



ENGINEERING STATEMENT
IN SUPPORT OF
REQUEST FOR SPECIAL TEMPORARY AUTHORITY
AND
DISPLACEMENT OF DIGITAL TRANSLATOR
K44CN-D
COTTONWOOD, AZ

Background and Waiver Request

Scripps Broadcasting Holdings LLC (Scripps) is the licensee of digital television translator station K44CN-D (BLDTT-20111201MLK, Facility ID. 53432) near Cottonwood, AZ. The station currently operate on Ch. 44, which is outside the new core of channels allocated for television broadcasting in the US (Ch. 2-36) following the results of the 2016/2017 Incentive Auction.

The translator recently received a 120-day notice from T-Mobile (copy attached hereto) informing it that T-Mobile is preparing to commence operations on its 600 MHz spectrum by 10/31/2017 and that K44CN is likely to cause harmful interference to its operations. K44CN will be required to terminate operation on Ch. 44 before the opening of the Special Displacement Window for translators.

Given the circumstances, Scripps respectfully requests a waiver of the Displacement Freeze for K44CN, according to the procedures detailed in the FCC Public Notice released on

**PROVIDING COMMUNICATION
SYSTEMS ENGINEERING**

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NEPHI, UT 84648

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REGIONAL OFFICE
6197 MILLER RD.
SWARTZ CREEK, MI 48473

TEL: (810)-226-0750



June 14, 2017 (DA 17-584, Incentive Auction Task Force and Media Bureau Set Forth Tools Available to LPTV/Translator Stations Displaced Prior to the Special Displacement Window).

Scripps has identified Ch. 33 as a possible new channel for operation of K44CN. As specified in the Public Notice, Scripps is filing both a displacement application and a request for Special Temporary Authority for K44CN to begin operation on Ch. 33.

Site and Tower

The tower is located at 34° 41' 12.0" N and 112° 07' 02.5" W (NAD83). The overall height of the tower is 25.0m AGL. The tower/site parameters pass the FCC TOWAIR program, therefore, it does not require an ASR, nor notification to the FAA. The transmitting antenna will be side-mounted. This is the same site and tower that is specified in the current K44CN authorization.

Antenna and Power

The proposed antenna is a ERI AL8E-25-H directional radiator (pattern data attached hereto). The radiation center of the antenna will be at a height of 15.0m AGL (2347.0m AMSL). The ERP will be 15.0 kW and the 51 dBu F(50,90) contour will completely encompass the area of Cottonwood, AZ. The station will utilize a full-service mask filter.

Interference

An interference study was conducted of the proposed facility parameters using the FCC TVStudy software (Version 2.2.3). The results of the study (copy attached hereto) show that

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potential interference is not predicted to exceed 0.49% to any full-service DTV or Class A stations or 1.99% to any low power stations as required by the Commission's Rules.

Environmental/RFR

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report.

The location of the proposed post-incentive auction facility is assumed to currently be "in compliance" with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst case ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.09607 mW/cm², which is less than MPE for public exposure (0.391333 mW/cm²) at Ch. 33 (584-590 MHz). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain "in compliance" with FCC guidelines.

Scripps 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.

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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.

A handwritten signature in black ink, appearing to read "Ben Pidek", is written over a horizontal line.

Benjamin L. Pidek, P.E.

October 26, 2017

Attached:

T-Mobile 120 Day Notice
TVStudy Interference Check Report
ERI Antenna Pattern Data

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VIA CERTIFIED MAIL & EMAIL

June 29, 2017

SCRIPPS MEDIA, INC.
312 WALNUT STREET 28TH FLOOR
CINCINNATI, OH 45202

RE: Notification of Intent to Begin 600MHz Operations

Dear K44CN-D Licensee:

T-Mobile USA, Inc. ("T-Mobile") is notifying you that T-Mobile is preparing to commence operations on its 600MHz spectrum in the Partial Economic Area ("PEA") # 180 by 10/31/2017 and your station is likely to cause harmful interference to T-Mobile's operations.

