

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of ALPHA BROADCASTING CORPORATION, licensee of full-power digital television station WZVI-DT in Charlotte Amalie, Virgin Islands, in support of its Application for License to operate on its post-repack channel, Channel 21. The underlying construction permit is authorized in LMS-0000034334.

It is important to note that, while a horizontally-polarized omnidirectional antenna was originally specified in LMS-0000034334, the licensee instead chose to install an elliptically-polarized version of the same antenna. The horizontally polarized effective radiated power (ERP) is unchanged at 6.0 kW and a vertically polarized component has been added with an ERP of 3.0 kW. No change in the horizontal radiation pattern, horizontal ERP, effective antenna height or site location is proposed herein.

Attached are the operating parameters, azimuth patterns and elevation patterns for the installed antenna.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read 'K. T. Fisher', with a stylized flourish at the end.

KEVIN T. FISHER

January 25, 2019

# **Antenna Specification for AL™ Series Side Mounted UHF Elliptically Polarized Coaxial Slotted Array Television Antenna**

**WZVI (DT), RF Channel 21  
ALPHA BROADCASTING CORPORATION, Charlotte Amalie, VI  
January 22, 2019**

**Antenna Model:  
AL8O-21-E**

**Specification Number  
SO 36426**

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**Antenna Specification for  
AL™ Series Side Mounted  
UHF Elliptically Polarized  
Coaxial Slotted Array Television Antenna**

**Electrical Characteristics:**

Channel:		21	
Frequency:		512 MHz to 518 MHz	
Service:		ATSC	
Azimuth Pattern Number:	Horizontal Polarization	AL-O	
	Vertical Polarization	AL-O	
Elevation Pattern Number:	Horizontal Polarization	AL8L7	
	Vertical Polarization	AL8L7	
Azimuth Directivity:	Horizontal Polarization	1.00	(0.00 dB)
	Vertical Polarization	2.36	(3.73 dB)
Elevation Directivity:	Horizontal Polarization	8.25	(9.16 dBd)
	Vertical Polarization	8.25	(9.16 dBd)
Peak Power Gain:	Horizontal Polarization	6.81	(8.33 dBd)
	Vertical Polarization	3.40	(5.32 dBd)
Gain at Horizontal:	Horizontal Polarization	5.67	(7.54 dBd)
	Vertical Polarization	2.84	(4.53 dBd)
ERP Vertical/Horizontal Ratio:		0.500	
Power Ratio:		0.212	
Electrical Beam Tilt:		1.75 Degrees	
Input Power Required:		0.88 kW	-(0.55 dBk)
RF Input:		7/8-inch EIA, 50 Ω, flanged male	
Input Power Rating (maximum):		2.5 kW Average Power, 8VSB	
Antenna VSWR (maximum):		1.10 Over 6 MHz Channel	

**Antenna Specification for  
AL™ Series Side Mounted  
UHF Elliptically Polarized  
Coaxial Slotted Array Television Antenna**

**Antenna Mechanical Characteristics:**

Mounting Configuration:	Side Mounted		
Height of Antenna	19.0 feet	(5.8 meters)	
Height of Center of Radiation (above RF input)	9.5 feet	(2.9 meters)	
Deicing:	Unpressurized radome slot covers		
Radome Height:	3.50 inches	(88.9 millimeters)	
Radome Color:	Gray		
Climbing Device:	Not Applicable		
Calculated Weight <sup>1</sup> :	No Ice	105.5 lb	47.9 kg
	0.5inch (13 mm) ice	170.5 lb	77.3 kg
Windload Data <sup>1, 2</sup>	EPA No Ice	9.0 ft <sup>2</sup>	(0.8 m <sup>2</sup> )
	0.5inch (13 mm) ice	10.9 ft <sup>2</sup>	(1.0 m <sup>2</sup> )

1) Please note, the listed weights and effective wind areas are based on the PRELIMINARY design of the antenna. Final As-Built values for the antenna are typically within +/-10% of the Preliminary design values, and will be provided in the technical manual that accompanies the antenna. Specified loads include the antenna, standard mounts, and power divider and jumper feed harnessing where applicable. Custom mounting brackets/adapters are NOT included.

2) Loads calculated in accordance with the ANSI/TIA-222-G standard.

**NOTE:** The purchaser or their representative shall be required to contact the tower owner, state and/or local building officials for specific design requirements and suitable parameters for a particular structure. Any variation from the parameters shown above must be communicated to ERI for comprehensive assessment.

## Broadcast Antenna System Power Analysis

**WZVI (DT) RF Channel: 21**  
**ALPHA BROADCASTING CORPORATION**  
**Charlotte Amalie, VI**  
**AL80-21-E**

### Antenna Parameters

#### Azimuth Directivity:

Horizontal: 1.00 (0.00 dB)  
 Vertical: 2.36 (3.73 dB)

#### Elevation Directivity:

Horizontal: 8.25 (9.16 dB)  
 Vertical: 8.25 (9.16 dB)

### Transmission Line

#### Vertical Run:

Type: 1-5/8-Inch HJ7-50A Air HELIAX, 50Ω  
 Length: 130 feet 39.6 meters  
 Attenuation: 0.485 dB/100 feet 1.590 dB/100 mtrs

#### Horizontal Run:

Type: 1-5/8-Inch HJ7-50A Air HELIAX, 50Ω  
 Length: 25 feet 7.6 meters  
 Attenuation: 0.485 dB/100 feet 1.590 dB/100 mtrs

#### Effective Radiated Power:

Horizontal: 6.00 kW (7.78 dBk)  
 Vertical: 3.00 kW (4.77 dBk)

#### Power Gain:

Horizontal: 6.81 numeric (8.33 dBd)  
 Vertical: 3.40 numeric (5.32 dBd)

#### Antenna Input Power:

0.88 kW -(0.55 dBk)

#### Transmission Line Losses:

-0.17 kW (0.751 dB)

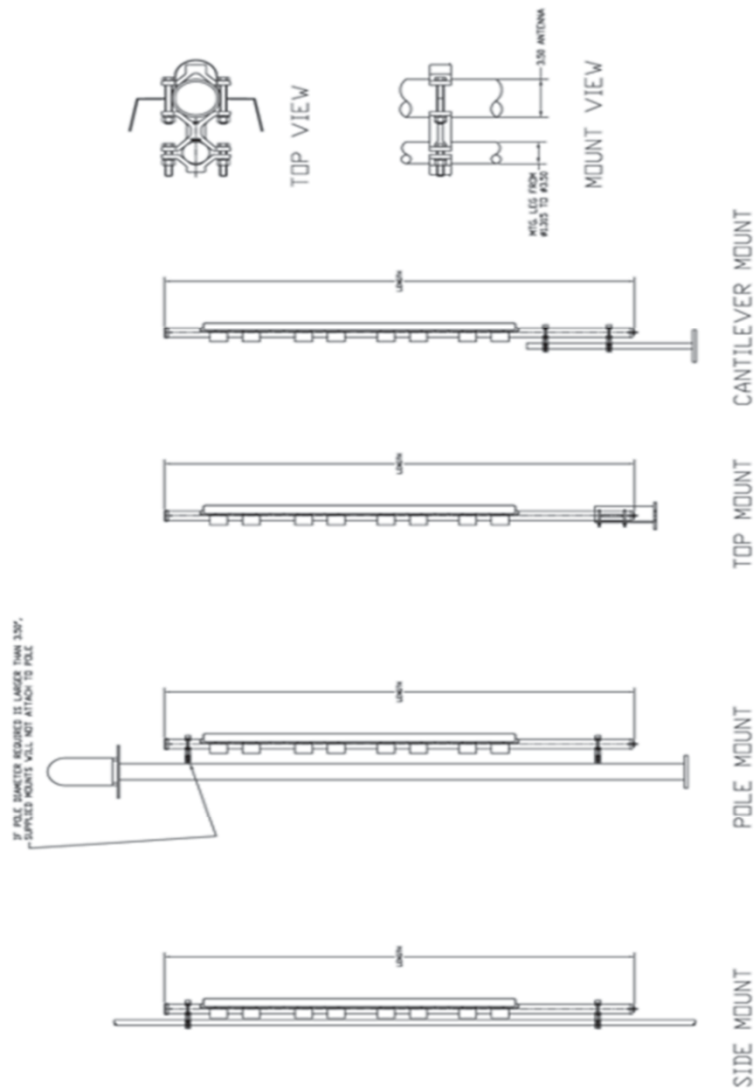
**Total Losses:** 0.751 dB

**Line Efficiency:** 84.12%

#### Transmitter Power Output:

1.05 kW  
 (0.20 dBk)

Typical Mounting Configuration Shown. Actual Configuration May Vary.

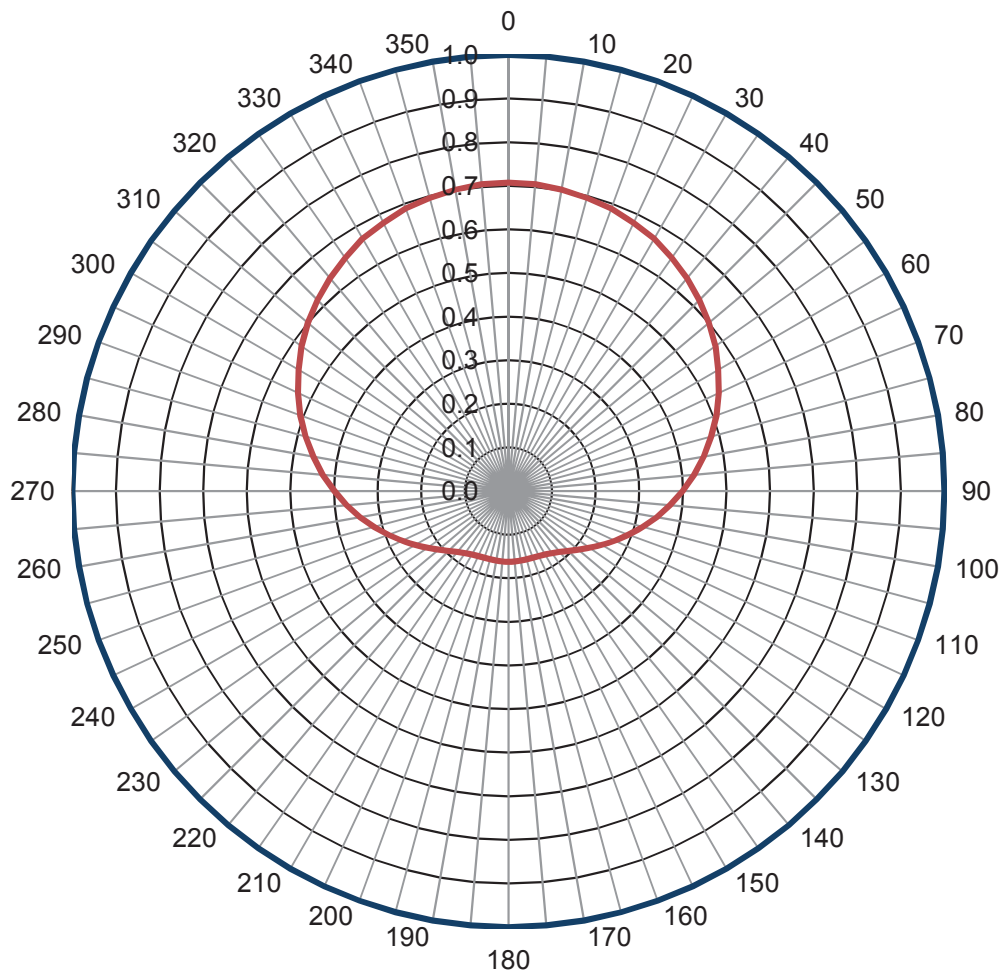


Typical Mounting Configurations for AL Series UHF Television Antennas

## Composite Azimuth Patterns

Type:	1.75	Polarization:	Elliptical
Directivity (H-Pol):	1.00 numeric (0.00 dB)	Channel:	21 (ATSC)
Directivity (V-Pol):	2.36 numeric (3.73 dB)	Location:	Charlotte Amalie, VI
Percent Horizontal:	82.52%	NOTE: Pattern shape and directivity may vary with channel and mounting	
Percent Vertical:	17.48%		
Power Ratio:	21.19%		
V/H ERP Ratio:	50.00%		

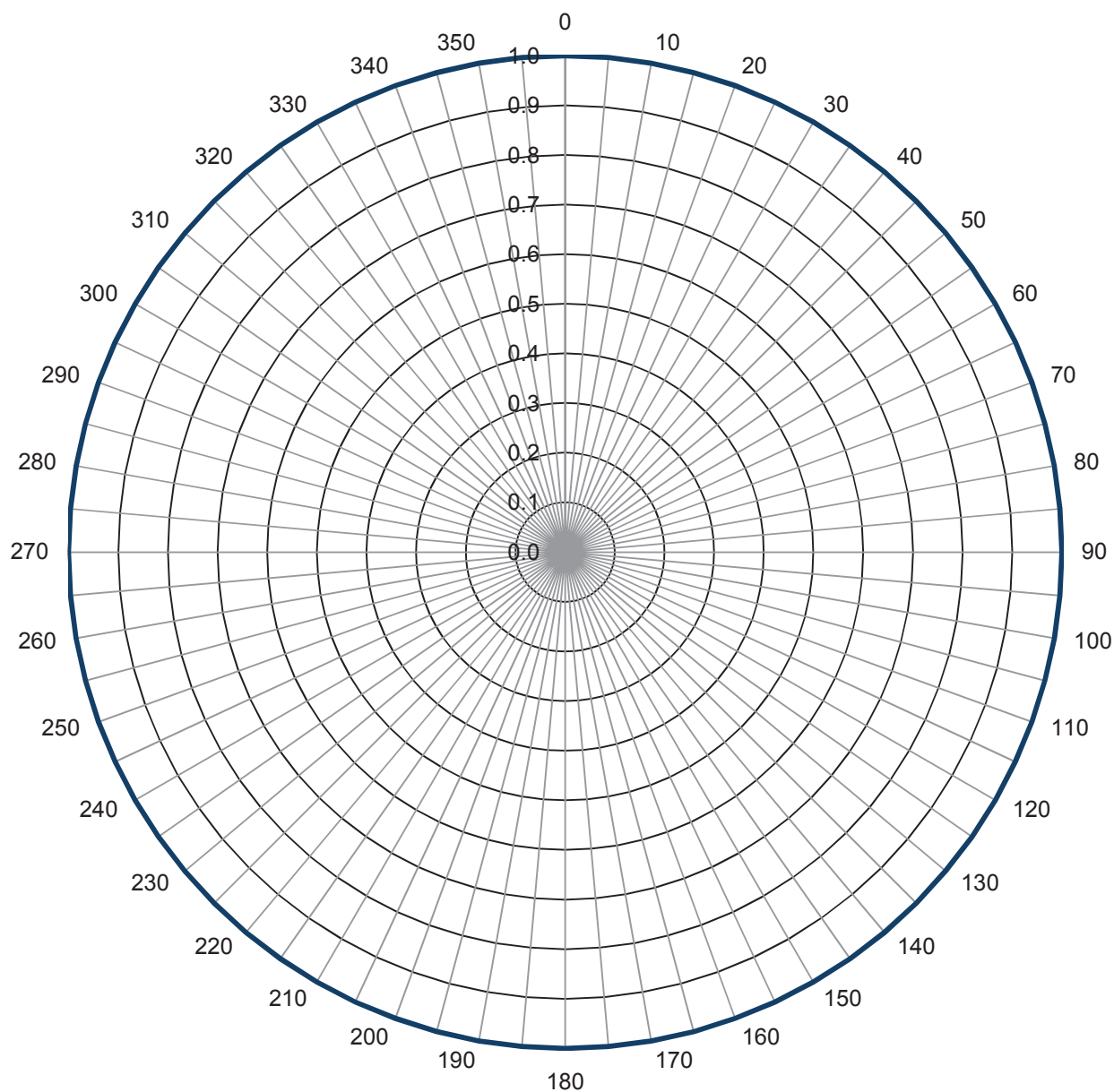
— Horizontal Relative Field      — Vertical Relative Field (scaled)



### Azimuth Pattern

Type:	AL-O	Polarization:	Horizontal
Directivity:	1.00 numeric (0.00 dB)	Channel:	21 (ATSC)
Peak(s) at:		Location:	Charlotte Amalie, VI
		NOTE: Pattern shape and directivity may vary with channel and mounting configuration.	

### Relative Field





## Tabulated Data for Azimuth Pattern

Type: AL-O

Angle	Field	dB
0	1.000	0.00
2	1.000	0.00
4	1.000	0.00
6	1.000	0.00
8	1.000	0.00
10	1.000	0.00
12	1.000	0.00
14	1.000	0.00
16	1.000	0.00
18	1.000	0.00
20	1.000	0.00
22	1.000	0.00
24	1.000	0.00
26	1.000	0.00
28	1.000	0.00
30	1.000	0.00
32	1.000	0.00
34	1.000	0.00
36	1.000	0.00
38	1.000	0.00
40	1.000	0.00
42	1.000	0.00
44	1.000	0.00
46	1.000	0.00
48	1.000	0.00
50	1.000	0.00
52	1.000	0.00
54	1.000	0.00
56	1.000	0.00
58	1.000	0.00
60	1.000	0.00
62	1.000	0.00
64	1.000	0.00
66	1.000	0.00
68	1.000	0.00
70	1.000	0.00
72	1.000	0.00
74	1.000	0.00
76	1.000	0.00
78	1.000	0.00
80	1.000	0.00
82	1.000	0.00
84	1.000	0.00
86	1.000	0.00
88	1.000	0.00
90	1.000	0.00
92	1.000	0.00
94	1.000	0.00
96	1.000	0.00
98	1.000	0.00

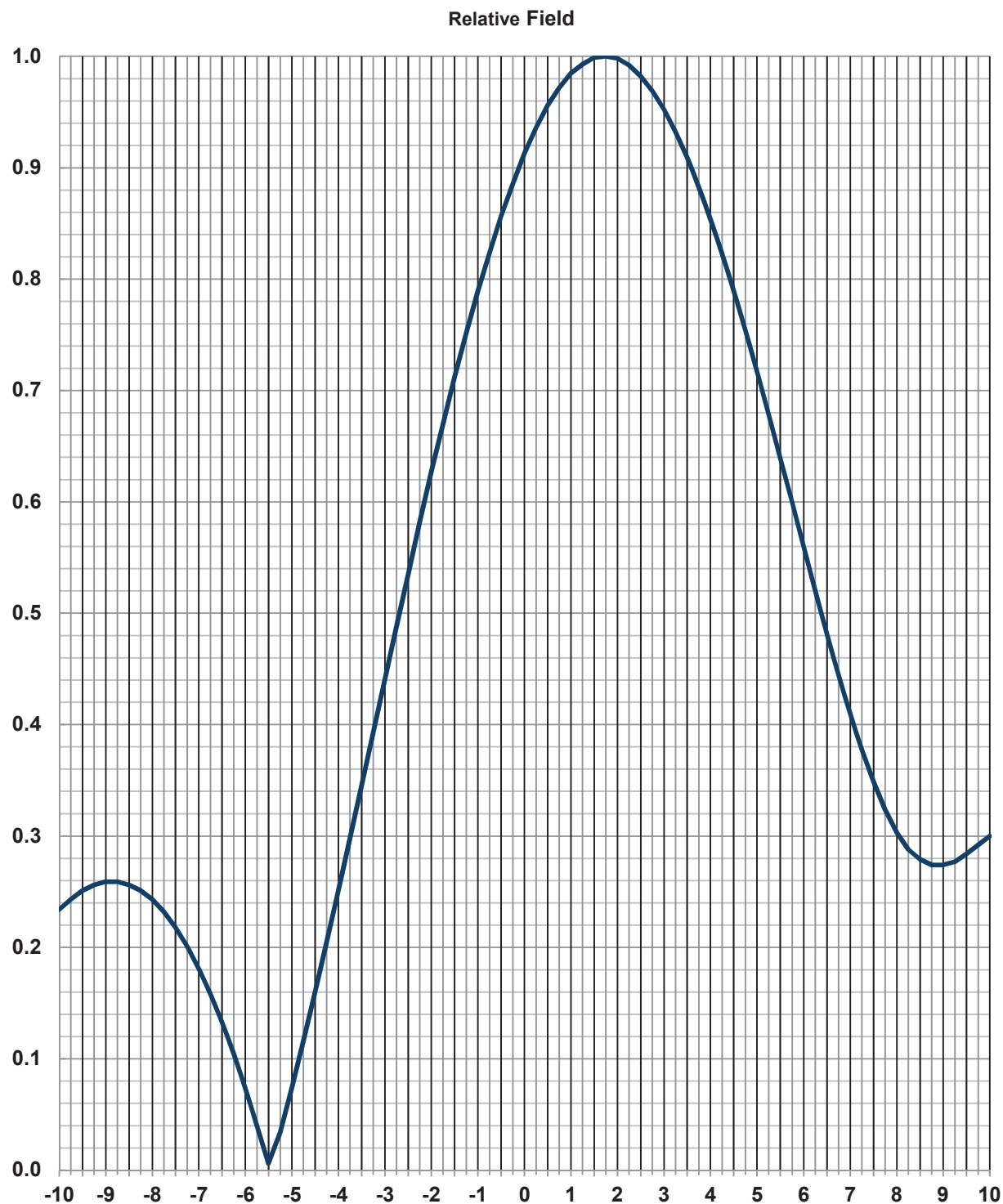
Angle	Field	dB
100	1.000	0.00
102	1.000	0.00
104	1.000	0.00
106	1.000	0.00
108	1.000	0.00
110	1.000	0.00
112	1.000	0.00
114	1.000	0.00
116	1.000	0.00
118	1.000	0.00
120	1.000	0.00
122	1.000	0.00
124	1.000	0.00
126	1.000	0.00
128	1.000	0.00
130	1.000	0.00
132	1.000	0.00
134	1.000	0.00
136	1.000	0.00
138	1.000	0.00
140	1.000	0.00
142	1.000	0.00
144	1.000	0.00
146	1.000	0.00
148	1.000	0.00
150	1.000	0.00
152	1.000	0.00
154	1.000	0.00
156	1.000	0.00
158	1.000	0.00
160	1.000	0.00
162	1.000	0.00
164	1.000	0.00
166	1.000	0.00
168	1.000	0.00
170	1.000	0.00
172	1.000	0.00
174	1.000	0.00
176	1.000	0.00
178	1.000	0.00
180	1.000	0.00
182	1.000	0.00
184	1.000	0.00
186	1.000	0.00
188	1.000	0.00
190	1.000	0.00
192	1.000	0.00
194	1.000	0.00
196	1.000	0.00
198	1.000	0.00

Angle	Field	dB
200	1.000	0.00
202	1.000	0.00
204	1.000	0.00
206	1.000	0.00
208	1.000	0.00
210	1.000	0.00
212	1.000	0.00
214	1.000	0.00
216	1.000	0.00
218	1.000	0.00
220	1.000	0.00
222	1.000	0.00
224	1.000	0.00
226	1.000	0.00
228	1.000	0.00
230	1.000	0.00
232	1.000	0.00
234	1.000	0.00
236	1.000	0.00
238	1.000	0.00
240	1.000	0.00
242	1.000	0.00
244	1.000	0.00
246	1.000	0.00
248	1.000	0.00
250	1.000	0.00
252	1.000	0.00
254	1.000	0.00
256	1.000	0.00
258	1.000	0.00
260	1.000	0.00
262	1.000	0.00
264	1.000	0.00
266	1.000	0.00
268	1.000	0.00
270	1.000	0.00
272	1.000	0.00
274	1.000	0.00
276	1.000	0.00
278	1.000	0.00
280	1.000	0.00
282	1.000	0.00
284	1.000	0.00
286	1.000	0.00
288	1.000	0.00
290	1.000	0.00
292	1.000	0.00
294	1.000	0.00
296	1.000	0.00
298	1.000	0.00

Angle	Field	dB
300	1.000	0.00
302	1.000	0.00
304	1.000	0.00
306	1.000	0.00
308	1.000	0.00
310	1.000	0.00
312	1.000	0.00
314	1.000	0.00
316	1.000	0.00
318	1.000	0.00
320	1.000	0.00
322	1.000	0.00
324	1.000	0.00
326	1.000	0.00
328	1.000	0.00
330	1.000	0.00
332	1.000	0.00
334	1.000	0.00
336	1.000	0.00
338	1.000	0.00
340	1.000	0.00
342	1.000	0.00
344	1.000	0.00
346	1.000	0.00
348	1.000	0.00
350	1.000	0.00
352	1.000	0.00
354	1.000	0.00
356	1.000	0.00
358	1.000	0.00
360	1.000	0.00

### Elevation Pattern

Type:	AL8L7	Polarization:	Horizontal
Directivity:		Channel:	21 (ATSC)
Main Lobe:	8.25 numeric (9.16 dB)	Location:	Charlotte Amalie, VI
Horizontal:	6.88 numeric (8.37 dB)	Beam Tilt:	1.75 degrees



## Tabulated Data for Elevation Pattern

Type: AL8L7

-10 to 10 degrees in 0.25 degree increments.

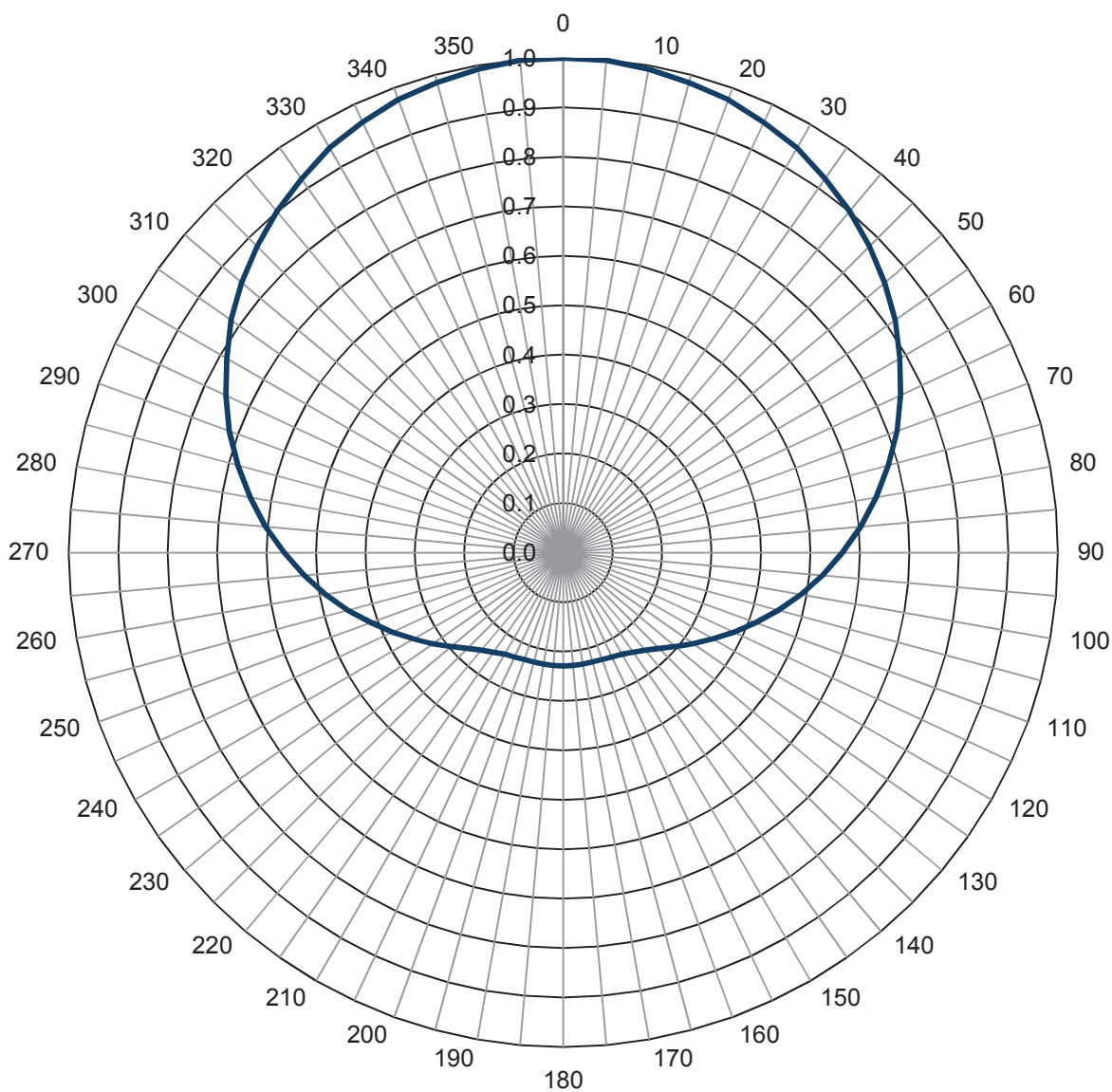
10 to 90 degrees in 0.50 degree increments.

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-10.00	0.234	-12.62	2.25	0.992	-0.07	19.00	0.165	-15.65	43.50	0.025	-32.04	68.00	0.070	-23.10
-9.75	0.243	-12.29	2.50	0.982	-0.16	19.50	0.176	-15.09	44.00	0.038	-28.40	68.50	0.065	-23.74
-9.50	0.251	-12.01	2.75	0.969	-0.27	20.00	0.182	-14.80	44.50	0.052	-25.68	69.00	0.060	-24.44
-9.25	0.256	-11.84	3.00	0.952	-0.43	20.50	0.182	-14.80	45.00	0.064	-23.88	69.50	0.056	-25.04
-9.00	0.259	-11.73	3.25	0.932	-0.61	21.00	0.176	-15.09	45.50	0.075	-22.50	70.00	0.052	-25.68
-8.75	0.259	-11.73	3.50	0.909	-0.83	21.50	0.166	-15.60	46.00	0.085	-21.41	70.50	0.049	-26.20
-8.50	0.256	-11.84	3.75	0.882	-1.09	22.00	0.151	-16.42	46.50	0.092	-20.72	71.00	0.047	-26.56
-8.25	0.251	-12.01	4.00	0.854	-1.37	22.50	0.132	-17.59	47.00	0.098	-20.18	71.50	0.045	-26.94
-8.00	0.243	-12.29	4.25	0.822	-1.70	23.00	0.111	-19.09	47.50	0.102	-19.83	72.00	0.044	-27.13
-7.75	0.232	-12.69	4.50	0.789	-2.06	23.50	0.090	-20.92	48.00	0.104	-19.66	72.50	0.044	-27.13
-7.50	0.218	-13.23	4.75	0.754	-2.45	24.00	0.070	-23.10	48.50	0.104	-19.66	73.00	0.044	-27.13
-7.25	0.201	-13.94	5.00	0.717	-2.89	24.50	0.057	-24.88	49.00	0.101	-19.91	73.50	0.045	-26.94
-7.00	0.181	-14.85	5.25	0.678	-3.38	25.00	0.054	-25.35	49.50	0.097	-20.26	74.00	0.046	-26.74
-6.75	0.158	-16.03	5.50	0.639	-3.89	25.50	0.064	-23.88	50.00	0.092	-20.72	74.50	0.047	-26.56
-6.50	0.133	-17.52	5.75	0.600	-4.44	26.00	0.078	-22.16	50.50	0.085	-21.41	75.00	0.049	-26.20
-6.25	0.105	-19.58	6.00	0.560	-5.04	26.50	0.094	-20.54	51.00	0.076	-22.38	75.50	0.050	-26.02
-6.00	0.074	-22.62	6.25	0.520	-5.68	27.00	0.108	-19.33	51.50	0.066	-23.61	76.00	0.051	-25.85
-5.75	0.040	-27.96	6.50	0.482	-6.34	27.50	0.119	-18.49	52.00	0.055	-25.19	76.50	0.052	-25.68
-5.50	0.006	-44.44	6.75	0.445	-7.03	28.00	0.127	-17.92	52.50	0.044	-27.13	77.00	0.053	-25.51
-5.25	0.034	-29.37	7.00	0.410	-7.74	28.50	0.130	-17.72	53.00	0.032	-29.90	77.50	0.054	-25.35
-5.00	0.074	-22.62	7.25	0.378	-8.45	29.00	0.130	-17.72	53.50	0.020	-33.98	78.00	0.054	-25.35
-4.75	0.116	-18.71	7.50	0.349	-9.14	29.50	0.126	-17.99	54.00	0.010	-40.00	78.50	0.054	-25.35
-4.50	0.160	-15.92	7.75	0.324	-9.79	30.00	0.119	-18.49	54.50	0.011	-39.17	79.00	0.054	-25.35
-4.25	0.205	-13.76	8.00	0.303	-10.37	30.50	0.108	-19.33	55.00	0.022	-33.15	79.50	0.054	-25.35
-4.00	0.251	-12.01	8.25	0.288	-10.81	31.00	0.094	-20.54	55.50	0.034	-29.37	80.00	0.053	-25.51
-3.75	0.298	-10.52	8.50	0.279	-11.09	31.50	0.079	-22.05	56.00	0.045	-26.94	80.50	0.052	-25.68
-3.50	0.345	-9.24	8.75	0.274	-11.24	32.00	0.062	-24.15	56.50	0.056	-25.04	81.00	0.051	-25.85
-3.25	0.393	-8.11	9.00	0.274	-11.24	32.50	0.047	-26.56	57.00	0.067	-23.48	81.50	0.050	-26.02
-3.00	0.441	-7.11	9.25	0.277	-11.15	33.00	0.034	-29.37	57.50	0.076	-22.38	82.00	0.048	-26.38
-2.75	0.488	-6.23	9.50	0.284	-10.93	33.50	0.031	-30.17	58.00	0.085	-21.41	82.50	0.046	-26.74
-2.50	0.535	-5.43	9.75	0.292	-10.69	34.00	0.040	-27.96	58.50	0.092	-20.72	83.00	0.044	-27.13
-2.25	0.582	-4.70	10.00	0.300	-10.46	34.50	0.053	-25.51	59.00	0.099	-20.09	83.50	0.042	-27.54
-2.00	0.627	-4.05	10.50	0.318	-9.95	35.00	0.067	-23.48	59.50	0.104	-19.66	84.00	0.039	-28.18
-1.75	0.670	-3.48	11.00	0.331	-9.60	35.50	0.080	-21.94	60.00	0.108	-19.33	84.50	0.037	-28.64
-1.50	0.712	-2.95	11.50	0.337	-9.45	36.00	0.091	-20.82	60.50	0.112	-19.02	85.00	0.034	-29.37
-1.25	0.752	-2.48	12.00	0.336	-9.47	36.50	0.100	-20.00	61.00	0.114	-18.86	85.50	0.031	-30.17
-1.00	0.789	-2.06	12.50	0.326	-9.74	37.00	0.106	-19.49	61.50	0.115	-18.79	86.00	0.028	-31.06
-0.75	0.824	-1.68	13.00	0.309	-10.20	37.50	0.109	-19.25	62.00	0.115	-18.79	86.50	0.024	-32.40
-0.50	0.857	-1.34	13.50	0.285	-10.90	38.00	0.109	-19.25	62.50	0.115	-18.79	87.00	0.021	-33.56
-0.25	0.886	-1.05	14.00	0.255	-11.87	38.50	0.107	-19.41	63.00	0.113	-18.94	87.50	0.018	-34.89
0.00	0.913	-0.79	14.50	0.222	-13.07	39.00	0.101	-19.91	63.50	0.111	-19.09	88.00	0.014	-37.08
0.25	0.936	-0.57	15.00	0.187	-14.56	39.50	0.094	-20.54	64.00	0.108	-19.33	88.50	0.011	-39.17
0.50	0.956	-0.39	15.50	0.153	-16.31	40.00	0.084	-21.51	64.50	0.104	-19.66	89.00	0.007	-43.10
0.75	0.972	-0.25	16.00	0.124	-18.13	40.50	0.072	-22.85	65.00	0.100	-20.00	89.50	0.004	-47.96
1.00	0.985	-0.13	16.50	0.107	-19.41	41.00	0.059	-24.58	65.50	0.096	-20.35	90.00	0.000	---
1.25	0.993	-0.06	17.00	0.105	-19.58	41.50	0.045	-26.94	66.00	0.091	-20.82			
1.50	0.999	-0.01	17.50	0.115	-18.79	42.00	0.031	-30.17	66.50	0.086	-21.31			
1.75	1.000	0.00	18.00	0.132	-17.59	42.50	0.018	-34.89	67.00	0.080	-21.94			
2.00	0.998	-0.02	18.50	0.150	-16.48	43.00	0.015	-36.48	67.50	0.075	-22.50			

### Azimuth Pattern

Type:	AL-O	Polarization:	Vertical
Directivity:	2.36 numeric (3.73 dB)	Channel:	21 (ATSC)
Peak(s) at:		Location:	Charlotte Amalie, VI
		NOTE: Pattern shape and directivity may vary with channel and mounting configuration.	

### Relative Field



## Tabulated Data for Azimuth Pattern

Type: AL-O

Angle	Field	dB
0	1.000	0.00
2	1.000	0.00
4	0.999	-0.01
6	0.999	-0.01
8	0.996	-0.03
10	0.993	-0.06
12	0.991	-0.08
14	0.988	-0.10
16	0.983	-0.15
18	0.979	-0.18
20	0.975	-0.22
22	0.968	-0.28
24	0.963	-0.33
26	0.957	-0.38
28	0.951	-0.44
30	0.945	-0.49
32	0.935	-0.58
34	0.926	-0.67
36	0.919	-0.73
38	0.911	-0.81
40	0.901	-0.91
42	0.891	-1.00
44	0.881	-1.10
46	0.872	-1.19
48	0.860	-1.31
50	0.849	-1.42
52	0.838	-1.54
54	0.825	-1.67
56	0.813	-1.80
58	0.800	-1.94
60	0.786	-2.09
62	0.774	-2.23
64	0.760	-2.39
66	0.746	-2.55
68	0.734	-2.69
70	0.719	-2.87
72	0.704	-3.05
74	0.690	-3.23
76	0.674	-3.43
78	0.658	-3.64
80	0.643	-3.84
82	0.628	-4.05
84	0.612	-4.27
86	0.596	-4.50
88	0.581	-4.72
90	0.565	-4.97
92	0.550	-5.20
94	0.535	-5.44
96	0.518	-5.72
98	0.504	-5.96

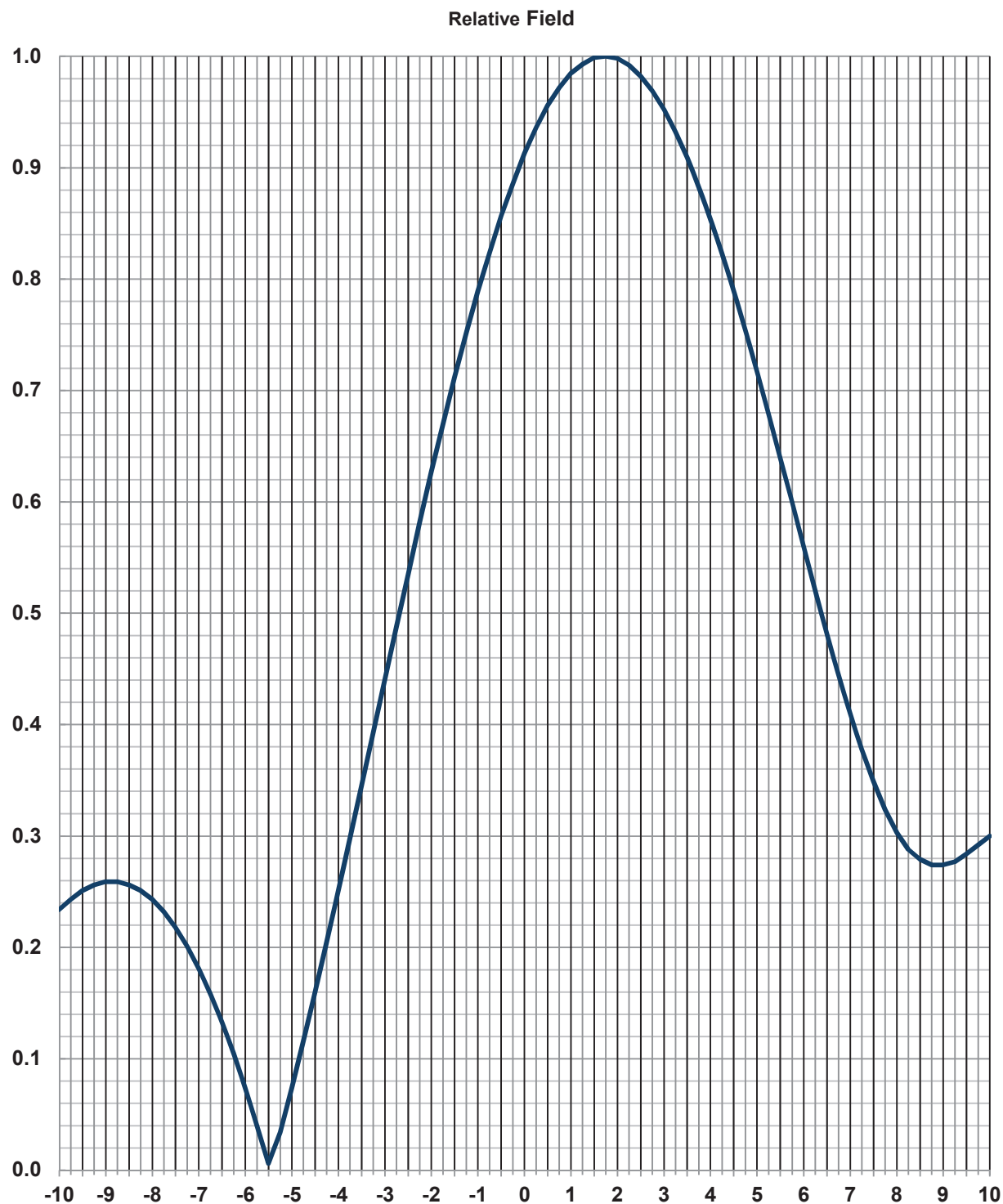
Angle	Field	dB
100	0.488	-6.22
102	0.473	-6.49
104	0.458	-6.77
106	0.442	-7.08
108	0.428	-7.36
110	0.414	-7.65
112	0.400	-7.95
114	0.387	-8.24
116	0.374	-8.53
118	0.361	-8.84
120	0.349	-9.13
122	0.337	-9.44
124	0.326	-9.73
126	0.315	-10.03
128	0.304	-10.33
130	0.295	-10.59
132	0.286	-10.86
134	0.278	-11.11
136	0.271	-11.33
138	0.264	-11.56
140	0.257	-11.79
142	0.252	-11.96
144	0.248	-12.10
146	0.243	-12.28
148	0.240	-12.39
150	0.237	-12.50
152	0.235	-12.57
154	0.233	-12.64
156	0.232	-12.68
158	0.230	-12.76
160	0.230	-12.76
162	0.229	-12.79
164	0.229	-12.79
166	0.229	-12.79
168	0.229	-12.79
170	0.229	-12.79
172	0.229	-12.79
174	0.229	-12.79
176	0.229	-12.79
178	0.229	-12.79
180	0.229	-12.79
182	0.229	-12.79
184	0.229	-12.79
186	0.229	-12.79
188	0.229	-12.79
190	0.229	-12.79
192	0.229	-12.79
194	0.229	-12.79
196	0.229	-12.79
198	0.229	-12.79

Angle	Field	dB
200	0.230	-12.76
202	0.230	-12.76
204	0.232	-12.68
206	0.233	-12.64
208	0.235	-12.57
210	0.237	-12.50
212	0.240	-12.39
214	0.243	-12.28
216	0.248	-12.10
218	0.252	-11.96
220	0.257	-11.79
222	0.264	-11.56
224	0.271	-11.33
226	0.278	-11.11
228	0.286	-10.86
230	0.295	-10.59
232	0.304	-10.33
234	0.315	-10.03
236	0.326	-9.73
238	0.337	-9.44
240	0.349	-9.13
242	0.361	-8.84
244	0.374	-8.53
246	0.387	-8.24
248	0.400	-7.95
250	0.414	-7.65
252	0.428	-7.36
254	0.442	-7.08
256	0.458	-6.77
258	0.473	-6.49
260	0.488	-6.22
262	0.504	-5.96
264	0.518	-5.72
266	0.535	-5.44
268	0.550	-5.20
270	0.565	-4.97
272	0.581	-4.72
274	0.596	-4.50
276	0.612	-4.27
278	0.628	-4.05
280	0.643	-3.84
282	0.658	-3.64
284	0.674	-3.43
286	0.690	-3.23
288	0.704	-3.05
290	0.719	-2.87
292	0.734	-2.69
294	0.746	-2.55
296	0.760	-2.39
298	0.774	-2.23

Angle	Field	dB
300	0.786	-2.09
302	0.800	-1.94
304	0.813	-1.80
306	0.825	-1.67
308	0.838	-1.54
310	0.849	-1.42
312	0.860	-1.31
314	0.872	-1.19
316	0.881	-1.10
318	0.891	-1.00
320	0.901	-0.91
322	0.911	-0.81
324	0.919	-0.73
326	0.926	-0.67
328	0.935	-0.58
330	0.945	-0.49
332	0.951	-0.44
334	0.957	-0.38
336	0.963	-0.33
338	0.968	-0.28
340	0.975	-0.22
342	0.979	-0.18
344	0.983	-0.15
346	0.988	-0.10
348	0.991	-0.08
350	0.993	-0.06
352	0.996	-0.03
354	0.999	-0.01
356	0.999	-0.01
358	1.000	0.00
360	1.000	0.00

### Elevation Pattern

Type:	AL8L7	Polarization:	Vertical
Directivity:		Channel:	21 (ATSC)
Main Lobe:	8.25 numeric (9.16 dB)	Location:	Charlotte Amalie, VI
Horizontal:	6.88 numeric (8.37 dB)	Beam Tilt:	1.75 degrees



## Tabulated Data for Elevation Pattern

Type: AL8L7

-10 to 10 degrees in 0.25 degree increments.

10 to 90 degrees in 0.50 degree increments.

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-10.00	0.234	-12.62	2.25	0.992	-0.07	19.00	0.165	-15.65	43.50	0.025	-32.04	68.00	0.070	-23.10
-9.75	0.243	-12.29	2.50	0.982	-0.16	19.50	0.176	-15.09	44.00	0.038	-28.40	68.50	0.065	-23.74
-9.50	0.251	-12.01	2.75	0.969	-0.27	20.00	0.182	-14.80	44.50	0.052	-25.68	69.00	0.060	-24.44
-9.25	0.256	-11.84	3.00	0.952	-0.43	20.50	0.182	-14.80	45.00	0.064	-23.88	69.50	0.056	-25.04
-9.00	0.259	-11.73	3.25	0.932	-0.61	21.00	0.176	-15.09	45.50	0.075	-22.50	70.00	0.052	-25.68
-8.75	0.259	-11.73	3.50	0.909	-0.83	21.50	0.166	-15.60	46.00	0.085	-21.41	70.50	0.049	-26.20
-8.50	0.256	-11.84	3.75	0.882	-1.09	22.00	0.151	-16.42	46.50	0.092	-20.72	71.00	0.047	-26.56
-8.25	0.251	-12.01	4.00	0.854	-1.37	22.50	0.132	-17.59	47.00	0.098	-20.18	71.50	0.045	-26.94
-8.00	0.243	-12.29	4.25	0.822	-1.70	23.00	0.111	-19.09	47.50	0.102	-19.83	72.00	0.044	-27.13
-7.75	0.232	-12.69	4.50	0.789	-2.06	23.50	0.090	-20.92	48.00	0.104	-19.66	72.50	0.044	-27.13
-7.50	0.218	-13.23	4.75	0.754	-2.45	24.00	0.070	-23.10	48.50	0.104	-19.66	73.00	0.044	-27.13
-7.25	0.201	-13.94	5.00	0.717	-2.89	24.50	0.057	-24.88	49.00	0.101	-19.91	73.50	0.045	-26.94
-7.00	0.181	-14.85	5.25	0.678	-3.38	25.00	0.054	-25.35	49.50	0.097	-20.26	74.00	0.046	-26.74
-6.75	0.158	-16.03	5.50	0.639	-3.89	25.50	0.064	-23.88	50.00	0.092	-20.72	74.50	0.047	-26.56
-6.50	0.133	-17.52	5.75	0.600	-4.44	26.00	0.078	-22.16	50.50	0.085	-21.41	75.00	0.049	-26.20
-6.25	0.105	-19.58	6.00	0.560	-5.04	26.50	0.094	-20.54	51.00	0.076	-22.38	75.50	0.050	-26.02
-6.00	0.074	-22.62	6.25	0.520	-5.68	27.00	0.108	-19.33	51.50	0.066	-23.61	76.00	0.051	-25.85
-5.75	0.040	-27.96	6.50	0.482	-6.34	27.50	0.119	-18.49	52.00	0.055	-25.19	76.50	0.052	-25.68
-5.50	0.006	-44.44	6.75	0.445	-7.03	28.00	0.127	-17.92	52.50	0.044	-27.13	77.00	0.053	-25.51
-5.25	0.034	-29.37	7.00	0.410	-7.74	28.50	0.130	-17.72	53.00	0.032	-29.90	77.50	0.054	-25.35
-5.00	0.074	-22.62	7.25	0.378	-8.45	29.00	0.130	-17.72	53.50	0.020	-33.98	78.00	0.054	-25.35
-4.75	0.116	-18.71	7.50	0.349	-9.14	29.50	0.126	-17.99	54.00	0.010	-40.00	78.50	0.054	-25.35
-4.50	0.160	-15.92	7.75	0.324	-9.79	30.00	0.119	-18.49	54.50	0.011	-39.17	79.00	0.054	-25.35
-4.25	0.205	-13.76	8.00	0.303	-10.37	30.50	0.108	-19.33	55.00	0.022	-33.15	79.50	0.054	-25.35
-4.00	0.251	-12.01	8.25	0.288	-10.81	31.00	0.094	-20.54	55.50	0.034	-29.37	80.00	0.053	-25.51
-3.75	0.298	-10.52	8.50	0.279	-11.09	31.50	0.079	-22.05	56.00	0.045	-26.94	80.50	0.052	-25.68
-3.50	0.345	-9.24	8.75	0.274	-11.24	32.00	0.062	-24.15	56.50	0.056	-25.04	81.00	0.051	-25.85
-3.25	0.393	-8.11	9.00	0.274	-11.24	32.50	0.047	-26.56	57.00	0.067	-23.48	81.50	0.050	-26.02
-3.00	0.441	-7.11	9.25	0.277	-11.15	33.00	0.034	-29.37	57.50	0.076	-22.38	82.00	0.048	-26.38
-2.75	0.488	-6.23	9.50	0.284	-10.93	33.50	0.031	-30.17	58.00	0.085	-21.41	82.50	0.046	-26.74
-2.50	0.535	-5.43	9.75	0.292	-10.69	34.00	0.040	-27.96	58.50	0.092	-20.72	83.00	0.044	-27.13
-2.25	0.582	-4.70	10.00	0.300	-10.46	34.50	0.053	-25.51	59.00	0.099	-20.09	83.50	0.042	-27.54
-2.00	0.627	-4.05	10.50	0.318	-9.95	35.00	0.067	-23.48	59.50	0.104	-19.66	84.00	0.039	-28.18
-1.75	0.670	-3.48	11.00	0.331	-9.60	35.50	0.080	-21.94	60.00	0.108	-19.33	84.50	0.037	-28.64
-1.50	0.712	-2.95	11.50	0.337	-9.45	36.00	0.091	-20.82	60.50	0.112	-19.02	85.00	0.034	-29.37
-1.25	0.752	-2.48	12.00	0.336	-9.47	36.50	0.100	-20.00	61.00	0.114	-18.86	85.50	0.031	-30.17
-1.00	0.789	-2.06	12.50	0.326	-9.74	37.00	0.106	-19.49	61.50	0.115	-18.79	86.00	0.028	-31.06
-0.75	0.824	-1.68	13.00	0.309	-10.20	37.50	0.109	-19.25	62.00	0.115	-18.79	86.50	0.024	-32.40
-0.50	0.857	-1.34	13.50	0.285	-10.90	38.00	0.109	-19.25	62.50	0.115	-18.79	87.00	0.021	-33.56
-0.25	0.886	-1.05	14.00	0.255	-11.87	38.50	0.107	-19.41	63.00	0.113	-18.94	87.50	0.018	-34.89
0.00	0.913	-0.79	14.50	0.222	-13.07	39.00	0.101	-19.91	63.50	0.111	-19.09	88.00	0.014	-37.08
0.25	0.936	-0.57	15.00	0.187	-14.56	39.50	0.094	-20.54	64.00	0.108	-19.33	88.50	0.011	-39.17
0.50	0.956	-0.39	15.50	0.153	-16.31	40.00	0.084	-21.51	64.50	0.104	-19.66	89.00	0.007	-43.10
0.75	0.972	-0.25	16.00	0.124	-18.13	40.50	0.072	-22.85	65.00	0.100	-20.00	89.50	0.004	-47.96
1.00	0.985	-0.13	16.50	0.107	-19.41	41.00	0.059	-24.58	65.50	0.096	-20.35	90.00	0.000	---
1.25	0.993	-0.06	17.00	0.105	-19.58	41.50	0.045	-26.94	66.00	0.091	-20.82			
1.50	0.999	-0.01	17.50	0.115	-18.79	42.00	0.031	-30.17	66.50	0.086	-21.31			
1.75	1.000	0.00	18.00	0.132	-17.59	42.50	0.018	-34.89	67.00	0.080	-21.94			
2.00	0.998	-0.02	18.50	0.150	-16.48	43.00	0.015	-36.48	67.50	0.075	-22.50			