GPS Source, Inc. Repeater Budget Calculator

Change the values in the yellow boxes to calculate required readings

-140 dBm at 100 feet from the building 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	Total Signal Power @ Range in Watts
35	-36	48	3	130	-148.37	1.5e-18

GPS Carrier Frequency (MHz)	Free Space loss with Isotropic Antennas	Total System Gain	Range in Miles	Effective Radiated Power dBm	Effective Radiated Power (dBW)
1575	-68.37	47	0.02	-82.15	-112.15

Avg Receive Power L1 dBm North America	Reference Dipole Gain	Transmitted Power (W)	Range in Kilometers	Effective Isotropic Radiated Power (dBm)	Effective Isotropic Radiated Power (dBW)
-130	2.15	3.1e-12	0.04	-80.00	-110.00

Range in Meters	Effective Radiated Power (W)
39.6240	6.1e-12