

ENGINEERING NARRATIVE
IN SUPPORT OF APPLICATION FOR CONSTRUCTION PERMIT
FOR INCENTIVE AUCTION REASSIGNMENT CHANNEL

Prepared for
LOCUSPOINT WRCF LICENSEE, LLC
WRCF-CD CH 16 Facility ID 10549 9.5 kW DA RC 210.9 M AMSL
ORLANDO, FLORIDA

Summary

LocusPoint WRCF Licensee, LLC ("LP") specifies herein its post-auction CH 16 transmission facilities. The proposed facility is based on relocation to FCC Tower Registration 1212124 using a custom, elliptically polarized, antenna pattern designed for the station's CH 16 operation. The horizontally polarized ERP will exceed the vertically polarized ERP at all azimuth bearings. At this site and RC AMSL the ERP is limited to 9.5 kW to maintain the proposed 48.9 dBu F(50,90) contour inside the baseline 48.9 dBu F(50,90). The entire city of Orlando community boundary is located well within the noise limited contour and thus the Grade B contour.

Attached herein is the TVStudy version 2.2.2 output which demonstrates that the proposed facility complies with the requirements for expedited processing in that there is no new interference to any station, the proposed population is 98.6 percent of the baseline population and the proposed coverage contour does not exceed the baseline contour.

Environmental

The proposed site is an existing broadcast site and the tower is existing.

The proposed antenna system consists of an Alive Telecommunications ("ATC") model ATC-BCE310OS-16, elliptically polarized, UHF TV antenna. The relative field in the elevation pattern across the depression angle range of 20 to 90 degrees does not exceed 0.2 with a radiation center 190.5 meters above ground. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 0.2 has been used to calculate the power density 2 meters above ground. The maximum power density is 0.464 uw/cm squared calculated for an ERP OF 9,500 watts H. polarization and 2,850 watts V. polarization. This value is 0.1447% of the General Population exposure per section

1.1310. Based on this analysis it is believed that the proposed facility is in compliance with OET-65 Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 Worker Safety Guidelines.

The proposed tower is an existing site with tower, building, access road and power.

OET-69 Bulletin, TVStudy Output

Study created: 2017.05.25 15:26:07

Study build station data: LMS TV 2017-05-21 (5)

Proposal: WRCF-CD D16 DC APP ORLANDO, FL
File number: DTVBL
Facility ID: 10549
Station data: User record
Record ID: 31
Country: U.S.

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
WVEN-TV	D15	DT	BL	DAYTONA BEACH, FL	DTVBL131	43.6 km
WBBH-TV	D15	DT	LIC	FORT MYERS, FL	BLCDT20030620AAA	207.2
WZRA-CD	D15	DC	BL	OLDSMAR, FL	DTVBL2130	165.0
WCJB-TV	D16	DT	LIC	GAINESVILLE, FL	BLCDT20071119AJB	165.9
WJHG-TV	D16	DT	BL	PANAMA CITY, FL	DTVBL73136	460.7
WPBF	D16	DT	LIC	TEQUESTA, FL	BLANK0000001052	176.3
WSAV-TV	D16	DT	BL	SAVANNAH, GA	DTVBL48662	386.5
WTCN-CA	D17	DC	BL	PALM BEACH, FL	DTVBL70865	195.0
WFTS-TV	D17	DT	BL	TAMPA, FL	DTVBL64588	142.1

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D16
Mask: Full Service
Latitude: 28 35 12.60 N (NAD83)
Longitude: 81 4 57.50 W
Height AMSL: 210.9 m
HAAT:
Peak ERP: 9.50 kW
Antenna: ATC-BCH4100S-16 0.0 deg

48.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.594 kW	202.4 m	35.6 km
45.0	0.173	206.4	29.5
90.0	0.137	206.7	28.3
135.0	0.270	197.9	31.3
180.0	1.16	190.8	38.5
225.0	5.03	191.4	46.1
270.0	9.37	193.5	49.4
315.0	2.93	197.7	43.7

Database HAAT does not agree with computed HAAT
Database HAAT: Computed HAAT: 198 m

Proposal service area is within baseline plus 1.0%
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 1459.8 km

Distance to Mexican border: 1590.4 km

Conditions at FCC monitoring station: Vero Beach FL
Bearing: 158.0 degrees Distance: 117.5 km
ERP: 0.569 kW Field strength: 3.8 dBu, 0.0 mV/m

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 306.6 degrees Distance: 2547.1 km

