

THE
SCOTT

FOREIGN AND U. S. SHORT WAVE
TUNING GUIDE



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E. H. SCOTT RADIO LABORATORIES, INC.

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PRICE 25c

U. S. Short Wave Station Time Schedule

Some of the finest programs that come over the air will be heard on the stations below. When you wish to tune in some special broadcast and there is no local outlet, try the short wave stations and you will probably find it. All times shown are E.S.T. Deduct 1 hr. for CST, 2 hrs. for MST, and 3 hrs. for PST. The time schedules are daily, except where indicated. Su. Sundays, M. Mondays, Tu. Tuesdays, W. Wednesdays, Th. Thursdays, F. Fridays, Sa. Saturdays.

6.30 AM TO 8 AM

WPIT 21.54 Megs.

8 AM TO 9 AM

WPIT 21.54 Megs.
WGEA 21.50 Megs.
WCBS 17.83 Megs. Su.

9 AM TO 10 AM

WPIT 21.54 Megs.
WGEA 21.50 Megs.
WCBS 17.83 Megs.
WNBI 17.78 Megs.
W1XK 9.57 Megs.

10 AM TO 11 AM

WGEA 21.50 Megs.
WCBS 17.83 Megs. Su. Sa.
WNBI 17.78 Megs.
WPIT 15.21 Megs.
W1XK 9.57 Megs.

11 AM TO 11.15 AM

WCBS 17.83 Megs. Su. Sa.
WNBI 17.78 Megs.
WPIT 15.21 Megs.
W1XK 9.57 Megs.

11.15 AM TO 11.45 AM

WCBS 17.83 Megs. Su. Sa.
WNBI 17.78 Megs.
WGEA 15.33 Megs.
WPIT 15.21 Megs.
W1XK 9.57 Megs.

11.45 AM TO NOON

WCBS 17.83 Megs. Su. Sa.
WNBI 17.78 Megs.
WGEA 15.33 Megs.
WCAB 15.27 Megs. M. Sa.
WPIT 15.21 Megs.
W1XK 9.57 Megs.

NOON TO 12.45 PM

WRCA 21.63 Megs.
WCBS 17.83 Megs. Su. Sa.
WNBI 17.78 Megs.
WGEA 15.33 Megs.
WCAB 15.27 Megs. M.-Sa.
WPIT 15.21 Megs.
W1XK 9.57 Megs.

12.45 PM TO 1 PM

WRCA 21.63 Megs.
WCBS 17.83 Megs. Su. Sa.
WNBI 17.78 Megs.
WGEA 15.33 Megs.
WPIT 15.21 Megs.
W1XK 9.57 Megs.

1 PM TO 1.30 PM

WRCA 21.63 Megs.
WCBS 17.83 Megs.
WNBI 17.78 Megs.
WGEA 15.33 Megs.
WCAB 15.27 Megs. Su. Sa.
WPIT 15.21 Megs.
W1XK 9.57 Megs.

1.30 PM TO 3 PM

WRCA 21.63 Megs.
WCBS 17.83 Megs.
WNBI 17.78 Megs.
WGEA 15.33 Megs.
WCAB 15.27 Megs.
WPIT 15.21 Megs.
W1XK 9.57 Megs.

3 PM TO 3.30 PM

WRCA 21.63 Megs.
WCBS 17.83 Megs.
WNBI 17.78 Megs.
WGEA 15.33 Megs.
WCAB 15.27 Megs.
WPIT 11.87 Megs.
W1XK 9.57 Megs.

3.30 PM TO 4 PM

WCBS 17.83 Megs.
WNBI 17.78 Megs.
WGEA 15.33 Megs.
WCAB 15.27 Megs.
WPIT 11.87 Megs.
W1XK 9.57 Megs.

4 PM TO 6 PM

WCBS 17.83 Megs.
WNBI 17.78 Megs.
WGEA 15.33 Megs.
WCAB 15.27 Megs.
WPIT 11.87 Megs.
WRCA 9.67 Megs.
W1XK 9.57 Megs.
WGEO 9.53 Megs.

6 PM TO 6.15 PM

WNBI 17.78 Megs.
WCAB 15.27 Megs. M.-Sa.
WPIT 11.87 Megs.
WRCA 9.67 Megs.
W1XK 9.57 Megs.
WGEO 9.53 Megs.

6.15 PM TO 6.30 PM

WNBI 17.78 Megs.
WPIT 11.87 Megs.
WRCA 9.67 Megs.
W1XK 9.57 Megs.
WGEA 9.55 Megs.
WGEO 9.53 Megs.

6.30 PM TO 7 PM

WNBI 17.78 Megs.
WCBS 15.27 Megs.

WPIT 11.87 Megs.
WRCA 9.67 Megs.
WCAB 9.59 Megs. M. Th. Sa.
W1XK 9.57 Megs.
WGEA 9.55 Megs.
WGEO 9.53 Megs.
WCAB 6.06 Megs. T. W. F.

7 PM TO 7.15 PM

WNBI 17.78 Megs.
WCBS 15.27 Megs.
WPIT 11.87 Megs.
WRCA 9.67 Megs.
WCAB 9.59 Megs. Tu. F.
W1XK 9.57 Megs.
WGEA 9.55 Megs.
WGEO 9.53 Megs.
WCAB 6.06 Megs. W. Th. Sa.

7.15 PM TO 7.30 PM

WNBI 17.78 Megs.
WCBS 15.27 Megs.
WPIT 11.87 Megs.
W1XK 9.57 Megs.
WRCA 9.67 Megs.
WGEA 9.55 Megs.
WGEO 9.53 Megs.

7.30 PM TO 8 PM

WNBI 17.78 Megs.
WCBS 15.27 Megs.
WPIT 11.87 Megs.
WRCA 9.67 Megs.
WCAB 9.59 Megs. Su. Tu.
W1XK 9.57 Megs.
WGEA 9.55 Megs.
WGEO 9.53 Megs.
WCAB 6.06 Megs. M. W. Th. Sa.

8 PM TO 8.30 PM

WNBI 17.78 Megs.
WCBS 15.27 Megs.
WPIT 11.87 Megs.
WRCA 9.67 Megs.
WCAB 9.59 Megs. Su. Tu. F.
W1XK 9.57 Megs.
WGEA 9.55 Megs.
WGEO 9.53 Megs.
WCAB 6.06 Megs. M. W. Th. Sa.

8.30 PM TO 9 PM

WNBI 17.78 Megs.
WPIT 11.87 Megs.
WRCA 9.67 Megs.
WCAB 9.59 Megs. Su. Tu. F.
W1XK 9.57 Megs.
WGEA 9.55 Megs.
WGEO 9.53 Megs.
WCAB 6.06 Megs. M. W. Th. Sa.

9 PM TO 9.15 PM

WNBI 17.78 Megs.
WPIT 11.87 Megs.
WCBS 11.83 Megs.
WRCA 9.67 Megs.
WCAB 9.59 Megs. Su. Tu. F.
W1XK 9.57 Megs.
WGEA 9.55 Megs.
WGEO 9.53 Megs.
WCAB 6.06 Megs. M. W. Th. Sa.

9.15 PM TO 10.30 PM

WNBI 17.78 Megs.
WPIT 11.87 Megs.
WCBS 11.83 Megs.
WRCA 9.67 Megs.
WCAB 9.59 Megs. Su. Tu. F.
W1XK 9.57 Megs.
WGEA 9.55 Megs.
WGEO 9.53 Megs.
WCAB 6.06 Megs. M. W. Th. Sa.

10.30 PM TO 11 PM

WNBI 17.78 Megs.
WPIT 11.87 Megs.
WCBS 11.83 Megs.
WRCA 9.67 Megs.
WCAB 9.59 Megs. Su. Tu. F.
W1XK 9.57 Megs.
WGEO 9.53 Megs.
WCAB 6.06 Megs. M. Th.

11 PM TO 11.30 PM

WPIT 11.87 Megs.
WCBS 11.83 Megs.
WRCA 9.67 Megs.
WCAB 9.59 Megs. Su. Tu. F.
W1XK 9.57 Megs.
WGEO 9.53 Megs.
WCAB 6.06 Megs. M. Th.

11.30 PM TO MIDNIGHT

WPIT 11.87 Megs.
WRCA 9.67 Megs.
W1XK 9.57 Megs.
WGEO 9.53 Megs.
WCAB 6.06 Megs. M. Th.

MIDNIGHT TO 1 AM

WRCA 9.67 Megs.
WCAB 9.59 Megs. Tu. F.
W1XK 9.57 Megs.
WCBS 6.77 Megs. (a)
WPIT 6.14 Megs.
WCBS 6.12 Megs. (b)
WNBI 6.10 Megs.
WCAB 6.06 Megs.

1 AM TO 2 AM

WCAB 6.06 Megs.

