WGI Innovations, Ltd.

Electronic Game Call

Model: EX1-RX, EM1-RX

May 17, 2012

Report No.: 12020292-FCC-E
(This report supersedes NONE)

Modifications made to the product : None

This Test Report is Issued Under the Authority of:		
William Long	Alex Liu	
William Long **Compliance Engineer**	**Alex Liu** **Technical Manager**	

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Test result presented in this test report is applicable to the representative sample only.

EMC Test Report

To: FCC Part 15 Subpart B Class B: 2012

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Laboratory Introduction

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Accreditations for Conformity Assessment

Country/Region	Accreditation Body	Scope
USA	FCC, A2LA	EMC , RF/Wireless , Telecom
Canada	IC, A2LA, NIST	EMC, RF/Wireless , Telecom
Taiwan	BSMI , NCC , NIST	EMC, RF, Telecom , Safety
Hong Kong	OFTA , NIST	RF/Wireless ,Telecom
Australia	NATA, NIST	EMC, RF, Telecom , Safety
Korea	KCC/RRA, NIST	EMI, EMS, RF , Telecom, Safety
Japan	VCCI, JATE, TELEC, RFT	EMI, RF/Wireless, Telecom
Mexico	NOM, COFETEL, Caniety	Safety, EMC , RF/Wireless, Telecom
Europe	A2LA, NIST	EMC, RF, Telecom , Safety

Accreditations for Product Certifications

Country	Accreditation Body	Scope
USA	FCC TCB, NIST	EMC , RF , Telecom
Canada	IC FCB , NIST	EMC , RF , Telecom
Singapore	iDA, NIST	EMC , RF , Telecom
EU	NB	EMC & R&TTE Directive
Japan	MIC, (RCB 208)	RF , Telecom
Hong Kong	OFTA (US002)	RF , Telecom

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CONTENTS

1 Executive Summary & EUT information

The purpose of this test programme was to demonstrate compliance of the WGI Innovations, Ltd., the Electronic Game Call, and model: EX1-RX, EM1-RX against the current Stipulated Standards. The Electronic Game Call has demonstrated compliance with the FCC Part 15 Subpart B Class B: 2012.

EUT Information

EUT Description		**Electronic Game Call**
Model No		**EX1-RX, EM1-RX (note)**
Serial No		**N/A**
Input Power		**9V DC battery of power supply**
Classification Per Stipulated Test Standard		**Class B Emission Product**

Note：

1. EX1-RX has two speakers, but EM1-RX just has one speaker.
2. EX1-RX's RC LCD will show two speaker icons, but EM1-RX's RC LCD just show one speaker icon
3. EM1-RX has no DC output.
4. EX1-RX has 80 sounds, but EM1-RX has 60 sounds.

2 TECHNICAL DETAILS

Purpose	**Compliance testing of Electronic Game Call with stipulated standard**
Applicant / Client	**WGI Innovations, Ltd. 602 Fountain Parkway Grand Prairie, TX 75050, U.S.A.**
Manufacturer	**Haojia Electronic (Shenzhen) Ltd. Fangmapu, Gui Hua Village, Guanlan, Baoan, Shenzhen, Guangdong 518110**
Laboratory performing the tests	**SIEMIC Nanjing (China) Laboratories NO.2-1,Longcang Dadao, Yuhua Economic Development Zone, Nanjing, China Tel:+86(25)86730128/86730129 Fax:+86(25)86730127 Email:info@siemic.com**
Test report reference number	**12020292-FCC-E**
Date EUT received	**March 31, 2012**
Standard applied	**FCC Part 15 Subpart B Class B: 2012**
Dates of test	**April 27, 2012**
No of Units :	**1#**
Equipment Category :	**Class B Emission Product**
Trade Name :	**Echo Baby**
Test Model :	**EX1-RX**
RF Operating Frequency (ies)	**Rx: 433.946MHz**
FCC ID：	**YTT-EX1EM1-RX**

3 MODIFICATION

NONE

4 TEST SUMMARY

The product was tested in accordance with the following specifications.
All testing has been performed according to below product classification:

Class B Emission Product

Test Results Summary

Emissions			
Test Standard	**Description**	**Product Class**	**Pass / Fail**
FCC Part 15 Subpart B Class B: 2012	AC Line Conducted Emissions	See Above	N/A
FCC Part 15 Subpart B Class B: 2012	Radiated Emissions	See Above	Pass

All measurement uncertainty is not taken into consideration for all presented test result.

