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

October 16, 2002

RE: Johnson Controls Interiors L.L.C.

FCC ID: CB2UCONN

After a review of the submitted information, I have a few comments on the above referenced Application.

1) Please provide a photograph that shows the complete back of the Bluetooth TX board.
2) Please provide an updated label that includes the correct FCC ID for this application.
3) The device appears to contain 2 or 3 different boards. Please provide a description of what each board is.
4) Please provide radiated spurious emissions test photographs.
5) Please provide a separate RF exposure exhibit. Please be sure to include information regarding how the device is expected to be mounted within a car and the distance the antenna is from users once installed. Also, please provide MPE calculations as these are still desired even with the low power output.
6) The users manual provided contains statements regarding confidentiality. Please note that the users manual is not typically allowed to be considered confidential, since the end user is expected to receive a copy anyway. Please comment.
7) Section 6.4 shows data and a limit for a 1 second. Please note that the limit specified is over a 30 second period of time. Please adjust the data given in this section. Additionally, depending on the amount of data the unit is sending, it likely will not transmit full packets and will provide data less than expected. Refer to Theory of operation that we sent to you earlier.
8) Section 6.5 & 6.6 of the test report states that average measurements were made using a 1 Hz VBW. The FCC only accepts an average measurement of 10 Hz or greater. Additionally, average measurements with the hopping enabled are NOT allowed. To obtain an average measurement, the following must be employed:

    1) Measure the signal with hopping DISABLED using RBW = 1 MHz, VBW = 10 Hz.
    2) Determine worse case duty cycle in any 100 msec of time. Please note that Bluetooth offers several different length packets depending on amount of data to send. Subtract the correction factor of 20 log (maximum transmit time in 100 msec/100) from 1) above.

9) The EUT should NOT be hopping for power measurements. Please provide new peak data (with hopping disabled and also for a typical low, middle, and high channels) for section 6.6 of the test report and also adjust the 731 form if necessary. Additionally, we have provided a document regarding testing of FHSS devices that you may find useful. Please note outline areas of document regarding hoping or being hop stoped.
10) The EUT should NOT be hopping for RF Antenna Conducted measurements. Please provide new peak data (with hopping disabled and also for a typical low, middle, and high channels) for section 6.6 of the test report.
11) Bandedge compliance should be measured for both a hopping and non-hopping mode of operation. Please provide new data for the bandege that checks both modes of operation.

Timothy R. Johnson
Examining Engineer

Direct Phone: 404-414-8071
mailto: tjohnson@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.