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FEDERAL COMMUNICATIONS COMMISSION
Registration number: 556682

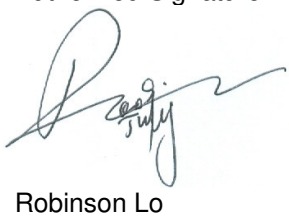
1 Cover Page

TEST REPORT

Application No. :	SZEMO090704283TX
Applicant:	Shantou City Chenghai Area Songyang Plastic Toys Co., Ltd
Applicant Address:	HUAINAN ROAD LIANXIA TOWN CHENGHAI,AREA,SHANTOU CITY GUANGDONG CHINA
FCC ID:	UKK13433324555
Fundamental Frequency :	49.860MHz
Equipment Under Test (EUT):	
Name:	R/C FLY MODEL
Model No.:	Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.
Labelled Age Grading:	3+
Standards:	FCC PART 15, SUBPART C : 2008 Section 15.235
Date of Receipt:	23 July 2009
Date of Test:	23 to 27 July 2009
Date of Issue:	27 July 2009
Test Result :	**PASS ***

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Robinson Lo
Laboratory Manager

2 Test Summary

Test	Test Requirement	Standard Paragraph	Result
Radiated Emission (30MHz to 1000MHz)	FCC PART 15 :2008	Section 15.235	PASS
Occupied Bandwidth	FCC PART 15 :2008	Section 15.235	PASS

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radiated Frequency.

Remark: item No.:

SY.A3603 SY.3603 SY.3603D SY.A3603A SY.A3603B SY.3803-20 SY.3803-20A SY.3803-20D SY.3803-7 SY.3803-22 SY.3803-22A SY.3803-23 SY.3803-23A SY.3803-12 SY.3803-12A SY.3803-13 SY.3803-13A SY.3803-15A SY.3803-19 SY.3803-11 SY.3803-11A SY.3803-6C SY.3803-18 SY.3803-25 SY.3803-25A SY.3803-25B SY.3803-24 SY.3803-24A SY.3803-24B SY.3803-26 SY.3803-26A SY.3803-26B SY.3803-27 SY.3803-27A SY.3803-27B SY.3803-27C SY.3803-27D SY.3803-27M SY.3803-28 SY.3803-28A SY.3803-29 SY.3803-29A SY.3803-30 SY.3803-30A SY.3803-30B SY.3803-31 SY.3803-31A SY.3803-32 SY.3803-32A SY.3803-33 SY.3803-33A SY.3803-33B SY.3803-34 SY.3803-34A SY.3803-34B SY.3803-35 SY.3803-35A SY.3803-35B SY.3803-36 SY.3803-36A SY.3803-37 SY.3803-37A SY.3803-38 SY.3803-38A SY.3803-39 SY.3803-39A SY.3803-40 SY.3803-40A SY.3803-41 SY.3803-42 SY.3803-43 SY.3803-44 SY.3803-45 SY.3803-46 SY.3803-47 SY.3803-48 SY.3803-49 SY.3803-50 SY.3803-51 SY.3803-41A SY.3803-42A SY.3803-43A SY.3803-44A SY.3803-45A SY.3803-46A SY.3803-47A SY.3803-48A SY.3803-49A SY.3803-50A SY.3803-51A

