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**FEDERAL COMMUNICATIONS COMMISSION**  
Registration number: 282399

Report No.: GLEMR061102070RFI  
Page: 1 of 9  
FCC ID: UT752691613304

# TEST REPORT

**Application No. :** GLEMR061102070RF  
**Applicant:** EMIRIMAGE CORPORATION  
**FCC ID:** UT752691613304

**Fundamental  
Frequency :** 27.145MHz

**Equipment Under Test (EUT):**

Name: R/C VEHICLE SERIES

Model No.: TOU4400M, TOU13888, TOU13889, TOU3231, TOU8631, TOU5890A♣

♣

Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.

**Standards:** FCC PART 15, SUBPART C : 2006  
Section 15.227

**Date of Receipt:** 29 November 2006

**Date of Test:** 29 November and 04 December 2006

**Date of Issue:** 07 December 2006

|                      |               |
|----------------------|---------------|
| <b>Test Result :</b> | <b>PASS *</b> |
|----------------------|---------------|

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

Authorized Signature:

Jerry Chen  
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.



## 2 Test Summary

| Test                                    | Test Requirement  | Standard Paragraph | Result |
|---|-------------------|--------------------|--------|
| Radiated Emission<br>(30MHz to 1000MHz) | FCC PART 15 :2006 | Section 15.227     | PASS   |
| Occupied Bandwidth                      | FCC PART 15 :2006 | Section 15.215     | PASS   |

Remark:

Model No.: TOU4400M, TOU13888, TOU13889, TOU3231, TOU8631, TOU5890A

The actual tested model is TOU4400M, since the electrical circuit design, PCB layout, component used and internal wiring are identical for the above models, only the outer decoration is different.



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## **4 General Information**

### **4.1 Client Information**

Applicant Name: EMIRIMAGE CORPORATION

Applicant Address: 5269 N. W. 161 Street, Miami, FL, 33014 USA

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

Name: R/C VEHICLE SERIES

Model No.: TOU4400M, TOU13888, TOU13889, TOU3231, TOU8631, TOU5890A♣

Power Supply: 9V DC (1 x '6F 22' Size Battery)

Power Cord: N/A-

### **4.3 Description of Support Units**

The EUT was tested as an independent unit: a 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 82155555

Fax: +86 20 82075059

No tests were sub-contracted.

### **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, 2006.
- **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.
- **FCC – Registration No.: 282399**  
SGS-CSTC Standards Technical Services Co., Ltd., 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 282399, May 31, 2002. With the above and NVLAP's accreditation, SGS-CSTC is an authorised test laboratory for the DoC process.



## 5 Test Results

### 5.1 Test Instruments

| RE in Chamber/OATS |                               |                   |               |            |                         |                            |
|--------------------|-------------------------------|-------------------|---------------|------------|-------------------------|----------------------------|
| No:                | Test Equipment                | Manufacturer      | Model No.     | Serial No. | Cal. Date<br>(dd-mm-yy) | Cal.Due date<br>(dd-mm-yy) |
| EMC0525            | Compact Semi-Anechoic Chamber | ChangZhou ZhongYu | N/A           | N/A        | 06-03-2006              | 06-03-2007                 |
| EMC0522            | EMI Test Receiver             | Rohde & Schwarz   | ESIB26        | 100249     | 05-12-2006              | 05-12-2007                 |
| N/A                | EMI Test Software             | Audix             | E3            | N/A        | N/A                     | N/A                        |
| EMC0514            | Coaxial cable                 | SGS               | N/A           | N/A        | 04-12-2006              | 04-12-2007                 |
| EMC0524            | Bi-log Type Antenna           | Schaffner -Chase  | CBL6112B      | 2966       | 31-10-2006              | 31-10-2007                 |
| EMC0519            | Bilog Type Antenna            | Schaffner -Chase  | CBL6143       | 5070       | 31-07-2006              | 31-07-2007                 |
| EMC0517            | Horn Antenna                  | Rohde & Schwarz   | HF906         | 100095     | 29-07-2006              | 29-07-2007                 |
| EMC0040            | Spectrum Analyzer             | Rohde & Schwarz   | FSP30         | 100324     | 05-12-2006              | 05-12-2007                 |
| EMC0520            | 0.1-1300 MHz Pre-Amplifier    | HP                | 8447D OPT 010 | 2944A06252 | 06-03-2006              | 06-03-2007                 |
| EMC0521            | 1-26.5 GHz Pre-Amplifier      | Agilent           | 8449B         | 3008A01649 | 06-03-2006              | 06-03-2007                 |
| EMC0523            | Active Loop Antenna           | EMCO              | 6502          | 00042963   | 14-01-2006              | 14-01-2007                 |
| EMC0530            | 10m Semi- Anechoic Chamber    | ETS               | N/A           | N/A        | 22-08-2006              | 22-08-2007                 |

