

The OCTOBER, 1933

# RADIO INDEX

THE ALL-WAVE RADIO MAGAZINE



30 cents  
in Canada  
Including  
Tax

The Beginners' Story of Radio  
Importance of a Good Ground  
Static-Reducing Antenna Systems  
Saturday's Time on the Air  
Best Time to Tune for 300 Stations

No. 72

OCTOBER 1, 1933



# RADIO IN INDEX

Reg. U. S. Patent Office

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*Editor and Publisher*



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*Technical Editor*

PAGE TAYLOR  
*Short Wave Editor*

TENTH YEAR

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**ADDRESS ALL CORRESPONDENCE TO CLEVELAND OFFICE**

# OCTOBER DX CALENDAR

This month we are giving a list of those stations which are on the air after midnight EST when interference begins to lessen. Time is given in EST in order to present the list of stations in their proper order. Power is given in kilowatts in parenthesis.

DAILY					
12:00-12:30		WOKO	Albany, N. Y., 1430 (.5)	KHJ	Los Angeles, 900 (1)
CHRC	Quebec, Que., 645 (1)	WOQ	Kansas City, 1300 (1)	KHQ	Spokane, 590 (1)
KLO	Ogden, Utah, 1400 (.5)	WOW	Omaha, Neb., 590 (1)	KTAB	San Francisco, 560 (1)
KTSH	Houston, Tex., 1120 (1)	WOWO	Ft. Wayne, 1160 (10)	KXL	San Francisco, Ore., 1420 (1)
WFBM	Indianapolis, 1230 (1)	WPG	Atlantic City, 1100 (5)	WIND	Gary, Ind., 560 (1)
WLP	Philadelphia, 610 (.5)	WRC	Washington, 950 (.5)		12:00-5:00
WLAP	Louisville, 1200 (1)	WREC	Memphis, 600 (.5)	KFQD	Anchorage, Alsk., 1230 (.25)
WLB	Kansas City, 1420 (1)	WREN	Lawrence, Kans., 1220 (1)	KWJJ	Portland, Ore., 1060 (.5)
WOAI	San Antonio, 1190 (50)	WRHM	Minneapolis, 1250 (1)	WEXL	Royal Oak, 1310 (.05)
WOR	Newark, N. J., 710 (5)	WSB	Atlanta, Ga., 740 (5)		12:00-6:00
12:00-1:00		WSBC	Chicago, 1210 (1)	KGFJ	Los Angeles, 1200 (1)
CJOR	Vancouver, 1210 (.5)	WSBT	South Bend, 1230 (.5)	XER-	Villa Acuna, 735 (150)
CKLW	Windsor, Ont., 540 (5)	WSM	Nashville, 650 (50)	XEF	
KABC	San Antonio, 1420 (1)	WSMB	New Orleans, 1320 (.5)		12:00-7:00
KDKA	Pittsburgh, 980 (5)	WSYR	Syracuse, 570 (25)	KTM	Los Angeles, 780 (.5)
KFAB	Lincoln, Neb., 770 (5)	WTAM	Cleveland, 1070 (50)		12:15-4:00
KGHL	Billings, Mont., 950 (1)	WTOC	Savannah, Ga., 1260 (.5)	KZEG	Manila, P. I., 618.5 (1)
KGIZ	Grant City, Mo., 1500 (1)	XEN	Mexico City, 711 (1)		1:00-3:00
KID	Idaho Falls, 1320 (.25)	XEO	Mexico City, 940 (5)	KFVD	Los Angeles, 1000 (.25)
KLRA	Little Rock, 1390 (1)		12:00-2:00		1:00-5:00
KLZ	Denver, Colo., 560 (1)	CRCV	Vancouver, 1100 (.5)	WHB	Kansas City, 860 (.5)
KMAC	San Antonio, 1370 (1)	KECA	Los Angeles, 1430 (1)		1:00-7:00
KMBC	Kansas City, 950 (1)	KFBK	Sacramento, 1310 (1)	KPCB	Seattle, 650 (1)
KOH	Reno, Nev., 1380 (.5)	KFKA	Greeley, Colo., 880 (.5)		2:00-3:00
KOMA	Oklahoma City, 1480 (5)	KGIR	Butte, Mont., 1360 (.5)	KFXF	Denver, 920 (.5)
KPQ	Wenatchee, Wash., 1500 (1)	KIT	Yakima, Wn., 1310 (1)		3:00-5:00
KPRC	Houston, Tex., 920 (1)	KLX	Oakland, 880 (1)	CFCT	Victoria, 1430 (.5)
KQW	San Jose, Cal., 1010 (.5)	KMO	Tacoma, 1330 (25)		3:00-7:00
KSEI	Pocatello, Idaho, 890 (25)	KNX	Hollywood, 1050 (25)	KJBS	San Francisco, 1070 (1)
KSTP	St. Paul, Minn., 1460 (25)	KOA	Denver, 830 (12.5)		4:00-7:00
KTAR	Phoenix, Ariz., 620 (.5)	KREG	Santa Ana, 1500 (1)	KZRM	Manila, P. I., 618.5 (50)
KTAT	Ft. Worth, Tex., 1240 (1)	KSL	Salt Lake City, 1130 (50)		
KTBS	Shreveport, La., 1450 (1)	KTFI	Twin Falls, Idaho, 1240 (.5)		
KTSA	San Antonio, 1290 (1)	WABC	New York, 860 (50)		
KVOR	Colorado Spgs., 1270 (1)	WCDA	New York, 1350 (25)		
KWCR	Cedar Rapids, 1420 (1)	WGN	Chicago, 720 (25)		
KWK	St. Louis, 1350 (1)	WHFC	Cicero, Ill., 1420 (1)		
KXRO	Aberdeen, Wn., 1310 (1)	WMAQ	Chicago, 670 (5)		
WCAC	Pittsburgh, 1220 (1)	WTMJ	Milwaukee, 620 (1)		
WCFL	Chicago, 970 (1.5)	XEAW	Reynosa, 965 (10)		
WDAF	Kansas City, 610 (1)		12:00-3:00		
WDAG	Amarillo, Tex., 1410 (1)	KDB	Santa Barbara, 1500 (1)		
WDAY	Fargo, N. D., 940 (1)	KDYL	Salt Lake City, 1290 (1)		
WDSU	New Orleans, 1250 (1)	KERN	Bakersfield, 1200 (1)		
WEAN	Providence, 780 (.5)	KEX	Portland, 1180 (5)		
WEBC	Superior, Wis., 1290 (1)	KFAC	Los Angeles, 1300 (1)		
WFAM	South Bend, Ind., 1200 (1)	KFLB	Everett, Wash., 1370 (.05)		
WFBL	Syracuse, N. Y., 1360 (1)	KFI	Los Angeles, 640 (50)		
WFBR	Baltimore, 1270 (.5)	KFOX	Long Beach, 1250 (1)		
WGL	Ft. Wayne, Ind., 1370 (1)	KFSF	San Diego, 600 (1)		
WGST	Atlanta, Ga., 890 (.25)	KFWB	Hollywood, 950 (1)		
WHAS	Louisville, 820 (25)	KFXM	San Bernardino, 1210 (1)		
WIBA	Madison, Wis., 1280 (.5)	KGA	Spokane, 1470 (5)		
WIBW	Topeka, 580 (1)	KGO	San Francisco, 790 (7.5)		
WICC	Bridgeport, 600 (.25)	KGW	Portland, Ore., 620 (1)		
WIL	St. Louis, 1200 (1)	KJR	Seattle, 970 (5)		
WJAR	Providence, 890 (.5)	KMJ	Fresno, 580 (.5)		
WJR	Detroit, 750 (10)	KMTR	Hollywood, 570 (.5)		
WKBW	Buffalo, 1480 (5)	KOLN	Portland, Ore., 940 (1)		
WKRC	Cincinnati, 550 (1)	KOL	Seattle, 1270 (1)		
WKY	Oklahoma City, 900 (1)	KOMO	Seattle, 920 (1)		
WLAC	Nashville, 1470 (5)	KPO	San Francisco, 680 (50)		
WLBW	Erie, Pa., 1260 (.5)	KVI	Tacoma, 570 (5)		
WMBD	Peoria, Ill., 1440 (.5)	KWG	Stockton, 1200 (1)		
WMC	Memphis, 780 (.5)	KYA	San Francisco, 1230 (1)		
WMCA	New York, 570 (.5)	WMCA	New York, 570 (5)		
WMT	Waterloo, Iowa, 600 (.5)		12:00-4:00		
WNAC	Boston, 1230 (1)	KFPY	Spokane, 1340 (1)		
WNAX	Yankton, S. D., 570 (1)	KFRC	San Francisco, 610 (1)		
WOC-	Des Moines, 1000 (50)	KGB	San Diego, 1330 (1)		
WHO		KGMB	Honolulu, 1320 (.25)		
		KGU	Honolulu, 750 (2.5)		

## SUNDAY MORNINGS

	12:00-12:30
WJAX	Jacksonville, 900 (4)
	12:00-1:00
CMBW	Havana, 925 (.6)
KFVS	Cape Girardeau, 1210 (1)
KFYR	Bismarck, 550 (1)
WKCY	Covington, 1490 (5)
WGLC	Hudson Falls, 1370 (.05)
WGY	Schenectady, 790 (50)
WHK	Cleveland, 1390 (1)
WHP	Harrisburg, 1430 (.5)
WILL	Urbana, Ill., 890 (.25)
WLS	Chicago, 870 (50)
WRNY	New York 1010 (.25)
WTAG	Worcester, 580 (.25)
WRRL	Woodside, 1500 (1)
XETW	Mexico City, 830 (.5)
	12:00-1:30
WMBC	Detroit, 1420 (1)
	12:00-2:00
KALE	Portland, Ore., 1300 (.5)
KMOX	St. Louis, 1090 (50)
KSO	Des Moines, 1370 (1)
WCCO	Minneapolis, 810 (50)
WWVA	Wheeling, 1160 (5)
	12:00-3:00
CMCD	Havana, 1140 (.25)
KGY	Olympia, 1210 (1)
WGES	Chicago, 1360 (.5)
WLW	Cincinnati, 700 (50)
KGER	Long Beach, 1360 (1)
	1:00-3:00
CMCW	Havana, 965 (1)
	1:30-2:30
CKCD	Vancouver, 1010 (1)
	2:00-5:00
CMCU	Havana, 630 (.5)
KPJM	Prescott, 1500 (1)
	3:00-4:00

CKWX Vancouver, 1010 (.1) 3:00-5:00	CFJC Kamloops, 1120 (.1) Oct. 2nd only, 2:10-2:30	WAPI Birmingham, 1140 (5) 1:00-1:30
CKOV Kelowna, B. C., 1200 (.1) Trail, B. C., 1155 (.025) 4:00-5:00	WRAK Williamsport, 1370 (.1) 2:30-3:30	WRAM Wilmington, 1370 (.1) 1:30-2:00
XEAO Mexicali, 560 (.1) Oct. 1st only, 2:30-4:30	CHWK Chilliwack, 780 (.1)	WLB Minneapolis, 1250 (1) 2:00-4:00
10-BI Prince Albert, 1200 (.025) Oct. 8th only, 1:00-2:00	<b>TUESDAY MORNINGS</b> 12:00-12:45	CMK Havana, 730 (5) WEDC Chicago, 1210 (.1) 3:00-4:00
WWAE Hammond, 1200 (.1) Oct. 1st-15th, 1:30-4:00	WBBZ Ponca City, 1200 (.1) 12:00-1:00	CKWX Vancouver, 1010 (.1) Oct. 5th, 5:30-6:00
CMBL Havana, 1445 (.05)	CHWC Regina, 1010 (.5)	KGFF Shawnee, 1420 (.1)
CHAB Moose Jaw, 1200 (.4)	KMA Shenandoah, 930 (.5)	<b>FRIDAY MORNINGS</b> 12:00-1:00
XFB Jalapa, Ver., 1290 (.5) Oct. 8th-22nd, 1:00-2:00	WKBF Indianapolis, 1400 (.5)	KVOO Tulsa, 1140 (5) 12:00-2:00
KUSD Vermillion, 890 (.5) Oct. 29th, 3:00-5:00	WPAP New York, 1010 (25) 1:00-5:00	KFEL Denver, 920 (.5) KIDO Boise, 1350 (1) 1:00-2:00
WFAS White Plains 1210 (.1) <b>MONDAY MORNINGS</b> 12:00-12:30	WSUI Iowa City, 880 (.5) 4:00-4:30	WBBX New Orleans, 1200 (.1) Oct. 27th, 4:00-5:00
WLTH Brooklyn, 1400 (.5) 12:00-1:00	WCAH Columbus, 1430 (.5) Oct. 3rd, 5:00-5:30	KPOF Denver, 880 (.5)
KFRU Columbia, 630 (.5)	WKFI Greenville, 1210 (.1)	<b>SATURDAY MORNINGS</b> 12:00-1:00
EGGC San Francisco, 1420 (.1)	<b>WEDNESDAY MORNINGS</b> 12:00-1:00	CKCK Regina, 1010 (.5)
KGRS Amarillo, 1410 (1)	WHBL Sheboygan, 1410 (.5)	WEBQ Harrisburg, 1210 (1) 12:00-3:00
KSOU Sioux Falls, 1110 (1)	XEH Monterrey, 1132 (.25) 1:00-1:30	KFJR Portland, 1300 (.5)
WHN New York, 1010 (.25)	WHBQ Memphis, 1370 (.1) 1:00-3:00	KRKD Los Angeles, 1120 (.5) 1:00-2:00
WMIL Brooklyn, 1500 (.1) 12:00-2:00	CMCW Havana, 965 (1) Oct. 4th, 2:00-2:30	KOIL Council Bluffs, 1260 (1) Chicago, 1080 (5)
KVL Seattle, 1370 (1)	WHBF Rock Island, 1210 (1) 2:30-3:00	WMBI Oct. 7th, 2:30-3:30
WGES Chicago, 1360 (.5) 12:00-3:00	WHIS Bluefield, 1410 (.25) Oct. 11th, 2:00-3:00	10-BQ Brantford, 1200 (.015) 5:15-5:45
CMCD Havana, 1140 (.5) 1:00-2:00	WJMS Ironwood, 1420 (1) Oct. 25th, 2:00-4:00	WGNV Chester, N. Y., 1210 (.05) Oct. 14th, 3:15-4:00
KROW Oakland, 930 (.5) 1:30-2:00	WMED Muscle Shoals, 1420 (1)	WMBQ Brooklyn, 1500 (.1)
CJOC Lethbridge, 580 (1) 2:00-3:00	<b>THURSDAY MORNINGS</b> 12:00-1:00	
KFSG Los Angeles, 1120 (.5) 3:00-4:00	KFXR Oklahoma City, 1310 (1)	

## THE MONTH'S CHANGES

### FREQUENCIES

550 TISO	San Jose, C. R., from 600
681 HJN	Bogota, Colombia, from 690
757 XEFD	Tijuana, B. C., from 855
830 XETW	Mexico City, D. F., from 815
840 XFX	Mexico City, D. F., from 860
977 CMGF	Matanzas, Cuba, from 987
1010 CKWX	Vancouver, B. C., from 730
1085 VOKW	St. John's, Nfld., from 1300
1100 CMCU	Havana, Cuba, from 630
1210 CFNB	Fredericton, N. B., from 1030
1400 VOGY	St. John's, Nfld., from 890

### POWER

550 TISO	San Jose, C. R., 50 to 250
681 HJN	Bogota, Colombia, 2000 to 500
730 CMK	Havana, Cuba, 3150 to 5000
740 WSB	Atlanta, Ga., 5000 to 50000
757 XEFD	Tijuana, B. C., 300 to 5000
912 TICR	San Jose, C. R., 50 to 75
965 CMBD	Havana, Cuba, 150 to 250
965 CMCW	Havana, Cuba, 100 to 150
1330 WSAI	Cincinnati, Ohio, 500 to 1000
1400 VOGY	St. John's Nfld., 500 to 75

### OWNERS

757 XEFD	Tijuana, B. C., to Goodwill Broadcasting Co.
1210 KFOR	Lincoln, Neb., to Howard Shuman

1210 WJBY	Gadsden, Ala., to Gadsden Broadcasting Co.
1260 KVOA	Tucson, Ariz., to Arizona Broadcasting Co., Inc.
1270 KVOR	Colorado Springs, Colo. to S. H. Patterson
1350 WBNX	New York, N. Y., to Standard Cahill Co. Inc.
1350 WCDA	New York, N. Y., to Standard Cahill Co. Inc.
1350 WMSG	New York, N. Y., to Standard Cahill Co. Inc.

### DELETED

845 XETM	Matamoros, Tams.
882 TIC	San Jose, C. R.
1120 CFCA	Toronto, Ont.
1370 HRB	Tegucigalpa, Hond.

### NEW

780 KEYZ	Mexico City, D. F.
800 VOAC	St. John's, Nfld.
1195 HIH	Santo Domingo, D. R.
1380 TGX	Gautemala City, Gautemala

### PERMIT TO CHANGE LOCATION

1420 KGIW	Trinidad, Colo., to Alamosa, Colo.
1500 WKBV	Connersville, Ind., to Richmond, Ind.

### CHAINS

1400 WKBF	Indianapolis, Ind., new NBC
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### CALLS

1200 KSUN	Lowell, Ariz., formerly KIGY
1500 WCNW	Brooklyn, N. Y., formerly WMIL

# The BEGINNERS' STORY of RADIO

By B. FRANCIS DASHIELL

**O**UR Story of Radio is intended primarily for beginners. And by beginners we mean those members of that vast family of enthusiasts who tune their dials successfully and log hundreds of stations, all without an adequate knowledge of the functions of a radio set. Radio receivers, like motor cars, quite generally are operated by people who, although wishing they knew just why the thing works, have been deprived of the kind of enlightenment they seek.

It is true that libraries have dozens of radio books on their shelves. But most of these "fundamentals" and "principles" are massive works which are further complicated by mathematical and technical descriptions that mean little to him who reads and runs. The fundamentals of radio make dry reading, so dry, in fact, that the romance which has been associated with radio from the very beginning is lost. Of course, professional writers are correct when they insist that a study of fundamentals and the connected sciences is absolutely necessary for a rather complete mastery of the theories of radio.

But, for our purposes, we may well leave the study of theories to those who live and work in radio. Let us, then, learn something of the interesting and fascinating wonders performed by this amazing marvel by taking a little sightseeing journey through the inner workings and ramifications of radio. Let us follow the radio waves from the originating studio and station to our loud speakers and see just what it is that takes place.

## Consider the Miracle

Pull up your favorite chair before the radio. Snap on the switch and bring in some distant station by the mere twist of the wrist. Simple, isn't it? Yet what marvelous laws

of nature are called into play, each perfectly coordinated with the other, so that reception will take place. Listen to the instant and faithful reproduction of a musical program. Then close your eyes and imagine that, standing beside the receiver, a musician plays his instrument. His every movement will appear simultaneously with the music coming from the speaker. It does not seem possible that he actually may be half way around the earth instead. When you hear a single mellow note of a piano you must realize that the player's finger has not yet left the key. Some day television will demonstrate all this with dramatic vividness.

Still seated in your chair, suppose you imagine that you are a modern Alice approaching the Wonderland of Radio. You are entering the studio of the distant station from which your program is coming. Suppose, too, that through some legerdemain



*Ethel ("Stormy Weather") Waters, famed colored songstress, with Mills' Blue Rhythm Band, on the NBC-WJZ network Wednesdays at midnight EST.*

you can become a tiny bit of nothing. Step up to the studio's microphone and speak into it, take a seat on the sound wave your voice creates; hold on for dear life, for you are about to go on a ride unrivaled in all nature.

Immediately some unknown force whisks you out of the studio, along wires across miles of country to the broadcasting station. Then, through a maze of controls, tubes and coils, you rush out upon the antennas high above the station and are shot, without further ado, into space. Higher and higher you rise, passing far into the perpetual cold of space, and it seems that you will go on, and on, forever. But suddenly you are turned back toward earth, for you have met the great Heaviside reflecting radio ceiling that prevents all radio signals from flying off into the depths of space. You speed down, down, and soon your own antenna, tuned to the length of the wave upon which you are riding, beckons, and you slide safely home.

Once again your carrier wave glides through another maze of tubes, coils and condensers. But this time it is your receiver that quickly amplifies and enlarges you to your normal size as you tumble from the loud speaker back into your chair. And if your journey was as much as 2,500 miles it only took one-seventieth of a second!

### With the Speed of Light

The instant flight from the micro-

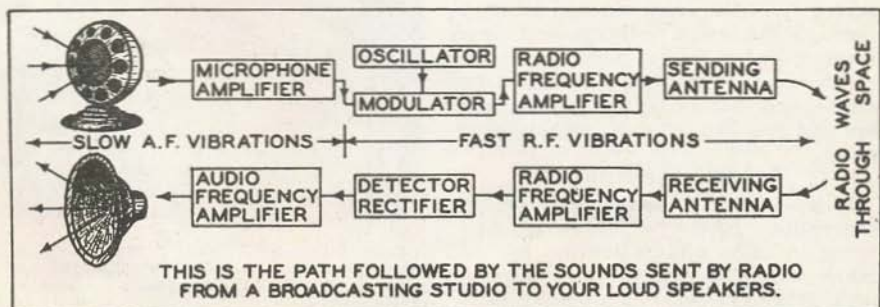
phone to your radio was made at the incredible rate of 186,000 miles per second! Such is the speed of radio. It also is the velocity of electricity and light. A radio wave, electric current or ray of light will travel around the earth in one-seventh of a second.

Vibrating sound and radio waves go to make up radio, and before music and speech can come from your loud speaker many things must take place. At the broadcasting studio sound waves pass through the air from the lips of speakers and singers, and from musical instruments, to strike the sensitive microphone and cause it to vibrate and thus vary the flow of an electric current. A microphone is nothing more than a refined type of telephone transmitter. The microphone receives sound waves from the air in much the same manner your ears enable you to hear, it is, in fact, radio's ear.

### Underlying Principle

The radio transmitter takes the sound waves, converts them to a modulated or fluctuating high frequency oscillating electric current which is broadcast across the surface of the earth as a form of vibrating electromagnetic energy. The radio receiver picks up some of this energy, which is in a greatly reduced condition, and converts it back again to sound waves. The construction and action of the radio receiver is, therefore, just the reverse of the transmitter.

Every piece of metal or wire in



the world is filled with hundreds of vibrating electrical currents induced by the passing radio waves. But these waves may be sorted out by the act of tuning a radio receiver connected to the wire or antenna, and only one wave to which the receiver is made to vibrate in harmony is permitted to pass. This very weak signal will be amplified in strength; reduced from its high radio-frequency vibration rate to a much lower audible rate, amplified again with power tubes, and fed into the speaker which is made to vibrate and thus communicate those vibrations to the air so that sound may be heard by the ear.

Radio is simply a means for sending sound waves through the air without wires. The higher the rate of the electrical vibrations, or the greater their frequency, the farther the radio waves will penetrate. This is the reason why short waves, or high frequencies, carry so far. The same may be said of a steam whistle—one having a shrill, high pitch will carry farther than one that is deep and low-pitched. Radio transmission is accomplished without the medium of conducting wires, such as are necessary for the telephone and telegraph. Radio in its earlier days was spoken of as wireless telegraphy and telephony.

In order more fully to understand what makes a radio receiver work it is important that we know at least a little something about the mysterious force that makes radio possible. Radio is nothing but electricity, and next month we shall discuss electricity and magnetism and how they work in radio.

### Queries

1. How fast do radio waves travel?
2. How long does it take a radio signal to travel from a station 2500 miles away?
3. What instrument first receives the sound waves?
4. What effect do the sound waves have upon the electric current?
5. Into what type current does the transmitter convert the sound waves?
6. What type current does your aerial pick up?
7. How do transmitter and receiver compare in method of operation?

8. What phenomenon prevents radio signals from flying off into space?
9. Through what changes do the radio waves pass in the receiver?
10. Which waves carry farther, the long or the short?

*The second lesson in this interesting home study course in Radio, will appear in the November issue.*

## Radio in Japan

IN AN interesting letter to our short wave Editor, Mr. Yoshimura of Moji, Japan, gives the following information in regard to the broadcasting situation in the Island Empire:

"All Japanese broadcasting stations are under the superintendence of the Japanese Broadcasting Association (Nippon Hos Kyokai). There are 24 stations on the air at the present time and also nine new stations which should be installed during 1933 and 1934.

"Daily programs of JOAK-1 are generally relayed by all J stations excepting JOBK, JODK, JFBK, JQAK and JOAK-2 and even the first four named relay a part of the programs of JOAK-1. JOAK-2 has his own programs but no musical features, transmitting scientific, educational, foreign language courses, etc.

"As to their operating times, they transmit the relay from JOAK-1 from 6:30 a. m. to 9:45 p. m. JST in April, May, September and October while in the other months they transmit from 7:00 a. m. to 9:45 p. m. JFAK, JFBK and JQAK transmit one hour later than the other stations."

Mr. Yoshimura, who says that RADEX is no stranger in Japan as he reads it often, gives us the following station corrections:

JOJK 300 watts instead of 3000; JONK on 635 kcs. instead of 940; and JODK-1 on 610 kcs. with 10,000 watts instead of 690 and 1000. Otherwise the list of Japanese, Korean and Manchurian stations are correct as published in our world list in the Midsummer Edition.

# IMPORTANCE of a GOOD GROUND

● ● ● By E. O. CUTLER, Vice President Newark News Radio Club

IT seems ridiculous to me that so many thousands of radio listeners who spend so much time DXing, pay so little attention to experimenting to determine the best ground. Undoubtedly many of your readers are perfectly contented to get a good set, build a good aerial and yet hitch a ground to a nearby radiator or water pipe without regard to simple and better alternatives in the way of outdoor grounds.

As I see it, any mass of metal planted under ground and watered and properly connected to the ground post of the set, will show radical signal strength increases with many aeriels and on many frequencies. A ten-cent switch and a little wire and pipe together with two or three hours of work, are all that are required to make many a DXer happy.

The following article containing my ideas on this subject recently appeared in the Newark News.

I firmly believe that one of the most profitable diversions for those members who wish to monkey with their sets during the Summer is that of experimenting with various grounds.

Those whose homes are so situated that they can plan an outdoor ground should do so, and also run ground wires to radiators and cold water pipes (three connections in all) to switches near the receiver. I procured two double-throw switches at 10 cents each at the 5 and 10 and ran the ground wire from the set to the center of one switch and from the latter to the center of the second switch. This provides connecting posts for four different experimental grounds.

After the soil surrounding the outdoor ground has become well satur-

ated with water you will be amazed at the increase in volume of many stations. By mounting these switches on a board, near the receiver, it will be convenient to test out all grounds on various stations from one end of the dial to the other.

After a year of experimentation I have determined that a good outdoor ground is superior for all stations when an indoor aerial is used, and on all remote stations (say over 1,500 miles) with long roof aeriels.

In published reports of remarkable DXing I have noticed that outdoor grounds are used. For example, RADEX, Midsummer edition, tells about the work of C. R. Caraven of Vancouver who uses an Ollie Ross ground. The issues of RADEX for February, 1931, and Midsummer, 1931, describe the Ollie Ross ground and his DX results in Vallejo, Calif.

About a month ago I set out to find a simple, cheap and easily installed pipe ground and have been very successful.

## The Ollie Ross Ground

The Ollie Ross ground is a length of copper tubing about one inch in diameter by four feet long wrapped with bare copper wire this wire being soldered to the insulated lead to the receiver. The tube was buried underground with rock salt to draw dampness in dry seasons (California!).

Mr. Ross suggested (RADEX) that the U. S. standard ground be tried. This consists of an eight-foot rod or one-half inch pipe driven vertically; a hole one foot deep and one foot square is dug and five pounds of rock salt melted in the hole and the ground is driven down in its center. However, Mr. Ross also suggested that if this U. S. ground was



used a piece of aerial wire should be soldered along the entire length of the rod or pipe, the wire being soldered to the lead-in to the set.

My theory is that any type of outdoor ground, no matter how efficient it is, can be improved if means are provided to get water down to the bottom at all times and thus saturate all the earth near the metal.

Incidentally, if any one tries to solder wire on lengths of rod or pipe and then drive them into hard ground with a sledge hammer he will find that the soldering is apt to break.

#### Mr. Cutler's Method

My new ground consists of a five-foot length of half-inch standard iron pipe, galvanized, screw-threaded on the outside of one end. In order to provide a wedge-shaped bottom, I procured a standard brass reducer (one-half inch to one-quarter inch, pipe standards) and screwed it on to the pipe end. A four-inch length of one-quarter inch brass pipe was screwed into the reducer. This brass pipe was squeezed to a wedge shape in a vise and ground down to a chisel edge on an emery wheel.

About ten one-quarter inch holes were drilled in the pipe, at random, from the bottom up three feet.

Since the reducer is larger in diameter than the pipe, when the pipe was driven down into the ground with a sledge there was left a slight clear space outside of the pipe all the way down.

The pipe was left with about three inches projecting above the ground, so that a funnel can be inserted and water poured down at any time. The water runs out through the holes in the pipe and saturates the soil. For the first few weeks I left a cavity on the surface about six inches deep and a foot in diameter and, after filling the pipe, filled up the cavity as well. Improvements in reception were noted as the ground became thoroughly wet. A cork stopper is tied by wire to the top of the pipe.

#### Attaching the Wire

I soldered a length of bare copper



Sandra Phillips (left) and Peggy Keenan have been vaudeville with Tony Wons but now all three are back on the WABC-Columbia. The duo pianists are well worth hearing (as well as seeing) Sundays at 10:45 a. m. EST and Mondays and Thursdays at 11:30 a. m.

wire on to the entire length of the pipe, but it stripped in driving, so that the lead to the set is now simply wrapped around and soldered to the top of the pipe. If I were making this ground again with iron pipe, I would drill two small holes into the pipe near the bottom in order to firmly secure the end of a bare copper wire and wind the wire around the pipe, soldering it to the top of the pipe and to the set lead. This should prevent the wire breaking away when the pipe is being driven. The reducer, being of larger diameter than the pipe, should protect the wire when the pipe is driven, but apparently soldering alone will not hold the wire under the shock of driving.

It might be better to use a length of stiff brass or copper pipe. In all

(Continued on page 79)

# RADIO *from a Box Seat*

• • • *With "Betty"*

**C**ONRAD THIBAUT, young American baritone, raised the money to pay for the first part of his musical education by working as a floorwalker in a big New York department store. In the first place, says Conrad, it was hard work just to stand around, so hard that when he came home to his furnished room at night it required real moral fiber for him to make himself drag his aching feet uptown to take a singing lesson. But he stuck it out for three reasons.

First, there was a girl back home. Before leaving his home town of Northampton, Mass., he had become engaged, and all through the early part of his career this charming girl, herself a singer, spurred him on to his best efforts.

Second, there was a choirmaster in Northampton who had seen the

possibilities in his rich baritone voice and who had urged him to try, in spite of financial hardships, to make something of his singing. And third, there was himself—his own self respect. Three people to consider, and he couldn't let any of them down.

So he worked by day, and studied by night, and at the end of the year he went back home, ready for the next step in his march upward to fame. It came in the form of a scholarship to the Curtis Institute of Music in Philadelphia, which he won in competition with other young singers who perhaps hadn't tried quite so hard to train themselves, or who hadn't the same inspirational forces behind them.

Conrad started his studies there under the great baritone, Emilio de Gogorza, famous for years in grand opera, and at the beginning of his second term he was given a contract by the Philadelphia Grand Opera Company. Then there was rejoicing in the Thibaults' small home (for he and the young lady were married before he won the scholarship).

## Into Grand Opera

He continued his work at the Curtis Institute for five years, meanwhile appearing regularly with the opera company and advancing from small parts to leading roles. While in Philadelphia, Thibault also began that part of his career that later was to carry him to the heights—he started to sing in radio.

He made an immediate hit on the air, and an audition at the NBC studios in New York was arranged without any difficulty at all. So Conrad came to the big city, was heard and signed to a contract, all on the same day. It was the proudest moment in his life, the day he and his young wife had dreamed of for years during the lean times that



Conrad Thibault

go hand in hand with the start of any career. But the triumph was mixed with bitterness, for the girl he loved and had worked for never knew of it. She was taken to the hospital the day he left for New York, and died as he was on his way back to her.

In spite of this terrible loss, Conrad carried on. His years of training stood squarely behind him. They wouldn't let him quit, they had made a trooper of him. The show must go on—and it did.

The young singer fitted in almost immediately on some featured programs over NBC networks, notably the "Through the Opera Glass" series of recitals with Archer Gibson, famous organist, last year. But this was only the beginning. At present he is heard over NBC networks in three outstanding sponsored programs.

Conrad is 30 years old, well built and a keen amateur athlete, putting up a good battle at handball, tennis or swimming.

### **She Capitalized Trouble**

It was a series of "bad breaks" that brought pretty and blonde Vera Van to radio stardom. As a baby in Marion, Ohio, where her family had lived for generations, Vera suffered from anemia, and several times the doctors despaired of her life. Finally, one doctor suggested that she be given dancing lessons for beneficial exercise. So Vera took to her toes.

Her health speedily improved. The Van family migrated to California in the hope that she might benefit from the climate. By this time, Vera had become a talented dancer, and when only seven years old she was earning a hundred dollars weekly as premiere danseuse of a child ballet. It was her early illness that resulted in her success on dancing feet.

But while she was tripping the light fantastic another "bad break" came along. She suffered a severe attack of influenza just as her mother was on the point of signing an at-



*Vera Van*

tractive vaudeville contract on her behalf. A stroke of ill fortune it seemed, but with her recovery came a more lucrative and desirable engagement in a musical show. Vera says her four months as ingenue with this company gave her the diversified experience that has helped her more than any other work.

Five years ago, Vera, who now is really a very healthy young lady, was stricken with spinal trouble, resulting in her inability to move her left side for several weeks. This affliction was diagnosed by the doctors as an aftermath of too much toe dancing as a youngster. She was ordered off her feet for a long rest.

### **From Toes to Transmitter**

But, figuratively, Vera was still on her toes. Now accustomed to turning the bad breaks to her advantage, she speculated on how she might benefit from this siege. So she started singing—and by the time she was up and around, her friends had convinced her that voice was her forte.

It was to KFI, Los Angeles, that



*Don Ross*

she took her songs and one hour later she was signed on the dotted line.

Her next radio work was with KMTR, also on the west coast, where her singing was so well received that at the termination of her contract, KHJ, Columbia's outlet, hurriedly signed her up. All the while she was studying at school, taking voice culture and making personal appearances, including an engagement at George Olsen's Club in Culver City.

Then came her appearance on the California Melodies program, which served as the network cradle for Bing Crosby, the Boswell Sisters and John P. Medbury. Now it seems that anyone carrying a diploma from the California Melodies school finds a rosy path to success ahead—more than likely in the east.

But Vera Van came very near not making the trip to New York where she is heard on three programs each week. She was just about to sign a year's contract in Los Angeles with an orchestra, but her lawyer, who was to approve the terms, was called out of town. Vera, anxious to begin work,

was disappointed. She thought it was another tough break. When he returned, and five minutes before she was to close the contract, a telegram arrived from New York with the invitation to come east.

Vera lives with her mother in a Manhattan hotel. Her first big ambition was to be a nurse. . . Raymond Paige and Ted Fiorito are her favorite band-leaders. . . Likes horseback riding, canoeing and hiking. . . Collects all sorts of silver money. . . Also gathers toy dogs and curious vases. . . Her favorite song is "Night and Day." . . Her pet fan letter was from a young man who said: "You sing so beautifully that you are probably as ugly as sin and at least forty." She is very pretty and nineteen.

#### **Jane Froman's Husband**

Don Ross, heard over the Columbia network as the Pontiac Minstrel, was born at Osakis, Minnesota, on July 16, 1905. His father, Fred E. Ross, is a minister and his mother is the former Mary Hamm. The Ross family points with justifiable pride to its distinguished Scottish ancestry.

At an early age Don's father was transferred to a pulpit at Washington Court House, Ohio, and it was there that the baritone received his primary education. During vacations he took a job in the local theatre at \$2.00 a week. Although he served as general helper—his duties included selling tickets, acting as usher and being a prompter in the wings—his real interest was in the entertainment side and from those early days dates his ambition to be a performer.

After graduation from high school he matriculated at Ohio State University. College was no bed of roses for Don. He had to help pay his way by being a chauffeur, digging ditches and working for a roofing company. With it all he managed to receive good grades in the classroom as well as take part in several activities. He was a member of the football, baseball and basketball squads, took part in col-

lege dramatics and debating and was vice president of the Glee Club. A fellow singer was Jack Brooks. As a team he and Don were featured in several college shows. Their work was exceptionally well received by the students, who encouraged them to continue it after they left college. In a short time Brooks and Ross were known all over the country. They started with appearances in picture houses, were featured in an edition of the Greenwich Village Follies and for several seasons were on the Chicago staff of the Columbia Broadcasting System.

While on tour the harmonists played an engagement at Cincinnati and were invited to make a broadcast over a local station. They were introduced to an attractive, brown-haired girl. Soon after Don Ross formed a new partnership, this time for life. The girl was Jane Froman, now a radio star in her own right.

The team of Brooks and Ross was dissolved early this year. Jane was enjoying radio and personal appearance success in the east and Don decided to follow her to New York. The Rosses live in Garden City, a Long Island suburb of New York. Not on the air together, they attend each other's rehearsals and programs. When Don is broadcasting, he can see Jane in the control room, singing his songs along with him and nodding encouragement to him.

On their off days they swim, ride and play tennis and golf together. In the evenings they learn new songs. This winter Don and Jane will be in the Follies, their first regular joint appearance and the first radio performers to be engaged for the famous Ziegfeld production.

#### George Olsen's Wife

Ethel Shutta, who is heard on the Nestle's Program as a co-star with Walter O'Keefe, every Friday at 8:00 p. m. EST, over the NBC (Blue) network, has sung for the musical comedy stage, the microphone and the talking picture screen—but this is the first time she has been in an

extended radio series without her husband, George Olsen.

Miss Shutta was featured in the Ziegfeld Follies and in "Louis the Fourteenth." She had a leading role in both the stage and screen versions of "Whoopee," and she has been on many outstanding radio programs with Olsen and his music.

A daughter of stage parents, Ethel made her first public appearance when she was three, and took her first speaking part when she was eight. From then on she never was away from the stage for more than a few months at a time.

Singing came naturally to her, and she soon began to appear in musical as well as dramatic productions. By the time she was in her 'teens she was a veteran trouser. She had played all over the country. Then a vaudeville act brought her to New York and her first part in a Broadway revue. An engagement in the Follies followed, and she was on the road to fame.

Miss Shutta came to radio after her retirement from the musical comedy stage as an occasional vocalist with her husband's orchestra. Popular demand soon made her an air headliner.



*Ethel Shutta*

# STATIC REDUCING ANTENNA SYSTEMS

• • • By B. FRANCIS DASHIELL

**W**HEN electric sparks are created by friction or the opening and closing of electrical contacts they radiate energy in the form of tiny radio waves which carry from a few to several hundred feet. All electrical apparatus, such as light switches, motors, utilizing brushes, street cars, trains, automobiles, elevators, circuit breakers, dial telephones, vacuum cleaners, refrigerators, fans, and other appliances, make themselves heard by producing clicks, hums, crashes, bangs and buzzes in the radio loud speaker. Motors produce a constant, grinding noise; x-ray or violet-ray machines create a loud, mushy, crackling roar.

The radio receiver picks up and amplifies this "man-made" static. The oscillations enter the receiver through the power lines, the antenna and the lead-in, or through the set itself. In the April, 1933, issue of *RADEX* (No. 68), we learned how static impulses coming over the power lines can be filtered out. But frequently static interference continues to baffle the listener. Let us, then, turn our attention toward the antenna system.

## The Inevitable Static

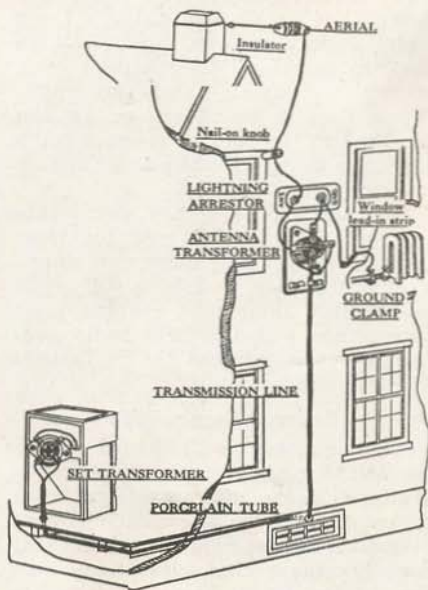
The antenna, in most all cases, is sufficiently removed from the active field of man-made static generated by devices operating within the building in which the receiver is located. We cannot expect the antenna to avoid picking up the natural atmospheric static which abounds when the weather is stormy, humid or hot. If we try to eliminate nature's static or atmospheric we at once hinder the collection of radio signals.

Since the majority of man-made static impulses cannot reach the an-

tenna because of its location high above the receiving set, it at once becomes obvious that the set itself or the lead-in wire may be at fault. But, because the modern receiver is so perfectly shielded, it seldom can be blamed for picking up noise.

## Lead-in Is Susceptible

Let us, then, examine the antenna down lead. This wire drops down from the high, outside antenna and passes close to the sources of local man-made static. Tiny spark waves or oscillations easily pass into the field of the wire and their impacts create the "shock excitation" that instantly becomes the static we hear in our loud speakers.



The Philco Antenna System

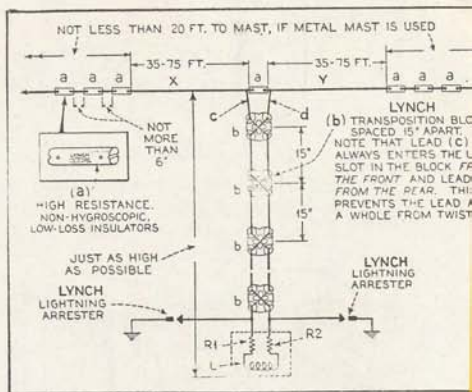
Now it is quite possible to bring the lead-in wire down past the zone of local static through a pipe or some other form of metallic shielding which will not permit radio waves to pass. And in this way the impulses of static would be prevented from reaching the wire for they would pass into the earth by way of the grounded, surrounding metal conductor or shield. But such a shield, if it happens to be rather lengthy, will sap most of the radio energy collected by the antenna because of a condenser or capacity effect set up between the insulated inner wire and the surrounding metal surface. The higher the frequencies being received the greater will be this energy loss through the long condenser.

Short waves, therefore, are very difficult to handle, and the shielding of lead-ins usually produces much signal loss. The least condenser effect in a short-wave antenna system means loss of signal strength. But success has been obtained by certain transposed down-lead systems in place of the usual shielded lead-in wire.

Shielding against static has been improved by utilizing small radio-frequency transformers for input and output together with a low impedance circuit between the antenna and receiver. Properly matched transformers at both ends of the lead-in permit the antenna to be located in the most desirable place and position, and the receiver may be installed in any location without relation to noise or proximity to the antenna.

### Antenna Transformer Systems

The general principle in use by several efficient noise-reducing antenna systems now on the market is decidedly similar. A small transformer is attached to the antenna wire. Passing down from this device is a pair of twisted lead-in wires covered with a metallic braid or shield, which is grounded. At the radio end another transformer connects to the antenna and ground terminals of the set. There are some systems which do not



The Lynch Transposed Aerial

use a shield covering, but transpose the two wires continuously all along the circuit. Several transformers may be used on one lead-in so that three or four sets can be operated simultaneously on a single antenna.

Amy, Aceves and King offer their "Akaformer" outfit which consists of an antenna Akaformer and a set Akaformer joined together with a length of single-wire, flexible-braid, shielded cable. Two antenna leads are provided at the set Akaformer; one for a receiver of low impedance, and one for a high impedance set. Tobe Deutschmann's model 33 "Filterizer" consists of impedance matched units for the antenna and radio set with a Filterized shielded down-lead cable. A good match may be obtained between any aerial, the shielded cable, and a receiver of any input impedance. Two terminals on the set transformer permit this close matching.

Pacent offers their No. 341 "Radioformer" system consisting of antenna and set Radioformers and special shielded transmission cable. An additional lead permits careful matching and excellent short-wave reception. Arthur H. Lynch has produced a broadcast noise-reducing "No-Stat" system using the antenna and set transformers and shielded cable. Most of these sets are similar to the Akaformer system, and some manufac-

# REPORTING

## Reception in French

IN the March, 1933, issue of this magazine (No. 67) appeared a letter in Spanish to be used in reporting reception of Spanish-speaking stations. Accompanying it was the English translation. This month we present the same letter in French; for the English translation see page 19 of the issue above referred to.

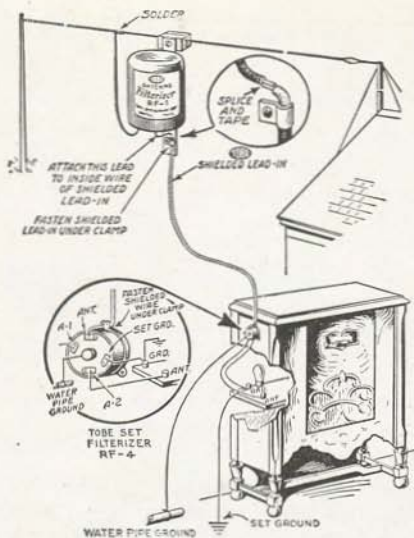
Monsieur le Ingénieur Chef  
Station de Radiodiffusion (Call)  
Cher Monsieur:

Je viens de m'amuser beaucoup en écoutant votre station de radiodiffusion (Call) en—kcs. Ci-dessous se trouve la liste des sélections que j'ai entendues. Voulez-vous avoir la bonté de vérifier celle-ci avec votre liste des stations, et m'adresser une vérification de ma réception.

1. Sélection d'orchestre
2. Sélection de piano
3. Sélection de violon
4. Sélection d'organe
5. Sélection de marimba
6. Sélection d'accordéon
7. Solo vocal (Monsieur)
8. Solo vocal (Madame)
9. Choeur vocal
10. Musique classique
11. Musique populaire
12. Musique du pays
13. Musique de la danse
14. Fox trot
15. Marche
16. Valse
17. Causerie
18. Annonces de la station
19. Volume—faible
20. Volume—médium
21. Volume—fort
22. Qualité du ton—mal
23. Qualité du ton—bien
24. Conditions de l'atmosphère—bien
25. Conditions de l'atmosphère—mal
26. Musique Américaine
27. Musique Francoise
28. Guitare
29. Duo Trio
30. Le temps

Je vous remerci d'avance pour votre vérification. Dans l'espoir de vous adresser encore un rapport à l'avenir, veuillez agréer, Monsieur, mes salutations distinguées.

*Friday's time on the air will appear in the November issue; Thursday's in December.*



*Tubo Deutschmann Transformer Aerial*

urers have been licensed under the Amy, Aceves and King basic patents which are said to control the system. The older Kolster system has been described previously in RADEX (November, 1932).

### The Transposed Lead-In

Some experimenters have perfected devices that do not use shielded cable. The Philco system avoids the use of metallic shielding and consists of two transformers; one, the antenna, and the other, the set transformer. A length of transposed, twisted lead-in wire is used to drop down from the antenna. A high ground close to the antenna is necessary. This Philco "Three-Purpose" system not only prevents man-made static from entering the set, but is said also to increase efficient reception and bring in many more stations. The "Staticlear" system also uses the transposed two-wire down-lead cable. Both it and the Philco work well on short waves without the need of a special transformer terminal. The Lynch "Doublet" transposed system was designed particularly for use on short waves, but it

*(Continued on page 32)*



# EXPLORING *the* Short Wave SPECTRUM

• • • *With* PAGE TAYLOR

**B**ECAUSE of the fact that reliable short wave reception depends upon so many different factors, it is necessary that broadcasting stations have constant and comprehensive reports from listeners so they may determine the proper frequencies antennae and operating schedules to use to obtain maximum results in transmission.

To assure these stations of a continuous stream of reports covering reception on the North American Continent, RADEX has appointed from among its readers, Official Auditors, whose duty it will be to watch the transmissions of a selected group of stations from day to day. These reports will be compiled and sent to the stations once each month. It is expected that such reports covering a period of several months can be of value to the designated stations, and of course, they will aid listeners in that they will surely result in better reception on this Continent.

