Compliance with 47 CFR 15.247(i)

> "*Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter*."

In the following configurations, the radios will only be used with a separation distance of 20 centimeters or greater between the antenna and the body of the user or nearby persons, and can therefore be considered mobile transmitters per 47 CFR 2.1091(b). The following MPE estimates are for the following collocated configuration:

- Bluetooth radio with the Muti Tech Systems Radio in the charger of the Zoll Lifecor Corp. LifeVest System

The radios can transmit simultaneously. Each radio transmits through its own antenna.

The MPE estimates are as follows:

Table 1 in 47 CFR 1.1310 defines the maximum permissible exposure (MPE) for the general population. The exposure level at a 20 cm distance from the EUT's transmitting antenna is calculated using the general equation:

$S = (PG)/4\pi R^2$
Where: S = power density (mW/cm^2)
P = power input to the antenna (mW)
G = numeric power gain relative to an isotropic radiator
R = distance to the center of the radiation of the antenna (20 cm = limit for MPE estimates)
PG = EIRP

Solving for S, the maximum power densities 20 cm from the transmitting antennas are summarized in the tables on the following pages:

RF Exposure Information

MPE Estimates for Self Co-located Device

FCC ID: POOWML-C40

Bluetooth Radio

Antenna Type	Antenna Part No.	Transmit Frequency (MHz)	Max Peak Conducted Output Power (mW)	Antenna Gain (dBi)	Minimum Antenna Cable Loss (dB)	Power Density @ 20 cm (mW/cm^2)	General Population Exposure Limit from 1.1310 (mW/cm^2)	Ratio of Power Density to the Exposure Limit
Chip	ANT8030-2R4-01A	2400	13.03	2	0	0.00411	1.000	0.004

Worst Case Ratio of Power Density to the Exposure Limit = 0.004

FCC ID: AU792U05E06800

Multi Tech Radio

Antenna Type	Antenna Part No.	Transmit Frequency (MHz)	Max Peak Conducted Output Power (mW)	Antenna Gain (dBi)	Minimum Antenna Cable Loss (dB)	Power Density @ 20 cm (mW/cm^2)	General Population Exposure Limit (mW/cm^2)	Ratio of Power Density to the Exposure Limit
From Original	Worst Case	850	1349	2.6	0	0.48836	0.567	0.862
From Original	Worst Case	1900	661	4.8	0	0.39713	1.000	0.397

Worst Case Ratio of Power Density to the Exposure Limit = 0.862 (850 MHz Band)
Worst Case Ratio of Power Density to the Exposure Limit = 0.397 (1900 MHz Band)

Worst Case Co-located Exposure Condition

Per Note 24 shown below, the Sum of Worst Case Power Ratios cannot exceed 1.0

Bluetooth Radio Worst Case Ratio of Power Density to the Exposure Limit	**Multi Tech Radio** Worst Case Ratio of Power Density to the Exposure Limit			**Sum of Worst Case Ratios (Power Density to the Exposure Limit)**	**FCC Limit for Sum of Worst Case Ratios**	
0.004	0.862			0.866	1.0	PASS

The results shown in the above table are equivalent to the Sum of the EIRP of the Two Co-located Transmitters (EIRP TX1 + EIRP TX2) compared to the exposure limit. The benefit of this method, is that accounts for transmitters operating at different frequ

Excerpts from TCB Training, April 3, 2002, "Mobile Transmitters", Slide 6:

"Devices operating in multiple frequency bands

- *When RF exposure evaluation is required for TCB approval*
  - *Separate antennas – estimated minimum separation distances may be considered for the frequency bands that do not require evaluation or TCB approval, however, the estimated distance should take into account the effect of co-located transmitters. (Note 24)*

    Note 24 According to multiple frequency exposure criteria, the ratio of field strength or power density to the applicable exposure limit at the exposure location should be determined for each transmitter and the sum of these ratios must not exceed 1.0 for the location to be compliant."

The sum of the ratios (power density to the exposure limit) does not exceed 1.0; therefore, the exposure condition is compliant with FCC rules.