dB Technology
(Cambridge Ltd.)

EMC Testing | EMC Consultancy | EMC Training

23, Headington Drive,
Cambridge.
CB1 9HE
Tel : 01954 251974 (test site)
or : 01223 241140 (accounts)
Fax : 01954 251907
web : www.dbtechnology.co.uk
email: mail@dbtechnology.co.uk

REPORT ON RF EXPOSURE CALCULATIONS

Performed at:
TWENTY PENCE TEST SITE

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

on

Sepura PLC

STP9040 + Car Kit

dated

15th December 2013

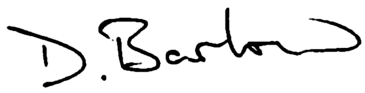
Document History

Issue	Date	Affected page(s)	Description of modifications	Revised by	Approved by
1	15/12/13		Initial release		

Based on report template:
v090319

Equipment Under Test (EUT):	STP9040 + Car Kit
Test Commissioned by:	Sepura PLC Radio House St Andrews Road Cambridge Cambridgeshire CB4 1GR
Representative:	Steve Wood
Test Engineer:	Dave Smith
Date of Report:	15th December 2013

Written by: Dave Smith — Checked by: Derek Barlow

Signature:  Signature: 

Date: 15th December 2013 — Date: 19th December 2013

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.

1 EUT Details

1.1 General

The EUT was a TETRA Voice + Data Hand Portable .

This report covers RF Exposure Calculations when used in a Car Kit configuration.

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

Manufacturer: Sepura

Product: STP9040

			Numeric Gain	
Antenna 1:	300 00663	7dBi	5.01	Fitted to Car-Kit

Frequency (MHz)	450		470	
Output Power (mW):	1800		1800	
Numerical Antenna Gain:	5.01		5.01	
Duty cycle (%):	25		25	
Distance (cm):	**25**		**25**	
Power Density (mW/cm2):	**0.287**		**0.287**	
FCC Limits: (mW/cm2)				
General limit: (f/1500)	**0.30**	**PASS**	**0.31**	**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.

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

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

Conclusion:

At a distance of 25cm the maximum power density is 0.287 mW/cm2 which is just below the general environment limit of 0.3 mW/cm2