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Exhibit 10

MIST Freedom II-M

Wireless Point of Sale Device

FCC ID: O3JF2R902M1

SAR Report
(With Test Set-up Photographs)

Certification Report on

Specific Absorption Rate (SAR) Experimental Analysis

MIST Inc.

MIST Freedom II-M

Test Date: May 2000

MISB-FREEDOM II-MOBITEX-3420

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CERTIFICATION REPORT

Subject: **Specific Absorption Rate (SAR) Experimental Analysis**

Product: Wireless Point of Sale Terminal using a Research in Motion RIM 902M Radio Modem (Mobitex network)

Model: MIST Freedom II-M

Client: MIST Inc.

Address: 703 Evans Ave., Suite 500
Toronto, Ontario, M9C 5E9
Canada

Project #: MISB-Freedom II Mobitex-3420

Prepared by: APREL Laboratories
51 Spectrum Way
Nepean, Ontario
K2R 1E6

Telecommunications Approval Board - Spectrum Sciences Institute
SAR Certified
APREL Laboratories
A051-Freedom II M

Tested by Paul G Cardinal Date: 19 May 2000
Dr. Paul G. Cardinal
Director, Laboratories

Submitted by Paul G Cardinal Date: 19 May 2000
Dr. Paul G. Cardinal
Director, Laboratories

Approved by Date: May 19 2000
Dr. Jacek J. Wojcik, P. Eng.

REGISTERED PROFESSIONAL ENGINEER
J. J. Wojcik
PROVINCE OF ONTARIO

FCC ID:	03JF2R902M1
Applicant:	MIST Inc.
Equipment:	Wireless Point of Sale Terminal
Model:	Wireless Point of Sale Terminal using a Research in Motion RIM 902M Radio Modem (Mobitex network)
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 MIST Freedom II Wireless Point of Sale Terminal operating with a built in Research in Motion RIM 902M radio modem (Mobitex network). The measurements were carried out in accordance with FCC 96-326. The Point of Sale Terminal was evaluated at its maximum nominal power level, 2 W (33 dBm).

The MIST Freedom II-M was tested at high, middle, and low frequencies on the keyboard, battery, both sides and the top edge of the device, with the antenna extended and retracted. The maximum SAR was found to coincide with the peak performance RF output power of channel 480_h (low, 896 MHz) for the left (antenna) side up position with the antenna extended. Test data and graphs are presented in this report.

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

The manual for this unit will require a warning to keep the antenna at least 38 mm away from any part of the body other than the extremities (23 mm for extremities) of either users or bystanders.

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

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1. INTRODUCTION

Tests were conducted to determine the Specific Absorption Rate (SAR) of a sample of a MIST Freedom II-M Point of Sale Terminal, which incorporates a Research in Motion R902M-2-0 radio modem. These tests were conducted at APREL Laboratories' facility located at 51 Spectrum Way, Nepean, Ontario, Canada. A view of the SAR measurement setup can be seen in Appendix A Figure 1. This report describes the results obtained.

2. APPLICABLE DOCUMENTS

The following documents are applicable to the work performed:

1) FCC 96-326, Guidelines for Evaluating the Environmental Effects of Radio-Frequency Radiation

2) ANSI/IEEE C95.1-1992, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

3) ANSI/IEEE C95.3-1992, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave.

4) OET Bulletin 65 (Edition 97-01) Supplement C (Edition 97-01), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields".

3. EQUIPMENT UNDER TEST

- MIST Freedom II-M, ESN 031/11/003802, received: 10 April, 2000

The Point of Sale Terminal will be called DUT (device under test) in the following.

The antenna is an extendible ¼ wavelength helical over ¼ wavelength whip type with no specified gain. A photograph of the DUT and the antenna can be found in Appendix B. See the manufacturer's submission documentation for drawings and more design details.

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4. TEST EQUIPMENT

- APREL Triangular Dosimetric Probe Model E-009, s/n 115, Asset # 301420
- CRS Robotics A255 articulated robot arm, s/n RA2750, Asset # 301335
- CRS Robotics C500 robotic system controller, s/n RC584, Asset # 301334
- R&S NRVS power meter, s/n 864268/017, Asset # 100851
- R&S NRV-Z7 power sensor, s/n 862 509/006, Asset # 100852
- APREL F-1, flat manikin, s/n 001
- Tissue Recipe and Calibration Requirements, APREL procedure SSI/DRB-TP-D01-033
- Toshiba Laptop computer Satellite Pro 400CS (supplied by APREL Laboratories to setup the device via RS232 port)

5. TEST METHODOLOGY

1. The test methodology utilised in the certification of the DUT complies with the requirements of FCC 96-326 and ANSI/IEEE C95.3-1992.
2. The E-field is measured with a small isotropic probe (output voltage proportional to E^2).
3. The probe is moved precisely from one point to the next using the robot (10 mm increments for wide area scanning, 5 mm increments for zoom scanning, and 2.5 mm increments for the final depth profile measurement).
4. The probe travels in the homogeneous liquid simulating human tissue. Appendix D contains information about the recipe and properties of the simulated tissue used for these measurements.
5. The liquid is contained in a manikin simulating a portion of the human body.

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6. The DUT is positioned in such a way that it touches the bottom of the phantom with its top, its bottom, or its side.

7. All tests were performed with the highest power available from the sample DUT, under transmit conditions.

More detailed descriptions of the test method is given in Section 6 when appropriate.

6. TEST RESULTS

6.1. TRANSMITTER CHARACTERISTICS

The battery-powered DUT will consume energy from its batteries, which may affect the DUT's transmission characteristics. In order to gage this effect the output of the transmitter is sampled before and after each SAR run. In the case of this DUT, the conducted power was sampled. A power meter was connected to an RF port inside the DUT. The following table shows the conducted RF power sampled before and after each of the eight sets of data used for the worst case SAR in this report.

Scan		**Conducted Power Readings (dBm)**		**D (dBm)**	**Battery #**
Type	Height (mm)	Before	After		
Area	2.5	12.73	12.73	0.0	7
Area	12.5	12.73	12.73	0.0	5
Zoom	2.5	12.73	12.73	0.0	3
Zoom	7.5	12.73	12.70	-0.03	4
Zoom	12.5	12.71	12.71	0.0	6
Zoom	17.5	12.69	12.70	+0.1	4
Zoom	22.5	12.68	12.40	-0.28	2
Depth	2.5 – 22.5	12.68	12.71	+0.03	3

NOTE: These readings do not include the 20dB pad nor the cable and adapter losses.

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6.2. SAR MEASUREMENTS

1) RF exposure is expressed as a Specific Absorption Rate (SAR). SAR is calculated from the E-field, measured in a grid of test points as shown in Appendix A Figure 2. SAR is expressed as RF power per kilogram of mass, averaged in 10 grams of tissue for the extremities and 1 gram of tissue elsewhere.

2) The DUT was put into test mode for the SAR measurements via communications software supplied by the radio manufacturer running on a PC to control the channel (initially 720_h, 899 MHz, middle) and maximum operating power (nominally 33 dBm).

