

May 25, 2001

Mr. Andy Leimer
Federal Communications Commission
Application Processing Branch
7435 Oakland Mills Road
Columbia, Maryland 21046

Re: Question from the FCC

FCC ID: O2SNURIT3010CT
Correspondence Reference Number: 19307
731 Confirmation Number EA100590
Date of Original E-Mail: May 17, 2001 1:01 PM

Dear Mr. Leimer:

Pursuant to your e-mail to me, I am forwarding to you our response. The relevant portions of the FCC's e-mail follow with our response inserted in the appropriate place:

To: Jayanta (Jay) Sarkar, null
From: Andy Leimer
aleimer@fcc.gov
FCC Application Processing Branch

Re: FCC ID O2SNURIT3010CT
Applicant: Lipman USA, Inc
Correspondence Reference Number: 19307
731 Confirmation Number: EA100590

1) This device uses a Novatel CDPD modem card (EA 92743), which has 600 mW conducted output. There is too much discrepancy between the conducted output and the measured ERP (141 mW). Please explain. Is the difference caused by cable or attenuation between the Novatel card and the antenna or some other reason?

Response: We have re-tested the ERP. Please find below the revised ERP data based on the re-test of the unit. The newly measured ERP is 0.333W. The complete test data for all three channels are shown in the following table.

Table 1

Channel No.	Nominal Transmit Frequency (MHz)	Measured Output Power ERP (Power Level:0) (dBm)	ERP (Power Level:0) (W)
991	824.00	25.23	0.333
383	836.49	24.74	0.298
799	849.90	25.05	0.320

Note: Our normal practice in the laboratory is to use a fully charged fresh battery prior to any measurement is carried out. In order to ensure that the process is correct, we measure the battery voltage and the conducted power (if possible) each time the battery is replaced. In this case, the battery was not fully charged as it was discovered while getting ready for re-test. It was the reason for low ERP reported in the submission.

However, the SAR measurement is independent of ERP measurement. As such, SAR was measured using fully charged batteries and at full power level. The Table 2 below presents the power (conducted, without the cable loss) for SAR measurement as reported in the SAR report. Table 3 presents the same power level as in Table 2, with the cable loss included in the calculation. It can be seen from the power level in Table 3 that the SAR measurement was performed with a fully charged battery and at full power. A revised summary page of the SAR report is attached with this response.

Table No. 2

Scan		Power Readings (dBm)		D (dB)	Battery #
Type	Height (mm)	Before	After		
Area	2.5	6.40	6.05	0.35	5
Zoom	2.5	6.30	6.05	0.25	7
Zoom	7.5	6.30	6.05	0.25	3
Zoom	12.5	6.30	6.02	0.28	7
Zoom	17.5	6.30	6.02	0.28	3
Zoom	22.5	6.30	6.06	0.24	4
Depth	2.5-22.5	6.30	6.01	0.29	5

The following table takes 21 dBm cable losses into account.

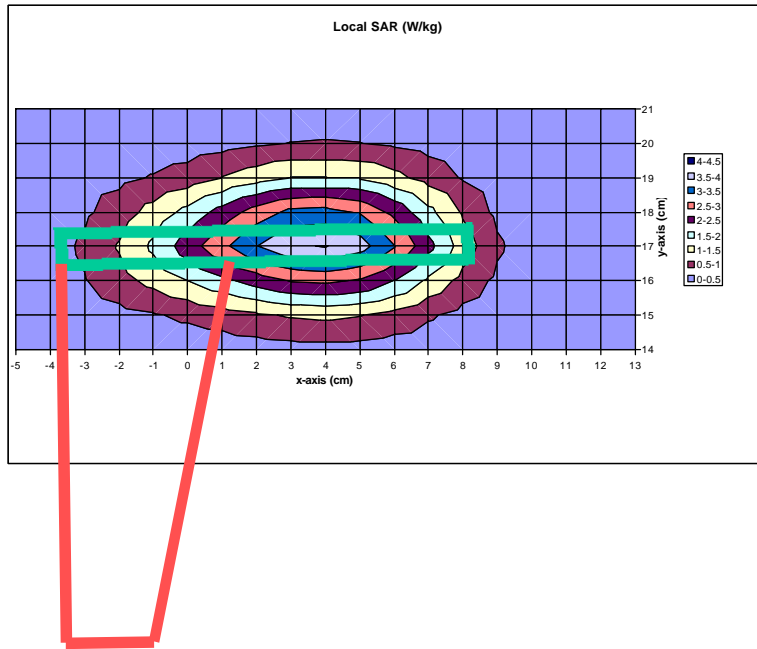
Table 3

Scan		Power Readings (dBm)		D (dB)	Battery #
Type	Height (mm)	Before	After		
Area	2.5	27.40	27.05	0.35	5
Zoom	2.5	27.30	27.05	0.25	7
Zoom	7.5	27.30	27.05	0.25	3
Zoom	12.5	27.30	27.02	0.28	7
Zoom	17.5	27.30	27.02	0.28	3
Zoom	22.5	27.30	27.06	0.24	4
Depth	2.5-22.5	27.30	27.01	0.29	5

Finally, the discrepancy between the conducted output (27.40 dBm) and the revised ERP (25.23 dBm, 0.333 W) is due to the loss in mismatch between the antenna input and modem output as well as the antenna loss.

2) Identify the peak SAR location with respect to the device & its antenna on figure 6.

Response: Shown below is the peak SAR location with respect to the device and its antenna on figure. The SAR report has been modified to reflect this.



In addition, the summary page of the SAR report has been modified showing the ERP. A copy the same page is attached with this.

I trust that the above will answer your inquiry. If not, please feel free to contact me.

Regards,

Jayanta (Jay) K.Sarkar
Director Technical Director, Standards and Certification

Attachment: SAR summary page

Attachment:

FCC ID: O2SNURIT3010CT
Applicant: Lipman
Equipment: Point of Sale Device with a Novatel NRM-6832 Wireless Modem
Model: Nurit 3010, CDPD
Standard: FCC 96 –326, Guidelines for Evaluating the Environmental Effects of Radio-Frequency Radiation

ENGINEERING SUMMARY

This report contains the results of the engineering evaluation performed on a Nurit 3010 POS EDC Terminal which incorporates a Novatel NRM-6832 CDPD modem and has a detachable Carant 3664 antenna. The measurements were carried out in accordance with FCC 96-326. The Nurit 3010 was evaluated for its maximum power level 0.333W(ERP). The duty factor of the radio modem is 100 %.

The Nurit 3010 was tested at low, middle, and high channels for the keyboard up, keyboard down, left, and right sides with the antenna in the 0, 90, and 180 degree positions. The maximum 10g SAR (2.65 W/kg) was found to coincide with the peak performance RF output power of channel 383 (836.49 MHz) for the left side of the device with the antenna in the 90 degree position. (The hot spot is located on the antenna). Test data and graphs are presented in this report.

At a separation distance of 4 cm from the antenna of the device, the maximum 1g SAR is 0.10 W/kg. The manual will have a warning to keep bystanders, and parts of the user's body other than extremities, at least 4 cm away from the antenna.

Based on the test results and on how the device will be marketed and used, it is certified that the product meets the requirements as set forth in the above specifications, for RF exposure environment.

(The results presented in this report relate only to the sample tested.)