

廠商會檢定中心

TEST REPORT

Report No. : AR0018424(8) Date : 18 Apr 2013

Application No. : LR007511(3)

Client : Kid Galaxy Inc

150 Dow Street,

Unit 425B Manchester, nh03101

Sample Description : One(1) item of submitted sample stated to be :

Sample Description	Model number
Viper	10192
Morphibians—shark / Gator / Rover /	10125 / 10126 / 10162 / 10163 /
exploer / Frog / Stingray / Cobra /	10112 / 10151 / 10118 / 10168
Killer Whale	

Sample registration no. : RR009272-002 Radio Frequency : 49.860MHz Receiver Rating : 3 x 1.5V AA size batteries

No. of submitted sample : Two (2) piece (s)

Date Received : 19 Mar 2013

Test Period : 22 Mar 2013 to 11 Apr 2013

Test Requested : FCC Part 15 Certification.

Test Method : 47 CFR Part 15 (10-1-10 Edition)

ANSI C63.4 - 2009

Test Result : See attached sheet(s) from page 2 to 22.

Conclusion : The submitted sample was found to comply with requirement of FCC Part 15

Subpart B.

Remark : All nine models are the same in circuitry and components; and therefore model

10192 was chosen to be the representative of the test sample. The difference

between the tested model and the declared model(s) is/are the model number, color

and sample description.

For and on behalf of

CMA Industrial Development Foundation Limited

Authorized Signature : Page 1 of 22

Mr. WONG Lap-pons, Andrew

Assistant Manager Electrical Division

FCC ID: QEA-E097-49R

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1 General Information

1.1 General Description

The equipment under test (EUT) is a receiver for Morphibians RC car. It operates at 49.860MHz and the oscillation of radio control is generated by a LRC circuit. The EUT is powered by 3 x 1.5V AA size batteries. When it switched on and received radio control signal, it will take corresponding action.

The brief circuit description is listed as follows:

- SW1, R12, R3, C11, C12, C6 and its associated circuit act as power circuit.
- L1, C1, C2, C3, Q1, T1, L2, R6, C4, R4, C5, R2, R5, C7, C8 and its associated circuit act as super regeneration band pass filter and amplifier circuit
- C9, R7, C10, U1 and its associated circuit act as pre-amplifier circuit
- U1, R1 and its associated circuit act as decoder circuit
- R8, R9, U2, C12, C14 and its associated circuit act as motor front / back circuit

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1.2 Location of the test site

FCC Registered Test Site Number: 552221

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 - 2009. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at:

Ground Floor, Yan Hing Centre, 9 – 13 Wong Chuk Yeung Street, Fo Tan, Shatin, New Territories, Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 - 2009. A shielded room is located at :

Ground Floor, Yan Hing Centre, 9 – 13 Wong Chuk Yeung Street, Fo Tan, Shatin, New Territories, Hong Kong.

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1.3 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.	Calibration Due Date
EMI Test Receiver	R&S	ESCI	100152	28 May 2013
Broadband Antenna	Schaffner	CBL6112B	2718	16 Jan 2014
Loop Antenna	EMCO	6502	00056620	15 Sep 2013
Coaxial Cable	Schaffner	RG 213/U	N/A	28 May 2013
Coaxial Cable	Schaffner	RG 214/U	N/A	28 May 2013

1.4 Measurement Uncertainty

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%.

Radiated emissions

Frequency	Uncertainty (U _{lab})
30MHz ~ 200MHz (Horizontal)	4.83dB
30MHz ~ 200MHz (Vertical)	4.84dB
200MHz ~1000MHz (Horizontal)	4.66dB
200MHz ~1000MHz (Vertical)	4.65dB

Conducted emissions

Conducted Chinggions	
Frequency Uncertainty (U _{lab})	
150kHz~30MHz	3.02dB

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2 Description of the radiated emission test

2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 - 2009.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

A signal generator was used to radiate an unmodulated continuous wave (CW) signal to the EUT (super-regenerative receiver) at its operating frequency in order to "cohere" the characteristic broadband emissions from the receiver.

2.2 Test Result

The frequencies from 30MHz to 1000MHz were investigated, and emissions more 20dB below limit were not reported. Thus, those highest emissions were presented in next page (section 2.3).