U. S. SHORT WAVE STATION FREQUENCIES

WCAB (formerly W3XAU) — Philadelphia, Pa. (CBS)	WGEA (formerly W2XAD) — Schenectady, New York (General Electric)
21.52 Megs. (13.94 Mets.)	21.50 Megs. (13.95 Mets.)
15.27 Megs. (19.65 Mets.)	15.33 Megs. (19.59 Mets.)
9.59 Megs. (31.28 Mets.)	9.55 Megs. (31.41 Mets.)
6.06 Megs. (49.5 Mets.)	
WCBS (formerly W2XE) — Wayne, New Jersey (CBS)	WPIT (formerly WSXK) — Pittsburgh, Pa. (Westinghouse)
21.57 Megs. (13.91 Mets.)	21.54 Megs. (13.93 Mets.)
17.83 Megs. (16.83 Mets.)	15.21 Megs. (19.72 Mets.)
15.27 Megs. (19.65 Mets.)	11.87 Megs. (25.26 Mets.)
11.83 Megs. (25.36 Mets.)	6.14 Megs. (48.86 Mets.)
9.65 Megs. (31.09 Mets.)	
6.17 Megs. (48.62 Mets.)	
6.12 Megs. (49.02 Mets.)	
WNBI (formerly W3XL) — Bound Brook, New Jersey (NBC)	WRCA (formerly W3XAL) — Bound Brook, New Jersey (NBC)
17.78 Megs. (16.87 Mets.)	21.63 Megs. (13.87 Mets.)
6.10 Megs. (49.18 Mets.)	9.67 Megs. (31.02 Mets.)
WGEO (formerly W2XAF) — Schenectady, New York (General Electric)	WSLR (formerly W1XAL) — Boston, Mass. World Wide Broadcasting Foundation.
9.53 Megs. (31.48 Mets.)	21.46 Megs. (13.99 Mets.)
	15.25 Megs. (19.67 Mets.)
	15.13 Megs. (19.83 Mets.)
W1XK—Millis, Mass. (Westinghouse)	11.79 Megs. (25.45 Mets.)
9.57 Megs. (31.35 Mets.)	11.73 Megs. (25.58 Mets.)
	6.04 Megs. (49.67 Mets.)

WSLR is primarily an International Station with one of the most powerful short wave transmitters in the world, changes its schedules from month to month, so is not included in our time schedule, but can generally be tuned in between 2 and 6 PM and from 9 to 10 PM E.S.T. It is a noncommercial station, transmitting some of the very finest symphonic, religious and scientific hours on the air.

HOW TO GET RESULTS ON SHORT WAVES

By E. H. SCOTT

THE first thing a beginner should do on starting to tune on the shortwaves is become thoroughly familiar with the handling of his receiver. You will find tuning shortwave stations is a little more difficult than tuning in stations on the broadcast band, for the reason that shortwave stations tune very much sharper than those on the broadcast band.

When searching for stations on the shortwaves, rotate the dial *very slowly*, and by S-L-O-W-L-Y I mean just that. Do not twirl the dial rapidly and expect shortwave stations to come rolling in, for you will be disappointed. So, one of the very first rules you must learn if you want to become a successful S. W. DX'er is to manipulate your dial *very slowly*.

Best Results on Shortwaves During Daylight

I often receive letters from owners who, on trying out their receiver for the first time, report poor results on the shortwaves. On investigating I have often found that they did most of their tuning at night. Apparently a very large number of owners do not know that reception on the very shortwaves, that is, from 21 to 11 megacycles (13 to 25 meters) is best during broad daylight and that you can often listen to stations four and five thousand miles away at Noon, even in the middle of the summer, with as much volume as you can get from a local station that is transmitting on the broadcast band.

To illustrate and prove the point that reception on shortwave lengths varies at different times during the day and night, take just one American station, say WPIT at Pittsburgh. You will find that it is listed under four different wave lengths—21.54, 15.21, 11.87 and 6.14 megs. Now why should one broadcasting station on the shortwaves be licensed to operate on four different wave lengths when they allow a station on the broadcast band to operate on only one wave length? The answer is simple. The S.W. broadcaster must change his wave length at different times during the day and night to make sure that his signals will be received clearly at distant points.

Why Tuning on the Shortwaves Below 11 Megacycles Should Be Done During Daylight

As soon as the sun begins to peep over the horizon stations on wave lengths below 9 megs. (31 meters) start coming in, getting stronger as the sun gets higher in the sky. Within an hour after sunrise you may be listening to a station 5,000 miles away with loud speaker volume, that before dawn could not be heard at all. After you have had a little experience tuning on the shortwaves, you will notice that stations above 9 megs. which come in with

good volume during the hours of darkness, begin to fade very rapidly as daylight appears.

A good rule to follow is—Tune for stations between 21 and 11 megs. (13 to 25 meters) between sunrise and sunset—Tune for stations between 11 and 6 megs. (25 to 49 meters) in late afternoon and early evening. On extremely distant stations where the signal may be coming from a part of the world where there will be a lot of daylight in its path before it reaches the receiving point, this rule does not always apply.

A good example of the above is the reception at Chicago of VK3ME, Melbourne, on 9.51 megs. (31.5 meters), when it is actually dark at both places while the program is being transmitted and received. The Melbourne program is received between 5:00 A.M. and 7:00 A.M. in Chicago, and is transmitted between 8:00 P.M. and 9:30 P.M. from Melbourne.

Turn to page 6. Find the 5:00 A.M. Column in Zone 13 and you will see that there is only an hour of darkness left in Chicago. Now follow the column down and you will find 13 hours of daylight, then two hours of darkness (for it doesn't get dark until about 7:00 P.M. in Melbourne). The signal, therefore has 13 hours of daylight and only 3 hours of darkness in its passage between Melbourne and Chicago, with the result it gets over all right.

But suppose the hours are reversed and the program was transmitted from Melbourne at 9 A.M. in the morning instead of 9 P.M. in the evening—and was received at 5 P.M. in Chicago instead of 5 A.M. what happens? Find 9 A.M. Melbourne time on the World Time Chart (Zone 45) and follow it up the column to 5 A.M. on Zone 13 (Chicago Time). You find, starting from Melbourne—3 hours of daylight—12 hours of darkness and one hour of daylight. Before the signal reaches Chicago at 5 P.M. the signal, therefore, would have 12 hours of darkness and only four hours of daylight in its path, with the results it would only be heard under very exceptional conditions.

It is a good idea, therefore, when you wish to go after a station about 30 meters or lower for the first time, to study the time chart to see how much daylight there is between you and the transmitting station you wish to tune for.

Tune for stations above 30 meters after darkness has fallen.

Study the World Time Chart

Almost all stations put on their best programs during the evening hours in their own part of the world, just as the best programs are transmitted from stations in the U.S.A. during the evening hours, so that when you are tuning for a foreign station, it is a good

idea to find out just what time it is in the country where the station is located.

How to Convert GMT Time to Local Time

Greenwich Meridian Time is standard time all over the world. Turn to the Scott World Time Chart on page 6 and you will find a set of numbers along the top line beginning at 1200. To convert G.M.T. time to local time proceed as follows: Say you wish to find what 1940 G.M.T. time is in your locality—and you live in Chicago, Zone 13. You find 1900 G.M.T. on the top line, then run down the column to Zone 13 and you see that it is 1:00 P.M., so you add the 40 to this and find the time is exactly 1:40 P.M. in Chicago when it is 1940 G.M.T. Any number given after the hour in G.M.T. time up to 60, gives you the minutes past the hour. For example—if it were 1920 G.M.T. time it would be 1:20 P.M.; 1935 G.M.T. would be 1:35 P.M., etc.

Special Antenna Helps Shortwave Reception

The new SCOTT SUPER DOUBLE-DOUBLE ANTENNA SYSTEM has incorporated in it a special self-selecting filter unit which automatically tunes the antenna to the principal shortwave and broadcast frequencies, effectively boosting the broadcast band signal sent down the antenna lead-in from 8 to 10 times over the conventional doublet. This antenna system, in combination with the Scott Supershield Antenna Coupling System built into the SCOTT PHILHARMONIC, PHANTOM DELUXE and MASTERPIECE receivers, represents, I believe, the finest DX and most efficient noise-reducing system available today. It not only assures maximum signal strength on all stations, both shortwave and broadcast band, but also quieter reception, especially in noisy locations. Although the SCOTT PHILHARMONIC, PHANTOM DELUXE and MASTERPIECE will provide satisfactory reception with any of the conventional antenna systems, it is strongly recommended that the new antenna system be used with these models. The price of the Scott Super Double Doublet Antenna is \$12.50 net.

Where to Get the Latest Information on Foreign Shortwave Stations

The allwave radio log published monthly by the Radex Publishing Company, 362 Cedarlane, Teaneck, New Jersey, at \$1.75 per year, is one of the best and most up-to-date shortwave broadcast logs. The International Shortwave Club, East Liverpool, Ohio, issues a magazine each month giving the latest information on shortwave stations with their transmitting schedules, and the subscription is only \$1.00 per year. Every Scott owner will find it very much worth while to subscribe to one or both of these publications.

THE PRINCIPAL SHORT WAVE BROADCAST AND PHONE STATIONS OF THE WORLD

The following log of the frequencies (shown in megacycles) and the time schedule (shown in Eastern Standard Time) of the principal Shortwave stations of the world has been very carefully compiled from the latest information available. However, owing to the fact that new stations are constantly coming on the air and old ones signing off, and the time schedules and frequencies are constantly being changed, it is impossible to

compile a log that will remain accurate for any considerable period.

All times and schedules shown are in Eastern Standard Time. Subtract one hour for Central Standard Time; two hours for Mountain Standard Time and three hours for Pacific Standard Time.

