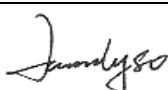




Gakkiku Technology Company
 Flat B, 5/F., Selwyn Factory Building,
 No. 404 Kwun Tong Road,
 Kwun Tong, Kowloon,
 Hong Kong
 Tel: (852) 8113 2281
 Fax: (852) 2797 0192
 E-mail: info@gakkiku.com

Test Report

Applicant	Scientific Toys Ltd.
Address	Rm. 1108, 11/F., Block B, New Mandarin Plaza, 14 Science Museum Road, TST East, Kowloon, Hong Kong
FCC ID Number	FCC ID: BY34723-49RP
Brand Name(s)	None
Model Number(s)	99059
Product Description	49.82-49.90 MHz Wireless Remote Control Toy - RX
Operating Frequency	49.860 MHz
Rules/Standards	Part 15.109 of the FCC Rules, RSS-310 Issue 3 and RSS-Gen Issue 3 of the Industry Canada
Received Date	1st June, 2012
Tested Date	4th June, 2012
Approved by	Dick Chan (Director of Gakkiku)
Tested by	Lahm Peng (Engineer of SEM.Test)
Signed by	 Jandy So (Manager of SEM.Test)
Report Number	GKK201206010B
Test Results	<input checked="" type="checkbox"/> PASSED <input type="checkbox"/> FAILED

GENERAL

The report is written by Gakkiku Technology Company. The tested device complies with the general approval requirements of the FCC Rules and the Industry Canada as identified in this test report.

TEST LOCATION

The tested device was tested at the test site of the SEM.Test Compliance Service Co., Ltd., 3/F, Jinbao Commerce Building, Xin'an Fanshen Road, Bao'an District, Shenzhen, 518101, Guangdong, China. The FCC Recognized 2.948 Listed Test Firm Registration Number is 994117. The Industry Canada IC OATS Filing Number/Assigned Code is 7673A.

TABLE OF CONTENTS

1. GENERAL INFORMATION 4

- 1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)..... 4
- 1.2 TEST STANDARDS 4
- 1.3 TEST METHODOLOGY 4
- 1.4 EUT EXERCISE SOFTWARE.....5
- 1.5 ACCESSORIES EQUIPMENT LIST AND DETAILS5
- 1.6 EUT CABLE LIST AND DETAILS.....5

2. SUMMARY OF TEST RESULTS..... 6

3. PART 15.109(A) & RSS-310 ISSUE 3 §3.1 - RADIATED EMISSION..... 7

- 3.1 MEASUREMENT UNCERTAINTY7
- 3.2 TEST EQUIPMENT LIST AND DETAILS.....7
- 3.3 TEST PROCEDURE7
- 3.4 TEST RECEIVER SETUP..... 8
- 3.5 CORRECTED AMPLITUDE & MARGIN CALCULATION 8
- 3.6 ENVIRONMENTAL CONDITIONS 8
- 3.7 SUMMARY OF TEST RESULTS/PLOTS..... 8

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Scientific Toys Ltd.
 Address of applicant: Rm. 1108, 11/F., Block B, New Mandarin Plaza,
 14 Science Museum Road, TST East, Kowloon, Hong Kong

Manufacturer: Scientific Toys Ltd.
 Address of manufacturer: Rm. 1108, 11/F., Block B, New Mandarin Plaza,
 14 Science Museum Road, TST East, Kowloon, Hong Kong

General Description of E.U.T

Items	Description
EUT Description:	49.82-49.90 MHz Wireless Remote Control Toy - RX
Trade Name:	None
Model No.:	99059
Rated Voltage:	DC 9.6V Rechargeable Battery Pack
Rated Current:	/
For more information refer to the circuit diagram form and the user's manual.	

The test data is gathered from a production sample, provided by the manufacturer.

1.2 Test Standards

The following report is prepared on behalf of the Scientific Toys Ltd. in accordance with Part 2 Subpart J and Part 15 Subparts B of the Federal Communication Commissions Rules.

The objective is to determine compliance with Part 15.109 of the FCC Rules and RSS-310 Issue 3 & RSS-Gen Issue 3 of the Industry Canada.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which results in lowering the emission/immunity, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI Standard C63.4-2009, American National Standard Institute for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

The equipment under test (EUT) was configured to measure its highest possible susceptibility against the tested phenomena. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 EUT Exercise Software

The EUT exercise program used during the testing was designed to exercise the system components. The test software is started while the whole system is on.

1.5 Accessories Equipment List and Details

Description	Manufacturer	Model	Serial Number
/	/	/	/

1.6 EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

2. SUMMARY OF TEST RESULTS

Description of Test	Result
Part 15.107(a) Conducted Emission	N/A
Part 15.109(a) Radiated Emission, RSS-310 Issue 3 §3.1	Compliant

3. Part 15.109(a) & RSS-310 Issue 3 §3.1 - RADIATED EMISSION

3.1 Measurement Uncertainty

Base on NIS 81, the Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

3.2 Test Equipment List and Details

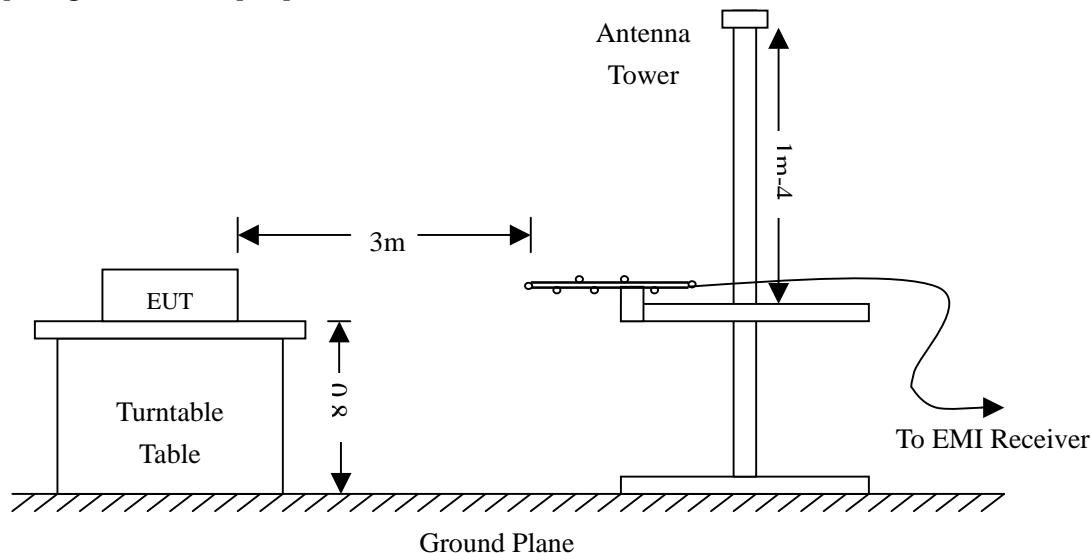
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2012-03-28	2013-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2012-03-28	2013-03-27
Positioning Controller	C&C	CC-C-1F	N/A	2012-03-28	2013-03-27
RF Switch	EM	EMSW18	SW060023	2012-03-28	2013-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2012-03-28	2013-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2012-03-28	2013-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2012-02-25	2013-02-24
Horn Antenna	ETS	3117	00086197	2012-02-25	2013-02-24
Signal Generator	HP	8648A	3642U01277	2012-03-28	2013-03-27

3.3 Test Procedure

The setup of EUT is according with ANSI Standard C63.4-2009 measurement procedure. The specification used was with the limits of Part 15.205 & 15.109 of the FCC Rules.

According to ANSI Standard C63.4-2009 § 12.1.1.1 (SUPERREGENERATIVE RECEIVER): A Signal Generator was set to the unit under test operating frequency. An unmodulated continuous wave (CW) signal was radiated at the superregenerative receiver operating frequency to cohere the characteristic broadband emissions from the receiver.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.



3.4 Test Receiver Setup

During the radiated emission test, the test receiver was set with the following configurations:

Start Frequency 30 MHz
 Stop Frequency..... 1000 MHz
 Sweep Speed Auto
 IF Bandwidth..... 100 kHz
 Quasi-Peak Adapter Bandwidth 120 kHz
 Quasi-Peak Adapter Mode Normal

3.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit for Part 15.109 of the FCC Rules. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit of Part 15.109 (RSS-310 Issue 3)}$$

3.6 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

3.7 Summary of Test Results/Plots

According to the data, the EUT is complied with the standards under Part 15.109 of the FCC Rules, and had the worst margin of:

-9.60 dB μ V at 893.8567 MHz in the Vertical polarization, 30 MHz to 1 GHz, 3 Meters

Plot of Radiated Emissions Test Data

Radiated Disturbance

EUT: 49.82-49.90 MHz Wireless Remote Control Toy - RX

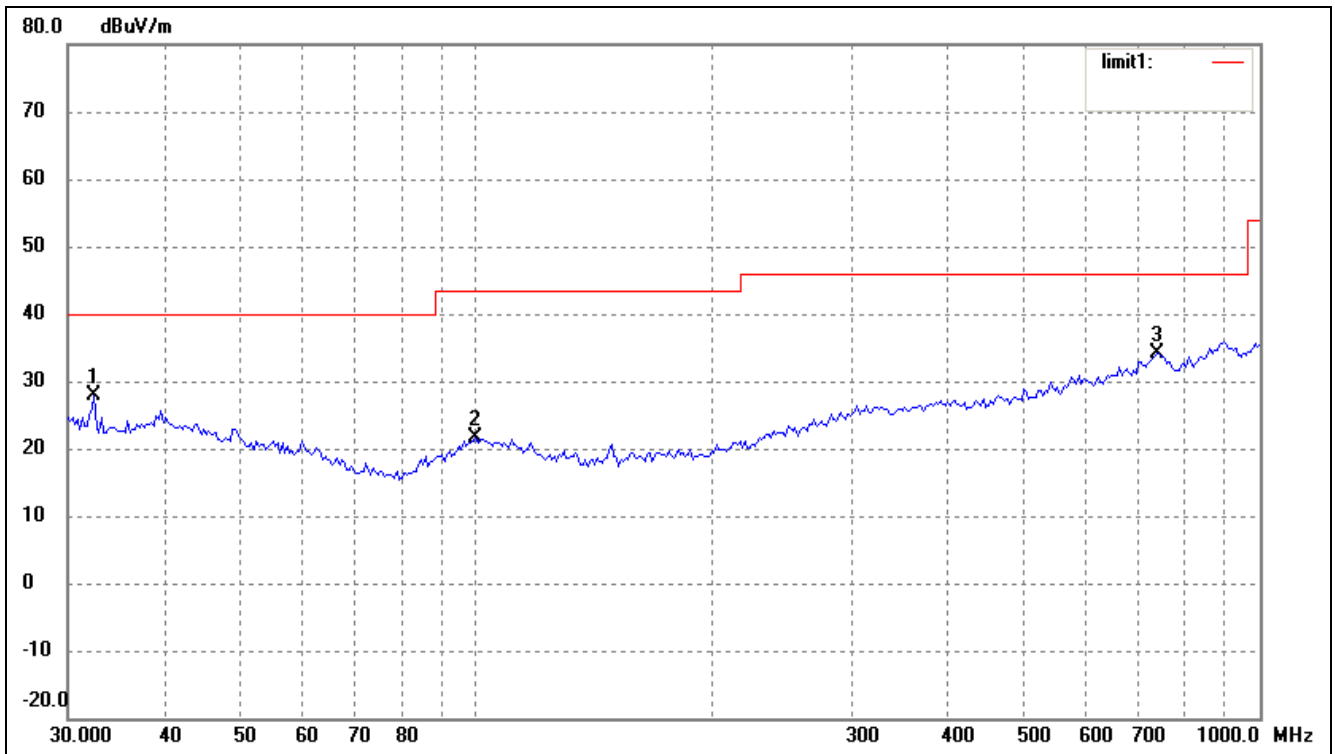
Model: 99059

Operating Condition: Receiving

Test Specification: Horizontal & Vertical

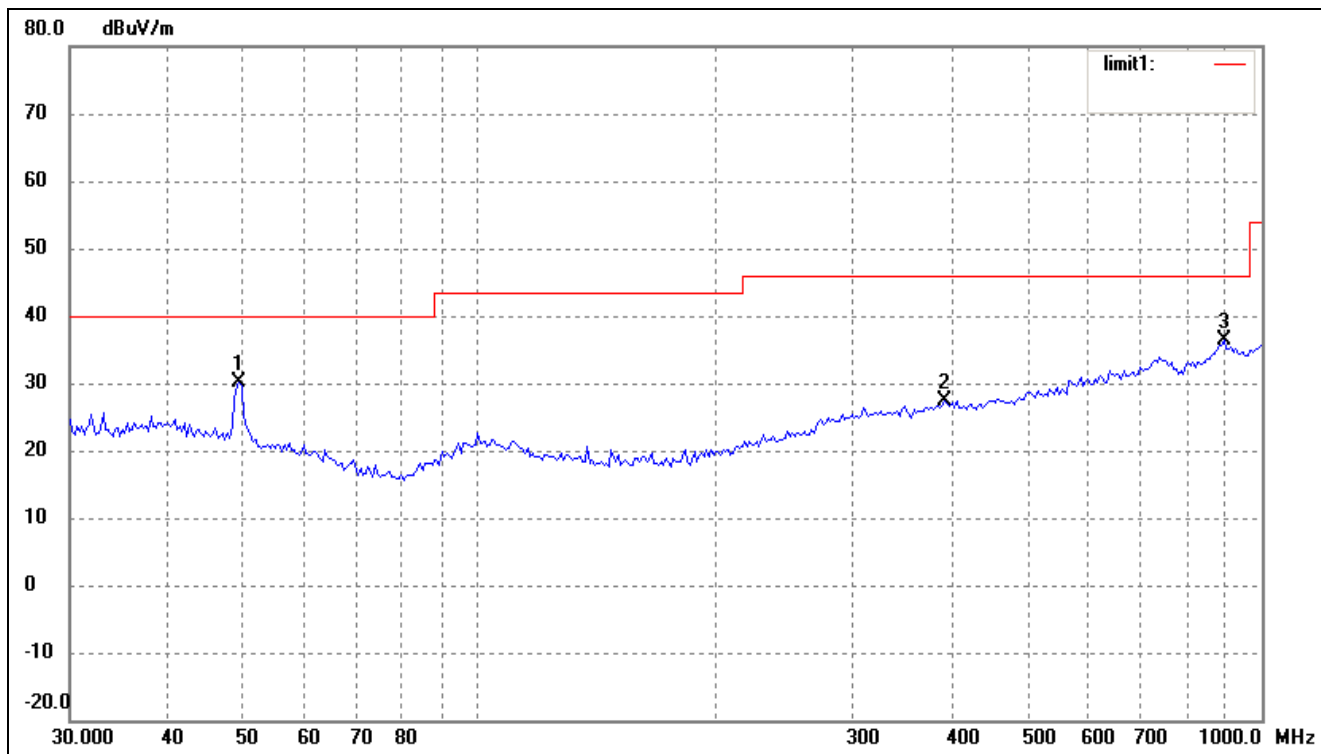
Comment: DC 9.6V Rechargeable Battery Pack

Horizontal:



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	32.4059	19.49	8.44	27.93	40.00	-12.07	203	100	Peak
2	99.5281	14.92	6.72	21.64	43.50	-21.86	14	100	Peak
3	739.6605	15.99	18.07	34.06	46.00	-11.94	75	100	Peak

Vertical:



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	49.3594	23.31	6.81	30.12	40.00	-9.88	255	100	Peak
2	393.4724	16.16	11.24	27.40	46.00	-18.60	234	100	Peak
3	893.8567	17.13	19.27	36.40	46.00	-9.60	14	100	Peak

***** END OF REPORT *****