



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

July 18, 2006

RE: LG Electronics

FCC ID: BEJPDA-L12C-WL

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

- 1) The block diagram should show the frequencies of all oscillators (clocks) in both the TX portions of the device (CFR 2.1033(a)(5)). Please correct.
- 2) Photographs of the back of the WLAN module/board, and underneath its shield must be provided. Please provide.
- 3) Because it is not obvious looking at internal photos, kindly provide an internal photo marking/showing placement of the antennas for the device.
- 4) Bluetooth theory cites the device is capable of +7dBm, while its maximum tested was only +2.4 dBm. Please explain as the FCC expects the device to be tested at its maximum.
- 5) If the device is capable of TX while powered from the AC adapter, then AC powerline conducted emissions are required in this configuration per 15.207.
- 6) Radiated tests for portable devices are to investigate all 3 axis positioning of the EUT. Although only worst case data is necessary to be provided, it can not be determined if the device was investigated in all 3 axis (as required by ANSI C63.4). Please review/correct/comment as necessary.
- 7) Section 15.15(b) prohibits adjustments of any control by the user that will cause operation of a device in violation of the regulations. Accordingly, any proposal to allow the end user to choose extended channels on frequencies outside of an allowable frequency band in the USA is not acceptable. For example, a WLAN device operating according to Section 15.247 on channels 1-11 between 2.4 - 2.483.5 GHz must not have any user controls or software to allow the device to operate on channels 12 and 13 which are outside of the allowed USA band. For instance, the user should not be able to select alternative countries which would allow different channel plans outside of the allowed USA band. Please explain how this device is compliant to this requirement.
- 8) For SAR testing, the device appears to be placed into a particular case. Please confirm if this is the case provided by the manufacturer. If not provided, then typically a device would be tested either directly against the phantom or at a minimum distance (i.e. 1.5 cm) which would be discussed in further detail in the manual. Please explain.
- 9) It appears that the WLAN and BT may function at the same time. Therefore, the Worst Case WLAN configuration should have been tested for SAR both with and without BT operational. Please note that for SAR with devices containing BT, the FCC prefers all testing on the dominant TX to be done with BT off, and then an additional test at the worst case position with the BT on. Note however that for purposes of this application, we will only require the worst case position reported with and without BT operational. Please provide.
- 10) Z-axis plots of worst case test data must be provided. Please provide.
- 11) For SAR, please provide procedures to establish the test signals described (put phone on a call, e.g., base-station simulator vs internal test codes)? This may include a test equipment list or test codes as appropriate.
- 12) SAR report should report probe tip distance to phantom inner surface during scans.
- 13) Ambient and liquid temperatures should be reported on each plot. Please update.
- 14) FYI.....Due to large delta existing between peak and average emissions for Bluetooth, it appears that BT RADIATED emissions were measured with the device hopping and not in CW mode. Note that due to the pulsed nature at each frequency, average measurements are not allowed. Instead a duty factor for the worst case duty factor on a particular channel in 100 msec should be used for

correction. However given the duty factor for DH5 is > 20 dB, therefore if peak measurements meet the limits, average will also meet since the limits between peak and average are 20 dB. In the future please ensure testing is done with a CW mode, or correct average by using the appropriate duty factors.

- 15) FYI....Page 107 & 113 of the manual mentions "This PDA has been tested and demonstrated compliance when Bluetooth and WLAN are transmitting simultaneously. This PDA must not be co-located or operating in conjunction with any other antenna or transmitter." It is recommended that at least this be changed to cite "RF Compliance" or "SAR Compliance".
- 16) FYI....For part 15 devices, the frequency range on the 731 should be the tunable frequencies and not frequency band (i.e. 2412 – 2462 WLAN, 2402 – 2480 BT). Please consider this in the future.
- 17) FYI....Regarding short term confidentiality, you are responsible for the following:

a) Note that any documents held under the short-term confidentiality will automatically become public after 45 days. A manufacturer may extend this period up to an additional 45 days. This requires an additional cover letter requesting this extension must be submitted to ATCB a minimum of 7 days prior to the expiration of the original 45 day temporary grant of confidentiality

b) If the manufacturer engages in public marketing activities or otherwise publicizes the device prior to the expiration of the short-term confidentiality period, the applicant must immediately notify ATCB so the exhibits can be made publicly available.

Attached: Short Term Confidentiality Memos



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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.