



ENGINEERING STATEMENT
OF
JOHN F.X. BROWNE, P.E.
IN SUPPORT OF AN APPLICATION FOR
MINOR MODIFICATION OF CONSTRUCTION PERMIT
FOR
W63AH/W32DS
MAPLEWOOD, OH

Background

Greater Dayton Public Television Inc. (GDPTV) is the licensee of the analog television translator station W63AH, Ch. 63, (Facility ID. 25069) at Maplewood, OH. W63AH translates the signal of WPTD-DT CH 16, Dayton OH, a public television station also owned and operated by GDPTV. In May 2009, GDPTV applied-for (and was granted) a construction permit (BDISDTT-20090507ADG) to displace W63AH from Ch. 63 to Ch. 32 and "flashcut" to digital operation^{1/}. W63AH had planned to operate from a tower located at 40° 54' 08" N, 84° 04' 21" W (NAD27); however, this site is no longer available for use. GDPTV has identified a new location for its Ch. 32 operation but must use a directional antenna (rather than the presently specified omni-directional antenna) from the new site in order to protect surrounding stations from interference. GDPTV is filing the instant application to modify its existing construction permit to specify the new site and operating parameters.

^{1/} Upon grant of the "flashcut" displacement application, the call sign for the translator was changed from W63AH to W32DS.



Site and Tower

The tower is located at the following coordinates:

40° 33' 10.3" N (NAD27)
84° 31' 02.3" W

The tower is registered (ASRN 1266029) and no change in the ASR, or notification to the FAA, is required as the overall height of the tower will not be changed. The proposed transmitting antenna will be attached to an existing top-mounted pole.

Antenna and Power

The proposed directional antenna is an ERI ALP12LW-HSER-32. The height of the antenna radiation center will be 412.5m AMSL. The proposed digital ERP is 6.8 kW. The antenna azimuth and elevation patterns with associated tabulations are attached hereto, along with a dBk table that lists the distances to the protected contour of the proposed facility and identifies the maximum and minimum azimuth pattern values.

Coverage

The 51 dBu F(50,90) protected contour of the proposed facility overlaps the contour of the 51 dBu F(50,90) protected contour of the presently authorized facility. Figure 1, attached hereto, is a map depicting the overlap of the contours.

Interference

An interference study was conducted using the proposed parameters with software that emulates that used by the Commission. That study shows that the proposed facility



would not cause more interference than the allowable 0.5% limit to any surrounding full-service or Class A stations nor would it cause more interference than the allowable 2.0% limit to surrounding low power analog or digital stations as defined in the Commission's Rules.

Environmental/RFR

This construction does not involve any of the conditions that require an Environmental Assessment as specified in 47 CFR Section 1.1311, therefore, further consideration is not required.

The additional ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.000111 mW/cm^2 , which is less than 5% of the MPE for public exposure (0.387 mW/cm^2) at the proposed frequency.

GDPTV agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of potential RFR hazards is posted.

**Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

John F. X. Browne, P.E.
January 21, 2010

John F.X. Browne & Associates P.C.

Overlap Between 51 dBu Contour of Authorized W63AH Digital Facility (Black) and
51 dBu Contour of Proposed W63AH Digital Facility (Red)

W63AH-CP (Black)

BDISDTT20090507ADG

Latitude: 40-23-54 N

Longitude: 084-04-21 W

ERP: 15.00 kW

Channel: 32

Frequency: 581.0 MHz

AMSL Height: 444.0 m

W63AH-Proposed (Red)

