

Technical Report W264DU Minor Modification

This technical report is submitted for a minor modification to W264DU, FCC facility ID 203252. Changes in the antenna location, COR AGL, antenna and ERP are submitted. The translator will continue to serve as a fill-in to rebroadcast the primary WNDO(AM) 1520 kHz facility at Apopka, FL, FCC facility ID 1185.

W264DU Modification Analysis:

An overlap study in exhibit E-1 shows the W264DU 264D modification is within the WJRR(FM) 266C and WRUM(FM) 262C second-adjacent protected contours. The +40 121.55 and 121.48 F(50-10) dBu contours (exhibits E-2 and E-3) do not encompass any population, buildings or roads (exhibit E-4). The 60 F(50-50) dBu contour overlaps the original CP 60 dBu contour and is contained within the WNDO(AM) licensed and CP 2.0 mV/m daytime contours (exhibit E-5).

Antenna System:

The W264DU modification will be located on the existing 138.4 meter tower, ASR #1038811, at coordinates:

28 32 22.4N 081 26 44.1W NAD 83

A Scala CL-FM, single bay, vertically polarized, directional antenna rotated at a 330 degree azimuth (exhibit E-6) and 45 degree slant will be mounted at a COR AGL of 106.7 meters, 135.7 meters AMSL, 104.8 meter HAAT (exhibit E-7) and operate at 0.250 kW ERP.

RF Exposure Calculation:

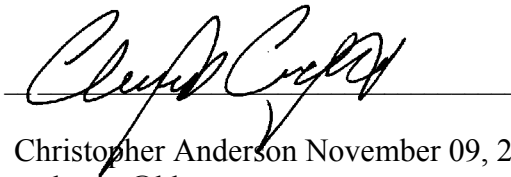
The RF contribution was calculated using the formula from the OET Bulletin 65:

$$S \text{ (RF in microwatts/cm}^2\text{)} = \frac{33.4 \times F^2 \times (H \text{ ERP} + V \text{ ERP in watts})}{R^2 \text{ (height of radiation center in meters -2m)}}$$

Using a worst case vertical (F) factor of 1.0, the RF is calculated to be 1.52 $\mu\text{W}/\text{cm}^2$ to the ground, which is less than 5% of the 200 $\mu\text{W}/\text{cm}^2$ maximum permissible for general public exposure allowing exclusion from consideration.

Conclusion:

It is concluded that the minor modification application for W264DU.CP complies with all Commission rules and policies.



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E-1 W264DU Mod. Overlap Study

REFERENCE 28 32 22.40 N. 81 26 44.10 W.		CH# 264D - 100.7 MHz, Pwr= 0.25 kW DA, HAAT= 104.8 M, COR= 135.7 M Average Protected F(50-50)= 13.16 km Standard Directional					DISPLAY DATES DATA 11-09-21 SEARCH 11-09-21			
CH CITY	CALL	TYPE ANT STATE	AZI ---	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
264C Tampa	WMTX	LIC NCN FL	225.1 44.7	113.07 BLH20111005AAC	27 49 10.80 82 15 38.00	100.000 472	188.9 491	85.1 Ihm Licenses, LLC	-77.9*<	20.8
266C Cocoa Beach	WJRR	LIC _CN FL	82.6 262.8	36.44 BMLH20031010ADE	28 34 51.90 81 04 31.20	100.000 487	12.4 500	85.5 Ihm Licenses, LLC	21.9	-49.1*<(1)
262C Orlando	WRUM	LIC _CN FL	82.6 262.8	36.44 BMLH20031010ADF	28 34 52.00 81 04 31.20	100.000 484	12.4 497	85.4 Ihm Licenses, LLC	21.9	-48.9*<(2)
264D Apopka	W264DU	CP _VN FL	19.8 199.8	3.61 0000163991	28 34 12.70 81 25 59.00	0.005	36	---Reference---	Orlando Radio Marketing, I	
264D Apopka	W264DU	APP _VN FL	19.8 199.8	3.61 0000164509	28 34 12.70 81 25 59.00	0.005	36	---Reference---	Orlando Radio Marketing, I	
264D Kissimmee	W264DV	CP DCN FL	163.3 343.3	20.00 BMPFT20190409AAC	28 22 02.10 81 23 12.10	0.250	20.7 108	6.2 Unity Broadcasting LLC	-2.8*<	6.4
264L1 Orlando	WUOH-LP	CP _CY FL	81.1 261.2	21.14 0000096868	28 34 07.80 81 13 53.80	0.014 81	106	0.9<	8.3	Voz Latina Broadcasting In
264L1 Orlando	WUOH-LP	LIC _CN FL	81.1 261.2	21.13 BLL20150423ABL	28 34 08.00 81 13 54.20	0.010 92	112	1.9<	8.5	Voz Latina Broadcasting In
210C3 Orlando	WUCF-FM	LIC DEN FL	76.3 256.4	24.23 BMLED20140515ADY	28 35 27.00 81 12 17.20	5.600 145	107.5 164	42.4 University Of Central Flor	11.5R	12.7M
264D Daytona Beach	W264DP	LIC _CN FL	27.0 207.1	86.34 0000105763	29 13 52.50 81 02 32.00	0.220	39.7 94	11.6 Glenn Cherry	37.8	45.0
264D Melbourne	W264AS	LIC DCN FL	121.5 301.8	85.31 BLFT20161006ACT	28 08 13.10 80 42 12.20	0.250	43.0 147	12.8 National Christian Network	40.2	65.2
264L1 Ocala	WCKP-LP	LIC _CN FL	317.0 136.7	89.57 BLL20160816AAY	29 07 36.90 82 04 30.30	0.072 36	57	59.9 Musical Performance Group	40.5	

