

LICENSE FOR LAND RADIO STATION

CLASS 2 - Limited Commercial

DEPARTMENT OF COMMERCE
BUREAU OF NAVIGATION
RADIO SERVICE

Pursuant to the act to regulate radio communication, approved August 13, 1912,

Westinghouse Electric & Manufacturing Company,

a citizen of the State of _____, a company incorporated under the laws of the State of Pennsylvania, having applied therefor, is hereby granted by the Secretary of Commerce for a period of one year on and subject to the restrictions and conditions hereinafter stated and revocable for cause by him, this License to use or operate the apparatus for radio communication (identified in the schedule hereinafter) for the purpose of transmitting to and receiving from ship stations and other land stations public correspondence, Government and service correspondence, and distress signals and messages, at rates of compensation not in excess of those fixed by the international agreement to which the Government of the United States has adhered, which have been submitted to and approved by the Secretary of Commerce, as included in the schedule hereinafter, or for the purpose of conducting experiments for the development of the science of radio communication, or the apparatus pertaining thereto, to carry on special tests, using any amount of power or any wave lengths, at such hours and under such conditions as will insure the least interference with the sending or receipt of commercial or Government radiograms, of distress signals and radiograms, or with the work of other stations, the purpose of the station being designated by the classification at the head of this License.

2. Public correspondence or limited commercial correspondence authorized by this License shall be limited to certain stations, ships or types of ships named hereinafter, which designation is authorized in view of the nature of the service and is independent of the radio system employed.

3. The use or operation of apparatus for radio communication pursuant to this License shall be subject also to the articles and regulations established by the International Radiotelegraphic Convention, ratified by the Senate of the United States and caused to be made public by the President, and shall be subject also to such regulations as may be established from time to time by authority of subsequent acts and treaties of the United States, in so far as they apply to the class of station indicated by this License.

4. The authority conferred by this License is subject to the provisions of the act of February 4, 1857, entitled "An Act to regulate commerce," as amended by the act of June 18, 1910, so far as the Licensee may be within the operation of said act, and except as provided in the act of August 13, 1912, or in the International Radiotelegraphic Convention and regulations made part thereof, the station shall transmit all messages offered by those who tender lawful rates on equal terms without discrimination, whether as regards rates, order of transmission, or otherwise.

5. The Licensee shall render to the Secretary of Commerce such accounts as the Secretary of Commerce shall direct in respect of all charges due or payable under the International Radiotelegraphic Convention in respect of messages exchanged between the station hereby licensed and other stations and shall pay to the Secretary of Commerce, at such times and in such manner as the Secretary of Commerce shall direct, all sums which shall be due from the Licensee under such accounts.

6. The apparatus shall at all times while in use and operation be in charge or under the supervision of a person or persons licensed for that purpose by the Secretary of Commerce, and the operator of the apparatus shall not willfully or maliciously interfere with any other radio communication.

7. The station shall give absolute priority to signals and radiograms relating to ships in distress; shall cease all sending on hearing a distress signal; and, except when engaged in answering or aiding the ship in distress, shall refrain from sending until all signals and radiograms relating thereto are completed.

8. The station shall use the minimum amount of energy necessary to carry out any communication desired, except in case of signals or radiograms relating to vessels in distress.

9. The station shall not use a transmitter during the first 15 minutes of each hour, local standard time, except for distress signals, whenever the Secretary of Commerce by notice in writing shall require it to observe a division of time, pursuant to the Twelfth Regulation of the act of August 13, 1912.

10. The President of the United States in time of war or public peril or disaster is authorized by law to close the station and cause the removal therefrom of all radio apparatus or may authorize the use or control of the station or apparatus by any department of the Government upon just compensation to the owners.

11. The Secretary of Commerce and Collectors of Customs or other officers of the Government authorized by him may at all reasonable times enter upon the station for the purpose of inspecting and may inspect any apparatus for radio communication of such station and the operation and operators of such apparatus.

12. The apparatus shall not be altered or modified in respect of any of the particulars mentioned in the following schedule, except with the approval of the Secretary of Commerce.

