Programs

A radio hour-by-hour program, similar to the one appearing on Page 2 of this section, is a DAILY feature of The Times. Order The Times delivered to your home so you won't miss a program.

RADIOGRAMS

Germany now has 500,000 radio fans.

New York City is the radio center of the world.

Forty broadcasting stations in the United States are planning 5,000-watt transmitters.

Outside the United States there are 44 broadcasting stations in Canada, 40 in Cuba, 9 in England, 5 in France, 4 in Mexico, 4 in Brazil and 3 in Argentina.

According to experts one of the greatest improvements that will come this year in radio is alternating current filament and plate supply to eliminate the troublesome batteries.

After months of experimenting the United States Bureau of Standards has devised a method of standardizing the frequency of radio waves. This will result in lessened interference between broadcasting stations.

If the size is sufficient to cut a piece to fit the cabinet, a glass panel can be made from any old broken windshield.

Bare wire is recommended for the aerial because of its lighter weight. It causes less strain on the antenna supports.

The use of phone-tip jacks on the battery terminal board instead of binding posts will make it more difficult to blow a tube by crossing battery leads.

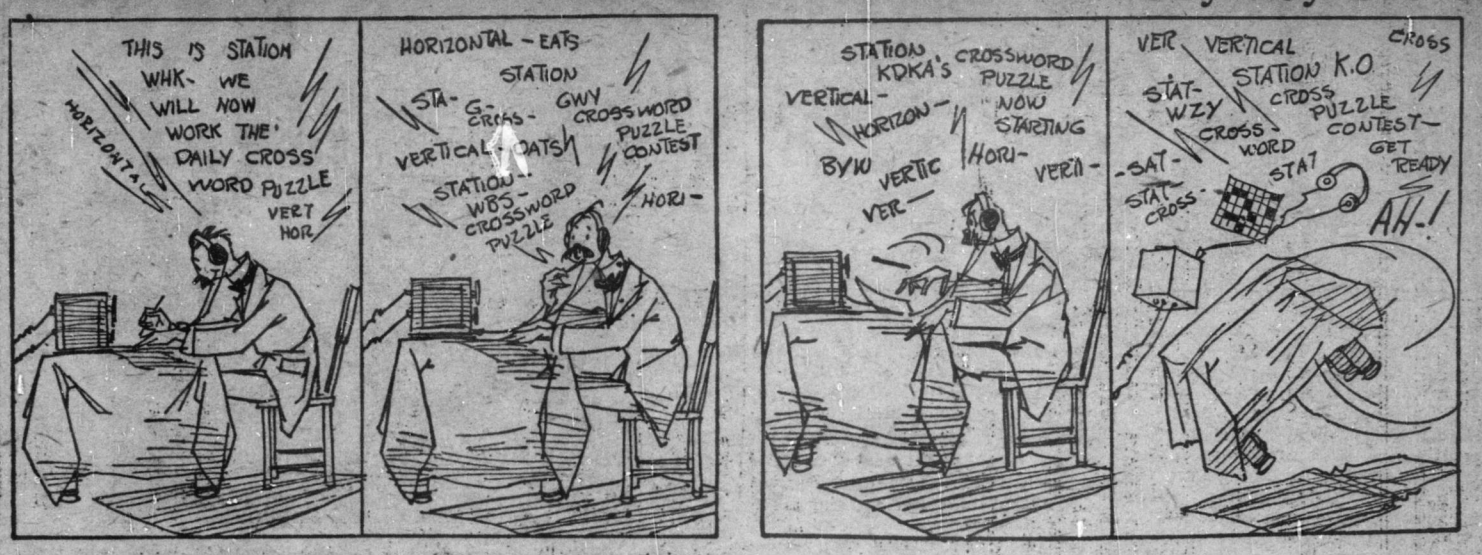
The wire should be replaced if any broken strands are found in the aerial.

A porous type of insulator absorbs moisture and becomes useless in a short time.

Safety for Whalers

Whaling ships in the North Sea will find roving the deep as safe as staying on land hereafter. Each ship is equipped with a Marconi direction finder, so it can locate the other ship and the coast line in fog or darkness.

BUGS — By Roy Grove



CLASS 'A' AND 'B' STATIONS ARE LICENSED BY U. S

By Times Special

WASHINGTON, Jan. 22.—Four new class A and three new class B broadcasting stations were licensed by the Department of Commerce during the past week, while five class C stations transferred to class A. The new stations follow:

Class A.

Call.	Station.	Wave Length.	Power Watts.
WABA	Lake Forest University, Lake Forest, Ill.	227	100
WBDC	Baxter Laundry Company, Grand Rapids, Mich.	256	50
WEBM	Radio Corporation of Americt, portable Mobile station	226	100
WGBI	Frank S. Megaree, Scranton, Pa.	240	10
	Class B.		
WHA	University of Wisconsin, Madison, Wis.	535.4	500
WEAR	Goodyear Tire and Rubber Company, Cleveland, Ohio	389.4	1000
WHN	George Schubel, New York, N. Y.	360.4	500
	Transfers.		
KFDJ	Oregon Agricultural College, Corvallis, Ore.	254	50
KUO	Examiner Printing Company, San Francisco, Cal.	246	150
WAAD	Ohio Mechanics Institute, Cincinnati, Ohio	258	25
WOAN	James D. Vaughan, Lawrenceburg, Tenn.	275	500
WOI	Iowa State College, Ames, Iowa	270	500

ECLIPSE BROADCASTING IS PLANNED BY STATION WIP

By Times Special

PHILADELPHIA, Jan. 22.—For the first time in the history of radio, an attempt will be made to broadcast to and from Europe and America in daylight. Numerous transatlantic tests have been held, some with very fine results, but all of these have taken place when darkness covered the vast spaces between the two continents.

Station WIP, the powerful broadcaster on the Gimbel Brothers store, in this city, has completed arrangements with 2LO, the London station of the British Broadcasting Company, to broadcast to each other during the hours next Saturday, when the moon will come between the sun and the earth, causing a complete eclipse.

Scientists all over this country and Europe have erected delicate apparatus to study just what effects this eclipse will have on radio waves, but it remains for WIP and 2LO to arrange the test that will be of greatest interest to radio fans.

Station WIP will broadcast music by Jack Le Roy and his orchestra from 7 to 9:30 a. m., eastern standard time. 2LO at London will begin its program promptly at 9:30 and continue to 11 a. m.

The theory so far has been that the sun's rays hinder the progress of the waves emitted from broadcasting stations, so preventing long-distance work. The path of the eclipse extends from Philadelphia, where totality will be 98 per cent, directly over the path to London.

Radio engineers at both stations feel that the eclipse will have enough effect on the radio waves to allow at least a part of the program to reach the other continent.

Ships at sea, between the two stations, will be asked to listen in for the broadcasts, and in event of hearing either WIP or 2LO, radio a message to the station heard, giving their exact nautical position and the time at which the signals were audible. This will give valuable information with which to compute the effect of the eclipse on radio transmission.

Not for ninety-nine years will there be another opportunity for such a transatlantic test, as there will not be another total eclipse of the sun for that length of time.

WIP and 2LO will make radio history with this broadcast. The data collected will be of aid to scientists and radio engineers in perfecting transmissions.

Radio fans all over the country are asked to tune in, carefully checking station WIP's transmission from Philadelphia, and attempting to catch the signals from 2LO at London. Should anyone hear the London signals, and it is very probable that they will, they are asked to please notify Station WIP immediately, as a careful record will be kept.

Defective, or bootleg, tubes sometimes draw as much as two or three times the usual voltage from the batteries.