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Report No.: SZEM150200086204

Page : 1 of 7

## **SAR Evaluation Report**

**Application No.:** SZEM1502000862ET (SGS SZ No.:T51510170052EM)

**Applicant:** Guangdong Alpha Animation and Culture Co., Ltd

**Product Name:** Fly 'Em Fast! Donnie

**Model No.(EUT):** YW710720

**Add Model No.:** US710005, CA710005, US710720, CA710720

**Product Description:** Super Wings Remote Control Donnie

**FCC ID:** VVAYW710720

**Standards:** 47 CFR Part 1.1307 (2014)

47 CFR Part 2.1093 (2014)

KDB447498D01 General RF Exposure Guidance v05r02

**Date of Receipt:** 2015-02-26

**Date of Test:** 2015-03-25 to 2015-04-14

**Date of Issue:** 2015-12-11

<b>Test Result :</b>	<b>PASS*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.  
This report supersedes our previous report SZEM150200086202, issued on 2015-11-11, which is hereby deemed null and void.

Authorized Signature:



Jack Zhang  
EMC 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.

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## 2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00		2015-11-11		Original
01		2015-12-11		New

Authorized for issue by:			
Tested By	 (Bill Chen) /Project Engineer	2015-03-25	Date
Prepared By	 (Jade Chen) /Clerk	2015-12-11	Date
Checked By	 (Eric Fu) /Reviewer	2015-12-11	Date

### **3 Contents**

	<b>Page</b>
<b>1 COVER PAGE</b>	1
<b>2 VERSION</b>	2
<b>3 CONTENTS</b>	3
<b>4 GENERAL INFORMATION</b>	4
4.1 CLIENT INFORMATION.....	4
4.2 GENERAL DESCRIPTION OF EUT .....	4
4.3 TEST LOCATION.....	5
4.4 TEST FACILITY.....	6
4.5 DEVIATION FROM STANDARDS .....	6
4.6 ABNORMALITIES FROM STANDARD CONDITIONS.....	6
4.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	6
<b>5 SAR EVALUATION</b>	7
5.1 RF EXPOSURE COMPLIANCE REQUIREMENT .....	7
5.1.1 <i>Standard Requirement</i> .....	7
5.1.2 <i>Limits</i> .....	7
5.1.3 <i>EUT RF Exposure</i> .....	7

## 4 General Information

### 4.1 Client Information

Applicant:	Guangdong Alpha Animation and Culture Co., Ltd
Address of Applicant:	Auldey Industrial Area, Wenguan Rd., Chenghai, Shantou, Guangdong, China

### 4.2 General Description of EUT

Product Name:	Fly 'Em Fast! Donnie
Model No.:	YW710720
Sample Type:	Portable production
Operation Frequency:	27.145MHz
Channel Numbers:	1
Modulation Type:	PM
Antenna Type:	Integral
Country of Origin:	China
Country of Destination:	US
Power Supply:	TX: DC 3.0V (2*1.5V "AAA" Size batteries)

Remark:

Model No.: YW710720, US710005, CA710005, US710720, CA710720.

Only the model YW710720 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being model name.



### **4.3 Test Location**

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch E&E Lab

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

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

No tests were sub-contracted.

## **4.4 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.

- A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- VCCI**

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

- 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 No.: 556682.

- Industry Canada (IC)**

The 3m Semi-anechoic chambers and the 10m Semi-anechoic chambers of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-2, 4620C-3.

## **4.5 Deviation from Standards**

None.

## **4.6 Abnormalities from Standard Conditions**

None.

## **4.7 Other Information Requested by the Customer**

None.

## 5 SAR Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v05r02

##### 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 5.1.2 Limits

At frequencies below 100 MHz, the following may be considered for SAR test exclusion:

- a) The power threshold at the corresponding test separation distance at 100 MHz in below step 1) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  for test separation distances  $> 50 \text{ mm}$  and  $< 200 \text{ mm}$
- b) The power threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$  for test separation distances  $\leq 50 \text{ mm}$ .

1)  $[\text{Power allowed at numeric threshold for } 50 \text{ mm in step 1)} + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)] \text{ mW}$ , at 100 MHz to 1500 MHz

#### 5.1.3 EUT RF Exposure

The maximum conducted output power specified is  $-32.65 \text{ dBm} = 0.0005 \text{ mW}$

The source- based time-averaging conducted output power

$$= 0.0005 * \text{Duty Cycle mW} = 0.0003 \text{ mW}$$

The SAR Exclusion Threshold Level for 27.145MHz when the minimum test separation distance is  $< 50 \text{ mm}$ :

$$= 474 * [1 + \log(100/f(\text{MHz}))]/2$$

$$= 371.2 \text{ mW}$$

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.