



# FCC PART 15 CLASS B

## MEASUREMENT AND TEST REPORT

For

### YMAX Communications Corp.

5700 Georgia Avenue, West Palm Beach, Florida, USA

**FCC ID: Y79K1103**  
**Model Number: K1103**

<b>This Report Concerns:</b> Amended Report	<b>Equipment Name:</b> Magicjack GO
<b>Test Engineer:</b> Toby Ren	<i>Toby Ren</i>
<b>Report Number:</b> RSCA140423001	
<b>Report Date:</b> 2014-04-24	
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**DOCUMENT REVISION HISTORY**

Revision Number	Report Number	Description of Revision	Date of Revision
0	RSC110121002	Original Report	2011-07-01
2	RSCA140423001	Amended Report	2014-04-24

Note: This report was the amended report application for changing EUT’s adapter, product name and changing EUT enclosure.

1. Changing EUT’s adapter

Original Adapter Photo



Current Adapter Photo



Details were presented in EUT photos.

2. Changing product name, the original was “Magicjack plus”; the current is “Magicjack GO”.

3. Changing product external enclosure.

Original external enclosure



Current external enclosure



*Except part of test data for adaptor mode, the above changes will affect none of other test data. All other test data and photos were referred to original report No.: RSC110121001, which was explained in permission changing letter.*

*Part of test data for Adapter mode have been tested, details were presented in this report.*

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## 1 - General Information

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

The **YMAX Communications Corp.**'s product, model number: **K1103** (FCC ID: **Y79K1103**) or the "EUT" as referred to in this report is the **Magicjack GO**, which had the plastic enclosure.

### 1.2 Mechanical Description of EUT

The EUT is measured approximately 75mm L x 38 mm W x 20 mm H.  
Rated input voltage: DC 5V.

*AC Adaptor:*

*Input: 100-240V ~ 50/60Hz, 0.2A*

*Output: 5.0V---1.0A*

*\*All measurement and test data in this report were gathered from final production sample, serial number: 140417001(Provided by BACL, Chengdu). It may have deviation from any other sample. The EUT supplied by the applicant was received on 2014-04-17, and EUT conformed to test requirement.*

### 1.3 Objective

The following CLASS B report is prepared on behalf of **YMAX Communications Corp.**, in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective of the manufacturer is to demonstrate compliance with FCC Part 15 CLASS B limits.

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

No Related Submittals.

### 1.5 Test Methodology

All measurements contained in this report are conducted with ANSI C63.4-2003, 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 is performed at BACL. The radiated testing is performed at an antenna-to-EUT distance of 3 Meters.

## **1.6 Test Facility**

The test site used by BACL to collect test data is located in the Room 5040, HuiLongWan Plaza, No. 1, ShaWan Road, JinNiu District, ChengDu, China

Test site at BACL 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 July 31, 2009. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 560332. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

## 2 - System Test Configuration

### 2.1 Justification

The system is configured for testing in a typical fashion (as a normally used by a typical user).

### 2.2 EUT Exercise Software

None

### 2.3 Special Accessories

No special accessories were supplied by BACL.

### 2.4 Equipment Modifications

No modification to the EUT was made by BACL to make sure the EUT comply with applicable limits.

### 2.5 Equipment under Test (EUT) General Description

Applicant	Description	Model Number	Serial Number	FCC ID
YMAX Communications Corp.	Magicjack GO	K1103	140417001	Y79K1103

### 2.6 Local Support Equipment List and Details

Manufacturer	Description	Model Number	Serial Number
TCL	Phone	HCD868(19)TSDL	010Y00ZK9C0114300121
TP-LINK	Router	TR 300M	13839934515

