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: APB95456-00B4R

REPORT NO: 01U0898-1

DATE: JULY 25, 2001

Prepared for
MATTEL MT. LAUREL
6000 MIDATLANTIC AVENUE
MOUNT LAUREL, NJ 08054
USA

Prepared by
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561 F MONTEREY ROAD
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1. VERIFICATION OF COMPLIANCE

COMPANY NAME	:	MATTEL MT. LAUREL 6000 MIDATLANTIC AVENUE MOUNT LAUREL, NJ 08054 USA
CONTACT PERSON	:	STEVE WEISS, ELECTRONIC DESIGN & DEVELOPMENT MANAGER
TELEPHONE NO.	:	(856) 840-1149
EUT DESCRIPTION	:	49MHz RADIO CONTROL TOY SKATEBOARDER (RECEIVER)
MODEL NAME/NUMBER	:	95456-9019-49R
BRAND NAME	:	TYCO R/C-TMH TONY HAWKS SKATEBOARDER
FCC ID	:	APB95456-00B4R
DATE TESTED	:	JULY 25, 2001
REPORT NUMBER	:	01U0898-1

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 By:

JESSE SALDIVAR
ASSOCIATE EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

Approved & Released For CCS By:

THU CHAN
SENIOR EMC ENGINNER
COMPLIANCE CERTIFICATION SERVICES

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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.

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4. MEASUREMENT EQUIPMENT USED

TEST EQUIPMENTS LIST				
Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date
Pre-Amplifier,25 dB	HP 0.1 - 1300MHz	8447D (P5)	2944A06550	9/19/01
Antenna, Bicon	Eaton30 - 200MHz	94455-1	1214	8/10/01
Antenna, LP	EMCO200 - 2000MHz	3146	9107-3163	8/10/01
Spectrum Analyzer	HP 0.1K - 1.5GHz	8568B	2732A03661	5/10/02
Spectrum Display	HP	85662A	2816A16696	5/4/02
Quasi Peak Adapter	HP9K - 1GHz	85650A	2811A01155	5/4/02
Signal Generator	HP 0.5K-1024MHz	8640B	3008A00369	4/10/02

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 TEST

During Radiated Emission Tests, H.P. Signal Generator Model No: 8640B was used to radiate unmodulated CW signal to EUT at 49.90 MHz. Please refer to radiated emission data for six highest readings.

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9. EQUIPMENT MODIFICATIONS

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

No changes were required in order to achieve compliance to FCC Section 15.109.

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10. TEST CONFIGURATION PHOTOS (Radiated Emission Test)

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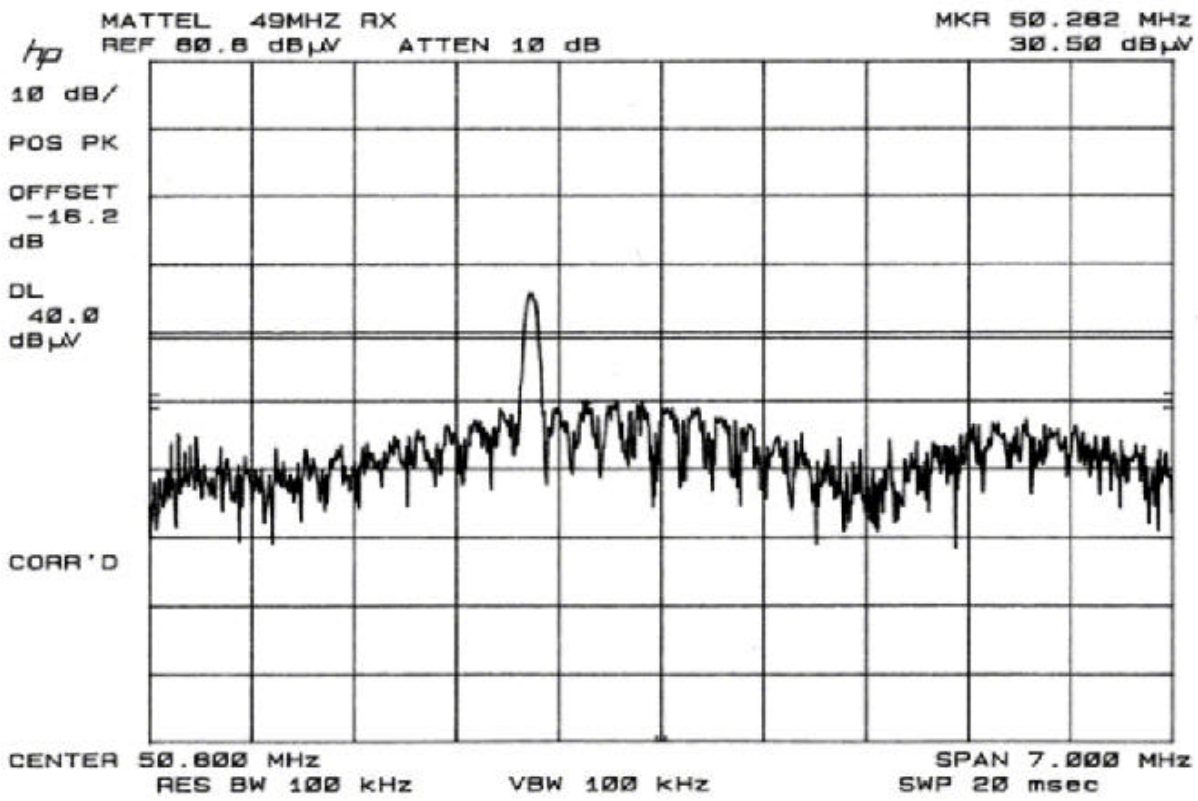