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4 General Information

4.1 Details of E.U.T

Name: R/C FLY MODEL

Model No.: SY.A3603 SY.3603 SY.3603D SY.A3603A SY.A3603B SY.3803-20 SY.3803-20A SY.3803-20D SY.3803-7 SY.3803-22 SY.3803-22A SY.3803-23 SY.3803-23A SY.3803-12 SY.3803-12A SY.3803-13 SY.3803-13A SY.3803-15A SY.3803-19 SY.3803-11 SY.3803-11A SY.3803-6C SY.3803-18 SY.3803-25 SY.3803-25A SY.3803-25B SY.3803-24 SY.3803-24A SY.3803-24B SY.3803-26 SY.3803-26A SY.3803-26B SY.3803-27 SY.3803-27A SY.3803-27B SY.3803-27C SY.3803-27D SY.3803-27M SY.3803-28 SY.3803-28A SY.3803-29 SY.3803-29A SY.3803-30 SY.3803-30A SY.3803-30B SY.3803-31 SY.3803-31A SY.3803-32 SY.3803-32A SY.3803-33 SY.3803-33A SY.3803-33B SY.3803-34 SY.3803-34A SY.3803-34B SY.3803-35 SY.3803-35A SY.3803-35B SY.3803-36 SY.3803-36A SY.3803-37 SY.3803-37A SY.3803-38 SY.3803-38A SY.3803-39 SY.3803-39A SY.3803-40 SY.3803-40A SY.3803-41 SY.3803-42 SY.3803-43 SY.3803-44 SY.3803-45 SY.3803-46 SY.3803-47 SY.3803-48 SY.3803-49 SY.3803-50 SY.3803-51 SY.3803-41A SY.3803-42A SY.3803-43A SY.3803-44A SY.3803-45A SY.3803-46A SY.3803-47A SY.3803-48A SY.3803-49A SY.3803-50A SY.3803-51A

Power Supply: 9V DC(9.0x1'6F22')

Power Cord: N/A-

4.2 Description of Support Units

The EUT was tested as an independent unit: a 49 MHz radio transmitter.

4.3 Test Location

All tests were performed at:

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, District Shenzhen, China 518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

4.4 Other Information Requested by the Customer

None.

4.5 Test Facility

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

- **CNAS (No. CNAS L2929)**
  CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.
- **VCCI**
  The 3m Semi-anechoic chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197 and C-2383 respectively.
  Date of Registration: September 29, 2008. Valid until September 28, 2011.
- **FCC – Registration No.: 556682**
  SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen 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 556682, June 27, 2008.
- **Industry Canada (IC)**
  The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

5 Test Results

5.1 Test Instruments

RE in Chamber						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (dd-mm-yy)**	**Cal.Due date (dd-mm-yy)**
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	16-06-2009	15-06-2010
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	12-12-2008	11-12-2009
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A
4	Coaxial cable	SGS	N/A	SEL0028	18-06-2009	17-06-2010
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0014	12-08-2008	11-08-2009
6	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	18-06-2009	17-06-2010
7	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0005	12-08-2008	11-08-2009
8	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	12-08-2008	11-08-2009
9	Pre-amplifier (1-18GHz)	Rohde & Schwarz	AFS42-00101 800-25-S-42	SEL0081	18-06-2009	17-06-2010
10	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	SEL0080	18-06-2009	17-06-2010
11	Band filter	Amindeon	82346	SEL0094	18-06-2009	17-06-2010
12	Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	15-06-2009	14-06-2010

5.2 E.U.T. Operation

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1010 mbar
EUT Operation:	Test the EUT in transmitting mode.

5.3 Test Procedure & Measurement Data

5.3.1 Radiated Emissions

Test Requirement:	FCC Part15 C Section 15.235
Test Method:	ANSI C63.4: 2003
Measurement Distance:	3m (Semi-Anechoic Chamber)
Requirements:	Carrier frequency will not exceed 80dBuV/m AT 3m. Out of band emissions shall not exceed: 40.0 dBμV/m between 30MHz & 88MHz 43.5 dBμV/m between 88MHz & 216MHz 46.0 dBμV/m between 216MHz & 960MHz 54.0 dBμV/m above 960MHz
Detector:	30MHz to 1000MHz RBW=100KHz VBW=300KHz Above 1000MHz RBW=1MHz VBW=3MHz
Test Procedure:	1. The EUT is placed on a turntable, which is 0.8m above ground plane. 2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions. 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance. 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. 6. Repeat above procedures until the measurements for all frequencies are complete. 7. The radiation measurements are performed in X, Y, Z axis positioning. The X axis is worst case shown in the report.

Intentional emission

Test Frequency (MHz)	Peak (dBμV/m)		Limits (dBμV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
49.860	55.82	46.82	100.0	44.18	53.18

Test Frequency (MHz)	Average (dBμV/m)		Limits (dBμV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
49.860	49.82	42.53	80.0	30.18	37.47

Other emissions

Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Quasi-Peak Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
97.900	1.18	9.02	27.89	55.45	37.76	43.50	-5.74
148.340	1.32	8.86	27.47	42.48	25.19	43.50	-18.31
198.780	1.40	10.19	27.16	51.16	35.59	43.50	-7.91
249.220	1.67	12.27	26.92	35.57	22.59	46.00	-23.41
296.750	1.88	13.76	26.73	36.38	25.29	46.00	-20.71
347.190	2.05	15.34	27.07	35.31	25.63	46.00	-20.37

Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Quasi-Peak Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
97.900	1.18	9.02	27.89	36.35	18.66	43.50	-24.84
148.340	1.32	8.86	27.47	32.20	14.91	43.50	-28.59
286.080	1.84	13.30	26.77	28.76	17.13	46.00	-28.87
448.070	2.40	16.84	27.56	30.02	21.70	46.00	-24.30
528.580	2.63	18.56	27.68	31.14	24.65	46.00	-21.35
793.390	3.18	22.07	26.96	32.40	30.69	46.00	-15.31

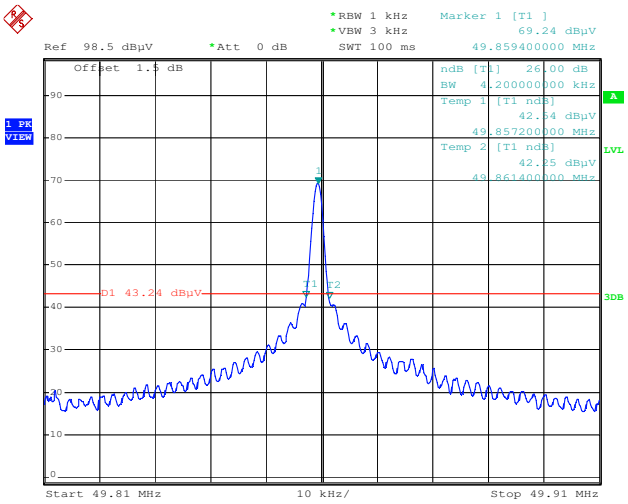
Remark:
According to 15.35 (b) When average radiated emission measurements are specified in the regulations, including emission measurements below 1000 MHz, there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules, e.g., see Section 15.255.

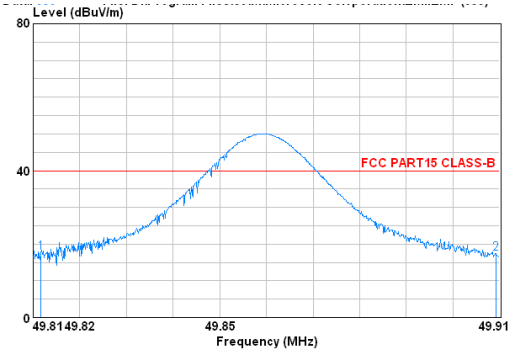
Test Results: The unit does meet the FCC Part 15 C Section 15.235 requirements.

5.3.2 Occupied Bandwidth

Test Requirement:	FCC Part15 C Section 15.235
Test Method:	ANSI C63.4: 2003
	Operation within the band 49.82 – 49.90 MHz
Requirements:	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 un-modulated carrier or to the general limits in Section 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 Section 15.209
Method of measurement:	The useful radiated emission from the EUT was detected by the spectrum analyzer with peak detector. The vertical Scale is set to –10dB per division. The horizontal scale is set to 10KHz per division.

The graph as below represents the emissions take for this device.





ndition : FCC PART15 CLASS-B 3m 0042673 VERTICAL
PT :

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	49.812	0.80	8.05	28.11	36.91	17.65	40.00	-22.35
2	49.909	0.80	8.05	28.11	36.58	17.32	40.00	-22.68

The prot test at 3m chamber. RBW=10KHz VBW=30KHz

The results: The unit does meet the FCC Part 15 C Section 15.235 requirements.