ERI® Electronics Research, Inc.
Electronics Research, Inc. 7777 Gardner Rd. Chandler, In 47610 Phone (812) 925-6000 Fax (812) 925-4030 http://www.eriinc.com/

Directional Antenna System
For
KJEF, Jennings, Louisiana

August 8, 2001

Electronics Research Inc. is providing a custom fabricated antenna system that is specially designed to meet the FCC requirements and the general needs of radio station KJEF.

The antenna is the ERI model MP-6E-DA-HW configuration. The circular polarized system consists of 6 half-wavelength spaced bays using one driven circular polarized radiating element per bay, one horizontal parasitic element per bay and four vertical parasitic elements interleaved between alternate bay pairs. The antenna was mounted on the North 187 degrees East tower face with bracketry to provide an antenna orientation of North 187 degrees East. The antenna was tested on a 24" ***ERI®λ MOUNTING SYSTEM,*** which is the structure the station plans to use to support the array. All tests were performed on a frequency of 92.9 megahertz which is the center of the FM broadcast channel assigned to KJEF.

Pattern measurements were made on a sixty-acre antenna pattern range that is owned and operated by Electronics Research, Inc. The tests were performed under the direction of Thomas B. Silliman, president of Electronics Research, Inc. Mr. Silliman has the Bachelor of Electrical Engineering and the Master of Electrical Engineering degrees from Cornell University and is a registered professional engineer in the states of Indiana, Maryland and Minnesota.

EXHIBIT B
APPLICATION FOR STATION LICENSE
APEX BROADCASTING. INC.
KHLA (FM) RADIO STATION
CH 225C2 - 92.9 MHZ - 30.0 KW
JENNINGS, LOUISIANA
March 2002

Directional Antenna System
For
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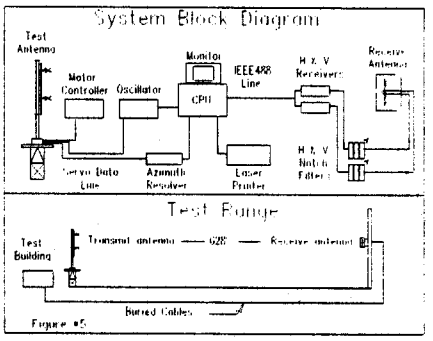
(Continued)

DESCRIPTION OF THE TEST PROCEDURE

The test antenna consisted of two bay levels of the circular polarized system with the associated horizontal and vertical parasitic elements. The elements and brackets that were used in this test are electrically equivalent to those that will be supplied with the antenna. A section of 3 1/8 inch o.d. rigid coaxial line was used to feed the test antenna, and a section of 3 1/8 inch o.d. rigid outer conductor only was attached above the test antenna. The lines were properly grounded during all tests.

The power distribution and phase relationship to the antenna elements was adjusted in order to achieve the directional radiation patterns for both horizontal and vertical polarization components.

The proof-of-performance was accomplished using a 24" ***ERI®λ MOUNTING SYSTEM,*** with identical dimension and configuration including all braces, ladders, conduits, coaxial lines and other appurtenances that are included in the actual aperture at which the antenna will be installed. The structure was erected vertically on a turntable mounted on a non-metallic building with the antenna centered vertically on the structure, making the center of radiation of the test approximately 30 feet above ground. The turntable is equipped with a motor drive and azimuth indicating mechanism, resolution of this azimuth measuring device is one-tenth of a degree.



The antenna under test was operated in the transmitting mode and fed from a Wavetek Model 3000 signal generator. The frequency of the signal source was set at 92.9 MHz and was constantly monitored by an Anritsu Model ML521B measuring receiver.

A broad-band horizontal and vertical dipole system, located approximately 628 feet from the test antenna, was used to receive the emitted test signals. The dipole system was mounted at the same height above terrain as the center of the antenna under test. The signals received by the dipole system were fed to the test building by way of two buried Heliax cables to an Anritsu Model ML521B measuring receiver.

(Continued)

This data was interfaced to a Hewlett-Packard Laser Jet 4P printer by means of a pentium computer system. Relative field strength was plotted as a function of azimuth.

The measurements were performed by rotating the test antenna in a counter-clockwise direction and plotting the received signal on polar co-ordinated graph paper in a clockwise direction. Both horizontal and vertical components were recorded separately.

