



FCC PART 15.227

MEASUREMENT AND TEST REPORT

For

Jazwares Inc

1067 Shotgun Road, Sunrise, Florida, USA

FCC ID: YNIJAZWARES92171

<b>Report Type:</b> Original Report	<b>Product Type:</b> Remote Controller
<b>Test Engineer:</b> <u>Gardon Zhang</u>	<i>Gardon Zhang</i>
<b>Report Number:</b> <u>RSZ121109816-00</u>	
<b>Report Date:</b> <u>2012-11-09</u>	
<b>Reviewed By:</b> <u>RF Leader</u>	<i>Alvin Huang</i>
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report **must not** be used by the customer to claim product certification, approval, or endorsement by NVLAP\*, or any agency of the Federal Government.

\* This report may contain data that are not covered by the NVLAP accreditation and shall be marked with an asterisk "★"

## TABLE OF CONTENTS

<b>GENERAL INFORMATION.....</b>	<b>3</b>
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	3
OBJECTIVE.....	3
RELATED SUBMITTAL(S)/GRANT(S).....	3
TEST METHODOLOGY.....	3
TEST FACILITY.....	3
<b>SYSTEM TEST CONFIGURATION.....</b>	<b>5</b>
JUSTIFICATION.....	5
EUT EXERCISE SOFTWARE.....	5
EQUIPMENT MODIFICATIONS.....	5
CONFIGURATION OF TEST SETUP.....	5
BLOCK DIAGRAM OF TEST SETUP.....	5
<b>SUMMARY OF TEST RESULTS.....</b>	<b>6</b>
<b>FCC§15.203 - ANTENNA REQUIREMENT.....</b>	<b>7</b>
APPLICABLE STANDARD.....	7
<b>FCC§15.205, §15.209, §15.227(A), §15.227 (B) – FIELD STRENGTH AND RESTRICTED BAND EMISSIONS.....</b>	<b>8</b>
STANDARD APPLICABLE.....	8
MEASUREMENT UNCERTAINTY.....	8
EUT SETUP.....	8
EMI TEST RECEIVER SETUP.....	9
TEST EQUIPMENT LIST AND DETAILS.....	9
CORRECTED AMPLITUDE & MARGIN CALCULATION.....	9
TEST DATA.....	9

## GENERAL INFORMATION

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### Product Description for Equipment under Test (EUT)

The *Jazwares Inc's* product, model number: 92171 (FCC ID: YNIJAZWARES92171) or the "EUT" as referred to in this report is *Remote controller*, named *REGULAR SHOW -5" RC Golf Cart* by applicant, which was measured approximately: 21.0 cm (L) x 6.5 cm (W) x 4.3 cm (H), rated input voltage: DC 9V battery.

*All measurement and test data in this report was gathered from production sample serial number: 1210091 (Assigned by BACL, Shenzhen). The EUT supplied by applicant was received on 2012-11-09.*

### Objective

This report is prepared on behalf of *Jazwares Inc* in accordance with Part 2-Subpart J, and Part 15-Subparts A, B and C of the Federal Communication Commissions rules.

The objective is to determine the compliance of EUT with FCC rules, section 15.203, 15.205, 15.209 and 15.227.

### Related Submittal(s)/Grant(s)

No related submittal(s).

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

The uncertainty of any RF tests which use conducted method measurement is  $\pm 0.96$  dB, the uncertainty of any radiation on emissions measurement is  $\pm 4.0$  dB

### Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect radiated and conducted emission measurement data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is an ISO/IEC 17025 guide accredited laboratory, and is accredited by National Voluntary Laboratory Accredited Program (Lab Code 200707-0).



The current scope of accreditations can be found at <http://ts.nist.gov/Standards/scopes/2007070.htm>

## SYSTEM TEST CONFIGURATION

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### Justification

The system was configured for testing in a typical mode.

