American Telecommunications Certification Body Inc.

6731 Whittier Ave, McLean, VA 22101

June 12, 2003 Date of Correspondence June 19, 2003 Date of Response

RE: Backgrounds Unlimited, Inc.
FCC ID: NH5-FWTX1W

I have a few comments on the above referenced Application.

1) Photographs 8, 9, 11 for internal photographs are too dark and/or unclear. Please provide new photographs.

Response: Please refer to the revised internal photograph exhibit uploaded with this response.

2) Please provide a block diagram of higher resolution so all characters are easily readable.

Response: Please refer to the new block diagram exhibit uploaded with this response.

3) From external photograph number 4, it is confusing as to what is being approved. Does the device consist of all items shown, only 2 of them, etc. Please provider further external photographs that clearly show the external view of the device from various angles and it's input/outputs.

Response: Please refer to the revised external photograph exhibit uploaded with this response.

4) Additionally, please note that TCB's are not allowed to approve portable modules for operation in licensed services that are not configured in a dedicated host device. From the information given in this application, it can not adequately be determined how this device will be used. Please provide further explanation regarding portable/mobile/fixed use and how this device is intended to be used.

Response: The EUT is a video transmitter intended to be used in mobile and fixed configurations. It will be used for law enforcement operations and surveillance.

5) The RF exposure calculations appear to show 180 cm. This appears incorrect. Please verify. Additionally, please note that the FCC no longer desires that the safe distance be calculated, but instead prefers the power density results to be calculated and compared to the power density limit.

Response: Please refer to the revised RF exposure exhibit uploaded with this response.

6) Given the number of boards and parts shown in this application, the parts list and schematic provide appear to be only a small portion of the device. Please explain.

Response: Please refer to the revised parts lists and schematics uploaded with this response.

7) Please provide a higher resolution schematics. Not all parts can be easily distinguished.

Response: Please refer to the new schematic exhibit uploaded with this response.

8) Spurious emissions were measured up to 10 X Fc, however, the equipment used for testing (page 10) only covers up to 5 x Fc. Please explain.

Response: An error occurred in the report. Please refer to the revised test report uploaded with this response.

9) The Corrected Signal Generator Levels given on page 6.2.1 appear to be slightly off. From my calculations, row 1 should be 79.8, row 3, 83.8. Everything appears to be off by 0.9 dB. Please provide a sample calculation and explain.

Response: The dBc value was calculated from a wrong carrier value, which was as noted 0.9 dB lower. The appropriate value has been used, the table corrected, and a revised test report uploaded with this response. A sample calculation is as follows:

Carrier Amplitude - (Signal Generator Level – Cable Loss + Antenna Gain) = Corrected Signal Generator Level (dBc)

30.0 – (-51.5 – 5.3 + 7.0) = 79.8

Limit (dBc) - Corrected Signal Generator Level (dBc) = Margin (dB)

Signal Generator Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Limit dBc	Margin (dB)
-51.5	5.3	7.0	79.8	43.0	-36.8

10) Please provide:

a) DC voltages & /currents applied into the several elements of the final radio frequency amplifying device for normal operation over the power range

Response: 12Vdc at 1000ma

b) Tune up procedure over power range

Response: N/A, microprocessor controlled frequency

c) Description of all circuitry and devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation, and for limiting power.

Response: Please refer to the revised Operational Description uploaded with this response.

d) If necessary, please adjust the confidentiality letter to cover these items.

Response: There is no need to adjust the confidentiality letter.

11) Please provide a statement explaining why the subcarriers were excluded from the necessary bandwidth calculations.

Response: The modulating signal consists of a video carrier and two audio sub-carriers. The mean radiated power from each of the sub-carriers is less than 0.5 percent of the total mean radiated power, therefore only the characteristics of the video modulating signal are considered when calculating the necessary bandwidth.

12) Using the FCC 1% of 99% bandwidth rule of thumb, the occupied BW plots should use an RBW not less than 131 kHz. Please correct.

Response: Please refer to the revised test report uploaded with this response.

13) The limits on page 15 refer to both kHz and MHz. Please correct.

Response: Please refer to the revised test report uploaded with this response.

14) The tolerance and emissions designator given on page 1 and the 731 form do not match page 6 of the test report. Please correct.

Response: Please refer to the revised test report uploaded with this response.

15) The frequency stability listed on the 731 does not match the report, please explain and correct as necessary.

Response: Please refer to the revised test report uploaded with this response.

16) The explanation given in section 9.2.1 of the test report does not appear to match the data provided. Please correct.

Response: Please refer to the revised test report uploaded with this response.

17) The occupied bandwidth shown in Plot 7-2 appears out of compliance. Please review and provide better plots as necessary.

Response: Please refer to the revised test report uploaded with this response.

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