To determine if your station(s) is likely to cause interference, an interference analysis has been performed, as specified by the Federal Communications Commissions' ("FCC") Inter-service Interference procedures¹, using publicly available information in the FCC's Licensing and Management System ("LMS") for your facility. This analysis predicts field strength at T-Mobile's base station and user equipment locations in the PEA # 180 market from your facility. The FCC has set the thresholds at which the predicted field strength from low power TV and translator stations creates a sufficient interference risk to wireless facilities. T-Mobile has determined that your facility exceeds those thresholds and is an interference risk to its wireless operations.

T-Mobile will commence its operations in the PEA # 180 market on 10/31/2017. This letter provides the 120 days' advance notification required by FCC regulations, 47 CFR §73.3700(g)(4).

¹ See 30 FCC Rcd 12049, 12071, para. 49 (2015)

The FCC regulations also require you to cease operations or eliminate the potential for harmful interference to T-Mobile's wireless facilities in the PEA # 180 market.

The FCC will work with you to attempt find a new television channel outside of the new 600 MHz mobile band that will not interfere with T-Mobile's network. You should review the FCC's Tools Available to LPTV/Translator Station Public Notice (enclosed) released on June 14, 2017 and contact Hossein Hashemzadeh, Melvin Collins, or Barbara Kreisman at the FCC for more information about the options available in your area.²

Please email 600MhzFC@T-Mobile.com once you have determined when you will eliminate the interference. If you would like additional information regarding our findings or if it might be possible to coordinate our operations, please submit a request to Dan Wilson, Sr. Manager, Spectrum Engineering, at 600MhzFC@T-Mobile.com.

Sincerely,

/s/ Dan Wilson

Sr. Manager, Spectrum Engineering, T-Mobile USA, Inc.

² See <https://www.fcc.gov/document/iatf-mb-set-forth-tools-available-lptvtranslator-stations>

TVStudy TV Interference Check Report for K44CN on Ch. 33

Study created: 2017.10.28 08:20:11

Study build station data: LMS TV 2017-10-11 (8)

Proposal: K44CN-D D33 LD LIC COTTONWOOD, AZ
File number: K44CNC33-AL8E-FSM-15k
Facility ID: 59432
Station data: User record
Record ID: 530
Country: U.S.

Build options:

Protect records not on baseline channel
Protect baseline records from LPTV

Search options:

Non-U.S. records included
Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
KTVW-DT	D33	DT	LIC	PHOENIX, AZ	BLCDT20100818ABA	150.5 km
K34EE-D	D34	LD	LIC	PRESCOTT-COTTONWOOD, AZ	BLDTT20120521ACZ	0.1

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D33
Mask: Full Service
Latitude: 34 41 12.00 N (NAD83)
Longitude: 112 7 2.50 W
Height AMSL: 2347.0 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: ERI AL8E-25-H 0.0 deg
Elev Pattn: Generic

50.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	12.5 kW	796.3 m	71.2 km
45.0	15.0	1156.6	80.2
90.0	15.0	1194.4	81.0
135.0	12.0	784.7	70.7
180.0	4.52	621.6	60.7
225.0	0.759	576.5	48.6
270.0	0.649	598.6	48.0
315.0	5.02	426.1	55.8

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 769 m

Distance to Canadian border: 1590.8 km

Distance to Mexican border: 315.2 km

Conditions at FCC monitoring station: Douglas AZ
Bearing: 146.4 degrees Distance: 421.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 43.1 degrees Distance: 854.9 km

