

# ***FCC TEST REPORT***

**FCC ID NO.** : QE8610XXRX49A

**Applicant** : **Interactive Toy Concepts (HK) Ltd.**  
7/F.,Eu Yan San Tower,11-15 Chatham Road South, TST, Kowloon,  
Hong Kong

**Equipment Under Test (EUT) :**

**Product Name** : R/C Helicopter

**Model No.** : 61081

**Standards** : FCC Part 15 SUBPART B

**Date of Test** : March 2, 2007

**Test Engineer** : **Tiger Su**

**Reviewed By** : 

PERPARED BY:

**Waltek Services (Shenzhen) Co., Ltd.**

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Guangdong, China.

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## 2 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)	FCC PART 15, SUBPART B: 2003	ANSI C63.4: 2003	Class B	PASS
Conducted Emission (150KHz to 30MHz)	FCC PART 15, SUBPART B: 2003	ANSI C63.4: 2003	Class B	N/A

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## 4 General Information

### 4.1 Client Information

Applicant: **Interactive Toy Concepts (HK) Ltd.**  
Address of Applicant: 7/F.,Eu Yan San Tower,11-15 Chatham Road South, TST,  
Kowloon, Hong Kong  
Manufacturer: Interactive Toy Concepts (HK) Ltd.  
Address of Manufacturer: 7/F.,Eu Yan San Tower,11-15 Chatham Road South, TST,  
Kowloon, Hong Kong

### 4.2 General Description of E.U.T.

Product Name: R/C Helicopter  
Model No.: 61081

### 4.3 Details of E.U.T.

Power Supply: RX: 3.7VDC Battery

### 4.4 Description of Support Units

Compliance test was performed test in ON mode .

The customer requested FCC tests for a R/C Helicopter.

The standard used was FCC Part 15.107 & Part15.109, SUBPART B, CLASS B (2003)

#### **4.5 Test Facility**

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC – Registration No.: 97379**

Shenzhen Academy Of Metrology and Quality Inspection EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 97379, April 20, 2006.

#### **4.6 Test Location**

All Emissions tests were performed at:-

Bldg, of Metrology and Quality Inspection , Longzhu Road , Nanshan  
District , Shenzhen , Guangdong , China

## 5 Equipment Used during Test

<b>Conducted Emission Test</b>						
<b>Item</b>	<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Date</b>	<b>Due date</b>
1	CE Variac	GZ Debao Factory	TS/DGC <sub>2</sub> -5	N/A	N/A	N/A
2	LISN	SCHAFFNER CHASE	MNZ050D 11	100002	18-11-2006	17-11-2007
3	Shielding Room	Frankonia	12 x 4 x 4 m <sup>3</sup>	N/A	N/A	N/A
4	EMI Receiver	ROHDE & SCHWARZ	ESCS30	830245/009	18-11-2006	17-11-2007
5	Coaxial Cable	SMQ	2m	N/A	18-11-2006	17-11-2007
<b>Radiated Emission Test</b>						
<b>Item</b>	<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Date</b>	<b>Due date</b>
1	3m Semi- Anechoic Chamber	Albatross Projects	9X6X6	N/A	18-11-2006	17-11-2007
2	EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	830245/009	18-11-2006	17-11-2007
3	EMI Test Software	ROHDE & SCHWARZ	ES-K1	N/A	N/A	N/A
4	Coaxial cable	SMQ	N/A	N/A	18-11-2006	17-11-2007
5	Bilog Antenna	Chase	CBL6112B	2591	18-11-2006	17-11-2007
6	Horn Antenna	ROHDE & SCHWARZ	HF906	100014	18-11-2006	17-11-2007
7	Loop Antenna	R&S	6108	N/A	18-11-2006	17-11-2007
<b>Common Used Equipment</b>						
<b>Item</b>	<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Series No.</b>	<b>Cal. Date</b>	<b>Due date</b>
1	Temperature, Humidity & Barometer	OREGON SCIENTIFIC	BA-888	EMC0001 to EMC0004	11-11-2006	10-11-2007
2	DMM	FLUKE	73	70681569 or 70671122	11-11-2006	10-11-2007

