

FCC PART 15C TEST REPORT

For

REALTRACE

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FCC ID: BSORT100V8

Report Type: Original Report	Product Type: PetScan RT100-V8
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Report Number: RSZ130325002-00B	
Report Date: 2013-04-15	
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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 *REALTRACE*'s product, model number: *RT100 V8* (FCC ID: *BSORT100V8*) or the "EUT" in this report is a *PetScan RT100-V8*, which was measured approximately: 15.5 cm (L) x 8.2 cm (W) x 3.3 cm (H), rated input voltage: 3.7V rechargeable Li-ion battery.

** All measurement and test data in this report was gathered from production sample serial number: 1303094 (Assigned by BACL, Shenzhen). The EUT was received on 2013-03-25.*

Objective

This report is prepared on behalf of *REALTRACE* 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, 15.207 and 15.209 rules.

Related Submittal(s)/Grant(s)

FCC Part 15.247 DSS submissions with FCC ID: BSORT100V8.

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.

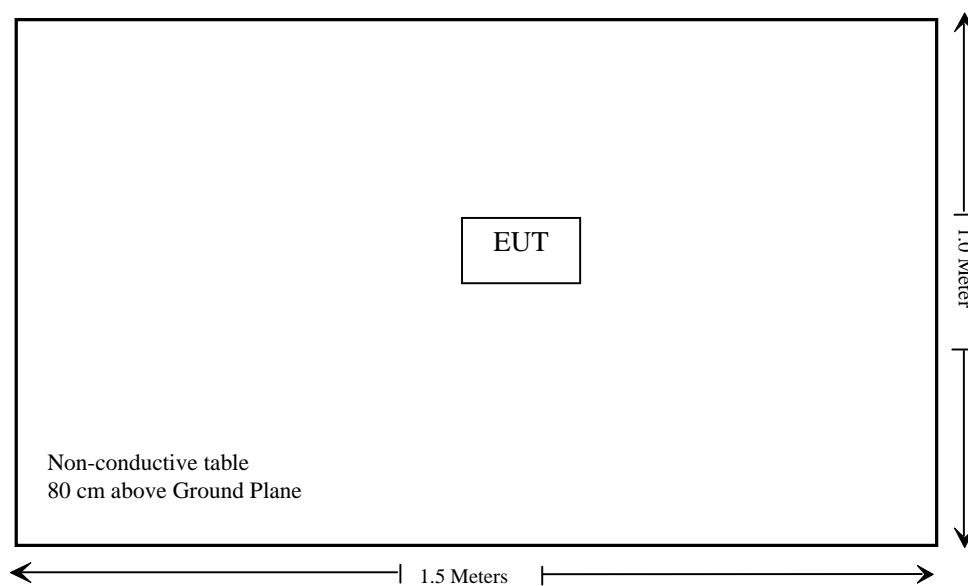
EUT Exercise Software

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

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.

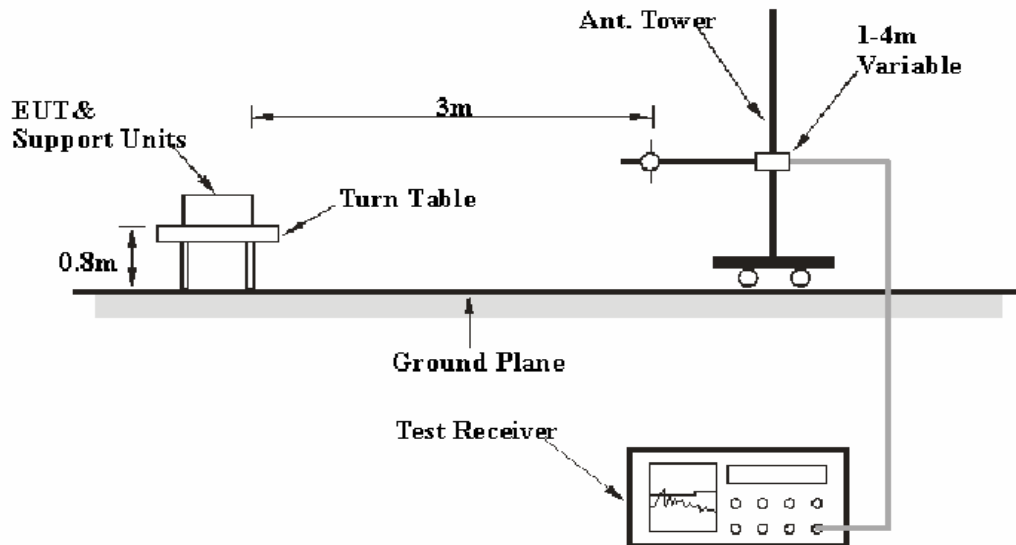
The EUT has an integrated loop coil antenna arrangement, which was permanently attached, and fulfills the requirement of this section. Please refer to the EUT internal photos.