Latitude: 40-33-10.30 N

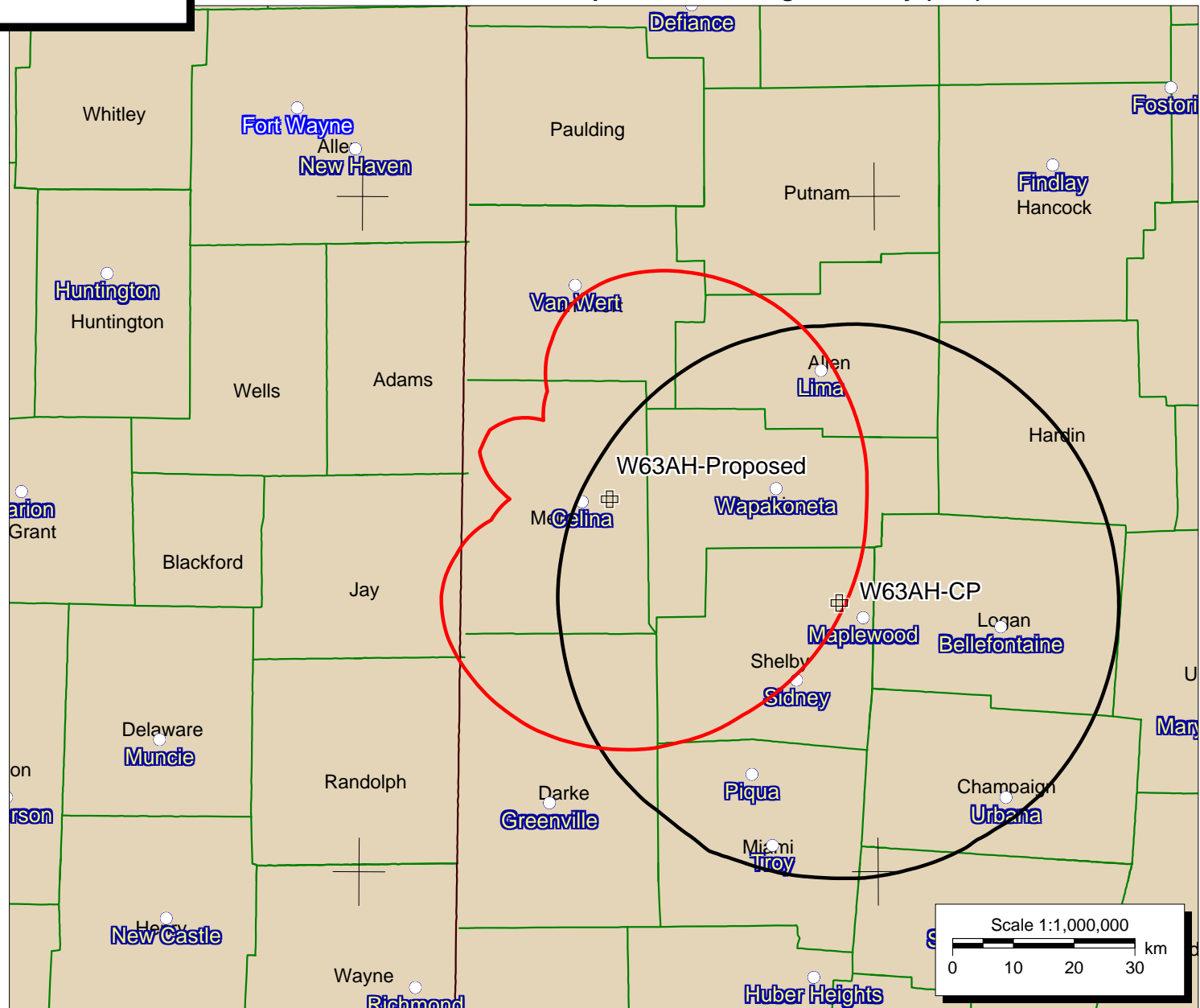
Longitude: 084-31-02.30 W

ERP: 6.80 kW

Channel: 32

Frequency: 581.0 MHz

AMSL Height: 413.0 m

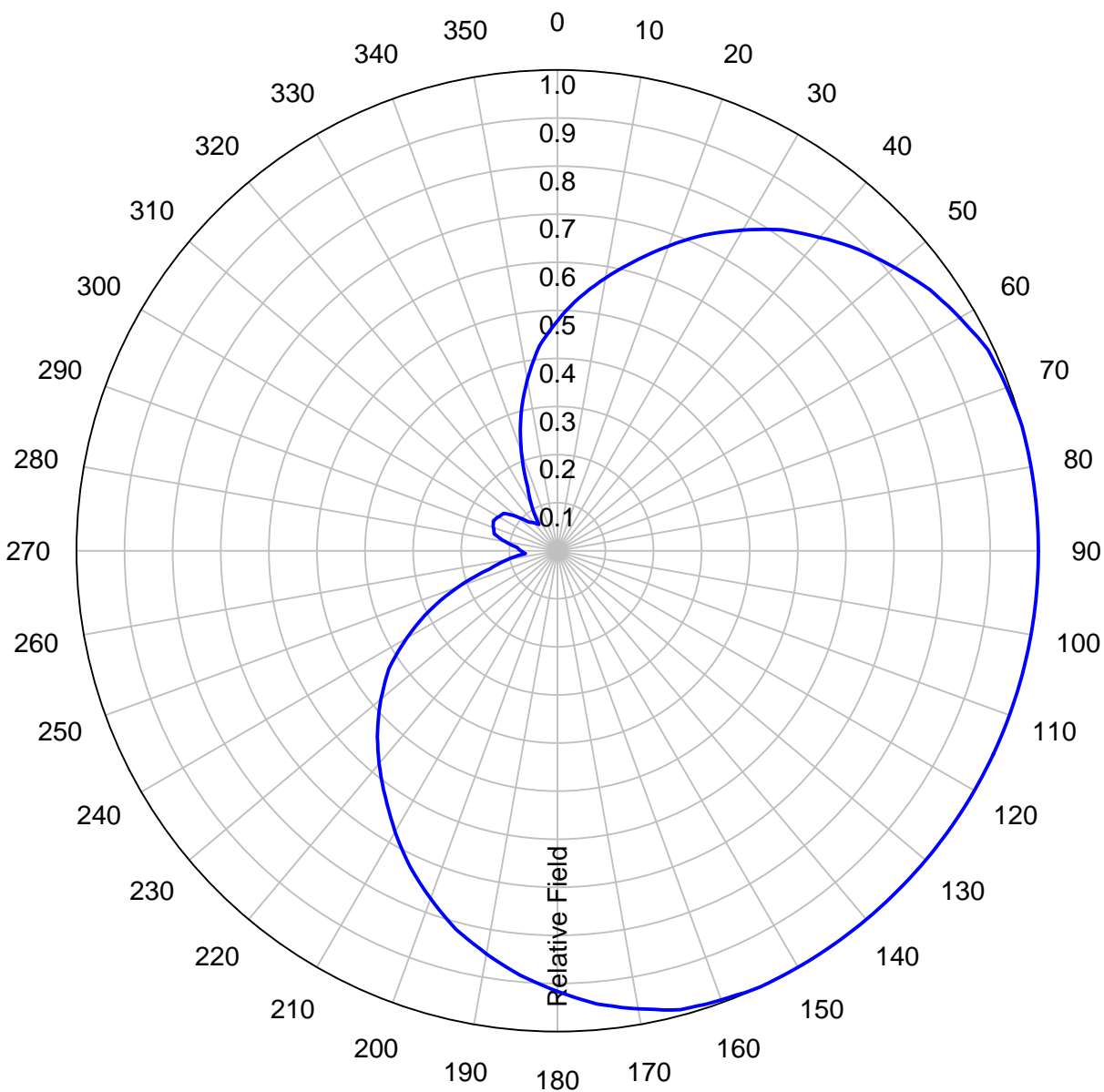


01-21-10

Figure 1

AZIMUTH PATTERN**Type:****ALP-ER****Channel:****32****Directivity:****Numeric****dBd****Location:****Celina, OH****Peak(s) at:****1.93****2.86****Polarization:****Horizontal**

Note: Pattern shape and directivity may vary with channel and mouting configuration.