Mc.	Log	Call	Mc.	Log	Call	Mc.	Log	Call
21.640	GRZ	DAVENTRY, ENG.	17.760	DJE	BERLIN, GERMANY, 12:05-5:30 am., 6-7:45 am., 11:10 am.-12:25 pm., 4:55-9 pm.	15.195	TAQ	ANKARA, TURKEY, 5:30-7 am., 9:30-11 am.
21.630	WRCA	BOUND BROOK, N. J., 8 am.-4 pm.	17.755	ZBW5	HONGKONG, CHINA, Daily 11:30 pm.-1:15 am., 5-10 am., Sat. 9 pm.-1:30 am., Sun. 5-9:30 am.	15.190	OIE	LAHTI, FINLAND, 1:05-4 am., 9 am.-5 pm.
21.570	WCBS	NEW YORK CITY, Irregular.	14.795	IQA	ROME, ITALY.	15.190	XGOX	CHUNGKING, CHINA, Irreg. 9-11 pm.
21.565	DJJ	BERLIN, GERMANY, Irregular.	15.340	DJR	BERLIN, GERMANY, 4:55-10:50 pm.	15.190		LAHTI, FINLAND.
21.550	GST	DAVENTRY, ENG., Irregular.	15.330	WGEA	SCHENECTADY, N. Y., 10:15 am.-5 pm.	15.190	ZBW4	HONGKONG, CHINA, Irregular. 11:30 pm. to 1:15 am., 3-10 am.
21.540	WPIT	PITTSBURGH, PA., 5:30-8 am.	15.330	KGEI	SAN FRANCISCO, CALIF., 1-4 am., 5-8 am., 12:30-8 pm.	15.180	GSO	DAVENTRY, ENG., 4:20-6 pm., 6:25-9:20 pm.
21.530	GSJ	DAVENTRY, ENG., 5:45-8:50 am.	15.320	OZH	SKAMLEBAK, DENMARK, Sun. 8 am.-1:30 pm.	15.170	TGWA	GAUTEMALA CITY, GAUT., Daily 12:45-1:45 pm., Sun. 12:45-5:15 pm.
21.520	WCAI	PHILADELPHIA, PA., Irregular.	15.310	GSP	DAVENTRY, ENG., 12:25-4 pm., 4:20-6 pm.	15.166	LKV	OSLO, NORWAY, 6:40-10 am.
21.510	2RO16	ROME, ITALY, 10-11 am.	15.300	YDB	SOERABAJA, JAVA, N. E. I., 10:30 pm.-2 am., Sat. 7:30 pm.-2 am.	15.160	JZK	TOKYO, JAPAN, 12:30-1:30 am., 7-7:30 am., 2:30-4 pm.
21.500	WGEA	SCHENECTADY, N. Y., 7-10 am.	15.300	XEBM	MAZATLAN, SIN., MEX., Irregularly 9-10 am., 1-2, 8-10 pm.	15.160	XEWW	MEXICO CITY, MEXICO, Irreg.
21.480	PH13	HUIZEN, HOLLAND, Irregular, 6:10-9:35 am.	15.300	2RO6	ROME, ITALY, 4:15-4:55, 10 am.-12:04 pm., 3-5:30, 7:30-9 pm.	15.155	SM5SX	STOCKHOLM, SWEDEN, Daily 11 am.-5 pm., Sun. 9 am.-5 pm.
21.470	GSH	DAVENTRY, ENG., 5:45 am.-12 noon.	15.290	VUD3	DELHI, INDIA, 3:30 am., 7:30 am.-12:30 pm.	15.150	YDC	BANDOENG, JAVA, 6-7:30 pm., 10:30 pm.-2 am., Sat. 7:30 pm.-2 am., Daily 4:30-10:30 am.
21.460	WSLA	BOSTON, MASS., Sun. 9-11:30 am., Tues. 10-11 am.	15.290	LRU	BUENOS AIRES, ARG., 7-9 am.	15.140	GSF	DAVENTRY, ENG., 12 m.-2:25 am., 5:45 am.-12 n., 4:20-6 pm., 6:20-9:30 pm.
21.450	DJS	BERLIN, GERMANY, 12:05-7:50 am.	15.280	DJQ	BERLIN, GERMANY, 12:05-11 am., 4:50-10:50 pm.	15.130	TPB6	PARIS, FRANCE, 6-8:15 pm.
19.020	HS6PJ	BANGKOK, SIAM, Mondays 8-10 am.	15.280	H13X	CIUDAD TRUJILLO, D. R., Sun. 7:40-9:40 pm. Tues. and Fri. 8:10-10:10 pm.	15.130	WSLR	BOSTON, MASS., Sun. 11 am.-12:30 pm.
18.480	HBH	GENEVA, SWITZERLAND, Sun. 10:45-11:30 am.	15.270	WCAI	PHILADELPHIA, PA., Daily, 10:45-11:45 am., 12:30-5:15 pm. Sat. Noon-5:15 pm. Sun. Noon-5 pm.	15.120	HVJ	VATICAN CITY, Tues. 10:30-11 am. Suns. 1-1:30 pm.
17.850	TPB3	PARIS, FRANCE, 5:30-10 am.	15.260	GSJ	DAVENTRY, ENG., Mid. to 2:15 am. 12:25-4 pm.	15.120	CSW4	LISBON, PORTUGAL, 7-9 am. Irregular.
17.845	DJH	BERLIN, GERMANY, 12:05-7:50, 8-9, 9:15-11 am.	15.250	WSLR	BOSTON, MASS., 2-4 pm., ex. Sat. and Sun.	15.110	DJL	BERLIN, GERMANY, 12:05-2, 8-9 am., 10:40 am.-4:25 pm.
17.840	HVJ	VATICAN CITY.	15.243	TPA2	PARIS, FRANCE, 6-11 am.	15.100	CB1510	VALPARAISO, CHILE.
17.840		MOYDRUM, ATHLONE, EIRE, 8:30-10 am., 12:30-4:30 pm. Irregular.	15.240	2RO	ROME, ITALY, 19.68 m. Irregular 3-9 pm.	15.100	2RO12	ROME, ITALY, Irreg.
17.830	WCBS	NEW YORK CITY, Daily 8:15-10 am., 1-6 pm. Sat., 8:15 am.-12 n., 12:30-6 pm. Sun., 8 am.-12 n., 12:30-6 pm.	15.240	CR7BD	LOURENCO MARQUES, MOZAMBIQUE, Irregular.	15.083	RKI	MOSCOW, U.S.S.R., 7-9:15 pm., Sun. 12:15-2:30 pm.
17.820	2RO8	ROME, ITALY, 5-8:45 am.	15.220	PCJ2	HILVERSUM, NETH., Sun. 7:40-9:05 am. Mon. & Thur. 7:40-9 am. Tue. 1:00-2:30 am. Wed. 9:30-11:30 am. Tu., Wed., Fri., Sat. 7:40-8:45 am.	14.930	PSE	RIO DE JANEIRO, BRAZIL
17.810	GSV	DAVENTRY, ENGLAND, 5:45-8:50 am., 12:20-4 pm.	15.215	RV96	MOSCOW, U.S.S.R., Mon., Tues., Fri., Sat. 2:30-3:30 pm. Daily 3-4 am. Mon., Wed., Thurs. 7-9:15 pm.	14.920	KQH	KAHUKU, HAWAII, Sats. 1-1:30 am., 11-11:30 pm. Fri. 9-10 pm.
17.800	OIH	LAHTI, FINLAND, 16.85 meters' 4-9 am.	15.210	WPIT	PITTSBURGH, PA., 9 am.-2 pm.	14.600	JVH	NAZAKI, JAPAN, 10-10:30 pm.
17.800	TGWA	GUATEMALA CITY, GUAT.	15.200	DJB	BERLIN, GERMANY, 12:05-11 am., 4:50-10:50 pm. Also Sun. 11:10 am.-12:25 pm.	14.535	HBJ	GENEVA, SWITZERLAND, Sun. 10:45-11:30 am., Mon. 4-4:15 am.
17.800	XGOX	CHUNGKING, CHINA, 9-10:30 pm.				14.440		RADIO MALAGA, SPAIN, 5:45-7:30 pm.
17.790	GSG	DAVENTRY, ENG., 5:45 am.-12 n., 12:25-4 pm.				14,000 TO 14,400 MEGS.		AMATEUR 20 METER BAND
17.785	JZL	TOKYO, JAPAN, 4:30-5:30 pm., 8-9 pm.				14,003	EA9AH	TETUAN, SPANISH MOROCCO, 5:15-6:15 pm., 6:30-7:30 pm., 9-10 pm.
17.780	WNBI	BOUND BROOK, N. J., 9 am.-5 pm. to Europe, 5-10 pm.						
17.770	PH12	HUIZEN, HOLLAND, Daily 7:40-8:45 am. Mon. & Thurs. 7:40-9 am. Sun. 6:40-10:05 am.						

