

Response to FCC Questions in Correspondence Reference Number: 18666

1.) The .0073 W power output value listed on FCC Form 731 has not been justified. The original question #1 from our 3/8/01 request remains unresolved.

A field strength of 97.7dBuV/m was measured (reference test report from L.S. Compliance page 15)
Converting this to Effective Radiated Power Measurement equals 1.2mW ERP.

$$E = 97.7 \text{ dB}\mu\text{V/m} = 10^{(97.7 \text{ dB}\mu / 20)} = 76736 * 10^{-6} \text{ V/m}$$

$$E \text{ (V/m)}^2 / 120 * = (P_t * G_t) / 4\pi R^2 \quad \text{where}$$

P = Power Density (in watts/square meter) at a distance R

P_t = Power radiated by an isotropic radiator (watts)

R = Distance of measurement from source

G_t = Transmit Antenna Gain

R = 3m

$$G_t = -0.5 \text{ dBi} = -0.5 + 2.15 = 1.65 \text{ dB} = 10^{(1.65/10)} = 1.46$$

$$P_t = ((E \text{ (V/m)}^2 * 4\pi R^2) / (G_t * 120 *))$$

$$P_t = (((76736 * 10^{-6})^2 * 4\pi (3)^2) / (1.466 * 120 *))$$

$$= 0.665 / 550.4$$

$$= 1.2 * 10^{-3} \text{ W}$$

$$= 1.2\text{mW}$$

2.) Please indicate the spectrum analyzer settings used for the measurement of occupied bandwidth.

HP89440 Vector Signal Analyzer settings for occupied bandwidth.

Frequency 613.975MHz

Span 50KHz

Res Bw 1KHz

3.) Section 2.1093 requires the measurement of SAR not MPE. The original question # 5 from our 3/8/01 request remains unresolved.

Please see exhibit titled "SAR Evaluation" submitted 5/21/2001.

4.) Page 3-11 of the Users Manual shows an "antenna system".

This does not appear to match the equipment photographs which state that "Green Lead wire acts as the antenna for the transmitter".

The picture on 3-11 is a receive antenna, used to receive the Telemetry signals and then send them to the Receiver System using coax cable.