

# Proposed Nighttime Directional Pattern

Call: WEUS  
 Freq: 810 kHz  
 ORLOVISTA, FL, US  
 Lat: 28-33-52.50 N  
 Lng: 081-25-08.50 W  
 Power: 2.0 kW  
 Theo RMS: 414.71 mV/m @ 1km

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0
2	1.837	-16.9	227.8	6.2	90.0	0	0	0.0	0.0	0.0	0.0
3	0.995	-29.4	454.0	5.0	90.0	0	0	0.0	0.0	0.0	0.0
4	0.720	252.5	90.0	81.5	90.0	0	0	0.0	0.0	0.0	0.0
5	1.485	234.6	228.0	1.8	90.0	1	0	0.0	0.0	0.0	0.0
6	0.824	205.5	228.8	8.6	90.0	1	0	0.0	0.0	0.0	0.0

## Standard Horizontal Plane Pattern

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	60.76	120.0	331.48	240.0	117.86
5.0	57.91	125.0	155.87	245.0	103.31
10.0	48.96	130.0	39.05	250.0	101.93
15.0	33.90	135.0	41.37	255.0	128.95
20.0	17.55	140.0	56.13	260.0	173.61
25.0	22.23	145.0	39.47	265.0	216.02
30.0	39.54	150.0	34.46	270.0	241.22
35.0	47.82	155.0	78.97	275.0	240.59
40.0	36.79	160.0	130.02	280.0	212.70
45.0	22.17	165.0	172.99	285.0	164.43
50.0	96.52	170.0	202.60	290.0	113.37
55.0	222.26	175.0	217.40	295.0	93.00
60.0	391.29	180.0	218.43	300.0	116.06
65.0	594.23	185.0	208.43	305.0	146.25
70.0	814.20	190.0	191.07	310.0	162.27
75.0	1027.81	195.0	170.49	315.0	160.33
80.0	1208.28	200.0	150.76	320.0	143.92
85.0	1330.06	205.0	135.35	325.0	119.54
90.0	1373.92	210.0	126.36	330.0	94.06
95.0	1331.25	215.0	123.99	335.0	73.11
100.0	1206.44	220.0	126.50	340.0	60.10
105.0	1016.37	225.0	130.80	345.0	55.38
110.0	787.25	230.0	132.99	350.0	56.36
115.0	549.39	235.0	129.27	355.0	59.31



Standard Pattern  
Calculated at 5.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	57.45	120.0	333.18	240.0	116.56
5.0	54.31	125.0	158.47	245.0	102.68
10.0	45.38	130.0	41.10	250.0	102.02
15.0	30.81	135.0	39.65	255.0	128.78
20.0	16.35	140.0	55.57	260.0	172.41
25.0	23.58	145.0	40.13	265.0	213.67
30.0	40.11	150.0	32.83	270.0	238.02
35.0	47.08	155.0	74.92	275.0	237.08
40.0	34.86	160.0	124.80	280.0	209.55
45.0	24.00	165.0	167.15	285.0	162.33
50.0	100.46	170.0	196.60	290.0	112.96
55.0	226.29	175.0	211.61	295.0	94.10
60.0	394.54	180.0	213.15	300.0	116.93
65.0	595.87	185.0	203.84	305.0	146.46
70.0	813.56	190.0	187.30	310.0	162.13
75.0	1024.56	195.0	167.56	315.0	160.14
80.0	1202.53	200.0	148.61	320.0	143.86
85.0	1322.39	205.0	133.82	325.0	119.60
90.0	1365.27	210.0	125.23	330.0	94.10
95.0	1322.79	215.0	123.00	335.0	72.89
100.0	1199.28	220.0	125.44	340.0	59.35
105.0	1011.35	225.0	129.53	345.0	53.93
110.0	784.75	230.0	131.51	350.0	54.20
115.0	549.28	235.0	127.72	355.0	56.51