## 5.1 Conduction Emissions, 0.15MHz to 30MHz

Test Requirement:	FCC Part 15.107
Test Method:	ANSI C63.4: 2003
Test Date:	March 2, 2007
Frequency Range:	150kHz to 30MHz
Class/Severity:	B
Limit:	66-56 dB $\mu$ V/m between 0.15MHz & 0.5MHz 56 dB $\mu$ V/m between 0.5MHz & 5MHz 60 dB $\mu$ V/m between 5MHz & 30MHz
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth) Quasi-Peak & Average if maximised peak within 6dB of Average Limit

### 5.1.1 E.U.T. Operation

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1012 mbar

#### EUT Operation :

Compliance test was performed test in ON mode.

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

### 5.1.2 Measurement Data

Owing to the DC operation of EUT, this test is not performed.

## 5.2 Radiated Emissions, 30MHz to 1GHz

Test Requirement:	FCC Part 15.109
Test Method:	ANSI C63.4: 2003
Test Date:	March 2, 2007
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Class:	Class B
Limit:	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 zbove 960MHz
Detector:	Peak for pre-scan (120kHz resolution bandwidth) Quasi-Peak if maximised peak within 6dB of limit

### 5.2.1 E.U.T. Operation

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1012 mbar

EUT Operation :

Compliance test was performed test in ON mode.

### 5.2.2 EUT Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4: 2003, The specification used in this report was the FCC Part 15.109 Class B limits.



### 5.2.3 Spectrum Analyzer Setup

According to FCC Part 15.109 Class B Rules, the system was tested to 1000 MHz.

Start Frequency .....	30 MHz
Stop Frequency .....	1000 MHz
Sweep Speed	Auto
IF Bandwidth .....	1 MHz
Video Bandwidth .....	1 MHz
Quasi-Peak Adapter Bandwidth .....	120 kHz
Quasi-Peak Adapter Mode.....	Normal
Resolution Bandwidth .....	1MHz

### 5.2.4 Test procedure

For the radiated emissions test, since the EUT does not have a power source, there was no connection to AC outlets.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant with all installation combinations.

All data was recorded in the peak detection mode. Quasi-peak readings were performed only when an emission was found to be marginal (within  $-4 \text{ dB}\mu\text{V}$  of specification limits), and are distinguished with a "Qp" in the data table.

The EUT was under normal mode during the final qualification test and the configuration was used to represent the worst case results.

ANSI STANDARD C63.4-2003 12.1.1.1 SUPERREGENERATIVE RECEIVER: A signal Generator was set to the unit under test operating frequency. An un-Modulated continuous wave (CW) signal was radiated at the super-regenerative receiver operating frequency to cohere the characteristic broadband emissions from the receiver.

### 5.2.5 Summary of Test Results

According to the data in section 5.2.6, the EUT complied with the FCC Part 15.109 Class B standards.

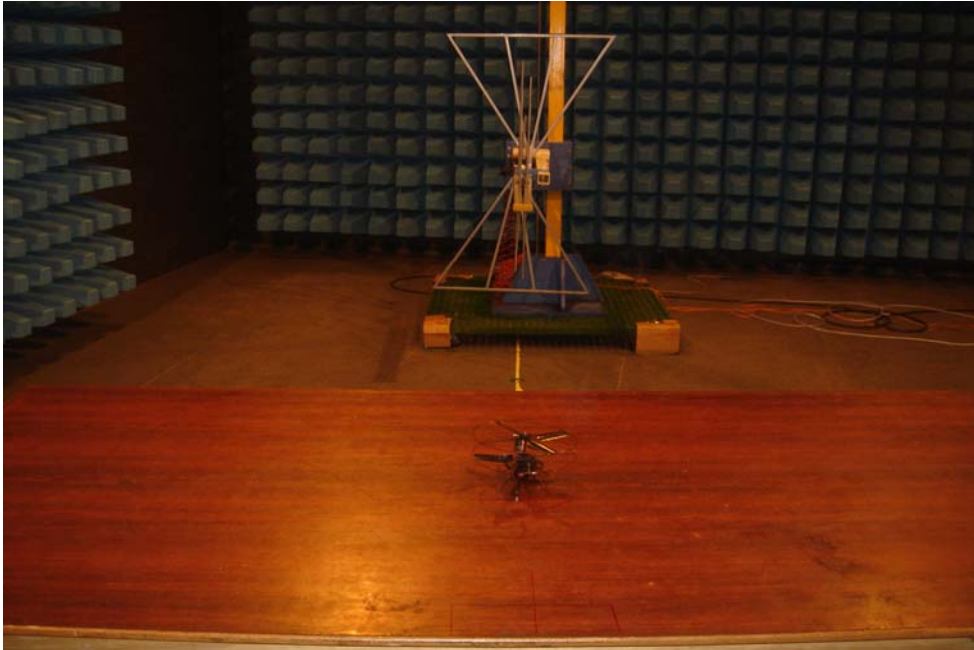
The test results: PASS.

