

THE SEPTEMBER, 1934

*Pratt*

# RADIO IN INDEX

THE ALL-WAVE RADIO MAGAZINE



25<sup>c</sup>

A Study of the Superheterodyne  
The September Radio Programs  
One Thousand S. W. Stations  
Two Hundred Summer Changes  
Reallocation in Canada

No. 81

# THE SUMMER'S CHANGES IN STATION DATA

## FREQUENCIES

550	CFNB	Fredericton, N. B., from 1030
630	CKOV	Kelowna, B. C., from 1210
630	WPRO	Providence, R. I., from 1210
681	VOWR	St. John's, Nfld., from 700
710	KPCB	Seattle, Wash., from 650
760	XEBC	Agua Caliente, L. C., from 1280
780	CMBS	Havana, Cuba, from 765
780	CMCF	Havana, Cuba, from 870
780	KFQD	Anchorage, Alaska, from 600
780	KGHL	Billings, Mont., from 950
800	WTBO	Cumberland, Md., from 1420
820	XEP	Mexico City, D. F., from 970
840	CFQC	Saskatoon, Sask., from 1230
840	CRCT	Toronto, Ont., from 960
840	VOGY	St. John's, Nfld., from 1050
880	CFJC	Kamloops, B. C., from 1310
880	KSEI	Pocatello, Idaho, from 890
880	WPHR	Petersburg, Va., from 1200
890	CMX	Havana, Cuba, from 875
900	KGA	Spokane, Wash., from 1470
910	CJAT	Trail, B. C., from 1200
910	CMHW	Cienfuegos, Cuba, from 1200
930	CHNS	Halifax, N. S., from 1050
930	CMJF	Camaguey, Cuba, from 910
950	CRCS	Chicoutimi, Que., from 1500
960	KCY	Winnipeg, Man., from 780
965	CMBY	Havana, Cuba, from 1230
980	XEOK	Tijuana, B. C., from 920
980	XEU	Veracruz, Ver., from 1200
987	CMGF	Matanzas, Cuba, from 971.5
990	XEK	Mexico City, C. F., from 1120
1010	CMBD	Havana, Cuba, from 965
1030	CKLW	Windsor, Ont., from 840
1030	XEB	Mexico City, D. F., from 1010
1037	CMHI	Santa Clara, Cuba, from 1007
1060	CMBG	Havana, Cuba, from 1048
1060	CMCB	Havana, Cuba, from 1048
1060	XEA	Guadalajara, Jal., from 1200
1080	XEMA	Tampico, Tams., from 1200
1090	WESG	Elmira, N. Y., from 680
1100	KWKH	Shreveport, La., from 850
1100	XETG	Mexico City, D. F., from 1040
1120	CHSJ	St. John, N. B., from 1370
1120	XENT	Nuevo Laredo, Tams., from 1340
1140	CMCG	Havana, Cuba, from 1300
1150	XEH	Monterrey, N. L., from 1130
1200	KOOS	Marshfield, Ore., from 1370
1200	WLVA	Lynchburg, Va., from 1370
1210	CMJI	Ciego de Avila, Cuba, from 1335
1230	CJOC	Lethbridge, Alta., from 840
1240	CJCB	Sydney, N. S., from 880
1240	XEAI	Mexico City, D. F., from 1420
1270	HIX	Santo Domingo, D. R., from 598
1270	XFB	Jalapa, Ver., from 1290
1300	WFBC	Greenville, S. C., from 1200
1330	KTRH	Houston, Texas, from 630
1340	XFD	Orizaba, Ver., from 1240
1360	KGIR	Butte, Mont., from 1340
1360	WSBT	South Bend, Ind., from 1230
1370	KFGQ	Boone, Iowa, from 1310
1370	XEI	Morelia, Meh., from 1310
1375	CMCN	Havana, Cuba, from 1357
1375	CMCR	Havana, Cuba, from 1357
1380	WALA	Mobile, Ala., from 1410
1400	TGX	Guatemala City, Guat., from 1380
1420	CKNC	Toronto, Ont., from 1030
1500	CHGS	Summerside, P. E. I., from 1120
570	KGKO	Wichita Falls, Texas, 250 to 500
570	KMTR	Hollywood, Calif., 500 to 1000
570	KVI	Tacoma, Wash., 500 to 1000
600	WICC	Bridgeport, Conn., 500 to 250
600	WMT	Waterloo, Iowa, 500 to 1000
600	WREC	Memphis, Tenn., 500 to 1000
610	AFX	Mexico City, D. F., 1000 to 500
630	CKOV	Kelowna, B. C., 50 to 100
700	WLW	Cincinnati, Ohio, 5000 to 50000
730	CJCA	Edmonton, Alta., 1000 to 500
800	WTBO	Cumberland, Md., 100 to 250
830	KOA	Denver, Colo., 12500 to 50000
840	CFQC	Saskatoon, Sask., 500 to 1000
850	VOGY	St. John's, Nfld., 75 to 400
850	KIEV	Glendale, Calif., 100 to 250
860	XEMO	Tijuana, L. C., 2500 to 2000
880	WPHR	Petersburg, Va., 100 to 500
890	WGST	Atlanta, Ga., 250 to 500
900	KGA	Spokane, Wash., 5000 to 1000
910	CJAT	Trail, B. C., 50 to 250
930	KGBZ	York, Neb., 500 to 1000
930	KMA	Shenandoah, Iowa, 500 to 1000
930	KROW	Oakland, Calif., 500 to 1000
930	WBRC	Birmingham, Ala., 500 to 1000
930	WDBJ	Roanoke, Va., 500 to 1000
940	WAAT	Jersey City, N. J., 300 to 1000
940	WHA	Madison, Wis., 1000 to 2500
960	KCY	Winnipeg, Man., 5000 to 15000
980	XEU	Veracruz, Ver., 100 to 250
1010	KGGF	Coffeyville, Kans., 500 to 1000
1010	KQW	San Jose, Calif., 500 to 1000
1010	WIS	Columbia, S. C., 500 to 1000
1060	XEA	Guadalajara, Jal., 250 to 125
1070	KJBS	San Francisco, Calif., 100 to 500
1080	XEMA	Tampico, Tams., 100 to 500
1120	XENT	Nuevo Laredo, Tams., 30000 to 50000
1180	WINS	New York, N. Y., 500 to 1000
1180	WMAZ	Macon, Ga., 500 to 1000
1185	CMBX	Havana, Cuba, 500 to 250
1200	KCOS	Marshfield, Ore., 100 to 250
1200	10-BP	Wingham, Ont., 15 to 25
1200	10-BU	Canora, Sask., 15 to 25
1210	CMJI	Ciego de Avila, Cuba, 45 to 150
1210	XEE	Durango, Dgo., 100 to 50
1220	KFKU	Lawrence, Kans., 500 to 1000
1240	CJCB	Sydney, N. S., 50 to 1000
1240	KTFI	Twin Falls, Idaho, 1000 to 500
1250	WCAL	Northfield, Minn., 1000 to 2500
1260	WLWB	Erie, Pa., 500 to 1000
1260	WTOC	Savannah, Ga., 500 to 1000
1270	HIX	Santo Domingo, D. R., 1500 to 1000
1270	XFB	Jalapa, Ver., 1000 to 250
1280	WIBA	Madison, Wis., 500 to 1000
1310	WEBR	Buffalo, N. Y., 100 to 500
1310	XEFW	Tampico, Tams., 70 to 250
1310	XEX	Monterrey, N. L., 50 to 125
1310	XFA	Aguaascalientes, Ags., 100 to 5
1320	KSO	Des Moines, Iowa, 500 to 250
1320	WSMB	New Orleans, La., 500 to 1000
1330	KTRH	Houston, Texas, 250 to 1000
1360	KGIR	Butte, Mont., 500 to 1000
1400	TGX	Guatemala City, Guat., 75 to 150
1440	KXYZ	Houston, Texas, 250 to 500
1450	WSAR	Fall River, Mass., 500 to 250
1500	WJBK	Detroit, Mich., 50 to 100
630	XEZ	Merida, Yuc.
630	XFG	Mexico City, D. F.
740	XEPR	Mexico City, D. F.
750	XEMC	Merida, Yuc.
780	CJCS	Sudbury, Ont.
850	XETZ	Mexico City, D. F.
890	XETU	Pachuca, Hdo.
930	KFWI	San Francisco, Calif.
980	XEAE	Tijuana, B. C.
1120	WHAD	Milwaukee, Wis.
1200	WNBW	Carbondale, Pa.
1200	XEY	Merida, Yuc.
1210	CFBO	St. John, N. B.
1210	XEAB	Nuevo Laredo, Tams.
1280	XFFW	Tampico, Tams.
1295	XEAC	San Luis Potosi, S.L.P.
1300	WOQ	Kansas City, Mo.

## DELETED

(Continued on page 77)

# THE SEPTEMBER DX CALENDAR

of special programs for distant listeners arranged by the stations outside of their regular hours. All time is EST so that programs may be arranged in order.

<b>DAILY</b>			
12:00-12:05	VAS	685 2000	Glacé Bay
12:00-1:00	WMC	780 1000	Memphis
12:00-6:00	KFAC	1300 1000	Los Angeles
12:00-8:00	KJBS	1070 100	San Francisco
1:00-7:00	WEDC	1210 100	Chicago
5:30-7:00	WSPA	1420 100	Spartanburg
6:00-7:00	KFBI	1050 5000	Ablene

### Monday Mornings

<b>September 3</b>			
2:00-2:15	WAVE	940 1000	Louisville
2:00-2:20	WJAC	1310 100	Johnstown
2:10-2:30	WFAS	1210 100	White Plains
2:10-2:30	WRAK	1370 100	Williamsport
2:30-2:50	WAGM	1420 100	Presque Isle
2:30-2:50	WBTM	1370 100	Danville
2:50-3:10	WHAT	1310 100	Philadelphia
3:10-3:30	WSYB	1500 100	Rutland
3:30-3:50	WKOK	1210 100	Sunbury
3:30-3:50	WQDM	1370 100	St. Albans
3:50-4:10	WBAX	1210 100	Wilkes-Barre
4:20-4:40	KGVO	1200 100	Missoula
4:30-4:50	KOOS	1200 100	Marshfield
4:30-5:00	WNBO	1200 100	Washington, Pa.
4:50-5:10	KRKO	1370 50	Everett
5:30-5:50	KUJ	1370 100	Walla Walla

### September 24

3:00-5:00	XED	1160 500	Guadalajara
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### Sept. 2, 9, 16, 23, 30

12:00-3:00	WCNW	1500 100	Brooklyn
2:30-4:30	CKMO	1410 100	Vancouver

### Tuesday Mornings

<b>September 4</b>			
2:30-2:50	WEED	1420 100	Rocky Mount
3:10-3:30	WNRA	1420 100	Muscle Shoals
3:50-4:10	WAGF	1370 100	Dothan
4:00-4:20	KWG	1200 100	Stockton
4:10-4:30	KPJM	1500 100	Prescott
4:20-4:40	KERN	1370 100	Bakersfield
4:20-4:40	WPFB	1370 100	Hattiesburg
4:30-4:50	KXO	1500 100	El Centro
4:40-5:00	WBNO	1200 100	New Orleans
5:00-5:20	WDNC	1500 100	Durham

### September 18

1:01-1:09	CFCY	630 500	Charlottetown
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### Sept. 4, 11, 18, 25

10:00-1:00	CMBX	1185 250	Havana
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### Wednesday Mornings

<b>September 5</b>			
1:00-2:00	KFYR	550 1000	Bismarek
1:30-2:00	WHBL	1410 500	Sheboygan
1:30-2:30	WSUI	880 500	Iowa City
2:30-2:50	WHIS	1410 250	Bluefield
2:40-3:00	WFBG	1310 100	Altoona
3:40-4:00	WGH	1310 100	Newport News
3:50-4:10	KBTM	1200 100	Jamestown
3:50-4:10	WOCL	1210 50	Jamestown
3:50-4:10	WROK	1410 500	Rockford
4:00-4:20	WQAN	880 250	Seranton
4:10-4:30	KGFL	1370 100	Roswell
4:10-4:30	WOSU	570 750	Columbus
4:50-5:10	WACO	1420 100	Waco

### September 12, 19, 26

2:00-2:30	WROK	1410 500	Rockford
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### September 19

1:01-1:09	CFCY	630 500	Charlottetown
2:00-2:30	KWTO	560 1000	Springfield
3:01-3:09	CHSJ	1120 100	St. John
3:00-3:30	KSO	1320 250	Des Moines
3:00-5:00	WJAG	1060 1000	Norfolk
3:00-5:00	WOPI	1500 100	Bristol

### September 26

5:30-5:45	WFBG	1310 100	Altoona
2:30-4:30	CKMO	1410 100	Vancouver
6:00-6:30	WASH	1270 500	Grand Rapids

### Thursday Mornings

<b>September 6</b>			
2:00-2:20	WDAH	1310 100	El Paso
2:20-2:40	KTSM	1310 100	El Paso
3:00-3:15	KREG	1500 100	Santa Ana
3:00-3:20	WHBY	1200 100	Green Bay
3:00-3:20	WRDW	1500 100	Augusta
3:10-3:30	WJMS	1420 100	Ironwood
3:30-3:50	KGKL	1370 100	San Angelo
3:40-4:00	KFPM	1310 15	Greenville
4:00-4:20	WEBQ	1210 100	Harrisburg
4:10-4:30	KONO	1370 100	San Antonio
4:10-4:30	WNBR	1430 500	Memphis
4:20-4:40	WQAM	560 1000	Miami
4:40-5:00	WCBS	1210 100	Springfield
4:50-5:10	WKBV	1500 100	Richmond
5:00-5:20	KBGX	1310 100	Springfield

### September 27

5:30-6:00	WRAW	1310 100	Reading
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### Sept. 6, 13, 20, 27

10:00-1:00	CMBX	1185 250	Havana
12:00-3:00	WCNW	1500 100	Brooklyn
3:00-4:00	XEFI	720 250	Chihuahua

### September 20

3:01-3:09	CHSJ	1120 100	St. John
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### Friday Mornings

<b>September 7</b>			
3:10-3:30	KOTN	1500 100	Pine Bluff
3:30-3:50	WELL	1420 50	Battle Creek
3:40-4:00	KFPL	1310 100	Dublin
3:40-4:00	WALR	1210 100	Zanesville
3:50-4:10	WMBC	1420 100	Detroit
4:50-5:10	WJBL	1200 100	Decatur
5:20-5:40	WHDF	1370 100	Calumet
5:40-6:00	WMBH	1420 100	Joplin

2:30-4:30	CKMO	1410 100	Vancouver
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### Saturday Mornings

<b>September 1</b>			
1:00-2:00	WWAE	1200 100	Hammond
2:00-2:30	KVOA	1260 500	Tucson
2:30-3:30	CHWK	780 100	Chiliwack
3:00-3:20	WJBC	1200 100	LaSalle
3:00-3:20	WTMJ	1280 500	Tranton
3:20-3:40	KFXR	1310 100	Oklahoma City
3:40-4:00	WFAM	1200 100	South Bend
4:00-4:20	KGCA	1270 100	Decatur
4:00-4:20	WJAY	610 500	Cleveland
5:00-5:20	WAVE	940 1000	Louisville
5:15-6:15	WSUI	880 500	Iowa City
5:20-5:40	WEW	760 1000	St. Louis
5:40-6:00	WLAP	1420 100	Lexington
5:50-6:10	KGGM	1230 250	Albuquerque

### September 8

3:00-3:30	KSO	1320 250	Des Moines
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### September 15

1:00-1:30	WDNC	1500 100	Durham
5:00-5:10	KFNF	890 500	Shenandoah

### September 22

2:00-3:00	VE9EK	1195 10	Montmagny
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### September 29

12:00-8:00	KGIR	1360 1000	Butte
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### Sept. 8, 15, 22, 29

12:00-12:30	WGAR	1450 500	Cleveland
12:00-3:00	WGES	1360 500	Chicago
1:00-3:00	TGX	1400 150	Guatemala

### Sunday Mornings

<b>September 2</b>			
4:10-4:30	KGDY	1340 250	Huron
4:20-4:40	KRGV	1260 500	Weslaco
5:00-5:20	KGKO	570 500	Wichita Falls
6:20-6:40	WNAD	1010 500	Norman

### September 9

3:00-4:00	WOS	630 500	Jefferson City
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### September 16

3:00-3:30	KUMA	1420 100	Yuma, Ariz.
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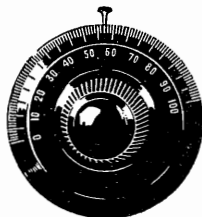
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September 1, 1934



# RADIO INDEX

Reg. U. S. Patent Office



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ELEVENTH YEAR

NUMBER 81

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# The BEGINNERS' STORY of RADIO

PART TEN

The Superheterodyne Receiver

• • • By B. FRANCIS DASHIELL

THE superheterodyne receiver is, without question, the world's most popular type of radio set. We can find its principles operating in practically every broadcast, all-wave and automobile radio now being manufactured. And, because of the constant stream of multi-purpose tubes and improved circuits, there appears to be no end to the possibilities of the superheterodyne receiver.

Previous chapters described the functions of many of the unit parts that go into the assembly of a radio set. A complete t.r.f. receiver was assembled in Chapter 9. And, by now, the reader should understand wave motion and frequency, and how the tuned-radio-frequency receiver just mentioned uses two different currents in its circuit—radio and audio frequencies. The superheterodyne set, to most persons, has been cloaked in mystery and considered a highly complicated type of receiver. But it really is very simple in its operation. So, at this time, we are prepared to take up some new principles of radio and, by the mere addition of two new units to the t.r.f. set described in Chapter 9, create a superheterodyne receiver.

## Defining the Set

The word *super* really is a nonentity in any description of the super-heterodyne circuit. This prefix is being attached to so many names in the commercial world that it seldom impresses the reader. Therefore, *super-heterodyne* means a *heterodyne* set having great power and sensitivity. The word heterodyne is derived from the Greek words *hetero*, meaning different or unlike, and *dyme*, meaning power or force.

From these definitions we assume that the super-heterodyne receiver operates because of different forces. Such actually is the case. Naturally these forces are electricity—two separate alternating currents. One is the radio signal that is picked up by the antenna, and the other is a locally generated current. These two forces are arranged to act at the same time on the same circuit, and, as a result, the frequency of the incoming signal will be *lowered* and held constant without impairing its audio-frequency characteristics or sound modulation. All subsequent amplifications within the receiver will be accomplished at this particular frequency.

These two currents, vibrating at high or radio frequencies, act *against* each other (for they must be produced simultaneously) and produce a third, or resultant current, which is used for the operation of the receiver. The new current vibrates at what is called the *beat frequency*. It becomes necessary, now, to turn to an elementary principle of sound and music to learn how a third and different radio frequency can be created, and why it is called a beat frequency.

## The Beat Frequency

If two closely adjacent piano keys are struck sharply at the same instant, the notes from each associated wire that is set into vibration cannot be heard separately. What we do hear is a peculiar sound having a tone that is different from those given off singly by either of the two wires. This new, or third, tone, is caused by the slow vibrations or beats set up by the interference created between the two original sound waves. Beats are usually

produced through interference or interaction between two sound or radio waves having slightly different periods of vibration.

In all cases, whether in music or radio, the number of beats per second, caused by this interaction between two slightly different wave vibrations, is equal to the *difference* between their respective vibration rates. For instance, if each of the two piano wires vibrates 5,000 and 6,000 times a second, then the resultant sound wave will have a beat frequency of 1,000 vibrations a second. An the pitch of its tone, of course, will be *lower* than the pitch of either of the two original sound waves.

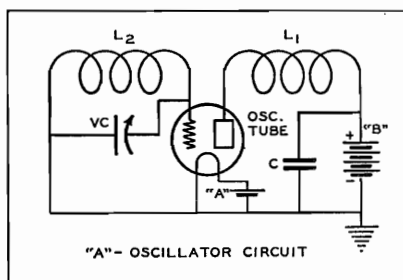
Now it is possible to apply this same principle to radio, and, instead of sound waves, we will make use of the terrific vibrations of radio-frequency currents. Should we apply two such currents simultaneously, as, for instance, one having a frequency of 1,000,000 cycles a second and the other a frequency of 1,100,000 cycles, a resultant electric wave will be created by the interference of the vibrations that do not coincide except at regular intervals, and which will have a frequency of 100,000 vibrations a second. This means there will be 100,000 beats a second—the difference between 1,000,000 cycles and 1,100,000 cycles. In this case the frequency of the resulting beat wave is 100 kilocycles (3,000 meters wave length), as against frequencies of 1,000 and 1,100 kilocycles (wave lengths of 300 and 275 meters, respectively) for the two separate radio waves which act to produce the beats.

The method of using two opposing radio frequencies to create a beat frequency is called the *heterodyne effect*. Quite frequently, when tuning in radio stations, the listener will notice a similar beat effect. The *heterodyning* of radio stations that are too close together on the dial to be tuned out is of common occurrence. All that can be heard is a throbbing sound, or beat, that rises and falls in waves, and

which renders the two programs meaningless.

### The Oscillator

To produce a beat frequency, a *local* radio-frequency current must be applied *simultaneously* with the radio-signal frequency that is coming in through the antenna. This current is obtained from a local oscillating circuit which is inductively coupled to the antenna input or radio-frequency amplification stage of the receiver. The antenna current meets in unison with the local current, which is of a slightly different frequency, being either higher or lower. This sets up a beat frequency. The oscillator of a superheterodyne receiver is the most complicated part of the circuit. The least abuse of its careful alignment will throw off the readings on the tuning dial, and frequently weaken or even prevent the reception of signals.



At "A" is shown a typical oscillator circuit. It is generally known that a radio tube will, in addition to its ability to amplify signals, generate a radio-frequency alternating current. Giant-size vacuum tubes are used in radio stations to create and broadcast powerful oscillating, or high frequency electric waves. In exactly the same manner a tiny receiving tube can be made to provide the local oscillations needed to beat against the incoming signal. To act as an oscillator it is necessary only to couple the plate or output circuit of the tube to its own grid or input circuit. A set of two coils, similar to a r.f. transformer, is used for the purpose.

## Generating the Oscillations

The action of an oscillator is not difficult to understand once the reader grasps how the current flows in and out of the circuit. The term "oscillate" means to swing back and forth, a movement like the pendulum in a clock, or vibration. The tube, shown in "A," starts to heat up the moment the radio set is turned on. An emission of electrons instantly flows, but becoming faster and faster as the filament and cathode gets hotter, and the stream attracted toward the positive plate quickly reaches its maximum density. Then, of course, the flow of plate current, as it passes through the circuit and its coil  $L_1$ , increases to its maximum potential. At this time, also, there is a magnetic field surrounding the coil, and it is building up in intensity. So, when the radio set is turned on, we have a condition of acceleration; the heating tube; an increasing flow of electrons; a mounting rise in the voltage of the plate current; and the spreading electromagnetic field around the coil  $L_1$ . These actions compare to the acceleration of a motor car as it reaches full speed from a standing position. It is this acceleration, created when the set is turned on, that gives the original *shock* to the oscillator and incites it into action.

During the tiny fraction of a second while the magnetic field of force about the coil  $L_1$  (see Part 3) is building up in strength, it is also inducing an *increasing* voltage in the grid coil  $L_2$ . But, as this coil is connected to the grid of the tube, the potential is being impressed on the grid. The grid, as we have learned, controls the flow of electrons within the tube and the plate current in the circuit. As the grid gains in its charge, due to the voltage being induced in  $L_2$ , it begins to slow down the flow of plate current and finally stops it entirely. Then, as no current is flowing through  $L_1$ , the surrounding magnetic field quickly collapses. The *inward* movement of the lines of force causes them again

to cut across coil  $L_2$ , but in a direction *opposite* to that which was taken when the plate current increased. So, a second surge of potential will be induced in  $L_2$ , but flowing in the opposite direction, and which immediately induces an opposite charge on the grid of the oscillator tube. This completes one cycle, or oscillation, in the current flowing through the coils  $L_1$  and  $L_2$ .

The charge now impressed on the grid is the same as the first charge. It permits the electrons again to flow and increases the plate current; the magnetic field builds up anew; a current surge of opposite direction is induced in  $L_2$ ; a new charge is impressed on the grid; the plate current is again shut off; and the process goes on and on as long as power is supplied to the tube and circuit. The action is very fast; faster indeed than any vibration the eye can imagine. It reaches radio-frequency proportions, which means that oscillations as frequent as 50,000,000 times a second can be created in an ultra-short wave circuit!

## The Intermediate Frequency

The rate or frequency of the oscillations set up in coil  $L_2$  depends upon the size of the inductances. And varying the capacity of the oscillator condenser VC changes the frequency at which the oscillations will occur. For instance, if the local current flowing through an oscillator is made to vibrate at a rate of 400,000 times a second, it, therefore, will have a frequency of that many cycles, or 400 kilocycles. When it is tuned *against* an incoming radio wave of 575,000 cycles, or 575 kilocycles, it will create a beat wave having a frequency of 175,000 cycles, or 175 kilocycles. This beat wave is called the *intermediate frequency*. It is *always lower* than either the transmitted radio wave or the locally generated oscillating wave, because it is equal to the arithmetical difference between the two original frequencies. An intermediate-frequency current can be amplified with less loss

than the original high signal frequency, and nearly as efficiently as the low audio frequencies.

The tuned-radio-frequency circuit shown in Chapter 9 was that of a receiver utilizing radio and audio frequencies and their amplification; in this chapter we shall place the intermediate frequency, as its name implies, *between* the radio and audio frequencies. The new circuit, then, will amplify all three of the frequencies, each separately—the radio, intermediate and audio, in the order indicated.

### The First Detector

The path followed by the three different frequencies as they flow through a superheterodyne receiver is shown at "B." At the left the intercepted r.f. signal passes through the radio-frequency amplification stage, as explained in previous chapters. The amplified output is sent into the first detector. Here the incoming r.f. signals are *combined* or *mixed* with the locally generated r.f. oscillating current. The resulting beat, or lowered, frequency, emerges from the output of the first detector as an intermediate frequency, ready for still further amplification.

The third tube is the oscillator, and its oscillating output is returned to the first detector for mixing with the incoming radio signals. The fourth tube is the intermediate-frequency amplifier that boosts up the output of the first detector. In some receivers there may be several i.f. stages and tubes.

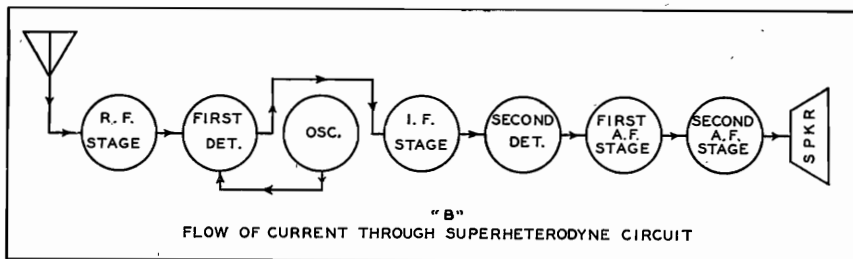
### The Second Detector

After the intermediate-frequency

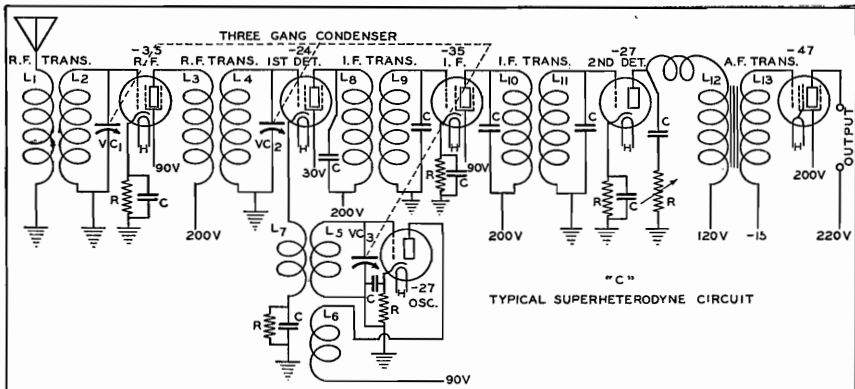
current has been sufficiently amplified by passing through the fourth tube or stage, shown in "B," it becomes necessary to repeat the detecting or rectifying process, using what is called a *second detector*. This is the fifth tube in the diagram. The second detector is the same as any type of detector (see Part 6) in any receiver. The first detector is used to rectify the beat frequency and pass it along, at an intermediate frequency to the i.f. amplification stages. The second detector simply rectifies the amplified intermediate frequency and changes it to a pulsating, audio current for further amplification. The sixth and seventh tubes, shown in "B," amplify the audio currents in the conventional manner.

Amplification of intermediate frequencies is obtained in much the same manner as that for radio frequencies. Intermediate-frequency transformers are similar in detail to r.f. transformers (see Part 3), but are designed to operate only on one frequency—the intermediate frequency of the set. For instance, if this intermediate frequency happens to be 175 kilocycles, it is said to be the *peak frequency* of the receiver. And intermediate-frequency transformers constructed to pass only 175 kilocycles are said to be *peaked* at this particular frequency.

Since these transformers pass but the one frequency it is not necessary to tune them with variable condensers as is the case with radio-frequency transformers. More wire is used in winding the i.f. transformer because it must have a higher reactance against a lower frequency. The reso-







nance of the i.f. transformer is set at the frequency at which the maker decides to peak the receiver, and sometimes small fixed or adjustable trimmer condensers are used to balance the circuit and make resonance to the peak frequency sharper. The transformer must be shielded carefully, otherwise it may pick up unwanted signals and cause no end of interference and trouble.

The tuning and circuit adjustment of the oscillator must be such that there will be a constant difference between its own frequency and that of any incoming signal. For instance, if a receiver is peaked at 175 kilocycles, the following must be the case: At one end of the dial a station is tuned in on 1,400 kilocycles, and the oscillator must generate a current having a frequency of 1,575 kilocycles if the intermediate frequency of 175 kilocycles is to be maintained; at the center of the dial a station broadcasting on 950 kilocycles is tuned in, and the oscillator must generate a current of 1,125 kilocycles; and at the other end of the dial a station on 600 kilocycles is tuned in, and the oscillator must generate 775 kilocycles.

This relationship, between the oscillator tuning and the r.f. circuit tuning, must be constant throughout the entire range of the receiver if the dial is to read correctly. In modern receivers a constant difference is easily

maintained, and the r.f. tuning condensers and the oscillator tuning condenser are mounted on a single shaft for one-knob control. Perfect *tracking* of all the condensers is obtained by carefully adjusting the resonance of the circuits with small trimmers.

### A Typical Circuit

A typical superheterodyne circuit is shown at "C." The antenna coil, with primary  $L_1$  and secondary  $L_2$ , couples the antenna to the grid of the radio-frequency tube. The output is further amplified by a r.f. transformer, using coils  $L_3$  and  $L_4$ . This increased signal is then impressed upon the control-grid of the first detector. The secondaries,  $L_2$  and  $L_4$ , are tuned simultaneously by the variable tuning condensers  $VC_1$  and  $VC_2$ . Up to now this portion of the circuit is similar to the r.f. circuit given in Part 9.

The oscillator tube creates a local r.f. current in the coils  $L_5$  and  $L_6$ . This energy is transferred to the first detector by means of a third coil wound close to  $L_5$ . The third coil is called the *pickup coil*, and is indicated at  $L_7$ . The point of contact with the first detector is the cathode of the tube, but other contacts, such as the control-grid, screen-grid, etc., are used by different circuit designs.

The unidirectional output of the first detector tube then passes through the primary  $L_8$  of the first i.f. trans-

(Continued on page 34)

# LITTLE SKETCHES

## of the Big Stars

• • • By "BETTY"

**B**EHIND the scenes with Johnny Green, youthful conductor and composer, and his weekly broadcast, "In the Modern Manner." For these presentations, which originate in the Columbia Radio Playhouse and are heard over the CBS network each Friday at 9:30 p.m. EDST, Green uses forty musicians—a mixture of dance orchestra and symphony men.

Early each Friday afternoon these two-score men headed by Johnny assemble on the stage of the Playhouse, ready to rehearse right up to air time. After outlining the program, the young maestro takes his baton in hand and the actual rehearsal begins. It isn't long before everybody is in shirt sleeves!

Young, dynamic, and knowing ex-

actly what he wants, Johnny commands the respect and attention of every man in the organization. After a number has been rehearsed to his satisfaction, he grants his men a five or ten minute respite for a smoke. But there is no rest for Johnny. Recess time always finds him at the piano going over the various piano solos or passages he is to play that evening.

When some individual or group of instrumentalists have a hard time getting the right interpretation of a number, Johnny waits and works with them until every note comes out just as he wants it.

An hour before air time the program is timed and any necessary cuts are made by Johnny and the production man. On the air, Johnny always announces his own programs, introduces his guest performers, and explains the significance of the various numbers, graciously giving credit to the composers and arrangers who have helped make the broadcast possible. When a number demands that he be at the piano, Johnny turns his baton over to his 23-year old assistant, Bernard Hermann. And by 10:00 p.m., when the final down-beat of his baton brings the show to a close, Johnny, as producer, conductor, arranger and soloist of his program, has concluded as busy a day as anyone in radio is likely to spend.

Johnny Green is composer of such popular hits as "Body and Soul," "Out of Nowhere," "I Cover the Waterfront" and "Easy Come, Easy Go."

### A Star at Fifteen

Vivienne Segal was born in Philadelphia and received her early vocal training and education in that city.



A Youthful Conductor



*Her Nickname is "Fagin"*

She attended George Washington primary school, William Penn and Girls High School, the Academy of Sisters of Mercy, and an art school. When she was eight years old she became president of her school dramatic club. Even then she dreamed of becoming a famous actress and her mother, who had cherished the same ambition as a child, encouraged her. Vivienne's father, a famous diagnostician and specialist in children's diseases, disapproved of a career on the dramatic stage but approved of her study of music with an operatic future in view.

At the age of 12, she was proficient as a pianist and was appearing in the ballet of the Philadelphia Operatic Society. That same year she played "Puck" in "Midsummer Night's Dream." For this performance she received her first newspaper criticism, which stated that "the role fit her better than her tights." A year later, she sang in splendid soprano voice, in numerous amateur productions. One of the highlights of this period of her training came when she was taken out of the ballet

to sing the title role in "Carmen." She was hailed as a prodigy, and her parents permitted her to take an intensive course in voice culture.

Then came her first big contract—her chance to star, at the age of 15, in the Shubert production of "Blue Paradise." With only four days of rehearsal for her part, she made her debut with the opening of the show in the Casino Theatre in New York.

In quick succession she met with success in numerous musical productions, including "Oh, Lady, Lady," "The Desert Song," several editions of the Ziegfeld Follies, "Chocolate Soldier," "Merry Widow," etc.

Vivienne has auburn hair and dark brown eyes . . . is five feet, three inches in height . . . weighs 105 pounds . . . the theatre and all its branches is her hobby . . . likes to travel in ships or airplanes . . . sport preferences are walking and dancing, and those to watch are races, fights, hockey and football . . . prefers modern classical music. Her present nickname is "Fagin" . . . birthdate is April 19.

Vivienne may be heard with Abe Lyman's orchestra over the CBS network every Tuesday at 8:30 p.m. EDST; and over the NBC (Red) network each Friday at 9:00 p.m. EDST.

### **He Fits His Part**

Known to millions of radio listeners as Captain Henry, veteran skipper who has been at the helm of the Maxwell House Show Boat since it started its voyage over the NBC (Red) network a year and a half ago, Charles Winninger fits his role to perfection.

Had he been born a few years earlier, the celebrated actor, who came to the microphone after a long and successful stage career, might have been just such a jovial Show Boat skipper as Captain Henry.

He wears his hair picturesquely long, a bit below the ears, and his manner away from the microphone is as individual as his famous chuckle, his childlike gurgle of laughter, or



*"It's Only the Beginnin'"*

his cheerful roar of "It's only the beginnin' folks—only the beginnin'." What's more, his hair is as white as that of Santa Claus. Possessed of a full, ruddy face, he bears a strong resemblance to the major domo of the Christmas season.

At rehearsals, Winninger is almost surrounded by a group of the younger members of the cast. Generally, he is telling them a story—a screamingly funny one. He likes to laugh and provoke laughter. No actor is as ready to get into a costume, at the last moment, as the pilot of "Show Boat." He'd just as soon dress for a broadcast as for a performance in the theatre.

Morning finds Charles Winninger at his desk in a Madison Avenue office in New York. Not content with being a star of the stage and air, he has gone into the business of producing radio shows himself. His offices include a completely equipped radio studio.

\* \* \*

If you see any of the actors from the Columbia program, "Forty-Five Minutes in Hollywood," dashing into

movie theatres along Broadway these afternoons, don't get the idea that it's for entertainment. It's all part of their jobs. Once they get inside they listen attentively to the voices of one or two film stars, and that's the way they learn to mimic those stars when they do a radio "preview" of a new picture in their broadcasts.

Marion Hopkinson, who has imitated the voices of Dorothea Wieck, Constance Bennett, Katharine Hepburn, Mae Clarke and Wynne Gibson; and Arlene Francis, who has been the radio "ghost" of Evelyn Venable, Lupe Valez, Constance Cummings, Anita Louise and Bette Davis, have been record-breaking movie fans since last winter. They even go around to neighborhood theatres in Brooklyn and the Bronx to "catch" old pictures featuring stars they are supposed to imitate. Jack Smart, Elizabeth Day and Dwight Wiest spend a lot of their afternoons in the movies, too, and the whole bunch take a couple of days off from the cinema as a "vacation" after every broadcast.

\* \* \*

The sponsor who once had Eddie Cantor (whose contract still has eight more weeks to run) has been reported as trying to lure Bing Crosby into turning into another Rudy Vallee type of showman, and in the event that fails, may present some mysterious "big name" in the dramatic field. It is whispered that the statement attributed to George Arliss, wherein the grand gentleman of the theatre admitted he might be interested in radio if he got \$100,000 for 13 broadcasts, is being taken at face value by this very sponsor.

\* \* \*

Al Jolson and his wife, Ruby Keeler, the film star, are spending their first summer in their home at Scarsdale, N. Y. They have had the house for several years, but this is the first time that Miss Keeler's film engagements and Jolson's own screen and

*(Continued on page 34)*

# The Summer on the

## SHORT WAVES

• • • By PAGE TAYLOR

**S**HORTWAVE listening, like some other hobbies, has its dull times; last spring was about as dull a time as veteran listeners have known in many moons, so it was with very little regret that radios were laid aside this summer to make way for boats and fishing tackle, mountains and seashore and the open road. During these few too-short weeks, however, several new stations appeared and some old ones became active again. Returning vacation-goers found that their sets had taken on new life, and a casual twirl of the dials in the mornings brought to light some strange stations. Faithful members of the Clan who remained by their sets have patiently logged and identified a large number of these new stations; one of these is George W. Acker, 267 N. Lyman St., Wadsworth, Ohio, whose letter follows.

### Some New Japs

"I have had a little luck with the Japanese stations here of late," writes Mr. Acker. "They are JVN and JVM, about 10,650 and 10,750 kilos. respectively. These call letters are according to the KDKA DX Club. Both are broadcast stations. JVM seems to be the best. One or the other of them operates from about midnight to 7:45 am every morning (EST). When I first hit this strange station sometime ago, I knew that it was no European, the language sounding strange and wierd to me, and the music of the old sing-song Oriental type. I therefore concluded that it was a Japanese. However, I was discouraged in this belief many a time, because several times the station came in

very clear and somewhat loud. The week before last JVM was used every morning. At 4:55 am, EST, English news bulletins are given. I have also had JYS (9,840 megs.) several times lately, although I can just get it and that's all. I have had JYK several times lately. JVN and JVM begin to come through here at about 4:30 am, but I find them best around 6:30 and 7 am.

"VK2ME and VK3ME are very good at times, and again, I have hit them several mornings when they were very poor. There is another Australian, VK3LR, 9580 kilocycles, at Melbourne. This station is on the air every morning except Sunday, from about three to about 8 am. Nearly any morning it is as good as either of the other two Aussie stations."

### A Report from California

William C. Vestal, 1120 Cedar Ave., Redlands, Calif., learned from the A. T. & T. at San Francisco, that the JV-series of stations is located at Nazaki, Japan, and that the JY-stations are at Kemikawa-Cho, Chi-



Here we have a glimpse of the Antennae system of "Deutschen Kurswellensenders" Station in Zeesen, Germany

ba-Ken, Japan. That is, the JY-stations are on the four frequencies formerly used by J1AA. The Nazaki stations are owned by the International Telephone Co. "I have heard JVT, in Nazaki, on about 6750 kc/s.," he writes. "The other morning over JVM I heard the broadcast of a baseball game. . . . English was used at times for some of the baseball terms, and I could hear the yelling of the crowd. I have listened to CEC in Santiago, Chile, talking to OCJ, Lima, Peru, but couldn't pick up the latter. The best South American now is HJ1ABB, which comes in with a powerful signal. CJRX in Winnipeg is regular on 11720. For some reason I have never been able to pick up a single European. I'd like to ask a few questions about stations I have heard. Here they are: 1. On about 6.000 I heard a station at 1 am, EDST, playing records, and using an interval call of three cuckoo calls. Speaks Spanish. 2. Is the Cruise of the Seth Parker still on the air; I'd like to try for KNRA."

#### A New Mexican

"I suppose by now you have all the dope on what is evidently a new Mexican station," postcards Dan Davis of Maud, Oklahoma. "The call is XEBT and they relay XEB. Their interval signal is a cuckoo call repeated three times rapidly and they announce frequently in Spanish and occasionally in English. They are full of CW interference but last night I got their program from 8:00 until 11:00 pm, when they signed off. They invited comments on the program."

Sr. Sancristobal, General Manager of Stations XEB and XEBT, tells us that XEBT works on 6010 kilocycles with 1 kw. power, relaying the programs of XEB daily, commencing at 10 am. Sr. Sancristobal will be very pleased to receive reports from his American listeners and will acknowledge them. XEBT is owned by El Buen Tono, S. A., Apartado 79-44,

Mexico City, D. F.

#### The "Seth Parker"

The "around the world cruise" of the good ship Seth Parker reached the tropical shores of the Island of Jamaica in the West Indies, and, according to latest reports, is still there. Mr. Lord's leisurely two-year cruise of the world was dropped, for a while at least, so he could add to his laurels as broadcaster and globe-trotter, the distinction of being a movie star. Mr. Lord set out to explore the little known parts of the globe and perhaps even discover new lands, which he would claim for his country, a-la-Byrd, but when these plans gave way to the no doubt attractive but surely less interesting life of a Hollywood hero, the broadcasts were dropped.

Geo. W. Burns, 2466 Wahl Terrace, Cincinnati, Ohio, says that KWU works JYT between 4:45 and 7 pm occasionally. From KWU he learned that JYT is on 15.760 megacycles. KWU also works with Manila, Java, and sometimes the Empress of Britain.

#### Good Reception On 31 Meters

"I now have a Philco 16-B and find reception conditions rather good at this time on 31 meters and the shorter wavelengths," reports R. P. Sloan, 2550 Rogers Ave., Fort Worth, Texas. "There is plenty of static among the 49ers until late at night. England and Germany take all the honors for signal strength and clarity, with GSD and DJD on 25 meters. DJD is wonderfully clear and loud, QSA5, R9, almost every afternoon and night, and DJB provides fairly good reception on 19 meters in the mornings. GSD is good here on transmission No. 5, heard from 5-7 pm, CST, and the same station also is audible here on Transmission No. 1, beginning at 10:30 pm, and continuing until after midnight.

"I can hear Paris every day, but there is no comparison between their signal strength and Berlin's.

Since the hot weather commenced EAQ has shown a decided falling off in volume but it still is audible every day. The South Americans are mostly on the noisy wavelengths. There is a station among the 49ers which broadcasts in Spanish the call letters of XEB. The volume is very good."

#### The CBS Arctic Station

The call letters KILS have been assigned to the Columbia Broadcasting System's temporary Arctic station in northwestern Alaska by the Federal Radio Commission. The transmitter will be the northern point of Columbia's attempt to link the Arctic and the Antarctic by radiophone. KILS, with its 1000 watt transmitter, will be the most powerful station in Alaska. Bob Flagler, song-writing announcer-engineer, is in the Arctic Circle, where he will start tests immediately to determine the best location for originating the broadcasts. A circuit of about seventeen thousand miles will carry voices from one end of the earth to the other. Flagler's voice, transmitted by KILS, will be picked up by the RCA at either Point Reyes, Calif. or Riverhead, L. I., for relay to Little America and simultaneously to the nationwide Columbia network. Unfortunately, we do not know yet the frequencies on which KILS will work.

#### With the Venezuelans

We have received letters from Stations YV1BC and YV3BC advising us that their call letters have been changed, as follows:

YV1BC, 960 kc/s., to YV1RC.

YV1BC, 6112 kc/s., to YV2RC.

YV3BC, 6150 kc/s., to YV3RC.

Mr. Navat, writing for YV3RC, says that the object of the change is merely to give a better Spanish meaning to the call signs, the former "BC" meaning "Broadcasting Caracas," while the "RC" means "Radio-difusora Caracas."

We have not been officially notified of other changes, but believe



*Barbara Jo Allen, beautiful dramatic star of the NBC's San Francisco studios, plays Beth Holly in "One Man's Family," broadcast over the NBC-KGO net Saturday nights at 9:00 p.m. EDST. Miss Allen is KGO's candidate in the Radio Queen Contest of 1934.*

that similar changes were made in all Venezuelan call signs. Hence, YV5BMO is probably YV5RMO.

The present operating schedule of YV2RC follows: Sunday, 9 to 11:30 am and 1:30 to 10:30 pm, EST. Other days, 11:30 am to 1 pm and 5:30 to 9:30 pm, EST. The effect of American broadcasts is clearly seen in the programs scheduled for this Caracas station. On Mondays and Fridays, from 9:30 to 10:30 pm, a mystery serial called "Dr. Hook's Experiment" is presented, while "Dick Daring, a Detective Serial," is a Tuesday and Saturday presentation from 8:45 to 9 pm. Maristan, a crooner, is featured from 8:45 to 9 pm on Thursdays and a fifteen minute Hollywood talk on Wednesdays.

#### Italians Improving

"Perhaps you will be interested in the following, which is quoted from

a letter from 12RO," surmises James T. Spalding, 2012 Alexander, Louisville, Ky. "Our Rome stations, above all, the short wave one, are going to be considerably improved as to power and range, so within a few months you will receive far better the Italian voices and sounds addressed to our overseas friends."

Some of our United States could well follow the idea recently adopted in little and often-times belittled Hungary, that all new electrical apparatus sold there must be properly filtered, and bear an official certificate stating that it will not interfere with radio reception. This suggestion is respectfully submitted to some gubernatorial candidates; it would be a sure-fire vote-getter among DX'ers.

Otto Rehak tells us that the station we have listed at HJ5ABB should be HJ5ABD. He has a verification from this station which states they use 100 watts power. Mr. Rehak uses an Atwater Kent 55 and invites correspondence from other owners of this receiver.

American amateur operators who are commissioned or enlisted members of the U. S. Naval Reserve, are now permitted to use the prefix "N" in lieu of the prefix "K" or "W", except that the "N" prefix must be used only in the frequency bands 1715-2000 and 3500-4000 kilocycles.

A change has been made in the Moscow schedule, according to information received from the station. RV59, 6.000 megs. (50 meters), works on Sunday, Monday, Wednesday and Friday, from 3-6 pm. A Sunday schedule is also given for RNE, despite the fact this station is now temporarily off the air.

#### Does J1AA Verify?

"I would like to know if J1AA has changed its policy of not verifying," requests Wade Chambers, whose address is withheld at his request. "I have always read in other



*Robert Simmons, popular young concert singer, was selected to replace Frank Parker as top tenor with the famous Revelers quartet over the NBC while Parker was absent in Hollywood. Simmons also substituted for Parker as featured soloist with the A & P Gypsies.*

magazines that J1AA would not verify. About two months ago I heard them well on 38.07 and wrote to them. Very much to my surprise they gave me a specific verification in English and also sent me a photo of the station. Am I just lucky in getting this verification or has J1AA changed its way of doing things?" As far as the Editors of this magazine know, J1AA has always answered letters, although recently, during the world tour of its chief-engineer, Mr. Kikutani, verifications came slowly. The well-known photo of the J1AA transmitter house, which appeared in this magazine in May, is a proud possession of thousands of shortwavers the world over.

#### Moving Improves Reception

"I have been enjoying very fine shortwave reception on my Model 250 Zenith. We just moved here from Los Angeles and I was pleased



to find that shortwave conditions are at least 25% improved. We live in the hills overlooking San Francisco Bay, and it certainly is fine for radioing. It seems that some California listeners complain that the D-stations cannot be heard. I cannot see why anyone out here cannot get DJD on their night transmission, for they are R8 here nearly every night. at 8:30 pm, when they sign off. Soon after GSB comes roaring in at 9:15 followed by VK2ME on Saturday nights. After all, the westerners haven't much to kick about. HJ1ABB and Prado are usually enjoyable, and XEBT is very good." Jack Watrous, La Canada Road, Hillsborough, Calif. is the writer of the letter.

#### Reporting from Cuba

Tropical weather and other radio bugaboos don't seem to bother Harry W. Field of 789, 10 de Octubre, Havana, Cuba, as his list of stations heard on his Silver-Marshall 726 looks almost like the s.w. lists appearing in the back of this magazine. "My first interest in radio was back in 1922," writes Mr. Field. "In that year I built a four tube set, the parts of which cost me \$236.50, with a head-set. 201A's cost \$10 here in those days." He soon lost interest in this receiver when it failed to give better than "sickly reception of PWX," and sold the outfit for \$20. On his present receiver he notes that EAQ is a very poor station while I2RO is one of his best. His neighbors can all set their clocks by his time signals from Daventry at 6 o'clock, and by actual test, with the volume control at maximum, has heard the British stations a block and a half way from the receiver.

A check-list of European shortwave stations received from Robt. M. Pybus, 4 Highfield Rd., Chorltoncum-Hardy, Manchester, England, contains several interesting items. Among these is LKJ1, apparently a sister station to LCL. LKJ1 is on 31.41 meters with 500 watts, work-

ing at present on an irregular schedule. ORK, the Brussels, Belgium, telephone station, is broadcasting regularly on 29.04 meters from 2:45 to 4:15 pm daily. DJE, Zeezen, Germany, 16.89 meters, works irregularly in the mornings.

"The short waves are much better than usual," writes J. A. Shanks, Russellville, Tenn., "but the static is getting pretty bad on the 49 meter band. PHI is now heard on 16.88 meters and they are much better than they were at their best on 25.57; they were R8 volume last Sunday morning but fading was pretty bad. The new Aussie on 31.30, VK3LR is coming in about as well as 2ME and 3ME; fading is very light now and all three are heard most times R8. Am hearing two new Japanese phone stations; one on 38 meters between 4:30 and 6:00 a.m. CST, and the other one on about 51.2 meters between 5:00 and 7:00 a.m. My latest s. w. veries are RV59, CP5, Prado, COC, and TIGP. Am expecting a reply from YV5BMO and others."