Standard Pattern  
Calculated at 10.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	48.37	120.0	338.08	240.0	112.84
5.0	44.46	125.0	166.18	245.0	101.00
10.0	35.72	130.0	47.65	250.0	102.30
15.0	22.97	135.0	34.47	255.0	128.25
20.0	15.47	140.0	53.56	260.0	168.87
25.0	27.28	145.0	41.85	265.0	206.82
30.0	41.10	150.0	29.29	270.0	228.74
35.0	44.27	155.0	63.65	275.0	226.97
40.0	28.96	160.0	109.94	280.0	200.56
45.0	31.23	165.0	150.37	285.0	156.46
50.0	112.34	170.0	179.25	290.0	112.06
55.0	238.23	175.0	194.80	295.0	97.42
60.0	404.00	180.0	197.74	300.0	119.56
65.0	600.45	185.0	190.45	305.0	147.20
70.0	811.38	190.0	176.24	310.0	161.82
75.0	1014.68	195.0	158.91	315.0	159.68
80.0	1185.30	200.0	142.19	320.0	143.75

85.0	1299.52	205.0	129.19	325.0	119.88
90.0	1339.58	210.0	121.73	330.0	94.38
95.0	1297.67	215.0	119.90	335.0	72.49
100.0	1178.00	220.0	122.14	340.0	57.49
105.0	996.37	225.0	125.68	345.0	50.10
110.0	777.19	230.0	127.10	350.0	48.33
115.0	548.79	235.0	123.19	355.0	48.82

Standard Pattern  
Calculated at 15.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	35.96	120.0	345.65	240.0	107.31
5.0	31.22	125.0	178.63	245.0	98.75
10.0	23.42	130.0	59.42	250.0	102.82
15.0	15.67	135.0	26.19	255.0	127.28
20.0	19.27	140.0	49.17	260.0	163.23
25.0	31.59	145.0	43.65	265.0	196.09
30.0	40.54	150.0	27.43	270.0	214.34
35.0	37.93	155.0	47.83	275.0	211.44
40.0	20.00	160.0	87.82	280.0	187.00
45.0	46.45	165.0	124.88	285.0	148.10
50.0	132.15	170.0	152.55	290.0	111.67
55.0	257.52	175.0	168.70	295.0	103.06
60.0	418.83	180.0	173.64	300.0	124.00
65.0	607.08	185.0	169.32	305.0	148.72
70.0	806.92	190.0	158.66	310.0	161.68
75.0	997.79	195.0	145.00	315.0	159.27
80.0	1156.67	200.0	131.67	320.0	143.90
85.0	1261.94	205.0	121.37	325.0	120.70
90.0	1297.58	210.0	115.61	330.0	95.34
95.0	1256.65	215.0	114.40	335.0	72.62
100.0	1143.17	220.0	116.38	340.0	55.62
105.0	971.62	225.0	119.18	345.0	45.34
110.0	764.40	230.0	119.93	350.0	40.52
115.0	547.47	235.0	116.09	355.0	38.36

Standard Pattern  
Calculated at 20.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	24.02	120.0	354.98	240.0	100.93
5.0	19.26	125.0	195.13	245.0	96.63
10.0	15.02	130.0	76.67	250.0	103.58
15.0	16.53	135.0	18.46	255.0	125.80
20.0	24.73	140.0	41.18	260.0	155.91
25.0	33.19	145.0	43.73	265.0	182.54
30.0	35.63	150.0	29.59	270.0	196.43
35.0	26.57	155.0	32.26	275.0	192.48
40.0	19.52	160.0	62.23	280.0	171.04
45.0	70.52	165.0	94.19	285.0	139.35
50.0	159.58	170.0	119.72	290.0	113.14
55.0	283.08	175.0	136.11	295.0	111.02
60.0	437.53	180.0	143.18	300.0	130.26
65.0	614.24	185.0	142.32	305.0	151.37
70.0	799.02	190.0	135.89	310.0	162.19
75.0	973.34	195.0	126.68	315.0	159.39
80.0	1116.79	200.0	117.45	320.0	144.76

