

Directional Antenna System
For
WDODFM, Chattanooga, Tennessee

(Continued)

ANTENNA SPECIFICATIONS

Antenna Type:	MP-6E-DA
Frequency:	96.5 MHz
Number of Bays:	6

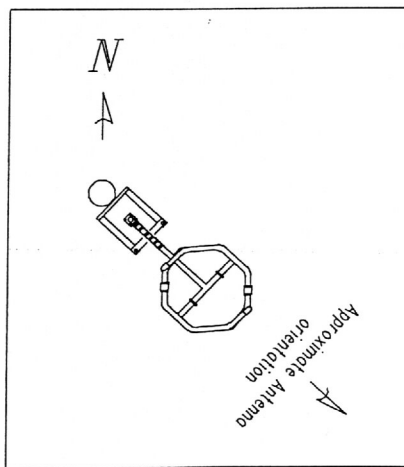
MECHANICAL SPECIFICATIONS

Mounting:	Standard
System length:	59 ft 6 in
Aperture length required:	66 ft.
Orientation:	133° true
Input flange to the antenna 3 1/8 inch female	

ELECTRICAL SPECIFICATIONS

(For directional use)

Maximum horizontal ERP:	100 kW (20 dBk)
Horizontal maximum power gain:	5.799 (7.634 dB)
Maximum vertical ERP:	88 kW (19.445 dBk)
Vertical maximum power gain:	5.103 (7.079 dB)
Total input power:	17.243 kW (12.366 dBk)