COHERENT EMISSION PLOT

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COMPLIANCE Certification Services
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Project #: 01U0898-1
Report #: 010725C1
Date& Time: 07/25/01 9:39 AM
Test Engr: Jesse Saldivar

Company: Mattel Mount Laurel
EUT Description: 49MHz Receiver Model: Tony Hawk #95456
Test Configuration : EUT
Type of Test: FCC Class B
Mode of Operation: Coherent RX Measurements

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)
50.28	46.70	10.08	0.98	27.26	30.50	40.00	-9.50	3mV	180.00	1.00	P
50.49	46.70	10.02	0.98	27.26	30.44	40.00	-9.56	3mV	180.00	1.00	P
50.67	46.70	9.97	0.99	27.26	30.39	40.00	-9.61	3mV	180.00	1.00	P
49.70	45.70	10.25	0.98	27.26	29.66	40.00	-10.34	3mV	180.00	1.00	P
50.87	45.90	9.91	0.99	27.26	29.54	40.00	-10.46	3mV	180.00	1.00	P
51.05	45.90	9.86	0.99	27.26	29.49	40.00	-10.51	3mV	180.00	1.00	P
6 Worst Data											

RADIATED EMISSION DATA

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PROPOSED FCC ID LABEL AND LOCATION

MATTEL MT. LAUREL

FCC ID: APB95456-00B4R

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.

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EXTERNAL PHOTO

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EXTERNAL PHOTO

COMPLIANCE CERTIFICATION SERVICES CCS DOCUMENT NO: CCSUP4021B
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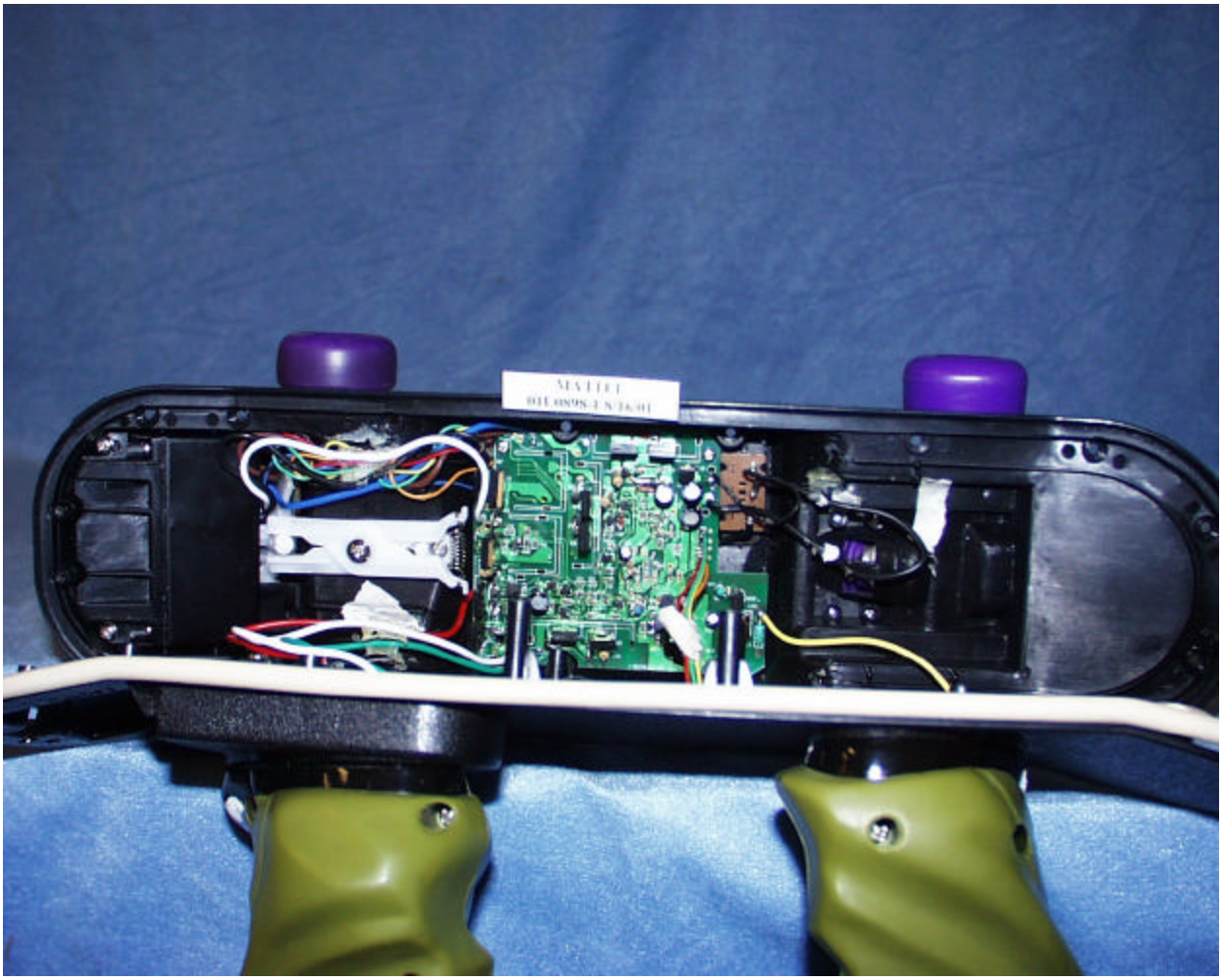

