

**Technical Report
Minor Amendment to an Application for
BNPFT-20080619AEC**

This technical report has been developed in support of a minor amendment to the new translator application, FCC file no. BNPFT-20080619AEC, at Buffalo, WY. A change in antenna is requested. All other modifications to the original application are to remain for the new translator to serve as a fill-in for KLQQ 285C0 at Clearmont, WY, facility I.D. 165310.

The following exhibits are provided in support of the form 349 application:

- E-1 Channel Overlap Study
- E-2 60 dBu Coverage within KLQQ and Overlap to the Current Facility
- E-3 Shively CL-FM/VRM-1 DA Pattern

Overlap Study:

An overlap study is shown in exhibit E-1 which shows there will continue to be no interference overlap to any other facilities. **The concurrent application filed for the Buffalo, WY 293 translator to channel 240, FCC file no. BNPFT-20080619AEA, eliminates any interference between them.**

Antenna System:

The translator will be located at an existing tower at a COR AGL of 10 meters, using a single bay Scala CL-FM/VRM vertically-polarized directional antenna rotated at an azimuth of 275 degrees, and operate at 0.250 kW ERP at coordinates:

Charles M. Anderson Associates

Broadcast Consultants
1519 Euclid Avenue
Bowling Green, KY 42103

44-20-54N 106-41-30W (NAD 27).

Exhibit E-2 shows the 60 dBu contour plot will be completely contained within the 60 Bu contour of KLQQ as well as overlap to the current facility's application 60 dBu contour.

RF Exposure Calculation:

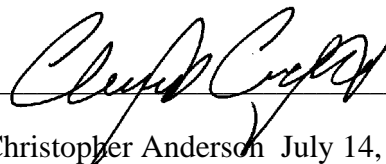
The RF contribution of the facility was calculated using the formula from the OET Bulletin 65:

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

Using the worst-case vertical (F) factor of 0.01, specified by Scala for the CL-FM/VRM antenna, yields an RF value of 0.013 $\mu\text{W/cm}^2$ at the base of the tower, which is well below 5% of the 200 $\mu\text{W/cm}^2$ maximum permissible for general public exposure, allowing exclusion from consideration.

Conclusion:

It is concluded that the minor amendment to this translator application complies with all Commission policies and rules.



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E-1 Overlap Study

REFERENCE

CH# 290D - 105.9 MHz, Pwr= 0.25 kW, HAAT= 30.0 M, COR= 1439 M

DISPLAY DATES

44 20 54.0 N.

Average Protected F(50-50)= 7.1 km

DATA 07-12-08

106 41 30.0 W.

Standard Directional

SEARCH 07-14-08

CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)
290D	1246891	APP	C	0.0	0.00	44 20 54.0	0.250	23.8	7.1	-25.37*	-10.94*
Buffalo		WY		0.0	BNPFT20080619AEC	106 41 30.0		1439	Lovcom, Inc.		
287D	651583	APP	C	324.4	0.15	44 20 58.0	0.250	1.1	7.1	-6.21*	-7.55*
Buffalo		WY		144.4	BNPFT20030313ATY	106 41 34.0		1449	Lovcom, Inc.		
293D	652158**	APP	C	324.4	0.15	44 20 58.0	0.250	1.1	7.1	-6.21*	-7.55*
Buffalo		WY		144.4	BNPFT20030313ATS	106 41 34.0		1449	Lovcom, Inc.		

** The concurrent application for the Buffalo,WY 293D New Translator filed moving it to channel to 240, FCC file no. BNPFT-20080619AEA, already eliminates this interference.