CONCLUSIONS

The circular polarized system consists of 6 half-wavelength spaced bays using one driven circular polarized radiating element per bay, one horizontal parasitic element per bay and four vertical parasitic elements interleaved between alternate bay pairs. The power distribution and phase relationship will be fixed when antenna is manufactured. Proper maintenance of the elements should be all that is required to maintain the pattern in adjustment.

The MP-6E-DA-HW array is to be mounted on the North 187 degrees East tower face of the 24" ***ERI®λ MOUNTING SYSTEM,*** at a bearing of North 187 degrees East. Blue prints provided with the antenna will show the proper antenna orientation alignment. The antenna alignment procedure should be directed by a licensed surveyor as prescribed by the FCC.

Figure #1 represents the maximum value of either the horizontal or vertical component at any azimuth. The measured horizontal plane relative field pattern, for both the horizontal and vertical polarization components, is shown on Figure #2 attached. The actual measured pattern does not exceed the authorized FCC composite pattern at any azimuth. A calculated vertical plane relative field pattern is shown on Figure #3 attached. The power in the maximum will reach 30 kilowatts (14.771 dBk).

The power at North 20-30 degrees East does not exceed 9.7 kilowatts (9.868 dBk).

The RMS of the vertically polarized horizontal plane component does not exceed the RMS of the horizontally polarized horizontal plane component.

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(Continued)

The composite horizontal and vertical maximum relative field pattern obtained from the measured data as shown on Figure #1 has an RMS that is greater that 85% of the filed composite pattern.

The clear vertical length of the structure required to support the antenna is 42 feet if the antenna is to be top mounted.

The directional antenna should not be mounted on the top of an antenna tower that includes a top-mounted platform larger than the cross-sectional area of the tower in the horizontal plane. No obstructions other than those that are specified by the blue prints supplied with the antenna are to be mounted within 75 ft. horizontally of the system. The vertical distance to the nearest obstruction should be a minimum of 10 ft. from the directional antenna. Metallic guy wires should be a minimum distance of forty feet horizontally from the antenna.

ELECTRONICS RESEARCH, INC.

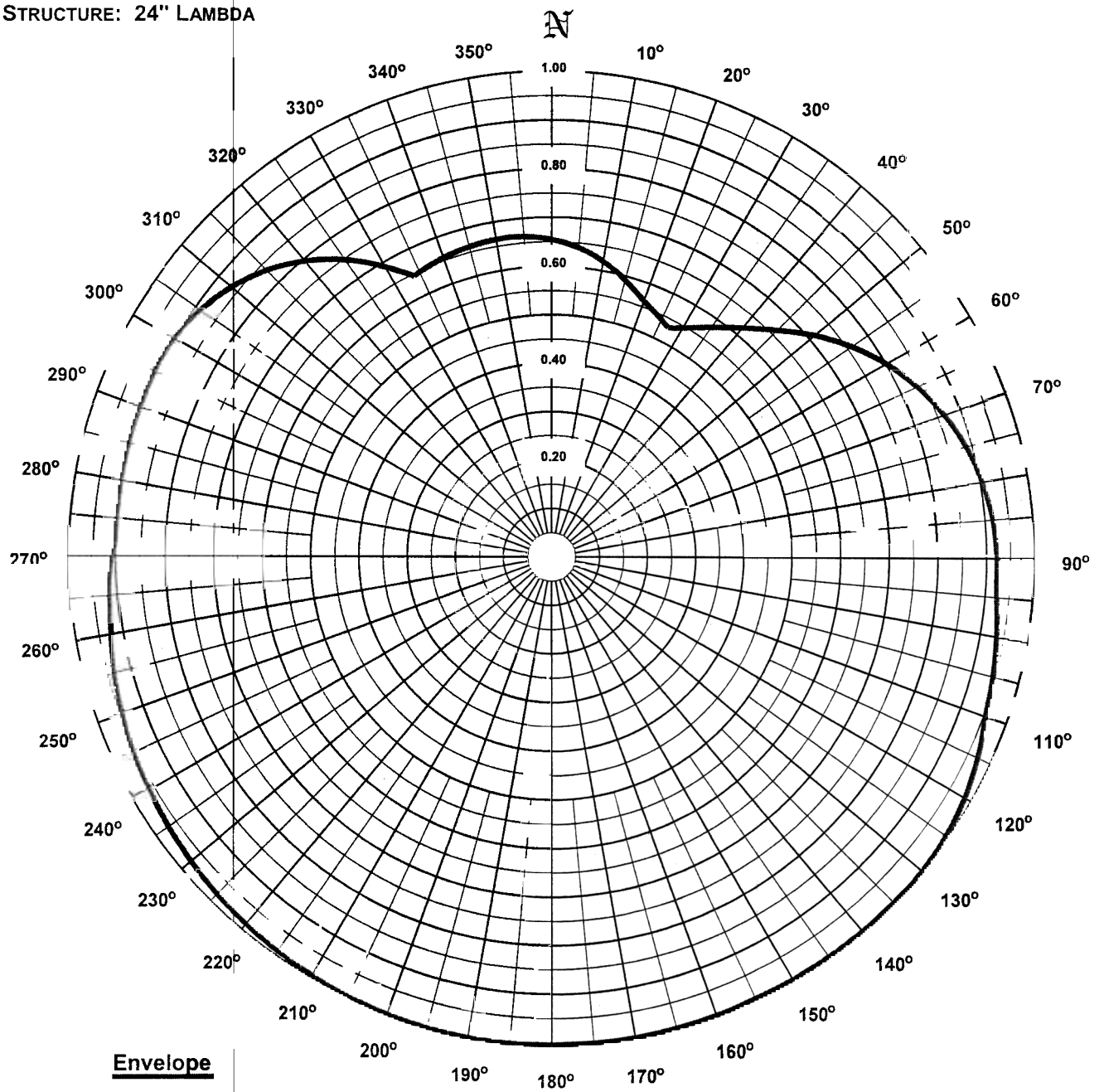
Tom Schaff Jr

ERI® Horizontal Plane Relative Field Pattern

Electronics Research, Inc. 7777 Gardner Rd. Chandler, In 47610 Phone (812) 925-6000 Fax (812) 925-4030 http://www.eriinc.com/

FIGURE: 1
STATION: KJEF
LOCATION: JENNINGS, LA
ANTENNA TYPE: MP-6E-DA-HW
STRUCTURE: 24" LAMBDA

DATE: 8/8/01
FREQUENCY: 92.9 MHz
ORIENTATION: 187° TRUE
MOUNTING: STANDARD



Envelope

RMS: 0.878
Maximum: 1.000 @ 133° True
Minimum: 0.536 @ 27° True

COMMENTS: COMPOSITE PATTERN: THIS PATTERN SHOWS THE MAXIMUM OF EITHER THE H OR V AZIMUTH VALUES. THIS PATTERN DOES NOT EXCEED THE FCC FILED COMPOSITE PATTERN AT ANY AZIMUTH. THE RMS OF THIS PATTERN IS GREATER THAN 85% OF THE FILED FCC COMPOSITE PATTERN BPH-2001029ADH

ERI® Horizontal Plane Relative Field List

Electronics Research, Inc. 7777 Gardner Rd. Chandler, In 47610 Phone (812) 925-6000 Fax (812) 925-4030 http://www.eriinc.com/