5 MEASUREMENTS, EXAMINATION AND DERIVED RESULTS

5.1 AC Line Conducted Emissions Test Result

Note:

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR and Average detectors, are reported. All other emissions were relatively insignificant.
2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. Conducted Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 9kHz – 30MHz (Average & Quasi-peak) is ±3.86dB.
4. Environmental Conditions

Temperature	23ºC
Relative Humidity	50%
Atmospheric Pressure	1009mbar

5. Test Date : N/A
   Tested By : William Long

Test result: N/A (Battery operated)

5.2 Radiated Emissions Test Result

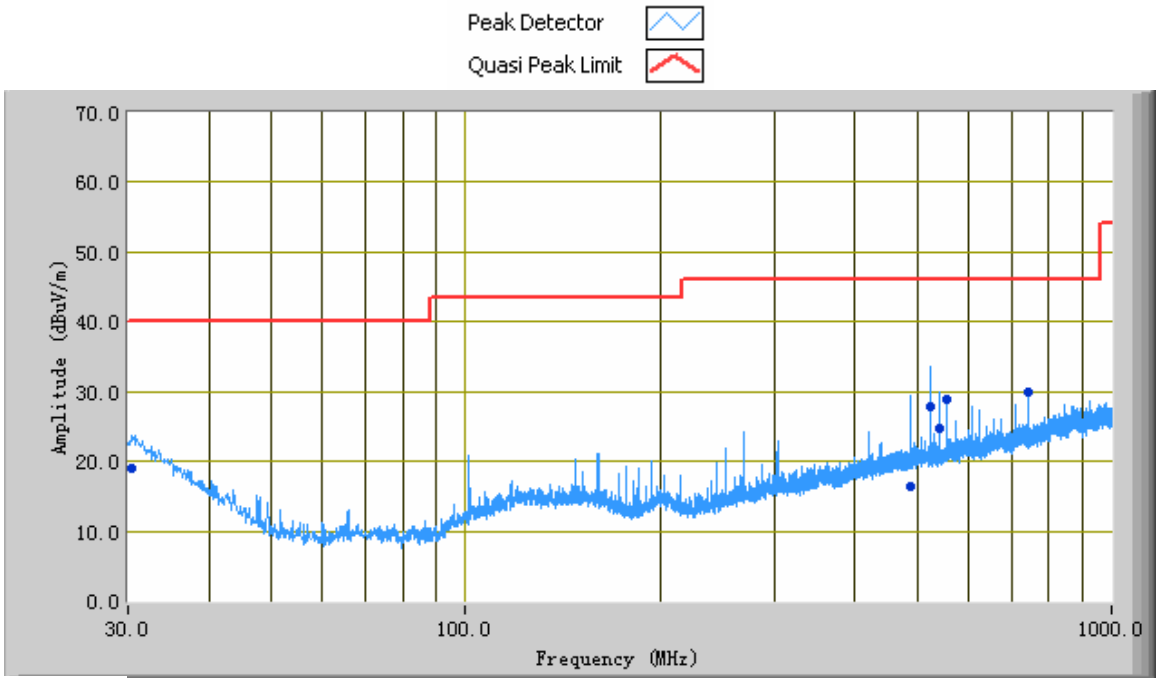
Note:

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. Radiated Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 1GHz (QP only @ 3m & 10m) is +5.6dB/-4.5dB (for EUTs < 0.5m X 0.5m X 0.5m).
4. Environmental Conditions

