



United States of America  
FEDERAL COMMUNICATIONS COMMISSION  
AM BROADCAST STATION LICENSE

Authorizing Official:

Official Mailing Address:

MID-WEST MANAGEMENT, INC.  
730 RAY O VAC DRIVE  
MADISON WI 53711

*Son Nguyen*

Son Nguyen  
Supervisory Engineer  
Audio Division  
Media Bureau

Facility Id: 41901

Call Sign: WLMV

License File Number: BZ-20171010AFJ

Grant Date: **JAN 31 2018**

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

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	7:30 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.	7:15 AM	4:30 PM

Callsign: WLMV

License No.: BZ-20171010AFJ

Name of Licensee: MID-WEST MANAGEMENT, INC.

Station Location: MADISON, WI

Frequency (kHz): 1480

Station Class: B

Antenna Coordinates:

Day

Latitude: N 43 Deg 01 Min 30 Sec

Longitude: W 89 Deg 23 Min 48 Sec

Night

Latitude: N 43 Deg 01 Min 30 Sec

Longitude: W 89 Deg 23 Min 48 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: 5.0

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

Antenna Mode: Day: DA Night: DA

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

Current (amperes): Day: 10.4 Night: 10.4

Resistance (ohms): Day: 50 Night: 50

Antenna Registration Number(s):

Day:

Tower No.	ASRN	Overall Height (m)
1	1037788	
2	1037789	

Night:

Tower No.	ASRN	Overall Height (m)
1	1037785	
2	1037786	
3	1037787	
4	1037788	

## DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

Theoretical RMS (mV/m/km): Day: 672.71 Night: 724.2

Standard RMS (mV/m/km):

Augmented RMS (mV/m/km): Day: 731.46 Night: 768.37

Q Factor: Day: Night:

## Theoretical Parameters:

## Day Directional Antenna:

Tower No.	Field Ratio	Phasing (Deg.)	Spacing (Deg.)	Orientation (Deg.)	Tower Ref Switch *	Height (Deg.)
1	0.4150	0.000	0.0000	0.000	0	108.3
2	0.3150	120.000	60.0000	140.000	0	108.3

## \* 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	59.0	26.0	584.37
2	122.0	36.0	177.03
3	158.0	18.0	173.81
4	172.5	29.0	209.21
5	218.0	36.0	547.18
6	236.0	29.0	755.68
7	250.5	29.0	866.47
8	265.0	25.0	967.36
9	277.5	25.0	1024.99
10	290.0	25.0	1081.59
11	310.0	40.0	1118.24
12	330.0	40.0	1115.85
13	357.0	34.0	1035.31

## 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	108.3
2	2.3240	-141.700	100.0000	17.000	0	108.3
3	2.1810	74.900	100.0000	17.000	1	108.3

## Theoretical Parameters:

## Night Directional Antenna:

Tower No.	Field Ratio	Phasing (Deg.)	Spacing (Deg.)	Orientation (Deg.)	Tower Ref Switch *	Height (Deg.)
4	0.8100	-70.000	100.0000	17.000	1	108.3

## \* 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	17.0	47.0	1632.79
2	46.0	58.0	1380.41
3	94.0	10.0	158.20
4	99.0	10.0	130.36
5	104.0	10.0	77.25
6	109.0	10.0	67.59
7	114.0	10.0	90.77
8	119.0	10.0	82.56
9	125.0	11.3	50.53
10	132.0	45.0	78.95
11	158.0	60.0	49.44
12	197.0	80.0	249.93
13	236.0	46.0	111.69
14	240.0	10.0	122.31
15	245.0	10.0	115.87
16	252.3	10.0	77.67
17	265.0	48.0	101.39
18	300.0	45.7	159.33

## Day Directional Operation:

Twr. Phase No. (Deg.)	Antenna Monitor Sample Current Ratio
1	
2	
3	
4 0	1
5 133	0.98

