



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

October 21, 2003

RE: FCC ID: PYANHL-9_ATCB000853

Attention: Tero Lehtinen

I have a few comments on this Application.

Part 24

1. Please note that you have provided 2 EMC report (Exhibit06.pdf and Exhibit6C.pdf). Please clearly identify which report is to be used. It is assumed that Exhibit06.pdf is the correct report as it is more complete. Please verify.
2. Please note that in your documentation list you specify ANSI C63.4 as a test method. Please note that where applicable for part 24 the accepted FCC test method is derived from TIA 603. Please provide evidence that this method was used.
3. In your report for EIRP of the transmitter you state that the receive antenna was placed at the same height as the transmitter. Please note that this does not necessarily account for a maximum power measurement even in an anechoic chamber. Please note that in EIRP measurements of the EUT the antenna needs to be raised and lowered sufficiently to make sure that the maximum reading is obtained. It cannot be assumed that the maximum occurs at the same height as the EUT. Please retest your device showing how a maximum measurement value was obtained.
4. In section 9.4 of the report you have a column that states "Level [dBm]". However you have not clearly identified this field. Is this the margin compared to the -13dBm limit? While this appears to be the delta from the peak of the plotted signal and while the device is compliant at the band edges, it is not clear what this column is representing. Please clarify.
5. FYI – no action needed. Please note that recent FCC decisions have stated that only the upper and lower band edge needs to show compliance. The FCC has retracted their previous requirements of showing all block edges.
6. Please note that as with EIRP power measurements mentioned in item 1, you have not raised and lowered the receive antenna to obtain the maximum emissions. Please note that it is not possible to predetermine a specific antenna height as the worst case emissions. Please follow the recommended TIA603 test procedures in measuring and reporting EIRP radiated spurious emissions. Please provide data showing that the receive antenna has been raised and lowered in the required manner.
7. As required, please provide the calibration dates of the test equipment.
8. Please note that you have provided 2 EMC report (Exhibit06.pdf and Exhibit6C.pdf). Please clearly identify which report is to be used.

Bluetooth Part 15

9. Please note that your limit table in section 15.4 is incorrect. The limit in the restricted bands above 1GHz is an average limit with requirements of also meeting a 20dB above average in peak mode. Please correct the limits listed in the table.
10. Please note that the restricted band emissions limits above 1GHz are average limits. Please also note that in addition to the average limit of 54dBuV/m the device must also meet the peak limit of 20dB above the average limit or 74dBuV/m. Please note that while the device appears to meet the peak 74dBuV/m it does not appear to have been tested to meet the average limit of 54dBuV/m. Please note that a number of readings on pages 37 to 38 of the BT report fail average limits and thus the device is not compliant. Please retest the device to show compliance to both the restricted band average limits of 54dBuV/m and the 20dB over average limit of 74dBuV/m.
11. Please note that there is no indication in the Bluetooth report that the receive antenna was raised and lowered between 1 to 4 meters during testing of radiated spurious emissions. Please provide evidence that this has been done. Alternately, please retest the EUT using the proper antenna height requirements.

12. Please provide information on the transducer factors used in calculating the radiated spurious emissions data (i.e. cable, preamp if used, antenna factors)
13. As required by ANSI C63.4, please provide evidence that test equipment meets the calibration cycle requirements.
14. In the photos for AC conducted, there appears to be 'spikes' protruding from the conducted emissions table. Please verify that these are not conductive and do not affect the emissions of the device.

SAR

15. Please note that the maximum power drift listed on page 4 of the SAR report show a greater than 5% drift. As stated in 1528 drifts are not to be greater than 5% and if they do exceed 5% then a justification for this excessive drift should be provided. Please explain this greater than 5% drift.



Dennis Ward

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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.