13.1 SAR TEST DATA SUMMARY

Ambient TEMPERATURE (°C)	20.9
Relative HUMIDITY (%)	58.2
Atmospheric PRESSURE (kPa)	99.3

Mixture Type: 150MHz Brain

Dielectric Constant: 60.2

Conductivity: 0.48 S/m

13.2 Measurement Results (Mouth SAR)

Frequency		Modulation	Power*	Separation Distance	Antenna Position	SAR**
MHz	Ch.		(Watts)	(cm)		(W/kg)
156.050	01	FM	4.96	2.5 cm	Fixed	0.906
156.800	16	FM	5.01	2.5 cm	Fixed	0.719
157.425	88	FM	4.99	2.5 cm	Fixed	0.626
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak (Muscle) Uncontrolled Exposure/General Population				**Mouth/Face 1.6 W/kg (mW/g)** averaged over 1 gram		

NOTES:

1. All modes of operation were investigated and the worst-case are reported.
2. Battery condition is fully charged for all readings.
3. Battery ☒ Standard ☐ Extended
4. *Power Measured ☐ Conducted ☐ EIRP ☒ ERP
5. SAR Measurement System ☒ SPEAG ☐ IDX
6. SAR Configuration ☒ Mouth ☐ Body ☐ Hand

Randy Ortanez
President & Chief Engineer

Figure 15.
MOUTH SAR Test Setup

13.1 SAR TEST DATA SUMMARY

Ambient TEMPERATURE (°C) 22.4
Relative HUMIDITY (%) 59.7
Atmospheric PRESSURE (kPa) 99.1

Mixture Type: 150 MHz Muscle

Dielectric Constant: 62.7

Conductivity: 0.75 S/m

13.3 Measurement Results (Body SAR)

Frequency		Modulation	Power* (Watts)	Separation Distance** (cm)	Antenna Position	SAR (W/kg)
MHz	**Ch.**					
156.050	01	FM	4.96	2.5 cm	Fixed	1.050
156.800	16	FM	5.01	2.5 cm	Fixed	1.150
157.425	88	FM	4.99	2.5 cm	Fixed	1.180
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak (Muscle) Uncontrolled Exposure/General Population				**Body 1.6 W/kg (mW/g)** averaged over 1 gram		

NOTES:
1. All modes of operation were investigated and the worst-case are reported.
2. Battery condition is fully charged for all readings.
3. Battery ☒ Standard ☐ Extended
4. *Power Measured ☐ Conducted ☐ EIRP ☒ ERP
5. SAR Measurement System ☒ SPEAG ☐ IDX
6. **SAR Configuration ☐ Mouth ☒ Body ☐ Hand
   [Spacing distance measured = 2.5cm. The permanently attached carrying beltclip provides 1.3cm of this spacing. The additional 1.2cm is provided by the spacer contained in the optional speaker/microphone kit.]

