



*** **W**HEN you set out to dial the programs of strange far-away lands you are on the threshold of a thrilling new experience. To realize the full measure of delight they provide, familiarize yourself at the outset with the technique necessary to bring them in.

Programs from distant countries are borne to your living-room by means of short waves, which have quite different characteristics from those we are used to in long waves. For example, some short waves travel best through daylight. Short-wave reception is less susceptible to such natural interference as lightning, yet much more sensitive to artificial interference—such as electric motors. It is such “idiosyncrasies” that this book aims to make clear.

A careful reading of this book will give you *all* the information you need to bring in the greatest number of foreign programs and to enjoy them with greatest satisfaction. To your increased radio enjoyment RCA Victor dedicates this book.

RCA VICTOR  

The change of time around the world

Just as when it's noon in New York City, it's 11 in Chicago, 10 in Denver and only 9 a. m. in San Francisco, so time varies proportionately around the world. Before tuning in a foreign station, therefore, it is interesting to know what time of day or night it is in the country in question. The chart on page 4 enables you to tell at a glance what time it is anywhere in the world.



of broadcasting of the most consistent and important stations, according to latest information.

When is the best time to get short-waves?

Obviously the time of dialing a station should be within the hours it is on the

air. The next consideration is: at what frequency does the station transmit? The Log will tell you the frequencies and location on the dial of all the leading stations in the world, and the table below tells you the conditions under which you may receive short waves in each band.

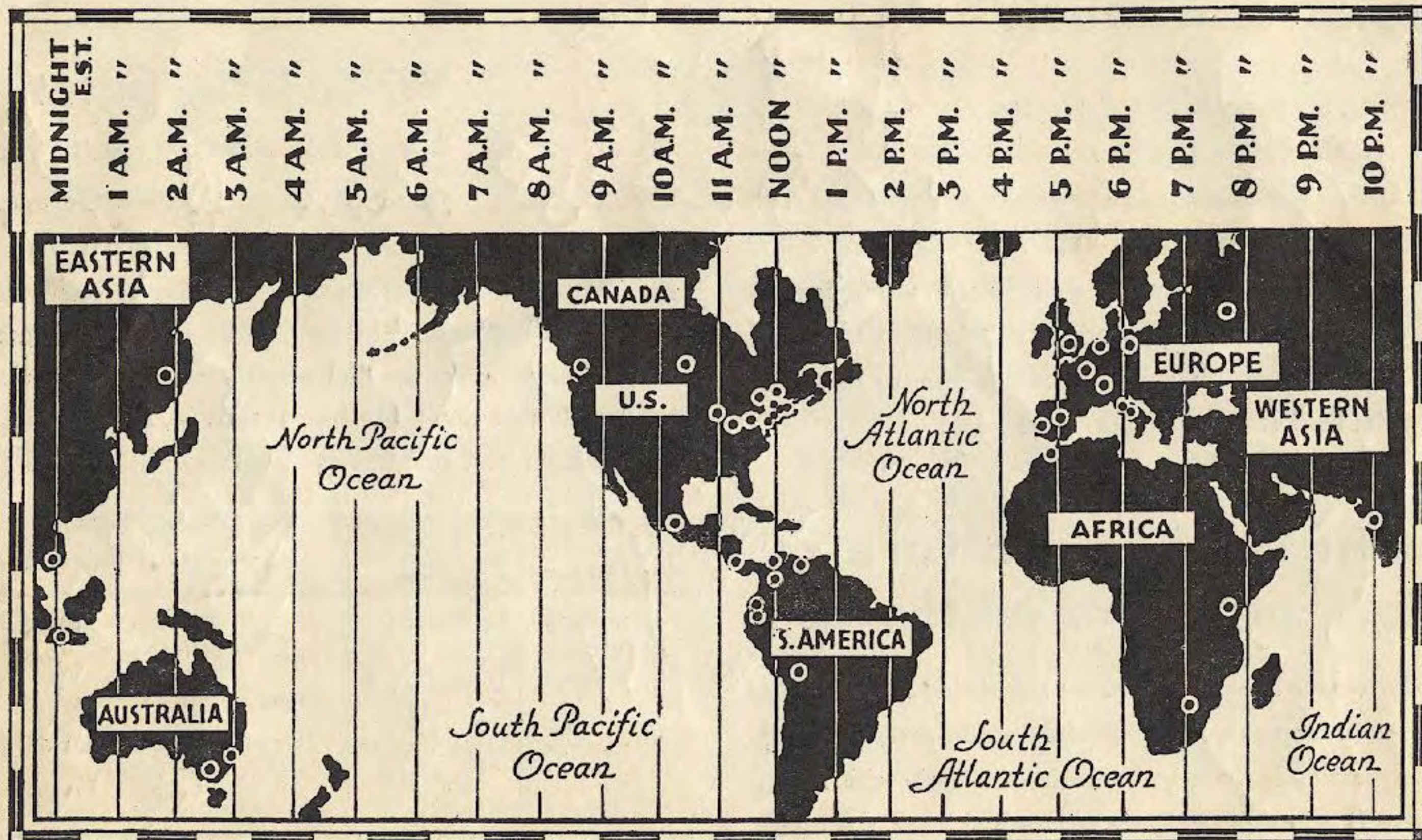
At what hours are foreign nations' programs on the air?

