

**From:** Roland Gubisch ES-Box  
**Sent:** Tuesday, October 26, 2004 5:00 PM  
**To:** Steve Li ES-SHA; Daniel Zhao ES-SHA  
**Cc:** Danielle Fontaine ES-Box  
**Subject:** Part 95C R/C Applications FCC ID: SEQ 33998559955 and FCC ID: SGZ30835HS45

Gentlemen,

Thank you for these certification applications. Technical and administrative review is now complete. The following issues must be addressed before we can proceed to certification:

#### **ADMINISTRATIVE**

1) The user manual does not contain required information to the user per 95.653(b)(2)-(3) as follows:

*§ 95.653 Instructions and warnings.*

*(2) Warnings concerning any adjustment that could result in a violation of the rules or that is recommended to be performed by or under the immediate supervision and responsibility of a person certified as technically qualified to perform transmitter maintenance and repair duties in the private land mobile services and fixed services by an organization or committee representative of users of those services.*

*(3) Warnings concerning the replacement of any transmitter component (crystal, semiconductor, etc.) that could result in a violation of the rules.*

**Please provide a revised user manual, or the necessary text as an addendum with the applicant's attestation to include this material.**

2) I cannot find information regarding the DC power (voltage, current) into the final RF stages, as required by 2.1033(c)(8). **Please indicate where this information can be found, or provide it.**

#### **TECHNICAL**

1) The occupied bandwidth plot has too narrow a span to allow observation of the bandwidth limit required in 95.633(b), nor of the emission mask in 95.635. **Please provide a bandwidth plot with a span no greater than twice or three times the emission bandwidth (that is span = 10 or 15 kHz). The 20 dBc points showing the occupied bandwidth should be clearly shown on this plot, as well as the emission mask with stepped limits changing at +/- 4 kHz, +/-8 kHz, +/-10 kHz and +/-20 kHz from the center frequency of the sample channel.** More than one plot may be used to show compliance clearly.

These plots are referenced to the total transmitter power, and not the peak emission. Therefore, the 20 dBc points and the 0 dB mask reference should be determined from a spectrum analyzer plot of the fundamental emission, taken with RBW > emission BW. Then, the RBW is decreased to that shown in the existing plots, but without adjusting the signal reference.

2) The occupied bandwidth plot shows a channel center frequency of 72.02 MHz. This is half way between two allowed channel frequencies of 72.01 and 72.03 MHz. **Please explain.**

3) This is a minor comment. The formula shown on page 11 is incorrect: Limit of ERP in dB = -56 - 10Log(Power) = -56.0 - 10Log(1.10) = -26.41 Db

In the formula, Power must be given in Watts. So the correct formula is: -56 - 10 log (0.0011) = -26.41 dB.

Certification can proceed as soon as these issues are addressed.

Thank you,  
Roland Gubisch