**5.2.6 Radiated Emissions Test Data**

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)	FCC 15 Subpart B Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Turntable Angle (°)
431.8	Horizontal	39.2	46.0	6.8	1.2	150
671.0	Horizontal	35.3	46.0	10.7	1.5	60
813.3	Horizontal	34.3	46.0	11.7	1.8	200
428.3	Vertical	37.7	46.0	8.3	1.5	60
462.2	Vertical	33.2	46.0	12.7	1.5	90
787.7	Vertical	30.9	46.0	15.1	1.5	120

### 5.3 Photographs - Test Setup

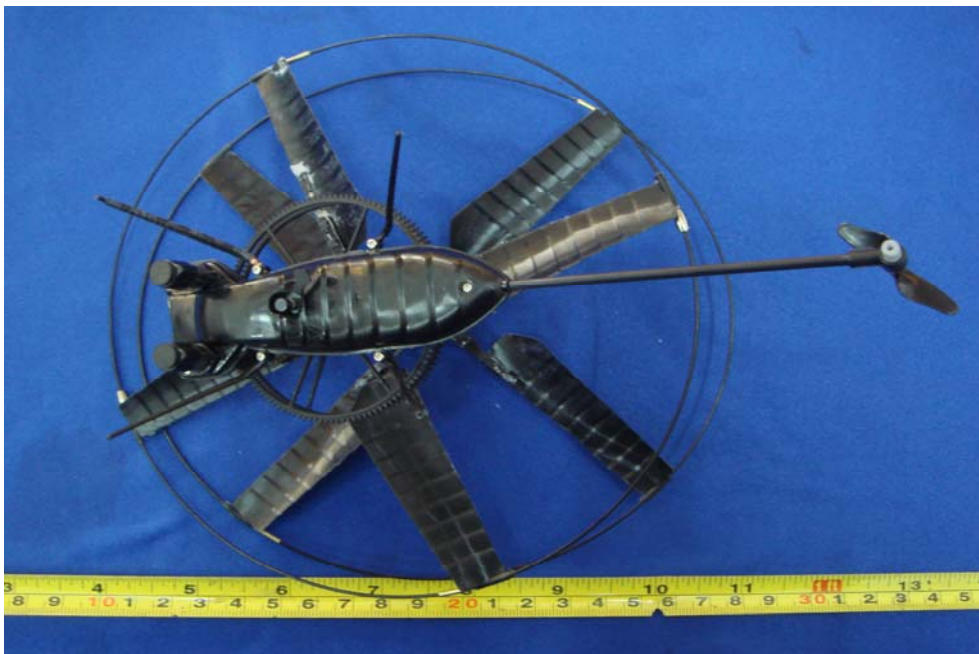
#### 5.3.1 Radiated Emissions Test Setup



