ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
CERTIFICATION TO FCC PART 15 REQUIREMENTS

for

INTENTIONAL RADIATOR

27 MHz RADIO CONTROLTRANSMITTER

MODEL NO: 50804

BRAND NAME: NICKELODEN
DELUXE GODDARD DOG

FCC ID NO: APB50804-01A2T

REPORT NO: 01U0735-1

ISSUE DATE: JUNE 27, 2001

Prepared for
MATTEL INC.
333 CONTINENTAL BLVD.
EL SEGUNDO, CA 90245-5012
USA

Prepared by
COMPLIANCE ENGINEERING SERVICES, INC.
d.b.a.
COMPLIANCE CERTIFICATION SERVICES
561 F MONTEREY ROAD
MORGAN HILL, CA 95037, USA
TEL: (408) 463-0885
FAX: (408) 463-0888

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EXHIBIT

1. Proposed FCC ID Label Format
2. Agent Authorization Letter

Attachment

- EUT Photographs
- Schematic Diagram

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1. VERIFICATION OF COMPLIANCE

COMPANY NAME	:	MATTEL INC. 333 CONTINENTAL BLVD. EL SEGUNDO, CA 90245-5012 USA
CONTACT PERSON	:	JOHN DASPIT/STAFF ENGINEER
TELEPHONE NO.	:	310-252-4221
EUT DESCRIPTION	:	27 MHz RADIO CONTROL TRANSMITTER
MODEL NAME/NUMBER	:	50804
BRAND NAME	:	NICKELODEN DELUX GODDARD DOG
SERIAL NUMBER	:	N/A
FCC ID	:	APB50804-01A2T
DATE TESTED	:	JUNE 20, 2001
REPORT NUMBER	:	01U0735-1

TYPE OF EQUIPMENT	RADIO CONTROL
EQUIPMENT TYPE	27 MHz TRANSMITTER
MEASUREMENT PROCEDURE	ANSI 63.4 / 1992
EQUIPMENT AUTHORIZATION TYPE	CERTIFICATION
FCC RULE	CFR 47, PART 15.227

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:

MIKE ZHU
SENIOR EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

Approved & Released For CCS By:

STEVE CHENG
EMC ENGINEERING MANAGER
COMPLIANCE CERTIFICATION SERVICES

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2. PRODUCT DESCRIPTION

CHASSIS TYPE	**PLASTIC**
Fundamental Frequency	**27.145 MHz**
Power Source	**ONE 9 VOLT BATTERY**
CHIPSET BRAND AND PART NO	**MATTEL 50804**
Transmitting Time	**CONTINUOUS**
Type of antenna	**PERMANENTLY ATTACHED**
NO. OF LAYER	**1**
Local Osc.	**27.145MHz**

3. TEST FACILITY

The 3/10/30 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 facility was submitted to the Commission on May 27,1994.

4. MEASUREMENT STANDARDS

The site is constructed and calibrated in conformance with the requirements of ANSI C63.4/1992.

5. TEST METHODOLOGY

For an intentional radiator, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 KHz, up to at least the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. (CFR 47 Section 15.33)

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6. MEASUREMENT EQUIPMENT USED

Manufacturer	Model Number	Description	Serial No.	Cal Due Date
H.P	8568B	Spectrum Analyzer	2841A04227	01/18/02
SCHAFFNER-CHASE	CBL6112B	Antenna, Bilog	2586	12/11/01
H.P.	8447D	Pre-Amplifier	2944A06589	09/19/01
EMCO	6502	Active Loop Antenna	9202-2722	02/23/01
BATTERY	ENERGIZER	9V Alkaline	N/A	N/A

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7. POWER LINE RFI LIMIT

CONNECTED TO AC POWER LINE	SECTION 15.207
CARRIER CURRENT SYSTEM IN THE FREQUENCY RANGE OF 450 KHz TO 30MHz	SECTION 15.205 AND SECTION 15.209, 15.221, 15.223, 15.225 OR 15.227, AS APPROPRIATE.
BATTERY POWER	NOT REQUIRED.

8. RADIATED EMISSION LIMITS

GENERAL REQUIREMENTS	SECTION 15.209
RESTRICTED BANDS OF OPERATION	SECTION 15.205
OPERATION WITHIN THE BAND 26.96 - 27.28 MHZ	SECTION 15.227

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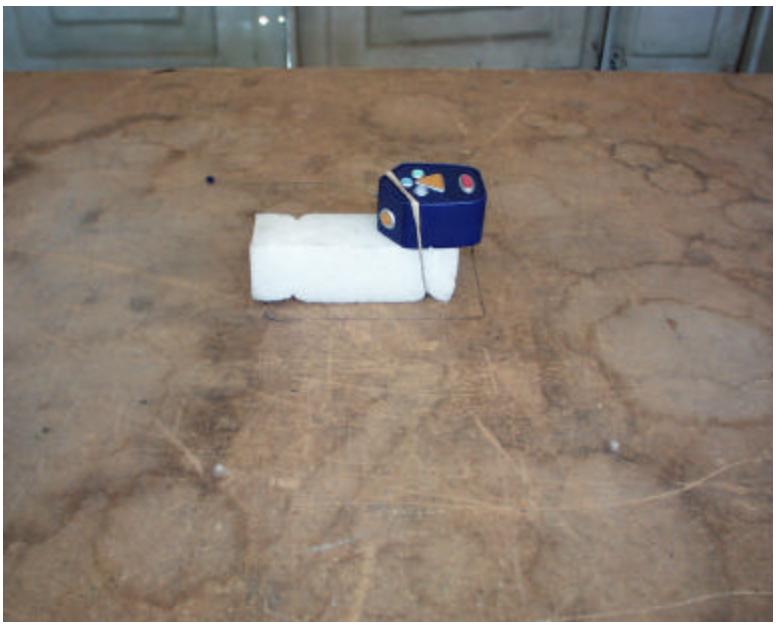
9. SYSTEM TEST CONFIGURATION

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The Eut was attached to a plastic foam by using a piece of plastic tape. It just need to insert the battery, press the button to active continuous transmitting, and turn the Eut on. Please refer to the following photograph for actual setup.



Radiated Open Site Test Set-up

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10. EQUIPMENT MODIFICATIONS

To achieve compliance to FCC Section 15.227 technical limits, the following change(s) were made during compliance testing:

No changes were required in order to achieve compliance to FCC Section 15.227.

11. SUMMARY

No Comment

12. TEST PROCEDURE AND RESULT

Powerline RFI Limits	Eut	Radiated Emission Limits	Eut
SECTION 15.207		SECTION 15.209	X
SECTION 15.205, 15.209, 15.221, 15.223, 15.225 OR 15.227		SECTION 15.205	X
BATTERY POWER	X	SECTION 15.227	X

12.1 RADIATION EMISSION TEST PROCEDURE AND RESULT

1. The EUT was placed on a wooden table on the outdoor ground plane. The search antenna was placed 3 meter from the EUT. The EUT antenna was mounted vertically as per normal installation.

2. The turntable was slowly rotated to locate the direction of maximum emission at each emission falling in the restricted bands of 15.205. The EUT was moved throughout the XY, XZ, and YZ planes to maximize emissions received by the search antenna.

3. Once maximum direction was determined, the search antenna was raised and lowered in both vertical and horizontal polarizations. The six maximum readings so obtained are recorded in the data listed below.

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UL, CSA, TUV, BSMI, DHHS, NVLAP
561F MONTEREY ROAD, SAN JOSE, CA 95037-9001
PHONE: (408) 463-0885 FAX: (408) 463-0888

Project #: 01U0735-1
Report #: 010620B1
Date& Time: 06/20/01 9:26 AM
Test Engr: MIKE ZHU

Company: MATTEL INC JD
EUT Description: 27MHZ TRANSMITTER,M/N:NICKEL ODEON MODEL#50804
Test Configuration : EUT ONLY
Type of Test: FCC 15.227 & 15.209
Mode of Operation: NORMAL

○ A-Site ◉ B-Site ○ C-Site ○ F-Site 6 Worst Data 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)
Green button:											
X position:											
27.14	74.00	21.00	1.21	29.53	66.68	80.00	-13.32	3mV	0.00	1.00	P
27.14	72.90	21.00	1.21	29.53	65.58	80.00	-14.42	3mH	30.00	1.00	P
y POSITION:											
27.14	74.00	21.00	1.21	29.53	66.68	80.00	-13.32	3mH	0.00	1.00	P
27.14	81.90	21.00	1.21	29.53	74.58	80.00	-5.42	3mV	30.00	1.00	P
Z POSITION:											
27.14	82.70	21.00	1.21	29.53	75.38	80.00	-4.62	3mV	30.00	1.00	P
27.14	74.00	21.00	1.21	29.53	66.68	80.00	-13.32	3mH	0.00	1.00	P
54.30	49.40	8.67	1.66	29.48	30.24	40.00	-9.76	3mV	30.00	1.00	P
81.44	43.60	7.14	2.02	29.42	23.34	40.00	-16.66	3mV	30.00	1.00	P
108.58	45.30	11.07	2.32	29.31	29.38	43.50	-14.12	3mV	30.00	1.00	P
244.28	45.80	12.19	3.66	28.67	32.98	46.00	-13.02	3mV	30.00	1.00	P
Y POSITION:											
54.29	49.20	8.67	1.66	29.48	30.04	40.00	-9.96	3mV	30.00	1.00	P
108.57	44.90	11.07	2.32	29.31	28.98	43.50	-14.52	3mV	30.00	1.00	P
244.27	44.60	12.19	3.66	28.67	31.78	46.00	-14.22	3mV	30.00	1.00	P
X POSITION:											
54.28	46.30	8.67	1.66	29.48	27.15	40.00	-12.85	3mV	30.00	1.00	P
108.57	43.90	11.07	2.32	29.31	27.98	43.50	-15.52	3mV	30.00	1.00	P
244.26	44.70	12.19	3.66	28.67	31.88	46.00	-14.12	3mV	60.00	1.00	P
54.28	46.30	8.67	1.66	29.48	27.15	40.00	-12.85	3mH	30.00	3.00	P
108.56	44.30	11.07	2.32	29.31	28.38	43.50	-15.12	3mH	30.00	3.00	P
217.13	48.90	10.72	3.42	28.83	34.21	46.00	-11.79	3mH	30.00	1.00	P
244.28	52.70	12.19	3.66	28.67	39.88	46.00	-6.12	3mH	60.00	1.00	P
271.43	46.40	12.93	3.92	28.59	34.66	46.00	-11.34	3mH	60.00	1.00	P
Y POSITION:											
271.44	46.00	12.93	3.92	28.59	34.26	46.00	-11.74	3mH	30.00	1.00	P

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244.28	51.60	12.19	3.66	28.67	38.78	46.00	-7.22	3mH	60.00	1.00	P
217.14	48.30	10.73	3.42	28.83	33.62	46.00	-12.38	3mH	60.00	1.00	P
54.30	46.80	8.67	1.66	29.48	27.64	40.00	-12.36	3mH	30.00	3.00	P
Z:											
54.29	44.80	8.67	1.66	29.48	25.64	40.00	-14.36	3mH	30.00	3.00	P
217.14	46.10	10.73	3.42	28.83	31.42	46.00	-14.58	3mH	30.00	1.00	P
244.28	49.60	12.19	3.66	28.67	36.78	46.00	-9.22	3mH	30.00	1.00	P
271.42	45.10	12.93	3.92	28.59	33.36	46.00	-12.64	3mH	30.00	1.00	P
YELLOW BUTTON:											
27.14	73.50	21.00	1.21	29.53	66.18	80.00	-13.82	3mH	0.00	1.00	P
27.14	74.50	21.00	1.21	29.53	67.18	80.00	-12.82	3mV	30.00	1.00	P
y:											
27.14	81.90	21.00	1.21	29.53	74.58	80.00	-5.42	3mV	30.00	1.00	P
27.14	74.40	21.00	1.21	29.53	67.08	80.00	-13.92	3mH	0.00	1.00	P
Z:											
27.14	74.60	21.00	1.21	29.53	67.28	80.00	-12.72	3mH	0.00	1.00	P
27.14	82.10	21.00	1.21	29.53	74.78	80.00	-5.22	3mV	30.00	1.00	P
54.30	49.30	8.67	1.66	29.48	30.14	40.00	-9.86	3mV	30.00	1.00	P
217.14	45.60	10.73	3.42	28.83	30.92	46.00	-15.08	3mV	30.00	1.00	P
244.28	43.50	12.19	3.66	28.67	30.68	46.00	-15.32	3mV	30.00	1.00	P
BLUE BUTTON:											
X:											
27.14	74.30	21.00	1.21	29.53	66.98	80.00	-13.02	3mV	30.00	1.00	P
27.14	71.10	21.00	1.21	29.53	63.78	80.00	-6.22	3mH	0.00	1.00	P
Y:											
27.14	69.30	21.00	1.21	29.53	61.98	80.00	-18.02	3mH	0.00	1.00	P
27.14	82.70	21.00	1.21	29.53	75.38	80.00	-4.62	3mV	30.00	1.00	P
Z:											
27.14	81.90	21.00	1.21	29.53	74.58	80.00	-5.42	3mV	30.00	1.00	P
27.14	70.50	21.00	1.21	29.53	63.18	80.00	-6.82	3mH	0.00	1.00	P
54.29	49.80	8.67	1.66	29.48	30.64	40.00	-9.36	3mH	30.00	1.00	P
217.14	45.10	10.73	3.42	28.83	30.42	46.00	-15.58	3mH	0.00	1.00	P
244.27	44.10	12.19	3.66	28.67	31.28	46.00	-14.72	3mH	0.00	1.00	P
271.44	45.20	12.93	3.92	28.59	33.46	46.00	-12.54	3mV	30.00	1.00	P
244.30	49.30	12.19	3.66	28.67	36.48	46.00	-9.52	3mV	0.00	1.00	P
217.16	46.50	10.73	3.42	28.83	31.82	46.00	-14.18	3mV	0.00	1.00	P
54.30	48.80	8.67	1.66	29.48	29.64	40.00	-10.36	3mV	0.00	3.00	P
RED BUTTON:											
X:											
27.14	76.00	21.00	1.21	29.53	68.68	80.00	-11.32	3mV	30.00	1.00	P
27.14	70.90	21.00	1.21	29.53	63.58	80.00	-6.42	3mH	0.00	1.00	P
Y:											
27.14	71.10	21.00	1.21	29.53	63.78	80.00	-16.22	3mH	0.00	1.00	P
27.14	82.60	21.00	1.21	29.53	75.28	80.00	-4.72	3mV	30.00	1.00	P
Z:											
27.14	83.50	21.00	1.21	29.53	76.18	80.00	-3.82	3mV	30.00	1.00	P
27.14	71.50	21.00	1.21	29.53	64.18	80.00	-15.82	3mH	0.00	1.00	P
54.30	49.30	8.67	1.66	29.48	30.14	40.00	-9.86	3mV	30.00	1.00	P
217.13	45.20	10.72	3.42	28.83	30.51	46.00	-15.49	3mV	30.00	1.00	P

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244.29	44.70	12.19	3.66	28.67	31.88	46.00	-14.12	3mV	30.00	1.00	P
271.43	42.60	12.93	3.92	28.59	30.86	46.00	-15.14	3mV	30.00	1.00	P
271.43	45.00	12.93	3.92	28.59	33.26	46.00	-12.74	3mH	0.00	1.00	P
244.29	50.50	12.19	3.66	28.67	37.68	46.00	-8.32	3mH	0.00	1.00	P
217.15	46.50	10.73	3.42	28.83	31.82	46.00	-14.18	3mH	0.00	1.00	P
GRAY BUTTON:											
X:											
27.14	71.10	21.00	1.21	29.53	63.78	80.00	-16.22	3mH	0.00	1.00	P
27.14	76.10	21.00	1.21	29.53	68.78	80.00	-11.22	3mV	30.00	1.00	P
Y:											
27.14	83.70	21.00	1.21	29.53	76.38	80.00	-3.62	3mV	30.00	1.00	P
27.14	69.10	21.00	1.21	29.53	61.78	80.00	-18.22	3mH	0.00	1.00	P
Z:											
27.14	70.00	21.00	1.21	29.53	62.68	80.00	-17.32	3mH	0.00	1.00	P
27.14	83.90	21.00	1.21	29.53	76.58	80.00	-3.42	3mV	30.00	1.00	P
54.30	45.60	8.67	1.66	29.48	26.44	40.00	-13.56	3mH	0.00	3.00	P
244.30	49.60	12.19	3.66	28.67	36.78	46.00	-9.22	3mH	0.00	1.00	P
271.43	45.60	12.93	3.92	28.59	33.86	46.00	-12.14	3mH	0.00	1.00	P
54.30	46.60	8.67	1.66	29.48	27.44	40.00	-12.56	3mV	30.00	1.00	P
244.30	45.50	12.19	3.66	28.67	32.68	46.00	-13.32	3mV	30.00	1.00	P
271.43	43.90	12.93	3.92	28.59	32.16	46.00	-13.84	3mV	30.00	1.00	P
Total data #: 76											

