# RF exposure statement

According to §1.1307, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.
Limits for General Population/Uncontrolled Exposure

| Frequency Range [MHz] | Electric Field Strength [V/m] | Magnetic Field Strength [A/m] | Power Density [mW/cm$^2$] | Averaging Time [minute] |
|---|---|---|---|---|
| Limits for General Population/Uncontrolled Exposure | | | | |
| 0.3 – 1.34 | 614 | 1.63 | 100 | 30 |
| 1.34 – 30 | 824/f | 2.19/f | 180/f$^2$ | 30 |
| 30 – 300 | 27.5 | 0.073 | 0.2 | 30 |
| 300 – 1500 | - | - | f/1500 | 30 |
| 1500 – 100 000 | - | - | 1.0 | 30 |

※f = frequency in MHz

**1. Friis transmission formula**

$$P_d = (P_{out} \times G) / (4\pi r^2)$$

$P_d$ = Power density
$P_{out}$ = power input to antenna
G = power gain
r = distance to the center of radiation of the antenna

## 2. Calculation of MPE at 20 cm

| Frequency [MHz] | Max.Average Tune up Power [dBm] | Antenna Gain [dBi] | EIRP | | Power density At 20 cm [mW/cm$^2$] | Limit [mW/cm$^2$] |
|---|---|---|---|---|---|---|
| | | | [dBm] | [mW] | | |
| 2 405 | 20.42 | 4.48 | 24.90 | 309.02 | 0.27556 | 1.0 |
| 2 440 | 20.14 | | 24.62 | 289.73 | 0.25836 | |
| 2 480 | 22.76 | | 27.24 | 529.66 | 0.47231 | |