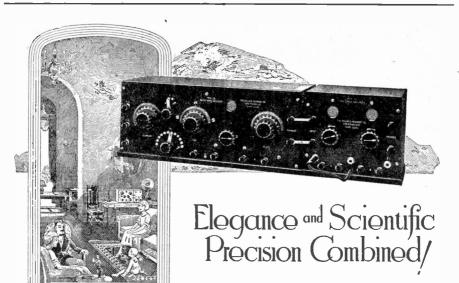
# RADIO DOINGS

THE BROADCAST PROGRAM OF THE LEADING BROADCAST STATIONS LATEST RADIO NEWS



\$2º A YEAR

5 CENTS A COPY





The Kennedy Variometer
This, as well as all other parts,
is scientifically constructed by
Kennedy artisans. The minute
clearance between rotor and
stator, the firm windings and
positive contact eliminate dielectric losses and increase sharpness
of tuning.

YOU will welcome a Kennedy Receiving Set in your home. Its distinguished appearance lends itself to the most refined surroundings and outwardly reflects the accuracy and precision exercised in its manufacture

In a cabinet of beautifully finished hardwood and mounted behind a richly polished panel you will find a series of precision instruments—each correctly designed in itself and each exactly co-ordinated with the balance of the set.

Ease of control, long distance reception, elimination of interference and the utmost pleasure and satisfaction in its use are assured with a Kennedy receiver.

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THE COLIN B. KENNEDY COMPANY SAN FRANCISCO SAINT LOUIS

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## KENNEDY



## Radio Doings

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J. B. SHILLINGFORD

Los Angeles, Cal.

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Five Cents a Copy

Two Dollars a Year

Vol. III

Los Angeles, August 11, 1923

No. 6

The death of President Harding came as a shock to us all. On the very day and, practically, at the very hour we had expected to hear him deliver his speech from the Coliseum at the Monro Centanial in Los Angeles, we received the sad news by the very medium over which we had hoped to hear his voice.

President Harding had always been a friend to radio and with his great foresight had seen its tremendous possibilities. His efforts in behalf of the White Bill showed this. This bill failed to pass in the lat minute rush in the late Congress. In this emergency the President signed an Executive Order which immediately put into effect the most important features of the proposed act.

The news wave lengths which are now in use by broadcasting stations which has eliminated so much of the interference, the definite assignment of wavelengths to amateurs and the various government departments, etc., are also due to this.

The sad news reached the public within a few minutes of President Harding's death through the medium of radio. Two hours before extras were on the street the world heard the report through the broadcasting stations and the thousand of listeners-in spread the news. This is the firt time that news of such import has been disseminated through radio and it has proved what an important force this is in keeping the public informed on events in so short a time.

Radioland, together with all the civilized world, mourns the passing of a great man.

#### All the Year for Two Dollars

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

RADIO DOINGS, 308 Van Nuys Building, Los Angeles, California:

Inclosed find two dollars for subscription to RADIO DOINGS for one year.

Address

6-8 A. M. PACIFIC TIME

## RADIO TIME TABLE

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

	_				31	JN.		_	MC	N.	l	ΤL	JES.	٠ ا		WE	D.	- 1	T	HU	JR.	.		FF	RI.			S.A.	r.
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STATION	METERS	СІТУ	CALL	8.00-8.30	30- 9.00	00- 9.30	9 30-10 00	00-8.30	_	30-10,00	8.00- 8.30	30- 9.00	00- 9.30	_ .	90- 8.30	30- 9.00	20 - 3	8 00 0 00 8		00 - 00 - 00 - 00 - 00 - 00 - 00 - 00	30 40 00	30-10.00		30- 9.00		9.30-10.00	_	90 8 90	9.30-10.00

Handled by the following Radio Dealers

RADIO STORES CORP. 348 South Spring Street. HOWLAND & DEWEY CO., 510 South Broadway.

CUT RATE ELECTRICAL SHOP, 744 South Spring Street. MANUAL ARTS RADIO SHOP. 4154 South Vermont Avenue.

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1077 North Western Avenue. AA1 RADIO SHOP, 2674 Pasadena Avenue.

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13 West Main Street
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BATTERIES FOR

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"B" STORAGE BATTERIES The Rechargeable "B" Battery With Long Life

## Harry W. Harrison, Inc.

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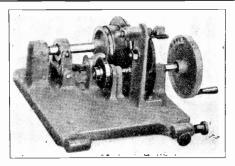
10-12 A. M. PACIFIC TIME

#### RADIO TIME TABLE

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

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L. A. Union Stk. Yds. 360 Bible Institute L. A. Timea 390 Earl C. Anthony 465 City Dye Works 360		K F C L K J S K H J K F I K U S	X X	×		x	x :		×	X	X			X				X				X :		•		x :		
Hale Brothers	Oakland	K P O K L X K L 8 K J Q	х х	x x	X	X				X			×				×		:		×	- -	:	:	×			×
Guy Greason Rhodes Co. First Presby, Church. Meler & Frank.	Seattle	K F E J K D Z E K T W K F E C			×	×	X	X X			X	X		X	X				×			X	х :	:	:	X	X	x x
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MURDOCK "SOLID" NO. 56 HEAD SETS Best at Any Price



## COIL WINDING **MACHINES**

These machines cost over \$100.00 each and are particularly adapted for all forms of straight, eliptical or armature windings

#### SPECIFICATIONS

The machine is driven by a belt from a small motor or line shaft. Pressing the treadle engages the bevel driving pulley with the bevel friction pulley starting the machine. Releasing the treadle disengages the friction puley and applies the brake stopping the machine smoothly. A slight pressure on the treadle leaves the spindle free to be revolved in either direction by means of the hand wheel.