291C1	KXXL	LIC	C	97.2	98.98	44 13 50.0	100.000	77.5	47.9	19.88	49.34
Moorcroft		WY		278.1	BLH20080403ABM	105 27 45.0	120	1542	Family Voice Communication		
290D	K288FZ	CP	DC	312.3	45.44	44 37 20.0	0.250	11.9	3.2	27.52	22.20
Sheridan		WY		132.0	BPFT200711102ASQ	107 06 57.0		2352	Lovcom, Inc.		
292D	K292DZ	LIC	DHN	330.4	29.07	44 34 32.0	0.135	0.2	4.1	24.12	24.46
Sheridan		WY		150.3	BLFT19880627TC	106 52 22.0	-55	1538	James & Susan Noga		
288D	K288FZ	LIC	DC	312.3	45.44	44 37 20.0	0.010	0.0	0.8	39.41	43.83
Sheridan		WY		132.0	BLFT20070131AFH	107 06 57.0		2352	Lovcom, Inc.		
287C1	NEW	CP	NCX	92.5	99.18	44 18 10.0	100.000	4.7	43.1	92.90	56.01
Sleepy Hollow		WY		273.4	BMPH20080213AHK	105 27 00.0	82	1492	Robert R. Rule		
290C1	KPBR	LIC	CX	315.3	207.72	45 39 31.0	100.000	138.2	40.7	63.65	147.58
Joliet		MT		133.9	BLH20060712AEX	108 34 14.0	134	1251	Connoisseur Media, Llc		
292C	NEW	CP	CX	226.4	145.63	43 26 18.0	50.000	9.6	72.9	130.75	72.11
Shoshoni		WY		45.5	BNPH20060310AAB	107 59 46.0	586	2512	Cochise Broadcasting Llc		
288C	RADD	ADD		264.0	173.65	44 09 56.0	100.000	15.2	95.8	151.43	76.74
Meeteetse		WY		82.5		108 51 04.0	600	2428	Millcreek B/casting Et Al.		

Terrain database is NGDC 30 SEC Distance + R = 73.215 or FCC spacings in KM, Distance + M = Margin in KM
Contour distances are on direct line to and from reference station. Reference Zone = 2. With 3rd Adj Channels.
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 protected contour.

E-2 New Translator Mod. 60 dBu Plot

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New Translator at Ch. 290
BNPFT20030313ATY
Latitude: 44-20-54 N
Longitude: 106-41-30 W
ERP: 0.25 kW
HAAT: 30.0 m
Channel: 290
Frequency: 105.9 MHz
RCAMSL Height: 1439.0 m
Site Elevation: 1429.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

651583.A 287D
60 dBu F(50-50) Contour

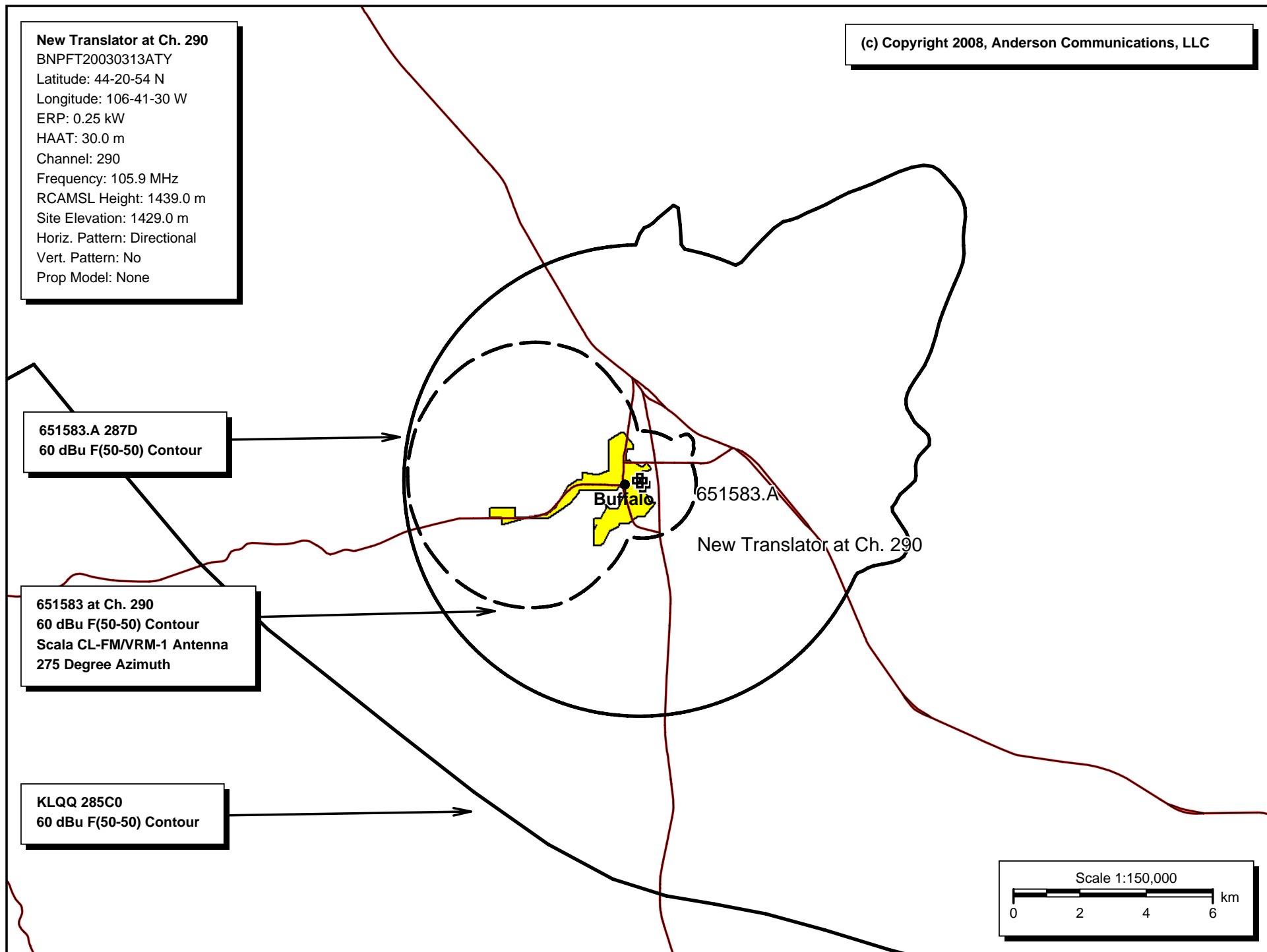
651583 at Ch. 290
60 dBu F(50-50) Contour
Scala CL-FM/VRM-1 Antenna
275 Degree Azimuth

