

Test Report of FCC Part 15 B: 2006
FOR FCC CERTIFICATE

On Behalf of

YINRUN PLASTIC CRAFTS CO.,LTD

Product Description: Radio Control Stunt Vehicle (49M)

Model No.: 8012, 8024, 8036, 8048, 8072,
8088, 8096, 9012, 9024, 9036

Brand Name: NA

FCC ID: R6U-YINRUN-ST49M

Prepared for: YINRUN PLASTIC CRAFTS CO.,LTD

Yinrun Ind, Garden, Laimei, Zone,Chenghai,Shantou City,
Guangdong, China

Prepared by: Bontek Compliance Testing Laboratory Ltd

1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road,
Nanshan, Shenzhen, China

Tel: 86-755-86337020

Fax: 86-755-86337028

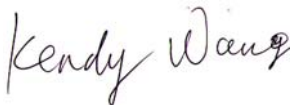
Report No.: BCT08HR-617E

Issue Date: September 25, 2008

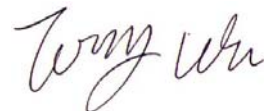
Test Date: September 18~25, 2008

Test by:

Reviewed By:



Kendy Wang



Tony Wu

Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior written consent of Bontek Compliance Testing Laboratory Ltd.

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1 - GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: **YINRUN PLASTIC CRAFTS CO., LTD**
Address of applicant: Yinrun Ind, Garden, Laimei, Zone,Chenghai,Shantou City, Guangdong, China
Manufacturer: **YINRUN PLASTIC CRAFTS CO., LTD**
Address of manufacturer: Yinrun Ind, Garden, Laimei, Zone,Chenghai,Shantou City, Guangdong, China

General Description of E.U.T

EUT Description: **Radio Control Stunt Vehicle (49M)**
Trade Name: N/A
Test Model No.: **8012**
Supplementary Model No.: **8024, 8036, 8048, 8072, 8088, 8096, 9012, 9024, 9036**
Note: the supplementary models used the same PCB with the test model of 8012.
Power Rating: DC 6V (4 x1.5VAA alkaline battery)

Remark: * The test data gathered are from the production sample provided by the manufacturer. Supplementary Models share same circuit and with different appearance.

1.2 Test Standards

The following Declaration of Conformity report of EUT is prepared in accordance with FCC Rules and Regulations Part 15 (2006) Subpart B Class B

The objective of the manufacturer is to demonstrate compliance with the described above standards.

1.3 Test Summary

Tests Carried Out Under FCC Part 15 Subpart B

Standard	Test Items	Status
FCC Part 15 Subpart B	Conduction Emission, 0.15MHz to 30MHz	x
FCC Part 15 Subpart B	Radiation Emission, 30MHz to 1000MHz	√

- √ Indicates that the test is applicable
x Indicates that the test is not applicable

1.4 Test Methodology

Both conducted and radiated testing were performed according to the procedures in 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. Radiated testing was performed at an antenna to EUT distance 3 meters.

1.5 Test Facility

All measurement required was performed at laboratory of Bontek Compliance Testing Laboratory Ltd at 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China

The test facility is recognized, certified, or accredited by the following organizations:

FCC – Registration No.: 338263

Bontek Compliance Testing Laboratory Ltd EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 338263, March 24, 2008.

The facility also complies with the radiated and AC line conducted test site criteria set forth in CISPR 16-1: 2002, CISPR16-2: 2002.

1.6 Test Equipment List and Details

Test equipments list of Bontek Compliance Testing Laboratory Ltd.

