

RF Exposure Evaluation

A calculation based on the **FCC's Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields (Edition 97-01)** appears below.

Antenna Connector Power Output = 12.5dBm

Antenna Gain = 11.14dBi (Yagi Y8966 antenna; highest among the two antennas used)

$$\text{EIRP} = P_{\text{max}} + G_{\text{ant}} = 12.5 + 11.14 = 23.64\text{dBm} = 231.2\text{mW}$$

The limit for General Population/Uncontrolled Exposure is

$$S [\text{mW}/\text{cm}^2] = f [\text{MHz}] / 1500$$

$$S = 900 / 1500 = 0.6 \text{ mW}/\text{cm}^2$$

The distance from the antenna at which this radiation level will be reached is

$$R = \sqrt{\frac{\text{EIRP}}{4\pi S}}$$
$$R = \sqrt{\frac{231.2}{4\pi * 0.6}} = 5.5\text{m}$$

This distance is well below the 20cm allowed for a portable device.

A statement indicating the need for a 20cm separation distance appears in the installation manual.