Randy Ortanez
President & Chief Engineer

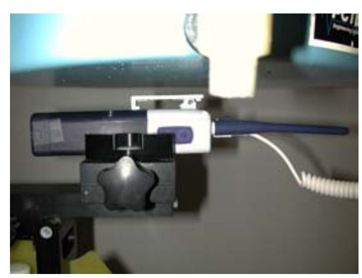

Figure 16.
BODY SAR Test Setup

14.1 SAR TEST EQUIPMENT

14.2 Type / Model	Calib. Date	S/N:
Stäubli Robot RX60L	Feb. 01	599131-01
Stäubli Robot Controller	Feb. 01	PCT592
Stäubli Teach Pendant (Joystick)	Feb. 01	3323-00161
Micron Computer	Feb. 01	PCT577
450 MHz Pentium III, Windows NT		
SPEAG EDC3	Feb. 01	321
SPEAG DAE3	Feb. 01	330
SPEAG E-Field Probe ET3DV6	Feb. 01	1560
SPEAG Dummy Probe	Feb. 01	PCT583
SPEAG Generic Twin Phantom	Feb. 01	PCT587
SPEAG Light Alignment Sensor	Feb. 01	205
SPEAG Validation Dipole D835V2	Feb. 01	PCT613
SPEAG Validation Dipole D1900V2	Feb. 01	PCT593
Brain Equivalent Matter (150MHz)	May 01	PCTBEM17
Muscle Equivalent Matter (150MHz	May 01	PCTBEM18
Brain Equivalent Matter (835MHz)	May 01	PCTBEM13
Muscle Equivalent Matter (835MHz)	May 01	PCTBEM15
Robot Table		PCT586
Phone Holder		PCT588
A/B Power Indicator		PCT589
Remote Power Switch		PCT590
Phantom Cover		PCT591
HP Spectrum Analyzer	Dec. 00	PCT200
IFI TEM Cell Model: CC110EXX	Jan. 01	A427-0697
(DC - 2000 MHz)		
Microwave Amp. Model: 5S1G4	Jan. 01	22332
(800MHz - 4.2GHz, 5 Watts)		

NOTE:
The E-field probe was calibrated by SPEAG. The SAR calibration of the E-field probe is performed by temperature measurement procedure. A TEM cell is used for the free space calibration of the probe. The tissue simulating material is calibrated by PCTEST using the dielectric probe system and network analyzer to determine the conductivity and permittivity (dielectric constant) of the desired equivalent material.

The following list of equipment was used to calibrate the equivalent materials:

Power Meter	Gigatronics 8651A
Signal Generator	HP-8648D (9kHz ~ 4GHz)
Power Amp	Amplifier Research 5S1G4 (5 Watts, 800MHz ~ 4.2GHz)
Network Analyzer	HP-8753E (30kHz ~ 3GHz)
Dielectric Probe Kit	HP85070B

15.1 CONCLUSION

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the FCC. These measurements are taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because innumerable factors may interact to determine the specific biological outcome of an exposure to electromagnetic fields, any protection guide shall consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.[3]

16.1 REFERENCES:

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APPENDIX A – SAR TEST PLOTS

UNIDEN FCC ID:AMWOVP2001610888 -- 150MHz Body SAR

Generic Twin Phantom; Flat Section; Probe: ET3DV6 - SN1560 -- Probe Cal Date 20/02/01

Med. Parameters 150 MHz Muscle: σ = 0.75 mho/m ε_r = 62.7 ρ = 1.00 g/cm^3; Antenna Position -- Out; Crest Factor 1.0

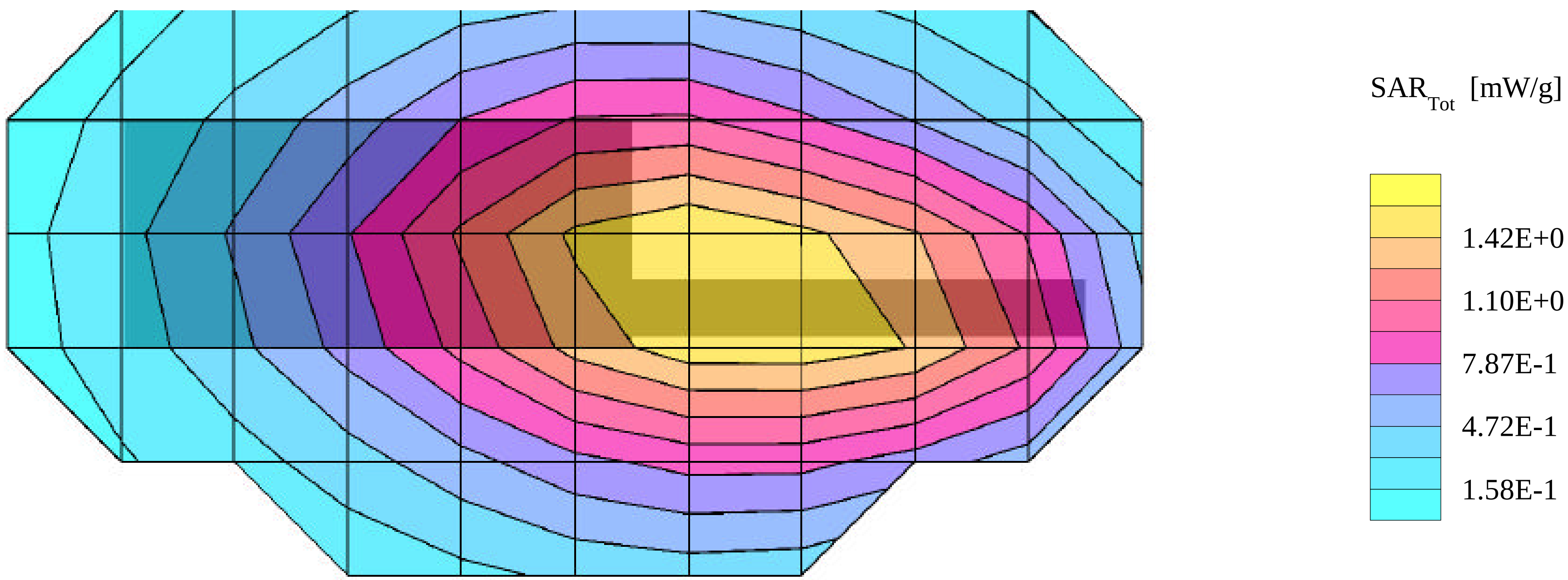
SAR (1g): 1.05 mW/g, SAR (10g): 0.810 mW/g