Each machine is equipped with a ball bearing clutch and brake and all spindle bearings have replacable bronze bushings.

No. 1000—New machines complete with counter, starting and stopping treadle and soldering iron holder, each

\$29.00 \$20.00 counter and starting and stopping treadle, each.....

each..... (F. O. B. Buffalo, N. Y.)

#### CARL A. STONE CO.

Representing Manufacturers 538 San Fernando Bldg.

Los Angeles

\$1.50

Metropolitan 1528

No. 1002-Soldering iron holders

12-2 P. M. PACIFIC TIME

## RADIO TIME TABLE

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

,					SU	IN.	Ì		MC	N.		1	ΓUI	ES.	Ì		WED. THUR.				3.		FI	₹1.			SA	١Τ.			
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Guy Greason	Tacoma	::::	K F E J K D Z E			:	-	X	X	:	·	X	X		<u> </u>	X	X	<u> </u>	- -		•	-	:	X	X	×	:	X	X	:	<u>:</u>
Reynolds Radio	Dallas	478 484 411	K L Z W F A A W O C W D A F W W J	Ι.	×	X		×	x	×	XXX	×	×	x : x	· XXX	×	×	X X	XXX	×	×	X	XXX	×	x	×	XXX	×	×	X	X X X

## LOUD SPEAKER and Reproducer In

MORE THAN A LOUD SPEAKER the AUDIOPHONE is a real reproduction, because they are so perfect. The speech, songs and instrumental music are not blurred or disguised by mechanical distortion. You get all the fine shadings and every inflection. In fact, the very personality of the artist seems to be present as you listen. DEVELOPED in the laboratories of an engineering firm known the world over for recording instruments of precision.

COMPLETE in every way and ready to connect to the receiving set.

NO AUXILIARY BATTERIES are required for magnetizing.

ADAPTED for use on all types of two or three stage power amplifiers.

THE BRISTOL SINGLE STAGE POWER AMPLIFIER for use with the usual two-stage amplifier can be furnished, which will greatly increase the range of the Audiophone where \$25.00

desirable. Price.....

Write for Bulletin 3006-X



#### AUDIOPHONE

MADE IN TWO MODELS: BRISTOL AUDIOPHONE
SR. Loud Speaker, Size of
Horn 15 inches
Diameter.
Price
\$32.50 Price.

BRISTOL AUDIOPHONE JR., Loud Speaker. Size of Horn 11 inches (2) Diameter. Price.....

#### THE BRISTOL COMPANY, WATERBURY, CONN.

Pacific Coast Branch Office Rialto Building, San Francisco

2-4 P. M. PACIFIC TIME

## **RADIO TIME TABLE**

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

	-								WE	D.		1	ГН	ŲR			FF	₹I.			SA	Τ,									
NAME OF STATION	CITY	Met.	CALL	2.	30-3.	90-3	3.30- 4.00		က	3.00- 3.30	3.30- 4.00	2.00- 2.30	2.30-3.00	3.00- 3.30	3.30- 4.00	2.00-2.30	2.30- 3.00	3.00-3.30	3.30- 4.00	2.00-2.30	2.30-3.00	3.00-3.30	3 30- 4 00	2 00- 2 30	2.30-3.00	3.00-3.30	3.30- 4.00	αi		유	Ŕ
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	San Francisco Oakland San Francisco .	360 509	K L X	×	х :	X	X	×	X		×	×	×	X :	x ·	X	X X	X	x	X	x x		×	×	x		×	x	x		×
Kimball-Upson Calif. Radio Lab'y	Stockton		KWG KFBK KFBD KFHJ		X	:	×		x	XXX	X		×	x x	X		· X	X X X	X		×	x x	×		×	X X	X		×	x x	
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## We're Ready for Your Set

Bring in your home-built set if you want to win that prize. Do it now!



### Neutrodyne

Part Two-By Frank D. Andrews

There are many circuits that are unusually good and efficient but perhaps are much too complicated for the average fan to construct; then, too, they are difficult to operate. Sometimes the difficulty may not necessarily be one of construction but rather a question of theoretical balance of the circuits. This last factor is one that the greatest percentage of fans will find is extremely difficult to overcome.

One of the new circuits that is effected by this last factor is the Hazeltine Neutrodyne. The word "circuits" is used but actually is a misnomer. The Hazeltine Neutrodyne is not a circuit but rather a method of overcoming, through neutralization, the various capacities in the coupling from tube to tube of any multi-tume receiving set.

There has been much written on the subject relative to the method of neutralizing, but little has been said about the circuit that has been chosen by the inventor of the Neutrodyne in amplifying radio currents at radio frequency, so we will dwell on this part of the subject for the moment as the value of tuned radio frequency as hardly appreciated by the average fan.

First it may be better to explain how the vacuum tube acts as a Radio frequency amplifier then work on down through the subject. When a current flows in the aerial tuning circuit it will alternately impress negative and positive po-

tentials on the grid.

When a positive potential is impressed upon the grid it will increase the slight positive potential already there and the plate current will be increased. When a negative potential is applied it will reduce the positive potential and less current will flow in the plate circuit. The plate current will then rise and fall in exact reproduction of the current flowing in the aerial circuit at Radio frequencies but of much greater values.

To utilize amplified current in the plate circuit, the primary of a transformer may be placed in the plate circuit. From the secondary of the alternating current is delivered to the next amplifying tube or detector tube.

It is this method of transformer coupling that has been the stumbling block in the way of constructing Radio frequency amplifiers for short wave lengths. While the method of coupling used by Professor Hazeltine may be a little more difficut to construct, it is by far the most effective. American manufactuers have been enterprising in their efforts to construct a coupling that would be simple and yet serve all purposes. This has been a difficult achievement and is still in the experimental stages, because there is such a wide range of frequencies to cover that it is practically impossible to reach them all with the same fixed coupling and yet obtain the step up ratio that a transformer should have.