## From the Stations

Mr. D. R. P. Coats, Broadcasting Manager of VE9JR, kindly sends us their correct operating schedule. This station works on Sundays from 9 to 10 p.m.; on Saturdays from 9:30 to 10 a.m.; 11 to 11:30 a.m.; 12:45 to 1:15 p.m.; 7 to 8:30 p.m.; and 9 to 10:30 p.m. On the other days of the week the schedule is: 9:30 to 10 a.m.; 11 to 11:30 a.m.; 2 to 2:15 p.m.; 3:15 to 3:35 p.m. and 7 to 10:30 p.m.

Mr. Coats writes that he would be very pleased to have RADEX readers report regularly on reception from VE9JR. They may be addressed at Radio Office, 155 Royal Alexandra Hotel, Winnipeg, Manitoba, Canada.

Mr. Hermann Degwitz, owner of YV3BC, writes:

"Answering your letter, we are giv-

ing you below our latest schedule:

6134 kcs., 11 a.m. to 1:30 p.m. and 5 to 10 p.m., Caracas time.

9510 kcs., 10 to 10:30 p.m., Caracas time.

"The above is on working days, on Sundays we transmit on 6134 kcs. from 9 a.m. to 12:30 p.m. and from 3:30 to 7 p.m. Caracas time in addition to our regular transmission which starts at 8 p.m. and ends at 11 p.m.

"We are not working on 6080 kcs. any more, and we believe that in a short time we will get a new frequency assignment instead of 6134 kcs. as this wave is very near W8XK (only 6 kcs.) and results in considerable interference.

"Our address is Radiodifusora Venezuela, Bajos Pasaje Ramella,



Howard Barlow, conductor of the Columbia Symphony Orchestra, is one of the air's most popular leaders. Mondays at 10:45 p. m. EST and Wednesdays at 11:00 p. m.

Caracas, Venezuela."

Caracas time is one half hour faster than EST.

### German S.W. Stations

From Herr Eppen of the Reichspostzentramt comes a letter containing accurate information about the German stations.

"The transmitters are located at Zeesen, a suburb of Berlin," he writes. "At this time two transmitters are working on various wavelengths and with different aerial systems.

"From 8 a.m. to noon, EST, one sender works on 15,200 kcs. (19.737 meters, DJB), also from 12:30 to 6:30 p.m. This same transmitter also works on 31.38 meters (DJA).

"The second transmitter works from 10 a.m. to 6 p.m. on 25.51 meters (DJD), and from 7 to 9 p.m. on 49.83 meters (DJC). Many programs are relayed from our long wave station on 1634.9 meters and also from the Berlin sender over the aforementioned wavelengths. The antenna output of these stations is 5 kw. and modulation is about 70%."

Additional information is given in a letter received from the Reichs-Rundfunk-Gesellschaft, Berlin-Charlottenburg 9, Haus des Rundfunks, Masurenallee. This letter states that DJA, 31.38 and DJC, 49.83 meters, work daily from 7 to 9 p.m. EST with news items in German, English and Spanish nightly at 8:45 p.m.

Reception reports for German broadcasting stations should be sent to the Reichs-Rundfunk-Gesellschaft at the address given above. We believe, however, that the Reichspostzentramt will continue to acknowledge communications regarding commercial or experimental stations. This organization can be addressed at Berlin-Tempelhof, Schöneberger Strasse 11-15.

### In the Dominican Republic

Accurate data have been received about station HI-1-A from its owner, Mr. Rafael Western. He writes:

"This station is constructed in this

country by its owner, Mr. Rafael Western. It works on a power of 7½ watts, and according to reports is heard in the United States, Cuba, Porto Rico, Venezuela, Virgin Islands and all the Dominican territory.

"The actual hours of transmission which we have scheduled are the following: 8 to 8:30 a.m.; 12:30 to 1:30 p.m. and 8 to 9 p.m. every day." (We believe EST is indicated.)

The frequency used is given on the letter-head as 6,272 kcs. or 47.8 meters, and the address as: Estacion Radiodifusora Commercial HI-uno-A, "La Voz del Yaque," Santiago de los Caballeros, Dominican Republic.

The two League of Nations stations at Prangins, Switzerland, have changed their schedule, according to information received from C. R. Anderson, 1026 1st St., N. E., Mason City, Iowa; I. Beitman, 249 Gates Ave., Elyria, Ohio, and John Strong, 1436 Meridian Place, Washington, D. C. Stations HBP and HBL operate



"It's funny business" that takes Milton Berle, 24-year-old wise-cracker, from Broadway to the Old Gold broadcasts with Fred Waring's Pennsylvanians. You will hear him Wednesdays at 10:00 p. m. EST on the See-Bee-Ess.

now from 5 to 5:45 p.m. EST Saturdays instead of Sundays.

### A Two-Way Police System

Some of our readers may be interested in the information contributed by Nathan Handler, 102 West 16th St., Bayonne, N. J. He writes that his "home town," Bayonne, has installed and is now using a short wave police radio system that works in duplex, or, as he says, "a system that works both ways, from a central station to police cars and from the cars to the station at headquarters, at the same time. The headquarters set operates with 25 watts power and the 9 police cars with 4.5 watts each. They all use the 34,600 kcs. frequency. The local police also have permission from the FRC to operate experimentally on the following frequencies: 41,000; 51,400; 60,000 and 400,000 kcs. I have not been able to find out what call letters are used. I hope you will find this information useful. This is the first time in the East that two-way communication has been tried with police radio."

These stations have experimental call letters at this time. The headquarters station is W2XEA, while the nine police cars are W2XEB, W2XEC, XED, -XEE, -XEF, -XEG, -XEH, -XGG and -XCJ. We would be interested in knowing how many of our readers are able to receive these ultra-high frequencies. 34,600 kcs. is equal to 8.6 meters. If readers are interested we will include in another issue of RADEX a list of these high frequency police transmitters. Several such stations have been licensed and should be in operation in the near future.

### Caracas and Saigon

A questionnaire sent to YV1BC was returned with the information that two frequencies are used, 6112 and 11,695 kcs. with 300 watts power. The station announces as "YV1BC, Broadcasting Caracas, le habla a la nacion," and chimes are used as an interval signal. The mailing address of this station is Compañía Anónima



When the Richfield Country Club broadcasts on Mondays at 7:30 p. m. EST, listeners hear these artists. Left to right, Mary McCoy, soprano; Ernest Chappell, m. of c.; Betty Barthell, blues singer; and Jack Golden, orchestra leader. Miss McCoy, who once toured with Madame Schumann-Heink, sings light opera and semi-classical selections. Miss Barthell, throaty voiced daughter of the South, sticks to popular "blues" tunes, sung in a style all her own.

Almacén Americano, Apartado 290, Caracas. YV1BC sends an interesting 14-page booklet filled with pictures to listeners in acknowledgment of correct reports.

According to a letter received from Compagnie Générale de Télégraphie Sans Fil, P. O. Box 238, Saigon French Indo-China, two transmitters working on three wavelengths are used for telephony with Ste. Assise, France.

Mr. P. Marty of this station writes: "Station FZS works telephony with Paris, FTK, on 16,345 meters (18.342 megs.). The service commences at 1345 GMT (8:45 a. m., EST). The power in the antenna is 15 kilowatts and the frequency is stabilized by quartz crystal.

"Telephonic communication with France is also maintained on 25.02 meters (11.983 megs.) by the same transmitter, FZS.

"We also use, but more rarely, another transmitter, FZR, which works on 18.51 meters or 16.200 megs."

A letter from TGW informs us that they work on short and long wave simultaneously, as follows:

Sundays, 12 noon to 1 p. m.

Other days, 12 to 1 p. m.; 6-7 p. m. and 9-11 p. m.

Standard time is not indicated, but we believe this schedule is given in CST. The wavelength is given as 45 meters.

Despite the fact TGW consistently requests reports from their audience, we have never heard of anyone receiving a confirmation.

#### The Summer Logs

"We've had some swell days this summer for short wave," reports Geo. K. Glass, 1320 Cadillac Blvd., Detroit, Mich. "The old Kennedy has performed perfectly. I've never been able to get NRH but in trying for him I picked up XETE in Mexico.

"DJD and DJB have been wonderful all summer. DJA and DJC also come in regularly, but not so perfectly. GSF, GSB and EAQ get an A-1 rating. Pontoise does not line up very well though some Sundays I get them on 25.2 and 25.6. I've gotten VK2ME a few times. In general, I have been doing more listening to programs than DXing. In fact, we've danced here several times to music from DJD. They broadcast a German orchestra one evening playing 'Stormy Weather' and we just had to dance. They sure outline their programs for the following two days in fine style at 7 p. m. I've had quite a few letters from Deutscher Kurzwellsender. They are quite interesting in reports.

"I notice that sometimes GSD and DJD conflict but yesterday I could separate them perfectly. Had another session with 2ME yesterday morning. Couldn't hear them from 1 to 3. They came in very good from 5 to 9 but couldn't get them from 11:30 to 1:30.



"The Hummingbirds" are the latest trio of harmonizers to be heard on the CBS. With Ted Husing, Barbara Maurer and Leon Belasco's orchestra, they provide the talent for the Oldsmobile programs, each Tuesday and Thursday night from 10:30 to 10:45 EST. Left to right: Margaret Speaks, Katherine Cavalli and Dorothy Greeley.

I occasionally get Pontoise on 25.6 clear enough to understand if I knew enough French. YV1BC has been missing for some time for me."

"South Americans are not receivable here at this writing," advises C. R. Anderson, Mason City, Iowa. "The German, French, and English are good at times. Spain being the most consistent of the lot, but you know how inconsistent short wave reception can be, one day no foreigners being heard at all, but the next time you turn in they are all there. J1AA on 30.4 meters is now on from 6 to 7:30 a. m. daily. I often hear a Mexican in the mornings on 16.88 meters, call not yet known. A Spanish station on 30.45 meters is also heard playing American recordings and asking for any American or Mexican station to come in. I would like more information on this from anyone."

(Continued on page 33)

# SICK SETS *and* Their Symptoms

• • • *By the* TECHNICAL EDITOR

**P**LEASE tell me what sort of circuit is used in the RCA R-21 receiver.

The RCA model R-21 receiver uses a 9-tube circuit, or eight tubes without counting the rectifier. It is a standard superheterodyne receiver and takes the following tubes: one -35 radio-frequency, one -27 oscillator, one -24 first detector, one -35 intermediate frequency, one -27 automatic volume control, one -27 second detector, two -47s in push-pull power output, and one -80 full-wave rectifier.

## Pick-Up With RCA Victor R-74

*How can I use an electric pick-up table in connection with my RCA Victor R-74 radio receiver?*

This particular receiver has a grid bleeder or resistance connected from the grid return to ground of the second detector, with a 0.1 mfd. condenser shorting or by-passing the return to the cathode of this tube. Place the terminals of the pick-up across the bleeder mentioned and remove the 0.1 condenser. It may be necessary to put a .002 mfd. condenser in its place. Then shunt or by-pass the 20,000 ohm second detector cathode resistance with a 3,500 ohms resistor. This will complete the adaption of the receiver.

## Changing To Short Waves

*I have a Radiola AR 812 receiver that I would like to change over for short wave reception if practicable. Will you advise me how to proceed?*

Although this circuit has been adapted to short wave reception there is no specific information available on the method of making the conversion. The loop must be tapped and only a small portion of it used. The tuning condensers should be reduced in capacity or value or replaced with

smaller ones. The coils shown in your circuit diagram, marked L1b, L2, L9 and L10, must be reduced in inductive values. And adjustments, alignment and the balancing of the circuit for higher frequencies is then a matter of experiment. Removal of turns of wire from the coils to shorten the wave lengths received are best determined by experimentation.

## Voice Coil On Sparton 301

*How can I go about cutting the speaker wires to insert a silencing switch when using headphones on my Sparton model 301?*



*When "The Bath Club" resumes its programs over WABC and the Columbia net, on Sunday, Oct. 1st, at 9:00 p. m. EST, Nino Martini, peer of radio tenors, will join the cast. Martini is the first singer to go from Radio to Metropolitan Opera though many have traveled in the other direction.*

Two yellow wires connect the power tubes to the primary of the output transformer, and blue and red wires attach to the field magnet of the field coil. Trace the two yellow wires from the chassis to the transformer. There you will find also two additional short wires leading from the secondary of this transformer to the voice coil which is wound on the tip of the speaker cone, being somewhat free to vibrate or "float." These are the voice coil wires, and either one may be cut for the series insertion of the silencing snap switch.

### Replacing Majestic Tubes

*Will it be possible to make a substitution of newer tubes for the tubes now in my Majestic model 90-B receiver?*

All Majestic tubes are similar, with only a very few exceptions, to standard tubes and they all may be interchanged. In your set all four of the -27 radio-frequency tubes may be replaced with 56s. However, in the interest of economy, we suggest that you purchase but one tube at a time and replace only those -27s where actual improvement may be noted by ear. If a 56 works well in each of the -27 sockets then all -27s may be replaced. No other changes are recommended.

### Magnetic Speaker On A-K 55

*How shall I go about attaching a magnetic speaker to my Atwater Kent 55 receiver?*

We assume that you wish to attach the speaker for use simultaneously with the dynamic speaker of the set. Of the four wires in the cable from the chassis socket to the speaker the two yellow wires with a black trace through them are the voice coil leads. Cut one of these short wires and insert a single closed circuit jack in series with the cut. When a phone plug is inserted in the jack it connects the magnetic speaker in series with the dynamic speaker—both operating together. If the magnetic speaker is not desired when the dynamic speaker operates, or vice versa, use another

type of phone jack which will cut off the dynamic speaker when the magnetic speaker plug is inserted in the jack.

### New Tubes In National Jr.

*Do you think it would be wise for me to change over to the newer types of tubes in my National Jr. short-wave receiver?*

The circuit is very critical and for this reason it is not advisable to substitute other and newer tubes for the ones now in use. The set is designed so carefully for the tubes furnished that any change will tend to throw off the extremely fine balancing of the circuits. Replace the old tubes with new ones if they are weak. Clean the set, particularly between the plates of the variable condenser, and remove all dust that tends to lower efficiency.

### Radex S. W. Converter

*I have been able only to procure a 30 millihenry choke for my short wave converter I am building. Will this work? Which tubes in my set are best for furnishing filament and B current?*

The 30-mh choke coil will serve quite well. The values given in our May and June issues were, of course, those best calculated to work in harmony with each other. Slight variations will not matter very much. You may take the filament current from one of the -45 tubes with a wafer adapter beneath, and the plate current with another wafer beneath the -27 first audio tube. This, of course, provided your receiver is rather standard in its arrangement.

### Failure Of All-Wave

*I have a Brunswick 9-tube receiver with a built-in short wave attachment which gives very poor results. Can you advise me how to use this set? Also, there are two coils that came with my receiver and I do not understand how to use them.*

This Brunswick receiver is a sort of all-wave set with plug-in short-wave coils. Since our available data do not give the values of the coils,

as well as some other essential information, we advise you to get in touch with Brunswick Engineers, 619 West 54th Street, New York, N. Y., who will gladly furnish you with all needed information about their receivers.

### Hum in R. C. A. Set

*My RCA 66 set has an objectionable hum when you sit to one side. It sounds wavy if the station tuned in is a powerful one. How can I filter this hum out of the receiver, for it begins as soon as the set is turned on?*

No general statement can be made in regard to receiver hum as there are a large number of possible sources of hum. As tubes become old their emission becomes irregular and causes a hum. The improper neutralization due to shifting tubes from one socket to another may cause hum. There are other sources too numerous to mention, such as improper plate voltage, improper grid voltage, insufficient heater current, leaky or open cathode condensers, defective filter units, etc., all or any of which can only be located by a well-equipped service man and shop. Of course, there is the question of a wavy or throbbing hum caused by station interference which no set can eliminate. It comes under the heading of interfering harmonics caused by two or more station carrier waves working against each other.

In this receiver all of the -27 tubes may be replaced with 56s, but the r.f. tuning, the i.f. tuning, the neutralization, and the oscillator, must be carefully and correctly readjusted. Because of the great increase in gain in these new tubes the volume control need never be turned as high as previously. More shielding on this set is not advised as it will alter to a certain extent the circuit characteristics and possibly beyond the range of the variable adjustments within the set.

### Coils And Condensers

*How are coils and condensers matched up in a radio circuit? How*



*The "Ford Dealers of the Air," otherwise "Lum and Abner," excellent interpreters of rural community life, obviously know their "common pee-pud." On the NBC-WEAF network each Monday, Tuesday, Wednesday and Thursday at 7:30 p.m. EST. They are also on the same systems Friday nights at 10:30 with an old-time sociable.*

*does a condenser tune a coil of wire?*

When you change continuously the capacity of a variable tuning condenser, or change the number of turns of wire on a coil, the process is called tuning. This is the method of regulating the circuit reactance. Reactance in a radio coil is its resistance to a flow of alternating current. A coil may have almost no resistance to direct current, yet present a high resistance to an alternating current. When the frequency is very high even a small coil has a great reactance.

Tuning may be accomplished through a change of condenser capacity, and this variation will balance its capacity reactance against the inductive reactance of the coil when the latter is a fixed unit, such as is the case in radio circuits. What we do by tuning the condenser is to

establish a point of resonance by creating a condition of zero reactance in the coil for the passage of a radio signal of a given frequency. No other frequencies can pass except the one to which the coil is tuned to a state of no resistance, and the circuit is said to be in tune with that certain frequency.

It can be seen, therefore, that coils must be carefully designed so they can be tuned by condensers, and that there is a definite ratio between these two units of the circuit. The coil, in a broadcast receiver, must not oppose frequencies between 545 and 1500 kilocycles which are induced in the receiving antenna, yet it must be capable of being tuned with a condenser to any frequency within that range. The usual condensers have capacities of .00035 and .0005 microfarads, or millionths of a farad. On the broadcast band with a .0005 condenser, about 50 turns of No. 28 wire on a two-inch tube will suffice, or about 65 turns for a .00035 mfd. condenser.

#### Freed-Eiseman Wiring

*How can I identify the wires for batteries on a Freed-Eiseman, model N-89, six-tube set, so they can be attached to A and B battery eliminators?*

The B 135-volts wire leads to the speaker jack and the plate of the -71 power tube in the set. The 90-volts B wire leads to one side of the primary of the second audio transformer; it also connects to —A through the by-pass fixed condenser. The B 22-volts wire connects to the primary end of the first audio transformer and then to the plate of the detector tube. The positive A wire goes to the volume control rheostat. The —A, —B and plus C wires connect to the ground and to one side of the filament terminals of all sockets. Negative C 4½ volts connects to the secondary coil of the first audio transformer (immediately following the detector tube). And C —22½ volts goes to the secondary coil of the second audio tube, thence to the grid of the last power tube, a -71 type.

#### New Tubes Cause Howling

*My General Electric a.c. receiver uses -24 and -27 type tubes which I replaced with 56s. Poor results were had, with whistling and other noises. What should be done?*

You have not indicated the model of your set, but we assume it is either H-31, H-51 or H-71, all of which use the same tube arrangements. The -27 oscillator tube in these sets cannot be replaced with 56s without re-adjustment and alignment of the oscillator condenser. This part of the circuit is very critical. The same applies to a lesser extent to the second detector, which is also a -27 tube. With rebalancing of the tuning condensers a 56 can be used in place of the second detector. The oscillator is the -27 tube next to the -24 at the right hand end of the chassis (looking down from the front), while the second detector is the last -27 at the left hand end of the row of tubes.

#### Poor Volume On RCA 46

*My RCA model 46 receiver seems to fluctuate in volume for half an hour or so after being turned on. What do you suggest as a remedy?*

The fluctuation appears to be due to trouble in the volume control which is a 50,000 ohms resistance that varies the voltage on the screen grids of the two r.f. tubes—type -22. It should be tested and replaced if at fault. Then there is a line voltage resistance with switch for regulating the 110-125-volt power. These resistances, which are three, each with 16 ohms resistance, may be defective. The series filament resistors, two in parallel, totalling 268 ohms, in the maroon and red wire leading to terminal 8 of the terminal strip, may need replacing.

All tubes, sockets, connections and resistors must be tested and replaced if defective. It is evident that after the set warms up the defective point expands and produces good contact. There have been cases of such variation in resistance being so difficult to

*(Continued on page 76)*



# NOVICES and Experts in the DX FIELD

• • • At our Readers' Dials

**I**NTRIGUED by the letters from our DXers, each month sees many new hands twirling the dials for the distant station. Here is one of the most interesting pastimes or hobbies in the world, one in which not a single cent need be spent or in which a verification collection of great interest may be built up. There are no membership fees and no formalities. If you have a radio set, start tonight to see how many stations you can log with your receiver whose call you hear distinctly.

## From a Beginner

"I found RADEX to be so helpful and interesting that I decided to become a DXer," states A. Rodriguez,



Fred Allen, droll funster from the Broadway musical show, brings his own company of clowns to the air as a garnishee for the Salad Bowl Revue. Allen's company includes his wife, Portland Hoffa, Roy Atwell, the twongue-tister, and Jack Smart. Ferde Grofe's orchestra furnishes the music—all on the NBC-WEAF net Friday nights at 9:00 p. m. EST.

Sergeant Service Co., 28th Infantry, Fort Niagara, Youngstown, N. Y. "What are the qualifications to become a member?" Sgt. Rodriguez has a 7-tube All-Wave Silvertone super and one of the first stations he has on his new log is DJC, Zeesen, Germany, which, he says, "comes in very loud and clear, almost like a local. I got this station Tuesday night at 8:15 EDST and again Wednesday at 9:00 and she is coming in again tonight, Thursday as they announced they would. When I first picked them up, it was such a surprise to me that I didn't think it could be possible until 9:00 p. m. when they announced for the second time in German, English and Spanish." In answer to the Sergeant's question, the DX game has been covered in a number of articles in recent issues of this magazine. See What Do You Mean—DX in March, 1932; Radio DX as an Interesting Hobby, in October, 1932; Rules and Regulations of DX, in November; On Riding a Hobby, in December; and many others.

## From Some Old Hands

"There is nothing I like to do better than sit by my radio in the wee, small hours and try for far-off distant signals," says Walter Dice, 714 Chess St., Bridgeville, Pa. "I have never identified any stations farther than the Pacific Coast but won't give up until I do. I do not seem to have any trouble getting California, Washington, Oregon and British Columbia but beyond that, nothing doing. I have heard signals several times on 750 kcs. which could have been KGU, Honolulu, or perhaps JOBK-1, Osaka, Japan. Also on 720 kcs. I have heard signals several times other than WGN, Chicago, but have never been able to get call letters loud enough. I

believed these latter signals to be 2YA, Wellington, N. Z. I will not guess I heard a certain station and until I hear the call letters and location, I will not count them.

"I did not have an outside antenna last winter because, where I was living, it was impossible to put one up. Neither did I have a ground on my set. Just a short wire run from the antenna post on the receiver to a hot air register. This, I found, made my set very selective because I was able to hear and verify on February 9th, at 7:15 p. m. EST, station CFCO on 1010 kcs. using 250 watts, with our own local KDKA using 50,000 watts at the same time on 980." Among Walter's other catches are HJN, YV1BC, KFPM, WKAQ, KFOX, KMPC, 10-BQ, CJOR and WNBW.

"Due to a difficult course in ceramics here at the University of Illinois," comments Rexford Newcomb, Jr., 605 Nevada Street, Urbana, Ill., "I was unable to do any DXing all last winter. Two weeks ago, however, I stayed up late to listen to a favorite dance program and, after its conclusion, I twirled the dials for fun and was lucky enough to get in with a bunch of stations giving frequency check program. On that night and the following, I logged 31 new stations, bringing my total log to 418. The best catch of these test programs was KGKL, 100 watts in San Angelo, Texas. This came in well despite the summer static. I received a verification from them yesterday morning to bring my total verifications up to 283.

"My pet peeve is a station that broadcasts nearly all night on some channel for months at a time and simply ruins DX on that particular channel. For instance, I can't seem to get anything but WEXL on 1310 kcs. and WNRB on 1430.

"I don't believe I have ever seen any other DXer mention the Travler set in RADEX. I have done all my DXing on a 6-tube midget set of this make which I think should constitute some kind of a record. Anyway, if any other readers are DXing with a

set like mine, I would be especially glad to correspond with them."

"Congratulations on your June issue!" writes Murray D. Bryce, Rt. 1, Royal Oak, B. C., Canada. "It is just about the swellest possible. It sure is great to see the foreigners listed in the indices. I wish you would publish such a pair of lists several times a year.

"Through RADEX I have made friends with another RADEXer, Frank Macedo of Victoria (page 18, February). I visited him, saw his set and two hundred odd veris. His log now totals about 385, fifteen ahead of me. I think it is the largest on Vancouver Island. His record is nothing short of remarkable, as his set is only a tiny two-tuber, but I don't think there is the slightest doubt about its authenticity, which is more than can be said about some of the fans.

"No doubt you have heard that the DXers on the coast have put on a



*Al Goodman and his orchestra furnish the music for the Irvin S. Cobb programs, Wednesdays and Fridays at 9:00 p. m. Columbia time. Cobb isn't much of a hand to watch the clock and this makes Goodman do some fast mental calculations.*

campaign to get some time for DXing on the 1200 channel by getting KGFJ, the 24-hour-a-day nuisance, to leave the air sometimes. We have been writing both the station and the FRC, but with little avail. The station has not replied. The FRC said, 'There is no restriction as to the number of hours an unlimited time station may operate, regardless of classification—local, regional or cleared channel. Therefore no action may be taken by the commission to curtail the present operating schedule of station KGFJ.' It is certainly too bad if nothing can be done."

### Our Symbols

"Who says you can't DX in the summer?" postcards Rex Newcomb, Jr., Urbana, Ill. "I've added 48 new stations to my log since August 3rd bringing the total to 453. I don't agree with your symbols regarding verifications. I have cards from WJS, WGN, WTAM, WMAQ and KGKY whereas you list all these stations as not verifying reports of reception." One of the questions on our recent questionnaire to all stations was "Do you verify reception for your listeners upon receipt of accurate report and return postage?" When a station answers Yes or No, we have to assume they can read the English language and know what they are saying. The symbols in RADEX indicate the answers the stations themselves gave us. When we attempt to change these symbols because some listener did or did not get a verification, we get into hot water. We can only tell our readers exactly what the stations told us.

"To prove to those DXers who believe in the fallacy that DX is terrible after June 1st," remarks Karl J. Halpern, 495 E. 3rd St., Brooklyn, N. Y., "the following is a list of some of the stations I have heard testing: KTFI, KGGM, WIND, WMBO, WNBO, WHBC, WHBD, WIEH, WEXL, and numerous Pacific coast stations from 500 watts up. Every one of the above stations was heard with a minimum

of static. This summer has been exceptional in that many small stations have been testing. WIND is on every morning till 4:00 o'clock EDST, with their Old Milkman Matinee. WIEH is WMCA's short wave transmitter on 1542 keys., a very good catch. They use between 10 and 50 watts. Can be heard in the early evenings."

"My radio log for the two years I have been DXing," reports Luther E. Grim, 505 S. Main St., Red Lion, Pa., "stands at 586, with 36 verified. About ten that I know of have been deleted since I heard them. There may be more when I check over the Canadian changes. These are all included in my log. My verification from HJN arrived sometime in May, making my second South American verification, YV1BC being the other."

### Likes His New Set

"After three years' experience with several different sets," contributes Clevement Van Velsor, 1033 Sanford Ave., Irvington, N. J., "I have come into possession of a set I've always wanted—the new Scott Deluxe. I find it to be the most powerful instrument for reception I have come across. Really, it is too fine to be called merely a set or receiver; it is an instrument for reception. Even in August I can pick up every channel by 9:00 p. m. EDST. Two weeks ago I pulled in every single channel save 850 (WABC was a little too strong for that one) at 8:30 p. m. When I can get WDEL, Wilmington, at 6:00 p. m. and WHAM, Rochester, at 7 during the summer, I need not mention what I expect when winter comes. Selectivity is fully 25% better than other sets I have used. I mean by this, selectivity over the entire dial and with all stations. I have been surprised again and again by the way I can pick up distant stations which heretofore were drowned out by interference. Short wave reception is all a real fan could ask for. At present GSB is coming in as quietly and as clearly as our local WOR. Even the great amount

of ignition interference from passing cars which formerly ruined many good programs bothers me now only a little."

#### Radio in Cuba

J. A. Vinas, Vista Hermosa letra "L", entre S. Pedro y Pinera, Cerro, Havana, Cuba, kindly sends us the latest official list of the Cuban stations and adds: "Now for a little chat. We have few real radio fans in this island. Short wave here is in its cradle as far as fandom is concerned. There seems to be a tendency to spend all in a radio set but as little as possible on antenna, ground and accessories. On the long waves, anybody with any kind of a radio hears all of those 50,000 watters and a few 25,000 and 5,000 ones that you have up in the states and some of the big ones in Mexico, but none of the rest even those located right here in Cuba outside the Havana city limits. Tell your readers to tune in for a native program on CMCJ with the best singers of Cuban airs in the country. Also for CMCY every Sunday night from 9:00 to 11:00 EST for the best imitation of last-decade theatrical successes in Spanish."

Here is a DXer that has the courage of his convictions. Robert Rosenberger, 17 Janssen Place, Kansas City, Mo., writes: "Kindly inform all DXers that any one who will telephone WE-4882 in Kansas City, Mo., will hear LR4, Radio Splendid, Buenos Aires, via the phone between the hours of 8:00 and 9:00 p. m. any Tuesday or Wednesday evening (when conditions are half-way fair). I will promise to tune this station in at least half the time although I cannot guarantee the volume nor conditions. I receive this station so frequently that I can safely say that most people who telephone me will hear LR4 relayed on the telephone." That's a pretty big offer Robert makes and we hope conditions will be favorable if he gets any calls.

Sam Kiamie, 2357 Sampson Ave., New York City, has just purchased a Grebe model 88 super which he says

is "a wonderful little set. It is not only sensitive but gives ten-ky. selectivity on local stations. Today I got a great kick out of pulling in WIBG in Glenside, Penna., only 25 watts, in the afternoon although WAAT in Jersey City and WBSO in Needham, Mass., on the two adjacent channels were also on at the same time. WIBG gave its location as Germantown and not Glenside."

"I have been DXing for five months and have logged 180 stations," records John Hawkins, Sallisaw, Okla. "My best catches are CMC, WEXL, WJTL, KTM, KTFI and KTAR. I am using a Philco Model 70, 7 tubes. I would like to correspond with a DXer on the west coast."

#### Foreign Programs

Should radio stations in the U. S. A. pick up and rebroadcast programs for foreign countries. This question is raised by Earl R. Roberts, 42 Burt Avenue, Newark, Ohio, who writes.

"I am now a member of the IDA of Bloomington, Illinois and have written to a number of Spanish speaking stations for DXes this fall to be dedicated to the International DX'ers Alliance and the Atlantic Radio Club. By writing these letters in Spanish, better results are obtained in receiving replies as I found out last year. So far I have sent to these stations for DXes during the months of October, November, and December 1933: PRAA, PRAG, PRAK, LR4, LR5, OAX, ZP1, HHK, CX26, CX24, CE86, CE74, EAJ1, EAJ3, Algiers, N. Africa, Rabat Morocco, La Paz, Bolivia Fecamp France, Julianehaab Greenland, and in SW to YV2AM, EAR58 and CT3AQ. Replies have been received from PRAA and CX26. The former apologized because they were unable to accept the DX and the latter stated that they would be ready to "prolong their transmission on a Saturday morning in order to facilitate the reception." The date and hour I asked for CX26 is Saturday, November 18th from 3:30 to 4:30 a.m. EST. They asked whether the

program was to be retransmitted or not but I do not know if they wanted it to be or not. I'll leave that up to them since I think WIOD Miami might retransmit it as they did HJN once last fall. I don't care much about it myself because some DXers are sure to take advantage of it and write direct to CX26 for a verification. What do you think?

"As I receive their letters of acceptance or refusal I will let you know the dates and hours of each of the programs to print in the DX column."

### Tips and Other Info

Thos. C. Roberts, 1043 S. Boxelder, Casper, Wyo., sends us a clipping from a Casper newspaper regarding a completely new station now under construction for KDFN, and says: "Perhaps when this new station is completed, Mr. E. B. Watson, of Ottawa, Ont., (mentioned in the September RADEX) may be able to log them. For Mr. Watson's benefit, KDFN sometimes stays on the air on Saturday nights until 9:30 or 10:00 MST. They did this last winter on several occasions so if Mr. Watson will try sometime to tune in on them after 9:00 p. m. MST, he might succeed in logging them."

For the benefit of the brethren in "Anzacland," WBBX, Claremont, New Hampshire, will give its first DX program of the season on November 19th, from 2:00-3:00 a. m. EST. The corresponding times "on the other side" according to the RADEX Time Converter are as follows: West Australia, 3:00-4:00 p. m.; Central Australia, 4:30-5:30 p. m.; East Australia, 5:00-6:00 p. m.; and New Zealand, 6:30-7:30 p. m.; all the same day. The information comes to us from R. R. Rawstron, Claremont, who adds: "In the U. S. A. we would appreciate reports relative to tone qualities of our improved amplifying system."

"For the benefit of DXers trying to log Eastern Canadian stations," suggests Donald F. Logan, 54 Brun-

wick Street, Gruso, Nova Scotia, "you might advise them that most of these stations run the Canadian Radio Commission programs and are on until midnight, AST, or later." Mr. Logan advises us that he has been appointed Eastern Canadian representative of the New Zealand DX Radio Association and that Canadian readers who would like to join the active New Zealand club may write to him.

"I would like to hear from DXers who have a 16-tube superheterodyne Midwest radio," requests Mrs. J. Maple, 1035 S. Vermont Ave., Los Angeles, Calif., "and the success they have on the broadcast band. We are new in the radio game and have not been able to do much so far. It may be our location isn't so good. We are surrounded by about ten broadcasting stations. Just about in the center of them, and also near power lines and streetcars."

A ball game has Walter J. Dmitrzak, 337 Gibson St., Buffalo, N. Y. up in the air. "On the morning of September 1st, from 3:15 to 3:50 EDST, I heard what was positively a baseball broadcast. Whether it was a night game or a far-distant day game, I want to find out. At 3:25 the score was tied, four and four. Static prevented identification of the station which was on either 1170 or 1180 kcs. Three o'clock EDST is eleven o'clock even on the West Coast and it seems hardly likely that a night game would be played that late. Can anyone identify?"

## Canadian DX Specials

The Canadian DX Relay announces the following programs: Time is a. m. EST.

Oct. 14, 1:00-2:00, WWAE, Hammond, Ind.  
3:00-4:00, WCAZ, Carthage, Ill.  
4:00-5:00, CFQC, Saskatoon, Sask.

Oct. 22, 3:00-4:00, CKCO, Ottawa, Ont.

Oct. 29, 4:00-5:00, WWNC, Asheville, N. C.

They say this will be one of the first DX programs, if not the first, for CKCO.

# A Methodical SHORT WAVE SERVICE

• • • *The "Official Auditors"*

**H**ERETOFORE radio listeners have taken a great deal from the broadcasting stations but contributed only too little in return. RADEX has now worked out a method which we believe will be of inestimable service to the broadcasters. Under the direction of our Short Wave Editor, Page Taylor, a group of "Official Auditors" have been appointed for the short wave spectrum. It is hoped in time to have at least one Auditor in each state and in each foreign country.

Each month a group of cooperating short wave stations will be chosen by Mr. Taylor. Our Auditors will check the programs from these stations and submit reports of their reception to Mr. Taylor covering the volume and clarity of the signals, the presence of static and other interference, fading, modulation, etc., etc. These reports will be compiled and sent to each station. The engineer of the station will then have before him a composite picture of the transmission of his signals as received at many widely scattered points.

During the present month, the Auditors will concentrate on the Daventry stations: DJA, DJB, DJC, DJD; VE9JR; VK2ME, VK3ME; and EAQ. In addition to this work, the Auditors will act as official reporters of the short waves to RADEX, providing this publication with a constant supply of authentic data.

The list of Official Auditors so far been named is as follows:

#### California:

Glendale, A. E. Armstrong, 2021 Bonita Drive  
Los Angeles, Stuart Walmsley, 1316 W. 58th Pl.

Pasadena, Gilbert Van Vranken, Jr., 2230 N. El Molino Ave.

San Francisco, Harry W. Dugdale, 3103 Jackson St.

#### District of Columbia:

Washington, John Strong, 1436 Meridian Place, N. W.

#### Iowa:

Emmetsburg, Doyle E. Carpenter  
Mason City, C. R. Anderson, 1026 1st, N. E.

#### Michigan:

Ann Arbor, Richard M. Carter, 820 McKinley Ave.

Detroit, George K. Glass, 1320 Cadillac Blvd., Apt. 205

Wyandotte, Richard Zorn, 464 Superior Blvd.

#### Minnesota:

Marshall, E. N. Luken, 605 Lyons St.

#### New Jersey:

Union, P. J. Soper, 256 Burroughs Terrace

#### New York:

Brooklyn, Arthur C. Gluck, 295 Clinton Ave.  
Charles A. Perdicaro, 7225 New Utrecht Ave.

Danville, Clarence Sargent, 18 Clinton St.

#### OHIO:

Cincinnati, George W. Burns, 2466 Wahl Terrace

Lima, R. W. Evans, 832 Richie Ave.

Oberlin, Robert H. Trufant, 23 S. Prospect St.

#### Pennsylvania:

Pittsburgh, C. E. Gates, 514 Ivy St.

#### Porto Rico:

Mayaguez, Benigno Contreras, Box 74, Marina Station

#### Rhode Island

Providence, Roy E. Robinson, 133 Mitchell St.

#### Virginia:

Richmond, W. T. R. Morris, Jr., 3219 Garland Ave.

#### CANADA

#### Ontario:

London, Edward C. Houlgate, 351 Adelaide St.

#### Quebec:

Montreal, K. P. Williamson, Apt. 42, 1610 Sherbrooke St. W.

## ELIMINATING NOISES

*"Radio Noises and Their Cure" is a big 75-page book published by the Tobe Deutschmann Corp. to sell for 50 cents. It completely describes man-made noises of all kinds and prescribes the proper treatment in each case. With each year's subscription to RADEX, we will give a copy of this book free in lieu of the Map of the World with Time Converter. Be sure to specify it if desired.*

# KEEPING STEP *with* Radio

• • • *and the* EDITOR

**J**UDGING from the letters we have received, the changes in arrangement in the September issue are meeting with universal favor of our readers. Putting the time on the air in the Index by Frequencies, is a most convenient arrangement. Some readers wish that we would convert all of these times into that of Eastern Standard. While this would be a big advantage to listeners in that zone, we fear it would be very annoying to readers in the other zones. They would be forced to perform mathematical calculations all the time even for stations in their own zone. We wish we knew a happy answer to this problem but we don't. It seems fairer to give the time actually used by each station.

The first "Lesson" in Mr. Dashiell's "Beginners' Story of Radio" appears in this issue and another installment will be found in each succeeding number. It is a very difficult thing to present a highly technical subject in words which anyone can understand but we are sure our readers will have a much clearer understanding of the intricacies of Radio after completing Mr. Dashiell's "home-study course."

Next month, too, our Technical Editor will have an article on "Overhauling the Set" which will, we know, be of great interest to those who must perforce use sets a few years old. While we are glad to present these hints on modernizing the old receiver, at the same time we believe that now is the time to buy a new one. Prices will not be so low again, in all probability for many years, and every purchase now helps strengthen the wings of the blue eagle and keep the factories running. It is almost a patriotic duty at this time to buy everything one needs and can possibly afford.

Anticipating Mr. Dashiell's article, we present a letter from one reader who has made interesting changes in his set.

## New Tubes in Philco

"For those who are interested," writes J. O. Challenger, Apt. 20, 5549 Queen Mary Road, Montreal, Quebec, "I have replaced all the type -24 and type -27 tubes in my Philco super-heterodyne-plus, model 112, by the new types -58 and -56 respectively. I have noted an all-round improvement notably the elimination of interference from local stations with those stations operating ten kilocycles on either side, the quieter op-

**TOBE**

## AERIAL FILTERIZER

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## STOPS RADIO NOISE

Acclaimed by Radex readers as the finest system for eliminating local man-made static and improving DX reception. Stocked by leading radio supply houses in every city.

**DEMAND THE ORIGINAL**

Ask your dealer or write

**TOBE DEUTSCHMANN CORP.**

1033 Perry St.

CANTON,

MASSACHUSETTS

eration of the set and an improvement of the tone. The above improvements appear in spite of operating with range switch set at maximum.

"The replacement of the -27 tubes by the -56 requires only the removal of the -27 and the plugging in of the -56 since the sockets for both tubes are five-prong. The -58, being a six-prong tube, cannot be inserted in the five-hole socket of the -24 so it is necessary to remove the old socket and replace by a new six-hole socket. I do not recommend the use of an adapter because it is necessary to modify the wiring for one of the tubes."

We fear not many of our readers possess Mr. Challenger's skill in making these changes and we hesitate to publish his directions for fear we may lead some owners into water over their heads. If, however, any of our readers feel that they have the skill to make these changes in wiring and sockets, we will be glad to send them the rest of Mr. Challenger's letter by mail.

#### From Little HIH

An interesting letter comes to us from Domingo Dominguez, owner of Station HIH, in San Pedro de Macoris, Dominican Republic. "This small station has only 15 watts with 420 volts and a radiation of 1.15 amperes in antenna and we work on a frequency of 1395 kilocycles. Yet in February and January we were reported heard in Chicago by Lionel F. Stetson and by many radio listeners from different parts outside of Santo Domingo. We are going to have a little on short waves and will be pleased to notify you as soon as it is ready. It will be the same as the other—15 watts, and we are almost certain that on short waves, we will obtain a much better record than on the long waves.

"This little station HIH is almost a sister station to NRH in regard to the record with the difference that our station with such a small voltage and on such a high frequency, cannot pos-

sibly obtain a record for greater distances. I am short of money to make improvements but a number of radio listeners have helped generously and with this assistance I have been going forward slowly with this little station HIH. If any radio listener or radio firm desires to give a present to this little station, a theme of four or five sounds will thank them; or if it is from some make of radio, we will be pleased to mention it in each broadcast when this theme is played and mention the gift and the giver."

As our readers probably know by this time, the long-awaited North American conference was a complete "flop." Practically nothing was accomplished and the conference ended in a dead-lock. Mexico asked for some thirty of the 90-odd channels and altogether the nations south of the Rio Grande and in the West Indies wanted nearly half of the available channels. Canada and the U. S. felt that the demands of our southern neighbors were so vast that there was no hope of even a compromise. Therefore the conference adjourned *sine die*. All hope of clearing up the North American air is abandoned.

#### Club Notes

Too late for inclusion in our roster of the DX clubs last month, comes the following information: The Atlantic Radio Club (membership not stated) was organized in the spring of 1932. The dues are \$1.50 per year (slightly higher in Canada) with an initiation fee of \$1.00 when joining. A four-page bulletin of DX information is mailed to the members every week by first class postage. Last season over one hundred programs were broadcast for the ARC by stations all over North America and many stations gave weekly broadcasts of tips and Club activities.

The Canadian DX Relay<sup>8</sup> opened its new season with a special program from CHRC, Quebec, on September 9th, the news of which reached us too late to make the September issue.



KSD, St. Louis, followed on September 24th and WWAE, Hammond, Ind., will be on from 1:00 to 2:00 a. m. EST, the morning of October 14th. Other programs will follow with prizes for the correct reports received from the greatest distance. Address P. O. Box 339, Goderich, Ont.

The International Radio Society is an unique organization in that it makes no charge for membership or dues. The society has 1220 members in 42 countries, writes Leslie W. Orton, the founder, of "Kingsthorpe," Willowbank, Uxbridge, England.

### Another System

"Why is it that you never mention the Southwest Broadcasting Company of Fort Worth, Texas?" asks B. L. Ahman, Jr., 3313 Westerwald Ave., Baltimore, Md. "It owns eleven stations in Texas and Oklahoma, and features Columbia programs as well as their own from Fort Worth. Some of their stations are KTAT, KTSA, KGKO, WACO, KOMO, KNOW, KGRS, KTRH, and WRR. As an authority for this I have a verification from KOMO explaining who the Southwest Broadcasting Company is, after I had heard a program by them. It seems that they deserve a designation mark as much as Don Lee or the Yankee network. Just got my first new season DX catch. WHB of Kansas City, experimenting on 1120 keys, and broadcasting a frolic on the morning of Monday, August 21st."

"Just a few words in appreciation of the Spanish report-of-reception letter, published in the March RADEX with the necessary words and phrases," writes Miss Florence Haist, Box 157 Lindenwold, N. J. "Could you please publish a French, German and Italian translation, too?" The French translation of the same letter will be found in this issue and, through the courtesy of Radexer Rudolph Kure, 3633 Vine St., (Clifton) Cincinnati, Ohio, a German translation will appear in November. Perhaps some of our readers who

write the Italian language will send us a translation in that tongue.

### Canadian Gossip

"Today, August 31st, CFCA goes off the air," writes Ernest L. Near, 32 Northcliffe Blvd., Toronto, Ont. "They have been operating since March, 1922. They are Canada's pioneer station. Their reasons for signing off are that they can see no future for privately owned stations in Canada. It seems too bad they must close down but with their low power and poor frequency, they cannot compete with CRCT (formerly CKGW) as both carry identical CRC programs.

"Another old-timer to go off soon is CKCL. They have been on the air since October, 1923. CKNC and CRCT are uniting. That will leave just CFRB and CRCT in Toronto. CKCL is now badly heterodyned by XEPN."

Station CFCO in Chatham, Ontario, holds a radio fan program every Sunday morning from 9:15 to 10:15, EST. There are chats on radio reception, DX tips and other features of interest to fandom. Those of our readers who can bring this station in in daylight, will probably find much of interest on this program.

### Still More Outlaws?

Pennsylvania seems to be a hotbed for unlicensed stations if all reports that reach us are any indication. Where are the inspectors for the FRC?

"While fooling around the dials the other day," reports Chas. Solomon, 752 Portland Way, Pittsburgh, Pa., "I ran into two new stations here in Pittsburgh—WWSP in the south hills of Pittsburgh and WBTC in New Kensington, Pa. WWSP came in at about 820 kcs. and WBTC at about 800. I have not been able to get any information on these stations."

Chas. L. Morgan, 800 East 179th Street, New York City, regarding whose skill with the pen, mention was recently made in RADEX, sends us

*(Continued on page 80)*

# INTERNATIONAL CONTEST

## for Foreign Stations

**A** DX contest for foreign stations on the broadcast band is announced by the International DX'ers Alliance, of Bloomington, Illinois, which ought to interest our Super-DX'ers. A letter from Charles A. Morrison gives the details:

Starting October 1st, the International DX'ers Alliance, will sponsor a world-wide DX Contest, to ascertain who may be able to verify the most foreign Broadcast Band stations, during the six months from Oct. 1st to Mar. 31st, inc.

All verifications must be in the hands of the judges not later than June 31, 1934.

Verifications must be from stations at least 2000 miles away, and no stations on the same continent as the Dx'er will be counted. (Australia, and New Zealand being considered as one continent.)

All verifications must be approved by the contest judges. In sending verifications to the judges, return postage must be included. In the case of the indecision of a contest judge, on any particular verification, it will be referred to one of the honorary judges for settlement, the honorary judges being neutral. A complete list of judges both contest and honorary, will be announced in the September Globe Circler. For the time being refer all inquiries to Mr. Frank H. A. Johnson, 59 West 66th Street, Chicago, Ill.

The Grand Award in this contest will be a 1934 Model Custom Built All-wave LINCOLN Receiver, through the great courtesy of the Lincoln Corporation.

Second Prize will be a complete, and custom-built Ollie Ross AERIAL-GROUND Unit.

Additional Prizes for the winner in each continent will be a one year's subscription to the Globe Circler.

Special Prize of a one year's sub-

scription to RADEX will go to the member having in the opinion of the judges, the finest single verification.

Any publicity you can give the contest will be greatly appreciated by all members, and you may state that all those desiring further information, or application blanks for I. D. A. membership may obtain the same from the International DX'ers Alliance, Headquarters, at Bloomington, Illinois, or in Europe from Mr. Francis Wiseman of 90 Brighton Grove, Newcastle on Tyne, England, or in New Zealand, or Australia, from F. H. A. Barnett, of 5 Chapman St., Anderston, Dunedin, New Zealand.