Station: KJEF
Location: Jennings, LA
Frequency: 92.9 MHz

Antenna: MP-6E-DA-HW
Orientation: 187° True
Tower: 24" Lambda

Figure: 1
Date: 8/8/01
Reference: kjef1m.fig

Angle	Envelope			Polarization	Angle	Envelope			Polarization
	Field	kW	dBk			Field	kW	dBk	
0°	0.658	13.01	11.14	Vertical	180°	1.000	30.00	14.77	Vertical
5°	0.644	12.44	10.95	Vertical	185°	1.000	30.00	14.77	Vertical
10°	0.623	11.64	10.66	Vertical	190°	1.000	29.98	14.77	Vertical
15°	0.595	10.62	10.26	Vertical	195°	0.999	29.91	14.76	Vertical
20°	0.566	9.61	9.83	Vertical	200°	0.997	29.81	14.74	Vertical
25°	0.543	8.86	9.47	Vertical	205°	0.994	29.67	14.72	Vertical
30°	0.550	9.08	9.58	Horizontal	210°	0.991	29.49	14.70	Vertical
35°	0.583	10.21	10.09	Horizontal	215°	0.988	29.27	14.66	Vertical
40°	0.623	11.63	10.66	Horizontal	220°	0.983	29.01	14.63	Vertical
45°	0.668	13.37	11.26	Horizontal	225°	0.978	28.72	14.58	Vertical
50°	0.718	15.45	11.89	Horizontal	230°	0.973	28.39	14.53	Vertical
55°	0.764	17.51	12.43	Horizontal	235°	0.966	28.02	14.47	Vertical
60°	0.804	19.41	12.88	Horizontal	240°	0.960	27.64	14.42	Horizontal
65°	0.839	21.10	13.24	Horizontal	245°	0.954	27.30	14.36	Horizontal
70°	0.867	22.56	13.53	Horizontal	250°	0.944	26.71	14.27	Vertical
75°	0.890	23.75	13.76	Horizontal	255°	0.935	26.20	14.18	Vertical
80°	0.906	24.64	13.92	Horizontal	260°	0.925	25.67	14.09	Vertical
85°	0.917	25.23	14.02	Horizontal	265°	0.916	25.19	14.01	Vertical
90°	0.922	25.49	14.06	Horizontal	270°	0.907	24.70	13.93	Vertical
95°	0.924	25.64	14.09	Vertical	275°	0.901	24.37	13.87	Horizontal
100°	0.935	26.21	14.19	Vertical	280°	0.902	24.43	13.88	Horizontal
105°	0.944	26.75	14.27	Vertical	285°	0.904	24.52	13.90	Horizontal
110°	0.954	27.31	14.36	Horizontal	290°	0.905	24.59	13.91	Horizontal
115°	0.971	28.29	14.52	Horizontal	295°	0.906	24.62	13.91	Horizontal
120°	0.985	29.09	14.64	Horizontal	300°	0.902	24.43	13.88	Horizontal
125°	0.994	29.64	14.72	Horizontal	305°	0.890	23.77	13.76	Horizontal
130°	0.999	29.94	14.76	Horizontal	310°	0.869	22.65	13.55	Horizontal
135°	1.000	30.00	14.77	Horizontal	315°	0.839	21.11	13.24	Horizontal
140°	1.000	30.00	14.77	Horizontal	320°	0.800	19.20	12.83	Horizontal
145°	1.000	30.00	14.77	Horizontal	325°	0.752	16.98	12.30	Horizontal
150°	1.000	29.99	14.77	Horizontal	330°	0.696	14.52	11.62	Horizontal
155°	0.998	29.90	14.76	Vertical	335°	0.651	12.70	11.04	Vertical
160°	1.000	29.97	14.77	Vertical	340°	0.659	13.04	11.15	Vertical
165°	1.000	30.00	14.77	Vertical	345°	0.665	13.26	11.23	Vertical
170°	1.000	30.00	14.77	Vertical	350°	0.668	13.37	11.26	Vertical
175°	1.000	30.00	14.77	Vertical	355°	0.666	13.32	11.25	Vertical

Polarization:
Maximum Field:
Minimum Field:
RMS:
Maximum ERP:
Maximum Power Gain:

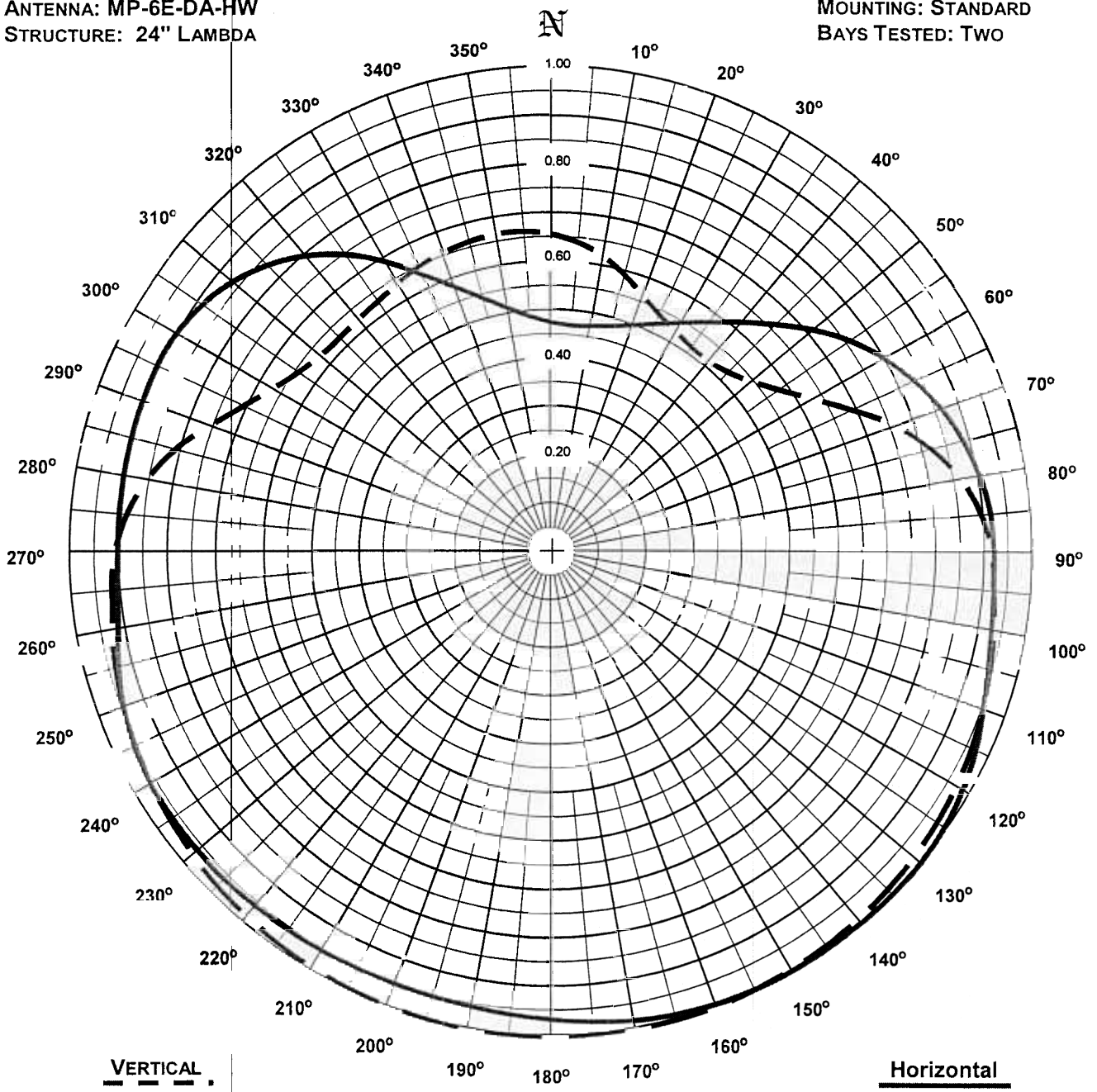
Total Input Power: 11.924 kW

ERI® Horizontal Plane Relative Field Pattern

Electronics Research, Inc. 7777 Gardner Rd. Chandler, In 47610 Phone (812) 925-6000 Fax (812) 925-4030 http://www.eriinc.com/

FIGURE NO: 2
STATION: KJEF
LOCATION: JENNINGS, LA
ANTENNA: MP-6E-DA-HW
STRUCTURE: 24" LAMBDA

DATE: 8/8/01
FREQUENCY: 92.9 MHz
ORIENTATION: 187° TRUE
MOUNTING: STANDARD
BAYS TESTED: TWO



VERTICAL

RMS: 0.841
MAXIMUM: 1.000 @ 165° TRUE
MINIMUM: 0.516 @ 39° TRUE

Horizontal

RMS: 0.859
Maximum: 1.000 @ 133° True
Minimum: 0.473 @ 5° True

COMMENTS: MEASURED PATTERNS OF THE HORIZONTAL AND VERTICAL COMPONENTS.

ERI® Horizontal Plane Relative Field List

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Station: KJEF
Location: Jennings, LA
Frequency: 92.9 MHz