On page 267 in the text book prepared by the Bureau of Standards at Washington for the U. S. Signal Corps, entitled The Principles Underlying Radio

Communication, will be found the following:

"When two circuits have some part in common or are linked together through a magnetic or an electrostatic field they are said to b 'coupled.' If two circuits have an inductance coil in common their relation is said to be 'direct inductive coupling' . . ." (Continuing on page 368) ". . . It is customary to denote as the 'primary' that circuit in which the applied emf. (electric motive force) is found, the other being regarded as the 'secondary' circuit."

As a rule transformer or fixed coupling is not as efficient as impedance or

As a rule transformer or fixed coupling is not as efficient as impedance or resonance coupling in which two air core windings are used similar to a vario-coupler and one or both can be tuned to the exact wave length that is desired by shunting it with a variable condenser. It is this method that is used by Professor Hazeltine. For it is proven in practice that one stage of tuned Radio frequency amplification is far more selective than a fiped coupling where the operator is deprived of the advantage of tuning it to the epact wave length he desire to receive.

(To Be Continued)

4-6 P. M. PACIFIC TIME

#### RADIO TIME TABLE

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

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L. A. Union Stock Yards E. C. Anthony. City Dye Works L. A. Herald L. A. Examiner.	Los Angeles	469 360 469	KFCL KFI KUS Herald Examiner	X	X		100000000000000000000000000000000000000	X				X		×	×	X		X	×	X		X	X	X	X	X	X	X		X
	San Francisco Oakland San Francisco Berkeley		KPO KLX KUO KRE			X	X	×	X	X		X	X	X	1 3	x :	X :	X	- 1	x	X	X	X	X	X	X	X	X	X :	X
Portable Wireless Gould San Joaquin L. & P Radio Den.	Stockton " Fresno Santa Ana		KWG KJQ KMJ KFAW			X	×	X	×	X	X	X	<b>X</b>	x	X	X	×	X	X	X	X	X	X	X	X	×	X	X	X	x ·
Nielson Radio Co	Phoenix		KFCB	Г	-	-		Г	_	x	x	_	_	-,	-	Γ	_	x	X		_	-	_	_		х	X	-	-	
First Presby. Church. Northwest Radio Mullens Elec. Guy Greason Meier & Frank Hallock & Watson	Seattle Tacoma Portland		KTW KJR KGB KFEJ KFEC KGG	X	x	X	x	X	×	x	XXX	×	X	×	XXX	x	X	X	X	×	X	-	X	X	- X	×	X X X	×	×	×
Tribune	For' Worth Dallas. Sarı Antonio Davenport Chicago Detroit Kansas City Great Falls Chicago Cincinnati	476 484 438 517 580 415	W B A P W F A A I W O C WM A Q W C X WW J W D A F K D Y S W D A P WLW	X	XXX	X	X	X X X	X	X	X	X	X	X	X	X	X X	XX X X	X	×		X	-	X	x x	X	X	x	x x x x	X

### HOW TO GET LONG DISTANCE

Use a Coast Coupler

Have you been able to tune in these stations?

WDAP-Chicago

CFCN-Calgary WWJ-Detroit

PWS-Havana

WSB-Atlanta

And Many More.

You can do it with a COAST COUPLER. It is a necessary part of your radio set. Manufactured of the best materials and guaranteed. Thoroughly tested before leaving the factory.

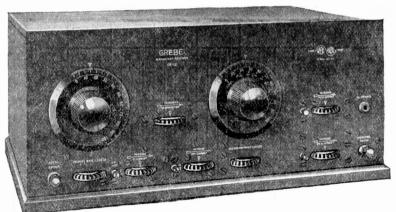
Anywhere in the United States-\$5.00

Write for Circular

#### COAST COUPLER COMPANY

245 East Seventh Street

Long Beach, Calif.



Grebe CR 12

### The Perfect Broadcast Receiver

It requires no outside antenna or loop.

It uses all types of tubes in any combination.

It employs Regeneration and tuned Radio Frequency Amplification with but two controls.

It receives all broadcasting.

It has controls calibrated in wavelength.

- It may be set up and operated at any time, at any place and by anyone.
- It is a complete self-contained receiver with compartments for all batteries.

Price complete with tubes, batteries and loudspeaker is ......\$242.00

With the unconditional guarantee of Grebe apparatus and our excellent service one cannot go wrong in purchasing such a receiver.