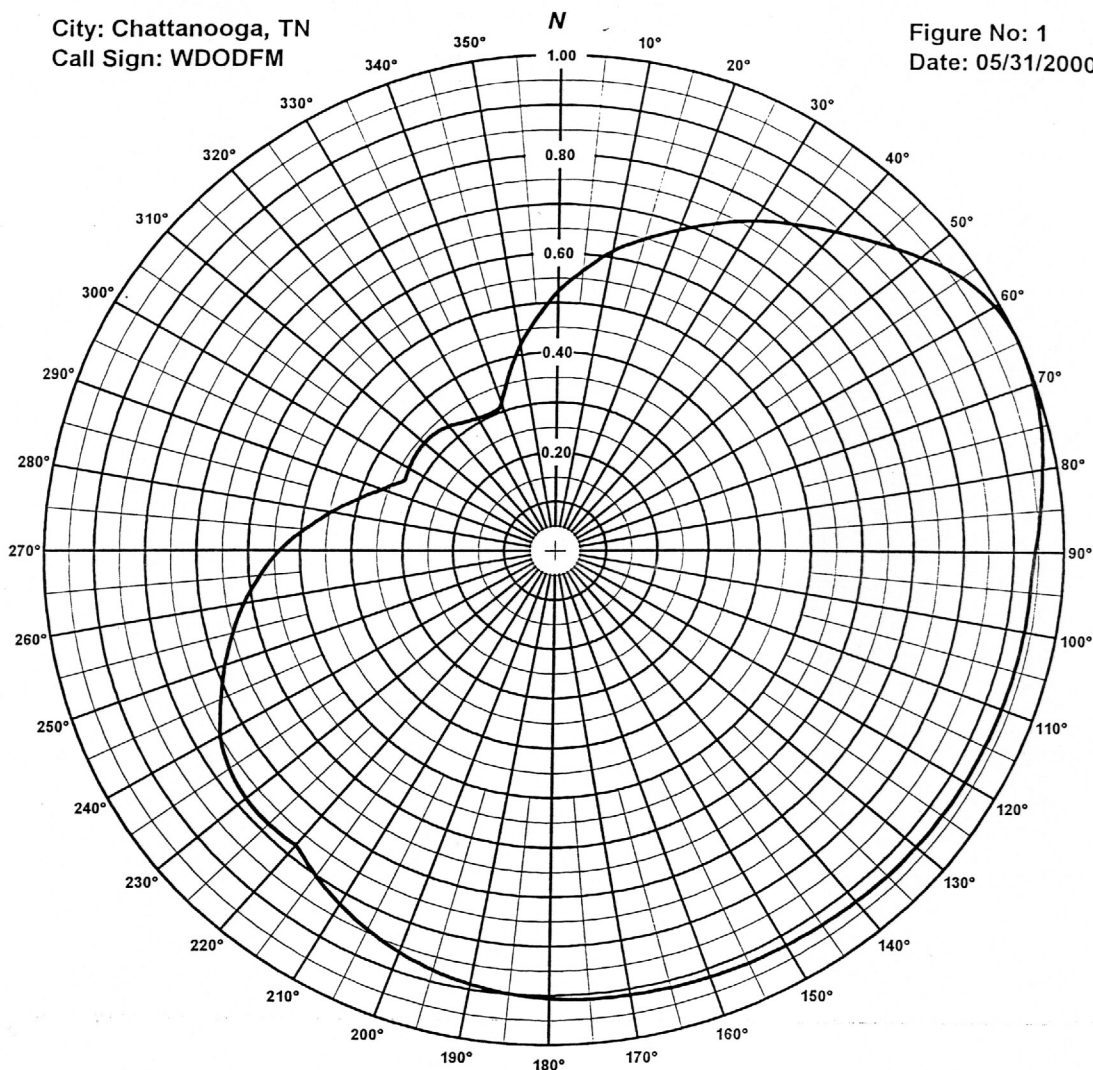




Horizontal Plane Envelope Pattern

City: Chattanooga, TN
Call Sign: WDODFM

Figure No: 1
Date: 05/31/2000



Frequency: 96.5 MHz
Antenna Type: MP-6E-DA
Antenna Orientation: 133° True
Antenna Mounting: Standard
Tower Type 10.75 Pole

Envelope

RMS: .762
Maximum: 1 @ 65°
Minimum: .305 @ 335°

Composite pattern: The maximum of either the H or V azimuth values



Horizontal Plane Relative Field Pattern

Figure# 1

Station: WDODFM

Location: Chattanooga, TN

Frequency: 96.5 MHz

Date: 05

Antenna: M

Antenna Orientation: 1

Number c

Azimuth	Envelope			Polarization	Maximum	Azimuth	Envelope			Polarization
	Field	kW	dBk				Field	kW	dBk	
0°	0.523	27.376	14.374	Horizontal		180°	0.906	82.106	19.144	Max
5°	0.568	32.223	15.082	Horizontal		185°	0.899	80.850	19.077	Ve
10°	0.613	37.534	15.744	Horizontal		190°	0.890	79.127	18.983	Ve
15°	0.649	42.182	16.251	Horizontal		195°	0.877	76.952	18.862	Ve
20°	0.687	47.197	16.739	Horizontal		200°	0.862	74.346	18.713	Ve
25°	0.726	52.718	17.220	Horizontal		205°	0.845	71.332	18.533	Ve
30°	0.767	58.774	17.692	Horizontal		210°	0.824	67.938	18.321	Ve
35°	0.803	64.535	18.098	Horizontal		215°	0.801	64.197	18.075	Ve
40°	0.841	70.728	18.496	Horizontal		220°	0.777	60.395	17.810	Hori
45°	0.882	77.793	18.909	Horizontal		225°	0.781	61.071	17.858	Hori
50°	0.925	85.563	19.323	Horizontal		230°	0.780	60.813	17.840	Hori
55°	0.966	93.243	19.696	Horizontal		235°	0.769	59.128	17.718	Hori
60°	0.991	98.134	19.918	Horizontal		240°	0.749	56.100	17.490	Hori
