

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

for

UNINTENTIONAL RADIATOR

**49 MHz RADIO CONTROL SCOOTER
(RECEIVER)**

MODEL NO: 97596-49R

BRAND NAME: TYCO R/C-STUNT SCOOTER

FCC ID NO: APB97596-01A4R

REPORT NO: 01U0946-4

DATE: AUGUST 31, 2001

Prepared for

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

Prepared by

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1. VERIFICATION OF COMPLIANCE

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

CONTACT PERSON : FRANK WINKLER/SENIOR PROJECT ENGINEER

TELEPHONE NO. : (856) 840-1149

EUT DESCRIPTION : 49 MHz RADIO CONTROL SCOOTER (RECEIVER)

MODEL NAME/NUMBER : 97596-49R

BRAND NAME : TYCO R/C-STUNT SCOOTER

FCC ID : APB97596-01A4R

DATE TESTED : AUGUST 31, 2001

REPORT NUMBER : 01U0946-4

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:

Approved & Released For CCS By:

MIKE ZHU
SENIOR EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

THU CHAN
SENIOR EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. PRODUCT DESCRIPTION

MATTEL MT. LAUREL, Model TYCO R/C-STUNT SCOOTER is the receiving portion of a remote control toy. The associated Transmitter is manufactured by MATTEL MT. LAUREL, Model No 97576-27T, FCC ID APB97577-01A4T.

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
-------------------------------------------	-----------------------

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

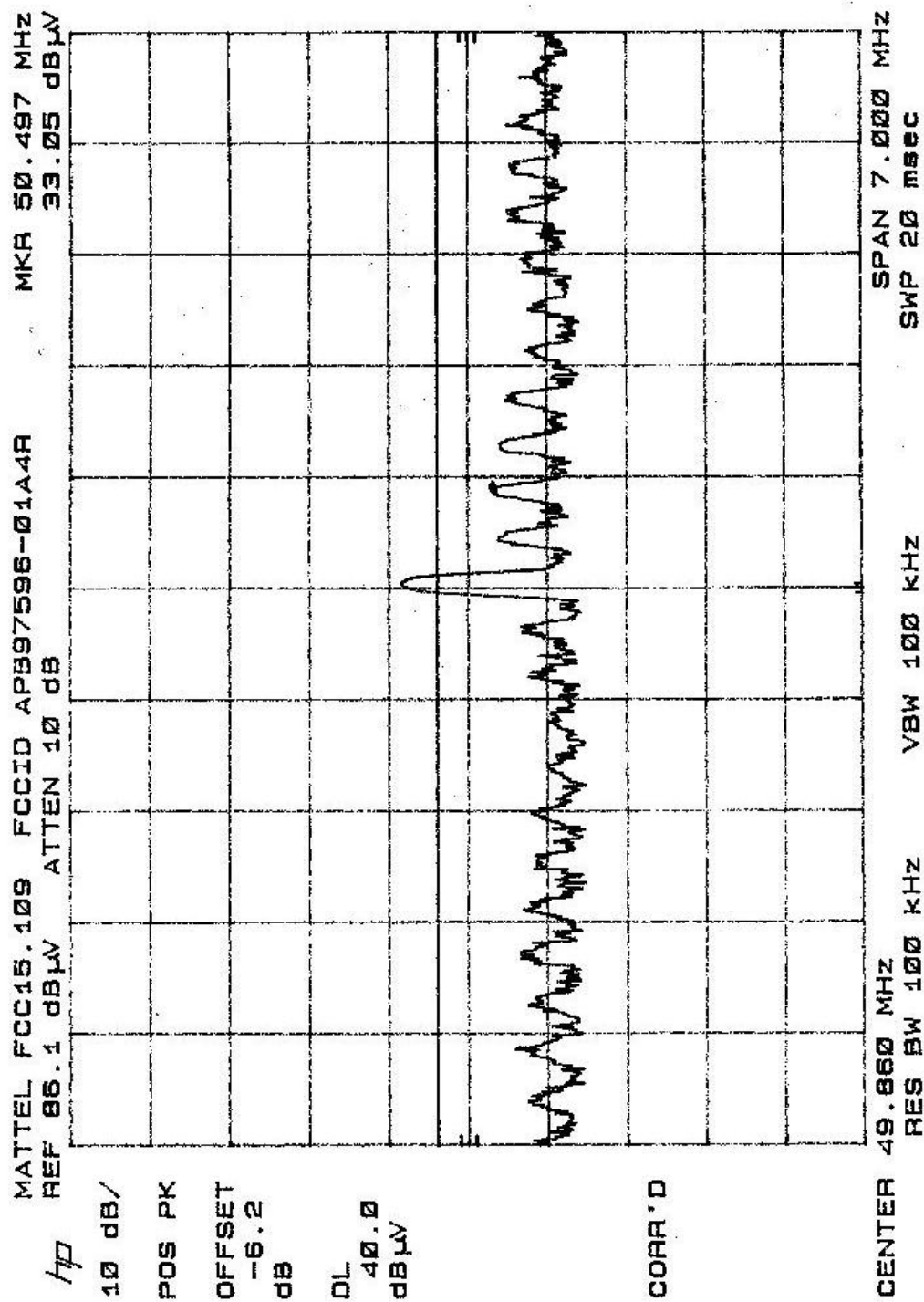
During Radiated Emission Tests, H.P. Signal Generator Model No: 8640B was used to radiate unmodulated CW signal to EUT at 49.88 MHz. Please refer to radiated emission data for six highest readings.

9. EQUIPMENT MODIFICATIONS

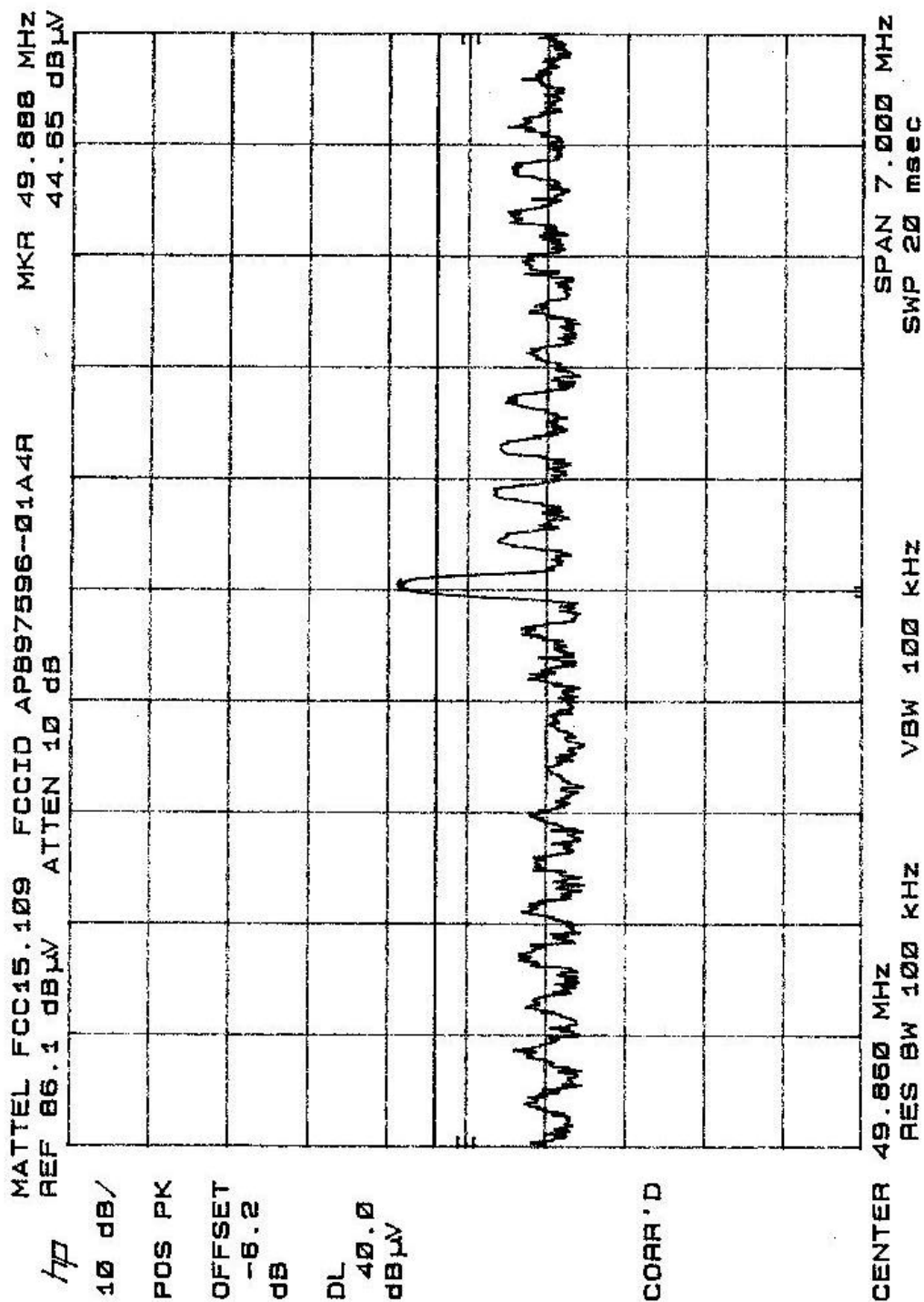
To achieve compliance to FCC Section 15.109, the following change(s) were made during compliance testing:

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

10. TEST CONFIGURATION PHOTOS (Radiated Emission Test)



COHERENT EMISSION PLOT



COHERENT EMISSION PLOT



FCC, VCCI, CISPR, CE, AUSTEL, NZ
UL, CSA, TUV, BSMI, DHHS, NVLAP

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Project #: 01u0946-4
Report #: 010830c1
Date & Time: 08/30/01 2:33 PM
Test Engr: MIKE ZHU

Company: MATTEL MOUNT LAUREL FW
EUT Description: 49MHZ RADIO CONTROL SCOOTER.M/N:67956-49R
Test Configuration : EUT/SIGNAL GENERATOR
Type of Test: FCC CLASS B
Mode of Operation: NORMAL

[<< Main Sheet](#)

Freq.	Reading	AF	Closs	Pre-amp	Level	Limit	Margin	Pol	Az	Height	Mark
(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	FCC_B	(dB)	(H/V)	(Deg)	(Meter)	(P/Q/A)
50.49	49.30	10.03	0.98	27.26	33.05	40.00	-6.95	3mV	60.00	1.00	P
50.16	48.70	10.11	0.98	27.26	32.54	40.00	-7.46	3mV	60.00	1.00	P
50.77	48.50	9.94	0.99	27.26	32.17	40.00	-7.83	3mV	60.00	1.00	P
51.04	47.80	9.86	0.99	27.26	31.39	40.00	-8.61	3mV	60.00	1.00	P
49.60	45.10	10.27	0.98	27.26	29.09	40.00	-10.91	3mV	60.00	1.00	P
49.30	44.90	10.36	0.97	27.26	28.97	40.00	-11.03	3mV	60.00	1.00	P
6 Worst Data											

RADIATED EMISSION DATA



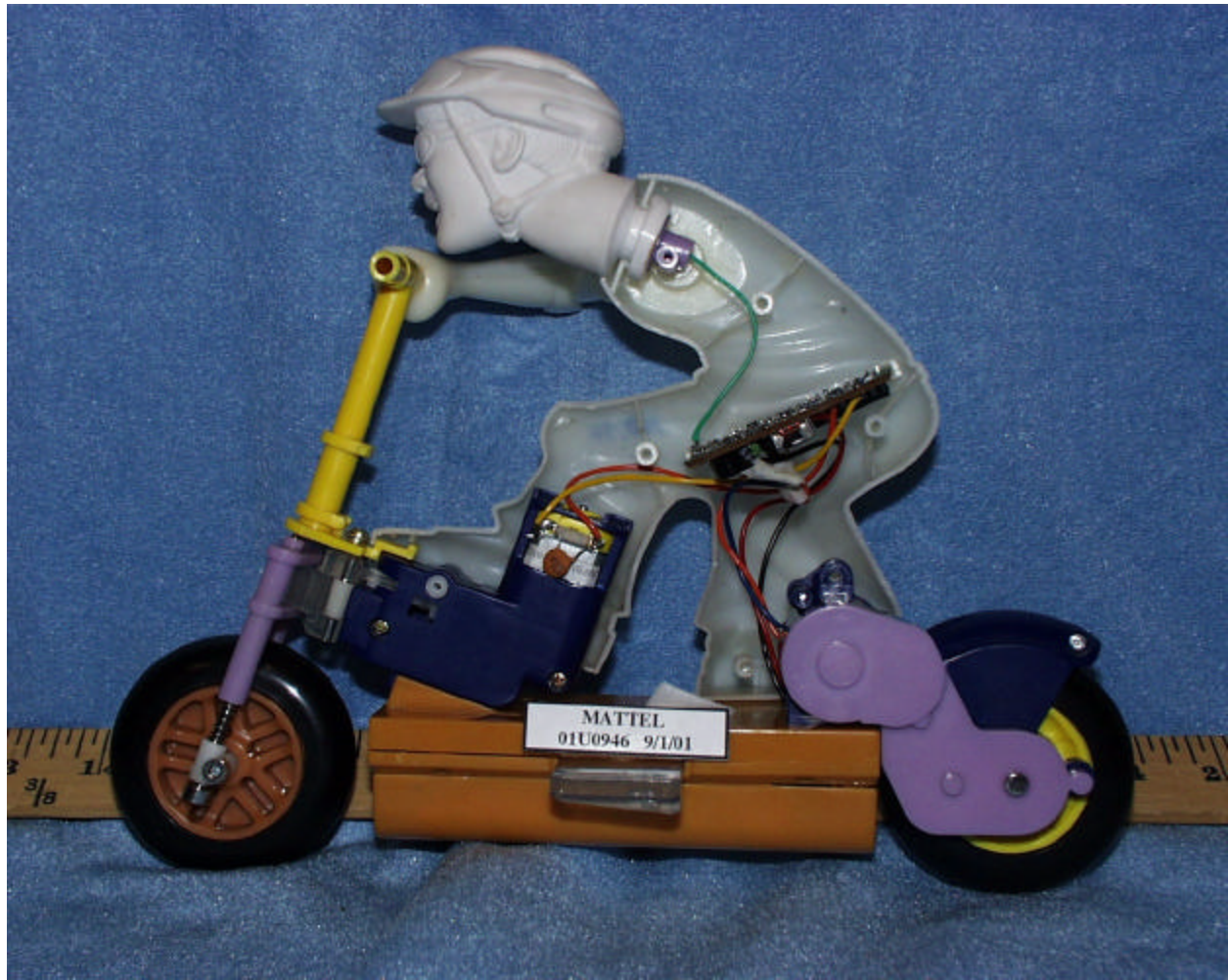
EXTERNAL PHOTO



EXTERNAL PHOTO



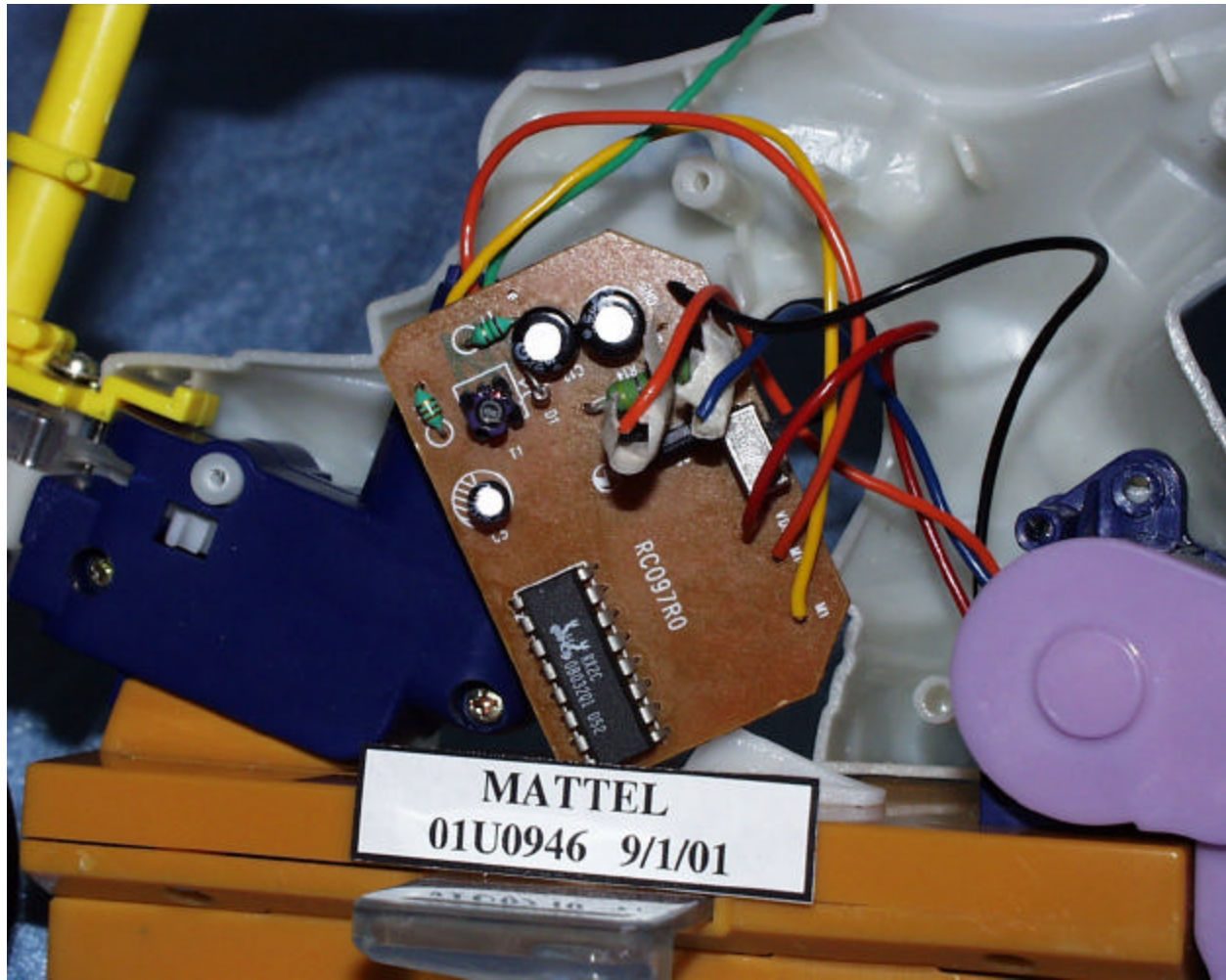
EXTERNAL PHOTO



INTERNAL PHOTO



INTERNAL PHOTO



INTERNAL PHOTO