

# American Innovation ERP Calculations

02/23/2016

| dBM Output | Distance from the retransmit antenna |       |        |        |        |                                         |  |  |                 |                                      |
|------------|--------------------------------------|-------|--------|--------|--------|-----------------------------------------|--|--|-----------------|--------------------------------------|
| Level      | 20 ft                                | 50 ft | 100 ft | 150 ft | 200 ft |                                         |  |  | Range in Feet   | Repeated Signal Power @ Range In dBm |
| -85        | -137                                 | -145  | -151   | -154   | -157   |                                         |  |  | 100             | -141.09                              |
| -84        | -136                                 | -144  | -150   | -153   | -156   |                                         |  |  |                 |                                      |
| -83        | -135                                 | -143  | -149   | -152   | -155   | GPS Carrier Frequency MHz               |  |  | Range in Miles  | Total Signal Power @ Range in Watts  |
| -82        | -134                                 | -142  | -148   | -151   | -154   | 1575                                    |  |  | 0.02            | 7.8E-18                              |
| -81        | -133                                 | -141  | -147   | -150   | -153   |                                         |  |  |                 |                                      |
| -80        | -132                                 | -140  | -146   | -149   | -152   | Avg Receive Power L1 dBm North America  |  |  | Range in Meters | METRO Radiated Power Range           |
| -79        | -131                                 | -139  | -145   | -148   | -151   | -130                                    |  |  | 31.17           | -75                                  |
| -78        | -130                                 | -138  | -144   | -147   | -150   |                                         |  |  |                 |                                      |
| -77        | -129                                 | -137  | -143   | -146   | -149   | Free Space loss with Isotropic Antennas |  |  |                 |                                      |
| -76        | -128                                 | -136  | -142   | -145   | -148   | -66.09                                  |  |  |                 |                                      |
| -75        | -127                                 | -135  | -141   | -144   | -147   |                                         |  |  |                 |                                      |
| -74        | -126                                 | -134  | -140   | -143   | -146   |                                         |  |  |                 |                                      |
| -73        | -125                                 | -133  | -139   | -142   | -145   |                                         |  |  |                 |                                      |
| -72        | -124                                 | -132  | -138   | -141   | -144   |                                         |  |  |                 |                                      |
| -71        | -123                                 | -131  | -137   | -140   | -143   |                                         |  |  |                 |                                      |
| -70        | -122                                 | -130  | -136   | -139   | -142   |                                         |  |  |                 |                                      |
| -69        | -121                                 | -129  | -135   | -138   | -141   |                                         |  |  |                 |                                      |
| -68        | -120                                 | -128  | -134   | -137   | -140   |                                         |  |  |                 |                                      |
| -67        | -119                                 | -127  | -133   | -136   | -139   |                                         |  |  |                 |                                      |
| -66        | -118                                 | -126  | -132   | -135   | -138   |                                         |  |  |                 |                                      |
| -65        | -117                                 | -125  | -131   | -134   | -137   |                                         |  |  |                 |                                      |