

**FCC§1.1307 (b) (1) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)****Applicable Standard**

According to subpart 1.1307 (b)(1), 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

| Limits for General Population/Uncontrolled Exposure |                                   |                                   |                                         |                                        |
|-----------------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------------|----------------------------------------|
| Frequency Range (MHz)                               | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E ,  H  or S (minutes) |
| 0.3-1.34                                            | 614                               | 1.63                              | *100                                    | 30                                     |
| 1.34-30                                             | 824/f                             | 2.19/f                            | *180/f <sup>2</sup>                     | 30                                     |
| 30-300                                              | 27.5                              | 0.073                             | 0.2                                     | 30                                     |
| 300-1,500                                           |                                   |                                   | f/1500                                  | 30                                     |
| 1,500-100,000                                       |                                   |                                   | 1.0                                     | 30                                     |

f = frequency in MHz

\* = Plane-wave equivalent power density

**Result****Calculated Formulary:**

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

| Frequency (MHz) | Antenna Gain |           | Conducted Power |       | Evaluation Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | MPE Limit (mW/cm <sup>2</sup> ) |
|-----------------|--------------|-----------|-----------------|-------|--------------------------|-------------------------------------|---------------------------------|
|                 | (dBi)        | (numeric) | (dBm)           | (mW)  |                          |                                     |                                 |
| 460             | 8            | 6.31      | 45              | 31623 | 300                      | 0.18                                | 0.31                            |

Note: The manufacturer does not specify an antenna to be used with this device, but a typical installation has a gain up to 8 dBi.

To comply with FCC RF exposure requirements, a minimum separation distance of 300 cm is required between the antenna and all public persons.

**Result: Compliance**