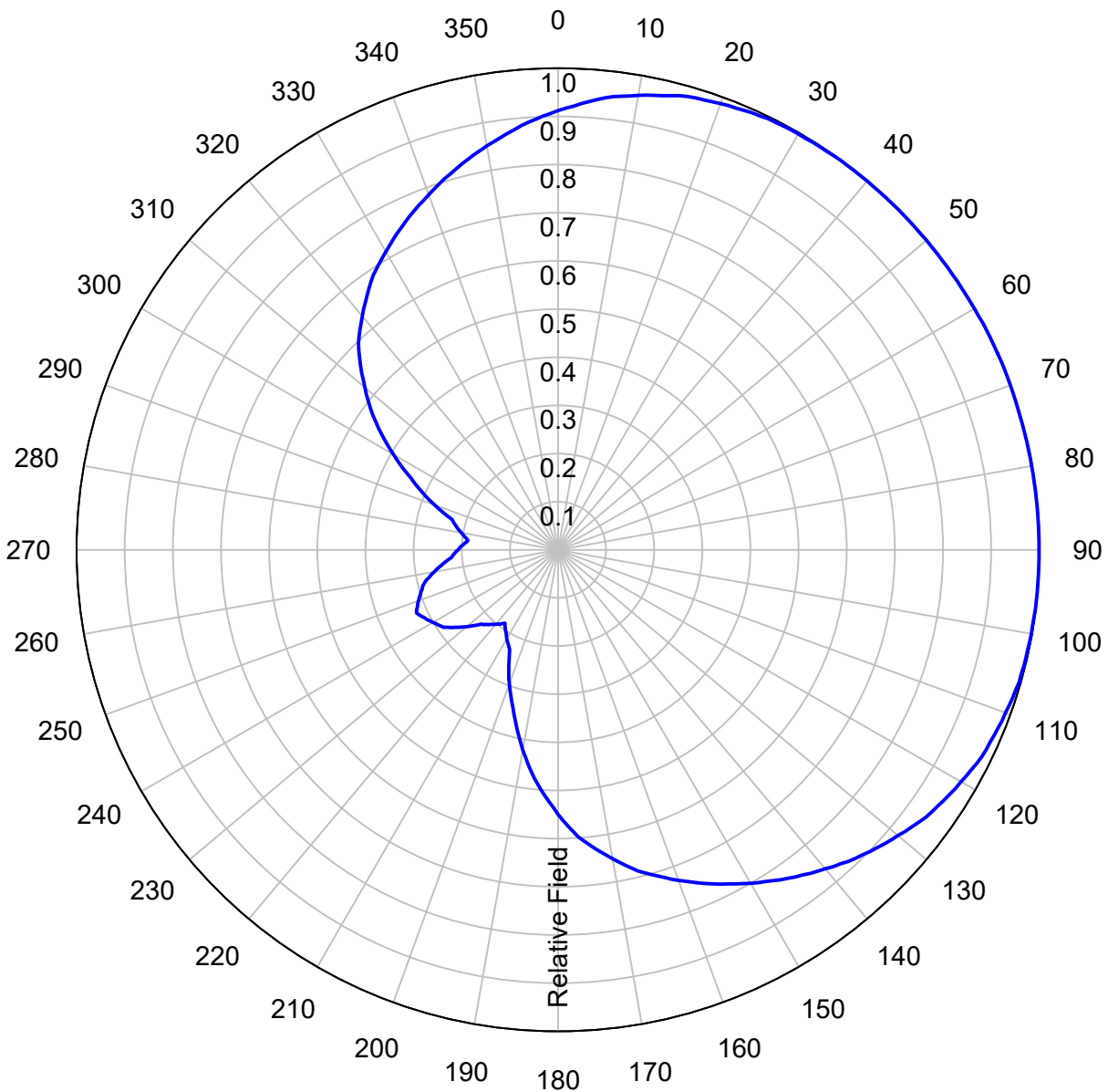
Study cell size: 1.00 km
Profile point spacing: 1.00 km

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

Proposal receives 3.93% interference from scenario 1
No IX check failures found.

AZIMUTH PATTERN**Type:****AL-E****Channel:****25****Directivity:****Numeric****dBd****Location:****Cottonwood, AZ - K44CN-D****Peak(s) at:****1.83****2.62****Polarization:****Horizontal**

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



Preliminary, subject to final design and review.

