



April 11, 2002

TCB

BABT Product Service
4855 Patrick Henry Drive, Building 6
Santa Clara, CA 95054

Dear Sir or Madam:

The following is the SAR calculation for the Digivance LRCS SMR System's Dual Transmit 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 $\text{Freq. (MHz)} / 1500 = \text{MPE mW/cm}^2$
 $851 \text{ MHz} / 1500 = .5673 \text{ mW/cm}^2$

The following equations determine the distance from the antenna that the power density is $\leq .5673 \text{ mW/cm}^2$.

+41.65dBm Transmitter Power (Max)
18.35dBi Antenna Gain (Max)
 $41.65\text{dBm} + 18.35\text{dBi} = +60\text{dBm EIRP}$
 $+60\text{dBm EIRP} = 1000 \text{ Watts EIRP}$
 $1000 \text{ Watts EIRP} = 1000 \cdot 10^3 \text{ mWatts EIRP}$
 $.5673 \text{ mW/cm}^2 = 1000 \cdot 10^3 \text{ mW} / (4 \cdot \pi \cdot r^2)$
 $r = \text{SQR}(1000 \cdot 10^3 / 4 \cdot \pi \cdot .5673)$
 $r = 374.53 \text{ cm or } 3.75 \text{ Meters}$

NOTE: The customer has the option to use either one antenna or two (reason for the class II change). In either case ADC states that the EIRP cannot exceed 1000 watts EIRP. The antenna's are expected to be directional with 60 to 80 degree of direction. The application would be on the corner of a building and so each antenna would be pointing 90 degrees away from each other.

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(s) cannot exceed 1000 Watts EIRP and the antenna(s) 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 'Gary Spedaliere', is written over a horizontal line.

Gary Spedaliere
Director of Product Management
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