Exposure of humans to RF fields

As per Section 1.1310 mobile transmitters are required to be operated in a manner that ensures the public is not exposed to RF energy levels in accordance with OST/OET Bulletin Number 65.

Calculations have been made using the General Public Exposure limits.

Minimum safe distances have been calculated below at 160.075 MHz.

Power density, $mW/cm^2 = E^2/3770$

- General Public / Uncontrolled exposure limit will be 0.2 mW/cm^2 or 27.5 V/m.

The minimum distance from the antenna at which the MPE is met is calculated from the equation relating field strength in V/m, transmit power in watts, transmit antenna gain, transmitter duty cycle and separation distance in metres:

E, V/m = (√ (30 * P * G * DC)) / d

The rated maximum transmitter power (P) = 5 watts.

Transmitter is operated using an antenna with a gain (G) of up to 20 (+13 dBi).

The client has declared a duty cycle (DC) of 100% (1)

General Public / Uncontrolled

d = √ (30 * P * G*DC) / E

d = √ (30 * 5 * 20 * 1) / 32.5

d = 1.68 metres or 168 cm

Result: Complies if the above safe distance is defined in the user manual for this equipment.