V.2b

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UL, CSA, TUV, BSMI, DHHS, NVLAP
561F MONTEREY ROAD, SAN JOSE, CA 95037-9001
PHONE: (408) 463-0885 FAX: (408) 463-0888

Project #: 01U0735-1
Report #: 010620B1
Date& Time: 06/20/01 9:26 AM
Test Engr: MIKE ZHU

Company: MATTEL INC JD
EUT Description: 27MHZ TRANSMITTER,M/N:NICKEL ODEON MODEL#50804
Test Configuration : EUT ONLY
Type of Test: FCC 15.227 & 15.209
Mode of Operation: NORMAL

<< Main Sheet

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)
27.14	83.90	21.00	1.21	29.53	76.58	80.00	-3.42	3mV	30.00	1.00	P
27.14	83.70	21.00	1.21	29.53	76.38	80.00	-3.62	3mV	30.00	1.00	P
27.14	83.50	21.00	1.21	29.53	76.18	80.00	-3.82	3mV	30.00	1.00	P
27.14	82.70	21.00	1.21	29.53	75.38	80.00	-4.62	3mV	30.00	1.00	P
27.14	82.70	21.00	1.21	29.53	75.38	80.00	-4.62	3mV	30.00	1.00	P
27.14	82.60	21.00	1.21	29.53	75.28	80.00	-4.72	3mV	30.00	1.00	P

6 Worst Data

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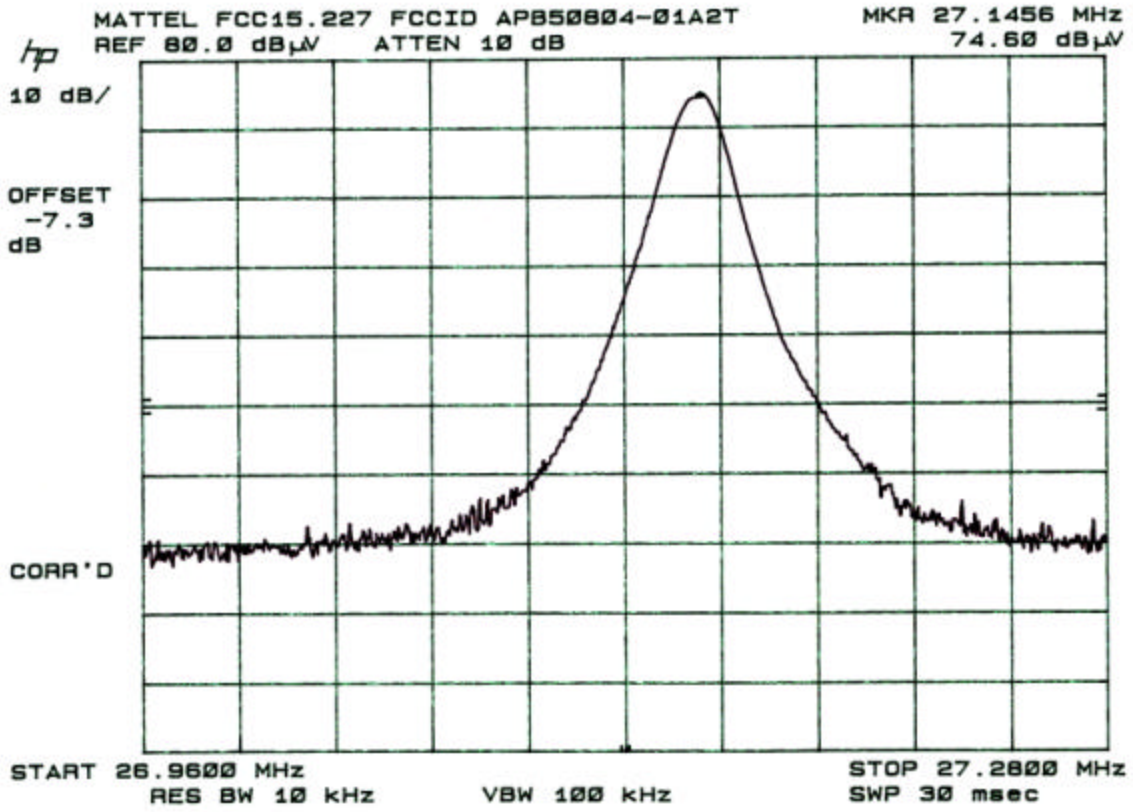

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