



NVLAP LAB CODE 200707-0



FCC PART 15B

MEASUREMENT AND TEST REPORT

For

Kenyazi Investment Limited

Flat A-1, 8/F., Yip Fung Industrial Building, 28-36 Kwai Fung Crescent,
Kwai Fong, N.T Hong Kong

FCC ID: PKH-WLNS67811RX

Report Type: Original Report	Product Type: Wireless Lights & Sounds of Christmas (Receiver)
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Report Number: <u>RSZ08082202</u>	
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1 GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

The *Kenyazi Investment Limited*'s product, model *WLNS67811 (RX)*, or the "EUT" as referred to in this report is a *Wireless Lights & Sounds of Christmas receiver*, rated input voltage: 120V/60Hz.

1.2 Mechanical Description of EUT

The Kenyazi Investment Limited's product, model number: *WLNS67811 (RX)*, measures approximately 12.0 cm L x 7.0 cm W x 8.10 cm H

** All measurement and test data in this report was gathered from production sample serial number: 0808050 (Assigned by BACL, Shenzhen). The EUT was received on 2008-08-22.*

1.3 EUT Photograph



1.4 Objective

The following test report is prepared on behalf of *Kenyazi Investment Limited* 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 determine compliance with FCC Part15B.

1.5 Related Submittal(s)/Grant(s)

No related submittal(s).

1.6 Test Methodology

All measurements contained in this report were 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 was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

1.7 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 November 04, 2004. 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.: 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 a National Institute of Standards and Technology (NIST) accredited laboratory, under the 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>

2 SYSTEM TEST CONFIGURATION

2.1 Justification

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

2.2 EUT Exercise Software

N/A

2.3 Special Accessories

N/A

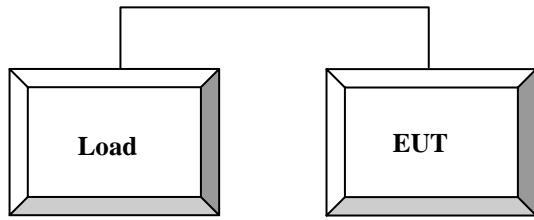
2.4 Equipment Modifications

No modifications were made to the unit tested.

