

The Short-Wave Broadcasting Stations of the World

When to listen for them And Where to Search for Them on Your Dials

When to listen for them
And Where to Search for
Them on Your Dials

by
Robert Hertzberg

The above photo shows the antenna system and transmitting house of station WABC.

MOST owners of short-wave receivers are able to pick-up foreign broadcasting stations without any trouble if they just happen to listen in at the right time. However, many short-wave fans do not seem to hit the right moments, and will sometimes listen half a dozen or so times a week without hearing anything outside of KDKA. They have frequently written for definite operating schedules, so RADIO DESIGN presents herewith what it believes is the most complete and most authentic list of the short-wave broadcasting stations of the world ever published. Where the actual operating hours are known, they are given in Eastern Standard Time, so that listeners may "fish" for them with some assurance that the transmitters are actually on the air.

It must be emphasized that most short-wave stations are purely experimental in nature, and in many cases their owners cannot give operating schedules because they have no fixed hours.

We'll start with the United States, and proceed to the other countries. If you learn to tune in the American stations, and record their dial readings, you will have a pretty good idea where to search for stations of lower or higher wavelength.

UNITED STATES

WABC-W2XE, station located at Cross Hassock Bay, L. I. (on road leading into

the Rockaways); owned and operated by the Columbia Broadcasting System, office 485 Madison Avenue, New York, N. Y. Wavelength, 49.02 meters, or 6120 kilocycles, power 500 watts. Transmits the same programs as WABC. Is on the air without interruption every day from 8 a. m. Eastern Standard Time to 1.00 a. m. the following morning. W2XE is the most active short-wave station in the world, operating continuously 17 hours a day. Station is readily identified because announcer always says "These are stations WABC and W2XE". Will soon have a 20,000 watt transmitter operating on any one of three wavelengths for international broadcasting: 19.63 meters (15,280 kc.), 25.34 meters (11,840 kc.), and 49.02 meters, (6120 kc.). Reports from listeners desired.

WGY, Schenectady, N. Y. General Electric Company. Operates a whole group of experimental short-wave stations. These are W2XAF, 31.48 meters (9530 kc.); W2XAD, 19.56 meters (15,340 kc.); and the following stations which are licensed to operate on any one of the frequencies listed afterward: WXO, W2XAH; W2XAK, W2XAZ, W2XH, W2XK, and W2XAC. Frequencies: 1604, 2398, 3256, 4795, 6425, 8650, 12,850, and 17,300 kilocycles. W2XAW is licensed for the same eight frequencies and in addition may use 23,000 kc. and above, or 13 meters and below. These stations broadcast the regu-

lar programs of WGY during the periods they are on the air.

Evening programs are transmitted by W2XAF on Monday, Tuesday, Thursday and Saturday, and by W2XAD on Monday, Wednesday, Friday, Saturday and Sunday. See your local newspaper for any National Broadcasting Company program for exact hours. Afternoon schedule: W2XAD, Sunday, 2.30 to 5.40 p. m.; Tuesday, 12.00 to 5.00 p. m.; Thursday, 12.00 to 5.00 p. m.; Friday, 2.00 to 3.00 p. m.; Saturday, 12.00 to 5.00 p. m. W2XK, Tuesday, Thursday, Saturday, 12.00 to 5.00 p. m. Where two stations are listed for the same time, it means they are both broadcasting the same program.

Every Monday night from 8 to 9.30 p. m., the English announcements are translated into Spanish, for the benefit of South American listeners.

Other special features: Early morning programs from W2XAF, 6.00 a. m. to 7.00 a. m., daily except Sunday, for benefit of Australian and New Zealand listeners. Television license, W2XACW, 139.5 meters, 2100 to 2200 kilocycles. Experimental airplane license, W2XCH, frequencies of 2302 and 3076 kc. Alternate Saturday nights, special programs to Commander Byrd, beginning at 11.00 a. m., by W2XAC on 34.5 meters in addition to W2XAD.

W2XAL - WRNY, Aviation Radio Station, Inc., Coytesville, N. J. Wavelength 49.9 meters (6040 kc.) On the air at 11.30 a. m., 3.30 p. m. with weather reports, aviation news. Also 11.30 p. m. to 12.30 midnight every night, testing.

