

FCC ID: B5D-AP200MW

RF Exposure Statement for Telex Model 2480AA Access Point:

Notice in Installation Manual:

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm (8 inches) between the radiator and your body.

RF Exposure Calculations:

The following information provides the minimum separation distances for the two major antenna types used in this system.

Sector Antenna Panel:

The 14.5 dBi sector antenna and 15 feet of LMR-400 cable is used with the **Telex Model 2480AA** Access Point product. The minimum separation distance is calculated from **FCC OET 65 Appendix B, Table 1B** Guidelines for General Population/Uncontrolled Exposure. This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain, and considering a 1.0 mW/cm² uncontrolled exposure limit. The formula used was:

$$S = (P_o * G) / (4 * \pi * r^2) \text{ or } r = \text{SQRT} [(P_o * G) / (4 * \pi * S)]$$

Where S = 1.0 mW/cm² for 2400 MHz

Where P_o = 178 mW (Peak RF)

Where G = 22.39 (numeric equivalent to 14.5 dBi antenna gain with 1 dB cable loss)

Where r = Minimum Safe Distance from antenna (cm)

For Telex Model 2480, r = 17.8 cm (7 inches)

For a distance [r] of 20cm from this antenna, the field density S = 0.79 mW/cm²

Omnidirectional Antenna:

The 9.5 dBi omni antenna and 3 feet of LMR-400 cable is used with the **Telex Model 2480AA** Access Point product. The minimum separation distance is calculated from **FCC OET 65 Appendix B, Table 1B** Guidelines for General Population/Uncontrolled Exposure. This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain, and considering a 1.0 mW/cm² uncontrolled exposure limit. The formula used was:

$$S = (P_o * G) / (4 * \pi * r^2) \text{ or } r = \text{SQRT} [(P_o * G) / (4 * \pi * S)]$$

Where $S = 1.0 \text{ mW/cm}^2$ for 2400 MHz

Where $P_o = 178 \text{ mW}$ (Peak RF)

Where $G = 8.32$ (numeric equivalent to 9.5 dBi antenna gain with 0.3 dB cable loss)

Where $r =$ Minimum Safe Distance from antenna (cm)

For Telex Model 2480, $r = 10.9 \text{ cm}$ (4.3 inches)

For a distance $[r]$ of 20cm from this antenna, the field density $S = 0.29 \text{ mW/cm}^2$

Notes:

1. The minimum safe distance is based on a conservative “worse case” prediction, i.e. using the formula shown above and no duty factor. In practice the minimum distance will be much shorter. (Ref. 2)
2. The minimum safe distance has been calculated for the maximum allowed Power Density (S) limit of 1.0 mW/cm^2 in the frequency range 1500-100,000 MHz for uncontrolled environments (Ref. 2).

References:

1. FCC Part 15, sub-clause 15.247 (b) (4) (i)
2. FCC OET Bulletin 65, Edition 97-01
3. FCC Supplement C to OET Bulletin 65, edition 01-01