

®

**SGS****SGS-CSTC Standards  
Technical Services Ltd.**

1/F., Building No. 1 Building, Agriculture Machinery Materials Co. Wushan  
Road, Shipai, Tianhe District, Guangzhou, China  
Telephone: +86 (0) 20 3848 1001 Fax: +86 (0) 20 3848 1006  
cn\_guangzhou\_emc\_section@sgs.com

**FEDERAL COMMUNICATIONS COMMISSION** Laboratory Division

7435 Oakland Mills Road Columbia, MD 21046

May 31, 2002

Registration number: 282399



Report No.: **02.07.729E-2**

Page: 1 of 6

## ***FCC TEST REPORT***

**Application No.** : 02.07.0729E-2  
**Applicant** : MLK Technologies Limited  
**FCC ID** : PP2MLKF-1000N

### **Equipment under Test (EUT):**

Name : RF Mouse (transmitter)

Model : MLKF-1000 (Creative WMU90S, ACROX MUH, NGS SMART MOUSE) ♣

♣ : Please refer to section 3.2 which will indicate which model was actually tested.

**Standards** : FCC PART 15, SUBPART C : 2000

**Date of Receipt** : 27 June 2002

**Date of Test** : 06 July 2002

**Date of Issue** : 15 July 2002

<b>Test Result :</b>	<b>PASS *</b>
----------------------	---------------

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation..

Kent Hsu  
 Laboratory Manager  
 SGS-CSTC Co., Ltd.

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf.

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the SGS PRODUCT CERTIFICATION MARK.. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.



**2 Contents**

	Page
<b>1 COVER PAGE.....</b>	<b>1</b>
<b>2 CONTENTS.....</b>	<b>2</b>
<b>3 GENERAL INFORMATION.....</b>	<b>3</b>
3.1 CLIENT INFORMATION .....	3
3.2 DETAILS OF E.U.T. ....	3
3.3 DESCRIPTION OF SUPPORT UNITS .....	3
3.4 TEST LOCATION.....	3
3.5 OTHER INFORMATION REQUESTED BY THE CUSTOMER .....	3
<b>4 TEST RESULTS.....</b>	<b>4</b>
4.1 TEST INSTRUMENTS .....	4
4.2 E.U.T. OPERATION .....	4
4.3 TEST PROCEDURE & MEASUREMENT DATA .....	5
4.3.1 <i>Radiated Emissions</i> .....	5
4.3.2 <i>Occupied Bandwidth</i> .....	6

### 3 General Information

#### 3.1 Client Information

Applicant: MLK Technologies Limited  
Address of Applicant: Room 1019-1020, Nanfung Center, 264-298 Castle Peak Road,  
Tsuen Wan, N.T. HongKong.

#### 3.2 Details of E.U.T.

Product Name: RF Mouse

Model: MLKF-1000(Creative WMU90S, ACROX MUH, NGS SMART  
MOUSE) ♣

♣ Model MLKF-1000, CREATIVE WMU90S, ACROX MUH, NGS SMART MOUSE are refer to the same product with only different model description. Please refer to the facsimile from Mr. Li of MLK Technologies Limited dated 12 July 2002

Power Supply: 3V DC (2 x 'AA' Batteries)  
Power Cord: N/A-

#### 3.3 Description of Support Units

The EUT was tested as an independent unit.

#### 3.4 Test Location

All tests were performed at:-

SGS-CSTC Standards Technical Services Ltd., Guangzhou Safety & EMC Laboratory, 1/F,  
Building No. 1, Agriculture Machinery Materials Company Warehouse Ltd., Wushan Road  
Shipai, Tianhe District, Guangzhou, China. P.C. 510630.

Tel: +86 20 3848 1001

Fax: +86 20 3848 1006

SGS UK Certificate No.: L32

Federal Communications Commission laboratory division

Registration number: 282399

#### 3.5 Other Information Requested by the Customer

None.

## 4 Test Results

### 4.1 Test Instruments

Description	Manufacturer	Model No.	Asset No.	Date of Cal.
Temperature, Humidity & Barometer	Oregon Scientific	BA-888	EMC023	26-07-2001
Radiated Emissions CNE	LAPLACE	ERS-A	EMC025	27-04-1998
Bioconic Antenna	R & S	HK116	EMC047	14-12-2001
3M Semi-Anechoic Chamber	Frankonia	11.5 x 7.5 x 6 m <sup>3</sup>	EMC1001	21-01-2002
0.8m Test Table	SGS-CSTC	N/A	EMC1003	N/A
EMI Receiver	R & S	ESCS30	EMC2001	13-11-2001
Spectrum Analyser	Advantest	R3261C+99	EMC071	26-07-2001
Log-Periodic Dipole Antenna	R & S	HL233	EMC2005	17-12-2001
Monitor System	HD-GmbH	N/A	EMC2008	N/A
Antenna Mask	HD-GmbH	AS620M	EMC2010	N/A
Turn-Table	HD-GmbH	DT430	EMC2014	N/A
Turn_Table & Mask Controller	ADVANTEST	HD-GmbH HD100	EMC2015	N/A
Coaxial Cable (12m)	R & S	HFU2-Z4	EMC3001	08-03-2002
EMI Test Software	R & S	ES-K1	EMC5001	N/A

### 4.2 E.U.T. Operation

Input voltage: 3V DC (2 x 'AA' Batteries)

Operating Environment:

Temperature: 24.0 °C

Humidity: 52 % RH

Atmospheric Pressure: 1006 mbar

EUT Operation:

Test the EUT in transmitting mode.

