

Antenna Calculations Consistent with Section 8.3.28 of the NTIA Manual

Change the values in the yellow boxes to calculate required readings
-140 or less at a range of 100 feet to meet NTIA regulations

Receive Ant Gain	Ant Cable Insertion Loss	Repeater Amp Gain	Repeater Ant Gain Best Case	Range in Feet	Repeated Signal Power @ Range In dBm
38	-15	30	3	100	-140.09
GPS Carrier Frequency MHz		Total System Gain		Range in Miles	Total Signal Power @ Range in Watts
1575		56		0.02	9.8E-18
Avg Receive Power L1 dBm North America				Range in Meters	Radiated Power dBm
-130				31.17	-74
Free Space loss with Isotropic Antennas				Range in Kilometers	Transmitted Power (W)
-66.09				0.03	20.0E-12
					Effective Radiated Power (W)
					39.8E-12
					Effective Radiated Power (dBW)
					-104