



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                                      | -13                      | 22                | 3                           | 100                 | -146.09                              |
| GPS Carrier Frequency MHz               |                          |                   | Total System Gain           | Range in Miles      | Total Signal Power @ Range in Watts  |
| 1575                                    |                          |                   | 50                          | 0.02                | 2.5E-18                              |
| Avg Receive Power L1 dBm North America  |                          |                   |                             | Range in Meters     | Radiated Power dBm                   |
| -130                                    |                          |                   |                             | 31.17               | -80                                  |
| Free Space loss with Isotropic Antennas |                          |                   |                             | Range in Kilometers | Transmitted Power (W)                |
| -66.09                                  |                          |                   |                             | 0.03                | 5.0E-12                              |
|                                         |                          |                   |                             |                     | Effective Radiated Power (W)         |
|                                         |                          |                   |                             |                     | 10.0E-12                             |
|                                         |                          |                   |                             |                     | Effective Radiated Power (dBW)       |
|                                         |                          |                   |                             |                     | -110                                 |

