



American Telecommunications Certification Body Inc.
6731 Whittier Ave, McLean, VA 22101

June 12, 2003

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.
- 2) Please provide a block diagram of higher resolution so all characters are easily readable.
- 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 provide further external photographs that clearly show the external view of the device from various angles and its input/outputs.
- 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.
- 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.
- 6) Given the number of boards and parts shown in this application, the parts list and schematic provided appear to be only a small portion of the device. Please explain.
- 7) Please provide a higher resolution schematic. Not all parts can be easily distinguished.
- 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.
- 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.
- 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
 - b) Tune up procedure over power range
 - 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.
 - e) If necessary, please adjust the confidentiality letter to cover these items.
- 11) Please provide a statement explaining why the subcarriers were excluded from the necessary bandwidth calculations.
- 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.
- 13) The limits on page 15 refer to both kHz and MHz. Please correct.
- 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.
- 15) The frequency stability listed on the 731 does not match the report, please explain and correct as necessary.
- 16) The explanation given in section 9.2.1 of the test report does not appear to match the data provided. Please correct.

--- Continued on Next Page ---

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

A handwritten signature in black ink, appearing to read "Timothy R. Johnson", with a stylized flourish at the end.

Timothy R. Johnson
Examining Engineer

[mailto: tjohnson@AmericanTCB.com](mailto:tjohnson@AmericanTCB.com)

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.