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November 10, 2004

RE: OQO

FCC ID: SHD-A4YWFS

1) The revised report still mentions a banded frequency of 2439 MHz (See page 30 and 34). Please correct.

[Corrected, revised report uploaded.](#)

2) The revised report still missing units for field strength on page 56.

[Corrected, revised report uploaded.](#)

3) Please provide units for the output power for output power shown in tables on page 56 of the revised report.

[Corrected, revised report uploaded.](#)

4) Although there was a concern with the test software for producing all 79 channels, please explain if the end use device will be using 79 channels. Note that if it is considered Bluetooth compliant, it is expected to use all 79 channels.

[Yes, the device will use the full Bluetooth protocol in normal operation. The inability to select the four channels is an issue with the test software for EMC testing.](#)

5) If the device is not considered Bluetooth compliant, please provide detailed theory of operation information regarding pseudo-random hop lists, information regarding RX tracking the TX and having equal input bandwidths to the TX, and information on compliance to 15.247(g) & (h).

[Not applicable, see response to \(5\) above.](#)

6) FYI...Model number or similar identification information should be placed on the same page in the users manual for the DoC compliance statement requirements.

[Noted – Model # is identified in DoC statement](#)

SAR Questions:

1) The SAR report cites power as conducted, but matches your EIRP power. Please explain.

[This was a typo, please see revised report.](#)

2) The FCC normally expects the SAR facility to measure power to ensure device has proper output power for test and that sample has not been damaged. What precautions were taken to ensure the device was operating properly during the test and that the sample was operating as previously measured. For instance, was power measured before and after SAR by Elliott? Are there any concerns with the test software as well. Please explain.

[Pre- and post- SAR test measurements of fundamental signal strength made at Elliott were within a range of +/- 1dB \(i.e. within the measurement uncertainty for a radiated field strength measurement\).](#)

3) This device is capable of transmit from either antenna. How was this factored into the testing. Note section 8.2 suggests both may have been evaluated, but it is not certain.

[Please see revised report.](#)

4) From page 22 of the SAR report, it appears power was only measured from the antenna producing lower power. It would be expected that the highest be measured.

[Please see revised report.](#)

5) For devices containing low power secondary transmitters < 5 mW (Bluetooth in this device), the FCC asks that the worse case positioning of the primary TX be tested with the secondary TX turned on and then off. The purpose of this testing is to show isolation of the 2 transmitters and the fact that the primary TX results are not affected. It appears this may not have been done. Please review and correct as necessary.

[FCC has accepted our procedure for collocated transmitters. In fact, our procedure was used as a model by FCC for its published collocation test procedures.](#)

6) Please adjust the report to define if this device is a production unit or identical prototype.

[Identical prototype](#)

7) Are there any battery options to consider for this device that must be tested?

[No](#)

8) On the test photographs, it is uncertain the positioning of the antennas. This should be denoted when possible.

[The photos show the worst case setup.](#)

9) The SAR report does not appear to 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.

[Please see revised report.](#)

10) Plots for the Validation do not appear to be provided.

[Please see revised report.](#)

11) Was SAR evaluated with the keyboard open and shut? This mode should have been investigated.

[Please see revised report.](#)

12) Are there any body worn accessories to be investigated for this device?

[NO](#)

13) Information regarding Crest Factors does not appear on SAR plots. This should be provided on the plots.

[The IndexSAR system does not use crest factors. Diode compression factor \(DCP\) is used. DCP is determined during calibration of the probe.](#)

14) Z-axis scan information does not appear to have been provided for worse case SAR measurements.

[Our phantoms liquid depth is 15 cm as shown in photos. Therefore according to IEEE 1528 z-axis scan is not required.](#)

15) The dielectric parameters measured should be compared to and show to be < 5% from the expected values.

[They are.](#)



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16) The calibration information given for the verification dipole does not appear to match the date of the calibration information provided and that the device may be out of calibration.

Cetecom extended the calibration period. Studies determined that an 18 month calibration cycle is sufficient. Also, the system validation is within specifications.

17) Users manual should mention to the user that the device has been evaluated for RF exposure conditions to the FCC requirements. Also, it appears that the statements of 15.21 may not be included in the manual. Please review.

Corrected.

This should resolve all concerns with the Manual, SAR and EMC reports. If you have any further comments or questions, please let us know.

Thank you,

A handwritten signature in green ink that reads "Mark Briggs".

Mark Briggs
VP of Engineering