

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.: SZEMO071203818RFF

Page: 1 of 9

FCC ID: VVAAD258010

# TEST REPORT

Application No.: SZEMO071203818RF(SZ SGS NO.:SZTYR071203390/EL)

Applicant: GUANGDONG ALPHA ANIMATION AND CULTURE CO., LTD.

(Former Name: GUANG DONG AULDEY TOY INDUSTRY CO., LTD.)

**AULDEY** Manufacturer:

**FCC ID** VVAAD258010

Fundamental Frequency: 27.145MHz

**Equipment Under Test (EUT):** 

Name: BNW 320 Si, HONDA CIVIC Type - R

Model: LC258660, LC258680, LC258690, LC258710.

Country of Origin: **CHINA** Labelled Age Grading: AGE 8+

Please refer to section 2 of this report which indicates which item was

actually tested and which were electrically identical.

FCC PART 15, SUBPART C: 2007 Standards:

Date of Receipt: 27 December 2007 Date of Test: 31 January 2008 Date of Issue: 28 February 2008

Test Result: PASS \*

Authorized Signature:

Robinson Lo Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. 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.

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at <a href="http://www.sgs.com/terms">http://www.sgs.com/terms</a> and conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document annot be reproduced except in full, without prior approval of the Company.

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



Report No.: SZEMO071203818RFF

Page: 2 of 9

## 2 Test Summary

Test	Test Requirement	Stanadard Paragraph	Result
Radiated Emission (30MHz to 1000MHz)	FCC PART 15 :2007	Section 15.227	PASS
Occupied Bandwidth	FCC PART 15 :2007	Section 15.215	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.



Report No.: SZEMO071203818RFF

Page: 3 of 9

#### 3 **Contents**

			Page
1	COV	VER PAGE	1
2	TES	ST SUMMARY	2
3	CON	NTENTS	3
4	GEN	NERAL INFORMATION	4
	4.1	CLIENT INFORMATION	
	4.2	DETAILS OF E.U.T.	
	4.3	DESCRIPTION OF SUPPORT UNITS	4
	4.4	TEST LOCATION	4
	4.5	TEST LOCATIONOTHER INFORMATION REQUESTED BY THE CUSTOMER	4
5	TES	ST RESULTS	5
	5.1	Test Instruments	5
	5.2	E.U.T. OPERATION	5
	5.3	TEST PROCEDURE & MEASUREMENT DATA	5
	5.3.1		
	5.3.2	.2 Occupied Bandwidth	



Report No.: SZEMO071203818RFF

Page: 4 of 9

### 4 General Information

#### 4.1 Client Information

Applicant: GUANGDONG ALPHA ANIMATION AND CULTURE CO.

(Former Name: GUANG DONG AULDEY TOY INDUSTRY CO., LTD.)

Address of Applicant: Auldey Ind Area, Wenguan Rd., (Central), Chenghai, Shantou,

Guangdong, China

4.2 Details of E.U.T.

Power Supply: 3.0V DC (2 \* 1.5V 'AA' Size Batteries) for Tx;

6.0V DC (4 \* 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: 27MHz 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.



Report No.: SZEMO071203818RFF

Page: 5 of 9

### 5 Test Results

#### 5.1 Test Instruments

ı	R&TTE 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	16-06-2007	15-06-2008				
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	12-12-2007	11-12-2008				
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A				
4	Coaxial cable	SGS	N/A	SEL0028	01-06-2007	31-05-2008				
5	Coaxial cable	SGS	N/A	SEL0027	20-10-2007	19-10-2008				
6	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0014	12-08-2007	11-08-2008				
7	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	27-06-2007	26-06-2008				
8	Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	15-06-2007	14-06-2008				

### 5.2 E.U.T. Operation

Operating Environment:

Temperature: 26.0 °C
Humidity: 51% RH
Atmospheric Pressure: 1004mbar

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 15.227

Test Method: ANSI C63.4

Measurement Distance: 3m (Semi-Anechoic Chamber)

**Requirements:** Carrier frequency will not exceed 80dBuV/m AT 3m.

Out of band emissions shall not exceed:  $40.0~dB\mu V/m$  between 30MHz~&~88MHz  $43.5~dB\mu V/m$  between 88MHz~&~216MHz  $46.0~dB\mu V/m$  between 216MHz~&~960MHz

54.0 dBµV/m above 960MHz

**Detector:** Peak Scan (9kHz resolution bandwidth for 9kHz to 30MHz;

120kHz resolution bandwidth for 30MHz to 1000MHz)



Report No.: SZEMO071203818RFF

Page: 6 of 9

#### 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. Only the worst case is shown in the report.

#### 27.145MHz Mode.

Test Procedure: For testing performed with the loop antenna, testing was performed in accordance to ANSI C63.4 section 8.2.1. The The center of the loop was positioned 1 m above the ground and positioned with its plane vertical at the specied distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane.