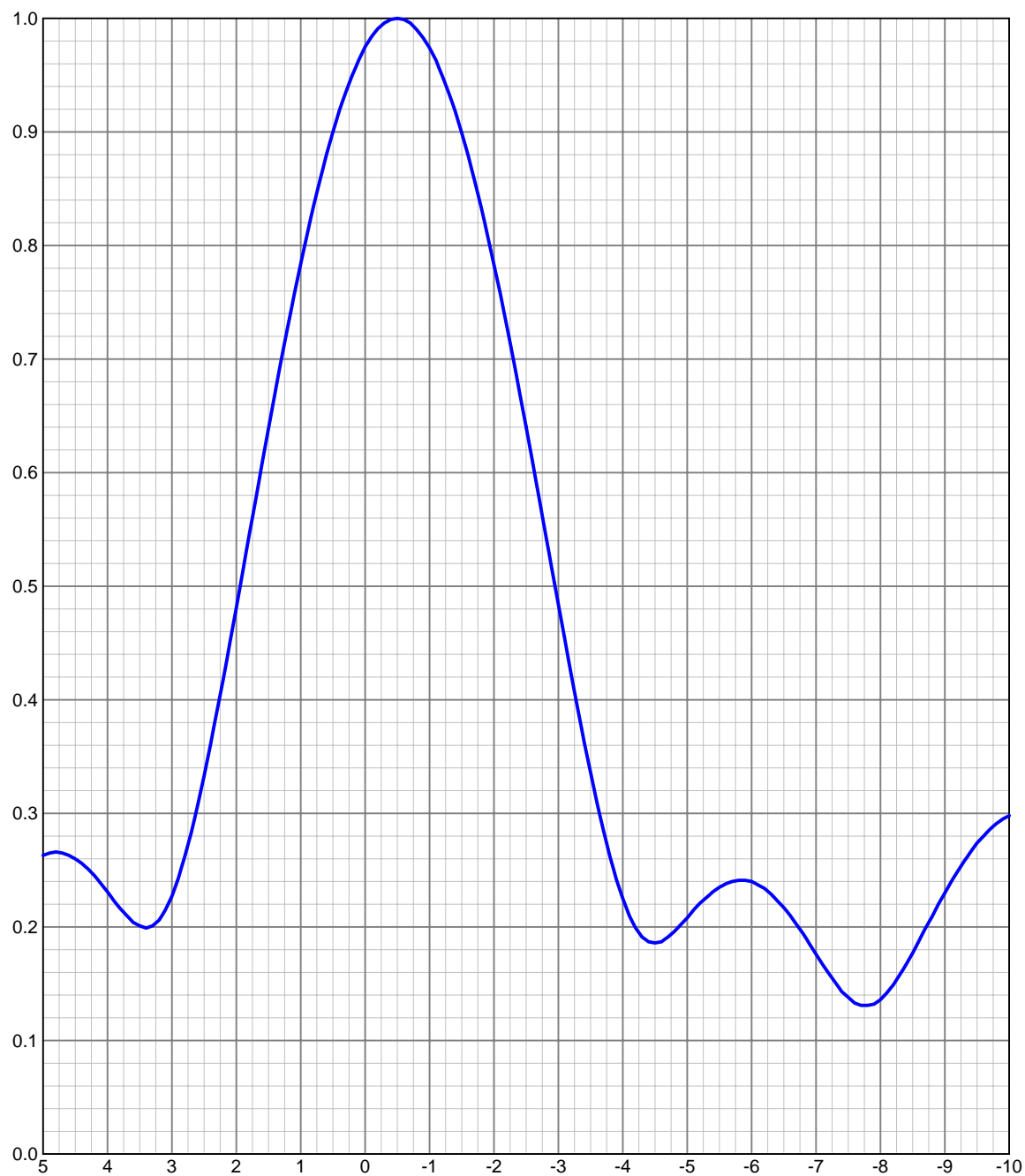


TABULATED DATA FOR AZIMUTH PATTERN

Type: ALP-ER

Polarization: Horizontal

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	0.478	-6.41	92	1.000	0.00	184	0.892	-0.99	276	0.090	-20.92
2	0.499	-6.04	94	1.000	0.00	186	0.879	-1.12	278	0.100	-20.00
4	0.519	-5.70	96	1.000	0.00	188	0.865	-1.26	280	0.110	-19.17
6	0.538	-5.38	98	1.000	0.00	190	0.851	-1.40	282	0.121	-18.34
8	0.557	-5.08	100	1.000	0.00	192	0.836	-1.56	284	0.131	-17.65
10	0.576	-4.79	102	1.000	0.00	194	0.822	-1.70	286	0.137	-17.27
12	0.595	-4.51	104	1.000	0.00	196	0.806	-1.87	288	0.139	-17.14
14	0.614	-4.24	106	1.000	0.00	198	0.788	-2.07	290	0.142	-16.95
16	0.634	-3.96	108	1.000	0.00	200	0.770	-2.27	292	0.144	-16.83
18	0.654	-3.69	110	1.000	0.00	202	0.752	-2.48	294	0.146	-16.71
20	0.674	-3.43	112	1.000	0.00	204	0.734	-2.69	296	0.146	-16.71
22	0.695	-3.16	114	1.000	0.00	206	0.715	-2.91	298	0.144	-16.83
24	0.715	-2.91	116	1.000	0.00	208	0.695	-3.16	300	0.141	-17.02
26	0.734	-2.69	118	1.000	0.00	210	0.675	-3.41	302	0.139	-17.14
28	0.752	-2.48	120	1.000	0.00	212	0.654	-3.69	304	0.137	-17.27
30	0.770	-2.27	122	1.000	0.00	214	0.634	-3.96	306	0.131	-17.65
32	0.788	-2.07	124	1.000	0.00	216	0.615	-4.22	308	0.121	-18.34
34	0.806	-1.87	126	1.000	0.00	218	0.596	-4.50	310	0.111	-19.09
36	0.822	-1.70	128	1.000	0.00	220	0.577	-4.78	312	0.100	-20.00
38	0.836	-1.56	130	1.000	0.00	222	0.558	-5.07	314	0.090	-20.92
40	0.850	-1.41	132	1.000	0.00	224	0.539	-5.37	316	0.083	-21.62
42	0.865	-1.26	134	1.000	0.00	226	0.519	-5.70	318	0.080	-21.94