UNIDEN 150MHz VHF Radio Model: LTD925

Handheld VHF Radio

Ch.01 [156.050MHz]; Spacing = 2.5cm from flat phantom to radio

Test Date -- 05/31/2001



PCTEST Engineering Laboratory, Inc.

UNIDEN FCC ID:AMWOVP2001610888 -- 150MHz Body SAR

Generic Twin Phantom; Flat Section; Probe: ET3DV6 - SN1560 -- Probe Cal Date 20/02/01

Med. Parameters 150 MHz Muscle: σ = 0.75 mho/m ε_r = 62.7 ρ = 1.00 g/cm^3; Antenna Position -- Out; Crest Factor 1.0

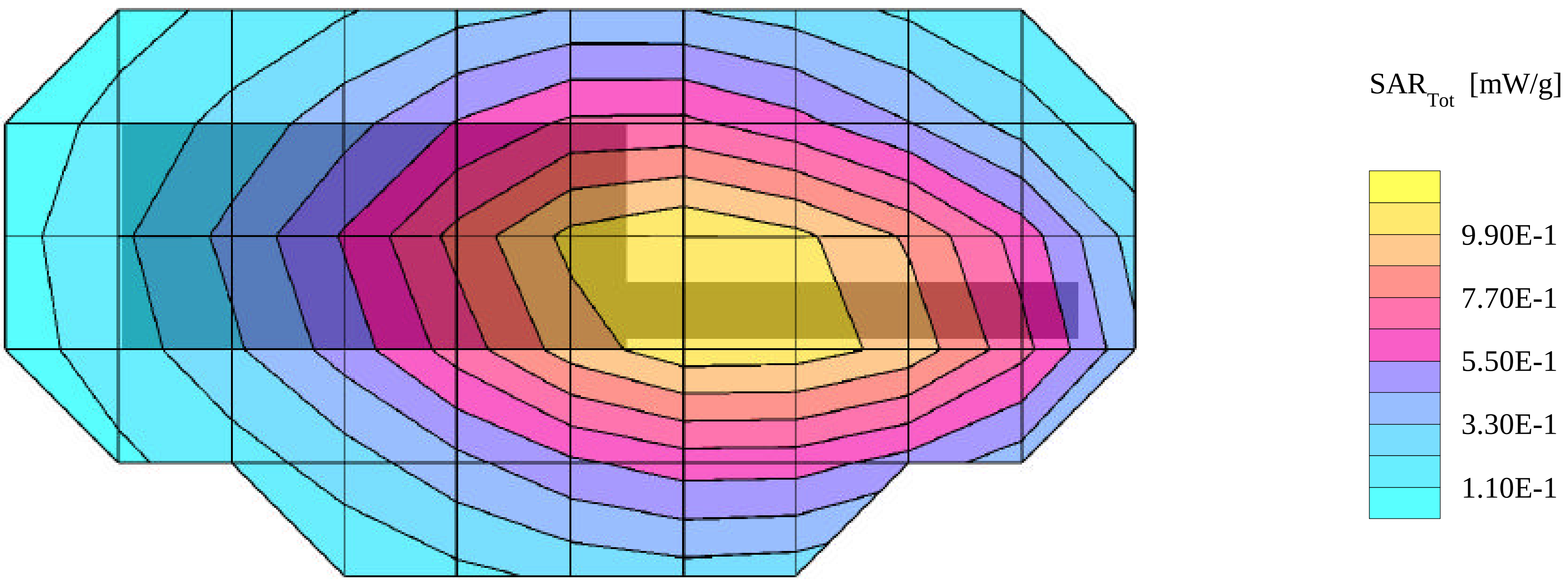
SAR (1g): 1.15 mW/g, SAR (10g): 0.884 mW/g