No land mobile station failures found

Proposal is not within the Offshore Radio Service protected area

Study cell size: 2.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

No IX check failures found.

tvstudy v2.2.2 - tvixstudy
Database: 127.0.0.1, Study: WRCF AT WOTF TOWER, Model: Longley-Rice
Start: 2017.05.25 15:26:46

Study created: 2017.05.25 15:26:07

Study build station data: LMS TV 2017-05-21 (5)

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WZRA-CD	D15	DC	BL	OLDSMAR, FL	DTVBL2130	165.0
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WJHG-TV	D16	DT	BL	PANAMA CITY, FL	DTVBL73136	460.7
WPBF	D16	DT	LIC	TEQUESTA, FL	BLANK0000001052	176.3
WSAV-TV	D16	DT	BL	SAVANNAH, GA	DTVBL48662	386.5
WTCN-CA	D17	DC	BL	PALM BEACH, FL	DTVBL70865	195.0
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90.0	0.137	206.7	28.3
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180.0	1.16	190.8	38.5
225.0	5.03	191.4	46.1
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Study cell size: 2.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Interference to DTVBL131 BL, scenario 1
Proposal causes no interference.

Interference to BLCDDT20030620AAA LIC, scenario 1
Proposal causes no interference.

Interference to DTVBL2130 BL, scenario 1
Proposal causes no interference.

Interference to BLCDDT20071119AJB LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	
Distance Desired:	WCJB-TV	D16	DT	LIC	GAINESVILLE, FL	BLCDDT20071119AJB	
Undesireds: km	WRCF-CD	D16	DC	BL	ORLANDO, FL	DTVBL10549	156.4
	WRCF-CD	D16	DC	APP	ORLANDO, FL	DTVBL	165.9
	WVEN-TV	D15	DT	BL	DAYTONA BEACH, FL	DTVBL131	125.3
	WZRA-CD	D15	DC	BL	OLDSMAR, FL	DTVBL2130	145.6
	WJHG-TV	D16	DT	BL	PANAMA CITY, FL	DTVBL73136	302.0
	WPBF	D16	DT	LIC	TEQUESTA, FL	BLANK0000001052	332.4
	WSAV-TV	D16	DT	BL	SAVANNAH, GA	DTVBL48662	299.4
	WFXU	D17	DT	BL	LIVE OAK, FL	DTVBL22245	127.2

	Service area		Terrain-limited		IX-free, before		IX-free, after	Percent
New IX								
18645.0	977,492	18645.0	977,492	18633.0	977,056	18633.0	977,056	0.00
0.00								

Undesired		Total IX	Unique IX, before	Unique IX, after
WRCF-CD D16 DC BL	4.0	206	0.0	0
WRCF-CD D16 DC APP	0.0	0		0.0 0
WVEN-TV D15 DT BL	4.0	206	0.0	0 0.0 0
WPBF D16 DT LIC	4.0	206	0.0	0 0.0 0
WSAV-TV D16 DT BL	12.0	436	8.0	230 8.0 230

Interference to DTVBL73136 BL, scenario 1
Proposal causes no interference.

Interference to BLANK0000001052 LIC, scenario 1
Proposal causes no interference.

Interference to DTVBL48662 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL70865 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL64588 BL, scenario 1
Proposal causes no interference.

Interference to proposal, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	
Distance Desired:	WRCF-CD	D16	DC	APP	ORLANDO, FL	DTVBL	
Undesireds: km	WVEN-TV	D15	DT	BL	DAYTONA BEACH, FL	DTVBL131	43.6
	WCJB-TV	D16	DT	LIC	GAINESVILLE, FL	BLCDT20071119AJB	165.9
	WPBF	D16	DT	LIC	TEQUESTA, FL	BLANK0000001052	176.3
	WFTS-TV	D17	DT	BL	TAMPA, FL	DTVBL64588	142.1
	Service area		Terrain-limited		IX-free	Percent IX	
	4643.2 1,795,483		4643.2 1,795,483		4643.2 1,795,483	0.00 0.00	

Coverage Baseline for Post-Auction Table of Allotments

	Noise Limited	Ter. limited	Interfer. Free
10549 BLDTA20130705AAR WRCF-CD 16 ORLANDO,FL DC 4780.2 1820391 4780.2 1820391 4776.2 1820390			

Proposed population 98.63% of Baseline.

Conclusion

Based on the information supplied herein, and accompanying application for construction permit, it is believed that the proposed facilities meet all applicable FCC requirements for construction permit.

