



**RF TEST REPORT**  
**No. 151201631SHA-001**

Applicant : KID GALAXY INC  
150 Dow Street Tower 2, Unit 425B, Manchester, New  
Hampshire 03101 U.S.A  
Manufacturer : KID GALAXY INC  
150 Dow Street Tower 2, Unit 425B, Manchester, New  
Hampshire 03101 U.S.A  
Product Name : R/C Stunt Car  
Type/Model : 10307  
**TEST RESULT : PASS**

**SUMMARY**

The equipment complies with the requirements according to the following standard(s):

**47CFR Part 15 (2015):** Radio Frequency Devices

**ANSI C63.10 (2013):** American National Standard for Testing Unlicensed Wireless Devices

Date of issue: February 23, 2016

Prepared by:

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Reviewed by:

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FCC ID: QEA-10307-49T

## Description of Test Facility

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## 1. General Information

### 1.1 Applicant Information

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Manufacturer : KID GALAXY INC  
150 Dow Street Tower 2, Unit 425B, Manchester, New  
Hampshire 03101 U.S.A

### 1.2 Identification of the EUT

Product description : R/C Stunt Car

Type/model : 10307

Operation Frequency : 49.82 ~ 49.90MHz

Band

Type of Modulation : 2FSK

Channel Description : 1Channel at 49.86MHz

Port identification : NA

Rating : 3V DC

Declared Temperature : 0°C ~ 45°C

range

Category of EUT : Class B

EUT type :  Table top  Floor standing

Sample received date : 2015.12.31

Sample Identification : \*0151231-48-001\*

No

Date of test : 2015.12.31 ~ 2016.01.07

### **1.3 Mode of operation during the test / Test peripherals used**

Within this test report, EUT was tested with modulation and tested under its rating voltage and frequency.

The EUT was set to work normal and as receiving and transmitting mode during test. No standby function.

The EUT is a handheld device, so three axes (X, Y, Z) were observed while the test receiver worked as “max hold” continuously and the highest reading among the whole test procedure was recorded.

Test Peripherals: NA

## 2. Test Specification

### 2.1 Instrument list

Selected	Instrument	EC no.	Model	Valid until date
<input checked="" type="checkbox"/>	Semi anechoic chamber	EC 3048	-	2016-5-10
<input checked="" type="checkbox"/>	EMI test receiver	EC 3045	ESIB26	2016-10-18
<input checked="" type="checkbox"/>	Broadband antenna	EC 4206	CBL 6112D	2016-4-26
<input checked="" type="checkbox"/>	Horn antenna	EC 3049	HF906	2016-4-26
<input checked="" type="checkbox"/>	Pre-amplifier	EC 5262	pre-amp 18	2016-5-24
<input checked="" type="checkbox"/>	Pre-amplifier	EC 4792-2	TPA0118-40	2016-4-9
<input checked="" type="checkbox"/>	High Pass Filter	EC 4797-1	WHKX 1.0/15G-10SS	2017-1-6
<input checked="" type="checkbox"/>	High Pass Filter	EC 4797-2	WHKX 2.8/18G-12SS	2017-1-6
<input checked="" type="checkbox"/>	High Pass Filter	EC 4797-3	WHKX 7.0/1.8G-8SS	2017-1-6
<input checked="" type="checkbox"/>	Band Reject Filter	EC 4797-4	WRCGV2400/2483/10SS	2017-1-6
<input checked="" type="checkbox"/>	Fully anechoic chamber	EC 3047	-	2016-5-10
<input checked="" type="checkbox"/>	PXA Signal Analyzer	EC5338	N9030A	2016-11-16
<input checked="" type="checkbox"/>	Test Receiver	EC 4501	ESCI 7	2017-1-12
<input checked="" type="checkbox"/>	Power sensor/Power meter	EC4318	N1911A/N1921A	2016-4-19
<input checked="" type="checkbox"/>	Power sensor	EC5338-1	U2021XA	2016-10-1
<input checked="" type="checkbox"/>	MXG Analog Signal Generator	EC5338-2	N5181A	2016-11-5
<input checked="" type="checkbox"/>	MXG Vector Signal Generator	EC5338-1	N51812B	2016-12-28

### 2.2 Test Standard

47CFR Part 15 (2015)

ANSI C63.10 (2013)

### 2.3 Test Summary

**This report applies to tested sample only. This report shall not be reproduced in part without written approval of Intertek Testing Service Shanghai Limited.**

TEST ITEM	FCC REFERANCE	RESULT
Radiated emission	15.235 & 15.209	Pass
Occupied bandwidth	15.235	Pass
Power line conducted emission	15.207	NA