UNIDEN 150MHz VHF Radio Model: LTD925

Handheld VHF Radio

Ch.16 [156.800MHz]; Spacing = 2.5cm from flat phantom to radio

Test Date -- 05/31/2001



UNIDEN FCC ID:AMWOVP2001610888 -- 150MHz Body SAR

Generic Twin Phantom; Flat Section; Probe: ET3DV6 - SN1560 -- Probe Cal Date 20/02/01

Med. Parameters 150 MHz Muscle: σ = 0.75 mho/m ε_r = 62.7 ρ = 1.00 g/cm^3; Antenna Position -- Out; Crest Factor 1.0

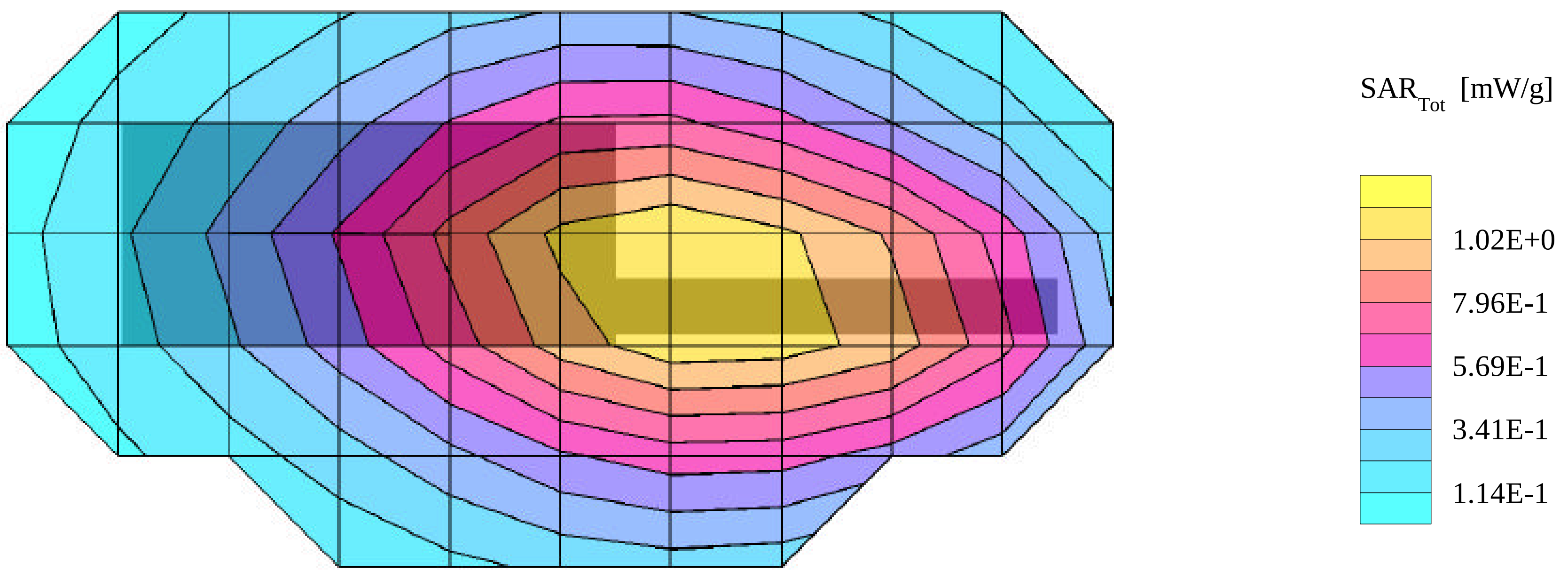
SAR (1g): 1.18 mW/g, SAR (10g): 0.909 mW/g