**5.3.2 EUT - Front View**

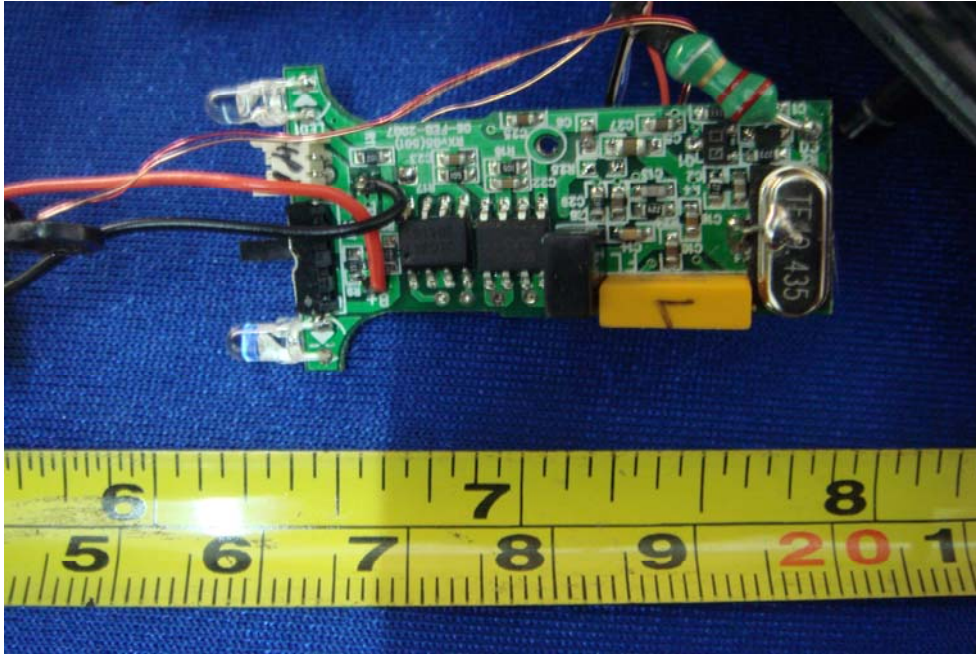


**5.3.3 EUT - Back View**

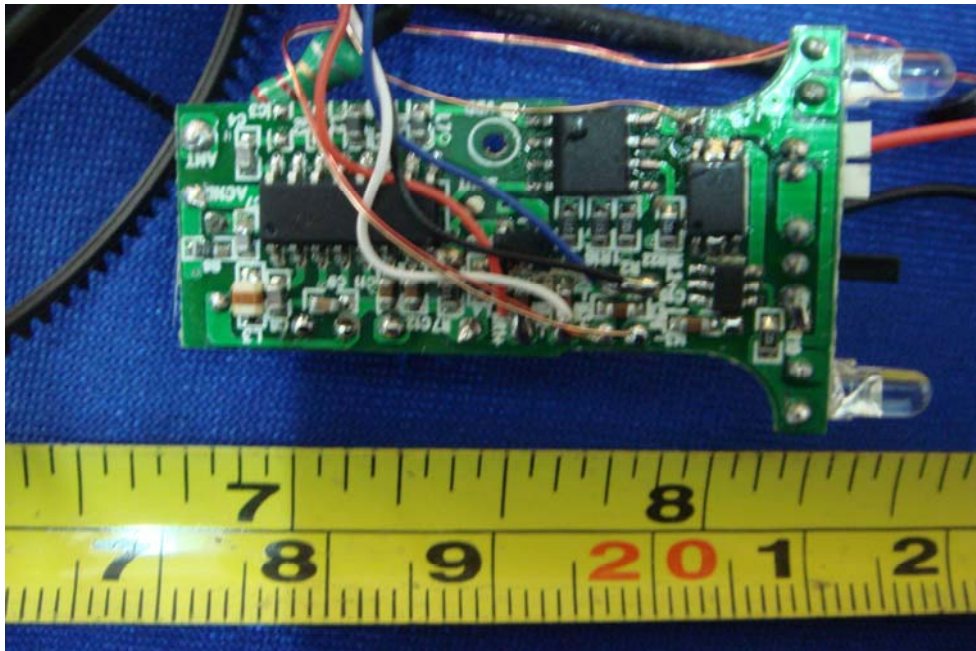




### 5.3.4 PCB - Front View



### 5.3.5 PCB - Back View



## 6 FCC ID Label

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.

The Label must not be a stick-on paper. The Label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Proposed Label Location on EUT  
EUT Top View/ proposed FCC Mark Location