### 3. Radiated emission

**Test result: PASS**

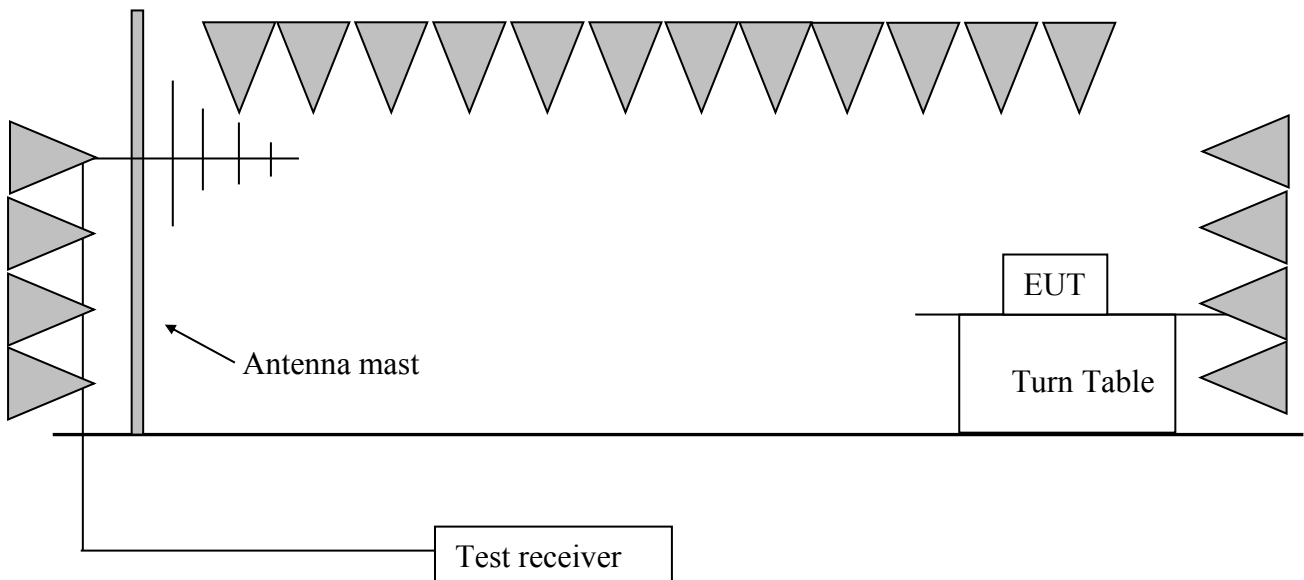
#### 3.1 Test limit

Fundamental Frequency (MHz)	Fundamental limit (dBuV/m)
49.86	80

The radiated emissions which fall outside allocated band (2400-2483.5MHz), must also comply with the radiated emission limits specified in §15.209(a) showed as below:

Frequency (MHz)	Field Strength (dBuV/m)	Measurement Distance (m)
30 - 88	40.0	3
88 - 216	43.5	3
216 - 960	46.0	3
Above 960	54.0	3

#### 3.2 Test Configuration





### 3.3 Test procedure and test setup

The measurement was applied in a semi-anechoic chamber. While testing for spurious emission higher than 1GHz, if applied, the pre-amplifier would be equipped just at the output terminal of the antenna.

The EUT and simulators were placed on a 0.8m high wooden turntable above the horizontal metal ground plane. The turn table rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna which was mounted on an antenna mast. The antenna moved up and down between from 1meter to 4 meters to find out the maximum emission level.

The radiated emission was measured using the Spectrum Analyzer with the resolutions bandwidth set as:

RBW=300 Hz, VBW=1 kHz (9 kHz~150 kHz);  
RBW=10kHz, VBW=30kHz (150kHz~30MHz);  
RBW = 100 kHz, VBW = 300 kHz (30MHz~1GHz for PK)  
RBW = 1MHz, VBW = 3MHz (>1GHz for PK);  
RBW = 1MHz, VBW = 10Hz (>1GHz for AV);