65°	1.000	100.000	20.000	Horizontal		245°	0.715	51.157	17.089	Hori
70°	0.996	99.276	19.968	Horizontal		250°	0.683	46.649	16.688	Hori
75°	0.987	97.359	19.884	Horizontal		255°	0.649	42.141	16.247	Hori
80°	0.971	94.284	19.744	Horizontal		260°	0.616	37.972	15.795	Hori
85°	0.957	91.565	19.617	Horizontal		265°	0.579	33.519	15.253	Hori
90°	0.943	88.925	19.490	Horizontal		270°	0.540	29.122	14.642	Hori
95°	0.937	87.809	19.435	Vertical		275°	0.493	24.266	13.850	Hori
100°	0.936	87.691	19.430	Vertical		280°	0.447	19.953	13.000	Hori
105°	0.936	87.546	19.422	Vertical		285°	0.403	16.218	12.100	Hori
110°	0.935	87.373	19.414	Vertical		290°	0.364	13.227	11.215	Hori
115°	0.934	87.173	19.404	Vertical		295°	0.333	11.092	10.450	Hori
120°	0.932	86.945	19.392	Vertical		300°	0.334	11.147	10.472	Ver
125°	0.931	86.689	19.380	Vertical		305°	0.337	11.390	10.565	Ver
130°	0.930	86.406	19.365	Vertical		310°	0.339	11.482	10.600	Ver
135°	0.928	86.096	19.350	Vertical		315°	0.336	11.282	10.524	Ver
140°	0.926	85.758	19.333	Vertical		320°	0.328	10.757	10.317	Ver
145°	0.924	85.394	19.314	Vertical		325°	0.316	10.009	10.004	Ver
150°	0.922	85.003	19.294	Vertical		330°	0.308	9.515	9.784	Ver
155°	0.920	84.586	19.273	Vertical		335°	0.305	9.333	9.700	Ver
160°	0.917	84.142	19.250	Vertical		340°	0.318	10.110	10.047	Horiz
165°	0.915	83.672	19.226	Vertical		345°	0.365	13.335	11.250	Horiz
170°	0.912	83.176	19.200	Vertical		350°	0.420	17.663	12.471	Horiz
175°	0.910	82.884	19.185	Vertical		355°	0.470	22.131	13.450	Horiz

