

## Included in your Package



VOYAGER



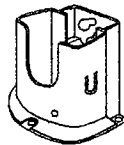
AC Adapter  
(BADY0510001)



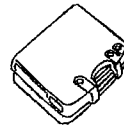
Antenna  
(HH9408)



DC Adapter



Drop-in Charger



Lithium Battery  
(Voyager BP)



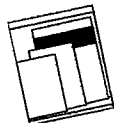
Beltclip



Wrist Strap  
(RETC484647Z)



Mounting Screws



Reference Guide/  
Printed Material

If any of these items are missing from the box, contact your Uniden Dealer or the Uniden Parts Department at (800)-554-3988.

## Additional Conversion Factors for Dosimetric E-Field Probe

Type:

**ET3DV6**

Serial Number:

**1677**

Place of Assessment:

**Zurich**

Date of Assessment:

**September 27, 2002**

Probe Calibration Date:

**April 10, 2002**

Schmid & Partner Engineering AG hereby certifies that conversion factor(s) of this probe have been evaluated on the date indicated above. The assessment 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 re-calibration schedule of the probe. The uncertainty of the numerical assessment is based on the extrapolation from measured value at 900 MHz or at 1800 MHz.

**Dosimetric E-Field Probe ET3DV6 SN:1677**

Conversion factor(± standard deviation)

**300MHz**

ConvF

**7.4 ± 8%**

$\epsilon_r = 45.3 \pm 5\%$
$\sigma = 0.87 \pm 5\% \text{ mho/m}$
(head tissue)

## 12. SYSTEM VERIFICATION

### Tissue Verification

Table 12.1 Simulated Tissue Verification [5]

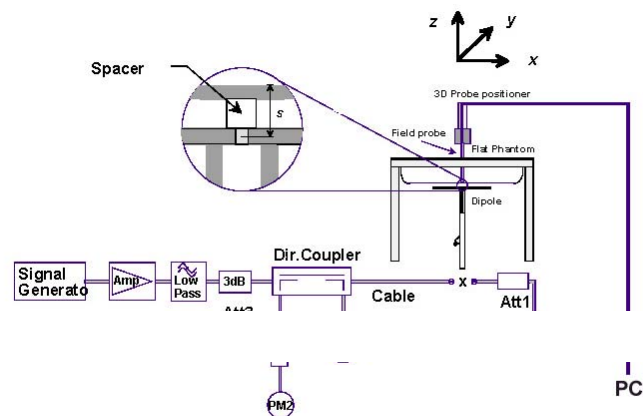
MEASURED TISSUE PARAMETERS									
Date(s)	09/30/02	150MHz Brain		150MHz Muscle		300MHz Brain		300MHz Muscle	
Liquid Temperature (°C)	22.9	Target	Measured	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: $\epsilon$		52.30	51.9	61.90	61.30	45.3	45.4	58.20	N/A
Conductivity: $\sigma$		0.760	0.780	0.800	0.830	0.870	0.890	0.920	N/A

### Test System Validation

Prior to assessment, the system is verified to the  $\pm 10\%$  of the specifications at 300MHz by using the system validation kit(s). (Graphic Plots Attached)

Table 12.2 System Validation [5]

SYSTEM DIPOLE VALIDATION TARGET & MEASURED				
System Validation Kit: D-300V2, S/N: 301	300MHz Brain	Targeted SAR <sub>1g</sub> (mW/g) 0.750	Measured SAR <sub>1g</sub> (mW/g) 0.805	Deviation (%) <b>+ 7.3</b>



PCTEST™ SAR REPORT	FCC CERTIFICATION			Uniden	Reviewed by: Quality Manager
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## 15. SAR TEST EQUIPMENT



