ACCREDITED

MOTOROLA

ELECTROMAGNETIC EXPOSURE (EME) TESTING LABORATORY

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Fort-Lauderdale, Florida

S.A.R. TEST REPORT

FCC ID: AZ489FT5799
(i3000 – H40XAH6RR1AN)

October 17, 2000 Rev.B

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1.0 Introduction

This report is a revision of the previous SAR report for Portable Radio, model number H40XAH6RR1AN (FCC ID: AZ489FT5799) dated 10/13/00. The purpose for this revision is to update antenna gain per Design Engineering input 10/16/00.

Revision A (dated 10/13/00): consolidated tables in sections 7.1 and 7.2 into one table, located in section 7.1, to include both measured and maximum calculated SAR data.
Revision O (dated 8/3/00).

This report details the test setup, test equipment, and test results of the Specific Absorption Rate (SAR) measurement performed at CGISS EME laboratory for the iDEN i3000 Radio Product Portable, model number H40XAH6RR1AN (FCC ID: AZ489FT5799).

2.0 Reference Standards and Guidelines

This product is designed to comply with the following national and international standards and guidelines.

- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR part 2 sub-part J
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition
- National Council on Radiation Protection and Measurements (NCRP) of the United States, Report 86, 1986
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- National Radiological Protection Board of the United Kingdom 1995
- Ministry of Health (Canada) Safety Code 6. Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999
- Australian Communications Authority Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard 1999 (applicable to wireless phones only)

3.0 Description of Test Sample

The Portable Radio, Model number H40XAH6RR1AN operates in 806-825 MHz band with a rated conducted power of 0.6W pulse average. This radio is marketed as a handheld transceiver capable of operating as a telephone, traditional two-way (dispatch) radio, or RF modem (packet data mode). An associated base station allocates a number of 15 msec. Time Division Multiplex (TDM) time slots in which the transceiver transmits depending on the service mode. The trunking system protocol for voice transmission uses a 90 msec. frame divided into six 15 msec. time slots. PSTN (phone mode) interconnect calls utilize 2 time slots (2/6 multiplexing) with a 33.33% duty cycle. Two-way radio dispatch transmissions are accomplished using one time slot (1/6 multiplexing) with a 16.67% duty cycle. In the packet data mode, the protocol uses a multiple of voice/circuit data mode frames with a duty cycle that varies with the RF environment. The worst case duty cycle of 67.5% occurring with 81/120 time slots.

3.1 Antenna Description:

3.1.1 Antenna type:

½ wave when extended and ¼ wave when retracted

Monopole	X	Dipole		Helix		Patch		Other	

3.1.2 Antenna Location on Device

Left		Right	X	Top	X	Bottom		Front		Back	

3.1.3 Antenna Dimensions

Length - cm (extended)	12.44
Diameter - cm (at tip of antenna)	0.58
Diameter - cm (at middle of antenna)	0.15
Diameter - cm (at base of antenna)	0.31

3.1.4 Antenna Configuration

Fixed		Retractable	X	External		Other	

3.1.5 Antenna Gain:

Extended	1.6 dBi (-0.55dBd)	Retracted	0.4 dBi (-1.75dBd)

3.2 Test Signal

Test Signal Source:

Test Mode	X	Base Station		Simulator		Other	

Signal Modulation:

CW	
TDMA	**16.67%**
Other	

3.3 Test Frequency and Output Power

Output power measurement conditions:

Free Space Radiated [ ] SAR test configuration [X] Conducted [X] Other [ ]

Output Power measured with:

Power meter [X] Base Station Simulator [ ] Spectrum Analyzer [ ] Other [ ]

Test Frequency (MHz)	Measured Power before SAR (W)	Power after SAR (dB)
806.0125	0.622	-0.01
813.5625	0.641	-0.01
820.9875	0.678	-0.01
824.9875	0.689	-0.01

4.0 Description of Test Equipment

4.1 Descriptions of SAR Measurement System

The laboratory utilizes a Dosimetric Assessment System (DASY™) SAR measurement system manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. This system utilizes a computer controlled six axis robot to move a measurement probe to measure the SAR. The SAR measurements were conducted with the probe ET3DV6 serial number 1384. It was calibrated at SPEAG™, and has a calibration date 6/2/00. A copy of the calibration certificate is included as appendix C. Dipole Validation Kit type 835MHz (serial number 835-002) was used to validate the system accuracy at 835MHz. The Dipole validation result are 9.32 mW/g and 9.24mW/g when normalized to 1W compared to the target of 9.38 mW/g, which is within the required accuracy of ± 10% (Dipole SAR Validation Certificate for Dipole S/N 835-002), and thus the measured SAR values are considered correct. See appendix B for print out of the validation test results from the DASY™ measurement system.

The DASY™ system is operated per the instructions in the DASY™ Users Manual. The entire manual is available directly from SPEAG™.

4.2 Description of Phantom

Human shaped, solid shell device made of fiberglass and mounted on a nonmetallic base or stand.