Phone 824-627

820 West Seventh Street

6-8 P. M.
PACIFIC TIME

## RADIO TIME TABLE

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

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City Dye Works	4	360 360 395 469	KHJ	x	x :	x ·	×			X			X X		X	×××	×××	- - -	- l	×	X		×	XXX	×××			X	×××
i, F. Examiner	San Francisco Berkeley Oakland San Francisco	360 509 469		X	X	x x		X	X	· X X		×	X : :		X		X				X		×		X		X		X X
Cimball & Upson.  Modesto Herald.  Jai, Radio Lab'y  Fallon & Co.  Radio Den.  Jr. R. O. Shelton.  Southern Elect.  Jr. W. K, Azbili.	Santa Barbara Santa Ana San Diego	242	K F A W K F F A	X X	XX	×	×	X	X X X X	×××	x		XXXX	Ċ .	X	X	×	X	X X X	XXXXX	XXX	١.	×	X X X	1	.	X X X	XXX	×
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ove Elect. Co Mullens Elect. Co Vorthwest Radio Service Excelsior Motor Cycle Rhodes Co First Presby, Church State Coll. of Wash	66 68	270	KMO KGB KJR KHQ KDZE KTW KFAE	١.			·······································	X	X	×	X X	X	X	x >			×	×				X	X :	X	×	x x		X	X
Stubbs Elect. Co. Dregonian. Hallock & Watson. Weier & Frank. Adler's Music Store. Boise High School. Auto Sup. Co.	Baker, Ore	360	K G G K F E C K F D A	:	×	x x	•	X	×	x X	××××	X	X X	x >	:	X		X X X	:	×		XXXX		X X	X	X	:	X	X
Felegram Deseret NewsReynold's RadioWastern Radio	Denver		KDYL KZN KLZ KFAF	1:		×	×	X	X X	×	x ·	x :		x x	1.	X	1 0		1 -	x	X	X	X	x	X			X	
Star-Telegram News and Journal Palmer School Dally News-Fair Post Dispatch WestInghouse Sweeney School Star Tribune Drake Hotel Drosby Mfg. Co.	Dalias Davenport Chicago St. Louis Chicago Kansas City Great Falls	476 484 448 546 448 411 411	W B A F W F A A W O C WM A Q K S D K YW W H B W D A F K D Y S W D A F	X	×	X	×	XXXX	1	×	×	XXX	X X	x x			X	:	XXX	XXX	X	×	XXX	X	X	X	×	X	1.

The numeral next to name of station indicates the wave length. Where no number appears, the wave length is \$60. The letter indicates that the station is on the air

# RAY-O-VAC

Signifies Superior Performance



Radio Batteries with long life and reliable service.

A battery for every need.

Twelve types A and B Batteries.

Remember the name—

Ray-o-Vac

# The Braun Corporation

Wholesale Distributors

363 New High Street

Los Angeles, California, U. S. A.

8-10 P. M. PACIFIC TIME

## RADIO TIME TABLE

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

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MURDOCK "SOLID" NO. 56 HEAD SETS

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Erla Reflex Transformers	5.00
WD-11, WD-12 Tubes, large stock	6.50
UV-199 and C-299, 201-A, 301-A Tubes	6.50
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11:00- 1:00 Mountain Time 12:00- 2:00 Central Time 1:00- 3:00 Eastern Time

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#### The Ambassador Hotel

LOS ANGELES, CALIFORNIA Broadcast by Remote Control Over KFI

MONDAY-10:00 to 11:00 p.m. TUESDAY---LYMAN'S ORCHESTRA.

8:00 to 9:00 p.m. WEDNESDAY--LYMAN'S ORCHESTRA.

11:00 to 12:00 LYMAN'S ORCHESTRA.

THURSDAY-8:00 to 9:00 p. m. FRIDAY--ROSENFELD'S ORCHESTRA

11:00 to 12:00 LYMAN'S ORCHESTRA. SATURDAY—

8:00 to 9:00 p.m. ROSENFELD'S ORCHESTRA

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Out of the many, many thousands who will now use nothing but RADIO-ARGENTITE detectors, a few may have bought them, in the beginning, out of curiosity, a few more because they were attractive in appearance but by far the greater number have bought them because a friend had used and recommended them for what they are-the very best mineral radiofone detector on the market.

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Los Angeles, California

#### K H J-Los Angeles Times-395 Meters

Times Building, First and Broadway, Los Angeles, Owned and Operated by Los Angeles Times. Phone Pico 700

#### SUNDAY-

- Sacred Service. Sermon by DR. RAY C. HARKER, Pastor of West Adams 10:00 a.m. Methodist Church.
- 10:30 to 11:00 a.m. Organ Recital from First Methodist Episcopal Church, ARTHUR BLAKELEY, Organist.
- 7:30 p. m. 7:00 to 7:30 8:00 to 10:00 Organ Recital, ARTHUR BLAKELEY, Organist.
- 0 to 10:00 p.m. De Luxe Program, presenting HARTLEY BELL, Tenor; EDNA ANDERSON WRIGHT, Pianiste; MARGARET FERN MELROSE, Soprano and FILMLAND TRIO

#### MONDAY---

- 12:30 to 1:15 p.m. 2:30 to 3:30 p.m. 6:45 to 7:30 p.m.
- 10 to 1:15 p.m. Program presenting TILDA ROHR, Swiss Contralto.
  10 to 3:30 p.m. Program arranged by and presenting TILDA ROHR.
  15 to 7:30 p.m. Children's Program, presenting DICK BRANDON, reader, 3½ years of age. Bedtime story by HARRY JAMES BEARDSLEY.
  10 to 10:00 p.m. De Luxe Program, presenting BOOS BROTHERS' CAFETERIA OR-CHESTRA, PRYOR MOORE, Conductor. ARNE NORDSKOG, Tenor, accompanied by HELEN ETHEL MYER. 8:00 to

#### TUESDAY...

- Program presenting BAISDEN'S BON TON ORCHESTRA. News 12:30 to 1:15 p.m. Items.
- 3:30 p.m. Matinee Musicale, presenting OTTO PLOETZ, Tenor Robusto, and 2:30 to
- MARGUERITE HAUBER, Lyric Soprano and Pianist.

  to 7:30 p.m. Children's Program, presenting EMERSON FROME LIVINGSTON,
  Reader, 5 years of age. Bedtime story by HARRY JAMES BEARDSLEY. 6:45 to 7:30 p.m.
- Reader, 5 years of 8:00 to 10:00 p.m. De Luxe Program, presenting HARRY JAMES BEARDSLEY.

#### WEDNESDAY-

- 12:30 to 1:15 p.m.
  12:30 to 1:15 p.m.
  12:30 to 3:30 p.m.
  12:30 to 3:30 p.m.
  12:30 to 3:30 p.m.
  13:30 to 3:30 p.m.
  14:30 to 3:30 p.m.
  15:30 p.m.
  16:45 to 7:30 p.m.
  16 Act Play, "Finders Keepers.