Temperature	23ºC
Relative Humidity	50%
Atmospheric Pressure	1009mbar

5. Test date : April 27, 2012
   Tested By : William Long

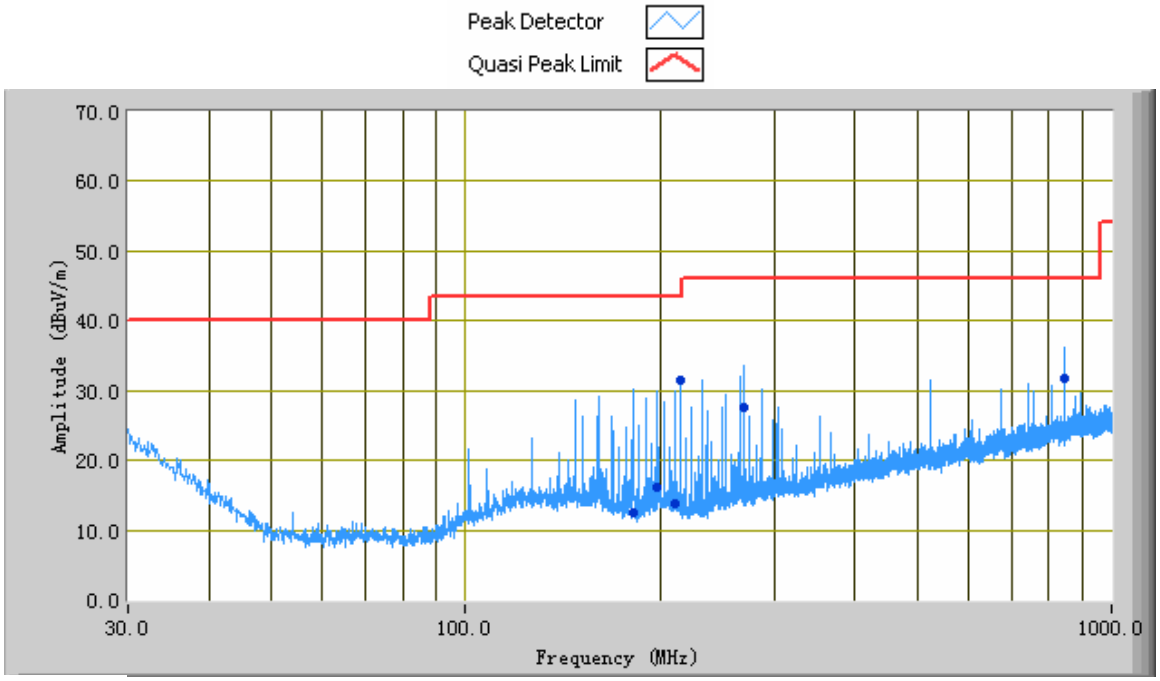
Test Result Complying For FCC Part 15 Subpart B Class B: 2012



Test Data

Frequency (MHz)	Quasi Peak (dBμV/m)	Azimuth	Polarity(H /V)	Height (cm)	Factors (dB)	Limit (dBμV/m)	Margin (dB)
523.17	27.86	255.00	V	101.00	-27.66	46.00	-18.14
742.55	29.82	103.00	V	101.00	-23.21	46.00	-16.18
540.07	24.69	198.00	V	114.00	-27.13	46.00	-21.31
30.49	19.09	90.00	V	242.00	-21.81	40.00	-20.91
489.45	16.42	240.00	V	253.00	-27.90	46.00	-29.58
556.94	28.78	188.00	V	110.00	-26.02	46.00	-17.22

Note: Radiation emission data test to 4340 MHZ， The data above 1 GHz which below 20 dB to the limit was not recorded.



Test Data

Frequency (MHz)	Quasi Peak (dBµV/m)	Azimuth	Polarity(H /V)	Height (cm)	Factors (dB)	Limit (dBµV/m)	Margin (dB)
843.83	31.70	138.00	H	100.00	-20.15	46.00	-14.30
270.03	27.46	164.00	H	100.00	-31.74	46.00	-18.54
215.17	31.51	195.00	H	154.00	-33.45	43.50	-11.99
181.42	12.45	0.00	H	123.00	-33.17	43.50	-31.05
198.29	16.08	183.00	H	130.00	-31.81	43.50	-27.42
210.96	13.68	189.00	H	164.00	-32.95	43.50	-29.82

Note: Radiation emission data test to 4340 MHZ，The data above 1 GHz which below 20 dB to the limit was not recorded.

Annex A. TEST INSTRUMENT & METHOD

Annex A.i. TEST INSTRUMENTATION & GENERAL PROCEDURES

Instrument	Model	Serial #	Calibration Due
Radiated Emissions			
R&S Receiver	ESPI 3	101216	08/25/2012
Hp Spectrum Analyzer	8563E	3821A09023	01/10/2013
HP Pre-amplifier	8447F	1937A01160	05/25/2012
Sunol Sciences, Inc. antenna	JB6	A121411	12/27/2012
A-INFOMW Horn Antenna (1~18GHz)	JXTXLB-10180	J2031081120092	06/24/2012
MITEQ Pre-Amplifier(0.1 ~ 18GHz)	AMF-7D-00101800-30-10P	1451710	05/25/2012

Annex A.ii. CONDUCTED EMISSIONS TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in Annex B.

2. The power supply for the EUT was fed through a 50Ω/50μH EUT LISN, connected to filtered mains.

3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.

4. All other supporting equipments were powered separately from another main supply.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.

2. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver.

3. High peaks, relative to the limit line, were then selected.

4. The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 KHz. For FCC tests, only Quasi-peak measurements were made; while for CISPR/EN tests, both Quasi-peak and Average measurements were made.

5. Steps 2 to 4 were then repeated for the LIVE line (for AC mains) or DC line (for DC power).

Sample Calculation Example

At 20 MHz limit = 250 μV = 47.96 dBμV

Transducer factor of LISN, pulse limiter & cable loss at 20 MHz = 11.20 dB

Q-P reading obtained directly from EMI Receiver = 40.00 dBμV
(Calibrated for system losses)

Therefore, Q-P margin = 47.96 – 40.00 = 7.96 i.e. **7.96 dB below limit**

Annex A. iii. RADIATED EMISSIONS TEST DESCRIPTION

EUT Characterisation

EUT characterisation, over the frequency range from 30MHz to 10th Harmonic, was done in order to minimise radiated emissions testing time while still maintaining high confidence in the test results.