Antenna: MP-6E-DA-HW
Orientation: 187° True
Tower: 24" Lambda

Figure: 2
Date: 8/8/01
Reference: kjef1m.fig

Angle	Horizontal			Vertical			Angle	Horizontal			Vertical		
	Field	kW	dBk	Field	kW	dBk		Field	kW	dBk	Field	kW	dBk
0°	0.478	6.87	8.37	0.658	13.01	11.14	180°	0.965	27.95	14.46	1.000	30.00	14.77
5°	0.473	6.72	8.27	0.644	12.44	10.95	185°	0.959	27.56	14.40	1.000	30.00	14.77
10°	0.477	6.82	8.34	0.623	11.64	10.66	190°	0.954	27.28	14.36	1.000	29.98	14.77
15°	0.486	7.09	8.51	0.595	10.62	10.26	195°	0.950	27.10	14.33	0.999	29.91	14.76
20°	0.502	7.55	8.78	0.566	9.61	9.83	200°	0.949	27.02	14.32	0.997	29.81	14.74
25°	0.523	8.20	9.14	0.543	8.86	9.47	205°	0.949	27.04	14.32	0.994	29.67	14.72
30°	0.550	9.08	9.58	0.528	8.35	9.22	210°	0.951	27.11	14.33	0.991	29.49	14.70
35°	0.583	10.21	10.09	0.518	8.06	9.06	215°	0.953	27.23	14.35	0.988	29.27	14.66
40°	0.623	11.63	10.66	0.516	7.99	9.03	220°	0.956	27.40	14.38	0.983	29.01	14.63
45°	0.668	13.37	11.26	0.527	8.32	9.20	225°	0.958	27.55	14.40	0.978	28.72	14.58
50°	0.718	15.45	11.89	0.550	9.07	9.58	230°	0.960	27.65	14.42	0.973	28.39	14.53
55°	0.764	17.51	12.43	0.586	10.31	10.13	235°	0.961	27.70	14.42	0.966	28.02	14.47
60°	0.804	19.41	12.88	0.636	12.12	10.83	240°	0.960	27.64	14.42	0.959	27.62	14.41
65°	0.839	21.10	13.24	0.698	14.61	11.65	245°	0.954	27.30	14.36	0.952	27.18	14.34
70°	0.867	22.56	13.53	0.767	17.63	12.46	250°	0.943	26.69	14.26	0.944	26.71	14.27
75°	0.890	23.75	13.76	0.824	20.35	13.09	255°	0.928	25.82	14.12	0.935	26.20	14.18
80°	0.906	24.64	13.92	0.868	22.59	13.54	260°	0.914	25.06	13.99	0.925	25.67	14.09
85°	0.917	25.23	14.02	0.899	24.24	13.85	265°	0.905	24.58	13.91	0.916	25.19	14.01
90°	0.922	25.49	14.06	0.917	25.23	14.02	270°	0.901	24.36	13.87	0.907	24.70	13.93
95°	0.924	25.60	14.08	0.924	25.64	14.09	275°	0.901	24.37	13.87	0.887	23.61	13.73
100°	0.930	25.92	14.14	0.935	26.21	14.19	280°	0.902	24.43	13.88	0.856	21.97	13.42
105°	0.940	26.49	14.23	0.944	26.75	14.27	285°	0.904	24.52	13.90	0.813	19.83	12.97
110°	0.954	27.31	14.36	0.953	27.26	14.35	290°	0.905	24.59	13.91	0.760	17.31	12.38
115°	0.971	28.29	14.52	0.961	27.72	14.43	295°	0.906	24.62	13.91	0.710	15.14	11.80
120°	0.985	29.09	14.64	0.969	28.14	14.49	300°	0.902	24.43	13.88	0.672	13.55	11.32
125°	0.994	29.64	14.72	0.975	28.52	14.55	305°	0.890	23.77	13.76	0.645	12.49	10.97
130°	0.999	29.94	14.76	0.981	28.86	14.60	310°	0.869	22.65	13.55	0.629	11.89	10.75
135°	1.000	30.00	14.77	0.986	29.16	14.65	315°	0.839	21.11	13.24	0.625	11.72	10.69
140°	1.000	30.00	14.77	0.990	29.41	14.68	320°	0.800	19.20	12.83	0.627	11.81	10.72
145°	1.000	30.00	14.77	0.994	29.62	14.72	325°	0.752	16.98	12.30	0.632	12.00	10.79
150°	1.000	29.99	14.77	0.996	29.78	14.74	330°	0.696	14.52	11.62	0.640	12.30	10.90
155°	0.998	29.88	14.75	0.998	29.90	14.76	335°	0.637	12.19	10.86	0.651	12.70	11.04
160°	0.995	29.67	14.72	1.000	29.97	14.77	340°	0.588	10.37	10.16	0.659	13.04	11.15
165°	0.989	29.36	14.68	1.000	30.00	14.77	345°	0.547	8.99	9.54	0.665	13.26	11.23
170°	0.982	28.95	14.62	1.000	30.00	14.77	350°	0.516	7.97	9.02	0.668	13.37	11.26
175°	0.974	28.43	14.54	1.000	30.00	14.77	355°	0.493	7.28	8.62	0.666	13.32	11.25