Mc.	Log	Call	Mc.	Log	Call	Mc.	Log	Call
12.486	HIIN	TRUJILLO CITY, DOM. REP., 6:40-10:40 am., 5:10-10:10 pm.	11.760	XETA	MONTEREY, MEX., Irregular.	10.100		DEUTSCHE FREIHEITS SENDER, Undercover German Station, 4-5 pm.
12.460	HC2JB	QUITO, ECUADOR, Daily exc. Mon. 7-8:15, 11:30 am.-2:30. 4:45-10:15 pm.	11.760	OLR4B	PRAGUE, BOHEMIA, Daily exc. Sun. 8:25-10:05 am.	10.050	TIEMT	SAN JOSE, COSTA RICA, 4:30-8 pm.
12.235	TFJ	REYKJAVIK, ICELAND, Sun. 1:40-2:30 pm.	11.750	GSD	DAVENTRY, ENG., 12 m.- 2:25 am., 10:45 am.-noon., 12:25-6 pm., 6:20-8:30 pm., 9:20-11:30 pm.	10.042	DZB	ZEESEN, GERMANY, Irregular.
12.230	COCE	HAVANA, CUBA, 8 am.-mid- nite. Sun., noon-mid.	11.740	HVJ	VATICAN CITY, Tues. 8:30-9 am.	10.010	COBC	HAVANA, CUBA, 6:55 am.- 1 am.
12.000	RNE	MOSCOW, U.S.S.R., 6-6:30, 10-10:30 am., 1-1:30, 3-5:30, 8:30-10 pm., Sun. 6-10 am., 1-6, 9-10 pm.	11.740	CR6RC	LOANDA, ANGOLA, Tues., Thurs., Sat. 2-3:30 pm.	9.920	JDY	DAIREN, MANCHUKUO, 7- 8 am.
12.000	CB1180	SANTIAGO, CHILE, 7-11 pm.	11.735	COCX	HAVANA, CUBA., Daily 8 am.- 1 am. Sun. 8 am.-1 am.	9.892	CPI	SUCRE, BOLIVIA, 11 am.-n., 7-9 pm.
11.960	H12X	CIUDAD TRUJILLO, D. R., Tue. and Fri. 8:10-10:10 pm, Sun. 7:40-9:40 am.	11.735	LKQ	OSLO, NORWAY, 10 am.-3 pm.	9.860	COCM	HAVANA, CUBA.
11.940	T12XD	SAN JOSE, COSTA RICA, 7:30 am.-noon, 4-10 pm.	11.730	PHI	HUIZEN, HOLLAND.	9.855	EAQ	MADRID, SPAIN, 7:30-8, 8:40- 9 pm., 3:45-4:05, 4:45-5:05 am.
11.940	XMHA	SHANGHAI, CHINA, 5-11 am.	11.730	WSLR	BOSTON, MASS., Daily exc. Sat. and Sun. 9:15-11:30 pm.	9.835	IRF	ROME, ITALY, 6-9 pm.
11.930	PPH	RIO DE JANEIRO, BRAZIL	11.720	CJRX	WINNIPEG, CANADA, Daily 6 pm.-12 m., Sat. 6 pm.-Sun. 4 am.	9.770	HH3W	PORT-AU-PRINCE, HAITI, 1-2, 7-9:15 pm.
11.910	CD1190	VALDIVIA, CHILE, 10 am.-1 pm., 3-6, 7-10 pm.	11.720	ZP14	VILLARICA, PARAGUAY, Irregular.	9.735	CSW7	LISBON, PORTUGAL, 6-9 pm.
11.900		HANOI, FRENCH INDO- CHINA.	11.718	CR7BH	LAURENCO MARQUES, POR- TUGUESE E. AFRICA, Daily 12:05-1, 4:30-6:30, 9:30-11 am., 12:05-4 pm., Sun. 5-7 am., 10 am.-2 pm.	9.700	CB970	VALPARAISO, CHILE, 6:30- 11:30 pm.
11.900	XEW1	MEXICO CITY, MEXICO, Mon., Wed., Fri. 3-4 pm., 9 pm.-12 m. Tues. and Thur. 7:30 pm.-12 m., Sat. 9 pm.-12 m., Sun. 12:30- 2 pm.	11.718	TPA4	PARIS, FRANCE, 7-9:15, 9:30- mid.	9.690	T14NRH	HEREDIA, COSTA RICA, Sun. 7-8 am., Tues., Thurs., Sat. 9- 10 pm.
11.900	XGOY	CHUNGKING, CHINA, 5:30- 10:30, 11-11:30 am., 4-6:30 pm.	11.710	YSM	SAN SALVADOR, EL SAL- VADOR, 1-2:30 pm.	9.690	LRAI	BUENOS AIRES, ARG., 6-9 pm. Mon.-Thurs., 4-9 pm. Fri., 7-9 pm. Sat.
11.890	2RO13	ROME, ITALY, Irregular 6-9 pm.	11.710		SAIGON, FRENCH INDO- CHINA, 7:30-9:15 am.	9.690	SRX	DAVENTRY, ENG.
11.885	TPB7	PARIS, FRANCE, 2-5 am., 11:15 am.-6 pm.	11.705	JLG3	TOKYO, JAPAN, 2:30-4 pm.	9.690	ZHP	SINGAPORE, MALAYA, Sun. 5:40-9:40 am., Wed. 12:40- 1:40 am., Mon.-Fri. 4:40- 9:40 am., Sat. 12:25-1:40 am., 4:40-9:40 am., 10:40 pm.- 1:10 am. (Sun.)
11.880	VLR3	MELBOURNE, AUST., 1-3 am.	11.705	SBP	MOTALA, SWEDEN, 1:20-2:05, 6-9 am., 11 am.-1 pm., Sat. 1:20- 2 am., 6 am.-1:30 pm., Sun. 3 am.-1:30 pm. Wed. and Sat. 8-9 pm.	9.685	TGWA	GUATEMALA CITY, GUAT., Daily 10-11:30, pm.; Sun. 7- 10:45 pm.
11.870	WPIT	PITTSBURGH, PA., 2-11 pm.	11.700	HP5A	PANAMA CITY, PAN., 10 am.- 1 pm., 5-10 pm. Sun. 6-10 pm.,	9.675	DJX	BERLIN, GERMANY, 10:40 am.- 4:25 pm.
11.870	VUM2	MADRAS, INDIA., Irregular.	11.700	CB1170	SANTIAGO, CHILE, 10 am.- 2 pm., 3:30-11 pm.	9.670	WNBI	BOUND BROOK, N. J., 5 pm.- 12 m.
11.860	GSE	DAVENTRY, ENG., 5:45 am.- 12 n., 12:25-3, 6:20-8:30 pm. (Sun. 6-8:30 pm.)	11.673	IQY	ROME, ITALY, Daily 12:07- 12:56, 1:50-2:30 pm.	9.670	2RO9	ROME, ITALY, 12:40-1, 1:37- 5:30 pm. Irreg. 6-9 pm.
11.855	DJP	BERLIN, GERMANY, Irregular.	11.650	COCX	HAVANA, CUBA, 8 am.-mid., Sun., 6-9 pm.	9.660	LRX	BUENOS AIRES, ARG., 6- 6:45 am.- 9:15 am.-10 pm.
11.850	CB1185	SANTIAGO, CHILE, Irregular.	11.402	HBO	GENEVA, SWITZERLAND, Sun. 7-7:45 pm., Mon. 1-1:15 am., 7-8:30 pm.	9.660	HVJ	VATICAN CITY, Sun. 5-5:30 am., Wed. 2:30-3 pm.
11.840	KZRM	MANILA, P. I., Irregular.	11.380	XTS	CHUNGKING, CHINA, 1-1:30, 8-8:35 am., 6:45-7:30 pm.	9.650	WCBS	NEW YORK CITY.
11.840	CSW	LISBON, PORT., Irregular.	11.040	CSW5	LISBON, PORTUGAL, Noon- 5:30 pm. Sun. 11 am.-5:30 pm.	9.650	CS2WA	LISBON, PORTUGAL, Thurs. and Sat. 4-7 pm.
11.840	OLR4A	PRAGUE, BOHEMIA, Daily 8-10:30 am., Sun. 7:15-9:55 pm.	11.000	PLP	BANDOENG, JAVA, 6- 7:30 pm., 10:30 pm.-2 am., 4:30- 10:30 or 11 am. Sat. until 11:30 am.	9.65	IABA	ADDIS ABABA, ETHIOPIA, 3:55-4:05, 4:15-4:45, 11 am.- noon, 1-3 pm. Suns. 3:30- 3:55 am.
11.830	WCBI	CHICAGO, ILL., Irregular.	10.670	CEC	SANTIAGO, CHILE, Irregular.	9.645	JLT2	TOKYO, JAPAN, 2:30-4 pm.
11.830	WCBS	NEW YORK CITY, 8-10:30 pm.	10.660	JVN	NAZAKI, JAPAN.	9.640	CXA8	COLONIA, URUGUAY, 5 am.- 10:45 pm. Sat. to 1 am.
11.826	XEBR	HERMOSILLA, SON., MEX., 9:30-11 am., 1-4 pm., 9 pm.- 12 m.	10.600	ZIK2	BELIZE, BRIT. HONDURAS, Tue., Thurs., Sat. 1:30-2, 8:30- 9 pm.	9.640	HH3W	PORT-AU-PRINCE, HAITI
11.820	GSN	DAVENTRY, ENG., Irregular.	10.535	JIB	TAIHOKU, TAIWAN, 9- 9:55 am., 1-2:30 am. Sun. to 10:15 am.	9.636	JFO	TAIHOKU, TAIWAN, Irregular.
11.810	2RO4	ROME, ITALY, Daily 4:30- 8:45 am., 10 am.-2:30 pm., 6-9 pm.	10.400	YSP	SAN SALVADOR, EL. SAL- VADOR, 1-3, 6:30-11 pm.	9.635	2RO3	ROME, ITALY, 12:07-3 pm., 5:30-9 pm., also Mon. 3:50- 4:05 pm., Fri. and Sat. 4-4:20 pm.
11.805	OZG	SKAMLEBAK, DENMARK, Irreg.	10.370	EAJ43	TENERIFE, CANARY ISL., 3- 4:30, 5-7, 7:45-8:45, 9-10 pm.	9.630	HJ7ABD	BUCARAMANGA, COL., 5:45- 6:30, 11:30 am.-1 pm., 6-11 pm.
11.800	DJZ	BERLIN, GERMANY, 4:50- 10:50 pm.	10.350	LSX	BUENOS AIRES, ARG., Irregular.	9.616	HJ1ABP	CARTAGENA, COL., Daily 9 am.- 1:30 pm., 7-10:15 pm., Sun. 4:30- 10 pm.
11.800	COGF	MATANZAS, CUBA, 2-3, 4-5, 6 pm.-Mid.	10.330	ORK	RUYSELEDE, BELGIUM, 1:30-3 pm.	9.610	LLG	OSLO, NORWAY, 3-6, 8-9, 11 pm.-mid.
11.800	JZJ	TOKYO, JAPAN, 8-10:30 am., 2:30-4 pm.	10.290	DZC	ZEESEN, GERMANY, Irregular.	9.606	ZRL	KLIPHEUVAL, S. AFRICA, Daily, exc. Sat. 11:45 pm.-12:50 am. Daily exc. Sun. 3:20-7:20, 9- 11:45 am., Sun. 3:30-4:30 or 4-5, 5:30-7, 9-11:45 am.
11.790	WSLR	BOSTON, MASS., Daily 3:15- 6:30 pm., Sat. 1:30-6 pm., Sun. 1-6:30 pm.	10.260	PMN	BANDOENG, JAVA, 6- 7:30 pm., 10:30 pm.-2 am., 4:30- 10:30 or 11 am., Sat. to 11:30 am.	9.600	RAN	MOSCOW, U.S.S.R., Daily exc. Sun. 6-10 pm. Sun. 6-7, 9:15- 10 pm.
11.780	HP5G	PANAMA CITY, PAN., 6-10 pm.	10.220	PSH	RIO DE JANEIRO, BRAZIL, Irregular.	9.600	CB960	SANTIAGO, CHILE, 8-11:30 pm.,
11.780	OFE	LAHTI, FINLAND, 1:05-3 am., 5-6:20 am., 10 am.-12:30 pm.						
11.770	DJD	BERLIN, GERMANY, 11:30 am.- 4:25 pm., 4:50-10:50 pm.						
11.760	TGWA	GAUTEMALA CITY, GAUT., Irregular.						

