

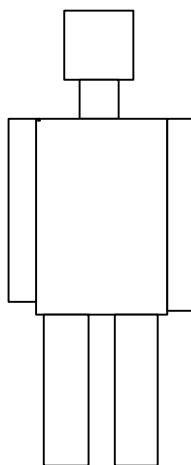
## General

The WLR-1900C BE Band is a building mounted PCS amplifier with output power less than 1640 W EIRP. Per table 1 of 1.1307 CFR 47, evaluation is not required for this device. Due to the location of the antenna, normal operating conditions and use, the unit will satisfy the requirements for RF Exposure per FCC rule 1.1310. 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 UNCONTROLLED, GENERAL POPULATION SAR**

$$S = PG/(4\pi R^2)$$

Where  $S$  = power density in  $\text{mw/cm}^2$

$P$  = input power to antenna in  $\text{mw}$ .

$G$  = power gain of antenna

$R$  = distance from antenna in  $\text{cm}$ .

For a minimum distance of 3000 centimeters and 0.032 watts (32mW) operation with the supplied antenna,  $S$  is:

$$S = 32/(4\pi (3000)^2) = 2.83E-7 \text{ mw/cm}^2$$

For a body cross sectional area of 143  $\text{cm}^2$ ,  $(2.83E-7)(143) = 4.05E-5 \text{ mw}$  is absorbed.

For a body mass of 72.6 kg, this is  $4.05E-5/72.6 = 5.57E-7 \text{ mwatts/kg}$

This is well within the  $1 \text{ mw/cm}^2$  limit prescribed by CFR 47 paragraph 1.1310.