#### THURSDAY-

- 12:30 to 1:15 p.m. Program presenting ETHEL SANBORN, Composer-Pianist.
- Items. 2:30 to 3:30 p.m. 6:45 to 7:30 p.m. Matinee Musicale, presenting ETHEL SANBORN, Composer-Pianist. Children's Program. Bedtime Story by HARRY JAMES BEARDS-
- LEY. 8:00 to 10:00 p.m 00 to 10:00 p.m. De Luxe Program, presenting FLORENCE VAN DYKE, Dramatic Soprano; ARMEDA PARTRIDGE, Harpist, and ELIZABETH O'NEIL, Pianist.

#### FRIDAY-

- News Items. Music.
- 12:30 to 1:15 p.m. News Items. Musi 2:30 to 3:30 p.m. Program presenting Rendezvous," Crystal Pier, Ocean Park. Program presenting MAJOR RENDEZVOUS ORCHESTRA, of "The
- 6:45 to 7:00 p. m. LEY. Children's Program. Bedtime story by HARRY JAMES BEARDS-
- 7:00 to 7:30 p.m. Or BLAKELEY, Organist Organ Recital from First Methodist Episcopal Church, ARTHUR De Luxe Program. 8:00 to 10:00 p.m.

#### SATURDAY-

- 12:30 to 2:30 to 1:15 p.m. News Items. Music.
- 3:30 p.m. Silent.
- ·6:45 to 7:30 p.m. Silent.
- 8:00 to 10:00 p.m. Silent

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#### SUNDAY-

Services by LOS ANGELES CHURCH FEDERATION. Courtesy LUCILLE E. HOLMAN, Soprano. 10:00 to 10:45 a.m. 4:00 to 5:00 p.m. 9:00 to 10:00 p.m. Examiner.

Courtesy THERON BENNETT, Orchestra Leader. 10:00 to 11:00 p.m.

#### MONDAY....

Courtesy THELMA HARRISON, Pianiste. 6:45 to 7:30 p. m. 9:00 p. m. 8:00 to 9:00 p.m. 9:00 to 10:00 p.m. Harald Fyaminer 8:00 to 9:00 p.m. Ambassador Hotel Orchestra, ABE LYMAN, Director.

#### TUESDAY-

6:45 to 7:30 p. m. 8:00 to 9:00 p. m. 9:00 to 10:00 p. m. 7:30 p. m. 10:00 to 11:00 p.m. Saxophone.

Courtesy EMMA M. BARTLETT, U. S. C. Summer Session. AMBASSADOR HOTEL CONCERT ORCHESTRA. Examiner. Courtesy CAROLINE HERMANN, Violin: MARGUERITE BRANEN

#### WEDNESDAY-

6:45 to 7:30 p. m. 8:00 to 9:00 p. m. 9:00 to 10:00 p. m. 10:00 to 11:00 p. m. 11:00 to 12:00 p. m.

NICK HARRIS, Detective Stories. Herald. Examiner FILIPINO STRING ORCHESTRA, Bluebird Cafeteria, AMBASSADOR HOTEL ORCHESTRA, ABE LYMAN, Director.

#### THURSDAY-

6:45 to 7:30 p.m. 10:00 to 11:00 p.m. 9:00 to 10:00 p.m. 10:00 to 11:00 p.m.

Courtesy Y. M. C. A. Ambassador Hotel Orchestra, ABE LYMAN, Director. Examiner. Courtesy MYRA BELLE VICKERS, Teacher of Voice.

#### FRIDAY-

6:45 to 7:30 p. m. 8:00 to 9:00 p. m. 9:00 to 10:00 p. m. 10:00 to 11:00 p. m. 11:00 to 12:00 p. m.

MARGARET WHITE, Pianiste; RUTH DOUGHERTY, Whistler. Herald. Examiner.

Courtesy MARIANE WARDE SCHOOL OF DRAMA.

AMBASSADOR HOTEL ORCHESTRA, ABE LYMAN, Director.

SATURDAY-

6:45 to 7:30 p. m. 8:00 to 9:00 p. m. 9:00 to 10:00 p. m. 10:00 to 11:00 p. m.

JEAN FONTAN, Violin; BESS RUDISILL, Pianiste. Courtesy R. CHURCHILL HAYS, Voice Teacher. Examiner. EUTERPEAN MALE QUARTETTE.

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SUNDAY-

9:00 p.m. CORTLAND GILMORE, Saxophonist, and his Examiner artists.

MONDAY-

9:00 p. m. CHARLIE MELSON and TED'S ALHAMBRANS.

TUESDAY-

9:00 p. m. SID GRAUMAN program.

WEDNESDAY-

9:00 p.m. CREIGHTON HALE, the famous actor, saxophone and readings; AL J. FOLKERSON, whistler.

THURSDAY-

9:00 p.m. DEPARTMENT OF PUBLIC SERVICE EMPLOYEES' ORCHESTRA.

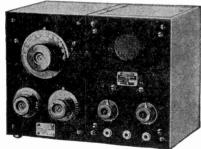
FRIDAY-

9:00 p. m. EXAMINER RADIO CLUB

SATURDAY-

9:00 p. m. SID GRAUMAN program.

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Radiola RC and Radiola V—better because they operate now on dry batteries, instead of storage batteries. Less in cost because dry batteries cost less and because of the new combination price that includes all batteries and headset with your Radiola. Wonderful sets for the home—great for long-distance reception.

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DAILY EXCEPT SUNDAY—
5:00 to 5:30 p.m. Evening Herald News Bulletins covering the World's News Events up to 5 p.m. Closing market quotations by leased wire.

MONDAY-

8:00 to 9:00 p.m. SANTA ANA NIGHT. Entire program by musical talent from that city.