Polarization:	**Horizontal**	**Vertical**
Maximum Field:	**1.000 @ 133° True**	**1.000 @ 165° True**
Minimum Field:	**0.473 @ 5° True**	**0.516 @ 39° True**
RMS:	**0.859**	**0.841**
Maximum ERP:	**30.000 kW**	**30.000 kW**
Maximum Power Gain:	**2.516 (4.007 dB)**	**2.516 (4.007 dB)**

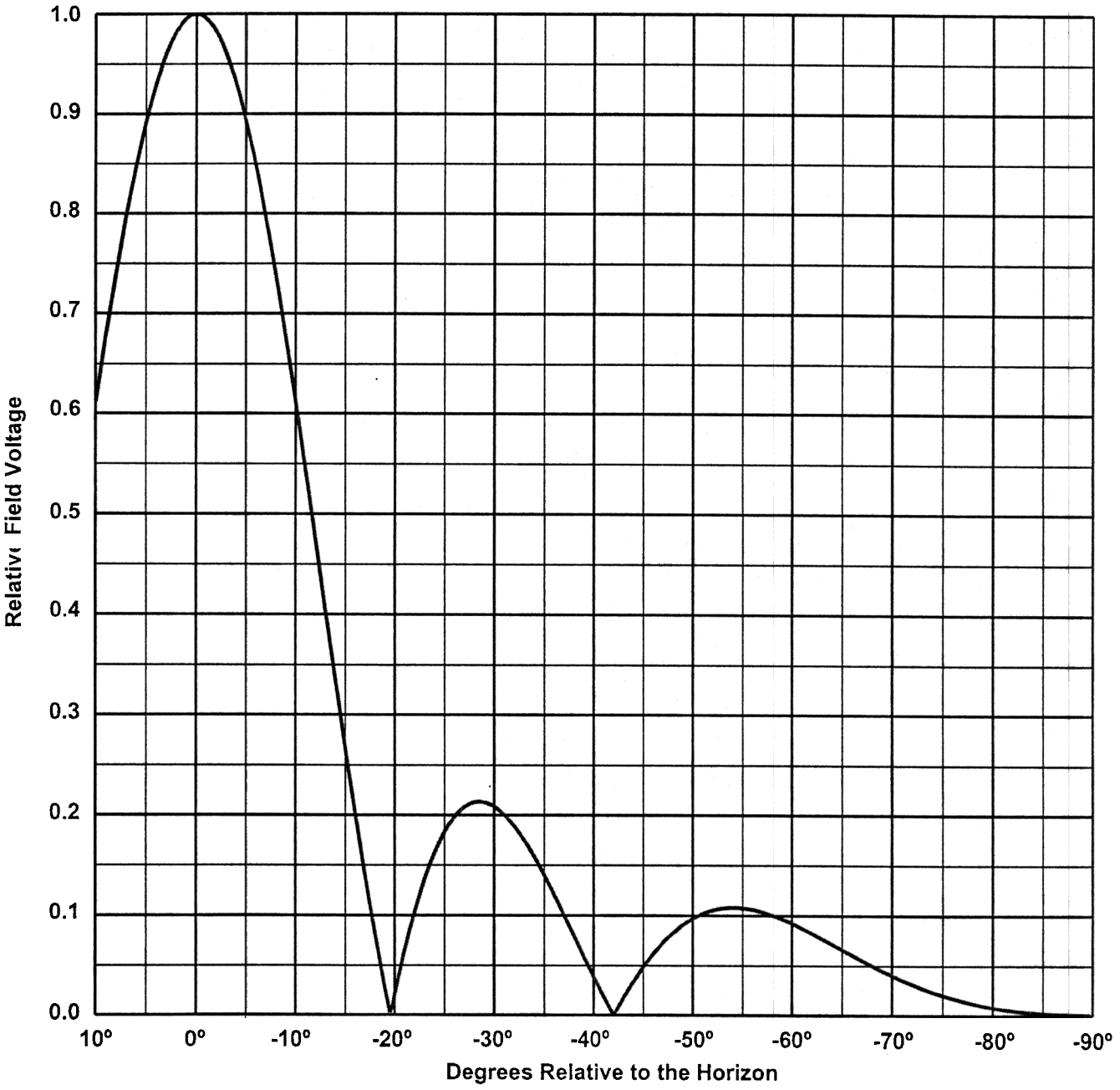
Total Input Power: 11.924 kW

ERI® Vertical Plane Relative Field Pattern

KJEF, Jennings, LA, 92.9 MHz

Figure#: 3 **Date: 8/8/01**

A 6 level, .5 wave-length spaced MP-6E-DA-HW directional antenna with 0° beam tilt, 0% null fill and a H/V maximum power ratio of 1.000



Vertical Polarization Gain:	Horizontal Polarization Gain:
Maximum: 2.516 (4.007 dB)	Maximum: 2.516 (4.007 dB)
Horizontal Plane: 2.516 (4.007 dB)	Horizontal Plane: 2.516 (4.007 dB)

