

SGS-CSTC Standards Technical Services Ltd.

No.198 Kezhu Road, Science Town Economic& Technology
Development District Guangzhou, China 510663
Telephone: +86 (0) 20 8215 5555 Fax: +86 (0) 20 8207 5059
Email: sgs_internet_operations@sgs.com

FEDERAL COMMUNICATIONS COMMISSION
Registration number: 556682

Report No.: SZEMO060801814RFF(I)
Page : 1 of 9
FCC ID : UKE12053

TEST REPORT

Application No. : SZEMO060801814RF(SGS HK NO.: 2014334EL)
Applicant : LORELEI COMMODITY AND RESOURCES SERVICES LTD
FCC ID : UKE12053
Fundamental Frequency : 49.860MHz

Equipment under Test (EUT):

EUT Name : ZOOBMOBILE CRUISER R/C
Item No. : 12053
Country of Origin : CHINA
Country of Destination : USA


Standards : FCC PART 15, SUBPART C : 2006
Section 15.235

Date of Receipt : 11 August 2006
Date of Test : 14 to 25 August 2006
Date of Issue : 29 August 2006

Test Result :	PASS *
----------------------	---------------

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

Authorized Signature:



Robinson Lo
Laboratory Manager

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

All test results in this report can be traceable to National or International Standards.

SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEMO060801814RFF(I)

Page : 2 of 9

2 Test Summary

Test	Test Requirement	Standard Paragraph	Result
Radiated Emission (30MHz to 1000MHz)	FCC PART 15 :2006	Section 15.235	PASS *
Occupied Bandwidth	FCC PART 15 :2006	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.

* The EUT passed the RE test after retest.

3 Contents

	Page
1 COVER PAGE.....	1
2 TEST SUMMARY	2
3 CONTENTS	3
4 GENERAL INFORMATION	4
4.1 CLIENT INFORMATION	4
4.2 DETAILS OF E.U.T.	4
4.3 DESCRIPTION OF SUPPORT UNITS	4
4.4 TEST LOCATION	4
4.5 OTHER INFORMATION REQUESTED BY THE CUSTOMER	4
4.6 TEST FACILITY	5
5 TEST RESULTS	6
5.1 TEST INSTRUMENTS.....	6
5.2 E.U.T. OPERATION	6
5.3 TEST PROCEDURE & MEASUREMENT DATA	6
5.3.1 Radiated Emissions.....	6
5.3.2 Occupied Bandwidth.....	9

4 General Information

4.1 Client Information

Applicant: LORELEI COMMODITY AND RESOURCES SERVICES LTD
Address of Applicant: Rm2101, Fook Yip Bldg., 53-57 Kwai Fung Crescent Kwai Fong, Hong Kong
China

4.2 Details of E.U.T.

Product Name: ZOOBMOBILE CRUISER R/C
Item No: 12053
Power Supply: 9.0V DC (1*9.0V '6F22' Size Battery) for Tx
4.5V DC (3*1.5V 'AA' Size Batteries) for Rx.
Power Cord: N/A-

4.3 Description of Support Units

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

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory, No.198 Kezhu Road,
Science Town Economic & Technology Development District Guangzhou, China 510663

Tel: +86 20 8215 5555 Fax: +86 20 8207 5059

4.5 Other Information Requested by the Customer

None.

4.6 Test Facility

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

- **NVLAP – Lab Code: 200611-0**
SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0. Effective through December 31, 2004.
- **ACA**
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.
- **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, 2005. Valid until September 28, 2008.
- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**
Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.
- **CNAL – LAB Code: L0141**
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of Testing Laboratories.
- **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, Aug. 04, 2005
- **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.: 6002.

5 Test Results

5.1 Test Instruments

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	28-04-2005	27-04-2007
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	100249	22-09-2005	21-09-2006
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A
4	Coaxial cable	SGS	N/A	SEL0028	20-05-2006	19-05-2007
5	Coaxial cable	SGS	N/A	SEL0027	20-05-2006	19-05-2007
6	BiConiLog Antenna	ETS-LINDGREN	3142C	00042673	10-01-2006	09-01-2007
7	BiConiLog Antenna	ETS-LINDGREN	3142C	00042670	10-01-2006	09-01-2007
8	EMI Test Receiver	Rohde & Schwarz	ESCI	100119	03-03-2006	02-03-2007
9	Loop Antenna	Emco	6502	00042963	30-05-2006	29-05-2007

5.2 E.U.T. Operation

Input voltage: 9V DC (1*9.0V '6F22' Size Battery) for the transmitter.