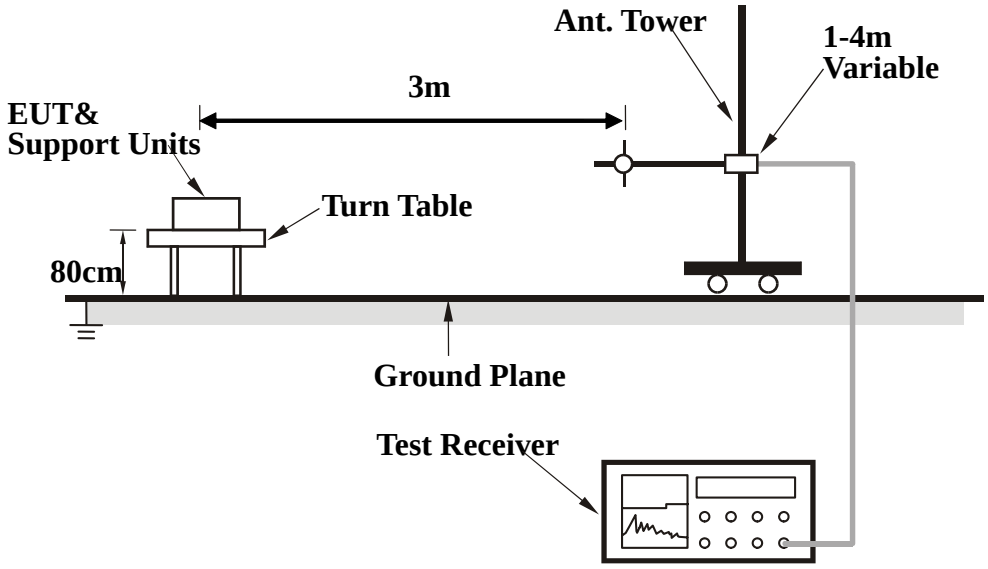
The EUT was placed in the chamber, at a height of about 0.8m on a turntable. Its radiated emissions frequency profile was observed, using a spectrum analyzer /receiver with the appropriate broadband antenna placed 3m away from the EUT. Radiated emissions from the EUT were maximised by rotating the turntable manually, changing the antenna polarisation and manipulating the EUT cables while observing the frequency profile on the spectrum analyzer / receiver. Frequency points at which maximum emissions occurred, clock frequencies and operating frequencies were then noted for the formal radiated emissions test at the Open Area Test Site (OATS).

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m X 1.0m X 0.8m high, non-metallic table.

2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the turntable.

3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.



Test Method

The following procedure was performed to determine the maximum emission axis of EUT:
1. With the receiving antenna is H polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
2. With the receiving antenna is V polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
3. Compare the results derived from above two steps. So, the axis of maximum emission from EUT was determined and the configuration was used to perform the final measurement.

Final Radiated Emission Measurement
1. Setup the configuration according to figure 1. Turn on EUT and make sure that it is in normal function.

2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a shielded chamber to determine the accurate frequencies of higher emissions will be checked on a open test site. As the same purpose, for emission frequencies measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.

3. For emission frequencies measured below and above 1 GHz, set the spectrum analyzer on a 100 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.

4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ◦ to 360 ◦ with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading.

5. Repeat step 4 until all frequencies need to be measured were complete.

6. Repeat step 5 with search antenna in vertical polarized orientations.

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	Peak	100 kHz	100 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Sample Calculation Example

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. For the limit is employed average value, therefore the peak value can be transferred to average value by subtracting the duty factor. The basic equation with a sample calculation is as follows:

Peak = Reading + Corrected Factor

where
Corr. Factor = Antenna Factor + Cable Factor - Amplifier Gain (if any)
And the average value is

