Report On

FCC Testing of the NEWTECH, INC.
Short Range Device Vital Signs Monitor Receiver NT1D-USB1
In accordance with FCC CFR 47 Part 15 Part B

COMMERCIAL-IN-CONFIDENCE

FCC ID: XPAUSB1

Document 57009051 Report 03 Issue 1 September 2009

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REPORT ON	FCC CRF 47 Parts 15 B: 2008 Testing of the NEWTECH, INC. Short Range Device Vital Signs Monitor Receiver NT1D-USB1 Document 57009051 Report 03 Issue 1 September 09
PREPARED FOR	NEWTECH, INC. R1-B1, Hi-Tech Industrial Park, Nanshan District, Shenzhen, 518057,CHINA
PREPARED BY	**ZHANG Xiaoying** Project Engineer
APPROVED BY	**Li Qun** Project engineer
DATED	04 Sep. 09

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47: Part 15B. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineer(s);

Q Li X Zhang

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SECTION 1

REPORT SUMMARY

FCC Testing of the NEWTECH, INC.
Short Range Device Vital Signs Monitor Receiver NT1D-USB1
in accordance with FCC CFR 47 Part 15B

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1.1 INTRODUCTION

The information contained in this report is intended to show verification of the NEWTECH, INC. Short Range Device Vital Signs Monitor Receiver NT1D-USB1 to the requirements of FCC CFR 47 Part 15B: 2008.

Testing was carried out in support of an application for Grant of Equipment Authorisation of Short Range Device Vital Signs Monitor Receiver NT1D-USB1.

Objective	To perform FCC Testing to determine the Equipment Under Test's (EUT's) compliance with the Test Specification, for the series of tests carried out.
Manufacturer	NEWTECH, INC.
Model Number(s)	Short Range Device Vital Signs Monitor Receiver NT1D-USB1
Serial Number(s)	Engineering sample
Antenna Gain	-0.3dBi
Number of Samples Tested	1
Test Specification/Issue/Date	FCC CFR 47 Part 15B: 2008
Incoming Release Date	Declaration of Build Status 24 July 2009
Start of Test	28 July 2009
Finish of Test	18 August 2009
Name of Engineer(s)	Q Li X Zhang
Related Document(s)	ANSI C63.4:2003

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1.2 BRIEF SUMMARY OF RESULTS

A brief summary of results in accordance with FCC CFR 47 Part 15B: 2008 is shown below.

Configuration - Short Range Device Vital Signs Monitor Receiver						
Section	FCC Clause	Test Description	Mode	Mod State	Result	Comments
2.1	15.107	Conducted Emissions on Power Line	Idle/receive	0	Pass	
2.2	15.109	Enclosure Radiated Emissions	Idle/receive	0	Pass	-

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1.3 DECLARATION OF BUILD STATUS

MAIN EUT	
MANUFACTURING DESCRIPTION	Short Range Device Vital Signs Monitor Receiver
MANUFACTURER	NEWTECH, INC.
TYPE	NT1D-USB1
PART NUMBER	--
SERIAL NUMBER	Engineering sample
HARDWARE VERSION	--
SOFTWARE VERSION	--
TRANSMITTER OPERATING RANGE	2440MHz
RECEIVER OPERATING RANGE	2440MHz
COUNTRY OF ORIGIN	P.R. CHINA
INTERMEDIATE FREQUENCIES	--
ITU DESIGNATION OF EMISSION	2M55F1D
HIGHEST INTERNALLY GENERATED FREQUENCY	2440MHz
FCC ID	XPAUSB1
TECHNICAL DESCRIPTION (a brief description of the intended use and operation)	NT1D-USB1 is a Short Range Device Vital Signs Monitor Receiver
MANUFACTURING DESCRIPTION	The Vital Signs Monitor Receiver NT1D-USB1 was powered by Notebook Computer: Model Type: Compaq nc4400 Manufacturer: HP Serial Number: CND6460KCL Adaptor Model: PA-1650-02HC Manufacturer: HP Serial Number: 384019-001

Signature Tang Dekai
Date 20 July 2009
D of B S Serial No 57009051

No responsibility will be accepted by TÜV Product Service Beijing Branch as to the accuracy of the information declared in this document by the manufacturer.

