



香港標準及檢定中心
The Hong Kong Standards and Testing Centre Ltd

Date : May 29, 1998

FCC ID: II677000R

TECHNICAL REPORT

1) Full Name of the Manufacturer of the Device

GUAN LAN TEEMABLE ELECTRONIC CO.

2) Mailing Address of the Manufacturer of the Device

Guan Lan Industrial Area
Bao An
CHINA

3) Trade Name

NIL

4) Model Number

77000

5) Additional Model Numbers under which the Device will be Marketed

77010

6) Copy of the Operating Instruction Furnished to the User

As enclosed





The Hong Kong Standards and Testing Centre Ltd

TEST REPORT

1998-04-23

No.: WM1213A/504

APPLICANT: (CODE : 001736)

SUPERSONICS ELECTRIC CO.
108 Lok Shan Road, Gee Chang Ind. Bldg.,
25-27 Luk Hop St, San Po Kong,
Kowloon, HONG KONG.

DATE OF SAMPLES RECEIVED: 1998-04-02

DATE OF TESTING: 1998.04.08

DESCRIPTION OF SAMPLE(S):

A sample of product said to be:

Product: Micro R/C - Receiver
Manufacturer: Guan Lan Teemable Electronic Co.
Model Number: 77000
Brand Name: NIL
Rating: DC 4.5V (LR01 AM5 N size battery X 3)
Origin: Made in China
Additional Model Number: 77010

INVESTIGATIONS REQUESTED:

Measurement to the relevant clauses of F.C.C. Rules and Regulations Part 15 Subpart B -
Unintentional Radiator.

RESULT/ REMARK: Please see attached sheet(s).

CONCLUSION:

From the measurement data obtained, the tested sample was considered to have COMPLIED with the clause 15.109(a) for the Receiver Section of Federal Communication Rules and Regulation Part 15 and ANSI C63.4-1992 Section 12.1.1.1-2.

TEST EQUIPMENT AUDIT: Please see Appendix A

Testing Engineer

Verify by

Patrick Wong
for Managing Director

Note:

Attention is drawn to the conditions printed overleaf under which this report is issued.
The test results of this report refer only to the sample tested and do not apply to the bulk, unless the sampling has been carried out by The Hong Kong Standards and Testing Centre Ltd and is stated as such in the report.
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TEST SUMMARY

- (A) Measurement of Radiated EmissionsSatisfactory
- (B) Line Conducted Voltage TestNot applicable

TEST DATA

Please refer to the attached result sheets

Members of:

Federation of Hong Kong Industries
 International Safe Transit Association
 American Society for Testing & Materials
 The Hong Kong General Chamber of Commerce



The Hong Kong Toys Council
 The Hong Kong Exporter's Association
 The Hong Kong Association of Certification
 Laboratories

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*** RECEIVER SECTION ***

(A) Measurement of Radiated Interference

TEST REFERENCE: FCC Rules Part 15 Subpart B section 15.109(a)

TEST CONDITION : Normal

TEST DATE 1998.04.08

Freq. to which tuned	Freq of the emission	Meter reading (at 3m)	Antenna factor	Field Strength (at 3m)		FCC Limit @
				dB(μV/m)	μV/m	
MHz	MHz	dB(μV)	dB			μV/m
49.861	49.9	V 21.4	- 15.0	< 36.4	< 66	100
	99.7	H < 1.0	- 12.2	< 12.2	< 4	150
	149.6	H < 1.0	+ 9.8	< 9.8	< 3	150
	199.3	V 17.6	+ 11.5	< 29.1	< 29	100
	249.2	H 12.2	- 15.9	< 28.1	< 25	100
	299.1	H < 1.0	- 17.0	< 17.0	< 7	200
	349.0	H < 1.0	+ 17.2	< 17.2	< 7	200
	398.8	H < 1.0	+ 18.8	< 18.8	< 9	200
	448.7	H < 1.0	+ 19.7	< 19.7	< 10	200
	498.6	H < 1.0	+ 20.6	< 20.6	< 11	200
	548.4	H < 1.0	+ 22.2	< 22.2	< 13	200
	598.3	H < 1.0	+ 23.4	< 23.4	< 15	200
	648.1	H < 1.0	+ 23.5	< 23.5	< 15	200
	698.0	H < 1.0	+ 25.0	< 25.0	< 18	200
	747.8	H < 1.0	+ 26.2	< 26.2	< 20	200
	797.7	H < 1.0	+ 27.2	< 27.2	< 23	200
	847.5	H < 1.0	+ 27.2	< 27.2	< 23	200
	897.5	H < 1.0	+ 27.2	< 27.2	< 23	200
	947.2	H < 1.0	+ 27.8	< 27.8	< 25	200
	997.1	H < 1.0	+ 28.5	< 28.5	< 26	500

