



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

June 29, 2002

RE: FCC ID: QCN001010

Attention: Morton Hoest

I have a few comments on this Application.

- 1 There has been no request for confidentiality. Consequently, all application documents will be considered not confidential. If you wish to have the schematics, Block diagram and theory of operation held confidential you will have to submit a request for confidentiality under CFR47 0.457 and 0.459.
- 2 Internal photos are blurred and unreadable. Please provide Internal photos that are clear and readable.
- 3 The label and the physical area on the device are of sufficient size capability to contain the FCC ID label and the required 15.19 (two-condition) statement. Please provide an FCC ID label meeting the requirements of 2.925 and 15.19.
- 4 15.21 (Information to user) states, "The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment." The manual only states the manufacturer is not responsible for unauthorized modification. This does not warn the user that any modification not approved by the manufacturer will void the user's authority to use the device. Please provide a corrected manual with a statement in line with the intent of 15.21
- 5 15.247C states the 20dB requirement for radiated emissions, however it also states that in the restricted bands of 15.205 must meet the 15.209 limits. The peak cannot be higher than 74dBuV/m and the averaged readings above 1 GHz cannot be higher than 54dBuV/m. The restricted band of concern in the report are - 2483.5-2500MHz, 4.5-5.15GHz and 7.25-7.75GHz. The peak readings given for a number of restricted band frequencies on page 33 of the report are more than 54dBuV at 3meters. While this may comply with the 20dB over the averaged reading for peak readings, there are no averaged measurements in the report to show compliance for these frequencies in the restricted band to the 54dB average limit. **The device therefore fails.** Please retest and/or provide a report that shows compliance to 15.247 and the requirements of restricted band limits in 15.205 and 15.209.
- 6 The maximum 20dB bandwidth for a frequency hopping Spread Spectrum device in the 2.4 GHz range is 1 MHz. The 1 MHz limit can be exceeded when at least 15 channels and not overlapping. In page mode and acquisition mode channel separation is greater than the 20dB bandwidth in that mode. Device is compliant.
- 7 The device appears to be a Part 15 digital device also. The manual must therefore contain the required statements of 15.105 and must declare the class of the device. Please provide a manual with this required statement or explain why you feel this is not a Part 15 digital device.
- 8 No schematics were provided for the transmitter. Please provide appropriate schematics of the transmitter.
- 9 Please provide a block diagram of the Bluetooth transmitter section.
- 10 No RF exposure (MPE) calculations have been provided. Please provide the required rf exposure calculations.

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.