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1.4 PRODUCT INFORMATION

1.4.1 Technical Description

The Equipment Under Test (EUT) NT1D-USB1 was a NEWTECH, INC. Short Range Device Vital Signs Monitor Receiver as shown in the photograph below. A full technical description can be found in the Manufacturer's documentation.

Equipment Under Test

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1.4.2 Test Configuration

The Bluetooth Pulse Oximeter was connected with a console computer by the USB cable and made in Idel mode during the testing.

The EUT was configured in accordance with FCC CFR 47 Part 15: 2008.

1.4.3 Modes of Operation

Operation Modes

Mode 1 – Idle

Information on the specific test modes utilised are detailed in the test procedure for each individual test.

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1.5 TEST CONDITIONS

For all tests the EUT was set up in accordance with the relevant test standard and to represent typical operating conditions. Tests were applied with the EUT situated in a shielded enclosure, test laboratories or an open test area as appropriate.

1.6 DEVIATIONS FROM THE STANDARD

No deviations from the applicable test standards or test plan were made during testing.

1.7 MODIFICATION RECORD

Modification State	Description of Modification fitted to EUT	Sample S/N
0	Initial sample supplied by customer	Engineering sample

No modifications were made to the EUT during testing.

1.8 ALTERNATIVE TEST SITE

The testing was conducted at following site registrations:

FCC Accreditation
910917 The State Radio Monitoring Center, No.80 Beilishi Road Xicheng District Beijing, China.

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SECTION 2

TEST DETAILS

FCC Testing of the NEWTECH, INC.
Short Range Device Vital Signs Monitor Receiver NT1D-USB1
in accordance with FCC CFR 47 Part 15B

2.1 CONDUCTED EMISSIONS ON POWER LINE

2.1.1 Specification Reference

FCC CFR 47 Part 15: 2008, Subpart B, Clause 15.107

2.1.2 Equipment Under Test

Short Range Device Vital Signs Monitor Receiver NT1D-USB1

2.1.3 Date of Test and Modification State

06 August 2009 – Modification State 0

2.1.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.1.5 Test Method and Operating Modes

The test was applied in accordance with the test method requirements of ANSI C63.4.

The EUT was placed 0.4 meters from the conducting wall of the shield room with the USB port of the EUT being connected to a notebook which was connected to the power mains through an artificical mains network (AMN). The distance between the computer and AMN was 80cm.

Emissions were formally measured using a Quasi-Peak and Average Detectors, which meet the CISPR requirements. The details of the worst-case emissions for the Live and Neutral Lines are presented in the tables below.

Conducted Emission were measured on Live and Neutral Lines of the power mains connected to the notebook in turn.

Measurements were made over the frequency range 0.15MHz to 30MHz.

The EUT was supplied from a 120V, 60Hz supply (Model: PA-1650-02HC).

The test was performed with the EUT in the following configurations and modes of operation:

- Mode 1

2.1.6 Environmental Conditions

	06 August 2009
Ambient Temperature	23.2°C
Relative Humidity	24.1%

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2.1.7 Test Results

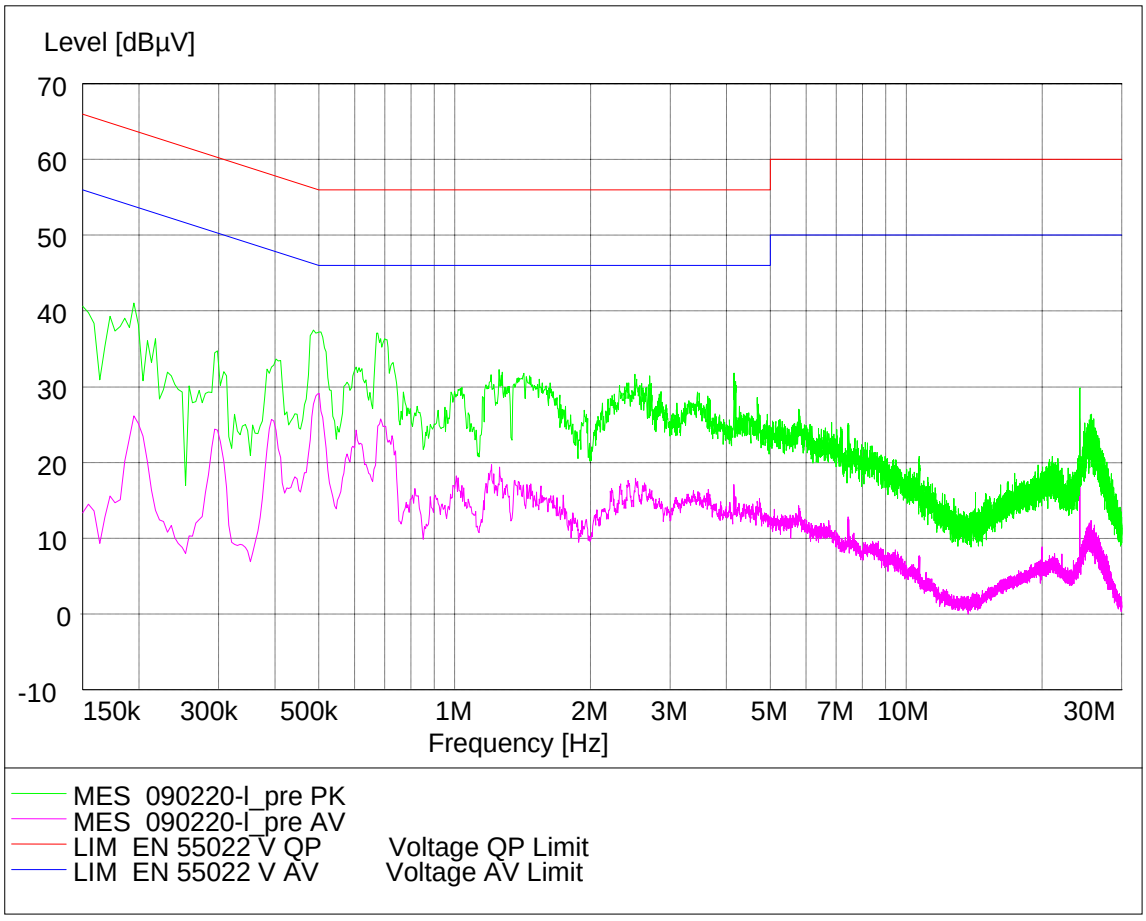
For the period of test the EUT met the Class B requirements of FCC CFR 47 Part 15: 2008 for Conducted Emissions on AC Power Ports.

Measurements were made with the EUT in idle Mode (See section 1.4.10 for details).

Test results are shown in the following tables.