44	0.879	-1.12	136	1.000	0.00	228	0.499	-6.04	320	0.076	-22.38
46	0.892	-0.99	138	1.000	0.00	230	0.479	-6.39	322	0.072	-22.85
48	0.904	-0.88	140	1.000	0.00	232	0.458	-6.78	324	0.069	-23.22
50	0.916	-0.76	142	1.000	0.00	234	0.438	-7.17	326	0.075	-22.50
52	0.928	-0.65	144	1.000	0.00	236	0.415	-7.64	328	0.091	-20.82
54	0.940	-0.54	146	1.000	0.00	238	0.388	-8.22	330	0.106	-19.49
56	0.950	-0.45	148	1.000	0.00	240	0.361	-8.85	332	0.122	-18.27
58	0.959	-0.36	150	1.000	0.00	242	0.334	-9.53	334	0.138	-17.20
60	0.967	-0.29	152	1.000	0.00	244	0.307	-10.26	336	0.161	-15.86
62	0.975	-0.22	154	1.000	0.00	246	0.278	-11.12	338	0.190	-14.42
64	0.984	-0.14	156	0.999	-0.01	248	0.249	-12.08	340	0.220	-13.15
66	0.989	-0.10	158	0.996	-0.03	250	0.219	-13.19	342	0.249	-12.08
68	0.992	-0.07	160	0.994	-0.05	252	0.190	-14.42	344	0.278	-11.12
70	0.994	-0.05	162	0.992	-0.07	254	0.161	-15.86	346	0.307	-10.26
72	0.996	-0.03	164	0.989	-0.10	256	0.138	-17.20	348	0.334	-9.53
74	0.999	-0.01	166	0.984	-0.14	258	0.122	-18.27	350	0.361	-8.85
76	1.000	0.00	168	0.975	-0.22	260	0.106	-19.49	352	0.388	-8.22
78	1.000	0.00	170	0.967	-0.29	262	0.091	-20.82	354	0.415	-7.64
80	1.000	0.00	172	0.959	-0.36	264	0.075	-22.50	356	0.438	-7.17
82	1.000	0.00	174	0.950	-0.45	266	0.069	-23.22	358	0.458	-6.78
84	1.000	0.00	176	0.940	-0.54	268	0.072	-22.85	360	0.478	-6.41
86	1.000	0.00	178	0.928	-0.65	270	0.076	-22.38			
88	1.000	0.00	180	0.916	-0.76	272	0.080	-21.94			
90	1.000	0.00	182	0.904	-0.88	274	0.083	-21.62			

