

## RFI / EMI TEST REPORT

**APPLICANT** : SYSGRATION LTD.

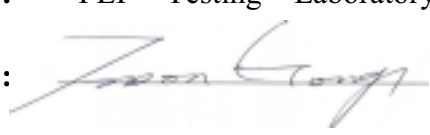
**E. U. T.** : RF MOUSE(transmitter)

**TRADE NAME** : N/A

**FCC ID** : HQXAGM-6700

**REGULATION** : CFR 47 , Part 15 Subpart B , **Class B**

**TEST SITE** : PEP Testing Laboratory

**TEST ENGINEER** : 

**TEST DATE** : 06 / 21 / 2000

**ISSUED DATE** : JULY / 13 / 2000

**REPORT No.** : E890378

**VERIFICATION****WE HEREBY VERIFY THAT:**

The E. U. T. listed below has completed RFI testing by PEP Testing Laboratory and the interference emissions can pass **FCC Class B** limitations .

The tested configurations and the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4 - 1992 .

Any data in this RFI report is “ **reference** “ only .

**APPLICANT** : SYSGRATION LTD.\*  
**PRODUCT** : RF MOUSE(transmitter)\*  
**FCC ID** : HQXAGM-6700\*  
**MODEL** : AGM67URXT\*



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M. Y. TSUI / Manager

**PEP Testing Laboratory**  
12-3FL., NO. 27-1, Lane 169, Kang-Ning St.,  
Hsi-Chi, Taipei Hsien, Taiwan, R. O. C.  
TEL : 886-2-6922097      FAX : 886-2-6956236

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**1. GENERAL**

**1.1 GENERAL INFORMATION:**

APPLICANT : SYSGRATION LTD.

8FL., NO. 542-7, CHUNG CHENG RD.,  
HSIN TIEN, TAIPIE, TAIWAN, R. O. C.

MANUFACTURER : SYSGRATION LTD.

VILLAGE E GONE-LING DING HU TOWN  
LONG GONG DISTRICT SHENZHEN CITY  
GUANGDONG PEOPLE REPUBLIC CHINA

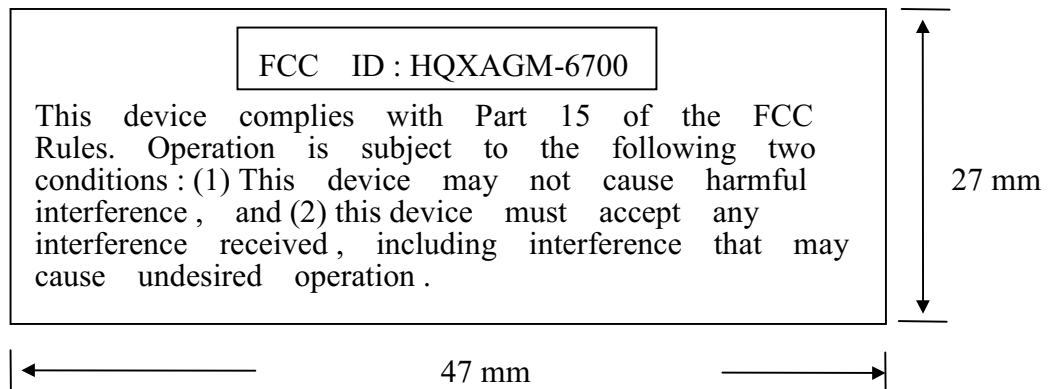
MEASUREMENT PROCEDURE : ANSI C63 , 4 - 1992

TESTED FOR COMPLIANCE WITH : Title 47 of CFR  
Part 15 , Subpart B , Class B

**1.2 PLACE OF MEASUREMENT**  
**PEP Testing Laboratory**

### 1.3 LABELING REQUIREMENT

A FCC ID label shall be permanently attached and conspicuously located on the equipment :



## 1.4 INFORMATION TO THE USER

The following FCC statement should be declared in a conspicuous location in the user's manual.

