



**BUREAU
VERITAS**

Test Report No.: FV140328N024



ACCREDITED
Test Lab
Cert 2951.01

TEST REPORT

Applicant	JADA TOYS CO. LTD
Address	Unit 318, 3/F, Tower A, New Mandarin Plaza, No.14 Science Museum Road, TST East, Kowloon, HK.

Manufacturer or Supplier	JADA TOYS CO. LTD	
Address	Unit 318, 3/F, Tower A, New Mandarin Plaza, No.14 Science Museum Road, TST East, Kowloon, HK.	
Product	Just Truck Recharge RC	
Brand Name	N/A	
Model	84213	
Additional Models & Model Difference	84210, 84211, 84213, 84209, 84220, 84197, 84198, see item 2.1 NOTE	
Date of tests	Mar. 28, 2014 ~ Apr. 24, 2014	

The submitted sample of the above equipment has been tested for according to the requirements of the following standards:

FCC Part 15, Subpart B, Class B

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Breeze Jiang
Project Engineer / EMC Department

Approved by Madison Luo
Supervisor / EMC Department

Date: Apr. 25, 2014

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FV140328N024	Original release	Apr. 25, 2014

Bureau Veritas Shenzhen Co., Ltd.
Dongguan Branch

No. 34, Chenwulu Section, Guantai Rd., Houjie
Town, Dongguan City,
Guangdong 523942, China

Tel.: +86 769 8593 5656
Fax: +86 769 8593 1080
Email: customerservice.dg@cn.bureauveritas.com



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD			
Standard Section	Test Item	Result	Remark
FCC Part 15, Subpart B, Class B	Radiated Emission Test (30MHz ~ 1GHz)	PASS	Meets Class B Limit Minimum passing margin is - 3.33dB at 767.20MHz

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

MEASUREMENT	FREQUENCY	UNCERTAINTY
Radiated emissions	30MHz ~ 1GHz	+/-4.12 dB



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Just Truck Recharge RC
MODEL NO.	84213
ADDITIONAL MODELS	84210, 84211, 84213, 84209, 84220, 84197, 84198
FCC ID	PWYJT49RX99019
NOMINAL VOLTAGE	DC3.2V From Li-Battery
THE HIGHEST OPERATING FREQUENCY	49MHz
CABLE SUPPLIED	N/A

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was showed in test report.
3. Please refer to the EUT photo document (Reference No.:140328N024) for detailed product photo.
4. Additional models 84210, 84211, 84213, 84209, 84220, 84197, 84198 are identical in circuitry and electrical, mechanical and physical construction with the test model 84213 except the appearance and model number for trading purpose.

2.2 DESCRIPTION OF TEST MODES

The EUT was tested under the **Receiving** mode for all tests.

2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Remote Control	JADA	84210	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A



3 EMISSION TEST

3.1 RADIATED EMISSION MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

TEST STANDARD: FCC Part 15, Subpart B (Section: 15.109)

FREQUENCY (MHz)	Class A (at 10m)		Class B (at 3m)	
	uV/m	dBuV/m	uV/m	dBuV/m
30 – 88	90	39.1	100	40.0
88 – 216	150	43.5	150	43.5
216 – 960	210	46.4	200	46.0
960 – 1000	300	49.5	500	54.0

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

LIMIT OF RADIATED EMISSION OF FCC PART 15, SUBPART B, FOR FREQUENCY ABOVE 1000 MHz

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

- Note: (1) The lower limit shall apply at the transition frequencies.
(2) Emission level (dBuV/m) = 20 log Emission level (uV/m).
(3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.



3.1.2 TEST INSTRUMENTS FOR FREQUENCY BELOW 1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESVS10	841431/004	May 19,13	May 18,14
Bilog Antenna	Teseq	CBL 6111D	30643	Jul. 27, 13	Jul. 26, 14
EMI Test Receiver	Rohde&Schwarz	ESPI	100302	May 19,13	May 18,14
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	Mar. 24,13	Mar. 23,14
Signal Amplifier	Agilent	8447D	2944A10488	N/A	N/A
Test software	ADT	ADT_Radiated_V7.5.14	N/A	N/A	N/A

- NOTE:** 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed at 966 Chamber.
 3. The FCC Site Registration No. is 494399.

