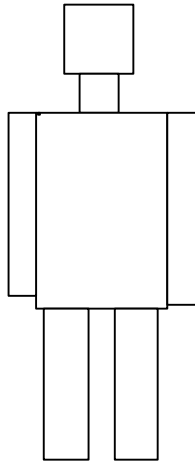## General

The KDR510RT is a VHF transmitter, which is hand, held down and away from the body for transmitting with an output power less than -39 dBm. Per table 1 of 1.1307, paragraphs 1.1310 and 2.1093 of CFR 47, evaluation for this device is as follows. Due to the location of the antenna, normal operating conditions and use, the unit will satisfy the requirements for RF Exposure. Calculations are made here for completeness.

SPECIFIC ABSORPTION RATE CALCULATION

Calculations per 2.1093 of CFR 47.

These calculations are based upon a typical human figure as approximated below. The height is 5' 8" (173 cm.) and the weight is 160 lbs. (72.6kg).

The calculated absorption cross section for this figure is 143 cm squared.

CALCULATED OCCUPATIONAL / CONTROLLED POPULATION SAR

$$S = PG/(4?R^2)$$

Where S = power density in mw/cm^2
     P = input power to antenna in mw.
     G = power gain of antenna
     R = distance from antenna in cm.

For a minimum distance of 2.5 centimeters and 125E-9 watts (125E-6 mW or -39 dBm) operation with the supplied antenna, S is:

$$S = 125E-6(1)/(4?(2.5)^2) = 1.59E-6 \text{ mw/cm}^2$$

For a body cross sectional area of 143 cm squared, (1.59E-6)(143) = 227.59E-6 mw is absorbed.

For a body mass of 72.6 kg, this is 227.6E-6/72.6 = 3.13E-6 mw/kg = 3.13E-9 w/kg

This is well within the 0.08 w/kg limit prescribed for General population/uncontrolled exposure limit as prescribed by CFR 47 paragraph 2.1093.