3) Figure 3 in Appendix A shows a contour plot of the SAR measurements for the DUT (480_h, 896 MHz, L). The presented values were taken 2.5 mm into the simulated tissue from the flat phantom's solid inner surface. Figures 1 and 2 in Appendix A show the phantom used in the measurements. A grid is shown inside of the phantom indicating the orientation of the x-y grid used, with the co-ordinates 0,0 on the top left (orange dot). The y-axis is positive towards the right and the x-axis is positive towards the bottom. In this position the antenna is located on top of the DUT.

   A different presentation of the same data is shown in Appendix A Figure 4. This is a surface plot, where the measured SAR values provide the vertical dimension, which is useful as a visualisation aid.

   Similar data was obtained 12.5 mm into the simulated. These measurements are presented as a contour plot in Appendix A Figure 5 and surface plot in Figure 6.

   Figure 12 in Appendix A shows an overlay of the DUT's outlines, superimposed onto the contour plot previously shown as Figure 3.

   Figures 3 through 6 in Appendix A show that there is a dominant peak, in the contour plots, that diminishes in magnitude with depth into the tissue simulation.

4) Wide area scans were performed for the low (480_h, 896 MHz), middle (720_h, 899 MHz) and high (880_h, 880 MHz) channels with the DUT facing up,

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down, both sides, and the top edge of the device, with the antenna both extended and retracted. The peak single point SAR for the scans were:

Channel			Antenna position	Orientation	Highest SAR [W/kg]
	#	Frequency [MHz]			
Middle	720h	899	out	keyboard up	6.00
Middle	720h	899	out	battery side up	2.98
Middle	720h	899	out	R side up	2.05
Middle	720h	899	out	L (ant) side up	8.52
Middle	720h	899	in	L (ant) side up	5.91
Middle	720h	899	in	top side up	0.79
Low	480h	896	out	L (ant) side up	**9.31**
Low	480h	896	in	L (ant) side up	4.87
High	880h	901	out	L (ant) side up	8.42
High	880h	901	in	L (ant) side up	5.41
Low	480h	896	out	keyboard up	6.10
Low	480h	896	in	keyboard up	4.30
High	880h	901	out	keyboard up	5.61
High	880h	901	in	keyboard up	4.58

All subsequent testing was performed on the low channel (480h, 896 MHz) with the left (antenna) side of the device against the phantom, with the antenna out.

5) Wide area scans were also performed for the low (480h, 896 MHz) channel versus separation. The peak single point SAR for the scans were:

Channel			Antenna axis to phantom's inner surface separation	Highest local SAR
	#	MHz	mm	W/kg
Low	480h	896	16	9.31
			34	1.61
			45	0.87

Figure 14 in Appendix A shows the data plotted as a function of separation and the exponential curve fit to them.

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6) The low channel (480_h, 896 MHz) SAR peak was then explored on a refined 0.5 mm grid in three dimensions. Figures 7, 8, 9, 10 and 11 show the measurements made at 2.5, 7.5, 12.5, 17.5, and 22.5 mm respectively. The SAR value averaged over 10 grams was determined from these measurements by averaging the 125 points (5x5x5) comprising an 2 cm cube. The maximum SAR value measured averaged over 10 grams was determined from these measurements to be 4.297 W/kg.

7) To extrapolate the maximum SAR value averaged over 10 grams to the inner surface of the phantom a series of measurements were made at a few (x,y) coordinates within the refined grid as a function of depth, with 2.5 mm spacing. Figure 13 in Appendix A shows the data gathered and the exponential curves fit to them. The average exponential coefficient was determined to be (-0.083± 0.002) / mm.

   The distance from the probe tip to the inner surface of the phantom for the lowest point is 2.5 mm. The distance from the probe tip to the tip of the measuring dipole within the APREL Triangular Dosimetric Probe Model E-009 is 2.3 mm. The total extrapolation distance is 4.8 mm, the sum of these two.

   Applying the exponential coefficient over the 4.8 mm to the maximum SAR value averaged over 10 grams that was determined previously, we obtain **the maximum SAR value at the surface averaged over 10 grams** of <u>6.41 W/kg</u>.

7. ANALYSIS

The measurements of highest local SAR versus separation of the antenna housing from the bottom of the phantom (Section 6.2.5) will enable the maximum 10g SAR for a separation of 13 mm (previous section) to be interpolated for other separations.

If the data for Figure 14 is fitted to an exponential equation we get:

$$\text{Peak Local SAR} = 36.6\ e^{-0.0859 * (\text{separation})}$$

A similar equation will exist for the maximum 10g SAR versus separation:

$$\text{Maximum 10g SAR} = k\ e^{-0.0859 * (\text{separation})}$$

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Using this equation with the previous section's data:

Maximum 10g SAR at the surface = 6.412 W/kg
Tissue – antenna axis separation = 13 mm,

results in a k = 25.34 W/kg, which corresponds to the maximum 10g SAR when the separation is 0 mm. A conservative maximum 10g SAR of 3.51 W/kg (4 W/kg reduced by our measurement uncertainty) would occur for a separation of 23.0 mm from the antenna axis.

8. BYSTANDER

The measurements from the previous section can be used to determine the bystander exposure during operation.

The SAR value averaged over 1 gram was determined from the 2.5, 7.5, and 12.5 mm zoom scans (section 6.2.6) by averaging the 27 points (3x3x3) comprising a 1 cm cube. The maximum measured SAR valued averaged over 1 gram was determined from these measurements to be 6.23 W/kg.

Applying the exponential coefficient over the 4.8 mm (section 6.2.7) to the maximum SAR value averaged over 1 gram determined above, we obtain **the maximum SAR value at the surface averaged over 1 gram** of 9.29 W/kg.

The measurements of highest local SAR versus separation of the antenna housing from the bottom of the phantom (Section 6.2.4) will enable the peak 1g SAR for a separation of 13 mm to be interpolated for other separations.

A similar equation to that determined in the previous section for the 10g SAR will exist for the maximum 1g SAR versus separation (see Figure 15):

$$\text{Maximum 1g SAR} = k\, e^{-0.0859\ \text{separation}}$$

Using this equation with the data earlier in this section:

Maximum 1g SAR at surface = 9.29 W/kg
Tissue – antenna axis separation = 13 mm,

results in a k = 36.74 W/kg, which corresponds to the peak 1g SAR when the separation is 0 mm. A conservative peak 1g SAR of 1.41 W/kg (1.6 W/kg reduced by our measurement uncertainty) would occur for a separation of 38.0 mm from the antenna axis.

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9. DISCUSSION

The MIST Freedom II-M wireless point of sale terminal has its maximum 10g SAR hot spot over the lower part of the antenna. Figure 16 shows an overlay of the antenna side of the device over the 10g SAR contour. The 10g SAR is over 3.51 W/kg on a small portion of the body of the device within 0.5 cm of the antenna sleeve. Since the user will be holding the device with his hand under the keypad and display, no portion of the user's hand or thumb will be exposed to levels of SAR exceeding the FCC 96-326 safety guidelines.