Terrain database is FCC 30 meter, R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
Contour distances are on direct line to and from reference station. Reference zone= East Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
***affixed to 'IN' or 'OUT' values = site inside restricted contour.
« = Station meets FCC minimum distance spacing for its class.
< = Contour Overlap
Reference station has protected zone issue: AM tower

- (1) The +40 121.55 F(50-10) dBu contour within the WJRR(FM) 266C second-adjacent protected contour (exhibit E-2) does not encompass any population, roads or buildings (exhibit E-4).
- (2) The +40 121.48 F(50-10) dBu contour within the WRUM(FM) 262C second-adjacent protected contour (exhibit E-3) does not encompass any population, roads or buildings (exhibit E-4).

W264DU Apopka, FL, Showing Protection to WJRR, Channel: 266
Geographic Coordinates: N. 283222.40 W. 812644.10
74.1204(d) Study - Using FCC 30 meter Terrain Database
Translator or LPFM Maximum Licensed ERP = 0.25 kW, Channel: 264
Translator or LPFM Antenna Height AG = 106.7 meters
W264DU Antenna Model = SCALA CLFMV-1

Protected Station's Contour = 81.55081 dBu
Translator's or LPFM's full Interference contour 121.55081

Review Azimuth = 330 Degrees True
Horizontal Relative Field at Review Azimuth = 1.000
Translator/LPFM ERP on the horizontal at Review Azimuth = 0.25 kW
Distance between stations = 36.4 km
Protected Station= WJRR, 100 kW, 500 M meters COR AMSL

Depression Angle From Degree(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	092.7747	092.7747	106.700
05.00	0.98	1.0	0.2401	090.9192	090.5732	098.776
10.00	0.95	1.0	0.2256	088.1360	086.7970	091.395
15.00	0.895	1.0	0.2003	083.0333	080.2041	085.209
20.00	0.82	1.0	0.1681	076.0752	071.4873	080.681
25.00	0.735	1.0	0.1351	068.1894	061.8006	077.882
30.00	0.645	1.0	0.1040	059.8397	051.8227	076.780
35.00	0.562	1.0	0.0790	052.1394	042.7101	076.794
40.00	0.47	1.0	0.0552	043.6041	033.4027	078.672
45.00	0.36	1.0	0.0324	033.3989	023.6166	083.083
50.00	0.25	1.0	0.0156	023.1937	014.9086	088.933
55.00	0.155	1.0	0.0060	014.3801	008.2481	094.921
60.00	0.085	1.0	0.0018	007.8858	003.9429	099.871
65.00	0.045	1.0	0.0005	004.1749	001.7644	102.916
70.00	0.02	1.0	0.0001	001.8555	000.6346	104.956
75.00	0.01	1.0	0.0000	000.9277	000.2401	105.804
80.00	0.01	1.0	0.0000	000.9277	000.1611	105.786
85.00	0.01	1.0	0.0000	000.9277	000.0809	105.776
90.00	0.01	1.0	0.0000	000.9277	000.0000	105.772

W264DU Apopka, FL, Showing Protection to WRUM(FM), Channel: 262
Geographic Coordinates: N. 283222.40 W. 812644.10
74.1204(d) Study - Using FCC 30 meter Terrain Database
Translator or LPFM Maximum Licensed ERP = 0.25 kW, Channel: 264
Translator or LPFM Antenna Height AG = 106.7 meters
W264DU Antenna Model = SCALA CLFMV-1

