

THE DECEMBER, 1934

# RADIO IN DEX

THE ALL-WAVE RADIO MAGAZINE



25<sup>c</sup>

Analyzing the 1935 Sets  
A Study of the Power Unit  
Calibrating the S. W. Dials  
The Long Wave Broadcasters  
Addresses of S. W. Stations

No. 84



## **"Boy, What a Christmas Present"**

**is what your  
father, brother,  
son or "boy  
friend" would  
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(50c more in Canada and West  
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1401 Prospect Ave.

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December 1, 1934



# RADIO INDEX

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ELEVENTH YEAR

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# THE DECEMBER DX CALENDAR

of frequency checks and 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	Glouce Bay
12:00-1:00	WFLA	620 1000	Clearwater
	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	WFSA	1420 100	Spartanburg
6:00-7:00	KFBI	1050 5000	Ablene
<b>Sunday Mornings</b>			
<b>December 2</b>			
1:00-2:00	WWAE	1200 100	Hammond
2:00-3:30	KVOA	1260 500	Tucson
2:00-4:00	CHAB	1200 100	Moose Jaw
3:00-3:20	KLCN	1290 100	Blytheville
3:30-3:50	KXYZ	1440 250	Houston
3:50-4:10	KTUL	1400 250	Tulsa
4:00-4:20	KPAC	1260 500	Pt. Arthur
4:10-4:30	KGDY	1340 250	Huron
4:20-4:40	KRGV	1260 500	Weslaco
4:50-5:10	KARK	890 250	Little Rock
5:00-5:20	KGKO	570 500	Wichita Falls
5:20-5:40	WNAD	1010 500	Norman
5:40-6:00	KUOA	1260 1000	Fayetteville
<b>December 9</b>			
2:00-3:00	PTT	859 15000	Strasbourg
	LR5	830 2500	Buenos Aires*
3:00-4:00	WOB	630 500	Jefferson City
	WBOQ	860 50000	New York
<b>December 16</b>			
12:00-1:00	WHO	1000 50000	Des Moines
1:00-1:30	WSUI	880 500	Iowa City
1:00-3:00	WHAZ	1300 500	Troy
1:30-2:00	KFNF	890 500	Shenandoah
2:00-2:30	WOI	640 50000	Ames
2:00-3:00	KFJB	1200 100	Marshalltown
2:30-3:00	KMA	930 500	Shenandoah
3:00-3:30	WMT	600 500	Waterloo
	KSO	1320 500	Des Moines
3:30-4:00	KSCJ	1330 1000	Sioux City
	KGCA	1270 100	Decorah
4:00-4:30	KWLC	1270 100	Decorah
	KFGQ	1370 100	Boone
4:30-5:00	KOIL	1260 1000	Council Bluffs
5:00-5:30	KWCR	1430 250	Cedar Rapids
	WOC	1370 100	Davenport
<b>December 9, 23</b>			
2:00-5:00	VOGY	840 400	St. John's
<b>December 23</b>			
1:00-1:30	WKY	900 1000	Oklahoma City
2:00-3:00	KGEK	1200 100	Yuma
2:30-4:30	CKBI	1210 100	Prince Albert
<b>December 2, 9, 16, 23, 30</b>			
12:00-1:00	WGAR	1450 500	Cleveland
12:00-2:00	WGES	1360 500	Chicago
12:00-3:00	CMCD	955 150	Havana
1:00-1:15	KOMA	1480 5000	Oklahoma City
2:00-4:00	XEMO	865 2500	Tijuana
2:00-5:00	WMMN	890 250	Fairmont
2:00-6:00	TGW	565 10000	Guatemala
3:00-5:00	CKOV	630 100	Kelowna
	CFCT	1450 75	Victoria
4:00-5:00	CFJC	850 100	Kamloops
<b>Monday Mornings</b>			
<b>December 3</b>			
2:00-2:20	WCNW	1500 100	Brooklyn
	WJAC	1310 100	Johnstown
2:10-2:30	WFAS	1210 100	White Plains
	WRAC	1370 100	Williamsport
2:20-2:40	WNBF	1500 100	Binghamton
	WCHS	580 500	Charleston
2:30-2:50	WAGM	1420 100	Presque Isle
	WBTM	1370 100	Danville
2:40-3:00	WLVA	1200 100	Lynchburg
2:50-3:10	WHDL	1420 100	Tupper Lake
	WHAT	1310 100	Philadelphia
3:00-3:20	WCAX	1200 100	Burlington
3:10-3:30	WSYB	1500 100	Rutland
	WTEL	1310 100	Philadelphia
3:20-3:40	WBK	1200 100	Utica
3:30-3:50	WQDM	1370 100	St. Albans
	WKOK	1210 100	Sunbury
3:40-4:00	WMBO	1310 100	Auburn
3:45-4:00	KUJ	1370 100	Walla Walla
3:50-4:10	WGLC	1370 100	Hudson Falls
	WBAX	1210 100	Wilkes-Barre
4:00-4:20	WCAD	1220 500	Canton
	KOOS	1200 250	Marshfield
4:10-4:30	WBBL	1210 100	Richmond
	KGBU	900 500	Ketchikan
4:20-4:40	WNBZ	1290 50	Saranac Lake
	WBRE	1310 100	Wilkes-Barre
	KGVO	1200 100	Missoula
4:30-4:50	WNBO	1200 100	Washington
	KPQ	1500 100	Wenatchee
4:40-5:00	WRAW	1310 100	Reading
	KGY	1210 100	Olympia
4:50-5:10	WAAT	940 300	Jersey City
	KRKO	1370 50	Everett
5:00-5:20	WSYR	570 250	Syracuse
	KFXD	1200 100	Nampa
5:10-5:30	KVL	1370 100	Seattle
	WCAC	600 500	Storrs
5:20-5:40	KGEZ	1310 100	Kalispell
5:30-5:50	KUJ	1370 100	Walla Walla
5:40-6:00	KGCX	1310 100	Wolf Point
5:50-6:10	KFQD	780 250	Anchorage
6:00-6:20	KSEI	900 250	Pocatello
6:10-6:30	KVOS	1200 100	Bellingham
6:20-6:40	KIT	1310 100	Yakima
6:30-6:50	KRSC	1120 100	Seattle
6:40-7:00	KXRO	1310 100	Aberdeen
6:50-7:10	KFIO	1120 100	Spokane
7:00-7:20	KFJ1	1210 100	Klamath Falls
7:10-7:30	KMED	1310 100	Medford
7:20-7:40	KORE	1420 100	Eugene
<b>December 10</b>			
2:00-3:00	LR5	830 25000	Buenos Aires
<b>December 24</b>			
3:00-5:00	XED	1160 500	Guadalajara
<b>December 31</b>			
2:00-2:15	WAVE	940 1000	Louisville
<b>December 3, 10, 17, 24, 31</b>			
12:00-3:00	WCNW	1500 100	Brooklyn
1:00-2:30	XEX	1310 125	Monterrey
2:30-4:30	CKMO	1410 100	Vancouver
4:30-5:00	WNBO	1200 100	Washington
<b>Tuesday Mornings</b>			
<b>December 4</b>			
2:00-2:20	WQDX	1210 100	Thomasville
2:10-2:30	WBHS	1200 100	Huntsville
2:20-2:40	WHBQ	1370 100	Memphis
2:30-2:50	WEED	1420 100	Rocky Mount
2:40-3:00	WOPT	1500 100	Bristol
2:50-3:10	WSMB	1320 500	New Orleans
3:00-3:20	WMBR	1370 100	Jacksonville
3:10-3:30	WNRA	1420 100	Muscle Shoals
3:20-3:40	WSJS	1310 100	Winston-Salem
3:30-3:50	WHEF	1500 100	Kosciusko
3:40-4:00	KMLB	1200 100	Monroe
3:50-4:10	WAGF	1370 100	Dothan
4:00-4:20	KWG	1200 100	Stockton
4:10-4:30	WTJS	1310 100	Jackson
	KPJM	1500 100	Prescott
4:20-4:40	WPFB	1370 100	Hattiesburg
	KERN	1370 100	Bakersfield
4:30-4:50	WGPC	1420 100	Albany
	KXO	1500 100	El Centro
4:40-5:00	WBNO	1200 100	New Orleans
	KIEM	1210 100	Eureka

(Continued on page 4)

# Analyzing *the* 1935 MIDWEST

• • • *By* B. FRANCIS DASHIELL

**T**HE Midwest 1935 model 16 receiver is a new super-all-wave set. It is replete with many interesting and efficient features. This 16 tube precision-built superheterodyne, designed to cover a range between 9 and 2400 meters, is the culmination of fifteen years of radio engineering.

The receiver has sixteen tubes arranged in a straight superheterodyne circuit. Midwest engineers long ago determined not to use dual-purpose tubes in order to conserve space. The first tube is a radio-frequency amplifier, a 6D6 type; another 6D6 is the first detector; the oscillator, a 6D6; first and second intermediate-frequency amplifiers, two 6D6s; second detector, a 76; first audio-amplifier, another 76; audio driver tube, 2A5, parallel push-pull audio amplifier, four -45s; rectifier, a 5Z3; automatic volume control, 6B7; automatic tone compensator, 6C6; and the pilot-light dimmer or tuning indicator, a 76 type tube.

## Covers Radio Spectrum

The new Midwest provides more than so-called all-wave reception. The large airplane dial is divided into five scales, for the tuning circuit of the set is separated into five wave bands. The first scale, marked "E", covers the long waves universally used in Europe, and also for American airplane and weather reports. Its limits are from 860 meters up to 2400 meters (350 to 125 kilocycles).

The second scale, marked "A", covers the North American broadcast band, from 200 meters up to 565 meters (1500 to 530 kilocycles).

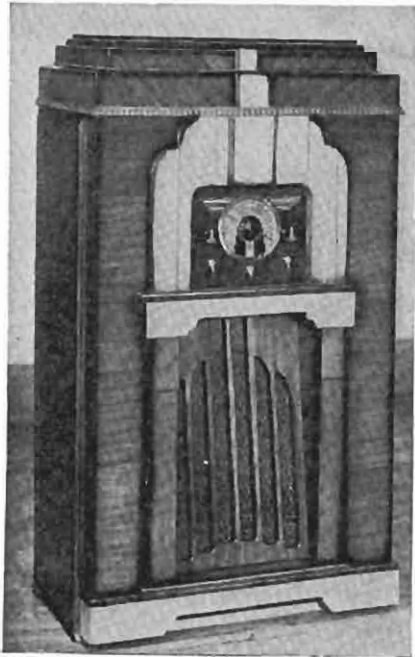
The third, or "L" scale, is the longer of the short-wave band. It embraces the police, airplane, television, commercial and amateur stations, that operate between 75 and 200 meters (4000 to 1500 kcs.)

Scale "M" is reserved mostly for foreign short-wave broadcasting, but it also includes American short-wave relay, ship, aviation and amateur stations. The band is between 25 and 75 meters (12,000 down to 4,000 kilocycles).

The fifth, or last, scale, covers the very short waves, from 9 to 25 meters (33,000 to 12,000 kilocycles). In this final band are grouped certain foreign amateur, ship, commercial and experimental stations.

## Vernier Dial Action

The dial of the Midwest 16 receiver is calibrated so the user can identify the proper station either by frequency in kilocycles, in megacycles, and, for short waves, in



*The 1935 Midwest Receiver*

4:50-5:10	WROL	1310	100	Knoxville
	KLS	1440	250	Oakland
5:00-5:20	WDNC	1500	100	Durham
	KGIX	1420	100	Las Vegas
5:10-5:30	WJBW	1200	100	New Orleans
	KGMB	1320	250	Honolulu
5:20-5:40	WAML	1310	100	Laurel
	KRE	1370	100	Berkeley
5:30-5:50	WSIX	1210	100	Springfield
	KGU	750	2500	Honolulu
5:40-6:00	KGAR	1370	100	Tucson
5:50-6:10	KCRJ	1310	100	Jerome
6:00-6:20	KGDM	1100	250	Stoekton
6:10-6:30	K SUN	1200	100	Lowell
6:20-6:40	KTRB	740	250	Modesto

3:00-4:00	CP4	1040	10000	La Paz
1:01-1:09	CFCY	630	500	Charlottetown
1:00-2:00	CMJP	1360	75	Moron

**Wednesday Mornings**

<b>December 11</b>				
1:00-2:00	CP4	1040	10000	La Paz
<b>December 18</b>				
1:01-1:09	CFCY	630	500	Charlottetown
<b>December 25</b>				
1:00-2:00	CMJP	1360	75	Moron
<b>December 5</b>				
1:00-2:00	KFYR	550	1000	Bismarck
	CMJP	1360	75	Moron
1:30-2:00	WHBL	1410	500	Sheboygan
1:30-2:30	WSUI	880	500	Iowa City
2:00-2:20	WEBR	1310	100	Buffalo
2:10-2:30	WPEN	920	100	Philadelphia
2:20-2:40	WSAJ	1310	100	Grove City
2:30-2:50	WHIS	1410	250	Bluefield
2:40-3:00	WFPG	1310	100	Altoona
2:50-3:10	WPHR	880	100	Petersburg
3:00-3:20	WDAS	1370	100	Philadelphia
	WKBB	1500	100	East Dubuque
3:10-3:30	WRBX	1410	250	Roanoke
	WHBC	1200	100	Canton
	KGHW	1420	100	Alamosa
3:20-3:40	WMBG	1210	100	Richmond
	WTRC	1310	50	Elkhart
	KICA	1370	100	Clovis
3:30-3:50	WBCM	1410	500	Bay City
	KGHI	1200	100	Little Rock
	WSWS	1370	50	Buffalo
3:40-4:00	WGH	1310	100	Newport News
	WGBF	630	500	Evansville
	KIDW	1420	100	Lamar
3:50-4:10	WOGL	1210	50	Jamestown
	WROK	1410	500	Rockford
	KBTM	1200	100	Jonesboro
4:00-4:20	WQAN	880	250	Seranton
	WBOW	1310	100	Terre Haute
	KFBB	1280	1000	Great Falls
4:10-4:30	WHEC	1430	500	Rochester
	WOSU	570	750	Columbus
	KGFL	1370	100	Roswell
4:20-4:40	WSAZ	1190	1000	Huntington
	WBEO	1310	100	Marquette
4:30-4:50	WGAL	1500	100	Lancaster
	WKBN	570	500	Youngstown
4:40-5:00	WCAL	1250	1000	Northfield
	WCAZ	1070	100	Carthage
	KFJB	1200	100	Marshalltown
4:50-5:10	WKBF	1400	500	Indianapolis
	WACO	1420	100	Waco
5:00-5:20	WDZ	1070	100	Tuscola
	KGDE	1200	100	Fergus Falls
5:10-5:30	WLBL	900	2500	Stevens Point
	WLB	1250	1000	Minneapolis
5:20-5:40	WBAA	890	500	W. Lafayette
	WTL	1200	100	St. Louis
5:30-5:50	WTAD	1440	500	Quincy
	KGHF	1320	250	Pueblo
5:40-6:00	WXYZ	1240	1000	Detroit
<b>December 12</b>				
2:30-3:30	CPX	1220	5000	La Paz
<b>December 19</b>				
1:01-1:09	CFCY	630	500	Charlottetown
2:00-2:30	KWTO	560	1000	Springfield
3:00-3:30	KSO	1320	250	Des Moines
3:01-3:09	CHSJ	1120	100	St. John
3:00-5:00	WOPI	1500	100	Bristol

<b>December 26</b>				
5:30-5:45	WFBG	1310	100	Altoona
<b>December 12, 19, 26</b>				
2:00-2:30	WROK	1410	500	Rockford
<b>December 5, 12, 19, 26</b>				
10:00-1:00	CMBX	1425	250	Havana
2:30-4:30	CKMO	1410	100	Vancouver
6:00-6:30	WASH	1270	500	Grand Rapids

**Thursday Mornings**

<b>December 6</b>				
2:00-2:20	WSOC	1210	100	Charlotte
2:10-2:30	WSPA	1420	100	Spartanburg
2:30-2:50	WSGN	1310	100	Birmingham
2:30-3:30	CHWK	780	100	Chilliwack
2:40-3:00	WJBO	1420	100	Baton Rouge
2:50-3:10	WGCM	1210	100	Gulfport
3:00-3:15	KREG	1500	100	Santa Ana
3:00-3:20	WRDW	1500	100	Augusta
	WHBY	1200	100	Green Bay
	WDAH	1310	100	El Paso
3:10-3:30	WKAQ	1240	1000	San Juan
	WJMS	1420	100	Ironwood
	KLUF	1370	100	Galveston
3:20-3:40	WCSF	1360	500	Charleston
	WEDC	1210	100	Chicago
	KTSM	1310	100	El Paso
3:30-3:50	WBSM	1440	500	Greensboro
	KGKL	1370	100	San Angelo
3:40-4:00	WCOA	1340	500	Pensacola
	WBCS	1210	100	Chicago
	KFFM	1310	15	Greenville
3:50-4:10	WQBC	1360	500	Vicksburg
	KFFZ	1420	100	Fond du Lac
	KMAC	1370	100	San Antonio
4:00-4:20	WDBO	580	250	Orlando
	WEBQ	1210	100	Harrisburg
	KFYO	1310	100	Lubbock
4:10-4:30	WNBR	1430	500	Memphis
	WMPC	1200	100	Lapeer
	KONO	1370	100	San Antonio
4:20-4:40	WQAM	560	1000	Miami
	WHBF	1210	100	Rock Island
4:30-4:50	WDAE	1220	1000	Tampa
	WKBZ	1500	100	Muskegon
	KFJM	1370	100	Grand Forks
4:40-5:00	WCBS	1210	100	Springfield
4:50-5:10	WCOC	880	500	Meridian
	WKBV	1500	100	Richmond
5:00-5:20	WTAX	1210	100	Springfield
	KGVB	1310	100	Springfield
	WIOD	1300	1000	Miami
5:10-5:30	WTCC	1260	1000	Savannah
	WHBD	1370	100	Mount Orab
	KCMC	1420	100	Texarkana
5:20-5:40	WHBU	1210	100	Anderson
5:30-5:50	WIBM	1370	100	Jackson
	KGFF	1420	100	Shawnee
5:40-6:00	WOMT	1210	100	Manitowoc
	KNOW	1500	100	Austin
<b>December 20</b>				
3:01-3:09	CHSJ	1120	100	St. John
<b>December 6, 20</b>				
3:00-4:00	XEFI	1440	250	Chihuahua
<b>December 27</b>				
3:15-3:45	KFH	1300	1000	Wichita
5:30-6:00	WRAW	1310	100	Reading
<b>December 6, 13, 20, 27</b>				
12:00-3:00	WCNW	1500	100	Brooklyn
<b>Friday Mornings</b>				
<b>December 7</b>				
1:30-3:00	LS2	1190	40000	Buenos Aires
3:00-3:20	WJW	1210	100	Akron
	KRMD	1310	100	Shreveport
3:10-3:30	WPAD	1420	100	Paducah
	KOTN	1500	100	Pine Bluff
3:20-3:40	WSEN	1210	100	Columbus
	KFXR	1310	100	Oklahoma City
3:30-3:50	WELL	1420	50	Battle Creek
	KGEK	1200	100	Sterling
3:40-4:00	WALR	1210	100	Zanesville
	KFPL	1310	100	Dublin

(Continued on page 48)

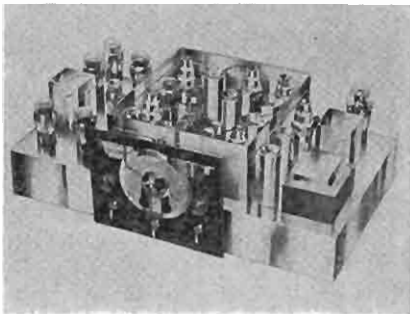
meters. The call letters of many of the world's most important stations are indicated on the dial, and turning the proper scale to some call letter instantly locates the station if it is operating. The dial is controlled at two speeds by means of a slow-fast vernier action which is said to be as good as band spreading. The short waves are tuned in very slowly, and the long waves more rapidly.

A single knob controls the tuning. But the novel feature is a "silent tuning" arrangement by which the pilot light illuminating the dial automatically dims whenever a station is properly tuned in. This light is located behind the upper half of the dial, and is connected in series with the secondary of a transformer. The primary of the transformer or inductance is in series with the plate of the pilot-dimmer tube. When the plate impedance or inductive reactance increases, as for instance, when a signal is tuned to resonance, the inductance ratio between the two transformer windings changes. Less current, therefore, flows through the secondary, and the brilliancy of the pilot light is dimmed accordingly. This particular part of the circuit is shown in some detail in the tube layout diagram.

#### Shows Type of Broadcast

On each waveband scale of the dial, between the numbers indicating frequency and wave length, are printed descriptions which show at a glance the types of programs that can be expected. When the band-change switch is thrown from bands "E", "A", "L", "M" or "H", it also connects a tiny light behind the scale in use. This throws a spot of light automatically upon the proper scale as the selector switch is rotated. In this way the section of the band being used is conspicuously illuminated at the point where tuning is being done.

In addition to the spot of light illuminating the center of any one of the five scales on the upper half of the dial, another spot of light indi-



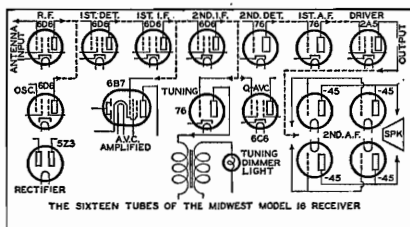
The Midwest 1935 Chassis

cates any one of the three wavelength bands on the lower half of the dial. Thus it is possible to see, simultaneously, any of the three short-wave bands (lower half of dial) in meters, and the same three bands (upper half) in kilocycles..

A vertical line of light, reaching across the upper half of the dial, marks the exact center of the illuminating spot of light so the station being received can be properly tuned in. When the set is in use there are three lights—the full glow that illuminates the entire dial and which dims when the set is tuned to sensitivity; the spot of light pointing to the wave band being tuned; and the vertical line of light acting as an index pointer for tuning in stations.

#### A Sensitivity Control

It is possible to vary the degree of response in the Midwest 16 receiver. A "Micro-Tenuator" controls the effectiveness of an electromagnetic shield placed between the primary and secondary windings of the first intermediate-frequency transformer. The shield is simply a third coil. It



is closed across its ends by a variable resistance. Reducing this resistance makes the shield more effective, which in turn affects the sensitivity of the receiver.

The coupling between the primary of the i.f. coil can be cut so low that only nearby stations will be heard. Setting the "Micro-Tenuator" at one point brings the sensitivity of the set to its maximum, such as for foreign short-wave stations. At the other extreme position only nearby stations are heard, full and mellow, but without DX noises and static. The sensitivity of the set is continuously variable from maximum to minimum.

#### Tone Shading

The tone control in the Midwest 16 is a new type. The "Fidel-A-Stat" gives new life to the low notes and provides positive bass-note control. Instead of the usual two or three stops, this new control is a strip of resistance material. There are three spots along the resistance where quite definite tone results will be found. At one the tone is normal; at the second the low notes will be boosted; and at the third the high notes will be reduced.

But, due to the construction of the control, at other positions of the tone-control arm the action tends to blend together the tones found at the three well-defined spots. There is no limit to the blending of tones or the shading that can be given to suit any room or acoustical condition. The automatic tone compensator tube works automatically to correct the bass-note response when the set is operating at low volume. It is well known that, ordinarily, at low volumes, bass notes are weak and frequently entirely lacking.

#### Four Power Tubes

The powerful audio circuit employs two pairs of -45 tubes in push-pull. Each pair of tubes is in parallel. The -45 tubes are noted for their fidelity of tone reproduction. And by adding the capacity of two tubes together in parallel the arrangement



*The "Death Valley Days" program has a large following among those who love the stories of the Great Open West. This is John White whose songs are heard each Thursday night from WJZ and network. 9:00 p. m. EST.*

will provide purity of tone with undistorted power. Preceding the power stage is a driver stage using a 2A5 pentode tube. It does not generate a hum that would be amplified by the power stage. The driver is fed, in turn, by the first audio tube, a type 76. The large, 12-inch dynamic speaker is standard equipment on all the 16 models. Its response is uniform throughout the audio range, and it provides high fidelity of tone reproduction.

The panel of the receiver, shown in the illustration, has five controls. At the left is a knob that controls a double resistance which acts as volume control and tone compensator. In the center is the airplane dial with its five upper, and three lower, wave-band scales. At the right is the tuning knob for operating the dial. This

*(Continued on page 46)*



# The Career of Roxy

• • • By "BETTY"

**T**HE career of Roxy (S. L. Rothafel) is proof of the saying that you can't *make* a showman, they are *born*, just like a great artist. The son of a Stillwater, Minn., shoemaker, he conducted kid shows, charging a penny admission, and "went on tour" to the neighboring town of Bay Water. Music always had a peculiar effect on him and he would disappear for hours while he read about orchestras and listened to scratchy discs of band music.

Roxy's career might have been quite a different story if the family hadn't moved to New York. But with the youthful faculty of readjustment, he was soon attending P. S. 96 in Brooklyn and serving as cash boy in a 14th Street store. A restless spirit in the lad made it hard for him to stay put very long. His next job was running press dispatches from Coney Island.

## Becomes a "Leather-Neck"

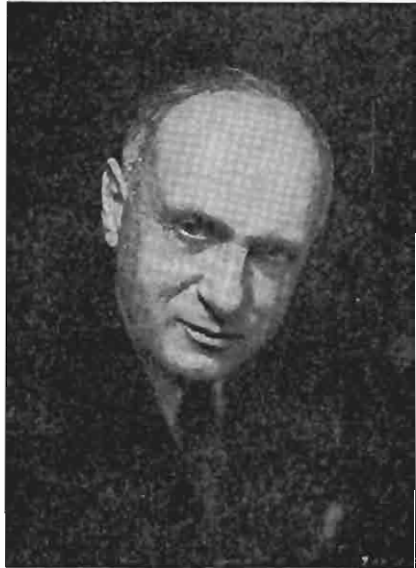
When he was 17, Roxy joined the Marines. During his first five years in the corps he had been in a fight; sent to the guard house; released; and made captain of the baseball team. His entire life has been just such a series of quick panoramic changes. His rather unfortunate beginning was, however, contradictory to the other six years in the service. Promoted to main orderly, corporal, sergeant and commissioned officer, Roxy realized he had attained his peak in the service and decided to enter civilian life once more.

Roxy's first experience in showmanship, staging a minstrel show for the Knights of Columbus of Carbondale, Pa., was such a success, the Keith Circuit offered to send him on an extended tour, but the cast, most of whom had responsible positions, were unable to accept.

## Tends Bar to Get Girl

Roxy decided to give up bachelorhood when he met Rosa Freedman. To win the hand of Rosa, though, he had to tend bar in her father's Forrest City, Pa., saloon. Tough miners were its only customers, but Roxy's youth, spent in the Marine Corps and with burly lumbermen in Minnesota, had fitted him to handle men. He pitched into the job with a vengeance. At the end of a year he had cleaned the place up morally and physically. The miners instinctively removed their hats as they entered the saloon. The dance hall had been decorated with murals, and a one-reel picture twice a month (on pay-days) was thrown in as an added premium with the free lunch.

The success of his initial venture thrust Roxy into a maelstrom of enthusiasm, ambition and a desire to



Roxy

go to New York where he could carry on his ideas. As a sideline, he had studied optical theory and had invented a process known as daylight pictures. A demonstration of this new device caught the fancy of a backer, and he was sent around the country installing these picture machines. At the same time he took over a number of large theatres that were losing money and put them on a paying basis by charging less admission and giving better shows. These new shows were the cornerstone of the "presentations" now featured on Broadway. As the head of the Capitol Theatre in New York, he brought an innovation to radio with the Sunday broadcasts featuring a "gang" made up of new performers and veterans of his stage shows.

In the "Roxy Revue" series over the Columbia network each Saturday from 8:00 to 8:45 p.m. EST, Roxy is bringing back the keynote of intimacy and sincerity of the first days of radio. "Ear pictures," the most recent musical and dramatic technique conceived by him, are featured in this program, and he introduces many promising youngsters who have impressed him as potential stars of the future.

Roxy's favorite sport is golf and he shoots in the high 70's . . . prefers dining at home . . . lives in a penthouse overlooking Central Park . . . reads all metropolitan sport pages . . . played professional baseball . . . was born in 1882.

---

## "Flopping" to Fame

Block and Sully, the outlandish pair heard in the "Big Show" on CBS, seemingly "flopped to fame." When Jesse Block and Eve Sully first met in a booking office eleven years ago, they viewed each other as "flops." But two negatives usually make a positive, so they not only

teamed up on the stage but got married and lived "sappily" ever after. It has brought them rich rewards on the stage, screen and radio.

In the beginning, Eve confesses that she didn't want to team up with Jesse—she was looking for a larger act. He, on the other hand, was mourning the loss of his feminine partner, who had left him to get married. So, at the start, Jesse and Eve were a pretty sorry example of enthusiasm. He paid scarcely any attention to Eve, and his performances were devoid of fire.

### Pepping Up the Act

Eve worried about the act. She had rehearsed, bought costumes, and wasted, it seemed, a good deal of time and effort on what was destined to be a "flop." Something had to be done to snap Jesse out of this mood, so she resorted to ad libbing during the performance. It was then Eve introduced the two catch-lines with which they have since become identified—"some dunce, I'll say" and "look at him." The trick worked like a charm. Jesse laughed at her uncued sallies, and was of necessity on his mettle for any further strategy his partner might take it into her head to use.

The early aspirations and endeavors of this team were almost synonymous. Jesse was born on December 16, 1906, in New York City. His first ambition was to become an actor. It was young Walter Winchell who came bounding up five flights to notify Jesse that Gus Edwards wanted him to join his "Song Revue of 1915" as a dancer and singer. He took the job, and his weekly envelope contained eighteen crisp dollar bills.

### His Big Thrill

It was while playing the Orpheum Theatre in Los Angeles that Jesse received the greatest thrill of his lifetime. Charlie Chaplin came back-stage at the final curtain to congratulate the troupe. That meeting with

the famous comedian was a turning point in the career of young Jesse. He decided then and there that comedy was the paramount form of entertainment, for laughter dispelled tears and brought joy and happiness to people. The erstwhile song and dance kid became a comedian.

For three years Jesse remained with Gus Edwards. Then came the day he branched out, secured a partner, and forthwith was booked as Block and Dunlap. This partnership lasted five years, until the day Francine Dunlap decided to switch her career to marriage.

Eve Sully was born on January 5, 1910, in Atlantic City. She too was fired with ambition to become a great actress. At the age of thirteen, in spite of her family's disapproval, Eve made her debut as a dancer in "The Midnight Rollickers," a big time vaudeville act. Then Eve met Jesse, teamed up with him, and finally in March of 1929 became Mrs. Jesse Block at the Los Angeles home of Jack Benny. This famous team appear with Eddie Cantor in his latest picture "Kid Millions."

Eve wears a new outfit at each broadcast . . . nicknamed "Peanut" as she is only four feet eleven inches high and weighs 103 pounds . . . has black hair and blue eyes. Jesse always need a haircut . . . likes to play baseball . . . weighs 148 pounds, and is five feet eight inches tall . . . has black hair and blue eyes.

The old phrase about his wife being his best friend and severest critic adds another few words—"and the most competent"—in the case of Arthur Schwartz, composer of the music in the original radio musical comedy of the air, "The Gibson Family." For his wife is the lovely Katherine Carrington, star of "Music in the Air." She passes on every melody Schwartz writes for "The Gibson Family" and those she doesn't like do not appear on the program.



*Block and Sully*

When Lew Brown searched the Broadway firmament for stars to shine in his new revue, "Calling All Stars," he found a very suitable constellation right in the CBS studios. Everett Marshall, head man of the "Broadway Varieties;" Gertrude Niesen, torch songstress of "The Big Show;" and George Givot, the "Grrrik" radio restaurateur, were the twinklers that registered in his telescope. They're all busy rehearsing in the new show. It's Gertrude Niesen's first musical comedy part, by the way, although her name has been in lights quite often in the night club sector.

\* \* \*

Virginia Rea is putting her home-making talents to a definite use these days. The famous soprano is furnishing a new home in the Pocono Mountains near the scenic Delaware Water Gap. Miss Rea was recently married to Edgar Sittig, well-known radio cellist.

\* \* \*

Though Mary Livingstone passed three favorable screen tests and was urged by movie magnates to appear in Jack Benny's latest film, she refused to do so. She's afraid she'd dispel too many illusions because she doesn't look like the character she portrays on the air.

# DIALING *the* S. W. Stations

• • • *By* PAGE TAYLOR

**W**E HAVE never yet seen a s. w. receiver with a calibrated dial that was accurate from one end to the other. The best dials we ever saw were the old fashioned ones calibrated simply in degrees, from 0 to 100 or 0 to 180, or whatever might be the number of degrees through which the dial rotated. Because of the fact that the calibration of the dial cannot be depended upon, we think it best to make a graph before we commence our serious tuning. If the set is calibrated in kilocycles or megacycles, consider these markings simply as markings.

On a sheet of graph paper, we will let the left hand margin represent "Frequency in Megacycles," and the upper (or lower) margin, "Dial Settings." The writer will prepare a graph for a set supposedly calibrated in megacycles. From left to right across the bottom of the graph, we let one line represent one degree or mark on the dial, and from top to bottom on the left hand side, ten lines will represent 1000 kilocycles (one megacycle), starting at 6 megacycles at the top, and continuing at intervals of one megacycle each, to 12 megs. at the bottom. Now that our graphs are laid out, we will commence tuning together.

## Starting to Calibrate

It is early evening, and according to the Short Wave Clock printed monthly in this magazine, it seems that our best chance for success will be in the vicinity of 9 megacycles. Setting the dials about where we think this band is located, we commence tuning, until we pick up a station at 9.3 megs., according to the dial reading. After the familiar NBC interval signal, we find that we have been listening to WBZ-WBZA-W1XAZ, which, according to our

shortwave lists, works on 9.570 megacycles. Although it has not been very thrilling to pick up Boston, we have made an important step, in that we have definitely located its place on the dial, and are able to plot it. On the graph we locate the point where the line representing Frequency 9.570 crosses the line representing Dial Setting 9.3, and mark the point with a dot. Now that W1XAZ has been plotted, we continue on, locating another station which soon identifies itself as W3XAU on 9.590 megs. This was heard at 9.35 on the dial, so close to 1XAZ that the dots for the two stations, when placed on the graph, nearly run together. Continuing our search, we find another station at 9.6 on the dial, an English-speaking station, but with much better volume than either of the two already picked up. After hearing news bulletins, and wondering why the announcer so carefully spells all the difficult words, we are surprised to learn that we have logged EAQ in Madrid, Spain, which works, according to RADEX, on 9.862 megacycles. The axis of the 9.862 (frequency) line and the 9.6 (dial setting) line is carefully located and a dot placed.

As there seems to be nothing doing on the lower wavelengths, we commence tuning in the other direction, and almost in the middle of the dial, find a telephone station, dial reading about 7.8 mgs. When we hear a girl say "Hello Majestic" and later on a man calls "Hello GFWV," we feel quite sure that we have logged WOO, a station which works on 8.560 megs. and talks to ships.

Before shutting down the receiver for the night, the dial readings of several other local stations are found, KWX on 6.9, HJ1ABB on 5.9,

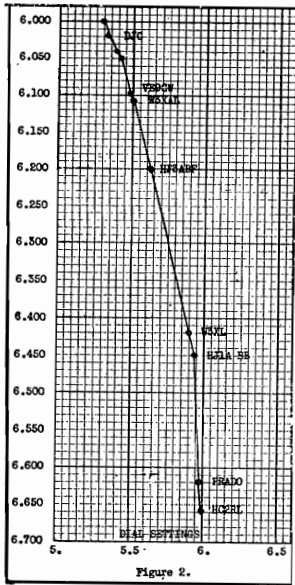


Figure 2.

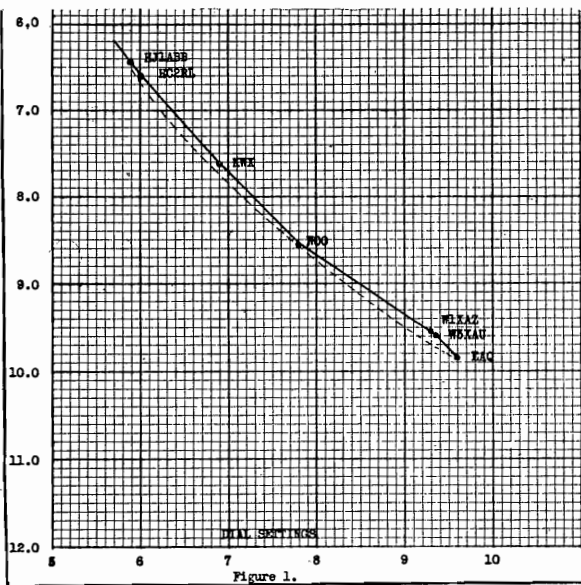


Figure 1.

HC2RL at 6, etc. The stations in the 6 megacycle band are so close together that there is room for only one dot on the graph for them, at dial reading 5.3 megs. However, we have located enough dots on the graph that we can connect them by drawing a line through them all. With so few coordinates the line does not describe a perfect curve, but when more stations are logged and more dots can be placed on the graph, the line will be slightly curved as is shown by the dotted line.

However meagre, the information we have already compiled is sufficient to show us the exact location of VK3ME in Melbourne, a station which we will tune for in the morning.

We understand that VK3ME works on 9.503 megacycles. To find its location on the dial, we find the line representing frequency 9.500, and determine the point at which this line crosses the curve we have drawn. This is very close to 9.1 megs., which will be the approximate

dial setting at which the station will come in.

Similar graphs can be drawn for the other frequency bands, so a complete set of graphs will cover the entire range of the receiver.

We have found that the 6000 kc/s. band is too congested for us to plot the stations accurately on this graph, so a separate graph can be made, if one wishes, covering just this one frequency band. This will spread the dots out and allow each station in the band to be plotted. This graph is shown in Figure 2. Here, each horizontal line represents 10 kilocycles, and each vertical line, one quarter of a dial division.

#### A Short Waxe DX

Charles Miller, Covington, Ky., tells us he has arranged for a special program from W8XAL on 49.50 meters or 6060 kcs. for Sunday morning, Dec. 16, from 2:00 to 3.00 EST. All reports are to be addressed to the Crosley Radio Corp., Cincinnati, Ohio.

# The BEGINNERS' STORY of RADIO

## PART THIRTEEN

### The Power Unit—Rectification

• • • By B. FRANCIS DASHIELL

**E**LECTRIC power to operate a radio receiver can be obtained from three sources — batteries, battery eliminators, and the power-pack unit that is built into the receiver. Batteries *generate* their own direct current. But other devices, such as eliminators and power packs, *deliver* direct current at the same time they are working on an alternating current. This alternating current, as the reader now understands, is useless when it comes to the operation of the plate circuits of a radio receiver. That is why we have had battery receivers for so long; before the eliminator was invented.

Some arrangement, then, must be made to provide a direct current supply for the operation of the all-electric receiver. But, since the world standard of 110-volt, 60-cycle alternating current only is available in nearly every locality, most receivers are made to operate on this house-lighting power. Battery sets, except when provided with power from the usual group of batteries, cannot run directly on the lighting-power lines, unless "A" and "B" battery eliminators are used.

It is a fact that batteries provide the best form of smooth, direct current. On the other hand, however, batteries are not economical; they are unsightly, bulky and quickly lose strength. When the alternating current that flows in the wires of our homes is used to run a radio receiver, its characteristics must be altered so the current flows as smoothly and evenly as that which comes from a battery.

#### Battery Eliminators

If alternating current is available, but only a battery set is used, the batteries may be discarded and an "A" and a "B" *battery eliminator* utilized. They take the 60-cycle power from the house wiring circuit and convert it into a smooth, quiet power that is similar to battery power. Eliminators are connected to the receiver as if they were "A" and "B" batteries.

In restricted down-town localities in some large cities 110-volt direct current only is available. It is not wholly satisfactory. Eliminators cannot be used, and all-electric sets are useless. To overcome this fault some manufacturers offer a.c.-d.c. sets. The 110 volts of the power line, however, is the limit of potential available for the internal circuits of the receiver. This is much lower than that used in modern a.c. sets.

The modern a.c. receiver is nothing more or less than a battery receiver in principle. It operates on power provided by "A" and "B" eliminators which in turn connect to the a.c. lighting circuit in the house. But, in modern sets, these eliminators are the *power-pack* or *power-unit* which is built into the receiver as an integral part of its chassis and circuit.

#### The Power Transformer

Since the power necessary to operate a modern, multi-tube radio receiver varies in potential from only a few volts to several hundred volts—considerably above and below the 110 volts flowing in the power or lighting lines, it becomes essential

that an alternating-current transformer be utilized to provide the several different voltages required.

Ordinarily we might believe that a number of separate transformers would be needed—each creating the voltage required by every particular circuit in the receiver. But instead of such an imposing array of transformers it is possible to construct a single transformer that will do the work of all. Such a device is called a *power transformer*.

The power transformer is connected to the 110-volt power line. An alternating current flows through its primary coil. This sets up a swinging magnetic field around the primary, and another alternating current, of higher or lower voltage, as the case may be, will be induced in a second coil which is wound over the first so as to be within its magnetic field. The voltage induced in the secondary depends upon the ratio between the number of turns of wire wound on the primary and the secondary. For instance, if a "one to two" ratio exists between the number of turns in the two coils, then twice as many volts will be induced in the secondary as are flowing through the primary. Transformer action has been discussed in considerable detail in Chapter Three.

#### Has Several Secondaries

But, instead of winding a single secondary coil over the inside primary coil on the power transformer, we may add as many individual secondaries as we please. The number of turns of wire on each controls the voltage it will deliver. A small secondary is used to provide the low voltage required for the filaments and heaters of the tubes; another furnishes higher voltages for still other purposes and circuits; and the outlet of a large secondary gives the high potential necessary for the plate circuits of the tubes.

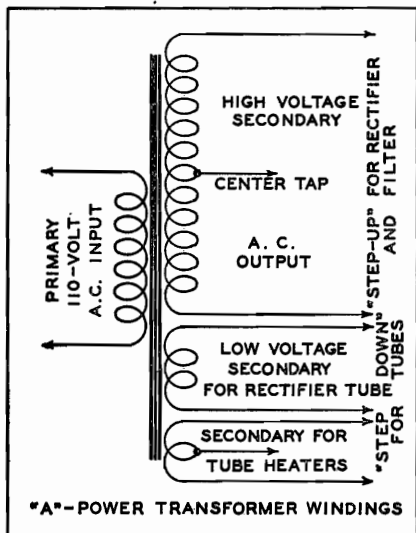
At "A" is shown a diagram circuit of a power transformer. While it is

similar in effect to that also shown in Chapter Three, at "F" and "L", it will be noted that it has several secondary windings. The high-potential secondary is a "step-up" transformer; low-potential secondaries are "step-down" transformers. It is not necessary to provide a large number of separate secondaries because so many different voltages are used in the radio circuit.

#### Using Resistors

It is possible to reduce the voltage of any secondary output by introducing a resistance in series with the wires leading to the various points of the receiver. Thus the many different voltages required by the tubes and units in a modern radio set can be controlled by a power transformer having only three or four secondary windings, and the intelligent use of resistors of the proper resistance placed wherever required.

Although the proper electric current and voltages needed to operate a receiver can be obtained from the power transformer, the fact still remains that the current furnished by the secondary coils is alternating in



character. It has the same frequency as the 110-volt current flowing through the primary coil. But radio sets require direct current and, therefore, it becomes necessary to *convert* this alternating current into a direct current.

### The Rectifier

The device that makes such a conversion is called a *rectifier*. There are several types in use. The oldest known rectifier is the *electrolytic* rectifier. It is not particularly efficient, but is quite satisfactory. Then there is a *dry-metal* rectifier, used mostly for *trickle chargers* for storage batteries, where a low current is essential. The most widely used and most efficient type is a *rectifier tube* of the *hot-cathode* type. Considerable previous discussion of radio tubes and rectification will be found in Chapter Six.

The rectifier, as its name would imply, takes an alternating current, which varies continuously from negative to positive potentials, and converts it into a direct current which *remains* steadily negative and positive. As has been explained previously in this series, rectification action takes place simply by holding back the passage of the negative alternations of each cycle of the current and permitting the passage of the positive alternations. Thus a rectified current, as pictured by the curved lines or cycles at "D" of Chapter Six, consists of a series of quick pulsations or surges that occur every time a positive alternation is allowed to pass through the rectifier. The *rate* at which these pulsations occur is equal to the number of positive alternations in the original current.

If the lighting current is the standard 60-cycle kind, then it has 60 positive and 60 negative alternations. As one of each combine to make one cycle there will be 120 alternations and 60 cycles per sec-

ond. Now, if we *cut off* the 60 negative alternations by the rectification action, then the 60 positive alternations will remain. The rectified current, as a result, will have a frequency of 60 positive pulsations of direct current each second. But this current, if passed through an audio circuit, will produce the sound of a *hum* having 60 vibrations a second. Further treatment, then, is necessary.

### The Power Unit

Let us look briefly at all the actions which take place in the eliminator or power-pack unit. The effect of the rectifier is to change the alternating current into a direct current that is composed of short, rapid impulses of electricity. But, before this interrupted current can be used by the radio set, the impulses or voltage fluctuations must be smoothed out. There must be a steady flow of current before hum and noise will be eliminated. So, immediately following the power-transformer output and the rectifying device, is the *filter circuit*. This circuit contains large capacity *filter condensers*, *iron-core choke coils*, and a large resistance *load* or *voltage-divider system*.

The choke coils are placed in *series* with the output from the rectifier. They offer a high a.c. resistance or impedance to the rapidly pulsating current. This inductance smooths out the hum and *ripple* caused by the rectified interruptions of current. Condensers, too, are used across the two leads from the rectifier, in parallel with the resistance load; they act to store up energy. This energy is released at the moments occurring between the pulses of current, and it equalizes the voltage of the output by building up the gaps to a level equal to the potential of the rectified current. The effect, then, of the filter system is to smooth out the ripples or waves in the rectified current so that it flows



as steadily and uniformly as battery power.

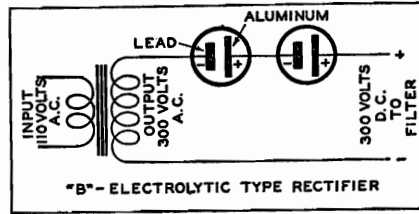
### The Electrolytic Rectifier

The oldest form of rectifier is the *electrolytic* type. If two sheets, one of *aluminum* and one of *lead*, are arranged parallel but insulated by a slight separation, and immersed in a solution of borax and water, they will act as a rectifier of alternating current. The rectifying unit should be placed in series with one of the two wires carrying the alternating current. The aluminum plate is the positive electrode, and the lead will be the negative terminal. Current flows *toward* the positive electrode. Its metal surface then becomes momentarily oxidized, and tiny bubbles of gas will form on the plate. Thus the current cannot flow between the plates because of the resistance of this film of gas. Now, when the current reverses, as it does in an alternating-current circuit, it will flow *from* the positive to the negative electrode. The positive alternations are not permitted to pass, but the negative alternations go through. This results in uni-directional pulsations of electricity.

Electrolytic rectifiers are used for charging storage batteries, and in "A" and "B" eliminators. But the appearance and care that is associated with a number of these cells used in the eliminator makes them more or less unsatisfactory. Illustration "B" shows an electrolytic rectifier connected in the secondary or output circuit of the power transformer shown in "A".

### The Tube Rectifier

This rectifier is a simple vacuum tube containing a filament and a plate. When the filament is heated to incandescence an intense cloud of electrons is emitted. Now, if a *positively* charged object is placed within the electronic field, the electrons will fly toward the object because of the natural attraction of a positive



charge for a negative charge—opposites attract and likes repel.

In Chapter Six we learned that, if a metal plate or anode surrounds a filament, it will attract all the electrons emitted by the red-hot filament, heater or cathode. The filament also is connected to one terminal of the electric power line that is to be rectified, and the plate to the other terminal. As long as the plate is given a positive charge electrons will fly across the gap.

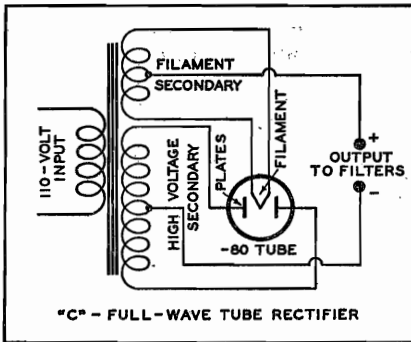
A current of electricity, then, will flow *from the plate toward the filament*. But, when the potential of the plate is reversed, or made negative, the stream of electrons instantly *will be repelled*, and, without this movement of electrons toward the plate, no current can flow in the circuit.

Now, connect the two elements of the tube to an alternating current. The filament is heated by a separate source. The alternating current then will flow in *one* direction only, because, when the positive alternations are impressed on the plate, electrons will flow. But, when the plate receives the negative alternation, current cannot flow between the filament and the plate. This briefly explains rectification or the uni-directional flow of electricity between the two elements of a diode tube. The effect is known as *half-wave* rectification. The types of tubes used are styles-81 and 12Z3.

### Full-Wave Rectification

Rectifier tubes generally used in modern radio power units have *two* plates instead of one. They are *full-wave* rectifiers. Because this type is

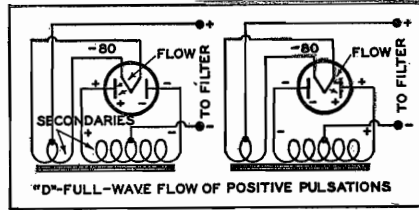
highly efficient and better known to the reader it will be discussed in detail, and illustrated in our diagram of the complete power unit. The full-wave rectifier passes *both* halves of the alternating potential from the power transformer, and the uni-directional d.c. output resulting from each half-cycle or alternation of the a.c. input will be supplied to the circuit at *twice* the rate of the impulses from a half-wave rectifier. This speeding up of the pulsations provides a more nearly even flow of current without such large gaps occurring between the voltage fluctuations. This action makes the work of filtering out of hum much simpler.



At "C" is shown a tube with its two plates and filament connected in an alternating-current circuit. Each plate is connected to the terminals of the high-potential secondary of the power transformer. The potential of the plates will change, alternately, from positive to negative, as the current alternates back and forth through the secondary coil in which it is induced.

#### How It Works

When one plate is given a positive charge, the other plate becomes negative, as shown at the left in "D". Then, when the potential *reverses* at the following half-cycle the first plate becomes negative, and the other plate, positive. This ef-



fect is shown at the right, in "D". In both cases electrons flow toward the plate that happens to be positively charged at the time. The flow is indicated by the arrows in "D". Between times, neither plate has a positive nor negative charge. Electrons do not flow.

Two plates utilized in this way work alternately and pass quick impulses of current, first from one, then from the other, into the circuit, but always in one direction. This current is a direct or uni-directional current. Its flow is broken up into 120 short pulses of potential, or fluctuations of voltage, every second. A similar effect would be given if the switch in a battery circuit should be opened and closed 120 times a second.

Let us again examine briefly the circuit shown at "C". The filament of the tube, which can be a type-80, 82, 83, 84, 5Z3 or 25Z5, is connected to the heater winding of the power transformer. The exact center of this transformer secondary winding is tapped with a connection that is used for the *positive terminal* of the d.c. output from the high-potential rectifier. The two plates of the tube are connected to the terminals of the large high-voltage secondary. This secondary also has a center-tap connection that is used as the *negative terminal* of the rectifier output. The two terminals of the rectifier—positive and negative—provide an output for the uni-directional direct current. But, and this fact is highly important, these pulsations must be filtered out before the current is

(Continued on page 46)

# HAPPY NIGHTS *are* Here Again

## Some DX Experiences

**A**LREADY reports of unusual and unexpected reception are reaching us, an augury of an excellent season for distant stations. We hope all of our DXers are ready for it. The articles in the October and November issues set forth clearly the part that the aerial plays in the reception of those weak, distant signals. They also contained an analysis of the various forms of antennae. If our readers really want to get into the A class, they should profit by these articles and provide their receiver with an aerial properly fitted for it.

### Midwest and World-Wide

"You published excerpts from my last letter in March, 1934, when I



*Boake Carter used to be a newspaper man once himself—corresponding for the London Daily Mail, and later writing for the Philadelphia Evening Bulletin, the Public Ledger and the Philadelphia Daily News. Nowadays you can hear his keen summary of the day's events over a WABC-Columbia net Monday through Friday from 7:45 to 8:00 p. m. EST.*

reported on the results with my Midwest R-9," recalls Thomas Quaid, University Station, Enid, Okla. "I wish to continue my report. I am still proud of the set and now I wish to sing the praises of the RCA 'World-Wide' Antenna which I bought in August following the description of this aerial in your June issue. It brings in most of the s. w. stations of the world with perfect understandability. I do little DXing on the b. c. b. now because I have received almost all the stations on that band in the USA and adjoining countries. I have been a reader of RADEX since I got my first copy in January, 1931. I keep them all stacked on the radio for reference and the pile looks like a budding skyscraper. I should like for all Midwest or 'World-Wide' antenna users to write to me. I am a senior in Phillips University here. Am taking a straight physics and mathematics course with the hope of getting into radio as an engineer in the future."

### All Set and Ready

"Once again the DX season is in full swing. I am going to try to make this year my greatest in DX thus far," promises Frank Wheeler, 406 Eagle Point, Lakeside, Erie, Pa. "To start the year off right, I cleaned my set and purchased some new tubes. I also erected a new aerial which points east and west. I also have a north and south aerial. I have experimented with both and find that the old aerial brings in the stations a little stronger but the new aerial brings them in much clearer and with quieter reception. I have set several goals for myself: to receive at least one trans-Atlantic and one TP; one Newfoundland; one Wyoming thus completing my roster of the states; to increase my log to 650;

to receive five more SA; to receive 100 more verifications before July; to join some good DX club; to continue purchasing RADEX each month as long as I have a radio." These are certainly good resolutions and Frank doesn't wait for New Years before making them. Here's hoping he makes them come true.

#### Getting Ready

"My log now stands at 210 in 45 states, four provinces, Mexico, Cuba and Puerto Rico," reports another first-timer, Victor Young, 83 Emery Street, London, Ont. "My best catches are CHNS, CKY, KEX, CMC, XEB, XEK and KHJ. My set is a Westinghouse 101, ten-tube, which I consider the best radio that anyone ever built. I have never used an aerial. I would like to join some good radio DX club and will correspond with DX fans anywhere, particularly with anyone using the same set as mine. I am building an RCA all-wave aerial of my own to use with a converter that I am building which is similar to the one illustrated in the November issue of RADEX. I notice in the current issue the problem of a user of a Pathe t. r. f. with fading. I had the same trouble with my own set but I remedied it simply by changing the positions of the two -27s, oscillator and second detector."

#### A New Reporter

"I have never written to you about my log like many other DXers have done, so I am enclosing some of my best catches. Up to date I have logged 588 stations. The following are the ones I have heard this fall: 2CO, 2YA, 7ZL, 3AR, 5CK, 1YA, 2FC, 3YA, 5CL, 4QG, 3LO, 2BL, 4RK, 3UZ, 2GB, 2UE, 4BC, 2CH, JOAK-1, JOIK, JOCK-1, JOGK, JOHK, JOBK-1, JOFK, JOPK, JOQK, JOXK, KGU, KGMB, TGW, WKAQ, XEFI. Some of these stations are verified and most of the others I have reports out to. To anybody trying for foreign stations, I

advise them to purchase a *DX Log of the World*. It sure helps in logging those distant stations." This fine report comes from Hilding Gustofson, 2228 Sixth St., Rockford, Ill., who sends us the front cover of the first RADEX he ever bought—No. 25 of December, 1928—and adds: "I get a big kick in looking through the RADEX of 1928. The stations during that time had weak power in comparison with the stations of today. In those days, PWX of Havana and 6KW of Tuinucu, Cuba, were popular catches. Now Australians, Japs and Europeans are the ones sought after."

