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
33	-5.3	30	3	280	-144.34

GPS Carrier Frequency MHz	Total System Gain	Range in Miles	Total Signal Power @ Range in Watts
1575	60.7	0.05	3.7e-18

Avg Receive Power L1 dBm North America	Range in Meters	Effective Isotropic Radiated Power dBm
-130	85.34	-69.3

Free Space loss with Isotropic Antennas	Range in Kilometers	Transmitted Power (W)
-75.04	0.09	5.9e-11

Effective Radiated Power (W)

1.2e-10

Effective Radiated Power (dBW)

-99.3