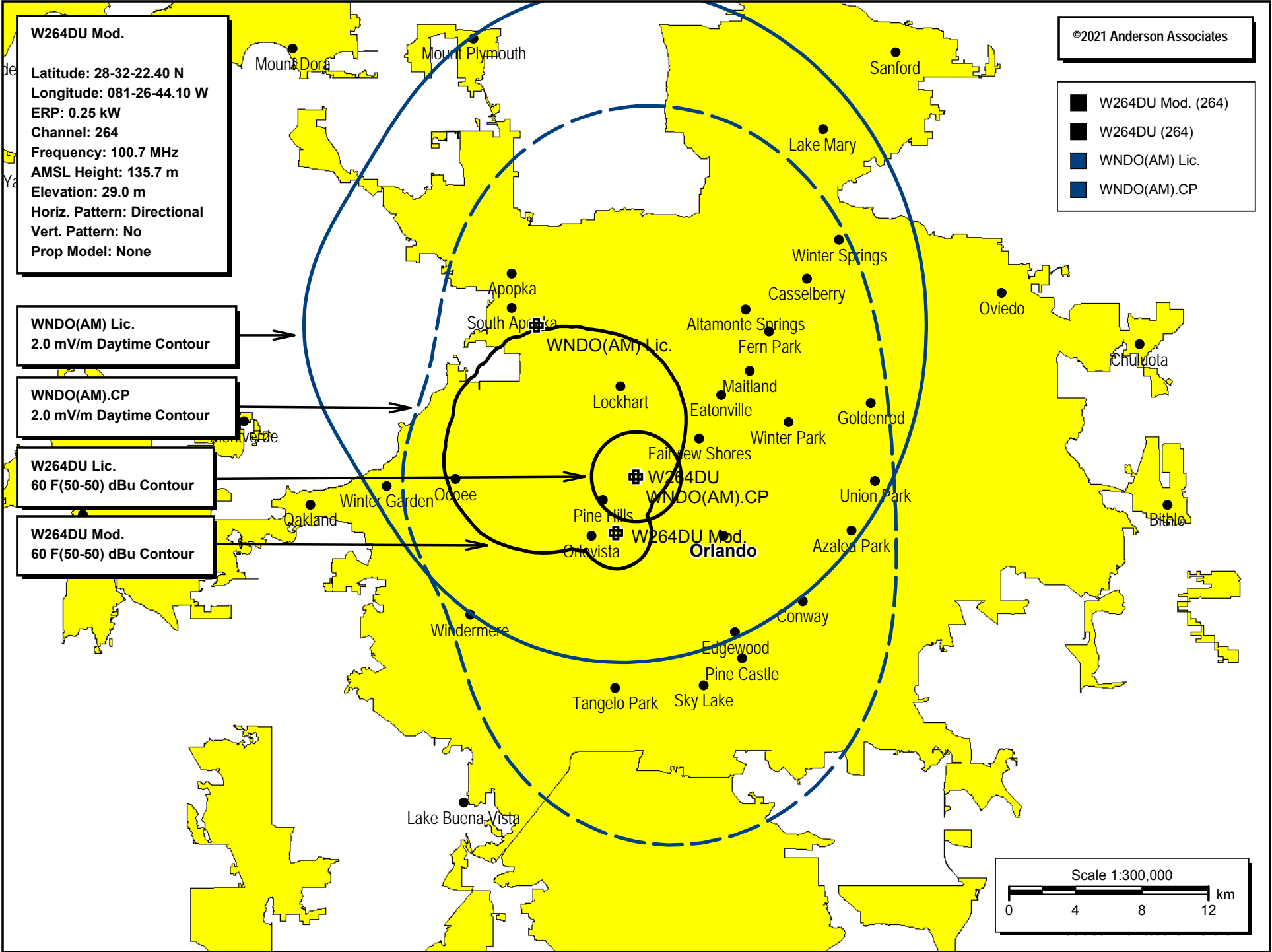
Protected Station's Contour = 81.48459 dBu
Translator's or LPFM's full Interference contour 121.48459

Review Azimuth = 330 Degrees True
Horizontal Relative Field at Review Azimuth = 1.000
Translator/LPFM ERP on the horizontal at Review Azimuth = 0.25 kW
Distance between stations = 36.4 km
Protected Station= WRUM, 100 kW, 497 M meters COR AMSL

Depression Angle From Degree(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	093.4847	093.4847	106.700
05.00	0.98	1.0	0.2401	091.6150	091.2664	098.715
10.00	0.95	1.0	0.2256	088.8105	087.4612	091.278
15.00	0.895	1.0	0.2003	083.6688	080.8179	085.045
20.00	0.82	1.0	0.1681	076.6574	072.0344	080.482
25.00	0.735	1.0	0.1351	068.7113	062.2735	077.661
30.00	0.645	1.0	0.1040	060.2976	052.2193	076.551
35.00	0.562	1.0	0.0790	052.5384	043.0369	076.565
40.00	0.47	1.0	0.0552	043.9378	033.6583	078.457
45.00	0.36	1.0	0.0324	033.6545	023.7973	082.903
50.00	0.25	1.0	0.0156	023.3712	015.0227	088.797
55.00	0.155	1.0	0.0060	014.4901	008.3112	094.830
60.00	0.085	1.0	0.0018	007.9462	003.9731	099.818
65.00	0.045	1.0	0.0005	004.2068	001.7779	102.887
70.00	0.02	1.0	0.0001	001.8697	000.6395	104.943
75.00	0.01	1.0	0.0000	000.9348	000.2420	105.797
80.00	0.01	1.0	0.0000	000.9348	000.1623	105.779
85.00	0.01	1.0	0.0000	000.9348	000.0815	105.769
90.00	0.01	1.0	0.0000	000.9348	000.0000	105.765

