ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
CERTIFICATION TO FCC PART 15 REQUIREMENTS

for

INTENTIONAL RADIATOR

RC TOY CAR TRANSMITTER

49MHz RC TOY CAR TRANSMITTER

MODEL NO: 92019

FCC ID NO: APB92019-00A4T

REPORT NO: 00U0167

Prepared for

MATTEL TOYS, INC.
333 CONTINENTAL BLVD.
EL SEGUNDO, CA 90245
USA

Prepared by

COMPLIANCE ENGINEERING SERVICES, INC.
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1. VERIFICATION OF COMPLIANCE

COMPANY NAME	:	MATTEL TOYS, INC. 333 CONTINENTAL BLVD. EL SEGUNDO, CA 90245 USA
CONTACT PERSON	:	VLADIMIR SOSNOVSKY
TELEPHONE NO.	:	310-252-2000
EUT DESCRIPTION	:	49MHz RF RC TOY CAR TRANSMITTER
MODEL NAME/NUMBER	:	92019
BRAND NAME	:	SPEED WRENCH CAR
SERIAL NUMBER	:	1
FCC ID	:	APB92019-00A4T
DATE TESTED	:	APRIL 05, 2000
REPORT NUMBER	:	00U0167

EQUIPMENT TYPE	49.86 MHz TRANSMITTER
MEASUREMENT PROCEDURE	ANSI 63.4 / 1992
LIMIT TYPE	CERTIFICATION
FCC RULE	CFR 47, PART 15.235

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.

T. N. COKENIAS / ENGIEERING DIRECTOR
COMPLIANCE ENGINEERING SERVICES, INC.

2. Product Description

CHASSIS TYPE	**PLASTIC**
Fundamental Frequency	**49.86 MHz**
Power Source	**9 VOLT Battery (4 X AA)**
Transmitting Time	**Continuous**
Type of Antenna	**Permanently attached**
No. of Channel	**One**
NO. OF LAYER	**1**
Board Revision No	**REV. 1.0**
Associated Receiver	**N/A**

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	Cal Due Date
H.P.	8546A	EMI Receiver (9kHz - 6.5GHz)	03/2001
H.P.	85460A	RF Filter Section (9kHz - 6.5GHz)	03/2001
EMCO	3146	Antenna (200-1000 MHz)	10/2000
EMCO	3110	Antenna (30-200 MHz)	10/2000
H.P.	8447D	Preamplifier (0.1 - 1300 MHz)	09/2000

7. Test Procedures and Test Results

Radiated Emission Test: (15.235 (a))

Test Procedure

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 was placed in X,Y, and Z position to simulate the actual usage.

2. The turntable was slowly rotated to locate the direction of maximum emission at each EUT position. Once the maximum direction and EUT position was determined, the search antenna was raised and lowered in both vertical and horizontal polarization. The maximum reading so obtained are recorded in the data list below.

Test Result: Peak emission was under average limit. Refer to attached plots.

Radiated Emission Test: (15.235 (b))

Test Requirement : The field strength between the band edges and up to 10kHz above and below the band edges shall be attenuated at least 26 dB below the level of the unmodulated carrier or to the general limits in 15.209, which permits the higher emission levels. All emissions more than 10KHz from the band edges shall be below the levels specified in 15.209.

Test Procedure:

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 was placed in X, Y, and Z position to simulate the actual usage.

2. The turntable was slowly rotated to locate the direction of maximum direction and EUT position was determined, the search antenna was raised and lowered in both vertical and horizontal polarizations. For band edge measurements a plot was taken in that position and orientation with 3KHz RES B/W and 100KHz VID B/W and compared to a limit line 26dB below the level measured in 12.235(a) plot (75.19dBuV/m-26dB = 49.19dBuV/m). For out of band measurements tabular data was taken.

Test results: All emissions were under specified limits. Refer to attached plots and tabular data sheet.

8. Radiated Emission Test Setup Photo