4.2.1 Full Body Phantom

Abdomen Thickness	0.15 cm
Face Thickness	0.15 cm

4.2.2 Half Body Phantom

Left Ear

Shell Thickness	0.15 cm
Ear Spacer Thickness	0.50 cm
Total Thickness	0.65 cm

Right Ear

Shell Thickness	0.15 cm
Ear Spacer Thickness	0.50 cm
Total Thickness	0.65 cm

4.3 Simulated Tissue Properties:

4.3.1 Type of Simulated Tissue

	Full Body	Half Body
Muscle	X	
Brain		X

4.3.2 Simulated Tissue Composition

	Muscle	**Brain**
	835MHz	**835MHz**
Di-Water	53.50 %	43.75 %
Sugar	44.25 %	54.00 %
Salt	1.15 %	1.15 %
HEC	1.00 %	1.00 %
Dowicil75	0.10 %	0.10 %

Note: HEC (HYDROXYETHYL CELLULOSE) is a gelling agent and Dowicil 75 is anti bacterial compound.

Characterization of Simulated tissue materials and ambient conditions:
Simulated tissue prepared for SAR measurements are measured at room temperature and verified to be in spec prior to actual SAR measurements by filling a coaxial slotted line with the tissue and probing the amplitude and phase changes versus distance in the simulated tissue. A HP8753D Network Analyzer is used to perform the measurements.
Measured simulated tissue dielectric constant and conductivity used in SAR runs as of 7/25/00 and 10/2/00.

	7/25/00		**10/2/00**	
	Muscle	**Brain**	**Muscle**	**Brain**
	835 MHz	**835 MHz**	**835 MHz**	**835 MHz**
Di-electric Constant	53.2	46.2	53.2	44.8
Conductivity – S/m	1.07	0.88	1.06	0.88

5.0 Description of Test Procedure

Several accessories are available which influence possible operating conditions of this handheld transceiver. These include carry cases with belt clip which are intended to be attached to a user's belt, and various audio accessories with interconnecting cable. The combination of carrying case and audio accessory/data cable devices when worn on the body permits the handheld transceiver to be operated in iDEN mode as a telephone with a 33.33% duty cycle, or as two-way radio with a 16.67% duty cycle, or RF modem (packet data mode) with 67.5% duty cycle .

The following accessories tested include body attach accessories and representative data cables and audio accessory cables:

- Lithium Polymer battery 500mAH (kit # SNN5704A)
- Lithium Ion battery 800mAH (kit # SNN5705A)
- Lithium Ion battery 1100mAH (kit # SNN5706A)
- Lithium Ion battery 1350mAH (kit # SNN5716A)
- Belt clip (kit # NTN9475)
- Leather carry case (open keypad) with belt clip (kit # NTN9478)
- Leather carry case (plastic window) with belt clip (kit # NTN9479)
- Over the ear head set with microphone (kit # NTN8497)
- Hearing aid neckloop (kit # NTN9239)
- Data cable (kit # SKN6315) with Universal data adapter (kit # SYN0279)
- Palm pilot V (kit # SKN6319)

All SAR measurements performed with the radio positioned in the described test positions and test modes were done while the radio was operating in iDEN mode as a 16.67% duty cycle for 806-825MHz.

5.1 Description of Test Positions

The following describes the three test positions used to perform SAR measurements on the portable radio:

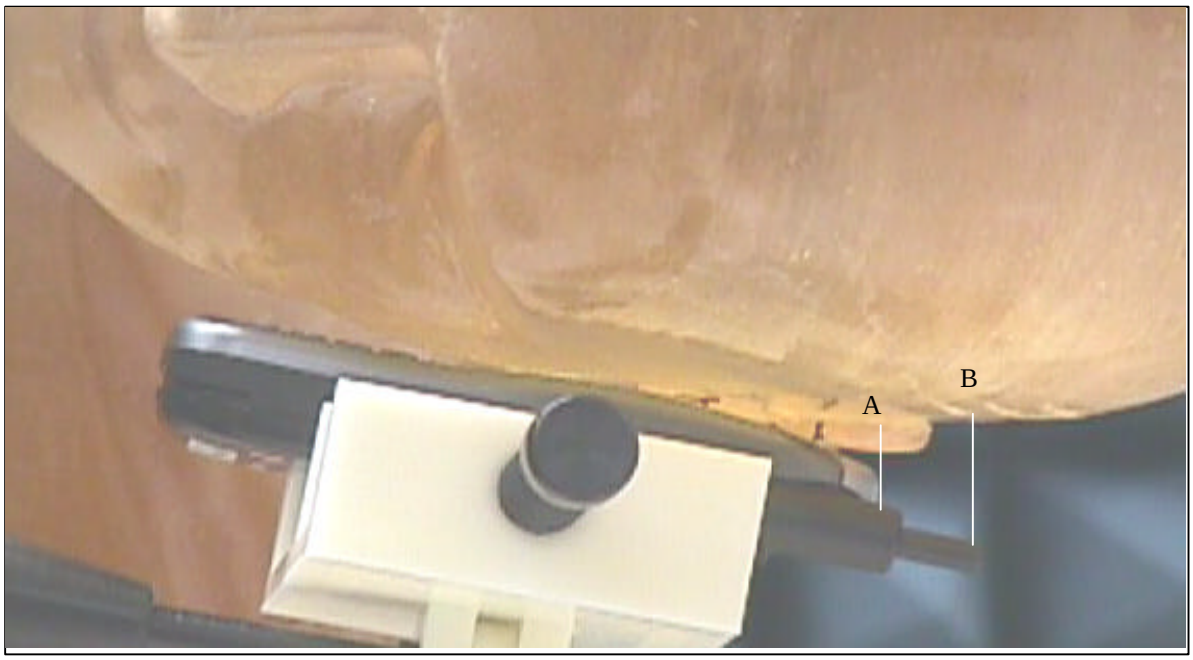
Head - The portable radio is positioned in a normal telephone operating position by aligning the axis of the radio with a line from the center of the ear to the corner of the lips, center the listening area of the test radio over the ear canal. Next, position the radio as close as possible to the phantom, preferably with three points of contact with the phantom to allow for best coupling to the simulated tissue. SAR measurements were performed with the radio antenna extended and retracted.