SCHEDULE OF STATION AND APPARATUS

Name of owner, Westinghouse Electric & Mfg. Co.

Location: State, Pennsylvania; County, Allegheny

City or town, East Pittsburgh; Street, ---; No. ---

Geographical location: Latitude, N. 40° 24' --''; Longitude, W. 79° 50' --''

This station is licensed for communication only with the following land stations, ships, or lines of ships:

Cleveland, Ohio Newark, N. J.

Springfield, Mass. Brooklyn, N. Y.

Specific hours during which the station ^{must} be open to service (local standard time): ---
^{may}
8:30 A. M. to 10:00 P.M.

Power: Transformer input, 2 KW.

Normal day range in nautical miles, 2 Tube sets 500 W and 600 W 300

Time and method, if any, of sending time signals and hydrographic and meteorological radiograms:

Call letters, KDKA

Coast charges: per word ---, minimum per radiogram ---

Coast charges: per word ---, minimum per radiogram ---

Coast charges: per word ---, minimum per radiogram ---

Radiotelegraphic system employed, Continuous wave - Westinghouse make

Characteristics of transmitting system:

Type of spark gap, -

Approximate spark frequency, -

Wave length range of receiving system: From 200 meters to 4000 meters.

Antenna: Number of masts 1, Height, ---

Type of aerial, Inverted L with counterpoise

Wires: Number, 6; Size and kind, 7/18 silicon bronze

Essential dimensions: Maximum height above water, 200 feet; Length of horizontal part, 200 feet; Length of vertical part, 90 feet; Total length measured from apparatus, 290 feet; Length of ground connection, - feet; Fundamental wave length 412 meters.

WAVE LENGTHS

The normal sending and receiving wave length shall be --- meters.

If the station be classified as a coast station it shall be prepared to transmit or relay distress calls

or messages using the distress wave length as provided by the International Radiotelegraphic Convention in force.

In view of special conditions the station is authorized to use for communication exclusively with stations licensed by the United States the following additional wave lengths under 600 or over 1,600 meters:

Meters, 360; Meters, 500; Meters, 3200; Meters, _____

The energy, if radiated by the transmitter in two or more wave lengths as indicated by a sensitive wave meter, shall not in any one of the lesser waves exceed 10 per cent of that in the greatest; and the logarithmic decrement per complete oscillation in the wave trains shall not exceed two-tenths, except when sending signals or messages relating to vessels in distress.

| SENDING WAVE LENGTH | ANTENNA CURRENT (AMPERES) | LOGARITHMIC DECREMENT | READING OF WAVE METER INDICATING INSTRUMENT* | |
|-----------------------|--|-----------------------|--|---------------------|
| | | | PRINCIPAL WAVE | WAVE NEXT IN ENERGY |
| 300 meters | Transmitter to be used at such times and under such conditions | | | |
| 600 meters | as to minimize interference with other stations. | | | |
| 360 meters | Not ascertained. 360 meters for general broadcasting. | | | |
| 500 meters | " " | | | |
| 3200 meters | " " | | | |
| _____ meters | | | | |

* Type of indicating instrument, _____

The station incurs rapid exchange with land wire stations at

(Company) (Location telegraph office)

(Company) (Location telegraph office)

in the following manner _____

Satisfactory proof has been furnished that the station was actually operating August 13, 1912.

This License will expire on the 6th day of November, 1922., 19



[Signature]
Assistant Secretary of Commerce.

[Signature]
Commissioner of Navigation.