### 5.2 E.U.T. Operation

|                        |                                    |
|------------------------|------------------------------------|
| Input voltage:         | 9V DC (1 x '6F 22' Size Battery)   |
| Operating Environment: |                                    |
| Temperature:           | 25.0 °C                            |
| Humidity:              | 56 % RH                            |
| Atmospheric Pressure:  | 1011 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 15.227  
**Test Method:** ANSI C63.4 section 8 & 13  
**Test Date:** 04 December 2006  
**Measurement Distance:** 3m (Semi-Anechoic Chamber and OATS)  
**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 dB $\mu$ V/m above 960MHz  
**Detector:** Peak Scan (120kHz resolution bandwidth)

Test Procedure: The procedure used was ANSI Standard C63.4-2003. The receive 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. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Active loop antenna and Bilog antenna with 2 orthogonal polarities

The following measurements were performed on the EUT on 04 December 2006:

Test the EUT in transmitting mode.

Intentional emission

| Test Frequency<br>(MHz) | Peak (dB $\mu$ V/m) |            | Limits<br>(dB $\mu$ V/m) | Margin (dB) |            |
|-------------------------|---------------------|------------|--------------------------|-------------|------------|
|                         | Vertical            | Horizontal |                          | Vertical    | Horizontal |
| 27.145                  | 74.9                | 67.0       | 100.0                    | 25.1        | 33.0       |

| Test Frequency<br>(MHz) | Average (dB $\mu$ V/m) |            | Limits<br>(dB $\mu$ V/m) | Margin (dB) |            |
|-------------------------|------------------------|------------|--------------------------|-------------|------------|
|                         | Vertical               | Horizontal |                          | Vertical    | Horizontal |
| 27.145                  | 61.2                   | 54.1       | 80.0                     | 18.8        | 25.9       |



Other emissions

Horizontal:

| Freq    | ReadAntenna<br>Level | Antenna<br>Factor | Cable<br>Loss | Preamplifier<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Remark |
|---------|----------------------|-------------------|---------------|------------------------|--------|---------------|---------------|--------|
| MHz     | dBuV                 | dB/m              | dB            | dB                     | dBuV/m | dBuV/m        | dB            |        |
| 54.290  | 27.38                | 9.93              | 0.70          | 25.21                  | 12.80  | 40.00         | -27.20        |        |
| 81.435  | 21.12                | 9.47              | 0.80          | 25.12                  | 6.27   | 40.00         | -33.73        |        |
| 108.580 | 21.28                | 12.51             | 0.94          | 25.10                  | 9.63   | 43.50         | -33.87        |        |
| 135.725 | 20.71                | 11.88             | 1.05          | 25.10                  | 8.54   | 43.50         | -34.96        |        |
| 162.870 | 20.80                | 9.84              | 1.16          | 24.88                  | 6.91   | 43.50         | -36.59        |        |
| 190.015 | 21.78                | 8.93              | 1.26          | 24.70                  | 7.28   | 43.50         | -36.22        |        |
| 217.160 | 21.40                | 10.56             | 1.37          | 24.53                  | 8.80   | 46.00         | -37.20        |        |