W9XF, WENR, Chicago, Ill. Wavelength 49.83 meters, power, 5000 watts. Relays all the WENR programs except daytime broadcasts on week-days between 9.00 a. m. and 5.00 p. m. Sunday morning programs are broadcast. (Data taken from newspaper clipping. Station probably on air throughout evening from 6.00 p. m. to about midnight.)

KDKA-W8XK, Westinghouse Electric Mfg. Co., East Pittsburgh, Pa. 25.4 meters (11,814 kc.) and 62.5 meters (4800 kc.) Known to be on the air every evening, but station does not answer letters or telegrams requesting information. 62.5 meter transmitter a stand-by for testing receivers, as it is very reliable in the United States.

WLW-W8XAL, Crosley Radio Corporation, Cincinnati, Ohio. Wavelength, 49.50 meters. Another powerful and consistent short-waver, but its owner evidently wants to keep its schedule a secret. Heard regularly during the evening hours.

W6XN-KGO, Oakland, California. 23.35 meters. Relays the regular programs of KGO. Tuesday, Wednesday, Friday, 12.30 to 4.00 p. m. Also after 9.00 p. m., experimental transmissions. Delivers a powerful signal in the East. Handles NBC chain programs, so don't be fooled by the New York or Chicago announcers. Wait for the announcements at the end of each 15-minute period, so that you can hear the KGO announcer tell you that you are listening to California.

W2XCR, Jenkins Television Corporation, Jersey City, N. J. 107 meters (2800 kc.). Week days from 3.00 to 5.00 p. m. and 8.00 to 10.00 p. m. Also, W3XK, same firm, Washington, D. C., 142.5 meters, daily except Sunday, 8.00 to 9.00 p. m.

SUPER-WASP OWNERS!

You can help the short-wave game greatly by reporting to RADIO DESIGN the short-wave broadcasting stations that you pick up. Tell us the dial readings, wavelength or frequency, if announced, the nature of the announcement, and the time you accomplished the reception. The more information of this kind you send in, the more pleasure will you obtain from your receivers, as we will publish the "dope" for the benefit of everybody. A post card with the facts on it is enough. Address, RADIO DESIGN, 103 Broadway, Brooklyn, N. Y.

Various call books list a large number of American short-wave broadcasting stations, but the great majority of them are not on the air. If you hear or read about any new ones, please let us know.

There are also a number of short-wave telephone stations along the Atlantic seaboard, engaged in radio-telephone service with

Great Britain. These are private stations, and are not to be classified as broadcast transmitters. Similarly, the English telephone stations are private in nature, and little data on them is available. It is quite easy to hear the English end of the circuit. The wavelengths skip all over the scale; down about 16 or 18 meters during the day and up in the neighborhood of 30 during the evening.

CANADA

CJRX, Winnipeg, Manitoba, James Richardson and Sons, Ltd. 25.6 meters, 2000 watts. All programs from CJRW, as follows: Daily, except Sunday, 5.30 p. m., to 8.30 p. m., music, talks. Sunday, 11.30 a. m. to 1.00 p. m., sacred and classical music, 10.00 to 11.00 p. m., Royal Alexander Hotel Concert. Tuesday, 5.30 to 10.30 p. m., music, talks. Thursday, 5.30 to 11.00 p. m.,

music, talks. Saturday, 5.30 p. m. to midnight, music, talks. French lessons on Tuesdays and Fridays, 7.50 p. m. to 8.00 p. m. CJRX is another powerful and reliable station, and you will find its programs very interesting.

There are a number of radio-telephone stations in Canada working with England. Like the American stations, these are private undertakings, and have nothing to do with broadcasting, although the telephone conversations can be picked up without much difficulty. The wavelengths are subject to change without notice.

ENGLAND

G5SW, Chelmsford, England. 25.53 meters, 15,000 watts. 2.00 p. m. to 7.00 p. m. daily, silent Saturday and Sunday. Experimental transmissions 7.00 to 9.00 p. m. Monday and Wednesday and 7.30 to 8.30 a. m., irregular intervals. Tests with American W2XO Monday and Thursday, 12.00 to 1.00 p. m. Heard quite regularly in the United States. Famous for its transmission of the midnight chimes of "Big Ben" when it signs off at 7.00 p. m. Eastern Standard Time, it then being midnight in London.