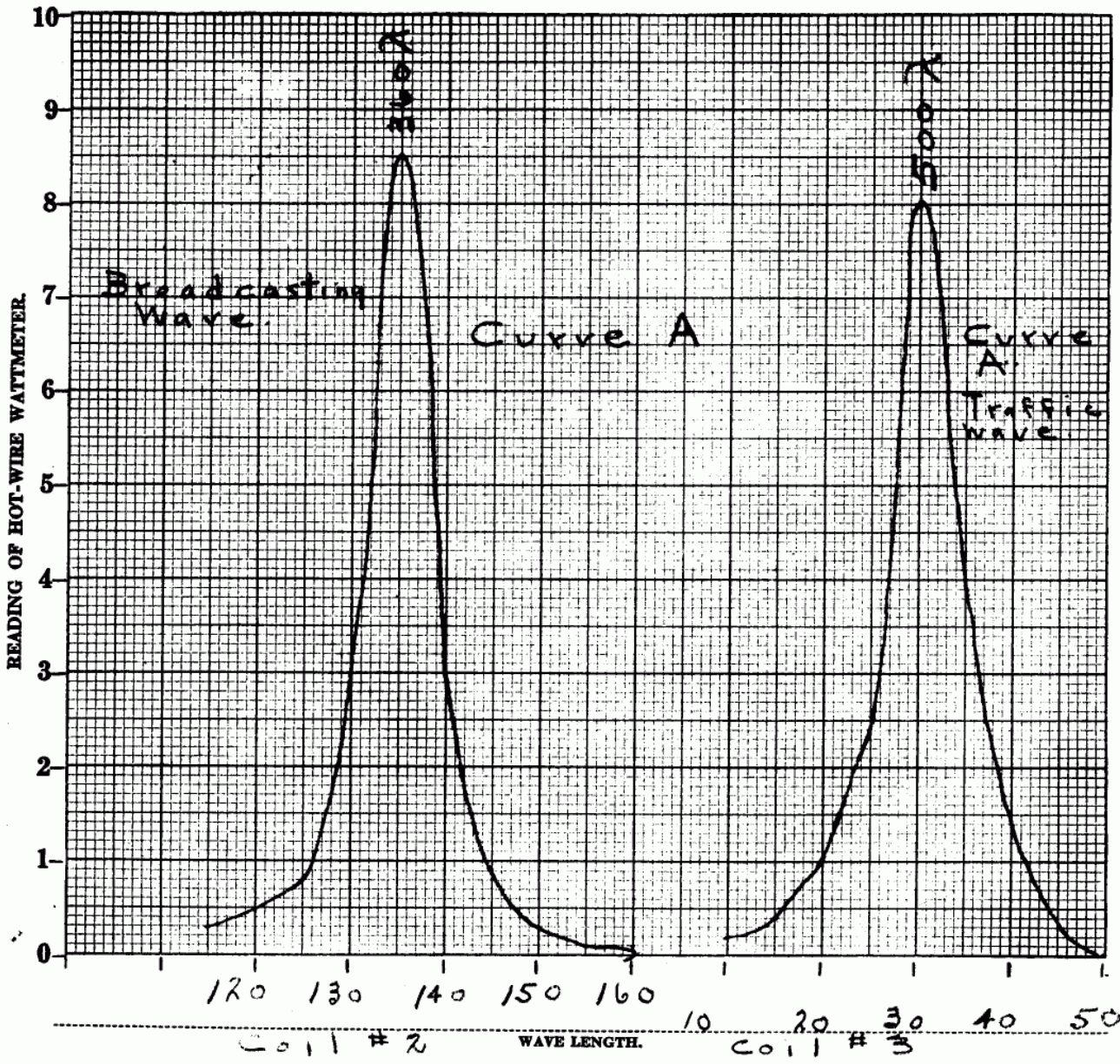
Washington, D. C., November 7, 1922., 19

INSPECTIONS

| DATE | INSPECTOR | REMARKS |
|------|-----------|---------|
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NAME OF STATION, Westinghouse Elec & Mfg Co
 ADDRESS OR LOCATION, East Pittsburgh Pa
 COMPANY, Limited Commercial

Date, Dec 5-1921
S. W. Edwards
 RADIO INSPECTOR



RESONANCE CURVES.

CURVE A
 AS FOUND.

Decrement, CW
 Antenna Current, 6.0 Amps.

CURVE B
 AFTER READJUSTMENT.

Decrement, _____
 Antenna Current, _____ Amps.

DEPARTMENT OF COMMERCE
 BUREAU OF NAVIGATION
 RADIO SERVICE
 Form 764