Frequency Range 1GHz-18GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer	Agilent	E4446A	MY46180622	April 24,13	April 23,14
Pre-Amplifier (100MHz-26.5GHz)	Agilent	8449B	3008A00409	May 14,13	May 13,14
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Nov. 04,13	Nov. 03,14
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
Horn Antenna	ETS-Lindgren	3117	00062558	Oct. 18,12	Oct. 17,14

- NOTE:** 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 10m Chamber.
 3. The FCC Site Registration No. is 502831

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Horn Antenna	ETS-Lindgren	3117	00062558	Oct. 18,12	Oct. 17,14

- NOTE:** 1. The calibration interval of the above test instruments is 24 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 10m Chamber.
 3. The FCC Site Registration No. is 502831

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170242	Feb. 13,14	Feb. 12,17

- NOTE:** 1. The calibration interval of the above test instruments is 36 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
 2. The test was performed in 10m Chamber.
 3. The FCC Site Registration No. is 502831



3.1.3 TEST PROCEDURE

A signal generator, not the matching transmitter, shall be used to radiate an unmodulated CW signal to a superregenerative receiver at its operating frequency in order to “cohere” or to resolve the individual components of the characteristic broadband emissions from such a receiver. The level of the signal may need to be increased for this to occur. If a superregenerative receiver is tested for radiated emissions with a resistive termination instead of an antenna connected to the antenna input terminals, apply the unmodulated signal at a level of approximately –60 dBm to the antenna terminals, using an impedance-matching network if necessary, to “cohere” the emissions. It may be necessary to adjust the signal level to accomplish this.

The basic test procedure was in accordance with ANSI C63.4:2009 (section 12).

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters Semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters (below 1GHz) and 3 meters (above 1GHz) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

NOTE:

1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. For measurement above 1GHz, the test receiver/spectrum analyzer resolution bandwidth is 1MHz and video bandwidth is 3MHz for Peak detection. For Average measurement, the resolution bandwidth was set to 1MHz and video bandwidth was set to 10Hz.
3. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the receiver antenna.
4. $\text{Emission level (dBuV/m)} = \text{Raw Value (dBuV)} + \text{Correction Factor (dB/m)}$
5. $\text{Correction Factor (dB/m)} = \text{Antenna Factor (dB/m)} + \text{Cable Factor (dB)}$
6. $\text{Margin value} = \text{Emission level} - \text{Limit value}$.