The foregoing was prepared on behalf of **LocusPoint WRCF Licensee, LLC** by Clarence M. Beverage of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The undersigned certifies, under penalty of perjury, that the statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



By _____

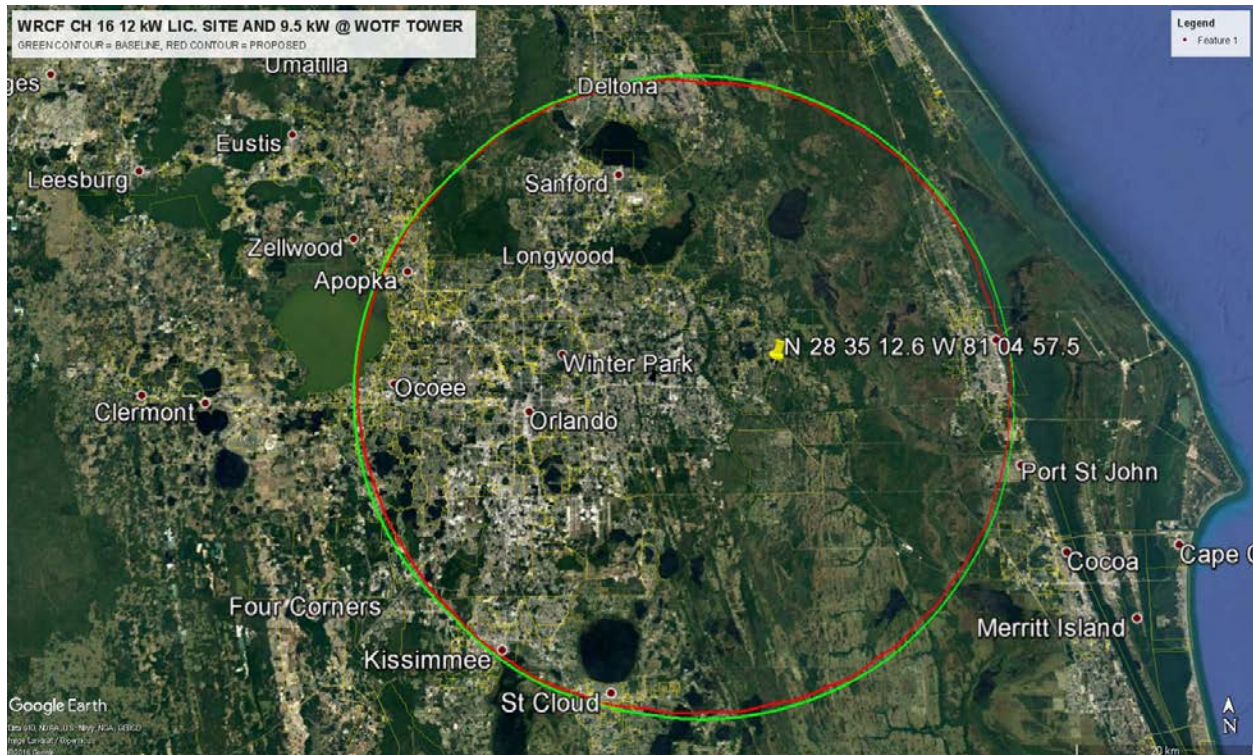
Clarence M. Beverage
for Communications Technologies, Inc.
Marlton, New Jersey
May 25, 2017