Face - The portable radio in the leather carry case without belt clip is positioned in the right hand of a full body phantom in a normal two-way radio operating position and the radio's normal speaking area is aligned the center of the phantom's mouth. SAR measurements were performed with the radio antenna extended and retracted.

Abdomen - The portable radio is positioned in a leather carry case with belt clip attached beneath the abdomen of the full body phantom with the back of the radio facing the abdomen, the keypad/display facing the floor. An interface cable between the radio connector and a head set or data cable is connected to the radio to allow telephone or two-way radio or RF modem (packet data mode) operation. SAR measurements were performed with the radio antenna extended and retracted.

Reference figures: 1, 2, and 3 for portable radio antenna orientation and distances relative to phantoms

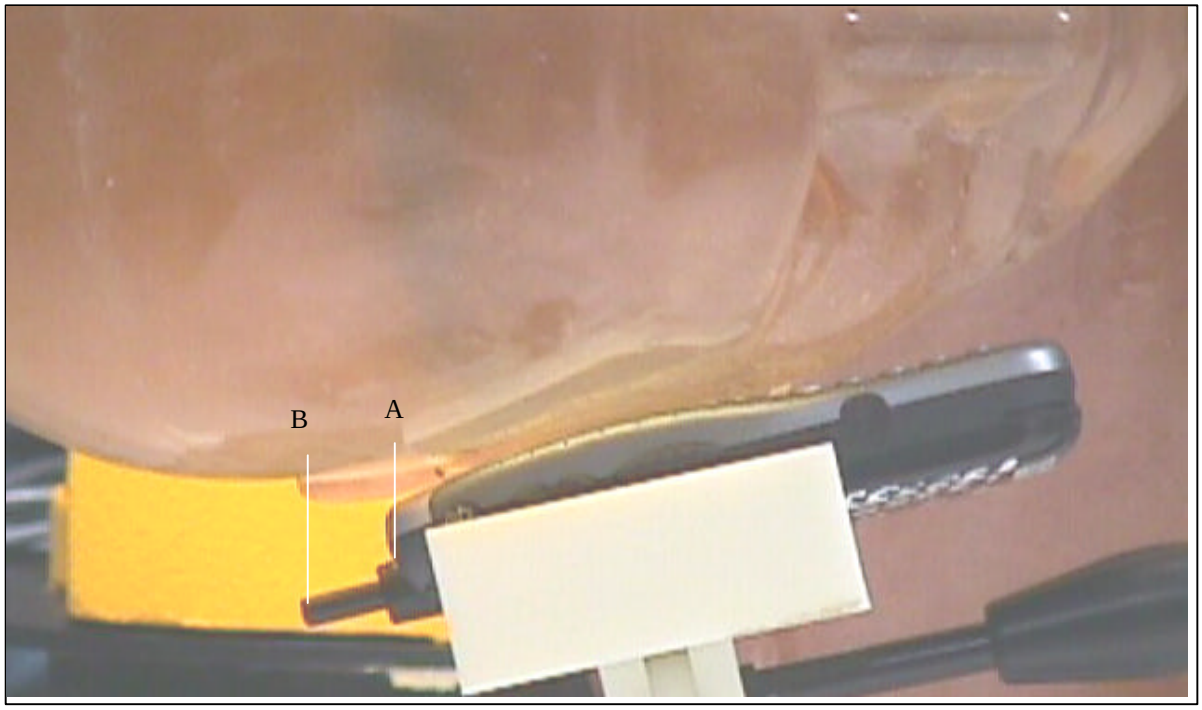
Figure 1a: Head Position – Left Ear.