INTERNAL PHOTO

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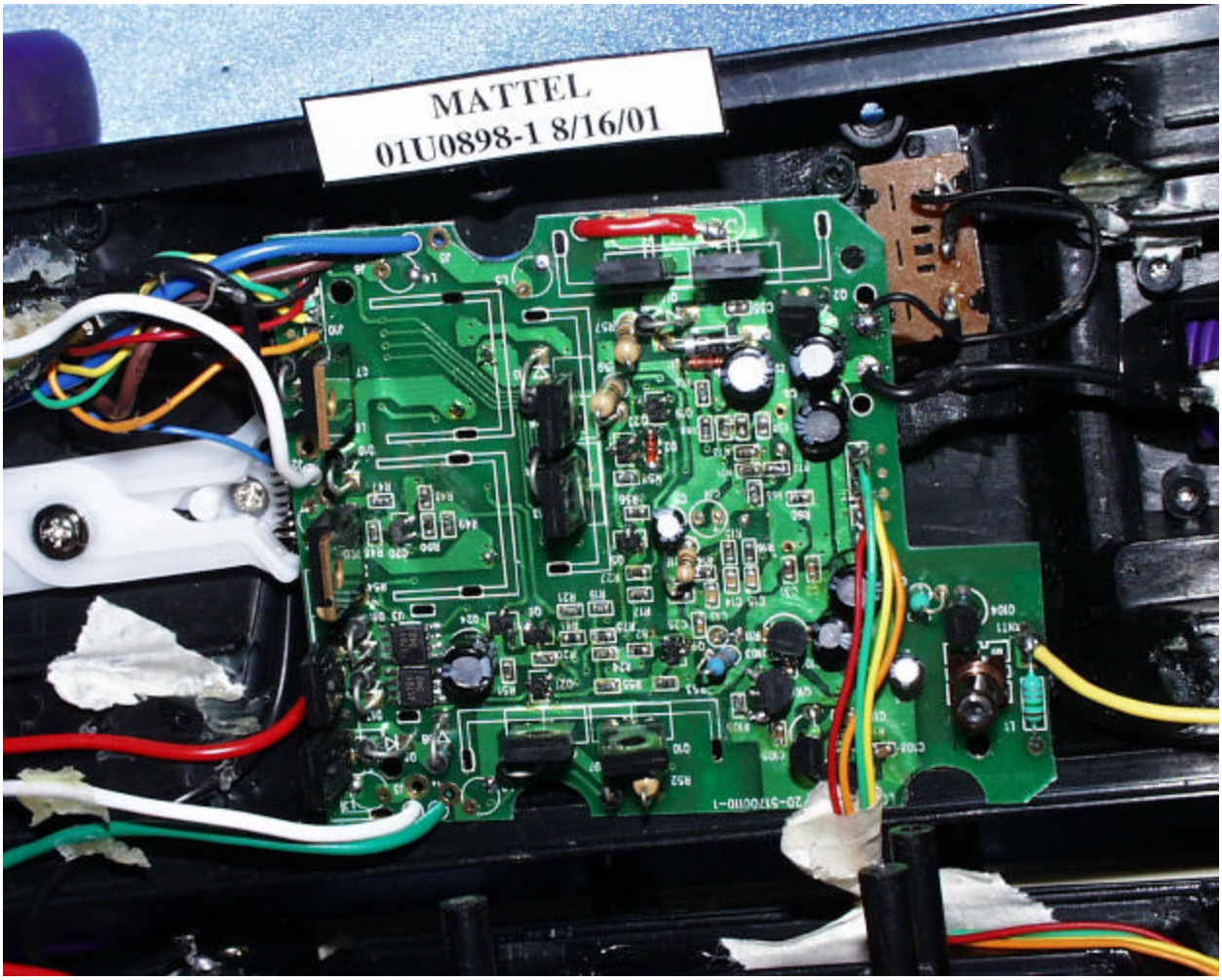

