Exposure of Humans to RF Fields

Analysis Performed By: Glen Westwell	**Date of Test: 21 Aug 2002**

Maximum Permissible Exposure (MPE) Compliance Statement, FCC Radio Frequency Exposure Limit 1.1310 & Industry Canada RSS-102

Mark IV 801154 Radio Module

The 801154 Radio Module has been tested and the performance characterized in accordance with the MPE requirements of FCC 47 CFR and Industry Canada RSS-102.

At an operating frequency of 915.75MHz the MPE limit for the General Population/Uncontrolled Exposure is 0.61mW/cm^2 (f/1500mW/cm^2). This device complies with this limit at the following line of sight distances from the antenna element:

801154 Radio Module : 23cm

The analysis is provided below.

Power Density (S) = EIRP/($4\pi R^2$), Therefore, $R \geq \sqrt{EIRP/S \times 4\pi}$
Using this calculation:

Maximum Antenna Gain = 8dBi
Maximum output power = 28dBm

S = 0.6 mW/cm^2
EIRP = 36dBm or 4W(max. worst case)
Therefore,
R= 22.8 cm

This minimum safe distance for the general population of 23cm shall be stated in the installation & operators instruction manual under the RF Safety Exposure Warning Statement.

Analysis provided by,
Glen Westwell, Nemko Canada Inc. for Mark IV Industries.