



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

August 5, 2003

RE: Netgear Incorporated

FCC ID: PY3ME103

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

- 1) It appears that the AC/DC adapter may contain a ferrite on this cable. Please confirm.
- 2) FYI, For purposes of MPE, all devices meet 20 cm mobile requirements. The manufacturer may specify further distances (i.e. 25 cm and 50 cm as given in the RF exposure exhibits) if they wish. However for purposes of the grant, all meet the mobile 20 cm requirement and will be listed this way.
- 3) Please provide photographs of each of the 12 proposed antennas.
- 4) It is not clear if all connections (access point, cables, Antennas) are non-standard connectors. These must all be non-standard unless the system is professionally installed. Please comment.
- 5) The FCC has normally required that the highest gain antenna of each type be tested. It appears that for the Triband antenna, only the lower gain model may have been tested. Please explain.
- 6) Only the radiated test configuration photographs were provided as a separate exhibit. Please provide the conducted emissions photographs as well.
- 7) The test report appears to show data and plots up to 5 GHz. Please confirm that the device was scanned up to approximately 25 GHz. Note that from the plots provided, it appears that there may not have been the necessary dynamic range to make measurements above 5 GHz. Please explain.
- 8) It appears that some of the patch antennas may have been tested with the antennas laying down, which may not allow proper measurement for spurious emissions that may be emitted from the main beamwidth of the antenna. Note that the highest fundamental measured was for the 5 dBi antenna. It is expected that the highest fundamental would normally occur for the highest gain antenna. Please comment. Note that this fact could affect the bandedge and spurious emissions measured.
- 9) The average emission for Horizontal on the second harmonics (page 130 of 154 of the test report) is only reported for peak emissions. Enough information is not shown to show compliance with the average emissions requirement.
- 10) It appears that the data on page 145 of 154 for the 5 dBi Ceiling antenna is backwards. In other words, by matching the bandedge data with the previous spurious data, the low channel data is listed as Channel 11 and the High channel data as Channel 01 in the bandedge tables. This also means that the results are miscalculated for the bandedge based on the delta measurements used since the incorrect delta is applied to both bandedges.
- 11) The delta measurements used for the bandedge do not appear to match those used in the tables. It appears that for the low channel, a delta measurement is 41.14 dB, while the table used 49.6 dB. For the high channel, a delta measurement is shown of 49.19 dB, while the tables use 48.74. Please explain.
- 12) Power meters listed in the test report appear to be out of calibration (page 155). Please explain.
- 13) It is not certain if any antenna required minimum cable lengths or if certain antennas have a fixed cable length attached. All the radiated test photographs appear to show a cable between the antenna and the access point, while the RF exposure does not list any cables for most antennas. Note that the FCC expects the maximum transmit power with minimum loss per antenna to be tested. Therefore it is expected that the lengths tested are the minimum for those configurations (and others of like antennas with lower gain). Please provide further information regarding this issue. If minimum cables are necessary, what keeps the end user (since this does not appear to be professionally installed) from eliminating these cables?

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- 14) Please provide a users manual for this system that includes proper FCC statements and RF exposure conditions.

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

Timothy R. Johnson
Examining Engineer

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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.