FCC TEST REPORT

FCC ID : HAP90448R49

Applicant : **Echo Toys Ltd**
Room1108,Peninsula Centre,67 Mody Road,Tsim Sha Tsui East, Kowloon HongKong

Equipment Under Test (EUT) :

Product Name : PRO FLYING SAUCER

Model No. : 90448

Standards : FCC Part 15 SUBPART B

Date of Test : July 12, 2005

Test Engineer : Tiger Su

Reviewed By : Phillo zhong

PERPARED BY:
Shenzhen Huatongwei International Inspection Co., Ltd
Keji S,12th,Road, Hi-tech Industrial Park, Shenzhen, Guangdong, China

FCC Registration Number: 662850

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	PASS

3 Contents

4 General Information

4.1 Client Information

Applicant:	**Echo Toys Ltd**
Address of Applicant:	Room1108,Peninsula Centre,67 Mody Road,Tsim Sha Tsui East, Kowloon HongKong

4.2 General Description of E.U.T.

Product Name:	PRO FLYING SAUCER
Model No.:	90448

4.3 Details of E.U.T.

Power Supply:	120VAC/60Hz

4.4 Description of Support Units

Compliance test was performed test in ON mode .

The customer requested FCC tests for a PRO FLYING SAUCER .

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.: 662850**

  Shenzhen Huatongwei International Inspection Co., Ltd, 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 662850, November 17, 2003.

4.6 Test Location

All Emissions testswere performed at:-Shenzhen Huatongwei International Inspection Co., Ltd. at Keji S,12th,Road, Hi-tech Industrial Park, Shenzhen, Guangdong, China.

5 Equipment Used during Test

	Conducted Emission Test					
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Series No.**	**Cal. Date**	**Due date**
1	EMI Test Receiver	Rohde&schwarz	ESCS30	100038	05-11-2004	04-11-2005
2	Artificial Mains	Rohde&schwarz	ESH2-Z5	100028	05-11-2004	04-11-2005
3	Pulse Limiter	Rohde&schwarz	ESHSZ2	100044	05-11-2004	04-11-2005
4	EMI Test Software	Rohde&schwarz	ESK1	N/A	N/A	N/A
	Radiated Emission Test					
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date**	**Due date**
1	3m Semi- Anechoic Chamber	Frankonia	N/A	N/A	05-11-2004	04-11-2005
2	EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	100085	18-09-2004	17-09-2005
3	EMI Test Software	ROHDE & SCHWARZ	ES-K1	N/A	N/A	N/A
4	Bilog Type Antenna	Schaffner -Chase	CBL6143	5070	18-09-2004	17-09-2005
	Common Used Equipment					
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Series No.**	**Cal. Date**	**Due date**
1	Temperature, Humidity & Barometer	OREGON SCIENTIFIC	BA-888	EMC001 to EMC004	05-11-2004	04-11-2005
2	DMM	FLUKE	73	70681579 or 70671133	05-11-2004	04-11-2005
3	Adaprot	LIS	48121000	N/A	N/A	N/A

5.1 Conduction Emissions, 0.15MHz to 30MHz

Test Requirement:	FCC Part 15.107
Test Method:	ANSI C63.4: 2003
Test Date:	July 12, 2005
Frequency Range:	150kHz to 30MHz
Class/Severity:	Class B
Limit:	66-56 dBµV/m between 0.15MHz & 0.5MHz 56 dBµV/m between 0.5MHz & 5MHz 60 dBµV/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.