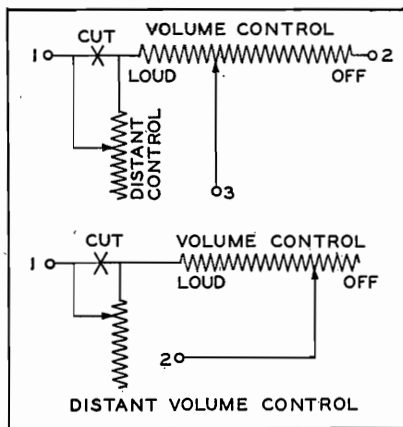
"On the s. w. I have heard all the German stations but DJD is about the best on the air with GSD a close second. France comes in with good volume but modulation seems poor. EAQ has good modulation while the volume is about R7. I hear the different English transmissions all day on different frequencies and volumes from R5 to R9. I held VK3ME this morning (July 15) till the W1XAZ carrier took away most of the volume. I heard London's relay of the Canadian Radio Commission's 'Empire Day' program at 2 a.m. EDST on Monday morning, July 2nd. That was on GSF on 19.81 m." From H. Arbic, Acton, Ontario.

We are on the threshold of a new DX season. What with the improvements in the transmitting apparatus of broadcasting stations, increases in power and the gradual betterment of receiving sets, our readers ought to set new records this coming winter.

*(Continued on page 34)*

# When GOOD SETS Go Wrong

• • • By the TECHNICAL EDITOR



*Can I turn down a radio set from a distance while the telephone is being used? Is there anything about a set that can be either shorted or grounded that would reduce the speaker volume to a minimum? I do not have to silence the speaker completely, but only to a low tone that will not interfere with hearing.*

You may go about this in several ways. But we believe that an additional rheostat or control placed in series with the control built in the receiver, and with long leads running to the point at which the unit is desired, can be used for this purpose. This secondary control—merely a variable unit of the same resistance as that of the volume control—should be kept at a zero setting and it will not interfere with the operation of the control in the receiver. Then, increasing the resistance of the new control would be the same as increasing the resistance of the regular control, and the volume of sound would be diminished. Practically all volume controls used in receivers are high resistance units with movable arms that slide over the resistor

surface. The additional resistance should be placed in series with the "loud" end of the volume control resistance—not the arm contact. The proper connections are shown in the accompanying illustration.

## Band Spread Coils

*I have an I. C. A. "Scout" short-wave converter which I use with a 29R Sonora receiver, but it does not pick up short-wave signals on the entire band. How does one go about placing band spread coils in a converter for better reception?*

Radiophone signals cannot be heard over the entire wave band. We suggest that you read the short-wave tuning articles published from time to time in the short-wave department of RADEX. This is a small converter, and we feel that the combination is about as satisfactory as you can expect.

The use of other types of coils in this converter is not to be recommended. Band-spread coils will not enable you to get much greater distance or bring in stations that are beyond the sensitivity of the receiver. Band-spread coils serve another, but very valuable purpose—they enable the operator to open up the tuning distance between otherwise closely tuned stations, and thus prevent interference and cause easier tuning of the dials.

## Revamping Old Receiver

*How can I increase the sensitivity of my Brunswick Panatropé with Radiola AR 746, eight tubes, and get more modern reception?*

Increasing the selectivity and sensitivity of this set can only be accomplished through a complete redesign, and in the light of many newer developments and inventions, together with new tubes and applica-

tions; it certainly would not pay to attempt to revise this old type circuit. Outside of making the set perform as well as it did when new, by cleaning, adjusting and replacing old tubes with new ones, there is nothing we can advise you to do.

#### A "Blooping" Set

*I have a 1933 Pathe t.r.f. receiver. I wish to improve its reception. New tubes have not helped, and no matter how the trimmer condensers are adjusted a "bloop" occurs, usually at 940 kcs. When the trimmers are adjusted to a different capacity the bloop occurs at other points on the dial. Before this trouble appeared the set tuned in stations perfectly at all frequencies. Then, too, whistles appear at nearly every station.*

Your trouble seems to be one of self-oscillation of one of the radio-frequency stages. This is usually due to inadequate screen or by-passing, or poor contact of the rotors of the tuning condensers to the chassis. Defective contacts of the tube shields to their sockets as well as stray coupling of grid and plate leads will cause this trouble. The "bloop" which you mention when the stage goes into oscillation is likely due to one or more of the causes outlined above. This oscillation will quite naturally produce a whistle at every station tuned in on the dial.

#### Adjusting Sparton 16-AW

*I have a combination broadcast and short-wave, 1933, Sparton model 16-W receiver. Will you please tell me how to neutralize and retune this outfit?*

This receiver does not require neutralizing because it is a superheterodyne set and not a tuned-radio-frequency type. It may be necessary, however, to adjust the trimmer or balancing condensers to line up the large tuning condensers.

Realignment is accomplished by adjusting the tiny balancing condensers (C2 on your circuit diagram if you have one). There are three of these, and they will be found at-



*Jimmy Melton's spare time is spent with his wife on his new yacht, "Melody," cruising along Long Island Sound and the Hudson River. The popular tenor is heard on "Ward's Family Theatre" program each Sunday at 9:00 p.m. EDST over the CBS net.*

tached to the tuning condenser gang unit. They should be realigned as explained in the April, 1934, issue of RADEX. The antenna equalizing condenser should also be adjusted. The primaries of the two i.f. transformers are tuned by tiny trimmers. The short-wave unit has three variable condensers on a single shaft for tuning the set. The alignment of this set is performed by two small condensers connected as a single unit. There is also an antenna equalizing condenser that must be adjusted.

#### Hum and New Tubes

*I am using an Atwater Kent, model 93 short-wave converter with a Majestic 15 broadcast receiver. There is some hum that drowns out reception. Are there some tube substitutions that*

*can be made to make this set more sensitive?*

The Majestic should be tuned to 300 meters (1,000 kcs.) when used with the Atwater Kent converter. Hum may be due to broken down bypass condensers or defective resistors. All of these, particularly those associated with the audio end of the circuit and cathodes of the tubes, should be tested. Examine the power tubes, and check the filament resistors and center-tap unit.

The -51 tube in the Majestic can be replaced with a new -35, or a 58, if a suitable adapter is used. Have the -47 tested for hum. A 2A5 can be used in place of the -47 with a suitable adapter, and the hum might be reduced or eliminated entirely. The -27 in the converter is the oscillator and cannot be replaced with a 56. The -24 is the detector which may be replaced with a 57 and proper adapter unit.

#### **Tubes Didn't Work**

*I attempted to improve reception in my General Electric model S22A receiver by utilizing 56 type tubes in place of the -27s, but they did not give results. Why was this?*

The oscillator of your set is a -27 which should not be replaced with a 56. The -27 second detector can be changed over to a 56. The -35 r.f. tube can be replaced with a 58 by making use of an adapter made for the purpose. The -35 i.f. tube should not be replaced with another type.

#### **A Superfluous Condenser**

*Can I change my R.C.A. model 60 receiver from a 3-gang to a 4-gang condenser tuning unit? Also, which of the newer tubes should I use.*

We do not see why you should desire to use a 4-gang unit in the R.C.A. 60. That set has only three coils that are to be tuned simultaneously. You may use a type -47 tube in place of the -71A if a special type of adapter is used or the necessary changes in wiring are made. However, the filament of the -47 will

draw much more current than a -71A and may cause serious overheating. If so, a return to the -71A type is obvious. 56s may be used without adapters to replace all -27s in this receiver.

#### **Installing Tuning Meter**

*The tuning meter that I have tried to install in my Midwest 16-tube receiver does not work. What size meter should I get?*

Perhaps you have the meter reversed. As it is a direct current device it will operate only when properly inserted in series in the circuit from the plates of the power tubes. The positive end of the meter must be connected in the lead *away* from the plates of the power output tubes. The meter should have a rating of at least 100 millamperes.

#### **Transformer Ratios**

*The audio transformers in my Crosley 21-22 receiver have become dead. As they are burned out I wish to replace them with new ones but do not know what ratios to procure. Can you tell me?*

The two audio transformers in this set are likely 6 to 1 ratio. We should prefer, however, a first a.f. transformer having a 6 to 1 ratio and a second a.f. transformer having a ratio of 3 to 1. This will give you better tone without material reduction in volume of sound.

#### **A and B Eliminators**

*Why is it that I can never obtain perfectly quiet reception with my H. F. L. receiver when I use A and B eliminators? I have tried all makes, and they are the same. Will you please tell how to make a complete, quiet and powerful A and B eliminator that will work without hum?*

You could build a dozen A and B eliminators but they possibly would be no better than the ones you can buy. There is nothing that you can add to a homemade eliminator that would not be available in the factory product. New eliminators are



*Henrietta Schumann, brilliant young pianist, is now heard regularly over the CBS as a principal of "Summer Interlude," Mondays at 9:30, p.m. EDST. Hailed in Russia as a child prodigy at the age of eight, Miss Schumann came to America at 15 to fulfill the glowing prophecies for her future.*

not necessary for the following reasons.

An eliminator consists of a transformer to step up the voltage of the standard power line to a potential equal to that required by the receiver and its tubes. There is a rectifier tube that cuts off one side of the alternations of increased current and changes it to a pulsating or rippling direct current. Some eliminators use dry rectifiers and wet solution rectifiers instead of tubes for that purpose. Then you must use choke coils and filter condensers in order to smooth the ripples out and provide a steady, direct current. Such operations will eliminate practically all the hum or ripple due to rectification. This is all any eliminator will do, including those built into the best of radio receivers.

But, in an a.c. receiver, in addition to the eliminator that is built into it, there are many filter condensers,

chokes, and by-pass condensers and resistors, all of which reduce hum. Such a set will use cathode type of heaters in the tubes, and these tend to reduce power line hum. At least, it would not be practicable for you to rebuild the circuits and tube requirements of your receiver, in order to provide the additional features that tend to reduce hum in a.c. sets only.

### Phonograph Pickup

*I have tried connecting a phonograph pickup to my Silver Marshall, type 724 A.C. receiver, but cannot get any volume from it. The same pickup works fine with other sets. How can I get it to work properly?*

The second detector of this receiver feeds directly into the push-pull amplifier and thus provides very little gain from the plate of the second detector to the loud speaker. For such a circuit arrangement the pickup must be of the high impedance type, or it must be provided with a matching transformer. There are, of course, many methods of connecting a pickup to a receiver, as shown in the article in the January, 1934, issue of RADEX. If your pickup is not already provided with a transformer, one should be obtained with a primary equal to the pickup (from 200 to 2,000 ohms resistance) and a secondary impedance of 100,000 ohms. In very few cases can the pickup be operated directly into the detector of a receiver without the use of a transformer.

### Set Suddenly Stops

*My Midwest 9-tube set has developed a case of going dead. I will have a station tuned in on the 75 meter band and suddenly the entire goes dead up to 3.6 megacycles. The set works fine from 75 meters on up to the broadcast band.*

The oscillator circuits of all-wave sets are usually more or less critical on high frequencies. In many cases a new oscillator tube will remedy the condition. Sometimes when the

tube is used for a short time it will again stop oscillating on the high frequencies and will have to be replaced. We suggest that you also examine carefully the following points that will tend to make the oscillator oscillate more strongly if corrected. Increase the oscillator plate voltage; lower the value of the oscillator grid leak if one is used; reduce or eliminate the bias on the oscillator if one is used—this is accomplished by shortening the oscillator cathode resistor; clean thoroughly the sliding contacts of the oscillator coils, making sure than a perfect electrical contact is made; increase the coupling of the feedback coil to the grid coil (connecting the grid and plate of the oscillator tube) by mounting it closer to the grid coil or by increasing the number of turns; if the coil is tapped for the circuit, then move the tap closer to the grid end of the coil. It will not be necessary to make all of these changes, but you might try one after the other until some relief is obtained on the high frequency tuning end of the dial.

#### Double-Spot Tuning

*I have an eight-tube Columbia receiver that has double-spot tuning on the dial. Stations come in at two places on the dial about 5 points apart. They come in strong, then I move the dial about 2 points and they fade out, then move it another 2 points and the stations roar back in again. I changed all the tubes and that did not help. The trimmers were retuned, but my serviceman could not remedy the trouble after many tests and examinations.*

The receiver that is described above is a tuned-radio-frequency set having three screen-grid amplifiers. The trouble is characteristic of overloading of the detector tube. When the signal is tuned off its point of resonance just a slight degree, such as the two points you mention, the volume increases because the load on the detector has been reduced to a point where it can now operate at

maximum efficiency. In cases where the original signal has a low field intensity, such as a distant station, this effect probably does not occur. The same effect can be caused by the tuning condensers being out of line in a certain manner. This may be caused either by wear at the condenser shafts or incorrect alignment. The use of vario-mu tubes, such as types -35, in the r.f. stages, and a 20,000 to 30,000 ohm resistor in the detector cathode, in place of the 100,000 ohm value now in the circuit, will, we feel certain, remedy this trouble.

#### Intermittant Action

*I have a General Electric J-100 tube receiver. If I turn it low the set sometimes goes dead. If I turn it off and then turn it back on the set resumes operation. Or, when it goes dead, if I turn up the volume control, the signal pops back in. After I had the set a week a condenser*



*When Emil Velazco opened with his orchestra in the grill room of the Hotel Taft, Florence Case was chosen from a group of vocalists as the featured singer. She sings alone and in boy-and-girl numbers with Jack Goodman in Velazco's sustaining programs over the CBS.*

*shorted and was replaced. Could this be the cause of the trouble? It seems that the a.v.c. is ineffective at low volume levels. How can I find the 250 volt lead in this set to use as a plate supply for a Stewart Warner short-wave converter?*

This trouble may be localized in the audio system of the circuit. We suspect the coupling condenser between the second detector and the first audio amplifier tubes. It joins chokes L-12 and L-13, and if you have a diagram, it is capacity C-28. Condensers C-25 and C-26 should also be carefully tested as they have considerable voltage across them. Condensers C-32 and C-33 have approximately 150 volts d.c. across them in addition to the signal peaks, and is possible that they may cause trouble through shorting.

The ineffectiveness of the a.v.c. at low volume levels may be due to gas in the a.v.c. tube, although it must be remembered that the a.v.c. is not intended to operate over the entire sensitivity range of the receiver as the signal must reach a definite minimum of volume before the a.v.c. goes into action. This signal must be sufficient to overcome the minimum bias of the a.v.c. tube.

The main plate feeder for the r.f. tube, the first detector, i.f. amplifier, the second detector, and the driver or first a.f. tube, carries 250 volts potential difference between it and the ground.

We suggest that you read the article on intermittent reception in the Mid-summer, 1934, issue of RADEX.

#### **That Buzzing Sound**

*My Crosley 158 receiver has a high pitched buzz that disappears when the set is turned off and then on again. The set seems to have lost some of its selectivity and sensitivity, yet all the tubes are perfect.*

A breakdown of the input filter condenser would give the symptoms noted above as this could affect the output signal by means of the speak-

er field without affecting the output tube to any great extent. The plate-to-heater capacity of the first audio-tube amplifier should be suspected as well as the coupling condenser from the plate of the first audio amplifier to the control grid of the output tube. Be sure also that the tone control unit (two condensers and a variable resistor) is in good shape. Although there are many possible sources of trouble of this kind, these will likely be confined to the resistors and fixed condensers of the audio system.

#### **Speaker Rattles**

*How can I take the rattle out of the speaker in my Colonial 400 type receiver?*

Speakers sometimes rattle if they are not centered properly. The remedy is to remove the cone from the speaker and paint the joints where the voice coil is attached to the cone with thick shellac, glue or rubber cement. Then make sure the cone is centered and does not touch any of the surrounding points when it vibrates on the low notes. A cone always vibrates with a greater movement from side to side and slowness of action on the low notes, and, therefore, has a tendency to rattle on these notes. Removal of the cone and speaker from the cabinet should be merely a mechanical problem and easily overcome.

*Editor's Note: While many of our readers are technically capable of making delicate adjustments, we recommend that those who have had little or no experience in radio-building, avail themselves of the services of a skilled radiotrician rather than attempt to make changes in wiring themselves.*

Readers are invited to send reports of their radio difficulties to the Technical Editor. They will be answered by mail in the order received as well as published in RADEX.

# Pioneer Radio Days

By Raymond M. Bell

**R**ADIO broadcasting in the United States was largely experimental until the fall of 1921. There were a number of individuals and companies experimenting in radio telephony in 1920 and 1921; a comparatively few listeners were building receivers. In September 1921 WBZ Springfield and WJZ Newark, of the Westinghouse Company and WDY Roselle Park, N. J., of the R.C.A. were licensed. WJZ was opened on October 12, 1921 and the real radio boom began. In November two more Westinghouse stations were licensed, KDKA Pittsburgh and KYW Chicago. By December five regularly licensed broadcasters were on the air, all using 360 meters without interference. 485 meters could be used occasionally with special permission. The Westinghouse Company had been encouraged by the results obtained in the Pittsburgh area. On November 4, 1920 8ZZ (later KDKA) had broadcast election returns with 100 watts power. On December 1, 1920 a daily schedule of concerts, talks, news, and church services had been inaugurated. By August 1921 500 watts was used, by October 1000. Because KDKA was the first to inaugurate daily broadcasts as we have them today and has continued them without a break, it has gained the name of "Pioneer Broadcasting Station of the World." WWJ and WGY were other "early settlers."

In December 1921 twenty stations were licensed; only two remain, KQW and KWG. The radio boom was tremendous in 1922; by April there were 200 stations on the air and a 400 meter band was added for the better stations. At this time no other country had regular broadcasters; 2LO London was not opened

until November 1922. By 1923 there were 500 stations and during that year the present plan of 10 kc. allocation was inaugurated. The early receivers used were crystal and one tube sets. Most sets were homemade, although an early Westinghouse product could be bought for \$65. Chicago was real DX and a fan with a log of 25 stations was not easy to find. KDKA pioneered in short as well as medium waves. In 1923 transmissions were begun on 94 meters. The world was astonished to find their DX value. In 1925 a shift was made to 63 m. In the latter year WGY began broadcasting on 41.5 meters.

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## More Changes

### in Canada

**E**FFECTIVE September first, the Canadian Radio Broadcasting Commission is making a new allocation of frequencies affecting sixteen stations and likewise affecting indirectly the reception of many U. S. stations. In making these changes, which, the Commission states, are the result of field measurements and careful study, these principles have been followed:

Stations of 1000 watts and over have been given the lower frequency channels below 1000 kcs. Stations of 100 watts and under, serving local areas only, have, as a rule, been allocated channels above 1200 kcs. Low power stations in particularly isolated localities, have been given channels below 1000 kcs. Low power stations which are giving only an intermittent service, or which are used largely for experimental purposes, have been allocated channels between 1500 and 1600 kcs.

The changes are contained in the indices in this issue of RADEX.



# Calls of the Nations

Following are the initial call letters assigned to the countries of the world by international agreement. Some changes have recently been made in these assignments. This list therefore supersedes all others.

CAA-CEZ Chile  
 CFA-CKZ Canada  
 CLA-CMZ Cuba  
 CNA-CNZ Morocco  
 COA-COZ Cuba  
 CPA-CPZ Bolivia  
 CQA-CRZ Portuguese Colonies  
 CSA-CUZ Portugal  
 CVA-CYZ Uruguay  
 CYA-CZZ Canada  
 D Germany  
 EAA-EHZ Spain  
 EIA-EIZ Irish Free State  
 ELA-ELZ Liberia  
 EPA-EQZ Persia  
 ESA-ESZ Estonia  
 ETA-ETZ Ethiopia  
 EZA-EZZ Territory of Saar  
 F France and Colonies  
 G Great Britain  
 HAA-HAZ Hungary  
 HBA-HBZ Switzerland  
 HCA-HCZ Ecuador  
 HHA-HHZ Haiti  
 HIA-HIZ Dominican Republic  
 HJA-HKZ Colombia  
 HPA-HPZ Panama  
 HRA-HRZ Honduras  
 HSA-HSZ Siam  
 HVA-HVZ Vatican City  
 HZA-HZZ Arabia  
 I Italy and Colonies  
 J Japan  
 K U. S. A.  
 LAA-LNZ Norway  
 LOA-LWZ Argentine  
 LXA-LXZ Luxemburg  
 LYA-LYZ Lithuania  
 LZA-LZZ Bulgaria  
 M Great Britain  
 N U. S. A.  
 OAA-OCZ Peru  
 OEA-OEZ Austria  
 OFA-OHZ Finland  
 OIA-OKZ Czecho-Slovakia  
 ONA-OTZ Belgium and Colonies

OUA-OZZ Denmark  
 PAA-PIZ Netherlands  
 PJA-PJZ Curacao  
 PKA-POZ Dutch East Indies  
 PPA-PYZ Brazil  
 PZA-PZZ Surinam  
 R U. S. S. R.  
 SAA-SMZ Sweden  
 SOA-SRZ Poland  
 SSA-SSZ Egypt  
 STA-SZZ Greece  
 TAA-TCZ Turkey  
 TFA-TFZ Iceland  
 TGA-TGZ Guatemala  
 TIA-TIZ Costa Rica  
 TKA-TZZ France and Colonies  
 U U. S. S. R.  
 VAA-VGZ Canada  
 VHA-VMZ Australia  
 VOA-VOZ Newfoundland  
 VPA-VSZ British Colonies  
 VTA-VWZ British India  
 VXA-VYZ Canada  
 W U. S. A.  
 XAA-XFZ Mexico  
 XGA-XUZ China  
 XYA-XZZ British India  
 YAA-YAZ Afghanistan  
 YBA-YHZ Dutch East Indies  
 YIA-YIZ Iraq  
 YJA-YJZ New Hebrides  
 YLA-YLZ Latvia  
 YMA-YMZ Danzig Free City  
 YNA-YNZ Nicaragua  
 YOA-YRZ Roumania  
 YSA-YSZ El Salvador  
 YTA-YUZ Yugoslavia  
 YVA-YWZ Venezuela  
 ZAA-ZAZ Albania  
 ZBA-ZJZ British Colonies  
 ZKA-ZMZ New Zealand  
 ZPA-ZPZ Paraguay  
 ZSA-ZUZ Union of South Africa  
 ZVA-ZZZ Brazil

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Calls beginning LW are now assigned to Argentine. The letter U is taken from Austria and given to the USSR. The former gets OEA-OEZ. Canada loses UWA-UZZ and gains CYA-CZZ and VXA-VYZ. Czecho-Slovakia gets OI and OJ in addition to OK. Dutch East Indies lose UIA-UKZ and get YBA-YHZ.

# LISTENING IN *with the* EDITOR

• • • News and Notes on Radio

**A** POINT is raised by Ewing's Radio Service, 708 Williams Street, Lansing, Mich., which we have to admit has considerable merit. "Your First Aid Department, is a very good thing for the set user but I think that you should say at the bottom that the best thing in each case is to see a serviceman. I know of two cases where owners tried to repair their own sets and made a bad job of it." Naturally some of those who write to us in regard to their troubles, have had long experience in the building and remodeling of receivers. On the other hand many have no technical knowledge at all. Many of the inquiries we receive call for the simplest treatment such as changing tubes, etc., but on the contrary, many require technical knowledge and equipment. We strongly urge those who have not been through the set-building stage of radio not to attempt any changes in the wiring of their sets. This calls for a complete knowledge of the principles of radio. A receiver may very easily be thrown out of adjustment by an unskilled hand or completely ruined by short-circuits. We will give the advice as to what to do whenever possible but only the reader can be the judge as to whether he ought to attempt to make the correction himself. Better be safe than be sorry.

## Modern Stations in Egypt

From The Egyptian State Broadcasting, Radio House 5, Sharia Elwi, Cairo, Egypt, comes an interesting description of their studios and transmitting equipment. The studios are entirely modern in every respect, completely insulated from sound and artificially ventilated by refrigeration and air conditioning. The main transmission station is situated at

Abu-Zabal, about 19 miles from Cairo. The station is the property of the Government. A smaller transmitting station has been erected at Ras-el-Tin, Alexandria. The former has a carrier power of 20 kw. radiated from an aerial between two masts each 300 feet high. The transmitter embodies all the latest technique of the Marconi Company and was designed and built at their Chelmsford Works. The plant comprises seven stages of magnification, each of increasing power, the final one consisting of five large water-cooled valves. The second transmitter at Ras-el-Tin is known as a relay and its carrier output is one kilowatt. The Lucerne plan for wavelengths provides two channels for Cairo and two for Alexandria. In the initial stages only one in each city will be used. Cairo with a frequency of 620 kcs. will operate on a wavelength of 483.9 m., while Alexandria will operate on a wavelength of 267.4 m.

## New Stations in Japan

The Japan Broadcasting Corp. is planning some powerful stations. The Corporation has recently applied to the Department of Communications for permission to increase the transmitting capacity of its Tokyo station, JOAK, from 10 kw. to 150 kw. Just when the construction of the new station will be started is not yet known but inquiries have been sent to the leading Japanese electrical goods manufacturers for quotations on equipment. The Corporation also plans to increase the capacity of its Osaka station, JOBK, from 10 kw. to 100 kw. within the next two years. The present stations at Niigata and Nagasaki will also be enlarged during 1935-36, according to the Corporation's present plans. New b. c. stations at Kagoshima, Toyama and Kogu of 5000 watts are now under

construction and will be opened during the latter part of 1934.

### Marking for Frequencies

From aboard the M. V. White Flash, John B. Carver writes to tell us how he has fixed his set, the dial of which is marked only from 0 to 100, to indicate kilocycles. He removed the knob which operated the dial. To the underside of this knob he attached a minute hand from a clock. On the panel he pasted a semi-circle of silver paper then replaced the knob with the hand affixed. As the dial was turned this hand moved in a semi-circle over the silver paper. By tuning in stations on various frequencies, he was able to make an accurate mark on the silver paper indicating the exact spot at which that channel would be tuned in. When a sufficient number of channels had been marked, he was able to draw a scale on the paper and his troubles were over. While this idea would not work with a drum dial, it would be very great convenience to those using knobs. It would be equally valuable to those whose dials are marked from 0 to 100 and to those whose dials are marked inaccurately in kilocycles.

"I am writing this because the way you published a letter of mine recently, sort of puts me 'on the spot,'" complains Raymond C. Corbett, 619 12th St., Sacramento, Calif. "Here is a part of what you printed: 'The stations in N. A. that I consider my best are WEXL, WKAQ, CMQ, and CJCJ. The last three were received at 7:00 a. m.' I did not state it like that. I said that the above stations were verified and that CJCJ was heard at 7:00 in the morning. It would be quite a feat to hear Porto Rico and Havana at 7:00 a. m. out here even in the midst of winter. I would jump on the neck of any DXer who said such a thing." Sorry, Raymond. In boiling down our readers' letters, we sometimes spill something.

Nicholas J. Hock, 562 Nostrand



*Gladys Swarthout, renowned American contralto and star of the Voice of Firestone Garden Concerts, is now supported by her husband, Frank Chapman. Chapman is the baritone member of the vocal ensemble heard with Miss Swarthout and William Daly's Symphonic Orchestra each Monday evening on the NBC-WEAF chain at 8:30 p.m. EDST.*

Ave., Brooklyn, N. Y., passes on the following information he received from a correspondent in Japan, Minoni Nakamura: Japanese stations have the following schedule: 6:00 to 6:20 p. m. Children's program; 6:20-6:30 Current Topics; 6:30-6:55 Talks; 6:55-8:00 News, talks, ect.; 8:00-9:30 Music (one hour Oriental, half-hour Occidental) 9:30 time signals; 9:30-10:00 p. m. Weather forecast and news. The time is JST.

"From the Secretary of the NZRA comes word that the New Zealand government has started work on a new 10-kw. station in Auckland and expects to have it in operation by Christmas. Tenders are also called for a new one in Dunedin to replace the present 4YA with an increase in power to 2500 watts." This information is passed on by Albert Sandham, 99 Page St., St. Catharines, Ont.

The Federal Radio Commission is no more. It is succeeded by the FCC, the Federal Communications Commission, with broader powers and a greatly widened field. The new commission will have jurisdiction over not only radio but telephones and telegraphs as well. Chairman E. O.

*(Continued on page 34)*

# Some DX *the* SUMMER Brought

## • • • Results in Spite of Static

**A**LTHOUGH the general opinion seems to be that the last radio season was not nearly as good as some that had preceded it, yet a great many of our readers have added numbers of new stations to their logs. Many, too, have reached across the oceans for the first time. Some good reports have come to us of excellent catches during the heat of summer. While it is not pleasant to try to tune in those distant stations in a crackle of static, it is doubly pleasing to log a new station in spite of it.

The summer has brought an unusually great number of changes in station data, so many that a RADEX of the summer months is practically obsolete and useless. All of the changes are printed elsewhere in this number. A description of the changes in Canada and the reasons therefore, will be found in another column. Official lists from Mexico continue to be (or at least to seem) contradictory to us.

Another questionnaire was sent to all stations this summer and our thanks go to the great majority of stations which returned our data prompt-

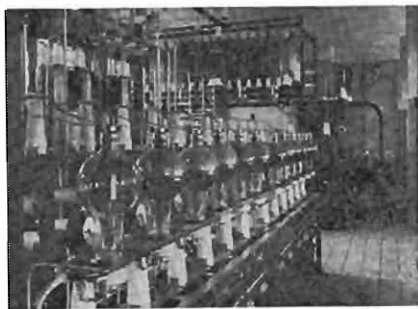
ly. This is being incorporated in the verification symbols in the Index by Frequencies and in the mail addresses now given in the Index by Calls. We feel that the street addresses are much more important than the owners' names.

A second questionnaire has been mailed to stations to ascertain their hours on the air. This has not been done sooner because we want the time on the air after the expiration of daylight saving. We hope to have this information in time for publication in the October issue.

Now let's see what happened while we were on vacation.

### Results in California

"Summer weather didn't stop me from DXING at all," comments Warren E. Winkley, P. O. Box 12, Hughson, Calif. "I am now at 594 logged and 140 verified with about 25 reports out. Latest veries are from JODK1 and 2, JOAK1, XENT, KGFI, KMAC, KOTN, and last and probably my best of the present season, CKTB, a 100-watter in St. Catharines, Ontario, on the crowded 1200 channel. Is XEPR on the air yet? I hear a station on 740 almost every night about midnight testing and playing records. It is too weak for either WSB or KMMJ. Also, has CMX been testing lately on 875? I've heard a station there playing records but failing to announce. The Aussies still come in. This morning 2BL was coming in about R4 QSA3 at 4:45 in broad daylight which is pretty good, I think. However, I do miss 2YA on their old frequency of 720. They used to be better than any other but now I can barely hear them." The latest official Mexican list does not show XEPR as operating and we are advised that CMX has moved to 890.



A view of the transmitter of HAL, Budapest, Hungary. This 120,000 watt station is picked up with considerable frequency in the United States. It will be found on 546 kcs.

XEMC also is no longer shown on 750.

#### Gets Durban on West Coast

"For me there has been no end of DXing this season," states C. E. Lowe, Merced, Calif. "There have been very few mornings that DXers could not reach across and play from nine to eleven of the Oceanic stations. This morning, July 23rd, for instance, I received 2YA, 3YA, 1YA, 2CO, 3AR, 3LO, 4QG, 4RK, 5CL, 5CK, 6ML and 6WF. I have sent for veries for most of the above since July first. We did not have the usual summer static this year and reception has been clearer than at any time during the past winter. I have added a verie from Radio Normandie and from the Durban station since March 1st. My letter from the African Broadcasting Coy. Ltd., Durban, says:

"We beg to acknowledge receipt of your favor of the 26th March regarding reception of this station in California and have to inform you that we confirm this reception and congratulate you. This plant only radiates approximately 300 watts on 723 kcs. and your report is the best received yet. We are heard regularly in Western Australia.' I consider this my best catch although KFPM gives me a better rating but I don't consider it so for Durban here at 7:00 a.m. PST is 5:00 p.m. Durban time. I would like to know if other Pacific Coast fans are getting the same results I am. I hear the wrestling matches from New Zealand and Australia on Friday mornings and China is also coming through."

#### Now on the East Coast

"Summer DX has been fine here with the exception of a little static," is the optimistic report of James Blase, 855 Home St., Bronx, N. Y. "My verifications are growing every day. I have close to 200 now. My best catches already verified are

CKMO, LR5, KFPM, KFBK, KLX, CJOC and KXL. I have had more luck in the last two months than all before in my two years' DX. I have already logged KZRM, EAJ1, PP, SBA and SPTT and I expect to receive veries from them very soon. How's that for summertime DX? I own a Westinghouse WR5 and a Radiola 3. I expect to join the NNRC this coming season. The RADEX Time Converter has helped me a lot."

"During this past hot weather," remarks Richard J. Spencer, 2273 Tiebout Ave., Bronx, N. Y., "the European stations were pretty noisy and faded a bit but, for the past week, they are coming over almost as well as in spring. Would like to hear from fans in New York City or suburbs who are using a Philco all-wave 11-tube such as I own and which, I think, is second to none."

"Despite the summer static," reports Robert Hoffman, 306 West School Lane, Germantown, Philadelphia, "I have managed to add 30 stations to my log which is now 280. I still have my Crosley 173 and would like to hear from anyone owning one. Among my additions are KNJ, KWCR, KFEL, KFVS, KFKU and KGH. On the 23rd of July, WPEN will move to 920 kc. with 500 watts."

#### Selectivity on T.R.F.

"My log is now at 327 stations," states M. R. Billings, 785a Querbes Ave., Autremont, Montreal, Que. "My method of counting stations is as follows: I count only those stations which actually exist. If a station leaves the air, I just scratch it off and forget it. If the call is changed, I also erase it and try to pick up the new call. When a change in frequency is made, I cross off the station and try for it on its new frequency. I count phantom calls as they present a target which sometime is pretty hard to strike. I can't see any object in counting stations which can never be heard again

as in the case of deleted stations. Among the stations heard last season are LR5 (verified), KOIN, KALE, XES and CRCV. As I had little time for DX this past year, I consequently didn't boost my log much. I seldom verify. All of my stations have been logged with an RCA Radiola 46. I got new tubes last fall and rebalanced both gang condensers and trimmers. I get good 10-kc. selectivity from 540 to 1550. As an example of selectivity, using the local switch, I can get WEEI on 590 with CFCF only three miles away on 600 without interference from the local. When XER was on 735 I used to bring them in quite loud with CKAC, our 5000 watt local 40 miles away, on one side and WSB at Atlanta, on the other side. Outside of a slight whistle there was little interference. I never believed such results were possible with a t. r. f. set of five tubes. Would like to hear from other owners of either the RCA 44, 46 or 47. Has anyone used a s. w. converter with one of these sets? If so, will they please drop me a line as to the results they obtained?"

### Joining the Hams

This warning comes from Clement Van Velsor, 1033 Sanford Ave., Irvington, N. J. "Recently I wrote to the NBC relative to the April 30th program from Uppsala University of Sweden. The reply stated that they could not help me as the program was classed as private. They further said that generally most rebroadcasts by the NBC were classed as private message traffic and therefore they could not divulge information on them. It might be timely to warn fans not to mention what they hear before and after rebroadcasts from the relay stations as it might be private and therefore come under the FRC secrecy ruling on private messages.

"By the time the next issue of RADEX comes around," goes on Mr. Van Velsor, "I expect to be a full-

fledged amateur. I'm studying for the exam now and will go on the air with a phone and CW rig (if I get a license) for 160 m. and 80 and 40 m. CW. I may use about 50 watts output or so with a 59 tri-tet crystal oscillator, 46 buffer, pair of 46's final stage, using a double button mike with a single stage of speech on a 56 modulator working into the final stage.

"This past DX season was fine from a b. c. view. I began with 318, set a goal of 450 and ended with 454. Outside of Nevada, Wyoming and Arizona, I have at least one station in each state. Porto Rico, Canada, Cuba, Mexico and Argentina are in the log. KFAC and KFSD were about my two best catches. I have 201 s.w. stations including KFZ, KNRA, KJTY, DGU, and DAF. I have logged 29 countries if Antarctica may be classed as a country. JIAA permits me to claim Asia and 2ME and 3ME take care of Australia. I have a flock of SA's, Europeans and Radio Maroc on 32 and 37 m."

### Reception in Miquelon

From Leon Briand, Saint Pierre, Miquelon Islands, comes the following letter: "In the May RADEX I see both Fecamp on 1456 kc. and Radio Normandie. I have to tell you that Fecamp and Radio Normandie are only one station, Radio Normandie being located in Fecamp, France. Our station FQN, St. Pierre, Miquelon, having only 250 watts power, is heard in California, in Saskatchewan, in Texas, but it is not heard very well in Miquelon only 30 miles from St. Pierre! Here in St. Pierre we have very good reception, receiving in winter time many of the European stations as far as Prague, Burcaest, on broadcast band. I receive with a Lincoln SW DC 34 in this season by daylight morning or afternoon, about 10 to 15 American and Canadian stations located about 1200 miles from St. Pierre. By night every kilocycle I get a station. On

s.w. all around the world—Pontoise, Rome, Moscow, Australia, Germany, England, Canada, everywhere. On short waves with my Lincoln no fading at all."

#### About LR-5

"Yesterday, May 25th, I got my LR5 verification," announces G. E. Jacques, 235 Greeley Ave., Hornell, N. Y. "I heard the station on March 11. The station was not satisfied with the reception of this program in N. A. and has decided that future DX programs will be commenced not sooner than November and not later than February. The towers are 700 feet high and are 1670 feet apart. The power is 25 kw. in the antenna which was built by the Marconi Corp. of England. The station is having a special diploma made given to those correctly reporting reception in the future."

Similar information comes from Robert W. Botzum, 633 Moss St., Reading, Pa. His letter from LR5 reads in part as follows: "Nevertheless, it is very gratifying to know that our station should have been picked up by you over a distance of close upon 6,500 miles. In the first place this speaks very highly of your ability to locate us on your set and we also think a certain amount of credit can be attached to our transmitter which has 25 kw. in antenna and is, at the time of writing, the most powerful station in the Argentine Republic. From reports received by us it would appear that we cover a far wider radius than that attained by any other local station."

#### African Reader on Verifications

"The article in the April issue, 'Bad Practices in Verification,' has been of special interest to me here," writes A. C. Lyell, P. O. Box 2204, Cape Town, Union of South Africa. "Participating, as I am, in the foreign station contest of the IDA, I have been brought into touch with nearly every part of the world and I



*Waiting to tee off on the links of the Metropolitan Club near New York, are Freddie Rich (left) and Nick Lucas (right). The center figure is Paul Runyon, professional golfer.*

wish to associate myself with those who have stressed the importance of warning DXers seriously against any practices which may react detrimentally in the matter of procuring verifications. You very rightly emphasize that, after all is said and done, verification of a pick-up is purely a matter of courtesy on the part of a station.

"I believe it will be conceded, with the increase all over the world in the acquisition of all-wave sets, there is bound to be a corresponding increase in application for verifications, and the probabilities are that the problem is bound to assume enormous proportions in course of time. That being so, it seems to be all the more reason why the procedure should be limited to strictly proper and legitimate lines, in order to obviate the development of undesirable conditions for those genuinely in need of a verification certificate occasionally. Up to the present, I've had the most

courteous replies from those European countries to whom I have had occasion to apply for verifications. The only notable exception, much to my surprise, has been the British stations through the British Broadcasting Corp. In spite of several appeals my endeavours so far have met with no success. I picked up practically all the British stations. "World Radio" will verify in their columns but, as I pointed out to them with no success, it is worse than useless for the purposes of this contest to have a reception mentioned in their columns."

Mr. Lyell sends us the log he has compiled during the IDA contest. Located as he is in the extreme southern part of the African continent, it follows that practically all b. c. stations are from 5500 to 8000 miles distant. Yet he submits a list of 59 broadcast stations pretty well covering the world. This seems to include practically all of the 50 kw. stations in America and even some 10,000-watters like WJR. On the short waves he heard stations in the USA, Spain, Italy, Morocco, Argentine, Kenya, Netherlands, Java, France, USSR, and Ecuador.

#### How to Get Veries

Getting a station to verify is not a matter of luck as the unsuccessful seem to think. It is a matter of submitting a report to the station that is worthy of a report. "I have never been refused a QSL from any station in many years of listening," says C. H. Hodge, 3156 Olive St., Huntington Park, Calif. "I just received one yesterday of a test on April 9th by LSQ in Buenos Aires. It contained some nice comment and this was particularly gratifying because they are not a. b. c. station. The great trouble with people who want QSL cards is that they think of themselves instead of the station. I am submitting a report today to Station PLE in Bandoeng, Dutch East Indies, and I am sending you a carbon copy." Mr.

Hodge opens his report by saying, "Having heard your station, PLE, consistently for the past two months testing with Tokyo and KWU, I wonder if you would care for the following report on your test with Tokyo on June 10, between the hours of 4:20 p.m. PST, when I first picked you up, to 6 p.m. PST. Station signal was strong at all times even when music was fading. Announcer's voice very clear and perfectly understandable. Static did not bother at all until about 5:55 and then fading was bad and at 6:05 p.m. the carrier was still heard. No QRM at any time." Then follows in great detail what was actually heard, minute by minute. He closes by telling them that he is using a Patterson 10, encloses an International Reply Coupon, and asks for QSL. "I'll take a reasonable bet that I get a reply," adds Mr. Hodge.

#### From a New Reader

"The other day I picked up your May issue and now I'm all interested in becoming a DXer," writes Thos. F. Goodman, 1911 Harney St., Omaha, Nebr. "I have an 8-tube Zenith Superheterodyne 725. I have no aerial and the ground is connected to the radiator. I want some tips on a good aerial as I live across the street from a hospital and three blocks from an electrical power house. Often I get the rushing sound that indicates a station but can't get the station itself. These are the prize stations I have picked up in a few months of listening. HKF, Bogota; LSX, Buenos Aires; W1XAL, W9XAA, W8XK, VE9DN, W2XAD, W1XAZ, W2XAF, W2XE, CFRB, CKAC, CKY, XEB, XEF, XENT, XER. I haven't verified any of these but I'm going to start and make a collection. Does this list give me a worthwhile start? Would headphones help me get some of the call I often hear and can't understand?" We think what Mr. Goodman needs is a good aerial and a



good ground although of course phones will help to identify those weak stations. Articles on aerials in recent issues of this magazine include "New All-wave World-wide Antenna" in June; "A Little Debate on Aerials and Grounds," in January; "Static-Reducing Antenna Systems" and "Importance of a Good Ground," in October; "Help Yourself to Better Reception," in March.

### Results in Nova Scotia

From Halifax City, Nova Scotia, D. F. Mason (53 Atlantic Ave.,) writes: "I have discontinued my unverified log of 522 stations and started a new one. So far I have only 107 stations with some verified but hope to add more. I have already heard England and Germany and have sent for veri to Germany. I have never heard any TPs but I'll keep on trying until I do. I now have three grounds—one outdoors, one to the waterpipe and an 'Ollie Ross' under the cellar floor. The last works best with my 63 foot outdoor aerial. The Halifax short-waver, VE9HX, now relays all the programs of the parent station, CHNS. The station director will appreciate reports from listeners. The times are 10:30 a. m. to 2 p. m. and 5:30 p. m. to midnight on Mondays to Thursdays inclusive. Fridays 10:30 a. m. to 4 p. m. and 6:00 to midnight. On Saturdays and Sundays 6:00 p. m. to midnight. All times are AST. I wonder if anybody in the US receives the Halifax Lightship, VGX. This would be a good catch. They are on 710 kcs. and broadcast fishing reports at 2:00 p. m. and 8:00 a. m. In a recent veri from VONF, St. John's, I was informed that they will soon increase their power to 1250 watts."

### Gets HAL in Ohio

Richard W. Watts, 19695 Beach Cliff Boulevard, Rocky River, Ohio, contributes the picture of the transmitter of the Budapest station, HAL,



*Arthur Allen (left) and Parker Fenelly, creators of down-east characters in the Soconyland Sketches. On the air Tuesday nights at 9:30 EDST. These air dramas are composed of original radio sketches and dramatizations of well known short stories.*

published elsewhere in this issue. Richard heard this station Sunday morning, February 19th at 8:00 a. m. EST on 546 kcs. over his Scott All-Wave. "I have had verifications from 66 stations with more on the way," writes Richard who confesses to "going on fifteen." "My best are KGDM, KGFG, WCLO, KFPY, WBNF, WMBW, WEDC, KRGV, KPCB, KMPC, KGFF, KUSD, KTAR, KOH. On short waves I have I2RO, DJD, HJ1ABB, VK3ME, GSD, YV1BC, HIZ, XETE, PHI, YV3BC, PRA3 and HC2RL, all verified. Have now heard every continent but not all verified. I hold the long-distance record for WATR, that is I did hold it, I don't know whether I still do or not. I consider WAGM my best eastern station. They are farthest east of all stations in the U. S. I have an aerial of about 50 yards with the ground attached to an iron rod in a hole which is kept filled with water. I would like to correspond with any

other 14-year old boys and will answer all letters."

### Selectivity on the Scott

"I have just purchased a new Scott all-wave 15 and thought I would write and give you some idea of what luck I have had with it in my first week," says Donald I. Cross, who does not give us his address. "I am using two antennae, one about 65 feet long in one piece including the leadin. This is for the b. c. b. For the s. w. I have a Lynch transposed-type antenna. It is about 65 feet high, 25 feet flat top on either side and I have a leadin of about 60 feet using 27 transposition blocks. I use two grounds, one to the coldwater pipe and one to a copper ground rod about four feet long. My leadins enter the house through glass tubes and are connected to porcelain beehive-type insulators in the room fastened to the window casing. In this first week, I have pulled in more than fifty broadcasting stations including JOAK-1, GSC-D, VE9JR, DJC, VE9GW, XEN, CT1AA, XETE, VK2-3ME, I2RO, EAQ, YV5BMO and HJ1ABB-3ABI-1ABD and 3ABF. I pulled in Seth Parker, KNRA in connection with the Seth Parker program from WJR. He was on 33.94 meters. On several places on the b. c. b. I can get 3-5 kc. selectivity even down along the 200 meter band and I believe that is going some."

### Uses a Monthly Log

"Up until a few months ago, my radio equipment was rather inadequate although I have been radioing for ten years," explains Harold L. Spies, 1217 Louisiana Ave., N. W., Canton, Ohio. "In November, 1933, however, I purchased a Midwest 10 and am here to state that I do not believe that this set can be equalled at the price. I am in an unfortunate location where I am unable to erect an outside aerial in order to get good s. w. reception. With just a large amount of wire in the attic, I am able regularly to receive EAQ,

I2RO and the GS stations so conditions are pretty fair. How can I get the capacity necessary for far-reaching DX on the s. w.? Regarding logs, I have my own system of counting number of stations received. It consists of compiling a list of stations received during a month's time using the current RADEX. I can't see much use in counting those received years ago. For instance I can remember 'way back when KWKC, Kansas City, was received daily with an old battery set. Today KWKC is using the same power, in the same place and probably with improved equipment but try and get it in Ohio with the best set made, outside of the frequency checks."

### DX On Board Ship

A chatty letter from R. Lyn Conduit of the S. S. L. J. Drake, written from Key West, Fla., follows: "Just a note from a seagoing DX hound to lift his voice in praise of your most helpful and meaty magazine. It was responsible for my DXing. Your trouble column (or shall I say agony column?) is of great help and exceedingly interesting. In regard to my own DX, as we move coastwise most of the time, I count only inland stations unless we make a West Indies or Caribbean trip such as our last to Venezuela. My best catches from Caripito, Venez., were LR4 and LR1 in Buenos Aires. KGBZ was heard signing off May 25 at 3 a. m. MST. WHO, WHAM, WCCO, CRCM, CRCT, XEFO were heard in two nights. I have had my Philco 46 but one month and have logged 56 stations. I have a deadline every night at 10 p. m. Saturday, June 9, I heard XENT on their old wave length of 1110 instead of their new one of 1340." (The new Mexican list shows XENT on 1120. Ed.).

### Uses 700-Foot Aerial

"In a period that extends over only nine months, I have logged over 500 stations on my RCA-Victor R90 10-  
(Continued on page 36)

## Give 'Em Credit

**A** READER who signs himself "An 'OM' De-Exer" thinks that some of the "impossible" catches reported may merely be freak reception and that critics ought not to be too hard on those reporting the seemingly impossible. "I remember in 1925, a friend of mine had a De-Forest 3-tube set with a loop aerial. One night he came rushing over and asked me to come over as he had a station in Porto Rico. I believed him nuts but went and, sure enough, he did have it and held it for ten minutes after I arrived, about 25 minutes in all. That set would hardly reach out 1000 miles in best conditions, but there it was, plain and clear. There was a heavy carrier next to it and it was riding through.

"In those early days I had many stations of ten watts, some of them in Philadelphia, but most of them I never heard but once. At that time I lived in Long Beach, Calif. I used to get Clearwater, Fla., (WBHH, I think was the call) in the afternoon at 4 p.m. I moved just one block north, put up the same aerial, same direction, and never again.

"There was a party in San Pedro who lived on Metlar Street who was bringing in the world on a Zenith. He was getting what seemed to be impossible stations and I know he was getting them. Experimenting on location, he took his set and aerial just two blocks north, put it up exactly as it was on his street—and he had an ordinary set. I remember picking up WDAY, Fargo, N. Dak., then a ten-watter, once but never again.

"Again I read of lots of ambitious but deluded DXers. Even saw one. Called me up and said he had Paris on s.w. Knowing his hook-up I doubted it. Immediately went to the freq: he gave me and it was CJRX. Now as Paris was close he might never have waited for the call letters



*These two deservedly-popular songsters are heard in the "Lavender and Old Lace" programs, featuring sentimental ballads and the beloved song favorites of older days. Tenor Frank Munn and soprano Muriel Wilson have leading parts in these unusually fine programs presented by Bayer's Aspirin. On the CBS-WABC net at 8 p. m. EDST each Tuesday.*

but took it for granted. I saw a letter not long ago in RADEX. Party had all stations in California but one. He was way back East. Now that would be a funny thing as we have some stations that operate only a few hours a day.

"We have a man in Chula Vista, near San Diego, Williams, by name—now if he would ever write telling what he gets, he would have to hire an extra postman to handle vitriolic letters. I think he has about a thousand stations on the b. c. band alone and this I know personally. He has had German stations at 4 p.m. PST so loud on the b. c. band that he has put the phone next to the receiver and they have been heard in radio stores so loud that crowds gathered to hear it. Many radio engineers I know go down there frequently to listen and try out hook-ups. It seems to make no difference

what make of set this man has, he can span the world.

"Now this is off my chest and you probably will never hear from me again. Your time converter is the best ever and if s. w. DXers would use it oftener, knowing that sending stations far distant come in better when they are sending after dark, they would have better luck."

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## On the Short Waves

*(Continued from page 15)*

We hope that readers will report their catches promptly. What may be more or less a regular to one is often a real prize to others. The fact that you are receiving such a station will give new hope and patience to others who are trying for it. Let's make this the greatest season ever on the short waves.

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## With the Editor

*(Continued from page 25)*

Sykes of the FRC is the new chairman of the FCC.

Two stations were destroyed by fire recently—WAAF in the Chicago Stock Yards fire and WAMC at Anniston, Ala. The former has again been licensed but the latter will not return to the air at present.

One official list from the Canadian Radio Commission gives the new station in Quebec as CRCQ and another gives it as CRCK. In such a case what is a poor editor to do? We are entering it as CRCK.

"When I was in Las Vegas, Nevada, a few weeks ago," points out Lloyd Rees of Ridgewood, N. J., "the people of that city said KGIX has been off the air for about two years." The published list of the FRC dated January 1, 1934, shows

this station as operating. Can any other readers confirm Mr. Rees' report?

