
BERNARD R. SEGAL, P. E.
CONSULTING ENGINEER
KENSINGTON, MARYLAND

AMENDED ENGINEERING EXHIBIT
FLASH-CUT APPLICATION FOR
DIGITAL TRANSLATOR CONSTRUCTION PERMIT
WYFF HEARST TELEVISION INC.
STATION W06AJ, FRANKLIN, ETC., NORTH CAROLINA
CHANNEL 6 0.193 KW (MAX-DA)

WYFF Hearst Television Inc. (hereafter, Hearst) is the licensee of analog television translator Station W06AJ, Franklin, Etc., North Carolina. The station operates on Channel 6 with a maximum peak visual effective radiated power of 0.467 kW using a directional antenna. The antenna radiation center height is 1643 meters above mean sea level.

An application is pending in File No. BDFCDTV-20120104AAN to flash-cut W06AJ to digital operation. The pending application specifies use of a full service filter. By means of the instant amendment, the filter designation is changed to "simple". No other change is proposed to the application. In light of the FCC admonition that references to already on file material are not possible, most of the earlier submitted information is repeated herein. To identify the digital operation in the discussions herein, the "LD" suffix has been added to the W06AJ call sign.

The proposed operation for Station W06AJ-LD is from the same site as for Station W06AJ. A new Larcan, 10 watt, digital translator, Model MXD 10V, will replace the present analog transmitter. A new antenna will replace the existing antenna. The new antenna will be comprised of four Kathrein, Scala Division, CL-46, log-periodic, antennas that are vertically stacked with inter-element vertical spacing of 0.67 wavelength. The axis for the main beam of radiation will be 85° true.

The horizontal plane radiation pattern for the composite antenna is provided in Figure 1. Figure 2 includes the tabulation of relative fields for the pattern of Figure 1. The maximum power gain for the antenna is 13.2 dBd. The vertical plane relative field radiation pattern for the antenna is furnished in Figure 3 and the tabulation of relative fields for the pattern of Figure 3 is provided in Figure 4.

Energy from the transmitter will be transferred to the antenna by means of a 100-foot length of Phelps-Dodge, type STA78-50, coaxial transmission line. Information for Phelps-Dodge cable products is not readily available. However, the attenuation for a similar type of transmission line was determined to be 0.34 dB/ 100 feet at 85 MHz according to Gabriel, Catalog 900. The maximum effective radiated power for the proposed W06AJ-LD operation will be -7.14 dBk, corresponding to 0.193 kW after taking into account the transmitter output power of 10 watts; the transmission line loss of 0.34 dB and the antenna power gain of 13.2 dBd.

The antenna will be mounted with the radiation center at 1643 meters AMSL. The overall tower height, with the antenna, will be 1646 meters AMSL. The site elevation is 1624.6 mAMSL. The site NAD '27 geographic coordinates are: 35° 10' 22.0" N. Latitude; 83° 34' 53.0" W. Longitude. A filter that provides a "simple" mask will be employed as part of the transmission system installation. The transmitter will meet FCC performance requirements for a digital translator. The structure does not require an ASRN.

Allocation concerns have been considered for this proposal using the Longley-Rice prediction methodology in accordance with the provisions set forth in OET Bulletin 69. For interference analysis purposes, the undersigned employed a Sunblade processor and the "tv_process_2010" program that was developed by Mr. William Meintel. The undersigned has repeatedly replicated FCC results with the Sunblade processor and the mentioned program. The cell size used was 1 kilometer on a side and the terrain sampling intervals were 1 kilometer.

The allocation study results for the proposed W06AJ-LD operation show that only full service digital television station WCES-TV, Wrens, GA., Channel 6, is of special interest. The study indicates that the proposed W06AJ-LD operation results in a

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prediction of interference impacting 0.3380 % of the WCES-TV served population. Since the interference prediction does not equal, or exceed 0.5 % of the served population of full service station WCES-TV, the proposed W06AJ-LD operation is in compliance with Section 74.793(e) of the Rules.