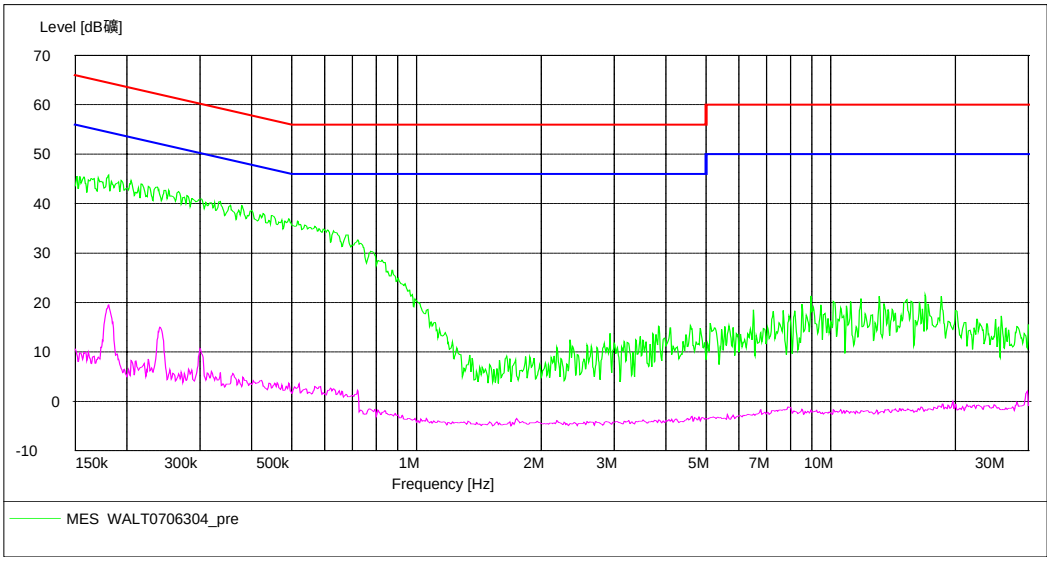
5.1.2 Measurement Data

An initial pre-scan was performed on the live and neutral lines.

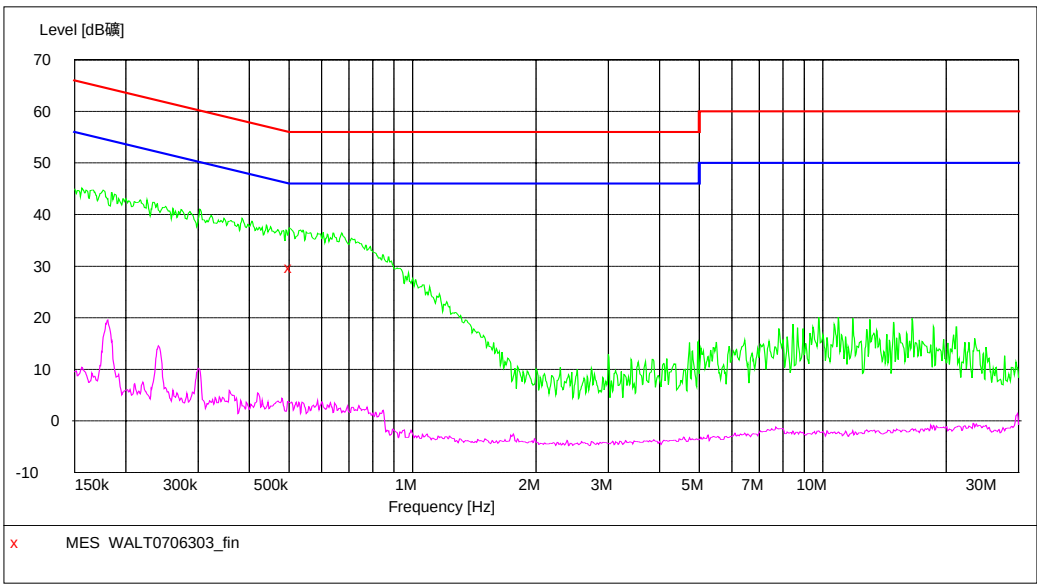
No futher quasi-peak or average measurements were performed since no peak emissions were detected within 10dB line below the average limit.

Please refer to the following peak scan graph for reference.

