

**NOTE**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

**ATTENTION!**

Changes or modifications not expressly approved by Futurecom Systems Group Inc. could void the user's authority to operate the equipment.

**IMPORTANT**

This manual contains important safety and operating instructions, therefore keep this manual always on hand!

Prior to using any product, follow all warning, safety and operating instructions written on the product and in the Users Manual. **All instructions should be saved for reference in the future!**

RF EXPOSURE**ATTENTION!**

To satisfy FCC/IC RF exposure requirements, a separation distance 66cm (26.0") or more should be maintained between 0dBd antenna of this device and persons. To ensure compliance, operations at closer than this distance is not allowed.

**RADIO OPERATOR**

Futurecom requires the MOBEXCOM DVE operator to ensure FCC Requirements for Radio Frequency Exposure are met. The DVE output power has to be set such that the maximum Effective Radiated Power (ERP) does not exceed 3.0W at the antenna. The minimum distance between all possible personnel and the antenna at 3.0W ERP must be at least 66cm (26.0").

FAILURE TO OBSERVE THE MPE DISTANCE EXCLUSION AREA AROUND THE ANTENNA MAY EXPOSE PERSONS WITHIN THIS AREA TO RF ENERGY ABOVE THE FCC EXPOSURE LIMIT FOR BYSTANDERS (GENERAL POPULATION). IT IS THE RESPONSIBILITY OF THE OPERATOR TO ENSURE THAT MPE LIMITS ARE OBSERVED AT ALL TIMES DURING TRANSMISSIONS. THE OPERATOR MUST ENSURE AT ALL TIMES THAT NO PERSON COMES WITHIN MPE DISTANCE FROM THE ANTENNA.

5.13. RF EXPOSURE REQUIREMENTS @ 1.1310 & 2.1091

5.13.1. Limits

- **FCC 1.1310:-** The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in 1.1307(b).

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
(A) Limits for Occupational/Control Exposures				
300-1500	F/300	6
(B) Limits for General Population/Uncontrolled Exposure				
300-1500	F/1500	6

F = Frequency in MHz

5.13.2. Method of Measurements

Refer to FCC @ 1.1310 and 2.1091

- In order to demonstrate compliance with MPE requirements (see Section 2.1091), the following information is typically needed:
 - (1) Calculation that estimates the minimum separation distance (20 cm or more) between an antenna and persons required to satisfy power density limits defined for free space.
 - (2) Antenna installation and device operating instructions for installers (professional/unskilled users), and the parties responsible for ensuring compliance with the RF exposure requirement
 - (3) Any caution statements and/or warning labels that are necessary in order to comply with the exposure limits
 - (4) Any other RF exposure related issues that may affect MPE compliance

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi \cdot r^2} = \frac{EIRP}{4\pi \cdot r^2}$$

Where: P: power input to the antenna in mW
 EIRP: Equivalent (effective) isotropic radiated power.
 S: power density mW/cm²
 G: numeric gain of antenna relative to isotropic radiator
 r: distance to centre of radiation in cm

FCC radio frequency exposure limits may be exceeded at distances closer than r cm from the antenna of this device

$$r = \sqrt{\frac{PG}{4\pi \cdot S}} = \sqrt{\frac{EIRP}{4\pi \cdot S}}$$

FCC radio frequency exposure limits may not be exceeded at distances closer than r cm from the antenna of this device

5.13.3. Evaluation of RF Exposure Compliance Requirements

Lowest Frequency, **F[MHz]** = 136

MPE Limit for Occupational/Controlled Exposure, **S_{controlled}[mW/cm²]** = F / 300 = 136 / 300 = 0.453

MPE Limit for General Population/Uncontrolled Exposure, **S_{uncontrolled}[mW/cm²]** = F / 1500 = 136 / 1500 = 0.091

Maximum RF Power conducted, **P_{conducted}[dBm]** = 34.84

Maximum Antenna Gain, **G[dBd]** = 0

Maximum EIRP, **P_{EIRP}[dBm]** = 34.84 + 2.14 = 36.94

Calculated RF Safety Distance for Occupational/Controlled Exposure, **r_{safety_controlled}[cm]** = 30

Calculated RF Safety Distance for General Population/Uncontrolled Exposure, **r_{safety_uncontrolled}[cm]** = 66

Specified Safety Separation Distance in User's Manual = 66

Antenna Gain (dBd)	Maximum EIRP (dBm)	Calculated RF Safety Distance (cm)	Specified Separation distance (cm)	Compliance
0	36.98	30, 66	66	Complies