

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
27	-5	20	4	100	-147.93	
GPS Carrier Frequency (MHz)		Free Space loss with Isotropic Antennas	Total System Gain	Range in Miles	Effective Radiated Power dBm	Effective
1227.6		63.93	42	0.02	-86.15	
Avg Receive Power in dBm North America		Reference Dipole Gain	Transmitted Power (W)	Range in Kilometers	Effective Isotropic Radiated Power (dBm)	Effective
-130		2.15	1.2e-12	0.03	-84.00	
Typical value @ L1: -130.0 dBm @ L2: -127.5 dBm				Range in Meters 30.4800		Effective