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Directional Antenna System
For
KJEF, Jennings, Louisiana

(Continued)

ANTENNA SPECIFICATIONS

Antenna Type:	MP-6E-DA-HW
Frequency:	92.9 MHz
Number of Bays:	6

MECHANICAL SPECIFICATIONS

Mounting:	Standard
System length:	35 ft 2 in
Aperture length required:	42 ft.
Orientation:	187° true

Input flange to the antenna 3 1/8 inch female

ELECTRICAL SPECIFICATIONS
(For directional use)

Maximum horizontal ERP:	30 kW (14.771 dBk)
Horizontal maximum power gain:	2.516 (4.007 dB)
Maximum vertical ERP:	30 kW (14.771 dBk)
Vertical maximum power gain:	2.516 (4.007 dB)
Total input power:	11.924 kW (10.764 dBk)

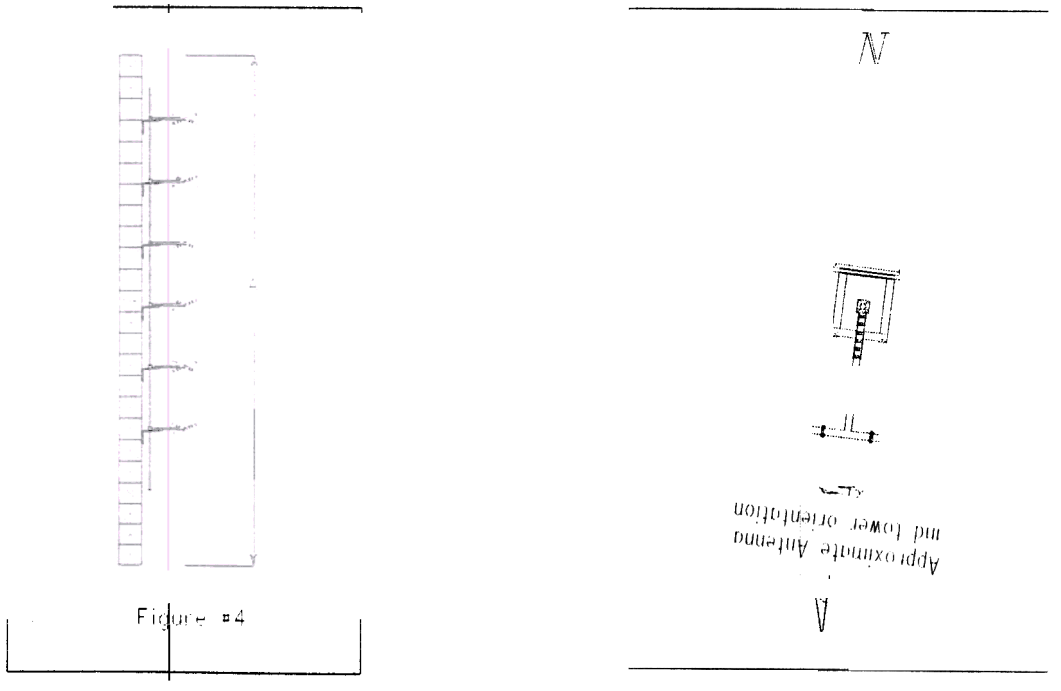

Figure #4