### Federal Communications Commission (FCC) Statement

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

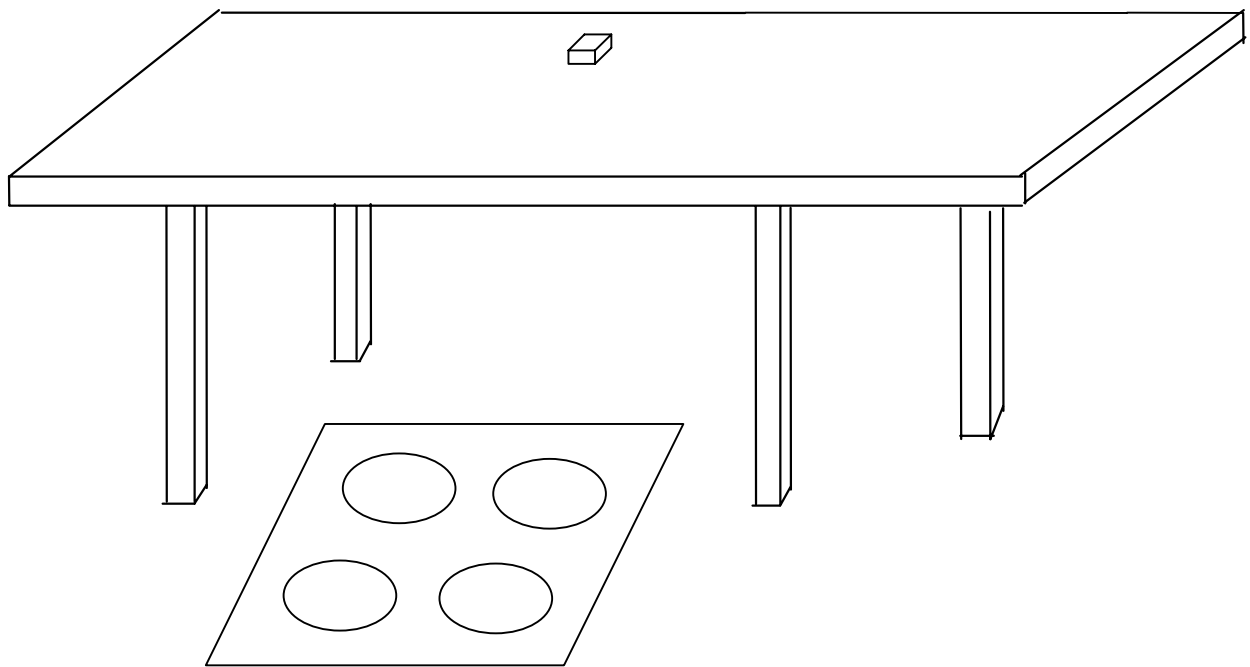
Warning : A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.

Use only shielded cables to connect I/O devices to this equipment.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

## 6. RADIATED EMISSIONS TEST

### 2.1 GENERAL SETUP OF THE FACILITIES



## 2.2 TEST PROCEDURES

Radiated emissions test was carried out by **PEP Testing Laboratory** at the open field test site authorized by FCC .

The EUT and supporting equipments were setup with the EMI diagnostic software .

- a. setting up the EUT under normally position , and scanning it from 30 MHz to 1000 MHz , then recording those narrow band noises which cannot be 6 dBuV below lower bound . Both horizontal and vertical antenna are measured from 1 meter height to 4.0 meter height , and turntable rotate 360 degrees .
- b. fixing the EUT rear face to antenna and antenna 1.0 meter height . We adjusted I/O cables to find the highest coupling noise and moved the height of antenna from 1 to 4 meters , then rotated the turntable simultaneously .
- c. checking following step b. all points which were recorded in step a.
- d. changing the peripherals position , and routine steps a. b. c.

The highest emissions were recorded in the RFI test report .



## **7. DESCRIPTION FOR EUT TESTING CONFIGURATION**

### **\*\* TEST PROCEDURE ----**

The EUT is RF mouse transmitter , FCC ID : HQXAGM-6700 , for more detail information about the EUT , please refer user's manual .

Test method : The EUT was put on the turn table and press the button kept the EUT enable ( TX on ) during the test .

(C) After the EUT was set up , we only performed the radiated emission test at the open field site .

(D) In the RFI test report , we provided the worst radiated emission test data.

**4. SUPPORTING DEVICES TO TEST**

N/A

**RADIATED TEST CONFIGURATION PHOTO.**

**< FRONT VIEW >**



**< REAR VIEW >**



**RADIATED EMISSIONS TEST DATA****Antenna polarization : HORIZONTAL ; Test distance : 3 m ;**

Freq. (MHz)	Level (dB)	Over Limit (dB)	Limit Line (dB)	Read Level (dB)	Probe Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)
27.039	39.30	-20.70	60.00	40.60	17.90	0.40	19.60
40.611	24.31	-25.69	40.00	30.87	12.23	0.90	19.69
54.078	27.52	-12.48	40.00	39.74	6.40	1.24	19.86
81.127	23.29	-16.71	40.00	34.65	6.98	1.54	19.88
133.135	22.73	-20.77	43.50	29.15	10.98	2.20	19.60
164.635	22.72	-20.78	43.50	30.72	9.20	2.50	19.70
230.619	16.47	-29.53	46.00	23.68	9.25	3.14	19.60
325.527	22.46	-23.54	46.00	28.36	13.70	0.00	19.79
336.045	24.93	-21.07	46.00	28.03	13.49	3.27	19.86
497.335	25.68	-20.32	46.00	25.19	16.88	3.79	20.17

Note :