ELEVATION PATTERN**Type:****ALP12L2****Channel:****32****Directivity:****Numeric****dBd****Location:****Celina, OH****Main Lobe:****12.64****11.02****Beam Tilt:****-0.50****Horizontal:****12.02****10.80****Polarization:****Horizontal****Relative Field**

TABULATED DATA FOR ELEVATION PATTERN

Type: ALP12L2

PolarizationHorizontal

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB
5.00	0.263	-11.60	-6.75	0.198	-14.07	-27.00	0.030	-30.46	-50.50
4.75	0.266	-11.52	-7.00	0.176	-15.09	-27.50	0.021	-33.56	-51.00
4.50	0.260	-11.70	-7.25	0.155	-16.19	-28.00	0.019	-34.42	-51.50
4.25	0.248	-12.11	-7.50	0.138	-17.20	-28.50	0.017	-35.39	-52.00
4.00	0.231	-12.73	-7.75	0.131	-17.65	-29.00	0.012	-38.42	-52.50
3.75	0.213	-13.43	-8.00	0.136	-17.33	-29.50	0.006	-44.44	-53.00
3.50	0.201	-13.94	-8.25	0.154	-16.28	-30.00	0.000	-40.00	-53.50
3.25	0.204	-13.83	-8.50	0.177	-15.04	-30.50	0.005	-46.02	-54.00
3.00	0.227	-12.88	-8.75	0.204	-13.81	-31.00	0.008	-41.94	-54.50
2.75	0.272	-11.29	-9.00	0.230	-12.77	-31.50	0.013	-37.72	-55.00
2.50	0.333	-9.55	-9.25	0.254	-11.92	-32.00	0.022	-33.15	-55.50
2.25	0.405	-7.86	-9.50	0.274	-11.24	-32.50	0.037	-28.64	-56.00
2.00	0.481	-6.36	-9.75	0.289	-10.80	-33.00	0.057	-24.88	-56.50
1.75	0.561	-5.03	-10.00	0.298	-10.52	-33.50	0.080	-21.94	-57.00
1.50	0.639	-3.89	-10.50	0.300	-10.46	-34.00	0.104	-19.66	-57.50
1.25	0.714	-2.92	-11.00	0.282	-11.00	-34.50	0.128	-17.86	-58.00
1.00	0.784	-2.11	-11.50	0.246	-12.18	-35.00	0.148	-16.59	-58.50
0.75	0.847	-1.45	-12.00	0.199	-14.02	-35.50	0.164	-15.70	-59.00
0.50	0.900	-0.92	-12.50	0.147	-16.65	-36.00	0.173	-15.24	-59.50
0.25	0.943	-0.51	-13.00	0.096	-20.35	-36.50	0.176	-15.09	-60.00
0.00	0.975	-0.22	-13.50	0.053	-25.51	-37.00	0.171	-15.34	-60.50
-0.25	0.994	-0.06	-14.00	0.020	-33.98	-37.50	0.160	-15.92	-61.00
-0.50	1.000	0.00	-14.50	0.001	-60.00	-38.00	0.144	-16.83	-61.50
-0.75	0.993	-0.06	-15.00	0.011	-39.17	-38.50	0.123	-18.20	-62.00
-1.00	0.974	-0.23	-15.50	0.015	-36.48	-39.00	0.100	-20.00	-62.50
-1.25	0.942	-0.52	-16.00	0.023	-32.77	-39.50	0.076	-22.38	-63.00
-1.50	0.899	-0.92	-16.50	0.035	-29.12	-40.00	0.056	-25.04	-63.50
-1.75	0.845	-1.46	-17.00	0.047	-26.56	-40.50	0.043	-27.33	-64.00
-2.00	0.783	-2.12	-17.50	0.055	-25.19	-41.00	0.039	-28.18	-64.50
-2.25	0.714	-2.92	-18.00	0.056	-25.04	-41.50	0.042	-27.54	-65.00
-2.50	0.640	-3.88	-18.50	0.051	-25.85	-42.00	0.047	-26.56	-65.50
-2.75	0.562	-5.01	-19.00	0.048	-26.38	-42.50	0.049	-26.20	-66.00
-3.00	0.484	-6.30	-19.50	0.059	-24.58	-43.00	0.047	-26.56	-66.50
-3.25	0.407	-7.81	-20.00	0.087	-21.21	-43.50	0.043	-27.33	-67.00
-3.50	0.336	-9.47	-20.50	0.123	-18.20	-44.00	0.036	-28.87	-67.50
-3.75	0.273	-11.26	-21.00	0.159	-15.97	-44.50	0.029	-30.75	-68.00
-4.00	0.225	-12.96	-21.50	0.192	-14.33	-45.00	0.023	-32.77	-68.50
-4.25	0.195	-14.20	-22.00	0.216	-13.31	-45.50	0.020	-33.98	-69.00
-4.50	0.186	-14.61	-22.50	0.229	-12.80	-46.00	0.020	-33.98	-69.50
-4.75	0.194	-14.27	-23.00	0.231	-12.73	-46.50	0.021	-33.56	-70.00
-5.00	0.208	-13.64	-23.50	0.221	-13.11	-47.00	0.021	-33.56	-70.50
-5.25	0.224	-13.01	-24.00	0.201	-13.94	-47.50	0.018	-34.89	-71.00
-5.50	0.235	-12.58	-24.50	0.173	-15.24	-48.00	0.011	-39.17	-71.50
-5.75	0.241	-12.38	-25.00	0.141	-17.02	-48.50	0.002	-53.98	-72.00
-6.00	0.240	-12.40	-25.50	0.107	-19.41	-49.00	0.010	-40.00	-72.50
-6.25	0.232	-12.71	-26.00	0.076	-22.38	-49.50	0.024	-32.40	-73.00
-6.50	0.217	-13.27	-26.50	0.049	-26.20	-50.00	0.040	-27.96	-73.50

