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## FCC PART 15 SUB PART B

Applicant	SCIENTIFIC TOYS, LTD.
Address	13/F., CHAI WAN INDUSTRIAL CENTRE 20 LEE CHUNG STREET CHAI WAN, HONG KONG
FCC ID	BY34339-49SV
Product Description	REMOTE CONTROL TOY RECEIVER
Date Sample Received	7/18/2007
Date Tested	7/20/2007
Tested By	Nam Nguyen
Approved By	Nam Nguyen
Report Number	2574HT7TestReport.doc
Total Pages	8
Test Results	<input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL

**THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL  
 WITHOUT THE WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.**



Certificate # 0955-01

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## STATEMENT OF COMPLIANCE

This equipment has been tested in accordance with the standards identified in the referenced test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report and demonstrate that the equipment complies with the appropriate standards.

I attest that the necessary measurements were made by me or under my supervision, at TIMCO ENGINEERING, INC. located at 849 N.W. State Road 45, Newberry, Florida 32669 USA.

**Authorized by:** Nam Nguyen

**Authorization signature:** <Nam Nguyen>

**Function:** Engineer

**Date:** 7/23/2007

## GENERAL INFORMATION

The test results relate only to the items tested.	
<b>DUT Description</b>	REMOTE CONTROL TOY RECEIVER
<b>FCC ID</b>	BY34339-49SV
<b>DUT Power Source</b>	<input type="checkbox"/> 110-120Vac/50- 60Hz
	<input type="checkbox"/> DC Power
	<input checked="" type="checkbox"/> Battery Operated Exclusively
<b>Test Item</b>	<input type="checkbox"/> Prototype
	<input checked="" type="checkbox"/> Pre-Production
	<input type="checkbox"/> Production
<b>Modifications to DUT</b>	None
<b>Test Standards</b>	FCC Part 15, Subpart B, ANSI C63.4-2003

APPLICANT: Scientific Toys, Ltd.  
 FCC ID: BY34339-49SV  
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## TEST EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/20/07	3/19/10
3-Meter OATS	TEI	N/A	N/A	Listed 1/11/06	1/10/09
3-Meter Semi- Anechoic Chamber	Panashield	N/A	N/A	Listed 5/11/07	5/10/10
Antenna: Biconnical	Eaton	94455-1	1057	CAL 12/12/05	12/12/07
Antenna: Biconnical	Eaton	94455-1	1096	CAL 10/11/06	10/11/08
Analyzer Blue Tower Quasi-Peak Adapter	HP	85650A	2811A01279	CAL 5/17/07	5/17/09
Analyzer Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 5/17/07	5/17/09
Analyzer Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 5/17/07	5/17/09
LISN	Electro- Metrics	ANS-25/2	2604	CAL 10/5/06	10/5/08
Antenna: Log- Periodic	Eaton	96005	1243	CAL 12/14/05	12/14/07

## TEST PROCEDURE

**General:** This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

**Radiation Interference:** The test procedure used was ANSI Standard C63.4-2003 using a spectrum analyzer with a pre-selector. The bandwidth of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The video bandwidth was always greater than or equal to the RBW.

**Formula Of Conversion Factors:** The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Preselector was accounted for in the Spectrum Analyzer Meter Reading.

**Example:**

Freq (MHz)	Meter Reading	+ ACF	+CL	= FS
33	20 dBuV	+ 10.36 dB/m	+0.40 dB	=30.36 dBuV/m @ 3m

**ANSI C63.4-2003 Section 10.1.7 Measurement Procedures:** The unit under test was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The table used for radiated measurements is capable of continuous rotation. When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

If powerline conducted testing was required for this device, the situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSI C63.4-2003 with the EUT 40 cm from the vertical ground wall.

## RADIATED SPURIOUS EMISSIONS

Rules Part No.: 15.109

### Requirements:

Frequency	Limits
30 – 88	40.0 dB $\mu$ V/m measured @ 3 meters
80 – 216	43.5 dB $\mu$ V/m measured @ 3 meters
216 – 960	46.0 dB $\mu$ V/m measured @ 3 meters
Above 960	54.0 dB $\mu$ V/m measured @ 3 meters

**Test Procedure:** The procedure used was ANSI C63.4-2003. The frequency was scanned from 30 MHz to 1.0 GHz. When an emission was found, the table was rotated to produce the maximum signal strength. The DUT was measured in three (3) orthogonal planes when necessary.

### Test Data:

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dB $\mu$ V	Ant. Pol	Coax Loss dB	Correction Factor dB	Field Strength dB $\mu$ V/m	Margin dB
49.9	40.68	10.3	V	0.45	9.75	20.50	19.50
49.9	44.44	9.6	V	0.47	10.06	20.13	19.87
49.9	78.71	12.9	V	0.60	6.73	20.23	19.77
49.9	80.23	5.6	H	0.60	6.63	12.83	27.17
49.9	81.70	7.2	H	0.60	6.80	14.60	25.40
49.9	81.77	15.2	V	0.60	7.09	22.89	17.11
49.9	84.70	10.2	H	0.61	7.16	17.97	22.03
49.9	84.74	20.2	V	0.61	7.74	28.55	11.45
49.9	86.23	7.3	H	0.62	7.45	15.37	24.63
49.9	90.79	8.1	H	0.63	8.39	17.12	26.38
49.9	90.80	18.8	V	0.63	9.69	29.12	14.38
49.9	93.83	16.8	V	0.63	10.42	27.85	15.65
49.9	99.89	14.0	V	0.65	11.58	26.23	17.27

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## POWER LINE CONDUCTED INTERFERENCE

**Rules Part No.:** Part 15.107

**Requirements:**

<b>Frequency (MHz)</b>	<b>Quasi Peak Limits (dBuV)</b>	<b>Average Limits (dBuV)</b>
0.15 – 0.5	66 – 56	56 – 46
0.5 – 5.0	56	46
5.0 – 30	60	50

**Test Procedure:** ANSI Standard C63.4-2003. The spectrum was scanned from 0.15 to 30 MHz.

**Test Data:** Not applicable.