FUTURECOM® SYSTEMS GROUP, ULC
a Motorola Solutions Company

Futurecom Systems Group, ULC

Booster Pack RF Safety Booklet

ATTENTION!

Before using this equipment, please read this booklet which contains important operating instructions for safe usage, RF energy control and compliance with exposure limits.

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Document Revisions

Revision	Date	Notes & References
1.0	2019-10-24	Initial Version
1.01	2022-08-03	Minor wording/formatting updates
1.02	2022-12-07	Updated logo
1.03	2024-03-19	Updated Part Numbers

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Proprietary Statement

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1 RF EXPOSURE

NOTE:

This equipment has been tested and found to comply with the Part 90 Signal Booster 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 installation 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, ULC could void the User's authority to operate the equipment.

USA Users: It is noted that the FCC rules would be violated if this radio is used to operate on frequencies outside of FCC (Part 90 and Part 22) Frequency Bands for users other than the Federal Government. This frequency band is reserved for distress beacons.

ATTENTION!

This radio device is intended for use in occupational / controlled conditions, where users have full knowledge of their exposure and can exercise control over their exposure to meet FCC limits. This radio device is NOT authorized for general population, consumer, or any other use.

It is the responsibility of the Booster Pack Operator to ensure that Maximum Permissible Exposure (MPE) limits are observed at all times during repeater transmissions.

The minimum lateral distance between all possible personnel and the Booster Pack antenna depends on the Frequency Band of the Booster Pack:

Booster Pack Frequency Range	Lateral Distance from the antenna
138-174 MHz	181 cm (72")
380-430 MHz	161 cm (64")
450-470 MHz	161 cm (64")
764-869 MHz	114 cm (45")

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).

IMPORTANT
The maximum allowed gain of the omni-directional antenna for the Booster Pack is Unity (0 dBd).

1.1 FCC AND RF EXPOSURE LABEL

The Booster Pack RF Exposure Label should be displayed on the device to direct the user to receive specific training information for meeting occupational exposure requirements.

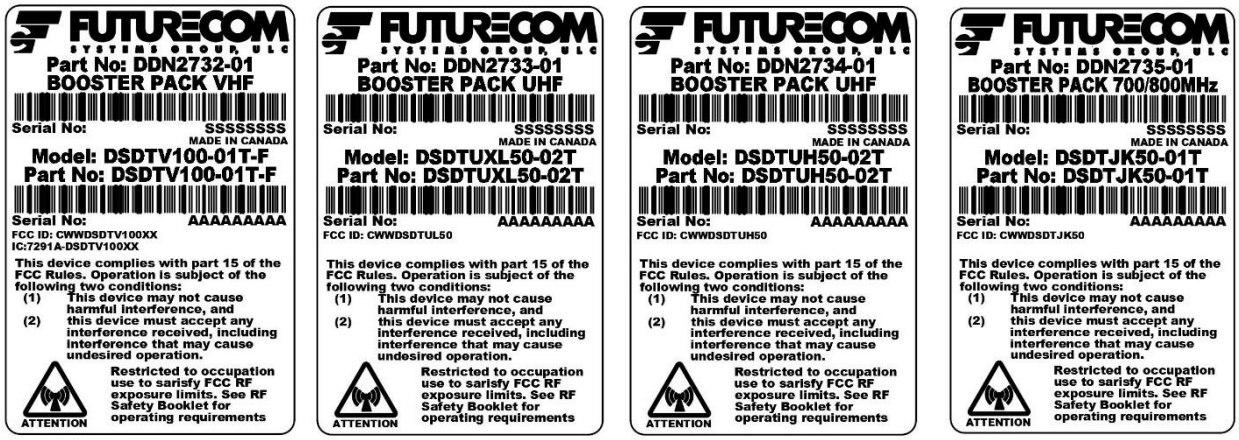

Figure 1 FCC and RF Exposure Labels

2 INSTALLATION REQUIREMENTS FOR COMPLIANCE WITH RADIO FREQUENCY (RF) ENERGY EXPOSURE SAFETY STANDARDS

ATTENTION!

To ensure compliance with RF Energy Safety Standards:

- Install only antennas meeting the specified gain requirements.
- Ensure the antenna installation is consistent with the Booster Pack Antenna Installation instructions described in this document.
- Ensure the **Product & RF Safety Booklet** is available to the end user prior to use.

	ANTENNA			Booster Pack MODEL			
#	Kit #	Freq. Range [MHz]	Type	700/800 MHz (50W) (up to 100% Tx Duty Cycle)	380-430 MHz (50W) (up to 100% Tx Duty Cycle)	450-470 MHz (50W) (up to 100% Tx Duty Cycle)	VHF (50W) (up to 100% Tx duty cycle)
1	**VAF0003A**	764-870	¼ wave	**50W**			
2	**VAE0003A**	380-433	¼ wave		**50W**		
3	**VAE0003A**	450-470	¼ wave			**50W**	
4	**VAD0003A**	136-174	¼ wave				**50W**

Table 1 – Antenna kits available from Futurecom Systems Group, ULC

3 ANTENNA INSTALLATION INSTRUCTIONS

3.1 SITE ANTENNAS

Radio equipment is sometimes installed at a predetermined location. In such cases the antenna installation must comply with the following requirements to assure optimal performance and make sure human exposure to radio frequency electromagnetic energy is within the guidelines set forth in the above standards.

• The antennas must be mounted outside the building.

• Mount the antennas on a tower where possible.

• If the antennas are to be mounted on a building then they must be mounted on the roof.

• As with all predetermined site antenna installations, it is the responsibility of the licensee to manage the site in accordance with applicable regulatory requirements and may require additional compliance actions such as site survey measurements, signage, and site access restrictions in order to ensure that exposure limits are not exceeded.

3.2 TEMPORARY SITE

Futurecom requires the Booster Pack operator to ensure FCC/ISED Requirements for Radio Frequency Exposure are met. It is the responsibility of the Licensee to ensure that the appropriate separation distances between the antennas and bystanders are established and followed to meet the FCC and ISED Canada Maximum Permissible Exposure (MPE) Requirements in any particular Temporary location. In situations where a site assessment is not practical, it is recommended that the antennas be located **at least 9 feet from bystanders**. This should ensure MPE compliance in any Temporary application and is likely to be a much greater separation distance than is necessary in most cases. Failure to observe the MPE distance exclusion area around the antenna may expose persons within this area to RF energy above the FCC/ISED Canada exposure limits for bystanders (general population).