Mc.	Log	Call
9.600	GRY	DAVENTRY, ENG., 12:25-6 pm.
9.600	XEYU	MEXICO CITY, MEX.
9.59	HP5J	PANAMA CITY, PANAMA, 12 n. to 1:30 pm., 6-10:30 pm.
9.595		MOYDRUM, ATHLONE, EIRE, Irregular.
9.595	HBL	GENEVA, SWITZERLAND, Irregular.
9.590	VUD2	DELHI, INDIA, 7:30 am.-12:30 pm., 8:30-10:30 pm.
9.590	PCJ	HUIZEN, HOLLAND, Sun. 2-3, 7-9:25 pm. Tues. 1:45-3:40, 7:15-8:45, 9-10:30 pm., Wed. 7:15-8:30 pm., Fri. 8-9 pm.
9.590	VK6ME	PERTH, W. AUSTRALIA, 6-8 am. exc. Sun.
9.590	VK2ME	SYDNEY, AUSTRALIA, Sun. 1-3 am., 5-9, 9:30-11:30 am.
9.590	WCAI	PHILADELPHIA, PA., Mon. and Thurs. 7:30-11:30 pm. Sat. 7:30-10:45 pm.
9.580	GSC	DAVENTRY, ENGLAND, 12:25-4, 4:20-6, 9:20-11:30 pm.
9.580	VLR	MELBOURNE, AUSTRALIA, Daily 3:30-8:30 am. Sun. 12:01-7:30 am.
9.570	KZRM	MANILA, P. I., Wkdys. 4:30-6 pm.
9.570	WBOS	BOSTON, MASS., 6 am.-12 m. Sun. 7 am.-12 m.
9.562	OAX4T	LIMA, PERU, 7-8, 11:30 am.-1:30, 4-6:15 pm.
9.560	XGAP	PEKING, CHINA, 4-9 am.
9.560	DJA	BERLIN, GERMANY, 6:30-10:50 pm.
9.550	HVJ	VATICAN CITY, Sun. 5-5:30 am., Wed. 2:30-3 pm.
9.550	TPBII	PARIS, FRANCE, Irregular.
9.550	WGEA	SCHENECTADY, N. Y., 5:15-8:15 pm.
9.550	OLR3A	PRAGUE, BOHEMIA, Irregular.
9.550	ZEFT	VERA CRUZ, MEX., 10:30 am.-4:30 pm., 10:30 pm.-12:30 am.
9.550	YDB	SOERABAJA, JAVA, Daily exc. Sat. 6-7:30 pm., 4:30-10:30 am. Sat. 4:30-11:30 am.
9.550	VUB2	BOMBAY, INDIA, 1-3:30 am., 5-6 am., 9:30-10:30 pm.
9.540	DJN	BERLIN, GERMANY, 12:05-11 am., 4:50-10:50 pm.
9.538	VPD2	SUVA, FIJI ISLANDS, 5:30-7 am., exc. Sun.
9.535		SCHWARZENBURG, SWITZERLAND, 1-2 pm., 6:45-7:45, 8-9 pm.
9.530	JZI	TOKIO, JAPAN.
9.530	KGEI	SAN FRANCISCO, CAL., 7-10 am.
9.530	WGEA	SCHENECTADY, N. Y., 3-11 pm.
9.530	VUC2	CALCUTTA, INDIA, 2:06-4:06 am., 10 pm.-2 am.
9.525	XEDQ	GUADALAJARA, GAL., MEXICO, 8-11:30 pm.
9.525	ZBW3	HONGKONG, CHINA, 5-10 am., 11:30 pm.-1:15 am. Sun. 5-9:30 am.
9.525	LKC	JELOY, NORWAY, 4:30-10:30 am., Sun. 2:30-10:30 am.
9.523	ZRG	ROBERTS HEIGHTS, S. AFRICA, Daily exc. Sun. 5-7:30 am.
9.520	OZF	SKAMLEBOAEK, DENMARK, 8-9:30, 9:30-11 pm. to No. America.
9.520	YSH	SAN SALVADOR, EL SALVADOR, Irregular.

Mc.	Log	Call
9.520	RV96	MOSCOW, U.S.S.R., 1-3, 4-7 pm.
9.510	GSB	DAVENTRY, ENGLAND, 12 m.-2:28 am., 12:28-4, 4:20-6, 6:20-8:30, 9:20-11:30 pm.
9.510	HJU	BUENAVENTURA, COLOMBIA, Mon., Wed. and Fri. 8-11 pm.
9.510	VK3ME	MELBOURNE, AUSTRALIA, Daily except Sun. 4-7 am.
9.510	HS8PJ	BANGKOK, SIAM, Thursday, 8-10 am.
9.510		HANOI, FRENCH INDO-CHINA, 12-2 am., 6-10 am. 15 watts.
9.503	XEWV	MEXICO CITY, MEX., 7:45 am.-12:30 am.
9.501	PRF5	RIO DE JANEIRO, BRAZIL, 4:45-5:55 pm. Ex. Suns.
9.500	XGOY	CHUNGKING, CHINA, Irreg. 7-8, 9-11:50 am., 4-5:30 pm.
9.500	OFD	LAHTI, FINLAND, 12:15-5 pm.
9.497	KZIB	MANILA, PHIL. ISL., 7-9:05 am.
9.488	EAR	MADRID, SPAIN, Irregular.
9.465	TAP	ANKARA, TURKEY, Irregular.
9.445	HCODA	GUAYAQUIL, ECUADOR, 8:15-10:15 pm., exc. Sun.
9.437	COCH	HAVANA, CUBA, 8 am.-9:30 pm. Sun. 8 am.-12 m.
9.390	OAX5C	ICA, PERU, 7-11:30 pm.
9.370	XOY	CHENG TU, CHINA, 9:45-10:30 am.
9.363	COBC	HAVANA, CUBA, 6:55 am.-mid.
9.355	HCJETC	QUITO, ECUADOR, Thurs. until 9:30 pm. 8-11 pm. Sats.
9.350	COCD	HAVANA, CUBA, 10 am.-11:30 pm. Sun. 10 am.-9 pm.
9.345	HBL	GENEVA, SWITZERLAND, Sun. 7-7:45, 8-8:45 pm. Mon. 6:50-8:15 pm.
9.340	OAX4J	LIMA, PERU, 12 n.-3 pm., 5 pm.-1 am.
9.295	H12G	CIUDAD TRUJILLO, D. R., 6:40-8:40 am., 11:40 am.-2:10 pm., 3:40-4:40 pm.
9.280	LYR	KAUNAS, LITHUANIA, Irreg.
9.200	COBX	HAVANA, CUBA, 8 am.-11:30 pm.
9.170	HCIGQ	QUITO, ECUADOR, Mon., Wed., Sat. 9-9:55 pm.
9.135	HC2CW	GUAYAQUIL, ECUADOR, 11 am.-1, 7-11 pm.
9.125	HAT4	BUDAPEST, HUNGARY, Daily 7-8 pm., Sat., 6-7 pm.
9.100	COCA	HAVANA, CUBA, Noon-12:15 am. Irreg. to 3 am.
9.091	PJCI	CURACAO, D. W. INDIES, 6:36-8:36 pm., Sun. 10:36 am.-12:36 pm.
9.030	COBZ	HAVANA, CUBA, 7:45 am.-1:15 am. Sun. 7:45 am.-12 m.
8.965	COKG	SANTIAGO, CUBA, 9-10 am., 11:30 am.-1:30 pm., 3-4:30, 5-6, 10-11 pm., 12 m.-2 am.
8.841	HCJB	QUITO, ECUADOR, 7-8:30 am., 11:45 am.-2:30 pm., 5-10 pm., exc. Mon. Sun. 12 n.-1:30 pm., 5:30-10 pm.
8.830	COCQ	HAVANA, CUBA, 6:55 am.-1 am.
8.700	HKV	BOGOTA, COLOMBIA, Tues. and Fri. 7-7:20 pm.
8.665	COJK	CAMAGUEY, CUBA, 5:30-6:30, 8-11 pm., daily exc. Sat. and Sun.
8.650	HJ4DAU	MEDELLIN, COLOMBIA, Wkdys. 7-10 pm.