TABULATED DATA FOR AZIMUTH PATTERN

Type: AL-E

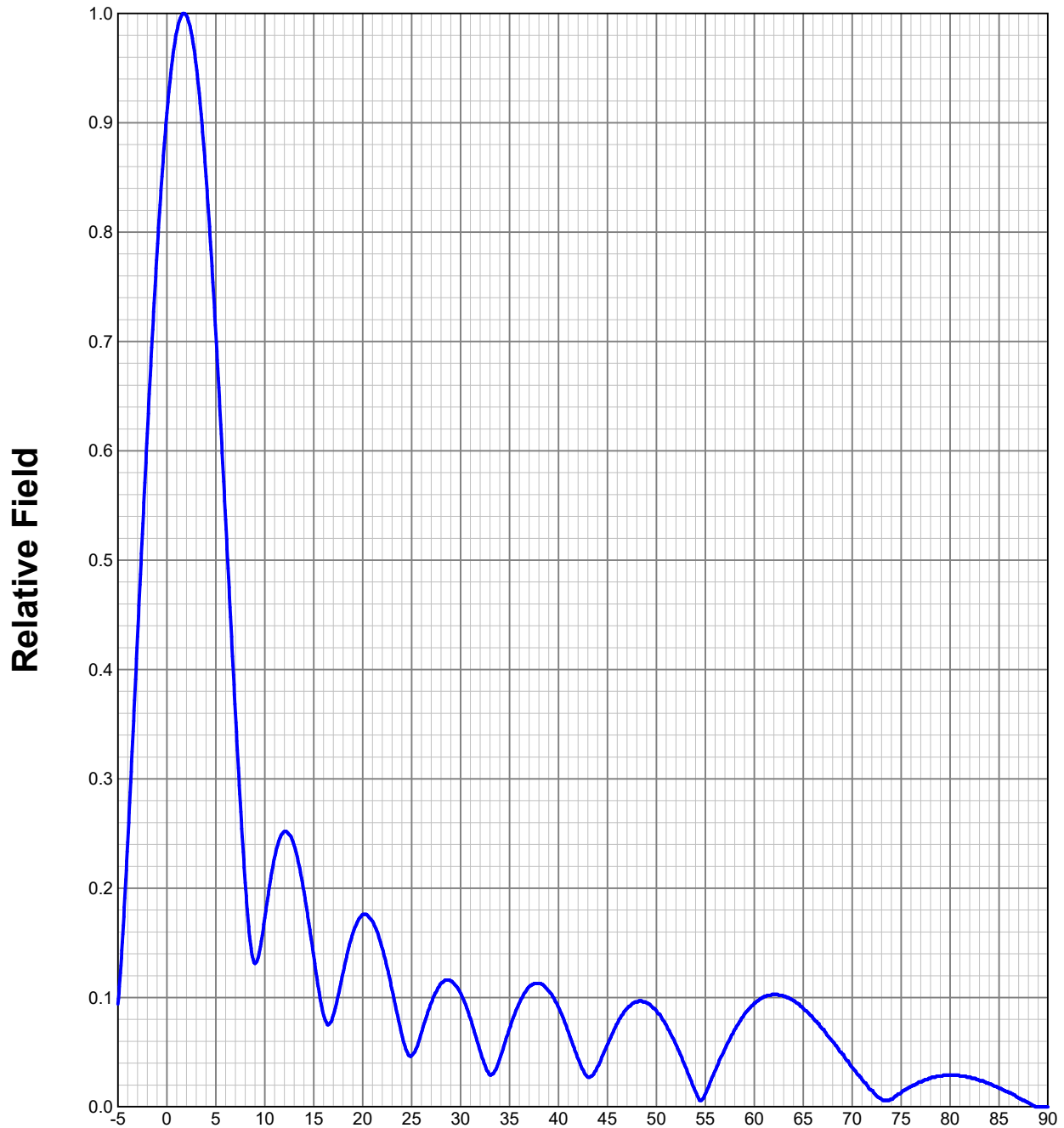
Polarization: Horizontal

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	0.912	-0.80	92	0.999	-0.01	184	0.500	-6.02	276	0.188	-14.52
2	0.922	-0.71	94	0.999	-0.01	186	0.476	-6.45	278	0.196	-14.15
4	0.933	-0.60	96	0.999	-0.01	188	0.449	-6.96	280	0.204	-13.81
6	0.944	-0.50	98	0.998	-0.02	190	0.422	-7.49	282	0.213	-13.43
8	0.951	-0.44	100	0.998	-0.02	192	0.394	-8.09	284	0.221	-13.11
10	0.958	-0.37	102	0.997	-0.03	194	0.367	-8.71	286	0.229	-12.80
12	0.965	-0.31	104	0.997	-0.03	196	0.340	-9.37	288	0.251	-12.01
14	0.972	-0.25	106	0.996	-0.03	198	0.318	-9.95	290	0.273	-11.28
16	0.979	-0.18	108	0.993	-0.06	200	0.296	-10.57	292	0.296	-10.57
18	0.982	-0.16	110	0.989	-0.10	202	0.273	-11.28	294	0.318	-9.95
20	0.986	-0.12	112	0.986	-0.12	204	0.251	-12.01	296	0.340	-9.37
22	0.989	-0.10	114	0.982	-0.16	206	0.229	-12.80	298	0.367	-8.71
24	0.993	-0.06	116	0.979	-0.18	208	0.221	-13.11	300	0.394	-8.09
26	0.996	-0.03	118	0.972	-0.25	210	0.213	-13.43	302	0.422	-7.49
28	0.997	-0.03	120	0.965	-0.31	212	0.204	-13.81	304	0.449	-6.96
30	0.997	-0.03	122	0.958	-0.37	214	0.196	-14.15	306	0.476	-6.45
32	0.998	-0.02	124	0.951	-0.44	216	0.188	-14.52	308	0.500	-6.02
34	0.998	-0.02	126	0.944	-0.50	218	0.195	-14.20	310	0.524	-5.61
36	0.999	-0.01	128	0.933	-0.60	220	0.202	-13.89	312	0.549	-5.21
38	0.999	-0.01	130	0.922	-0.71	222	0.208	-13.64	314	0.573	-4.84
40	0.999	-0.01	132	0.912	-0.80	224	0.215	-13.35	316	0.597	-4.48
42	0.999	-0.01	134	0.901	-0.91	226	0.222	-13.07	318	0.615	-4.22