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## The Beginners' Story

*(Continued from page 7)*

former. An alternating current having an intermediate or beat frequency is induced in the secondary  $L_9$ . This secondary is untuned. The amplified output from the i.f. tube passes into the primary of  $L_{10}$  of the second i.f. transformer, and induces a stronger current in the secondary coil  $L_{11}$ . The grid of the second detector is controlled by this amplified i.f. current, which is then rectified and passed out through the plate circuit as an audio-frequency pulsating direct current (see Part 7). This flows through the primary  $L_{12}$  of the first audio transformer. The amplified output from  $L_{13}$  passes into the last power tube in the audio-frequency amplifying circuit and emerges ready for conversion into sound at the loud speaker.

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*(Next month we shall begin a discussion of the behavior of short waves, and make a study of the functions of short-wave receivers, short-wave converters and all-wave sets.)*

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## Stories of the Stars

*(Continued from page 10)*

radio work have been so arranged that they could spend a summer together in Scarsdale.

\* \* \*

Frank Munn, the lyric tenor, is one of the most enthusiastic philatelists in the NBC studios. Some day when he retires he plans to go on a world cruise to remote regions collecting stamps first hand. Munn is more interested in seeing the postage-stamps of foreign lands than the people or the scenery.

## Russian Super Station

**E**QUALLED in power only by the new WLW, Cincinnati, Soviet Russia's new 500,000-watt "Komintern" broadcasting station in Moscow is now on the air 20 hours a day, employing the long wave of 174 kc. (1,724 meters). Advices from abroad state that the station's coverage extends as far as Vladivostok and Kamchatka to the east and all over Europe to the west. After 5,000 hours of operation, it has met all tests and may later be boosted to 1,000,000 watts, which would make it the most powerful broadcaster in the world.

Wholly of Soviet design and manufacture, the station is the first in Russia to employ directional antennas, radiating in an ellipse which is said to give its power the effect of 700,000 watts. A setup transformer of original design and a switchboard for one-button starting of the entire mechanism had to be invented for its operation. It requires only five men on a shift to operate.

that the carrier waves actually traversed the enormous distance of some 12,200 miles, half-way around the earth, was simply amazing. LSX has also been heard from several times since. Reception conditions have deteriorated, around QSA3, R5/S/X lately.

My set is a Patterson 8-tube all-wave. Little trouble is experienced in the reception of stations in Europe, Australia, Africa, Asia and, as you have noted, even in South America. But for reasons quite unknown, North American stations have been found quite impossible to get at; not even the high-powered W8XK has been heard from. It will be interesting if an explanation may be forthcoming. (We are sorry that we have no explanation to hazard. The distance from some of the powerful American stations to Shanghai is much less than half-way around the world provided the signals pass over the northern end of the world. We shall be interested to learn when Mr. Pao-Tung finally receives the USA, as we are sure he will some day. Ed.)

*\*576 Szechuen Road, Shanghai, China.*

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## Short Wave

### DX in China

By Tong Pao-Tung\*

**P**ERHAPS it will be of interest to you to learn something of my personal experience in DX reception. On the morning of the 8th of April at about 7:15 local time (6:15 p. m. EST) while dialing for EAQ, I came upon LSX 28.98 m. QSA5, R7/R/N and had it good for quite half an hour or until about 8 a. m. when fading rapidly took place. Reception consisted of calls for KFZ, talk and musical numbers apparently for Admiral Byrd's party in Little America. I had never before quite realized such large possibilities in radio reception—

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## Sets Are Defined

**T**HE Radio Manufacturers Association has adopted definitions for the classes of radio receiving sets to avoid confusion and misrepresentation. This supplies the need which has been pointed out repeatedly in these pages.

The "standard broadcast" receiver is defined to include sets having the regular frequency range from 540 to 1500 kcs. The definition of "all wave" receiver applies to sets with frequency ranges from 540 kcs. to at least 18,000 kcs. (16.6 to 555 meters)

The "standard and short wave" receiver will apply to sets having frequencies between 540 and 1500

kcs. together with a portion of the short wave spectrum. If manufacturers and dealers can be made to follow these definitions, no longer will people be offered "all wave" receivers that cover only a small portion of the high frequencies.

## September DX Calendar

(Continued from page 1)

September 30			
2:00-3:00	KGEK	1200	100 Yuma, Colo.
2:30-4:30	CKBI	1210	100 Fr. Albert
Sept. 2, 9, 16, 23, 30			
10:00-1:00	CMBX	1185	250 Havana
11:00-11:30	KDKA	980	50kw Pittsburgh
12:00-1:00	WGAR	1450	500 Cleveland
12:00-2:00	WGES	1360	500 Chicago
1:00-1:15	KOMA	1480	5000 Okla. City
4:00-5:00	CFJC	880	100 Kamloops

## The Summer DX

(Continued from page 32)

tube superheterodyne," summarizes Walter C. Birch, 22 Oneida St., East Lynn, Mass. "I have recently erected an aerial nearly 700 feet in length and over 60 feet in height. Whatever directional characteristics it possesses, I have utilized for European reception as we are but a few feet from the ocean. Last season was one of the worst I have ever known in my 14 years' experience as a listener. The past two weeks have been very good—signals not extra strong but a minimum of noise and atmospheric disturbances. Boy, do the Cubans pound in here? Not only the 500-watters but the little fellows as well. There is a strange one on about 1135 and another on 1190. (CMBJ, CMBW and CMCJ are all now listed on 1140. Ed.) I am constructing a s. w. converter at the present time and hope to go exploring those intriguing wave lengths next week."

### Honolulu From England

"I must say that I am very pleased that the IDA, of which I am a member, brought RADEX to my notice. I only wish that it was published this side of the Atlantic," comments K.

Judd, 68, Mayfield Ave., Orpington, Kent, England. "During the 1933-34 DX season, I received the following, all being first reports from England: KDB, KERN, KGU, KMPC, NAA, 2UE and 5CL. I received 2UE, 10,500 miles away with 3000 watts, at midday. I received the first TP degree to be issued in Europe by the IDA. I will be pleased to help any reader of RADEX to verify European stations on receipt of report and a U. S. 5c stamp. Would like a correspondent in any country and will answer all letters." We hope Mr. Judd will describe his receiver in his next letter. Picking up Honolulu and 100-watt stations on our West Coast, is no small feat.

### Two Dollars for Reports!

"I have a Stewart-Warner 1109 and have had wonderful luck so far," states M. E. Smith, 528 High Street, Fairport Harbor, Ohio. "I have 42 states but don't seem to be able to get Maine, New Hampshire, Vermont, Rhode Island, Delaware and Wyoming. I have 243 stations logged but none verified. My best is CKOV, Kelowna, B. C., but the one that gave me my biggest kick I received at 1:30 this morning, JOHK!" Mr. Smith had a station on about 940 which he was trying to identify at 3:15 a. m. EST, on April 14th. He left the room for a moment and returned just in time to hear the announcement that any DXer reporting the program would receive two dollars. Naturally he is anxious to identify the station but at this late date, we fear our readers cannot help him. It sounds like one of the "Cuckoo" programs to us.

"Since purchasing my first copy of RADEX a little less than two years ago, I have increased my log from 305 to 601 stations on the b. c. b. with 100 verified. I consider my best verified catches are JOAK1, JODK1, 4BC, 2GB, 2UE, 2BL, 3LO, 4QG, 5CK, 2YA, 3YA, KGU, HIX, HJN.

(Continued on page 77)

# WHAT'S ON THE AIR TONIGHT

Fill in calls and dial numbers for those stations through which you best receive the three chains. You can then turn quickly to the one that has the feature you want.

COLUMBIA.....(C)	
Call	Dial

NATIONAL, Red (R)	
Call	Dial

NATIONAL, Blue (B)	
Call	Dial

TIME: ED Eastern Daylight; E Eastern; C Central; M Mountain.  
For Pacific Time subtract one hour from Mountain.

RADEX is the only publication listing stations in alphabetical order for your convenience. While these programs are correct at the time of going to press changes are made from time to time.

## MONDAY

ED-6:00 p.m., E-5:00, C-4:00, M-3:00

**C—Peter Biljo and Orchestra**  
CFRB CKLW KFAB KGKO KLRA KTRH WAAB WABC WADC WBBM WBT WCAO WCAU WDAE WDBJ WDDB WDOO WDSU WEAN WFBL WFEA WGR WGST WHAS WHBC WHK WHP WJAS WJSV WKBW WLAC WLBW WNAC WNOX WOKO WORC WQAM WSFA WTOC

ED-6:45 p.m., E-5:45, C-4:45, M-3:45

**B—Lowell Thomas**  
CFCF CRCT KDKA WBAL WBZ WBZA WFLA WGAR WHAM WIOD WJAX WJR WJZ WLW WMAL WSYR

ED-7:15 p.m., E-6:15, C-5:15, M-4:15

**C—Nick Lucas, Songs**  
CFRB CKAC CKLW KBD KFAB KFH KGKO KLRA KLZ KMBC KOH KOMA KRLD KSCJ KSL KTRH K TSA KTUL KVOR WACO WADC WALA WBIG WBRC WBT WCAO WCAU WCCO WDAE WDNC WDOO WDRC WDSU WEAN WFBL WFEA WGR WGST WHAS WHBC WHK WHP WICC WISN WJAS WKBN WLAC WLBW WLBZ WNAC WNAZ WNOX WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTOC

**R—Gene and Glenn**

WBEN WCSH WFAE WEEI WFBR WFLA WGY WIOD WIS WJAR WJAX WPTF WRC WTAG WUNC

ED-7:30 p.m., E-6:30, C-5:30, M-4:30

**C—Silver Duet Sorenaders**  
WABC WCAO WCAU WDRC WFBL WGR WHEC WHP WJAS WJSV WMAS WOKO WORC WVVVA

ED-7:45 p.m., E-6:45, C-5:45, M-4:45

**C—Boake Carter**  
CKLW KMBC KMOX WABC WBBM WBT WCAO WCAU WCCO WGR WHAS WHK WJAS WJSV WNAC

**B—Frank Buck**

CRCT KDKA WBAL WBZ WBZA WCKY WENR WFLA WGAR WHAM WIOD WJR WJZ WMAL WPTF WRVA

ED-8:00 p.m., E-7:00, C-6:00, M-5:00

**C—Kate Smith**  
CFRB CKLW KDB KFH KGKO KLRA KLZ KMBC KOH KRLD KTRH K TSA KTUL KVOR WABC WACO WALA WBBM WBIG WBT

WCAO WCO WDAE WDOD WDRC WDSU WEAN WFBL WGR WHK WHP WICC WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMBG WMT WNAC WNOX WOKO WORC WOWO WQAM WSFA WSJS WVVVA

**R—Richard Himer and Orchestra**  
KSD WBEN WCAE WCSH WDAF WFAE WEEI WFBR WGY WHO WJAR WLIT WMAQ WOW WRC WSAI WTAG WTAM WTIC

**B—Jan Garber and Orchestra**

KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WKBZ WLS WLW WMAL WREN WSYR

ED-8:15 p.m., E-7:15, C-6:15, M-5:15

**C—Howard Barlow's Orchestra**  
CFRB CKLW KGKO KMBC KMOX KOH WABC WADC WBIG WBT WCAU WCCO WDAE WDBJ WDNC WDRC WGST WHP WICC WLBZ WMT WNAC WORC WQAM WSFA WTOC WVVVA

ED-8:30 p.m., E-7:30, C-6:30, M-5:30

**C—Raffles; Amateur Cracksman**  
CFRB CKAC CKLW KDB KFH KLRA KLZ KMBC KOH KOIN KOMA KRLD KSCJ KTRH K TSA KTUL WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDDB WDNC WDOO WDRC WDSU WEAN WFBL WFBM WFEA WGR WGST WHAS WHEG WHK WHP WIBW WICC WJAS WKBN WLAC WLBW WLBZ WMAS WMT WNAC WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTOC WVVVA

**R—Voice of Firestone**

CFCF CRCT WBEN WCAE WCSH WDAF WFAE WEEI WFBR WGY WJAR WLIT WMAQ WRC WSAI WTAG WTAM WTIC WWJ

ED-9:00 p.m., E-8:00, C-7:00, M-6:00

**C—Evan Evans, Baritone**  
CFRB CKAC KDB KERN KFBK KFH KFPY KFRC KGB KGKO KGMB KHJ KLRA KLZ KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH K TSA KTUL KVI KWG WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDDB WDNC WDOO WDSU WFBL WFEA WGR WGST WHAS WHBC WHP WIBW WICC WISN WJAS WKBW WKRC WLAC WLBW WLBZ

WMAS WMBG WMBR WMT WNAC WNOX WOKO WORC WPG WQAM WREC WSFA WSJS WSPD WTOC

**R—A. & P. Gypsies**

KSD WBEN WCAE WCSH WDAF WFAE WEEI WGY WHO WJAR WLIT WMAQ WOC WOW WTAG WTAM WTIC WWJ

**B—Sinclair Minstrels**

KDKA KFYR KOA KOIL KPRC KSO KSTP KTBS KTHS KVOO KWK WAPI WBAL WBZ WBZA WDAY WIBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WLS WLW WMC WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WTMJ WWNC

ED-9:15 p.m., E-8:15, C-7:15, M-6:15

**C—Roy Helton, Talks**  
CFRB CKAC CKLW KDB KERN KFBK KFH KFPY KFRC KGB KGKO KGMB KHJ KLRA KLZ KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH K TSA KTUL KVI KVOR KWG WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDDB WDNC WDOO WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBW WKRC WLAC WLBZ WMAS WMBG WMBR WMT WNAC WNOX WOKO WORC WPG WQAM WREC WSFA WSJS WSPD WTOC

ED-9:30 p.m., E-8:30, C-7:30, M-6:30

**C—Lud Gluskin and Orchestra**  
CKLW KMBC KMOX WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WSPD

**R—Colgate House Party**

KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KVOO WENB WCAE WCEP WDAF WDAY WFAE WIBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WJR WLIT WLW WMAL WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

**B—Princess Pat Players**

KDKA KOIL KSO KWCR KWK

## MONDAY (Continued)

WBAL WBZ WBZA WCKY WENR  
WGAR WHAM WJR WJZ WMAL  
WREN WRSY

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**  
**C — Wayne King and Orchestra**  
CKLW KDB KERN KFAB KFBK  
KFPY KPRC KGB KHJ KLZ KMBC  
KMJ KMOX KOIN KOL KRLL  
KSL KVI KWG WAAB WABC  
WADC WBBM WBNS WCAO WCAU  
WCCO WDRS WDSU WEAN WFBL  
WFBM WHAS WHK WIBW WJAS  
WJSV WKBW WKRC WOKO WOWO  
WSPD

**R — Contented Program**  
KDYL KFI KGO KGW KHQ KOA  
KOMO KSD WBEN WCAE WFSB  
WDAF WEAF WEEI WFAA WFBH  
WGY WHO WJAR WLIT WLW  
WMAQ WOC WOW WRC WTAG  
WTAM WTIC WWJ

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**C — Singin' Sam**  
KMBC KMOX KOMA KRLL KSCJ  
KTRH KTUL WBBM WDOB WFBM  
WHAS WLAC WMBD WMT WNAX  
WNOX

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**C — Fats Waller, Songs**  
CKAC KDB KFH KGKO KLRA  
KLZ KMBC KOH KOIN KOMA  
KRLL KTRH KTSa KTUL KVOR  
WAAB WABC WACO WALA WBIG  
WBRC WBT WCAO WADC WDAE  
WDBJ WDBO WDNC WDDO WDSU  
WFBL WFBM WGST WEAS WHEC  
WHP WIBW WIP WJAS WJSV  
WKBW WKBW WLAC WLWB  
WMBG WNOX WOKO WPG WQAM  
WREC WSBT WSFA WSJS WSPD  
WTOC

**B — Frank Buck**  
KDYL KFI KGO KGW KHQ KOA  
KOIL KOMO KPRC KSTP KTHS  
KWK WDAF WFAA WKY WMC  
WOAI WREN WSB WSM WSMB  
WTMJ

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**  
**C — Glen Gray and Orchestra**  
CFRB CKAC CKLW KDB KFH  
KGKO KLRA KLZ KMBC KMOX  
KOH KOMA KRLL KSL KTRH  
KTSa KVOR WABC WACO WADC  
WALA WBIG WBNS WBRC WBT  
WCAO WCAU WDAE WDBJ WDBO  
WDNC WDDO WDRS WDSU WEAN  
WFBL WFBM WFEA WGST WHAS  
WHEC WHK WICC WISN WJAS  
WJSV WKBW WKBW, WLAC WLWB  
WLWB WMAS WMBG WNAC WNOX  
WOKO WORC WPG WQAM WRC  
WSBT WSFA WSJS WSPD WTOC

**R — Gene and Glenn**  
KDYL KFI KFSB KGO KGW KHQ  
KOA KOMO KPRC KSD KSTP  
KTAR KTBS KTHS WAVE WCAE  
WDAF WBCY WFAA WHO WIBA  
WJDX WKBF WKY WMAQ WMC  
WOAI WOC WOW WSAI WSB WSM  
WSMB WTAM WWJ

**ED-11:30, p.m., E-10:30, C-9:30, M-8:30**  
**R — Voice of Firestone**  
KDYL KFI KFSB KFYR KGHL  
KGIR KGO KGU KGW KHQ KOA  
KOMO KSD KSTP KTAR WDAF  
WDAE WBCY WHO WIBA WKBF  
WOC WOW WTMJ

**ED-11:45 p.m., E-10:45, C-9:45, M-8:45**  
**C — Jan Garber and Orchestra**  
CFRB CKAC CKLW KDB KFH  
KGKO KLRA KLZ KMBC KOH  
KOH KOMA KRLL KTRH KTSa  
KTUL KVOR WABC WACO WADC  
WALA WBIG WBNS WBRC WBT  
WCAO WCAU WDAE WDBJ WDBO  
WDNC WDDO WDSU WEAN WFBL  
WFBM WFEA WHEC WHK WHP  
WJAS WJSV WKBW WLAC WLWB  
WLWB WMAS WMBG WNAC WOKO  
WPG WQAM WREC WSBT WSFA  
WSJ WSPD WTOC

## TUESDAY

**ED-6:00 p.m., E-5:00, C-4:00, M-3:00**  
**C — Charles Carlile, Tenor**  
CFRB CKLW KFAB KGKO KLRA  
KMOX KTRH WAAB WABC WADC  
WBBM WBT WCAO WCAU WDAE  
WDBJ WDBO WDDO WDRS WDSU  
WFBL WGST WHEC WHK WHP  
WISN WJAS WJSV WKBW WLWB  
WMT WNAX WNOX WOKO WQAM  
WSFA WSJS WTOC

**ED-6:15 p.m., E-5:15, C-4:15, M-3:15**  
**C — Edward Wurtzback's Orchestra**  
CKLW KFAB KFH KGKO KLRA  
KLZ KOH KOMA KRLL KSCJ  
KTRH KTSa KTUL KVOR WBBM  
WBIG WBRC WCAO WCCO WDAE  
WDBJ WDBO WDDO WHP WIBW  
WISN WJSV WKRC WMT WNAX  
WNOX WSFA WSJS WSPD WTOC

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**  
**C — Sam Robbins and Orchestra**  
CKLW KGKO KLRA KLZ KMBC  
KMOX KOH KOMA KRLL KSCJ  
KSL KTRH KTSa KTUL KVOR  
WAAB WABC WBIG WBRC WDAE  
WDBJ WDBO WDNC WDDO WDRS  
WDSU WFEA WGST WHAS WHEC  
WHK WHP WIP WISN WJAS WJSV  
WKBW WLAC WLWB WLWB WMAS  
WMT WNAX WNOX WOKO WORC  
WQAM WREC WSFA WSJS WSPD  
WTOC WWVA

**B — Lowell Thomas, See Monday**

**ED-7:00 p.m., E-6:00, C-5:00, M-4:00**  
**C — Beale Street Boys**  
CFRB CKAC CKLW KFAB KGKO  
KLRA KOH KOMA KRLL KSCJ  
KSL KTRH KTSa KTUL KVOR  
WABC WACO WADC WALA WBIG  
WBNS WBRC WBT WCAU WDAE  
WDBJ WDBO WDNC WDDO WDRS  
WDSU WEAN WFEA WGR WGST  
WHAS WHK WHP WICC WISN  
WJAS WLAC WLWB WLWB WMAS  
WMBG WMT WNAC WNAX WNOX  
WOKO WORC WQAM WREC WSFA  
WSJS WSPD WTOC

**ED-7:15 p.m., E-6:15, C-5:15, M-4:15**  
**C — Wayside Cottage, Drama**  
CFRB CKAC CKLW KFAB KFH  
KGKO KLRA KLZ KOH KOMA  
KRLL KSCJ KSL KTRH KTSa  
KTUL KVOR WABC WACO WADC  
WALA WBIG WBRC WBT WCAO  
WCAU WCCO WDAE WDBJ WDBO  
WDNC WDDO WDRS WDSU WFEA  
WGR WGST WHEC WHK WHP  
WICC WISN WJAS WKBW WLAC  
WLWB WLWB WNAC WNAX WNOX  
WOKO WORC WQAM WREC WSFA  
WSJS WSPD WTOC

**R — Gene and Glenn, See Monday**

**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**  
**C — Peter Biljo and Orchestra**  
KDB KFH KGKO KMOX KOMA  
DSCJ KTRH KVOR WABC WACO  
WCAO WCAU WCCO WDBJ WDRS  
WFBL WGR WHEC WHP WISN  
WJAS WJSV WMAS WNAX WOKO  
WORC WWVA

**B — You and Your Government**  
KDKA KEX KFSB KFYR KGA  
KGHL KGIR KJR KOA KOIL KPRC  
KTAR KTBS KTHS KVVO KWCR  
KWK KYA WAPI WBZ WBSZ  
WCKY WFLA WHAM WIBA WIS  
WJDX WJZ WMAL WOAI WPTF  
WREN WSMB WWNC

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**  
**C — Boake Carter, See Monday**  
**B — Frank Buck, See Monday**

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**C — Frank Munn; Muriel Wilson**  
CKLW KMBC KMOX WABC WADC  
WBBM WCAO WCAU WDRS WEAN  
WFBL WFBM WGR WHAS WHK  
WJAS WJSV WKRC WNAC WOKO  
WOWO WSPD

**R — Leo Relsman and Orchestra**  
WBEN WCAE WCSH WEAF WEEI  
WFBF WFI WGY WJAR WKBW  
WMAQ WRC WTAG WTAM WTIC  
WWJ

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**  
**C — Abe Lyman; Vivienne Segal**  
CFRB CKLW KMBC KMOX WABC  
WBBM WCAO WCAU WCCO WDRS  
WEAN WFBL WFBM WGR WHEC  
WHK WJSV WKRC WNAC WOKO

**R — Wayne King and Orchestra**  
KPRC KSD KSTP WBEN WCAE  
WCSH WDAF WEAF WEEI WFAA  
WFI WGY WHO WJAR WKBW  
WKY WMAQ WMC WOAI WOC  
WOW WRC WSAI WSB WSM WSMB  
WTAG WTAM WTIC WTMJ WWJ

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**C — George Givot**  
CFRB CKAC KDB KFH KGKO  
KLRA KLZ KMBC KMOX KOIN  
KOMA KRLL KSCJ KTRH KTSa  
KVOR WABC WADC WBNS WBRC  
WBT WCAO WCAU WCCO WDAE  
WDBJ WDBO WDDO WDRS WDSU  
WEAN WFEA WGST WHAS WHEC  
WHK WHP WISN WJSV WLWB  
WLWB WMT WNAC WNOX WOKO  
WORC WPG WSFA WSJS WTOC

**B — Household Musical Memories**  
KDKA KWK WBAL WBZ WBZA  
WCKY WHAM WJZ WLS

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**  
**C — Richard Himber and Orchestra**  
CKLW KFH KMBC KMOX KOMA  
KRLL KTUL WABC WADC WBBM  
WBNS WBT WCAO WCAU WCCO  
WDRS WDSU WEAN WFBL WFBM  
WEK WJAS WJSV WKBW WKBW  
WKRC WNAC WOKO WSBT WSPD

**R — Soconyland Sketches**  
WBEN WCSH WEAF WEEI WGY  
WJAR WTAG WTIC

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**  
**C — Fray and Braggiotti**  
CKLW KDB KMBC KMOX KOIN  
KTRH WABC WADC WBBM WDBJ  
WDDO WDSU WHP WMT WSBT  
WSFA



## TUESDAY (Continued)

**R — Palmolive Beauty Box Theatre**  
CFCE CRCT KDYL KFI KFSD  
KFYR KGHL KGIR KGO KGW  
KHQ KOA KOMO KPFC KSD KSTP  
KTAR KTBS KVVO WAVE WBAP  
WBEN WCAE WCSH WDAF WDAY  
WEAF WEBC WEEI WFBF WFLA  
WGY WHO WIOD WIS WJAR WJAX  
WJDX WKBF WKY WLW WMAQ  
WMC WOA WOC WOW WPTF  
WRC WRVA WSB WSM WSMB  
WSOC WTAG WTAM WTMJ WWJ  
WWNC

**ED-10:15 p.m., E-9:15, C-8:15, M-7:15**  
**C — The Troopers; Freddie Rich**  
CKLW KDB KGKO KTRH WABC  
WADC WBBM WDBJ WDDO WDSU  
WHP WMBD WMT WMAX WSBT  
WSFA

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**C — Melodic Strings**  
KDB KGKO KOIN KSL KTRH  
WABC WADC WBBM WBIG WBNS  
WCAO WDBJ WDDO WDSU WFBM  
WHCC WHK WHP WICC WMT  
WMAX WSBT WSFA

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**C — Richard Himber and Orchestra**  
KDB KERN KFBK KPFP KFRC  
KGB KHJ KLZ KMJ KOIN KOL  
KSL KVI KWG

**B — Frank Buck, See Monday**

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**  
**C — Isham Jones and Orchestra**  
CKAC CKLW KDB KFAB KFH  
KGKO KLRA KLZ KMBC KOH  
KOMA KSCJ KTRH KTSK KTUL  
KVOR WABC WACO WADC WALA  
WBBM WBNS WBRW WBT WCAO  
WCAU WCCO WDAE WDBJ WDBO  
WDNC WDDO WDRC WDSU WEAN  
WFBL WFBM WFEA WGST WHAS  
WHCC WHP WIC WISN WJAS  
WJSV WKBW WLAC WLWB WLZ  
WMAZ WMBD WMBG WNAC  
WMAX WNOX WOKO WORC WQAM  
WREC WSBT WSFA WSJS WSPD

**R — Gene and Glenn, See Monday**

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**  
**R — Leo Reisman and Orchestra**  
KDYL KFI KGO KGW KHQ KOA  
KOMO KSD WDAF WHO WLW  
WOC WOW WSB WSM WSMB  
WTMJ

## WEDNESDAY

**ED-6:00 p.m., E-5:00, C-4:00, M-3:00**  
**C — Tito Guizar**  
KFAB KGKO KTRH WABC WADC  
WBBM WBIG WCAU WDAE WDBJ  
WDBO WDDO WDRC WDSU WGST  
WHCC WHP WJSV WLWB WMT  
WMAX WNOX WORC WQAM WSFA  
WSJS WTOC

**ED-6:15 p.m., E-5:15, C-4:15, M-3:15**  
**C — Edw. Wurtzbach, See Tuesday**

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**  
**C — Peter Biljo and Orchestra**  
CKLW KFH KGKO KLRA KLZ  
KMBC KMOX KOH KOMA KRLD  
KSCJ KSL KTRH KTSK KTUL  
KVOR WAAB WABC WBBM WBIG  
WBNS WBRW WCAU WDAE WDBJ  
WDBO WDNC WDDO WDRC WDSU  
WFBL WFEA WGST WHAS WHCC  
WHP WIP WISN WJAS WKBW

WLAX WLWB WLZ WMAS WMT  
WMAX WNOX WOKO WORC WQAM  
WREC WSFA WSJS WSPD WTOC  
WWVA

**B — Lowell Thomas, See Monday**

**ED-7:00 p.m., E-6:00, C-5:00, M-4:00**  
**C — Gene Kardos and Orchestra**  
CFRB CKAC CKLW KFAB KFH  
KGKO KLRA KOH KOMA KRLD  
KSCJ KSL KTRH KTSK KTUL  
KVOR WACO WADC WALA WBIG  
WBNS WBRW WBT WCCO WDAE  
WDBJ WDBO WDNC WDDO WDRC  
WDSU WEAN WFEA WGR WGST  
WHP WHP WISN WJAS WLAC  
WLWB WLZ WMAS WMBG WMT  
WMAX WNOX WOKO WORC  
WQAM WREC WSFA WSJS WSPD  
WTOC

**ED-7:15 p.m., E-6:15, C-5:15, M-4:15**  
**C — Vera Van, Songs**

CFRB CKAC CKLW KFAB KFH  
KGKO KLRA KLZ KOH KOMA  
KRLD KSCJ KSL KTRH KTSK  
KTUL KVOR WABC WACO WADC  
WALA WBIG WBRW WBT WCAO  
WCAU WCCO WDAE WDBJ WDBO  
WDNC WDDO WDRC WDSU WEAN  
WFEA WGR WGST WHCC WHK  
WHP WJAS WKBN WLAC WLWB  
WLZ WMBG WNAC WMAX WNOX  
WOKO WORC WQAM WREC WSFA  
WSJS WSPD WTOC

**R — Gene and Glenn, See Monday**

**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**  
**B — Irene Rich for Welch**  
KDKA KOIL KSO KWCR WAVE  
WBAL WBZ WBZA WCKY WENR  
WJZ WYAL WMC WREN WSB  
WSYR

**C — Silver Dust, See Monday**

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**  
**C — Boake Carter, See Monday**

**B — Frank Buck, See Monday**

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**C — Maxine; Phil Spitalny**  
CKLW WABC WBBM WCAO WCAU  
WDRW WGR WHK WJAS WJSV  
WNAC

**R — Jack Pearl with Cliff Hall**

CFCE CRCT KDYL KFI KFYR  
KGO KGW KHQ KOA KOMO KPFC  
KSD KTAR KTBS KTHS KVOO  
WAVE WBAP WBEN WCAE WCKY  
WCSH WDAF WDAY WEAF WEBC  
WEEI WEFR WFLA WGY WHO  
WIBA WIOD WIS WJAR WJAX  
WJDX WKY WLIT WMAQ WMC  
WOAI WOC WOW WPTF WRC  
WRVA WSAI WSB WSM WSMB  
WTAG WTAM WTIC WWJ WWNC

**ED-8:15 p.m., E-7:15, C-6:15, M-5:15**  
**C — Emery Deutsch and Orchestra**  
CFRB CKAC CKLW KFH KGKO  
KLRA KLZ KMBC KSCJ KSL  
KTRH KTSK KVOR WABC WACO  
WADC WALA WBBM WBIG WBNS  
WCAU WCAU WDNC WDDO WDRC  
WDSU WEAN WFBL WFBM WFEA  
WHCC WHP WJAS WLWB WLZ  
WMBG WMT WNAC WOKO WORC  
WSFA WTOC WWVA

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**  
**C — Everett Marshall and Vanities**  
CFRB CKAC CKLW KDB KERN  
KFBK KPFP KFRC KGB KHJ  
KLZ KMBC KMJ KMOX KOIN

KOL KOMA KRLD KSL KVI KWG  
WABC WBBM WBT WCAO WCAU  
WCCO WDSU WGR WHAS WHK  
WIBW WJAS WJSV WKRC WLAC  
WNAC

**R — Wayne King, See Tuesday**

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**C — Detroit Symphony Orchestra**  
CFRB CKAC CKLW KDB KERN  
KFAB KFBK KFH KPFP KFRC  
KGB KGKO KGMB KHJ KLRA  
KLZ KMBC KMJ KMOX KOH  
KGIN KOL KOMA KRLD KSCJ  
KSL KTRH KTSK KTUL KVI KWG  
WABC WACO WADC WALA WBBM  
WBIG WBNS WBRW WBT WCAO  
WCAU WCCO WDBJ WDBO WDNC  
WDDO WDRC WDSU WEAN WFBL  
WFBM WFEA WGST WHCC WHK  
WHP WIBW WIC WISN WJAS  
WKBW WKRC WLAC WLWB WLZ  
WMAZ WMBG WMBR WMT WNAC  
WMAX WNOX WOKO WORC WPG  
WQAM WREC WSFA WSJS WSPD  
WTOC

**R — Fred Allen; Lennie Hayton**  
KFRC KSD KSTP KTBS KVOO  
WBEN WCAE WCSH WDAF WEAF  
WEBC WEEI WFAA WFBW WGY  
WHO WIOD WIS WJAR WJAX WKY  
WLIT WLW WMAQ WMC WOAI  
WOC WOW WPTF WRC WRVA  
WSB WSM WSMB WTAG WTAM  
WTIC WTMJ WWJ

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**

**C — Byrd Expedition Broadcast**  
CKLW KDB KERN KFAB KFBK  
KPH KPFP KFRC KGB KHJ KLRA  
KLZ KMBC KMJ KMOX KOIN KOL  
KOMA KRLD KSL KTRH KTSK  
KVI KWG WABC WACO WADC  
WBBM WBNS WBT WCAO WCAU  
WCCO WDAE WDRC WDSU WEAN  
WFBL WFBM WGST WHAS WHCC  
WHP WHP WIBW WJAS WJSV  
WKBW WKRC WLAC WLWB WMBG  
WMT WNAC WMAX WOKO WORC  
WOW WQAM WREC

**R — Guy Lombardo and Orchestra**  
KFRC KSD KTBS KTHS KVOO  
WAVE WBEN WCAE WCSH WDAF  
WEAF WEEI WFAA WFBW WFLA  
WGY WHO WIOD WIS WJAR WJAX  
WJDX WKBF WKY WLIT WLW  
WMAQ WMC WOAI WOC WOW  
WPTF WRC WRVA WSB WSM  
WSMB WTAG WTAM WTIC WWJ  
WWNC

**B — Dennis King; Louis Katzman**  
KDKA KDYL KFI KFYR KGO KGW  
KHQ KOA KOIL KOMO KSO KSTP  
KWCR KWK WALB WBZ WBZA  
WCKY WDAY WEBC WENR WGAR  
WHAM WIBA WJR WJZ WMAL  
WREN WSYR WTMJ

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**

**C — Mary Eastman; Howard Barlow**  
CFRB CKAC KFH KGKO KLZ  
KMOX KOIN KRLD KTRH KTSK  
KVOR WABC WACO WADC WBBM  
WBIG WBNS WBT WCCO WDAE  
WDBJ WDBO WDDO WDRC WDSU  
WFEA WGST WHAS WHCC WHP  
WJSV WLWB WLWB WMBD WMAX  
WNOX WSBT WSFA WSJS

**B — Harry Richman; Jack Denny**  
KDYL KFYR KOA KOLL KPFC  
KSO KVOO KWCR KWK WBAL  
WCKY WDAY WEBC WENR WFAA

## WEDNESDAY (Cont'd)

WGAR WHAM WJR WJZ WKY  
WMAL WREN WRVA WSYR WTMJ

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**C — Nick Lucas, Songs**

CFRB CKLW KFH KGKO KLRA  
KLZ KMBC KOH KOIN KOMA  
KRLD KSL KTRH KTSa KTUL  
KVOR WAAB WABC WACO WADC  
WALA WBIG WBRC WBT WDAE  
WDBJ WDBO WDNC WDOD WDRC  
WDSU WFBL WFBM WGST WHEC  
WHP WIBW WIP WJAS WJSV  
WKBW WLAC WLWB WMBG  
WNAX WNOX WQAM WREC WSBT  
WSFA WSJS WSPD WTOG

**B — Frank Buck, See Monday**

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**  
**C — Little Jack Little**

CFRB CKAC CKLW KDB KFH  
KGKO KLRA KLZ KOH KOMA  
KTRH KTSa KTUL KVOR WABC  
WACO WALA WBIG WBRC WBT  
WCAO WCAU WDAE WDBJ WDBO  
WDNC WDOD WDRC WDSU WEAN  
WFBL WFBM WFEA WGST WHEC  
WHP WIP WJAS WJSV WKBW  
WLAC WLWB WLWB WMBG  
WNAX WNOX WOKO WORC WPG  
WREC WSBT WSFA WSJS WSPD  
WTOG

**R — Gene and Glenn, See Monday**

**ED-12:00 p.m., E-11:00, C-10:00, M-9:00**  
**R — Fred Allen; Lennie Hayton**  
KDYL KFI KGO KGW KHQ KOA  
KOMO

## THURSDAY

**ED-6:00 p.m., E-5:00, C-4:00, M-3:00**  
**C — Mischka Raginsky and Orchestra**  
CFRB KFAB KGKO KLRA KTRH  
WAAB WABC WACO WADC WBBM  
WBT WCAU WDAE WDBJ WDBO  
WDOD WDSU WGST WHEC WHK  
WHP WJSV WLAC WLWB WMT  
WNAX WNOX WOKO WORC WQAM  
WSFA WSJS

**ED-6:15 p.m., E-5:15, C-4:15, M-3:15**  
**C — Edw. Wurtzbech, See Tuesday**

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**  
**C — Charles Barnet and Orchestra**  
CKLW KFH KGKO KLRA KLZ  
KMBC KMOX KOH KOMA KRLD  
KSCJ KSL KTRH KTSa KTUL  
KVOR WAAB WABC WBIG WBRC  
WCAO WDAE WDBJ WDBO WDNC  
WDOD WDRC WDSU WFBL WFEA  
WGST WHAS WHEC WHK WHP  
WIP WISN WJAS WJSV WKBW  
WLAC WLWB WLWB WMBG WMT  
WNAX WNOX WOKO WORC WQAM  
WREC WSFA WSJS WSPD WTOG

**B — Lowell Thomas, See Monday**

**ED-7:00 p.m., E-6:00, C-5:00, M-4:00**  
**C — Sylvia Froos, Songs**

CFRB CKAC CKLW KFAB KFH  
KGKO KLRA KOH KOMA KRLD  
KSCJ KSL KTRH KTSa KTUL  
KVOR WABC WACO WADC WALA  
WBIG WBNS WBRC WBT WCAO  
WCAU WDAE WDBJ WDBO WDNC  
WDOD WDRC WDSU WEAN WFEA  
WGR WGST WHAS WHK WHP  
WICC WISN WJAS WLAC WLWB  
WLWB WMBG WMBG WMT WNAC  
WNAX WNOX WOKO WORC WQAM  
WREC WSFA WSJS WSPD WTOG

**ED-7:15 p.m., E-6:15, C-5:15, M-4:15**  
**C — Wayside Cottage, See Tuesday**

**R — Gene and Glenn, See Monday**

**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**  
**C — Cliff Edwards "Ukelele Ike"**

KDB KFH KGKO KOMA KSCJ  
KTRH KTSa KTUL KVOR WABC  
WACO WCAU WCOO WDRC  
WFBL WFBM WGR WHAS WHEC  
WHP WIP WJAS WJSV WMBG  
WNAX WOKO WORC WVVV

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**  
**C — Boake Carter, See Monday**

**B — Frank Buck, See Monday**

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**R — Rudy Vallee and Orchestra**

CFRC CRCT KDYL KFYR KHQ  
KPRC KSD KSTP KTAR KTHS  
KVOO WAPI WBAP WBEN WCAE  
WCSH WDAF WDAY WFEA WHEC  
WEEI WFER WFI WFLA WGY  
WHO WIOD WIS WJAR WJAX  
WJDX WKY WMAQ WMC WOAI  
WOC WOW WPTF WRC WRVA  
WSM WSMB WTAG WTAM WTIC  
WTMJ WWJ WWNC

**C — Kate Smith, See Monday**

**ED-8:15 p.m., E-7:15, C-6:15, M-5:15**  
**C — Walter Pitkin**

CFRB CKAC CKLW KDB KFAB  
KFH KGKO KLRA KLZ KMBC  
KSCJ KSL KTRH KVOR WABC  
WACO WADC WALA WBIG WBNS  
WCAO WCAU WDNC WDOD WDRC  
WDSU WEAN WFBL WFBM WFEA  
WHP WISN WJAS WLWB WLWB  
WMBG WMT WNAC WOKO WORC  
WSFA WVVV

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**  
**C — Leith Stevens Harmonies**

CFRB CKAC CKLW KDB KFH  
KLRA KLZ KMBC KMOX KOH  
KOIN KOMA KSCJ KTRH KTSa  
KTUL KVOR WABC WACO WADC  
WBIG WBNS WBRC WBT WCAU  
WCOO WDAE WDBJ WDBO WDOD  
WDRC WDSU WEAN WFBM WFEA  
WGR WGST WHAS WHEC WHK  
WHP WIBW WICC WISN WJAS  
WJSV WKBW WKBW WLAC WLWB  
WLWB WMBG WMT WNAC  
WNOX WOKO WORC WPG WQAM  
WREC WSBT WSFA WSJS WSPD  
WTOG

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**C — Bar X Days and Nights**

CKLW KMBC KMOX WABC WBBM  
WCAO WCAU WDRC WEAN WFBL  
WFBM WHAS WHK WJAS WJSV  
WKBW WKRC WNAC

**R — Maxwell House Show Boat**

KDYL KFI KFSD KGHK KGR  
KGO KGW KHQ KOA KOMO KPRC  
KSD KSTP KTAR KTSa WAPI  
WAVE WBAP WBEN WCAE WCSH  
WDAF WFEA WEEI WFER WFI  
WFLA WGY WHO WIOD WIS WJAR  
WJAX WJDX WKFB WKY WLW  
WMAQ WMC WOAI WBS WSM  
WRC WRVA WSAI WSB WSM  
WSMB WTAG WTAM WTIC WTMJ  
WWJ WWNC

**B — Death Valley Days**

KDKA KOIL KSO KWCR KWK  
KWBAL WBEZ WBAZ WGAR WHAM  
WJR WJZ WLS WLW WMAL WREN  
WSYR

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**  
**C — Tito Guizar and Orchestra**

CFRB CKAC CKLW KDB KFAB  
KFH KGKO KLRA KLZ KMBC  
KMOX KOH KOIN KOMA KRLD  
KSCJ KSL KTRH KTSa KTUL  
KVOR WABC WACO WADC WALA  
WBBM WBIG WBNS WBRC WBT  
WCAO WCAU WCOO WDAE WDBJ  
WDBO WDOD WDRC WDSU WEAN  
WFBL WFBM WFEA WGST WHAS  
WHEC WHP WIBW WICC WISN  
WJSV WKBW WKBW WKRC WLAC  
WLWB WLWB WMBG WMBG WMT  
WNAC WNAX WNOX WOC  
WREC WWOV WPG WQAM WREC  
WSJS WSPD WTOG

**ED-9:45 p.m., E-8:45, C-7:45, M-6:45**  
**C — Fats Waller's Rhythm Club**

CFRB CKAC CKLW KDB KFAB  
KFH KGKO KLRA KLZ KMBC  
KMOX KOH KOIN KOMA KRLD  
KSCJ KSL KTRH KTSa KTUL  
KVOR WABC WACO WADC WALA  
WBBM WBIG WBNS WBRC WBT  
WCAO WCAU WCOO WDAE WDBJ  
WDBO WDOD WDRC WDSU WEAN  
WFBL WFBM WFEA WGST WHEC  
WHP WIBW WICC WISN WJAS  
WJSV WKBW WKBW WKRC WLAC  
WLWB WLWB WMBG WMBG WMT  
WNAC WNAX WNOX WOC  
WREC WWOV WPG WQAM WREC  
WSJS WSPD WTOG

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**  
**C — 45 Minutes in Hollywood**

CFRB CKAC CKLW KLZ KMBC  
KMOX KOMA KRLD KSL KTRH  
KTSa KTUL WABC WACO WBBM  
WBNS WBT WCAO WCAU WCOO  
WDAE WDBO WDRC WDSU WEAN  
WFBL WGST WHEC WHK WJAS  
WJSV WKRC WLAC WMBR WNAC  
WOKO WQAM WSPD

**R — Paul Whiteman; Al Jolson**

CFRC CRCT KDYL KFI KFYR  
KGO KGW KHQ KOA KOMO KPRC  
KSD KSTP KTAR KTSa KTHS  
WBAP WBEN WCAE WCSH WDAF  
WDAY WFEA WHEC WEEI WFER  
WFI WGY WHO WIBA WJAR WKY  
WLW WMAQ WOAI WOC WOW  
WRC WTAG WTAM WTMJ WWJ

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**B — Archer Gibson, Organist**

KDKA KSO KWCR KYW WBAL  
WBZ WBZA WCKY WGAR WHAM  
WJZ WMAL WREN

**ED-10:45 p.m., E-9:45, C-8:45, M-7:45**  
**C — Playboys; Piano Trio**

CFRB CKLW KDB KFAB KFH  
KLRA KLZ KMBC KMOX KOH  
KOIN KOMA KRLD KSCJ KSL  
KTRH KTSa KTUL KVOR WAAB  
WABC WACO WADC WALA WBBM  
WBIG WBNS WBRC WBT WCAO  
WCAU WCOO WDAE WDBJ WDBO  
WDNC WDOD WDRC WDSU WEAN  
WFBL WFBM WFEA WGST WHP  
WIBW WICC WISN WJAS WJSV  
WKBW WKBW WLAC WLWB WLWB  
WMBG WMBG WMT WNAC  
WNOX WOKO WORC WPG WQAM  
WREC WSBT WSFA WSJS WSPD  
WTOG

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**C — Vera Van, Songs**

CKLW KDB KFH KGKO KLRA  
KLZ KMBC KOH KOIN KOMA  
KRLD KTRH KTSa WAAB WABC

## THURSDAY (Continued)

WACO WADC WALA WBIG WBRC  
WBT WCAO WDAE WDBJ WDBO  
WDNC WDDO WDRC WDSU WFBL  
WFBM WGST WHAS WHEC WHP  
WIBW WIP WJAS WJSV WKBW  
WLAC WLWB IWMBG WNOX  
WOKO WQAM WREC WBSB WSFA  
WSJS WSPD WTOC

**B — Frank Buck, See Monday**

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**

**C — Ferde Grofe and Orchestra**

CFRB CKLW KDB KFAB KKH  
KGKO KLRA KLZ KMBC KOH  
KOMA KRLD KSCJ KSL K TSA  
KTUL KVOR WABC WACO WBBM  
WBIG WBNS WBRC WBT WCAO  
WCCO WDBJ WDBO WDNC WDDO  
WDRC WDSU WEAN WFBL WFEA  
WGST WHAS WHEC WHK WIBW  
WICC WIP WJAS WJSV WKBW  
WKBW WLAC WLWB WLWB WMAS  
WMBD WMBG WMT WNAC WNAX  
WNOX WOKO WORC WPG WQAM  
WREC WBSB WSFA WSJS WSPD  
WTOC

**R — Gene and Glenn, See Monday**

## FRIDAY

**ED-6:00 p.m., E-5:00, C-4:00, M-3:00**

**C — Round Towners with Orchestra**

CFRB CKLW KFAB KFH KGKO  
KLRA KLZ KMOX KOH KOMA  
KSCJ KSL KTRH K TSA KTUL  
KVOR WAAB WABC WADC WBBM  
WBIG WBNS WBRC WBT WCAO  
WCAU WDAE WDBJ WDBO WDNC  
WDDO WDRC WDSU WFBL WGST  
WHAS WHEC WHP WIBW WISN  
WJAS WJSV WKBW WLAC WLWB  
WMBG WMT WNAX WOKO WORC  
WQAM WREC WSFA WSJS WSPD  
WTOC W WVA

**ED-6:15 p.m., E-5:15, C-4:15, M-3:15**

**C — Edw. Wurtzbach, See Tuesday**

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**

**C — Esther Velas and Orchestra**

CKLW KFH KGKO KLRA KLZ  
KMBC KMOX KOH KOMA KRLD  
KSCJ KSL KTRH K TSA KTUL  
KVOR WABC WADC WBBM WBIG  
WBNS WBRC WCAU WDAE WDBJ  
WDBO WDNC WDDO WDRC WDSU  
WEAN WFBL WFEA WGST WHAS  
WHEC WHP WISN WJAS WKBW  
WLAC WLBU WLWB WMAS WMT  
WNAX WNOX WOKO WORC WQAM  
WREC WSFA WSJS WSPD WTOC  
W WVA

**B — Lowell Thomas, See Monday**

**ED-7:00 p.m., E-6:00, C-5:00, M-4:00**

**C — Sam Robbins and Orchestra**

CFRB CKAC CKLW KFAB KFH  
KGKO KLRA KOH KOMA KSCJ  
KSL KTRH K TSA KTUL KVOR  
WACO WADC WALA WBIG WBNS  
WBRC WBT WCAU WDAE WDBJ  
WDBO WDNC WDDO WDRC WDSU  
WFEA WGR WGST WHAS WHK  
WHP WICC WISN WJAS WLAC  
WLWB WLWB WMAS WMBG WMT  
WNAC WNAX WNOX WOKO WORC  
WQAM WREC WSFA WSJS WSPD  
WTOC

**ED-7:15 p.m., E-6:15, C-5:15, M-4:15**

**R — Gene and Glenn, See Monday**

**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**

**C — Silver Dust, See Monday**

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**

**C — Boake Carter, See Monday**

**B — Frank Buck, See Monday**

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**

**R — Civic Service Concert**

CRCT KDYL KOA KPRC KSD  
KSTP KTBS KTS KVOO KYW  
WBAP WBEN WCAE WFSH WDAF  
WEAF WEBC WEEI WFAA WFBW  
WGY WHO WJAR WKY WLIT  
WQAI WOC WOW WRC WRVA  
WSAI WTAG WTAM WTIC WTMJ  
WWJ

**C — Kate Smith, See Monday**

**ED-8:15 p.m., E-7:15, C-6:15, M-5:15**

**C — Freddie Rich and Orchestra**

CKLW KFAB KGKO KLRA KLZ  
KMBC KSCJ KSL KTRH KVOR  
WABC WACO WADC WALA WBIG  
WBNS WCAU WDNC WDRC WDSU  
WEAN WFBL WFBM WFEA WHP  
WISN WJAS WLWB WLWB WMT  
WNAC WORC WSEA W WVA

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**

**C — True Story Court**

CKLW KMBC WABC WADC WBBM  
WCAU WCAU WCCO WDRC WEAN  
WFBL WHK WJAS WJSV WKBW  
WKRK WNAC WOKO

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**

**R — Frank Munn; Abe Lyman**

KSD WBEN WCAE WFSH WDAF  
WEAF WEEI WFBW WGY WJAR  
WLIT WLW WMAQ WOW WRC  
WTAG WTAM WWJ

**B — Phil Harris and Orchestra**

KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KPRC KSO KSTP  
WAPI WBAL WBZ WBZA WCKY  
WFAA WGAR WHAM WJZ WKY  
WLS WMAL WQAI WREN WBS  
WSM WSMB WSYR

**ED-9:15 p.m., E-8:15, C-7:15, M-6:15**

**C — California Melodies**

CKAC KFAB KGKO KILZ KMBC  
KMOX KOH KOIN KRLD KSCJ  
KTRH KVOR WACO WADC WBIG  
WBNS WCAU WCCO WDDO WDRC  
WDSU WEAN WFEA WHEC WHK  
WHP WMT WISN WJSV WLAC  
WLWB WMT WNAC WNAX WOKO  
WORC WSFA

