TEST REPORT

Report No. :	**HST201412-4651-SAR**
Product description:	**UHF Wireless Microphone**
Model/Type :	**MPWL-1508BK, SH-3037, SH-3038, SH-3051 SH-3050. SH-3032, SH-3052. SH-3033, SH-3039**
Applicant's name:	**Bo xing Electronic(Enping)Co.,Ltd.**

Lab: Guangdong Huesent Testing & Inspection Technology Co., Ltd
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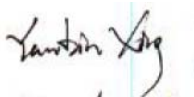
RF Exposure Evaluation REPORT

FCC ID:2AD5FMPWL-1508BK

Report Reference No. .....:	HST201412-4651-SAR	
Tested by (+ signature) .....:		Yanbin Xing
Review by (+ signature) .....:		Sandy Yu
Approved by (+ signature)		Robin Peng
Date of issue .....:	Jan. 20, 2015	
Total number of pages .....:	8 Pages	
Testing Laboratory……..:	Guangdong Environment Radiation Monitoring Center. (Accredited by CNAS, Accredited Number: L5539) FCC- Registration No: 667318 on on Sep. 29, 2009	
Address .....:	860, South Guangzhou Avenue, Guangzhou, P.R. China	
Applicant's name .....:	Bo xing Electronic(Enping)Co.,Ltd.	
Address .....:	No.6-2,Block F , Foreign/Private Industrial Area , Enping ,Guangdong,China	
Manufacturer's name .....:	Bo xing Electronic(Enping)Co.,Ltd.	
Address .....:	No.6-2,Block F , Foreign/Private Industrial Area , Enping ,Guangdong,China	
Test specification……..:	Entrusted testing	
Standard.....:	FCC Part 1.1307, 2.1091, and 2.1093: 2014	
Non-standard test method……...:	N/A	
Test Report Form No. .....:	N/A	
Test Report Form(s) Originator..:	N/A	
Test item description.....:	UHF Wireless Microphone	
Trade Mark.....:	N/A	
Model/Type reference .....:	MPWL-1508BK	
Ratings .....:	3.0Vdc 2*AA Batteries	

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1 TEST SUMMARY

Test	Test Requirement	Standard Paragraph	Result
RF Exposure Evaluation	FCC Part 1.1307, 2.1091, and 2.1093	447498 D01 General RF Exposure Guidance v05r02	PASS

Remark:

♣The EUT has one channel, which is located in the range 614.200 MHz to 697.800MHz.

Only test result of sample of in channels 614.2 MHz, 670.0 MHz and 697.8 MHz were recorded in this report.

Model: MPWL-1508BK, SH-3037, SH-3038, SH-3051 SH-3050. SH-3032, SH-3052. SH-3033, SH-3039

Only tested MPWL-1508BK, since the other models listed above are electric identical with only difference being the model name.

2 GENERAL INFORMATION

2.1 Client Information

Applicant:	Bo xing Electronic(Enping)Co.,Ltd.
Address of Applicant:	No.6-2,Block F , Foreign/Private Industrial Area , Enping ,Guangdong,China

2.2 General Description of E.U.T.

EUT Name:	UHF Wireless Microphone
Item No.:	Listed on the 3rd page
Serial No.:	Not supplied by client

2.3 Details of E.U.T.

Power Supply:	3.0Vdc 2*AA Batteries
Main Function:	Wireless microphone system with an associated receiver for transmitting voice.
Transmitting Power:	Low 614.2MHz: -3.6dBm(i.e.0.44 mW) ±1.0 dB Mid. 670.0MHz: -3.8dBm(i.e.0.42 mW) ±1.0 dB High 697.8MHz: -3.8dBm(i.e.0.42 mW) ±1.0 dB

The final amplifier Collector Voltage and Collector Current are 0.1V & 3.5mA respectively.