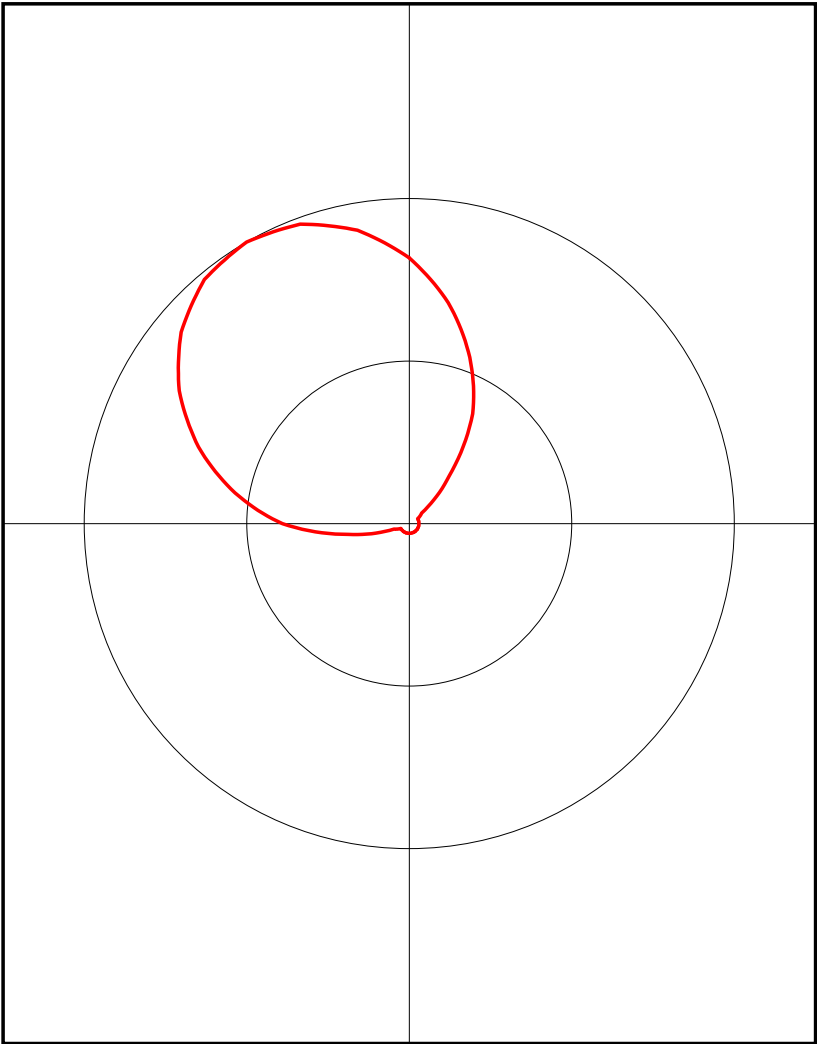


E-5 W264DU Mod. 60 dBu Contour Plot

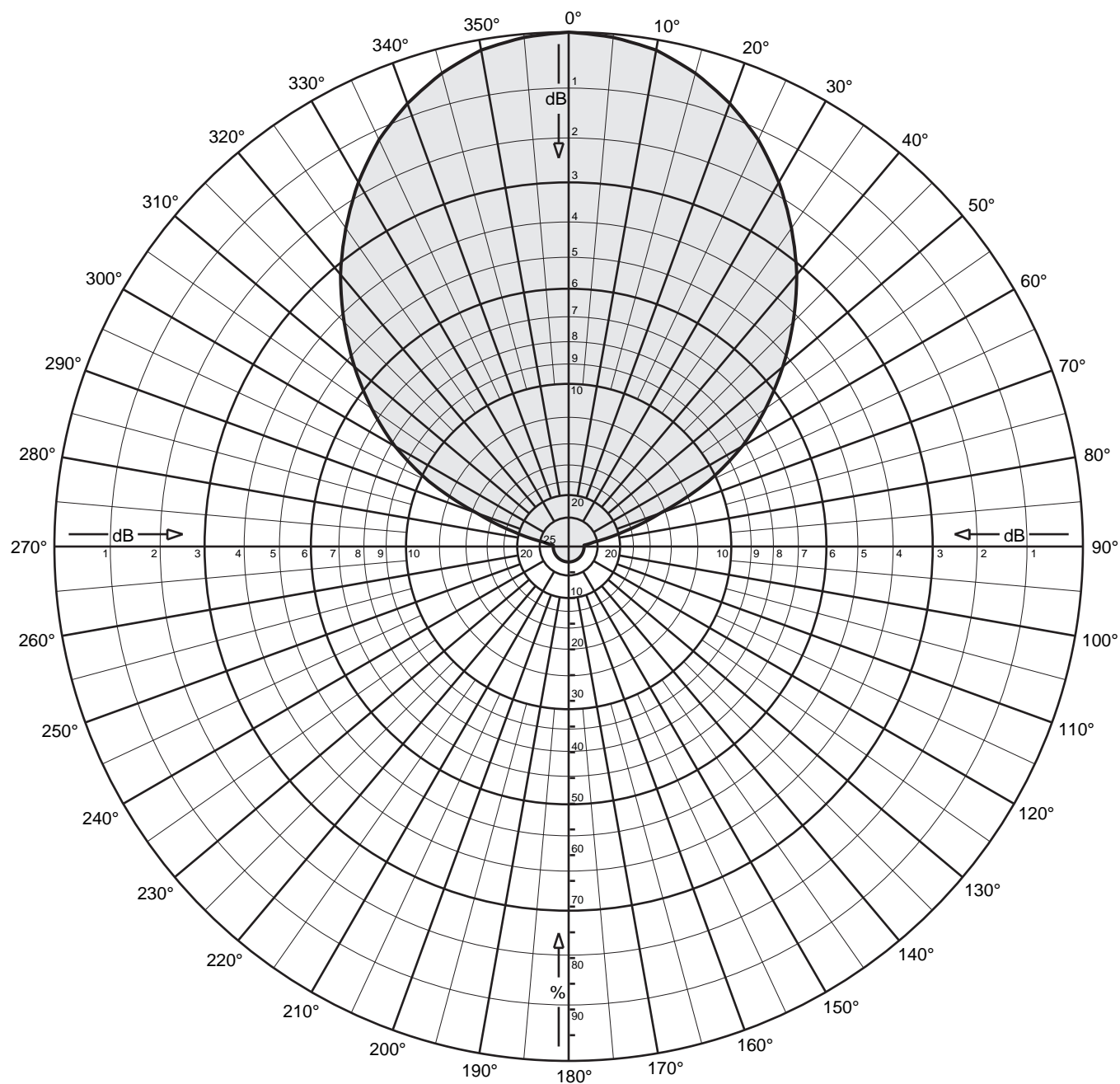


E-6 W264DU Mod. Antenna Pattern

Azimuth (deg)	Relative Field
0.0	0.817
10.0	0.69
20.0	0.544
30.0	0.39
40.0	0.19
50.0	0.05
60.0	0.03
70.0	0.03
80.0	0.03
90.0	0.03
100.0	0.03
110.0	0.03
120.0	0.03
130.0	0.03
140.0	0.03
150.0	0.03
160.0	0.03
170.0	0.03
180.0	0.03
190.0	0.03
200.0	0.03
210.0	0.03
220.0	0.03
230.0	0.03
240.0	0.03
250.0	0.05
260.0	0.19
270.0	0.39
280.0	0.544
290.0	0.69
300.0	0.817
310.0	0.916
320.0	0.98
330.0	1.0
340.0	0.98
350.0	0.916



E-6A Scala CL-FM V Pol. Antenna Reference Pattern



CL-FM Log-periodic

FM

7.0 dBd (9.15 dBi)

Vertical polarization

Horizontal radiation pattern



CL-FM Log-periodic
FM

7.0 dBd (9.15 dBi)
Vertical polarization

Horizontal radiation pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	7.00	5.01	45	0.618	-4.19	2.81	1.91
1	0.998	-0.01	6.99	5.00	46	0.602	-4.40	2.60	1.82
2	0.997	-0.02	6.98	4.99	47	0.588	-4.61	2.39	1.73
3	0.996	-0.03	6.97	4.97	48	0.573	-4.84	2.16	1.65
4	0.995	-0.04	6.96	4.96	49	0.558	-5.06	1.94	1.56
5	0.993	-0.06	6.94	4.95	50	0.544	-5.30	1.70	1.48
6	0.991	-0.08	6.92	4.92	51	0.528	-5.54	1.46	1.40
7	0.988	-0.10	6.90	4.89	52	0.513	-5.80	1.20	1.32
8	0.985	-0.13	6.87	4.87	53	0.498	-6.06	0.94	1.24
9	0.982	-0.15	6.85	4.84	54	0.483	-6.33	0.67	1.17
10	0.980	-0.18	6.82	4.81	55	0.467	-6.60	0.40	1.10
11	0.975	-0.22	6.78	4.76	56	0.452	-6.90	0.10	1.02
12	0.969	-0.27	6.73	4.71	57	0.436	-7.20	-0.20	0.95
13	0.964	-0.32	6.68	4.65	58	0.421	-7.51	-0.51	0.89
14	0.958	-0.37	6.63	4.60	59	0.405	-7.84	-0.84	0.82
