

XM Satellite Radio Inc Additional Information
Provided in Response to ATCB Questions 1-2 dated Nov 11, 2008
FCC ID RS2SPRCI
Nov 13, 2008

- 1) FYI... Please note the following from previous comment 1 below since it appears you didn't see my concern. The error is minor (few tenths of a dB), but thought you may want to be aware.

Awareness has been acknowledged, and the necessary corrections have been made to table 7-29. All data cells have been re-calculated using the right AFCL's for each emission level recorded. The updated test report and 'Permit but Ask Info' documents have been uploaded for your review.

- 2) We agree that the majority of closer margins look normal (where roughly 5 to 40 dB margin is shown). However starting on page 38 of 53 of the test report, there is a series of RAW data showing -135 dBm as noise floor. Note that the margins jump from about -30 dB (reasonable to expect) to -80 dB. It is almost if an amplifier gain was entered as a negative number, rather than positive number. Typical gain of 8447D is >25 dB. However note that an amplifier is not shown in any correction factors.

While some spectrum analyzers may achieve -135 dBm – with my experience this is typically only found at a 1 Hz RBW. Therefore typical use of 120 kHz RBW would show a value much higher than -135 dBm especially for in-situ type testing where ambient conditions would be much higher than in a controlled semi-anechoic environment. Note that the lowest reading in the class B report was about -101 dBm which could be reasonable to expect as near noise floor conditions in typical configurations.

Another unusual item we can note would be that the frequency on page 38 for 440.5 MHz is about -81.5 dBm (again a typical expected reading). However page 41 shows this same frequency as -135 dBm for a different test configuration.

Pages 38-52 appear to show RAW readings from -114 dBm to -135 dBm. Please explain the test equipment configuration to achieve these values.

The data tables on pages 38 – 52 (Tables 7-33 through 7-47) have been corrected in the revised test report already uploaded. The levels shown in the "LEVEL" column are adjusted for an external pre-amplifier. This was an error in the original report in that the RAW levels did not include the pre-amplifier gain. The final levels and margins for actual detected emissions did not change. The -135dBm level reported in the "LEVEL" column is the level to indicate that no signal was detected and this also takes the pre-amplifier into account (gain ~27dB). The tables in the original report inadvertently took the pre-amplifier gain into account a second time for calculating the final field strength level for the noise floor levels (i.e. -135dBm).