



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

June 30, 2003

RE: FCC ID: QUH40345-04_ATCB000370
Attention: Mark Betts

I have a few comments on this Application.

1. The power in the documentation needs to be consistent. Please note that the manual and specs state the uplink power to be 31dBm yet the measured power is 28.82dBm max. This is a difference of greater than 2dB. Please make the technical specs and the measured power consistent (within +/- 1 dB). x
2. Please note that the document labeled as the manual appears to be more of the theory of operation and parts list. If this is to be confidential, please include this in the request for confidentiality – also, to justify the manual as confidential please include a short justification as to how and where this device is to have limited access only to qualified personnel. x
3. Please provide the tune up procedure for the device. Alternately, please explain why no tune up is necessary. x
4. Please provide the rf exposure information for this application. x
5. FYI - no action needed unless the block diagram is to be confidential. Please note that the report contains the block diagram of the system. If the block diagram is to be listed as confidential it must be listed on the confidentiality request and removed from the report. x
6. Please verify that the signal amplified is indeed the signal received at the input of the system. The schematics for the preamplifier and the PA are only shown. The block diagram appears to show only filtering but it is not completely clear if the received signal goes through any alteration. If the input signal is demodulated and or altered (other than filtering) then the device may not be an amplifier. Also, please verify that the receiver in the system does not modify the input in anyway but is only used for authenticity of the incoming call. x
7. Since the amplifier filters the input, please provide the schematics for this filter. x
8. Please note that the input vs output data for the uplink show an anomaly. Please refer to pages 30 to 33. The input level from -36dBm to -26dBm show the same output. It is expected that the amplifier should react the same way as with the input vs output of the downlink. The data would suggest that the gain of the amplifier may be saturated at the two levels mentioned. Please explain. x
9. Please note that your limits are incorrect on pages 37 to 42. The limit is not 13 dB down from the fundamental the limit is $43+10\log P$ of the fundamental. This relates to -13dBm as the limit. Please correct your report to show the proper limits as defined in 22.917. Please pay very close attention to 2674MHz, 2547MHz, 3396MHz, 3368MHz, 3340MHz, 2539MHz, 1670MHz, 2505MHz, 769MHz and 3296MHz as these appear to be failing.
10. Please note that radiated spurious emissions are not QP as listed in your report, but ERP values using antenna substitution method. Please provide the ERP values for the radiated spurious emissions. Please note that the limit is again $43+10\log P$ or -13dBm not 13dB down from the fundamental ERP. Please correct your report to show compliance using proper 22.917 and TIA603 methods. Please be aware that there are a number of frequencies that may not be compliant – thus requiring further testing.
11. Please note that the first set of plots in the report are done at a correct RBW as we discussed, however, the block edge plots starting on page 53 of the report were done at the lower than the allowed bandwidths. Your resolution and video bandwidths on the block/band edge plots starting on page 53 are 3kHz. Please note that the lowest allowable RBW required for block and band edge measurement is 1% of the 26dB band width (for a CDMA about 12.5kHz). While the device may be compliant, you must still use the required RBWs. Please correct your report to use the proper RBW and VBW in accordance with 22.917
- 12.

A handwritten signature in cursive script that reads "Dennis Ward".

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.