



# RF EXPOSURE REPORT

**REPORT NO.:** SA130306E03

**MODEL NO.:** M-R0047-O

**FCC ID:** JNZMR0047O

**RECEIVED:** Feb. 07, 2013

**TESTED:** Feb. 07, 2013

**ISSUED:** Mar. 15, 2013

**APPLICANT:** LOGITECH FAR EAST LTD.

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**ISSUED BY:** Bureau Veritas Consumer Products Services  
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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130306E03	Original release	Mar. 15, 2013



## 1. CERTIFICATION

**PRODUCT:** Bluetooth Mouse  
**BRAND NAME:** Logitech  
**MODEL NO.:** M-R0047-O  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**APPLICANT:** LOGITECH FAR EAST LTD.  
**TESTED DATE:** Feb. 07, 2013  
**STANDARDS:** FCC Part 2 (Section 2.1091)  
FCC OET Bulletin 65, Supplement C (01-01)  
IEEE C95.1

The above equipment (Model: M-R0047-O) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY** : , **DATE:** Mar. 15, 2013  
( Lori Chung, Specialist )

**APPROVED BY** : , **DATE:** Mar. 15, 2013  
( May Chen, Manager )

## 2. EVALUATION RESULT

### Following FCC KDB 447498 D01 “General SAR test exclusion guidance”

The corresponding SAR Exclusion Threshold condition, listed below:

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR where

Ø  $f(\text{GHz})$  is the RF channel transmit frequency in GHz

Ø Power and distance are rounded to the nearest mW and mm before calculation

Ø The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

2) At 100 MHz to 6 GHz and for test separation distances  $> 50$  mm, the SAR test exclusion threshold is determined according to the following:

a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100MHz to 1500 MHz

b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at  $> 1500$  MHz and  $\leq 6$  GHz

3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.

a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  for test separation distances  $> 50$  mm and  $< 200$  mm.

b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$  for test separation distances  $\leq 50$  mm.

c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

### 3. SAR TEST EXCLUSION THRESHOLDS

Maximum measured transmitter power:

Frequency (GHz)	Max. Power (mW)	Min. test separation distance (mm)	SAR test exclusion calculation value <sup>(NOTE 2)</sup>	10-g extremity SAR test exclusion thresholds	Result
2.402 ~ 2.480	1.352	5	0.00025	7.5	Pass

**NOTE:** 1. The antenna type is PCB printed antenna with -8.81dBi gain.

2. Calculate SAR test exclusion thresholds from condition "1" formulas.

### 4. CONCLUSION

Since Source-base time average power is below SAR test exclusion power thresholds, the SAR evaluation is not required.

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