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## Anti-Noise Antennae

*(Continued from page 14)*

responds well to signals in the broadcast band.

Good experimental results may be had with only a cable consisting of a pair of duplex twisted and insulated No. 18 wires. One wire is connected to the antenna and the lower end of the same wire hangs free close to the ground and is wrapped with tape for insulation. A connection is made at some point where it passes close to the radio set for the latter's antenna contact. The lower end of the remaining wire of the pair is grounded, and its upper end, close to the antenna, is insulated with tape and left hanging free. A ground wire is run to the receiver but carefully twisted around the short antenna connection previously arranged. The capacitive effect of the paired wires will weaken the antenna signals somewhat, of course, but the induced static noises are weakened in much greater proportion, and the noise level ratio is considerably reduced.

# Exploring the Short Waves

(Continued from page 18)

## Short Waves on Ships

The peculiarities of tuning the short waves from the high seas are described in a letter from T. D. Richardson, Second Engineer of the M. V. "El Aleto" of the Atlantic Refining line: "I use a Pilot Dragon 8-tube set, a. c. working from the ship's d. c. mains through a Janette rotary converter (output 150 watts, 110 volts, 60 cycle). The ship is engaged in oil transport on a regular schedule from La Libertad, Ecuador, to Philadelphia. The American short wave stations W2XAF, W1XAZ, W3XAL, W8XK and W2XE come in excellently throughout the voyage. GSB, GSA, EAQ, DJC come in on the Atlantic side of Panama at full loud speaker strength. On the Pacific side I lose EAQ and DJC but receive VK2ME splendidly and GSB is much clearer on that side. The broadcast band is hopeless in the Caribbean but fairly free of static when we are on the Ecuadorian Coast.

"The cabin fans on 110 volts d. c. cause a lot of noise in the receiver, making it necessary to stop those in adjoining cabins. This noise is only present when I am on the short wave band. I contemplate the purchase of a Scott Deluxe 12-tube set; would the fan trouble be more acute in a 12-tube set or would the Scott avoid this? There are five short wave sets aboard this ship and consequently RADEX is very popular and it certainly deserves its popularity."

## All Set for H. F.

"My DXing is nothing about which to speak long or loud, as I only settled down to business in January—to find my antenna in a high noise and man-made static field," submits Ben G. Freiland, 6715 McPherson Blvd., E. E. Pittsburgh, Pa. "Using RADEX since December, I naturally came upon the article on the use of

phones and successfully attached a set of them to my new RCA R-75, following your complete information. Now with a new doublet antenna, longer and higher, and a Lynch transposed lead-in, I find myself in the hot, static summer weather. However, I prepared for that by purchasing a Pilot 4-tube s. w. converter and surprise many skeptical friends by letting them enjoy broadcasts from EAQ, YV1BC, DJB, DJD, GSB, I2RO, TI-4-NRH, Pontoise, and many other stations."

"From a letter I received from Reichs-Rundfunk-Gesellschaft, the German short wave transmitters, the other day, asking me to check their programs from August 18th to 27th, it would seem that they are to have special programs over the DJ's during that part of August," concludes W. T. R. Morris, Jr., 3219 Garland Ave., Richmond, Va. "They indicate that they would appreciate reports from s. w. enthusiasts the world over on those particular programs.

"I might add that anyone writing to the German stations must not expect a letter from them if they write but once. The German stations are desirous of corresponding with only those they are sure are interested in their stations and not in just a hurried verification."

## A Home-Made Set

Mr. P. J. Soper, 256 Burroughs Terrace, Union, N. J., uses a three-tube set which he built himself. This receiver tunes from 13.5 to 5000 meters, but is most sensitive below 200 meters. It is battery operated and has an aerial 150 feet long running NE to SW. Mr. Soper writes: "Besides the broadcast stations, I have listed hundreds of commercial phones, police, airways, etc. I do not log the amateur stations. My log, without duplications, totals 329 stations. I do not log a station twice when it uses two wavelengths, unless the call signal is different for each wave used, as in the case of the Daventry stations. I do not attempt to verify all stations nor do I bother with commercial transmit-

ters. A few of the positive verifications I have are from PRADO, CM5RY, DHC, 3ME, PLW, G5SW, T14NRH, PHI, PCJ, CT1AA, F31CD, HRB and Rabat. The best reception of a short wave station in this locality is from DJD Germany between 5:30 and 8 p. m. There is little fading and very loud clear signals. I2RO is fair, as is GSD. GSB is very good from 7 to 8 in the evening."

A note from John Strong, 1436 Meridian place, N. W., Washington, D. C., supplies the following information: "GSF has discontinued their nightly broadcast and GSD is now used with GSB for the Canadian Zone. CP5 is a new station in La Paz, Bolivia, on 49.3 meters."

"I have been in Illinois on vacation and have been having good results," advises Doyle E. Carpenter, Emmetsburg, Iowa. "I2RO, DJB, DJD, EAQ and the Daventry stations have been very good. Heard I2RO playing good old American jazz the other night . . . have they become polluted also? Haven't heard Huizen for ages and Radio Coloniale has been missing for quite a while. I simply can't get OXY. I wonder if it's working?"

According to listeners' reports in "World Radio," OXY is being heard regularly on 49.4 meters. This station is very hard to get in the United States. They work from 2 until 6:30 p. m., EST.

#### Verification Troubles

"DXing has been poor this summer," writes David F. Thomas, Twenty-sixth St., Ferry Co., Proctorville, Ohio. "I have added a few good ones to my list, though, namely: VK3LR, 52 meters, 200 watts; VQ7LO, FIUI and SR1. Would like to know why TGX promises to verify reports that are correct, yet in every instance they failed to do so. They came in here one morning on a test program on 49.6 meters so loud and clear that they were rebroadcasted by a local station here. The German, French and many other countries are exceptionally nice about answering QSL's."

Roy E. Robinson, 133 Mitchell St.,

Providence, R. I., is justly proud of the results he has had with his Stewart-Warner 100 Series with built-in converter 301-A, which, he says, "sure is a great combination."

"Just now and until about the middle of September," he continues, "I am at my summer home about 15 miles from Providence and right beside a river, making ideal conditions for radio reception. My results in the city have been remarkable too. This summer I have heard VK2ME Sydney nearly every Sunday morning, real good, and VK3ME about very Saturday and Wednesday morning, quite good. To date I have logged 45 broadcast stations, 24 telephones, 42 police and 2 ships."

"In a little over a year I have logged about 100 s.w. stations throughout the world," informs Charles A. Perdicaro, 7225 New Utrecht Ave., Brooklyn, N. Y. "I am using a Majestic superhet converter Model 10 with an R. C. A. Victor Model R-90. Now for some information which I hope can be of use. All time is EST. WPFU, 2422 kes. new police station located at Portland, Maine.

#### Some Tips

"W9XAA, Chicago, Ill. 49.34 meters is now back on the air from 3 to 6 p. m. daily.

"CNR, Rabat, Morocco, operates also on 37.33 meters Sundays from 2:30 to 5 p. m.

"VE9HX, Halifax, N. S., 48.98 meters, 8:30 to 11:15 a. m. and 5 to 10 p. m. daily. Address, Director, P. O. Box 998.

"HC2JSB, Guayaquil, Ecuador, now works on 90 meters, Monday, Wednesday and Friday, 8 to 11 p. m.

"HCK (formerly HC1DR), Quito, Ecuador, is on 52.65 meters from 8 to 11 p. m."

"Now for the first San Joaquin Valley report I have ever seen or heard of in a short wave magazine," comments R. M. Ballard, Visalia, Calif. "I have heard 2ME, 3ME, Rocky Point and Lawrenceville phones. I hear nothing below the 31 meter band and

(Continued on page 79)

# 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).....WABC NATIONAL, Red (R)....WEAF NATIONAL, Blue (B).....WJZ

Call	Dial	Call	Dial

Call	Dial	Call	Dial

Call	Dial	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, Year 2433**

CKLW WAAB WABC WADC WBT WCAO WCAU  
WDRG WEAN WGR WHK WJAS WJVS WKRC  
WOKO

R — **Viennese Ensemble—Walter Logan**

CRCT KDYL KFYR KOA KPO KPRC KSD KSTP  
KTBS KVOO WAPI WBNB WCAE WCSH WDAF  
WDAY WEAF WEBC WFAA WFLA WGY WHO WIBA  
WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC  
WQAI WQC WOW WRC WRVA WSAI WSB WSM  
WSMB WTAG WTAM WWJ WWNC

B — **Richard Himber and Ensemble**

KDKA KSO KWCR WBAL WENR WHAM WJZ WLW  
WMAL WREN

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

C — **H-Bar-O Rangers**

WAAB WABC WCAU WDRG WEAN WFBL WGR  
WHEC WHK WLZB WMAS WOKO WORC

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

B — **Lowell Thomas—Today's News**

CRCT KDKA WBAL WBZ WBZA WFLA WGAR  
WHAM WIOD WJAX WJR WJZ WLW WSYR

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

C — **Myrt and Marge**

CKLW KRLD WAAB WABC WADC WBT WCAO  
WCAU WDAE WDBO WDRG WEAN WFBL WGR  
WHK WJAS WJVS WKRC WOKO WQAM WSPD  
WTOC WWVA

B — **Amos 'n' Andy**

CRCT KDKA WBAL WBZ WBZA WFLA WGAR WIOD  
WJZ WLW WMAL WPTF WRVA

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

C — **Jack Denny's Orchestra**

WABC WCAU WDRG WFBL WGR WHEC WHP  
WJAS WMAS WOKO WORC WWVA

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

C — **Dolph Martin's Orchestra—Travelers Quartet**

WABC WCAU WCAU WDRG WEAN WFBL WFAA  
WGR WHEC WHP WICC WJAS WJVS WLZB WNAC  
WOKO WORC

R — **Lum and Abner**

WBEN WCAE WCSH WEAF WEEL WFBR WGY  
WJAR WLW WRC WTAG WTAM

B — **Richfield Country Club—Grantland Rice**

CRCT KDKA WBAL WBZ WBZA WHAM WJZ WMAL  
WSYR

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

C — **Boake Carter, Philco**

CKLW WABC WBBM WBT WCAO WCAU WGR  
WHK WJAS WJVS WNAC

R — **The Goldbergs**

WBEN WCAE WCSH WDAF WEAF WEEL WENR  
WFBR WGY WJAR WLIT WOW WRC WSAI WTAG  
WTAM WWJ

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

C — **Happy Bakers**

CKLW WABC WADC WCAH WCAU WDRG WFBM  
WGR WHEC WHK WICC WJVS WKBN WMAS  
WNCR WORC WSPD

R — **Soconyland Sketches—Drama**

WBEN WCSH WEAF WEEL WGY WJAR WTAG  
WTIC

B — **The Nomads**

CFRC CRCT KDKA KOIL KSO KWCR KWK WBAL  
WBZ WBZA WCKY WGAR WHAM WJR WJZ WLS  
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 WCAO WCAU  
WCCO WDRG WEAN WFBL WFBM WGN WGR  
WHK WJAS WJVS WKRC WNAC WOKO WSPD

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

R — **Floyd Gibbons; Victor Young**

KDYL KOA KPRC KSD WBEN WCSH WDAF WEAF  
WEEL WFBR WFLA WGY WHO WIOD WIS WJAR  
WJAX WKY WLIT WLW WMAQ WMC WOC WOW  
WRC WRVA WSB WSM WSMB WTAG WTAM WTIC  
WWJ

B — **Potash and Perlmutter**

KDKA WBAL WCKY WGAR WHAM WJR WJZ WIS  
WMAL WSYR

E-8:45 p.m., C-7:45, M-6:45, P-5:45

B — **Red Davis, Dramatic Sketch**

KDKA WBAL WBZ WBZA WHAM WJZ WLS WSYR  
C — **Kate Smith**

CFRB CKLW KFAB KFH KLRA KLZ KMBC KSL  
KTRH KTSA KVOB WABC WACO WADC WBG  
WBRC WBT WCAH WCAO WDAE WDBJ WDOD  
WDRG WDSU WEAN WFBL WFAE WGST WHAS  
WHEC WHP WICC WIP WISN WJAS WJVS WLAC  
WLWB WLWZ WMBG WMT WOKO WORC WQAM  
WSBT WSFA WSJS WSPD WTAQ WWVA

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

C — **Evening in Paris**

CKLW KLZ KMBC KMOX KOMA KSL WABC WCAO  
WCAU WCCO WDSU WEAN WGN WGST WHK  
WJAS WJVS WNAC

R — **A. & P. Gypsies**

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

B — **Sinclair Minstrels**

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

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

C — **Isham Jones; Lulu McConnell**

CFRB CKLW KDB KERN KFBK KFPY KFRC KGB  
KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD  
KSL KVI KWG WAAB WABC WADC WBBM WBT  
WCAH WCAO WCAU WCCO WDRG WDSU WEAN  
WFBL WFBM WGR WHAS WHK WICC WJAS WJVS  
WKRC WLAC WOKO WOWO WREC WSPD WTAR

R — **Del Monte Ship of Joy**

KDYL KOA KPRC KSD KTBS KVOO WCAE WCSH  
WEAF WEEL WFAA WFBR WFLA WGY WHO WIOD  
WIS WJAR WJAX WKY WLIT WMAQ WQAI WOC  
WOW WRC WRVA WSAI WTAG WTAM WWJ WWNC

**MONDAY—(Continued)****B — Jack Frost's Melody Moments**

KDKA WBAL WENR WGAR WHAM WJR WJZ WLW

**E-10:00 p. m., C-9:00, M-8:00, P-7:00****C — Andre Kostelanetz—Gladys Rice**

CFRB CKLW KFH KLZ KMBC KOMA KRLD KSL KTRH KTSa KVR WABC WACO WADC WBBM WBT WCAO WCAU WCCO WDCB WDBJ WDOB WDDO WDRC WFBL WFBM WFEA WGST WHAS WHEC WHP WISN WJAS WLAC WLBW WMBD WMBG WODX WOKO WORC WQAM WREC WSJS WTAR

**R — Contented Program**

KSD WBEN WCAE WDAF WENR WGY WHO WLW WOC WTAM WTMJ WWJ

**E-10:30 p. m., C-9:30, M-8:30, P-7:30****R — Jules Lande, Violinist**

KDYL KFI KFJR KGHK KGIR KGO KOA KPRC KSTP KVOO WBEN WCAE WCSH WDAF WFAE WFCB WEEI WFAA WFRB WGY WHO WJAR WKY WLIT WLW WMC WOAI WOC WRC WSB WSM WTAG WTAM WTIW WTMJ WWJ

**E-10:45 p. m., C-9:45, M-8:45, P-7:45****C — Howard Barlow and Symphony Orchestra**

CKLW KFH KMOX KOMA KRLD KSL KTRH KTSa KVR WAAB WABC WACO WADC WBBM WBG WBRB WBT WCAO WCCO WDAE WDBJ WDOB WDRC WDSU WFBL WFBM WFEA WGST WHAS WHEC WHP WIBW WJAS WLAC WLBW WLBZ WMBD WMT WODX WOKO WORC WPG WQAM WREC WSBT WSJS WSPD

**C — Myrt and Marge**

KALE KDB KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KSL KTRH WBBM WBRB WCCO WDSU WFBM WGST WHAS WLAC WREC WSFA

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

KDYL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSTP KTHS KWK WCKY WDAF WENR WFAA WHAM WJR WKY WMAQ WMC WOAI WREN WSB WSM WSMB WTMJ

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

CKLW KFH KMBC KOMA KSL KTRH KTSa KVR WABC WACO WADC WBBM WBG WBRB WBT WCAO WCAU WCCO WDAE WDBJ WDOB WDRC WDSU WFBL WFBM WFEA WGST WHAS WHEC WHP WIBW WIP WJAS WKBN WLAC WLBW WMBD WMT WODX WOKO WORC WQAM WREC WSBT WSJS WSPD

**R — Buddy Rogers and Orchestra**

WCAE WFAE WFRB WFLA WIOD WIS WRC WSAI WTAG WWNC

**R — Lum and Abner**

KSD WDAF WENR WHO WKBF WOC WTAM WTMJ

**B — The Poet Prince**

KDYL KFI KFJR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTHS KWCW KWK WBAL WBCB WFAA WFLA WIBA WIOD WIS WJZ WKY WMAQ WOAI WREN WRVA WSYR WWNC

**E-11:30 p. m., C-10:30, M-9:30, P-8:30****R — Jack Denny and Orchestra**

WCSH WFAE WFRB WJAR WRC WTAG WTIW

**TUESDAY****E-6:00 p. m., C-5:00, M-4:00, P-3:00****R — Walter Logan, See Monday****B — Dick Messner and Orchestra**

KOIL KSO KWCW KYW WBAL WCKY WENR WHAM WJR WJZ WMAL WREN WSYR

**C — Buck Rogers, See Monday****E-6:15 p. m., C-5:15, M-4:15, P-3:15****C — H-Bar-O Rangers, See Monday****E-6:30 p. m., C-5:30, M-4:30, P-3:30****R — Mid-Week Hymn Sing**

KDYL KFJR KGIR KPO KPRC KTBS KTHS KVOO WDAY WFAE WFAA WFI WGY WHO, WIBA WIS

WJAX WJDZ WMAQ WOAI WOC WRC WSAI WTAG WWNC

**B — Kathryn Newman, Coloratura Soprano**

KSO KWCW WBAL WCKY WENR WHAM WJZ WREN WSYR

**E-6:45 p. m., C-5:45, M-4:45, P-3:45****C — Barney Rapp and Orchestra**

CKLW KFH KLZ KMBC KOMA KSL KTRH KTSa KVR WAAB WABC WBBM WBG WBRB WBT WCAO WCAU WDAE WDBJ WDOB WDRC WDSU WFBL WFEA WGST WHAS WISN WKBN WLAC WLBW WLBZ WMBG WMT WODX WOKO WORC WQAM WREC WSFA WSJS WSPD WTAQ WVVA

**R — Shirley Howard—Songs**

KDYL KFJR KOA KPO KPRC KSD KSTP KTBS KTHS WCKY WDAY WFAE WFCB WEEI WFAA WFRB WGY WHO WJAR WJDZ WKY WMAQ WOAI WOC WOW WSAI WSM WTAG WWJ

**B — Lowell Thomas, See Monday****E-7:00 p. m., C-6:00, M-5:00, P-4:00****B — Amos 'n' Andy, See Monday****C — Myrt and Marge, See Monday****E-7:15 p. m., C-6:15, M-5:15, P-4:15****C — Dance Time**

CKLW KFH KLZ KMOX KOMA KSL KTRH KTSa KVR WAAB WABC WACO WADC WBBM WBG WBRB WBT WCAU WCCO WDBJ WDOB WDRC WFBM WFEA WGST WHAS WHK WHP WISN WJAS WKBN WLAC WLBW WMBG WODX WOKO WORC WQAM WREC WSFA WSJS WSPD WTAQ WTAR

**B — National Advisory Council on Radio in Education**  
KDKA KECA KEX KFSD KFJR KGA KGHK KGIR KJR KOA KOIL KPRC KTAR KTBS KTHS KVOO KWCW KWK KYA WAPI WBAR WBZ WBZA WCKY WFLA WIBA WIS WJDZ WJZ WMAL WOAI WPTF WREN WSMB WWNC**E-7:30 p. m., C-6:30, M-5:30, P-4:30****C — Mills Brothers**

CFRB CKLW KFAB KFH KFLA KLZ KMBC KRLD KSL KTRH KTSa KVR WABC WBBM WBG WBRB WBT WCAO WCAU WDAE WDBJ WDOB WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHP WICC WISN WJAS WJSV WKBN WLAC WLBW WLBZ WMBG WNAC WOKO WORC WQAM WREC WSFA WSJS WSPD WTAQ WVVA

**R — Lum and Abner, See Monday****E-7:45 p. m., C-6:45, M-5:45, P-4:45****R — The Goldbergs, See Monday****C — Boake Carter, See Monday****B — Don Carney's Dog Chats**

KDKA KYW WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WMAL WSYR

**E-8:00 p. m., C-7:00, M-6:00, P-5:00****C — Boswell Sisters**

CFRB CKLW KFAB KFH KFLA KRLD KTRH KTSa KVR WABC WACO WADC WBBM WBG WBRB WBT WCAH WCAO WCAU WCCO WDOB WDSU WEAN WFBL WFBM WFEA WGST WHK WHP WICC WISN WJAS WJSV WKBN WLAC WLBW WLBZ WNAC WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTAQ WVVA

**B — Eno Crime Clues**

KDKA KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW WMAL WMAQ WREN

**R — Blackstone; Sanderson-Crumit**

WBEN WCAE WCSH WFAE WEEI WFI WGY WJAR WRC WTAG WTAM WWJ

**E-8:15 p. m., C-7:15, M-6:15, P-5:15****C — Singin' Sam, Barbasol Man**

CKLW KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WHK WJAS WJSV WKRC WNAC WOKO WSPD

**E-8:30 p. m., C-7:30, M-6:30, P-5:30****C — Voice of Experience**

CKLW KMBC KMOX WABC WBBM WCAO WCAU WDRC WEAN WGR WHAS WHK WJAS WJSV WKRC WNAC

**R — Wayne King and Orchestra**

KPRC KSD KSTP WBEN WCAE WCSH WDAF WFAE WEEI WFI WGY WHO WJAR WKY WMAQ

**TUESDAY—(Continued)**

WOAI WOC WOW WRC WSAI WTAG WTAM WTMJ WJWJ

**B — Horlick's Adventures in Health**  
CRCT KDKA KOIL KSO WBAL WBZ WBZA WGAR WHAM WJZ WLS WLW WREN

**E-8:45 p. m., C-7:45, M-8:45, P-5:45**

**C — Kate Smith**  
CFRB CKLW KFAB KFH KLRA KMBC KRLL KSL KTRH KTSa KVR WABC WACO WADC WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDDO WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHK WHP WIC WISN WJAS WJSV WKBN WLAC WLWB WLZ WMBG WMT WNAC WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTAQ WYVA

**B — The Rollickers Quartet**  
KDKA KDYL KOA KOIL KWCR WBAL WBZ WBZA WFLA WGAR WHAM WIOD WIS WJZ WLS WMAL WREN WSYR WWNC

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

**R — Ben Bernie and Orchestra**  
KFYR KOA KPRC KSD KSTP WBAP WBEN WCAE WCSH WDAY WEAF WEEI WFBR WFI WGY WHO WJAR WKY WLS WLW WMC WOAI WOC WOW WRC WRVA WSM WSMB WTAG WTAM WTMJ WJWJ

**B — Household Musical Memories**  
KDKA KSO KWK WBAL WBZ WBZA WREN WHAM WJR WJZ WKBF WREN WSYR

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

**C — Nino Martini, Tenor**  
CKLW KFH KLZ KMBC KMOX KOMA KRLL KTRH KVR WABC WACO WADC WBIG WBRC WBT WCAO WCAU WCCO WDAE WDDO WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHK WHP WIBW WISN WJAS WKBN WLAC WLWB WLZ WMT WODX WOKO WORC WPG WQAM WSFA WSJS WSPD WTAQ

**R — Texaco Fire Chief Program**  
KDYL KFI KFSO KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTSB KVOO WBAP WBEN WCAE WCSH WDAF WDAY WEAF WECB WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTMJ WJWJ WWNC

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

**C — California Melodies**  
CKLW KFH KLZ KMBC KMOX KOMA KSL KTRH KTSa KVR WAAB WABC WACO WADC WBIG WBRC WBT WCAO WCAU WCCO WDBJ WDDO WDRC WDSU WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WISN WJAS WKBN WLAC WLWB WLZ WMBD WMBG WMT WODX WOKO WORC WQAM WREN WSJS WSPD WTAQ

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

**C — Ted Husing and Leon Belasco**  
CKLW KDB KERN KFBK KFH KFPY KFRK KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KSCJ KSL KTAT KTRH KTSa KVI KWG WABC WADC WBBM WBRC WBT WCAH WCAU WCCO WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WIBW WIP WJAS WJSV WKBW WKRC WLAC WLZ WMT WNAC WOKO WOWO WREC WRR

**R — Madame Sylvia of Hollywood**  
KDYL KFI KGO KGW KHQ KOA KOMO KSD KSTP WBEN WEAF WECB WEEI WGY WHO WIBA WMAQ WOC WRC WTAG WTMJ WJWJ

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

**C — Light Opera Gems**  
CKLW KFH KLZ KMBC KMOX KOMA KSL KTRH KTSa KVR WAAB WABC WACO WADC WBIG WBRC WBT WCAO WCCO WDAE WDBJ WDDO WDRC WDSU WFBL WFBM WFEA WGST WHAS WHEC WHP WIBW WIP WJAS WKBN WLAC WLWB WLZ WMBG WMT WODX WOKO WORC WPG WQAM WREC WSJS WSPD

**C — Myrt and Marge, See Monday**

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

**B — A mos 'n' Andy, See Monday**

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

**R — Lum and Abner, See Monday**

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

**B — Ernie Holyst and Orchestra**  
CFCF KDYL KFYR KOIL KPO KSO KSTP KWCR KWK WAPI WBAL WBZ WBZA WCKY WDAY WECB WENR WFLA WHAM WIBA WIOD WIS WJDX WJZ WMAL WMC WREN WRVA WSB WSM WSMB WSYR WWNC

**C — Singin' Sam, Barbasol Man**  
KDB KERN KFBK KFPY KFRK KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

**E-11:45 p. m., C-10:45, M-9:45, P-8:45**

**B — Horlick's Adventures in Health**

KDYL KFI KGO KGW KHQ KOA KOMO

**E-12:00 mid., C-11:00, M-10:00, P-9:00**

**R — Ben Bernie and Orchestra**

KFI KGO KGW KHQ KOMO

**WEDNESDAY**

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

**R — Walter Logan, See Monday**

**C — Buck Rogers, See Monday**

**B — Dick Messner, See Tuesday**

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

**C — H-Bar-O Rangers, See Monday**

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

**R — Back of the News in Washington**

KDYL KFYR KGHL KGIR KOA KPO KPRC KTSB KTHS KVOO WDAY WEAF WFBR WGY WHO WIBA WIS WJAR WJDX WMAQ WOAI WOC WRC WSAI WSB WSM WJWJ WWNC

**E-8:45 p. m., C-5:45, M-4:45, P-3:45**

**C — Ted Husing, Sport Talk**

CKLW KFH KMBC KOMA KSL KTRH KTSa KVR WAAB WABC WBIG WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDDO WDRC WDSU WEAN WFBL WFEA WGST WISN WJAS WKBN WKBW WLAC WLWB WMBG WMT WODX WOKO WORC WQAM WREC WSBT WSFA WSJS WTAQ WTOC

**R — John Pierce, Tenor**

KDYL KFI KFYR KPO KPRC KSD KTSB WBEN WCKY WCSH WDAY WEAF WECB WEEI WFAA WFBW WFI WGY WHO WIS WJAR WJDX WKY WMAQ WOAI WOC WOW WRC WSAI WSM WTAG WJWJ

**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 — A mos 'n' Andy, See Monday**

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

**C — Jack Denny, See Monday**

**B — Ray Heatherton, Baritone**

KDKA KOIL KSO KTHS KWCR KWK WBAL WCKY WENR WGAR WHAM WJR WJZ WMAL WREN

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

**C — Dolph Martin, See Monday**

**R — Lum and Abner, See Monday**

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

**C — Boake Carter, See Monday**

**R — The Goldbergs, See Monday**

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

**C — Happy Bakers, See Monday**

**R — Chase and Sanborn Tea Program**

CFCF CRCT KSD WBEN WCAE WCKY WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WLIT WLS WOC WOW WRC WSAI WTAG WTAM WTIC WJWJ

**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**

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

**B — Potash and Perlmutter, See Monday**

**E-8:45 p. m., C-7:45, M-6:45, P-5:45**

**B — Red Davis, See Monday**

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

**C — Irvin S. Cobb — Al Good man's Orchestra**

CKLW KLRA KRLL KTRH KTSa WABC WACO

WEDNESDAY—(Continued)

WADC WBIG WBRC WBT WCAH WCAO WCAU  
WDAE WDBJ WDBO WDOD WDRC WDSU WEAN  
WFBL WFEA WGLC WGST WHAS WHK WJAS  
WJSV WKBW WKRC WLAC WLWB WMAS WMBG  
WNAC WOKO WORC WOWO WQAM WREC WSFA  
WSPD WTAR WTOG

**R—Ferde Grofe's Orchestra**  
KSD KSTP WBEA WCAE WCSH WDAF WFAE WEEI  
WGY WJAR WLIT WMAQ WRC WTAM WTIC WTMJ  
WWJ

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

**C—Kate Smith**  
CFRB CKLW KFH KLRA KLZ KMBC KRLD KSL  
KTRH KTSa KVR WABC WACO WADC WBIG  
WBRC WBT WCAH WCAO WCAU WDAE WDBJ  
WDOD WDRC WDSU WEAN WFBL WFBM WFEA  
WGST WHEC WHP WICC WISN WJAS WJSV WLAC  
WLWB WMBG WMT WNAC WOKO WORC WPG  
WQAM WSBT WSFA WSJS WSPD WTAQ WWVA

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

**C—Guy Lombardo and Orchestra—Burns and Allen**  
CKLW KLZ KMBC KMOX KOMA KRLD KSL KTRH  
KTSa WABC WADC WBIG WBT WCAO WCAU  
WCCO WDRC WEAN WFBL WFBM WGN WHK  
WJAS WJSV WKBW WKRC WNAC WOKO WORC  
WOWO WSPD

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

**C—Old Gold—Fred Waring's Orchestra**  
CKLW KDB KERN KFBK KFH KFPY KFRC KGB  
KHJ KLRA KLZ KMBC KML KMOX KOH KOIN  
KOL KOMA KRLD KSCJ KSL KTRH KTSa KVI  
KVRW KWG WABC WADC WBIG WBRC WBT  
WCAH WCAO WCAU WCCO WDAE WDBJ WDBO  
WDOD WDRC WDSU WEAN WFBL WFBM WFEA  
WGN WGST WHAS WHEC WHK WHP WIBW WICC  
WISN WJAS WJSV WKBW WKBW WKRC WLAC  
WLWB WLWB WMBD WMBG WMT WNAC WNOX  
WODX WOKO WORC WOWO WPG WQAM WREC  
WSPD WTAR WTOG

**R—Corn Cob Pipe Club**  
KDYL KFI KFYP KGHK KGIR KGO KGW KHQ  
KOA KOMO KSD KSTP WBEA WCAE WCSH WDAF  
WDAE WFAE WFBW WEEI WENR WFR WGY  
WHO WIBA WJAR WLIT WLW WOC WOV WRC  
WRVA WTAG WTAM WTIC WTMJ WWJ

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

**B—Music Magic—Ruth Lyon, Soprano**  
KSO KWCR KYW WBAL WBZ WBZA WCKY WJZ  
WMAL WREN WSYR

**C—Alexander Woolcott**  
CFRB CKLW KFH KLRA KLZ KRLD KSL KTRH  
KTSa KVR WAAB WABC WACO WADC WBIG  
WBRC WBT WCAH WCAO WCAU WCCO WDAE  
WDBJ WDOD WDRC WDSU WEAN WFBL WFBM  
WFEA WGST WHAS WHEC WHK WHP WICC WIP  
WISN WJAS WJSV WLAC WLWB WMBD WMBG  
WMT WOKO WORC WQAM WSBT WSJS WSPD

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

**C—Myrt and Marge, See Monday**  
**C—Howard Barlow, See Monday**

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

**B—Amos 'n' Andy, See Monday**

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

**R—Lum and Abner, See Monday**  
**B—Poet Prince, See Monday**

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

**C—Charlie Davis and Orchestra**  
CKLW KLRA WABC WACO WADC WBIG WBRC  
WBT WCAO WCAU WDBJ WDBO WDOD WDRC  
WEAN WFBL WFEA WGST WHEC WHK WHP  
WICC WKBW WLAC WLWB WMBG WNAC WODX  
WOKO WORC WQAM WREC WSJS WSPD WTAR  
**B—Jack Denny and Orchestra**  
KSO KWCR KWK WBAL WBZ WBZA WCKY WENR  
WGAR WJZ WREN WSYR

**E-12:30 a.m., C-11:30 p.m., M-10:30, P-9:30**

**C—Guy Lombardo; Burns and Allen**  
KBD KERN KFBK KFPY KFRC KGB KHJ KMJ  
KOIN KOL KVI KWG

THURSDAY

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

**R—Walter Logan, See Monday**  
**C—Buck Rogers, See Monday**  
**B—Reggie Childs and Orchestra**  
KOIL KSO KWCR KYW WBAL WBZ WBZA WENR  
WHAM WJR WJZ WMAL WREN WSYR

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

**C—H-Bar-O Rangers, See Monday**

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

**C—Shell Football Reporter, Ed Dooley**  
WAAB WABC WBIG WBT WCAU WDBJ WDBO  
WEAN WFBL WFEA WHEC WHP WJAS WKBW  
WLWB WMBG WNAC WOKO WORC WSJS WTAR

**R—Roger Gerston and Orchestra**  
KFYR KOA KPRC KSD KSTP KTBS KVOO WAPI  
WBEN WCKY WDAY WFAE WHEC WHEC WFAA  
WFRB WFI WGY WHO WIBA WJAR WJDX WKY  
WMC WOAI WOC WOW WSAI WSB WSM WSMW  
WTAG WWJ

**B—Old Songs of the Church**  
KSO KWCR WBAL WCKY WENR WHAM WJZ  
WREN WSYR

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

**B—Lowell Thomas, See Monday**

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

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

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

**C—Dance Time, See Tuesday**

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

**R—Lum and Abner, See Monday**  
**C—Mills Brothers, See Tuesday**  
**B—Concert Footlights, Mario Cozzi**  
CFPC KDKA KGO KGW KOIL KOMO KPRC KSO  
KSTP KTBS KTHS KWCR KWK WAPI WBAP WBZ  
WBZA WCKY WHAM WIBA WIOD WIS WJDX  
WJZ WMAL WOAI WREN WSMW WWNC

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

**C—Boak Carter, See Monday**  
**R—The Goldbergs, See Monday**

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

**R—Fleischmann Hour—Rudy Vallee**  
CFPC CRCT KDYL KFI KFYP KGR KGO KGW KHQ  
KOA KOMO KPRC KSD KSTP KTAR KTHS KVOO  
WAPI WBAP WBEN WCAE WCSH WDAF WDAY  
WFAE WHEC WHEI WFRB WFI WFLA WGY WHO  
WIOD WJAR WJAX WJDX WKY WLW WMAQ  
WMC WOAI WOC WOW WPTF WRC WRVA WSB  
WSM WSMW WTAG WTAM WTMJ WWJ  
**C—Boswell Sisters, See Tuesday**

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

**C—Singing Sam, See Tuesday**

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

**C—Columbia Dramatic Guild**  
CKLW KFAB KFH KMBC KMOX KOMA KSL KTSa  
KVR WAAB WABC WACO WADC WBIG WBRC  
WBT WCAO WCAU WCCO WDAE WDBJ WDBO  
WDOD WDRC WFAE WFBM WFEA WGST  
WHAS WHEC WHK WHP WICC WJAS WKBW WLAC  
WLWB WMBG WMT WODX WOKO WORC WQAM  
WREC WSBT WSFA WSJS WSPD WTAQ WTAR  
WWVA

**B—Horlick's Adventures, See Tuesday**

**E-8:45 p.m., C-7:45, M-6:45, P-5:45**

**B—John L. Fogarty, Tenor**  
KDKA KOIL KWCR WBAL WBZ WBZA WGAR  
WHAM WJZ WLS WMAL WREN WSYR

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

**R—Maxwell House Show Boat**  
KDYL KFI KFSD KGO KGW KHQ KOA KOMO  
KPRC KSD KSTP KTAR KTBS WAPI WBAP WBEN  
WCAE WCKY WCSH WDAF WFAE WFI WFRB  
WFI WFLA WGY WHO WIOD WIS WJAR WJAX  
WJDX WKY WMAQ WMC WOAI WOC WOW WRC  
WRVA WSAI WSB WSM WSMW WTAG WTAM  
WTMJ WWJ WWNC



**THURSDAY—(Continued)**

**B — Death Valley Days—Drama**  
 KDKA KOIL KWK WBAL WBZ WBZA WGR WHAM  
 WJR WJZ WLS WLW WREN

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

**C — U. S. Marine Band**  
 CKLW KFAB KFH KLZ KMBC KMOX KOMA KRLL  
 KSL KTSB KVOR WABC WACO WADC WBG WBRC  
 WBT WCAO WCAU WDAE WDBJ WDBO WDDO  
 WDRS WDSU WEAN WFBL WFEA WGST WHAS  
 WHP WIBW WICC WISN WJAS WJVS WKBN WLAC  
 WLBW WMBG WMT WYAC WOKO WQAM WWSB  
 WLSA WSJS WSPD WTAQ WTAR WTOG WVVV

**B — Wayne King and Orchestra**  
 KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA  
 WENR WGR WHAM WJR WJZ WREN

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

**C — Willard Robison and Orchestra**  
 CKLW KFAB KFH KLZ KMBC KMOX KOMA KRLL  
 KTSB KVOR WABC WACO WADC WBG WBRC  
 WCCO WDAE WDBJ WDBO WDDO WDRS WDRS  
 WFBL WFBM WFEA WGST WHAS WHK WHP  
 WIBW WISN WJAS WJVS WLAC WLBW WMBG  
 WOKO WORC WQAM WREC WSBT WSFA WSJS  
 WSPD WTAQ WTOG

**R — Al Jolson; Paul Whiteman's Orchestra**  
 KDYL KFI KFJR KGO KGW KHQ KOA KOMO  
 KPRC KSD KSTP KTBS KTBS WAPI WBAP WBN  
 WCAE WCHS WDAF WDAY WEAF WECB WEEI  
 WFRB WFI WFLA WGY WHO WIBA WIOD WIS  
 WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI  
 WOC WOW WPTF WRC WRVA WSB WSMB WTAG  
 WTAM WTMJ WWJ WWNC

**B — Hands Across the Border**  
 CFCF CRCT KDKA KOIL KSO KWCR WBAL WBZ  
 WBZA WCKY WGR WHAM WJR WJZ WMAQ  
 WREN WSYR

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

**C — Ted Husing, See Tuesday**  
**B — Echoes of Palisades — Archer Gibson, Organist**  
 KDKA KSO KWCR KYW WBAL WBZ WBZA WCKY  
 WGR WHAM WJZ WMAL WREN

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

**C — Gladys Rice, Soprano**  
 CFBK CKLW KFAB KFH KLZ KMBC KOMA KSL  
 KTRH KTSB KVOR WAAB WABC WACO WADC  
 WBG WBRC WBT WCAO WCCO WDAE WDBJ  
 WDBO WDDO WDRS WDSU WEAN WFBL WFBM  
 WFEA WGST WHAS WHEC WHP WIBW WICC  
 WIP WJAS WJVS WKBN WLAC WLBW WMBD  
 WMBG WMT WODX WOKO WORC WPG WQAM  
 WREC WSJS WSPD WTOG

**C — Myrt and Marge, See Monday**

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

**B — Amos 'n' Andy, See Monday**

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

**C — Phil Regan, See Monday**  
**R — Lum and Abner, See Monday**

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

**B — U. S. Army Band**  
 CFCF CRCT KDKA KDYL KFJR KOA KOIL KPO  
 KSO KSTP KTBS KVOR KWCR KWK WBAL WBAP  
 WBZ WBZA WCKY WDAY WECB WFLA WGR  
 WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ  
 WMAL WMAQ WMC WOAI WREN WRVA WSB  
 WSM WSMB WWNC

**R — Jack Denny, See Monday**  
**C — Singin' Sam, See Tuesday**

**FRIDAY**

**E-8:00 p.m., C-5:00, M-4:00, P-3:00**

**R — Walter Logan, See Monday**  
**B — Henry King and Orchestra**  
 KDKA KOIL KWCR KWK WBAL WBZ WBZA WCKY  
 WENR WHAM WJZ WMAL WREN WSYR

**E-8:15 p.m., C-5:15, M-4:15, P-3:15**

**C — H-Bar-O Rangers, See Monday**

**E-8:30 p.m., C-5:30, M-4:30, P-3:30**

**C — Football Reporter, See Thursday**

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

**C — H. V. Kallenberg**  
 CFBK CKLW KFH KLZ KMBC KMOX KSL KTRH KTSB  
 KVOR WAAB WABC WBBM WBG WBRC WBT  
 WCAH WCAO WCAU WCCO WDAE WDBJ WDBO  
 WDDO WDRS WDSU WEAN WFBL WFEA WGST  
 WHAS WHEC WISN WKBN WLAC WLBW WLBZ  
 WMBG WMT WOKO WORC WQAM WREC WSFA  
 WSJS WSPD WTAQ WVVV

**R — Gould and Sheffer, Piano Team**  
 KOA KPO KPRC KSD KTBS KVOR WDAY WEAF  
 WFI WIBA WIS WJAR WJDX WMC WOAI WOW  
 WRC WSAI WWS WSM WSMB WTIC WWJ WWNC

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

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

**R — The Mollie Program**  
 KSD WBN WCAE WCHS WDAF WEAF WEEI  
 WFRB WGY WHO WJAR WKBK WLIT WMAQ  
 WOC WRC WTAG WTAM WTIC WWJ

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

**C — Jack Denny, See Monday**  
**R — Just Relax—Comedy Sketch**  
 KDYL KGO KHQ KOA KOMO KSD KTBS KTHS  
 WBN WCHS WDAY WEAF WIBA WJAR WJAX  
 WJDX WMAQ WMC WOAI WRC WSB WSMB WTAG  
 WTIC

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

**B — String Symphony; Frank Black, Conductor**  
 KDKA KDYL KFI KFJR KGO KGW KHQ KOIL  
 KOMO KPRC KSO KTBS KTHS KWCR KWK WBAL  
 WBAP WBZ WBZA WCKY WHAM WIBA WIOD  
 WIS WJDX WJZ WMAL WMC WOAI WENR WSB  
 WSMB WWNC

**R — Betty Boop Frolics**  
 KSD WBN WEAF WJAR WMAQ WTAG

**C — Dolph Martin, See Monday**

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

**C — Boake Carter, See Monday**  
**R — The Goldbergs, See Monday**

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

**R — Cities Service—Jessica Dragonette**  
 CRCT KDYL KOA KPRC KSD KTBS KTHS KVOR  
 KYW WBN WCAE WCHS WDAY WEAF WECB  
 WEEI WFAA WFRB WGY WHO WJAR WKY WLIT  
 WOAI WOC WOW WRC WSAI WTAG WTAM WTIC  
 WTMJ WWJ

**B — Nestle's Program with Ethel Shutta**  
 KDKA KWK WBAL WBZ WBZA WCKY WGR  
 WHAM WJR WJZ WLS WMAL WWSR

**C — Happy Bakers, See Monday**

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

**C — Edwin C. Hill, See Monday**

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

**B — Potash and Perlmutter, See Monday**

**E-8:45 p.m., C-7:45, M-6:45, P-5:45**

**B — Red Davis, See Monday**

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

**R — Fred Allen's Revue**  
 KSD WBN WCHS WEAF WEEI WFRB WFLA  
 WGY WIOD WIS WJAR WJAX WLIT WLW WMAQ  
 WPTF WRC WRVA WTAG WTAM WTIC WWJ  
 WWNC

**B — Phil Harris and Orchestra**  
 KDKA KDYL KFI KGHK KGIR KGO KGW KHQ  
 KOA KOIL KOMO KSO KWCR KWK WAPI WBAL  
 WBZ WBZA WCKY WFAA WGR WJZ WKY WLS  
 WMAL WOAI WREN WBS WSM WSMB WSYR

**C — Irvin S. Cobb, See Wednesday**

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

**C — Threads of Happiness**  
 CKLW KDB KERN KFBK KFH KFPY KFCR KGB  
 KLRA KLZ KMBC KPM KMOX KOIN KOI KOMA  
 KSL KTAT KTRH KTSB KVI KGW WABC WADC  
 WBRC WBT WCAO WCAU WCCO WDAE WDRS  
 WDSU WEAN WFBL WFBM WGN WGST WHAS  
 WHK WJAS WJVS WKBW WCRK WLAC WNAQ  
 WOKO WORC WOWO WREC WSPD WTAR WTOG

FRIDAY—(Continued)

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

R — Pond's Program

KSD WBEN WCAE WCSH WDAF WFAE WENR WFBW WGY WHO WJAR WLIT WOC WOW WRC WTAI WTAG WTAM WTTIC WWJ

B — Armour Program with Phil Baker

KDKA KDYL KOA KOIL KPRC KSO KSTP KWK WAPI WBAL WBZ WBZA WBCB WFAA WGAR WHAM WIOD WJAX WJR WJZ WKY WMAQ WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

C — All America Football Show

CKLW KDB KERN KFBK KFH KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KTSB KVI KWG WABC WACO WADC WBBM WBT WCAH WCAO WCAU WCCO WDRG WEAN WFBL WFBM WGR WGST WHAS WHEC WHK WHP WJWS WJAZ WJW WKRC WLAC WMBG WMT WNAC WOKO WORC WQAM WREC WSPD WSTAR

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

C — Swift Program; Olsen and Johnson

CKLW KFLH KFH KLRA KLZ KMBC KOMA KRLD KSL KTRH KTSB WAAB WACO WADC WBIG WBRC WBT WCAH WCAO WCCO WDAE WDBJ WDBO WDOD WDRG WDSU WEAN WFBM WFEA WGST WHAS WHEC WHK WICC WISN WJAZ WJWS WLWB WMBD WMBG WMT WOKO WORC WPG WQAM WREC WSJS WSPD

R — First Nighter, Drama

CRCT KDYL KFI KFSB KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS WAPI WBEN WCAE WCSH WDAF WFAE WFCB WEEI WFAA WFBW WGY WHO WJAR WKBF WKY WLIT WMAQ WOAI WOC WOW WRC WSAI WSB WSM WSMB WTAG WTAM WTTIC WTMJ WWJ

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

B — Mario Cozzi, Baritone

KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOMO KSO KTBS WAPI WBAL WBZ WBZA WCKY WDAY WECB WFLA WHAM WIBA WIOD WIS WJAX WJR WJZ WREN WSB WSM WSYR WWNC

C — Alexander Woolcott, See Wednesday

R — Lum and Abner's Sociable

KSD WBEN WCAE WDAF WFAE WENR WFBW WGY WHO WKBF WLIT WLW WOC WRC WTAM WTTIC WTMJ

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

B — Floyd Gibbons

KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOMO KSO KTBS WAPI WBAL WBZ WBZA WCKY WDAY WECB WFAA WFLA WHAM WIBA WIOD WIS WJAX WJR WJZ WREN WSB WSM WSYR WWNC

C — Myrt and Marge, See Monday

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

B — Amos 'n' Andy, See Monday

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

C — Guy Lombardo and Orchestra

CKLW KFAB KFH KLZ KMBC KMOX KSL KTRH KTSB KTVR WABC WACO WADC WBIG WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRG WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WJWS WJZ WJW WKRC WLAC WLBW WMBD WMBG WMT WNAC WODX WOKO WORC WPG WQAM WREC WSJS WSPD WSTAR WTTIC WWVA

R — Fred Allen's Revue

KDYL KFI KFSB KGO KGW KHQ KOA KOMO KTAR WDAF

SATURDAY

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

B — Richard Himber, See Monday

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

B — O'Leary's Irish Minstrels

KOIL KSO KWCR KWK WBAL WBZ WGAR WHAM WJZ WMAL WMAQ WREN WSYR

C — Football Reporter, See Thursday

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

R — Meyer Davis and Orchestra

CRCT KSD KYW WBEN WCAE WDAF WFAE WEEI WFBW WGY WHO WJAR WOC WSAI WTAG

C — Frederic William Wile

CFRB CKLW KFAB KFH KLRA KLZ KMBC KOMA KSL KTRH KTSB KTVR WABC WACO WADC WBBM WBIG WBRC WBT WCAH WCAO WCCO WDAE WDBJ WDBO WDOD WDRG WDSU WEAN WFBL WFEA WGST WHAS WHEC WHP WICC WISN WJAZ WJWS WLAC WLWB WLBZ WMBG WMT WNAC WOKO WORC WQAM WREC WSAI WSM WSJS WSPD WTAQ WWVA