Equipment	Manufacturer	Model No.	Last Cal	Calibration Period
EMI Test Receiver	R&S	ESCI	2008-2-22	1 year
EMI Test Receiver	R&S	ESPI	2008-2-22	1 year
Amplifier	HP	8447D	2008-2-22	1 year
Single Power Conductor Module	FCC	FCC-LISN-5-50-1-01-CISPR25	2008-2-22	1 year
TRILOG Broadband Test-Antenna	SCHWARZBECK	VULB9163	2008-2-22	1 year
Horn Antenna	SCHWARZBECK	BBHA9120A	2008-2-27	1 year
High Field Biconical Antenna	ELECTRO-METRICS	EM-6913	2008-2-27	1 year
Log Periodic Antenna	ELECTRO-METRICS	EM-6950	2008-2-27	1 year
Remote Active Vertical Antenna	ELECTRO-METRICS	EM-6892	2008-2-27	1 year
Power Clamp	SCHWARZBECK	MDS-21	2008-2-22	1 year
Teo Line Single Phase Module	SCHWARZBECK	NSLK8128	2008-3-31	1 year

Positioning Controller	C&C	CC-C-1F	2008-2-22	1 year
Electrostatic Discharge Simulator	TESEQ	NSG437	2008-3-31	1 year
Fast Transient Burst Generator	SCHAFFNER	MODULA6150	2008-2-22	1 year
Fast Transient Noise Simulator	Noiseken	FNS-105AX	2008-2-22	1 year
Capacitive Coupling Clamp	TESEQ	CDN8014	2008-2-22	1 year
Color TV Pattern Generator	PHILIPS	PM5418	2008-2-22	1 year
Power Frequency Magnetic Field Generator	EVERFINE	EMS61000-8K	2008-2-22	1 year
Triple-Loop Antenna	EVERFINE	LLA-2	2008-2-22	1 year

2 - SYSTEM TEST CONFIGURATION

2.1 Justification

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

2.2 EUT Exercise Software

The EUT exercising program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The software offered by manufacture, can let the EUT being normal operation.

2.3 Special Accessories

As shown in section 2.5, interface cable used for compliance testing is shielded as normally supplied by **YINRUN PLASTIC CRAFTS CO.,LTD** and its respective support equipment manufacturers.

2.4 Equipment Modifications

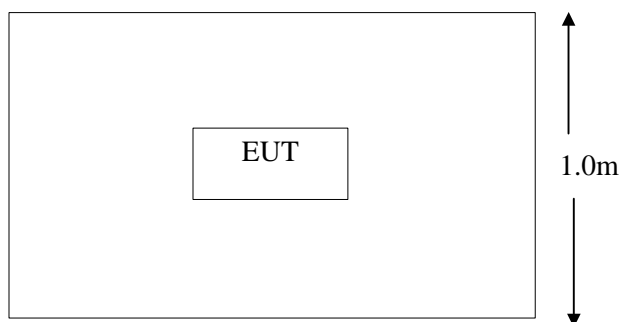
The EUT tested was not modified by BCT.

2.5 Configuration of Test System



EUT

2.6 Test Setup Diagram



3- RADIATED DISTURBANCES

3.1 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.

The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement is ± 4.0 dB.

3.2 Limit of Radiated Disturbances (Class B)

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dB μ V/m)
30 ~ 88	3	40
88~216	3	43.5
216 ~ 960	3	46
960 ~ 1000	3	54

- Note: (1) The tighter limit shall apply at the edge between two frequency bands.
(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

3.3 EUT Setup

The radiated emission tests were performed in the in the 3-meter anechoic chamber, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC Part 15 Subpart B limits.

The EUT was placed on the center of the test table.

Maximum emission emitted from EUT was determined by manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation and the levels in the final result of the test were recorded with the EUT running in the operating mode that maximum emission was emitted.

3.4 Test Receiver Setup

According to FCC Part 15 rule, the frequency was investigated from 30 to 1000 MHz. During the radiated emission test, the test receiver was set with the following configurations:

Test Receiver Setting:

Detector.....Peak & Quasi-Peak
IF Band Width.....120KHz
Frequency Range.....30MHz to 1000MHz
Turntable Rotated.....0 to 360 degrees

Antenna Position:

Height.....1m to 4m
Polarity.....Horizontal and Vertical

3.5 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 peak detection mode. Quasi-peak readings performed only when an emission was found to be marginal (within -10 dB μ V of specification limits), and are distinguished with a "QP" in the data table.

