

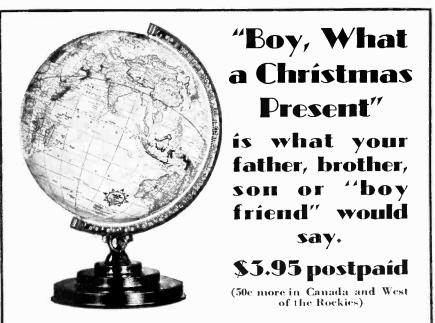
THE ALL-WAVE RADIO MAGAZINE





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

N. S. E.



This beautiful World Globe stands seventeen inches high and measures nearly 38 inches in circumference. Finished in eight brilliant colors and the last word in geographical changes. All the principal cities are shown. A Manual of Facts explains how to use a globe. Ideal for measuring distances.

A Short Wave Globe

For only 25c additional (\$4.20) we will send a Globe on which the leading short-wave stations of the world are marked.

For Only \$1.95 (\$2.30 in Canada and West of the Rockies)

We can furnish a smaller Globe but one which still measures 28 inches in circumference. This is unusual value for the price. Brilliant colors, washable, substantial. Contains the very latest changes in territory and spelling.

RADIO PARTS CO.

1401 Prospect Ave.

Cleveland, Ohio.

December 1, 1934



B. FRANCIS DASHIELL Technical Editor

ELEVENTH YEAR



FRED CLAYTON BUTLER Editor and Publisher



PAGE TAYLOR Short Wave Editor

NUMBER 84

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THE DECEMBER DX CALENDAR

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

							-		
			ILY		3:00-3:20	WCAX		100	Burlington
12:00-12:05	5 VAB	685		Glace Bay	3 :10-3:30	WSYB	1500	100	Rutland
12:00-1:00	WFLA	620	1000	Clearwater		WTEL	1310	100	Philadelphia
	WMC	780		Memphis	3:20-3:40	WIBX	1200	100	Utica
12:00-6:00	KFAC	1300	1000	Los Angeles	3 :30-3 :50	WQDM		100	St. Albans
12:00-8:00	KJBS	1070		San Francisco		WKOK	1210	100	Sunbury
1:00-7:00	WEDC	1210	100	Chicago	3:40-4:00	WMBO		100	Auburn
5:30-7:00	WSPA	1420	100	Spartanburg	3:45-4:00	KUJ	1370	100	Walla Walla
6:00-7:00	KFBI	1050		Abilene	3 :50-4 :10	WGLC	1370	100	Hudson Falls
	Su		Mornin	gs	1.00 1.00	WBAX	1210	100	Wilkes-Barre
			mber 2		4 :00-4 :2 0	WCAD	1220	500	Canton
1:00-2:00	WWAE	1200	100	Hammond	4:10:4:30	KOOS	1200	250	Marshfield
2:00-3:30	KVOA	1260	500	Tucson	a.10.a.30	WBBL KGBU	1210	100	Richmond Ketchikan
2:00-4:00	CHAB	1200	100	Moose Jaw	4:20-4:40	WNBZ	1290	500 50	Saranac Lake
3:00-3:20	KLCN	1290	100	Blytheville	4.20-4.40	WBRE	1310	100	Wilkes-Barre
3:30-3:50	KXYZ	1440	250	Houston		KOVO	1200	100	Missoula
3:50-4:10	KTUL	1400	250	Tulsa	4:30-4:50	WNBO	1200	100	Washington
4:00-4:20	KPAC	1260	500	Pt. Arthur	a.00-a.00	KPQ	1500	100	Wenatchee
4:10-4:30	KGDY	1340	250	Huron	4:40-5:00	WRAW		100	Reading
4:20-4:40	KRGV	1260	500	Weslaco	110 0.00	KGY	1210	100	Olympia
4:50-5:10	KARK	890	250	Little Rock	4:50-5:10	WAAT	940	300	Jersey City
5:00-5:20 5:20-5:40	WNAD	570 1010	500 500	Wichita Falls Norman		KRKO	1370	50	Everett
5:40-6:00	KUOA	1260	1000	Fayetteville	5:00-5:20	WSYR	570	250	Syracuse
0.40-0.00	ROOM		nber 9	rayettevine		KFXD	1200	100	Nampa
2:00-3:00	PTT		15000	Strasbourg	5:10-5:30	KVL	1370	100	Seattle
2.00-0.00	LR5	830	2500	Buenos Aires*		WCAC	600	500	Storrs
3:00-4:00	WOS	630	500	Jefferson City	5:20-5:40	KGEZ	1310	100	Kalispell
0.00-4.00	WBOQ		50000	New York	5:30-5:50	KUJ	1370	100	Walla Walla
*This may				New York	5:40-6:00	KGCX	1310	100	Wolf Point
			nber 16		5:50-6:10	KFQD	780	250	Anchorage
12:00-1:00	WHO		50000	Des Moines	6:00-6:20	KSEI	900	250	Pocatello
1:00-1:30	WSUI	880	500	Iowa City	6:10-6:30	KVOS	1200	100	Bellingham
1:00-3:00	WHAZ	1300	500	Troy	6:20-6:40	KIT	1310	100	Yakima
1:30-2:00	KFNF	890	500	Shenandoah	6 :30 -6 :50	KRSC	1120	100	Seattle
2:00-2:30	WOI	640	5000	Ames	6:40-7:00	KXRO	1310	100	Aberdeen
2:00-3:00	KFJB	1200	100	Marshalltown	6:50-7:10	KFIO	1120	100	Spokane
2:30-3:00	KMA	930	500	Shenandoah	7:00-7:20	KFJI	1210	100	Klamath Falls
3 :00-3 :30	WMT	600	500	Waterloo	7:10-7:30	KMED	1310	100	Medford
	\mathbf{KSO}	1320	500	Des Moines	7 :20-7 :40	KORE	1420	100	Eugene
3 :30-4 : 00	KSCJ	1330	1000	Sioux City			Decem	iber 10	
	KGCA	1270	100	Decorah	2:00-3:00	LR5	830	25000	Buenos Aires
4:00-4:30	KWLC	1270	100	Decorah				ber 24	
	KFGQ	1370	100	Boone	3:00-5:00	XED	1160	50 0	Guadalajara
4:30-5:00	KOIL	1260	1000	Council Bluffs			Decem	ıber 31	
5:00-5:30	KWCR	1430	250	Cedar Rapids	2:00-2:15	WAVE		1000	Louisville
	woc	1370	100	Davenport				10, 17,	
		ecemi	ber 9, 23	1	12:00-3:00	WCNW	1500	100	Brooklyn
2:00-5:00	VOGY	840	400	St. John's	1:00-2:30	XEX	1310	125	Monterrey
			iber 23		2:30-4:30	CKMO	1410	100	Vancouver
1:00-1:30	WKY	900	1000	Oklahoma City	4 :30-5 :00	WNBO	1200	100	Washington
2:00-3:00	KGEK	1200	100	Yuma		т.	arday	Mornin	
2:30-4:30	CKBI	1210	100	Prince Albert			-		.y.
10.00 1.00			9, 16, 2				Decen	nber 4	
12:00-1:00 12:00-2:00	WGAR WGES	1450	500	Cleveland	2:00-2:20	WQDX	1210	100	Thomasville
12:00-3:00	CMCD	1360 955	500 150	Chicago Hayana	2:10-2:30	WBHS	1200	100	Huntsville
1:00-1:15	KOMA	1480	5000	Oklahoma City	2:20-2:40	WHBQ	1370	100	Memphis
2:00-4:00	XEMO	865	2500	Tijuana	2:30-2:50	WEED	1420	100	Rocky Mount
2:00-5:00	WMMN	890	250	Fairmont	2 :40 -3 :00	WOPI	1500	100	Bristol
2:00-6:00	TGW		10000	Guatemala	2:50-3:10	WSMB	1320	500	New Orleans
3:00-5:00	CKOV	630	100	Kelowna	3 :00 -3:20	WMBR	1370	100	Jacksonville
0.00 0.00	CFCT	1450	75	Victoria	3:10-3:30	WNRA	1420	100	Muscle Shoals
4:00-5:00	CFJC	880	100	Kamloopa	3:20-3:40	WSJS	1310	100	Winston-Salem
				-	3:30-3:50	WHEF	1500	100	Kosciusko
	MIC		Mornin	y.	3:40-4:00	KMLB	1200	100	Monroe
2:00-2:20	WCNW	1500	1ber 3 100	Brooklyn	3:50-4:10	WAGF	1370	100	Dothan
2.00-2.20	WJAC	1310	100	Johnstown	4:00-4:20	KWG WTJS	1200	100 100	Stockton
2:10-2:30	WFAS	1210	100	White Plains	4:10-4:30	KPJM	1310 1500	100	Jackson Prescott
2.10-2.00	WRAK	1370	100	Williamsport	4:20-4:40	WPFB	1370	100	Hattlesburg
2:20-2:40	WNBF	1500	100	Binghamton	1.20-1.40	KERN	1370	100	Bakersfield
2.20 2.20	WCHS	580	500	Charleston	4:30-4:50	WGPC	1420	100	Albany
							1500	100	
2:30-2:50		1420	100	Presque Isle		KXO			
2:30-2:50	WAGM		100 100	Presque Isle Danville	4:40-5:00	KXO WBNO			El Centro New Orleans
2:40-3:00		1420 1370 1200	100 100 100	Presque Isle Danville Lynchburg	4:4 0-5:00	KXO WBNO KIEM	1200	100	New Orleans
	WAGM WBTM	1370	100	Danville		WBNO KIEM	$\begin{array}{c} 1200 \\ 1210 \end{array}$	100 100	New Orleans Eureka
2:40-3:00	WAGM WBTM WLVA	$1370 \\ 1200$	100 100	Danville Lynchburg		WBNO	$\begin{array}{c} 1200 \\ 1210 \end{array}$	100 100	New Orleans Eureka

Analyzing the 1935 MIDWEST

• • • By B. FRANCIS DASHIELL

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

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

Covers Radio Spectrum

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

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

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

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

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

Vernier Dial Action

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



The 1935 Midwest Receiver

4:50-5:10	WROI	. 1310	100	T			_		
4.00-0.10	KLS	1440		Knoxville				iber 26	i
5:00 5:00				Oakland	5:30-5:45	WFBG	1310		Altoona
5:00-5:20				Durham				r 12, 19	, 26
2.10 5.00	KGIX		100	Las Vegas	2:00-2:30	WROK		500	Rockford
5:10-5:30	WJBW		100	New Orleans			nber 5	, 12, 19	, 26
	KGMI		250	Honolulu	10:00-1:00	CMBX	1425	250	Havana
5:20-5:40	WAMI		100	Laurel	2:30-4:30	CKMO	1410	100	Vancouver
	KRE	1370	100	Berkeley	6 :00-6 :30	WASH	1270	500	Grand Rapids
5:30-5:50	WSIX	1210	100	Springfield					-
	KGU	750	2500	Honolulu		The	ursday	Morn	ings
5:40-6:00	KGAR	1370	100	Tucson			Decen	nber 6	
5:50-6:10	KCRJ	1310	100	Jerome	2:00-2:20	WSOC	1210	100	Charlotte
6:00-6:20	KGDM	1 1100	250	Stockton	2:10-2:30	WSPA	1420	100	Spartanburg
6:10-6:30	KSUN		100	Lowell	2:30-2:50	WSGN	1310	100	Birmingham
6:20-6:40	KTRB	740	250	Modesto	2:30-3:30	CHWK	780	100	Chilliwack
					2:40-3:00	WJBO	1420	100	Baton Rouge
9.00 4.00	0.04	Decen	nber 11		2:50-3:10	WGCM	1210	100	Gulfport
3:00-4:00	CP4	1040	10000	La Paz	3:00-3:15	KREG	1500	100	Santa Ana
		Decen	nber 18	3	3:00-3:20	WRDW		100	Augusta
1:01-1:09	CFCY	630	500	Charlottetown		WHBY	1200	100	Green Bay
		Decen	nber 25			WDAH	1310	100	El Paso
1:00-2:00	CMJP	1360	75	Moron	3:10-3:30	WKAQ	1240	1000	San Juan
	W					WJMS	1420	100	Ironwood
		driesday		lings		KLUF	1370	100	Galveston
1.00 0.00	KFYR	Decen	nber 5		3:20-3:40	WCSF	1360	500	Charleston
1 :00-2 :00			1000	Bismarck		WEDC	1210	100	Chicago
1.00.0.00	CMJP	1360	75	Moron		KTSM	1310	100	El Paso
1:30-2:00	WHBL		5 00	Sheboygan	3:30-3:50	WBIG	1440	500	
1:30-2:30	WSUI	880	500	Iowa City	0.00-0.00	KGKL	1370	100	Greensboro
2:00-2:20	WEBR		100	Buffalo	3:40-4:00	WCOA	1370	100 500	San Angelo Pensacola
2:10-2:30	WPEN		100	Philadelphia	3.40-4.00	WSBC			
2:20-2:40	WSAJ	1310	100	Grove City			1210	100	Chicago
2:30-2:50	WHIS	1410	250	Bluefield	2.50 4.10	KFPM	1310	15	Greenville
2:40-3:00	WFBG		100	Altoona	3:50-4:10	WQBC	1360	500	Vicksburg
2:50-3:10	WPHR		100	Petersburg		KFIZ	1420	100	Fond du Lac
3:00-3:20	WDAS	1370	100	Philadelphia	4.00 4.00	KMAC	1370	100	San Antonio
	WKBB		100	East Dubuque	4:00-4:20	WDBO	580	250	Orlando
3:10-3:30	WRBX	1410	250	Roanoke		WEBQ	1210	100	Harrisburg
	WHBC	1200	100	Canton		KFYO	1310	100	Lubbock
	KGIW	1420	100	Alamosa	4:10-4:30	WNBR	1430	500	Memphis
3:20-3:40	WMBC	3 1210	100	Richmond		WMPC	1200	100	Lapeer
	WTRC		50	Elkhart		KONO	1370	100	San Antonio
	KICA	1370	100	Clovis	4:20-4:40	WQAM	560	1000	Miami
3:30-3:50	WBCM		500	Bay City		WHBF	1210	100	Rock Island
	KGHI	1200	100	Little Rock	4 :30-4:50	WDAE	1220	1000	Tampa
	WSVS	1370	50	Buffalo		WKBZ	1500	100	Muskegon
3:40-4:00	WGH	1310	100	Newport News		KFJM	1370	100	Grand Forks
	WGBF		500	Evansville	4:40-5:00	WCBS	1210	100	Springfield
	KIDW	1420	100	Lamar	4:50-5:10	WCOC	880	500	Meridian
3:50-4:10	WOCL	1210	50	Jamestown		WKBV	1500	100	Richmond
0.00 1.10	WROK		500	Rockford	5 :00-5:20	WTAX	1210	100	Springfield
	KBTM		100	Jonesboro		KGBX	1310	100	Springfield
4:00-4:20		880				WIOD	1300	1000	Miami
x .00- x .20	WQAN WBOW		250 100	Scranton	5 :10-5:30	WTOC	1260	1000	Savannah
	KFBB	1280		Terre Haute		WHBD	1370	100	Mount Orab
4:10-4:30	WHEC	1430	1000 500	Great Falls Rochester		KCMC	1420	100	Texarkana
*.10-1.00	WOSU				5:20-5:40	WHBU	1210	100	Anderson
		570	750	Columbus	5:30-5: 50	WIBM	1370	100	Jackson
4:20-4:40	KGFL WSAZ	1370	100	Roswell		KGFF	1420	100	Shawnee
4.20-4.40	WBEO	1190	1000	Huntington	5:40-6:00	WOMT	1210	100	Manitowoo
4:30-4:50		1310	100	Marquette		KNOW	1500	100	Austin
	WGAL WKBN	1500 570	100 500	Lancaster Youngstown			Decem		
	WABN				3:01-3:09	CHSJ	1120	100	St. John
4:40-5:00	WCAL	1250 1070	1000 100	Northfield				ər 6, 2	0
4.40-3.00	WCAZ	1200		Carthage	3:00-4:00	XEFI	1440	250	Chihuahua
4.50 5.10	KFJB		100	Marshalltown			Decem		e initianua
4:50-5:10	WKBF	1400	500	Indianapolis	3:15-3:45	KFH	1300	1000	Wichita
	WACO	1420	100	Waco	5:30-6:00	WRAW	1310	100	Reading
5:00-5:20	WDZ	1070	100	Tuscola	0.00 0.00	Decem		13, 2	a 27
F-10 7 85	KGDE	1200	100	Fergus Falls	12:00-3:00	WCNW	1500	100	Brooklyn
5:10-5:30	WLBL	900	25 00	Stevens Point					
	WLB	1250	1000	Minneapolis				iornin	gs
5:20-5:40	WBAA	890	500	W. Lafayette	1 00 0 00	T :00	Dece m		
	WIL	1200	100	St. Louis	1:30-3:00	1.82	1190 4		Buenos Aires
5:30-5:50	WTAD	1440	500	Quincy	3:00-3:20	WJW	1210	100	Akron
	KGHF	1320	250	Pueblo	0.10.0.00	KRMD	1310	100	Shreveport
5:40-6:00	WXYZ	1240	1000	Detroit	3:10-3:30	WPAD	1420	100	Paducah
		Decem	ber 12		0.00.0	KOTN	1500	100	Pine Bluff
2:30-3:30	CPX		5000	La Paz	3:20-3:40	WSEN	1210	100	Columbus
2.00-0.00	OI Y	Decem		1.8. F 8.2	0.00.0	KFXR	1310	10 0	Oklahoma City
1:01-1:09	CFCY	630	500	Charletteter	3:30-3:50	WELL	1420	50	Battle Creek
2:00-2:30	KWTO	630 560	1000	Charlottetown		KGEK	1200	100	Sterling
				Springfield	3 :40-4 :00	WALR	1 21 0	100	Zanesville
3:00-3:30 3:01-3:09	KSO CHSJ	1320 1120	250 100	Des Moines St. John		KFPL	1310	100	Dublin
					(Contin	ied (n n	age 48)
3:00-5:00	WOPI	1500	100	Bristol	(p	~90 10)

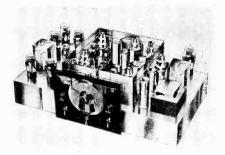
meters. The call letters of many of the world's most important stations are indicated on the dial, and turning the proper scale to some call letter instantly locates the station if it is operating. The dial is controlled at two speeds by means of a slow-fast vernier action which is said to be as good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

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

Shows Type of Broadcast

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

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



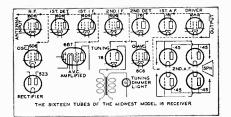
The Midwest 1935 Chassis

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

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

A Sensitivity Control

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



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

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

Tone Shading

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

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

Four Power Tubes

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



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

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

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

(Continued on page 46)

The Career of Roxy

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

Roxy's career might have been quite a different story if the family hadn't moved to New York. But with the youthful faculty of readjustment, he was soon attending P. S. 90 in Brooklyn and serving as cash boy in a 14th Street store. A restless spirit in the lad made it hard for him to stay put very long. His next job was running press dispatches from Coney Island.

Becomes a "Leather-Neck"

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

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

• • • *By* "BETTY"

Tends Bar to Get Girl

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

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



Roxy

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

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

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

"Flopping" to Fame

Block and Sully, the outlandish pair heard in the "Big Show" on CBS, seemingly "flopped to fame." When Jesse Block and Eve Sully first met in a booking office eleven years ago, they viewed each other as "flops." But two negatives usually make a positive, so they not only teamed up on the stage but got married and lived "sappily" ever after. It has brought them rich rewards on the stage, screen and radio.

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

Pepping Up the Act

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

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

His Big Thrill

It was while playing the Orpheum Theatre in Los Angeles that Jesse received the greatest thrill of his lifetime. Charlie Chaplin came backstage at the final curtain to congratulate the troupe. That meeting with the famous comedian was a turning point in the career of young Jesse. He decided then and there that comedy was the paramount form of entertainment, for laughter dispelled tears and brought joy and happiness to people. The erstwhile song and dance kid became a comedian.

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

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

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

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



Block and Sully

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

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

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

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DIALING the S. W. Stations

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

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

Starting to Calibrate

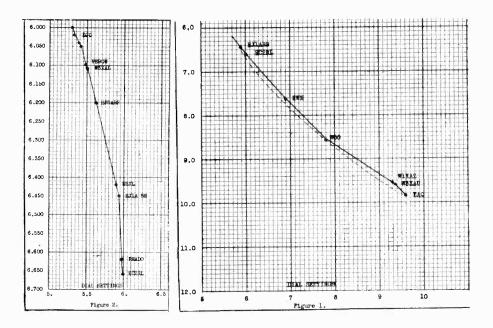
It is early evening, and according to the Short Wave Clock printed monthly in this magazine, it seems that our best chance for success will be in the vicinity of 9 megacycles. Setting the dials about where we think this band is located, we commence tuning, until we pick up a station at 9.3 megs., according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

• • • By PAGE TAYLOR

shortwave lists, works on 9.570 megacycles. Although it has not been very thrilling to pick up Boston, we have made an important step, in that we have definitely located its place on the dial, and are able to plot it. On the graph we locate the point where the line representing Frequency 9,570 crosses the line representing Dial Setting 9.3, and mark the point with a dot. Now that W1XAZ has been plotted. we continue on, locating another station which soon identifies itself as W3XAU on 9.590 megs. This was heard at 9.35 on the dial, so close to 1XAZ that the dots for the two stations, when placed on the graph, nearly run together. Continuing our search, we find another station at 9.6 on the dial, an English-speaking station, but with much better volume than either of the two already picked up. After hearing news bulletins, and wondering why the announcer so carefully spells all the difficult words, we are surprised to learn that we have logged EAQ in Madrid, Spain, which works, according to RADEX, on 9.862 megacycles. The axis of the 9.862 (frequency) line and the 9.6 (dial setting) line is carefully located and a dot placed.

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

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



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

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

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

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

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

A Short Waxe DX

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

The BEGINNERS' STORY of RADIO

PART THIRTEEN

The Power Unit - Rectification

• • By B. FRANCIS DASHIELL

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

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

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

Battery Eliminators

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

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

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

The Power Transformer

Since the power necessary to operate a modern, multi-tube radio receiver varies in potential from only a few volts to several hundred volts —considerably above and below the 110 volts flowing in the power or lighting lines, it becomes essential that an alternating-current *transformer* be utilized to provide the several different voltages required.

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

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

Has Several Secondaries

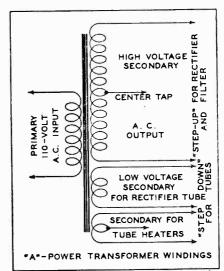
But, instead of winding a single secondary coil over the inside primary coil on the power transformer. we may add as many individual secondaries as we please. The number of turns of wire on each controls the voltage it will deliver. A small secondary is used to provide the low voltage required for the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

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

Using Resistors

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

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



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

The Rectifier

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

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

If the lighting current is the standard 60-cycle kind, then it has 60 positive and 60 negative alternations. As one of each combine to make one cycle there will be 120 alternations and 60 cycles per second. Now, if we cut off the 60 negative alternations by the rectification action, then the 60 positive alternations will remain. The rectified current, as a result, will have a frequency of 60 positive pulsations of direct current each second. But this current, if passed through an audio circuit, will produce the sound of a hum having 60 vibrations a second. Further treatment, then, is necessary.

The Power Unit

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

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

as steadily and uniformly as battery power.

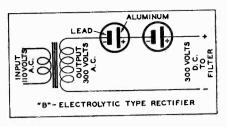
The Electrolytic Rectifier

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

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

The Tube Rectifier

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



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

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

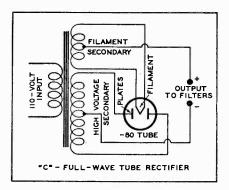
A current of electricity, then, will flow from the plate toward the filament. But, when the potential of the plate is reversed, or made negative, the stream of electrons instantly will be repelled, and, without this movement of electrons toward the plate, no current can flow in the circuit.

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

Full-Wave Rectification

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

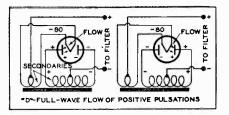
highly efficient and better known to the reader it will be discussed in detail, and illustrated in our diagram of the complete power unit. The fullwave rectifier passes both halves of the alternating potential from the power transformer, and the uni-directional d.c. output resulting from each half-cycle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



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

How It Works

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



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

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

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

(Continued on page 46)

HAPPY NIGHTS are Here Again

Some DX Experiences

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

Midwest and World-Wide

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



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

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

All Set and Ready

"Once again the DX season is in full swing. I am going to try to make this year my greatest in DX thus far." promises Frank Wheeler, 406 Eagle Point, Lakeside, Erie, Pa. "To start the year off right, I cleaned my set and purchased some new tubes. I also erected a new aerial which points east and west. I also have a north and south aerial. I have experimented with both and find that the old aerial brings in the stations a little stronger but the new aerial brings them in much clearer and with quieter reception. I have set several goals for myself: to receive at least one trans-Atlantic and one TP; one Newfoundland; one Wyoming thus completing my roster of the states: to increase my log to 650; to receive five more SA; to receive 100 more verifications before July; to join some good DX club; to continue purchasing RADEX each month as long as I have a radio." These are certainly good resolutions and Frank doesn't wait for New Years before making them. Here's hoping he makes them come true.

Getting Ready

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

A New Reporter

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

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

Verifies the "Impossible"

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



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

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

"If They Can, I Can"

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



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

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

A New Old-Timer

A first report from an old DXer comes from Whitney Smith, 53 West End Ave., Pontiac, Mich. "DX has been my hobby since 1924 but I start compiling a fresh log with each new radio. I keep a file of 4x6 cards with station heard, power, owner, location, etc., kept up to date by RADEX listings, and showing date of every reception. My present log was started in July, 1932, with a Majestic 8-tube, to which was added, in May, 1933, a Stewart-Warner s. w. converter. I do not verify any stations heard except those which I consider exceptional catches. However, I do not log a station until there is no question in my own mind that I have actually heard it. My log at this time consists of 1261 stations of which 632 are on the b. c. b. and 629 on the s. w., including 456 amateur and airport stations. In **my** b. c. log are 34 stations which are now off the air. I have the state of Texas with 32 stations logged 100 per cent. I have logged 39 out of 44 in California and several states lack just one station of being fully received. This, I think, is not bad for Michigan."

Verifying California

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

Cuban News

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

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

From New Zealand

George E. Bott, 507 Southampton St., E., Hastings, New Zealand, sends us corrections for the Oceania stations for the DX Log of the World and adds: "I have now heard 310 stations and have verified 168 with 25 reports out. Reports are out to VUB, Bombay; HS7PJ, Siam; Berlin on 841 kc.; Bucharest on 823 kc.; 11M1, Milan on 814 kc.; Belgrade on 686 kc.; OKB Brno on 922 kc. These are my best. A long overdue verification from KFVD came to hand today (Sept. 18). Report was posted Oct. 24, 1933! Another received on Sept. 10, was XEB; report was mailed them on Sept. 4, 1933. Reception has not been very good here this year but is picking up now. WLW was too loud tonight without volume being reduced. P. S. Have just sent reports to Poste Parisien, 959; Breslau, 950; Heilsberg, 1031; Bari (I1BA) 1059; Naples (I1NA) 1104; Lwow 795; Strasburg, 859; Posman, 868. This makes a total of 13 sent since Sept. 1. I want to make it 20 by the end of the DX season on October 31,"

All Channels

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

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

JO's in Kansas City

"A new year for DX is at hand and



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

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

A Pennsylvania Log

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

Schedule of TGW

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

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

From Canada

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

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

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

Short and Snappy

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

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



Lois Bennett, famous radio soprano, who sings the part of "Sally Gibson" on The Gibson Family programs—those original musical comedies written expressly for radio presentation. A full hour every Saturday at 9:30 p. m. EST on the NBC-WEAF. my halt in DX was due to oilburner noises. With these and other motors on both sides of our house, there are very few minutes quiet enough for early morning DX. I think your aerial story in October and November will help me but if any other readers have other suggestions, I will appreciate them."

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

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

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



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

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

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

(Continued on page 47)

ADVICE from the Radio Clinic

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

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

Converter Voltage

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

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

Parallel Antennas

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

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

• • By The Technical Editor

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

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

Repeating Stations

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

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

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

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

New Tubes in Victor 22A

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

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

Shielded Lead-In

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

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

Converter With Zenith

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

As most large converters have their own filament transformers there

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

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

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

Eliminator Ripple

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

A 60-cycle hum will be present if the filter system is not functioning properly. One choke or filter condenser, if defective, might cause ripple by not smoothing out all the hum from the rectifier unit. If this ripple is due to the rectifier and eliminator it will be heard at any point on your dial. Is this the case? Try connecting a speaker or phones across the output of the eliminator and see if the hum is heard direct from the power unit. A small condenser in series with the speaker will protect it from possible damage if connected too long.

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

Philco Cuts Off

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

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

Set Goes Dead

My Silver-Marshall receiver, Q-34, has a tendency to go dead after it has been in use two or three hours. After resting a while it becomes satisfactory, only to go dead some time later. What can cause trouble of this character?

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

Scott Power Unit

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

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

The voice coil specifications remain the same. The original sockets and wiring remain intact for all the changes. All that is necessary is to remove the old tubes and place the new ones in the appropriate sockets.

But, depending upon the speaker design, and other design features of the set, it is questionable whether such a change would be justified. The receiver fidelity of the finished would not be improved, and it would not help to improve the power output if the speaker will not be capable of handling the output. The 2A3s consume more current than the -45s, but it is possible that your power transformer can easily stand this overload. The plate potentials and other characteristics are suitable for either tube types and no alterations are needed.

Harmonics in Philco 16

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

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

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

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

Tubes Hiss

Why does my Crosley 168 receiver



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

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

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

47 Versus 2A5

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

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

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

A Pre-Tuner

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

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

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

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

Midwest Model 11

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

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

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

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

Dial Readings Off

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

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

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

Repeat Spots

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

(Continued on page 43)

The EDITORIAL Microphone

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

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

The Day's News

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

• • Chatting *about* Radio

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

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



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

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

Chiseling Advertisers

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

Station Notes

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

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

In a letter to W. H. Ansell, 168 Wascana Street, N., Regina, Sask., Radio Station 2ME of Sydney, Australia, write: "We have pleasure in advising you that a program will be dedicated on December 9th, 1934, to the States of Canada. We have decided to make this dedication to the States and not to Clubs. The 1DA members in these particular States can take these programs to be for them as well as for the non-members of the listening public." Following are the hours: 2:15-3:00 a.m. EST for Alaska, Yukon, British Columbia, Alberta and Saskatchewan. 6:30-7 a.m. EST for Manitoba and Ontario. 7:00-7:30 a.m. EST for Quebec, New Brunswick and Nova Scotia.

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

Unwise Experiment

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

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

This and That

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

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

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

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

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



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

 $4\frac{1}{2}$ d or 3/6 per annum. For the convenience of our readers in Britain, Mr. Baker carries a supply of RADEX, the *DX Log of the World* and the Time Converters.

The Singleton Honors

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

- ZTD, Durban, South Africa. C. E. Lowe, Merced, Calif.
- 2ZP, Wairoa, New Zealand. Charles Hesterman, Saskatoon, Sask.
- 3BO, Bendigo, Australia. Robert R. Rawstron, Worcester, Mass.
- 2KY, Sydney, Australia. Art. Collins, 109 Amber St. Buffalo, N. Y.
- 3KZ, Melbourne, Australia. Art. Collins, Buffalo.
- 6PR, Perth, Australia. Art. Collins, Buffalo.
- Copenhagen, Denmark. Ray La Rocque, Worcester. Mass.

- Trieste, Italy. Ray La Rocque, Worcester, Mass.
- SBH, Horby, Sweden. Ray La Rocque, Worcester, Mass.
- 2YC, Wellington, N. Z. Harold Alexson, Vancouver, B. C.

Eliminated

- SBA, Stockholm, Sweden, awarded to James Blase, Bronx, N. Y., is eliminated by Art. Collins, Buffalo, N. Y.
- HAL, Budapest, Hungary awarded to Richard W. Watts Rocky River, Ohio, is eliminated by P. H. Robinson, Shelburne, N. S.
- 4BC, Brisbane, Australia, awarded to Frank W. Hoxie, South Orrington, Maine, is eliminated by Robert R. Rawstron, Worcester Mass.

Iowa on the Air

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

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

The Programs

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

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

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

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

The date is Sunday, December 16th.

The time is Central Standard.

Another IDA Contest

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

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

High Frequency NEWS and COMMENT

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

After several years of highly successful transmitting over experimental station I2RO, the Italians, following the example of the British and German broadcasters, have removed their shortwave broadcasting from an experimental status, and although their plans are not fully known, it is expected that future programs will be radiated from directional antennae to various sections of the world after the fashion of the other European stations. Lady announcers will be used, as is the custom in all Italian stations, and announcements will be in several languages.

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

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

Radio Maroc

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

• By the Short Wave Editor

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

Two New Stations

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



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

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

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

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

A Strange Visitor

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

which is supposed to work on 6116 kcs."

Stations to the South

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

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

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

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

Over the Pacific

"Since the weather is cooling off a little. I am beginning to hear a few stations on Asiatic wavelengths," reports Geo. W. Acker, 267 N. Lyman St., Wadsworth, Ohio. "So far however, the Asiatics have been comparatively weak. Japan has discontinued her broadcasting through JVM and JVN, which were used during the summer, and is now using JVT on 6750 kcs. PHI has also changed over to its winter spot, that is, 11725 kcs. It is quite poor, but its new companion station on 15220 kcs. roars in like a lion. The new station broadcasts the same programs as PHI but seems to be on the air every morning until 10:30 a.m.

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

Above 15 Megs.

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

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

The Afrikanders

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

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

S.W. in Texas

"I am still able to drag in the regulars on the s.w., the Daventrys, the Germans, all the Americans and most of the South Americans," summarizes Charles A. Steele, 3119 Seventh St., "Those phone Port Arthur, Texas. stations at Nazaki, JVS and JVT, are heard here every night; at least, KWO at Dixon is heard carrying on a oneway conversation with them. Мy usually reliable Aussies have just about quit me although I did hear VK2ME good and clear last Sunday. But Portugal, Holland, Morocco, the Russians, and Geneva still elude my earnest efforts. Another funny thing is Porto Rico and Bermuda, although comparatively close, are very seldom heard, in fact, just once did I have HI1A and that was a special DX from midnight until 1 a.m. On the other hand, the Orientals are almost a sure bet every morning early. The Canadians CJRX and CJRO at Winnipeg have been consistently good while Bowmanville has done a complete fadeout." Mr. Steele is a bedfast war veteran and, although he may not be able to answer all the letters he receives, we believe he would like to hear from other shortwave fans.

The Soviet Stations

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

From California

"I belong to several s.w. clubs and have read quite a lot about reception not being so good this summer, so today 1 thought I would check up on my summer log, and I think, considering the fact I am so far removed from the center of action, I have a very good log," writes a Californian who wishes to be known only as Old Man De-Exer. "I will admit, however, that reception is not as good as in 1925-1929. My luck with EAQ is nil; 1 must be in a skip spot. I am using a Patterson PR10. Had 100 feet of No. 12 wire for summer but have put up 125 feet of No. 10 for my winter use. It runs SW by NE." OM De-Exer is doubly entitled to his chosen nom du plume, being a young man of 63, and being a radio fan since 1918 on the Broadcast band and since 1924 on the shortwayes. The log he sends shows 48 foreign stations received during the summer just past, all the USA stations, 172 amateurs, and ten special stations, such as KNRA, KFZ. W10XDA, KIIX, etc. Foreign stations were logged on every continent except Africa, which, we think, is very good tuning.

One from Arkansas

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

Logs YDA

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

What's in the Air

At this time of year the air is filled with prophecy. Dopesters are busy picking the football winners, the hockey championships are already decided by busy guessers, and next year's baseball teams are already selected by members of the hot stove league. We will fall in line with some radio prophecying. . . Rumors have been drifting about for months that Pontoise will expand its facilities and it is expected that, ere long, Radio Coloniale will be heard on 9,585 and 15,454 megs. in addition to its present assignments. The more ambitious prophets say that 100 kw. will be used. It has been gossiped around for some time that the German Kurzwellensenders would have call letters running in alphabetical order from DJA clear through to DJR. Some of these have already been heard, such as DJE, DJL, DJN and DJO. DJE is heard in the mornings and the others in the afternoons. DJL 15,110 megs. DJN, 9.450 megs and DJO on 11.790 megs.

Some Radio Gossip

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

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

What Location?

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

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



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

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

Uses S-C Selector

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

"On the shortwaves some of the

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

Some New Ones

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

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

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

Megacycling Around

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

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

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

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

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

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

VK2ME, Sydney, Australia, will broadcast programs on Sunday, December 9, expressly for the provinces of the Dominion of Canada. Those dedicated to the western provinces will be received from 2:15 to 3:00 a.m. EST. Those for Manitoba and Ontario from 6:30 to 7:00 a.m. EST. Those for the Maritimes from 7:00 to 7:30 a.m. EST.

Answers to Questions.

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

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

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

Simply Questions

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

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

The Foreign Stamp Exchange

HE "STAMP WINDOW" which the IDA has set up in charge of R. W. Schofield, Director, is now open to the public. It has the cooperation of the Treasury Department, the Post Office Department, the State Department and the American Consular Service in many countries. It has its own agents in twenty-one foreign countries who act as a source of supply. While some of the stamps are necessarily more expensive than International Reply Coupons, most of them cost less. They are much more convenient for use as return postage than the IRC and much less trouble to the station receiving them.

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

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

The Girl on the Cover

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

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

Stories of the IDA Contest

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

From Hawaii

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

From Sweden

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

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

From Saskatoon

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

JOQK, JOSK, JOAG, YC1BC, CX26, and CMCY. I used a Victor RE-45, ten-tube t.r.f. with no attachments of any description. Most of the stations were heard quite well on the speaker though on occasions I was forced to use phones owing to the heavy static waking the rest of the household. My antenna system is of the inverted L type, 35 feet in length, 30 feet in height, east to west with a lead-in taken from the west end. My ground is an Ollie Ross buried in salt. I was cursed with endlessinterference caused by the multiple-printers on the CNR telegraphs. Lately I have removed from that locality and so far this new location seems much quiet-I have erected a pair of superer. antenna masts, each 85 feet in height and 250 feet apart. The new ground system is 25 feet of heavy copper busbar, soldered into a grid and submerged in fifteen feet of water. 1 have great expectations from this outfit this season." Mr. Hesterman is connected with radio station CFQC and says they intend broadcasting one or two more DX programs this season and are anxious to know just how far out their signals are reaching.

From England

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

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

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

"The article by Page Taylor, 'As 1 See the Short Waves' was the goods. Of course a large set isn't necessary. I prefer a large radio on account of reserve power, etc., but when all is said and done, it depends entirely upon conditions what you hear. I've had WTIC and WCAU on a one-valve set.

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

"Please don't think I'm boasting; I just quote this to prove what anyone can do with simple apparatus. This little set is by my bed. I didn't build it with the idea of using it DXing on the s.w. The aerial was only about 25 feet high as I was installing a new pole. This is 40 feet high; aerial is ordinary L running East-West. I shall shortly have installed an H. M. U. 9valve de luxe Radiogram with record changer. On the s.w. I shall use a two-valve converter with the above, this converter being made specially for me. This equipment is all a.c. mains operated. I built my present superhet in 1932 so it's getting a bit ancient and hasn't a v.c."

Some Coming Treats • • • By Earl R. Roberts

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

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

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

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

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

Confirmed IDA programs arranged

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Inter-Club Cooperation ••• By ELWIN H. BULLARD

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

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

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

The Radio Clinic

(Continued from page 28)

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

Tubes In S-M Q-34

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

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

A Low-Frequency Special

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

The Case of "TAX vs BLURBS"

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

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

Advertising Plus Tax

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

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

Commission Makes Progress

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

Ford Broadcast Ideal

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

advertiser's announcements." Montreal, Que.

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

Too Much French

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

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

"I prefer the Canadian system of broadcasting without advertising so long as the tax is not over \$2 a year. Of course we are not free from advertising up here yet. Lots of stations continue to do advertising. However the CRC stations are fairly free from it. A little advertising would be OK but when programs are cut short for five-minute talks, it is just too bad." Ottawa, Ont.

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

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

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

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

"The Canadian Radio Commission programs are much inferior to the American ones. The Commission promised a new station on the West Coast. Instead of that they are using the old transmitter of CNRV which was installed a good many years ago." Victoria, B. C.

The Midwest Set

(Continued from page 6)

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

The Lever Controls

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

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

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

The Story of Radio

(Continued from page 16)

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

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

The Long Wave Stations

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

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

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

Kcs.	Call	Location
245		Leningrad, USSR
248	CYW	Strathburn, Ont. Amarillo, Texas
	KCAG	Amarillo, Texas
	WET WWBF	Spartanburg, S. C. Mobile Als
	VFT	Mobile, Ala. Red Deer, Alta.
254	KCAV KCAW	Red Deer, Alta. Springfield, Mo.
	KCAW	San Antonio, Tex.
	KLK WWAP	Reno, Nevada
	WWBC	Pittsburgh, Pa. Titusville Fla.
256.4		Titusville, Fla. Tashkent, USSR
2 60		Oslo, Norway
	KCS	Ashkent, USSR Oslo, Norway Pasco, Wash. Los Angeles, Calif. Richmond, Va. Jackson, Miss. Minnee nolis. Minn.
	KCT	Richmond, Va.
	WNR WWAQ	Jackson, Miss.
266	KCAQ	Minneapolis, Minn.
	KCX WHZ	Medford, Ore.
	WSX	Medford, Ore. Atlanta, Ga. Boston, Mass. Buffalo, N. Y. Moscow, USSR Little Book Ark
	WWAB	Buffalo, N. Y.
271		Moscow, USSR
272	KCAJ	Little Rock, Ark. Iowa City, Iowa
	KIS WWAF	
	WWAF WWX	Washington, D. C.
278	Common	for all stations
280 284	Roto	Tifits, USSR
284	KVM	North Platte Neb.
290	KCQ	Miami, Fia. Washington, D. C. for all stations Tiffis, USSR Butte, Mont. North Platte, Neb. St. Louis, Mo. Rock Springs, Wyo. Tuisa. Okla.
	KDN	Rock Springs, Wyo.
296	KCAA VFQ	
302	KCAR	Regina, Sask. Pueblo, Colo.
308	KCAE	Winslow, Ariz.
314	KOJ VFR	Winslow, Ariz. Elko, Nevada Maple Creek, Sask.
	VFR VFU	London Ont.
320	KCAT	Maple Creek, Sask. London, Ont. Milford, Utah Omaha, Nebr. Greensboro, N. C. Albany, N. Y.
	KJF WRW	Omaha, Nebr.
	WRW	Greensboro, N. C.
	WWAH WWAR	
326	KCAP	Big Spring, Texas
	KSG	Cheyenne, Wyo. Memphis, Tenn.
	WWAU VFS	
	VXR	Jarvis, Ont.
332	KCAU	Jarvis, Ont. Houston, Texas Portland, Ore.
	KCY VFN	Portland, Ore. St. Hubert, Que.
	VFP	Forrest, Man.
	VFP WBP	Forrest, Man. Key West, Fla. Wichita, Kans.
	WEK	Wichita, Kans.
	WWAS WWAW	Cincinnati, Ohio Charleston, S. C.
338	KCAM	Tucson, Ariz.
	KGD	Sait Lake City
	WWAG WWHS	New Orleans, La.
	WWU	Charleston, S. C. Tucson, Ariz. Sait Lake City New Orleans, La. Chattanooga, Tenn. Newark, N. J. Spokane, Wash. Fresno, Calif. Jacksonville, Fla. Claveland, Obio.
344	KCAS KCU	Spokane, Wash.
	KCU	Fresno, Calif.
	WWAV WWO	Jacksonville, Fla.
35 0	KCAH	Jacksonvine, Fis. Cleveland, Ohlo Kingman, Arlz. Oklahoma City Chicago, Ill. Raleigh, N. C. Flinmark, Norway Rostov, USSR Idebo Falla
	KCCA	Oklahoma City
	KDA WWBI	Chicago, Ill. Balaigh N.C.
355	WWBI	Finmark, Norway
		Rostov, USSR
359	KCAD	Idaho Falis
365	KRC KCAN	Rostov, USSR Idaho Falis Kansas City, Mo. Fargo, N. D. Seattle, Wash. Fort Worth, Texas Sverdlovsk, USSR Ostersund, Sweden
000	KCAN KCZ	Seattle, Wash.
	KKJ	Fort Worth, Texas
375 392		Sverdlovsk, USSR
392 401		Geneva, Switz.
101		Moscow, USSR

413.5	Boden, Sweden
	Veronete, USSR
431	Oulu, Finland
436	Ufa, USSR
518	Tartu, Estonia
519	Hamar, Norway
519	Innsbruck, Austria
527	Ljubljana, Yugoslavia
	Vilpuri, Finland
536	Bolzano, Italy
	Wilmo, Poland
546	Budapest, Hungary

Happy Nights

(Continued from page 23)

CM (Cuban) and K6 (Hawaiian)." This report is from William J. Wood, 817 ½ Lake Street, Oak Park, Ill.

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

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

Who Needs WBOQ?

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

47

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

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

The DX Calendar

(Continued from page 4)

		,		1.30 -7		KGCA	1270	100	Deco
				_	4:10-4:30	WBNS	1430	500	Coiu
3:50-4:10	WMBC	1420	100	Detroit		KFVS	1210	100	Cape
	WCAT	1200	100	Rapid City		WTNJ	1280	500	Trent
4:00:4:20	WFDF	1310	100	Flint	4:20-4:40	WWJ	920	1000	Detr
	KGCU	1240	250	Mandan		KGHL	780	1000	Billin
4:10-4:30	WFBE	1200	100	Cincinnati	4:30-4:50	KQV	1380	500	Pitts
	KWYO	1370	100	Sheridan		KDLR	1210	100	Devil
4:20-4:40	WGAR	1450	500	Cleveland	4:40-5:00	WLAP	1420	100	Lexin
	KLPM	1240	250	Minot	4:50-5:10	WSMK	1380	200	Dayt
4:30-4:40	WCLO	1200	100	Janesville		KFXJ	1200	100	Gran
	KGFG	1370	100	Okla. City	5:00-5-20	WAVE	940	1000	Louis
4:40-5:00	WCLS	1310	100	Joliet		KFDM	960	500	Beau
	KABC	1420	100	San Antonio	5:10-5:30	WADC	1320	1000	Akro
4:50-5:10	WJBL	1200	100	Decatur		KWTN	1210	100	Wate
	KFJZ	1370	100	Fort Worth	5:15-6:15	WSUI	880	500	Iowa
5:00-5:20	WJBK	1500	100	Detroit	5:20-5:40	WSPD	1340	1000	Tole
	KWCR	1430	250	Cedar Rapids		WEW	760	1000	St. L
5:10-5:30	WIBU	1210	100	Poynette	5:30-5:50	KWEA	1210	100	Shre
	KGFI	1500	10 0	Corpus Christi	5:50-6:10	KGGM	1230	250	Albu
5:20-5:40	WHDF	1370	100	Calumet			Decen	ther 8	
	WLBF	1420	100	Kansas City	1:00-1:30	WKY	900	100	Okiał
5:30 -5 :50	WCRW	1210	100	Chicago	3:00-3:30	KSO	1320	250	Des 1
	KGKB	1500	100	Tyler	0.00-0.00				Des
5:40-6:00	WTAQ	1330	1000	Eau Claire				ber 15	
	WMBH	1420	100	Joplin	1:00-1:30	WDNC	1500	100	Durh
		Decem	ber 21		5:00-5:10	KFNF	890	500	Shena
1:00-3:00	HJN	681	1000	Bogota		1	Decem	ber 22	
			. 14. 3		2:00-4:00	CX26	1050	5000	Mont
10:00-1:00	CMBX	1185	250	Havana		1	Decem	ber 29	
1:00-2:30	XEX	1310	125		12:00-8:00	KGIR	1360	1000	Butt
2:30-4:30	CKMO	1410		Monterrey		Decem	her 1	8, 15,	77 29
2.30-4.30			100	Vancouver	12:00-12:30	WGAR	1450	500	Cleve
	Sat	urday	Morni	ngs	12:30-1:00	KDKA		50000	Pitts
		Decen	nber 1		12:00-3:00	WGES	1360	500	Chica
2:10-2:30	WBRB	1210	100	Red Bank	1:00-3:00	TGX	1400	150	Guat
2:20-2:40	WWRL	1500	100	Woodside	1.00 0.00	CMCW	540	150	Hava
		- 500	-00			0.40.0	010	100	110,40

ADDRESSES OF SHORTWAVE STATIONS

- Compania International de Radio, fensa 143, Buenos Aires, Argentina. 1. De-
- 2 Transradio Internacional, Compania Ra-diotelegrafica Argentina, S. A. Buenos Buenos Aires, Argentina.
- Amaigamated Wireless, (A/sia), Ltd., 47 York St., Sydney, N. S. W., Australia. 3. 4
- Companhia Radio Internacional do Brasil, Caixa Postal 620, Rio de Janeiro, Brasil,
- 5 Cia Radiotelegraphica Brasileira, Caixa Postal 500, Rio de Janeiro, Brasil.
- 6 Canadian Marconi Co., P. O. Box 1690, Montreal, P. Q., Canada.
- 7. Compana Internacional de Radio S. A. (Chile), Casilla 16D, Santiago de Chile,
- Chinese Government Radio Administration. Sassoon House, Jinkee Road, Shanghai, China.
- 9. Compana Radiografica Internacional de Costa Rica, San Jose, Costa Rica.
- 10 Marconi Radio Telegraph Co. of Egypt, S. A. P. O. Box No. 795, Cairo, Egypt. (Street address: Radio House, Sharia Eloui).

11. Societe Francaise Radio-Electrique, 70

WGNY

CHWK

WGBB

WORO

WJBC

KTRH

WGL

KFPW

WWAE

WTAW

WLBC

WFAM

KWLC

WCAP

WJAY

KGCA

KASA

WMBQ

1210 100

780 100

1500

1210 100

1430 500

1200 100

1330 1000

1370 100

1210 100

1200 100

1120 500

1310 100

1210 100

1200 100

1270 100

1280 500

610 500

1270

100

100

Chester

Chilliwack

Brooklyn

Freeport

Houston

Bloomington

Fort Wayne

College Station

Fort Smith

Hammond

Muncie

Elk City

Decorah

Cleveland

Columbus Cape Girardeau Trenton Detroit Billings Pittsburgh Devils Lake Lexington Dayton Grand Junction Louisville Beaumont Akron Watertown Iowa City Toledo St. Louis Shreveport Albuquerque

Decorah

South Bend

Asbury Park

Okiahoma City

Des Moines

Shenandoah

Montevideo

Cleveland Pittsburgh Chicago Guatemala Havana

Durham

Butte

Albany

2:30-2:50

2:30-3:30

2:40-3:00

2:50-3:10

3:00-3:20

3:10-3:30

3:20-3:40

3:30-3:50

3:40-4:00

3:50-4:10

4:00-4:20

- Boulevard Hausseann, Paris VIII, France, Compagnie Generale de Telegraphie Sans Fil, Boite Postale 238, Saigon, French Indo-12. China.
- 13. Reichspostzentralamt, Telegraphentechnisches Reichsamt, Schoneberger Strasse 11-15, Berlin-Tempelhof, Germany.
- Reichs-Rundfunk Gesellschaft, 14. Haus des Rundfunks, Masure tenburg 9, Germany Masurenallee, Berlin-Charlot-
- 15. Hauptfunksteile Norddeich, Norden-Land, Germany.
- The Engineer-in-Chief, G. P. O. (Radio Section), 86 Wood St., London, EC2, Eng-16. land.
- 17. The British Broadcasting Corp., casting House, London, W1. England. Broad-
- Parkstaat 29, S'Gravenhage, Holland. 18.
- 19. Radiomarittimo Coltano Radio IAC, Piza, Italy
- 20. Societe Italo Radio, Via Calabria No. 46-48, Rome, Italy.

- 22. Gouvernements Radio-Dienst, Bandoeng, Java, Netherland East-Indies. Post Telegraaf en Telefoondienst, Makas-23.
- sar, Celebes, Netherland East Indies. 24.
- Superintendent of Post and Telegraphs, General Post Office, Wellington, New Zealand. 25
- Compania Peruana de Telefonos, Apartado 986, Lima, Peru. 26
- Radio Corp. of the Philippines. Plaza Moraga, Manilla, Philippine Islands. 27.
- Post and Telegraph Department, Bangkok, Siam 28.
- Compania Telefonica Nacional de Espana, S. A., Margall 2, Madrid, Spain. 29.
- Administration of Central Broadcasting Stations, Central Executive Committee of Stations, Central Executive Committee or Kuomintang, Nanking, China. M. G. Gallarati, Information Section, League of Nations, Geneva, Switzerland. Cuba Transatlantic Radio Corp., Habana, 30
- 31.
- 32
- Radio Corporation de Cuba, Habana, Cuba. 33 Department of Marine, Radio Branch, Ottawa, Canada.
- 34 Caigary Herald, Ltd., Southam Bldg., Calgary, Alta.
- Estacion YVQ, Estados Unidos de Vene-zuela, Servicio Radiotelegrafico, Maracay, 35 Venezuela. 36
- Imperial and International Communications, Ltd., Davidson St., Hamilton, Bermuda. 37
- The National Broadcasting Co., 30 Rock-efeller Plaza, New York, N. Y. 38
- Japan International Radiophone Co., Nazaki, Ibaraki-Ken, Japan. 39
- Research Laboratories for Electrical Communications, Royal Hungarian Post Office Authority, Gyali St. 22, Budapest, Hungary.
- North German Lloyd, Pier 42, North River, 42
- Foot of Morton St., New York, N. Y. Hamburg-American Lines, Pier 86, North River, West 46th St., New York, N. Y. North German Lloyd, Pier 4, Foot of 58th 43
- 44
- 45.
- North German Lloyd, Pier 4, Foot of 58th St., Brooklyn, New York. Canadian Airways, Ltd., (Western Lines), 60 Brock St., Winnipeg, Man., Canada. North-West Telephone Co., Corner 2nd Ave. and Wylie St., Vancouver, B. C., Canada 46.
- Canada. Laurentian Forest Protective Association, 126 St. Peter St., Quebcc, P. Q., Canada. 47.
- CP5: Compania Radio Boliviana, Casilla 637, La Paz, Bolivia.
- CT1AA: Senhor Abillo Nunes dos Santos, Jr., Av. Antonio Augusto de Aguiar 144, Lisbon, Portgual.
- CTICT: Senhor Oscar G. Lomelino, Rua Gomez Freire 79, 2-D, Lisbon, Portugal. CT3AQ: Thiago D'Aguiar, Funchal, Madeira
- Islands.
- EASAB: Radio Club de Tenerife, Alvarez de Lugo 1, Santa Cruz de Tenerife, Canary Islands.
- G6RX: Rugby Radio Station G6RX, Hillmorton, Near Rugby, Warwickshire, England.
- Roberto Levi, Apartado 759, Guayaquil, Ecuador. HIX:
- Mr. J. R. Saladin, Director de Radio. Estacion Radiodifusora HIX, Santo Domingo, Dominican Republic.
- HIZ: Mr. Geo. Abbes, Estacion HIZ, Calle Duarte No. 68, Santo Domingo, Dominican Republic. HIIA:
- Estacion HI1A, La Voz del Yaque, Santiago de los Caballeros, Dominican Republic.
- HJ1ABB: Radiodifusora La Voz de Barran-quilla de Elias J. Pellet B., Apartado 715, Barranquilla, Colombia.

- HJ2ABA: Sr. Pompelio Sanchez, La Voz del Pais, Tunja, Colombia. HJ3ABB: Estacion HJ3ABB, Apartado 509,
- Bogota, Colombia
- HJ3ABF: Estacion HJ3ABF, Calle 15, 5-40, Bogota, Colombia. HJ4ABB: Radio Manizales, Sr. Roberto Baena No.
- V., Apartado 175, Manizales, Colombia. ABE: Cia. Radiodifusora de Medellin, HJ4ABE:
- Emisora HJ4ABE, Medeilin, Colombia. ABB: Estacion Radiodifusora dei HJ5ABB:
- Valle HJ5ABB, Apartado 270, Cali, Colombia.
- HVJ: Stazione Radio-Vatican, Pontificia Accademia Della Scienze, Roma-Castina Pio IV, Citta del Vaticano.
- I2RO: Ente Italiano per le Audizioni Radio-foniche, Via Asiago N. 10, Rome, Italy.
- LCL: Minister du Commerce du Royaume de Norvege, Oslo, Norway.
- LR4: Radio Splendide, Callao 1526, Buenos Aires, Argentina.
- NIROM: N. V. Nederlandsch Indische Radio Omroep Moatschappij, Tandjong Priok, Zuiderderweg, Batavia, Java, Netherland East-Indies.
- OER2-3: Radio Wein, Oesterreich, Johannisgasse 4-6, Vienna, Austria
- OPL-M: Radio Station Leopoldville, Leopoldville, Belgian Congo. ORG-K: Regie des Telegraphes et des Tele-
- phones, Direction des Radiocommunications, Brussels, Belgium,
- OXY: Stratsradiofonien, Drifts sledern, Heibersgade 7, Copenhagen, Denmark. PHI:_N. V. Philips Radio Laboratories, Hulzen,
- Holland.
- PK1WK: Mr. J. F. W. de Kort, Radiohandel, Bragaweg 34, Bandoeng, Java, Netherland East-Indies.
- PRADO: Radiodifusora "El Prado," Apartado 98, Riobaamba, Ecuador.
- Rabat: Direction de L'Office des Postes, des Telegraphes et des Telephones du Maroc, Rabat, Morocco.
- Ministere des Postes, Rdo. Coloniale: Telegraphs et Telephones, Direction de la Radiodiffusion, 98 bis, Blvd. Haussman, Paris, France.
- Rdo. Tananarive: Le Directeur des Postes et des Teiegraphes, Tananarive, Madagascar. RNE: Commissriat du Peuple des Communica-
- tions Postales et Electriques de l'URSS, No. 17 Gorki St., Moscow,
- RV59: Trade Union Radio Station, Radio Centre, Palace of Labour, Solianke 12, Moscow, USSR.
- SR1: Radio Poznanski, Plac Wolnosce II, Rozglosnia, Poznan, Poland.
- TI4 NRH: Sr. Amando Cespedes Marin, Apartado 40, Heredia, Costa Rica.
- VE9BJ: C. A. Munro, Ltd., Canterbury St., St. John, New Brunswick, Canada. VE9CA: The Voice of the Prairies, Ltd., Cal-
- gary, Alta.
- VE9CS: Radio Service Engineers, Ltd Davie St., Vancouver, B. C., Canada. Ltd., 734
- VE9EH: Island Radio Broadcasting Co., Ltd. 143 Great George St., Charlottetown, P. E. I., Canada.
- GW: Canadian Radio Commission Station VE9GW, R. R. No. 4, Bowmanville, Ont., VE9GW: Canada.
- VE9HX: The Maritime Broadcasting Co., Ltd., P. O. Box 998, Halifax, N. S., Canada.
 VE9JR: James Richardson & Sons, Ltd., Radio Office 155 Royal Alexandria Hotel, Winni-Der, Mariteba.
- peg. Manitoba.
 VK3LR: Research Section, P. M. G. Department, 61 Little Collins St., CI, Melbourne,
- ment, of Little Collins St., CI, Melbourne, Victoria, Australia.
 VK3ME: Amalgamated Wireless, (A/sia), Ltd., Box No. 1272L, Elizabeth St. P. O., Mel-bourne, Vic., Australia.
 VQ7LO: Imperial and International Commun-

ications, Ltd., P. O. Box 777, Nairobi, Kenya Colony.

WTVD: Mr. H. M. McKenzie, St. Thomas, Virgin Islands.

WTDW: Mr. S. I. Winde, Christiansted, Virgin Islands.

VUC: Indian State Broadcasting Service, 1 Garstin Place, Calcutta, India.

- WVD: Alaskan Telephone Co., 517 Federal Office Bidg., Seattle, Washington. WIXAL: World Wide Broadcasting Corp., Boston,
- Mass.
- W1XAZ: Westinghouse Radio Stations of New
- WIXAL: Westingnouse Ratio stations of New England, Hotel Bradford, Boston, Mass.
 W2XE: Columbia Broadcasting System, Inc., 485 Madison Ave. at 52nd St., New York
- City. W3XAU: WCAU Broadcasting WCAU Co.,
- Bidg., 1622 Chestnut St., Philadelphia, Pa. WSXAL: Crosley Radio Corp., 1329 Arlington
- St., Cincinnati, Ohio. K: Westinghouse Radio Station W8XK WSXK:
- Hotel William Penn, Pittsburgh, Pa. W3XAA: Mr. Maynard Marquardt, Chicago Federation of Labor, 666 Lake Shore Drive,
- Chicago, Ill. W9XF-9XQ: National Broadcasting Co., Inc., Merchandise Mart, Chicago, Ill.
- XAM: Telegrafos Nacionales, Merida, Yucatan, Mexico.
- XETE: Empressa Telefonos Ericsson, S. A., C. Central 3, Colonia del Valle, Mexico, D. F. (or, P. O. Box 1396).
- YVIBC: Broadcasting Caracas, Apartado 290, Caracas, Venezuela.
- YV3BC: Radiodifusora Venezuela YV3BC, Bajos Pasaje Ramella, Caracas, Venezuela.
- ZFS: Office of Superintendent of Telegraphs, Central Bay Street, Nassau, N. P., Bahamas.
- Malayan Amateur Radio Society, c/o ZGE: Institute for Medical Research, Kuala Lampur, Federated Malay States.

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

The Classified Column

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

MOTION PICTURES

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

SALESMEN WANTED

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

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

are to mer						
	Thursda		ning,	Nov. 29		
2:00-4:00	KFJB	1200	100	Marshalltown		
	Nov. 2	9, Dec.	6. 13.	20, 27		
3:00-4:00	CKWX	1010	100	Vancouver		
-	Sunda	y Mor	ning, I	Dec. 2		
3:00-5:00	CFCT		75	Victoria		
	Sunda	y Mor	nina.	Dec. 9		
2:00-3:00	KFJZ		100	Ft. Worth		
3:00-4:00	CJGX			Yorkton		
4:00-5:00	WSGN			Birmingham		
2100 0.00	Tuesday	Mor	nina.	Dec. 11		
12:00-3:00	WMBC	1420	100	Detroit		
2:00-3:00	KDYL			Salt Lake		
-100 0.01	Saturda	v Mor	ning.	Dec. 15		
3:00-6:00		1310	50	Elkhart		
4:00-5:00	CJRM	540	1000	Moose Jaw		
	Thursd	av Mo	rning.	Dec. 20		
3:00-5:30	KGFF	1420	100			
	Saturda	y Mor	ning,	Dec. 22		
1:30-5:00	KMAC	1370	100	San Antonio		
	Sunda	у Мог	ning,	Dec. 23		
4:00-5:00	VE9EK	1185	10	Montmagny		
5:00-5:30	KGEZ	1310	100	Kalispell		
5:30-6:00	KIT	1310	100	Yakima		
Friday Morning, Dec. 28						
12:00-3:00	WMBC		100	Detroit		
	Sunda	ay Mor	ning,	Dec. 30		
2:00-3:00	XEPN	590	50000	Piedras Negras		

THE MONTH'S CHANGES

POWER

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

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

NEW

850	WWPA	Clarion, Pa.
1210	WMFG	Hibbing, Minn.
1310	WMFF	Plattsburg, N. Y.
1370	WMFD	Wilmington, N. C.
1370		Longview, Texas
1380	WMFE	New Britain, Conn.
1420	KABR	Aberdeen, S. D.
		DELETED
990	WJEM	Tupelo, Miss.
1200	10-BQ	Brantford, Ont.
1420	WLEU	Erie, Pa.
		CALLS
1260	CFRN	Edmonton, formerly CFTP
1370	WABY	Hudson Falls, N. Y., formerly WGLC
	PER	WIT TO CHANGE LOCATION
1370	WABY	Hudson Falls, N. Y., to Albany, N. Y.

A Christmas Present that comes ten times a year.

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

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

For \$3.50

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

For \$2.25

RADEX for one year with leatherette cover.

For \$1.75

RADEX for one year.

For \$1.50

RADEX for five months with leatherette cover.

For \$1.00

RADEX for five months.

For 50 cents

The leatherette cover for holding the current copy of RADEX.

THE RADEX PRESS INC.

705 Hanna Building

Cleveland, Ohio

Where to Get the DAY'S NEWS

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

KEY a Daily except Sunday b Every day c Daily except Saturday d Monday, Wednesday, Friday e Wednesday only f Mon., Tues., Wed., Thurs. Friday only g h Daily except Sat. and Sun. Saturday only Mon., Tues., Thurs., Frl. **Tuesday and Friday** Stations Using Eastern Time CFRB, Toronto, on 690 8:00-8:10 a.m. (a) 12:25-12:30 p.m. (a) 6:30-6:40 p.m. (a) 11:00-11:15 p.m. (b) CKLW, Windsor, on 1030 8:00-8:05 a.m. (b) 10:00-10:05 a.m. (b) 12:45-12:50 p.m. (b) 5:55-6:00 p.m. (b) 7:45-8:00 p.m. (c) 8:15-8:30 p.m. (d) WCAU, Philadelphia, on 1170 10:00-10:05 a.m. (a) 7:45-8:00 p.m. (a) 11:00-11:15 p.m. (a) WCKY, Cincinnati, on 1490 10:45-10:50 a.m. (b) 6:30-6:35 p.m. (b) WGY, Schenectady, on 790 6:30 p.m. (b) WHAM, Rochester, on 1150 12:15 p.m. (a) 4:15 p.m. (a) 10:30 p.m. (a) 11:10 p.m. (e) WJR, Detroit, on 750 11:00-11:15 p.m. (f) 11:15-11:30 p.m. (g) WLW, Cincinnati, on 700 9:55-10:00 a.m. (i) 10:00 a.m. (e) 10:40 a.m. (h) 11:00-11:05 p.m. (b) WOR, Newark, on 710 8:15-8:20 a.m. (a) 11:15-11:30 a.m. (e) 12:00-12:05 p.m. (a) 3:00-3:15 p.m. (e)

5:05-5:10 p.m. (a) 11:00-11:05 p.m. (a) 11:00-11:15 p.m. (e) WPG, Atlantic City, on 1100 10:00 a.m. (b) WRVA, Richmond, on 1110 10:00 a.m. (j) 10:30 a.m. (i) WTIC, Hartford, on 1040 10:00-10:05 a.m. (a) 11:00-11:05 a.m. (e) 6:00-6:30 p.m. (a) 11:30-11:35 p.m. (e) Stations Using Central Time CKY, Winnipeg, on 960 1:00-1:05 p.m. (a) 4:15-4:30 p.m. (k) 5:40-5:45 p.m. (a) 9:45-10:00 p.m. (b) KFAB, Lincoln, on 770 11:30-11:45 a.m. (a) 1:15-1:30 p.m. (a) 3:15-3:30 p.m. (a) ex. Fri. 4:00-4:15 p.m. (a) KSTP, St. Paul, on 1460 7:30-7:35 a.m. (a) 12:45-12:50 p.m. (a) 6:10-6:15 p.m. (a) 10:15-10:25 p.m. (b) KTHS, Hot Springs, on 1060 9:00-9:05 a.m. (a) 10:00 a.m. (e) KYW, Chicago, on 1020 6:15-6:30 p.m. (b) 9:00-9:15 p.m. (b) WENR, Chicago, on 870 5:30-5:45 p.m. (a) WFAA, Dallas, on 800 10:00 a.m. (a) 5:30 p.m. (a)

WGN, Chicago, on 720 9:00-9:05 p.m. (a)

WHO, Des Moines, on 1000 12:30 p.m. (i) 12:45 p.m. (h) 6:30 p.m. (i) 6:45 p.m. (h) 10:05 p.m. (a)

WJJD, Chicago, on 1130 6:00-6:30 a.m. (a) 12:50-1:00 p.m. (a) WLAC, Nashville, on 1470 6:30-7:00 a.m. (a) 5:55-6:00 p.m. (a) WLS, Chicago, on 870 7:00 a.m. (a) 8:30-8:45 a.m. (e) 10:25 a.m. (a) 11:55 a.m. (a) WMAQ, Chicago, on 670 5:30-5:45 p.m. (a) WOAI, San Antonio, on 1190 9:00 a.m. (a) 10:05 a.m. (e) 5:30 p.m. (a) WOWO, Ft. Wayne, on 1160 12:15 p.m. (b) Stations Using MountainTime KOB, Albuquerque, on 1180 6:45 p.m. (a) KSL, Salt Lake City, on 1130 8:00 a.m. (a) 4:55 p.m. (a) Stations Using Pacific Time KECA, Los Angeles, on 1430 12:15 p.m. (a) 6:15 p.m. (a) KFI, Los Angeles, on 640 7:30 a.m. (a) 9:45 a.m. (a) 12:00 noon (a) 10:00 p.m. (a) KJR, Seattle, on 970 9:30-10:45 a.m. (a) 6:00-6:15 p.m. (a) 9:00-9:15 p.m. (b) KNX, Hollywood, on 1050 9:45-10:00 a.m. (a) 12:00-12:15 p.m. (a) 6:00-6:15 p.m. (a) 9:00-9:15 p.m. (a) KPO, San Francisco, on 680 9:00-9:15 a.m. (i) 10:15-10:30 a.m. (d) 4:45-5:00 p.m. (h) 12:00-12:15 p.m. (a) ex. Mon.

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WHAT'S ON THE AIR TONIGHT

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

COLUMBIA(C)				
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Call	Dial

NATIONAL	., Blue (B
Call	Dial

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

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

MONDAY

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

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

C - The Shadow; Drama WAAB WABC WCAO WCAU WDRC WEAN WFBL WHEC WIBX WJSV WKBW WOKO WORC

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

WBEN WCAE WCSH WEAF WEEI WFBR WFI WGY WJAR WRC WTAG WTAM WTIC WWJ

B - Lowell Thomas

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

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

WABC WADC WBT WCAO WCAU WDAE WDBO WEAN WFBL WGR WJAS WJSV WKRC WNAC WOKO WQAM WSPD WTOC WWVA

B — Amos 'n' Andy

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

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

WBEN WCSH WEAF WEEI WFBR WFLA WGY WIOD WIS WJAR WJAX WPTF WRC WTAG WWNC

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

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

WABC WCAO WCAU WDRC WFBL WGR WHEC WHP WJAS WJSV WMAS WOKO WORC WWVA

- Buck Rogers; 25th Century с. KMBC KMOX KRLD KTRH KTSA WBBM WBT WCCO WDSU WFBM WGST WHAS WMBG

R — Al Bernard and Paul Dumont

KSD WCSH WDAF WEAF WGY WHO WJAR WMAQ WOC WRC WSAI WTAG WTAM WWJ

B - Red Davis; Drama

KDKA KOIL KPRC KSO KSTP

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

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C - Boake Carter for Philco

CKLW KMBC KMOX WABC WBBM WBT WCAO WCAU WCCO WGR WHAS WHK WJAS WJSV WNAC

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

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

C — Bar X Days; Carson Robison CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KVI KWG WABC WBBM WBNS WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHEC WHK WJAS WJSV WKRC WNAC WOKO

R - Richard Himber and Orchestra KPRC KSD KTBS KVOO WBAP WEEN WCAE WCAE WCAF WAAF WEEI WFAA WGY WHO WJAR WKY WMAQ WOAI WOC WOW WRC WSAI WTAG WTAM WTIC

B -– Jan Garber and Orchestra

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

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Edwin C. Hill CKLW KMBC KMOX WABC WADC

WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WSPD

C — Billy Batchelor

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

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

C — Atwater Kent Program CKLW KDB KERN KFBK KFPY KFRC KGB KIIJ KLZ KMBC KMOX KMT KOIN KOL KRLD KSL KVI KWG WABC WADC WBBM WBT WCAO WCAU WCCO WDOD WDRC WDSU WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC

WMT WNAC WOKO WOWO WQAM WSPD

R — Voice of Firestone

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

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

C — Chesterfield Program CKLW KDB KERN KFBK KFH KFPY KFRC KGB KGMB KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KTUL KVI KWG WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBH WKBW WKRC WLACWLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAC WNAX WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC

R — A & P Gypsies

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

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

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — The Big Show

C - Ine big show CKAC CKLW KFAB KLZ KMBC KMON KSL WABC WADC WBBM WBNS WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WHAS WHK WICC WJAS WJSV WKBW WKRC WNAC WOKO WOWO WREC WSPD

R — Colgate House Party

KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WLW WMAQ WMC WOAI WOC WOW WPTF WRC

MONDAY (Continued)

WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC R Princess Pat Players

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

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

C — Wayne King and Orchestra CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WADC WBBM WBNS WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WHAS WHK WIBW WJAS WJSV WKBW WKRC WOKO WSPD

- Contented Program R

CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WJAR WKY WLIT WLW WMAQ WMC WOAI WOC WOW WRC WSB WSM WTAG WTAM WTIC WTMJ WWJ

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

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

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Emery Deutsch and Orchestra

CFRB CKAC CKLW KFH KGKO KLRA KLZ KMBC KOH KRLD KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHK WHP WICC WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAX WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC

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

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KVI KWG WALA WBBM WBRC WCCO WDSU WFBM WGST WILAS WLAC WREC WSFA

- Amos 'n' Andy R .

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

E-11:15 p.m., C-10:15, M-9:15, P-8:15 - Glen Gray and Orchestra

WALA WBRC WBT KLRA WABC WCAO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFEA WJSV WLAC WLBZ WMAS WMBG WMBR WNAC WNOX WORC WPG WQAM WREC WSFA WSJS WTOC C - Edwin C. Hill

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

R - Gene and Glenn

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

E-11:30 p.m., C-10:30, M-9:30, P-8:30 R - Voice of Firestone

KDYL KFI KFSD KFYR KGHL KGIR KGO KGU KGW KHQ KOA KOMO KSD KSTP KTAR WDAF WDAY WEBC WHO WIBA WKBF WOC WOW WTMJ

TUESDAY

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

E-6:30 p.m., C-5:30, M-4:30, P-3:30 - Musical Appreciation Program c CKLW KLRA WABC WALA WBIG WBRC WBT WCAO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFEA WGLC WHEC WHK WHP WJAS WJSV WKBW WKRC WLAC WLBW WLBZ WMAS WMBG WMBR WNOX WOKO WORC WQAM WREC WSFA WSJS WSPD WTOC WWVA

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

B — Lowell Thomas, See Monday

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

B — Amos 'n' Andy, See Monday

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

E-7:30 p.m., C-6:30, M-5:30, P-4:30 Whispering Jack Smith C -WABC WCAO WCAU WDRC WEAN WFBL WGR WJAS WJSV WNAC WOKO WORC

B — Household Musical Memories KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WENR WGAR WHAM WJZ WMAL WREN WSYR

C — Buck Rogers, See Monday

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

E-8:00 p.m., C-7:00, M-6:00, P-5:00 - Frank Munn; Gustav Haenschen CKLW KMBC KMOX WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO

R — Leo Reisman and Orchestra KFYR KPRC KSD KSTP KTBS KVOO WAVE WBAP WBEN WCAE WCSH WDAF WDAY WFAF WEBC WEEI WFDR WFI WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WKBF WKY WMAQ WMC WOC WOW WPTF WRC WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B - Eno Crime Clues

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

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

E-8:30 p.m., C-7:30, M-6:30, P-5:30 c - Abe Lyman; Vivienne Segal CFRB CKLW KMBC KMOX WABC WADC WBBM WCAO WCAU WCCO WORC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WOWO WSPD

R --- Wayne King and Orchestra KPRC KSD KSTP WBEN WCAE WCSH WDAF WEAF WEEI WFAA WFI WGY WHO WJAR WEBF WEY WMAQ WMC WOAI WOC WOY WRC WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ B - Lawrence Tibbett CFCF CRCT KDKA KOIL KSO KWCR WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WMAL

WREN WSYR

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

CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KTUL KVI KWG WABC WADC WBBM WBT WCAO WCAU WCCO WGST WHAS WIK WJAS WJSV WOWO WREC WSPD

R — Ben Bernie and Orchestra

KFYR KOA KPRC KSD KSTP KTBS WBAP WBEN WCAE WCSH WDAY WEAF WEEI WFBR WFI WGY WJAR WJDX WAL WOMA WMC WOAI WOW WRC WSB WTAG WJAR WJDX WKY WMAQ WTAM WTIC WTMJ WWJ

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

B - Story Behind Claim; Drama KDKA KOIL KSO KWCR WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WLS WMAL WREN WSYR

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

C - Isham Jones and Orchestra CKLW KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRII KTSA KTUL KVI KWG KWKH WABC WACO WADC WALA WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WDBO WDOD WDRC WDSO WDAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBS WICC WIND WISN WJAS WJSV WKRN WKBW WKRC WLAC WKBN WKBW WKRC WMAS WMBD WMBG WLBW WMBR WMT WNAC WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSMK WSPD

R — Ed Wynn; Eddie Duchin

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

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Glen Gray; Walter O'Keefe CKLW KFAB KFH KLRA KMBC

TUESDAY (Continued)

EMOX KOMA KRLD KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGST WHEC WHS WJAS WJSV WKBN WKCC WISN WJAS WJSV WKBN WKBW WKRC WLAC WLBW WLDZ WMAS WMBD WMBG WMER WMT WAAC WNAX WOKO WORC WOWO WFG WQAN WREC WSFA WJS WSPD WTOC

R — Palmolive Beauty Box

GFGF CRCT KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KVOO WAVE WBAP WEAP WCAE WCSH WDAY WEAF WEBC WEEI WFBR WJAX WGY WHO WIOD WIS WJAR WJAX WJDX WKBF WKY WLW WMAQ WMC WOAI WOC WOW WPTF WRC WYA WSB WSM WSMB WSOC WTAG WTAM WTMJ WWJ

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

C -- George Given GFRB CKAC CKLW KDB KFH KGKO KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDHO WDNC WDOU WDNC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHK WHP WIBW WICC WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAX WNOX WOKO WORC WFG WQAM WSBT WSFA WSJS WSPO WTOC

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

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Harry Saitsr and Orchestra CKAC CKLW KDB KFH KGKO KLRA KLZ KOH KOMA KRLD KTRH KTSA KVOR KWKH WABC WACO WADC WALA WDNS WBRC WBT WCAO WDAE WDBJ WDBO WDNC WDRC WDSU WEAN WFBA WFEA WGLC WHEC WHK WHP WIBW WJAS WJSV WKBW WKRC WLAC WLBW WLBZ WMAS WMBG WMBR WMT WNAC WNAX WNOX WOKO WORC WFG WQAM WSBT WSFA WSJS WSPD WTOC WWYA

R - Gene and Glenn, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Henry Busse and Orchestra GFRB CKAC CKLW KFH KGKO KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WDBU WEAN WFBL WFEA WHEC WHS WFP WIBW WICC WISN WJAS WJSV WKBW WKAC WLAC WLBW WLBZ WMAS WMBD WMBR WMT WNAC WNAX WNOX WORC WFG WQAM WSBT WSFA WSJS WSPD WTOC WWVA

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

WEDNESDAY

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

E-6:30 p.m., C-5:30, M-4:30, P-3:30 C — The Shadow, See Monday E-6:45 p.m., C-5:45, M-4:45, P-3:45 R — Billy Batchelor, See Monday

B --- Lowell Thomas, See Monday

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

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

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

R - Gene and Glenn, See Monday

B - Willard Robison, See Monday

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

C — Silver Dust, See Monday

C --- Buck Rogers, See Monday

B — Red Davis, See Monday

R — Uncle Ezry

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

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

B — Dangerous Paradise, See Monday

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

C — Easy Aces CFRB CKLW KMBC KMOX WABC WBBM WCAO WCAU WCCO WFBL

WBBM WCAO WCAO WCCO WFBL WFBM WGR WHAS WHK WJAS WKRC WNAC WOKO WOWO WSPD R — Mary Pickford and Company

CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KFPC KSD KSTP KTAR KTBS KVOO WAVE WBAP WBEN WCAE WCKY WCSH WDAF WDAF WDAY WEAF WEBC WEEL WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMAQ WMC WOAI WOC WOW WFTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ

B --- Eno Crime Clues, See Tuesday

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

C — Billy Batchelor, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Everett Marshall; Victor Arden CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KVI KWG WABC WADC WDBW WBT WCAO WCAU WDRC WDAU WEAN WFBL WFBM WGR WHAS WIBW WJAS WJSV WKRC WLAC WNAC WOKO WSPD

B — Lanny Ross and Orchestra KDKA KOIL KSO KWCR WBAL WGAR WHAM WJR WJZ WLS WMAL WREN WSYR

R — Wayne King, See Tuesday

E-9:00 p.m., C-8:00, M-7:00, P-6:00 R — Fred Allen; Lennie Hayton

KPRC KSD KSTP KTBS KVOO WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFDR WGY WIOD WIS WJAR WJAX WKY WLIT WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ

B — Warden Lawes; Drama

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

E-9:30 p.m., C-8:30, M-7:30, P-6:30 C — George and Gracie

CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KTSA KVI KWG WABC WADU WBBM WBIG WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WHK WJAS WJSV WKBW WKRC WNAC WOKO WORC WOWO WSPD

B — John Charles Thomas

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

E-10:00 p.m., C-9:00, M-8:00, P-7:00 C — Byrd Expedition Broadcast

CKLW KDB KERN KFAB KFBK KFH KFPY KFRC KFZ KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSLKTRH KTSA KVI KWG WABC WACO WADC WBBM WBNS WBT WCAO WCAU WCCO WDAE WDRC WDSU WEAC WFBL WFBM WGST WHAS WHEC WHK WHP WIBW WJAS WHEC WHK WHP WIBW WJAS WJSV WKBW WKRC WLAC WLBZ WMBG WMT WNAC WNAX WOKO WORC WWO WQAM WREC

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

E-10:15 p.m., C-9:15, M-8:15, P-7:15 B — Madame Sylvia, Talks

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

E-10:30 p.m., C-9:30, M-8:30, P-7:30 C — Howard Barlow: Mary Eastman CFRB CKAC CKLW KDB KFH KGKO KHJ KLRA KLZ KMBC KOH KONA KRLL KSGJ KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBBM WBIG WBRC WBT WCAO WCAU WDAE WDBJ WDB0 WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHP WIBW WICC WISN WJAS WJSV WKRC WLAC WLBW WMAS WMBD WMBR WMT WNOX WORC WORC WQAM WSBT WSFA WSJS WSPD

8 — Harry Richman; Jack Denny KDYL KFYR KOA KOIL KPRC KSO KSTP KVOO KWCR KWK WBAL WCKY WDAY WEBC WENR WFAA WHAM WJR WJZ WKY WMAL WREN WRVA WSYR WTMJ

WEDNESDAY(Continued

R - One Man's Family

KSD WAPI WAVE WBEN WCAE WCSH WEAF WFBR WFLA WGY WIOD WIS WJAR WJAX WJDX WKBF WLIT WMAQ WMC WOW WPTF WRC WSAI WSB WSMB WSOC WTAG WTAM WTAR WWJ WWNC

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

E-11:15 p.m., C-10:15, M-9:15, P-8:15 C — Leon Belasco and Orchestra

KLRA WABC WALA WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDDC WDBU WEAN WFEA WJSV WLAC WLBZ WMBR WNAC WNOX WORC WPG WQAM WSFA WSJS WTOC

C --- Edwin C. Hill, See Monday

R - Gene and Glenn, See Monday

 $\begin{array}{l} \textbf{E-11:30 p.m., C-10:30, M-9:30, P-8:30}\\ \textbf{C} & - \textbf{Ozzie Nelson and Orchestra}\\ \textbf{KLRA WABC WALA WBRC WBT}\\ WOAD WALA WDBJ WDBO WDNC\\ WDOD WDRC WDSU WEAN WFEA\\ WICC WISN WJSV WLAC WLBZ\\ WMAS WMBR WNAC WNOX WORC\\ WPG WQAM WSFA WSJS WTOC\\ \end{array}$

C — Voice of Experience

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

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

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

THURSDAY

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

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

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

B — Amos 'n' Andy. See Monday

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

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

R — Gene and Glenn, See Monday

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

C --- Jack Smith, See Tuesday

C — Buck Rogers, See Monday

R — Al Bernard, See Monday

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

E-8:00 p.m., C-7:00, M-6:00, P-5:00 R — Rudy Vallee and Orchestra CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KVOO WAPI WBAP WBEN WCAE WCSH WDAY WEAF WEBC WEEL WFBR WFI WFLA WGY WHO WIOD WIS WJAA WJAX WJDX WKY WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WWJ WWNC

C ---- Easy Aces, See Wednesday

E-8:15 p.m., C-7:15, M-6:15, P-5:15 C — Fray and Braggiotti

CKLW KDB KPH KGKO KHJ KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHP WIBW WICC WISN WJAS WJSY WKRC WLAC WLBW WLAS WMAS WMT WNAC WNAX WNOX WOKO WORC WQAM WSBT WSFA WSJS WTOC WWVA

C — Billy Batchelor, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30 C — Edwin C. Hill CKLW KMBC KMOX WABC WADC

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

E-9:00 p.m., C-8:00, M-7:00, P-6:00 C --- Glen Gray; Walter O'Keefe

CKLW KFAB KFH KLRA KMBC KMOX KOMA KRLD KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKRC WKBN WKBW WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAC WNAX WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC

R — Maxwell House Show Boat

KDYL KFI KFSD KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS WAPI WAVE WBAP WBEN WCAE WCSH WDAF WEAF WEEL WFBR WFI WJAX WJDX WKBF WHY WLW WMAQ WAC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMR WTAG WTAM WTIC WTMJ WWJ WWNC

B --- Death Valley Days; Drama

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

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

C — Fred Waring's Pennsylvanians CFRB CKLW CRCM KDB KERN KFAB KFBK KFPK KFRC KGB KGKO KIJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG WABC WACO WADC WALA WBBM WBIG WACO WADC WALA WBBM WBIG WOOD WDC WDSU WEAN WFBL WFDM WFEA WGLC WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBN WKBW WKBC WLAC WLBW WBZ WMAS WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC

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

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

R — Paul Whiteman's Music Hall CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS KVOO WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC 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 WTIC WTMJ WWJ WWNC

E-10:45 p.m., C-9:45, M-8:45, P-7:45 C — Fats Waller's Rhythm Club CFRB CKAC CKLW KDB KFH KGKO KHJ KLRA KOH KRLD KSCJ KSL KTRH KTSA KVOR WAAB WABC WACO WADC WALA WBIG WBNS WBRC WRT WCAU WDAE WDBJ WDNC WDOD WDRC WEAN WFBL WBNG WDOD WDRC WGR WHEC WHP WIBW WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WNOX WOKO WORC WPG WQAM WSBT WSJS WSPD WTOC

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C --- Myrt and Marge, See Monday

B - Amos 'n' Andy, See Monday

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

CFRB CKAC CKLW KDB KFH KGKO KLRA KLZ KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBBM WBNS WBRC WBT WCAO WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFA WGLC WHEC WHE WHP WIBW WISN WJAS WJSV WKBW WKRC WLAC WLBW WLBZ WMAS WMBD WMIT WNAC WNAX WNOX WOKO WORC WPG WQAM WSBT WSFA WSJS WSPD WTOC WWVA

R — Gene and Glenn, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C — Glen Gray; Walter O'Kcefe KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOH KOIN KOL KSL KVI KVOR KWG

FRIDAY

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

OKLW KFH KGKO KLZ KMBC KOH KOMA KRLD KSCJ KSL KTRH KVOR KWKH WAAB WABC WBBM WCAO WCAU WDNC WDRC WFBL WGLC WHEC WHK WISN WJAS WJSV WKBW WLAC WLBW WMT WOKO WORC WSPD

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

FRIDAY (Continued)

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

B -- Amos 'n' Andy, See Monday

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

R — Gene and Glenn, See Monday

B — Willard Robison, See Monday

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

C - Silver Dust, See Monday

R ... – Red Davis, See Monday

R — Uncle Ezry, See Wednesday

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

B — Dangerous Paradise, See Monday

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

R — Cities Service Concert

CRCT KDYL KOA KPRC KSD KSTP KTBS KTHS KVOO KYW WBAP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WJAR WKY WLIT WOAI WOC WOW WRC WRVA WSAI WTAG WTAM WTIC WWJ

R. - Irene Rich; Drama

KDKA KOIL KSO KWCR WAVE WBAL WBZ WBZA WHAM WJZ WLS WMAL WMC WREN WSB WSM WSYR

C --- Easy Aces, See Wednesday

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

C - Billy Batchelor, See Monday

B—Robert Armbruster and Orchestra

KDKA KOIL KSO KWCR WBZ WBZA WJR WJZ WKBF WLS WMAL WREN WSYR

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

C — True Story Court CKLW KMBC WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WGR WHK WJAS WJSV WKRC WNAC WOKO

P Al Goodman and Orchestra

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

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

CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KMOX KOIN KOL KRLD KSL KVI KWG WABC WADC WBBM WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGST WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WSPD

R -- Frank Munn; Abe Lyman

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

- Phil Harris and Orchestra

KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WAPI WBAL WBZ WBZA WCKY WFAA WGAR WHAM WJZ WLS WMAL WOAI WREN WKY WSB WSM WSMB WSYR

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

CFRB CKAC CKLW KDB KERN KFAB KFBK KFH KFPY KFRC

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

Pick and Pat

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

R -Armour Program; Phil Baker

KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTAR KWK WAPI WAVE WBAL WBZ WBZA WEBC WENR WFAA WFLA WGAR WHAM WIOD WJAX WJR WJZ WKY WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

E-10:00 p.m., C-9:00, M-8:00, P-7:00 R --- First Nighter: Drama

KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WJAR WKY WLIT WLW WMAQ WMC WOAI WOC WOW WRC WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ

B --- Al Bernard and Paul Dumont

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

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

CFRB CKAC CKLW KDB KFH KGKO KHJ KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KVOR KWKI WAAB WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WDAE WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHP WIBW WICC WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMT WNAX WNOX WOKO WORC WPG WQAM WSFA WSJS WSPD WTOC

E-11:00 p.m., C-10:00, M-9:00, P-8:00 C - Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

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

C - Edwin C. Hill, See Monday

R — Gene and Glenn, See Monday

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

KDB KERN KFBK KFPY KGB KHJ KLZ KMJ KMOX KOIN KOL KSL KVI KWG WFRC WHAS wowo

SATURDAY

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

CKLW KDB KFH KGKO KHJ KLRA KLZ KOH KOMA KRLD KSCJ KSL KTRH KTSA KVOR KWKH WAAB WABC WACO WALA WBBM WBIG WBNS WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDBC WDBU WFBL WFBM WGLC WHEC WHK WHP WIBM WISN WJAS WKRC WLAC WLBW WMT WNAX WNOX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTOC

E-6:15 p.m., C-5:15, M-4:15, P-3:15 C — Gene Kardos and Orchestra

CKAC CKLW KDB KFEA KFH KGKO KHJ KLRA KLZ KMBC KOH KOMA KRLD KSCJ KSL KTRH KTSA KVOR KWKH WAAB WABC WACO WALA WBBM WBIG WCAO WACU WALA WBBM WBIG WCAU WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WFBM WGLC WHEC WHK WHP WIBW WICC WISN WJAS WKRC WLAC WLBW WLSN ZWJAS WNAX WNOX WOKO WORC WQAM WSFA WSJS WSPD WTOC

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

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

E-7:45 p.m., C-6:45, M-5:45, P-4:45 C - Lawyer and The Public

CFRB CKAC CKLW KDB KFH KGKO KHJ KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBIG WBNS WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHP WIBW WICC WISN WIEC WHP WHW WICC WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMT WNAC WNAX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTOC WWVA

R - Floyd Gibbons

KPRC KSD WAPI WBEN WCSH WDAF WEAF WFAA WFI WFLA WDAF WEAF WFAA WFI WFLA WGY WHO WIOD WIS WJAR WJAX WKY WLW WMAQ WMC WOC WOW WRC WRVA WSB WSMB WTAG WTAM WTIC WWJ

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

C — Roxy and His Gang CFRB CKAC CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KTSA KVI KWG WABC WBBM WBRC WCAO WCAU WCCO WOOD WORC WOSU WEAN WFBL WFBM WGR WGST WHAS WHK WIBW WJAS WJSV WKRC WLAC WMT WNAC WOKO WORC WREC WSPD

R — Swift Hour; Sigmund Romberg KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS WBAP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WFI WGY WIBA WJAR WKY WLW WMAQ WOAI WOW WRC WTAG WTAM WTIC WTMJ WWJ

SATURDAY (Continued))

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

E-9:00 p.m., C-8:00, M-7:00, P-6:00 R --- Songs You Love

KFYR KSD KSTP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WCY WIBA WJAR WLW WMAQ WOW WRC WTAG WTAM WTIC WTMJ WWJ

R -– Radio Clty; Frank Black KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WLS WMAL WREN WSYR

Chesterfield Program, see C -Monday

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

R - Gibson Family Musical

KDYL KFI KFYR KGO KGW KHQ KOA KOMO KSD KSTP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WGY WIBA WJAR WLW WMAQ WOW WRC WTAG WTAM WTIC WTMJ WWJ

B --- National Barn Dance

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

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

CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KVI KWG WAAB WABC WBBM WBT WCAO WCAU WCCO WHAS WHK WJAS WKBW WKRC

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

CFRB CKLW KDB KFH KGKO KHJ KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBIG WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHP WIBW WICC WISN WJAS WIP WIEW WICC WISH WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMT WNAX WNOX WOKO WORC WPG WQAM WSBT WSFA WSJS WSPD WTOC WWVA

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

B --- National Barn Dance

KDYL KF1 KGO KGW KHQ KOA

KOMO WAVE WJDX WLS WMC WSB WSMB

C — Elder Michaux' Congregation

CKAC CKLW KLRA WAAB WABC WBT WDAE WDBJ WDBO WDOD WDRC WDSU WFBM WGLC WGR WHEC WHP WIBW WJAS WJSV WKRC WLAC WORC WQAM WSBT WSFA WSJS WTOC

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C - Glen Gray and Orchestra

CKAC CKLW KLRA WAAB WABC WBT WDAE WDBJ WDBO WDOD WDRC WDSU WFBM WGLC WGR WHEC WHP WIBW WJAS WJSV WKRC WLAC WORC WQAM WSBT WSFA WSJS WTOC

E-12:00 p.m., C-11:00, M-10:00, P-9:00 C - Portland Junior Symphony

CKAC CKLW KDB KFH KGKO KLRA KLZ KMBC KOH KOMA KTRH KTSA KWKH WABC WBNS WCAU WDBO WDNC WDOD WEAN WFBL WFBM WGLC WHP WIBW WICC WJSV WKBW WKRC WLAC WLBW WNAC WNOX WOKO WPG WQAM WSBT WTOC

R — Floyd Gibbons

KDYL KFI KFSD KGO KGW KHQ KOA KOMO

SUNDAY

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

CKLW KFH KGKO KLRA KLZ KOH KRLD KSCJ KSL KTRH KTSA KWKH WABC WACO WADC WALA WBBM WBMS WCCO WDAE WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WHK WHP WIBW WICC WISN WJAS WJSV WLAC WLBW WLBZ WMAS WMBD WMBR WMT WNAC WNAX WNOX WORO WORC WQAM WREC WSFA WSPD

- Major Bowes' Family R-

KDYL KFYR KOA KPRC KSTP KTBS KVOO WAPI WCAE WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WJAR WJAX WKY WMAQ WMC WOAI WOC WRC WRVA WSAI WSMB WTAG WTAM WWNC

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

CKLW KMBC KMOX WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WJAS WJSV WKH WKRC WMAS WNAC WOKO WORC WOWO WSPD

B — Radio City Symphony CFCF CRCT KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOLL KOMO KPRC KSO KVOO WAPI WBAL WBZ WBZA WCKY WDAY WEBC WGAR WHAM WIS WJDX WJZ WKY WMAL WOAI WJR WREN WSMB WSYR WWNC

E-1:00 p.m., C-12:00, M-11:00, P-10:00 C --- Church of the Air

CFRB CKLW KFH KGKO KHJ KLRA KLZ KOH KRLD KSCJ KSL KTRH KTSA KWKH WAAB WABC WACO WALA WBBM WBIG WBNS WBT WCAO WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WFBL WGLC WGR WHEC WHP WIBW WJAS WJSV WKRC WLAC

WLBW WLBZ WMBR WMT WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WWVA

R — Dale Carnegie, Talks

WBEN WCAE WEAF WEEI WFBR WFI WGY WJAR WRC WSAI WTAG WTAM WTIC WWJ

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

R - Miss Bab-o's Surprise WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WJAR WMAQ WOW WRC WSAI WTAG WTAM WWJ

C --- Little Jack Little

CKLW KMBC KMOX KRLD WABC WADC WBBM WBT WCAU WCCO WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WOWO

E-1:45 p.m., C-12:45, M-11:45, P-10:45 C - Pat Kennedy; Art Kassel

CFRB CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG WABC WBBM WBNS WCAO WCAU WCCO WDSU WFBM WGR WGST WHAS WHK WJAS WJSV WKRC WMT WOWO WSPD

E-2:00 p.m., C-1:00, M-12:00, P-11:00 C - Lazy Dan, Minstrel Man

CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KVI KWG WABC WADC WBBM WBNS WBT WCAO WCAU WCCO WDBJ WDRC WDSU WEAN WFBL WFBM WGST WHAS WHEC WHK WIBW WJAS WJSV WKBW WKRC WLAC WMBG WMT WNAC WOWO

R — Mohawk Treasure Chest

WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WJAR WMAQ WOW WRC WSAI WTAG WTAM WWJ

B — Anthony Frome; Poet Prince

KDKA KOIL KSO KWCR KWR WBAL WBZ WBZA WENR WGAK WJR WJZ WMAL WREN WSYR

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

B -- Becker's Chats About Dogs KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WJR WJZ WLS WMAL WREN WSYR

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

C - Imperial Hawaiian Band CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KIT I KINOX KOIN KOL KOMA KMJ KMOX KOIN KOL KOMA KRLD KSL KVI KWG WABC WADC WBBM WBT WCAO WCAU WCCO WDBJ WDRC WDSU WEAN WFEL WFBM WGST WHAS WHEO WHK WIBW WJAS WJSV WKBW WKRC WLAC WMBG WMT WNAC wowo

R -- Gene Arnold and Commodores

WCAE WCSH WEAF WEEI WFBR WGY WJAR WMAQ WOW WRC WSAI WTAG WTAM

– Lux Program; Dramas B -

KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTBS KTHS KVOO KWCR KWK WBAL WBZ WBZA WDAY WEBC WFAA WGAR WHAM WIBA WJR WJZ WKY WLW WMAL

SUNDAY (Continued)

WOAI WPTF WREN WRVA WSYR WTAR

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

R - Sally of The Talkies

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

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

R — Maybelline Musical Romance KDYL KFI KGO KGW KHQ KOA KOMO KSD WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WLIT WLW WMAQ WOC WOW WRC WTAG WTAM WTIC WWJ

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

KSTP KWK WCAO WCAU WDRC WEAN WFBL WFEA WGAR WGR WHB WHO WICC WIND WJAS WJJD WJR WLBZ WLW WMAS WNAC WNBH WOC WOKO WOL WOR WORC

R - Rhythm Symphony

KDYL KFT KGW KOA KOMO KPO KPRC KTBS WAPI WAVE WBAP WBEN WCSH WDAF WEAF WEEL WFBR WFLA WGY WIBA WIOD WJAR WJAX WJDX WLIT WJAQ WMC WOAI WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WWJ

B - Sherlock Holmes; Drama

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

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

KDYL KFI KFSD KFYR KGO KGW KHQ KOA KOMO KSTP KTAR WAPI WEBC WJDX WMC WSB WSM WSMB

B — Land of Beginning Again

KDKA KGO KOIL KWCR WBZ WBZA WENR WHAM WJZ WMAL WREN WSYR

E-4:45 p.m., C-3:45, M-2:45, P-1:45 R — Dream Drama

WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WJAR WMAQ WRC WSAI WTAG WTAM WTIC WWJ

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

WEAN WFBL WFBM WGR WGST

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

R - Sentinels Serenade

CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO WAVE WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WFI WGY WHO WIBA WJAR WKBF WMAQ WMC WOC WOW WRC WSAI WSB WSM WTAG WTAM WTIC WTMJ WWJ

B - Roses and Drums

B - ROSES and DIAMS KOKA KOIL KPRC KSO KTHS KWCR KWK WBAL WBAP WBZ WBZA WENR WGAR WHAM WJR WJZ WKY WLW WMAL WOAI WREN WSYR -

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

C — Frank Crumit; Julia Sanderson CKLW KFII KMBC KMOX KOMA KTUL WAB WABC WADC WBNS WCAO WCAU WDRC WDSU WEAN WFBL WFBM WGR WHAS WHEC WHK WHSX WICC WJSV WMAS WOKO WORC WSPD WWVA

R — Tony Wons

CFCF CRCT KPRC KTHS KVOO WBAP WBEN WCAE WCSH WDAF WEAF WEEI WFI WGY WHO WIS WJAR WKY WMAQ WOAI WOC WOW WPTF WRC WRVA WTAG WTAM WTIC WWJ WWNC

B — American Bosch Explorers

KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOLL KOMO KSO KSTP KWCR KWK WAPI WAVE WBAL WBZ WBZA WCKY WDAY WEBC WENR WGAR WHAM WIBA WJDX WJR WJZ WKBF WMAL WMC WREN WSB WSM WSMB WSYR WTMJ

E-5:45 p.m., C-4:45, M-3:45, P-2:45 B — Terhune Dog Drama

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

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

C-George Gershwin; Louis Katzman CFRB CKLW NDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WBBM WBNS WBT WCAO WCAU WCCO WDRC WDSU WFBL WFBM WGST WHAS WHEC WHK WJAS WJSV WKBW WKRC WHK

E-6:15 p.m., C-5:15, M-4:15, P-3:15 B — Sparton Triolians

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

E-6:30 p.m., C-5:30, M-4:30, P-3:30 C — Smilin' Ed McConnell

CKLW KDB KERN KLAB KFBE KFPY KFRC KGB KHJ KLZ KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WBBM WBNS WBRC WBT WCAU WCCO WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHK WHP WICC WISN WJAS WJSV WKBW WKRC WLAC WLBW WLBZ WORC WQAM WREC WWA

R - Armco Iron Master

KPRC KSD KTBS KVOO WBAP

WBEN WCAE WDAF WEAF WFBR WGY WHO WKY WLIT WLW WMAQ WOAI WOC WOW WRC WTAM WWJ

B --- Compana Grand Hotel

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

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

C — Voice of Experience CKLW KMBC KMOX WAAB WABC WBBM WBT WCAO WCAU WCCO WDRC WEAN WFBL WHAS WHK WJAS WJSV WKBW WKRC WNAC WOWO WWVA

E-7:00 p.m., C-6:00, M-5:00, P-4:00 B — Jack Benny; Don Bestor

KDKA KDVL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KWCR KWK WBAL WBAP WBZ WBZA WEBC WGAR WHAM WIBA WJDX WJR WJZ WKY WLS WLW WMAL WMC WOAI WREN WSB WSM WSMB WSYR WTMJ

C — Chicago Knights

KDB KLŘA KĽZ KMBC KTRH KWKH WABC WADC WBIG WBNS WCAO WCCO WDAE WDBJ WDSU WEAN WFBM WFEA WHK WIBX WLBW WLBZ WMT WNAC WOKO WORC WPG WREC WSJS WSPD

E-7:15 p.m., C-6:15, M-5:15, P-4:15 R — Uncle Ezry

WCSH WEAF WGY WHO WMAQ WOW WRC WSAI WTAM

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

R — American Radiator Program KSD WCSH WEAF WGY WJAR WMAQ WOW WRC WSAI WTAG WTAM WWJ

B — Joe Penner; Ozzie Nelson

KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOLL KOMO KPRC KSO KSTP KTAR KVOO KWCR KWK WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIDD WJAX WJDX WJR WJZ WKY WLS WMAL WMC WOAI WPTF WREN WRVA WSB WSM WSMB WSYR WTMJ

2 — California Melodies

CKAC KERA KLZ KMBC KTRH WABC WADC WBIG WBNS WCAO WCCO WDAE WDBJ WDBO WDRC WDSU WEAN WFBL WFBM WFEA WHK WHP WICC WLBW WLBZ WMT WNAC WNAX WOKO WORC WPG WREC WSJS WSPD

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

R — Fitch Program; Wendell Hall CFCF KSD WBEN WCAE WCSH WEAF WFBR WGY WHO WJAR WKBF WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ

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

CFRB CKLW KDB KERN KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KTUL KVI KVOR KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC

SUNDAY (Continued)

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

- Chase and Sanborn Hour CF CRCT KDYL KFI KFYR R

CECE KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KVOO WAPI WAVE WBEN WBZ WBZA WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WLIT WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

B - General Motors Symphony

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

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

KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMOX KOIN KOL KSL KVI KWG WABC WBBM WCAO WCAU WCCO WDRC WGR WHAS WHK WJAS WFBL. WJSV WKRC WNAC WOKO

R -- Manhattan Merry-Go-Round CFCF KDYL KFI KGO KGW KHQ KOA KOMO KSD KSTP WDAF WEAF WEBC WFBR WFI WGY WHO WJAR WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ

8 - Silken Strings; Charles Previn KDKA KDYL KFI KGO KGW KHQ KOA KOAI KOIL KOMO KPRC KSO KSTP KWCR KWK WBAL WBAP WBZ WBZA WEBC WGAR WHAM WIBA WJR WJZ WKY WLS WLW WMAL WREN WSYR WTMJ

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

CKLW KLRA KRLD KTRH KTSA WABC WACO WADC WALA WBIG

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

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

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

Album of Familiar Music

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

B --- Walter Winchell

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

E-9:45 p.m., C-8:45, M-7:45, P-6:45 B - Tastyeast Theatre

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

E-10:00 p.m., C-9:00, M-8:00, P-7:00 R - Hall of Fame

CFCF CRCT KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KTHS WBEN WCAE WCSH WDAF WEAF WEEI WFAA WHO WFBR WFI WGY WJAR WJDX WKBF WKY WLW WMAQ WOAI WOC WOW WMC WRC WSB WSM WSMB WTAG WTAM WTIC WWJ

C - Wayne King, See Monday

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

CKAC CKLW KFH KGKO KHJ KLRA KLZ KMBC KOH KRLD KSCJ KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBIG WBNS WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHP WIBW WICC WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMBR WMT WNAX WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC

R — Pontiac Program; Jane Froman KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSTP KTAR KTBS KTHS WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKBF WKY WLW WMAQ WMC WOAL WOC WOW WRVA WPTF WRC WSB WSM WSMB WSOC WTAG WTAM WTIC WTMJ WWJ WWNC

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

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

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

E-11:15 p.m., C-10:15, M-9:15, P-8:15 B — Walter Winchell

KDYL KFI KFSD KGHL KGIR KGW KHQ KOA KOMO KPO KPRC KTAR KTBS KTHS WAPI WAVE WBAP WJDX WKY WMC WSB WSM WSMB

E-11:30 p.m., C-10:30, M-9:30, P-8:30 C --- Leon Belasco and Orchestra CKAC KLRA KLZ KRLD KTRH KTSA KWKH WABC WBNS WDBJ WDSU WFBL WFBM WHK WLBW WMBR WMT WOKO WREC WSPD

R - Jack Benny; Don Bestor KDYL KFI KFSD KGHL KGIR KGU KGW KHQ KOA KOMO KPO KTAR

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

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

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

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

CONCERTS

American Radiator Program, 7:30 p.m. Sunday, R Armco Iron Master, 6:30 p.m. Sunday, R Atwater Kent, 8:30 p.m. Monday, C Ford Concert, 8:00 p.m. Sunday, C General Motors Symphony, 8:00 p.m. Sunday, B Reineral Nations Symphony, 5:00 p.m. Sunday, C Portland Junior Symphony, 12:00 Mid. Saturday, C Radio City Music Hall, 12:30 p.m. Sunday, B Swift Hour, 8:00 p.m. Saturday, R

DANCE BANDS

- Victor Arden, 8:30 p.m. Wednesday, C
- Robert Armbruster, 8:45 p.m. Sat., C: 8:15 p.m. Fri., B Leon Belasco, 9:30 p.m. Friday, B: 11:30 p.m. Sunday; 11:15 p.m. Wed., C
- Ben Bernie, 9:00 p.m. Tuesday, R
- Don Bestor, 7:00 and 11:30 p.m. Sunday, B
- Frank Black, 10:30 p.m. Sunday, R; 9:00 p.m. Saturday, R
- Henry Busse, 11:30 p.m. Tuesday, C
- Jack Denny, 10:30 p.m. Wednesday, B
- Eddie Duchin, 9:30 p.m. Tuesday, R
- Jan Garber, 8:00 p.m. Monday, B
- Lud Gluskin, 9:30 p.m. Monday, C Al Goodman, 8:30 p.m. Friday, B
- Glen Gray, 10:00 p.m. Tuesday: 9:00 and 11:30 p.m. Thursday; 11:15 p.m. Mon.: 11:30 p.m. Sat., C Phil Harris, 9:00 p.m. Friday, B
- Lennie Hayton, 9:00 and 12:00 p.m. Wednesday, R
- Richard Himber, 8:00 p.m. Monday, R; 9:30 and 11:00 p.m. Saturday, C Isham Jones, 9:30 p.m. Tuesday, C

- Isuam Jones, 9:30 p.m. Tuesday, C Gene Kardos, 6:15 p.m. Saturday, C Art Kassel, 1:45 p.m. Sunday, C Louis Katzman, 6:00 p.m. Sunday, C Wayne King, 8:30 p.m. Tues, and Wed., R; 10:00 p.m. Sunday and Monday, C
- Little Jack Little, 1:30 and 11:00 p.m. Sunday; 11:15 p.m. Thurs., C
- Guy Lombardo, 10:00 p.m. Wednesday, R
- Abe Lyman, 9:00 p.m. Friday, R; 8:30 p.m. Tuesday, C Freddy Martin, 5:00 p.m. Sunday, C Ozzie Nelson, 7:30 p.m. Sunday, B; 11:30 p.m. Wed.;
- 11:15 p.m. Friday, C
- Raymond Paige, 7:30 p.m. Sunday, C

- Raymond Faige, 7.30 p.m. Sunday, C Charles Previn, 9:00 p.m. Sunday, B Leo Reisman, 8:00 and 11:30 p.m. Tuesday, R Willard Robison, 7:15 p.m. Mon., Wed. and Fri., B Harry Satter, 11:15 p.m. Tuesday, C
- Rudy Vallee, 8:00 p.m. Thursday, R Fred Waring, 9:30 p.m. Thursday, C
- Paul Whitman, 10:00 p.m. Thursday, R

DIALOG

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

DRAMA

- Bar X Days, 8:00 p.m. Monday, C Billy Batchelor, 6:45 p.m. daily, except Sat. and Sun., R: 8:15 p.m. daily, except Sat. and Sun., C Dangerous Paradise, 7:45 p.m. Mon., Wed. and Fri., B Red Davis, 7:30 p.m. Mon., Wed., and Fri., B
- Death Valley Days, 9:00 p.m. Mon., wed., and Fri. Death Valley Days, 9:00 p.m. Thursday, B Dramatic Guild, 10:30 p.m. Sunday, C Dream Drama, 4:45 p.m. Sunday, R

- Eno Crime Clues, 8:00 p.m. Tues. and Wed., B
- First Nighter, 10:00 p.m. Friday, R
- Grand Hotel, 6:30 p.m. Sunday, B
- Sherlock Holmes, 4:00 p.m. Sunday, B
- Warden Lawes, 9:00 p.m. Wednesday, B
- Lux Program, 2:30 p.m. wednesday, B Lux Program, 2:30 p.m. Sunday, B Myrt and Marge, 7:00 and 11:00 p.m. daily, except Sat, and Sun., C
- One Man's Family, 10:30 p.m. Wednesday, R
- Mary Pickford, 8:00 p.m. Wednesday, R Princess Pat Players, 9:30 p.m. Monday, B
- Irene Rich, 8:00 p.m. Friday, B
- Buck Rogers, 6:00 and 7:30 p.m. Mon. to Thurs., inc., C
- Roses and Drums, 5:00 p.m. Sunday, B
- Saily of the Talkies, 3:00 p.m. Sunday, R
- The Shadow, 6:30 p.m. Mon. and Wed., C
- Soconyland Sketches, 7:00 p.m. Saturday, C
- Story Behind Claim, 9:15 p.m. Tuesday, B
- Tastyeast Theatre, 9:45 p.m. Sunday, B
- Terhune Dog Dramas, 5:45 p.m. Sunday, B
- True Story Court, 8:30 and 11:30 p.m. Friday, C

PIANO

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

POPULAR PROGRAMS

A & P Gypsies, 9:00 p.m. Monday, R Album Familiar Music, 9:30 p.m. Sunday, R Gene Arnold's Commodores, 2:30 p.m. Sunday, R Miss Bab-o's Surprise, 1:30 p.m. Sunday, R Bernard and Dumont, 7:30 p.m. Mon. and Thurs., R; 10:00 p.m. Friday, B Major Bowes, 11:30 a.m. Sunday, R Byrd Expedition, 10:00 p.m. Wednesday, C Carborundum Band, 10:00 p.m. Saturday, C Cabse and Sanborn, 8:00 p.m. Sunday, R Chesterfield Program, 9:00 p.m. Mon., Wed. and Sat., Chicago Knights, 7:00 p.m. Sunday, C Cities Service Concert, 8:00 p.m. Friday, R Colgate House Party, 9:30 p.m. Monday, R Contented Program, 10:00 p.m. Monday, R Emerson Drug Program, 8:30 p.m. Friday, B Fleischmann Variety, 8:00 p.m. Thursday, R Forty-Five Minutes in Hollywood, 10:00 p.m. Thursday, C Forum of Liberty, 8:30 p.m. Thursday, C Gems of Melody, 7:15 p.m. Thursday, B Gibson Family Musical, 9:30 p.m. Saturday, R Gulf Headliners, 9:30 p.m. Sunday, C Hall of Fame, 10:00 p.m. Sunday, R Hollywood Hotel, 9:30 p.m. Friday, C Household Musical, 7:30 p.m. Tuesday, B Imperial Hawaiian Band, 2:30 p.m. Sunday, C Land of Beginning, 4:30 p.m. Sunday, B Manhattan Merry-Go-Round, 9:00 p.m. Sunday, R March of Time, 9:00 p.m. Friday, C Maxwell House Show Boat, 9:00 p.m. Thursday, R Maybelline Musical, 3:30 p.m. Sunday, R Mohawk Treasure Chest, 2:00 p.m. Sunday, R Music Appreciation, 6:30 p.m. Tuesday, C Nutsic Appreciation, 0.50 p.m. Tuesday, O National Barn Dance, 9:30 and 11:00 p.m. Saturday, B Palmotive Beauty Box, 10:00 p.m. Tuesday, R

Pontiac Program, 10:30 p.m. Sunday, R

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

RELIGIOUS

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

SINGERS

- Mildred Bailey, 7:15 p.m. Mon., Wed., Fri., B
- Mary Courtland, 8:45 p.m. Sat., C; 8:15 p.m. Friday, B
- Bing Crosby, 9:00 p.m. Tuesday, C
- Mary Eastman, 10:30 p.m. Wednesday, C
- Jane Froman, 10:30 p.m. Sunday, R Gene and Glenn, 7:15 and 11:15 p.m. daily except

- Sat. and Sun., R Tito Guizar, 12:30 p.m. Sunday, C Wendell Hall, 7:45 and 11:00 p.m. Sunday, R Annette Haushaw, 10:00 p.m. Tuesday; 9:00 and 11:30 p.m. Thurs., C
- Pat Kennedy, 1:45 p.m. Sunday, C
- Ralph Kirbery, 2:00 p.m. Sunday, R
- Frances Langford, 9:30 p.m. Monday, R

- Lazy Dan, 2:00 p.m. Sunday, C Elizabeth Lennov, 8:30 p.m. Wednesday, C Everett Marshail, 8:30 p.m. Wednesday, C Nino Martini, 9:00 p.m. Wednesday, C

- Martha Mears, 9:30 p.m. Friday, B James Melton, 9:00 and 12:00 p.m. Wednesday, R
- Frank Munn, 9:30 p.m. Sunday; 9:00 p.m. Friday, R; 8:00 p.m. Tuesday, C
- Gertrude Niesen, 9:30 p.m. Monday, C
- Donald Novis, 9:30 p.m. Monday, R
- Frank Parker, 9:00 p.m. Monday, R; 7:00 and 11:30 p.m. Sunday, B

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

- Lawrence Tibbett, 8:30 p.m. Tuesday, B Fats Waller, 10:45 p.m. Tuesday, B Fats Waller, 10:45 p.m. Thurs, C Whispering Jack Smith, 7:30 p.m. Tues.; Thurs. and Sat., C

TALKS

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

As Shown in the Index by

Frequencies and Dial Numbers

- Frederic William Wile, 6:00 p.m. Saturday, C Walter Winchell, 9:30 and 11:15 p.m. Sunday, B Alexander Woollcott, 9:00 p.m. Sunday, C

KEY TO SYMBOLS

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

fies Atlantic Standard Time (AST). E is Eastern Standard Time (EST). C is Central Standard

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Second Column Symbols

- Verifies reception for return postage.
- ħ Verifies only occasionally.
- Does not verify. c
- d Verification 10c: letter 25c.
- Sends Ekko stamp for 10c. e
- Sends Ekko stamp for 5c. f
- Sends Ekko stamp for postage. g
- Sends own station stamp for 10c. ĥ
- Sends own station stamp for 5c.
- Sends own station stamp for postage.
- Has no stamps.
- Verifies for 5c. m
- No information available. 7.

Fourth Column Symbols

Time (CST). P is Pacific Standard Time (PST).

National "Blue" network. в

Columbia network. Dn Daytime with occasional evening hours. Canadian Radio Brdestg. Commission. F

- N National"Red" and "Blue" networks.
- p Has construction permit only.
- National 'Red' network, R
- 8 Sunday only.

D Daytime only.

- Sv Synchronized.
- X Y Has permit to increase power.
- Has permit to change location.
- Has permit to change frequency. Z
- a-b-c. Small letters show stations using same transmitter.
- 1-2-3. Figures denote stations sharing time.
- No information.

Time on the Air The time is given in accordance with the "24-hour clock." Noon is always 12:00, but midnight may be either 0:00 or 24:00. To change to time of your own clock, subtract twelve. Thus, 18:00-24:00 is 6:00 p. m. to midnight. 23:00-0:30 is 11:00 p. m. to 12:30 a.m. A signi-

With Friday's	Time on the Air	
540 kilocycles 555.2 meter	'S K	CYS.
CJRM ak 1000 F Moose Jaw, Sask. CMCW dk 150 Havana, Cuba	E-12-18: 1-3	600 IAL
550 kilocycles 545.1 meter	's	IAL
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	A-8:10-24 C-7-8; 12:15-12:40; 15-15:40; 22-23	
560 kilocycles 535.4 meter	'S	
$\begin{array}{llllllllllllllllllllllllllllllllllll$	$\begin{array}{c} C-7:15-14;\ 16-22\\ M-6:45-23:30\\ If.\ P-7.1\\ C-6-17:45\\ C-12:14:30;\ 18:30-19:30;\ 21-23\\ E-6:45-9;\ 9:45-11;\ 13-14;\ 15-16:30;\ 18-24\\ C-7\cdot1\\ E-8-24\\ E-9-9:45;\ 11-13;\ 14-15;\ 16:30-18\\ E-7:30-24\\ P-8-22\\ \end{array}$	
570 kilocycles 526.0 meter	S	
KGKO ak250C (1)Wichita Falls, TexaKMTR ak500Hollywood, Calif.KVIak1000Tacoma, Wash.WKBN ae5001CYoungstown, OhioWMCA ak500New York, N. Y.WNAX ak1000C (2.5)Yankton, S. D.WOSU ak7501 (1)Columbus, OhioWSYR ak250BSyracuse, N. Y.WWNC ae1000NAsheville, N. C.	P - 6:45 - 23:30 P - 6:24	
580 kilocycles 516.9 meter	s	
CHRC ak 100 F Ouebec, Oue. CKCL ae 100 F Toronto, Ont. CKUA ak 500 Edmonton, Alta. KMJ ak 500 C Fresno, Calif. KSAC ak 500 2 (1) Manhattan, Kans. WCHS ak 500 (1) Charleston, W. Va. WIBW ak 1000 C2 (2.5) Topeka, Kans. WTAG ae 500 R (1) Worcester, Mass.	E = 9 - 0:30 E = -8 - 23:30 M = -13 - 15:15; 19 - 21 P = -7 - 24	
590 kilocycles 508.2 meter	S	
KHOak1000N (2.5)Spokane, Wash.WEE1ak1000RBoston, Mass.WKZOae1000DKalamazoo, Mich.WOWae1000R (2.5)Omaha, Neb.XEPNak50000PiedrasNegras,Coal	$\begin{array}{c} P-6:45-24 \\ EE-7:30-18 \\ C6:30-0:30 \\ n. C-5-24 \end{array}$	
600 kilocycles 499.7 meter	s	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	E-8-24 E-7:30-9: 11-13:30; 17-23 P-7:30-23:15	

610 kilocycles 491.5 meters	
CMCF ak 250 Havana, Cuba KFRC ak 1000 C (2.5) San Francisco, Calif. KZRM ak 50000 618.5 Manila, P. I. WDAF ak 1000 R (2.5) Kansas City, Mo. WIP ae 500 (1) Philadelphia, Pa. WJAY ae 500 D Cleveland, Ohio XFX ak 500 Mexico City, D. F.	$ \begin{array}{l} \mathbf{E} & -12 - 14 ; \ 18 - 20 \\ \mathbf{P} & -7 - 24 \\ \mathbf{L} & -6 ; 30 - 7 : 30 ; \ 12 : 15 - 13 : 15 ; \ 17 - 22 : 30 \\ \mathbf{C} & -6 : 30 - 24 \\ \mathbf{E} & -7 - 1 \\ \mathbf{E} & -6 - 17 : 15 \\ \mathbf{C} & -7 - 12 ; \ 16 : 30 - 22 : 30 \end{array} $
620 kilocycles 483.6 meters	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	P7-24 M7-23:15 E7:30-24 E7-sunset E-8-24 E-7:30-24 C6:45-0:30 E
630 kilocycles 475.9 meters	
CFCY ae 500 F Char't'w'n, P.E.I. CJGX ck 500 F Yorkton, Sask. CKOV ak 100 F Kelowna, B. C. CMBY z 250 635 Havana, Cuba KFRU ak 500 1 Columbia, Mo. KGFX ak 200 D Pierre, S. D. WGBF ae 500 1 Evansville, Ind. WMAL ak 250 B (.5) Washington, D. C. WOS ak 500 1D Jefferson City, Mo. -WPRO ak 250 Providence, R. I.	$\begin{array}{l} A-12-13:30; 18-23:30\\ C-8:30-9:15; 10:30-12; 19:30-21:30\\ P-8-10; 11:30-13:30; 17:30-22:30\\ E-\dots\\ C-6-9; 16-sunset; 19-20:30\\ C-9:30-sunset\\ C-7-23\\ E-6:45-1\\ C-9-16\\ E-8-1:15 \end{array}$
640 kilocycles 468.5 meters	
KFI ak 50000 N Los Angeles, Calif. WAIU ae 500 B Columbus, Ohio WOI ae 5000 D Ames, Iowa XEOX ak 250 Saltillo, Coah.	P-6:30-24 E-6:15-17:30 C-6:45-17 C
650 kilocycles 461.3 meters	
WSM as 50000 N Nashville, Tenn.	C-6:30-24
660 kilocycles 454.3 meters WAAW ak 500 D Omaha, Neb. WEAF ak 50000 R New York, N. Y. XEAL z 1000 Mexico City, D. F.	C6-18:15 E6:45-1 C
670 kilocycles 447.5 meters	
WMAQ ck 50000 N Chicago, Ill.	G—7-1
680 kilocycles 440.9 meters CMAF ak 1000 HJN ak 500 681 KFEQ ae 2500 D KPO ak 50000 N RDN z 500 VAS ak 2000 685 VOWR ck 500 681 WPTF ae 1000 DnN Add State Stat	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$
690 kilocycles 434.5 meters	
CFRB ae 10000 C Toronto, Ont. CJCJ ak 100 F Calgary, Alta. NAA ak 1000 Arlington, Va. XET ck 500 Monterrey, N. L.	E8-0:30 M E10:10-10:15; 11:55-12; 21:55-22 C12-14; 16-22
700 kilocycles 428.3 meters	
WLW ak 500000 N Cincinnati, Ohio	E-6:30-3

