

Comments and Response:

Part 90

10) Please explain compliance to 90.203(e) and/or (g).

**Response:** The radio is intended for professional installation. All access to parameters including transmit frequencies is password protected (i.e., “controls are inaccessible to the operator”).

Part 101:

8) Please explain compliance to 101.141(a)(6) as applicable. Application of the masks do not appear intuitive. Note that Part 24 defines the mask as a displacement from the edge of the authorized BW. However Part 101 defines this as from the CENTER of the authorized BW. Part 101 appears to allow use of aggregate BW's. It appears you are taking advantage of aggregate channels when using 101.111(a)(6), but it is not apparent where and what is being used for the authorized BW for each side of the mask. Therefore please explain what the center is for the authorized BW's and/or how you calculate from the center of the channel are that are used for purposes of generating the masks. This would also apply to other plots around pages 128 – 133, and page 162 (i.e. both 25 and 50 kHz).

Note: There is a Note 1 on page 47 that seems to also ask this same question: describe ... how the reference for the top of the mask was determined".

Note 2: The rest of the mask was not yet proofed pending the response to this comment.

**Response:** For Part 101, the mask for aggregate channels is built by adding 1 less than the number of aggregated channels around the center of the authorized bandwidth and then adding  $\frac{1}{2}$  of the mask for a single channel on each edge of the mask. So the mask shape remains the same it is just widened to account for the multiple channels used. For example, the width of the §101.111(a)(6) mask for a single channel where no attenuation is required is 10kHz wide and then sloped attenuation is required to the point  $250\% * \text{authorized bandwidth}$  from the center. When you aggregate two 25kHz channels, the width where no attenuation is required becomes 35kHz ( $25\text{kHz} + 10\text{kHz}$ ) and the sloped attenuation begins at this point and continues to the point  $250\% * 50\text{kHz}$ . A revised report has been uploaded with the note on page 47 modified as it was not completed correctly.

9) Page 128 & 162 – It cannot fully be determined if the plot exceeds the limit line.

**Response:** Compliance with the mask limit is indicated by the indication of PASS at the bottom of the plot. The software determines if any of the emission exceeds the limit line. If it does at any frequency, the result would be considered a failure and the indication would be FAIL.

13) Similar to the above question 8, please provide more of an explanation on how the aggregate mask of page 151 is derived.

**Response:** The same method as described above for Part 101 was used for part 90 aggregate mask on page 151 except for two 12.5 kHz channels. Here 5 kHz is the width for a single 12.5 kHz channel. Therefore for 2 aggregated channels, 17.5 kHz is the width for the top of the mask before the slope begins.

16) 90.210C masks appears to change between pages 66-68 and 69-77 for the portion > 10 kHz and < 250%. Please explain as this formula isn't expected to change for these masks?

**Response:** The plots on pages 66-68 did not account for the lesser attenuation allowed for the portion of the frequency ranges from 10kHz to 250% from the center of the authorized bandwidth. This lesser amount of attenuation is correctly shown on pages 69-77. Since the product met the more restrictive mask, it was deemed to comply.

2) The previous response to question 11 (i.e. why is Mask G shown on page 55, 63-65) for some frequencies subject to mask J, mentions that mask G is more restrictive than mask J. Please explain how mask G is more restrictive when the mask starts at 10 kHz, and Mask J starts at 2.3 kHz. Therefore mask J appears to have attenuation from 2.5 – 10 kHz that Mask G does not, as well as at 10 kHz, it appears Mask J may be 7 dB more restrictive.

**Response:** For this aggregate mask, Mask G is more restrictive than Mask J at offsets > 10 kHz and < 18 kHz by as much as 17.4 dB (24.9 versus 7.5). However you are correct that from an offset of 8.75 to 10 kHz, Mask J is more restrictive by as much as 7.5 dB. However, based on the characteristics of the emissions from this product, Mask G represents the worst case compared to the limit. Notes have been added to the test report explaining that the device also meets Mask J.