

PROVISIONAL

COPY

No. 872

LICENSE FOR LAND RADIO STATION

CLASS A - LIMITED COMMERCIAL

DEPARTMENT OF COMMERCE
BUREAU OF NAVIGATION
RADIO SERVICE

Pursuant to the act to regulate radio communication, approved August 13, 1912,
AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

a citizen of the State of _____, a company incorporated under the laws of the State of TEXAS, having applied therefor, is hereby granted by the Secretary of Commerce for a period of three months 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 lines 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, 1887, 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, Agricultural and Mechanical College of Texas
 Location: State, Texas; County, Brasos
 City or town, College Station; Street, _____; No. _____

Geographical location: Latitude, N. 96° 18' "; Longitude, W. 30° 36' "

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

~~Limited commercial - broadcasting entertainment and like matter. One commercial second class operator or higher required.~~

~~This station is licensed for the specific service shown on the wave lengths indicated, no other service permitted.~~

~~The hours of operation specified below may be changed or a division of time may be required whenever in the opinion of the Secretary of Commerce such action is necessary.~~

Specific hours during which the station ^{must} be open to service (local standard time): _____
 may

~~Unlimited hours.~~

Power: Transformer input, 50 watts Transmitter

Normal day range in nautical miles, 50

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

Call letters, W T A W

Coast charges: per word _____, minimum per radiogram _____

Coast charges: per word _____, minimum per radiogram _____

Coast charges: per word _____, minimum per radiogram _____

Radiotelegraphic system employed, Composite VT telephone

Characteristics of transmitting system:

Type of spark gap, _____

Approximate spark frequency, _____

Wave length range of receiving system: From 200 meters to 12,000 meters.

Antenna: Number of masts 2; Height, _____

Type of aerial, T

Wires: Number, 4; Size and kind, Phosphor bronze

Essential dimensions: Maximum height above water, 110 feet; Length of horizontal part,

140 feet; Length of vertical part, 100 feet; Total length measured from apparatus,

160 feet; Length of ground connection, 80 feet; Fundamental wave length 250 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

Form 761

APPLICANT'S DESCRIPTION OF APPARATUS

DEPARTMENT OF COMMERCE
BUREAU OF NAVIGATION
RADIO SERVICE

The following form of description of apparatus will be filled out in duplicate and forwarded to the radio inspector by each applicant for a license for apparatus for radio communication of any class (ship or land), except amateur stations (general or restricted) for which Form 762 is provided. The inspector, if necessary, will then arrange for an inspection of the station; or, when feasible, the inspector may accompany the applicant and make the inspection during the filling of this form.

Where the form calls for a statement of details of apparatus with which the station is not equipped, the applicant will please draw a line through the space provided for the appropriate answer.

The information is desired primarily as the basis of the description of the apparatus to be inserted in the license, but many of the details are desired to facilitate the classification and particularly the inspection of stations, and will not, of course, be incorporated in the license. This form when filled will not be open to public inspection.

NOTICE.—This Form Must be Submitted in Duplicate to the Proper Radio Inspector.

GENERAL SPECIFICATIONS OF STATION.

Name of applicant: Agricultural and Mechanical College of Texas

Address: College Station, Texas.

A citizen of the State of Texas Or a company incorporated in the State of _____

Name and address of owner of radio apparatus: Agricultural & Mechanical College of Texas
College Station, Texas.

If SHIP STATION—Name of ship: _____ Owner of ship: _____

Type of vessel: _____ Official number: _____ International signal code letters: _____

Home port (where permanent document issues): _____ Average speed of vessel (nautical miles): _____

Number of persons in crew: _____ Number of passengers vessel is licensed to carry: _____

Is vessel subject to the Act of June 24, 1910, as amended by the Act of July 23, 1912? _____

If LAND STATION—Coast or inland? Inland Location—State: Texas

County: Brazos City or Town: College Station Street: _____ No.: _____

Approximate Latitude, North: 26° 18'; Longitude, West: 30° 36'

Class of license desired (see regulations): Limited commercial broadcast Nature of service: Agricultural information and lectures

Specific hours open to public service: No specific hours

If limited station—Corresponds only with (state names of land stations, names of ships or lines of ships): _____

Transformer input (normal conditions): if spark Low watts K. W. * Power, if CW, ICW, or radio telephone, _____ W.

Approximate day-transmitting range (nautical miles) with average ship: _____; with similar land station: _____

PRIMARY SOURCE OF POWER SUPPLY.

Engine—Type and horsepower: _____

Electric power—Source and available K. W.: College Plant Is power continuously available? Yes

SHIP OR COAST CHARGES.

(State class of service, such as North and South American or Transoceanic.)