Many short-wave broadcasts are not scheduled as definitely, nor so far in advance, as standard domestic programs, and station operation is apt to be intermittent. The World Log on Pages 8 to 11 gives you, in Eastern Standard Time, the hours

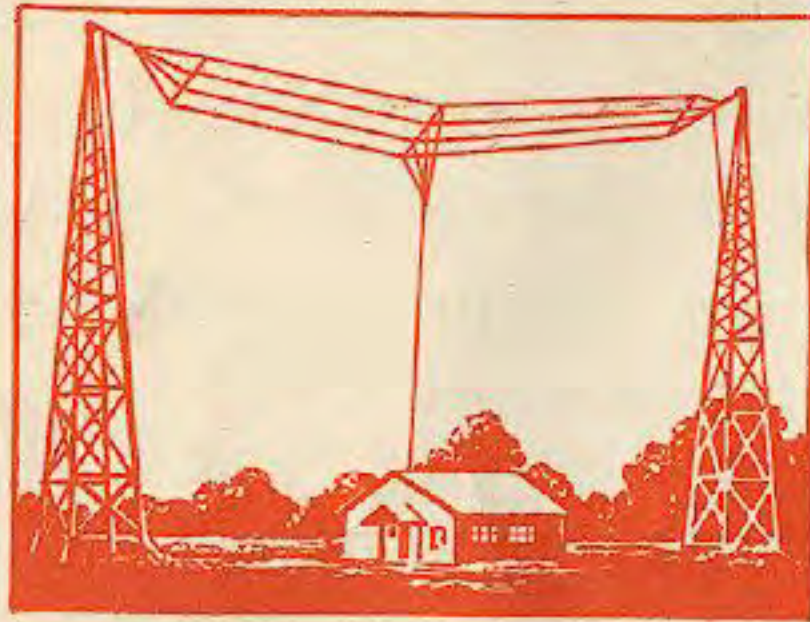
If the broadcast is in this band	You'll receive it best when its path is through	Best received at these distances
49 meters	Darkness	Day: 300 miles, night: over 1500 miles
31 meters	Darkness & Daylight	Over 800 miles
25 meters	Darkness & Daylight	Day: under 2000 miles Night: over 2000 miles
19 meters	Daylight	Over 1500 miles



Time Around the World



Some interesting facts about short-waves



Sky Waves and Ground Waves—Radio waves when leaving a transmitter pursue two courses—along the ground and skyward. Ground waves travel close to the earth

and for only a short distance. Sky waves, however, rise to a great height, until they encounter the Kennelly-Heaviside Layer which deflects them earthward. This phenomenon explains why many short waves are received better at great distances; in fact, accounts for our ability to hear from stations thousands of miles around the world.

Skip-distance is one feature of short-wave broadcasting it is well to be familiar with, also. It is the distance from where ground waves stop and where deflected sky-waves again reach the earth. This distance is, of course, highly variable, and within the skip-distance zone, reception is generally impossible. It should be borne in mind that

different stations have different skip-distances and that though you may be within the skip-distance of certain stations, other stations' programs are available to you.

Time and Seasonal Factors

International short-wave reception varies from day to day, day to night and with each change of season. In order that you may better understand these variations, the table on page 6 is supplied for your reference.

International Entertainment Bands

By international agreement, short-wave entertainment programs have been largely restricted to four bands or meter classifications: the 49-meter, from 6000 to 6150 kilocycles; the 31-meter, 9500—9600; the 25-meter, 11700—11900 and the 19-meter, 15100—15350 kilocycles.



RCA Victor World-wide Radio

When you dial with an RCA Victor World-wide Radio, you may be confident that you have access to all the stations that are receivable in your locality at the time.

The amazing Globe Trotters 240, 140 and 121 have been developed by the world's greatest engineers who have for years been engaged in developing every type of short-wave equipment for commercial purposes. The new Globe

Trotters are highly sensitive and selective, with superb tone quality and many ultra-modern improvements in addition to the extra stability that short-wave reception demands. In every detail of workmanship, these Globe Trotters are designed for your complete enjoyment of all the important broadcasting in the world!

Study the log now and select the stations you'll be most interested in hearing. Then follow the simple suggestions outlined in this book, and use your new RCA Victor World-wide Radio to bring you new, thrilling pleasure!

TABLE 1—EFFECT OF TIME OF DAY AND SEASON OF YEAR ON SHORT-WAVE TRANSMISSION

Wave Length (meters)	Ground Wave Range		Sky Wave (Summer) Reliable Range				Sky Wave (Winter) Reliable Range			
			Noon		Midnight		Noon		Midnight	
	Miles	Kilom.	Miles	Kilom.	Miles	Kilom.	Miles	Kilom.	Miles	Kilom.
100	90	145	90	145	600	970	100	160	2500	4000
49	75	120	100—200	160—320	250—5000	400—8000	200—600	320—970	400—*	640—*
31	60	97	200—700	320—1125	1000—*	1600—*	500—2000	800—3200	1500—*	2400—*
25	50	80	300—1000	480—1600	1500—*	2400—*	600—3000	970—4800	2000—*	3200—*
19	35	56	400—2000	640—3200	2500—*	4000—*	900—4000	1450—6400	X	X
16	15	24	700—4000	1125—6400	X	X	1500—*	2400—*	X	X

*—Unlimited distance.

X—Ordinarily cannot be heard.

NOTE—Time and season apply to transmitting station. The above table applies to transmitters of relatively high power and to receivers operating under favorable conditions.



Broadcasting of 7 types on RCA Victor World-wide Radios!



RCA Victor World-wide Models 240, 140 and 121 bring in practically every type of broadcasting! . . . In addition to standard domestic programs—6 types in the short wave spectrum. Models 240 and 140 cover the 1500-18000 kc. (short-wave) frequencies; and Globe Trotter 121, the frequencies between 5400 and 15500 kc. in which by international agreement the principal foreign entertainment programs occur.



Police calls: Thousands of radio listeners are enjoying the thrills of police dispatches from scores of cities throughout the U. S. Many such orders send police to the scene of the crime while it is still being enacted! (1550-1712* and 2400-2500 kc.*)



"Big Ben" of London, the world's most famous timepiece.

Aircraft signals: Hear the terse communications between airports and planes hurtling through space! (At night, 2300-3500 kc.*; day, 4100*-5700 kc.)

Amateurs: It is always interesting—and frequently surprising or amusing—to listen in on the informal chats between amateur broadcasters. (1800-2000 kc.,* 3900-4000 kc.* and 14150-14250 kc.)

* Received on Models 240 and 140 only

Ships at sea: At various points on the dial signals from ships hundreds of miles at sea may be received at irregular intervals.

Domestic short waves: Another distinct advantage to owning an RCA Victor World-wide Radio is its ability to bring in, via short waves, programs also sent out by long-wave. When long-wave reception is poor, tuning in the standard station's short-wave companion-station often results in clearer reception. (See the list of standard stations having short-wave "companions," on page 11.)

Foreign entertainment programs! The greatest thrill of all reception by RCA Victor World-wide Radio is the brilliant, fascinating programs it brings in from strange, distant lands across the seven seas! The tables on the following pages list the principal international short-wave stations of the world, in accordance with most recent information.



The Eiffel Tower, symbolical of the gay French Capital.



Short-wave Stations, 77-32 Meters, and Broadcasting Schedule

Station	Wave Length (meters)	Freq. (kc.)	Location	Schedule	E. S. T.
Amateur	77-75	3900 4000	Phone		
RW15	70.2	4273	Khabarovsk U.S.S.R.	S-M-T-W-T-F-S	3-9 A.M.
HVJ	50.21	5968	Vatican City	S-M-T-W-T-F-S	2-2.15 P.M.
RV49	50.0	6000	Moscow U.S.S.R.	*S-M-T-W-T-F-S	3-5 P.M.
DJC	49.83	6020	Berlin Germany	S-M-T-W-T-F-S	8-11 P.M.
W4XB	49.67	6040	Miami, Fla.	**S-M-T-W-T-F-S	7-11 P.M.
GSA	49.59	6050	London England	***S-M-T-W-T-F-S	6-8 P.M.
W3XAU	49.5	6060	Philadelphia Pa.	*S-M-T-W-T-F-S	7-12 P.M.
W8XAL	49.5	6060	Cincinnati Ohio	**S-M-T-W-T-F-S	12-1.30 A.M. 6-10.30 A.M. 1.30-3.30 P.M. 6-12 P.M.
VQ7LO	49.5	6060	Nairobi Kenya Africa	S-M-T-W-T-F-S	11 A.M.-2 P.M.
W9XAA	49.34	6080	Chicago, Ill.	**S-M-T-W-T-F-S	4-12 P.M.
CP5	49.26	6090	La Paz Bolivia	S-M-T-W-T-F-S	9-11 P.M.