WEDNESDAY-

8:00 to 9:00 p.m. Dramatic and vocal recital through courtesy of MARION WARDE of the Warde Dramatic School.

FRIDAY-

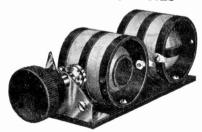
8:00 to 9:00 p.m. Concert through courtesy of CLARENCE WEAVER HARSIN.

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## K J S-Bible Institute Radiophone-360 Meters

Owned and Operated by Bible Institute of Los Angeles, Inc. M. E. Carrier, Manager Radio Department Telephone Main 9293

#### STINDAY....

Sermon, DR. FRANK NORRIS. Solo, C. M. BOOKS, Bass.
Sermon, MR. KEITH L. BROOKS. Music, MR. SCOTT GRANT, Concert Horn.
Sermon, MR. FRANK NORRIS. Solo, MR. HENRY ABRAMS, Bass. IMMAN-11:30 p. m. Sermon, DR. FR. 6:00 p. m. Sermon, MR. KE. 8:00 p. m. Sermon, MR. FR. UEL MALE QUARTETTE.

#### TUESDAY-

Music, IMMANUEL MALE QUARTETTE. Pianist. MR. GORDON HOOKER. 7:00 p. m.

#### THURSDAY-

8:00 to 9:00 p.m. Music, MR. OTTO HIRSCHLER, Organist; MRS. IRVIN FALLIS, Soprano; MR. C. M. BOOKS, Bass.

### K U S-City Dye Works Radiophone-360 Meters

Owned and Operated by the City Dye Works, Los Angeles Telephone South 120

Daily Except Sunday Daily Except Sunday Monday and Thursday Tuesday and Friday Walter Camp's Daily Dozen 7:00 to 7:30 a.m. 12:00 to 12:30 p.m. 2:00 to 2:30 p.m. 4:00 to 4:30 p.m. Concert. Special Program. Code Practice.

#### WEDNESDAY-

Walter Camp's Daily Dozen. 7:00 to 7:30 a.m. 12:00 to 12:30 p.m. 6:00 to 6:45 p.m. 7:30 a.m. Concert.

Concert given by the City Dye Works Choral Society. "PA" OLSON MISS BEATRICE VANCE, Accompanist. on the harmonica.

#### FRIDAY-

7:00 to 7:30 a.m. 12:00 to 12:30 p.m. 6:00 to 6:45 p.m. Walter Camp's Daily Dozen. Special Program given by the CHORAL SOCIETY.

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Radio Doings,

Very truly yours,

R. C. WILMARTH, P. O. Box No. 416, East San Diego, California.

Ans. To find the wave length in meters, multiply its length in inches by the length in meters per inch of winding. The variocoupler you describe should be very suitable for wave lengths ranging from 150 to 450 meters providing you are using the vario-coupler in a tuned primary, tuned secondary, inductively coupled circuit. It is impossible to tell you what distance you will hear due to the fact that weather conditions are variable. You give us no data on the height of your aerial and this is very vital in determining sensitivity of a receiver.

Radio Doings.

Note you have started a "question box." I recently constructed an Erla Reflex set as described in Radio Doings of June 1712. In your article as also in the Buletin issued by the Erla people, it is stated that the set will operate on three dry cells, but I am unable to make it do so. With four cells is brings in a good volume, and still better with storage battery, in fact the volume then becomes practically equal to most of the detector and two-stage hookups I have tried. Am anxious to make it operate on three cells as have exactly enough room in my cabinet for three cells. Any suggestions you might offer would be appreciated. I am using a 201-A tube and 135 volts in the B battery.

Yours very truly,

E. A. FORAN, 44 W. Carter Ave., Sierra Madre, Calif., July 31.

Ans. We recommend the use of UV199 tubes in your circuit. These tubes will operate successively with three dry cells. Your trouble is a very common one and we sugget if possible to use 201-A tubes with storage batteries. Of course, if your space is limited and if you are building a receiver for portable work, the UV199 tube is desirable.

(Continued on Page 28)

#### "Half the head sets in use are Murdock"

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Radiola IV Radiola V Western Electric R. C. S.

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San Francisco, California-Class "B" Station

E. J. MARTINEAU, Director of the Station ADA MORGAN O'BRIEN, Program Manager

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Fairment Hetel Orchestra 1:00 to 2:00 p.m. Fairmont Hotel Orchestra. 4:30 to 5:30 p.m.

#### SUNDAY-

Radio Church Service. 11:00 to 12:30 p.m.

#### MONDAY, TUESDAY and THURSDAY-

Vocal and instrumental concert. 8:00 to 10:00 p.m.

#### SATURDAY-

Dance music from Fairmont Hotel Orchestra. 8:00 to 12:00 p.m.

	SPECIAL E	BARGAINS	
Spaghetti, yard	10c	Detectors	40c to \$1.00
Taps	1c	Switches	25c
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Brass Sliders and Rods, each	:h15c	Crystal Sets	\$5.00
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The only reason we can afford to (where others can't) is because we have tons and tons of ore. It is the finest kind of crystal ore, too.

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Los Angeles, California

#### K G W—The Morning Oregonian—492 Meters

Owned and Operated by The Morning Oregonian, Portland, Oregon

#### SUNDAY-

7:00 to 8:00 p.m. GEORGE OLSEN and his orchestra in dinner programme of concert music, by direct wire from Potrland Hotel dining room.

#### MONDAY....

3:30 to 4:00 p.m. Educational programme by the PORTLAND LIBRARY ASSN.
8:00 to 9:00 p.m. Violin Recital by FAURICE LE PLAT of the Cornish School of Music, assisted by WILFORD KEELER, Tenor.
9:30 to 10:30 p.m. Community Program arranged by the HILLSBORO CHAMBER OF COMMERCE.
11:00 to 12:00 p.m. Hoot Owis.

