

FOUR RIVERS COMMUNITY BROADCASTING CORPORATION

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

Antenna Make: SHI

Antenna Model: 6812-1 1-bay

| Depression Angle from Antenna | Antenna Relative Field | ERP Watts | ERP dBk | Distance to Ground from Antenna (km) | Free Space Signal (dBu) | 2.5 dB Loss for Reflection | Signal Strength at Ground (dBu) | Circular Distance From Tower (m) |
|-------------------------------------|------------------------------|--------------|------------|--|----------------------------|-------------------------------|------------------------------------|-------------------------------------|
| 90 | 0.001 | 0.000 | -80.00 | 0.0200 | 60.9 | 2.5 | 58.4 | 0.00 |
| 85 | 0.087 | 0.076 | -41.21 | 0.0201 | 99.7 | 2.5 | 97.2 | 1.75 |
| 80 | 0.174 | 0.303 | -35.19 | 0.0203 | 105.6 | 2.5 | 103.1 | 3.53 |
| 75 | 0.259 | 0.671 | -31.73 | 0.0207 | 108.9 | 2.5 | 106.4 | 5.36 |
| 70 | 0.342 | 1.170 | -29.32 | 0.0213 | 111.0 | 2.5 | 108.5 | 7.28 |
| 65 | 0.423 | 1.789 | -27.47 | 0.0221 | 112.6 | 2.5 | 110.1 | 9.33 |
| 60 | 0.500 | 2.500 | -26.02 | 0.0231 | 113.6 | 2.5 | 111.1 | 11.55 |
| 55 | 0.573 | 3.283 | -24.84 | 0.0244 | 114.3 | 2.5 | 111.8 | 14.00 |
| 50 | 0.643 | 4.134 | -23.84 | 0.0261 | 114.7 | 2.5 | 112.2 | 16.78 |
| 45 | 0.707 | 4.998 | -23.01 | 0.0283 | 114.9 | 2.5 | 112.4 | 20.00 |
| 40 | 0.766 | 5.868 | -22.32 | 0.0311 | 114.7 | 2.5 | 112.2 | 23.84 |
| 35 | 0.819 | 6.708 | -21.73 | 0.0349 | 114.3 | 2.5 | 111.8 | 28.56 |
| 30 | 0.866 | 7.500 | -21.25 | 0.0400 | 113.6 | 2.5 | 111.1 | 34.64 |
| 25 | 0.906 | 8.208 | -20.86 | 0.0473 | 112.6 | 2.5 | 110.1 | 42.89 |
| 20 | 0.940 | 8.836 | -20.54 | 0.0585 | 111.0 | 2.5 | 108.5 | 54.95 |
| 15 | 0.966 | 9.332 | -20.30 | 0.0773 | 108.9 | 2.5 | 106.4 | 74.64 |
| 10 | 0.985 | 9.702 | -20.13 | 0.1152 | 105.6 | 2.5 | 103.1 | 113.43 |
| 5 | 0.996 | 9.920 | -20.03 | 0.2295 | 99.7 | 2.5 | 97.2 | 228.60 |

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

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|---------------------|------------|-------------------------|--------|
| Maximum ERP | 10 watts | Max dBu to Ground Level | 112.25 |
| Radiation Center AG | 0.020 km | | |
| Radiation Center AG | 65.617 ft. | | |