

# FOUR RIVERS COMMUNITY BROADCASTING CORPORATION

## Freespace Interference Study for a given antenna based on Vertical Radiation Pattern

Antenna Make: PSI

Antenna Model: FML

Depression Angle from <u>Antenna</u>	Antenna Relative <u>Field</u>	ERP <u>Watts</u>	ERP <u>dBk</u>	Distance to Ground from <u>Antenna (km)</u>	Free Space <u>Signal (dBu)</u>	2.5 dB Loss <u>for Reflection</u>	Signal Strength <u>at Ground (dBu)</u>	Circular Distance <u>From Tower (m)</u>
90	0.001	0.000	-66.02	0.0345	70.1	0	70.1	0.00
85	0.087	1.892	-27.23	0.0346	108.9	0	108.9	3.02
80	0.174	7.569	-21.21	0.0350	114.8	0	114.8	6.08
75	0.259	16.770	-17.75	0.0357	118.1	0	118.1	9.24
70	0.342	29.241	-15.34	0.0367	120.3	0	120.3	12.56
65	0.423	44.732	-13.49	0.0381	121.8	0	121.8	16.09
60	0.500	62.500	-12.04	0.0398	122.9	0	122.9	19.92
55	0.573	82.082	-10.86	0.0421	123.6	0	123.6	24.16
50	0.643	103.362	-9.86	0.0450	124.0	0	124.0	28.95
45	0.707	124.962	-9.03	0.0488	124.1	0	124.1	34.50
40	0.766	146.689	-8.34	0.0537	124.0	0	124.0	41.12
35	0.819	167.690	-7.75	0.0601	123.6	0	123.6	49.27
30	0.866	187.489	-7.27	0.0690	122.9	0	122.9	59.76
25	0.906	205.209	-6.88	0.0816	121.8	0	121.8	73.99
20	0.940	220.900	-6.56	0.1009	120.3	0	120.3	94.79
15	0.966	233.289	-6.32	0.1333	118.1	0	118.1	128.76
10	0.985	242.556	-6.15	0.1987	114.8	0	114.8	195.66
5	0.996	248.004	-6.06	0.3958	108.9	0	108.9	394.34

Distance to Ground Level assumes flat ground or a site where the ground level is above average terrain in all azimuths.

Maximum ERP                      250 watts  
Radiation Center AG            0.035 km  
Radiation Center AG            113.189 ft.

Max dBu to Ground Level                      123.99