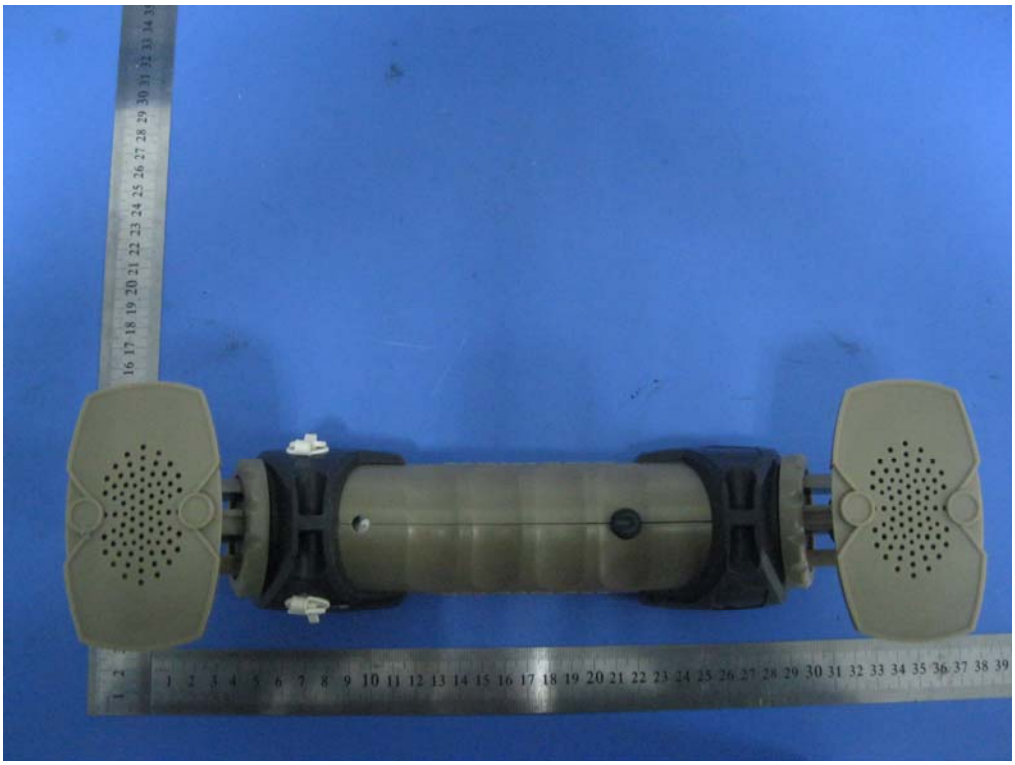
Average = Peak Value + Duty Factor or
Set RBW = 1MHz, VBW = 10Hz.

Note:
If the measured frequencies are fall in the restricted frequency band, the limit employed must be quasi peak value when frequencies are below or equal to 1 GHz. And the measuring instrument is set to quasi peak detector function.

Annex B. EUT AND TEST SETUP PHOTOGRAPHS

Annex B.i. Photograph 1: EUT External Photo

Top View of EUT



Bottom View of EUT

Left View of EUT

Right View of EUT

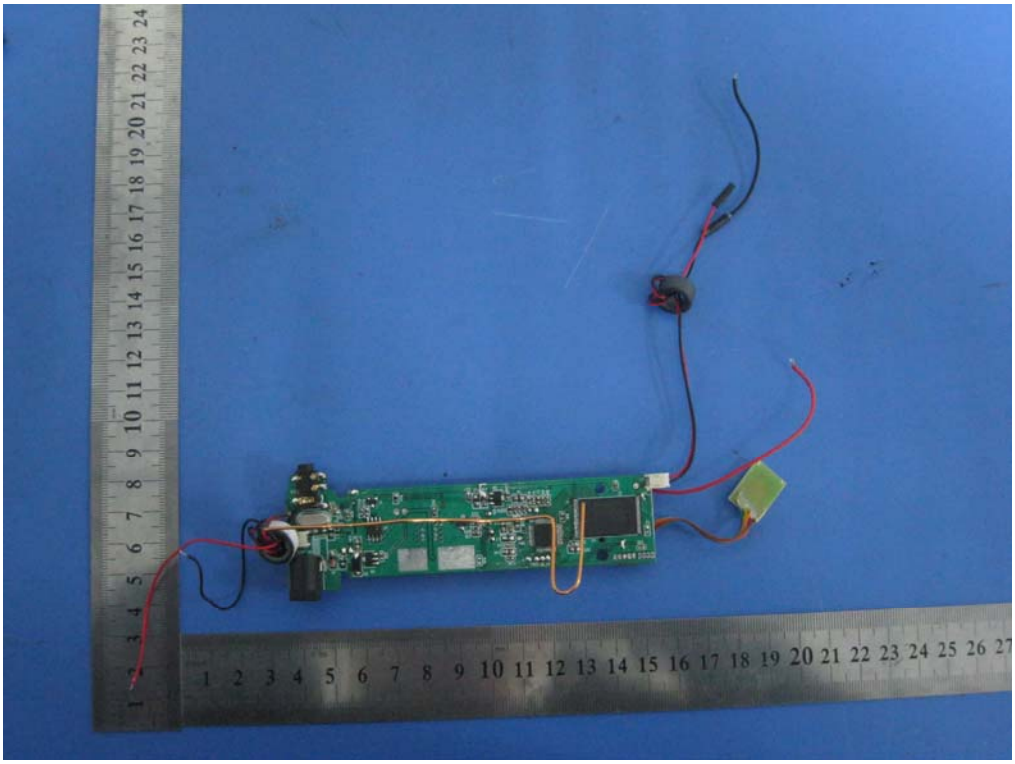
Annex B.ii. Photograph 2: EUT Internal Photo

