## Section 15.247(i) – Radio Frequency Hazard Information

The device is portable and is held in the hand however a 20 cm minimum distance can be maintained.

The device only operates when the read button is pushed by the user with the transmitter turning itself off once a card has been activated.

When the device is transmitting there is an audible and visual warning to the user.

The power output of the Bluetooth device has been measured to be less than 1 mW and has therefore been considered to be inconsequential.

In accordance with Section 1.1310 the Maximum Permissible Exposure (MPE) limits for the General Population / Uncontrolled Exposure of f/1500 have been applied.

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/m2 $= E2/3770$
E for MPE: $(902/1500) = E2/3770$
$E = \sqrt{(902/1500)}*3770$
$E = 47.6$ V/m

The maximum radiated power measured was +28.3 dBm or 0.68 watts.
Therefore:
$E = \sqrt{(30 * P * G)} / d$
$d = \sqrt{(30 * P * G)} / E$
$d = \sqrt{(30 * 0.68)} / 47.6$
$d = 0.09$ m or 9 cm

**Result:** Complies if a minimum safe distance of 20 cm is specified.

**EMC Technologies (NZ) Ltd**

STREET ADDRESS - 47 MacKelvie Street, Grey Lynn, Auckland, New Zealand
POSTAL ADDRESS - PO Box 68 307, Newton, Auckland, New Zealand

Telephone: +64 9 360 0862   Fax: +64 9 360 0861
E-mail: aucklab@ihug.co.nz
Web Site: www.emctech.com.au

**Page 29 of 36        This report may not be reproduced except in full**