

## **1. Radio Frequency exposure**

### **1.1 Regulation**

15.247(b4) 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 levels in excess of the Commission's guidelines. See §1.1307(b)(1) of this Chapter.

### **1.2 Result**

According to par 1.1307b(1), the EUT does not require an environmental evaluation.

1. This equipment classification is not present within table 1 of part 1.1307 and is not listed in section 1.1307b(2).
2. The EUT categorically exempt from routine environmental evaluation per section 2.1093.

Included are calculations that determine that minimum distance I from the transmitter antenna that will ensure an exposure limit at or below the guidelines given in table 1 of part 1.1310 for the general population. The formula for these calculations are taken from OET Bulletin 65, edition 97-01, August 1997; "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields".

### **1.3 CALCULATIONS**

Per Table 1 of Section 1.1310 the limit for general population exposure at 2.4 GHz is  $1.0 \text{ mW/cm}^2$

Per OET Bulletin 65, edition 97-01 the formula for calculating power density is:

$$S = P \cdot G / 4\pi R^2$$

with

$$\text{Power} = 25.6 \text{ dBm} = 363 \text{ mW}$$

$$\text{Gain of Antenna: System} = 10.4 \text{ dBi or a numeric gain of } 11$$

therefore

Solving for R gives a minimum safe distance of 17.8 cm

### **1.4 CONCLUSION**

Page 19 of the user manual instructs the installer to maintain at least a 2 meter separation between personal and the user.