B — John Herrick, Baritone

KDKA KFI KGO KGW KHQ KOA KOMO KTBS KTBS KVOO KWCR WAPI WBAL WCKY WECB WFLA WGAR WIBA WIOD WIS WJAX WJDX WJZ WMAL WMAQ WMC WOAI WRVA WSB WSM WSMB WWNC

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

C — Mildred Bailey, Songs

CKLW KFLH KLZ KMOX KOMA KTRH KTSB KTVR WAAB WABC WADC WBIG WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRG WEAN WFBL WFEA WGST WHAS WHK WHP WICC WISN WJAZ WJWS WLAC WLWB WLBZ WMBG WMT WODX WOKO WORC WQAM WREC WSAI WSM WSJS WSPD WTAQ WTTIC WTMJ WTRC

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

R — Jack and Loretta Clemens, Songs

KDYL KFI KGO KGW KHQ KOA KOMO KSD WBEN WCAE WDAF WFAE WEEI WFBW WPI WGY WHO WJAR WMAQ WOC WRC WSAI WTAG WTAM WWJ

B — Kaltenmeyer's Kindergarten

CFCC KFYR KOIL KSO KTBS KWCR KWK KYW WBAL WBAF WCKY WIBA WIOD WIS WJZ WKY WMAL WOAI WREN WSM WSMB WWNC

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

R — Optimistic Mrs. Jones—Sketch

KDYL KFI KGO KGW KHQ KOA KOMO WBEN WCSH WDAF WFAE WEEI WENR WFBW WPI WGY WJAR WOV WRC WSAI WTAG WTAM WWJ

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

C — Connie Boswell, Songs

CFRB CKLW KFAB KFH KLRA KOMA KRLD KTRH KTSB KTVR WABC WACO WADC WBIG WBRC WBT WCAH WCAO WCAU WDAE WDBJ WDBO WDOD WDRG WDSU WEAN WFBL WFBM WFEA WGST WHEC WHK WHP WICC WISN WJAZ WJWS WLAC WLBZ WNAC WOKO WORC WQAM WREC WSBT WSAI WSJS WSPD WTAQ WWVA

R — Rollickers Quartet

KSD KYW WBEN WCSH WDAF WFAE WEEI WFBW WGY WJAR WOV WRC WTAG WTAM WWJ

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

R — Sam Herman and Frank Banta

KSD WCSH WDAF WFAE WEEI WFBW WPI WGY WJAR WRC WTAG WTAM WWJ

C — Casa Loma Orchestra

CFRB CKLW KFH KMBC KMOX KOMA KRLD KTRH KTSB KTVR WABC WACO WADC WBIG WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRG WEAN WFBL WFEA WGST WHEC WHP WICC WJAZ WJWS WLAC WLWB WLBZ WMBG WNAC WODX WOKO WORC WQAM WREC WSBT WSAI WSJS WSPD WTAQ WTTIC WWVA

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

R — Sous Les Ponts de Paris

KSD WBEN WCSH WDAF WFAE WEEI WFBW WPI WGY WHO WJAR WMAQ WOC WOW WRC WSAI WTAG WTAM WWJ

E-8:45 p.m., C-7:45, M-6:45, P-5:45

B — Annie, Judy and Zeke; Hillbilly Songs

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

C — Gertrude Niesen, Songs

CKLW KFAB KFH KLZ KMBC KOMA KRLD KSL KTRH KTSB KTVR WABC WADC WBIG WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRG WEAN WFBL WFBM WFEA WGST

**SATURDAY—(Continued)**

WHEC WHK WHP WIBW WICC WISN WJAS WJSV  
WLAC WLWB WLWB WMBD WMBG WMT WMT  
WODX WOKO WORC WQAM WREC WSJS WSPD  
WTAQ WTRW WTCO WWVA

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

**B — Jamboree, Variety Show**

KDKA KOIL KWCR KWK KYW WBAL WBZ WBZA  
WCKY WGAR WHAM WJR WJZ WMAL WREN  
WSYR

**R — Antebal's Cubans**

KSD WBEN WCAE WCHS WDAF WEAF WGY WHO  
WJAR WMAQ WOC WSAI WTAG

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

**R — K-7—Drama**

KSD WBEN WCAE WCHS WDAF WEAF WEEI  
WFBR WFI WGY WHO WJAR WMAQ WOC WOW  
WRC WSAI WTAG WTAM WWJ

**C — Willard Robison and Orchestra**

CFRB CKLW KFH KLRA KLZ KMBC KOMA KRLD  
KSL KTRH KTSK KVRB WABC WADC WADG  
WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE  
WDBJ WDBO WDOD WDRC WDSU WEAN WFBL  
WFBM WFEA WGST WHCC WHK WHP WICC  
WISN WJAS WJSV WLAC WLWB WMBG WMT  
WNAO WOKO WORC WQAM WREC WSFA WSJS  
WSPD WTAQ WWVA

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

**B — Mad Luke, Drama with Music**

KDKA KOIL KSO KWCR KWK KYW WBAL WCKY  
WGAR WHAM WJR WJZ WMAL WREN WSYR

**R — B. A. Rolfe and Orchestra**

CRCT KDYL KFI KGO KGW KOA KOMO KSD  
KSTP WBAP WBEN WCAE WCHS WDAF WEAF  
WEEI WFBR WFI WGY WHO WJAR WJAX WLW  
WMAQ WTAQ WOC WOW WPTF WRC WRVA WSB  
WSMB WTAG WTAM WTMJ WWJ

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

**C — Singing Strings from Montreal**

CKLW KLZ KMBC KMOX KOMA KSL KTRH KTSK  
KVRB WABC WADC WADG WBIG WBRC WBT  
WCAO WCAU WCCO WDAE WDBJ WDBO WDOD  
WDRC WEAN WFBL WFBM WFEA WGST WHAS  
WHCC WHP WIBW WICC WJAS WJSV WLAC WLWB  
WLWB WMBD WMBG WMT WODX WOKO WORC  
WPG WQAM WREC WSJS WSPD WTCO WWVA

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

**C — Jerry Freeman and Orchestra**

CKLW KFAH KFH KLZ KMBC KMOX KOMA KSL  
KTRH KTSK KVRB WABC WADC WBIG WBRC  
WBT WCAO WCAU WCCO WDAE WDBJ WDBO  
WDOD WDRC WEAN WFBL WFBM WFEA WGST  
WHAS WHCC WHP WIBW WICC WJAS WJSV WLAC  
WLWB WLWB WMBD WMBG WNAO WODX WOKO  
WORC WQAM WREC WSBT WSJS WSPD WTCO

**B — The Leaders—Male Trio**

KOIL KSO KWCR WBAL WCKY WHAM WJZ WLW  
WMAQ WREN WSYR

**R — Harry Sosnick's Orchestra**

CFRC KDYL KFI KFJR KGO KGW KOA KOMO  
KSD KSTP KTSB KVOO WBAP WBEN WCAE WCHS  
WDAF WDAY WEAF WFBR WFI WFLA WIBA WIOD  
WISN WJAR WJDX WMC WOAI WOW WRC WSB  
WSMB WTAM WWJ WNNC

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

**C — Charlie Davis, See Wednesday**

**SUNDAY**

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

**R — Major Bowes' Family**

KDYL KFJR KOA KPRC KSTP KTSB KVOO WAPI  
WBAE WDAF WDAY WEAF WEBC WFAA WFBR  
WFLA WGY WHO WIOD WJAR WJAX WKY WMAQ  
WMC WOAI WOC WRC WRVA WSAI WSMB WTAG

**E-12:30 p.m., C-11:30, M-10:30, P-9:30**

**C — New World Salon Orchestra**

CKLW KFH KLZ KMBC KMOX KTRH KTSK KVRB  
WABC WACO WADC WBBM WBRC WCAU WCCO  
WDAE WDOD WDSU WFBL WFEA WHAS WHP  
WIBW WISN WJAS WKBN WLAC WLWB WMBD

WMT WOKO WORC WPG WQAM WREC WSBT  
WSPA WSPD WTAQ

**R — International Tid Bits**

WBEN WCHS WDAF WEAF WEEI WFBR WFI WGY  
WHO WJAR WOC WRC WSAI WTAG WTAM

**B — Radio City Concert**

CFRC CRCT KDKF KDYL KFSD KFJR KGO KHQ  
KOA KOIL KOMO KPRC KSO KSTP KTRH KTSB  
KVOO KWCR KWK WAPI WBAL WBAP WGBZ WBZA  
WCKY WDAY WEBC WENE WFLA WGAR WHAM  
WIBA WIOD WIS WJAX WJDX WJR WJZ WLW  
WMAL WMAQ WMC WOAI WREN WSB WSMB  
WSYR

**E-1:15 p.m., C-12:15, M-11:15, P-10:15**

**R — Sonata Recital**

WBEN WCAE WDAF WEAF WEEI WENR WFBR  
WFI WGY WHO WJAR WLW WOC WRC WSAI WTAG  
WTAM WWJ

**E-1:30 p.m., C-12:30, M-11:30, P-10:30**

**R — Russian Symphonic Choir**

CFRC CRCT WBEN WCAE WCHS WDAF WEAF  
WEEI WFBR WFI WGY WHO WJAR WLW WMAQ  
WOC WRC WTAG WTAM WWJ

**B — High Lights of the Bible**

KDKA KDYL KFI KFJR KGHL KGIR KGO KGW  
KOA KOIL KOMO KPRC KSO KVOO KWK WAPI  
WBAL WBZ WBZA WDAY WEBC WHAM WIOD WIS  
WJAX WJDX WJR WJZ WMAL WOAI WREN WRVA  
WSM WSMB WSYR WNNC

**E-2:00 p.m., C-1:00, M-12:00, P-11:00**

**C — John Kelvin, Tenor**

CFRB CKLW KFH KLZ KMBC KSL KTRH KTSK  
KVRB WABC WACO WADC WBBM WBIG WBRC  
WBT WCAO WCAU WCCO WDBO WDOD WDRC  
WDSU WFBL WFBM WFEA WHK WIBW WISN  
WJAS WKBN WLAC WLWB WMT WOKO WORC  
WQAM WSBT WSJS WSPD WTAQ WWVA

**E-2:15 p.m., C-1:15, M-12:15, P-11:15**

**C — The Playboys**

CKLW KFH KLZ KMBC KMOX KTRH KTSK KVRB  
WABC WACO WADC WBBM WBRC WBT WCAO  
WCAU WDOD WDRC WDSU WFBL WFBM WFEA  
WHAS WIBW WISN WJAS WKBN WLAC WLWB  
WMT WOKO WORC WQAM WSBT WSJS WSPD

**R — Pop Concert—Walter Logan**

CFRC CRCT KSD WBEN WCAE WCKY WCHS  
WDAF WEAF WEEI WFBR WGY WHO WJAR WMAQ  
WOC WOW WRC WSAI WTAG WTAM WWJ

**E-2:30 p.m., C-1:30, M-12:30, P-11:30**

**C — Manhattan Moods—Do Re Mi Trio**

CKLW KFH KLZ KMBC KMOX KTRH KTSK KVRB  
WABC WACO WADC WBBM WBIG WBRC WBT  
WCAO WCAU WCCO WDAE WDOD WDRC WDSU  
WFBL WFEA WHP WIBW WISN WJAS WKBN WLAC  
WLWB WMBG WMT WOKO WORC WQAM WSBT  
WSJS WSPD WTAQ WWVA

**B — Yeast Foamers—Jan Garber's Orchestra**

KDKA KDYL KFI KFSD KFJR KGHL KGIR KGO  
KGW KHQ KOA KOIL KOMO KPRC KSO KSTP  
KTRH KTSB KTSB KVOO KWCR KWK KYW WAPI  
WBAL WBZ WBZA WDAY WEBC WFAA WFLA  
WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR  
WJZ WKY WLW WMAL WOAI WPTF WREN WRVA  
WSB WSM WSMB WSYR WTMJ WNNC

**E-3:00 p.m., C-2:00, M-1:00, P-12:00**

**C — Howard Barlow and Symphony Orchestra**

CKLW KFH KLZ KMBC KMOX KTRH KTSK KVRB  
WABC WACO WADC WBIG WBRC WBT WCAO  
WCAU WCCO WDAE WDOD WDSU WFBL WFBM  
WFEA WHAS WHP WIBW WISN WJAS WKBN  
WLAC WLWB WMBD WMBG WMT WOKO WORC  
WQAM WREC WSBT WSJS WSPD WTAQ

**R — Wayne King and Orchestra**

KDYL KFI KGO KGW KHQ KOA KOMO KPRC  
KSD KSTP KVOO WBEN WCAE WCHS WEAF WEEI  
WFAA WGY WHO WJDX WJR WKY WLIT WIS  
WLW WMC WOAI WOC WOW WRC WSB WSM  
WSMB WTAG WTAM WTMJ WWJ

**B — National Opera Concert**

CFRC CRCT KDKA KOIL KSO KWCR KWK WBAL  
WBAE WDAY WCKY WFLA WGAR WIOD WIS WJAX  
WJR WJZ WMAL WREN WRVA WSYR WNNC

SUNDAY—(Continued)

E-3:30 p.m., C-2:30, M-1:30, P-12:30

R — Radio Pulpit

KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOMO KPRC KTBS KTHS KVOO KYW WAPI WBEN WCAE WCSH WDAF WDAY WFAE WEEB WEEI WFLA WFLR WFLG WGY WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMOI WOV WRC WRVA WSAI WSB WSM WTAG WTAM WWJ WWNC

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

R — Fiddlers Three

CFCC CRCT KDYL KFI KFSD KFYR KGO KGW KHQ KOA KOMO KSD KSTP KTAR KTBS KYW WAPI WBEN WCAE WDAF WDAY WFAE WEEB WEEI WFLA WGY WHO WIBA WIOD WIS WJAR WJDX WKY WLIT WMOI WOV WRC WRVA WSAI WSB WSM WTAG WTAM WWJ WWNC

B — Gould and Sheffter, Piano Duo

KDKA KOIL KWCR KWK WBAL WGAR WHAM WJZ WMAL WREN WSYR

C — Cathedral Hour

CKLW KFH KLZ KMBC KMOX KRLL KSL KTRH KTSa KVOR WABC WADC WBIG WBRW WBT WCAO WCAU WCCO WDAE WDOD WDRS WDSU WFLB WFBM WFEA WHAS WHK WHP WIBW WISN WJAX WKBN WLAC WLWB WMBD WMBG WMT WOKO WORC WQAM WREC WSBT WSJS WSPD WTAQ

E-4:15 p.m., C-3:15, M-2:15, P-1:15

R — Wildroot—Vee and Johnny

KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSTP KTBS KVOO WBEN WCAE WCSH WDAF WDAY WFAE WEEB WEEI WFLA WFLR WFLG WGY WIBA WJAR WKY WLIT WLS WMOI WOV WRC WRVA WSAI WTAG WTAM WTMJ WWJ

B — Morin Sisters, Harmony Trio

CFCC CRCT KDKA KOIL KSO KWCR KWK KYW WBAL WBT WBZA WCKY WFLA WGAR WHAM WIOD WJAX WJDX WJR WJZ WLW WMAL WREN WRVA WSB WSM WSYR WWNC

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

R — Temple of Song

KSD WBEN WCAE WCSH WDAF WFAE WEEI WENR WFRB WFI WGY WHO WJAR WLW WMAQ WOC WOV WRC WSAI WTAG WTAM WWJ

B — Dion Kennedy, Organist

CFCC CRCT KDKA KFSD KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTBS KVOO KWCR KWK KYW WBAL WBT WBZA WCKY WDAY WEEB WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WMAL WMC WMOI WREN WRVA WSM WSYR WWNC

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

R — Big Ben—Drama

WBEN WCAE WCSH WDAF WFAE WEEI WFRB WGY WJAR WMAQ WOV WRC WSAI WTAG WTAM WWJ

C — Willard Robison Syncoated Sermons

CKLW KFH KLZ KMBC KMOX KRLL KTRH KTSa KVOR WABC WADC WBIG WBRW WBT WCAO WCAU WCCO WDAE WDOD WDRS WDSU WFLB WFBM WFEA WHAS WHK WHP WIBW WISN WJAX WKBN WLAC WLWB WMBD WMBG WMT WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTAQ

B — The Friendly Hour

KDYL KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KPRC KSO KSTP KTAR KTBS KVOO KWCR KWK WBAL WBT WBZA WCFB WCKY WDAY WEEB WFLA WGAR WHAM WIOD WIS WJAX WJDX WJR WJZ WKY WMAL WMC WMOI WPTF WREN WRVA WSB WSMB WSYR WWNC

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

C — Vera Van, Contralto

CKLW KFH KLZ KMBC KMOX KRLL KTRH KTSa KVOR WABC WADC WBIG WBRW WBT WCAO WCAU WCCO WDAE WDOD WDRS WDSU WFLB WFBM WFEA WHAS WHK WHP WIBW WISN WJAX WKBN WLAC WLWB WMBD WMBG WMT WOKO WORC WQAM WREC WSBT WSJS WSPD WTAQ

R — Paul Ash and Orchestra

CFCC CRCT WBEN WCAE WCSH WDAF WFAE

WEEI WENR WFRB WFI WGY WHO WJAR WOC WOV WRC WSAI WTAG WTAM WWJ

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

B — Eva Jessye Choir

CFCC CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTBS KVOO KWCR KWK KYW WAPI WBAL WBAF WBBB WBBZ WBBZ WCKY WDAY WEEB WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WMAL WMC WMOI WREN WRVA WSB WSM WSMB WSYR WWNC

C — Frank Crumit and Julia Sanderson

CKLW KFAB KFH KMBC KMOX KOMA WAAB WABC WADC WCAH WCAO WCAU WDRS WDSU WEAN WFBL WFBM WGR WHAS WHEC WHK WICC WJSV WMAA WOKO WORC WSPD WTAR

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

C — Eddie Duchin and Orchestra

CKLW KFH KLZ KMBC KMOX KRLL KSL KTRH KTSa KVOR WABC WADC WBBB WBIG WBRW WBT WCAU WCCO WDAE WDOD WDRS WDSU WFLB WFEA WHK WHP WIBW WIP WJAX WKBW WKBW WLAC WLWB WMT WOKO WORC WPG WQAM WREC WSBT WSJS WSPD WTAQ WWVA

R — Catholic Hour

KDYL KECA KFYR KGHL KGIR KGW KOA KOMO KPO KPRC KSTP KTAR KTBS KVOO WAPI WBAF WBEN WCAE WCSH WDAF WDAY WFAE WEEB WEEI WENR WFRB WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMC WMOI WOV WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC

B — Don Hall Trio

CFCC CRCT KDKA KOIL KSO KWCR KWK WBAL WCKY WGAR WHAM WJR WJZ WMAL WMAA WREN

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

C — Smiling Ed McConnell

CKLW KDB KERN KFAB KFBC KFH KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOJ KRLL KSL KVI KWG WAAB WABC WBBM WBT WCAH WCAU WCCO WDSU WEAN WFBL WHAS WHEC WHP WJAX WJSV WKBW WKRC WLAC WMT WOKO WQAM WSPD WTAR WWVA

B — Henri Deering, Concert Pianist

KDKA KOIL KSO KWCR KWK WCKY WENR WGAR WHAM WJR WJZ WLW WMAL WREN WSYR

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

B — Trio Romantique

KDKA KOIL KSO KWCR KWK WCKY WENR WGAR WHAM WJR WJZ WLW WMAL WREN WSYR

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

C — H. V. Kaltenborn

CKLW KFH KLRA KLZ KSL KTRH KTSa KVOR WABC WACO WADC WBIG WBRW WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDOD WDRS WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHP WICC WIP WISN WJAX WJSV WKBN WLAC WLWB WLWB WNAC WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTAQ WWVA

B — Vincent Lopez's Orchestra; Alice Joy

KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTHS KWCR KWK WBAL WBT WBZA WDAY WEEB WGAR WHAM WIBA WJDX WJR WJZ WKY WLS WLW WMAL WMOI WREN WSB WSM WSMB WSYR WTMJ

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

R — Horse Sense Philosophy—Andrew Keily

KSD WBEN WCAE WCSH WDAF WFAE WEEI WGY WJAR WMAQ WSAI WTAG WWJ

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

C — Roses and Drums, Drama

CKLW KLRA KLZ KMBC KMOX KOMA KTAT KTRH KTSa WABC WADC WBBB WBRW WCAO WCCO WDSU WGR WGST WHAS WHK WJAX WJSV WKRC WNAC WREC WGR

B — Desert Guns, Foreign Legion Drama

CFCC CRCT KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTAR KTBS KTHS KVOO KWCR KWK WAPI WBAL WBT

## SUNDAY—(Continued)

WBZA WCKY WDAY WEBC WFLA WGAR WHAM  
WIBA WIOD WIS WJDX WJR WJZ WKY WLS WMAL  
WMC WOAI WREN WRVA WSB WSM WSMB WSYR  
WWNC

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

**R — Fitch Program—Wendell Hall**

CFCF KSD WBEN WCAE WCSH WDAF WFAF  
WFBR WGY WHO WJAR WLIT WMAQ WOC WOW  
WRC WSAI WTAG WTAM WTIC WWJ

**C — Chicago Variety Program**

CKLW KLZ KMBC KMOX KTRH KVOR WABC  
WACO WADC WBBM WBIG WBRB WBT WCAO  
WCAU WCCO WDOD WDRC WDSU WFBL WFBM  
WFEA WHAS WHP WISN WJAS WKBN WLAC  
WLBW WOKO WORC WPG WQAM WREC WSJS

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

**R — Chase and Sanborn Hour**

CFCF CRCT KDYL KFI KFYR KGO KGW KHQ  
KOA KOMO KPRC KSD KSTP KTR KTHS KVOO  
WAPI WBEN WCAE WCSH WDAF WDAY WFAF  
WEBC WFAA WFBR WFLA WGAR WGY WHO  
WIOD WIS WJAX WJDX WKY WLIT WLW WMAQ  
WMC WOAI WOC WOW WPTF WRC WRVA WSB  
WSM WSMB WTAG WTAM WTIC WTMJ WWJ

**B — Light Opera Nights**

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

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

**C — Johnny Green; Gertrude Niesen**

CKLW KFAB KFH KLRA KLZ KMBC KSL KTRH  
KTSK KVOR WAAB WABC WACO WADC WBIG  
WBRB WBT WCAH WCAO WCAU WCCO WDAE  
WDBJ WDOD WDRC WDSU WFBL WFBM WFEA  
WGST WHAS WHEC WHK WHP WICC WISN WJAS  
WJSV WKBN WLAC WLBW WMT WOKO WORC  
WQAM WREC WSFA WSJS WSPD WTAQ WVVV

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

**C — Carson Robison and Buckaross**

CFRB CKLW KLRA KLZ KMBC KSL KTRH KTSK  
KVOR WAAB WABC WACO WADC WBRB WBT  
WCAH WCAO WCAU WCCO WDAE WDBJ WDOD  
WDRC WDSU WFBL WFBM WFEA WGST WHAS  
WHEC WHK WHP WICC WISN WJAS WJSV WKBN  
WLAC WLBW WLBZ WMT WOKO WORC WQAM  
WREC WSFA WSJS WSPD WTAQ WVVV

**R — Manhattan Merry-Go-Round**

KDYL KFI KGO KGW KHQ KOA KOMO KSD WDAF  
WFAF WENR WFBR WFI WGY WHO WJAR WOC  
WOW WRC WSAI WTAM WTIC WWJ

**B — Gulf Headliners—Revelers Quartet**

KDKA KPRC KTBS KTHS KVOO WAPI WBAL WBZ  
WBZA WFAA WFLA WGAR WHAM WIOD WIS  
WJAX WJDX WJR WJZ WLW WMAL WMC WOAI  
WPTF WRVA WSB WSM WSMB WSYR WWNC

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

**R — American Album of Familiar Music**

CFCF KDYL KFI KGO KGW KHQ KOA KOMO  
KPRC KSD KSTP KVOO WBEN WCAE WCKY  
WCSH WDAF WFAF WEEI WENR WFAA WFBR  
WFI WFLA WGY WHO WIOD WJAR WJAX WJDX  
WKY WMC WOAI WOC WOW WPTF WRC WRVA  
WSAI WSB WSMB WTAG WTAM WTMJ WWJ

**B — Jergens Program; Walter Winchell**

KDKA KPRC KTBS KTHS KVOO WAPI WBAL  
WBZ WBZA WFAA WFLA WGAR WHAM WIOD WIS  
WJDX WJR WJZ WLW WMAL WOAI WPTF WRVA  
WSB WSM WSMB WSYR WWNC

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

**C — Freddy Rich; Mildred Bailey**

CFRB CKLW KLRA KLZ KMBC KRLD KSL KTRH  
KTSK KVOR WAAB WABC WACO WADC WBIG

WBRB WBT WCAH WCAO WCAU WCCO WDAE  
WDBJ WDOD WDRC WDSU WFBM WFEA WGST  
WHAS WHEC WHK WHP WICC WISN WJAS WJSV  
WLAC WLBW WLBZ WMT WOKO WORC WPG  
WQAM WREC WSJS WSPD

**R — Col. Louis McHenry Howe**

KDYL KFI KFYR KGHL KGIR KGO KGW KHQ KOA

KOMO KPRC KSD KSTP KVOO WBEN WCAE WCSH  
WDAF WDAY WFAF WEBC WFAA WFBR WFI WGY  
WHO WIBA WJAR WKY WMAQ WMC WOAI WOC  
WOW WRC WSAI WSB WSMB WTAG WTAM WTIC  
WTMJ WWJ

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

**B — Green Brothers Novelty Orchestra**

CFCF KDKA KSO KWCR KWK WBAL WBZ WBZA  
WCKY WFLA WGAR WHAM WIOD WIS WJAX WJR  
WJZ WLW WMAQ WREN WRVA WSYR WWNC

**C — Madison Singers; Ann Leaf**

CFRB CKLW KLRA KLZ KMBC KRLD KSL KTRH  
KTSK KVOR WAAB WABC WACO WADC WBIG  
WBRB WBT WCAH WCAO WCAU WCCO WDAE  
WDBJ WDOD WDRC WDSU WEAN WFBL WFBM  
WFEA WGST WHAS WHP WICC WISN WJAS WJSV  
WKBN WLAC WLBW WLBZ WMBD WMT WOKO  
WORC WPG WQAM WREC WSJS WSPD

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

**R — Sunday at Seth Parker's**

CFCF KDYL KFSB KFYR KGHL KGIR KGO KGW  
KHQ KOA KOMO KPRC KSD KSTP KATR KTBS  
KYW WAPI WBEN WCAE WCSH WDAF WDAY  
WFAF WEBC WEEI WFAA WFBR WFI WFLA WGY  
WHO WIBA WIOD WIS WJAR WJAX WJDX WMC  
WOAI WOC WOW WPTF WRC WRVA WSI WSBW  
WSM WSMB WTAG WTAM WTMJ WWJ WWNC

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

**C — Guy Lombardo and Orchestra**

CKLW KFH KLZ KMBC KMOX KSL KTRH KTSK  
KVOR WABC WACO WADC WBIG WBRB WBT  
WCAO WCCO WDAE WDBJ WDOD WDRC WDSU  
WFBL WFBM WFEA WHAS WHEC WHP WIBW  
WIP WISN WJAS WKBN WLAC WLBW WMBD WMT  
WOKO WQAM WREC WSBT WSJS WSPD



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# CLASSIFIED INDEX TO CHAIN PROGRAMS

## Time in Eastern Standard

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Concert Footlights, 7:30 p.m., Thursday, B.  
Jules Lande, 10:30 p.m., Monday, R.  
Light Opera, 8:00 p.m., Sunday, B.  
Light Opera Gems, 10:45 p.m., Tuesday, C.  
Walter Logan, 2:15 p.m., Sun.; 6:00 p.m., daily, except Sat. and Sun., R.  
National Opera, 3:00 p.m., Sunday, B.  
New World Salon, 12:30 p.m., Sunday, C.  
Radio City, 12:30 p.m., Sunday, B.  
Russian Symphonic Choir, 1:30 p.m., Sunday, R.  
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### DANCE BANDS

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Jack Denny, 11:30 p.m., Mon. and Thurs., R.; 11:30 p.m., Wed., B.; 7:15 p.m., Mon., Wed., Fri., C.  
Eddie Duchin, 6:00 p.m., Sunday, C.  
Jerry Freeman, 11:30 p.m., Sun.; 11:00 p.m., Sat., C.  
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Roger Gerston, 6:30 p.m., Thursday, R.  
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Johnny Green, 8:30 p.m., Sunday, C.  
Ferde Grofe, 9:00 p.m., Wed.; 9:00 and 11:30 p.m., Fri., R.  
Phil Harris, 9:00 p.m., Friday, B.  
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Ernie Holst, 7:15 p.m., Wed., R.; 11:30 p.m., Tues., B.  
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Henry King, 6:00 p.m., Friday, B.  
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Guy Lombardo, 11:00 p.m., Sun.; 9:30 p.m., and 12:30 a.m., Wed.; 11:30 p.m., Fri., C.  
Vincent Lopez, 7:00 p.m., Sunday, B.  
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George Olsen, 8:00 p.m., Wednesday, R.  
Freddie Rich, 10:00 p.m., Sunday, C.  
Willard Robinson, 5:00 p.m., Sun.; 10:00 p.m., Thurs.; 9:30 p.m., Sat., C.  
Buddy Rogers, 11:15 p.m., Monday, R.  
B. A. Rolfe, 10:00 p.m., Saturday, R.  
Harry Soenick, 11:00 p.m., Saturday, R.  
Rudy Vallee, 8:00 p.m., Thursday, R.  
Fred Waring, 10:00 p.m., Wednesday, C.  
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### DIALOG

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Milton Berle, 10:00 p.m., Wednesday, C.  
Burns and Allen, 9:30 p.m., and 12:30 a.m., Wednesday, C.  
East and Dumke, 9:30 p.m., Tuesday, R.  
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Lum and Abner, 7:30 and 11:15 p.m., Mon., Tues., Wed. and Thurs.; 10:30 p.m., Fri., R.  
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### DRAMA

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Death Valley Days, 9:00 p.m., Thursday, B.  
Desert Guns, 7:30 p.m., Sunday, B.  
Eno Crime Clues, 8:00 p.m., Tues. and Wed., B.  
Evening in Paris, 9:00 p.m., Monday, C.  
First Nighter, 10:00 p.m., Friday, R.  
Goldbergs, 7:45 p.m., daily, except Sat. and Sun., R.  
H-Bar-O Rangers, 6:15 p.m., daily, ex. Sat. and Sun., C.  
K-7, 9:30 p.m., Saturday, R.  
Lives at Stake, 10:00 p.m., Tuesday, R.  
Myrt and Marge, 7:00 and 10:45 p.m., Daily, except Saturday and Sunday, C.  
Buck Rogers, 6:00 p.m., Mon., Tues., Wed., Thurs., C.  
Soconyland Sketches, 8:00 p.m., Monday, R.  
Roses and Drums, 7:30 p.m., Sunday, C.

### PIANO AND ORGAN

Henri Deering, 6:30 p.m., Sunday, B.  
Archer Gibson, 10:30 p.m., Thursday, B.  
Gould and Sheffner, 6:45 p.m., Fri., R.; 4:00 p.m., Sun., B.  
Sam Herman and Frank Banta, 8:15 p.m., Saturday, R.  
Dion Kennedy, 4:30 p.m., Sunday, B.  
Ohman and Arden, 9:30 p.m., Sunday, R.  
Playboys, 2:15 p.m., Sunday, C.

### POPULAR PROGRAMS

A. & P. Gypsies, 9:00 p.m., Monday, R.  
Album of Familiar Music, 9:30 p.m., Sunday, R.  
Fred Allen's Revue, 9:00 and 11:30 p.m., Friday, R.  
Armour Program, 9:00 p.m., Friday, B.  
Blackstone Plantation, 8:00 p.m., Tuesday, R.  
California Melodies, 10:00 p.m., Tuesday, C.  
Chase and Sanborn, 8:00 p.m., Sun.; 8:00 p.m., Wed., R.  
Chicago Knights, 6:45 p.m., Sunday, C.  
Chicago Variety, 7:45 p.m., Sunday, C.  
Cities Service Concert, 8:00 p.m., Friday, R.  
Contented Program, 10:00 p.m., Monday, R.  
Corn Cob Pipe Club, 10:00 p.m., Wednesday, R.  
Del Monte Ship of Joy, 9:30 p.m., Monday, R.  
Fiddlers Three, 4:00 p.m., Sunday, R.  
Fleischmann Hour, 8:00 p.m., Thursday, R.  
Jack Frost's Melody, 9:30 p.m., Monday, B.  
Gulf Headliners, 9:00 p.m., Sunday, B.  
Household Musical, 9:00 p.m., Tuesday, B.  
Jamboree, 9:00 p.m., Saturday, B.  
Kaltenmeyer's Kindergarten, 7:30 p.m., Saturday, B.  
Lum and Abner Sociable, 10:30 p.m., Friday, R.  
Manhattan Merry-Go-Round, 9:00 p.m., Sunday, R.  
Maxwell House Show Boat, 9:00 p.m., Thursday, R.  
Molle Program, 7:00 p.m., Friday, R.  
Nestle's Chocolateeers, 8:00 p.m., Friday, B.  
Old Gold, 10:00 p.m., Wednesday, C.  
Pond's Players, 9:30 p.m., Friday, R.  
Richfield Country Club, 7:30 p.m., Monday, B.  
Singing Strings, 10:30 p.m., Saturday, C.  
Texaco Program, 9:30 p.m., Tuesday, R.  
Yeast Foamers, 2:30 p.m., Sunday, B.  
Threads of Happiness, 9:15 p.m., Friday, C.

### RELIGIOUS

Cathedral Hour, 4:00 p.m., Sunday, C.  
Catholic Hour, 6:00 p.m., Sunday, R.  
Church of the Air, 1:00 p.m., Sunday, C.

Friendly Hour, 5:00 p.m., Sunday, B.  
 High Lights of the Bible, 1:30 p.m., Sunday, B.  
 Mi-week Hymn Sing, 6:30 p.m., Tuesday, R.  
 Old Songs of Church, 6:30 p.m., Thursday, B.  
 Seth Parker, 10:45 p.m., Sunday, R.  
 Radio Pulpit, 3:30 p.m., Sunday, R.

#### SINGERS

Annie, Judy and Zeke, 8:45 p.m., Saturday, B.  
 Mildred Bailey, 10:00 p.m., Sun.; 7:15 p.m., Sat., C.  
 Betty Barthell, 9:30 p.m., Saturday, C.  
 Connie Boswell, 8:00 p.m., Saturday, C.  
 Boswell Sisters, 8:00 p.m., Tues. and Thurs., C.  
 Jack and Loretta Clemens, 7:30 p.m., Saturday, R.  
 Mario Cozzi, 7:30 p.m., Thurs.; 10:30 p.m., Fri., B.  
 De Re Mi Trio, 2:30 and 10:00 p.m., Sunday, C.  
 Jessica Dragonette, 8:00 p.m., Friday, R.  
 Evan Evans, 10:00 p.m., Mon.; 10:45 p.m., Friday, C.  
 John Fogarty, 8:45 p.m., Thursday, B.  
 Tito Guizar, 9:30 p.m., Sun.; 6:45 p.m., Sat., C.  
 Gypsy Nina, 7:00 p.m., Tuesday, C.  
 Don Hall Trio, 6:00 p.m., Sunday, B.  
 Wendell Hall, 7:45 p.m., Sunday, R.  
 Annette Hanshaw, 9:00 p.m., Thursday, R.  
 Happy Bakers, 8:00 p.m., Mon., Wed., Fri., C.  
 Ray Heatherton, 7:15 p.m., Wednesday, B.  
 John Herrick, 7:00 p.m., Saturday, B.  
 Eva Jessye Choir, 5:30 p.m., Sunday, B.  
 Al Jolson, 10:00 p.m., Thursday, R.  
 Alice Joy, 7:00 p.m., Sunday, B.  
 John Kelvin, 2:00 p.m., Sunday, C.  
 Jeannie Lang, 7:15 p.m., Mon., Wed., Fri., C.  
 Little Jack Little, 10:30 p.m., Mon.; 11:15 p.m., Tues., C.  
 Ruth Lyon, 10:30 p.m., Wednesday, B.  
 Madison Singers, 10:30 p.m., Sunday, C.  
 Major, Sharp and Minor, 10:30 p.m., Sunday, B.  
 Nino Martini, 9:30 p.m., Tuesday, C.  
 Mills Brothers, 7:30 p.m., Tues. and Thurs., C.  
 Morin Sisters, 4:15 p.m., Sunday, B.  
 Frank Munn, 9:30 p.m., Sunday, R.  
 Kathryn Newman, 6:30 p.m., Tuesday, B.  
 Gertrude Niesen, 8:30 p.m., Sun.; 8:45 p.m., Sat., C.  
 O'Leary's Irish Minstrels, 6:30 p.m., Saturday, B.

Phil Regan, 11:15 p.m., Monday and Thursday, C.  
 Revelers Quartet, 9:00 p.m., Sunday, B.  
 Gladys Rice, 10:00 p.m., Mon.; 10:45 p.m., Thurs., C.  
 Harry Richman, 10:00 p.m., Wednesday, C.  
 Carson Robison, 9:00 p.m., Sunday, C.  
 Rollickers Quartet, 8:00 p.m., Sat., R; 8:45 p.m., Tues., B.  
 Baby Rose Marie, 7:15 p.m., Monday, B.  
 Lanny Ross, 9:00 p.m., Thursday, R.  
 Sanderson-Crumit, 8:00 p.m., Tues., R; 5:30 p.m., Sun., C.  
 Ethel Shutta, 8:00 p.m., Friday, B.  
 Sinclair Minstrels, 9:00 p.m., Monday, B.  
 Singin' Sam, 8:15 and 11:30 p.m., Tues. and Thurs., C.  
 Smiling Ed McConnell, 6:30 p.m., Sunday, C.  
 Kate Smith, 8:45 p.m., Mon. and Tues.; 9:15 p.m., Wednesday, C.  
 Conrad Thibault, 9:00 p.m., Wednesday, R.  
 Vera Van, 5:15 p.m., Sun.; 11:15 p.m., Wed. and Fri., C.  
 Vee and Johnny, 4:15 p.m., Sunday, R.

#### TALKS

All America Football Show, 9:30 p.m., Friday, C.  
 Don Carney's Dog Chats, 7:45 p.m., Tuesday, B.  
 Boake Carter, 7:45 p.m., daily, except Sat. and Sun., C.  
 Irvin S. Cobb, 9:00 p.m., Wednesday and Friday, C.  
 Football Reporter, 6:30 p.m., Thurs., Fri. and Sat., C.  
 Floyd Gibbons, 8:30 p.m., Mon., R; 10:45 p.m., Fri., B.  
 William Hard, 6:30 p.m., Wednesday, R.  
 Edwin C. Hill, 8:15 p.m., Mon., Wed. and Fri., C.  
 Horlick's Health, 8:30 p.m., Tues. and Thurs., B.  
 Col. Louis McHenry Howe, 10:00 p.m., Sunday, R.  
 Ted Husing, 10:30 p.m., Tues. and Thurs.; 6:45 p.m., Wednesday, C.  
 H. V. Kaltenborn, 7:00 p.m., Sunday; 6:45 p.m., Friday, C.  
 Andrew F. Kelly, 7:15 p.m., Sunday, R.  
 Poet Prince, 11:15 p.m., Monday and Wednesday, B.  
 Radio in Education, 7:15 p.m., Tuesday, B.  
 Grantland Rice, 7:30 p.m., Monday, B.  
 Madame Sylvia, 10:30 p.m., Tuesday, R.  
 Lowell Thomas, 6:45 p.m., daily, except Sat. and Sun., B.  
 Voice of Experience, 8:30 p.m., Tuesday, C.  
 Frederic William Wile, 7:00 p.m., Saturday, C.  
 Walter Winchell, 9:30 p.m., Sunday, B.  
 Alexander Woolcott, 10:30 p.m., Wednesday and Friday, 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.

As Shown in the Index by  
 Frequencies and Dial Numbers

#### 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.
- z No information available.

#### Fourth Column Symbols

- A Amalgamated Broadcasting System.
- B National "Blue" network.
- C Columbia network.
- D Daytime only.
- Dn Daytime with occasional evening hours.
- E Trans-Canada network.
- F Canadian Radio Broadcast. Commission.
- G All Canadian networks.

- H Yankee network.
- J Orange network.
- K Michigan network.
- L Canadian Pacific Ry. network.
- M Central Canada network.
- N National "Red" and "Blue" networks.
- P Has construction permit only.
- Q Great Lakes network.
- R National "Red" network.
- S Sunday only.
- Sy Synchronized.
- T Don Lee System.
- U Dixie network.
- V Maritime Broadcasting network.
- W All-Florida network.
- W Curtis-Indiana network.
- 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.

INDEX BY FREQUENCIES AND DIAL NUMBERS  
With Saturday's Time on the Air

540 kilocycles 555.2 meters

CKLW	ae	5000	C	Windsor, Ont.	E-7:00-1:00
KEY	z	105	546.8	Merida, Yuc.	

550 kilocycles 545.1 meters

KFDY	ae	500	1 (1)	Brookings, S. D.	C-12:30-2:00
KFUO	ae	500	2 (1)	St. Louis, Mo.	C
KFYR	ah	1000	1N (2.5)	Bismarck, N. D.	C-7:00-12:30; 2:00-mid.
KOAC	ak	1000	.....	Corvallis, Ore.	P-6:30-4:00; 6:30-9:00
KSD	ak	500	2R	St. Louis, Mo.	C
TISO	ak	250	.....	San Jose, C. R.	C-1:00-11:00
WDEV	ae	500	D	Waterbury, Vt.	E-7:30-10:00; 11:30-2:00; 3:00-7:00
WGR	ae	1000	C	Buffalo, N. Y.	E-7:30-mid.
WKRC	ak	1000	C	Cincinnati, Ohio.	E-7:00-1:00

560 kilocycles 535.4 meters

KFDM	ak	500	(1)	Beaumont, Texas.	C-7:00-10:00
KGIZ	ak	500	D	Springfield, Mo.	C-7:00-7:00
KLZ	ak	1000	C	Denver, Colo.	M-6:45-11:30
KTAB	ak	1000	.....	San Francisco, Calif.	P-7:00-1:00
WFI	ae	500	1R	Philadelphia, Pa.	E-6:45-9:00; 9:45-11:00; 1:00-2:00; 3:00-4:30; 6:00-mid.
WIND	ak	1000	C	Gary, Ind.	C-5:30-3:30
WLIT	ak	500	1R	Philadelphia, Pa.	E-9:00-9:45; 11:00-1:00; 2:00-3:00; 4:30-6:00
WNOX	ak	1000	C (2)	Knoxville, Tenn.	C
WQAM	ae	1000	CW	Miami, Fla.	E-7:15-mid.
XEAO	ak	100	(.15)	Mexicali, B. C.	P-8:00-10:00

570 kilocycles 526.0 meters

KGKO	ak	250	(.5)	Wichita Falls, Texas.	C-7:00-10:00
KMTR	ak	500	.....	Hollywood, Calif.	P-6:00-12:15
KVI	ak	500	.....	Tacoma, Wash.	P-6:00-mid.
WKBN	ae	500	1C	Youngstown, Ohio.	E-7:30-1:00
WMCA	ak	500	.....	New York, N. Y.	E-8:00-1:00
WNAX	ak	1000	C	Yankton, S. D.	C-6:00-mid.
WOSU	ae	750	1 (1)	Columbus, Ohio.	E-1:00-mid.
WSYR	ak	250	B	Syracuse, N. Y.	E-7:30-1:00
WWNC	ae	1000	N	Asheville, N. C.	E-8:00-1:00

580 kilocycles 516.9 meters

CHMA	ak	250	S	Edmonton, Alta.	
CKLQ	aj	100	M	Toronto, Ont.	E-8:00-11:30 (CFCL)
CKUA	ak	500	F	Edmonton, Alta.	M
CRCA	ak	500	F	Moncton, N. B.	A-12:30-2:00; 8:00-mid.
HIX	ah	1500	.....	Santo Domingo, D. R.	E-Silent
KMJ	ak	500	CT	Fresno, Calif.	P-7:00-mid.
KSAC	ak	500	2 (1)	Manhattan, Kans.	C-8:00-9:00; 12:30-1:30
WDBO	ae	250	CW	Orlando, Fla.	E-7:00-mid.
WIBW	ae	1000	C2	Topeka, Kans.	C-6:00-mid.
WOBU	ak	250	(.5)	Charleston, W. Va.	E-8:00-mid.
WTAG	ae	250	R (.5)	Worcester, Mass.	E-8:00-1:00
XEPN	ak	75000	585	Piedras Negras, Coah.	C-6:00-8:00; 11:00-1:00; 7:00-11:00

590 kilocycles 508.2 meters

CMW	ae	1400	.....	Havana, Cuba.	E
KHQ	ak	1000	N (2.5)	Spokane, Wash.	P-7:00-1:00
WEEI	ak	1000	R	Boston, Mass.	E
WKZO	ae	1000	DK	Kalamazoo, Mich.	E-7:00-7:00
WOW	ae	1000	R	Omaha, Neb.	C-7:00-10:00; 10:45-mid.

600 kilocycles 499.7 meters

CFCF	ae	500	F	Montreal, Que.	E-7:30-mid.
KFQD	ck	250	.....	Anchorage, Alaska.	L-6:00-mid.
KFSD	ah	1000	N	San Diego, Calif.	P-7:30-mid.
WCAC	ae	250	2	Storrs, Conn.	E-Silent
WCAO	ae	250	C	Baltimore, Md.	E-7:00-mid.
WICC	ae	250	2 CH (.5)	Bridgeport, Conn.	E-7:45-1:00
WMT	af	500	C	Waterloo, Iowa.	C-6:00-mid.
WREC	ak	500	C (1)	Memphis, Tenn.	C-6:30-mid.

610 kilocycles 491.5 meters

KFRC	ae	1000	CT	San Francisco, Calif.	P-7:00-1:00
KZEG	ak	1000	618.5	Manila, P. I.	L-7:30-12:15; 1:15-5:00



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KCYS.

710

DIAL

KZRM	ak	5000	618.5	Manila, P. I.	L	6:30-7:30; 12:15-1:15; 5:10-mid.
TIXA	z	7.5	614	San Jose, C. R.		
WDAF	ak	1000	R	Kansas City, Mo.	C	7:56-12:30
WIP	ae	500	C	Philadelphia, Pa.	E	8:30-12:30
WJAY	ak	500	D	Cleveland, Ohio.	E	
XETR	z	1000	.....	Mexico City, D. F.	C	9:00-noon; 1:00-4:00; 5:00-11:00

## 620 kilocycles 483.6 meters

KGW	ae	1000	NJ	Portland, Ore.	P	7:00-mid.
KTAR	ae	500	NJ (1)	Phoenix, Ariz.	M	7:00-11:15
WFLA	ae	1000	Na (2.5)	Clearwater, Fla.	E	7:30-mid.
WLBZ	ak	500	C	Bangor, Maine.	E	
WSUN	ae	1000	Na (2.5)	St. Petersburg, Fla.	E	7:30-mid.
WTMJ	ae	1000	N (2.5)	Milwaukee, Wis.	C	6:45-1:00

## 630 kilocycles 475.9 meters

CFCY	ae	500	FVE	Charlottetown, P. E. I.	A	12:00-1:30; 6:00-11:30
CJGX	ck	500	F	Yorkton, Sask.	C	8:30-9:15; 10:30-noon; 7:30-9:30
CKTB	z	1000	P	St. Catharines, Ont.	E	
CMQ	z	500	2	Havana, Cuba.	E	
KFRU	ak	500	1	Columbia, Mo.	C	6:00-9:00; 2:00-sunset; 7:00-10:00
KGFX	z	200	D	Pierre, S. D.	C	
WGBF	ae	500	1	Evansville, Ind.	C	
WMAL	ak	250	B (.5)	Washington, D. C.	E	6:45-mid.
WOS	ak	500	1D	Jefferson City, Mo.	C	9:00-2:00
XETF	ak	500	.....	Veracruz, Ver.	C	
XEZ	z	500	.....	Merida, Yuc.	C	
XFG	z	2000	638.3	Mexico City, D. F.	C	

## 640 kilocycles 468.5 meters

CHRC	ak	100	FZ645	Quebec, Que.	E	9:00-12:30
CKCR	ak	100	M645	Kitchener, Ont.	E	10:00-1:30; 4:00-11:00
KFI	ak	5000	1N	Los Angeles, Calif.	P	6:30-mid.
WAIU	ae	500	1	Columbus, Ohio.	E	6:15-5:30
WOI	ae	5000	D	Ames, Iowa.	C	6:30-2:00

## 650 kilocycles 461.3 meters

KPCB	ae	100	.....	Seattle, Wash.	P	5:30-sunset; 10:00-4:00
WSM	aej	5000	N	Nashville, Tenn.	C	6:30-mid.