The emissions meeting the requirement of section 15.109 are based on measurements employing the CISPR quasi-peak detector below 1000MHz and average detector for frequencies above 1000MHz.

It was found that the EUT meet the FCC requirement.

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2.3 Radiated Emission Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Environmental conditions:

ParameterRecorded valueAmbient temperature:25° CRelative humidity:70%

Detector: Quasi-peak RBW: 120kHz VBW: 300kHz

Frequency	Polarity	Reading at	Antenna	Field Strength	Limit at 3m	Margin
(MHz)	(H/V)	3m	Factor and	at 3m	$(dB\mu V/m)$	(dB)
		(dBµV)	Cable Loss (dB/m)	(dBµV/m)		
50.095	V	15.6	10.2	25.8	40.0	- 14.2
53.818	V	12.0	10.2	22.2	40.0	- 17.8
71.618	V	8.9	8.0	16.9	40.0	- 23.1
115.103	V	11.5	12.4	23.9	43.5	- 19.6
146.059	V	8.8	14.5	23.3	43.5	- 20.2
248.517	V	12.2	11.9	24.1	43.5	- 19.4
254.165	V	9.4	15.0	24.4	46.0	- 21.6
320.184	V	9.5	15.9	25.4	46.0	- 20.6
366.453	V	11.7	15.9	27.6	46.0	- 18.4
397.386	V	12.8	15.9	28.7	46.0	- 17.3

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3 Description of the Line-conducted Test

3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 - 2009. The EUT was setup as described in the procedures, and both lines were measured.

3.2 Test Result

No measurement is required as the EUT is a battery-operated product.

3.3 Graph and Table of Conducted Emission Measurement Data

Not Applicable

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- 4 Photograph
- 4.1 Photographs of the Test Setup for Radiated Emission and Conducted Emission

For electronic filing, the photos are saved with filename TSup1.jpg to TSup2.jpg.

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho2.jpg and InPho1.jpg to InPho2.jpg.

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5 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

Document	Filename
ID Label/Location	LabelSmp.jpg
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf

5.1 Bandwidth

Not Applicable

5.2 Duty cycle

Not Applicable

5.3 Transmission time

Not Applicable

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6 Appendices

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A2.	Photos of External Configurations	1	page
A3.	Photos of Internal Configurations	1	page
A4.	ID Label/Location	1	page
A5.	Block Diagram	1	page
A6.	Schematics Diagram	1	page
A7.	User Manual	4	pages
A8.	Operation Description	1	page

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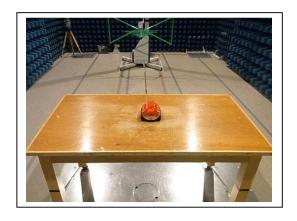


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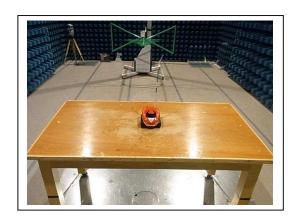
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A1. Photos of the set-up of Radiated Emissions



(Front view)



(Back view)

Tested by:

Mr. LEUNG Shu-kan, Ken

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A2. Photos of External Configurations



External Configuration 1



External Configuration 2

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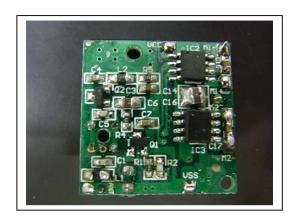
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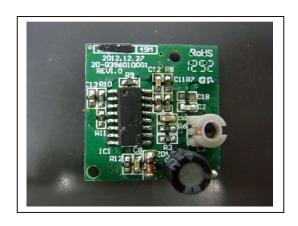
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A3. Photos of Internal Configurations