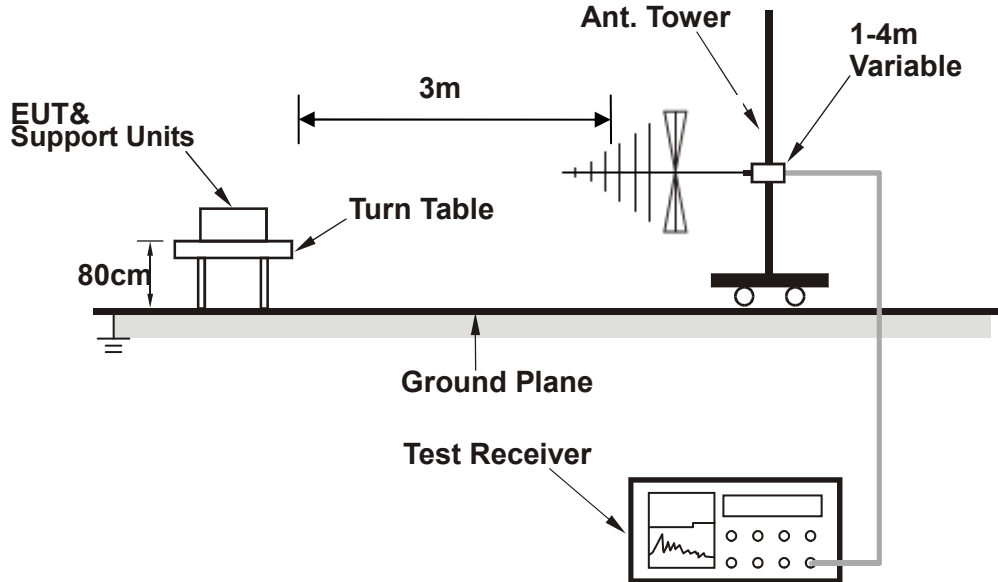
3.1.4 DEVIATION FROM TEST STANDARD

No deviation

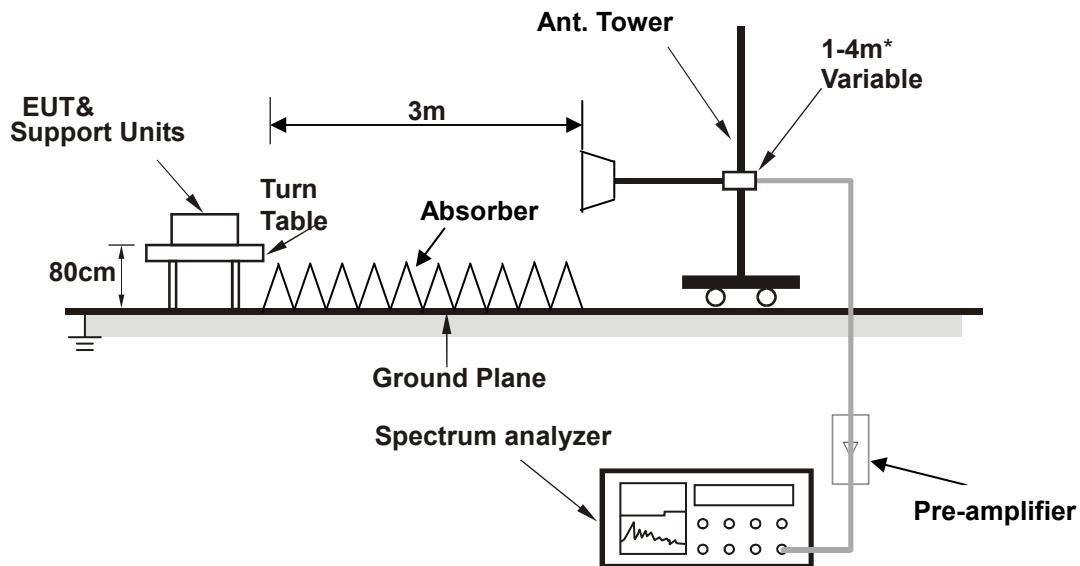


3.1.5 TEST SETUP

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



* : depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3..

3.1.6 EUT OPERATING CONDITIONS

- Turned on the power of all equipment.
- EUT was operated according to the type description in manufacturer's specifications or the User's Manual.