Operating Environment:

Temperature: 26.0 °C

Humidity: 58 % RH

Atmospheric Pressure: 1003 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

Test Date: 14 August 2006 (Initial Test)
25 August 2006 (Test after Retest)

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: Peak Scan (120kHz resolution bandwidth)

SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEMO060801814RFF(I)

Page : 7 of 9

Test Procedure: The procedure used was ANSI Standard C63.4-2003. The receiver was scanned from 30MHz to 1000MHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. The worst case emissions were reported.

An initial pre-scan was performed in the 3m chamber using the spectrum analyser in peak detection mode. The EUT was measured by Bilog antenna with 2 orthogonal polarities and peak emissions from the EUT were detected within 6dB of the class B limit line.

The following measurements were performed on the modified modified EUT on 25 August 2006:
Test the EUT in transmitting mode.

Intentional emission

Test Frequency (MHz)	Peak (dBµV/m)		Limits (dBµV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
49.860	48.33	40.86	100.0	51.67	59.04

Test Frequency (MHz)	Average (dBµV/m)		Limits (dBµV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
49.860	44.36	36.16	80.0	35.64	43.84

SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEMO060801814RFF(I)

Page : 8 of 9

Other emissions

Horizontal.

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
43.525	0.68	10.58	28.10	38.22	21.38	40.00	-18.62
98.125	1.18	9.03	27.89	39.06	21.38	43.50	-22.12
146.875	1.31	8.72	27.47	32.30	14.86	43.50	-28.64
198.550	1.40	10.19	27.16	33.86	18.29	43.50	-25.21
298.000	1.89	13.81	26.72	35.69	24.67	46.00	-21.33

Vertical.

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
31.825	0.60	14.49	28.17	43.03	29.95	40.00	-10.05
63.025	0.80	7.10	28.03	40.71	20.58	40.00	-19.42
98.125	1.18	9.03	27.89	45.61	27.93	43.50	-15.57
298.000	1.89	13.81	26.72	37.26	26.24	46.00	-19.76
397.450	2.20	16.27	27.39	32.33	23.41	46.00	-22.59

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

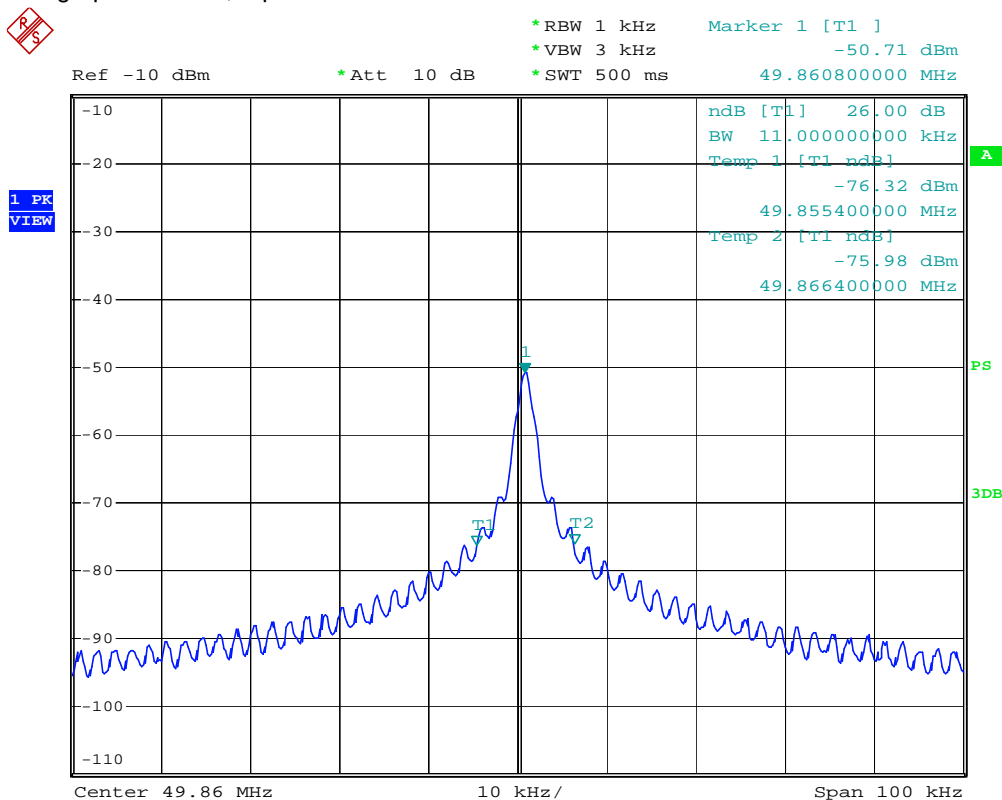
Operation within the band 49.82 – 49.90 MHz

Test Date: 14 August 2006

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 unmodulated 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 analyser with peak detector. The vertical Scale is set to –10dB per division. The horizontal scale is set to 5KHz per division.

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



Date: 14.AUG.2006 10:13:47

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