The impact that effectuation of the instant proposal could have on the environment has been considered. Since the site that will be employed is already used for broadcasting purposes, only the environmental impact concern of Section 1.1307 of the Rules that relates to human exposure to radio-frequency radiation (rfr), merits consideration. Using the criteria set forth in OET Bulletin 65 as the touchstone for evaluation, the prospective impacts relative to the general public and to workers have been addressed.

The FCC's adopted limit at Channel 6 (82-88 MHz) for general public, whole body, unrestricted time, rfr exposure is 0.2 mW/cm^2 . A test calculation has been performed for the proposed W06AJ-LD operation toward an imaginary target that is located two meters above ground level at the base of the antenna supporting tower. The base of the tower is the closest that a member of the general public could get to the tower. The 2-meter height above ground level elevation approximates the height of a standing person's head. The bottom of the antenna was used as the radiation source.

The antenna radiation center is to be located 18.3 meters above ground level. The distance from the bottom of the antenna to the target will be 12.8 meters. As recommended in O.E.T. Bulletin 65, a ground reflection coefficient of 1.6 was employed. For the purpose of the study evaluation, flat earth was assumed in the vicinity of the tower site. In actuality the terrain slopes downward away from the tower. Thus, the calculation result errs on the conservative side. An allowance was made for vertical plane

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KENSINGTON, MARYLAND

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directivity. Within the angular depression range from 18° to 90° below the horizontal plane, the vertical plane relative field does not exceed 0.21 of the maximum. (See Figure 3). The test calculation, using a relative field value of 0.21, yielded a power density level of 0.0017 mW/cm² at the target, corresponding to a contribution to the ambient power density level of 0.9 % of the maximum permitted exposure (MPE) of 0.2 mW/cm².

For depression angles shallower than 18° and assuming the maximum radiation of 0.193 kW, the power density level throughout the 0°-18° depression angle range will not exceed 0.004 mW/cm², corresponding to 2.1 % of the MPE. The proposed operation will comply with the FCC's MPE requirements for uncontrolled (general public) locations.

As to controlled (worker) location rfr exposure concerns, a radiation hazard warning sign is posted on the tower, and prior coordination is achieved with the licensee of WSPA, with whom the site is shared, for the termination of excitation to their antenna and to the W06AJ antenna, whenever work must be performed on, or near either antenna. It is believed that these procedures are adequate to avoid overexposure of workers to rfr.

The instant proposal complies with the FCC's adopted human rfr exposure standards for controlled and uncontrolled locations. An Environmental Assessment is not required for this proposal.

I declare under penalty of perjury that the foregoing is true and correct. Executed on January 26, 2012.

Bernard R. Segal, P.E.

Bernard R. Segal, P. E.