DIM A = Distance from surface of antenna base to phantom head = 15 mm

DIM B = Distance from surface of antenna tip to phantom head = 23 mm

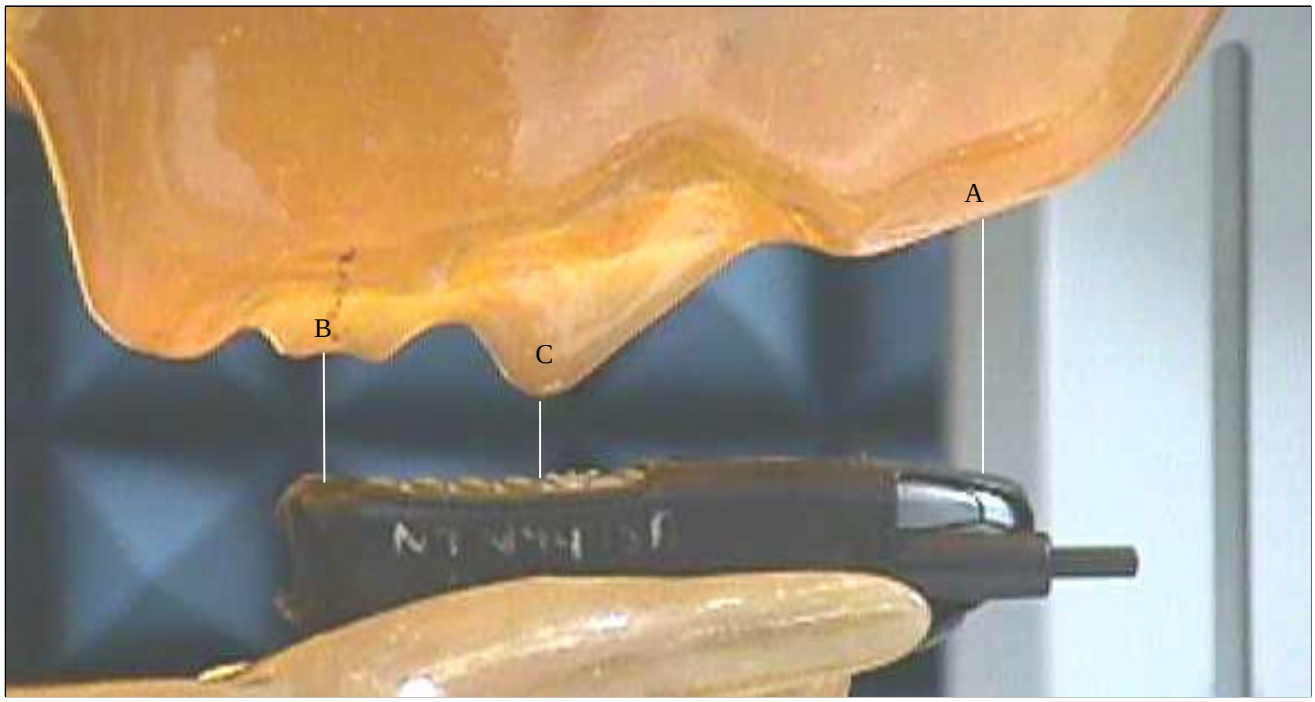
Figure 1b: Head Position - Right Ear.



DIM A = Distance from surface of antenna base to phantom head = 24 mm

DIM B = Distance from surface of antenna tip to phantom head = 30 mm

Figure 2: Facial Position

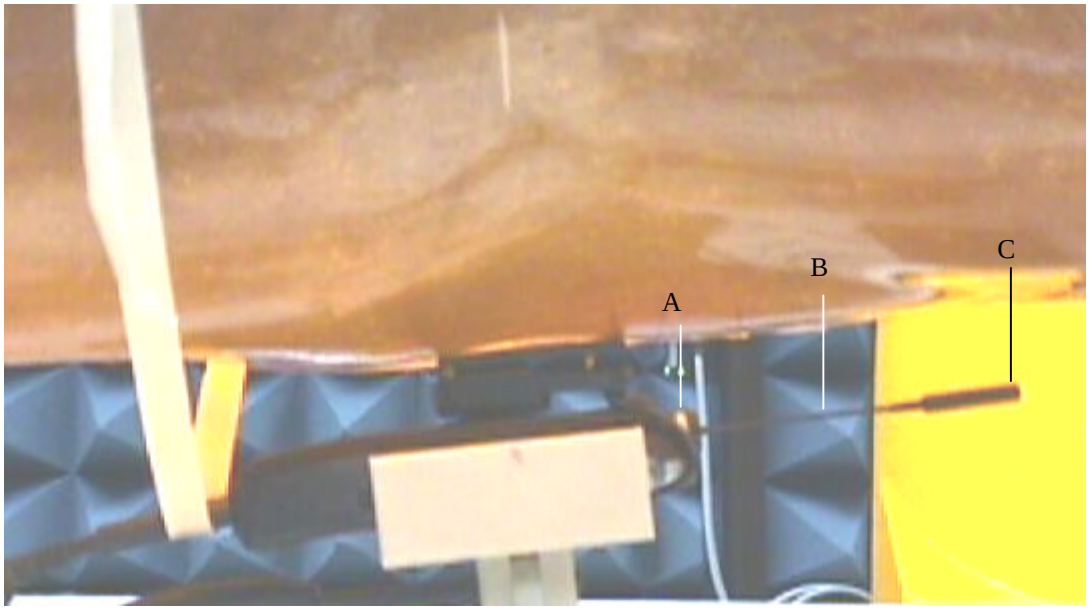


DIM A = Distance from center of phantom's forehead to radio surface = 46 mm

DIM B = Distance between phantom's mouth and radio surface = 25 mm

DIM C = Closest distance between phantom's nose tip and radio surface = 15 mm

Figure 3: Abdominal Position



Dim A = Distance from surface of antenna base to phantom surface = 23 mm

Dim B= Distance from surface of antenna center to phantom surface = 27 mm

Dim C= Distance from antenna surface tip to phantom = 27 mm

5.2 Probe Scan Procedures

The E-field probe is first scanned in a coarse grid over a large area inside the phantom in order to locate the maximum for most SAR distributions even with relatively large grid spacing. After the coarse scan measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference for a finer resolution grid or the cube evaluations.