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10. CONCLUSIONS

The maximum Specific Absorption Rate (SAR) averaged over 10 g, determined at 896 MHz (low channel, 480_h), of the MIST Freedom II Mobitex Point of Sale Terminal, which incorporates a Research in Motion R902M-2-0 Mobitex radio transmitter, is 6.41 W/kg. The overall margin of uncertainty for this measurement is ± 12.0 % (Appendix C). The SAR limit given in the FCC 96-326 safety guideline is 4 W/kg.

For a bystander (or user) exposing a part of the body other than the extremities, the maximum Specific Absorption Rate (SAR) averaged over 1g is 9.29 W/kg. The overall margin of uncertainty for this measurement is ± 12.0 % (Appendix C). The SAR limit given in the FCC 96-326 safety guideline is 1.6 W/kg.

This unit as tested, and as it will be marketed and used (with a warning in the manual to keep bystanders at least 38 mm, and the user's hand at least 23 mm, from the antenna), is found to be compliant with this requirement.

Telecommunications Approval Board - Spectrum Sciences Institute - SAR Certified APREL Laboratories A051-Freedom II M

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APPENDIX A

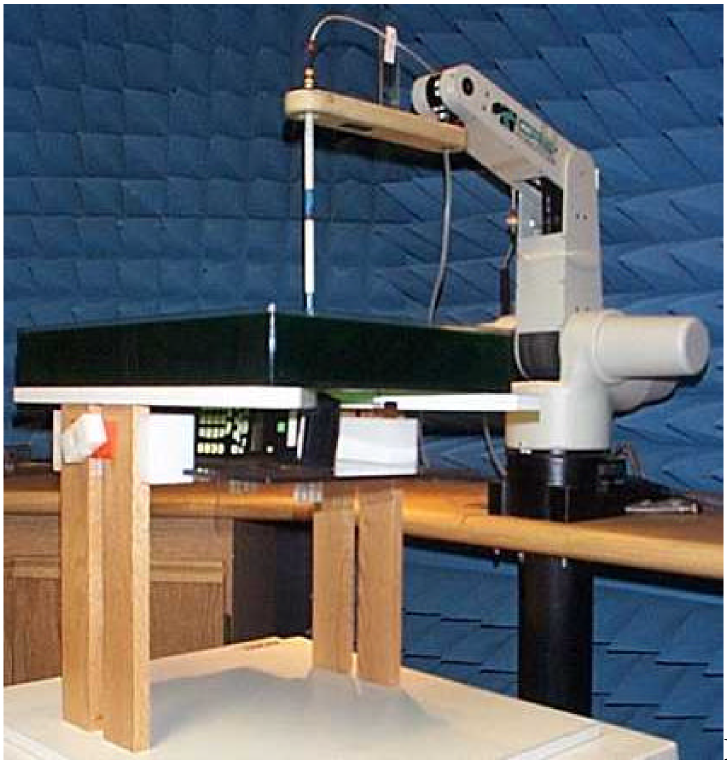

Figure 1

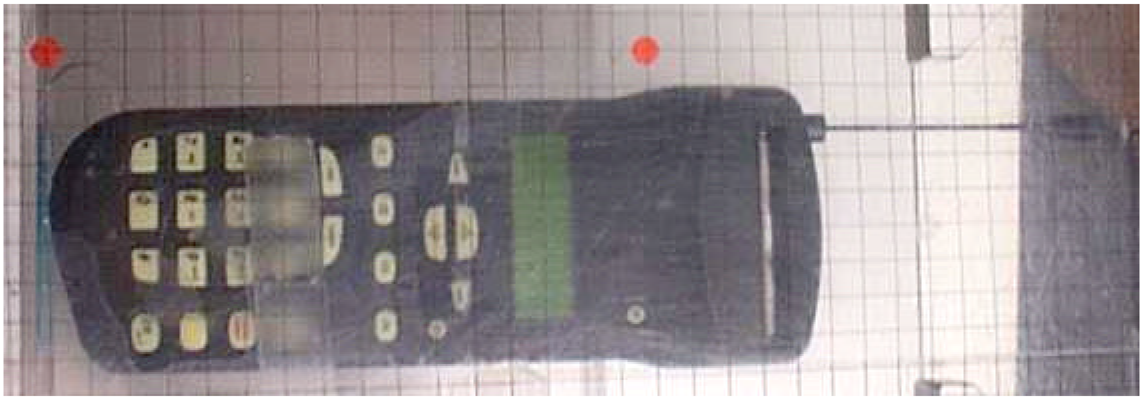

Figure 2

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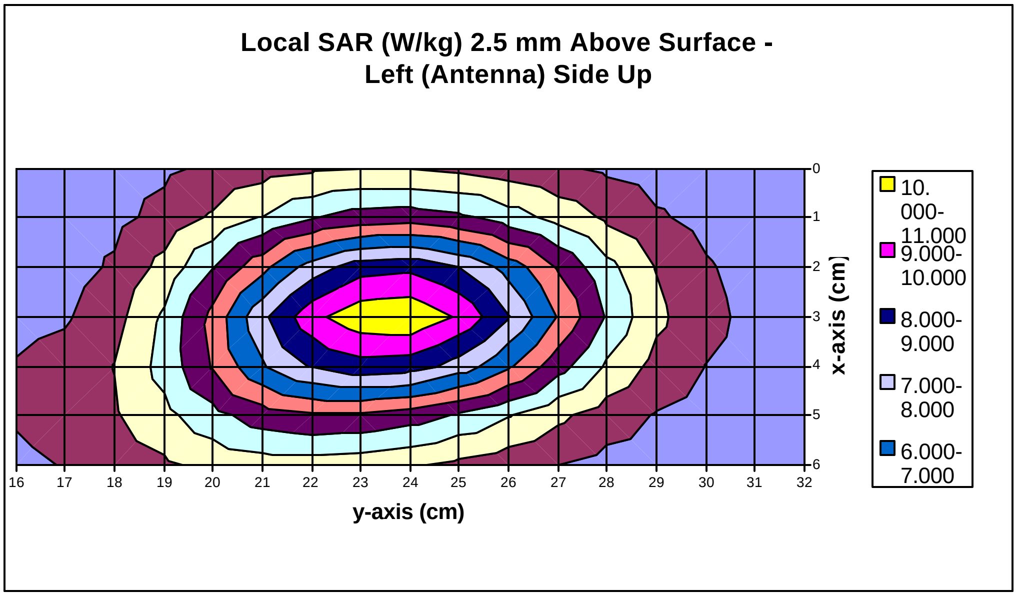

