ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
CERTIFICATION TO FCC PART 15 REQUIREMENTS

for

INTENTIONAL RADIATOR

27 MHz REMOTE CONTROL CAR TRANSMITTER

MODEL NO: 50345

BRAND NAME: RC ANGELICA CHATMOBILE

FCC ID NO: APB50345-01A2T

REPORT NO: 01U0667-1

ISSUE DATE: FEBRUARY 16, 2001

Prepared for
MATTEL TOYS, 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
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EXHIBIT

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

Attachment

- EUT Photographs
- Schematic Diagram

1. VERIFICATION OF COMPLIANCE

COMPANY NAME	:	MATTEL TOYS, INC. 333 CONTINENTAL BLVD. EL SEGUNDO, CA 90245-5012, USA
CONTACT PERSON	:	KEVIN MULLALLY/ SENIOR ELECTRONIC ENGINEER
TELEPHONE NO.	:	310-252-3828
EUT DESCRIPTION	:	27 MHz REMOTE CONTROL CAR TRANSMITTER
MODEL NAME/NUMBER	:	50345
BRAND NAME	:	RC ANGELICA CHATMOBILE
SERIAL NUMBER	:	N/A
FCC ID	:	APB50345-01A2T
DATE TESTED	:	FEBRUARY 16, 2001
REPORT NUMBER	:	01U0667-1

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.

Tested and/or Reviewed By:

THU CHAN
SENIOR EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

Released For CCS By:

T. N. COKENIAS
ENGINEERING DIRECTOR
COMPLIANCE CERTIFICATION SERVICES

2. PRODUCT DESCRIPTION

CHASSIS TYPE	**PLASTIC**
Fundamental Frequency	**27.145 MHz**
Power Source	**ONE 9 VOLT BATTERY**
CHIPSET BRAND AND PART NO	**MATTEL. 50345/TX**
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)

COMPLIANCE ENGINEERING SERVICES, INC. CCS DOCUMENT NO:CCSUP4022B
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6. MEASUREMENT EQUIPMENT USED

Manufacturer	Model Number	Description	Cal Due Date
H.P.	8566B	SPECTRUM ANALYZER (100Hz - 22GHz)	06/16/01
H.P.	85662A	SPECTRUM DISPLAY	06/16/01
H.P.	85650A	QUASI-PEAK DETECTOR (9KHZ – 1GHZ)	06/16/01
EMCO	3146	Antenna (200-1000 MHz)	10/2001
EMCO	3110	Antenna (30-200 MHz)	10/2001
H.P.	8447D	Preamplifier (0.1 - 1300 MHz)	09/2001
EMCO	6502	Active Loop Antenna (10 K-30 MHz)	02/23/01

7. POWER LINE 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). 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