6.0 Measurement Uncertainty:

The table below list an estimate of the possible errors that are associated with the measurement system.

Uncertainty Description	Standard Uncertainty
Probe Uncertainty	
- Axial Isotropy	± 2.4 %
- Spherical Isotropy	± 4.8 %
- Spatial Resolution	± 0.5 %
- Linearity Error	± 2.7 %
- Calibration Error	± 8 %
Evaluation Uncertainty	
- Data Acquisition Error	± 0.60 %
- ELF and RF Disturbances	± 0.25 %
- Conductivity Assessment	± 5 %
Spatial Peak SAR Evaluation Uncertainty	
- Extrapolation and boundary effects	± 3%
- Probe positioning	± 1 %
- Integration and cube orientation	± 3 %
- Cube shape inaccuracies	± 1.2 %
- Device positioning	± 1.0 %

The Total Measurement Uncertainty is ± 12.1 %. The Expanded Measurement Uncertainty is ± 24.2 % (k=2)

7.0 SAR Test Results

SAR was fully investigated with the batteries and accessories indicate in section 5.0 of this report. The highest measured results are summarized below in table 7.1. The highest maximum calculated values for each body position are indicated in bold and full data set output from DASY™ measurement system for these results are provided in Appendix A.

7.1 SAR in iDEN mode:

			Highest Measured SAR					Max Calculated SAR				
			Face	Left Ear	Right Ear	Abdomen		Face	Left Ear	Right Ear	Abdomen	
Test Freq. (MHz)	Ant Pos	Cond. Power (W)	(16.67%)	(16.67%)	(16.67%)	Audio cable (16.67%)	Data Cable (16.67%)	PTT mode (16.67%)	Phone mode (33.33%)	Phone mode (33.33%)	Phone mode (33.33%)	Data mode (67.5%)
806	IN	0.622	0.18	0.57	0.59	0.18	0.11	**0.20**	1.27	1.33	0.40	0.50
813	IN	0.641	0.18	0.56	0.63	0.21	0.16	0.19	1.23	**1.36**	**0.46**	0.71
821	IN	0.678	0.16	0.54	0.62	0.18	0.14	0.17	1.12	1.28	0.37	0.57
825	IN	0.689	0.16	0.52	0.64	0.18	0.13	0.16	1.06	1.29	0.36	0.53
806	OUT	0.622	0.09	0.23	0.19	0.15	0.20	0.10	0.51	0.43	0.33	0.91
813	OUT	0.641	0.08	0.22	0.19	0.16	0.22	0.09	0.49	0.41	0.35	0.97
821	OUT	0.678	0.07	0.19	0.17	0.17	0.24	0.07	0.40	0.36	0.34	**1.00**
825	OUT	0.689	0.07	0.18	0.16	0.20	0.23	0.07	0.37	0.31	0.40	0.96

The calculated maximum 1 gram averaged SAR value is determined by scaling up the SAR to adjust for any condition of permissible tuning, frequency, voltage and temperature; which is 0.7W average pulse power in this case. For this reason, the radio Maximum Calculated 1 gram averaged peak SAR becomes:

$$\text{Maximum Calculated 1-gram Average Peak SAR} = \frac{P_{max}}{P(0)} \times \frac{P(0)}{P_{end}} \times \frac{P(0)+P(30)}{2xP(0)} \times (D1xD2) \times SAR_{meas}.$$

P_{max} = Maximum power delivered to the antenna connector under any conditions of permissible tuning, frequency, voltage and temperature.

P(0) = Measured power before SAR testing.

P(30) = measured power at 30 minutes of continuous transmit.

P_{end} = Lowest measured power at end of SAR.

SAR_{meas}. = Measured 1 gram averaged peak SAR .

D1 = the transmission mode duty cycle, i.e., the ratio of the service mode and the tested mode.

D2 = the Push To Talk duty cycle.
For two-way radio (dispatch for controlled environment) = 0.5,
For two-way radio (dispatch for uncontrolled/ general population) = 1,
For data and telephony = 1.

Maximum Calculated 1-gram Average Peak SAR for PTT Mode at the face = $\frac{0.7\ W}{0.622W} \times \frac{0.622W}{0.621W} \times \frac{0.622W + 0.617W}{(2 \times 0.622W)} \times \left(\left(\frac{16.67\ \%}{16.67\%}\right) \times 1\right) \times 0.18\ mW/g = 0.20\ mW/g$

Maximum Calculated 1-gram Average Peak SAR for Phone Mode at the head = $\frac{0.7\ W}{0.641W} \times \frac{0.641W}{0.640W} \times \frac{0.641W + 0.635W}{(2 \times 0.641W)} \times \left(\left(\frac{33.33\%}{16.67\%}\right) \times 1\right) \times 0.626\ mW/g = 1.36\ mW/g$