85.0	1210.45	205.0	110.37	325.0	122.55
90.0	1240.46	210.0	106.64	330.0	97.63
95.0	1200.96	215.0	106.21	335.0	74.25
100.0	1095.68	220.0	107.99	340.0	55.25
105.0	937.48	225.0	110.12	345.0	41.83
110.0	746.11	230.0	110.42	350.0	33.47
115.0	544.57	235.0	107.20	355.0	28.29

Standard Pattern  
Calculated at 25.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	16.66	120.0	364.80	240.0	94.94
5.0	13.70	125.0	214.61	245.0	95.28
10.0	14.83	130.0	98.93	250.0	104.52
15.0	19.88	135.0	25.07	255.0	123.85
20.0	25.68	140.0	28.74	260.0	147.63
25.0	28.40	145.0	39.83	265.0	167.70
30.0	24.14	150.0	32.80	270.0	177.26
35.0	15.43	155.0	24.12	275.0	172.83
40.0	41.87	160.0	38.42	280.0	155.64
45.0	103.09	165.0	62.93	285.0	132.89
50.0	193.64	170.0	84.99	290.0	117.71
55.0	313.17	175.0	100.81	295.0	121.15
60.0	458.01	180.0	109.58	300.0	138.26
65.0	619.93	185.0	112.04	305.0	155.47
70.0	786.20	190.0	109.89	310.0	163.88
75.0	940.69	195.0	105.27	315.0	160.63
80.0	1065.98	200.0	100.27	320.0	146.90
85.0	1146.18	205.0	96.52	325.0	126.01
90.0	1169.82	210.0	94.89	330.0	101.99
95.0	1132.23	215.0	95.35	335.0	78.46
100.0	1036.77	220.0	97.14	340.0	58.00
105.0	894.44	225.0	98.98	345.0	41.89
110.0	722.03	230.0	99.45	350.0	30.21
115.0	539.13	235.0	97.74	355.0	22.15

Standard Pattern  
Calculated at 30.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	15.69	120.0	373.56	240.0	90.55
5.0	12.78	125.0	235.54	245.0	95.08
10.0	14.08	130.0	125.05	250.0	105.56
15.0	17.00	135.0	46.93	255.0	121.65
20.0	18.48	140.0	14.96	260.0	139.41
25.0	16.38	145.0	30.05	265.0	153.53
30.0	14.97	150.0	32.12	270.0	159.60
35.0	34.57	155.0	24.75	275.0	155.80
40.0	77.40	160.0	23.37	280.0	144.15
45.0	142.90	165.0	36.62	285.0	131.12
50.0	232.39	170.0	53.30	290.0	125.84
55.0	345.23	175.0	67.24	295.0	133.03
60.0	477.53	180.0	76.69	300.0	147.73
65.0	621.75	185.0	81.68	305.0	161.14
70.0	766.82	190.0	83.18	310.0	167.16
75.0	899.24	195.0	82.61	315.0	163.50
80.0	1004.74	200.0	81.38	320.0	150.85

85.0	1070.54	205.0	80.63	325.0	131.67
90.0	1087.60	210.0	80.96	330.0	109.12
95.0	1052.42	215.0	82.44	335.0	86.21
100.0	967.93	220.0	84.67	340.0	65.19
105.0	843.18	225.0	86.92	345.0	47.40
110.0	691.87	230.0	88.50	350.0	33.29
115.0	530.07	235.0	89.29	355.0	22.75



Standard Pattern  
Calculated at 35.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	23.29	120.0	379.50	240.0	88.54
5.0	17.40	125.0	255.94	245.0	96.05
10.0	14.53	130.0	153.27	250.0	106.72
15.0	14.01	135.0	75.67	255.0	119.71
20.0	15.84	140.0	25.02	260.0	132.56
25.0	23.40	145.0	15.23	265.0	142.21
30.0	41.45	150.0	24.32	270.0	146.35
35.0	73.18	155.0	24.12	275.0	144.57
40.0	121.16	160.0	19.88	280.0	139.20
45.0	187.44	165.0	21.06	285.0	135.03
50.0	272.79	170.0	29.71	290.0	136.94
55.0	375.92	175.0	39.95	295.0	145.91
60.0	492.93	180.0	48.56	300.0	158.13
65.0	617.12	185.0	54.69	305.0	168.20
70.0	739.29	190.0	58.58	310.0	172.13
75.0	848.57	195.0	60.93	315.0	168.25
80.0	933.81	200.0	62.56	320.0	156.94
85.0	985.21	205.0	64.19	325.0	139.90
90.0	995.99	210.0	66.29	330.0	119.51
95.0	963.71	215.0	69.02	335.0	98.14
100.0	890.84	220.0	72.30	340.0	77.73
105.0	784.50	225.0	75.86	345.0	59.59
110.0	655.43	230.0	79.52	350.0	44.38
115.0	516.25	235.0	83.46	355.0	32.28