HOLLAND

PCJ, Philips Radio, Eindhoven, Holland. 31.4 meters, 27 kilowatts. Latest schedule is Thursday, 1.00 p. m. to 3.00 p. m. and 6.00 p. m. to 10.00 p. m. Friday, 1.00 p. m. to 3.00 p. m., 7.00 p. m. to 1.00 a. m. Saturday morning.

Announcements are made in six languages: Dutch, English, French, German, Spanish and Portuguese, according to the country to which the particular program is dedicated. As a rule, English is always used, in the form of this announcement: "Hello, this is station PCJ of Philips Radio, Eindhoven, Holland, broadcasting on a wavelength of 31.4 meters to the Argentine, Australia etc."

PCJ was one of the first short-wave broadcasting stations, and is probably the most widely heard. It is heard regularly in the United States and can be tuned in quite easily.

Associated with PCJ are a number of other transmitters, mainly engaged in a telephone service to the Dutch possessions in the East Indies, but also heard broadcasting regular programs. Notable among them is PHI, Huizen, Holland, on 16.88 meters. Monday, 8.00 to 11.00 a. m.; Wednesday, Thursday, Friday, 7.00 a. m. to 11.00 a. m.

The stations in Java are also heard frequently. There is PLE, Bandoeng, on 15.74 meters, and PLF, Malabar, 17.7 meters. PLE is on the air Wednesday, 7.40 a. m. to 9.40 a. m.; PLF from 9.00 a. m. to 11.00 a. m. There is also a station PCK, in Kootwik, Holland, on 16.3 meters, broadcasting at 11.00 a. m. daily.

FRANCE

The French short-wave stations are just beginning to be heard in the United States. Reports on them are very much desired.

Station at Nancy, France. 15.5 meters, (19,754 kilocycles) 5.00 p. m. daily, news and weather reports.

Station at Ste. Assise, France. 24 meters (12,500 kc.) 6.00 a. m. to 8.00 a. m. daily.

Eiffel Tower, Paris. 49 meters, (6122 kc.) 7.30 a. m. to 7.45 a. m., 2.15 p. m. to 2.30 p. m., 7.15 p. m. to 7.45 p. m., daily.

New Experimental station in Paris. 31.65 meters (9479 kc.), 5.00 p. m., and 6.00 p. m. daily.

Paris-Vitus. 33 meters, (9091 kc.), 3.30 p. m. daily.

Agen, France. 38 meters, (7894 kc.) 8.40 a. m. daily.

Rugles, France. 55 meters, (5455 kc.) with 500 watts. 9.30 a. m., and 5.00 to 8.00 p. m. daily.

GERMANY

Koenigswursterhausen, (Berlin) Germany. 31.88 meters. The Reichs-Rundfunk Gesellschaft, Berlin, Germany, would like reports on this station. On the air daily from 9.00 to 9.55 a. m., 11.30 a. m. to 2.30 p. m., 3.00 p. m. to 5.00 p. m., 5.00 p. m. to 10.00 p. m.

RADIO DESIGN is greatly indebted to Mr. Karl Stegman, of 254-92nd Street, Brooklyn, for the accurate data on the French and German stations, and for much of the information about the other European short-wave broadcasters.

PORTUGAL

Oporto, Portugal, Apolo Theatre. 25 meters (12,000 kc.) Daily from 8.00 to 9.00 a. m., 3.00 to 4.00 p. m., 6.00 p. m. to 9.00 p. m.

SPAIN

EAR, Madrid, Spain. 43 meters (6976 kc.) Monday and Friday, 5.30 p. m. to 7.00 p. m.

A station EAM in Spain has been reported by listeners as far away as the Hawaiian Islands, but we have no details on it.

DENMARK

Lyngby, Denmark. 31.6 meters (9494 kc.) On the air daily at 2.00 p. m., 3.55 p. m. to 4.15 p. m., and 5.00 p. m. to 6.00 p. m.

SWITZERLAND

EH9XD, Zurich, Switzerland. 32 meters, (9375 kc.) 4.00 to 6.30 p. m., daily.

SWEDEN

Motala, Sweden. 49.9 meters (6012 kc.) Daily at 1.00 p. m.

BRITISH EAST AFRICA

7LO, Nairobi, British East Africa. 31.4 meters (9554 kc.) 12 noon to 2.00 p. m. daily. This station has been heard in the United States, and in many other parts of the world.

AUSTRIA

UOR2, Vienna, Austria. 49.4 meters (6075 kc.) Daily at 12 noon, and 5.00 p. m.

