



September 1, 2004

Federal Communications Commission
Equipment Approval Services
P.O. Box 358315
Pittsburgh, PA 15251-5315

Dear Sir or Madam:

The following is the SAR calculation for the Digivance Software Defined Radio 800 MHz 50 Watt System's Remote Unit using the system's maximum RF emission. The calculation is based on FCC 47CFR Part 2 and OET 65.

Per OET 65:

Maximum Permissible Exposure is $\text{Freq. (MHz)}/1500 = \text{MPE mW/cm}^2$
 $869 \text{ MHz}/1500 = 0.5793 \text{ mW/cm}^2$

The following equations determine the distance from the antenna that the power density is $\leq 0.5793 \text{ mW/cm}^2$.

+50.00dBm Transmitter Power (Max)
10.00dBi Antenna Gain (Max)
 $50.00\text{dBm} + 10.00\text{dBi} = +60\text{dBm EIRP}$
 $+60\text{dBm EIRP} = 1000 \text{ Watts EIRP}$
 $1000 \text{ Watts EIRP} = 1000 \times 10^3 \text{ mWatts EIRP}$
 $0.5793 \text{ mW/cm}^2 = 1000 \times 10^3 \text{ mW}/(4 \times \pi \times r^2)$
 $r = \text{SQR}(1000 \times 10^3 / 4 \times \pi \times 0.5793)$
 $r = 370.63 \text{ cm or } 3.70 \text{ Meters}$

In addition, the following statement will be added to our installation/operation manual:

To comply with Maximum Permissible Exposure (MPE) requirements, the maximum composite output from the antenna cannot exceed 1000 Watts EIRP and the antenna must be permanently installed in a fixed location that provides at least 6 meters (20 feet) of separation from all persons.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dave Conyers'.

Dave Conyers
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