Standard Pattern  
Calculated at 40.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	43.39	120.0	380.78	240.0	89.02
5.0	37.72	125.0	273.55	245.0	98.04
10.0	35.58	130.0	181.22	250.0	108.20
15.0	37.67	135.0	107.53	255.0	118.74
20.0	45.22	140.0	53.77	260.0	128.33
25.0	60.06	145.0	20.02	265.0	135.54
30.0	84.31	150.0	11.53	270.0	139.55
35.0	120.09	155.0	16.16	275.0	140.81
40.0	169.22	160.0	16.70	280.0	141.23
45.0	232.81	165.0	15.55	285.0	143.50
50.0	310.75	170.0	17.20	290.0	149.49
55.0	401.30	175.0	22.29	295.0	158.74
60.0	500.79	180.0	28.43	300.0	168.65
65.0	603.56	185.0	34.08	305.0	176.04
70.0	702.27	190.0	38.78	310.0	178.43
75.0	788.61	195.0	42.67	315.0	174.71
80.0	854.26	200.0	46.12	320.0	165.05

85.0	892.12	205.0	49.55	325.0	150.61
90.0	897.37	210.0	53.32	330.0	133.08
95.0	868.44	215.0	57.66	335.0	114.27
100.0	807.32	220.0	62.65	340.0	95.76
105.0	719.39	225.0	68.24	345.0	78.79
110.0	612.67	230.0	74.40	350.0	64.14
115.0	496.61	235.0	81.23	355.0	52.27

Standard Pattern  
Calculated at 45.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	74.50	120.0	375.65	240.0	91.58
5.0	71.02	125.0	285.92	245.0	100.93
10.0	71.60	130.0	206.06	250.0	110.35
15.0	77.01	135.0	139.25	255.0	119.37
20.0	88.25	140.0	86.94	260.0	127.41
25.0	106.56	145.0	49.04	265.0	134.01
30.0	133.25	150.0	24.48	270.0	139.16
35.0	169.55	155.0	12.23	275.0	143.45
40.0	216.34	160.0	9.87	280.0	148.01
45.0	273.89	165.0	10.40	285.0	153.93
50.0	341.48	170.0	11.38	290.0	161.58
55.0	417.23	175.0	13.68	295.0	170.20
60.0	497.90	180.0	17.36	300.0	178.16
65.0	578.97	185.0	21.69	305.0	183.63
70.0	654.92	190.0	26.16	310.0	185.15
75.0	719.72	195.0	30.65	315.0	182.05
80.0	767.49	200.0	35.23	320.0	174.41
85.0	793.38	205.0	40.13	325.0	162.98
90.0	794.18	210.0	45.56	330.0	148.94
95.0	768.97	215.0	51.66	335.0	133.59
100.0	719.28	220.0	58.47	340.0	118.21
105.0	648.97	225.0	65.94	345.0	103.87
110.0	563.74	230.0	73.99	350.0	91.41
115.0	470.33	235.0	82.56	355.0	81.45