DIRECTIONAL ANTENNA DATA
W63AH/W32DS
dBk Table

Actual Bearing	Pattern Azimuth	Relative Field	ERP (dBk)	CONTOUR 51 dBu (km)
N000E	0.00	0.478	1.91	36.1
	10.00	0.576	3.53	
	20.00	0.674	4.90	
	30.00	0.770	6.05	
	40.00	0.850	6.91	
N045E	45.00	0.883	7.24	42.3
	50.00	0.916	7.56	
	60.00	0.967	8.03	
	70.00	0.994	8.27	
	80.00	1.000	8.33	
N090E	90.00	1.000	8.33	42.3
	100.00	1.000	8.33	
	110.00	1.000	8.33	
	120.00	1.000	8.33	
	130.00	1.000	8.33	
N135E	135.00	1.000	8.33	42.1
	140.00	1.000	8.33	
	150.00	1.000	8.33	
	160.00	0.994	8.27	
	170.00	0.967	8.03	
N180E	180.00	0.916	7.56	41.1
	190.00	0.851	6.92	
	200.00	0.770	6.05	
	210.00	0.675	4.91	
	220.00	0.577	3.55	
N225E	225.00	0.528	2.78	35.9
	230.00	0.479	1.93	
	240.00	0.361	-0.52	
	250.00	0.219	-4.87	
	260.00	0.106	-11.17	
N270E	270.00	0.076	-14.06	16.4
	280.00	0.110	-10.85	
	290.00	0.142	-8.63	
	300.00	0.141	-8.69	
	310.00	0.111	-10.77	
N315E	315.00	0.094	-12.21	18.9
	320.00	0.076	-14.06	
	330.00	0.106	-11.17	
	340.00	0.220	-4.83	
	350.00	0.361	-0.52	

Maximum: N070E - 8.33 dBk
N150E

Minima: N270E -14.06 dBk
N320E -14.06 dBk