Figure 3

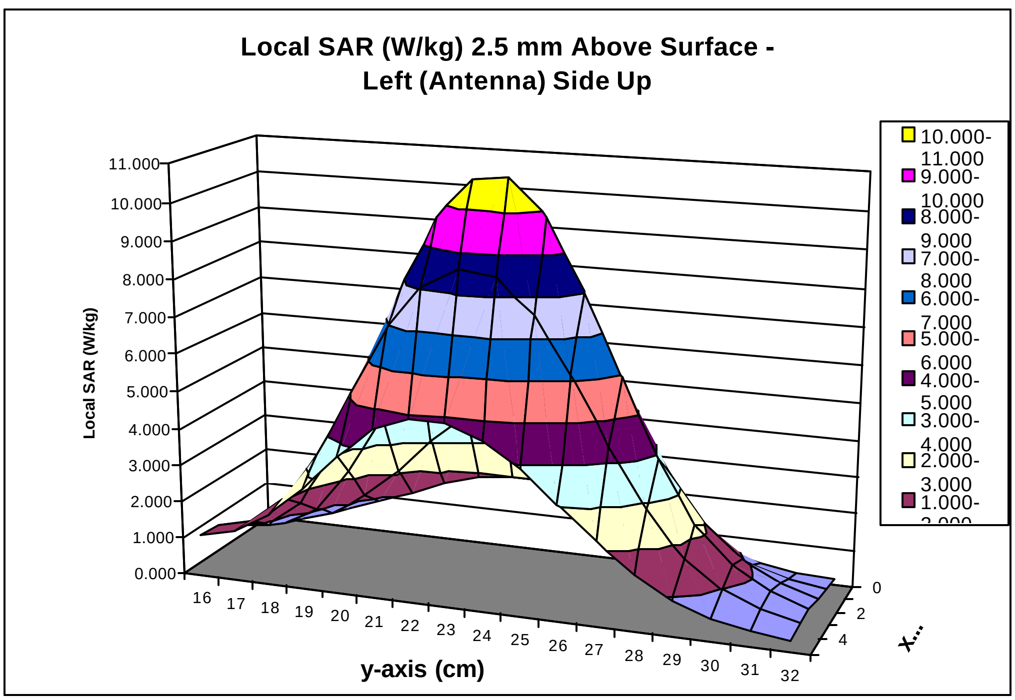

Figure 4

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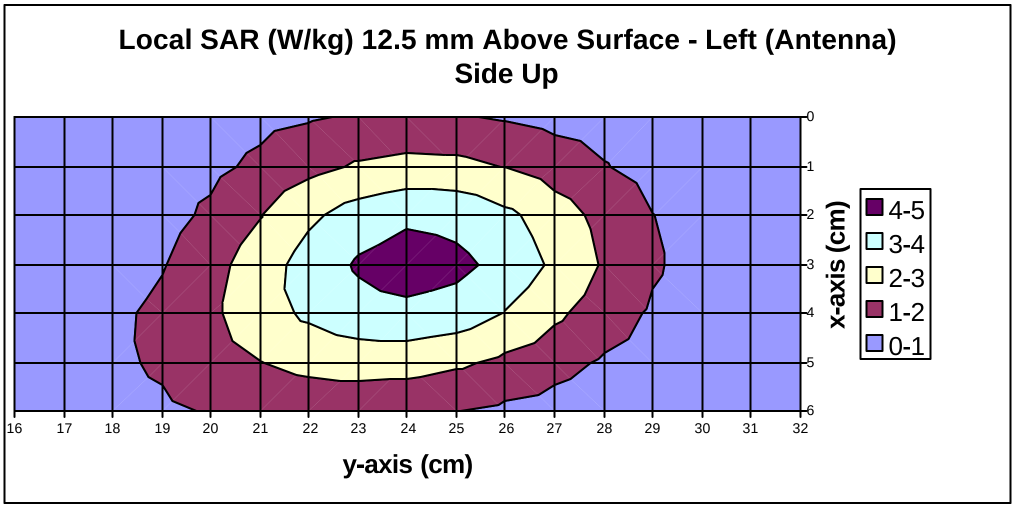

Figure 5

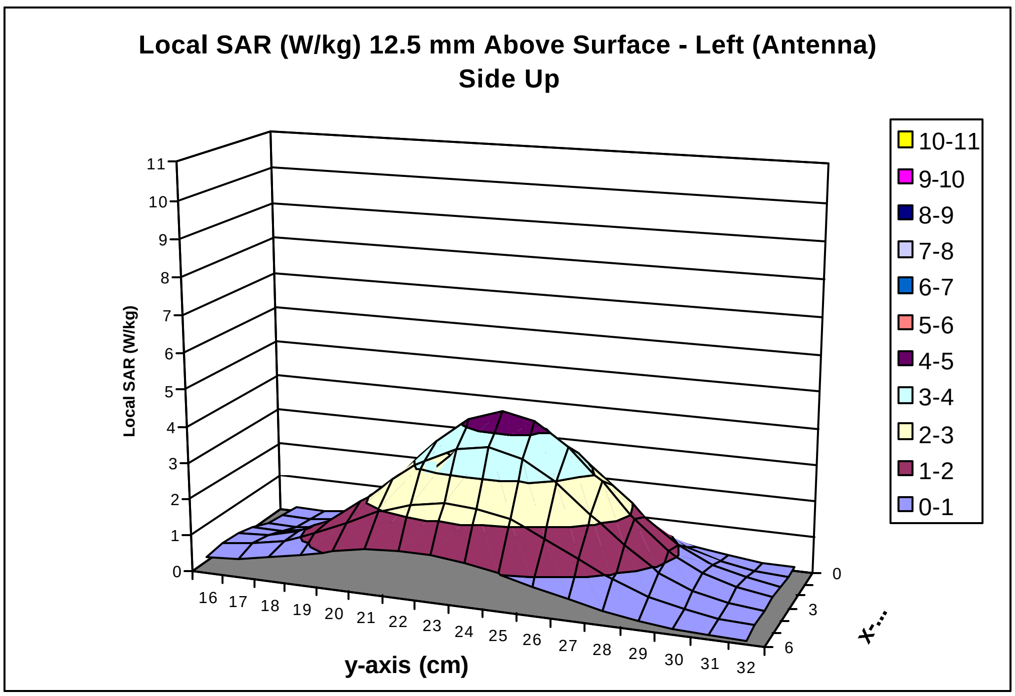

Figure 6

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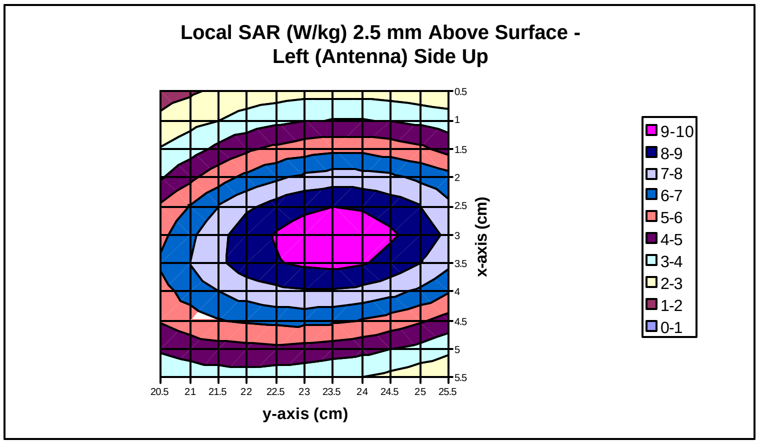