Station	Wave Length (meters)	Freq. (kc.)	Location	Schedule	E. S. T.
OXY	49.26	6090	Copenhagen Denmark	S-M-T-W-T-F-S	2-6 P.M.
VE9GW	49.22	6095	Toronto Canada	*S-F-S	3-11 P.M.
W9XF	49.18	6100	Chicago, Ill.	*S-M-T-W-T-F	12-1 A.M. 3.30-7 P.M. 8.30-12 P.M.
W3XAL	49.18	6100	New York City	*Sat.	3.30-12 P. M.
YV1BC	49.10	6110	Caracas Venezuela	*S-M-T-W-T-F-S	10.30 A.M.-1 P.M. 5.15-10 P. M.
ZTJ	49.02	6120	Johannes- burg, Africa	**S-M-T-W-T-F-S	4-6 A.M. 8-10.30 A.M. 11 A.M.-3.30 P.M.
W2XE	49.02	6120	New York City	*S-M-T-W-T-F-S	5-10 P.M.
W8XK	48.86	6140	Pittsburgh, Pa.	*S-M-T-W-T-F-S	4.30-12 P.M.
VY3BC	48.70	6160	Caracas Venezuela	S-M-T-W-T-F-S	5.30-10 P.M.
Amateur	42.86 41.1	7000 7300	Mostly Code		
HBP	38.48	7797	Geneva Switzerland	Sat.	5.30-6.15 P.M.
CNR	37.3	8035	Rabat Morocco Africa	Sun.	2.30-5 P.M.

49-METER BAND

49-METER BAND

*** Footnotes on page 10



Short-wave Stations, 31-25.21 Meters, and Broadcasting Schedule

31-METER BAND

Station	Wave Length (meters)	Freq. (kc.)	Location	Schedule	E. S. T.
GSB	31.55	9510	London England	*S-M-T-W-T-F-S	11.30 A.M. to 12.30 P.M. 1-5.30 P.M.
VK3ME	31.55	9510	Melbourne Australia	W-Sat.	5-6.30 A.M.
OXY	31.51	9520	Copenhagen Denmark	S-M-T-W-T-F-S	2-6 P.M.
W2XAF	31.48	9530	Schenectady N. Y.	*S-M-T-W-T-F-S	12-1 A.M. 6.45-12 P.M.
DJA	31.38	9560	Berlin Germany	S-M-T-W-T-F-S	2-6 P.M.
W1XAZ	31.36	9570	Springfield Mass.	*S-M-T-W-T-F-S	6 A.M.-12 P.M.
GSC	31.30	9585	London England	***S-M-T-W-T-F-S	6-8 A.M.
VK2ME	31.28	9590	Sydney Australia	Sun.	1-2 A.M. 3-8.30 A.M. 10.30-11.30 A.M.
W3XAU	31.28	9590	Philadelphia Pa.	***S-M-T-W-T-F-S	11 A.M.-5 P.M.
HBL	31.26	9595	Geneva Switzerland	Sat.	5.30-6.15 P.M.

25-METER BAND

Station	Wave Length (meters)	Freq. (kc.)	Location	Schedule	E. S. T.
EAQ	30.43	9855	Madrid, Spain	S-M-T-W-T-F-S	5.30-7 P.M.
FYA	25.64	11700	Paris, France	*S-M-T-W-T-F-S	3-5 P.M. 6-10.30 P.M.
VE9JR	25.62	11710	Winnipeg Canada	M-T-W-T-F-S	9-30-10 A.M. 11-11.30 A.M. 2-2.15 P.M. 3.15-3.30 P.M. 7-9 P.M.
PHI	25.57	11730	Huizen, Holland	M-T	7-10.30 A.M.
GSD	25.53	11750	London England	*S-M-T-W-T-F-S	9 A.M.-3 P.M.
DJD	25.51	11760	Berlin Germany	S-M-T-W-T-F-S	8-11 P.M.
12RO	25.4	11810	Rome, Italy	S-M-T-W-T-F-S	11.30 A.M.- 12.30 P.M. 1.30-6 P.M.
W2XE	25.36	11830	New York City	*S-M-T-W-T-F-S	2-4 P.M.
GSE	25.29	11865	London England	*S-M-T-W-T-F-S	7-8.45 A.M.
W8XK	25.27	11870	Pittsburgh, Pa.	*S-M-T-W-T-F-S	4.30-10 P.M.
FYA	25.21	11900	Paris, France	*S-M-T-W-T-F-S	11.15 A.M.- 12.45 P.M.