15	0.952	-0.42	6.58	4.55	60	0.390	-8.18	-1.18	0.76
16	0.946	-0.49	6.51	4.48	61	0.372	-8.59	-1.59	0.69
17	0.938	-0.56	6.44	4.41	62	0.354	-9.02	-2.02	0.63
18	0.931	-0.62	6.38	4.34	63	0.336	-9.47	-2.47	0.57
19	0.923	-0.69	6.31	4.27	64	0.318	-9.95	-2.95	0.51
20	0.916	-0.76	6.24	4.21	65	0.300	-10.46	-3.46	0.45
21	0.908	-0.84	6.16	4.13	66	0.278	-11.12	-4.12	0.39
22	0.899	-0.92	6.08	4.05	67	0.256	-11.84	-4.84	0.33
23	0.890	-1.01	5.99	3.97	68	0.234	-12.62	-5.62	0.27
24	0.882	-1.10	5.90	3.89	69	0.212	-13.47	-6.47	0.23
25	0.873	-1.18	5.82	3.82	70	0.190	-14.42	-7.42	0.18
26	0.862	-1.29	5.71	3.72	71	0.174	-15.19	-8.19	0.15
27	0.851	-1.41	5.59	3.63	72	0.158	-16.03	-9.03	0.13
28	0.840	-1.52	5.48	3.53	73	0.142	-16.95	-9.95	0.10
29	0.829	-1.63	5.37	3.44	74	0.126	-17.99	-10.99	0.08
30	0.817	-1.75	5.25	3.35	75	0.110	-19.17	-12.17	0.06
31	0.806	-1.88	5.12	3.25	76	0.098	-20.18	-13.18	0.05
32	0.793	-2.02	4.98	3.15	77	0.086	-21.31	-14.31	0.04
33	0.781	-2.15	4.85	3.05	78	0.074	-22.62	-15.62	0.03
34	0.767	-2.30	4.70	2.95	79	0.062	-24.15	-17.15	0.02
35	0.756	-2.44	4.56	2.86	80	0.050	-26.02	-19.02	0.01
36	0.742	-2.59	4.41	2.76	81	0.046	-26.74	-19.74	0.01
37	0.729	-2.74	4.26	2.67	82	0.042	-27.54	-20.54	0.01
38	0.716	-2.90	4.10	2.57	83	0.038	-28.40	-21.40	0.01
39	0.704	-3.05	3.95	2.48	84	0.034	-29.37	-22.37	0.01
40	0.690	-3.22	3.78	2.39	85	0.030	-30.46	-23.46	0.00
41	0.675	-3.41	3.59	2.29	86	0.030	-30.46	-23.46	0.00
42	0.661	-3.60	3.40	2.19	87	0.030	-30.46	-23.46	0.00
43	0.646	-3.79	3.21	2.09	88	0.030	-30.46	-23.46	0.00
44	0.632	-3.99	3.01	2.00	89	0.030	-30.46	-23.46	0.00



