

FCC PART 15C TEST REPORT

For

RTX Hong Kong Ltd.

8/F Corporation Square, 8 Lam Lok Street, Kowloon Bay, Hong Kong

FCC ID: T7HCT8171

Report Type: Original Report	Product Type: DECT-HiBAN Cordless Phone (Handset Unit)
Test Engineer: Gardon Zhang	<i>Gardon Zhang</i>
Report Number: RSZ140826003-00PPBA1	
Report Date: 2014-09-17	
Reviewed By: Jimmy Xiao RF Engineer	<i>Jimmy Xiao</i>
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

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.

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *RTX Hong Kong Ltd.*'s product, model number: *Phonak DECT II Cordless phone US/CAN (FCC ID: T7HCT8171)* or the "EUT" in this report was a handset unit of *DECT-HiBAN Cordless Phone*, which was measured approximately: 13.5 cm (L) x 5.1 cm (W) x 2.1 cm (H), rated with input voltage: DC 3.7V battery.

* All measurement and test data in this report was gathered from production sample serial number: 1408195 (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2014-08-26.

Objective

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

The tests were performed in order to determine the compliance of EUT with FCC Part 15, Subpart C, and section 15.203 and 15.209 rules.

Related Submittal(s)/Grant(s)

FCC part 15D base unit with FCC ID: T7HX8170 has been granted on 2013-07-12.
FCC part 15D handset unit with FCC ID: T7HCT8171.

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 emissions measurement was performed and 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 ± 0.96 dB, the uncertainty of any radiation on emissions measurement is 4.0 dB.

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.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in an engineering mode.

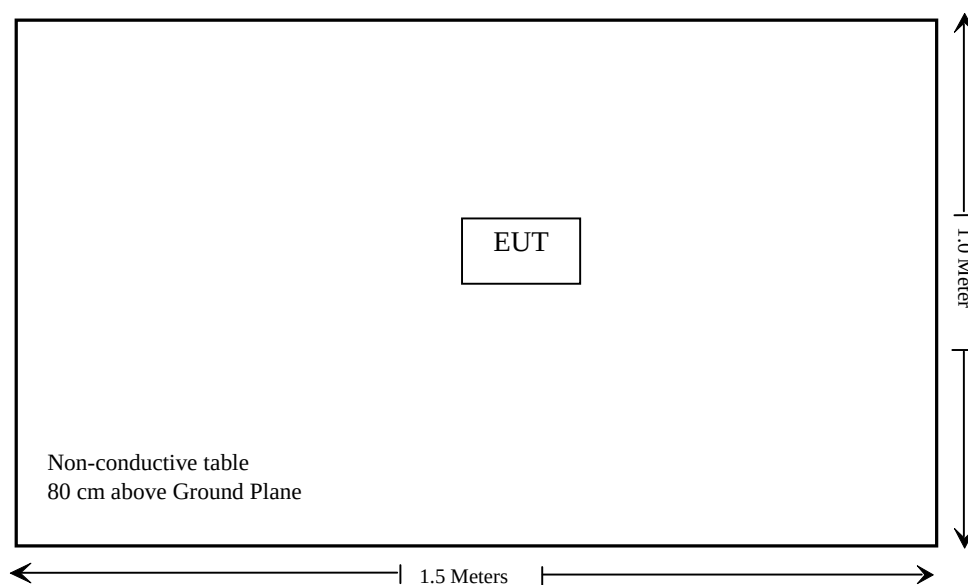
EUT Exercise Software

N/A

Equipment Modifications

No modification was made to the EUT tested.

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
§15.209	Radiated Emission	Compliance

Note: The EUT is powered by battery only, so conducted emission test is not required.

FCC §15.203 - ANTENNA REQUIREMENT

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.

Result: Compliant.

The EUT has an integrated loop coil antenna arrangement, which was permanently attached, and fulfills the requirement of this section. Please refer to the EUT internal photos.

FCC §15.209 - SPURIOUS EMISSIONS

Applicable Standard

FCC §15.209;

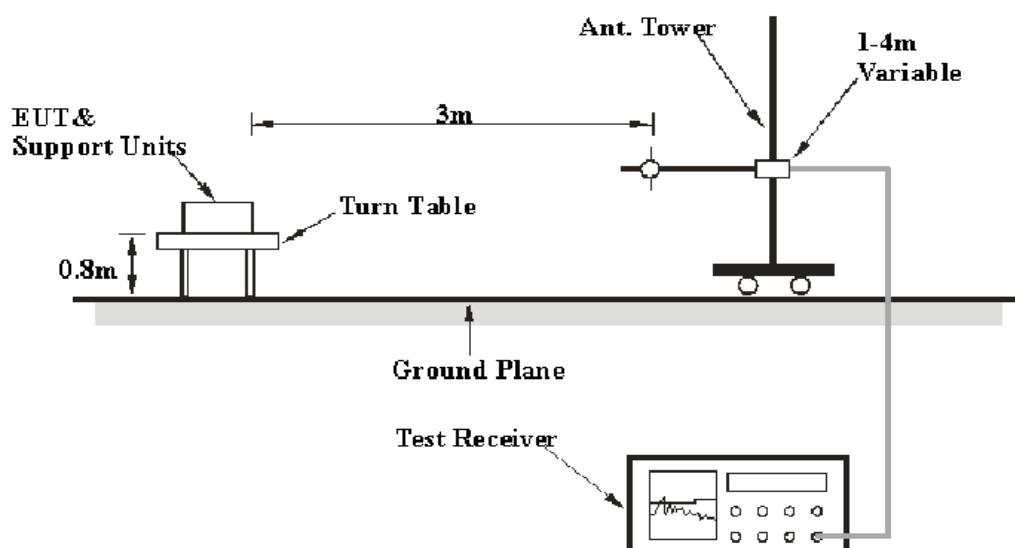
Measurement Uncertainty

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 16-4-2:2011, the expanded combined standard uncertainty of radiation emissions at Bay Area Compliance Laboratories Corp. (Shenzhen) is shown in below table. And the uncertainty will not be taken into consideration for the test data recorded in the report