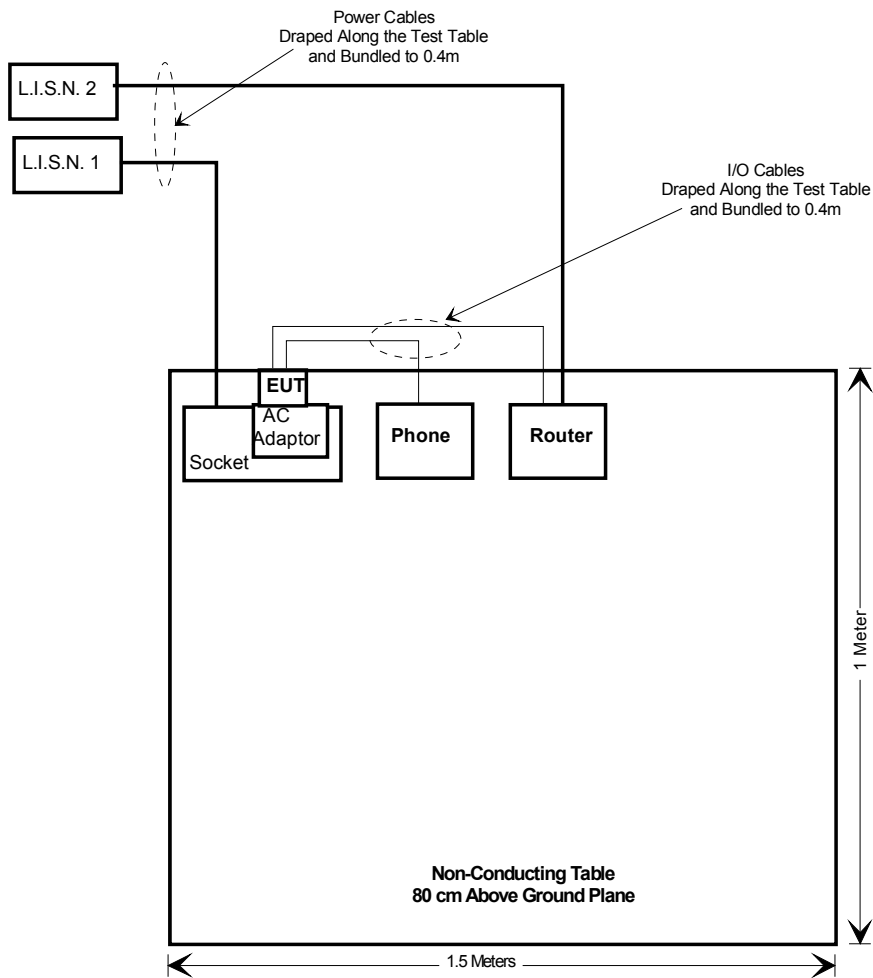
### 2.7 External I/O Cable

Cable Description	Length (M)	From	To
RJ11 Cable	0.5	EUT	Phone
RJ45 Cable	1	EUT	Router