## 660 kilocycles 454.3 meters

TIGP	z	75	666	San Jose, C. R.		
WAAW	af	500	D	Omaha, Neb.	C	6:00-sunset
WEAF	ak	5000	R	New York, N. Y.	E	8:00-1:00

## 670 kilocycles 447.5 meters

WMAQ	ck	5000	N	Chicago, Ill.	C	7:30-1:00
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## 680 kilocycles 440.9 meters

CMAF	ak	1000	.....	Havana, Cuba.	E	5:30-11:00
HJN	ak	500	681	Bogota, Colombia.	L	Noon-1:30; 8:00-11:00
KFEQ	ae	2500	D	St. Joseph, Mo.	C	8:45-9:30; 11:00-11:30; noon-1:30
KPO	ak	5000	N	San Francisco, Calif.	P	7:30-mid.
VAS	z	2000	685	Glace Bay, N. S.	A	1:00-1:15; 1:00-1:15
WPTF	ae	1000	DnN	Raleigh, N. C.	E	7:30-sunset

## 690 kilocycles 434.5 meters

CFAC	ak	500	1	Calgary, Alta.	M	
CFRB	ak	10000	C	Toronto, Ont.	E	8:00-mid.
CJJC	ak	500	1	Calgary, Alta.	M	
NAA	ak	1000	.....	Arlington, Va.	E	11:55-noon; 9:55-10:00
XET	ck	500	.....	Monterrey, N. L.	C	Noon-2:00; 4:00-10:00

## 700 kilocycles 428.3 meters

WLW	ak	5000	N	Cincinnati, Ohio.	E	6:30-3:00
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## 710 kilocycles 422.3 meters

KMPC	ae	500	Dn	Beverly Hills, Calif.	P	6:45-12:30
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TIFB	z	30	714	San Jose, C. R.	C-6:00-10:00
WOR	ak	5000	.....	Newark, N. J.	E-6:45-12:30
XEN	ak	1000	711	Mexico City, D. F.	C-9:00-noon; 1:00-4:00; 5:00-mid.

## 720 kilocycles 416.4 meters

WGN	ck	25000	C	Chicago, Ill.	C-7:00-1:30
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## 730 kilocycles 410.7 meters

CFPL	z	100	.....	London, Ont.	E
CJCA	ah	500	F	Edmonton, Alta.	M
CKAC	ak	5000	CF	Montreal, Que.	E-7:30-11:30
CMK	ae	3150	.....	Havana, Cuba.	E-11:00-1:00; 7:00-mid.
XEF-					
XER	ak	150000	735	Villa Acuna, Coah.	C-7:15-5:00

## 740 kilocycles 405.2 meters

KMMJ	ae	1000	D	Clay Center, Neb.	C-5:00-sunset
WHBB	ak	250	D	Portsmouth, N. H.	E-8:30-1:30; 3:30-7:45
WSB	ah	50000	NX	Atlanta, Ga.	C-6:55-mid.

## 750 kilocycles 399.8 meters

KGU	aj	2500	N	Honolulu, T. H.	L-6:30-10:30
WJR	ak	10000	B	Detroit, Mich.	E-7:00-1:00
XEAN	ae	5000	.....	Juarez, Chih.	M
XEFD	ak	5000	757	Tijuana, B. C.	P-7:00-3:00

## 760 kilocycles 394.5 meters

KXA	ae	250	(.5)	Seattle, Wash.	P
WBAL	ae	10000	BSy	Baltimore, Md.	(See 1060 Kcys.)
WEW	ae	1000	D	St. Louis, Mo.	C-7:30-6:00
WJZ	ck	50000	BSy	New York, N. Y.	E-8:00-1:00

## 770 kilocycles 389.4 meters

KFAB	ae	5000	CSy	Lincoln, Neb.	C-5:00-6:45; 9:00-mid.
WBBM	ae	25000	CSy	Chicago, Ill.	C

## 780 kilocycles 384.4 meters

CHWK	ak	100	F	Chilliwack, B. C.	P-9:00-10:00; 12:00-1:00; 5:30-8:30
CJCS	ae	500	(1) P	Sudbury, Ont.	E-8:00-mid.
CKPR	ak	100	FE	Fort William, Ont.	E
CMBS	ag	200	1 (.15)	Havana, Cuba.	E-10:00-noon; 3:30-6:00
CMCQ	z	1000	1	Havana, Cuba.	E
KELW	ae	500	2	Burbank, Calif.	P-10:00-1:00; 5:00-8:00; 4:00-6:00
KTM	ae	500	2 (1)	Los Angeles, Calif.	P-6:00-10:00; 1:00-5:00; 8:00-4:00
WEAN	ae	500	CH	Providence, R. I.	E-7:30-1:00
WMC	ak	500	N (1)	Memphis, Tenn.	C-7:00-mid.
WTAR	ae	500	C	Norfolk, Va.	E-7:00-mid.
XEP	z	1000	.....	Mexico City, D. F.	C
XBYZ	z	10000	.....	Mexico City, D. F.	C

## 790 kilocycles 379.5 meters

CMJK	ak	500	.....	Camaguey, Cuba.	E-11:30-12:30; 5:00-11:00
KGO	ak	7500	N	San Francisco, Calif.	P-7:00-mid.
WGY	ak	50000	R	Schenectady, N. Y.	E-6:45-1:00

## 800 kilocycles 374.8 meters

VOAC	z	40	.....	St. John's, Newfoundland.	L
WBAP	ak	50000	Na	Fort Worth, Texas.	C-6:30-7:00; 8:30-10:30; 12:30-3:00; 5:30-6:30; 7:00-10:00
WFAA	ak	50000	Na	Dallas, Texas.	C-7:00-8:30; 10:30-12:30; 3:00-5:30; 6:30-7:00; 10:00-mid.
XFC	z	350	805	Aguascalientes, Ags.	

## 810 kilocycles 370.2 meters

VOAS	ak	100	.....	St. John's, Nfld.	L-11:00-12:30; 7:45-9:30
WCCO	ae	50000	C	Minneapolis, Minn.	C-7:00-1:00
WNYC	ak	500	N	New York, N. Y.	E-10:00-7:30

## 820 kilocycles 365.6 meters

CMGC	z	30	.....	Matanzas, Cuba.	E
WHAS	aj	25000	C	Louisville, Ky.	C-7:00-mid.

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## 830 kilocycles 361.2 meters

CMGA	z	100	834	Colon, Cuba.	E
KOA	ak	12500	N	Denver, Colo.	M-7:00-mid.
TIEA	z	7.5	833	San Jose, C. R.	L
WEEU	ak	1000	D	Reading, Pa.	E-8:00-6:15
WHDH	ae	1000	Dn	Boston, Mass.	E-7:00-sunset in Denver
WRUF	ae	5000	Dn	Gainesville, Fla.	E-8:00-7:15
XETW	dk	500	.....	Mexico City, D. F.	C-Noon-mid.

## 840 kilocycles 356.9 meters

CJOC	ak	100	F	Lethbridge, Alta.	M-7:30-8:00
CMC	ae	500	.....	Havana, Cuba.	E-10:30-11:30; 8:00-11:00
XFX	ak	500	.....	Mexico City, D. F.	C-7:00-11:00; 8:00-10:00

KCYS.

900

DIAL

## 850 kilocycles 352.7 meters

KIEV	ak	100	D	Glendale, Calif.	P-6:00-sunset
KWKH	ae	10000	1	Shreveport, La.	C
WWL	ae	10000	1Dn	New Orleans, La.	C-8:00-8:30

## 860 kilocycles 348.6 meters

TIVL	z	30	869	San Jose, C. R.	C-11:00-1:00; 7:00-10:00
WABC	ae	50000	C	New York, N. Y.	E-7:30-2:00 (WBOQ)
WHB	ae	500	D	Kansas City, Mo.	C-6:00-5:45
XETH	ak	100	.....	Puebla, Pue.	C-8:30-11:00; 1:00-3:00; 7:00-mid.

## 870 kilocycles 344.6 meters

WENR	ak	5000	Na	Chicago, Ill.	C
WLS	ae	5000	Na	Chicago, Ill.	C-5:30-9:15; 10:45-2:30; 6:00-mid.
XEAD	z	250	875	Mexico City, D. F.	C

## 880 kilocycles 340.7 meters

CJCB	ak	50	.....	Sydney, N. S.	A-10:00-11:00; noon-2:00; 5:00-10:00
CJRM	z	500	.....	Moose Jaw, Sask.	C
CJRW	ak	500	F	Fleming, Sask.	C-8:00-9:00; 10:00-10:45; 1:00-1:15; 2:15-2:30; 5:30-7:30; 8:00-9:30
CRCO	z	500	F	Ottawa, Ont.	E
KFKA	ak	500	2 (1)	Greeley, Colo.	M-6:00-7:30; 9:00-2:30; 4:30-6:00; 7:30-mid.
KLX	ae	1000	.....	Oakland, Calif.	P-8:00-11:00
KPOF	ae	500	2	Denver, Colo.	M-7:30-9:00; 2:30-4:30; 6:00-7:30
WCOC	ae	500	(1)	Meridian, Miss.	C-7:30-2:00; 5:00-10:30
WGBI	ae	250	1	Scranton, Pa.	E-9:30-12:30; 1:30-4:30; 5:30-11:00
WQAN	ae	250	1	Scranton, Pa.	E-9:00-9:30; 12:30-1:30; 4:30-5:30
WSUI	ae	500	.....	Iowa City, Iowa.	C-9:00-10:00; 6:00-7:10
YVZBC	z	100	882	Caracas, Venez.	L

## 890 kilocycles 336.9 meters

CFQC	z	500	Z	Saskatoon, Sask.	C
CHML	aei	50	M	Hamilton, Ont.	E-8:00-11:00
CMCF	ak	250	1	Havana, Cuba.	E-5:00-8:00
CMX	ae	1000	1	Havana, Cuba.	E-Noon-2:00; 8:00-11:00
KARK	ak	250	.....	Little Rock, Ark.	C-7:00-2:00; 4:30-9:30
KFNF	ak	500	2 (1)	Shenandoah, Iowa.	C-5:00-10:30; 11:00-5:00; 6:00-11:00
KSEI	ck	250	(.5)	Pocatello, Idaho.	M-7:30-11:00
KUSD	ae	500	2	Vermillion, S. D.	C-Silent
WGST	ae	250	C (.5)	Atlanta, Ga.	C-7:00-mid.
WILL	ak	250	2 (.5)	Urbana, Ill.	C-11:00-12:15; 11:00-mid.
WJAR	ae	500	R	Providence, R. I.	E-8:00-1:00
WMMN	ae	250	(.5)	Fairmont, W. Va.	E-7:00-9:30
XETU	z	100	.....	Pachuca, Hdo.	

## 900 kilocycles 333.1 meters

KGBU	ak	500	.....	Ketchikan, Alaska.	L
KHJ	ae	1000	CT	Los Angeles, Calif.	P-7:00-1:00
VOWR	ae	500	S	St. John's, Nfld.	L-11:00-6:30
WBEN	ae	1000	R	Buffalo, N. Y.	E-6:45-1:00
WJAX	ae	1000	N	Jacksonville, Fla.	E-7:00-12:30
WKY	ak	1000	N	Oklahoma City, Okla.	C-6:45-mid.
WLBL	ae	2500	D	Stevens Point, Wis.	C-8:00-sunset

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910 kilocycles 329.6 meters

CFRC	ak	100	915	Kingston, Ont.	E
CKY	ak	5000	.....	Winnipeg, Man.	C—8:30-4:00; 6:00-11:00
TICR	z	75	911	San Jose, C. R.	C—6:30-10:00
XEW	ak	5000	.....	Mexico City, D. F.	C

920 kilocycles 325.9 meters

CMBW	ak	600	925	Havana, Cuba.	E—6:00-11:00
CMDE	z	150	925	Havana, Cuba.	E
HHK	ae	1000	.....	Port-au-Prince, Haiti.	E—Silent
KFEL	ak	500	1	Denver, Colo.	M—6:30-8:30; 10:00-12:30; 3:00-4:30; 6:00-7:30
KFXF	ae	500	1	Denver, Colo.	M—7:30-10:00; 7:30-1:00
KOMO	ak	1000	N	Seattle, Wash.	P—6:55-mid.
KPRC	ae	1000	N (2.5)	Houston, Texas.	C—6:30-mid.
WAAF	ak	500	D	Chicago, Ill.	C—6:00-sunset
WBSO	ae	500	D	Babson Park, Mass.	E—8:30-5:15
WWJ	ae	1000	R	Detroit, Mich.	E—7:30-mid.

930 kilocycles 322.4 meters

CFCH	ak	100	F	North Bay, Ont.	E—Noon-1:30; 5:30-mid.
CFLC	ae	100	.....	Prescott, Ont.	E—8:00-10:00; noon-2:00; 5:00-7:30
CKPC	ae	100	FG	Preston, Ont.	E—6:45-mid.
CKX	ak	500	.....	Brandon, Man.	C
CMJF	z	200	.....	Camaguey, Cuba.	E
KFWI	ak	500	1	San Francisco, Calif.	P
KGBZ	ak	500	2 (1)	York, Neb.	C
KMA	ak	500	2 (1)	Shenandoah, Iowa.	C—6:00-7:30; 9:30-11:00; 12:30-2:00; 3:30-5:00; 6:30-8:30
KROW	ak	500	1 (1)	Oakland, Calif.	P—8:00-9:00; 1:00-6:00; 7:30-11:00
WBRC	ak	500	C (1)	Birmingham, Ala.	C—7:00-11:00
WDBJ	ae	250	C (.5)	Roanoke, Va.	E—8:00-mid.
WIBG	ae	25	D	Glenside, Pa.	E—9:00-sunset.

940 kilocycles 319.0 meters

KOIN	ak	1000	CT	Portland, Ore.	P—6:30-mid.
WAAT	ae	300	D	Jersey City, N. J.	E—6:00-6:00
WCHS	ae	1000	R (2.5)	Portland, Maine.	E—8:00-mid.
WDAY	ae	1000	N	Fargo, N. D.	C—7:00-mid.
WFIW	ak	1000	Y	Hopkinsville, Ky.	C—5:00-7:45; 11:30-1:00; 6:30-9:30
WHA	ak	1000	D	Madison, Wis.	C—8:00-sunset
XEFO	ak	5000	.....	Mexico City, D. F.	C—1:00-3:00; 6:25-mid. (XEO)

950 kilocycles 315.6 meters

CMHD	dk	500	(.25)	Caibarien, Cuba.	E—8:00-9:00
KFWB	ak	1000	.....	Hollywood, Calif.	P—7:30-12:30
KGHL	ak	1000	NJ (2.5)	Billings, Mont.	M—8:00-11:00
KMBC	ak	1000	C	Kansas City, Mo.	C—6:00-mid.
WRM	ae	500	R	Washington, D. C.	E—6:30-1:00

960 kilocycles 312.3 meters

CMBD	z	250	965	Havana, Cuba.	E—6:00-11:00
CMCW	ak	150	965	Havana, Cuba.	E—12:01-6:00; 1:00-3:00
CMJL	z	50	.....	Camaguey, Cuba.	
CRCT	z	5000	NF	Toronto, Ont.	E
XEAW	ak	10000	965	Reynosa, Tams.	C—5:00-1:00
YVIBC	ak	5000	.....	Caracas, Venez.	L—11:00-1:30; 5:30-10:15

970 kilocycles 309.1 meters

CMGF	ak	100	977	Matanzas, Cuba.	E—3:00-5:00; 8:00-10:30
KJR	z	5000	N	Seattle, Wash.	P—6:55-mid.
WCFL	ae	1500	BX	Chicago, Ill.	C—7:00-mid.

980 kilocycles 303.9 meters

KDKA	ak	50000	B	Pittsburgh, Pa.	E—7:00-1:00
XEAE	ak	800	.....	Tijuana, B. C.	P—9:00-mid.

990 kilocycles 302.8 meters

TITV	z	7.5	999	San Jose, C. R.	C—3:00-5:00; 7:00-11:00
WBZ	ak	25000	BSy	Boston, Mass.	E
WBZA	ak	1000	BSy	Springfield, Mass.	E
WJEM	z	500	D	Tupelo, Miss.	C
XEK	ak	100	.....	Mexico City, D. F.	C—11:00-4:00; 6:00-2:00

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1000 kilocycles 299.8 meters

KFVD	ae	250	Dn	Los Angeles, Calif.	P-6:30-sunset; 10:00-mid.
WHO-					
WOC	ak	5000	R	Des Moines, Iowa.	C-7:00-mid.
WORK	ak	1000	D	York, Pa.	E-8:00-6:45
XEA	ak	250	.....	Guadalajara, Jal.	C-8:30-9:00; 6:00-11:00
XEC	z	50	.....	Toluca, D. F.	C
XEFE	z	100	.....	Nuevo Laredo, Tams.	C
XEFJ	ak	100	.....	Monterrey, N. L.	C-11:00-2:00; 7:00-10:00
XEFS	ak	40	.....	Queretaro, Oro.	C-8:00-10:00
XEL	ak	40	.....	Saltillo, Coah.	C-10:30-1:00; 6:00-9:00

1010 kilocycles 296.9 meters

CHWC	ae	500	3F	Regina, Sask.	M-7:00-9:00; 10:00-11:00; noon-1:00; 3:30-11:00
CKCD	ak	100	.....	Vancouver, B. C.	P-7:30-11:30
CKCK	ak	500	3F	Regina, Sask.	M-9:00-10:00; 11:00-noon; 1:00-3:30
CKCO	z	100	.....	Ottawa, Ont.	E
CKIC	ak	50	.....	Wolfville, N. S.	A-6:00-7:00
CKOC	ae	500	FZ	Hamilton, Ont.	E-7:45-11:30
CKWX	ae	100	LZ	Vancouver, B. C.	P-7:00-7:30; 11:30-1:00
CMBZ	ak	150	.....	Havana, Cuba.	E-11:00-1:00; 4:00-6:00; 8:30-11:00
CMJO	ak	50	.....	Ciego de Avila, Cuba.	E-9:00-1:00; 6:00-10:00
KGGF	ak	500	2 (1)	Coileville, Kans.	C-7:30-2:00; 5:00-10:30
KQW	ae	50	.....	San Jose, Calif.	P-7:00-8:00; 9:00-3:00; 4:30-10:00
TIGA	z	30	1014	Cartago, C. R.	
WHN	ae	250	1	New York, N. Y.	E-1:30-4:00
WIS	ae	500	N (1)	Columbia, S. C.	E-8:00-mid.
WNAD	ae	500	2	Norman, Okla.	C-Silent
WPAP	ae	250	1	New York, N. Y.	E-4:00-8:00
WQAO	ae	250	1	New York, N. Y.	E-Silent
WRNY	ae	250	1	New York, N. Y.	E-9:30-1:00; 8:00-1:00
XEJ	ak	500	1015	Juarez, Chih.	C
XEU	ak	100	.....	Veracruz, Ver.	C-7:00-9:00; 10:00-2:00; 5:00-11:00

KCYS.  
1070  
DIAL

1020 kilocycles 293.9 meters

KYW	ae	1000	N	Chicago, Ill.	C-8:00-1:00
WRAX	ak	250	D	Philadelphia, Pa.	E-7:00-7:00
XES	dk	250	.....	Tampico, Tams.	C-10:00-2:30; 5:00-10:00

1030 kilocycles 291.1 meters

CFBO	z	500	.....	St. John, N. B.	A
CFCN	ak	1000	.....	Calgary, Alta.	M
CKNC	ak	500	F	Toronto, Ont.	E-8:00-11:00
CMHI	ak	250	1037	Santa Clara, Cuba.	E-11:00-noon; 8:00-9:00
CMKC	z	150	1034	Santiago, Cuba.	E
XEB	ak	1000	.....	Mexico City, D. F.	C-10:00-10:00

1040 kilocycles 288.3 meters

CMGH	ak	15	.....	Matanzas, Cuba.	E-2:00-3:00; 5:00-6:00; 7:30-8:30
KRLD	ae	1000	1C	Dallas, Texas.	C
KTHS	ae	1000	1N	Hot Springs, Ark.	C
WESG	ak	1000	D	Elmira, N. Y.	E-8:00-7:00
WKAR	ak	1000	D	East Lansing, Mich.	E

1050 kilocycles 285.5 meters

CHNS	ae	500	FL	Halifax, N. S.	A-8:00-1:30; 6:00-mid.
CMJG	z	50	.....	Camaguey, Cuba.	E
KFB1	ak	5000	Dn	Abilene, Kans.	C-6:00-sunset
KNX	ak	25000	.....	Hollywood, Calif.	P-6:45-11:00
XEFC	ak	100	.....	Merida, Yuc.	C-11:00-noon

1060 kilocycles 282.8 meters

KWJJ	ak	500	.....	Portland, Ore.	P-6:00-8:00; 9:00-2:00
WBAL	ae	10000	1B	Baltimore, Md.	E-3:00-mid.
WJAG	ak	1000	D	Norfolk, Neb.	C-6:45-sunset
WTIC	ak	50000	1R	Hartford, Conn.	E

1070 kilocycles 280.2 meters

CMBG	z	225	.....	Havana, Cuba.	E
CMCB	ak	150	.....	Havana, Cuba.	E

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<p>KJBS ae 100 D WCAZ ae 50 D WDZ ak 100 D WTAM ck 5000 R XEG z 500 1075</p>		<p>San Francisco, Calif. P—12:01-sunset Carthage, Ill. C Tuscola, Ill. C—8:00-4:00 Cleveland, Ohio. E—6:30-1:00 Mexico City, D. F. C—(Mail returned)</p>			
<b>1080 kilocycles 277.6 meters</b>					
<p>VOKW z 30 1085 WBT ae 25000 CU WCBDB ae 5000 1Dn WMBI ae 5000 1Dn</p>		<p>St. John's, Nfld. L Charlotte, N. C. E—7:00-mid. Zion, Ill. C—7:30-10:30; 1:30-sunset Chicago, Ill. C—7:00-7:30; 10:30-1:30; 2:30-4:00</p>			
<b>1090 kilocycles 275.1 meters</b>					
<p>KMOX ak 5000 C XEAI z 100 .....</p>		<p>St. Louis, Mo. C—6:30-1:00 Mexico City, D. F. (All mail returned)</p>			
<b>1100 kilocycles 272.6 meters</b>					
<p>CMCU ak 500 .....</p>	<p>CRCV ak 500 F KGDMD ak 250 D TIRCA ak 500 .....</p>	<p>Havana, Cuba. E—Noon-6:00 Vancouver, B. C. P—6:00-7:30 Stockton, Calif. P—6:00-6:30 San Jose, C. R. C—11:00-1:00; 5:00-10:30 New York, N. Y. E—6:00-8:00 Atlantic City, N. J. E—9:00-6:00; 8:00-1:00</p>			
<b>1110 kilocycles 270.1 meters</b>					
<p>KSOO ae 1000 Dn (2.5) WRVA ae 5000 N XENT ak 15000 1115</p>		<p>Sioux Falls, S. D. C—6:00-6:30 Richmond, Va. E—7:00-mid. Nuevo Laredo, Tams. C—6:00-8:00; 10:00-2:00; 5:00-10:00</p>			
<b>1120 kilocycles 267.7 meters</b>					
<p>CHGS ae 100 F</p>	<p>CHLP z 100 .....</p>	<p>Summerside, P. E. I. A—7:30-8:45; 10:30-2:00; 4:30-7:30; 9:00-11:00 Montreal, Que. E—9:00-mid. Spokane, Wash. P—7:00-sunset Los Angeles, Calif. P—6:30-7:15; 7:30-mid. Los Angeles, Calif. P—7:45-7:30 Seattle, Wash. P—6:45-6:30 Houston, Texas. C—6:30-11:30 Wilmington, Del. E—9:00-10:00 Milwaukee, Wis. C—9:30-10:15; 8:30-9:30 Milwaukee, Wis. C College Station, Texas. C—Silent</p>			
<b>1130 kilocycles 265.3 meters</b>					
<p>KSL ae 5000 C WJJD ae 20000 Dn WJVD ag 1000 D XEH ak 250 1132</p>		<p>Salt Lake City, Utah. M—6:45-mid. Chicago, Ill. C—6:30-10:00 New York, N. Y. E—8:00-6:00 Monterrey, N. L. C—8:00-1:30; 4:00-10:30</p>			
<b>1140 kilocycles 263.0 meters</b>					
<p>CMBJ z 500 .....</p>	<p>CMCD ak 500 (.25) KVOO ae 5000 1N WAPI ae 5000 1N</p>	<p>Havana, Cuba. E Havana, Cuba. E—Noon-11:30 Tulsa, Okla. C—6:30-7:00; 9:00-mid. Birmingham, Ala. C—6:00-9:00</p>			
<b>1150 kilocycles 260.7 meters</b>					
<p>CMJH ak 50 .....</p>	<p>WHAM ae 25000 B XED ak 500 1155 10-AT ak 25 1155</p>	<p>Ciego de Avila, Cuba. E—8:00-8:30; 10:00-3:00; 5:30-10:30 Rochester, N. Y. E—8:00-1:00 Guadalajara, Jal. C—Noon-3:30; 7:00-mid. Trail, B. C. P—9:30-9:00</p>			
<b>1160 kilocycles 258.5 meters</b>					
<p>WOWO ae 10000 1C WVVA ae 5000 1C</p>		<p>Fort Wayne, Ind. C—8:30-5:45 Wheeling, W. Va. E—6:30-2:00</p>			
<b>1170 kilocycles 256.3 meters</b>					
<p>CMJE z 50 1175 WCAU ae 5000 C</p>		<p>Camaguey, Cuba. E. Philadelphia, Pa. E—8:00-1:00</p>			

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1180 kilocycles 254.1 meters

CMBN	ak	150	1185	Havana, Cuba.	E—Noon-2:00; 4:00-6:00; 7:00-10:00
CMCJ	ak	500	1185	Havana, Cuba.	E
HIJK	z	15000	.....	Santo Domingo, D. R.	
KEX	ak	5000	2N	Portland, Ore.	P—7:00-5:30; 8:00-mid.
KOB	ak	10000	2	Albuquerque, N. M.	M—Noon-1:00; 5:00-9:00
WDGY	ak	1000	Dn	Minneapolis, Minn.	C—6:30-8:15
WINS	ak	500	.....	New York, N. Y.	E—6:00-7:30
WMAZ	ak	500	.....	Macon, Ga.	E—7:30-3:00; 5:00-8:15
XETA	z	250	.....	Mexico City, D. F.	

1190 kilocycles 252.0 meters

CMHJ	ae	60	.....	Cienfuegos, Cuba.	E—11:00-2:00; 6:00-9:00
HIH	z	15	1195	Santo Domingo, D. R.	E—12:30-2:30, 6:30-8:30
VONF	ak	400	1195	St. John's, Nfld.	L—Noon-2:00; 6:00-9:00
WOAI	ae	50000	N	San Antonio, Texas.	C—6:30-11:30
WSAZ	ak	1000	.....	Huntington, W. Va.	E—8:00-8:00

1200 kilocycles 249.9 meters

CHAB	ak	25	F	Moose Jaw, Sask.	M—5:30-10:00
CKOV	ak	100	F	Kelowna, B. C.	P
CKTB	ae	100	GP	St. Catharines, Ont.	E
CMGB	z	30	1205	Matanzas, Cuba.	E
KBTM	ak	100	D	Paragould, Ark.	C—7:30-1:30; 2:30-5:30
KERN	ak	100	CT	Bakersfield, Calif.	P—7:00-mid.
KFJB	ak	100	(.25)	Marshalltown, Iowa.	C—6:00-9:00; noon-3:00; 6:00-9:00
KFWF	ak	100	5	St. Louis, Mo.	C
KFXD	ae	100	.....	Nampa, Idaho.	M—7:00-9:00
KFXJ	ak	100	.....	Grand Junction, Colo.	M
KGDE	ak	100	(.25)	Fergus Falls, Minn.	C—7:00-9:00
KGEK	ak	100	.....	Yuma, Colo.	M—11:30-1:30
KGFI	ak	100	.....	Los Angeles, Calif.	P—24 hours
KGHI	ak	100	(.25)	Little Rock, Ark.	C—7:00-1:00; 4:00-10:00
KGWO	ak	100	.....	Missoula, Mont.	M—8:00-8:30
KMLB	ak	100	.....	Monroe, La.	C
KSUN	ak	100	D	Lowell, Ariz.	M—Sunrise-sunset
KVOS	ak	100	.....	Bellingham, Wash.	P—7:00-10:00
KWG	ak	100	CP	Stockton, Calif.	P—7:00-mid.
WABI	ak	100	.....	Bangor, Maine.	E—9:00-2:00; 6:00-10:00
WBBX	ak	100	1	New Orleans, La.	C—Noon-5:00; 8:00-11:00
WBBZ	ak	100	.....	Ponca City, Okla.	C—6:30-9:45
WBHS	z	100	4	Huntsville, Ala.	C
WCAT	ak	100	D	Rapid City, S. D.	C
WCAX	ak	100	.....	Burlington, Vt.	E—Noon-1:00
WCLO	ak	100	.....	Janesville, Wis.	C—7:30-2:00; 5:00-8:30
WCOD	ak	100	3	Harrisburg, Pa.	E—7:00-10:00; 2:00-5:00; 7:00-11:00
WFAM	ak	100	8C	South Bend, Ind.	C—6:30-mid.
WFBC	ak	100	4 (.25)	Greenville, S. C.	E—7:30-2:30; 5:30-10:30
WFBE	ak	100	(.25)	Cincinnati, Ohio.	E—7:00-11:30
WBHC	ak	100	2	Canton, Ohio.	E—7:00-9:00; noon-3:00; 6:00-9:00
WBHY	ak	100	.....	Green Bay, Wis.	C—7:30-9:45
WBX	ae	100	(.3)	Utica, N. Y.	E—8:00-11:00
WIL	ak	100	5 (.25)	St. Louis, Mo.	C—7:00-mid.
WJBC	ak	100	6	LaSalle, Ill.	C—8:00-9:00; 10:00-12:30; 3:00-6:30
WJBL	ak	100	6	Decatur, Ill.	C—6:30-8:00; 9:00-10:00; 12:30-3:00; 6:30-10:00
WJBW	ak	100	1	New Orleans, La.	C—8:00-noon; 5:00-8:00
WKJC	ak	100	3	Lancaster, Pa.	E—11:00-3:00; 6:00-8:00
WLAP	ak	100	(.25)	Louisville, Ky.	C—7:30-11:30
WNBO	ak	100	2	Silverhaven, Pa.	E—9:00-noon; 3:00-6:00; 9:00-mid.
WNBW	z	10	(.1)	Carbondale, Pa.	E
WPHR	ak	100	(.25)	Petersburg, Va.	E—8:00-5:00; 6:00-9:00
WRBL	z	100	.....	Columbus, Ga.	C—7:00-11:00
WWAE	ak	100	8	Hammond, Ind.	C—7:00-8:30; 11:00-1:00; 4:00-7:00; 8:00-mid.
YV3BC	ak	1000	.....	Caracas, Venz.	L—11:00-2:00; 5:00-10:30
10-AK	ak	15	.....	Stratford, Ont.	E—Noon-1:00; 5:30-7:00
10-BI	ak	25	.....	Prince Albert, Sask.	M
10-BP	ak	25	.....	Wingham, Ont.	E—Silent
10-BQ	ak	15	.....	Brantford, Ont.	E—11:00-8:00
10-BU	z	15	.....	Canora, Sask.	C

1210 kilocycles 247.8 meters

CFCO	ak	100	FL	Chatham, Ont.	E—7:15-10:00
CFNB	ae	500	FE	Fredericton, N. B.	A—8:30-9:30; 12:30-2:00; 7:30-10:00
CFNC	ak	100	PF	New Carlisle, Que.	A—1:00-mid.
CJOR	ak	500	.....	Vancouver, B. C.	P—7:30-10:30
CKCH	z	100	.....	Hull, Que.	E

KCY5.  
1210  
DIAL

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With Saturday's Time on the Air

CKMC	ak	100	.....	Cobalt, Ont.	E
KASA	ak	100	.....	Elk City, Okla.	C—6:30-1:30; 5:00-7:00
KDLR	ak	100	.....	Devils Lake, N. D.	C—8:00-2:15; 6:00-8:00
KFJI	ak	100	.....	Klamath Falls, Ore.	P—8:30-9:00
KFOR	ak	100	(.25)	Lincoln, Neb.	C—7:00-10:00
KFPW	ak	100	.....	Fort Smith, Ark.	C—7:00-2:00; 5:00-10:00
KFVS	ae	100	6	Cape Girardeau, Mo.	C—9:00-noon; 4:00-7:30; 9:00-mid.
KFXM	ak	100	9	San Bernardino, Calif.	P—6:00-mid.
KGCR	ak	100	.....	Watertown, S. D.	C
KGCY	ak	100	.....	Olympia, Wash.	P—7:00-mid.
KIEM	ak	100	.....	Eureka, Calif.	P—7:45-sunset
KPPC	ak	50	9	Pasadena, Calif.	P—Silent
KWEA	z	100	.....	Shreveport, La.	C
KWVW	z	100	.....	Hilo, Hawaii.	L
WALR	ae	100	.....	Zanesville, Ohio.	E
WBAX	ae	100	1	Wilkes Barre, Pa.	E
WBBL	ak	100	7S	Richmond, Va.	E—Silent
WBBS	ak	100	2	Springfield, Ill.	C—11:15-3:00; 6:45-8:30
WCRW	ae	100	4	Chicago, Ill.	C—11:00-2:00; 5:00-7:00
WBEQ	ae	100	6	Harrisburg, Ill.	C—6:00-9:00; noon-4:00; 7:30-9:00
WEDC	ae	100	4	Chicago, Ill.	C—8:30-10:00; 3:30-5:00; 7:00-8:00; 10:00-11:00; mid.-2.00
WFAS	ak	100	3	White Plains, N. Y.	E—9:00-11:30; 3:00-5:00; 7:00-10:00
WGGB	ae	100	3	Freeport, N. Y.	E—Silent
WGCN	ae	100	(.25)	Mississippi City, Mass.	C—Silent until Dec. 29
WGNV	ak	50	.....	Chester, N. Y.	E
WHBF	ak	100	.....	Rock Island, Ill.	C—7:30-10:00
WHBU	ah	100	.....	Anderson, Ind.	C—7:00-10:00
WHET	ak	100	D	Troy, Ala.	C—9:00-sunset
WIBU	ae	100	.....	Poyette, Wis.	C
WJBI	ak	100	3	Red Bank, N. J.	E—5:00-7:00
WJBY	ak	100	.....	Gadsden, Ala.	C—9:00-9:00
WJEJ	ah	100	D	Hagerstown, Md.	E—7:00-1:00; 4:00-7:45
WJW	ak	100	.....	Akron, Ohio.	E—9:00-11:30
WKFI	ak	100	.....	Greenville, Miss.	C—7:00-7:00
WKOK	ak	100	IP	Sunbury, Pa.	E
WMBG	ak	100	7C	Richmond, Va.	E—7:00-mid.
WOCL	ak	50	.....	Jamestown, N. Y.	E—Noon-mid.
WOMT	ae	100	.....	Manitowoc, Wis.	C
WPRO	ak	100	CH	Providence, R. I.	E—9:00-2:00; 4:00-11:15
WQDX	ae	100	.....	Thomasville, Ga.	E—8:00-9:00
WSBC	ae	100	4	Chicago, Ill.	C—6:00-8:30; 10:00-11:00; 2:00-3:30; 8:00-10:00; 11:00-mid.
WSEN	ak	100	.....	Columbus, Ohio.	E—8:00-mid.
WSIX	ak	100	.....	Springfield, Tenn.	C—6:00-4:00; 6:00-9:00
WSOC	ae	100	Y	Gastonia, N. C.	E
WTAX	ae	100	2	Springfield, Ill.	C
XEX	z	500	.....	Mexico City, D. F.	(All mail returned)

## 1220 kilocycles 245.8 meters

CMHK	ak	50	1225	Cruces, Cuba.	E—10:00-11:30
KFKU	ae	500	a	Lawrence, Kans.	C—2:30-3:00; 6:00-6:15
KTW	ak	1000	S2	Seattle, Wash.	P—Silent
KWSC	ae	1000	2(2)	Pullman, Wash.	P—Noon-2:30; 4:30-8:00
WCAD	ak	500	D	Canton, N. Y.	E—12:30-1:30
WCAE	ae	1000	R	Pittsburgh, Pa.	E—6:45-1:00
WDAA	ae	1000	CV	Tampa, Fla.	E—8:00-mid.
WREN	ak	1000	Ba	Lawrence, Kas.	C—7:00-mid.

## 1230 kilocycles 243.8 meters

CMBY	z	250	2	Havana, Cuba.	E
CMCA	z	150	2	Havana, Cuba.	E
KGGM	ak	250	(.5)	Albuquerque, N. M.	M—6:00-noon; 4:00-8:00
KYA	ae	1000	N	San Francisco, Calif.	P—7:30-mid.
WFBM	ae	1000	1C	Indianapolis, Ind.	C—7:30-3:00; 5:30-11:30
WNAC	ak	1000	CH	Boston, Mass.	E—6:30-1:00
WSBT	ak	500	1C	South Bend, Ind.	C—6:30-mid.

## 1240 kilocycles 241.8 meters

CMAB	z	20	1249	Pinar del Rio, Cuba.	E
CMJN	z	50	.....	Camaguey, Cuba.	E
KGCU	ak	250	1	Mandan, N. D.	M—Noon-5:00; 6:45-9:00
KLPM	ak	250	1	Minot, N. D.	C—7:00-1:00; 6:00-7:45
KTAT	ak	1000	.....	Fort Worth, Texas.	C—7:00-mid.
KTFI	ae	1000	.....	Twin Falls, Idaho.	M—6:00-mid.
WKAQ	ae	1000	.....	San Juan, P. R.	A—12:15-3:15; 6:30-10:00
WXYZ	ak	1000	K	Detroit, Mich.	E—7:30-mid.



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1250 kilocycles 239.9 meters

KFOX	ae	1000		Long Beach, Calif.	P-6:00-mid.
WAAM	ae	1000	1 (2.5)	Newark, N. J.	E-7:00-9:00; 10:00-noon; 2:00-4:30; 6:00-9:00
WCAL	ah	1000	2	Northfield, Minn.	C-9:45-10:15; 8:00-10:00
WDSU	ak	1000	C	New Orleans, La.	C-7:00-11:45
WGCP	ak	250	1	Newark, N. J.	E-2:00-5:00; 8:00-10:00
WLB	ak	1000	2	Minneapolis, Minn.	C-2:00-5:00
WODA	z	1000	1	Paterson, N. J.	E
WRHM	ak	1000	2	Minneapolis, Minn.	C-6:15-9:45; 10:35-mid.
XEFA	z	500	.....	Mexico City, D. F.	C

1260 kilocycles 238.0 meters

KOIL	ak	1000	B	Council Bluffs, Iowa.	C-6:00-1:00
KRGV	ae	500	1	Harlingen, Texas.	C-7:00-9:30; 12:30-3:30
KUOA	ak	1000	.....	Fayetteville, Ark.	C-7:00-6:30
KVOA	ak	500	.....	Tucson, Ariz.	M-6:00-9:00; noon-3:00; 6:00-9:00
KWWG	z	500	1	Brownsville, Texas.	C
WLBW	ae	500	C(1)	Erie, Pa.	E-8:00-1:00
WNBX	ak	250	D	Springfield, Vt.	E-9:00-1:00
WTOC	ae	500	C	Savannah, Ga.	E-7:00-1:00
XEFI	ak	250	.....	Chihuahua, Chih.	C-1:00-3:00; 8:00-10:30

1270 kilocycles 236.1 meters

CMBC	ae	150	1	Havana, Cuba.	E
CMCP	z	150	1	Havana, Cuba.	E
KGCA	ak	100	2D	Decorah, Iowa.	C-8:30-9:45; 10:45-11:30; 12:30-2:30
KOL	ae	1000	CT	Seattle, Wash.	P-6:45-mid.
KVOR	ae	1000	C	Colorado Springs, Colo.	M-7:00-11:00
KWLC	ak	100	2D	Decorah, Iowa.	C-7:30-8:30; 9:45-10:45; 11:30-12:30; 2:30-3:30
WASH	ak	500	Ka	Grand Rapids, Mich.	E-7:00-mid.
WFBH	ae	500	R	Baltimore, Md.	E-7:10-1:00
WJDX	ae	1000	N	Jackson, Miss.	C-7:00-11:00
WOOD	ak	500	Ka	Grand Rapids, Mich.	E-7:00-mid.

1280 kilocycles 234.2 meters

CMJI	ak	45	.....	Ciego de Avila, Cuba.	E
KFBB	ae	1000	(2.5)	Great Falls, Mont.	M-8:00-3:00; 5:00-10:00
WCAM	ae	500	1	Camden, N. J.	E-Silent
WCAP	ae	500	1	Asbury Park, N. J.	E-9:00-1:00; 2:00-5:00; 8:00-mid.
WDOD	ae	1000	C(2.5)	Chattanooga, Tenn.	C-7:00-11:00
WIBA	ae	500	N(1)	Madison, Wis.	C-7:30-mid.
WORC	ak	500	CH	Worcester, Mass.	E-8:00-mid.
WRR	ak	500	C	Dallas, Texas.	C-7:00-11:00
WTNJ	ak	500	1A	Trenton, N. J.	E-1:00-2:00; 5:00-8:00
XEFW	ak	70	.....	Tampico, Tams.	C-8:00-10:00; noon-2:00; 5:00-6:00; 7:00-10:00

KCY.S.  
1310  
DIAL

1290 kilocycles 232.4 meters

CMHL	ak	20	.....	Cienfuegos, Cuba.	E-10:00-noon; 6:00-9:00
KDYL	ae	1000	NJ	Salt Lake City, Utah.	M-6:30-1:00
KLNC	z	100	D	Blytheville, Ark.	C
KTSA	ak	1000	C	San Antonio, Texas.	C-7:00-mid.
WEBC	ae	1000	N(2.5)	Superior, Wis.	C-7:00-mid.
WJAS	ak	1000	C(2.5)	Pittsburgh, Pa.	E-7:30-12:30
WNBZ	z	50	D	Saranac Lake, N. Y.	E
XEAC	z	100	1295	San Luis Potosi, S. L. P.	P
XFB	ak	500	.....	Jalapa, Ver.	C-8:00-9:00; 1:00-2:30; 8:00-11:30

1300 kilocycles 230.6 meters

CMKJ	z	20	.....	Guantanamo, Cuba.	E
KALE	ak	500	3CT	Portland, Ore.	P-7:00-10:30; 2:30-5:00; 6:00-7:00; 8:00-11:00
KFAC	ae	1000	.....	Los Angeles, Calif.	P-7:00-mid.
KFH	ak	1000	C2	Wichita, Kans.	C-7:00-8:30; 9:00-11:00; 11:30-2:00; 3:00-10:00
KFJR	ag	500	3	Portland, Ore.	P-10:30-2:30; 5:00-6:00
WBRR	aej	1000	1	Brooklyn, N. Y.	E-Silent
WEVD	ak	500	1	New York, N. Y.	E-8:00-6:00
WFAB	ae	1000	1	New York, N. Y.	E-9:00-10:00; noon-3:00; 9:00-10:00
WHAZ	ae	500	1	Troy, N. Y.	E-Silent
WIOD	ae	1000	N	Miami, Fla.	E-7:15-mid.
WOQ	ae	1000	2	Kansas City, Mo.	C-6:00-7:00; 8:35-9:05; 11:00-11:30; 2:00-3:00; 10:00-11:00

1310 kilocycles 228.9 meters

CFJC	ak	100	FLE	Kamloops, B. C.	P-7:30-10:30; noon-2:00; 6:00-9:00
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With Saturday's Time on the Air

CHCK	ak	100	.....	Charlottetown, P. E. I.	A—Noon-1:30; 5:00-9:00
KCVV	ak	50	.....	Quebec, Que.	E—Noon-2:00; 6:30-8:00
KCRJ	ak	100	D	Jerome, Ariz.	M—7:30-9:30; noon-1:00; 4:30-6:00
KFBK	ak	100	C	Sacramento, Calif.	P—7:00-11:00
KFGQ	ak	100	7	Boone, Iowa.	C
KFPL	ak	100	.....	Dublin, Texas.	C—6:30-8:30; 9:00-3:15; 7:00-10:45
KFPM	ae	15	.....	Greenville, Texas.	C—7:45-9:00; 12:30-2:45; 6:00-8:30
KFXR	ak	100	(.25)	Oklahoma City, Okla.	C—7:30-2:00; 4:30-11:00
KFYO	ak	100	(.25)	Lubbock, Texas.	C—7:00-2:00; 4:00-10:00
KGBX	ae	100	.....	Springfield, Mo.	C
KGCX	ak	100	(.25)	Wolf Point, Mont.	M—7:30-9:00; 11:30-3:00; 6:00-7:00
KGEZ	aj	100	.....	Kalispell, Mont.	M—8:00-9:00
KGFV	ak	100	.....	Kearney, Neb.	C—7:00-9:00
KIFH	z	100	.....	Juneau, Alaska.	L
KIT	ak	100	.....	Yakima, Wash.	P—7:00-11:00
KMED	ck	100	.....	Medford, Ore.	P—8:00-8:00
KRMD	ak	100	.....	Shreveport, La.	C—7:00-1:00; 5:00-8:00
KTSM	ak	100	a	El Paso, Texas.	M—7:00-1:30; 3:00-10:00
KXRO	ak	100	.....	Aberdeen, Wash.	P—7:30-10:00
WAML	ak	100	.....	Laurel, Miss.	C—7:00-10:00; 11:00-2:00; 4:00-9:30
WBEO	ae	100	.....	Marquette, Mich.	C—9:30-1:15; 5:00-7:00
WBOW	ak	100	.....	Terre Haute, Ind.	C—7:00-mid.
WBRE	ak	100	.....	Wilkes Barre, Pa.	E—8:00-9:45
WCLS	ak	100	b	Joliet, Ill.	C—Silent
WDAH	ck	100	Sa	El Paso, Texas.	M
WEBR	aej	100	Q (.25)	Buffalo, N. Y.	E—7:00-1:00
WEXL	ak	50	.....	Royal Oak, Mich.	E—7:30-mid.
WFBG	ae	100	3	Altoona, Mich.	E—10:30-2:30; 6:15-9:15
WFDL	ak	100	K	Flint, Mich.	E—7:00-mid.
WGAL	ae	100	5	Lancaster, Pa.	E—9:30-2:30; 4:30-10:15
WGH	ae	100	.....	Newport News, Va.	E—7:00-1:00; 5:00-mid.
WHAT	ak	100	4	Philadelphia, Pa.	E—9:00-11:30; 1:00-4:00; 9:00-mid.
WIAS	ak	100	7	Ottumwa, Iowa.	C
WJAC	ae	100	3	Johnstown, Pa.	E—9:00-10:30; 4:30-6:15; 9:15-10:15
WKBB	ae	100	b	Joliet, Ill.	C
WKBC	ak	100	.....	Birmingham, Ala.	C—7:00-10:00
WLBC	ak	50	6	Muncie, Ind.	C—7:00-10:00
WMBO	ak	100	.....	Auburn, N. Y.	E—9:00-9:00
WNBH	ak	100	(.25)	New Bedford, Mass.	E—8:00-2:00; 4:00-10:00
WOL	ae	100	A	Washington, D. C.	E—7:00-1:00; 3:00-9:00
WRW	ak	100	5	Reading, Pa.	E—7:00-9:30
WROL	ak	100	.....	Knoxville, Tenn.	C—7:00-1:00; 4:00-11:00
WSAJ	ae	100	.....	Grove City, Pa.	E—Irregular
WSJS	ak	100	C	Winston-Salem, N. C.	E—7:45-mid.
WTFL	ah	100	4	Philadelphia, Pa.	E—7:00-9:00; 11:30-1:00; 4:00-9:00
WTJS	ak	100	(.25)	Jackson, Tenn.	C—7:00-2:00; 4:00-10:00
WTRC	ak	50	6 (1)	Elkhart, Ind.	C—6:00-7:30
XEFB	ak	100	1315	Monterrey, N. L.	C—11:00-2:00; 6:00-mid.
XEI	ak	250	.....	Morelia, Mich.	C—2:00-3:30; 9:00-10:00

## 1320 kilocycles 227.1 meters

CMCY	ak	500	1325	Havana, Cuba.	E
KGFH	ak	250	(.5)	Pueblo, Colo.	M—6:30-9:30
KGMB	ak	250	C	Honolulu, T. H.	L—6:00-11:00
KID	ae	250	(.5)	Idaho Falls, Idaho.	M—6:00-11:00
WADC	ae	1000	C	Akron, Ohio.	E—8:00-mid.
WSMB	ak	500	N	New Orleans, La.	C—7:00-mid.

