

Ted A McCall

W235AQ

Maudin, SC

Ted A McCall proposes to use a Dielectric DCRL-2C75 antenna to reduce signal levels on ground near the tower.

This work sheet shows expected signal levels on the ground and at a safety plane 3 meters AGL

Distances and signal levels are computed for every 5 degrees below horizontal at antenna center of radiation.

This safety plane is based on the highest likely receiver elevation AGL. Distance from Antenna is also computed to the intercept of the safety plane or ground level and a line from the antenna center of radiation.

0.038 Kilowatts ERP

Antenna Make: Dielectric

20 Meters AGL to Radiation Center

Antenna Model: DCRL2-75

3 Meters AGL of Highest Receiver (Safety Plane)

143 dbu Interfering contour

Angle	Antenna	ERP	ERP	Distance from	Dist.From Ant.	Field Strength	Field Strength
Below Horizoi	Rel. Field	Kwatts	DbK	Antenna to Interfering	to Safety Plane	In dbu at	In Dbu at
						Safety Plane	to Ground Level
0	1.000	0.0380	-14.20	3.1 m	INF		INF
5	0.975	0.0361	-14.42	3.0 m	195.1 m	106.7 dbu	105.3 dbu
10	0.902	0.0309	-15.10	2.8 m	97.9 m	112.0 dbu	110.6 dbu
15	0.788	0.0236	-16.27	2.4 m	65.7 m	114.3 dbu	112.9 dbu
20	0.645	0.0158	-18.01	2.0 m	49.7 m	115.0 dbu	113.6 dbu
25	0.486	0.0090	-20.47	1.5 m	40.2 m	114.4 dbu	112.9 dbu
30	0.325	0.0040	-23.96	1.0 m	34.0 m	112.3 dbu	110.9 dbu
35	0.174	0.0012	-29.39	0.5 m	29.6 m	108.1 dbu	106.7 dbu
40	0.042	0.0001	-41.74	0.1 m	26.4 m	96.7 dbu	95.3 dbu
45	0.065	0.0002	-37.94	0.2 m	24.0 m	101.4 dbu	99.9 dbu
50	0.149	0.0008	-30.74	0.5 m	22.2 m	109.3 dbu	107.8 dbu
55	0.196	0.0015	-28.36	0.6 m	20.8 m	112.2 dbu	110.8 dbu
60	0.216	0.0018	-27.51	0.7 m	19.6 m	113.5 dbu	112.1 dbu
65	0.218	0.0018	-27.43	0.7 m	18.8 m	114.0 dbu	112.6 dbu
70	0.203	0.0016	-28.05	0.6 m	18.1 m	113.7 dbu	112.3 dbu
75	0.176	0.0012	-29.29	0.5 m	17.6 m	112.7 dbu	111.3 dbu
80	0.143	0.0008	-31.10	0.4 m	17.3 m	111.1 dbu	109.7 dbu
85	0.110	0.0005	-33.37	0.3 m	17.1 m	108.9 dbu	107.5 dbu
90	0.100	0.0004	-34.20	0.3 m	17.0 m	108.1 dbu	106.7 dbu

Formulas used

Distance to Contour =

Field Strength=

$(10^{((106.92 - [\text{desiredDbu}] + [\text{ERPInDbK}]) / 20))} * 1000)$
 $106.92 - (20 * (\text{LOG}([\text{DistKm}] / 1000))) + ([\text{ERPInDbK}])$