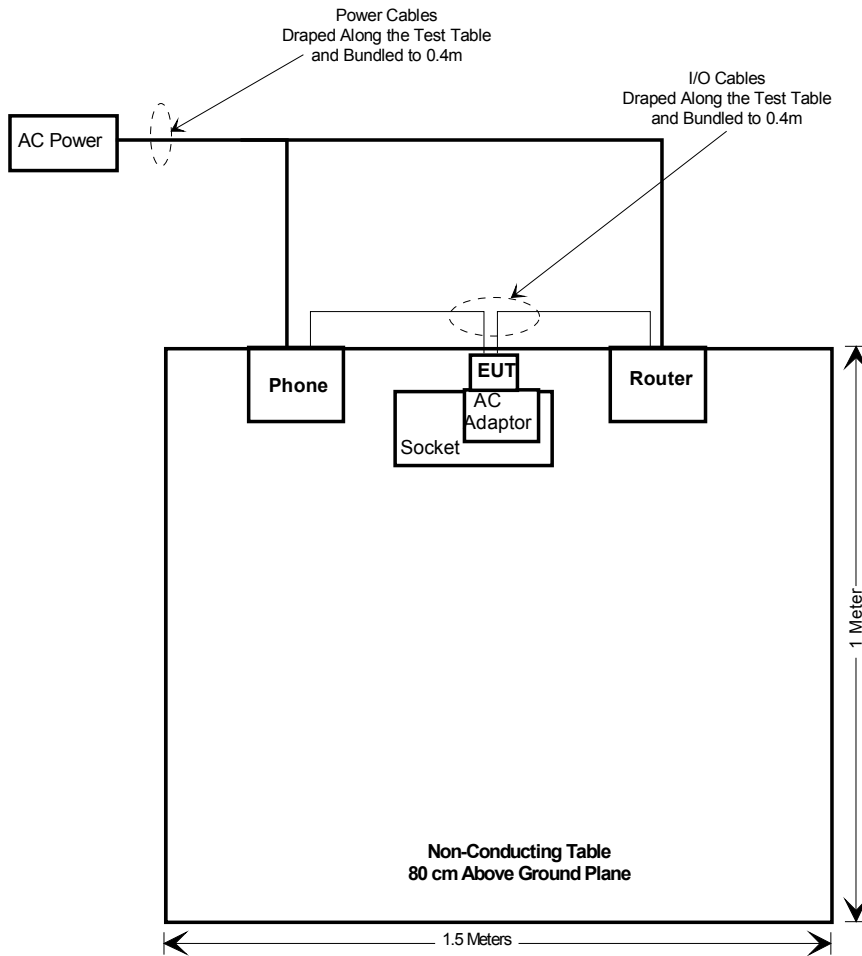
## 2.8 Block Diagram of Test Setup

### For Adaptor Mode

Conducted emission:



Radiated emission:





### 3 - Summary of Test Results

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Standard	Description	Result
FCC §15.107	Conducted Emission	Compliance
FCC §15.109	Radiated Emission	Compliance
FCC §15.33	Frequency Range of Radiated Measurements	Compliance
FCC §15.27	Special Accessories	Compliance

## 4 - FCC §15.107 Conducted Emission Test

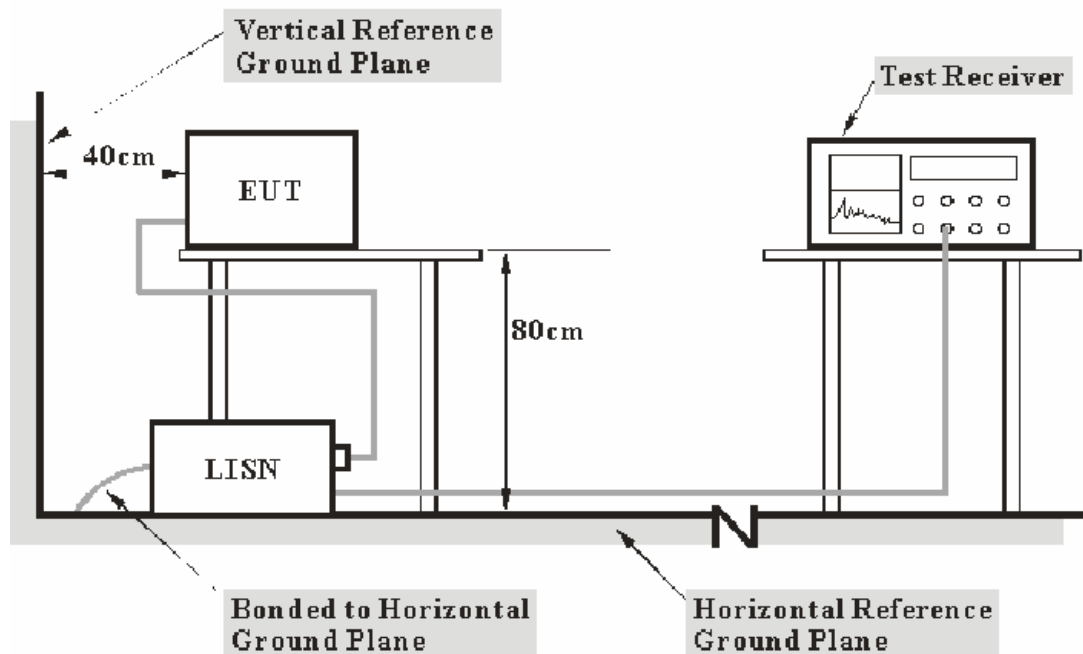
### 4.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMI. The factors contributing to uncertainties are EMI Test Receiver, cable loss, and L.I.S.N.