3.6 Corrected Amplitude & Margin Calculation

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

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

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

$$\text{Margin} = \text{Corr. Ampl.} - \text{Class B Limit}$$

3.7 Radiated Emissions Test Result

Temperature (°C)	22~23
Humidity (%RH)	50~54
Barometric Pressure (mbar)	950~1000
EUT	Radio Control Stunt Vehicle (49M)
M/N	8012
Operating Mode	On

Test data see following pages (Page14)

- Remark:** (1) When PK reading is less than relevant limit 20dB, the QP reading and AV reading will not be recorded.
(2) Where QP reading is less than relevant AV limit, the AV reading will not be measured

3.8 Test Result

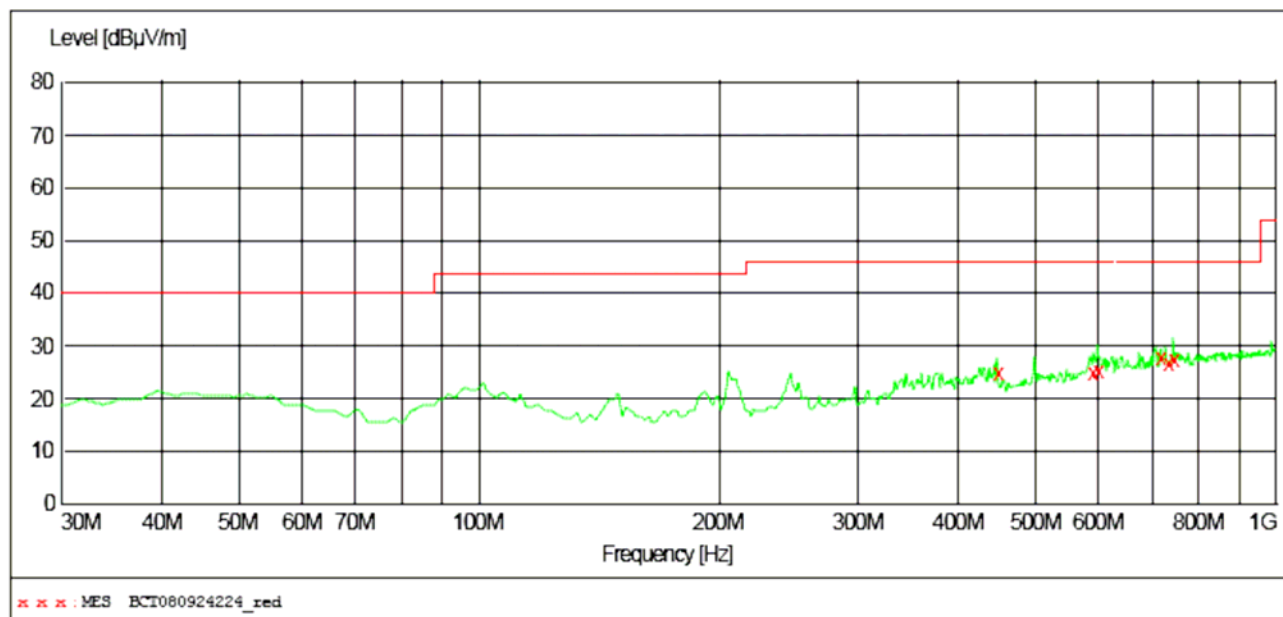
Pass

Radiated Emission Test Data:

EUT: Radio Control Stunt Vehicle (49M) M/N: 8012
 Operating Condition: On
 Test Site: Shielded Room
 Operator: Gavin
 Test Specification: DC 6V from Battery
 Tem:25°C Hum:50%
 Comment: Polarisation: Horizontal
 Start of Test: 09/25/08/ 15:22PM

SWEEP TABLE: "test: (30M-1G)"

Short Description:		Field Strength			
Start	Stop	Detector	Meas. Time	IF Bandw.	Transducer
Frequency 30.0 MHz	Frequency 1.0 GHz	MaxPeak	Coupled	100 kHz	VULB9163 NEW



MEASUREMENT RESULT: "BCT080924224_red"