## 1330 kilocycles 225.4 meters

KGB	agj	1000	CT	San Diego, Calif.	P—7:00-1:00
KMO	ak	250	.....	Tacoma, Wash.	P—6:45-11:00
KSCJ	aj	1000	1C (2.5)	Sioux City, Iowa.	C—7:30-11:00
WDRC	ae	500	CH	Hartford, Conn.	E—8:00-mid.
WSAI	ak	1000	R (2.5)	Cincinnati, Ohio.	E—8:00-mid.
WTAQ	ae	1000	1C	Eau Claire, Wis.	C—7:00-8:00
XEQ	z	500	.....	Mexico City, D. F.	

## 1340 kilocycles 223.7 meters

KFPY	ak	1000	C	Spokane, Wash.	P—6:45-mid.
KGDY	ak	250	.....	Huron, S. D.	C
KGNO	ak	250	.....	Dodge City, Kans.	C—6:30-10:00
WCOA	ae	500	.....	Pensacola, Fla.	E—9:00-10:00
WLEC	z	250	(.5)	Portland, Maine.	E—(Mail returned)
WSPD	ae	1000	C	Toledo, Ohio.	E—7:00-1:00

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1350 kilocycles 222.1 meters

KIDO	ak	1000	.....	Boise, Idaho.	M-8:00-8:00
KWK	ak	1000	B	St. Louis, Mo.	C-7:00-mid.
TCW	ak	500	.....	Guatemala City, Gua.	L-Noon-1:00; 6:00-7:00; 9:00-11:00
WAWZ	ae	250	I	Zarephath, N. J.	E-7:45-8:45; 5:00-6:30
WBND	ae	250	1a A	New York, N. Y.	E-6:00-7:30; 9:00-1:00
WCXA	ae	250	1a	New York, N. Y.	E-9:00-5:00; 6:30-2:00
WHFC	ae	500	D	Charlottesville, Va.	E
WMSG	ae	250	1a	New York, N. Y.	E-1:00-5:00

1360 kilocycles 220.4 meters

CMJP	ak	75	.....	Moron, Cuba.	E-10:00-noon; 8:00-10:00
KGER	ak	1000	.....	Long Beach, Calif.	P-6:00-1:00
KGJR	ak	500	N (1)	Butte, Mont.	M-7:00-mid.
WCSC	ae	500	.....	Charleston, S. C.	E-8:00-10:30; noon-2:00; 7:00-10:00
WFBL	ak	1000	C (2.5)	Syracuse, N. Y.	E-8:00-1:00
WGES	ae	500	.....	Chicago, Ill.	C-5:45-11:00; 5:00-7:00; 11:00-2:00
WQBC	ak	500	.....	Vicksburg, Miss.	C

1370 kilocycles 218.8 meters

CMCN	z	250	1375	Havana, Cuba.	E
CMCR	ak	150	1375	Havana, Cuba.	E-Noon-1:00; 4:00-6:00; 8:00-9:00
CMGE	z	30	1375	Gardenas, Cuba.	E
KCRC	ak	100	2(.25)	Enid, Okla.	C-6:00-9:00; 11:00-2:00; 5:00-7:45; 10:00-mid.
KFBL	ak	50	3	Everett, Wash.	P-9:00-noon; 3:00-6:00; 9:00-mid.
KFJM	ak	100	.....	Grand Forks, N. D.	C-7:00-9:00
KFJZ	ak	100	.....	Fort Worth, Texas.	C-7:00-11:00
KGAR	ae	100	(.25)	Tucson, Ariz.	M-7:00-9:00
KGFG	bk	100	2	Oklahoma City, Okla.	C
KGFL	ak	100	4	Roswell, N. M.	M-6:00-9:30; 2:00-7:30
KGKL	ak	100	.....	San Angelo, Texas.	C-8:00-4:30; 6:00-10:00
KICA	ak	100	4	Clovis, N. M.	M-9:30-2:00; 7:30-9:30
KLUF	z	100	.....	Galveston, Texas.	C
KMAC	ak	100	5	San Antonio, Texas.	C-7:00-8:30; 10:00-11:00; noon-1:30; 4:00-6:00; 7:00-8:00; 10:00-12:30
KONO	ak	100	5	San Antonio, Texas.	C-6:00-7:00; 8:00-10:00; 11:00-noon; 1:30-4:00; 6:00-7:00; 8:00-10:00
KOOS	ae	100	.....	Marshfield, Ore.	P-7:00-9:00
KRE	ak	100	.....	Berkeley, Calif.	P-6:30-9:30; noon-3:00; 6:00-9:00
KSO	ak	100	B(.25)	Des Moines, Iowa.	C-6:30-1:00
KUJ	ak	100	.....	Walla Walla, Wash.	P-6:45-9:00
KVL	ak	100	3	Seattle, Wash.	P-6:00-9:00; noon-3:00; 6:00-9:00
KWKC	z	100	.....	Kansas City, Mo.	C
WBTM	ak	100	7	Danville, Va.	E-11:00-1:00; 6:30-10:00
WCBM	ae	100	(.25)A	Baltimore, Md.	E
WDAS	ae	100	(.25)	Philadelphia, Pa.	E-9:00-11:00
WGL	ae	100	C	Fort Wayne, Ind.	C-6:30-mid.
WGLC	ak	100	C	Hudson, Falls, N. Y.	E-7:30-1:00
WHBD	ak	100	.....	Mount Orab, Ohio.	E-8:00-11:30; noon-9:00
WHBQ	ak	100	.....	Memphis, Tenn.	C-7:55-2:00; 4:00-10:30
WHDF	ak	100	(.25)	Calumet, Mich.	E-7:00-9:00; 11:30-1:30; 5:30-8:30
WIBM	ae	100	1K	Jackson, Mich.	E-7:30-9:00
WJBK	ae	50	I	Detroit, Mich.	E-7:00-sunset; 9:00-mid.
WJTL	ae	100	.....	Atlanta, Ga.	E
WLEY	ak	100	(.25)	Lexington, Mass.	E-Noon-3:00; 6:00-9:00
WLVA	ck	100	7	Lynchburg, Va.	E-7:00-11:00; 1:00-6:30
WMBR	ak	100	.....	Tampa, Fla.	E-7:00-9:30
WPFB	ak	100	.....	Hattiesburg, Miss.	C
WQDM	ae	100	D	St. Albans, Vt.	E
WRAK	ak	100	.....	Williamsport, Pa.	E-8:30-3:00; 5:00-10:30
WRAM	ae	100	.....	Wilmington, N. C.	E-7:30-mid.
WRDO	ae	100	.....	Augusta, Maine.	E-9:00-1:00; 4:30-8:30
WRJN	ae	100	.....	Racine, Wis.	C-9:00-2:30; 4:00-10:30
WSVS	ak	50	D	Buffalo, N. Y.	E-8:30-10:00
XEJV	ae	100	.....	Juarez, Chih.	C-9:00-3:00; 5:00-11:00
XEFZ	ae	100	.....	Mexico City, D. F.	C

1380 kilocycles 217.3 meters

CMJC	z	150	1382	Camaguey, Cuba.	E
KOH	ak	500	C	Reno, Nev.	P-8:00-10:00
KQV	ak	500	2	Pittsburgh, Pa.	E-7:00-10:00
TGX	z	75	.....	Guatemala City, Gua.	
WKBH	ae	1080	C	LaCrosse, Wis.	C-7:30-10:00
WSMK	ak	200	2	Dayton, Ohio.	E-7:00-8:00; 10:00-mid.
XETB	z	125	.....	Torreón, Coah.	

KCYS.

1380

DIAL

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Saturday's Time on the Air

1390 kilocycles 215.7 meters

KLRA	ae	1000	C	Little Rock, Ark.	C—7:00-mid.
KOY	ae	500	(1)	Phoenix, Ariz.	M
WHK	ae	1000	C(2.5)	Cleveland, Ohio.	E—7:00-1:00

1400 kilocycles 214.2 meters

KLO	ah	500	C	Ogden, Utah.	M—8:30-10:30
KOCW	z	250	(.5)	Tulsa, Okla.	C
VOGY	ak	75	.....	St. John's, Nfld.	L—10:30-11:30; 1:00-2:00; 6:15-8:00
WARD	ak	500	2	Brooklyn, N. Y.	E
WBAA	z	500	1	Lafayette, Ind.	C—Silent
WBBC	ae	500	2	Brooklyn, N. Y.	E—7:00-11:00; 7:30-9:00
WFOX	ak	500	2	Brooklyn, N. Y.	E
WKBF	ak	500	1N	Indianapolis, Ind.	C—6:00-mid.
WLTH	ak	500	2	Brooklyn, N. Y.	E—11:00-1:30; 6:00-7:30

1410 kilocycles 212.6 meters

CKFC	ak	50	5	Vancouver, B. C.	P—3:00-4:30
CKMO	z	100	5	Vancouver, B. C.	P
CMCH	ak	50	.....	Havana, Cuba.	E
CMCM	z	15	.....	Havana, Cuba.	E
KFLV	ak	500	4	Rockford, Ill.	C—10:00-12:30; 3:00-6:00; 8:00-10:45
KGRS	ae	1000	1	Amarillo, Texas.	C—6:00-8:00; 10:00-12:30; 3:00-4:30; 6:00-7:30; 9:00-10:00
WAAB	ae	500	CH	Boston, Mass.	E—8:30-mid.
WBMC	ae	500	K	Bay City, Mich.	E—8:00-mid.
WDAG	ae	1000	1	Amarillo, Texas.	C—8:00-10:00; 12:30-3:00; 4:30-6:00; 7:30-9:00; 10:00-mid.
WHBL	ae	500	4	Sheboygan, Wis.	C—7:00-10:00; 12:30-3:00; 6:00-8:00
WHIS	ak	250	2	Bluefield, W. Va.	E—7:00-9:00; noon-3:00; 6:00-8:00
WODX	ae	500	3C	Mobile, Ala.	C—7:00-6:15; 7:45-10:30
WRBX	ae	250	2	Roanoke, Va.	E
WSFA	ck	500	3C	Montgomery, Ala.	C—6:00-7:45

1420 kilocycles 211.1 meters

KABC	ak	100	.....	San Antonio, Texas.	C—6:00-mid.
KBPS	aj	100	4	Portland, Ore.	P—Silent
KCMC	ak	100	.....	Texarkana, Ark.	C—7:00-2:00; 4:00-9:00
KFIZ	ak	100	.....	Fond du Lac, Wis.	C—10:00-1:00; 4:00-10:00
KGFF	ak	100	.....	Shawnee, Okla.	C—7:30-3:00; 5:00-9:00
KGGC	ak	100	.....	San Francisco, Calif.	P—9:00-1:00; 4:00-9:00
KGIW	ak	100	1Y	Trinidad, Colo.	M
KGIX	ak	100	.....	Las Vegas, Nev.	M
KICK	z	100	.....	Carter Lake, Iowa.	C
KIDW	z	100	1	Lamar, Colo.	M—8:00-10:00; 7:00-10:00
KORE	ae	100	.....	Eugene, Ore.	P—7:45-9:00
KUMA	ak	100	.....	Yuma, Ariz.	M—7:00-9:00; 11:00-2:00; 6:00-10:00
KWCR	ak	100	B(.25)	Cedar Rapids, Iowa.	C—6:30-mid.
KXLL	ae	100	4	Portland, Ore.	P—24 hours
WACO	ak	100	C	Waco, Texas.	C—8:00-2:00; 5:00-10:30
WAGM	ae	100	.....	Presque Isle, Maine.	E—11:00-1:00; 4:00-7:00
WAMC	ae	100	.....	Anniston, Ala.	C—7:00-9:00
WAZL	ak	100	2	Hazleton, Pa.	E—11:00-9:00
WEED	ak	100	DP	Greenville, N. C.	E—9:00-6:00
WEHS	ak	100	a	Cicero, Ill.	C—4:00-6:00
WELL	ak	50	.....	Battle Creek, Mich.	E—9:00-9:30
WENC	ak	100	D	Americus, Ga.	C—7:00-6:15
WHDL	ae	100	D	Tupper Lake, N. Y.	E
WHFC	ae	100	a	Cicero, Ill.	C—7:00-1:30; 6:00-1:00
WILM	aj	100	2	Wilmington, Del.	E—7:00-11:00; 2:00-5:00; 9:00-mid.
WJBO	z	100	DY	New Orleans, La.	C
WJMS	ak	100	.....	Ironwood, Mich.	C—7:30-1:30; 4:30-7:00
WKBI	ak	100	a	Cicero, Ill.	C—1:30-4:00
WLBF	ak	100	.....	Kansas City, Kans.	C—7:00-11:00
WMAS	ak	100	CH(.25)	Springfield, Mass.	E—8:00-mid.
WMBC	ag	100	(.25)	Detroit, Mich.	E—7:30-1:30
WMBH	ak	100	(.25)	Joplin, Mo.	C—7:30-2:00; 6:00-10:00
WMED	ak	100	D	Muscle Shoals, Ala.	C—7:00-10:00
WPAD	ak	100	.....	Paducah, Ky.	C
WSPA	ae	100	(.25)	Spartanburg, S. C.	E—7:30-2:00; 4:00-9:30
WTBO	ae	100	(.25)	Cumberland, Md.	E—9:00-7:00

1430 kilocycles 209.7 meters

CFCT	ae	50	.....	Victoria, B. C.	P—8:00-12:30; 6:00-8:00; mid.-2.00
KECA	ak	1000	N	Los Angeles, Calif.	P—7:00-11:00
KGNF	ak	500	D	North Platte, Neb.	C—7:00-sunset

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With Saturday's Time on the Air

WBAK ak 500 1 (1)  
 WCAH ae 500 1C  
 WFEA ae 500 CH  
 WHEC ae 500 C  
 WHP ak 500 1C(1)  
 WNBK ae 500 .....  
 WOKO ae 500 C

Harrisburg, Pa. E  
 Columbus, Ohio E-8:00-mid.  
 Manchester, N. H. E-7:30-11:00  
 Rochester, N. Y. E  
 Harrisburg, Pa. E-8:30-10:30; 11:30-1:00  
 Memphis, Tenn. C-8:00-1:00; 3:00-10:00  
 Albany, N. Y. E-7:30-1:00

## 1440 kilocycles 208.2 meters

CMBK z 15 1445  
 CMBL ak 200 1445  
 KDFN ak 500 .....  
 KLS ae 250 D  
 KXYZ ak 250 .....  
 TIFS z 7.5 1441  
 WBIG ae 500 C(1)  
 WBCA aj 250 a  
 WMBD ae 500 3C(1)  
 WSN aj 250 a  
 WTAD ak 500 3

Havana, Cuba. E  
 Havana, Cuba. E-Noon-1:00; 8:00-10:00  
 Casper, Wyo. M-7:30-2:00; 3:30-9:00  
 Oakland, Calif. P-8:00-sunset  
 Houston, Texas. C-6:30-1:00; 2:30-11:00  
 Cartago, C. R. L  
 Greensboro, N. C. E-8:00-11:00  
 Allentown, Pa. E-7:30-mid.  
 Peoria, Ill. C-6:00-11:00; 8:00-mid.  
 Allentown, Pa. E-7:30-mid.  
 Quincy, Ill. C-11:00-8:00

## 1450 kilocycles 206.8 meters

KTBS ck 1000 N  
 TIEP z 7.5 .....  
 WGAR ak 500 B(1)  
 WHOM ae 250 .....  
 WSAK ae 250 .....  
 WTFI ak 500 .....  
 XEAB ak 7.5 .....

Shreveport, La. C-7:00-mid.  
 San Jose, C. R. L  
 Cleveland, Ohio. E-6:00-1:00  
 Jersey City, N. J. E-8:00-mid.  
 Fall River, Mass. E-8:00-3:30; 5:00-10:00  
 Athens, Ga. E-8:00-9:00  
 Nuevo Laredo, Tams. C-10:00-3:00; 4:00-5:00

## 1460 kilocycles 205.4 meters

KSTP ak 2500 (N 10)  
 WJSV ak 1000 C

St. Paul, Minn. C-6:45-12:30  
 Washington, D. C. E-6:30-mid.

## 1470 kilocycles 204.0 meters

KGA ak 5000 N  
 WLAC ae 5000 C

Spokane, Wash. P-6:00-mid.  
 Nashville, Tenn. C-7:00-mid.

## 1480 kilocycles 202.6 meters

KOMA ak 500 C  
 WKBW ae 500 C

Oklahoma City, Okla. C-6:30-mid.  
 Buffalo, N. Y. E-10:00-1:00

## 1490 kilocycles 201.2 meters

WCKY ae 500 BY

Covington, Ky. E-7:00-1:00

## 1500 kilocycles 199.9 meters

CRCS z 100 .....  
 KDB ak 100 CT  
 KGFI ak 100 (25)  
 KGFK ak 100 .....  
 KGKB ak 100 .....  
 KGKY ck 100 .....  
 KKNW ak 100 .....  
 KPJM ak 100 .....  
 KPQ aj 100 .....  
 KREG ak 100 .....  
 KXO al 100 .....  
 WCNW ak 100 1  
 WFDW ak 100 .....  
 WHEF z 100 P(25)  
 WKBV z 100 Y  
 WKBZ ak 100 .....  
 WKBU ak 100 .....  
 WMBQ ae 100 1  
 WMPQ ak 100 .....  
 WNBK ae 100 .....  
 WOPI ae 100 .....  
 WPEN ck 100 (25)A  
 WRDW ak 100 .....  
 WSYB ak 100 .....  
 WWRL ae 100 1  
 WWSW ae 100 (25)

Chicotimi, Que.  
 Santa Barbara, Calif. P-7:30-mid.  
 Corpus Christi, Tex. C-7:00-3:00; 6:00-10:00  
 Moorhead, Minn. C-8:00-9:00  
 Tyler, Texas. C-8:00-10:00; noon-2:00; 5:00-6:00; 7:30-9:00  
 Scottsbluff, Neb. M-9:00-1:30; 5:30-9:00  
 Austin, Texas. C-7:30-2:00; 4:00-10:00  
 Prescott, Ariz. M-7:00-8:00  
 Wenatchee, Wash. P-7:00-10:00  
 Santa Ana, Calif. P-9:00-11:00  
 El Centro, Calif. P-7:00-2:00; 4:00-9:00  
 Brooklyn, N. Y. E-3:00-9:00  
 Rome, Ga. C-7:00-10:00; noon-3:00; 6:00-9:00  
 Kosciusko, Miss. C  
 Connersville, Ind. C  
 Ludington, Mich. E-9:00-9:00  
 LaGrange, Ga. C-10:00-noon; 3:00-6:00  
 Brooklyn, N. Y. E-9:00-11:00  
 Lapeer, Mich. E-Silent  
 Binghamton, N. Y. E-7:30-10:00  
 Bristol, Tenn. E-3:00-10:00  
 Philadelphia, Pa. E-7:30-10:00  
 Augusta, Ga. E  
 Rutland, Vt. E-10:00-1:00; 5:00-9:00  
 Woodside, N. Y. E-8:00-9:00; 11:00-3:00; 9:00-2:00  
 Pittsburgh, Pa. E-8:00-mid.

KCYS.  
**1500**  
**DIAL**



INDEX BY LOCATIONS

Boone	WLEC 1340 250	Northfield	Scottsbluff
KFGQ 1310 100	Presque Isle	WCAL 1250 1000	KGKY 1500 100
Carter Lake	WAGM 1420 100	St. Paul	York
KICK 1420 100	<b>MARYLAND</b>	KSTP 1460 25000 N	KGBZ 930 500
Cedar Rapids	Baltimore	<b>MISSISSIPPI</b>	<b>NEVADA</b>
KWCR 1420 100 B	WBAL 1060 10000 B	Greenville	Las Vegas
<b>Council Bluffs</b>	WCAO 600 250 C	WKFI 1210 100	KGIX 1420 100
KOIL 1260 1000 B	WCBM 1370 100 A	Hattiesburg	Reno
Decorah	WFBF 1270 500 R	WPFB 1370 100	KOH 1380 500 C
KGCA 1270 100	<b>Cumberland</b>	Jackson	<b>NEW HAMPSHIRE</b>
KWLC 1270 100	WTBO 1420 100	WJDX 1270 1000 N	Manchester
<b>Des Moines</b>	Hagerstown	Kosciusko	WFEA 1430 500 C
KSO 1370 100 B	WJEJ 1210 100	WHEF 1500 100	Portsmouth
WOC- 1000 50000 R	<b>MASSACHUSETTS</b>	Laurel	WHEB 740 250
WHO	Babson Park	WAML 1310 100	<b>NEW JERSEY</b>
Iowa City	WBOS 920 500	Meridian	Asbury Park
WSUI 880 500	Boston	WCOC 880 500	WCAP 1280 500
Marshalltown	WAAB 1410 500 C	Mississippi City	Atlantic City
KFJB 1200 100	WBZ 990 25000 B	WGCM 1210 100	WPG 1100 5000 C
Ottumwa	WEEL 590 1000 R	Tupelo	Camden
WIAS 1310 100	WHDH 830 1000	WJEM 990 500	WCAM 1280 500
<b>Shenandoah</b>	WNAC 1230 1000 C	Vicksburg	Jersey City
KNFN 890 500	<b>Fall River</b>	WQBC 1360 500	WAAT 940 300
KMA 930 500	WSAR 1450 250	<b>MISSOURI</b>	WHOM 1450 250
<b>Sioux City</b>	Lexington	Cape Girardeau	Newark
KSCJ 1330 1000 C	WLEY 1370 100	KFVS 1210 100	WAAM 1250 1000
Waterloo	New Bedford	Columbia	WGCP 1250 250
WMT 600 500 C	WNBH 1310 100	KFRU 630 500	WOR 710 5000
<b>KANSAS</b>	Springfield	Jefferson City	Paterson
Abilene	WBZA 990 1000 B	WOS 630 500	WODA 1250 1000
KFBI 1050 5000	WMAS 1420 100 C	Joplin	Red Bank
Coffeyville	Worcester	WMBH 1420 100	WJBI 1210 100
KGGF 1010 500	WROC 1280 500 C	Kansas City	Trenton
Dodge City	WTAG 580 250 R	KMBC 950 1000 C	WTNJ 1280 500 A
KGNO 1340 250	<b>MICHIGAN</b>	KWKC 1370 100	Zarephath
<b>Kansas City</b>	Battle Creek	WDAF 610 1000 R	WAWZ 1350 250
WLBK 1420 100	WELL 1420 50	WHB 860 500	<b>NEW MEXICO</b>
Lawrence	Bay City	WQO 1300 1000	Albuquerque
KFKU 1220 500	WBCM 1410 500	St. Joseph	KGGM 1230 250
WREN 1220 1000 B	Calumet	St. Louis	KOB 1180 10000
<b>Manhattan</b>	WHDF 1370 100	KFUO 550 500	Clovis
KSAC 580 500	Detroit	KFWF 1200 100	KICA 1370 100
Topeka	WJBK 1370 50	KMOX 1090 50000 C	Roswell
WIBW 580 1000 C	WJR 750 10000 B	KSD 550 500 R	KGFL 1370 100
<b>Wichita</b>	WMBE 1420 100	KWK 1350 1000 B	<b>NEW YORK</b>
KFH 1300 1000 C	WVJ 920 1000 R	WEW 760 1000	Albany
<b>KENTUCKY</b>	WXYZ 1240 1000	WIL 1200 100	WOKO 1430 500 C
Covington	<b>East Lansing</b>	Springfield	Auburn
WCKY 1490 5000 B	WKR 1040 1000	KG BX 1310 100	WMBO 1310 100
<b>Hopkinsville</b>	Flint	KGIZ 560 500	Binghamton
WFIW 940 1000	WDFD 1310 100	<b>MONTANA</b>	WNBK 1500 100
Louisville	Grand Rapids	Billings	Brooklyn
WHAS 820 25000 C	WASH 1270 500	KGHL 950 1000 N	WARD 1400 500
WLAP 1200 100	WOOD 1270 500	Butte	WBBC 1400 500
<b>Paducah</b>	Ironwood	KGIR 1360 500 N	WBFR 1300 1000
WPAD 1420 100	WJMS 1420 100	Great Falls	WCNW 1500 100
<b>LOUISIANA</b>	Jackson	KFBB 1280 1000	WFOJ 1400 500
Monroe	WIBM 1370 100	Kalispell	WLTH 1400 500
KMLB 1200 100	Kalamazoo	KGEZ 1310 100	WMBQ 1500 109
<b>New Orleans</b>	WKZO 590 1000	Missoula	Buffalo
WBBC 1200 100	Lapeer	KGVO 1200 100	WBEN 900 1000 R
WDSU 1250 1000 C	WMPK 1500 100	Wolf Point	WEBR 1310 100
WJBO 1420 100	Ludington	KG CX 1310 100	WGR 550 1000 C
WJBW 1200 100	WKBZ 1500 100	<b>NEBRASKA</b>	WKBW 1480 5000 C
WSMB 1320 500 N	Marquette	Clay Center	WSVS 1370 50
WWL 850 10000	WBEO 1310 100	KMMJ 740 1000	Canton
<b>Shreveport</b>	Royal Oak	Kearney	WCAD 1220 500
KRMD 1310 100	WEXL 1310 50	KGFW 1310 100	Chester
KTBS 1450 1000 N	<b>MINNESOTA</b>	Lincoln	WGNV 1210 50
KWEA 1210 100	Fergus Falls	KFAB 770 5000 C	Elmira
KWKH 850 10000	KGDE 1200 100	KFOR 1210 100	WESG 1040 1000
<b>MAINE</b>	WCCO 810 50000 C	Norfolk	Freeport
Augusta	WDBQ 1180 1000	WJAG 1060 1000	WGBB 1210 100
WRDO 1370 100	WLB 1250 1000	North Platte	WGLC 1370 100 C
Bangor	WRHM 1250 1000	KG FN 1430 500	Hudson Falls
WABI 1200 100	Moorhead	Omaha	WGLC 1370 100 C
WLBZ 620 500 C	KGFB 1500 100	WAAW 660 500	Jamestown
<b>Portland</b>		WOW 590 1000 R	WOCL 1210 50
WCSH 940 1000 R			

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<b>New York</b>	WSAI 1330 1000 R	<b>Hazelton</b>	WAZL 1420 100	<b>Watertown</b>	KGCR 1210 100
WABC 860 50000 C	<b>Cleveland</b>	<b>Johnstown</b>	WJAC 1310 100	<b>Yankton</b>	WNAX 570 1000 C
WBNX 1350 250 A	WGAR 1450 500 B	<b>Lancaster</b>	WGAL 1310 100	<b>TENNESSEE</b>	
WBOQ 860 50000	WHK 1390 1000 C		WKJC 1200 100	<b>Bristol</b>	WOPI 1500 100
WCDA 1350 250	WJAY 610 500	<b>Philadelphia</b>	WCAU 1170 50000 C	<b>Chattanooga</b>	WDOD 1280 1000 C
WEAF 660 50000 R	WTAM 1070 50000 R		WDAS 1370 100	<b>Jackson</b>	WTJS 1310 100
WEVD 1300 500	<b>Columbus</b>		WFI 560 500 R	<b>Knoxville</b>	WNOX 560 1000 C
WFAB 1300 1000	WAU 640 500		WHAT 1310 100	<b>WROL</b>	WROL 1310 100
WHN 1010 250	WCAH 1430 500 C		WIP 610 500 C	<b>Memphis</b>	WHBQ 1370 100
WINS 1180 500	WOSU 570 750		WLIT 560 500 R		WMC 780 500 N
WJZ 760 50000 B	WSEN 1210 100		WPEN 1500 100 A		WNBR 1430 500
WLWL 1100 5000	<b>Dayton</b>		WRAX 1020 250		WREC 600 500 C
WMCA 570 500	WSMK 1380 200		WTEL 1310 100	<b>Nashville</b>	WLAC 1470 5000 C
WMSG 1350 250	<b>Mount Orab</b>		<b>Pittsburgh</b>		WSM 650 50000 N
WNYC 810 500	WHBD 1370 100		KDKA 980 50000 B	<b>Springfield</b>	WSIX 1210 100
WOV 1130 1000	<b>Toledo</b>		KQV 1380 500	<b>TEXAS</b>	
WPAP 1010 250	WSPD 1340 1000 C		WCAE 1220 1000 R	<b>Amarillo</b>	KGRS 1410 1000
WQAO 1010 250	<b>Youngstown</b>		WJAS 1290 1000 C		WDAG 1410 1000
WRNY 1010 250	WKBN 570 500 C		WWSW 1500 100	<b>Austin</b>	KNOW 1500 100
<b>Rochester</b>	<b>Zanesville</b>		<b>Reading</b>	<b>Beaumont</b>	KFDM 560 500
WHAM 1150 25000 B	WALR 1210 100		WEEU 830 1000	<b>Brownsville</b>	KWWG 1260 500
WHEC 1430 500 C	<b>OKLAHOMA</b>		WRAP 1310 100	<b>College Station</b>	WTAW 1120 500
<b>Saranac Lake</b>	<b>Eik City</b>		<b>Scranton</b>	<b>Corpus Christi</b>	KGFI 1500 100
WNBZ 1290 50	KASA 1210 100		WGBI 880 250	<b>Dallas</b>	KRLD 1040 10000 C
<b>Schenectady</b>	<b>Enid</b>		WQAN 880 250		WFAA 800 50000 N
WGY 790 50000 R	KCRC 1370 100		<b>Silverhaven</b>	<b>Dublin</b>	WRR 1280 500 C
<b>Syracuse</b>	<b>Norman</b>		WNBO 1200 100	<b>El Paso</b>	KFPL 1310 100
WFBL 1360 1000 C	WNAD 1010 500		<b>Sunbury</b>	<b>Fort Worth</b>	KTSM 1310 100
WSYR 570 250 B	<b>Oklahoma City</b>		WKOK 1210 100		WDAH 1310 100
<b>Troy</b>	KFXR 1310 100		<b>Wilkes-Barre</b>	<b>Galveston</b>	KFJZ 1370 100
WHAZ 1300 500	KGFG 1370 100		WBAX 1210 100	<b>Greenville</b>	KTAT 1240 1000
<b>Tupper Lake</b>	KOMA 1480 5000 C		WBRE 1310 100		WBAP 800 50000 N
WHDL 1420 100	WKY 900 1000 N		<b>Williamsport</b>	<b>Houston</b>	KPRC 920 1000 N
<b>Utica</b>	<b>Ponca City</b>		WRAC 1370 100		KTRH 1120 1000 C
WIBX 1200 100	WBBZ 1200 100		<b>York</b>	<b>Lubbock</b>	KXYZ 1440 250
<b>White Plains</b>	<b>Shawnee</b>		WORK 1000 1000	<b>San Angelo</b>	KGKL 1370 100
WFAS 1210 100	KGFF 1420 100		<b>PHILIPPINES</b>	<b>San Antonio</b>	KABC 1420 100
<b>Woodside</b>	<b>Tulsa</b>		<b>Cebu</b>		KMAC 1370 100
WWRL 1500 100	KOCW 1400 250		KZRC 937.5 500	<b>Brookings</b>	KONO 1370 100
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<b>Asheville</b>	<b>OREGON</b>		<b>Manila</b>	<b>Pierre</b>	KGDY 1340 250
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<b>Charlotte</b>	KOAC 550 1000		KZKA 1110 1000	<b>Sioux Falls</b>	WCAT 1200 100
WBT 1080 25000 C	<b>Eugene</b>		KZRM 618.5 50000	<b>Vermillion</b>	KSOU 1110 1000
<b>Gastonia</b>	KORE 1420 100		<b>PORTO RICO</b>	<b>KUSD</b>	KUSD 890 500
WSOC 1210 100	<b>Klamath Falls</b>		<b>San Juan</b>		
<b>Greensboro</b>	KFJI 1210 100		WKAQ 1240 1000	<b>RHODE ISLAND</b>	
WBIG 1440 500 C	<b>Marshfield</b>		<b>Providence</b>	<b>Providence</b>	WEAN 780 500 C
<b>Greenville</b>	KOOS 1370 100		WJAR 890 500 R		WJAS 1290 1000 C
WEED 1420 100	<b>Medford</b>		WPRO 1210 100 C	<b>SOUTH CAROLINA</b>	
<b>Raleigh</b>	KMED 1310 100		<b>Charleston</b>	<b>Charleston</b>	WCSC 1360 500
WPTF 680 5000 N	<b>Portland</b>		<b>Columbia</b>	<b>Columbia</b>	WIS 1010 500 N
<b>Wilmington</b>	KALE 1300 500 C		<b>Greenville</b>	<b>Greenville</b>	WFBC 1200 100
WRAM 1370 100	KBPS 1420 100		<b>Spartanburg</b>	<b>Spartanburg</b>	WSPA 1420 100
<b>Winston-Salem</b>	KEX 1180 5000 N		<b>SOUTH DAKOTA</b>	<b>Brookings</b>	
WSJS 1310 100 C	KFJR 1300 500		<b>Brookings</b>	<b>Huron</b>	KGDY 550 500
<b>NORTH DAKOTA</b>	KGW 620 1000 N		<b>Greenville</b>	<b>Pierre</b>	KGFX 630 200
<b>Bismarck</b>	KOIN 940 1000 C		<b>San Angelo</b>	<b>Rapid City</b>	WCAT 1200 100
KFYR 550 1000 N	KWJJ 1060 500		<b>San Antonio</b>	<b>Sioux Falls</b>	KSOU 1110 1000
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## SHORT WAVE RELAY BROADCASTING STATIONS

### *Grouped According to Network Programs Transmitted*

Frequency in megacycles in first column, wavelength in meters in second column, schedule in third column, time being EST. The location of the broadcast band station is given in parentheses following the geographical location of the short wave transmitter.

#### COLUMBIA BROADCASTING SYSTEM

W2XE-WABC, Wayne, N. J. (New York, N. Y.)	15.258 19.65 11 a.m. to 1 p.m.
	11.823 25.36 3 p.m. to 5 p.m.
	6.116 49.02 6 to 11 p.m.
W3XAU-WCAU, Byberry, Pa. (Philadelphia, Pa.)	9.585 31.28 11 a.m. to 5 p.m.
	6.057 49.50 7 p.m. to midnight

#### NATIONAL "RED" NETWORK

W1XAL-WEEI, Boston, Mass. (Boston, Mass.)	11.794 25.42 Irregular
	6.040 49.64 Irregular
W2XAD-WGY, Schenectady, N. Y. (Schenectady, N. Y.)	15.320 19.57 Sun., 2 to 4 p.m.; Mon., Wed., Fri., 2 to 3 p.m.
W2XAF-WGY, Schenectady, N. Y. (Schenectady, N. Y.)	9.530 31.46 7 to 10 p.m.
W9XAA-WCFI, Chicago, Ill. (Chicago, Ill.)	17.780 16.88 Very Irregular
	11.840 25.35 Irregular
	6.076 49.34 3 to 6 p.m.

#### NATIONAL "BLUE" NETWORK

W1XAZ-WBZ-WBZA, Millis, Mass. (Boston and Springfield, Mass.)	9.560 31.36 6 a.m. to midnight
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W3XAL-WJZ, Boundbrook, N. J. (New York, N. Y.)	17.772 16.87 12:30 to 8:30 p.m., except Sat.
	6.099 49.17 Sat. day, 3 p.m. to midnight
W3XL-WJZ, Boundbrook, N. J. (New York, N. Y.)	6.421 46.65 Irregular
W8XK-KDKA, Saxonburg, Pa. (Pittsburgh, Pa.)	21.451 13.93 7 a.m. to 2 p.m.
	15.204 19.72 10 a.m. to 4:15 p.m.
	11.870 25.25 4:30 to 10 p.m.
	6.140 48.83 4:30 p.m. to 12:30 a.m.

#### NATIONAL "RED" AND "BLUE" NETWORK

VE9DR-CFCF, Montreal, Quebec (Montreal, Quebec)	6.005 49.93 Sun., noon to 11:15 p.m. Other days, 7:30 a.m. to midnight
VE9GW-CRCT, Bowmanville, Ont. (Toronto, Ontario)	6.092 49.22 Sat., 4 p.m. to midnight; Sun., 11 a.m. to 9 p.m.; Mon. and Thurs., 8 a.m. to noon; Thurs. and Fri., 4 to 8 p.m.
W4XB-WIOD, Miami Beach, Fla. (Miami Beach, Fla.)	6.036 49.67 Irregular
W8XAL-WLW, Mason, Ohio (Cincinnati, Ohio)	6.060 49.48 Irregular
W9XF-WENR, Downer's Grove, Ill. (Chicago, Ill.)	6.100 49.15 Sat., silent; Sun., 1 to 2:30 p.m., 4:30 to 7 p.m., 9 p.m. to 2 a.m.; other days, 4:30 to 8 p.m., 9:30 p.m. to 2 a.m.

INDEX BY CALL LETTERS

<b>CFAC</b> 890 500 Calgary, Alta. Calgary Herald.	<b>CKCD</b> 1010 100 Vancouver, B. C. Vancouver Daily Province.
<b>CFBO</b> 1030 500 St. John, N. B. C. A. Munro, Ltd.	<b>CKCH</b> 1210 100 Hull, Que. Dr. J. L. Chabot.
<b>CFBF</b> 600 500 Montreal, Que. Canadian Marconi Co.	<b>CKCK</b> 1010 500 Regina, Sask. Leader-Post, Ltd.
<b>CFCH</b> 930 100 North Bay, Ont. Northern Broadcasting Co., Ltd.	<b>CKCL</b> 580 100 Toronto, Ont. Dominion Battery Co., Ltd.
<b>CFCN</b> 1030 10000 Calgary, Alta. W. W. Grant & H. G. Love.	<b>CKCO</b> 1010 100 Ottawa, Ont. Dr. G. M. Geldert.
<b>CFCO</b> 1210 100 Chatham, Ont. John Beardall.	<b>CKCR</b> 845 100 Kitchener, Ont. William C. Mitchell and G. Liddle.
<b>CFCT</b> 1430 50 Victoria, B. C. Victoria Broadcasting Assn.	<b>CKCV</b> 1310 50 Quebec, Que. Vandry, Inc.
<b>CFCY</b> 630 500 Charlottetown, P. E. I. Island Radio Broadcasting Co., Ltd.	<b>CKFC</b> 1410 50 Vancouver, B. C. Radio Service Engineers, Ltd.
<b>CFJC</b> 1310 100 Kamloops, B. C. Review Publishing Co., Ltd.	<b>CKIC</b> 1010 50 Wolfville, N. S. Acadia University.
<b>CFLC</b> 930 100 Prescott, Ont. Radio Assn. of Prescott.	<b>CKLW</b> 540 5000 Windsor, Ont. Western Ontario Broadcasting Co., Ltd.
<b>CFNB</b> 1210 500 Fredericton, N. B. James S. Neill & Sons, Ltd.	<b>CKMC</b> 1210 100 Cobalt, Ont. R. L. MacAdam.
<b>CFPL</b> 730 100 London, Ont. Free Press & Printing Co., Ltd.	<b>CKMO</b> 1410 100 Vancouver, B. C. Sprott-Shaw Radio Co.
<b>CFQC</b> 890 500 Saskatoon, Sask. Electric Shop, Ltd.	<b>CKNC</b> 1030 500 Toronto, Ont. Canadian National Carbon Co., Ltd.
<b>CFRB</b> 690 10000 Toronto, Ont. Canadian Radio Corp., Ltd.	<b>CKOC</b> 1010 500 Hamilton, Ont. Wentworth Radio Broadcasting Co., Ltd.
<b>CFRC</b> 915 100 Kingston, Ont. Queens University.	<b>CKOV</b> 1200 100 Kelowna, B. C. Okanagan Broadcasters, Ltd., Box 243.
<b>CHAB</b> 1200 25 Moose Jaw, Sask. Moose Jaw Radio Assn.	<b>CKPC</b> 930 100 Preston, Ont. Cyrus Dolph.
<b>CHCK</b> 1310 100 Charlottetown, P. E. I. J. A. Gesner.	<b>CKPR</b> 780 100 Fort William, Ont. Dougall Motor Co., Ltd.
<b>CHGS</b> 1120 100 Summerside, P. E. I. R. T. Holman, Ltd.	<b>CKTB</b> 1200 100 St. Catharines, Ont. E. T. Sandell.
<b>CHLP</b> 1120 100 Montreal, Que. La Patrie Publishing Co., Ltd.	<b>CKUA</b> 580 500 Edmonton, Alta. University of Alberta.
<b>CHMA</b> 580 250 Edmonton, Alta. Christian and Missionary Alliance.	<b>CKWX</b> 1010 100 Vancouver, B. C. Western Broadcasting Co., Ltd.
<b>CHML</b> 890 50 Hamilton, Ont. Maple Leaf Radio Co., Ltd.	<b>CKX</b> 930 500 Brandon, Man. Manitoba Telephone System.
<b>CHNC</b> 1210 100 New Carlisle, Que. Dr. Charles Houde.	<b>CKY</b> 910 5000 Winnipeg, Man. Manitoba Telephone System.
<b>CHNS</b> 1050 500 Halifax, N. S. Maritime Broadcasting Co., Ltd.	<b>CMAB</b> 1249 20 Pinar del Rio, Cuba. Jose Silvera, Marti No. 101.
<b>CHRC</b> 645 100 Quebec, Que. CHRC, Ltd.	<b>CMAF</b> 680 1000 Havana, Cuba. International Broadcasting Co., Miramar.
<b>CHWC</b> 1010 500 Regina, Sask. R. H. Williams & Sons, Ltd.	<b>CMBC</b> 1270 150 Havana, Cuba. Domingo Fernandez, Maximo Gomez No. 139.
<b>CHWK</b> 780 100 Chilliwack, B. C. Chilliwack Broadcasting Co., Ltd.	<b>CMBD</b> 965 250 Havana, Cuba. Luis Perez Garcia, Enamorados y Flores.
<b>CJCA</b> 730 500 Edmonton, Alta. Edmonton Journal, Ltd.	<b>CMBG</b> 1070 225 Havana, Cuba. John L. Stowers, Hospital No. 100
<b>CJCB</b> 880 50 Sydney, N. S. Nathanson's Radio Headquarters.	<b>CMBJ</b> 1140 500 Havana, Cuba. Emilio Perera, Consulado y Virtudes.
<b>CJCJ</b> 690 500 Calgary, Alta. Albertan Publishing Co., Ltd.	<b>CMBK</b> 1445 15 Havana, Cuba. Alberto Alvarez, Paula y Oficios.
<b>CJCS</b> 780 500 Sudbury, Ont. George McLeod Cootes	<b>CMBL</b> 1445 200 Havana, Cuba. Julio C. Hidalgo, Vedado.
<b>CJGX</b> 630 500 Yorkton, Sask. Winnipeg Grain Exchange.	<b>CMBN</b> 1185 150 Havana, Cuba. G. de Sequeira, Agrimonte No. 32
<b>CJOC</b> 840 100 Lethbridge, Alta. H. R. Carson, Ltd.	<b>CMBS</b> 780 200 Havana, Cuba. Enrique Artalejo, Calzada y H. St.
<b>CJOR</b> 1210 500 Vancouver, B. C. G. C. Chandler.	<b>CMBW</b> 925 600 Havana, Cuba. Alvarez, Moris y Cia, Obrapia No. 13.
<b>CJRM</b> 830 500 Moose Jaw, Sask. James Richardson & Sons, Ltd.	<b>CMBY</b> 1230 250 Havana, Cuba. Callejas-Estefani, Principe No. 33.
<b>CJRW</b> 880 500 Fleming, Sask. James Richardson & Sons, Ltd.	<b>CMBZ</b> 1010 150 Havana, Cuba. Manuel y G. Salas, San Rafael No. 14.
<b>CKAC</b> 730 5000 Montreal, Que. LaPresse Publishing Co., Ltd.	<b>CMC</b> 840 500 Havana, Cuba. Radio Corp. of Cuba.