Based on NIS 81, the Treatment of Uncertainty in EMI Measurements, the best estimate of the uncertainty of any conducted emissions measurement at BACL is  $\pm 2.4$  dB.

### 4.2 EUT Setup

The measurement is performed at BACL, using the same setup per ANSI C63.4-2003 measurement procedure. The specification used is the FCC Part 15 Class B limits.



- Note:**
1. Support units were connected to second LISN.
  2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The power cables and excess cables shall be folded at the cable center into a bundle no longer than 40 cm.

The separation between the neighbouring unit & EUT is 10 cm in the horizontal.

DC 5V power source was provided to EUT through AC adaptor.

### 4.3 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

<i>Frequency Range</i>	<i>IF B/W</i>
150 kHz – 30 MHz	9 kHz

### 4.4 Test Procedure

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant with all installation combination.

All data are recorded in the Quasi-peak and Average detection mode. Quasi-peak readings are distinguished with a "QP". Average readings are distinguished with an "AV".

The EUT is in the normal operating mode during the final qualification test to represent the worst cases results.

### 4.5 Test Equipment List and Details

Manufacturer	Description	Model Number	Serial Number	Calibration Date	Calibration Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	10028	2013-08-22	2014-08-21
L.I.S.N.	Rohde & Schwarz	ENV216	3560.6550.06	2013-07-31	2014-07-31
L.I.S.N.	Rohde & Schwarz	ENV216	3560.6550.12	2014-02-18	2015-02-17

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

### 4.6 Test Environment Conditions

Temperature:	24 °C
Relative Humidity:	53 %
ATM Pressure:	100.7 kPa

*The testing was performed by Toby Ren on 2014-04-17.*

#### 4.7 Summary of Test Results

According to the data in the following, the EUT complied with the FCC Part 15 for a Class B device, with the *worst* margin reading of:

##### For Adaptor Mode

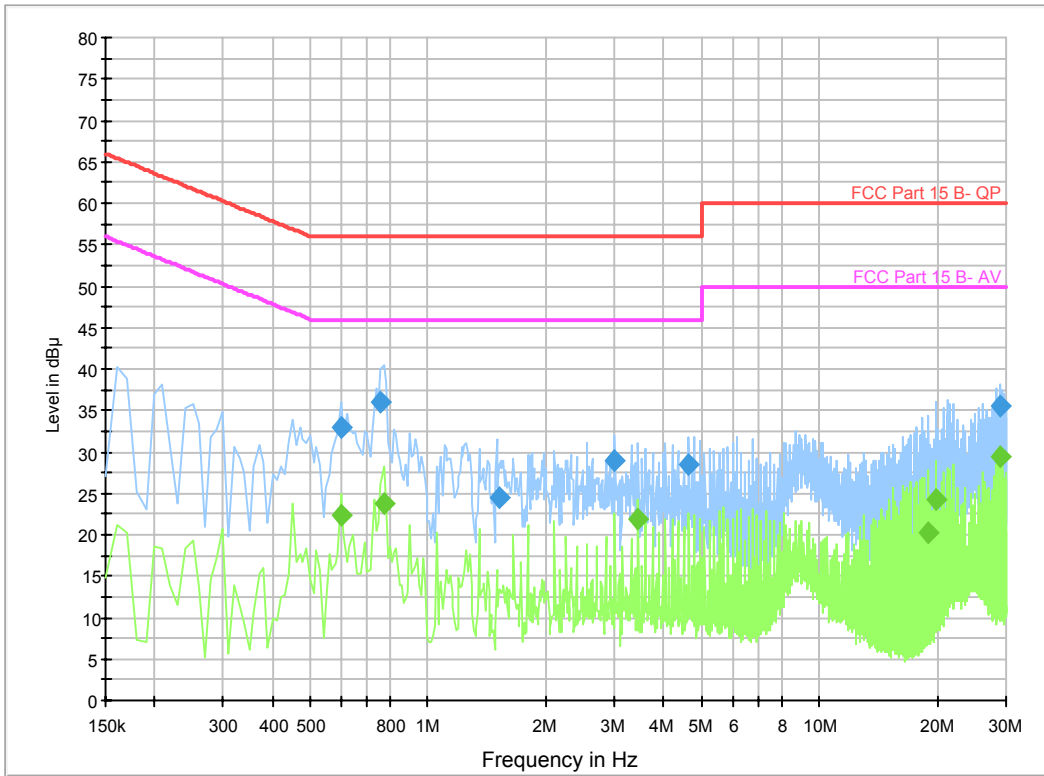
**20.10 dB at 0.76 MHz** in the **Line** conductor mode

#### 4.8 Conducted Emission Test Data and Plots (For Adaptor Mode)

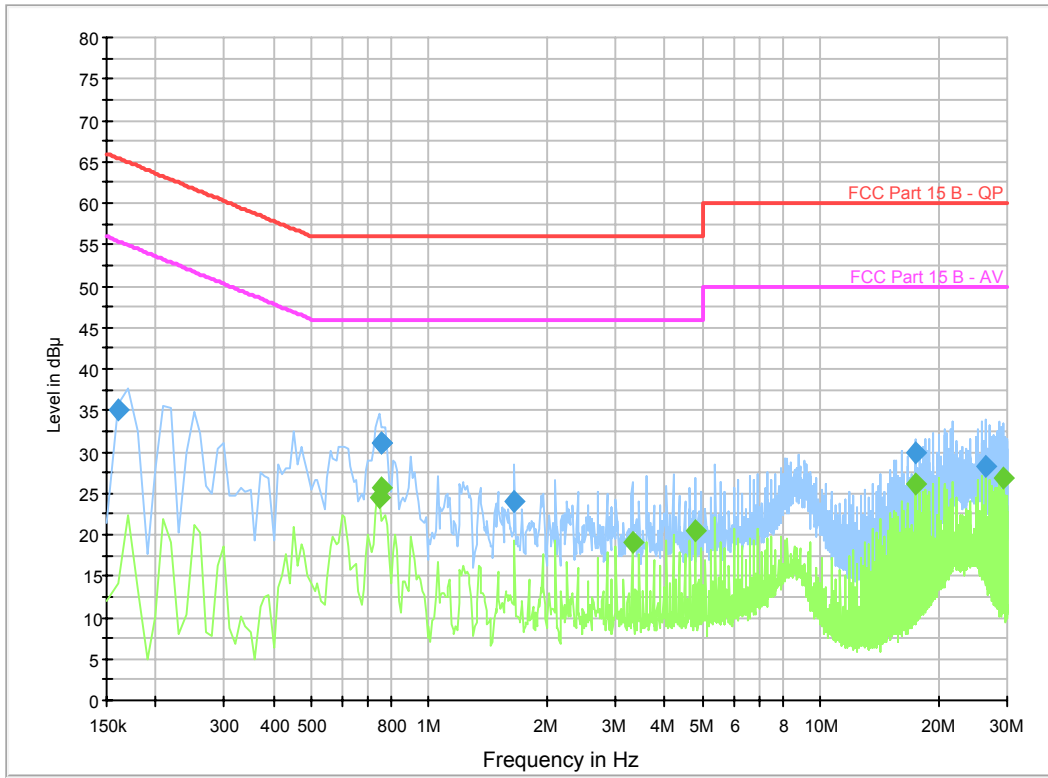
*Test mode: operating mode*

LINE CONDUCTED EMISSIONS				FCC PART 15 CLASS B	
Frequency	Amplitude	Detector	Phase	Limit	Margin
MHz	dB $\mu$ V	QP/Ave/Peak	Line/Neutral	dB $\mu$ V	dB
0.6	33	QP	Line	56.00	23.00
0.76	35.9	QP	Line	56.00	20.10
1.52	24.4	QP	Line	56.00	31.60
3.01	29	QP	Line	56.00	27.00
4.65	28.6	QP	Line	56.00	27.40
29.1	35.6	QP	Line	60.00	24.40
0.6	22.3	AV	Line	46.00	23.70
0.77	23.6	AV	Line	46.00	22.40
3.45	21.9	AV	Line	46.00	24.10
18.9	20.2	AV	Line	50.00	29.80
19.8	24.1	AV	Line	50.00	25.90
29.1	29.5	AV	Line	50.00	20.50
0.16	35	QP	Neutral	65.46	30.46
0.76	31.1	QP	Neutral	56.00	24.90
0.76	31.2	QP	Neutral	56.00	24.80
1.65	24.1	QP	Neutral	56.00	31.90
17.4	29.8	QP	Neutral	60.00	30.20
26.55	28.3	QP	Neutral	60.00	31.70
0.75	24.4	AV	Neutral	46.00	21.60
0.76	25.5	AV	Neutral	46.00	20.50
3.3	19	AV	Neutral	46.00	27.00
4.8	20.4	AV	Neutral	46.00	25.60
17.4	26.2	AV	Neutral	50.00	23.80
29.4	26.7	AV	Neutral	50.00	23.30

