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

July 26, 2002

RE: FCC ID: AK8DCRIP220
Attention: Kanako Sanda / Hiroka Umeyama

I have a few comments on this Application.

1 While I can open the documents, the FCC is not capable of opening pdf documents with Asian fonts. Please remove all Asian and or Japanese fonts form the following documents and provide them to ATCB: Block Diagram (confidential_BlockDiagram.PDF), Test report (22IE0025-HO-2_FCC15C_.pdf, 22IE0025-HO-2(FCC15C)-2(data)a.pdf) and Test Setup Photos (Test Setup Photo.pdf).

2 While the device is compliant to conducted limits of the new FCC rules, the calculation of the limit appears to be off by several db. The linear interpolation is basically an y=mx+b evaluation. With 150kHz at 66dBuV (1995.2uV) and 500kHz at 56 dBuV (631uV) the value at 259.7kHz should be approximately 63.9dBuV (1567.5uV). The value at 389.6kHz should be approximately 60.5dBuv. As I stated, the device still appears to be compliant, but the report should reflect the correct limit values. Please explain how you derived at the limits in your report.

3 In some instances Bluetooth devices can have larger than 1mHz bandwidths in acquisition (inquiry) mode. Please verify that the device is compliant to the bandwidth requirements for frequency hopping devices in acquisition mode.

4 The 731 form states the power as 0.000026W (2.6mW). The reports however shows the conducted antenna power measurement to be 0.00000062W (0.62mW). An FCC grant contains the actual power measured, not power listed in brochures or technical documentation. The grant therefore will have a power rating of 0.00000062W (0.62mW). If you desire to have the 2.6mW rating on the grant you will have to retest a device that outputs power at this level. Please advice is you wish to retest at a higher level or if you wish to have the grant specify the 0.62mW measured power. If the higher power is desired, please provide a report with testing to show compliance of 15.247 at this higher power.

5 On page 45 of the report you list a 'radiated' power limit of 1W (1000mW). Please note that the 1W is an antenna conducted limit, not a radiated limit. Since you have provided conducted antenna measurements there is no need for Radiated Power measurements. If, however, you wish to include this table (page 45) then you must use the accepted procedure for calculating the Power. This is found in the FCC FHSS test procedure in DA000705. In order to calculate this values, you must use the formula $P = (Ed)^2 /30G$. Remember that G (gain of the antenna) must be the actual gain of the device antenna not an assumed gain of isotropic or dipole. Please correct the values in the table to show correct comparison to the 15.247 power limits.

6 Please note that the restricted band limit for 135MHz is the limit specified in 15.209. This limit is 150uV/m or 43.5dBuV not 40dBuV as stated in the report. While the device is still compliant, the report should be accurate with the correct limits. Please correct to show the correct limits for restricted band.

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.