

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

for

INTENTIONAL RADIATOR

REMOTE CONTROL CAR TRANSMITTER

MODEL NO: 88238

FCC ID NO: APB88238-00A2T

REPORT NO: 00U0205-1

ISSUE DATE: APRIL 24, 2000

Prepared for

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

Prepared by

COMPLIANCE ENGINEERING SERVICES, INC.

d.b.a.

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| | 2. Agent Authorization Letter | |
| Attachment | | |
| | • EUT Photographs | |
| | • Schematic Diagram | |

1. VERIFICATION OF COMPLIANCE

COMPANY NAME : MATTEL, INC.
333 CONTINENTAL BLVD.
EL SEGUNDO, CA 90245
USA

CONTACT PERSON : VLADIMIR SOSNOVSKY / PROJECT ENGINEER

TELEPHONE NO. : (310) 252-5595

EUT DESCRIPTION : REMOTE CONTROL CAR TRANSMITTER

MODEL NAME/NUMBER : 88238

BRAND NAME : GRAVEDIGGER SERIAL NUMBER : 1

FCC ID : APB882386-00A2T

DATE TESTED : APRIL 24, 2000

REPORT NUMBER : 00U0205

| | |
|-----------------------|----------------------------|
| TYPE OF EQUIPMENT | REMOTE CONTROL TRANSMITTER |
| EQUIPMENT TYPE | 27 MHZ TRANSMITTER |
| MEASUREMENT PROCEDURE | ANSI 63.4 / 1992 |
| LIMIT 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.

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

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2. Product Description

| | |
|---------------------------|------------|
| CHASSIS TYPE | PLASTIC |
| Fundamental Frequency | 27.145 MHz |
| Power Source | 9V Battery |
| CHIPSET BRAND AND PART NO | TX058A-R1 |
| Transmitting Time | CONTINUOUS |
| BOARD REVISION NO | 1.0 |
| NO. OF LAYER | 1 |
| Local Osc. | 27.145 MHz |

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)

6. Measurement Equipment Used

| Manufacturer | Model Number | Description | Cal Due Date |
|--------------|--------------|--------------------------------------|--------------|
| H.P. | 8566B | Spectrum Analyzer (100Hz – 22GHz) | 7/01/00 |
| CHASE EMC | CBL6112 | Antenna (25 - 2000MHz) | 8/12/00 |
| EMCO | 6502 | Antenna (10 kHz – 30 MHz) | 2/25/01 |
| H.P. | 8447D | Preamplifier (0.1 - 1300 MHz) | 09/3/00 |

7. POWERLINE RFI LIMIT

| | |
|---|--|
| CONNECTED TO AC POWER LINE | SECTION 15.207 |
| CARRIER CURRENT SYSTEM IN THE FREQUENCY RANGE OF 450 kHz TO 30 MHz | SECTION 15.205 AND SECTION 15.209, 15.221, 15.223, 15.225 OR 15.227, AS APPROPRIATE. |
| BATTERY POWER | NO 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 |

9. SYSTEM TEST CONFIGURATION

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT is attached to a block of plastic foam using a rubber band to cause continuous transmission. Please refer to the following photograph for actual setup.



Radiated Open Site Test Set-up

10. Equipment Modifications

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

NOT APPLICABLE

11. 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, x 15.225 OR 15.227 | | SECTION 15.205 | x |
| BATTERY POWER | X | SECTION 15.227 | X |

11.1 Radiated 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.