#### TUESDAY-

3:30 to 4:00 p.m. Woman's Program; talk by JEANETTE P. CRAMER, home economics editor of The Oregonian.

10:00 to 11:00 p.m. Dance music by GEORGE OLSEN and his orchestra by direct telephone wire from the Portland Hotel.

#### WEDNESDAY-

3:30 to 4:00 p. m. Children's Programme. Music and story by AUNT NELL.
8:00 to 9:00 p. m. Concert by the ENTERPRISE PHILHARMONIC ORCHESTRA.
10:00 to 11:00 p. m. Dance music by GEORGE OLSEN and his orchestra by direct telephone wire from the Portland Hotel.

#### THURSDAY-

3:30 to 4:00 p.m. Woman's Program devoted to Child Training.
10:00 to 11:00 p.m. Dance music by GEORGE OLSEN and his orchestra by direct telephone wire from the Portland Hotel.

#### FRIDAY-

3:30 to 4:00 p.m.

"A Summer in the Mt. Hood Region."

8:00 to 8:15 p.m.
companist.

8:15 to 9:00 p.m.
Hotel.

Other in the Mt. Hood Region."

A. G. JACKSON, Forest Examiner, Oregon National Forest; subject, Mt. Hood Region."

Vocal Solos, LENA GARRIOTT, Soprano; ARDITH DUNCAN,, ac
Studio Concert by GEORGE OLSEN and his orchestra of the Portland 0:00 to 11:00 p.m.

Dance region National Forest; subject, Mt. Hood Region."

10:00 to 11:00 p.m. Dance music by GEORGE OLSEN and his orchestra of the Portland phone wire from the Portland Hotel.

11:00 to 12:00 p.m. Dance music by GEORGE OLSEN and his orchestra by direct tele-

#### SATURDAY-

3:30 to 4:00 p.m. Children's Programme. Story by AUNT NELL.
10:00 to 11:00 p.m. Dance music by GEORGE OLSEN and his orchestra by direct telephone wire from the Portland Hotel.

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## W F A A—Dallas News-Journal—475 Meters

6:00 to 7:30 p.m. Music from the orchestra, DON ALBERT, Conducting, and the Grand Organ, DWIGHT BROWN, Organist, broadcast from the Palace Theatre. MONDAY-

TUESDAY-6:30 to 7:30 p. m. 9:00 to 10:00 a. m. 10:30 to 11:00 p. m. JEROME I. WRIGHT'S MALE QUARTET OF SINGERS. WATSON'S GULLY-LOW ORCHESTRA. R. E. L. SANER on "Americanization;" an address.

WEDNESDAY-

Address, DeWITT McMURRAY, Editor Semi-Weekly Farm News, in 10:30 to 11:00 a.m. Address, DeWITT a medley of humor, pathos and wisdom.

THURSDAY-

10:30 to 11:00 a.m. Address, Z. E. BLACK, of the Dallas Chamber of Commerce, on "Dallas, an Analysis of Population and of Occupations."
6:30 to 7:30 p.m. MARIO H. BOLACK, Blind Pianist, and MRS. CLYDE F. MAGEE,

6:30 to 7 Reader. Address, "The Texas Homestead Law," by CHARLES A. LEDDY, Except for United States Weather forecast at 7:30, Station WFAA will 10:30 to 11:00 a.m. Attorney, Dallas. Except be silent after 5:00 p. m.

FRIDAY 10:30 to 11:00 a.m. 6:30 to

Address, DR. ROBERT STUART HYER, Southern Methodist University, on the Sunday School Lesson, "Stephen, the Martyr."

to 7:30 p.m. Musical Recital presenting WALTER EMERSON, Tenor and assisting musicians.

SATURDAY-10:30 to 11:00 a.m. in Current History 6:30 to 7:30 p.m.

Address, PROF. CLYDE EAGLETON, Southern Methodist University, Comment.

6:30 to 7:30 p.m. 9:00 to 10:00 p.m.

Old Fiddlers from Renner, Texas, in old-time favorites. NETTO MALE QUARTET in vocal recital.

SUNDAY-

12:30 to 1:30 p.m. Radio Chapel Bible Class, DR. WILLIAM M. ANDERSON, Pastor of the First Presbyterian Church, Teacher; half hour Bible Study and half hour gospel Dramatic presentation by players from CYCLE PARK THEATRE. 0 p. m. Sacred music by choristers from HASKELL AVENUE BAPTIST

singing. 2:00 p.m. 7:30 to 8 8:00 p. m. CHURCH. 9:00 p.m. 8:00 to

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#### WOC-Palmer School of Chiropractic-484 Meters

Davenport, Iowa-Pacific Time

SUNDAY-

6:00 p.m. Church Service—REV. IRVING K. MERCHANT, Pastor A. M. E. Church, Davenport, Iowa. (Postponed from August 5th.)
7:00 p.m. Musical Program (2 hours)—ERWIN SWINDELL, Musical Director. P. S. C. ORCHESTRA, assisted by ANGELA DRISCOLL, Soprano; PEARL WEAVER, Contralto; SUSAN MEEHAN, Pianiste.

MONDAY-

4:30 p.m. Sandman's Visit.

TUESDAY-

3:45 p.m. Chimes Concert.
4:00 p.m. Baseball Scores and Weather Forecast. (No broadcasting on Tuesday evening by agreement of Tri-City Stations.)
6:00 p.m. Pipe Organ Recital, ERWIN SWINDELL, Organist; HAROLD STELK, Boy 6:00 p. m. Soprano.