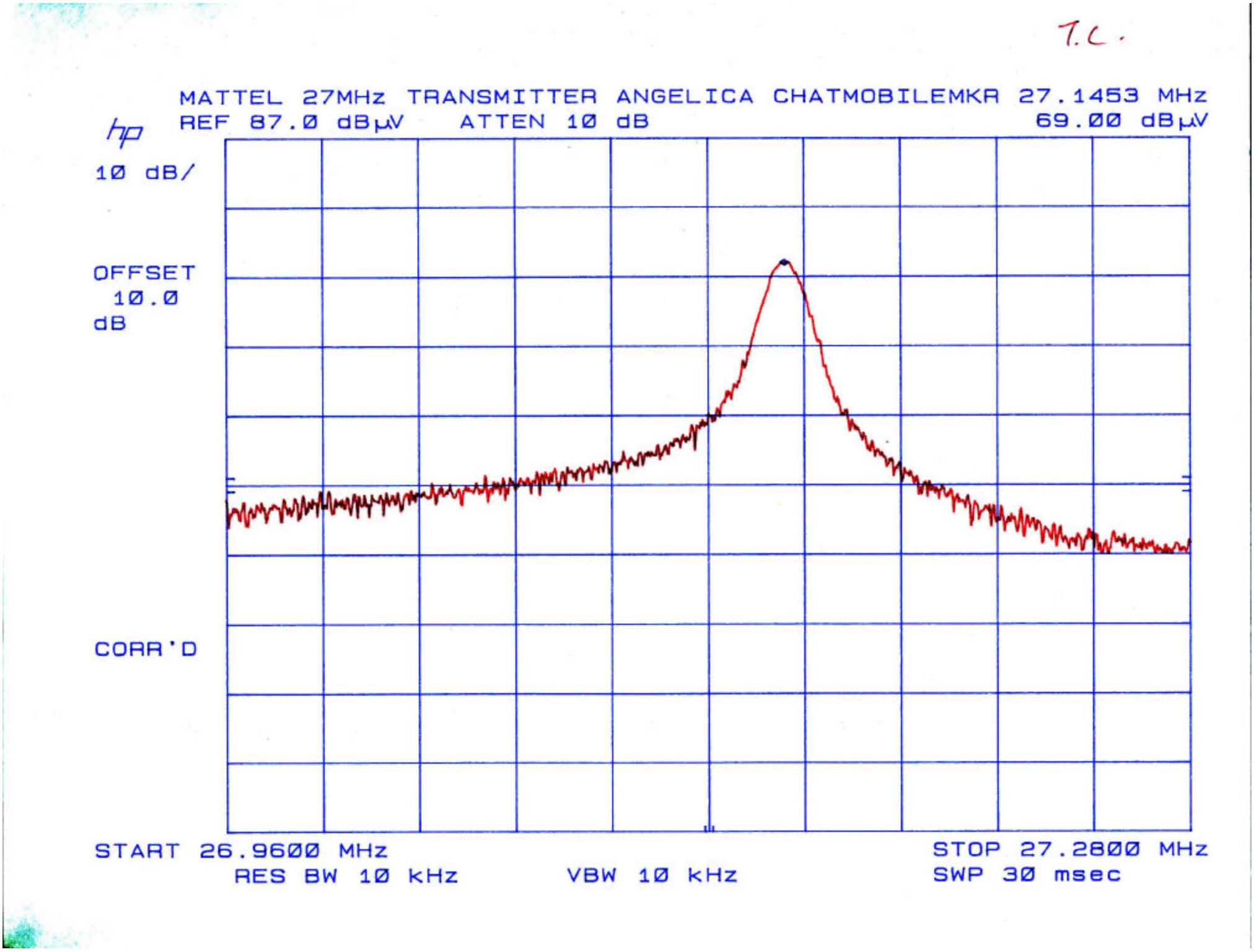
11.1 RADIATION EMISSION TEST PROCEDURE AND RESULT

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.

T.C.


MATTEL 27MHz TRANSMITTER ANGELICA CHATMOBILEMKR 27.1453 MHz
REF 87.0 dBµV
ATTEN 10 dB
69.00 dBµV
10 dB/
OFFSET
10.0
dB
CORR'D
START 26.9600 MHz
RES BW 10 kHz
VBW 10 kHz
STOP 27.2800 MHz
SWP 30 msec

COMPLIANCE Certification Services

FCC, VCCI, CISPR, CE, AUSTEL, NZ
UL, CSA, TUV, BSMI, DHHS, NVLAP

561F MONTEREY ROAD, SAN JOSE, CA 95037-9001
PHONE: (408) 463-0885 FAX: (408) 463-0888

Project #:	01U0667-1
Report #:	020801C1
Date& Time:	02/08/01 11:46 AM
Test Engr:	Thu Chan

Company:	Mattel
EUT Description:	27MHz Transmitter (M/N: Angelica Chatmobile #50345)
Test Configuration :	EUT only
Type of Test:	FCC 15.227
Mode of Operation:	Transmitting continuously