44	0.999	-0.01	136	0.890	-1.01	228	0.235	-12.58	320	0.633	-3.97
46	0.999	-0.01	138	0.877	-1.14	230	0.248	-12.11	322	0.651	-3.73
48	0.999	-0.01	140	0.864	-1.27	232	0.261	-11.67	324	0.669	-3.49
50	0.999	-0.01	142	0.852	-1.39	234	0.274	-11.24	326	0.687	-3.26
52	0.999	-0.01	144	0.839	-1.52	236	0.287	-10.84	328	0.701	-3.09
54	0.999	-0.01	146	0.826	-1.66	238	0.294	-10.63	330	0.715	-2.91
56	0.999	-0.01	148	0.812	-1.81	240	0.301	-10.43	332	0.730	-2.73
58	0.999	-0.01	150	0.799	-1.95	242	0.308	-10.23	334	0.744	-2.57
60	0.999	-0.01	152	0.785	-2.10	244	0.315	-10.03	336	0.758	-2.41
62	1.000	0.00	154	0.772	-2.25	246	0.322	-9.84	338	0.772	-2.25
64	1.000	0.00	156	0.758	-2.41	248	0.315	-10.03	340	0.785	-2.10
66	1.000	0.00	158	0.744	-2.57	250	0.308	-10.23	342	0.799	-1.95
68	1.000	0.00	160	0.730	-2.73	252	0.301	-10.43	344	0.812	-1.81
70	1.000	0.00	162	0.715	-2.91	254	0.294	-10.63	346	0.826	-1.66
72	0.999	-0.01	164	0.701	-3.09	256	0.287	-10.84	348	0.839	-1.52
74	0.999	-0.01	166	0.687	-3.26	258	0.274	-11.24	350	0.852	-1.39
76	0.999	-0.01	168	0.669	-3.49	260	0.261	-11.67	352	0.864	-1.27
78	0.999	-0.01	170	0.651	-3.73	262	0.248	-12.11	354	0.877	-1.14
80	0.999	-0.01	172	0.633	-3.97	264	0.235	-12.58	356	0.890	-1.01
82	0.999	-0.01	174	0.615	-4.22	266	0.222	-13.07	358	0.901	-0.91
84	0.999	-0.01	176	0.597	-4.48	268	0.215	-13.35	360	0.912	-0.80
86	0.999	-0.01	178	0.573	-4.84	270	0.208	-13.64			
88	0.999	-0.01	180	0.549	-5.21	272	0.202	-13.89			
90	0.999	-0.01	182	0.524	-5.61	274	0.195	-14.20			

Preliminary, subject to final design and review.