Figure 7

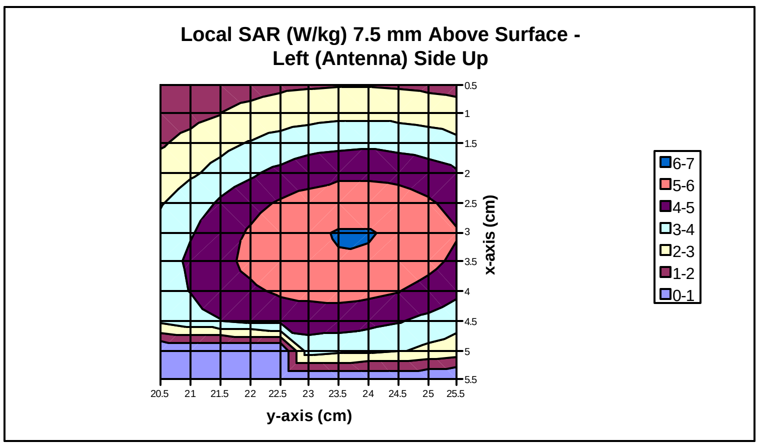

Figure 8

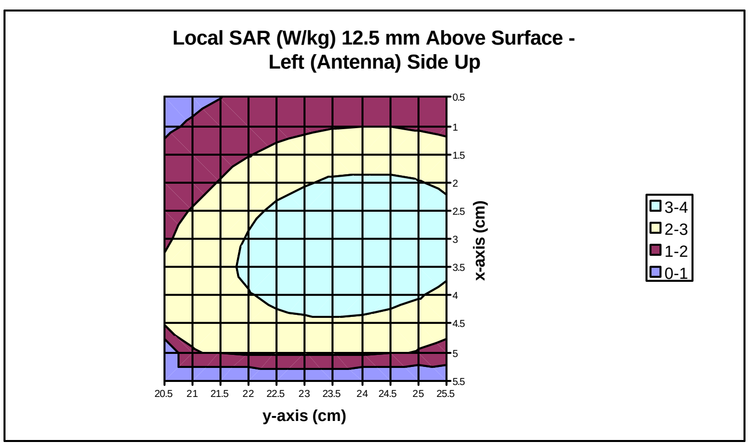

Figure 9

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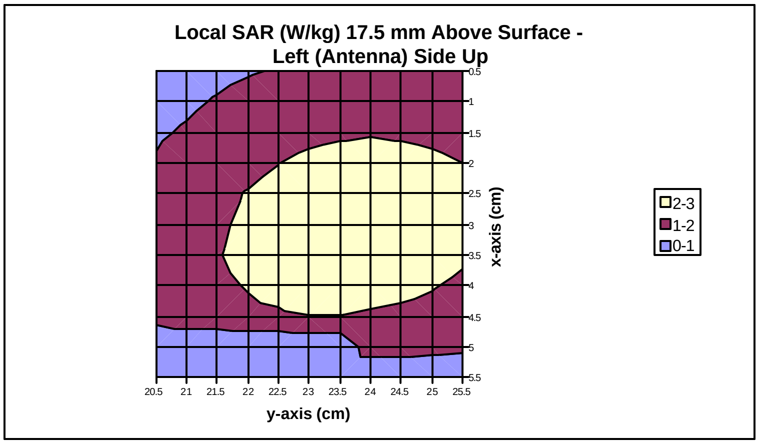

Figure 10

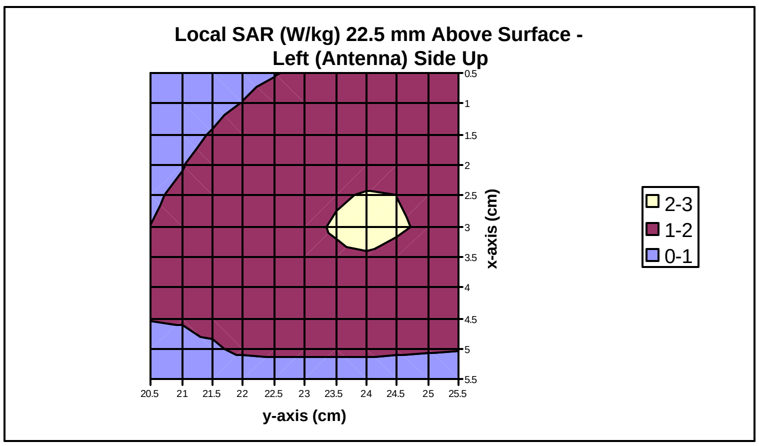

Figure 11

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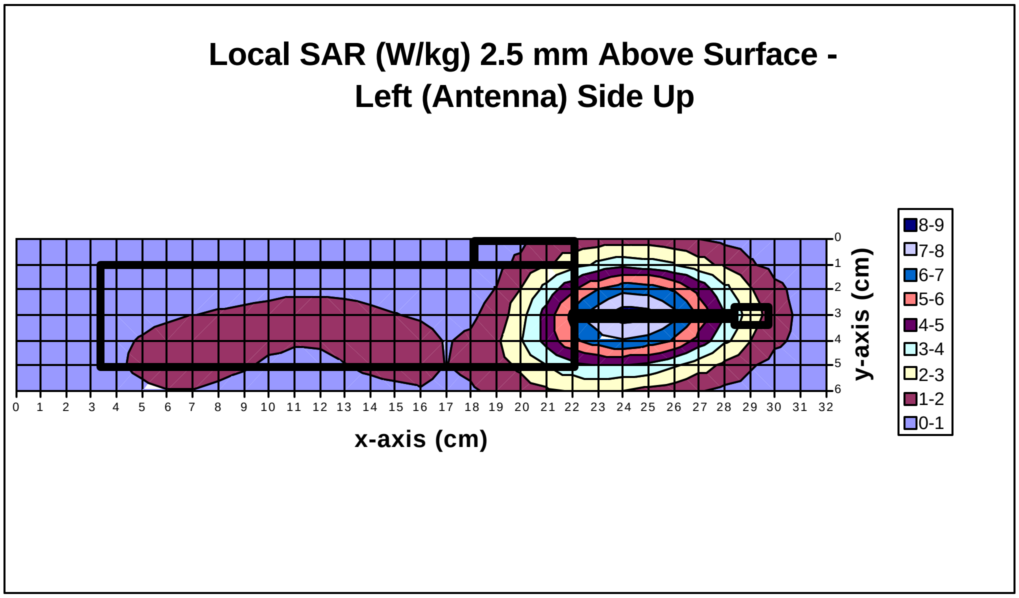