### 3.4 Test protocol

Temperature : 25 °C  
 Relative Humidity : 55 %

CH	Antenna	Frequency (MHz)	Correct Factor (dB/m)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
49.86 MHz	H	30.00	20.7	23.1	40.0	16.9	PK
	<b>H</b>	<b>49.86</b>	<b>10.4</b>	<b>49.5</b>	<b>80.0</b>	<b>30.5</b>	<b>PK</b>
	H	80.54	8.8	20.6	40.0	19.4	PK
	H	99.98	12.9	24.6	43.5	18.9	PK
	H	123.31	14.4	21.8	43.5	21.7	PK
	H	199.12	12.3	21.9	43.5	21.6	PK
	H	348.80	17.8	26.4	46.0	19.6	PK
	H	461.54	20.3	25.8	46.0	20.2	PK
	H	646.21	22.7	29.2	46.0	16.8	PK
	H	912.53	25.7	33.1	46.0	12.9	PK
	H	1826.8	-8.7	36.1	74.0	37.9	PK
	H	2737.5	-6.8	40.2	74.0	33.8	PK
	V	30.00	20.7	23.6	40.0	16.4	PK
	<b>V</b>	<b>49.86</b>	<b>10.4</b>	<b>57.6</b>	<b>80.0</b>	<b>22.4</b>	<b>PK</b>
	V	76.65	8.4	15.1	40.0	24.9	PK
	V	99.98	12.9	20.8	43.5	22.7	PK
	V	134.97	13.9	19.0	43.5	24.5	PK
	V	348.80	17.8	22.8	46.0	23.2	PK
	V	494.59	20.8	25.2	46.0	20.8	PK
	V	599.56	22.3	29.2	46.0	16.8	PK
	V	928.08	25.8	33.0	46.0	13.0	PK
	V	1826.8	-8.7	36.8	74.0	37.2	PK
V	2737.5	-6.8	40.2	74.0	33.8	PK	
V	5497.0	-1.5	41.1	74.0	33.9	PK	

Remark:

1. For fundamental emission test, no pre-amplifier is employed;
2. Correct Factor = Antenna Factor + Cable Loss (-Amplifier, is employed);
3. Corrected Reading = Original Receiver Reading + Correct Factor;
4. Margin = limit – Corrected Reading;
5. If the PK reading is lower than AV limit, the AV test can be elided;
6. The shaded data is the fundamental emission;
7. Both emissions on “horizontal” and “vertical” axes were assessed and the worse test data was listed in this report;



Example:

Assuming Antenna Factor = 30.20dB/m, Cable Loss = 2.00dB,  
Gain of Preamplifier = 32.00dB, Original Receiver Reading = 10dBuV,  
Then Correct Factor =  $30.20 + 2.00 - 32.00 = 0.20\text{dB/m}$ ,  
Corrected Reading =  $10\text{dBuV} + 0.20\text{dB/m} = 10.20\text{dBuV/m}$ ,  
Assuming limit = 54dBuV/m, Corrected Reading = 10.20dBuV/m,  
Then Margin =  $54 - 10.20 = 43.80\text{dBuV/m}$ .

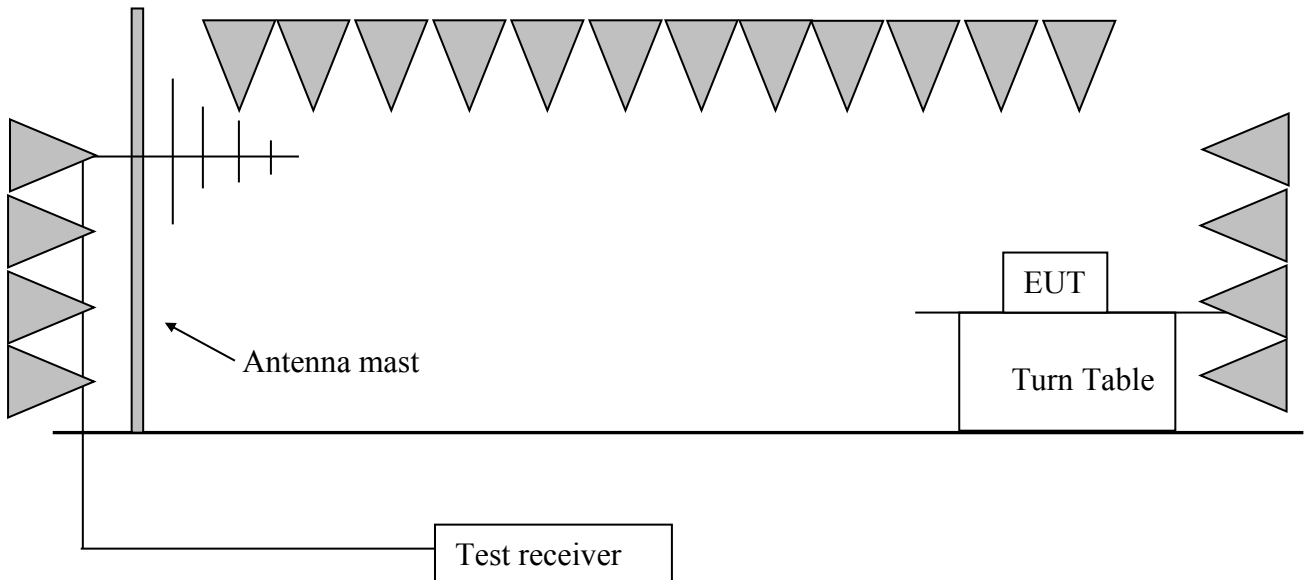
### 4. Occupied Bandwidth

Test result: PASS

#### 4.1 Limit

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.