120 V/60 Hz, Line



120 V/60 Hz, Neutral



## 5 - FCC §15.109 Radiated Emission Test

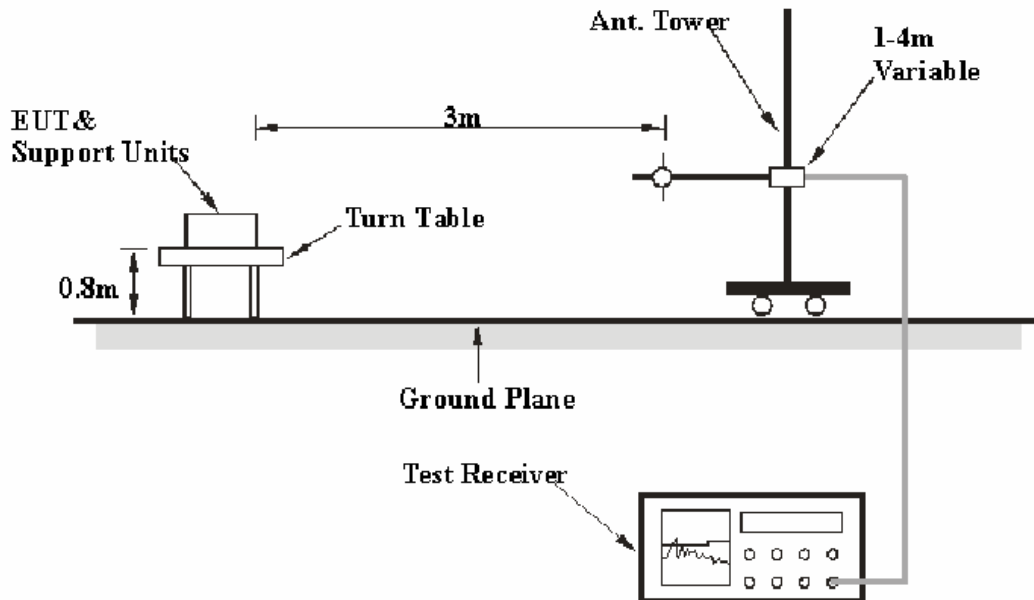
### 5.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMI. The factors contributing to uncertainties are EMI Test Receiver, 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 NIS 81, the Treatment of Uncertainty in EMI Measurements, the best estimate of the uncertainty of a radiation emissions measurement at BACL is  $\pm 4.0$  dB.

### 5.2 EUT Setup

The radiated emission tests are performed at BACL, using the setup in accordance with the ANSI C63.4-2003. The specification used is the FCC Part 15 Class B limits.



The excess cables shall be folded at the cable center into a bundle no longer than 40 cm.

The separation between the neighbouring unit & EUT is 10 cm in the horizontal.

DC 5V power source was provided to EUT through AC adaptor.

### 5.3 EMI Test Receiver Setup

The system was investigated from 30 MHz to 1 GHz

During the radiated emission test, the EMI test receiver is set with the following configurations:

<u>Frequency Range</u>	<u>RBW</u>	<u>Video B/W</u>	<u>Detector</u>
30 MHz – 1000 MHz	120 kHz	300 kHz	QP

### 5.4 Test Procedure

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant with all installation combinations.

All data were recorded in the quasi-peak detection mode.

The EUT was in the normal operating mode during the final qualification test to represent the worst case results.

### 5.5 Corrected Amplitude & Margin Calculation

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

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

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 7 dB $\mu$ V/m below the maximum limit for FCC Part 15 Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{FCC Part 15 Class B Limit} - \text{Corr. Ampl.}$$

### 5.6 Test Equipment List and Details

Description	Manufacturer	Model Number	Serial Number	Calibration Date	Calibration Due Date
Amplifier	Agilent	8447D	2944A10442	2013-07-23	2014-07-22
EMI Test Receiver	Rohde & Schwarz	ESCI	10028	2013-08-22	2014-08-21
Broadband Antenna	Sunol Sciences	JB3	A101808	2013-04-10	2015-04-09
Semi-Anechoic Chamber	EMCT	966	N/A	2012-06-19	2015-06-18

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



## 5.7 Test Environment Conditions

Temperature:	24 °C
Relative Humidity:	53 %
ATM Pressure:	100.7 kPa

*The testing was performed by Toby Ren on 2014-04-17.*

## 5.8 Summary of Test Results

According to the data in the following, the EUT complied with the FCC Part 15 Class B standards, and had the worst margin of:

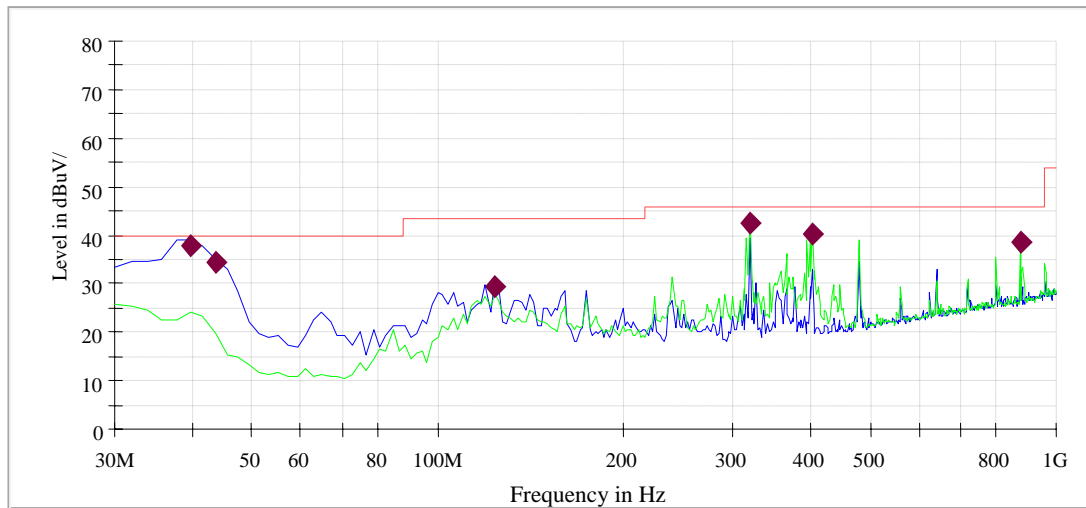
### For Adaptor Mode

**3.1 dB at 39.758479 MHz** in the **Vertical** polarization for Normal Operating Mode, 30 MHz to 1000 MHz, 3 meters

**5.9 Radiated Emission Test Data and Plots (For Adaptor Mode)**

Frequency (MHz)	Corr. Ampl (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity (H/V)	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
39.758479	36.9	120.000	100.0	V	359.0	-11.6	3.1	40.0
43.214541	33	120.000	110.0	V	331.0	-14.6	7.0	40.0
123.306613	28.2	120.000	102.0	V	130.0	-11.0	15.3	43.5
319.9543424	41.0	120.000	131.0	H	267.0	-12.4	5.0	46.0
403.226453	39.2	120.000	225.0	H	196.0	-10.8	6.8	46.0
875.415424	36.5	120.000	128.0	H	350.0	-4.5	9.5	46.0

Electric Field Strength with Scans



## 6 - FCC Labeling Requirements

### 6.1 As per FCC §15.19: Labeling Requirements (a) (3)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.  
FCC ID: Y79K1103.

### 6.2 Suggested Label Location on EUT



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