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**

**C — Johnny Green and Orchestra**

CFRB CKAC CKLW KDB KFAB  
KFH KGKO KLRA KLZ KMBC  
KMOX KOH KOIN KOMA KRLD  
KSCJ KSL KTRH K TSA KTUL  
KVOR WABC WACO WADC WALA  
WBBM WBIG WBRC WBT WCAO  
WCAU WCCO WDAE WDBJ WDBO  
WDNC WDDO WDRC WDSU WEAN  
WFBL WFBM WFEA WGST WHAS  
WHEC WHK WHP WIBW WICC  
WISN WJAS WJSV WKBW WKBW  
WLAC WLWB WLWB WMAS WMBG  
WNAC WNOX WOKO WORC WPG  
WQAM WREC WBSB WSFA WSJS  
WSPD WTOC

**R — Pick and Pat**

KSD WBEN WCAE WFSH WDAF  
WEAF WFBW WGY WHO WJAR  
WLIT WMAQ WOC WOW WRC  
WSAI WTAG WTAM WTIC WWJ

**B — Armour Program; Phil Baker**

KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KPRC KSO KSTP

KTAR KWK WAPI WAVE WBAL  
WBZ WBZA WEBC WENR WFAA  
WFLA WGAR WHAM WHD WJAX  
WJR WJZ WKY WMC WOAI WREN  
WRYA WSB WSM WSMB WTMJ  
WVNC

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**

**C — Spotlight Revue**

KFAB KLRA KLZ KMBC KMOX  
KOMA KRLD KSCJ KSL KTRH  
K TSA KTUL WABC WBBM WBNS  
WBT WCAO WCAU WCCO WDAE  
WDRC WDSU WEAN WFBM WHAS  
WHK WISN WJAS WJSV WLAC  
WMBR WMT WNAC WOW WREC  
WSPD

**R — First Nighter, Drama**

KDYL KFI KGO KGW KHQ KOA  
KOMA KPRC KSD KSTP WBEN  
WCAE WFSH WDAF WEAF WEBC  
WEEI WFAA WFBW WGY WHO  
WJAR WKY WLIT WMAQ WMC  
WQAI WOC WOW WRC WSAI WBS  
WSM WSMB WTAG WTAM WTIC  
WTMJ WWJ

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**

**R — Jack Benny; Don Bestor**

KDYL KFI KFYZ KGO KGW KHQ  
KOA KOMO KPRC KSD KTBS  
KTHS WAVE WBEN WCAE WFSH  
WDAF WDAY WEAF WEBC WEEI  
WFAA WFBW WFLA WGY WHO  
WIBA WIOD WIS WJAR WJAX  
WJDX WKY WLIT WLW WMAQ  
WMC WOAI WOC WOW WPTF  
WRC WRVA WSB WSM WSMB  
WTAG WTAM WTAR WTIC WTMJ  
WWJ W WNC

**ED-10:45 p.m., E-9:45, C-8:45, M-7:45**

**C — Carlie, London, Warwick Sisters**

CFRB CKAC CKLW KDB KFH  
KGKO KLRA KLZ KMBC KMOX  
KOH KOMA KRLD KSCJ KSL  
KTRH K TSA KTUL WAAB WABC  
WACO WADC WALA WBIG WBNS  
WBRC WCAU WCAU WCCO WDAE  
WDBJ WDBO WDNC WDDO WDRC  
WDSU WEAN WFBM WFEA WGR  
WGST WHAS WHK WHP WIBW  
WICC WJAS WJSV WLAC WLWB  
WLWB WMAS WMBD WMBG WMT  
WNAX WNOX WOKO WORC WQAM  
WREC WSFA WSJS WSPD WTOC

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**

**C — Edith Murray, Songs**

CKAC CKLW KDB KFH KGKO  
KLRA KLZ KMBC KOH KOMA  
KRLD KSL KTRH K TSA KTUL  
KVOR WAAB WABC WACO WADC  
WALA WBBM WBIG WBRC WBT  
WCAO WDAE WDBJ WDBO WDNC  
WDDO WDRC WDSU WFBL WFBM  
WGST WHAS WHP WIBW WIP  
WJAS WJSV WKBW WLAC WLWB  
WMBG WNOX WOKO WQAM  
WREC WSFA WSJS WSPD WTOC

**B — Frank Buck, See Monday**

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**

**C — Isham Jones, See Tuesday**

**R — Gene and Glenn, See Monday**

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**

**C — True Story Court**

KDB KERN KFBC KFPY KPRC  
KGB KHJ KLZ KMBC KMJ KMOX  
KOIN KOIL KSL KVI KGW WHAS  
WOKO

# SATURDAY

**ED-6:15 p.m., E-5:15, C-4:15, M-3:15**  
**C — Billy Hays and Orchestra**  
CFRB CKAC CKLW KDB KFAB  
KFH KGKO KLRA KMBC KMOX  
KOH KOIN KOMA KRLD KSCJ  
KTRH KTSK KTVL KFOR WABC  
WABC WBIG WBNS WBRC WBT  
WCAO WCAU WDAE WDBJ WDNC  
WDNC WDOD WDRC WDSU WFLB  
WFEA WGST WHAS WHEC WHK  
WIBW WICC WISN WJAS WLAC  
WLBW WLBZ WMAS WMBG WMT  
WNOX WOKO WORC WQAM WREC  
WSFA WSJS WSPD WTOC

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**  
**B — John Herrick, Baritone**  
KDKA KOIL KSO KWCR KWK  
WBAL WCKY WGAR WJZ WKBF  
WMAL WMAQ

**C — Charles Barnet, See Thursday**

**ED-7:00 p.m., E-6:00, C-5:00, M-4:00**  
**C — Mary Eastman, Soprano**  
CFRB CKAC CKLW KDB KFAB  
KFH KGKO KLRA KLZ KOH KOIN  
KOMA KRLD KSCJ KTRH KTSK  
KTVL KFOR WABC WACO WADC  
WALA WBIG WBNS WBRC WBT  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDNC WDOD WDRC WDSU  
WFEA WGR WGST WHAS WHEC  
WHK WHP WIBW WICC WISN  
WJAS WJSV WLAC WLBW WLBZ  
WMAS WMBG WMT WMAX WNOX  
WOKO WORC WQAM WREC WSFA  
WSJS WSPD WTOC

**ED-7:15 p.m., E-6:15, C-5:15, M-4:15**  
**C — Isham Jones and Orchestra**  
CKAC CKLW KDB KFH KGKO  
KMBC KMOX KOH KOMA KSCJ  
KTRH KTSK KTVL KFOR WACO  
WALA WBBM WBIG WBRC WBT  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDNC WDOD WDRC WDSU  
WFLB WFBM WGR WGST WHAS  
WHEC WIBW WICC WJAS WJSV  
WLAC WLBW WLBZ WMAS WMBG  
WMAX WNOX WOKO WORC  
WQAM WSFA WSJS WSPD WTOC  
WVVA

**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**  
**B — Don Bestor and Orchestra**  
KDKA KGR KWCW KWK KYW  
WBAL WBZ WBZA WCKY WGAR  
WHAM WJAR WJR WJZ WMAL  
WREN WSYR

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**  
**C — Fats Waller, Songs**  
CFRB CKLW KDB KFAB KGKO  
KLRA KLZ KMBC KMOX KOH  
KOMA KRLD KSCJ KTRH KTSK  
KTVL KFOR WABC WACO WADC  
WALA WBBM WBNS WBRC WBT  
WCCO WDAE WDBJ WDBO WDNC  
WDOD WDRC WDSU WEAN WFLB  
WFEA WGR WGST WHEC WHK  
WICC WIP WJAS WJSV WLAC  
WLBW WLBZ WMAS WMBG WMT  
WMAX WNOX WOKO WORC  
WQAM WREC WSFA WSJS WSPD  
WVVA

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**C — Manhattan Serenaders**  
CFRB CKLW KDB KFAB KGKO  
KLRA KLZ KMBC KMOX KOH  
KOMA KRLD KSCJ KTRH KTSK  
KTVL KFOR WABC WACO WADC  
WALA WBBM WBNS WBRC WBT  
WCCO WDAE WDBJ WDBO WDNC

WDOD WDRC WDSU WEAN WFLB  
WFEA WGR WGST WHEC WHK  
WICC WIP WJAS WJSV WLAC  
WLBW WLBZ WMAS WMBG WMT  
WMAX WNOX WOKO WORC  
WQAM WREC WSFA WSJS WSPD  
WVVA

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**  
**C — Philadelphia Summer Concerts**  
CKAC CKLW KDB KFH KGKO  
KLRA KLZ KMBC KMOX KOH  
KOH KOIN KOMA KRLD KSCJ  
KSL KTRH KTSK KFOR WABC WADC  
WALA WBBM WBIG WBNS WBRC  
WBT WCAO WCAU WCCO WDAE  
WDBJ WDBO WDNC WDOD WDRC  
WDSU WEAN WFLB WFBM WFEA  
WGR WGST WHEC WHK WIP  
WICC WISN WJAS WJSV WLAC  
WLBW WLBZ WMBD WMBG WMT  
WMAX WNOX WOKO WORC WPG  
WQAM WREC WSFA WSJS WSPD  
WTOC WVVA

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**R — One Man's Family**  
CFRC KDYL KFYR KOA KPO  
KPRC KSD KSTP KTBS KTSH  
KVOO WBBN WCAE WDAF WDAY  
WEAF WFBZ WFI WFLA WGY  
WHO WIBA WIOD WIS WJAR  
WJAX WJDX WKY WMAQ WMC  
WOAI WOC WOV WRC WRVA  
WSAI WSB WSMB WTAG WTAM  
WWJ WNNC

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**  
**R — Ray Knight and Cuckoos**  
CFRC CRCT KDYL KFI GHLL  
KGO KGW KHQ KOA KOMO KPRC  
KSD KSTP KTAR KTBS WAPI  
WBAP WBEN WCAE WCHS WDAF  
WDAY WEAF WECB WEEI WFBZ  
WFI WFLA WGY WHO WJAR  
WKBZ WKY WLW WMAQ WMC  
WOAI WOC WOV WRC WRVA  
WSB WSM WSMB WSOC WTAG  
WTAM WTIC WTMJ WWJ WNNC

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**C — Elder Michaux and Congregation**  
CFRB CKLW KDB KFH KGKO  
KLRA KLZ KMBC KOH KOIN  
KOMA KRLD KSCJ KTRH KTSK  
KTVL KFOR WAAB WABC WACO  
WADC WALA WBIG WBNS WBRC  
WBT WCAO WCAU WCCO WDAE  
WDBJ WDBO WDNC WDOD WDRC  
WDSU WFLB WFBM WFEA WGR  
WGST WHEC WHK WHP WIBW  
WICC WJAS WJSV WLAC WLBW  
WLBZ WMAS WMBD WMBG WMT  
WNOX WOKO WORC WQAM WREC  
WSFA WSJS WSPD WTOC WVVA

**B — National Barn Dance**  
KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KSO KWCR KWK  
WBAL WBZ WBZA WGAR WHAM  
WJR WJZ WLW WMAL WREN  
WSYR

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**C — Sylvia Froos, Songs**  
CFRB CKAC CKLW KDB KFH  
KGKO KLRA KLZ KOH KOIN  
KOMA KRLD KSL KTRH KTSK  
KTVL WAAB WABC WADC WALA  
WBRC WBT WDAE WDBJ WDBO  
WDNC WDOD WDRC WDSU WFLB  
WFBM WFEA WGST WHAS WHP  
WIBW WIP WJAS WJSV WLAC  
WLBW WMBG WNOX WOKO  
WQAM WREC WSFA WSJS WSPD  
WTOC

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**  
**C — Glen Gray, See Monday**

**ED-11:45 p.m., E-10:45, C-9:45, M-8:45**  
**C — Ferde Grofe and Orchestra**  
CFRB CKAC CKLW KDB KFAB  
KFH KGKO KLZ KMBC KMOX  
KOH KOIN KRLD KSCJ KSL KTRH  
KTSK KTVL KFOR WABC WACO  
WADC WALA WBBM WBRC WBT  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDNC WDOD WDRC WDSU  
WEAN WFLB WFBM WFEA WGST  
WHEC WHP WIBW WICC WISN  
WJAS WJSV WKBW WLAC WLBW  
WLBZ WMAS WMBD WMBG WMT  
WMAX WNOX WOKO WORC  
WQAM WREC WSFA WSJS WSPD

# SUNDAY

**ED-11:30 a.m., E-10:30, C-9:30, M-8:30**  
**C — Salt Lake Tabernacle Choir**

CKLW KFAB KFH KGKO KLRA  
KLZ KMOX KOMA KRLD KSCJ  
KSL KTRH KTVL WACO WADC  
WALA WBBM WBIG WBNS WBT  
WCAO WCCO WDAE WDBJ WDBO  
WDOD WDSU WFLB WFEA WGST  
WHAS WHEC WHK WHP WIBW  
WICC WISN WJAS WJSV WKBW  
WLAC WLBW WLBZ WMAS WMBD  
WMT WMAX WNOX WOKO WORC  
WPG WQAM WREC WSFA WSJS  
WSPD WTOC

**R — Major Bowes' Family**  
KDYL KFYR KOA KPRC KSTP  
KTBS KVOO WAPI WCAE WDAF  
WDAY WEAF WECB WFAA WFBZ  
WFLA WGY WHO WIOD WJAR  
WJAX WKY WMAQ WMC WOAI  
WOC WRC WRVA WSAI WSMB  
WTAG WTAM WNNC

**ED-12:30 p.m., E-11:30, C-10:30, M-9:30**  
**C — Romany Trail, Salon Music**

CFRB CKAC CKLW KDB KFAB  
KFH KLRA KLZ KMOX KOH  
KOH KOIN KOMA KSCJ KSL KTRH  
KTSK KTVL WABC WACO WADC  
WALA WBBM WBRC WCAU WCCO  
WDAE WDBO WDNC WDOD WDRC  
WDSU WEAN WFLB WFEA WGR  
WGST WHAS WHP WIBW WICC  
WISN WJAS WJSV WKBW WLAC  
WLBW WLBZ WMBD WMT WMAX  
WNOX WOKO WORC WPG  
WQAM WREC WSFA WSPD

**R — Chicago Round Table**  
WBEN WCHS WDAF WEAF WEEI  
WFBZ WFI WGY WHO WJAR  
WOC WOV WRC WSAI WTAG  
WTAM WWJ

**B — Radio City Symphony**  
CFRC CRCT KDKA KDYL KFI  
KFYR KGO KGW KHQ KOA KOIL  
KOMO KPRC KSO KVOO WAPI  
WBAL WBZ WBZA WCKY WDAY  
WECB WGAR WEAM WIS WJDX  
WJR WJZ WKY WMAL WOAI  
WREN WSMB WSYR WNNC

**ED-1:00 p.m., E-12:00, C-11:00, M-10:00**  
**C — Ann Leaf at Organ**

CFRB CKLW KFH KLRA KLZ  
KMBC KOH KOMA KRLD KSCJ  
KSL KTRH KTVL KFOR WAAB  
WABC WACO WALA WBBM WBIG  
WBNS WBRC WBT WCAO WCAU  
WCCO WDAE WDBJ WDBO WDNC  
WDOD WDRC WDSU WFLB WGR  
WGST WHAS WHEC WHP WISN  
WJSV WKBW WLAC WLBW WMBD  
WMT WMAX WOKO WORC WPG

# SUNDAY (Continued)

WQAM WREC WSBT WSJS WSPD  
WVVA

## ED-1:30p.m., E-12:30, C-11:30, M-10:30 C — Compinsky Trio

CFRB CKAC CKLW KDB KFH  
KGKO KLRA KLZ KMBC KOH  
KOH KAIN KOMA KRLD KSCJ KSL  
KTRH KTUL KFOR WABC WACO  
WADC WALA WBBM WBIG WBNS  
WBRC WBT WCAO WCAU WCCO  
WDAE WDBJ WDBO WDNV WDRD  
WDRS WDSU WFBL WGR WGST  
WHCC WHK WHP WJAS WJSV  
WKBN WLAC WLWB WMBD  
WMT WNAX WOKO WORC WPG  
WQAM WREC WSBT WSFA WSJS  
WSPD WTOC WVVA

## R — Miss Bab-o's Surprise

WBEN WCAE WCSH WDAF WFAF  
WEEL WFBR WFI WGY WHO  
WJAR WMAQ WOW WRC WSAI  
WTAG WTAM WWJ

## ED-2:00 p.m., E-1:00, C-12:00, M-11:00

R — Gene Arnold and Commodores  
KOA KPRC KVOO WAPI WAVE  
WBEN WCAE WCSH WDAF WFAF  
WFLA WGY WHO WJAS WJAX  
WKY WLW WMAQ WMC WOAI WOC WOW  
WPTF WRC WRVA WSMB WTAG  
WTAM WWJ WNNC

## ED-2:30 p.m., E-1:30, C-12:30, M-11:30

C — Windy City Review  
CFRB CKAC CKLW KDB KFH  
KLRA KLZ KMBC KMOX KOH  
KOMA KRLD KSCJ KSL KTRH  
KTSa KTUL KFOR WABC WACO  
WALA WBBM WBIG WBNS WBRD  
WBT WCAO WCAU WCCO WDAE  
WDBO WDNV WDRD WDRS WDSU  
WEAN WFBL WFEA WGR WGST  
WHAS WHEC WHP WIBW WICC  
WISN WJAS WJSV WKBN WLAC  
WLWB WLWB WMAQ WMBG WMT  
WNAC WNOX WOKO WORC WPG  
WQAM WREC WSBT WSFA WSJS  
WSPD WTOC WVVA

## ED-3:00 p.m., E-2:00, C-1:00, M-12:00

C — Detroit Symphony Orchestra  
CFRB CKAC CKLW KFAB KFH  
KGKO KLRA KLZ KMBC KMOX  
KOH KOIN KOMA KRLD KSCJ  
KSL KTRH KTSa KTUL KFOR  
WABC WADC WALA WBBM WBIG  
WBNS WBRD WCAO WCAU WCCO  
WDAE WDBJ WDBO WDNV WDRD  
WDRS WDSU WEAN WFBL WFEA  
WGR WGST WHAS WHEC WHK  
WHP WIBW WICC WISN WJAS  
WJSV WKBN WLAC WLWB WLWB  
WMAQ WMBG WMT WNAC WNOX  
WOKO WORC WQAM WREC WSBT  
WSJS WSPD WTOC

## R — Talkie Picture Time

WAPI WBEN WCAE WCSH WDAF  
WEAF WEEL WFBR WGY WHO  
WJAR WJDX WLIT WMAQ WMC  
WOC WOW WRC WSAI WSB WSM  
WSMB WTAG WTAM WWJ

## ED-4:00 p.m., E-3:00, C-2:00, M-1:00

C — Buffalo Variety Workshop  
CFRB CKAC CKLW KDB KFH  
KLRA KLZ KMBC KMOX KOH  
KOH KAIN KOMA KRLD KSCJ KSL  
KTRH KTUL KFOR WABC WADC  
WALA WBNS WBRD WBT WCAO  
WCAU WCCO WDAE WDBJ WDBO

WDCN WDOD WDRC WDSU WEAN  
WFBL WFBM WFEA WGR WGST  
WHEC WHP WIRW WICC WISN  
WJAS WJSV WLWB WLWB WMAQ  
WMBD WMT WNAC WNOX WOKO  
WQAM WREC WSBT WSFA WSJS  
WSPD WTOC

## ED-4:30 p.m., E-3:30, C-2:30, M-1:30

C — Oregon on Parade  
CFRB CKAC CKLW KDB KFH  
KGKO KLRA KLZ KMBC KMOX  
KOH KOIN KOMA KRLD KSCJ  
KSL KTRH KTUL KFOR WABC  
WADC WALA WBBM WBIG WBNS  
WBRD WBT WCAO WCAU WCCO  
WDAE WDBJ WDBO WDNV WDRD  
WDSU WEAN WFBL WFBM WFEA  
WGR WGST WHAS WHEC WHK WHP  
WIBW WICC WISN WJAS WKBN  
WLAC WLWB WLWB WMAQ WMBD  
WMT WNAC WNOX WOKO WORC  
WPG WQAM WREC WSBT WSFA  
WSJS WSPD WTOC

## ED-5:00 p.m., E-4:00, C-3:00, M-2:00

C — The Playboys; Piano Trio  
CKAC CKLW KDB KFH KGKO  
KLRA KLZ KMBC KMOX KOH  
KOH KAIN KOMA KRLD KSCJ KSL  
KTRH KTSa KTUL KFOR WABC  
WADC WBIG WBNS WBRD WBT  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDNV WDRD WDRS WDSU  
WEAN WFBL WFBM WFEA WGR  
WGST WHAS WHEC WHK WHP  
WIBW WICC WISN WJAS WJSV  
WKBN WLAC WLWB WLWB WMAQ  
WMBD WMT WNOX WOKO WORC  
WPG WQAM WREC WSBT WSFA  
WSJS WSPD WTOC WVVA

## B — National Vespers

KDYL KFSD KFYR KGHL KGIR  
KGO KGW KHQ KOA KOIL KPRC  
KSO KSTP KTAR KTBS KVOO  
KWCR KWK WAPI WBAL WBZ  
WBZA WCFW WCKY WDAY WEBC  
WFLA WGAR WHAM WIBA WIOD  
WIS WJAX WJDX WJR WJZ WKY  
WMAL WMC WOI WPTF WREN  
WRVA WSB WSM WSMB WNNC

## ED-5:15 p.m., E-4:15, C-3:15, M-2:15

C — Poets' Gold; David Ross  
CFRB CKAC KDB KFH KGKO  
KLRA KLZ KMBC KMOX KOH  
KOH KAIN KOMA KRLD KSCJ KTRH  
KTSa KTUL KFOR WAAAB WABC  
WADC WBIG WBNS WBRD WBT  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDNV WDRD WDRS WDSU  
WEAN WFBL WFBM WFEA WGR  
WGST WHAS WHEC WHK WHP  
WIBW WICC WISN WJAS WJSV  
WKRC WLAC WLWB WLWB WMBD  
WNOX WOKO WORC WOWO WPG  
WQAM WREC WSBT WSFA WSJS  
WSPD WTOC

## ED-5:30 p.m., E-4:30, C-3:30, M-2:30

C — Frank Crumit; Julia Sanderson  
CKLW KFH KMBC KMOX KOMA  
KTUL WAAAB WABC WADC WBNS  
WCAO WCAU WDRD WDSU WEAN  
WFBL WFBM WGR WHAS WHEC  
WHK WICC WJSV WMAQ WOKO  
WORC WSPD WVVA

## R — Sentinels Serenade

WBEN WCAE WCSH WDAF WFAF  
WEEL WFBR WFI WGY WJAR  
WLW WMAQ WOW WRC WTAG  
WTAM WWJ

## B — American Bosch Explorers Club

KDKA KDYL KFI KFYR KGO

KGW KHQ KOA KOIL KOMO  
KSO KSTP KWCR KWK WAPI  
WAVE WBAL WBZ WBA WCKY  
WDAY WEBC WENR WGAR  
WHAM WIBA WJDX WJR WJZ  
WKBF WMAL WMC WREN WSB  
WSM WSYR

## ED-6:00 p.m., E-5:00, C-4:00, M-3:00

C — Nick Lucas, Songs  
CFRB CKAC CKLW KDB KFAB  
KGKO KLRA KLZ KMBC KMOX  
KOH KOIN KOMA KRLD KSCJ  
KSL KTRH KTSa KTUL KFOR  
WABC WADC WBBM WBIG WBRD  
WBT WCAO WCAU WCCO WDAE  
WDBJ WDBO WDNV WDRD WDRS  
WDSU WFBL WHK WHP WIBW  
WJAS WJSV WKBN WKBW WLAC  
WMT WNOX WOKO WORC WPG  
WQAM WREC WSBT WSFA WSJS  
WSPD WTOC WVVA

## R — Catholic Hour

KDYL KFYR KGHL KGIR KGW  
KOA KOMO KPO KPRC KSTP  
KTAR KTBS KVOO WAPI WBAW  
WBEN WCAE WCSH WDAF WDAY  
WEAF WEBC WEEL WENR WFBR  
WFLA WGY WHO WIBA WIOD  
WIS WJAR WJAX WJDX WKY  
WLIT WMC WOAI WOC WOW  
WRC WRVA WSAI WSB WSM  
WSMB WTAG WTAM WWJ WNNC

## ED-6:15 p.m., E-5:15, C-4:15, M-3:15

C — Summer Musicals  
CFRB CKAC CKLW KDB KFAB  
KFH KGKO KLRA KLZ KMBC  
KMOX KOH KOIN KOMA KRLD  
KSCJ KSL KTRH KTSa KTUL  
KFOR WABC WADC WBBM WBIG  
WBNS WBRD WBT WCAO WCAU  
WCCO WDBJ WDBO WDNV WDRD  
WDRS WDSU WEAN WFBL WFBM  
WFEA WGST WHAS WHP WIBW  
WICC WJAS WJSV WKBN WKBW  
WLAC WLWB WLWB WMAQ WMT  
WNAC WNAX WNOX WOKO WORC  
WQAM WREC WSBT WSFA WSJS  
WSPD WTOC WVVA

## ED-6:45 p.m., E-5:45, C-4:45, M-3:45

C — Carlisle, London, Warwick Sisters  
CKLW KDB KFAB KFH KGKO  
KLRA KLZ KMBC KMOX KOH  
KOMA KRLD KSCJ KSL KTRH  
KTSa KTUL KFOR WABC WADC  
WBIG WBNS WBRD WBT WCAO  
WCAU WCCO WDAE WDBJ WDBO  
WDNV WDRD WDRS WDSU WEAN  
WFBL WFBM WFEA WGST WHAS  
WHEC WHP WIBW WICC WJAS  
WJSV WKBN WKBW WLAC WLWB  
WLWB WMAQ WMT WNAC WNAX  
WNOX WOKO WORC WQAM WREC  
WSFA WSJS WSPD WTOC WVVA

## ED-7:00 p.m., E-6:00, C-5:00, M-4:00

B — Charles Previn and Orchestra  
KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KPRC KSO  
KSTP KWCR KWK WBAL WBAW  
WBZ WBZA WEBC WGAR WHAM  
WIBA WJDX WJR WJZ WKY WLS  
WLW WMAL WMC WOAI WREN  
WSB WSM WSMB WSYR WTMJ

## ED-7:30 p.m., E-6:30, C-5:30, M-4:30

C — Chicago Knights  
CKLW KDB KFAB KFH KGKO  
KLRA KLZ KMBC KMOX KOH  
KOH KAIN KOMA KRLD KSCJ KSL  
KTRH KTSa KTUL KFOR WABC  
WACO WADC WALA WBBM WBIG  
WBNS WBRD WBT WCAO WCAU  
WCCO

## SUNDAY (Continued)

WDAE WDBJ WDBO WDCN WDDO  
WDRG WDSU WEAN WFBL WFBM  
WFEA WGR WGST WHAS WHEC  
WHP WIBW WICC WISN WJAS  
WJSV WKBN WLAC WLWB WLWB  
WMT WNAC WNAX WNOX WOKO  
WORC WPG WQAM WREB WSFA  
WSJS WSPD WTOC WVVVA

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**  
**R — Fitch Program; Irene Beasley**  
CFCF KSD WBNB WCAE WCSH  
WEAF WFBW WGY WHO WJAR  
WKBF WLIT WMAQ WOC WOW  
WRC WSAI WTAG WTAM WTIC  
WWJ

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**C — Columbia Variety Hour**  
CFRB CKLW KDB KFAB KFH  
KGKO KLRA KLZ KMBC KMOX  
KOH KOIN KOMA KRLD KSCJ  
KSL KTRH K TSA KTUL KFOR  
WABC WADC WALA WBIG WBNS  
WBRC WBT WCAO WCAU WCCO  
WDBJ WDCN WDOD WDRG WDSU  
WEAN WFBL WFBM WFEA WGR  
WGST WHAS WHEC WHK WHP  
WIBW WICC WISN WJAS WKBN  
WLAC WLWB WLWB WMAS WMT  
WNAC WNAX WNOX WOKO WORC  
WREC WSBT WSFA WSJS WTOC  
WVVVA

**R — Chase and Sanborn Hour**  
CFCF CRCT KDYL KFI KFJR  
KGO KGW KHQ KOA KOMO KPRC  
KSD KSTP KTAI KTHS KVOO  
WAPI WAVE WBNB WBZ WBZA  
WCAE WCSH WDAF WDAY WEAF  
WBEV WFEA WFBW WFLA WGY  
WHO WIOD WIS WJAR WJAX  
WJDX WKY WLIT WLW WMAQ  
WMC WOAI WOC WOW WPTF  
WRC WRVA WSB WSM WSMB  
WTAG WTAM WTIC WTMJ WWJ  
WVNC

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**C — Buddy Rogers; Jeanie Lang**  
CKLW KMOX WABC WADC WBBM  
WBNS WBRC WCAO WCAU WDRG  
WEAN WFBL WFEA WHK WICC  
WJAS WKBN WLWB WMAS WMBR  
WNAC WOKO WORC WSBT WSFA  
WVVVA

**R — Manhattan Merry-Go-Round**  
CFCF KDYL KFI KGO KGW KHQ  
KOA KOMO KSD KSTP WDAF

WEAF WEEB WFBW WFI WGY  
WHO WJAR WMAQ WOC WOW  
WRC WSAI WTAG WTAM WTIC  
WTMJ WWJ

**B — Gulf Headliners**  
KDKA KPRC KTBS WAVE WBAL  
WBZ WBZA WFAA WFLA WGAR  
WHAM WIOD WIS WJAX WJDX  
WJR WJZ WLW WMAL WOAI  
WRVA WSM WSMB WSYR WVNC

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**  
**C — Fred Waring's Pennsylvanians**  
CFRB CKAC CKLW KDB KERN  
KFAB KFBC KFH KFPY KFCR  
KQB KH' KLRA KLZ KMBC KMJ  
KMOX KOH KOIN KOL KOMA  
KRLD KSCJ KSL KTRH K TSA  
KTUL KYI KFOR KWG WABC  
WACO WADC WALA WBBM WBNS  
WBRC WBT WCAU WCCO WDAE  
WDBJ WDBO WDCN WDOD WDRG  
WDSU WEAN WFBL WFBM WFEA  
WGB WGST WHAS WHEC WHK  
WHP WIBW WICC WISN WJAS  
WJSV WKBN WKRC WLAC WLWB  
WLWB WMAS WMBR WMT WNAC  
WNAX WNOX WOKO WORC WOWO  
WPG WQAM WREC WREB WSFA  
WSJS WSPD WTOC

**R — Album of Familiar Music**  
CFCF CRCT KDYL KFI KGO KGW  
KHQ KOA KOMO KPRC KSD KSTP  
KVOO WBNB WCAE WCSH WDAF  
WEAF WEEI WEEA WFBW WFI  
WFLA WGY WHO WIOD WIS WJAR  
WJAX WJDX WKY WMAQ WMC  
WOAI WOC WOW WPTF WRC  
WRVA WSAI WSB WSMB WTAG  
WTAM WTMJ WWJ WVNC

**B — Tastyest Theatre**  
KDKA KOIL KSO KWCR KWK  
WBAL WBZ WBZA WCKY WENR  
WGAR WHAM WJR WJZ WMAL  
WREN WSYR

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**  
**R — Hall of Fame**  
CFCF CRCT KDYL KFI KGO KGW  
KHQ KOA KOMO KPRC KSD KSTP  
KTBS KTHS WBNB WCAE WCSH  
WDAF WEAF WEEI WFAA WFBW  
WFI WGY WHO WJAR WJDX  
WKBF WKY WLW WMAQ WMC  
WOAI WOC WOW WRC WSB WSM  
WSMB WTAG WTAM WTIC WWJ

**B — Mme. Schumann-Heink**  
KDKA KOIL KSO KWCR KWK  
WBAL WBZ WBZA WCKY WENR

WGAR WHAM WJR WJZ WMAL  
WREN WSYR

**C — Wayne King, See Monday**

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**C — Ferde Grofe's Orchestra**  
CFRB CKAC CKLW KGKO KLZ  
KMBC KMOX KOMA KRLD KSL  
KTRH K TSA KTUL WAAB WABC  
WACO WADC WBBM WBIG WBNS  
WBT WCAO WCAU WCCO WDAE  
WDBJ WDBO WDOD WDRG WDSU  
WEAN WFBL WGR WGST WHEC  
WHK WHP WJAS WJSV WKRC  
WLAC WMBR WOKO WQAM WSJS  
WSPD WTOC

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**C — Little Jack Little**  
CFRB CKAC CKLW KFAB KFH  
KGKO KLRA KLZ KMBC KMOX  
KOH KOMA KRLD KSCJ KSL  
KTRH K TSA KTUL KFOR WABC  
WACO WADC WALA WBBM WBIG  
WBNS WBRC WBT WCAO WCAU  
WCCO WDAE WDBJ WDBO WDCN  
WDOD WDRG WDSU WEAN WFBL  
WFBM WFEA WGR WGST WHEC  
WHP WIBW WICC WISN WJAS  
WJSV WKBN WLAC WLWB WLWB  
WMAS WMBD WMT WNAC WNAX  
WNOX WOKO WPG WQAM WREC  
WSBT WSFA WSPD WTOC

**R — Fitch Program; Irene Beasley**  
KDYL KFI KFJR KGO KGW KHQ  
KOA KOMO KPRC KSTP KTBS  
WAVE WBAF WDAF WDAY WBEV  
WIBA WKY WOAI WTMJ

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**  
**B — Mme. Schumann-Heink**  
KDYL KFI KGO KGW KHQ KOA  
KOMO KPRC WBAF WKY WOAI

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**  
**C — Glen Gray and Orchestra**  
CFRB CKAC CKLW KFAB KFH  
KGKO KLRA KLZ KMBC KOH  
KRLD KSCJ KTRH K TSA KTUL  
KFOR WABC WACO WADC WALA  
WBBM WBNS WBRC WBT WCAO  
WCAU WCCO WDAE WDBJ WDBO  
WDCN WDOD WDRG WDSU WEAN  
WFBL WFBM WFEA WGR WGST  
WHAS WHEC WHK WHP WIBW  
WICC WISN WJAS WJSV WKBN  
WLAC WLWB WLWB WMAS WMBD  
WMT WNAC WNAX WOKO WPG  
WQAM WREC WSBT WSFA WSJS  
WSPD WTOC

## CLASSIFIED INDEX TO CHAIN PROGRAMS

*Time in Eastern Daylight Saving*

C—Columbia; R—National (Red); B—National (Blue)

### CONCERTS

Howard Barlow, 8:15 p.m. Monday; 10:30 p.m. Wednesday, C  
Peter Biljo, 6:00 p.m. Mon.; 7:30 p.m. Tues; 6:45 p.m. Wed., C  
Compinsky Trio, 1:30 p.m. Sunday, C  
Detroit Symphony, 3:00 p.m. Sunday; 9:00 p.m. Wednesday, C  
Emery Deutsch, 8:15 p.m. Wednesday, C  
Ferde Grofe, 10:30 p.m. Sunday; 11:15 p.m. Thursday; 11:45 p.m. Sat., C  
Melodie Strings, 10:30 p.m. Tuesday, C  
Radio City Symphony, 12:30 p.m. Sunday, B  
Mitscha Raginsky, 6:00 p.m. Thursday, C  
Romany Trail, 12:30 p.m. Sunday, C

### DANCE BANDS

Victor Arden, 8:30 p.m. Wednesday, C  
Charles Barnet, 6:45 p.m. Thurs. and Sat., C  
Don Bestor, 10:30 p.m. Friday, R; 7:30 p.m. Sat., B  
Jack Dennis, 10:30 p.m. Wednesday, B  
Duke Ellington, 10:00 p.m. Sunday, R  
Jan Garber, 8:00 p.m. Monday, B; 11:45 p.m. Monday, C  
Lud Gluskin, 9:30 p.m. Monday, C  
Glen Gray, 11:30 p.m. Sunday; 11:15 p.m. Mon. and Sat., C  
Johnny Green, 9:30 p.m. Friday, C  
Phil Harris, 9:00 p.m. Friday, B  
Billy Hayes, 6:15 p.m. Saturday, C  
Lennie Hayton, 9:00 and 12:00 p.m. Wednesday, R

Richard Himber, 8:00 p.m. and 1:00 a.m. Monday, R;  
9:30 and 11:00 p.m. Tuesday, C  
Isham Jones, 11:15 p.m. Tues. and Fri.; 7:15 p.m. Sat.,  
C  
Gene Kardos, 7:00 p.m. Wednesday, C  
Louis Katzman, 10:00 p.m. Wednesday, B  
Wayne King, 10:00 p.m. Sunday and Monday, C; 8:30  
p.m. Tues. and Wed., R  
Guy Lombardo, 10:00 p.m. Wednesday, R  
Abe Lyman, 9:00 p.m. Friday, R; 8:30 p.m. Tuesday, C  
Charles Previn, 7:00 p.m. Sunday, B  
Leo Reisman, 8:00 and 11:30 p.m. Tuesday, R  
Freddie Rich, 10:15 p.m. Tuesday; 8:15 p.m. Friday, C  
Sam Robbins, 6:45 p.m. Tuesday; 7:00 p.m. Friday, C  
Buddy Rogers, 9:00 p.m. Sunday, C  
Phil Spitalny, 8:00 p.m. Wednesday, C  
Rudy Vallee, 8:00 p.m. Thursday, R  
Esther Velas, 6:45 p.m. Friday, C  
Fred Waring, 9:30 p.m. Sunday, C  
Paul Whiteman, 10:00 p.m. Thursday, R  
Edward Wurtzbach, 6:15 p.m. Tues., Wed., Thurs.  
and Fri., C  
Victor Young, 10:00 p.m. Friday, C

#### DIALOG

Fred Allen, 9:00 and 12:00 p.m. Wednesday, R  
Phil Baker, 9:30 p.m. Friday, B  
Jack Benny, 10:30 p.m. Friday, R  
Joe Cook, 9:30 p.m. Monday, R  
Cuckoos, 10:00 p.m. Saturday, R  
George Givot, 9:00 p.m. Tuesday, C  
Jake and Lena, 7:15 and 11:15 p.m., Mon. to Fri., Inc., R  
Jack Pearl, 8:00 p.m. Wednesday, R  
Pick and Pat, 9:30 p.m. Friday, R  
Stoppagne and Budd, 10:00 p.m. Friday, C

#### DRAMA

Bar X Days, 9:00 p.m. Thursday, C  
Death Valley Days, 9:00 p.m. Thursday, B  
First Nighter, 10:00 p.m. Friday, R  
One Man's Family, 9:00 p.m. Saturday, R  
Princess Pat Players, 9:30 p.m. Monday, B  
Raffles, 8:30 p.m. Monday, C  
Irene Rich for Welch, 7:30 p.m. Wednesday, B  
Societyland Sketches, 9:30 p.m. Tuesday, R  
Talkie Picture Time, 3:00 p.m. Sunday, R  
Tastyeast Theatre, 9:30 p.m. Sunday, B  
True Story Court, 8:30 and 11:30 p.m. Friday, C  
Wayside Cottage, 7:15 p.m. Tuesday and Thurs., C

#### PIANO AND ORGAN

Carille and London, 6:45 p.m. Sunday; 10:45 p.m.  
Friday, C  
Fray and Braggolotti, 10:00 p.m. Tuesday, C  
Archer Gibson, 10:30 p.m. Thursday, B  
Ann Leaf, 1:00 p.m. Sunday, C  
Ohman and Arden, 9:30 p.m. Sunday, R  
Playboys, 5:00 p.m. Sunday; 10:45 p.m. Thursday, C

#### POPULAR PROGRAMS

A. & P. Gypsies, 9:00 p.m. Monday, R  
Album of Familiar Music, 9:30 p.m. Sunday, R  
Armour Program, 9:30 p.m. Friday, B  
Gene Arnold and Commodores, 2:00 p.m. Sunday, R  
Miss Babo's Surprise, 1:30 p.m. Sunday, R  
Major Bowes' Family, 11:30 a.m. Sunday, R  
Buffalo Variety Workshop, 4:00 p.m. Sunday, C  
Byrd Expedition, 10:00 p.m. Wednesday, C  
California Melodies, 9:15 p.m. Friday, C  
Chase and Sanborn, 8:00 p.m. Sunday, R  
Chicago Knights, 7:30 p.m. Sunday, C  
Cities Service, 8:00 p.m. Friday, R  
Colgate House Party, 9:30 p.m. Monday, R  
Columbia Variety Hour, 8:00 p.m. Sunday, C  
Contented Program, 10:00 p.m. Monday, R  
Forty-Five Minutes in Hollywood, 10:00 p.m. Thurs., C  
Gulf Headliners, 9:00 p.m. Sunday, B  
Hall of Fame, 10:00 p.m. Sunday, R  
Household Musical, 9:00 p.m. Tuesday, B  
Manhattan Merry-Go-Round, 9:00 p.m. Sunday, R  
Maxwell House Show Boat, 9:00 p.m. Thursday, B  
National Barn Dance, 10:30 p.m. Saturday, B  
Oregon on Parade, 4:30 p.m. Sunday, C

Palmolive Theatre, 10:00 p.m. Tuesday, R  
Sentinels Serenade, 5:30 p.m. Sunday, R  
Silken Strings, 7:00 p.m. Sunday, B  
Silver Dust Serenaders, 7:30 p.m. Mon., Wed. and  
Fri., C  
Snelair Minstrels, 9:00 p.m. Monday, B  
Leith Stevens Harmonies, 8:30 p.m. Thursday, C  
Voice of Firestone, 8:30 and 11:30 p.m. Monday, R  
Windy City Revue, 2:30 p.m. Sunday, C

#### RELIGIOUS

Catholic Hour, 6:00 p.m. Sunday, R  
Elder Michaux, 10:30 p.m. Saturday, C  
National Vespers, 5:00 p.m. Sunday, B  
Salt Lake Choir, 11:30 a.m. Sunday, C

#### SINGERS

Beale Street Boys, 7:00 p.m. Tuesday, C  
Irene Beasley, 7:45 and 11:00 p.m. Sunday, R  
Charles Carille, 6:00 p.m. Tuesday, C  
Columblans, 8:15 p.m. Friday, C  
Frank Crumit, 10:00 p.m. Friday, C  
Edward Davies, 5:30 p.m. Sunday, R  
Jessica Dragonette, 8:00 p.m. Friday, R  
Phil Du..., 8:00 and 11:30 p.m. Tuesday, R  
Mary F..., 10:30 p.m. Wednesday; 7:00 p.m.  
Saturday, C  
Cliff Edwards, 7:30 p.m. Thursday, C  
Evan Evans, 9:00 p.m. Monday, C  
Sylvia Hoods, 7:00 p.m. Thursday; 11:00 p.m. Sat., C  
Gene and Glenn, 7:15 and 11:15 p.m. Mon. to Fri.;  
inclusive, R  
Tito Guizar, 6:00 p.m. Wednesday; 9:30 p.m. Thursday,  
C

John Herrick, 6:45 p.m. Saturday, B  
Al Jolson, 10:00 p.m. Thursday, R  
Dennis King, 10:00 p.m. Wednesday, B  
Jeanie Lang, 9:00 p.m. Sunday, C  
Frances Langford, 9:30 p.m. Monday, R  
Elizabeth Lennox, 8:30 p.m. Wednesday, C  
Little Jack Little, 11:00 p.m. Sunday; 11:15 p.m.  
Wednesday, C  
Nick Lucas, 6:00 p.m. Sunday; 7:15 p.m. Monday;  
11:00 p.m. Wednesday, C  
Everett Marshall, 8:30 p.m. Wednesday; 10:00 p.m.  
Friday, C  
Maxine, 8:00 p.m. Wednesday, C  
Frank Munn, 9:30 p.m. Sunday; 9:00 p.m. Friday, R;  
8:00 p.m. Tuesday, C  
Edith Murray, 11:00 p.m. Friday, C  
Donald Novis, 9:30 p.m. Monday, R  
Frank Parker, 10:30 p.m. Friday, R  
Virginia Rea, 9:30 p.m. Sunday, R  
Harry Richman, 10:30 p.m. Wednesday, B  
Carson Robison, 9:00 p.m. Thursday, C  
Round Towners, 6:00 p.m. Friday, C  
Sanderson-Crumit, 5:30 p.m. Sunday, C  
Mme. Schumann-Heink, 10:00 and 11:15 p.m. Sunday, B  
Vivienne Segal, 8:30 p.m. Tuesday, C; 9:00 p.m. Friday,  
R  
Robert Simmons, 9:00 p.m. Monday, R  
Singin' Sam, 10:30 p.m. Monday, C  
Mary Small, 1:30 p.m. Sunday, R  
Kate Smith, 8:00 p.m. Mon., Thurs. and Fri., C  
Gladys Swarthout, 8:30 and 11:30 p.m. Monday;  
10:00 p.m. Tuesday, R  
Tamara, 9:00 p.m. Sunday, R  
Vera Van, 7:15 p.m. Wednesday; 11:00 p.m. Thurs-  
day, C  
Fats Waller, 11:00 p.m. Mon.; 9:45 p.m. Thurs.;  
7:45 p.m. Sat., C  
Muriel Wilson, 8:00 p.m. Tuesday, C

#### TALKS

American Bosch Explorers Club, 5:30 p.m. Sunday, B  
Frank Buck, 7:45 and 11:00 p.m. Mon. to Fri., Inc., B  
Boake Carter, 7:45 p.m. daily, except Sat. and Sun., C  
Chicago Round Table, 12:30 p.m. Sunday, R  
Roy Helton, 9:15 p.m. Monday, C  
Walter Pitkin, 8:15 p.m. Thursday, C  
Lowell Thomas, 6:45 p.m. Mon. to Fri., inclusive, B  
You and Your Government, 7:30 p.m. Tuesday, B

# THE SHORTWAVE STATIONS OF THE WORLD BY FREQUENCIES

In the list of stations arranged by frequencies, the frequency is given first, in megacycles followed by the wavelength in meters. The location of each station given in the frequency list is given as it is announced over the air.

A complete list of station addresses appears in the May issue of RADEX.

## KEY TO SYMBOLS IN PARENTHESES:

Capital letters indicate type of service, as follows:

A, Point-to-point, Condition A, inverted modulation.  
B, Point-to-point, Condition B, intelligible speech.

E, Experimental.  
F, Forestry service.  
G, Airway ground station.  
P, Police.  
R, Relay (broadcasting).  
SS, Ship to shore, or shore to ship, communication.

Small letters following the hyphen concern verifications, as follows:

a, verifies for return postage.  
b, verifies only occasionally.  
c, does not verify.  
x, address given alphabetically in address list.

y, address not given.  
z, no information available.  
1, 2, 3, figures indicate key numbers in address list.

	1.606 186.69	1.706 175.74
KIGA, Brdct. pickup (KSTP)	WHER, Brdct. pickup (KDKA)	KGPC, St. Louis, Mo. (P-z)
WIEO, Brdct. pickup (B-a-37)	WIEW, Brdct. pickup (B-a-37)	WKDU, Cincinnati, Ohio (P-z)
WIEX, Brdct. pickup (B-a-37)	WJER, Brdct. pickup (WTMJ)	WPET, Lexington, Ky. (P-z)
WMEF, Brdct. pickup (B-a-37)		1.712 175.13
	1.620 185.07	CZG, Prince Rupert, B. C. (British Columbia Provincial Police)
CFL, Tabouret, P. Q. (F-47)		KGHY, Whittier, Calif. (P-z)
1.622 184.85		KGJX, Pasadena, Calif. (P-z)
KIED, Brdct. pickup (KFWB)		KGJY, San Bernardino, Calif. (P-z)
KIEL, Brdct. pickup (KJR)		KVP, Dallas, Texas (P-z)
KIEF, Brdct. pickup (WIL)		WYR, Montreal, P. Q. (P-z)
KIFI, Brdct. pickup (WDGY)		WPDB, Chicago, Ill. (P-z)
WIEH, Brdct. pickup (WMCA)		WPDC, Chicago, Ill. (P-z)
WKEM, Brdct. pickup (WINS)		WPDD, Chicago, Ill. (P-z)
WNEI, Brdct. pickup (WFBM)		WPDU, Pittsburgh, Pa. (P-z)
1.630 183.94		WPED, Arlington, Mass. (P-z)
WEY, Boston, Mass. (Marine Fire)		WPEH, Somerville, Mass. (P-z)
WKDT, Detroit, Mich. (Marine Fire)		WPEI, E. Providence, R. I. (P-z)
1.634 183.48		WPEJ, Brookline, Mass. (P-z)
....., Marion County, Ind. (State Police)		WPFA, Newton, Mass. (P-z)
....., Portable in Ind. (State Police)		WPFN, Fairhaven, Mass. (P-z)
	1.642 182.59	WPGV, Boston, Mass. (P-z)
WRDS, E. Lansing, Mich. (State Police)		....., Medford, Mass. (P-z)
1.646 182.15		1.715 to 2.000
WIEK, Brdct. pickup (B-a-W2XE)		(149.91 to 174.82 meters)
WIEL, Brdct. pickup (B-a-W2XE)		Amateur band. Phones from 1.875 to 2.000 megs.
WLEB, Brdct. pickup (WOKO)		2.102 142.64
1.658 180.83		KIGA, Brdct. pickup (KSTP)
KSW, Berkeley, Calif. (P-z)		KIGW, Brdct. pickup
WPGC, S. Schenectady, N. Y. (State Police)		WHER, Brdct. pickup (WHER)
1.666 179.96		WIEO, Brdct. pickup (B-a-37)
WMP, Framingham, Mass. (State Police)		WIEW, Brdct. pickup (B-a-37)
WPEL, W. Bridgeport, Mass. (State Police)		WIEX, Brdct. pickup (B-a-37)
WPEV, Portable in Mass. (State Police)		WJER, Brdct. pickup (WTMJ)
WPEW, Northampton, Mass. (State Police)		WMEF, Brdct. pickup (B-a-37)
1.674 179.10		2.150 139.45
KGPM, San Jose, Calif. (P-z)		KIED, Brdct. pickup (KFWB)
KGZT, Santa Cruz, Calif. (P-z)		KIEF, Brdct. pickup (WIL)
WPSP, Harrisburg, Pa. (State Police)		KIEL, Brdct. pickup (KJR)
1.682 178.25		KIEO, Brdct. pickup (KFSD)
KGHO, Des Moines, Ia. (State Police)		KIFI, Brdct. pickup (WDGY)
WPGG, Findlay, Ohio (State Police)		KIFT, Brdct. pickup (KJBS)
WPGQ, Columbus, Ohio (P-z)		KIIQ, Brdct. pickup (KMTR)
W8XA, Portable in Ohio (Dept. of Highways, Division of State Highway Patrol)		KILB, Brdct. pickup (KWKH)
....., Massillon, Ohio (P-z)		WIEG, Brdct. pickup (WMCA)
		WKEM, Brdct. pickup (WINS)
		WLEX, Brdct. pickup (WJAG)
		WNEI, Brdct. pickup (WFBM)
		2.190 136.90
CFC, Cub Lake, Sask. (B-z)*		KIIB, Brdct. pickup (KFAB)
CGQ, Lac la Ronge, Sask. (B-z)*		WIEK, Brdct. pickup (B-a-W2XE)
CGV, Emma Lake, Sask. (B-z)*		WIEL, Brdct. pickup (B-a-W2XE)
CZJ, Isle-a-la-Crosse, Sask. (B-z)*		
YYP, Prince Albert, Sask. (B-z)*		2.382 125.87
*Dept. of Natural Resources, Govt. of the Province of Saskatchewan		KGHT, Brownsville, Tex. (P-z)
WCF, New York, N. Y. (P-z)		KGHU, Austin, Tex. (P-z)
WRDU, Brooklyn, N. Y. (P-z)		



INDEX BY FREQUENCIES AND DIAL NUMBERS

540 kilocycles 555.2 meters

CJRM ak 1000 F Moose Jaw, Sask.