Envelope Maximum Relative Field: 1.000 Azimuth: 65° True

Envelope Minimum Relative Field: 0.305 Azimuth: 335° True

Envelope RMS: 0.762

Maximum Horizontal ERP: 100.000 kW

Maximum Vertical ERP: 88.000 kW

Total Input Power: 17.243 kW

Maximum Horizontal Power Gain of the Complete Array: 5.799 (7.634 dB)

Maximum Vertical Power Gain of the Complete Array: 5.103 (7.079 dB)

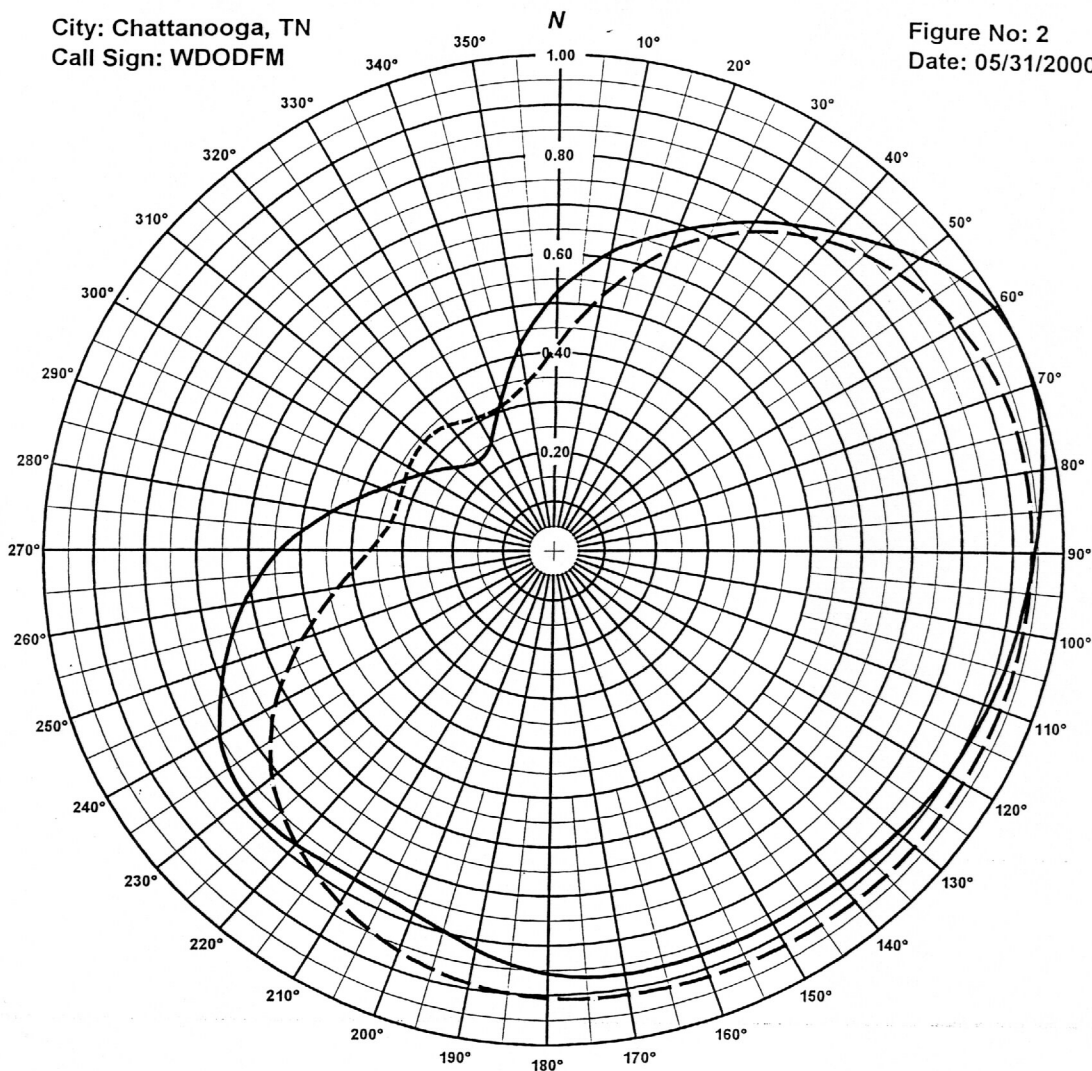
Reference: WDODFM 1.FIG



Horizontal Plane Relative Field Pattern

City: Chattanooga, TN
Call Sign: WDODFM

Figure No: 2
Date: 05/31/2000



Frequency: 96.5 MHz
Antenna Type: MP-6E-DA
Antenna Orientation: 133° True
Antenna Mounting: Standard
Tower Type 10.75 Pole

VERTICAL

RMS: .73
Maximum: .938 @ 77°
Minimum: .305 @ 335°

HORIZONTAL

RMS: .741
Maximum: 1 @ 65°
Minimum: .234 @ 321°

Measured pattern of the horizontal and vertical components.