Figure 12

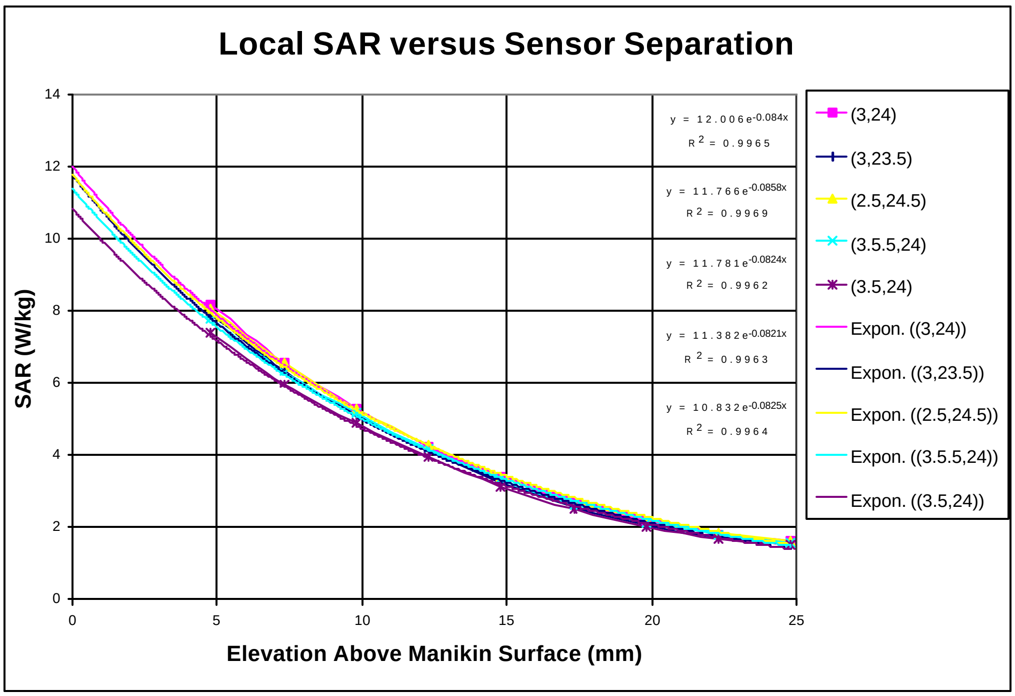

Figure 13

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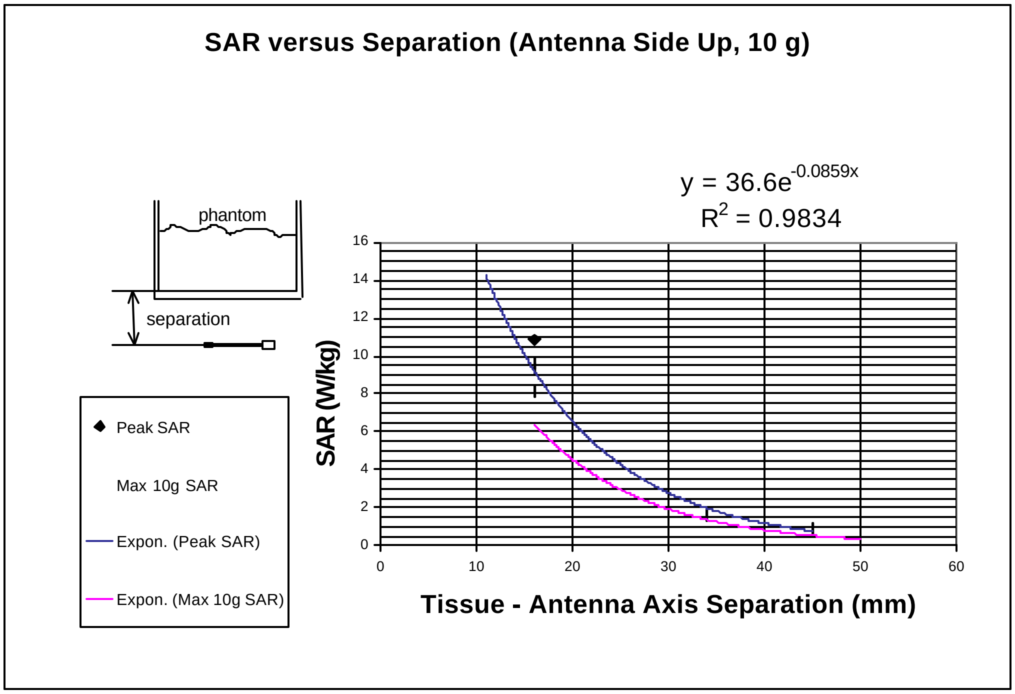

Figure 14

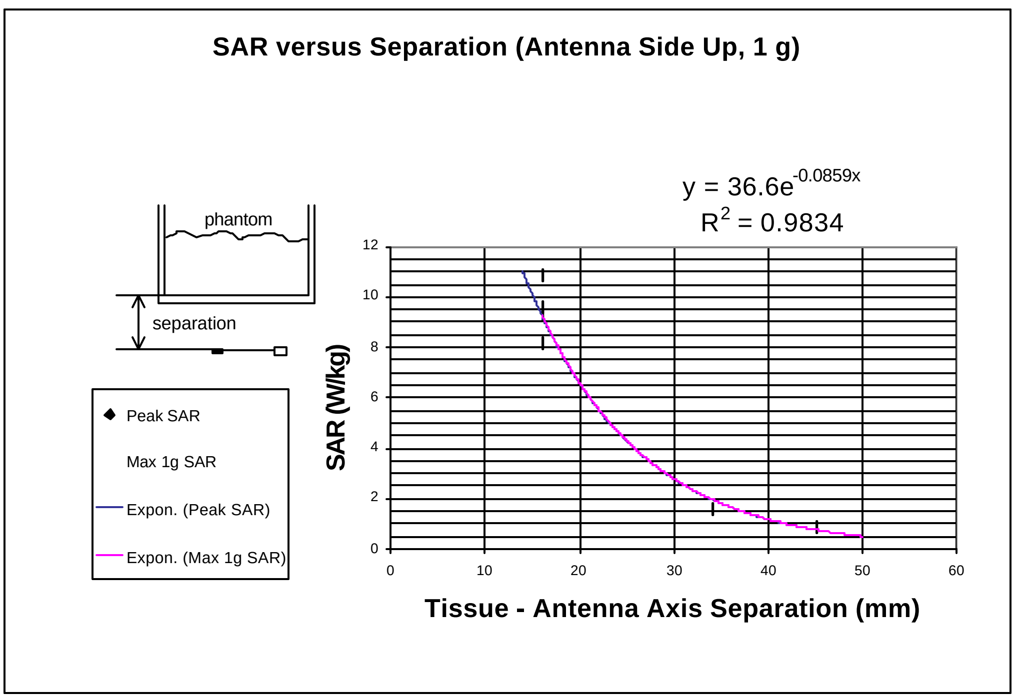

Figure 15

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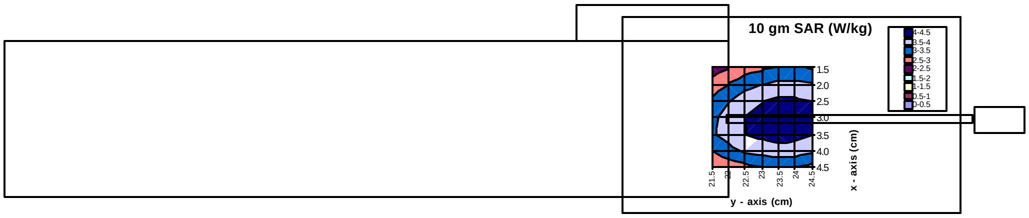

Figure 16

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APPENDIX B

Manufacturer's Antenna Specifications

(See manufacturer's submission documentation for drawings and more design details)

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APPENDIX C

Uncertainty Budget

Uncertainties Contributing to the Overall Uncertainty

Type of Uncertainty	Specific Uncertainty	
Power variation due to battery cond	phone	3.5%
Extrapolation due to curve fit of SA	phone	3.7%
Extrapolation due to depth measur	setup	4.1%
Conductivity	setup	6.0%
Density	setup	2.6%
Tissue enhancement factor	setup	7.0%
Voltage measurement	setup	1.0%
Probe sensitivity factor	setup	3.5%
		12.1% RSS

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APPENDIX D

Simulated Tissue Material and Calibration Technique

The mixture used was based on that presented SSI/DRB-TP-D01-033, “Tissue Recipe and Calibration Requirements”.