KLQQ 285C0
60 dBu F(50-50) Contour

Buffalo

651583.A
New Translator at Ch. 290

Scale 1:150,000
0 2 4 6 km



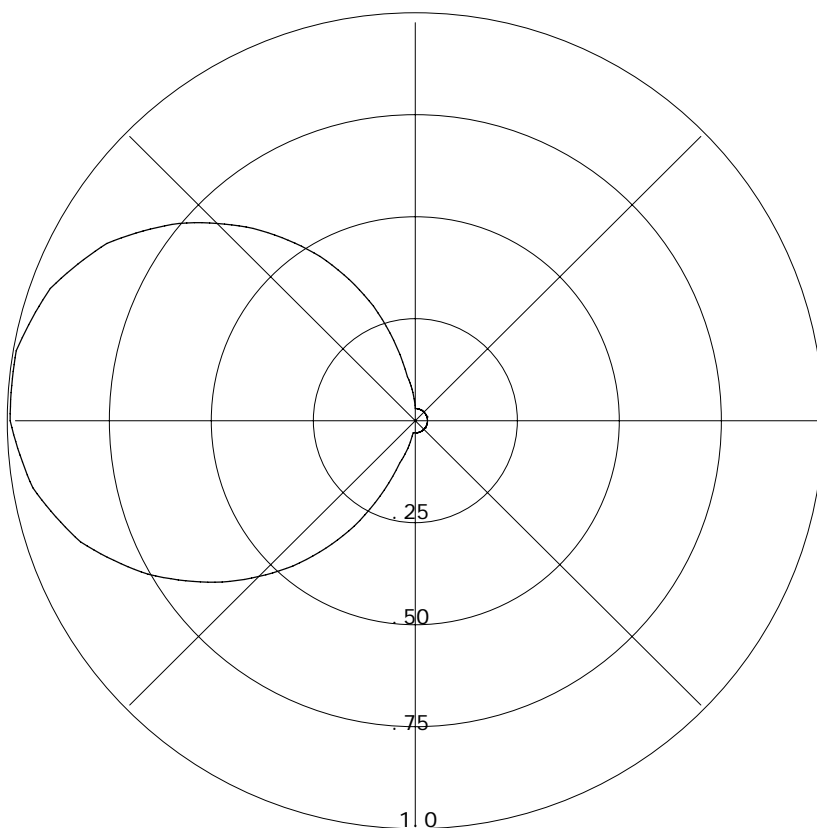
E-3 Scal a CL-FM/VRM DA Pattern

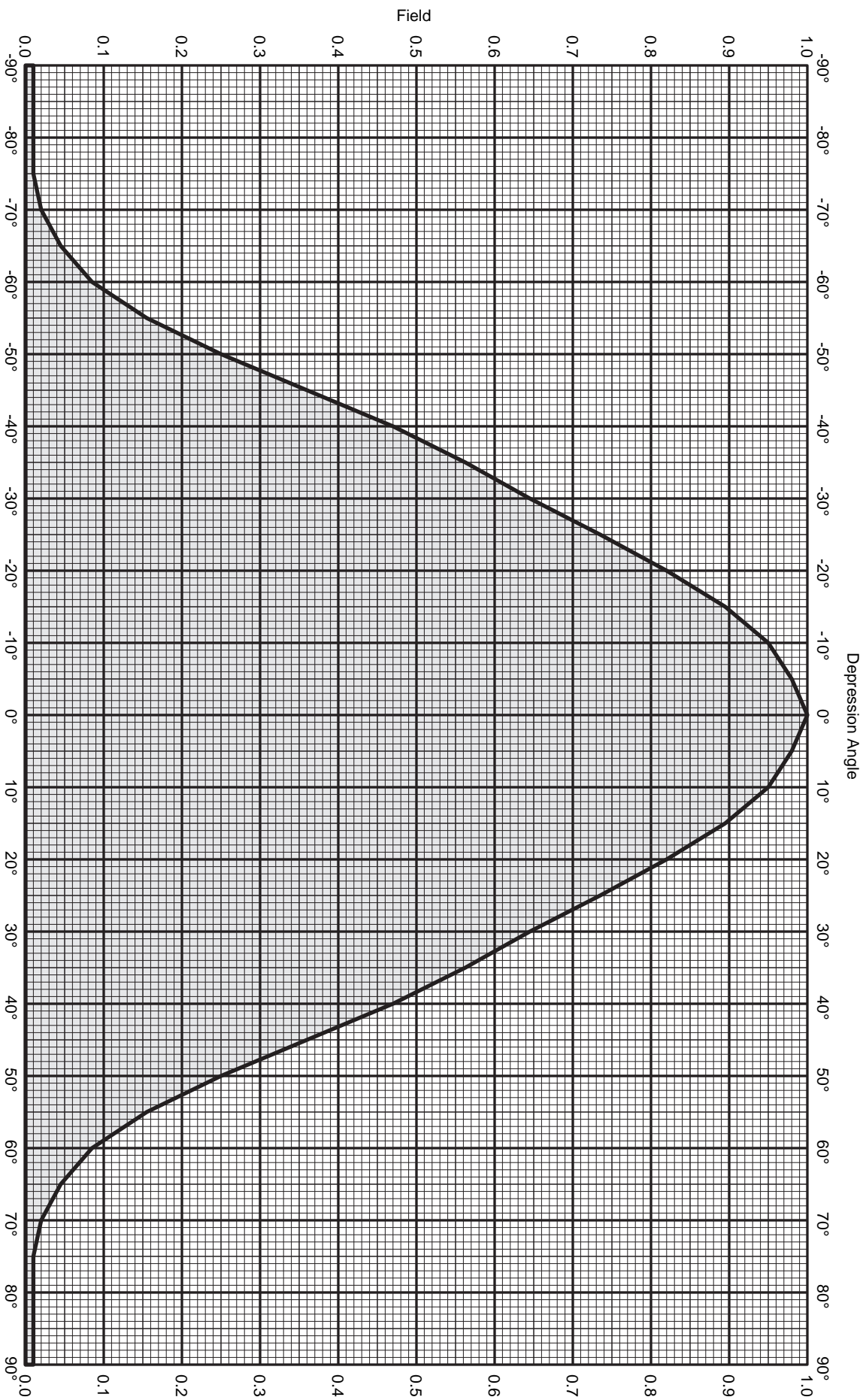
RMS(V)= .466

Bearing Field % Vol tage

Graph i s Percent Relative Fi el d Vol tage

000	=	0.030
010	=	0.030
020	=	0.030
030	=	0.030
040	=	0.030
050	=	0.030
060	=	0.030
070	=	0.030
080	=	0.030
090	=	0.030
100	=	0.030
110	=	0.030
120	=	0.030
130	=	0.030
140	=	0.030
150	=	0.030
160	=	0.030
170	=	0.030
180	=	0.030
190	=	0.030
200	=	0.110
210	=	0.300
220	=	0.467
230	=	0.618
240	=	0.756
250	=	0.873
260	=	0.952
270	=	0.993
280	=	0.993
290	=	0.952
300	=	0.873
310	=	0.756
320	=	0.618
330	=	0.467
340	=	0.300
350	=	0.110





CL-FM Log-periodic

FM

7.0 dBd (9.15 dBi)

Vertical polarization



SCALA DIVISION

Post Office Box 4580
Medford, OR 97501 (USA)
Phone: (541) 779-6500
Fax: (541) 779-3991
<http://www.kathrein-scala.com>



CL-FM Log-periodic
FM

7.0 dBd (9.15 dBi)

Vertical polarization

Vertical radiation pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.010	-40.00	-33.00	0.00	-45	0.360	-8.87	-1.87	0.65
-89	0.010	-40.00	-33.00	0.00	-44	0.382	-8.36	-1.36	0.73
-88	0.010	-40.00	-33.00	0.00	-43	0.404	-7.87	-0.87	0.82
-87	0.010	-40.00	-33.00	0.00	-42	0.426	-7.41	-0.41	0.91
-86	0.010	-40.00	-33.00	0.00	-41	0.448	-6.97	0.03	1.01
-85	0.010	-40.00	-33.00	0.00	-40	0.470	-6.56	0.44	1.11
-84	0.010	-40.00	-33.00	0.00	-39	0.488	-6.22	0.78	1.20
-83	0.010	-40.00	-33.00	0.00	-38	0.507	-5.90	1.10	1.29
-82	0.010	-40.00	-33.00	0.00	-37	0.525	-5.59	1.41	1.38
-81	0.010	-40.00	-33.00	0.00	-36	0.544	-5.29	1.71	1.48
-80	0.010	-40.00	-33.00	0.00	-35	0.562	-5.00	2.00	1.59
-79	0.010	-40.00	-33.00	0.00	-34	0.579	-4.75	2.25	1.68
-78	0.010	-40.00	-33.00	0.00	-33	0.595	-4.50	2.50	1.78
-77	0.010	-40.00	-33.00	0.00	-32	0.612	-4.26	2.74	1.88
-76	0.010	-40.00	-33.00	0.00	-31	0.628	-4.03	2.97	1.98
-75	0.010	-40.00	-33.00	0.00	-30	0.645	-3.81	3.19	2.09
-74	0.012	-38.42	-31.42	0.00	-29	0.663	-3.57	3.43	2.20
-73	0.014	-37.08	-30.08	0.00	-28	0.681	-3.34	3.66	2.32
-72	0.016	-35.92	-28.92	0.00	-27	0.699	-3.11	3.89	2.45
-71	0.018	-34.89	-27.89	0.00	-26	0.717	-2.89	4.11	2.58
-70	0.020	-33.98	-26.98	0.00	-25	0.735	-2.67	4.33	2.71
-69	0.025	-32.04	-25.04	0.00	-24	0.752	-2.48	4.52	2.83
-68	0.030	-30.46	-23.46	0.00	-23	0.769	-2.28	4.72	2.96
-67	0.035	-29.12	-22.12	0.01	-22	0.786	-2.09	4.91	3.10
-66	0.040	-27.96	-20.96	0.01	-21	0.803	-1.91	5.09	3.23
-65	0.045	-26.94	-19.94	0.01	-20	0.820	-1.72	5.28	3.37
-64	0.053	-25.51	-18.51	0.01	-19	0.835	-1.57	5.43	3.49
-63	0.061	-24.29	-17.29	0.02	-18	0.850	-1.41	5.59	3.62
-62	0.069	-23.22	-16.22	0.02	-17	0.865	-1.26	5.74	3.75
-61	0.077	-22.27	-15.27	0.03	-16	0.880	-1.11	5.89	3.88
-60	0.085	-21.41	-14.41	0.04	-15	0.895	-0.96	6.04	4.01
-59	0.099	-20.09	-13.09	0.05	-14	0.906	-0.86	6.14	4.11
-58	0.113	-18.94	-11.94	0.06	-13	0.917	-0.75	6.25	4.21
-57	0.127	-17.92	-10.92	0.08	-12	0.928	-0.65	6.35	4.32
-56	0.141	-17.02	-10.02	0.10	-11	0.939	-0.55	6.45	4.42
-55	0.155	-16.19	-9.19	0.12	-10	0.950	-0.45	6.55	4.52
-54	0.174	-15.19	-8.19	0.15	-9	0.956	-0.39	6.61	4.58
-53	0.193	-14.29	-7.29	0.19	-8	0.962	-0.34	6.66	4.64
-52	0.212	-13.47	-6.47	0.23	-7	0.968	-0.28	6.72	4.70
-51	0.231	-12.73	-5.73	0.27	-6	0.974	-0.23	6.77	4.75
-50	0.250	-12.04	-5.04	0.31	-5	0.980	-0.18	6.82	4.81
-49	0.272	-11.31	-4.31	0.37	-4	0.984	-0.14	6.86	4.85
-48	0.294	-10.63	-3.63	0.43	-3	0.988	-0.10	6.90	4.89
-47	0.316	-10.01	-3.01	0.50	-2	0.992	-0.07	6.93	4.93
-46	0.338	-9.42	-2.42	0.57	-1	0.996	-0.03	6.97	4.97
					0	1.000	0.00	7.00	5.01



CL-FM Log-periodic
FM

7.0 dBd (9.15 dBi)

