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Two Dollars a Year

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No. 20

Summertime Radio

SUMMER is with us again, and with it our old friend "static." Most of us know that during hot weather long distance reception is unsatisfactory and often impossible. Those of us that are comparatively new at the game may not realize this fact and may be prone to think that something is wrong with their set or blame their dealer for selling them something that does not "deliver the goods."

Although we may not get that distant station as well as we did during the past few months, there are still our local stations to enjoy, and, possibly, some of the more powerful ones at a distance.

Many will be visiting the seashore, mountains and other resorts; here the radio set will prove a constant source of entertainment during the evening hours. The climatic conditions in the mountains and by the sea are more favorable for radio reception during the hot weather than in our cities, and for that reason we shall be able to pick up many stations and keep posted on what our favorite baseball club is doing, and be able to dance to some of the best music from fine orchestras.

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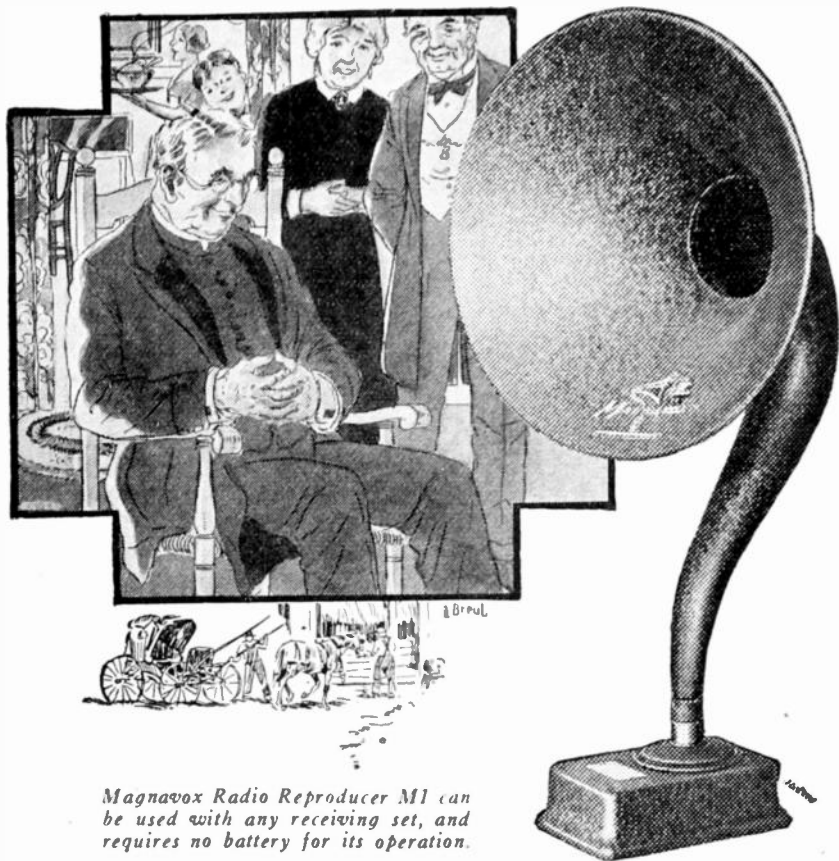
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Broadcasting From Your Home

By L. O. MARSTELLER

Radio Engineer, Westinghouse Electric & Manufacturing Company

Everyone is interested in learning the trouble that has been and may be caused by operating a miniature broadcasting station, and more greatly interested in how to prevent this interference.

Nearly all the sensitive receiving sets in use are capable of broadcasting speech and music. This can readily be done by the use of a microphone properly connected to a receiving set. Before proceeding further, let me explain that a microphone is a simple little device, one form of which we use every day; namely, the part of the telephone into which we talk. Talking into a very sensitive microphone causes the voice to affect the powerful radio waves sent out by the transmitter, which is fundamentally a large sensitive receiving set having a microphone connected to it. The tickler on the transmitter is necessarily adjusted so as to make the circuit oscillate and consequently transmit radio waves, just as your receiving set will do with a similar tickler adjustment.

If I thought that you would use the microphone only to reprimand your neighbor, who is causing his receiving set to transmit whistles and squeals, then I certainly would explain how to connect the devices to your set. However, there is always the possibility of the ladies broadcasting tea party gossip or the uncanny East or West wind from a Mah Jongg party, so I shall leave the "home broadcasting" idea for you to think about.

The purpose of mentioning the possibility of using your receiving set as a broadcasting station is to call your attention to the power you control with the knobs and dials on your set.

If you do not have a microphone connected to your receiving set, you can still transmit, but it will be whistles and squeals, which are a source of interference to your neighbors.

Many times during the reception of an interesting program, one will hear a whistle or squeal caused by a neighbor who improperly manipulates the controls of his set. The fact that he can very easily prevent such interference is an excellent reason for paying him a visit and explaining the situation. Before paying your neighbor this instructive visit, however, it would be well to learn the cause, effect and remedy for such interference.

There are several types of receiving sets which can be made to act as a transmitter. The first of these is the favorite set, a single circuit receiver. One of these controls is known as a tuner handle or knob. This control makes it possible to tune-in one station and eliminate another. The other control is a tickler or intensifier. Its purpose is to increase the signal strength. Both tuner and tickler should be operated simultaneously. Now, let us consider the proper operation of this set.

With the tickler set near zero, bring the tuner control to approximately the setting where you would expect to find the desired signal, and, with the other hand, bring the tickler control up to the point where a slight hiss or rustle is heard and keep the tickler so adjusted as you more accurately tune in the signal. Never increase the tickler beyond the point where the hissing sound is heard

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or you will hear a whistle or squeal, indicating that you are sending an interfering wave which will interfere with your neighbor's reception.

If a slight change of the tuner adjustment causes a squeal or whistle to be heard, you should immediately remedy matters by decreasing the tickler until the whistler disappears. If you do not decrease the tickler setting, your set will continue to act as a transmitter and radiate an interfering wave. This will cause your neighbors to receive a whistle like noise mixed in with the concert music from the broadcasting station. Many times music of excellent quality is condemned because of the interference caused by the wave sent out from a neighbor's receiving set.

With a very little practice the single circuit receiving set can be operated, night after night, without causing any interference.

Another type of receiver, which often finds a place in the amateur's home and sometimes is used for broadcast reception, has one more control than the single circuit set, making a total of three controls.

One control tunes the primary or antenna circuit and the other tunes the secondary or tube circuit. The third control is marked tickler or intensifier. This receiver is very selective, but requires considerable skill and patience in order to tune in weak signals. As this type of receiver has three controls, and, as the average person has but two hands, it is rather difficult to keep the tickler properly adjusted as the primary and secondary controls are operated. The general tendency is to set the tickler to maximum and then tune the primary and secondary until the whistle-like note of a broadcasting station is heard. That means that the operation has probably interfered with your neighbor's reception of the concert.

For people who only have two hands, there is only one way to operate such a set and not cause interference, that is, to calibrate the secondary circuit by marking the proper setting down on a chart. Then, to tune in a station, it is only necessary to set the secondary control to the proper point as determined from the calibration chart and adjust the tickler to the point where a slight hiss or rustle is heard as the primary circuit is tuned to the desired signal.

There is one other receiver which is commonly used. This receiver causes a great amount of interference as it has three tuned circuits. Two of the controls are marked "primary and secondary," and are manipulated to tune in a signal. The third control acts as a tickler, and has a definite adjustment for each adjustment of the secondary circuit. With this type of receiver, it is almost impossible to tune in a station without radiating an interfering wave. Every time that the third control is tuned to the secondary circuit an interfering wave will be radiated.

How far will anyone or all of these three types of receivers transmit? Anyone will cause interference over a distance of four city blocks and can, under most favorable conditions, be heard six blocks away.

In some parts of the country the interference caused by radiation from receiving sets is much more pronounced than in others. In the cities where broadcast reception has been a popular form of entertainment for several years, there is not nearly so much interference per capita as in the smaller towns. This is probably due to the experience gained by long use of the apparatus in such cities as Pittsburgh, New York and Chicago.

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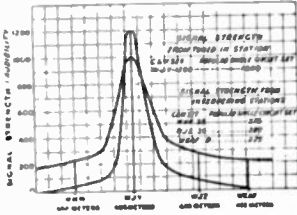
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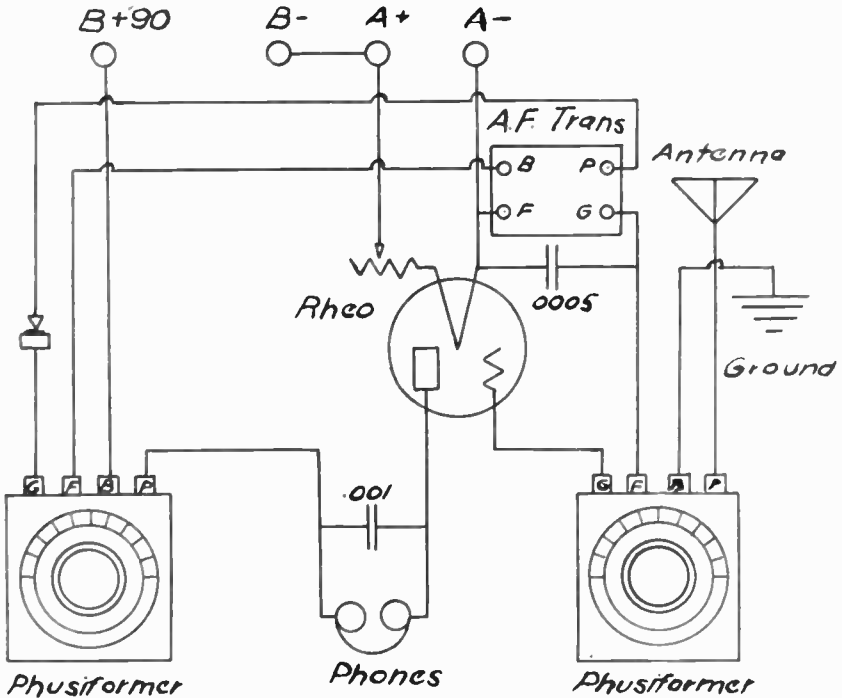
Phusiformer As Used In Reflex Circuits

By J. M. SCHWARTZ

The name "reflex" is derived from the manner in which the tube of the receiver is caused to function. The word itself, reflex, being derived from the Latin "reflexus," meaning a bending back.

Its principal points of desirability are economy of apparatus and economy in space. The reflex receiver in itself is not the most highly desirable type of radio receiver for many reasons, but if we do not carry this reflex action too far it serves and admirable purpose from the point of view of initial cost.

We will now examine this reflex action in the receiver. The incoming energy collected by the antenna is transferred to the grid of the vacuum tube by the phusiformer, which has brought this antenna-grid circuit into resonance.



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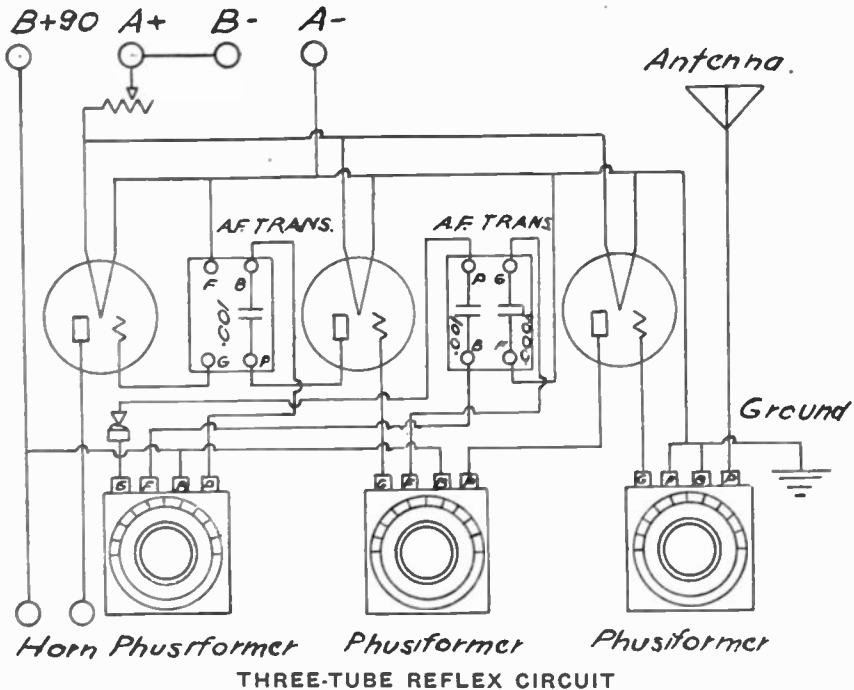
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inherent property of the vacuum tube, this energy is transferred and magnified in this process into the plate circuit, where it is again passed on through the second phusiformer to the crystal detector. In this crystal detector the electrical wave is changed into a sound wave. This sound wave now travels on into the primary of the audio frequency transformer, where it is magnified five times and transferred by the secondary back onto the grid of the vacuum tube. Here it is again amplified and passed on to the telephone receivers. This action can readily be followed by the schematic diagram shown in the circuit Nos. 1 and 2.

The constructor of the circuits shown here is earnestly advised to follow these exact layout arrangements, for they have been carefully studied out and planned both from the point of view of simplicity of wiring and efficiency of operation.



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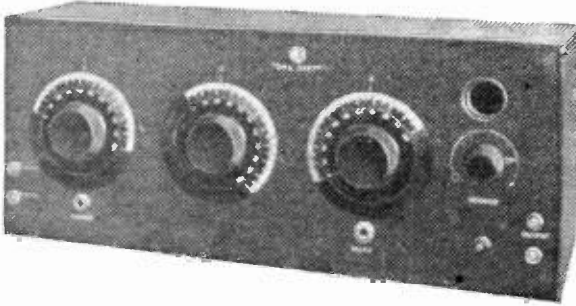
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In selectivity, volume, distance getting, clarity and fine appearance, the FADA "One Sixty" is unsurpassed. To hear it perform is to be convinced. It will be well worth your while to visit your dealer and see this receiver. Price \$120. This does not include tubes, batteries or phones.

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The reflex receiver in itself is not the most highly desirable type of radio receiver, for many reasons, but if we do not carry this reflex action too far it serves an admirable purpose; that of low initial cost.

They are presented for their educational value and as a means of securing the maximum results from a minimum amount of apparatus, but hardly provide the most satisfactory ultimate receivers. They are somewhat erratic in their action and are very apt to produce distortion of tone unless exceptional care is taken with the wiring and the reflexing action is not carried too far. There are several types of reflex systems any of which may be used, including the well known Harkness.

Regardless of the particular system of reflexing resorted to, its use with the phusiformer or tuned radio frequency system is infinitely superior to any system employing fixed radio frequency transformers. The phusiform method, without going into technical detail at this time, permits the grids of the tubes to be kept at a negative potential with respect to the filaments, thus eliminating the great danger of distortion existing where a potentiometer is used to control the grids of the tubes to prevent oscillation. Audio frequency amplification is very poor when the grids of the amplifying tubes are not kept at a negative potential at all times.

Radio Aids in Solving Mirage

When approaching Sydney, Nova Scotia, recently, Captain Bauge of the Hospital Ship St. Joan of Arc was confronted by a mirage which distorted the shore lines so they could not be recognized. Calling his radio compass into service, he took radio bearings from North Sydney, Magdalen Island, and Canso, with the result that he succeeded in locating his position.