1. Level = Read Level + Probe Factor + Cable Loss – Preamp Factor
2. Over Limit = Level – Limit Line

**RADIATED EMISSIONS TEST DATA**Antenna polarization : VERTICAL ; Test distance : 3 m ;

Freq. (MHz)	Level (dB)	Over Limit (dB)	Limit Line (dB)	Read Level (dB)	Probe Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)
27.038	38.20	-21.80	60.00	39.50	17.90	0.40	19.60
40.517	27.48	-12.52	40.00	33.98	12.29	0.90	19.69
53.289	26.68	-13.32	40.00	38.68	6.60	1.23	19.83
66.817	27.50	-12.50	40.00	40.03	4.97	0.37	19.87
135.613	27.22	-16.28	43.50	33.86	10.78	2.20	19.62
162.757	25.17	-18.33	43.50	33.17	9.20	2.50	19.70
230.617	23.90	-22.10	46.00	31.11	9.25	3.14	19.60
393.296	28.21	-17.79	46.00	28.06	15.57	4.62	20.04
501.872	30.08	-15.92	46.00	27.58	17.30	5.21	20.01
610.448	27.87	-18.13	46.00	22.88	19.00	5.85	19.86

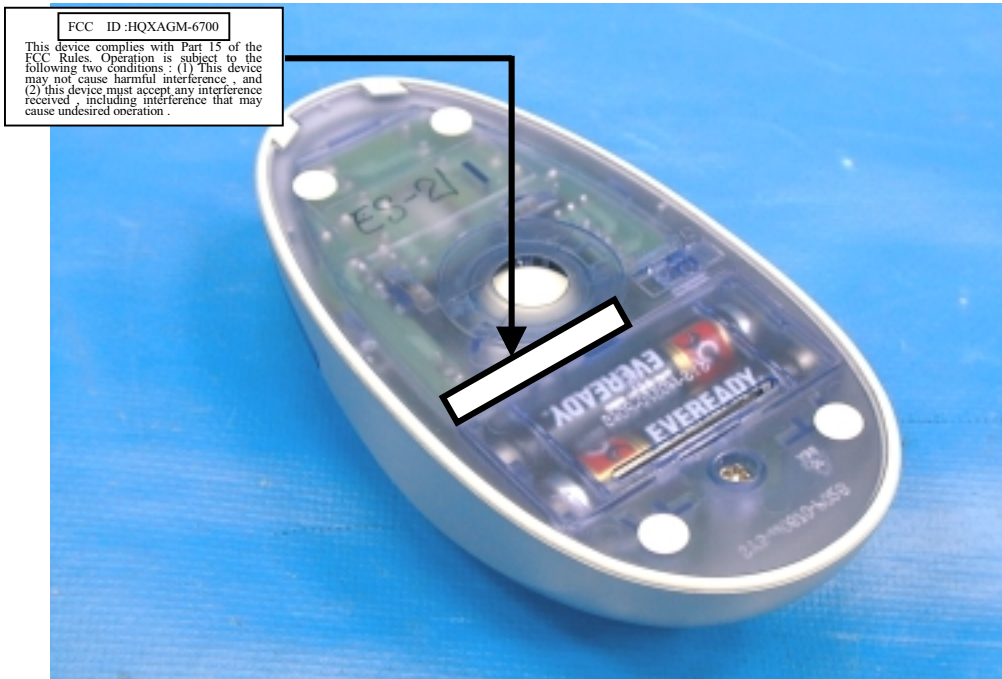
Note :

1. Level = Read Level + Probe Factor + Cable Loss – Preamp Factor
2. Over Limit = Level – Limit Line

**APPENDIX A.**  
**PHOTOS OF EUT APPEARANCE**  
**< EUT FRONT VIEW >**



**< EUT REAR VIEW >**



**APPENDIX B.**  
**List of Test Equipment**

Instrument	Model No.	Next Cal. Date	S/N
R&S Receiver	ESVS30(30M~1GHZ)	Apr. 21, 2001	863342/012
R&S Receiver	ESBI (20~5GHZ)	Feb. 12, 2001	845658/003
Spectrum Analyzer	HP8591A(9K~1.8GHZ)	Apr. 15, 2001	3225A03039
Spectrum Analyzer	R3261A (9K~2.6GHZ)	Dec. 03, 2000	91720076
EMCO L.I.S.N.	3825/2 (10K~30MHZ)	Apr. 15, 2001	9311-2150
Anritsu Pre-Amp.	MH648A(100K~1.4GHZ)	Sep. 20, 2000	M40076
COM-Power Horn Antenna	AH-118 (1G~18GHZ)		10056
EMCO Dipole Antenna	3121C (20M~1GHZ)	May. 22, 2001	9611-1230
EMCO Biconical Antenna	3110B (30M~300M)	Mar. 10, 2001	2932
EMCO Log-Periodic Antenna	3146A (300M~1GHZ)	Apr. 14, 2001	1384