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<b>CMCA 1230</b>	<b>150</b>	<b>Havana, Cuba.</b>	<b>CMJP 1360</b>	<b>75</b>	<b>Moron, Cuba.</b>
		Manuel Cruz, Ave. de Italia No. 102.			Cesar Canall, Callejas No. 28.
<b>CMCB 1070</b>	<b>150</b>	<b>Havana, Cuba.</b>	<b>CMK 730</b>	<b>5000</b>	<b>Havana, Cuba.</b>
		Metropolitan-Radio de Cuba.			National Broadcasting Co. of Cuba.
<b>CMCD 1140</b>	<b>500</b>	<b>Havana, Cuba.</b>	<b>CMKC 1034</b>	<b>150</b>	<b>Santiago, Cuba.</b>
		Angel Bertematy.			Pinol Batlle y Co.
<b>CMCF 890</b>	<b>250</b>	<b>Havana, Cuba.</b>	<b>CMKJ 1300</b>	<b>20</b>	<b>Guantanamo, Cuba.</b>
		Raoul Karman.			Luis Morlote, East Giro 11.
<b>CMCH 1410</b>	<b>50</b>	<b>Havana, Cuba.</b>	<b>CMQ 630</b>	<b>500</b>	<b>Havana, Cuba.</b>
		Wifredo y Humberto Fontanals Sanchez.			Jose Fernandez, 25 Numero 445.
<b>CMCJ 1185</b>	<b>500</b>	<b>Havana, Cuba.</b>	<b>CMW 590</b>	<b>1400</b>	<b>Havana, Cuba.</b>
		Rafael Rodriguez, Estevez No. 4.			Troncoso y Gil, Paseo de Marti 103.
<b>CMCM 1410</b>	<b>15</b>	<b>Havana, Cuba.</b>	<b>CMX 890</b>	<b>1000</b>	<b>Havana, Cuba.</b>
		Aurelio Balino, Belas Coain No. 639.			Casa "Lavin," Ave. de la Republica 99A.
<b>CMCN 1375</b>	<b>250</b>	<b>Havana, Cuba.</b>	<b>CRCA 580</b>	<b>500</b>	<b>Moncton, N. B.</b>
		Antonio Ginard, Reina y Ave. Buen Retiroe			Canadian Radio Broadcasting Commission.
<b>CMCP 1270</b>	<b>150</b>	<b>Havana, Cuba.</b>	<b>CRCO 880</b>	<b>500</b>	<b>Ottawa, Ont.</b>
		Jose A. Yaniz			Canadian Radio Broadcasting Commission
<b>CMCQ 780</b>	<b>1000</b>	<b>Havana, Cuba.</b>	<b>CRCS 1500</b>	<b>100</b>	<b>Chicoutimi, Que.</b>
		Andres Martinez, Vista Alegre No. 80.			Canadian Radio Broadcasting Commission.
<b>CMCR 1375</b>	<b>150</b>	<b>Havana, Cuba.</b>	<b>CRCT 960</b>	<b>5000</b>	<b>Toronto, Ont.</b>
		Aurelio Hernandez.			Canadian Radio Broadcasting Commission.
<b>CMCU 1100</b>	<b>500</b>	<b>Havana, Cuba.</b>	<b>CRCV 1100</b>	<b>500</b>	<b>Vancouver, B. C.</b>
		Jorge Garcia Serra.			Canadian Radio Broadcasting Commission.
<b>CMCW 965</b>	<b>150</b>	<b>Havana, Cuba.</b>	<b>HHK 920</b>	<b>1000</b>	<b>Port-au-Prince, Haiti.</b>
		Vilarino y Cervantes.			Haitian Government.
<b>CMCY 1325</b>	<b>500</b>	<b>Havana, Cuba.</b>	<b>HIH 1395</b>	<b>15</b>	<b>San Pedro de M., D. R.</b>
		Manuel D. Autran, Ave. de la Pd't s.215.			Domingo Dominguez
<b>CMDE 925</b>	<b>150</b>	<b>Havana, Cuba.</b>	<b>HIJ 1195</b>	<b>15</b>	<b>Santo Domingo, D. R.</b>
		Radio Aerial Ad.			Tuto Baez, Hostos 34
<b>CMGA 834</b>	<b>100</b>	<b>Colon, Cuba.</b>	<b>HIJK 1180</b>	<b>15000</b>	<b>Santo Domingo, D. R.</b>
		L. Valdes Figueroa, Marti No. 19.			
<b>CMGB 1205</b>	<b>30</b>	<b>Matanzas, Cuba.</b>	<b>HIX 580</b>	<b>1500</b>	<b>Santo Domingo, D. R.</b>
		Jose Anorga, Magdalena No. 1.			J. R. Saladin, Director General
<b>CMGC 820</b>	<b>30</b>	<b>Matanzas, Cuba.</b>	<b>HJN 681</b>	<b>500</b>	<b>Bogota, Colombia</b>
		Oscar S. Mechoso, Independencia No. 56.			Government of Colombia, National Library.
<b>CMGE 1375</b>	<b>30</b>	<b>Cardenas, Cuba.</b>	<b>KABC 1420</b>	<b>100</b>	<b>San Antonio, Texas.</b>
		Genaro Sebatier, Cespedes No. 180.			Alamo Broadcasting Co., Inc.
<b>CMGF 977</b>	<b>100</b>	<b>Matanzas, Cuba.</b>	<b>KALE 1300</b>	<b>500</b>	<b>Portland, Ore.</b>
		Bernabe R. de la Torre.			Kale, Inc., New Heathman Hotel
<b>CMGH 1040</b>	<b>15</b>	<b>Matanzas, Cuba.</b>	<b>KARK 890</b>	<b>250</b>	<b>Little Rock, Ark.</b>
		Octavio y Julio Alvarez.			Arkansas Radio & Equipment Co.
<b>CMHD 950</b>	<b>500</b>	<b>Caibarien, Cuba.</b>	<b>KASA 1210</b>	<b>100</b>	<b>Elk City, Okla.</b>
		Manuel Alvarez, M. Escobar 17.			E. M. Woody, Casa Grande Hotel.
<b>CMHI 1037</b>	<b>250</b>	<b>Santa Clara, Cuba.</b>	<b>KBPS 1420</b>	<b>100</b>	<b>Portland, Ore.</b>
		Lavis y Paz.			Benson Polytechnic School
<b>CMHJ 1190</b>	<b>60</b>	<b>Cienfuegos, Cuba.</b>	<b>KBTM 1200</b>	<b>100</b>	<b>Paragould, Ark.</b>
		Victorino Lopez Hontanon.			Jay P. Beard.
<b>CMHK 1225</b>	<b>50</b>	<b>Cruces, Cuba.</b>	<b>KGMC 1420</b>	<b>100</b>	<b>Texarkana, Ark.</b>
		Virgilio Villaneuva Fernandez.			M. P. Mims, Box 865.
<b>CMHL 1290</b>	<b>20</b>	<b>Cienfuegos, Cuba.</b>	<b>KCRC 1370</b>	<b>100</b>	<b>Enid, Okla.</b>
		Oscar Zayas, San Carlos 143.			Enid Radiophone Co.
<b>CMJC 1382</b>	<b>150</b>	<b>Camaguey, Cuba.</b>	<b>KCRJ 1310</b>	<b>100</b>	<b>Jerome, Ariz.</b>
		Feliciano Isaac, Cisneros y G. Gomez.			Chas. C. Robinson, Drawer D.
<b>CMJE 1175</b>	<b>50</b>	<b>Camaguey, Cuba.</b>	<b>KDB 1500</b>	<b>100</b>	<b>Santa Barbara, Calif.</b>
		Manuel Fernandez, Plaza de Maceo.			Santa Barbara Broadcasters, Ltd.
<b>CMJF 930</b>	<b>200</b>	<b>Camaguey, Cuba.</b>	<b>KDFN 1440</b>	<b>500</b>	<b>Casper, Wyo.</b>
		John L. Stowers, Hotel Plaza.			Donald Lewis Hathaway.
<b>CMJG 1050</b>	<b>50</b>	<b>Camaguey, Cuba.</b>	<b>KDKA 980</b>	<b>50000</b>	<b>Pittsburgh, Pa.</b>
		Jose Antonio Lefran, Martires 133.			Westinghouse Electric & Mfg. Co.
<b>CMJH 1150</b>	<b>50</b>	<b>Ciego de Avila, Cuba.</b>	<b>KDLR 1210</b>	<b>100</b>	<b>Devils Lake, N. D.</b>
		Luis Marauri Mendosa.			KDLR, Inc., 1025 3rd Street.
<b>CMJI 1280</b>	<b>45</b>	<b>Ciego de Avila, Cuba.</b>	<b>KDYL 1290</b>	<b>1000</b>	<b>Salt Lake City, Utah.</b>
		Gilberto Gessa Lopez, Independencia 95.			Intermountain Broadcasting Corp.
<b>CMJK 790</b>	<b>500</b>	<b>Camaguey, Cuba.</b>	<b>KECA 1430</b>	<b>1000</b>	<b>Los Angeles, Calif.</b>
		Compania Cubana Nacional de Radio S. A.			Earle C. Anthony, Inc.
<b>CMJL 960</b>	<b>50</b>	<b>Camaguey, Cuba.</b>	<b>KELW 780</b>	<b>500</b>	<b>Burbank, Calif.</b>
		Enrique Artime, Cuba No. 27.			Magnolia Park, Ltd., 3702 Magnolia
<b>CMJN 1240</b>	<b>50</b>	<b>Camaguey, Cuba.</b>	<b>KERN 1200</b>	<b>100</b>	<b>Bakersfield, Calif.</b>
		Ernesto de Ugarriza, Martires 11.			Bee Bakersfield Broadcasting Co.
<b>CMJO 1010</b>	<b>50</b>	<b>Ciego de Avila, Cuba.</b>	<b>KEX 1180</b>	<b>5000</b>	<b>Portland, Ore.</b>
		Jose M. Rey, C. Central & Maceo.			National Broadcasting Co.

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**KFAB 770 5000 Lincoln, Neb.**  
KFAB Broadcasting Co.

**KFAC 1300 1000 Los Angeles, Calif.**  
E. L. Cord, 645 So. Mariposa.

**KFBF 1280 1000 Great Falls, Mont.**  
Buttrey Broadcast, Inc.

**KFBI 1050 5000 Abilene, Kans.**  
Farmers & Bankers Life Ins. Co.

**KFBK 1310 100 Sacramento, Calif.**  
James McClatchy Publishing Co.

**KFBL 1370 50 Everett, Wash.**  
Leese Bros., 2814 Rucker Ave.

**KFDM 560 500 Beaumont, Texas.**  
Sabine Broadcasting Co.

**KFDY 550 500 Brookings, S. D.**  
South Dakota State College.

**KFEL 920 500 Denver, Colo.**  
Eugene P. O'Fallon, Inc.

**KFEQ 680 2500 St. Joseph, Mo.**  
Seroggin & Co. Bank

**KFGQ 1310 100 Boone, Iowa.**  
Boone Biblical College.

**KFH 1300 1000 Wichita, Kans.**  
Radio Station KFH Co.

**KFI 640 50000 Los Angeles, Calif.**  
Earle C. Anthony, Inc.

**KFIO 1120 100 Spokane, Wash.**  
Spokane Broadcasting Corp.

**KFIZ 1420 100 Fond du Lac, Wis.**  
Reporter Printing Co.

**KFJB 1200 100 Marshalltown, Iowa.**  
Marshall Electric Co.

**KFJI 1210 100 Klamath Falls, Ore.**  
KFJI Broadcasters, Inc., Willard Hotel.

**KFJM 1370 100 Grand Forks, N. D.**  
University of North Dakota.

**KFJR 1300 500 Portland, Ore.**  
Ashley C. Dixon-KFJR, Inc.

**KFJZ 1370 100 Fort Worth, Texas.**  
Fort Worth Broadcasters, Inc.

**KFKA 880 500 Greeley, Colo.**  
Mid-Western Radio Corp.

**KFKU 1220 500 Lawrence, Kans.**  
University of Kansas.

**KFLV 1410 500 Rockford, Ill.**  
Rockford Broadcasters, Inc.

**KFNF 890 500 Shenandoah, Iowa.**  
Henry Field Co.

**KFOR 1210 100 Lincoln, Neb.**  
Howard Shuman

**KFOX 1250 1000 Long Beach, Calif.**  
Nicholas & Warinner, Inc.

**KFPL 1310 100 Dublin, Texas.**  
C. C. Baxter, Box 176

**KFPM 1310 15 Greenville, Texas.**  
New Furniture Co.

**KFPW 1210 100 Fort Smith, Ark.**  
Southwestern Hotel Co.

**KFPY 1340 1000 Spokane, Wash.**  
Symons Broadcasting Co.

**KFQD 600 250 Anchorage, Alaska**  
Anchorage Radio Club, Inc.

**KFRC 610 1000 San Francisco, Calif.**  
Don Lee, Inc.

**KFRU 630 500 Columbia, Mo.**  
KFRU, Inc., 9th and Elm Sts.

**KFSD 600 1000 San Diego, Calif.**  
Airfan Radio Corp., Ltd.

**KFSG 1120 500 Los Angeles, Calif.**  
Echo Park Evangelistic Assn.

**KFUO 550 500 St. Louis, Mo.**  
Evangelical Lutheran Church.

**KFVD 1000 250 Los Angeles, Calif.**  
E. L. Cord, 645 S. Mariposa.

**KFVS 1210 100 Cape Girardeau, Mo.**  
Oscar C. Hirsch, Box 275.

**KFWB 950 1000 Hollywood, Calif.**  
Warner Bros. Motion Pictures, Inc.

**KFWF 1200 100 St. Louis, Mo.**  
St. Louis Truth Center, Inc.

**KFWI 930 500 San Francisco, Calif.**  
Radio Entertainments, Ltd.

**KFXD 1200 100 Nampa, Idaho.**  
Frank E. Hurt, 1024 12th Ave., S.

**KFXE 920 500 Denver, Colo.**  
Colorado Radio Corp.

**KFXJ 1200 100 Grand Jct., Colo.**  
Western Slope Broadcasting Co.

**KFXM 1210 100 San Bernardino, Calif.**  
Lee Bros. Broadcasting Co.

**KFXR 1310 100 Oklahoma City, Okla.**  
Exchange Avenue Baptist Church.

**KFYO 1310 100 Lubbock, Texas.**  
Kirksey Bros., Hotel Lubbock.

**KFYR 550 1000 Bismarck, N. D.**  
Mayer Broadcasting Co.

**KGA 1470 5000 Spokane, Wash.**  
Northwest Broadcasting Co., Inc.

**KGAR 1370 100 Tucson, Ariz.**  
Tucson Motor Service Co.

**KGB 1330 1000 San Diego, Calif.**  
Don Lee Broadcasting System

**KGBU 900 500 Ketchikan, Alaska.**  
Alaska Radio & Service Co., Inc.

**KGBX 1310 100 Springfield, Mo.**  
KGBX, Inc.

**KGBZ 930 500 York, Neb.**  
Dr. Geo. R. Miller, 715 Grant Ave.

**KGCA 1270 100 Decorah, Iowa**  
Charles W. Greenley

**KGCR 1210 100 Watertown, S. D.**  
Greater Kampeska Radio Corp.

**KGCU 1240 250 Mandan, N. D.**  
Mandan Radio Assn.

**KGXC 1310 100 Wolf Point, Mont.**  
E. E. Krebsbach.

**KGDE 1200 100 Fergus Falls, Minn.**  
C. L. Jaren.

**KGDM 1100 250 Stockton, Calif.**  
E. F. Peffer, 42 S. Calif. St.

**KGDY 1340 250 Huron, S. D.**  
Voice of S. D., Inc., 347 Dakota Ave.

**KGEK 1200 100 Yuma, Colo.**  
Elmer G. Beehler, 109 W. 2nd St.

**KGER 1380 1000 Long Beach, Calif.**  
Consolidated Broadcasting Co.

**KGEZ 1310 100 Kalispell, Mont.**  
Donald C. Treloar, Box 1.

**KGFF 1420 100 Shawnee, Okla.**  
KGFF Broadcasting Co., Inc.

**KGFG 1370 100 Oklahoma City, Okla.**  
Oklahoma Broadcasting Co., 1113 N. Broadway.

**KGFI 1500 100 Corpus Christi, Texas.**  
Eagle Broadcasting Co., Inc.

**KGfJ 1200 100 Los Angeles, Calif.**  
Ben S. McGlashan, 1417 S. Figueroa.

**KGFK 1500 100 Moorhead, Minn.**  
Red River Broadcasting Co., Inc.

**KGFL 1370 100 Roswell, N. M.**  
KGFL, Inc., 507 N. Main St.

**KGFW 1310 100 Kearney, Neb.**  
Central Nebraska Broadcasting Corp.

**KGFX 630 200 Pierre, S. D.**  
Dana McNeil, 510 Summit Ave.

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<b>KGGC</b> 1420 100 San Francisco, Calif. Golden Gate Broadcasting Co.	<b>KLCN</b> 1290 100 Blytheville, Ark. C. L. Lintzenich, Main and Division St.
<b>KGFF</b> 1010 500 Coffeyville, Kans. Hugh J. Powell and Stanley Platz.	<b>KLO</b> 1400 500 Ogden, Utah. Interstate Broadcasting Co.
<b>KGGM</b> 1230 250 Albuquerque, N. M. New Mexico Broadcasting Co.	<b>KLPM</b> 1240 250 Minot, N. D. John B. Cooley.
<b>KGHF</b> 1320 250 Pueblo, Colo. C. P. Ritchie & Geo. J. Ikelman	<b>KLRA</b> 1390 1000 Little Rock, Ark. Arkansas Broadcasting Co.
<b>KGHI</b> 1200 100 Little Rock, Ark. Lloyd Judd Co., Marion Hotel.	<b>KLS</b> 1440 250 Oakland, Calif. Warner Bros., 2201 Telegraph Ave.
<b>KGHL</b> 950 1000 Billings, Mont. Northwestern Auto Supply Co.	<b>KLUF</b> 1370 100 Galveston, Texas. Geo. R. Clough, 3327 Ave. F.
<b>KGIR</b> 1360 500 Butte, Mont. KGIR, Inc., 121 W. Broadway.	<b>KLX</b> 880 1000 Oakland, Calif. Tribune Publishing Co.
<b>KGIW</b> 1420 100 Trinidad, Colo. Leonard E. Wilson, 326 N. Commercial	<b>KLZ</b> 560 1000 Denver, Colo. Reynolds Radio Co., Inc.
<b>KGIX</b> 1420 100 Las Vegas, Nev. J. M. Heaton, Box 656.	<b>KMA</b> 930 500 Shenandoah, Iowa. Earl E. May Seed & Nursery Co.
<b>KGIZ</b> 560 500 Springfield, Mo. Grant City Park Corp.	<b>KMAC</b> 1370 100 San Antonio, Texas. W. W. McAllister, Blue Bonnet Hotel.
<b>KGKB</b> 1500 100 Tyler, Texas. East Texas Broadcasting Co.	<b>KMBC</b> 950 1000 Kansas City, Mo. Midland Broadcasting Co.
<b>KGKL</b> 1370 100 San Angelo, Texas. KGKL, Inc., St. Angelus Hotel.	<b>KMED</b> 1310 100 Medford, Ore. Mrs. W. J. Virgin, Sparta Bldg.
<b>KGKO</b> 570 250 Wichita Falls, Texas. Wichita Falls Broadcasting Co.	<b>KMJ</b> 580 500 Fresno, Calif. James McClatchy Co.
<b>KGKY</b> 1500 100 Scottsbluff, Neb. Hilliard Co., Inc., 1517½ Broadway.	<b>KMLB</b> 1200 100 Monroes, La. Liners Broadcasting Station, Inc.
<b>KGMB</b> 1320 250 Honolulu, T. H. Honolulu Broadcasting Co., 119 Merchant St.	<b>KMMJ</b> 740 1000 Clay Center, Neb. The M. M. Johnson Co.
<b>KGNF</b> 1430 500 North Platte, Neb. Great Plains Broadcasting Co.	<b>KMO</b> 1330 250 Tacoma, Wash. KMO, Inc., Hotel Winthrop.
<b>KGNO</b> 1340 250 Dodge City, Kans. KGNO Broadcasting Station	<b>KMOX</b> 1090 50000 St. Louis, Mo. The Voice of St. Louis, Inc.
<b>KGO</b> 790 7500 San Francisco, Calif. National Broadcasting Co., Inc.	<b>KMPC</b> 710 500 Beverly Hills, Calif. Beverly Hills Broadcasting Corp.
<b>KGRS</b> 1410 1000 Amarillo, Texas. E. B. Gish, Bellaire Park.	<b>KMTR</b> 570 500 Hollywood, Calif. KMTR Radio Corp., 915 N. Formosa Ave.
<b>KGU</b> 750 2500 Honolulu, T. H. Advertiser Publishing Co., Ltd.	<b>KNOW</b> 1500 100 Austin, Texas. Southwest Broadcasting Co.
<b>KGVO</b> 1200 100 Missoula, Mont. Mosbys, Inc., 240 N. Higgins.	<b>KNX</b> 1050 25000 Hollywood, Calif. Western Broadcast Co., Inc.
<b>KGW</b> 620 1000 Portland, Ore. Oregonian Publishing Co.	<b>KOA</b> 830 12,500 Denver, Colo. General Electric Co., 1370 Krameria St.
<b>KGY</b> 1210 100 Olympia, Wash. KGY, Inc., 11th and Capitol Way.	<b>KOAC</b> 550 1000 Corvallis, Ore. Oregon State Agricultural College.
<b>KHJ</b> 900 1000 Los Angeles, Calif. Don Lee Broadcasting System.	<b>KOB</b> 1180 10000 Albuquerque, N. M. Albuquerque Journal, Box 667.
<b>KHQ</b> 590 1000 Spokane, Wash. Louis Wasmer, Inc.	<b>KOCW</b> 1400 250 Tulsa, Okla. J. T. Griffin.
<b>KICA</b> 1370 100 Clovis, N. M. Southwest Broadcasting Co.	<b>KOH</b> 1380 500 Reno, Nev. The Bee, Inc.
<b>KICK</b> 1420 100 Carter Lake, Iowa. Red Oak Radio Corp.	<b>KOIL</b> 1280 1000 Council Bluffs, Iowa. Mona Motor Oil Co.
<b>KID</b> 1320 250 Idaho Falls, Idaho. KID Broadcasting Co., Inc.	<b>KOIN</b> 940 1000 Portland, Ore. KOIN, Inc., New Heathman Hotel.
<b>KIDO</b> 1350 1000 Boise, Idaho. C. G. Phillips & Frank L. Hill.	<b>KOL</b> 1270 1000 Seattle, Wash. Seattle Broadcasting Co.
<b>KIDW</b> 1420 100 Lamar, Colo. Lamar Broadcasting Co., Box 688	<b>KOMA</b> 1480 5000 Oklahoma City, Okla. National Radio Manufacturing Co.
<b>KIEM</b> 1210 100 Eureka, Calif. Harold H. Hanseth, Vance Hotel.	<b>KOMO</b> 920 1000 Seattle, Wash. Fishers Blend Station, Inc.
<b>KIEV</b> 850 100 Glendale, Calif. Cannon System, Ltd., Glendale Hotel.	<b>KONO</b> 1370 100 San Antonio, Texas. Merion Broadcasting Co., St. Anthony Hotel.
<b>KIFH</b> 1310 100 Juneau, Alaska Juneau Broadcasting Co.	<b>KOOS</b> 1370 100 Marshfield, Ore. H. H. Hanseth, Hall Bldg.
<b>KIT</b> 1310 100 Yakima, Wash. Valley Broadcasters, Inc.	<b>KORE</b> 1420 100 Eugene, Ore. Frank L. Hill and Curtis G. Phillips.
<b>KJBS</b> 1070 100 San Francisco, Calif. Julius Brunton & Sons Co.	<b>KOY</b> 1390 500 Phoenix, Ariz. Nielsen Radio & Sporting Goods Co.
<b>KJR</b> 970 5000 Seattle, Wash. Fishers Blend Station, Inc.	<b>KPCB</b> 650 100 Seattle, Wash. Queen City Broadcasting Co.

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<b>KPJM</b> 1500 100 Prescott, Ariz. Frank Mauthe, Box 852	<b>KUJ</b> 1370 100 Walla Walla, Wash. KUJ, Inc., Marcus Whitman Hotel.
<b>KPO</b> 680 50000 San Francisco, Calif. National Broadcasting Co., Inc.	<b>KUMA</b> 1420 100 Yuma, Ariz. Dr. A. H. Schermann, Box 267.
<b>KPOF</b> 880 500 Denver, Colo. Pillar Of Fire, 1845 Champa St.	<b>KUOA</b> 1250 1000 Fayetteville, Ark. KUOA, Inc., Washington Hotel.
<b>KPPC</b> 1210 50 Pasadena, Calif. Pasadena Presbyterian Church.	<b>KUSD</b> 890 500 Vermillion, S. D. University of South Dakota.
<b>KPQ</b> 1500 100 Wenatchee, Wash. Westcoast Broadcasting Co.	<b>KVI</b> 570 500 Tacoma, Wash. Puget Sound Broadcasting Co., Tacoma Hotel.
<b>KPRC</b> 920 1000 Houston, Texas. Houston Printing Co.	<b>KVL</b> 1370 100 Seattle, Wash. KVL, Inc., 5th and Virginia St.
<b>KQV</b> 1380 500 Pittsburgh, Pa. KQV Broadcasting Co., Investment Bldg.	<b>KVOA</b> 1260 500 Tucson, Ariz. Arizona Broadcasting Co., Inc.
<b>KQW</b> 1010 500 San Jose, Calif. Pacific Agricultural Foundation, Ltd.	<b>KVOO</b> 1140 8900 Tulsa, Okla. Southwestern Sales Corp.
<b>KRE</b> 1370 100 Berkeley, Calif. First Congregational Church.	<b>KVOR</b> 1270 1000 Colorado Springs, Colo S. H. Patterson
<b>KREG</b> 1500 100 Santa Ana, Calif. The Voice of the Orange Empire, Inc.	<b>KVOS</b> 1200 100 Bellingham, Wash. KVOS, Inc., Bellingham Hotel.
<b>KRGV</b> 1260 500 Harlingen, Texas. KRGV, Inc.	<b>KWCR</b> 1420 100 Cedar Rapids, Iowa. Cedar Rapids Broadcast Co.
<b>KRKD</b> 1120 500 Los Angeles, Calif. Fireside Broadcasting Corp.	<b>KWEA</b> 1210 100 Shreveport, La. Hello World Broadcasting Corp.
<b>KRLD</b> 1040 10000 Dallas, Texas. KRLD Radio Corp., Adolphus Hotel.	<b>KWFV</b> 1210 100 Hilo, Hawaii Hilo Broadcasting Co., Ltd.
<b>KRMD</b> 1310 100 Shreveport, La. Radio Station KRMD, Inc.	<b>KWG</b> 1200 100 Stockton, Calif. McClatchy Newspapers, Inc.
<b>KROW</b> 930 500 Oakland, Calif. Educational Broadcasting Corp.	<b>KWJJ</b> 1060 500 Portland, Ore. KWJJ Broadcast Co., Inc., 328 Salmon St.
<b>KRSC</b> 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club.	<b>KWK</b> 1350 1000 St. Louis, Mo. Thomas Patrick, Inc., Hotel Chase.
<b>KSAC</b> 580 500 Manhattan, Kans. State College of Agriculture.	<b>KWKC</b> 1370 100 Kansas City, Mo. Wilson Duncan Broadcasting Co.
<b>KSCJ</b> 1330 1000 Sioux City, Iowa. Perkins Bros. Co., 415 Douglas St.	<b>KWKH</b> 850 10000 Shreveport, La. Hello World Broadcasting Corp.
<b>KSD</b> 550 500 St. Louis, Mo. Pulitzer Publishing Co.	<b>KWLC</b> 1270 100 Decorah, Iowa. Luther College.
<b>KSEI</b> 890 250 Pocatello, Idaho. Radio Service Corp., 141 S. 6th Ave.	<b>KWSC</b> 1220 1000 Pullman, Wash. State College of Washington.
<b>KSL</b> 1130 50000 Salt Lake City, Utah. Radio Service Corp. of Utah.	<b>KWWG</b> 1260 500 Brownsville, Texas. Frank P. Jackson.
<b>KSO</b> 1370 100 Des Moines, Iowa. Des Moines Register & Tribune.	<b>KXA</b> 760 250 Seattle, Wash. American Radio Tel. Co., 218 Bigelow Bldg.
<b>KSOO</b> 1110 1000 Sioux Falls, S. D. Jos. Henkin, 1613 S. Duluth Ave.	<b>KXL</b> 1420 100 Portland, Ore. KXL Broadcasters, 269 Pine St.
<b>KSTP</b> 1460 25000 St. Paul, Minn. National Battery Broadcasting Co.	<b>KXL</b> 1500 100 El Centro, Calif. E. R. Irey and F. M. Bowles.
<b>KSUN</b> 1290 100 Lowell, Ariz. Copper Electrical Co.	<b>KXRO</b> 1310 100 Aberdeen, Wash. KXRO, Inc., Hotel Morck.
<b>KTAB</b> 560 1000 San Francisco, Calif. Associated Broadcasters, Inc.	<b>KXYZ</b> 1440 250 Houston, Texas. Harris County Broadcast Co.
<b>KTAR</b> 620 500 Phoenix, Ariz. KTAR Broadcasting Co.	<b>KYA</b> 1230 1000 San Francisco, Calif. Pacific Broadcasting Corp.
<b>KTAT</b> 1240 1000 Fort Worth, Texas. Southwest Broadcasting Co.	<b>KYW</b> 1020 10000 Chicago, Ill. Westinghouse Elec. & Mfg. Co.
<b>KTBS</b> 1450 1000 Shreveport, La. Tri-State Broadcasting System.	<b>KZRM</b> 618.5 50000 Manila, P. I. Erlanger and Galingier, Inc. (KZEG)
<b>KTFI</b> 1240 1000 Twin Falls, Idaho. Radio Broadcasting Corp.	<b>NAA</b> 690 1000 Arlington, Va. United States Navy.
<b>KTHS</b> 1040 10000 Hot Springs, Ark. Chamber of Commerce.	<b>RUS</b> 664 500 San Salvador, E. S. Republic of El Salvador.
<b>KTM</b> 780 500 Los Angeles, Calif. Piekwick Broadcasting Corp., Ltd.	<b>TGW</b> 1350 500 Guatemala, Gua. Gobierno de Guatemala.
<b>KTRH</b> 1120 1000 Houston, Texas. KTRH Broadcasting Co., Rice Hotel.	<b>TGX</b> 1380 75 Guatemala City
<b>KTSA</b> 1290 1000 San Antonio, Texas. Southwest Broadcasting Co.	<b>TICR</b> 912 75 San Jose, C. R. Government of Costa Rica.
<b>KTSM</b> 1310 100 El Paso, Texas. Tri-State Broadcasting Co., Inc.	<b>TIEA</b> 833 7.5 San Jose, C. R.
<b>KTW</b> 1220 1000 Seattle, Wash. First Presbyterian Church.	<b>TIEP</b> 1450 7.5 San Jose, C. R.

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TIFB	714	30	San Jose, C. R.	WBAK	1430	1000	Harrisburg, Pa. Commonwealth of Pennsylvania.
TIFS	1441	7.5	Cartago, C. R.	WBAL	1060	10000	Baltimore, Md. Consolidated Gas, Elec. Light & Power Co.
TIGA	1014	30	Cartago, C. R.	WBAP	800	50000	Fort Worth, Texas. Carter Publications, Inc.
TIGP	666	75	San Jose, C. R.	WBAX	1210	100	Wilkes-Barre, Pa. John H. Stenger, Jr., 70 S. Main St.
TIRCA	1100	500	San Jose, C. R. Perry Girton, Apt. 225.	WBBC	1400	500	Brooklyn, N. Y. Brooklyn Broadcasting Corp.
TISO	550	250	San Jose, C. R. P. F. Saborio, Apt. 1354	WBBL	1210	100	Richmond, Va. Grace Covenant Presbyterian Church.
TITV	999	7.5	San Jose, C. R.	WBBM	770	25000	Chicago, Ill. WBBM Broadcasting Corp., Wrigley Bldg.
TIVL	869	30	San Jose, C. R.	WBBR	1300	1000	Brooklyn, N. Y. Peoples Pulpit Assn.
TIXA	614	7.5	San Jose, C. R.	WBBX	1200	100	New Orleans, La. Samuel D. Reeks, Marbere Hotel.
VAS	685	2000	Glace Bay, N. S. Canadian Marooni Co., Ltd.	WBBZ	1200	100	Ponca City, Okla. C. L. Carrell.
VOAC	800	40	St. John's, Nfld.	WBCM	1410	500	Bay City, Mich. James E. Davidson, Hotel Wenonah.
VOAS	810	100	St. John's, N. F. Ayre & Sons, Ltd.	WBEN	900	1000	Buffalo, N. Y. WBEN, Inc. (Buffalo Evening News.)
VOGY	1400	75	St. John's, N. F. Newfoundland Broadcasting Co.	WBEO	1310	100	Marquette, Mich. Lake Superior Broadcasting Co., Inc.
VOKW	1085	30	St. John's, N. F. Cyril L. Parkins.	WBHS	1200	100	Huntsville, Ala. Radio Station WBHS, Inc.
VONF	1195	400	St. John's, N. F. Dominion Broadcasting Co., Ltd., Box 1355.	WBIG	1440	500	Greensboro, N. C. North Carolina Broadcasting Co., Inc.
VOWR	900	500	St. John's, N. F. Wesley United Church, Box 157.	WBNX	1350	250	New York, N. Y. Standard Cahill Co., Inc.
WAAB	1410	500	Boston, Mass. Bay State Broadcasting Corp., 1 Winter Pl.	WBOQ	860	50000	New York, N. Y. Atlantic Broadcasting Corp.
WAAF	920	500	Chicago, Ill. Chicago Daily Drivers Journal.	WBOV	1310	100	Terre Haute, Ind. Banks of Wabash, Inc., 24½ S. 6th.
WAAM	1250	1000	Newark, N. J. WODAAAM Corp., 1060 Broad St.	WBRC	930	500	Birmingham, Ala. Birmingham Broadcasting Co., Inc.
WAAT	940	300	Jersey City, N. J. Bremer Broadcasting Corp., 50 Journal Sq.	WBRE	1310	100	Wilkes-Barre, Pa. Louis G. Baltimore, 16 N. Main.
WAAW	660	500	Omaha, Neb. Omaha Grain Exchange.	WBSO	920	500	Babson Park, Mass. Broadcasting Service Organisation, Inc.
WABC	860	50000	New York, N. Y. Atlantic Broadcasting Corp.	WBT	1080	25000	Charlotte, N. C. Station WBT, Inc., Wilder Bldg.
WABI	1200	100	Bangor, Maine. First Universalist Society.	WBTM	1370	100	Danville, Va. Piedmont Broadcasting Corp.
WACO	1420	100	Waco, Texas. Southwest Broadcasting Co.	WBZ	990	25000	Boston, Mass. Westinghouse Elec. & Mfg. Co.
WADC	1320	1000	Akron, Ohio. Allen T. Simmons, P. O. Box 29.	WBZA	990	1000	Springfield, Mass. Westinghouse Elec. & Mfg. Co.
WAGM	1420	100	Presque Isle, Me. Aroostook Broadcasting Corp.	WCAC	600	250	Storrs, Conn. Connecticut Agricultural College.
WAIU	640	500	Columbus, Ohio. Associated Radiocasting Corp.	WCAD	1220	500	Canton, N. Y. St. Lawrence University.
WALR	1210	100	Zanesville, Ohio. WALR Broadcasting Corp.	WCAE	1220	1000	Pittsburgh, Pa. WCAE, Inc., Sun-Telegraph.
WAMC	1420	100	Anniston, Ala. R. C. Hammett, 1200 Noble St.	WCAH	1430	500	Columbus, Ohio. International Bible Students Assn.
WAML	1310	100	Laurel, Miss. Southland Radio Corp.	WCAL	1250	1000	Northfield, Minn. St. Olaf College.
WAPI	1140	5000	Birmingham, Ala. WAPI Broadcasting Corp.	WCAM	1280	500	Camden, N. J. City of Camden, City Hall.
WARD	1400	500	Brooklyn, N. Y. United States Broadcasting Corp.	WCAO	600	250	Baltimore, Md. Monumental Radio Co.
WASH	1270	500	Grand Rapids, Mich. Kunsky-Trendle Broadcasting Corp.	WCAP	1280	500	Asbury Park, N. J. Radio Industries Broadcast Co.
WAWZ	1350	250	Zarephath, N. J. Pillar of Fire.	WCAT	1200	100	Rapid City, S. D. South Dakota State School of Mines.
WAZL	1420	100	Hazleton, Pa. Hazleton Broadcasting Service, Inc.	WACU	1170	50000	Philadelphia, Pa. WCAU Broadcasting Co., 1622 Chestnut.
WBAA	1400	500	West Lafayette, Ind. Purdue University.	WCAX	1200	100	Burlington, Vt. Burlington Daily News, Inc.



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**WCAZ 1070 50 Carthage, Ill.**  
Superior Broadcasting Service, Inc.

**WCBX 1440 250 Allentown, Pa.**  
B. Bryan Musselman, 39-41 10th St.

**WCBF 1080 5000 Zion, Ill.**  
Wilbur Glenn Voliva.

**WCBM 1370 100 Baltimore, Md.**  
Baltimore Broadcasting Corp.

**WCBS 1210 100 Springfield, Ill.**  
WCBS, Inc., 208½ S. 5th.

**WCCO 810 50000 Minneapolis, Minn.**  
Northwestern Broadcasting, Inc.

**WCDA 1350 250 New York, N. Y.**  
Standard Cahill Co., Inc.

**WCFL 970 1500 Chicago, Ill.**  
Chicago Federation of Labor.

**WCKY 1490 5000 Covington, Ky.**  
L. B. Wilson, Inc.

**WCLO 1200 100 Janesville, Wis.**  
WCLO Radio Corp.

**WCLS 1310 100 Joliet, Ill.**  
WCLS, Inc., 301 E. Jefferson St.

**WCNW 1500 100 Brooklyn, N. Y.**  
Arthur Faske, 1525 Pitkin Ave.

**WCOA 1340 500 Pensacola, Fla.**  
Pensacola Broadcasting Co.

**WCOC 880 500 Meridian, Miss.**  
Mississippi Broadcasting Co., Inc.

**WCOD 1200 100 Harrisburg, Pa.**  
Keystone Broadcasting Corp.

**WCRW 1210 100 Chicago, Ill.**  
Clinton R. White, 2756 Pine Grove Ave.

**WCSC 1360 500 Charleston, S. C.**  
South Carolina Broadcasting Co., Inc.

**WCSH 940 1000 Portland, Me.**  
Congress Square Hotel Co., 157 High.

**WDAE 1220 1000 Tampa, Fla.**  
Tampa Publishing Co., Tampa Terrace.

**WDAF 610 1000 Kansas City, Mo.**  
Kansas City Star Co.

**WDAG 1410 1000 Amarillo, Texas.**  
National Radio & Broadcasting Corp.

**WDAH 1310 100 El Paso, Texas.**  
Tri-State Broadcasting Co., Inc.

**WDAS 1370 100 Philadelphia, Pa.**  
WDAS Broadstg. Co., Inc., Broadwood Hotel.

**WDAY 940 1000 Fargo, N. D.**  
WDAY, Inc., Black Bldg., 118 Broadway.

**WDBJ 930 250 Roanoke, Va.**  
Times World Corp., 122 W. Church Ave.

**WDBO 580 250 Orlando, Fla.**  
Orlando Broadcasting Co., Inc.

**WDEL 1120 250 Wilmington, Del.**  
WDEL, Inc., 10th and King Sts.

**WDEV 550 500 Waterbury, Vt.**  
Harry C. Whitehill, Stowe St.

**WDGY 1180 1000 Minneapolis, Minn.**  
Dr. Geo. W. Young, 909 W. Broadway.

**WDOD 1280 1000 Chattanooga, Tenn.**  
WDOD Broadcasting Corp., Hotel Patten.

**WDRG 1330 500 Hartford, Conn.**  
WDRG, Inc., Corning Bldg., 11 Asylum St.

**WDSU 1250 1000 New Orleans, La.**  
Jos. H. Uhalt, On Hotel DeSoto.

**WDZ 1070 100 Tuscola, Ill.**  
James L. Bush.

**WEAF 660 50000 New York, N. Y.**  
National Broadcasting Co., Inc.

**WEAN 780 500 Providence, R. I.**  
Shepard Broadcasting Service, Inc.

**WEBC 1290 1000 Superior, Wis.**  
Head of the Lakes Broadcasting Co.

**WBEQ 1210 100 Harrisburg, Ill.**  
Harrisburg Broadcasting Co.

**WBRB 1310 100 Buffalo, N. Y.**  
Howell Broadcasting Co., Inc., 735 Main.

**WDEC 1210 100 Chicago, Ill.**  
Emil Denmark, 3860 Ogden Ave.

**WEED 1420 100 Greenville, N. C.**  
Wm. Avera Wynne.

**WEEI 590 1000 Boston, Mass.**  
Edison Elec. Illuminating Co.

**WEEU 830 1000 Reading, Pa.**  
Berks Broadcasting Co., 533 Penn.

**WEHC 1350 500 Charlottesville, Va.**  
Community Brdcastg. Corp.

**WEHS 1420 100 Cicero, Ill.**  
WEHS, Inc., 6138 W. 22nd St.

**WELL 1420 50 Battle Creek, Mich.**  
Enquirer News Co., 7 N. McCamy St.

**WENC 1420 100 Americus, Ga.**  
Americus Broadcast Corp.

**WENR 870 50000 Chicago, Ill.**  
Great Lakes Broadcasting Co.

**WESG 1040 1000 Elmira, N. Y.**  
Elmira Star Gazette, Inc.

**WEVD 1300 500 New York, N. Y.**  
Jewish Daily Forward, Hotel Claridge.

**WEW 760 1000 St. Louis, Mo.**  
St. Louis University, 221 N. Grand Blvd.

**WEXL 1310 50 Royal Oak, Mich.**  
Royal Oak Broadcasting Co.

**WFAA 800 50000 Dallas, Texas.**  
Morning News and Journal.

**WFAB 1300 1000 New York, N. Y.**  
Fifth Avenue Broadcasting Corp.

**WFAM 1200 100 South Bend, Ind.**  
South Bend Tribune, 200 W. Colfax.

**WFAS 1210 100 White Plains, N. Y.**  
Westchester Broadcasting Corp.

**WFBC 1200 100 Greenville, S. C.**  
Greenville News-Piedmont Co.

**WFBE 1200 100 Cincinnati, Ohio.**  
WFBE, Inc., Hotel Sinton.

**WFBG 1310 100 Altoona, Pa.**  
Gable Broadcasting Co. 12th Av. & 13th St.

**WFLB 1380 1000 Syracuse, N. Y.**  
Onondaga Radio Broadcasting Corp.

**WFBM 1230 1000 Indianapolis, Ind.**  
Indianapolis Power & Light Co.

**WFBZ 1270 500 Baltimore, Md.**  
Baltimore Radio Show, Inc.

**WFDF 1310 100 Flint, Mich.**  
Flint Broadcasting Co.

**WFDY 1500 100 Rome, Ga.**  
Rome Broadcasting Corp., 10 3rd Ave.

**WFEE 1430 500 Manchester, N. H.**  
New Hampshire Broadcasting Co.

**WFI 560 500 Philadelphia, Pa.**  
WFI Broadcasting Co., 801 Market.

**WFIW 940 1000 Hopkinsville, Ky.**  
WFIW, Inc., 8th and Main Sts.

**WFLA 620 1000 Clearwater, Fla.**  
Florida West Coast Broadcasting Co., Inc.

**WFOX 1400 500 Brooklyn, N. Y.**  
Paramount Broadcasting Co., 1 Nevins St.

**WGAL 1310 100 Lancaster, Pa.**  
WGAL, Inc., 8 W. King St.

**WGAR 1450 500 Cleveland, Ohio.**  
WGAR Broadcasting Co., Hotel Statler.

**WGBB 1210 100 Freeport, N. Y.**  
H. H. Carman, 64 S. Grove St.

**WGBF 630 500 Evansville, Ind.**  
Evansville On the Air, Inc.

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<b>WGBI 880 250</b> Scranton, Pa. Scranton Broadcasters, Inc.	<b>WHN 1010 250</b> New York, N. Y. Marcus Loew Booking Agency.
<b>WGCM 1210 100</b> Mississippi City, Miss. Great Southern Land Co., Gulfport, Miss.	<b>WHOM 1450 250</b> Jersey City, N. J. New Jersey Broadcasting Corp.
<b>WGCP 1250 250</b> Newark, N. J. May Radio Broadcasting Co.	<b>WHP 1430 500</b> Harrisburg, Pa. WHP, Inc., Harrisburg Telegraph.
<b>WGES 1360 500</b> Chicago, Ill. Oak Leaves Broadcasting Station, Inc.	<b>WIAS 1310 100</b> Ottumwa, Iowa. Iowa Broadcasting Co., Hotel Ottumwa.
<b>WGH 1310 100</b> Newport News, Va. Hampton Roads Broadcasting Corp.	<b>WIBA 1280 500</b> Madison, Wis. Badger Broadcasting Co., Inc.
<b>WGL 1370 100</b> Fort Wayne, Ind. F. C. Zieg, 213 W. Main St.	<b>WIBG 930 25</b> Glenside, Pa. WIBG, Inc., Keswick Bldg.
<b>WGLC 1370 100</b> Hudson Falls, N. Y. O. T. Griffin & G. F. Bissell.	<b>WIBM 1370 100</b> Jackson, Mich WIBM, Inc., Otsego Hotel.
<b>WGN 720 25000</b> Chicago, Ill. WGN, Inc., Tribune Tower.	<b>WIBU 1210 100</b> Poynette, Wis. Wm. C. Forrest, R. F. D. No. 3.
<b>WGNV 1210 50</b> Chester, N. Y. Peter Goelet (Orange County).	<b>WIBW 580 1000</b> Topeka, Kans. Topeka Broadcasting Assn. Inc.
<b>WGR 550 1000</b> Buffalo, N. Y. Buffalo Broadcasting Corp.	<b>WIBX 1200 100</b> Utica, N. Y. WIBX, Inc., 1st Natl. Bank Bldg.
<b>WGST 890 250</b> Atlanta, Ga. Georgia School of Technology.	<b>WICC 800 250</b> Bridgeport, Conn. Shepard Broadcasting Service, Inc.
<b>WGY 790 50000</b> Schenectady, N. Y. National Broadcasting Co., Inc.	<b>WIL 1200 100</b> St. Louis, Mo. Missouri Broadcasting Co.
<b>WHA 940 1000</b> Madison, Wis. University of Wisconsin.	<b>WILL 890 250</b> Urbana, Ill. University of Illinois.
<b>WHAD 1120 250</b> Milwaukee, Wis. Marquette University.	<b>WILM 1420 100</b> Wilmington, Del. Delaware Broadcasting Co., Inc.
<b>WHAM 1150 25000</b> Rochester, N. Y. Stromberg-Carlson Tel. Mfg. Co.	<b>WIND 560 1000</b> Gary, Ind. Johnson-Kennedy Broadcasting Corp.
<b>WHAS 820 25000</b> Louisville, Ky. Courier Journal & Louisville Times.	<b>WINS 1180 500</b> New York, N. Y. American Radio News Corp.
<b>WHAT 1310 100</b> Philadelphia, Pa. Curtis-Martin Newspapers, Inc.	<b>WIOD 1300 1000</b> Miami, Fla. Isle of Dreams Broadcasting Corp.
<b>WHAZ 1300 500</b> Troy, N. Y. Rensselaer Polytechnic Institute.	<b>WIP 610 500</b> Philadelphia, Pa. Pennsylvania Broadcasting Co.
<b>WHB 860 500</b> Kansas City, Mo. WHB Broadcasting Co., Scarritt Bldg.	<b>WIS 1010 500</b> Columbia, S. C. Station WIS, Inc., 1811 Main St.
<b>WHBC 1200 100</b> Canton, Ohio. Edw. P. Graham, 319 Tusc. St., W.	<b>WISN 1120 250</b> Milwaukee, Wis. American Radio News Corp.
<b>WHBD 1370 100</b> Mount Orab, Ohio. F. P. Moler.	<b>WJAC 1310 100</b> Johnstown, Pa. WJAC, Inc., Tribune Bldg. Annex.
<b>WHBF 1210 100</b> Rock Island, Ill. Rock Island Broadcasting Co.	<b>WJAG 1060 1000</b> Norfolk, Neb. Norfolk Daily News.
<b>WHBL 1410 500</b> Sheboygan, Wis. Press Publishing Co.	<b>WJAR 890 500</b> Providence, R. I. Outlet Co., Weybossett St.
<b>WHBQ 1370 100</b> Memphis, Tenn. Broadcasting Sta. WNBQ, Inc., Hotel Claridge.	<b>WJAS 1290 1000</b> Pittsburgh, Pa. Pittsburgh Radio Supply House.
<b>WHBU 1210 100</b> Anderson, Ind. Anderson Broadcasting Corp.	<b>WJAX 900 1000</b> Jacksonville, Fla. City of Jacksonville.
<b>WHBY 1200 100</b> Green Bay, Wis. WHBY, Inc., Bellin Bldg.	<b>WJAY 610 500</b> Cleveland, Ohio. Cleveland Radio Broadcasting Corp.
<b>WHDF 1370 100</b> Calumet, Mich. Upper Michigan Broadcasting Co.	<b>WJBC 1200 100</b> LaSalle, Ill. Kaskaskia Broadcasting Co.
<b>WHDH 830 1000</b> Boston, Mass. Matheson Radio Co., 62 Boylston.	<b>WJBI 1210 100</b> Red Bank, N. J. Monmouth Broadcasting Co., Inc.
<b>WHDL 1420 100</b> Tupper Lake, N. Y. Tupper Lake Broadcasting Co.	<b>WJBK 1370 50</b> Detroit, Mich. James F. Hopkins, Inc., Curtiss Bldg.
<b>WHEB 740 250</b> Portsmouth, N. H. Granite State Broadcasting Corp.	<b>WJBL 1200 100</b> Decatur, Ill. Commodore Broadcasting, Inc.
<b>WHEC 1430 500</b> Rochester, N. Y. WHEC, Inc., 40 Franklin St.	<b>WJBO 1420 100</b> New Orleans, La. Baton Rouge Broadcasting Co., Inc.
<b>WHEF 1500 100</b> Kosciusko, Miss. Attala Milling & Produce Co.	<b>WJBW 1200 100</b> New Orleans, La. C. C. Carlson, 2743 Dumaine St.
<b>WHET 1210 100</b> Troy, Ala. Troy Broadcasting Co.	<b>WJBY 1210 100</b> Gadsden, Ala. Gadsden Broadcasting Co., 112 N. 8th St.
<b>WHFC 1420 100</b> Cicero, Ill. WHFC, Inc., 6138 W. 22nd St.	<b>WJBX 1270 1000</b> Jackson, Miss. Lamar Life Insurance Co.
<b>WHIS 1410 250</b> Bluefield, W. Va. Daily Telegraph Printing Co., Inc.	<b>WJEJ 1210 100</b> Hagerstown, Md. Hagerstown Broadcasting Co., Inc.
<b>WHK 1390 1000</b> Cleveland, Ohio. Radio Air Service Corp.	<b>WJEM 990 500</b> Tupelo, Miss. Britt A. Rogers, Jr.