550 kilocycles 545.1 meters

CFNB ak 500 F Fredericton, N. B.  
 KFUB ae 500 2 (1) St. Louis, Mo.  
 KFVR ae 1000 N (2.5) Bismarck, N. D.  
 KOAC ak 1000 ..... Corvallis, Ore.  
 KSD ak 500 2R (1) St. Louis, Mo.  
 TISO ae 250 ..... San Jose, C. R.  
 WDEV ae 500 D Waterbury, Vt.  
 WGR ae 1000 C Buffalo, N. Y.  
 WKRC ak 1000 C (2.5) Cincinnati, Ohio  
 WSWA z 500 P Staunton, Va.

560 kilocycles 535.4 meters

KFDM ak 500 (1) Beaumont, Texas  
 -KLZ ae 1000 C (2.5) Denver, Colo.  
 -KTAB ak 1000 ..... San Francisco, Calif.  
 KWTO ak 1000 D Springfield, Mo.  
 WFI ae 500 1R (1) Philadelphia, Pa.  
 WIND ak 1000 (2.5) Gary, Ind.  
 WLIT ak 500 1R (1) Philadelphia, Pa.  
 WNOX ak 1000 C (2) Knoxville, Tenn.  
 WOAM ae 1000 C Miami, Fla.  
 XEAO ak 250 (.15) Mexicali, B. C.

570 kilocycles 526.0 meters

FON z 250 574 St. Pierre, Miquelon  
 KGKO ak 250 C (1) Wichita Falls, Texas  
 -KMTR ak 500 ..... Hollywood, Calif.  
 -KVI ak 1000 ..... Tacoma, Wash.  
 WKBN ae 500 IG Youngstown, Ohio  
 WMCA ak 500 ..... New York, N. Y.  
 WNAX ak 1000 C (2.5) Yankton, S. D.  
 WOSU ak 750 1 (1) Columbus, Ohio  
 WSYR ak 250 B Syracuse, N. Y.  
 WWNC ae 1000 N Asheville, N. C.

580 kilocycles 516.9 meters

CHRC ak 100 F Quebec, Que.  
 CKCL ae 100 F Toronto, Ont.  
 CKUA ak 500 ..... Edmonton, Alta.  
 -KMJ ak 500 G Fresno, Calif.  
 -KSAC ak 500 2 (1) Manhattan, Kans.  
 WCHS ak 500 (1) Charleston, W. Va.  
 ✓WDBO ae 250 C (1) Orlando, Fla.  
 WIBW ak 1000 C2 Topeka, Kans.  
 WTAG ae 500 R (1) Worcester, Mass.

590 kilocycles 508.2 meters

CMW ae 1400 595 Havana, Cuba  
 -KHO ak 1000 N (2.5) Spokane, Wash.  
 WEEI ak 1000 R Boston, Mass.  
 WKZO ae 1000 D Kalamazoo, Mich.  
 -WOW ae 1000 R (2.5) Omaha, Neb.  
 XEPN ak 50000 ..... Piedras Negras, Coah.

600 kilocycles 499.7 meters

CFCF ae 500 ..... Montreal, Que.  
 CFCO ak 100 F Chatham, Ont.  
 CJOR ak 500 ..... Vancouver, B. C.  
 -KFSD ae 1000 N San Diego, Calif.  
 WCAC ak 500 2 Storrs, Conn.  
 WCAO ae 500 C Baltimore, Md.  
 WICC ae 250 2 C (1) Bridgeport, Conn.  
 -WMT af 1000 C (2.5) Waterloo, Iowa  
 WREC ak 1000 C (2.5) Memphis, Tenn.

610 kilocycles 491.5 meters

-KFRC ak 1000 C (2.5) San Francisco, Calif.

Radio Stations  
Of The World

KGHV, Corpus Christi, Tex. (P-z)  
 KGZH, Klamath Falls, Tex. (P-z)  
 WPDN, Auburn, N. Y. (P-z)  
 WPEA, Syracuse, N. Y. (P-z)  
 WPFM, Birmingham, Ala. (P-z)  
 WPGW, Mobile, Ala. (P-z)  
 ..... Duluth, Minn. (P-z)

2.406 124.61

KGHZ, Little Rock, Ark. (P-z)  
 KGPW, Salt Lake City, Utah (P-z)

2.414 124.20

KGHW, Centralia, Wash. (P-z)  
 KGPA, Seattle, Wash. (P-z)  
 KGPF, Santa Fe, N. Mex. (P-z)  
 KGPS, Bakersfield, Calif. (P-z)  
 KGZA, Fresno, Calif. (P-z)  
 KGZM, El Paso, Tex. (P-z)  
 KGZN, Tacoma, Wash. (P-z)  
 KGZO, Santa Barbara, Calif. (P-z)  
 KGZV, Aberdeen, Wash. (P-z)  
 KGZX, Albuquerque, N. Mex. (P-z)  
 WCK, Detroit, Mich. (P-z)  
 WMO, Highland Park, Mich. (P-z)  
 WPDA, Tulare, Calif. (P-z)  
 WPDJ, Passaic, N. J. (P-z)  
 WPDK, Detroit, Mich. (P-z)  
 WPDY, Atlanta, Ga. (P-z)  
 WPFH, Baltimore, Md. (P-z)  
 WPFI, Columbus, Ga. (P-z)  
 WPGH, Albany, N. Y. (P-z)  
 WPGJ, Utica, N. Y. (P-z)  
 WPGM, La Grange, Ga. (P-z)  
 WRDR, Grosse Pointe, Mich. (P-z)

2.416 124.09

CJW, St. John, N. B. (P-Dept. of Public Safety)  
 CZG, Prince Rupert, B. C. (British Columbia Provincial Police)  
 VYW, Winnipeg, Man. (Board of Police Commissioners)

2.422 123.79

KGPE, Kansas City, Mo. (P-z)  
 KGPG, Vallejo, Calif. (P-z)  
 KGZC, Topeka, Kans. (P-z)  
 KSW, Berkeley, Calif. (P-z)  
 WMJ, Buffalo, N. Y. (P-z)  
 WNFP, Niagara Falls, N. Y. (P-z)  
 WPCR, Rochester, N. Y. (P-z)  
 WPDW, Washington, D. C. (P-z)  
 WPFU, Portland, Me. (P-z)  
 ..... Leavenworth, Kans. (P-z)  
 ..... Nashua, N. H. (P-z)

2.430 123.45

KGHX, Santa Ana, Calif. (P-z)  
 KGPE, Minneapolis, Minn. (P-z)  
 KGZJ, Phoenix, Ariz. (P-z)  
 WPDJ, Columbus, Ohio (P-z)  
 WPDN, Dayton, Ohio (P-z)  
 WPDS, St. Paul, Minn. (P-z)  
 WPEK, New Orleans, La. (P-z)  
 WPFH, Highland Park, Ill. (P-z)  
 WPFK, Hackensack, N. J. (P-z)  
 WPGI, Portsmouth, Ohio (P-z)  
 ..... Long Beach, Calif. (P-z)

2.442 122.77

KGPP, Portland, Ore. (P-z)  
 KGPX, Denver, Colo. (P-z)  
 KGZR, Salem, Ore. (P-z)  
 WMDZ, Indianapolis, Ind. (P-z)

INDEX BY FREQUENCIES AND DIAL NUMBERS

KZEG	ak	1000	618.5	Manila, P. I.
KZRM	ak	50000	618.5	Manila, P. I.
TXA	z	7.5	614	San Jose, C. R.
WDAF	ak	1000	R	Kansas City, Mo.
WIP	ae	500	C (1)	Philadelphia, Pa.
WJAY	ae	500	D	Cleveland, Ohio
XFX	ak	500	.....	Mexico City, D. F.

620 kilocycles 483.6 meters

KGW	ak	1000	N (2.5)	Portland, Ore.
KTAR	ae	1000	N	Phoenix, Ariz.
WFLA	ae	1000	Na (2.5)	Clearwater, Fla.
WHJB	z	250	P	Greensburg, Pa.
WLBZ	ak	500	C	Bangor, Maine
WSUN	ae	1000	Na (2.5)	St. Petersburg, Fla.
WTMJ	ae	1000	N (2.5)	Milwaukee, Wis.
.....	2	250	P	Pittsburgh, Pa.

630 kilocycles 475.9 meters

CFCY	ae	500	F	Char't'w'n, P.E.I.
CJGX	ck	500	F	Yorkton, Sask.
KCOV	ak	100	F	Kelowna, B. C.
KFRU	ak	500	1	Columbia, Mo.
KGFX	ak	200	D	Pierre, S. D.
WGBF	ae	500	1	Evansville, Ind.
WMAL	ak	250	B (.5)	Washington, D. C.
WOS	ak	500	ID	Jefferson City, Mo.
WPRO	ak	100	.....	Providence, R. I.

640 kilocycles 468.5 meters

CMQ	z	500	645	Havana, Cuba
KFI	ak	50000	N	Los Angeles, Calif.
WAIU	ae	500	.....	Columbus, Ohio
WOI	ae	5000	D	Ames, Iowa
XEOX	ak	250	.....	Saltillo, Coah.

650 kilocycles 461.3 meters

WSM	ae	50000	N	Nashville, Tenn.
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660 kilocycles 454.3 meters

WAAW	ak	500	D	Omaha, Neb.
WEAF	ak	50000	R	New York, N. Y.
XEAL	z	1000	.....	Mexico City, D. F.

670 kilocycles 447.5 meters

WMAQ	ck	50000	N	Chicago, Ill.
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680 kilocycles 440.9 meters

CMAF	ak	1000	.....	Havana, Cuba
CMCQ	z	1000	.....	Havana, Cuba
HJN	ak	500	681	Bogota, Colombia
KFEQ	ae	2500	D	St. Joseph, Mo.
KPO	ak	50000	N	San Francisco, Calif.
RDN	z	500	.....	San Salvador, E. S.
VAS	ak	2000	685	Glace Bay, N. S.
VOWR	ck	500	681	St. John's, Nfld.
WPTF	ae	1000	DnN	Raleigh, N. C.

690 kilocycles 434.5 meters

CFRB	ae	10000	C	Toronto, Ont.
CJCJ	ak	100	F	Calgary, Alta.
NAA	ak	1000	.....	Arlington, Va.
XET	ck	500	.....	Monterrey, N. L.

700 kilocycles 428.3 meters

WLW	ak	500000	N	Cincinnati, Ohio
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710 kilocycles 422.3 meters

KMPC	ae	500	Dn	Beverly Hills, Calif.
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WPDE	Louisville, Ky. (P-z)
WPDF	Flint, Mich. (P-z)
WPDH	Richmond, Ind. (P-z)
WPDJ	Lansing, Mich. (P-z)
WPED	Grand Rapids, Mich. (P-z)
WPES	Saginaw, Mich. (P-z)
WPFC	Muskegon, Mich. (P-z)
WPFE	Reading, Pa. (P-z)
WPFJ	Jacksonville, Fla. (P-z)
WPFK	Palm Beach, Fla. (P-z)
WPFY	Yonkers, N. Y. (P-z)
WPFZ	Miami, Fla. (P-z)
WPGJ	Binghamton, N. Y. (P-z)
WPGP	Muncie, Ind. (P-z)

2.450 122.40

KGHN	Hutchinson, Kans. (P-z)
KGPH	Oklahoma City, Okla. (P-z)
KGPO	Tulsa, Okla. (P-z)
KGPP	Honolulu, Hawaii (P-z)
KGPT	Wichita, Kans. (P-z)
KGZF	Chanute, Kans. (P-z)
KGZP	Coffeyville, Kans. (P-z)
WPKK	Milwaukee, Wis. (P-z)
WPKE	Brooklyn, N. Y. (P-z)
WPEF	Bronx, N. Y. (P-z)
WPEG	New York City (P-z)
.....	Kenosha, Wisc. (P-z)

2.452 122.27

CGZ	Vancouver, B. C. (Police)
CJZ	Verdun, P. Q. (P-z)

2.458 121.97

KGHS	Spokane, Wash. (P-z)
KGZI	Wichita Falls, Tex. (P-z)
KGZW	Lubbock, Texas (P-z)
WPDG	Youngstown, Ohio (P-z)
WPDH	Akron, Ohio (P-z)
WPDV	Charlottesville, N. C. (P-z)
WPFJ	Asheville, N. C. (P-z)
WPGD	Rockford, Ill. (P-z)
WRBH	Cleveland, Ohio (P-z)
.....	Idaho Falls, Ida. (P-z)
.....	Staubenville, Ohio (P-z)

2.466 121.58

KGHP	Lawton, Okla. (P-z)
KGOZ	Cedar Rapids, Ia. (P-z)
KGPD	San Francisco, Calif. (P-z)
KGPI	Omaha, Nebr. (P-z)
KGPK	Sioux City, Ia. (P-z)
KGPN	Davenport, Ia. (P-z)
KGZG	Des Moines, Ia. (P-z)
WPEC	Memphis, Tenn. (P-z)
WPEM	Woonsocket, R. I. (P-z)
WPFV	Pawtucket, R. I. (P-z)
WPFW	Bridgeport, Conn. (P-z)
WPGA	Bay City, Mich. (P-z)
WPGB	Port Huron, Mich. (P-z)
WPGK	Cranston, R. I. (P-z)
WPGX	Worcester, Mass. (P-z)
WPHA	Fitchburg, Mass. (P-z)

2.470 121.40

KGHK	Palo Alto, Calif. (P-z)
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2.474 121.19

KGHG	Las Vegas, Nev. (P-z)
KGHM	Reno, Nev. (P-z)
WPDF	Philadelphia, Pa. (P-z)
WPFQ	Knoxville, Tenn. (P-z)
WPFU	Swarthmore, Pa. (P-z)
WPFJ	Asheville, N. C. (P-z)
WPGZ	Johnson City, Tenn. (P-z)
WRDQ	Toledo, Ohio (P-z)

2.482 120.80

KGZE	San Antonio, Tex. (State and City Police)
.....	New Castle, Pa. (P-z)

## INDEX BY FREQUENCIES AND DIAL NUMBERS

<p> <b>KPCB</b> ae 250 ..... Seattle, Wash.  <b>TFB</b> z 30 714 San Jose, C. R.  <b>WOR</b> ak 5000 ..... Newark, N. J.  <b>XEN</b> ak 1000 711 Mexico City, D. F.                 </p>	<p> <b>2.490 120.41</b>  <b>KGHA</b>, Snowplow No. A232, Wash.                      (P-z)  <b>KGHB</b>, Snowplow No. A227, Wash.                      (P-z)  <b>KGHC</b>, Portable in Washington (P-z)  <b>KGHD</b>, Seattle, Wash. (State Police)  <b>KGHE</b>, Snoqualmie Pass, Wash.                      (State of Wash. Highway and                      Police Dept.)  <b>KGZD</b>, San Diego, Calif. (P-z)  <b>KGZU</b>, Lincoln, Nebr. (P-z)  <b>WPDT</b>, Kokomo, Ind. (P-z)  <b>WPDZ</b>, Fort Wayne, Ind. (P-z)  <b>WPFJ</b>, Clarksburg, W. Va. (P-z)  <b>WPGN</b>, South Bend, Ind. (P-z)  <b>WPGO</b>, Huntington, N. Y. (P-z)  <b>WPGS</b>, Mineola, N. Y. (P-z)                      ..... Chinook Pass, Wash. (P-z)                      ..... Olympia, Wash. (P-z)                 </p>
<b>720 kilocycles 416.4 meters</b>	
<p> <b>WGN</b> ck 50000 ..... Chicago, Ill.  <b>XEFI</b> ae 250 ..... Chihuahua, Chih.                 </p>	
<b>730 kilocycles 410.7 meters</b>	
<p> <b>CFPL</b> ak 100 F London, Ont.  <b>CLCA</b> ah 500 F Edmonton, Alta.  <b>CKAC</b> ak 5000 C Montreal, Que.  <b>CMK</b> ae 2000 ..... Havana, Cuba                 </p>	
<b>740 kilocycles 405.2 meters</b>	
<p> <b>KMMJ</b> ae 1000 D Clay Center, Neb.  <b>KTRB</b> ak 250 D Modesto, Calif.  <b>WHEB</b> ak 250 D Portsmouth, N. H.  <b>WSB</b> ah 50000 N Atlanta, Ga.                 </p>	
<b>750 kilocycles 399.8 meters</b>	
<p> <b>KGU</b> aj 2500 N Honolulu, T. H.  <b>WJR</b> ak 10000 B Detroit, Mich.                 </p>	
<b>760 kilocycles 394.5 meters</b>	
<p> <b>CMCO</b> z 1000 767 Havana, Cuba  <b>KXA</b> ae 250 (.5) Seattle, Wash.  <b>WBAL</b> ae 10000 BSy Baltimore, Md.  <b>WEW</b> ae 1000 D St. Louis, Mo.  <b>WJZ</b> ck 50000 BSy New York, N. Y.  <b>XEBC</b> ak 5000 ..... Agua Caliente, L. C.                 </p>	
<b>770 kilocycles 389.4 meters</b>	
<p> <b>KFAB</b> ae 5000 CSy Lincoln, Neb.  <b>WBBM</b> ae 25000 CSy Chicago, Ill.                 </p>	
<b>780 kilocycles 384.4 meters</b>	
<p> <b>CHWK</b> ak 100 F Chilliwack, B. C.  <b>CMBS</b> ak 200 ..... Havana, Cuba  <b>CMCF</b> ak 250 ..... Havana, Cuba  <b>KELW</b> ae 500 2 Burbank, Calif.  <b>KFDY</b> ae 1000 D Brookings, S. D.  <b>KFOD</b> ck 250 ..... Anchorage, Alaska  <b>KGHL</b> ak 1000 N (2.5) Billings, Mont.  <b>KTM</b> ak 500 2 (1) Los Angeles, Calif.  <b>WEAN</b> ae 500 C (25) Providence, R. I.  <b>WMC</b> aj 1000 N (2.5) Memphis, Tenn.  <b>WTAR</b> ae 500 N Norfolk, Va.  <b>XEYZ</b> z 10000 ..... Mexico City, D. F.                 </p>	
<b>790 kilocycles 379.5 meters</b>	
<p> <b>CMJK</b> ak 500 ..... Camaguey, Cuba  <b>KGO</b> ak 7500 N San Francisco, Calif.  <b>WGY</b> ak 50000 R Schenectady, N. Y.                 </p>	
<b>800 kilocycles 374.8 meters</b>	
<p> <b>TIGP</b> z 75 ..... San Jose, C. R.  <b>WBAP</b> ak 50000 Na Fort Worth, Tex.  <b>WFAA</b> ak 50000 Na Dallas, Tex.  <b>WTBO</b> ae 250 ..... Cumberland, Md.                 </p>	
<b>810 kilocycles 370.2 meters</b>	
<p> <b>WCCO</b> ae 50000 C Minneapolis, Minn.  <b>WNYC</b> ak 500 N New York, N. Y.  <b>XFC</b> z 350 ..... Aguascalientes, Ags.                 </p>	
<p> <b>2.522 118.88</b>  <b>KOW</b>, Edmonds, Wash. (SS-z)                      (Pacific Telephone &amp; Telegraph                      Co.)  <b>2.550 117.58</b>  <b>WMES</b>, Lorain, Ohio (Pub. Coastal)  <b>2.566 116.84</b>  <b>KOU</b>, Wilmington, Calif. (SS-z)                      (Southern Calif. Telephone Co.)  <b>2.590 115.76</b>  <b>WOU</b>, Marshfield, Mass. ((SS-z)  <b>WOX</b>, St. George, Staten Island,                      N. Y. (SS-z) (New York Telephone                      Co.)  <b>2.604 115.14</b>  <b>WVD</b>, Seattle, Wash. (B-ax) (Phones                      Ketchikan)                 </p>	
<b>2.612 114.79</b>	
<b>Aeronautical point-to-point stations.</b>	
<b>2.636 113.34</b>	
<b>Aeronautical point-to-point stations.</b>	
<b>2.720 110.23</b>	
<b>Aeronautical point-to-point stations.</b>	
<b>2.728 109.90</b>	
<b>KIJY</b> , Hood River, Ore.	
<b>KIJZ</b> , Portable. (Stations owned by "Crag Rats, Inc.")	
<b>2.732 109.74</b>	
<b>Aeronautical stations.</b>	
<b>2.748 109.10</b>	
<b>Aeronautical stations.</b>	
<b>2.906 103.17</b>	
<b>Aeronautical stations.</b>	
<b>2.922 102.61</b>	
<b>Aeronautical stations.</b>	
<b>2.930 102.33</b>	
<b>WMEP</b> , Suffield, Ohio (G-z)	
<b>WMEU</b> , St. Petersburg, Fla. (G-z)	
<b>WMEV</b> , Opa Locka, Fla. (G-z) (Goodyear Zeppelin Base)	
<b>2.946 101.77</b>	
<b>Aeronautical stations.</b>	

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820 kilocycles 365.6 meters

CMGC	z	30	.....	Matanzas, Cuba
WHAS	aj	50000	C	Louisville, Ky.
XEP	z	500	.....	Mexico City, D. F.
XETW	dk	500	.....	Mexico City, D. F.

830 kilocycles 361.2 meters

CMG	ae	500	835	Havana, Cuba
CMGA	z	100	834	Colon, Cuba
KOA	ak	50000	N	Denver, Colo.
TIEA	z	7.5	833	San Jose, C. R.
WEEU	ak	1000	D	Reading, Pa.
WHDH	ae	1000	Dn	Boston, Mass.
WRUF	ae	5000	Dn	Gainesville, Fla.

840 kilocycles 356.9 meters

CFQC	z	1000	F	Saskatoon, Sask.
CRCT	ak	5000	F	Toronto, Ont.
VOGY	ak	400	.....	St. John's, Nfld.

850 kilocycles 352.7 meters

KIEV	aj	250	D	Glendale, Calif.
WWL	ae	10000	.....	New Orleans, La.
XEXX	z	500	.....	Mexico City, D. F.

860 kilocycles 348.6 meters

TIVL	z	30	869	San Jose, C. R.
WABC	ae	50000	C	New York, N. Y.
WHB	ae	500	D	Kansas City, Mo.
XEMO	ak	2000	865	Tijuana, B. C.

870 kilocycles 344.6 meters

WENR	ak	50000	Na	Chicago, Ill.
WLS	ae	50000	Na	Chicago, Ill.

880 kilocycles 340.7 meters

CFJC	ak	100	F	Kamloops, B. C.
CRCO	ak	1000	F	Ottawa, Ont.
KFKA	ak	500	2 (1)	Greeley, Colo.
KLX	ae	1000	.....	Oakland, Calif.
KPOF	ak	500	2	Denver, Colo.
KSEI	ck	250	(.5)	Pocatello, Idaho
WCOG	ae	500	(1)	Meridian, Miss.
WGBI	ae	500	1	Scranton, Pa.
WPHR	z	500	.....	Petersburg, Va.
WQAN	ae	250	1	Scranton, Pa.
WSUI	ae	500	.....	Iowa City, Iowa
YV2RC	z	100	882	Caracas, Venez.

890 kilocycles 336.9 meters

CJIC	z	100	D	S. Ste. Marie, Ont.
CMX	ae	1000	.....	Havana, Cuba
KARK	ak	250	(.5)	Little Rock, Ark.
KFNF	ak	500	2 (1)	Shenandoah, Iowa
KFPY	ak	1000	C	Spokane, Wash.
KUSD	ae	500	2	Vermillion, S. D.
WGST	ae	250	C (1)	Atlanta, Ga.
WILL	ak	250	2 (1)	Urbana, Ill.
WJAR	ae	500	R	Providence, R. I.
WMMN	ae	250	(.5)	Fairmont, W. Va.
XEW	ak	50000	.....	Mexico City, D. F.

900 kilocycles 333.1 meters

KGA	ak	5000	N	Spokane, Wash.
KGBU	ak	500	.....	Ketchikan, Alaska
KHI	ae	1000	C (2.5)	Los Angeles, Calif.
WBEN	ae	1000	R	Buffalo, N. Y.
WJAX	ae	1000	N	Jacksonville, Fla.

2.980 100.61

CZA, Drummondville, P. Q. (SS-a-6)

2.994 100.14

KGXU, Port Armstrong, Alaska (Buchan & Heinen)

KIEJ, Poorman, Alaska (W. N. Growden)

KIHK, Circle, Alaska\*

KIIL, Fort Yukon, Alaska\*

KIIM, Hot Springs, Alaska\*

KIIN, Eagle, Alaska\*

KIIO, McGrath, Alaska (B-z)

KIJO, Port Herbert, Alaska (B-z)

KIJS, Baranoff, Island, Alaska (B-z)

KIJV, Deep Cove, Alaska (B-z)

KILY, Excursion Inlet, Alaska (B-z)

..... Cape Pole, Alaska (A. R. Brueger)

\*Owned by Northern Commercial Co. Point to point with WXP at Fairbanks and WXE at Anchorage.

3.040 98.62

Aeronautical stations.

3.070 97.66

CJU, Winnipeg, Man. (G-45)

3.073 97.57

Aeronautical stations.

3.088 97.09

Aeronautical stations.

3.093 96.94

KGM, Ketchikan, Alaska (B-z) (Alaska Pacific Salmon Co.)

(KIAK-KIAY)

KICI, View Cove, Dall Island, Alaska

(B-z)

KIIP, Willow Creek Mines, Alaska

(W. E. Dunkle)

KIJP, Uganik Bay, Alaska (B-z)

3.128 95.85

Aeronautical stations.

3.163 94.79

Aeronautical stations

3.183 94.19

Aeronautical stations

3.190 93.99

KIGP, Egushik, Alaska (SS-z) (Libby

McNeill & Libby)

KIHK, Circle, Alaska\*

KIIL, Fort Yukon, Alaska\*

KIIM, Hot Springs, Alaska\*

KIIN, Eagle, Alaska\*

KIIO, McGrath, Alaska (B-z)

KIIN, Peril Straits, Alaska (B-z)

\*Phone Fairbanks and Anchorage.

Owned by Northern Commercial Co.

3.233 92.74

Aeronautical stations.

3.258 92.03

Aeronautical stations

3.265 91.83

KIIT, St. Michael, Alaska (B-z)

(Territorial Govt. of Alaska)

KIJI, Port Conclusion, Alaska (B-z)

INDEX BY FREQUENCIES AND DIAL NUMBERS

W-KY ae 1000 N Oklahoma City, Ok.  
 WLBL ak 2500 D Stevens Point, Wis.

910 kilocycles 329.6 meters

CJAT ak 250 F Trail, B. C.  
 CMDE z 150 915 Havana, Cuba  
 CMHW z 100 ..... Clenuegos, Cuba  
 CRCM ak 5000 F Montreal, Que.  
 TICR z 75 911 San Jose, C. R.

920 kilocycles 325.9 meters

CMCD ah 500 925 Havana, Cuba  
 HHK ae 1000 ..... Port-au-Prince, Haiti  
 KFEL ak 500 I Denver, Colo.  
 KOMO ak 1000 N Seattle, Wash.  
 KPRC ae 1000 N (2.5) Houston, Texas  
 KVOB ae 500 I Denver, Colo.  
 WAAF ak 500 D Chicago, Ill.  
 WBSO ae 500 D Babson Park, Mass.  
 WPEN ak 100 (2.5) Philadelphia, Pa.  
 WRAX ak 250 D Philadelphia, Pa.  
 WWJ ak 1000 R Detroit, Mich.  
 XEAA z 200 ..... Mexicali, B. C.  
 XEKL z 500 ..... Leon, Guan.  
 XEOK z 2500 ..... Tijuana, B. C.

930 kilocycles 322.4 meters

CFAC ak 100 F Calgary, Alta.  
 CFCH ak 100 F North Bay, Ont.  
 CFLC ae 100 ..... Prescott, Ont.  
 CHNS ae 500 F Halifax, N. S.  
 CKPC ae 100 F Brantford, Ont.  
 CKPR ak 50 F Fort William, Ont.  
 CMJF z 200 I ..... Camaguey, Cuba  
 KGBZ ak 1000 2 (2.5) York, Neb.  
 KMA ak 1000 2 (2.5) Shenandoah, Iowa  
 KROW ak 500 (1) Oakland, Calif.  
 WBRC ak 1000 C Birmingham, Ala.  
 WDBJ ae 1000 C Roanoke, Va.

940 kilocycles 319.0 meters

KOIN ak 1000 C (2.5) Portland, Ore.  
 VOAS ak 100 ..... St. John's, Nfld.  
 WAAT ae 500 D Jersey City, N. J.  
 WAVE ak 1000 N Louisville, Ky.  
 WCSH ae 1000 R (2.5) Portland, Maine  
 WDAY ae 1000 N (2.5) Fargo, N. D.  
 WHA ak 1000 D (2.5) Madison, Wis.  
 XEFO ak 5000 ..... Mexico City, D. F.

950 kilocycles 315.6 meters

CMHD dk 500 ..... Caibarien, Cuba  
 CRCS z 100 F Chicoutimi, Que.  
 KFWB ak 1000 (2.5) Hollywood, Calif.  
 KMBC ae 1000 C (2.5) Kansas City, Mo.  
 WRC ae 500 R (1) Washington, D. C.  
 XEAW ak 10000 ..... Reynosa, Tams.

960 kilocycles 312.3 meters

CKY ak 15000 F Winnipeg, Man.  
 CMBY z 250 ..... Havana, Cuba  
 CMCW dk 150 965 Havana, Cuba  
 CMJL z 50 ..... Camaguey, Cuba  
 YVIRC ak 5000 ..... Caracas, Venez.

970 kilocycles 309.1 meters

KJR z 5000 N Seattle, Wash.  
 WCFL ak 1500 B Chicago, Ill.  
 WIBG ak 100 D Glenside, Pa.  
 XES dk 250 ..... Tampico, Tams.

KIKJ, Washington Bay, Kuiu Isl., Alaska

KIJW, Shearwater Bay, Alaska (B-z)  
 KIJX, Kadiak Island, Alaska (B-z)  
 ..... Afognak, Alaska (B-z)  
 ..... Skowl Arm, Alaska (B-z)

3.268 91.74

CGP, Prince Rupert, B. C. (B-46)

3.385 88.57

KIIU, Marshall, Alaska (Territorial Govt. of Alaska)

3.423 87.59

WOZ, New York, N. Y. (American Telephone & Telegraph Co.)

3.452 86.85

CJU, Winnipeg, Man. (G-45)

3.468 86.45

Aeronautical stations

3.500 to 4.000

(74.96 to 85.66 meters),

Amateur band. Phone band from 3.900 to 4.000 megs.

3.750 79.95

CTICT, Lisbon, Portugal (R-ax) (Radio Eddystone) 9 to 11 a.m.

I3RO, Rome, Italy (R-address I2RO)

4.098 73.16

WND, Hialeah, Fla. (B-cy)

4.107 73.00

HCJB, Quito, Ecuador (R-ax)

4.124 72.70

KIFM, Fairbanks, Alaska (G-z) (Pacific Alaskan Airways, Inc.)

4.250 70.55

Ship stations

4.253 70.50

WKF, Lawrenceville, N. J. (A-cy)

WOG, Ocean Gate, N. J.

4.273 70.65

RV15, Khabarovsk, USSR. (R-cy)

WOO, Ocean Gate, N. J. (SS-cy)

WOY, Lawrenceville, N. J.

4.276 70.11

WIR, Rocky Point, N. Y. (E-cy)

4.280 70.05

Italian ships

4.283 70.00

HC2JSB, Guayaquil, Ecuador (R-by)

4.307 69.60

WTDV, Virgin Island (ax)

WTDW, Virgin Island (ax)

4.320 69.40

DAF, Norden, Germany (SS-a-15)

G6RX, Rugby, England (E-ax)

GDB, Rugby, England (A-a-16)

4.348 68.96

CGA9, Drummondville, P. Q. (A-c-6)

INDEX BY FREQUENCIES AND DIAL NUMBERS

980 kilocycles 303.9 meters

CMGF ak 100 987  
 KDKA bk 50000 B  
 XEAE ak 200 .....  
 XEU ak 250 .....

Matanzas, Cuba  
 Pittsburgh, Pa.  
 Mexicala, B. C.  
 Veracruz, Ver.

4.465 67.14  
**CFA2, Drummondville, P. Q. (B-b-6)**  
 4.505 66.55  
**CGO, Ocean Falls, B. C. (B-46)**  
**CZO, Prince George, B. C. (B-46)**  
**CZP, Claydon Bay, B. C. (B-46)**

990 kilocycles 302.8 meters

TITV z 7.5 999  
 WBZ ak 50000 B5y  
 WBZA ak 1000 B5y  
 WJEM z 500 DP  
 XEK ak 100 .....

San Jose, C. R.  
 Boston, Mass.  
 Springfield, Mass.  
 Tupelo, Miss.  
 Mexico City, D. F.

4.513 66.43  
**ZFS, Nassau, Bahamas (B-ax)**  
 4.550 65.89  
**WDN, W2XBJ Rocky Point, N. Y. (E-cy)**

1000 kilocycles 299.8 meters

CMBZ ak 150 1005  
 KFVD ak 250 Dn  
 WHO ak 50000 R  
 WORK ak 1000 D

Havana, Cuba  
 Los Angeles, Calif.  
 Des Moines, Iowa  
 York, Pa.

4.740 63.25  
**Aeronautical stations**  
 4.745 63.18  
**Aeronautical stations**

1010 kilocycles 296.9 meters

CHML aei 50 F  
 CHWC ak 500 3F  
 CKCD ak 100 .....  
 CKCK ak 500 3F  
 CKCO z 100 .....  
 CKIC ak 50 .....  
 CKWX ak 100 .....  
 CMBD z 250 .....  
 CMJO ak 50 .....  
 KGGF ak 1000 2  
 KOW ae 1000 .....  
 TIGA z 30 1014  
 WHN ae 1000 .....  
 WIS ae 1000 N (2.5)  
 WNAD ae 500 2

Hamilton, Ont.  
 Regina, Sask.  
 Vancouver, B. C.  
 Regina, Sask.  
 Ottawa, Ont.  
 Wolfville, N. S.  
 Vancouver, B. C.  
 Ciego de Avila, Cuba  
 Ciego de Avila, Cuba  
 Coffeyville, Kans.  
 Cartago, C. R.  
 New York, N. Y.  
 Columbia, S. C.  
 Norman, Okla.

4.753 63.08  
**WOO, Ocean Gate, N. J. (SS-cy)**  
**WOY, Lawrenceville, N. J.**  
 4.755 63.05

1020 kilocycles 293.9 meters

KYW ak 10000 NY  
 XEJ ak 250 .....

Chicago, Ill.  
 Juarez, Chih.

**CFU, Rossland, B. C. (B-z) (Consolidated Mining & Smelting Co. of Canada, Ltd.)**

1030 kilocycles 291.1 meters

CFCN ak 10000 F  
 CKLW ae 5000 C  
 CMHI ak 250 .....  
 CMKC z 150 1034  
 XEB ak 10000 .....

Calgary, Alta.  
 Windsor, Ont.  
 Santa Clara, Cuba  
 Santiago, Cuba  
 Mexico City, D. F.

4.785 66.66  
**CZA, Drummondville, P. Q. (SS-c-6)**  
 4.835 62.00  
**GDW, Rugby, England (A-a-16)**

1040 kilocycles 288.3 meters

CMGH ak 15 .....  
 KRLD ae 10000 G  
 KWJJ ak 500 .....  
 WKAR ak 1000 D  
 WTIC ak 50000 R

Matanzas, Cuba  
 Dallas, Texas  
 Portland, Ore.  
 East Lansing, Mich.  
 Hartford, Conn.

4.865 61.63  
**CGT, Campbell River, B. C. (B-46)**  
 4.972 60.30  
**G6RX, Rugby, England (E-ax)**

1050 kilocycles 285.5 meters

CMJG z 50 .....  
 CRCK z 1000 .....  
 KFBI ak 5000 Dn  
 KNX ak 50000 .....

Camaguey, Cuba  
 Quebec, Que.  
 Abilene, Kans.  
 Hollywood, Calif.

4.975 60.27  
**GBC, Rugby, England (SS-a-16)**  
 4.988 60.11  
**Aeronautical stations**

1060 kilocycles 282.8 meters

CMBG z 225 .....  
 CMCB ak 150 .....  
 KTHS ae 10000 N  
 WBAL ae 10000 B  
 WJAG ak 1000 D  
 XEA ak 125 .....

Havana, Cuba  
 Havana, Cuba  
 Hot Springs, Ark.  
 Baltimore, Md.  
 Norfolk, Neb.  
 Guadalajara, Jal.

5.045 59.42  
**ZFA, Hamilton, Bermuda (A-cy)**  
 5.143 58.30  
**PMY, Bandoeng, Java (R-a-22)**

5.263 56.96  
**WQN, Rocky Point, N. Y. (E-cy)**  
 5.378 55.75  
**Aeronautical stations**

5.405 55.47  
**CGP, Prince Rupert, B. C. (B-46)**  
**CZQ, Anyox, B. C. (B-46)**  
 5.505 54.46

**WQN, Rocky Point, N. Y. (E-cy)**  
 5.573 to 5.633  
**Aeronautical stations**  
 5.660 51.21

**CFD, Kenora, Ont. (F-z) (Ont. Dept. of Lands and Forests)**  
**CFJ, Red Lake, Ont. (Ont. Dept. of Lands and Forests)**

INDEX BY FREQUENCIES AND DIAL NUMBERS

1070 kilocycles 280.2 meters

KJBS ak 100 Dn San Francisco, Calif.  
 WCAZ dk 100 D Carthage, Ill.  
 WDZ ak 100 D Tuscola, Ill.  
 WTAM ck 50000 R Cleveland, Ohio

1080 kilocycles 277.6 meters

VOKW z 30 1085 St. John's Nfld.  
 WBT ae 50000 C Charlotte, N. C.  
 WCBD ak 5000 1Dn Zion, Ill.  
 WMBI ae 5000 1Dn Chicago, Ill.  
 XEAF z 750 ..... Nogales, Son.  
 XEMA z 50 ..... Tampico, Tams.

1090 kilocycles 275.1 meters

KMOX ak 50000 C St. Louis, Mo.  
 WESG ak 1000 ..... Elmira, N. Y.

1100 kilocycles 272.6 meters

CMHA z 500 1103 Sagua la Grande, C.  
 CMCU ak 500 ..... Havana, Cuba  
 CRCV ak 1000 F Vancouver, B. C.  
 KGDM ak 250 D Stockton, Calif.  
 KWKH ae 10000 ..... Shreveport, La.  
 TIRCA ae 500 ..... San Jose, C. R.  
 WLWL ae 5000 1 New York, N. Y.  
 WPG ak 5000 1C Atlantic City, N. J.  
 XEFG ak 250 1105 Mexico City, D. F.

1110 kilocycles 270.1 meters

KSOO ak 1000 Dn (2.5) Sioux Falls, S. D.  
 WRVA ae 5000 N Richmond, Va.

1120 kilocycles 267.7 meters

CHLP z 100 ..... Montreal, Que.  
 CHSJ ae 100 F St. John, N. B.  
 CKOC ae 500 F (1) Hamilton, Ont.  
 CMHJ ak 60 1125 Clenuegues, Cuba  
 KFIO ak 100 D Spokane, Wash.  
 KFSG ag 500 a Los Angeles, Calif.  
 KRKD ae 500 a Los Angeles, Calif.  
 KRSC ck 100 D Seattle, Wash.  
 WDEL ak 250 (.5) Wilmington, Del.  
 WISN ak 250 (1) Milwaukee, Wis.  
 WTAW ae 500 ..... College Station, Tex.  
 XENT ck 50000 ..... Nuevo Laredo, Tams.

1130 kilocycles 265.3 meters

KSL ae 50000 C Salt Lake City, Utah  
 TGW ak 500 X Guatemala City, G.  
 WJJD ak 20000 Dn Chicago, Ill.  
 WOV ag 1000 D New York, N. Y.

1140 kilocycles 263.0 meters

CMBJ z 500 1147 Havana, Cuba  
 CMBW ak 600 ..... Havana, Cuba  
 CMCG z 500 ..... Havana, Cuba  
 CMCO ak 500 1145 Havana, Cuba  
 KVOO ak 25000 IN Tulsa, Okla.  
 WAPI ae 5000 IN Birmingham, Ala.

1150 kilocycles 260.7 meters

CMJH ak 50 ..... Ciego de Avila, Cuba  
 WHAM ae 50000 B Rochester, N. Y.  
 XEH ak 250 ..... Monterrey, N. L.  
 XEWZ z 100 ..... Mexico City, D. F.

1160 kilocycles 258.5 meters

WOWO ae 10000 1C Fort Wayne, Ind.

CFU, Rossland, B. C. (B-z) (Consolidated Mining & Smelting Co. of Canada, Ltd.)

5.678 52.80

VK3LR, Melbourne, Australia (R-ax)

5.765 52.01

KZGF, Manila, P. I. (Philippine Long Distance Telephone Co.)

5.766 52.00

XAM, Merida, Yucatan, Mexico (B-bx) Phones, Mexico City

5.795 51.74

KZGH, Iloilo, P. I. (Philippine Long Distance Telephone Co.)

5.825 51.47

HJA2, Bogota, Colombia (B-cy) KZGG, Cebu, P. I. (Philippine Long Distance Telephone Co.)

WQN, Rocky Point, N. Y. (E-cy)

5.850 51.25

WOB, Lawrenceville, N. J. (A-cy)

5.879 51.00

HJ2ABA, Tunja, Colombia (R-ax) (La Voz del Pais)

HJ2ABD, Cucuta, Colombia (La Voz de Cucuta)

XDA, Mexico City, D. F. (B-cy)

5.900 50.82

CMB-1, Havana, Cuba (B-a-31) HJ4ABE, Medellin, Colombia (R-ax)

5.940 50.47

TGW, Guatemala City, Guat. (R-ay)

5.948 50.40

HIX, Santo Domingo, D. R. (R-ax)

5.968 50.26

HVJ, Vatican City (R-ax)

5.975 50.18

HJ2ABC, Cucuta Colombia (R-ax)

5.995 50.01

WVD, Seattle, Wash. (B-ax)

5.996 50.00

RV59, Moscow, USSR. (R-ax) Signs off with Kremlin Chimes and L'Internationale

ZGE, Kuala Lumpur, FMS. (R-ax)

6.005 49.93

VE9DN, Drummondville, P. Q. (R-a-6) Relays CFCF

VE9DR, Montreal, P. Q. (R-a-6) Relays CFCF

6.010 49.72

COC, Havana, Cuba (R-ay) (P. O. Box 98)

XEBT, Mexico City, D. F. (R-ay) Interval signal, 3 cuckoo calls. Apartado 7944.

6.020 49.80

CQN, Macao, Macao (R-)

DJC, Zeesen, Germany (R-a-14)

INDEX BY FREQUENCIES AND DIAL NUMBERS

—WWVA ak 5000 1C  
XED ck 500 .....

1170 kilocycles

CMJE z 50 .....  
—WCAU ae 50000 C

1180 kilocycles

CMBN ak 150 1185  
CMBX ak 250 1185  
CMCJ ak 500 .....  
—KEX ak 5000 2N  
—KOB ae 10000 2  
—WDGY ak 1000 D (2.5)  
—WINS ae 1000 .....  
—WMAZ ak 1000 .....  
XEFA z 500 .....

1190 kilocycles

HIJ z 15 1195  
VE9EK ak 10 1195  
VONF ak 5000 1195  
—WATR ak 100 D  
—WOAI ak 50000 N  
WSAZ ak 1000 .....

1200 kilocycles

CHAB ak 100 .....  
CKTB ak 100 F  
CMGB z 30 1205  
KBTM ak 100 D  
KFJB ak 100 (.25)  
—KFXD ae 100 .....  
—KFXJ ak 100 .....  
—KGDE ak 100 (.25)  
—KGEK ak 100 .....  
—KGFJ ae 100 .....  
—KGGH ak 100 (.25)  
—KGYO ak 100 .....  
—KMLB ak 100 .....  
—KOOS ae 100 .....  
—KSUN ck 100 D  
—KVOS ak 100 .....  
—KWG ak 100 C  
—WABI ak 100 .....  
—WBBZ ak 100 .....  
—WBHS z 100 .....  
—WBNO ck 100 1  
—WCAT ak 100 D  
—WCAX ak 100 .....  
—WCLO ak 100 .....  
—WFAM ak 100 8  
—WFBE ak 100 (.25)  
—WHBC ak 100 2  
—WHBY ak 100 .....  
—WIBX ak 100 (.3)  
—WIL ak 100 (.25)  
—WJBC ak 100 6  
—WJBL ae 100 6  
—WJBW ak 100 1  
—WKBO ak 100 3  
—WKJC ae 100 3 (.25)  
—WLVA ck 100 .....  
—WMPC ak 100 .....  
—WNBO ae 100 2  
—WRBL ak 100 .....  
—WWAE ae 100 8  
—YV3BC ak 1000 .....  
10-AK ak 15 .....  
10-BP ak 25 .....  
10-BQ ak 15 .....  
10-BU ak 50 .....  
..... z 100 P

1210 kilocycles

CHNC ak 100 F  
CKBI ak 100 F

Wheeling, W. Va.  
Guadalajara, Jal.

256.3 meters

Camaguey, Cuba  
Philadelphia, Pa.

254.1 meters

Havana, Cuba  
Havana, Cuba  
Havana, Cuba  
Portland, Ore.  
Albuquerque, N. M.  
Minneapolis, Minn.  
New York, N. Y.  
Macon, Ga.  
Mexico City, D. F.

252.0 meters

Santo Domingo, D. R.  
Montmagny, Que.  
St. John's Nfld.  
Waterbury, Conn.  
San Antonio, Texas.  
Huntington, W. Va.

249.9 meters

Moose Jaw, Sask.  
St. Catharines, Ont.  
Matanzas, Cuba  
Jonesboro, Ark.  
Marshalltown, Iowa  
Nampa, Idaho  
Grand Junction, Col.  
Fergus Falls, Minn.  
Yuma, Colo.  
Los Angeles, Calif.  
Little Rock, Ark.  
Missoula, Mont.  
Monroe, La.  
Marshfield, Ore.  
Lowell, Ariz.  
Bellingham, Wash  
Stockton, Calif.  
Bangor, Maine  
Ponca City, Okla.  
Huntsville, Ala.  
New Orleans, La.  
Rapid City, S. D.  
Burlington, Vt.  
Janesville, Wis.  
South Bend, Ind.  
Cincinnati, Ohio  
Canton, Ohio  
Green Bay, Wis.  
Utica, N. Y.  
St. Louis, Mo.  
LaSalle, Ill.  
Decatur, Ill.  
New Orleans, La.  
Harrisburg, Pa.  
Lancaster, Pa.  
Lynchburg, Va.  
Lapeer, Mich.  
Washington, Pa.  
Columbus, Ga.  
Hammond, Ind.  
Caracas, Venez.  
Stratford, Ont.  
Wingham, Ont.  
Brantford, Ont.  
Canora, Sask.  
Ada, Okla.

247.8 meters

New Carlisle, Que.  
Prince Albert, Sask.