ELEVATION PATTERN

Type:	<u>AL8</u>		Channel:	<u>25</u>
Directivity:	<u>Numeric</u>	<u>dBd</u>	Location:	<u>Cottonwood, AZ - K44CN-D</u>
Main Lobe:	<u>8.68</u>	<u>9.39</u>	Beam Tilt:	<u>1.75</u>
Horizontal:	<u>7.17</u>	<u>8.56</u>	Polarization:	<u>Horizontal</u>



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TABULATED DATA FOR ELEVATION PATTERN

Type: AL8

Polarization: Horizontal

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.00	0.094	-20.54	6.75	0.403	-7.88	27.00	0.095	-20.45	50.50	0.082	-21.72	74.00	0.007	-43.10
-4.75	0.122	-18.24	7.00	0.360	-8.87	27.50	0.105	-19.58	51.00	0.075	-22.50	74.50	0.010	-40.00
-4.50	0.158	-16.03	7.25	0.318	-9.95	28.00	0.113	-18.94	51.50	0.066	-23.61	75.00	0.013	-37.72
-4.25	0.200	-14.00	7.50	0.278	-11.12	28.50	0.116	-18.71	52.00	0.057	-24.88	75.50	0.016	-35.92
-4.00	0.242	-12.32	7.75	0.240	-12.40	29.00	0.115	-18.79	52.50	0.047	-26.56	76.00	0.019	-34.42
-3.75	0.287	-10.83	8.00	0.205	-13.76	29.50	0.111	-19.09	53.00	0.036	-28.87	76.50	0.021	-33.56
-3.50	0.334	-9.53	8.25	0.175	-15.11	30.00	0.104	-19.66	53.50	0.025	-32.04	77.00	0.023	-32.77
-3.25	0.382	-8.37	8.50	0.152	-16.36	30.50	0.094	-20.54	54.00	0.014	-37.08	77.50	0.025	-32.04
-3.00	0.430	-7.33	8.75	0.137	-17.27	31.00	0.081	-21.83	54.50	0.006	-44.44	78.00	0.026	-31.70
-2.75	0.478	-6.42	9.00	0.131	-17.65	31.50	0.066	-23.61	55.00	0.012	-38.42	78.50	0.027	-31.37
-2.50	0.524	-5.61	9.25	0.135	-17.43	32.00	0.051	-25.85	55.50	0.023	-32.77	79.00	0.028	-31.06
-2.25	0.571	-4.87	9.50	0.144	-16.83	32.50	0.038	-28.40	56.00	0.033	-29.63	79.50	0.029	-30.75
-2.00	0.616	-4.21	9.75	0.157	-16.08	33.00	0.029	-30.75	56.50	0.044	-27.13	80.00	0.029	-30.75
-1.75	0.661	-3.60	10.00	0.173	-15.24	33.50	0.033	-29.63	57.00	0.053	-25.51	80.50	0.029	-30.75
-1.50	0.703	-3.06	10.50	0.203	-13.85	34.00	0.044	-27.13	57.50	0.062	-24.15	81.00	0.028	-31.06
-1.25	0.743	-2.58	11.00	0.228	-12.84	34.50	0.058	-24.73	58.00	0.071	-22.97	81.50	0.028	-31.06
-1.00	0.782	-2.14	11.50	0.245	-12.22	35.00	0.072	-22.85	58.50	0.078	-22.16	82.00	0.027	-31.37
-0.75	0.818	-1.74	12.00	0.252	-11.97	35.50	0.084	-21.51	59.00	0.085	-21.41	82.50	0.026	-31.70
-0.50	0.851	-1.40	12.50	0.249	-12.08	36.00	0.095	-20.45	59.50	0.090	-20.92	83.00	0.024	-32.40
-0.25	0.881	-1.10	13.00	0.239	-12.43	36.50	0.104	-19.66	60.00	0.095	-20.45	83.50	0.023	-32.77