Horizontal Plane Relative Field Pattern

Figure# 2

Station: WODDFM

Location: Chattanooga, TN

Frequency: 96.5 MHz

Date: 05/31/2000

Antenna: MP-6E-DA

Antenna Orientation: 133° True

Number of Bays: 6

Azimuth	Horizontal			Vertical			Azimuth	Horizontal			Vertical		
	Field	kW	dBk	Field	kW	dBk		Field	kW	dBk	Field	kW	dBk
0°	0.523	27.376	14.374	0.412	16.982	12.300	180°	0.857	73.432	18.659	0.906	82.106	19.144
5°	0.568	32.223	15.082	0.465	21.627	13.350	185°	0.841	70.743	18.497	0.899	80.850	19.077
10°	0.613	37.534	15.744	0.524	27.480	14.390	190°	0.819	67.103	18.267	0.890	79.127	18.983
15°	0.649	42.182	16.251	0.585	34.277	15.350	195°	0.797	63.559	18.032	0.877	76.952	18.862
20°	0.687	47.197	16.739	0.648	41.945	16.227	200°	0.781	61.059	17.857	0.862	74.346	18.713
25°	0.726	52.718	17.220	0.697	48.629	16.869	205°	0.772	59.545	17.748	0.845	71.332	18.533
30°	0.767	58.774	17.692	0.743	55.194	17.419	210°	0.768	58.982	17.707	0.824	67.938	18.321
35°	0.803	64.535	18.098	0.782	61.218	17.869	215°	0.771	59.383	17.737	0.801	64.197	18.075
40°	0.841	70.728	18.496	0.817	66.732	18.243	220°	0.777	60.395	17.810	0.776	60.147	17.792
45°	0.882	77.793	18.909	0.847	71.752	18.558	225°	0.781	61.071	17.858	0.747	55.828	17.469
50°	0.925	85.563	19.323	0.873	76.199	18.820	230°	0.780	60.813	17.840	0.715	51.097	17.084
55°	0.966	93.243	19.696	0.894	80.008	19.031	235°	0.769	59.128	17.718	0.672	45.186	16.550
60°	0.991	98.134	19.918	0.912	83.121	19.197	240°	0.749	56.100	17.490	0.627	39.368	15.951
65°	1.000	100.000	20.000	0.925	85.495	19.319	245°	0.715	51.157	17.089	0.575	33.113	15.200
70°	0.996	99.276	19.968	0.933	87.097	19.400	250°	0.683	46.649	16.688	0.525	27.542	14.400
75°	0.987	97.359	19.884	0.938	87.903	19.440	255°	0.649	42.141	16.247	0.476	22.646	13.550
80°	0.971	94.284	19.744	0.938	87.993	19.444	260°	0.616	37.972	15.795	0.432	18.621	12.700
85°	0.957	91.565	19.617	0.938	87.960	19.443	265°	0.579	33.519	15.253	0.394	15.488	11.900
90°	0.943	88.925	19.490	0.938	87.898	19.440	270°	0.540	29.122	14.642	0.364	13.218	11.212
95°	0.933	87.039	19.397	0.937	87.809	19.435	275°	0.493	24.266	13.850	0.342	11.690	10.678
100°	0.925	85.513	19.320	0.936	87.691	19.430	280°	0.447	19.953	13.000	0.329	10.797	10.333
105°	0.918	84.253	19.256	0.936	87.546	19.422	285°	0.403	16.218	12.100	0.324	10.471	10.200
110°	0.911	83.009	19.191	0.935	87.373	19.414	290°	0.364	13.227	11.215	0.325	10.559	10.236
115°	0.904	81.780	19.126	0.934	87.173	19.404	295°	0.333	11.092	10.450	0.329	10.795	10.332
120°	0.898	80.566	19.062	0.932	86.945	19.392	300°	0.305	9.333	9.700	0.334	11.147	10.472
125°	0.891	79.367	18.996	0.931	86.689	19.380	305°	0.282	7.943	9.000	0.337	11.390	10.565
130°	0.884	78.183	18.931	0.930	86.406	19.365	310°	0.260	6.761	8.300	0.339	11.482	10.600
135°	0.878	77.013	18.866	0.928	86.096	19.350	315°	0.243	5.884	7.697	0.336	11.282	10.524
140°	0.874	76.430	18.833	0.926	85.758	19.333	320°	0.235	5.514	7.414	0.328	10.757	10.317
145°	0.871	75.858	18.800	0.924	85.394	19.314	325°	0.238	5.671	7.537	0.316	10.009	10.004
150°	0.871	75.858	18.800	0.922	85.003	19.294	330°	0.251	6.310	8.000	0.308	9.515	9.784
155°	0.871	75.858	18.800	0.920	84.586	19.273	335°	0.282	7.943	9.000	0.305	9.333	9.700
160°	0.871	75.858	18.800	0.917	84.142	19.250	340°	0.318	10.110	10.047	0.310	9.614	9.829
165°	0.871	75.858	18.800	0.915	83.672	19.226	345°	0.365	13.335	11.250	0.322	10.383	10.163
170°	0.870	75.747	18.794	0.912	83.176	19.200	350°	0.420	17.663	12.471	0.342	11.697	10.681
175°	0.867	75.112	18.757	0.910	82.884	19.185	355°	0.470	22.131	13.450	0.369	13.646	11.350

Horizontal Maximum Relative Field: 1.000 Azimuth: 65° True

Horizontal Minimum Relative Field: 0.234 Azimuth: 321° True

Vertical Maximum Relative Field: 0.938 Azimuth: 77° True

Vertical Minimum Relative Field: 0.305 Azimuth: 335° True

Horizontal RMS: 0.741

Vertical RMS: 0.730

Maximum Horizontal ERP: 100.000 kW

Maximum Vertical ERP: 88.000 kW

Total Input Power: 17.243 kW

Maximum Horizontal Power Gain of the Complete Array: 5.799 (7.634 dB)

