



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

February 17, 2003

RE: FCC ID: QVZ10010000  
Attention: Elton Chen

I have a few comments on this Application.

1. In section 3.3 of your report you state the 6dB bandwidth is 280MHz. Please correct this to be in line with what was measured in the plots. XXX
2. Please note that your mention of 500kHz as the limit on bandwidth for FHSS systems in the chart on page 9 of your report is incorrect. R & O FCC 02-151 changes the 1 MHz requirement. While you can still have the 1MHz maximum for 79 hopping frequencies, you should reference the correct number. Please change your maximum to show the correct bandwidth. Also, please review the latest 15.247 when testing. XXX
3. The bandwidth plots appear to be very narrow for a Bluetooth device. Typical Bluetooth modulation characteristics generally produce bandwidths in the 700 to 900kHz range. Consequently, it appears that you have not modulated the device with the widest data stream. This assumption is further justified by the fact that the channel separation plot shows a modulated bandwidth greater than 400+kHz. Please remember that while the hopping is to be stopped, the channel must still be modulated with the widest possible data stream for DH1, DH3 and DH5 modes. Please retest the device using the widest modulating data stream and a stopped hopper function at the low middle and high frequencies. Alternately please explain what modulation you used in the test and please explain how this is the widest modulating data stream for your Bluetooth system. XXX
4. In your report you state that the measured conducted power out was -.53dBm with a 1.5dB cable factor giving a conducted power of +.97dBm. However, the bandwidth plots – even though taken with an analyzer and which are typically taken at a lower res bandwidth, shows a peak of 107.55dBuV or +.55dBm. Since you have not specified what the power meter bandwidth was in your conducted power measurements I must conclude that you have incorrectly derived the power out. It would appear that the power out of the device was at least +55dBm with an added 1.5dB cable or 2.05dBm (1.6mw). Please provide an explanation of how you measured the conducted power out giving the associated bandwidths of the power meter. Please explain why the lower resolution bandwidth plot in the SA OBW shows a higher measured power level than your maximum power out table indicates. Please correct the report as necessary. XXX
5. Please note that you have only provided dwell time for one mode and have not clearly identified that mode. Please provide evidence that the dwell time is compliant for the major Bluetooth modes of operation (i.e. DH1 DH3 and DH5 modes). XXX
6. Please note that since you have not put the 2-condition statement required in 15.19 on the device, you must put it in the manual or on the package. Please provide a corrected manual to show you have included this required statement. XXX
7. Please note that the dongle is not clearly identified in the radiated emissions set up photos. Please clearly identify or mark the dongle in these setup photos. XXX

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](http://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.