



American Telecommunications Certification Body Inc.
6731 Whittier Ave, McLean, VA 22101

March 31, 2006

RE: Mobile Access Networks

FCC ID: OJFMA2K-IDEN-SMR

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

- 1) The labeling exhibit shows the 2 part FCC statement from 15.19(a)(3). However it would appear that 15.19(a)(1) may be more appropriate. Please review.
- 2) Labeling appears on the MA2000 cabinet, yet the cabinet appears capable of various number and types of RHU units, including different services. It appears that the labeling of the individual RHU's may be more appropriate. If not, then different FCC ID's may be necessary for each configuration on the MA2000 cabinet including number and type of RHU's present. Please justify labeling of the cabinet vs. labeling of the individual RHU units.
- 3) The tune up procedure provided is not very descriptive. Please provide the tune up procedure for this device. If there is no factory tune up done on the device, please explain.
- 4) To correctly identify limit, section 7 should also reference 90.219 (ERP Limits). Please consider correcting.
- 5) It is uncertain if a description of all circuitry and devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation, and for limiting power been provided per 2.1033(c)(10).
- 6) Please confirm/explain iDEN frequencies. Various different bands are cited: 731 (851-869), report (851-869), Operational description (851 - 866), etc. What is correct.
- 7) Please justify 32 kHz occupied bandwidth (page 30) when 90.209 suggests an authorized bandwidth of 13.6 kHz.
- 8) Please verify the frequencies listed in table 7.3.2. They do not appear fully consistent with application.
- 9) For emissions mask, it appears that only mask G was used for 851 – 866 MHz and possibly H was used for 866-869. However the most current version of 90.210 suggests the use of Mask H for 851-854 MHz and Mask G for 854 – 869 MHz. Please review/correct.
- 10) Please justify use of different SMR modulating signal between occupied bandwidth, mask G and J used.
- 11) FYI....It appears that the older G mask was used and not the most recent version. However the difference is only in the 5 – 10 kHz range and does not appear to affect results. Please be careful of this in the future.
- 12) Output power appears different than given on the datasheet provided. Please review/explain.
- 13) Per FCC guidelines, please justify the input drive level used (maximum input rating and maximum gain settings for all tests).
- 14) SMR services in Part 90 require RF exposure evaluation per 1.1307 and 2.1091 depending on ERP values. Please provide RF exposure information as necessary to justify 20 cm distance listed in manual and also to support 2.1091 exemption requirements as well. Alternatively RF exposure evaluation (measurements) should be provided. Please note that final RF exposure should also take into consideration all simultaneous TX power into each antenna element. RF exposure is a function of total RF power.
- 15) SMR appears to require mask J, which appears to equate to $50 + 10 \log P = -20$ dBm. However conducted spurious on page 44 suggest comparison to only -13 dBm. 1 level appear to exceed – 20 dBm. Please review.
- 16) Section 7.5 does not appear to provide any substitution tabular data. Please explain.

- 17) Please explain if the device incorporates frequency translation or only retransmits on same frequency. Note that frequency translation requires frequency tolerance testing per FCC guidelines.
- 18) RX emissions appear to be tested terminated, but the amplifier passband suggest measurements in excess of 15.111 limits. Therefore RX emissions should be tested with antenna attached following Part 15 guidelines. Please review.
- 19) Radiated RX emissions must meet with levels equivalent to Class B levels. Any emissions exceeding Class B levels must be determined to not come from the receiver or transmit circuitry.
- 20) AC Conducted data appears to contain points in excess of the limit, please explain.



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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. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.