#### Verifies the "Impossible"

"I have seen many reports regarding the reception of stations which I thought impossible," observes Warren C. Reichardt, 5 Grant St., Reading, Mass., "but the past year I have taken my DX a little more seriously and have proven that a good many reports are very prob-



*Josef Pasternack conducts the Atwater Kent series, starring eminent guest artists with his orchestra over the Columbia chain every Monday evening at 8:30 EST. Pasternack recently conducted his 200th program for AK.*

able. On the b. c. b. I have 60 foreign stations verified—35 in Europe, 6 in South America, 5 in Japan, 11 in Australia, 2 in New Zealand, FQN and KGU if you count them as foreign. The morning of October 9th was the most unusual morning I have ever experienced for at 2:35 EST, 2BL was coming in and at the same time down on 1456 kcs. Fecamp was just pounding in. The Japs started to come in at 3:05 a. m. and between then and 5:45, I was able to positively identify and log 16 of them. They were as follows: JOCK-1, JOCK-2, JOBK-1, JOBK-2, JOIK, JOHK, JOAK-1, JODK-1, JOFK, JOJK, JOSK, JOGK, JOBG, JONK, JOQK, and JOXK. The peculiar part of it was that the Aussies and Zedders were not coming in so well that particular morning. It was certainly worth losing sleep over anyway. I am using a Scott deluxe with an antenna about 275 feet long, flat top, directed toward Asia."

#### "If They Can, I Can"

William Wheatley, 254 Cleveland St., Brooklyn, N. Y., disagrees with Howard L. Spies in his letter published in November, regarding mammoth logs. "I felt the same way when I first bought RADEX, two years ago, but I wasn't discouraged. I felt that if somebody had received 500 or 600 stations, I could do the same. So I started out to duplicate these great logs and, up to now, I have received 622 stations of which 490 are verified. And I have counted only ten stations twice—these on account of change in calls. In order to get this 'mammoth' log, I have got up dozens of nights with but two or three hours of sleep, and spent six or seven hours at the radio, patiently tuning. Some night nothing would be on; others I would get maybe as high as 15 or 20 new stations. I do all my DXing from September to May and get an average of four hours' sleep a night. So, Mr. Spies and all you DXers that get discouraged when



Arthur Allen (right) and Parker Fenelly, of the old "Stebbins Boys" fame, take the parts of Dan'l Dickey and Hiram Neville, in the Soconyland Snow Village sketches. On the CBS Saturdays from 7:00 to 7:30 p. m. EST.

you read about the other fellow's reception, go out and get the same and say to yourself, 'if they can get a log like that, so can I,' and here's luck to you."

#### A New Old-Timer

A first report from an old DXer comes from Whitney Smith, 53 West End Ave., Pontiac, Mich. "DX has been my hobby since 1924 but I start compiling a fresh log with each new radio. I keep a file of 4x6 cards with station heard, power, owner, location, etc., kept up to date by RADEX listings, and showing date of every reception. My present log was started in July, 1932, with a Majestic 8-tube, to which was added, in May, 1933, a Stewart-Warner s. w. converter. I do not verify any stations heard except those which I consider exceptional catches. However, I do not log a station until

there is no question in my own mind that I have actually heard it. My log at this time consists of 1261 stations of which 632 are on the b. c. b. and 629 on the s. w., including 456 amateur and airport stations. In my b. c. log are 34 stations which are now off the air. I have the state of Texas with 32 stations logged 100 per cent. I have logged 39 out of 44 in California and several states lack just one station of being fully received. This, I think, is not bad for Michigan."

#### Verifying California

"The answer the 'DX Fool' gave in the November issue regarding verifying California stations, was very good," thinks Ray E. Everly, Newton, Ill. "On its October FCC check I had KTRB in Modesto at 5:40 a. m. CST with broad daylight and the sun shining, clear and loud. I also hear consistently KERN in Bakersfield, KRE in Berkeley, KGDM in Stockton — all small stations — and KXL in Portland, Oregon. There is no reason why California can't be verified to the very last station. I was three years waiting for KFBK in Sacramento and finally got them last spring. After adding KTRB I have California complete to date. The NNRC specials of these 'hard-to-get' stations have made possible the logging of stations impossible to hear otherwise. My log now stands at 838. My latest are W2XR, KPAC, TGW, WPRO, KVOD, KWTN, WDNC, KOTN, WJIM, WHEF, KADA, WGPC, WMEX, WAGF, KTRB, CKOV, CRCO, XEMO, CJAT. I need 26 yet in the USA."

#### Cuban News

Rafael A. Munoz, Atlanta, Ga., sends his complete log which in itself is almost a station index. He has from one to six stations on every frequency from 550 to 1500 with the one exception of 1390. Among his best he lists: LS2, TGW, KJR, KHQ, KFXD, KFVD, XEFE, WEXL, KABC, WJBK, XEC, CMBC, CMBZ, CMCA and CMCW. Rafael tells us

that CMAF has been without an aerial since the cyclone on Sept. 2, 1933 and that CMC has been silent since March, 1934, when the employes of the Companie Cubana de Electricidad, the owners of the station, struck. He says that CMCY is his old standby there in Atlanta but that it has completely faded out in the last few weeks. "Two weeks ago," he says, "I bought an all-wave 8-tube RCA-Victor, model 141-E, and I am operating it with a loop antenna I built according to some information I gathered in RADEX. So far it has brought in 38 stations in 13 countries. I am of Cuban nationality but have lived in the USA for the past five years."

#### From New Zealand

George E. Bott, 507 Southampton St., E., Hastings, New Zealand, sends us corrections for the Oceania stations for the *DX Log of the World* and adds: "I have now heard 310 stations and have verified 168 with 25 reports out. Reports are out to VUB, Bombay; HS7PJ, Siam; Berlin on 841 kc.; Bucharest on 823 kc.; IIM1, Milan on 814 kc.; Belgrade on 686 kc.; OKB Brno on 922 kc. These are my best. A long overdue verification from KFVD came to hand today (Sept. 18). Report was posted Oct. 24, 1933! Another received on Sept. 10, was XEB; report was mailed them on Sept. 4, 1933. Reception has not been very good here this year but is picking up now. WLW was too loud tonight without volume being reduced. P. S. Have just sent reports to Poste Parisien, 959; Breslau, 950; Heilsberg, 1031; Bari (IIBA) 1059; Naples (IINA) 1104; Lwow 795; Strasburg, 859; Posman, 868. This makes a total of 13 sent since Sept. 1. I want to make it 20 by the end of the DX season on October 31."

#### All Channels

"Thanks to the DX Calendar, I've been able to pick up approximately 100 stations within the last four

months," advises S. C. Bickness, 2651 West 64th St., Chicago, Ill. "My log now stands at 427 stations verified. Stations have been received and verified on all frequencies from 54 to 1500 kc. I have also verified at least one station in each of 47 states, the only exception being Idaho. I have verified the following states 100 per cent.: Illinois, Indiana, Kentucky, Rhode Island, West Virginia, Wisconsin and Wyoming. The best catch this week was CJLS of Yarmouth, Nova Scotia. Station KFEL, Denver, is still broadcasting on 920 kc, but has not appeared in the last two issues of RADEX." We understood that KFEL and KFXF, both of Denver and both on 920 kc. had consolidated with the call KVOD. If we are in error will some of our Denver readers advise us?

#### JO's in Kansas City

"A new year for DX is at hand and



*And here is our old friend, David Harum, cowboy philosopher and outstanding American humorist. Traveling ambassador of good-will, Will Rogers and his alarm clock are picked up by the Gulf Oil program wherever they may happen to be. Sunday nights from 9:30 to 10:00 EST on the Columbia. Stoopnagle and Budd relieve Rogers now and then as headliners on this series.*

I started out with a bang," exclaims Chas. Rife, 1330 Jefferson, Kansas City, Mo. "Wednesday morning, Oct. 3, for the first time this year, I clapped on the head phones and started to roam. And here is where I visited, 2CO, 2YA, 5CK, KGU, 4ZG, 2BL. And thinking that was a pretty good trip, I tried again this morning, Oct. 4, and found the Japs all over the dial: JOBK-1, JOCK-1, JOHK, JOIK, JOFK, JOAK-1, JOAG, JOBK-1, and JOCK-2. I was surprised at the strength of signal with which JOAG, 500 watts, came in. With the setting of my volume control at one half of its rated full power, every Jap I had' could have been put on the loud speaker and brought the neighbors in the apartment house down on my head. I have a Majestic 251 super with nine tubes. My aerial is seven-strand copper 100 feet long plus 15-foot leadin. No ground."

#### A Pennsylvania Log

"During the past two and a half years I have been successful in logging 560 stations with 365 verified," reports Robert W. Botzum, 633 Moss Street, Reading, Pa. "Best verified include 2BL, PRA3, LR4-5, YV1RC, KGU, WKAQ. I have reports out to LS2, TGW and XEXX. Other good catches include OFA, HHK, VAS and 197 100-watt stations of which 102 are verified. Have now heard 466 in U. S., 52 in Canada, 17 in Mexico, 14 in Cuba, 3 in Argentine and one each in Brazil, Finland, Australia, Venezuela, Hawaii, Haiti, Guatemala and Puerto Rico. Thanks to the frequency tests and the CDXR, I have been able to log stations otherwise impossible to receive. I expect to increase my log to 650 with 450 verifications before the end of this DX season."

#### Schedule of TGW

"The Guatemalan station TGW is heard every Sunday morning," reports Earl R. Roberts, 2308 Roosevelt Ave., Indianapolis, Ind. "By the way, in their verie they state they

broadcast these programs every Sunday from 1:00 to 5:00 a. m. CST on 565 kcs. Reception is usually R7 on the music but the speech is much weaker. They nearly always have a marimba playing during the morning program. Other stations logged recently were COA, CRCK, CHSJ, CJAT, CJIC, CJRC, XEFI, XEYZ, XEMO, KADA, KWTO, WLLH, WGPC, W2XR, KWYO, making a total log of 706 active b. c. b. stations. Reception here has been very good although I have not a satisfactory outside aerial as yet. Have heard pieces from Australian and New Zealand stations on two Sunday mornings."

#### From Canada

"I have been a DX fan since 1920, when I built my first regenerative set, a one-tuber, and had to wait six months after my order was in for a tube to use with it and then at a cost of \$6.00 for a 112 tube. Although the stations then were only 500 watts, it was easier to get 3000 miles distance than it is today to get 5000 miles with 13 or 16 tube sets. I did receive Daventry, England, every day with no exception from November 1st to March 1st. Then they seemed to die out but for the past three weeks they have been coming in strong from about 10 a. m. CST to about 4 p. m." This from J. L. Cooper, 1043 Sherburn St., Winnipeg, Man.

"Considering the phenomenal reception reported in RADEX, I hesitate to submit my list of 189 stations on the b. c. b.," writes R. Wharton, Box 413, Waterford, Ont. "My set is a three-tube three-circuit and is very sensitive although perhaps not quite as selective as I could wish. I heard and held WHEF, Kosciusko, Miss., for an hour and a half this morning from 2:30 to 4:00 EST. They were broadcasting a recorded program with 100 watts power. They invited listeners to write and said they would reply free with a card or would write a letter for ten cents.

I also heard WKEU, KFI and XEAW this morning."

#### Short and Snappy

"Since September 20th, I've received seven veries as follows: WQAN, WDBO, WKBZ, WCAL, KVOD, CMW and KTM," reports John J. Swatko, 216 East 5th Ave., Homestead, Pa. "My aerial is 153 feet long of a number 12 solid wire running North-South. I am using three grounds—one on the water-pipe and two outside consisting of large copper pipe nine feet long. I am still using the Victor R-32. If any reader is using a s. w. converter with an R-32 Victor, I surely would be very glad to know who he may be because I am interested in s. w."

"I have fallen away from DX in the last year," confesses Herbert E. Weidman, 7443 Bennett Ave., Chicago. "But I hope to get back in the track again. I have about 500 verified including KPQ when they were using 50 watts. The main reason to



*Lois Bennett, famous radio soprano, who sings the part of "Sally Gibson" on The Gibson Family programs—those original musical comedies written expressly for radio presentation. A full hour every Saturday at 9:30 p. m. EST on the NBC-WEAF.*



my halt in DX was due to oilburner noises. With these and other motors on both sides of our house, there are very few minutes quiet enough for early morning DX. I think your aerial story in October and November will help me but if any other readers have other suggestions, I will appreciate them."

"Since August 29, I have added 99 stations making my log 472," reports Julian Schaefer, 2036 West 83rd St., Cleveland, Ohio. "My best are KPCB, KFBB, KGHL, KFXJ, KFPW, KASA, WHEF, KNOW, KFJZ, WCAT and KTAB. I have 20 from California, six from Washington and three in Lower California. I have logged all but four states. On Sunday morning, October 7, between 4:30 and 5:00, I heard a station between 570 and 575 kcs. playing xylophone selections. Could this have been FQN? I will correspond with any active DXer especially those who own a Majestic 91 and 92."

"Reception has been very spotted," reports Robert Nestor, Route 3, Sayre, Okla. "Sept. 16 was about the best reception weather I have ever had. On that day I logged the following stations: JOAK-1, JOGK, 5CL, CX30, KGFJ, KGFK, CFRB, XETZ, CRCT, CKY, CJRM and XEBT. The Japs and Aussies are my first TP's. I use a Majestic aircell receiver, Model 105, with a T antenna and an old radiator for a ground. KADA, Ada, Okla., has been on the air regularly since Sept. 26."

"I have a Bosch Cruiser radio" says Howard Conrad, RFD No. 1, Killingly, Conn. "Here are some of the best stations I've got: WEXL, WKAQ, WDAH, KADA, KFXD, KFAC, KGDM, KFYO, KFJM, KPAC, KTM, CFJC, TGW. I picked up TGW Sunday morning, October 14, and I have sent for a verification. Could any DX fan tell me what station was on 855 kcs. Sunday morning, Oct. 14, broadcasting church music about 4:50 a. m.? And another one on 1000 also broadcasting church music."



*Alice Frost is the charming young blonde recently added to the list of radio artists who impersonate screen celebrities for pre-views of movies broadcast during the "Forty-five Minutes in Hollywood" program over the Columbia net Thursdays at 10:00 p. m. EST.*

"I'll never forget the morning of October 14th," exclaims Roy N. Licari, Allenwood, N. J. "I picked up for the first time: KIT, VOGY, KGU, 5CK, 3LO, 2CO, 3UZ, 3AR, 4RK, 2UW and 4BC, all loud except KGU. I also heard KGMB, 2BL, 4QG, 2UE, 2SM and 2GB but I had had these before. I also heard what I believe to be two very low-powered Australians and I have written to them to verify it. I dare not report them now else people would not believe it."

"On my GE K-85 all-wave, beginning January 26, 1934, I have logged a total of 835 stations as follows: B. c. b., 170; S. W. (foreign) 29; hams, U. S. A., 546; hams, foreign, 17; airports and planes, 4; police, 66; ships, 2; television, 1. The foreign hams include VE (Canadian), X1 (Mexican), K4 (Puerto Rico),

*(Continued on page 47)*

# ADVICE from the Radio Clinic

• • • By The Technical Editor

*The bass notes from my Ertla radio receiver do not seem as perfect as they should. Can I install an adjustable device that will vary the tone of the bass notes?*

The 2A5 of this set is the power output tube. Between the grid of this tube and the chassis, or between the plate of the tube and the chassis, insert a series combination of variable resistance and fixed condenser. The value of the resistance should be 10,000 ohms. The condenser; 500 volts breakdown test, and .05 microfarad. Place the resistance between the chassis and the fixed condenser, and the condenser between the resistance and the plate or grid of the 2A5 tube. This prevents the plate or grid voltage from getting into the resistance; only the a.c. component passes through.

## Converter Voltage

*How can I cut down 250 volts to 180 volts so as to use a short-wave converter with my receiver?*

Use a 3,500-ohm resistor (2 watts) in series with the 180-volt terminal of the converter. This value of the resistance is based on the supposition that two tubes are used in the converter.

## Parallel Antennas

*A neighbor and I intend placing our two antennas on the same supporting masts. Will such an arrangement cause trouble if the two wires are parallel and used on different receivers?*

Such practice is not always to be recommended. Of course, it will work. Much depends upon the types of receivers to be used on the antennas. Regenerative receivers should never be attached to adjacent antennas. The ordinary superheterodyne set, however, will seldom affect a nearby receiver through re-radiation by way of the antenna.

Many apartment houses erect antennas that are grouped together and supported at the ends by single racks. In your case, adjacent antennas, three or four feet apart, provided the leads are not parallel, will prove quite satisfactory. Place the wires as far apart as is practicable.

Some radio manufacturers have devised multiple receiver antenna installations. This means that two or more receivers can be used on one antenna. The "Lynch No-Stat" noiseless antenna system can be used in this manner.

## Repeating Stations

*How can I stop the repeating of many stations at two different points on the dial of my 1934 Remler Cameo model 10-3 receiver? I get KYA on 1230 kilocycles, and it also repeats on 720 kilocycles. Other stations also repeat, but at different frequencies.*

The intermediate frequency of your set is 180 kcs. Some sets of this make use 250 kilocycles. There may be some harmonic relationship here, for in some superheterodynes, if the circuits are not properly balanced, this very thing happens. Now, for instance, the intermediate frequency of the set is 180 kcs. The 4th harmonic of the intermediate frequency within the set is 720 kcs. If the set has an i. f. of 250 kcs., then its 3rd harmonic will be 750 kcs. Both of these are close together. This 4th harmonic of 720 kcs. is the additional spot in your set where you say KYA "repeats" on the dial, although that station operates on 1230 kcs. KGGC, you state, comes in on 1420 kcs., but repeats at 900 kcs. 900 kilocycles is the 5th harmonic of the 180 kcs. i. f. If this is the case you will get most of the repeats on 540, 720, 900, 1080 and 1260 kilocycles on your dial. These are the

3rd, 4th, 5th, 6th and 7th harmonics of your intermediate frequency. The 2nd and 8th harmonics are too low and too high to fall within the tuning range of the receiver.

This excessive harmonic content of the heterodyne oscillator is due to defects in the circuit which control the harmonic output. Try cutting down the antenna length. Your serviceman will be able to reduce the coupling between the antenna circuit and the tuned circuits, and to balance the set carefully in an attempt to remedy this trouble.

#### **New Tubes in Victor 22A**

*Can I change the tubes in my Victor 22A receiver so as to use some newer type of tube and improve the performance of the set?*

The tubes used in your receiver—56s, a 55, 46s and an 82—are about the newest ones available for this particular set. We cannot recommend any changes from the 55 to a 2A6 or 2B7, or from the 46 to a 2A5, or the 82 to another type.

#### **Shielded Lead-In**

*I wish to shield the lead-in of my antenna. What material do I use, and how is it connected?*

A shielding tube of braided metallic material may be used to cover the lead-in wire or wires. It can be purchased at any radio supply house. There will be a slight signal loss. It is recommended that, if the shielded lead-in is used, a system of transformer coupling be installed, such as the "Lynch" and others, to prevent these losses. Read the articles appearing in the October and November, 1934, issues of RADEX.

#### **Converter With Zenith**

*I wish to use a short-wave converter with my Zenith model 805 receiver. Will there be any trouble in providing current to the converter? Also, how can I use the small I. C. A. short-wave converter, with the -27 tube, in connection with my receiver?*

As most large converters have their own filament transformers there



*Ralph Kirby, star of the Mohawk Treasure Chest, finds his treasures in the great outdoors. Rod and gun, and woods and water are the dreams of the "Dream Singer." With Harold Levey's orchestra each Thursday at Noon EST, and each Sunday at 2:00 p. m. EST.*

is little or no trouble about getting proper current and voltage for the converter tubes.

If you wish to use the small I. C. A. converter with your Zenith receiver it is only necessary to replace the -27 tube with a 37 which operates on 6.3 volts, the same as the tubes in your Zenith. Or you may continue to use the -27 tube by placing a 3-ohm resistor in series with one of the wires leading to the -27 tube filament connection. This will cut down the voltage from 6.3 to 2.5 volts.

#### **Eliminator Ripple**

*My Philco B253 "B" eliminator is not giving good results. The jars are in good shape and the solution is new. There is a "ripple" noise that I cannot account for.*

A 60-cycle hum will be present if the filter system is not functioning properly. One choke or filter con-

denser, if defective, might cause ripple by not smoothing out all the hum from the rectifier unit. If this ripple is due to the rectifier and eliminator it will be heard at any point on your dial. Is this the case? Try connecting a speaker or phones across the output of the eliminator and see if the hum is heard direct from the power unit. A small condenser in series with the speaker will protect it from possible damage if connected too long.

A defect in the audio chokes or filter condensers will cause variation in the degree of hum. This could be called a ripple. There are five filter condensers in this unit; two have capacities of 4 microfarads; two are 2 mfd.; and one has 1 mfd. capacity. The variable resistance may not be working properly. There is a .15 mfd. condenser in series with the lead running to K, the cathode terminal. It may be defective.

#### **Philco Cuts Off**

*My Philco 90 cuts off about every minute or two and then comes back on if a light switch in the house is snapped on or off. What is wrong?*

The snapping of a light switch on or off seems to set up a surge of current that changes the operating potential and seals or repairs some defective condenser or resistor in your set. Breaking down or the audio coupling condensers causes the most common trouble of this character in the model 90 Philco. Replace all units found defective with new units that use stranded wire to the lugs instead of the solid pig-tail connections. The audio coupling condensers, if you have a diagram, are numbered 23, 24, 28, and 30. There are three of the 24s in the audio end of the circuit. Also, the coupling condenser (23) between the second detector and first audio tube may be the real cause of this trouble.

#### **Set Goes Dead**

*My Silver-Marshall receiver, Q-34, has a tendency to go dead after it has*

*been in use two or three hours. After resting a while it becomes satisfactory, only to go dead some time later. What can cause trouble of this character?*

The most probable reason for the cutting off as described is a defective plate resistor in the oscillator plate circuit. When a critical temperature is reached the resistor changes value sufficiently to prevent oscillations. The action of the resistor is probably very erratic in this regard. Other units which might possibly be the cause of such difficulties are: Oscillator bypass condensers, oscillator cathode resistors and other units having to do with the operation of the oscillator. Of course, the first thing to do is to check the tubes, particularly the rectifier.

#### **Scott Power Unit**

*I have a 1933 Scott deluxe all-wave receiver employing an -80 type rectifier with two -45s as amplifiers. These are coupled to twin speakers. Will you give some data telling what will be needed to convert the power unit to employ a 5Z3 rectifier and two 2A3 audio amplifier tubes in place of the ones now being used?*

The main purpose of making the changes you suggest is, of course, to obtain more power from the output of the speaker. While no circuit changes are necessary for this conversion, it will be necessary to replace the output transformer, which is in the speaker unit, with one having the proper impedance. The plate-to-plate impedance of two 2A3s in push-pull is about one-half of that of two -45 tubes. If the original audio transformer is used, considerable power loss and distortion will be the result. The new transformer must have an impedance of 5,000 ohms from plate to plate. The old one has 8,000 ohms.

The voice coil specifications remain the same. The original sockets and wiring remain intact for all the changes. All that is necessary is to

remove the old tubes and place the new ones in the appropriate sockets.

But, depending upon the speaker design, and other design features of the set, it is questionable whether such a change would be justified. The fidelity of the finished receiver would not be improved, and it would not help to improve the power output if the speaker will not be capable of handling the output. The 2A3s consume more current than the -4Bs, but it is possible that your power transformer can easily stand this overload. The plate potentials and other characteristics are suitable for either tube types and no alterations are needed.

#### Harmonics in Philco 16

*I have a Philco 16 receiver. We have a local station on 1500 kcs. There is also an out of town station on 590 kcs. When both are operating I get a howl on 590 and a bad harmonic of our local station at the same spot. How can I cut out the harmonic when receiving on 590?*

The interference of the 1500 kcs. station with the 590 kcs. station is undoubtedly due to the second harmonic of the intermediate frequency, which is 460 kcs. Quite often it has been found necessary to change the i. f. of these receivers to either a slightly higher i. f. or a slightly lower i. f. Many successful jobs have been completed by changing either to 445 kcs., or 475 kcs.

This change, either way, is usually sufficient to cut out all harmonic interference, and is within the range of adjustment of the i. f. trimmers. Your service man can quickly make the changes necessary to this end.

The howl may be produced by the interference of the i. f. and some local long-wave signal, or even with a broadcast station. If increasing the i. f. to one of the values mentioned above does not cure this trouble, try changing to the other value.

#### Tubes Hiss

*Why does my Crosley 168 receiver*



*Three little girls from Texas, Dot, Kay and Em, have been selected by Rudy Vallee to sing with his Connecticut Yankees each Thursday night on the country-wide NBC-WEAF hook-up. Singing in a Houston theatre, they met a girl who knew a fellow who knew Rudy. So they came East.*

*have a distinct hiss when it is tuned to weak and distant stations?*

When you tune to weak stations and increase the volume so as to hear those stations you also tend to increase the action of the tubes, forcing them to the limit. A characteristic hiss, then, comes as a form of tube noise. We suggest that you have tubes tested and replaced if they appear gassy.

#### 47 Versus 2A5

*Can I replace a -47 tube with a 2A5 type in the audio power output stage of my receiver?*

The -47 may be replaced with a 2A5 by using an adapter in the -47 socket and inserting the 2A5 in the top of the adapter. Or you can remove the old socket and replace with a six-contact socket. The latter has an additional contact for the cathode of the 2A5 tube. See the November,

1934, issue of RADEX, page 34, for detailed information of socket connections.

#### A Pre-Tuner

*I have a model 140 RCA Victor, superheterodyne, with tuning range from 540 to 18,000 kilocycles. I don't seem to be getting the short-wave stations I should. Can I construct a pre-amplifier using two 58 type tubes and with a separate power pack with an -80 type tube as rectifier?*

We have mailed you a diagram of an appropriate radio-frequency amplifier suitable for any frequency. If the coils used are of good design and the construction work properly done this pre-tuner ought to help you considerably.

However, while it would be possible to build a pre-amplifier for this receiver, it would be almost impossible to synchronize its tuning or station selecting positions with that of the radio receiver proper. Failure to accomplish this would render the unit practically useless. Because of this difficulty even in the expert manufacturing field no pre-amplifiers are used. You would be attempting an impossible task in this respect.

We think the untuned r. f. amplifier, above mentioned, will give you some amplification, and if you build it we would like to have a report on the results obtained, so that we can pass them along to the readers of RADEX.

#### Midwest Model 11

*Please tell me the functions and locations of the different tubes in my Midwest super 11—1932, model 6769 receiver. What is the value in ohms of its volume control?*

The arrangement of the tubes in the chassis should be about as follows: The tube nearest the antenna post, or at least the screen-grid tube nearest the antenna post, is the radio-frequency amplifier tube. It will be followed by the oscillator, a -27. Next in line follow: Four screen-grid tubes, the last of which is the second de-

detector, and the first of which is the first detector. In between should be the i. f. tubes. The second detector is in turn followed by two resistance-capacity coupled audio amplifiers which are transformer coupled push-pull output pentodes. The rectifier is easily distinguishable because of its size and appearance. This is an -80 type tube. The output tubes are also larger than the others.

According to the diagram of this set it uses a 500,000 ohm resistor as a volume control. The slider or arm is grounded.

#### Dial Readings Off

*Why is it that my Philco 16L is "off-dial" at certain places on the short-wave bands? On 15,000 kcs., it is about 150 kcs. high; on 10,350 kcs., it is 100 kcs. high; and on 5,000 kcs., it is about right. On the broadcast band it is 5 kcs. below the proper frequency all the way through the band.*

The high-frequency (short-wave) compensating condenser for the oscillator is out of adjustment. There is one master h. f. adjustment for all bands. It is integral with the tuning condenser assembly. Its value must be increased by adjusting it for more compensation. Any serviceman can quickly make the change for you if you do not feel competent to do the work or locate the trimmer.

The dial calibration for the broadcast band can be corrected by loosening the dial from its shaft and turning it to the proper place, according to the station coming in. When this is done the drum-dial is then tightened in place. This setting must be done before the trimmers are adjusted for the short-wave bands.

#### Repeat Spots

*I have repeat spots on the short-wave portion of my set. They are about 900 kilocycles below the station frequency and seem to occur on nearly all stations, including foreigners. Why is this, and how can they be eliminated? The set is a Philco 16L model.*

*(Continued on page 43)*

# The EDITORIAL Microphone

## • • • Chatting *about* Radio

SOME of the best features of this magazine originated with our readers. It is from our daily mail that we learn what our readers want and how they want it. The time on the air, the DX calendar, the frequency tests, the marginal tabs—all of these were suggested by our readers. It is a pleasure for us to receive either suggestions or criticisms for it is through them that we learn how to improve this publication.

We receive a heavy mail and we reply to each letter either by post or through these pages. True, we are sometimes slow in answering but this is merely because there are many other letters ahead. We want our readers to feel free to write us whatever they have on their minds. We want them to be, in effect, associate editors of this, their magazine.

### The Day's News

"In western Canada and western U. S. there are thousands of radio owners who depend on radio almost entirely for the news as the mail service is so poor that newspapers are anywhere up to a week old on arrival," points out Dr. W. J. Bates, Bracken, Sask. "The news means more to these radio owners than all else that they hear on the radio. Then why not add to your very valuable RADEX a "Where to Get the News" page, listing a few of the best news services in east, middle west and west?" One of the silliest and most futile movements of our day is the opposition of newspaper publishers to the broadcasting of the news by radio. They have frightened the stations by threatening to discontinue publishing the radio programs until the stations have agreed to limit the broadcasting of news to five minutes and the material to that furnished by the news syndicates. Even then the stations are required

to tack on the postscript "For full details see your daily newspaper." What about the great multitude for whom Dr. Bates speaks, who do not have a daily newspaper? Many thousands of our people live in places where daily newspapers are days late. Are they to be deprived of information to which they are entitled merely to protect the newspapers from what they consider competition? If the broadcasters are of a stuff worthy to be pioneers in a new field, they will not submit for long to this dictation but will form their own news-gathering organizations and then the papers will have some real competition.

We do not know how many of the stations have regular daily periods during which they broadcast the day's news but we are sending out a ques-



*Grete Stueckgold, distinguished concert and opera star, who recently started her second season of broadcasts over the nation-wide CBS net. She is the featured soloist of the Saturday broadcasts (9:00 to 9:30 p. m. EST) in the three-a-week Chesterfield series.*

tionnaire to the largest stations in the U. S. and Canada and with their co-operation, we will publish the information our friend suggests.

#### **Chiseling Advertisers**

It is surprising when there is already so much opposition to advertising on the radio even by sponsors, that so many broadcasting stations add fuel to the fire by "chiseling in" on the sponsor's time and making one and two-minute announcements for local advertisers. Most listeners submit more or less gracefully to the advertising "blurbs," conceding that the firm that provides the program is entitled to something for his money. Every listener, however, resents the intrusion of an advertiser who has provided nothing. It is a dishonest practice at best. The station has taken the pay of the network to broadcast the program which the sponsor has paid for. To sneak in an extra announcement for a chiseling advertiser, takes time the sponsor has paid for and reduces the appeal of his own message by irritating listeners. It is a petty business and ought to be stopped, if not by the stations themselves, then by the networks or in the last event by the FCC. It is exactly as though a newspaper were to run a small ad for a chiseler in the white space of an advertisement some other firm had paid for.

#### **Station Notes**

This message comes from Senor B. Sancristobal, General Director of Radio Station XEB, Mexico City: "There is something that we would like to tell everyone of your readers and that is we are going to broadcast a special program for the IDA on the 24th of November from 10 p.m. to 10:30 CST, and that on future dates we will dedicate a concert to everyone of the short wave clubs in America. We request that every club send us material for their respective programs. We would like to have music publishers send us some songs to be played as we want to make these programs international in

character. We want to do our share in increasing international good-will, by broadcasting international music." We are sorry this letter reached us too late for the November issue but the rest of the letter we refer to the music publishers of the U. S.

In a letter to W. H. Ansell, 168 Wascana Street, N., Regina, Sask., Radio Station 2ME of Sydney, Australia, write: "We have pleasure in advising you that a program will be dedicated on December 9th, 1934, to the States of Canada. We have decided to make this dedication to the States and not to Clubs. The IDA members in these particular States can take these programs to be for them as well as for the non-members of the listening public." Following are the hours: 2:15-3:00 a.m. EST for Alaska, Yukon, British Columbia, Alberta and Saskatchewan, 6:30-7 a.m. EST for Manitoba and Ontario, 7:00-7:30 a.m. EST for Quebec, New Brunswick and Nova Scotia.

"W2XR can be heard daily between the hours of 5 and 7 p.m. except on Saturdays and Sundays," says William Wingerter, 1864 Cornelia St., Brooklyn, N. Y. "They play records of all the classics and operas and are certainly worth listening to. W2XR invites correspondence from listeners and are located at 41 Park Row, New York, N. Y."

#### **Unwise Experiment**

"What would happen if I disconnected the speaker from my 70 Philco and hooked the set to the antenna post of my 725 Zenith?" inquires one reader with experimental inclinations. Well, he could probably scrap the Philco and on the Zenith he would get just nothing at all. A receiver should never be operated without the speaker connected. If the speaker plug is ever removed, one should be very certain that it is back in place before turning on the current. In any event, the audio frequency current flowing from the Philco into the aerial of the Zenith would have no more effect than if you were to attach a phone



to the aerial and talk into it. The aerial, of course, receives radio frequencies.

#### This and That

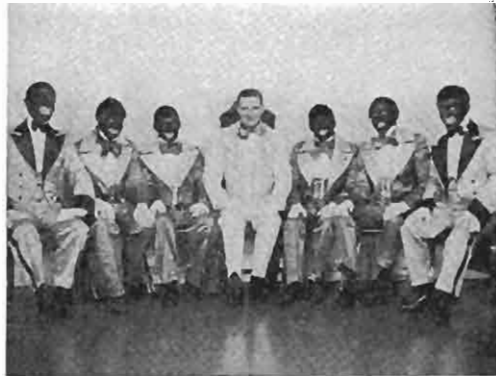
"Here is one for your 'Bust Department,' " writes K. S. Sutton of Oklahoma City: "In the window of The Jenkins Music Store in this city is a Stromberg-Carlson chassis. A display card calling attention to the advantages of this receiver reads as follows: 'All wiring wrapped with cotton and silk, soaked in beeswax insuring long life and little service.'"

"I believe I have a singleton in a Canadian call, VE9CF, an amateur in Halifax, N. S., who used the CHNS transmitter one morning about three years back," claims R. R. Rawstron, 96 Leeds St., Worcester, Mass. We can hardly enter this as a Singleton if we understand the situation correctly. This amateur using this call may never use the CHNS transmitter again—probably won't. Hearing him over CHNS isn't the same as hearing him over his own small transmitter.

A reader submits the following tip for labor-saving in driving a pipe ground. "Attach hose to upper end, put on full pressure and let pipe sink itself into the soil; shake and twist pipe to enlarge hole. My ground was put into the earth ten feet by this method. Pipe can later be drawn out and hack-sawed in spots to allow water to seep through all the way down, then reinserted and washed down again."

Here's a chance to boost your log. WPTF, Raleigh, N. C. has been granted special temporary authority to operate on frequencies 550, 620, 670, 720, 770, 800, 840, 860, 910, 920, 1020, 1070, 1090, 1150, 1230, 1330 and 1490 in order to make antenna tests and observations on a new antenna development. But here's the catch—one-watt power.

One of the newsiest club bulletins which comes to our desk is the British Globe Circler Arthur C. Baker, Editor. Mr. Baker's address is 10, Lansdowne Road, Sale, Cheshire, England. The price of the BGC is



Here we have the Mollie Merry Minstrels who, with all the color and gusto of any old-time minstrel entertainment, are brought to NBC audiences over the WEAJ net for 15 minutes each Monday and Thursday at 7:30 p. m. EST and on the WJZ list Friday's at 10:00 p. m. EST.

4½d or 3/6 per annum. For the convenience of our readers in Britain, Mr. Baker carries a supply of RADEX, the *DX Log of the World* and the Time Converters.

## The Singleton Honors

ARE the readers listed below the only ones in the U. S. who have heard the particular stations listed? So far their record stands except as otherwise noted. Do you think you have a verification from some station which no one else in the U. S. or Canada has heard? If so, send us the call. Do not send the verification unless it is requested in case of dispute.

ZTD, Durban, South Africa. C. E. Lowe, Merced, Calif.

2ZP, Wairoa, New Zealand. Charles Hesterman, Saskatoon, Sask.

3BO, Bendigo, Australia. Robert R. Rawstron, Worcester, Mass.

2KY, Sydney, Australia. Art. Collins, 109 Amber St. Buffalo, N. Y.

3KZ, Melbourne, Australia. Art. Collins, Buffalo.

6PR, Perth, Australia. Art. Collins, Buffalo.

Copenhagen, Denmark. Ray La Rocque, Worcester, Mass.

Trieste, Italy. Ray La Rocque, Worcester, Mass.

SBH, Horby, Sweden. Ray La Rocque, Worcester, Mass.

2YC, Wellington, N. Z. Harold Alexson, Vancouver, B. C.

#### Eliminated

SBA, Stockholm, Sweden, awarded to James Blase, Bronx, N. Y., is eliminated by Art. Collins, Buffalo, N. Y.

HAL, Budapest, Hungary awarded to Richard W. Watts Rocky River, Ohio, is eliminated by P. H. Robinson, Shelburne, N. S.

4BC, Brisbane, Australia, awarded to Frank W. Hoxie, South Orrington, Maine, is eliminated by Robert R. Rawstron, Worcester Mass.

## Iowa on the Air

**T**HROUGH the initiative of Robert W. Gorsuch and Donald Barnes, a most unique series of broadcasts will take to the air on Sunday morning, December 16th. Every station in the state of Iowa will participate. Naturally Messrs. Gorsuch and Barnes are hoping that DXers will appreciate their efforts and the co-operation of the stations and will respond by reporting their reception. Memberships in the NNRC, IDA, CRXR, NRC, GCDX and other clubs have been donated as prizes together with several three-month subscriptions to RADEX.

Interference on the frequencies to be used will be limited through the co-operation of the courtesy program committees of the leading DX clubs. As a consequence these programs should be well received in every part of the country. As a most interesting part of the program, each station will give a brief history of its existence, call letters and frequencies used in the past, etc.

#### The Programs

WHO has promised a variety program for the first hour including their regular "Barn Dance Frolic." Henry Field, owner of KFNF, will be at the

microphone to give the history of his station and talk to his numberless friends throughout the country. KFJB will be on the air with a short lecture by Grant O. Gale, professor of Physics at Grinnell College, and will probably have either a German band or a hill-billy orchestra. Earl May of KMA will be at the mike to tell a few details of the plot to kidnap him. WMT will be on with a meeting of their popular "Brain Improvement Society," a very clever comedy skit.

Following is the schedule of "Iowa On the Air":

12:00-1:00 WHO Des Moines 1000  
1:00-1:30 WSUI Iowa City 880  
1:30-2:00 KFNF Shenandoah 890  
2:00-3:00 KFJB Marshalltown 1200  
2:00-2:30 WOI Ames 640  
2:30-3:00 KMA Shenandoah 930  
3:00-3:30 WMT Waterloo 600  
3:00-3:30 KSO Des Moines 1320  
3:30-4:00 KSCJ Sioux City 1330  
3:30-4:00 KGCA Decorah 1270  
4:00-4:30 KWLC Decorah 1270  
4:00-4:30 KFGQ Boone 1370  
4:30-5:00 KOIL Council Bluffs 1260  
5:00-5:30 KWCR Cedar Rapids 1430  
5:00-5:30 WOC Davenport 1370 or  
KICK Carter Lake 1420

The date is Sunday, December 16th.

The time is Central Standard.

#### Another IDA Contest

The International DXers Alliance of Bloomington, Ill., is again seeking the b. c. b. Champion of the World. Only stations broadcasting between 540 and 1570 kcs. will be counted. The stations, too, must be not less than 2000 miles distant from the receiver, and they must be from one of the other continents.

Information in regard to the contest and the rules for scoring may be secured from Charles A. Morrison, President of the IDA, at the above address.

# High Frequency NEWS and COMMENT

• • • By the Short Wave Editor

**S**TATION 12RO, quiet for several months, broke its silence on October 28th, when Signor Marconi, Father of Radio, inaugurated a series of programs to be heard several nights each week from the new Italian shortwave station. These programs are known as the American Hour, and last for 90 minutes. The schedule will probably be from 6:30 to 8 p.m., EST.

After several years of highly successful transmitting over experimental station 12RO, the Italians, following the example of the British and German broadcasters, have removed their shortwave broadcasting from an experimental status, and although their plans are not fully known, it is expected that future programs will be radiated from directional antennae to various sections of the world after the fashion of the other European stations. Lady announcers will be used, as is the custom in all Italian stations, and announcements will be in several languages.

The new Roman station works on the following frequencies: 5550 kcs. (54.02 meters); 5725 kcs. (52.37); 6060 kcs. (49.48); 6980 kcs. (42.95); 9630 kcs. (31.13); 9780 kcs. (30.66), and 11810 kcs. (25.39).

As call letters are lacking at the present time, the station will be found listed as "Radio Roma-Napoli."

## Radio Maroc

Reception of Rabat, in Morocco, is so erratic that we have often wondered if the station still held to a regular schedule. A letter from M. Chanton, Charge' and Principle Inspector in charge of wireless in Morocco, indicates that Rabat continues to broadcast its programs twice every Sunday, first on 12.830 megacycles from 7 to 9 a.m., and on 8,035 megs, from 11 a.m. to noon and from

2 until 7 p.m., EST. Letters to this station should be addressed to Direction de L'Office de P. T. T., Rabat, Morocco. We have read somewhere that this station can be recognized by the ticking of a metronome or by a gong, but in reply to our question, M. Chanton says the identification "signal" is the English announcement, "This is Radio-Maroc."

## Two New Stations

"While writing this letter and listening to the radio I heard a new station come on the air at about 9 p.m., and it signed off at 9:30, EST." announces Thomas Quaid, University Station, Enid, Oklahoma. "It announced its call letters as COH, lo-



Anne Seymour, star of Grand Hotel, is of the seventh consecutive generation of her family to follow a dramatic career. She turned to radio after four years on the stage. The program features an original radio drama each week. Sunday evenings at 6:30 EST over the NBC-WJZ network.

cated in Havana, Cuba. The frequency was given as 9428 kcs. but it was heard near 9500. The address, I believe, is 2B Street, Ciudad Habana.

"A very fine station has opened in Rio de Janeiro, PRF5, and is at present the best South American on my set," continues Mr. Quaid. "EAQ, GSD, GSB and DJB are the best from Europe now and the best from Asia and Australia are JVM, JVN and VK2ME. From 5.8 to 8 megs. my set is a veritable maze of SA stations. Of your 100 Best I have heard 74. My bests to add to those are PLV, TGX, KIO, PLE and DIQ. My log totals 103 foreign stations, exclusive of amateurs."

Mr. Quaid mentions reception of VK3ME and VK3LR on a Sunday morning, but these were most likely special transmissions in connection with the London-Melbourne air races. Faithful shortwave tuners heard the results of the races from 3LR long before any news appeared in the local press.

#### A Strange Visitor

"I have been listening to a mysterious foreigner who works on or near 6120 kcs. and who seems to be best just after sunrise," observes P. M. Baldwin, 150 Willoughby Ave., Las Cruces, N. Mex. "This station sends out good programs, mostly music, varying all the way from classical to jazz. One morning I heard Oriental singing, resembling that of the Japanese. I cannot recognize the language but am sure it is not Spanish, French or German, although it sounds more like German than anything else. Perhaps Dutch. I have never detected anything that sounds like a station announcement. This station comes in quite consistently every morning, for which reason I am quite sure it is not in Europe because we do not receive European stations at all well in this locality. On the other hand, we do receive trans-Pacific; I can get RV15 as regularly as clockwork. I wonder if I could be hearing YDA at Bandoeng, Java,

which is supposed to work on 6116 kcs."

#### Stations to the South

"I have a card from Eduardo Pinto Hernandez, Apartado 257, San Jose, Costa Rica," commences one of Robert L. Weber's interesting reports. "His call letters are TIEP (La Voz del Tropico) when using 6710 kcs. and TI2EP when on his amateur's frequency of 7238 kcs. His card says he is a member of the Cadena Indo-Latina de Estaciones Radiodifusoras (Indo-Latin Network of Broadcasting Stations)."

According to the Radio Club Venezolano, the name of the South American network is as it was given in RADEX last month, Cadena Indo-Americano.

"I have learned that HJN, the popular (and only) broadcast band station in Bogota, will be on a high frequency of 6079 kcs. soon. The s.w. call letters are not known at the present time, but I believe the new station is now on the air," continues Mr. Weber. "I have also heard a Costa Rican, TIX, on about 52 meters during the evening hours, announcing as "La Reina del Aire," (The Queen of the Air)."

The Queen of the Air is not acting in a very queenly manner at present. The commotion heard each evening near 51.5 meters seems to be the result of three stations trying to use the same frequency at the same time, TIX, HCK, and TGX.

#### Over the Pacific

"Since the weather is cooling off a little. I am beginning to hear a few stations on Asiatic wavelengths," reports Geo. W. Acker, 267 N. Lyman St., Wadsworth, Ohio. "So far however, the Asiatics have been comparatively weak. Japan has discontinued her broadcasting through JVM and JVN, which were used during the summer, and is now using JVT on 6750 kcs. PHI has also changed over to its winter spot, that is, 11725 kcs. It is quite poor, but its new companion station on 15220 kcs. roars in like a lion. The new station broad-

casts the same programs as PHI but seems to be on the air every morning until 10:30 a.m.

"Every morning I hear a station between 6120-30 kcs. but am never able to get an announcement from it. It is an English-speaking station and the English is distinctly British. I conclude that it is in one of the British possessions in Asia or Australia because good reception at that time of the morning would most likely come from the West."

#### Above 15 Megs.

Mr. Acker put up a single wire antenna, 175 feet long, and with it logged 40 stations in one day. Commenting on this aerial, he writes, "Heretofore I have never heard a single station lower than PPU on 19270 kcs. Now I am getting stations that I never knew were above that frequency before. All the stations below 19 meters used to be distorted and weak, but now they pound in faster than I can identify them. I cannot understand why, unless it is the height of this aerial that counts; it is only about 20 feet above the ground, JVF, 15620 kcs. at Nazaki. has gotten to be a regular visitor every evening until shortly after dark. JVF works with either KWU or KWN at Dixon, coming on the air at 6 p.m., EST, and continuing long after they fade out near 7:30."

Seven strangers were heard in one morning by Mr. Acker, on the following frequencies: 19200, 20250, 20500, 20550, 21200, 21370 and 22000 kcs. They were all phone stations except 20500 kcs., which was broadcasting music.

#### The Afrikanders

"Recently I received a verification from Salisbury, Southern Rhodesia, giving their frequency as 6000 kcs. with 500 watts aerial power," contributes H. Lotter, Marandellas, Bagnor Road, Rosebank Cape, South Africa. "This station is used for experimental broadcasts and also for meteorological and aircraft services. As you perhaps know, Nairobi operates on 6060 kcs. with 500 watts.

Two other African stations are Johannesburg, 6122.45 kcs., 5 kilowatts and Durban, 48.8 meters, 10 watts. These stations are run by the African Broadcasting Co. which charges seven dollars for a license annually. My receiver is an 8-tube Westinghouse All-wave with a vertical aerial about 40 feet high."

#### S.W. in Texas

"I am still able to drag in the regulars on the s.w., the Daventrys, the Germans, all the Americans and most of the South Americans," summarizes Charles A. Steele, 3119 Seventh St., Port Arthur, Texas. "Those phone stations at Nazaki, JVS and JVT, are heard here every night; at least, KWO at Dixon is heard carrying on a one-way conversation with them. My usually reliable Aussies have just about quit me although I did hear VK2ME good and clear last Sunday. But Portugal, Holland, Morocco, the Russians, and Geneva still elude my earnest efforts. Another funny thing is Porto Rico and Bermuda, although comparatively close, are very seldom heard, in fact, just once did I have H11A and that was a special DX from midnight until 1 a.m. On the other hand, the Orientals are almost a sure bet every morning early. The Canadians CJRX and CJRO at Winnipeg have been consistently good while Bowmanville has done a complete fade-out." Mr. Steele is a bedfast war veteran and, although he may not be able to answer all the letters he receives, we believe he would like to hear from other shortwave fans.

#### The Soviet Stations

English programs are now broadcast from the Moscow shortwave station on Sunday, Monday, Wednesday and Friday at 4 p.m., EST. on 50 meters (RV59), and on Sundays, additional programs are broadcast on 25 meters (RNE), at 6 a.m. and 10 a.m., EST. Special features to be broadcast during the winter on the 4 p.m., 50 meter transmissions, are announced by Radio Centre, operators of the stations, the series consisting, as usual

of talks about the Soviet Union, "and sometimes Music."

#### **From California**

"I belong to several s.w. clubs and have read quite a lot about reception not being so good this summer, so today I thought I would check up on my summer log, and I think, considering the fact I am so far removed from the center of action, I have a very good log," writes a Californian who wishes to be known only as Old Man De-Exer. "I will admit, however, that reception is not as good as in 1925-1929. My luck with EAQ is nil; I must be in a skip spot. I am using a Patterson PR10. Had 100 feet of No. 12 wire for summer but have put up 125 feet of No. 10 for my winter use. It runs SW by NE." OM De-Exer is doubly entitled to his chosen nom du plume, being a young man of 63, and being a radio fan since 1918 on the Broadcast band and since 1924 on the shortwaves. The log he sends shows 48 foreign stations received during the summer just past, all the USA stations, 172 amateurs, and ten special stations, such as KNRA, KFZ, W10XDA, KILX, etc. Foreign stations were logged on every continent except Africa, which, we think, is very good tuning.

#### **One from Arkansas**

"Using a Bosch All-wave Model 460, I picked up a station at 3 a.m. on 6800 kcs, which was broadcasting what appeared to be a drama between two men and a woman. It sounded to me like a Chinese or Japanese station," concludes Geo. L. Beyers, 1001 W. Capitol Blvd., Little Rock, Ark. With the new Italian stations testing at various times of the day and night, the steadily increasing activity of the Soviets, and the myriad of Japanese stations, it is difficult to identify any station, but with GBD at Rugby, England, working on 6790 kcs. it is possible that their inverted speech sounded like Chinese. Rugby has been mistaken for China many times.

#### **Logs YDA**

"I use a Scott DeLuxe and have a log of 750 stations (both standard and short waves) for the first year of its operation," advises Melvin Hill, 824 Castro St., San Francisco, Calif. "My best bets include Daventry, Pontoise, Australia, the new Bandoeng station YDA, KAY, JYS, JYR and JYT. I wonder if readers can identify stations YQ4 and UY9, heard several evenings talking to each other near 47 meters. Neither gave its location. As they were quite loud I presume they are on the Coast. Perhaps they are army stations, or possibly outlaws." Our guess is army airways stations.

#### **What's in the Air**

At this time of year the air is filled with prophecy. Dopesters are busy picking the football winners, the hockey championships are already decided by busy guessers, and next year's baseball teams are already selected by members of the hot stove league. We will fall in line with some radio prophecy. . . Rumors have been drifting about for months that Pontoise will expand its facilities and it is expected that, ere long, Radio Coloniale will be heard on 9.585 and 15.454 megs. in addition to its present assignments. The more ambitious prophets say that 100 kw. will be used. It has been gossiped around for some time that the German Kurzwellensenders would have call letters running in alphabetical order from DJA clear through to DJR. Some of these have already been heard, such as DJE, DJL, DJN and DJO. DJE is heard in the mornings and the others in the afternoons. DJL 15.110 megs. DJN, 9.450 megs and DJO on 11.790 megs.

#### **Some Radio Gossip**

A station in Reykjavik, Iceland, should be heard very soon on 9.050 megs. The tentative call sign is TFK. The Administration of Central Broadcasting Stations at Nanking, China, is reported to be building a short-wave sister station to its already

famous XGOA. The new station, XGOX, will probably work in each of the four regular bands, 48, 31, 25 and 17 meters. Perhaps by the time this appears in type, VK3LR will have terminated its shortwave work. The station was supposed to serve persons in the interior of the continent but the Australian government feels that their needs can better be served on a long wave length, about 1100 meters. Stations come and go. We are always glad to see new ones come, and sometimes we are glad when they go, but the passing of an old favorite like 3LR is always regretted. We will continue to list 3LR until we are sure that they have left the air.

#### What Location?

"We are shortwave fiends," admits Elwyn C. West, 29 Charlotte St., Binghamton, N. Y. "We have a Grunow All-Wave and get quite a variety of stations: DJC, EAQ, YV2RC, and London, of course, daily. Personally, we prefer the Spanish-speaking countries. We are wondering about Zeesen and Daventry. Are these Berlin and London respectively? If so, why aren't they listed as such?" In our lists by frequencies the location of the stations is given as announced on the air, and in the alphabetical list the location of the transmitter is given. We believe our lists are more valuable to users when locations are given as announced on the air as this aids materially in identification. Some small stations have the transmitter and studios under one roof, or at least, in the same city, but all large stations remove their transmitters from city interference. In the latter case we believe the actual location of the transmitter is of more interest than the studio location.

"I have had my Philco 6-tube less than a month and have had lots of fun tuning it. I don't bother with the long waves but stick to the good old s.w. I am very proud of my log which includes 17 foreign stations in



*John B. Kennedy, noted editor and radio commentator, is the master of ceremonies on the "Radio City Party" series in which the RCA Radiotron Co. honor the outstanding stars and programs of the year. Saturday nights at 9 o'clock EST over the WJZ net.*

Germany, Russia, Spain, England, etc." C. A. Redick, 137 Elgin St., Sarnia, Ont., the writer of the letter, would like to hear from other DXers.

#### Uses S-C Selector

Users of Stromberg-Carlson sets will probably find the comments by C. A. Berlinger, 76 Hotel-de-Ville St., Hull, P. Q., of interest. He writes, "I have recently gotten a Stromberg-Carlson All-Wave Selector to go in conjunction with my present Model 30 Stromberg-Carlson. I use a GE Allwave aerial with this equipment and am getting satisfactory results. I have noticed that with this aerial, the receiver works better with the receiver transformer set at standard wave when working the 19 and 25 meter bands, and with the transformer set at shortwave when working the 31 and 49 meter band. I receive Daventry, Berlin and Pontoise daily as though they were locals, with enough volume to shake the house down. I have also heard a number of South American stations."

"On the shortwaves some of the

most interesting stations heard here are LSX, KNRA, VK2ME, VK3ME, HI1A, HJ1ABB, HC2RL and the League of Nations, which I picked up before this series of broadcasts was started on the NBC; I do not want to be accused of having heard WCG or some such station relaying them. I have, of course, heard the usual British, German, French and Spanish stations." Whitney Smith, 53 West End Ave., Pontiac, Mich., is the reporter.

#### Some New Ones

The Director of Radiodifusora Nacional TGW in Guatemala City informs Rudolph Kure of Cincinnati that they will be on the air very soon with their new s.w. unit, working on 5940 kcs. with 200 watts.

Reports have appeared for several months in European publications of a Brazilian station, PRA8 at Pernambuco, on 6028 kcs. or 49.75 meters. This station is heard regularly over there but has not been reported in this country.

Our faithful English reporter, Robert M. Pybus, 4 Highfield Rd., Chorlton - cum - Hardy, Manchester brought the European section of our lists up-to-date, and adds a new station, CT2AJ, Ponta Delgada, Azores. 2AJ works on 3500 kcs., on Wednesdays and Saturdays from 5 to 7 p.m., EST.