Mc.	Log	Call
8.580	YNPR	MANAGUA, NICARAGUA, 12:45-2:15, 6:45-10:15 pm.
8.572		BUCHAREST, ROUMANIA, 8:15-10:30 am., 4-7 pm.
8.090	YDX	MEDAN, SUMATRA, N. E. I., Daily exc. Sat., 10:30 pm.-2 am. Sat. 7:30 pm.-1:30 am. Irregular to 9 am.
7.894	YSD	SAN SALVADOR, EL SALVADOR, 7:10-30 pm.
7.870	HCIRB	QUITO, ECUADOR, 8:30-11:30 pm.
7.854	HC2JSB	GUAYAQUIL, ECUADOR, 11 am.-2, 4-11 pm.
7.797	HBP	GENEVA, SWITZERLAND.
7.614	CR6AA	LOBITO, ANGOLA, Mon., Wed., Sats. 2:45-4:30 pm.
7.520	KKH	KAHUKU, HAWAII, Fri. 9-10 pm., Sat. 1-1:30 am., 9:30-10 pm.
7.510	JVP	TOKIO, JAPAN.
7.500	EAJ43	TENERIFE, CANARY ISL., Irreg.
7.450	TI2RS	SAN JOSE, COSTA RICA, 7-11 pm.
7.440	FG8AH	POINT-A-PITRE, GUADELOUPE, F. W. I., Irregular.
7000 TO 7300 AMATEUR 40 METER BAND		
6.990	XEME	MERIDA, YUCATAN, Irregular.
6.977	XBA	TACUBAYA, D. F., MEX., 9:30 am.-1 pm., 7-8:30 pm.
6.960	2ZB	WELLINGTON, N. Z., Mid-7 am.
6.880	XOJD	HANKOW, CHINA, 6-8:30 am.
6.805	H17P	CIUDAD TRUJILLO, DOM. REP., Daily exc. Sat. and Sun. 12:40-1:40, 6:40-8:40 pm. Sat. 12:40-1:40 pm. Sun. 10:40 am.-11:40 am.
6.790	PZH	PARAMIRABO, SURINAM, Daily 6:06-8:36 am., Sun. 9:36-11:36 am. Daily 5:36-8:36 pm.
6.775	HIH	SAN PEDRO DE MACORIS, DOM. REP., 12:10-1:40 pm., 7:30-9 pm. Sun. 3-4 am., 4:15-6 pm., 4:40-7:40 pm.
6.750	JVT	NAZAKI, JAPAN, Irregular.
6.730	H13C	LA ROMANA, DOM. REP., 12:30-2 pm., 5-6 pm.
6.710	PMH	BANDOENG, JAVA, 4:30-11 or 11:30 am. Also Sat. 9:30 pm.-1:30 am.
6.690	TIEP	SAN JOSE, COSTA RICA, Daily 4-11 pm.
6.675	HBQ	GENEVA, SWITZERLAND, Sun. 1:45-2:45 pm.
6.660	HI6Y	TRUJILLO CITY, D. R.
6.635	HC2RL	GUAYAQUIL, ECUADOR, S. A., Sun. 5:45-7:45 pm., Tues. 9:15-11:15 pm.
6.630	HIT	CIUDAD TRUJILLO, D. R., Daily exc. Sun. 12:10-1:40 pm., 5:40-8:40 pm.; also Sat. 10:40 pm.-12:40 am.
6.625	PRADO	RIOBAMBA, ECUADOR, Thurs. 9-11:45 pm.
6.610	YNLG	MANAGUA, NICARAGUA, 1:30-2:30, 6-10:15 pm.
6.600	HI6H	TRUJILLO CITY, D. R., 7:40-8:40 pm.
6.565	HI5P	PUERTO PLATA, D. R., 5:40-7:40, 9:40-11:40 pm.
6.558	HI4D	CIUDAD TRUJILLO, D. R., 12:30-2, 6-8 pm. Except Suns.
6.550	XBC	VERA CRUZ, MEX., 8:15-9 am.
6.550	TIRCC	SAN JOSE, COSTA RICA, 11 am.-2 pm., 6-7, 8-9 pm. Daily 12 n.-2 pm., 6-7 pm., Thurs. 6-11 pm.

Mc. Log Call
6.545 — YV6RB BOLIVAR, VENEZUELA, 6-10:30 pm.
6.520 — YV4RB VALENCIA, VENEZUELA, 11 am.-2 pm., 5-10 pm.
6.516 — YNIGG MANAGUA, NICARAGUA, 1-2:20, 8-10 pm. Except Sun.
6.500 — HIIL SANTIAGO DE LOS CABALLEROS, D. R., 9:40-11:40 am., 7:40-9:40 pm.
6.490 — TGWB GUATEMALA CITY, GUAT., Daily 7:45-9 am. 12:45-3:45 pm., 7:30 pm.-12:15 am. Sun. 10:30 am.-5:15 pm., 7 pm.-12 m.
6.470 — YNLAT GRANADA, NICARAGUA, Irregular.
6.465 — YV3RD BARQUISIMETO, VENEZUELA, Irregular.
6.455 — HI4V SAN FRANCISCO DE MACORIS, 11:40 am.-1:40 pm., 5:10-9:40 pm.
6.420 — HIIS SANTIAGO, D. R., 5:40-7:35 pm. Ex. Suns.
6.400 — TGQA QUEZALTENANGO, GUATEMALA, Mon.-Fri. 9-11 pm. Sat. 10 pm.-1 am. Sun. 1-3 pm.
6.388 — HI9B SANTIAGO, D. R., Mon. & Fri. 8:10-8:40 pm.
6.380 — ZIZ BASSETERRE, ST. KITTS, W. INDIES, 4-4:45 pm., Wed. 7-7:30 pm.
6.357 — HRPI SAN PEDRO SULA, HONDURAS, 6-7:30 am., 2-4 pm.
6.355 — IAC ROME, ITALY.
6.340 — HIIX CIUDAD TRUJILLO, D. R., daily 12:10-1:10 pm., Sun. 7:40-10:40 am., Tues. and Fri. 8:10-10:10 pm.
6.335 — OAXIA ICA, PERU, 8-11 pm.
6.324 — COCW HAVANA, CUBA, 7 am.-mid.
6.310 — HIZ CIUDAD TRUJILLO, D. R., Daily except Sat. and Sun. 11:10 am.-2:25 pm., 5:10-8:40 pm. Sat. 5:10-11:10 pm. Sun. 11:40 am.-1:40 pm.
6.300 — YV4RD MARACAY, VENEZUELA, 6:30-9:30 pm. exc. Sun.
6.295 — OAX4G LIMA, PERU, 7-9:30 pm.
6.280 — HIG TRUJILLO CITY, D. R., 7:10-9:40 am., 11:40 am.-2:10 pm., 3:40-9:40 pm.
6.270 — YV5RP CARACAS, VENEZUELA.
6.255 — YV5RJ CARACAS, VENEZUELA, 5:30-8 pm.
6.243 — HIN CIUDAD TRUJILLO, D. R. 12 n.-2 pm., 6-10 pm.
6.235 — HRD2 LA CEIBA, HONDURAS, 8-11 pm.; Sat. 8 pm.-1 am.; Sun. 4-6 pm.
6.225 — YVIRG VALERA, VENEZUELA, 6-9:30 pm.
6.210 — SAIGON, INDO-CHINA, 5:30-9:15 am.
6.205 — YV5RI CORO, VENEZUELA, Irregular.
6.200 — ZGE KUALALUMPUR, F. M. A.
6.200 — COKG SANTIAGO, CUBA, Daily except Sat. 9 am.-11 pm.
6.190 — JLK TOKYO, JAPAN, 8-9:30 am.
6.190 — KGEI SAN FRANCISCO.
6.190 — HVJ VATICAN CITY, Mon., Wed., Thur., Sat. 2-3:30 pm., Tues., Fri. 2-3 pm. Thur. also 3-3:30 pm.
6.190 — TG2 GUATEMALA CITY, GUAT., Mon.-Fri. 6-11 pm., Sat. 6 pm.-3 am. Suns. 7-11 am., 3-8 pm.
6.185 — HIIA SANTIAGO, D. R., 7 am.-5 pm.
6.170 — XEXA MEXICO CITY, MEX.
6.170 — WCBS NEW YORK CITY, 11 pm.-12 m.