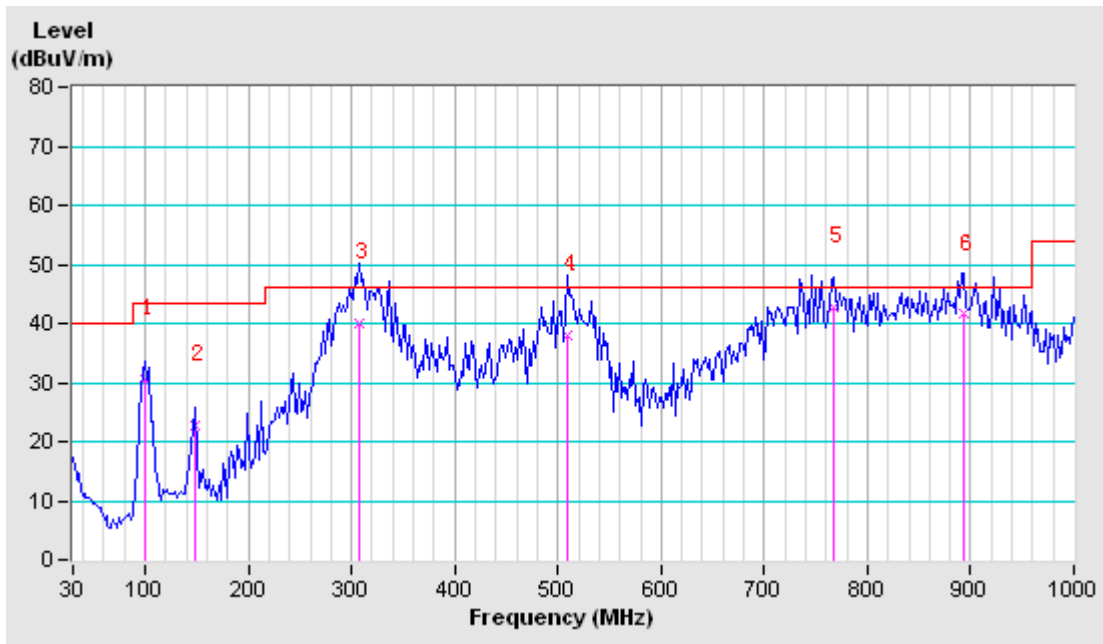


3.1.7 TEST RESULTS

TEST MODE	Receiving	FREQUENCY RANGE	30-1000MHz
TEST VOLTAGE	DC3.2V From Li-Battery	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	23deg. C, 54% RH	TESTED BY: Robert	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	99.84	10.72	19.85	30.57	43.50	-12.93	100	0
2	148.34	12.65	10.09	22.74	43.50	-20.76	124	265
3	307.42	16.16	23.90	40.06	46.00	-5.94	300	125
4	509.18	22.21	15.87	38.08	46.00	-7.92	100	84
5	767.20	27.08	15.59	42.67	46.00	-3.33	200	0
6	893.30	28.89	12.72	41.61	46.00	-4.39	100	25

REMARKS: The emission levels of other frequencies were very low against the limit.

