

FULL SYSTEM PATH STUDY
Sample System Table with Graph

Transmitter coordinates, N. Lat. 443352 W. Lng. 855346
Receiver coordinates, N. Lat. 445212 W. Lng. 860336
Transmitter Antenna Height= 148.52 Mtrs AG
Receiver Antenna Height= 10 Mtrs AG

Path Length =36.35 km
Azimuth =339.19 degrees
Frequency = 96.7 MHz

Obstruction loss =-20.64 dB
Free Space loss =-107.52 dB
Transmission line loss = -4 dB
Receiving line loss = -1 dB
Connector loss = -1 dB
Other losses = 0 dB

Total losses = -134.16 dB

Transmitter output power = 10 Watts, 40 dBm
Transmitter antenna gain = .173 dBi
Receiver antenna gain = 4.933 dBi
Other gains = 0 dB

Total gains = 45.11 dB

Expected receiver signal =-89.05 dB
Desired receiver signal (sensitivity) = 7.08 microVolts, -90 dBm
Available fade margin = .94 dB

Minimum fade margin Recommended = 12.72 dB