Mc. Log Call
6.170 — XEXA MEXICO CITY, MEX., Daily 8-11 am., 2:30-4 pm., 7:30 pm.-12:45 am. Sun. 1:30 pm.-12:45 am.
6.156 — YV5RD CARACAS, VENEZUELA, 11 am.-2 pm., 4-10:40 pm.
6.153 — H15N MOCA CITY, D. R., 6:40-9:10 pm.
6.150 — HJ4DAE MEDELLIN, COLOMBIA, 9:30 am.-1 pm., 5-11:30 pm.
6.150 — CJRO WINNIPEG, MAN., CANADA, Daily 6 pm.-12 m., Sun. 5-10 pm.
6.145 — HJ4ABG MEDELLIN, COL., 11 am.-12 n., 6-10:30 pm.
6.140 — WPIT PITTSBURGH, PA., 11 pm.-12 m.
6.137 — CR7AA LAURENCO MARQUES, PORT. E. AFRICA, Daily 12:05-1, 4:30-6:30, 9:30-11 am., 12:05-4 pm., Sun. 5-7 am., 10 am.-2 pm.
6.130 — VP3BG GEORGETOWN, BRITISH GUIANA, 9-10 am., 2:15-6:30 pm., Sun. 5:30-11:30 am., 3-5 pm.
6.130 — TIEM SAN JOSE, COSTA RICA, 11 am.-11 pm., Sun. 10 am.-6 pm.
6.130 — CHNX HALIFAX, N. S., CAN., 7 am.-11:15 pm. Sat. 8 am.-11:30 pm. Sun., Noon-11:15 pm.
6.130 — LKJ JELOY, NORWAY, Noon-6 pm.
6.130 — COCD HAVANA, CUBA.
6.127 — XEUZ MEXICO CITY, MEX., 9 am.-1 pm., 7 pm.-2 am.
6.125 — CXA4 MONTEVIDEO, URUGUAY, 8 am.-Noon. 2-10 pm.
6.122 — JH3ABX BOGOTA, COL., 12 n.-2 pm. 5:30-11 pm.; Sun. 6-11 pm.
6.122 — HP5H PANAMA CITY, PAN., 10 am.-1 pm., 5-11 pm.
6.122 — FK8AA NOUMEA, NEW CALEDONIA, Wed. & Sats. 2:30-3:30 am.
6.120 — WCBS NEW YORK CITY, N. Y.
6.115 — OLR2C PRAGUE, BOHEMIA
6.110 — GSL LONDON, ENG.
6.108 — HJ6ABB MANIZALES, COL., Mon.-Fri. 12:15-1 pm.; Tue. and Fri. 7:30-10 pm.; Sun. 2:30-5 pm.
6.100 — YUA BELGRADE, JUGOSLAVIA, 1-3, 6:30-8:30 am., Noon-6:30 pm.
6.100 — W3XL BOUND BROOK, N. J., 9 pm.-12 m.
6.097 — ZRK KLIPHEUVEL, S. AFRICA, Daily 12 n.-4 pm., Sun. 12 n.-3:20 pm.
6.097 — ZRJ JOHANNESBURG, S. AFRICA, Daily exc. Sat. 11:45 pm.-12:50 am.; Daily exc. Sun. 3:15-7:30, 9-11:30 am. (Sat. 8:30-11:30 am.) Sun. 3:30-4:30 or 4-5 am., 5:30-7, 9-11:30 am.
6.095 — JZH TOKYO, JAPAN, Irregular
6.090 — ZNS NASSAU, BAHAMAS
6.083 — VQ7LO NAIROBI, KENYA, AFRICA, Mon., Fri. 5:30-6 am., 11:15 am.-2:15 pm., also Tues. and Thurs. 8:15-9:15 am.; Sat. 11:15 am.-3:15 pm.; Sun. 10:45 am.-1:45 pm.
6.081 — YV1RD MARACAIBO, VEN., 6-11 pm.
6.080 — WCBI CHICAGO, ILL., Irregular.
6.080 — CRY9 MACAO, MACAO, Mons. 8:30-10 am.
6.080 — HP5F COLON, PAN., 7-9 pm.
6.079 — DJM BERLIN, GERMANY, Irregular.

Mc. Log Call
6.077 — OAX4Z LIMA, PERU, 7 pm.-1:30 am. Except Sun.
6.075 — VP3MR GEORGETOWN, BRITISH GUIANA, Daily 4:45-8:45 pm. Sun. 7:45-10:15 am.
6.070 — CFRX TORONTO, CAN., 6:30 am.-11 pm., Sun. 9 am.-11 pm.
6.070 — CKFX VANCOUVER, B. C., CAN., Sun. 1:45-9 pm., 10:30 pm.-1 am.; Tues. 6-7:30 pm., 11:30 pm.-1:30 am. Daily 6-7:30 pm.
6.065 — SBO MOTALA, SWEDEN, 4:15-5 pm.
6.060 — WLWO CINCINNATI, OHIO, Tues., Fri., Sun. 5:45 am.-12 n., 11 pm.-2 am.; Wed. 5:45 am.-12 n., 9 pm.-2 am.; Mon., Thurs., Sat. 5:45 am.-2 pm.
6.060 — WCAI PHILADELPHIA, PA., Wed., Fri., Sun. 7:30-11 pm., 11:30 pm.-1 am., Mon. and Thur. 12 m.-1 am. Tues. 7:30-11 pm., 12 m.-1 am. Sat. 11 pm.-2 am.
6.057 — ZHJ PENANG, FED. MALAY STATES, 6:40-8:40 am., except Sun., also Sat. 11 pm.-1 am.
6.054 — HJ6ABA PEREIRA, COL., 9:30 am.-12 n., 6:30-10 pm.
6.050 — GSA DAVENTRY, ENGLAND, 12:25-4, 4:20-6 pm.
6.045 — XETW TAMPICO, MEXICO, Irregular.
6.040 — HJ1ABG BARRANQUILLA, COL. 11 am.-11 pm.; Sun. 11 am.-8 pm.
6.040 — WSLR BOSTON, MASS., 7-9 pm. exc. Sat. & Sun.
6.033 — HP5B PANAMA CITY, PAN., 10:30 am.-2, 6-10 pm.
6.030 — CFVP CALGARY, ALTA, CAN., Thur. 9 am.-1 am.; Sun. 12 n.-12 m.
6.030 — RV59 MOSCOW, U.S.S.R., 1-3, 4-7 pm.
6.023 — XEUW VERA CRUZ, MEX., 10 pm.-1 am.
6.020 — DJC BERLIN, GERMANY, 11:30 am.-4:30 pm.
6.020 — HJ3CAX BOGOTA, COL., 5:30-11 pm., Sun. 6-11 pm.
6.017 — H13U SANTIAGO DE LOS CABALLEROS, D. R., 7:30-9 am., 12 n.-2 pm., 5-7 pm., 8-9:30 pm.; Sun. 12:30-2, 5-6 pm.
6.015 — PRA8 PERNAMBUCO, BRAZIL, 4-9 pm.
6.010 — OLR2A PRAGUE, BOHEMIA, Irregular.
6.010 — COCO HAVANA, CUBA, Daily 7:55 am.-12 m., Sun. until 11 pm.
6.010 — VK9MI S. S. KANIMBLA, (Travels between Australia and New Zealand). Sun. Wed., Thurs. 6:30-7:30 am.
6.010 — CJCX SYDNEY, NOVA SCOTIA, 7 am., 1:30, 4-8:30 pm.
6.007 — XYZ RANGOON, BURMA, 6:30-10 am., 9:11 pm., Sat. 9:30-11 pm.
6.007 — ZRH ROBERTS HEIGHTS, S. AFRICA, Daily exc. Sun. 9:30 am.-3:30 pm.; Sun. 9 am.-12 n., 12:15-3:15 pm.
6.005 — HP5K COLON, PAN., 7-9 am., 10:30 am.-1 pm., 5-11 pm.
6.005 — CFCX MONTREAL, CAN., 6:45 am.-12 m.; Sun. 8 am.-10:15 pm.
6.005 — VE9DN DRUMMONDVILLE, QUE., CAN.
6.002 — CXA2 MONTEVIDEO, URUGUAY, 5:30-10:30 pm.
6.000 — XEBT MEXICO CITY, MEX., 10 am.-1:45 am.