#### Megacycling Around

A nice bouquet is herewith presented to COC for those Saturday night broadcasts, and our heartiest congratulations on the new transmitter which steps out so beautifully. And brickbats to lots of guys who never announce in any language, particularly the one on 6120 kcs. in the early A.M. Wonder what happened to YV2RC. They must have laid off the violin and flute players, leaving the bass drummer to play solos all evening. Hope they get the trouble ironed out so we can hear the high notes again. Among the sadly missing: HRB and its marimba band; lots of Saturday nights were spent at home on their account. Gone but

never missed: X26A. Thomas Quaid can proudly wear a feather in his cap this month for his discovery of COH. And our heartfelt sympathy to the cuckoo at XEBT (he has a cold or so it sounds up here).

A very satisfactory record is the one submitted by Rafael A. Munoz, 109 North Ave., N.W. Atlanta, Ga. Mr. Munoz is satisfied to cover Europe and South America very thoroughly, totaling 38 stations in 13 countries.

From Cecil Dickinson, Chatham, Ontario, comes this interesting report: "I have a Sparton ten-tube and a Sparton model 60 converter with which I have had wonderful results. I have verifications from numerous stations but the BBC is best. I have missed 'London calling' only 16 times in the past 17 months. Once they played a request number for me; they do not grant requests as a rule but I got mine. My mother who lives in Chester, England, listens in to the same broadcasts as I do which send my thought back home and bring back many pleasant memories of days gone by. I have RADEX to thank for all these hours of pleasure and also Jack Beardall of CFCO who first brought RADEX to my notice."

"I was lucky enough to arrange a special good-will broadcast direct from the League of Nations at Geneva for the IDA and SWP via HBP, 38.47 meters, Geneva, on Sunday, December 16th, from 5:00-6:00 p.m. EST. It is going to be a Secretariat message, a surprise program." This information is from Rudolph Kure, Cincinnati, Ohio.

"I have just bought a Midwest 16 and am having great reception," says Paul E. George, Box 271, Salem, Mass. "Up to now I have GSB, YV3BC, DJD and several SA s.w. stations. I hope to make this winter the most successful ever in the DX field."

VK2ME, Sydney, Australia, will broadcast programs on Sunday, December 9, expressly for the provinces of the Dominion of Canada. Those dedicated to the western provinces



will be received from 2:15 to 3:00 a.m. EST. Those for Manitoba and Ontario from 6:30 to 7:00 a.m. EST. Those for the Maritimes from 7:00 to 7:30 a.m. EST.

#### Answers to Questions.

Rev. Homer Fort, 730 Gandy St., Denison, Tex.

- (1) Has XENT a s.w. station on about 67 meters?
- (2) Does KFZ use the 8.820 frequency exclusively?
- (3) How is it possible to identify airport stations?

(1) The station on 67 meters is the fourth harmonic of XENT. (2) KFZ uses no frequency exclusively, but whichever one of its 20 assigned frequencies is the most suitable for the season or other propagation conditions. (3) Except in very rare cases, the identity of the airways stations is "guessed" as they seldom announce their call signs.

#### Simply Questions

"It was my good fortune recently to win an All-Wave radio. I wonder if some of my fellow radio fans could assist me in the identification of a station, presumably Japanese, on about 6130 kcs. It is on early every morning but fades away about 8 a.m., CST. The music is wierd, and some selections last as long as 15 minutes." Alvin Oliver 1506 Lamar, Apt. 5, Houston, Texas.

Delbert Turner, Odin, Ill. "What Spanish-speaking station broadcasts on 158 meters near 9 P.M. CST daily?"

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## The Foreign Stamp Exchange

**T**HE "STAMP WINDOW" which the IDA has set up in charge of R. W. Schofield, Director, is now open to the public. It has the cooperation of the Treasury Department, the Post Office Department, the State Department and the American Consular Service in many countries. It has its own agents in

twenty-one foreign countries who act as a source of supply. While some of the stamps are necessarily more expensive than International Reply Coupons, most of them cost less. They are much more convenient for use as return postage than the IRC and much less trouble to the station receiving them.

The International DXers Alliance Stamp Exchange, (300 Evans Ave., Missoula, Mont.) now has a stock of stamps from 43 foreign countries and, within the next thirty days, expects to have supplies from 14 countries more. The list of stamps available is too long to print here but a price list may be secured from the Exchange for fifteen cents.

This exchange should be a very real service to the DXers of North America for they can convert U. S. coins or postage into the stamps of any country to which they wish to report. It may reasonably be expected that a report of reception accompanied by a self-addressed envelope containing a stamp of the country concerned, will ensure attention and verification. Then, too, envelopes self-addressed are more certain to come back to the writer than those addressed by clerks in foreign broadcasting stations.

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## The Girl on the Cover

Born and brought up in Manistee, Michigan, Georda Young, twenty-year-old blues songstress, had no vocal training until a few weeks ago when she met a music teacher at a studio broadcast. Three short weeks later she won an audition which paved the way to her network debut. She was the guest star on the "Open House" program with Freddy Martin and his orchestra.

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*The current issue of the DX Log of the World contains both the Short Wave Stations and those on the Broadcast Band. Price 10c.*

# Stories of the IDA Contest

**T**HOSE of our readers who have never yet tuned in a foreign station, should get both inspiration and encouragement from the experiences of the contestants in the recent IDA marathon. This contest was for stations on the broadcast band at least 2000 miles distant. As outlined in the last issue of this magazine, the winner of the grand award verified 114 such stations. This month we are privileged to print letters from some of the others who participated in this contest.

## From Hawaii

"In the IDA contest, I used a Radiola 66 with eight tubes, all of which were over three years old at the time. I also used a Resonator and for power, the regular a.c. from floor-plug. My antenna is 40 feet high and 125 feet long running NE to SW. It is of the L type and the lead-in is partly shielded. For my ground, I have two Ollie Ross grounds set down four feet and six feet apart. I am 2100 miles from my nearest station and have 135 verifications mostly in letter form. None of these verifications could be used in the recent IDA contest as they were all secured prior to its starting." This information comes from H. Harding-Jones, 2531 Rainbow Drive, Honolulu, T. H., who won the third award in the recent contest with 74 verifications.

## From Sweden

From another of the contest winners, John S. Bohm, Box 511, Malung, Sweden, comes this letter: "I received the October issue of RADEX today and as usual found it very interesting. I am now going to give you a DX report from Sweden. I think you have never before heard from my country. I have been interested in DX since autumn 1932 and started writing for verifications in November the same year. Up to the present date I have 75 NA and SA stations verified, the best are as fol-

lows: KFXM, KGIR, KIT, KWG, KXL, WJBW, WTJS, WBNX, KOA, WMAS and CP4. I have identified 146 stations in North and South America. The USA stations are at present very well received here, lots of stations from all parts of the country are coming over the big Atlantic. This morning I had wonderful reception of KNX, 'The Voice of Hollywood,' and 'Radio station KOA, Denver.' KSL in Salt Lake City was also heard with great clarity. The Argentine stations are always heard in Sweden, quite as well in summer as in winter. I have identified 22 stations in Argentina, three in Uruguay, one in Bolivia and one in Venezuela. LR4, LR5, CP4 and YV1BC are verified. I am a member of the IDA and I am enjoying the membership very much. I use a five-tube Philips and a six-tube Telefunken a.c. for my DXing."

## From Saskatoon

From another entrant, Charles H. Hesterman, 2214 Herman Ave., Saskatoon, Sask., comes this report of his experience: "Unfortunately I did not enter the competition until January after it had been in full swing for four months, but I managed to get fairly high up in the list. One or two of my catches were thought very remarkable by both the examiner and the president of the IDA. So far as I can discover, and I have made several inquiries, European veries are a real scarcity in these western provinces of ours; I therefore consider myself somewhat fortunate in possessing three. Following is my list of foreign stations—38 of them, including the three Europeans—which was OKed in the IDA contest: 2CO, 2GB, 2BL, 2UE, 3HA, 3LO, 3AR, 4BH, 4RK, 4QG, 4BC, 5CL, 5CK, 5DN, 2YA, 2ZP, 3YA, KGU, WKAQ, LR5, CP4, IMI, PP, 7ZL, Stuttgart, JOAK-1, JOAK-2, JOCK, JODK, JOFK, JOGK, JOHK, JOIK, JOJK, JOLK, JOOK, JOPK,

JOQK, JOSK, JOAG, YC1BC, CX26, and CMCY. I used a Victor RE-45, ten-tube t.r.f. with no attachments of any description. Most of the stations were heard quite well on the speaker though on occasions I was forced to use phones owing to the heavy static waking the rest of the household. My antenna system is of the inverted L type, 35 feet in length, 30 feet in height, east to west with a lead-in taken from the west end. My ground is an Ollie Ross buried in salt. I was cursed with endless interference caused by the multiple-printers on the CNR telegraphs. Lately I have removed from that locality and so far this new location seems much quieter. I have erected a pair of super-antenna masts, each 85 feet in height and 250 feet apart. The new ground system is 25 feet of heavy copper busbar, soldered into a grid and submerged in fifteen feet of water. I have great expectations from this outfit this season." Mr. Hesterman is connected with radio station CFQC and says they intend broadcasting one or two more DX programs this season and are anxious to know just how far out their signals are reaching.

#### From England

"I was delighted to receive your card informing me that I had been lucky enough to win a year's subscription to your fine magazine in the recently concluded IDA Contest," writes R. T. Coales, 54 Chelsea Road, Southsea, England. "I've been DXing for about seven years but didn't start collecting veries till I joined the IDA, a year ago this month. It wasn't until last January that I bought my first RADEX. It's a great magazine. The times on the air are invaluable; had I had this information before, I reckon I could have had several more stations in the contest. My stations verified in the contest totalled 72 made up as follows: Canada, 5; Argentine, Bolivia, Cuba, Mexico and Puerto Rico, one each; USA from the following 28 states: N. Y. 15, Mass. 5, Ill. and Ohio 4

each, N. J. and Texas 3 each, Conn., Ky., Pa., and Tenn., 2 each, and one from Ala., Cal., D. C., Ga., Ind., Iowa, La., Maine, Md., Mich., Minn., Miss., N. C., Okla., Utah, Va., and West Va.

"Some of the high power stations are just as hard to get as the little 'uns'. My lowest power Xmitters were WBNX, WHN and WRNY, all 250 watts. Power isn't everything. I've never had KDKA, yet lower-powered stations farther away are well heard. This morning, static was terrible and conditions poor yet WJZ, WABC, WBZ, WTIC, WPG and WCAU were quite well heard but WLW (a wonderful signal under good conditions) was only just audible. The only USA stations who didn't verify were WJAR and WKBW. The Argentines, apart from LR5, are a hopeless lot as regards answering.

"The article by Page Taylor, 'As I See the Short Waves' was the goods. Of course a large set isn't necessary. I prefer a large radio on account of reserve power, etc., but when all is said and done, it depends entirely upon conditions what you hear. I've had WTIC and WCAU on a one-valve set.

"We European members of the IDA have a s.w. contest on now. At the moment I'm third and I'm only using an O.U.I. This uses two battery valves (triodes) 60 volts high tension. Since June, amongst others, I have verified 14 fone hams in the US and Canada with over 40 reports out including hams in Puerto Rico, Cuba, Santa Domingo, Ecuador, etc. Some other veries: YV1RC, YV3RC, HJ4ABE, VQ7LO, XEBT, VK2ME, PRA2. Reports are out to VUB, HC2RL, HJ1ABB, Prado, COC, etc.

"Please don't think I'm boasting; I just quote this to prove what anyone can do with simple apparatus. This little set is by my bed. I didn't build it with the idea of using it DXing on the s.w. The aerial was only about 25 feet high as I was installing a new pole. This is 40 feet high; aerial is ordinary L running East-West. I shall shortly have installed an H. M. U. 9-

valve de luxe Radiogram with record changer. On the s.w. I shall use a two-valve converter with the above, this converter being made specially for me. This equipment is all a.c. mains operated. I built my present superhet in 1932 so it's getting a bit ancient and hasn't a v.c."

## Some Coming Treats

● ● ● By Earl R. Roberts

I am on the program committee of the IDA and the NRC and have already arranged some fine programs from stations in Europe, South America and Mexico. I'll be glad if you will give all the publicity possible to these programs as the stations wish many reports and have requested that I publish the program dates.

International Good-will Programs for the IDA have been arranged and accepted by the following stations:

Radio Prieto, LS2, Buenos Aires, Argentina, 1190 kc., 40,000 watts, Friday, December 7, 1:30 to 3:00 a. m. EST. Tuesday, January 22, 2:00 to 3:00 a. m. EST. Their programs will consist of popular recordings, Argentine dances, typical Argentine orchestras, with announcements in English and Spanish. On the first program a short talk will be given by one of their engineers describing their transmitter which is all-Argentine construction.

Radio Uruguay, CX26, Montevideo, Uruguay, 1050 kc., 5,000 watts, Saturday December 22, 3:30 to 5:30 a. m. EST. Announcements will be given in English and Spanish. Diploma certificates will be awarded for correct reports.

Union Radio, S. A., EAJ-7, Madrid, Spain, 1095 kc., 10,000 watts, Thursday January 10, 1:00 to 2:30 a. m. EST. Announcements in English and Spanish after each selection.

Confirmed IDA programs arranged

by other members as listed in the October "Globe Circler" are:

Radio Strasbourg, P.T.T., Strasbourg, France, 859 kcs., 17,000 watts, Sunday, Dec. 9, 2:00 to 3:00 a. m. EST.

Radio Excelsior, LR-5, Buenos Aires, Argentina, 830 kc., 25,000 watts, Monday, Dec. 10, 2:00 to 3:00 a. m. EST. All correct reports will be verified by a handsome diploma.

Radio Illimani, CP-4, La Paz, Bolivia, 1040 kc., 10,000 watts, Tuesday, Dec. 11, 3:00 to 4:00 a. m. EST.

Radio Nacional, CPX, La Paz, Bolivia, 1220 kc., 5,000 watts, Wednesday, December 12, 2:30 to 3:30 a. m. EST. This program from CPX will consist of native Inca music which will be a rare treat seldom enjoyed in this country.

Radio Biblioteca, HJN, Bogota, Colombia, 682 kc., 1,000 watts., Friday, December 21, 1:00 to 3:00 a. m. EST.

Radio Club of Portugal, CT1GL, Parede, Portugal, 1031 kcs., 5,000 watts, Wednesday, January 16, 12:01 to 2:00 a. m. EST.

In sending reports for verification I'd appreciate your telling readers to be sure and enclose an International Reply Coupon to help pay for postage and handling. These International Good Will programs are dedicated to the people of North America and especially to the members of the IDA. The address of LS2 is Radio Prieto LS2, S. A., S. A. R. P., 1352 Bolivar 1358, Buenos Aires, Argentina. That of EAJ7 is Union Radio S. A., EAJ7, Pi y Margall, 10, Madrid, Spain.

With the help of C. G. Huber and S. R. Lewis, I am arranging a special series of programs to be known as "Mexican Nights" for Friday, Saturday and Sunday, January 11, 12, and 13, from 1:00 to 6:00 a. m. EST. To date I have replies from three stations regarding programs for the NRC:

XEAA, Mexicali, L. C., 920 kc.

January 11 and 12, 3:00 to 4:00 a. m. EST.

XEAO, Mexicali, L. C., 560 kc. January 2nd, 5:00-6:00 a. m. EST.

XEMO, Tijuana, L. C., 865 kc. January 13, 3:00 to 4:00 a. m. EST.

Nearly fifty Mexican stations have been asked to join this series and we expect three full mornings of Mexican music. Other Clubs have been requested not to arrange specials for these mornings so as to allow all DXers to listen in on this series and not miss their own club programs either.

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## Inter-Club Cooperation

● ● ● By ELWIN H. BULLARD

How many times have DXers tried to hear some special broadcast only to find two or three other stations on the same frequency? This season we should find less clashing of DX programs than heretofore. The leading radio clubs are beginning to realize that only by inter-club co-operation can much of the clashing we have had in the past, be avoided. The IDA, the NRC and the CDXR have worked out a plan to prevent their DX broadcasts from interfering with each other.

Each courtesy-programs-committee chairman notifies the others just as soon as he has a DX broadcast confirmed. The CPC chairman then notifies his committee members who have charge of that frequency, not to arrange a DX program for that date and time. For the IDA's foreign broadcasts, the NRC and the CDXR will try to keep the frequency clear as well as those on both sides.

This means a lot of extra work for the chairmen of the above clubs but if we can avoid some of the clashing that we have had in the past, it will be well worth while.

## The Radio Clinic

(Continued from page 28)

Repeat spots are caused by the fact that the pretuner is ineffective in cutting out interference. This often occurs with all-wave receivers as it is impracticable to build an effective pre-tuner or amplifier. The repeat point occurs 900 kilocycles displaced from the oscillator frequency or twice the i. f. displaced from it. The i. f. of this particular receiver is 450 kcs. This is one problem of all-wave receiver design that has not been entirely overcome. The selectivity of the pre-tuner determines the image frequency, and if this cannot be carried to the proper point, it will be difficult to prevent the trouble. The question will require careful study by your serviceman, who may be able to make some adjustments in the tuner section of the set and eliminate some of the repeating.

### Tubes In S-M Q-34

*I am anxious to be able to identify the tubes in my Silver-Marshall model Q-34 receiver. Can you help me?*

Look down upon the set, facing the front. The row of tubes, from right to left, is as follows: 56—frequency driver for the broadcast band oscillator; 56—short-wave oscillator; 58—first detector; 56—oscillator; 58—first intermediate-frequency; 58—second intermediate frequency; 56—automatic volume control; 56—second detector; 45—power driver tube; the last two 45s, at extreme left are the push-pull audio or power amplifiers. The 82 is the power rectifier for the power tubes and the power driver, and the -80 is the rectifier for all the other remaining tubes.

### A Low-Frequency Special

The IDA has arranged for a special DX program on the long waves with Radio Luxembourg for the morning of Dec. 24, from 1:30 to 2:30 EST. The frequency is 230 kcs. or 1304 meters. Luxembourg uses 200,000 watts and should be heard here.

# The Case of "TAX vs BLURBS"

**T**HE article in our November issue has aroused the interest of our friends in Canada and votes on the two systems of broadcasting are pouring in. The results of the "election" will be given in the January number of this magazine. We received a number of votes from residents of the U. S. If they will read the article in question again, they will see that this vote was expressly limited to our readers in Canada for it is they who have experienced the two different systems of radio broadcasting. Votes from the U. S. cannot be counted.

Many of those who sent in votes explained their positions in letters. From these letters we are making some excerpts. We can quote from but a few.

## Advertising Plus Tax

"About 75 per cent of the Canadian stations do advertise; this however is mostly on privately owned stations. The only stations that do not advertise are the ones owned and controlled by the Canadian Radio Commission and even some of these use advertising when broadcasting a local program. I will admit that they are allowed to use only a certain small percentage of their time for this purpose but some of it is as bad as that used by your American stations. With regard to our \$2.00 yearly tax that each radio owner is compelled to pay here in Canada, this money is used for the purpose of helping the CRC put on better programs. Then too, in many sections of Canada, they have a radio inspector whose job it is to help clear up interference. This service is free to set owners providing they have a license. Those who do not take out a license are liable to a fine if caught. (If they do not have a license they cannot even have their sets installed or repaired by a serviceman.) When the time comes to pay the \$2.00 it is hard to part with

it even though it goes for a good cause." London, Ont.

## Commission Makes Progress

"Prior to the formation of the CRBC, radio in Canada was more or less in a state of chaos. There was scarcely any national broadcasting—barely three or four hours a week. Most of the smaller stations used records all day long and inferior artists in the evening. Large areas, notably Quebec, were without adequate broadcasting service. After less than two years of CRBC control, conditions have vastly improved. New stations have come into existence; others have increased their power; there is more national broadcasting per day than formerly per week, and good programs are available for the smallest stations. Much yet remains to be done but, given time, I am sure the CRBC will do what it set out to, namely, to give Canada an adequate broadcasting system which previously it did not have. I listen to and enjoy the high-class programs from the U. S.—there are none better in the world. They would be even better though minus the advertising." Paris, Ont.

## Ford Broadcast Ideal

"On the whole, I prefer the Canadian system although at present this is a compromise. Originally only 5 per cent of the time of any program was to be allotted to advertising announcements but it was found that advertisers did not like this so the time has been increased. But it is not yet anywhere near as bad as the ballyhoo on some of the U. S. stations. In return for our \$2 tax, one is entitled to call upon a government department to send out a radio-equipped car to clear up interference, and it is cleared up. This applies even to small villages or points anywhere in the Dominion. By the way, the broadcast of the World's Series by the Ford people was ideal in the way of

advertiser's announcements." Montreal, Que.

"I prefer the Canadian method but we haven't the money to enable us to equal the best U. S. programs. Our best talent gets better pay in the U. S. and gravitates there naturally. Some of our programs like the non-commercial ones of the CRC and the sponsored ones like Nielsons, Wrigley's, etc., are 100 per cent A-1—a credit to Canada and North America. Of course only the CRC stations here are run on the British system; all others like CFRB, CKAC and CFCH are run the U. S. A. way." North Bay, Ont.

#### Too Much French

"You may consider it tough to have to take advertising with your entertainment, but what would you do if half your broadcasts were in French and the other half consisted of the most mediocre form of broadcasting? Canada has practically nothing that could be honestly called first class entertainment due to lack of money and star performers. From the expression one hears in this locality, 'Blurb' should win hands down. And I am a Canadian, born and bred in this country." Montreal, Que.

"There are good points in both systems but my vote is for the American system. Under government control, there is too much sameness in programs across the continent so if you do not like one program, there is little choice. As far as advertising goes, I think we have as much in Canada as in the States. For instance, our hockey broadcasts are sponsored by General Motors yet I have heard many sports programs from the States which are sponsored only by the broadcasting systems. I think that with programs sponsored by advertisers we get a greater variety of programs and higher priced artists." Winnipeg, Man.

"I prefer the Canadian system of broadcasting without advertising so long as the tax is not over \$2 a year. Of course we are not free from advertising up here yet. Lots of sta-

tions continue to do advertising. However the CRC stations are fairly free from it. A little advertising would be OK but when programs are cut short for five-minute talks, it is just too bad." Ottawa, Ont.

"I prefer the American type of program, because I believe that individual sponsors can provide more types of entertainment than an individual governing body. As far as advertising is concerned, I don't mind it as long as it is not too explicit as though listeners were only kids, and the same line of advertising is not repeated twice on the same program." Hull, Que.

"The fee in Canada is only \$2.00 a year which really is not much for the amount of high-class entertainment provided the year 'round, although I do prefer many of the popular American programs." Montreal, Que.

"Our Commission is in direct competition with the independent stations for they not only take our \$2 every year but they also broadcast any commercials that they can get. We not only pay the tax but we get the advertising too. Our popular station here is CFCF (NBC) operated by the Canadian Marconi Co. This station has a new 5000-watt transmitter which was built just at the time the CRBC was forced on us. The CRBC has refused to give the Marconi Company permission to use this new transmitter at all." Montreal, Que.

"I would much rather listen to 'blurbs' and hear good programs than pay a tax of \$2.00 per annum and then get the mediocre entertainment that our Canadian stations put out over the air. Don't be misled in thinking that we do not get advertising on our programs because we get plenty and most of it is in French as are many of our programs." Montreal, Que.

"The Canadian Radio Commission programs are much inferior to the American ones. The Commission promised a new station on the West Coast. Instead of that they are using

the old transmitter of CNRV which was installed a good many years ago." Victoria, B. C.

## The Midwest Set

(Continued from page 6)

has two speeds—6 to 1, for long-wave tuning; and 30 to 1, for short wave tuning.

### The Lever Controls

Below are three levers. The left-hand lever operates the "Fidel-A-Stat", or tone control. The center lever is the band-selector switch which changes instantly to bands "E", "A", "L", "M" and "H". It also controls the different dial spot lights. This lever, when in a vertical position, is set to the broadcast band. The spot light, then, will center on the second-from-top, or "A" scale. The right-hand lever controls the sensitivity of the set or the "Micro-Tenuator" device, and also acts as the "on-off" switch.

The sixteen tubes of the Midwest model 16 superheterodyne receiver are shown in the diagrammatic layout plan. The "flow" of the various currents through the circuit, from tube to tube, is indicated indirectly by the dotted lines. This new type of simplified diagram, therefore, does not show the complicated coils, connections and other units of the usual circuit diagram, which are so confusing to the average radio listener and enthusiast.

Our readers may secure a new book illustrating this receiver by addressing Department 795, Midwest Radio Corp., Cincinnati, Ohio.

## The Story of Radio

(Continued from page 16)

sufficiently smooth and quiet so it can be used in a radio circuit.

(Next month we shall follow the rectified current as it leaves the rectifier and enters the filter and voltage-divider systems of the power unit.)

## The Long Wave Stations

**M**ANY people refer to the broadcast band as the long waves to differentiate them from the short waves. This is, of course, incorrect. We like the English method of using the terms, long waves, medium waves and short waves. The long waves are those longer than the broadcast band (above 555 meters or below 540 kcs.) while the short waves are those below 200 meters or above 1500 kcs.

Raymond M. Bell, 616 S. Allen Street, State College, Pa., compiles a list of the principal long wave stations in the U. S. which, he says, "opens up a new DX field because the calls are given frequently." We are working into his list the principal long-wave stations of Europe so as to give a more or less complete index to these stations on the lower frequencies. Mr. Bell says he has tried for these Europeans but had no luck at all and asks if others have ever heard them.

Kcs.	Call	Location
155		Kaunas, Lithuania
160		Hulzen, Neth.
		Kootwijk, Neth.
		Brasov, Romania
166		Lahti, Finland
174		Moscow, USSR
182		Paris, France
185		Istanbul, Turkey
191		Berlin, Germany
200		Droitwich, GB.
		Daventry, GB.
		Ankara, Turkey
208		Minsk, USSR
		Reykjavik, Iceland
214		Paris, France
216		Motala, Sweden
217.5		Novosibirsk, USSR
224		Warsaw, Poland
	WSG	LaCrosse, Wis.
	WWAT	Birmingham, Ala.
	WWQ	Bellefonte, Pa.
230		Luxembourg, Lux.
	KCAF	Albuquerque, N. M.
	KCAK	Shreveport, La.
232		Kharkov, USSR
236	WWAC	Nashville, Tenn.
238		Kalundborg, Denmark
240		Vienna, Austria
242	KCAO	El Paso, Texas
	KCR	Boise, Idaho
	KCV	Oakland, Calif.
	WWHP	Harrisburg, Pa.



Kcs.	Call	Location	413.5	Boden, Sweden
245		Leningrad, USSR	431	Veroneje, USSR
248	CYW	Strathburn, Ont.	436	Oulu, Finland
	KCAG	Amarillo, Texas	518	Ufa, USSR
	WET	Spartanburg, S. C.	519	Tartu, Estonia
	WWBF	Mobile, Ala.	519	Hamar, Norway
	VFT	Red Deer, Alta.	527	Innsbruck, Austria
254	KCAV	Springfield, Mo.		Ljubljana, Yugoslavia
	KCAW	San Antonio, Tex.		Vilpuri, Finland
	KLK	Reno, Nevada	536	Bolzano, Italy
	WWAP	Pittsburgh, Pa.	546	Wilno, Poland
	WWBC	Titusville, Fla.		Budapest, Hungary
256.4		Tashkent, USSR		
260		Oslo, Norway		
	KCS	Pasco, Wash.		
	KCT	Los Angeles, Calif.		
	WNR	Richmond, Va.		
	WWAQ	Jackson, Miss.		
266	KCAQ	Minneapolis, Minn.		
	KCX	Medford, Ore.		
	WHZ	Atlanta, Ga.		
	WSX	Boston, Mass.		
	WWAB	Buffalo, N. Y.		
271		Moscow, USSR		
272	KCAJ	Little Rock, Ark.		
	KIS	Iowa City, Iowa		
	WWAF	Miami, Fla.		
	WWX	Washington, D. C.		
278	Common	for all stations		
280		Tiflis, USSR		
284	KCAC	Butte, Mont.		
	KVM	North Platte, Neb.		
290	KCQ	St. Louis, Mo.		
	KDN	Rock Springs, Wyo.		
296	KCAA	Tulsa, Okla.		
	VFQ	Regina, Sask.		
302	KCAR	Pueblo, Colo.		
308	KCAE	Winslow, Ariz.		
314	KOJ	Elko, Nevada		
	VFR	Maple Creek, Sask.		
	VFU	London, Ont.		
320	KCAT	Millford, Utah		
	KJF	Omaha, Nebr.		
	WRW	Greensboro, N. C.		
	WWAH	Albany, N. Y.		
	WWAR	Jackson, Mich.		
326	KCAP	Big Spring, Texas		
	KSG	Cheyenne, Wyo.		
	WWAU	Memphis, Tenn.		
	VFS	Lethbridge, Alta.		
	VXR	Jarvis, Ont.		
332	KCAU	Houston, Texas		
	KCY	Portland, Ore.		
	VFN	St. Hubert, Que.		
	VFP	Forrest, Man.		
	WBP	Key West, Fla.		
	WEK	Wichita, Kans.		
	WWAS	Cincinnati, Ohio		
	WWAV	Charleston, S. C.		
338	KCAM	Tucson, Ariz.		
	KGD	Salt Lake City		
	WWAG	New Orleans, La.		
	WWHS	Chattanooga, Tenn.		
	WWU	Newark, N. J.		
344	KCAS	Spokane, Wash.		
	KCU	Fresno, Calif.		
	WWAV	Jacksonville, Fla.		
	WVO	Cleveland, Ohio		
350	KCAH	Kingman, Ariz.		
	KCCA	Oklahoma City		
	KDA	Chicago, Ill.		
	WWBI	Raleigh, N. C.		
355		Finmark, Norway		
		Rostov, USSR		
359	KCAD	Idaho Falls		
	KRC	Kansas City, Mo.		
365	KCAN	Fargo, N. D.		
	KCZ	Seattle, Wash.		
	KKJ	Fort Worth, Texas		
375		Sverdlovsk, USSR		
392		Ostersund, Sweden		
401		Geneva, Switz.		
		Moscow, USSR		

## Happy Nights

(Continued from page 23)

CM (Cuban) and K6 (Hawaiian).” This report is from William J. Wood, 817 1/2 Lake Street, Oak Park, Ill.

“My record stands at 424 on the b. c. band,” says Robert Wood, Hillsboro, N. H. “I started logging in September, 1933, and as I went to high school I couldn’t spend much time during the week on DX. However, this year I expect to have a larger number. I started a new log September 1st of this year. Some of my best catches last winter were LR5, KALE, KRGV, KARK, KFXF, 10-BQ, KTUL, WEXL, XENT, KTAR, KROW, KYA, KTFI, KFOX and KTM.”

This brief report is from John T. Satterly, 127 Water Street, Newburgh, N. Y.: “I have 176 stations up to date on the b. c. b. My best are KGU, KOA, KFI, CKCR, KSOO, KRLD, CFNB. I belong to the CDXR, one of the best DX clubs in the world. Will correspond with anyone who wishes to.”

### Who Needs WBOQ?

Especially for the benefit of those DXers who have never logged WBOQ, the phantom call for WABC, the Columbia Broadcasting System will broadcast a special program using the call, WBOQ, dedicated to the NNRC on Sunday morning, Dec. 9, from 3:00 to 4:00 a. m. EST. They are anxious for reports on this program and the NNRC would also appreciate DXers everywhere writing in. This information comes from

Philip R. Nichols, vice-president of the NNRC.

Jos. M. Brennan, 2314 N. E. Multnomah, Portland, Ore., wants us to locate some one in that city who is interested in s. w. and b. c. reception. He wants to hear from them.

## The DX Calendar

(Continued from page 4)

3:50-4:10	WBMC	1420	100	Detroit
	WCAT	1200	100	Rapid City
4:00-4:20	WFDF	1310	100	Flint
	KGCU	1240	250	Mandan
4:10-4:30	WFBE	1200	100	Cincinnati
	KWYO	1370	100	Sheridan
4:20-4:40	WGAR	1450	500	Cleveland
	KLPM	1240	250	Minot
4:30-4:40	WCLO	1200	100	Janesville
	KGFG	1370	100	Okl. City
4:40-5:00	WCLS	1310	100	Joliet
	KABC	1420	100	San Antonio
4:50-5:10	WJBL	1200	100	Decatur
	KFJZ	1370	100	Fort Worth
5:00-5:20	WJBK	1500	100	Detroit
	KWCR	1430	250	Cedar Rapids
5:10-5:30	WIBU	1210	100	Poynette
	KGFI	1500	100	Corpus Christi
5:20-5:40	WHDF	1370	100	Calumet
	WLFJ	1420	100	Kansas City
5:30-5:50	WCRW	1210	100	Chicago
	KGKB	1500	100	Tyler
5:40-6:00	WTAQ	1330	1000	Eau Claire
	WMBH	1420	100	Joplin
<b>December 21</b>				
1:00-3:00	HJN	681	1000	Bogota
<b>December 7, 14, 21, 28</b>				
10:00-1:00	CMBX	1185	250	Havana
1:00-2:30	XEX	1310	125	Monterrey
2:30-4:30	CKMO	1410	100	Vancouver
<b>Saturday Mornings</b>				
<b>December 1</b>				
2:10-2:30	WBRB	1210	100	Red Bank
2:20-2:40	WWRL	1500	100	Woodside
2:30-2:50	WGNF	1210	100	Chester
2:30-3:30	CHWK	780	100	Chilliwack
2:40-3:00	WMBQ	1500	100	Brooklyn
2:50-3:10	WGBB	1210	100	Freeport
3:00-3:20	WOKO	1430	500	Albany
	WJBC	1200	100	Bloomington
	KTRH	1330	1000	Houston
3:10-3:30	WGL	1370	100	Fort Wayne
	KFPW	1210	100	Fort Smith
3:20-3:40	WWAE	1200	100	Hammond
	WTAW	1120	500	College Station
3:30-3:50	WLBC	1310	100	Muncie
	KASA	1210	100	Elk City
3:40-4:00	WFAM	1200	100	South Bend
	KWLC	1270	100	Decorah
3:50-4:10	WCAP	1280	500	Asbury Park
4:00-4:20	WJAY	610	500	Cleveland
	KGCA	1270	100	Decorah
4:10-4:30	WBNS	1430	500	Columbus
	KFVS	1210	100	Cape Girardeau
	WTNJ	1280	500	Trenton
4:20-4:40	WWJ	920	1000	Detroit
	KGHL	780	1000	Billings
4:30-4:50	KQV	1380	500	Pittsburgh
	KDLR	1210	100	Devils Lake
4:40-5:00	WLAP	1420	100	Lexington
4:50-5:10	WSMK	1380	200	Dayton
	KFXJ	1200	100	Grand Junction
5:00-5:20	WAVE	940	1000	Louisville
	KFDM	960	500	Beaumont
5:10-5:30	WADC	1320	1000	Akron
	KWTN	1210	100	Watertown
5:15-6:15	WSUI	880	500	Waukegan
5:20-5:40	WSPD	1340	1000	Iowa City
	WEW	760	1000	Toledo
5:30-5:50	KWEA	1210	100	St. Louis
5:50-6:10	KGGM	1230	250	Shreveport
				Albuquerque
<b>December 8</b>				
1:00-1:30	WKY	900	100	Oklahoma City
3:00-3:30	KSO	1320	250	Des Moines
<b>December 15</b>				
1:00-1:30	WDNC	1500	100	Durham
5:00-5:10	KFNF	890	500	Shenandoah
<b>December 22</b>				
2:00-4:00	CX26	1050	5000	Montevideo
<b>December 29</b>				
12:00-3:00	KGR	1360	1000	Butte
<b>December 1, 8, 15, 22, 29</b>				
12:00-12:30	WGAR	1450	500	Cleveland
12:30-1:00	KDKA	980	50000	Pittsburgh
12:00-3:00	WGES	1360	500	Chicago
1:00-3:00	TGX	1400	150	Guatemala
	CMCW	540	150	Havana

## ADDRESSES OF SHORTWAVE STATIONS

- Compania Internacional de Radio, Defensa 143, Buenos Aires, Argentina.
- Transradio Internacional, Compania Radiotelegrafica Argentina, S. A. Buenos Aires, Argentina.
- Amalgamated Wireless, (A/sia), Ltd., 47 York St., Sydney, N. S. W., Australia.
- Companhia Radio Internacional do Brasil, Caixa Postal 620, Rio de Janeiro, Brasil.
- Cia. Radiotelegrafica Brasileira, Caixa Postal 500, Rio de Janeiro, Brasil.
- Canadian Marconi Co., P. O. Box 1690, Montreal, P. Q., Canada.
- Compania Internacional de Radio S. A. (Chile), Casilla 16D, Santiago de Chile.
- Chinese Government Radio Administration, Sassoon House, Jinkee Road, Shanghai, China.
- Compania Radiografica Internacional de Costa Rica, San Jose, Costa Rica.
- Marconi Radio Telegraph Co. of Egypt, S. A. P. O. Box No. 795, Cairo, Egypt. (Street address: Radio House, Sharia Eloul).
- Societe Francaise Radio-Electrique, 79 Boulevard Haussmann, Paris VIII, France.
- Compagnie Generale de Telegraphie Sans Fil, Boite Postale 238, Saigon, French Indo-China.
- Reichspostzentralamt, Telegraphentechnisches Reichsamt, Schoneberger Strasse 11-15, Berlin-Tempelhof, Germany.
- Reichs-Rundfunk Gesellschaft, Haus des Rundfunks, Masurenallee, Berlin-Charlottenburg 9, Germany.
- Hauptfunkstelle Norddeich, Norden-Land, Germany.
- The Engineer-in-Chief, G. P. O. (Radio Section), 86 Wood St., London, EC2, England.
- The British Broadcasting Corp., Broadcasting House, London, W1, England.
- Parkstaat 29, S'Gravenhage, Holland.
- Radiomarittimo Coltano Radio IAC, Piza, Italy.
- Societe Italo Radio, Via Calabria No. 46-48, Rome, Italy.

22. Gouvernements Radio-Dienst, Bandoeng, Java, Netherland East-Indies.
23. Post Telegraaf en Telefoondienst, Makassar, Celebes, Netherland East Indies.
24. Superintendent of Post and Telegraphs, General Post Office, Wellington, New Zealand.
25. Compania Peruana de Telefonos, Apartado 986, Lima, Peru.
26. Radio Corp. of the Philippines, Plaza Moraga, Manila, Philippine Islands.
27. Post and Telegraph Department, Bangkok, Siam.
28. Compania Telefonica Nacional de Espana, S. A., Margall 2, Madrid, Spain.
29. Administration of Central Broadcasting Stations, Central Executive Committee of Kuomintang, Nanking, China.
30. M. G. Gallarati, Information Section, League of Nations, Geneva, Switzerland.
31. Cuba Transatlantic Radio Corp., Habana, Cuba.
32. Radio Corporation of Cuba, Habana, Cuba.
33. Department of Marine, Radio Branch, Ottawa, Canada.
34. Calgary Herald, Ltd., Southam Bldg., Calgary, Alta.
35. Estacion YVQ, Estados Unidos de Venezuela, Servicio Radiotelegrafico, Maracay, Venezuela.
36. Imperial and International Communications, Ltd., Davidson St., Hamilton, Bermuda.
37. The National Broadcasting Co., 30 Rockefeller Plaza, New York, N. Y.
38. Japan International Radiophone Co., Nazaki, Ibaraki-Ken, Japan.
39. Research Laboratories for Electrical Communications, Royal Hungarian Post Office Authority, Gyal St. 22, Budapest, Hungary.
42. North German Lloyd, Pier 42, North River, Foot of Morton St., New York, N. Y.
43. Hamburg-American Lines, Pier 86, North River, West 46th St., New York, N. Y.
44. North German Lloyd, Pier 4, Foot of 58th St., Brooklyn, New York.
45. Canadian Airways, Ltd., (Western Lines), 60 Brock St., Winnipeg, Man., Canada.
46. North-West Telephone Co., Corner 2nd Ave. and Wylie St., Vancouver, B. C., Canada.
47. Laurentian Forest Protective Association, 126 St. Peter St., Quebec, P. Q., Canada.
- CP5: Compania Radio Boliviana, Casilla 637, La Paz, Bolivia.
- CT1AA: Senhor Abilio Nunes dos Santos, Jr., Av. Antonio Augusto de Aguiar 144, Lisbon, Portugal.
- CT1CT: Senhor Oscar G. Lomelino, Rua Gomez Freire 79, 2-D, Lisbon, Portugal.
- CT3AQ: Thiago D'Aguiar, Funchal, Madeira Islands.
- EASAB: Radio Club de Tenerife, Alvarez de Lugo 1, Santa Cruz de Tenerife, Canary Islands.
- G6RX: Rugby Radio Station G6RX, Hillmorton, Near Rugby, Warwickshire, England.
- HCJB: Mr. Clarence W. Jones, Transmisora HCJB, Casilla 691, Quito, Ecuador.
- HC2RL: Estacion Radiodifusora HC2RL, Dr. Roberto Levi, Apartado 759, Guayaquil, Ecuador.
- HIX: Mr. J. R. Saladin, Director de Radio, Estacion Radiodifusora HIX, Santo Domingo, Dominican Republic.
- HIZ: Mr. Geo. Abbes, Estacion HIZ, Calle Duarte No. 68, Santo Domingo, Dominican Republic.
- HIIA: Estacion HIIA, La Voz del Yaque, Santiago de los Caballeros, Dominican Republic.
- HJ1ABB: Radiodifusora La Voz de Barranquilla de Elias J. Pellet B., Apartado 715, Barranquilla, Colombia.
- HJ2ABA: Sr. Pompelio Sanchez, La Voz del Pais, Tunja, Colombia.
- HJ3ABB: Estacion HJ3ABB, Apartado 509, Bogota, Colombia.
- HJ3ABF: Estacion HJ3ABF, Calle 15, No. 5-40, Bogota, Colombia.
- HJ4ABB: Radio Manizales, Sr. Roberto Baena V., Apartado 175, Manizales, Colombia.
- HJ4ABE: Cia. Radiodifusora de Medellin, Emisora HJ4ABE, Medellin, Colombia.
- HJ5ABB: Estacion Radiodifusora del Valle HJ5ABB, Apartado 270, Cali, Colombia.
- HVJ: Stazione Radio-Vaticana, Pontificia Accademia Della Scienze, Roma-Castina Pio IV, Citta del Vaticano.
- I2RO: Ente Italiano per le Audizioni Radiofoniche, Via Asiago N. 10, Rome, Italy.
- LCL: Minister du Commerce du Royaume de Norvege, Oslo, Norway.
- LR4: Radio Splendide, Callao 1526, Buenos Aires, Argentina.
- NIROM: N. V. Nederlandsch Indische Radio Omroep Maatschappij, Tandjong Priok, Zuiderderweg, Batavia, Java, Netherland East-Indies.
- OER2-3: Radio Wein, Oesterreich, Johannaergasse 4-6, Vienna, Austria.
- OPL-M: Radio Station Leopoldville, Leopoldville, Belgian Congo.
- ORG-K: Regie des Telegraphes et des Telephones, Direction des Radiocommunications, Brussels, Belgium.
- OXY: Stratsradiofonien, Drifts sledern, Heibergsgade 7, Copenhagen, Denmark.
- PHI: N. V. Philips Radio Laboratories, Huizen, Holland.
- PK1WK: Mr. J. F. W. de Kort, Radiohandel, Bragawe 34, Bandoeng, Java, Netherland East-Indies.
- PRADO: Radiodifusora "El Prado," Apartado 98, Riobaamba, Ecuador.
- Rabat: Direction de L'Office des Postes, des Telegraphes et des Telephones du Maroc, Rabat, Morocco.
- Rdo. Coloniale: Ministere des Postes, Telegraphs et Telephones, Direction de la Radiodiffusion, 98 bis, Blvd. Haussman, Paris, France.
- Rdo. Tananarive: Le Directeur des Postes et des Telegraphes, Tananarive, Madagascar.
- RNE: Commissariat du Peuple des Communications Postales et Electriques de l'URSS, No. 17 Gorki St., Moscow.
- RV59: Trade Union Radio Station, Radio Centre, Palace of Labour, Solianke 12, Moscow, USSR.
- SRI: Radio Poznanski, Plac Wolnosce 11, Rozglosnia, Poznan, Poland.
- TI4 NRH: Sr. Amando Cespedes Marin, Apartado 40, Heredia, Costa Rica.
- VE9BJ: C. A. Munro, Ltd., Canterbury St., St. John, New Brunswick, Canada.
- VE9CA: The Voice of the Prairies, Ltd., Calgary, Alta.
- VE9CS: Radio Service Engineers, Ltd., 734 Davie St., Vancouver, B. C., Canada.
- VE9EH: Island Radio Broadcasting Co., Ltd., 143 Great George St., Charlottetown, P. E. I., Canada.
- VE9GW: Canadian Radio Commission Station VE9GW, R. R. No. 4, Bowmanville, Ont., Canada.
- VE9HX: The Maritime Broadcasting Co., Ltd., P. O. Box 998, Halifax, N. S., Canada.
- VE9JR: James Richardson & Sons, Ltd., Radio Office 155 Royal Alexandria Hotel, Winnipeg, Manitoba.
- VK3LR: Research Section, P. M. G. Department, 61 Little Collins St., Cl, Melbourne, Victoria, Australia.
- VK3ME: Amalgamated Wireless, (A/sia), Ltd., Box No. 1272L, Elizabeth St. P. O., Melbourne, Vic., Australia.
- VQ7LO: Imperial and International Commun-

jections, Ltd., P. O. Box 777, Nairobi, Kenya Colony.  
 WTVD: Mr. H. M. McKenzie, St. Thomas, Virgin Islands.  
 WTDW: Mr. S. I. Winde, Christiansted, Virgin Islands.  
 VUC: Indian State Broadcasting Service, 1 Garstin Place, Calcutta, India.  
 WVD: Alaskan Telephone Co., 517 Federal Office Bldg., Seattle, Washington.  
 W1XAL: World Wide Broadcasting Corp., Boston, Mass.  
 W1XAZ: Westinghouse Radio Stations of New England, Hotel Bradford, Boston, Mass.  
 W2XE: Columbia Broadcasting System, Inc., 485 Madison Ave. at 52nd St., New York City.  
 W3XAU: WCAU Broadcasting Co., WCAU Bldg., 1622 Chestnut St., Philadelphia, Pa.  
 W8XAL: Crosley Radio Corp., 1329 Arlington St., Cincinnati, Ohio.  
 W8XK: Westinghouse Radio Station W8XK, Hotel William Penn, Pittsburgh, Pa.  
 W9XAA: Mr. Maynard Marquardt, Chicago Federation of Labor, 666 Lake Shore Drive, Chicago, Ill.  
 W9XF-9XQ: National Broadcasting Co., Inc., Merchandise Mart, Chicago, Ill.  
 XAM: Telegrafos Nacionales, Merida, Yucatan, Mexico.  
 XETE: Empresa Telefonos Ericsson, S. A., C. Central 3, Colonia del Valle, Mexico, D. F. (or, P. O. Box 1396).  
 YV1BC: Broadcasting Caracas, Apartado 290, Caracas, Venezuela.  
 YV3BC: Radiodifusora Venezuela YV3BC, Bajos Pasaje Ramella, Caracas, Venezuela.  
 ZFS: Office of Superintendent of Telegraphs, Central Bay Street, Nassau, N. F., Bahamas.  
 Malayan Amateur Radio Society, c/o ZGE: Institute for Medical Research, Kuala Lumpur, Federated Malay States.

Whispering Jack Smith, who is built like a fullback and weighs more than 200 pounds and has been on the air for approximately ten years, admits that he's scared stiff before the mike. Smith says he trembles before each broadcast and never feels thoroughly composed until after he has sung his first number.

## The Classified Column

An advertisement here will be read by many thousands of radio enthusiasts who are experimentally inclined. Price 10c per word; minimum \$4.00.

### MOTION PICTURES

WANTED: 16 mm. films, 35 mm. negatives of circus parades, performances, taken from 1900 to 1934. State prices wanted. E. Sullivan, Box 692, St. Louis, Mo.

### SALESMEN WANTED

MEN to sell shirts. No experience necessary. Free samples. Commission in advance. Free ties with shirts. Carroll Mills, 875A Flatbush Ave., Brooklyn, N. Y.

The following CDXR specials were received too late to include in the DX Calendar:

	<b>Thursday Morning, Nov. 29</b>	
2:00-4:00	KFJB	1200 100 Marshalltown
	<b>Nov. 29, Dec. 6, 13, 20, 27</b>	
3:00-4:00	CKWX	1010 100 Vancouver
	<b>Sunday Morning, Dec. 2</b>	
3:00-5:00	CFCT	1450 75 Victoria
	<b>Sunday Morning, Dec. 9</b>	
2:00-3:00	KFJZ	1370 100 Ft. Worth
3:00-4:00	CJGX	630 500 Yorkton
4:00-5:00	WSGN	1310 100 Birmingham
	<b>Tuesday Morning, Dec. 11</b>	
12:00-3:00	WBMC	1420 100 Detroit
2:00-3:00	KDYL	1290 1000 Salt Lake
	<b>Saturday Morning, Dec. 15</b>	
3:00-6:00	WTRC	1310 50 Elkhart
4:00-5:00	CJRM	540 1000 Moose Jaw
	<b>Thursday Morning, Dec. 20</b>	
3:00-5:30	KGFF	1420 100 Shawnee
	<b>Saturday Morning, Dec. 22</b>	
1:30-5:00	KMAC	1370 100 San Antonio
	<b>Sunday Morning, Dec. 23</b>	
4:00-5:00	VE9EK	1185 10 Montmagny
5:00-5:30	KGEZ	1310 100 KallsPELL
5:30-6:00	KIT	1310 100 Yakima
	<b>Friday Morning, Dec. 28</b>	
12:00-3:00	WBMC	1420 100 Detroit
	<b>Sunday Morning, Dec. 30</b>	
2:00-3:00	XEPN	590 50000 Piedras Negras

## THE MONTH'S CHANGES

### POWER

865	XEMO	Tijuana, Mexico, 2000 to 2500
890	WBAA	W. Lafayette, Ind., 500 to 1000
920	WPEN	Philadelphia, Pa., 100 to 250
1260	WNBC	Springfield, Vt., 500 to 1000
1300	WFBC	Greenville, S. C., 250 to 1000
1320	KSO	Des Moines, Iowa, 250 to 500
1420	WEHC	Charlottesville, Va., 500 to 100
1450	CFCT	Victoria, B. C., 50 to 75

### FREQUENCIES

560	WIS	Columbia, S. C., from 1010
890	WBAA	W. Lafayette, Ind., from 1400
990	XEAF	Nogales, Mex., from 1080
1010	WNOX	Knoxville, Tenn., from 560
1420	WEHC	Charlottesville, Va., from 1350
1440	XEFI	Chihuahua, Mex., from 720

### NEW

850	WWPA	Clarion, Pa.
1210	WMFG	Hibbing, Minn.
1310	WMFF	Plattsburg, N. Y.
1370	WMFD	Wilmington, N. C.
1370	.....	Longview, Texas
1380	WMFE	New Britain, Conn.
1420	KABR	Aberdeen, S. D.

### DELETED

990	WJEM	Tupelo, Miss.
1200	10-BQ	Brantford, Ont.
1420	WLEU	Erie, Pa.

### CALLS

1260	CFRN	Edmonton, formerly CFTF
1370	WABY	Hudson Falls, N. Y., formerly WGLC
	<b>PERMIT TO CHANGE LOCATION</b>	
1370	WABY	Hudson Falls, N. Y., to Albany, N. Y.

**A Christmas Present  
that comes ten times  
a year.**

Give RADEX to your friends. Its monthly visits will remind them of you throughout the year.

We will send them an original Christmas card with your greetings and best wishes.

**For \$3.50**

**RADEX for two years together with a beautiful leatherette slip cover.**

**For \$2.25**

**RADEX for one year with leatherette cover.**

**For \$1.75**

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**For \$1.50**

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**705 Hanna Building**

**Cleveland, Ohio**

# Where to Get the DAY'S NEWS

More radio listeners are interested in knowing where and when to tune in the news of the day, than in any other feature. Radio stations are invited to submit the hours of their daily or weekly news flashes or bulletins. A list of the news commentators will be found under "Talks" on page 62.