Maryland Registration # 25811

FIGURE 1

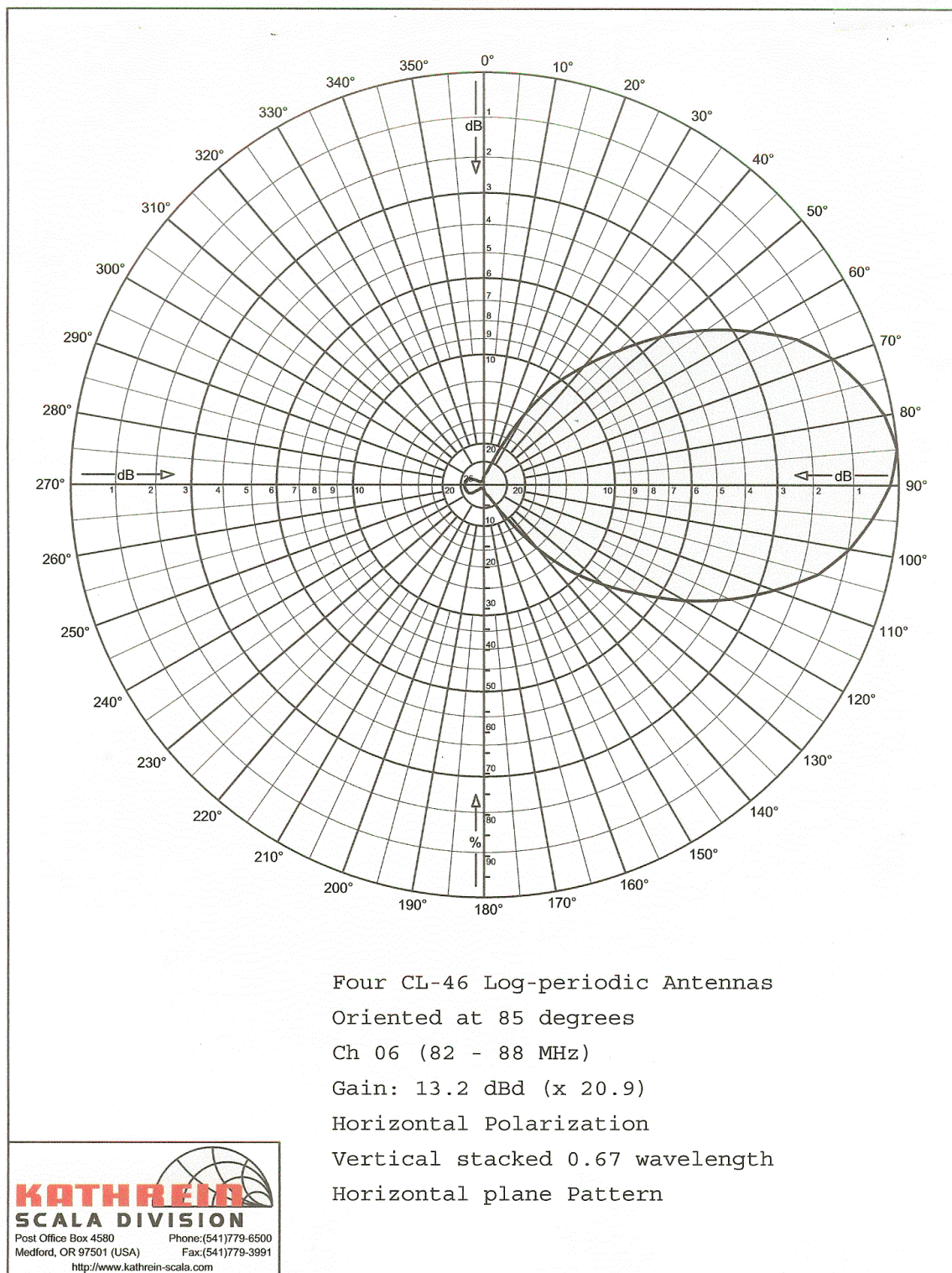


FIGURE 2



Four CL-46 Log-periodic Antennas

Oriented at 85 degrees

Ch 06 (82 - 88 MHz)

Gain: 13.2 dBd (x 20.9)