ALPHABETICAL LIST OF PRINCIPAL CITIES AND COUNTRIES OF THE WORLD, ARRANGED IN TIME ZONES

A	Zone	C. (Cont'd)	Zone	H. (Cont'd)	Zone	N	Zone	S. (Cont'd)	Zone
Abyssinia	30	Celebes Islands	41	Hawaiian Islands	4	Nauen, Germany	27	Seychelle Islands	33
Adelaide, Australia	44	Central Time, U. S. A.	13	Hayti, West Indies	15	New Caledonia, F. Oceania	47	Shamlebark, Denmark	27
Aden, Arabia	31	Ceylon	36	Helsingfors	29	Newfoundland	18	Shanghai, China	41
Afghanistan	34	Chi-Hoa, Indo-China	39	Heredia, Costa Rica	13	New Hebrides Islands	47	Siam	39
Alaska	7	Chihuahua (Mexico)	13	Hilo, Hawaii	4	New Ireland	45	Sidney, Australia	45
Albania	28	Chile	17	Holland	26	New Zealand	48	Sierra Leone, West Africa	25
Albuquerque (Mexico)	11	Chelmsford, England	25	Honduras	15	Nicaragua	14	Singapore, Strait Sett'ments	39
Alexandria, Egypt	29	China	42	Hongkong, China	41	Nigeria	27	Sitka, Alaska	7
Algeria	25	Christmas Islands	4	Honolulu, Hawaii	4	Nome (Alaska)	7	Society Islands	5
American Samoa	3	Christchurch, New Zealand	48	Hungary	27	Norway	27	Sofia, Bulgaria	29
Amsterdam (-10 Min's)	26	Chosen	43	I		Nova Scotia	17	Solomon Islands	46
Angola, Port. W. Africa	27	Colombia, Colombia	15	Iceland	23	O		Somaliland, Africa	31
Antwerp, Belgium	25	Colon, Panama	15	India	36	Odessa, Russia	29	Soochow, China	37
Arabia	31	Constantinople, Turkey	29	Indo China	39	Oporto, Portugal	25	Sourabaya, Java (-10 Min's)	40
Argentina	17	Copenhagen, Denmark	27	Iraq, Persia	31	Osaka, Japan	43	Spain	25
Armenia	31	Costa Rica	13	Ireland	25	Oslo, Norway	27	Spanish Guinea	26
Astrakhan, Russia	32	Cuba	15	Irkutsk, Russia	39	Ottawa, Canada	15	Spitzbergen	28
Athens, Greece	29	Curaca	16	Italy	27	P		Stamboul, Turkey	29
Atlantic Time, U. S. A.	17	Czechoslovakia	27	J		Pacific Time, U. S. A.	9	St. Assise, France (-9 Min's)	25
Auckland, New Zealand	48	D		Jamaica	15	Padang, D. E. I.	38	St. Helena Island	24
Austria	27	Danzig	27	Japan	43	Palestine	29	St. John, New Brunswick	17
Azores Islands	21	Delhi, India	36	Java	40	Paraguay	18	Stockholm, Sweden	27
B		Denmark	27	Johannesburg, S. Africa	29	Panama Canal Zone	15	Straits Settlements	39
Bagdad, Mesopotamia	31	Doberitz, Germany	27	Jugoslavia	27	Perth, Australia	41	Sumatra	38
Bahama Islands	15	Dominican Republic	16	K		Pernambuco, Brazil	19	Suva	1
Bahia, Brazil	19	Dutch East Indies	40	Karachi, India	36	Persia	32	Sweden	27
Bahia Blanca, Argentine	17	Dutch Guiana	18	Kenya	31	Perth, Australia	41	Switzerland	27
Baku	32	Dutch New Guinea	44	Khabarovsk, Russia	42	Petrograd, Russia	29	Sydney	45
Bandoeng (-10 Min's) Java	40	E		Kief, Russia	31	Peru	15	Syria and Liban	29
Bangkok, Siam	39	Easter Islands	10	Kemikawa, Japan	43	Philippine Islands	41	T	
Barbados, B. W. I.	17	Eastern Australia	45	Kootwijk, Holland	26	Pitcairn Islands	8	Tahiti, South Sea Islands	5
Barcelona, Spain	25	Eastern Time, U. S. A.	15	L		Poland	27	Tampico, Mexico	13
Barranquilla, Colombia	15	Eastern European Time	29	Latvia	29	Pontoise, France	25	Tasmania	45
Batavia, D. E. I.	40	Ecuador	14	Leningrad, Russia	31	Porto Rico	17	Tegucigalpa, Honduras	15
Bathurst, Australia	25	Eindhoven, Holland	26	Liberia	25	Portugal	25	Teheran, Persia	32
Belgium	25	Egypt	29	Lima, Peru	15	Portuguese East Africa	29	Tibet	37
Belgrade, Yugoslavia	27	England	25	Lisbon, Portugal	25	Portuguese Guinea	25	Tiflis, Russia	31
Berlin, Germany	27	Estonia	29	Lithuania	27	Portuguese Timor	41	Tokio, Japan	43
Bermuda	16	F		London, England	25	Prague, Czechoslovakia	27	Tomsok, Russia	36
Berne, Switzerland	27	Falkland Islands	17	Luxemburg	25	Pretoria, South Africa	29	Tonga Island	2
Bogota, Colombia	15	Fiji Islands	1	Lyons, France	25	Q		Toronto, Ontario	15
Bolivia	18	Finland	29	M		Quebec, Canada	15	Trinidad, W. Indies	17
Bombay, India	36	Formosa	41	Madagascar	25	Quito, Ecuador	14	Tripoli, N. Africa	27
Bordeaux (-9 Min's) France	25	France	25	Madeira Island	23	R		Tunis, N. Africa	27
Borneo	40	Frankfurt, Main	27	Madrid, Spain	25	Rabat, Morocco	25	Turkey	29
Brazil	19	Fr. Equatorial Africa	25	Makatea Islands	5	Rangoon, India	36	U	
Brisbane, Australia	45	Fr. Guiana	17	Malay States	39	Regina, Saskatchewan	11	Uganda, Africa	30
Br. Guiana	17	Fr. Guinea	25	Malta	27	Republic of Colombia	15	Union of South Africa	29
Br. Honduras	13	Fr. Indo China	39	Managua, Nicaragua	14	Republic of Panama	15	Uruguay	18
Br. New Guinea	45	French Sudan	25	Manila, P. I.	41	Reykjavik, Iceland	23	V	
Br. North Borneo	41	Funchal, Madeira	23	Maracaibo	16	Rhodesia, South Africa	29	Valencia, Venezuela	16
Br. Samoa Islands	2	G		Mariana Islands	44	Riga, Russia	29	Valparaiso, Chile	17
Br. South West Africa	29	Galapagos Islands	12	Marquesas Islands	6	Riobamba, Ecuador	14	Vancouver, Br. Columbia	9
Brussels, Belgium	25	Genoa	27	Martinique, F. W. I.	17	Rio de Janeiro, Brazil	19	Venezuela	16
Budapest, Hungary	27	Georgetown, Br. Guinea	45	Mauritius Islands	33	Rome, Italy	27	Vera Cruz, Mexico	13
Buenos Aires, Argentine	17	Germany	27	Medillem, Colombia	15	Roumania	29	Vienna, Austria	27
Bukharest, Reumania	29	Gibraltar	25	Melbourne, Australia	45	Rugby, England	25	Vladivostok	42
Bulgaria	29	Gothen, Germany	27	Mexico City	13	S		W	
C		Greece	29	Minsk, Russia	31	Saar Territory	27	Warsaw, Russia	27
Cairo, Egypt	29	Greenland	19	Middle European Time	27	Saigon, Indo-China	39	Wellington, New Zealand	48
Calcutta, India	36	Guam	44	Monrovia	25	Salvador	13	Western Australia	41
Cameroons	26	Guatemala	13	Montevideo, Uruguay	18	Sandwich Islands	22	Winnipeg, Manitoba	13
Canary Islands	25	H		Montreal, Canada	15	Santiago, Chile	17	Z	
Capetown	29	Hague	26	Morocco	25	Santo Domingo	15	Zanzibar	30
Cape Verde Islands	21	Halifax	17	Moscow, Russia	29	Santos, Brazil	19	Zeesen, Germany	27
Caracas, Venezuela	16	Hamburg	27	Mountain Time, U. S. A.	11			Zurich, Switzerland	27
Caroline Islands	43	Hankau	41	Motala, Sweden	27				
Casablanca, Morocco	25	Havana	15	Mukden, Manchuria	41				

For example: Suppose you wish to know what time it is in Rome, Italy, when it is 3:00 p. m. in Chicago. Chicago is Central Standard Time (C.S.T.) which you will find is located in Zone 13. You now look up Rome and find it is in Zone 27, so to find the time in Rome when it is 3:00 p. m. in Chicago, you simply run along Zone 13 until you come to 3:00 p. m., then go down the column to Zone 27 and you find that it is 10:00 p. m. of the same day in Rome, Italy.

But say it is 8:00 p. m. in Chicago and you wish to know the time in Calcutta. You find Calcutta is located in Zone 36 so you run along Zone 13 to 8:00 p. m. and down the column to Zone 36 and you find it is 7:30 a. m. the **FOLLOWING DAY**.

How do we know it is the following day? Simple. You notice the white line running from the bottom of the page below Zone 48 up to the top of the page on the opposite corner to Zone 1. That line is the International Date Line. When you run down a column and pass through the International Date Line you pass into the next day.

You will also notice a set of figures running across the top

of the page, giving Greenwich Meridian Time or G.M.T. time. This is the standard time all over the world. You will find that most foreign stations give their transmitting schedules in G.M.T. time. Although it looks a little complicated, it is really very simple.

G.M.T. is divided up into 24 hours instead of 12, beginning with 0100 G.M.T., which is 1:00 a. m. Then when you pass noon, which is 1200 G.M.T., and go into the afternoon hours, 1:00 p. m. is 1300 G.M.T., 2:00 is 1400, etc., until you reach midnight, which is 2400 G.M.T.

Suppose you wish to know what time it is locally when it is 1900 G.M.T. You would run down the 1900 column to the time zone you are located in and you then have your local time. If you were located in Chicago you would run down to Zone 13 where you see that it is 1:00 p. m. when it is 1900 G.M.T.

On page 12 you will find the transmitting schedules of the world arranged in G.M.T. time. This Time Chart will be used not only in America but by SCOTT OWNERS in foreign countries, so that they, too, will find it easy to know when various stations of the world are actually on the air.



REPRODUCED BY PERMISSION RADIO RETAILING

DX MAP OF THE WORLD

The map above shows you how the world would look if it were laid out flat, instead of round, as it is.

Looking at the ordinary flat map you would say that Tokio, Japan, was directly west of New York, when as a matter of fact, if you traveled in an absolutely straight air line you would travel northwest and would actually pass through the Arctic regions. As is well known, signals are easier to pick up over large stretches of water, and this map is valuable in showing you how much water and land the signal must pass over before it reaches you.

This map will also give, with fair accuracy, the air line distance between various parts of the world measured from New York. To find out the distance between San Francisco and Melbourne, you would first measure the distance, according to the scale, between New York and Melbourne, then deduct from this the distance between San Francisco and New York as shown by a regular scale map of U. S. A. This distorted map is only accurate for determining distances between New York and other parts of the world.