UNIDEN 150MHz VHF Radio Model: LTD925

Handheld VHF Radio

Ch.88 [157.425MHz]; Spacing = 2.5cm from flat phantom to radio

Test Date -- 05/31/2001



UNIDEN FCC ID:AMWOVP2001610888 -- 150MHz Mouth SAR

Generic Twin Phantom; Flat Section; Probe: ET3DV6 - SN1560 -- Probe Cal Date 20/02/01

Med. Parameters 150 MHz Brain: σ = 0.48 mho/m ε_r = 60.2 ρ = 1.00 g/cm^3; Antenna Position -- Out; Crest Factor 1.0

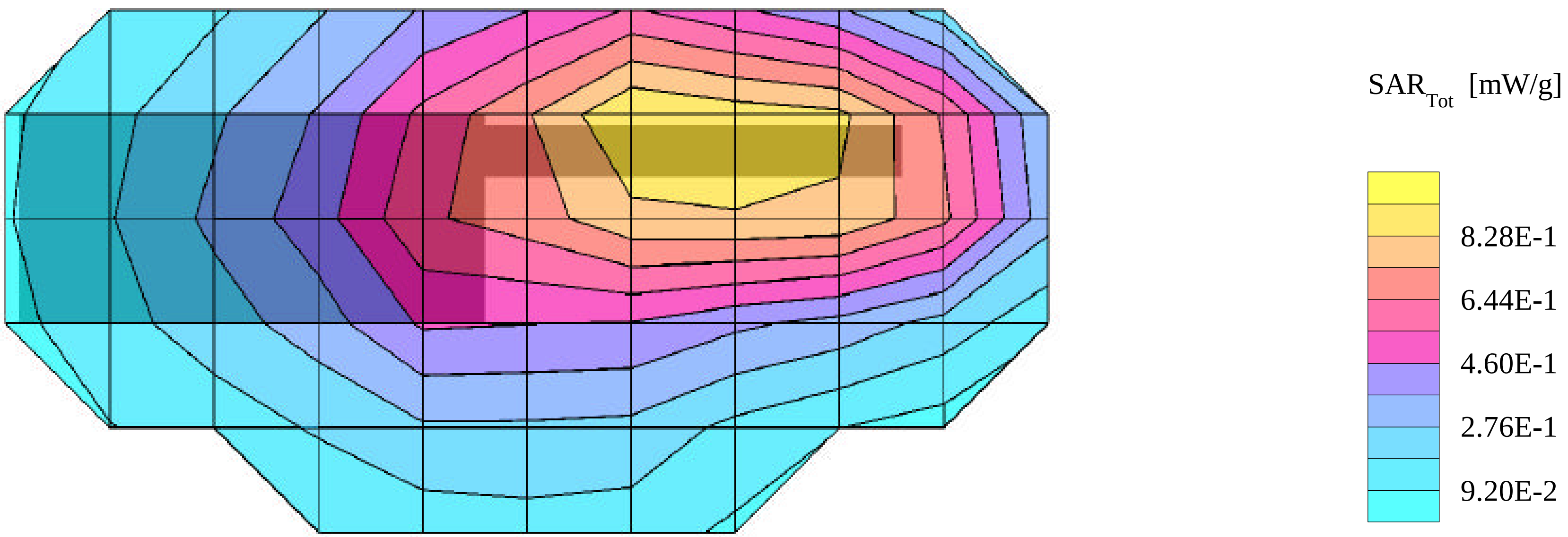
SAR (1g): 0.906 mW/g, SAR (10g): 0.692 mW/g