### 4.3 Test Procedure & Measurement Data

#### 4.3.1 Radiated Emissions

Test Requirement:	FCC Part15 C
Test Method:	Based on FCC Part15 C Section 15.227
Test Date:	06 July 2002
Measurement Distance:	3m (Semi-Anechoic Chamber)
Requirements:	Carrier frequency will not exceed 80dBuV/m AT 3m. Out of band emissions shall not exceed: 40.0 dB $\mu$ V/m between 30MHz & 88MHz 43.5 dB $\mu$ V/m between 88MHz & 216MHz 46.0 dB $\mu$ V/m between 216MHz & 960MHz 54.0 dB $\mu$ V/m above 960MHz
Detector:	Peak Scan (120kHz resolution bandwidth)

Test Procedure: The procedure used was ANSI Standard C63.4-1992. The receiver was scanned from 30MHz to 1000MHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the horizontal and vertical polarities and the worst case emissions were reported.

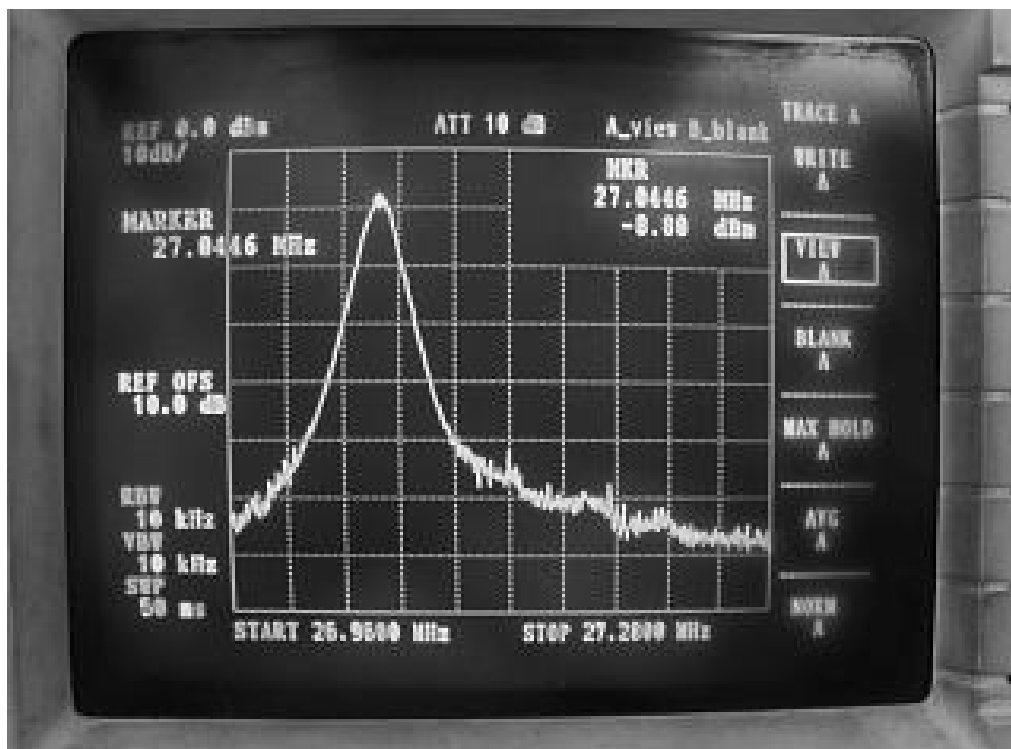
The following Peak measurements were performed on the EUT on 06 July 2002:  
Test the EUT in transmitting mode.

Test Frequency (MHz)	Quasi-Peak (dBuV/m)		Limits (dBuV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
27.04	64.4	62.1	80.0	15.6	17.9
54.09	38.1	34.9	40.0	1.9	5.1
81.13	35.2	31.8	40.0	4.8	8.2
108.18	33.8	32.4	43.5	9.7	11.1
135.22	32.1	31.0	43.5	11.4	12.5
162.27	31.5	29.6	43.5	12.0	13.9
189.31	32.0	28.4	43.5	11.5	15.1
216.36	29.6	27.6	46.0	16.4	18.4
243.40	28.3	27.4	46.0	17.7	18.6
270.45	26.4	25.8	46.0	19.6	20.2

**Test Results: The unit does meet the FCC Part 15 C requirements.**

### 4.3.2 Occupied Bandwidth

Test Requirement: FCC Part15 C  
 Test Method: Based on FCC Part15 C Section 15.227:  
 Operation within the band 26.96 - 27.28 MHz  
 Test Date: 06 July 2002  
 Requirements: The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209.  
 Method of measurement: The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector. The vertical Scale is set to – 10dB per division. The horizontal scale is set to 5KHz per division.  
 The graph as below, represents the emissions take for this device.



**The results: The unit does meet the FCC Part 15 C requirements.**