<b>KEY</b>		5:05-5:10 p.m. (a)	WJJD, Chicago, on 1130
a Daily except Sunday		11:00-11:05 p.m. (a)	6:00-6:30 a.m. (a)
b Every day		11:00-11:15 p.m. (e)	12:50-1:00 p.m. (a)
c Daily except Saturday	WPG, Atlantic City, on 1100		WLAC, Nashville, on 1470
d Monday, Wednesday, Friday	10:00 a.m. (b)		6:30-7:00 a.m. (a)
e Wednesday only	WRVA, Richmond, on 1110		5:55-6:00 p.m. (a)
f Mon., Tues., Wed., Thurs.	10:00 a.m. (j)		WLS, Chicago, on 870
g Friday only	10:30 a.m. (i)		7:00 a.m. (a)
h Daily except Sat. and Sun.	WTIC, Hartford, on 1040		8:30-8:45 a.m. (e)
i Saturday only	10:00-10:05 a.m. (a)		10:25 a.m. (a)
j Mon., Tues., Thurs., Fri.	11:00-11:05 a.m. (e)		11:55 a.m. (a)
k Tuesday and Friday	6:00-6:30 p.m. (a)		WMAQ, Chicago, on 670
Stations Using Eastern Time	11:30-11:35 p.m. (e)		5:30-5:45 p.m. (a)
CFRB, Toronto, on 690	Stations Using Central Time		WOAI, San Antonio, on 1190
8:00-8:10 a.m. (a)	CKY, Winnipeg, on 960		9:00 a.m. (a)
12:25-12:30 p.m. (a)	1:00-1:05 p.m. (a)		10:05 a.m. (e)
6:30-6:40 p.m. (a)	4:15-4:30 p.m. (k)		5:30 p.m. (a)
11:00-11:15 p.m. (b)	5:40-5:45 p.m. (a)		WOWO, Ft. Wayne, on 1160
CKLW, Windsor, on 1030	9:45-10:00 p.m. (b)		12:15 p.m. (b)
8:00-8:05 a.m. (b)	KFAB, Lincoln, on 770		Stations Using Mountain Time
10:00-10:05 a.m. (b)	11:30-11:45 a.m. (a)		KOB, Albuquerque, on 1180
12:45-12:50 p.m. (b)	1:15-1:30 p.m. (a)		6:45 p.m. (a)
5:55-6:00 p.m. (b)	3:15-3:30 p.m. (a) ex. Fri.		KSL, Salt Lake City, on 1130
7:45-8:00 p.m. (c)	4:00-4:15 p.m. (a)		8:00 a.m. (a)
8:15-8:30 p.m. (d)	KSTP, St. Paul, on 1460		4:55 p.m. (a)
WCAU, Philadelphia, on 1170	7:30-7:35 a.m. (a)		Stations Using Pacific Time
10:00-10:05 a.m. (a)	12:45-12:50 p.m. (a)		KECA, Los Angeles, on 1430
7:45-8:00 p.m. (a)	6:10-6:15 p.m. (a)		12:15 p.m. (a)
11:00-11:15 p.m. (a)	10:15-10:25 p.m. (b)		6:15 p.m. (a)
WCKY, Cincinnati, on 1490	KTHS, Hot Springs, on 1060		KFI, Los Angeles, on 640
10:45-10:50 a.m. (b)	9:00-9:05 a.m. (a)		7:30 a.m. (a)
6:30-6:35 p.m. (b)	10:00 a.m. (e)		9:45 a.m. (a)
WGY, Schenectady, on 790	KYW, Chicago, on 1020		12:00 noon (a)
6:30 p.m. (b)	6:15-6:30 p.m. (b)		10:00 p.m. (a)
WHAM, Rochester, on 1150	9:00-9:15 p.m. (b)		KJR, Seattle, on 970
12:15 p.m. (a)	WENR, Chicago, on 870		9:30-10:45 a.m. (a)
4:15 p.m. (a)	5:30-5:45 p.m. (a)		6:00-6:15 p.m. (a)
10:30 p.m. (a)	WFAA, Dallas, on 800		9:00-9:15 p.m. (b)
11:10 p.m. (e)	10:00 a.m. (a)		KNX, Hollywood, on 1050
WJR, Detroit, on 750	5:30 p.m. (a)		9:45-10:00 a.m. (a)
11:00-11:15 p.m. (f)	WGN, Chicago, on 720		12:00-12:15 p.m. (a)
11:15-11:30 p.m. (g)	9:00-9:05 p.m. (a)		6:00-6:15 p.m. (a)
WLW, Cincinnati, on 700	WHO, Des Moines, on 1000		9:00-9:15 p.m. (a)
9:55-10:00 a.m. (i)	12:30 p.m. (i)		KPO, San Francisco, on 680
10:00 a.m. (e)	12:45 p.m. (h)		9:00-9:15 a.m. (i)
10:40 a.m. (h)	6:30 p.m. (i)		10:15-10:30 a.m. (d)
11:00-11:05 p.m. (b)	6:45 p.m. (h)		4:45-5:00 p.m. (h)
WOR, Newark, on 710	10:05 p.m. (a)		12:00-12:15 p.m. (a) ex. Mon.
8:15-8:20 a.m. (a)			
11:15-11:30 a.m. (e)			
12:00-12:05 p.m. (a)			
3:00-3:15 p.m. (e)			

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# 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: E Eastern; C Central; M Mountain; P Pacific

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

**E-6:00 p.m., C-5:00, M-4:00, P-3:00**  
**C — Buck Rogers; 25th Century**  
 CKLW WAAB WABC WBNS WCAO  
 WCAU WFBL WHEC WHK WJAS  
 WJSV WKBW WKRC WOKO

**E-6:30 p.m., C-5:30, M-4:30, P-3:30**  
**C — The Shadow; Drama**  
 WAAB WABC WCAO WCAU WDRC  
 WEAN WFBL WHEC WIBX WJSV  
 WKBW WOKO WRC

**E-6:45 p.m., C-5:45, M-4:45, P-3:45**  
**R — Billy Batchelor**  
 WBN WCAE WCSH WEA F WEEI  
 WFBR WFI WGY WJAR WRC  
 WTAG WTAM WVIC WWJ

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

**E-7:00 p.m., C-6:00, M-5:00, P-4:00**  
**C — Myrt and Marge**  
 WABC WADC WBT WCAO WCAU  
 WDAE WDBO WEAN WFBL WGR  
 WJAS WJSV WKRC WNAC WOKO  
 WQAM WSPD WTOC WWVA

**B — Amos 'n' Andy**  
 CRCT KDKA WBAL WBZ WBZA  
 WCKY WENR WFLA WGAR WHAM  
 WIOD WJR WJZ WLW WMAL  
 WPTF WRVA

**E-7:15 p.m., C-6:15, M-5:15, P-4:15**  
**R — Gene and Glenn**  
 WBN WCSH WEA F WEEI WFBR  
 WFLA WGY WIOD WIS WJAR  
 WJAX WPTF WRC WTAG WWNC

**B — Willard Robison; Mildred Bailey**  
 KDKA KOIL KSO KWCR KWK  
 WBAL WBZ WBZA WCKY WENR  
 WHAM WJR WJZ WMAL WSYR

**E — 7:30 p.m., C-6:30, M-5:30, P-4:30**  
**C — Silver Dust Serenaders**  
 WABC WCAO WCAU WDRC WFBL  
 WGR WHEC WHP WJAS WJSV  
 WMAS WOKO WORC WWVA

**C — Buck Rogers; 25th Century**  
 KMBC KMOX KRLD KTRH KTSB  
 WBBM WBT WCCO WDSU WFBM  
 WGST WHAS WMBG

**R — Al Bernard and Paul Dumont**  
 KSD WCSH WDA F WEA F WGY  
 WHO WJAR WMAQ WOC WRC  
 WSAI WTAG WTAM WWJ

**B — Red Davis; Drama**  
 KDKA KOIL KPRC KSO KSTP

KTBS KWCR KWK WAVE WBAL  
 WBZ WBZA WEBC WENR WFLA  
 WHAM WIBA WIOD WIS WJAX  
 WJDX WJZ WKY WMAL WMC  
 WPTF WREN WRVA WSB WSM  
 WSMB WSYR WTAR WWNC

**E-7:45 p.m., C-6:45, M-5:45, P-4:45**  
**C — Boake Carter for Philco**  
 CKLW KMBC KMOX WABC WBBM  
 WBT WCAO WCAU WCCO WGR  
 WHAS WHK WJAS WJSV WNAC

**B — Dangerous Paradise; Drama**  
 KDKA KOIL KSO KTBS KVOO  
 KWCR KWK WBAL WBZ WBOA  
 WENR WFAA WGAR WHAM WJR  
 WJZ WKY WMAL WOAI WREN  
 WSB WSM WSMB WSYR

**E-8:00 p.m., C-7:00, M-6:00, P-5:00**  
**C — Bar X Days; Carson Robison**  
 CKLW KDB KERN KFBK KFPY  
 KFRC KGB KHJ KLZ KMBC KMJ  
 KMOX KOIN KOL KSL KVI KWG  
 WABC WBBM WBNS WCAO WCAU  
 WCCO WDRC WEAN WFBL WFBM  
 WGR WHAS WHEC WHK WJAS  
 WJSV WKRC WNAC WOKO

**R — Richard Himber and Orchestra**  
 KPRC KSD KTBS KVOO WBAF  
 WBN WCAE WCSH WDA F WEA F  
 WEEI WFAA WGY WHO WJAR  
 WKY WMAQ WOAI WOC WOW  
 WRC WSAI WTAG WTAM WVIC

**B — Jan Garber and Orchestra**  
 KDKA KDYL KFI KGO KGW KHQ  
 KOA KOIL KOMO KSO KWCR  
 KWK WBAL WBZ WBZA WGAR  
 WHAM WJR WJZ WKB F WLS WLW  
 WMAL WREN WSYR

**E-8:15 p.m., C-7:15, M-6:15, P-5:15**  
**C — Edwin C. Hill**  
 CKLW KMBC KMOX WABC WADC  
 WBBM WCAO WCAU WCCO WDRC  
 WEAN WFBL WFBM WGR WHAS  
 WHK WJAS WJSV WKRC WNAC  
 WOKO WSPD

**C — Billy Batchelor**  
 KDB KERN KFBK KFPY KFRC  
 KGB KHJ KMJ KOIN KOL KVI  
 KWG

**E-8:30 p.m., C-7:30, M-6:30, P-5:30**  
**C — Atwater Kent Program**  
 CKLW KDB KERN KFBK KFPY  
 KFRC KGB KHJ KLZ KMBC KMOX  
 KMT KOIN KOL KRLD KSL KVI  
 KWG WABC WADC WBBM WBT  
 WCAO WCAU WCCO WDOD WDRC  
 WDSU WEAN WFBL WFBM WGR  
 WHAS WHK WJAS WJSV WKRC

WMT WNAC WOKO WOWO WQAM  
 WSPD

**R — Voice of Firestone**  
 CFCE CRCT WBN WCAE WCSH  
 WDA F WEA F WEEI WFBM WGY  
 WJAR WLIT WLW WMAQ WRC  
 WTAG WTAM WVIC WWJ

**E-9:00 p.m., C-8:00, M-7:00, P-6:00**  
**C — Chesterfield Program**  
 CKLW KDB KERN KFBK KPH  
 KFPY KFRC KGB KGMB KHJ  
 KLA KLZ KMBC KMJ KMOX  
 KOH KOIN KOL KOMA KRLD  
 KSCJ KSL KTRH KTSB KTVL  
 KVI KWG WABC WACO WADC  
 WALA WBBM WBIG WBNS WBRB  
 WBT WCAO WCAU WCCO WDAE  
 WDBJ WDBO WDNC WDOD WDRC  
 WDSU WEAN WFBL WFBM WFEA  
 WGST WHAS WHEC WHK WHP  
 WIBW WIOC WISN WJAS WJSV  
 WKBH WKBW WKRC WLAC WLWB  
 WLBZ WMAS WMBD WMBG  
 WMBR WMT WNAC WNAX WOKO  
 WORC WOWO WPG WQAM WREC  
 WSPA WSJS WSPD WTOC

**R — A & P Gypsies**  
 KSD WBN WCAE WCSH WDA F  
 WEA F WEEI WGY WHO WJAR  
 WLIT WMAQ WOC WOW WTAG  
 WTAM WVIC WWJ

**B — Sinclair Greater Minstrels**  
 KDKA KFI KFSD KFYP KOA KOIL  
 KPO KPRC KSO KSTP KTAR KTBS  
 KTSB KVOO KWK WBD WBZ  
 WBZA WDAY WEBC WFAA WFLA  
 WGAR WHAM WIBA WIOD WIS  
 WJAX WJDX WJR WJZ WKY WLS  
 WLW WMC WOAI WPTF WREN  
 WRVA WBS WSM WSMB WSOC  
 WTAR WTMJ WVIC

**E-9:30 p.m., C-8:30, M-7:30, P-6:30**  
**C — The Big Show**  
 GKAC CKLW KFAB KLZ KMBC  
 KMOX KSL WABC WADC WBBM  
 WBNS WBT WCAO WCAU WCCO  
 WDRC WDSU WEAN WFBL WFBM  
 WHAS WHK WIOC WJAS WJSV  
 WKBW WKRC WNAC WOKO  
 WOWO WREC WSPD

**R — Colgate House Party**  
 KDYL KFI KFYP KGO KGW KHQ  
 KOA KOMO KPRC KSD KSTP  
 KTBS KVOO WBN WCAE WCSH  
 WDA F WDAY WEA F WEEI  
 WFAA WFBR WFLA WGY WHO  
 WIBA WIOD WIS WJAR WJAX  
 WJDX WKY WLIT WLW WMAQ  
 WMC WAI WOC WOW WPTF WRC

## MONDAY (Continued)

WRVA WSAI WSB WSM WSMB  
WTAG WTAM WTMJ WJW WWCN

### B — Princess Pat Players

KDKA KOIL KSO KWCR KWK  
WBAL WBZ WBZA WKY WENR  
WGR WHAM WJR WJZ WMAL  
WREN WSYR

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

**C — Wayne King and Orchestra**  
CKLW KDB KERN KFAB KFBK  
KFPY KFRC KGB KHJ KLZ KMBC  
KMJ KMOX KOIN KOL KRLD  
KSL KVIK WG WAAB WABC WADC  
WBMM WBNS WCAO WCAU WCCO  
WDRS WDSU WEAN WFBL WFBM  
WHAS WHK WJW WJAS WJSV  
WKBW WKRC WOKO WSPD

### R — Contented Program

CFCH CRCT KDYL KFI KFJR  
KGO KGW KHQ KOA KOMO KPRC  
KSD KSTP WBEN WCAE WCHS  
WDAF WDAF WEBC WEEL WFAA  
WFBR WGY WHO WJAR WKY  
WLIT WLW WMAQ WMC WOAI  
WOC WOW WRC WSB WSM WTAG  
WTAM WTIC WTMJ WJW

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

**C — Talks on Health Problems**  
CFRB CKLW KFH KLRA KLZ  
KMBC KOH KRLD KTRH KTSa  
KVRB KWKH WAAB WABC WACO  
WADC WALA WBIG WBNS WBRC  
WBT WCAU WCCO WDAE WDBJ  
WDBO WDNC WDOD WDSU WEAN  
WFBL WFBM WFEA WGLC WGR  
WHCH WHK WHP WIBW WICQ  
WISN WJAS WJSV WKRC WLAC  
WLWB WLWB WMAS WMBD  
WMBG WMBR WMT WNAX WNOX  
WOKO WORC WPG WQAM WREC  
WSBT WSFA WSJS WSPD WTOC

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

**C — Emery Deutsch and Orchestra**  
CFRB CKAC CKLW KFH KGKO  
KLRA KLZ KMBC KOH KRLD  
KTRH KTSa KVRB KWKH WAAB  
WABC WACO WADC WALA WBIG  
WBNS WBRC WBT WCAU WCAU  
WDAE WDBJ WDBO WDNC WDOD  
WDSU WEAN WFBL WFBM WFEA  
WGLC WGR WHCH WHK WHP  
WICC WISN WJAS WJSV WKRC  
WLAC WLWB WLWB WMAS WMBD  
WMBG WMBR WMT WNAX WNOX  
WOKO WORC WPG WQAM WREC  
WSBT WSFA WSJS WSPD WTOC

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

**C — Myrt and Marge**  
KDB KERN KFAB KFBK KFPY  
KFRC KGB KHJ KLRA KLZ KMBC  
KMJ KMOX KOIN KOL KOMA  
KRLD KSL KTRH KVI KWG WALA  
WBMM WBRC WCCO WDSU WFBM  
WGST WHAS WLAC WREC WSFA

### B — Amos 'n' Andy

KOIL KPRC KSTP KTHS KWK  
WBAP WCKY WDAF WENR WFAA  
WJR WKY WMC WOAI WREN  
WSB WSM WTMJ

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

**C — Glen Gray and Orchestra**  
KLRA WABC WALA WBRC WBT  
WCAO WDAE WDBJ WDO WDNC  
WDOD WDRS WDSU WEAN WFEA  
WJSV WLAC WLWB WMAS WMBG  
WMBR WNAC WNOX WORC WPG  
WQAM WREC WSFA WSJS WTOC

### C — Edwin C. Hill

KDB KERN KFBK KFPY KFRC  
KGB KHJ KLZ KMJ KOIN KOL  
KSL KVI KWG

### R — Gene and Glenn

KDYL KFI KFSD KGO KGW KHQ  
KOA KOMO KPRC KSD KSTP  
KTAR KTBS KTHS WAVE WCAE  
WDAF WEBC WFAA WHO WIBA  
WJDX WKBF WKY WMAQ WMC  
WOC WOW WSAI WSB WSM  
WSMB WTAM WTMJ WJW

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

**R — Voice of Firestone**  
KDYL KFI KFSD KFJR KGH  
KGR KGO KGU KGW KHQ KOA  
KOMO KSD KSTP KTAR WDAF  
WDAY WEBC WHO WIBA WFBF  
WOC WOW WTMJ

## TUESDAY

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

### C — Buck Rogers, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30

**C — Musical Appreciation Program**  
CKLW KLRA WABC WALA WBIG  
WBRC WBT WCAO WDAE WDBJ  
WDBO WDNC WDOD WDRS WDSU  
WEAN WFEA WGLC WHCH WHK  
WHP WJAS WJSV WKBW WKRC  
WLAC WLWB WLWB WMAS WMBG  
WMBR WNOX WOKO WORC WQAM  
WREC WSFA WSJS WSPD WTOC  
WVVA

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

### R — Billy Batchelor, See Monday

### B — Lowell Thomas, See Monday

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

### C — Myrt and Marge, See Monday

### B — Amos 'n' Andy, See Monday

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

### R — Gene and Glenn, See Monday

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

**C — Whispering Jack Smith**  
WABC WCAO WCAU WDRS WEAN  
WFBL WGR WJAS WJSV WNAC  
WOKO WORC

### B — Household Musical Memories

KDKA KOIL KSO KWCR KWK  
WBAL WBZ WBZA WENR WGAR  
WHAM WJZ WMAL WREN WSYR

### C — Buck Rogers, See Monday

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

### C — Boake Carter, See Monday

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

**C — Frank Munn; Gustav Haenschen**  
CKLW KMBC KMOX WABC WADC  
WBMM WCAO WCAU WDRS WEAN  
WFBL WFBM WGR WHAS WHK  
WJAS WJSV WKRC WNAC WOKO

### R — Leo Reisman and Orchestra

KFYR KPRC KSD KSTP KTBS  
KVOO WAVE WBAP WBEN WCAE  
WCHS WDAF WDAY WFAA WEBC  
WEEL WFBR WFI WFLA WGY  
WIBA WIOD WIS WJAR WJAX  
WJDX WKBF WKY WMAQ WMC  
WOC WOW WPTF WRC WSB WSM  
WSMB WSOC WTAG WTAM WTAR  
WTIC WTMJ WJW WJW

### B — Eno Crime Clues

KDKA KOIL KSO KWCR KWK  
WBAL WBZ WBZA WGAR WJR  
WJZ WLS WLW WMAL WREN  
WSYR

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

### C — Billy Batchelor, See Monday

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

**C — Abe Lyman; Vivienne Segal**  
CFRB CKLW KMBC KMOX WABC  
WADC WBBM WCAO WCAU WCCO  
WDRS WEAN WFBL WFBM WGR  
WHAS WHK WJAS WJSV WKRC  
WNAC WOKO WOW WSPD

### R — Wayne King and Orchestra

KPRC KSD KSTP WBEN WCAE  
WCHS WDAF WFAA WEEL WFAA  
WFI WGY WHO WJAR WKBW WKY  
WMAQ WMC WOAI WOC WOW  
WRC WSAI WSB WSM WSMB  
WTAG WTAM WTIC WTMJ WJW

### B — Lawrence Tibbett

CFCH CRCT KDKA KOIL KSO  
KWCR WBAL WBZ WBZA WGAR  
WHAM WJR WJZ WLS WMAL  
WREN WSYR

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

### C — Bing Crosby

CKLW KDB KERN KFBK KFPY  
KFRC KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KRLD KSL  
KTUL KVI KWG WABC WADC  
WBMM WBT WCAO WCAU WCCO  
WDRS WDSU WEAN WFBL WFBM  
WGST WHAS WHK WJAS WJSV  
WKBW WKRC WNAC WOKO  
WOW WREC WSPD

### R — Ben Bernie and Orchestra

KFYR KOA KPRC KSD KSTP  
KTBS WBAP WBEN WCAE WCHS  
WDAF WFAA WEEL WFBR WFI  
WGY WJAR WJDX WKY WMAQ  
WMC WOAI WOW WRC WSB WTAG  
WTAM WTIC WTMJ WJW

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

### B — Story Behind Claim; Drama

KDKA KOIL KSO KWCR WBAL  
WBZ WBZA WCKY WGAR WHAM  
WJR WJZ WLS WMAL WREN  
WSYR

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

### C — Isham Jones and Orchestra

CKLW KDB KERN KFAB KFBK  
KFH KFPY KFRC KGB KGKGO  
KHJ KLRA KLZ KMBC KMJ KMOX  
KOH KOIN KOL KOMA KRLD  
KSCJ KSL KTRH KTSa KTUL KVI  
KWG KWKH WABC WACO WADC  
WALA WBMM WJBS WBRC WBT  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDOD WDRS WDSU WEAN  
WFBL WFBM WFEA WGST WHAS  
WHCH WHK WHP WIBW WIBX  
WICC WIND WISN WJAS WJSV  
WKBW WKBW WKRC WLAC  
WLWB WMAS WMBD WMBG  
WMBR WMT WNAC WNAX WNOX  
WOKO WORC WOW WPG WQAM  
WREC WSFA WSJS WSMK WSPD

### R — Ed Wynn; Eddie Duchin

KDYL KFI KFSD KFJR KGH  
KGR KGO KGW KHQ KOA KOMO  
KPRC KSD KSTP KTAR KTBS  
KTHS KVOO WAVE WBAP WBEN  
WCAE WCHS WDAF WDAY WFAA  
WEBC WEEL WFBR WFI WFLA  
WGY WHO WIBA WIOD WIS WJAR  
WJAX WJDX WKBF WKY WMAQ  
WMC WOAI WOW WPTF WRC  
WRVA WSB WSM WSMB WSOC  
WTAG WTAM WTIC WTMJ WJW  
WJW

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

### C — Glen Gray; Walter O'Keefe

CKLW KFAB KFH KLRA KMBC



## TUESDAY (Continued)

KMOX KOMA KRLL KSCJ KTRH  
K TSA KTUL KWKH WABC WACO  
WADC WALA WBBM WBIG WBNS  
WBRC WBT WCAO WCAU WCCO  
WDAE WDBJ WDBO WDNC WDDO  
WDRC WDSU WEAN WFBL WFBM  
WFEA WGST WHEC WHK WHF  
WIBW WICC WISN WJAS WJSV  
WKBN WKBW WKRC WLAC  
WLBW WLBZ WMAS WMBD  
WMBG WMBR WMT WNAX WNOX  
WOKO WORC WPG WQAM  
WREC WSFA WSJS WSPD WTOC

### R — Palmolive Beauty Box

CFCF CRCT KDYL KFI KFSD  
KFYR KGHL KGIR KGO KGW  
KHQ KOA KOMO KPRC KSD KSTP  
KTAR KTBS KVOO WAVE WBAP  
WBEN WCAE WCSH WDAF WDAY  
WEAF WEBC WEEI WFBF WFLA  
WGY WHO WIOD WIS WJAR WJAX  
WJDX WKBF WKY WLW WMAQ  
WMC WOAI WOC WOW WPTF  
WRC WRVA WSB WSM WSBM  
WSOC WTAG WTAM WTMJ WWJ  
WWNC

### E-10:30 p.m., C-9:30, M-8:30, P-7:30

#### C — George Givot

CFRB CKAC CKLW KDB KFH  
KGKO KLRA KLZ KMBC KOH  
KOMA KRLL KSCJ KTRH K TSA  
KTRH KWKH WAAB WABC WACO  
WADC WALA WBIG WBNS WBRC  
WBT WCAO WCAU WDAE WDBJ  
WDBO WDNC WDDO WDRS WDSU  
WEAN WFBL WFBM WFEA WGLC  
WGR WHEC WHK WHF WIBW  
WICC WJAS WJSV WKRC WLAC  
WLBW WLBZ WMAS WMBD  
WMBG WMBR WMT WNAX WNOX  
WOKO WORC WPG WQAM WSBT  
WSFA WSJS WSPD WTOC

### E-11:00 p.m., C-10:00, M-9:00, P-8:00

#### C — Myrt and Marge, See Monday

#### B — Amos 'n' Andy, See Monday

### E-11:15 p.m., C-10:15, M-9:15, P-8:15

C — Harry Saiter and Orchestra  
CKAC CKLW KDB KFH KGKO  
KLRA KLZ KOH KOMA KRLL  
KTRH K TSA KVOR KWKH WABC  
WACO WADC WALA WBNS WBBM  
WBT WCAO WDAE WDBJ WDBO  
WDNC WDRS WDSU WEAN WFBL  
WFEA WGLC WHEC WHK WHF  
WIBW WJAS WJSV WKBW WKRC  
WLAC WLBW WLBZ WMAS WMBG  
WMBR WMT WNAX WNOX  
WOKO WORC WPG WQAM WSBT  
WSFA WSJS WSPD WTOC WYVA

#### R — Gene and Glenn, See Monday

### E-11:30 p.m., C-10:30, M-9:30, P-8:30

C — Henry Busse and Orchestra  
CFRB CKAC CKLW KFH KGKO  
KLRA KLZ KMBC KOH KOMA  
KRLL KSCJ KTRH K TSA KVOR  
KWKH WABC WADC WBBM WDAE  
WBRC WBT WCAO WCAU WDAE  
WDBJ WDBO WDNC WDDO WDRS  
WDSU WEAN WFBL WFEA WHEC  
WHK WHF WIBW WICC WISN  
WJAS WJSV WKBW WKRC WLAC  
WLBW WLBZ WMAS WMBD  
WMBR WMT WNAX WNOX  
WORC WPG WQAM WSBT WSFA  
WSJS WSPD WTOC WYVA

R — Leo Reisman and Orchestra  
KDYL KFI KFSD KGIR KGO KGW  
KHQ KOA KOMO KPO KTAR

## WEDNESDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00  
C — Buck Rogers, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30  
C — The Shadow, See Monday

E-6:45 p.m., C-5:45, M-4:45, P-3:45  
R — Billy Batchelor, See Monday

B — Lowell Thomas, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00  
C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15  
R — Gene and Glenn, See Monday

B — Willard Robison, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30  
C — Silver Dust, See Monday

C — Buck Rogers, See Monday

B — Red Davis, See Monday

R — Uncle Exxy

KSD WCSH WEAF WGY WHO  
WJAR WMAQ WOC WOW WRC  
WSAI WTAM

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

B — Dangerous Paradise, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00  
C — Easy Aces

CFRB CKLW KMBC KMOX WABC  
WBBM WCAO WCAU WCCO WFBL  
WFBM WGR WHAS WHK WJAS  
WKRC WNAC WOKO WOW WSPD

R — Mary Pickford and Company

CFCF CRCT KDYL KFI KFYR  
KGO KGW KHQ KOA KOMO KPRC  
KSD KSTP KTAR KTBS KVOO  
WAVE WBAP WBEN WCAE WCKY  
WCSH WDAF WDAY WEAF WEBC  
WEEI WFBF WFLA WGY WHO  
WGA WIOD WIS WJAR WJAX  
WJDX WKY WLIT WMAQ WMC  
WOAI WOC WOW WPTF WRC  
WRVA WSAI WSB WSM WSBM  
WTAG WTAM WTIC WTMJ WWJ  
WWNC

B — Eno Crime Clues, See Tuesday

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

C — Edwin C. Hill, See Monday

C — Billy Batchelor, See Monday

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

C — Everett Marshall; Victor Arden

CKLW KDB KERN KFBC KFPY  
KFRC KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KOMA KRLL  
KSL KVI KWG WABC WADC  
WBBM WBT WCAO WCAU WDRS  
WDSU WEAN WFBL WFBM WGR  
WHAS WIBW WJAS WJSV WKRC  
WLAC WNAC WOKO WOW WSPD

B — Lanny Ross and Orchestra

KDKA KOIL KSO KWCR WBAL  
WGAR WHAM WJR WJZ WLS  
WMAL WREN WSYR

R — Wayne King, See Tuesday

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

R — Fred Allen; Lennie Hayton

KPRC KSD KSTP KTBS KVOO  
WBEN WCAE WCSH WDAF WEAF  
WEBC WEEI WFBF WGY WIOD  
WIS WJAR WJAX WKY WLIT  
WLW WMAQ WMC WOAI WOW  
WPTF WRC WRVA WSB WSM

WSMB WTAG WTAM WTIC WTMJ  
WWJ

B — Warden Lawes; Drama

KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KSO KWCR  
KWK WBAL WBZ WBZA WCKY  
WGAR WHAM WJR WJZ WKBF  
WLS WLW WMAL WREN WSYR  
C — Chesterfield Program, See Mon.

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

C — George and Gracie

CKLW KDB KERN KFBC KFPY  
KFRC KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KOMA KRLL  
KSL KTRH K TSA KVI KWG WABC  
WADC WBBM WBIG WBT WCAO  
WCAU WCCO WDRS WDSU WEAN  
WFBL WFBM WHK WJAS WJSV  
WKBW WKRC WNAC WOKO WORC  
WOW WSPD

B — John Charles Thomas

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

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

C — Byrd Expedition Broadcast

CKLW KDB KERN KFBC KFPY  
KFB KFH KFPY KFRC KFZ KGB KHJ  
KLRA KLZ KMBC KMJ KMOX  
KOIN KOL KOMA KRLL KSL KTRH  
K TSA KVI KWG WABC WACO  
WADC WBBM WBNS WBT WCAO  
WCAU WCCO WDAE WDRS WDSU  
WEAN WFBL WFBM WGST WHAS  
WHEC WHK WHF WIBW WJAS  
WJSV WKBW WKRC WLAC WLBZ  
WMBG WMT WNAC WNAX WOKO  
WORC WOW WQAM WREC

R — Guy Lombardo and Orchestra

KPRC KSD KTBS KTHS KVOO  
WAVE WBEN WCAE WCSH WDAF  
WEAF WEEI WFAA WFBF 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

E-10:15 p.m., C-9:15, M-8:15, P-7:15

B — Madame Sylvia, Talks

KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KSO KSTP KWCR  
KWK WBAL WBZ WBZA WEBC  
WENR WGAR WHAM WJZ WMAL  
WREN WRVA WSYR WTMJ

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

C — Howard Barlow; Mary Eastman

CFRB CKAC CKLW KDB KFH  
KGKO KHJ KLRA KLZ KMBC  
KOH KOMA KRLL KSCJ KTRH  
K TSA KVOR KWKH WAAB WABC  
WACO WADC WALA WBBM WBIG  
WBRC WBT WCAO WCAU WDAE  
WDBJ WDBO WDNC WDDO WDRS  
WDSU WEAN WFBL WFBM WFEA  
WGLC WGR WHEC WHF WIBW  
WICC WISN WJAS WJSV WKRC  
WLAC WLBW WMAS WMBD  
WMBR WMT WNOX WOKO WORC  
WQAM WSBT WSFA WSJS WSPD  
WTOC

B — Harry Richman; Jack Denny

KDYL KFYR KOA KOIL KPRC  
KSO KSTP KVOO KWCR KWK  
WBAL WCKY WDAY WEBC WENR  
WFAA WHAM WJR WJZ WKY  
WMAL WREN WRVA WSYR WTMJ

## WEDNESDAY (Continued)

**R — One Man's Family**  
KBD WAPI WAVE WBNB WCAE  
WCSH WFAE WFBR WFLA WGY  
WIOD WIS WJAR WJAX WJDX  
WKBF WLIT WMAQ WMC WOW  
WPTF WRC WSAI WSB WSMB  
WSOC WTAG WTAM WTAR WWJ  
WWNC

**E-11:00 p.m., C-10:00, M-9:00, P-8:00**  
**C — Myrt and Marge, See Monday**  
**B — Amos 'n' Andy, See Monday**

**E-11:15 p.m., C-10:15, M-9:15, P-8:15**  
**C — Leon Belasco and Orchestra**  
KLRA WABC WALA WBRC WBT  
WCAO WCAU WDAE WDBJ WDBO  
WDNC WDDO WDRC WDSU WEAN  
WFEA WJVS WLAC WLBS WMBR  
WNAC WNOX WORC WPG WQAM  
WSFA WSJS WTOG

**C — Edwin C. Hill, See Monday**

**R — Gene and Glenn, See Monday**

**E-11:30 p.m., C-10:30, M-9:30, P-8:30**  
**C — Ozzie Nelson and Orchestra**  
KLRA WABC WALA WBRC WBT  
WCAO WCAU WDBJ WDBO WDNC  
WDDO WDRC WDSU WEAN WFEA  
WICC WISN WJVS WLAC WLBS  
WMAS WMBR WNAC WNOX WORC  
WPG WQAM WSFA WSJS WTOG

**C — Voice of Experience**  
KDB KERN KFBK KFPY KFRC  
KGB KHJ KLZ KMJ KOIN KOL  
KSL KVI KWG

**B — Lanny Ross and Orchestra**  
KDYL KFI KFSD KGO KGW KHQ  
KOA KOMO

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

## THURSDAY

**E-6:00 p.m., C-5:00, M-4:00, P-3:00**  
**C — Buck Rogers, See Monday**

**E-6:45 p.m., C-5:45, M-4:45, P-3:45**  
**R — Billy Batchelor, See Monday**  
**B — Lowell Thomas, See Monday**

**E-7:00 p.m., C-6:00, M-5:00, P-4:00**  
**C — Myrt and Marge, See Monday**  
**B — Amos 'n' Andy, See Monday**

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

**B — Gems of Melody**  
KDEA KOIL KSO KTBS KWCR  
WBAL WBZ WBZA WENR WHAM  
WJZ WMAL WREN WSYR

**R — Gene and Glenn, See Monday**

**E-7:30 p.m., C-6:30, M-5:30, P-4:30**  
**C — Jack Smith, See Tuesday**

**C — Buck Rogers, See Monday**

**R — Al Bernard, See Monday**

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

**E-8:00 p.m., C-7:00, M-6:00, P-5:00**  
**R — Rudy Vallee and Orchestra**  
CFCF CRCT KDYL KFI KFYY  
KGO KGW KHQ KOA KOMO KPFC  
KSD KSTP KTAR KVOO WAPI  
WBAF WBNB WCAE WCSH WDAY  
WEAF WEBC WEEI WFBR WFI

WFLA WGY WHO WIOD WIS  
WJAR WJAX WJDX WKY WLW  
WMAQ WMC WQAI WOC WOW  
WPTF WRC WRVA WSB WSM  
WSMB WTAG WTAM WTIC WWJ  
WWNC

**C — Easy Aces, See Wednesday**

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

**C — Fran and Braggiotti**  
CKLW KDB KFH KGKO KHJ  
KLRA KLZ KMBC KOH KOMA  
KRLD KSCJ KTRH K TSA KVOR  
KWKH WABC WACO WADC WALA  
WBIG WBNS WBRC WBT WCAO  
WCAU WDAE WDBJ WDBO WDNC  
WDDO WDRC WDSU WEAN WFBL  
WFBM WFEA WGLC WGR WHP  
WIBW WICC WISN WJAS WJVS  
WKRC WLAC WLBS WLBZ WMAS  
WMT WNAC WNAX WNOX WOKO  
WORC WQAM WSBT WSFA WSJS  
WTOG WWVA

**C — Billy Batchelor, See Monday**

**E-8:30 p.m., C-7:30, M-6:30, P-5:30**  
**C — Edwin C. Hill**

CKLW KMBC KMOX WABC WADC  
WBBM WCAO WCAU WDRC WEAN  
WFBL WFBM WGR WHAS WHK  
WJAS WJVS WKRC WNAC WOKO  
WOWO WSPD

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

**C — Glen Gray; Walter O'Keefe**  
CKLW KFAB KFH KLRA KMBC  
KMOX KOMA KRLD KSCJ KTRH  
K TSA KTUL KWKH WABC WACO  
WADC WALA WBBM WBIG WBNS  
WBRC WBT WCAO WCAU WCCO  
WDAE WDBJ WDBO WDDO WDRC  
WDSU WEAN WFBL WFBM WFEA  
WGST WHAS WHEC WHK WHP  
WIBW WICC WISN WJAS WJVS  
WKBN WKBW WKRC WLAC  
WLBS WMAS WMBD  
WMBG WMBR WMT WNAC WNAX  
WOKO WORC WOWO WPG WQAM  
WREC WSFA WSJS WSPD WTOG

**R — Maxwell House Show Boat**  
KDYL KFI KFSD EGHG EGIR  
KGO KGW KHQ KOA KOMO KPFC  
KSD KSTP KTAR KTBS WAPI  
WAVE WBAF WBNB WCAE WCSH  
WDAF WFAE WEEI WFBR WFI  
WFLA WGY WHO WIOD WIS WJAR  
WJAX WJDX WKBF WKY WLW  
WMAQ WMC WQAI WOC WOW  
WRC WRVA WSAI WSB WSM  
WSMB WTAG WTAM WTIC WTMJ  
WWJ WWNC

**B — Death Valley Days; Drama**  
KDEA KOIL KSO KWCR KWK  
WBAL WBZ WBZA WGR WHAM  
WJR WJZ WLS WLW WMAL WREN  
WSYR

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

**C — Fred Waring's Pennsylvanians**  
CFBR CKLW CRCM KDB KERN  
KFAB KFBK KFH KFPY KFRC  
KGB KGKO KHJ KLRA KLZ KMBC  
KMJ KMOX KOH KOIN KOL KOMA  
KRLD KSCJ KSL KTRH K TSA  
KTUL KVI KVOR KGW WABC  
WACO WADC WALA WBBM WBIG  
WBNS WBRC WBT WCAO WCAU  
WCCO WDAE WDBJ WDBO WDNC  
WDDO WDRC WDSU WEAN WFBL  
WFBM WFEA WGLC WGST WHAS  
WHEC WHK WHP WIBW WICC  
WISN WJAS WJVS WKBW WKBW  
WKRC WLAC WLBS WLBZ WMAS  
WMBD WMBG WMBR WMT WNAC

WNAX WNOX WOKO WORC WOWO  
WPG WQAM WREC WSFA WSJS  
WSPD WTOG

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

**C — 45 Minutes in Hollywood**  
CFBR CKAC CKLW KFH KLZ  
KMOX KOMA KRLD KSL KTRH  
K TSA KTUL WABC WACO WBBM  
WBNS WBT WCAO WCAU WCCO  
WDAE WDBO WDRC WDSU WEAN  
WFBL WGST WHEC WHK WHAS  
WJVS WKBW WKRC WLAC WMBR  
WNAC WOKO WQAM WSPD

**R — Paul Whiteman's Music Hall**  
CFCF CRCT KDYL KFI KFYY  
KGO KGW KHQ KOA KOMO KPFC  
KSD KSTP KTAR KTBS KTHS  
KVOO WAPI WAVE WBAF WBNB  
WCAE WCSH WDAF WDAY WEAF  
WEBC WEEI WFBR WFI WFLA  
WGY WHO WIBA WIOD WIS WJAR  
WJAX WJDX WKY WLW WMAQ  
WMC WQAI WOC WOW WPTF  
WRC WRVA WSB WSM WSMB  
WTAG WTAM WTIC WTMJ WWJ  
WWNC

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

**C — Fats Waller's Rhythm Club**  
CFBR CKAC CKLW KDB KFH  
KGKO KHJ KLRA KOH KRLD  
KSCJ KSL KTRH K TSA KVOR  
WAAB WABC WACO WADC WALA  
WBBM WBNS WBRC WBT WCAU  
WDAE WDBJ WDNC WDDO WDRC  
WEAN WFBL WFBM WFEA WGLC  
WGR WHEC WHP WIBW WJAS  
WJVS WKRC WLAC WLBS WLBZ  
WMAS WNOX WOKO WORC WPG  
WQAM WSBT WSJS WSPD WTOG

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

**C — Myrt and Marge, See Monday**  
**B — Amos 'n' Andy, See Monday**

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

**C — Little Jack Little**  
CFBR CKAC CKLW KDB KFH  
KGKO KLRA KLZ KOH KOMA  
KRLD KSCJ KTRH K TSA KVOR  
KWKH WABC WACO WADC WALA  
WBBM WBNS WBRC WBT WCAO  
WCCO WDAE WDBJ WDBO WDNC  
WDDO WDRC WDSU WEAN WFBL  
WFBM WFEA WGLC WHEC WHK  
WHP WIBW WISN WJAS WJVS  
WKBW WKRC WLAC WLBS WLBZ  
WMAS WMBD WMT WNAC WNAX  
WNOX WOKO WORC WPG WQAM  
WSBT WSFA WSJS WSPD WTOG  
WWVA

**R — Gene and Glenn, See Monday**

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

**C — Glen Gray; Walter O'Keefe**  
KDB KERN KFBK KFPY KFRC  
KGB KHJ KLZ KMJ KOH KOIN  
KOL KSL KVI KVOR KVG

## FRIDAY

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

**C — H. V. Kaltenborn**  
CKLW KFH KGKO KLZ KMBC KOH  
KOMA KRLD KSCJ KSL KTRH  
KVOR KWKH WAAB WABC WBBM  
WCAO WCAU WDNC WDRC WFBL  
WGLC WHEC WHK WISN WJAS  
WJVS WKBW WLAC WLBS WMT  
WOKO WORC WSPD

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

**R — Billy Batchelor, See Monday**  
**B — Lowell Thomas, See Monday**

**FRIDAY (Continued)**

**E-7:00 p.m., C-6:00, M-5:00, P-4:00**  
**C — Myrt and Marge, See Monday**  
**B — Amos 'n' Andy, See Monday**

**E-7:15 p.m., C-6:15, M-5:15, P-4:15**  
**R — Gene and Glenn, See Monday**  
**B — Willard Robison, See Monday**

**E-7:30 p.m., C-6:30, M-5:30, P-4:30**  
**C — Silver Dust, See Monday**  
**B — Red Davis, See Monday**  
**R — Uncle Exxy, See Wednesday**

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

**E-8:00 p.m., C-7:00, M-6:00, P-5:00**  
**R — Cities Service Concert**  
**CRCT KDYL KOA KPRC KSD KSTP KTBS KTHS KVOO KYW WBAP WBNB WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFRB WGY WHO WJAR WKY WLIT WQAI WQC WOW WRC WRVA WSAI WTAG WTAM WTMJ WWJ**

**B — Irene Rich; Drama**  
**KDKA KOIL KSO KWCR WAVE WBAL WBZ WBZA WHAM WJZ WLS WML WMC WREN WSB WSM WSYR**

**C — Easy Aces, See Wednesday**

**E-8:15 p.m., C-7:15, M-6:15, P-5:15**  
**C — Edwin C. Hill, See Monday**  
**C — Billy Batchelor, See Monday**

**B — Robert Armbruster and Orchestra**  
**KDKA KOIL KSO KWCR WBZ WBZA WJR WJZ WKBF WLS WML WREN WSYR**

**E-8:30 p.m., C-7:30, M-6:30, P-5:30**  
**C — True Story Court**  
**CKLW KMBC WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WGR WHK WJAS WJSV WKRC WNAC WOKO**

**B — Al Goodman and Orchestra**  
**KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WML WREN WSYR**

**E-9:00 p.m., C-8:00, M-7:00, P-6:00**  
**C — March of Time**  
**CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KMOX KOIN KOL KRLD KSL KVI KWG WABC WADC WBBM WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGST WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WOVO WSPD**

**R — Frank Munn; Abe Lyman**  
**KSD WBNB WCAE WCSH WDAF WEAF WEEI WFRB WGY WJAR WLIT WLW WMAQ WOW WRC WTAG WTAM WWJ**

**B — Phil Harris and Orchestra**  
**KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WAPI WBAL WBZ WBZA WCKY WFAA WGAR WHAM WJZ WKY WLS WML WQAI WREN WSB WSM WSBM WSYR**

**E-9:30 p.m., C-8:30, M-7:30, P-6:30**  
**C — Hollywood Hotel**  
**CFRB CKAC CKLW KDB KERN KFAB KFBK KFH KFPY KFRC**

**KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSK KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNB WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WICW WICC WISN WJAS WJSV WKBH WKRB WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAC WNAX WNOX WOKO WORC WOVO WPG WQAM WRC WSBT WSFA WSJS WSPD WTOC**

**R — Pick and Pat**  
**KSD WBNB WCAE WCSH WDAF WEAF WFRB WGY WHO WJAR WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTMJ 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 WIOD WJAX WJR WJZ WKY WMC WQAI WREN WRVA WSB WSM WSBM WTMJ WWNC**

**E-10:00 p.m., C-9:00, M-8:00, P-7:00**  
**R — First Nighter; Drama**  
**KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP WBNB WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFRB WGY WHO WJAR WKY WLIT WLW WMAQ WMC WQAI WOC WOW WRC WSB WSM WSBM WTAG WTAM WTMJ WWJ**

**B — Al Bernard and Paul Dumont**  
**KDKA KOIL KSO KWCR WBAL WBZ WBZA WENR WGAR WHAM WJR WJZ WML WREN WSYR**

**E-10:30 p.m., C-9:30, M-8:30, P-7:30**  
**C — Kate Smith**  
**CFRB CKAC CKLW KDB KFH KGKO KHJ KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KVOR KWKH WAAB WABC WACO WADC WALA WBIG WBNB WBRC WBT WCAO WDAE WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHP WIBW WICC WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMT WNAX WNOX WOKO WORC WPG WQAM WSFA WSJS WSPD WTOC**

**E-11:00 p.m., C-10:00, M-9:00, P-8:00**  
**C — Myrt and Marge, See Monday**  
**B — Amos 'n' Andy, See Monday**

**E-11:15 p.m., C-10:15, M-9:15, P-8:15**  
**C — Ozzie Nelson and Orchestra**  
**KLRA WABC WALA WBRC WBT WCAO WDAE WDBO WDNC WDOD WDRC WDSU WEAN WFEA WHK WJSV WLAC WLBZ WMAS WNAC WNOX WORC WPG WQAM WSFA WSJS WTOC**

**C — Edwin C. Hill, See Monday**  
**R — Gene and Glenn, See Monday**

**E-11:30 p.m., C-10:30, M-9:30, P-8:30**  
**C — True Story Court**  
**KDB KERN KFBK KFPY KGB KHJ KLZ KMJ KMOX KOIN KOL KSL KVI KWG WRC WHAS WOVO**

**SATURDAY**

**E-6:00 p.m., C-5:00, M-4:00, P-3:00**  
**C — Frederic William Wile**  
**CKLW KDB KFH KGKO KHJ KLRA KLZ KOH KOMA KRLD KSCJ KSL KTRH KTSK KVOR KWKH WAAB WABC WACO WALA WBBM WBIG WBNB WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WFBL WFBM WGLC WHEC WHK WHP WIBW WISN WJAS WKRC WLAC WLBW WMT WNAX WNOX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTOC**

**E-6:15 p.m., C-5:15, M-4:15, P-3:15**  
**C — Gene Kardos and Orchestra**  
**CKAC CKLW KDB KFEA KFH KGKO KHJ KLRA KLZ KMBC KOH KOMA KRLD KSCJ KSL KTRH KTSK KVOR KWKH WAAB WABC WACO WALA WBBM WBIG WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WFBM WGLC WHEC WHK WHP WICC WISN WJAS WKRC WLAC WLBW WLBZ WMAS WNAX WNOX WOKO WORC WQAM WSFA WSJS WSPD WTOC**

**E-7:00 p.m., C-6:00, M-5:00, P-4:00**  
**C — Socoonland Sketches**  
**WABC WDRC WEAN WGR WICC WLBZ WMAS WNAC WOKO WORC**

**E-7:30 p.m., C-6:30, M-5:30, P-4:30**  
**C — Jack Smith, See Tuesday**

**E-7:45 p.m., C-6:45, M-5:45, P-4:45**  
**C — Lawyer and The Public**  
**CFRB CKAC CKLW KDB KFH KGKO KHJ KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KTSK KVOR KWKH WABC WACO WADC WALA WBIG WBNB WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHP WIBW WICC WISN WJAS WJSV WKC WLAC WLBW WLBZ WMAS WMT WAC WNAX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTOC WWYA**

**R — Floyd Gibbons**  
**KPRC KSD WAPI WBNB WCSH WDAF WEAF WFAA WFI WFLA WGY WHO WTD WIS WJAR WJAX WKY WLW WMAQ WMC WOC WOW WRC WRVA WSB WSBM WTAG WTAM WTMJ WWJ**

**E-8:00 p.m., C-7:00, M-6:00, P-5:00**  
**C — Roxy and His Gang**  
**CFRB CKAC CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KTSK KVI KWG WABC WBBM WBRC WCAO WCAU WCCO WDOD WDRC WDSU WEAN WFBL WFBM WGR WGST WHAS WHK WIBW WJAS WJSV WKRC WLAC WMT WNAC WOKO WORC WREC WSPD**

**R — Swift Hour; Sigmund Romberg**  
**KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS WBAP WBNB WCAE WCSH WDAF WEAF WEBC WEEI WFRB WFI WGY WBA WJAR WKY WLW WMAQ WQAI WOW WRC WTAG WTAM WTMJ WWJ**

## SATURDAY (Continued)

**E-8:45 p.m., C-7:45, M-6:45, P-5:45**  
**C — Robert Armbruster and Orchestra**  
CKLW KDB KERN KFBK KFPY  
KFRC KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KRLL KSL KVI  
KWG KWKH WABC WADC WBBM  
WBT WCAO WCAU WCCO WDRS  
WEAN WFBL WFBM WGR WHAS  
WHK WJAS WJVS WKRC WNAC  
WOKO WOWO WSPD

**E-9:00 p.m., C-8:00, M-7:00, P-6:00**  
**R — Songs You Love**  
KFYR KSD KSTP WBEN WCAE  
WCBS WDAF WDAY WDAF WEBC  
WEEI WFBR WFI WGY WJAR  
WJAR WLW WMAQ WOV WRC  
WTAG WTAM WTIC WTMJ WJJ

**B — Radio City; Frank Black**  
KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KSO KWCR KWK  
WBAL WBZ WBZA WCKY WGAR  
WHAM WJR WJZ WLS WMAL  
WREN WSYR

**C — Chesterfield Program, see Monday**

**E-9:30 p.m., C-8:30, M-7:30, P-6:30**  
**C — Richard Himber and Orchestra**  
CKLW KFH KMBC KMOX WAAB  
WABC WADC WBBM WBNS WBT  
WCAO WCAU WCCO WDRS WDSU  
WEAN WFBL WFBM WGST WHK  
WJAS WJVS WKBW WKRC WOKO  
WSBT WSPD

**R — Gibson Family Musical**  
KDYL KFI KFYR KGO KGW KHQ  
KOA KOMO KSD KSTP WBEN  
WCAE WCBS WDAF WDAY WDAF  
WEBC WEEI WFBM WFI WGY  
WIBA WJAR WLW WMAQ WOV  
WRC WTAG WTAM WTIC WTMJ  
WJJ

**B — National Barn Dance**  
KDKA KOIL KSO KWCR KWK  
WBAL WBZ WBZA WGAR WHAM  
WJR WJZ WKBF WLS WMAL  
WREN WSYR

**E-10:00 p.m., C-9:00, M-8:00, P-7:00**  
**C — Carborundum Band**  
CKLW KDB KERN KFBK KFPY  
KFRC KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KSL KVI KWG  
WAAB WABC WBBM WBT WCAO  
WCAU WCCO WHAS WHK WJAS  
WKBW WKRC

**E-10:30 p.m., C-9:30, M-8:30, P-7:30**  
**C — Saturday Revue**  
CFRB CKLW KDB KFH KGKO  
KHJ KLRA KLZ KMBC KOH KOMA  
KRLL KSCJ KTRH KTSa KVOR  
KWKH WAAB WABC WACO WADC  
WALA WBAE WBT WCAO WCAU  
WCCO WDAE WDBJ WDBO WDNC  
WDOD WDRS WDSU WEAN WFBL  
WFBM WFEA WGLC WGR WHEC  
WHP WIBW WICC WISN WJAS  
WJVS WKRC WLAC WLWB WLWB  
WMAS WMBD WMT WNAX WNOX  
WOKO WORC WPG WQAM WSBT  
WSFA WSJS WSPD WTOC WYVA

**E-11:00 p.m., C-10:00, M-9:00, P-8:00**  
**C — Richard Himber and Orchestra**  
KDB KERN KFBK KFPY KFRC  
KGB KHJ KLZ KMJ KOIN KOL  
KSL KVI KWG  
**B — National Barn Dance**  
KDYL KFI KGO KGW KHQ KOA

KOMO WAVE WJDX WLS WMC  
WSB WSMB

**C — Elder Michaux' Congregation**  
CKAC CKLW KLRA WAAB WABC  
WBT WDAE WDBJ WDBO WDOD  
WDRS WDSU WFBM WGLC WGR  
WHEC WHP WIBW WJAS WJVS  
WKRC WLAC WORC WQAM WSBT  
WSFA WSJS WTOC

**E-11:30 p.m., C-10:30, M-9:30, P-8:30**  
**C — Glen Gray and Orchestra**  
CKAC CKLW KLRA WAAB WABC  
WBT WDAE WDBJ WDBO WDOD  
WDRS WDSU WFBM WGLC WGR  
WHEC WHP WIBW WJAS WJVS  
WKRC WLAC WORC WQAM WSBT  
WSFA WSJS WTOC

**E-12:00 p.m., C-11:00, M-10:00, P-9:00**  
**C — Portland Junior Symphony**  
CKAC CKLW KDB KFH KGKO  
KLRA KLZ KMBC KOH KOMA  
KTRH KTSa KWKH WABC WBNS  
WCAU WDBO WDNC WDOD WEAN  
WFBL WFBM WGLC WHP WIBW  
WICC WJVS WKBW WKRC WLAC  
WLWB WNAC WNOX WOKO WPG  
WQAM WSBT WTOC

**R — Floyd Gibbons**  
KDYL KFI KFSD KGO KGW KHQ  
KOA KOMO

## SUNDAY

**E-11:30 a.m., C-10:30, M-9:30, P-8:30**  
**C — Salt Lake Tabernacle Choir**  
CKLW KFH KGKO KLRA KLZ  
KOH KRLL KSCJ KSL KTRH  
KTSa KWKH WABC WACO WADC  
WALA WBBM WBMS WCCO WDAE  
WDBO WDOD WDRS WDSU WEAN  
WFBM WFEA WGLC WHK  
WHP WIBW WICC WISN WJAS  
WJVS WLAC WLWB WLWB WMAS  
WMBD WMBR WMT WNAC WNAX  
WNOX WOKO WORC WQAM WREC  
WYVA WSPD

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

**E-12:30 p.m., C-11:30, M-10:30, P-9:30**  
**C — Tito Guizar**  
CKLW KMBC KMOX WABC WADC  
WBBM WCAO WCAU WDRS WEAN  
WFBL WFBM WGR WHAS WJAS  
WJVS WKH WKRC WMAS WNAC  
WOKO WORC WOWO WSPD

**B — Radio City Symphony**  
CFRC CROCT KDKA KDYL KFI  
KPHY KGO KGW KHQ KOA KOIL  
KOMO KPRC KSO KVOO WAPI  
WBAL WBC WCCO WDAE WDBJ  
WDBO WDNC WDOD WDRS WDSU  
WFBL WGLC WGR WHEC WHP  
WIBW WJAS WJVS WKRC WLAC

**E-1:00 p.m., C-12:00, M-11:00, P-10:00**  
**C — Church of the Air**  
CFRB CKLW KFH KGKO KHJ  
KLRA KLZ KOH KRLL KSCJ KSL  
KTRH KTSa KWKH WAAB WABC  
WACO WALA WBBM WBG WDBJ  
WBT WCAO WCCO WDAE WDBJ  
WDBO WDNC WDOD WDRS WDSU  
WFBL WGLC WGR WHEC WHP  
WIBW WJAS WJVS WKRC WLAC

WLWB WLWB WMBR WMT WNOX  
WOKO WORC WPG WQAM WREC  
WSBT WSFA WSJS WSPD WYVA

**R — Dale Carnegie, Talks**  
WBEN WCAE WEAF WEEI WFBR  
WFI WGY WJAR WRC WSAI  
WTAG WTAM WTIC WWJ

**E-1:30 p.m., C-12:30, M-11:30, P-10:30**  
**R — Miss Bab-o's Surprise**  
WBEN WCAE WCBS WDAF WEAF  
WEEI WFBR WFI WGY WJAR  
WMAQ WOV WRC WSAI WTAG  
WTAM WWJ

**C — Little Jack Little**  
CKLW KMBC KMOX KRLL WABC  
WADC WBBM WBT WCAU WCCO  
WFBL WFBM WGR WHAS WHK  
WJAS WJVS WKRC WOWO

**E-1:45 p.m., C-12:45, M-11:45, P-10:45**  
**C — Pat Kennedy; Art Kassel**  
CFRB CKLW KDB KERN KFBK  
KFPY KFRC KGB KHJ KLZ KMBC  
KMJ KMOX KOIN KOL KRLL  
KSL KVI KWG WABC WBBM  
WBNS WCAO WCAU WCCO WDSU  
WFBM WGR WGST WHAS WHK  
WJAS WJVS WKRC WMT WOWO  
WSPD

**E-2:00 p.m., C-1:00, M-12:00, P-11:00**  
**C — Lazy Dan, Minstrel Man**  
CKLW KDB KERN KFAB KFBK  
KFPY KFRC KGB KHJ KLZ KMBC  
KMJ KMOX KOIN KOL KOMA  
KRLL KSL KVI KWG WABC WADC  
WBBM WBNS WBT WCAO WCAU  
WCCO WDBJ WDRS WDSU WEAN  
WFBL WFBM WGST WHAS WHEC  
WHK WIBW WJAS WJVS WKBW  
WKRC WLAC WMBG WMT WNAC  
WOWO  
**R — Mohawk Treasure Chest**  
WBEN WCAE WCBS WDAF WEAF  
WEEI WFBR WFI WGY WJAR  
WMAQ WOV WRC WSAI WTAG  
WTAM WWJ

**B — Anthony Frome; Poet Prince**  
KDKA KOIL KSO KWCR KWR  
WBAL WBZ WBZA WENR WGAR  
WJR WJZ WMAL WREN WSYR

**E-2:15 p.m., C-1:15, M-12:15, P-11:15**  
**B — Becker's Chats About Dogs**  
KDKA KOIL KSO KWCR KWR  
WBAL WBZ WBZA WGAR WJR  
WJZ WLS WMAL WREN WSYR