Horizontal Polarization

Vertical stacked 0.67 wavelength

Horizontal plane Pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	0.020	-33.98	-20.78	0.01	180	0.010	-40.00	-26.80	0.00
5	0.025	-32.04	-18.84	0.01	185	0.010	-40.00	-26.80	0.00
10	0.027	-31.21	-18.01	0.02	190	0.010	-40.00	-26.80	0.00
15	0.035	-29.12	-15.92	0.03	195	0.010	-40.00	-26.80	0.00
20	0.055	-25.19	-11.99	0.06	200	0.010	-40.00	-26.80	0.00
25	0.105	-19.58	-6.38	0.23	205	0.010	-40.00	-26.80	0.00
30	0.200	-13.98	-0.78	0.84	210	0.010	-40.00	-26.80	0.00
35	0.295	-10.60	2.60	1.82	215	0.010	-40.00	-26.80	0.00
40	0.375	-8.52	4.68	2.94	220	0.010	-40.00	-26.80	0.00
45	0.460	-6.74	6.46	4.42	225	0.015	-36.48	-23.28	0.00
50	0.560	-5.04	8.16	6.55	230	0.023	-32.96	-19.76	0.01
55	0.655	-3.68	9.52	8.96	235	0.035	-29.12	-15.92	0.03
60	0.745	-2.56	10.64	11.60	240	0.041	-27.74	-14.54	0.04
65	0.835	-1.57	11.63	14.57	245	0.043	-27.33	-14.13	0.04
70	0.895	-0.96	12.24	16.74	250	0.044	-27.13	-13.93	0.04
75	0.940	-0.54	12.66	18.46	255	0.045	-26.94	-13.74	0.04
80	0.980	-0.18	13.02	20.07	260	0.046	-26.74	-13.54	0.04
85	1.000	0.00	13.20	20.89	265	0.047	-26.56	-13.36	0.05
90	0.980	-0.18	13.02	20.07	270	0.046	-26.74	-13.54	0.04
95	0.940	-0.54	12.66	18.46	275	0.045	-26.94	-13.74	0.04
100	0.895	-0.96	12.24	16.74	280	0.044	-27.13	-13.93	0.04
105	0.835	-1.57	11.63	14.57	285	0.043	-27.33	-14.13	0.04
110	0.745	-2.56	10.64	11.60	290	0.041	-27.74	-14.54	0.04
115	0.655	-3.68	9.52	8.96	295	0.035	-29.12	-15.92	0.03
120	0.560	-5.04	8.16	6.55	300	0.023	-32.96	-19.76	0.01
125	0.460	-6.74	6.46	4.42	305	0.015	-36.48	-23.28	0.00
130	0.375	-8.52	4.68	2.94	310	0.010	-40.00	-26.80	0.00
135	0.295	-10.60	2.60	1.82	315	0.010	-40.00	-26.80	0.00
140	0.200	-13.98	-0.78	0.84	320	0.010	-40.00	-26.80	0.00
145	0.105	-19.58	-6.38	0.23	325	0.010	-40.00	-26.80	0.00
150	0.055	-25.19	-11.99	0.06	330	0.010	-40.00	-26.80	0.00
155	0.035	-29.12	-15.92	0.03	335	0.010	-40.00	-26.80	0.00
160	0.027	-31.21	-18.01	0.02	340	0.010	-40.00	-26.80	0.00
165	0.025	-32.04	-18.84	0.01	345	0.010	-40.00	-26.80	0.00
170	0.020	-33.98	-20.78	0.01	350	0.010	-40.00	-26.80	0.00
175	0.015	-36.48	-23.28	0.00	355	0.015	-36.48	-23.28	0.00