FIGURE 1

WRCF BASELINE AND PROPOSED 48.9 dBu F(50,90) CONTOURS

GREEN – BASELINE

RED - PROPOSED



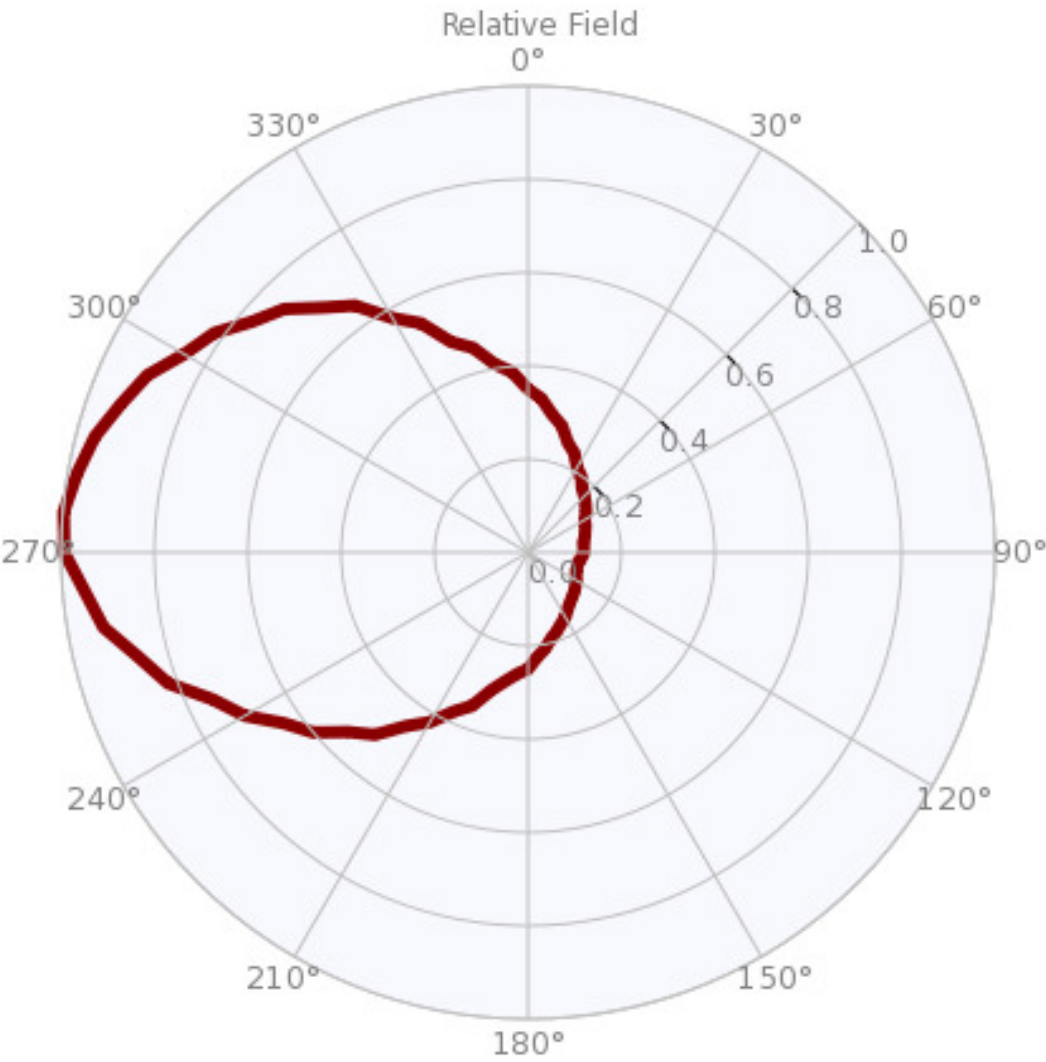
APPENDIX 1 FOLLOWS

ALIVE TELECOM ANTENNA SYSTEM SPECIFICATIONS

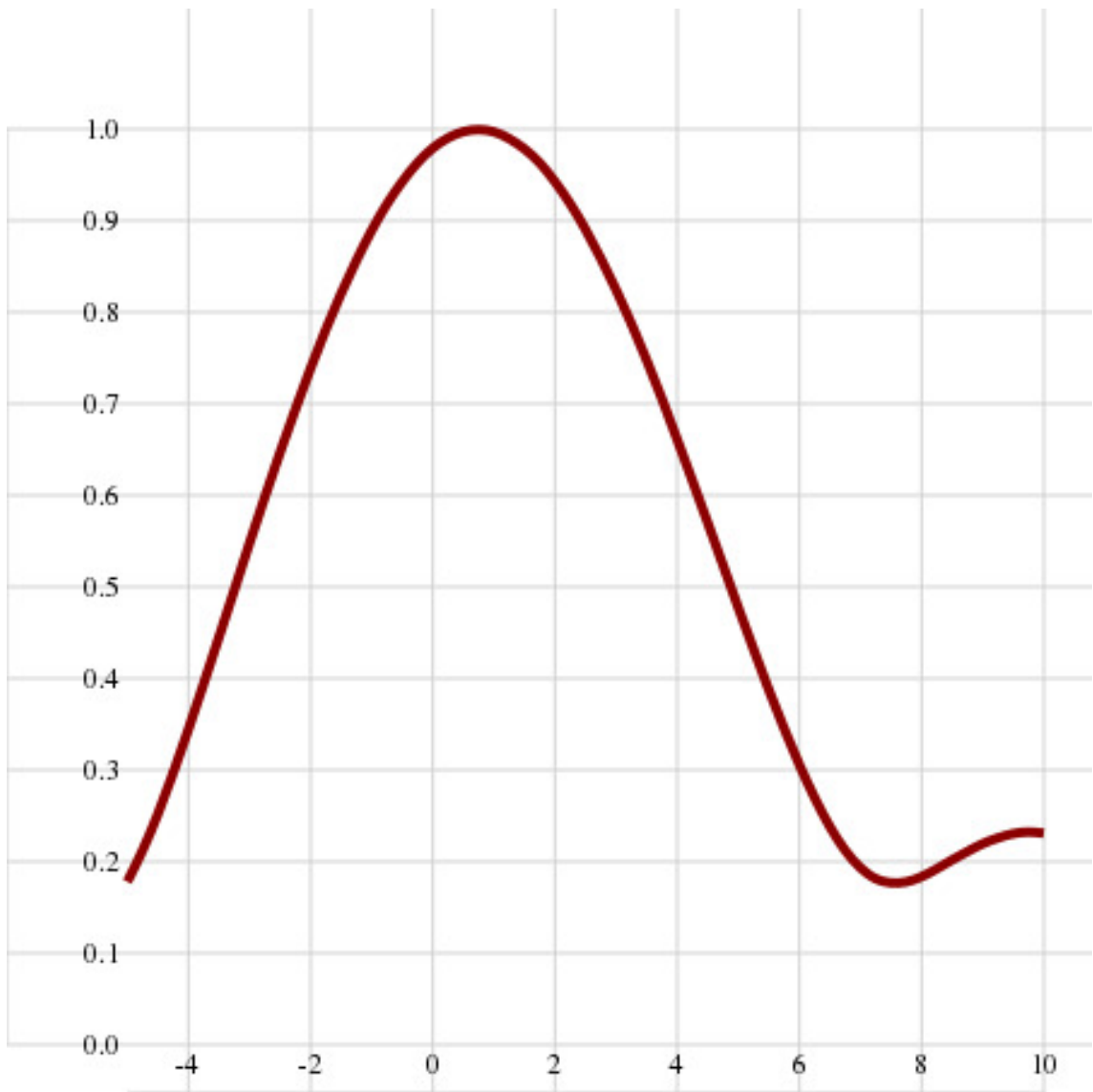
Summary

Antenna Specifications	
Antenna Type	Coaxial Slot
Antenna Model	ATC-BCE310OS-16
Electrical Specifications	
Channel(s)	16
Frequency Range (MHz)	482 - 488
Polarization	Elliptical/Circular
Horizontal Azimuth Pattern	CE
Directivity	3.70
dB	5.68
Vertical Azimuth Pattern	V2-Narrow Cardioid
Directivity	2.76
dB	4.41
Vertical Component	30 %
Azimuth Peak of Beam	266°
Elevation Pattern	BC10
Directivity	10.00
dB	10.00
Electrical Beam Tilt	0.75 °
Antenna Peak Power Gain	
Horizontal Gain Power	28.46
Horizontal Gain Ratio	14.54 dBd
Vertical Gain Power	8.54
Vertical Gain Ratio	9.31 dBd
Line Type	1-5/8" 50 Ohm Air Flex Line
Line Length	720 ft
Total Line Loss	3.38 dB
Effective Radiated Power (ERP)	9.5 kW
ERP Vertical Power	2.85 kW
Transmitter Power Output (TPO)	
TPO Power	0.73 kW
TPO Ratio	-1.39 dBk
Input Type	EIA 1-5/8"
Mechanical Specifications	
Mount Type	Side Mount
Length of Antenna	23.83 ft
Center of Radiation	11.91 ft
Radome Diameter	3" SLOT COVERD
Color	White
Calculated Weight	190 lbs
Windload (Shear)	Contact Alive Telecom 1 2

