

UltraTech
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August 29, 2002

Federal Communications Commission

7435 Oakland Mills Road
Columbia, MD 21046
USA

Attn: **Mr. Stan Lyles**

Subject: **Response to Correspondence dated August 15, 2002**

Confirmation #: **EA299429**

Correspondence Reference #: **23687**

Re: **FCC ID: QHM-9870**
Applicant: **Intellect International N.V.**

Dear Mr. Lyles,

Concerning correspondence # 23687, please see the following for our response.

1) Operational Description states TX frequency range is 806 MHz to 825 MHz and the 731 form shows frequency range is 806 MHz to 821 MHz. Please clarify.

The device incorporates a radio modem supplied by Research In Motion Inc. (RIM), model R802D, FCC ID: L6AR802D-2-O.

In the US the licensed frequency band for operation on DataTAC networks is 806-821 MHz. RIM 802D module supports the frequency range of 806-825 MHz, but the modules marketed in US are only operational in frequency band 806-821 MHz. Thus the upper frequency range of 821-825 MHz is software disabled and is not available for operation.

2) Please specify normal and/or expected use device and antenna positions.

The normal position of the antenna is as shown on Page 9 or in the test setup photos of the SAR test report. However, it can be rotated 180 degrees around the attachment point.

Normal use would most likely be hand-held at a body-worn height with antenna in the normal position as stated above.

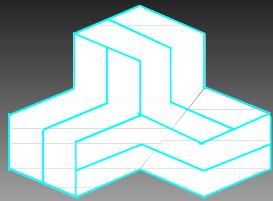
3) Clarification of maximum conducted power. Measurements show 2W however the operational descriptions mention 2.25W is requested. Please clarify. Also, please clarify if the measured value is "burst average".

Our measured conducted power is 2 Watts. RIM's FCC approval grant for the radio modem shows 2 Watts. The conducted power at the factory is calibrated to 2.00 W. The tolerance on the calibration is +/- 0.5 dB. Therefore, 2.25 W (2.00 W+0.5 dB) represented the worst case for SAR measurement.

The conducted power measured was an average during a single pulse (an averaging power sensor was used with an averaging time much shorter than the pulse width).

Also, if you refer to the correspondence from the original RIM radio modem certification, FCC ID: L6AR802D-2-O, a similar question regarding the 2.25W output power and the answer uploaded by RIM can be found. I have uploaded a copy of the correspondence, labeled: "Original RIM Correspondence" for your perusal.

Continued...



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4.) SAR test results for additional body-worn positions. Please provide data for the device with it's back toward the phantom at an appropriate distance corresponding to a body-worn accessory gap.

The summary of SAR results for this particular body position can be found on page 48 of the SAR report. Since it has been found to be at least 3 dB lower than the compliance limit, no further investigation were performed with this specific configuration. Please refer to the uploaded file, labeled: "Body Worn – Back" for details.

5) Additional system verification data. Manufacturer developed data supporting the target value could not be located. Also, please provide the full SAR plot and printout for the validation SAR plot included in the report.

The system has been calibrated using the thermal transfer calibration procedure as shown in Section 5.6 System Calibration (pg. 26 of the SAR report). The results of this calibration are shown in Section 9.2 Temperature Transfer Calibration (pg. 53). The system verification was performed by measuring the exposure from the reference dipole, then comparing the result with the reference SAR values specified in Table 8.1 (Pg. 70 of IEEE Standards 1528). The system verification procedure employed is described in detail in Section 5.7 SAR measurement System Validation (pg. 38 of the SAR report).

6. Clarification of the date of the SAR tests and characteristics of the test liquid. Dates on page 50 and 51 do not agree with those on the SAR plots.

The tissue characteristics shown on page 51 are the results of the tissue calibration performed when the tissue was initially formulated on January 9, 2002 (01/09/02).

Prior to actual SAR measurements, the simulated tissue is calibrated a second time to verify the tissue characteristics; refer to page 50 for details. This verification was performed on April 2, 2002 (04/02/02), in accordance with OET 65, Supplement C (ED 01-01), page 42, which states: "The tissue media should be checked at the beginning of a series of SAR measurements to determine if the dielectric parameters are within the tolerances of the specified target values."

The computer system used to generate the SAR plots and data have regional settings that display dates in the format, (dd/mm/yyyy). The computer system used to generate the complete SAR report uses the format, (mm/dd/yyyy). Therefore, the date, 02/04/02 as shown on the SAR plots should actually be 04/02/02 which correspond to the calibration date shown on page 50. This discrepancy will be corrected for all future SAR reports.

7) Clarification of the test liquid parameters. Values measured on page 51 do not appear to agree with those used for testing.

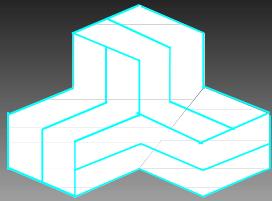
Please refer to the answer to question 6) above.

The values used for testing were the dielectric parameters obtained when the simulated tissue was calibrated a second time. Please refer to page 50 for details of the dielectric parameters used in the SAR tests.

8) New SAR plots/printouts. Please include ambient and liquid temperatures.

The room temperature was found to be $24^{\circ}\text{C} \pm 1^{\circ}\text{C}$ and the tissue temperature was found to be $23^{\circ}\text{C} \pm 1^{\circ}\text{C}$ when the SAR measurement was performed. This information will be included in all future SAR test reports.

Continued...



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9) New RF safety statement for the users manual. Users should be cautioned not to touch the antenna with their hand. When the unit is used with the antenna in the 0 degree position the user could easily touch the antenna.

Correction noted. Please refer to the uploaded file, labeled: "Revised User's Manual"

If you have any other queries, please do not hesitate to contact us.

Yours truly,



Tri M. Luu, P.Eng.
VP – Engineering, Authorized Agent

TML/MT