

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
CERTIFICATION TO FCC PART 15 REQUIREMENTS**

for

UNINTENTIONAL RADIATOR

**49MHz RADIO CONTROL TOY
SKATEBOARDER (RECEIVER)**

MODEL NO: 95456-9019-49R

**BRAND NAME: TYCO R/C-TMH TONY HAWKS
SKATEBOARDER**

FCC ID NO: APB95456-00A4R

REPORT NO: 01U0762-3

DATE: JUNE 22, 2001

Prepared for

**MATTEL MT. LAUREL
6000 MIDATLANTIC DRIVE
MOUNT LAUREL, NJ 08054
USA**

Prepared by

**COMPLIANCE ENGINEERING SERVICES, INC.
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TABLE OF CONTENTS

1. VERIFICATION OF COMPLIANCE	1
2. PRODUCT DESCRIPTION	2
3. TEST FACILITY	2
4. MEASUREMENT EQUIPMENT USED.....	3
5. TEST CONFIGURATION.....	3
6. TESTS CONDUCTED	3
7. RADIATED EMISSION TEST PROCEDURE.....	4
8. COHERENT TESTS.....	4
9. EQUIPMENT MODIFICATIONS.....	5
10. TEST CONFIGURATION PHOTOS (RADIATED EMISSION TEST).....	6
• TEST DATA	
○ Cohered Emission Plot	
○ Radiated Emission Data	
• PROPOSED FCC ID LABEL FORMAT	
• AUTHORIZATION LETTER	
• SCHEMATIC DIAGRAM	
• USER MANUAL	
• EUT PHOTOGRAPHS	

1. VERIFICATION OF COMPLIANCE

COMPANY NAME : MATTEL MT. LAUREL
6000 MIDATLANTIC DRIVE
MOUNT LAUREL, NJ 08054
USA

CONTACT PERSON : FRANK WINKLER, SENIOR PROJECT ENGINEER

TELEPHONE NO. : (856) 840-1259

EUT DESCRIPTION : 49MHz RADIO CONTROL TOY SKATEBOARDER
(RECEIVER)

MODEL NAME/NUMBER : 95456-9019-49R

BRAND NAME : TYCO R/C-TMH TONY HAWKS SKATEBOARDER

SERIAL NUMBER : N/A

FCC ID : APB95456-00A4R

DATE TESTED : MAY 30, 2001

REPORT NUMBER : 01U0762-3

TYPE OF EQUIPMENT	RADIO CONTROL RECEIVER (UNINTENTIONAL RADIATOR)
EQUIPMENT TYPE	49 MHz SUPERREGENERATE RECEIVER
MEASUREMENT PROCEDURE	ANSI 63.4 / 1992
LIMIT TYPE	CERTIFICATION
FCC RULE	CFR 47, PART 15.109

The above equipment was tested by Compliance Engineering Services, Inc. for compliance with the requirements set forth in CFR 47, PART 15. This said equipment in the configuration described in this report shows that maximum emission levels emanating from equipment are within the compliance requirements. **Warning:** This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification will constitute fraud and shall nullify the document.

Tested and/or Reviewed By:

Approved & Released For CCS By:

KERWIN CORPUZ
ASSOCIATE EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

STEVE CHENG
EMC ENGINEERING MANAGER
COMPLIANCE CERTIFICATION SERVICES

PAGE NO: 1

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2. PRODUCT DESCRIPTION

MATTEL MT. LAUREL, Model TYCO R/C-TMH TONY HAWKS SKATEBOARDER is the receiving portion of a remote control toy. The associated Transmitter is manufactured by MATTEL MT. LAUREL, Model No 95456-9519-49T: FCC ID APB95456-00A4T.

3. TEST FACILITY

The 3 meter open area test site and conducted measurement facility used to collect the radiated data is located at 561F Monterey Road, Morgan Hill, California, U.S.A. A detailed description of the test facilities was submitted to the Commission on May 27, 1994.

The measuring instrument, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

4. MEASUREMENT EQUIPMENT USED

TEST EQUIPMENTS LIST				
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date
Spectrum Analyzer	HP 0.1K - 1.5GHz	8568B	2732A03661	5/10/02
Spectrum Display	HP	85662A	2816A16696	5/10/02
Quasi Peak Adapter	HP9K - 1GHz	85650A	2811A01155	5/10/02
Pre-Amplifier, 25 dB	HP0.1 - 1300MHz	8447D (P8)	2944A06589	9/19/01
Antenna, Bilog	Schaffner-Chase30M-2GHz	CBL6112B	2586	12/11/01
Signal Generator	HP 10M - 20GHz	83732B	US34490599	3/21/02

5. TEST CONFIGURATION

Set signal generator to transmit at 49 MHz. Adjusted generator level and frequency to get the maximum coherent and emission of the Eut. The receiver receives the signal. All the wires are placed on the turntable to their maximum length to simulate the worse emission condition.

6. TESTS CONDUCTED

CFR 47, 15.109 RADIATED EMISSION TESTS	CONDUCTED AT 3 METERS
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7. RADIATED EMISSION TEST PROCEDURE

The EUT and all other support equipment are placed on a wooden table 80 cm above the ground screen. Antenna to EUT distance is 3 meters. During the test, the table is rotated 360 degrees to maximize emissions and the antenna is positioned from 1 to 4 meters above the ground screen to further maximize emissions. The antenna is polarized in both vertical and horizontal positions.

Monitor the frequency range of interest at a fixed antenna height and EUT azimuth. Frequency span should be small enough to easily differentiate between broadcast stations and intermittent ambients. Rotate EUT 360 degrees to maximize emissions received from EUT. If emission increases by more than 1 dB, or if another emission appears that is greater by 1 dB, return to azimuth where maximum occurred and perform additional cable manipulation to further maximize received emission.

Move antenna up and down to further maximize suspected highest amplitude signal. If emission increased by 1 dB or more, or if another emission appears that is greater by 1dB or more, return to antenna height where maximum signal was observed and manipulate cables to produce highest emissions, noting frequency and amplitude.

8. COHERENT TESTS

During Radiated Emission Tests, H.P. Signal Generator Model No: 83732B was used to radiate unmodulated CW signal to EUT at 49 MHz. Please refer to radiated emission data for six highest readings.

9. EQUIPMENT MODIFICATIONS


To achieve compliance to FCC Section 15.109, the following change(s) were made during compliance testing:


Modification 1: Replaced R113 from 820 ohm to 4.7k ohm.

Modification 2: Replaced R114 from 180k ohm to 330k ohm.

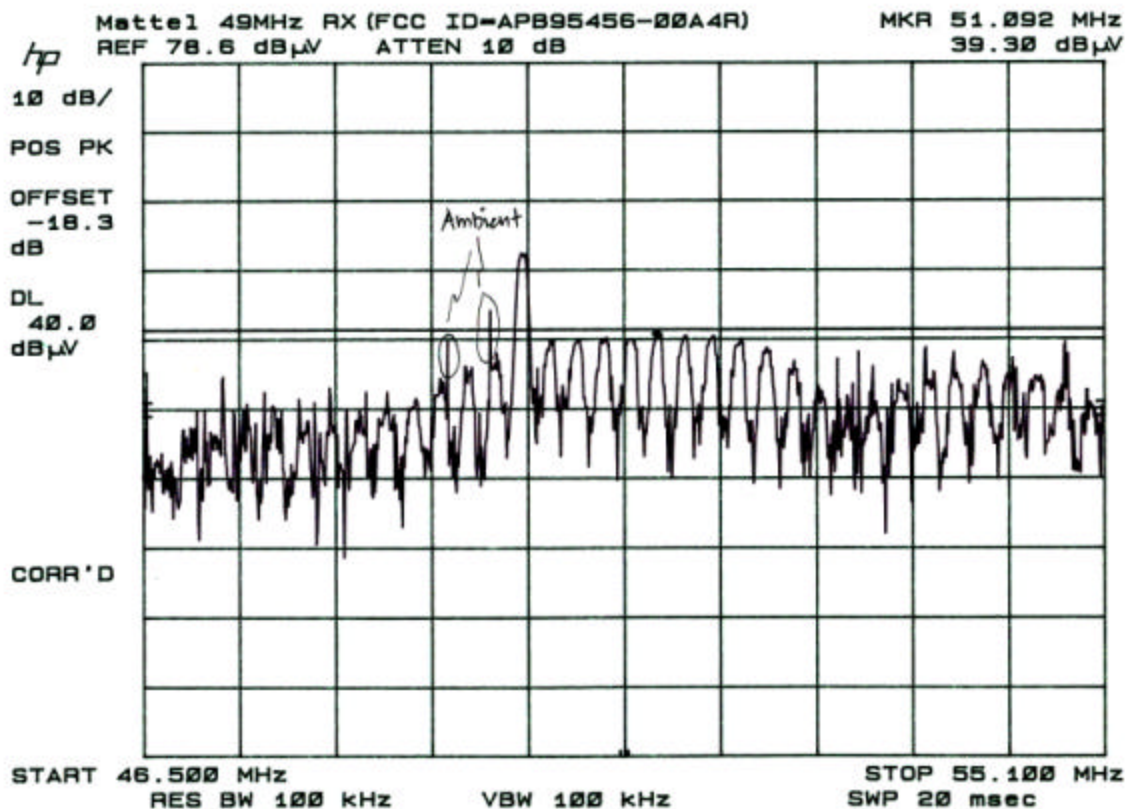
10. TEST CONFIGURATION PHOTOS (Radiated Emission Test)

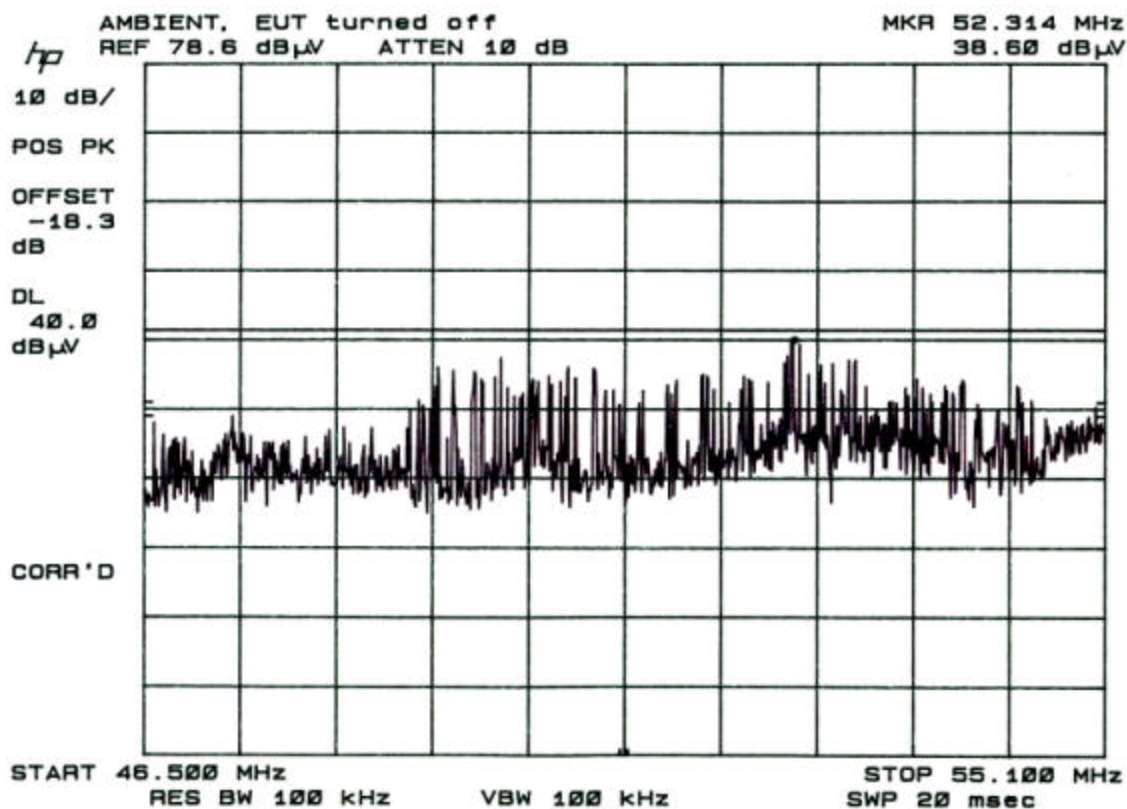


		Project #: 01U0762-3 Report #: 010530B3 Date & Time: 05/30/01 5:01 PM Test Engr: KERWIN CORPUZ									
FCC, VCCI, CISPR, CE, AUSTEL, NZ UL, CSA, TUV, BSMI, DHHS, NVLAP 561F MONTEREY ROAD, SAN JOSE, CA 95037-9001 PHONE: (408) 463-0885 FAX: (408) 463-0888											
Company: Mattel Mount Laurel EUT Description: 49MHz Radio Control Toy Skateboard(M/N:95456-9019-49R) Test Configuration : EUT only Type of Test: FCC CLASS B Mode of Operation: Receiver from Coherent											
<input type="radio"/> A-Site	<input checked="" type="radio"/> B-Site	<input type="radio"/> C-Site	<input type="radio"/> F-Site								
<input type="checkbox"/> 6 Worst Data		<input type="checkbox"/> Descending									
Freq. (MHz)	Reading (dBuV)	AF (dB)	Closs (dB)	Pre-amp (dB)	Level (dBuV/m)	Limit FCC B	Margin (dB)	Pol (H/V)	Az (Deg)	Height (Meter)	Mark (P/Q/A)
Replaced R113 from 820 ohm to 4.7k ohm and replaced R114 from 180k ohm to 330k ohm.											
50.14	56.90	9.67	1.59	29.48	38.68	40.00	-1.32	3mV	90.00	1.00	P
50.40	56.90	9.60	1.60	29.48	38.62	40.00	-1.38	3mV	90.00	1.00	P
50.56	57.10	9.57	1.60	29.48	38.78	40.00	-1.22	3mV	90.00	1.00	P
50.87	56.90	9.49	1.60	29.48	38.51	40.00	-1.49	3mV	90.00	1.00	P
51.09	57.60	9.44	1.61	29.48	39.16	40.00	-0.84	3mV	90.00	1.00	P
51.35	57.40	9.38	1.61	29.48	38.91	40.00	-1.09	3mV	90.00	1.00	P
51.60	57.30	9.32	1.62	29.48	38.75	40.00	-1.25	3mV	90.00	1.00	P
51.85	56.60	9.26	1.62	29.48	37.99	40.00	-2.01	3mV	90.00	1.00	P
50.15	48.80	9.66	1.59	29.48	30.58	40.00	-9.42	3mH	0.00	1.00	P
50.42	48.40	9.60	1.60	29.48	30.12	40.00	-9.88	3mH	0.00	1.00	P
50.90	48.30	9.48	1.60	29.48	29.91	40.00	-10.09	3mH	0.00	1.00	P
COMPLETED SCAN 30 - 1000 MHz, VERTICAL AND HORIZONTAL POLARIZATION.											
Total data #: 11											
V.2b											

 COMPLIANCE Certification Services	FCC, VCCI, CISPR, CE, AUSTEL, NZ UL, CSA, TUV, BSMI, DHS, NVLAP		Project #: 01U0762-3 Report #: 010530B3	
	561F MONTEREY ROAD, SAN JOSE, CA 95037-9001 PHONE: (408) 463-0885 FAX: (408) 463-0888		Date & Time: 05/30/01 5:01 PM Test Engr: KERWIN CORPUZ	
	Company: Mattel Mount Laurel			
	EUT Description: 49MHz Radio Control Toy Skateboard(M/N:95456-9019-49R)			
Test Configuration : EUT only		Type of Test: FCC CLASS B		
Mode of Operation: Receiving from Coherent		<< Main Sheet		

Freq. (MHz)	Reading (dBuV)	AF (dB)	Cross (dB)	Pre-amp (dB)	Level (dBuV/m)	Limit FCC_B	Margin (dB)	Pol (H/V)	Az (Deg)	Height (Meter)	Mark (P/Q/A)
51.09	57.60	9.44	1.61	29.48	39.16	40.00	-0.84	3mV	90.00	1.00	P
51.35	57.40	9.38	1.61	29.48	38.91	40.00	-1.09	3mV	90.00	1.00	P
50.56	57.10	9.57	1.60	29.48	38.78	40.00	-1.22	3mV	90.00	1.00	P
51.60	57.30	9.32	1.62	29.48	38.75	40.00	-1.25	3mV	90.00	1.00	P
50.14	56.90	9.67	1.59	29.48	38.68	40.00	-1.32	3mV	90.00	1.00	P
50.40	56.90	9.60	1.60	29.48	38.62	40.00	-1.38	3mV	90.00	1.00	P
6 Worst Data											





This Ambient Signal Plot is to support the previous data plot.