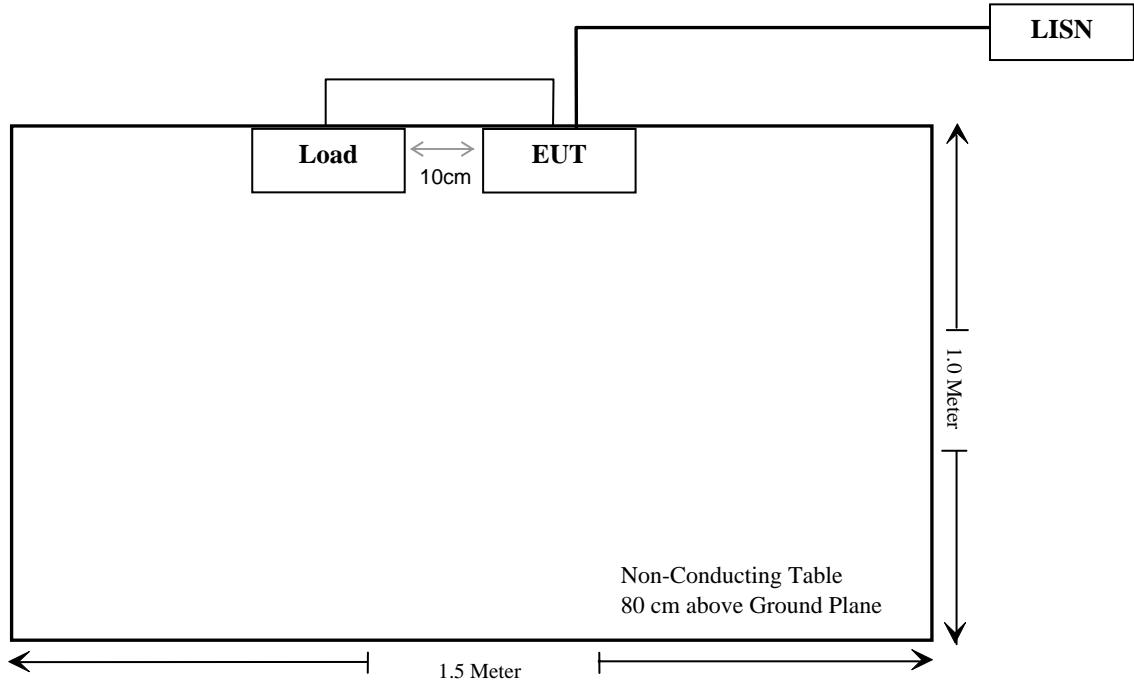
2.5 External I/O Cable

Cable Description	Length (m)	From/Port	To
Unshielded AC Cable	0.33	EUT	LISN

2.6 Configuration of Test Setup



2.7 Block Diagram of Test Setup



3 SUMMARY OF TEST REPORT

FCC Rules	Description	Results
§15.107	Conducted Emissions	Compliant
§15.109	Radiated Emissions	Compliant*

*Note: * Within measurement uncertainty.*

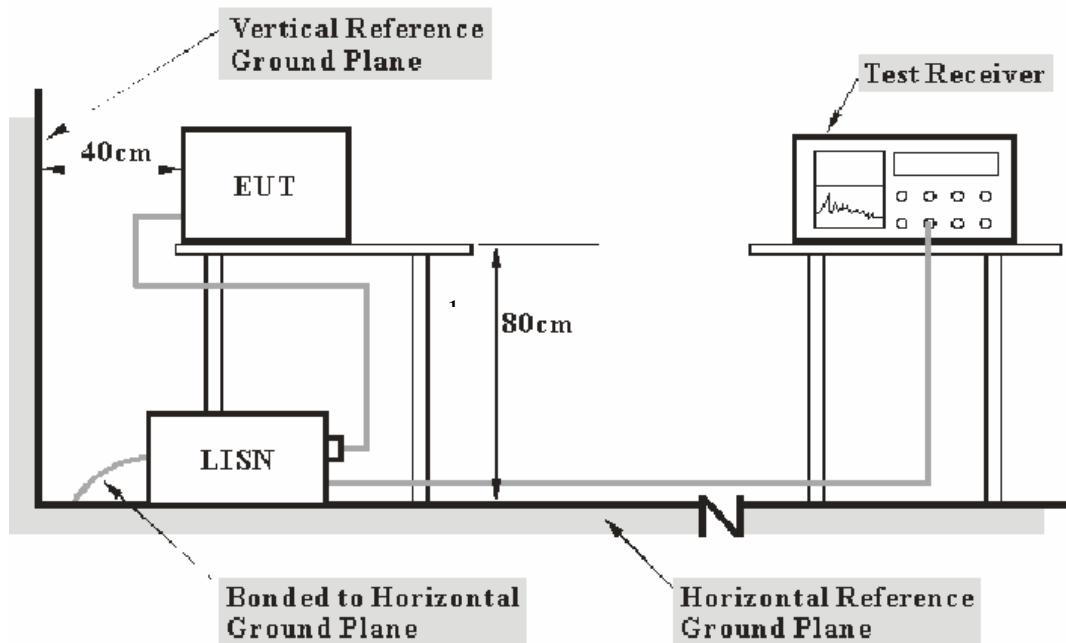
4 CFR47 §15.107 - CONDUCTED EMISSIONS

4.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is ± 2.4 dB.

4.2 EUT Setup



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 setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The EUT was connected to a 120 VAC/60 Hz power source.

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:

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

4.4 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12208	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCS30	DE25330	2008-03-25	2009-03-25
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2008-03-25	2009-03-25

* Com-Power's LISN were used as the supporting equipment.

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

4.5 Test Procedure

During the conducted emission test, the host PC was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

4.6 Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15 Class B, with the worst margin reading of:

5.91 dB at 0.165 MHz in the **Line** conductor mode.

4.7 Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56%
ATM Pressure:	100.2kPa

The testing was performed by Alvin Huang on 2008-08-25.