### Equipment Calibration

Table 15.1 Test Equipment Calibration

EQUIPMENT SPECIFICATIONS			
Type		Calibration Date	Serial Number
Stäubli Robot RX60L		February 2002	599131-01
Stäubli Robot Controller		February 2002	PCT592
Stäubli Teach Pendant (Joystick)		February 2002	3323-00161
Micron Computer, 450 MHz Pentium III, Windows NT		February 2002	PCT577
SPEAG EDC3		February 2002	321
SPEAG DAE3		February 2002	330
SPEAG E-Field Probe ET3DV6		April 2002	1677
SPEAG Dummy Probe		February 2002	PCT583
SPEAG SAM Twin Phantom V4.0		February 2002	PCT666
SPEAG Light Alignment Sensor		February 2002	205
PCTEST Validation Dipole D300V2		September 2002	PCT301
SPEAG Validation Dipole D835V2		February 2002	PCT512
SPEAG Validation Dipole D1900V2		February 2002	PCT613
Brain Equivalent Matter (150MHz)		October 2002	PCTBEM501
Brain Equivalent Matter (300MHz)		October 2002	PCTBEM601
Muscle Equivalent Matter (150MHz)		October 2002	PCTMEM501
Microwave Amp. Model: 5S1G4, (800MHz - 4.2GHz)		January 2002	22332
Gigatronics 8651A Power Meter		January 2002	1835299
HP-8648D (9kHz ~ 4GHz) Signal Generator		January 2002	PCT530
Amplifier Research 5S1G4 Power Amp		January 2002	PCT540
HP-8753E (30kHz ~ 3GHz) Network Analyzer		January 2002	PCT552
HP85070B Dielectric Probe Kit		January 2002	PCT501
Ambient Noise/Reflection, etc.	<12mW/kg/<3%of SAR	January 2002	Anechoic Room PCT01