**E-2:30 p.m., C-1:30, M-12:30, P-11:30**  
**C — Imperial Hawaiian Band**  
CKLW KDB KERN KFAB KFBK  
KFPY KFRC KGB KHJ KLZ KMBC  
KMJ KMOX KOIN KOL KOMA  
KRLL KSL KVI KWG WABC  
WADC WBBM WBT WCAO WCAU  
WCCO WDBJ WDRS WDSU WEAN  
WFBL WFBM WGST WHAS WHEC  
WHK WIBW WJAS WJVS WKBW  
WKRC WLAC WMBG WMT WNAC  
WOWO

**R — Gene Arnold and Commodores**  
WCAE WCBS WEAF WEEI WFBR  
WGY WJAR WMAQ WOV WRC  
WSAI WTAG WTAM

**B — Lux Programs; Dramas**  
KDKA KDYL KFI KFYR KGO  
KGW KHQ KOA KOIL KOMO KPRC  
KSO KSTP KTBS KTHS KVOO  
KWCR KWK WBAAL WBZA  
WDA Y WEBC WFAA WGAR WHAM  
WIBA WJR WJZ WGY WLW WMAL

# SUNDAY (Continued)

WOAI WPTF WREN WRVA WSYR  
WTAR

**E-3:00 p.m., C-2:00, M-1:00, P-12:00**  
**C — N. Y. Philharmonic Symphony**  
CFRB CKAC CKLW KFH KGKO  
KHJ KLRA KLZ KOH KRLD KSCJ  
KSL KTRH KTSa KVR KWKH  
WABC WADC WALA WBIG WBNS  
WBT WCAO WCAU WCCO WDAE  
WDBJ WDBO WDNC WDOD WDRC  
WDSU WEAN WFBL WFBM WFEA  
WGLC WGR WHEC WHK WHP  
WIBW WICC WISN WJAS WJSV  
WKRC WLAC WLBW WLBZ WMAS  
WMBD WMBR WMT WNAC WOKO  
WORC WQAM WREC WSBT WSFA  
WSJS WSPD WTOC

**R — Sally of The Talkies**  
KDYL WBEN WCAE WCHS WDAF  
WEAF WEEI WFBM WGY WHO  
WJAR WJDX WLIT WMAQ WMC  
WOC WOV WRC WSAI WSB WSM  
WSMB WTAG WTAM WWJ

**E-3:30 p.m., C-2:30, M-1:30, P-12:30**  
**R — Maybelline Musical Romance**  
KDYL KFI KGO KGW KHQ KOA  
KOMO KSD WBEN WCAE WCHS  
WDAF WEAF WEEI WFBM WGY  
WHO WJAR WLIT WLW WMAQ  
WOC WOV WRC WTAG WTAM  
WTIC WWJ

**E-4:00 p.m., C-3:00, M-2:00, P-1:00**  
**Rev. Charles E. Coughlin**  
KSTP KWK WCAO WCAU WDRC  
WEAN WFBL WFEA WGAR WGR  
WHB WHO WICC WIND WJAS  
WJDX WJR WLBZ WLW WMAS  
WNAC WNBH WOC WOKO WOL  
WOR WORC

**R — Rhythm Symphony**  
KDYL KFI KGW KOA KOMO KPO  
KPRC KTBS WAPI WAVE WBAF  
WBEN WCHS WDAF WEAF WEEC  
WEEI WFBM WFLA WGY WIBA  
WIOD WJAR WJAX WJDX WLIT  
WMAQ WMC WOA1 WPTF WRVA  
WSAI WSB WSM WSMB  
WTAG WTAM WTIC WWJ

**B — Sherlock Holmes; Drama**  
KDKA KOIL KSO KWCR WBAL  
WBZ WBZA WENR WJZ WMAL  
WREN WSYR

**E-4:30 p.m., C-3:30, M-2:30, P-1:30**  
**R — Tony Wons**  
KDYL KFI KFSD KFYR KGO  
KGW KHQ KOA KOMO KSTP KTAR  
WAPI WAVE WJDX WMC WSB  
WSM WSMB

**B — Land of Beginning Again**  
KDKA KGO KOIL KWCR WBZ  
WBZA WENR WHAM WJZ WMAL  
WREN WSYR

**E-4:45 p.m., C-3:45, M-2:45, P-1:45**  
**R — Dream Drama**  
WBEN WCAE WCHS WDAF WEAF  
WEEI WFBM WFI WGY WJAR  
WMAQ WRC WSAI WTAG WTAM  
WTIC WWJ

**E-5:00 p.m., C-4:00, M-3:00, P-2:00**  
**C — Freddy Martin and Orchestra**  
CKLW KFH KLRA KLZ KMBC  
KMOX KOMA KRLD KSL KTRH  
KTSa KTUL WAAB WABC WADC  
WBBM WBIG WBRW WBT WCAO  
WCAU WCCO WDOD WDRC WDSU  
WEAN WFBL WFBM WGR WGST

WHAS WHEC WHK WIBW WJAS  
WJSV WKBN WKRC WLAC WLBZ  
WMAS WMBG WOKO WORC WOWO  
WREC WSPD

**R — Sentinels Serenade**  
CFCF CRCT KDYL KFI KFYR  
KGO KGW KHQ KOA KOMO WAVE  
WBEN WCAE WCHS WDAF WEAF  
WEEC WEEI WFBM WFI WGY  
WHO WIBA WJAR WKBW WMAQ  
WMC WOC WOV WRC WSAI WSB  
WSM WTAG WTAM WTIC WTMJ  
WWJ

**B — Roses and Drums**  
KDKA KOIL KPRC KSO KTHS  
KWCR KWK WBAL WBAF WBZ  
WBZA WENR WGAR WHAM WJR  
WJZ WKY WLW WMAL WOA1  
WREN WSYR

**E-5:30 p.m., C-4:30, M-3:30, P-2:30**  
**C — Frank Crumit; Julia Sanderson**  
CKLW KFH KMBC KMOX KOMA  
KTUL WAAB WABC WADC WBNS  
WCAO WCAU WDRC WDSU WEAN  
WFBL WFBM WGR WHAS WHEC  
WHK WIBX WICC WJSV WMAS  
WOKO WORC WSPD WWVA

**R — Tony Wons**  
CFCF CRCT KPRC KTHS KVOO  
WBAF WBEN WCAE WCHS WDAF  
WEAF WEEI WFI WGY WHO WIS  
WJAR WKY WMAQ WOA1 WOC  
WOV WPTF WRC WRVA WTAG  
WTAM WTIC WWJ WWNC

**B — American Bosch Explorers**  
KDKA KDYL KFI KFYR KGO KGW  
KHQ KOA KOIL KOMO KSO KSTP  
KWCR KWK WAPI WAVE WBAL  
WBZ WBZA WCKY WDAY WEEC  
WENR WGAR WHAM WIBA WJDX  
WJR WJZ WKBW WMAL WMC  
WREN WSB WSM WSMB WSYR  
WTMJ

**E-5:45 p.m., C-4:45, M-3:45, P-2:45**  
**B — Terhune Dog Drama**  
KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KSO KWCR KWK  
WBAL WBZ WBZA WENR WGAR  
WHAM WJR WJZ WMAL WREN  
WSYR

**E-6:00 p.m., C-5:00, M-4:00, P-3:00**  
**C — George Gershwin; Louis Katzman**  
CFRB CKLW KDB KERN KFBK  
KFPY KFRC KGB KHJ KLZ KMBC  
KMJ KMOX KOIN KOL KRLD  
KSL KVI KWG WAAB WABC  
WBBM WBNS WBT WCAO WCAU  
WCCO WDRC WDSU WFBL WFBM  
WGST WHAS WHEC WHK WJAS  
WJSV WKBW WKRC WOKO

**E-6:15 p.m., C-5:15, M-4:15, P-3:15**  
**B — Sparton Triolians**  
KDKA KOIL KSO KWCR KWK  
WBAL WBZ WBZA WENR WHAM  
WJR WJZ WMAL WREN

**E-6:30 p.m., C-5:30, M-4:30, P-3:30**  
**C — Smilin' Ed McConnell**  
CKLW KDB KERN KFAB KFBK  
KFPY KFRC KGB KHJ KLZ KMJ  
KMOX KOIN KOL KRLD KSL KVI  
KWG WAAB WABC WBBM WBNS  
WBRW WBT WCAU WCCO WDRC  
WDSU WEAN WFBL WFBM WFEA  
WGST WHAS WHK WHP WICC  
WISN WJAS WJSV WKBW WKRC  
WLAC WLBW WLBZ WORC WQAM  
WREC WWVA

**R — Armco Iron Master**  
KPRC KSD KTBS KVOO WBAF

WBEN WCAE WDAF WEAF WFBM  
WGY WHO WKY WLIT WLW  
WMAQ WOA1 WOC WOW WRC  
WTAM WWJ

**B — Compana Grand Hotel**  
KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KSO KSTP KWCR  
KWK WBAL WBZ WBZA WEEC  
WENR WGAR WHAM WJR WJZ  
WMAL WREN WSYR WTMJ

**E-6:45 p.m., C-5:45, M-4:45, P-3:45**  
**C — Voice of Experience**  
CKLW KMBC KMOX WAAB WABC  
WBBM WBT WCAO WCAU WCCO  
WDRC WEAN WFBL WFEA WGB  
WJAS WJSV WKBW WKRC WNAC  
WOWO WWVA

**E-7:00 p.m., C-6:00, M-5:00, P-4:00**  
**B — Jack Benny; Don Bestor**  
KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KPRC KSO KSTP  
KWCR KWK WBAL WBAF WBZ  
WBZA WEEC WGAR WHAM WIBA  
WJDX WJR WJZ WKY WLS WLW  
WMAL WMC WOA1 WREN WSB  
WSM WSMB WSYR WTMJ

**C — Chicago Knights**  
KDB KLRA KLZ KMBC KTRH  
KWKH WABC WADC WBIG WBNS  
WCAO WCCO WDAE WDBJ WDSU  
WEAN WFBM WFEA WHK WIBX  
WLBW WLBZ WMT WNAC WOKO  
WORC WPG WREC WJSJ WSPD

**E-7:15 p.m., C-6:15, M-5:15, P-4:15**  
**R — Uncle Ezy**  
WCHS WEAF WGY WHO WMAQ  
WOV WRC WSAI WTAM

**E-7:30 p.m., C-6:30, M-5:30, P-4:30**  
**R — American Radiator Program**  
KSD WCHS WEAF WGY WJAR  
WMAQ WOV WRC WSAI WTAG  
WTAM WWJ

**B — Joe Penner; Ozzie Nelson**  
KDKA KDYL KFI KFYR KGO  
KGW KHQ KOA KOIL KOMO KPRC  
KSO KSTP KTAR KVOO KWCR  
KWK WBAL WBZ WBZA WDAY  
WEEC WFAA WFLA WGAR WHAM  
WIBA WIOD WJAX WJDX WJR  
WJZ WKY WLS WMAL WMC WOA1  
WPTF WREN WRVA WSB WSM  
WSMB WSYR WTMJ

**C — California Melodies**  
CKAC KLRA KLZ KMBC KTRH  
WABC WADC WBIG WBNS WCAO  
WCCO WDAE WDBJ WDBO WDRC  
WDSU WEAN WFBL WFBM WFEA  
WHK WHP WICC WLBW WLBZ  
WMT WNAC WNAX WOKO WORC  
WPG WREC WJSJ WSPD

**E-7:45 p.m., C-6:45, M-5:45, P-4:45**  
**R — Fitch Program; Wendell Hall**  
CFCF KSD WBEN WCAE WCHS  
WEAF WFBM WGY WHO WJAR  
WKBW WLIT WMAQ WOC WOV  
WRC WSAI WTAG WTAM WTIC  
WWJ

**E-8:00 p.m., C-7:00, M-6:00, P-5:00**  
**C — Ford Symphony**  
CFRB CKLW KDB KERN KFBK  
KFH KFPY KFRC KGB KGKO  
KHJ KLRA KLZ KMBC KMJ  
KMOX KOH KOIN KOL KOMA  
KRLD KSCJ KSL KTRH KTSa  
KTUL KVI KVR KWKH WABC  
WACO WADC WALA WBBM WBIG  
WBNS WBRW WBT WCAO WCAU  
WCCO WDAE WDBJ WDBO WDNC

**SUNDAY (Continued)**

WDOD WDRC WDSU WEAN WFBL  
 WFBM WFEA WGLC WGR WGST  
 WHAS WHEC WHK WHP WIBW  
 WIBX WICC WISN WJAS WJSV  
 WKBH WKBN WKRC WLAC  
 WLBW WLBZ WMAS WMBR WMT  
 WNAC WNAX WNOX WOKO WORC  
 WOWO WQAM WSBT WSFA WSJS  
 WSPD WTOC WWVA

**R — Chase and Sanborn Hour**  
 CFCF CRCT KDYL KFI KFYZ  
 KGO KGW KHQ KOA KOMO KPRC  
 KSD KSTP KTAR KVOO WAPI  
 WAVE WBEN WBZ WBZA WCAE  
 WCSH WDAF WDAY WEAF WECB  
 WFAA WFSB WFLA WGY WHO  
 WIOD WIS WJAR WJAX WJDX  
 WKY WLIT WLW WMAQ WMC  
 WOAI WOC WOW WPTF WRC  
 WRVA WSB WSM WSMB WTAG  
 WTAM WVIC WTMJ WWJ WNNC

**B — General Motors Symphony**  
 KDKA KOIL KSO KWCR KWK  
 WBAL WBZ WBZA WCKY WGAR  
 WHAM WJR WJZ WLS WREN  
 WSYR

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

**C — Alexander Woolcott**  
 KDB KERN KFBK KFPY KFRC  
 KGB KHJ KLZ KMBC KMOX  
 KOIN KOL KSL KVI KGC WABC  
 WBBM WCAO WCAU WCCO WDRC  
 WFBL WGR WHAS WHK WJAS  
 WJSV WKRC WNAC WOKO

**R — Manhattan Merry-Go-Round**  
 CFCF KDYL KFI KGO KGW KHQ  
 KOA KOMO KSD KSTP WDAF  
 WEAF WECB WFSB WFI WGY  
 WHO WJAR WMAQ WOC WOW  
 WRC WSAI WTAG WTAM WVIC  
 WTMJ WWJ

**B — Silken Strings; Charles Previn**  
 KDKA KDYL KFI KGO KGW KHQ  
 KOA KOAI KOI KOMO KPRC KSO  
 KSTP KWCR KWK WBAL WBP  
 WBZ WBZA WECB WGAR WHAM  
 WIBA WJR WJZ WKY WLS WLW  
 WMAL WREN WSYR WTMJ

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

**C — Gulf Headliners**  
 CKLW KLRA KRLD KTRH KTS  
 A WABC WACO WADC WALA WBI

WBNS WBRC WBT WCAO WCAU  
 WDAE WDBJ WDBO WDOD WDRC  
 WDSU WEAN WFEA WGST WHAS  
 WHEC WHK WJAS WJSV WKRC  
 WLAC WLBZ WMAS WMBG WMBR  
 WNAC WOKO WORC WOWO WQAM  
 WREC WSPD WTOC

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

**B — Walter Winchell**  
 KDKA KOIL KSO KWCR KWK  
 WBAL WBZ WBZA WENR WGAR  
 WHAM WJR WJZ WLW WMAL  
 WREN WSYR

**E-9:45 p.m., C-8:45, M-7:45, P-6:45**

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

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

**R — Hall of Fame**  
 CFCF CRCT KDYL KFI KGO  
 KGW KHQ KOA KOMO KPRC KSD  
 KSTP KTBS KTHS WBEN WCAE  
 WCSH WDAF WEAF WEEI WFAA  
 WFSB WFI WGY WHO WJAR  
 WJDX WKBK WKY WLW WMAQ  
 WMC WOAI WOC WOW WRC  
 WSB WSM WSMB WTAG WTAM  
 WVIC WWJ

**C — Wayne King, See Monday**

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

**C — Dramatic Guild**  
 CKAC CKLW KFH KGKO KHJ  
 KLRA KLZ KMBC KOH KRLD  
 KSCJ KTRH KTSB KVR KWKH  
 WABC WACO WADC WALA WBI  
 WBNS WBT WCAO WCAU WCCO  
 WDAE WDBJ WDBO WDNC WDOD  
 WDRC WDSU WEAN WFBL WFBM  
 WFEA WGLC WGR WHEC WHP  
 WIBW WICC WISN WJAS WJSV  
 WKRC WLAC WLBW WLBZ WMAS  
 WMBD WMBR WMT WNAX WNOX

WOKO WORC WPG WQAM WREC  
 WSBT WSFA WSJS WSPD WTOC

**R — Pontiac Program; Jane Froman**  
 KDYL KFI KFSD KFYZ KGH  
 KGIR KGO KGW KHQ KOA KOMO  
 KPRC KSTP KTAR KTBS KTHS  
 WAPI WAVE WBPB WBEN WCAE  
 WCSH WDAF WDAY WEAF WECB  
 WEEI WFSB WFI WFLA WGY  
 WHO WBA WIOD WIS WJAR  
 WJAX WJDX WKBK WKY WLW  
 WMAQ WMC WOAI WOC WOW  
 WPTF WRC WRVA WSB WSM  
 WSMB WSOB WTAG WTAM WVIC  
 WTMJ WWJ WNNC

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

**C — Little Jack Little**  
 CFBK CKAC CKLW KFH KGKO  
 KLRA KLZ KOH KRLD KSCJ  
 KTRH KTSB KVR KWKH WABC  
 WACO WADC WBBM WBNS WBT  
 WCAO WCAU WCCO WDAE WDBJ  
 WDBO WDNC WDOD WDRC WDSU  
 WEAN WFBL WFEA WGLC WGR  
 WHEC WHK WHP WIBW WISN  
 WJAS WJSV WKRC WLAC WLBW  
 WLBZ WMAS WMBD WMBR WMT  
 WNAC WNAX WNOX WOKO WORC  
 WPG WQAM WREC WSBT WSFA  
 WSJS WSPD WTOC

**R — Fitch Program; Wendell Hall**  
 KDYL KFI KFYZ KGO KGW KHQ  
 KOA KOMO KPRC KSTP KTBS  
 KTHS WAPI WAVE WBPB WDAF  
 WDAY WECB WIBA WJDX WKY  
 WMC WOAI WSB WSM WSMB  
 WTMJ

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

**B — Walter Winchell**  
 KDYL KFI KFSD KGHL KGIR  
 KGW KHQ KOA KOMO KPO KPRC  
 KTAR KTBS KTHS WAPI WAVE  
 WBPB WJDX WKY WMC WSB  
 WSM WSMB

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

**C — Leon Belasco and Orchestra**  
 CKAC KLRA KLZ KRLD KTRH  
 KTSB KWKH WABC WBNS WDBJ  
 WDSU WFBM WFBM WHK WLBW  
 WMBR WMT WOKO WREC WSPD

**B — Jack Benny; Don Bestor**  
 KDYL KFI KFSD KGHL KGIR  
 KGU KGW KHQ KOA KOMO KPO  
 KTAR

Vivienne Segal spends the time between rehearsals and the actual broadcast of Melodiana improvising on the piano. The other day, a musician in Abe Lyman's band wrote down the music she was playing, and now it's going to be published under the title "Suspense," signifying the tense moments just before a broadcast starts, when each minute seems to the performers like a half hour.

\* \* \*

Many fans seem to think that Pearl Pickens, of Carson Robinson's Buckaroos, is one of the Pickens Sisters. She isn't. There are only four

of the famous Pickens Sisters—Helen, Jane and Patti of the harmony trio, and Grace, the "spare," who pinch hits when the necessity arises. Pearl Pickens is a Kansas gal, while the Pickens Sisters hail from Georgia.

\* \* \*

Annette Hanshaw's 17 year old brother, Frankie, has organized a band, with Frankie singing as well as directing. He's Annette's pride and joy. Eddie Cantor and family leave for London early in December. It will be the banjo-eyed comic's first visit to England in ten years.

# CLASSIFIED INDEX TO CHAIN PROGRAMS

*Time in Eastern Standard*

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

## CONCERTS

American Radiator Program, 7:30 p.m. Sunday, R  
Armco Iron Master, 6:30 p.m. Sunday, R  
Arwater Kent, 8:30 p.m. Monday, C  
Ford Concert, 8:00 p.m. Sunday, C  
General Motors Symphony, 8:00 p.m. Sunday, B  
N. Y. Philharmonic, 3:00 p.m. Sunday, C  
Portland Junior Symphony, 12:00 Mid. Saturday, C  
Radio City Music Hall, 12:30 p.m. Sunday, B  
Swift Hour, 8:00 p.m. Saturday, R

## DANCE BANDS

Victor Arden, 8:30 p.m. Wednesday, C  
Robert Armbruster, 8:45 p.m. Sat., C; 8:15 p.m. Fri., B  
Leon Belasco, 9:30 p.m. Friday, B; 11:30 p.m. Sunday;  
11:15 p.m. Wed., C  
Ben Bernie, 9:00 p.m. Tuesday, R  
Don Bestor, 7:00 and 11:30 p.m. Sunday, B  
Frank Black, 10:30 p.m. Sunday, R; 9:00 p.m. Saturday,  
B  
Henry Busse, 11:30 p.m. Tuesday, C  
Jack Denny, 10:30 p.m. Wednesday, B  
Eddie Duchin, 9:30 p.m. Tuesday, R  
Jan Garber, 8:00 p.m. Monday, B  
Lud Gluskin, 9:30 p.m. Monday, C  
Al Goodman, 8:30 p.m. Friday, B  
Glen Gray, 10:00 p.m. Tuesday; 9:00 and 11:30 p.m.  
Thursday; 11:15 p.m. Mon.; 11:30 p.m. Sat., C  
Phil Harris, 9:00 p.m. Friday, B  
Lennie Hayton, 9:00 and 12:00 p.m. Wednesday, R  
Richard Himber, 8:00 p.m. Monday, R; 9:30 and  
11:00 p.m. Saturday, C  
Isham Jones, 9:30 p.m. Tuesday, C  
Gene Kardos, 6:15 p.m. Saturday, C  
Art Kassel, 1:45 p.m. Sunday, C  
Louis Katzman, 6:00 p.m. Sunday, C  
Wayne King, 8:30 p.m. Tues. and Wed., R; 10:00 p.m.  
Sunday and Monday, C  
Little Jack Little, 1:30 and 11:00 p.m. Sunday; 11:15  
p.m. Thurs., C  
Guy Lombardo, 10:00 p.m. Wednesday, R  
Abe Lyman, 9:00 p.m. Friday, R; 8:30 p.m. Tuesday, C  
Freddy Martin, 5:00 p.m. Sunday, C  
Ozzie Nelson, 7:30 p.m. Sunday, B; 11:30 p.m. Wed.;  
11:15 p.m. Friday, C  
Raymond Palge, 7:30 p.m. Sunday, C  
Charles Previn, 9:00 p.m. Sunday, B  
Leo Reisman, 8:00 and 11:30 p.m. Tuesday, R  
Willard Robison, 7:15 p.m. Mon., Wed. and Fri., B  
Harry Salter, 11:15 p.m. Tuesday, C  
Rudy Vallee, 8:00 p.m. Thursday, R  
Fred Waring, 9:30 p.m. Thursday, C  
Paul Whitman, 10:00 p.m. Thursday, R

## DIALOG

Fred Allen, 9:00 and 12:00 p.m. Wednesday, R  
Amos 'n' Andy, 7:00 and 11:00 p.m. daily, except  
Sat. and Sun., B  
Phil Baker, 9:30 p.m. Friday, B  
Jack Benny, 7:00 and 11:30 p.m. Sunday, B  
Block and Sully, 9:30 p.m. Monday, C  
Eddie Cantor, 8:00 p.m. Sunday, R  
Joe Cook, 9:30 p.m. Monday, R  
Easy Aces, 8:00 p.m. Wed., Thurs. and Fri., C  
George and Grace, 9:30 p.m. Wednesday, C  
George Givot, 10:30 p.m. Tuesday, C  
Jake and Lena, 7:15 and 11:15 p.m. daily, except  
Sat. and Sun., R  
Walter O'Keefe, 10:00 p.m. Tuesday; 9:00 and 11:30  
p.m. Thursday, C  
Joe Penner, 7:30 p.m. Sunday, B  
Pick and Pat, 9:30 p.m. Friday, R  
Uncle Eazy, 7:15 p.m. Sun.; 7:30 p.m. Wed. and Fri., R  
Ed Wynn, 9:30 p.m. Tuesday, R

## DRAMA

Bar X Days, 8:00 p.m. Monday, C  
Billy Batchelor, 6:45 p.m. daily, except Sat. and Sun.,  
R; 8:15 p.m. daily, except Sat. and Sun., C  
Dangerous Paradise, 7:45 p.m. Mon., Wed. and Fri., B  
Red Davis, 7:30 p.m. Mon., Wed., and Fri., B  
Death Valley Days, 9:00 p.m. Thursday, B  
Dramatic Guild, 10:30 p.m. Sunday, C  
Dream Drama, 4:45 p.m. Sunday, R  
Eno Crime Clues, 8:00 p.m. Tues. and Wed., B  
First Nighter, 10:00 p.m. Friday, R  
Grand Hotel, 6:30 p.m. Sunday, B  
Sherlock Holmes, 4:00 p.m. Sunday, B  
Warden Lawes, 9:00 p.m. Wednesday, B  
Lux Program, 2:30 p.m. Sunday, B  
Myrt and Marge, 7:00 and 11:00 p.m. daily, except  
Sat. and Sun., C  
One Man's Family, 10:30 p.m. Wednesday, R  
Mary Pickford, 8:00 p.m. Wednesday, R  
Princess Pat Players, 9:30 p.m. Monday, B  
Irene Rich, 8:00 p.m. Friday, B  
Buck Rogers, 6:00 and 7:30 p.m. Mon. to Thurs.,  
Inc., C  
Roses and Drums, 5:00 p.m. Sunday, B  
Sally of the Talkies, 3:00 p.m. Sunday, R  
The Shadow, 6:30 p.m. Mon. and Wed., C  
Soconyland Sketches, 7:00 p.m. Saturday, C  
Story Behind Claim, 9:15 p.m. Tuesday, B  
Tastyest Theatre, 9:45 p.m. Sunday, B  
Terhune Dog Dramas, 5:45 p.m. Sunday, B  
True Story Court, 8:30 and 11:30 p.m. Friday, C

## PIANO

Fray and Braggiotti, 8:15 p.m. Thursday, C  
George Gershwin, 6:00 p.m. Sunday, C  
Ohman and Arden, 9:30 p.m. Sunday, R

## POPULAR PROGRAMS

A & P Gypsies, 9:00 p.m. Monday, R  
Album Familiar Music, 9:30 p.m. Sunday, R  
Gene Arnold's Commodores, 2:30 p.m. Sunday, R  
Miss Bab-o's Surprise, 1:30 p.m. Sunday, R  
Bernard and Dumont, 7:30 p.m. Mon. and Thurs., R;  
10:00 p.m. Friday, B  
Major Bowes, 11:30 a.m. Sunday, R  
Byrd Expedition, 10:00 p.m. Wednesday, C  
Carborundum Band, 10:00 p.m. Saturday, C  
Chase and Sanborn, 8:00 p.m. Sunday, R  
Chesterfield Program, 9:00 p.m. Mon., Wed. and Sat.,  
C  
Chicago Knights, 7:00 p.m. Sunday, C  
Cities Service Concert, 8:00 p.m. Friday, R  
Colgate House Party, 9:30 p.m. Monday, R  
Contented Program, 10:00 p.m. Monday, R  
Emerson Drug Program, 8:30 p.m. Friday, B  
Fleischmann Variety, 8:00 p.m. Thursday, R  
Forty-Five Minutes in Hollywood, 10:00 p.m. Thurs-  
day, C  
Forum of Liberty, 8:30 p.m. Thursday, C  
Gems of Melody, 7:15 p.m. Thursday, B  
Gibson Family Musical, 9:30 p.m. Saturday, R  
Gulf Headliners, 9:30 p.m. Sunday, C  
Hall of Fame, 10:00 p.m. Sunday, R  
Hollywood Hotel, 9:30 p.m. Friday, C  
Household Musical, 7:30 p.m. Tuesday, B  
Imperial Hawaiian Band, 2:30 p.m. Sunday, C  
Land of Beginning, 4:30 p.m. Sunday, B  
Manhattan Merry-Go-Round, 9:00 p.m. Sunday, R  
March of Time, 9:00 p.m. Friday, C  
Maxwell House Show Boat, 9:00 p.m. Thursday, R  
Maybelline Musical, 3:30 p.m. Sunday, R  
Mohawk Treasure Chest, 2:00 p.m. Sunday, R  
Music Appreciation, 6:30 p.m. Tuesday, C  
National Barn Dance, 9:30 and 11:00 p.m. Saturday, B  
Palmolive Beauty Box, 10:00 p.m. Tuesday, R  
Pontiac Program, 10:30 p.m. Sunday, R

Rhythm Symphony, 4:00 p.m. Sunday, R  
 Roxy and His Gang, 8:00 p.m. Saturday, C  
 Saturday Revue, 10:30 p.m. Saturday, C  
 Sentinels Serenade, 5:00 p.m. Sunday, R  
 Silver Dust Serenaders, 7:30 p.m. Mon., Wed. and  
 Fri., C  
 Sinclair Minstrels, 9:00 p.m. Monday, B  
 Songs You Love, 9:00 p.m. Saturday, R  
 Sparton Triollans, 6:15 p.m. Sunday, B  
 Voice of Firestone, 8:30 and 11:30 p.m. Monday, R  
 Tony Wons, 4:30 and 5:30 p.m. Sunday, R

#### RELIGIOUS

Church of the Air, 1:00 p.m. Sunday, C  
 Elder Michaux, 11:00 p.m. Saturday, C  
 Salt Lake Choir, 11:30 a.m. Sunday, C

#### SINGERS

Mildred Bailey, 7:15 p.m. Mon., Wed., Fri., B  
 Mary Courtland, 8:45 p.m. Sat., C; 8:15 p.m. Friday, B  
 Bing Crosby, 9:00 p.m. Tuesday, C  
 Mary Eastman, 10:30 p.m. Wednesday, C  
 Jane Froman, 10:30 p.m. Sunday, R  
 Gene and Glenn, 7:15 and 11:15 p.m. daily except  
 Sat. and Sun., R  
 Tito Guizar, 12:30 p.m. Sunday, C  
 Wendell Hall, 7:45 and 11:00 p.m. Sunday, R  
 Annette Hanshaw, 10:00 p.m. Tuesday; 9:00 and 11:30  
 p.m. Thurs., C  
 Pat Kennedy, 1:45 p.m. Sunday, C  
 Ralph Kirbery, 2:00 p.m. Sunday, R  
 Frances Langford, 9:30 p.m. Monday, R  
 Lazy Dan, 2:00 p.m. Sunday, C  
 Elizabeth Lennox, 8:30 p.m. Wednesday, C  
 Everett Marshall, 8:30 p.m. Wednesday, C  
 Nino Martini, 9:00 p.m. Wednesday, C  
 Martha Mears, 9:30 p.m. Friday, B  
 James Melton, 9:00 and 12:00 p.m. Wednesday, R  
 Frank Munn, 9:30 p.m. Sunday; 9:00 p.m. Friday, R;  
 8:00 p.m. Tuesday, C  
 Gertrude Niesen, 9:30 p.m. Monday, C  
 Donald Novis, 9:30 p.m. Monday, R  
 Frank Parker, 9:00 p.m. Monday, R; 7:00 and 11:30  
 p.m. Sunday, B

Rosa Ponselle, 9:00 p.m. Monday, C  
 Virginia Rea, 9:30 p.m. Sunday, R  
 Harry Richman, 10:30 p.m. Wednesday, B  
 Carson Robison, 8:00 p.m. Monday, C  
 Lanny Ross, 9:00 p.m. Thursday, R; 8:30 and 11:30  
 p.m. Wednesday, B  
 Sanderson-Crumit, 5:30 p.m. Sunday, C  
 Vivienne Segal, 9:00 p.m. Friday, R; 8:30 p.m. Tues-  
 day, C  
 Mary Small, 1:30 p.m. Sunday, R  
 Smlin' Ed McConnell, 6:30 p.m. Sunday, C  
 Kate Smith, 10:30 p.m. Friday, C  
 Grete Stueckgold, 9:00 p.m. Saturday, C  
 Gladys Swarthout, 8:30 and 11:30 p.m. Sunday; 10:00  
 p.m. Tuesday, R  
 Conrad Thibault, 9:00 p.m. Thursday, R  
 John Charles Thomas, 9:30 p.m. Wednesday, B  
 Lawrence Tibbett, 8:30 p.m. Tuesday, B  
 Fats Waller, 10:45 p.m. Thurs, C  
 Whispering Jack Smith, 7:30 p.m. Tues.; Thurs. and  
 Sat., C

#### TALKS

American Bosch Explorers, 5:30 p.m. Sunday, B  
 Becker's Dog Chats, 2:15 p.m. Sunday, B  
 Dale Carnegie, 1:00 p.m. Sunday, R  
 Boake Carter, 7:45 p.m. daily, except Sat. and Sun., C  
 Rev. Charles E. Coughlin, 4:00 p.m. Sunday  
 Floyd Gibbons, 7:45 and 12:00 p.m. Saturday, R  
 Health Talks, 10:30 p.m. Monday, C  
 Edwin C. Hill, 8:15 and 11:15 p.m. Mon., Wed., Fri.;  
 8:30 p.m. Thursday, C  
 H. V. Kaltenborn, 6:00 p.m. Friday, C  
 John B. Kennedy, 8:30 p.m. Tues; 10:30 p.m. Wed.;  
 9:00 p.m. Sat., B  
 Lawyer and Public, 7:45 p.m. Saturday, C  
 Madame Sylvia, 10:15 p.m. Wednesday, B  
 Lowell Thomas, 6:45 p.m. daily, except Sat. and  
 Sun., B  
 Voice of Experience, 6:45 p.m. Sunday; 11:30 p.m.  
 Wednesday, C  
 Frederic William Wile, 6:00 p.m. Saturday, C  
 Walter Winchell, 9:30 and 11:15 p.m. Sunday, B  
 Alexander Woolcott, 9:00 p.m. Sunday, C

## KEY TO SYMBOLS

Frequency is given in kilocycles; wavelength in meters. Night power is shown in watts in third column. Daytime power is shown in parenthesis in fourth column in kilowatts, thus (.25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column. Time Zones: A—Atlantic, E—Eastern, C—Central, M—Mountain, P—Pacific, L—Local. A.M. time is shown in light face type.

#### Second Column Symbols

- a Verifies reception for return postage.
- b Verifies only occasionally.
- c Does not verify.
- d Verification 10c; letter 25c.
- e Sends Ekko stamp for 10c.
- f Sends Ekko stamp for 5c.
- g Sends Ekko stamp for postage.
- h Sends own station stamp for 10c.
- i Sends own station stamp for 5c.
- j Sends own station stamp for postage.
- k Has no stamps.
- m Verifies for 5c.
- z No information available.

#### Fourth Column Symbols

- B National "Blue" network.

- C Columbia network.
- D Daytime only.
- Dn Daytime with occasional evening hours.
- F Canadian Radio Brdctg. Commission.
- N National "Red" and "Blue" networks.
- P Has construction permit only.
- R National "Red" network.
- S Sunday only.
- Sy Synchronized.
- X Has permit to increase power.
- Y Has permit to change location.
- Z Has permit to change frequency.

- a-b-c. Small letters show stations using same transmitter.
- 1-2-3. Figures denote stations sharing time.
- ..... No information.

## Time on the Air

The time is given in accordance with the "24-hour clock." Noon is always 12:00, but midnight may be either 0:00 or 24:00. To change to time of your own clock, subtract twelve. Thus, 18:00-24:00 is 6:00 p. m. to midnight. 23:00-0:30 is 11:00 p. m. to 12:30 a.m. A signifies Atlantic Standard Time (AST). E is Eastern Standard Time (EST). C is Central Standard Time (CST). P is Pacific Standard Time (PST).



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With Friday's Time on the Air

540 kilocycles 555.2 meters

CJRM ak 1000 F Moose Jaw, Sask.  
CMCW dk 150 ..... Havana, Cuba

M-7-23  
E-12-18; 1-3

KCYS.  
600  
DIAL

550 kilocycles 545.1 meters

CFNB ak 500 F Fredericton, N. B.  
KFUO ae 500 2 (1) St. Louis, Mo.  
KFYR ae 1000 N (2.5) Bismarck, N. D.  
KOAC ak 1000 ..... Corvallis, Ore.  
KSD ak 500 2R (1) St. Louis, Mo.  
KTSA ak 1000 C San Antonio, Texas  
TISO ak 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  
WSVA z 500 DP Staunton, Va.

A-8:10-24  
C-7-8; 12:15-12:40; 15-15:40; 22-23  
C-7-24  
P-9-22  
C-.....  
C-7-14; 15-23:30  
C-.....  
E-7:30-10; 11:30-14; 15-19  
E-7:30-24  
E-7-1  
E-.....

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.  
TGW ak 10000 565 Guatemala City  
WFI ae 500 1R (1) Philadelphia, Pa.  
WIND ak 1000 (2.5) Gary, Ind.  
WIS ae 1000 N (2.5) Columbia, S. C.  
WLIT ak 500 1R (1) Philadelphia, Pa.  
WQAM ae 1000 C Miami, Fla.  
XEAO ak 250 (.15) Mexicali, B. C.

C-7:15-14; 16-22  
M-6:45-23:30  
P-7-1  
C-6-17:45  
C-12-14:30; 18:30-19:30; 21-23  
E-6:45-9; 9:45-11; 13-14; 15-16:30; 18-24  
C-7-1  
E-8-24  
E-9-9:45; 11-13; 14-15; 16:30-18  
E-7:30-24  
P-8-22

570 kilocycles 526.0 meters

KGKO ak 250 C (1) Wichita Falls, Texas  
KMTR ak 500 ..... Hollywood, Calif.  
KVI ak 1000 ..... Tacoma, Wash.  
WKBN ae 500 1C 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  
WYSR ak 250 B Syracuse, N. Y.  
WWNC ae 1000 N Asheville, N. C.

C-7:30-23:30  
P-6:45-23:30  
P-6-24  
E-7:30-9; 11-19  
E-7-1  
C-6-24  
E-9-11; 19-23:30  
E-7:30-1  
E-7:30-0:30

580 kilocycles 516.9 meters

CHRC ak 100 F Quebec, Que.  
CKGL ae 100 F Toronto, Ont.  
CKUA ak 500 ..... Edmonton, Alta.  
KMJ ak 500 C 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 (2.5) Topeka, Kans.  
WTAG ae 500 R (1) Worcester, Mass.

E-9-0:30  
E-8-23:30  
M-13-15:15; 19-21  
P-7-24  
C-9:30-10:30; 12:30-14; 16:30-17:30  
E-7-23  
E-7:30-24  
C-6-9:30; 10:30-12:30; 14-16:30; 17:30-24  
E-8-24

590 kilocycles 508.2 meters

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 ..... PiedrasNegras, Coah.

P-6:45-24  
E-.....  
E-7:30-18  
C-6:30-0:30  
C-5-24

600 kilocycles 499.7 meters

CFCF ae 500 ..... Montreal, Que.  
CFCO ak 100 F Chatham, Ont.  
CJOR ak 500 ..... Vancouver, B. C.  
FON z 250 609 St. Pierre, Miquelon  
KFSD ae 1000 N San Diego, Calif.  
WCAK 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.

E-8-24  
E-7:30-9; 11-13:30; 17-23  
P-7:30-23:15  
L-Silent  
P-7-24  
E-12:30-13; 19-20  
E-7-24  
E-7:45-12:30; 13-1  
C-7-24  
C-7-24

CUT OUT ON DOTTED LINES

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With Friday's Time on the Air

610 kilocycles 491.5 meters

CMCF	ak	250	.....	Havana, Cuba	E-12-14; 18-20
KFRC	ak	1000	C(2.5)	San Francisco, Calif.	P-7-24
KZRM	ak	50000	618.5	Manila, P. I.	L-6:30-7:30; 12:15-13:15; 17-22:30
WDAF	ak	1000	R(2.5)	Kansas City, Mo.	C-6:30-24
WIP	ae	500	(1)	Philadelphia, Pa.	E-7-1
WJAY	ae	500	D	Cleveland, Ohio	E-6-17:15
XFX	ak	500	.....	Mexico City, D. F.	C-7-12; 16:30-22:30

620 kilocycles 483.6 meters

KGW	ak	1000	N(2.5)	Portland, Ore.	P-7-24
KTAR	ae	1000	N	Phoenix, Ariz.	M-7-23:15
WFLA	ae	1000	Na(2.5)	Clearwater, Fla.	E-7:30-24
WHJB	z	250	P	Greensburg, Pa.	E-7-sunset
WLBZ	ak	500	C	Bangor, Maine	E-8-24
WSUN	ae	1000	Na(2.5)	St. Petersburg, Fla.	E-7:30-24
WTMJ	ae	1000	N(5.)	Milwaukee, Wis.	C-6:45-0:30
.....	z	250	P	Pittsburgh, Pa.	E-.....

630 kilocycles 475.9 meters

CFCY	ae	500	F	Char't'w'n, P.E.I.	A-12-13:30; 18-23:30
CJGX	ck	500	F	Yorkton, Sask.	C-8:30-9:15; 10:30-12; 19:30-21:30
CKOV	ak	100	F	Kelowna, B. C.	P-8-10; 11:30-13:30; 17:30-22:30
CMBY	z	250	635	Havana, Cuba	E-.....
KFRU	ak	500	1	Columbia, Mo.	C-6-9; 16-sunset; 19-20:30
KGFX	ak	200	D	Pierre, S. D.	C-9:30-sunset
WGBF	ae	500	1	Evansville, Ind.	C-7-23
WMAL	ak	250	B(.5)	Washington, D. C.	E-6:45-1
WOS	ak	500	1D	Jefferson City, Mo.	C-9-16
WPRO	ak	250	.....	Providence, R. I.	E-8-1:15

640 kilocycles 468.5 meters

KFI	ak	50000	N	Los Angeles, Calif.	P-6:30-24
WAIU	ae	500	B	Columbus, Ohio	E-6:15-17:30
WOI	ae	5000	D	Ames, Iowa	C-6:45-17
XEOX	ak	250	.....	Saltillo, Coah.	C-.....

650 kilocycles 461.3 meters

WSM	ae	50000	N	Nashville, Tenn.	C-6:30-24
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660 kilocycles 454.3 meters

WAAW	ak	500	D	Omaha, Neb.	C-6-18:15
WEAF	ak	50000	R	New York, N. Y.	E-6:45-1
XEAL	z	1000	.....	Mexico City, D. F.	C-.....

670 kilocycles 447.5 meters

WMAQ	ck	50000	N	Chicago, Ill.	C-7-1
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680 kilocycles 440.9 meters

CMAF	ak	1000	.....	Havana, Cuba	E-17:30-23
HJN	ak	500	681	Bogota, Colombia	L-12-13:30; 19-21
KFEQ	ae	2500	D	St. Joseph, Mo.	C-6-17:45
KPO	ak	50000	N	San Francisco, Calif.	P-7:30-24
RDN	z	500	.....	San Salvador, E. S.	L-.....
VAS	ak	2000	685	Glace Bay, N. S.	A-23-23:10; 0-0:10
VOWR	ck	500	681	St. John's, Nfld.	L-11-18:30
WPTF	ae	1000	DnN	Raleigh, N. C.	E-7:30-sunset

690 kilocycles 434.5 meters

CFRB	ae	10000	C	Toronto, Ont.	E-8-0:30
CJ CJ	ak	100	F	Calgary, Alta.	M-.....
NAA	ak	1000	.....	Arlington, Va.	E-10:10-10:15; 11:55-12; 21:55-22
XET	ck	500	.....	Monterrey, N. L.	C-12-14; 16-22

700 kilocycles 428.3 meters

WLW	ak	500000	N	Cincinnati, Ohio	E-6:30-3
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710 kilocycles 422.3 meters

KMPC ae 500 Dn Beverly Hills, Calif.  
 KPCB ae 250 ..... Seattle, Wash.  
 TIFB z 30 714 San Jose, C. R.  
 WOR ak 5000 ..... Newark, N. J.  
 XEN ak 1000 711 Mexico City, D. F.

P-6:45-0:30  
 P-5:30-sunset; 22-4  
 C-6-10  
 E-6:45-0:30  
 C-9-12; 13-16; 17-24

720 kilocycles 416.4 meters

CMK ae 3150 725 Havana, Cuba  
 KZEG ak 1000 ..... Manila, P. I.  
 WGN ck 50000 ..... Chicago, Ill.

E-11-13; 19-24  
 L-7:30-12:15; 13:15-17  
 C-7-1:30

KCYS.  
 800  
 DIAL

730 kilocycles 410.7 meters

CFPL ak 100 F London, Ont.  
 CJCA ah 500 F Edmonton, Alta.  
 CKAC ak 5000 C Montreal, Que.

E-8:15-10:30; 12-13:30; 17-23:30  
 M-7:30-14; 15:30-23  
 E-7:30-1

740 kilocycles 405.2 meters

KMMJ ae 1000 D Clay Center, Neb.  
 KTRB ak 250 D Modesto, Calif.  
 WHEB ak 250 D Portsmouth, N. H.  
 WSB ah 50000 N Atlanta, Ga.

C-5-18  
 P-.....  
 E-8-13:30; 15:15-18  
 C-6:55-24

750 kilocycles 399.8 meters

KGU aj 2500 N Honolulu, T. H.  
 WJR ak 10000 B Detroit, Mich.  
 XEAM z 50 ..... Nuevo Laredo, Tams.

L-6:30-22:30  
 E-6-24  
 C-.....

760 kilocycles 394.5 meters

CMX ae 1000 765 Havana, Cuba  
 KXA ae 250 (.5) Seattle, Wash.  
 WBAL ae 10000 BSy Baltimore, Md.  
 WEW ae 1000 D St. Louis, Mo.  
 WJZ ck 50000 BSy New York, N. Y.  
 XEBC ak 5000 ..... Agua Caliente, L. C.

E-12-14; 20-23  
 P-.....  
 E-21-24  
 C-8-17  
 E-8-1  
 P-.....

770 kilocycles 389.4 meters

KFAB ae 5000 CSy Lincoln, Neb.  
 WBBM ae 25000 CSy Chicago, Ill.

C-6-17:45; 20:30-21:30; 22-24  
 C-6:50-2:15

780 kilocycles 384.4 meters

CHWK ak 100 F Chilliwack, B. C.  
 KELW ae 500 2 Burbank, Calif.  
 KFDY ae 1000 D Brookings, S. D.  
 KFQD ck 250 ..... Anchorage, Alaska  
 KGHL ak 1000 N (2.5) Billings, Mont.  
 KTM ak 500 2 (1) Los Angeles, Calif.  
 WEAN ae 500 C (.25) Providence, R. I.  
 WMC aj 1000 N (2.5) Memphis, Tenn.  
 WTAR ae 500 N Norfolk, Va.  
 XEYZ z 10000 ..... Mexico City, D. F.

P-12-13:30; 18-22:30  
 P-10-13; 17-20; 4-6  
 C-12:30-14  
 L-18-24  
 M-8-23  
 P-6-10; 13-17; 20-4  
 E-7:30-1  
 C-7-24  
 E-7-24  
 C-10-23

790 kilocycles 379.5 meters

CMJK ak 150 ..... Camaguey, Cuba  
 KGO ak 7500 N San Francisco, Calif.  
 WGY ak 50000 R Schenectady, N. Y.

E-11:30-12:30; 17-23  
 P-7-24  
 E-6:45-1

800 kilocycles 374.8 meters

TIGP z 75 ..... San Jose, C. R.  
 WBAP ak 50000 Na Fort Worth, Tex.  
 WFAA ak 50000 Na Dallas, Tex.  
 WTB O ae 250 ..... Cumberland, Md.

C-.....  
 C-8:30-10:30; 12:30-15; 17:30-18:30; 22-24  
 C-6:45-8:30; 10:30-12:30; 15-17:30; 18-22  
 E-6-19:15

CUT OUT ON DOTTED LINES

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**810 kilocycles 370.2 meters**

WCCO	ae	5000	C	Minneapolis, Minn.	C-7-24
WNYC	ak	500	N	New York, N. Y.	E-10-19:30
XFC	z	350	.....	Aguascalientes, Ags.	C-.....

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**820 kilocycles 365.6 meters**

WHAS	aj	5000	C	Louisville, Ky.	C-7-24
XEP	z	500	.....	Mexico City, D. F.	C-.....
XETW	dk	500	.....	Mexico City, D. F.	C-12-24

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**830 kilocycles 361.2 meters**

CMC	ae	500	835	Havana, Cuba	E-10:30-11:30; 20-23
KOA	ak	50000	N	Denver, Colo.	M-7-24
TIVL	z	30	835	San Jose, C. R.	A-10-11; 15-16
WEEU	ak	1000	D	Reading, Pa.	E-8-17:30
WHDH	ae	1000	Dn	Boston, Mass.	E-7-sunset in Denver
WRUF	ae	5000	Dn	Gainesville, Fla.	E-8-18:45

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**840 kilocycles 356.9 meters**

CFQC	ak	1000	F	Saskatoon, Sask.	M-8-13:30; 17:30-23
CMQ	z	340	.....	Havana, Cuba	E-6:55-1
CRCT	ak	5000	F	Toronto, Ont.	E-6:45-24
VOGY	ak	400	.....	St. John's, Nfld.	L-10-11:30; 13-14:30; 18-21
XEXX	z	500	845	Mexico City, D. F.	C-10-23

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**850 kilocycles 352.7 meters**

KIEV	aj	250	D	Glendale, Calif.	P-6-16:45
WWL	ae	10000	.....	New Orleans, La.	C-8-20:30
WWPA	z	250	DP	Clarion, Pa.	E-.....

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**860 kilocycles 348.6 meters**

WABC	ae	50000	C	New York, N. Y.	E-7:30-1:30
WHB	ae	500	D	Kansas City, Mo.	C-6-17
XEMO	ak	2500	865	Tijuana, B. C.	P-.....

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**870 kilocycles 344.6 meters**

WENR	ak	50000	Na	Chicago, Ill.	C-10:15-11:45; 15:30-19
WLS	ae	50000	Na	Chicago, Ill.	C-6-10:15; 11:45-15:30; 19-20:30

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**880 kilocycles 340.7 meters**

CFJC	ak	100	F	Kamloops, B. C.	P-7:30-10:30; 12-14; 18-21
CRCO	ak	1000	F	Ottawa, Ont.	E-8-9; 12-14; 17:45-24
KFKA	ak	500	2 (1)	Greeley, Colo.	M-6-7:30; 9-14:30; 16:30-18; 21:30-24
KLX	ae	1000	.....	Oakland, Calif.	P-8-23
KPOF	ak	500	2	Denver, Colo.	M-7:30-9; 14:30-16:30; 18-20
WCOC	ae	500	(1)	Meridian, Miss.	C-7:30-14; 17-22:30
WGBI	ae	500	1	Scranton, Pa.	E-9:30-12:30; 13:30-16:30; 17:30-20
WPHR	z	500	.....	Petersburg, Va.	E-8-17; 18-21
WQAN	ae	250	1	Scranton, Pa.	E-9-9:30; 12:30-13:30; 16:30-17:30; 20-23
WSUI	ae	500	.....	Iowa City, Iowa	C-9-10; 11-12:30; 14-16; 18-22

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**890 kilocycles 336.9 meters**

CJIC	z	100	D	S. Ste. Marie, Ont.	E-8:30-9:30; 11-13:30; 16:30-18
KARK	ak	250	(.5)	Little Rock, Ark.	C-7-22
KFNF	ak	500	2 (1)	Shenandoah, Iowa	C-5:30-8; 11-16; 18-21
KUSD	ae	500	2	Vermillion, S. D.	C-16-17; 21-22
WBAA	ak	1000	D	W. Lafayette, Ind.	C-11-12; 12:30-14; 16-17
WGST	ae	250	C (1)	Atlanta, Ga.	C-7-24
WILL	ak	250	2 (1)	Urbana, Ill.	C-8-11; 17-18; 23-24
WJAR	ae	500	R	Providence, R. I.	E-8-1
WMMN	ae	250	(.5)	Fairmont, W. Va.	E-9-21:30
XEW	ak	50000	.....	Mexico City, D. F.	C-.....

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**900 kilocycles 333.1 meters**

KGA	ak	1000	N (2.5)	Spokane, Wash.	P-6-24
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KGBU	ak	500	.....	Ketchikan, Alaska	L-.....
KHJ	ak	1000	C (2.5)	Los Angeles, Calif.	P-7-1
KSEI	ck	250	(.5)	Pocatello, Idaho	M-7:3-23
WBEN	ae	1000	R	Buffalo, N. Y.	E-6:45-24
WJAX	ae	1000	N	Jacksonville, Fla.	E-7-1
WKY	ae	1000	N	Oklahoma City, Ok.	C-6:45-24
WLBL	ak	2500	D	Stevens Point, Wis.	C-8-16

910 kilocycles 329.6 meters

CJAT	ak	250	F	Trail, B. C.	P-8-22:30
CMBS	ak	150	915	Havana, Cuba	E-10-12; 15:30-18
CMHW	z	100	.....	Cienfuegos, Cuba	E-11-13; 18:30-21:30
CRGM	ak	5000	F	Montreal, Que.	E-.....
TICR	z	75	911	San Jose, C. R.	C-16:30-22

920 kilocycles 325.9 meters

HHK	ae	1000	.....	Port-au-Prince, Haiti	E-20-21
KOMO	ak	1000	N	Seattle, Wash.	P-7-24
KPRC	ae	1000	N (2.5)	Houston, Texas	C-6:30-24
KVOD	ak	500	.....	Denver, Colo.	M-8:30-10; 12:30-15; 16:30-18; 19:30-21
WAAF	ak	500	D	Chicago, Ill.	C-6-Sunset
WBOS	ae	500	D	Babson Park, Mass.	E-8:30-16:30
WPEN	ak	250	(.5)	Philadelphia, Pa.	E-7:30-22
WRAX	ak	250	D	Philadelphia, Pa.	E-7:30-22
WSPA	ae	1000	D	Spartanburg, S. C.	E-5:30-22
WWJ	ak	1000	R	Detroit, Mich.	E-7-24
XEAA	z	200	.....	Mexicali, B. C.	P-12-14; 18-20
XEKL	z	500	.....	Leon, Guan.	C-10:30-16; 17-23
XEOK	z	2500	.....	Tijuana, B. C.	P-.....

