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dB Technology
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REPORT ON RF EXPOSURE CALCULATIONS

Performed at:
TWENTY PENCE TEST SITE

**Twenty Pence Road,
Cottenham,
Cambridge
U.K.
CB24 8PS**

on

Sepura PLC

SRG3900UW + DMU

dated


19th March 2012

Document History

Issue	Date	Affected page(s)	Description of modifications	Revised by	Approved by
1	19/03/12		Initial release		

Based on report template:
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	Issue No: 1		
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Equipment Under Test (EUT): SRG3900UW + DMU

Test Commissioned by: Sepura PLC
Radio House
St Andrews Road
Cambridge
Cambridgeshire
CB4 1GR

Representative: Bob Allen

Test Engineer: Dave Smith


Date of Report: 19th March 2012

Written by: Dave Smith Checked by: Derek Barlow

Signature:  Signature: 

Date: 5th March 2011 Date: 19th March 2012

dB Technology can only report on the specific unit(s) tested at its site. The responsibility for extrapolating this data to a product line lies solely with the manufacturer.


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1 EUT Details

1.1 General

The EUT was a TETRA Voice + Data Mobile Station.

This report covers RF Exposure Calculations when used in a Desk Mount Unit configuration.

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RF Exposure Evaluation: OET Bulletin 65 97-01 CFR 47 1.1310

Manufacturer: Sepura

Product: SRG3900UW

Antenna 1: 300 00976 0dBd 1.64 Numeric Gain Fitted to DMU

Frequency (MHz)	450	470
Output Power (mW):	10000	10000
Numerical Antenna Gain:	1.64	1.64
Duty cycle (%):	25	25
Distance (cm):	20	20
Power Density (mW/cm ²):	0.816	0.816
FCC Limits: (mW/cm²)		
Controlled Environment: (f/300)	1.50 PASS	1.57 PASS

Antenna gain is taken from the supplied data sheets.

Duty Cycle is based on Tetra System in which each channel is divided into 4 slots - with equal time allocation.

$$\text{Total Power, } P(\text{Watts}) = \text{Output Power} \times \text{Antenna Gain} \times \frac{\text{Duty Cycle}}{100}$$

$$\text{Power at a Distance, } d(\text{metres}) = \frac{P}{4 \pi d^2}$$

Conclusion:

At a distance of 20cm the maximum power density is 0.816 mW/cm² which is comfortably below controlled environment limit of 1.5 mW/cm²