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**FEDERAL COMMUNICATIONS COMMISSION**  
Registration number: 556682

Report No.: SZEMO070902447RFF(I)  
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FCC ID : VLEAE20004-8

# TEST REPORT

**Application No.** : SZEMO070902447RF(SGS SZ NO.: SZTYR070902384/EL)

**Applicant** : Asian Express Holding Ltd

**FCC ID** : VLEAE20004-8

**Fundamental Frequency** : 49.860MHz

**Equipment under Test (EUT):**

**EUT Name** : Mini R/C Truck

**Item No.** : AE20004-8

**Labelled Age Grading** : 8 or above

**Country of Origin** : China

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

**Date of Receipt** : 10 September 2007

**Date of Test** : 10 to 11 September 2007

**Date of Issue** : 12 September 2007

<b>Test Result :</b>	<b>PASS *</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo  
Laboratory Manager

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## **2 Test Summary**

<b>Test</b>	<b>Test Requirement</b>	<b>Stanadard Paragraph</b>	<b>Result</b>
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.



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## **4 General Information**

### **4.1 Client Information**

Applicant: Asian Express Holding Ltd  
Address of Applicant: 4F, -4, No.669, Jingping Rd., Zhonghe City, Taipei County 235, Taiwan,  
P.O.C.

### **4.2 Details of E.U.T.**

Product Name: Mini R/C Truck  
Item No: AE20004-8  
Power Supply: 6.0V DC (4 \* 1.5V 'AA' Size Batteries) for Tx  
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.



## 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	16-06-2007	15-06-2008
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	100249	14-12-2006	13-12-2007
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	01-06-2007	31-05-2008
6	BiConiLog Antenna	ETS-LINDGREN	3142C	00042673	03-03-2007	02-03-2008
7	EMI Test Receiver	Rohde & Schwarz	ESCI	100119	27-06-2007	26-06-2008
8	Loop Antenna	Emco	6502	00042963	30-05-2006	29-05-2008

### 5.2 E.U.T. Operation

Input voltage: 6.0V DC (4 \* 1.5V 'AA' Size Batteries) for the transmitter.

Operating Environment:

Temperature: 23.0 °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

Test Date: 10 September 2007

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)



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 10 September 2007:  
Test the EUT in transmitting mode.

Intentional emission

Test Frequency (MHz)	Peak (dB $\mu$ V/m)		Limits (dB $\mu$ V/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
49.860	78.06	45.74	100.0	21.94	55.26

Test Frequency (MHz)	Average (dB $\mu$ V/m)		Limits (dB $\mu$ V/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
49.860	72.42	40.24	80.0	7.58	39.76

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.



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Other emissions

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)
97.90	1.18	9.02	27.89	57.75	40.06	43.50	-3.44
208.48	1.45	10.65	27.11	37.52	22.51	43.50	-20.99
451.95	2.42	16.96	27.57	37.60	29.41	46.00	-16.59
711.91	2.94	21.60	27.24	38.50	35.80	46.00	-10.20

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)
97.90	1.18	9.02	27.89	37.71	20.02	43.50	-23.48
229.82	1.57	11.64	27.00	30.09	16.30	46.00	-29.70
249.22	1.67	12.27	26.92	28.51	15.53	46.00	-30.47
343.31	2.04	15.25	27.05	25.81	16.05	46.00	-29.95
464.56	2.47	17.41	27.61	25.92	18.19	46.00	-27.81

**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

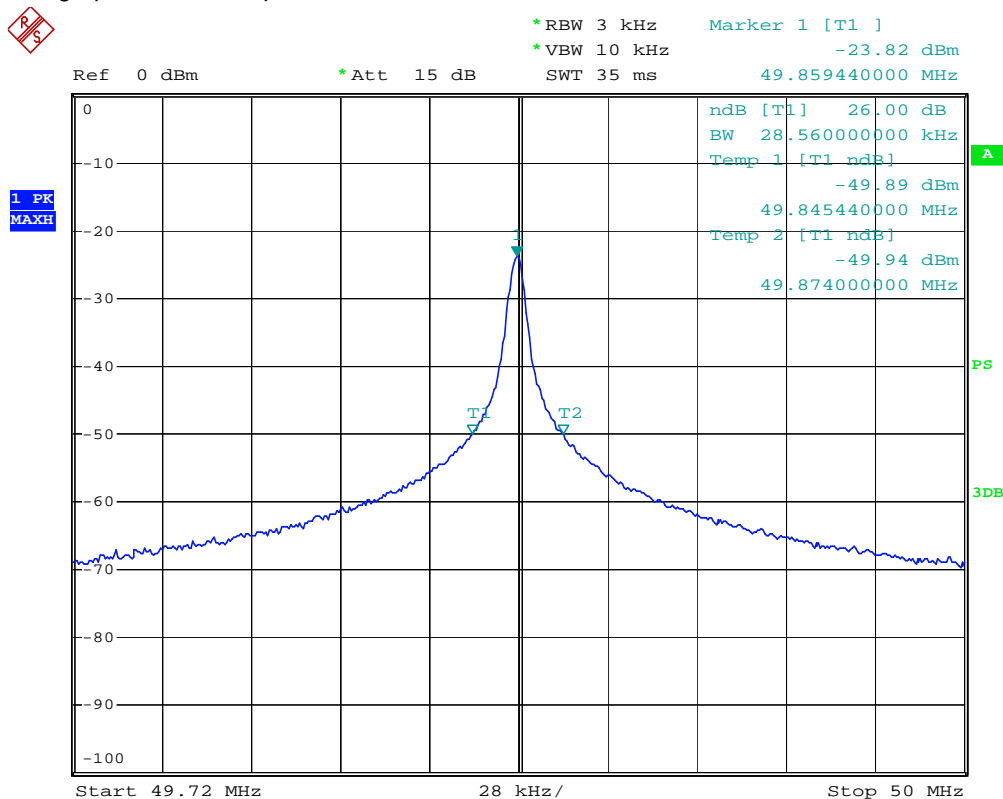
Operation within the band 49.82 – 49.90 MHz

Test Date: 11 September 2007

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 10KHz per division. The EUT is operation with modulated signal.

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



N

Date: 11.SEP.2007 12:13:47

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