De-ionised water	52.8 %
Sugar	45.3 %
Salt	1.5 %
HEC	0.3 %
Bactericide	0.1 %

Mass density, ρ — 1.30 g/ml
(The density used to determine SAR from the measurements was the recommended 1040 kg/m^3 found in Appendix C of Supplement C to OET Bulletin 65, Edition 97-01)

Dielectric parameters of the simulated tissue material were determined using a Hewlett Packard 8510 Network Analyser, a Hewlett Packard 809B Slotted Line Carriage, and an APREL SLP-001 Slotted Line Probe.

The dielectric properties are:

	APREL	OET 65 Supplement	Δ / % (OET)
Dielectric constant, ε_r	44.7	55.96	-20%
Conductivity, σ/ [S/m]	1.03	0.969	6%
Tissue Conversion Factor, γ	9.6	-	-

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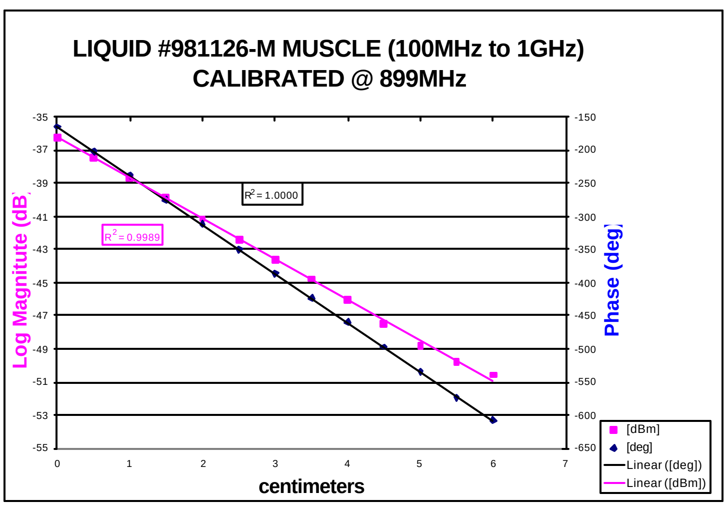
SIMULATION FLUID #	**981126-M**
CALIBRATION DATE	**14-Apr-00**
CALIBRATED BY	**Paul Cardinal**
Frequency Range	**100MHz-1GHz**
Frequency Calibrated	**899 MHz**
Tissue Type	**Muscle**

Position [cm]	Amplitude [dBm]	Phase [deg]	[deg]
0	-36.23	-164.75	-164.75
0.5	-37.5	157.89	-202.11
1	-38.656	121.72	-238.28
1.5	-39.904	84.02	-275.98
2	-41.14	48.35	-311.65
2.5	-42.453	10.54	-349.46
3	-43.602	-26.23	-386.23
3.5	-44.79	-63.08	-423.08
4	-46.07	-99.79	-459.79
4.5	-47.49	-137.09	-497.09
5	-48.81	-174.53	-534.53
5.5	-49.81	146.53	-573.47
6	-50.568	112.61	-607.39

ΔdB_1	-7.372	Δdeg_1	-221.48
ΔdB_2	-7.29	Δdeg_2	-220.97
ΔdB_3	-7.414	Δdeg_3	-221.51
ΔdB_4	-7.586	Δdeg_4	-221.11
ΔdB_5	-7.67	Δdeg_5	-222.88
ΔdB_6	-7.357	Δdeg_6	-224.01
ΔdB_7	-6.966	Δdeg_7	-221.16
ΔdB_{AVG} [dB]	-7.38	$Ddeg_{AVG}$ [deg]	-221.8742857
dB_{AVG} (α_{AVG}) [dB/cm]	-2.46	deg_{AVG} (β_{AVG}) [deg/cm]	-73.95809524
(α_{AVG}) [NP/cm]	-0.283190555	(β_{AVG}) [rad/cm]	-1.29081227

f [Hz]	8.99E+08
μ [H/cm]	1.25664E-08
ε_o [F/cm]	8.854E-14

			D
ε_r	**44.7**		-20.2%
$\sigma_{effective}$	**1.03**	**S/m**	6.3%



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899 MHz Data (Tony & Heike) MUSCLE with E-115

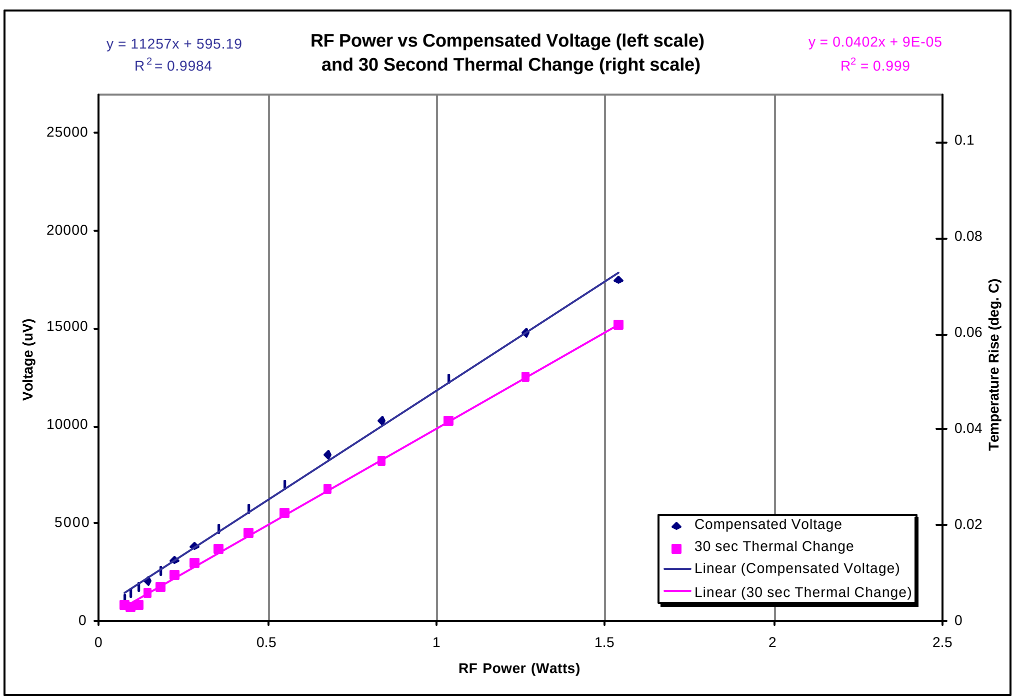
						delta T	Sum		Thermal
RF Power			**Ch0**	**Ch1**	**Ch2**	**(30 sec)**	**Vi/Ei**		**SAR**
W	dBm	R&S	uV	uV	uV	deg. C			W/kg
0.072611	18.61	-26.74	317	708	1831	0.0033	1173.5		0.31
0.090991	19.59	-25.76	342	830	2246	0.0028	1404.5		0.26
0.115345	20.62	-24.73	391	1001	2808	0.0034	1725.9		0.31
0.143549	21.57	-23.78	439	1221	3418	0.006	2086.7		0.56
0.179887	22.55	-22.8	513	1465	4224	0.0071	2548.7		0.66
0.224905	23.52	-21.83	610	1807	5225	0.0096	3140.4		0.89
0.283792	24.53	-20.82	732	2222	6421	0.0122	3852.6		1.13
0.353183	25.48	-19.87	854	2710	7861	0.015	4695		1.39
0.442588	26.46	-18.89	1025	3345	9717	0.0184	5788.9		1.70
0.548277	27.39	-17.96	1221	4077	11719	0.0225	6992.8		2.08
0.677642	28.31	-17.04	1489	5005	14233	0.0275	8517.2		2.54
0.837529	29.23	-16.12	1782	6079	17114	0.0334	10263		3.09
1.037528	30.16	-15.19	2173	7422	20605	0.042	12409		3.89
1.264736	31.02	-14.33	2612	8936	24390	0.0509	14767		4.71
1.538155	31.87	-13.48	3149	10693	28711	0.0617	17485		5.71