KCYS.  
970  
DIAL

930 kilocycles 322.4 meters

CFAC	ak	100	F	Calgary, Alta.	M-7:30-22:30
CFCH	ak	100	F	North Bay, Ont.	E-12-13:30; 17:30-23:30
CFLC	ae	100	.....	Prescott, Ont.	E-8-10; 12-14; 17-19:30
CHNS	ae	500	F	Halifax, N. S.	A-10:30-13:30; 18-24
CKPC	ae	100	F	Brantford, Ont.	E-7-24
CKPR	ak	50	F	Fort William, Ont.	E-.....
CMJF	z	200	.....	Camaguey, Cuba	E-.....
CMW	ae	1400	.....	Havana, Cuba	E-.....
KGBZ	ak	1000	2 (2.5)	York, Neb.	C-5-6; 7:30-9; 11-12:30; 14-15:30; 17-18:30; 20:30-22
KMA	ak	1000	2 (2.5)	Shenandoah, Iowa	C-6-7:30; 9-11; 12:30-14; 15:30-17; 18-30-20:30
KROW	ak	500	(1)	Oakland, Calif.	P-7-1
WBRC	ak	1000	C	Birmingham, Ala.	C-7-23
WDBJ	ak	1000	C	Roanoke, Va.	E-8-24

940 kilocycles 319.0 meters

CMKM	z	100	.....	Manzanillo, Cuba	E-.....
KOIN	ak	1000	C (2.5)	Portland, Ore.	P-6:30-24
VOAS	ak	100	.....	St. John's, Nfld.	L-11-12:30; 16-17:30
WAAT	ae	500	D	Jersey City, N. J.	E-6:30-18
WAVE	ak	1000	N	Louisville, Ky.	C-7-24
WCSH	ae	1000	R (2.5)	Portland, Maine	E-8-24
WDAY	ae	1000	N (2.5)	Fargo, N. D.	C-7-24
WHA	ak	2500	D	Madison, Wis.	C-8-Sunset
XEFO	ak	5000	.....	Mexico City, D. F.	C-11-15; 18-24

950 kilocycles 315.6 meters

CMCD	ah	500	955	Havana, Cuba	E-12-23:30
CMHD	dk	250	.....	Caibarien, Cuba	E-20-21
CRCS	z	100	F	Chicoutimi, Que.	E-18; 15-23
KFWB	ak	1000	(2.5)	Hollywood, Calif.	P-7-23:30
KMBC	ae	1000	C (2.5)	Kansas City, Mo.	C-6:25-24
VONF	ak	5000	.....	St. John's, Nfld.	L-12-14; 18-21
WRC	ae	500	R (1)	Washington, D. C.	E-6:30-1

960 kilocycles 312.3 meters

CKY	ak	15000	F	Winnipeg, Man.	C-8:30-14; 16-24
CMJL	z	50	.....	Camaguey, Cuba	E-.....
XEAW	ak	10000	.....	Reynosa, Tams.	C-17-1
YVIRC	ak	5000	.....	Caracas, Venez.	L-12-13:30; 18-22

970 kilocycles 309.1 meters

CMGF	ak	100	971.5	Matanzas, Cuba	E-15-17; 20-22:30
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KJR	z	5000	N	Seattle, Wash.	P-7:30-24
WCFL	ae	1500	B	Chicago, Ill.	C-7-24
WIBG	ak	100	D	Glenside, Pa.	E-6-Sunset
XES	dk	250	.....	Tampico, Tams.	C-9:30-14:30; 17-22

## 980 kilocycles 303.9 meters

KDKA	bk	50000	B	Pittsburgh, Pa.	E-7-1
XEAE	ak	200	.....	Mexicala, B. C.	P-9-24
XEU	ak	250	.....	Veracruz, Ver.	C-7-9; 10-14; 17-23

## 990 kilocycles 302.8 meters

WBZ	ak	50000	BSy	Boston, Mass.	E-7-1
WBZA	ak	1000	BSy	Springfield, Mass.	E-7-1
XEAF	z	250	.....	Nogales, Son.	M-.....
XEK	ak	100	.....	Mexico City, D. F.	C-11-16; 18-2

## 1000 kilocycles 299.8 meters

CMBZ	ak	100	1005	Havana, Cuba	E-12-18
KFVD	ak	250	Dn	Los Angeles, Calif.	P-6:30-Sunset; 22-24
WHO	ak	50000	R	Des Moines, Iowa	C-7-24

## 1010 kilocycles 296.9 meters

CHML	aei	50	F	Hamilton, Ont.	E-8-13:30; 16:30-23
CHWC	ak	500	3F	Regina, Sask.	M-7-9; 10-11; 12-13; 15:30-23
CKCD	ak	100	.....	Vancouver, B. C.	P-7:30-23:30
CKCK	ak	500	3F	Regina, Sask.	M-9-10; 11-12; 13-15:30; 17:30-23
CKCO	z	100	.....	Ottawa, Ont.	E-6-23
CKIC	ak	50	.....	Wolfville, N. S.	A-12-13; 18-19
CKWX	ak	100	.....	Vancouver, B. C.	P-7-20:30; 21-24
CMJO	ak	50	.....	Ciego de Avila, Cuba	E-9-13; 18-22
KGGF	ak	1000	2	Coffeyville, Kans.	C-7-14; 17-22:30
KOW	ae	1000	.....	San Jose, Calif.	P-6:30-22
TIGA	z	30	1014	Cartago, C. R.	C-.....
WHN	ae	1000	.....	New York, N. Y.	E-7:30-1
WNAD	ae	500	2	Norman, Okla.	C-Silent
WNOX	ak	1000	C (2)	Knoxville, Tenn.	C-6:45-24

## 1020 kilocycles 293.9 meters

KYW	ak	10000	NY	Chicago, Ill.	C-8-1
XEJ	ak	250	.....	Juarez, Chih.	C-10-14; 17-23:30

## 1030 kilocycles 291.1 meters

CFCN	ak	10000	F	Calgary, Alta.	M-.....
CKLW	ae	5000	C	Windsor, Ont.	E-6:45-1
CMHI	ak	150	1037	Santa Clara, Cuba	E-11-12; 20-21
CMKC	z	150	1034	Santiago, Cuba	E-.....
XEB	ak	10000	.....	Mexico City, D. F.	C-9-24

## 1040 kilocycles 288.3 meters

CMBC	ae	150	.....	Havana, Cuba	E-.....
CMGH	ak	15	.....	Matanzas, Cuba	E-14-15; 17-18; 19:30-20:30
KRLD	ae	10000	C	Dallas, Texas	C-6:30-24
KWJJ	ak	500	.....	Portland, Ore.	P-6-Sunset; 21-3:15
WKAR	ak	1000	D	East Lansing, Mich.	E-12-12:30; 14-15
WTIC	ak	50000	R	Hartford, Conn.	E-7-24

## 1050 kilocycles 285.5 meters

CMJG	z	50	.....	Camaguey, Cuba	E-.....
CRCK	z	1000	F	Quebec, Que.	E-.....
KFBI	ak	5000	Dn	Abilene, Kans.	C-5-18:45
KNX	ak	50000	.....	Hollywood, Calif.	P-7-23:30

## 1060 kilocycles 282.8 meters

CMCB	ak	150	.....	Havana, Cuba	E-13-16; 20-24
KTHS	ae	10000	N	Hot Springs, Ark.	C-7-24
WBAL	ae	10000	B	Baltimore, Md.	E-7-21
WJAG	ak	1000	D	Norfolk, Neb.	C-7-Sunset
XEA	ak	125	.....	Guadalajara, Jal.	C-8:30-9; 18-23

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**1070 kilocycles 280.2 meters**

KJBS ak 100 Dn	San Francisco, Calif.	P-0-Sunset
WCAZ dk 100 D	Carthage, Ill.	C-9:30-15:30
WDZ ak 100 D	Tuscola, Ill.	C-7:30-15:30
WTAM ck 5000 R	Cleveland, Ohio	E-6:30-1

**1080 kilocycles 277.6 meters**

WBT ae 5000 C	Charlotte, N. C.	E-7:30-24
WCBD ak 5000 1Dny	Zion, Ill.	C-7:30-10:30; 13:30-14:30; 15:30-24
WMBI ae 5000 1Dn	Chicago, Ill.	C-7:30; 10:30-13:30; 14:30-15:30; 0-1
XEMA z 50 .....	Tampico, Tams.	C-.....

**1090 kilocycles 275.1 meters**

CMGI z 30 1094	Colon, Cuba	E-.....
KMOX ak 5000 C	St. Louis, Mo.	C-5:30-24
WESG ak 1000 .....	Elmira, N. Y.	E-7:30-18:15

**1100 kilocycles 272.6 meters**

CMHA z 50 1103	Sagua la Grande, C.	E-.....
COX z 200 .....	Havana, Cuba	E-.....
CRCV ak 1000 F	Vancouver, B. C.	P-11-14; 17:30-23
KGDM ak 250 D	Stockton, Calif.	P-6-Sunset; 0-6
KWKH ae 10000 C	Shreveport, La.	C-.....
TRCA ak 500 .....	San Jose, C. R.	C-.....
WLWL ae 5000 1	New York, N. Y.	E-14-15; 18-20
WPG ak 5000 1C	Atlantic City, N. J.	E-9-18; 20-1
XEFG ak 250 1105	Mexico City, D. F.	C-.....

**1110 kilocycles 270.1 meters**

KSOO ak 1000 Dn (2.5)	Stoux Falls, S. D.	C-6:30-18:30
WRVA ae 5000 N	Richmond, Va.	E-7-24

**1120 kilocycles 267.7 meters**

CHLP z 100 .....	Montreal, Que.	E-9-14; 17-24
CHSJ ae 100 F	St. John, N. B.	A-.....
CKOC ae 500 F (1)	Hamilton, Ont.	E-7:45-14:30; 16-24
CMHJ ae 40 1125	Cienfuegos, Cuba	E-11-13; 17-21
KFIO ak 100 D	Spokane, Wash.	P-6-17
KFSG ag 500 a	Los Angeles, Calif.	P-6:30-7:15; 19:30-24
KRKD ae 500 a	Los Angeles, Calif.	P-7:45-24
KRSC ck 100 D	Seattle, Wash.	P-6-Sunset
WDEL ak 250 (.5)	Wilmington, Del.	E-9-22
WISN ak 250 (1)	Milwaukee, Wis.	C-.....
WTAW ae 500 .....	College Station, Tex.	C-11:50-12:30; 20-21
XENT ck 50000 .....	Nuevo Laredo, Tama.	C-7:30-24

**1130 kilocycles 265.3 meters**

KSL ae 5000 C	Salt Lake City, Utah	M-6:30-24
WJJD ak 20000 Dn	Chicago, Ill.	C-6-18:45
WOV ag 1000 D	New York, N. Y.	E-8-14; 15-18

**1140 kilocycles 263.0 meters**

KVOO ak 25000 1N	Tulsa, Okla.	C-6:30-17:45; 21-24
WAPI ae 5000 1N	Birmingham, Ala.	C-6-21

**1150 kilocycles 260.7 meters**

GMJH ak 50 .....	Ciego de Avila, Cuba	E-8-8:30; 10-15; 17:30-22:30
COK z 250 .....	Havana, Cuba	E-.....
WHAM ae 50000 B	Rochester, N. Y.	E-8-1
XEH ak 250 .....	Monterrey, N. L.	C-9-20
XEWZ z 100 .....	Mexico City, D. F.	C-.....

**1160 kilocycles 258.5 meters**

WOWO ae 10000 1C	Fort Wayne, Ind.	C-7-18:45; 19:30-23
WVVA ak 5000 1C	Wheeling, W. Va.	E-6:30-20:30
XED ck 500 .....	Guadalajara, Jal.	C-8-9; 12-15:30; 19-23

KCYS.  
1160  
DIAL

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**1170 kilocycles**

CMJE z 50 .....  
COA z 500 1175  
WCAU ae 50000 C

**256.3 meters**

Camaguey, Cuba E-.....  
Havana, Cuba E-.....  
Philadelphia, Pa. E-8-1

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**1180 kilocycles**

KEX ak 5000 2N  
KOB ae 10000 2  
VE9EK ak 10 1185  
WDGY ak 1000 D (2.5)  
WINS ae 1000 .....  
WMAZ ak 1000 .....  
XEFA z 500 .....

**254.1 meters**

Portland, Ore. P-6:30-17:30; 20-24  
Albuquerque, N. M. M-11-21  
Montmagny, Que. E-Silent  
Minneapolis, Minn. C-6:30-20:15  
New York, N. Y. E-7-19:30  
Macon, Ga. E-7-19  
Mexico City, D. F. C-.....

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**1190 kilocycles**

HJ z 15 1195  
WATR ak 100 D  
WOAI ak 50000 N  
WSAZ ak 1000 .....

**252.0 meters**

Santo Domingo, D. R. E-.....  
Waterbury, Conn. E-9-17:15  
San Antonio, Texas. C-6:55-13:45; 15-23:30  
Huntington, W. Va. E-7-18:45

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**1200 kilocycles**

CHAB ak 100 F  
CKTB ak 100 F  
CMCJ ak 400 .....  
KADA z 100 PD  
KBTM ak 100 D  
KFJB ak 100 (.25)  
KFXD ae 100 .....  
KFXJ ak 100 .....  
KGDE ak 100 (.25)  
KGEK ak 100 .....  
KGFJ ae 100 .....  
KGHI ak 100 (.25)  
KGVO 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 .....  
WGLO 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 ak 100 (.25)  
WMPC ak 100 .....  
WNBO ae 100 2  
WRBL ak 100 .....  
WWAE ae 100 8  
YV3RC ak 1000 .....  
10-AK ak 15 .....  
10-BP ak 25 .....  
10-BU ak 50 .....

**249.9 meters**

Moose Jaw, Sask. M-7:30-22  
St. Catharines, Ont. E-8-13:30; 16-23:30  
Havana, Cuba E-.....  
Ada, Okla. C-.....  
Jonesboro, Ark. C-6-17  
Marshalltown, Iowa C-6-9; 12-15; 18-21  
Nampa, Idaho M-7-21  
Grand Junction, Col. M-9-21  
Fergus Falls, Minn. C-7-21  
Sterling, Colo. M-11:30-13:30  
Los Angeles, Calif. P-24 hours  
Little Rock, Ark. C-8-13; 15-22  
Missoula, Mont. M-8-22  
Monroe, La. C-.....  
Marshfield, Ore. P-8-19  
Lowell, Ariz. M-Sunrise-Sunset  
Bellingham, Wash P-7:30-22:30  
Stockton, Calif. P-7-24  
Bangor, Maine E-9-14; 18-22  
Ponca City, Okla. C-6:30-21:45  
Huntsville, Ala. C-.....  
New Orleans, La. C-12-17 :20-23  
Rapid City, S. D. M-12:30-13:30  
Burlington, Vt. E-12-13; 17-19  
Janesville, Wis. C-7-20  
South Bend, Ind. C-6:30-24  
Cincinnati, Ohio E-7-23  
Canton, Ohio E-7-9; 12-15; 18-21  
Green Bay, Wis. C-7:30-23  
Utica, N. Y. E-8-24  
St. Louis, Mo. C-7-23  
Bloomington, Ill. C-9-12:30; 15-19:30  
Decatur, Ill. C-6:30-9; 12:30-15; 19:30-22  
New Orleans, La. C-8-12; 17-20  
Harrisburg, Pa. E-8-11; 15-24  
Lancaster, Pa. E-11-15; 18-20  
Lynchburg, Va. E-7-14; 17-22  
Lapeer, Mich. E-10-14; 15:30-18; 19-22:30  
Washington, Pa. E-9-12; 15-18; 21-24  
Columbus, Ga. C-7-21  
Hammond, Ind. C-7-8:30; 11-13; 16-24  
Caracas, Venez. L-11-14; 17-22:30  
Stratford, Ont. E-12-13; 17:30-19  
Wingham, Ont. E-12-13  
Canora, Sask. C-.....

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**1210 kilocycles**

CHNC ak 100 F  
CKBI ak 100 F  
CKCH ak 100 F  
CKMC ak 50 .....  
CMJI ak 150 .....

**247.8 meters**

New Carlisle, Que. A-12:30-13:30; 18-24  
Prince Albert, Sask. M-.....  
Hull, Que. E-11:30-13:15; 17:30-23  
Cobalt, Ont. E-.....  
Ciego de Avila, Cuba E-.....

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KASA	ck	100	.....	Elk City, Okla.	C-6-8; 9-13:30; 14:30-20
KDLR	ak	100	.....	Devils Lake, N. D.	C-8-14:15; 18-20
KFJJ	ak	100	.....	Klamath Falls, Ore.	P-8:30-21
KFOR	ak	100	(.25)C	Lincoln, Neb.	C-7-22:30
KFPW	ak	100	.....	Fort Smith, Ark.	C-6-14; 17:30-21:30
KFVS	ae	100	6 (.25)	Cape Girardeau, Mo.	C-9-12; 16-19:30; 21-24
KFXM	ak	100	9	San Bernardino, Cal.	P-6-24
KCY	ak	100	.....	Olympia, Wash.	P-7-23
KIEM	ak	100	.....	Eureka, Calif.	P-7:30-22
KPPC	ak	50	9	Pasadena, Calif.	P-Silent
KWEA	z	100	.....	Shreveport, La.	C-.....
KWFV	z	100	.....	Hilo, Hawaii	L-.....
KWTN	ak	100	.....	Watertown, S. D.	C-7-21
WALR	ak	100	Y	Zanesville, Ohio	E-.....
WBAX	ae	100	1	Wilkes Barre, Pa.	E-7-12
WBBL	ak	100	7S	Richmond, Va.	E-Silent
WBRB	ak	100	3	Red Bank, N. J.	E-9-11; 16-24
WCBS	ak	100	2	Springfield, Ill.	C-11:15-15; 18:45-21:30
WCOL	ak	100	2	Columbus, Ohio	E-8-23
WCRW	ae	100	4	Chicago, Ill.	C-11-14; 17-19
WEBQ	ae	100	6 (.25)	Harrisburg, Ill.	C-6-9; 12-16; 20:30-24
WEDC	ae	100	4	Chicago, Ill.	C-8:30-10; 15:30-17; 19-20; 22-23; 0-2
WFAS	ak	100	3	White Plains, N. Y.	E-Silent
WGBB	ae	100	3	Freeport, N. Y.	E-Silent
WGCM	ae	100	(.25)	Gulfport, Miss.	C-9-13; 19-21
WGNV	ak	100	3	Chester, N. Y.	E-7:30-9; 11-13
WHBF	ak	100	.....	Rock Island, Ill.	C-7:30-23
WHBU	ak	100	.....	Anderson, Ind.	C-7-23
WIBU	ak	100	.....	Foyette, Wis.	C-7-19
WJBV	ak	100	.....	Gadsden, Ala.	C-9-21
WJEJ	ah	100	D	Hagerstown, Md.	E-Sunset
WJIM	z	100	P	Lansing, Mich.	E-.....
WJW	ak	100	Y	Akron, Ohio	E-9-23:30
WKFI	ak	100	Y	Greenwood, Miss.	C-7-19
WKOK	ak	100	1P	Sunbury, Pa.	E-12-24
WMBC	ak	100	7C	Richmond, Va.	E-7-24
WMFG	z	100	P	Hibbing, Minn.	C-.....
WOCL	ak	50	.....	Jamestown, N. Y.	E-10:30-22:30
WOMT	ae	100	.....	Manitowoc, Wis.	C-7-21
WODX	ae	100	.....	Thomasville, Ga.	E-8-21
WSBC	ae	100	4	Chicago, Ill.	C-6-8:30; 10-11; 14-15:30; 20-22; 23-24
WSIX	ak	100	.....	Springfield, Tenn.	C-6-14:30; 17-20:30
WSOC	ak	100	N (.25)	Charlotte, N. C.	E-7-24
WTAJ	ak	100	2	Springfield, Ill.	C-.....
XEE	z	50	.....	Durango, Dgo.	C-.....
XEFJ	ak	100	.....	Monterrey, N. L.	C-11-14; 18-22
XEFV	ak	100	.....	Juarez, Chih.	M-9-15; 17-22
XEMZ	z	30	.....	Tijuana, B. C.	P-.....
XETH	ak	100	.....	Puebla, Pue.	C-8:30-11; 13-15; 19-24

KCYS.  
1240  
DIAL

## 1220 kilocycles 245.8 meters

CMHK	z	50	1225	Cruces, Cuba	E-10-11:30
KFKU	ae	1000	a	Lawrence, Kas.	C-14:30-15; 18-18:30
KTW	ak	1000	S2	Seattle, Wash.	P-Silent
KWSC	ae	1000	2 (2)	Pullman, Wash.	P-6:45-8; 10:30-21:30
WCAD	ak	500	D	Canton, N. Y.	E-12:30-13:30; 15-16
WCAE	ak	1000	R	Pittsburgh, Pa.	E-6:45-1
WDAE	ae	1000	C (2.5)	Tampa, Fla.	E-8-24
WREN	ak	1000	Ba	Lawrence, Kas.	C-7-24

## 1230 kilocycles 243.8 meters

CJOC	ak	100	F	Lethbridge, Alta.	M-8-14; 16:30-22
CMCA	z	150	2	Havana, Cuba	E-12-14; 17-18
KGGM	ak	250	(.5)	Albuquerque, N. M.	M-6-12; 16-20
KYA	ae	1000	N	San Francisco, Calif.	P-7-24
WFBM	ae	1000	1C	Indianapolis, Ind.	C-6:30-24
WNAC	ak	1000	C (2.5)	Boston, Mass.	E-6:30-1

## 1240 kilocycles 241.8 meters

CJCB	ak	1000	F	Sydney, N. S.	A-10-13:30; 18-23:30
CMHB	z	30	1245	San Spiritus, Cuba	E-.....
KGCU	ak	250	1	Mandan, N. D.	M-12-17; 18:45-21
KLPM	ak	250	1	Minot, N. D.	C-7-13; 18-19:45
KTAT	ak	1000	C	Fort Worth, Texas	C-7-24
KTFI	ae	1000	(1.5)	Twin Falls, Idaho	M-5:45-0:15

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WKAQ	ae	1000	.....	San Juan, P. R.	E-11:15-12:45; 17:15-21
WXYZ	ak	1000	.....	Detroit, Mich.	E-7-24
XEAI	z	100	.....	Mexico City, D. F.	C-.....
<b>1250 kilocycles</b>				<b>239.9 meters</b>	
CMCU	ak	150	1255	Havana, Cuba	E-12-18
KFOX	ae	1000	.....	Long Beach, Calif.	P-6-24
WCAL	ah	1000	2 (2.5)	Northfield, Minn.	C-9:45-10:15; 20-22
WDSU	ak	1000	C	New Orleans, La.	C-7-24
WHBI	ak	1000	1 (2.5)	Newark, N. J.	E-14-19; 20-22
WLB	ak	1000	2	Minneapolis, Minn.	C-14-19
WNEW	ae	1000	1 (2.5)	Newark, N. J.	E-7-4
WTCN	ak	1000	2	Minneapolis, Minn.	C-6:15-9:45; 22:35-24
<b>1260 kilocycles</b>				<b>238.0 meters</b>	
CFRN	ak	100	.....	Edmonton, Alta.	M-7:30-13:30; 15-16; 17:30-20
KOIL	ak	1000	B (2.5)	Council Bluffs, Iowa	C-6-1
KPAC	z	500	D	Port Arthur, Texas	C-.....
KRGV	ak	500	.....	Weslaco, Texas	C-7-21
KUOA	ak	1000	D	Fayetteville, Ark.	C-7:13; 16-19
KVOA	ak	500	C	Tucson, Ariz.	M-6-9; 12-15; 18-21
WLBW	ae	1000	C	Erie, Pa.	E-7-1
WNBX	ak	1000	D	Springfield, Vt.	E-7:15-Sunset
WTOC	ae	1000	C	Savannah, Ga.	E-7-1
<b>1270 kilocycles</b>				<b>236.1 meters</b>	
CMCP	z	150	.....	Havana, Cuba	E-.....
HIX	ak	1000	.....	Santo Domingo, D.R.	E-11:40-20:10
KGCA	ak	100	2D	Decorah, Iowa	C-8:30-9:45; 10:45-11:30; 12:30-14:30
KOL	ae	1000	C (2.5)	Seattle, Wash.	P-6:45-24
KVOR	ae	1000	C	Colorado Spgs., Colo.	M-7-23
KWLC	ak	100	2D	Decorah, Iowa	C-7:30-8:30; 9:45-10:45; 11:30-12:30; 14:30-15:30
WASH	ak	500	a	Grand Rapids, Mich.	E-7-24
WFBR	ae	500	R	Baltimore, Md.	E-7-24
WJDX	ae	1000	N (2.5)	Jackson, Miss.	C-7-23
WOOD	ak	500	a	Grand Rapids, Mich.	E-7-24
XFB	ak	1000	.....	Jalapa, Ver.	C-8-9; 13-14:30; 20-23:30
<b>1280 kilocycles</b>				<b>234.2 meters</b>	
CMCO	z	150	.....	Havana, Cuba	E-.....
KFBF	ae	1000	(2.5)	Great Falls, Mont.	M-8-22
WCAM	ae	500	1	Camden, N. J.	E-11-12; 14-19; 21-24
WCAP	ae	500	1	Asbury Park, N. J.	E-8:30-11; 12-13; 20-21
WDOD	ae	1000	C (2.5)	Chattanooga, Tenn.	C-7-23:30
WIBA	ae	500	N (1)	Madison, Wis.	C-7:30-24
WORC	ak	500	C	Worcester, Mass.	E-8-24
WRR	ak	500	.....	Dallas, Texas	C-7-23
WTNJ	ak	500	1	Trenton, N. J.	E-8-8:30; 13-14; 17-20
<b>1290 kilocycles</b>				<b>232.4 meters</b>	
KDYL	ak	1000	N	Salt Lake City, Utah	M-6:30-1
KLCN	z	100	D	Blytheville, Ark.	C-10:30-16:30
WEBC	ae	1000	N (2.5)	Superior, Wis.	C-7-24
WJAS	ak	1000	C (2.5)	Pittsburgh, Pa.	E-7:30-0:30
WNBZ	z	50	D	Saranac Lake, N. Y.	E-.....
WNEL	z	500	P	San Juan, P. R.	A-.....
<b>1300 kilocycles</b>				<b>230.6 meters</b>	
CMKJ	z	20	.....	Guantanamo, Cuba	E-.....
HIZ	z	10	.....	Santo Domingo, D.R.	E-.....
KALE	ak	500	3C	Portland, Ore.	P-7-10:30; 14:30-17; 18-19
KFAC	ak	1000	.....	Los Angeles, Calif.	P-7-24
KFH	ak	1000	C2	Wichita, Kans.	C-7-24
KFJR	ag	500	3	Portland, Ore.	P-10:30-14:30; 17-18
VOAC	z	40	.....	St. John's, Nfld.	L-.....
WBBR	ae	1000	1	Brooklyn, N. Y.	E-6:30-7; 10-12; 18-20
WEVD	ak	1000	1	New York, N. Y.	E-7-9; 15-18; 20-21; 22-23; 0-1
WFAB	ae	1000	1	New York, N. Y.	E-9-10; 12-15; 21-22
WFBC	ak	1000	(1)	Greenville, S. C.	E-7:30-14:30; 17:30-22:30
WHAZ	ae	500	1	Troy, N. Y.	E-Silent
WIOD	ae	1000	N	Miami, Fla.	E-8-24
<b>1310 kilocycles</b>				<b>228.9 meters</b>	
CHCK	ak	50	.....	Charlottetown, P.E.I.	A-12-13:30; 17-21

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CJKL	z	100	.....	Kirkland Lake, Ont.	E—.....
CJLS	z	100	.....	Yarmouth, N. S.	A—.....
CKGV	ak	50	.....	Quebec, Que.	E—12-14; 18:30-19:30
CMCY	ak	500	1316	Havana, Cuba	E—.....
KCRJ	ak	100	D	Jerome, Ariz.	M—7:30-9:30; 12-13; 16:30-18
KFBK	ak	100	C	Sacramento, Calif.	P—8-24
KFPL	dkh	100	.....	Dublin, Texas	C—6-15; 18-21
KFPM	ae	15	.....	Greenville, Texas	C—7:45-9; 12:30-14:45; 18-21
KFXR	ak	100	(.25)	Oklahoma City, Ok.	C—7:30-22
KFYO	ak	100	(.25)	Lubbock, Texas	C—7-21
KGBX	ak	100	.....	Springfield, Mo.	C—17:45-22
KGCX	ak	100	(.25)	Wolf Point, Mont.	M—7:30-9; 11:30-15; 18-19
KGEZ	aj	100	.....	Kalispell, Mont.	M—8-21
KGFW	ak	100	.....	Kearney, Neb.	C—7-13:30; 15:30-21
KIT	ak	100	.....	Yakima, Wash.	P—7-22
KMED	ck	100	(.25)	Medford, Ore.	P—8-20
KRMD	ak	100	.....	Shreveport, La.	C—7-21
KTSM	ak	100	.....	El Paso, Texas	M—6:30-13; 15-22
KXRO	ak	100	.....	Aberdeen, Wash.	P—7:30-22
WAML	ak	100	.....	Laurel, Miss.	C—7-10; 11-14; 16-21:30
WBEO	ae	100	.....	Marquette, Mich.	C—9:30-13:15; 17-19
WBOW	ak	100	.....	Terre Haute, Ind.	C—7-23
WBRE	ak	100	.....	Wilkes Barre, Pa.	E—8-21:45
WCLS	ae	100	.....	Jollet, Ill.	C—Silent
WDAH	ak	100	S	El Paso, Texas	M—Silent
WEER	ae	100	(.25)	Buffalo, N. Y.	E—7-24
WEXL	ak	50	3	Royal Oak, Mich.	E—8-4
WFBG	ak	100	3	Altoona, Pa.	E—10:30-16:30; 19:15-22
WFDF	am	100	.....	Flint, Mich.	E—7-24
WGH	ae	100	.....	Newport News, Va.	E—7-13; 16:30-23
WHAT	ak	100	4	Philadelphia, Pa.	E—9-11:30; 13-16; 21-24
WJAC	ae	100	3	Johnstown, Pa.	E—9-10:30; 16:30-18:15; 21:15-22:15
WIBC	ak	50	6 (.1)	Muncie, Ind.	C—7-22
WLNH	ak	100	.....	Laconia, N. H.	E—.....
WMBO	ak	100	.....	Auburn, N. Y.	E—9-21
WMFF	z	100	PD	Plattsburg, N. Y.	E—.....
WNBH	ae	100	(.25)	New Bedford, Mass.	E—7:45-23:20
WOL	ae	100	(.25)	Washington, D. C.	E—7-24
WRAW	ak	100	.....	Reading, Pa.	E—7-13; 16-22
WROL	ak	100	.....	Knoxville, Tenn.	C—7-24
WSAJ	ae	100	.....	Grove City, Pa.	E—Silent
WSGN	ak	100	(.25)	Birmingham, Ala.	C—6-22
WSJS	ak	100	C	Winston-Salem, N.C.	E—7:45-24
WTLS	ah	100	4	Philadelphia, Pa.	E—7-9; 11:30-13; 16-21
WTJS	ak	100	(.25)	Jackson, Tenn.	C—7-13:45; 16-22
WTRC	ak	50	6 (.1)	Elkhart, Ind.	C—8-19:30
XECW	z	10	.....	Mexico City, D. F.	C—.....
XEFC	ak	100	.....	Merida, Yuc.	C—11-12
XEFW	ak	250	.....	Tampico, Tams.	C—9-11; 12-14:30; 17-21
XETB	z	125	.....	Torreón, Coah.	C—.....
XEX	ak	125	.....	Monterrey, N. L.	C—8-21

**1320 kilocycles 227.1 meters**

CMCK	z	100	P	Havana, Cuba	E—.....
KGHF	ak	500	.....	Pueblo, Colo.	M—7-22
KGMB	ak	250	C	Honolulu, T. H.	L—6-22:30
KID	ae	250	(.5)	Idaho Falls, Idaho	M—6-23
KSO	ak	500	B (1)	Des Moines, Iowa	C—5:30-1
WADC	ae	1000	C (2.5)	Akron, Ohio	E—8-24
WORK	ak	1000	.....	York, Pa.	E—8-17:30
WSMB	ak	500	N	New Orleans, La.	C—7-24

**1330 kilocycles 225.4 meters**

KGB	ag	1000	C (2.5)	San Diego, Calif.	P—7-1
KMO	ak	250	.....	Tacoma, Wash.	P—6:45-23
KSCJ	aj	1000	1C (2.5)	Sioux City, Iowa	C—7:30-23
KTRH	z	500	C (2.5)	Houston, Texas	C—6:30-24
WDRG	ae	1000	C	Hartford, Conn.	E—8-24
WSAI	ak	1000	R (2.5)	Cincinnati, Ohio	E—7-24
WTAQ	ae	1000	1	Eau Claire, Wis.	C—7-18:45

**1340 kilocycles 223.7 meters**

KFPY	ak	1000	C	Spokane, Wash.	P—7-24
EGDY	ak	250	D	Huron, S. D.	C—.....
KGNO	ak	250	.....	Dodge City, Kans.	C—7-20
WGOA	ak	500	.....	Pensacola, Fla.	C—9-22

**KCYS.**  
**1340**  
**DIAL**

**CUT OUT ON**  
**DOTTED LINES**

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WFEA	ae	500	C	Manchester, N. H.	E-9-23
WSPD	ae	1000	C (2.5)	Toledo, Ohio	E-7-1
XFD	z	250	.....	Orizaba, Ver.	C-.....

1350 kilocycles 222.1 meters

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CMBD	z	150	.....	Havana, Cuba	E-18-23
KIDO	ak	1000	(2.5)	Boise, Idaho	M-7:30-22
KWK	ae	1000	B (2.5)	St. Louis, Mo.	C-6:30-1
WAWZ	ae	250	1	Zarephath, N. J.	E-6-9; 17-18:30
WBNX	ae	250	1	New York, N. Y.	E-6-7:30; 9-13

1360 kilocycles 220.4 meters

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CMJP	ak	75	.....	Moron, Cuba	E-10-12; 20-22
CMKF	z	30	1363	Holquin, Cuba	E-.....
KGER	ak	1000	.....	Long Beach, Calif.	P-7-23
KGIR	ak	1000	N	Butte, Mont.	M-8-23:15
WCSC	ae	500	(1)	Charleston, S. C.	E-8-15:30; 18-23
WFBL	ak	1000	C (2.5)	Syracuse, N. Y.	E-7-1
WGES	ae	500	.....	Chicago, Ill.	C-7-12; 17-20; 23-1
WQBC	ak	500	(1)	Vicksburg, Miss.	C-.....
WSBT	ak	500	.....	South Bend, Ind.	C-6:30-24

1370 kilocycles 218.8 meters

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CKCW	z	100	.....	Moncton, N. B.	A-.....
CMBG	z	225	1375	Havana, Cuba	E-.....
KMGE	z	30	1375	Cardenas, Cuba	E-.....
KCRC	ak	100	2 (.25)	Enid, Okla.	C-7-9; 11-14; 17-19:45
KERN	ak	100	.....	Bakersfield, Calif.	P-7-24
KFGO	ak	100	.....	Boone, Iowa	C-.....
KFJM	ak	100	.....	Grand Forks, N. D.	C-8-20
KFJZ	ae	100	.....	Fort Worth, Texas	C-7-23
KGAR	ae	100	(.25)	Tucson, Ariz.	M-7-13; 16-22
KGFG	bk	100	2	Oklahoma City, Ok.	C-9-11; 14-19; 19:45-24
KGFL	ak	100	4	Roswell, N. M.	M-6-9:30; 14-19:30
KGKL	ak	100	(.25)	San Angelo, Texas	C-8-21:30
KICA	ak	100	4	Clovis, N. M.	M-9:30-14; 19:30-21:30
KLUF	z	100	(.25)	Galveston, Texas	C-.....
KMAC	ak	100	5	San Antonio, Texas	C-7-8:30; 10-11; 12-13:30; 16-18; 19-20; 22-0:30
KONO	ak	100	5	San Antonio, Texas	C-6-7; 8:30-10; 11-12; 13:30-16; 18-19; 20-22
KRE	ak	100	.....	Berkeley, Calif.	P-6-24
KRKO	ak	50	.....	Everett, Wash.	P-7:30-12; 16:30-20
KSLM	z	100	.....	Salem, Ore.	P-.....
KUJ	ak	100	.....	Walla Walla, Wash.	P-6:30-22
KVL	ak	100	.....	Seattle, Wash.	P-6-9; 12-15; 18-21
KWKC	z	100	.....	Kansas City, Mo.	C-.....
KWYO	z	100	Y	Sheridan, Wyo.	M-7-22:30
WABY	ak	100	Y	Hudson Falls, N. Y.	E-7:30-1
WAGF	ak	100	D	Dothan, Ala.	C-8-17:15
WBTM	ak	100	.....	Danville, Va.	E-7-14; 17-22
WCBM	ae	100	(.25)	Baltimore, Md.	E-.....
WDAS	ae	100	(.25)	Philadelphia, Pa.	E-9-23
WGL	ak	100	C	Fort Wayne, Ind.	C-8-13; 16:45-24
WHBD	ak	100	.....	Mount Orab, Ohio	E-8-11:30; 12-21
WHBQ	ak	100	.....	Memphis, Tenn.	C-7:55-14; 16-22:30
WHDF	ak	100	(.25)	Calumet, Mich.	E-7-9; 11:30-13:30; 17:30-20:30
WIBM	ak	100	.....	Jackson, Mich.	E-7-24
WJTL	ae	100	.....	Atlanta, Ga.	E-.....
WLLH	ak	100	(.25)	Lowell, Mass.	E-12-15; 18-21
WMBR	ak	100	C	Jacksonville, Fla.	E-7-24
WMFD	z	100	DP	Wilmington, N. C.	E-.....
WOC	z	100	P	Davenport, Iowa	C-.....
WPFB	ak	100	.....	Hattiesburg, Miss.	C-7:30-9:30; 11-13; 18-20
WQDM	ae	100	D	St. Albans, Vt.	E-.....
WRAK	ak	100	.....	Williamsport, Pa.	E-7:30-20
WRDO	ae	100	.....	Augusta, Maine	E-7:30-13:30; 15-21
WRJN	ak	100	.....	Racine, Wis.	C-8:50-14:30; 16-22:30
WSVS	ak	50	D	Buffalo, N. Y.	E-8:30-10; 14-15
XEFE	z	100	.....	Nuevo Laredo, Tams.	C-.....
XEFZ	ae	100	.....	Mexico City, D. F.	C-.....
XEI	ak	125	.....	Morelia, Mch.	C-14-15:30; 21-22
XEZZ	z	100	.....	San Luis Potosi, SLP	C-9:30-15; 17-22
....	z	100	DP	Longview, Texas	C-.....

1380 kilocycles 217.3 meters

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CMJC	z	150	1382	Camaguey, Cuba	E-.....
KOH	ak	500	C	Reno, Nev.	P-8-24

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KOY	ak	500	2C	Pittsburgh, Pa.	E-7-24
WALA	ae	50	0	Mobile, Ala.	C-8-23
WKBH	ae	1000	.....	LaCrosse Wis.	C-7:30-14; 17-22
WMFE	z	250	FD	New Britain, Conn.	E-.....
WSMK	ak	200	C	Dayton, Ohio	E-7:20; 22-24

1390 kilocycles 215.7 meters

CJRC	ck	100	.....	Winnipeg, Man.	C-.....
HIH	ak	15	.....	1395 San Fed. de Macoris, DR	E-.....
KLRA	ae	1000	C (2.5)	Little Rock, Ark.	C-6:30-23
KOY	ae	500	(1)	Phoenix, Ariz.	M-.....
WHK	ae	1000	C (2.5)	Cleveland, Ohio	E-7:30-24

1400 kilocycles 214.2 meters

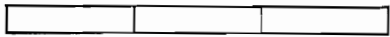
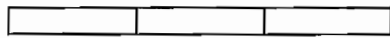
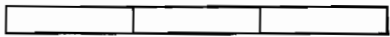
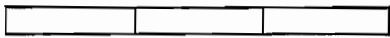
CMCR	z	150	.....	Havana, Cuba	E-12-13; 16-18; 20-21
KLO	ae	500	C	Ogden, Utah	M-7-24
KTUL	ak	250	(.5) C	Tulsa, Okla.	C-6:30-24
TGX	ak	150	.....	Guatemala City, Gt.	C-.....
WARD	ak	500	2	Brooklyn, N. Y.	E-11:15-13:30; 18-19:30
WBBC	ae	500	2 (1)	Brooklyn, N. Y.	E-16-18; 22-1
WKBF	ak	500	N (1)	Indianapolis, Ind.	C-6:30-24
WLTH	ak	500	2	Brooklyn, N. Y.	E-11:30-13:30; 18-19:30
WVFW	ak	500	2	Brooklyn, N. Y.	E-7-11:15; 19:30-21

1410 kilocycles 212.6 meters

CKFC	ak	50	5	Vancouver, B. C.	P-15-16:30
CKMO	ak	100	5	Vancouver, B. C.	P-.....
KGRS	ak	1000	1	Amarillo, Texas	C-6-8; 10-12:30; 15-16:30; 18-19:30; 21-22
WAAB	ak	500	C	Boston, Mass.	E-8-23
WBCM	ae	500	.....	Bay City, Mich.	E-8-24
WDAG	ae	1000	1 (2.5)	Amarillo, Texas	C-8-10; 12:30-14:15; 19:30-21; 22-23
WHBL	ae	500	4	Sheboygan, Wis.	C-6-10; 13-16:30; 18-19:30
WHIS	ak	250	2	Bluefield, W. Va.	E-7-9; 12-15; 18-20
WRBX	ae	250	2 (.5)	Roanoke, Va.	E-9-12; 15-18; 20-23
WROK	ak	500	4	Rockford, Ill.	C-10-13; 16:30-18; 19:30-22:30
WSFA	ak	500	C	Montgomery, Ala.	C-6:30-22:30

1420 kilocycles 211.1 meters

CKGC	ak	100	.....	Timmins, Ont.	E-12-13:30; 17-19:30
CKNC	ak	100	F	Toronto, Ont.	E-8-23:15
CMBX	ak	150	1425	Havana, Cuba	E-.....
KABC	ak	100	.....	San Antonio, Texas	C-7-22:30
KABR	z	100	DP	Aberdeen, S. Dak.	C-.....
KBPS	aj	100	4	Portland, Ore.	P-Silent
KCMC	ak	100	.....	Texarkana, Ark.	C-7-14; 16-21
KFIZ	ak	100	.....	Fond du Lac, Wis.	C-10-13; 16-22
KGFF	ak	100	.....	Shawnee, Okla.	C-7:30-15; 17-21
KGGC	ak	100	.....	San Francisco, Cal.	P-9-13; 16-23
KGW	ak	100	i	Alamosa, Colo.	M-10-13; 17-19; 22-23
KGIX	ak	100	P	Las Vegas, Nev.	M-.....
KIDW	z	100	1	Lamar, Colo.	M-8-10; 13-17; 19-22
KORE	ae	100	.....	Eugene, Ore.	P-7:45-21
KUMA	ak	100	.....	Yuma, Ariz.	M-7-9; 11-13:30; 18-22
KXL	ae	100	4 (.25)	Portland, Ore.	P-8-24
WACO	ak	100	C	Waco, Texas	C-8-17
WAGM	ae	100	.....	Presque Isle, Maine	E-11-13; 16-19
WAZL	ak	100	2	Hazleton, Pa.	E-10:30-14:30; 16-22
WEED	ak	100	D	Rocky Mount, N. C.	E-7-21
WEHC	ae	100	3 (.25)	Charlottesville, Va.	E-.....
WEHS	ak	100	a	Cicero, Ill.	C-16-18
WELL	ak	50	.....	Battle Creek, Mich.	E-7:30-23
WGPC	ak	100	D	Albany, Ga.	C-7-16:45
WHDL	ak	100	D	Olean, N. Y.	E-.....
WHFC	ae	100	a	Cicero, Ill.	C-7-13:30; 18-21; 23-1
WILM	aj	100	2	Wilmington, Del.	E-7-11; 14-17; 21-24
WJBO	z	100	D	Baton Rouge, La.	C-.....
WJMS	ak	100	.....	Ironwood, Mich.	C-7:30-19:30
WKBI	ak	100	a	Cicero, Ill.	C-13:30-16; 21-23
WLAF	ak	100	(.25)	Lexington, Ky.	C-7-23
WLBK	ak	100	.....	Kansas City, Kans.	C-7-22
WMAS	ak	100	C (.25)	Springfield, Mass.	E-7:30-24
WMBG	ae	100	(.25)	Detroit, Mich.	E-7:30-24
WMBH	ak	100	(.25)	Joplin, Mo.	C-7:30-14; 18-21:30
WNRA	ak	100	D	Muscle Shoals, Ala.	C-7-13; 16-22
WPAD	ak	100	.....	Paducah, Ky.	C-7-9:30; 11-14; 16-22:30
XEFB	ak	100	.....	Monterrey, N. L.	E-10-14; 18-22:30



KCYS.  
1420  
DIAL

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1430 kilocycles 209.7 meters

KECA	ak	1000	(2.5)	Los Angeles, Calif.	P-7-23
KGNF	ak	500	D	North Platte, Neb.	C-7-Sunset
KWCR	ak	250	B (.5)	Cedar Rapids, Iowa	C-7-24
WBNS	ae	500	C (1)	Columbus, Ohio	E-6:15-24
WHEC	ae	500	C (1)	Rochester, N. Y.	E-8-24
WHP	ak	500	C (1)	Harrisburg, Pa.	E-8:30-1
WNBR	ae	500	C	Memphis, Tenn.	C-7-13; 15-22
WOKO	ae	500	C (1)	Albany, N. Y.	E-8-1

1440 kilocycles 208.2 meters

KDFN	ak	500	.....	Casper, Wyo.	M-7:30-13:30; 15-21
KLS	ae	250	D	Oakland, Calif.	P-8-Sunset
KXYZ	ak	500	.....	Houston, Texas	C-6:30-13; 14:30-23
WBIG	ae	500	C (1)	Greensboro, N. C.	E-7:30-23
WGBA	aj	250	a	Allentown, Pa.	E-7-23
WMBD	ae	500	3C (1)	Peoria, Ill.	C-6-11; 20-24
WSAN	aj	250	a	Allentown, Pa.	E-Silent
WTAD	ak	500	3	Quincy, Ill.	C-11-20
XEFI	ae	250	.....	Chihuahua, Chih.	C-.....

1450 kilocycles 206.8 meters

CFCT	ae	75	.....	Victoria, B. C.	P-8-12:30; 17:30-20:15
CKX	ak	500	F	Brandon, Man.	C-.....
CMCQ	z	1000	.....	Havana, Cuba	E-.....
KTBS	ck	1000	N	Shreveport, La.	C-7-24
WGAR	ak	500	B (1)	Cleveland, Ohio	E-6:30-1
WHOM	ae	250	.....	Jersey City, N. J.	E-8-24
WSAR	ae	250	.....	Fall River, Mass.	E-8-15:30; 17-22
WTFI	ak	500	.....	Athens, Ga.	E-9-21

1460 kilocycles 205.4 meters

KSTP	ae	10000	N (25)	St. Paul, Minn.	C-7-0:30
WJSV	ak	10000	C	Washington, D. C.	E-6:30-1

1470 kilocycles 204.0 meters

CMCG	z	150	1475	Havana, Cuba	E-12-18
WLAC	ak	5000	C	Nashville, Tenn.	C-6:30-24

1480 kilocycles 202.6 meters

KOMA	ak	5000	C	Oklahoma City, Ok.	C-7-24
WKBW	ae	5000	C	Buffalo, N. Y.	E-9-1

1490 kilocycles 201.2 meters

WCKY	ae	5000	B	Covington, Ky.	E-7-24
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1500 kilocycles 199.9 meters

CHGS	ae	50	F	Summerside, P.E.I.	A-7:30-8:30; 10:30-14; 16-23
CMCN	z	250	.....	Havana, Cuba	E-.....
KDB	ak	100	C	Santa Barbara, Calif.	P-7:30-24
KGFI	ak	100	(.25)	Corpus Christi, Tex.	C-7-15; 18-22
KGFK	ak	100	.....	Moorhead, Minn.	C-8-21
KGKB	ak	100	.....	Tyler, Texas	C-8-10; 12-13; 17-20:30
KGKY	ck	100	.....	Scottsbluff, Neb.	M-9-13:30; 17:30-21
KNOW	ak	100	.....	Austin, Texas	C-7:30-14; 16-22
KOTN	ak	100	D	Pine Bluff, Ark.	C-7-17:30
KPJM	ak	100	.....	Prescott, Ariz.	M-8-13:30; 17:30-20
KPO	ak	100	.....	Wenatchee, Wash.	P-6:30-22:30
KREG	ak	100	.....	Santa Ana, Calif.	P-9-23
KXO	ae	100	.....	El Centro, Calif.	P-7-14; 16-21
WCNW	ak	100	1 (.25)	Brooklyn, N. Y.	E-14-18; 20-22
WDNC	ak	100	C	Durham, N. C.	E-7:30-24
WGAL	ae	100	(.25)	Lancaster, Pa.	E-9-22
WHEF	z	100	(.25)	Kosciusko, Miss.	C-6-24
WJBK	ae	100	.....	Detroit, Mich.	E-7-Sunset; 21-24
WKBB	ae	100	.....	E. Dubuque, Ill.	C-7-21
WKBV	ak	100	.....	Richmond, Ind.	C-10-12; 18-22
WKBZ	ak	100	.....	Muskegon, Mich.	E-9-21
WKEU	ak	100	.....	LaGrange, Ga.	C-10-12; 15-18
WMBQ	ae	100	1	Brooklyn, N. Y.	E-9-11; 18-20
WMEX	z	100	P (.25)	Chelsea, Mass.	E-.....

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WNBF	ae	100	.....	Binghamton, N. Y.	E-7-22
WOPJ	ae	100	.....	Bristol, Tenn.	E-6:30-20
WRDW	ak	100	.....	Augusta, Ga.	E-8-21
WRGA	ak	100	.....	Rome, Ga.	C-7-10; 12-15; 18-21
WSYB	ak	100	.....	Rutland, Vt.	E-10-13; 17-21
WWRL	ak	100	i (.25)	Woodside, N. Y.	E-8-9; 11-15; 22-0:30
WWSW	ae	100	(.25)	Pittsburgh, Pa.	E-8-24

**1510 kilocycles 198.6 meters**

CFRC	ak	100	.....	Kingston, Ont.	E-.....
KCCR	ak	100	.....	Waterloo, Ont.	E-8:30-13:30; 16:30-23

**1530 kilocycles 196.0 meters**

W1XBS	z	1000	.....	Waterbury, Conn.	E-8:30-23:30
W9XBY	z	1000	.....	Kansas City, Mo.	C-7-1

**1550 kilocycles 193.4 meters**

W2XR	z	1000	.....	Long Isl. City, N. Y.	E-Silent
W6XA1	z	1000	.....	Bakersfield, Calif.	P-.....