Endeavoring to find the proper point at which to land in a fog, Captain Bauge and a native fisherman who was on board were greatly confused by a mirage which changed the appearance of the coast. They knew they were not in front of Scarati, for a steep cliff could be seen behind the lighthouse, obviously not the gentle sloping hill of the Nova Scotia shore, five miles distant from the lighthouse.

Standing by temporarily until the sun came out, the skipper took an altitude, which, plotted with his radio bearings, intersected in a triangle of error of less than three miles on a side. He was east-northeast of Scarati. Soon the lighthouse appeared in its natural place. The radio compass proved correct, he states, despite the "evidence" of their eyes.

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More and More Broadcasters

Broadcasting, thought to have reached its level last May is again on the increase, as far as the number of stations is concerned. Today there are 577 stations licensed to broadcast, compared to the peak of 591 last May. New stations are still coming in, 27 having been added during the past month while 19 dropped out of the aerial entertaining profession. The gain in January was 7; February, 14; and March, 20. The distribution on May 1st was as follows: Class A, 371; Class B, 52; Class C, 152; and Class D, development stations, 2. Wave lengths for Class B stations is exhausted, and practically all the wave lengths allocated for Class A stations have also reached the saturation point in zone distribution.

It is probable that Secretary Hoover will ask for a reallocation of the eighty wave lengths now allotted to broadcasters, with a view to redistributing them in a better manner if one can be found at the forthcoming conference. Instead of distributing them on the basis of frequencies, with a waste space between the wave lengths assigned, it is possible that a new method may be devised, which, it is said, would make a dozen more wave lengths available. Another plan would be to eliminate the 152 Class C stations, which have been permitted to continue on the original 360 meter wave, or transfer them to A or B stations, and make that wave length available for general use in the several zones.

New B Stations Must Share Wave Lengths

Reviving interest in the building of high-powered and high-class broadcasting stations has entirely exhausted the available wave lengths between 303 and 546 meters. All wave lengths in this band, reserved for Class B stations, being assigned, it is impossible to give new B stations exclusive waves, and as a consequence, wave lengths now in use must be shared by neighboring stations; or more exactly, operating time must be divided as is done in Washington by WRC and WCAP, which broadcast on alternate nights.

There are 52 Class B stations operating with 500 watts or more power, and broadcasting high-class entertainment and features, but applications for almost a dozen similar stations are on file in the Department. Prospective broadcasters, who hope to secure Class B licenses from the Government, are warned that they will have to operate part time and share wave lengths already assigned to one or more stations, as is the practice with Class A stations, the Department points out.



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Behind the Scenes in a Broadcast Studio

NUMBER 12—HOW THE LISTENER-IN CAN HELP

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

In this, the last of this series of twelve brief articles, I am going to tell you how you can help broadcasting.

Make your requests few and reasonable. Remember that programs are booked far in advance and many are sponsored by organizations. Do not call up at the last moment and request "Sleep, Baby, Sleep" to be sung on a program of chamber music sponsored by some civic organization. It is also well to remember that the program hour in any studio is a busy one and too many phone calls during this period only add to the confusion. Some studios discontinue telephone service while the program is being broadcast.

And you must be more regular in applause cards. Instead of waiting and then writing that you have intended to write for a year or so, send a card at least once a week to the individual stations. Few people care to perform before a lifeless microphone without some visible sign that their efforts are heard and appreciated.

Home town news, notices of organization meetings, and so forth, have caused such a tremendous demand on the part of broadcasters' time that the day will soon come when they must be curtailed.

With the erection of so-called super-stations located at strategic points throughout the county and supplemented by the local stations everywhere, the time is not far distant when you can tune in at any time of day or night and hear a program of some sort.

Tomorrow's radio will see many more remote control stations and portable panels so performances on special occasions can be broadcast. Relaying will also come more into vogue and messages will travel around the world and back in the space of a few moments.

The radio of the future will more materially assist crime detection, civic enterprises and home life. Ned Lawrence has aptly said: "Whether radio dies or lives will depend absolutely and wholly upon those who own the receivers, and not those who own the transmitters."



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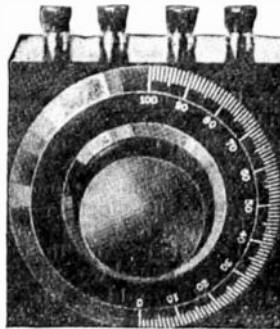
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Earle C. Anthony Station Sued by Composers, Authors and Publishers Society

The Composers, Authors and Publishers Society has sued KFI for alleged broadcasting of a song copyrighted by a member of the organization, M. Witmark and Sons.

The Earle C. Anthony Station has been extremely active in the fighting of the copyright law, prohibiting music published by certain concerns to be broadcasted, and it is undoubtedly due to the great public response to KFI's appeal for letters and telegrams to Washington that this suit has been filed in retaliation. It was the Earle C. Anthony Studio that made the initial announcements about the Dill Bill, with the resultant flood of telegrams to the Senate Patent Committee.

Apparently the Composers, Authors and Publishers Society misjudge the wide appeal of radio, and in its endeavor to win by force the ground it has lost in making the radio ruling, is instigating this suit against the Earle C. Anthony Station. The KFI Station, however, will continue its regular schedule of programs, as well as rigid observance of censoring music published by members of the society. The standard of musical programs sent out by this station is an extremely high one, and very little difficulty has been encountered in keeping an advance watch on all program copy, or in the substituting of other numbers in such instances.

The Dill Bill, which relieves radio alone, has not as yet been reported out of committee. Senator Dill is of the opinion that if it can be reported out it will be quickly passed in the Senate, and a poll which the National Association of Broadcasters has made would indicate that he is correct.

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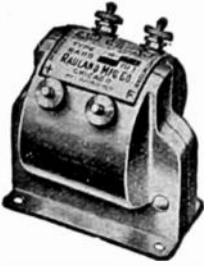
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All American Wins Again

The Chicago Daily News Laboratory's report of tests on three All American Long Wave Radio Frequency Transformers for SUPER HETERODYNE

published April 5th in the Chicago Daily News, shows "They were virtually uniform: 6,500 to 12,500 meters, 6,450 to 12,500 meters, 6,500 to 12,500 meters. The curve of these transformers is almost flat from the point where the amplification rises above 1 milli volt on the scale at 6,500 until it drops back at 12,500. There is a gradual decrease in amplification but the curve is still high at 15,000 meters.

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Squier Plans "Cable Wireless"

By Washington Radio News Service

Outlining what he termed "The Key Plan," applying radio to cable operations, Major General George O. Squier, until recently Chief Signal Officer of the Army, said a short time ago that radio engineering was approaching a phase of development which would eventually give a speed and accuracy heretofore unthought-of in cable communication.

By adapting the basic principles of radio communication to the sub-audio band of frequencies, which apply principally to ocean cable practice, General Squier said Signal Corps experiments on the new Seattle-Alaskan cable, have already showed marked progress. At the laboratory of William M. Bruce, Jr., a cable engineer, at Springfield, Ohio, a universal automatic telegraph transmitter, applicable to radio, land lines and submarine cables, has been developed and tested under the newly devised "key plan." An improved form of rectified received record has also been developed and tested, he announced.

An entirely new range in cable efficiency will be opened up by the use of electron tubes, which will amplify the cable signals several times, just as amplifying tubes increase incoming broadcast signals, General Squier predicted, adding that with properly designated signals, such amplification has already been demonstrated as practical in laboratory work.

Following up his application of radio to wires in 1910, which made possible the employment of an unused band of frequencies between 15,000 and 100,000 per second, and resulted in the use of multiplex telephony and telegraphy on wire circuits, General Squier now proposes a second fundamental step, which may revolutionize cable operation.

By utilizing the special means of transmitting and speeding up the Morse alphabet, as demonstrated by General Squier last year, he now proposes to hook up his cable transmitting and receiving system as follows: First, the generator of the carrier wave, and the modulator; then the transmitting cable, on the opposite end of which is connected the sub-audio amplifier, followed by the detector unit, and finally the interpreter, which makes the message legible.

The key plan, through the powerful amplification made possible by electron tubes, should logically become a vital step in the reception of long, submarine cable signals, the general points out. In the near future cable practice, he believes, will include several stages of amplification of sub-audio signals.

Keeler White Co., 211 South San Pedro Street, Los Angeles
Pacific Coast Agent of Wm. J. Murdock Co.

Make your set a thing of Beauty

Hardwood Cabinets

*Built to Order in Sizes, Styles,
and Finish*

Here is something in console type that is entirely new to the market. It will pay to stock this new style before the demand.

MAYWOOD CABINET SHOP

Manufacturers

233 Slauson Ave. Maywood, Calif.

Phone: AXridge 4833



6-8 A. M.
PACIFIC TIME

RADIO TIME TABLE

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

STATION	WATTS	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
					6:00-6:30	6:30-7:00	7:00-7:30	7:30-8:00	8:00-8:30	8:30-9:00	9:00-9:30	9:30-10:00	10:00-10:30	10:30-11:00	11:00-11:30	11:30-12:00	12:00-12:30	12:30-1:00
Reynolds Radio	500	Denver	360	K L Z	.	.	.	.	X	X	X	X	X	X	X	X	X	X
Free Press	500	Detroit	617	W C X	.	.	X	.	X	X	.	.	.	.	.	.	.	X
Detroit News	500	Detroit	617	W W J	.	.	.	X	X	X	X	X	X	X	X	X	X	X
Woodmen of W.	500	Omaha	628	W O A W	.	X	X	.	.	.	.	.	.	.	.	.	X	X

8-10 A. M. PACIFIC TIME

9-11 Mountain Time

10-12 Central Time

11- 1 Eastern Time

STATION	WATTS	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
					8:00-8:30	8:30-9:00	9:00-9:30	9:30-10:00	10:00-10:30	10:30-11:00	11:00-11:30	11:30-12:00	12:00-12:30	12:30-1:00	1:00-1:30	1:30-2:00	2:00-2:30	2:30-3:00
Echophone Radio	100	Long Beach	234	K F O N	.	.	X	.	.	.	.	.	.	.	.	.	.	X
S. F. Examiner	150	San Francisco	360	K U O	.	X	.	.	X	X	.	.	.	.	.	.	.	X
Reynolds Radio	500	Oemver	360	K L Z	.	.	.	X	X	X	X	X	X	X	X	X	X	X
Star-Telegram	500	Fort Worth	478	W B A P	.	X	X	.	.	.	.	.	.	.	.	.	.	X
News and Journal	500	Oafas	478	W F A A	.	.	X	X	X	X	X	X	X	X	X	X	X	X
Palmer School	500	Davenport	484	W O C	.	.	.	X	X	X	X	X	X	X	X	X	X	X
John Wanamaker	500	Philadelphia	509	W O O	.	.	.	X	X	X	X	X	X	X	X	X	X	X
Federal Tel.	500	Buffalo	319	W G R	X	.	.	.	X	.	.	.	X

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DISTANCE—SELECTIVITY
—VOLUME

Make your set step out

PHIPPS SUPER COILS

\$1.00

For Harkness and Reflex

SPECIALS

Mounted Crystal.....	\$0.10	Horns	\$ 8.50
Navy Type Detectors.....	1.00	23 Plate Condensers.....	1.25
Sockets .....	.25	2 Tube Portable.....	9.95
A. F. Transformers.....	2.25	2 Tube Reflex complete...	42.50
Phones	2.98		

Plus 25c for Postage

Our factory is equipped to manufacture any radio product you may have.

D. C. PHIPPS

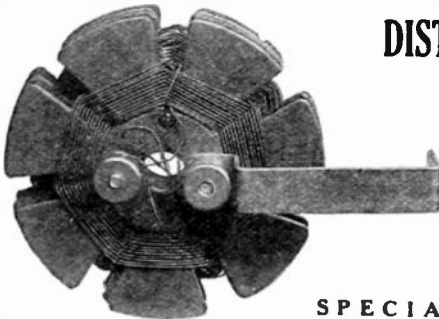
Distributor

WING RADIO PRODUCTS

Phone TRinity 6434

Los Angeles, California

726 S. Spring Street



10-12 A. M.
PACIFIC TIME

RADIO TIME TABLE

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

STATION	WATTS	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
					10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00	10 00-10 30	10 30-11 00
L. A. Times	500	Los Angeles	395	K H J	X	X	X	X										
Earl C. Anthony	500	Los Angeles	468	K F I	X	X	X	X										
Bible Institute	750	Los Angeles	360	K J S	X	X	X	X										
Angelus Temple	500	Los Angeles	278	K F S G	X	X	X	X										
So. Electric Co.	50	San Diego	244	K O P T	X	X												
Hale Brothers	500	San Francisco	423	K P O		X	X											
Tribune	500	Oakland	509	K L X	X	X												
Waener Brothers	250	Oakland	360	K L S				X		X			X			X		X
Gould	5	Stockton	360	K J Q	X	X												
Fallon & Co.	100	Santa Barbara	380	K F H J	X	X												
Guy Greason	10	Tacoma	360	K F E J			X	X		X	X					X	X	
Rhodes Co.	100	Seattle	455	K D Z E			X						X			X		X
First Pres. Church	750	Seattle	360	K T W		X	X											
Meier & Frank	50	Portland	360	K F E C														X
Reynolds Radio	500	Denver	360	K L Z				X		X		X		X				X
News and Journal	500	Dallas	476	W F A A			X	X		X		X		X		X		X
Palmer School	500	Davenport	484	W O C			X			X		X		X		X		X
Oregonian	500	Portland	492	K G W				X		X		X		X		X		X
Federal Tel. Co.	500	Buffalo	319	W G R				X		X		X		X		X		X

Murdock Radio Head Phones "Standard Since 1914"

BRANSTON

Super-Heterodyne Kits

(New Type)

Including all frequency transformers, coupling units, with blue prints and drilling template.

With this kit you can build the last word in radio receivers.

Regular price, \$36.50

GERMAIN'S RADIO HAS BEEN BUILT ON SERVICE

Whatever set you have we will gladly help you

Germain's Motto: TRUTH IN RADIO

GERMAIN'S

SIXTH AND MAIN + LOS ANGELES

12-2 P. M.
PACIFIC TIME

RADIO TIME TABLE

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

STATION	WATTS	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
					12 00-12 30	1 00-1 30	1 30-2 00	12 00-12 30	1 00-1 30	1 30-2 00	12 00-12 30	1 00-1 30	1 30-2 00	12 00-12 30	1 00-1 30	1 30-2 00	12 00-12 30	1 00-1 30	1 30-2 00
L. A. Times	500	Los Angeles	395	KH J	X			X	X			X	X			X	X	
Bible Institute	750	Los Angeles	360	K J S	X													
Angelus Temple	500	Los Angeles	278	K F S G	X													
So. Electric Co.	50	San Diego	244	KD P T					X	X								X
Warner Bros	250	San Francisco	360	K L S	X	X		X	X		X	X		X	X		X	X
Hale Bros	500	San Francisco	423	K P O				X	X		X	X		X	X		X	X
General Elec	1000	Oakland	312	K G O				X	X		X	X		X	X		X	X
Herrold Lab'y	50	San Jose	380	K Q W				X	X		X	X		X	X		X	X
Guy Greason	10	Tacoma	360	K F E J				X	X		X	X		X	X		X	X
Rhodes Co	100	Seattle	270	K D Z E				X	X		X	X		X	X		X	X
Honolulu Star Bul	100	Honolulu	380	K D Y X	X	X		X	X		X	X		X	X		X	X
Honolulu Adver	500	Honolulu	360	K G U				X	X					X	X		X	X
Reynolds Radio	500	Denver	360	K L Z				X	X		X	X		X	X		X	X
Pyles Nichols	10	Denver	380	K D Z Q				X	X		X	X		X	X		X	X
News and Journal	500	Dallas	478	W F A A	X	X												
Palmer School	500	Davenport	484	W O C				X	X		X	X		X	X		X	X
Star	500	Kansas City	411	W D A F				X	X		X	X		X	X		X	X
News	500	Detroit	415	W J J				X	X		X	X		X	X		X	X
Radio Corp. of Am	500	New York	467	W J Z				X	X		X	X		X	X		X	X
Herald	1000	Calgary	420	C F A C				X	X		X	X		X	X		X	X
Federal Tel. Co.	500	Buffalo	319	W G R	X	X	X	X	X		X	X		X	X		X	X
Woodmen of W.	500	Omaha	526	W O A W	X	X		X	X		X	X		X	X		X	X

When the Receiving Set is Finished



You will want your family and your friends to listen in with you. A good Loud Speaker is the only way possible.