OHK2, Vienna, Austria. 70 meters, (4285 kc.) Sundays, for 15 minutes at the beginning of each hour from 12 noon to 7.00 p. m.

CENTRAL AMERICA

NRH, Costa Rica, operated by Amando Cespedes Marin. 30.3 meters, every evening 10.00 p. m. to 11.00. One of the most unique of all the short-wave stations because it uses only 7½ watts of power and is heard all over the world. Mr. Marin runs it just for fun, and is a most interesting character.

AUSTRALIA

2ME, Sydney, Australia. 28.8 meters (10,410 kc.) On Wednesday after 6.00 a. m., but also on at irregular hours. Usually heard in the Eastern United States after 4.00 a. m. Reported by dozens of Super-Wasp owners.

6AG, Perth, Australia. 42 meters (7124 kc.) Daily at 5.30 a. m. and 10.00 a. m.

Melbourne, Australia. 31.55 meters (9509 kc.) Daily from 5.00 to 6.00 a. m.

SIAM

HS1PJ, Bangkok, Siam. 16.9 meters. Sundays, 7.00 a. m. to 9.30 a. m., and from 1.00 p. m. to 3.00 p. m.

HS4PJ, Bangkok, Siam. 37 meters. Tuesdays, 8.00 to 10.00 a. m. and 1.00 to 3.00 p. m.; Friday, 8.00 to 10.00 a. m.

Announcements from these two stations are made in English, French, German and Siamese. Reports welcomed. Address, Radio Chief, Bangkok, Siam.

UNION OF SOVIET SOCIALISTIC REPUBLICS (RUSSIA)

RA97, Khabarovsk. 35 meters. Daily at 3.00 a. m. Announcement in Russian, Chinese and English. Programs end with playing of the "International". This information comes direct to RADIO DESIGN from the station itself. RA97 has been heard in the United States on numerous occasions.

RFN, Moscow, 50 meters. Tuesday, Thursday, Saturday, 7.00 to 10.00 a. m.

RFM, (city?) 70.1 meters. Also during the morning hours.

OTHER STATIONS

News about other scattered stations has drifted in from one source or another, and we are presenting herewith. We believe

most of it is reliable. If you hear any of these stations, please write and give us the details.

Manila, Phillipine Islands. 48 and 31.3 meters, daily at 9.00 a. m.

DHC, Nauen, Germany. 26.22 meters, 15 kilowatts. Thursday, Friday, Saturday, Sunday about 2.00 p. m.

DGW, Germany, 14.83 meters, about 7.30 a. m.

AGC, Nauen, Germany. 17.20 meters, 20 kilowatts.

FZT, Madagascar. 13.4, 24.4, 30.5 and 39.1 meters. **FZU,** same place, 16.7, 20.3, 59.5 meters. **FZV,** on 12.2, 15.4, and 34.8 meters.

According to "Amateur Wireless", a British magazine, the Royal Society of Great Britain has instituted a series of calibration signals. On the second and fourth Sundays of each month the Society's Cambridge station will send out calibration signals at 5.00 a. m. and 5.05 a. m. At 4.58 the letter X will be followed by a telephonic announcement that the service is about to start. At 5.00 a. m. will come RSGB RSGB de G5YK, in morse, followed by a two-minute dash on 42.75 meters. At 5.05 a. m. the procedure will be repeated, on 41.38 meters. This same magazine says there is a reliable station in Doberitz, in Europe, on 67.25 meters.