FIGURE 3

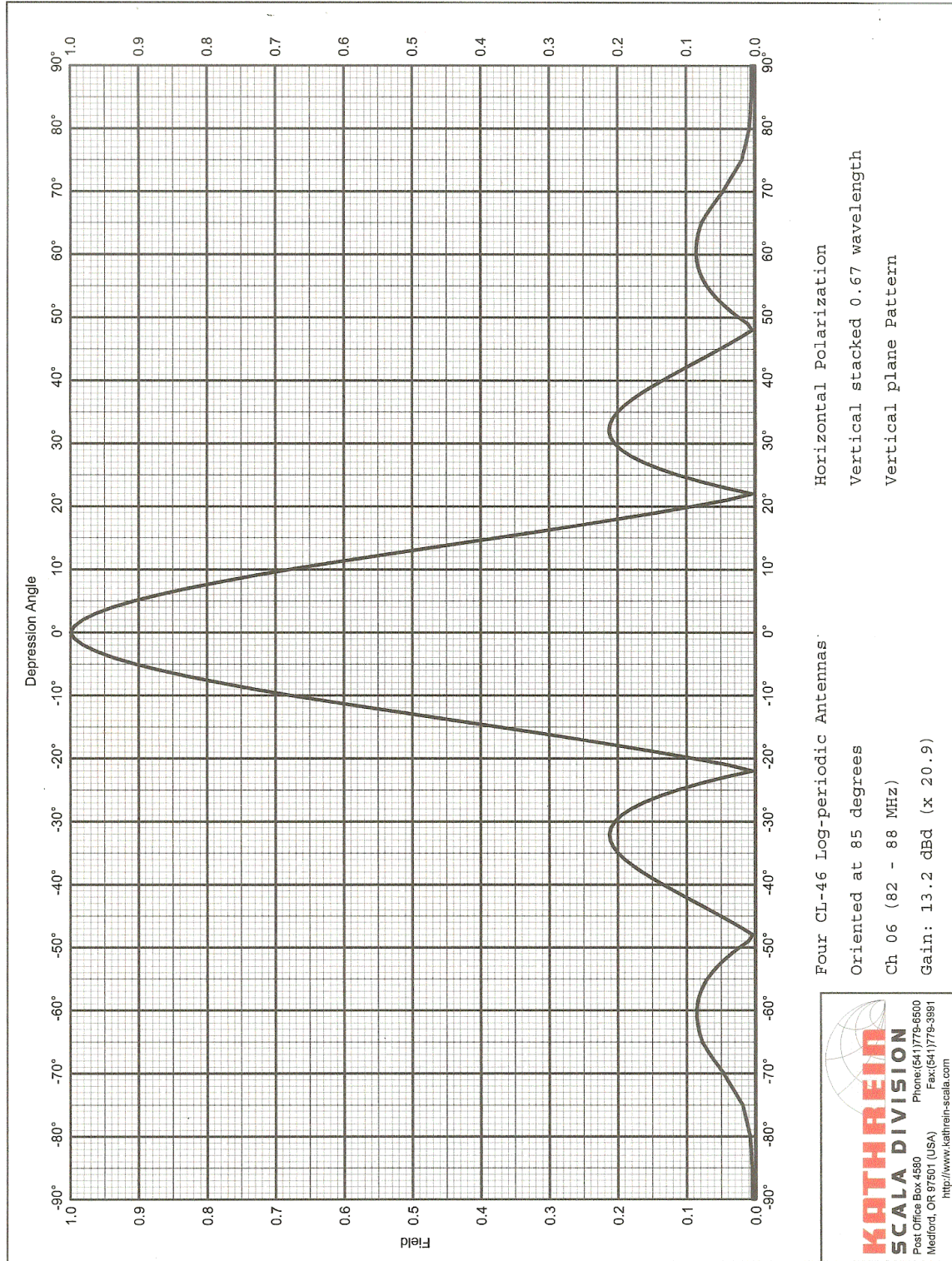


FIGURE 4, SHEET 1 OF 2



Four CL-46 Log-periodic Antennas

Oriented at 85 degrees

Ch 06 (82 - 88 MHz)

Gain: 13.2 dBd (x 20.9)