Maximum Vertical Power Gain of the Complete Array: 5.103 (7.079 dB)

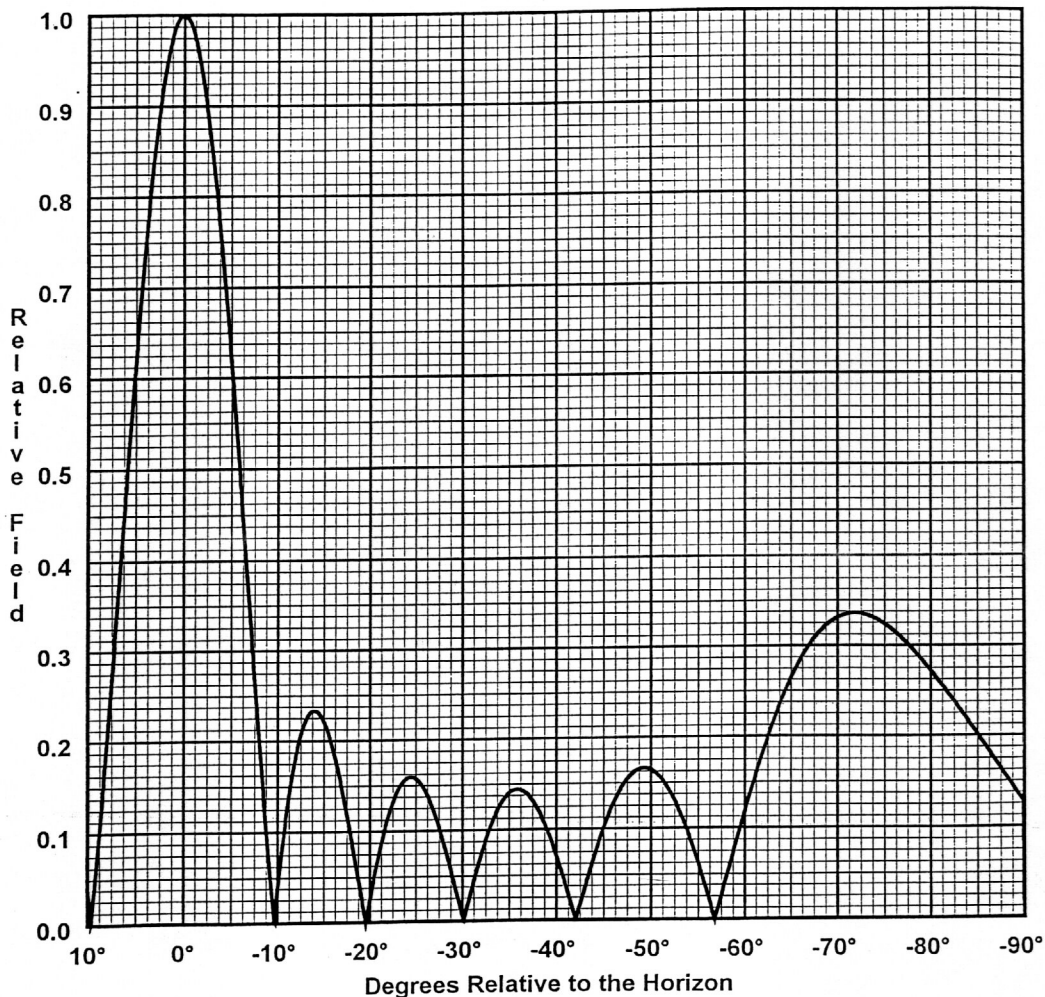
Reference: WODDFM 2.FIG



Vertical Plane Relative Field Pattern

Figure No: 3
Call Sign: WDODFM
Location: Chattanooga, TN
Frequency: 96.5 MHz
6 bay MP-6E-DA antenna

Date: 05/31/2000
H/V Power Ratio: 1
1 Wave-length Spacing
0° Beam Tilt
0% First Null Fill



Vertical Polarization Gain:
Maximum: 5.103
Horizontal Plane: 5.103

Horizontal Polarization Gain:
Maximum: 5.799
Horizontal Plane: 5.799