



American Telecommunications Certification Body Inc.

6731 Whittier Ave, McLean, VA 22101

April 18, 2005

RE: FCC ID: BIO5290_ATCB002304

Attention: Bob Cole

I have a few comments on this Application. Please note that further comments may arise in response to answers provided to the questions below.

1. Please provide the tune up procedure for this transmitter. x
2. Please note that part 74 is a licensed broadcast rule part. As such the transmitters under part 74 would have an equipment code of either TBC (Licensed Broadcast Station Transmitter) or TBE (Broadcast Transmitter Held to Ear). This would appear to be TBC. Please verify the equipment code and correct the 731. x
3. Please note that on page 6 of the test report the data table says "Radiated Scan". Please note that if this is the power measurement data it is not correct. Please note that power measurements in accordance with 2.1046 are conducted antenna terminal measurements and are not radiated field strength measurements. Please provide actual conducted antenna terminal power data to support the stated transmitter power of 20W in accordance with Part 74.534 and 2.1046. x
4. Please note that the table on page 6 states a distance of "None" but a distance correction factor of -10dB. What does this mean? Please note that dBuV/m is a radiated emissions unit while dBuV would be a conducted emissions unit of measurement. Please explain your measurement method, the limit values and please provide analyzer settings for the measurements for the data on page 6. x
5. Please note that the conducted mean power measured in item 3 becomes the power used to determine compliance to the Occupied Bandwidth requirements and the EIRP requirements of radiated spurious emissions specified in 74.535.
6. Please explain the plot on page 7 of the report. What does this plot represent?
7. Please note that if the plot mentioned in item 6 is supposed to be the Occupied Bandwidth plot, this does not show compliance to the emissions mask requirements within 250% of the fundamental (i.e. occupied bandwidth requirements 2.1049(e)). Please provide compliance evidence of the emissions in accordance with 74.535 and 2.1049 (i.e. generally provided in graphical form using all appropriate emissions designations). Please insure that the plots are correctly modulated and that the analyzer settings are clearly stated.
8. Please note that conducted spurious emissions limits are stated in part 74.535. As this appears to be an analog modulation and not a digital modulation scheme, the emissions mask for signals removed by more than 250% of the fundamental would be $43+10\log(P)$ or 80dB which ever is less. Please explain why, on pages 8 and 9 of the report, you used a part 15 Class A converted radiated field strength limit for the conducted antenna terminal measurement requirements of a licensed device. Please compare the conducted antenna terminal emissions to the proper limit as specific in part 74.
9. Please note that radiated EIRP limits are stated in part 74.535. As this appears to be an analog modulation and not a digital modulation scheme, the emissions mask for signals removed by more than 250% of the fundamental would be $43+10\log(P)$ or 80dB which ever is less. Please note that in the case of a 20W device this limit would be -13dBm (i.e. $43 - 43 + 10 \log(20)$ or $43 - 56$). Please note that these masks apply to all modulations. Please explain how you derived your limits stated in the table on page 12. Please provide evidence that all emissions designators are compliant with the emissions mask requirements of 74.535 for emissions removed by more than 250% of the fundamental. Please clearly show your calculations for the limit used. Please use the correct reference P as shown in the formula $43+10\log(P)$ and please use the correct calculated EIRP limit of -13dBm.
10. Please note that the request for confidentiality state that the operational description and the schematics are to be confidential. However, please note that these items are also located in the manual, which is not confidential. This means that regardless of the request for confidentiality the schematics and operational description will be in public domain. If these items are to be

confidential, please either remove them from the manual or please include the manual in the request for confidentiality. If the later is desired, please include proper justification for holding the manual confidential.



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.