	Time on the Air
710 kilocycles 422.3 meters	
KMPC ae 500 Dn Beverly Hills, Calif.	P-6:45-0:30
KPCB ae 250 Seattle, Wash. TIFB z 30 714 San Jose, C. R. WOR ak 5000 Newark, N. J.	P—5:30-sunset; 22-4 C—6-10 E—6:45-0:30
XEN ak 1000 711 Newark, N. J. XEN ak 1000 711 Mexico City, D. F.	E—6:45-0:30 C—9-12; 13-16; 17-24
720 kilocycles 416.4 meters	
CMK ae 3150 725 Havana, Cuba KZEG ak 1000 Manila, P. I.	E-11-13; 19-24 L-7:30-12:15; 13:15-17 KCVS
WGN ck 50000 Chicago, III.	C-7-1:30
730 kilocycles 410.7 meters	800
CFPL ak 100 F London, Ont.	E-8:15-10:30; 12-13:30; 17-23:30
CJCA ah 500 F Edmonton, Alta. CKAC ak 5000 C Montreal, Que.	M-7:30-14; 15:30-23 E7:30-1
	B 7.50-1
740 kilocycles 405.2 meters	
KMMJ ae 1000 D Clay Center, Neb. KTRB ak 250 D Modesto, Calif.	C5-18 P
WHEB ak 250 D Portsmouth, N. H. WSB ah 50000 N Atlanta, Ga.	E-8-13:30; 15:15-18
	C6:55-24
750 kilocycles 399.8 meters	
KGU aj 2500 N Honolulu, T. H. WJR ak 10000 B Detroit, Mich	L6:30-22:30
WJR ak 10000 B Detroit, Mich. XEAM z 50 Nuevo Laredo, Tams	E-6-24 • C
760 kilocycles 394.5 meters	
CMX ae 1000 765 Havana, Cuba KXA ae 250 (.5) Seattle, Wash.	E-12-14; 20-23
WBAL ae 10000 BSy Baltimore, Md.	P— E—21-24
WJZ ck 50000 BSy New York, N. Y.	C-8-17 E-8-1
XEBC ak 5000 Agua Callente, L. C.	• P—
770 kilocycles 389.4 meters	
KFAB ae 5000 CSy Lincoln, Neb. WBBM ae 25000 CSy Chicago, III.	C6-17:45; 20:30-21:30; 22-24 C6:50-2:15
	G 0.00-2.13
780 kilocycles 384.4 meters	
CHWK ak 100 F Chilliwack, B. C. KELW ac 500 2 Burbank, Calif.	P-12-13:30; 18-22:30 P-10-13: 17-20: 4-6
KFD1 ae 1000 D Brookings, S. D.	C12:30-14
KGHL ak 1000 N (2.5) Billings Mont	L—18-24 M—8-23
KTM ak 500 2(1) Los Angeles, Calif. WEAN ac 500 C (.25) Providence, R. I. WMC aj 1000 N (2.5) Memphis, Tenn.	P—6-10; 13-17; 20-4 E_7:30-1
WIAR at SUU N Norfolk Vo	C-7-24 E-7-24
XEYZ z 10000 Mexico City, D. F.	Č—10-23
790 kilocycles 379.5 meters	
CMJK ak 150 Camaguey, Cuba KGO ak 7500 N San Francisco, Calif.	E11:30-12:30; 17-23 P7-24
KGO ak 7500 N San Francisco, Calif. WGY ak 50000 R Schenectady, N. Y.	P7-24 E6:45-1
800 kilocycles 374.8 meters	
TIGP z 75 San Jose, C. R. WBAP ak 50000 Na Fort Worth, Tex.	C C8-30-10-30+12-30-15+17-30-18-30+22-24
WFAA ak 50000 Na Dallas, Tex.	C-6:45-8:30; 10:30-12:30; 15-17:30; 18-22
wIBO ac 250 Cumberland, Md.	E—6-19:15

810 kilocycles 370.2 meters WCC0 ae 50000 C WNYC ak 500 N XFC z 350 Aguascalientes, Ags.	C-7-24 E-10-19:30 C
820 kilocycles 365.6 meters	
WHAS aj 50000 C Louisville, Ky. XEP z 500 Mexico City, D. F. XETW dk 509 Mexico City, D. F.	C-7-24 C C-12-24
830 kilocycles 361.2 meters	
CMC ac 500 835 Havana, Cuba KOA ak 50000 N Denver. Colo. TIVL z 30 835 San Jose, C. R. WEEU ak 1000 D Reading, Pa. WHDH ac 1000 Dn Boston, Mass. WRUF ac 5000 Dn Gainesville, Fla.	E-10:30-11:30; 20-23 M-7-24 A-10-11: 15-16 E-8-17:30 E-7-sunset in Denver E-8-18:45
840 kilocycles 356.9 meters	
CFOC ak 1000 F Saskatoon, Sask. CMO z 340 Havana, Cuba CRCT ak 5000 F Toronto, Ont. VOGY ak 400 St. John's, Nid. XEXX z 500 845 Mexico City, D. F.	$\begin{array}{l} M - 8 - 13:30; \ 17:30 - 23 \\ E - 6:55 - 1 \\ E - 6:45 - 24 \\ L - 10 - 11:30; \ 13 - 14:30; \ 18 - 21 \\ C - 10 - 23 \end{array}$
850 kilocycles 352.7 meters	
KIEV aj 250 D Glendale, Calif. WWL ac 10000 WWPA z 250 DP Clarion, Pa.	P6-16:45 C8-20:30 E
860 kilocycles 348.6 meters	
WABC ac 50000 C New York, N. Y. WHB ac 500 D Kansas City, Mo. XEMO ak 2500 865 Tijuana, B. C.	E7:30-1:30 C6-17 P
870 kilocycles 344.6 meters	
WENR ak 50000 Na Chicago, Ill. WLS ac 50000 Na Chicago, Ill.	C10:15-11:45; 15:30-19 C6-10:15; 11:45-15:30; 19-20:30
880 kilocycles 340.7 meters	
CFJC ak 100 F Kamloops, B. C. CRCO ak 1000 F Ottawa, Ont. KFKA ak 500 2 (1) Greeley, Colo. KLX ae 1000 Oakland, Calif. KPOF ak 500 2 Denver, Colo. WCOC ae 500 (1) Meridian, Miss. WGBI ae 500 1 Scranton, Pa. WPHR z 500 Petersburg, Va. WOAN ae 250 1 Scranton, Pa. WSUI ae 500 Iowa City, Iowa	$\begin{array}{l} p = -7:30-10:30; 12-14; 18-21\\ e = 8-9; 12-14; 17:45-24\\ M = 6-7:30; 9-14:30; 16:30-18; 21:30-24\\ p = 8-23\\ M = -7:30-9; 14:30-16:30; 18-20\\ C = -7:30-14; 17-22:30\\ E = 9:30-12:30; 13:30-16:30; 17:30-20\\ E = -8-17; 18-21\\ E = -9-9:30; 12:30-13:30; 16:30-17:30; 20-23\\ C = -9-10; 11-12:30; 14-16; 18-22\\ \end{array}$
890 kilocycles 336.9 meters	
CJIC z 100 D S. Ste. Marie, Ont. KARK ak 250 (.5) Little Rock, Ark. KFNF ak 500 2 (1) Shenandoah, Iowa KUSD ae 500 2 Vermillion, S. D. WBAA ak 1000 D W. Lafayette, Ind. WGST aeh 250 C (1) Atlanta, Ga. WILL ak 250 2 (1) Urbana, Ill. WJAR ae 500 R Providence, R. I. WMNae 250 (.5) Fairmont, W. Va. XEW ak 50000 Mexico City, D. F.	$ \begin{array}{c} \mathbb{E} \longrightarrow 3:30 - 9:30; \ 11 - 13:30; \ 16:30 - 18\\ \mathbb{C} \longrightarrow 7 - 22\\ \mathbb{C} \longrightarrow 5:30 - 8; \ 11 - 16; \ 18 - 21\\ \mathbb{C} \longrightarrow 16 - 17; \ 21 - 22\\ \mathbb{C} \longrightarrow 11 - 12; \ 12:30 - 14; \ 16 - 17\\ \mathbb{C} \longrightarrow 7 - 24\\ \mathbb{C} \longrightarrow 8 - 11; \ 17 - 18; \ 23 - 24\\ \mathbb{E} \longrightarrow 9 - 21:30\\ \mathbb{C} \longrightarrow \dots \end{array} $
900 kilocycles 333.1 meters KGA ak 1000 N (2.5) Spokane, Wash.	P6-24

KGBU ak 500 KHJ ae 1000 C (2.5) KSEI ck 250 (.5) WBEN ae 1000 R WJAX aeh 1000 N WKY ae 1000 N WKY ae 2500 D	Ketchikan, Alaska Los Angeles, Calif. Pocatello, Idaho Buffalo, N. Y. Jacksonville, Fla. Oklahoma City, Ok. Stevens Point, Wis.	$ \begin{array}{c} L\cdots \\ P7:1 \\ M7:3-23 \\ E6:45-24 \\ E7-1 \\ C6:45-24 \\ C8-16 \end{array} $
910 kilocycles 3	329.6 meters	
CJAT ak 250 F CMBS ak 150 915 CMHW z 100 CRCM ak 5000 F TICR z 75 911	Trail, B. C. Havana, Cuba Cienfuegos, Cuba Montreal, Que. San Jose, C. R.	P8-22:30 E10-12:15:30-18 E11-13:18:30-21:30 E
920 kilocycles 3	325.9 meters	
HHK ae 1000 KOMO ak 1000 N	Port-au-Prince, Haiti Seattle, Wash. Houston, Texas Denver, Colo. Chicago, Ill. Babson Park, Mass. Philadelphia, Pa. Spartanburg, S. C. Detroit, Mich. Mexicali, B. C. Leon, Guan. Tijuana, B. C.	$ \begin{array}{c} E & - 20 - 21 \\ P & - 7 - 24 \\ C & - 6 \cdot 30 - 24 \\ M & - 8 \cdot 30 - 10; \ 12: 30 - 15; \ 16: 30 - 18; \ 19: 30 - 21 \\ C & - 6 \cdot Sunset \\ E & - 8: 30 - 16: 30 \\ E & - 7: 30 - 22 \\$
930 kilocycles 3	322.4 meters	
CFAC ak 100 F CFLC ak 100 F CHLC ae 100 F CHNS ae 100 F CKPC ae 100 F CKPC ae 100 F CKPR ak 50 F CMJF z 200 CMW ae 1400 KGBZ ak 1000 2 (2.5)	Calgary, Alta. North Bay, Ont. Prescort, Ont. Halifax, N. S. Brantford, Ont. Fort William, Ont. Camaguey, Cuba Havana, Cuba York, Neb.	$ \begin{array}{c} M = 7:30 - 22:30 \\ E = 12 - 13:30; 17:30 - 23:30 \\ E = 8 - 10; 12 - 14; 17 - 19:30 \\ A = 10:30 - 13:30; 18 - 24 \\ E = -7.24 \\ E = $
WBRC ak 1000 C	Shenandoah, Iowa Oakland, Calif. Birmingham, Ala. Roanoke, Va.	$\begin{array}{c} C = 67^{-30}, 50^{-22} \\ P = 7^{-1} \\ C = -7^{-23} \\ C = -7^{-23} \\ C = -8^{-24} \end{array}$
940 kilocycles 3	319.0 meters	
VOAS ak 100 WAAT ac 500 D WAVE ak 1000 N WCSH ac 1000 R (2.5) WDAY ac 1000 N (2.5) WHA ak 2500 D XEFO ak 5000	Manzanillo, Cuba Portland, Ore. St. John's, Nild. Jersey City, N. J. Louisville, Ky. Portland, Maine Fargo, N. D. Madison, Wis. Mexico City, D. F.	$ \begin{array}{c} E & - & & \\ P & - & & \\ - & & 6 & : 30 - 24 \\ L & - 11 - 12 & : 30 & ; 16 - 17 & : 30 \\ E & - & & & \\ E & - & - & 24 \\ E & - & 8 - 24 \\ C & - & 7 - 24 \\ C & - & 7 - 24 \\ C & - & 8 - Sunset \\ C & - & 11 - 15 & ; 18 - 24 \end{array} $
	815.6 meters	F 12.22.20
CMHD dk 250 CRCS z 100 F KFWB ak 1000 (2.5) KMBC ae 1000 C (2.5)	Havana, Cuba Caibarien, Cuba Chicoutimi, Que. Hollywood, Calif. Kansas City, Mo. St. John's, Nfld. Washington, D. C.	E - 12 - 23 : 30 $E - 20 - 21$ $E - 18; 15 - 23$ $P - 7 - 23 : 30$ $C - 6: 25 - 24$ $L - 12 - 14; 18 - 21$ $E - 6: 30 - 1$
960 kilocycles 3	312.3 meters	
XEAW ak 10000 YV1RC ak 5000	Winnipeg, Man. Camaguey, Cuba Reynosa, Tams. Caracas, Venz.	C8:30-14; 16-24 E C17-1 L
······································	809.1 meters	
CMGF ak 100 971.5	Matanzas, Cuba	E—15-17; 20-22:30

					•	
	KJR WCFL WIBG XES	z ae ak dk	5000 1500 100 250	N B D	Seattle, Wash. Chicago, Ill. Glenside, Pa. Tampico, Tams.	P7:30-24 C7-24 E6-Sunset C9:30-14:30; 17-22
	980 1	kild	ocyc	les	303.9 meters	
	KDKA XEAE XEU		50000 200 250	B 	Pittsburgh, Pa. Mexicala, B. C. Veracruz, Ver.	E7-1 P9-24 C7-9; 10-14; 17-23
	990 1	kilo	ocyc	les	302.8 meters	
	WBZ WBZA XEAF XEK	ak ak z ak	50000 1000 250 100	BSy BSy	Boston, Mass. Springfield, Mass. Nogales, Son. Mexico City, D. F.	E-7-1 E-7-1 M C11-16; 18-2
	1000	ki	locy	cles	299.8 meters	
	CMBZ KFVD WHO	ak ak ak	100 250 50000	1005 Dn R	Havana, Cuba Los Angeles, Calif. Des Moines, Iowa	E-12-18 P-6:30-Sunset; 22-24 C-7-24
	1010	ki	locy	cles	296.9 meters	
	CHML CHWC CKCD CKCK CKCO CKIC CKWX CMJO KGGF KOW TIGA WHN WNAD WNOX	ak ak ae z ae ae	$\begin{array}{c} 50\\ 500\\ 100\\ 500\\ 100\\ 50\\ 100\\ 1000\\ 1000\\ 30\\ 1000\\ 500\\ 1000\\ 1000\\ \end{array}$	F 3F 3F 2 1014 2 C (2)	Hamilton, Ont. Regina, Sask. Vancouver, B. C. Regina, Sask. Ottawa, Ont. Wolfville, N. S. Vancouver, B. C. Ciego de Avila, Cuba Coffeyville, Kans. San Jose, Calif. Cartago, C. R. Ner York, N. Y. Norman, Okla. Knozville, Tenn.	$ \begin{array}{l} E & -8-13 : 30 ; 16 : 30 - 23 \\ M & -7 - 9 ; 10 - 11 ; 12 - 13 ; 15 : 30 - 23 \\ P & -7 : 30 - 23 : 30 \\ M & -9 - 10 ; 11 - 12 ; 13 - 15 : 30 ; 17 : 30 - 23 \\ E & -6 - 23 \\ A & -12 - 13 ; 18 - 19 \\ P & -7 - 20 : 30 ; 21 - 24 \\ E & -9 - 13 ; 18 - 22 \\ C & -7 - 14 ; 17 - 22 : 30 \\ P & -6 : 30 - 22 \\ C & - \dots \\ E & -7 : 30 - 1 \\ C & -8 : 48 \\ C & -8 : 48 \\ C & -6 : 45 - 24 \\ \end{array} $
	1020	ki	locy	cles	293.9 meters	
	K YW XEJ	ak ak	10000 250	N Y 	Chicago, Ill. Juarez, Chih.	C—8-1 C—10-14; 17-23:30
	1030	ki	locy	cles	291.1 meters	
	CFCN CKLW CMHI	ak ae ak z	$10000 \\ 5000 \\ 150 \\ 150 \\ 10000$	F C 1037 1034	Calgary, Alta. Windsor, Ont. Santa Clara, Cuba Santiago, Cuba Mexico City, D. F.	$ \begin{array}{c} M - \dots \\ E - 6:45 - 1 \\ E - 11 - 12; 20 - 21 \\ E - \dots \\ C - 9 - 24 \end{array} $
	1040	ki	locy	cles	288.3 meters	
	CMBC CMGH KRLD KWJJ WKAR WTIC	ae ak ae ak	150 15 10000 500 1000 50000	C D R	Havana, Cuba Matanzas, Cuba Dallas, Texas Portland, Ore. East Lansing, Mich. Hartford, Conn.	$\begin{array}{c} E\\ E-14-15; 17-18; 19:30-20:30\\ C6:30-24\\ P6-Sunset; 21-3:15\\ E-12-12:30; 14-15\\ E-7-24\end{array}$
	1050	ki	locy	cles	285.5 meters	
	CMJG CRCK KFBI KNX	z z ak	50 1000 5000 50000	F Dn	Camaguey, Cuba Quebec, Que. Abilene, Kans. Hollywood, Calif.	E E
	1060	ki	locy	cles	282.8 meters	
	CMCB KTHS WBAL WJAG XEA	ak ae ae ak ak	150 10000 10000 1000 125	N B D	Havana, Cuba Hot Springs, Ark. Baltimore, Md. Norfolk, Neb. Guadalajara, Jal.	E-13-16; 20-24 C7-24 E7-21 C7-Sunset C8:30-9; 18-23
					6	8

1070 kilocycles 280.2 meters **KJBS** 8k 100 Dn P-0-Sunset San Francisco, Calif. WCAZ WDZ dk 100 Carthage, Ill. Tuscola, Ill. D C -9:30-15:30 ak 100 Đ -7:30-15:30 WTAM ck 50000 R Cleveland, Ohio E-6:30-1 1080 kilocycles 277.6 meters WBT 50000 ae C Charlotte, N. C. E-7:30-24 WCBD ak 5000 1Dny Zion, Ill. Ć -7:30-10:30; 13:30-14:30; 15:30-24 WMBI ae 5000 Chicago, Ill. 1Dn -7-7:30; 10:30-13:30; 14:30-15:30; 0-1 XEMA z 50 Tampico, Tama. С 1090 kilocycles 275.1 meters CMGI 1094 Colon, Cuba CMGI z KMOX ak 30 F 50 000 Ĉ St. Louis, Mo. Elmira, N. Y. C -5.30-24 WESG ak 1000 -7:30-18:15 1100 kilocycles 272.6 meters CMHA z 50 1103 Sagua la Grande, C. Havana, Cuba Vancouver, B. C. Stockton, Calif. COX z CRCV ak 200 Ē F 1000 P -11-14; 17:30-23 KGDM ak 250 Ď Þ -6-Sunset; 0-6 Shreveport, La. San Jose, C. R. New York, N. Y. Atlantic City, N. J. Mexico City, D. F. KWKH ae 10000 $\overline{\mathbf{C}}$ C TIRCA ak 500 С WLWL ae 5000 1 —14-15; 18-20 —9-18; 20-1 E îC WPG ak 5000 J, Е XEFG ak 250 1105 KCYS. 1110 kilocycles 270.1 meters 1160 KSOO ak 1000 Dn (2.5) Sloux Falls, S. D. N Richmond, Va. C-6:30-18:30 WRVA ae 5000 E-7-24 DIAL 1120 kilocycles 267.7 meters 100 Montreal, Que. St. John, N. B. Hamilton, Ont. CHLP -9-14; 17-24 Z E CHSJ ae 100 F CKOC CMHJ **F**(1) -7:45-14:30; 16-24 500 8.6 F ae 40 100 1125 Cienfuegos, Cuba Spokane, Wash. Е -11-13; 17-21 **KFIO** Ď ak P-6-17 Spokane, waan. Los Angeles, Calif. Los Angeles, Calif. Seattle, Wash. Wilmington, Del. Milwaukee, Wis. College Station, Tex. Nuevo Laredo, Tams. KFSG 500 ag P-6:30-7:15; 19:30-24 8 KRKD 500 ae 8 P-7:45-24 100 KRSC ck D P----6-Sunset WDEL яk 250 250 (.5) Ē -9-22 WISN ak WTAW ae (1)500 -11:50-12:30; 20-21 C 50000 XENT ck C-7:30-24 1130 kilocycles 265.3 meters KSL WJJD 50000 86 C Salt Lake City, Utah M-6:30-24 ak 20000 Dn Chicago, Ill. New York, N. Y. C--6-18:45 WOV 1000 ag D E-8-14; 15-18 1140 kilocycles 263.0 meters KVOO ak 25000 WAPI ac 5000 1N 1N Tulsa, Okla. -6:30-17:45: 21-24 Č--6-21 Birmingham, Ala. 1150 kilocycles 260.7 meters CMJH ak 50 Ciego de Avila, Cuba E -8-8:30; 10-15; 17:30-22:30 COK WHAM as ak COK 250 в.... Havana, Cuba E Rochester, N. Y. Monterrey, N. L. Merico City, D. F. -8-1 50000 E 250 -9-20 XEWZ a 100 C 1160 kilocycles 258.5 meters WOWO ae 10000 Fort Wayne, Ind. Wheeling, W. Va. Guadalajara, Jal. 10 C--7-18:45: 19:30-23 WWVA ak 5000 ĨČ E-6:30-20:30 XED ck 500 C--8-9; 12-15:30; 19-23

			with Friday's Th	the off the All	
1170 kil	locy	eles	256.3 meters		
CMJE z	50		Camaguey, Cuba	<u>E</u> —	
COA z WCAU ae	500 50000	1175 C	Havana, Cuba Philadelphia, Pa.	E	
					1
1180 ki	locy	eles	254.1 meters		
KEX ak	5000	2N 2	Portland, Ore.	P6:30-17:30; 20-24 M11-21	
KOB ae VE9EK ak	10000 10	1185	Albuquerque, N. M. Montniagny, Que.	E—Silent	
WDGY ak WINS ae	$1000 \\ 1000$	D (2.5)	Minneapolis, Minn. New York, N. Y.	C6:30-20:15 E7-19:30	
WMAZ ak	1000		Macon, Ga. Mexico City, D. F.	E7-19	
XEFA z	500		Menco City, D. F.	C—	
1190 ki	locy	cles	252.0 meters		
HIJ z	15	1195	Santo Domingo, D. R.	E E9-17:15	
WATR ak WOAl ak	100 50000	D N	Waterbury, Conn. San Antonio, Texas		
WSAZ ak	1000	····	San Antonio, Texas, Huntington, W. Va	E7-18:45	
1200 ki	loov	-100	249.9 meters		
	10C y v 100	F	Moose Jaw, Sask.	M-7:30-22	1
CKTB ak	100	r F	St. Catharines, Ont.	E-8-13:30; 16-23:30	
CMCJ ak KADA z	400 100	PD	Havana, Cuba Ada, Okla.	Е— С—	
KBTM ak	$\begin{array}{c} 100 \\ 100 \end{array}$	D (.25)	Jonésboro, Ark. Marshalltown, Iowa	C6-17 C6-9; 12-15; 18-21	
KFJB ak KFXD ae	100	(.23)	Nampa, Idaho	M-7-21 M-9-21	
KFXJ ak KGDE ak	$\begin{array}{c} 100 \\ 100 \end{array}$	(.25)	Grand Junction, Col. Fergus Falls, Minn.	M9-21 C7-21	
KGEK ak	100		Sterling, Colo.	M—11:30-13:30 P—24 hours	
KGFJ ae KGHI ak	$\begin{array}{c} 100 \\ 100 \end{array}$	(.25)	Los Angeles, Calif. Little Rock, Ark.	C8-13; 15-22	•
KGVO ak KMLB ak	$\begin{array}{c} 100 \\ 100 \end{array}$		Missoula, Mont. Monroe, La	M—8-22 C—	
KOOS ae	100		Marshfield, Ore.	P-8-19	
KSUN ck KVOS ak	$\begin{array}{c} 100 \\ 100 \end{array}$	D	Lowell, Ariz. Bellingham, Wash	M-Sunrise-Sunset P-7:30-22:30	
KWG ak WABI ak	$100 \\ 100$	С	Stockton, Calif. Bangor, Maine Ponca City, Okia. Huntsville, Ala.	P7-24 E9-14; 18-22	
WBBZ ak	100		Ponca City, Okla.	C-6:30-21:45	
WBHS z WBNO ck	$100 \\ 100$	i	New Orleans, La.	C	
WCAT ak WCAX ak	$100 \\ 100$	D	Rapid City, S. D.	M—12:30-13:30 E—12-13; 17-19	
WCLO ak	100	 	Janesville, Wis.	C-7-20	
WFAM ak WFBE ak	$\begin{array}{c} 100 \\ 100 \end{array}$	8 (.25) 2	South Bend, Ind. Cincinnati, Ohio	C6:30-24 E7-23	
WHBC ak	100	2	Canton Ohio	E-7-9; 12-15; 18-21 C-7:30-23	
WHBY ak WIBX ak	$\begin{array}{c} 100 \\ 100 \end{array}$	(.3)	Green Bay, Wis. Utica, N. Y.	E-8-24	
WIL ak WJBC ak	$\begin{array}{c} 100 \\ 100 \end{array}$	(.25) 6	St. Louis, Mo. Bloomington, Ill.	C-7-23 C-9-12:30; 15-19:30 C-6:30-9; 12:30-15; 19:30-22	
WJBL ae	100	6 1	Decatur, III.	C6:30-9; 12:30-15; 19:30-22 C8-12; 17-20	
WJBW ak WKBO ak	$\begin{array}{c} 100 \\ 100 \end{array}$	3	New Orleans, La. Harrisburg, Pa.	E-8-11; 15-24	
WKJC ae WLVA ak	$\begin{array}{c} 100 \\ 100 \end{array}$	3 (.25) (.25)	Lancaster, Pa. Lynchburg, Va.	E-11-15; 18-20 E-7-14; 17-22	
WMPC ak	100	2	Lapeer, Mich.	E-10-14; 15:30-18; 19-22:30 E-9-12; 15-18; 21-24	
WNBO ae WRBL ak	$100 \\ 100$		Washington, Pa. Columbus, Ga.	C7-21	
WWAE ae YV3RC ak	$\begin{array}{c}100\\1000\end{array}$	8	Hammond, Ind. Caracas, Venz.	C-7-8:30; 11-13; 16-24 L-11-14; 17-22:30	
10-AK ak	15		Stratford, Ont.	E-12-13; 17:30-19	
10-BP ak 10-BU ak	25 50		Wingham, Ont. Canora, Sask.	E-12-13 C	
	4		0.45.0		11
121 0 ki	locy		247.8 meters		1
CHNC ak CKBI ak	$\begin{array}{c} 100 \\ 100 \end{array}$	F F	New Carlisle, Que. Prince Albert, Sask.	A12:30-13:30; 18-24 M	
CKCH ak	100	F	Hull, Que.	E-11:30-13:15; 17:30-23	
CKMC ak CMJI ak	50 150	11111	Cobalt, Ont. Ciego de Avila, Cuba	E E	

KASA ck KDLR ak	100 100		Elk City, Okla. Devils Lake, N. D.	C6-8; 9-13:30; 14:30-20 C8-14:15; 18-20	
KFJI ak	100		Klamath Falls, Ore.	P-8:30-21	
KFOR ak	100	(.25)C	Lincoln, Neb.	C-7-22:30	
KFPW ak	100	(Fort Smith, Ark.	C-6-14; 17:30-21:30	
KFVS ae	100	6 (.25)	Cape Girardeau, Mo.		
KFXM ak	100	9` ´	San Bernardino, Cal.	P-6-24	
KGY ak	100		Olympia, Wash.	P-7-23	
KIEM ak	100		Eureka, Calif.	P -7:30-22	
KPPC ak	50	9	Pasadena, Calif.	P-Silent	
KWEA Z KWFV Z	100	· · · · ·	Shreveport, La.		
KWFV z KWTN ak	100 100		Hilo, Hawaii Watertown, S. D.	L— C—7-21	
WALR ak	100	ÿ	Zanesville, Ohio	E	
WBAX ae	100	î	Wilkes Barre, Pa.	Ē7-12	
WBBL ak	100	$\overline{7}S$	Richmond, Va.	E—Silent	
WBRB ak	100	3	Red Bank, N. J.	E 9-11; 16-24	
WCBS ak	100	2	Springfield, Ill.	C-11:15-15; 18:45-21:30	
WCOL ak	100		Columbus, Ohio	E-8-23	
WCRW ae	100	4	Chicago, III.	C-11-14; 17-19	
WEBO ae	100	6 (.25)	Harrisburg, Ill.	C = 6-9; 12-16; 20:30-24	
WEDC ae	100 100	4	Chicago, Ill.	C8:30-10; 15:30-17; 19-20; 22-23; 0-2 ESilent	
WFAS ak WGBB ae	100	3 3	White Plains, N. Y. Freeport, N. Y.	E-Silent	
WGCM ae	100	(.25)	Gulfport, Miss.	C—9-13; 19-21	
WGNY ak	100	3	Chester, N. Y.	E-7:30-9; 11-13	
WHBF ak	100		Rock Island, Ill.	C7:30-23	
WHBU ak	100		Anderson, Ind.	C—7-23	
WIBU ak	100		Poynette, Wis.	C-7-19	
WJBY ak	100		Gadsden, Ala.	<u>C</u> -9-21	
WJEJ ah	100	D	Hagerstown, Md.	E-Sunset	
WJIM z WJW ak	$\begin{array}{c}100\\100\end{array}$	Р	Lansing, Mich.	E	
WKFI ak	100	Ŷ	Akron, Ohio Greenwood, Miss.	C-7-19	
WKOK ak	100	ÎP	Sunbury, Pa.	E-12-24	
WMBG ak	100	7C	Richmond, Va.	E-7-24	
WMFG z	100	Р	Hibbing, Minn.	C	
WOCL ak	50		Jamestown, N. Y.	E-10:30-22:30	
WOMT ae	100		Manitowoc, Wis.	C - 7 - 21	
WODX ae WSBC ae	100		Thomasville, Ga.	E = 8 - 21	
WSBC ae WSIX ak	100 100	4	Chicago, III. Springfield, Tenn.	C-6-8:30; 10-11; 14-15:30; 20-22; 23-24 C-6-14:30; 17-20:30	
WSOC ak	100	N (.25)	Charlotte, N. C.	E-7-24	
WTAX ak	100	N (.25) 2	Springfield, 111.	Č —,	
XEE z	50		Durango, Dgo.	C	VONO
XEFJ ak	100		Monterrey, N. L.	C-11-14; 18-22	KCYS.
XEFV ak	100		Juarez, Chih.	M—9-15; 17-22	1240
XEMZ z	30		Tijuana, B. C.	P-1	
XETH ak	100	· • • • •	Puebla, Pue.	C-8:30-11; 13-15; 19-24	DIAL
1000 1-1	1	_ 1	245 0		1
1220 ki			245.8 meters		[
CMHK z	50	1225	Cruces, Cuba	E-10-11:30	Para contraction and a second
KFKU ae	1000	a S2	Lawrence, Kas.	C-14:30-15; 18-18:30	
KTW ak KWSC ae	$\begin{array}{c} 1000 \\ 1000 \end{array}$	S2 2 (2)	Seattle, Wash. Pullman, Wash.	P-Silent	
WCAD ak	500	$\mathbf{\hat{D}}^{(2)}$	Canton, N. Y.	P-6:45-8; 10:30-21:30 F-12:30-13:30: 15-16	
WCAE ak	1000	Ŕ	Pittsburgh, Pa.	E-12:30-13:30; 15-16 E-6:45-1	
WDAE ae	1000	C (2.5)	Tampa, Fla.	E	
WREN ak	1000	Ba	Lawrence, Kas.	Č-7-24	

1000 1230 kilocycles

243.8 meters

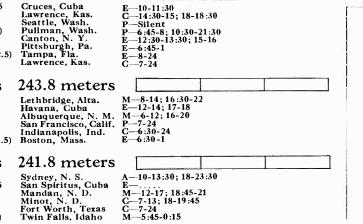
CJOC	ak	100	F
CMCA	z	150	2
KGGM	ak	250	(.5)
KYA	ae	1000	Ń
WFBM	ae	1000	1C
WNAC	ak	1000	C (2.

1240 kilocycles

CJCB	ak	1000	F
СМНВ	z	30	1245
KGCU	ak	250	1
KLPM	ak	250	1
KTAT	ak	1000	C
KTFI	ae	1000	(1.5)

241.8 meters

Sydney, N. S. San Spiritus, Cuba Mandan, N. D. Minot, N. D. Fort Worth, Texas Twin Falls, Idaho



			•	
WKAQ ae WXYZ ak XEAI z	1000 1000 100		San Juan, P. R. Detroit, Mich. Mexico City, D. F.	E—11:15-12:45; 17:15-21 E—7-24 C—
1250 ki	locve	les	239.9 meters	
CMCU ak KFOX ae WCAL ah WDSU ak WHBI ak WLB ak WNEW ae WTCN ak	-	1255 2 (2.5) C 1 (2.5) 2 1 (2.5) 2 1 (2.5) 2	Havana, Cuba Long Beach, Calif. Northfield, Minn. New Orleans, La. Newark, N. J. Minneapolis, Minn. Newark, N. J. Minneapolis, Minn.	$ \begin{array}{c} E = -12 - 18 \\ P = -6 - 24 \\ C = -9 \cdot 45 - 10 \cdot 15 ; \ 20 - 22 \\ C = -7 - 24 \\ E = -14 - 19 ; \ 20 - 22 \\ C = -14 - 19 \\ E = -7 - 4 \\ C = -6 \cdot 15 - 9 \cdot 45 ; \ 22 \cdot 35 - 24 \end{array} $
1260 ki	locyc	les	238.0 meters	
CFRN ak KOIL ak KPAC z KRGV ak KUOA ak KVOA ak WLBW ae WNBX ak WTOC ae	100 1000 500 500 1000 500 1000	B (2.5) D D C C	Edmonton, Alta. Council Bluffs, Iowa Port Arthur, Texas Weslaco, Texas Fayetteville, Ark. Tucson, Ariz Erie, Pa. Springfield, Vt. Savannah, Ga.	$ \begin{array}{c} M = -7:30-13:30; \ 15-16; \ 17:30-20\\ C=-6-1\\ C=-7-2i\\ C=-7-13; \ 16-19\\ M=6-9; \ 12-15; \ 18-21\\ E=-7:15-Sunset\\ E=-7:15-Sunset\\ \end{array} $
1270 ki	locyc	les	236.1 meters	
CMCP z HIX ak KGCA ak KOL ae KVOR ae KWLC ak	150 1000 100 1000 1000 1000	2D C (2.5) C 2D	Havana, Cuba Santo Domingo, D.R. Decorah, Iowa Seattle, Wash. Colorado Spg3., Colo. Decorah, Iowa	$\begin{array}{c} E - & & \\ E - & 11:40-20:10 \\ C - & 8:30-9:45; 10:45-11:30; 12:30-14:30 \\ P - & 6:45-24 \\ M - & 7-23 \\ C - & 7:30-8:30; 9:45-10:45; 11:30-12:30; 14:30-15:30 \\ 15:30 \end{array}$
WASH ak WFBR ae WJDX ae WOOD ak XFB ak	500 500 1000 500 1000	a R N (2.5) a	Grand Rapids, Mich. Baltimore, Md. Jackson, Miss. Grand Rapids, Mich. Jalapa, Ver.	$ \begin{array}{c} E = -7 - 24 \\ E = -7 - 24 \\ C = -7 - 23 \\ E = -7 - 24 \\ C = 8 - 9; \ 13 - 14: 30; \ 20 - 23: 30 \end{array} $
1280 ki		eles	234.2 meters	E
CMCO z KFBB ae WCAM ae WCAP ae WDOD ae WIBA ae WORC ak WRR ak WTNJ ak	$150 \\ 1000 \\ 500 \\ 500 \\ 1000 \\ 50$	(2.5) 1 1 C (2.5) N (1) C 1 1 1 C (2.5) 1 1 1 1 1 1 1 1 1 1 1 1 1	Havana, Cuba Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Worcester, Mass. Dallas, Texas Trenton, N. J.	
1290 ki	locyc	eles	232.4 meters	
KDYL ak KLCN z WEBC ae WJAS ak WNBZ z WNEL z	1000 100 1000 1000 50 500	N D N (2.5) C (2.5) D P	Salt Lake City, Utah Blytheville, Ark. Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. San Juan, P. R.	$\begin{array}{c} M - 6:30 - 1 \\ C - 10:30 - 16:30 \\ C - 7-24 \\ E - 7:30 - 0:30 \\ E - \dots \\ A - \dots \end{array}$
1300 k i	ilocyc	eles	230.6 meters	
CMKJ z HIZ z KALE ak KFR ak KFH ak KFJR ag VOAC z WBBR ae WEVD ak WFAC Bae WFBC ak WHAZ ae	$\begin{array}{c} 20\\ 10\\ 500\\ 1000\\ 500\\ 40\\ 1000\\ 1000\\ 1000\\ 1000\\ 1000\\ 1000\\ 1000\\ 500\\ 1000 \end{array}$	3C 3C 22 3 1 1 1 (1) 1 N	Guantanamo, Cuba Santo Domingo, D. R. Portland, Ore. Los Angeles, Calif. Wichita, Kans. Portland, Ore. St. John's, Nfid. Brooklyn, N. Y. New York, N. Y. New York, N. Y. Greenville, S. C. Troy, N. Y. Miami, Fla.	$E = \dots$ $E = -10:30; 14:30-17; 18-19$ $E = -7-24$ $E = -7-24$ $E = -7-3; 15-18; 20-21; 22-23; 0-1$ $E = -7-3; 15-18; 20-21; 22-23; 0-1$ $E = -7:30-14:30; 17:30-22:30$ $E = -5ilent$ $E = -8-24$
1310 k		cles	228.9 meters	
CHCK ak	50	•••••	Charlottetown, P.E.I.	

