

Change the values in the yellow boxes to calculate required readings  
-130 or less at a range of 100 feet to meet NTIA regulations

| Receive Ant Gain (dBm)                  | Cable Insertion Loss (dBm) | Repeater Amp Gain (dBm) | Repeater Ant Gain Best Case (dBi) | Range in Feet       | Effective Isotropic Radiated Power @ Range In dBm |
|-----------------------------------------|----------------------------|-------------------------|-----------------------------------|---------------------|---------------------------------------------------|
| 33                                      | -10                        | 22                      | 3                                 | 100                 | -148.09                                           |
| GPS Carrier Frequency MHz               |                            |                         | Total System Gain                 | Range in Miles      | Total Signal Power @ Range in Watts               |
| 1575                                    |                            |                         | 48                                | 0.02                | 1.6E-18                                           |
| Avg Receive Power L1 dBm North America  |                            |                         |                                   | Range in Meters     | Radiated Power dBm                                |
| -130                                    |                            |                         |                                   | 31.17               | -82                                               |
| Free Space loss with Isotropic Antennas |                            |                         |                                   | Range in Kilometers | Transmitted Power (W)                             |
| -66.09                                  |                            |                         |                                   | 0.03                | 3.2E-12                                           |
|                                         |                            |                         |                                   |                     | Effective Radiated Power (W)                      |
|                                         |                            |                         |                                   |                     | 6.3E-12                                           |
|                                         |                            |                         |                                   |                     | Effective Radiated Power (dBW)                    |
|                                         |                            |                         |                                   |                     | -112                                              |

