



American Telecommunications Certification Body Inc.

6731 Whittier Ave, McLean, VA 22101

July 18, 2003

RE: FCC ID: QDCHAR100_ATCB000525

Attention: Timothy R. Johnson

I have a few comments on this Application.

1. Please note that the 731 does not contain the emissions designator information. Please provide the emissions designator for this device.
2. Please note that the tune up procedure states the device is to be set to "just below 10 watts". The device tested was only 8.7 watts. This is a 14% error between the stated tune up and the actual power measured. Please adjust the power of the device in accordance with the tune up procedure and perform out put power tests. Alternately, please correct the tune up procedure to be closer to the actual power to which the device will be certified (i.e. 8.7 watts). (For example, this may be done by simply stating that the power must be 40dBm +0 / -1dB. This allows the current tune up to be used without reducing the actual power target. Of 10watts)
3. Please note that on page 17 of the report a note states, "This is the LO feed through of the spectrum analyzer and may be ignored." Please note that this signal appears to have a peak that might saturate the analyzer. Since the signal is so close to the 530 kHz fundamental being measured, please explain what measures were taken to insure that over loading of the analyzer was not a problem in this measurement.
4. Please note that the Audio Low Pass Filter Response characteristics are tests that are to be done on the device being certified. The charts provided are not clear and appear to be design guideline 'canned text' charts; not actual measurements of the device. Please provide actual measurement plots (i.e. not design guidelines) that are representative of the actual device being certified.
5. Please note that the OBW plots provided are questionable. Please note that it is not clear from the hand drawn mask on pages 21 and 22 of the report if the device is compliant. The thick overlay of the hand drawn mask hides parts of the lower side band. While the device may be compliant, it is not easily discernable from the data provided. (FYI this may be because the actual modulating tone appears to be almost 2600hz not 2500Hz) Please provide a more clear indication of how the mask overlays on the SA display.
6. Please note that the frequency tolerance for this type device is not expressed in % or in parts per million but is an absolute 100Hz. Please note that the data on page 28 of your report is incorrectly presented. Also please note that the device may be failing frequency tolerance requirements as specified in Part 90.242. Please also note that the ambient transmit frequency needs to be the reference frequency. Please correct the report to reflect the proper tolerance limits of 100Hz and please show compliance to the maximum deviation in frequency as less than +/-100Hz.
7. Please note that temperature drift measurements are to be over the entire range using a single reference frequency so that the total drift can be measured. Please explain why the transmit frequency below 20 degrees is different than the actual transmit frequency above 30 degrees? This indicates that you may have a significant drift in that range.
8. Please note that the emissions mask plots should be referenced to the unmodulated carrier. The plots provided only show reference to modulated carriers. Please provide plots showing proper emissions masks in reference to an unmodulated carrier.

A handwritten signature in black ink that reads "Dennis Ward". The signature is fluid and cursive, with "Dennis" on the top line and "Ward" on the bottom line.

Dennis Ward

<mailto:dward@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.

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.