CJKL CJLS	z 2	100 100		Kirkland Lake, Ont. Yarmouth, N. S.	E A
CKCV CMCY	ak ak	50 500	1316	Quebec, Que. Havana, Cuba Jerome, Ariz.	E-12-14; 18:30-19:30 E
KCRJ	ak	100	D	Jerome, Ariz.	M7:30-9:30; 12-13; 16:30-18
KFBK KFPL	ak dkh	100 100	С	Sacramento, Calif. Dublin, Texas	P-8-24 C6-15; 18-21
KFPM	ae	15		Greenville, Texas	C-7:45-9; 12:30-14:45; 18-21
KFXR KFYO	ak ak	100 100	(.25) (.25)	Okianoma City, Ok.	G—7:30-22
KGBX	ak	100	(.25)	Lubbock, Texas Springfield, Mo.	C7-21 C17:45-22
KGCX	ak	100	(.25)	Springfield, Mo. Wolf Polnt, Mont. Kalispell, Mont. Kearney, Neb. Yakima, Wash. Modford, Ore	M-7:30-9; 11:30-15; 18-19
KGEZ KGFW	aj ak	100 100		Kalispell, Mont. Kearney, Neb.	M8-21 C7-13:30: 15:30-21
KIT	ak	100		Yakima, Wash.	C-7-13:30; 15:30-21 P-7-22
KMED KRMD	ck ak	100 100	(.25)	Medford, Ore. Shreveport, La.	P8-20 C7-21
KTSM	ak	100		El Paso, Texas	M - 6:30 - 13: 15 - 22
KXRO WAML	ak ak	$100 \\ 100$	$\cdots \cdots \times$	Aberdeen, Wash.	M-6:30-13; 15-22 P-7:30-22
WBEO	ae	100		Laurel, Miss. Marquette, Mich.	C-7-10; 11-14; 16-21:30 C-9:30-13:15; 17-19
WBOW	ak	100		Terre Haute, Ind.	C7-23
WBRE WCLS	ak ae	100 100		Wilkes Barre, Pa. Joliet, Ill.	E-8-21:45 C-Silent
WDAH		100	S	El Paso, Texas	C—Silent M—Silent
WEBR	ae	100	(.25)	El Paso, Texas Buffalo, N. Y. Royal Oak, Mich.	E724
WEXL WFBG	ak ae	50 100	3	Royal Oak, Mich.	E-8-4 E-10:30-16:30; 19:15-22
WFDF	am	100		Altoona, Pa. Flint, Mich.	E-7-24
WGH	ae	100		Newport News, Va.	E-7-13; 16:30-23
WHAT WJAC	ak ae	$\begin{array}{c} 100 \\ 100 \end{array}$	4 3	Philadelphia, Pa. Johnstown, Pa	$\begin{array}{l} \mathbf{E} = 9-11:30; \ 13-16; \ 21-24 \\ \mathbf{E} = 9-10:30; \ 16:30-18:15; \ 21:15-22:15 \end{array}$
WJAC WLBC	ak	50	ŏ (.1)	Johnstown, Pa. Muncie, Ind. Laconia, N. H.	C-7-22
WLNH WMBO		100 100		Laconia, N. H.	E E9-21
WMFF	Z	100	PD	Auburn, N. Y. Plattsburg, N. Y. New Bedford, Mass.	E
WNBH WOL		100	(.25)	New Bedford, Mass.	E-7:45-23:20
WRAW	ae ak	100 100	(.25)	mashington, D. C.	E7-24 E7-13; 16-22
WROL	ak	100		Reading, Pa. Knoxville, Tenn.	C-7-24
WSAJ WSGN	ae	100		Grove Clty, Pa.	E-Silent
WSIS	ak ak	$100 \\ 100$	(.25) C	Birmingham, Ala. Winston-Salem, N.C.	C6-22 E7:45-24
WTEL	ah	100	4	Philadelphia, Pa. Jackson, Tenn. Elkhart, Ind.	E-7-9; 11:30-13; 16-21
WTJS WTRC	ak ak	$ 100 \\ 50 $	(.25) 6 (.1)	Jackson, Tenn.	C7-13:45; 16-22 C8-19:30
XECW	Z	10		Elkhart, Ind. Mexico City, D. F. Merida Yuc	C
XEFC XEFW	ak ak	100			C-11-12
XETB	2 2	250 125		Tampico, Tams. Torreon, Coah.	C-9-11; 12-14:30; 17-21 C
XEX	ak	125		Monterrey, N. L.	Č—8-21
1320	1211	00200	100	227 1 motors	
				227.1 meters	
CMCK KGHF	z ak	100 500	Р	Havana, Cuba Pueblo, Colo.	E M
KGMB		250	Ċ	Honolulu, T. H.	L-6-22:30
KID KSO	ae ak	$250 \\ 500$	(.5)	Idaho Falls, Idaho	M6-23
WADC	ae	1000	B (1) C (2.5)	Des Moines, Iowa Akron, Ohio	C5:30-1 E8-24
WORK	ak	1000		Akron, Ohio York, Pa. New Orleans, La.	E-8-17:30
WSMB	ak	500	N	New Orleans, La.	C—7-24
1330	kil	ocyc	eles	225.4 meters	
KGB	80	1000	C (2.5)	San Diego, Calif. Tacoma, Wash.	P-7-1
KMO KSCJ	ak aj	250 1000	ición	Tacoma, Wash.	P6:45-23 C7:30-23
KTRH	2	500	C (2.5) C (2.5)	Sioux City, Iowa Houston, Texas	C-6:30-24
WDRC	ae	1000	U	marcioro, Conn.	E-8-24 E-7-24
WSAI WTAQ	ak ae	$1000 \\ 1000$	R (2.5) 1	Cincinnati, Ohio Eau Claire, Wis.	E7-24 C7-18:45
-			1		
1340	kil	ocyc	eles	223.7 meters	
KFPY					
	ak	1000	C	Spokane, Wash.	P-7-24
	ak ak	1000 250 250	C D	Spokane, Wash. Huron, S. D. Dodge City, Kans. Pensacola, Fla.	P7-24 C C7-20

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KCYS. 1340 DIAL

				With Filday S In	ne on the An
WSPD	ae ae z	500 1000 250	C C (2.5)	Manchester, N. H. Toledo, Ohio Orizaba, Ver.	E—9-23 E—7-1 C—
1350	kil	ocvo	les	222.1 meters	
CMBD KIDO KWK WAWZ WBNX	z ak ae ae ae	150 1000 1000 250 250	(2.5) B (2.5) 1 1	Havana, Cuba Boise, Idaho St. Louis, Mo. Zarephath, N. J. New York, N. Y.	
1360	kil	ocyc	les	220.4 meters	
CMJP CMKF KGER KGIR WCSC WFBL WGES WOBC WSBT	ak z ak ak ak ak ak ak ak	75 30 1000 500 1000 500 500 500 500 500	1363 N (1) C (2.5) (1)	Moron, Cuba Holquin, Cuba Long Beach, Calif. Butte, Mont. Charleston, S. C. Syracuse, N. Y. Chicago, Ill. Vicksburg, Miss. South Bend, Ind. 218.8 meters	$ \begin{array}{c} E - 10 - 12; \ 20 - 22 \\ E \\ P - 7 - 23 \\ M - 8 - 23: 15 \\ E - 8 - 15: 30; \ 18 - 23 \\ E - 7 - 1 \\ C - 7 - 12; \ 17 - 20; \ 23 - 1 \\ C \\ C - 6: 30 - 24 \end{array} $
	z	100			Λ
CMBG CMGE KCRC KERN KFGQ KFJM KFJZ KGAR KGFG KGFL KGKL KICA	ZZAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	225 30 100 100 100 100 100 100 100 100 100	(.25) 4 (.25) 5	Moncton, N. B. Havana, Cuba Cardenas, Cuba Enid, Okla. Bakersfield, Calif. Boone, Iowa Grand Forks, N. D. Fort Worth, Teras Tucson, Ariz. Oklahoma City, Ok. Roswell, N. M. San Angelo, Teras Clovis, N. M. Galveston, Teras San Antonio, Teras	$ \begin{array}{c} E = \ldots \\ E = \ldots \\ C = 7 - 9; 11 - 14; 17 - 15 \\ P - 7 - 24 \\ C = \ldots \\ C = 8 - 20 \\ C = 7 - 23 \\ M = 7 - 13; 16 - 22 \\ C = 9 - 11; 14 - 19; 19:4 \\ M = -6 - 9:30; 14 - 19:30 \\ C = 8 - 21:30 \\ M = 9:30 - 14; 19:30 - 2 \\ C = -23 \\ C = $
KONO KRE KRKO	ak ak ak	100 100 50	5	San Antonio, Texas	0:30 C-6-7; 8:30-10; 11- P-6-24 P-7:30-12; 16:30-20
KSLM KUJ KVL KWKC KWYC WAGF WBTM WDAS WGL WHBO WHBO WHBO WHBO WHBO WHBO WHBO WHBO	zaazzaaaaaaaaaaaaaazzaaaaaazaazzaazza	$\begin{array}{c} 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100$	Y D (.25) C C DP P D D D D D T	Salem, Ore. Walla Walla, Wash. Seattle, Wash. Kansas City, Mo. Sheridan, Wyo. Hudson Falls, N. Y. Dothan, Ala. Danville, Va. Baltimore, Md. Philadelphia, Pa. Fort Wayne, Ind. Mount Orab, Ohio Memphis, Tenn. Calumet, Mich. Jackson, Mich. Atlanta, Ga. Lowell, Mass. Jacksonville, Fla. Wilmington, N. C. Davenport, Iowa Hattlesburg, Miss. St. Albans, Vt. Williamsport, Pa. Augusta, Maine Racine, Wis. Buffalo, N. Y. Nuevo Laredo, Tams. Merico City, D. F. Morelia, Mch. San Luis Potosi, SLP Longview, Texas	$ \begin{array}{c} \hline p \\ -6:30-22 \\ p-6:9; 12-15; 18-21 \\ \hline C \\ -7:30-1 \\ \hline C \\ -7:30-1 \\ \hline C \\ -7:30-1 \\ \hline C \\ -8-17:15 \\ \hline E \\ -7:14; 17-22 \\ \hline C \\ -8-13; 16:45-24 \\ \hline E \\ -8-11:30; 12-21 \\ \hline C \\ -7:55-14; 16-22:3 \\ \hline C \\ -7:24 \\ \hline E \\ -7:24 \\ \hline C \\ -7:24 \\ \hline C \\ -7:30-9:30; 11-13 \\ \hline E \\ -7:30-20 \\ \hline C \\ -7:30-13:30; 15-2 \\ \hline C \\ -8:50-14:30; 16-2 \\ \hline C \\ -8:50-14:30; 16-2 \\ \hline C \\ -7:30-15; 17-22 \\ \hline C \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\$
1380				217.3 meters	F
СМЈС КОН	z ak	150 500	1382 C	Camaguey, Cuba Reno, Nev.	E
				7	A

3 23-1 7-19:45 19:45-24 9:30 30-21:30 1; 12-13:30; 16-18; 19-20; 22-11-12; 13:30-16; 18-19; 20-22 0-20 8-21 24 21 22:30 3:30; 17:30-20:30 -13; 18-20 15-21 16-22:30



			With Friday's In	me on the Air
WKBH ae WMFE z WSMK ak	50 0 0 1000 . 250 1 200 0	C PD C	Pittsburgh, Pa. Mobile, Ala. LaCrosse Wis. New Britain, Conn. Dayton, Ohio	E7-24 C8-23 C7:30-14; 17-22 E7:20; 22-24
1390 kil	ocycl	les	215.7 meters	
CJRC ck HIH ak KLRA ae KOY ae WHK ae	100 . 15 1 1000 0 500 (1395 Sar C (2.5) (1)	Winnipeg, Man. n Ped. de Macoris, DR Little Rock, Ark. Phoenix, Ariz. Cleveland, Ohio	C E
1400 kil	ocycl	les	214.2 meters	
CMCR z KLO ae KTUL ak TGX ak WARD ak WBBC ak WKBF ak WLTH ak WVFW ak	150 500 0 250 (150 . 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2 500 2	C (.5) C 2 (1) N (1) 2 2	Havana, Cuba Ogden, Utah Tulsa, Okla. Guatemala City, Gt. Brooklyn, N. Y. Brooklyn, N. Y. Brooklyn, N. Y. Brooklyn, N. Y.	$ \begin{array}{l} E & -12 - 13; \ 16 - 18; \ 20 - 21 \\ M & -7 - 24 \\ C & -6 : 30 - 24 \\ E & -11 : 15 - 13 : 30; \ 18 - 19 : 30 \\ E & -16 - 18; \ 22 - 1 \\ C & -6 : 30 - 24 \\ E & -11 : 30 - 13 : 30; \ 18 - 19 : 30 \\ E & -7 - 11 : 15; \ 19 : 30 - 21 \\ \end{array} $
1410 kil	ocycl	les	212.6 meters	
CKFC ak CKMO ag KGRS ae WAAB ak WBCM ae WBCM ae WHBL ae WHBL ae WHIS ak WRBX ak WRBX ak	50 5 100 5 1000 1 500 0 1000 1 500 2 250 2 250 2 500 4	5 5 1 C 1 (2.5) 4 2 2 (.5) 4	Vancouver, B. C. Vancouver, B. C. Amarillo, Texas Boston, Mass. Bay City, Mich. Amarillo, Texas Sheboygan, Wis. Bluefield, W. Va. Roanoke, Va. Rockford, Ill.	$\begin{array}{c} \mathbf{P} - 15 - 16:30 \\ \mathbf{P} \\ \mathbf{C} - 6.8; 10 - 12:30; 15 - 16:30; 18 - 19:30; 21 - 22 \\ \mathbf{E} - 8 - 23 \\ \mathbf{E} - 8 - 24 \\ \mathbf{C} - 8 - 10; 12:30 - 14:15; 19:30 - 21; 22 - 23 \\ \mathbf{C} - 6 - 10; 13 - 16:30; 18 - 19:30 \\ \mathbf{E} - 7 - 9; 12 - 15; 18 - 20 \\ \mathbf{E} - 9 - 12; 15 - 18; 20 - 23 \\ \mathbf{C} - 10 - 13; 16:30 - 18; 19:30 - 22:30 \\ \mathbf{C} - 6 - 30 - 22:30 \\ \mathbf{C} - 5 - 30 - 30 \\ \mathbf{C} - 5 - 30 - 30 \\ \mathbf{C} - 5 \\$
WSFA ak	500 C	С	Montgomery, Ala.	
		C.	211.1 meters	
1420 kill CKGB ak CKNC ak CKNC ak KABC ak KABR z KBPS aj KCMC ak KGC ak KGC ak KGC ak KGC ak KGC ak KGC ak KGC ak KGIX ak KGIX ak KORE ac WACO ak WACO ak WACO ak WACO ak WACD ak WEHC ac WEHS ak WGPC ak	OCYC1 100 1 100 2 100 1 100 2 100 1 100 2 100 1 100 1 100 2 100 1 100 1 100 2 100 1 100 1 100 1 100 1 100 2 100 1 100 1 10	les i ¹⁴²⁵ DP 4 P 1 A (.25) a DD	2111.1 meters Timmins, Ont. Toronto, Ont. Havana, Cuba San Antonio, Texas Aberdeen, S. Dak. Portland, Ore. Texarkana, Ark. Fond du Lac, Wis. Shawnee, Okla. San Francisco, Cal. Alamosa, Colo. Las Vegas, Nev. Lamar, Colo. Eugene, Ore. Yuma, Ariz. Portland, Ore. Waco, Texas Presque Iale, Maine Hazleton, Pa. Rocky Mount, N. C. Charlottesville, Va. Cicero, III. Battle Creek, Mich. Albany, Ga. Olean, N. Y.	E - 12 - 13 : 30 ; 17 - 19 : 30 $E - 8 - 23 : 15$ $E - 5 - 23 : 15$ $E - 5 - 23 : 15$ $E - 5 - 23 : 15$ $E - 7 - 30 : 15 : 17 - 21$ $P - 9 : 13 : 16 - 22$ $C - 7 : 30 - 15 : 17 - 21$ $P - 9 - 13 ; 16 - 22$ $M - 10 - 13 ; 17 - 19 ; 22 - 23$ $M - 10 : 13 - 17 ; 19 - 22$ $P - 7 : 45 - 21$ $M - 7 - 9 ; 11 - 13 : 30 ; 18 - 22$ $P - 8 - 24$ $C - 8 - 17$ $E - 11 - 13 ; 16 - 19$ $E - 10 : 30 - 14 : 30 ; 16 - 22$ $E - 7 - 21$ $E - 7 : 30 - 23$ $C - 7 - 16 : 45$ $E - 7 : 30 - 23$ $C - 7 - 16 : 45$
1420 kill CKGB ak CKNC ak CKNC ak KABC ak KABR z KBPS aj KCMC ak KGC ak KGC ak KGC ak KGC ak KGC ak KGC ak KGC ak KGIX ak KGIX ak KGIX ak KORE ae WACO ak WACO ak WACO ak WACO ak WACO ak WEHC ae WEHS ak WHCL ak WHC ac	OCYC1 100 1 150 1 150 1 100 1 10	les 7 1425 DP 4 1 P 1 2 D 3 (.25) a D a 2	211.1 meters Timmins, Ont. Toronto, Ont. Havana, Cuba San Antonio, Texas Aberdeen, S. Dak. Portland, Ore. Texarkana, Ark. Fond du Lac, Wis. Shawnee, Okla. San Francisco, Cal. Alamosa, Colo. Las Vegas, Nev. Lamar, Colo. Eugene, Ore. Yuma, Ariz. Portland, Ore. Waco, Texas Presque Isle, Maine Hazleton, Pa. Rocky Mount, N. C. Charlottesville, Va. Cicero, III. Battle Creek, Mich. Albany, Ga. Olean, N. Y. Cicero, III.	E - 12 - 13 : 30 ; 17 - 19 : 30 $E - 8 - 23 : 15$ E
1420 kill CKGB ak CKNC ak CKNC ak KABC ak KABC ak KABC ak KGFT ak KGCC ak KGFT ak KGCC ak KGTW ak WACA ac WACA ak WACA ac WACA ac WACA ac WHC ac WHC ac WHC ac WHCA ac WHCA ac WHCA ac WHCA ac WHCA ac	OCYC1 100 1 100 1 150 1 100 1 10	les //	211.1 meters Timmins, Ont. Toronto, Ont. Havana, Cuba San Antonio, Texas Aberdeen, S. Dak. Portland, Ore. Texarkana, Ark. Fond du Lac, Wis. Shawnee, Okia. San Francisco, Cal. Alamosa, Colo. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Maine Hazleton, Pa. Rocky Mount, N. C. Charlottesville, Va. Olcero, Ill. Battle Creek, Mich. Albany, Ga. Olean, N. Y. Cicero, Ill. Wilmington, Del. Baton Rouge, La. Ironwood, Mich.	E - 12 - 13 : 30 ; 17 - 19 : 30 $E - 8 - 23 : 15$ E
1420 kill CKGB ak CKNC ak CKNC ak KABC ak KABC ak KABR z KBPS aj KCMC ak KGC ak KGF ak KGC ak KGF ak KGC ak KGF ak KGC ak KGC ak KGT ak KGC ak KGC ak KGC ak KGC ak KGC ak KGC ak KGC ak KGC ak KORE ae WAZL ak WED ak WEL ak WHC ae WHC ac WHC	OCYC1 100 1 100 1 150 1 100 1 100 1 100 4 100 4 100 1 100 1 10	les //	211.1 meters Timmins, Ont. Toronto, Ont. Havana, Cuba San Antonio, Texas Aberdeen, S. Dak. Portland, Ore. Texarkana, Ark. Fond du Lac, Wis. Shawnee, Okia. San Francisco, Cal. Alamosa, Colo. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Maine Hazleton, Pa. Rocky Mount, N. C. Charlottesville, Va. Olcero, Ill. Battle Creek, Mich. Albany, Ga. Olean, N. Y. Cicero, Ill. Wilmington, Del. Baton Rouge, La. Ironwood, Mich.	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$
1420 kill CKGB ak CKNC ak CKNC ak KABC ak KABC ak KABR z KGFC ak KGCC ak KGFP ak KGCC ak KGCC ak KGFP ak KGCC ak KGCCC	OCYC1 100 1 100 1 10	les : Ites :	211.1 meters Timmins, Ont. Toronto, Ont. Havana, Cuba San Antonio, Texas Aberdeen, S. Dak. Portland, Ore. Texarkana, Ark. Fond du Lac, Wis. Shawnee, Okia. San Francisco, Cal. Alamosa, Colo. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Las Vegas, Nev. Yuma, Ariz. Portland, Ore. Waco, Texas Presque Isle, Maine Hazleton, Pa. Rocky Mount, N. C. Charlottesville, Va. Cicero, Ill. Battle Creek, Mich. Albany, Ga. Olean, N. Y. Cicero, Ill. Wilmington, Del. Baton Rouge, La. Ironwood, Mich.	E - 12 - 13 : 30 ; 17 - 19 : 30 $E - 8 - 23 : 15$ E

1430	kilocy	cles	209.7 meters	
KECA KGNF KWCR WBNS WHEC	ak 1000 ak 500 ak 250 ae 500 ae 500 ak 500 ae 500	(2.5) D B (.5) C (1) C (1) C (1) C (1) C (1)	Los Angeles, Calif. North Platte, Neb. Cedar Rapids, Iowa Columbus, Ohio Rochester, N. Y. Harrisburg, Pa. Memphis, Tenn. Albany, N. Y.	P7-23 C-7-Sunset C7-24 E6:15-24 E8:24 E8:30-1 C7-13; 15-22 E8-1
1440	kilocy	cles	208.2 meters	
KLS KX YZ WBIG WCBA WMBD WSAN WTAD	ak 500 ae 250 ak 500 ae 500 aj 250 ae 500 aj 250 ak 500 aj 250 ak 500 ae 250 ak 500	D C (1) a 3C (1) a 3 	Casper, Wyo. Oakland, Cailf. Houston, Texas Greensboro, N. C. Allentown, Pa. Peorla, III. Allentown, Pa. Quincy, III. Chihuahua, Chih.	$\begin{array}{l} M = 7:30-13:30; 15-21 \\ P = 8-Sunset \\ C = 6:30-13; 14:30-23 \\ E = 7-7:30-23 \\ C = 6-11; 20-24 \\ E = Silent \\ C = 11-20 \\ C = \dots \end{array}$
1450	kilocy	cles	206.8 meters	
CFCT CKX CMCQ KTBS WGAR WHOM WSAR	ae 75 ak 500 z 1000 ck 1000 ak 500 ak 500 ae 250	F N B (1)	Victoria, B. C. Brandon, Man. Havana, Cuba Shreveport, La. Cleveland, Ohio Jersey City, N. J. Fall River, Mass. Athens, Ga.	$\begin{array}{l} P - 8 - 12:30; \ 17:30 - 20:15\\ C - \dots \\ E - \dots \\ C - 7 - 24\\ E - 6:30 - 1\\ E - 8 - 24\\ E - 8 - 15:30; \ 17 - 22\\ E - 9 - 21\end{array}$
1460	kilocyo		205.4 meters	
	ae 10000 ak 10000	N (25) C	St. Paul, Minn. Washington, D. C.	C7-0:30 E6:30-1
1470	kilocyo	cles	204.0 meters	
CMCG WLAC	z 150	1475 C	Havana, Cuba Nashville, Tenn.	E-12-18 C-6:30-24
1480	kilocyc	eles	202.6 meters	
KOMA WKBW	ak 5000	C C	Oklahoma City, Ok. Buffalo, N. Y.	C7-24 E9-1
1490	kilocyc	cles	201.2 meters	
WCKY	-	в	Covington, Ky.	E-7-24
1500	kilocyc	eles	199.9 meters	
CMCN KGFI KGFK KGFK KGKK KNOW KNOW KNOW KPJM KPQ KREG KXO WCNW WDNC WGAL WHEF	ak 100 ae 100 z 100 ae 100 ak 100 ak 100 ak 100 ak 100 ac 100	F C.(.25) D 1 (.25) C (.25) (.25) i P (.25)	Summerside, P.E.I. Havana, Cuba Santa Barbara, Calif. Corpus Christi, Tex. Moorhead, Minn. Tyler, Texas Scottsbluff, Neb. Austin, Texas Pine Biuff, Ark. Prescott, Arlz. Wenatchee, Wash. Santa Ana, Calif. El Centro, Calif. Brooklyn, N. Y. Durham, N. C. Lancaster, Pa. Kosclusko, Miss. Detroit, Mich. E. Dubuque, III. Richmond, Ind. Muskegon, Mich. LaGrange, Ga. Brooklyn, N. Y. Chelsea, Mass.	$\begin{array}{llllllllllllllllllllllllllllllllllll$

WNBF WOPI WRDW WRGA WSYB WWRL WWSW	ak ak ak	100 100 100 100 100 100 100	1 (.25) (.25)	Binghamton, N. Y. Bristol, Tenn. Augusta, Ga. Rome, Ga. Rutland, Vt. Woodside, N. Y. Pittsburgh, Pa.	$\begin{array}{l} \mathbf{E}7-22\\ \mathbf{E}6:30-20\\ \mathbf{E}8:21\\ \mathbf{C}7-10;\ 12-15;\ 18-21\\ \mathbf{E}10-13;\ 17-21\\ \mathbf{E}8-9;\ 11-15;\ 22-0:30\\ \mathbf{E}8-24 \end{array}$
1510	kil	ocyc	les	198.6 meters	
CFRC CKCR	ak ak	100 100	 ,	Kingston, Ont. Waterloo, Ont.	E
1530	kile	ocyc	les	196.0 meters	
W1XBS W9XBY	Z	1000 1000		Waterbury, Conn. Kansas Clty, Mo.	E-8:30-23:30 C-7-1
1550	kile	ocyc	les	193.4 meters	
W2XR W6XAI		1000 1000		Long Isl. City, N. Y. Bakersfield, Calif.	E-Silent P

INDEX BY LOCATIONS

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

		,	a and brat. I Clanadian.
ALABAMA	Jonesboro	KLX 880 1000	CONNECTICUT
Birmingham	KBTM 1200 100	KROW 930 1000	
WAPI 1140 5000 N	Little Rock	Pasadena	Bridgeport
WBRC 930 1000 C	KARK 890 250	KPPC 1210 50	WICC 600 250 C
WSGN 1310 100	KGHI 1200 100	Sacramento	Hartford
Dothan	KLRA 1390 1000 C	KFBK 1310 100 C	WDRC 1330 1000 C
WAGF 1370 100	Pine Bluff	San Bernardino	WTIC 1040 50000 R
Gadsden	KOTN 1500 100	KFXM 1210 100	New Britain
WJBY 1210 100	Texarkana	San Diego	WMFE 1380 250
Huntsville	KCMC 1420 100	KFSD 600 1000 N	Storrs
WBHS 1200 100	CALIFORNIA	KGB 1330 1000 C	WCAC 600 500
Mobile	Bakersfield	San Francisco	Waterbury
WALA 1380 500 C	KERN 1370 100 C	KFRC 610 1000 C	WATR 1190 100
Montgomery	W6XAI 1550 1000		W1XBS 1530 1000
WSFA 1410 500 C	Berkeley	KGGC 1420 100 KGO 790 7500 N	DELAWARE
Muscle Shoals	KRE 1370 100		
	Beverly Hills		Wilmington
WNRA 1420 100	KMPC 710 500		WDEL 1120 250
ALASKA	Burbank		WILM 1420 100
	KELW 780 500		DISTRICT OF
Anchorage	El Centro	San Jose	COLUMBIA
KFQD 780 250	KXO 1500 100	KQW 1010 1000	Washington
Ketchikan	Eureka	Santa Ana	WJSV 1460 10000 C
KGBU 900 500		KREG 1500 100	
ARIZONA	KIEM 1210 100 Fresno	Santa Barbara	
Jerome		KDB 1500 100 C	
KCRJ 1310 100		Stockton	
Lowell	Glendale	KGDM 1100 250	FLORIDA
KSUN 1200 100	K1EV 850 250	KWG 1200 100 C	Clearwater
Phoenix	Hollywood	COLORADO	WFLA 620 1000 N
KOY 1390 500	KFWB 950 1000	Aiamosa	Gainesville
KTAR 620 1000 N	KMTR 570 1000	KGIW 1420 100	WRUF 830 5000
Prescott	KNX 1050 50000	Colorado Springs	Jacksonville
KPJM 1500 100	Long Beach		WJAX 900 1000 N
	KFOX 1250 1000		WMBR 1370 100 C
Tucson KCAB 1270 100	KGER 1360 1000	Denver KLZ F(A 1000 C	Miami
KGAR 1370 100 KVOA 1260 500	Los Angeles	KLZ 560 1000 C KOA 830 50000 N	WIOD 1300 1000 N
KVOA 1260 500 Yuma	KECA 1430 1000		WQAM 560 1000 C
	KFAC 1300 1000		Orlando
KUMA 1420 100	KFI 640 50000 N	KVOD 920 500	WDBO 580 250 C
ARKANSAS	KFSG 1120 500	Grand Junction	Pensacola
	KFVD 1000 250	KFXJ 1200 100	WCOA 1340 500
Blytheville	KGFJ 1200 100	Greeley	St. Petersburg
KLCN 1290 100	KHJ 900 1000 C	KFKA 880 500	
Fayetteville	KRKD 1120 500	Lamar	
KUOA 1260 1000	KTM 780 500	KIDW 1420 100	Tampa
Fort Smith	Modesto	Pueblo	WDAE 1220 1000 C
KFPW 1210 100	KTRB 740 250	KGHF 1320 500	GEORGIA
Hot Springs	Oakland	Sterling	Albany
KTHS 1060 10000 N	KLS 1440 250	KGEK 1200 100	WGPC 1420 100
			1100 1120 100

-15

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Athens	WTAX 1210 100	Topeka WIBW 580 1000 C	Bay City WBCM 1410 500
WTFI 1450 500 Atlanta	Tuscola WDZ 1070 100	Wichita	Calumet WHDF 1370 100
WGST 890 500 C WJTL 1370 100	Urbana WILL 890 250	KFH 1300 1000 C KENTUCKY	Detroit
WSB 740 50000 N	Zion WCBD 1080 5000	Covington	WJBK 1500 100 WJR 750 10000 B
Augusta WRDW 1500 100	INDIANA	WCKY 1490 5000 B Lexington	WMBC 1420 100 WWJ 920 1000 R
Columbus WRBL 1200 100	Anderson	WLAP 1420 100	WXYZ 1240 1000
LaGrange WKEU 1500 100	WHBU 1210 100 Elkhart	Louisville WAVE 940 1000 N	East Lansing WKAR 1040 1000
Macon	WTRC 1310 50	WHAS 820 50000 C Paducah	Flint WFDF 1310 100
WMAZ 1180 1000 Rome	Evansville WGBF 630 500	WPAD 1420 100	Grand Rapids
WRGA 1500 100	Fort Wayne WGL 1370 100 C	LOUISIANA	WASH 1270 500 WOOD 1270 500
Savannah WTOC 1260 1000 C	WOWO 1160 10000 C	Baton Rouge WJBO 1420 100	Ironwood WJMS 1420 100
Thomasville WQDX 1210 100	Gary WIND 560 1000	Monroe KMLB 1200 100	Jackson
HAWAII	Hammond WWAE 1200 100	New Orleans WBNO 1200 100	WIBM 1370 100 Kalamazoo
HII0 KWFV 1210 100	Indianapolis	WDSU 1250 1000 C	WKZO 590 1000 Lansing
Honolulu	WFBM 1230 1000 C WKBF 1400 500 N	WJBW 1200 100 WSMB 1320 500 N	WJIM 1210 100
KGMB 1320 250 C KGU 750 2500 N	Muncie WLBC 1310 100	WWL 850 10000	Lapeer WMPC 1200 100
IDAHO Boise	Richmond	Shreveport KRMD 1310 100	Marquette WBEO 1310 100
KIDO 1350 1000	South Bend	KTBS 1450 1000 N KWEA 1210 100	Muskegon
Idaho Falls KID 1320 250	WFAM 1200 100 WSBT 1360 500 C	KWKH 1100 10000 C	WKBZ 1500 100 Royal Oak
Nampa KFXD 1200 100	Terre Haute	MAINE Augusta	WEXL 1310 50
Pocatello	West Lafayette	WRĎO 1370 100	MINNESOTA
KSEI 900 250 Twin Falls	WBAA 890 1000	Banger WABI 1200 100	Forgus Falls KGDE 1200 100
KTFI 1240 500	IOWA	WLBZ 620 500 C Portland	Hibbing WMFG 1210 100
ILLINOIS Bicomington	Ames WOI 640 5000	WCSH 940 1000 R	Minneapolls
WJBC 1200 100 Carthage	Boone KFGQ 1370 100	Presque Isle WAGM 1420 100	WDGY 1180 1000
WCAZ 1070 100	Cedar Rapids KWCR 1430 250 B	MARYLAND	WLB 1250 1000 WTCN 1250 1000
Chicago KYW 1020 10000 N	Council Bluffs	Baltimore WBAL 1060 10000 B	Moorhead KGFK 1500 100
WAAF 920 500 WBBM 770 25000 C	KOIL 1260 1000 B Davenport	WCAO 600 500 C WCBM 1370 100	Northfield
WCFL 970 1500 B	WOC 1370 100 Decorah	WFBR 1270 500 R	WCAL 1250 2500 St. Paul
WEDC 1210 100	KGCA 1270 100	Cumberland WTBO 800 250	KSTP 1460 10000 N
WENR 870 50000 N WGES 1360 500	Des Moines	Hagerstown WJEJ 1210 100	MISSISSIPPI
WGN 720 50000 WJJD 1130 20000	KSO 1320 500 B WHO 1000 50000 R	MASSACHUSETTS	Greenwood WKFI 1210 100
WLS 870 50000 N	Iowa City WSUI 880 500	Babson Park WBSO 920 500	Gulfport WGCM 1210 100
WMAQ 670 50000 N WMBI 1080 5000	Marshalltown	Boston	Hattiesburg WPFB 1370 100
WSBC 1210 100 Cicere	KFJB 1200 100 Shenandoah	WAAB 1410 500 C WBZ 990 50000 B	Jackson
WEHS 1420 100	KFNF 890 500 KMA 930 1000	WEEI 590 1000 R	WJDX 1270 1000 N Kosciusko
WHFC 1420 100 WKBI 1420 100	Sloux City	WNAC 1230 1000 C	WHEF 1500 100 Laurel
Decatur WJBL 1200 100	KSCJ 1330 1000 C Waterloo	Chelsea WMEX 1500 100	WAML 1310 100
East Dubuque	WMT 600 1000 C	Fall River WSAR 1450 250	Meridian WCOC 880 500
WKBB 1500 100 Harrisburg	KANSAS	Lowell	Vicksburg WOBC 1360 500
WEBQ 1210 100 Jollet	Abliene KFBI 1050 5000	WLLH 1370 100 New Bedford	MISSOURI
WCLS 1310 100	Coffeyville KGGF 1010 1000	WNBH 1310 100 Springfield	Cape Girardeau
Peoria WMBD 1440 500 C	Dodge City	WBZA 990 1000 B	KFVS 1210 100 Columbia
Quincy WTAD 1440 500	Kansas City	WMAS 1420 100 C Worcester	KFRU 630 500
Reckford	WLBF 1420 100	WORC 1280 500 C WTAG 580 500 R	Jefferson City WOS 630 500
Rock Island	KFKU 1220 1000	MICHIGAN	Joplin WMBH 1420 100
WHBF 1210 100 Springfield	Manhattan	Battle Creek	Kansas City
WCBS 1210 100	KSAC 580 500	WELL 1420 50	KMBC 950 1000 C

	100
KWKC 1370 100	Zare WAW
WDAF 610 1000 R	
WDAF 610 1000 R WHB 860 500 W9XBY 1530 1000	NE
St. Joseph	Albu KGGN
KFEQ 680 2500 St. Louis	I KOB
KFUO 550 500	Clovi KICA
KMOX 1090 50000 C KSD 550 500 R	Rosw
KWK 1350 1000 B	KGFL
WEW 760 1000 WIL 1200 100	N
Springfield	Alba WOKO
Springfield KGBX 1310 100 KWTO 560 1000	Aubi WMB
KWTO 560 1000 Montana	Bing
Billings	Bing WNBF
KGHL 780 1000 N Butte	Brook WARI WBBC
KGIR 1360 1000 N	WBBC
Great Falls	WBBC WBBF WCNV
KFBB 1280 1000 Kalispeli	I WLTH
Kalispeli KGEZ 1310 100	WMB WVFW
Missouia KGVO 1200 100	Buffa WBEN
Welf Point	WBEN WEBR
	WGR
NEBRASKA Clay Center	WGR WKBV WSVS
KMMJ 740 1000	WSVS Canto WCAD
Kearney KGFW 1310 100	WCAD
l la cola	Chest WGN1
KFAB 770 5000 C KFOR 1210 109 C	Elmin WESG
MORTOIK	Freep
WJAG 1060 1000 North Platte	Freep WGBB
North Platte KGNF 1430 500	Huds WAB Y
Omaha WAAW 660 500 WOW 590 1000 R	Jame WOCL
WOW 590 1000 R	
Scottsbluff KGKY 1500 100	Long W2XR New
York	WABC
	I WRNY
NEVADA Las Vegas	WEAF
KGIX 1420 100	WBOO WEAF WEVD WFAB
Reno KOH 1380 500 C	WFAB
NEW HAMPSHIRE	WHN WINS WJZ WLWL
Laconia	WLWL
WLNH 1310 100 Manchester	WMCA
Manchester WFEA 1340 500 C	WN YC WOV
Portsmouth WHEB 740 250	Olean
NEW JERSEY	WHDL
Asbury Park	Platts WMFF
Atlantic City	Roche WHAM WHEC
WPG 1100 5000 C	WHEC
Camden WCAM 1280 500	Saran WNBZ
Jersey City	Schen WGY
WHOM 1450 250	WGY
Newark	Syrace WFBL WSYR
WHBI 1250 250 WNEW 1250 1000 WOR 710 5000	WSYR
WOR 710 5000	WHAZ
Red Bank WBRB 1210 100	Utica WIBX
Trenton	WIBX White WFAS
WTNJ 1280 500	WFAS
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areph AWZ	ath	250	Ι.
NEW	1350	250 Kico	1
lbugu	ergue	AICO	
lbuqu GM B	erque 1230	250	1
B	1180	10000	1.
lovis CA	1370	100	
loswell FL	1250		1
		100	1
NE	1 10	KR	1
lbany)KO	1430	500 C	1
uburn 1BO			1
1BO	1310	100	1
Ingha IBF	1500	100	
rookiy RD BBC	n 1 400		1
BC	1400 1400	500 500	1
BR	1300 1500 1400	1000	
NW TU	1500	100 500	
4BO	1500	100	
BBR CNW TH 4BO FW	1400	500	I
uffalo SEN BR R BW	900	1000 R	1
BR	1310 550	100	1
R	550 1480	1000 C	I B
VS	1370	5000 C 50	L
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NY	1210	100	
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reepor BB	1210	100	v
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FF	1310	100	W N
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AM EC	1150 1430	50000 B 500 C	
ranac	Lake	K O	
henec	tady	50 50 50000 R	K
Y	790	50000 R	ĸ
racuse BL YR	1360	1000 C	к
YŘ	570	250 B	
AZ	1300	500	W
ica		500	ĸ
BX _	1200	100	K
hite P AS	iains 1210	100	Ku
		100	

Woods WWRL	ide 1500	100
NORT	H CAR	OLINA
Ashev	IIIe 570	1000 N
Charle WBT	otte 1080	50000 C 100 N
wsoc	1210	100 N
WDNC	1500	100 C
WBIG	sboro 1440	500 C
Raielg WPTF	n 680	5000 N
Rocky WEED	Moun 1420	t 100
Wilml WMFD	ngton 1370	100
Winst WSJS	on-Sale 1310	m 100 C
NOR	TH DA	
Bisma KFYR	rck 550	1000 N
KDLR	Lake 1210	100
Fargo WDA Y	940	1000 N
Grand KFJM	Forks 1370	100
Manda KGCU	1240	250
Minot KLPM	1240	250
	OHIO	
Akron WADC WJW	1320 1210	1000 C
WJW Cantor WHBC	1	
WHBC Cincin	1200 nati	100
Cincin WFBE WKRC WLW	1200 550	100 1000 C
WONI	1330	1000 C 00000 N 1000 R
Clavela	nd 1450	500 B
WGAR WHK WJA Y WTAM	1390 610	1000 C
	bus	5000 R
WAIU WBNS WCOL WOSU	640	500 B 500 C
WCOL	1430 1210 570	100 750
Dayton WSMK		200 C
Mount WHBD	Orab 1370	100
Toledo WSPD	1340	1000 C
Young WKBN	1340 stown 570	500 C
WKBN Zanesv WALR	570 IIIe 1210	
ОК	1210	100 MA
Ada KADA	1200	100
EIK CIt (ASA	y 1210	100
Enid KCRC	1370	100
Norma	n 1010	500
Oklaho (FXR	ma Cit 1310	y 100
Oklaho CFXR (GFG (OMA WKY	1370	100
WKY	1480 900	1000 N

	-	
Ponca WBBZ	City 1200	100
Shawn KGFF	1420	100
Tulsa KTUL KVOO	1400	250 C
	1140	
Corvel	REGO	N
KOAC Eugen	550	1000
KORE	1420	100
KFJI Marsh	th Fall 1210	100
KOOS	field 1200	250
Medfor KMED		100
RMED Portial KALE KBPS KEX KFJR KGW KOIN KWII	nd 1300	500 C
KBPS KEX	1420 1180	100 5000 N
KFJR KGW	1300	500 1000 N
KOIN KWJJ	620 940	1000 C 500
KXL	1040 1420	100
Salem KSLM	1370	100
	ISYLV	NIA
Allento WCBA WSAN	1440	250
Altoom	1440	250
WFBG Clarion WWPA	1310	100
WWPA Erio WLBW	850	250
Glensiz	1260 Ie	1000 C
WIBG Greens WHJB	970	100
WHJB Grove (WSAJ	620 City 1310	250
WSAJ Harrish	1310 ura	100
Harrish WHP WKBO	1430 1200	500 C 100
Haziete WAZL	1420	100
Johnsto WJAC	1310	100
Lancas WGAL WKJC	1310 ter 1500	100
WKJC	1200	100
Philade WCAU	1170	50000 C
WEI	540	100 500 R 100
WHAT WIP	1310 610	100 500
WLIT WPEN	560 920	500 R
WLIT WPEN WRAX WTEL	560 920 920 1310	250 250 100
	rgh	
KDKA KOV WCAE WJAS	1380	500 C
WUAE WJAS WWSW	1220	1000 R 1000 C
wwsw	1500 620	100 250
Reading WEEU WRAW	830 1310	1000
WRAW Scrante	1310 n	100
Scrante WGBI WQAN		500 250
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Sunbury	Austin KNOW 1500 100	Norfolk WTAR 780 500 N	Poynette WIBU 1210 100
WKOK 1210 100 Washington	Beaumont	Petersburg	Racine WRJN 1370 100
WNBO 1200 100 Wilkes-Barre	KFDM 560 500 College Station	Richmond	Sheboygan
WBAX 1210 100	WTAW 1120 500	WBBL 1210 100 WMBG 1210 100 C	WHBL 1410 500 Stevens Point
WBRE 1310 100 Williamsport	Corpus Christi KGF1 1500 100	WRVA 1110 5000 N	WLBL 900 2500
WRAK 1370 100	Dallas KRLD 1040 10000 C	Roanoke WDBJ 930 1000 C	Superior WEBC 1290 1000 N
York WORK 1320 1000	WFAA 800 50000 N	WRBX 1410 250	WYOMING
PHILIPPINES	WRR 1280 500 Dublin	Staunton WSVA 550 500	Casper
Manila KZEG 720 1000	KFPL 1310 100	WASHINGTON	KDFN 1440 500 Sheridan
KZRM 618.5 50000	El Paso KTSM 1310 100	Aberdeen	KWYO 1370 100
PORTO RICO San Juan	WDAH 1310 100 Fort Worth	KXRO 1310 100	CANADA
WKAQ 1240 1000	KFJZ 1370 100	Bellingham KVOS 1200 100	ALBERTA
WNEL 1290 500 RHODE ISLAND	KTAT 1240 1000 C WBAP 800 50000 N	Everett KRKO 1370 50	Calgary
Providence	Galveston	Olympia	CFAČ 930 100 F CFCN 1030 10000 F
WEAN 780 500 C WJAR 890 500 R	KLUF 1370 100 Greenville	KGY 1210 100 Puliman	CJCJ 690 100 F
WPRO 630 250	KFPM 1310 15 Houston	KWSC 1220 1000	Edmonton CFRN 1260 100
SOUTH CAROLINA	KPRC 920 1000 N	Seattle KJR 970 5000 N	CJCA 730 500 F
Charleston WCSC 1360 500	KTRH 1330 1000 C KXYZ 1440 500	KOL 1270 1000 C KOMO 920 1000 N	Lethridge
Columbia	Longview	KPCB 710 250	CJOC 1230 100 F
Greenville	1370 100 Lubbock	KRSC 1120 100 KTW 1220 1000	BRITISH COLUMBIA Chilliwack
WFBC 1300 1000 Spartanburg	KFYO 1310 100	KVL 1370 100	CHWK 780 100 F
WSPA 920 1000	Port Arthur KPAC 1260 500	KXA 760 250 Spokane	Kamloops CFJC 880 100 F
SOUTH DAKOTA	San Angelo KGKL 1370 100	KFIO 1120 100 KFPY 1340 1000 C	Kelowna
Aberdeen	San Antonio	KGA 900 1000 N	CKOV 630 100 F
KABR 1420 100 Brookings	KABC 1420 100 KMAC 1370 100	KHQ 590 1000 N Tacoma	CJAT 910 250 F
KFDY 780 1000 Huron	KONO 1370 100 KTSA 550 1000 C	KMO 1330 250	Vancouver CJOR 600 500
KGDY 1340 250	WOAI 1190 50000 N	KVI 570 1000 C Walla Walla	CKCD 1010 100 CKFC 1410 50
Pierre KGFX 630 200	Tyler KGKB 1500 100	KUJ 1370 100 Wenatchee	СКМО 1410 100
Rapid City	Waco	KPQ 1500 100	CKWX 1010 100 CRCV 1100 1000 F
Sioux Falls	Weslaco	Yakima KIT 1310 100	Victoria CFCT 1450 75
KSOO 1110 1000 Vermiliion	KRGV 1260 500 Wichita Falls	WEST VIRGINIA	MANITOBA
KUSD 890 500	KGKO 570 500 C	Bluefield	Brandon
Watertown KWTN 1210 100	UTAH	WHIS 1410 250 Charleston	CKX 1450 500 F Winnipeg
Yankton	Ogden KLO 1400 500 C	WCHS 580 500	CJRC 1390 100
WNAX 570 1000 C Tennessee	Salt Lake City	Fairmont WMMN 890 250	CKY 960 15000 F NEW BRUNSWICK
Bristol	KDYL 1290 1000 N KSL 1130 50000 C	Huntington	Fredericton
WOPI 1500 100 Chattanooga	VERMONT	Wheeling	CFNB 550 500 F Moncton
WDOD 1280 1000 C	Burlington WCAX 1200 100	WWVA 1160 5000 C	CKCW 1370 100
Jackson WTJS 1310 100	Rutland WSYB 1500 100	WISCONSIN	St. John CHSJ 1120 100 F
Knoxville WNOX 1010 1000 C	St. Albans	Eau Claire WTAQ 1330 1000	NOVA SCOTIA
WROL 1310 100	WQDM 1370 100 Springfield	Fond du Lac KFIZ 1420 100	Giace Bay
Memphis WHBQ 1370 100	WNBX 1260 1000	Green Bay	VAS 685 2000 Halifax
WMC 780 1000 N	Waterbury WDEV 550 500	WHBY 1200 100 Janesville	CHNS 930 500 F
WNBR 1430 500 WREC 600 1000 C	VIRGINIA	WCLO 1200 100	Sydney CJCB 1240 1000 F
Nashville	Arlington NAA 690 1000	LaCrosse WKBH 1380 1000	Wolfville CKIC 1010 50
WSM 650 50000 N	Charlottesville	Madison WHA 940 2500	Yarmouth
Springfield WSIX 1210 100	Danville	WIBA 1280 1000 N	CJLS 1310 100 ONTARIO
TEXAS	WBTM 1370 100 Lynchburg	Manitowoc WOMT 1210 100	Brantford
Amarillo	WLVA 1200 100	Milwaukee	CKPC 930 100 F
KGRS 1410 1000 WDAG 1410 1000	Newport News WGH 1310 100	WISN 1120 250 C WTMJ 620 1000 N	Chatham CFCO 600 100 F

Cobal CKMC	1210	50	l c
Fort V	VIIIIam 030	50 F	
Hamil CHML CKOC	ton 1010	50 F	l v
CKOC	1010 1120	500 F	
	1510 nd Lab	100	v
CIKL	1310	100	*
Londo CFPL	<b>_</b> 730	100 F	
CFCH	8ay 930	100 F	F
Ottaw CKCO CRCO	a 1010 880	100 1000 F	
Presco CFLC	tt		
St. Ca CKTB	930 tharine	100	_
CKTB Sault CJIC	1200 Ste. Ma	arie	Т
Stratfo	ord	100	T T T
10-AK Timm	1200 Ins	15	
		100	
Toront CFRB CKCL CKNC	690 580	10000 C 100 F	1.
CKNC	1420 840	100 F 5000 N	_{т.}
Wateri	00	100 N	
CKCR Winds CKLW Winsh	or 1030	5000 C	
Wingh 10-BP	am 1200	25	R
PRIN	E EDI	WARD	
	SLAND		
Charlo CFCY CHCK	ttetowr 630 1310	500 F	x
CHCK Summ CHGS	1310 erside		
		50 F	x
	UEBEC	;	
CRCS	950	100 F	
Hull CKCH Montm	1210	100 F	
		10	
Montre CFCF CHLP	600	500 N	
CHLP CKAC CRCM	7.50	100 5000 C	x
CRCM New Ca CHNC	910 ariiste	5000 F	
CHNC Quebec		100 F	xi
Quebec CHRC CKCV CRCK	580 1310	100 F 50	
	1050	1000 F	x
Сапога	ATCHE	WAN	x
10-BU Meese	1200 Jaw	50	Y
10-BU Moose CHAB CJRM	Jaw 1200	100 F	XI
CJRM	Jaw 1200 540	100 F 1000 F	
CJRM Prince CKBI	Jaw 1200 540 Albert 1210	100 F 1000 F 100 F	
CJRM Prince CKBI Regina CHWC CKCK	Jaw 1200 540 Albert 1210 1010	100 F 1000 F	
CJRM Prince CKBI Regins CHWC	Jaw 1200 540 Albert 1210 1010	100 F 1000 F 100 F 500 F	

Yorkta CJGX		
CJGX	630	500 F
		AND
NEWI St. Jol VOAC VOAS VOGY VONF VOWR	hn's	40
VOAS	1300 940	40 100
VOGY	840 950	400 5000
VOWR	681	500
	QUELO	N
St. Ple FON	rre 609	250
•		
	NTR/	
	STA RI	
Cartag TIGA San Jo	1014	30
San Jo TICR TIFB TIGP TIRCA TISO TIVL	912 714	75 30
TIGP	714 800	30 75
TIRCA	1100	500
TIVL	550 835	250 30
GU	TEMA	LA
Guater TGW TGX	nala Cit	ty Loooo
ŤĞX	565 1 1400	150
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San Sa RDN	ivador 680	500
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BAJA ( Agua C XEBC Mexical XEAA XEAO TIJuani XEAE XEAO XEMZ XEMZ XEOK Chihuaa XEFI	CALIFO saliente 760 920 560 980 865 1210 920 HUAHU	5000 200 250 250 2500 30 2500 2500
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BAJA ( Agus C XEBC Mexical XEAA XEAA XEAA XEAA XEAA XEAA XEMZ XEOK Chilhual XEFI Juarez XEFV XEJ CO	CALIFO aliente 760 920 560 980 865 1210 920 HUAHU hua 1440 1210 1020 AHUILA	5000 200 250 250 2500 30 2500 4A 250 100 250
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CFAC 930 100 Calgary, Alta. Calgary Herald, Southam Bidg.	Royal Alexandra Hotel
CFCF 600 500 Montreal, Que.	CJRM 540 1000 Moose Jaw, Sask.
Mt. Royal Hotel	311 Main St. No. CKAC 730 5000 Montreal, Que.
CFCH 930 100 North Bay, Ont. Capitol Theatre Bidg.	980 St. Catherine St. W.
CFCN 1030 10000 Calgary, Alta.	CKBI 1210 100 Prince Albert, Sask. Canada Bidg.
Toronto Gen. Trust Bldg. CFCO 600 100 Chatham, Ont.	CKCD 1010 100 Vancouver, B. C.
Wm. Pitt Hotel	142 Hastings St. W. CKCH 1210 100 Hull, Que.
CFCT 1450 75 Victoria, B. C.	CKCH 1210 100 Hull, Que. Standish Hall Hotei
620 View St. CFCY 630 500 Charlottetown, P.E.I.	CKCK 1010 500 Regina, Sask.
143 Great George St.	1853 Hamilton St. CKCL 580 100 Torento, Ont.
CFJC 880 100 Kamioops, B. C. Wilcox-Hall Bidg.	CKCL 580 100 Toronto, Ont. 444 University Ave.
CFLC 930 100 Prescott, Ont.	CKCO 1010 100 Ottawa, Ont.
Victoria Hall CFNB 550 500 Fredericton, N. B.	272 Somerset St. W. CKCR 1510 100 Waterloo, Ont.
CFNB 550 500 Fredericton, N. B. York St.	24 King St. So.
CFPL 730 100 London, Ont.	CKCV 1310 50 Quebec, Que. 254 Ave. Marguerite
Richmond St. CFQC 840 1000 Saskatoon, Sask.	CKCW 1370 100 Moncton, N. B.
216 First Ave., No.	Moneton Brdcstg. Co., Ltd. CKFC 1410 50 Vancouver, B. C.
CFRB 690 10000 Teronto, Ont. 37 Bloor St. W.	Hemlock & 12th Ave.
CFRC 1510 100 Kingston, Ont.	CKGB 1420 100 Timmins, Ont.
Queens University CFRN 1260 100 Edmenton, Alta.	R. H. Thompson, Press Bldg. CKIC 1010 50 Wolfville, N. S.
CFRN 1260 100 Edmenton, Alta. Birks Bldg.	Acadia University
CHAB 1200 100 Moose Jaw, Sask.	CKLW 1030 5000 Windsor, Ont.
Grant Hall Hotel CHCK 1310 50 Charlottetown, P.E.I.	Guaranty Trust Bldg. CKMC 1210 50 Cobait, Ont.
36 Upper Hillsboro St.	R. L. MacAdam
CHGS 1500 50 Summerside, P. E. I.	CKMO 1410 100 Vancouver, B. C. 1604 Bekins Bldg.
190 Water St. CHLP 1120 100 Montreal, Que.	CKNC 1420 100 Torento, Ont.
Sun Life Bldg.	805 Davenport Road CKOC 1120 500 Hamilton, Ont.
CHML 1010 50 Hamilton, Ont. 47 Main St. E.	Wentworth Bldg.
CHNC 1210 100 New Carlisle, Que.	CKOV 630 100 Kelowna, B. C.
Dr. Charles Houde CHNS 930 500 Halifax, N. S.	Okanagan Broadcasters, Ltd., Box 243 CKPC 930 100 Brantford, Ont.
CHNS 930 500 Halifax, N. S. Lord Nelson Hotel	Arcade Bidg.
CHRC 580 100 Quebec, Que.	CKPR 930 50 Fort William, Ont. Royal Edward Hotel
CHRC, Ltd., Victoria Hotel CHSJ 1120 100 St. John, N. B.	CKTB 1200 100 St. Catharines, Ont.
Admiral Beatty Hotel	E. T. Sandell, Welland House
CHWC 1010 500 Regina, Sask. Kitchener Hotel	CKUA 580 500 Edmonton, Alta. University of Alberta.
CHWK 780 100 Chilliwack, B. C.	CKWX 1010 100 Vancouver, B. C.
Wellington Ave.	Hotel Georgia CKX 1450 500 Branden, Man-
CJAT 910 250 Trail, B. C. Trail Amateur Radio Assn.	CKX 1450 500 Branden, Man. Rosser Ave.
CJCA 730 500 Edmonton, Alta.	CKY 960 15000 Winnipeg, Man.
10122-100A St.	Sherbrooke St. CMAF 680 1000 Havana, Cuba
CJCB 1240 1000 Sydney, N. S. 318 Charlotte St.	CMAF 680 1000 Havana, Cuba 1 y 8 Rept. Miramar
CJCJ 690 100 Calgary, Alta.	CMBC 1040 150 Havana, Cuba
New Albertan Bidg. CJGX 630 500 Yorkton, Sask.	Domingo Fernandez, Maximo Gomez No. 139- CMBD 1350 150 Havana, Cuba
188 Grain Exchange Bldg.	Luis Perez Garcia, Centre Gallege
CJIC 890 100 S. Ste. Marie, Ont.	CMBG 1375 225 Havana, Cuba John L. Stowers, Hospital No. 100
72 Pine St. CJKL 1310 100 Kirkiand Lake, Ont.	CMBS 915 150 Havana, Cuba
O. J. Thorpe	Calzada y H. St., Vedado
CJLS 1310 100 Yarmouth, N. S. Laurie L. Smith, Grand Hotel	CMBX 1425 150 Havana, Cuba Alberto Alvarez, Belascoain No. 32
CJOC 1230 100 Lethbridge, Alta.	CMBY 635 250 Havana, Cuba
Marquis Hotel	Infanta 132 esq-Jevellar CMBZ 1005 100 Havana, Cuba-
CJOR 600 500 Vanceuver, B. C. G. C. Chandler, Hotel Grosvenor	CMBZ 1005 100 Havana, Cuba- Manuely G. Salas, San Rafael No. 14
G. C. Chandler, Hotel Glosvenor	

	CMC 835 500 Havana, Cuba Aguila y Dragones
	CMCA 1230 150 Havana, Cuba
	J. M. GODZAIES, Galianc No. 102
	CMCB 1060 150 Havana, Cuba Metropolitan Bldg.
	CMCD 955 250 Havana, Cuba
	Calle G y 25, Vedado
	Raoul Karman, P. O. Box 647
	CMCG 1475 150 Havana, Cuba
	Emilie Perera, San Miguel No. 62 CMCJ 1200 400 Havana, Cuba
	Rafael Rodriguez, Estevez No 4
	CMCK 1320 100 Havana, Cuba Manuel Autran G., Vedado
	Manuel Autran G., Vedado
	CMCN 1500 250 Havana, Cuba Reina y Ave. Buen Ritiroe, Marianao
	CMCO 1280 150 Havana, Cuba
	Ass. Detes. del Comercio
	CMCP 1270 150 Havana, Cuba Calzada de Luyane No. 132
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	Vista Alegre No. 80, Vibora
	CMCR 1400 150 Havana, Cuba Milagros No. 35, Vibora
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-	CMCU 1255 150 Havana, Cuba San Francisco No. 13, Vibora
	CMCW 540 150 Havana, Cuba Galiano y San Lazaro Sts.
	CMCY 1316 500 Havana Cuba
	Manuel D. Autran, Calle G 215, Vedado
	CMGE 1375 30 Cardenas, Cuba Genaro Sebater, Cespedes No. 180
	CMGF 971.5 100 Matanzas, Cuba
	G. Betancourt No. 51
	CMGH 1040 15 Matanzas, Cuba B. Byrne No. 113
	CMGI 1094 30 Colon, Cuba
	Armando Linanza, Marti No. 35
	CMHA 1103 50 Saguala Grande, Cub. Abelardo Menocal, Carrillo No. 1
	CMHB 1245 30 San Spiritus, Cuba
	Independencia No. 33
	CMHD 950 250 Caibarlen, Cuba Manuel Alvarez, M. Escobar 17
	CMHI 1037 150 Santa Clara, Cuba
	Lavis y Paz, independencia No. 34
	CMHJ 1125 40 Clenfuegos, Cuba Romoualde Ugalde, Hotel Bristo I
	CMHK 1225 50 Cruces, Cuba
	Heredia No. 61 CMHW 910 100 Clentuegos, Cuba
	CMHW 910 100 Clenfuegos, Cuba Arguelles No. 200
	CMJC 1382 150 Camaguey, Cuba
	Feliciano Isaac, Cisneros y G. Gomez CMJE 1170 50 Camaguey Cuba
	CMJE 1170 50 Camaguey, Cuba Manuel Fernandez, Hnos. Aguere No. 2
	CMJF 930 200 Camaguey, Cuba
	John L. Stowers, Republica No. 88
	CMJG 1050 50 Camaguey, Cuba Jose Antonio Lefran, Maceo No.1
	CMJH 1150 50 Ciego de Avila Cuba
	Luis Marauri, Vista Hermosa CMJI 1210 150 Ciego de Avila, Cuba
	Gilberto Gessa Lopez, Independencia 95
	CMJK 790 150 Camaguey, Cuba
	Cla. Nacional de Radio, Finlay CMJL 960 50 Camaguey, Cuba
	Enrique Artime, Cuba No. 27
	CMJO 1010 50 Ciego de Avila, Cuba Jose M. Rey, C. Central & Maceo

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	CMJP 1360 75 Moron, Cuba
	Cesar Canall, Callejas No. 28
	CMK 725 3150 Havana, Cuba Hotel Plaza
1	J. A. Saco, Alta 23
	CMKF 1363 30 Holquin, Cuba
	Libertad esq. Arias
	CMKJ 1300 20 Guantanamo, Cuba
	Luis Morlote, East Glro 11
	CMKM 940 100 Manzanillo. Cuba Jesus Armeste, Merchant y P. Figuerado
	CMO 840 340 Havana Cuba
	CMQ 840 340 Havana, Cuba 25 Numero 445, Vedado
	CMW 930 1400 Havana, Cuba
	Troncoso y Gil, Apdo. 1010
1	CMX 765 1000 Havana, Cuba Casa "Lavin," Ave. del a Republica 99A
	COA 1175 500 Havana, Cuba
	Juan Fernandez, Aguiar 126, Altes
	COK 1150 250 Havana, Cuba
-	Rafael Valdez, Marques Gonzales 52
	COX 1100 200 Havana, Cuba 10 entre 17 y 19, Vedado
	CRCK 1050 1000 Quebec, Que. Chateau Frontenac Hotel
	CRCM 910 5000 Montreal, Que.
	1231 St. Catherine St. W.
	CRCO 880 1000 Ottawa, Ont.
	Chateau Laurier Hotel
	CRCS 950 100 Chicoutimi, Que. 4 Rue Larouche
	CRCT 840 5000 Toronto, Ont.
	805 Davenport Road
	CRCV 1100 1000 Vancouver, B. C.
	C. N. R. Station Bidg.
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	FQN       609       250       St. Pierre, Miq.         HHK       920       1000       Port-au-Prince, Halti-Haitlan Government         HIH       1395       15       San Pedro de M., D.R.         Domingo Dominguez       HIJ       1195       15         HIJ       1195       15       Santo Domingo, D. R.         Tuto Baez       Hostos 34       HIX       1270         HIZ       1300       Santo Domingo, D. R.         J. R. Saladin, Director Generat       HIZ       1300
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	KTRH Broadcasting Co., Rice Hotel
	KTSA 550 1000 San Antonio, Texas Southwest Broadcasting Co., Piaza Hotel

<ul> <li>P. O. Box 1976</li> <li>KTUL 1400 250 Tuisa, Okia. National Bank of Tuisa Bidg.</li> <li>KTW 1220 1000 Seattle, Wash. 77th Ave. &amp; Spring St.</li> <li>KUJ 1370 100 Walla Walla, Wash.</li> <li>KUJ, Inc., Marcus Whitman Hotel</li> <li>KUJA 1240 100 Yuma, Arkz.</li> <li>Dr. A. H. Schermann, Box 267</li> <li>KUOA, Inc., Washington Hotel</li> <li>KUSD 850 500 Vermillion, S. D.</li> <li>University of South Dakota</li> <li>KVL 1370 100 Seattle, Wash.</li> <li>KVL, Inc., 5th and Virgibla St.</li> <li>KVOA 1260 500 Tueson, Arkz.</li> <li>Cons. Natl. Bank Bidg.</li> <li>KVOA 1260 500 Tueson, Arkz.</li> <li>Cons. Natl. Bank Bidg.</li> <li>KVOA 1260 500 Denver, Colo.</li> <li>Continental Oil Bidg.</li> <li>KVOB 920 500 Denver, Colo.</li> <li>Continental Oil Bidg.</li> <li>KVOB 1200 1000 Colorado Spg., Colo.</li> <li>Mining Exchange Bidg.</li> <li>KVOR 1270 1000 Storado Spg., Colo.</li> <li>Mining Exchange Bidg.</li> <li>KVOR 1210 100 Sheveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWFV 1210 100 Stockton, Callf.</li> <li>Medico-Dental Bidg.</li> <li>KWKK 1350 1000 St. Louis, Mo.</li> <li>Thomas Patrick, Inc., Hotel Chase</li> <li>KWKK 1350 1000 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKK 1100 1000 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKK 1120 100 Washington</li> <li>KWKK 1120 100 Mann, Wash.</li> <li>State College of Washington</li> <li>KWK 1100 1000 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKC 1270 100 Decorsh, Iowa</li> <li>Luther College</li> <li>KWSC 1220 100 Springfield, Mo.</li> <li>KGBX Inc.</li> <li>KWYO 1370 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWK 1300 1000 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWK 120 1000 Portland, Ore.</li> <li>Big Horn Brdestg. Co.</li> <li>KXA 760 250 Soattle, Wash.</li> <li>Karm 6135 50000 Manila, P. I.</li> <li>Erlanger &amp; Galinger, Inc.</li> <li>KXZEM 0130 1000 Shreveport, La.</li> <li>Spring &amp; Fansh Sts.</li> <li>KWK 1300 1000 Shreveport, La.</li> <li>Spring &amp; Fansh Sts.</li> <li>KWK 1300</li></ul>		KTSM 1310 100 El Paso, Texas
National Bank of Tulea Bildg.         Artw 1220 1000 Seattle, Wash.         77th Ave. & Spring St.         KUJ Inc., Marcus Whitman Hotel         KUMA 1420 100 Yuma, Ariz.         Dr. A. H. Schermann, Box 267         KUOA 1260 1000 Fayetteville, Ark.         KVL 1370 100 Seattle, Wash.         KVL 1370 100 Soattle, Wash.         KVL 1370 100 Soattle, Wash.         KVL 1370 100 Socattle, Wash.         KVL 1370 1000 Colorado Spg., Colo.         Continental Oll Bilds.         KVOS 1200 100 Beilingham, Wash.         I15 W. Magnolia St.         KWCK 1270 1000 Colorado Spg., Colo.         Mining Exchange Bidg.         KWVOS 1200 100 Steewaport, La.         Spring & Fannin Sts.         KWEA 1210 100 Milo, Hawail         Hilo Broadcasting Co., Ltd.         KWK 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWKK 1370 100 Karasa City, Mo. <tr< th=""><th></th><th>KTUL 1400 250 Tuisa, Okia.</th></tr<>		KTUL 1400 250 Tuisa, Okia.
77th Ave. & Spring St.         KUJ 100.       Marcus Whitman Hotel         KUMA 1420       100 Yuma, Ariz.         Dr. A. H. Schermann, Box 267         KUDA 1260       1000 Fayetteville, Ark.         KUSD 830       500 Vermillion, S. D.         University of South Dakota       Kvi         KVI.       570 1000 Seattle, Wash.         KVL. 1370       100 Seattle, Wash.         KVL. 1200 500 Tureson, Ariz.       Cons. Natl. Bank Bidg.         KVOD 220 500 Denver, Colo.       Continental Oll Bidg.         KVOD 1200 1000 Colorado Sps., Colo.       Mining Exchange Bidg.         KVOS 1200 100 Beilingham, Wash.       115 W. Magnolia St.         KWCR 1430 250 Cedar Rapids, Iowa       Hotel Montrose         KWER 1210 100 Shrevsport, La.       Spring & Fanin Sts.         KWFV 1210 100 Milo, Hawail       Hilo Broadcasting Co., Ltd.         KWK 1350 1000 St. Louis, Mo.       Thomas Patrick, Inc., Hotel Chase         KWKZ 1370 100 Strevsport, La.       Spring & Fannin Sts.         KWK 1350 1000 Shrevsport, La.       Spring & Fannin Sts.         KWKK 1370 100 Sheridan, Wyo.       Big Horn Brdcstg. Co.		National Bank of Tulsa Bldg.
RUJ, Inc., Marcus Whitman Hotel         KUMA 1420       100         Dr. A. H. Schermann, Box 267         KUOA, Inc., Washington Hotel         KUSD 830       500         Vermillion, S. D.         University of South Dakota         KVI       570         KVOA       1265         KVOA       1260         KVOD       220         KVOD       220         KVOO       1000         Constantal Oll Bilds.         KVOO       1200         KVOR       1200         Sortantal Oll Bilds.         KVOS       1200         KVOR       1200         KVOR       1200         Bardiage Co., Ltd.         KWG       1300         KWKI 1300       100         KVG1 1370       100         KWG2 1200       100         Spring & Fanin S		77th Ave. & Spring St.
KUMA 1420100Yuma, Ariz. Dr. A. H. Schermann, Box 267KUOA 12601000Fayetteville, Ark. KUOA, Inc., Washington HotelKUSD 850500Vermillion, S. D. University of South DakotaKVI.5701000KVI.1370100Seattle, Wash. KVL, 1170100KVL1370100Seattle, Wash. KVL, Inc., 5th and Virgibla St. KVOA 1260S00KVOA 1260500Denver, Colo. 		KUJ 1370 100 Waila Walla, Wash.
<ul> <li>KUOA, 1260 1000 Fayetteville, ArK.</li> <li>KUOA, Inc., Washington Hotel</li> <li>KUS 850 500 Vermillion, S. D.</li> <li>University of South Dakota</li> <li>KVI 570 1000 Tacoma, Wash.</li> <li>KVL 1370 100 Seattle, Wash.</li> <li>KVL, Inc., 5th and Virgibla St.</li> <li>KVOA 1260 500 Tueson, Ark.</li> <li>Cons. Natl. Bank Bidg.</li> <li>KVOO 520 500 Denver, Colo.</li> <li>Continental Oll Bidg.</li> <li>KVOO 1140 25000 Tulsa, Okla.</li> <li>Wright Bidg.</li> <li>KVOR 1270 1000 Colorado Spg., Colo.</li> <li>Mining Exchange Bidg.</li> <li>KVOR 1270 1000 Colorado Spg., Colo.</li> <li>Mining Exchange Bidg.</li> <li>KVOR 1210 100 Storken, Wash.</li> <li>I15 W. Magnolla Bt.</li> <li>KWEA 1210 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWK 1350 1000 St. Louis, Mo.</li> <li>Thomas Patrick, Inc., Hotel Chase</li> <li>KWKK 1350 1000 St. Louis, Mo.</li> <li>Thomas Patrick, Inc., Hotel Chase</li> <li>KWKK 1270 100 Kansas City, Mo.</li> <li>39th &amp; Main Sts.</li> <li>KWKC 1270 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKC 1270 100 Menseport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKC 1270 100 Menseport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKC 1270 100 Menseport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKC 1270 100 Decorsh, Iowa</li> <li>Luther College of Washington</li> <li>KWTN 1210 100 Watertown, S. D.</li> <li>Citizens Bank Bidg.</li> <li>KWTO 560 1000 Springfield, Mo.</li> <li>KGBX Inc.</li> <li>KWYO 1370 100 Sheridan, Wyo.</li> <li>Big Horn Brdestg. Co.</li> <li>KXA 760 250 Seattle, Wash.</li> <li>American Radio Tel. Co., 218 Bigelow Bidg.</li> <li>KXPO 1310 100 Aberdeen, Wash.</li> <li>KXRO 1310 100 Manila, P. I.</li> <li>Erianger &amp; Galinger, Inc.</li> <li>KZRM 618.5 50000 Manila, P. I.</li> </ul>		KUMA 1420 100 Yuma, Ariz.
<ul> <li>KUOA, Inc., Washington Hotel</li> <li>KUSD 830 500 Vermillion, S. D.</li> <li>University of South Dakota</li> <li>KVI 570 1000 Tacoma, Wash.</li> <li>W. R. Rust Bldg.</li> <li>KVL 1370 100 Seattle, Wash.</li> <li>KVL, 1370 100 Seattle, Wash.</li> <li>KVL, 11c., 5th and Virginia St.</li> <li>KVOA 1250 500 Denver, Colo.</li> <li>Continental Oll Bidg.</li> <li>KVOS 1200 100 Colorado Spg., Colo.</li> <li>Mining Exchange Bidg.</li> <li>KVOS 1200 100 Beillingham, Wash.</li> <li>H15 W. Magnolia St.</li> <li>KWCR 1430 250 Codar Rapids, Iowa</li> <li>Hotel Montrose</li> <li>KWER 1210 100 Shreveport, La.</li> <li>Spring &amp; Fanin Sts.</li> <li>KWK 1350 1000 St. Louis, Mo.</li> <li>Thomas Patrick, Inc., Hotel Chase</li> <li>KWKK 1350 100 St. Louis, Mo.</li> <li>Thomas Patrick, Inc., Hotel Chase</li> <li>KWKK 1370 100 Kansas City, Mo.</li> <li>39th &amp; Main Sts.</li> <li>KWKK 1370 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKC 1370 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWK 1350 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWK 1370 100 Meremond.</li> <li>G22 S. W. Saimon St.</li> <li>KWK 1370 100 Strekton, Calif.</li> <li>Medico-Dental Bidg.</li> <li>KWK 1370 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWK 1370 100 Vatertown, S. D.</li> <li>Citizens Bank Bidg.</li> <li>KWYO 1370 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWYO 1370 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWYO 1370 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWYO 1370 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWYO 1370 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWYO 1370 100 Shreveport, S. D.</li> <li>Citizens Bank Bidg.</li> <li>KWYO 1370 100 Sheridan, Wyo.</li> <li>Big Horn Brdestg. Co.</li> <li>KXA 760 250 Seattle, Wash.</li> <li>American Radio Tel. Co., 218 Bigleow Bidg.</li> <li>KYRO 1310 100 Aberdeen, Wash.</li> <li>KXRO 1310 100 Aberdeen, Wash.</li> <li>KXRO 1310 100 Sheridan, Wyo.</li> <li>Big Korn</li></ul>		KIIGA 1260 1000 Favetteville, ArK.
<ul> <li>KUSD 500 500 Verminion, S. D. University of South Dakota</li> <li>KVL 570 1000 Tacoma, Wash.</li> <li>W. R. Rust Bidg.</li> <li>KVL 1370 100 Seattle, Wash.</li> <li>KVL 1370 100 Seattle, Wash.</li> <li>KVL 1370 100 Soattle, Wash.</li> <li>KVOA 1260 500 Denver, Colo.</li> <li>Continental Oll Bidg.</li> <li>KVOOR 1270 1000 Colorado Spg., Colo.</li> <li>Mining Exchange Bidg.</li> <li>KVOS 1200 100 Beilingham, Wash.</li> <li>H5 W. Magnolia St.</li> <li>KWCS 1270 1000 Beilingham, Wash.</li> <li>H5 W. Magnolia St.</li> <li>KWCR 1430 250 Codar Rapids, Iowa</li> <li>Hotel Montrose</li> <li>KWFV 1210 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWK 1350 100 Stockton, Calif.</li> <li>Medico-Dental Bidg.</li> <li>KWK 1350 100 St. Louis, Mo.</li> <li>Thomas Partick, Inc., Hotel Chase</li> <li>KWKK 1370 100 Kansas City, Mo.</li> <li>39th &amp; Main Sts.</li> <li>KWKK 1370 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWK 1100 10000 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKK 1370 100 Beilingham, Wash.</li> <li>State College fWashington</li> <li>KWTO 1510 100 Springfield, Mo.</li> <li>KGBX Inc.</li> <li>KWYO 1370 100 Springfield, Mo.</li> <li>KGBX Inc.</li> <li>KWYO 1310 100 Sheridan, Wyo.</li> <li>Big Horn Brdestg. Co.</li> <li>KXA 760 250 Seattle, Wash.</li> <li>American Radio Tel. Co., 218 Bigelow Bidg.</li> <li>KXPI 1320 100 Aberidan, Wyo.</li> <li>Big Horn Brdestg. Co.</li> <li>KXA 760 250 Houston, Texas</li> <li>Fannin &amp; Rusk Sts.</li> <li>KYRO 1310 100 Aberidan, Wyo.</li> <li>Big Horn Brdestg. Co.</li> <li>KXA 760 250 Houston, Texas</li> <li>Fannin &amp; Rusk Sts.</li> <li>KYRO 1310 100 Aberidan, Wash.</li> <li>KXRO, Inc., Hotel Morck.</li> <li>KXYZ 1440 250 Houston, Texas</li> <li>Fannin &amp; Rusk Sts.</li> <li>KYM 1020 10000 Manila, P. I.</li> <li>Erlanger &amp; Galinger, Inc.</li> <li>KZEG 720 1000 Manila, P. I.</li> <li>Erlanger &amp; Galinger, Inc.</li> <li>KZEM 618.5 50000 Manila, P. I.</li> </ul>		KUOA, Inc., Washington Hotel
<ul> <li>KVI 570 1000 Tacoma, Wash.</li> <li>W. R. Rust Bidg.</li> <li>KVL 1370 100 Soattle, Wash.</li> <li>KVL 1370 100 Soattle, Wash.</li> <li>KVL 1370 100 Soattle, Wash.</li> <li>KVOA 1260 500 Tucson, Ariz.</li> <li>Cons. Natl. Bank Bidg.</li> <li>KVOO 1140 25000 Tulsa, Okia.</li> <li>Wright Bidg.</li> <li>KVOS 1270 1000 Colorado Spg., Colo.</li> <li>Mining Exchange Bidg.</li> <li>KVOS 1200 100 Beilingham, Wash.</li> <li>H5 W. Magnolia St.</li> <li>KWCR 1430 250 Codar Rapids, Iowa</li> <li>Hotel Montrose</li> <li>KWEA 1210 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWK 1320 100 Stockton, Calif.</li> <li>Medico-Dental Bidg.</li> <li>KWK 1350 1000 St. Louis, Mo.</li> <li>Thomas Patrick, Inc., Hotel Chase</li> <li>KWKK 1370 100 Kansas City, Mo.</li> <li>39th &amp; Main Sts.</li> <li>KWKC 1270 100 Decorah, Iowa</li> <li>Luther College</li> <li>KWSC 1220 100 Springfield, Mo.</li> <li>KGBX Inc.</li> <li>KWYO 1370 100 Springfield, Mo.</li> <li>KGBX Inc.</li> <li>KWYO 1310 100 Aberdeen, Wash.</li> <li>American Radio Tel. Co., 218 Bigelow Bidg.</li> <li>KXP 1320 100 Springfield, Mo.</li> <li>KGBX Inc.</li> <li>KYW 1020 1000 Shortespo, Fill.</li> <li>Mitheigan Ave.</li> <li>KZZEG 720 1000 Manila, P. I.</li> <li>Erlanger &amp; Galinger, Inc.</li> <li>KZRM 618.5 50000 Manila, P. I.</li> </ul>		KUSD 890 500 Verminion, a. D.
KVL       1370       100       Seattle, Wash.         KVL, Inc., 5th and Virgibla St.       KVOA       1260       500       Tueson, Ariz.         Cons. Natl. Bank Bidg.       KVOD 920       500       Denver, Colo.         Continental Oll Bidg.       KVOD 920       500       Denver, Colo.         Continental Oll Bidg.       KVOD 1100       S0000       Tuisa, Okla.         Wright Bidg.       KVOS 1200       100       Colorado Spg., Colo.         Mining Exchange Bidg.       KVOS 1200       100       Bellingham, Wash.         I15 W. Magnolia St.       KWCR 1430       250       Codar Rapids, Iowa         Hotel Montrose       KWER 1210       100       Stresport, La.         Spring & Fannin Sts.       KWFV 1210       100       Stockton, Calif.         Medico-Dental Bidg.       KWW 1350       1000       Stockton, Calif.         Medico-Dental Bidg.       KWK 1350       1000       Stockton, Calif.         Medico-Dental Bidg.       KWK 1350       1000       Stockton, Calif.         Medico-Dental Bidg.       KWK 1370       100       Kanas City, Mo.         39th & Main Sta       KWK 1370       100       Stockton, Calif.         KWK 1370       1000       Decorah, Iowa       Luthe		KVI 570 1000 Tacoma, Wash.
KVOA 1260 500 Tueson, Ariz. Cons. Natl. Bank Bidg. KVOD 520 500 Denver, Colo. Continental Oll Bidg.KVOD 1270 1000 Colorado Spg., Colo. Mining Exchange Bidg.KVOS 1100 1000 Colorado Spg., Colo. Mining Exchange Bidg.KVOS 1200 100 Beilingham, Wash. 115 W. Magnolia Bt.KWCR 1430 250 Cedar Rapids, Iowa Hotel MontroseKWER 1430 250 Cedar Rapids, Iowa Hotel MontroseKWER 1210 100 Shreveport, La. Bpring & Fannin Sts.KWF 1210 100 Shreveport, La. Bpring & Fannin Sts.KWF 1210 100 Stockton, Calif. Medico-Dental Bidg.KWK 1350 1000 St. Louis, Mo. Thomas Patrick, Inc., Hotel Chase KWKK 1370 100 Shreveport, La. Spring & Fannin Sts.KWK 1100 10000 Shreveport, La. Spring & Fannin Sts.KWK 1210 100 Decorah, Iowa Luther College KWSC 1220 100 Puliman, Wash. State College of Washington KWTN 1210 100 Watertown, S. D. Citizens Bank Bidg. KWYO 1370 100 Sheridan, Wyo. Big Horn Brdcetg. Co. KXA 760 250 Seattle, Wash. American Radio Tel. Co., 218 Bigelow Bidg. KXL 1420 100 Portland, Ore. KXL Broadcasters, Multnomah Hotel KXCR 0, Inc., Hotel Morck. KXRO, Inc., Hotel Morck. KXRO 1310 100 Aberdeen, Wash. KXRO 1310 100 Aberdeen, Wash. KXRO 1310 100 Aberdeen, Wash. KXRO, Inc., Hotel Morck. KXRO 1310 100 Sher Francisco, Calif. F. M. Bowles, Box 140 KXRO, Ince, Hotel Morck. KYY 1440 250 Mouston, Texas Fannin & Rusk Bts. KYY 1020 1000 Chicago, Ill. 310 S. Michigan Ave. KZEG 720 1000 Manila, P. I. Erlanger & Gallinger, Inc. KZRM 618.5 50000 Manila, P. I.		KVL 1370 100 Seattle, Wash.
Cons. Natl. Bank Bidg. KVOD 920 500 Denver, Colo. Continental Oll Bidg. KVOG 1140 25000 Tuisa, Okia. Wright Bidg. KVOS 1270 1000 Colorado Spg., Colo. Mining Exchange Bidg. KVOS 1200 100 Beilingham, Wash. 115 W. Magnolia St. KWCR 1430 250 Codar Rapids, Iowa Hotel Montrose KWER 1210 100 Shreveport, La. Bpring & Fanin Sts. KWFV 1210 100 Milo, Mawail Hilo Broadcasting Co., Ltd. KWG 1200 100 Stockton, Calif. Medico-Dental Bidg. KWK 1350 1000 St. Louis, Mo. Thomas Patrick, Inc., Hotel Chase KWKK 1370 100 Mansas City, Mo. 39th & Main Sts. KWKK 1370 100 Decorsh, Iowa Luther College KWSC 1220 100 Springfield, Mo. KGBX Inc. KWTO 560 1000 Springfield, Mo. KGBX Inc. KWYO 1370 100 Sheridan, Wyo. Big Horn Brdcstg. Co. KXA 760 250 Seattle, Wash. American Radio Tel. Co., 218 Bigelow Bidg. KXL 1320 100 Operiand, Ore. KXL Broadcasters, Multnomah Hotel KXO 1500 100 San Francisco, Calif. KWYO 1310 100 Aseridan, Wyo. Big Horn Brdcstg. Co.		KVL, Inc., 5th and Virginia St.
Continental Oil Bidg. KVOO 1140 25000 Tuisa, Okia. Wright Bidg. KVOR 1270 1000 Colorado Spg., Colo. Mining Exchange Bidg. KVOS 1200 100 Beilingham, Wash. 115 W. Magnolia Bt. KWCR 1430 250 Cedar Rapids, Iowa Hotel Montrose KWEA 1210 100 Shreveport, La. Spring & Fannin Sts. KWF V 1210 100 Milo, Hawail Hilo Broadcasting Co., Ltd. KWG 1200 100 Stockton, Calif. Medico-Dental Bidg. KWKJ 1040 500 Portland, Ore. 622 S. W. Salmon St. KWKK 1350 1000 St. Louis, Mo. Thomas Patrick, Inc., Hotel Chase KWKK 1370 100 Shreveport, La. Spring & Fannin Sts. KWKK 1100 10000 Shreveport, La. Spring & Fannin Sts. KWKK 1100 10000 Shreveport, La. Spring & Fannin Sts. KWKK 1100 10000 Shreveport, La. Spring & Fannin Sts. KWKU 1270 100 Decorah, Iowa Luther College KWSC 1220 1000 Puliman, Wash. State College of Washington KWTN 1210 100 Shreveport, S. D. Citizens Bank Bidg. KWYO 1370 100 Shreidan, Wyo. Big Horn Brdestg. Co. KXA 760 250 Seattle, Wash. American Radio Tel. Co., 218 Biglow Bidg. KXL 1202 100 Portland, Ore. KXL 1300 1000 El Centro, Calif. F. M. Bowles, Box 140 KXRO 1310 100 Aberdeen, Wash. KXRO 1310 100 Aberdeen, Wash. KXRO 1310 100 Aberdeen, Wash. KXRO 1310 100 Aberdeen, Wash. KXRV 1220 1000 Chicago, Ill. 310 S. Michigan Ave. KZEM 463.5 50000 Manila, P. L.		Cons. Natl. Bank Bldg.
KV00 1140 25000 Tulsa, Okla.         Wright Bidg.         KV0R 1270 1000 Colorado Spg., Colo.         Mining Exchange Bidg.         KV0S 1200 100 Beilingham, Wash.         115 W. Magnolla St.         KWCR 1430 250 Cedar Rapids, Iowa         Hotel Montrose         KWEA 1210 100 Shreveport, La.         Spring & Fannin Sts.         KWFV 1210 100 Milo, Hawail         Hilo Broadcasting Co., Ltd.         KWG 1200 100 Stockton, Calif.         Medico-Dental Bidg.         KWKX 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWKK 1370 100 Kansas City, Mo.         39th & Main Sts.         KWKL 1270 100 Decorah, Iowa         Luther College         KWSC 1220 1000 Shreveport, La.         Spring & Fannin Sts.         KWKC 1370 100 Decorah, Iowa         Luther College         KWSC 1220 1000 Puliman, Wash.         State College of Washington         KWTO 3170 100 Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Springfield, Mo.         KGBX Inc.         KWYO 1310 100 Aberdeen, Wash.         American Radio Tel. Co., 218 Bigelow Bidg. <td< th=""><th></th><th></th></td<>		
KVOR 1270 1000 Colorado Sps., Colo. Mining Exchange Bidg.         KVOS 1200 100 Bellingham, Wash.         115 W. Magnolla St.         KWCR 1430 250 Codar Rapids, Iowa         Hotel Montrose         KWER 1210 100 Shreveport, La.         Spring & Fanin Sts.         KWFV 1210 100 Hilo, Hawail         Ribo Broadcasting Co., Ltd.         KWG 1200 100 Stockton, Calif.         Medico-Dental Bidg.         KWJJ 1040 500 Portland, Ore.         622 S. W. Saimon St.         KWK 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWKK 1370 100 Kansas City, Mo.         39th & Main Sts.         KWKK 100 10000 Shreveport, La.         Spring & Fannin Sts.         KWKU 1370 100 Decorah, Iowa         Luther College         KWSC 1220 1000 Puliman, Wash.         State College of Washington         KWYO 560 1000 Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Sheridan, Wyo.         Big Horn Brdestg. Co.         KXA 760 250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXD 1300 100 El Centro, Calif.         F. M. Bowles, Box 140         KXRO 1310 100 Abordeen, Wash.         KXRO 1310 100 Abordeen, Wash.		KVOO 1140 25000 Tuisa, Okia.
<ul> <li>Mining Exchange Bidg.</li> <li>KVOS 1200 100 Beilingham, Wash.</li> <li>115 W. Magnolla Bt.</li> <li>KWCR 1430 250 Cedar Rapids, Iowa Hotel Montrose</li> <li>KWEA 1210 100 Shreveport, La.</li> <li>Bpring &amp; Fannin Sts.</li> <li>KWFV 1210 100 Hilo, Hawaii</li> <li>Hilo Broadcasting Co., Ltd.</li> <li>KWG 1200 100 Stockton, Callf.</li> <li>Medico-Dental Bidg.</li> <li>KWK 1350 1000 St. Louis, Mo.</li> <li>Thomas Patrick, Inc., Hotel Chase</li> <li>KWKK 1350 1000 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWK 1350 1000 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKC 1270 100 Kansas City, Mo.</li> <li>39th &amp; Main Sts.</li> <li>KWKC 1270 100 Decorsh, Iowa</li> <li>Luther College</li> <li>KWSC 1220 1000 Puliman, Wash.</li> <li>State College of Washington</li> <li>KWTN 1210 100 Shreveport, S. D.</li> <li>Citizens Bank Bidg.</li> <li>KWTO 560 1000 Springfield, Mo.</li> <li>KGBX Inc.</li> <li>KWA 760 250 Seattle, Wash.</li> <li>American Radio Tel. Co., 218 Bigelow Bidg.</li> <li>KXL 120 100 Portland, Ore.</li> <li>KXL Broadcasters, Multnomah Hotel</li> <li>KXO 1500 100 El Centre, Calif.</li> <li>F. M. Bowies, Box 140</li> <li>KXRO 1310 100 Aberdeen, Wash.</li> <li>KXRO 1310 100 Canberdeen, Wash.</li> <li>KXRO 1310 100 Aberdeen, Wash.</li> <li>KXZEG 720 1000 Manila, P. I.</li> <li>Erlanger &amp; Galinger, Inc.</li> <li>KZRM 618.5 50000 Manila, P. I.</li> </ul>		
<ul> <li>115 W. Magnolia St.</li> <li>KWCR 1430 250 Cedar Rapids, lowa Hotel Montrose</li> <li>KWEA 1210 100 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWFV 1210 100 Hilo, Hawaii Hilo Broadcasting Co., Ltd.</li> <li>KWG 1200 100 Stockton, Calif.</li> <li>Medico-Dental Bidg.</li> <li>KWJJ 1040 500 Portland, Ore.</li> <li>6228. W. Saimon St.</li> <li>KWKK 1350 1000 St. Louis, Mo.</li> <li>Thomas Patrick, Inc., Hotel Chase</li> <li>KWKK 1370 100 Kansas City, Mo.</li> <li>39th &amp; Main Sts.</li> <li>KWKK 1100 10000 Shreveport, La.</li> <li>Spring &amp; Fannin Sts.</li> <li>KWKC 1270 100 Decorah, lowa</li> <li>Luther College</li> <li>KWSC 1220 1000 Puliman, Wash.</li> <li>State College of Washington</li> <li>KWTO 1210 100 Watertown, S. D.</li> <li>Citizens Bank Bidg.</li> <li>KWYO 1370 100 Springfield, Mo.</li> <li>KGBX Inc.</li> <li>KWXO 1300 Springfield, Mo.</li> <li>KGBX Inc.</li> <li>KXA 760 250 Seattle, Wash.</li> <li>American Radio Tel. Co., 218 Bigelow Bidg.</li> <li>KXL 120 100 Portland, Ore.</li> <li>KXL Broadcasters, Multnomah Hotel</li> <li>KXO 1510 100 Aberdeen, Wash.</li> <li>KRO, Inc., Hotel Morck.</li> <li>KXRO, 1310 100 Aberdeen, Wash.</li> <li>KXRO 1310 100 Aberdeen, Wash.</li> <li>KXRV 1230 1000 San Francisco, Calif.</li> <li>PS8 Market St.</li> <li>KYW 1020 10000 Chicago, Ill.</li> <li>310 S. Michigan Ave.</li> <li>KZEG 720 1000 Manila, P. I.</li> <li>Erlanger &amp; Galinger, Inc.</li> <li>KZRM 618.5 50000 Manila, P. I.</li> </ul>		Mining Exchange Bldg.
KWCR 1430 250 Cedar Rapids, Iowa Hotel Montrose         KWEA 1210 100 Shreveport, La.         Spring & Fannin Sts.         KWFX 1210 100 Mile, Mawail         Rilb Broadcasting Co., Ltd.         KWG 1200 100 Stockton, Calif.         Medico-Dental Bidg.         KWK 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWK 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWK 1350 1000 Shreveport, La.         Spring & Fannin Sts.         KWKC 1270 100 Decorsh, Iowa         Luther College         KWSC 1220 1000 Puliman, Wash.         State College of Washington         KWTN 1210 100 Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Sheridan, Wyo.         Big Horn Brdcstg. Co.         KXA 760 250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXL 1420 100 Portland, Ore.         KXL Broadcasters, Multnomah Hotel         KXRO 110 100 Aberdeen, Wash.         KXRO 1310 100 Aberdeen, Wash.         KXRO 1320 1000 San Francisco, Calif.         F. M. Bowles, Box 140         KXRO 1310 100 Aberdeen, Wash.         KXRO 1310 100 San Francisco, Calif.         F. M. Bowles Bts.         KYW 1020 10000 Chic		
KWEA 1210 100 Shreveport, La.         Spring & Fannin Sts.         KWFV 1210 100 Hilo, Hawaii         Hilo Broadcasting Co., Ltd.         KWG 1200 100 Stockton, Calif.         Medico-Dental Bidg.         KWJJ 1040 500 Portland, Ore.         622 S. W. Saimon St.         KWK 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWK 1370 100 Kansas City, Mo.         39th & Main Sts.         KWK 1100 10000 Shreveport, La.         Spring & Fannin Sts.         KWK L 1270 100 Decorsh, Iowa         Luther College         KWSC 1220 1000 Puliman, Wash.         State College of Washington         KWTO 1210 100 Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Sheridan, Wyo.         Big Horn Brdestg. Co.         KXA 760 250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXD 1310 100 Aberdeen, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXA 760 250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXL 120 100 Aberdeen, Wash.         KXL Broadcasters, Multnomah Hotel         KXO, Inc., Hotel Morck.         KXYZ 1440 250 Houston, Texas         Fannin & Rusk Sts.		KWCR 1430 250 Cedar Rapids, Iowa
<ul> <li>Spring &amp; Fannin Sts.</li> <li>KWFV 1210 100 Milo, Hawail</li> <li>Hilo Broadcasting Co., Ltd.</li> <li>KWG 1200 100 Stockton, Calif.</li> <li>Medico-Dental Bidg.</li> <li>KWJJ 1040 500 Portland, Ore.</li> <li>622 B. W. Saimon St.</li> <li>KWK 1350 1000 St. Louis, Mo.</li> <li>Thomas Patrick, Inc., Hotel Chase</li> <li>KWKC 1370 100 Kansas City, Mo.</li> <li>39th &amp; Main Sts.</li> <li>KWKC 1270 100 Decorah, Iowa</li> <li>Luther College</li> <li>KWSC 1220 1000 Puliman, Wash.</li> <li>State College of Washington</li> <li>KWTN 1210 100 Sheridan, Wash.</li> <li>State College of Washington</li> <li>KWTN 1210 100 Sheridan, Wash.</li> <li>State College College College Machines.</li> <li>KWY 01370 100 Sheridan, Wyo.</li> <li>Big Horn Brdcstg. Co.</li> <li>KXA 760 250 Seattle, Wash.</li> <li>American Radio Tel. Co., 218 Bigelow Bidg.</li> <li>KXC 1310 100 Aberdeen, Wash.</li> <li>KXC 1310 100 Aberdeen, Wash.</li> <li>KXRO 1310 100 Aberdeen, Wash.</li> <li>KXRV 1420 100 Portland, Ore.</li> <li>KXRO 1310 100 Aberdeen, Wash.</li> <li>KXRV 1420 100 San Francisco, Calif.</li> <li>988 Market St.</li> <li>KYW 1020 10000 Chicago, Ill.</li> <li>310 S. Michigan Ave.</li> <li>KZEM Gallinger, Inc.</li> <li>KZRM 618.5 50000 Manila, P. I.</li> <li>Erlanger &amp; Gallinger, Inc.</li> <li>KZRM 618.5 50000 Manila, P. I.</li> </ul>		4
Hilo Broadcasting Co., Ltd.         KWG 1200 100 Stockton, Calif.         Medico-Dental Bids.         KWJJ 1040 500 Portland, Ore.         622 S. W. Saimon St.         KWK 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWKC 1370 100 Kansas City, Mo.         39th & Main Sts.         KWKC 1370 100 Decrah, Iowa         Luther College         KWSC 1220 1000 Puliman, Wash.         State College of Washington         KWTN 1210 100 Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Sheridan, Wyo.         Big Horn Brdestg. Co.         KXA 760 250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXL 120 100 Portland, Ore.         KXL Broadcasters, Multnomah Hotel         KXO 1300 100 El Centre, Calif.         F. M. Bowies, Box 140         KXRO, Inc., Hotel Morck.         KXYZ 1440 250 Houston, Texas         Fannin & Rusk Sts.         KYA 120 1000 San Francisco, Calif.         988 Market St.         KYW 1020 10000 Chicago, Ill.         310 S. Michigan Ave.         KZEG 720 1000 Manila, P. I.         Erlanger & Gallinger, Inc.         KZRM 618.5 50000 Manila, P. I.		Spring & Fannin Sts.
KWG 1200 100 Stockton, Calif. Medico-Dental Bidg.         KWJJ 1040 500 Portland, Ore.         622 S. W. Salmon St.         KWK 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWK 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWK 1370 100 Kansas City, Mo.         39th & Main Sts.         KWKL 1270 100 Decorsh, Iowa         Luther College         KWSC 1220 1000 Puliman, Wash.         State College of Washington         KWTN 1210 100 Sheridan, Wash.         State College of Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Sheridan, Wyo.         Big Horn Brdcstg. Co.         KXA 760 250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXL 1420 100 Portland, Ore.         KXL Broadcasters, Multnomah Hotel         KXO 1310 100 Aberdeen, Wash.         KRO 1310 100 Aberdeen, Wash.         KXRO, Inc., Hotel Horck.         KXRO, Inc., Hotel Morck.         KYW 1220 1000 San Francisco, Calif.         Fannin & Rusk Bts.         KYM 1230 1000 San Francisco, Calif.         Stale Sander & Galinger, Inc.         KZEG 720 1000 Manila, P. I.         Erlanger & Galinger, Inc.         KZEM 618.5 50		
KWJJ 1040 500 Portland, Ore.         622 S. W. Salmon St.         KWK 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWK 1370 100 Kansas City, Mo.         39th & Main Sts.         KWK 1100 10000 Shreveport, La.         Spring & Fannin Sts.         KWK 12270 100 Decorah, Iowa         Luther College         KWSC 1220 1000 Puliman, Wash.         State College of Washington         KWTN 1210 100 Watertown, S. D.         Citizens Bank Bidg.         KWYO 560 1000 Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Sheridan, Wyo.         Big Horn Brdcstg. Co.         KXL 1420 100 Portland, Ore.         KXL 1600 100 El Centro, Calif.         F. M. Bowles, Box 140         KXRO 110 100 Aberdeen, Wash.         KXRO 1310 100 Aberdeen, Wash.         KXRO 1320 1000 San Francisco, Calif.         F. M. Bowles, Box 140         KXRO 1310 100 Aberdeen, Wash.         KXRO 1310 100 San Francisco, Calif.         Fannin & Rusk Sts.         KYW 1220 10000 San Francisco, Calif.         988 Market St.         KYW 1020 10000 Chicago, Ill.         310 S. Michigan Ave.         KZEG 720 1000 Manila, P. I.         Erlanger & Galinger, In		KWG 1200 100 Stockton, Calif.
KWK 1350 1000 St. Louis, Mo.         Thomas Patrick, Inc., Hotel Chase         KWKC 1370 100 Kansas City, Mo.         39th & Main Sts.         KWKL 1100 10000 Shreveport, La.         Spring & Fannin Sts.         KWLC 1270 100 Decorah, Iowa         Luther College         KWSC 1220 1000 Puliman, Wash.         State College of Washington         KWTN 1210 100 Watertown, S. D.         Citizens Bank Bidg.         KWYO 560 1000 Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Sheridan, Wyo.         Big Horn Brdestg. Co.         KXA 760 250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXL 120 100 Portiand, Ore.         KXL Broadcasters, Multnomah Hotel         KXO 1500 100 El Centre, Calif.         F. M. Bowles, Box 140         KXRQ 1310 100 Aberdeen, Wash.         KXRQ 1310 100 San Francisco, Calif.         Fannin & Rusk Sts.         KYA 1230 1000 San Francisco, Calif.         Syst Market St.         KYW 1020 10000 Chicago, Ill.         310 S. Michigan Ave.         KZEG 720 1000 Manila, P. I.         Erlanger & Galinger, Inc.         KZRM 618.5 50000 Manila, P. I.		KWJJ 1040 500 Portland, Ore.
Thomas Patrick, Inc., Hotel Chase         WKC 1370       100         Bith & Main Sts.         KWKH 1100       10000         Spring & Fannin Sts.         KWLC 1270       100         Luther College         KWSC 1220       1000         Kuth C 1270       100         Bitte College       Washington         Kuth C 1270       100         Bitte College of Washington         Kuth C 1210       100         Washington         KWTO 560       1000         KUYO 1370       100         Sig Horn Brdcstg. Co.         KXA       760         KXU 1370       100         Sig Horn Brdcstg. Co.         KXA       760         KXL       1420         Merican Radio Tel. Co., 218 Bigelow Bidg.         KXL       1420         KXO       1500         KXO       1500         KXRO 1310       100 Aberdeen, Wash.         KXRO 1310       100 Aberdeen, Wash.         KXRO, Inc., Hotel Horck.       KXRO, Inc., Hotel Horck.         KXRYZ 1440       250 Houston, Texas         Fannin & Rusk Bts.       KYW         KYA       1230		
39th & Main Sts.         KWKH 1100 10000 Shreveport, La.         Spring & Fannin Sts.         KWLC 1270 100 Decorah, Iowa         Luther College         KWSC 1220 1000 Puliman, Wash.         State College of Washington         KWTN 1210 100 Watertown, S. D.         Citizens Bank Bidg.         KWTO 560 1000 Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Sheridan, Wyo.         Big Horn Brdcetg. Co.         KXA 760 250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXL 1420 100 Portland, Ore.         KXL Broadcasters, Multnomah Hotel         KXO 1500 100 El Centro, Calif.         F. M. Bowles, Box 140         KXRO, Inc., Hotel Morck.         KXRV 1230 1000 San Francisco, Calif.         988 Market St.         KYW 1020 10000 Chicago, Ill.         310 S. Michigan Ave.         KZEG 720 1000 Manila, P. I.         Erlanger & Galinger, Inc.         KZRM 618.5 50000 Manila, P. I.		Thomas Patrick, Inc., Hotel Chase
KWKH 1100 10000 Shreveport, La.         Spring & Fannin Sts.         KWLC 1270 100 Decorah, Iowa         Luther College         KWSC 1220 1000 Puliman, Wash.         State College of Washington         KWTO 1210 100 Watertown, S. D.         Citizens Bank Bidg.         KWTO 560 1000 Springfield, Mo.         KGBX Inc.         KWYO 1370 100 Sheridan, Wyo.         Big Horn Brdcstg. Co.         KXL 1420 100 Portland, Ore.         KXL Broadcasters, Multnomah Hotel         KXO 1500 100 El Centro, Calif.         F. M. Bowles, Box 140         KXRO, Inc., Hotel Morek.         KXPZ 1440 250 Houston, Texas         Fannin & Rusk Bts.         KYM 1220 1000 San Francisco, Calif.         SMarket St.         KYM 1020 10000 Chicago, Ill.         310 S. Michigan Ave.         KZEG 720 1000 Manila, P. I.         Erlanger & Gallinger, Inc.         KZRM 618.5 50000 Manila, P. I.		South & Main Sts.
KWLC 1270       100 Decorah, Iowa         Luther College         KWSC 1220       100 Puliman, Wash.         State College of Washington         KWTN 1210       100 Watertown, S. D.         Citizens Bank Bidg.         KWTO 560       1000 Springfield, Mo.         KGBX Inc.         KWYO 1370       100 Sheridan, Wyo.         Big Horn Brdcstg. Co.         KXA       760       250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXL       100 Portland, Ore.         KXL Broadcasters, Multnomah Hotel         KXO       1500       100 El Centro, Calif.         F. M. Bowles, Box 140       KXRO, Inc., Hotel Morck.       KXRZ 1440         KXRO 1310       100 Aberdeen, Wash.       KXRO, 1320       1000 San Francisco, Calif.         988 Market St.       KYM       1020 10000 Chicago, III.       310 S. Michigan Ave.         KZEG 720 1000 Manila, P. I.       Erlanger & Galinger, Inc.       KZRM 618.5 50000 Manila, P. I.		KWKH 1100 10000 Shreveport, La.
Luther College         KWSC 1220       1000       Puliman, Wash.         State College of Washington         KWTN 1210       100       Watertown, S. D.         Citizens Bank Bidg.         KWTO 560       1000       Springfield, Mo.         KGBX Inc.       KWYO 1370       100       Sheridan, Wyo.         Big Horn Brdcstg. Co.       KXA       760       250       Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.       KXL       1420       100       Portland, Ore.         KXL       Broadcasters, Multnomah Hotel       KXO       1500       100       El Centro, Calif.         F. M. Bowles, Box 140       KXRO 1310       100       Aberdeen, Wash.         KXRO, Inc., Hotel Horck.       KXRVZ 1440       250       Houston, Texas         Fannin & Rusk Sts.       KYA       1230       1000       San Francisco, Calif.         S8 Market St.       KYW       1020       1000       Chicago, Ill.       310       S. Michigan Ave.         KZEG       720       1000       Manila, P. I.       Erlanger & Galinger, Inc.       KZRM 618.5       S0000       Manila, P. I.		
State College of Washington         KWTN 1210       100 Watertown, S. D.         Citizens Bank Bidg.         KWTO 560       1000 Springfield, Mo.         KGBX Inc.       KWYO 1370         Big Horn Brdcstg. Co.       KXA         KXA       760       250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.       KXL         KXL       100 Portland, Ore.         KXL       Brood casters, Multnomah Hotel         KXO       1300 El Centro, Calif.         F. M. Bowles, Box 140       KXRO 1100         KXRO 110.       100 Aberdeen, Wash.         KXRV Z       140 Descreter, Wash.         KXRV 1120       100 San Francisco, Calif.         YW       1020 10000 Chicago, Ill.         310 S. Michigan Ave.       KZEG 720 1000 Manila, P. I.         Erlanger & Galinger, Inc.       KZRM 618.5 50000 Manila, P. I.		Luther College
KWTN 1210       100       Watertown, S. D.         Citizens Bank Bidg.       Citizens Bank Bidg.         KWTO 560       1000       Springfield, Mo.         KGBX Inc.       KWY0 1370       100       Sheridan, Wyo.         Big Horn Brdcstg. Co.       Big Horn Brdcstg. Co.       KXA       760       250         KXA       760       250       Soattle, Wash.         American Radio Tel. Co., 218       Bigelow Bidg.         KXL       1420       100       Portland, Ore.         KXL       Broadcasters, Multnomah Hotel       KXO       1500       100       El Centro, Calif.         F. M. Bowles, Box 140       KXRO 1310       100       Aberdeen, Wash.       KXRO 1310       100 Aberdeen, Wash.         KXRO, Inc., Hotel Morck.       KXRVZ 1440       250       Houston, Texas         Fannin & Rusk Bts.       KYA       1230       1000       San Francisco, Calif.         988       Market St.       KYW       1020       1000       Chicago, Ill.         310       S. Michigan Ave.       KZEG       720       1000       Manila, P. I.         Erlanger & Galinger, Inc.       KZRM 618.5       50000       Manila, P. I.		
KWTO       560       1000       Springfield, Mo.         KGBX Inc.       KWYO       1370       100       Sheridan, Wyo.         Big Horn Brdcstg. Co.       KXA       760       250       Seattle, Wash.         American Radio Tel. Co., 218       Bigelow Bidg.       KXL       1420       100       Portland, Ore.         KXL       Broadcasters, Multnomah Hotel       KXO       1500       100       El Centro, Calif.         F. M. Bowles, Box 140       KXRO 110.       100 Aberdeen, Wash.       KXRO, 110.       Horek.         KXRO, Inc., Hotel Morck.       KXRVZ 1440       250       Houston, Texas         Fannin & Rusk Sts.       KYA       1230       1000       San Francisco, Calif.         988       Market St.       KYW       1020       1000       Chicago, Ill.         310       S. Michigan Ave.       KZEG       720       1000       Manila, P. I.         Erlanger & Galinger, Inc.       KZRM 618.5       50000       Manila, P. I.		KWTN 1210 100 Watertown, S. D.
KGBX Inc.         WY0 1370 100 Sheridan, Wyo.         Big Horn Brdestg. Co.         KXA 760 250 Seattle, Wash.         American Radio Tel. Co., 218 Bigelow Bidg.         KXL 1420 100 Portland, Ore.         KXL Broadcasters, Multnomah Hotel         KXO 1500 100 El Centro, Calif.         F.M. Bowles, Box 140         KXRO 1310 100 Aberdeen, Wash.         KXRO 1310 250 Houston, Texas         Fannin & Rusk Sts.         KYA 1230 1000 San Francisco, Calif.         988 Market St.         KYW 1020 10000 Chicago, Ill.         310 S. Michigan Ave.         KZEG 720 1000 Manila, P. I.         Erlanger & Galinger, Inc.         KZRM 618.5 50000 Manila, P. I.		
Big Horn Brdestg. Co.         KXA       760       250       Seattle, Wash.         American Radio Tel. Co., 218       Bigelow Bidg.         KXL       1420       100       Portland, Ore.         KXL       Bigelow Bidg.       KXL       160       Portland, Ore.         KXL       Bigelow Bidg.       KXL       1420       100       Portland, Ore.         KXL       Bigelow Bidg.       Bigelow Bidg.       KXL       1420       Inc.         KXO       1500       100       El Centro, Calif.       F. M. Bowles, Box 140         KXRO       1310       100 Aberdeen, Wash.       KXRO, Inc., Hotel Morck.         KXRO       1310       100 Aberdeen, Wash.       KXRO, Inc., Hotel Morck.         KXRYZ       1440       250       Houston, Texas         Fannin & Rusk Bts.       KYA       1230       1000         KYW       1020       1000       San Francisco, Calif.         988       Market St.       KYW       1020       1000         KZEG       720       1000       Manila, P. I.         Erlanger & Galinger, Inc.       KZRM 618.5       50000       Manila, P. I.	-	KGBX Inc.
American Radio Tel. Co., 218 Bigelow Bidg.         KXL 1420       100 Portland, Ore.         KXL Broadcasters, Multnomah Hotel         KXO 1500       100 El Centro, Calif.         F. M. Bowles, Box 140         KXRO, 1310       100 Aberdeen, Wash.         KXRO, Inc., Hotel Morck.         KXYZ 1440       250 Houston, Texas         Fannin & Rusk Sts.         KYA 1230       1000 San Francisco, Calif.         988 Market St.         KYW 1020 10000 Chicago, Ill.         310 S. Michigan Ave.         KZEG 720 1000 Manila, P. I.         Erlanger & Galinger, Inc.         KZRM 618.5 50000 Manila, P. I.		
KXL       1420       100       Portland, Ore.         KXL       Broadcasters, Multnomah Hotel         KXO       1500       100       El Centro, Calif.         F. M. Bowles, Box 140       KXRO 3110       100       Aberdeen, Wash.         KXRO, 1nc., Hotel Morck.       KXRV, Inc., Hotel Morck.       KXRV, Inc., Hotel Morck.         KXYZ       1440       250       Houston, Texas         Fannin & Rusk Sts.       KYA       1230       1000       San Francisco, Calif.         988       Market St.       KYW       1020       10000       Chicago, III.         310       S. Michigan Ave.       KZEG       720       1000       Manila, P. I.         Erlanger & Galinger, Inc.       KZRM 618.5       50000       Manila, P. I.		KXA 760 250 Seattle, Wash.
KXL Broadcasters, Multnomah Hotel         KXO 1500 El Centro, Calif.         F. M. Bowles, Box 140         KXRO 1310 100 Aberdeen, Wash.         KXRO 1310 200 Aberdeen, Wash.         KXRO 1310 100 Aberdeen, Wash.         KXRO 1310 100 Aberdeen, Wash.         KXYZ 1440 250 Houston, Texas         Fannin & Rusk Bts.         KYA 1230 1000 San Francisco, Calif.         988 Market St.         KYW 1020 10000 Chicago, Ill.         310 S. Michigan Ave.         KZEG 720 1000 Manila, P. I.         Erlanger & Galinger, Inc.         KZRM 618.5 50000 Manila, P. I.		
F. M. Bowles, Box 140 KXRO 1310 100 Aberdeen, Wash. KXRO, Inc., Hotel Morck. KXYZ 1440 250 Houston, Texas Fannin & Rusk Sts. KYA 1230 1000 San Francisco, Calif. 988 Market St. KYW 1020 10000 Chicago, III. 310 S. Michigan Ave. KZEG 720 1000 Manila, P. I. Erlanger & Galinger, Inc. KZRM 618.5 50000 Manila, P. I.		KXL Broadcasters, Multnomah Hotel
KXRO 1310       100 Aberdeen, Wash.         KXRO, Inc., Hotel Morck.         KXYZ 1440       250 Houston, Texas         Fannin & Rusk Sts.         KYA 1230       1000 San Francisco, Calif.         988 Market St.         KYW 1020       10000 Chicago, Ill.         310 S. Michigan Ave.         KZEG 720       1000 Manila, P. I.         Erlanger & Galinger, Inc.         KZRM 618.5       50000 Manila, P. I.	-	
KXYZ 1440       250       Houston, Texas         Fannin & Rusk Sts.       KYA       1230       1000       San Francisco, Calif.         988 Market St.       KYW       1020       10000       Chicago, Ili.         310 S. Michigan Ave.       XZEG       720       1000       Manila, P. I.         Erlanger & Galinger, Inc.       KZRM 618.5       50000       Manila, P. I.		KXRO 1310 100 Aberdeen, Wash.
KYA       1230       1000       San Francisco, Calif.         988       Market St.		KXYZ 1440 250 Houston, Texas
988 Market St. KYW 1020 1000 Chicago, Ili. 310 S. Michigan Ave. KZEG 720 1000 Manila, P. I. Erlanger & Galinger, Inc. KZRM 618.5 50000 Manila, P. I.		
310 S. Michigan Ave. KZEG 720 1000 Manila, P. I. Erlanger & Galinger, Inc. KZRM 618.5 50000 Manila, P. I.		
KZEG 720 1000 Manila, P. I. Erlanger & Galinger, Inc. KZRM 618.5 50000 Manila, P. I.		
Erlanger & Galinger, Inc. KZRM 618.5 50000 Manila, P. I.		KZEG 720 1000 Manila, P. I.

ΝΑΔ 690 1000 Arlington, Va. United States Navy RDN 680 500 Sam Salvador, E. S. Republic of El Salvador 565 10000 Guatemala, Gua. TGW Gobierno de Guatemala TGX 1400 150 Guatemala City TICR 912 75 San Jose, C. R. Government of Costa Rica TIFE 714 30 San Jose, C. R. **TIGA 1014** 30 Cartago, C. R. TIGP 800 75 San Jose, C. R. Gonzalo Pinto H. Apt. 225 TIRCA 1100 500 San Jose, C. R. Perry Girton, Apt. 225 550 TISO 250 San Jose, C. R. P. F. Saborio, Apt. 1354 TIVL 835 30 San Jose, C. R. VA5 685 2000 Glace Bay, N. S. Canadian Marconi Co., Ltd. VE9EK 1185 10 Montmagny, Que. J. A. Marquis, P. O. Box 52 VOAC 1300 40 St. John's, Nfld. VOA5 940 100 St. John's N. F. Ayre & Sons, Ltd., Water St. VOGY 840 400 St. John's, N. F. Newfoundland Hotel VONF 950 5000 St. John's N. F. Dominion Broadcasting Co., Ltd., Box 135 VOWR 681 500 St. John's, N. F. Wesley United Church, Box 157 WAAB 1410 500 Boston, Mass. 21 Brookline Ave. WAAF 920 500 Chicago, III. 836 Exchange Ave. WAAT 940 300 Jersey City, N. J. Bremer Broadcasting Corp., 50 Journal Sq. WAAW 660 500 Omaha, Neb. **Omaha** Grain Exchange WABC 860 50000 New York, N. Y. 485 Madison Ave. WABI 1200 100 Bangor, Maine First Universalist Society Park St. WABY 1370 100 Hudson Falls, N. Y. Colonial Display House WACO 1420 100 Waco, Texas Amicable Bldg. WADC 1320 1000 Akron, Ohio Alien T. Simmons, P. O. Box 29 WAGF 1370 100 Dothan, Ala. P.O. Box 25 WAGM 1420 100 Presque Isle, Me. Aroostook Broadcasting Corp., Main St. WAIU 640 500 Columbus, Ohio Deshler-Wallick Hotel WALA 1380 500 Mobile, Ala. Battle House WALR 1210 100 Zanesville, Ohio First Trust & Savs. Bank Bldg. WAML 1310 100 Laurel, Miss. Southland Radio Corp., Box 26 WAPI 1140 5000 Birmingham, Ala. Protective Life Bidg. WARD 1400 500 Brooklyn, N. Y. 427 Flatbush Ave., Ext. WASH 1270 500 Grand Rapids, Mich. Grand Rapids Natl, Bank Bldg.

	WATR 1190 100 Waterbury, Conn. WATR Co. Inc. 47 Grand St.
	WAVE 940 1000 Louisville, Ky. WAVE, Inc., 1525 Brown Hote!
	WAWZ 1350 250 Zarephath, N. J.
	Pillar of Fire. WAZL 1420 100 Hazleton, Pa.
	Hazleton Broadcasting Service, Inc. WBAA 890 1000 West Lafayette, Ind.
	Purdue University WBAL 1060 10000 Baltimore, Md.
	Lexington Bldg.
	WBAP 800 50000 Fort Worth, Texas Blackstone Hotel
	WBAX 1210 100 Wilkes-Barre, Pa. John H. Stenger, Jr., 70 S. Main St.
	WBBC 1400 500 Brooklyn, N. Y. 552-54 Atlantic Ave.
	WBBL 1210 100 Richmond, Va. 1627 Monument Ave.
-	WBBM 770 25000 Chicago, III.
	WBBM Broadcasting Corp., Wrigley Bldg. WBBR 1300 1000 Brooklyn, N. Y.
	124 Columbia Heights WBBZ 1200 100 Ponca City, Okia.
	C. L. Carrell, 407 W. South Ave.
	WBCM 1410 500 Bay City, Mich. James E. Davidson, Hotel Wenonah
	WBEN 900 1000 Buffalo, N. Y. WBEN, Inc., Hotel Statler
	WBEO 1310 100 Marquette, Mich. 146 W. Washington St.
	WBHS 1200 100 Huntsville, Ala. VirgilV. Evans
	WBIG 1440 500 Greensboro, N. C.
	Box 408 WBNO 1200 100 New Orleans, La.
	Hotel Marbero WBNS 1430 500 Columbus, O.
	33 N. High St. WBNX 1350 250 New York, N. Y.
	260 E. 161st St. WBOQ 860 50000 New York, N. Y.
	Atlantic Broadcasting Corp.
	Banks of Wabash, Inc., 19 Beach Block
	WBRB 1210 100 Red Bank, N. J. 63 Broad St.
	WBRC 930 1000 Birmingham, Ala. Bankhead Hotel
	WBRE 1310 100 Wilkes-Barre, Pa. Louis G. Baltimore, 16 N. Main
	WBSO 920 500 Babson Park, Mass. Drawer B
	WBT 1080 50000 Charlotte, N. C.
	Station WBT, Inc., Wilder Bidg. WBTM 1370 100 Danville, Va.
	Miller Bidg. WBZ 990 50000 Boston, Mass.
	Hotel Bradford WBZA 990 1000 Springfield, Mass.
	Hotel Kimball WCAC 600 500 Storrs, Conn.
	Connecticut State College
	WCAD 1220 500 Canton, N. Y. St. Lawrence University
	WCAE 1220 1000 Pittsburgh, Pa. 6th Ave. & Smithfield St.
	WCAL 1250 1000 Northfield, Minn. St. Olaf College
	WCAM 1280 500 Camden, N. J. City of Camden, City Hall
	ony or canden, ony rian

	WCAO 600 500 Baitimore, Md.
	WCAO 600 500 Baitimore, Md. 811 W. Lanvale St.
	WCAP 1280 500 Asbury Park, N. J.
	Convention Hall WCAT 1200 100 Rapid City, S. D.
	South Dakota State School of Mines
	WCAU 1170 50000 Philadelphia, Pa. WCAU Broadcasting Co., 1622 Chestnut
	WCAX 1200 100 Burlington, Vt.
	203 College St.
	WCAZ 1070 100 Carthage, III. 97 1/2 Adams St.
	WCBA 1440 250 Allentown, Pa.
	B, Bryan Musselman, 39-41 10th St. WCBD 1080 5000 Zion, iii.
	75 E. Wacker Drive, Chicago
	WCBM 1370 100 Baltimore, Md.
	Keith Theatre Bldg. WCBS 1210 100 Springfield, III.
	WCBS, Inc., 208 1/2 S. 5th.
	WCCO 810 50000 Minneapolis, Minn. Nicollet Hotel
	WCFL 970 1500 Chicago, III.
	666 Lake Shore Drive WCHS 580 500 Charleston, W. Vs.
	WOBU, Inc., Ruffner Hotel
	WCKY 1490 5000 Covington, Ky.
	6th & Madison Sts. WCLO 1200 100 Janesville, Wis.
	200 E. Milwaukee St.
	WCLS 1310 100 Joliet, III. WCLS, Inc., 301 E. Jefferson St.
	WCNW 1500 100 Brooklyn, N. Y.
	Arthur Faske, 1525 Pitkin Ave.
	WCOA 1340 500 Pensacola, Fla. San Carlos Hotel
	WCOC 880 500 Meridian, Miss.
	Box 603 WCOL 1210 100 Columbus, Ohio
	WCOL Inc., 30 N. High St.
	WCRW 1210 100 Chicago, III. Clinton R. White, 2756 Pine Grove Ave.
<u>}</u>	WCSC 1360 500 Charleston, S. C.
	Francis Marion Hotel WCSH 940 1000 Portland, Me.
[	579 Congress St.
	WDAE 1220 1000 Tampa, Fla. Tampa Times Co., Tampa Terrace
	WDAF 610 1000 Kansas City, Me.
	1729 Grand Ave,
	WDAG 1410 1000 Amarillo, Texas Box 306
	WDAH 1310 100 El Paso, Texas
	Box 1976 WDAS 1370 100 Philadelphia, Pa.
	WDAS Brdcstg. Co., Inc., Broadwood Hotel
	WDAY 940 1000 Fargo, N. D. WDAY, Inc., Black Bldg., 118 Broadway
	WDBJ 930 1000 Roanoke, Va.
	Times World Corp., P. O. Box 150
	WDBO 580 250 Orlando, Fla. 555 N. Orange Ave.
<u> </u>	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.
ļ	Dr. Geo. W. Young, 909 W. Broadway WDNC 1500 100 Durham, N. C.
	Washington Duke Hotel
	WDOD 1280 1000 Chattanooga, Tenn.
	WDOD Broadcasting Corp., Hotel Patten

WDRC 1330 1000 Hartford, Conn. WDRC, Inc., Corning Bldg., 11 Asylum St. WDSU 1250 1000 New Orleans, La. Jos. H. Uhalt, Hotel Monteleone WDZ 1070 100 Tuscola, Ill. James L. Bush, Star Store Bldg. WEAF 660 50000 New York, N. Y. 30 Rockefeller Plaza WEAN 780 500 Providence, R. I. New Crown Hotel WEBC 1290 1000 Superior, Wis. Spaulding Hotel, Duluth, Minn. WEBQ 1210 100 Harrisburg, Ill. 100 E. Poplar St. WEBR 1310 100 Buffalo, N. Y. Howell Broadcasting Co., Inc., 735 Main WEDC 1210 100 Chicago, III. Emil Denemark, 3860 Ogden Ave. WEED 1420 100 Rocky Mount, N. C. Wm. Avera Wynne, Box 221 WEEL 590 1000 Boston, Mass. 182 Tremont St. WEEU 830 1000 Reading, Pa. Berks Broadcasting Co., 533 Penn. 100 Charlottesville, Va. WEHC 1420 7th & Main Sts. WEHS 1420 100 Cicero, Ill. WEHS, Inc., 6138 W, Cermak Rd. WELL 1420 50 Battle Creek, Mich. Enquirer News, 38 W. State St. WENR 870 50000 Chicago, III. 222 N. Bank Drive WESG 1090 1000 Elmira, N. Y. Mark Twain Hotel 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. 212 W.6th St. WFAA 800 50000 Dailas, Texas Baker Hotel WFAB 1300 1000 New York, N. Y. Fifth Avenue Broadcasting Corp. WFAM 1200 100 South Bend, Ind. South Bend Tribune, 225 W. Colfax Ave. WFAS 1210 100 White Plains, N. Y. Hote | Roger Smith WFBC 1300 1000 Greenville, S. C. Imperial Hotel 100 Cincinnati, Ohio WFBE 1200 WFBE, Inc., Hotel Sinton WFBG 1310 100 Altoona, Pa. Gable Broadcasting Co. 12th Av. & 13th St. WFBL 1360 1000 Syracuse, N. Y. Onondaga Hotel WFBM 1230 1000 Indianapolis, Ind. 48 Monument Circle WFBR 1270 500 Baltimore, Md. 7 St. Paul St. WFDF 1310 100 Flint, Mich. Union Industrial Bldg. WFEA 1340 600 Manchester, N. H. Carpenter Hotel 560 500 Philadelphia, Pa. WFL WFI Broadcasting Co., 801 Market WFLA 620 1000 Clearwater, Fla. Box 119 100 Lancaster, Pe. WGAL 1500 WGAL, Inc., 8 W. King St. 500 Cleveland, Ohio WGAR 1450 WGAR Broadcasting Co., Hotel Statler

WGBB 1210 100 Freeport, N. Y. H. H. Carman, 64 S. Grove St. WGBF 630 500 Evansville, Ind. 519 Vine St. WGB1 880 500 Scranton, Pa. 116 N. Washington Ave. WGCM 1210 100 Gulfport, Miss Great Southern Hotel 500 Chicago, III. WGES 1360 128 N. Crawford Ave. WGH 1310 100 Newport News, Va. 2813 Washington Ave. WGL 1370 100 Fort Wayne, Ind. F. C. Zieg, 213 W. Main St. WGLC 1370 100 Hudson Falls, N. Y. Colonial Display House 720 50000 Chicago, III. WGN WGN. Inc., Tribune Tower WGNY 1210 100 Chester, N. Y. Peter Goelet (Orange County) WGPC 1420 100 Albany, Ga. Rylander Theatre Bldg WGR 550 1000 Buffalo, N. Y. Rand Bldg. WGST 890 250 Atlanta, Ga. Ansley Hotel WCY 790 50000 Schenectady, N. Y. 1 River Road WHA 940 2500 Madison, Wis. University of Wisconsin WHAM 1150 50000 Rochester, N. Y. 100 Carlson Road WHAS 820 50000 Louisville, Ky. 300 W. Liberty St. WHAT 1310 100 Philadelphia, Pa. Public Ledger Bldg. WHAZ 1300 500 Troy, N. Y. 8th St. WHR 860 500 Kansas City, Mo. WHB Broadcasting Co., Scarritt Bldg. WHBC 1200 100 Canton, Ohi Edw. P. Graham, 319 Tusc. St., W. 100 Canton, Ohio WHBD 1370 100 Mount Orab, Ohio F. P. Moler WHBF 1210 100 Rock Island, III. Hotel Harms WHBI 1250 1000 Newark, N. J. 100 Shipman St. WHBL 1410 500 Sheboygan, Wis. Press Publishing Co., Press Bldg. WHBQ 1370 100 Mamphis, Tenn. Brdcstg. Sta. WNBQ, Inc., Hotel Claridge WHBU 1210 100 Anderson, Ind. Anderson Broadcasting Corp., Box 816 WHBY 1200 100 Gre WHBY, Inc., Bellin Bidg. 100 Green Bay, Wis, WHDF 1370 100 Calumet, Mich. Box 643 WHDH 830 1000 Boston, Mass. Matheson Radio Co., 62 Boylston WHDL 1420 100 Olean, N. Y. Iroquois Hotel WHEB 740 250 Portsmouth, N. H. Box 522, 39 Congress St. WHEC 1430 500 Rochester, N. Y. WHEC, Inc., 40 Franklin St. WHEF 1500 100 Kosciusko, Miss. 417 W. Adams St. WHFC 1420 100 Cicero, Ill. WHFC, Inc., 6138 W. Cermak Road WHIS 1410 250 Bluefield, W. Va. Bland St.