UNIDEN 150MHz VHF Radio Model: LTD925

Handheld VHF Radio

Low Ch.01 [156.050]; Spacing = 2.5cm (1.0inch) from flat phantom to radio

Test Date -- 05/21/2001



UNIDEN FCC ID:AMWOVP2001610888 -- 150MHz Mouth SAR

Generic Twin Phantom; Flat Section; Probe: ET3DV6 - SN1560 -- Probe Cal Date 20/02/01

Med. Parameters 150 MHz Brain: σ = 0.48 mho/m ε_r = 60.2 ρ = 1.00 g/cm^3; Antenna Position -- Out; Crest Factor 1.0

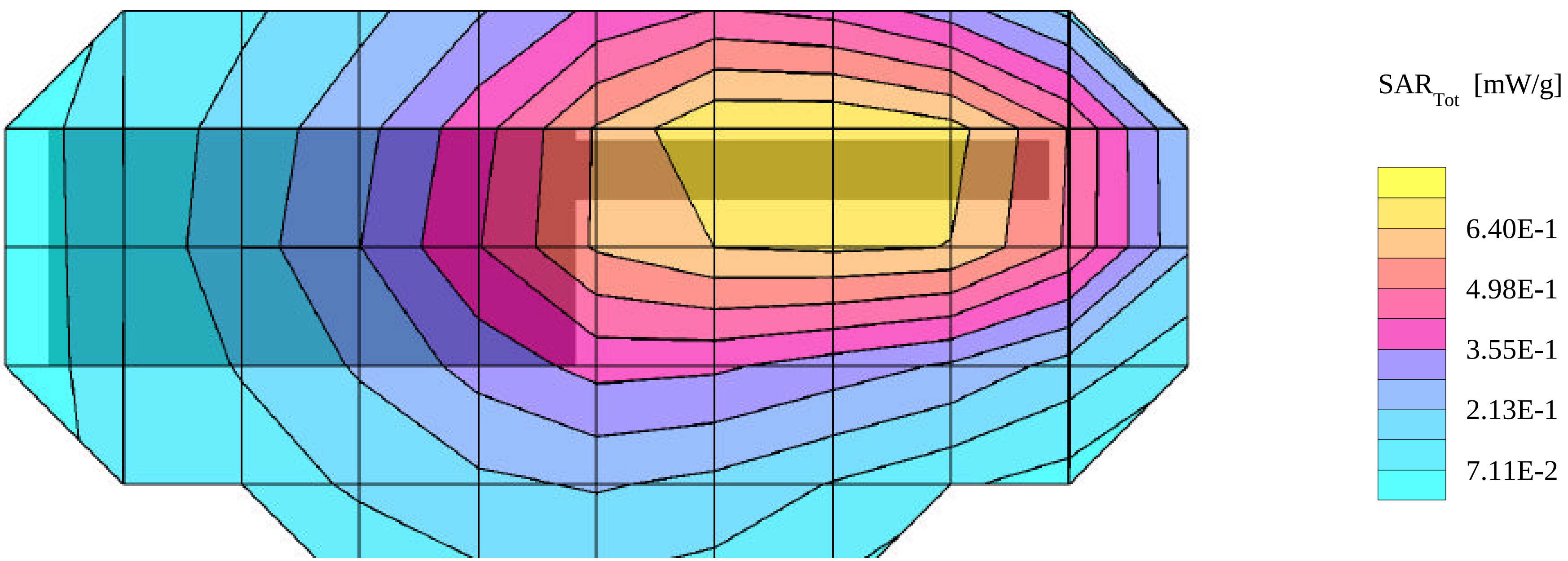
SAR (1g): 0.719 mW/g, SAR (10g): 0.550 mW/g

UNIDEN 150MHz VHF Radio Model: LTD925

Handheld VHF Radio

Mid Ch.16 [156.800MHz]; Spacing = 2.5cm (1.0inch) from flat phantom to radio

Test Date -- 05/21/2001



PCTEST Engineering Laboratory, Inc.