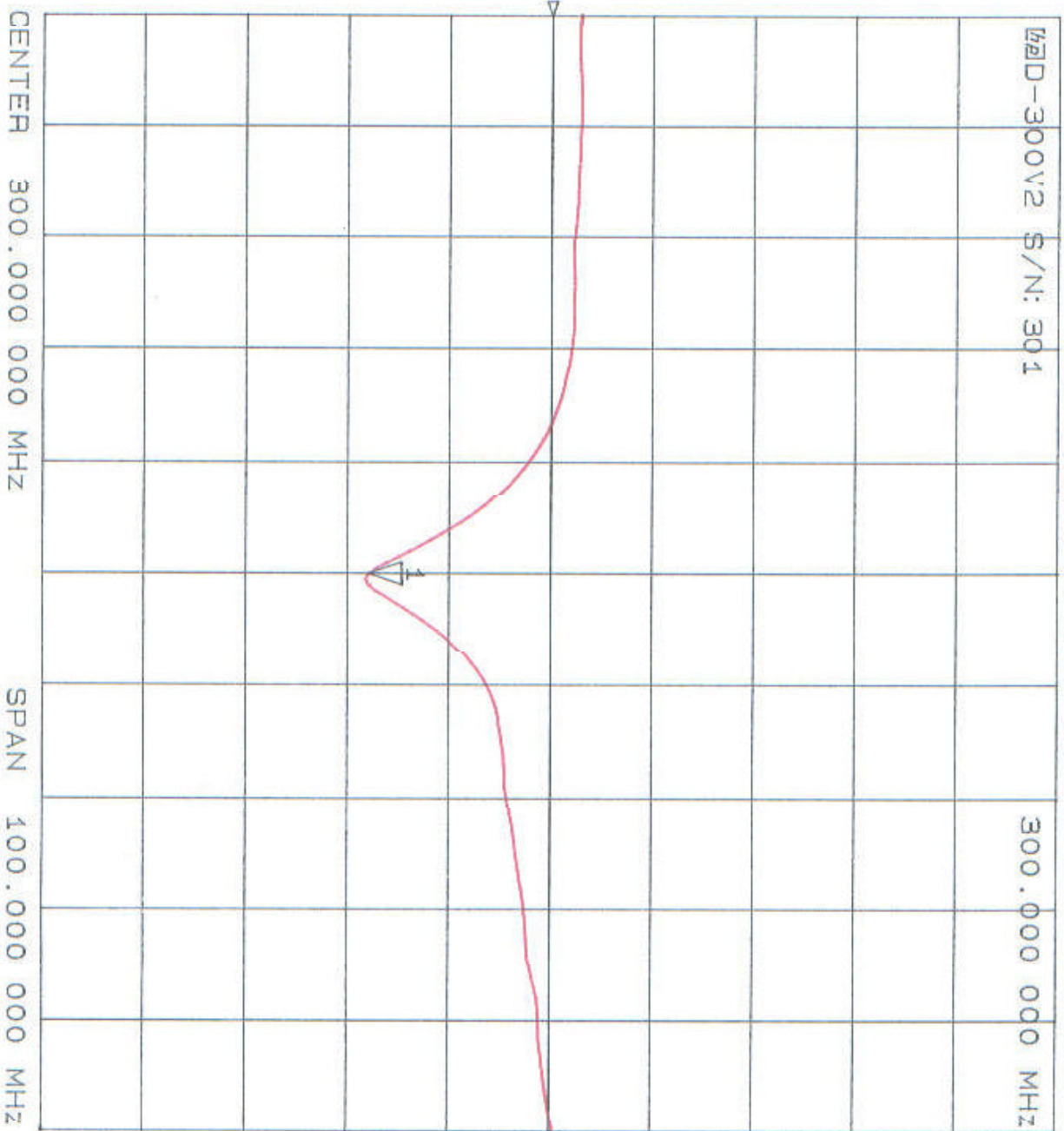
**NOTE:**

The E-field probe was calibrated by SPEAG, by temperature measurement procedure. Dipole Validation measurement is performed by PCTEST Lab. before each test. The brain simulating material is calibrated by PCTEST using the dielectric probe system and network analyzer to determine the conductivity and permittivity (dielectric constant) of the brain-equivalent material.

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CH1 MEM 10g MAG 10 dB/ REF -10 dB 1:--27.984 dB