## Night Directional Operation:

Twr. Phase No. (Deg.)	Antenna Monitor Sample Current Ratio
1 -63	0.36

## Night Directional Operation:

Twr. Phase No. (Deg.)	Antenna Monitor Sample Current Ratio
2 155	0.6
3 0	1
4 -158	0.32
5	

Antenna Monitor: POTOMAC INSTRUMENTS AM-19D (210) S/N 102

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)
46	6.19	95.8
140	4.36	37.54

## Night Operation:

Radial (Deg. T)	Distance From Transmitter (km)	Maximum Field Strength (mV/m)
104	2.65	30.9
129	3.72	13.6
158	4.75	13.8
197	2.74	136.7
236	3.06	58.67
265	8.36	9
290	2.27	41.91

## Special operating conditions or restrictions:

- 1 The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

## 2 Antenna Description:

Four vertical, guyed, series-excited steel radiators of uniform cross section (towers #1-#4), plus one tower #5 (NE) vertical, self supporting, series-excited, tapered steel radiator. Tower #4(N) and #5(NE) are used for the daytime directional array; and towers #1(S), #2(SC), #3(NC), and #4(N) are used for the nighttime array. An STL antenna is side-mounted at 45.7 meters AGL on tower #2(SC).

## Special operating conditions or restrictions:

## 3 Ground System Description:

120 equally spaced buried, copper radials about the base of each tower, each 56.4 meters in length about towers #1, #2 and #3 and 76.2 meters about towers #4 and #5 except where terminated by property boundaries or where intersecting radials are shortened and bonded to a transverse copper strap midway between adjacent towers. Plus a 9.8 meter square ground screen about the base of tower #5(NE), and a 6.1 meter radius hexagonal elevated ground screen about the base of tower #1, #2, #3 and #4.

## 4 Location of Monitor Points:

Direction of 46° true North. Proceed on Winnequah Road (which continues to the left) onto Maywood Road and proceed north 0.3 miles to Nichols Road. Turn left and proceed west 0.2 miles to the point. The point is at a mark on the pavement at the edge of a parking lot on the north side of Nichols Road opposite a "No parking anytime" sign.

Direction of 104° true North. Proceed on Clayton Road until it turns to the south and becomes Larsen Road. Proceed south on Larsen Road to the point. The point is at a mark on the pavement, 0.95 miles from County Highway MM on the east side of Larsen Road, directly opposite a utility pole.

Direction of 129° true North. Proceed south on Larsen Road to the intersection of Goodland Park Road, 1.92 miles from County Highway MM. Continue south and then east on Goodland Park Road 0.32 miles to Lalor Road. Turn right and proceed south 0.05 miles to the point. The point is at a mark on the pavement on the east edge of Lalor Road, opposite a utility pole.

## 5 Location of Monitor Points continued:

Direction of 140° true North. Proceed south and then east on Goodland Park Road to Lalor Road. Turn right and proceed south 0.65 miles to the point. The point is at a mark on the pavement on the east edge of Lalor Road, near a large oak tree.

Direction of 158° true North. The point is at a mark on the pavement on the south edge of Maple Avenue, opposite the mail box to 4862.

Direction of 197° true North. The point is at a mark on the pavement on the south edge of Lacy Road, opposite the mail box to 5284.

Direction of 236° true North. Proceed on Fish Hatchery Road to Glacier Valley Road. Turn right and continue north on Glacier Valley Road 0.15 miles to the point. The point is at a mark on the pavement on the west edge of Glacier Valley Road.

## 6 Location of Monitor Points continued:

Direction of 265° true North. The point is located on the East edge of Maple Grove Road at the driveway to 3037 Maple Grove Road and lies 5.19 miles (8.35 Kilometers) from the WLMV antenna system.

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Special operating conditions or restrictions:

- 7 This license is subject to any action taken in MB Docket No. 07-294, and to any action taken in response to a pending or future request to extend or make permanent this station's dual operating authority.

\*\*\* END OF AUTHORIZATION \*\*\*