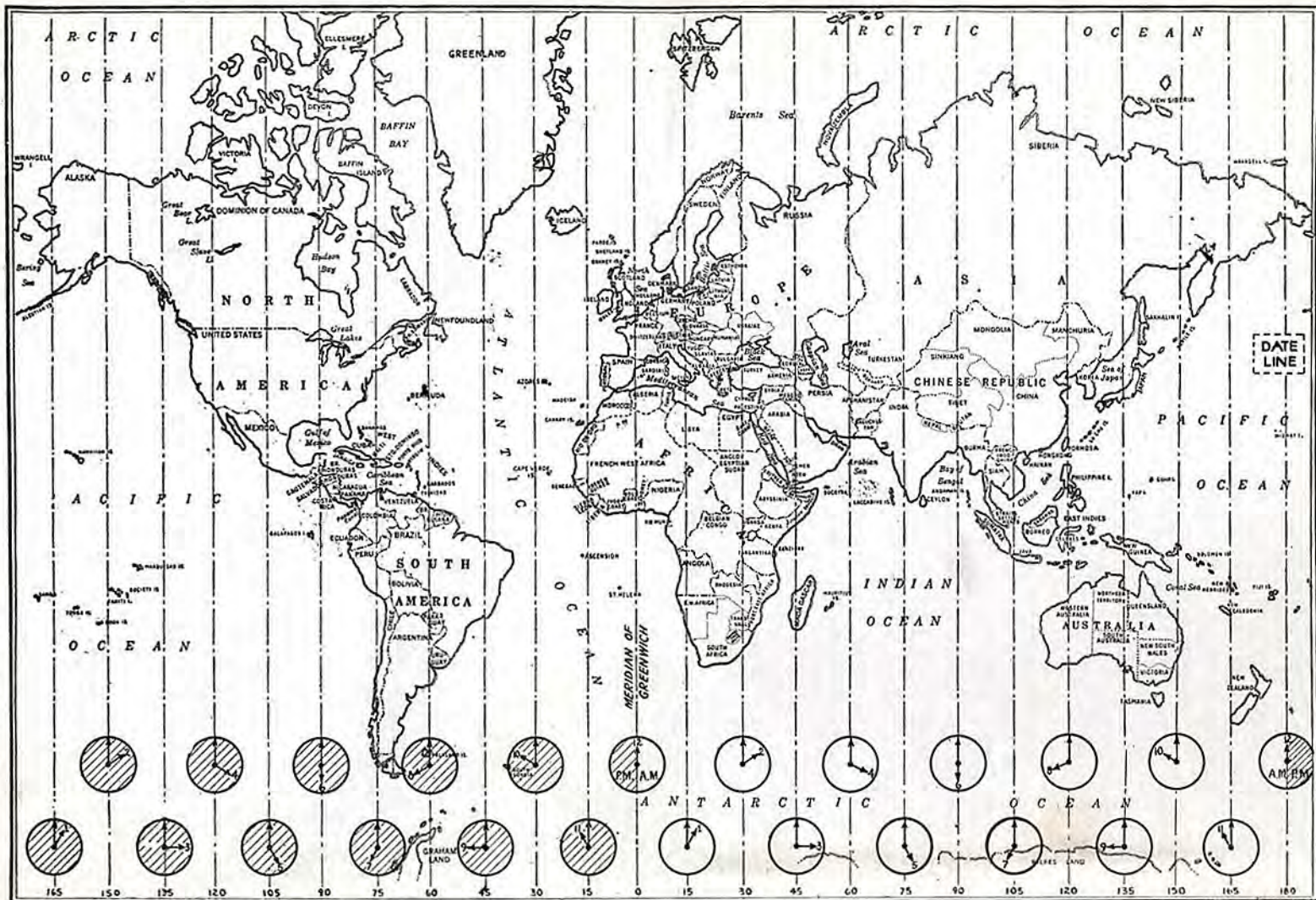
"Wireless World" says that experiments in "Fultograph" picture transmission are being conducted in Vienna over a short-wave transmitter working on 41.42 meters, with announcements in voice. The telephony schedule is from 4.20 to 4.30 a. m.

An English station GBX on 27.86 meters has been reported working with Sydney, Australia, on a telephone circuit. Also, a New Zealand listener reports having heard stations VUC and VUV in India, and JOAK, JOHK and JOGK, in Japan. JOAK has also been reported by American listeners, but we have no dope on its wavelength or hours.

Mr. Leon Tosi, P. O. Box 2066, Seattle, Wash., using a Super-Wasp, reports a station LON, in Buenos Aires, South America. Mr. Douglas A. Dane, Beaver Cave, Vancouver, Island, B. C., is the fan who heard JOAK.

We have incomplete data on many other stations, but we are not publishing it because it would be of little value.

In looking for any of these foregoing stations on your dials, record the readings for dependable stations like KDKA, CJRX, the WGY group, PCJ, G5SW, W6XN, and NRH, and you will have a fairly good idea where the others should be. Remember that the Super-Wasp tunes in steps from 15 to 26 meters, 26 to 50, and 50 to 100 meters, on the three short-wave coils. After you've spotted a few stations you'll find it easy to hear others.