8:00 p. m. Artist Musical Program, ERWIN SWINDELL, Musical Director. Program furnished by the "Blackhawk Hotel Orchestra," through the courtesy of CARL NORTH-INGTON. Immediately following the late musical program, "Tourists' Road Report."

WEDNESDAY-

Chimes Concert. Sandman's Visit.

3:45 p. m. 4:30 p. m. 4:50 p. m.

Baseball Scores and Weather Forecast.

THURSDAY...

3:45 p. m. 4:30 p. m.

Chimes Concert. Sandman's Visit.

FRIDAY-

4:50 p.m. SATURDAY- Baseball Scores and Weather Forecast.

4:50 p.m. 7:30 p.m.

Baseball Scores and Weather Forecast.

Dance Program (one hour)—P. S. C. ORCHESTRA.

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#### ? ? ? ?

(Continued from Page 23)

Radio Doings,

I would like to know if I put more wires on my aerial if it would extend my receiving distance or louden it. My name is Damon Miller, address Box 47, National City, Calif.

Yours truly,

DAMON MILLER.

Ans. You do not give us complete data on your present antenna. This information is very vital if we are to answer your question. The number of wires in an antenna does not necessarily control the distance and audibility of your signals. Let us suggest that your antenna be one wire not over 150 feet

long including lead-in and the higher the better.

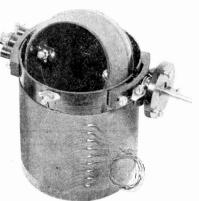
Can you tell me if something can be done to compel the wireless telegraph transmitter which spoils KFI concerts nightly around the Harbor District? To raise his wave length? I can tune them in very sharply on 600 meters. He spoils concerts on 479 meters and can be heard faintly on 395 meters. Can you give me Mayor Dillars address and do you thinr it would do any good to take it up with him. I am using a Westinghouse 2 step set and Western Electric loud speaker. With the cheaper sets the interference is very loud.

H. M. HUBBELL,

Harbor City, Cal., July 31, 1923.

P. S.—Who do you think this station is?

Ans. Nothing can be done to control the interference you experience. These stations are commercial and handle traffic to and from ships at sea. The U. S. radio inspector can do nothing for you. Let us suggest that you increase the selectivity of your receiver by changing the circuit to a tuned primary, tuned secondary, inductively coupled receiver. The station that is interfering with you is the Radio Corporation Marine Station at Wilmington, call letters KSE.



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309 Meters-Pacific Time MONDAY-

00 p. m. Special music by JENNIE KEHRT and BABSON REPORT.

100 to 6:00 p. m. Part One—The ZOO OPERA COMPANY directed by RALPH LY-FORD, artists from Metropolitan Opera Company and other leading opera companies. Chorus of sixty voices. Ballet of thirty. (Broadcast courtesy management Cincinnat's Notes 6:000 processes.) 1:00 p. m. 5:00 to

6:30 p. m. Part Two-(From WLW Studio)-The ROBER HILL DANCE OR-CHESTRA

TUESDAY-

ESDAY—
6:45 to 7:15 p.m. Part Three—Continuation of the performance of the ZOO GRAND OPERA COMPANY, name of opera to be announced by Radio.
7:00 p.m. Part One—(1) Vocal Solos, GLADYS HENEN WOERS, accompanied by her mother; (2) A Play in One Act, "Behind the Scenes;" (3) Vocal Solos by HELEN WOERZ, from the College of Music. Part Two—Entertainment by The CIRCLE OR-

WEDNESDAY-

OP. M. Part One—(1) Piano Solos, MARGARET NEISEL (College of Music); (2) Quartet Selections, THE CINCINNATI HARMONY FOUR; (3) Piano Solos, MARGARET NIESEL; (4) THE CINCINNATI HARMONY FOUR; (5) Dance Selections by the AICHELE NOVELTY ORCHESTRA. Part Two—(1) THE CINCINNATI HARMONY FOUR; (2) AICHELE NOVELTY DANCE ORCHESTRA; (3) The CINCINNATI HARMONY FOUR. 5:00 p. m. THURSDAY-

URSDAY—
7:00 p.m. Part One—(1) The STEINKOENING ORCHESTRA; (2) Cornet Solo by MR. CLIFFORD FRICKE, with HOBART FRICKE at the piano; (3) Baritone Solo by WM. STEINKOENING; (4) Selection by the SETINGOENING ORCHESTRA; (5) Tenor Solos by OLIVER PLUNKETT; (6) Piano Solos by MERCEDES VOSS; (7) Tenor Solos by

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The Radio Corporation installed in the private car of General Gouraud a set with a loud speaker. The set entertained the famous French officer on tour in the United States. M. and Madame Jusserand, who visited the car, were pleased with the reception of broadcasts. En route to Baltimore the General reported he was able to hear WCAP, the new Telephone Company's station.

"Uncle John" of KHJ is away on his vacation. We shall all miss him. He is surely entitled to a good time and we hope he will have one. During his absence Mr. Sam S. Hines will have charge of the evening programs, Mr. Harry James Beardsley of the District Attorney's office the Children's hour, and Mrs. Carrie Preston Rittmeister the matinee. All three of these are well known to radioland and we, no doubt, will be well entertained.

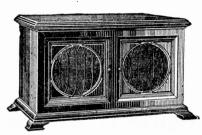
Publishers and composers of music are finding radio of great assistance in making the public familiar with their latest productions. Mr. George Grimm, the composer of the "KHJ Concert Waltz" and "Twilight Memories," is finding this true. "Twilight Memories" was written in memory of Mr. Grimm's mother who recently passed away. Another number by the same composer, "Recollections of Home," will be out shortly.

Thre has been such a demand for our Anniversary Number that we are entirely sold out. We have received requests from practically all over the country for copies. We shall, therefore, have to refund on all orders from this date.

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