The same engineers which built the other Audiophone models, including Senior and Junior, developed this Baby

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TRADE MARK
REG. U. S. PAT. OFFICE

Model. It is different from the others, and costs less, but gives good results. The price, \$12.50, is not much more than many of the better grade headphones. This Baby Audiophone is ready to connect to your set—requires no auxiliary batteries to operate. It is substantial in construction and good looking in appearance. The base is finished in dull gold bronze with the fibre horn of same color to match. Write for Bulletin No. 3013-X.

THE BRISTOL COMPANY WATERBURY, CONNECTICUT

“ULTRE FLEX”

THE WINNER

Two Tube Circuit Developed by Nash Co.
for California Atmosphere

and giving to the public
this Two-Tube Circuit developed right here in Los Angeles
for Long Distance Reception

*In Los Angeles this Circuit brought in KGO
using ground as aerial*

First Consider its quality of tone with unexcelled volume.
The price is so reasonable for Radiona Ultraflex L1-L2-L3 Radio
Frequency Transformers that you cannot afford to be without.

Price Per Set \$3.00

Money Orders Accepted

Complete Parts for Circuit

- 1 Set Ultraflex Coils
- 1 7x14 Panel
- 3 23 Plate Condensers
- 3 Dials
- 2 Rheostats
- 1 Jack
- 1 Shelf
- 2 Sockets
- 2 5 to 1 Audio Transformers
- 1 Crystal Detector
- 8 Binding Posts
- Bus Bar

Hook up with each set of Nash Coils

\$31.00

This Circuit

brings in KGO close to high
tension wire, street car wires
and telephone wires, while KJS
and KFSG, KFI, KHJ are
broadcasting. On the Loud
Speaker. Sets complete

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Open Evenings

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Distributors

ELECTRIC CORPORATION
Los Angeles - Seattle - Portland

4-6 P. M.
PACIFIC TIME

RADIO TIME TABLE

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

STATION	WATTS	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT	
					4 00-4 30	4 30-5 00	4 00-4 30	4 30-5 00	4 00-4 30	4 30-5 00	4 00-4 30	4 30-5 00	4 00-4 30	4 30-5 00	4 00-4 30	4 30-5 00	4 00-4 30	4 30-5 00
E. C. Anthony	500	Los Angeles	469	K F I	X	X												
L. A. Herald	500	Los Angeles	469	Herald														
L. A. Examiner	500	Los Angeles	469	Examin'r														
Angelus Temple	500	Los Angeles	278	K F S G	X	X												
Echophone Radio	100	Long Beach	234	K F O N														
General Electric		Oakland.	312	K G O			X	X	X									
Hale Bros	500	San Francisco	423	K P O			X	X	X									
Oakland Tribune	500	Oakland	509	K L X			X											
S. F. Examiner	150	San Francisco	360	K U O				X	X									
Maxwell Elec.	50	Berkeley	278	K R E														
Portable Wireless	100	Stockton	360	K W G			X	X										
Gould	5	Stockton	360	K J Q			X	X										
Radio Den	10	Santa Ana	268	K F A W			X											
Nielson Radio Co.	10	Phoenix	238	K F C B				X	X									
Post Intelligencer.	100	Seattle	270	K F J C			X											
Star Electric.	50	Seattle	283	K F H R			X	X										
First Pres. Church.	750	Seattle	360	K T W	X	X												
Northwest Radio	50	Seattle	283	K J R			X	X	X									
Meier & Frank	50	Portland	248	K F E C			X	X	X									
Hallock & Watson	50	Portland	360	K G G			X	X	X									
Pyle & Nichols	10	Denver	360	K D Z Q		X	X											
Star-Telegram.	500	Fort Worth	476	W B A P					X									
News and Journal	500	Dallas	476	W F A A			X	X										
Southern Egr. Exp.	500	San Antonio	385	W O A I					X	X								
Palmer School	500	Davenport	484	W O C	X	X	X	X										
Post Dispatch	500	St. Louis	546	K S D														
Daily News	500	Chicago	448	W M A Q					X	X								
Drake Hotel	500	Chicago	380	W D A P			X	X	X	X								
Free Press	500	Detroit	617	W C X	Y	X	X	X	X	X								
News	500	Detroit	517	W W J	X	X	X	X	X	X								
Star	500	Kansas City	411	W D A F	X	X	X	X	X	X								
Crosley Mfg. Co.	500	Cincinnati	309	W L W			X	X	X	X								
Radio Cor. of Am.	500	New York	455	W J Z		X	X	X	X	X								
John Wanamaker	500	Philadelphia	509	W O O			X	X	X	X								
Federal Tel. Co.	500	Buffalo	319	W G R			X	X	X	X								
Westinghouse	1000	Pittsburg	326	K D K A	X	X	X	X	X	X								
Westinghouse	1000	Springfield.	337	W B Z			X	X	X	X								
Westinghouse	1000	Chicago	536	K Y W		X	X	X	X	X								
Woodmen of W	500	Omaha	526	W O A W	X	X	X	X	X	X								
Willard Battery	1000	Cleveland	390	W T A M														
Canadian Nat. Ry.		Ottawa	435	C K C H														

Owing to "daylight saving" time now in force in the East, all stations in East should show one hour earlier.

Murdock Radio Head Phones "Standard Since 1914"

WE KNOW OUR STUFF

If you want your Neutrodyne repaired properly, bring it to us. We repair all types of radio sets
Radio sets built to order—by men who know your wants and can give you expert workmanship and prompt service.

STANRAD

2-Tube Reflex Set, complete with horn. . \$68.50 2-Tube Set, wired. . \$29.50
Radio Batteries charged in eight hours, 75c. Stanrad Bakelite Coils, per set, \$2.00

Call TUCKER 2433

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

1048 South Olive St. **STANDARD RADIO**

Los Angeles



THE WORLD'S
FAMOUS
LOUD SPEAKER
AMPLION

Mfd. by Alfred Graham Sons of London
Dist. in U. S. by Signal Electric Mfg. Co.

DEALERS—A limited quantity of this famous speaker arrived last week from England and are now ready for distribution. Get yours now from your jobber.

GLOBE COMMERCIAL CO.
LOS ANGELES AND SAN FRANCISCO

Radio!

Headquarters
for Standard
Sets:

Kennedy
Radiola
Neutrodyne
Teledyne
Grebe

22 Years
in the
Electrical
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2914

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726 So. Olive St.

Experimenters!

The new multi-tube circuits call for careful layouts, and the use of ACCURATE capacities.

Where a .000 or a .00025 mfd. fixed condenser is specified, be sure that the value is ACCURATE.

We are in position to calibrate

Fixed Condensers
Variable Condensers
Fixed Resistances
Variable Resistances

at reasonable rates.

We also calibrate wave-meters and wave traps.

Don't guess—know!

6-8 P. M.
PACIFIC TIME

RADIO TIME TABLE

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

STATION	WATTS	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
					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
Bible Institute	750	Los Angeles	360	K J S	X	X												
L. A. Times	500	Los Angeles	396	KH J	X	X			X	X	X	X	X	X	X	X	X	X
E. C. Anthony	500	Los Angeles	469	K F I	X	X			X	X	X	X	X	X	X	X	X	X
Angelus Temple	500	Los Angeles	278	K F S G					X	X	X	X	X	X	X	X	X	X
Electric Light Sup.	100	Los Angeles	360	K N X					X	X	X	X	X	X	X	X	X	X
Echaphone Radio	100	Long Beach	234	K F O N			X	X	X	X	X	X	X	X	X	X	X	X
Hale Brothers	500	San Francisco	423	K P O					X	X	X	X	X	X	X	X	X	X
S. F. Examiner	150	San Francisco	360	K U O			X	X	X	X	X	X	X	X	X	X	X	X
Maxwell Electric	50	Berkeley	278	K R E					X	X	X	X	X	X	X	X	X	X
Tribune	500	Oakland	509	K L X				X	X	X	X	X	X	X	X	X	X	X
General Electric	1000	Oakland	312	K G O				X	X	X	X	X	X	X	X	X	X	X
Kimball & Upson	100	Sacramento	283	K F B K			X	X	X	X	X	X	X	X	X	X	X	X
Fallon & Co.	100	Santa Barbara	360	K F H J			X	X	X	X	X	X	X	X	X	X	X	X
Radio Den	10	Santa Ana	288	K F A W			X	X	X	X	X	X	X	X	X	X	X	X
Southern Elect.	50	San Diego	244	K D P T			X	X	X	X	X	X	X	X	X	X	X	X
Nelson Radio Sup.	50	Phoenix	238	K F C B		X		X	X	X	X	X	X	X	X	X	X	X
McArthur Bros.	100	Phoenix	360	K F A D				X	X	X	X	X	X	X	X	X	X	X
Love Elect. Co.	10	Tacoma	360	K M O			X	X	X	X	X	X	X	X	X	X	X	X
Mullens Elect. Co.	50	Tacoma	252	K G B				X	X	X	X	X	X	X	X	X	X	X
N. W. Radio Ser.	50	Seattle	283	K J R			X	X	X	X	X	X	X	X	X	X	X	X
Exel. Motor Cy.	100	Seattle	360	K H O				X	X	X	X	X	X	X	X	X	X	X
First Pres. Church	750	Seattle	360	K T W		X	X											
Star Electric	50	Seattle	283	K F H R			X	X	X	X	X	X	X	X	X	X	X	X
Oregonian	500	Portland	492	K G W	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hallock & Watson	50	Portland	360	K G G	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Meier & Frank	50	Portland	248	K F E C				X	X	X	X	X	X	X	X	X	X	X
Apple Cy. Rad. Cfb	10	Hood River	360	K O P			X	X	X	X	X	X	X	X	X	X	X	X
Adler's Music Store	5	Baker, Ore	360	K F D A	X	X		X	X	X	X	X	X	X	X	X	X	X
Boise High School	150	Boise, Ida	270	K F A U				X	X	X	X	X	X	X	X	X	X	X
Bunkhill-Sul.Co.	10	Kellogg, Ida	360	K F E Y		X		X	X	X	X	X	X	X	X	X	X	X
Telegram	100	Salt Lake	360	K D Y L			X	X	X	X	X	X	X	X	X	X	X	X
Reynold's Radio	500	Denver	360	K L Z				X	X	X	X	X	X	X	X	X	X	X
Western Radio	50	Denver	360	K F A F				X	X	X	X	X	X	X	X	X	X	X
Pyle & Nichols	10	Denver	360	K Z D Q		X	X											
Fitzsimmons Hospital		Denver	542	A A 3									X	X	X	X	X	X
Sparks Hi School	10	Sparks, Nev	226	K F F R									X	X	X	X	X	X
Westinghouse El	1000	Hastings, Neb.	341	K F K X				X	X	X	X	X	X	X	X	X	X	X
Star-Telegram	500	Fort Worth	476	W B A P			X	X	X	X	X	X	X	X	X	X	X	X
News and Journal	500	Dallas	476	W F A A			X	X	X	X	X	X	X	X	X	X	X	X
Palmer School	500	Davenport	484	W O C	X	X	X	X	X	X	X	X	X	X	X	X	X	X
W. O. W.	500	Omaha	526	W O A W	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Daily News	500	Chicago	448	W M A Q						X	X	X	X	X	X	X	X	X
Post Dispatch	500	St. Louis	548	K S D	X	X		X	X	X	X	X	X	X	X	X	X	X
Westinghouse	1000	Chicago	536	K Y W					X	X	X	X	X	X	X	X	X	X
Sweeney School	500	Kansas City	411	W H B			X	X	X	X	X	X	X	X	X	X	X	X
Star	500	Kansas City	411	W D A F			X	X	X	X	X	X	X	X	X	X	X	X
Drake Hotel	1000	Chicago	390	W D A P	X	X												
Crosley Mfg. Co.	500	Cincinnati	309	W L W			X	X	X	X	X	X	X	X	X	X	X	X
Albertan Pub. Co.	250	Calgary, Can.	410	C H B C									X	X	X	X	X	X
Detroit Free Press	500	Detroit	517	W C X					X	X	X	X	X	X	X	X	X	X
Radio Cor. of Am.	500	New York	453	W J Z	X	X	X	X	X	X	X	X	X	X	X	X	X	X
John Wanamaker	500	Philadelphia	509	W O O			X	X	X	X	X	X	X	X	X	X	X	X
Federal Tel. Co.	500	Buffalo	318	W G R			X	X	X	X	X	X	X	X	X	X	X	X
El Buen Tono	500	Mexico City	425	C Y B			X	X	X	X	X	X	X	X	X	X	X	X
El Universal	500	Mexico City	500	C Y L														
Willard Battery	1000	Cleveland	290	W T A M					X	X	X	X	X	X	X	X	X	X
Westinghouse	1000	Pittsburg	328	K D K A					X	X	X	X	X	X	X	X	X	X
Canadian Nat. Ry.		Ottawa	435	C K C H					X	X	X	X	X	X	X	X	X	X
Chamber of Com.	50	El Paso	268	W D A H			X	X	X	X	X	X	X	X	X	X	X	X

Murdock Radio Head Phones "Standard Since 1914"

Notice to the Trade

On June fifteenth we will open a branch factory at 239 South Los Angeles St. under the direction of EMMETT R. PATTERSON, formerly of the Patterson Electric Company, who have been retailing WORKRITE Neutrodyne sets.

Mr. Patterson is closing out his entire retail business and will devote his entire organization to the manufacture and sale of WorkRite sets and parts to the trade.

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Workrite Manufacturing Co.