EUT – Inside View 1#

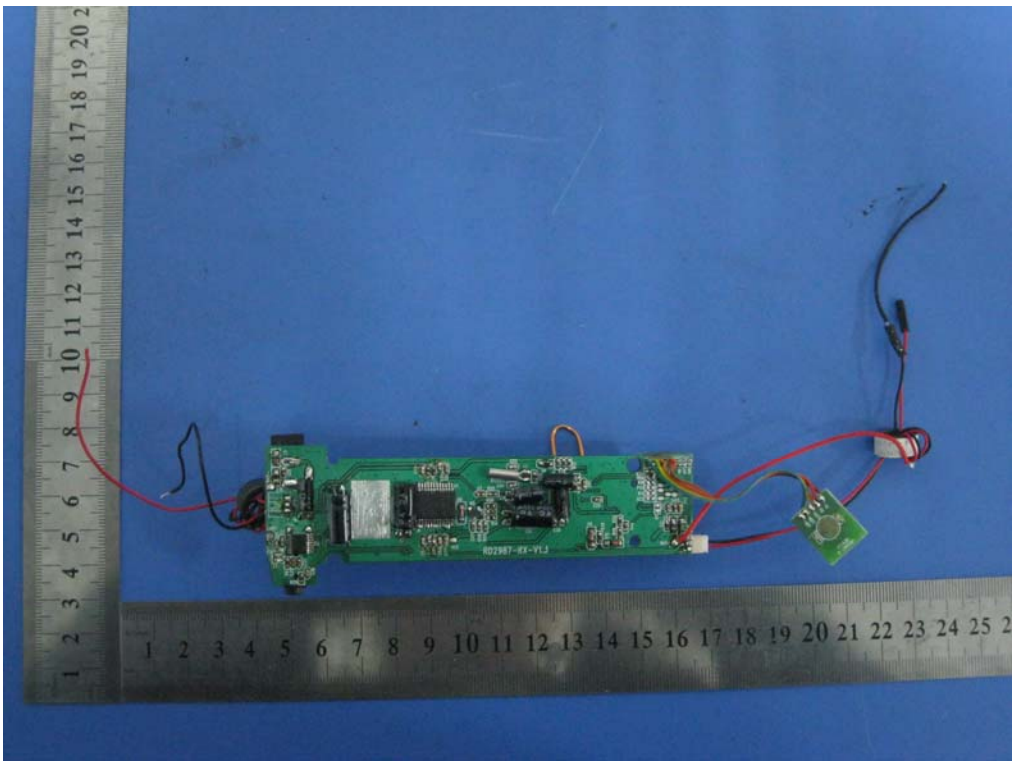
Rear View of Speaker

EUT – Inside View 2#

Front View of PCB Board

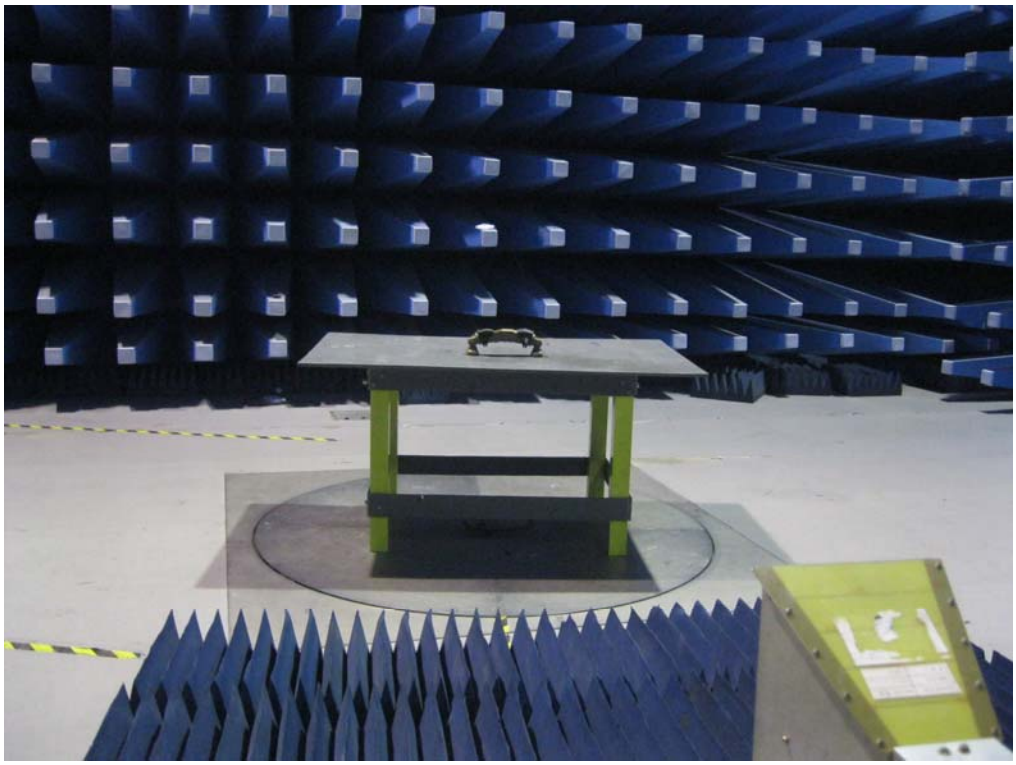


Front View of PCB Board 1#

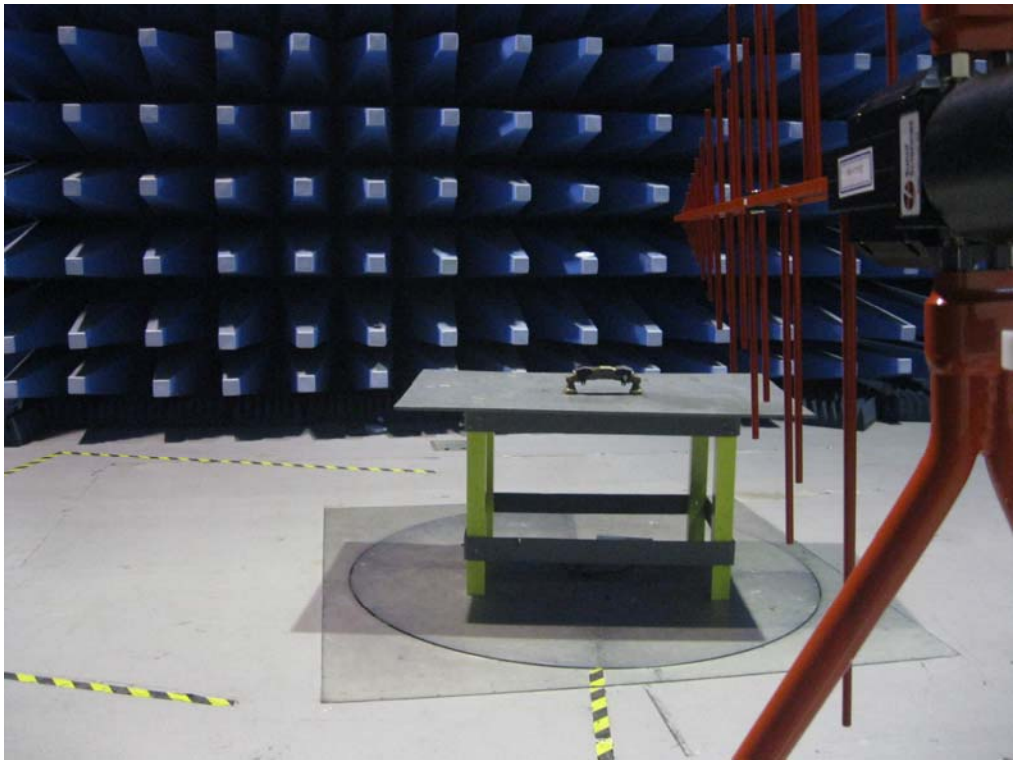


Rear View of PCB Board 1#

Annex B.iii. Photograph : Test Setup Photo



Radiated Emission Test Setup Front View （1GHz Above）



Radiated Emission Test Setup Front View （1GHz Below）

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

EUT TEST CONDITIONS

Annex C. i. SUPPORTING EQUIPMENT DESCRIPTION

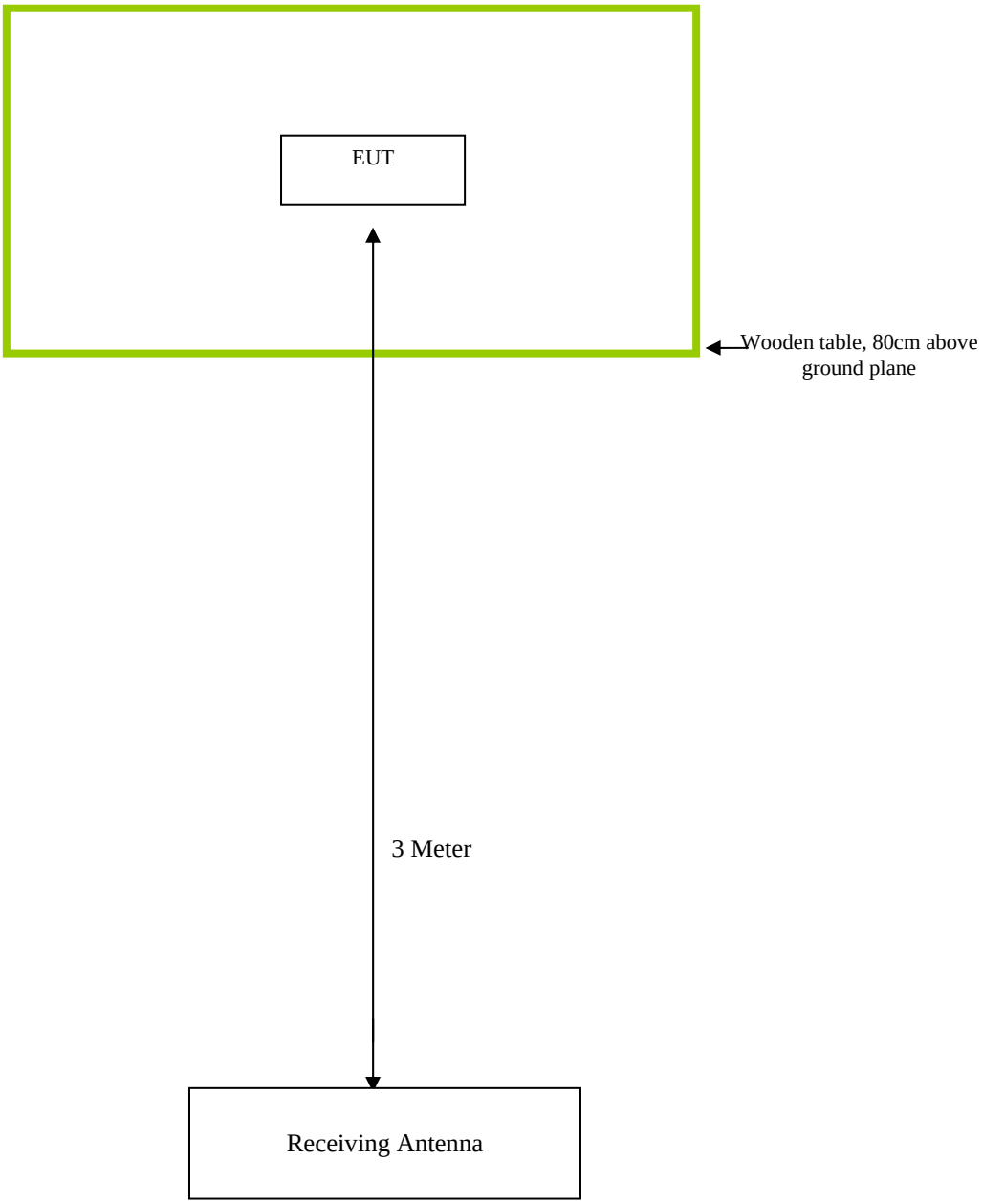
The following is a description of supporting equipment and details of cables used with the EUT.

Equipment Description (Including Brand Name)	Model & Serial Number	Cable Description (List Length, Type & Purpose)
N/A	N/A	N/A

Block Configuration Diagram for Conducted Emission

N/A

Block Configuration Diagram for Radiated Emission



Annex C.ii. EUT OPERATING CONDITIONS

The following is the description of how the EUT is exercised during testing.

Test	Description Of Operation
Emissions Testing	**The EUT is working normally to stimulate the worst case.**

Annex D. USER MANUAL / BLOCK DIAGRAM / SCHEMATICS / PART LIST

Please see attachment

Annex E. Declaration of Similarity

EX1-RX has the same design as EM1-RX.

1. EX1-RX has two speakers, but EM1-RX just has one speaker.
2. EX1-RX 's RC LCD will show two speaker icons, but EM1-RX 's RC LCD just show one speaker icon EX1-RX
3. EM1-RX has no DC output.
4. EX1-RX has 80 sounds, but EM1-RX has 60 sounds.

EX1-TX has the same design as EM1-TX. The only differences are the model name.

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Tel: 1-972-352-6600 ext. 129 Contact Person & Position: Jin Tan, Director of Quality, jin.tan@feeders.com

Signature: