Radio Frequency Hazard Information

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

In accordance with this section and also Section 2.1091, this device has been classified as a mobile device whereby a distance of 20 cm can normally be maintained between the user and the device.

In accordance with Section 1.1310 the Maximum Permissible Exposure (MPE) limit for the Occupational / Controlled Exposure of 2.687 (f/300 = 806 MHz/300) has been applied.

This mobile transceiver will typically be used at emergency incidents requiring temporary extended range communications.

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

$E, V/m = (\sqrt{(30 * P * G)}) / d$

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

E for MPE: $= E^2/3770$
$\qquad\qquad E = \sqrt{2.687*3770}$
$\qquad\qquad \underline{E = 100.6 \ V/m}$

The maximum transmitter power = 3 watts.

Typically this mobile transceiver would be used with a whip type of antenna with a gain of 1.5 in conjunction with push to talk devices that would lead to a duty cycle of 50%.

$d = \sqrt{(30 * P * G)} / E$
$\ \ = \sqrt{(30 * 3 * 1.5)} / 100.6$
$\ \ = \underline{0.115 \ metres \ or \ 11.5 \ cm}$

The duty cycle has not been taken into consideration. A typical duty cycle of 50% would further reduce this distance to 5.8 cm.

The above calculations therefore show that this device meets the MPE requirement for mobile devices falling below the 20 cm clearance required.

Result: Complies