Lab Code: 200707-0

FCC PART 15.235
EMI MEASUREMENT AND TEST REPORT

For

HK（Shenzhen）Industries Development CO., Ltd

Flat 615.3/F., Bagua Industries Zone, Bagua 2nd Road Shenzhen 518029， China

FCC ID: R3BHK-TV8024

June 12, 2006

This Report Concerns:	**Equipment Type:**
☒ Original Report	TOYABI MONSTER TRUCK (Transmitter, Toy Remote Control)

Test Engineer:	William chan
Report No.:	RSZ06051102
Test Date:	May 16, 2006
Reviewed By:	Boni Baniqued
Prepared By:	Bay Area Compliance Lab Corp. (ShenZhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, Guangdong 518038, P.R.China Tel: +86-755-33320018 Fax: +86-755-33320008

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *HK（Shenzhen）Industries Development CO., Ltd.'*s product, model number: *HK-TV8024* or the "EUT" as referred to in this report is a *transmitter of TOYABI MONSTER TRUCK*. The EUT is measured approximately 59.0 cm L x 16.0 cm W x 6.5 cm H. rated input voltage: DC 9V battery.

** The test data gathered are from production sample, serial number: 0605006, provided by the manufacturer. We received EUT on 2006-5-11.*

Objective

This Type approval report is prepared on behalf of *HK（Shenzhen）Industries Development CO., Ltd* in accordance with Part 2, Subpart J, and Part 15, Subparts A, B and C of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules, section 15.203,15.205,15.209 and 15.235 rules.

Related Submittal(s)/Grant(s)

No Related Submittals.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

Test Facility

The Test site used by Bay Area Compliance Lab Corp. (ShenZhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, Guangdong 518038, P.R.China.

Test site at Bay Area Compliance Lab Corp. (ShenZhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Lab Corp. (ShenZhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0). The current scope of accreditations can be found at http://ts.nist.gov/ts/htdocs/210/214/scopes/2007070.htm.

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in a typical fashion (as normally used by a typical user).

EUT Exercise Software

N/A.

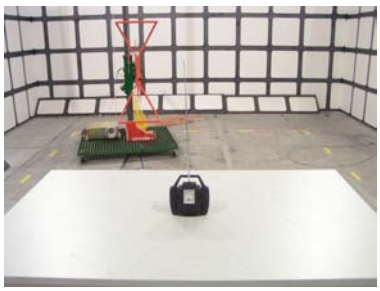
Special Accessories

The special Accessories were supplied by manufacturer.

Equipment Modifications

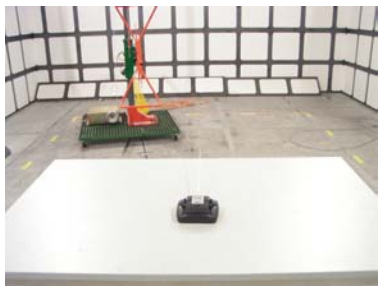
Bay Area Compliance Lab Corp. (ShenZhen) has not done any modification on the EUT.