6.040 49.64

W1XAL, Boston, Mass. (R-ax) Relays  
WEI  
W4XB, Miami, Fla. (R-cy) Relays  
W10D

6.045 49.60

HJ3ABI, Bogota, Colombia (Apartado 513)

6.050 49.56

GSA, Daventry, England (R-a-17)

6.057 49.50

PK1WK, Bandoeng, Java (R-ax)

6.060 49.48

W3XAU, Philadelphia, Pa. (R-ax) Relays WCAU  
W8XAL, Cincinnati, Ohio (R-ax) Relays WLW

6.070 49.39

VE9CS, Vancouver, B. C. (R-ax)  
YV5BMO, Maracaibo, Venezuela (R-z)

6.075 49.35

OER2, Vienna, Austria (R-cx)  
OXY, Skamlebaek, Denmark (R-ax)

6.081 49.30

CP5, La Paz, Bolivia (R-ax)

6.090 49.23

VE9BJ, St. John, N. B. (R-ax)

6.094 49.20

YV14BC, Caracas, Venezuela

6.095 49.19

VE9GW, Bowmanville, Ont. (R-ax) Relays CRCT

6.100 49.15

W3XAL, Boundbrook, N. J. (R-a-37) WJ7  
W9XF, Chicago, Ill. (R-ax)

6.110 49.07

VE9CG, Calgary, Alta. (R-a-34)  
VE9HX, Halifax, N. S. (R-ax)

6.112 49.10

YV2RC, Caracas, Venez. (R-ax)

6.116 49.02

HJ1ABD, Cartagena, Colombia

6.120 48.99

W2XE, New York, N. Y. (R-ax) Relays WABC

6.140 48.83

W8XK, Pittsburgh, Pa. (R-ax) Relays KDKA

6.150 48.75

CJRO, Winnipeg, Man. (R-a-33)  
YV3RC, Caracas, Venezuela (R-ax)

6.160 48.67

KNRA, "Seth Parker" (B-a-37)

6.200 48.36

HJ3ABF, Bogota, Colombia (R-cy)



## INDEX BY FREQUENCIES AND DIAL NUMBERS

<p>CKCH ak 100            CKMC ak 50            CMJI ak 150            — KASA ck 100            — KDLR ak 100            — KFJH ak 100            KFOR ak 100            KFPW ak 100            KFVS ae 100            — KFXM ak 100            — KGY ak 100            KIEM ak 100            — KPPC ak 50            — KWEA z 100            KWVY z 100            KWVN ak 100            — WALR ak 100            WBAX ae 100            WBBL ak 100            WCBS ak 100            WCRW ae 100            WEBQ ae 100            WEDC ae 100            WFAA ak 100            — WGBB ae 100            — WGCM ae 100            — WGNV ak 100            WHBF ak 100            WHBU ak 100            WIBU ak 100            WJBI ak 100            WJBY ak 100            WJEF ah 100            WJIM z 100            WJW ak 100            WKFI ak 100            WKOK ak 100            WMBG ak 100            WOCL ak 50            WOMT ae 100            WQDX ae 100            WSBC ae 100            WSEN ak 100            WSIX ak 100            WSOC ak 100            WTAX ak 100            XEC z 50            XEE z 50            XEFJ ak 100            XEFV ae 100            XEMZ z 30            XETH ak 100</p>	<p>F 100            ..... 50            ..... 150            ..... 100            ..... 100            ..... 100            (25)C 100            6 (.25) 100            9 100            ..... 100            9 50            ..... 100            ..... 100            ..... 100            ..... 100            ..... 100            ..... 100            ..... 100            ..... 100            ..... 100            7S 100            2 100            4 100            6 (.25) 100            4 100            3 100            3 Freeport, N. Y.            (25) 100            3 100            ..... 100            ..... 100            ..... 100            ..... 100            ..... 100            3 100            ..... 100            D 100            P 100            ..... 100            Y 100            1P 100            7C 100            ..... 50            ..... 100            ..... 100            ..... 100            4 100            ..... 100            ..... 100            N (.25) 100            2 100            ..... 50            ..... 50            ..... 100            ..... 100            ..... 30            ..... 100</p>	<p>Hull, Que.            Cobalt, Ont.            Ciego de Avila, Cuba            Elk City, Okla.            Devils Lake, N. D.            Klamath Falls, Ore.            Lincoln, Neb.            Fort Smith, Ark.            Cape Girardeau, Mo.            San Bernardino, Cal.            Olympia, Wash.            Eureka, Calif.            Pasadena, Calif.            Shreveport, La.            Hilo, Hawaii            Watertown, S. D.            Zanesville, Ohio            Wilkes Barre, Pa.            Richmond, Va.            Springfield, Ill.            Chicago, Ill.            Harrisburg, Ill.            Chicago, Ill.            White Plains, N. Y.            Freeport, N. Y.            Gulfport, Miss.            Chester, N. Y.            Rock Island, Ill.            Anderson, Ind.            Poynette, Wis.            Red Bank, N. J.            Gadsden, Ala.            Hagerstown, Md.            Lansing, Mich.            Akron, Ohio            Greenwood, Miss.            Sunbury, Pa.            Richmond, Va.            Jamestown, N. Y.            Manitowoc, Wis.            Thomasville, Ga.            Chicago, Ill.            Columbus, Ohio            Springfield, Tenn.            Charlotte, N. C.            Springfield, Ill.            Toluca, D. F.            Durango, Dgo.            Monterrey, N. L.            Juarez, Chih.            Tijuana, B. C.            Puebla, Pue.</p>	<p>La Voz de Bogota. Interval signal:            chimes similar to those used by            NBC            6.233 48.10            OCM, Lima, Peru (R-All America            Cables, Inc., 677 Calle de San            Antonio, Lima, Peru)            6.272 47.80            HI1A, Santiago de los Caballeros,            D. R. (R-ax)            6.285 47.70            CZA, Drummondville, P. Q. (SS-a-6)            6.379 47.50            HIZ, Santo Domingo, D. R. (R-ax)            6.425 46.66            CZG, Prince Rupert, B. C. (Police)            W3XL, Boundbrook, N. J. (NBC            Control station, and cue station            for nearly all stunt broadcasts)            W9XF, Chicago, Ill. (E-ax)            6.451 46.47            HJ1ABB, Barranquilla, Colombia            (R-ax)            6.500 46.13            HJ5ABB, Cali, Colombia (R-ax), La            Voz de Valle. Interval signal:            rooster crow.            6.615 45.32            WMEP, Suffield, Ohio (G-z)            WMEU, St. Petersburg, Fla. (G-z)            WMEV, Opa Locka, Fla. (G-z)            (Goodyear Zeppelin Base)            6.618 45.31            PRADO, Riobamba, Ecuador (R-ax)            WVD, Seattle, Wash. (B-ax) Phones            Alaska            6.648 45.10            IAC, Coltano, Italy (SS-a-19)            6.650 45.09            KFY, Forward Base, Little America            (B-cy)            KFZ, Main Base, Little America            (B-cy)            6.659 45.02            HC2RL, Guayaquil, Ecuador (R-ax)            6.660 45.02            KFY, Forward Base, Little America            (B-cy)            KFZ, Main Base, Little America            (B-cy)            KNRA, "Seth Parker" (B-a-37)            6.662 45.00            WXH, Ketchikan, Alaska (B-z)            Phones Seattle            6.670 44.95            KFY, Forward Base, Little America            (B-cy)            KFZ, Main Base, Little America            (B-cy)            KNRA, "Seth Parker" (B-a-37)</p>
<b>1220 kilocycles</b>		<b>245.8 meters</b>	
<p>CMHK z 5            KFKU ae 1000            — KTW ak 1000            — KWSC ae 1000            — WCAD ak 500            — WCAE ak 1000            — WDAE ae 1000            — WREN ak 1000</p>	<p>1225            a            S2            2 (2)            D            R            C (2.5)            Ba</p>	<p>Cruces, Cuba            Lawrence, Kas.            Seattle, Wash.            Pullman, Wash.            Canton, N. Y.            Pittsburgh, Pa.            Tampa, Fla.            Lawrence, Kas.</p>	
<b>1230 kilocycles</b>		<b>243.8 meters</b>	
<p>CJOC ak 100            CMCA z 150            — KGGM ak 250            — KYA ae 1000            — WFBM ae 1000            — WNAC ak 1000</p>	<p>F            2            (.5)            N            1C            C (2.5)</p>	<p>Lethbridge, Alta.            Havana, Cuba            Albuquerque, N. M.            San Francisco, Calif.            Indianapolis, Ind.            Boston, Mass.</p>	
<b>1240 kilocycles</b>		<b>241.8 meters</b>	
<p>CJCB ak 1000            CMAB z 20            CMJN z 50            — KGCU ak 250            — KLPM ak 250            — KTAT ak 1000</p>	<p>F            20            50            1            1            C</p>	<p>Sydney, N. S.            Pinar del Rio, Cuba            Camaguey, Cuba            Mandan, N. D.            Minot, N. D.            Fort Worth, Texas</p>	

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KTFI	ae	1000	.....	Twin Falls, Idaho		
WKAQ	ae	1000	.....	San Juan, P. R.		6.672 44.94
WXYZ	ak	1000	.....	Detroit, Mich.	YVQ, Maracay, Venezuela (B-c-35)	
XEAI	z	100	.....	Mexico City, D. F.		6.675 44.91
<b>1250 kilocycles</b>		<b>239.9 meters</b>				
KFOX	ae	1000	.....	Long Beach, Calif.		
WCAL	ah	1000	2 (2.5)	Northfield, Minn.		
WDSU	ak	1000	C	New Orleans, La.		
WGCP	ak	1000	1 (2.5)	Newark, N. J.	YNCRG, Granada, Nicaragua (Radio Club of Granada)	
WLB	ak	1000	2	Minneapolis, Minn.		6.718 44.62
WNEW	ae	1000	1 (2.5)	Newark, N. J.	WDB, Rocky Point, N. Y. (E-cy)	
WRHM	ak	1000	2	Minneapolis, Minn.		6.720 44.62
<b>1260 kilocycles</b>		<b>238.0 meters</b>				
CFTP	ak	100	.....	Edmonton, Alta.		
KOIL	ak	1000	R (2.5)	Council Bluffs, Iowa		6.725 44.57
KRGV	ak	500	.....	Weslaco, Texas	WQO, Rocky Point, N. Y. (E-cy)	
KUOA	ak	1000	D	Fayetteville, Ark.		6.733 44.53
KVOA	ak	500	.....	Tucson, Ariz.	KEQ, Kahuku, Hawaii (B-cy)	
KWWG	z	500	D	Brownsville, Tex.		6.740 44.48
WLBW	ae	1000	C	Erie, Pa.	WEJ, Rocky Point, N. Y. (E-cy)	
WNBX	ak	500	D	Springfield, Vt.		6.755 44.38
WTOC	ae	1000	C	Savannah, Ga.	WOA, Lawrenceville, N. J. (A-cy)	
<b>1270 kilocycles</b>		<b>236.1 meters</b>				
CMBC	ae	150	1	Havana, Cuba		
CMCP	z	150	1	Havana, Cuba		
HIX	ak	1000	.....	Santo Domingo, D. R.		6.790 44.16
KGCA	ak	100	2D	Decorah, Iowa	CMB, Havana, Cuba (B-c-31)	
KOL	ae	1000	C (2.5)	Seattle, Wash.	GDB, Rugby, England (A-a-16)	
KVOR	ae	1000	C	Colorado Spgs., Colo.		6.860 43.71
KWLC	ak	100	2D	Decorah, Iowa	KEL, Bolinas, Calif. (E-cy)	
WASH.	ak	500	a	Grand Rapids, Mich.		6.880 43.58
WFBR	ae	500	R	Baltimore, Md.	CGA7, Drummondville, P. Q. (A-c-6)	
WJDX	ae	1000	N (2.5)	Jackson, Miss.		6.900 43.45
WOOD	ak	500	a	Grand Rapids, Mich.	GDS, Rugby, England (A-a-16)	
XFB	ak	1000	.....	Jalapa, Ver.		6.928 43.27
<b>1280 kilocycles</b>		<b>234.2 meters</b>				
KFBB	ae	1000	(2.5)	Great Falls, Mont.	WEZ, Rocky Point, N. Y. (E-cy)	
WCAM	ae	500	1	Camden, N. J.		6.935 43.23
WCAP	ae	500	1	Asbury Park, N. J.	WEB, Rocky Point, N. Y. (E-cy)	
WDOD	ae	1000	C (2.5)	Chattanooga, Tenn.		6.950 43.13
WIBA	ae	500	N (1)	Madison, Wis.	WKP, Rocky Point, N. Y. (E-cy)	
WORC	ak	500	C	Worcester, Mass.		6.958 43.09
WRR	ak	500	.....	Dallas, Texas	WEO, Rocky Point, N. Y. (E-cy)	
WTNJ	ak	500	1	Trenton, N. J.		6.966 43.04
<b>1290 kilocycles</b>		<b>232.4 meters</b>				
CMHL	ak	20	.....	Cienfuegos, Cuba	EDO, Madrid, Spain (B-a-28)	
KDYL	ak	1000	N	Salt Lake City, Utah	EDQ, Madrid, Spain (B-a-28)	
KLCN	z	100	D	Blytheville, Ark.		6.990 42.89
KTSA	ak	1000	C	San Antonio, Texas	LCL, Joloy, Norway (R-ax)	
WEBC	ae	1000	N (2.5)	Superior, Wis.		7.000 to 7.300
WJAS	ak	1000	C (2.5)	Pittsburgh, Pa.	(41.07 to 42.83 meters), Amateur Band. Foreign amateurs use phone in this band; USA and Canada, code only.	
WNBZ	z	50	D	Saranac Lake, N. Y.		7.000 42.83
WNL	z	500	P	San Juan, P. R.	HJ1ABE, Cartagena, Colombia (Laboratorios Fuentes L., Apartado 31)	
<b>1300 kilocycles</b>		<b>230.6 meters</b>				
CMKJ	z	20	.....	Guantanamo, Cuba		7.055 42.50
HIZ	z	10	.....	Santo Domingo, D. R.	HIH, San Pedro de Macoris, D. R. (R-a) La Voz del Higuamo. Sr. Domingo Dominguez, owner.	
KALE	ak	500	3C	Portland, Ore.		
KFAC	ak	1000	.....	Los Angeles, Calif.		
KFH	ak	1000	C2	Wichita, Kans.		
KFJR	ag	500	3	Portland, Ore.		
VOAC	z	40	.....	St. John's, Nfld.		
WBRR	ae	1000	1	Brooklyn, N. Y.		
WEVD	ak	1000	1	New York, N. Y.		
WFAB	ae	1000	1	New York, N. Y.		
WFBC	ak	250	.....	Greenville, S. C.		
WHAZ	ae	500	1	Troy, N. Y.		
WIOD	ae	1000	N	Miami, Fla.		

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1310 kilocycles 228.9 meters

CHCK	ak	50	.....	Charlottetown, P.E.I.
CJKL	z	100	.....	Kirkland Lake, Ont.
CJLS	z	100	.....	Yarmouth, N. S.
CKCV	ak	50	.....	Quebec, Que.
CMCY	ak	500	1316	Havana, Cuba
KCRJ	ak	100	D	Jerome, Ariz.
KFBK	ak	100	C	Sacramento, Calif.
KFPL	dkh	100	.....	Dublin, Texas
KFPM	ae	15	.....	Greenville, Texas
KFXR	ak	100	(.25)	Oklahoma City, Ok.
KFYO	ak	100	(.25)	Lubbock, Texas
KGBX	ak	100	.....	Springfield, Mo.
KGCX	ak	100	(.25)	Wolf Point, Mont.
KGEZ	aj	100	.....	Kalispell, Mont.
KGFV	ak	100	.....	Kearney, Neb.
KIT	ak	100	.....	Yakima, Wash.
KMED	ck	100	(.25)	Medford, Ore.
KRMD	ak	100	.....	Shreveport, La.
KTSM	ak	100	.....	El Paso, Texas
KXRO	ak	100	.....	Aberdeen, Wash.
WAML	ak	100	.....	Laurel, Miss.
WBEO	ae	100	.....	Marquette, Mich.
WBOW	ak	100	.....	Terre Haute, Ind.
WBRE	ak	100	.....	Wilkes Barre, Pa.
WCLS	ae	100	.....	Joliet, Ill.
WDAH	ak	100	S	El Paso, Texas
WEBR	ae	500	.....	Buffalo, N. Y.
WEXL	ak	50	.....	Royal Oak, Mich.
WFBG	ae	100	3	Altoona, Pa.
WFD	am	100	.....	Ft. Ht., Mich.
WGH	ae	100	.....	Newport News, Va.
WHAT	ak	100	4	Philadelphia, Pa.
WJAC	ae	100	3	Johnstown, Pa.
WLBC	ak	50	6 (.1)	Muncie, Ind.
WLNH	ak	100	.....	Laconia, N. H.
WMBO	ak	100	.....	Auburn, N. Y.
WNBH	ae	100	(.25)	New Bedford, Mass.
WOL	ae	100	(.25)	Washington, D. C.
WRAW	ak	100	.....	Reading, Pa.
WROL	ak	100	.....	Knoxville, Tenn.
WSAJ	ae	100	.....	Grove City, Pa.
WSGN	ak	100	(.25)	Birmingham, Ala.
WSJS	ak	100	C	Winston-Salem, N.C.
WTEL	ah	100	4	Philadelphia, Pa.
WTJS	ak	100	(.25)	Jackson, Tenn.
WTRC	ak	50	6 (.1)	Elkhart, Ind.
XECW	z	10	.....	Mexico City, D. F.
XEFC	ak	100	.....	Merida, Yuc.
XEPW	ak	250	.....	Tampico, Tams.
XETB	z	125	.....	Torreón, Coah.
XEX	ak	125	.....	Monterrey, N. L.
XFA	z	5	.....	Aguascalientes, Ags.

1320 kilocycles 227.1 meters

KGHF	ak	500	.....	Pueblo, Colo.
KGMB	ak	250	C	Honolulu, T. H.
KID	ae	250	(.5)	Idaho Falls, Idaho
KSO	ak	250	.....	Des Moines, Iowa
WADC	ae	1000	C (.25)	Akron, Ohio
WSMB	ak	1000	N	New Orleans, La.

1330 kilocycles 225.4 meters

KGB	ag	1000	C (.25)	San Diego, Calif.
KMO	ak	250	.....	Tacoma, Wash.
KSCJ	aj	1000	1C (.25)	Sioux City, Iowa
KTRH	z	500	C (.25)	Houston, Texas
WDRC	ae	1000	C	Hartford, Conn.
WSAI	ak	1000	R (.25)	Cincinnati, Ohio
WTAQ	ae	1000	1	Eau Claire, Wis.

1340 kilocycles 223.7 meters

KGDY	ak	250	D	Huron, S. D.
KGNO	ak	250	.....	Dodge City, Kans.
WCOA	ak	500	.....	Pensacola, Fla.
WSPD	ae	1000	C (.25)	Toledo, Ohio
XFD	z	250	.....	Orizaba, Ver.

		7.090	42.29	
HKE	Bogota, Colombia (Observatorio de San Bartolome)			
		7.138	42.00	
HJ4ABB	Manizales, Colombia (R-ax) La Voz de Caldas			
HKN	Medellin, Colombia			
		7.205	41.61	
EASCF	Santa Cruz de Tenerife, Canary Islands (R-ax)			
		7.220	43.86	
HAT	Budapest, Hungary (E-a-39)			
		7.370	40.67	
KEB	Bolinas, California (E-cy)			
WJN	Rocky Point, N. Y. (E-cy)			
		7.384	40.60	
ZLT	Wellington, N. Z. (A-a-24)			
		7.400	40.51	
WEM	Rocky Point, N. Y. (E-cy)			
		7.402	40.50	
HJ3ABB	Bogota, Colombia (R-b-x) ("Colombia Broadcasting")			
HKI	Bogota, Colombia			
		7.415	40.43	
WEG	Rocky Point, N. Y. (E-cy)			
		7.465	40.16	
HJP	Bogota, Colombia (B-cy) Phones Hialeah			
		7.520	39.87	
KDK	Kahuku, Hawaii (A-cy) Phones Dixon			
KKH	Kahuku, Hawaii (A-cy) Phones Dixon			
RKI	Moscow, USSR (B-cy)			
		7.565	39.63	
KWY	(W6XN), Dixon, California (A-cy) Phones Hawaii			
		7.575	39.58	
XGO	Shanghai, China (B-a-8)			
		7.610	39.40	
KWX	Dixon, California (A-cy)			
		7.620	39.34	
RIM	Irkutsk, USSR (B-cy)			
		7.685	39.01	
TIR	Cartago, Costa Rica (B-b-9) Phones Hialeah			
		7.715	38.86	
KEE	Bolinas, Calif. (E-cy)			
		7.797	38.47	
HBP	Geneva, Switzerland (R-b-30) "Radio Nations"			
		7.830	38.29	
PDV	Kootwijk, Holland (A-c-18)			
		7.880	38.05	
JYR	Kemikawa-Cho, Chiba-Ken, Japan (B-z)			

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1350 kilocycles 222.1 meters

KIDO	ak	1000	(2.5)	Boise, Idaho
KWK	ae	1000	B (2.5)	St. Louis, Mo.
WAWZ	ae	250	1	Zarephath, N. J.
WBNX	ae	250	1	New York, N. Y.
WEHC	ae	500	D	Charlottesville, Va.

1360 kilocycles 220.4 meters

CMJP	ak	75	.....	Moron, Cuba
KGER	ak	1000	.....	Long Beach, Calif.
KGIR	ak	1000	N	Butte, Mont.
WCSC	ae	500	(1)	Charleston, S. C.
WFBL	ak	1000	C (2.5)	Syracuse, N. Y.
WGES	ae	500	.....	Chicago, Ill.
WOBC	ak	500	(1)	Vicksburg, Miss.
WSBT	ak	500	.....	South Bend, Ind.

1370 kilocycles 218.8 meters

CKCW	z	100	.....	Moncton, N. B.
CMCN	z	250	1375	Havana, Cuba
CMCR	z	150	1375	Havana, Cuba
CMGE	z	30	1375	Cardenas, Cuba
KCRC	ak	100	2 (2.5)	Entd, Okla.
KERN	ak	100	.....	Bakersfield, Calif.
KFGQ	ak	100	.....	Boone, Iowa
KFJM	ak	100	.....	Grand Forks, N. D.
KFJZ	ae	100	.....	Fort Worth, Texas
KGAR	ae	100	(.25)	Tucson, Ariz.
KGFG	bk	100	2	Oklahoma City, Ok.
KGFL	ak	100	4	Roswell, N. M.
KGKL	ak	100	(.25)	San Angelo, Texas
KICA	ak	100	4	Clovis, N. M.
KLUF	z	100	(.25)	Galveston, Texas
KMAC	ak	100	5	San Antonio, Texas
KONO	ak	100	5	San Antonio, Texas
KRE	ak	100	.....	Berkeley, Calif.
KRKO	ak	50	.....	Everett, Wash.
KSLM	z	100	.....	Salem, Ore.
KUJ	ak	100	.....	Walla Walla, Wash.
KVL	ak	100	.....	Seattle, Wash.
KWKC	z	100	.....	Kansas City, Mo.
KWYO	z	100	.....	Sheridan, Wyo.
WAGF	ak	100	D	Dothan, Ala.
WBTM	ak	100	.....	Danville, Va.
WCBM	ae	100	(.25)	Baltimore, Md.
WDAS	ae	100	(.25)	Philadelphia, Pa.
WGL	ak	100	C	Fort Wayne, Ind.
WGLC	ak	100	.....	Hudson Falls, N. Y.
WHBD	ak	100	.....	Mount Orab, Ohio
WHBQ	ak	100	.....	Memphis, Tenn.
WHDF	ak	100	(.25)	Calumet, Mich.
WIBM	ak	100	.....	Jackson, Mich.
WJTL	ae	100	.....	Atlanta, Ga.
WLEY	ak	100	(.25)	Lexington, Miss.
WMBR	ak	100	C	Jacksonville, Fla.
WPFB	ak	100	.....	Hattiesburg, Miss.
WQDM	ae	100	D	St. Albans, Vt.
WRAK	ak	100	.....	Williamsport, Pa.
WRDO	ae	100	.....	Augusta, Maine
WRJN	ak	100	.....	Racine, Wis.
WSVS	ak	50	D	Buffalo, N. Y.
XEFE	z	100	.....	Nuevo Laredo, Tams.
XEFZ	ae	100	.....	Mexico City, D. F.
XEI	ak	125	.....	Morelia, Mch.
XEZZ	z	100	.....	San Luis Potosi, SLP

1380 kilocycles 217.3 meters

CMJC	z	150	1382	Camaguey, Cuba
KOH	ak	500	C	Reno, Nev.
KQV	ak	500	2C	Pittsburgh, Pa.
WALA	ae	500	C	Mobile, Ala.
WKBH	ae	1000	.....	LaCrosse, Wis.
WSMK	ak	200	2	Dayton, Ohio

7.940 37.76  
VK2ME, Sydney, Australia (A-a-3)

7.960 37.67  
CMB, Havana, Cuba (B-b-31)  
XGL, Shanghai, China (B-b-8)

7.980 37.57  
HSJ, Bangkok, Slam (E-a-27)  
8.015 37.40

Aeronautical stations  
8.017 37.40  
EDQ, Madrid, Spain (B-a-28)

8.180 36.65  
PSK, Rio de Janeiro, Brazil (A-b-4)  
PSK, Rio de Janeiro, Brazil (R-a-38)  
Relays PRA3

8.218 36.36  
....., Rabat, Morocco (R-ax)

8.230 36.43  
KNRA, "Seth Parker" (B-a-37)  
8.464 35.42

DAF, Norden, Germany (SS-a-15)  
8.510 35.23

Ship stations  
8.515 35.21  
CZA, Drummondville, P. Q. (SS-c-6)  
8.560 35.03

WOO, Ocean Gate, N. J. (SS-cy)  
WOY, Lawrenceville, N. J.  
8.630 34.74

CMA, Havana, Cuba (B-b-31)  
8.646 34.56

GBC, Rugby, England (SS-a-16)  
8.770 34.19

RSZ, Irkutsk, USSR (B-cy)  
8.820 33.99

KFY, Forward Base, Little America (B-cy)  
KFZ, Main Base, Little America (B-cy)  
KNRA, "Seth Parker" (B-a-37)

8.840 33.92  
KFY, Forward Base, Little America (B-cy)  
KFZ, Main Base, Little America (B-cy)  
KNRA, "Seth Parker" (B-a-37)

8.930 33.57  
WAD, Rocky Point, N. Y. (E-cy)  
WEC, Rocky Point, N. Y. (E-cy)

8.940 33.54  
KZGG, Cebu, P. I. (Philippine Long Distance Telephone Co.)  
WKL, Rocky Point, N. Y. (E-cy)

8.950 33.50  
WEL, Rocky Point, N. Y. (E-cy)

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### 1390 kilocycles 215.7 meters

CJRC	ck	100	.....	Winnipeg, Man.
HIH	ak	15	1395 San	Ped. de Macoris, DR
KLRA	ae	1000	C (2.5)	Little Rock, Ark.
KOY	ae	500	(1)	Phoenix, Ariz.
WHK	ae	1000	C (2.5)	Cleveland, Ohio

### 1400 kilocycles 214.2 meters

GMCM	z	50	1405	Havana, Cuba
KLO	ae	500	C	Ogden, Utah
KTUL	ak	250	(.5) C	Tulsa, Okla.
TGX	ak	150	.....	Guatemala City, Gt.
WARD	ak	500	2	Brooklyn, N. Y.
WBAA	z	500	.....	W. Lafayette, Ind.
WBBC	ae	500	2 (1)	Brooklyn, N. Y.
WBFB	ak	500	N (1)	Indianapolis, Ind.
WLTH	ak	500	2	Brooklyn, N. Y.
WVFW	ak	500	2	Brooklyn, N. Y.

### 1410 kilocycles 212.6 meters

CKFC	ak	50	5	Vancouver, B. C.
CKMO	ag	100	5	Vancouver, B. C.
CMCH	ak	50	.....	Havana, Cuba
KGRS	ae	1000	1	Amarillo, Texas
WAAB	ak	500	C	Boston, Mass.
WBCM	ae	500	.....	Bay City, Mich.
WDAG	ae	1000	1 (2.5)	Amarillo, Texas
WHBL	ak	500	4	Sheboygan, Wis.
WHIS	ak	250	2	Bluefield, W. Va.
WRBX	ak	250	2 (.5)	Roanoke, Va.
WROK	ak	500	4	Rockford, Ill.
WSFA	ak	500	C	Montgomery, Ala.

### 1420 kilocycles 211.1 meters

CKGB	ak	100	.....	Timmins, Ont.
CKNC	ak	100	F	Toronto, Ont.
KABC	ak	100	.....	San Antonio, Texas
KBPS	aj	100	4	Portland, Ore.
KCMC	ak	100	.....	Texarkana, Ark.
KFIZ	ak	100	.....	Fond du Lac, Wis.
KGFF	ak	100	.....	Shawnee, Okla.
KGGC	ak	100	.....	San Francisco, Cal.
KGIW	ak	100	1	Alamosa, Colo.
KGIX	ak	100	.....	Las Vegas, Nev.
KICK	z	100	.....	Carter Lake, Iowa
KIDW	z	100	1	Lamar, Colo.
KORE	ak	100	.....	Eugene, Ore.
KUMA	ak	100	.....	Yuma, Ariz.
KXL	ak	100	4 (.25)	Portland, Ore.
WAGO	ak	100	C	Waco, Texas
WAGM	ae	100	.....	Presque Isle, Maine
WAZL	ak	100	.....	Hazleton, Pa.
WEED	ak	100	D	Rocky Mount, N. C.
WEHS	ak	100	a	Cicero, Ill.
WELL	ak	50	.....	Battle Creek, Mich.
WGPC	ak	100	D	Albany, Ga.
WHDL	ak	100	D	Tupper Lake, N. Y.
WHFC	ak	100	a	Cicero, Ill.
WILM	aj	100	2	Wilmington, Del.
WJBO	z	100	D	Baton Rouge, La.
WJMS	ak	100	.....	Ironwood, Mich.
WKBI	ak	100	a	Cicero, Ill.
WLAP	ak	100	(.25)	Lexington, Ky.
WLBF	ak	100	.....	Kansas City, Kans.
WLEU	z	100	DP	Erie, Pa.
WMAS	ak	100	C (.25)	Springfield, Mass.
WMBC	ae	100	(.25)	Detroit, Mich.
WMBH	ak	100	(.25)	Joplin, Mo.
WNRA	ak	100	D	Muscle Shoals, Ala.
WPAD	ak	100	.....	Paducah, Ky.
WSPA	ae	100	(.25)	Spartanburg, S. C.

### 1430 kilocycles 209.7 meters

KECA	ak	1000	(2.5)	Los Angeles, Calif.
KGNF	ak	500	D	North Platte, Neb.

8.980 33.59

VWY, Kirkee, Poona, India (B-z)

9.010 33.28

KEJ, Bollinas, Calif. (E-cy)

9.014 33.26

GCS, Rugby, England (A-a-16)

9.120 32.88

CP5, La Paz, Bolivia (R-ax)

9.168 32.70

YVR, Maracay, Venezuela (B-cy)

9.170 32.70

KZGF, Manila, P. I. (Phillipine Long Distance Telephone Co.)

WNA, Lawrenceville, N. J. (A-cy)

9.273 32.33

GCB, Rugby, England (A-a-16)  
Phones Canada

9.332 32.13

CGA4, Drummondville, P. Q. (A-a-6)

9.340 32.10

XDC, Mexico City, Mexico (B-cy)

9.375 31.97

XDA, Mexico City, Mexico (B-cy)

9.410 31.86

PLV, Bandoeng, Java (A-a-22),  
Phones Australia

9.448 31.74

WES, Rocky Point, N. Y. (E-cy)

9.460 31.79

WKJ, New Brunswick, N. J. (A-cy)

9.470 31.55

WET, Rocky Point, N. Y. (E-cy)

9.480 31.63

PLW, Bandoeng, Java (A-a-22),  
Phones Australia

WDA, Rocky Point, N. Y. (E-cy)

9.490 31.59

KZGH, Holo, P. I. (Phillipine Long Distance Telephone Co.)

WEF, Rocky Point, N. Y. (E-cy)

9.503 31.55

VK3ME, Braybank (Melbourne),  
Australia (R-ax)

9.510 31.53

GSB, Daventry, England (R-a-17)

9.520 31.49

OXY, Skamlebaek, Denmark (R-ax),  
Chimes strike midnight at 6 p.m.,  
EST.

9.530 31.46

W2XAF, Schenectady, N. Y. (R-ax),  
Relays WGY

9.555 31.38

VE9DN, Drummondville, P. Q.  
(R-a-6)

## INDEX BY FREQUENCIES AND DIAL NUMBERS

KWCR	ak	250	B (.5)	Cedar Rapids, Iowa	9.560	31.36
WBNS	ae	500	C (1)	Columbus, Ohio		
WFEA	ae	500	.....	Manchester, N. H.	DJA, Zeosen, Germany (R-a-14)	
WHEC	ae	500	C (1)	Rochester, N. Y.	9.570	31.33
WHP	ak	500	C (1)	Harrisburg, Pa.		
WNBR	ae	500	.....	Memphis, Tenn.	W1XAZ, Mills, Mass. (R-ax), Relays	
WOKO	ae	500	C (1)	Albany, N. Y.	WBZ-WBZA	
<b>1440 kilocycles</b>				<b>208.2 meters</b>		
CMBL	ak	200	1445	Havana, Cuba	9.580	31.30
KDFN	ak	500	.....	Casper, Wyo.	VK3LR, Melbourne, Australia (R-ax)	
KLS	ae	250	D	Oakland, Calif.	9.585	31.28
KXYZ	ak	500	.....	Houston, Texas	GSC, Daventry, England (R-a-17)	
TIFS	z	7.5	1441	Cartago, C. R.	VK2ME, Sydney, Australia (R-a-3)	
WBIG	ae	500	C (1)	Greensboro, N. C.	9.590	31.26
WCBA	aj	250	a	Allentown, Pa.	W3XAU, Philadelphia, Pa. (R-ax)	
WMBD	ae	500	3C (1)	Peoria, Ill.	Relays WCAU	
WSAN	aj	250	a	Allentown, Pa.	9.595	31.25
WTAD	ak	500	3	Quincy, Ill.	HLB, Geneva, Switzerland (R-b-30)	
					"Radio Nations"	
<b>1450 kilocycles</b>				<b>206.8 meters</b>		
CFCT	ae	50	.....	Victoria, B. C.	9.600	31.23
CKX	ak	500	F	Brandon, Man.	CT1AA, Lisbon, Portugal (R-ax),	
KTBS	ck	1000	N	Shreveport, La.	Interval signal: cuckoo call.	
TIEP	z	7.5	.....	San Jose, C. R.	LQA, Buenos Aires, Argentina	
WGAR	ak	500	B (1)	Cleveland, Ohio	(A-b-1)	
WHOM	ae	250	.....	Jersey City, N. J.	XETE, Mexico City, Mexico (R-bx)	
WSAR	ae	250	.....	Fall River, Mass.	YV5BMO, Maracalbo, Venezuela	
WTFI	ak	500	.....	Athens, Ga.	(R-z)	
<b>1460 kilocycles</b>				<b>205.4 meters</b>		
KSTP	ae	10000	N (25)	St. Paul, Minn.	9.609	31.20
WJSV	ak	10000	C	Washington, D. C.	DGU, Nauen, Germany (B-a-13)	
<b>1470 kilocycles</b>				<b>204.0 meters</b>		
WLAC	ak	5000	C	Nashville, Tenn.	9.670	31.00
<b>1480 kilocycles</b>				<b>202.6 meters</b>		
CMBK	z	15	1485	Havana, Cuba	TI4NRH, Heredia, Costa Rica (R-ax)	
KOMA	ak	5000	C	Oklahoma City, Ok.	9.702	30.90
WKBW	ae	5000	C	Buffalo, N. Y.	GCA, Rugby, England (A-a-16)	
<b>1490 kilocycles</b>				<b>201.2 meters</b>		
WCKY	ae	5000	B	Covington, Ky.	9.750	30.75
<b>1500 kilocycles</b>				<b>199.9 meters</b>		
CHGS	ae	50	F	Summerside, P.E.I.	VK2ME, Sydney, Australia (B-a-3)	
KDB	ak	100	C	Santa Barbara, Calif.	WOF, Lawrenceville, N. J. (A-cy)	
KGFI	ak	100	(.25)	Corpus Christi, Tex.	9.798	30.60
KGFK	ak	100	.....	Moophead, Minn.	GCW, Rugby, England (A-a-16)	
KGKB	ak	100	.....	Tyler, Texas	9.823	30.52
KGKY	ck	100	.....	Scottsbluff, Neb.	IRM, Rome, Italy (B-a-20)	
KNOW	ak	100	.....	Austin, Texas	9.830	30.50
KOTN	ak	100	D	Pine Bluff, Ark.	LSI, Buenos Aires, Argentina (B-a-1)	
KPJM	ak	100	.....	Prescott, Ariz.	9.840	30.47
KPO	ak	100	.....	Wenatchee, Wash.	FTI, Ste. Assise, France (B-a-11)	
KREG	ak	100	.....	Santa Ana, Calif.	JYS, Kemikawa-Cho, Chiba-Ken,	
KXO	ae	100	.....	El Centro, Calif.	Japan (R-z)	
WCNW	ak	100	I (.25)	Brooklyn, N. Y.	9.862	30.40
WDNC	ak	100	C	Durham, N. C.	EAQ, Madrid, Spain (R-a-29)	
WGAL	ae	100	.....	Lancaster, Pa.	9.870	30.38
WHEF	z	100	(.25)	Kosciusko, Miss.	WON, Lawrenceville, N. J. (A-cy)	
WJBK	ae	100	.....	Detroit, Mich.	9.895	30.30
WKBW	ae	100	.....	E. Dubuque, Ill.	LSN, Buenos Aires, Argentina (A-b-1)	
WKBV	ak	100	.....	Richmond, Ind.	9.942	30.15
WKBZ	ak	100	.....	Muskegon, Mich.	GCU, Rugby, England (A-a-16)	
WKEU	ak	100	.....	LaGrange, Ga.	9.990	30.01
WMBQ	ae	100	I	Brooklyn, N. Y.	KAZ, Manila, P. I. (B-cy)	
WMEX	z	100	P (.25)	Chelsea, Mass.	10.014	29.84
WNBF	ae	100	.....	Binghamton, N. Y.	SUV, Calro, Egypt (B-a-10)	
WOP1	ae	100	.....	Bristol, Tenn.		

**INDEX BY LOCATIONS**

WRDW ak	100	.....	Augusta, Ga.
WRGA ak	100	.....	Rome, Ga.
WSYB ak	100	.....	Rutland, Vt.
WWRL ak	100	1 (.25)	Woodside, N. Y.
WWSW ae	100	(.25)	Pittsburgh, Pa.

10.060 29.80  
ZFB, Hamilton, Bermuda (B-cy)

**1510 kilocycles 198.6 meters**

CFRC ak	100	.....	Kingston, Ont.
CKCR ak	100	.....	Waterloo, Ont.
KIFS z	50	1518	Klamath Falls, Ore.

10.135 29.58  
OPM, Leopoldville, Belgian Congo (B-ax)

10.164 29.79  
EHY, Madrid, Spain (B-a-28), Phones Venezuela

**1530 kilocycles 196.0 meters**

W1XBS z	1000	.....	Waterbury, Conn.
W9XBY z	1000	.....	Kansas City, Mo.

10.212 29.35  
PSH, Rio de Janeiro, Brazil (B-b-5)

10.250 29.25  
PMN, Bandoeng, Java (A-a-22)

**1550 kilocycles 193.4 meters**

W2XR z	1000	.....	Long Isl. City, N. Y.
W6XAI z	1000	.....	Bakersfield, Calif.

10.285 29.15  
DIQ, Zeeson, Germany (E-a-13)  
(Continued next month)

**INDEX BY LOCATIONS**

*Frequency in kilocycles in second column. Night power in watts in third column. Net work affiliations in fourth column: C Columbia, R National Red, B National Blue, N National Red and Blue. F Canadian.*

<b>ALABAMA</b>				<b>CONNECTICUT</b>			
Birmingham			Jonesboro	KLX 880	1000		Bridgeport
WAPI 1140	5000 N		KBTM 1200	KROW 930	1000		WICC 600 250 C
WBRC 930	1000 C		Little Rock	Pasadena			Hartford
WSGN 1310	100		KARK 890	KPPC 1210	50		WDRG 1330 1000 C
Dothan			KGHI 1200	Sacramento			WTIC 1040 50000 R
WAGF 1370	100		KLRA 1390	KFBK 1310	100 C		Storrs
Gadsden			Pine Bluff	KFXM 1210	100		WCAC 600 500
WJBY 1210	100		KOTN 1500	San Bernardino			Waterbury
Huntsville			Texarkana	KFSD 600	1000 N		WATR 1190 100
WBHS 1200	100		KCMC 1420	KGB 1330	1000 C		W1XBS 1530 1000
Mobile			<b>CALIFORNIA</b>				<b>DELAWARE</b>
WALA 1380	500 C		Bakersfield	San Francisco			Wilmington
Montgomery			KERN 1370	KFRC 610	1000 C		WDEL 1120 250
WSFA 1410	500 C		W6XAI 1550	KGCC 1420	100		WILM 1420 100
Muscle Shoals			Berkeley	KGO 790	7500 N		<b>DISTRICT OF COLUMBIA</b>
WNRA 1420	100		KRE 1370	KJBS 1070	100		Washington
<b>ALASKA</b>				<b>CONNECTICUT</b>			
Anchorage			Beverly Hills	KPO 680	50000 N		WJSV 1460 10000 C
KFQD 780	250		KMPC 710	KTAB 560	1000		WMAL 630 250 B
Ketchikan			Burbank	KYA 1230	1000 N		WOL 1310 100
KGBU 900	500		KELW 780	San Jose			WRC 950 500 R
<b>ARIZONA</b>				<b>FLORIDA</b>			
Jerome			El Centro	KQW 1010	1000		<b>CLEARWATER</b>
KCRJ 1310	100		KXO 1500	Santa Ana			WFLA 620 1000 N
Lowell			Eureka	KREG 1500	100		Gainesville
KSUN 1200	100		KIEM 1210	Santa Barbara			WRUF 830 5000
Phoenix			Fresno	KDB 1500	100 C		Jacksonville
KOY 1390	500		KMJ 580	Stockton			WJAX 900 1000 N
KTAR 620	1000 N		Glendale	KGDM 1100	250		WMBR 1370 100 C
Prescott			KIEV 850	KWG 1200	100 C		Miami
KPJM 1500	100		Hollywood	<b>COLORADO</b>			
Tucson			KFWB 950	Alamosa			WIOD 1300 1000 N
KGAR 1370	100		KMTR 570	KGIW 1420	100		WOAM 560 1000 C
KVOA 1260	500		KNX 1050	Colorado Springs			Orlando
Yuma			Long Beach	KVOR 1270	1000 C		WDBO 580 250 C
KUMA 1420	100		KFOX 1250	Denver			Pensacola
<b>ARKANSAS</b>				<b>CONNECTICUT</b>			
Blytheville			KGER 1360	KFEL 920	500		WCOA 1340 500
KLCN 1290	100		Los Angeles	KLZ 560	1000 C		St. Petersburg
Fayetteville			KECA 1430	KOA 830	50000 N		WSUN 620 1000 N
KUOA 1260	1000		KFAC 1300	KPOF 880	500		Tampa
Fort Smith			KFI 640	KVOD 920	500		WDAE 1220 1000 C
KFPW 1210	100		KFSG 1120	Grand Junction			<b>GEORGIA</b>
Hot Springs			KFVD 1000	KFXJ 1200	100		Albany
KTHS 1060	10000 N		KGFJ 1200	Greeley			WGPC 1420 100
			KHJ 900	KFKA 880	500		Athens
			KRKD 1120	Lamar			WTFI 1450 500
			KTM 780	KIDW 1420	100		
			Modesto	Pueblo			
			KTRB 740	KGHF 1320	500		
			Oakland	Yuma			
			KLS 1440	KGEK 1200	100		

## INDEX BY LOCATIONS

<b>Atlanta</b>	<b>Tuscola</b>	<b>Wichita</b>	<b>Calumet</b>
WGST 890 500 C	WDZ 1070 100	KFH 1300 1000 C	WHDF 1370 100
WJTL 1370 100	Urbana	<b>KENTUCKY</b>	<b>Detroit</b>
WSB 740 50000 N	WILL 890 250	<b>Covington</b>	WJBK 1500 100
<b>Augusta</b>	Zion	WCKY 1490 5000 B	WJR 750 10000 B
WRDW 1500 100	WCBD 1080 5000	<b>Lexington</b>	WMBC 1420 100
<b>Columbus</b>	<b>INDIANA</b>	WLAP 1420 100	WWJ 920 1000 R
WRBL 1200 100	<b>Anderson</b>	<b>Louisville</b>	WKYZ 1240 1000
LaGrange	WBHU 1210 100	WAVE 940 1000 N	<b>East Lansing</b>
WKEU 1500 100	Elkhart	WHAS 820 50000 C	WKAR 1040 1000
Macon	WTRC 1310 50	<b>Paducah</b>	Flint
WMAZ 1180 1000	Evansville	WPAD 1420 100	WFDF 1310 100
Rome	WGBF 630 500	<b>LOUISIANA</b>	<b>Grand Rapids</b>
WRGA 1500 100	Fort Wayne	<b>Baton Rouge</b>	WASH 1270 500
Savannah	WGL 1370 100 C	WJBO 1420 100	WOOD 1270 500
WTOC 1260 1000 C	WOWO 1160 10000 C	Monroe	<b>Ironwood</b>
Thomasville	Gary	KMLB 1200 100	WJMS 1420 100
WQDX 1210 100	WIND 560 1000	<b>New Orleans</b>	WIBM 1370 100
<b>HAWAII</b>	Hammond	WBNO 1200 100	<b>Kalamazoo</b>
Hilo	WWAE 1200 100	WDSU 1250 1000 C	WKZO 590 1000
KWFV 1210 100	Indianapolis	WJBW 1200 100	<b>Lansing</b>
Honolulu	WFBM 1230 1000 C	WSMB 1320 1000 N	WJIM 1210 100
KGMB 1320 250 C	WKBF 1400 500 N	WWL 850 10000	<b>Lapeer</b>
KGU 750 2500 N	Muncie	Shreveport	WMPC 1200 100
<b>IDAHO</b>	WLBC 1310 100	KRMD 1310 100	Marquette
Boise	Richmond	KTBS 1450 1000 N	WBEO 1310 100
KIDO 1350 1000	WKBV 1500 100	KWEA 1210 100	<b>Muskegon</b>
Idaho Falls	South Bend	KWKH 1100 10000	WKBZ 1500 100
KID 1320 250	WFAM 1200 100	<b>MAINE</b>	Royal Oak
Nampa	WSBT 1360 500 C	<b>Augusta</b>	WEXL 1310 50
KFXD 1200 100	Terre Haute	WRDO 1370 100	<b>MINNESOTA</b>
Pocatello	WBOW 1310 100	Bangor	Fergus Falls
KSEI 900 250	West Lafayette	WABI 1200 100	KGDE 1200 100
Twin Falls	WBAA 1400 500	WLBZ 620 500 C	<b>Minneapolis</b>
KTFI 1240 500	<b>IOWA</b>	Portland	WCO 810 50000 C
<b>ILLINOIS</b>	Ames	WCSH 940 1000 R	WDGY 1180 1000
Bloomington	WOI 640 5000	Presque Isle	WLB 1250 1000
WJBC 1200 100	Boone	WAGM 1420 100	WRHM 1250 1000
Carthage	KFGQ 1370 100	<b>MARYLAND</b>	<b>Moorhead</b>
WCAZ 1070 100	Carter Lake	<b>Baltimore</b>	KGFK 1500 100
Chicago	KICK 1420 100	WBAL 1060 10000 B	<b>Northfield</b>
KYW 1020 10000 N	Cedar Rapids	WCAO 600 500 C	WAL 1250 2500
WAAF 920 500	KWCR 1430 250 B	WCBM 1370 100	<b>St. Paul</b>
WBMM 770 25000 C	Council Bluffs	WFBR 1270 500 R	KSTP 1460 10000 N
WCFL 970 1500 B	KOIL 1260 1000 B	<b>Cumberland</b>	<b>MISSISSIPPI</b>
WCRW 1210 100	Decorah	WTBO 800 250	<b>Greenwood</b>
WEDC 1210 100	KGCA 1270 100	Hagerstown	WKFI 1210 100
WENR 870 50000 N	KWLC 1270 100	WJEJ 1210 100	<b>Gulfport</b>
WGES 1360 500	Des Moines	<b>MASSACHUSETTS</b>	WGCM 1210 100
WGN 720 50000	KSO 1320 250 B	<b>Babson Park</b>	Hattiesburg
WJJD 1130 20000	WHO 1000 50000 R	WBSO 920 500	WPFB 1370 100
WLS 870 50000 N	<b>Iowa City</b>	<b>Boston</b>	Jackson
WMAQ 670 50000 N	WSUI 880 500	WAAB 1410 500 C	WJDX 1270 1000 N
WMBI 1080 5000	Marshalltown	WBZ 990 50000 B	<b>Kosciusko</b>
WSBC 1210 100	KFJB 1200 100	WEEI 590 1000 R	WHEF 1500 100
Chicago	Shenandoah	WHDH 830 1000	Laurel
WEHS 1420 100	KNFN 890 500	WNAC 1230 1000 C	WAML 1310 100
WHFC 1420 100	KMA 930 1000	<b>Chelsea</b>	Meridian
WKBI 1420 100	Sioux City	WMEX 1500 100	WCOC 880 500
<b>Decatur</b>	KSCJ 1330 1000 C	Fall River	Tupelo
WJBL 1200 100	Waterloo	WSAR 1450 250	WJEM 990 500
East Dubuque	WMT 600 1000 C	Lexington	Vicksburg
WKBB 1500 100	<b>KANSAS</b>	WLEY 1370 100	WQBC 1360 500
Harrisburg	Abilene	<b>New Bedford</b>	<b>MISSOURI</b>
WEBQ 1210 100	KFBI 1050 5000	WNBH 1310 100	<b>Cape Girardeau</b>
Joliet	Coffeyville	Springfield	KFVS 1210 100
WCLS 1310 100	KGGF 1010 1000	WBZA 990 1000 B	<b>Columbia</b>
Peoria	Dodge City	WMAS 1420 100 C	KFRU 630 500
WMBD 1440 500 C	KGNO 1340 250	Worcester	Jefferson City
Quincy	Kansas City	WORC 1280 500 C	WOS 630 500
WTAD 1440 500	WLBK 1420 100	WTAG 580 500 R	Joplin
<b>Rockford</b>	Lawrence	<b>MICHIGAN</b>	WMBH 1420 100
WROK 1410 500	KFKU 1220 1000	Battle Creek	<b>Kansas City</b>
Rock Island	WREN 1220 1000 B	WELL 1420 50	KMBC 950 1000 C
WHBF 1210 100	Manhattan	Bay City	KWKC 1370 100
Springfield	KSAC 580 500	WBCM 1410 500	WDAF 610 1000 R
WCBS 1210 100	Topeka		
WTAX 1210 100	WIBW 580 1000 C		



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WHB 860 500	Zarephath		<b>NORTH CAROLINA</b>	Tulsa	
W9XB 1530 1000	WAWZ 1350 250		Asheville	KTUL 1400 250 C	
St. Joseph	<b>NEW MEXICO</b>		WWNC 570 1000 N	KVOO 1140 25000 N	
KFEQ 680 2500	Albuquerque		Charlotte	<b>OREGON</b>	
St. Louis	KGGM 1230 250		WBT 1080 50000 C	Corvallis	
KFUO 550 500	KOB 1180 10000		WSOC 1210 100 N	KOAC 550 1000	
KMOX 1090 50000 C	Clovis		Durham	Eugene	
KSD 550 500 R	KICA 1370 100		WDNC 1500 100 C	KORE 1420 100	
KWK 1350 1000 B	Roswell		Greensboro	Klamath Falls	
WEW 760 1000	KGFL 1370 100		WBG 1440 500 C	KFJI 1210 100	
WIL 1200 100	<b>NEW YORK</b>		Raleigh	KIFS 1518 100	
Springfield	Albany		WPTF 680 5000 N	Marshfield	
KGBX 1310 100	WOKO 1430 500 C		Rocky Mount	KOOS 1200 250	
KWTO 560 1000	Auburn		WEED 1420 100	Medford	
<b>MONTANA</b>	WMBO 1310 100		Winston-Salem	KMED 1310 100	
Billings	Binghamton		WSJS 1310 100 C	Portland	
KGHL 780 1000 N	WNBF 1500 100		<b>NORTH DAKOTA</b>	KALE 1300 500 C	
Butte	Brooklyn		Bismarck	KBPS 1420 100	
KGIR 1360 1000 N	WARD 1400 500		KFYR 550 1000 N	KEK 1180 5000 N	
Great Falls	WBBC 1400 500		Devils Lake	KFJR 1300 500	
KFBB 1280 1000	WBRR 1300 1000		KDLR 1210 100	KGW 620 1000 N	
Kalispell	WCNW 1500 100		Fargo	KOIN 940 1000 C	
KGEZ 1310 100	WLTH 1400 500		WDAY 940 1000 N	KWJJ 1040 500	
Missoula	WMBQ 1500 100		Grand Forks	KXL 1420 100	
KGVO 1200 100	WFWF 1400 500		KFJM 1370 100	Salem	
Wolf Point	Buffalo		Mandan	KSLM 1370 100	
KGCC 1310 100	WBEN 900 1000 R		KGCU 1240 250	<b>PENNSYLVANIA</b>	
<b>NEBRASKA</b>	WEBR 1310 500		Minot	Allentown	
Ciay Center	WGR 550 1000 C		KLPM 1240 250	WCBA 1440 250	
KMMJ 740 1000	WKBW 1480 5000 C		<b>OHIO</b>	WSAN 1440 250	
Kearney	WSVS 1370 50		Akron	Altoona	
KGFW 1310 100	Canton		WADC 1320 1000 C	WFBG 1310 100	
Lincoln	WCAD 1220 500		WJW 1210 100	Erie	
KFAB 770 5000 C	Chester		Canton	WLBW 1260 1000 C	
KFOR 1210 100 C	WGNV 1210 100		WHBC 1200 100	WLEU 1420 100	
Norfolk	Elmira		Cincinnati	Glenside	
WJAG 1060 1000	WESG 1090 1000		WFBE 1200 100	WIBG 970 100	
North Platte	Freeport		WKRC 550 1000 C	Greensburg	
KGNF 1430 500	WGBB 1210 100		WLW 700 50000 N	WHJB 620 250	
Omaha	Hudson Falls		WSAI 1330 1000 R	Grove City	
WAAW 660 500	WGLC 1370 100		Cleveland	WSAJ 1310 100	
WOW 590 1000 R	Jamestown		WGR 1450 500 B	Harrisburg	
Scottsbluff	WOOL 1210 50		WHK 1390 1000 C	WHP 1430 500 C	
KGKY 1500 100	Long Island City		WJAY 610 500	WKBO 1200 100	
York	W2KR 1550 1000		WTAM 1070 50000 R	Hazleton	
KGBZ 930 1000	New York		Columbus	WAZL 1420 100	
<b>NEVADA</b>	WABC 860 50000 C		WAIU 640 500	Johnstown	
Las Vegas	WBNX 1350 250		WBNS 1430 500 C	WJAC 1310 100	
KGIX 1420 100	WBOQ 860 50000		WOSU 570 750	Lancaster	
Reno	WEAF 660 50000 R		WSEN 1210 100	WGAL 1500 100	
KOH 1380 500 C	WEVD 1300 1000		Dayton	WKJC 1200 100	
<b>NEW HAMPSHIRE</b>	WFAB 1300 1000		WSMK 1380 200	Philadelphia	
Laconia	WHN 1010 1000		Mount Orab	WCAU 1170 50000 C	
WLNH 1310 100	WINS 1180 1000		WHBD 1370 100	WDAS 1370 100	
Manchester	WJZ 760 50000 B		Toledo	WFI 560 500 R	
WFEA 1430 500 C	WLWL 1100 5000		WSPD 1340 1000 C	WHAT 1310 100	
Portsmouth	WMCA 570 500		Youngstown	WIP 610 500 C	
WHEB 740 250	WNYC 810 500		WKBN 570 500 C	WLIT 560 500 R	
<b>NEW JERSEY</b>	WOV 1130 1000		Zanesville	WPEN 920 500	
Asbury Park	Rochester		WALR 1210 100	WRAX 920 500	
WCAP 1280 500	WHAM 1150 50000 B		<b>OKLAHOMA</b>	WTFL 1310 100	
Atlantic City	WHEC 1430 500 C		Ada	Pittsburgh	
WPG 1100 5000 C	Saranac Lake		..... 1200 100	KDKA 980 50000 B	
Camden	WNBZ 1290 50		Elk City	KQV 1380 500 C	
WCAM 1280 500	Schenectady		KASA 1210 100	WCAE 1220 1000 R	
Jersey City	WGY 790 50000 R		Enid	WJAS 1290 1000 C	
WAAT 940 500	Syracuse		KCRC 1370 100	WWSW 1500 100	
WHOM 1450 250	WFBL 1360 1000 C		Norman	..... 620 250	
Newark	WSYR 570 250 B		WNAD 1010 500	Reading	
WGCP 1250 250	Troy		Oklahoma City	WEEU 830 1000	
WNEW 1250 1000	WHAZ 1300 500		KFXR 1310 100	WRAW 1310 100	
WOR 710 5000	Tupper Lake		KGFG 1370 100	Scranton	
Red Bank	WHDL 1420 100		KOMA 1480 5000 C	WGBI 880 500	
WBJE 1210 100	Utica		WEY 900 1000 N	WQAN 880 250	
Trenton	WIBX 1200 100		Ponca City	Sunbury	
WTNJ 1280 500	White Plains		WBBZ 1200 100	WKOK 1210 100	
	WFAS 1210 100		Shawnee	Washington	
	Woodside		KGFF 1420 100	WNBO 1200 100	
	WWRL 1500 100				