Standard Pattern  
Calculated at 50.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	111.74	120.0	362.65	240.0	95.68
5.0	111.01	125.0	290.74	245.0	104.69
10.0	114.26	130.0	224.76	250.0	113.44
15.0	122.14	135.0	167.26	255.0	121.72
20.0	135.40	140.0	119.68	260.0	129.38
25.0	154.81	145.0	82.37	265.0	136.36
30.0	181.10	150.0	54.83	270.0	142.85
35.0	214.82	155.0	35.95	275.0	149.24
40.0	256.21	160.0	24.27	280.0	155.99
45.0	304.96	165.0	18.08	285.0	163.34
50.0	360.11	170.0	15.71	290.0	171.16
55.0	419.88	175.0	15.83	295.0	178.78
60.0	481.65	180.0	17.61	300.0	185.24
65.0	542.04	185.0	20.57	305.0	189.52
70.0	597.14	190.0	24.36	310.0	190.82
75.0	642.82	195.0	28.83	315.0	188.76
80.0	675.22	200.0	33.92	320.0	183.42

85.0	691.21	205.0	39.64	325.0	175.29
90.0	688.83	210.0	46.03	330.0	165.13
95.0	667.58	215.0	53.09	335.0	153.88
100.0	628.60	220.0	60.79	340.0	142.49
105.0	574.49	225.0	69.03	345.0	131.85
110.0	509.07	230.0	77.69	350.0	122.74
115.0	436.88	235.0	86.63	355.0	115.84

Standard Pattern  
Calculated at 55.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	148.34	120.0	340.80	240.0	100.80
5.0	150.19	125.0	286.07	245.0	109.10
10.0	155.45	130.0	234.45	250.0	117.21
15.0	164.62	135.0	187.85	255.0	125.06
20.0	178.16	140.0	147.49	260.0	132.63
25.0	196.51	145.0	113.95	265.0	139.97
30.0	219.97	150.0	87.25	270.0	147.18
35.0	248.64	155.0	66.92	275.0	154.41
40.0	282.39	160.0	52.23	280.0	161.76
45.0	320.68	165.0	42.29	285.0	169.15
50.0	362.52	170.0	36.15	290.0	176.35
55.0	406.47	175.0	32.98	295.0	182.92
60.0	450.57	180.0	32.08	300.0	188.30
65.0	492.48	185.0	32.94	305.0	191.97
70.0	529.63	190.0	35.20	310.0	193.52
75.0	559.42	195.0	38.60	315.0	192.79
80.0	579.46	200.0	42.98	320.0	189.84
85.0	587.91	205.0	48.22	325.0	184.99
90.0	583.64	210.0	54.25	330.0	178.75
95.0	566.46	215.0	60.96	335.0	171.73
100.0	537.12	220.0	68.26	340.0	164.63
105.0	497.29	225.0	76.03	345.0	158.12
110.0	449.36	230.0	84.13	350.0	152.84
115.0	396.19	235.0	92.44	355.0	149.40

Standard Pattern  
Calculated at 60.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	176.65	120.0	309.78	240.0	106.02
5.0	180.34	125.0	270.65	245.0	113.27
10.0	186.60	130.0	232.86	250.0	120.51
15.0	195.73	135.0	197.68	255.0	127.69
20.0	207.99	140.0	166.04	260.0	134.80
25.0	223.54	145.0	138.52	265.0	141.85
30.0	242.44	150.0	115.36	270.0	148.86
35.0	264.58	155.0	96.51	275.0	155.81
40.0	289.66	160.0	81.70	280.0	162.67
45.0	317.14	165.0	70.55	285.0	169.31
50.0	346.21	170.0	62.58	290.0	175.54
55.0	375.82	175.0	57.32	295.0	181.09
60.0	404.66	180.0	54.33	300.0	185.70
65.0	431.25	185.0	53.22	305.0	189.10
70.0	454.06	190.0	53.68	310.0	191.13
75.0	471.57	195.0	55.47	315.0	191.72
80.0	482.45	200.0	58.39	320.0	190.96

85.0	485.71	205.0	62.28	325.0	189.04
90.0	480.76	210.0	66.99	330.0	186.29
95.0	467.56	215.0	72.42	335.0	183.11
100.0	446.58	220.0	78.43	340.0	179.93
105.0	418.81	225.0	84.91	345.0	177.25
110.0	385.62	230.0	91.74	350.0	175.51
115.0	348.68	235.0	98.81	355.0	175.17