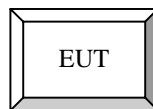
### EUT Exercise Software

No exercise software was used.

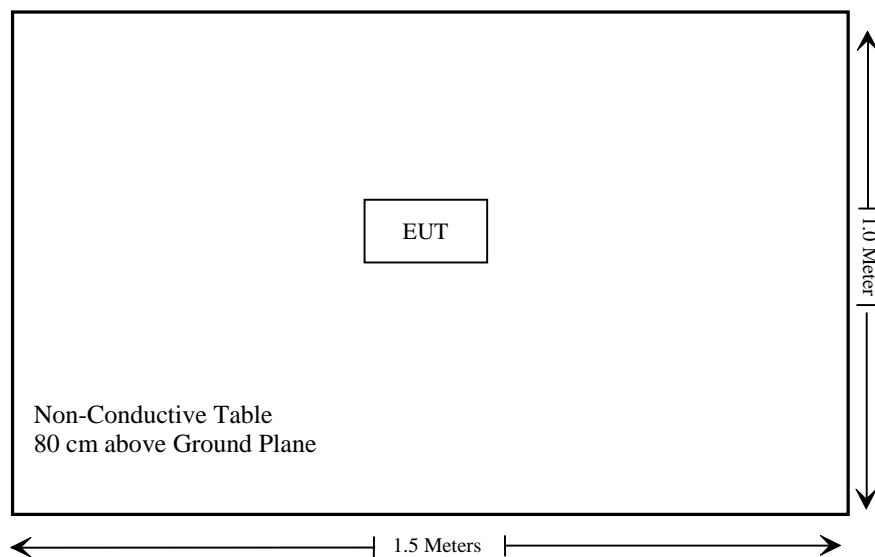
### Equipment Modifications

No modifications.

### Configuration of Test Setup



### Block Diagram of Test Setup



**SUMMARY OF TEST RESULTS**

FCC Rules	Description of Test	Result
§15.203	Antenna requirement	Compliance
§15.207	Conducted Emissions	Not Applicable*
§15.205, §15.209, §15.227(a), §15.227(b)	Field Strength and Restricted Band Emissions	Compliance

**Note:** Not Applicable\* - EUT is battery operation only.

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## **FCC§15.203 - ANTENNA REQUIREMENT**

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### **Applicable Standard**

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has a permanently attached antenna, fulfill the requirement of this section, and please refer to the EUT photos.

**Result:** Compliant.

## FCC§15.205, §15.209, §15.227(a), §15.227 (b) – FIELD STRENGTH AND RESTRICTED BAND EMISSIONS

### Standard Applicable

According to FCC §15.227 (a), the field strength if any emission within this band shall not exceed 10,000 microvolts/meter at 3 meters.

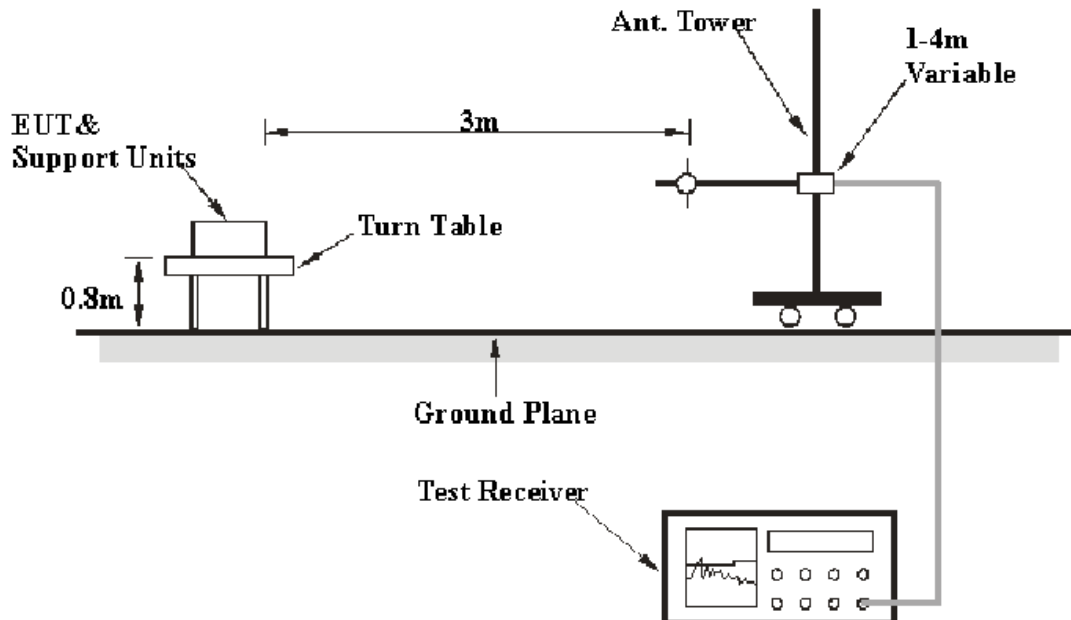
(b) The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in §15.209.

### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on CISPR 16-4-4, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is 4.0 dB.(k=2, 95% level of confidence), and the uncertainty will not be taken into consideration for all the test data recorded in the report.

### EUT Setup



The radiated emission tests were performed in the chamber test site, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC Part 15 Subpart C, section 15.227 limits.



## EMI Test Receiver Setup

The system was investigated from 9 kHz to 1000 MHz.

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	8447E	1937A01046	2011-11-24	2012-11-23
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2012-08-08	2013-08-07
Sunol Sciences	Bilog Antenna	JB1	A040904-2	2011-11-28	2012-11-27
EM Test	Loop Antenna	MS100	0809-05	2011-11-17	2012-11-16

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter reading. The basic equation is as follows:

$$\begin{aligned} \text{Corrected Amplitude} &= \text{Meter Reading} + \text{Correction Factor} \\ \text{Correction Factor} &= \text{Antenna Loss} + \text{Cable Loss} - \text{Amplifier Gain} \end{aligned}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

## Test Data

### Environmental Conditions

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	56 %
<b>ATM Pressure:</b>	100.0kPa

*Testing was performed by Gardon Zhang on 2012-11-09*

**1) Field Strength of Radiated Emissions**

Indicated		Table Angle Deg.	Antenna Height (m)	Detector (PK/Ave.)	Correction Factor (dB)	Corrected Amplitude (dB $\mu$ V/m)	FCC Part 15.227		
Freq. (MHz)	Reading (dB $\mu$ V)						Limit (dB $\mu$ V/m)	Margin (dB)	Remarks
27.145	49.24	349	1.0	Ave.	-5.86	43.38	80	36.31	Fund.
27.145	49.55	349	1.0	PK	-5.86	43.69	100	56.31	Fund.

**2) Spurious Emission, up to 1000MHz:**

Frequency (MHz)	Corrected Amplitude (dB $\mu$ V/m)	Detector (PK/QP/Ave.)	Antenna height (cm)	Polarity	Turntable position (deg)	Correction Factor (dB)	FCC Part 15.227&15.209	
							Limit (dB $\mu$ V/m)	Margin (dB)
434.375950	37.7	QP	1.0	V	229.0	-11.4	46.0	8.3
461.528750	35.3	QP	1.0	V	126.0	-10.7	46.0	10.7
54.298900	27.2	QP	1.0	V	176.0	-20.8	40.0	12.8
488.688750	32.5	QP	1.0	V	174.0	-10.1	46.0	13.5
54.298900	22.2	QP	1.0	H	124.0	-20.8	40.0	17.8
407.224350	27.3	QP	1.0	V	280.0	-11.4	46.0	18.7
30.364418	15.0	QP	2.4	V	309.0	-7.0	40.0	25.0

**\*\*\*\*END OF REPORT\*\*\*\***