72D-300V2 S/N: 301 300.000 000 MHz



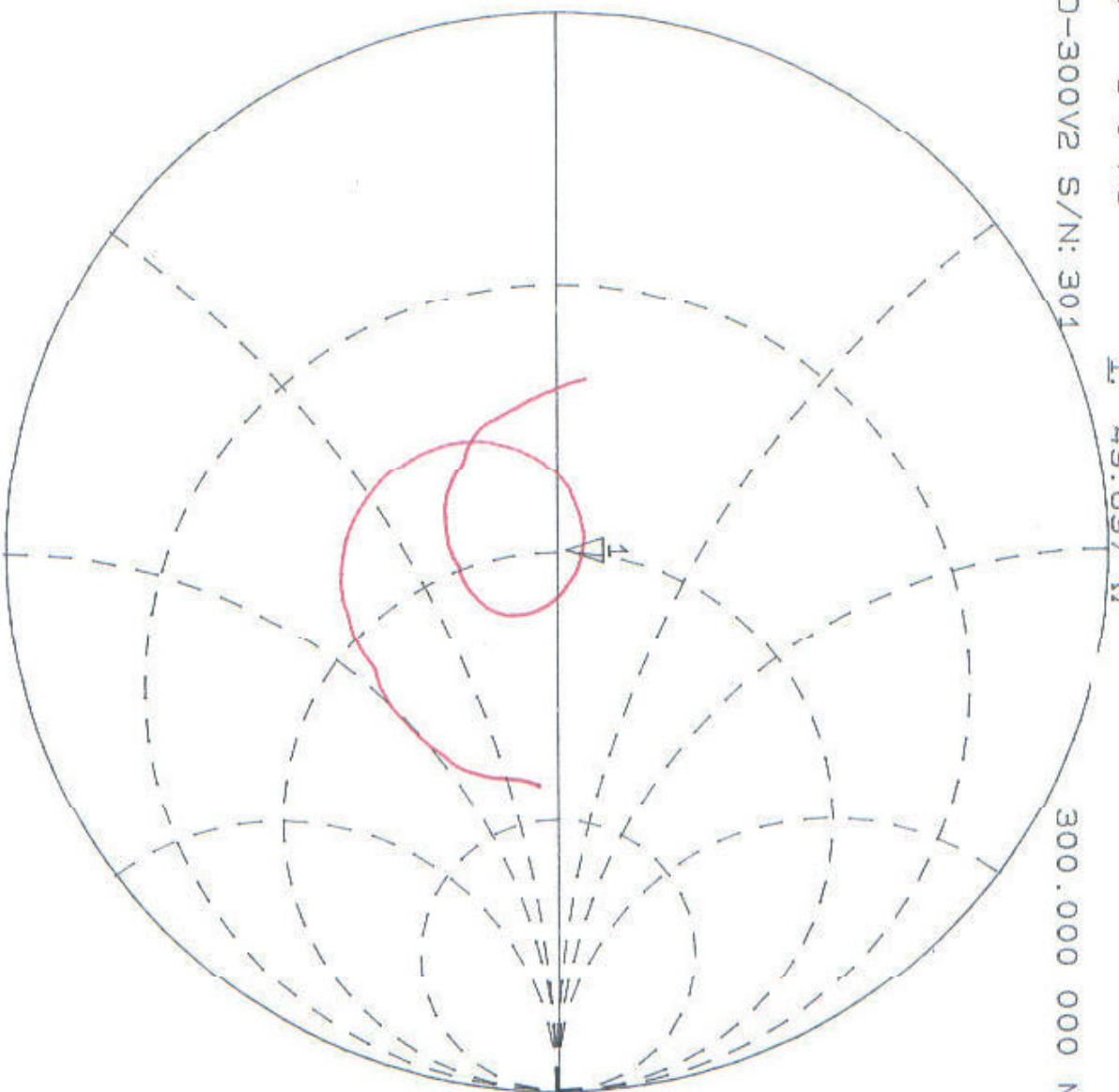
CH1 MEM 1 U FS

1: 49.697  $\Omega$

62D-300V2 S/N: 301

300.000 000 MHZ

↑



CENTER. 300.000 000 MHZ

SPAN 100.000 000 MHZ

## 11. MEASUREMENT UNCERTAINTIES

a	b	c	d	e = f(d,k)	f	g	h = cxf/e	i = cxg/e	k
Uncertainty Component	Sec.	Tol. (± %)	Prob. Dist.	Div.	$c_i$ (1 - g)	$c_i$ (10 - g)	1 - g $u_i$ (± %)	10 - g $u_i$ (± %)	$v_i$
<b>Measurement System</b>									
Probe Calibration	E1.1	4.0	N	1	1	1	4.0	4.0	∞
Axial Isotropy	E1.2	4.88	R	$\sqrt{3}$	0.5	0.5	1.4	1.4	∞
Hemishperical Isotropy	E1.2	9.6	R	$\sqrt{3}$	0.5	0.5	2.8	2.8	∞
Boundary Effect	E1.3	11.0	R	$\sqrt{3}$	1	1	6.4	6.4	∞
Linearity	E1.4	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
System Detection Limits	E1.5	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Readout Electronics	E1.6	1.0	R	1	1	1	1.0	1.0	∞
Response Time	E1.7	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
Integration Time	E1.8	1.7	R	$\sqrt{3}$	1	1	1.0	1.0	∞
RF Ambient Conditions	E5.1	1.2	R	$\sqrt{3}$	1	1	0.7	0.7	∞
Probe Positioner Mechanical Tolerance	E5.2	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
Probe Positioning w/ respect to Phantom	E5.3	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
Extrapolation, Interpolation & Integration Algorithms for Max. SAR Evaluation	E4.2	3.9	R	$\sqrt{3}$	1	1	2.3	2.3	∞
<b>Test Sample Related</b>									
Test Sample Positioning	E3.2.1	10.6	R	$\sqrt{3}$	1	1	6.1	6.1	11
Device Holder Uncertainty	E3.1.1	8.7	R	$\sqrt{3}$	1	1	5.0	5.0	8
Output Power Variation - SAR drift measurement	5.6.2	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
<b>Phantom &amp; Tissue Parameters</b>									
Phantom Uncertainty (Shape & Thickness tolerances)	E2.1	4.0	R	$\sqrt{3}$	1	1	2.3	2.1	∞
Liquid Conductivity - deviation from target values	E2.2	5.0	R	$\sqrt{3}$	0.7	0.5	2.0	1.4	∞
Liquid Conductivity - measurement uncertainty	E2.2	10.0	R	$\sqrt{3}$	0.7	0.5	4.0	2.9	∞
Liquid Permittivity - deviation from target values	E2.2	5.0	R	$\sqrt{3}$	0.6	0.5	1.7	1.4	∞
Liquid Permittivity - measurement uncertainty	E2.2	5.0	R	$\sqrt{3}$	0.6	0.5	1.7	1.4	∞
<b>Combined Standard Uncertainty (k=1)</b>			RSS				13.7	13.2	
<b>Expanded Uncertainty (k=2)</b> (95% CONFIDENCE LEVEL)							27.4	26.4	

The above measurement uncertainties are according to IEEE Std. 1528-200x (July, 2001)

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