

849 NW State Road 45 Newberry, Fl 32669 USA

Phone: 888.472.2424 or 352.472.5500

Fax: 352.472.2030

Email: <u>info@timcoengr.com</u>
Website: <u>www.timcoengr.com</u>

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	BY34547-49RD			
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	2575HT7TestReport.doc			
Total Pages	8			
Test Results	⊠ PASS ☐ FAIL			

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







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APPLICANT: Scientific Toys, Ltd. FCC ID: BY34547-49RD

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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

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GENERAL INFORMATION

The test results relate only to the items tested.						
DUT Description	REMOTE CONTROL TOY RECEIVER					
FCC ID	BY34547-49RD					
DUT Power Source	☐ 110-120Vac/50- 60Hz					
	☐ DC Power					
	☐ Battery Operated Exclusively					
Test Item	☐ Prototype					
	☐ Pre-Production					
	☐ Production					
Modifications to DUT	None					
Test Standards	FCC Part 15, Subpart B, ANSI C63.4-2003					

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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	НР	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

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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 1mby 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 verticals 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.

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RADIATED SPURIOUS EMISSIONS

Rules Part No.: 15.109

Requirements:

Frequency	Limits			
30 – 88	40.0 dBμV/m measured @ 3 meters			
80 – 216	43.5 dBμV/m measured @ 3 meters			
216 – 960	46.0 dBμV/m measured @ 3 meters			
Above 960	54.0 dBμV/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	Emission	Meter	Ant.	Coax	Correction	Field	Margin
Frequency	Frequency	Reading	Pol	Loss	Factor	Strength	dВ
MHz	MHz	dBuV		dВ	dВ	dBuV/m	
49.9	54.96	5.7	Н	0.52	11.20	17.42	22.58
49.9	56.96	7.0	H	0.52	11.16	18.68	21.32
49.9	57.83	8.7	V	0.53	11.63	20.86	19.14
49.9	58.64	8.6	v	0.53	11.58	20.71	19.29
49.9	59.84	7.6	v	0.53	11.51	19.64	20.36
49.9	61.02	8.3	V	0.54	11.07	19.91	20.09
49.9	61.82	8.3	V	0.54	10.74	19.58	20.42
49.9	64.18	8.9	V	0.55	9.74	19.19	20.81
49.9	66.58	8.5	V	0.56	8.80	17.86	22.14
49.9	69.62	9.0	V	0.57	7.64	17.21	22.79
49.9	71.12	8.3	V	0.57	7.34	16.21	23.79
49.9	75.66	11.3	V	0.59	6.79	18.68	21.32
49.9	78.70	12.5	V	0.60	6.73	19.83	20.17
49.9	81.68	6.7	H	0.60	6.80	14.10	25.90
49.9	81.74	15.5	V	0.60	7.08	23.18	16.82
49.9	84.72	8.5	H	0.61	7.17	16.28	23.72
49.9	84.74	19.0	V	0.61	7.74	27.35	12.65
49.9	89.26	8.0	H	0.62	8.05	16.67	26.83
49.9	90.80	7.2	H	0.63	8.39	16.22	27.28
49.9	90.86	17.9	V	0.63	9.71	28.24	15.26
49.9	93.84	4.7	H	0.63	9.12	14.45	29.05
49.9	93.86	15.5	V	0.63	10.43	26.56	16.94
49.9	99.90	13.3	v	0.65	11.58	25.53	17.97
49.9	101.04	7.3	H	0.65	11.52	19.47	24.03
49.9	104.24	6.4	H	0.65	11.58	18.63	24.87
49.9	107.76	5.0	Н	0.66	12.15	17.81	25.69

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POWER LINE CONDUCTED INTERFERENCE

Rules Part No.: Part 15.107

Requirements:

Frequency (MHz)	Quasi Peak Limits (dBuv)	Average Limits (dBuV)
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.

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