Horizontal Azimuth Pattern



Elevation pattern -5 to 10



Elevation pattern -5 to 90



Azimuth Horizontal Pattern Tabulation

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
0°	0.250	-12.04	90°	0.120	-18.42	180°	0.350	-9.12	270°	0.993	-0.06
2°	0.250	-12.04	92°	0.120	-18.42	182°	0.358	-8.92	272°	0.986	-0.12
4°	0.235	-12.58	94°	0.120	-18.42	184°	0.372	-8.59	274°	0.970	-0.26
6°	0.225	-12.96	96°	0.120	-18.42	186°	0.388	-8.22	276°	0.953	-0.42
8°	0.220	-13.15	98°	0.120	-18.42	188°	0.402	-7.92	278°	0.933	-0.60
10°	0.210	-13.56	100°	0.120	-18.42	190°	0.410	-7.74	280°	0.923	-0.70
12°	0.210	-13.56	102°	0.121	-18.34	192°	0.419	-7.56	282°	0.912	-0.80
14°	0.199	-14.02	104°	0.124	-18.13	194°	0.436	-7.21	284°	0.890	-1.01
16°	0.191	-14.38	106°	0.126	-17.99	196°	0.454	-6.86	286°	0.864	-1.27
18°	0.184	-14.70	108°	0.129	-17.79	198°	0.471	-6.54	288°	0.835	-1.57
20°	0.180	-14.89	110°	0.130	-17.72	200°	0.480	-6.38	290°	0.820	-1.72
22°	0.178	-14.99	112°	0.131	-17.65	202°	0.492	-6.16	292°	0.805	-1.88
24°	0.172	-15.29	114°	0.134	-17.46	204°	0.518	-5.71	294°	0.775	-2.21
26°	0.168	-15.49	116°	0.136	-17.33	206°	0.542	-5.32	296°	0.745	-2.56
28°	0.162	-15.81	118°	0.139	-17.14	208°	0.568	-4.91	298°	0.715	-2.91
30°	0.160	-15.92	120°	0.140	-17.08	210°	0.580	-4.73	300°	0.700	-3.10
32°	0.158	-16.03	122°	0.142	-16.95	212°	0.593	-4.54	302°	0.688	-3.25
34°	0.152	-16.36	124°	0.148	-16.59	214°	0.619	-4.17	304°	0.662	-3.58
36°	0.148	-16.59	126°	0.152	-16.36	216°	0.646	-3.80	306°	0.638	-3.90
38°	0.142	-16.95	128°	0.158	-16.03	218°	0.672	-3.45	308°	0.612	-4.26
40°	0.140	-17.08	130°	0.160	-15.92	220°	0.685	-3.29	310°	0.600	-4.44
42°	0.139	-17.14	132°	0.162	-15.81	222°	0.696	-3.15	312°	0.589	-4.60
44°	0.136	-17.33	134°	0.166	-15.60	224°	0.717	-2.89	314°	0.566	-4.94
46°	0.134	-17.46	136°	0.171	-15.34	226°	0.738	-2.64	316°	0.544	-5.29
48°	0.131	-17.65	138°	0.175	-15.14	228°	0.759	-2.40	318°	0.521	-5.66
50°	0.130	-17.72	140°	0.180	-14.89	230°	0.770	-2.27	320°	0.510	-5.85
52°	0.129	-17.79	142°	0.184	-14.70	232°	0.780	-2.16	322°	0.499	-6.04
54°	0.126	-17.99	144°	0.191	-14.38	234°	0.800	-1.94	324°	0.476	-6.45
56°	0.124	-18.13	146°	0.199	-14.02	236°	0.820	-1.72	326°	0.454	-6.86
58°	0.121	-18.34	148°	0.206	-13.72	238°	0.840	-1.51	328°	0.431	-7.31
60°	0.120	-18.42	150°	0.210	-13.56	240°	0.850	-1.41	330°	0.420	-7.54
62°	0.119	-18.49	152°	0.215	-13.35	242°	0.860	-1.31	332°	0.411	-7.72
64°	0.116	-18.71	154°	0.225	-12.96	244°	0.879	-1.12	334°	0.394	-8.09
66°	0.114	-18.86	156°	0.235	-12.58	246°	0.899	-0.92	336°	0.376	-8.50
68°	0.111	-19.09	158°	0.245	-12.22	248°	0.918	-0.74	338°	0.359	-8.90
70°	0.110	-19.17	160°	0.250	-12.04	250°	0.928	-0.65	340°	0.350	-9.12
72°	0.110	-19.17	162°	0.256	-11.84	252°	0.934	-0.59	342°	0.341	-9.34
74°	0.110	-19.17	164°	0.269	-11.40	254°	0.948	-0.46	344°	0.324	-9.79
76°	0.110	-19.17	166°	0.281	-11.03	256°	0.960	-0.35	346°	0.306	-10.29
78°	0.110	-19.17	168°	0.294	-10.63	258°	0.974	-0.23	348°	0.289	-10.78
80°	0.110	-19.17	170°	0.300	-10.46	260°	0.980	-0.18	350°	0.280	-11.06
82°	0.111	-19.09	172°	0.306	-10.29	262°	0.985	-0.13	352°	0.276	-11.18
84°	0.114	-18.86	174°	0.319	-9.92	264°	0.995	-0.04	354°	0.269	-11.40
86°	0.116	-18.71	176°	0.331	-9.60	266°	1.00	0.0	356°	0.261	-11.67
88°	0.119	-18.49	178°	0.344	-9.27	268°	0.995	-0.04	358°	0.254	-11.90



