



September 28, 2007

ATCB  
Mr. Richard Fabina

RE: ATCB005022 for Radio Systems Corporation  
FCC ID: KE3-FT303A

Mr. Fabina:

The following is my response to your letter with comments regarding the above submittal. I have included your original text to respond to.

I have a few comments on this Application. Depending on your responses, kindly understand there may be additional comments.

1. Please confirm that this transmitter is not a learned mode transmitter where it determines its pulse train from a device that is operated by the consumer. Learned mode transmitters cannot be approved by America TCB.

The Transmitter is not a learned mode transmitter.

2. The FCC ID label is wrong. It is missing the term "FCC ID" (See Section 2.925(a)(1) of the FCC Rules. This section reads "FCC Identifier consisting of the two elements in the exact order specified in §2.926. The FCC Identifier shall be preceded by the term *FCC ID* in capital letters on a single line, and shall be of a type size large enough to be legible without the aid of magnification." Please revise the label exhibit accordingly.

Revised and Uploaded

3. Please confirm that all buttons were depressed to determine worst case duty cycle factor and all buttons either transmit the same pulse train or the worst case was chosen for determining the duty cycle correction factor. Plot 5d shows 20 pulses in the pulse train while plots 5c and 5e show either 31 or 33 pulses in the pulse train. If the duty cycle increases, recalculate the duty cycle correction factor using item 7 below.

Plots 5a and 5b show transmit time of the 2 discrete pulse types used in the transmission. Plot 5d shows a single cycle of the pulse train. This cycle is repeated 4 times every 380.63 ms as shown in plot 5e.

Original duty cycle correction was conducted as 26.4 ms every 380.63 ms as that was the duty cycle, yielding -23.18 dB duty cycle correction factor.

However, since the maximum allowed time to determine duty cycle correction is every 100 ms, and assuming that all pulse transmissions occur in the 100 ms time period, the duty cycle factor becomes:

$$20 \log (26.4/100) = -11.6 \text{ dB Correction Factor (as calculated below under item 7)}$$

The report has been corrected accordingly and uploaded.

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4. Please confirm that all buttons were depressed to determine worst case radiated emissions from this transmitter and what mode or button represents the worst case radiated data submitted. If the duty cycle increases, recalculate the duty cycle correction factor using item 7 below.

This confirms that all buttons were depressed to determine the worst case radiated emissions. The side transmit button represents the worst case radiated emission. The EUT was also tested in all three axis to determine worst case emission.

5. Please confirm that the knob that increases the intensity of the pet training signal does not increase the duty cycle correction factor by increasing the number or width of pulses sent in a pulse train. If the duty cycle increases, recalculate the duty cycle correction factor using item 7 below.

This is confirmation that the knob increases the voltage applied but does not increase the duty cycle.

6. The letter granting US Tech the authority to act as your agent before the FCC comes from a different company (Pet Safe Training Systems) than Radio Systems Corporation. Please either provide another letter from Radio Systems authorizing US Tech authority to act as your agent or give Pet Safe the authority to do so. There must be traceability back to the applicant, Radio Systems Corporation on all actions in this application.

Pet Safe Training Systems is the Copyrighted Trademark of Radio Systems Inc. This Agency letter has been used since 2005 to allow us to act as agent for Radio Systems. All prior applications that have been granted by ATCB for Radio Systems has used this letter. Can it continue to be accepted?

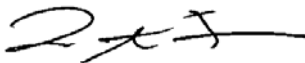
7. For your information – The duty cycle correction factor was calculated incorrectly. Duty factors are calculated over the entire pulse train including blanking intervals or 100 milliseconds whichever is shorter. In this case, the pulse train exceeds 100 mS. Therefore, you must choose the maximum on time for the pulse train during any 100 mS window. See ANSI C63.4(2003), Annex H4, step J and Section 15.35(c) of the FCC Rules for help. If the answers to issue 3 above do not change what has been represented in this filing, I have calculated the worst case duty factor as being -11.6 dB if all pulse transmissions occur within the 100 mS window (which they will not). But even using this duty cycle correction factor, the transmitter complies with all the requirements for field strength of fundamental, spurious and restricted band radiated emissions. Please make a note of this requirement for future applications.

Noted. See item 3 above. Report corrected and uploaded.

Thank you for your attention to this matter.

Please contact me with any further questions.

Sincerely,



Louis A. Feudi  
Vice President of Operations and Engineering

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