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*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. P Canadian.*

<p><b>ALABAMA</b></p> <p>Birmingham</p> <p>WAPI 1140 5000 N</p> <p>WBRC 930 1000 C</p> <p>WSGN 1310 100</p> <p>Dothan</p> <p>WAGF 1370 100</p> <p>Gadsden</p> <p>WJBY 1210 100</p> <p>Huntsville</p> <p>WBHS 1200 100</p> <p>Mobile</p> <p>WALA 1380 500 C</p> <p>Montgomery</p> <p>WSFA 1410 500 C</p> <p>Muscle Shoals</p> <p>WNRA 1420 100</p> <p><b>ALASKA</b></p> <p>Anchorage</p> <p>KFQD 780 250</p> <p>Ketchikan</p> <p>KGBU 900 500</p> <p><b>ARIZONA</b></p> <p>Jerome</p> <p>KCRJ 1310 100</p> <p>Lowell</p> <p>KSUN 1200 100</p> <p>Phoenix</p> <p>KOY 1390 500</p> <p>KTAR 620 1000 N</p> <p>Prescott</p> <p>KPJM 1500 100</p> <p>Tucson</p> <p>KGAR 1370 100</p> <p>KVOA 1260 500</p> <p>Yuma</p> <p>KUMA 1420 100</p> <p><b>ARKANSAS</b></p> <p>Blytheville</p> <p>KLCN 1290 100</p> <p>Fayetteville</p> <p>KUOA 1260 1000</p> <p>Fort Smith</p> <p>KFPW 1210 100</p> <p>Hot Springs</p> <p>KTHS 1060 10000 N</p>	<p>Jonesboro</p> <p>KBTM 1200 100</p> <p>Little Rock</p> <p>KARK 890 250</p> <p>KGHI 1200 100</p> <p>KLRA 1390 1000 C</p> <p>Pine Bluff</p> <p>KOTN 1500 100</p> <p>Texarkana</p> <p>KCMC 1420 100</p> <p><b>CALIFORNIA</b></p> <p>Bakersfield</p> <p>KERN 1370 100 C</p> <p>W6XA1 1550 1000</p> <p>Berkeley</p> <p>KRE 1370 100</p> <p>Beverly Hills</p> <p>KMPC 710 500</p> <p>Burbank</p> <p>KELV 780 500</p> <p>El Centro</p> <p>KXO 1500 100</p> <p>Eureka</p> <p>KIEM 1210 100</p> <p>Fresno</p> <p>KMJ 580 500 C</p> <p>Glendale</p> <p>KIEV 850 250</p> <p>Hollywood</p> <p>KFWB 950 1000</p> <p>KMTR 570 1000</p> <p>KNX 1050 50000</p> <p>Long Beach</p> <p>KFOX 1250 1000</p> <p>KGER 1360 1000</p> <p>Los Angeles</p> <p>KECA 1430 1000</p> <p>KFAC 1300 1000</p> <p>KFI 640 50000 N</p> <p>KFSG 1120 500</p> <p>KKFD 1000 250</p> <p>KGFJ 1200 100</p> <p>KHJ 900 1000 C</p> <p>KRKC 1120 500</p> <p>KTM 780 500</p> <p>Modesto</p> <p>KTRB 740 250</p> <p>Oakland</p> <p>KLS 1440 250</p>	<p>KLX 880 1000</p> <p>KROW 930 1000</p> <p>Pasadena</p> <p>KPPC 1210 50</p> <p>Sacramento</p> <p>KFBK 1310 100 C</p> <p>San Bernardino</p> <p>KFXM 1210 100</p> <p>San Diego</p> <p>KFSD 600 1000 N</p> <p>KGB 1330 1000 C</p> <p>San Francisco</p> <p>KFRC 610 1000 C</p> <p>KGGC 1420 100</p> <p>KGO 790 7500 N</p> <p>KJBS 1070 100</p> <p>KPO 680 50000 N</p> <p>KTAB 560 1000</p> <p>KYA 1230 1000 N</p> <p>San Jose</p> <p>KQW 1010 1000</p> <p>Santa Ana</p> <p>KREG 1500 100</p> <p>Santa Barbara</p> <p>KDB 1500 100 C</p> <p>Stockton</p> <p>KGDM 1100 250</p> <p>KWG 1200 100 C</p> <p><b>COLORADO</b></p> <p>Alamosa</p> <p>KGIW 1420 100</p> <p>Colorado Springs</p> <p>KVOR 1270 1000 C</p> <p>Denver</p> <p>KLZ 560 1000 C</p> <p>KOA 830 50000 N</p> <p>KPOF 880 500</p> <p>KVOD 920 500</p> <p>Grand Junction</p> <p>KFXJ 1200 100</p> <p>Greely</p> <p>KFKA 880 500</p> <p>Lamar</p> <p>KIDW 1420 100</p> <p>Pueblo</p> <p>KGHF 1320 500</p> <p>Sterling</p> <p>KGEK 1200 100</p>	<p><b>CONNECTICUT</b></p> <p>Bridgeport</p> <p>WICC 600 250 C</p> <p>Hartford</p> <p>WDRC 1330 1000 C</p> <p>WTIC 1040 50000 R</p> <p>New Britain</p> <p>WMFE 1380 250</p> <p>Storrs</p> <p>WCAC 600 500</p> <p>Waterbury</p> <p>WATR 1190 100</p> <p>WIXBS 1530 1000</p> <p><b>DELAWARE</b></p> <p>Wilmington</p> <p>WDEL 1120 250</p> <p>WILM 1420 100</p> <p><b>DISTRICT OF COLUMBIA</b></p> <p>Washington</p> <p>WJSV 1460 10000 C</p> <p>WMAL 630 250 B</p> <p>WOL 1310 100</p> <p>WRC 950 500 R</p> <p><b>FLORIDA</b></p> <p>Clearwater</p> <p>WFLA 620 1000 N</p> <p>Gainesville</p> <p>WRUF 830 5000</p> <p>Jacksonville</p> <p>WJAX 900 1000 N</p> <p>WMBR 1370 100 C</p> <p>Miami</p> <p>WIOD 1300 1000 N</p> <p>WQAM 560 1000 C</p> <p>Orlando</p> <p>WDBO 580 250 C</p> <p>Pensacola</p> <p>WCOA 1340 500</p> <p>St. Petersburg</p> <p>WSUN 620 1000 N</p> <p>Tampa</p> <p>WDAE 1220 1000 C</p> <p><b>GEORGIA</b></p> <p>Albany</p> <p>WGPC 1420 100</p>
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Columbus WRBL 1200 100	Zion WCBZ 1080 5000	Covington WCKY 1490 5000 B	Detroit WJBK 1500 100				
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WBBM 770 25000 C	Boone KFGQ 1370 100	KWKH 1100 10000 C	MINNESOTA				
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WENR 870 50000 N	Decorah KGCA 1270 100	WLBZ 620 500 C	St. Paul KSTP 1460 10000 N	MISSISSIPPI			
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WJJD 1130 20000	Iowa City WSUI 880 500	WAGM 1420 100	Meridian WCOC 880 500	Vicksburg WQBC 1360 500	MISSOURI		
WLS 870 50000 N	Marshalltown KFJB 1200 100	MARYLAND	Cape Girardeau KFVS 1210 100	Columbia KFRU 630 500	Jefferson City WOS 630 500	Joplin WMBH 1420 100	
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Plains</b>  <b>WFAS</b> 1210 100                 </p>	<p> <b>Woodside</b>  <b>WWRL</b> 1500 100  <b>NORTH CAROLINA</b>  <b>Asheville</b>  <b>WVNC</b> 570 1000 N  <b>Charlotte</b>  <b>WBT</b> 1080 50000 C  <b>WSOC</b> 1210 100 N  <b>Durham</b>  <b>WDNC</b> 1500 100 C  <b>Greensboro</b>  <b>WBIG</b> 1440 500 C  <b>Raleigh</b>  <b>WPTF</b> 680 5000 N  <b>Rocky Mount</b>  <b>WEED</b> 1420 100  <b>Wilmington</b>  <b>WMFD</b> 1370 100  <b>Winston-Salem</b>  <b>WSJS</b> 1310 100 C  <b>NORTH DAKOTA</b>  <b>Bismarck</b>  <b>KFYR</b> 550 1000 N  <b>Devils Lake</b>  <b>KDLR</b> 1210 100  <b>Fargo</b>  <b>WDAY</b> 940 1000 N  <b>Grand Forks</b>  <b>KFJM</b> 1370 100  <b>Mandan</b>  <b>KGCU</b> 1240 250  <b>Minot</b>  <b>KLPM</b> 1240 250  <b>OHIO</b>  <b>Akron</b>  <b>WADC</b> 1320 1000 C  <b>WJW</b> 1210 100  <b>Canton</b>  <b>WHBC</b> 1200 100  <b>Cincinnati</b>  <b>WFBE</b> 1200 100  <b>WKRC</b> 550 1000 C  <b>WLW</b> 700 50000 N  <b>WSAI</b> 1330 1000 R  <b>Cleveland</b>  <b>WGR</b> 1450 500 B  <b>WHK</b> 1390 1000 C  <b>WJAY</b> 610 500  <b>WTAM</b> 1070 50000 R  <b>Columbus</b>  <b>WAIU</b> 640 500 B  <b>WBNS</b> 1430 500 C  <b>WGOL</b> 1210 100  <b>WOSU</b> 570 750  <b>Dayton</b>  <b>WSMK</b> 1380 200 C  <b>Mount Orab</b>  <b>WHBD</b> 1370 100  <b>Toledo</b>  <b>WSPD</b> 1340 1000 C  <b>Youngstown</b>  <b>WKBN</b> 570 500 C  <b>Zanesville</b>  <b>WALR</b> 1210 100  <b>OKLAHOMA</b>  <b>Ada</b>  <b>KADA</b> 1200 100  <b>Elk City</b>  <b>KASA</b> 1210 100  <b>Enid</b>  <b>KCRC</b> 1370 100  <b>Norman</b>  <b>WNAD</b> 1010 500  <b>Oklahoma City</b>  <b>KFXR</b> 1310 100  <b>KGFG</b> 1370 100  <b>KOMA</b> 1480 5000 C  <b>WKY</b> 900 1000 N                 </p>	<p> <b>Ponca City</b>  <b>WBBZ</b> 1200 100  <b>Shawnee</b>  <b>KGFF</b> 1420 100  <b>Tulsa</b>  <b>KTUL</b> 1400 250 C  <b>KVOO</b> 1140 25000 N  <b>OREGON</b>  <b>Corvallis</b>  <b>KOAC</b> 550 1000  <b>Eugene</b>  <b>KORE</b> 1420 100  <b>Klamath Falls</b>  <b>KFJI</b> 1210 100  <b>Marshfield</b>  <b>KOOS</b> 1200 250 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Washington WNBO 1200 100	Beaumont KFDM 560 500	Petersburg WPHR 880 500	Racine WRJN 1370 100
Wilkes-Barre WBAX 1210 100	College Station WTAW 1120 500	Richmond WBBL 1210 100	Shaboygan WHBL 1410 500
WBre 1310 100	Corpus Christi KCFI 1500 100	WMBG 1210 100 C	Stevens Point WVBL 900 2500
Williamsport WRAC 1370 100	Dallas KRLD 1040 10000 C	Roanoke WDBJ 930 1000 C	Superior WBEBC 1290 1000 N
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<b>PHILIPPINES</b>	WRRR 1280 500	WSVA 550 500	Casper KDFN 1440 500
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Greenville WFBC 1300 1000	Lubbock KFYO 1310 100	KVL 1370 100	Kelowna CKOV 630 100 F
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Pierre KGFY 630 200	KTSA 550 1000 C	Tacoma KMO 1330 250	CKWX 1010 100
Rapid City WCAT 1200 100	WAOI 1190 50000 N	KVI 570 1000 C	CRCV 1100 1000 F
Sioux Falls KSOO 1110 1000	Tyler KGBK 1500 100	Walla Walla KUJ 1370 100	Victoria CFCT 1450 75
Vermillion KUSD 890 500	Waco WACO 1420 100 C	Wenatchee KPO 1500 100	<b>MANITOBA</b>
Watertown KWTN 1210 100	Weslaco KRGV 1260 500	Yakima KIT 1310 100	Brandon CKX 1450 500 F
Yankton WNAX 570 1000 C	Wichita Falls KGKO 570 500 C	<b>WEST VIRGINIA</b>	Winnipeg CJRC 1390 100
<b>TENNESSEE</b>	<b>UTAH</b>	Bluefield WHIS 1410 250	CKY 960 15000 F
Bristol WOPJ 1500 100	Ogden KLO 1400 500 C	Charleston WCHS 580 500	<b>NEW BRUNSWICK</b>
Chattanooga WDOD 1280 1000 C	Salt Lake City KDYL 1290 1000 N	Fairmont WMMN 890 250	Fredericton CFNB 550 500 F
Jackson WTJS 1310 100	KSL 1130 50000 C	Huntington WSAZ 1190 1000	Moncton CKCW 1370 100
Knoxville WNOX 1010 1000 C	<b>VERMONT</b>	Wheeling WWVA 1160 5000 C	St. John CHSJ 1120 100 F
WROL 1310 100	Burlington WCAX 1200 100	<b>WISCONSIN</b>	<b>NOVA SCOTIA</b>
Memphis WHBQ 1370 100	Rutland WSYB 1500 100	Eau Claire WTAQ 1330 1000	Glace Bay VAS 685 2000
WMC 780 1000 N	St. Albans WQDM 1370 100	Fond du Lac KFIZ 1420 100	Hallifax CHNS 930 500 F
WNBR 1430 500	Springfield WNBX 1260 1000	Green Bay WHBY 1200 100	Sydney CJCB 1240 1000 F
WREC 600 1000 C	Waterbury WDEV 550 500	Janesville WCLO 1200 100	Wolfville CKIC 1010 50
<b>VIRGINIA</b>	<b>TEXAS</b>	LaCrosse WKBH 1380 1000	Yarmouth CJLS 1310 100
Arlington NAA 690 1000	Amarillo KGRS 1410 1000	Madison WHA 940 2500	<b>ONTARIO</b>
Charlottesville WEHC 1420 100	WDMC 780 1000 N	WIBA 1280 1000 N	Brantford CKPC 930 100 F
Danville WBTM 1370 100	WREC 1430 500	Manitowoc WOMT 1210 100	Chatham CFCO 600 100 F
Lynchburg WLVA 1200 100	WVLA 1200 100	Milwaukee WISN 1120 250 C	
Newport News WGH 1310 100	WVLA 1200 100	WTMJ 620 1000 N	

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Cobalt		Yorkton		XEFO	940 5000	Cardenas	
CKMC 1210	50	CJGX 630	500 F	XEFZ	1370 100	CMGE	1375 30
Fort William		<b>NEWFOUNDLAND</b>		XEK	990 100	Ciego de Avila	
CKPR 930	50 F	St. John's		XEN	710 1000	CMJH	1150 50
Hamilton		VOAC	1300 40	XEO	940 5000	CMJI	1210 150
GHML 1010	50 F	VOAS	940 100	XEP	820 500	CMJO	1010 50
CKOC 1120	500 F	VOGY	840 400	XETW	820 500	Cienfuegos	
Kingston		VONF	950 5000	XEW	890 50000	CMHJ	1125 40
CFRC 1510	100	VOWR	681 500	XEWZ	1150 100	CMHW	910 100
Kirkland Lake		<b>MIQUELON</b>		XEXX	845 500	Colon	
CJKL 1310	100	St. Pierre		XEYZ	780 10000	CMGI	1094 30
London		FQN	609 250	XFX	610 1000	Cruces	
CFPL 730	100 F	<b>CENTRAL AMERICA</b>		<b>DURANGO</b>		CMHK	1225 50
North Bay		<b>COSTA RICA</b>		Durango		Guantanamo	
CFCH 930	100 F	Cartago		XEE	1210 50	CMKJ	1300 20
Ottawa		TIGA	1014 30	<b>GUANAJUATO</b>		Havana	
CKCO 1010	100	San Jose		Leon		CMAF	680 1000
CRCO 880	1000 F	TIGR	912 75	XEAZ	1420 7	CMBC	1040 150
Prescott		TIFB	714 30	XEKL	920 500	CMBD	1350 150
CFLC 930	100	TIGP	800 75	<b>JALISCO</b>		CMBG	1375 225
St. Catharines		TIRCA	1100 500	Guadalajara		CMBS	915 150
CKTB 1200	100 F	TISO	550 250	XEA	1060 125	CMBX	1425 150
Sault Ste. Marie		TIVL	835 30	XED	1160 500	CMBY	635 250
CJIC 890	100	<b>GUATEMALA</b>		<b>MICHOACAN</b>		CMCZ	1005 100
Stratford		Guatemala City		Morelia		CMC	835 500
10-AK 1200	15	TGW	565 10000	XEI	1370 125	CMCA	1230 150
Timmins		TGX	1400 150	<b>NUEVO LEON</b>		CMCB	1060 150
CKGB 1420	100	<b>EL SALVADOR</b>		Monterrey		CMCD	955 250
Toronto		San Salvador		XEFB	1420 100	CMCF	610 250
CFRB 690	10000 C	RDN	680 500	XEFJ	1210 100	CMCG	1475 150
CKCL 580	100 F	<b>MEXICO</b>		XEH	1150 250	CMCJ	1200 400
CKNC 1420	100 F	Aguascalientes		XET	690 500	CMCN	1500 250
CRCT 840	5000 N	XFC	810 350	XEX	1310 125	CMCO	1280 150
Waterloo		BAJA CALIFORNIA		<b>PUEBLA</b>		CMCP	1270 150
CKCR 1510	100	Agua Caliente		Puebla		CMCQ	1450 1000
Windsor		XEBC	760 5000	XETH	1210 100	CMCR	1400 150
CKLW 1030	5000 C	Mexicali		<b>SAN LUIS POTOSI</b>		CMCU	1255 150
Wingham		XEAA	920 200	San Luis Potosi		CMCW	540 150
10-BP 1200	25	XEAO	560 250	XEZZ	1370 100	CMCY	1316 500
<b>PRINCE EDWARD ISLAND</b>		Tijuana		<b>SONORA</b>		CMK	725 3150
Charlottetown		XEAE	980 250	Nogales		CMQ	840 340
GFCY 630	500 F	XEMO	865 2500	XEAF	990 250	CMW	930 1400
CHCK 1310	50	XEMZ	1210 30	<b>TAMAULIPAS</b>		CMX	765 1000
Summerside		XEKO	920 2500	Nuevo Laredo		COA	1175 500
CHGS 1500	50 F	<b>CHIHUAHUA</b>		XEAM	750 50	COK	1150 250
<b>QUEBEC</b>		Chihuahua		XEFE	1370 100	COX	1100 200
Chicoutimi		XEFI	1440 250	XENT	1120 50000	Holquin	
GRCS 950	100 F	Juarez		Roynosa		CMKF	1363 30
Hull		XEFV	1210 100	XEAW	960 10000	Manzanillo	
CKKB 1210	100 F	XEJ	1020 250	Tampico		CMKM	940 100
Montmagny		<b>COAHUILA</b>		XEFW	1310 250	Matanzas	
VE9EK 1185	10	Piedras Negras		XEMA	1080 50	CMGF	971.5 100
Montreal		XEPN	590 50000	XES	970 250	CMGH	1040 15
GFCF 600	500 N	Saltillo		<b>VERACRUZ</b>		Moron	
GHLF 1120	100	XEOX	640 250	Jalapa		CMJP	1360 75
CKAC 730	5000 C	Torreon		XFB	1270 250	Sagua la Grande	
CRCM 910	5000 F	XETB	1310 125	Orizaba		CMHA	1103 50
New Carlisle		<b>D. F.</b>		XFD	1340 350	San Spiritus	
GHNC 1210	100 F	Mexico City		Voracruz		CMHB	1245 30
Quebec		XEAI	1240 100	XEU	980 250	Santa Clara	
CHRC 580	100 F	XEAL	660 1000	<b>YUCATAN</b>		CMHI	1037 150
CKCV 1310	50	XEB	1030 10000	Merida		Santiago	
CRCK 1050	1000 F	XECW	1310 10	XEFC	1310 100	CMKC	1034 150
<b>SASKATCHEWAN</b>		XEFA	1180 500	<b>WEST INDIES</b>		<b>DOMINICAN REPUBLIC</b>	
Canora		XEFG	1100 250	<b>CUBA</b>		San Pedro de	
10-BU 1200	50	<b>CALIFORNIA</b>		Calbarlen		Marcoris	
Moose Jaw		Calbarlen		CMHD	950 250	HII	1395 15
CHAB 1200	100 F	Camaguey		CMJC	1382 150	Santo Domingo	
CJRM 540	1000 F	CMJE	1170 50	CMJF	930 200	HIJ	1195 15
Prince Albert		CMJG	1050 50	CMJK	790 150	HIX	1270 1000
CKBI 1210	100 F	CMJL	960 50	<b>HAITI</b>		HIZ	1300 10
Regina		<b>CUBA</b>		Port-au-Prince		HHK	920 1000
CHWC 1010	500 F	Calbarlen					
CKOK 1010	500 F	Camaguey					
Saskatoon		CMJG	1050 50				
CFQC 840	1000 F	CMJK	790 150				

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<b>CFAC</b> 930 100 Calgary, Alta. Calgary Herald, Southam Bldg.	<b>CJRC</b> 1390 100 Winnipeg, Man. Royal Alexandra Hotel
<b>CFCF</b> 600 500 Montreal, Que. Mt. Royal Hotel	<b>CJRM</b> 540 1000 Moose Jaw, Sask. 311 Main St. No.
<b>CFCH</b> 930 100 North Bay, Ont. Capitol Theatre Bldg.	<b>CKAC</b> 730 5000 Montreal, Que. 980 St. Catherine St. W.
<b>CFCN</b> 1030 10000 Calgary, Alta. Toronto Gen. Trust Bldg.	<b>CKBI</b> 1210 100 Prince Albert, Sask. Canada Bldg.
<b>CFCO</b> 600 100 Chatham, Ont. Wm. Pitt Hotel	<b>CKCD</b> 1010 100 Vancouver, B. C. 142 Hastings St. W.
<b>CFCT</b> 1450 75 Victoria, B. C. 620 View St.	<b>CKCH</b> 1210 100 Hull, Que. Standish Hall Hotel
<b>CFCY</b> 630 500 Charlottetown, P.E.I. 143 Great George St.	<b>CKCK</b> 1010 500 Regina, Sask. 1853 Hamilton St.
<b>CFJC</b> 880 100 Kamloops, B. C. Wilcox-Hall Bldg.	<b>CKCL</b> 580 100 Toronto, Ont. 444 University Ave.
<b>CFLC</b> 930 100 Prescott, Ont. Victoria Hall	<b>CKCO</b> 1010 100 Ottawa, Ont. 272 Somerset St. W.
<b>CFNB</b> 550 500 Fredericton, N. B. York St.	<b>CKCR</b> 1510 100 Waterloo, Ont. 24 King St. So.
<b>CFPL</b> 730 100 London, Ont. Richmond St.	<b>CKCV</b> 1310 50 Quebec, Que. 254 Ave. Marguerite
<b>CFQC</b> 840 1000 Saskatoon, Sask. 216 First Ave., No.	<b>CKCW</b> 1370 100 Moncton, N. B. Moncton Brdrestg. Co., Ltd.
<b>CFRB</b> 690 10000 Toronto, Ont. 87 Bloor St. W.	<b>CKFC</b> 1410 50 Vancouver, B. C. Hemlock & 12th Ave.
<b>CFRC</b> 1510 100 Kingston, Ont. Queens University	<b>CKGB</b> 1420 100 Timmins, Ont. R. H. Thompson, Press Bldg.
<b>CFRN</b> 1260 100 Edmonton, Alta. Birks Bldg.	<b>CKIC</b> 1010 50 Wolfville, N. S. Acadia University
<b>CHAB</b> 1200 100 Moose Jaw, Sask. Grant Hall Hotel	<b>CKLW</b> 1030 500 Windsor, Ont. Guaranty Trust Bldg.
<b>CHCK</b> 1310 50 Charlottetown, P.E.I. 36 Upper Hillsboro St.	<b>CKMC</b> 1210 50 Cobalt, Ont. R. L. MacAdam
<b>CHGS</b> 1500 50 Summerside, P. E. I. 190 Water St.	<b>CKMO</b> 1410 100 Vancouver, B. C. 1604 Bekins Bldg.
<b>CHLP</b> 1120 100 Montreal, Que. Sun Life Bldg.	<b>CKNC</b> 1420 100 Toronto, Ont. 805 Davenport Road
<b>CHML</b> 1010 50 Hamilton, Ont. 47 Main St. E.	<b>CKOC</b> 1120 500 Hamilton, Ont. Wentworth Bldg.
<b>CHNC</b> 1210 100 New Carlisle, Que. Dr. Charles Houde	<b>CKOV</b> 630 100 Kelowna, B. C. Okanagan Broadcasters, Ltd., Box 243
<b>CHNS</b> 930 500 Halifax, N. S. Lord Nelson Hotel	<b>CKPC</b> 930 100 Brantford, Ont. Arcade Bldg.
<b>CHRC</b> 580 100 Quebec, Que. CHRC, Ltd., Victoria Hotel	<b>CKPR</b> 930 50 Fort William, Ont. Royal Edward Hotel
<b>CHSJ</b> 1120 100 St. John, N. B. Admiral Beatty Hotel	<b>CKTB</b> 1200 100 St. Catharines, Ont. E. T. Sandell, Weiland House
<b>CHWC</b> 1010 500 Regina, Sask. Kitchener Hotel	<b>CKUA</b> 580 500 Edmonton, Alta. University of Alberta.
<b>CHWK</b> 780 100 Chilliwack, B. C. Wellington Ave.	<b>CKWX</b> 1010 100 Vancouver, B. C. Hotel Georgia
<b>CJAT</b> 910 250 Trail, B. C. Trail Amateur Radio Assn.	<b>CKX</b> 1450 500 Brandon, Man. Rosser Ave.
<b>CJCA</b> 730 500 Edmonton, Alta. 10122-100A St.	<b>CKY</b> 960 15000 Winnipeg, Man. Sherbrooke St.
<b>CJCB</b> 1240 1000 Sydney, N. S. 318 Charlotte St.	<b>CMAF</b> 680 1000 Havana, Cuba 1 y 8 Rept. Miramar
<b>CJCJ</b> 690 100 Calgary, Alta. New Albertan Bldg.	<b>CMBC</b> 1040 150 Havana, Cuba Domingo Fernandez, Maximo Gomez No. 189
<b>CJGX</b> 630 500 Yorkton, Sask. 188 Grain Exchange Bldg.	<b>CMBD</b> 1350 150 Havana, Cuba Luis Perez Garcia, Centre Galego
<b>CJIC</b> 890 100 S. Ste. Marie, Ont. 72 Pine St.	<b>CMBG</b> 1375 225 Havana, Cuba John L. Stowers, Hospital No. 100
<b>CJKL</b> 1310 100 Kirkland Lake, Ont. O. J. Thorpe	<b>CMBS</b> 915 150 Havana, Cuba Calzada y H. St., Vedado
<b>CJLS</b> 1310 100 Yarmouth, N. S. Laurie L. Smith, Grand Hotel	<b>CMBX</b> 1425 150 Havana, Cuba Alberto Alvarez, Belascoain No. 82
<b>CJOC</b> 1230 100 Lethbridge, Alta. Marquis Hotel	<b>CMBY</b> 635 250 Havana, Cuba Infanta 132 esq-Jewellar
<b>CJOR</b> 600 500 Vancouver, B. C. G. C. Chandler, Hotel Grosvenor	<b>CMBZ</b> 1005 100 Havana, Cuba Manuely G. Salas, San Rafael No. 14

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**CMC** 835 500 Havana, Cuba  
 Agulla y Dragones  
**CMCA** 1230 150 Havana, Cuba  
 J. M. Gonzales, Galliano No. 102  
**CMCB** 1060 150 Havana, Cuba  
 Metropolitan Bldg.  
**CMCD** 955 250 Havana, Cuba  
 Calle G y 25, Vedado  
**CMCF** 610 250 Havana, Cuba  
 Raoul Karman, P. O. Box 647  
**CMCG** 1475 150 Havana, Cuba  
 Emilie Perera, San Miguel No. 62  
**CMCJ** 1200 400 Havana, Cuba  
 Rafael Rodriguez, Estevez No. 4  
**CMCK** 1320 100 Havana, Cuba  
 Manuel Autran G., Vedado  
**CMCN** 1500 250 Havana, Cuba  
 Reina y Ave. Buen Ritiroe, Marianao  
**CMCO** 1280 150 Havana, Cuba  
 Ass. Detes. del Comercio  
**CMCP** 1270 150 Havana, Cuba  
 Calzada de Luyane No. 132  
**CMCQ** 1450 1000 Havana, Cuba  
 Vista Alegre No. 80, Vibora  
**CMCR** 1400 150 Havana, Cuba  
 Milagros No. 35, Vibora  
**CMCU** 1255 150 Havana, Cuba  
 San Francisco No. 13, Vibora  
**CMCW** 540 150 Havana, Cuba  
 Gallano y San Lazaro Sts.  
**CMCY** 1316 500 Havana, Cuba  
 Manuel D. Autran, Calle G 215, Vedado  
**CMGE** 1375 30 Cardenas, Cuba  
 Genaro Sebater, Cespedes No. 180  
**CMGF** 971.5 100 Matanzas, Cuba  
 G. Betancourt No. 51  
**CMGH** 1040 15 Matanzas, Cuba  
 B. Byrne No. 113  
**CMGI** 1094 30 Colon, Cuba  
 Armando Linanza, Marti No. 35  
**CMHA** 1103 50 SagualaGrande, Cuba  
 Abelardo Menocal, Carrillo No. 1  
**CMHB** 1245 30 San Spiritus, Cuba  
 Independencia No. 33  
**CMHD** 950 250 Caibarien, Cuba  
 Manuel Alvarez, M. Escobar 17  
**CMHI** 1037 150 Santa Clara, Cuba  
 Lavis y Paz, Independencia No. 34  
**CMHJ** 1125 40 Cienfuegos, Cuba  
 Romoualde Ugalde, Hotel Bristol  
**CMHK** 1225 50 Cruces, Cuba  
 Heredia No. 61  
**CMHW** 910 100 Cienfuegos, Cuba  
 Arguelles No. 200  
**CMJC** 1382 150 Camaguey, Cuba  
 Feliciano Isaac, Cisneros y G. Gomez  
**CMJE** 1170 50 Camaguey, Cuba  
 Manuel Fernandez, Hnos. Aguerre No. 2  
**CMJF** 930 200 Camaguey, Cuba  
 John L. Stowers, Republica No. 88  
**CMJG** 1050 50 Camaguey, Cuba  
 Jose Antonio Lefran, Maceo No.1  
**CMJH** 1150 50 Ciego de Avila, Cuba  
 Luis Maraurl, Vista Hermosa  
**CMJI** 1210 150 Ciego de Avila, Cuba  
 Gilberto Gessa Lopez, Independencia 95  
**CMJK** 790 150 Camaguey, Cuba  
 Cla. Nacional de Radio, Finlay  
**CMJL** 960 50 Camaguey, Cuba  
 Enrique Arttime, Cuba No. 27  
**CMJO** 1010 50 Ciego de Avila, Cuba  
 Jose M. Rey, C. Central & Maceo

**CMJP** 1360 75 Moron, Cuba  
 Cesar Canall, Callejas No. 28  
**CMK** 725 3150 Havana, Cuba  
 Hotel Plaza  
**CMKC** 1034 150 Santiago, Cuba  
 J. A. Saco, Alta 23  
**CMKF** 1363 30 Holquin, Cuba  
 Libertad esq. Arias  
**CMKJ** 1300 20 Guantanamo, Cuba  
 Luis Morlote, East Giro 11  
**CMKM** 940 100 Manzanillo, Cuba  
 Jesus Armeste, Merchant y P. Figuerado  
**CMQ** 840 340 Havana, Cuba  
 25 Numero 445, Vedado  
**CMW** 930 1400 Havana, Cuba  
 Troncoso y Gil, Apdo. 1010  
**CMX** 765 1000 Havana, Cuba  
 Casa "Lavin," Ave. del a Republica 99A  
**COA** 1175 500 Havana, Cuba  
 Juan Fernandez, Agular 126, Altes  
**COK** 1150 250 Havana, Cuba  
 Rafael Valdez, Marques Gonzales 52  
**COX** 1100 200 Havana, Cuba  
 10 entre 17 y 19, Vedado  
**CRCK** 1050 1000 Quebec, Que.  
 Chateau Frontenac Hotel  
**CRCM** 910 5000 Montreal, Que.  
 1231 St. Catherine St. W.  
**CRCO** 880 1000 Ottawa, Ont.  
 Chateau Laurier Hotel  
**CRCS** 950 100 Chicoutimi, Que.  
 4 Rue Larouche  
**CRCT** 840 5000 Toronto, Ont.  
 805 Davenport Road  
**CRCV** 1100 1000 Vancouver, B. C.  
 C. N. R. Station Bldg.  
**FQN** 609 250 St. Pierre, Miq.  
  
**HHK** 920 1000 Port-au-Prince, Haiti  
 Haitian Government  
**HIH** 1395 15 San Pedro de M., D.R.  
 Domingo Dominguez  
**HIJ** 1195 15 Santo Domingo, D. R.  
 Tuto Baer, Hostos 34  
**HIX** 1270 1000 Santo Domingo, D. R.  
 J. R. Saladin, Director General  
**HIZ** 1300 10 Santo Domingo, D. R.  
 Abbes and Garcia  
**KABC** 1420 100 San Antonio, Texas  
 Texas Theatre Bldg.  
**KABR** 1420 100 Aberdeen, S. Dak.  
 Aberdeen Broadcast Co.  
**KADA** 1200 100 Ada, Okla.  
 C. C. Morris  
**KALE** 1300 500 Portland, Ore.  
 Kale, Inc., New Heathman Hotel  
**KARK** 890 250 Little Rock, Ark.  
 N. S. L. Bldg.  
**KASA** 1210 100 Elk City, Okla.  
 E. M. Woody, Casa Grande Hotel  
**KBPS** 1420 100 Portland, Ore.  
 E. 12th & Hoyt Sts.  
**KBTM** 1200 100 Jonesboro, Ark.  
 Jay P. Beard  
**KCMC** 1420 100 Texarkana, Ark.  
 M. P. Mims, Box 865  
**KCRC** 1370 100 Enid, Okla.  
 Enid Radiophone Co., Oxford Hotel  
**KCRJ** 1310 100 Jerome, Ariz.  
 Chas. C. Robinson, Drawer D.  
**KDB** 1500 100 Santa Barbara, Calif.  
 15-17 E. Haley St.

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<b>KDFN 1440 500</b>	<b>Casper, Wyo.</b> Donald Lewis Hathaway	<b>KFRC 610 1000</b>	<b>San Francisco, Calif.</b> 1000 Van Ness Ave.
<b>KDKA 980 50000</b>	<b>Pittsburgh, Pa.</b> Hotel Wm. Penn	<b>KFRU 630 500</b>	<b>Columbia, Mo.</b> KFRU, Inc., 9th and Elm Sts.
<b>KDLR 1210 100</b>	<b>Devils Lake, N. D.</b> KDLR, Inc., 1025 3rd Street	<b>KFSD 600 1000</b>	<b>San Diego, Calif.</b> U. S. Grant Hotel
<b>KDYL 1290 1000</b>	<b>Salt Lake City, Utah</b> Ezra Thompson Bldg.	<b>KFSG 1120 500</b>	<b>Los Angeles, Calif.</b> 1100 Glendale Blvd.
<b>KECA 1430 1000</b>	<b>Los Angeles, Calif.</b> 1000 S. Hope St.	<b>KFUO 550 500</b>	<b>St. Louis, Mo.</b> 801 De Mun St.
<b>KELW 780 500</b>	<b>Burbank, Calif.</b> 3702 Magnolia Park Blvd.	<b>KFVD 1000 250</b>	<b>Los Angeles, Calif.</b> E. L. Cord, 645 S. Mariposa
<b>KERN 1370 100</b>	<b>Bakersfield, Calif.</b> Elk's Club	<b>KFVS 1210 100</b>	<b>Cape Girardeau, Mo.</b> Oscar C. Hirsch, Box 275
<b>KEX 1180 5000</b>	<b>Portland, Ore.</b> Oregonian Bldg.	<b>KFWB 950 1000</b>	<b>Hollywood, Calif.</b> Warner Bros. Motion Pictures, Inc.
<b>KFAB 770 5000</b>	<b>Lincoln, Neb.</b> Cornhusker Hotel	<b>KFXD 1200 100</b>	<b>Nampa, Idaho</b> Frank E. Hurt, 1024 12th Ave., S.
<b>KFAC 1300 1000</b>	<b>Los Angeles, Calif.</b> E. L. Cord, 645 So. Mariposa	<b>KFXJ 1200 100</b>	<b>Grand Jct., Colo.</b> Hillcrest Manor
<b>KFBB 1280 1000</b>	<b>Great Falls, Mont.</b> Buttrey Broadcast., Inc.	<b>KFXM 1210 100</b>	<b>San Bernardino, Calif</b> California Hotel
<b>KFBI 1050 5000</b>	<b>Ablene, Kans.</b> Box 345	<b>KFXR 1310 100</b>	<b>Oklahoma City, Okla.</b> 541 Hightower Bldg.
<b>KFBK 1310 100</b>	<b>Sacramento, Calif.</b> Sacramento Bee	<b>KFYO 1310 100</b>	<b>Lubbock, Texas</b> Kirksey Bros., Hotel Lubbock
<b>KFDM 560 500</b>	<b>Beaumont, Texas</b> Beaumont Hotel, P. O. Box 2950	<b>KFYR 550 1000</b>	<b>Bismarck, N. D.</b> 320 Broadway
<b>KFDY 780 1000</b>	<b>Brookings, S. D.</b> South Dakota State College	<b>KGA 900 1000</b>	<b>Spokane, Wash.</b> 1023 W. Riverside Ave.
<b>KFEQ 680 2500</b>	<b>St. Joseph, Mo.</b> Schneider Bldg.	<b>KGAR 1370 100</b>	<b>Tucson, Ariz.</b> 142 S. 6th Ave.
<b>KFGQ 1370 100</b>	<b>Boone, Iowa</b> 924 W. 2nd St.	<b>KGB 1330 1000</b>	<b>San Diego, Calif.</b> 1012—1st St.
<b>KFH 1300 1000</b>	<b>Wichita, Kans.</b> 124 1/2 S. Market St.	<b>KGBU 900 500</b>	<b>Ketchikan, Alaska</b> Mile 5, Wards Cove Rd.
<b>KFI 640 50000</b>	<b>Los Angeles, Calif.</b> 1000 S. Hope St.	<b>KGBX 1310 100</b>	<b>Springfield, Mo.</b> KGBX, Inc., C. of C. Bldg.
<b>KFIO 1120 100</b>	<b>Spokane, Wash.</b> 213 Riverside Ave.	<b>KGBZ 930 1000</b>	<b>York, Neb.</b> KGBZ Broadcasting Co., 715 Grant Ave.
<b>KFIZ 1420 100</b>	<b>Fond du Lac, Wis.</b> 18 W. 1st St.	<b>KGCA 1270 100</b>	<b>Decorah, Iowa</b> Charles W. Greenley, 201 Water St.
<b>KFJB 1200 100</b>	<b>Marshalltown, Iowa</b> 1603 W. Main St.	<b>KGCU 1240 250</b>	<b>Mandan, N. D.</b> 404 W. Main St.
<b>KFJI 1210 100</b>	<b>Klamath Falls, Ore.</b> KFJI Broadcasters, Inc., Willard Hotel	<b>KGCX 1310 100</b>	<b>Wolf Point, Mont.</b> E. E. Krebsbach.
<b>KFJM 1370 100</b>	<b>Grand Forks, N. D.</b> University of North Dakota	<b>KGDE 1200 100</b>	<b>Fergus Falls, Minn.</b> C. L. Jaren
<b>KFJR 1300 500</b>	<b>Portland, Ore.</b> 622 Lumbermen's Bldg.	<b>KGDM 1100 250</b>	<b>Stockton, Calif.</b> E. F. Peffer, 42 S. Calif. St.
<b>KFJZ 1370 100</b>	<b>Fort Worth, Texas</b> Texas Hotel	<b>KGDY 1340 250</b>	<b>Huron, S. D.</b> Voice of S. D., Inc., 347 Dakota Ave.
<b>KFKA 880 500</b>	<b>Greeley, Colo.</b> Box 735	<b>KGEE 1200 100</b>	<b>Sterling, Colo.</b> Elmer G. Beehler, 109 W. 2nd St.
<b>KFKU 1220 1000</b>	<b>Lawrence, Kans.</b> University of Kansas	<b>KGER 1360 1000</b>	<b>Long Beach, Calif.</b> 435 Pine Ave.
<b>KFNF 890 500</b>	<b>Shenandoah, Iowa</b> 407 Sycamore St.	<b>KGEZ 1310 100</b>	<b>KallsPELL, Mont.</b> Donald C. Treloar, Box 1
<b>KFOR 1210 100</b>	<b>Lincoln, Neb.</b> Howard Shuman, Hotel Lincoln	<b>KGFF 1420 100</b>	<b>Shawnee, Okla.</b> 9th & Bell Sts.
<b>KFOX 1250 1000</b>	<b>Long Beach, Calif.</b> 220 E. Anaheim St.	<b>KGFG 1370 100</b>	<b>Oklahoma City, Okla.</b> Okla. Broadcasting Co., 1113 N. Broadway
<b>KFPL 1310 100</b>	<b>Dublin, Texas</b> C. C. Baxter, Box 176	<b>KGFI 1500 100</b>	<b>Corpus Christi, Texas</b> Eagle Broadcasting Co., Inc., P. O. Box 1508
<b>KFPM 1310 15</b>	<b>Greenville, Texas</b> New Furniture Co.	<b>KGFI 1200 100</b>	<b>Los Angeles, Calif.</b> Ben S. McClashan, 1417 S. Figueroa.
<b>KFPW 1210 100</b>	<b>Fort Smith, Ark.</b> Goldman Hotel	<b>KGFK 1500 100</b>	<b>Moorhead, Minn.</b> 722 Center Ave.
<b>KFPY 1340 1000</b>	<b>Spokane, Wash.</b> Symons Bldg.	<b>KGFL 1370 100</b>	<b>Roswell, N. M.</b> KGFL, Inc., 507 N. Main St.
<b>KFQD 780 250</b>	<b>Anchorage, Alaska</b> 411—4th Ave.	<b>KGFW 1310 100</b>	<b>Kearney, Neb.</b> Midway Hotel

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<b>KGFX 630</b>	<b>200 Pierre, S. D.</b> Dana McNeil, 510 Summit Ave.
<b>KGGC 1420</b>	<b>100 San Francisco, Calif.</b> 230 Eddy St.
<b>KGGF 1010</b>	<b>1000 Coffeyville, Kans.</b> Coffeyville Journal Bldg.
<b>KGGM 1230</b>	<b>250 Albuquerque, N. M.</b> Franciscan Hotel
<b>KGHF 1320</b>	<b>250 Pueblo, Colo.</b> C. F. Ritchie, 113 Broadway
<b>KGHI 1200</b>	<b>100 Little Rock, Ark.</b> Lloyd Judd Co., Marion Hotel
<b>KGHL 780</b>	<b>1000 Billings, Mont.</b> 5th & N. Broadway
<b>KGIR 1360</b>	<b>1000 Butte, Mont.</b> KGIR, Inc., 121 W. Broadway
<b>KGIW 1420</b>	<b>100 Alamosa, Colo.</b> Leonard E. Wilson, 326 N. Commercial
<b>KGIX 1420</b>	<b>100 Las Vegas, Nev.</b> J. M. Heaton, Box 656
<b>KGKB 1500</b>	<b>100 Tyler, Texas</b> 115 S. College
<b>KGKL 1370</b>	<b>100 San Angelo, Texas</b> KGKL, Inc., St. Angelus Hotel
<b>KGKO 570</b>	<b>500 Wichita Falls, Texas</b> 9th St. & Indiana Ave.
<b>KGKY 1500</b>	<b>100 Scottsbluff, Neb.</b> Hillard Co., Inc., 1517 1/2 Broadway
<b>KGMB 1320</b>	<b>250 Honolulu, T. H.</b> Honolulu Broadcasting Co., Box 2663
<b>KGNF 1430</b>	<b>500 North Platte, Neb.</b> Great Plains Broadcasting Co., W. 12th St.
<b>KGNO 1340</b>	<b>250 Dodge City, Kans.</b> First Natl. Bank Bldg.
<b>KGO 790</b>	<b>7500 San Francisco, Calif.</b> 111 Sutter St.
<b>KGRS 1410</b>	<b>1000 Amarillo, Texas</b> E. B. Gish, Bellaire Park
<b>KGU 750</b>	<b>2500 Honolulu, T. H.</b> Kaplanani at South St.
<b>KGVO 1200</b>	<b>100 Missoula, Mont.</b> Mosby, Inc., 240 N. Higgins
<b>KGW 620</b>	<b>1000 Portland, Ore.</b> 325 Adler St.
<b>KGY 1210</b>	<b>100 Olympia, Wash.</b> KGY, Inc., 11th and Capitol Way
<b>KHJ 900</b>	<b>1000 Los Angeles, Calif.</b> 7th at Bixel
<b>KHQ 590</b>	<b>1000 Spokane, Wash.</b> Sprague Ave. & Post St.
<b>KICA 1370</b>	<b>100 Clovis, N. M.</b> Southwest Broadcasting Co.
<b>KID 1320</b>	<b>250 Idaho Falls, Idaho</b> Park Ave. & Broadway
<b>KIDO 1350</b>	<b>1000 Boise, Idaho</b> Hotel Boise
<b>KIDW 1420</b>	<b>100 Lamar, Colo.</b> Lamar Broadcasting Co., Box 688
<b>KIEM 1210</b>	<b>100 Eureka, Calif.</b> Redwood Bdstg. Co., Vance Hotel
<b>KIEV 850</b>	<b>250 Glendale, Calif.</b> Cannon System, Ltd., Glendale Hotel
<b>KIT 1310</b>	<b>100 Yakima, Wash.</b> 109 1/2 E. Yakima Ave.
<b>KJBS 1070</b>	<b>100 San Francisco, Calif.</b> 1380 Bush St.
<b>KJR 970</b>	<b>5000 Seattle, Wash.</b> Skinner Bldg.
<b>KLCN 1290</b>	<b>100 Blytheville, Ark.</b> C. L. Lintzenleh, Main and Division St.
<b>KLO 1400</b>	<b>500 Ogden, Utah</b> 405 — 25th St.

<b>KLPM 1240</b>	<b>250 Minot, N. D.</b> John B. Cooley, Box 707
<b>KLRA 1390</b>	<b>1000 Little Rock, Ark.</b> Arkansas Broadcasting Co., Box 550
<b>KLS 1440</b>	<b>250 Oakland, Calif.</b> Warner Bros., 2201 Telegraph Ave.
<b>KLUF 1370</b>	<b>100 Galveston, Texas</b> Geo. R. Clough, 3327 Ave. P.
<b>KLX 880</b>	<b>1000 Oakland, Calif.</b> Tribune Tower
<b>KLZ 560</b>	<b>1000 Denver, Colo.</b> Shirley-Savoy Hotel
<b>KMA 930</b>	<b>500 Shenandoah, Iowa</b> Earl E. May Seed & Nursery Co.
<b>KMAC 1370</b>	<b>100 San Antonio, Texas</b> W. W. McAllister, Blue Bonnet Hotel
<b>KMBC 950</b>	<b>1000 Kansas City, Mo.</b> Pickwick Hotel
<b>KMED 1310</b>	<b>100 Medford, Ore.</b> Mrs. W. J. Virgin, Sparta Bldg.
<b>KMJ 580</b>	<b>500 Fresno, Calif.</b> Van Ness & Calaveras Sts.
<b>KMLB 1200</b>	<b>100 Monroe, La.</b> Francis Hotel
<b>KMMJ 740</b>	<b>1000 Clay Center, Neb.</b> The M. M. Johnson Co.
<b>KMO 1330</b>	<b>250 Tacoma, Wash.</b> KMO, Inc., Hotel Winthrop
<b>KMOX 1090</b>	<b>50000 St. Louis, Mo.</b> 401 S. 12th St.
<b>KMPC 710</b>	<b>500 Beverly Hills, Calif.</b> 9631 Wiltshire Blvd.
<b>KMTR 570</b>	<b>500 Hollywood, Calif.</b> KMTR Radio Corp., 915 N. Formosa Ave.
<b>KNOW 1500</b>	<b>100 Austin, Texas</b> Driskill Hotel
<b>KNX 1050</b>	<b>25000 Hollywood, Calif.</b> West. Broadcast Co., Inc., 1558 N. Vine St.
<b>KOA 830</b>	<b>50000 Denver, Colo.</b> General Electric Co., 1370 Krameria St.
<b>KOAC 550</b>	<b>1000 Corvallis, Ore.</b> Oregon State Agricultural College
<b>KOB 1180</b>	<b>10000 Albuquerque, N. M.</b> Albuquerque Journal, Box 667
<b>KOH 1380</b>	<b>500 Reno, Nev.</b> 440 N. Virginia St.
<b>KOIL 1260</b>	<b>1000 Council Bluffs, Iowa</b> Mona Motor Oil Co.
<b>KOIN 940</b>	<b>1000 Portland, Ore.</b> KOIN, Inc., New Heathman Hotel
<b>KOL 1270</b>	<b>1000 Seattle, Wash.</b> Northern Life Tower
<b>KOMA 1480</b>	<b>5000 Oklahoma City, Okla.</b> Biltmore Hotel
<b>KOMO 920</b>	<b>1000 Seattle, Wash.</b> Skinner Bldg
<b>KONO 1370</b>	<b>100 San Antonio, Texas</b> Mission Broadcast Co., St. Anthony Hotel
<b>KOOS 1200</b>	<b>250 Marshfield, Ore.</b> H. H. Hanseth, Hall Bldg.
<b>KORE 1420</b>	<b>100 Eugene, Ore.</b> 733 Willamette St.
<b>KOTN 1500</b>	<b>100 Pine Bluff, Ark.</b> William H. Chaplin, Hotel Pines
<b>KOY 1390</b>	<b>500 Phoenix, Ariz.</b> 621 N. Central Ave.
<b>KPAC 1260</b>	<b>500 Port Arthur, Texas</b> Port Arthur College
<b>KPCB 710</b>	<b>100 Seattle, Wash.</b> Tower Bldg.
<b>KPJM 1500</b>	<b>100 Prescott, Ariz.</b> Scott & Sturm, P. O. Box 782

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<b>KPO</b> 680 50000 San Francisco, Calif. 111 Sutter St.	<b>KTSM</b> 1310 100 El Paso, Texas P. O. Box 1976
<b>KPOF</b> 880 500 Denver, Colo. Pillar Of Fire, 1845 Champa St.	<b>KTUL</b> 1400 250 Tulsa, Okla. National Bank of Tulsa Bldg.
<b>KPPC</b> 1210 50 Pasadena, Calif. 585 E. Colorado St.	<b>KTW</b> 1220 1000 Seattle, Wash. 77th Ave. & Spring St.
<b>KPQ</b> 1500 100 Wenatchee, Wash. KPQ Bldg.	<b>KUJ</b> 1370 100 Walla Walla, Wash. KUJ, Inc., Marcus Whitman Hotel
<b>KPRC</b> 920 1000 Houston, Texas 2204 Shell Bldg.	<b>KUMA</b> 1420 100 Yuma, Ariz. Dr. A. H. Schermann, Box 267
<b>KQV</b> 1380 500 Pittsburgh, Pa. KQV Broadcasting Co., Investment Bldg.	<b>KUOA</b> 1260 1000 Fayetteville, Ark. KUOA, Inc., Washington Hotel
<b>KQW</b> 1010 1000 San Jose, Calif. 87 E. San Antonio St.	<b>KUSD</b> 890 500 Vermillion, S. D. University of South Dakota
<b>KRE</b> 1370 100 Berkeley, Calif. 2345 Channing Way	<b>KVI</b> 570 1000 Tacoma, Wash. W. R. Rust Bldg.
<b>KREG</b> 1500 100 Santa Ana, Calif. 3rd & Sycamore Sts.	<b>KVL</b> 1370 100 Seattle, Wash. KVL, Inc., 5th and Virginia St.
<b>KRGV</b> 1260 500 Weslaco, Texas KRGV, Inc.	<b>KVOA</b> 1260 500 Tucson, Ariz. Cons. Natl. Bank Bldg.
<b>KRKD</b> 1120 500 Los Angeles, Calif. 815 Spring Arcade Bldg.	<b>KVOD</b> 920 500 Denver, Colo. Continental Oil Bldg.
<b>KRKO</b> 1370 50 Everett, Wash. Lee Mudgett, 2814 Rucker Ave.	<b>KVOO</b> 1340 25000 Tulsa, Okla. Wright Bldg.
<b>KRLD</b> 1040 10000 Dallas, Texas KRLD Radio Corp., Adolphus Hotel	<b>KVOR</b> 1270 1000 Colorado Spg., Colo. Mining Exchange Bldg.
<b>KRMD</b> 1310 100 Shreveport, La. Jefferson Hotel	<b>KVOS</b> 1200 100 Bellingham, Wash. 115 W. Magnolia St.
<b>KROW</b> 930 500 Oakland, Calif. 1808 Franklin St.	<b>KWCR</b> 1430 250 Cedar Rapids, Iowa Hotel Montrose
<b>KRSC</b> 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club	<b>KWEA</b> 1210 100 Shreveport, La. Spring & Fannin Sts.
<b>KSAC</b> 580 500 Manhattan, Kans. State College of Agriculture	<b>KWFO</b> 1210 100 Hilo, Hawaii Hilo Broadcasting Co., Ltd.
<b>KSCJ</b> 1330 1000 Sioux City, Iowa Perkins Bros. Co., 415 Douglas St.	<b>KWG</b> 1200 100 Stockton, Calif. Medico-Dental Bldg.
<b>KSD</b> 550 500 St. Louis, Mo. 12th & Olive Sts.	<b>KWJJ</b> 1040 500 Portland, Ore. 622 S. W. Salmon St.
<b>KSEI</b> 900 250 Pocatello, Idaho Radio Service Corp., 141 S. 6th Ave.	<b>KWK</b> 1350 1000 St. Louis, Mo. Thomas Patrick, Inc., Hotel Chase
<b>KSL</b> 1130 50000 Salt Lake City, Utah Vermont Bldg.	<b>KWKC</b> 1370 100 Kansas City, Mo. 39th & Main Sts.
<b>KSLM</b> 1370 100 Salem, Ore. Oregon Radio, Inc.	<b>KWKH</b> 1100 10000 Shreveport, La. Spring & Fannin Sts.
<b>KSO</b> 1320 500 Des Moines, Iowa Des Moines Register & Tribune	<b>KWLC</b> 1270 100 Decorah, Iowa Luther College
<b>KS00</b> 1110 1000 Sioux Falls, S. D. Sioux Falls Brdstr. Assn., Carpenter Hotel	<b>KWSC</b> 1220 1000 Pullman, Wash. State College of Washington
<b>KSTP</b> 1460 10000 St. Paul, Minn. St. Paul Hotel	<b>KWTN</b> 1210 100 Watertown, S. D. Citizens Bank Bldg.
<b>KSUN</b> 1200 100 Lowell, Ariz. Copper Electrical Co., Drawer C	<b>KWTO</b> 560 1000 Springfield, Mo. KGBX Inc.
<b>KTAB</b> 560 1000 San Francisco, Calif. 5th & Mission Sts.	<b>KWYO</b> 1370 100 Sheridan, Wyo. Big Horn Brdstr. Co.
<b>KTAR</b> 620 1000 Phoenix, Ariz. 116 N. Central Ave.	<b>KXA</b> 760 250 Seattle, Wash. American Radio Tel. Co., 218 Bigelow Bldg.
<b>KTAT</b> 1240 1000 Fort Worth, Texas Ft. Worth Natl. Bank Bldg.	<b>KXL</b> 1420 100 Portland, Ore. KXL Broadcasters, Multnomah Hotel
<b>KTBS</b> 1450 1000 Shreveport, La. Box 1642	<b>KXO</b> 1500 100 El Centro, Calif. F. M. Bowles, Box 140
<b>KTFI</b> 1240 1000 Twin Falls, Idaho Radio Broadcasting Corp., Box 521	<b>KXRO</b> 1310 100 Aberdeen, Wash. KXRO, Inc., Hotel Morck
<b>KTHS</b> 1060 10000 Hot Springs, Ark. Chamber of Commerce, Box 886	<b>KXYZ</b> 1440 250 Houston, Texas Fannin & Rusk Sts.
<b>KTM</b> 780 500 Los Angeles, Calif. 214 S. Vermont St.	<b>KYA</b> 1230 1000 San Francisco, Calif. 988 Market St.
<b>KTRB</b> 740 250 Modesto, Calif. McTammany & Bates	<b>KYW</b> 1020 10000 Chicago, Ill. 310 S. Michigan Ave.
<b>KTRH</b> 1330 1000 Houston, Texas KTRH Broadcasting Co., Rice Hotel	<b>KZEG</b> 720 1000 Manila, P. I. Erianger & Galinger, Inc.
<b>KTSA</b> 550 1000 San Antonio, Texas Southwest Broadcasting Co., Plaza Hotel	<b>KZRM</b> 618.5 50000 Manila, P. I. 601 Escolta



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<b>NAA</b> 690 1000 Arlington, Va. United States Navy	<b>WATR</b> 1190 100 Waterbury, Conn. WATR Co. Inc. 47 Grand St.
<b>RDN</b> 680 500 San Salvador, E. S. Republic of El Salvador	<b>WAVE</b> 940 1000 Louisville, Ky. WAVE, Inc., 1525 Brown Hotel
<b>TGW</b> 565 10000 Guatemala, Gua. Gobierno de Guatemala	<b>WAWZ</b> 1350 250 Zarephath, N. J. Pillar of Fire.
<b>TGX</b> 1400 150 Guatemala City	<b>WAZL</b> 1420 100 Hazleton, Pa. Hazleton Broadcasting Service, Inc.
<b>TICR</b> 912 75 San Jose, C. R. Government of Costa Rica	<b>WBAA</b> 890 1000 West Lafayette, Ind. Purdue University
<b>TIFB</b> 714 30 San Jose, C. R.	<b>WBAL</b> 1060 10000 Baltimere, Md. Lexington Bldg.
<b>TIGA</b> 1014 30 Cartage, C. R.	<b>WBAP</b> 800 50000 Fort Worth, Texas Blackstone Hotel
<b>TIGP</b> 800 75 San Jose, C. R. Gonzalo Pinto H. Apt. 225	<b>WBAX</b> 1210 100 Wilkes-Barre, Pa. John H. Stenger, Jr., 70 S. Main St.
<b>TIRCA</b> 1100 500 San Jose, C. R. Perry Girton, Apt. 225	<b>WBBC</b> 1400 500 Brooklyn, N. Y. 552-54 Atlantic Ave.
<b>TISO</b> 550 250 San Jose, C. R. P. F. Saborio, Apt. 1354	<b>WBBL</b> 1210 100 Richmond, Va. 1627 Monument Ave.
<b>TIVL</b> 835 30 San Jose, C. R.	<b>WBBM</b> 770 25000 Chicago, Ill. WBBM Broadcasting Corp., Wrigley Bldg.
<b>VAS</b> 685 2000 Glace Bay, N. S. Canadian Marconi Co., Ltd.	<b>WBBR</b> 1300 1000 Brooklyn, N. Y. 124 Columbia Heights
<b>VESEK</b> 1185 10 Montmagny, Que. J. A. Marquis, P. O. Box 82	<b>WBBZ</b> 1200 100 Ponca City, Okla. C. L. Carrell, 407 W. South Ave.
<b>VOAC</b> 1300 40 St. John's, Nfld.	<b>WBCM</b> 1410 500 Bay City, Mich. James E. Davidson, Hotel Wenonah
<b>VOAS</b> 940 100 St. John's N. F. Ayre & Sons, Ltd., Water St.	<b>WBEN</b> 900 1000 Buffalo, N. Y. WBEN, Inc., Hotel Statler
<b>VOGY</b> 840 400 St. John's, N. F. Newfoundland Hotel	<b>WBEQ</b> 1310 100 Marquette, Mich. 146 W. Washington St.
<b>VONF</b> 950 5000 St. John's N. F. Dominion Broadcasting Co., Ltd., Box 135	<b>WBHS</b> 1200 100 Huntsville, Ala. Virgil V. Evans
<b>VOWR</b> 681 500 St. John's, N. F. Wesley United Church, Box 157	<b>WBIG</b> 1440 500 Greensboro, N. C. Box 408
<b>WAAB</b> 1410 500 Boston, Mass. 21 Brookline Ave.	<b>WBNO</b> 1200 100 New Orleans, La. Hotel Marberc
<b>WAAF</b> 920 500 Chicago, Ill. 836 Exchange Ave.	<b>WBNS</b> 1430 500 Columbus, O. 33 N. High St.
<b>WAAT</b> 940 300 Jersey City, N. J. Bremer Broadcasting Corp., 50 Journal Sq	<b>WBNX</b> 1350 250 New York, N. Y. 260 E. 161st St.
<b>WAAW</b> 660 500 Omaha, Neb. Omaha Grain Exchange	<b>WBOQ</b> 860 50000 New York, N. Y. Atlantic Broadcasting Corp.
<b>WABC</b> 860 50000 New York, N. Y. 485 Madison Ave.	<b>WBOW</b> 1310 100 Terre Haute, Ind. Banks of Wabash, Inc., 19 Beach Block
<b>WABI</b> 1200 100 Bangor, Maine First Universalist Society Park St.	<b>WBRB</b> 1210 100 Red Bank, N. J. 63 Broad St.
<b>WABY</b> 1370 100 Hudson Falls, N. Y. Colonial Display House	<b>WBRC</b> 930 1000 Birmingham, Ala. Bankhead Hotel
<b>WACO</b> 1420 100 Waco, Texas Amlcable Bldg.	<b>WBRE</b> 1310 100 Wilkes-Barre, Pa. Louis G. Baltimore, 16 N. Main
<b>WADC</b> 1320 1000 Akron, Ohio Allen T. Simmons, P. O. Box 29	<b>WBSE</b> 920 500 Babson Park, Mass. Drawer B
<b>WAGF</b> 1370 100 Dothan, Ala. P. O. Box 25	<b>WBT</b> 1080 50000 Charlotte, N. C. Station WBT, Inc., Wilder Bldg.
<b>WAGM</b> 1420 100 Presque Isle, Me. Aroostook Broadcasting Corp., Main St.	<b>WBTM</b> 1370 100 Danville, Va. Miller Bldg.
<b>WAIU</b> 640 500 Columbus, Ohio Deshler-Wallek Hotel	<b>WBZ</b> 990 50000 Boston, Mass. Hotel Bradford
<b>WALA</b> 1380 500 Mobile, Ala. Battle House	<b>WBZA</b> 990 1000 Springfield, Mass. Hotel Kimball
<b>WALR</b> 1210 100 Zanesville, Ohio First Trust & Savs. Bank Bldg.	<b>WCAC</b> 600 500 Storrs, Conn. Connecticut State College
<b>WAML</b> 1310 100 Laurel, Miss. Southland Radio Corp., Box 26	<b>WCAD</b> 1220 500 Canton, N. Y. St. Lawrence University
<b>WAPI</b> 1140 5000 Birmingham, Ala. Protective Life Bldg.	<b>WCAE</b> 1220 1000 Pittsburgh, Pa. 6th Ave. & Smithfield St.
<b>WARD</b> 1400 500 Brooklyn, N. Y. 427 Flatbush Ave., Ext.	<b>WCAL</b> 1250 1000 Northfield, Minn. St. Olaf College
<b>WASH</b> 1270 500 Grand Rapids, Mich. Grand Rapids Natl. Bank Bldg.	<b>WCAM</b> 1280 500 Camden, N. J. City of Camden, City Hall