Vertical polarization

Vertical radiation pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	7.00	5.01	45	0.360	-8.87	-1.87	0.65
1	0.996	-0.03	6.97	4.97	46	0.338	-9.42	-2.42	0.57
2	0.992	-0.07	6.93	4.93	47	0.316	-10.01	-3.01	0.50
3	0.988	-0.10	6.90	4.89	48	0.294	-10.63	-3.63	0.43
4	0.984	-0.14	6.86	4.85	49	0.272	-11.31	-4.31	0.37
5	0.980	-0.18	6.82	4.81	50	0.250	-12.04	-5.04	0.31
6	0.974	-0.23	6.77	4.75	51	0.231	-12.73	-5.73	0.27
7	0.968	-0.28	6.72	4.70	52	0.212	-13.47	-6.47	0.23
8	0.962	-0.34	6.66	4.64	53	0.193	-14.29	-7.29	0.19
9	0.956	-0.39	6.61	4.58	54	0.174	-15.19	-8.19	0.15
10	0.950	-0.45	6.55	4.52	55	0.155	-16.19	-9.19	0.12
11	0.939	-0.55	6.45	4.42	56	0.141	-17.02	-10.02	0.10
12	0.928	-0.65	6.35	4.32	57	0.127	-17.92	-10.92	0.08
13	0.917	-0.75	6.25	4.21	58	0.113	-18.94	-11.94	0.06
14	0.906	-0.86	6.14	4.11	59	0.099	-20.09	-13.09	0.05
15	0.895	-0.96	6.04	4.01	60	0.085	-21.41	-14.41	0.04
16	0.880	-1.11	5.89	3.88	61	0.077	-22.27	-15.27	0.03
17	0.865	-1.26	5.74	3.75	62	0.069	-23.22	-16.22	0.02
18	0.850	-1.41	5.59	3.62	63	0.061	-24.29	-17.29	0.02
19	0.835	-1.57	5.43	3.49	64	0.053	-25.51	-18.51	0.01
20	0.820	-1.72	5.28	3.37	65	0.045	-26.94	-19.94	0.01
21	0.803	-1.91	5.09	3.23	66	0.040	-27.96	-20.96	0.01
22	0.786	-2.09	4.91	3.10	67	0.035	-29.12	-22.12	0.01
23	0.769	-2.28	4.72	2.96	68	0.030	-30.46	-23.46	0.00
24	0.752	-2.48	4.52	2.83	69	0.025	-32.04	-25.04	0.00
25	0.735	-2.67	4.33	2.71	70	0.020	-33.98	-26.98	0.00
26	0.717	-2.89	4.11	2.58	71	0.018	-34.89	-27.89	0.00
27	0.699	-3.11	3.89	2.45	72	0.016	-35.92	-28.92	0.00
28	0.681	-3.34	3.66	2.32	73	0.014	-37.08	-30.08	0.00
29	0.663	-3.57	3.43	2.20	74	0.012	-38.42	-31.42	0.00
30	0.645	-3.81	3.19	2.09	75	0.010	-40.00	-33.00	0.00
31	0.628	-4.03	2.97	1.98	76	0.010	-40.00	-33.00	0.00
32	0.612	-4.26	2.74	1.88	77	0.010	-40.00	-33.00	0.00
33	0.595	-4.50	2.50	1.78	78	0.010	-40.00	-33.00	0.00
34	0.579	-4.75	2.25	1.68	79	0.010	-40.00	-33.00	0.00
35	0.562	-5.00	2.00	1.59	80	0.010	-40.00	-33.00	0.00
36	0.544	-5.29	1.71	1.48	81	0.010	-40.00	-33.00	0.00
37	0.525	-5.59	1.41	1.38	82	0.010	-40.00	-33.00	0.00
38	0.507	-5.90	1.10	1.29	83	0.010	-40.00	-33.00	0.00
39	0.488	-6.22	0.78	1.20	84	0.010	-40.00	-33.00	0.00
40	0.470	-6.56	0.44	1.11	85	0.010	-40.00	-33.00	0.00
41	0.448	-6.97	0.03	1.01	86	0.010	-40.00	-33.00	0.00
42	0.426	-7.41	-0.41	0.91	87	0.010	-40.00	-33.00	0.00
43	0.404	-7.87	-0.87	0.82	88	0.010	-40.00	-33.00	0.00
44	0.382	-8.36	-1.36	0.73	89	0.010	-40.00	-33.00	0.00
					90	0.010	-40.00	-33.00	0.00