CLEVELAND, OHIO

Western Branch

239 So. Los Angeles St. Telephone VAndike 8139

8-10 P. M.
PACIFIC TIME

RADIO TIME TABLE

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

STATION	WATTS	CITY	METERS	CALL	SUN.		MON.		TUES.		WED.		THUR.		FRI.		SAT.	
					8 00-8 30	8 30-9 00	9 00-9 30	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
L. A. Herald	500	Los Angeles	469	He:aid			X	X										
Bible Institute	750	Los Angeles	360	K J S	X	X												
L. A. Times	500	Los Angeles	395	K H J	X	X												
L. A. Examiner	500	Los Angeles	469	Exam:n'r	X	X												
E. C. Anthony	500	Los Angeles	469	K F I	X	X												
Angelus Temple	500	Los Angeles	278	K F S G	X	X												
Electric Light Sup	100	Los Angeles	360	K N X														
Echophone Radio	100	Long Beach	234	K F O N			X	X	X	X	X	X	X	X	X	X	X	X
Hale Bros	500	San Francisco	423	K P O	X	X	X	X	X	X	X	X	X	X			X	X
S. F. Examiner	150	San Francisco	360	K U O														
Warner Bros	250	San Francisco	360	K L S						X	X	X	X	X	X	X	X	X
Dakland Tribune	500	Oakland	509	K L X		X	X	X	X	X	X	X	X	X	X	X	X	X
Maxwell Electric	50	Oakland	275	K R E		X	X	X	X	X	X	X	X	X	X	X	X	X
General Elec. Co	1000	Oakland	312	K G O		X	X	X	X	X	X	X	X	X	X	X	X	X
T. Seifert	100	Bakersfield	360	K D Z B							X	X	X	X	X	X	X	X
Portable Wireless	100	Stockton	360	K W G			X	X										
Herrold Lab'y	50	San Jose	360	K Q W							X	X	X	X	X	X	X	X
Kimball-Upson	100	Sacramento	283	K F B K							X	X	X	X	X	X	X	X
Gould	500	Stockton	360	K J Q									X	X				
Fallon & Co	100	Santa Barbara	360	K F H J											X	X		
Southern Elec. Co	50	San Diego	244	K D P T								X	X	X	X	X	X	X
R. H. Horn	50	San Luis Obispo	242	K F B E	X	X					X	X						
Drake Radio	5	Santa Rosa	234	K F N V											X	X	X	X
Univ. of Ariz	150	Tucson	360	K F D H						X				X				
Nielson Rad. Sup	10	Phoenix	238	K F C B											X	X	X	
Post-Intelligencer	100	Seattle	270	K F J C			X	X	X	X	X	X	X	X	X	X	X	X
Excelsior Motor	100	Seattle	360	K H O			X	X	X	X	X	X	X	X	X	X	X	X
Rhodes Co	500	Seattle	455	K F O A			X	X	X		X	X	X	X	X	X	X	X
First Pres. Church	750	Seattle	388	K T W	X	X	X											
Star Electric	50	Seattle	283	K F H R									X	X	X	X	X	X
Mullens Elec.	50	Tacoma	252	K G B			X	X	X	X	X	X	X	X	X	X	X	X
State Col. of Wash.	500	Pullman	330	K F A E			X	X	X						X	X	X	X
Oregonian	500	Portland	492	K G W			X	X	X	X	X	X	X	X	X	X	X	X
Hallock & Watson	50	Portland	340	K G G							X	X	X	X			X	X
Stubbs Elect	100	Portland	310	K G N							X	X	X	X				
Meier & Frank	50	Portland	248	K F E C										X	X			
Apple Cy Rad. Cl	10	Hood River	360	K Q P							X	X	X	X				
Boise High School	150	Boise, Ida	270	K F A U		X	X				X	X	X	X	X	X	X	X
Virgin Radio Ser	50	Melford, Ore	283	K F A Y			X	X		X	X	X	X	X	X	X	X	X
Bunkerhill-Sul. Co.	10	Kellogg, Ida	360	K F E Y			X		X		X		X				X	X
Reynolds Radio	500	Denver	360	K L Z	X	X												
Pyle & Nichols	10	Denver	360	K D Z Q					X	X				X	X	X	X	X
Westinghouse El.	1000	Hastings, Neb.	341	K F K X			X	X	X					X	X	X	X	X
Star Telegram	500	Fort Worth	476	W B A P		X	X	X	X	X	X	X	X	X	X	X	X	X
Dallas News	500	Dallas, Tex	476	W F A A	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Palmer School	600	Davenport	484	W O C	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Post Dispatch	500	St Louis	546	K S D			X	X	X	X	X	X	X	X	X	X	X	X
Star	500	Kansas City	411	W D A F		X	X	X	X	X	X	X	X	X	X	X	X	X
Woodmen of W	500	Omaha	526	W O A W					X	X	X	X	X	X	X	X	X	X
Westinghouse	1800	Chicago	536	K Y W					X	X	X	X	X	X	X	X	X	X
Drake Hotel	1000	Chicago	360	W D A P					X	X	X	X	X	X	X	X	X	X
Crosley Mfg. Co.	500	Cincinnati	309	W L W					X	X	X	X	X	X	X	X	X	X
Detroit News	500	Detroit	517	W W J					X	X	X	X	X	X	X	X	X	X
Radio Cor. of Am.	500	New York	455	W J Z			X		X		X		X				X	X
Herald	1000	Calgary	420	C F A C	X	X			X	X				X	X			
W. W. Grant	500	Calgary	440	C K C X					X	X				X	X			
Federal Tel. Co	500	Buffalo	319	W G R					X	X		X	X					
El Universal	500	Mexico City	500	C Y L					X	X				X	X			
El Buen Tone	500	Mexico City	425	C Y B									X	X				
Sweeney School	500	Kansas City	411	W H B		X	X											
Edgewater Beach	1000	Chicago	370	W G N					X	X	X	X	X	X	X	X	X	X
Westinghouse	1000	Springfield	337	W B Z					X	X	X	X	X	X	X	X	X	X
Westinghouse	1000	Pittsburg	328	K D K A					X	X	X							

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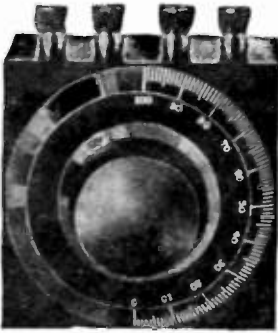
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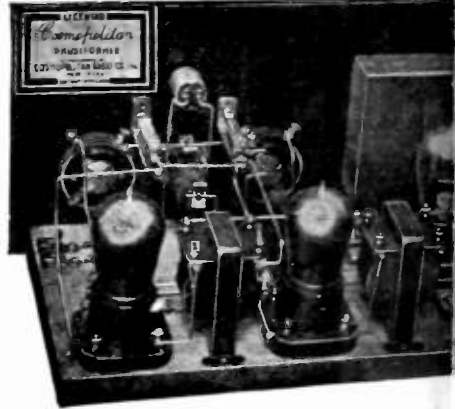
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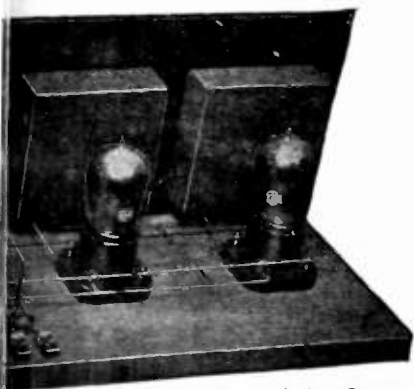
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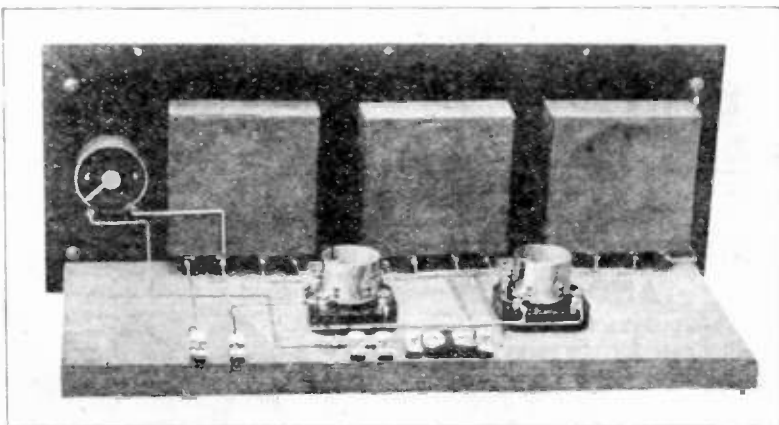


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Volume*

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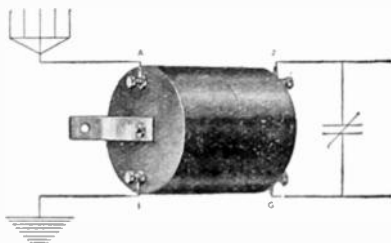
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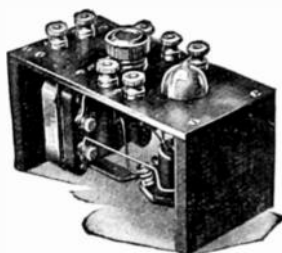
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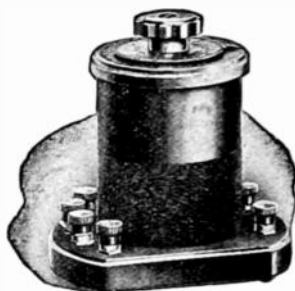


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Times Building, First and Broadway, Los Angeles. Owned and Operated by Los Angeles Times
John S. Daggett, Announcer and Manager

Daily, except Sunday and Monday, from 10 to 11 p. m., we will broadcast Art Hickman's Orchestra from the Biltmore Hotel. Sunday from 6:30 to 7:30 p. m. and daily except Monday, from 8 to 8:30, we will broadcast Art Hickman's Concert Orchestra from the Biltmore Hotel. 6:30 to 7:00 p. m. Music Memory Contest conducted by the Fitzgerald Music Company.

WEEK COMMENCING SUNDAY, MAY 18, 1924

SUNDAY, MAY 18—

- 10:00 a. m. Sermon from KHJ studio by Dr. G. A. Briegleb, pastor of the West-lake Presbyterian Church.
10:30 to 12:30 p. m. Organ recital and entire religious service from the First Methodist Episcopal Church, Arthur Blakeley organist and Rev. Elmer E. Helms pastor.
6:00 to 6:30 p. m. Music Memory Contest conducted by the Fitzgerald Music Company and arranged by Raymond Harmon.
7:00 to 7:30 p. m. Organ recital from the First Methodist Episcopal Church.
8:00 to 10:00 p. m. Program presented through the courtesy of Paul G. Hocman Co.

MONDAY, MAY 19—

- 12:30 to 1:15 p. m. Program presenting Mary Newkirk Bower, soprano, singing the compositions of Helen Lukens-Gant.

TUESDAY, MAY 20—

- 12:30 to 1:15 p. m. Program presenting Lenore Killian, mezzo-soprano, and Claire Forbes Crane, pianist. White's Californians, through the courtesy of the La Raza Palm Grove.
2:30 to 3:30 p. m. Matinee Musicale.
7:00 to 7:30 p. m. Children's program presenting Prof. Walter Sylvester Hertzog, telling stories of American history. The weekly visit of the Sandman and Queen Titania. Mimmie Ekman, pianist, 12 years old.
8:00 to 10:00 p. m. De luxe program.

WEDNESDAY, MAY 21—

- 12:30 to 1:15 p. m. Program presenting Altheda Oliver, mezzo-soprano, and Irene Hays, pianist. Fred C. McNabb, of Aggeler & Musser Seed Company, will give a "Garden Talk."
2:30 to 3:30 p. m. Matinee Musicale.
7:00 to 7:30 p. m. Children's program presenting Prof. Walter Sylvester Hertzog.
8:00 to 10:00 p. m. Program presented by Pomona College. Studebaker Radio Orchestra of Long Beach. Dr. Mars Baumgardt, lecturer.

THURSDAY, MAY 22—

- 12:30 to 1:15 p. m. Program presenting Elizabeth Monson Biehl, contralto. The Oakmont Country Club Orchestra.
2:30 to 3:30 p. m. Matinee Musicale.
7:00 to 7:30 p. m. Children's program presenting Prof. Walter Sylvester Hertzog, telling stories of American history. The weekly visit of Dickie Brandon, screen juvenile. Norma Emert, 12 years old, and Betty McDougal, 13 years old, readers, pupils of Inez Morris Moore.
8:00 to 9:00 p. m. Program presented through the courtesy of the Fitzgerald Music Co.
9:00 to 10:00 p. m. Program presenting Jose Arias and his orchestra.

FRIDAY, MAY 23—

- 12:30 to 1:15 p. m. Program presenting Arthur Raymond Hill, tenor, and Bill Hatch, pianist.
2:30 to 3:30 p. m. Matinee Musicale.
7:00 to 7:30 p. m. Children's program presenting Prof. Walter Sylvester Hertzog, telling stories of American history. The weekly visit of Richard Headrick, screen juvenile. Bedtime story by Uncle John.
8:00 to 9:00 p. m. Program arranged through the courtesy of Myra Belle Vickers.
9:00 to 10:00 p. m. Program presenting Hatch Graham, singer and banjoist. Lyllon Wheeler Sarno, dramatic reader.

SATURDAY, MAY 24—

- 12:30 to 1:15 p. m. Program presenting Mrs. A. R. Price, soprano. Vera Harriet White, pianist, pupil of Alice H. Hughes.
2:30 to 3:30 p. m. Matinee Musicale.
7:00 to 7:30 p. m. Children's program presenting Prof. Walter Sylvester Herzog, telling stories of American history. Georgie Pepper, 7 years old, violinist. Helene Pirie, screen juvenile. Mrs. George L. Charrette, soprano, accompanied by Grace Eaton Dow.
8:00 to 10:00 p. m. Program arranged through the courtesy of Beatrice Fenner, composer.

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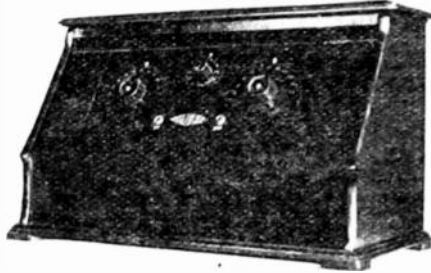
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Remote Control Stations:

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
 Hotel Ambassador: 8:00 to 9:00 p. m. Sunday, Tuesday, Thursday
 10:00 to 11:00 p. m. Monday
 11:00 to 12:00 p. m. Wednesday, Friday, Saturday

SUNDAY, MAY 18—

10:00 to 10:45 a. m. L. A. Church Federation Service.
 4:00 to 5:00 p. m. Sol Cohen Matinee Musicale.
 6:45 to 7:30 p. m. Silver Gate Trio.
 8:00 to 9:00 p. m. Ambassador Hotel Concert.
 9:00 to 10:00 p. m. Examiner Concert.
 10:00 to 11:00 p. m. Cinderella Ballroom Orchestra.

MONDAY, MAY 19—

5:15 to 5:45 p. m. Examiner News Bulletin.
 9:00 to 10:00 p. m. Examiner Concert.
 10:00 to 11:00 p. m. Ambassador—Max Fisher's Coconut Grove Orchestra.

TUESDAY, MAY 20—

5:15 to 5:45 p. m. Examiner News Bulletins.
 6:45 to 7:30 p. m. Vocal Concert.
 8:00 to 9:00 p. m. Ambassador—Max Fisher's Coconut Grove Orchestra.
 9:00 to 10:00 p. m. Examiner Concert.
 10:00 to 11:00 p. m. Harry Porter arranging concert.

WEDNESDAY, MAY 21—

5:15 to 5:45 p. m. Examiner News Bulletins.
 6:45 to 7:30 p. m. Nick Harris Detective Stories and Concert.
 9:00 to 10:00 p. m. Examiner Concert.
 10:00 to 11:00 p. m. Hollywoodland Community Orchestra.
 11:00 to 12:00 p. m. Ambassador—Max Fisher's Coconut Grove Orchestra.