Directional Coupler factor 25.35 dB (Asset 100251 cal file data (Janusz, 21 Jul 96))
Additional inline attenuation 20 dB

Sensitivity (e) 1.619 1.633 1.619 - Sensor Sensitivity in mV/ (mW/cm^2): 899 MHz cal (HW, 2 Jul 99)
η = 1.50 e 2.4285 2.4495 2.4285

Density	1.3	g/cm^3	1300	kg/m^3	- Marcin, summer 97
Conductivity	11.7	mS/cm	1.17	S/m	- Heike 19-Apr-99
Heat Capacity (c)	2.775	J/C/g	2775	J/C/kg	- average of Balzano (2.7) and Kuster (2.85) values
Exposure Time	30	seconds	30	seconds	
Slope of Measure Voltage (m_V)	11257	uV/W	0.0113	V/W	
- standard error or m_V	126.2	uV/W	0.0001	V/W	1.1%
Slope of Measure Temp Change (m_T)	0.0402	C/W	0.0402	C/W	
- standard error or m_T	0.0003	C/W	0.0003	C/W	0.9%

Tissue Conversion Factor ([illegible]) 9.6



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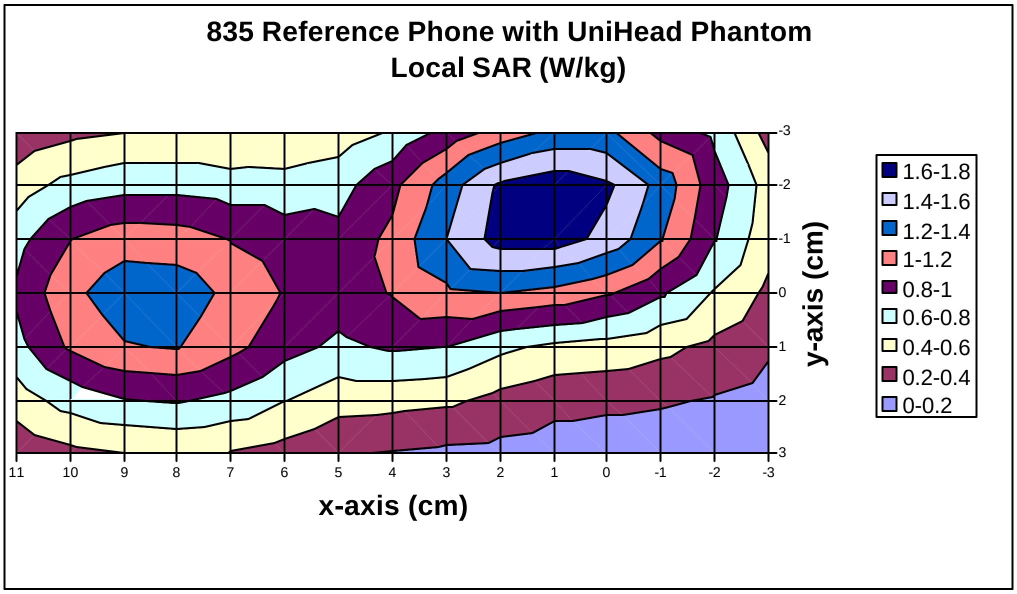
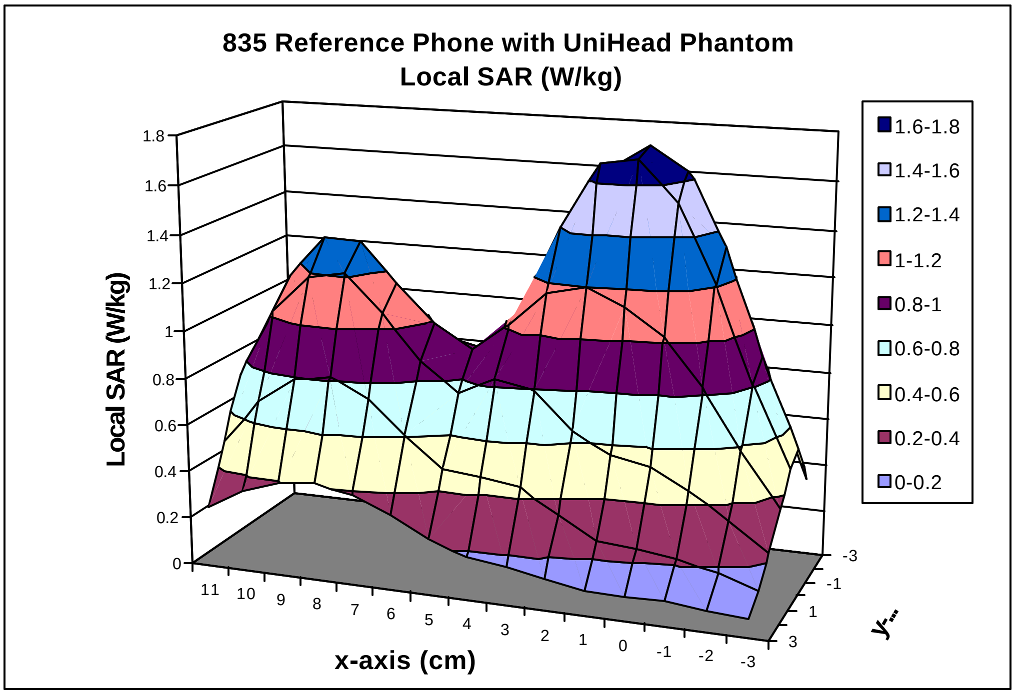
APPENDIX E

Validation Scans





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