UNIDEN FCC ID:AMWOVP2001610888 -- 150MHz Mouth SAR

Generic Twin Phantom; Flat Section; Probe: ET3DV6 - SN1560 -- Probe Cal Date 20/02/01

Med. Parameters 150 MHz Brain: σ = 0.48 mho/m ε_r = 60.2 ρ = 1.00 g/cm^3; Antenna Position -- Out; Crest Factor 1.0

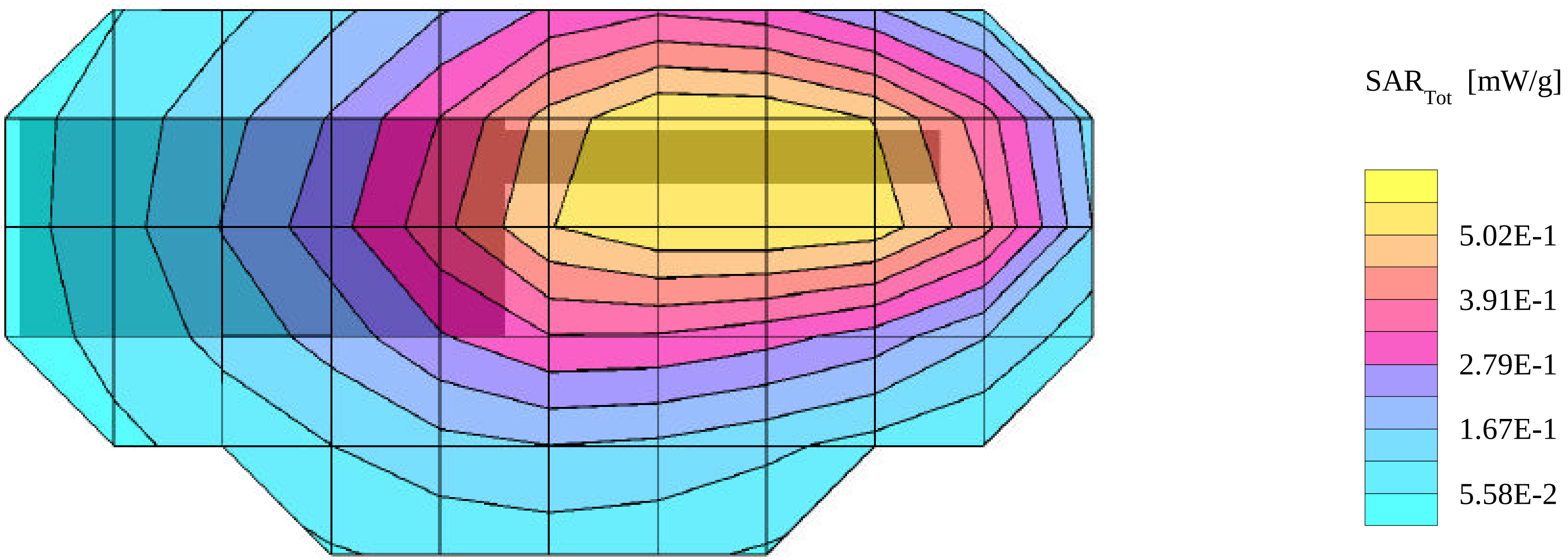
SAR (1g): 0.626 mW/g, SAR (10g): 0.479 mW/g