*** Footnotes on Page 10



Short-wave Stations, 23—16.87 Meters, and Broadcasting Schedule

Station	Wave Length (meters)	Freq. (kc.)	Location	Schedule	E. S. T.
CNR	23.38	12830	Rabat Morocco Africa	Sun.	7:30-9:30 A.M.
Amateur	21.2 21.1	14150 14250	Phone		
HVJ	19.84	15120	Vatican City	S-M-T-W-T-F-S	5-5.15 A.M.
GSF	19.82	15140	London England	*S-M-T-W-T-F-S	1-3 A.M.
DJB	19.74	15200	Berlin Germany	S-M-T-W-T-F-S	8-11 A.M.

Station	Wave Length (meters)	Freq. (kc.)	Location	Schedule	E. S. T.
W8XK	19.72	15210	Pittsburgh Pa.	*S-M-T-W-T-F-S	10 A.M.- 4:15 P.M.
FYA	19.68	15240	Paris France	*S-M-T-W-T-F-S	8-11 A.M.
W2XAD	19.57	15330	Schenec- tady, N.Y.	*S-M-W-F	3-4 P.M.
GSG	16.88	17770	London England	*S-M-T-W-T-F-S	6-8 A.M.
W3XAL	16.87	17780	New York City	*M-T-W-T-F	12:30- 6:30 P.M.

*Station operates on a slightly different schedule during the summer months to comply with observance of "daylight-saving" time in the northern hemisphere. In general, schedules will be shifted one hour earlier during the period affected—such changes may be obtained most reliably through station announcement and may be noted upon the chart.

** Station operates irregularly at present — schedule shown should therefore be regarded as approximate.



Standard U. S. Stations			Their Short-Wave Companion Stations			
Station	Wave Length (kc.)	Location	Station	Wave Length (meters)	Wave Length (kc.)	Location
KDKA	980	Pittsburgh Pa.	W8XK	19.71	15210	Saxonburg Pa.
				25.25	11870	
				31.33	9570*	
				48.83	6140	
WABC	860	New York N. Y.	W2XE	25.32	11840	Wayne, N. J.
				48.99	6120	
WBZ	990	Boston, Mass.	W1XAZ	31.33	9570	Millis, Mass.
WBZA	990	Springfield Mass.				
WCAU	1170	Philadelphia Pa.	W3XAU	31.26	9590	Byberry, Pa.
				49.48	6060	

*Not in operation at present.

Standard U. S. Stations			Their Short-Wave Companion Stations			
Station	Wave Length (kc.)	Location	Station	Wave Length (meters)	Wave Length (kc.)	Location
WCFL	970	Chicago, Ill.	W9XAA	49.31	6080	Chicago, Ill.
WENR	870	Chicago, Ill.	W9XF	49.15	6100	Downer's Grove, Ill.
WGY	790	Schenectady N. Y.	W2XAD	19.55	15340	Schenectady N. Y.
			W2XAF	31.46	9530	
WIOD	1300	Miami Florida	W4XB	49.67	6036*	Miami Beach Florida
WJZ	760	New York N. Y.	W3XAL	16.87	17772	Boundbrook N. J.
				49.15	6100	
			W3XL	46.66	6425	
WLW	700	Cincinnati, O.	W8XAL	49.48	6060	Mason, Ohio

(Courtesy "Radex")

Keep in touch with the new developments in short-wave broadcasting

Current short-wave information may be obtained from the Electrical Equipment Division, Bureau of Foreign & Domestic Commerce, Department of Commerce, Washington, D. C., U. S. A.—or by joining the Short-Wave Club, a non-commercial organization. The Club Magazine, Inter-

national Short-Wave Radio, contains up-to-date information about short-wave broadcasting, including commercial, amateur, police and aviation activities. The annual membership fee, including the magazine, is \$1, U.S. currency. Address The Short-Wave Club, P.O. Box 713, Klondyke, Ohio, U.S. A.



RCA VICTOR



CAMDEN, NEW JERSEY • 1934