

# KEVIN FITZGERALD

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

Antenna Make: Scala

Antenna Model: CA-2V (CA-2 Vertical Polarization)

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>	Signal Strength <u>at Ground (dBu)</u>	Circular Distance <u>From Tower (m)</u>
90	0.050	0.625	-32.04	0.0860	96.19	96.19	0.00
85	0.055	0.756	-31.21	0.0863	96.98	96.98	7.52
80	0.075	1.406	-28.52	0.0873	99.58	99.58	15.16
75	0.125	3.906	-24.08	0.0890	103.85	103.85	23.04
70	0.190	9.025	-20.45	0.0915	107.24	107.24	31.30
65	0.265	17.556	-17.56	0.0949	109.82	109.82	40.10
60	0.345	29.756	-15.26	0.0993	111.72	111.72	49.65
55	0.430	46.225	-13.35	0.1050	113.15	113.15	60.22
50	0.510	65.025	-11.87	0.1123	114.05	114.05	72.16
45	0.595	88.506	-10.53	0.1216	114.69	114.69	86.00
40	0.675	113.906	-9.43	0.1338	114.96	114.96	102.49
35	0.745	138.756	-8.58	0.1499	114.82	114.82	122.82
30	0.808	163.216	-7.87	0.1720	114.34	114.34	148.96
25	0.865	187.056	-7.28	0.2035	113.47	113.47	184.43
20	0.915	209.306	-6.79	0.2514	112.12	113.47	236.28
15	0.957	228.962	-6.40	0.3323	110.09	110.09	320.96
10	0.978	239.121	-6.21	0.4953	106.81	106.81	487.73
5	0.990	245.025	-6.11	0.9867	100.93	100.93	982.98

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              0.086 km  
Radiation Center AG              282.152 ft.

Max dBu to Grou                      114.96