

February 10, 1999

Federal Communications Commission
Equipment Authorization Division
7435 Oakland Mills Road
Columbia, MD 21046

Subject: Maximum Permissible Exposure calculations for **FCC ID: OEE700**

To whom it may concern,

Serena Medial is submitting a low power transmitter for an equine heart monitor device. The unit operates in the 902 to 928 MHz band with a radiated output power of .025 mW. The monitor transmits on one frequency that is user selectable.

Assuming a worst case of no duty cycle.

For an Isotropic radiator the surface area of a sphere can be used to determine the area over which the transmitter energy is radiated.

$$\text{Surface area of a sphere} = 4 \cdot \pi \cdot \text{radius}^2$$

The exposure level can be calculated as follows :

$$\text{MPE distance} = (\text{output power} \cdot \text{duty cycle} \cdot 10(\text{antenna gain}/10)) / (4 \cdot \pi \cdot \text{Exposure Limit (mW/cm}^2)^{1/2})$$

$$\begin{aligned} \text{OEE700 MPE distance} &= (.025 \text{ mW} \cdot 1 / 4 \cdot 3.14 \cdot 1)^{1/2} \\ &= .045 \text{ cm} \\ &= .017 \text{ in} \end{aligned}$$

If you have any questions please do not hesitate to call me.

Sincerely,

Chris Byleckie
Technical Director
Electronic Compliance Laboratories