



Date: May 30, 2000.

Authorization and Evaluation Division
Federal Communications Commission Laboratory
7435 Oakland Mills Road
Columbia, MD 21046

Att: Errol Chang and Kwok Chan.

Subject: Response to correspondence number 13324, confirmation number EA97158, for
FCC ID: AZ492FT1627.

Gentlemen:

Q1. This transmitter is categorically excluded from routine MPE evaluation. However, because of its high output (72 watts) and lower MPE limit (0.204 mW/cm^2) allowed at its operating frequency, additional information is needed to confirm if MPE compliance can be assured. An RF exposure compliance statement has been submitted for this filing indicating that Motorola had subject this device to RF exposure evaluation. The mentioned test data may be used to address RF exposure concerns, or Motorola may choose to use other alternative means to address the exposure concerns.

A1. Motorola is enclosing the MPE Test Report, dated 3/22/00, as requested in item 1. However, as a point of clarification this Mobile Radio was tested and certified to be compliant to the FCC's limits for Occupational/Controlled Exposures (1.0 mW/cm^2) for people outside the car and to the General Population/Uncontrolled Exposure limit of 0.2 mW/cm^2 or 0.073 A/m for people inside the car.

This device is designed specifically for use by occupational workers (occupational/controlled environment) and will be marketed to Federal Government and Public Safety agencies and private businesses such as utilities, airlines, railroads. These radios are used in a disciplined way to help improve productivity, control and coordinate work teams, and enhance personal safety. Push-to-talk two-way radio conversations are measured in seconds, not minutes.

Q2. The user's manual indicates a separation distance of 3 feet (91.5 cm) is needed between the antenna and persons to satisfy RF exposure requirement. It is not clear if this distance is appropriate or sufficient without additional information on antenna gain, type and installation requirements. The manual also indicates transmission should only occur when people inside and outside of a vehicle are at least maintaining this minimum distance from the antenna. Because of the substantially higher power and separation distance, it is not clear if the information included

in the manual can effectively alert all radio operators/users so that RF exposure compliance can be assured. The burden and responsibility for ensuring compliance are resting on the radio operators to ensure all persons are at least 3 feet away from the antenna during transmission to ensure compliance. Currently, the manual information has instructed people inside a vehicle to be at least 3 feet away from the antenna, which may not be always feasible. Please clarify these issues accordingly. If MPE test data is available, it would clarify the actual distance needed for ensuring compliance.

A2. Please refer to the enclosed Mobile Antenna Installation Instructions for antenna information including gain, type, and installation instructions. Additional antenna installation instructions are located in the Radio Installation Manual which is also enclosed.

Also please refer to the enclosed revised User's Manual wherein the previous instructions to the operator to assure people inside the car are a specified distance from the antenna has been deleted; this is consistent with the test results contained in the MPE report which indicate levels inside the car, both front and rear seat locations, adequately meet the General Population/Uncontrolled Exposure limit of 0.2 mW/cm^2 or 0.073 A/m for all intended antenna locations.

The User's Manual provides clear instructions on proper usage, including a specific section on EME. The information contained in the manuals provides sufficient information to properly install and operate the equipment in order to assure compliance with the FCC's Rules and Regulations. While user training is the responsibility of the customer, who uses manuals, instructional sessions or other means to inform workers, Motorola also offers its customers training classes on the proper use of two-way radios.

Q3. The manual had stated that installation of vehicle-mount antennas according to requirements of the antenna manufacturer and installation instructions for this radio. One antenna (HAB9405) has been identified in the manual for this device's operating frequency. Please clarify the type of installation instructions that will be available for users and installers to ensure RF exposure compliance.

A3. The revised User's Manual is enclosed and has been corrected to indicate only the RAB4002 antenna as being applicable for this product and its operating frequency range. Specific antenna installation instructions are contained in the Radio Installation Manual and the Antenna Installation Instructions; compliance with the requirements of both of these documents is called for in the EME section of the User's Manual.

Q4. The manual indicates this device may be used with an antenna installed outside of buildings, please clarify if this is one of the intended operating configurations for this device. If so, appropriate installation instructions and requirements should be provided to users and installers for satisfying RF exposure compliance.

A4. Yes, fixed site configuration with external antenna is one of the intended operating configurations. Please refer to the recently enhanced installation instructions addressing this type of configuration found in the User and Radio Installation Manuals.

We trust that the above information satisfies your requirements. Contact me at (954) 723-5793, if you require any additional information.

Sincerely,

Mike Ramnath.
FCC Liaison.
Email: Mike.Ramnath@Motorola.com