

October 2, 2006

RE: XM Satellite Radio, Inc.

FCC ID: BGAXMXP04

After a review of the submitted information, I have a few comments on the above referenced Application. Depending on your responses, kindly understand there may be additional comments.

- 1) Is there any specific communication with the FCC regarding this device? If so, please provide correspondence as appropriate to document this filing.

[Answer – Methodology has been discussed in meetings and verbally approved by the FCC. Written communication has been between FCC and ATCB.](#)

- 2) Please update the labeling exhibit to include label location photograph or diagram. Note that the labeling exhibit may not be covered by confidentiality.

[Response : Xpress_Lite_FCC_label_Rev2.doc is uploaded which includes a photograph of the label location.](#)

- 3) Test photographs showing the general test site setup (receive antenna and vehicle) for the in vehicle tests should also be provide as part of the test setup photographs.

[Response : Xpress_Lite_Test_Setup_Photos_Rev2.doc is uploaded which includes photographs of the general test site setup photos.](#)

- 4) Please provide information (testing, not simply users manual or operational description information) to explain the absolute lowest and highest TX frequencies for each band available in the device. Note that currently the FCC is asking that the test lab report the minimum/maximum channels that the tuning controls were manually capable of moving to verify maximum tuning range and not simply a manufacturer explanation. Please have report updated for this.

[Xpress_Lite_Report_of_Measurements_Rev2 is updated to include this measurement from the test lab.](#)

- 5) It is uncertain if cables were manipulated in effort to obtain worse case data. Has cable placement been explored? This is required by ANSI C63.4.

[Answer - Cable placement was randomly peaked at each test frequency tested.](#)

- 6) Generally the FCC expects all inputs and outputs to be filled during testing and following published requirements of ANSI C63.4. For radiated tests, please define what ports were utilized and justify as appropriate why certain ports may not be filled (i.e. there is a concern with the audio ports) Please explain, justify, or correct.

[During testing, the audio INPUT port was filled with an audio cable. The audio output port was inadvertently not filled. All data pertaining to Section 15.239 has been repeated with the audio output port filled and included in the updated report.](#)

- 7) For in vehicle testing, the test report shows that the lowest and highest channels do not appear to be used for testing (88.7 vs 88.1 MHz and 107.1 vs. 107.9). In absence of some compelling argument, the FCC asks that the lowest and highest actually be used – especially for occupied bandwidth tests. Note that 731 form cites 88.1 – 107.9 MHz. Please review.

Answer – High level ambient signals present at the OATS made testing of 88.1 and 107.9 impractical. Available frequencies were selected as close to the low, mid, and high end of the usable frequency range as possible. For occupied BW, 88.1 MHz and 107.9 MHz were used, as required.

- 8) It is uncertain what type of glass antennas were present in each vehicle tested and their location. Please provide photographs or information as appropriate to document this.

The Toyota Camry and Nissan Maxima were used, which have glass antennas in the rear glass. The Chrysler Pacifica uses a glass antenna in the side window glass.

- 9) Test equipment for AC conducted emissions do not appear to be provided. Please update.

Answer – Model, serial number and applicable calibration dates for this equipment can be found in the test report in section 4.8 under the sub section titled, 'FAU EMI Lab' and in section 4.2.1 titled 'Test Set up – Conducted Emissions.'

- 10) The manual mentions Audio Level adjustment (page 25). Please comment on how this was adjusted to ensure maximum levels during testing (drive levels, etc.). Please ensure both radiated and occupied bandwidth tests have been performed utilizing maximum user controllable drive levels.

Answer - In all cases, the audio levels were set to maximum.

- 11) FYI.....Regarding short term confidentiality, you are responsible for the following:

a) Note that any documents held under the short-term confidentiality will automatically become public after 45 days. A manufacturer may extend this period up to an additional 45 days. This requires an additional cover letter requesting this extension must be submitted to ATCB a minimum of 7 days prior to the expiration of the original 45 day temporary grant of confidentiality

b) If the manufacturer engages in public marketing activities or otherwise publicizes the device prior to the expiration of the short-term confidentiality period, the applicant must immediately notify ATCB so the exhibits can be made publicly available.

- 12) FYI..... Although we are processing this application, as of September 12, 2006 we are also required to work with the FCC to pre-review 15.239 applications and also for FCC to authorize us to release the grants. Please note that we must rely on the FCC to release locked FCC ID's in order to do this. Please note that depending on when reviews are actually completed, there may be a delay during which the grants are generated dependent on the FCC.

For the following information, in effort to treat effectively under short-term confidentiality requested, please answer the following items separately as cited below.

13) The block diagram appears to suggest 2 different forms of FM couplers (one labeled "FM Booster", one labeled "FM Direct Adapter"). Please explain the differences between these various modes/configurations as necessary (i.e. are they leaky coax, what type of coupling is utilized, is the signal attenuated, length of cable, etc.). Please ensure this includes a description of operation/function of each.

Answer - See '[Xpress_Lite_ATCB_Responses_Short_Term_Confidential.doc](#)'

14) Please provide a technical description of operation/function of the FM coupler. Please upload this information as a separate exhibit (operational description) to ensure proper treatment of confidentiality.

Answer - See '[Xpress_Lite_ATCB_Responses_Short_Term_Confidential.doc](#)'

15) Please provide an appropriate installation manual for the coupler configuration. This does not appear to have been provided.

Answer - See '[Xpress_Lite_ATCB_Responses_Short_Term_Confidential.doc](#)'

16) Regarding the FM coupler, please explain what happens if the XM antenna is directly connected to the docking port and therefore bypasses the coupling module. Would this yield a leaky coax connection? Is it possible to bypass the coupling module this way?

Answer - See '[Xpress_Lite_ATCB_Responses_Short_Term_Confidential.doc](#)'



[mailto: tjohnson@AmericanTCB.com](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.