Horizontal Polarization

Vertical stacked 0.67 wavelength

Vertical plane Pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.010	-40.00	-26.80	0.00	-45	0.051	-25.88	-12.68	0.05
-89	0.010	-40.00	-26.80	0.00	-44	0.068	-23.41	-10.21	0.10
-88	0.010	-40.00	-26.80	0.00	-43	0.084	-21.46	-8.26	0.15
-87	0.010	-40.00	-26.80	0.00	-42	0.102	-19.87	-6.67	0.22
-86	0.010	-40.00	-26.80	0.00	-41	0.118	-18.54	-5.34	0.29
-85	0.010	-40.00	-26.80	0.00	-40	0.135	-17.41	-4.21	0.38
-84	0.010	-40.00	-26.80	0.00	-39	0.150	-16.45	-3.25	0.47
-83	0.010	-40.00	-26.80	0.00	-38	0.165	-15.64	-2.44	0.57
-82	0.010	-40.00	-26.80	0.00	-37	0.179	-14.97	-1.77	0.67
-81	0.010	-40.00	-26.80	0.00	-36	0.190	-14.41	-1.21	0.76
-80	0.010	-40.00	-26.80	0.00	-35	0.200	-13.98	-0.78	0.83
-79	0.010	-40.00	-26.80	0.00	-34	0.207	-13.69	-0.49	0.89
-78	0.012	-38.36	-25.16	0.00	-33	0.211	-13.51	-0.31	0.93
-77	0.014	-36.89	-23.69	0.00	-32	0.212	-13.46	-0.26	0.94
-76	0.017	-35.63	-22.43	0.01	-31	0.210	-13.55	-0.35	0.92
-75	0.019	-34.52	-21.32	0.01	-30	0.204	-13.80	-0.60	0.87
-74	0.024	-32.29	-19.09	0.01	-29	0.194	-14.22	-1.02	0.79
-73	0.030	-30.51	-17.31	0.02	-28	0.181	-14.87	-1.67	0.68
-72	0.035	-29.03	-15.83	0.03	-27	0.162	-15.79	-2.59	0.55
-71	0.041	-27.78	-14.58	0.03	-26	0.140	-17.09	-3.89	0.41
-70	0.046	-26.71	-13.51	0.04	-25	0.113	-18.97	-5.77	0.27
-69	0.053	-25.50	-12.30	0.06	-24	0.081	-21.84	-8.64	0.14
-68	0.060	-24.48	-11.28	0.07	-23	0.045	-27.01	-13.81	0.04
-67	0.066	-23.60	-10.40	0.09	-22	0.010	-40.00	-26.80	0.00
-66	0.072	-22.85	-9.65	0.11	-21	0.041	-27.73	-14.53	0.04
-65	0.077	-22.22	-9.02	0.13	-20	0.090	-20.90	-7.70	0.17
-64	0.080	-21.90	-8.70	0.13	-19	0.142	-16.93	-3.73	0.42
-63	0.083	-21.66	-8.46	0.14	-18	0.197	-14.09	-0.89	0.81
-62	0.084	-21.49	-8.29	0.15	-17	0.255	-11.86	1.34	1.36
-61	0.085	-21.40	-8.20	0.15	-16	0.315	-10.04	3.16	2.07
-60	0.085	-21.40	-8.20	0.15	-15	0.376	-8.49	4.71	2.96
-59	0.084	-21.49	-8.29	0.15	-14	0.438	-7.18	6.02	4.00
-58	0.082	-21.69	-8.49	0.14	-13	0.499	-6.04	7.16	5.20
-57	0.079	-22.01	-8.81	0.13	-12	0.560	-5.03	8.17	6.55
-56	0.075	-22.47	-9.27	0.12	-11	0.620	-4.15	9.05	8.03
-55	0.070	-23.11	-9.91	0.10	-10	0.678	-3.38	9.82	9.60
-54	0.063	-24.03	-10.83	0.08	-9	0.732	-2.72	10.48	11.18
-53	0.055	-25.24	-12.04	0.06	-8	0.782	-2.14	11.06	12.77
-52	0.045	-26.87	-13.67	0.04	-7	0.828	-1.64	11.56	14.32
-51	0.035	-29.18	-15.98	0.03	-6	0.870	-1.21	11.99	15.80
-50	0.023	-32.77	-19.57	0.01	-5	0.906	-0.85	12.35	17.16
-49	0.010	-39.93	-26.73	0.00	-4	0.937	-0.56	12.64	18.36
-48	0.010	-40.00	-26.80	0.00	-3	0.963	-0.33	12.87	19.36
-47	0.019	-34.55	-21.35	0.01	-2	0.982	-0.16	13.04	20.13
-46	0.034	-29.26	-16.06	0.02	-1	0.994	-0.05	13.15	20.65
					0	1.000	0.00	13.20	20.89

FIGURE 4, SHEET 2 OF 2



Four CL-46 Log-periodic Antennas

Oriented at 85 degrees

Ch 06 (82 - 88 MHz)

Gain: 13.2 dBd (x 20.9)