CL-FM Log-periodic
FM

7.0 dBd (9.15 dBi)

Vertical polarization

Horizontal radiation pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
90	0.030	-30.46	-23.46	0.00	135	0.030	-30.46	-23.46	0.00
91	0.030	-30.46	-23.46	0.00	136	0.030	-30.46	-23.46	0.00
92	0.030	-30.46	-23.46	0.00	137	0.030	-30.46	-23.46	0.00
93	0.030	-30.46	-23.46	0.00	138	0.030	-30.46	-23.46	0.00
94	0.030	-30.46	-23.46	0.00	139	0.030	-30.46	-23.46	0.00
95	0.030	-30.46	-23.46	0.00	140	0.030	-30.46	-23.46	0.00
96	0.030	-30.46	-23.46	0.00	141	0.030	-30.46	-23.46	0.00
97	0.030	-30.46	-23.46	0.00	142	0.030	-30.46	-23.46	0.00
98	0.030	-30.46	-23.46	0.00	143	0.030	-30.46	-23.46	0.00
99	0.030	-30.46	-23.46	0.00	144	0.030	-30.46	-23.46	0.00
100	0.030	-30.46	-23.46	0.00	145	0.030	-30.46	-23.46	0.00
101	0.030	-30.46	-23.46	0.00	146	0.030	-30.46	-23.46	0.00
102	0.030	-30.46	-23.46	0.00	147	0.030	-30.46	-23.46	0.00
103	0.030	-30.46	-23.46	0.00	148	0.030	-30.46	-23.46	0.00
104	0.030	-30.46	-23.46	0.00	149	0.030	-30.46	-23.46	0.00
105	0.030	-30.46	-23.46	0.00	150	0.030	-30.46	-23.46	0.00
106	0.030	-30.46	-23.46	0.00	151	0.030	-30.46	-23.46	0.00
107	0.030	-30.46	-23.46	0.00	152	0.030	-30.46	-23.46	0.00
108	0.030	-30.46	-23.46	0.00	153	0.030	-30.46	-23.46	0.00
109	0.030	-30.46	-23.46	0.00	154	0.030	-30.46	-23.46	0.00
110	0.030	-30.46	-23.46	0.00	155	0.030	-30.46	-23.46	0.00
111	0.030	-30.46	-23.46	0.00	156	0.030	-30.46	-23.46	0.00
112	0.030	-30.46	-23.46	0.00	157	0.030	-30.46	-23.46	0.00
113	0.030	-30.46	-23.46	0.00	158	0.030	-30.46	-23.46	0.00
114	0.030	-30.46	-23.46	0.00	159	0.030	-30.46	-23.46	0.00
115	0.030	-30.46	-23.46	0.00	160	0.030	-30.46	-23.46	0.00
116	0.030	-30.46	-23.46	0.00	161	0.030	-30.46	-23.46	0.00
117	0.030	-30.46	-23.46	0.00	162	0.030	-30.46	-23.46	0.00
118	0.030	-30.46	-23.46	0.00	163	0.030	-30.46	-23.46	0.00
119	0.030	-30.46	-23.46	0.00	164	0.030	-30.46	-23.46	0.00
120	0.030	-30.46	-23.46	0.00	165	0.030	-30.46	-23.46	0.00
121	0.030	-30.46	-23.46	0.00	166	0.030	-30.46	-23.46	0.00
122	0.030	-30.46	-23.46	0.00	167	0.030	-30.46	-23.46	0.00
123	0.030	-30.46	-23.46	0.00	168	0.030	-30.46	-23.46	0.00
124	0.030	-30.46	-23.46	0.00	169	0.030	-30.46	-23.46	0.00
125	0.030	-30.46	-23.46	0.00	170	0.030	-30.46	-23.46	0.00
126	0.030	-30.46	-23.46	0.00	171	0.030	-30.46	-23.46	0.00
127	0.030	-30.46	-23.46	0.00	172	0.030	-30.46	-23.46	0.00
128	0.030	-30.46	-23.46	0.00	173	0.030	-30.46	-23.46	0.00
129	0.030	-30.46	-23.46	0.00	174	0.030	-30.46	-23.46	0.00
130	0.030	-30.46	-23.46	0.00	175	0.030	-30.46	-23.46	0.00
131	0.030	-30.46	-23.46	0.00	176	0.030	-30.46	-23.46	0.00
132	0.030	-30.46	-23.46	0.00	177	0.030	-30.46	-23.46	0.00
133	0.030	-30.46	-23.46	0.00	178	0.030	-30.46	-23.46	0.00
134	0.030	-30.46	-23.46	0.00	179	0.030	-30.46	-23.46	0.00



CL-FM Log-periodic
FM

7.0 dBd (9.15 dBi)

