

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

*for*

**INTENTIONAL RADIATOR**

**27 MHz RC CAR TRANSMITTER**

**MODEL NO: 92182**

**FCC ID NO: APB92182--00A2T**

**REPORT NO: 00U0412-1**

**ISSUE DATE: AUGUST 31, 2000**

*Prepared for*

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

*Prepared by*

**COMPLIANCE ENGINEERING SERVICES, INC.**

*d.b.a.*

**COMPLIANCE CERTIFICATION SERVICES**

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## 1. VERIFICATION OF COMPLIANCE

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

CONTACT PERSON : NATHAN BLOCH, SENIOR PROJECT ENGINEER

TELEPHONE NO. : (856) 840-1262

EUT DESCRIPTION : 27 MHz RC CAR TRANSMITTER

MODEL NAME/NUMBER : 92182

BRAND NAME : KEY START WITH SOUND

SERIAL NUMBER : N/A

FCC ID : APB92182-00A2T

DATE TESTED : AUGUST 18, 2000

REPORT NUMBER : 00U0412-1

TYPE OF EQUIPMENT	REMOTE CONTROL
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.

*Approved By*

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T. N. COKENIAS / ENGINEERING DIRECTOR  
COMPLIANCE CERTIFICATION SERVICES

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## 2. PRODUCT DESCRIPTION

CHASSIS TYPE	PLASTIC
Fundamental Frequency	27.145 MHz
Power Source	9 VOLT BATTERY
CHIPSET BRAND AND PART NO	MATTEL. 92182/TX
Transmitting Time	CONTINUOUS
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)

## 6. Measurement Equipment Used

Manufacturer	Model Number	Description	Cal Due Date
H.P.	8568A	Spectrum Analyzer (100Hz - 1.5GHz)	11/18/00
EMCO	6502	Active Loop Antenna (10K - 30MHz)	02/23/01
SCHAFFNER- CHASE	CBL6112B	Antenna (30-2000 MHz)	11/23/00
H.P.	8447D	Preamplifier (0.1 - 1300 MHz)	09/19/01

## 7. POWERLINE RFI LIMIT

CONNECTED TO AC POWER LINE	SECTION 15.207
ARRIER 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

## 9. SYSTEM TEST CONFIGURATION

The EUT was configured for testing in a typical fashion (as a customer would normally use it). Attached a plastic module to EUT button by using a rubber band to cause continuous transmission. Push-to-Transmit switch is held in transmit position using electrician's (PVC) tape for transmit mode. The tape is removed for receive mode. 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.