Azimuth Pattern Tabulation, FCC

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
0°	0.250	-12.04	90°	0.120	-18.42	180°	0.350	-9.12	270°	0.993	-0.06
10°	0.210	-13.56	100°	0.120	-18.42	190°	0.410	-7.74	280°	0.923	-0.70
20°	0.180	-14.89	110°	0.130	-17.72	200°	0.480	-6.38	290°	0.820	-1.72
30°	0.160	-15.92	120°	0.140	-17.08	210°	0.580	-4.73	300°	0.700	-3.10
40°	0.140	-17.08	130°	0.160	-15.92	220°	0.685	-3.29	310°	0.600	-4.44
50°	0.130	-17.72	140°	0.180	-14.89	230°	0.770	-2.27	320°	0.510	-5.85
60°	0.120	-18.42	150°	0.210	-13.56	240°	0.850	-1.41	330°	0.420	-7.54
70°	0.110	-19.17	160°	0.250	-12.04	250°	0.928	-0.65	340°	0.350	-9.12
80°	0.110	-19.17	170°	0.300	-10.46	260°	0.980	-0.18	350°	0.280	-11.06
						266°	1.00	0.00			

Elevation Pattern Tabulation

-5 to 10 in 0.25 increments, 10 to 90 in 0.50 increments

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-5.00	0.178	-14.99	8.75	0.211	-13.51	35.00	0.015	-36.48	62.50	0.144	-16.83
-4.75	0.211	-13.51	9.00	0.220	-13.15	35.50	0.004	-47.96	63.00	0.142	-16.95
-4.50	0.251	-12.01	9.25	0.226	-12.92	36.00	0.020	-33.98	63.50	0.140	-17.08
-4.25	0.296	-10.57	9.50	0.231	-12.73	36.50	0.037	-28.64	64.00	0.136	-17.33
-4.00	0.344	-9.27	9.75	0.233	-12.65	37.00	0.052	-25.68	64.50	0.131	-17.65
-3.75	0.394	-8.09	10.00	0.231	-12.73	37.50	0.066	-23.61	65.00	0.125	-18.06
-3.50	0.445	-7.03	10.50	0.220	-13.15	38.00	0.078	-22.16	65.50	0.118	-18.56
-3.25	0.496	-6.09	11.00	0.200	-13.98	38.50	0.087	-21.21	66.00	0.112	-19.02
-3.00	0.548	-5.22	11.50	0.173	-15.24	39.00	0.093	-20.63	66.50	0.104	-19.66
-2.75	0.598	-4.47	12.00	0.143	-16.89	39.50	0.097	-20.26	67.00	0.097	-20.26
-2.50	0.647	-3.78	12.50	0.112	-19.02	40.00	0.098	-20.18	67.50	0.089	-21.01
-2.25	0.694	-3.17	13.00	0.086	-21.31	40.50	0.096	-20.35	68.00	0.082	-21.72
-2.00	0.739	-2.63	13.50	0.072	-22.85	41.00	0.091	-20.82	68.50	0.073	-22.73
-1.75	0.782	-2.14	14.00	0.076	-22.38	41.50	0.084	-21.51	69.00	0.066	-23.61
-1.50	0.821	-1.71	14.50	0.093	-20.63	42.00	0.075	-22.50	69.50	0.059	-24.58
-1.25	0.857	-1.34	15.00	0.113	-18.94	42.50	0.064	-23.88	70.00	0.052	-25.68
-1.00	0.890	-1.01	15.50	0.130	-17.72	43.00	0.051	-25.85	70.50	0.046	-26.74
-0.75	0.919	-0.73	16.00	0.142	-16.95	43.50	0.037	-28.64	71.00	0.042	-27.54
-0.50	0.943	-0.51	16.50	0.147	-16.65	44.00	0.022	-33.15	71.50	0.038	-28.40
-0.25	0.964	-0.32	17.00	0.146	-16.71	44.50	0.008	-41.94	72.00	0.036	-28.87
0.00	0.980	-0.18	17.50	0.140	-17.08	45.00	0.008	-41.94	72.50	0.036	-28.87
0.25	0.991	-0.08	18.00	0.127	-17.92	45.50	0.021	-33.56	73.00	0.036	-28.87