SUMMARY

All data is within limits

Broad-band Antennas were used and both polarizations of emissions were measured
 Polarizations at highest reading indicated as:

H -- Horizontal

V -- Vertical



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NOTES FOR THE RADIATION MEASUREMENT

(1) Test site facility:

Open field test site located at Taipo (Hong Kong) with a metal ground plane on filed with the FCC pursuant to section 2.948 of the FCC Rules.

(2) Distance between the ET and measuring antenna:

3 meters.

(3) Measuring instrumentation's:

CISPR Quasi-peak type field strength meter (25 MHz - 1000 MHz.). 6 dB bandwidth set at 120 KHz. Also, peak level of the fundamental emissions was measured in order to determine compliance with the 20dB peak to average limit specified in Section 15.35(b) of the FCC new Rules.

(4) Measuring antenna:

Broad band antenna for the frequency range 25-1000 MHz, connected with 10 meters coaxial cable. Cable loss of the coaxial cable, included in the Antenna Factor for measurement data. The antenna are capable of measuring both horizontal and vertical polarizations.

(5) Frequency range scanned:

The frequency range from 25 MHz to 1000 MHz had been searched. Readings of the highest emissions relating to the limit were reported as above.

(6) Arrangement of EUT:

During the test, the sample was operated at rated supply voltage and arranged for maximum emissions.

(7) Measuring Procedure:

In accordance with the relevant clauses of the FCC Rules Part 15 section 15.109(a) and ANSI C63.4:1992 section 12.1.1.1-2.

(8) Measuring Uncertainty:

The calculated uncertainty for measurement performed at 3M test distance are:-
30MHz to 200MHz = ± 3.7 dB. 200MHz to 1000MHz = ± 3.0 dB/-2.7dB.

Remark: Purpose of this test is to provide the Applicant with the necessary test data of their device for the submission to FCC with application for Equipment Authorization under FCC's Equipment Authorization Program. This test itself is not an Approval Test.

***** End of Document *****



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Appendix A

TEST EQUIPMENT AUDIT

Radiated Emission

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL.
EM007	SPECTRUM ANALYZER	HP	HP83660B	3144A21192	02/05/97
EM008	SPECTRUM ANALYZER DISPLAY	HP	HP85662A	3144A20514	02/05/97
EM009	QUASI PEAK ADAPTOR	HP	HP85650A	3303A01702	02/05/97
EM010	RF PRESELECTOR	HP	HP85685A	3221A01410	02/05/97
EM011	ATTENUATOR SWITCH	HP	HP11713A	2508A10595	02/05/97
FM012	PRE-AMPLIFIER	HP	HP8449B	3008A00262	02/05/97
FM013	CONTROLLER (COMPUTER),	HP	HP9000	6226A60314	CM
	COLOR MONITOR, KEYBOARD &	HP	HP A1097C	3151739517	
	MOUSE FLOPPY DRIVE	HP	HP9133L	2623A02468	
EM017	ANTENNA	ARA INC.	LPB-2513/A	1069	31/12/97
EM072	SIGNAL GENERATOR	HP	8640B	1948A11892	30/03/98
EM083	HKSTC OPEN AREA TEST SITE	HKSTC	N/A	N/A	16/02/98

ABBREVIATIONS:

CM=Corrective Maintenance

N/A=Not Applicable