#### Vertical.

Test Frequency	Peak (dBmV/m)	Limits	Margin (dB)	
(MHz)	X	(dBmV/m)	Χ	
27.145	67.26	100.0	32.74	

Test Frequency	Aerage (dBmV/m)	Limits	Margin (dB)	
(MHz)	X	(dBmV/m)	X	
27.145	63.53	80.0	16.47	

#### Horizontal.

Test Frequency	Peak (dBmV/m)	Limits	Margin (dB)	
(MHz)	X	(dBmV/m)	X	
27.145	56.08	100.0	43.92	

Test Frequency	Peak (dBmV/m)	Limits	Margin (dB)	
(MHz)	Х	(dBmV/m)	X	
27.145	52.71	80.0	27.29	

Y: EUT as per photograph in section 5.3.3 of this report.

X: As Y, but rotate EUT by 90° clockwise.

Z: As X, but rotate EUT by 90° vertically.

#### Other emissions

FCC ID: VVAAD258010



Report No.: SZEMO071203818RFF

Page: 7 of 9

#### Test the EUT in transmitting mode.

#### Horizontal.

TIOTIZOTICAL.							
Frequency (MHz)	Antenna Factor (dB/m)	Limit Line (dBuV/m)		Read Level (dBuV)	Quasi- Peak Level (dBuV/m)	Cable Loss (dB)	Preamp Factor (dB)
54.250	0.80	7.92	28.08	36.37	17.01	40.00	-22.99
34.230	0.00	1.32	20.00	30.37	17.01	40.00	-22.33
98.125	1.18	9.03	27.89	31.84	14.16	43.50	-29.34
186.850	1.38	10.03	27.22	31.29	15.48	43.50	-28.02
215.125	1.49	10.97	27.07	31.76	17.15	43.50	-26.35
384.775	2.16	16.12	27.32	30.61	21.57	46.00	-24.43

#### Vertical.

Frequency (MHz)	Antenna Factor (dB/m)	Limit Line (dBuV/m)		Read Level (dBuV)	Quasi- Peak Level (dBuV/m)	Cable Loss (dB)	Preamp Factor (dB)
54.250	0.80	7.64	28.08	55.80	36.16	40.00	-3.84
79.600	1.09	7.68	28.00	37.46	18.23	40.00	-21.77
105.925	1.22	8.81	27.82	42.53	24.74	43.50	-18.76
134.200	1.29	7.88	27.57	35.12	16.72	43.50	-26.78
161.500	1.34	9.58	27.38	31.92	15.46	43.50	-28.04

#### 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 15.227 requirements.



Report No.: SZEMO071203818RFF

Page: 8 of 9

### 5.3.2 Occupied Bandwidth

Test Requirement: FCC Part 15 C Section 15.215 (C) and Section 15.227.

Test Method: ANSI C63.4

Operation within the band 26.960 - 27.280 MHz.

26.960-27.280MHz Mode.

Requirements: Intentional radiators operating under the alternative provisions

to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the 20 dB bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of

out-of-band operation.

Method of measurement: The useful radiated emission from the EUT was detected by

the spectrum analyser with peak detector. The vertical Scale

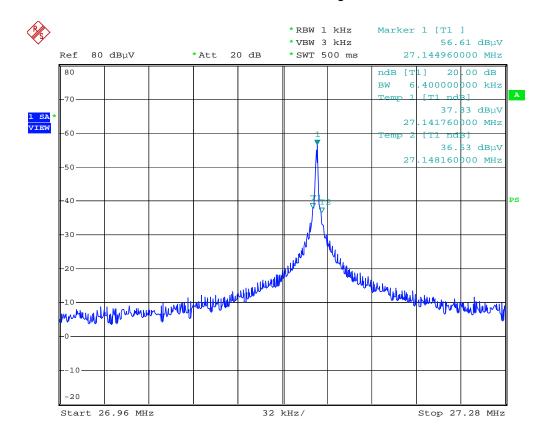
is set to 10dB per division. The horizontal scale is set

to32KHz per division.



Report No.: SZEMO071203818RFF

Page: 9 of 9



Date: 4.APR.2006 15:34:35

The results: The unit does meet the FCC Part 15 C Section 15.215 requirements