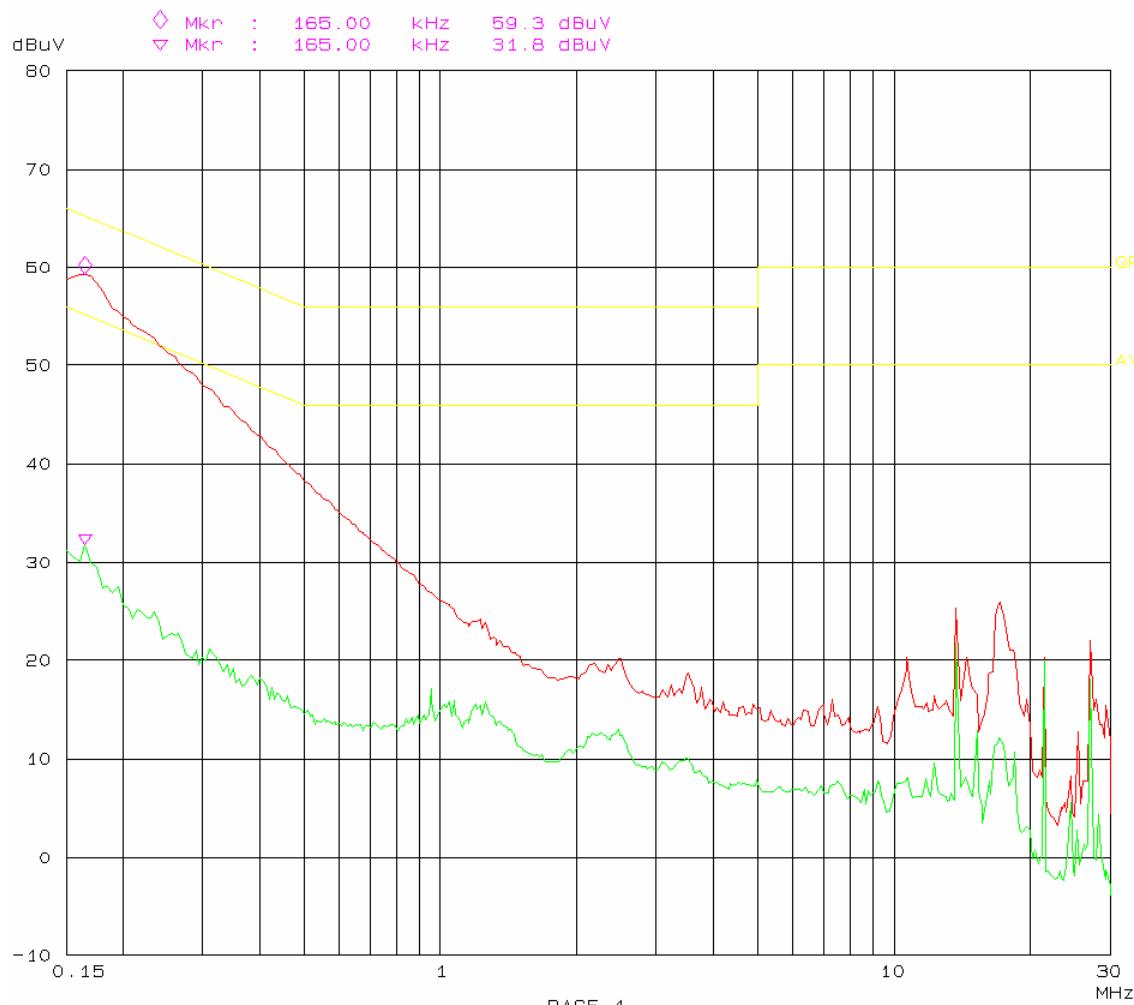
Line Conducted Emissions				FCC Part15.107	
Frequency (MHz)	Amplitude (dB μ V)	Detector (QP/AV)	Conductor (Neutral/Line)	Limit (dB μ V)	Margin (dB)
0.165	59.30	QP	Line	65.21	5.91
0.235	52.80	QP	Line	62.27	9.47
0.150	55.90	QP	Neutral	66.00	10.10
0.385	43.40	QP	Line	58.17	14.77
0.165	31.80	AV	Line	55.21	23.41
21.505	25.20	AV	Neutral	50.00	24.80
0.235	24.90	AV	Line	52.27	27.37
13.740	21.80	AV	Line	50.00	28.20
0.150	27.40	AV	Neutral	56.00	28.60
0.385	18.50	AV	Line	48.17	29.67
27.125	18.10	AV	Line	50.00	31.90
17.125	26.00	QP	Line	60.00	34.00
21.505	25.40	QP	Neutral	60.00	34.60
13.740	25.30	QP	Line	60.00	34.70
20.075	24.40	QP	Neutral	60.00	35.60
17.450	24.20	QP	Neutral	60.00	35.80
14.495	22.80	QP	Neutral	60.00	37.20
20.000	12.50	AV	Neutral	50.00	37.50
17.085	12.20	AV	Line	50.00	37.80
27.185	22.00	QP	Line	60.00	38.00
14.480	10.40	AV	Neutral	50.00	39.60
10.740	20.30	QP	Neutral	60.00	39.70
17.325	10.00	AV	Neutral	50.00	40.00
10.770	9.70	AV	Neutral	50.00	40.30

4.8 Plot(s) of Test Data

Plot(s) of Test Data is presented hereinafter as reference.

Conducted Emission
FCC 15

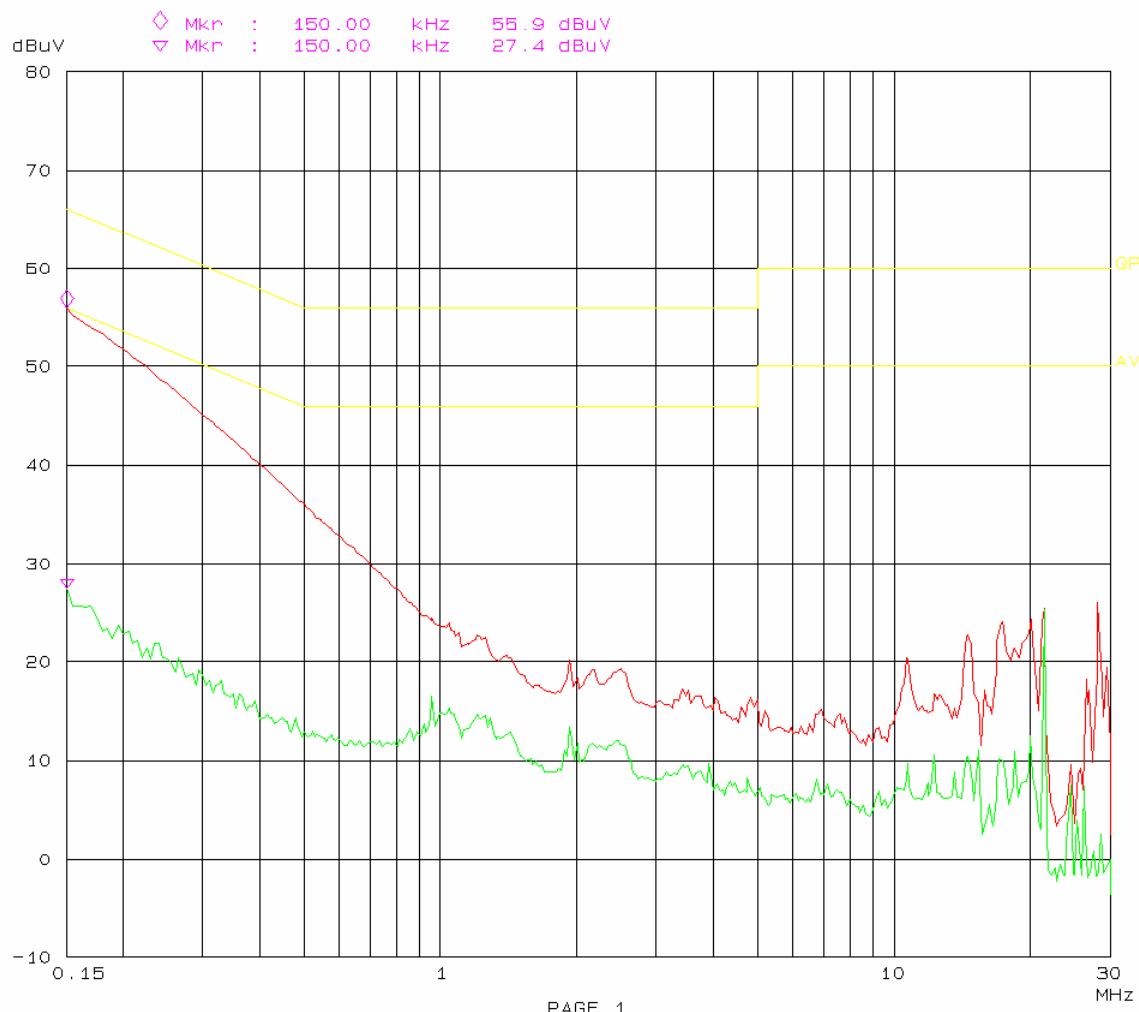
EUT: RECEIVER M/N: WLNS67811
Manuf: NEW KENYAZI
Op Cond: RECEIVING
Operator: Alvin
Test Spec: AC120V60HZ Line
Comment: Temp: 25 Hum: 56%



Conducted Emission
FCC 15

25. Aug 08 18: 40

EUT: RECEIVER M/N: WLNS67811
Manuf: NEW KENYAZI
Op Cond: RECEIVING
Operator: Alvin
Test Spec: AC120V60HZ Neutral
Comment: Temp: 25 Hum: 56%



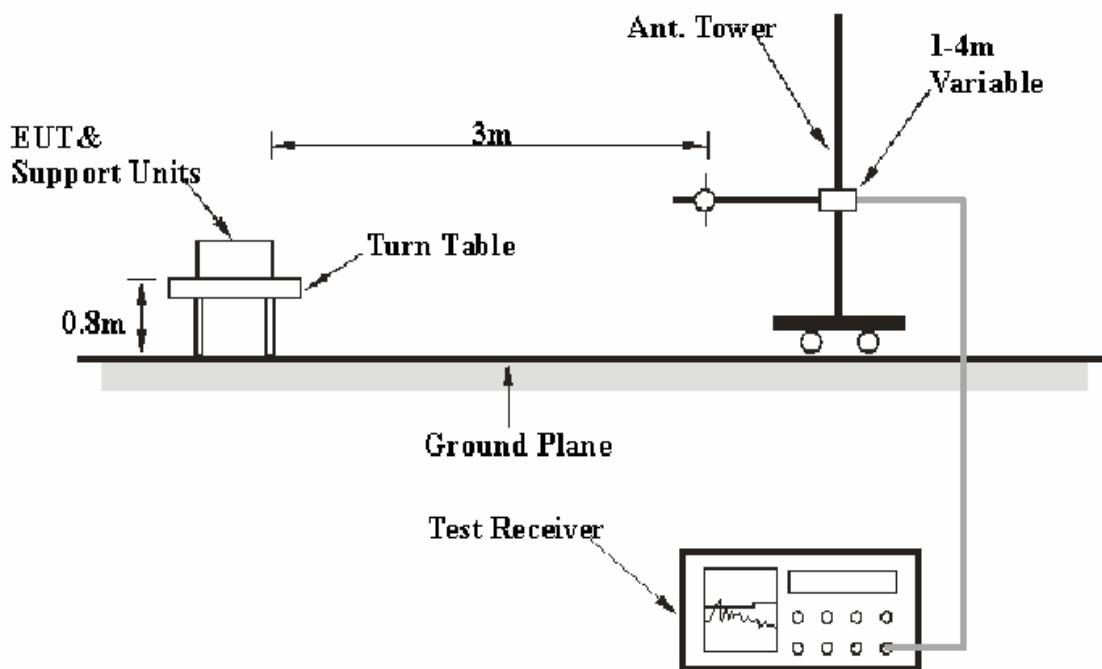
5 CFR47 §15.109 - RADIATED EMISSIONS

5.1 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 NIS 81, 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.

5.2 EUT Setup



The radiated emission tests were performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC PART 15 CLASS B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The EUT was connected to a 120 VAC/60 Hz power source.

5.3 EMI Test Receiver Setup

The system was investigated from 30 MHz to 1000 MHz.

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

Frequency Range	RBW	Video B/W	IF B/W
30 – 1000 MHz	100 kHz	300 kHz	120 kHz

5.4 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	8447E	1937A01046	2007-11-15	2008-11-15
Rohde & Schwarz	EMI Test Receiver	ESCI	100224	2007-10-16	2008-10-16
Sunol Sciences	Bilog Antenna	JB1	A040904-2	2008-08-14	2009-08-14

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

5.5 Test Procedure

For the radiated emissions test, the host PC was connected to AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the Quasi-peak detection mode.

5.6 Corrected Amplitude & Margin Calculation

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

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

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 7dB below the limit. The equation for margin calculation is as follows:

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

5.7 Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.109, with the worst margin reading of:

2.80 dB at 871.389425 MHz in the Horizontal polarization.

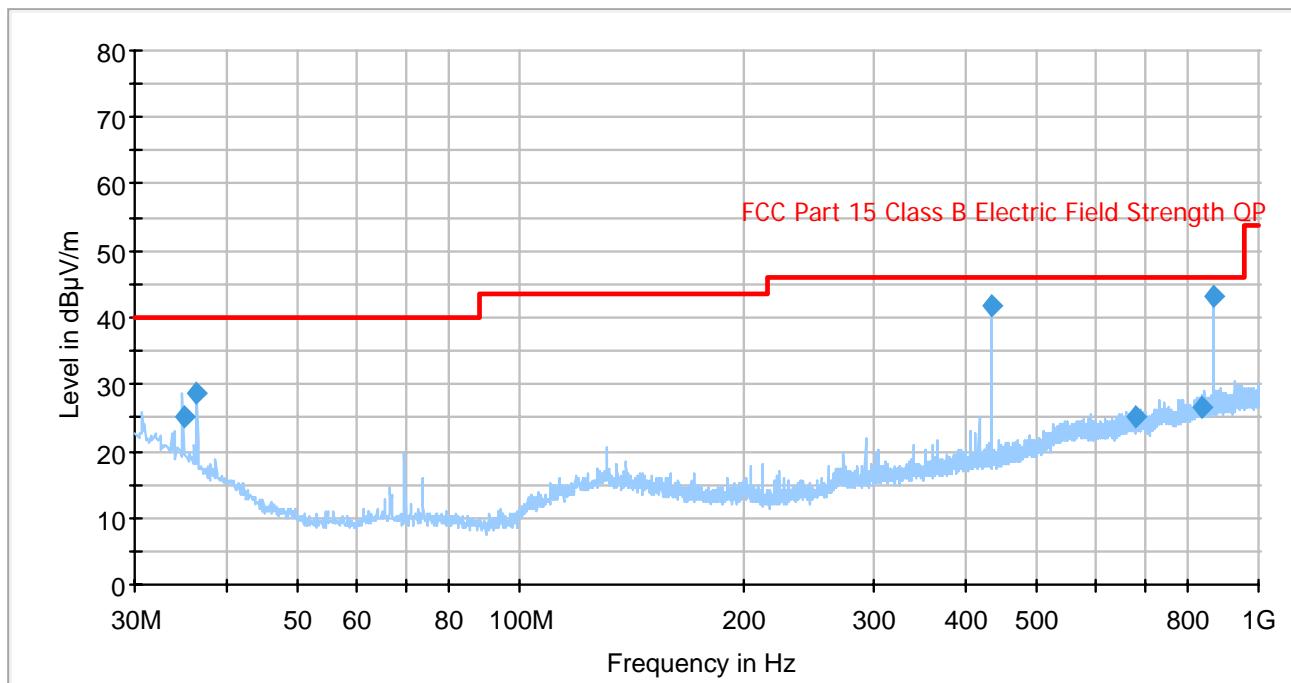
5.8 Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56%
ATM Pressure:	100.2kPa

The testing was performed by Alvin Huang on 2008-08-25.

Test Mode: Receiving



Frequency (MHz)	Corrected Amplitude (dB μ V/m)	Antenna Height (cm)	Ant. Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dB μ V/m)	Margin (dB)
871.389425	43.2	105.0	H	269.0	0.6	46.0	2.8*
435.699725	41.8	101.0	H	102.0	-7.5	46.0	4.2
36.425425	28.7	359.0	V	61.0	-8.4	40.0	11.3
34.907525	25.0	366.0	V	23.0	-7.3	40.0	15.0
838.586525	26.5	212.0	H	312.0	0.3	46.0	19.5
680.431450	25.2	330.0	H	121.0	-2.2	46.0	20.8

* Within measurement uncertainty.

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