Vertical polarization

Horizontal radiation pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
180	0.030	-30.46	-23.46	0.00	225	0.030	-30.46	-23.46	0.00
181	0.030	-30.46	-23.46	0.00	226	0.030	-30.46	-23.46	0.00
182	0.030	-30.46	-23.46	0.00	227	0.030	-30.46	-23.46	0.00
183	0.030	-30.46	-23.46	0.00	228	0.030	-30.46	-23.46	0.00
184	0.030	-30.46	-23.46	0.00	229	0.030	-30.46	-23.46	0.00
185	0.030	-30.46	-23.46	0.00	230	0.030	-30.46	-23.46	0.00
186	0.030	-30.46	-23.46	0.00	231	0.030	-30.46	-23.46	0.00
187	0.030	-30.46	-23.46	0.00	232	0.030	-30.46	-23.46	0.00
188	0.030	-30.46	-23.46	0.00	233	0.030	-30.46	-23.46	0.00
189	0.030	-30.46	-23.46	0.00	234	0.030	-30.46	-23.46	0.00
190	0.030	-30.46	-23.46	0.00	235	0.030	-30.46	-23.46	0.00
191	0.030	-30.46	-23.46	0.00	236	0.030	-30.46	-23.46	0.00
192	0.030	-30.46	-23.46	0.00	237	0.030	-30.46	-23.46	0.00
193	0.030	-30.46	-23.46	0.00	238	0.030	-30.46	-23.46	0.00
194	0.030	-30.46	-23.46	0.00	239	0.030	-30.46	-23.46	0.00
195	0.030	-30.46	-23.46	0.00	240	0.030	-30.46	-23.46	0.00
196	0.030	-30.46	-23.46	0.00	241	0.030	-30.46	-23.46	0.00
197	0.030	-30.46	-23.46	0.00	242	0.030	-30.46	-23.46	0.00
198	0.030	-30.46	-23.46	0.00	243	0.030	-30.46	-23.46	0.00
199	0.030	-30.46	-23.46	0.00	244	0.030	-30.46	-23.46	0.00
200	0.030	-30.46	-23.46	0.00	245	0.030	-30.46	-23.46	0.00
201	0.030	-30.46	-23.46	0.00	246	0.030	-30.46	-23.46	0.00
202	0.030	-30.46	-23.46	0.00	247	0.030	-30.46	-23.46	0.00
203	0.030	-30.46	-23.46	0.00	248	0.030	-30.46	-23.46	0.00
204	0.030	-30.46	-23.46	0.00	249	0.030	-30.46	-23.46	0.00
205	0.030	-30.46	-23.46	0.00	250	0.030	-30.46	-23.46	0.00
206	0.030	-30.46	-23.46	0.00	251	0.030	-30.46	-23.46	0.00
207	0.030	-30.46	-23.46	0.00	252	0.030	-30.46	-23.46	0.00
208	0.030	-30.46	-23.46	0.00	253	0.030	-30.46	-23.46	0.00
209	0.030	-30.46	-23.46	0.00	254	0.030	-30.46	-23.46	0.00
210	0.030	-30.46	-23.46	0.00	255	0.030	-30.46	-23.46	0.00
211	0.030	-30.46	-23.46	0.00	256	0.030	-30.46	-23.46	0.00
212	0.030	-30.46	-23.46	0.00	257	0.030	-30.46	-23.46	0.00
213	0.030	-30.46	-23.46	0.00	258	0.030	-30.46	-23.46	0.00
214	0.030	-30.46	-23.46	0.00	259	0.030	-30.46	-23.46	0.00
215	0.030	-30.46	-23.46	0.00	260	0.030	-30.46	-23.46	0.00
216	0.030	-30.46	-23.46	0.00	261	0.030	-30.46	-23.46	0.00
217	0.030	-30.46	-23.46	0.00	262	0.030	-30.46	-23.46	0.00
218	0.030	-30.46	-23.46	0.00	263	0.030	-30.46	-23.46	0.00
219	0.030	-30.46	-23.46	0.00	264	0.030	-30.46	-23.46	0.00
220	0.030	-30.46	-23.46	0.00	265	0.030	-30.46	-23.46	0.00
221	0.030	-30.46	-23.46	0.00	266	0.030	-30.46	-23.46	0.00
222	0.030	-30.46	-23.46	0.00	267	0.030	-30.46	-23.46	0.00
223	0.030	-30.46	-23.46	0.00	268	0.030	-30.46	-23.46	0.00
224	0.030	-30.46	-23.46	0.00	269	0.030	-30.46	-23.46	0.00



CL-FM Log-periodic
FM

7.0 dBd (9.15 dBi)