#### 4.2 Test Configuration



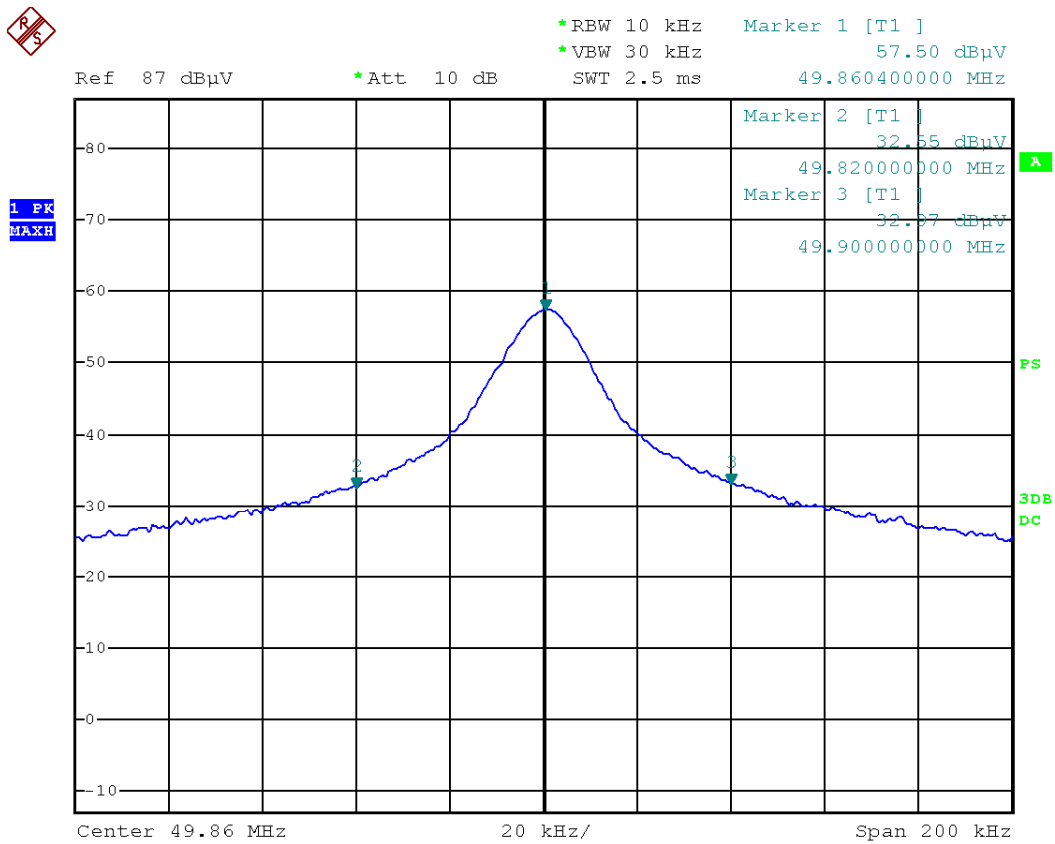
#### 4.3 Test procedure and test setup

The Occupied Bandwidth per FCC § 15.235 is measured using the Spectrum Analyzer. Where the Maker-delta method can be use if the result over the limit.

### 4.4 Test protocol

Temperature : 25°C  
 Relative Humidity : 55 %

Frequency	Reading (dBuV/m)	Limit (dBuV/m)
49.82MHz	32.55	40.00
49.90MHz	32.97	40.00