0.00	0.909	-0.83	13.50	0.221	-13.11	37.00	0.110	-19.17	60.50	0.098	-20.18	84.00	0.021	-33.56
0.25	0.933	-0.61	14.00	0.197	-14.11	37.50	0.113	-18.94	61.00	0.101	-19.91	84.50	0.019	-34.42
0.50	0.953	-0.42	14.50	0.168	-15.49	38.00	0.113	-18.94	61.50	0.102	-19.83	85.00	0.017	-35.39
0.75	0.970	-0.26	15.00	0.138	-17.20	38.50	0.111	-19.09	62.00	0.103	-19.74	85.50	0.015	-36.48
1.00	0.983	-0.15	15.50	0.108	-19.33	39.00	0.106	-19.49	62.50	0.102	-19.83	86.00	0.013	-37.72
1.25	0.992	-0.07	16.00	0.084	-21.51	39.50	0.100	-20.00	63.00	0.101	-19.91	86.50	0.011	-39.17
1.50	0.998	-0.02	16.50	0.075	-22.50	40.00	0.091	-20.82	63.50	0.100	-20.00	87.00	0.008	-41.94
1.75	1.000	0.00	17.00	0.084	-21.51	40.50	0.081	-21.83	64.00	0.097	-20.26	87.50	0.006	-44.44
2.00	0.998	-0.02	17.50	0.102	-19.83	41.00	0.069	-23.22	64.50	0.094	-20.54	88.00	0.004	-47.96
2.25	0.992	-0.07	18.00	0.123	-18.20	41.50	0.056	-25.04	65.00	0.090	-20.92	88.50	0.001	-60.00
2.50	0.982	-0.16	18.50	0.143	-16.89	42.00	0.044	-27.13	65.50	0.086	-21.31	89.00	0.000	-40.00
2.75	0.969	-0.27	19.00	0.159	-15.97	42.50	0.034	-29.37	66.00	0.081	-21.83	89.50	0.000	-40.00
3.00	0.952	-0.43	19.50	0.170	-15.39	43.00	0.027	-31.37	66.50	0.076	-22.38	90.00	0.000	-40.00
3.25	0.931	-0.62	20.00	0.176	-15.09	43.50	0.029	-30.75	67.00	0.071	-22.97			
3.50	0.908	-0.84	20.50	0.175	-15.14	44.00	0.037	-28.64	67.50	0.065	-23.74			
3.75	0.881	-1.11	21.00	0.170	-15.39	44.50	0.047	-26.56	68.00	0.060	-24.44			
4.00	0.851	-1.40	21.50	0.160	-15.92	45.00	0.057	-24.88	68.50	0.054	-25.35			
4.25	0.819	-1.74	22.00	0.145	-16.77	45.50	0.067	-23.48	69.00	0.048	-26.38			
4.50	0.784	-2.11	22.50	0.127	-17.92	46.00	0.076	-22.38	69.50	0.042	-27.54			
4.75	0.746	-2.54	23.00	0.107	-19.41	46.50	0.084	-21.51	70.00	0.036	-28.87			
5.00	0.707	-3.01	23.50	0.086	-21.31	47.00	0.090	-20.92	70.50	0.030	-30.46			
5.25	0.667	-3.52	24.00	0.066	-23.61	47.50	0.094	-20.54	71.00	0.025	-32.04			
5.50	0.624	-4.10	24.50	0.051	-25.85	48.00	0.096	-20.35	71.50	0.020	-33.98			
5.75	0.581	-4.72	25.00	0.047	-26.56	48.50	0.097	-20.26	72.00	0.015	-36.48			
6.00	0.537	-5.40	25.50	0.054	-25.35	49.00	0.095	-20.45	72.50	0.010	-40.00			
6.25	0.492	-6.15	26.00	0.068	-23.35	49.50	0.092	-20.72	73.00	0.007	-43.10			
6.50	0.448	-6.97	26.50	0.082	-21.72	50.00	0.088	-21.11	73.50	0.006	-44.44			

Preliminary, subject to final design and review.