0.50	0.998	-0.02	18.50	0.109	-19.25	46.00	0.035	-29.12	73.50	0.038	-28.40
0.75	1.000	0.00	19.00	0.088	-21.11	46.50	0.046	-26.74	74.00	0.040	-27.96
1.00	0.998	-0.02	19.50	0.064	-23.88	47.00	0.056	-25.04	74.50	0.042	-27.54
1.25	0.990	-0.09	20.00	0.040	-27.96	47.50	0.065	-23.74	75.00	0.045	-26.94
1.50	0.979	-0.18	20.50	0.022	-33.15	48.00	0.071	-22.97	75.50	0.048	-26.38
1.75	0.964	-0.32	21.00	0.028	-31.06	48.50	0.075	-22.50	76.00	0.050	-26.02
2.00	0.943	-0.51	21.50	0.047	-26.56	49.00	0.077	-22.27	76.50	0.052	-25.68
2.25	0.919	-0.73	22.00	0.066	-23.61	49.50	0.077	-22.27	77.00	0.054	-25.35
2.50	0.891	-1.00	22.50	0.083	-21.62	50.00	0.075	-22.50	77.50	0.056	-25.04
2.75	0.859	-1.32	23.00	0.094	-20.54	50.50	0.071	-22.97	78.00	0.057	-24.88
3.00	0.825	-1.67	23.50	0.102	-19.83	51.00	0.066	-23.61	78.50	0.057	-24.88
3.25	0.788	-2.07	24.00	0.104	-19.66	51.50	0.058	-24.73	79.00	0.058	-24.73
3.50	0.748	-2.52	24.50	0.102	-19.83	52.00	0.048	-26.38	79.50	0.058	-24.73
3.75	0.706	-3.02	25.00	0.095	-20.45	52.50	0.038	-28.40	80.00	0.057	-24.88
4.00	0.661	-3.60	25.50	0.084	-21.51	53.00	0.027	-31.37	80.50	0.057	-24.88
4.25	0.616	-4.21	26.00	0.070	-23.10	53.50	0.017	-35.39	81.00	0.056	-25.04
4.50	0.570	-4.88	26.50	0.052	-25.68	54.00	0.013	-37.72	81.50	0.054	-25.35
4.75	0.524	-5.61	27.00	0.034	-29.37	54.50	0.021	-33.56	82.00	0.052	-25.68
5.00	0.477	-6.43	27.50	0.015	-36.48	55.00	0.034	-29.37	82.50	0.050	-26.02
5.25	0.432	-7.29	28.00	0.010	-40.00	55.50	0.046	-26.74	83.00	0.048	-26.38
5.50	0.387	-8.25	28.50	0.028	-31.06	56.00	0.059	-24.58	83.50	0.045	-26.94
5.75	0.345	-9.24	29.00	0.044	-27.13	56.50	0.072	-22.85	84.00	0.042	-27.54
6.00	0.305	-10.31	29.50	0.059	-24.58	57.00	0.084	-21.51	84.50	0.040	-27.96
6.25	0.269	-11.40	30.00	0.072	-22.85	57.50	0.096	-20.35	85.00	0.036	-28.87
6.50	0.237	-12.51	30.50	0.082	-21.72	58.00	0.106	-19.49	85.50	0.033	-29.63
6.75	0.211	-13.51	31.00	0.087	-21.21	58.50	0.116	-18.71	86.00	0.029	-30.75
7.00	0.192	-14.33	31.50	0.089	-21.01	59.00	0.124	-18.13	86.50	0.026	-31.70
7.25	0.180	-14.89	32.00	0.087	-21.21	59.50	0.131	-17.65	87.00	0.022	-33.15
7.50	0.176	-15.09	32.50	0.082	-21.72	60.00	0.137	-17.27	87.50	0.018	-34.89
7.75	0.177	-15.04	33.00	0.073	-22.73	60.50	0.141	-17.02	88.00	0.014	-37.08
8.00	0.183	-14.75	33.50	0.061	-24.29	61.00	0.143	-16.89	88.50	0.005	-46.02
8.25	0.192	-14.33	34.00	0.048	-26.38	61.50	0.145	-16.77	89.00	0.004	-47.96
8.50	0.202	-13.89	34.50	0.033	-29.63	62.00	0.145	-16.77	89.50	0.003	-50.46
8.75	0.211	-13.51	35.00	0.015	-36.48	62.50	0.144	-16.83	90.00	0.001	-60.00