TELLING TIME

One very important thing that all owners of short-wave receivers must learn is that time is different in different parts of the world. Remember that song entitled, "When It's Night Time in Italy It's Wednesday Over Here"? Well, it wasn't as crazy as it sounded. When it's Wednesday over here it's actually to-morrow in New Zealand.

The accompanying full page map of the world shows how time differs. For purposes of reckoning time, the world has been divided into 24 zones, each representing a time change of one hour and each equal to a slice of the earth's surface 15 degree of longitude wide. The meridian of longitude which runs through the little town of Greenwich, England, is the starting point, and international time is usually expressed as Greenwich Mean Time, familiarly abbreviated into the letters G. M. T.

The sections west of the Greenwich line are earlier than Greenwich, and those east are later, an hour in each direction for each 15 degrees. If we travel half way around the earth in each direction away from Greenwich, we will have passed twelve time zones in each direction, as the earth is a globe and represents a geometrical total of 360 degrees. When we reach this point twelve zones or 180 degrees away (diametrically opposite Greenwich), we come to another imaginary line which we call the International Date Line. In going across this line from east to west, we actually lose a complete day; in the other direction, we actually gain a complete day. That is, at the same instant a place just east of this date line is one day later than a place just west of it.

The little clocks on the map are shaded to indicate time between noon and midnight, and left white to show time between midnight and noon. You can see that when it is 8.00 a. m. in western Australia it is 2.00 a. m. in Egypt. Our own United States is divided into four zones: Eastern, Central, Mountain, and Western, which represent zones five, six, seven and eight hours earlier than Greenwich. When it's 6.00 p. m. in Boston, New York, Philadelphia and Miami, it is 5.00 p. m. in Chicago, St. Louis, Little Rock and New Orleans, 4.00 p. m. in Butte, Denver and Albuquerque, and only 3.00 p. m. in Seattle, San Francisco and San Diego.

All this explains why you have to get up at 4.00 in the morning to hear Australia, and why you hear the midnight chimes from London through G5SW when you've finished your supper in New York. Time differences are very confusing at first, but after you've studied the subject a little, you will find it is very simple and obvious.

Instead of trying to remember all these details, the best thing to do is to write

to the Government Printing Office, Washington, D. C., for a copy of Miscellaneous Publication No. 84, entitled, "Standard Time Conversation Chart". A reduced reproduction of this handy chart is shown at the bottom of this page. The inner circle is a separate disc of cardboard, which can be turned with the finger. To find the time any place in the world when it is a certain time in any other place, you simply adjust the disc and read off the answer directly on the chart. There is no calculating to be done. This chart costs only ten cents (do not send stamps) and is an education in itself. Every owner of a short-wave receiver should have one.

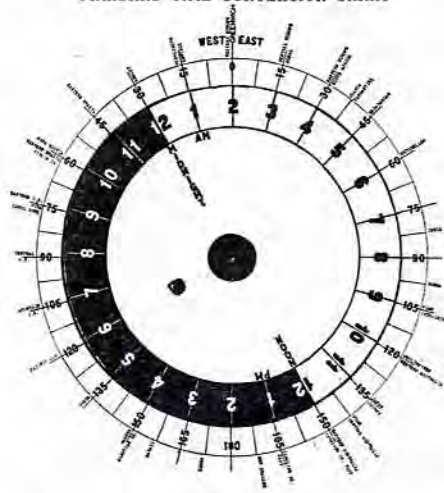
Another good thing to have is a small globe. Since the earth is a globe, a flat map gives a distorted idea of its appearance, and makes distances particularly hard to figure. You'll learn some astonishing things about distance with a globe by stretching a string between any two points you want to measure. On a flat map you get one figure, but on a globe you get the true distance, which is something altogether different.

You'll learn that some foreign stations are nearer than some American ones, and that some countries are located in the most unexpected places. Your whole conception of the earth will change, for the better, if you have a globe. Small globes can be bought as cheaply as \$2.00. Buy one, stick colored pins in it to represent the countries you have heard, and you will have a DX "log" that beats everything else for spectacular appearance.

DEPARTMENT OF COMMERCE
BUREAU OF STANDARDS
SERIES S. SERIAL 2200

Miscellaneous Publication
No. 84
June, 1936
Price 10 cents

STANDARD TIME CONVERSION CHART



(Directions for use on reverse side)

Send ten cents in coin to the Government Printing Office, Washington, D. C., for one of these highly valuable time conversion charts.