FCC §15.209 - SPURIOUS EMISSIONS

Applicable Standard

FCC §15.209;

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 peak and average detection mode for frequency range of 9 kHz to 30 MHz and Quasi-peak detection mode for frequency range of 30 MHz to 1 GHz.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	8447E	1937A01046	2012-11-24	2013-11-23
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2012-08-08	2013-08-07
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2011-11-28	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:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Simon Wang on 2013-04-10.

Test mode: Transmitting

1) 9 kHz – 150 kHz

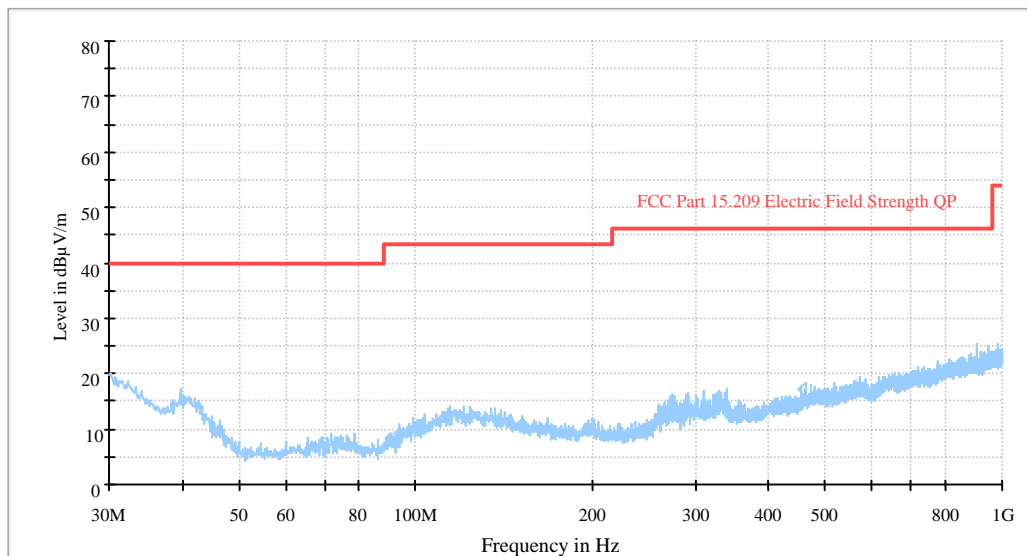
Indicated		Table Angle Degree	Antenna Height (m)	Detector PK/QP/AV	Correction Factor			Corrected Amplitude (dB μ V/m) @ 3m	FCC PART 15.209	
Frequency (kHz)	Maximum Reading (dB μ V/m) @ 3m				Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)		Limit (dB μ V/m) @ 3m	Result
101.49	0.30	180	1.0	PK	65.7	0.05	0.0	66.05	107.48	Pass
116.99	0.92	180	1.0	PK	63.2	0.05	0.0	64.17	106.24	Pass
134.20	41.4	180	1.0	PK	62.5	0.06	0.0	103.90	105.05	Pass

2) 150 kHz – 30 MHz

Indicated		Table Angle Degree	Antenna Height (m)	Detector PK/QP/AV	Correction Factor			Corrected Amplitude (dB μ V/m) @ 3m	FCC PART 15.209	
Frequency (MHz)	Maximum Reading (dB μ V/m) @ 3m				Ant. Factor (dB)	Cable Loss (dB)	Pre-Amp. Gain (dB)		Limit (dB μ V/m) @ 3m	Result
2.12	17.93	180	1.0	PK	40.3	0.10	0.0	58.33	69.5	Pass
5.58	14.55	180	1.0	PK	34.5	0.10	0.0	49.15	69.5	Pass

3) 30 MHz – 1000 MHz

Auto Test (FCC part 15 .209)



Note: All radiated emissions are 20 dB below the limit or are on the system noise floor level.

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