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WBRE 1310 100	Corpus Christi	WMBG 1210 100 C	Stevens Point
Williamsport	KGFI 1500 100	WRVA 1110 5000 N	WLBL 900 2500
WRAX 1370 100	Dallas	Roanoke	Superior
York	KRLD 1040 10000 C	WDBJ 930 1000 C	WEBC 1290 1000 N
WORK 1000 1000	WFAA 800 50000 N	WRBX 1410 250	
<b>PHILIPPINES</b>	WRR 1280 500	Staunton	<b>WYOMING</b>
Manila	Dublin	WSVA 550 500	Casper
KZEG 618.5 1000	KFPL 1310 100	<b>WASHINGTON</b>	KDFN 1440 500
KZRM 618.5 50000	El Paso	Aberdeen	Sheridan
<b>PORTO RICO</b>	KTSM 1310 100	KXRO 1310 100	KWYO 1370 100
San Juan	WDAH 1310 100	Bellingham	
WKAQ 1240 1000	Fort Worth	KVOS 1200 100	<b>CANADA</b>
WNEL 1290 500	KFJZ 1370 100	Everett	<b>ALBERTA</b>
<b>RHODE ISLAND</b>	KTAT 1240 1000 C	KRKO 1370 50	Calgary
Providence	WBAP 800 50000 N	Olympia	CFAC 930 100 F
WEAN 780 500 C	Galveston	KGY 1210 100	CFCN 1030 10000 F
WJAR 890 500 R	KLUF 1370 100	Pullman	CJ CJ 690 100 F
WPRO 630 100	Greenville	KWSC 1220 1000	Edmonton
<b>SOUTH CAROLINA</b>	KFPM 1310 15	Seattle	CFTP 1260 100
Charleston	Houston	KJR 970 5000 N	CJCA 730 500 F
WCSC 1360 500	KPRC 920 1000 N	KOL 1270 1000 C	CKUA 580 500
Columbia	KTRH 1330 1000 C	KOMO 920 1000 N	Lethridge
WIS 1010 1000 N	KXYZ 1440 500	KPCB 710 250	CJOC 1230 100 F
Greenville	Lubbock	KRSC 1120 100	<b>BRITISH COLUMBIA</b>
WFBC 1300 250	KFYO 1310 100	KTW 1220 1000	Chilliwack
Spartanburg	Port Arthur	KVL 1370 100	CHWK 780 100 F
WSPA 1420 100	KWWG 1260 500	KXA 760 250	Kamloops
<b>SOUTH DAKOTA</b>	San Angelo	Spokane	CFJC 880 100 F
Brookings	KGKL 1370 100	KFIO 1120 100	Kelowna
Huron	San Antonio	KFPY 890 1000 C	CKOV 630 100 F
KGDY 1340 250	KABC 1420 100	KGA 900 1000 N	Trail
Pierre	KMAC 1370 100	KHQ 590 1000 N	CJAT 910 250 F
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Rapid City	KTSA 1290 1000 C	KMO 1330 250	CJOR 600 500
WCAT 1200 100	WOAI 1190 50000 N	KVI 570 1000 C	CKCD 1010 100
Sioux Falls	Tyler	Walla Walla	CKFK 1410 50
KSOO 1110 1000	KGKB 1500 100	KUJ 1370 100	CKMO 1410 100
Vermillion	Waco	Wenatchee	CKWX 1010 100
KUSD .890 500	WAGC 1420 100 C	KPO 1500 100	CRCV 1100 1000 F
Watertown	Weslaco	Yakima	Victoria
KWTN 1210 100	KRGV 1260 500	KIT 1310 100	CFCT 1450 50
Yankton	Wichita Falls	<b>WEST VIRGINIA</b>	<b>MANITOBA</b>
WNAX 570 1000 C	KGKO 570 500 C	Bluefield	Brandon
<b>TENNESSEE</b>	<b>UTAH</b>	WHIS 1410 250	CKX 1450 500 F
Bristol	Ogden	Charleston	Winnipeg
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Chattanooga	Salt Lake City	Fairmont	CKY 960 15000 F
WDOD 1280 1000 C	KDYL 1290 1000 N	WMMN 890 250	<b>NEW BRUNSWICK</b>
Jackson	KSL 1130 50000 C	Huntington	Fredericton
WTJS 1310 100	<b>VERMONT</b>	WSAZ 1190 1000	CFNB 550 500 F
Knoxville	Burlington	Wheeling	Moncton
WNOX 560 1000 C	WCAX 1200 100	WVVA 1160 5000 C	CKCW 1370 100
WROL 1310 100	Rutland	<b>WISCONSIN</b>	St. John
Memphis	WSYB 1500 100	Eau Claire	CHSJ 1120 100 F
WHBQ 1370 100	St. Albans	WTAQ 1330 1000	<b>NOVA SCOTIA</b>
WMC 780 1000 N	WQDM 1370 100	Fond du Lac	Glace Bay
WNBR 1430 500	Springfield	KFIZ 1420 100	VAS 685 2000
WREC 600 1000 C	WNBX 1260 500	Green Bay	Halifax
<b>TEXAS</b>	Waterbury	WBYB 1200 100	CHNS 930 500 F
Amarillo	WDEV 550 500	Janesville	Sydney
KGRS 1410 1000	<b>VIRGINIA</b>	WCLO 1200 100	CJCB 1240 1000 F
WDAG 1410 1000	Arlington	LaCrosse	Wolfville
Austin	NAA 690 1000	WKBH 1380 1000	CKIC 1010 50
KNOW 1500 100	Charlottesville	Madison	Yarmouth
Beaumont	WEHC 1350 500	WHA 940 2500	CJLS 1310 100
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	WBTM 1370 100	Manitowoc	Brantford
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	WLVA 1200 100	Milwaukee	10-BQ 1200 15
	Newport News	WISN 1120 250 C	Chatham
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<b>CFAC</b> 930 100	Calgary, Alta. Calgary Herald, Southam Bldg.
<b>CFCF</b> 600 500	Montreal, Que. Mt. Royal Hotel
<b>CFCH</b> 930 100	North Bay, Ont. Capitol Theatre Bldg.
<b>CFCN</b> 1030 10000	Calgary, Alta. Toronto Gen. Trust Bldg.
<b>CFCO</b> 600 100	Chatham, Ont. Wm. Pitt Hotel
<b>CFCT</b> 1450 50	Victoria, B. C. 620 View St.
<b>CFCY</b> 630 500	Charlottetown, P.E.I. 143 Great George St.
<b>CFJC</b> 880 100	Kamloops, B. C. Wilcox-Hall Bldg.
<b>CFLC</b> 930 100	Prescott, Ont. Victoria Hall
<b>CFNB</b> 550 500	Fredericton, N. B. York St.
<b>CFPL</b> 730 100	London, Ont. Richmond St.
<b>CFQC</b> 840 1000	Saskatoon, Sask. 216 First Ave., No.
<b>CFRB</b> 690 10000	Toronto, Ont. 37 Bloor St. W.
<b>CFRC</b> 1510 100	Kingston, Ont. Queens University
<b>CFTP</b> 1260 100	Edmonton, Alta. Birks Bldg.
<b>CHAB</b> 1200 100	Moose Jaw, Sask. Grant Hall Hotel
<b>CHCK</b> 1310 50	Charlottetown, P.E.I. 36 Upper Hillsboro St.
<b>CHGS</b> 1500 50	Summerside, P. E. I. 190 Water St.
<b>CHLP</b> 1120 100	Montreal, Que. Sun Life Bldg.
<b>CHML</b> 1010 50	Hamilton, Ont. 47 Main St. E.
<b>CHNC</b> 1210 100	New Carlisle, Que. Dr. Charles Houde
<b>CHNS</b> 930 500	Halifax, N. S. Lord Nelson Hotel
<b>CHRC</b> 580 100	Quebec, Que. CHRC, Ltd., Victoria Hotel
<b>CHSJ</b> 1120 100	St. John, N. B. Admiral Beatty Hotel
<b>CHWC</b> 1010 500	Regina, Sask. Kitchener Hotel
<b>CHWK</b> 780 100	Chilliwack, B. C. Wellington Ave.
<b>CJAT</b> 910 250	Trail, B. C. Trail Amateur Radio Assn.
<b>CJCA</b> 730 500	Edmonton, Alta. 10122-100A St.
<b>CJCB</b> 1240 1000	Sydney, N. S. 318 Charlotte St.
<b>CJCJ</b> 690 100	Calgary, Alta. New Albertan Bldg.
<b>CJGX</b> 630 500	Yorkton, Sask. 188 Grain Exchange Bldg.
<b>CJIC</b> 890 100	S. Ste. Marie, Ont. 72 Pine St.
<b>CJKL</b> 1310 100	Kirkland Lake, Ont. O. J. Thorpe
<b>CJLS</b> 1310 100	Yarmouth, N. S. Laurie L. Smith, Grand Hotel
<b>CJOC</b> 1230 100	Lethbridge, Alta. Marquis Hotel
<b>CJOR</b> 600 500	Vancouver, B. C. G. C. Chandler, Hotel Grosvenor
<b>CJRC</b> 1390 100	Winnipeg, Man. Royal Alexandra Hotel
<b>CJRM</b> 540 1000	Moose Jaw, Sask. 311 Main St. No.
<b>CKAC</b> 730 5000	Montreal, Que. 980 St. Catherine St. W.
<b>CKBI</b> 1210 100	Prince Albert, Sask. Canada Bldg.
<b>CKCD</b> 1010 100	Vancouver, B. C. 142 Hastings St. W.
<b>CKCH</b> 1210 100	Hull, Que. Standish Hall Hotel
<b>CKCK</b> 1010 500	Regina, Sask. 1853 Hamilton St.
<b>CKCL</b> 580 100	Toronto, Ont. 444 University Ave.
<b>CKCO</b> 1010 100	Ottawa, Ont. 272 Somerset St. W.
<b>CKCR</b> 1510 100	Waterloo, Ont. 24 King St. So.
<b>CKCV</b> 1310 50	Quebec, Que. 254 Ave. Marguerite
<b>CKCW</b> 1370 100	Moncton, N. B. Moncton Brdcastg. Co., Ltd.
<b>CKFK</b> 1410 50	Vancouver, B. C. Hemlock & 12th Ave.
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<b>CKIC</b> 1010 50	Wolfville, N. S. Acadia University
<b>CKLW</b> 1030 5000	Windsor, Ont. Guaranty Trust Bldg.
<b>CKMC</b> 1210 50	Cobalt, Ont. R. L. MacAdam
<b>CKMO</b> 1410 100	Vancouver, B. C. 1604 Bekins Bldg.
<b>CKNC</b> 1420 100	Toronto, Ont. 805 Davenport Road
<b>CKOC</b> 1120 500	Hamilton, Ont. Wentworth Bldg.
<b>CKOV</b> 630 100	Kelowna, B. C. Okanagan Broadcasters, Ltd., Box 243
<b>CKPC</b> 930 100	Brantford, Ont. Arcade Bldg.
<b>CKPR</b> 930 50	Fort William, Ont. Royal Edward Hotel
<b>CKTB</b> 1200 100	St. Catharines, Ont. E. T. Sandell, Welland House
<b>CKUA</b> 580 500	Edmonton, Alta. University of Alberta.
<b>CKWX</b> 1010 100	Vancouver, B. C. Hotel Georgia
<b>CKX</b> 1450 500	Brandon, Man. Rosser Ave.
<b>CKY</b> 960 15000	Winnipeg, Man. Sherbrooke St.
<b>CMAB</b> 1249 20	Pinar del Rio, Cuba Jose Silvera, Marti No. 101
<b>CMAF</b> 680 1000	Havana, Cuba P. O. Box 66
<b>CMBC</b> 1270 150	Havana, Cuba Domingo Fernandez, Maximo Gomez No. 139
<b>CMBD</b> 1010 250	Havana, Cuba Luis Perez Garcia, Enamorados y Flores
<b>CMBG</b> 1060 225	Havana, Cuba John L. Stowers, Hospital No. 100
<b>CMBJ</b> 1147 500	Havana, Cuba Emilio Perera, Consulado y Virtudes
<b>CMBK</b> 1485 15	Havana, Cuba Alberto Alvarez, Paula y Oficios
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<b>CMBS 780</b>	<b>200</b>	<b>Havana, Cuba</b> Enrique Artalejo, Calzada y H. St.
<b>CMBW 1140</b>	<b>600</b>	<b>Havana, Cuba</b> Alvarez, Moris y Cia, Obrapia No. 13
<b>CMBX 1185</b>	<b>250</b>	<b>Havana, Cuba</b> San Miguel 194
<b>CMBY 965</b>	<b>250</b>	<b>Havana, Cuba</b> Callejas-Estefani, Principe No. 33
<b>CMBZ 1005</b>	<b>150</b>	<b>Havana, Cuba</b> Manuel y G. Salas, San Rafael No. 14
<b>CMC 835</b>	<b>500</b>	<b>Havana, Cuba</b> Agulla y Dragones
<b>CMCA 1230</b>	<b>150</b>	<b>Havana, Cuba</b> J. M. Gonzales Ave. de Italia No. 102
<b>CMCB 1060</b>	<b>150</b>	<b>Havana, Cuba</b> Metropolitan Bldg.
<b>CMCD 925</b>	<b>500</b>	<b>Havana, Cuba</b> Hotel Palace, Vedado
<b>CMCF 780</b>	<b>250</b>	<b>Havana, Cuba</b> Raoul Karman, P. O. Box 647
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<b>CMCH 1410</b>	<b>50</b>	<b>Havana, Cuba</b> 88 Primellas St., Verro
<b>CMCJ 1180</b>	<b>500</b>	<b>Havana, Cuba</b> Rafael Rodriguez, Estevez No. 4
<b>CMCM 1405</b>	<b>50</b>	<b>Havana, Cuba</b> Aurelio Balino, Belas Coain No. 639
<b>CMCN 1375</b>	<b>250</b>	<b>Havana, Cuba</b> Antonio Ginard, Reina y Ave. Buen Retiroe
<b>CMCO 1145</b>	<b>500</b>	<b>Havana, Cuba</b>
<b>CMCP 1270</b>	<b>150</b>	<b>Havana, Cuba</b> Jose A. Yaniz
<b>CMCQ 680</b>	<b>1000</b>	<b>Havana, Cuba</b> Andres Martinez, Vista Alegre No. 80
<b>CMCR 1375</b>	<b>150</b>	<b>Havana, Cuba</b> Milagros No. 35, Vibora
<b>CMCU 1100</b>	<b>500</b>	<b>Havana, Cuba</b> San Francisco No. 13, Vibora
<b>CMCW 965</b>	<b>150</b>	<b>Havana, Cuba</b> Galiano y San Lazaro Sts.
<b>CMCY 1316</b>	<b>500</b>	<b>Havana, Cuba</b> Manuel D. Autran, Ave. de La Pdt s. 215
<b>CMDE 915</b>	<b>150</b>	<b>Havana, Cuba</b> Radio Aerial Ad.
<b>CMGA 834</b>	<b>100</b>	<b>Colon, Cuba</b> L. Valdes Figueroa, Marti No. 19
<b>CMGB 1205</b>	<b>30</b>	<b>Matanzas, Cuba</b> Jose Anorga, Magdalena No. 1
<b>CMGC 820</b>	<b>30</b>	<b>Matanzas, Cuba</b> Oscar S. Mechoso, Independencia No. 56
<b>CMGE 1375</b>	<b>30</b>	<b>Cardenas, Cuba</b> Genaro Sebater, Cespedes No. 180
<b>CMGF 987</b>	<b>100</b>	<b>Matanzas, Cuba</b> G. Betancourt No. 105
<b>CMGH 1040</b>	<b>15</b>	<b>Matanzas, Cuba</b> B. Byrne No. 113
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<b>CMHD 950</b>	<b>500</b>	<b>Calbarien, Cuba</b> Manuel Alvarez, M. Escobar 17
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<b>CMHK 1225</b>	<b>50</b>	<b>Cruces, Cuba</b> Heredia No. 61
<b>CMHL 1290</b>	<b>20</b>	<b>Cienfuegos, Cuba</b> Oscar Zayas, San Carlos 143

<b>CMHW 910</b>	<b>100</b>	<b>Cienfuegos, Cuba</b> San Carlos No. 106
<b>CMJC 1382</b>	<b>150</b>	<b>Camaguey, Cuba</b> Feliciano Isaac, Cisneros y G. Gomez
<b>CMJE 1170</b>	<b>50</b>	<b>Camaguey, Cuba</b> Manuel Fernandez, Plaza de Maceo
<b>CMJF 930</b>	<b>200</b>	<b>Camaguey, Cuba</b> John L. Stowers, Hotel Plaza
<b>CMJG 1050</b>	<b>50</b>	<b>Camaguey, Cuba</b> Jose Antonio Lefran, Martires 133
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<b>CMJI 1210</b>	<b>150</b>	<b>Ciego de Avila, Cuba</b> Gilberto Gessa Lopez, Independencia 95
<b>CMJK 790</b>	<b>500</b>	<b>Camaguey, Cuba</b> Compania Cubana Nacional de Radio S. A.
<b>CMJL 960</b>	<b>50</b>	<b>Camaguey, Cuba</b> Enrique Artime, Cuba No. 27
<b>CMJN 1240</b>	<b>50</b>	<b>Camaguey, Cuba</b> Ernesto de Ugarriza, Martires 11
<b>CMJO 1010</b>	<b>50</b>	<b>Ciego de Avila, Cuba</b> Jose M. Rey, C. Central & Maceo
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<b>CMK 730</b>	<b>2000</b>	<b>Havana, Cuba</b> Hotel Plaza
<b>CMKC 1034</b>	<b>150</b>	<b>Santiago, Cuba</b> J. A. Saco, Alta 23
<b>CMKJ 1300</b>	<b>20</b>	<b>Guantanamo, Cuba</b> Luis Morlote, East Giro 11
<b>CMQ 645</b>	<b>500</b>	<b>Havana, Cuba</b> Jose Fernandez, 25 Numero 445
<b>CMW 595</b>	<b>1400</b>	<b>Havana, Cuba</b> Troncoso y Gil, Paseo de Marti 103
<b>CMX 890</b>	<b>1000</b>	<b>Havana, Cuba</b> Casa "Lavin," Ave. de la Republica 99A
<b>CRCK 1050</b>	<b>1000</b>	<b>Quebec, Que.</b> Chateau Frontenac Hotel
<b>CRCM 910</b>	<b>5000</b>	<b>Montreal, Que.</b> 1231 St. Catherine St. W.
<b>CRCO 880</b>	<b>1000</b>	<b>Ottawa, Ont.</b> Chateau Laurier Hotel
<b>CRCS 950</b>	<b>100</b>	<b>Chicoutimi, Que.</b> 4 Rue Larouche
<b>CRCT 840</b>	<b>5000</b>	<b>Toronto, Ont.</b> 805 Davenport Road
<b>CRCV 1100</b>	<b>1000</b>	<b>Vancouver, B. C.</b> C. N. R. Station Bldg.
<b>FQN 574</b>	<b>250</b>	<b>St. Pierre, Miq.</b>
<b>HHK 920</b>	<b>1000</b>	<b>Port-au-Prince, Haiti</b> Haitian Government
<b>HHH 1395</b>	<b>15</b>	<b>San Pedro de M., D.R.</b> Domingo Dominguez
<b>HJ 1195</b>	<b>15</b>	<b>Santo Domingo, D. R.</b> Tuto Baez, Hostos 34
<b>HIX 1270</b>	<b>1000</b>	<b>Santo Domingo, D. R.</b> J. R. Saladin, Director General
<b>HIZ 1300</b>	<b>10</b>	<b>Santo Domingo, D. R.</b> Abbes and Garcia
<b>KABC 1420</b>	<b>100</b>	<b>San Antonio, Texas</b> Texas Theatre Bldg.
<b>KALE 1300</b>	<b>500</b>	<b>Portland, Ore.</b> Kale, Inc., New Heathman Hotel
<b>KARK 890</b>	<b>250</b>	<b>Little Rock, Ark.</b> N. S. L. Bldg.
<b>KASA 1210</b>	<b>100</b>	<b>Elk City, Okla.</b> E. M. Woody, Casa Grande Hotel
<b>KBPS 1420</b>	<b>100</b>	<b>Portland, Ore.</b> E. 12th & Hoyt Sts.
<b>KBTM 1200</b>	<b>100</b>	<b>Jonesboro, Ark.</b> Jay P. Beard

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<b>KCMC 1420 100</b> Texarkana, Ark. M. P. Mims, Box 865	<b>KFPL 1310 100</b> Dublin, Texas C. C. Baxter, Box 176
<b>KCRC 1370 100</b> Enid, Okla. Enid Radiophone Co., Oxford Hotel	<b>KFPM 1310 15</b> Greenville, Texas New Furniture Co.
<b>KCRJ 1310 100</b> Jerome, Ariz. Chas. C. Robinson, Drawer D.	<b>KFPW 1210 100</b> Fort Smith, Ark. Goldman Hotel
<b>KDB 1500 100</b> Santa Barbara, Calif. 15-17 E. Haley St.	<b>KFPY 890 1000</b> Spokane, Wash. Symons Bldg.
<b>KDFN 1440 500</b> Casper, Wyo. Donald Lewis Hathaway	<b>KFQD 780 250</b> Anchorage, Alaska 411-4th Ave.
<b>KDKA 980 50000</b> Pittsburgh, Pa. Hotel Wm. Penn	<b>KFRG 610- 1000</b> San Francisco, Calif. 1000 Van Ness Ave.
<b>KDLR 1210 100</b> Devils Lake, N. D. KDLR, Inc., 1025 3rd Street	<b>KFRU 630 500</b> Columbia, Mo. KFRU, Inc., 9th and Elm Sts.
<b>KDYL 1290 1000</b> Salt Lake City, Utah Ezra Thompson Bldg.	<b>KFSD 600 1000</b> San Diego, Calif. U. S. Grant Hotel
<b>KECA 1430 1000</b> Los Angeles, Calif. 1000 S. Hope St.	<b>KFSG 1120 500</b> Los Angeles, Calif. 1100 Glendale Blvd.
<b>KELW 780 500</b> Burbank, Calif. 3702 Magnolia Park Blvd.	<b>KFUO 550 500</b> St. Louis, Mo. 801 De Mun St.
<b>KERN 1370 100</b> Bakersfield, Calif. Elk's Club	<b>KFVD 1000 250</b> Los Angeles, Calif. E. L. Cord, 645 S. Mariposa
<b>KEX 1180 5000</b> Portland, Ore. Oregonian Bldg.	<b>KFVS 1210 100</b> Cape Girardeau, Mo. Oscar C. Hirsch, Box 275
<b>KFAB 770 5000</b> Lincoln, Neb. Cornhusker Hotel	<b>KFWB 950 1000</b> Hollywood, Calif. Warner Bros. Motion Pictures, Inc.
<b>KFAC 1300 1000</b> Los Angeles, Calif. E. L. Cord, 645 So. Mariposa	<b>KFXD 1200 100</b> Nampa, Idaho Frank E. Hurt, 1024 12th Ave., S.
<b>KFBB 1280 1000</b> Great Falls, Mont. Buttrety Broadcast., Inc.	<b>KFXJ 1200 100</b> Grand Jct., Colo. Hillcrest Manor
<b>KFBI 1050 5000</b> Abilene, Kans. Box 345	<b>KFXM 1210 100</b> San Bernardino, Calif. California Hotel
<b>KFBK 1310 100</b> Sacramento, Calif. Sacramento Bee	<b>KFXR 1310 100</b> Oklahoma City, Okla. 541 Hightower Bldg.
<b>KFDM 560 500</b> Beaumont, Texas Beaumont Hotel, P. O. Box 2950	<b>KFYO 1310 100</b> Lubbock, Texas Kirksey Bros., Hotel Lubbock
<b>KFDY 780 1000</b> Brookings, S. D. South Dakota State College	<b>KFYR 550 1000</b> Bismarck, N. D. 320 Broadway
<b>KFEL 920 500</b> Denver, Colo. Albany Hotel	<b>KGA 900 1000</b> Spokane, Wash. 1023 W. Riverside Ave.
<b>KFEQ 680 2500</b> St. Joseph, Mo. Schnelder Bldg.	<b>KGAR 1370 100</b> Tucson, Ariz. 142 S. 6th Ave.
<b>KFGQ 1370 100</b> Boone, Iowa 924 W. 2nd St.	<b>KGB 1330 1000</b> San Diego, Calif. 1012-1st St.
<b>KFH 1300 1000</b> Wichita, Kans. 124 1/2 S. Market St.	<b>KGBU 900 500</b> Ketchikan, Alaska Mile 5, Wards Cove Rd.
<b>KFI 640 50000</b> Los Angeles, Calif. 1000 S. Hope St.	<b>KGBX 1310 100</b> Springfield, Mo. KGBX, Inc., C. of C. Bldg.
<b>KFIO 1120 100</b> Spokane, Wash. 213 Riverside Ave.	<b>KGBZ 930 1000</b> York, Neb. KGBZ Broadcasting Co., 715 Grant Ave.
<b>KFIZ 1420 100</b> Fond du Lac, Wis. 18 W. 1st St.	<b>KGCA 1270 100</b> Decorah, Iowa Charles W. Greenley, 201 Water St.
<b>KFJB 1200 100</b> Marshalltown, Iowa 1603 W. Main St.	<b>KGCU 1240 250</b> Mandan, N. D. 404 W. Main St.
<b>KFJI 1210 100</b> Klamath Falls, Ore. KFJI Broadcasters, Inc., Willard Hotel	<b>KGCC 1310 100</b> Wolf Point, Mont. E. E. Krebsbach.
<b>KFJM 1370 100</b> Grand Forks, N. D. University of North Dakota	<b>KGDE 1200 100</b> Fergus Falls, Minn. C. L. Jaren
<b>KFJR 1300 500</b> Portland, Ore. 622 Lumbermen's Bldg.	<b>KGDM 1100 250</b> Stockton, Calif. E. F. Peffer, 42 S. Calif. St.
<b>KFJZ 1370 100</b> Fort Worth, Texas Texas Hotel	<b>KGDY 1340 250</b> Huron, S. D. Voice of S. D., Inc., 347 Dakota Ave.
<b>KFKA 880 500</b> Greeley, Colo. Box 755	<b>KGEK 1200 100</b> Yuma, Colo. Elmer G. Beeher, 109 W. 2nd St.
<b>KFKU 1220 1000</b> Lawrence, Kans. University of Kansas	<b>KGER 1360 1000</b> Long Beach, Calif. 435 Pine Ave.
<b>KFNF 890 500</b> Shenandoah, Iowa 407 Sycamore St.	<b>KGEZ 1310 100</b> Kalispell, Mont. Donald C. Treloar, Box 1
<b>KFOR 1210 100</b> Lincoln, Neb. Howard Shuman, Hotel Lincoln	<b>KGFF 1420 100</b> Shawnee, Okla. 9th & Bell Sts.
<b>KFOX 1250 1000</b> Long Beach, Calif. 220 E. Anaheim St.	<b>KGFG 1370 100</b> Oklahoma City, Okla. Okla. Broadcasting Co., 1113 N. Broadway

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<b>KGFI 1500 100 Corpus Christi, Texas</b> Eagle Broadcasting Co., Inc., P. O. Box 1508	<b>KIEV 850 250 Glendale, Calif.</b> Cannon System, Ltd., Glendale Hotel
<b>KGFI 1200 100 Los Angeles, Calif.</b> Ben S. McGlashan, 1417 S. Figueroa.	<b>KIFS 1518 100 Klamath Falls, Ore.</b> Care KFJI Willard Hotel
<b>KGFK 1500 100 Moorhead, Minn.</b> 722 Center Ave.	<b>KIT 1310 100 Yakima, Wash.</b> 109 1/2 E. Yakima Ave.
<b>KGFL 1370 100 Roswell, N. M.</b> KGFL, Inc., 507 N. Main St.	<b>KJBS 1070 100 San Francisco, Calif.</b> 1380 Bush St.
<b>KGFW 1310 100 Kearney, Neb.</b> Midway Hotel	<b>KJR 970 5000 Seattle, Wash.</b> Skinner Bldg.
<b>KGFX 630 200 Pierre, S. D.</b> Dana McNeil, 510 Summit Ave.	<b>KLCN 1290 100 Blytheville, Ark.</b> C. L. Lintzenich, Main and Division St.
<b>KGGC 1420 100 San Francisco, Calif.</b> 230 Eddy St.	<b>KLO 1400 500 Ogden, Utah</b> 405 — 25th St.
<b>KGGF 1010 1000 Coffeyville, Kans.</b> Coffeyville Journal Bldg.	<b>KLPM 1240 250 Minot, N. D.</b> John B. Cooley, Box 707
<b>KGGM 1230 250 Albuquerque, N. M.</b> Franciscan Hotel	<b>KLRA 1390 1000 Little Rock, Ark.</b> Arkansas Broadcasting Co., Box 550
<b>KGHF 1320 250 Pueblo, Colo.</b> C. P. Ritchie, 113 Broadway	<b>KLS 1440 250 Oakland, Calif.</b> Warner Bros., 2201 Telegraph Ave.
<b>KGHI 1200 100 Little Rock, Ark.</b> Lloyd Judd Co., Marlon Hotel	<b>KLUF 1370 100 Galveston, Texas</b> Geo. R. Clough, 3327 Ave. P.
<b>KGHL 780 1000 Billings, Mont.</b> 5th & N. Broadway	<b>KLX 880 1000 Oakland, Calif.</b> Tribune Tower
<b>KGIR 1360 1000 Butte, Mont.</b> KGIR, Inc., 121 W. Broadway	<b>KLZ 560 1000 Denver, Colo.</b> Shirley-Savoy Hotel
<b>KGIW 1420 100 Alamosa, Colo.</b> Leonard E. Wilson, 326 N. Commercial	<b>KMA 930 500 Shenandoah, Iowa</b> Earl E. May Seed & Nursery Co.
<b>KGIX 1420 100 Las Vegas, Nev.</b> J. M. Heaton, Box 656	<b>KMAC 1370 100 San Antonio, Texas</b> W. W. McAllister, Blue Bonnet Hotel
<b>KGKB 1500 100 Tyler, Texas</b> 115 S. College	<b>KMBC 950 1000 Kansas City, Mo.</b> Pickwick Hotel
<b>KGKL 1370 100 San Angelo, Texas</b> KGKL, Inc., St. Angelus Hotel	<b>KMED 1310 100 Medford, Ore.</b> Mrs. W. J. Virgin, Sparta Bldg.
<b>KGKO 570 500 Wichita Falls, Texas</b> 9th St. & Indiana Ave.	<b>KMJ 580 500 Fresno, Calif.</b> Van Ness & Calaveras Sts.
<b>KGKY 1500 100 Scottsbluff, Neb.</b> Hilliard Co., Inc., 1517 1/2 Broadway	<b>KMLB 1200 100 Monroe, La.</b> Francis Hotel
<b>KGMB 1320 250 Honolulu, T. H.</b> Honolulu Broadcasting Co., Box 2663	<b>KMMJ 740 1000 Clay Center, Neb.</b> The M. M. Johnson Co.
<b>KGNF 1430 500 North Platte, Neb.</b> Great Plains Broadcasting Co., W. 12th St.	<b>KMO 1330 250 Tacoma, Wash.</b> KMO, Inc., Hotel Winthrop
<b>KGNO 1340 250 Dodge City, Kans.</b> First Natl. Bank Bldg.	<b>KMOX 1090 50000 St. Louis, Mo.</b> 401 S. 12th St.
<b>KGO 790 7500 San Francisco, Calif.</b> 111 Sutter St.	<b>KMPC 710 500 Beverly Hills, Calif.</b> 9631 Wilshire Blvd.
<b>KGRS 1410 1000 Amarillo, Texas</b> E. B. Gish, Bellaire Park	<b>KMTR 570 500 Hollywood, Calif.</b> KMTR Radio Corp., 915 N. Formosa Ave.
<b>KGU 750 2500 Honolulu, T. H.</b> Kaplolani at South St.	<b>KNOW 1500 100 Austin, Texas</b> Driskill Hotel
<b>KGVO 1200 100 Missoula, Mont.</b> Mosbys, Inc., 240 N. Higgins	<b>KNX 1050 25000 Hollywood, Calif.</b> West. Broadcast Co., Inc., 1558 N. Vine St.
<b>KGW 620 1000 Portland, Ore.</b> 325 Adler St.	<b>KOA 830 50000 Denver, Colo.</b> General Electric Co., 1370 Krameria St.
<b>KGY 1210 100 Olympia, Wash.</b> KGY, Inc., 11th and Capitol Way	<b>KOAC 550 1000 Corvallis, Ore.</b> Oregon State Agricultural College
<b>KHJ 900 1000 Los Angeles, Calif.</b> 7th at Bixel	<b>KOB 1180 10000 Albuquerque, N. M.</b> Albuquerque Journal, Box 667
<b>KHQ 590 1000 Spokane, Wash.</b> Sprague Ave. & Post St.	<b>KOH 1380 500 Reno, Nev.</b> 440 N. Virginia St.
<b>KICA 1370 100 Clovis, N. M.</b> Southwest Broadcasting Co.	<b>KOIL 1260 1000 Council Bluffs, Iowa</b> Mona Motor Oil Co.
<b>KICK 1420 100 Carter Lake, Iowa</b> Red Oak Radio Corp.	<b>KOIN 940 1000 Portland, Ore.</b> KOIN, Inc., New Heathman Hotel
<b>KID 1320 250 Idaho Falls, Idaho</b> Park Ave. & Broadway	<b>KOL 1270 1000 Seattle, Wash.</b> Northern Life Tower
<b>KIDO 1350 1000 Boise, Idaho</b> Hotel Boise	<b>KOMA 1480 5000 Oklahoma City, Okla.</b> Biltmore Hotel
<b>KIDW 1420 100 Lamar, Colo.</b> Lamar Broadcasting Co., Box 688	<b>KOMO 920 1000 Seattle, Wash.</b> Skinner Bldg.
<b>KIEM 1210 100 Eureka, Calif.</b> Harold H. Hanseth, Vance Hotel	<b>KONO 1370 100 San Antonio, Texas</b> Mission Broadcast. Co., St. Anthony Hotel

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<b>KOOS 1200 250</b> Marshfield, Ore. H. H. Hanseth, Hall Bldg.	<b>KTFI 1240 1000</b> Twin Falls, Idaho Radio Broadcasting Corp., Box 521
<b>KORE 1420 100</b> Eugene, Ore. 733 Willamette St.	<b>KTHS 1060 10000</b> Hot Springs, Ark. Chamber of Commerce, Box 886
<b>KOTN 1500 100</b> Pine Bluff, Ark. William H. Chaplin, Hotel Pines	<b>KTM 780 500</b> Los Angeles, Calif. 214 S. Vermont St.
<b>KOY 1390 500</b> Phoenix, Ariz. 621 N. Central Ave.	<b>KTRB 740 250</b> Modesto, Calif. McTammany & Bates
<b>KPCB 710 100</b> Seattle, Wash. Tower Bldg.	<b>KTRH 1330 1000</b> Houston, Texas KTRH Broadcasting Co., Rice Hotel
<b>KPJM 1500 100</b> Prescott, Ariz. Scott & Sturm, P. O. Box 782	<b>KTSA 1290 1000</b> San Antonio, Texas Southwest Broadcasting Co., Plaza Hotel
<b>KPO 680 50000</b> San Francisco, Calif. 111 Sutter St.	<b>KTSM 1310 100</b> El Paso, Texas P. O. Box 1976
<b>KPOF 880 500</b> Denver, Colo. Pillar Of Fire, 1845 Champa St.	<b>KTUL 1400 250</b> Tulsa, Okla. National Bank of Tulsa Bldg.
<b>KPPC 1210 50</b> Pasadena, Calif. 585 E. Colorado St.	<b>KTW 1220 1000</b> Seattle, Wash. 77th Ave. & Spring St.
<b>KPQ 1500 100</b> Wenatchee, Wash. KPQ Bldg.	<b>KUJ 1370 100</b> Walla Walla, Wash. KUJ, Inc., Marcus Whitman Hotel
<b>KPRC 920 1000</b> Houston, Texas 2204 Shell Bldg.	<b>KUMA 1420 100</b> Yuma, Ariz. Dr. A. H. Schermann, Box 267
<b>KQV 1380 500</b> Pittsburgh, Pa. KQV Broadcasting Co., Investment Bldg.	<b>KUOA 1260 1000</b> Fayetteville, Ark. KUOA, Inc., Washington Hotel
<b>KQW 1010 1000</b> San Jose, Calif. 87 E. San Antonio St.	<b>KUSD 890 500</b> Vermillion, S. D. University of South Dakota
<b>KRE 1370 100</b> Berkeley, Calif. 2345 Channing Way	<b>KVI 570 1000</b> Tacoma, Wash. W. R. Rust Bldg.
<b>KREG 1500 100</b> Santa Ana, Calif. 3rd & Sycamore Sts.	<b>KVL 1370 100</b> Seattle, Wash. KVL, Inc., 5th and Virginia St.
<b>KRGV 1260 500</b> Weslaco, Texas KRGV, Inc.	<b>KVOA 1260 500</b> Tucson, Ariz. Cons. Natl. Bank Bldg.
<b>KRKD 1120 500</b> Los Angeles, Calif. 815 Spring Arcade Bldg.	<b>KVOD 920 500</b> Denver, Colo. Continental Oil Bldg.
<b>KRKO 1370 50</b> Everett, Wash. Lee Mudgett, 2814 Rucker Ave.	<b>KVOO 1140 25000</b> Tulsa, Okla. Wright Bldg.
<b>KRLD 1040 10000</b> Dallas, Texas KRLD Radio Corp., Adolphus Hotel	<b>KVOR 1270 1000</b> Colorado Spg., Colo. Mining Exchange Bldg.
<b>KRMD 1310 100</b> Shreveport, La. Jefferson Hotel	<b>KVOS 1200 100</b> Bellingham, Wash. 115 W. Magnolia St.
<b>KROW 930 500</b> Oakland, Calif. 1803 Franklin St.	<b>KWCR 1430 250</b> Cedar Rapids, Iowa Hotel Montrose
<b>KRSC 1120 100</b> Seattle, Wash. Radio Sales Corp., Washington Athletic Club	<b>KWEA 1210 100</b> Shreveport, La. Spring & Fannin Sts.
<b>KSAC 580 500</b> Manhattan, Kans. State College of Agriculture	<b>KWFB 1210 100</b> Hilo, Hawaii Hilo Broadcasting Co., Ltd.
<b>KSCJ 1330 1000</b> Sioux City, Iowa Perkins Bros. Co., 415 Douglas St.	<b>KWG 1200 100</b> Stockton, Calif. Medico-Dental Bldg.
<b>KSD 550 500</b> St. Louis, Mo. 12th & Olive Sts.	<b>KWJJ 1040 500</b> Portland, Ore. 622 S. W. Salmon St.
<b>KSEI 900 250</b> Pocatello, Idaho Radio Service Corp., 141 S. 6th Ave.	<b>KWK 1350 1000</b> St. Louis, Mo. Thomas Patrick, Inc., Hotel Chase
<b>KSL 1130 50000</b> Salt Lake City, Utah Vermont Bldg.	<b>KWKC 1370 100</b> Kansas City, Mo. 39th & Main Sts.
<b>KSLM 1370 100</b> Salem, Ore. Oregon Radio, Inc.	<b>KWKH 1100 10000</b> Shreveport, La. Spring & Fannin Sts.
<b>KSO 1320 250</b> Des Moines, Iowa Des Moines Register & Tribune	<b>KWLC 1270 100</b> Decorah, Iowa Luther College
<b>KSOO 1110 1000</b> Sioux Falls, S. D. Sioux Falls Brdest. Assn., Carpenter Hotel	<b>KWSC 1220 1000</b> Pullman, Wash. State College of Washington
<b>KSTP 1460 10000</b> St. Paul, Minn. St. Paul Hotel	<b>KWTN 1210 100</b> Watertown, S. D. Citizens Bank Bldg.
<b>KSUN 1200 100</b> Lowell, Ariz. Copper Electrical Co., Drawer C	<b>KWTO 560 1000</b> Springfield, Mo. KGBX Inc.
<b>KTAB 560 1000</b> San Francisco, Calif. 5th & Mission Sts.	<b>KWWG 1260 500</b> Port Arthur, Texas Frank P. Jackson
<b>KTAR 620 1000</b> Phoenix, Ariz. 116 N. Central Ave.	<b>KWYO 1370 100</b> Sheridan, Wyo. Big Horn Brdestg. Co.
<b>KTAT 1240 1000</b> Fort Worth, Texas Ft. Worth Natl. Bank Bldg.	<b>KXA 760 250</b> Seattle, Wash. American Radio Tel. Co., 218 Bigelow Bldg.
<b>KTBS 1450 1000</b> Shreveport, La. Box 1642	<b>KXL 1420 100</b> Portland, Ore. KXL Broadcasters, Multnomah Hotel



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<b>KXO</b>	1500	100	El Centro, Calif.
			F. M. Bowles, Box 140
<b>KXRO</b>	1310	100	Aberdeen, Wash.
			KXRO, Inc., Hotel Morok.
<b>KXYZ</b>	1440	250	Houston, Texas
			Fannin & Rusk Sts.
<b>KYA</b>	1230	1000	San Francisco, Calif.
			988 Market St.
<b>KYW</b>	1020	10000	Chicago, Ill.
			310 S. Michigan Ave.
<b>KZRM</b>	618.5	50000	Manila, P. I.
			601 Escolta
<b>NAA</b>	690	1000	Arlington, Va.
			United States Navy
<b>RDN</b>	680	500	San Salvador, E. S.
			Republic of El Salvador
<b>TGW</b>	1350	500	Guatemala, Gua.
			Gobierno de Guatemala
<b>TGX</b>	1400	150	Guatemala City
<b>TICR</b>	912	75	San Jose, C. R.
			Government of Costa Rica
<b>TIEA</b>	833	7.5	San Jose, C. R.
<b>TIEP</b>	1450	7.5	San Jose, C. R.
<b>TIFB</b>	714	30	San Jose, C. R.
<b>TIFS</b>	1441	7.5	Cartago, C. R.
<b>TIGA</b>	1014	30	Cartago, C. R.
<b>TIGP</b>	800	75	San Jose, C. R.
			Gonzalo Pinto H. Apt. 225
<b>TIRCA</b>	1100	500	San Jose, C. R.
			Perry Girton, Apt. 225
<b>TISO</b>	550	250	San Jose, C. R.
			P. F. Saborlo, Apt. 1354
<b>TITV</b>	999	7.5	San Jose, C. R.
<b>TIVL</b>	869	30	San Jose, C. R.
<b>TIXA</b>	614	7.5	San Jose, C. R.
<b>VAS</b>	685	2000	Glace Bay, N. S.
			Canadian Marconi Co., Ltd.
<b>VESEK</b>	1195	10	Montmagny, Que.
			J. A. Marquis, P. O. Box 52
<b>VOAC</b>	1300	40	St. John's, Nfld.
<b>VOAS</b>	940	100	St. John's N. F.
			Ayre & Sons, Ltd., Water St.
<b>VOGY</b>	840	400	St. John's, N. F.
			Newfoundland Hotel
<b>VOKW</b>	1085	30	St. John's, N. F.
			Cyril L. Parkins, Box 5039 East
<b>VONF</b>	1195	5000	St. John's N. F.
			Domlnon Broadcasting Co., Ltd., Box 135
<b>VOWR</b>	681	500	St. John's, N. F.
			Wesley United Church, Box 157
<b>WAAB</b>	1410	500	Boston, Mass.
			21 Brookline Ave.
<b>WAAF</b>	920	500	Chicago, Ill.
			836 Exchange Ave.
<b>WAAT</b>	940	300	Jersey City, N. J.
			Bremer Broadcasting Corp., 50 Journal Sq
<b>WAAW</b>	660	500	Omaha, Neb.
			Omaha Grain Exchange
<b>WABC</b>	860	50000	New York, N. Y.
			485 Madison Ave.
<b>WABI</b>	1200	100	Bangor, Maine
			First Universalist Society, Park St.

