



United States of America
FEDERAL COMMUNICATIONS COMMISSION
AM BROADCAST STATION LICENSE

Authorizing Official:

Official Mailing Address:

LAIRD BROADCASTING COMPANY, INC.
 200 TOWER RD
 PO BOX 247
 WAUPACA WI 54981

Son Nguyen
 Son Nguyen
 Supervisory Engineer
 Audio Division
 Media Bureau

Facility Id: 36245

Call Sign: WDUX

License File Number: BZ-19910313AB

Grant Date:

This license expires 3:00 a.m.
 local time, December 01, 2020.

BS-20170503AB0

This authorization re-issued to update the route description of the monitor points. 8/25/2017

Subject to the provisions of the Communications Act of 1934, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this license, the licensee is hereby authorized to use and operate the radio transmitting apparatus herein described.

This license is issued on the licensee's representation that the statements contained in licensee's application are true and that the undertakings therein contained so far as they are consistent herewith, will be carried out in good faith. The licensee shall, during the term of this license, render such broadcasting service as will serve the public interest, convenience, or necessity to the full extent of the privileges herein conferred.

This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequency designated in the license beyond the term hereof, nor in any other manner than authorized herein. Neither the license nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This license is subject to the right of use or control by the Government of the United States conferred by Section 606 of the Communications Act of 1934.

Hours of Operation: Unlimited

Average hours of sunrise and sunset:
 Local Standard Time (Non-Advanced)

Jan.	7:30 AM	4:45 PM	Jul.	4:30 AM	7:45 PM
Feb.	7:00 AM	5:30 PM	Aug.	5:00 AM	7:00 PM
Mar.	6:15 AM	6:00 PM	Sep.	5:30 AM	6:15 PM
Apr.	5:15 AM	6:45 PM	Oct.	6:15 AM	5:15 PM
May	4:30 AM	7:15 PM	Nov.	6:45 AM	4:30 PM
Jun.	4:15 AM	7:45 PM	Dec.	7:30 AM	4:15 PM

Name of Licensee: LAIRD BROADCASTING COMPANY, INC.

Station Location: WAUPACA, WI

Frequency (kHz): 800

Station Class: B

Antenna Coordinates:

Day

Latitude: N 44 Deg 21 Min 15 Sec
Longitude: W 89 Deg 03 Min 29 Sec

Night

Latitude: N 44 Deg 21 Min 15 Sec
Longitude: W 89 Deg 03 Min 29 Sec

Transmitter(s): Type Accepted. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.

Nominal Power (kW): Day: 5.0 Night: 0.5

Antenna Input Power (kW): Day: 5.4 Night: 0.54

Antenna Mode: Day: DA Night: DA

(DA=Directional Antenna, ND=Non-directional Antenna; CH=Critical Hours)

Current (amperes): Day: 10 Night: 3.16

Resistance (ohms): Day: 54 Night: 54

Antenna Registration Number(s):

Day:

Tower No.	ASRN	Overall Height (m)
1	1035449	
2	1035450	

Night:

Tower No.	ASRN	Overall Height (m)
1	1035449	
2	1035450	

DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

Theoretical RMS (mV/m/km): Day: 650.17 Night: 205.6
 Standard RMS (mV/m/km):
 Augmented RMS (mV/m/km): Day: 686.35 Night: 21704
 Q Factor: Day: Night: 7.07

Theoretical Parameters:

Day Directional Antenna:

Tower No.	Field Ratio	Phasing (Deg.)	Spacing (Deg.)	Orientation (Deg.)	Tower Ref Switch *	Height (Deg.)
1	1.0000	0.000	0.0000	0.000	0	76.0
2	0.6500	-130.000	60.0000	300.000	0	76.0

* Tower Reference Switch

- 0 = Spacing and orientation from reference tower
- 1 = Spacing and orientation from previous tower

Augmentation Parameters:

Aug No.	Central Azimuth (Deg. T)	Span (Deg.)	Radiation at Central Azimuth (mV/m @ 1 km)
1	48.5	57.0	447.72
2	90.0	60.0	280.03
3	120.0	60.0	300.95
4	150.0	60.0	281.64
5	200.0	100.0	503.42

Theoretical Parameters:

Night Directional Antenna:

Tower No.	Field Ratio	Phasing (Deg.)	Spacing (Deg.)	Orientation (Deg.)	Tower Ref Switch *	Height (Deg.)
1	1.0000	0.000	0.0000	0.000	0	76.0
2	0.6500	-130.000	60.0000	300.000	0	76.0

* Tower Reference Switch

- 0 = Spacing and orientation from reference tower
- 1 = Spacing and orientation from previous tower

Augmentation Parameters:

Aug No.	Central Azimuth (Deg. T)	Span (Deg.)	Radiation at Central Azimuth (mV/m @ 1 km)
1	48.5	57.0	141.60
2	90.0	60.0	88.60
3	120.0	60.0	95.20
4	150.0	60.0	89.10

Augmentation Parameters:

Aug No.	Central Azimuth (Deg. T)	Span (Deg.)	Radiation at Central Azimuth (mV/m @ 1 km)
5	200.0	100.0	159.20

Day Directional Operation:

Twr. No.	Phase (Deg.)	Antenna Monitor Sample Current Ratio
1	0	1
2	-124	1.27

Antenna Monitor: POTOMAC INSTRUMENTS AM-19D(204)

Sampling System Approved Under Section 73.68 of the Rules.

Monitoring Points:

Day Operation:

Radial (Deg. T)	Distance From Transmitter (km)	Maximum Field Strength (mV/m)
90	5.28	45
120	5.51	42.1

Special operating conditions or restrictions:

- 1 Ground System consists of 120-76.2 meters to 106.7 meters, equally spaced, buried, copper radials plus 120-15.2 meters interspaced radials about the base of each tower. Intersecting radials are shortened and bonded to a transverse copper strap midway between towers.

Special operating conditions or restrictions:

2 DESCRIPTION OF AND FIELD INTENSITY MEASURED AT MONITORING POINTS:

Direction of 90° True North: Turn right from the transmitter driveway onto Tower Road, proceeding south 0.3 miles to Royalton Street; Turn left onto Royalton Street, proceeding east 1.1 miles to Hwy 22 south/54 west; Turn right onto Hwy 22/54, proceeding south 0.26 miles to Harrington Road; Turn left onto Harrington Road, proceeding east 1.7 miles to Butternut Ridge Drive; Turn left onto Butternut Ridge Drive, proceeding 0.25 miles north then 0.5 miles east to Military Road; Turn left onto Military Road, proceeding north 0.42 miles to the point. The point is located 210 feet west of the road, in the farm field. Distance from the antenna array is 3.28 miles. The maximum permitted daytime field intensity is 45.0 mV/m

Direction of 120° True North: Turn right from the transmitter driveway onto Tower Road, proceeding south 0.3 miles to Royalton Street; Turn left onto Royalton Street proceeding east 1.1 miles to Hwy 22 south/54 west; Turn right onto Hwy 22/54, proceeding south 0.26 miles to Harrington Road; Turn left onto Harrington Road, proceeding east then south for a total of 3.0 miles to River Breeze Drive (after river crossing and before us Highway 10); Turn right onto River Breeze Drive. The point is located at the western edge of the died-end circle of River Breeze Drive. Distance from the antenna array is 3.42 miles. The maximum permitted daytime field intensity is 42.1 mV/m

*** END OF AUTHORIZATION ***