ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
CERTIFICATION TO FCC PART 15 REQUIREMENTS

for

UNINTENTIONAL RADIATOR

49MHz RC CAR RECEIVER

MODEL: 92019

FCC ID NO: APB92019-00A4R

REPORT NO: 00U0183

ISSUE DATE: APRIL 14, 2000

Prepared for

MATTEL, INC.
333 CONTINENTAL BLVD
EL SEGUNDO, CA 90246
USA

Prepared by

COMPLIANCE ENGINEERING SERVICES, INC.
d.b.a.
COMPLIANCE CERTIFICATION SERVICES
1366 BORDEAUX DRIVE
SUNNYVALE, CA 94089, USA
TEL: (408) 752-8166
FAX: (408) 752-8168

TABLE OF CONTENTS

ATTACHMENT:

Proposed FCC ID Label
Agent Authorization Letter
Test data
- Radiated Emission Data

Block Diagram/Schematics
User Manual

1. VERIFICATION OF COMPLIANCE

COMPANY NAME	:	MATTEL, INC. 333 CONTINENTAL BLVD. EL SEGUNDO, CA 90246 USA
CONTACT PERSON	:	VLADIMIR SOSNOVSKY / ENGINEER
TELEPHONE NO.	:	310-252-5595
EUT DESCRIPTION	:	49MHz RC CAR RECEIVER
MODEL NAME/NUMBER	:	92019
DATE TESTED	:	APRIL 14, 2000
REPORT NUMBER	:	00U0183

TYPE OF EQUIPMENT	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.

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

2. PRODUCT DESCRIPTION

MATTEL, INC., Model 92019 is the receiving portion of Radio Control Toy Car. The associated Transmitter is manufactured by Mattel, Inc., FCC ID: APB92019-00A4T.

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

Manufacturer	Model Number	Description	Cal Due Date
H.P.	8593EM	Portable Spectrum Analyzer	08/00
CHASE	CBL6112B	Bilog Antenna (30-1000 MHz)	10/00
H.P.	8447D	Preamplifier (0.1 - 1300 MHz)	09/00
ARA	DRG-18/A	Antenna(1 - 18GHZ)	12/00
H.P.	8449B	Preamplifier (1-26.5GHZ)	03/01

5. TEST CONFIGURATION

Set frequency generator to 49.597 MHz, EUT receiving transmission continuously. EUT was placed on the turn table and the antenna was extended to its maximum length to simulate the worse emission conditions.

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 ambient. 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 TESTS

During Radiated Emission Tests, H.P. signal generator model no: 8640B (0.5-1024MHz) was used to radiate unmodulated CW signal to EUT at 49.597 MHz. Please refer to radiated emission plots for six highest readings.

9. EQUIPMENT MODIFICATIONS

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

NOT APPLICABLE

10. TEST CONFIGURATION PHOTOS (Radiated Emission Test)