Maximum Calculated 1-gram Average Peak SAR for Phone Mode at the abdomen = $\frac{0.7\ W}{0.641W} \times \frac{0.641W}{0.640W} \times \frac{0.641W + 0.635W}{(2 \times 0.641W)} \times \left(\left(\frac{33.33\%}{16.67\%}\right) \times 1\right) \times 0.21\ mW/g = 0.46\ mW/g$

Maximum Calculated 1-gram Average Peak SAR for Data Mode at the abdomen = $\frac{0.7\ W}{0.678W} \times \frac{0.678W}{0.676W} \times \frac{0.678W + 0.671W}{(2 \times 0.678W)} \times \left(\left(\frac{67.5\ \%}{16.67\%}\right) \times 1\right) \times 0.24\ mW/g = 1.00\ mW/g$

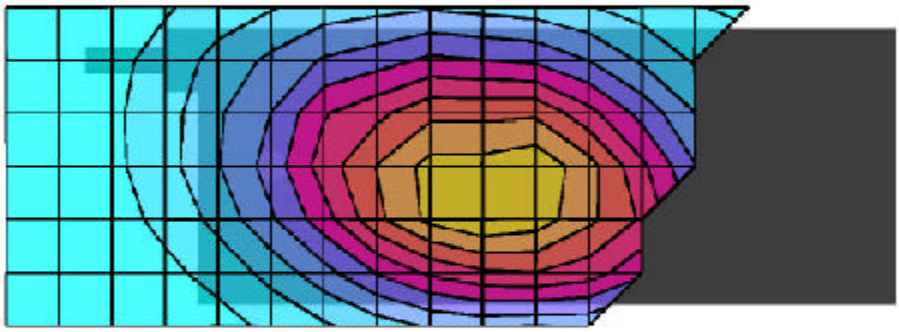
8.0 Conclusion

The highest Operational Maximum Calculated 1-gram average SAR values found for the portable radio model number H40XAH6RR1AN was 1.36 mW/g. These results are fully compliant to the General Population/Uncontrolled Environment limit of 1.6 mW/g.

Appendix A: Data Results

i3000_Phone_Right Ear; Test Date:07/25/00

Run #: i3000_00072502. Time: 22min
Model #:H40XAH6RR1AN, S/N: 919AAL00GJ.
Meas Power: 0.641 W, Tx_Freq: 813.5625MHz
Batt:SNN5704A, Ant: FIX ,
Right HeadPhantom; Right ear
Probe: ET3DV6 - SN1384; ConvF(6.50,6.50,6.50); Crest factor: 6.0; Brain 835 MHz: **s** = 0.88 mho/m **e**r = 46.2 **r** = 1.04 g/cm 3
Cube 5x5x7:SAR (1g): 0.626 mW/g, (Worst-case extrapolation)



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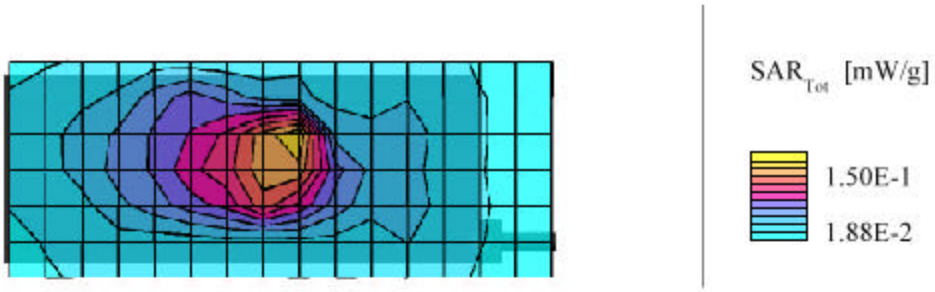
i3000_Face; Test Date:07/28/00

Run #: i3000_00072806. Time: 26 min
Model #:H40XAH6RR1AN, S/N: 919AAL00GJ.
Meas Power: 0.622 W, Tx_Freq: 806.0625MHz
Batt:SNN5716A, Ant: FIX ,
Leather case w/o belt clip: NTN9478,
Full bodyPhantom; Full Body _Face
Probe: ET3DV6 - SN1384; ConvF(6.45,6.45,6.45); Crest factor: 6.0; Muscle 835 MHz : **s** = 1.07 mho/m **e**r = 53.2 **r** = 1.07 g/cm 3
Cube 5x5x7:SAR (1g): 0.182 mW/g, (Worst-case extrapolation)



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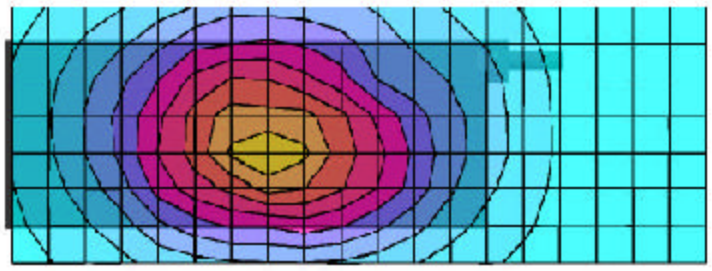
i3000_Ab; Test Date:07/27/00