Live Line



Neutral Line



5.1.3 Conductied Emissions Test Data

Freq. MHz	Line	QP Reading dBuV	Limit dBuV	Margin dB	AV Reading dBuV	Limit dBuV	Margin dB
0.150000	Neutral	43.1	66.0	22.9	11.8	56.0	44.2
0.503600	Neutral	29.6	56.0	26.4	7.5	46.0	38.5
0.150000	Live	41.7	66.0	24.3	11.5	56.0	44.5
0.503600	Live	28.5	56.0	27.5	7.6	46.0	38.4

5.2 Radiated Emissions, 30MHz to 1GHz

Test Requirement:	FCC Part 15.109
Test Method:	ANSI C63.4: 2003
Test Date:	July 12, 2005
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Class:	Class B
Limit:	40.0 dBµV/m between 30MHz & 88MHz
	43.5 dBµV/m between 88MHz & 216MHz
	46.0 dBµV/m between 216MHz & 960MHz
	54.0 dBµV/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 have a power source, there was 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 was performed only when an emission was found to be marginal (within -4 dBμV 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.

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.

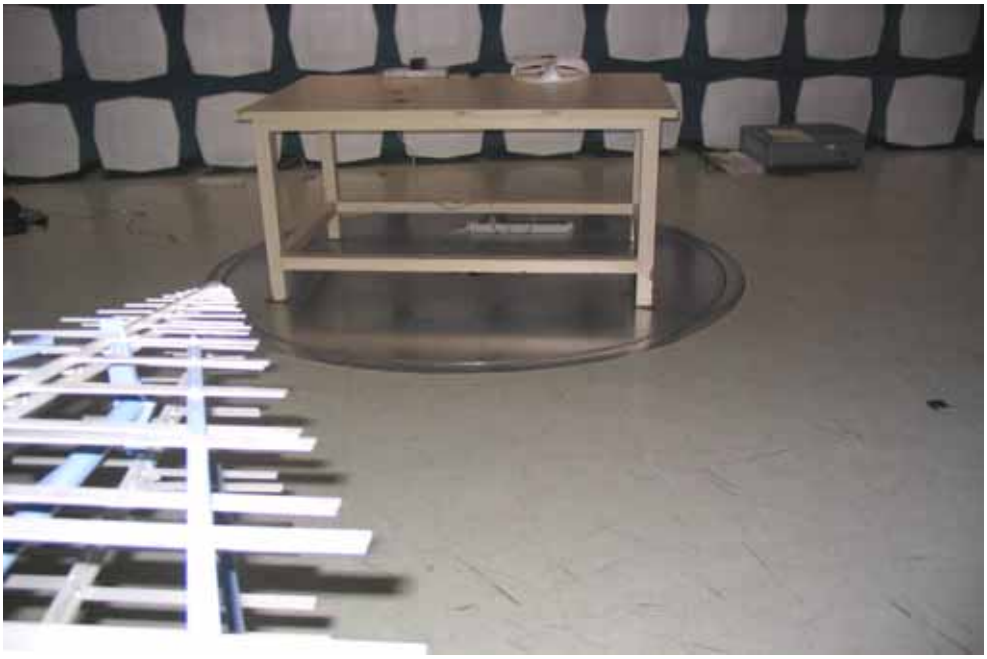
5.2.6 Radiatied Emissions Test Data

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)	Limit dBuV/m)	Margin (dB)	Antenna Height (m)	Turntable Angle (°)
30.540000	Vertical	21.20	40.0	18.8	1.5	90
80.165000	Vertical	27.50	40.0	12.5	2.0	45
906.693387	Vertical	34.50	46.0	11.5	1.0	66
79.180000	Horizontal	26.30	40.0	13.7	2.2	45
313.560000	Horizontal	32.50	46.0	13.5	1.2	180
700.641283	Horizontal	32.30	46.0	13.7	1.5	270

5.3 Photographs - Test Setup

5.3.1 Mains Terminals Disturbance Voltage 150KHz To 30MHz

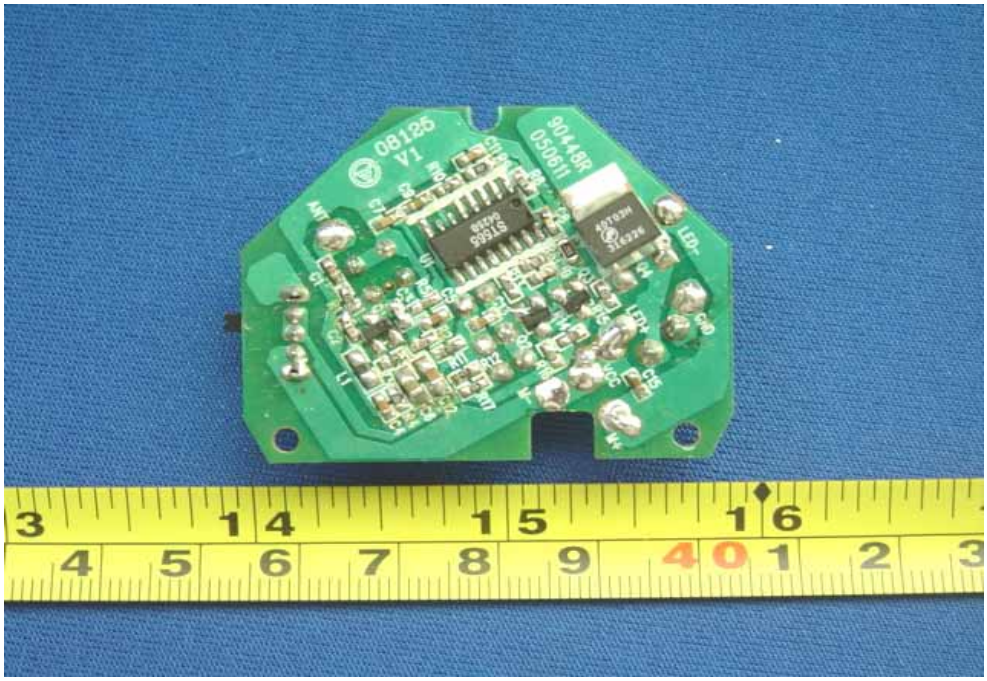
5.3.2 Radiated Emissions, 30M-1000MHz



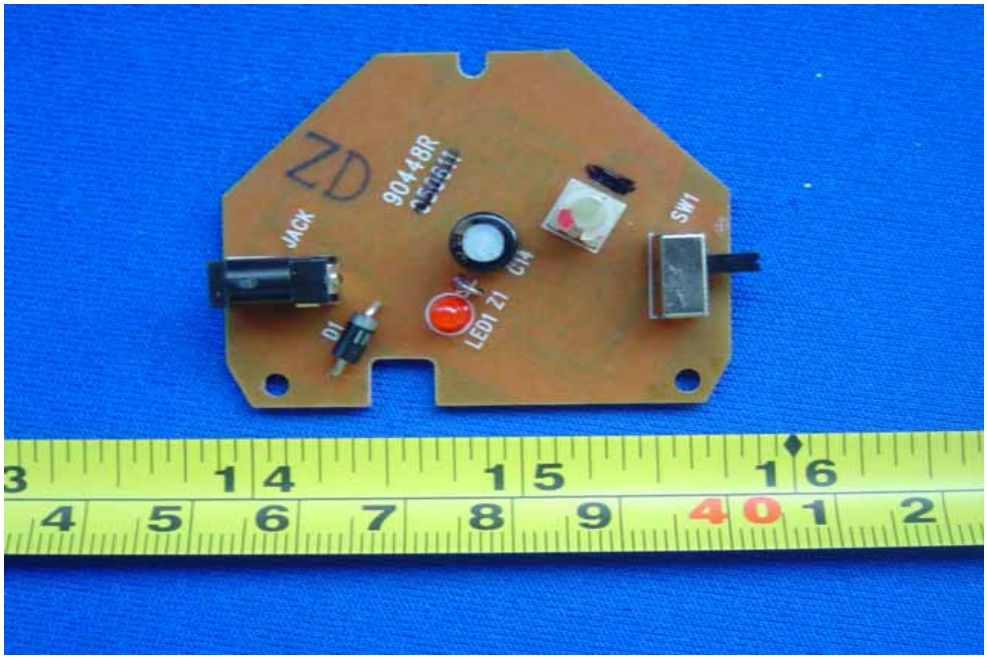
5.3.3 EUT - Front View

5.3.4 EUT - Back View

5.3.5 PCB - Solder View



5.3.6 PCB - Component View



6 FCC 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