Date: 6.JAN.2016 08:59:49

## 5. Power line conducted emission

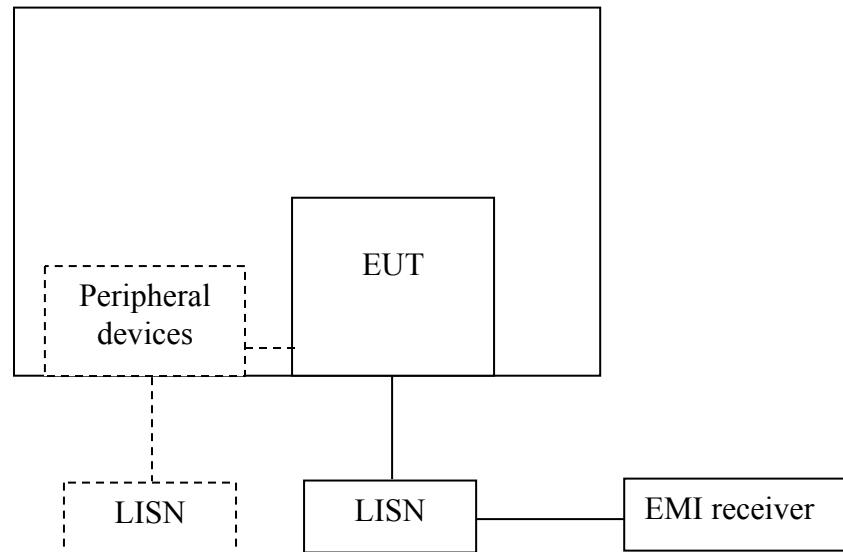
Test result: NA

### 5.1 Limit

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	QP	AV
0.15-0.5	66 to 56*	56 to 46 *
0.5-5	56	46
5-30	60	50

\* Decreases with the logarithm of the frequency.

### 5.2 Test configuration



- For table top equipment, wooden support is 0.8m height table
- For floor standing equipment, wooden support is 0.1m height rack.

### 5.3 Test procedure and test set up

The EUT are connected to the main power through a line impedance stabilization network (LISN). This provides a 50Ω/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50Ω/50uH coupling impedance with 50Ω termination.

Both sides (Line and Neutral) of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4 on conducted measurement. The bandwidth of the test receiver is set at 9 kHz.

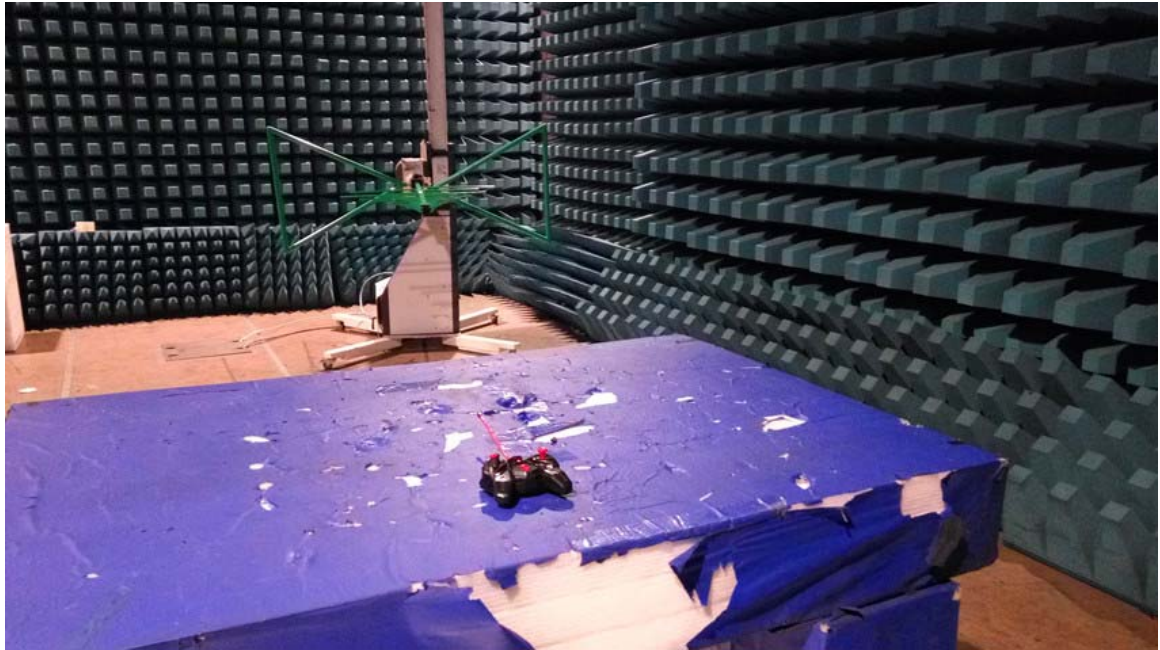
### 5.4 Test protocol

Temperature : °C  
 Relative Humidity : %

#### Test Data:

Frequency (MHz)	Quasi-peak			Average		
	level dB(μV)	Limit dB(μV)	Margin (dB)	level dB(μV)	limit dB(μV)	Margin (dB)
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

**Appendix I: Photograph of test setup**





**Appendix I: Photograph of equipment under test**