UNIDEN 150MHz VHF Radio Model: LTD925

Handheld VHF Radio

High Ch.88 [157.425MHz]; Spacing = 2.5cm (1.0inch) from flat phantom to radio

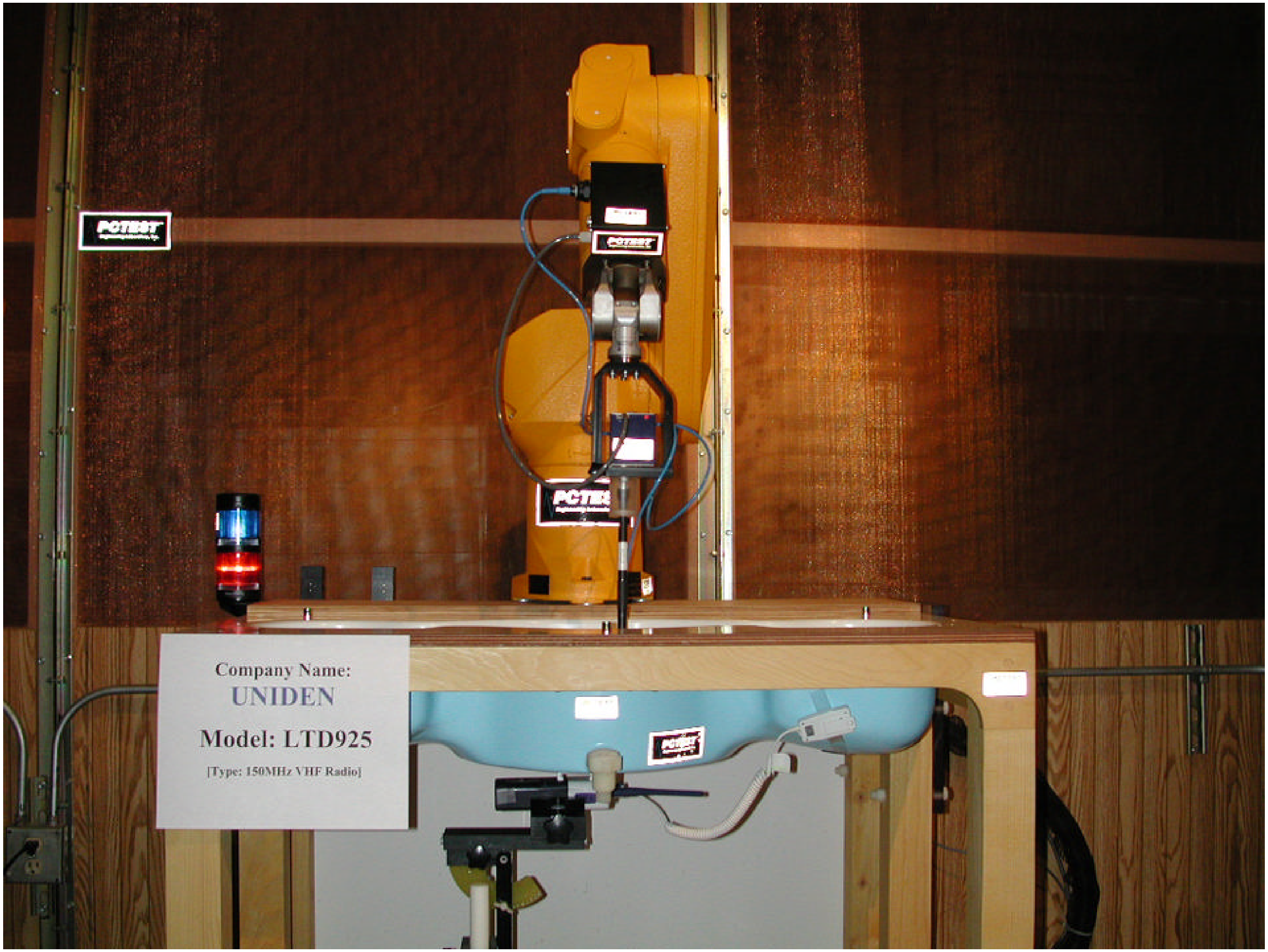
Test Date -- 05/21/2001



APPENDIX B – SAR TEST SETUP PHOTOGRAPHS

UNIDEN FCC ID: AMWOVP2001610888
150MHz Handheld VHF Radio

NVLAP Lab Code: 100431-0




Company Name:
UNIDEN
Model: LTD925
[Type: 150MHz VHF Radio]
PCTEST