INTERNAL PHOTO

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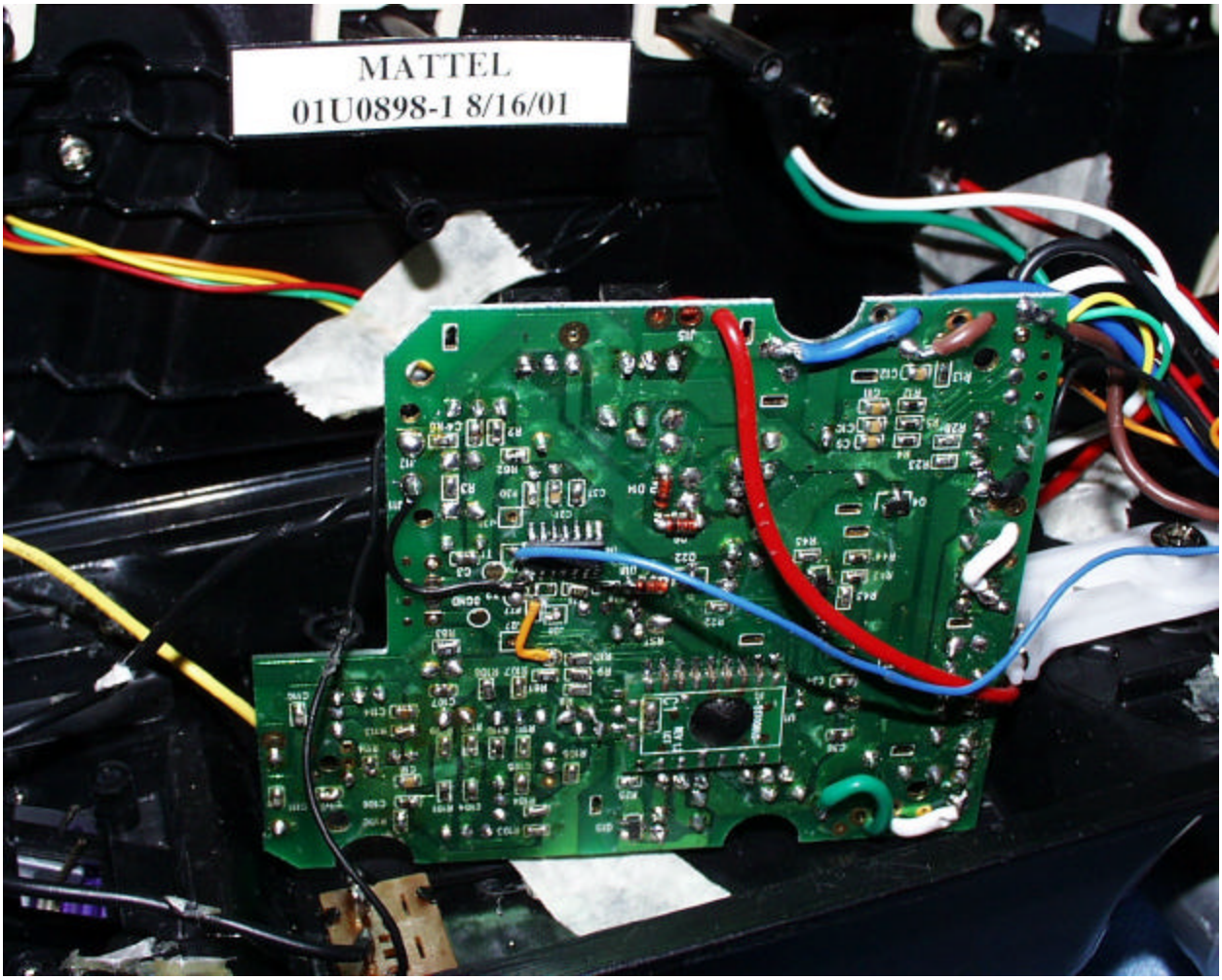

INTERNAL PHOTO

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