( ) 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)
Using Magnetic Loop for measurements below:											
X-Position (Back Lay down):											
27.15	44.00	9.00	0.77	0.00	53.77	80.00	-26.23	3mH	90.00	1.00	P
27.15	52.00	9.00	0.77	0.00	61.77	80.00	-18.23	3mV	90.00	1.00	P
Y-Position (Side laid down):											
27.15	57.00	9.00	0.77	0.00	66.77	80.00	-13.23	3mV	90.00	1.00	P
27.15	41.00	9.00	0.77	0.00	50.77	80.00	-29.23	3mH	90.00	1.00	P
Z-Position (Stand up):											
27.15	44.50	9.00	0.77	0.00	54.27	80.00	-25.73	3mH	90.00	1.00	P
27.15	59.23	9.00	0.77	0.00	69.00	80.00	-11.00	3mV	90.00	1.00	P
Using Biconical Antenna to measurement the readings below:											
Z-Position (Stand up):											
54.29	56.50	8.92	1.02	27.26	39.18	40.00	-0.82	3mV	90.00	1.00	P
81.44	47.00	9.02	1.22	27.22	30.01	40.00	-9.99	3mV	270.00	1.00	P
108.58	42.00	10.75	1.47	27.12	27.10	43.50	-16.40	3mV	90.00	1.00	P
135.73	38.00	14.14	1.66	27.02	26.78	43.50	-16.72	3mV	90.00	1.00	P
54.29	51.00	10.09	1.02	27.26	34.85	40.00	-5.15	3mH	270.00	3.50	P
81.44	43.00	8.79	1.22	27.22	25.79	40.00	-14.21	3mH	90.00	3.00	P
108.58	40.00	11.13	1.47	27.12	25.48	43.50	-18.02	3mH	90.00	2.00	P
Y-Position (Side laid down):											
54.29	54.00	10.09	1.02	27.26	37.85	40.00	-2.15	3mH	90.00	3.20	P
81.44	44.00	8.79	1.22	27.22	26.79	40.00	-13.21	3mH	90.00	2.50	P
108.58	38.00	11.13	1.47	27.12	23.48	43.50	-20.02	3mH	90.00	2.00	P
54.29	57.00	8.92	1.02	27.26	39.68	40.00	-0.32	3mV	0.00	1.00	P
54.29	55.00	8.92	1.02	27.26	37.68	40.00	-2.32	3mV	0.00	1.00	QP
81.35	52.00	9.00	1.22	27.22	35.00	40.00	-5.00	3mV	180.00	1.00	QP
X-Position (Back lay down):											
54.29	46.20	8.92	1.02	27.26	28.88	40.00	-11.12	3mV	90.00	1.00	P
81.44	41.00	9.02	1.22	27.22	24.02	40.00	-15.98	3mV	90.00	1.00	P
Total data #: 21											

COMPLIANCE
Certification Services

FCC, VCCI, CISPR, CE, AUSTEL, NZ
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Company: Mattel
EUT Description: 27MHz Transmitter (M/N: Angelica Chatmobile #50345)
Test Configuration : EUT only
Type of Test: FCC 15.227
Mode of Operation: Transmitting continuously

<< 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)
54.29	57.00	8.92	1.02	27.26	39.68	40.00	-0.32	3mV	0.00	1.00	P
54.29	54.00	10.09	1.02	27.26	37.85	40.00	-2.15	3mH	90.00	3.20	P
81.35	52.00	9.00	1.22	27.22	35.00	40.00	-5.00	3mV	180.00	1.00	QP
27.15	59.23	9.00	0.77	0.00	69.00	80.00	-11.00	3mV	90.00	1.00	P
81.44	44.00	8.79	1.22	27.22	26.79	40.00	-13.21	3mH	90.00	2.50	P
108.58	42.00	10.75	1.47	27.12	27.10	43.50	-16.40	3mV	90.00	1.00	P
6 Worst Data											