Vertical polarization

Horizontal radiation pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
270	0.030	-30.46	-23.46	0.00	315	0.618	-4.19	2.81	1.91
271	0.030	-30.46	-23.46	0.00	316	0.632	-3.99	3.01	2.00
272	0.030	-30.46	-23.46	0.00	317	0.646	-3.79	3.21	2.09
273	0.030	-30.46	-23.46	0.00	318	0.661	-3.60	3.40	2.19
274	0.030	-30.46	-23.46	0.00	319	0.675	-3.41	3.59	2.29
275	0.030	-30.46	-23.46	0.00	320	0.690	-3.22	3.78	2.39
276	0.034	-29.37	-22.37	0.01	321	0.704	-3.05	3.95	2.48
277	0.038	-28.40	-21.40	0.01	322	0.716	-2.90	4.10	2.57
278	0.042	-27.54	-20.54	0.01	323	0.729	-2.74	4.26	2.67
279	0.046	-26.74	-19.74	0.01	324	0.742	-2.59	4.41	2.76
280	0.050	-26.02	-19.02	0.01	325	0.756	-2.44	4.56	2.86
281	0.062	-24.15	-17.15	0.02	326	0.767	-2.30	4.70	2.95
282	0.074	-22.62	-15.62	0.03	327	0.781	-2.15	4.85	3.05
283	0.086	-21.31	-14.31	0.04	328	0.793	-2.02	4.98	3.15
284	0.098	-20.18	-13.18	0.05	329	0.806	-1.88	5.12	3.25
285	0.110	-19.17	-12.17	0.06	330	0.817	-1.75	5.25	3.35
286	0.126	-17.99	-10.99	0.08	331	0.829	-1.63	5.37	3.44
287	0.142	-16.95	-9.95	0.10	332	0.840	-1.52	5.48	3.53
288	0.158	-16.03	-9.03	0.13	333	0.851	-1.41	5.59	3.63
289	0.174	-15.19	-8.19	0.15	334	0.862	-1.29	5.71	3.72
290	0.190	-14.42	-7.42	0.18	335	0.873	-1.18	5.82	3.82
291	0.212	-13.47	-6.47	0.23	336	0.882	-1.10	5.90	3.89
292	0.234	-12.62	-5.62	0.27	337	0.890	-1.01	5.99	3.97
293	0.256	-11.84	-4.84	0.33	338	0.899	-0.92	6.08	4.05
294	0.278	-11.12	-4.12	0.39	339	0.908	-0.84	6.16	4.13
295	0.300	-10.46	-3.46	0.45	340	0.916	-0.76	6.24	4.21
296	0.318	-9.95	-2.95	0.51	341	0.923	-0.69	6.31	4.27
297	0.336	-9.47	-2.47	0.57	342	0.931	-0.62	6.38	4.34
298	0.354	-9.02	-2.02	0.63	343	0.938	-0.56	6.44	4.41
299	0.372	-8.59	-1.59	0.69	344	0.946	-0.49	6.51	4.48
300	0.390	-8.18	-1.18	0.76	345	0.952	-0.42	6.58	4.55
301	0.405	-7.84	-0.84	0.82	346	0.958	-0.37	6.63	4.60
302	0.421	-7.51	-0.51	0.89	347	0.964	-0.32	6.68	4.65
303	0.436	-7.20	-0.20	0.95	348	0.969	-0.27	6.73	4.71
304	0.452	-6.90	0.10	1.02	349	0.975	-0.22	6.78	4.76
305	0.467	-6.60	0.40	1.10	350	0.980	-0.18	6.82	4.81
306	0.483	-6.33	0.67	1.17	351	0.982	-0.15	6.85	4.84
307	0.498	-6.06	0.94	1.24	352	0.985	-0.13	6.87	4.87
308	0.513	-5.80	1.20	1.32	353	0.988	-0.10	6.90	4.89
309	0.528	-5.54	1.46	1.40	354	0.991	-0.08	6.92	4.92
310	0.544	-5.30	1.70	1.48	355	0.993	-0.06	6.94	4.95
311	0.558	-5.06	1.94	1.56	356	0.995	-0.04	6.96	4.96
312	0.573	-4.84	2.16	1.65	357	0.996	-0.03	6.97	4.97
313	0.588	-4.61	2.39	1.73	358	0.997	-0.02	6.98	4.99
314	0.602	-4.40	2.60	1.82	359	0.998	-0.01	6.99	5.00

E-7 W264DU Mod. HAAT Calculation

N. Lat. = 283222.4 W. Lng. = 812644.1

HAAT and Distance to Contour,

FCC, FM 2-10 Mi, 51 pts Method - FCC 30 Meter

W264DU, Orlando Radio Marketing, Inc., 0000164509

Azi. AV EL HAAT ERP kW 60-F(50-50)

000	30.2	105.5	0.1669	11.97
030	28.6	107.1	0.0380	8.39
060	27.0	108.7	0.0002	2.15
090	29.9	105.8	0.0002	2.13
120	29.1	106.6	0.0002	2.14
150	29.3	106.4	0.0002	2.14
180	28.2	107.5	0.0002	2.15
210	35.7	100.0	0.0002	2.09
240	35.2	100.5	0.0002	2.10
270	34.8	100.9	0.0380	8.13
300	34.5	101.2	0.1669	11.73
330	28.8	106.9	0.2500	13.29

Ave EI= 30.94 M HAAT= 104.76 M AMSL= 135.7 M

ASR Registration 1038811

Registration Detail

Reg Number	1038811	Status	Constructed
File Number	A1179172	Constructed	04/01/1994
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type GTOWER - Guyed Structure Used for Communication Purposes

Location (in NAD83 Coordinates)

Lat/Long	28-32-22.4 N 081-26-44.1 W	Address	115 Nome Blvd (283455 / WINTER PARK FL)
City, State	ORLANDO , FL		
Zip	32811	County	ORANGE
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
29.0	138.4
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
167.4	128.0

Painting and Lighting Specifications

FAA Chapters 4, 8, 12

Paint and Light in Accordance with FAA Circular Number 70/7460-1L

FAA Notification

FAA Study	2020-ASO-17657-OE	FAA Issue Date	09/01/2020
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Owner & Contact Information

FRN	0011498342	Owner Entity Type	Limited Liability Company
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Owner

American Towers LLC
Attention To: FAA/FCC Regulatory Team
10 Presidential Way
Woburn , MA 01801

P: (781)926-4500
F:
E: faa-fcc@americantower.com

Contact

Attention To: FAA/FCC Regulatory Team
10 Presidential Way
Woburn , MA 01801

P: (781)926-4500
F:
E: faa-fcc@americantower.com

Last Action Status

Status	Constructed	Received	12/03/2020
Purpose	Notification	Entered	12/03/2020
Mode	Interactive		

Related Applications

12/03/2020 A1179172 - Notification (NT)