Configuration of Test Setup



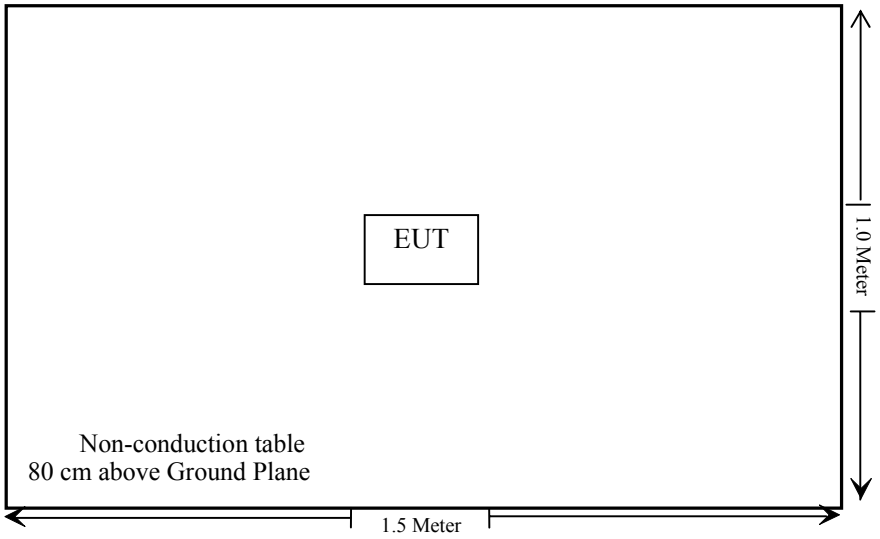
Stand View

Side View



Lie View

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.203	Antenna requirement	Compliant
§15.207(a)	Conducted Emission	N/A
§15.209(a) §15.235(a)	Radiated Emission	Compliant
§15.235(b)	Band Edges Testing	Compliant
§15.203	Antenna requirement	Compliant

§15.203 - ANTENNA REQUIREMENT

Standard Applicable

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has a permanent antenna, fulfill the requirement of this section.

Test Result: Pass

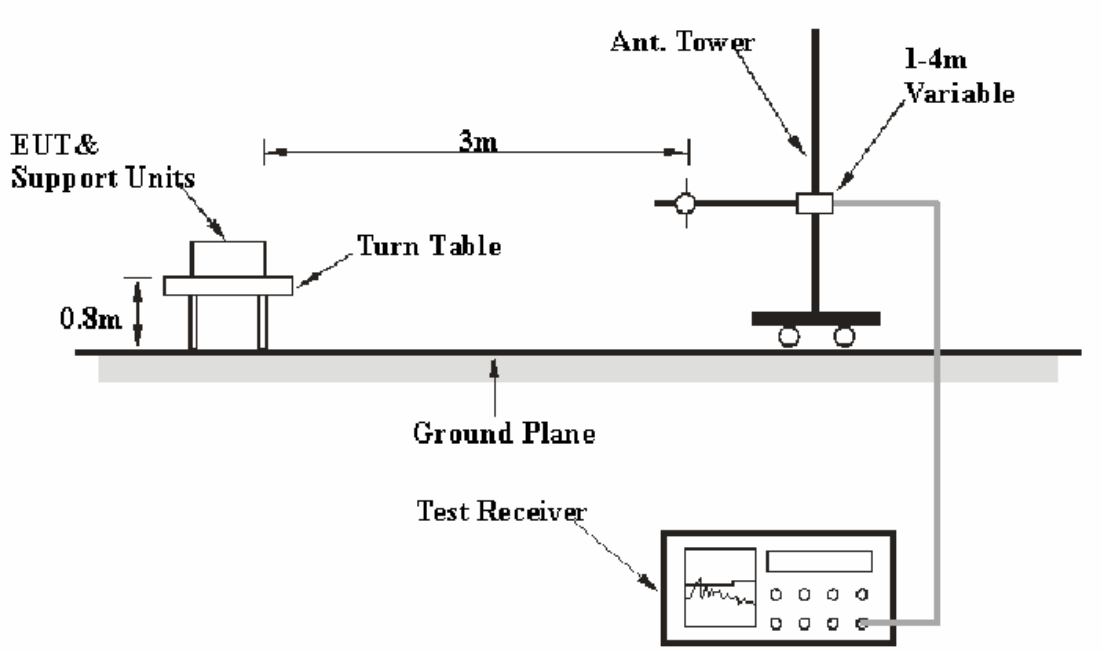
§15.209(a) §15.235(a) - RADIATED EMISSION

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Lab Corp. (ShenZhen) is ±4.0 dB.

EUT Setup



The radiated emission tests were performed in the chamber A test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209 and 15.235 limits.

EMI Test Receiver Setup

According to FCC Rules, 47 CFR 15.33, the EUT emissions were investigated from 30 MHz to 1000 MHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency	***RB/W***	***VB/W***	***IF B/W***
9 kHz-30 MHz	10 kHz	30 kHz	9 kHz
30 MHz-1 GHz	100 kHz	300 kHz	120 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2005-8-17	2006-8-17
HP	Amplifier	HP8447E	1937A01046	2005-8-17	2006-8-17
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2006-4-28	2007-4-28
ETS	Passive Loop Antenna	6512	00029604	2006-4-26	2007-4-26

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the Quasi-peak detection mode.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter reading. The basic equation is as follows:

Corr. Ampl. = Meter Reading + Antenna Loss + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corr. Ampl

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.209 & 15.235, with the worst margin reading of:

4.20 dB at **99.719875 MHz** in the **Vertical** polarization.

Test Data

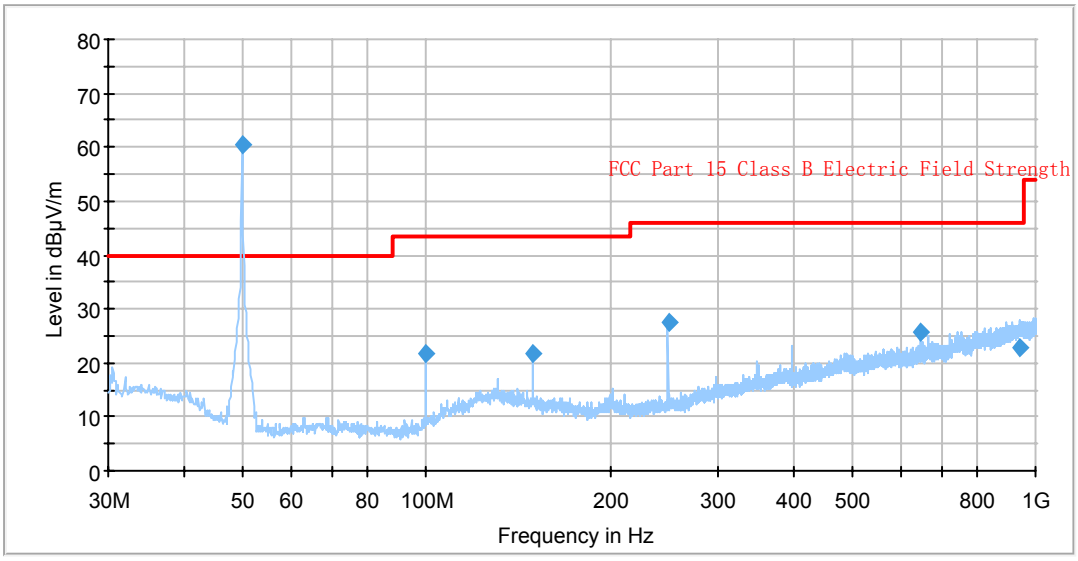
Environmental Conditions

Temperature:	22° C
Relative Humidity:	58%
ATM Pressure:	1016mbar

Testing was performed by William Chan on 2006-05-16.

Test Mode: Transmitting

Auto Test (FCC 15C) Horizontal



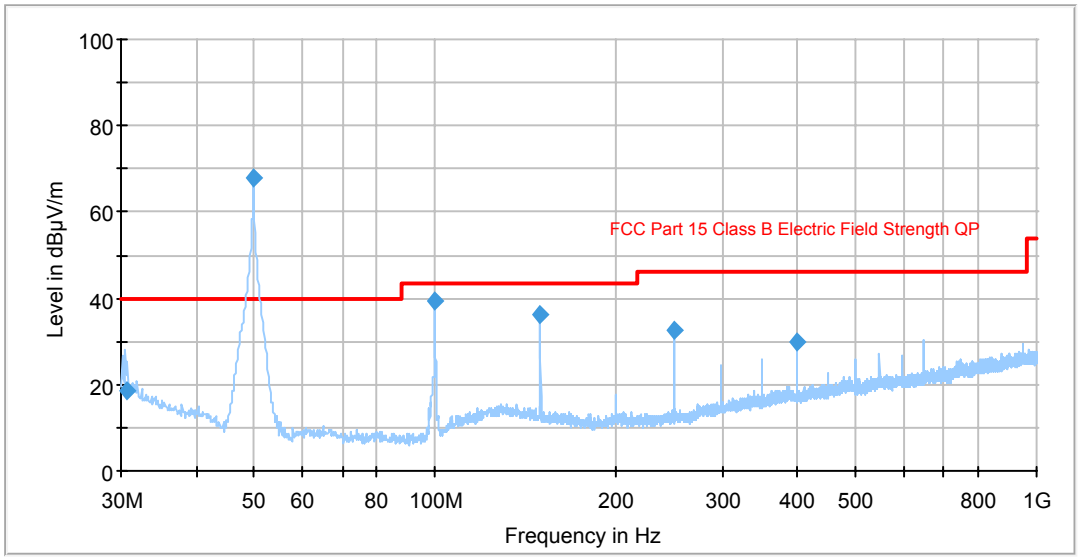
Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB µ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity
99.762540	21.6	3000.000	120.000	257.0	H
149.552500	21.8	3000.000	120.000	400.0	H
249.865720	27.4	3000.000	120.000	117.0	H
648.197825	25.8	3000.000	120.000	129.0	H
944.236950	22.9	3000.000	120.000	283.0	H

(Continuation of the "Final Measurement Detector 1" table from column 6.)

Frequency (MHz)	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)
99.762540	20.0	-1.6	21.9	43.5
149.552500	13.0	-18.9	21.7	43.5
249.865720	0.0	-12.9	18.6	46.0
648.197825	44.0	-4.3	20.2	46.0
944.236950	275.0	0.8	23.1	46.0

Auto Test (FCC 15C) Vertical



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB µ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity
30.717950	18.4	3000.000	120.000	391.0	V
99.719875	39.3	3000.000	120.000	100.0	V
149.579875	36.3	3000.000	120.000	100.0	V
249.294100	32.4	3000.000	120.000	181.0	V
398.842500	29.8	3000.000	120.000	101.0	V

(Continuation of the "Final Measurement Detector 1" table from column 6.)

Frequency (MHz)	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)
30.717950	98.0	-7.2	21.6	40.0
99.719875	0.0	-17.4	4.2	43.5
149.579875	226.0	-13.4	7.2	43.5
249.294100	134.0	-12.9	13.6	46.0
398.842500	345.0	-18.9	16.2	46.0

Frequency	Meter Reading	Detector	Direction	Height	Polar	Antenna Loss	Cable loss	Amplifer Gain	Corr. Ampl.	FCC Part 15.235		
MHz	dBuV/m	PK/QP/AV	Degree	Meter	H / V	dB	dB	dB	dBuV/m	Limit dBuV/m	Margin dB	
49.864	60.64	PK	0	1.0	H	8.5	1.0	28.4	41.74	100	- 58.26	Fundamental
49.864	67.95	PK	0	1.0	V	8.5	1.0	28.4	49.05	100	- 50.95	Fundamental
49.864	57.94	AV	0	1.0	H	8.5	1.0	28.4	39.04	80.00	-40.96	Fundamental
49.864	63.53	AV	0	1.0	V	8.5	1.0	28.4	43.63	80.00	- 36.37	Fundamental

§15.235(b) - BAND EDGES TESTING

Standard Applicable

The field strength of any emissions appearing between the band edges and up to 10 kHz 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, whichever permits the higher emission levels. The field strength of any emissions removed by more than 10 kHz from the band edges shall not exceed the general radiated emission limits in §15.209. All signals exceeding 20 microvolts/meter at 3 meters shall be reported in the application for certification.

Test Procedure

With the EUT's antenna attached, the EUT's radiated emission power was received by the test antenna which was connected to the test receiver setup with the START and STOP frequencies set to the EUT's operation band.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2005-8-17	2006-8-17
HP	Amplifier	HP8447E	1937A01046	2005-8-17	2006-8-17
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ETS	Passive Loop Antenna	6512	00029604	2006-4-26	2007-4-26

*** Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	25° C
Relative Humidity:	53%
ATM Pressure:	1010mbar

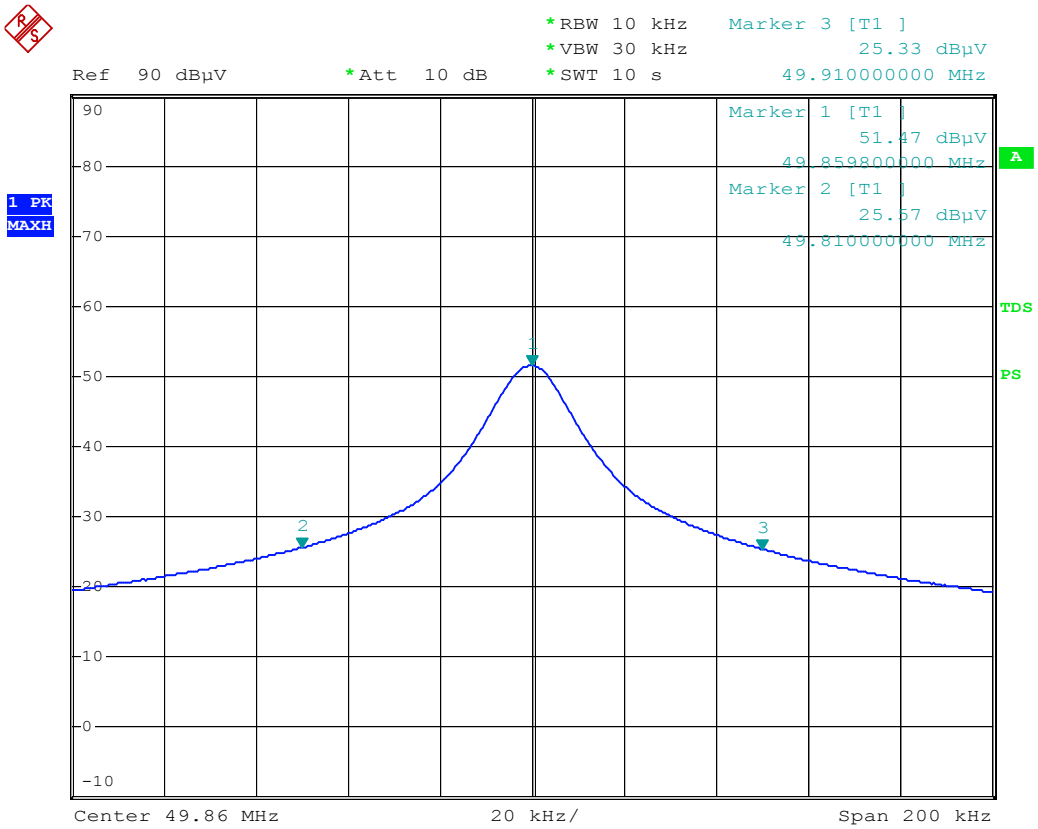
Testing was performed by William Chan on 2006-05-16.

Test Mode: Transmitting

The result has been complied with the 15.235(b), please see the following plot:

Frequency MHz	Emission dBμV/m	Limit dBμV/m	Margin dB
49.81	25.57	40.0	-14.43
49.91	25.33	40.0	-14.67

Test Result: Pass



HK TOYABI MONSTER TRUCK HK-TV8024(49MHz) --- out of band

Date: 17.MAY.2006 01:11:24