Frequency	Polarity	Measurement uncertainty
30MHz~200MHz	Horizontal	4.62 dB (k=2, 95% level of confidence)
	Vertical	4.54 dB (k=2, 95% level of confidence)
200MHz~1GHz	Horizontal	4.84 dB (k=2, 95% level of confidence)
	Vertical	5.91 dB (k=2, 95% level of confidence)
1 GHz~6 GHz	Horizontal/Vertical	4.68 dB (k=2, 95% level of confidence)
Above 6 GHz	Horizontal/Vertical	4.92 dB (k=2, 95% level of confidence)

EUT Setup



The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC 15.205 and 15.209 limits.

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

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 1000 MHz.

Test Procedure

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

Data was recorded in Quasi-Peak detection mode for frequency range of 9 kHz to 30 MHz.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	8447E	1937A01046	2014-05-06	2015-05-06
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2013-11-12	2014-11-12
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2011-11-28	2014-11-27
ETS	Passive Loop Antenna	6512	00029604	2011-11-30	2014-11-29

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements, traceable to National Primary Standards and International System of Units (SI).

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:

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

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Gardon Zhang on 2014-08-29.

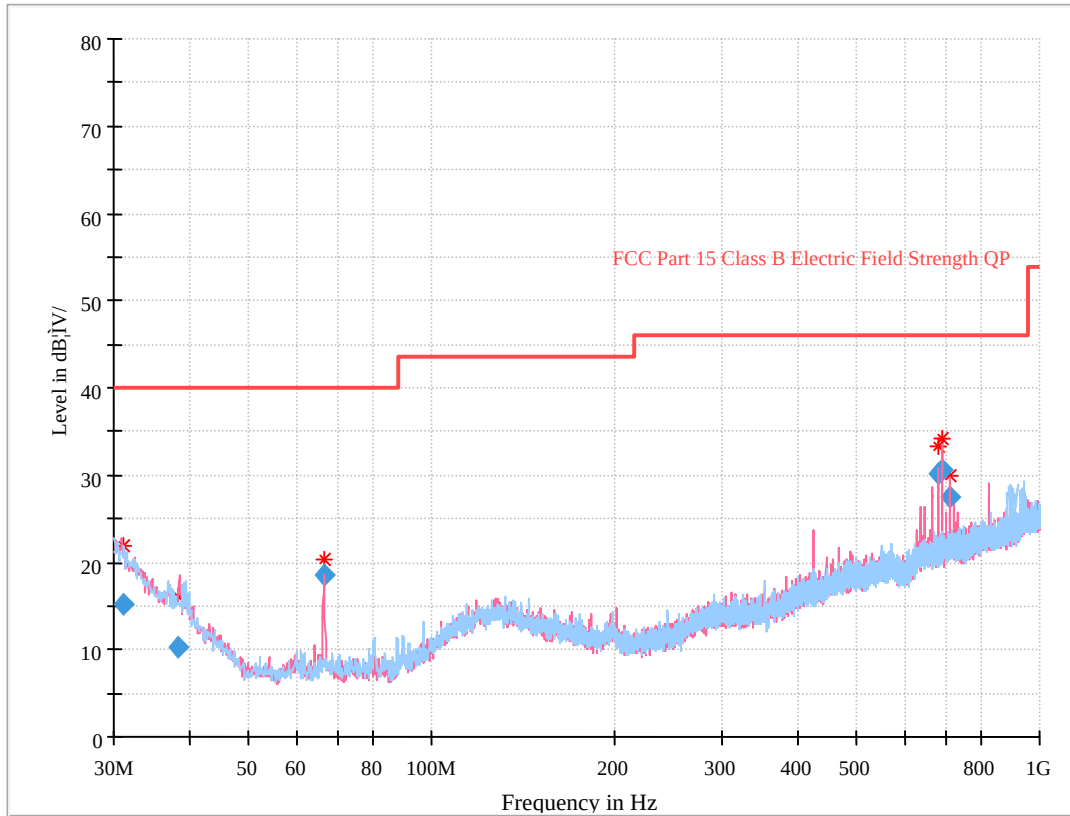
Test mode: Transmitting

9 kHz – 30 MHz

Frequency (MHz)	Corrected Amplitude (dB μ V/m)	Detector (QP/PK/ Ave.)	Antenna Height (cm)	Turntable Position (Degree)	Correction Factor (dB/m)	Limit (dB μ V/m)	Margin (dB)	Comment
10.58	48.67	QP	150.0	180.0	32.30	69.5	20.83	Fund.
21.16	20.11	QP	150.0	180.0	31.50	69.5	49.39	Harmonic

30 MHz – 1000 MHz

Full Spectrum



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Detection (QP/PK/Ave.)	Antenna Height (cm)	Antenna Polarity	Turntable Position (Degree)	Correction Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
31.221375	15.22	QP	205.0	V	300.0	-7.0	40.00	24.78
38.352250	10.25	QP	305.0	V	204.0	-12.3	40.00	29.75
66.566625	18.52	QP	124.0	V	237.0	-19.6	40.00	21.48
679.045500	30.23	QP	100.0	V	248.0	-6.2	46.00	15.77
689.634875	30.58	QP	100.0	V	242.0	-5.8	46.00	15.42
710.940875	27.52	QP	100.0	V	292.0	-5.2	46.00	18.48

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