THURSDAY, MAY 22—

5:15 to 5:45 p. m. Examiner News Bulletins.
 6:45 to 7:30 p. m. Y. M. C. A. Concert and Lecture.
 8:00 to 9:00 p. m. Ambassador Hotel Concert.
 9:00 to 10:00 p. m. Examiner Concert.
 10:00 to 11:00 p. m. Electa Ferry and Georgia Stark in Concert.

FRIDAY, MAY 23—

5:15 to 5:45 p. m. Examiner News Bulletins.
 6:45 to 7:30 p. m. Vocal Concert.
 9:00 to 10:00 p. m. Examiner Concert.
 10:00 to 11:00 p. m. Pupils of Myra Belle Vickers.
 11:00 to 12:00 p. m. Ambassador—Max Fisher's Coconut Grove Orchestra.

SATURDAY, MAY 24—

4:45 to 5:15 p. m. Evening Herald News Bulletins.
 5:15 to 5:45 p. m. Examiner News Bulletins.
 6:45 to 7:30 p. m. Vocal Concert.
 8:00 to 9:00 p. m. Crosby Sisters and Sigma Pi Violin Trio.
 9:00 to 10:00 p. m. Examiner Concert.
 10:00 to 11:00 p. m. Popular Song Concert.
 11:00 to 12:00 p. m. Ambassador—Max Fisher's Coconut Grove Orchestra.

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Evening Herald, Los Angeles

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5:00 to 5:30—Daily except Sunday. Evening Herald News Items.

MONDAY, MAY 19—

8:00 to 9:00 p. m. Evening Herald Radiolians, popular dance music. Henrietta Cugley, cellist; Ruth Rogers, pianist. Arlow Embertson one-string coconola.

WEDNESDAY, MAY 21—

8:00 to 9:00 p. m. Concert program presented by Abrasha Orlikoff.

FRIDAY, MAY 23—

Program courtesy of X. L. Radio Mfg. Co.

K J S—Bible Institute Radiophone—360 Meters

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M. E. CARRIER, Mgr. PROF. J. B. TROWBRIDGE, Director of Programs.

M. E. Carrier, Manager; Prof. J. B. Trowbridge, Director of Program

SUNDAY, MAY 18—

10:45 to 12:30 noon. Regular services of the Church of the Open Door, including sermon by Dr. John M. MacInnis. Mrs. Irvin S. Fallis, soprano. Mr. Paul S. McConnell, organist.

6:00 to 6:45 p. m. Radio Vesper service, with sermon by Rev. John A. Hubbard. Miss Paulene Plummer, organist. Mrs. Harry Rimmer, soprano.

8:00 p. m. Sermon by Miss Christabel Pankhurst. Mr. C. M. Brooks, baritone; Mr. Paul S. McConnell, organist.

TUESDAY, MAY 20—

8:00 to 9:00 p. m. Annual Festival Concert, given by the Church Choral Union, J. B. Trowbridge, director, featuring "The Daughter of Jairus" (Stainer), and a miscellaneous musical program by the chorus. Gudrun Estvad, violinist, and the Harmony Quartet. Soloists: Jessie F. Fallis, soprano; C. M. Books, bass, and J. B. Trowbridge, tenor. Paul S. McConnell, organist; Mildred H. McConnell, pianist.

THURSDAY, MAY 22—

8:00 to 9:00 p. m. Program arranged by courtesy of Misses Paulene Plummer and Rachel Wood, assisted by Misses Nora Jordan, contralto, and May Robertson, soprano. Program including organ and piano solos by Miss Plummer and Miss Wood, contralto and soprano solos and duets.

Closing Out!

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SUNDAY, MAY 18—

- 10:30 to 12:30 p. m. Great Organ and Chimes, Esther Fricke Green. Address by Wm. P. Nicholson, noted Irish Evangelist.
- 2:30 to 4:30 p. m. Introduction to Temple and Radio Church. Temple Silver Band. Choir: Frank E. Brown, baritone; Mrs. W. C. Corning, soprano; Chas. Sutton, tenor. HEART STIRRING MESSAGE by Rev. Wm. P. Nicholson.
- 7:00 to 7:30 p. m. Ruth Thomas playing "Hungarian Rhapsody No. 2," by Liszt. Ada Lantz, Swedish soprano; Silver Band; Male Quartet; Choir.
- 8:00 to 10:00 p. m. Salvation Sermon and Altar call, Aimee Semple McPherson.

TUESDAY, MAY 20—

- 3:30 to 4:00 p. m. Organ Recital, Esther Fricke Green.
- 4:00 to 5:30 p. m. Dorothy Sauter, 'cellist; Mrs. Eva Jennison, Evangelistic singer; John Walker, tenor; Marion McGlashan Muller, Salvation Army soloist; Flanche Scott, soprano.
- 6:30 to 7:30 p. m. KOZY HOUR. Inez Lasley, soprano; Eva G. Hathaway, violinist; Frank E. Brown, baritone; Mr. and Mrs. A. T. Heard, cornet and trombone duet. Aimee Semple McPherson's version of "Pilgrim's Progress," read by Daphne Goss, teacher of expression. "Mother's Story."
- 6:00 to 8:00 p. m. Great Auditorium Service and Message.
- 9:00 to 10:00 p. m. Swanee Jubilee Singers in plantation melodies. Margaret Knox McGraw, contralto, "Songs of David."
- 10:00 to 10:30 p. m. Organ recital, Roy Reid Brignall.

WEDNESDAY, MAY 21—

- 2:30 to 4:30 p. m. Divine Healing service and sermon. Testimonials, Cheery Words for Shut-ins. Altar call and prayer for the sick.
- 6:30 to 7:30 p. m. KOZY HOUR. Francis Floto, bird whistler; Annie Lacey, child soprano; A. J. W. Galbraith, basso; Monte Plume, falsetto. "Fireside Story by Mother." Ruth Thomas accompanist and soloist.

THURSDAY, MAY 22—

- 3:30 to 4:30 p. m. Organ recital and program courtesy B. Earnest Ballard and assisted by Margaret Kennedy.
- 4:30 to 5:30 p. m. Sarah Karcher, violinist; Mrs. R. W. Klages and Mrs. W. C. Corning, soprano; Ada Lantz, Swedish soprano. Roy Reid Brignall, accompanist.
- 6:30 to 7:30 p. m. KOZY HOUR. Children's program presenting Paul de Ronde, aged 14, Marimba soloist. Ruth Clayton, "The Children's Friend," in story and song. Blanche Clay, soprano; S. T. Lashbrook, tenor. "Good Night Story."
- 8:00 to 9:00 p. m. The Great Baptismal service, "Splashing Waters."
- 9:00 to 10:00 p. m. Gray Studio program, courtesy of Butts Music Co., featuring Carl Edward Hatch, violinist, and associates. "Taps."

FRIDAY, MAY 23—

- 3:30 to 4:00 p. m. Organ recital, Roy Reid Brignall.
- 4:00 to 5:30 p. m. Madeleine Gilliland, "Happy Song Girl"; Anna McMillan, reading; Ethel Miller Thomas and Eleanor Hoke, "Plantation Melodies." Thomas Johnson, "The Golden Voiced Negro Baritone." Ruth Russell, soprano; Mildred Wetkavaska, violinist.
- 6:30 to 7:30 p. m. KOZY HOUR. Special program, courtesy of Harry James Beardsley (Cousin Jim), and associates. Reading of Aimee Semple McPherson's version of "Pilgrim's Progress," Daphne Goss. "Mother's Story."
- 8:00 to 9:00 p. m. Crusaders Chorus. "National Address" by Judge Carlos S. Hardy, Justice Superior Court. Madeleine Gilliland, "The Happy Song Girl"; evangelistic address by Aimee Semple McPherson.
- 9:00 to 10:00 p. m. Gray Studio program, presented through the courtesy of Margaret Knox McCraw, contralto, and associates, assisted by the Temple Silver Band. "Evening Meditation."

SATURDAY, MAY 24—

- 3:30 to 5:00 p. m. A. L. Stark, baritone; Inglewood High School Trio: Elsie Noah, piano; Rita Bell, 'cello, and Blanche Noah, violinist. Grace Waldron, soprano. E. E. Colebaugh, lyric tenor, accompanied by J. Harold Forshaw (selected numbers). Ruth Clayton, reading.
- 5:00 to 5:30 p. m. Organ recital, Roy Reid Brignall.
- 6:30 to 7:30 p. m. KOZY HOUR. Children's program, presenting Gertrude Wilding, child soprano; James R. Hood and Dwight Sankey Tock, baritone. Mrs. St. Elmo Bateman, concert and gospel soloist. "Preview I. S. S. Lesson by Mother."

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WEDNESDAY, MAY 21—7:00 p. m.

THURSDAY, MAY 22—2:50 to 3:30 p. m.

FRIDAY, MAY 23, 9:10 p. m.

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PROGRAM FOR WEEK BEGINNING SUNDAY, MAY 18

SUNDAY, MAY 18—

9:30 to 10:00 p. m. Talk by Rev. John Snape, pastor of the First Baptist Church of Oakland. Sacred songs.

MONDAY, MAY 19—

8:00 to 9:00 p. m. Educational program broadcast from the University of California over private leased wires through KLX.

9:00 to 10:00 p. m. Dance music by L'Aiglon Ball Room Orchestra, Adele Steinbeck, leader and pianist; Raymond Buraft, drums; Sam Madge, saxophone; Willis Bowman, trumpet; Chick Moore, trombone; Raymond Town, banjo, and Stanley Boquest, violin.

WEDNESDAY, MAY 21—

8:00 to 10:00 p. m. Studio program. Program under direction of Walter Horace Bundy. Accompanists, Hjalmar Stromberg, Miss Mildred Hackett; soloists, Miss Maud Allen, Miss Helen Clevenger, Messrs. Lindquist and Ramsay. Piano soloists, Miss Dorothy Edwards, Miss Margaret Graham. Male Chorus, Eastbay Serenaders. Male Chorus, (a) Grand March from "Aida"; (b) Avil Chorus from "Trovatore"—Eastbay Serenaders. Piano solo, Selected—Miss Margaret Graham. Mezzo soprano solos, (a) Vissi D'Arte (Tosca); (b) Minnetonka (Lieurance)—Miss Maud Allen. Violin solos, (a) Liebsleid (Kreisler); (b) Souvenir (Drdla)—Mr. Warren Brauer. Soprano solos and male chorus, (a) Carry Me Back to Old Virginny; (b) Mighty Lak a Rose—Miss Margaret Graham and Eastbay Serenaders. Vocal duets, (a) "Suel Aria," Letter duet from "Marriage of Figaro"; (b) L'addio (Nicaloi)—Misses Hackett and Hatch. Overture by American Theater, Owen Sweeten, director; broadcast direct from the theater over private leased wires through Radio KLX. Male chorus, Soldiers' Chorus (Faust)—Eastbay Serenaders. Vocal solo, A Necklace of Love—Miss Helen Clevenger. Baritone solo, Little Lad O'Dreams—Raymond Ramsey. Male chorus, (a) Kentucky Babe; (b) Love's Old Sweet Song—Eastbay Serenaders. Violin solos, (a) Meditation (Tbais); (b) Canto Amoroso (Elman)—Warren Brauer. Male chorus with solos, (a) A Song of the Sea (Burns)—Soloists, Messrs. Phillips and Buckalew; (b) Asleep in the Deep—Mr. Scheller, soloist, Eastbay Serenaders. Vocal solos, (a) Ah, Love But a Day (Protheroe); (b) The Answer (Terry); (c) Rain (Curran)—Miss Maud Allen. Piano solos, (a) Chopin's Prelude; (b) Coming of Spring (Palmgren)—Miss Dorothy Edwards.

FRIDAY, MAY 23—

8:00 to 10:00 p. m.

Studio program—Old Time Songs: Soprano solos with violin obligato, (a) Those Songs My Mother Used to Sing; (b) I Can Not Sing the Old Songs—Miss Carolyn Gilman, Miss Beulah Thorpe, piano; Ned Johnson, violin. Violin solo, Silver Threads Among the Gold—Ned Johnson. Soprano solos, with violin obligato, (a) Last Rose of Summer; (b) Love's Old Sweet Song; (c) Listen to the Mocking Bird—Miss Carolyn Gilman, Beulah Thorpe, pianist, Ned Johnson, violinist. Old Time Jiggs and Reels—Ned Johnson. Soprano solos, (a) Sweetest Story Ever Told; (b) Selected—Miss Carolyn Gilman, Beulah Thorpe, pianist. Hawaiian Music, Group 1—Piea's KLX Hawaiians. Vocal solos, (a) I Shall Be Waiting Piano solos, Selected—Catherine Brown. Vocal duets, (Wilcox); (b) All For You (Marlin)—Mrs. Leo Hanly. Instrumental selections, Group 2—Piea's KLX Hawaiians. Vocal solos, (a) Parisian Flower (Barrett); (b) E'en as the Flower (Logan);



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K G O—Pacific Broadcasting Station—312 Meters**GENERAL ELECTRIC COMPANY (312 Meters), OAKLAND, CALIFORNIA
(Pacific Time)****WEEK OF MAY 18, 1924**

- SUNDAY, MAY 18—**
3:30 p. m. Concert by KGO Little Symphony Orchestra and soloists.
- MONDAY, MAY 19—**
1:30 p. m. New York Stock Exchange and U. S. Weather Bureau reports.
3:00 p. m. Short musical program. Address in connection with series of talks on "The Health of the Child," given by the Parent-Teacher Association.
4:00 to 5:30 p. m. Hotel St. Francis Dance Orchestra, San Francisco, Henry Halstead, leader.
6:45 p. m. Final reading, Stock Exchange and Weather Reports, and News Items.
8:00 p. m. Educational program, with musical numbers. Courses in Agriculture, Spanish, Music, Economics, and Literature.
- TUESDAY, MAY 20—**
1:30 p. m. New York Stock Exchange and U. S. Weather Bureau reports.
4:00 to 5:30 p. m. Concert Orchestra of the Hotel St. Francis, San Francisco, Fermin Cardona, conducting.
6:45 p. m. Final reading, Stock Exchange and Weather Reports, and News Items.
8:00 p. m. Radio play, "Seven Keys to Baldpate," by George M. Coban. Music by Arion Trio.
10:00 to 1:00 a. m. Hotel St. Francis Dance Orchestra, San Francisco, Henry Halstead leader.
- WEDNESDAY, MAY 21—**
1:30 p. m. New York Stock Exchange and U. S. Weather Bureau reports.
3:00 p. m. Short musical program. Address by Louis L. de Jean on the subject, "What Is the Social Instinct?"
4:00 to 5:30 p. m. Concert Orchestra of the Hotel St. Francis, San Francisco, Fermin Cardona conducting.
6:45 p. m. Final reading, Stock Exchange and Weather Reports, and News Items.
- THURSDAY, MAY 22—**
1:30 p. m. New York Stock Exchange and U. S. Weather Bureau reports.
4:00 to 5:30 p. m. Concert Orchestra of the Hotel St. Francis, San Francisco, Fermin Cardona conducting.
6:45 p. m. Final reading, Stock Exchange and Weather Reports, and News Items.
8:00 p. m. Program furnished by Tracy, California, High School.
- FRIDAY, MAY 23—**
1:30 p. m. New York Stock Exchange and U. S. Weather Bureau reports.
3:00 p. m. Short musical program. Clara Dolliver Burtchael in original poems.
4:00 to 5:30 p. m. Concert Orchestra of the Hotel St. Francis, San Francisco, Fermin Cardona conducting.
6:45 p. m. Final reading, Stock Exchange and Weather Reports, and News Items.
- SATURDAY, MAY 24—**
12:30 noon. New York Stock Exchange and U. S. Weather Bureau reports.
4:00 to 5:30 p. m. Concert Orchestra of the Hotel St. Francis, San Francisco, Fermin Cardona conducting.
8:00 p. m. Address, "Humors of the Law," by Archibald Treat. Musical program.
10:00 to 1:00 a. m. Hotel St. Francis Dance Orchestra, San Francisco, Henry Halstead, leader.
- TUESDAY, MAY 20—**
8:00 p. m. "SEVEN KEYS TO BALDPATE," A Melodramatic Farce, in a Prologue, Two Acts, and an Epilogue, by George M. Coban. Characters: Elijah Quimby, the caretaker of Baldpate Inn; Mrs. Quimby, the caretaker's wife; William Hallowell Magee, the novelist; John Bland, the millionaire's right-hand man; Mary Norton, the newspaper reporter; Mrs. Rhodes, the charming widow; Peters, the Hermit of Baldpate; Myra Thornhill, the blackmailer; Lou Max, the Mayor's man "Friday"; Jim Cargan, the crooked Mayor of Reuton;

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Thomas Hayden, the president of the R. & E. Suburban Railroad; Jiggs Kennedy, Chief of Police of Asquewan Falls; the owner of Baldpate. Scene: The office of Baldpate Inn. Time: The present. Instrumental selections: (a) Quartet from Rigoletto (Verdi), (b) Valse Triste (Sibelius), Arion Trio. Act I. Instrumental Selections: (a) Sextet from Lucia (Donizetti), (b) Barcarolle (Rubenstein), Arion Trio. Act. II. Instrumental Selections: (a) I Hear You calling Me (Marshall), (b) Selections from "The Merry Widow" (Lehar).