9/25/2008 15:22

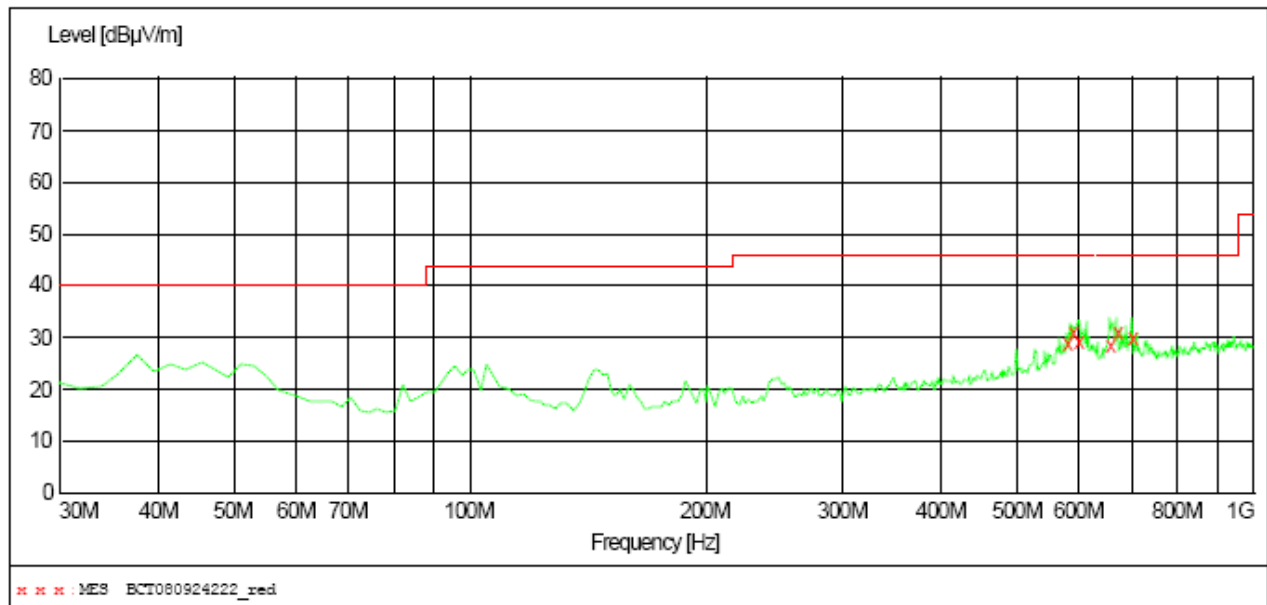
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
449.400000	24.60	14.4	46.0	21.4	QP	100.0	0.00	HORIZONTAL
588.350000	25.10	15.2	46.0	20.9	QP	100.0	0.00	HORIZONTAL
599.340000	25.30	10.4	46.0	20.7	QP	100.0	0.00	HORIZONTAL
715.290000	27.60	12.8	46.0	18.4	QP	100.0	0.00	HORIZONTAL
733.280000	26.90	13.3	46.0	19.1	QP	100.0	0.00	HORIZONTAL
744.160000	27.50	15.6	46.0	10.5	QP	100.0	0.00	HORIZONTAL

Radiated Emission Test Data:

EUT: Radio Control Stunt Vehicle (49M) M/N: 8012
 Operating Condition: On
 Test Site: Shielded Room
 Operator: Gavin
 Test Specification: DC 6V from Battery
 Comment: Polarisation: Vertical
 Tem:25°C Hum:50%
 Start of Test: 09/25/08/ 15:26PM

SWEEP TABLE: "test (30M-1G)"

Short Description:		Field Strength			
Start	Stop	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VULB9163 NEW



MEASUREMENT RESULT: "BCT080924222_red"

9/25/2008 15:26

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Asimuth deg	Polarization
577.540000	28.70	20.2	46.0	17.3	QP	100.0	0.00	VERTICAL
588.260000	30.70	20.2	46.0	15.3	QP	100.0	0.00	VERTICAL
599.960000	29.30	20.2	46.0	16.7	QP	100.0	0.00	VERTICAL
658.730000	28.50	20.2	46.0	17.5	QP	100.0	0.00	VERTICAL
670.020000	30.80	20.2	46.0	15.2	QP	100.0	0.00	VERTICAL
701.240000	30.10	20.2	46.0	15.9	QP	100.0	0.00	VERTICAL