

Gentlemen,

This covering letter is in response to your email dated 19 December 2000, EA 99036, FCC ID CASTEL0051, correspondence number 17434.

Exhibits for MPE testing and supplementary information comprising an updated User Guide and Installation guide will be uploaded with this letter.

The supplementary information on antenna choice and installation and operator training has been designed for incorporation into an Installation Guide and User Manual common to this range of transceivers one of which has already been granted authorisation (FCC ID CASTEL 0036).

*Q1. Please identify the operating configurations and exposure conditions of this transmitter. Does it use vehicle-mount antennas only or if there are other operating configurations.*

Answer:

Operating Conditions: Mobile transmitter using vehicle mounted antennas only.

Exposure conditions: Occupational/Controlled.

*Q2. The manual has identified antennas up to 9 dBi and the highest measured output is 27 W, while the manual info is only applicable for 15 and 25 W. The MPE separation distances indicated in the manual do not seem to be appropriate or correct, with respect to FCC limits at the operating frequency of this transmitter. This is inappropriate and insufficient for users and installers to satisfy MPE compliance requirements. (also see below)*

Answer:

The manuals have been updated to specify calculated safe distances for 2.1 and 5.1 dBi gain antennas. The power density was measured with a power output of 26.4 watts, and the results proportionately adjusted for a power output of 30 watts (maximum available). This ensures safety should any environmental factors cause the transmitter to exceed the nominal set power of 25 watts.

*Q3. After revising the separation distances required in item #2 above, if these separation distances cannot be ensured by the specific antenna installation procedures/requirements currently indicated in the manual and the radio operator must maintain the needed separation between bystanders and the antenna, this transmitter must be limited for use in an occupational/controlled exposure environment (note; exposure environment and exposure limits are two separate items). That is, the radio operator must have control of bystander exposure conditions to ensure bystanders are complying with general population exposure limits. General population limits are applicable for bystanders because they do not have knowledge of being exposed, therefore, cannot control their exposure conditions or duration. Occupation limits may apply to the radio operator if he or she has the knowledge to control his or her own exposure conditions to satisfy the higher occupational limit. Otherwise, general population limits should be used for the radio operator. (please see Supplement C to OET Bulletin 65 for exposure environment and requirements etc)*

Answer:

Exposure conditions: Occupational/Controlled.

*Q4. The antenna installation positions and configurations indicated in figure 4 of the manual will need to be revised accordingly (see above comments)*

Answer:

Revised installation manual has been uploaded.

*Q5. In order for this radio to qualify for use in an occupational exposure environment, radio operators are required to have the knowledge, through training, to control the exposure conditions and duration for themselves and*

*bystanders. Please provide the appropriate training material and procedures as supporting info. If the training info is in the form of a manual, an RF exposure label is required on the device to direct users to the specific training info. The label should indicate that in order for this radio to satisfy FCC RF exposure requirement it must be restricted for occupational use only and the users must following the specific training information in the manual before operating this radio.*

Answer:

Please refer to supplementary information in User Guide.

*Q6. Please see recently approved filing, FCC ID: AZ492FT4835 for similar situations on controlled exposure requirements. That device (operates at a higher frequency) is categorically excluded from routine RF exposure evaluation but has chosen to perform both MPE and SAR measurements to achieve a smaller (more realistic) separation distance. For training and labeling info, please see another recently approved filing, FCC ID: OWDTR-0006-E. This is a portable radio, but the training and labeling info should generally applicable to the device in the current filing.*

*Note: Output is 27 W.*

Answer:

Noted.

Best Regards,

Steve Crompton.