Horizontal Polarization

Vertical stacked 0.67 wavelength

Vertical plane Pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	13.20	20.89	45	0.051	-25.88	-12.68	0.05
1	0.994	-0.05	13.15	20.65	46	0.034	-29.26	-16.06	0.02
2	0.982	-0.16	13.04	20.13	47	0.019	-34.55	-21.35	0.01
3	0.963	-0.33	12.87	19.36	48	0.010	-40.00	-26.80	0.00
4	0.937	-0.56	12.64	18.36	49	0.010	-39.94	-26.74	0.00
5	0.906	-0.85	12.35	17.16	50	0.023	-32.77	-19.57	0.01
6	0.870	-1.21	11.99	15.80	51	0.035	-29.18	-15.98	0.03
7	0.828	-1.64	11.56	14.32	52	0.045	-26.87	-13.67	0.04
8	0.782	-2.14	11.06	12.77	53	0.055	-25.24	-12.04	0.06
9	0.732	-2.71	10.49	11.18	54	0.063	-24.03	-10.83	0.08
10	0.678	-3.38	9.82	9.60	55	0.070	-23.11	-9.91	0.10
11	0.620	-4.15	9.05	8.03	56	0.075	-22.47	-9.27	0.12
12	0.560	-5.03	8.17	6.55	57	0.079	-22.01	-8.81	0.13
13	0.499	-6.04	7.16	5.20	58	0.082	-21.69	-8.49	0.14
14	0.438	-7.18	6.02	4.00	59	0.084	-21.49	-8.29	0.15
15	0.376	-8.49	4.71	2.96	60	0.085	-21.40	-8.20	0.15
16	0.315	-10.04	3.16	2.07	61	0.085	-21.40	-8.20	0.15
17	0.255	-11.86	1.34	1.36	62	0.084	-21.49	-8.29	0.15
18	0.197	-14.09	-0.89	0.81	63	0.083	-21.66	-8.46	0.14
19	0.142	-16.93	-3.73	0.42	64	0.080	-21.90	-8.70	0.13
20	0.090	-20.90	-7.70	0.17	65	0.077	-22.22	-9.02	0.13
21	0.041	-27.72	-14.52	0.04	66	0.072	-22.85	-9.65	0.11
22	0.010	-40.00	-26.80	0.00	67	0.066	-23.60	-10.40	0.09
23	0.045	-27.02	-13.82	0.04	68	0.060	-24.48	-11.28	0.07
24	0.081	-21.84	-8.64	0.14	69	0.053	-25.50	-12.30	0.06
25	0.113	-18.97	-5.77	0.27	70	0.046	-26.71	-13.51	0.04
26	0.140	-17.09	-3.89	0.41	71	0.041	-27.78	-14.58	0.03
27	0.162	-15.79	-2.59	0.55	72	0.035	-29.03	-15.83	0.03
28	0.181	-14.87	-1.67	0.68	73	0.030	-30.51	-17.31	0.02
29	0.194	-14.22	-1.02	0.79	74	0.024	-32.29	-19.09	0.01
30	0.204	-13.80	-0.60	0.87	75	0.019	-34.52	-21.32	0.01
31	0.210	-13.55	-0.35	0.92	76	0.017	-35.63	-22.43	0.01
32	0.212	-13.46	-0.26	0.94	77	0.014	-36.89	-23.69	0.00
33	0.211	-13.51	-0.31	0.93	78	0.012	-38.36	-25.16	0.00
34	0.207	-13.69	-0.49	0.89	79	0.010	-40.00	-26.80	0.00
35	0.200	-13.98	-0.78	0.83	80	0.010	-40.00	-26.80	0.00
36	0.190	-14.41	-1.21	0.76	81	0.010	-40.00	-26.80	0.00
37	0.179	-14.97	-1.77	0.67	82	0.010	-40.00	-26.80	0.00
38	0.165	-15.64	-2.44	0.57	83	0.010	-40.00	-26.80	0.00
39	0.150	-16.45	-3.25	0.47	84	0.010	-40.00	-26.80	0.00
40	0.135	-17.41	-4.21	0.38	85	0.010	-40.00	-26.80	0.00
41	0.118	-18.54	-5.34	0.29	86	0.010	-40.00	-26.80	0.00
42	0.102	-19.87	-6.67	0.22	87	0.010	-40.00	-26.80	0.00
43	0.085	-21.46	-8.26	0.15	88	0.010	-40.00	-26.80	0.00
44	0.068	-23.41	-10.21	0.10	89	0.010	-40.00	-26.80	0.00
					90	0.010	-40.00	-26.80	0.00