

American Telecommunications Certification Body Inc.

6731 Whittier Ave, McLean, VA 22101

March 31, 2004

RE: M/A-COM Inc.

FCC ID: OWDTR-0022-E

After a review of the submitted information, I have a few comments on the above referenced Application.

Administrative/General:

1) External photographs appear to be missing the front of the unit. Please provide.

Response: Please refer to the revised external photograph exhibit uploaded with this response.

2) The RF exposure appears to be calculated using 35 W, while the maximum measured appear to be 36.4 W. Typically, the RF exposure should be calculated using worse case power. Please explain and/or correct. Note that this may affect the distances documented in the users manual.

Response: MPE reports have been changed to use the 36.4 W measured conducted power. Revised reports are loaded with this response.

3) Also in regards to RF exposure, 90.205(q) should be accounted for in MPE evaluations, i.e., compliance distances should be determined according to allowed 20% over nominal power, unless radio is documented to not support such levels. Please explain and/or correct as necessary.

Response: MPE reports have been changed to incorporate a 20% adder over the reported conducted power measurement. Revised reports are loaded with this response.

4) The label mentioning occupational exposure appears to be placed on the back of the unit in a position that is not seen by the end user. The FCC rules state that the Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. If the label not visible after installation, please explain how the user is made fully aware of the potential for exposure, given the user may not necessarily be the installer.

Response: Photographs showing microphone types with TSB-133 recommended RF radiation hazard warning label attached to the microphone, have been uploaded with this response.

5) The manual(s) appear to be missing information regarding co-location, i.e.: "This device must not be co-located or operating in conjunction with any other antenna or transmitter."

Response: Please refer to the revised manuals uploaded with this response.

Technical:

6) Please confirm that the digital device and RX portions of this equipment have been verified for compliance under Part 15 requirements. Additionally, information regarding this fact was not found in the users manual. Please provide an updated users manual as necessary for Part 15 compliance statements and prohibition against modification, etc.

Response: FCC Part 15 section 103(a) categorically excludes mobile radio installations. But, per 15.103 recommendation, the digital portion of the device was tested and a DoC report covering Part 15 digital and RX emissions exists and can be provided upon request. The

American Telecommunications Certification Body Inc.

6731 Whittier Ave, McLean, VA 22101

statement regarding prohibition against modification was added to the manual, and uploaded with this response.

7) Please provide an attestation/explanation of compliance to 90.203 (e)/(g).

Response: M/A Com has stated that 90.203(e) and 90.203(f) do not apply because of the exclusion available through 90.203(g)(3). Radios are configured at the factory, on a per customer contract basis, to those frequencies assigned by the system FCC site license, using our PC Programmer tool. This tool is not in the operator, or user's hands.

8) Please justify the use of a 2851 Hz signal for modulation purposes listed in several places in the report (i.e. pages 12, 16, 18) while the plots are typically labeled 2500 Hz.

Response: This was a typographical error, the reference should have been to 2500 HZ, as that is what was used for testing. Please refer to the revised test report uploaded with this response.

9) Please explain why the EA mask was only applied to the 2-Level, wideband, 9600 Modulation in the 806-821 and 851-866 Bands. Please explain why the masks G & H are not necessary for these bands as specified by 90.210. It seems the device may also apply to mask G, but it appears that these waveforms may not meet the G masks requirements.

Response:

- a. Mask EA was applied to plots 8-3, 8-5, 8-7, and 8-11 all in the 806-821, and 851-866 bands.
- b. Mask G was applied to Plot 8-9, and Mask H was applied to Plots 8-6, 8-8, 8-10, and 8-12.
- c. It appears that all waveforms under Mask G pass.

10) If possible, please provide a test for all appropriate masks within each sub-band 806-821, 821-824, 851-866, and 866-869 MHz.

Response: For testing efficiency, and based on our extensive knowledge of M/A Com products, the testing methodology was to provide a cross-sectional representation of the masks in each sub-band. For example, wideband voice Mask B was supplied for the 806 sub-band, and Mask EA for the 851 sub-band, etc.

11) A careful look at Plot 8-8 shows one sidelobe which exceeds the limit.

Response: Please refer to the revised test report uploaded with this response.

Timothy R. Johnson
Examining Engineer
mailto: tjohnson@AmericanTCB.com

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination.