



FCC PART 15 CLASS B TEST REPORT

For

HONG KONG IPRO TECHNOLOGY CO., LIMITED

ROOM C1D, 6/F, WING HING INDUSTRIAL BUILDING, 14 HING YIP STREET, KWUN TONG, KOWLOON, HONG KONG, China

FCC ID: PQ4IPROMAGIC

Report Type: Original Report	Product Type: GSM Mobile Phone
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Report Number: <u>RSZ121112003-00A</u>	
Report Date: <u>2012-11-26</u>	
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* This report may contain data that are not covered by the NVLAP accreditation and shall be marked with an asterisk ★

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *HONG KONG IPRO TECHNOLOGY CO., LIMITED*'s product, model number: *Magic* (FCC ID: *PQ4IPROMAGIC*) or the "EUT" in this report was a *GSM Mobile Phone*, which was measured approximately: 11.3 cm (L) x 5.1 cm (W) x 1.5 cm (H), rated input voltage: DC 3.7V Li-ion battery.

** All measurement and test data in this report was gathered from production sample serial number: IPROMAGIC000001 (Assigned by the applicant). The EUT supplied by the applicant was received on 2012-11-12.*

Objective

This test report is prepared on behalf of *HONG KONG IPRO TECHNOLOGY CO., LIMITED* in accordance with Part 2-Subpart J, Part 15-Subparts A and B of the Federal Communication Commissions rules.

The objective of the manufacturer is to determine the compliance of the EUT with FCC Part 15 B.

Related Submittal(s)/Grant(s)

Part 22H/24E PCE and Part 15.247 DSS submissions with FCC ID: *PQ4IPROMAGIC*

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on 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 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

Description of Test Configuration

The system was configured for testing in a manufacturer testing fashion.

EUT operation mode: Downloading (data transform with computer)

EUT Exercise Software

“winthrax” exercise software was used.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

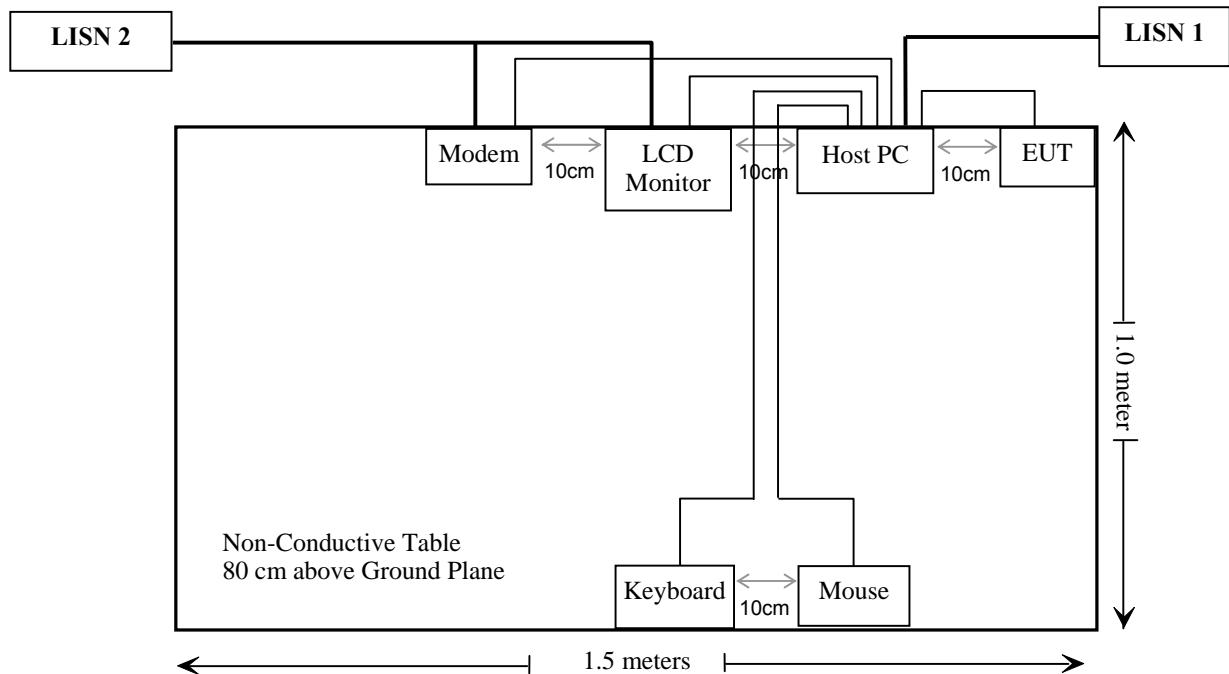
Description	Manufacturer	Model	Serial Number
PC	DELL	VOSTRO 220S	127BP2X
Keyboard	DELL	L100	CNORH656658907BL05DC
Mouse	DELL	MOC5UO	G1900NKD
LCD Monitor	DELL	E178WFPC	CN-OWY564-64180-7C4-2SQH
Modem	SAST	AEM-2100	0293

External I/O Cable

Cable Description	Length (m)	From/Port	To
Shielded Detachable USB Cable	1.5	Host PC	Mouse
Shielded Detachable Serial Cable	1.2	Host PC	Modem
Shielded Detachable K/B Cable	1.5	Host PC	Keyboard
Shielded Detachable VGA Cable	1.5	Host PC	LCD Monitor
Unshielded Detachable USB Cable	1.0	EUT	Host PC

Block Diagram of Test Setup

Downloading mode:



SUMMARY OF TEST RESULTS

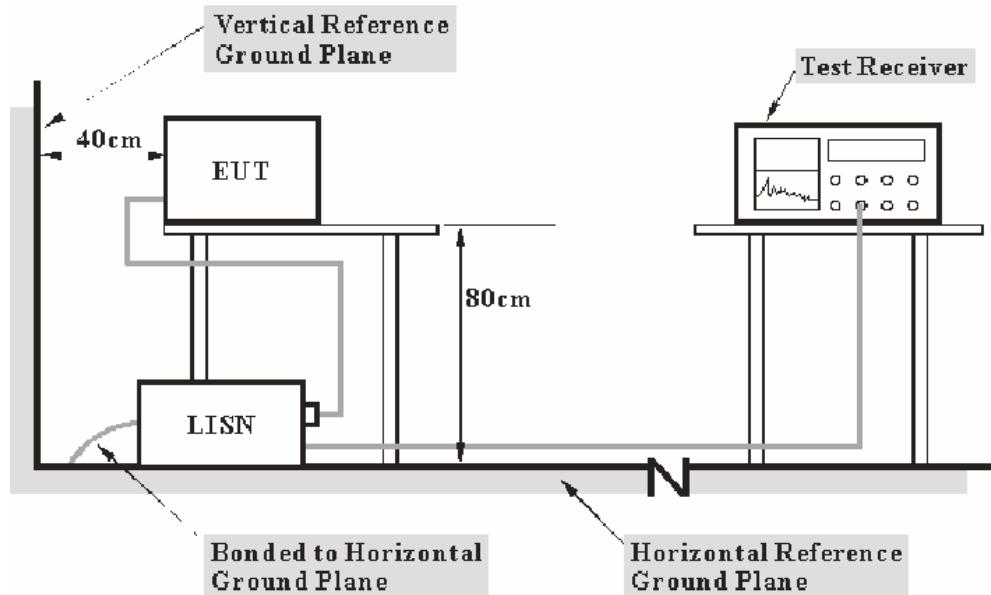
FCC Rules	Description of Test	Results
§15.107	AC Line Conducted Emissions	Compliance
§15.109	Radiated Spurious Emissions	Compliance

FCC §15.107 – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.107

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 measurement procedure of EUT setup is according with per ANSI C63.4-2009. The related limit was specified in FCC Part 15.107 Class B.

The spacing between the peripherals was 10 cm.

The host PC and other relevant equipments were connected to a 120 VAC/60 Hz power source.

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

Test Procedure

During the conducted emission test, the host PC was connected to the outlet of the first LISN, and the other relevant equipments were connected to the second 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.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2011-11-24	2012-11-23
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2012-08-22	2013-08-21
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Rohde & Schwarz	Pulse limiter	ESH3Z2	DE25985	2012-07-08	2013-07-07
BACL	CE Test software	BACL-CE	V1.0	-	-

* **Statement of Traceability:** Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to National Institute of Metrology (NIM)

Corrected Factor & Margin Calculation

The Corrected factor is calculated by adding LISN/ISN VDF (Voltage Division Factor), Cable Loss and Pulse Limiter Attenuation. The basic equation is as follows:

$$\text{Correction Factor} = \text{LISN VDF} + \text{Cable Loss} + \text{Pulse Limiter Attenuation}$$

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

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

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.107, with the worst margin reading of:

8.72 dB at 19.430 MHz in the Neutral conducted mode

Test Data

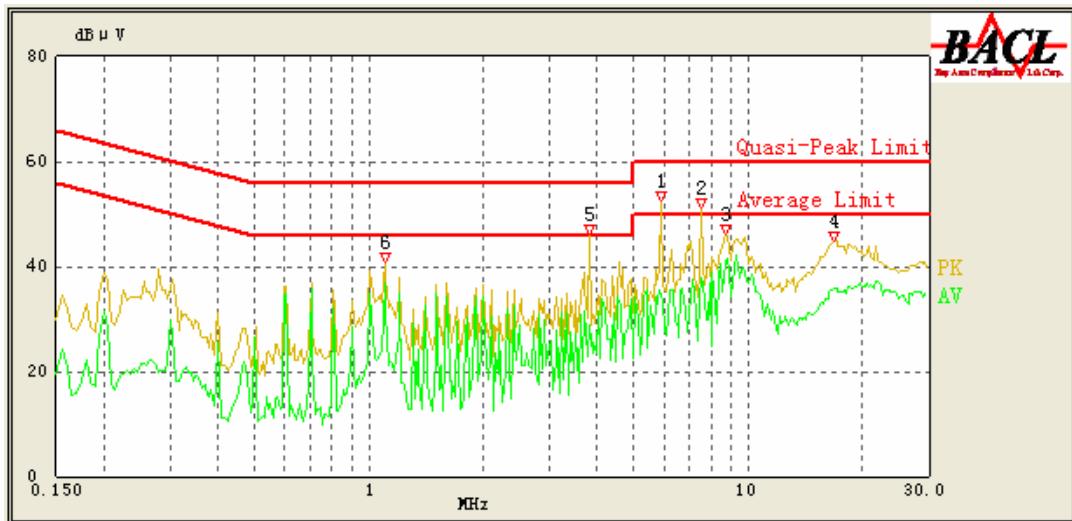
Environmental Conditions

Temperature:	25°C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Jimmy Xiao on 2012-11-23.

EUT Operation Mode: Downloading (data transforms with Computer)

AC 120V/60 Hz, Line



Frequency (MHz)	Corrected Amplitude (dB μ V)	Correction Factor (dB)	Limit (dB μ V)	Margin (dB)	Detector (PK/Ave./QP)
1.105	36.90	10.17	46.00	9.10	Ave.
8.740	40.76	10.44	50.00	9.24	Ave.
7.535	37.87	10.40	50.00	12.13	Ave.
16.780	35.74	11.84	50.00	14.26	Ave.
5.930	33.37	10.34	50.00	16.63	Ave.
3.820	39.32	10.26	56.00	16.68	QP
3.820	28.83	10.26	46.00	17.17	Ave.
7.520	42.74	10.40	60.00	17.26	QP
5.925	42.69	10.34	60.00	17.31	QP
1.105	37.90	10.17	56.00	18.10	QP
8.740	41.26	10.44	60.00	18.74	QP
16.865	38.30	11.87	60.00	21.70	QP

AC 120V/60 Hz, Neutral



Frequency (MHz)	Corrected Amplitude (dB μ V)	Correction Factor (dB)	Limit (dB μ V)	Margin (dB)	Detector (PK/Ave./QP)
19.430	41.28	12.42	50.00	8.72	Ave.
12.970	39.85	10.94	50.00	10.15	Ave.
0.200	42.67	10.24	54.57	11.90	Ave.
9.445	32.73	10.47	50.00	17.27	Ave.
19.430	42.58	12.42	60.00	17.42	QP
5.975	42.05	10.33	60.00	17.95	QP
4.020	27.96	10.26	46.00	18.04	Ave.
9.470	40.80	10.47	60.00	19.20	QP
12.970	40.01	10.94	60.00	19.99	QP
0.200	43.51	10.24	64.57	21.06	QP
4.010	32.70	10.26	56.00	23.30	QP
5.990	25.94	10.33	50.00	24.06	Ave.

Note:

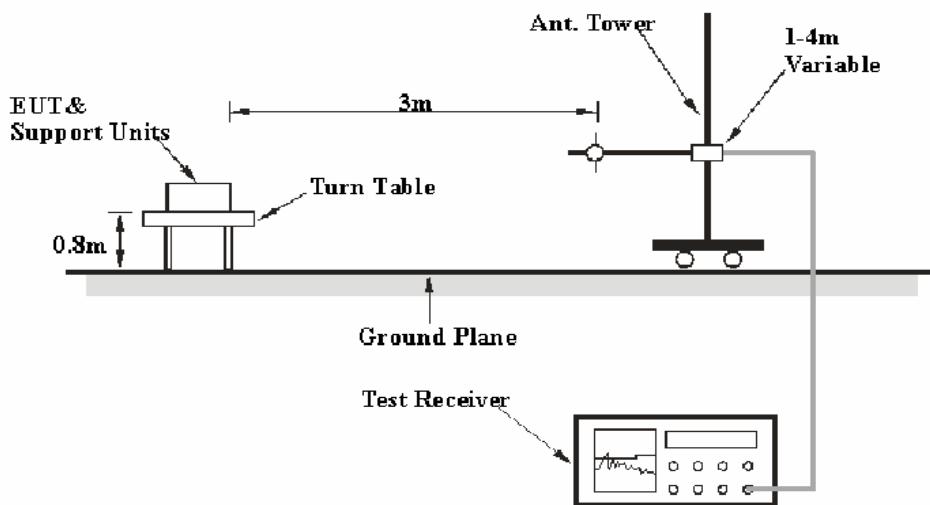
- 1) Correction Factor = LISN/ISN VDF (Voltage Division Factor) + Cable Loss + Pulse Limiter Attenuation
The corrected factor has been input into the transducer of the test software.
- 2) Corrected Amplitude = Reading + Correction Factor
- 3) Margin = Limit – Corrected Amplitude

FCC §15.109 - RADIATED SPURIOUS EMISSIONS

Applicable Standard

According to FCC§15.109

EUT Setup



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC Part 15.109 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 host PC and other relevant equipments were connected to a 120 VAC/60 Hz power source

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	Detector
30MHz – 1000 MHz	100 kHz	300 kHz	120kHz	QP

Test Procedure

For the radiated emissions test, the host PC and other relevant equipments were connected to AC floor outlet for downloading mode.

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

All the data was recorded in the Quasi-peak detection mode from 30 MHz to 1 GHz.

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	Broadband Antenna	JB1	A040904-2	2011-11-28	2012-11-27
R&S	Auto test Software	EMC32	V6.30	-	-

* **Statement of Traceability:** Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to National Institute of Metrology (NIM)

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

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

Test Results Summary

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

2.8 dB at 56.344125 MHz in the Vertical polarization

Test Data

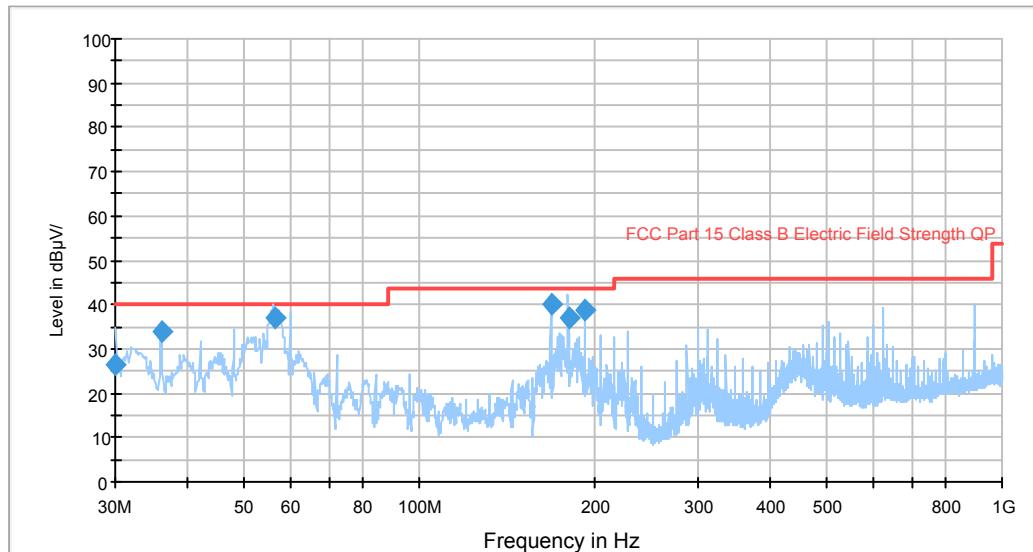
Environmental Conditions

Temperature:	25°C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Jimmy Xiao on 2012-11-23.

EUT Operation Mode: Downloading (data transforms with Computer)

Auto Test(FCC 15 Class B)



Frequency (MHz)	Corrected Amplitude (dB μ V/m)	Antenna height (cm)	Antenna Polarity	Turntable position (deg)	Correction Factor (dB/m)	Limit (dB μ V/m)	Margin (dB)	Detector (PK/QP/Ave.)
56.344125	37.2	123.0	V	47.0	-20.9	40.0	2.8	QP
167.984150	40.2	231.0	H	263.0	-15.5	43.5	3.3	QP
191.963675	38.9	199.0	H	262.0	-15.9	43.5	4.6	QP
35.984600	33.8	120.0	V	137.0	-11.5	40.0	6.2	QP
180.066200	37.2	211.0	H	263.0	-16.0	43.5	6.3	QP
30.067125	26.3	143.0	V	111.0	-6.7	40.0	13.7	QP

Note:

- 1) Corrected Amplitude = Meter Reading + Correction Factor
- 2) Correction Factor = Antenna Factor + Cable Loss - Amplifier Gain
The corrected factor has been input into the transducer of the test software.
- 3) Margin = Limit – Corrected Amplitude

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