Vertical:

| Freq    | ReadAntenna<br>Level | Antenna<br>Factor | Cable<br>Loss | Preamplifier<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Remark |
|---------|----------------------|-------------------|---------------|------------------------|--------|---------------|---------------|--------|
| MHz     | dBuV                 | dB/m              | dB            | dB                     | dBuV/m | dBuV/m        | dB            |        |
| 54.290  | 46.22                | 6.70              | 0.70          | 25.21                  | 28.40  | 40.00         | -11.60        |        |
| 81.435  | 28.73                | 6.94              | 0.80          | 25.12                  | 11.36  | 40.00         | -28.64        |        |
| 108.580 | 25.65                | 10.60             | 0.94          | 25.10                  | 12.09  | 43.50         | -31.41        |        |
| 135.725 | 25.65                | 10.98             | 1.05          | 25.10                  | 12.58  | 43.50         | -30.92        |        |
| 162.870 | 23.52                | 9.27              | 1.16          | 24.88                  | 9.06   | 43.50         | -34.44        |        |
| 190.015 | 25.80                | 11.00             | 1.26          | 24.70                  | 13.36  | 43.50         | -30.14        |        |
| 217.160 | 22.05                | 10.99             | 1.37          | 24.53                  | 9.89   | 46.00         | -36.11        |        |

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.**





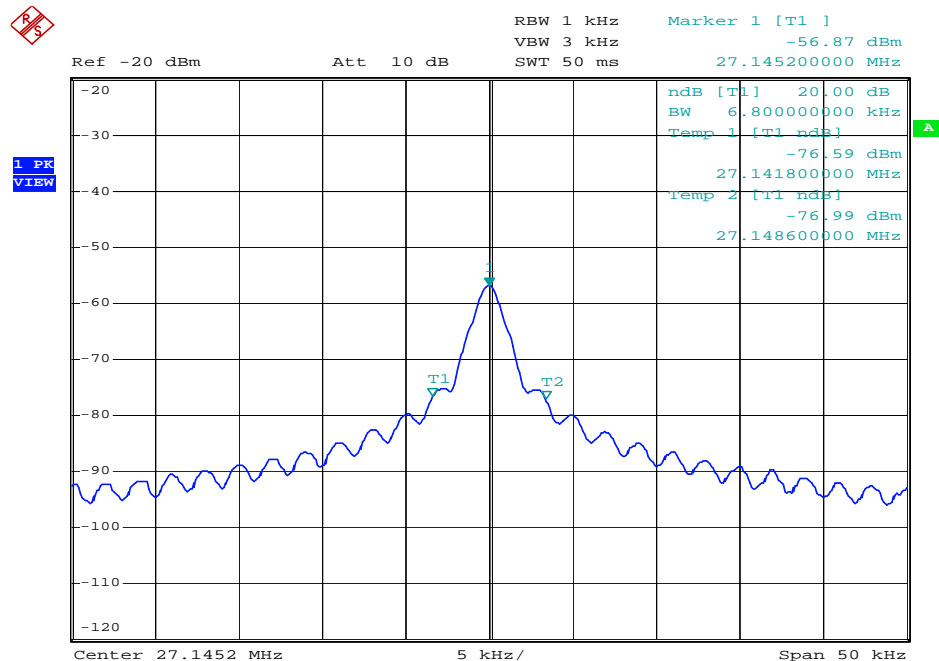
### 5.3.2 Occupied Bandwidth

Test Requirement: FCC Part 15 C Section 15.215 (C)  
Test Method: ANSI C63.4 section 13 & FCC Part 2.1049  
Operation within the band 26.960 – 27.280 MHz  
Test Date: 29 November 2006

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 to 5KHz per division.

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



Date: 29.NOV.2006 15:51:44

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