_____ per word: _____; minimum per radiogram: _____

_____ per word: _____; minimum per radiogram: _____

_____ per word: _____; minimum per radiogram: _____

Relay charges _____

Make and type of radio system to be used: Radio telephones, 40 watts

Type of spark gap (plain, rotary synchronous, quenched, etc.): _____

Approximate spark frequency (pitch of note) per second: _____

Type and make of receiving apparatus (conductive or inductive coupling, etc.): Composite

Type of detector: Vacuum tubes - 3 to 5 stage amplifier

Wave length range of receiving system: From 200 meters to 12000 meters.

ANTENNA.

Type of antenna (T, 7, umbrella, fan, etc.): T

Masts—Number: 2 Steel or wood? Steel Other supports: _____

Essential dimensions—Maximum height above ground or water: 110 ft. Length of horizontal part: 140 ft.

Length of vertical part (including lead-in): 100 ft. Total length measured from apparatus: 150 ft.

Length of ground connection: 60 ft. Fundamental wave length: 250 meters.

Other essential dimensions: _____

Number of wires: 4 Size and kind of wire used: Phosphor bronze Spacing between wires: 2 ft

Insulators—Material: _____ Sizes: _____

Location: _____

Ground connection—Type: Copper wire and water pipe

Lightning protective switch—Type: Knife Location: on panel

How operated: Hand

Remarks: _____

* Person, company, or corporation controlling and operating station and responsible, under the law, for operation and radio accounts.
* Show address of office to which should be sent communications concerning radio accounts and operation of station.
* If vacuum tubes are to be used, power should be actual watts in plate circuit.

AUXILIARY APPARATUS (IF SHIP STATION).

Type and make: _____ Wave length: _____ meters.
 Source of power: _____ Normal day range (nautical miles) with ships: _____
 Plain aerial or coupled circuits? _____ Condenser in aerial circuit? _____

NORMAL WAVE LENGTH AND OTHER WAVE LENGTHS APPLIED FOR. (UNDERScore NORMAL.)

SENDING WAVE LENGTH.	ANTENNA CURRENT.	LOGARITHMIC DECREMENT.
300 meters		
600 meters		
360 meters	2.0	
_____ meters		
_____ meters		
_____ meters		

If public service coast station, the station insures rapid exchange with land wire stations as follows:

Company: _____ Place: _____ By direct wire or telephone? _____
 Company: _____ Place: _____ By direct wire or telephone? _____
 Number of operators required—First grade: _____ Second grade: _____ Others: _____

POWER SUPPLY TO TRANSMITTER.

(a) Motor generator: Motor. Generator.
 Voltage—A. C. or D. C. and cycles: A.C. 60 cycle Volts (rated) and cycles: 500 DC.
 H. P. (rated): 2 Speed: _____ K. W. (rated): 2
 Location: _____ K. V. A. (rated): _____
 Remarks: _____

(b) Power-measuring instruments:
 Type, make, range, etc. _____
 Motor starter—Direct or distant control? _____ Are motor field rheostat and generator field rheostat provided? _____

(c) Storage battery:
 Make: _____ Type: _____
 Capacity (ampere hours): _____ Number of cells: _____ Location: _____

(d) Internal-combustion engine:
 Make: _____ Type: _____
 K. W. of generator (rated): _____ Location: _____

RADIO APPARATUS.

(a) Transmitter:
 Is proper means provided for reducing the range of the station as required by the London Convention? Yes
 Condenser in aerial circuit for _____ meters, _____ meters.
 Coupling—Inductive or conductive? Conductive Type of primary condenser: mica plate

(b) Receiver:
 Is secondary circuit tuned or untuned? Tuned Are complete duplicate receivers installed? No.
 Are tuning positions for 300 meters and 600 meters plainly marked on apparatus? on chart
 Method used for disconnecting receiver when transmitting (hand switch or automatic "break"): Hand switch

Operator License #4271 Signature of applicant: Agricultural & Mechanical College of Texas.

By: J. C. Bolton
 Professor of Electrical Engineering

INSTRUCTIONS TO RADIO INSPECTORS.

Send out this form in triplicate—one for the applicant's files if he desires it. When received back, fill in the following; preserve one copy for your records and forward the original to the Commissioner of Navigation with report and recommendation.

Received by (inspector): Theodore G. Deiler, at New Orleans, La., Date December 28, 1922.

Date of inspection of station: *** Inspected by: ***

Name of port or inspection district in which inspection was made: ***

REPORT AND RECOMMENDATION.

It is recommended that Provisional Limited Commercial Broadcasting station license be issued, renewal.

Theodore G. Deiler
 U. S. Radio Inspector,
 New Orleans, La.

The license, when approved by the Secretary of Commerce, will be forwarded to the inspector for delivery to the applicant. The inspector will then fill in from the license the following on his file copy:

Class of license: _____ Serial No.: _____ Date of delivery to applicant: _____