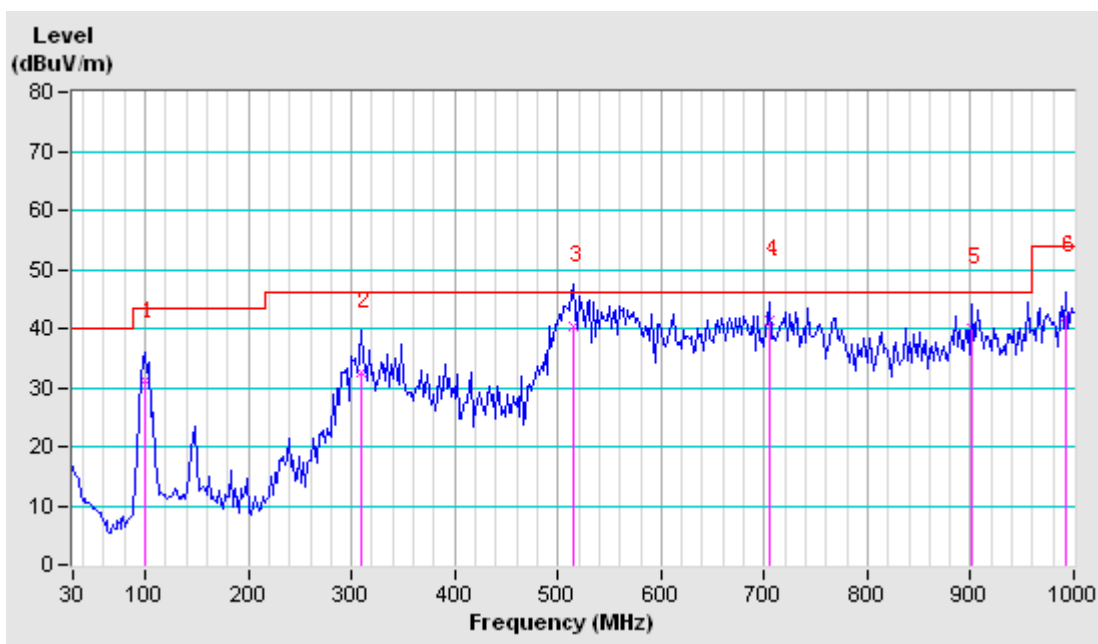




TEST MODE	Receiving	FREQUENCY RANGE	30-1000MHz
TEST VOLTAGE	DC3.2V From Li-Battery	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	23deg. C, 54% RH		TESTED BY: Robert

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Correction Factor (dB/m)	Raw Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)
1	99.84	10.72	20.37	31.09	43.50	-12.41	100	0
2	309.36	16.19	16.35	32.54	46.00	-13.46	100	0
3	515.00	22.35	18.03	40.38	46.00	-5.62	100	0
4	705.12	25.98	15.30	41.28	46.00	-4.72	100	0
5	901.06	29.16	10.78	39.94	46.00	-6.06	100	0
6	992.24	31.81	10.18	41.99	54.00	-12.01	100	0

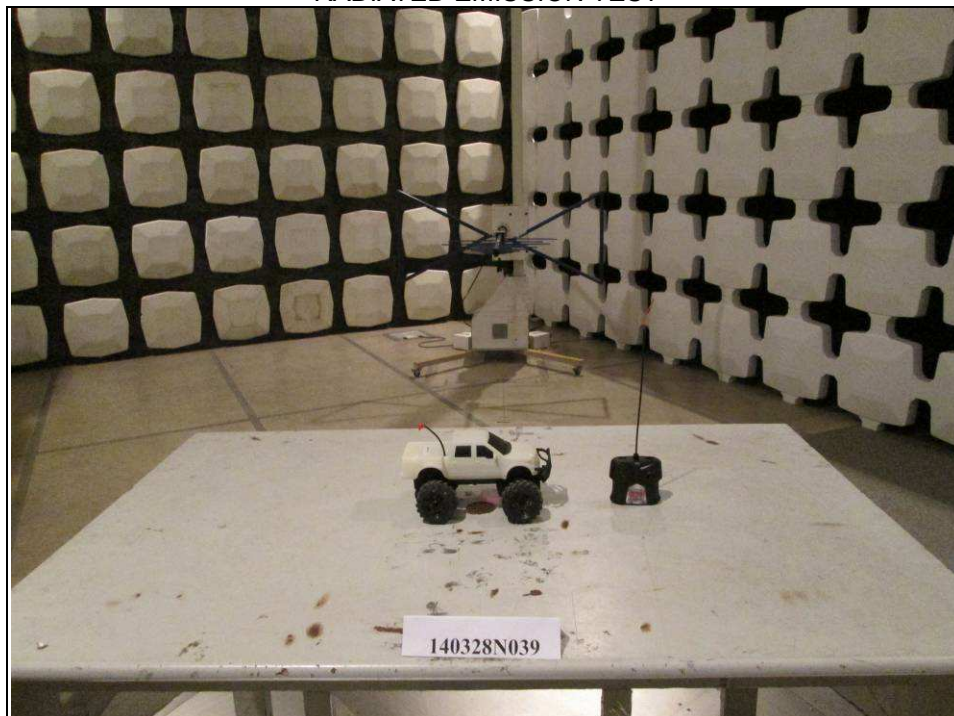
REMARKS: The emission levels of other frequencies were very low against the limit.





4 PHOTOGRAPHS OF THE TEST CONFIGURATION

RADIATED EMISSION TEST





5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications were made to the EUT by the lab during the test.

---END---