	WHJB 620 250 Greensburg, Pa.
	Penna. Radio Supply House
	WHK 1390 1000 Cleveland, Ohio 1311 Terminal Tower
	WHN 1610 1000 New York, N. Y.
	1540 Broadway
	WHO 1000 50000 Des Moines, Iowa Central Brdcstg. Co., 914 Wainut St.
	WHOM 1450 250 Jersey City, N. J.
	2870 Boulevard
	WHP 1430 500 Harrisburg, Pa. WHP, Inc., 216 Locust St.
	WIBA 1280 1000 Madison, Wis.
	111 King St.
	WIBG 970 100 Glenside, Pa. WIBG, Inc., Keswick Bldg.
	WIBM 1370 100 Jackson, Mich.
	WIBM, Inc. 306 W. Michigan Ave.
	WIBU 1210 100 Poynette, Wis.
	Wm. C. Forrest, R. F. D. No. 3 WIBW 580 1000 Topeka, Kans.
	11th & Topeka Blvd.
	WIBX 1200 100 Utica, N. Y.
	WIBX, Inc., 1st Natl. Bank Bldg. WICC 600 250 Bridgeport, Conn.
	Southern Conn. Broadcasting Corp.
-	WIL 1200 100 St. Louis, Mo.
	Melbourne Hotel WILL 890 250 Urbana, fil.
	WILL 890 250 Urbana, III. University of Illinois
	WILM 1420 100 Wilmington, Del.
	920 King St. WIND 560 1000 Gary, Ind.
	504 Broadway
	WINS 1180 1000 New York, N. Y.
	110 E. 58th St. WIOD 1300 1000 Miami, Fis.
	Herald Bidg.
	WIP 610 500 Philadelphia, Pa.
	Gimbel Bidg. WIS 560 1000 Columbia, S. C.
	Station WIS, Inc., 1811 Main St.
	WISN 1120 250 Milwaukee, Wis. 123 W. Michigan St.
	WJAC 1310 100 Johnstown, Pa.
	WJAC, Inc., Locust St.
	WJAG 1060 1000 Norfolk, Neb. Norfolk Daily News
	WJAR 890 500 Providence, R. I.
	Outlet Co., Weybossett St.
	WJAS 1290 1000 Pittsburgh, Pa. Chamber of Commerce Bidg.
	WJAX 900 1000 Jacksonville, Fla.
	City of Jacksonville
	WJAY 610 500 Cleveland, Ohle
	1224 Huron Road WJBC 1200 100 Bloomington, III.
	Kaskaskia Broadcasting Co.
	WJBK 1500 100 Detroit, Mich.
	6559 Hamilton Ave. WJBL 1200 100 Decatur, III.
	WJBL 1200 100 Decatur, III. Gushard Bidg.
0	WJBO 1420 100 Baton Rouge, La.
	Baton Rouge Broadcasting Co., Inc.
	WJBW 1200 100 New Orleans, La. C. C. Carlson, 2743 Dumaine St.
	WJBY 1210 100 Gadsden, Ala.
	Gadsden Broadcasting Co., 112 N. 8th St.
	WJDX 1270 1000 Jackson, Miss. Lamar Life Bidg.
	WJEJ 1210 100 Hagerstown, Md.
	Lovely Dame Bldg.

	WJIM 1210 100 Lansing, Mich.
	Capital City Brdestg. Co. WJJD 1130 20000 Chicago, III.
	WJJD 1130 20000 Chicago, III. WJJD, Inc., 201 N. Wells St.
	WJMS 1420 100 Ironwood, Mich.
	WJMS, Inc., St. James Hotel
	WJR 750 10000 Detroit, Mich. WJR, Inc., Fisher Bidg.
-	WJSV 1460 10000 Washington, D. C.
-	Shoreham Bldg.
	WJTL 1370 100 Atlanta, Ga.
	Ogiethorpe University WJW 1210 100 Akron, Ohio
	WJW, Inc., 41 S. High St.
	WJZ 760 50000 New York, N. Y.
	30 Rockefeller Plaza WKAQ 1240 1000 San Juan, P. R.
	Radio Corp. of Porto Rico, P. O. Box 858
	WKAR 1040 1000 East Lansing, Mich.
-	Michigan State Coilege WKBB 1500 100 East Dubuque, III.
	Richard W. Hoffman
	WKBF 1400 500 Indianapolis, Ind.
	540 N. Meridian St. WKBH 1380 1000 LaCrosse, Wis.
	WKBH, Inc., 409 Main St.
	WKRI 1420 100 Cicaro, Ili.
	WKBI Inc., 6138 W. Cermak Road WKBN 570 500 Youngstown, Ohio
	WKBN 570 500 Youngstown, Ohlo 17 N. Champion St.
	WKBO 1200 100 Harrisburg, Pa.
-	Penn Harris Hotel WKBV 1500 100 Richmond, Ind.
	WKBV 1500 100 Richmond, Ind. Knox Radio Corp., Box 308
	WKBW 1480 5000 Buffalo, N. Y.
	Rand Bidg. WKBZ 1500 100 Muskegen, Mich.
	WKBZ 1500 100 Muskegon, Mich. Karl L. Ashbacker & Sons
100	WKEU 1500 100 LaGrange, Ga.
1	Radio Station WKEU, 906 Hill St.
	WKFI 1210 100 Greenwood, Miss. J. Pat Scully, Box 302
	WKJC 1200 100 Lancaster, Pa.
	16 W. King St.
	WKOK 1210 100 Sunbury, Pa.
	1150 N. Front St. WKRC 550 1000 Cincinnati, Ohio
	WKRC, Inc., Hotel Alms
1	WKY 900 1000 Oklahoma City, Okla. Plaza Court Bidg.
	WKZO 590 1000 Kalamazoo, Mich.
	John E. Fetzer, Burdick Hotel
	WLAC 1470 5000 Nashville, Tenn.
	159-4th Ave. No. WLAP 1420 100 Lexington, Ky.
	Main & Esplanade
	WLB 1250 1000 Minneapolis, Minn.
	University of Minnesota WLBC 1310 100 Muncle, Ind.
	D. A. Burton, Anthony Bldg.
	WLBF 1420 100 Kansas City, Kans.
	WLBF Broadcasting Co., Huron Bidg.
	WLBL 900 2500 Stevens Point, Wis. Wisconsin Dept. of Agriculture and Markets
	WLBW 1260 1000 Erie, Pa.
1	Broadcasters of Pennsylvania, Inc.
	WLBZ 620 500 Banger, Me. Maine Broadcasting Co., Inc., 100 Main
-	WLIT 560 500 Philadelphia, Pa.
	Sth & Market Sts.
	WLLH 1370 100 Lowell, Mass. Albert S. Moffat, Box D
L	ADDIES. MOLLES, DOLD

WLNH 1310 100 Laconia, N. H. 523 Main St. 870 50000 Chicage, Ill. WLS 1230 W. Washington Blvd. WLTH 1400 500 Brooklyn, N. Y. 305 Washington St. WEVA 1200 100 Lynchburg, Va. 915 Main St. WLW 700 50000 Cincinneti, Ohie 1329 Arlington St. WLWL 1100 415 W.59th St. 5080 New York, N. Y. WMAL 630 250 Washington, D. C. 712-11th St., N. W. WMAQ 670 5000 Chicago, III. Merchandise Mart WMAS 1420 100 Springfi WMAS, Inc., 70 Chestnut St. 100 Springfield, Mass. WMAZ 1180 1060 Macon, Ga. 211 Cotton Ave. 100 Detroit, Mich. WMBC 1420 7310 Woodward Ave. WMBD 1440 500 Peoria, III. 114 N. Madison St. WMBG 1210 100 Richmond, Va. 914 W. Broad St. WMBH 1420 100 Joplin, Me. 1334 Roosevelt St. 5000 Chicago, Ill. WMBI 1080 153 Institute Place WMBO 1310 100 Auburn, N. Y. WMBO, Inc., Metcalf Bldg. 100 Brooklyn, N. Y. WMBQ 1500 Paul J. Gollhofer, 95 Leonard St. 100 Jacksonville, Fia. WMBR 1370 F. J. Reynolds, Carling Hotel 780 1000 Memphis, Tenn. WMC WMC, Inc., Hotel Gayoso WMCA 570 500 New York, N. Y. 1697 Broadway WMEX 1500 100 Chelses, Mass. The Northern Corp. 100 Wilmington, N. C. WMFD 1370 **Richard** Austin Dunlea 250 New Britain, Conn. WMFE 1380 William J. Sanders WMFF 1310 100 Plattsburg, N. Y. Plattsburg Broadcasting Corp. 100 Hibbing, Minn. WMEG 1210 Head of the Lakes Brdcstg. Co. WMMN 890 250 Fairmont, W. Va. A. M. Rowe, Inc., 325 Main St. WMPC 1200 100 Lapeer, Mich. 81 Liberty St. WMT 600 500 Waterloo, lews 3rd & Lafayette Sts. WNAC 1230 1000 Besten, Mass. 21 Brookline Ave. WNAD 1010 500 Norman, Okla. University of Oklahoma WNAX 570 1000 Yankton, S. D. Houseof Gurney, Inc., 2nd and Capital St. WNBF 1500 100 Binghamton, N. Y. Arlington Hotel WNBH 1310 100 New Bedford, Mass. 251 Union St. WNBO 1200 100 Washington, Pa. 319 E. Beau St. 500 Memphis, Tenn. WNBR 1430 Memphis Broadcasting Co., Hotel DeVoy WNBX 1260 1000 Springfield, Vt. WNBX Broadcasting Corp., 39 Main St.

	WNBZ 1290 50 Saranac Lake, N. Y. Smith & Mace, 70 Broadway
	WNEL 1290 500 San Juan, P. R.
	Box 1252 WNEW 1250 1000 Newark, N. J.
	Wodaam Corp., 1060 Broad
	WNOX 1010 1000 Knoxville, Tenn. WNOX, Inc., Hotel Andrew Johnson
	WNRA 1420 100 Muscle Shoals, Ala.
	Kathryn Jones, P. O. Box 486, Sheffield, Ala. WNYC 810 500 New York, N. Y.
	Centre & Duane Sts.
	WOAI 1190 50000 San Antonio, Texas
	Southland Industries, Inc., 1038 Navarro WOC 1370 100 Davenport, Iswa
-	Paimer School of Chiropractic
	WOCL 1210 50 Jamestown, N. Y. A. E. Newton, 840 N. Main St.
	WOI 640 5000 Ames, Iowa Iowa State College
	WOKO 1430 500 Albany, N. Y.
	WOKO, Inc., Hotel Ten Eyck
	WOL 1310 100 Washington, D. C. American Broadcasting Co., Annapolis Hotel
	WOMT 1210 100 Manitowoc, Wis.
	Francis M. Kadow, Box 326 WOOD 1270 500 Grand Rapids, Mich.
	Grand Rapids Natl. Bank Bidg.
	WOPI 1500 100 Bristol, Tenn. 22nd & State Sts.
	WOR 710 5000 Newark, N. J.
	147 Market St. WORC 1280 500 Worcester, Mass.
	Alfred F. Kleindienst, 60 Franklin St.
	WORK 1320 1000 York, Pa.
	York Broadcasting Co., 15 S. Beaver St. WOS 630 500 Jefferson City, Mo.
	State Highway Control, Capitol Bldg.
	WOSU 570 750 Columbus, Ohio Ohio State University
	WOV 1130 1000 New York, N. Y. 16 E. 42nd St.
	WOW 590 1000 Omaha, Neb.
	Woodmen of the World, 4th and Farnam WOWO 1160 10000 Fort Wayne, Ind.
_	Main Auto Supply Co., 213 W. Main
	WPAD 1420 100 Paducah, Ky. 2201 Broadway
_	WPEN 920 250 Philadelphia, Pa.
	22nd & Walnut Sts.
	WPFB 1370 100 Hattlesburg, Miss. Otis P. Eure, Box 530
	WPG 1100 5000 Atlantic City, N. J. Convention Hall
	WPHR 880 100 Petersburg, Va.
1	WLBG, Inc., Medical Arts Bidg.
	WPRO 630 250 Providence, R. I. Cherry & Webb Brdcstg. Co., 15 Chestnut
	WPTF 680 5000 Raleigh, N. C.
	324 Fayetteville St. WQAM 560 1000 Miami, Fia.
	Miami Brdestg. Co., Inc., 327 N. E. 1st Ave.
	WQAN 580 250 Scranton, Pa. Scranton Times, 149 Penn Ave.
	WQBC 1360 500 Vicksburg, Miss,
	Delta Broadcasting Co., Hotel Vicksburg
	42 N. Main St.
	WQDX 1210 100 Thomasville, Ga. Stevens Luke, 135 E. Jackson St.
	WRAK 1370 100 Williamsport, Pa.
	WRAK, Inc., 244 W. 4th St.

-	WRAW 1310 100 Reading, Pa.
	Reading Broadcasting Co., 533 Penn St.
	WRAX 920 250 Philadelphia, Pa. WRAX Broadcasting Co., 217 S. Broad St.
	WRBL 1200 100 Columbus, Ca.
-	Royal Theatre Bidg. WRBX 1410 250 Roanske, Va.
	WRBX 1410 250 Roanoke, Va. P. O. Box 2389
	WRC 950 500 Washington, D. C.
	National Press Bidg.
	WRDO 1370 100 Augusta, Me. WRDO, Inc., Augusta House
	WRDW 1500 100 Augusta Ga
	Virgil V. Evans Co., 3098th St.
	WREC 600 500 Memphis, Tenn. WREC, Inc., Hotel Peabody
	WREN 1220 1000 Lawrence Mana
	Jenny Wren Co., 8th and Vermont St.
	WRGA 1500 100 Rome, Ga. 10 Third Ave.
100	WRJN 1370 100 Recipe Wis
	Racine Broadcasting Corp., Hotel Racine
	WROK 1410 500 Rockford, III. 109 So. Water St. WROL 1310 100 Knoxville, Tenn.
	WROL 1310 100 Knoxville, Tenn.
	Stuart Broadcasting Corp., 524 S. Gay
	WRR 1280 500 Dallas, Texas
-	City of Dallas, Southland Life Bidg. WRUF 830 5000 Gainesville, Fia.
	State University
	WRVA 1110 5000 Richmond, Va.
	Larus & Bros Co., Inc., 22nd and Gary St. WSAI 1330 1000 Cincinnati, Ohio
	WSAI 1330 1000 Clininati, Ohio Crosley Radio Corp., 1329 Arlington WSAJ 1310 100 Grove City, Pa.
	Grove City College, 418 Poplar St.
	WSAN 1440 250 Allentown, Pa. WSAN, Inc., 39 10th St.
	WSAN, Inc., 39 10th St.
	WSAR 1450 250 Fall River, Mass. Academy of Music Bidg.
	WSAZ 1190 1000 Huntington, W. Va.
	WSAZ, Inc., P. O. Box 729
	WSB 740 50000 Atlanta, Ga. Atlanta Journal, 7 N. Forsyth St.
	WSBC 1210 100 Chicago, III.
	WSBC 1210 100 Chicago, III. Gene T. Dyer, 1258 S. Michigan Ave. WSBT 1360 500 South Bend, Ind.
	South Bend Tribune, 225 W. Colfax Ave.
	WSFA 1410 500 Montgomery, Ala.
	Jefferson Davis Hotel WSGN 1310 100 Birmingham, Ala.
	WSGN 1310 100 Birmingham, Ala. R. B. Broyles, Tutwiler Hotel
	WSIX 1210 100 Springfield, Tenn.
	638 Tire & Vulcanizing Co. WSJS 1310 100 Winston-Salem N.C.
	WSJS 1310 100 Winston-Salem, N. C. Winston-Salem Journal Co., 416 N. Marshall
	WSM 650 50000 Nashville, Tenn.
_	301-7th Ave. No.
	WSMB 1320 500 New Orleans, La. WSMB, Inc., Maison Blanche Bldg.
	WSMK 1380 200 Dayton, Ohlo
	WSME Inc., 4th and Main St.
	WSOC 1210 100 Charlotte, N. C. WSOC, Inc., Box 730
17 ma	WSPA 920 1000 Spartanburg, S. C.
	Virgil V. Evans, Ravenel and Avant St
	WSPD 1340 1000 Toledo, Ohio Toledo Broadcasting Co., 505 Jefferson
	WSUI 880 500 lowa City, lowa
	State University of Iowa
	WSUN 620 1000 St. Petersburg, Fla. Chamber of Commerce

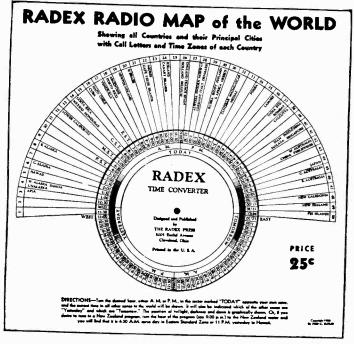
	WSVA 550 500 Staunton, Va.
	Marion K. Gilliam WSVS 1370 50 Buffalo, N. Y.
1	666 E. Delavan Ave.
	WSYB 1500 100 Rutland, Vt. Philip Weiss Music Co., 80 West St.
	WEYR 570 250 Syracuse, N. Y.
	E. Onondaga & S. Warren Sts.
	WTAD 1440 500 Quincy, ill. Illinois Brdestg. Corp., State and 6th
	WTAG 580 500 Worcester, Mass.
	18 Franklin St. WTAM 1070 50000 Cleveland, Ohio
	1367 E. 6th St.
	WTAQ 1330 1000 Eau Claire, Wis.
	Gillette Rubber Co., Hotel Eau Claire WTAR 780 500 Norfolk, Va.
1	WTAR Radio Corp., Wainwright Bldg. WTAW 1120 500 College Station, Tex.
	Agricultural and Mechanical College
	WTAX 1210 100 Springfield, III.
	WTAX, Inc., 416 E. Capitol Ave. WTBO 800 250 Cumberland, Md.
	Associated Brdcstg. Corp., Box 794
	WTCN 1250 1000 Minneapolis, Minn.
	Wesley Temple Bidg. WTEL 1310 100 Philadelphia, Pa.
	Broad & Erie Ave.
	WTFI 1450 500 Athens, Ga. 133 E. Washington St.
	WTIC 1040 50000 Hartford, Conn.
1	26 Grove St.
	WTJS 1310 100 Jackson, Tenn. Bun Publishing Co., Sun Bldg.
	WTMI 620 1000 Milwaukee, Wis.
	The Journal Co., 333 W. State St. WTNJ 1280 500 Trenton, N. J.
	Trenton Brdcstg. Co., Stacy Trent Hotel
<b>├</b> ───	WTOC 1260 1000 Savannah, Ga.
	Savannah Brdestg. Co., De Soto Hotel WTRC 1310 50 Eikhart, Ind.
	Truth Radio Corp., Hotel Elkhart
	WVFW 1400 500 Breoklyn, N. Y. Paramount Brdestg. Co., 1 Nevins St.
	WWAE 1200 100 Hammond, Ind.
1	402 Hammond Bldg.
	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 Brdcstg. Co., Inc., Flatiron Bldg.
	WWPA 850 250 Clarlon, Pa.
	WWRL 1500 100 Woodside, N. Y.
	4130-58th St.
	WWSW 1500 100 Pittsburgh, Pa.
	Hotel Schenley WWVA 1160 5000 Wheeling, W. Va.
	WWVA 1160 5000 Wheeling, W. Va. Hawley Bldg.
	WXYZ 1240 1000 Detroit, Mich. Madison Theatre Bldg.
	W1XBS 1530 1000 Waterbury, Conn.
	61 Leavenworth St.
	W2XR 1550 1000 Longisland City, N.Y. John V. L. Hogan, 41 Park Row, N. Y. City
	W6XAI 1550 1000 Bakersfield, Calif.
	Pioneer Mercantile Co.
	W9XBY1530 1000 Kansas City, Mo. First National Television Inc.
	XEA 1060 125 Guadalajara, Jal.
	Alberto Palos Souza, Apdo. 197

XEAA 920 200 Mexicali, B. C. Apdo.42 250 Tiluana, B. C. XEAE 980 Apt. 42 XEAF 990 250 Nogales, Son. Francisco G. Elias, Hotel Central 100 Mexico City, D. F. XEAI 1240 Carlos Gonzales Caballero, Insurgentes 366 XEAL 660 1000 Mexico City, D. F. Ando, 1903 50 Nuevo Laredo, Tams. **XEAM 750** Edificio Banco Longoria 250 Mexicall, B. C. XEAO 560 Luis L. Castro, C. Altamirano 156 XEAW 960 10000 Reynosa, Tams. Internacional Broadcasting Co., S. A. XEAZ 1420 7 Leon, Guan. Pocitos 47 XEB 1030 10000 Mexico City, D. F. El Buen Tono, S. A., Apdo. 79-44 XEBC 760 2500 Agua Callente, B. C. Agua Caliente Hotel **XECW 1310** 10 Mexico City, D. F. MariaElenaBravodeCorderoAve.Juarez104 XED 1160 500 Guadalajara, Jal. Cia. Radiofonografica, Apdo. 197 XEE 1210 50 Durango, Dgo. 20 de Nov. 112 (Apdo. 148) XEFA 1180 500 Mexico City, D. F. Eduardo Limon Segui, Meditarraneo 236 **XEFB 1420** XEFB 1420 100 Monterrey, N. L. Jesus Quintanilla, P. O. Box 317 XEFC 1310 100 Merida, Yuc. J. Molina Font, Calle 59, 517 XEFE 1370 100 Laredo, Tams. R T Carranza, Km, 4 Carretera Laredo Mt. XEFG 1100 250 Mexico City. D. F. Ricardo Gonzales Montero, Tepic 48 XEFI 1440 250 Chihuahua, Chih. Feliciano Lopez Isles, Ap. 157 XEFJ 1210 100 Monterrey, N. L. R. Junco de la Vega, P. O. Box 186 XEFO 940 5000 Mexico City, D. F. Reforma No. 137 XEEV 1210 100 Jaurez, Chih. Cordova & Prieto, Ave. Ferrocaril 104 XEFW 1310 70 Tampico, Tams. J. E. Martinez, Salvador Diaz Miron 6 XEFZ 1370 100 Mexico City, D. F. Manuel Zetina, Calsada Nonoalco 481 250 Monterrey, N. L. XEH 1150 Tarnava y Cia, P. O. Box 147 125 Morella, Mich. 1370 XEL Carlos Gutierrez M., F. I. Madero 545 XEJ 1020 250 Juarez, Chih. Juan G. Buttner, P. O. Box 111 XEK 990 100 Mexico City, D. F. Arturo Martinez, Jalapa No. 51 XEKL 920 500 Leon, Guan. 5 de Mayo 26 XEMA 1080 50 Tampico, Tams. Manuel M. Pier, Aretsanos 10 XEMO 865 2500 Tiluana, B. C. P. O. Box 202, San Diego, Calif. 30 Tijuana, B. C. **XEMZ 1210** Adolfo Labsatida, Jr., Ave. D, 542 710 1000 Mexico City, D. F. XEN Cerveceria Modelo Ave. Juarez 77 XENT 1120 50000 Nuevo Laredo, Tams. Box 410, Laredo, Texas XEOK 920 2500 Tijuana, B. C. Carlos de la Sierra, Calle 5 a 312

XEOX 640 250 Saitilio, Coah.
XEP 820 500 Mexico City, D. F. Cia Difusora de Mexico S. A. Rembrandt 11
 XEPN 590 50000 Piedras Negras, Coah. Piedras Negras Brdeste. Co., Madero 53 XES 970 250 Tampico, Tams.
Fernando Sada, Box 309 XET 690 500 Monterrey, N. L. P. O. Box 203, Hidalgo
XETB 1310 125 Torreon, Coah. Jose A. Berumen, R. Corona 317
 XETH 1210 100 Puebla, Pue. Ramon Huerta G., Calle 17, Oriente 11 XETW 820 500 Mexico City, D. F.
 Ratael M. Pena, Ave. 16 de Sep. 83 XEU 980 250 Veracruz, Ver. Fernando Pazos Sosa, Independencia 98
XEW 890 50000 Mexico City, D. F. P. O. Box 2516
XEWZ 1150 100 Mexico City, D. F. Medellin e Insurgentes
 XEX 1310 125 Monterrey, N. L. L. F. Petit Jean, P. O. Box 10

XEXX 845 500 Mexico City, D. F. Av. Pino Suarez 9
 XEYZ 780 10000 Mexico City, D. F. Angel M. Diez, Ave. Juarez 48
XEZZ 1370 100 San Luis Potosi, SLP Emilio Delgado R. Ave. Chicosein 32
 <b>XFB 1270 1000 Jalapa, Ver.</b> Gobierno del Estado de Veracruz
 XFC 810 350 Aguascalientes, Ags. Gobierno del Estado de Aguascalientes
 XFD 1340 350 Orizaba, Ver. Gobierno Estado de Veracruz
 XFO 940 5000 Mexico City, D. F. Nat. Rev. Party, Ave. Morelos 110
 XFX 610 1000 Mexico City, D. F. Secretaria de Educacion Publica
 10-AK 1200 15 Stratford, Ont. M. I. Higgins, 151 Ontario St.
10-BP 1200 25 Wingham, Ont. W. T. Cruickshank, Box 65
 10-BU 1200 50 Canora, Sask. Canora Radio Assn.

# The RADEX Short Wave Station Time Converting Dial



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.

THE RADEX PRESS INC.

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# AROUND the CLOCK on the SHORT WAVES

MIDNIGHT TO NOON (EST)

GMT	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
EST		12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
CST	11:00		12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
MST	10:00	11:00		12:00	1:00	2:00	3:00	4:00	5:00	6:00	7 :00	8:00
PST	9:00	10:00	11:00	12.00	1.00							
	COC W8XK W9XF	HIIA TGX VK2ME WL9XF	GSB GSD VK2ME	GSB GSD RV15	DJA DJB RV15 VK3LR	DJA DJB HVJ RNE RV15 VK2ME VK3LR VK3LR VK3ME	GSF GSG HSJ RV15 VE9GW VK2ME VK3LR VK3LR W1XAZ	RV15 VE9GW VK2ME VK3LR	DJB GSF GSG PHI Pont. Rabat. VE9GW VK2ME W1XAZ W3XAL W8XK	DJB GSE GSF PHI Pont. VE9GW W1XAZ W3XAL W3XAL	DJA DJB GSE GSF HVJ Pont. VE9GW W1XAL W1XAZ W8XK W3XAL	DJA DJB GSE GSE Pont. Rabat. VE9GW W1XAI W1XAZ W2XE W3NAI W3XL W8NK W9XAA

## NOON TO MIDNIGHT (EST)

			1					1000			0.00	4:00
GMT	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	1 :00	2:00	3:00	4.00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6 :00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4 :00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	VUB W1XAL W1XAZ W2XE W3XAL	W3XAL W3XAU W3XL	DJC GSB GSD Font. Rabat VE96W W1XAZ W2XAD W3XAU W3XA W9XAA XEBT	RV59 VE9GW	VE9GW W1XAZ W2XE W3XAU W3XL	Rabat RV59 VE9GW W1XAL W1XAZ	HJIABB Pont Rabat VE9GW	W3XAL W3XAU W8XK W9XAA W9XF XEBT YV2RC YV3RC	HCJB HIX HJIABB Pont. TGW TGX TIEP VE9GW W1XAL W1XAZ W2XAF W2XE W3XAL W3XAU W8XK	CJRO CJRX DJC DJD HCJB HC2RL HIX HJIABB HJ3ABD FRADO TGW TGW YCE9GW W1XAZ W2XAF W2XAF W2XAF W3XAL W3XAU W3XAU W3XA W9XF YV2RC YV3RC		CJRO CJRX COC Pont. W3XAL W3XAU W3XAU W3XAU W9XXA W9XIF

# 100 Best Shortwave Stations by Call Letters

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

- Amateur phones are heard between GSA, Daventry, England, 6.050. 7-8 1.875 and 2.000 megs. 3.900 and 4.000 megs.
  - 7.000 and 7.300 megs. (Foreign (vino
- 14.150 and 14.250 megs.
- Broadcast Pickup stations: 1.606; 1.622; 1.646; 2.102; 2.150; 2.190; 2.390.
- CGA4, Drummondville, P. Q., 9.332. Phones London.
- CJRO, Middlechurch, Man., 6.150. Relays Canadian Radio Com. programs, 8-11 p.m. and 11:30 to midnight.
- CJRX, Middlechurch, Man., 11.720. Same schedule as CJRO, q. v.
- COC, Havana, Cuba, 6.010. 4-6 p.m.
- daily. Sat., 11:30-12:30 p.m. COH, Havana, Cuba, 9:500. Tests.
- CP5, La Paz, Bolivia, 6.080. 8-9 p.m.
- CTIAA, Lisbon, Portugal, 9.600. Tues., Fri., 4:30-7 p.m.
- DJA, Zeesen . Germany, 9.560. Sun., 4-5:30 a.m. daily, 6-9:30 a.m.;
- 3:15-7:15 p.m. DJB, Zeesen, Germany, 15.200. 12:15-
- 2 a.m.; 8-11:30 a.m. DJC, Zeesen, Germany, 6.020. Noon
- to 4:30 p.m ; 5:30-10:45 p.m. DJD, Zeesen, Germany, 11.760. Noon
- to 4:30 p.m.; 5:30-10:45 p.m. DJE, Zeesen, Germany, 17.760. Ir-
- regularly, Mornings. EAQ, Aranjuez, Spain, 9.862. 5:30-
- 7 p.m.; Sat. noon to 2 p.m. GBB, Rugby, England, 13.500. Phones
- Canada. GBS, Rugby, England, 12.150. Phones
- N.Y.
- GBU, Rugby, England, 12.240. Phones BW, Rugby, England Phones N. Y. 6-8 p.m.
- England, 14.440.

- p.m.
- GSB, Daventry England, 9.510. 2:15-4:15 a.m.; 10:45 a.m. to 5:45 p.m.
- GSC. Daventry, England, 9.585. 6-8 p.m.
- D, Daventry, England, 11.750. 2:15-4:15 a.m.; 1-5:45 p.m. GSD,
- GSE, Daventry, England, 11.865. 9:15 a.m. to 12:45 p.m.
- GSF, Daventry, England, 15.140. 6-10:45 a.m.
- GSG, Daventry, England, 17.790. 6-8:30 a.m.
- HBL, Prangins, Switzerland, 9.595. Sat. 5:30-6:15 p.m.
- HBP, Prangins, Switzerland, 7.797. Sat. 5:30-6:15 p.m.
- HCJB, Quito, Ecuador, 8.200. 8:15-10:15 daily except Monday.
- HC2ET, Guayaquil, Ecuador, 4.600. Fri., Sat., 9:30-11 p.m.
- HC2RL, Guayaquil, Ecuador, 6.659. Tues. 9:14-11:14 p.m.: Sun. 5:45-7:45 p.m.
- HIH, San Pedro de Macoris, D. R., 6.810. Sunday, 9:30 p.m.
- HIX, Santo Domingo, D. R., 5.948. Tues. and Fri., 8-10 p.m.
- HIIA, Santiago de los Caballeros D.R., 7.240. 7:30-9:30 p.m. daily.
- HJA2, Bogota, Colombia, 5.825.
- HJA3, Barranquilla, Colombia, 12.830
- HJB, Bogota, Colombia, 14.930.
- HJIABB, Barranquilla Colombia, 6.447. 5-10 p.m.
- HJIABE, Cartagena, Colombia, 6.115, Monday, 10-mid., Wed., 8-10 p.m.
- HJIABG, Barranquilla, Colombia 6.042, 7-10 p.m.
- HJ2ABC, Cucuta, Norte de Santanter, Colombia, "La Voz de Cucuta,"

5.975 megs. 6-9 p.m. daily exc. Sunday

- HJ3ABD, Bogota, Colombia, 7.406. "Colombia Broadcasting." 6-9 p.m. daily.
- HJ3ABF, Bogota, Colombia, 6.200. "La Voz de Bogota." Daily 7-11 p.m.
- HJ4ABB, Manizales, Colombia, 7.200 Wed., 8-9 p.m.; Sun., 3-6 p.m.
- HJ4ABE, Medellin, Colombia, 5.900. 7-11 p.m.
- HJ5ABD, Cali, Colombia, 6.490. Thurs., Sat., Sun., 7-9 p.m.
- HPF, Panama City, Panama, 14.545. Phones Hialeah.
- HSJ, Bangkok, Siam, 7.980.
- HVJ, Vatican City, 15.120. 5-5.15 a.m. daily except Sunday. Occasionally from 10-10:30 a.m.
- JVE, Nazaki, Japan, 15.660. Phones Java, nights.
- JVF, Nazaki, Japan, 15.620. Phones Dixon, 5-11 p.m.
- JVH, Nazaki, Japan, 14.600. Phones Europe, 2-6 a.m.
- Phone
- JVQ, Nazaki, Japan, 7.470. JVT, Nazaki, Japan, 5.890. Phones Dixon.
- KAY, Manila, P. I., 14.980. Phones Dixon.
- KKH, Kahuku, T. H., 7.520. Phones Dixon.
- KFZ, Main Base, Little America, 5.740; 6.650; 6.660; 6.670; 8.820; 8.840; 11.850; 13.185; 13.200; 13.245; 13.260.
- KKP. Kahuku, T. H., 16.030. Phones Dixon.
- KNRA, "Seth Parker", 6.160; 6.660; 6.670; 8.230; 8.820; 8.840; 13.200
- KWO, Dixon, Calif., 15.415. Phones Hawaii and Manila.

## THE POSTSCRIPT DEPARTMENT

"My wife and I are rabid radio fans, but the only radio magazine we will have in the house is RADEX. It sure is one fine magazine and is so complete. It is a wonder where you get all the information."

B. R. Rohrbaugh, Thompson, Ohio.

"Since the good old howling one-lunger days, I've bought and subscribed to nearly all the good radio magazines, but RADEX is the best yet!

A. Knoff, 1427 Seneca Place, N. E., E Canton, Ohio.

"I consider RADEX the best, by far, of any radio magazine that I have ever seen.

H. Harding-Jones, 2531 Rainbow Drive, Honolulu, T. H.

"I must congratulate you on having the best magazine of its kind on the market. I have read and used your RADEX for many years ever since No. 25 of December, 1928."

Hilding Gustofson, 2228 Sixth St., Rockford, Ill.

"I consider RADEX as invaluable to a DXer as a saw is to a carpenter."

Kenneth C. McCartt, 213 State St., Lexington, Ky.

"I have been a reader of your magazine for three years. I have never seen a magazine

that has such accurate data as RADEX." Manuel J. Hamilton, 1753 Kensington Avenue, Youngstown, Ohio.

"Without RADEX my radio would be much like a ship without a rudder."

Jack Watrous, La Canada Road, San Mateo, Calif.

"Daddy has been buying RADEX for me since 1932. It's a swell magazine."

Harry Will, 1406 Montreal, Dallas, Texas.

"This RADEX is a great magazine and I would not be without it. It is the one and

only to find any tips you would like to know." Freddie Miller, 45 Elm Avenue, Rosedale, Toronto, Ont.

- KWU, Dixon, Calif., 15.355. Phones Japan.
- KWX, Dixon, Calif., 7.610. Phones Hawaii.
- Monte Grande, Argentina, LSX. 10.350. Phones New York and Byrd.
- ORK, Ruysselede, Belgium, 10.330. 2:45-4:15 p.m.
- PH1, Hilversuum, Netherlands, 11.725. 7:30-10 a.m.
- , Huizen, Netherlands, 15.220. Relaying PH1.
- Police Stations, on frequencics : 1.596 : 1.634 ; 1.642 : 1.658 ; 1.666 ; 1.674 : 1.682 1.706 1.712 2.382 2.406 2.414 ; 2.416 2.422 ; 2.430 ; 2.442 ; 2.450 ; 2.452 ; 2.458 ; 2.466 ; 2.474 ; 2.482;2.490.
- PRADO, Riobamba, Ecuador, 6.618. Thurs., 9-11:30 p.m.
- 5:30-6:15 p.m.
- Radio Coloniale, Pontoise, France, 11.710; 1:15-5 p.m.; 5:15-9 p.m.; 10 p.m. to midnight.
  - 11.905: 11:15 a.m. to 5 p.m.
  - 15.243: 7:30-11 a.m.
- Radio Roma-Napoli, Italy. Will work on frequencies: 5550, 5725, 6060, 6980, 9630, 9780, 11810.
- Rabat, Morocco, 8.035. Sun., 11 a.m. to noon, 2-7 p.m.
- 12.830. Sun., 7-9 a.m.
- Moscow . U.S.S.R., 7.520. RKI. Phones USA .
- RNE, Moscow, U.S.S.R., 12.000 Sun., 6 a.m. and 10 a.m.
- RV15, Khabarovsk, U.S.S.R., 4.273. 3-9 s.m.
- RV59, Moscow, U.S.S.R., 5.996. 3-6 p.m.
- TOW, Guatemala City, Guatemala, 5.940, 5:30-6:30; 8-10 p.m.
- TGN, Guatemala City, Guatemala, 5.937. Sun., 1-3 a.m.; other days, 8-12 p.m.

- TIEP, San Jose, Costa Rica, 6.710. 7-10 p.m.
- 12 215. Pontoise. France. TYA, Phones Algeria.
- VE9GW, Bowmanville, Ont., 6.095. Sun., noon to 8 p.m.; Mon., Tues., Wed., 2-11 p.m.; Thur., Fri., Sat., 6 a.m. to 11 p.m.
- VE9HX Halliax, N. S., 6.110. 5-11 p.m.
- VK2ME, Pennant Hills, Australia, 9 585. Mid. to 2 a.m. and 4:30-8:30 a.m., Sundays only.
- VK3LR, Melbourne, Australia, 9.580. Daily exc. Sun. 4-8 a.m. VK3ME, Braybank , Australia , 9.503.
- Wed., 5-6:30 a.m.; Sat. 5-7 a.m. VUB, Bombay, India 9.565. Testing
- from noon to 1 p.m. WOO, Ocean Gate, N. J., 4.273;
- Phones 4.753; 8.560; 12.840. Ships.
- W1XAL, Boston, Mass., 11.790. Wed., 5-6 p.m. and Sun., 6:30-8:30 p.m.
- 15.250. Sun., 10 a.m. to 1 p.m. WIXAZ, Millis, Mass., 9.570. 6 a.m.
- to midnight.
- W2XAD, Schenectady ,N.Y., 15.340. Sun., Mon., Wed., Fri., 2-3 p.m., W2XAF, Schenectady, N. Y., 9.530.
- 7:40-11 p.m.
- W2XE. Wayne, N. J., 6.120. 6-11 p.m. 11.830. 3-5 p.m. 15.270. 11 a.m. to 1 p.m.
- W3XAL, Boundbrook, N. J., 6.100. Mon., Wed., Sat., 5 p.m. to
  - midnight. 17.780. Daily exc. Fri., 8 a.m. to
- 2 p.m. W3XAU, Newton Sq., Pa., 6.060. 8 p.m. to 11 p.m.
- 9.590. Noon to 8p.m. W3XL, Boundbrook, N. J., 17.310.
- Fri., 11 a.m. to 5 p.m. W8XAL, Mason, Ohio, 6.060. Ir-
- regular.

- W8XK, Saxonburg, Pa., 6.140. 4:30 p.m. to 12:30 a.m.
  - 11.870. 4:30-10 p.m.
  - 15.210. 10 a.m. to 5:15 p.m.
  - 21.540. 7 a.m. to 2 p.m.
- W9XAA, Chicago, Ill., 6.080. Sun., 11:30 a.m. to 9 p.m.
  - Tues. , Thur., Sat., 4-12 p.m. Mon., Wed., Fri., 4:30-7 p.m.
- W9XF, Downer's Grove, Ill., 6.100. Daily exc. Sat. and Sun., 4:30-8 p.m.; 9:30 p.m. to 2 a.m. Sunday, 4:30-7 p.m. and 9 p.m. to 2 s.m.
- XEBT, Mexico City, D. F., 6.010. Relays XEB, 10 a.m. to 11 p.m.
- XGL, Shanghai, China, 7.960
- XGN, Shangha i, China, 16.380. XGO, Shangha i China 7.575.
- YDA, Bandoeng, Java, 6.116. NIROM station.
- YNA, Managua, Nicaragua, 14.480. Phones Hialeah.
- YNLF, Managua, Nicaragua, 6.950. 7-8; 10-11 p.m.
- YVQ, Maracay, Venezuela, 6.672. Relays Caracas BC stations occasionally.
- Venezuela, 9.168. YVR, Maracay. Phones Madrid.
- YVQ. Maracay , Venezuela, 6.672.
- YV2RC, Caracas, Venezuela, 6.112.
- 5:15-10 p.m. YV3RC, Caracas, Venezuela, 6.150.
- 5-10 p.m. YV4RC, Caracas, Venezuela, 5.990.
- YV5RMO, Maracay Venezuela, 6.070. and 9.600.
- YV6RV, Valencia, Venezuela, 6.030. 'La Voz de Carabobo.'
  - The Venezuelan Network includes YV4RC, YV3RC. stations YV5RMO and YVQ.
- ZFB, St. George, Bermuda, 10.060. ZFS, Nassua, Bahamas, 4.513.

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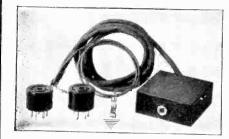
Lift out the power tube or tubes in your set and replace them in the socket-adapters. That is all there is to it.

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This bigger, better, more powerful, clearer-toned, super selective radio gives you absolute realism—assures you of life-like, crystal-clear tone—unlike anything you have ever experienced before! You will hear one more octave—over-tones—that cannot be brought in withordinary radios. Now, hear every instrument every voice every shade and inhear every instrument, every voice, every shade and in-flection of speech. Take advantage of the amazing 30-day FREE trial offer. Send coupon today for FREE catalog.

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ALL FIVE WAVE SANDS Only Midwest covers a tuning range of 9 to 2400 meters (33 Megacycles to 125 KC)— enabling you to easily and successfully tune in foreign stations up to 12,000 miles away with crystal-elear, loud-speaker reception. All First Hugh Fidelity American programs. In ad-airplane and skp broadcasts and derive new deliabi-vest 36- and new eritemat from unequicant, that we deliabi-tors and skp broadcasts and derive new deliabi-vest 36- and new eritemat from unequicant, some that Russia, Australia, etc. Send today for money-making factel ures a

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1. Dial calibrated in Kilocycas, Negesyste turk Meters; 2. Gill letters of American Broadcast Station prince on dial and situminated situation on dial and situ 5. Simpliferd Juning Cuide Lights 6. Automatic Select-O-Band In-dicator 9. Illiumi. Shadow Tuning - Tuning 9. Centralized Tuning.

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