THURSDAY, MAY 22—
8:00 p. m.

Program furnished through the courtesy of the Tracy, California, High School, H. O. Williams, Principal; sponsored by the Tracy Lions' Club. Reveille (Berton Ballenger). Orchestral Selections: (a) King of Spain (Freta), (b) Superba (Dalbey), Tracy High School Orchestra, A. A. Graham, conductor; Duet for Cornets, Mignonette (Dalbey), Martin O'Neill and Alvin Freudendahl; Overture, The Golden Magnet (Bennet), Tracy High School Orchestra; Address, "Education of the Future," H. O. Williams, Principal of the Tracy High School; Orchestral Selections: (a) Parade of the Wooden Soldiers (Jessel), (b) In Old Pekin (King), Tracy High School Orchestra; Xylophone Trio: Lawrence Moore, Celestyna Richards, Louverne Richards; Piano Solo, Anitra's Dance (Grieg), Eleanor Moore; Duet for Violin and Flute, A Little Chat (Noakes), Robert Chrisman, violin; Helen Rittenhouse, flute. Overture, Frolics of Cupid (Gruenwald), Tracy High School Orchestra; 'Cello Solo, Serenade (Schubert), Georgia Pressey; Orchestral Selection, Melodies from "The Bohemian Girl" (Balfe), Tracy High School Orchestra; Taps, Martin O'Neill; Piano Solo, Faust Transcription (Liszt), Edna Linkowski. Soprano Solos: (a) Villanelle (Dell Acqua), (b) Rockin' in the Wind (Neidlinger), Laura Broderick. Baritone Solos: (a) The Bandelero (Stuart), (b) Gypsy John (Clay), James E. Ziegler. Duet for Soprano and Baritone: Piangi (from "Rigoletto") (Verdi), Laura Broderick and James E. Ziegler. Piano Solos: (a) Valse Caprice (Newland), (b) Lucia Sextet (for left hand) (Leschetizky), Edna Linkowski.

SATURDAY, MAY 24—
8:00 p. m.

Overture, North Pole, Hayes (Fillmore), McClymonds High School Band, Oakland, California; W. R. Douglass, Director. Soprano Solos: (a) When Love Fills Your Heart With Song, Russell (Boosey); (b) The Garden of Your Heart, Dorel (Boosey), Mrs. J. H. Keyser, Elsbeth Dove, accompanist. Saxophone Quartet: (a) America's Destiny (Holmes), (b) Rigoletto Quartet (Verdi), McClymonds High School Saxophone Quartet. Wilfer Whitehead, first saxophone; Collins Matthiessen, second saxophone; Camillo Bettencourt, tenor saxophone; Leon Rose, baritone saxophone. Baritone Solos: (a) Border Ballad, Cowen (Boosey), (b) Dreaming Alone in the Twilight, Moore (Ditson), Lauren Wilson; Mrs. Mark Latham, accompanist. Paper, "Pictures and Picture Hanging," Helen Parker (courtesy Art Dealers' Association of California); Tenor Solo, Celeste Aida (from "Aida") (Verdi), Frank Mueller; Piano Solo, Ballade in G Minor (Chopin), Douglas Soule; Mezzo-Soprano Solo, Slumber Boat (Gaynor), Marguerite Weaver; Address, "Humors of the Law," Archibald Treat of San Francisco; Band Selection, Banana Humoresque (arr. by W. R. Douglass), McClymonds High School Band. Vocal Selections: (a) Sierra Sue (Carey) (Buell Music Co.), (b) My Old Irish Mother (Cary) (Buell Music Co.), Marie Wallman; Cornet Solo, Inflammatus (Stabat Mater) (Rossini), Milton Barnes, accompanied by Band.

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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 Selger'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.

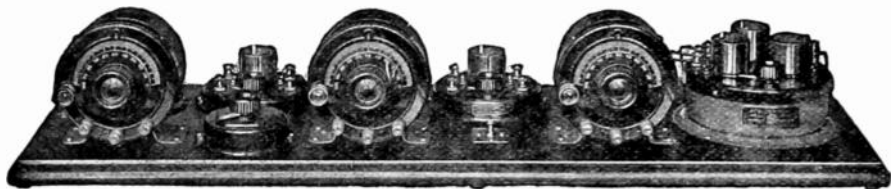
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MONDAY, MAY 19—

Summer Millinery, Miss E. Belle Alger. Piano solos, Miss Florence Carpenter. Mites control, L. W. Cassel, poultry department. Mezzo-soprano solos, Miss Floy Fay Bean. Orchestra selections.

WEDNESDAY, MAY 21—

Forage Crops, Prof. O. E. Barbee. Piano solos, Miss Margaret Rawson, Puyallup. "Phipps," one-act play by students of Mrs. D. C. Miller. Individuality in Dress, Miss Helen K. Robson. Weeds on the Farm, Prof. Leonard Hegnauer. Soprano solos, Miss Muriel Halloway, LaCrosse, Kansas.

FRIDAY, MAY 23—

Training for Agriculture, Dean E. C. Johnson. Instrumental selections. What Sodatol Meant to Washington Farmers, R. M. Turner. Soprano solos, Miss Aneita White, Coeur d'Alene, Ida. New Books to Read, Miss Alice Webb.

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Pacific Time

CARL E. HAYMOND, Program Announcer

MONDAY, MAY 19—

8:30 p. m. The Pacific States Electric Company presents one of Seattle's most popular orchestras in a two-hour dance program.

WEDNESDAY, MAY 21—

8:30 p. m. The Franklin-Wicks Company of Seattle, agents for Franklin Automobiles, will give a unique evening's entertainment. The program is as follows: Air Cooled Quartet—"Songs You'll Enjoy." R. H. Vivian, Seattle's Sunny Songster; Frank M. Moulton, Soloist of Sweet Songs; Wm. H. Butt, Master of Mellow Melodies; David Brown, Singer of "Songs of the Sea." Carl Reiter—The "Irish" Manager of the Orpheum Theatre, giving Stories I Have Heard Here and There. W. A. Wicks—The "Wicks" part of the Franklin-Wicks Co. Address, "The Future Automobile." Syd Jones—Piano Wizard. Hits on Four, Six, Eight or Twelve—take your choice.

Mrs. Romeyn Jansen—Dramatic Contralto, accompanied by Miss Katherine Robinson. Arranged by L. A. Hubbs, the Co. end of the Franklin-Wicks Co.

FRIDAY, MAY 23—

8:30 p. m. The Metropolitan Building Company of Seattle will present a diversified program of vocal and instrumental music. Mr. A. A. Bass, editor of the Fur Farmer Magazine, will give the first of a series of addresses in the interest of the fur industry of the Pacific Northwest, an instructive talk concerning a great future industry.

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PORTLAND, OREGON

(PACIFIC TIME)

PROGRAM FOR WEEK MAY 18 TO 24, 1924

SUNDAY, MAY 18—

Church service by Centenary-Wilbur Methodist Church, Rev. Cbas MacCaughey, pastor.
7:00 p. m. George Olsen's Concert Orchestra in dinner program; baseball scores.

MONDAY, MAY 19—

3:30 p. m. Literary program by Portland Library Association.
8:00 p. m. Dramatic recital by Mrs. Herbert Garr Reed.
9:30 p. m. Program arranged by Hallene Porter.

TUESDAY, MAY 20—

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, MAY 21—

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. Concert by B. P. O. E. Band, Lodge No. 142, Portland, Ore.
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. Intermission numbers by Rosarian Quartet.

THURSDAY, MAY 22—

11:15 a. m. Window Shopping.
12:30 p. m. Concert provided by Sieberling Lucas Music Co.
3:30 p. m. Woman's story program. Installment of "The Midlander," by Booth Tarkington.
8:15 p. m. Studio program of dance music by George Olsen's Metropolitan Orchestra of Hotel Portland, Herman Kenin, director.
10:00 p. m. Dance music by Olsen's Metropolitan Orchestra of the Hotel Portland. Intermission solos by Mrs. C. L. Neilson, soprano.

FRIDAY, MAY 23—

11:15 a. m. Market Basket.
12:30 p. m. Program by Peck Holton's Orchestra of The Wintergarden.
3:30 p. m. Lecture by Jesse D. McComb, head of Home Economics Extension Service, Oregon Agricultural College.
8:00 p. m. Oratorical contest under auspices of U. of O., division of public speaking.
8:30 p. m. Silent until 10:30 p. m.
10:30 p. m. Hoot Owls.

SATURDAY, MAY 24—

3:00 p. m. Children's program. Story by Aunt Nell.
10:00 p. m. Baseball scores, weather forecast and dance music by George Olsen's Metropolitan Orchestra of Hotel Portland (two hours).
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DAILY—FEATURES—**SUNDAY, MAY 18—**

- 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 from the Rialto Theater, Miss Marguerite Agnew White, organist. (E. L. O. announcing.)
 3:00 to 4:00 p. m. Concert by Cleburne, Texas, artists. (E. L. O. announcing.)
 5:00 p. m. Sport review.
 9:00 to 10:00 p. m. Popular program by Crockett's Texas Orchestra.

MONDAY, MAY 19—

- 5:30 to 6:30 p. m. Concert by the Municipal Band of Jayton, Texas.
 7:30 to 8:45 p. m. Concert by the Men's and Girls' Glee Clubs of the John Tarleton College, Stephenville, Texas.

TUESDAY, MAY 20—

- 5:30 to 6:30 p. m. Concert by Walter Colling's Band of Cleburne, Texas.
 7:30 to 8:45 p. m. Concert by artists of the Forth Worth Harmony Club.

WEDNESDAY, MAY 21—

- 5:30 to 6:30 p. m. Concert by Sam S. Losh, baritone and pianist, and assisting artists.
 7:30 to 8:45 p. m. Concert by Dick Gaines' Orchestra.

THURSDAY, MAY 22—

- 7:30 to 8:45 p. m. Concert by artists of the Business and Professional Women's Club. Concert of Spanish and Hawaiian music by artists of Thorp Spring, Texas, Christian College.

FRIDAY, MAY 23—

- 5:30 to 6:30 p. m. Concert by the First Methodist Church Choir of Cleburne.
 7:30 to 8:45 p. m. Concert by Dot Echols McCutchan's Orchestra.

SATURDAY, MAY 24—

- 5:00 to 5:40 p. m. Review of the interdenominational Sunday School Lesson and radio Bible class, by Mrs. W. F. Barnum.

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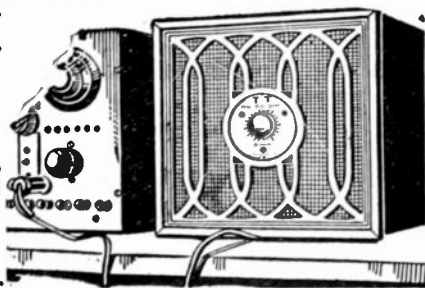
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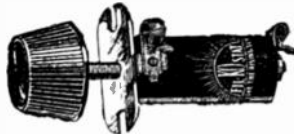
THE SPECTOR COMPANY, Los Angeles, San Francisco, Seattle

W F A A—Dallas News-Journal—476 Meters(PACIFIC TIME) DALLAS, TEXAS
SPECIAL DAILY FEATURES

- MONDAY, MAY 19—**
10:30 to 11:00 a. m. Address, "Why the 'Y'?" by C. E. Osborne, physical director Dallas Y. M. C. A.
6:30 to 7:30 p. m. Mrs. Robert H. Morton presents the Y. W. C. A. Choral Club.
- TUESDAY, MAY 20—**
10:30 to 11:00 a. m. Address, DeWitt McMurray, editor The Semi-Weekly Farm News, in a medley of humor, pathos and wisdom.
6:30 to 7:30 p. m. Varied program by performers from Frost, Texas.
9:00 to 10:00 p. m. Musical program presenting Miss L. Mabel Cranfill and assisting artists of Dallas.
- WEDNESDAY, MAY 21—**
10:30 to 11:00 a. m. Musical program presenting the Red-Headed Girl of The Dallas Journal. Station WFAA will be silent for remainder of the day.
- THURSDAY, MAY 22—**
10:30 to 11:00 a. m. Epps G. Knight, pioneer and financier, on "The Church as It Was as It is."
6:30 to 7:30 p. m. W. H. Dawson and his singers and players from Rockwall, Texas.
9:00 to 10:00 p. m. Mustang Serenaders, a merry symphony.
- FRIDAY, MAY 23—**
10:30 to 11:00 a. m. Address, Dr. Robert Stewart Hyer, president emeritus of Southern Methodist University, head of the department of physics, on the Sunday School Lesson.
6:30 to 7:30 p. m. W. B. Chenoweth and his Cornfield Symphony Orchestra of old fiddlers.
- SATURDAY, MAY 24—**
10:30 to 11:00 a. m. Address, Hugo Swan, manager Dallas Better Business Bureau.
6:30 to 7:30 p. m. Reader, pianist and singer from faculty of North Texas State Teachers' College, Denton, Texas.
9:00 to 10:00 p. m. Adolphus Hotel Orchestra, dance music broadcast from the junior ballroom of the hotel; Lawrence Morrel, orchestra director; R. B. Ellifritz, managing director of the hotel.
- SUNDAY, MAY 25—**
4:00 to 5:00 p. m. Radio Bible Class, Dr. William M. Anderson, pastor First Presbyterian Church, teacher; Bible study and Gospel song.
7:00 to 8:00 p. m. Netto Male Quartet, vocal recital.
8:00 to 9:00 p. m. City Temple Orchestra, Prof. A. Cruz, director; Harry M. Gibney, manager.