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**WJJD 1130 20000 Chicago, Ill.**  
 WJJD, Inc., 201 N. Wells St.  
**WJMS 1420 100 Ironwood, Mich.**  
 WJMS, Inc., St. James Hotel.  
**WJR 750 10000 Detroit, Mich.**  
 WJR, Inc., Fisher Bldg.  
**WJSV 1450 10000 Washington, D. C.**  
 Old Dominion Broadcasting Co.  
**WJTL 1370 100 Atlanta, Ga.**  
 Oglethorpe University.  
**WJW 1210 100 Akron, Ohio.**  
 WJW, Inc., 41 S. High St.  
**WJZ 780 50000 New York, N. Y.**  
 National Broadcasting Co., Inc.  
**WKAQ 1240 1000 San Juan, P. R.**  
 Radio Corp. of Porto Rico.  
**WKAR 1040 1000 East Lansing, Mich.**  
 Michigan State College.  
**WKBB 1310 100 Joliet, Ill.**  
 Richard W. Hoffman, Joliet Natl. Bank Bldg.  
**WKBC 1310 100 Birmingham, Ala.**  
 R. B. Broyles, Tutwiler Hotel.  
**WKBF 1400 500 Indianapolis, Ind.**  
 Indianapolis Broadcasting, Inc.  
**WKBH 1380 1000 LaCrosse, Wis.**  
 WKBH, Inc., 409 Main St.  
**WKBI 1420 100 Cicero, Ill.**  
 WKBI, Inc., 6138 W. 22nd St.  
**WKBN 570 500 Youngstown, Ohio.**  
 WKBN Broadcasting Corp.  
**WKBV 1500 100 Connersville, Ind.**  
 Wm. O. Knox, Box 286  
**WKBW 1480 5000 Buffalo, N. Y.**  
 Buffalo Broadcasting Corp.  
**WKBZ 1500 100 Ludington, Mich.**  
 Karl L. Ashbacker & Sons.  
**WKEU 1500 100 LaGrange, Ga.**  
 Radio Station WKEU, 906 Hill St.  
**WKFI 1210 100 Greenville, Miss.**  
 J. Pat Scully, Box 302.  
**WKJC 1200 100 Lancaster, Pa.**  
 Lancaster Broadcasting Service, Inc.  
**WKOK 1210 100 Sunbury, Pa.**  
 Sunbury Broadcasting Co.  
**WKRC 550 1000 Cincinnati, Ohio.**  
 WKRC, Inc., Hotel Alms.  
**WKY 900 1000 Oklahoma City, Okla.**  
 Oklahoma Publishing Co.  
**WKZO 590 1000 Kalamazoo, Mich.**  
 John E. Fetzer, Burdick Hotel.  
**WLAC 1470 5000 Nashville, Tenn.**  
 Life & Casualty Insurance Co.  
**WLAP 1200 100 Louisville, Ky.**  
 American Broadcasting Corp. of Ky.  
**WLB 1250 1000 Minneapolis, Minn.**  
 University of Minnesota.  
**WLBC 1310 50 Muncie, Ind.**  
 D. A. Burton, Anthony Bldg.  
**WLBK 1420 100 Kansas City, Kans.**  
 WLBK Broadcasting Co., Huron Bldg.  
**WLBL 900 2500 Stevens Point, Wis.**  
 Wisconsin Dept. of Agriculture and Markets.  
**WLBW 1260 500 Erie, Pa.**  
 Broadcasters of Pennsylvania, Inc.  
**WLBZ 820 500 Bangor, Me.**  
 Maine Broadcasting Co., Inc., 100 Main.  
**WLEC 1340 250 Portland, Me.**  
 Casco Bay Broadcasting Co.  
**WLEY 1370 100 Lexington, Mass.**  
 Albert S. Moffat  
**WLIT 560 500 Philadelphia, Pa.**  
 Lit Bros. Broadcasting System, Inc.

**WLS 870 50000 Chicago, Ill.**  
 Agricultural Broadcasting Co.  
**WLTH 1400 500 Brooklyn, N. Y.**  
 Voice of Brooklyn, Inc.  
**WLVA 1370 100 Lynchburg, Va.**  
 Lynchburg Broadcasting Corp.  
**WLW 700 50000 Cincinnati, Ohio.**  
 Crosley Radio Corp.  
**WLWL 1100 5000 New York, N. Y.**  
 Missionary Society of St. Paul.  
**WMAL 630 250 Washington, D. C.**  
 National Broadcasting Co., Inc.  
**WMAQ 670 5000 Chicago, Ill.**  
 National Broadcasting Co., Inc.  
**WMAS 1420 100 Springfield, Mass.**  
 WMAS, Inc., Hotel Stonehaven.  
**WMAZ 1180 500 Macon, Ga.**  
 Southeastern Broadcasting Co.  
**WMBC 1420 100 Detroit, Mich.**  
 Michigan Broadcasting Co.  
**WMBD 1440 500 Peoria, Ill.**  
 Peoria Broadcasting Co.  
**WMBG 1210 100 Richmond, Va.**  
 Havens and Martin, Inc.  
**WMBH 1420 100 Joplin, Mo.**  
 W. M. Robertson.  
**WMBI 1080 5000 Chicago, Ill.**  
 Moody Bible Institute.  
**WMBO 1310 100 Auburn, N. Y.**  
 WMBO, Inc., Metcalf Bldg.  
**WMBQ 1500 100 Brooklyn, N. Y.**  
 Paul J. Gollhofer, 95 Leonard St.  
**WMBR 1370 100 Tampa, Fla.**  
 F. J. Reynolds, 907 Florida Ave.  
**WMC 780 500 Memphis, Tenn.**  
 Commercial Appeal, Inc., Hotel Gayoso.  
**WMCA 570 500 New York, N. Y.**  
 Knickerbocker Broadcasting Co.  
**WMED 1420 100 Muscle Shoals, Ala.**  
 Kathryn Jones.  
**WMMN 890 250 Fairmont, W. Va.**  
 A. M. Rowe, Inc., 325 Main St.  
**WMPC 1500 100 Lapeer, Mich.**  
 First Methodist Protestant Church.  
**WMSG 1350 250 New York, N. Y.**  
 Standard Cahill Co., Inc.  
**WMT 600 500 Waterloo, Iowa.**  
 Waterloo Broadcasting Co.  
**WNAC 1230 1000 Boston, Mass.**  
 Shepard Broadcasting Service, Inc.  
**WNAD 1010 500 Norman, Okla.**  
 University of Oklahoma.  
**WNAX 570 1000 Yankton, S. D.**  
 The House of Gurney, Inc., 2nd and Capital St.  
**WNBF 1500 100 Binghamton, N. Y.**  
 Howitt-Wood Radio Co., Inc.  
**WNBH 1310 100 New Bedford, Mass.**  
 New Bedford Broadcasting Co.  
**WNBO 1200 100 Silver Haven, Pa.**  
 John Brownlee Spriggs. (Washington, Pa.)  
**WNBK 1430 500 Memphis, Tenn.**  
 Memphis Broadcasting Co., Hotel DeVoy.  
**WNBW 1200 100 Carbondale, Pa.**  
 WNBW, Inc., 50 Main St., N.  
**WNBX 1260 250 Springfield, Vt.**  
 WNBX Broadcasting Corp., 39 Main St.  
**WNBZ 1290 50 Saranac Lake, N. Y.**  
 Smith & Mace, 70 Broadway.  
**WNOX 560 1000 Knoxville, Tenn.**  
 WNOX, Inc.  
**WNYC 810 500 New York, N. Y.**  
 Dept. of Plant and Structures.

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<b>WQAI 1190 50000 San Antonio, Texas.</b> Southern Equipment Co., 1038 Navarro.	<b>WRAM 1370 100 Wilmington, N. C.</b> Wilmington Radio Assn., Princess St.
<b>WOBU 580 250 Charleston, W. Va.</b> WOBU, Inc., Ruffner Hotel.	<b>WRAW 1310 100 Reading, Pa.</b> Reading Broadcasting Co., 533 Penn St.
<b>WOC- 1000 50000 Des Moines, Iowa.</b>	<b>WRAX 1020 250 Philadelphia, Pa.</b> WRAX Broadcasting Co., 217 S. Broad St.
<b>WHO Central Broadcastg. Co., 914 Walnut St.</b>	<b>WRBL 1200 100 Columbus, Ga.</b> WRBL Radio Station, Inc.
<b>WOCL 1210 50 Jamestown, N. Y.</b> A. E. Newton, 840 N. Main St.	<b>WRBX 1410 250 Roanoke, Va.</b> Richmond Development Corp.
<b>WODA 1250 1000 Paterson, N. J.</b> WODAAM Corp., 115 Ellison St.	<b>WRC 950 500 Washington, D. C.</b> National Broadcasting Co., Inc.
<b>WODX 1410 500 Mobile, Ala.</b> Mobile Broadcasting Corp., Battle House.	<b>WRDO 1370 100 Augusta, Me.</b> WRDO, Inc., Augusta House.
<b>WOI 640 5000 Ames, Iowa.</b> Iowa State College.	<b>WRDW 1500 100 Augusta, Ga.</b> Virgil V. Evans Co., 309 8th St.
<b>WOKO 1430 500 Albany, N. Y.</b> WOKO, Inc., Hotel Ten Eyck.	<b>WREC 600 500 Memphis, Tenn.</b> WREC, Inc., Hotel Peabody.
<b>WOL 1310 100 Washington, D. C.</b> American Broadcasting Co., Annapolis Hotel.	<b>WREN 1220 1000 Lawrence, Kans.</b> Jenny Wren Co., 8th and Vermont St.
<b>WOMT 1210 100 Manitowoc, Wis.</b> Francis M. Kadow, Box 326.	<b>WRHM 1250 1000 Minneapolis, Minn.</b> Minnesota Broadcasting Corp., 115 E. Grant.
<b>WOOD 1270 500 Grand Rapids, Mich.</b> Kunsky-Trendle Broadcasting Corp.	<b>WRJM 1370 100 Racine, Wis.</b> Racine Broadcasting Corp., Hotel Racine.
<b>WOPI 1500 100 Bristol, Tenn.</b> Radiophone Broadcasting Station WOPI, Inc.	<b>WRNY 1010 250 New York, N. Y.</b> Marcus Loew Booking Agency.
<b>WOQ 1300 1000 Kansas City, Mo.</b> Unity School of Christianity.	<b>WROL 1310 100 Knoxville, Tenn.</b> Stuart Broadcasting Corp., 524 S. Gay.
<b>WOR 710 5000 Newark, N. J.</b> Bamberger Broadcasting Service, Inc.	<b>WRR 1280 500 Dallas, Texas.</b> City of Dallas, Hilton Hotel.
<b>WORC 1280 500 Worcester, Mass.</b> Alfred F. Kleindienst, 60 Franklin St.	<b>WRUF 830 5000 Gainesville, Fla.</b> State University.
<b>WORK 1000 1000 York, Pa.</b> York Broadcasting Co., 15 S. Beaver St.	<b>WRVA 1110 5000 Richmond, Va.</b> Larus & Bro. Co., Inc., 22nd and Gary St.
<b>WOS 630 500 Jefferson City, Mo.</b> State Highway Control, Capitol Bldg.	<b>WSAI 1330 1000 Cincinnati, Ohio.</b> Crosley Radio Corp., 1329 Arkington.
<b>WOSU 570 750 Columbus, Ohio.</b> Ohio State University.	<b>WSAJ 1310 100 Grove City, Pa.</b> Grove City College.
<b>WOV 1130 1000 New York, N. Y.</b> International Broadcasting Corp.	<b>WSAN 1440 250 Allentown, Pa.</b> WSAN, Inc., 39 10th St.
<b>WOW 590 1000 Omaha, Neb.</b> Woodmen of the World, 4th and Farnam.	<b>WSAR 1450 250 Fall River, Mass.</b> Doughty & Welch Electric Co., Inc.
<b>WOWO 1160 10000 Fort Wayne, Ind.</b> Main Auto Supply Co., 213 W. Main.	<b>WSAZ 1190 1000 Huntington, W. Va.</b> WSAZ, Inc., 929½ 4th Ave.
<b>WPAD 1420 100 Paducah, Ky.</b> Paducah Broadcasting Co., Inc.	<b>WSB 740 50000 Atlanta, Ga.</b> Atlanta Journal, 7 N. Forsyth St.
<b>WPAP 1010 250 New York, N. Y.</b> Marcus Loew Booking Agency.	<b>WSBC 1210 100 Chicago, Ill.</b> Gene T. Dyer, 1258 S. Michigan Ave.
<b>WPEN 1500 100 Philadelphia, Pa.</b> William Penn Broadcasting Co.	<b>WSBT 1230 500 South Bend, Ind.</b> South Bend Tribune.
<b>WPFB 1370 100 Hattiesburg, Miss.</b> Hattiesburg Broadcasting Co., Box 530.	<b>WSEN 1210 100 Columbus, Ohio.</b> Columbus Broadcasting Corp., 144 S. High.
<b>WPG 1100 5000 Atlantic City, N. J.</b> Columbia Broadcasting System.	<b>WSFA 1410 500 Montgomery, Ala.</b> Montgomery Brgd. Co., Inc., Jeff. Dav. H'l.
<b>WPHR 1200 100 Petersburg, Va.</b> WLBG, Inc., Medical Arts Bldg.	<b>WSIX 1210 100 Springfield, Tenn.</b> 638 Tire & Vulcanizing Co.
<b>WPRO 1210 100 Providence, R. I.</b> Cherry & Webb Broadcasting Co., 15 Chestnut.	<b>WSJS 1310 100 Winston-Salem, N. C.</b> Winston-Salem Journal Co., 416 N. Marshall.
<b>WPTF 680 5000 Raleigh, N. C.</b> Durham Life Insurance Co.	<b>WSM 650 50000 Nashville, Tenn.</b> National Life & Accident Insurance Co.
<b>WQAM 560 1000 Miami, Fla.</b> Miami Broadcasting Co., Inc., 327 N. E. 1st Ave.	<b>WSMB 1320 500 New Orleans, La.</b> WSMB, Inc., Maison Blanche Bldg.
<b>WQAN 880 250 Scranton, Pa.</b> Scranton Times, 149 Penn Ave.	<b>WSMK 1380 200 Dayton, Ohio.</b> S. M. Krohn, Jr., 4th and Main St.
<b>WQAO 1010 250 New York, N. Y.</b> Marcus Loew Booking Agency.	<b>WSOC 1210 100 Gastonia, N. C.</b> WSOC, Inc., Box 730.
<b>WQBC 1360 500 Vicksburg, Miss.</b> Delta Broadcasting Co., Hotel Vicksburg.	<b>WSPA 1420 100 Spartanburg, S. C.</b> Virgil V. Evans, Ravenel and Avant St.
<b>WQDM 1370 100 St. Albans, Vt.</b> A. J. St. Antoine and E. J. Regan.	<b>WSPD 1340 1000 Toledo, Ohio.</b> Toledo Broadcasting Co., 505 Jefferson
<b>WQDX 1210 100 Thomasville, Ga.</b> Stevens Luke, 135 E. Jackson St.	<b>WSUI 880 500 Iowa City, Iowa.</b> State University of Iowa.
<b>WRAK 1370 100 Williamsport, Pa.</b> WRAK, Inc., 244 W. 4th St.	

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**WSUN 620 1000 St. Petersburg, Fla.**  
Florida Westcoast Broadcasting Co., Inc.

**WSVS 1370 50 Buffalo, N. Y.**  
Seneca Vocational High School.

**WSYB 1500 100 Rutland, Vt.**  
Philip Weiss Music Co., 80 West St.

**WSYR 570 250 Syracuse, N. Y.**  
Central New York Broadcasting Corp.

**WTAD 1440 500 Quincy, Ill.**  
Illinois Broadcasting Corp., State and 6th.

**WTAG 580 250 Worcester, Mass.**  
Worcester Telegram Publishing Co.

**WTAM 1070 50000 Cleveland, Ohio.**  
National Broadcasting Co., Inc.

**WTAQ 1330 1000 Eau Claire, Wis.**  
Gillette Rubber Co., Hotel Eau Claire.

**WTAR 780 500 Norfolk, Va.**  
WTAR Radio Corp., Wainwright Bldg.

**WTAW 1120 500 College Station, Texas.**  
Agricultural and Mechanical College.

**WTAX 1210 100 Springfield, Ill.**  
WTAX, Inc., 416 E. Capitol Ave.

**WTBO 1420 100 Cumberland, Md.**  
Associated Broadcasting Corp., Box 794.

**WTEL 1310 100 Philadelphia, Pa.**  
Foulkrod Radio Engineering Co., Inc.

**WTFI 1450 500 Athens, Ga.**  
Liberty Broadcasting Co., Costa Bldg.

**WTIC 1060 50000 Hartford, Conn.**  
Travelers Broadcasting Service Corp.

**WTJS 1310 100 Jackson, Tenn.**  
Sun Publishing Co., Sun Bldg.

**WTMJ 620 1000 Milwaukee, Wis.**  
The Journal Co., 333 W. State St.

**WTNJ 1280 500 Trenton, N. J.**  
Trenton Broadcasting Co., Stacy Trent Hotel.

**WTOG 1260 500 Savannah, Ga.**  
Savannah Broadcasting Co., Inc., DeSoto Hotel.

**WTRC 1310 50 Elkhart, Ind.**  
Truth Radio Corp., Hotel Elkhart.

**WWAE 1200 100 Hammond, Ind.**  
Hammond Calumet Broadcasting Corp.

**WWJ 920 1000 Detroit, Mich.**  
Evening News Assn., 616 Lafayette Blvd.

**WWL 850 10000 New Orleans, La.**  
Loyola University, Roosevelt Hotel.

**WWNC 570 1000 Asheville, N. C.**  
Citizen Broadcasting Co., Inc., Flatiron Bldg.

**WWRL 1500 100 Woodside, N. Y.**  
Long Island Broadcasting Corp.

**WWSW 1500 100 Pittsburgh, Pa.**  
Walker & Downing Radio Corp.

**WWVA 1160 5000 Wheeling, W. Va.**  
West Virginia Broadcasting Corp.

**WXYZ 1240 1000 Detroit, Mich.**  
Kunsky-Trendle Broadcasting Corp.

**XEA 1000 250 Guadalajara, Jal.**  
Alberto Palos Souza.

**XEAB 1450 7.5 Nuevo Laredo, Tams.**  
Horacio Mattei A. y Humberto Garcia.

**XEAC 1295 100 San Luis Potosi, S.L.P.**  
Francisco de P. Cabrera.

**XEAD 875 250 Mexico City, D. F.**  
Julio Zetina Osorio.

**XEAE 1000 50 Mexicali, B. C.**

**XEAI 1090 100 Mexico City, D. F.**  
Carlos Gonzales Caballero.

**XEAN 750 5000 Juarez, Chih.**  
Radio Difusora Nacional S. A.

**XEAO 560 100 Mexicali, B. C.**  
Luis L. Castro.

**XEAW 965 10000 Reynosa, Tams.**  
Internacional Broadcasting Co., S. A.

**XEB 1030 10000 Mexico City, D. F.**  
El Buen Tono, S. A., Buen Tono No. 6.

**XEC 1000 50 Toluca, D. F.**  
Jesus R. Benavides.

**XED 1155 500 Guadalajara, Jal.**  
Radiofonografica de Guadalajara, S. A.

**XEF 735 150000 Villa Acuna, Coah.**  
Compania Radiodifusora de Acuna, S. A.

**XEFA 1250 500 Mexico City, D. F.**  
Eduardo Limon Segui.

**XEFB 1315 100 Monterrey, N. L.**  
Jesus Quintanilla.

**XEFC 1050 100 Merida, Yuc.**  
J. Molina Font.

**XEFD 757 5000 Tijuana, B. C.**  
Goodwill Broadcasting Co. (Box 1441 San Diego)

**XEFE 1000 100 Laredo, Tams.**  
Rafael T. Carranza.

**XEFI 1260 250 Chihuahua, Chih.**  
Feliciano Lopez Isles, Ap. 157.

**XEFJ 1000 100 Monterrey, N. L.**  
R. Junco de la Vega.

**XEFO 940 5000 Mexico City, D. F.**  
Partido Nacional Revolucionario.

**XEFS 1000 40 Queretaro, Qro.**  
Salvador Sanchez.

**XEFV 1370 100 Juarez, Chih.**  
J. Onofre Mesa.

**XEFW 1280 70 Tampico, Tams.**  
J. Expedito Martinez.

**XEFZ 1370 100 Mexico City, D. F.**  
Jose Onofre Mesa.

**XEG 1075 500 Mexico City, D. F.**  
Ricardo Gonzales Montero.

**XEH 1132 250 Monterrey, N. L.**  
Tarnava y Cia, P. Mier 215.

**XEI 1310 250 Morelia, Mich.**  
Carlos Gutierrez M.

**XEJ 1015 500 Juarez, Chih.**  
Juan G. Buttner and Leo Allande.

**XEK 990 100 Mexico City, D. F.**  
Arturo Martinez, Jalapa No. 51.

**XEL 1000 40 Saltillo, Coah.**  
Antonio Garza Castro.

**XEN 711 1000 Mexico City, D. F.**  
Cerveceria Modelo S. A.

**XENT 1115 150000 Nuevo Laredo, Tams.**  
Cia Industrial Universal S. A.

**XEO 940 5000 Mexico City, D. F.**  
Partido Nacional Revolucionario.

**XEP 780 500 Mexico City, D. F.**  
Cia Difusora de Mexico S. A.

**XEPN 585 75000 Piedras Negras, Coah.**  
Piedras Negras Broadcasting Co.

**XEQ 1330 500 Mexico City, D. F.**

**XER 735 150000 Villa Acuna, Coah.**  
Compania Radiodifusora de Acuna, S. A.

**XES 1020 250 Tampico, Tams.**  
Fernando Sada, Hotel Inglaterra.

**XET 690 500 Monterrey, N. L.**  
Cadena Radiodifusora Mexicana, S. A.

**XETA 1180 250 Mexico City, D. F.**  
Manuel Espanozo Tagle.

**XETB 1380 125 Torreon, Coah.**  
Jose A. Berumen.

**XETF 630 500 Veracruz, Ver.**  
Manuel Angel Fernandez.

**XETH 860 100 Puebla, Pue.**  
Ramon Huerta G.

<b>XETR</b> 610 1000	Mexico City, D. F. Cia Difusora Mexicana S. A.
<b>XETU</b> 890 100	Pachuca, Hdgo. Rodrigo Manriquez.
<b>XETW</b> 830 500	Mexico City, D. F. Rafael M. Pena, Gante 4, 3er piso
<b>XEU</b> 1010 100	Veracruz, Ver. Fernando Pasos Sosa.
<b>XEW</b> 910 5000	Mexico City, D. F. Cadena Radiodifusora Mexicana S. A.
<b>XEX</b> 1210 500	Mexico City, D. F. "Excelsior" Cia Editorial S. A.
<b>XEY</b> 548.8 10	Merida, Yuc. Partido Socialista del Surest.
<b>XEYZ</b> 780 10000	Mexico City, D. F. Radiodifusora Continental S. A.
<b>XEZ</b> 630 500	Merida, Yuc.
<b>XFB</b> 1290 500	Jalapa, Ver. Gobierno del Estado de Veracruz.
<b>XFC</b> 805 350	Aguascalientes, Ags. Gobierno del Estado de Aguascalientes.
<b>XFG</b> 638.3 2000	Mexico City, D. F. Secretaria de Guerra y Marina.
<b>XFO</b> 940 5000	Mexico City, D. F. National Revolucionario Party.
<b>XFX</b> 840 500	Mexico City, D. F. Secretaria de Educacion Publica.
<b>YVIBC</b> 960 5000	Caracas, Venez. Cia Ama Alamacen Americana.
<b>YV2BC</b> 882 100	Caracas, Venez.
<b>YV3BC</b> 1200 1000	Caracas, Venez. Degwitz & Siblesz.
<b>10-AK</b> 1200 15	Stratford, Ont. M. I. Higgins, 151 Ontario St.
<b>10-AT</b> 1155 25	Trail, B. C. Trail Amateur Radio Assn.
<b>10-BI</b> 1200 25	Prince Albert, Sask. Prince Albert Radio Club.
<b>10-BP</b> 1200 25	Wingham, Ont. W. T. Cruickshank.
<b>10-BQ</b> 1200 15	Brantford, Ont. Tom and Harold Brown.
<b>10-BU</b> 1200 15	Canora, Sask. Canora Radio Assn.

## Symptoms of Sick Sets

(Continued from page 22)

locate that every joint in the circuit had to be resoldered before the trouble ceased.

### Connecting S. W. Converter

*How can I go about connecting an Audiola short-wave converter to my Colonial model 32 AC receiver?*

The converter has four leads. One goes to a large prong on the -80 rectifier tube in your receiver, which is the high voltage side. This provides the necessary plate potential for your tubes in the converter. One prong only of the -80 is the proper one to connect to, and you must experiment with both prongs to locate the proper one. Be careful of the high voltage!

One wire of the converter, through a small condenser, next connects to the antenna terminal of the receiver; another wire connects to the ground terminal. The antenna wire connects to your converter. The wire leading to the antenna of the Colonial set from the converter must be as short and direct as possible without close contact with other wires.

The Colonial set is a tuned radio frequency circuit and is not as powerful as a superheterodyne. But the converter turns it into a short-wave superheterodyne. Short wave tuning is complicated, and we suggest you follow short wave articles in RADEX, particularly the one in May RADEX dealing with tuning problems.

### Changing Tubes

*Will it be practicable to change the older tubes in my Radiola 82 over to the newer 56 and 57 types of tubes?*

We do not believe the improvement in volume will be remarkable, but there will be some other advantages if certain of the tubes are changed. The first tube, a -24, can be replaced with a 57. While the two intermediate-frequency tubes could be replaced with 57s, tuning and adjustments would be necessary. Since there is no first audio amplifier in this circuit there is no position where a 56 tube can be used, unless in the second detector (-27), and that would be a mere experiment because of the critical adjustments in the tuning of that tube.

*Now is your opportunity to buy a high grade world globe for a low price. See back cover.*

# One Hundred Best

## Short Wave Stations

### Arranged Alphabetically

Stations marked with an asterisk (\*) will not verify. Frequencies are given in megacycles. Times are given in Eastern Standard.

- \*British Ships, 13.220, 8.831, 4.174  
\*CEC, Chile, 19.678, 15.855  
CGA, Canada, 13.296, 9.340  
CNR, Morocco, 12.820  
CTIAA, Portugal, 9.592. Tues. and Fri., 4:30 to 7:00 p.m.  
DAF, Germany, 12.394  
DFB, Germany, 17.512  
DIQ, Germany, 10.285  
DJA, Germany, 9.552. 7 to 9 p.m.  
DJB, Germany, 15.190. 8 a.m. to 6:30 p.m.  
DJC, Germany, 6.017. 7 to 9 p.m.  
DJD, Germany, 11.753. 10 a.m. to 6 p.m.  
EAQ, Spain, 9.862. 5:30 to 7 p.m. daily and 1-3 p.m. Sat.  
EHY, Spain, 10.164  
FTM, France, 19.282  
FZS, Indo-China, 11.983  
\*German Ships, 13.135, 10.163, 8.328, 4.174  
GAS, England, 18.304  
GBB, England, 13.500  
GBS, England, 12.148  
GBW, England, 14.450  
GSA, England, 6.050. 1 to 5:30 p.m.  
GSB, England, 9.510. 10:30 a.m. to 12:30 p.m.; 3 to 5:30 p.m.; 6 to 8 p.m.  
GSC, England, 9.585  
GSD, England, 11.750. 1 to 5:30 p.m.; 11:30 p.m. to 1:30 a.m.  
GSE, England, 11.865  
GSF, England, 15.140. 6 to 8 a.m.; 8:30 a.m. to 12:30 p.m.; 1 to 3 p.m.; 11:30 p.m. to 1:30 a.m.  
GSG, England, 17.770. 6 to 8 a.m.; 8:30 to 10:30 a.m.  
HBL, Switzerland, 9.580. Sat., 5 to 5:45 p.m.  
HBP, Switzerland, 7.872. Sat., 5 to 5:45 p.m.  
HI-1-A, Santo Domingo, 6.272. 8-8:30 a.m.; 12:30-1:30 p.m.; 8-9 p.m.  
\*HJB, Colombia, 14.930  
\*HJY, Colombia, 18.444  
HJ1ABB, Colombia, 5.793. 8-10 p.m. daily  
HJ2ABA, Colombia, 5.879. 7:30 to 10 p.m.  
HJ4ABB, Colombia, 7.139. Sat., 11 p.m. to Mid.; Sun. 3-5 p.m.; Wed., 8-10 p.m.  
HJ4ABE, Colombia, 5.879. Mon., Wed., Fri., 7:30-9:30 p.m.  
HSP, Siam, 17.719  
HVJ, Vatican City, 15.120  
IAC, Italy, 12.785  
I2RO, Italy, 11.800. 11:30 a.m. to 12:30 p.m.; 1:15 to 6 p.m.  
J1AA, Japan, 9.862. 5 to 8 a.m.  
KAY, Philippines, 14.980  
KAZ, Philippines, 9.990  
\*KKP, Hawaii, 16.024  
LSN, Argentina, 9.895  
LSX, Argentina, 10.345  
LSY, Argentina, 18.116  
\*OCI, Peru, 18.670  
OXY, Denmark, 9.520. 2 to 6:30 p.m.  
PHI, Holland, 17.761. 8-10 a.m. Mon., Tues., and Fri.; 8 to 10:30 a.m. Sat. and Sun.  
PLV, Java, 9.410  
Pontoise, France, 15.234. 8-11 a.m.  
11.898. 11:30 a.m. to 1:15 p.m.  
11.711. 3-5 p.m. and 6-11 p.m.  
\*PPU, Brazil, 19.270  
PRADO, Ecuador, 6.618. Thursday, 9-11 p.m.  
\*PSF, Brazil, 14.682  
Rabat, Morocco, 12.820. Sun, 7:30 to 9 a.m.  
8.218. Sun, 2:30 to 5 p.m.  
\*RXF, Panama, 14.545  
TGA, Guatemala, 14.545  
TIR, Costa Rica, 14.545  
TI4NRH, Costa Rica, 9.670. 6:30 to 7:30 p.m.  
\*VE9CS, Canada, 8 to 10 p.m.  
VE9DR, Canada, 6.005. 7:30 a.m. to Midnight; Sun., noon to 11:15 p.m.  
VE9GW, Canada, 6.092. Mon., Tues. 8 a.m. to noon; Thurs., Fri. 4-8 p.m.; Sat. 4 p.m. to midnight; Sun. 11 a.m. to 9 p.m.  
VE9HX, Canada, 6.110. 8:30-11:30 a.m.; 5-10 p.m.  
VE9JR, Canada, 11.710. For Schedule, see S. W. News Section  
VK2ME, Australia, 10.520.  
9.585. Sunday, 12:30-2:30 a.m.; 4:30-8:30 a.m.; 9:30-11:30 a.m.  
VK3ME, Australia, 9.503. Wed., 5-6:30 a.m.; Sat., 5-7 a.m.  
YPN, Bahamas, 4.513  
YVZ, India, 17.533  
\*WEA, U. S. A., 10.601  
\*WEF, U. S. A., 9.488  
\*WNC, U. S. A., 15.055  
W2XAD, U. S. A., 15.320. Mon., Wed., Fri., 3-4 p.m.; Sun, 2-4 p.m.  
W1XAL, U. S. A., 6.040. Sat., 6-7 p.m.; Sun., 7:30-9:30 p.m.; other days, 9-10 p.m.  
W2XAF, U. S. A., 9.530. 7 p.m. to 1 a.m.  
W2XE, U. S. A., 15.258. 11 a.m. to 1 p.m.  
11.823. 3 to 5 p.m.  
6.116. 6 to 11 p.m.  
W3XAL, U. S. A., 17.772. 12:30 to 6:30 p.m. except Sat. 6.096 3 p.m. to midnight, Saturday  
W3XAU, U. S. A., 9.585. 11 a.m. to 5 p.m.  
6.057. 7 p.m. to midnight  
W3XL, U. S. A., 6.421. Irregular  
W8XX, U. S. A., 21.451. 7 a.m. to 2 p.m.  
15.204. 10 a.m. to 4:15 p.m.  
11.870. 4:30-10 p.m.  
6.140. 4:30 p.m. to 12:30 a.m.  
W9XAA, U. S. A., 6.076. 3 to 6 p.m.  
W9XF, U. S. A., 6.100. Silent Sat.; Sun, 1-2:30 p.m.; 4:30-7 p.m.; 9 p.m. to 2 a.m.; other days, 4:30-8 p.m.; 9:30 p.m. to 2 a.m.  
XAM, Mexico, 11.187  
XETE, Mexico, 9.600. 2:30-5 p.m.; 6:30 p.m. to midnight  
\*YNA, Nicaragua, 14.480. Phones Hialeah  
\*YVQ, Venezuela, 13.337. Phones Hialeah  
\*YVR, Venezuela, 18.296 and 9.168  
YV1BC, Venezuela, 6.112. 5:15 to 10 p.m.  
YV2AM, Venezuela, 14.102. Sun., 6:30 to 11:30 a.m.  
YV3BC, Venezuela, 9.510. 9:30 to 10 p.m.  
6.134. 10:30 a.m. to 1 p.m. and 4:30-9:30 p.m.; Sun., 8:30 a.m. to noon and 3-6:30 p.m.  
\*ZFA, Bermuda, 5.045  
\*ZFB, Bermuda, 10.060

Next month, with 400 stations cooperating, the special DX programs commence in earnest. Watch for the November DX Calendar.

# One Hundred Best Short Wave Stations

## By Frequencies and Wave Lengths

Submitted by our readers as being most regularly received. First column gives frequency in megacycles (for kilocycles read the decimal point as a comma) and the second column, wavelengths in meters.

For complete lists of short wave stations see the following issues of this magazine:

September: Foreign stations arranged by countries.

November: American stations by States.

December: Canadian stations by Provinces and Complete list by call letters.

April: Complete list by frequencies and wave lengths.

Stations marked with an asterisk (\*) will not verify.

Broadcast, B.	Phone, P.						
4.174	71.82	*British Ships	P	11.725	25.57	PHI, Huizen, Holland	B
4.174	71.82	*German Ships	P	11.750	25.51	GSD, Daventry, England	B
4.283	70.00	Italian Ships	P	11.753	25.51	DJD, Zeesen, Germany	B
4.513	66.43	VPN, Nassau, Bahamas	P	11.800	25.40	I2RO, Rome, Italy	B
4.753	63.08	*WOO, Ocean Gate, N. J.	P	11.823	25.36	W2XE, Wayne, N. J.	B
5.045	59.42	*ZFA, Hamilton, Bermuda	P	11.865	25.27	GSE, Daventry, England	B
5.793	51.75	HJ1ABB, Barranquilla, Colombia	B	11.870	25.25	W8XK, Pittsburgh, Pa.	B
5.879	51.00	HJ2ABA, Tunja, Colombia	B	11.898	25.20	Pontoise, France	B
5.879	51.00	HJ4ABE, Medellin, Colombia	B	11.983	25.02	FZS, Saigon, Indo-China	P
6.005	49.93	VE9DR, Montreal, Quebec	B	12.148	24.68	GBS, Rugby, England	P
6.017	49.83	DJC, Zeesen, Germany	B	12.394	24.19	DAF, Norden, Germany	P
6.040	49.64	W1XAL, Boston, Mass.	B	12.785	23.45	IAC, Coltano, Italy	P
6.050	49.56	GSA, Daventry, England	B	12.820	23.38	CNR, Rabat, Morocco	P
6.057	49.50	W3XAU, Philadelphia, Pa.	B	12.820	23.38	Rabat, Morocco	B
6.074	49.39	*VE9CS, Vancouver, B. C.	B	13.135	23.00	*German Ships	P
6.076	49.34	W9XAA, Chicago, Ill.	B	13.220	22.68	*British Ships	P
6.092	49.22	VE9GW, Bowmanville, Ont.	B	13.296	22.55	CGA, Drummondville, Quebec	P
6.096	49.17	W3XAL, Boundbrook, N. J.	B	13.337	22.48	*YVQ, Maracay, Venezuela	P
6.100	49.15	W9XF, Chicago, Ill.	B	13.500	22.09	GBB, Rugby, England	P
6.110	49.07	VE9HX, Halifax, N. S.	B	14.102	21.26	YV2AM, Maracaibo, Venezuela	B
6.112	49.10	YV1BC, Caracas, Venezuela	B	14.450	20.75	GBW, Rugby, England	P
6.116	49.02	W2XE, Wayne, N. J.	B	14.480	20.70	*YNA, Managua, Nicaragua	P
6.134	48.87	YV3BC, Caracas, Venezuela	B	14.545	20.69	*RXF, Panama City, Panama	P
6.272	47.80	HI-1-A, Santiago de los Caballeros, Dominican Republic	B	14.545	20.69	TGA, Guatemala City, Guatemala	P
			B	14.545	20.69	TIR, Cartago, Costa Rica	P
6.421	46.69	W3XL, Boundbrook, N. J.	B	14.682	20.42	*PSF, Rio de Janeiro, Brazil	P
6.618	45.31	PRADO, Riobamba, Ecuador	B	14.930	20.08	*HJB, Bogota, Colombia	P
7.139	42.00	HJ4ABB, Manizales, Colombia	B	14.980	20.01	KAY, Manila, Philippines	P
7.872	38.47	HBP, Prangins, Switzerland	B	15.055	19.91	*WNC, Hialeah, Florida	P
8.218	36.36	Rabat, Morocco	B	15.120	19.83	HVJ, Vatican City	B
9.168	32.70	*YVR, Maracay, Venezuela	P	15.140	19.81	GSF, Daventry, England	B
9.410	31.86	PLV, Bandoeng, Java	P	15.190	19.73	DJB, Zeesen, Germany	B
9.488	31.60	*WEF, Rocky Point, N. Y.	P	15.204	19.72	W8XK, Pittsburgh, Pa.	B
9.503	31.55	VK3ME, Melbourne, Australia	B	15.234	19.68	Pontoise, France	B
9.510	31.53	GSB, Daventry, England	B	15.258	19.65	W2XE, Wayne, N. J.	B
9.510	31.52	YV3BC, Caracas, Venezuela	B	15.320	19.57	W2XAD, Schenectady, N. Y.	B
9.520	31.49	OXY, Sknlebaek, Denmark	B	15.855	18.91	*CEC, Santiago, Chile	P
9.530	31.46	W2XAF, Schenectady, N. Y.	B	16.024	18.71	*KKP, Kahuku, Hawaii	P
9.552	31.38	DJA, Zeesen, Germany	B	17.512	17.12	DFB, Nauen, Germany	P
9.580	31.30	HLB, Prangins, Switzerland	B	17.533	17.10	VWZ, Poona, India	P
9.585	31.28	GSC, Daventry, England	B	17.580	17.05	*British Ships	P
9.585	31.28	VK2ME, Sydney, Australia	B	17.719	16.92	HSP, Bangkok, Siam	P
9.592	31.25	CT1AA, Lisbon, Portugal	B	17.761	16.88	PHI, Huizen, Holland	B
9.600	31.23	XETE, Mexico City, D. F.	B	17.770	16.88	GSG, Daventry, England	B
9.670	31.00	T14NRH, Heredia, Costa Rica	B	17.772	16.87	W3XAL, Boundbrook, N. J.	B
9.862	30.40	EAQ, Madrid, Spain	B	18.116	16.55	LSY, Buenos Aires, Argentina	P
9.862	30.40	J1AA, Tokyo, Japan	B	18.296	16.39	*YVR, Maracay, Venezuela	P
9.895	30.30	LSN, Buenos Aires, Argentina	P	18.304	16.38	GAS, Rugby, England	P
9.990	30.01	KAZ, Manila, P. I.	P	18.444	16.25	*HJY, Bogota, Colombia	P
10.060	29.80	*ZFB, Hamilton, Bermuda	P	18.670	16.06	*OCI, Lima, Peru	P
10.164	29.79	EHY, Madrid, Spain	P	19.270	15.57	*PPU, Rio de Janeiro, Brazil	P
10.285	29.15	DIQ, Zeesen, Germany	Ex.	19.282	15.55	FTM, Ste. Assise, France	P
10.345	28.98	LSX, Buenos Aires, Argentina	Exp.	19.678	15.24	*CEC, Santiago, Chile	P
10.520	28.50	VK2ME, Sydney, Australia	P	19.684	15.23	EAQ, Madrid, Spain	P
10.601	28.28	*WEA, Rocky Point, N. Y.	P	21.020	14.27	LSN, Buenos Aires, Argentina	P
11.187	26.80	XAM, Merida, Yucatan	P	21.069	14.23	*PSA, Rio de Janeiro, Brazil	P
11.710	25.60	VE9JR, Winnipeg, Man.	B	21.470	13.96	GSH, Daventry, England	B
11.711	25.60	Pontoise, France	B	21.451	13.93	W8XK, Pittsburgh, Pa.	B



## Exploring the Short Waves

(Continued from page 34)

results above are very poor. There are lots of signals I cannot tune in. Give us Valley s.w. fans a break and some help."

R. W. Evans, 832 Richie Ave., Lima, Ohio, reports several new stations he is hearing. "XETE in Mexico City runs from 5:30 to past midnight on 9600 kcs.," he writes. "Programs of XETE are rebroadcast from XEPE on 600, which must be a new one also. VE9HX relays CHNS on 6100 kcs. in the late afternoons, sometimes up till 11 p. m. EST."

The May issue, No. 69, contained the slogans and names of buildings used by stations in announcements, mail addresses, etc.

The June issue, No. 70, contained in the Index by Frequencies, all the broadcasting stations of the world.

The September issue, No. 71, contained a list of 300 stations with time they are to be checked monthly. Also Sunday's time on the air for all stations.

A few back copies left; price 25c each.

## The Ground is Important

(Continued from page 7)

cases, however, the reducer or another wedge-shaped affair, larger in diameter than the pipe, should be attached to the lower end—to facilitate driving and to provide circulation space for water.

### Moisture is Necessary

I maintain that the Ollie Ross, the U. S. Standard, or any kind of rod or pipe ground—no matter how good—can be improved by providing means to wet the soil all the way down.

This ground is much superior to the radiator and cold water pipe grounds, with indoor and short outdoor aerials. There is little choice between grounds for powerful local stations with long roof aerials. I have had no opportunity to check with long roof aerials and distant stations. The outdoor ground is better with WHAS and the Chicago stations. It is handy for installing lightning arrestors outside.

(Concluded on page 80)

## That's What Our Readers Say

"We are certainly delighted to know that part of the prize money was used to renew your subscription to RADEX. We think it is the finest and most complete radio magazine published today."—Radio Station CFCO, Chatham, Ontario, in a letter to F. W. A. Barnett, 5 Chapman St., Anderston, Dunedin, New Zealand.

"After you have used RADEX once, it would seem an impossibility to DX without it. We recommend RADEX to our members as the *one and only* authentic radio publication."—Henry P. Allen, Vice President, Atlantic Radio Club, 513 City Line, Oak Lane, Philadelphia.

"I find RADEX invaluable when doing DX work—as a matter of fact, I could not do DX work without it."

—Robert Mumford, Brighton Villa, 47, Sydney Parade, County Dublin, Irish Free State.

"Thank you for your splendid magazine. It is a real radio guide. Have been reading RADEX about a year now and do not miss a copy."—Sergeant Wm. Senkewich, Co. F, 16th Infantry, Ft. Jay, N. Y.

"I have read almost every radio magazine on the market but I have never seen one that came as near being perfect as RADEX."—Dolphus Whitten, Jr., Gurdon, Arkansas.

"In my opinion it is the greatest book of its kind. I'll have RADEX as long as I have the money to buy it."—Wallace Archambeau, Ironwood, Mich.

This pipe ground is cheap and can be planted in a very small space, close to the house, and again I say to the members, try it out this Summer with radiator and cold water pipe grounds also available. You are due for surprises!

## Keeping Step with Radio

(Continued from page 31)

a letter he received from a reader in New Zealand, Chas. G. Forbes, Grant Road, Woodville, N. Z. The letter is an interesting one regarding radio in our Antipodes. Mr. Forbes, who is a journalist in Woodville, would like to exchange cards with other readers. Mr. Morgan also sends us samples of the hand-illustrated verifications he is now sending to stations heard. Attractively drawn in ink and in colors, Mr. Morgan's verifications will constitute a most unusual and valuable collection.

George W. Burns, 2466 Wahl Terrace, Cincinnati, Ohio, sends us a clipping from the Tombstone (Ariz-

zona) Epitaph regarding a new station, KSUN, to be installed at Bisbee, Ariz., by the Copper Electric Company, the owners of the new KIGY at Lowell, Ariz. Who can give us the details?

Robert Base, 4105 Alto Road, Baltimore, Md., sends us a photograph of his Scott set and some of his verifications which we are sorry we are unable to reproduce. He has a business-like DX outfit.

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Hanna Building  
Cleveland, Ohio.

Enclosed find \$..... for which send me postpaid my choice of your offers as checked below:

- Program "Slates"  1 for 10c  2 for 15c  4 for 25c
- One radio map of North America..... 15c
- One Radio World Map and Time Converter..... 25c
- One copy of the next RADEX..... 25c
- Trial subscription, next five issues of RADEX..... \$1.00
- One year's subscription to RADEX, 10 issues and World Map-Converter, free..... 1.75
- Two subscriptions to RADEX with one leatherette cover and Map-Converter, both free..... 3.50
- One two-year subscription with leatherette cover and Map-Converter, both free..... 3.50
- Leatherette Cover..... .50

Write Name plainly.....

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City and State.....

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# A "SLATE" for Your Radio Programs

How annoying it is to miss some favorite feature because you forgot this was the night or the hour for it.

Use our Radio "Slate" and you won't miss the programs you want to hear.

Four pages; printed on fine Bristol board so entries may be erased and kept up-to-date.

Spaces for each 15-minute period for every evening of the week and Sunday afternoon.

Price, 10 cents each, two for 15c,  
four for a quarter

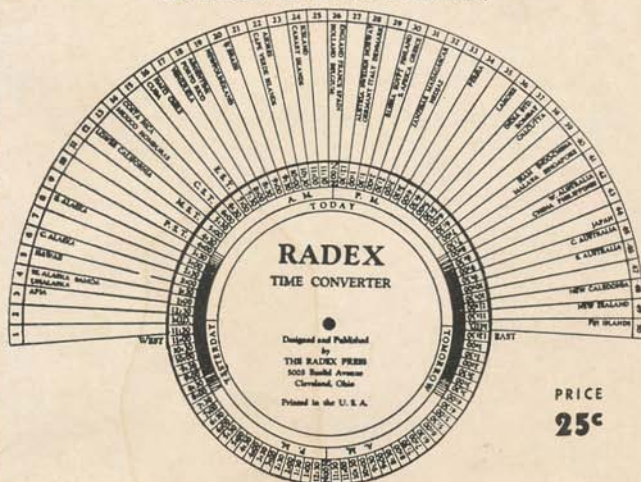
## RADIO PROGRAMS

Time	MONDAY			TUESDAY		
	Program	Call	Dial	Program	Call	Dial
6:00						
6:15						
6:30						
6:45						
7:00						
7:15						
7:30						
7:45						
8:00						
8:15						
8:30						
8:45						
9:00						
9:15						
9:30						
9:45						
10:00						
10:15						
10:30						
10:45						
11:00						
11:15						
11:30						
11:45						
12:00						

Actual size 5 x 7 inches

## RADEX RADIO MAP of the WORLD

Showing all Countries and their Principal Cities  
with Call Letters and Time Zones of each Country



PRICE  
**25¢**

Just turn the dial to the time in your zone and—Presto: Change—there is the time for every other place in the world.

No adding; no subtracting; no trying to figure which is yesterday, today or tomorrow. The dial does it all.

Big map of the world showing all principal cities and their time zones.

Only a Quarter Postpaid to any country.

DIRECTIONS—Turn the desired hour, either A.M. or P.M., in the sector marked "TODAY" opposite your own zone and the correct time in all other zones in the world will be shown. It will also be indicated which of the other zones are "Yesterday" and which are "Tomorrow". The position of twilight, darkness and dawn is graphically shown. Or, if you desire to tune in a New Zealand program, turn the hour of the program (say 9:00 p.m.) in the New Zealand sector and you will find that it is 6:30 A.M. some day in Eastern Standard Zone or 11 P.M. yesterday in Hawaii.

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*Every Radio Fan Can Afford to Own*

Right up to the minute and so large every state in the U. S. A. and all the principal cities are plainly shown. Twelve inches in diameter—nearly 39 inches in circumference—beautifully printed in many colors. Ball is substantial metal.

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