

RADIO TRAINING NETWORK

Conway SC

Radio Training Network, Inc 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 9 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.

0.027 Kilowatts ERP

Antenna Make: Dielectric

86 Meters AGL to Radiation Center

Antenna Model: DCRL2-75

9 Meters AGL of Highest Receiver (Safety Plane)

119.4 dbu Interfering contour

Angle Below Horizontal	Antenna Rel. Field	ERP Kwatts	ERP DbK	Distance from Antenna to Interfering	Dist.From Ant. to Safety Plane	Field Strength In dbu at Safety Plane	Dist.From Ant. to Ground Level	Field Strength In Dbu at Ground Level
0	1.000	0.0270	-15.69	39 m	INF m		INF	
5	0.975	0.0257	-15.91	38 m	883.5 m	92.1 dbu	986.7 m	91.1 dbu
10	0.902	0.0220	-16.58	35 m	443.4 m	97.4 dbu	495.3 m	96.4 dbu
15	0.788	0.0168	-17.76	31 m	297.5 m	99.7 dbu	332.3 m	98.7 dbu
20	0.645	0.0112	-19.50	25 m	225.1 m	100.4 dbu	251.4 m	99.4 dbu
25	0.486	0.0064	-21.95	19 m	182.2 m	99.8 dbu	203.5 m	98.8 dbu
30	0.325	0.0029	-25.45	13 m	154.0 m	97.7 dbu	172.0 m	96.8 dbu
35	0.174	0.0008	-30.88	7 m	134.2 m	93.5 dbu	149.9 m	92.5 dbu
40	0.042	0.0000	-43.22	2 m	119.8 m	82.1 dbu	133.8 m	81.2 dbu
45	0.065	0.0001	-39.43	3 m	108.9 m	86.8 dbu	121.6 m	85.8 dbu
50	0.149	0.0006	-32.22	6 m	100.5 m	94.7 dbu	112.3 m	93.7 dbu
55	0.196	0.0010	-29.84	8 m	94.0 m	97.6 dbu	105.0 m	96.7 dbu
60	0.216	0.0013	-29.00	8 m	88.9 m	98.9 dbu	99.3 m	98.0 dbu
65	0.218	0.0013	-28.92	9 m	85.0 m	99.4 dbu	94.9 m	98.5 dbu
70	0.203	0.0011	-29.54	8 m	81.9 m	99.1 dbu	91.5 m	98.2 dbu
75	0.176	0.0008	-30.78	7 m	79.7 m	98.1 dbu	89.0 m	97.2 dbu
80	0.143	0.0006	-32.58	6 m	78.2 m	96.5 dbu	87.3 m	95.5 dbu
85	0.110	0.0003	-34.86	4 m	77.3 m	94.3 dbu	86.3 m	93.3 dbu
90	0.100	0.0003	-35.69	4 m	77.0 m	93.5 dbu	86.0 m	92.5 dbu

Formulas used

Distance to Contour =

Field Strength=

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