

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	35	Ant Cable Insertion Loss	-12	Repeater Amp Gain	30	Repeater Ant Gain (Best Case)	3	Range in Feet	100	Repeated Signal Power @ Range In dBm	-140.09	Total Signal Power @ Range in Watts	9.8e-18
GPS Carrier Frequency (MHz)	1575	Free Space loss with Isotropic Antennas	66.09	Total System Gain	53	Range in Miles	0.02	Effective Radiated Power dBm	-76.15	Effective Radiated Power (dBW)	-106.15		
Avg Receive Power in dBm North America	-130	Reference Dipole Gain	2.15	Transmitted Power (W)	1.2e-11	Range in Kilometers	0.03	Effective Isotropic Radiated Power (dBm)	-74.00	Effective Isotropic Radiated Power (dBW)	-104.00		
Typical value @ L1: -130.0 dBm @ L2: -127.5 dBm						Range in Meters	30.4800	Effective Radiated Power (W)	2.4e-11				