Run #: i3000_00072701. Time: 32min
Model #:H40XAH6RR1AN, S/N: 919AAL00GJ.
Meas Power: 0.641 W, Tx_Freq: 813.5625MHz
Batt:SNN5704A, Ant: FIX ,
Leather case w/ belt clip: NTN9478, Neckloop: NTN9239 (area scan: Radio)
Full bodyPhantom; Full Body_Abdomen
Probe: ET3DV6 - SN1384; ConvF(6.45,6.45,6.45); Crest factor: 6.0; Muscle 835 MHz : **s** = 1.07 mho/m **e**r = 53.2 **r** = 1.07 g/cm 3
Cube 5x5x7:SAR (1g): 0.210 mW/g, (Worst-case extrapolation)



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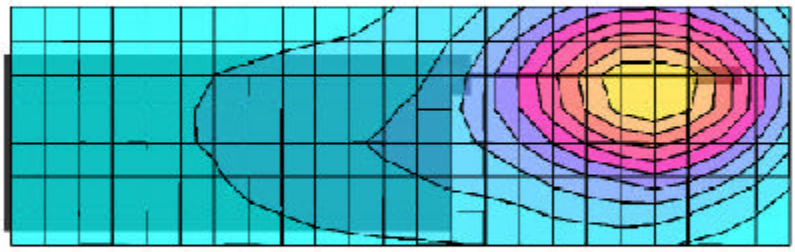
i3000_Phone_Ab; Test Date:10/05/00

Run #: i3000_00100506. Time: 32min
Model #:H40XAH6RR1AN, S/N: 919AAL00GJ.
Meas Power: 0.678 W, Tx_Freq: 820.9875MHz
Batt:SNN5704A, Ant: Out ,
Leather case w/ belt clip: NTN9478, Palm Pilot V: SKN6319
Full bodyPhantom; Full Body_Abdomen
Probe: ET3DV6 - SN1384; ConvF(6.45,6.45,6.45); Crest factor: 6.0; Muscle 835 MHz : **s** = 1.06 mho/m **e**r = 53.2 **r** = 1.07 g/cm 3
Cube 5x5x7:SAR (1g): 0.236 mW/g, (Worst-case extrapolation)



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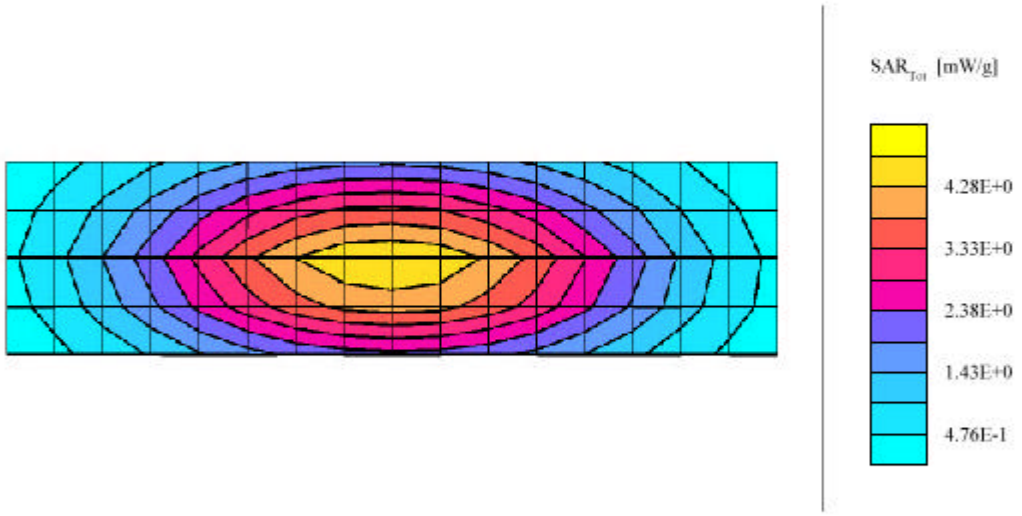
Appendix B: Dipole Validation Data Results

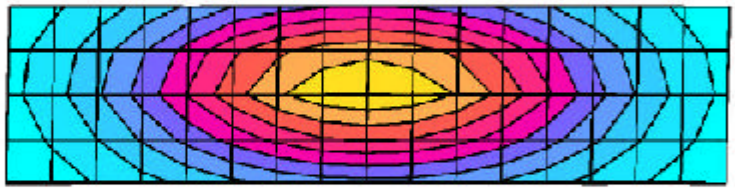
835 CGISS Dipole 002

Flat Phantom;
Probe: ET3DV6 - SN1384; ConvF(6.45,6.45,6.45); Crest factor: 1.0; Muscle 835 MHz : **s** = 1.07 mho/m **e**r = 53.2 **r** = 1.07 g/cm 3
Cube 5x5x7: Peak: 7.26 mW/g, SAR (1g): 4.63 mW/g, SAR (10g): 3.00 mW/g, (Worst-case extrapolation)
Penetration depth: 12.2 (10.8, 14.0) [mm]
Powerdrift: -0.03 dB



835 CGISS Dipole 002; Test Date:10/02/00

Flat Phantom;
Probe: ET3DV6 - SN1384; ConvF(6.45,6.45,6.45); Crest factor: 1.0; Muscle 835 MHz : s = 1.07 mho/m er = 53.2 r = 1.07 g/cm 3
Cube 5x5x7: SAR (1g): 4.61 mW/g, SAR (10g): 3.01 mW/g, (Worst-case extrapolation),
Peak: 7.12 mW/g,
Penetration depth: 12.4 (11.2, 14.0) [mm]
Powerdrift: -0.01 dB