Professional testimony

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WOC—Palmer School of Chiropractic—484 Meters

Davenport, Iowa—Pacific Time

SUNDAY, MAY 18—

- 5:00 p. m. Organ Recital from the B. J. Palmer residence, Erwin Swindell, organist.
 6:00 p. m. Church Service—Rev. Chas. H. Lewis, pastor Bethel Baptist Church, Port Byron, Illinois. Subject of sermon, "The Beaten Path." Musical numbers to be announced.
 7:30 p. m. Musical program (1½ hours). The Palmer School Radio Orchestra. Erwin Swindell, conductor; assisted by John McGreevy, baritone, and Mrs. John McGreevy, contralto.

MONDAY, MAY 19—

- 6:00 p. m. Musical program. Program of popular music by the LeClaire Hotel Roof Garden Orchestra, of Moline, Ill.
 8:00 p. m. Musical program. Program by the Wennerberg Chorus of Augustana College, Rock Island, Ill. Cyril Graham, conductor.

TUESDAY, MAY 20—

- Silent night for WOC.

WEDNESDAY, MAY 21—

- 5:00 p. m. Educational Talk—"Building an Automobile for the Public," by H. C. Snow, Chief Engineer of the Velie Motors Corporation, Moline, Ill.
 6:00 p. m. Musical program. Troy Laundry Machinery Co. Band, of East Moline, Ill. W. H. B. Scobie, director.

THURSDAY, MAY 22—

- 7:00 p. m. Orchestra program (1 hour)—The Palmer School Radio Orchestra. Erwin Swindell, conductor. Featuring "Minnehaha's Love," "Wonderful Pal, Good-night," "Dream Girl," "You'll Be Sorry," "You Taught Me the Meaning of Love," "I Still Believe in You." (Popular selections released through the National Association of Broadcasters, of which WOC is a member.) Ralph W. Fuller, baritone soloist.

FRIDAY, MAY 23—

- 6:00 p. m. Musical program (1 hour)—Readings and music by select juvenile artists from the Tri-Cities and Vicinity.
 7:00 p. m. Weekly Tourists' Road Bulletin, as compiled by Touring Bureau, Davenport Chamber of Commerce.

SATURDAY, MAY 24—

- 7:00 p. m. Orchestra program (1 hour)—The Palmer School Radio Orchestra. Erwin Swindell, conductor. Featuring "Memory's Garden," "I've Got the Greens," "Chimes Blues," "Someday, Sweetheart," "Forget-Me-Not," "You Can Take Me Away from Dixie." (Popular selections released through the National Association of Broadcasters, of which WOC is a member.) Ralph W. Fuller, baritone soloist.

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Open Evenings

Los Angeles

KYW—560 Kilocycles (536 Meters)—Westinghouse, Chicago

DAYLIGHT SAVING TIME
FOR WEEK OF MAY 18 TO MAY 25, 1924

KYW, "The World Crier," will broadcast the latest news of the world every half hour—on the hour and half hour—during the twenty four. This service is broadcast under the auspices of the Chicago Evening American, International News Service, Cosmopolitan News Service, from 5 a. m. to 5 p. m. KYW bulletins are provided from 5 p. m. to 5 a. m. by the Universal News Service in co-operation with the Chicago Herald and Examiner.

SUNDAY, MAY 18—

6:00 a. m.

Central Church Service broadcast from Orchestra Hall, Chicago. Dr. Frederick F. Shannon, pastor. Musical program under the direction of Daniel Prothero.

11:30 a. m.

Studio Chapel Service under the direction of the Chicago Church Federation. The speaker will be announced by radiophone. Preliminary service of the Chicago Sunday Evening Club.

3:00 p. m.

5:00 p. m.

Regular service of the Chicago Sunday Evening Club. The speaker of the evening will be Mr. Fred B. Smith of New York City, whose address will be "Is America a Great Nation?"

TUESDAY, MAY 20—

5:00 to 6:30 p. m.

Musical program given by the following artists: Florence Bruscho Hering, soprano; F. W. Soltysiak, tenor; Hilda Butler Farr, pianist; Norma Tarkington Gans, dramatic reader; Sallie Menkes, accompanist. Speeches under the auspices of the American Farm Bureau Federation. The speakers of the evening will be A. R. Simpson, assistant director, Organization Department, American Farm Bureau Federation, whose subject will be "Playing Margins," Senator H. C. Kessinger, Aurora, Illinois, whose subject will be the "Organized Farmer."

WEDNESDAY, MAY 21—

5:00 to 6:00 p. m.

Musical program: Margaret Martin, soprano; Sallie Menkes, accompanist; C. A. Johnson, tenor; O. H. Davis, reader; Rev. A. Pliskin, baritone; Jasha Schammlin, accompanist; Dick Lloyd.

7:00 to 11:30 p. m.

Midnight Revue. This is a Westinghouse, Chicago Evening America feature, broadcast from KYW's studio in Hearst Square, Chicago. Among the artists will be J. Remington Welch, organist at McCvicker's theatre.

THURSDAY, MAY 22—

5:00 to 6:30 p. m.

"Twenty Minutes of Good Reading," by Rev. C. J. Pernin, S. J., Head of Dept. of English, Loyola University. Miss Meyers will sing the following selections: Dedication (Schumann); Floriana Song (Godard); Joy of My Heart (Giordani); Were I a Bird of Air (Hiller). Speeches will be radiocast from the meeting of the Credit Men's Association to be held in the Gold Room of the Congress Hotel.

FRIDAY, MAY 23—

5:20 to 6:30 p. m.

Speeches under the auspices of the American Farm Bureau Federation. The speaker of the evening will be E. W. Wentworth, director of Armour's Live Stock Bureau, whose subject will be "Why Our Company Is Supporting Boys' and Girls' Club Work." Paul A. Potter, Asst. Editor, whose subject will be "Among Our Neighbors."

7:00 to 11:30 p. m.

Midnight Revue. This is a Chicago Evening American, Westinghouse feature, broadcast from KYW's studio in Hearst Square,

SATURDAY, MAY 24—

5:00 to 11:00 p. m.

Musical program courtesy of the Sherwood Music School. Direction of Ruth H. Lathrop. Artists and detailed program will be announced by radiophone. Talk by Vivette Gorman, Home Economics Dept., Peoples Gas Co. Youth's Companion, including stories, articles and humorous sketches. Late show.

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PHOENIX RADIO LABORATORY

PHOENIX - - ARIZONA

K S D—St. Louis Post-Dispatch—546 Meters

Pacific Standard Time

- MONDAY, MAY 19—**
 6:30 p. m. Music program broadcast direct from the Grand Central Theater.
- TUESDAY, MAY 20—**
 4:30 p. m. Program of Abergh's Concert Ensemble broadcast direct from the Hotel Statler.
 7:00 p. m. Program by Western Military Academy Orchestra and Glee Club. Address by O. H. Pierce on "Aluminum."
 9:00 p. m. Broadcasting direct from Hotel Statler dance music played by Rodemich's Orchestra.
- WEDNESDAY, MAY 21—**
 6:00 p. m. Program by Advanced Music Department of St. Louis Public Schools. Orchestra of 500.
- THURSDAY, MAY 22—**
 6:00 p. m. Operatic program by G. Mario Lanza, tenor; Helen Stephens-Phillips, soprano; Arthur Koch, pianist, and chorus of 30 voices broadcast direct from the Odeon.
- FRIDAY, MAY 23—**
 6:00 p. m. Combined vocal and instrumental program by the Advanced Music Department of the St. Louis Public Schools. Orchestra of 500, chorus of 800 voices.
- SATURDAY, MAY 24—**
 6:00 p. m. Missouri Theater Orchestra concert specialties broadcast direct from the theater.

CKCH — Canadian National Railways — 435 Meters

Radio Program to be broadcast from
 The Canadian National Railways Broadcasting Station, Ottawa, Canada
 (Pacific Time)

WEDNESDAY, MAY 21—5:00 P. M.

PART I

Concert by the Regimental Band of The Governor-General's Foot Guards
 By kind permission of Col. R. F. Parkinson, D.S.O., and Officers

- | | |
|--|---------------|
| March—"Coronation" (Meyerbeer) | By the Band |
| Overture—"Orpheus" (Offenbach) | By the Band |
| Waltz—"Roseland" (Jewell) | By the Band |
| Song—"Love's Old Sweet Song" (Molloy) | Mr. Wm. Nixon |
| Selection—"Songs of Scotland" (Lampe) | By the Band |
| Address—By Mr. J. M. Dudley, entitled "The Canadian National Railways and the Y. M. C. A." | |
| Descriptive—"Hunting Scene" (Bucalossi) | By the Band |
| Patrol—"Blue and Grey" (Dalbey) | By the Band |
| Selection—"Reminiscences of England" (Godfrey) | By the Band |
| March—"Priests War March from Athalie" (Mendelssohn) | By the Band |
| Mr. J. T. Brown, Director of Music. Mr. Wm. Nixon, Assisting Artist-Tenor | |

PART II

Chateau Laurier Orchestra under the direction of Mr. Jas. McIntyre, in popular Dance Selections broadcast direct from the Grill Room of the Chateau Laurier Hotel.
 J. S. McArthur, Director of Programs, Canadian National Railways, Montreal.

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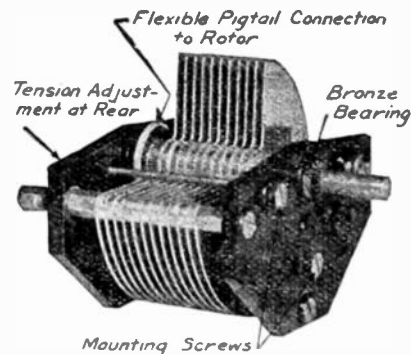
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Variable Condenser Construction

Letters to the Editor

May 6, 1924.

Radio Doings,

308 Van Nuys Building, Los Angeles, California.

Dear Sir: I would appreciate it very much if one of your readers would tell me what station was broadcasting on Tuesday, between 7:30 and 8 o'clock. The program consisted of band selections, and continuously played without announcing their call letters.

We appreciate your Radio Doings every week, and I send copies back to Kansas City to let them see what California is doing in radio development. Thanking you in advance, yours truly,

M. R. RICHARDSON,

824 East Adams Street, Los Angeles, California.

Answer: Perhaps some of our readers can help you.

New Naval Communications Chief

Captain Ridley McLean, U. S. N., formerly in command of the battleship Arkansas, has been designated to relieve Captain O. P. Jackson as Director of Naval Communications. Captain Jackson goes to command the Training Station at Newport, R. I.

Captain McLean, who is well trained to handle naval communications, is a graduate of both the Naval and Army War Colleges, has served as Judge Advocate General of the Navy, and is a gunnery expert. He reported to the Navy Department at Washington recently and is understudying Captain Jackson, whom he relieves on June 1st.



"Death Valley" Permactec Price \$1.00

The "Death Valley" PERMATECT is constructed expressly for Reflex Circuits. Recommended by Radio Engineers. Will stand up under any High Plate Voltage.

This Product is also an ideal detector for a crystal set.

"Death Valley" Crystal Price 30 Cents

The "Death Valley" Crystal is a natural mineral with every point sensitive. The Volume and Clarity has not been equaled. Will stand up under any conditions, as it cannot be damaged. Sold only in sealed packages.

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Pacific Coast Distributor, V. P. LANCE, San Fernando, Calif.

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Complete Radio Satisfaction?

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**Important
Announcement**

June 1st

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TRinity 2350

115 East 11th St.

Los Angeles

Letters to the Editor

Dear Sir:

I hope this letter will find a place in the "Letters to the Editor" department of your very praiseworthy magazine. It is dedicated to those who are guilty of making their radio sets radiate.

Radiation from radio receivers is becoming the most serious of radio menaces. Many a good program is utterly ruined by some thoughtless or ignorant person who is operating a receiver which is radiating.

When one's regenerative receiver's detector tube is turned up until a rushing sound is heard, he may be certain that he is sending out a wave that will annoy anyone listening in within one-half mile radius or farther. When the receiver has been turned up to this point, the next thing the operator does is to twist the knobs and dials until a whistle of some station is heard. All this time a wave is emitted over the entire wave length bands he may happen to cover. Now that the carrier wave to the station is heard, the operator tries to tune it out by gradually tuning it toward the zero point. He now has his station, but with the slightest movement of his finger the set will howl or groan, and of course anyone else who happens to be listening to the same station will also hear said howl or groan. I might say here that he could shield his set until the pigs begin to fly, but as long as the set is oscillating it will always be subject to body capacity. Shielding is meant to drop a station from fading when the hand is brought away from the set after the station has been properly tuned in. If the detector tube is kept below the point where the rushing sound starts, that is, below the oscillation point, and the station is tuned in, no howl will be experienced, and probably no body capacity if the set is properly shielded.

Those persons who have sets that will radiate should observe every precaution that they do not let them do so, for our Government is keeping a most watchful eye on the whole radio situation, and unless something is done immediately the time is not far off when a receiver of any description which will radiate will be absolutely against the law to operate.

This has already taken place in England.

Here's hoping that some radio bugs will get wise and stop "blooping," as the expression is.

One more important thing. Let us all not forget to thank KHJ and KFI for the stand they have taken in the Battle for Free Music.

STANLEY C. FORD, Needles, California.

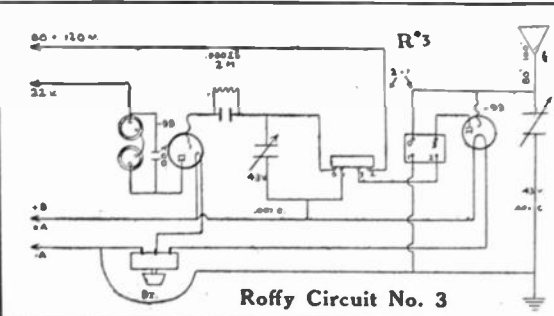
May 4, 1924.

Dear Sir:

I would greatly appreciate if any of your subscribers could tell me what station signed off at 12 p. m., Saturday, May 3, at about 405 meters. This was Pacific time. There was an orchestra playing, and finished by playing taps, and the announcer started to talk, but I could not get the station's call letters. Thanking you in advance, sincerely yours,

H. J. ALLEN,

2204 Third Street, Ocean Park, California.



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Letters to the Editor

May 3, 1924.

Gentlemen:

Radio Doings is a fine magazine, and would not be without it; like to read the different articles, enjoy looking over all the programs; would like to see Hastings, Neb., program listed, as I am sure it would be appreciated by the fans, as I have no trouble to get them.

Last Tuesday evening, April 29, heard an orchestra on a wave meter about 510, at 7:45 p. m.; came in softly on the loud speaker and could not get the call number at the time; was interfered by a strong wireless message. Would appreciate it if you or your subscribers could tell me the station and oblige.

Yours respectfully,

ALFRED DUCOMMUN.

P. O. Box 310, Arcade Station, Los Angeles, California.

Note.—We are trying to arrange for a program from the Hastings station.

May 5, 1924.

Editor Radio Doings,

308 Van Nuys Building, Los Angeles, California.

Dear Sir: Even though I am a radio beginner, thirteen years old. I read the Radio Doings every week.

I have an Atwater-Kent five-tube set with two loud speakers. I am now going to put together a five-tube set made with Federal parts. I have put together a few one-tube sets, but could not get them to working. I used a UV 200-tube and dry cells.

The station B. S. Head asked about was the "Bronco Busters," broadcasting their regular Tuesday evening (and Wednesday morning) "blowout." They were broadcasted by CFCN, W. W. Grant Radio, Ltd., "The Voice of the Prairies," Calgary, Alta, Canada, on 440 meters, 500 watts.

