



# RF Exposure REPORT

Amendment to and including RFE073108-02-01

Company: Worth Data  
623 Swift St.  
Santa Cruz, CA 95060

Contact: Steve Luzovich

Product: 7000 Series RF Terminal

FCC ID: JWSLT7001  
IC ID: 4724A-LT7001

Test Report No: RFE073108-02-01A

Issued by: NCEE Labs  
4740 Discovery Dr.  
Lincoln, NE 68521

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**RF Exposure Calculations:**

The minimum separation distance is calculated from FCC OET 65 Appendix B, Table 1B “Guidelines for General Population/Uncontrolled Exposure.” This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain. The duty cycle was measured and a duty cycle factor was applied to the calculations. The duty cycle of the EUT is set in the firmware and is not adjustable by the user.

**RF Power Measurement**

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuators. The spectrum analyzer was used to make power measurements using the channel power function, with a channel width of 20MHz

Frequency (MHz)	Output Power dBm	Output Power mW
902.971	21.77	150.314
915.000	22.19	165.577
926.277	22.51	178.238

**Test Equipment Used**

<i>Serial #</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Description</i>	<i>Last Cal.</i>
100007	Rohde & Schwarz	ESIB7	EMI Test Receiver	6/9/08

**Test Environment**

Testing was performed at the NCEE Labs Lincoln facility. Laboratory environmental conditions varied slightly throughout the test:

Relative humidity of  $40 \pm 5\%$

Temperature of  $20 \pm 2^\circ$  Celsius

<b>Exposure Limit (mW/cm<sup>2</sup>) = F/1200</b>	0.77 mW/cm <sup>2</sup>
<b>Frequency (MHz)</b>	926.277
<b>Maximum peak output power (mW)</b>	178.238
<b>Antenna Gain (Numeric)</b>	1.50
<b>Antenna type</b>	Dipole(whip)
<b>Pulse duration (mS)</b>	40
<b>Period period (mS)</b>	500

$$P_d = D \times (P_{out} \times G) / (4\pi \times R^2)$$

$$R = \sqrt{(P_{out} \times G \times D) / (4\pi \times P_d)}$$

$P_d$  = Power density limit, mW/cm<sup>2</sup>

$P_{out}$  = Peak power output, mW

G = Numeric Antenna Gain

R = Distance from antenna, cm

D = Duty cycle factor = (pulse duration/period duration)

<b>P<sub>out</sub></b> <b>mW</b>	<b>G</b> <b>Numeric</b>	<b>P<sub>d</sub></b> <b>mW/cm<sup>2</sup></b>	<b>R</b> <b>cm</b>	<b>D</b>	<b>Frequency</b> <b>MHz</b>	<b>Calculation</b>
178.238	1.5	0.770	<b>1.48</b>	0.08	926.277	Minimum distance to meet limit
178.238	1.5	<b>0.004</b>	20	0.08	926.277	Power density at 20 cm

Notes:

1. The minimum safe distance is based on a conservative “worst case” prediction, i.e. using the formula shown above and no duty factor. In practice the minimum distance will be much shorter. (Ref. 2)

**References:**

1. FCC OET Bulletin 65, Edition 97-01
2. FCC Supplement C to OET Bulletin 65, edition 01-01
3. IEEE C95.1, 1999

Radio Frequency Exposure Compliance of  
Radiocommunication Apparatus (All Frequency Bands)

RSS-102

**Annex B - Declaration of RF Exposure Compliance**

**ATTESTATION:** I attest that the information provided in Annex A is correct; that a Technical Brief was prepared and the information it contains is correct; that the device evaluation was performed or supervised by me; that applicable measurement methods and evaluation methodologies have been followed and that the device meets the SAR and/or RF exposure limits of RSS-102.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

09 Feb 09

NAME

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Nic Johnson

TITLE

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Test Engineer

COMPANY

(Please print or type):

NCEE Labs