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Appendix C: Measurement Probe Calibration Certificate

Schmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

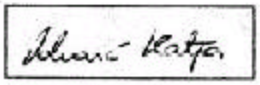
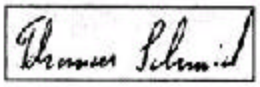
Calibration Certificate

Dosimetric E-Field Probe

Type:	ET3DV6
Serial Number:	1384
Place of Calibration:	Zurich
Date of Calibration:	June 1, 2000
Calibration Interval:	12 months

Schmid & Partner Engineering AG hereby certifies, that this device has been calibrated on the date indicated above. The calibration was performed in accordance with specifications and procedures of Schmid & Partner Engineering AG.

Wherever applicable, the standards used in the calibration process are traceable to international standards. In all other cases the standards of the Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland have been applied.

Calibrated by:	
Approved by:	

DASY3 - Parameters of Probe: ET3DV6 SN:1384

Sensitivity in Free Space

NormX	1.75 $\mu V/(V/m)^2$
NormY	1.75 $\mu V/(V/m)^2$
NormZ	1.90 $\mu V/(V/m)^2$

Diode Compression

DCP X	96 mV
DCP Y	96 mV
DCP Z	96 mV

Sensitivity in Tissue Simulating Liquid

450 MHz ε_r = 48 ± 5% σ = 0.90 ± 10% mho/m

ConvF X	6.69 extrapolated	Boundary effect:	
ConvF Y	6.69 extrapolated	Alpha	0.60
ConvF Z	6.69 extrapolated	Depth	1.74

900 MHz ε_r = 42.5 ± 5% σ = 0.86 ± 10% mho/m

ConvF X	6.37 ± 7% (k=2)	Boundary effect:	
ConvF Y	6.37 ± 7% (k=2)	Alpha	0.71
ConvF Z	6.37 ± 7% (k=2)	Depth	1.76

1500 MHz ε_r = 41 ± 5% σ = 1.32 ± 10% mho/m

ConvF X	5.94 interpolated	Boundary effect:	
ConvF Y	5.94 interpolated	Alpha	0.87
ConvF Z	5.94 interpolated	Depth	1.80

1800 MHz ε_r = 41 ± 5% σ = 1.69 ± 10% mho/m

ConvF X	5.73 ± 7% (k=2)	Boundary effect:	
ConvF Y	5.73 ± 7% (k=2)	Alpha	0.94
ConvF Z	5.73 ± 7% (k=2)	Depth	1.81

Sensor Offset

Probe Tip to Sensor Center	2.7	mm
Optical Surface Detection	1.6 ± 0.2	mm

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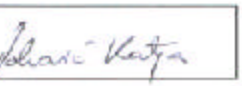
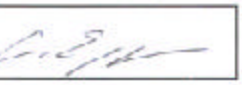
Certificate

Numerical Assessment of Conversion Factor for Dosimetric E-Field Probe

Type:	ET3DV6
Serial Number:	1384
Place of Assessment:	Zurich
Date of Assessment:	June 2, 2000
Probe Calibration Due Date:	June 1, 2001

Schmid & Partner Engineering AG hereby certifies that conversion factor(s) of this probe have been evaluated on the date indicated above. The calibration was performed using the FDTD numerical code SEMCAD of Schmid & Partner Engineering AG. Since the evaluation is coupled with measured conversion factors, it has to be recalculated yearly, i.e., following the recalibration schedule of the probe.

Performed by:	
Approved by:	

Dosimetric E-Field Probe ET3DV6 SN:1384

Conversion factor (± standard deviation)

450 MHz	ConvF	**7.14 ± 8%**	ε_r = 47.0 σ = 0.83 mho/m (brain tissue)
835 MHz	ConvF	**6.50 ± 8%**	ε_r = 44.0 σ = 0.90 mho/m (brain tissue)
925 MHz	ConvF	**6.33 ± 8%**	ε_r = 44.0 σ = 0.93 mho/m (brain tissue)
1500 MHz	ConvF	**6.00 ± 8%**	ε_r = 41.1 σ = 1.00 mho/m (brain tissue)
1900 MHz	ConvF	**5.46 ± 8%**	ε_r = 39.9 σ = 1.42 mho/m (brain tissue)
150 MHz	ConvF	**8.46 ± 8%**	ε_r = 70.00 σ = 0.75 mho/m (muscle tissue)
450 MHz	ConvF	**7.12 ± 8%**	ε_r = 58.0 σ = 1.00 mho/m (muscle tissue)
835 MHz	ConvF	**6.45 ± 8%**	ε_r = 52.0 σ = 1.10 mho/m (muscle tissue)
925 MHz	ConvF	**6.31 ± 8%**	ε_r = 52.0 σ = 1.20 mho/m (muscle tissue)
1500 MHz	ConvF	**6.18 ± 8%**	ε_r = 41.2 σ = 1.48 mho/m (muscle tissue)
1920 MHz	ConvF	**5.20 ± 8%**	ε_r = 51.5 σ = 1.95 mho/m (muscle tissue)