Station VMG, that J. A. Brookhoff, of Hamlin, Kansas, asked about was Station VMG at Apia, Samoa, broadcasting on 600 meters.

The station that Charles Swanson, of Exeter, heard must have been CKCX, at Calgary, Canada. They broadcast on Fridays, between 8 and 9 p. m., Pacific time. Yours truly,

JAMES YOUNG,

Rawson Ranches, Route No. 5, Meridian, Idaho.

Dear Sir: I wonder if you or any of your readers could tell me who broadcasted the American Theater on Wednesday evening from about 10:20 to 11:15. Due to code and static, I was unable to find out where the station was located. This information will be greatly appreciated. Yours truly,

KENNETH N. HADLEY,

430 Twenty-sixth Street, San Diego, California.

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“We All Know Her”

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“Known to All”

Katherine Clifford
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Canada's Prima-Donna

Doraldina
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Bessie Crawford
With T. Roy Barnes

Betty Fox
*England's Wonder
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Lionel Belmore
Entertainment

Billy Wells
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Larry Semon
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T. Roy Barnes
“Orpheum Wonder”

Mickey McBan
*“The Scotch Boy
Wonder”*

Will Stitt
“California's Baritone”

Benefit of

Over-Seas League of Southern California

Afternoon and Evening, May 24th

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Los Angeles

Letters to the Editor

Editor Radio Doings:

Dear Sir: In the May 4-10 issue of the Radio Doings there is asked for discussion concerning the tax on broadcasting music of the American Society of Composers, Authors and Publishers. This is the most unjust act I have ever heard of. I believe when music is broadcasted and people hear it, they want to buy the piece, especially if they are interested in music or have instruments in their homes. I know when we hear a new piece over the radio we usually try to get the music for the piano.

I surely agree with G. B. Kellogg that it ought to be the publishers that should pay the tax, and if they had any sense they would keep quiet and back up Radio. I want to let Mr. Kellogg know that I am interested in this bill, and also that our family are back of Uncle John.

From every point of view the American Society of Composers, Authors and Publishers is the most un-American act ever brought up.

Hoping this will find many fans who think as I do on this subject, I remain,
Yours truly,

ARTHUR BAUCKHAM,
535 Vincent Park, Redondo Beach.

Hamlin, Kansas, May 5.

Radio Doings:

May 4-10 issue just read. Will try to answer a few questions. Just a word to all who ask "Who did I hear?" Now, when you give only time, that's entirely too indefinite. Give at least approximate wave, and tell something about how it sounded, and the announcer, and what the call sounded like. We who reply cannot answer "for sure" unless you help us. C.? Now, as I was about to say:

C. W. Swanson. CKCX is Burns & Co., at Calgary, broadcasting Tuesday and Friday, 9 to 10, mountain time. and I believe on 420 m. CHCM is Riley & McCormick. Calgary, 440 m., 7:30 to 8:30, mountain, and claims to be a 2½ k.w. station. B. S. Head: Believe you had CFCN, as the "Broncho Busters" were there once last winter. Ask CFCN, why don't you? A. S. Berney—wave not given; if about 546, it probably was KSD, St. Louis.

Am using my 1-tube set upstairs now, on an aerial made of No. 22 wire, five turns around the ceiling. In less than an hour, Saturday morning. I picked up 15 new amateurs, including my first in Florida.

R. D. Continues better. Articles, letters, 'n everything.

J. A. BROCKHOFF.

Gentlemen:

In answer to the question asked by Mr. Charles Swanson, I think the station he heard on April 18 must have been CKCD, The Daily Province, at Vancouver, B. C., operating on 410 meters.

G. L. CREWS,

R. I. Box 347, Long Beach, California.

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A RESULT ON OUR SUPER-HET—Kansas City on one-foot loop and loud speaker—next door to KHJ

ON OUR SUPER-NEUT—Hastings, Neb., and Calgary on loud speaker—no loop aerial on ground

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Parkers' Radio Stores

Oceanside, Calif.: C. M. Patton, Manager

MAIL THIS COUPON
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Address.....

?? ??

Editor Radio Doings,

Dear Sir: Can radio frequency amplification be added to the Cockaday four-circuit receiver, which already has two stages of audio frequency amplification?

Would one stage of radio frequency help the volume of a receiver to any great extent? Respectfully,

WILLIS WOODS,

R. R. No. B, Box 52A, Bakersfield, California.

Answer: Yes. Not to any extent, but would increase your range.

Radio Doings,

Van Nuys Building.

May 2, 1924.

Gentlemen: Perhaps you or some one of your readers can help me out. I have a five-tube Fada set. Can get all local, Long Beach and KGO very loud, but Hastings, Neb., KLX, Oakland, and Hale Bros., San Francisco, are the only other outside stations which come in, and they come in so faintly that you can just distinguish them. Never have been able to get Portland or any station on 360 wave length. Why can't I get these other stations?

Also, is it possible to cut out the "frying" sound when distant stations come in? Would a "C" battery help? Am using a 301A tube for detector—just a new tube. Very truly yours,

ALVIN SELVEY,

Los Angeles.

P. S.—Couldn't get along without Radio Doings.

Answer: Your capacities are not neutralized. Suggest you get in touch with the party that sold you the set or some neutrodyne expert.

Radio Doings,

Van Nuys Building, Los Angeles, California.

May 7, 1924.

Gentlemen: I have a Kennedy Model No. 281 with a No. 521 two-stage amplifier using 199 tubes. Can you tell me if I can get satisfactory volume using an outside loop aerial with this set? If it can be done, can you send me a diagram showing how to construct same, with sizes?

The reason I wish to use the large outside loop is that it doesn't take up so much space. Tried a single-wire aerial, about seventy feet, including lead-in, and it works, but does not give satisfactory volume.

Also, would I have to use a variable condenser with the loop, or could I use one end of the wire and a ground?

Will appreciate it very much if you can give me the above information.

Yours very truly,

E. A. MERCER,

625 Garnet Street, Redondo Beach, California.

P. S.—Have been a reader of Radio Doings for some time.

Answer: This set is made to work on antenna 150 feet long, including lead-in. Do not use loop.

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Radio Supplies

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Radio Goods offered at

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Arcade Radio Co.

(Incorporated)

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836 So. Figueroa
LOS ANGELES

Phone TUcker 1752

Phone VAndike 5940

?????

April 4, 1924.

Dear Sir: Am just beginning to learn a little about radio. We have a three-tube set, somewhat on the order of an Armstrong circuit, I have been told by the man who rebuilt it. We used to get KPO and KHJ very plainly and quite regularly, but since shortening our aerial to about 135 feet from 160 feet have been unable to get them at all. We still get KGO, KF1, KGW, KFKX, WOC and WOAW at almost any time and practically as loud as local stations. Can you explain any reason why we need a longer aerial for KPO and KHJ, also Calgary stations, than we do for those at similar distance operating on similar power?

Will you please state which way you'd run the aerial, sketch A or B?

Obligingly, C. S. WARREN.

Answer: We believe A will give best results. You should not need a longer antenna for KPO and KHJ; your location must be to blame. Mail your circuit to us and we can give you more data.

May 8, 1924.

Sir: I have been following your interesting "Doings" for some time and have received some very good things from it.

We have a five-tube Neutrodyne set with two stages of amplification, but do not seem to get sufficient results. The aerial is 120 feet, strung east and west, between two trees, with thirty-foot lead-in wire. It is insulated and does not touch tree. However, the aerial itself clears the leaves only two or three feet. Would it be possible to get better results by the following?

1.—Shorten aerial. 2.—Shorten lead wire. 3.—Change location of aerial?

It is in Malibu Hills, about thirty-five miles from Los Angeles, in a small valley.

With the same set in Los Angeles we were able to get Chicago, Schenectady, Hastings, etc. Now the limit is Portland, which we get only occasionally.

Thanking you in advance for any suggestions, I am, very truly yours,

A. LEE NAYLOR,

5057 Glen Iris Avenue, Eagle Rock, Los Angeles.

Answer: The same antenna should give results where you are now, with exception of height. Raise your antenna if possible. Your location must be poor. Suggest trying counterpoise ground.

Our one, two and three tube Harkness Sets are built with the best of parts and the most careful workmanship, and give perfect results, in clarity of tone, volume, selectivity and distance.

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Open Evenings

Los Angeles

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Complete
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Parts

VENICE ELECTRIC CO.

40 Market Street

VENICE, CALIF.

Phone 62261

F A B E R

3 6 7 2

Three Guesses!!!

What is it?—

—Why, our new phone No.

Please file this in the Rogues' Gallery, as the Phone Book was already too large—they had to leave us out.

*—And the new address, by the way, is
Eleven Eleven Wall Street.*

Wholesale Radio Electric Co.

LOS ANGELES

Trade Notes

Radio trade association work is not confined to the dealers in Los Angeles. The radio manufacturers' agents organized some weeks ago and are holding regular meetings. They believe that by co-operation among themselves the interests of radio can be still further advanced. By meeting together and discussing affairs and conditions they can advise their factories more intelligently and specifically. Carl A. Stone is president this year and practically every Southern California manufacturers' agent and representative is a member. A small committee is leaving for San Francisco next week and will convey a message to the members of the radio trades in that city, endorsing their plans for a radio show which will take place there in August and assuring them of their desire to aid them and co-operate in every way possible.

W. D. Scott has been appointed representative of the Herbert H. Frost Co., Inc., and has opened offices for the Pacific Coast at 304 Calo Building, 443 South San Pedro Street, Los Angeles.

G. N. Marshank Co., 1240 South Main Street, Los Angeles, are the representatives for the New York Coil Co.

Carl A. Stone Co. have lately been appointed agents for All-American Products, manufactured by the Rauland Manufacturing Co.

Radio Row, Los Angeles, is quite a feature now and compares with automobile and furniture "rows." The following firms are located in the vicinity of Eleventh and Wall Streets: Leo. J. Meyberg Company, Wholesale Radio Electric Company, Electric Corporation, Lincoln Radio Company, Carl A. Stone Company, Frederic L. Tomlinson Company, Marshall & Company, Globe Commercial Company, Earl H. Wright & Company, and within a short time the Western Radio, Incorporated, will occupy their new building in this "row."

The regular monthly meeting of the Radio Division of the Music Trades Association will be held at the City Club, Los Angeles, on Thursday, May 29th, at 6:30 p. m. Dinner will be served and speakers on matters of interest to the trade will be heard. Let's all attend.

The Standard Radio Equipment Co., under the management of Mr. W. M. C. Everett and Paul V. Hiverly, have opened a new radio store at 806 South Figueroa Street, Los Angeles, and are specializing on Radio Corporation of America products and high class radio parts.

In an effort to clear up some of the uncertainty in the radio industry as to the rights of manufacturers making tubes for radio receivers, the District of Columbia Court of Appeals ruled that Lee De Forest of New York is the owner of the audion patent. The commissioner of patents had awarded the patent priority to Edwin H. Armstrong.

**When Your Set Is "Out of Fix"
and You Need Help**

Call VERmont 3311

WINCH RADIO SHOP

4301 South Western Avenue

OPEN EVENINGS

SETS

REPAIRS THAT ARE REPAIRS

PARTS

"Out of the Air"

By LISTENER-IN

If set works fine on one locality and not in another, change the ground, or use a multiple connection.

It does not require a technical education to operate a receiving set. A little patience and practice are all that is required.

He—"Appearances are often deceptive."

She—"Yes; because a man carries his wife's photo in his watch it doesn't follow that she is the only woman in the case!"

In regenerative sets begin tuning for the station with regeneration at zero, and when the station is heard increase regeneration until the signal is at its loudest.

When using battery chargers of the no-self-polarizing type, it is absolutely necessary to connect the positive terminal to the charger to terminal of the battery.

"Hams, fans, ops" and the *hoi polloi* of radio land will be interested to know that the White Radio Bill finally has been passed on by the radio sub-committee, of which Representative White is chairman, and sent to the Merchant Marine and Fisheries Committee of the House. The committee is scheduled to meet Thursday, and may approve the measure. Mr. White believes that the general committee will soon report the bill favorably to the House, where he hopes it will pass this session. No one can prophesy as to what the attitude of the Senate will be.

Few changes were made in the bill, it is understood, since the recent hearings; basically, it is practically as originally introduced.

Little Rosie—"Mother, tell me a fairy story."

Mother (glancing at the clock)—"Wait till father comes home, my dear, and he'll tell us both one."—Chaparral.

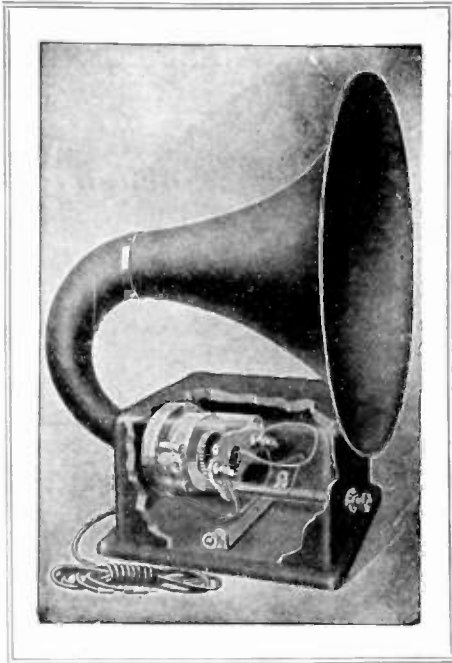
Last week six new Class A stations were added to the list:

Call	Station	Frequency Kcys.	Wave Length Meters	Power Watts
WCBY	The Forks Electrical Shop, Buck Hill Falls, Pa.	1120	268	10
WCBZ	Coppotelli Bros. Music House, Chicago Heights, Ill.	1210	248	50
WDBD	Herman Edwin Burns, Martinsburg, W. Va.	1120	268	5
WDBI	E. Budd Peddicord, New Orleans, La.	1240	242	10
KFPX	First Presbyterian Church, Pine Bluff, Arkansas	1240	242	100
WCBW	George P. Rankin, Jr., and Maitland Soloman, Macon, Ga.	1330	226	10

"Judge," said the prisoner, "I'm deaf."

"That may be," said the judge, "but you'll get your hearing in the morning."
—Exchange.

The address delivered by President Coolidge recently at the Associated Press luncheon in New York City was heard by his father, John G. Coolidge, at Plymouth, Vt.



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**Adjustable Air Gap—Loud—Clear
No Distortion—Absolute Perfection
The Last Word in Radio Loud Speakers**

Price \$24.50

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If Your Jobber Hasn't Them, Write Me Direct

LEROY C. BISHOP

Sales Agent

Dictograph Products Corporation

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Los Angeles, Calif.

WHAT CRYSTAL?

What Crystal shall I use? A question asked a million times by a million Fans. The answer is: Give **ORIGINAL ARGENTITE** a Chance.

Mr. Dewey D. Baker, of Miami, Arizona, writes:

May 6, 1924.

Mineral Products Co.,
326 H. W. Hellman Bldg., Los Angeles, Cal.

Dear Sirs:

I received the two **ARGENTITE** as ordered from you last week.

Heretofore I have found two other crystals that were loud, but the tone was harsh, and heavy static discharges would knock them out of adjustment.

I am especially pleased with the **TRUETONE** of Argentite.

Am using an Erla three-tube Duo-Reflex. CYL, Mexico City; WGY, Schenectady, N. Y.; KDKA, Pittsburgh, Pa., are my best DX so far.



Know Your Crystal by This Label, the Mark of

Quality — **S**ervice — **E**fficiency and

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