<b>WACO</b>	1420	100	Waco, Texas
			Amicable Bldg.
<b>WADC</b>	1320	1000	Akron, Ohio
			Allen T. Simmons, P. O. Box 29
<b>WAGF</b>	1370	100	Oothan, Ala.
			P. O. Box 25
<b>WAGM</b>	1420	100	Presque Isle, Me.
			Aroostook Broadcasting Corp., Main St.
<b>WAIU</b>	640	500	Columbus, Ohio
			Deshler-Wallick Hotel
<b>WALA</b>	1380	500	Mobile, Ala.
			Battle House
<b>WALR</b>	1210	100	Zanesville, Ohio
			First Trust & Savs. Bank Bldg.
<b>WAML</b>	1310	100	Laurel, Miss.
			Southland Radio Corp., Box 26
<b>WAPI</b>	1140	5000	Birmingham, Ala.
			Protective Life Bldg.
<b>WARD</b>	1400	500	Brooklyn, N. Y.
			427 Flatbush Ave., Ext.
<b>WASH</b>	1270	500	Grand Rapids, Mich.
			Grand Rapids Natl. Bank Bldg.
<b>WATR</b>	1190	100	Waterbury, Conn.
			47 Grand St.
<b>WAVE</b>	940	1000	Louisville, Ky.
			WAVE, Inc., 1525 Brown Hotel
<b>WAWZ</b>	1350	250	Zarephath, N. J.
			Pillar of Fire.
<b>WAZL</b>	1420	100	Hazleton, Pa.
			Hazleton Broadcasting Service, Inc.
<b>WBAA</b>	1400	500	West Lafayette, Ind.
			Purdue University
<b>WBAL</b>	1060	10000	Baltimore, Md.
			Lexington Bldg.
<b>WBAP</b>	800	50000	Fort Worth, Texas
			Blackstone Hotel
<b>WBAX</b>	1210	100	Wilkes-Barre, Pa.
			John H. Stenger, Jr., 70 S. Main St.
<b>WBBC</b>	1400	500	Brooklyn, N. Y.
			552-54 Atlantic Ave.
<b>WBBL</b>	1210	100	Richmond, Va.
			1627 Monument Ave.
<b>WBBM</b>	770	25000	Chicago, Ill.
			WBBM Broadcasting Corp., Wrigley Bldg.
<b>WBBR</b>	1300	1000	Brooklyn, N. Y.
			124 Columbia Heights
<b>WBBZ</b>	1200	100	Ponca City, Okla.
			C. L. Carrell, 407 W. South Ave.
<b>WBGM</b>	1410	500	Bay City, Mich.
			James E. Davidson, Hotel Wenonah
<b>WBEN</b>	900	1000	Buffalo, N. Y.
			WBEN, Inc., Hotel Statler
<b>WBEO</b>	1310	100	Marquette, Mich.
			146 W. Washington St.
<b>WBHS</b>	1200	100	Huntsville, Ala.
			Radio Station WBHS, Inc.
<b>WBIG</b>	1440	500	Greensboro, N. C.
			Box 408
<b>WBNO</b>	1200	100	New Orleans, La.
			Hotel Marbero
<b>WBNS</b>	1430	500	Columbus, O.
			33 N. High St.
<b>WBNX</b>	1350	250	New York, N. Y.
			260 E. 161st St.
<b>WBOQ</b>	860	50000	New York, N. Y.
			Atlantic Broadcasting Corp.
<b>WBOW</b>	1310	100	Terre Haute, Ind.
			Banks of Wabash, Inc., 19 Beach Block
<b>WBRC</b>	930	1000	Birmingham, Ala.
			Bankhead Hotel
<b>WBRE</b>	1310	100	Wilkes-Barre, Pa.
			Louis G. Baltimore, 16 N. Main

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<b>WBSO</b> 920 500 Babson Park, Mass. Drawer B	<b>WDAS</b> 1370 100 Philadelphia, Pa. WDAS Brdcastg. Co., Inc., Broadwood Hotel
<b>WBT</b> 1080 50000 Charlotte, N. C. Station WBT, Inc., Wilder Bldg.	<b>WDAY</b> 940 1000 Fargo, N. D.
<b>WBTM</b> 1270 100 Danville, Va. Miller Bldg.	<b>WDAY, Inc.</b> , Black Bldg., 118 Broadway
<b>WBZ</b> 990 50000 Boston, Mass. Hotel Bradford	<b>WDBJ</b> 930 1000 Roanoke, Va. Times World Corp., P. O. Box 150
<b>WBZA</b> 990 1000 Springfield, Mass. Hotel Kimball	<b>WDBO</b> 580 250 Orlando, Fla. 555 N. Orange Ave.
<b>WCAC</b> 600 500 Storrs, Conn. Connecticut State College	<b>WDEL</b> 1120 250 Wilmington, Del. WDEL, Inc., 10th and King Sts.
<b>WCAD</b> 1220 500 Canton, N. Y. St. Lawrence University	<b>WDEV</b> 550 500 Waterbury, Vt. Harry C. Whitehill, Stowe St.
<b>WCAE</b> 1220 1000 Pittsburgh, Pa. 6th Ave. & Smithfield St.	<b>WDGY</b> 1180 1000 Minneapolis, Minn. Dr. Geo. W. Young, 909 W. Broadway
<b>WCAL</b> 1250 1000 Northfield, Minn. St. Olaf College	<b>WDNC</b> 1500 100 Durham, N. C. Washington Duke Hotel
<b>WCAM</b> 1280 500 Camden, N. J. City of Camden, City Hall	<b>WDOD</b> 1280 1000 Chattanooga, Tenn. WDOD Broadcasting Corp., Hotel Patten
<b>WCAO</b> 600 500 Baltimore, Md. 811 W. Lanvale St.	<b>WDRG</b> 1330 1000 Hartford, Conn. WDRG, Inc., Corning Bldg., 11 Asylum St.
<b>WCAP</b> 1280 500 Asbury Park, N. J. Convention Hall	<b>WDSU</b> 1250 1000 New Orleans, La. Jos. H. Uhalt, Hotel Monteleone
<b>WCAT</b> 1200 100 Rapid City, S. D. South Dakota State School of Mines	<b>WDZ</b> 1070 100 Tuscola, Ill. James L. Bush, Star Store Bldg.
<b>WCAU</b> 1170 50000 Philadelphia, Pa. WCAU Broadcasting Co., 1622 Chestnut	<b>WEAF</b> 660 50000 New York, N. Y. 30 Rockefeller Plaza
<b>WCAX</b> 1200 100 Burlington, Vt. 203 College St.	<b>WEAN</b> 780 500 Providence, R. I. New Crown Hotel
<b>WCAZ</b> 1070 100 Carthage, Ill. 97 1/2 Adams St.	<b>WEBC</b> 1290 1000 Superior, Wis. Spaulding Hotel, Duluth, Minn.
<b>WCBA</b> 1440 250 Allentown, Pa. B. Bryan Musselman, 39-41 10th St.	<b>WEBQ</b> 1210 100 Harrisburg, Ill. 100 E. Poplar St.
<b>WCBD</b> 1080 5000 Zion, Ill. 75 E. Wacker Drive, Chicago	<b>WEBR</b> 1310 100 Buffalo, N. Y. Howell Broadcasting Co., Inc., 735 Main
<b>WCBM</b> 1370 100 Baltimore, Md. Keith Theatre Bldg.	<b>WEDC</b> 1210 100 Chicago, Ill. Emil Denemark, 3860 Ogden Ave.
<b>WCBS</b> 1210 100 Springfield, Ill. WCBS, Inc., 208 1/2 S. 5th.	<b>WEED</b> 1420 100 Rocky Mount, N. C. Wm. Avera Wynne, Box 221
<b>WCCO</b> 810 50000 Minneapolis, Minn. Nioclet Hotel	<b>WEEI</b> 590 1000 Boston, Mass. 182 Tremont St.
<b>WCFL</b> 970 1500 Chicago, Ill. 666 Lake Shore Drive	<b>WEEU</b> 830 1000 Reading, Pa. Berks Broadcasting Co., 533 Penn.
<b>WCHS</b> 580 500 Charleston, W. Va. WOBV, Inc., Ruffner Hotel	<b>WEHC</b> 1350 500 Charlottesville, Va. 7th & Main Sts.
<b>WCKY</b> 1490 5000 Covington, Ky. 6th & Madison Sts.	<b>WEHS</b> 1420 100 Cicero, Ill. WEHS, Inc., 6138 W. Cermak Rd.
<b>WCLO</b> 1200 100 Janesville, Wis. 200 E. Milwaukee St.	<b>WELL</b> 1420 50 Battle Creek, Mich. Enquirer News, 38 W. State St.
<b>WCLS</b> 1310 100 Joliet, Ill. WCLS, Inc., 301 E. Jefferson St.	<b>WENR</b> 870 50000 Chicago, Ill. 222 N. Bank Drive
<b>WCNW</b> 1500 100 Brooklyn, N. Y. Arthur Faske, 1525 Pitkin Ave.	<b>WESG</b> 1090 1000 Elmira, N. Y. Mark Twain Hotel
<b>WCOA</b> 1340 500 Pensacola, Fla. San Carlos Hotel	<b>WEVD</b> 1300 500 New York, N. Y. Jewish Daily Forward, Hotel Claridge
<b>WCOC</b> 880 500 Meridian, Miss. Box 603	<b>WEW</b> 760 1000 St. Louis, Mo. St. Louis University, 221 N. Grand Blvd.
<b>WCRW</b> 1210 100 Chicago, Ill. Clinton R. White, 2756 Pine Grove Ave.	<b>WEXL</b> 1310 50 Royal Oak, Mich. 212 W. 6th St.
<b>WCSC</b> 1360 500 Charleston, S. C. Francis Marion Hotel	<b>WFAA</b> 800 50000 Dallas, Texas Baker Hotel
<b>WCSH</b> 940 1000 Portland, Me. 579 Congress St.	<b>WFAB</b> 1300 1000 New York, N. Y. Fifth Avenue Broadcasting Corp.
<b>WDAE</b> 1220 1000 Tampa, Fla. Tampa Times Co., Tampa Terrace	<b>WFAM</b> 1200 100 South Bend, Ind. South Bend Tribune, 225 W. Colfax Ave.
<b>WDAF</b> 610 1000 Kansas City, Mo. 1729 Grand Ave.	<b>WFAP</b> 1210 100 White Plains, N. Y. Hotel Roger Smith
<b>WDAG</b> 1410 1000 Amarillo, Texas Box 306	<b>WFBC</b> 1300 250 Greenville, S. C. Imperial Hotel
<b>WDAH</b> 1310 100 El Paso, Texas	<b>WFBE</b> 1200 100 Cincinnati, Ohio WFBE, Inc., Hotel Sinton
	<b>WFBG</b> 1310 100 Altoona, Pa. Gable Broadcasting Co. 12th Av. & 13th St.

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<b>WFBL 1360 1000</b>	<b>Syracuse, N. Y.</b>	<b>WHBY 1200 100</b>	<b>Green Bay, Wis.</b>
Onondaga Hotel		WHBY, Inc., Bellin Bldg.	
<b>WFBM 1230 1000</b>	<b>Indianapolis, Ind.</b>	<b>WHDF 1370 100</b>	<b>Calumet, Mich.</b>
48 Monument Circle		Box 643	
<b>WFBR 1270 500</b>	<b>Baltimore, Md.</b>	<b>WHDH 830 1000</b>	<b>Boston, Mass.</b>
7 St. Paul St.		Matheson Radio Co., 62 Boylston	
<b>WDFD 1310 100</b>	<b>Flint, Mich.</b>	<b>WHDL 1420 100</b>	<b>Tupper Lake, N. Y.</b>
Union Industrial Bldg.		Iroquois Hotel	
<b>WFEA 1430 600</b>	<b>Manchester, N. H.</b>	<b>WHEB 740 250</b>	<b>Portsmouth, N. H.</b>
Carpenter Hotel		Box 522, 39 Congress St.	
<b>WFI 560 500</b>	<b>Philadelphia, Pa.</b>	<b>WHEC 1430 500</b>	<b>Rochester, N. Y.</b>
WFI Broadcasting Co., 801 Market		WHEC, Inc., 40 Franklin St.	
<b>WFLA 620 1000</b>	<b>Clearwater, Fla.</b>	<b>WHEF 1500 100</b>	<b>Kosciusko, Miss.</b>
Box 119		417 W. Adams St.	
<b>WGAL 1500 100</b>	<b>Lancaster, Pa.</b>	<b>WHFC 1420 100</b>	<b>Cicero, Ill.</b>
WGAL, Inc., 8 W. King St.		WHFC, Inc., 6138 W. Cermak Road	
<b>WGAR 1450 500</b>	<b>Cleveland, Ohio</b>	<b>WHIS 1410 250</b>	<b>Bluefield, W. Va.</b>
WGAR Broadcasting Co., Hotel Statler		Bland St.	
<b>WGBB 1210 100</b>	<b>Freesport, N. Y.</b>	<b>WHJB 620 250</b>	<b>Greensburg, Pa.</b>
H. H. Carman, 64 S. Grove St.		Penna. Radio Supply House	
<b>WGBF 630 500</b>	<b>Evansville, Ind.</b>	<b>WHK 1390 1000</b>	<b>Cleveland, Ohio</b>
519 Vine St.		1311 Terminal Tower	
<b>WGBI 880 500</b>	<b>Scranton, Pa.</b>	<b>WHN 1010 1000</b>	<b>New York, N. Y.</b>
116 N. Washington Ave.		1540 Broadway	
<b>WGCM 1210 100</b>	<b>Gulfport, Miss.</b>	<b>WHO 1000 50000</b>	<b>Des Moines, Iowa</b>
Great Southern Hotel		Central Brdcastg. Co., 914 Walnut St.	
<b>WGCP 1250 1000</b>	<b>Newark, N. J.</b>	<b>WHOM 1450 250</b>	<b>Jersey City, N. J.</b>
609 Broad St.		2870 Boulevard	
<b>WGES 1360 500</b>	<b>Chicago, Ill.</b>	<b>WHP 1430 500</b>	<b>Harrisburg, Pa.</b>
128 N. Crawford Ave.		WHP, Inc., 216 Locust St.	
<b>WGH 1310 100</b>	<b>Newport News, Va.</b>	<b>WIBA 1280 1000</b>	<b>Madison, Wis.</b>
2813 Washington Ave.		111 King St.	
<b>WGL 1370 100</b>	<b>Fort Wayne, Ind.</b>	<b>WIBG 970 100</b>	<b>Glenside, Pa.</b>
F. C. Zieg, 213 W. Main St.		WIBG, Inc., Keswick Bldg.	
<b>WGLC 1370 100</b>	<b>Hudson Falls, N. Y.</b>	<b>WIBM 1370 100</b>	<b>Jackson, Mich.</b>
Colonial Display House		WIBM, Inc., 306 W. Michigan Ave.	
<b>WGN 720 50000</b>	<b>Chicago, Ill.</b>	<b>WIBU 1210 100</b>	<b>Poynette, Wis.</b>
WGN, Inc., Tribune Tower		Wm. C. Forrest, R. F. D. No. 3	
<b>WGNV 1210 100</b>	<b>Chester, N. Y.</b>	<b>WIBW 580 1000</b>	<b>Topeka, Kans.</b>
Peter Goelet (Orange County)		11th & Topeka Blvd.	
<b>WGPC 1420 100</b>	<b>Albany, Ga.</b>	<b>WIBX 1200 100</b>	<b>Utica, N. Y.</b>
Rylander Theatre Bldg.		WIBX, Inc., 1st Natl. Bank Bldg.	
<b>WGR 550 1000</b>	<b>Buffalo, N. Y.</b>	<b>WICC 600 250</b>	<b>Bridgeport, Conn.</b>
Rand Bldg.		Southern Conn. Broadcasting Corp.	
<b>WGST 890 250</b>	<b>Atlanta, Ga.</b>	<b>WIL 1200 100</b>	<b>St. Louis, Mo.</b>
Ansley Hotel		Melbourne Hotel	
<b>WGY 790 50000</b>	<b>Schenectady, N. Y.</b>	<b>WILL 890 250</b>	<b>Urbana, Ill.</b>
1 River Road		University of Illinois	
<b>WHA 940 2500</b>	<b>Madison, Wis.</b>	<b>WILM 1420 100</b>	<b>Wilmington, Del.</b>
University of Wisconsin		920 King St.	
<b>WHAM 1150 50000</b>	<b>Rochester, N. Y.</b>	<b>WIND 560 1000</b>	<b>Gary, Ind.</b>
100 Carlson Road		504 Broadway	
<b>WHAS 820 50000</b>	<b>Louisville, Ky.</b>	<b>WINS 1180 1000</b>	<b>New York, N. Y.</b>
300 W. Liberty St.		110 E. 58th St.	
<b>WHAT 1310 100</b>	<b>Philadelphia, Pa.</b>	<b>WIOD 1300 1000</b>	<b>Miami, Fla.</b>
Public Ledger Bldg.		Herald Bldg.	
<b>WHAZ 1300 500</b>	<b>Troy, N. Y.</b>	<b>WIP 610 500</b>	<b>Philadelphia, Pa.</b>
8th St.		Gimbel Bldg.	
<b>WHB 860 500</b>	<b>Kansas City, Mo.</b>	<b>WIS 1010 1000</b>	<b>Columbia, S. C.</b>
WEB Broadcasting Co., Scarritt Bldg.		Station WIS, Inc., 1811 Main St.	
<b>WHBC 1200 100</b>	<b>Canton, Ohio</b>	<b>WISN 1120 250</b>	<b>Milwaukee, Wis.</b>
Edw. P. Graham, 319 Tusc. St., W.		123 W. Michigan St.	
<b>WHBD 1370 100</b>	<b>Mount Orab, Ohio</b>	<b>WJAC 1310 100</b>	<b>Johnstown, Pa.</b>
F. P. Moier		WJAC, Inc., Locust St.	
<b>WHBF 1210 100</b>	<b>Rock Island, Ill.</b>	<b>WJAG 1060 1000</b>	<b>Norfolk, Neb.</b>
Hotel Harms		Norfolk Daily News	
<b>WHBL 1410 500</b>	<b>Sheboygan, Wis.</b>	<b>WJAR 890 500</b>	<b>Providence, R. I.</b>
Press Publishing Co., Press Bldg.		Outlet Co., Weybossett St.	
<b>WHBQ 1370 100</b>	<b>Memphis, Tenn.</b>	<b>WJAS 1290 1000</b>	<b>Pittsburgh, Pa.</b>
Brdcastg. Sta. WNBQ, Inc., Hotel Claridge		Chamber of Commerce Bldg.	
<b>WHBU 1210 100</b>	<b>Anderson, Ind.</b>	<b>WJAX 900 1000</b>	<b>Jacksonville, Fla.</b>
Anderson Broadcasting Corp., Box 816		City of Jacksonville	

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<b>WJAY 610 500</b> Cleveland, Ohio 1224 Huron Road	<b>WKZO 590 1000</b> Kalamazoo, Mich. John E. Fetzer, Burdick Hotel
<b>WJBC 1200 100</b> Bloomington, Ill. Kaskaskia Broadcasting Co.	<b>WLAC 1470 500</b> Nashville, Tenn. 159—4th Ave. No.
<b>WJBI 1210 100</b> Red Bank, N. J. 63 Broad St.	<b>WLAP 1420 100</b> Lexington, Ky. Main & Esplanade
<b>WJBK 1500 100</b> Detroit, Mich. 6559 Hamilton Ave.	<b>WLB 1250 1000</b> Minneapolis, Minn. University of Minnesota
<b>WJBL 1200 100</b> Decatur, Ill. Gushard Bldg.	<b>WLBC 1310 100</b> Muncie, Ind. D. A. Burton, Anthony Bldg.
<b>WJBO 1420 100</b> Baton Rouge, La. Baton Rouge Broadcasting Co., Inc.	<b>WLBK 1420 100</b> Kansas City, Kans. WLBK Broadcasting Co., Huron Bldg.
<b>WJBW 1200 100</b> New Orleans, La. C. C. Carlson, 2743 Dumaine St.	<b>WLBL 900 2500</b> Stevens Point, Wis. Wisconsin Dept. of Agriculture and Markets
<b>WJBY 1210 100</b> Gadsden, Ala. Gadsden Broadcasting Co., 112 N. 8th St.	<b>WLBW 1260 1000</b> Erie, Pa. Broadcasters of Pennsylvania, Inc.
<b>WJDX 1270 1000</b> Jackson, Miss. Lamar Life Bldg.	<b>WLBZ 620 500</b> Bangor, Me. Maine Broadcasting Co., Inc., 100 Main
<b>WJEJ 1210 100</b> Hagerstown, Md. Lovely Dame Bldg.	<b>WLEU 1420 100</b> Erie, Pa.
<b>WJEM 990 500</b> Tupelo, Miss. Britt A. Rogers, Jr.	<b>WLEY 1370 100</b> Lexington, Mass. Albert S. Moffat, Box D
<b>WJIM 1210 100</b> Lansing, Mich. Capital City Brdcastg. Co.	<b>WLIT 560 500</b> Philadelphia, Pa. 8th & Market Sts.
<b>WJJD 1130 20000</b> Chicago, Ill. WJJD, Inc., 201 N. Wells St.	<b>WLNH 1310 100</b> Laconia, N. H. 523 Main St.
<b>WJMS 1420 100</b> Ironwood, Mich. WJMS, Inc., St. James Hotel	<b>WLS 870 50000</b> Chicago, Ill. 1230 W. Washington Blvd.
<b>WJR 750 10000</b> Detroit, Mich. WJR, Inc., Fisher Bldg.	<b>WLTH 1400 500</b> Brooklyn, N. Y. 305 Washington St.
<b>WJSV 1460 10000</b> Washington, D. C. Shoreham Bldg.	<b>WLVA 1200 100</b> Lynchburg, Va. 915 Main St.
<b>WJTL 1370 100</b> Atlanta, Ga. Oglethorpe University	<b>WLW 700 50000</b> Cincinnati, Ohio 1329 Arlington St.
<b>WJW 1210 100</b> Akron, Ohio WJW, Inc., 41 S. High St.	<b>WLWL 1100 5000</b> New York, N. Y. 415 W. 50th St.
<b>WJZ 760 50000</b> New York, N. Y. 30 Rockefeller Plaza	<b>WMAL 630 250</b> Washington, D. C. 712—11th St., N. W.
<b>WKAQ 1240 1000</b> San Juan, P. R. Radio Corp. of Porto Rico, P. O. Box 358	<b>WMAQ 670 5000</b> Chicago, Ill. Merchandise Mart
<b>WKAR 1040 1000</b> East Lansing, Mich. Michigan State College	<b>WMAS 1420 100</b> Springfield, Mass. WMAS, Inc., 70 Chestnut St.
<b>WKBB 1500 100</b> East Dubuque, Ill. Richard W. Hoffman	<b>WMAZ 1180 1000</b> Macon, Ga. 211 Cotton Ave.
<b>WKBF 1400 500</b> Indianapolis, Ind. 540 N. Meridian St.	<b>WMBC 1420 100</b> Detroit, Mich. 7310 Woodward Ave.
<b>WKBH 1380 1000</b> LaCrosse, Wis. WKBH, Inc., 409 Main St.	<b>WMBD 1440 500</b> Peoria, Ill. 114 N. Madison St.
<b>WKBI 1420 100</b> Cicero, Ill. WKBI Inc., 6138 W. Cermak Road	<b>WMBG 1210 100</b> Richmond, Va. 914 W. Broad St.
<b>WKBN 570 500</b> Youngstown, Ohio 17 N. Champion St.	<b>WMBH 1420 100</b> Joplin, Mo. 1334 Roosevelt St.
<b>WKBO 1200 100</b> Harrisburg, Pa. Penn Harris Hotel	<b>WMBI 1080 5000</b> Chicago, Ill. 153 Institute Place
<b>WKBV 1500 100</b> Richmond, Ind. Wm. O. Knox, Box 308	<b>WMBO 1310 100</b> Auburn, N. Y. WMBO, Inc., Metcalf Bldg.
<b>WKBW 1480 5000</b> Buffalo, N. Y. Rand Bldg.	<b>WMBQ 1500 100</b> Brooklyn, N. Y. Paul J. Gollhofer, 95 Leonard St.
<b>WKBZ 1500 100</b> Muskegon, Mich. Karl L. Ashbacher & Sons	<b>WMBR 1370 100</b> Jacksonville, Fla. F. J. Reynolds, Carling Hotel
<b>WKEU 1500 100</b> LaGrange, Ga. Radio Station WKEU, 906 Hill St.	<b>WMC 780 1000</b> Memphis, Tenn. WMC, Inc., Hotel Gayoso
<b>WKFI 1210 100</b> Greenwood, Miss. J. Pat Scully, Box 302	<b>WMCA 570 500</b> New York, N. Y. 1697 Broadway
<b>WKJC 1200 100</b> Lancaster, Pa. 16 W. King St.	<b>WMEX 1500 100</b> Chelsea, Mass. The Northern Corp.
<b>WKOK 1210 100</b> Sunbury, Pa. 1150 N. Front St.	<b>WMMN 890 250</b> Fairmount, W. Va. A. M. Rowe, Inc., 325 Main St.
<b>WKRC 550 1000</b> Cincinnati, Ohio WKRC, Inc., Hotel Alms	<b>WMPC 1200 100</b> Lapeer, Mich. 81 Liberty St.
<b>WKY 900 1000</b> Oklahoma City, Okla. Plaza Court Bldg.	<b>WMT 600 500</b> Waterloo, Iowa 3rd & Lafayette Sts.

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<b>WNAC 1230 1000</b> Boston, Mass. 21 Brookline Ave.	<b>WPTF 680 5000</b> Raleigh, N. C. 324 Fayetteville St.
<b>WNAD 1010 500</b> Norman, Okla. University of Oklahoma	<b>WQAM 560 1000</b> Miami, Fla. Miami Brdcastg. Co., Inc., 327 N. E. 1st Ave.
<b>WNAX 570 1000</b> Yankton, S. D. House of Gurney, Inc., 2nd and Capital St.	<b>WQAN 880 250</b> Scranton, Pa. Scranton Times, 149 Penn Ave.
<b>WNBK 1500 100</b> Binghamton, N. Y. Arlington Hotel	<b>WQBC 1360 500</b> Vicksburg, Miss. Delta Broadcasting Co., Hotel Vicksburg
<b>WNBH 1310 100</b> New Bedford, Mass. 251 Union St.	<b>WQDM 1370 100</b> St. Albans, Vt. 42 N. Main St.
<b>WNBO 1200 100</b> Washington, Pa. 319 E. Beau St.	<b>WQDX 1210 100</b> Thomasville, Ga. Stevens Luke, 135 E. Jackson St.
<b>WNBK 1430 500</b> Memphis, Tenn. Memphis Broadcasting Co., Hotel DeVoy	<b>WRAC 1370 100</b> Williamsport, Pa. WRAC, Inc., 244 W. 4th St.
<b>WNBX 1260 500</b> Springfield, Vt. WNBX Broadcasting Corp., 39 Main St.	<b>WRWA 1310 100</b> Reading, Pa. Reading Broadcasting Co., 533 Penn St.
<b>WNBZ 1290 50</b> Saranac Lake, N. Y. Smith & Mace, 70 Broadway	<b>WRAX 920 250</b> Philadelphia, Pa. WRAX Broadcasting Co., 217 S. Broad St.
<b>WNEL 1290 500</b> San Juan, P. R. Box 1252	<b>WRBL 1200 100</b> Columbus, Ga. Royal Theatre Bldg.
<b>WNEW 1250 1000</b> Newark, N. J. Wodaam Corp., 1060 Broad	<b>WRBX 1410 250</b> Roanoke, Va. P. O. Box 2389
<b>WNOX 560 1000</b> Knoxville, Tenn. WNOX, Inc., Hotel Andrew Johnson	<b>WRC 950 500</b> Washington, D. C. National Press Bldg.
<b>WNRA 1420 100</b> Muscle Shoals, Ala. Kathryn Jones, P. O. Box 486, Sheffield, Ala.	<b>WRDO 1370 100</b> Augusta, Me. WRDO, Inc., Augusta House
<b>WNYC 810 500</b> New York, N. Y. Centre & Duane Sts.	<b>WRDW 1500 100</b> Augusta, Ga. Virgil V. Evans Co., 309 8th St.
<b>WOAI 1190 50000</b> San Antonio, Texas Southland Industries, Inc., 1038 Navarro	<b>WREC 600 500</b> Memphis, Tenn. WREC, Inc., Hotel Peabody
<b>WOCL 1210 50</b> Jamestown, N. Y. A. E. Newton, 840 N. Main St.	<b>WREN 1220 1000</b> Lawrence, Kans. Jenny Wren Co., 8th and Vermont St.
<b>WOI 640 5000</b> Ames, Iowa Iowa State College	<b>WRGA 1500 100</b> Rome, Ga. 10 Third Ave.
<b>WOKO 1430 500</b> Albany, N. Y. WOKO, Inc., Hotel Ten Eyck	<b>WRHM 1250 1000</b> Minneapolis, Minn. Wesley Temple Bldg.
<b>WOL 1310 100</b> Washington, D. C. American Broadcasting Co., Annapolis Hotel	<b>WRJN 1370 100</b> Racine, Wis. Racine Broadcasting Corp., Hotel Racine
<b>WOMT 1210 100</b> Manitowoc, Wis. Francis M. Kadow, Box 326	<b>WROK 1410 500</b> Rockford, Ill. 109 So. Water St.
<b>WOOD 1270 500</b> Grand Rapids, Mich. Grand Rapids Natl. Bank Bldg.	<b>WROL 1310 100</b> Knoxville, Tenn. Stuart Broadcasting Corp., 524 S. Gay
<b>WOPI 1500 100</b> Bristol, Tenn. 22nd & State Sts.	<b>WRR 1280 500</b> Dallas, Texas City of Dallas, Hilton Hotel
<b>WOR 710 5000</b> Newark, N. J. 147 Market St.	<b>WRUF 830 5000</b> Gainesville, Fla. State University
<b>WORC 1280 500</b> Worcester, Mass. Alfred F. Kleindienst, 60 Franklin St.	<b>WRVA 1110 5000</b> Richmond, Va. Larus & Bros Co., Inc., 22nd and Gary St.
<b>WORK 1000 1000</b> York, Pa. York Broadcasting Co., 15 S. Beaver St.	<b>WSAI 1330 1000</b> Cincinnati, Ohio Crosley Radio Corp., 1329 Arlington
<b>WOS 630 500</b> Jefferson City, Mo. State Highway Control, Capitol Bldg.	<b>WSAJ 1310 100</b> Grove City, Pa. Grove City College, 418 Poplar St.
<b>WOSU 570 750</b> Columbus, Ohio Ohio State University	<b>WSAN 1440 250</b> Allentown, Pa. WSAN, Inc., 39 10th St.
<b>WOV 1130 1000</b> New York, N. Y. 10 E. 42nd St.	<b>WSAR 1450 250</b> Fall River, Mass. Academy of Music Bldg.
<b>WOW 590 1000</b> Omaha, Neb. Woodmen of the World, 4th and Farnam	<b>WSAZ 1190 1000</b> Huntington, W. Va. WSAZ, Inc., P. O. Box 729
<b>WOWO 1160 10000</b> Fort Wayne, Ind. Main Auto Supply Co., 213 W. Main	<b>WSB 740 50000</b> Atlanta, Ga. Atlanta Journal, 7 N. Forsyth St.
<b>WPAD 1420 100</b> Paducah, Ky. 2201 Broadway	<b>WSBC 1210 100</b> Chicago, Ill. Gene T. Dyer, 1258 S. Michigan Ave.
<b>WPEN 920 100</b> Philadelphia, Pa. 22nd & Walnut Sts.	<b>WSBT 1360 500</b> South Bend, Ind. South Bend Tribune, 225 W. Colfax Ave.
<b>WPFB 1370 100</b> Hattiesburg, Miss. Otis P. Eure, Box 530	<b>WSEN 1210 100</b> Columbus, Ohio Columbus Broadcasting Corp., 144 S. High
<b>WPG 1100 5000</b> Atlantic City, N. J. Convention Hall	<b>WSFA 1410 500</b> Montgomery, Ala. Jefferson Davis Hotel
<b>WPHR 880 100</b> Petersburg, Va. WLBG, Inc., Medical Arts Bldg.	<b>WSGN 1310 100</b> Birmingham, Ala. R. B. Broyles, Tutwiler Hotel
<b>WPRO 630 100</b> Providence, R. I. Cherry & Webb Brdcastg. Co., 15 Chestnut	<b>WSIX 1210 100</b> Springfield, Tenn. 638 Tire & Vulcanizing Co.

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<b>WSM 650 50000</b> Nashville, Tenn. 301—7th Ave. No.	<b>WXYZ 1240 1000</b> Detroit, Mich. Madison Theatre Bldg.
<b>WSMB 1320 500</b> New Orleans, La. WSMB, Inc., Maison Blanche Bldg.	<b>W1XBS 1530 1000</b> Waterbury, Conn. American Republican, Inc.
<b>WSMK 1380 200</b> Dayton, Ohio S. M. Krohn, Jr., 4th and Main St.	<b>W2XR 1550 1000</b> Long Island City, N. Y. John V. L. Hogan
<b>WSOC 1210 100</b> Charlotte, N. C. WSOC, Inc., Box 730	<b>W6XAI 1550 1000</b> Bakersfield, Calif.
<b>WSPA 1420 100</b> Spartanburg, S. C. Virgil V. Evans, Ravenel and Avant St.	<b>W9XBY 1530 1000</b> Kansas City, Mo. First National Television Inc.
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<b>WTEL 1310 100</b> Philadelphia, Pa. Broad & Erie Ave.	<b>XEFB 1420 100</b> Monterrey, N. L. Jesus Quintanilla, P. O. Box 317
<b>WTFI 1450 500</b> Athens, Ga. 133 E. Washington St.	<b>XEFC 1310 100</b> Merida, Yuc. J. Molina Font, Calle 59, 517
<b>WTIC 1040 50000</b> Hartford, Conn. 26 Grove St.	<b>XEFE 1370 100</b> Laredo, Tams. R. T. Carranza, Km. 4 Carretera Laredo Mt.
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<b>WTOC 1260 1000</b> Savannah, Ga. Savannah Brdsg. Co., P. O. Box 704	<b>XEFO 940 5000</b> Mexico City, D. F. Reforma No. 137
<b>WTRC 1310 50</b> Elkhart, Ind. Truth Radio Corp., Hotel Elkhart	<b>XEFV 1210 100</b> Jaurez, Chih. J. Onofre Meza Ave., Tlaxcala 1013
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## The Summer DX

(Continued from page 36)

LR5, YV1BC and PP. I have one or more stations verified in each of the Canadian provinces and Newfoundland and in 45 of the 48 states. I use an 8-tube Edison with 130-foot aerial n. e. and s.w. with a water-pipe ground." This excellent report comes from Frank W. Hoxie, Box 15, South Orrington, Maine.

"I have a Midwest 16-34 receiver which I have been using for about five weeks. On the broadcast band, my log is 103 stations. I consider my best catches to be KTBS, CKCD, CKWX, KLRA, KGIW and KWK. WCKY and KSTP come in regularly every night." This report is from William C. Vestal, 1120 Cedar Ave., Redlands, Calif., who sends his log of 103 stations. These completely cover the U. S., Canada and Mexico. Although located in the extreme West his receiver is keeping him in touch with the entire continent.

## The Summer's Changes

(Continued from Front Cover)

1310 KIFH	Juneau, Alaska
1340 WLEC	Portland, Maine
1370 XEL	Saltillo, Coah.
1420 WAMC	Anniston, Ala.
	<b>NEW</b>
550 WSVA	Staunton, Va.
620 WHJB	Greensburg, Pa.
620	Pittsburgh, Pa.
840 XEXX	Mexico City, D. F.
890 CJJC	Sault Ste. Marie, Ont.
920 XEAA	Mexicall, B. C.
920 XEKL	Leon, Guan.
1050 CRCK	Quebec, Que.
1200	Ada, Okla.
1225 CMHK	Cruces, Cuba
1370 KCKW	Moneton, N. B.
1370 KSLM	Salem, Ore.
1530 W1XBS	Waterbury, Conn.
1530 W9XBY	Kansas City, Mo.
1550 W2XR	Long Island City, N. Y.
1550 W6XAI	Bakersfield, Calif.
	<b>LOCATION</b>
1200 WJBC	Bloomington, Ill., from LaSalle, Ill.
1210 WGCM	Guilford, Miss., from Mississippi City, Miss.
1260 KRGV	Weslaco, Texas, from Harlingen, Texas
1260 KWWG	Port Arthur, Texas, from Brownsville, Texas
1420 WEED	Rocky Mount, N. C., from Greenville, N. C.
1500 WKBZ	Muskegon, Mich., from Ludington, Mich.
	<b>CALLS</b>
920 KVOB	Denver, Colo., from KFXF
1210 KWTN	Watertown, S. D., from KGCR
1370 KRKO	Everett, Wash., from KFBL
1370 WAGF	Dothan, Ala., from WHET
1420 WGPC	Albany, Ga., from WENC

# AROUND *the* CLOCK on the SHORT WAVES

MIDNIGHT TO NOON (EST)

GMT	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	W1XAZ W3XAL W3XAU W8XK W9XF	GSB GSB VK2ME W1XAZ W9XF	GSB GSB VK2ME	RV15	DJA DJB HVJ PK1WK RV15 VK3LR	DJA DJB HVJ RV15 VK3ME VK3LR VK3ME	HSJ RV15 VK2ME HX PHI Rabat RV15 PHI VK2ME ZGE VK3LR W1XAZ ZHI	GSF GSB GSF HX PHI Rabat RV15 PHI VK2ME ZGE VK3LR W1XAZ ZHI	DJA DJB DJB GSF GSB HX PHI Rabat VE9GW VK2ME W1XAZ W3XAL	DJA DJB GSE GSF PHI Pont. VE9GW W1XAZ W3XAL	DJA DJB GSE GSF Pont. VE9GW W1XAZ W3XAL	GSB GSE I2RO Pont. VE9GW W1XAL W3XE W3XAL W8XK W8XK W9XAA

NOON TO MIDNIGHT (EST)

GMT	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	1:00	2:00	3:00	4:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	DJC DJD GSB GSE I2RO Pont. VE9GW W2XE W3XAL W3XAU W3XL W8XK W9XAA	DJC DJD GSB GSD I2RO ORX OXY Pont. VE9GW W1XAZ W3XAL W3XAU W3XL W8XK W9XAA	DJC DJD GSA GSB GSD I2RO ORX OXY Rabat RV59	DJC DJD GSA GSB I2RO OXY Pont. Rabat RV59 VE9GW W2XAD W2XE W3XAU W3XL W8XK W9XAA W9XAA YV3RC	CT1AA DJA DJD EAQ GSA GSB HBL HBP HIZ HJ1ABB I2RO OXY Pont. RV59 VE9GW VE9HX W1XAL W3XAL W3XAU W8XK W9XF W9XAA YV2RC YV3RC	CT1AA DJA DJD EAQ GSA GSB HBL HBP HIZ HJ1ABB I2RO OXY Pont. RV59 VE9GW VE9HX W1XAL W3XAL W3XAU W8XK W9XF W9XAA YV2RC YV3RC	COC CP5 CT1AA DJA DJD GSA GSC HJ1ABB 4ABE HJ4ABE HBL HJ1ABB HJ1ABB HJ1ABB OXY Pont W1XAL W2XAF W2XE W3XAL W8XK W9XAA W9XF W8XK W9XAF YV2RC YV3RC	COC CP5 CT1AA DJA DJD GSA GSC HJ1ABB 4ABE HJ4ABE HBL HJ1ABB HJ1ABB HJ1ABB OXY Pont W1XAL W2XAF W2XE W3XAL W8XK W9XAA W9XF W8XK W9XAF YV2RC YV3RC	CJRO CJRXX DJC DJD HCJB HIX HJ1ABB HC2RL HIX HJ1ABB H3ABD PRADO VE9GW VE9HX W1XAL W2XAF W2XE W3XAL W8XK W9XAA W9XF XETE YV2RC YV3RC	CJRO CJRXX CP5 DJC DJD HCJB HIX HJ1ABB H3ABD PRADO VE9GW VE9HX W1XAL W2XAF W2XE W3XAL W8XK W9XAA W9XF XETE YV2RC YV3RC	CJRO CJRXX CP5 DJC DJD HC2RL HIX HJ1ABB H3ABD PRADO VE9GW VE9HX W1XAL W2XAF W2XE W3XAL W8XK W9XAA W9XF XETE YV2RC YV3RC	CJRO CJRXX Pont. VE9DN W1XAZ W3XAL W3XAU W8XK W9XAA W9XF XETE



# 100 Best Shortwave Stations by Call Letters

Frequencies are given in megacycles and the time is Eastern Standard. In this list, the location of the transmitter is given.

Amateur phones are heard between 1.875 and 2.000 megs. 3.900 and 4.000 megs. 7.000 and 7.300 megs. (Foreign only). 14.150 and 14.250 megs.	G8B, Daventry, England, 9.510. 1-5:30 p.m.; 11:30 p.m. to 1:30 a.m.	HJ3ABD, Bogota, Colombia, 7.406- "Colombia Broadcasting." 6-9 p.m. daily.
Broadcast Pickup stations: 1.606; 1.622; 1.646; 2.102; 2.150; 2.190; 2.390.	G8C, Daventry, England, 9.585. 6-8 p.m.	HJ3ABF, Bogota, Colombia, 6.200. "La Voz de Bogota." Daily 7-11 p.m.
CGA4, Drummondville, P. Q., 9.332. Phones London.	G8D, Daventry, England, 11.750. 6-8 p.m.; 11:30 p.m. to 1:30 a.m.	HJ4ABE, Medellin, Colombia, 5.900. 7-11 p.m.
CJRO, Middlechurch, Man., 6.150. Relays Canadian Radio Com. programs, 8-11 p.m. and 11:30 to midnight.	G8E, Daventry, England, 11.865. 10:45 a.m. to 12:45 p.m.	HVJ, Vatican City, 15.120. 5-5:15 a.m. daily except Sunday. Occasionally from 10-10:30 a.m.
CJRX, Middlechurch, Man., 11.720. Same schedule as CJRO, q. v.	G8F, Daventry, England, 15.140. 8:45 a.m. to 12:45 p.m.; 1-5:30 p.m.	I2RO, Cecchignola, Italy, 11:30 a.m. to 12:30 p.m.; 1:15 to 6 p.m. "Radio Roma-Napoli."
COC, Havana, Cuba, 6.010. 4-6 p.m. daily.	G8G, Daventry, England, 17.790. 6-10:45 a.m.	JVE, Nazaki, Japan, 15.650. Phone.
CP5, La Paz, Bolivia, 6.080, 6:30 to 8 p.m. 9:20, 7:30-10:30 p.m.	G8H, Daventry, England, 21.470. 6-8:30 a.m.	JVL, Nazaki, Japan, 6.750. Phones California.
CT1AA, Lisbon, Portugal, 9.600. Tues., Fri., 4:30-7 p.m.	HBL, Prangins, Switzerland, 9.595. Sat. 5:30-6:15 p.m.	JVM, Nazaki, Japan, 10.740. Phones California.
DJA, Zeesen, Germany, 9.560. Sun., 4-5:30 a.m.; daily, 8-11 a.m. and 5-8:15 p.m.	HBP, Prangins, Switzerland, 7.797. Sat. 5:30-6:15 p.m.	JVN, Nazaki, Japan, 10.660. Phones England.
DJB, Zeesen, Germany, 15.200. 12:30-2:30 a.m.; 8-11 a.m.	HC2RL, Guayaquil, Ecuador, 6.659. Tues. 9:14-11:14 p.m.; Sun. 5:45-7:45 p.m.	JVQ, Nazaki, Japan, 7.470. Phone.
DJC, Zeesen, Germany, 6.020. Noon to 4 p.m. and 8:45 to 10:30 p.m.	HIX, Santo Domingo, D. R., 5.948. Tues. and Fri., 8-10 p.m.	JVS, Nazaki, Japan, 15.620. Phone.
DJD, Zeesen, Germany, 11.760. Noon to 4 p.m. and 5-10:30 p.m.	HILA, Santiago de los Caballeros, D. R., 7:30-9:30 p.m., and Special DX programs at 1 a.m. Sundays.	JVT, Nazaki, Japan, 6.680. Phone.
EAQ, Aranjuez, Spain, 9.862. 5:30-7 p.m.; Sat. noon to 2 p.m.	HJA2, Bogota, Colombia, 5.825.	JYK, Kemikawa-Cho, Chiba-Ken, Japan, 13.610. 4-8 a.m.
GSA, Daventry, England, 6.050.	HJA3, Barranquilla, Colombia, 12.830	JYM, Kemikawa-Cho, Chiba-Ken, Japan, 11.660. 4-8 a.m.
	HJB, Bogota, Colombia, 14.930.	JYR, Kemikawa-Cho, Chiba-Ken, Japan, 7.880. 4-8 a.m.
	HJ1AB, Barranquilla, Colombia, 6.447. 5-10 p.m.	JYS, Kemikawa-Cho, Chiba-Ken, Japan, 15.620. 4-8 a.m.
	HJ2ABC, Cucuta, Norte de Santander, Colombia, "La Voz de Cucuta," 5.975 megs. 6-9 p.m. daily except Sunday.	JYT, Kemikawa-Cho, Chiba-Ken, Japan, 15.762. 4-8 a.m.
		KAY, Manila, P. I., 14.980. Phones Dixon.

## KIND WORDS *and* WELCOME

"I am a constant reader of RADEX and I get more enjoyment out of it than any other radio magazine."

D. A. Chilton, P. O. Box 310, Draper, N. C.

"I surely would hate to miss even one copy of RADEX or the DX Log of the World. They are the best books of their kind."

David H. Beverly, 132 Chestnut Ave., Long Beach, Calif.

"The finest radio journal I have ever seen." F. R. Crowder, 12, Belle Vue Place, Belle Vue Road, Leeds 3, Yorkshire, England.

"I enjoy every page of RADEX. I would hate to think of ever having to do without it."

M. R. Billings, 785a Querbes Ave., Outremont, Montreal, P. Q.

"I can't tell you how much I enjoy having such a magazine to help me in my hobby. It is invaluable."

Nathan Handler, 642 Ave. C, Bayonne, N. J.

"I have to use two car tickets and an hour's time to get my copy of RADEX each month. When you said 'it doubles the enjoyment of radio' you told the whole truth."

Patrick J. Burke, 3149 Rosemont Blvd., Rosemont, Quebec.

"RADEX is indispensable in our home. It is the only magazine we have found which gives a reliable account of radio in all its branches."

Albert Sandham, 99 Page St., St. Catherines, Ont.

"The Governor of one Carolina remarked to the Governor of the other, 'It's a long time between drinks.' I want to change that historic remark to 'It's a long time between RADEX.'"

James T. Spalding, 2012 Alexander, Louisville, Ky.

"Have been wanting to tell you just how much I have enjoyed your magazine. I owned an old model Philco with which I was not entirely satisfied. Then you came out with a plea that folks should buy a new set and help to stimulate trade. Now I have a new All-Wave Philco."

Chas. A. Steele, 3119 Seventh St., Port Arthur, Texas.

"The new radio season is at hand for which RADEX is indispensable. I would be lost without it."

Herbert Van Duyne, P. O. Box 88, Towaco, N. J.

KKH, Kahuku, T. H., 7.520. Phones Dixon.

KFZ, Main Base, Little America, 5.740; 6.650; 6.660; 6.670; 8.820; 8.840; 11.850; 13.185; 13.200; 13.245; 13.260.

KEP, Kahuku, T. H., 16.030. Phones Dixon.

KWO, Dixon, Calif., 15.415. Phones Hawaii and Manilla.

KWU, Dixon, Calif., 15.355. Phones Japan.

KWX, Dixon, Calif., 7.610. Phones Hawaii.

LSX, Monte Grande, Argentina, 10.350. Broadcasts 3-4 and 8-9 p.m. daily; Phones New York and Byrd.

PHI, Hilversum, Netherlands, 17.775. 7-10:30 a.m.

Police Stations, on frequencies: 1.596; 1.634; 1.642; 1.658; 1.666; 1.674; 1.682; 1.706; 1.712; 2.382; 2.406; 2.414; 2.416; 2.422; 2.430; 2.442; 2.450; 2.452; 2.458; 2.466; 2.474; 2.482; 2.490.

PRADO, Riobamba, Ecuador, 6.618. Thurs., 9-11:30 p.m.

Radio Coloniale, Fontoise, France, 11.711, 3-6 p.m.; 6:15-9 p.m.; 10 p.m. to midnight. 11.898, 3-6 p.m.; 15.234, 8-11 a.m.

RKI, Moscow, U.S.S.R., 7.520. Phones USA. (Replaces RNE temporarily).

RNE, Moscow, U.S.S.R., 12.000. Temporarily off the air.

RV15, Khabarovsk, U.S.S.R., 4.273. 3-9 a.m.

RV59, Moscow, U.S.S.R., 5.996. 3-6 p.m.

TGW, Guatemala City, Guatemala, 5.940. Supposed to commence tests soon.

VE9BJ, St. John, N. B., 6.090. Irregular.

VE9DN, Drummondville, P. Q., 6.005.

VE9GW, Bowmanville, Ont., 6.095. Fri., Sat., 8-noon; Sun., noon to 9 p.m.; other days, 2-11 p.m. Relays CRCT and Canadian Radio Commission programs.

VE9HX, Halifax, N. S., 6.110. 5-11 p.m.

VK2ME, Pennant Hills, Australia, 9.585. Mid. to 2 a.m. and 4:30-8:30 a.m., Sundays only.

VK3LR, Melbourne, Australia, 9.580. Daily exc. Sun., 4-8 a.m.

VK3ME, Braybank, Australia, 9.503. Wed., 5-6:30 a.m.; Sat. 5-7 a.m.

WOO, Ocean Gate, N. J., 4.273; 4.753; 8.560; 12.840. Phones Ships.

W1XAL, Boston, Mass., 6.040. Irregular. 15.250. 10 a.m. to 1 p.m. Sunday.

W1XAZ, Mills, Mass., 9.570. 6:30-10:30 a.m.; 1:30-3:30 p.m.; 6 p.m. to 2 a.m.

W2XAD, Schenectady, N. Y., 15.340. Sun., Mon., Wed., Fri., 4-5 p.m.

W2XAF, Schenectady, N. Y., 9.530. 7:40-11 p.m.

W2XE, Wayne, N. J., 6.120. 6-11 p.m. 11.830. 3-5 p.m. 15.270. 11 a.m. to 1 p.m.

W3XAL, Boundbrook, N. J., 6.100. Mon., Wed., Sat., 5 p.m. to 1 a.m. 17.780. Daily exc. Fri., 8 a.m. to 2 p.m.

W3XAU, Newton Sq., Pa., 6.060. 8 p.m. to 1 a.m. 9.590. Noon to 6 p.m.

W3XL, Boundbrook, N. J., 17.310. Fri., 11 a.m. to 5 p.m.

W4XB, Miami, Fla., 6.040. 4 p.m. to 1 a.m.; (Not heard now, probably off the air).

W8XXL, Mason, Ohio, 6.060. Irregular.

W8XX, Saxonburg, Pa., 6.140. 4:30 p.m. to 12:30 a.m. 11.870. 4:30-10 p.m. 15.210. 10 a.m. to 5:15 p.m.

W9XAA, Chicago, Ill., 6.080. Sun., 11:30 a.m. to 9 p.m. Tues., Thur., Sat., 4-12 p.m. Mon., Wed., Fri., 4:30-7 p.m.

W9XF, Downer's Grove, Ill., 6.100. Daily exc. Sat. and Sun., 4:30-8 p.m.; 9:30 p.m. to 2 a.m. Sunday, 4:30-7 p.m. and 9 p.m. to 2 a.m.

XEBT, Mexico City, D. F., 6.010. Relays XEB, commencing at 10 a.m.

XETE, Mexico City, D. F., 9.600. 6:30 p.m. to midnight.

XGI, Shanghai, China, 7.960.

XGN, Shanghai, China, 16.380.

XGO, Shanghai, China, 7.575.

YVQ, Maracay, Venezuela, 6.672.

YV2RC, Caracas, Venezuela, 6.112. 5:15-10 p.m.

YV3RC, Caracas, Venezuela, 6.150. 5-10 p.m.

YV5RMO, Maracay, Venezuela, 6.070. and 9.600.

ZFB, St. George, Bermuda, 10.060.

ZFS, Nassua, Bahamas, 4.513.

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The May-June-July Edition of the DX Radio Log of the World was devoted entirely to the short waves. All principal stations of the world listed three ways.

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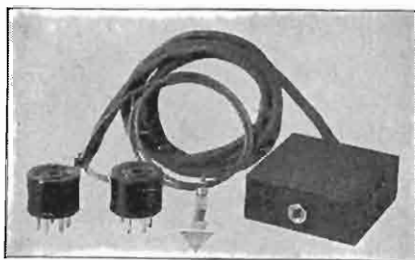
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# For Real DX Work USE HEAD PHONES

Loud Speaker volume brings out the static. Use phones and keep the signals above the noise level.

## THE PERFECT PHONE ADAPTER

may be used on any receiver without any change in the wiring or in the load or balance of the set. Not necessary to remove and put back tubes. Socket adapters go under the power tubes; the little clip goes to the ground and the Adapter is installed. Pushing in the phone-plug automatically switches the signals to phones and silences speaker. Pulling it out returns the set to loud speaker operation. The jack-box may be placed in back of set or screwed underneath out of sight and yet convenient for instant use.



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*With a few circuits, it is necessary to use a small B battery in the ground lead to provide grid bias. There is no drain on the battery and it should last indefinitely.*

We now have a model of the Adapter for midget sets using 5-, 6-, or 7-prong tubes which uses the volume of all the tubes. It is not suitable for power tubes with four prongs.

*When ordering give make and model of your receiver and number and type of power tubes. It will help us if you can send diagram of your set.*

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CLEVELAND, OHIO

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<p><b>World-Wide Entertainment</b>                  Hollywood, Calif. "I am amazed any one Midwest radio, I feel, could give a better reception than being an entertainment item that may exceed the world as a whole."  <i>Gene Harlow</i>                  (Hollywood-Magazine Star)</p>	<p><b>Amazing All-Wave Performance</b>                  Hollywood, Calif. "I feel Midwest is the best I have ever used. It gives me super long-range reception and super radio pleasure. Its performance on all five wave bands exceeds all I have ever heard of."                  RICHARD ARLEN                  (Hollywood-Famous Player)</p>	<p><b>Thrilling Foreign Reception</b>                  Hollywood, Calif. "I feel that I could not say Midwest is the best, but I really appreciate what radio reception was. It enables me to bring in distant foreign stations so clearly on local programs."                  (Hollywood Star) <i>Clayton Gable</i></p>	<p><b>Better Foreign Reception</b>                  Hollywood, Calif. "I am quite impressed with the Midwest. Many friends who have heard it are delighted with its performance. It brings in, wide and a double, the best all-wave reception I have ever heard of."                  (Hollywood Star) <i>Clayton Gable</i></p>
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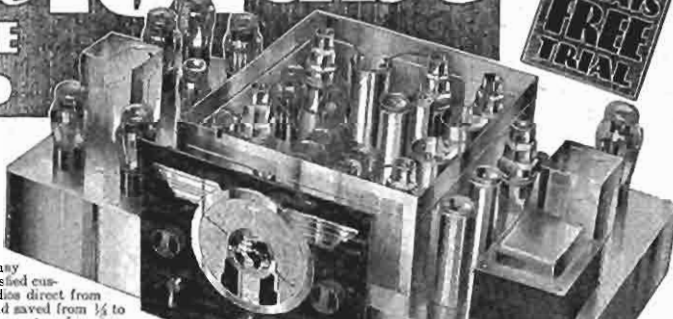
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the world's most distant stations. Thrill to the chimes of Big Ben from GSH, London, England... tune in on the "Marsolimit" from FVA, Pointoise, France... Hear sparkling music from EAO, Madrid, Spain... delight in lively tunes from YVBC, Caracas, Venezuela... listen to the call of the Kookaburra bird, from VK2ME, Sydney, Australia, etc. Send today for money-saving facts!

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