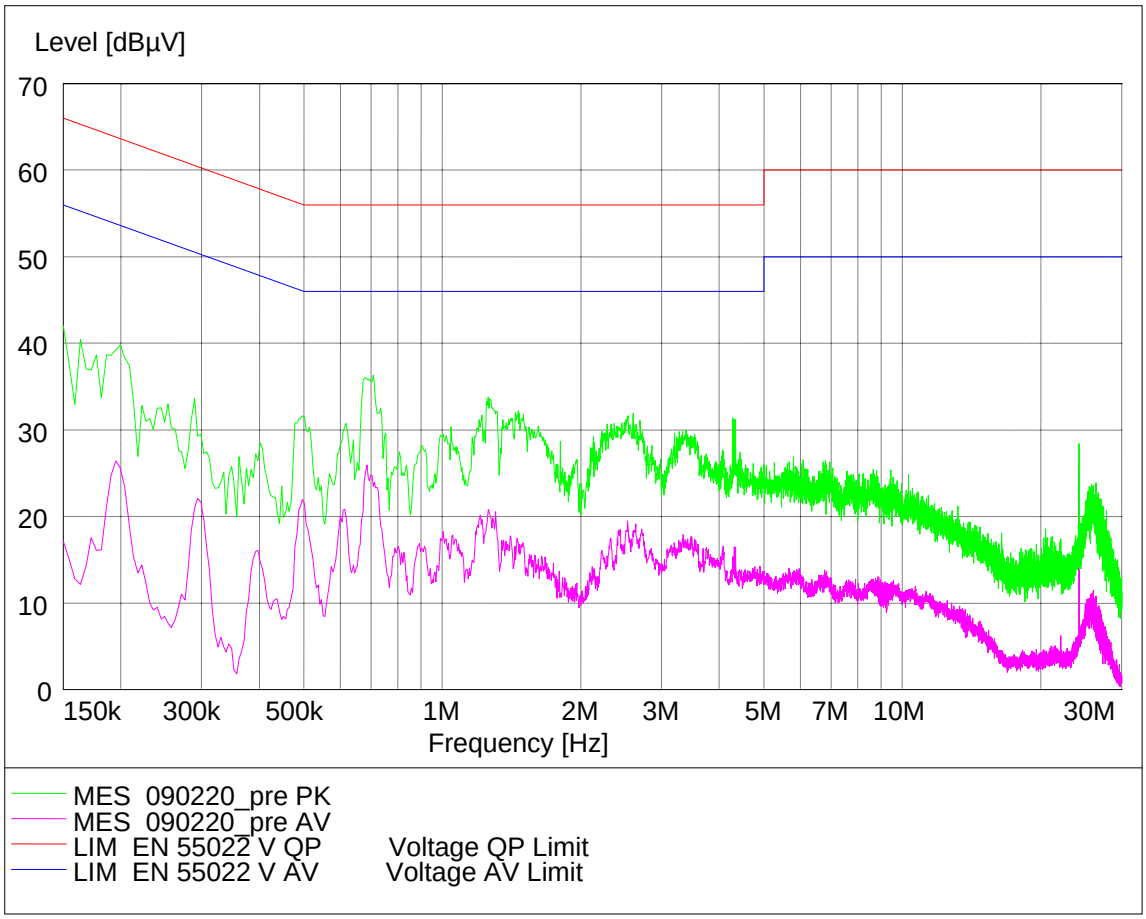
- Mode 1

Live Line



The margin between the specification requirements and all other emissions was 20dB or more below the specified Quasi-Peak and 20dB or more below the specified Average limit.

Neutral Line



The margin between the specification requirements and all other emissions was 20dB or more below the specified Quasi-Peak and 20dB or more below the specified Average limit.

2.2 ENCLOSURE RADIATED EMISSIONS

2.2.1 Specification Reference

FCC CFR 47 Part 15: 2008, Subpart B, Clause 15.109

2.2.2 Equipment Under Test

Short Range Device Vital Signs Monitor Receiver NT1D-USB1

2.2.3 Date of Test and Modification State

06 August 2009 – Modification State 0

2.2.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.2.5 Test Method and Operating Modes

The test was applied in accordance with ANSI C63.4.

A preliminary profile of the Spurious Radiated Emissions was obtained by operating the EUT on a remotely controlled turntable within a semi-anechoic chamber. Measurements of emissions from the EUT were obtained with the Measurement Antenna in both Horizontal and Vertical Polarisations. The profiling produced a list of the worst-case emissions together with the EUT azimuth and antenna polarisation.

Emissions identified within the range 30MHz – 1GHz were formally measured using a CISPR Quasi-Peak detector.

The measurements were performed at a 3m distance unless otherwise stated.

The test was performed with the EUT in the following modes of operation:

- Mode 1

2.2.6 Environmental Conditions

	06 August 2009
Ambient Temperature	23.2°C
Relative Humidity	24.1%

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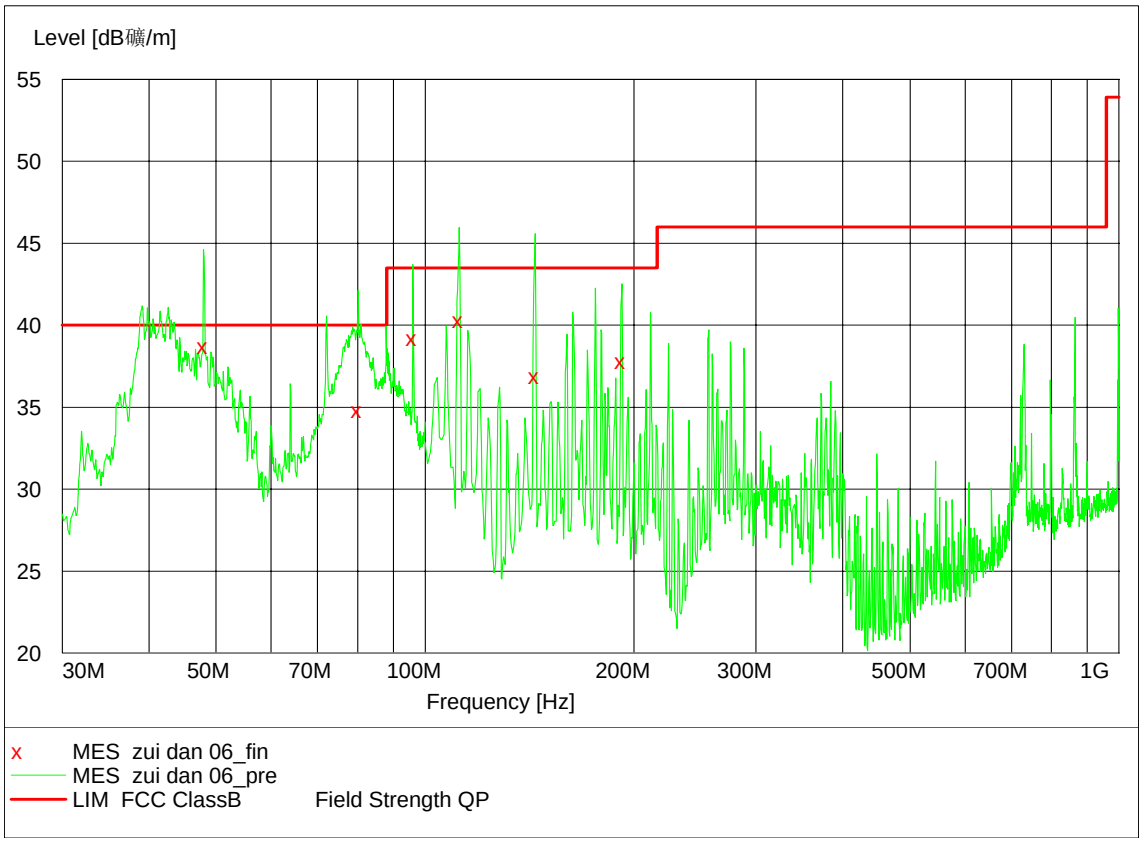
2.2.7 Test Results

For the period of test the EUT met the Class B requirements of FCC CFR 47 Part 15: 2008 Subpart B for Spurious Radiated Emissions (30MHz – 1GHz).

The test results are shown below.

- Mode 1



Emission Frequency (MHz)	Polarisation	Height (cm)	Azimuth (degree)	Field Strength		Limit	
				dBµV/m	µV/m	dBµV/m	µV/m
48.000000	Vertical	100.00	90.00	38.70	86.10	40.00	100.00
79.980000	Vertical	100.00	90.00	34.80	54.95	40.00	100.00
96.000000	Vertical	100.00	180.00	39.20	91.20	43.50	149.62
112.000000	Vertical	100.00	270.00	40.30	103.51	43.50	149.62
144.040000	Vertical	100.00	180.00	36.90	69.98	43.50	149.62
192.040000	Vertical	100.00	270.00	37.80	77.62	43.50	149.62

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SECTION 3

TEST EQUIPMENT USED

3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

Instrument	Manufacturer	Type No.	Serial No.	Calibration Due
EMI Receiver	Rohde & Schwarz	ESI 40	100015	2010/08/19
Ultra log test antenna	Rohde & Schwarz	HL562	100167	2010/08/19
Antenna master	Frankonia	MA 260	-	TU
Relay Switch Unit	Rohde & Schwarz	331.1601.31	338965002	TU
Turn Table	FRANKONIA	MA260	--	2010/08/19
Semi- Anechoic Chamber	Frankonia	23.18m×16.88m×9.60m	-	2010/09/23
EMI test software	Rohde & Schwarz	ES-K1	-	TU
EMI Test receiver	Rohde & Schwarz	ESCS	100029	2010/08/19
LISN	Rohde & Schwarz	ESH3-Z5	100020	2010/08/19
Thermo-hygrometer	AZ Instruments	8705	9151655	2010/12/16

TU Traceability Unscheduled

3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:-

Test Discipline	Frequency / Parameter	MU
Radiated Emissions, Bilog Antenna, AOATS	30MHz to 1GHz Amplitude	5.1dB*
Worst case error for both Time and Frequency measurement 12 parts in 10^6.		

* In accordance with CISPR 16-4

Product Service

SECTION 4

DISCLAIMERS AND COPYRIGHT

4.1 DISCLAIMERS AND COPYRIGHT

This report relates only to the actual item/items tested.