Internal Configuration 1



Internal Configuration 2

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A4. ID Label / Location



ID Label 1



ID Label 2

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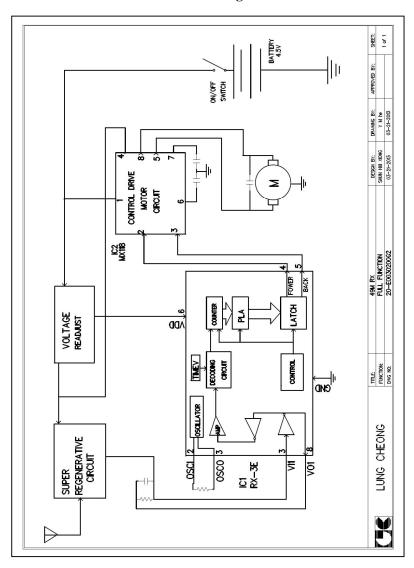


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A5. Block Diagram



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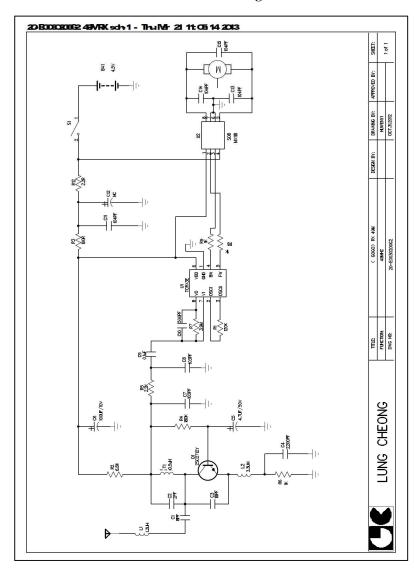


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A6. Schematics Diagram



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A7. User Manual



Tested by:

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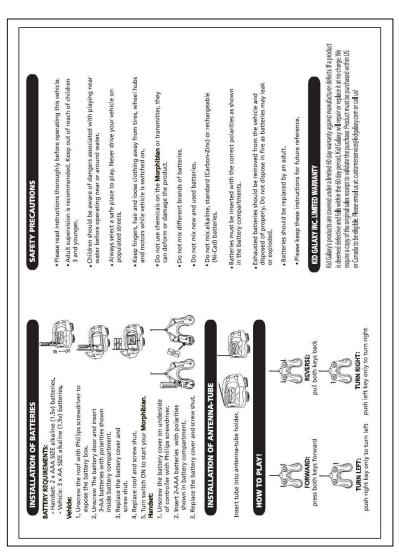


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A7. User Manual



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A7. User Manual



Tested by:

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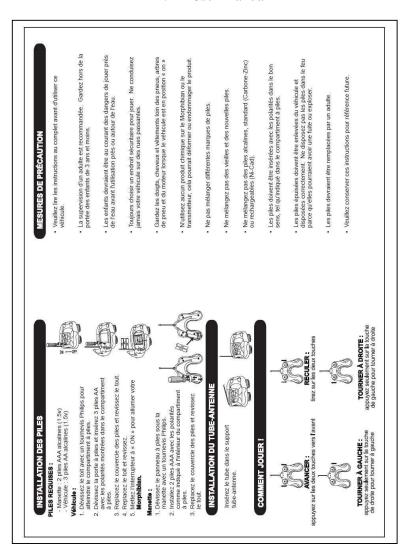


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A7. User Manual



A8. Operation Description

Tested by:

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TEST REPORT

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Kid Galaxy RC-TOY GOGO CAR RX OPERATION PRINCIPLE

The Kid Galaxy RC-TOY go go car operates at frequency 27.145MHz, or 49.860MHz, encode signals were received from antenna then passed into the super regeneration band pass filter circuit for wave-check; After Pre-amplification then passed into the decoder of the IC, the controlling signals corresponding to TX will be demodulated out to control the car's functions of frontward: backward.

Circuits' composition:

Power circuit, super regeneration band pass filter and amplifier circuit, pre-amplified circuit, decoder circuit, motor front/back circuit.

1. Power circuit:

SW1, R12, R3 , C11, C12, C6

2. super regeneration band pass filter and amplifier circuit:

L1, C1, C2, C3, Q1, T1, L2, R6, C4, R4, C5, R2, R5, C7, C8

3. pre-amplified circuit:

C9, R7, C10, U1

4 · decoder circuit:

U1. R1

5. motor front/back circuit:

R8, R9, U2, C13, C14

***** End of Report *****

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