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

September 11, 2003

RE: Listen Technologies Corporation

FCC ID: OMDMSF0001

After a review of the submitted information, I have a few comments on the above referenced Application.

1) Please provide a FRN Number for Listen Technologies Corporation. Note that the FRN number is different than the applicants grantee code. This is now required for all Grantees - (reference MD Docket No. 00-205). To obtain an FRN online, visit the FCC's Web site at www.fcc.gov and click the Commission Registration System (CORES) link. For further assistance, please either refer to the FAQ at this same link; contact the CORES helpdesk at CORES@fcc.gov; or call the CORES helpdesk toll-free number: 1-877-480-3201.
2) Internal photographs must show both the top and bottom views of all boards containing any RF circuitry. Please provide additional photographs as necessary. Given the nature of the device containing several antennas, it would be suggested to provide labeling on the photographs that shows which antennas are for which portion of the device (72 MHz RX, 216 MHz RX, 216 MHz TX, etc.).
3) Please provide a labeling exhibit that shows the following:
    a) example label for this device (this should include information specified by 95.1017)
    b) photograph or drawing showing label location
4) Please provide a separate exhibit for the test configuration photographs. The FCC requires this to be submitted as a stand alone exhibit.
5) Please verify that the 72 and 216 MHz receivers have been tested to comply with Part 15 Verification requirements.
6) Please provide both the DC voltage & current applied into the several elements of the final radio frequency amplifying device for normal operation over the power range.
7) The tune up procedure provided appears incomplete, especially relative to power output level adjustments. Please correct.
8) Some of the equipment given in section 4.0 appears to be out of calibration. Please explain.
9) The RF power and spurious radiated measurements made in sections 5.0 & 8.0 of the report mentions using the substitution method. However, the equation used for calculating the final value mentions the use of an antenna factor (AF). Note that the antenna factor is NOT the correct factor to use in this equation (i.e. The factor used was 10.95, while the gain of many Biologs around 200 MHz is around 5 dBi in this range; the horn antenna gain @ 1.3 GHz is typically around 9 dBi). The equation expects the actual gain in dBi. Please explain and/or correct the measurements as necessary. Note that this may actually decrease the power measured even further.
10) The measurement antenna during radiated tests should have been checked for both Horizontal and Vertical polarities. Please explain if this was performed.
11) The users manual mentions, "when you plug a device into the AUX IN, the transmission range of the internal transmitter is increased". How does this feature affect the output power? Has this mode been tested? Was this mode used for final testing since it is likely worse case?
12) The power measurements are much lower than one would typical expect. What is the expected transmission distance for the various output levels (see question 9)? Can you provide an explanation for this device having such a low power measurement.
13) How does variation of the input signal amplitude affect the radiated output power level? (i.e. how is the power output limited and the input drive level controlled)?
14) The plots in section 7.1 do not appear to match the tabular data results. Please explain.
15) The plots provided in section 7.1.2-7.1.4 should be provide for a slightly larger span (approx 50 kHz), relative to the unmodulated carrier level, and also must be provided for both standard and extra band channels (width) modes for comparison to the limits of 95.635(c).

16) I am not familiar with the method used for the occupied bandwidth. Typically BW measurements are provided using a spectrum analyzer power measurement feature to measure the 99% Occupied BW, or for certain types of emissions the 20 dB bandwidth may suffice. The 99% is the portion of the spectrum which contains 99% of the emitted energy (.5% of the remaining is above and .5% is below the occupied BW) while typically using a RBW setting of >= 1% and VBW > RBW. The occupied bandwidth measured should be less than the authorized bandwidth. Note that occupied bandwidth measurements should be consistent with the necessary bandwidth calculations but less that the authorized bandwidth.
17) Please explain the derivation of the 9420 Hz deviation used in the Necessary Bandwidth calculation. This does not appear to be obtained from the deviation threshold testing.
18) Please provide a calculation of the necessary bandwidth for both the standard and extra band channels (width) modes.
19) Please provide a modulation limiting data for both the standard and extra band channels (width) modes. It is uncertain which was used for the data provided.
20) Please explain the derivation of the -23.6 dBm level in section 8.0 of the report. Typically the limit for 43 + 10 log P = -13 dBm.
21) Page 35 of the users manual mentions that this device has been certified to comply with the Class B computing device limits. Note that this application is only requested certification to Part 95. It is assumed that the digital device and receivers have been tested under a verification. Please explain and/or correct the users manual as necessary.
22) Page 35 of the users manual mentions that the cables used must be shielded. Note that according to the users manual shielded cables were not used for power, mic, or speaker connections. Please explain.

Timothy R. Johnson
Examining Engineer

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.