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<b>WCAO</b> 600 500 Baltimore, Md. 811 W. Lanvale St.	<b>WDRC</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 Denmark, 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. Nicollet Hotel	<b>WEEI</b> 590 1000 Boston, Mass. 182 Tremont St.
<b>WCFL</b> 970 1500 Chicago, Ill. 666 Lake Shore Drive	<b>WEUU</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> 1420 100 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 Fiske, 1625 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>WCOL</b> 1210 100 Columbus, Ohio WCOL Inc., 30 N. High St.	<b>WEXL</b> 1310 50 Royal Oak, Mich. 212 W. 6th St.
<b>WCRW</b> 1210 100 Chicago, Ill. Clinton R. White, 2756 Pine Grove Ave.	<b>WFAA</b> 800 50000 Dallas, Texas Baker Hotel
<b>WCSC</b> 1360 500 Charleston, S. C. Francis Marion Hotel	<b>WFAB</b> 1300 1000 New York, N. Y. Fifth Avenue Broadcasting Corp.
<b>WCSH</b> 940 1000 Portland, Me. 579 Congress St.	<b>WFAM</b> 1200 100 South Bend, Ind. South Bend Tribune, 225 W. Colfax Ave.
<b>WDAE</b> 1220 1000 Tampa, Fla. Tampa Times Co., Tampa Terrace	<b>WFAS</b> 1210 100 White Plains, N. Y. Hotel Roger Smith
<b>WDAF</b> 610 1000 Kansas City, Mo. 1729 Grand Ave.	<b>WFBC</b> 1300 1000 Greenville, S. C. Imperial Hotel
<b>WDAG</b> 1410 1000 Amarillo, Texas Box 306	<b>WFBE</b> 1200 100 Cincinnati, Ohio WFBE, Inc., Hotel Sinton
<b>WDAH</b> 1310 100 El Paso, Texas Box 1976	<b>WFBG</b> 1310 100 Altoona, Pa. Gable Broadcasting Co. 12th Av. & 13th St.
<b>WDAS</b> 1370 100 Philadelphia, Pa. WDAS Brdestg. Co., Inc., Broadwood Hotel	<b>WFBL</b> 1360 1000 Syracuse, N. Y. Onondaga Hotel
<b>WDAY</b> 940 1000 Fargo, N. D. WDAY, Inc., Black Bldg., 118 Broadway	<b>WFBM</b> 1230 1000 Indianapolis, Ind. 48 Monument Circle
<b>WDEJ</b> 930 1000 Roanoke, Va. Times World Corp., P. O. Box 150	<b>WFBZ</b> 1270 500 Baltimore, Md. 7 St. Paul St.
<b>WDBO</b> 580 250 Orlando, Fla. 555 N. Orange Ave.	<b>WFDF</b> 1310 100 Flint, Mich. Union Industrial Bldg.
<b>WDEL</b> 1120 250 Wilmington, Del. WDEL, Inc., 10th and King Sts.	<b>WFEA</b> 1340 600 Manchester, N. H. Carpenter Hotel
<b>WDEV</b> 550 500 Waterbury, Vt. Harry C. Whitehill, Stowe St.	<b>WFI</b> 560 500 Philadelphia, Pa. WFI Broadcasting Co., 801 Market
<b>WDGY</b> 1180 1000 Minneapolis, Minn. Dr. Geo. W. Young, 909 W. Broadway	<b>WFLA</b> 620 1000 Clearwater, Fla. Box 119
<b>WDNC</b> 1500 100 Durham, N. C. Washington Duke Hotel	<b>WGAL</b> 1500 100 Lancaster, Pa. WGAL, Inc., 8 W. King St.
<b>WDOD</b> 1280 1000 Chattanooga, Tenn. WDOD Broadcasting Corp., Hotel Patten	<b>WGAR</b> 1450 500 Cleveland, Ohio WGAR Broadcasting Co., Hotel Statler

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<b>WGBB 1210</b>	<b>100</b>	<b>Freeport, N. Y.</b> H. H. Carman, 64 S. Grove St.
<b>WGBF 630</b>	<b>500</b>	<b>Evansville, Ind.</b> 519 Vine St.
<b>WGBI 880</b>	<b>500</b>	<b>Scranton, Pa.</b> 116 N. Washington Ave.
<b>WGCM 1210</b>	<b>100</b>	<b>Gulfport, Miss.</b> Great Southern Hotel
<b>WGES 1360</b>	<b>500</b>	<b>Chicago, Ill.</b> 128 N. Crawford Ave.
<b>WGH 1310</b>	<b>100</b>	<b>Newport News, Va.</b> 2813 Washington Ave.
<b>WGL 1370</b>	<b>100</b>	<b>Fort Wayne, Ind.</b> F. C. Zieg, 213 W. Main St.
<b>WGLC 1370</b>	<b>100</b>	<b>Hudson Falls, N. Y.</b> Colonial Display House
<b>WGN 720</b>	<b>50000</b>	<b>Chicago, Ill.</b> WGN, Inc., Tribune Tower
<b>WGNV 1210</b>	<b>100</b>	<b>Chester, N. Y.</b> Peter Goelet (Orange County)
<b>WGPC 1420</b>	<b>100</b>	<b>Albany, Ga.</b> Rylander Theatre Bldg.
<b>WGR 550</b>	<b>1000</b>	<b>Buffalo, N. Y.</b> Rand Bldg.
<b>WGST 890</b>	<b>250</b>	<b>Atlanta, Ga.</b> Ansley Hotel
<b>WGY 790</b>	<b>50000</b>	<b>Schenectady, N. Y.</b> 1 River Road
<b>WHA 940</b>	<b>2500</b>	<b>Madison, Wis.</b> University of Wisconsin
<b>WHAM 1150</b>	<b>50000</b>	<b>Rochester, N. Y.</b> 100 Carlson Road
<b>WHAS 820</b>	<b>50000</b>	<b>Louisville, Ky.</b> 800 W. Liberty St.
<b>WHAT 1310</b>	<b>100</b>	<b>Philadelphia, Pa.</b> Public Ledger Bldg.
<b>WHAZ 1300</b>	<b>500</b>	<b>Troy, N. Y.</b> 8th St.
<b>WHB 860</b>	<b>500</b>	<b>Kansas City, Mo.</b> WHB Broadcasting Co., Scarritt Bldg.
<b>WHBC 1200</b>	<b>100</b>	<b>Canton, Ohio</b> Edw. P. Graham, 319 Tusc. St., W.
<b>WHBD 1370</b>	<b>100</b>	<b>Mount Orab, Ohio</b> F. P. Moler
<b>WHBF 1210</b>	<b>100</b>	<b>Rock Island, Ill.</b> Hotel Harms
<b>WHBI 1250</b>	<b>1000</b>	<b>Newark, N. J.</b> 100 Shipman St.
<b>WHBL 1410</b>	<b>500</b>	<b>Sheboygan, Wis.</b> Press Publishing Co., Press Bldg.
<b>WHBQ 1370</b>	<b>100</b>	<b>Memphis, Tenn.</b> Brdestg. Sta. WNBQ, Inc., Hotel Claridge
<b>WHBU 1210</b>	<b>100</b>	<b>Anderson, Ind.</b> Anderson Broadcasting Corp., Box 816
<b>WHBY 1200</b>	<b>100</b>	<b>Green Bay, Wis.</b> WHBY, Inc., Bellin Bldg.
<b>WHDF 1370</b>	<b>100</b>	<b>Calumet, Mich.</b> Box 643
<b>WHDH 830</b>	<b>1000</b>	<b>Boston, Mass.</b> Matheson Radio Co., 62 Boylston
<b>WHDL 1420</b>	<b>100</b>	<b>Olean, N. Y.</b> Iroquois Hotel
<b>WHEB 740</b>	<b>250</b>	<b>Portsmouth, N. H.</b> Box 522, 39 Congress St.
<b>WHEC 1430</b>	<b>500</b>	<b>Rochester, N. Y.</b> WHEC, Inc., 40 Franklin St.
<b>WHEF 1500</b>	<b>100</b>	<b>Kosciusko, Miss.</b> 417 W. Adams St.
<b>WHFC 1420</b>	<b>100</b>	<b>Cicero, Ill.</b> WHFC, Inc., 6138 W. Cermak Road
<b>WHIS 1410</b>	<b>250</b>	<b>Bluefield, W. Va.</b> Bland St.

<b>WHJB 620</b>	<b>250</b>	<b>Greensburg, Pa.</b> Penna. Radio Supply House
<b>WHK 1390</b>	<b>1000</b>	<b>Cleveland, Ohio</b> 1311 Terminal Tower
<b>WHN 1010</b>	<b>1000</b>	<b>New York, N. Y.</b> 1540 Broadway
<b>WHO 1000</b>	<b>50000</b>	<b>Des Moines, Iowa</b> Central Brdestg. Co., 914 Walnut St.
<b>WHOM 1450</b>	<b>250</b>	<b>Jersey City, N. J.</b> 2870 Boulevard
<b>WHP 1430</b>	<b>500</b>	<b>Harrisburg, Pa.</b> WHP, Inc., 216 Locust St.
<b>WIBA 1280</b>	<b>1000</b>	<b>Madison, Wis.</b> 111 King St.
<b>WIBG 970</b>	<b>100</b>	<b>Glenside, Pa.</b> WIBG, Inc., Keswick Bldg.
<b>WIBM 1370</b>	<b>100</b>	<b>Jackson, Mich.</b> WIBM, Inc., 306 W. Michigan Ave.
<b>WIBU 1210</b>	<b>100</b>	<b>Poynette, Wis.</b> Wm. C. Forrest, R. F. D. No. 3
<b>WIEW 580</b>	<b>1000</b>	<b>Topeka, Kans.</b> 11th & Topeka Blvd.
<b>WIBX 1200</b>	<b>100</b>	<b>Utica, N. Y.</b> WIBX, Inc., 1st Natl. Bank Bldg.
<b>WICC 600</b>	<b>250</b>	<b>Bridgeport, Conn.</b> Southern Conn. Broadcasting Corp.
<b>WIL 1200</b>	<b>100</b>	<b>St. Louis, Mo.</b> Melbourne Hotel
<b>WILL 890</b>	<b>250</b>	<b>Urbana, Ill.</b> University of Illinois
<b>WILM 1420</b>	<b>100</b>	<b>Wilmington, Del.</b> 920 King St.
<b>WIND 560</b>	<b>1000</b>	<b>Gary, Ind.</b> 604 Broadway
<b>WINS 1180</b>	<b>1000</b>	<b>New York, N. Y.</b> 110 E. 58th St.
<b>WIOD 1300</b>	<b>1000</b>	<b>Miami, Fla.</b> Herald Bldg.
<b>WIP 610</b>	<b>500</b>	<b>Philadelphia, Pa.</b> Gimbel Bldg.
<b>WIS 560</b>	<b>1000</b>	<b>Columbia, S. C.</b> Station WIS, Inc., 1811 Main St.
<b>WISN 1120</b>	<b>250</b>	<b>Milwaukee, Wis.</b> 123 W. Michigan St.
<b>WJAC 1310</b>	<b>100</b>	<b>Johnstown, Pa.</b> WJAC, Inc., Locust St.
<b>WJAG 1060</b>	<b>1000</b>	<b>Norfolk, Neb.</b> Norfolk Daily News
<b>WJAR 890</b>	<b>500</b>	<b>Providence, R. I.</b> Outlet Co., Weybossett St.
<b>WJAS 1290</b>	<b>1000</b>	<b>Pittsburgh, Pa.</b> Chamber of Commerce Bldg.
<b>WJAX 900</b>	<b>1000</b>	<b>Jacksonville, Fla.</b> City of Jacksonville
<b>WJAY 610</b>	<b>500</b>	<b>Cleveland, Ohio</b> 1224 Huron Road
<b>WJBC 1200</b>	<b>100</b>	<b>Bloomington, Ill.</b> Kaskaskia Broadcasting Co.
<b>WJBK 1500</b>	<b>100</b>	<b>Detroit, Mich.</b> 6559 Hamilton Ave.
<b>WJBL 1200</b>	<b>100</b>	<b>Decatur, Ill.</b> Gushard Bldg.
<b>WJBO 1420</b>	<b>100</b>	<b>Baton Rouge, La.</b> Baton Rouge Broadcasting Co., Inc.
<b>WJBW 1200</b>	<b>100</b>	<b>New Orleans, La.</b> C. C. Carlson, 2743 Dumaine St.
<b>WJBY 1210</b>	<b>100</b>	<b>Gadsden, Ala.</b> Gadsden Broadcasting Co., 112 N. 8th St.
<b>WJDX 1270</b>	<b>1000</b>	<b>Jackson, Miss.</b> Lamar Life Bldg.
<b>WJEJ 1210</b>	<b>100</b>	<b>Hagerstown, Md.</b> Lovely Dame Bldg.

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<b>WJJD 1130 20000 Chicago, Ill.</b> WJJD, Inc., 201 N. Wells St.	<b>WLS 870 50000 Chicago, Ill.</b> 1230 W. Washington Blvd.
<b>WJMS 1420 100 Ironwood, Mich.</b> WJMS, Inc., St. James Hotel	<b>WLTH 1400 500 Brooklyn, N. Y.</b> 305 Washington St.
<b>WJR 750 10000 Detroit, Mich.</b> WJR, Inc., Fisher Bldg.	<b>WLVA 1200 100 Lynchburg, Va.</b> 915 Main St.
<b>WJSV 1460 10000 Washington, D. C.</b> Shoreham Bldg.	<b>WLW 700 50000 Cincinnati, Ohio</b> 1329 Arlington St.
<b>WJTL 1370 100 Atlanta, Ga.</b> Oglethorpe University	<b>WLWL 1100 5080 New York, N. Y.</b> 415 W. 69th St.
<b>WJW 1210 100 Akron, Ohio</b> WJW, Inc., 41 S. High St.	<b>WMAL 630 250 Washington, D. C.</b> 712-11th St., N. W.
<b>WJZ 760 50000 New York, N. Y.</b> 30 Rockefeller Plaza	<b>WMAQ 670 5000 Chicago, Ill.</b> Merchandise Mart
<b>WKAQ 1240 1000 San Juan, P. R.</b> Radio Corp. of Porto Rico, P. O. Box 858	<b>WMAS 1420 100 Springfield, Mass.</b> WMAS, Inc., 70 Chestnut St.
<b>WKAR 1040 1000 East Lansing, Mich.</b> Michigan State College	<b>WMAZ 1130 1080 Macon, Ga.</b> 211 Cotton Ave.
<b>WKBB 1500 100 East Dubuque, Ill.</b> Richard W. Hoffman	<b>WMBC 1420 100 Detroit, Mich.</b> 7310 Woodward Ave.
<b>WKBF 1400 500 Indianapolis, Ind.</b> 540 N. Meridian St.	<b>WMBD 1440 500 Peoria, Ill.</b> 114 N. Madison St.
<b>WKBH 1380 1000 LaCrosse, Wis.</b> WKBH, Inc., 409 Main St.	<b>WMBG 1210 100 Richmond, Va.</b> 914 W. Broad St.
<b>WKBI 1420 100 Cicero, Ill.</b> WKBI Inc., 6138 W. Cermak Road	<b>WMBH 1420 100 Joplin, Mo.</b> 1334 Roosevelt St.
<b>WKBN 570 500 Youngstown, Ohio</b> 17 N. Champlon St.	<b>WMBI 1080 5000 Chicago, Ill.</b> 153 Institute Place
<b>WKBO 1200 100 Harrisburg, Pa.</b> Penn Harris Hotel	<b>WMBO 1310 100 Auburn, N. Y.</b> WMBO, Inc., Metcalf Bldg.
<b>WKBV 1500 100 Richmond, Ind.</b> Knox Radio Corp., Box 308	<b>WMBQ 1500 100 Brooklyn, N. Y.</b> Paul J. Gollhofer, 95 Leonard St.
<b>WKBW 1480 5000 Buffalo, N. Y.</b> Rand Bldg.	<b>WMBR 1370 100 Jacksonville, Fla.</b> F. J. Reynolds, Carling Hotel
<b>WKBZ 1500 100 Muskegon, Mich.</b> Karl L. Ashbacher & Sons	<b>WMC 780 1000 Memphis, Tenn.</b> WMC, Inc., Hotel Gayoso.
<b>WKEU 1500 100 LaGrange, Ga.</b> Radio Station WKEU, 906 Hill St.	<b>WMCA 570 500 New York, N. Y.</b> 1897 Broadway
<b>WKFI 1210 100 Greenwood, Miss.</b> J. Pat Scully, Box 302	<b>WMEX 1500 100 Chelsea, Mass.</b> The Northern Corp.
<b>WKJC 1200 100 Lancaster, Pa.</b> 16 W. King St.	<b>WMFD 1370 100 Wilmington, N. C.</b> Richard Austin Dunlea
<b>WKOK 1210 100 Sunbury, Pa.</b> 1150 N. Front St.	<b>WMFE 1380 250 New Britain, Conn.</b> William J. Sanders
<b>WKRC 550 1000 Cincinnati, Ohio</b> WKRC, Inc., Hotel Aims	<b>WMFF 1310 100 Plattsburg, N. Y.</b> Plattsburg Broadcasting Corp.
<b>WKY 900 1000 Oklahoma City, Okla.</b> Plaza Court Bldg.	<b>WMFG 1210 100 Hibbing, Minn.</b> Head of the Lakes Brdcastg. Co.
<b>WKZO 590 1000 Kalamazoo, Mich.</b> John E. Fetser, Burdick Hotel	<b>WMMN 890 250 Fairmont, W. Va.</b> A. M. Rowe, Inc., 325 Main St.
<b>WLAC 1470 5000 Nashville, Tenn.</b> 159-4th Ave. No.	<b>WMPC 1200 100 Lapeer, Mich.</b> 81 Liberty St.
<b>WLAP 1420 100 Lexington, Ky.</b> Main & Esplanade	<b>WMT 600 500 Waterloo, Iowa</b> 3rd & Lafayette Sts.
<b>WLB 1250 1000 Minneapolis, Minn.</b> University of Minnesota	<b>WNAC 1230 1000 Boston, Mass.</b> 21 Brookline Ave.
<b>WLBC 1310 100 Muncie, Ind.</b> D. A. Burton, Anthony Bldg.	<b>WNAD 1010 500 Norman, Okla.</b> University of Oklahoma
<b>WLBF 1420 100 Kansas City, Kans.</b> WLBFB Broadcasting Co., Huron Bldg.	<b>WNAX 570 1000 Yankton, S. D.</b> House of Gurney, Inc., 2nd and Capital St.
<b>WLBL 900 2500 Stevens Point, Wis.</b> Wisconsin Dept. of Agriculture and Markets	<b>WNEF 1500 100 Binghamton, N. Y.</b> Arlington Hotel
<b>WLBW 1260 1000 Erie, Pa.</b> Broadcasters of Pennsylvania, Inc.	<b>WNBH 1310 100 New Bedford, Mass.</b> 251 Union St.
<b>WLBZ 620 500 Bangor, Me.</b> Maine Broadcasting Co., Inc., 100 Main	<b>WNB0 1200 100 Washington, Pa.</b> 319 E. Beau St.
<b>WLIT 560 500 Philadelphia, Pa.</b> 8th & Market Sts.	<b>WNER 1430 500 Memphis, Tenn.</b> Memphis Broadcasting Co., Hotel DeVoy
<b>WLLH 1370 100 Lowell, Mass.</b> Albert S. Moffat, Box D	<b>WNBX 1260 1000 Springfield, Vt.</b> WNBX Broadcasting Corp., 39 Main St.

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<b>WNBZ 1290 50</b> Saranac Lake, N. Y. Smith & Mace, 70 Broadway	<b>WRAP 1370 100</b> Williamsport, Pa. WRAP, Inc., 244 W. 4th St.
<b>WNEL 1290 500</b> San Juan, P. R. Box 1252	<b>WRAX 920 250</b> Philadelphia, Pa. WRAX Broadcasting Co., 217 S. Broad St.
<b>WNEW 1250 1000</b> Newark, N. J. Wodaam Corp., 1060 Broad	<b>WRBL 1200 100</b> Columbus, Ga. Royal Theatre Bldg.
<b>WNOX 1010 1000</b> Knoxville, Tenn. WNOX, Inc., Hotel Andrew Johnson	<b>WRBX 1410 250</b> Reaneke, Va. P. O. Box 2389
<b>WNRA 1420 100</b> Muscle Shoals, Ala. Kathryn Jones, P. O. Box 486, Sheffield, Ala.	<b>WRC 950 500</b> Washington, D. C. National Press Bldg.
<b>WNYC 810 500</b> New York, N. Y. Centre & Duane Sts.	<b>WRDO 1370 100</b> Augusta, Me. WRDO, Inc., Augusta House
<b>WOAI 1190 50000</b> San Antonio, Texas Southland Industries, Inc., 1038 Navarro	<b>WRDW 1500 100</b> Augusta, Ga. Virgil V. Evans Co., 309 8th St.
<b>WOC 1370 100</b> Davenport, Iowa Palmer School of Chiropractic	<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 640 500</b> Ames, Iowa Iowa State College	<b>WRGA 1500 100</b> Remo, Ga. 10 Thrd Ave.
<b>WOKO 1430 500</b> Albany, N. Y. WOKO, Inc., Hotel Ten Eyck	<b>WRJN 1370 100</b> Racine, Wis. Racine Broadcasting Corp., Hotel Racine
<b>WOL 1310 100</b> Washington, D. C. American Broadcasting Co., Annapolis Hotel	<b>WROK 1410 500</b> Rockford, Ill. 109 So. Water St.
<b>WOMT 1210 100</b> Manitowoc, Wis. Francis M. Kadow, Box 326	<b>WROL 1310 100</b> Knoxville, Tenn. Stuart Broadcasting Corp., 524 S. Gay
<b>WOOD 1270 500</b> Grand Rapids, Mich. Grand Rapids Natl. Bank Bldg.	<b>WRR 1280 500</b> Dallas, Texas City of Dallas, Southland Life Bldg.
<b>WOPI 1500 100</b> Bristol, Tenn. 22nd & State Sts.	<b>WRUF 830 5000</b> Gainesville, Fla. State University
<b>WOR 710 5000</b> Newark, N. J. 147 Market St.	<b>WRVA 1110 5000</b> Richmond, Va. Larus & Bros Co., Inc., 22nd and Gary St.
<b>WORC 1280 500</b> Worcester, Mass. Alfred F. Kleindienst, 60 Franklin St.	<b>WSAI 1330 1000</b> Cincinnati, Ohio Crosley Radio Corp., 1329 Arlington
<b>WORK 1320 1000</b> York, Pa. York Broadcasting Co., 15 S. Beaver St.	<b>WSAJ 1310 100</b> Grove City, Pa. Grove City College, 418 Poplar St.
<b>WOS 630 500</b> Jefferson City, Mo. State Highway Control, Capitol Bldg.	<b>WSAN 1440 250</b> Allentown, Pa. WSAN, Inc., 39 10th St.
<b>WOSU 570 750</b> Columbus, Ohio Ohio State University	<b>WSAR 1450 250</b> Fall River, Mass. Academy of Music Bldg.
<b>WOV 1130 1000</b> New York, N. Y. 16 E. 42nd St.	<b>WSAZ 1190 1000</b> Huntington, W. Va. WSAZ, Inc., P. O. Box 729
<b>WOW 590 1000</b> Omaha, Neb. Woodmen of the World, 4th and Farnam	<b>WSB 740 50000</b> Atlanta, Ga. Atlanta Journal, 7 N. Forsyth St.
<b>WOWO 1160 10000</b> Fort Wayne, Ind. Main Auto Supply Co., 213 W. Main	<b>WSBC 1210 100</b> Chicago, Ill. Gene T. Dyer, 1258 S. Michigan Ave.
<b>WPAD 1420 100</b> Paducah, Ky. 2201 Broadway	<b>WSBT 1360 500</b> South Bend, Ind. South Bend Tribune, 225 W. Colfax Ave.
<b>WPEN 920 250</b> Philadelphia, Pa. 22nd & Walnut Sts.	<b>WSFA 1410 500</b> Montgomery, Ala. Jefferson Davis Hotel
<b>WPFB 1370 100</b> Hattiesburg, Miss. Otis P. Eure, Box 530	<b>WSGN 1310 100</b> Birmingham, Ala. R. B. Broyles, Tutwiler Hotel
<b>WPG 1100 5000</b> Atlantic City, N. J. Convention Hall	<b>WSIX 1210 100</b> Springfield, Tenn. 638 Tire & Vulcanizing Co.
<b>WPHR 880 100</b> Petersburg, Va. WLBG, Inc., Medical Arts Bldg.	<b>WSJS 1310 100</b> Winston-Salem, N. C. Winston-Salem Journal Co., 416 N. Marshall
<b>WPRO 630 250</b> Providence, R. I. Cherry & Webb Brdstg. Co., 15 Chestnut	<b>WSM 650 50000</b> Nashville, Tenn. 301-7th Ave. No.
<b>WPTF 680 5000</b> Raleigh, N. C. 324 Fayetteville St.	<b>WSMB 1320 500</b> New Orleans, La. WSMB, Inc., Malson Blanche Bldg.
<b>WQAM 560 1000</b> Miami, Fla. Miami Brdstg. Co., Inc., 327 N. E. 1st Ave.	<b>WSMK 1380 200</b> Dayton, Ohio WSMK Inc., 4th and Main St.
<b>WQAN 880 250</b> Scranton, Pa. Scranton Times, 149 Penn Ave.	<b>WSOC 1210 100</b> Charlotte, N. C. WSOC, Inc., Box 730
<b>WQBC 1360 500</b> Vicksburg, Miss. Delta Broadcasting Co., Hotel Vicksburg	<b>WSPA 920 1000</b> Spartanburg, S. C. Virgil V. Evans, Ravenel and Avant St.
<b>WQDM 1370 100</b> St. Albans, Vt. 42 N. Main St.	<b>WSPD 1340 1000</b> Toledo, Ohio Toledo Broadcasting Co., 505 Jefferson
<b>WQDX 1210 100</b> Thomasville, Ga. Stevens Luke, 135 E. Jackson St.	<b>WSUI 880 500</b> Iowa City, Iowa State University of Iowa
<b>WRAC 1370 100</b> Williamsport, Pa. WRAC, Inc., 244 W. 4th St.	<b>WSUN 620 1000</b> St. Petersburg, Fla. Chamber of Commerce

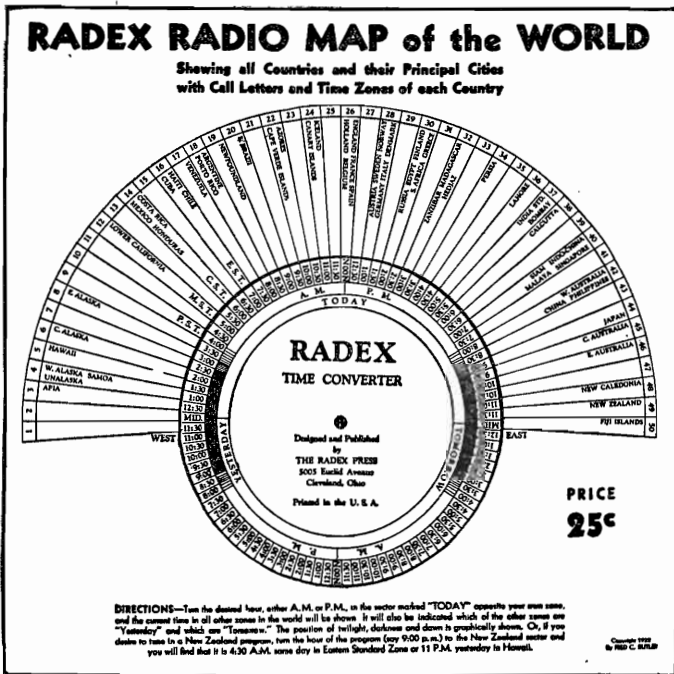
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<b>WSVA</b> 550 500 Staunton, Va. Marlon K. Gilliam	<b>XEAA</b> 920 200 Mexicali, B. C. Apdo. 42
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<b>WSYB</b> 1500 100 Rutland, Vt. Philip Weiss Music Co., 80 West St.	<b>XEAF</b> 990 250 Nogales, Son. Francisco G. Elias, Hotel Central
<b>WSYR</b> 570 250 Syracuse, N. Y. E. Onondaga & S. Warren Sts.	<b>XEAI</b> 1240 100 Mexico City, D. F. Carlos Gonzales Caballero, Insurgentes 366
<b>WTAD</b> 1440 500 Quincy, Ill. Illinois Brdestg. Corp., State and 6th	<b>XEAL</b> 660 1000 Mexico City, D. F. Apdo. 1903
<b>WTAG</b> 580 500 Worcester, Mass. 18 Franklin St.	<b>XEAM</b> 750 50 Nuevo Laredo, Tams. Edificio Banco Longoria
<b>WTAM</b> 1070 50000 Cleveland, Ohio 1367 E. 6th St.	<b>XEAO</b> 560 250 Mexicali, B. C. Luis L. Castro, C. Altamirano 156
<b>WTAQ</b> 1330 1000 Eau Claire, Wis. Gillette Rubber Co., Hotel Eau Claire	<b>XEAW</b> 960 10000 Reynosa, Tams. Internacional Broadcasting Co., S. A.
<b>WTAR</b> 780 500 Norfolk, Va. WTAR Radio Corp., Wainwright Bldg.	<b>XEAZ</b> 1420 7 Leon, Guan. Poctos 47
<b>WTAW</b> 1120 500 College Station, Tex. Agricultural and Mechanical College	<b>XEB</b> 1030 10000 Mexico City, D. F. El Buen Tono, S. A., Apdo. 79-44
<b>WTAX</b> 1210 100 Springfield, Ill. WTAX, Inc., 416 E. Capitol Ave.	<b>XEBC</b> 760 2500 Agua Caliente, B. C. Agua Caliente Hotel
<b>WTBO</b> 800 250 Cumberland, Md. Associated Brdestg. Corp., Box 794	<b>XECW</b> 1310 10 Mexico City, D. F. Maria Elena Bravode Cordero Ave. Juarez 104
<b>WTCN</b> 1250 1000 Minneapolis, Minn. Wesley Temple Bldg.	<b>XED</b> 1160 500 Guadalajara, Jal. Cla. Radiofonografica, Apdo. 197
<b>WTEL</b> 1310 100 Philadelphia, Pa. Broad & Erle Ave.	<b>XEE</b> 1210 50 Durango, Dgo. 20 de Nov. 112 (Apdo. 148)
<b>WTFI</b> 1450 500 Athens, Ga. 133 E. Washington St.	<b>XEFA</b> 1180 500 Mexico City, D. F. Eduardo Limon Segul, Meditarraneo 236
<b>WTIC</b> 1040 50000 Hartford, Conn. 26 Grove St.	<b>XEFB</b> 1420 100 Monterrey, N. L. Jesus Quintanilla, P. O. Box 317
<b>WTJS</b> 1310 100 Jackson, Tenn. Sun Publishing Co., Sun Bldg.	<b>XEFC</b> 1310 100 Merida, Yuc. J. Molina Font. Calle 59, 517
<b>WTMJ</b> 620 1000 Milwaukee, Wis. The Journal Co., 333 W. State St.	<b>XEFE</b> 1370 100 Laredo, Tams. R. T. Carranza, Km. 4 Carretera Laredo Mt.
<b>WTNJ</b> 1280 500 Trenton, N. J. Trenton Brdestg. Co., Stacy Trent Hotel	<b>XEFG</b> 1100 250 Mexico City, D. F. Ricardo Gonzales Montero, Tepló 48
<b>WTOC</b> 1260 1000 Savannah, Ga. Savannah Brdestg. Co., De Soto Hotel	<b>XEFI</b> 1440 250 Chihuahua, Chih. Feliciano Lopez Isles, Ap. 157
<b>WTRC</b> 1310 50 Elkhart, Ind. Truth Radio Corp., Hotel Elkhart	<b>XEFJ</b> 1210 100 Monterrey, N. L. R. Junco de la Vega, P. O. Box 186
<b>WVFW</b> 1400 500 Brooklyn, N. Y. Paramount Brdestg. Co., 1 Nevins St.	<b>XEFO</b> 940 5000 Mexico City, D. F. Reforma No. 137
<b>WWAE</b> 1200 100 Hammond, Ind. 402 Hammond Bldg.	<b>XEFV</b> 1210 100 Jaurez, Chih. Cordova & Prieto, Ave. Ferrocarril 104
<b>WWJ</b> 920 1000 Detroit, Mich. Evening News Assn., 616 Lafayette Blvd.	<b>XEFW</b> 1310 70 Tampico, Tams. J. E. Martinez, Salvador Diaz Miron 6
<b>WWL</b> 850 10000 New Orleans, La. Loyola University, Roosevelt Hotel	<b>XEFZ</b> 1370 100 Mexico City, D. F. Manuel Zetina, Calzada Nonolco 481
<b>WWNC</b> 570 1000 Asheville, N. C. Citizen Brdestg. Co., Inc., Flatiron Bldg.	<b>XEH</b> 1150 250 Monterrey, N. L. Tarnava y Cia, P. O. Box 147
<b>WWPA</b> 850 250 Clarion, Pa.	<b>XEI</b> 1370 125 Morelia, Mich. Carlos Gutierrez M., F. I. Madero 545
<b>WWRL</b> 1500 100 Woodside, N. Y. 4130-58th St.	<b>XEJ</b> 1020 250 Juarez, Chih. Juan G. Buttner, P. O. Box 111
<b>WWSW</b> 1500 100 Pittsburgh, Pa. Hotel Schenley	<b>XEK</b> 990 100 Mexico City, D. F. Arturo Martinez, Jalapa No. 51
<b>WWVA</b> 1160 5000 Wheeling, W. Va. Hawley Bldg.	<b>XEKL</b> 920 500 Leon, Guan. 5 de Mayo 26
<b>WXYZ</b> 1240 1000 Detroit, Mich. Madison Theatre Bldg.	<b>XEMA</b> 1080 50 Tampico, Tams. Manuel M. Pjer, Aretsanos 10
<b>W1XBS</b> 1530 1000 Waterbury, Conn. 61 Leavenworth St.	<b>XEMO</b> 865 2500 Tijuana, B. C. P. O. Box 202, San Diego, Calif.
<b>W2XR</b> 1550 1000 Long Island City, N. Y. John V. L. Hogan, 41 Park Row, N. Y. City	<b>XENZ</b> 1210 30 Tijuana, B. C. Adolfo Labsatda, Jr., Ave. D, 542
<b>W6XAI</b> 1550 1000 Bakersfield, Calif. Pioneer Mercantile Co.	<b>XEN</b> 710 1000 Mexico City, D. F. Cerveceria Modelo Ave. Juarez 77
<b>W9XBY</b> 1530 1000 Kansas City, Mo. First National Television Inc.	<b>XENT</b> 1120 50000 Nuevo Laredo, Tams. Box 410, Laredo, Texas
<b>XEA</b> 1060 125 Guadalajara, Jal. Alberto Palos Souza, Apdo. 197	<b>XEOK</b> 920 2500 Tijuana, B. C. Carlos de la Sierra, Calle 5 a 312

INDEX BY CALL LETTERS

<b>XEOX</b> 640 250 Saltillo, Coah. Victoria No. 4, Aitos.	<b>XEXX</b> 845 500 Mexico City, D. F. Av. Pino Suarez 9
<b>XEP</b> 820 500 Mexico City, D. F. Cia Difusora de Mexico S. A., Rembrandt 11	<b>KEYZ</b> 780 10000 Mexico City, D. F. Angel M. Diaz, Ave. Juarez 48
<b>XEPN</b> 590 50000 Piedras Negras, Coah. Piedras Negras Brdstrg. Co., Madero 53	<b>XEZZ</b> 1370 100 San Luis Potosi, SLP Emilio Delgado R. Ave. Chicosein 32
<b>XES</b> 970 250 Tampico, Tams. Fernando Sada, Box 309	<b>XFB</b> 1270 1000 Jalapa, Ver. Gobierno del Estado de Veracruz
<b>XET</b> 690 500 Monterrey, N. L. P. O. Box 203, Hidalgo	<b>XFC</b> 810 350 Aguascalientes, Ags. Gobierno del Estado de Aguascalientes
<b>XETB</b> 1310 125 Torreon, Coah. Jose A. Berumen, R. Corona 317	<b>XFD</b> 1340 350 Orizaba, Ver. Gobierno Estado de Veracruz
<b>XETH</b> 1210 100 Puebla, Pue. Ramon Huerta G., Calle 17, Oriente 11	<b>XFO</b> 940 5000 Mexico City, D. F. Nat. Rev. Party, Ave. Morelos 110
<b>XETW</b> 820 500 Mexico City, D. F. Rafael M. Pena, Ave. 16 de Sep. 83	<b>XFX</b> 610 1000 Mexico City, D. F. Secretaria de Educacion Publica
<b>XEU</b> 990 250 Veracruz, Ver. Fernando Pazos Sosa, Independencia 98	<b>10-AK</b> 1200 15 Stratford, Ont. M. I. Higgins, 151 Ontario St.
<b>XEW</b> 890 50000 Mexico City, D. F. P. O. Box 2516	<b>10-BP</b> 1200 25 Wingham, Ont. W. T. Cruickshank, Box 65
<b>XEWZ</b> 1150 100 Mexico City, D. F. Medellin e Insurgentes	<b>10-BU</b> 1200 50 Canora, Sask. Canora Radio Assn.
<b>XEX</b> 1310 125 Monterrey, N. L. L. F. Petit Jean, P. O. Box 10	

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Just turn the dial to the time in your zone and—Presto! Change—there is the time for every other place in the world.

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# 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
	COC W8XK W9XF	HIIA TGX VK2ME WL9XF	GSB GSD VK2ME	GSB GSD RV15	DJA DJB RV15 VK3LR	DJA DJB HVJ RNE RV15 VK2ME VK3LR VK3ME	GSF GSG HSJ PHI RV15 VE9GW VK2ME VK3LR VK3ME W1XAZ	GSF GSG PHI Pont. RV15 Rabat VE9GW VK2ME VK3LR W1XAZ W8XK	DJB GSF GSG PHI Pont. Rabat. VE9GW W1XAZ W8XK	DJB GSE GSF PHI Pont. VE9GW W1XAZ W8XK	DJA DJB GSE GSF HVJ Pont. VE9GW W1XAZ W8XK W3XAL	DJA DJB GSB GSE Pont. Rabat. VE9GW W1XAZ W1XAZ W8XK W3XAL W3XAL 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 EAQ GSB GSE Pont. VE9GW VUB W1XAL W2XE W1XAZ W3XAL W3XAU W3XL W8XK W9XAA	DJC DJD EAQ GSB GSD Pont. Rabat. VE9GW W1XAZ W3XAL W3XAU W3XL W8XK W9XAA XEBT	DJC DJD GSB GSD ORX Pont. Rabat. VE9GW W1XAZ W3XAL W3XAU W3XL W8XK W9XAA XEBT	DJC DJD GSB GSD ORX GSD Pont. Rabat. RV59 VE9GW W1XAZ W2XE W3XAL W3XAU W8XK W9XAA XEBT YV3RC	COC CT1AA DJC DJD EAQ GSB GSD Pont. Rabat. RV59 VE9GW W1XAZ W2XE W3XAL W3XAU W8XK W9XAA XEBT YV3RC	COC CT1AA DJC DJD EAQ GSA GSC HBL HBP HC2RL HJ1ABB Pont. PRF5 Rabat. RV59 VE9GW W1XAL W2XE W3XAL W3XAU W8XK W9XAA XEBT YV2RC YV3RC	CT1AA DJC DJD EAQ GSA GSC HJ1ABB HBL HBP HC2RL HJ1ABB Pont. Rabat. VE9GW W1XAL W2XE W3XAL W3XAU W8XK W9XAA XEBT YV2RC YV3RC	JC DJD GSA GSC HJ1ABB HBL HBP HC2RL HJ1ABB Pont. Rabat. VE9GW W1XAL W2XE W3XAL W3XAU W8XK W9XAA XEBT YV2RC YV3RC	CJRO CJRXC CP5 DJC DJD HCJB HC2RL HIX HJ1ABB Pont. HJ3ABD PRADO TGX TIEP VE9GW W1XAL W2XAF W3XAL W3XAU W8XK W9XAA XEBT YV2RC YV3RC	CJRO CJRXC DJC DJD HCJB HC2RL HIX HJ1ABB HJ3ABD PRADO TGX TIEP VE9GW W1XAL W2XAF W3XAL W3XAU W8XK W9XAA XEBT YV2RC YV3RC	CJRO CJRXC DJC DJD HC2RL Pont. PRADO TGX TIEP VE9GW W1XAL W2XAF W3XAL W3XAU W8XK W9XAA XEBT YV2RC YV3RC	CJRO CJRXC COC Pont. W1XAZ W3XAL W3XAU W8XK W9XAA W9XF W8XK W9XAA XEBT YV2RC YV3RC



# 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).	GSA, Daventry, England, 6.050. 7-8 p.m.	5.975 megs. 6-9 p.m. daily exc. Sunday.
14.150 and 14.250 megs.	GSB, Daventry, England, 9.610. 2:15-4:15 a.m.; 10:45 a.m. to 5:45 p.m.	HJ3ABD, Bogota, Colombia, 7.406. "Columbia Broadcasting." 6-9 p.m. daily.
Broadcast Pickup stations: 1.606; 1.622; 1.646; 2.102; 2.150; 2.190; 2.390.	GSC, Daventry, England, 9.685. 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.	GSD, Daventry, England, 11.750. 2:15-4:15 a.m.; 1-5:45 p.m.	HJ4ABB, Manizales, Colombia, 7.200 Wed., 8-9 p.m.; Sun., 3-6 p.m.
CJRO, Middlechurch, Man., 6.150. Relays Canadian Radio Com. programs, 8-11 p.m. and 11:30 to midnight.	GSE, Daventry, England, 11.865. 9:15 a.m. to 12:45 p.m.	HJ4ABE, Medellin, Colombia, 5.900. 7-11 p.m.
CJRX, Middlechurch, Man., 11.720. Same schedule as CJRO, q. v.	GSF, Daventry, England, 15.140. 6-10:45 a.m.	HJ5ABD, Cali, Colombia, 6.490. Thurs., Sat., Sun., 7-9 p.m.
COC, Havana, Cuba, 6.010. 4-6 p.m. daily. Sat., 11:30-12:30 p.m.	GSG, Daventry, England, 17.790. 6-8:30 a.m.	HPF, Panama City, Panama, 14.545. Phones Hialeah.
COH, Havana, Cuba, 9.500. Tests. CP5, La Paz, Bolivia, 6.080. 8-9 p.m.	HBL, Prangins, Switzerland, 9.595. Sat. 5:30-6:15 p.m.	HSJ, Bangkok, Siam, 7.980.
CTIAA, Lisbon, Portugal, 9.600. Tues., Fri., 4:30-7 p.m.	HBP, Prangins, Switzerland, 7.797. Sat. 5:30-6:15 p.m.	HVJ, Vatican City, 15.120. 5-5:15 a.m. daily except Sunday. Occasionally from 10-10:30 a.m.
DJA, Zeesen, Germany, 9.560. Sun., 4-5:30 a.m. daily, 6-9:30 a.m.; 3:15-7:15 p.m.	HCJB, Quito, Ecuador, 8.200. 8:15-10:15 daily except Monday.	JVE, Nazaqi, Japan, 15.660. Phones Java, nights.
DJB, Zeesen, Germany, 15.200. 12:15-2 a.m.; 8-11:30 a.m.	HC2ET, Guayaquil, Ecuador, 4.600. Fri., Sat., 9:30-11 p.m.	JVF, Nazaqi, Japan, 15.620. Phones Dixon, 5-11 p.m.
DJC, Zeesen, Germany, 6.020. Noon to 4:30 p.m.; 5:30-10:45 p.m.	HC2RL, Guayaquil, Ecuador, 6.659. Tues. 9:14-11:14 p.m.; Sun. 5:45-7:45 p.m.	JVH, Nazaqi, Japan, 14.600. Phones Europe, 2-6 a.m.
DJD, Zeesen, Germany, 11.760. Noon to 4:30 p.m.; 5:30-10:45 p.m.	HHH, San Pedro de Macoris, D. R., 6.810. Sunday, 9:30 p.m.	JVQ, Nazaqi, Japan, 7.470. Phone.
DJE, Zeesen, Germany, 17.760. Irregularly, Mornings.	HIX, Santo Domingo, D. R., 5.948. Tues. and Fri., 8-10 p.m.	JVT, Nazaqi, Japan, 5.890. Phones Dixon.
EAQ, Aranjuez, Spain, 9.862. 5:30-7 p.m.; Sat. noon to 2 p.m.	HIIA, Santiago de los Caballeros D. R., 7.240. 7:30-9:30 p.m. daily.	KAY, Manila, P. I., 14.980. Phones Dixon.
GBB, Rugby, England, 13.500. Phones Canada.	HJA2, Bogota, Colombia, 5.825.	KKH, Kahuku, T. H., 7.520. Phones Dixon.
GBS, Rugby, England, 12.150. Phones N. Y.	HJA3, Barranquilla, Colombia, 12.830	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.
GBU, Rugby, England, 12.240. Phones N. Y.	HJB, Bogota, Colombia, 14.930.	KKP, Kahuku, T. H., 16.030. Phones Dixon.
GBW, Rugby, England, 14.440. Phones N. Y. 6-8 p.m.	HJABB, Barranquilla, Colombia, 6.447. 5-10 p.m.	KNRA, "Seth Parker", 6.160; 6.660; 6.670; 8.230; 8.820; 8.840; 13.200
	HJABE, Cartagena, Colombia, 6.115. Monday, 10-mid., Wed., 8-10 p.m.	KWO, Dixon, Calif., 15.415. Phones Hawaii and Manila.
	HJLABG, Barranquilla, Colombia 6.042. 7-10 p.m.	
	HJZABC, Cucuta, Norte de Santander, Colombia, "La Voz de Cucuta,"	

## THE POSTSCRIPT DEPARTMENT

"My wife and I are rabid radio fans, but the only radio magazine we will have in the house is RADEX. It sure is one fine magazine and is so complete. It is a wonder where you get all the information."

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"I consider RADEX the best, by far, of any radio magazine that I have ever seen."

H. Harding-Jones, 2531 Rainbow Drive, Honolulu, T. H.

"I must congratulate you on having the best magazine of its kind on the market. I have read and used your RADEX for many years—ever since No. 25 of December, 1928."

Hilding Gustofson, 2228 Sixth St., Rockford, Ill.

"I consider RADEX as invaluable to a DXer as a saw is to a carpenter."

Kenneth C. McCart, 213 State St., Lexington, Ky.

"I have been a reader of your magazine for three years. I have never seen a magazine that has such accurate data as RADEX."

Manuel J. Hamilton, 1753 Kensington Avenue, Youngstown, Ohio.

"Without RADEX my radio would be much like a ship without a rudder."

Jack Watrous, La Canada Road, San Mateo, Calif.

"Daddy has been buying RADEX for me since 1932. It's a swell magazine."

Harry Will, 1406 Montreal, Dallas, Texas.

"This RADEX is a great magazine and I would not be without it. It is the one and only to find any tips you would like to know."

Freddie Miller, 45 Elm Avenue, Rosedale, Toronto, Ont.

**KWU**, Dixon, Calif., 15.355. Phones Japan.  
**KWX**, Dixon, Calif., 7.610. Phones Hawaii.  
**LSX**, Monte Grande, Argentina, 10.350. Phones New York and Byrd.  
**ORK**, Ruysselde, Belgium, 10.330. 2:45-4:15 p.m.  
**PHI**, Hilversum, Netherlands, 11.725. 7:30-10 a.m.  
 . . . . . Huizen, Netherlands, 15.220. Relaying PHI.  
**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.  
**PRF5**, Rio de Janeiro, Brazil, 9.505. 5:30-6:15 p.m.  
**Radio Coloniale**, Pontoise, France, 11.710: 1:15-5 p.m.; 5:15-9 p.m.; 10 p.m. to midnight.  
 11.905: 1:15 a.m. to 5 p.m.  
 15.243: 7:30-11 a.m.  
**Radio Roma-Napoli**, Italy. Will work on frequencies: 5550, 5725, 6060, 6980, 9630, 9780, 11810.  
**Rabat**, Morocco, 8.035. Sun., 11 a.m. to noon, 2-7 p.m.  
**RKI**, Moscow, U.S.S.R., 7.520. Phones USA.  
**RNE**, Moscow, U.S.S.R., 12.000 Sun., 6 a.m. and 10 a.m.  
**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, 5:30-6:30; 8-10 p.m.  
**TGX**, Guatemala City, Guatemala, 5.937. Sun., 1-3 a.m.; other days, 8-12 p.m.

**TIEP**, San Jose, Costa Rica, 6.710. 7-10 p.m.  
**TYA**, Pontoise, France, 12.215. Phones Algeria.  
**VE9GW**, Bowmanville, Ont., 6.095. Sun., noon to 8 p.m.; Mon., Tues., Wed., 2-11 p.m.; Thur., Fri., Sat., 6 a.m. to 11 p.m.  
**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.  
**VUB**, Bombay, India, 9.565. Testing from noon to 1 p.m.  
**WOO**, Ocean Gate, N. J., 4.273; 4.753; 8.560; 12.840. Phones Ships.  
**W1XAL**, Boston, Mass., 11.790. Wed., 5-6 p.m. and Sun., 6:30-8:30 p.m.  
 15.250. Sun., 10 a.m. to 1 p.m.  
**W1XAZ**, Millis, Mass., 9.570. 6 a.m. to midnight.  
**W2XAD**, Schenectady, N. Y., 15.340. Sun., Mon., Wed., Fri., 2-3 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 midnight.  
 17.780. Daily exc. Fri., 8 a.m. to 2 p.m.  
**W3XAU**, Newton Sq., Pa., 6.060. 8 p.m. to 11 p.m.  
 9.590. Noon to 8 p.m.  
**W3XL**, Boundbrook, N. J., 17.310. Fri., 11 a.m. to 5 p.m.  
**W8XAL**, Mason, Ohio, 6.060. Irregular.

**W8XK**, 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.  
 21.540. 7 a.m. to 2 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, 10 a.m. to 11 p.m.  
**XGL**, Shanghai, China, 7.960.  
**XGN**, Shanghai, China, 16.380.  
**XGO**, Shanghai, China, 7.575.  
**YDA**, Bandoeng, Java, 6.116. A NIROM station.  
**YNA**, Managua, Nicaragua, 14.480. Phones Hialeah.  
**YNLF**, Managua, Nicaragua, 6.950. 7-8; 10-11 p.m.  
**YVQ**, Maracay, Venezuela, 6.672. Relays Caracas BC stations occasionally.  
**YVR**, Maracay, Venezuela, 9.168. Phones Madrid.  
**YVQ**, Maracay, Venezuela, 6.672.  
**YV2RC**, Caracas, Venezuela, 6.112. 5:15-10 p.m.  
**YV3RC**, Caracas, Venezuela, 6.150. 5-10 p.m.  
**YV4RC**, Caracas, Venezuela, 5.990.  
**YV5RMO**, Maracay, Venezuela, 6.070. and 9.600.  
**YV6RV**, Valencia, Venezuela, 6.030. "La Voz de Carabobo." The Venezuelan Network includes stations YV3RC, YV4RC, YV5RMO and YVQ.  
**ZFB**, St. George, Bermuda, 10.060.  
**ZFS**, Nassau, Bahamas, 4.513.

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## THE PERFECT PHONE ADAPTER

Does the trick in one minute.

No "B" Batteries necessary.

It consists of a jack-box which can be placed in the back of the set or screwed to under side of console or table, and a cord to which is attached either one or two socket-adapters.

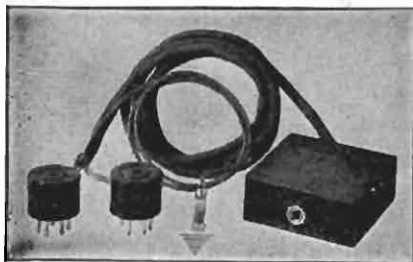
Lift out the power tube or tubes in your set and replace them in the socket-adapters. That is all there is to it.

To use phones, insert the phone-plug in the jack. To use speaker, pull it out. Signals are automatically switched from one to the other.

Plug holds two sets of phones if desired or an additional magnetic speaker may be used in any part of the house.

### *Fits Any Set*

We have Adapters for any receiver. Just give us make and model and number and type of power tubes (or a list of all tubes). We will send proper model with full instructions.



### PRICES

Perfect Phone Adapter, postpaid .....	\$ 3.95
Adapter with 2000-ohm Phones and Plug .....	6.70
Adapter with Plug and 24000 - ohm feather- weight phones (made especially for sensitive work) .....	12.50

## RADIO PARTS CO.

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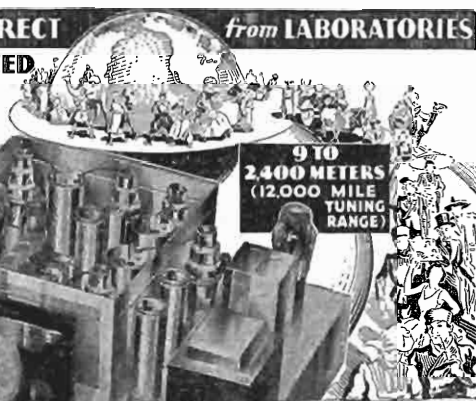
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**ALL-WAVE Radio**  
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(12,000 MILE  
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Never before so much radio for so little money! Midwest  
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This bigger, better, more powerful, clearer-toned, super  
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Only Midwest covers a tuning range of 9 to 2400 meters  
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