

Subject: Nokia reply to FCC Correspondence Number 15357 with car kit manual attached

Date: Tue, 8 Aug 2000 17:36:44 -0500

From: Dan.Laramie@nokia.com

To: general@mflom.com

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Nokia responses shown in red and underlined, or attached as pdf files.  
Please upload data to FCC as soon as corrected EIRP data has been inserted for question 1.

Re: FCC ID GMLNSD-3AW

Applicant:

Nokia Mobile Phones Inc

Correspondence Reference Number: 15357

731 Confirmation Number:

EA96989

Date of Original e-mail:

08/01/2000

1. Latest revised radiated measurement indicates 275 mW EIRP at 1851.25 MHz. This does not corresponding to the field strength and correction factor indicated; please re-calculate and confirm output.

Please see corrected data attached, previous data included a typographical error.

(M. FLOM PLEASE INSERT CORRECTED EIRP DATA HERE)

2. Proposed car-kit installation instructions ask users to maintain a 20 cm separation distance from the antenna and all persons. Vehicle-mounted antennas should be installed to provide at least 20 cm separation from all persons to satisfy RF exposure compliance. Please revise accordingly and upload the relevant page.

The car-kit installation instructions have been modified to read as shown in the following attachment. <<CARK-91USANDH07.26.00.pdf>>

3. The belt-clips indicated in all the latest body-worn SAR plots appear to be out of place (next to the antenna) and is different than the test configuration indicated in earlier body-worn SAR plots. Please clarify and if necessary, resubmit plots.

The belt clip was tested inverted previously, because the intended position was not specified to our SAR engineer and he tested it in the wrong position. Attached below is the latest body SAR data with the belt clip in the correct position. The PCS data shows an increase in SAR because with the belt clip in the correct position, it is much closer to the antenna feed point. The change in PCS body SAR is currently attributed to the metal inside the belt clip, which may approximate a resonant length.

<<nsd-3aw\_body\_response3.pdf>>

4. Highest AMPS mode body-worn SAR with the belt-clip was reported earlier as 0.77 W/kg. This is substantially different than that reported in the latest body-worn SAR results (1.04 W/kg). Please clarify factors that had contributed to such changes.

Please refer to attached table of SAR measurements. The earlier AMPS SAR

value of 0.77 mW/g was a mid-channel, antenna retracted, body SAR measurement. The corresponding value to compare this to is 0.91 mW/g (as opposed to 1.04). The difference is approximately 18%, which is within acceptable SAR measurement error. The latest body SAR test with the belt clip upright, shows the SAR at this frequency to be compliant at 0.99 mW/g, this 29% difference is due to the repositioning of the belt clip.

<<SAR\_comparison\_for\_Q4,Q5\_CRN15357.PDF>>

5. The hand SAR values in the latest reply are substantially different from those reported earlier for both AMPS and PCS bands - AMPS mode hand SAR has become much higher (0.84 vs. 2.01) and PCS mode hand SAR has become lower (2.09 vs 1.49) Please clarify factors that had contributed to such changes. Please refer to attached SAR comparison table from question 4. Earlier measured values were 0.85 mW/g for AMPS and 2.09 mW/g for PCS. The value of 2.01 mW/g for AMPS is not relevant, the relevant value is 1.25 mW/g, for mid channel. Although the previous SAR values were significantly different, there is no internationally accepted method to measure the SAR value in the hand when the phone is used beside the head, and the position of the hand is also difficult to determine. Please note that all these values are well within the FCC SAR limit of 4.0 mW/g.

6. Please respond to item number 6 of previous correspondence - revise body-worn statement. The response/statement provided by the test lab on "Hand SAR" is not relevant to body-worn issues. The revised manual page should be uploaded.

The language used in the manual page has been revised, please see attachment. <<Reply to Q6 for FCC CRN 15357 Aug7.pdf>>

7. For AMPS mode, verify compliance with the 911 Calling Mode provision of Section 22.921 of the Rules.

The handset is compliant per FCC order DA 00-132, WT Docket No. 99-328, Adopted January 27, 2000. A copy of this document will be e-mailed separately to the reviewer.

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