Necessary Bandwidth: 2M+2DK= 2 x 80 kHz + 2 x 20kHz x 1.0 = 200 kHz

16 channels for each microphone; Modulation: 68KF3E; Antenna Type: Fixed; Gained: 0 dBi

2.4 Description of Support Units

Connect the EUT to mains power, and then test the EUT with signal generator.

2.5 Standards Applicable for Testing

The standard used was FCC Part 1.1307, 2.1091, and 2.1093: 2014

The EUT belongs to licensed low power auxiliary devices.

2.6 Test Location

ERP & Spurious Emission tests were subcontracted to the laboratory following-

Guangdong Environment Radiation Monitoring Center.
860, South Guangzhou Avenue, Guangzhou, P.R. China
Tel: 86-20-84281721 Fax: N/A Email: Kevin.ma@nemko.com

FCC- Registration No: 667318 on on Sep. 29, 2009
CNAS- Accreditation No: L5539.

2.7 Deviation from Standards

None.

2.8 Abnormalities from Standard Conditions

None.

3 RF EXPOSURE EVALUATION

Test Requirement:	FCC CFR 47 RF Exposure Evaluation
Test Method:	447498 D01 General RF Exposure Guidance v05r02
Test Date:	Jan. 13, 2015
Test Procedure:	
SAR Test Guidance	In 447498 D01 General RF Exposure Guidance v05r02 Setction 4.3.1

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,[25] where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[26]
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

Note:

Max. power of channel, including tune-up tolerance:
Low 614.2MHz: -2.6dBm(i.e.0.55 mW)
Mid. 670.0MHz: -2.8dBm(i.e.0.52 mW)
High 697.8MHz: -2.8dBm(i.e 0.52 mW)

Distance from the antenna to the outer skin = 6 mm
Min. test separation =6 mm

Low channel $F_{(GHz)}$=0.6142 GHz
Mid channel $F_{(GHz)}$= 0.6700 GHz
High channel $F_{(GHz)}$=0.6978 GHz

In low channel: 614.2MHz:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] = [(0.55)/ 6]* (√0.6142)
= 0.072
≤3

In mid channel: 670.0MHz:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] = [(0.52)/ 6]* (√0.6700)
= 0.072
≤3

In high channel: 697.8MHz:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] ·

$[\sqrt{f_{(GHz)}}]$ = [(0.52)/ 6]* (√0.6978)
= 0.073
≤3

Result: The EUT's SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required.

4 EQUIPMENTS USED DURING TEST

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date
1	RF Generator	Rohde & Schwarz	SMB100A-B106	1.031	2014-5-10	2015-5-10
2	Spectrum Analyzer	Rohde & Schwarz	FSP30	EMC0001	2014-1-17	2015-1-17
3	EMI Test Receiver	Rohde & Schwarz	ESCI	EMC1002	2014-2-17	2015-2-17
4	2-Channel Power Meter	Rohde & Schwarz	NRP2	1.033	2014-5-10	2015-5-10
5	Audio Analyzer	Hewlett Packard	8903B	EMC0011	2014-11-5	2015-11-5
6	Power Sensor	Rohde & Schwarz	NRP-Z91	1.034	2014-5-10	2015-5-10
7	Power Sensor	Rohde & Schwarz	NRP-Z91	1.035	2014-5-10	2015-5-10
8	Temperature Chamber	Gongwen	GDS-250	SFT0009	2014-11-5	2015-11-5
9	D.C. Power Supply	KIKUSUI	PAN35-10A	SFT0319	2014-11-5	2015-11-5
10	Temperature Chamber	Gongwen	GDS-250	SFT0009	2014-11-5	2015-11-5
11	D.C. Power Supply	KIKUSUI	PAN35-10A	SFT0319	2014-11-5	2015-11-5
12	Humidity/ Temperature Meter	Anymetre	TH101B	SFT0063	2014-11-5	2015-11-5
13	Barometer	ChangChun	DYM3	SEL0088	2014-6-8	2015-6-8
14	Multimeter	UNI-T	UT70A	EMC0017	2014-11-5	2015-11-5
15	Monopole Antenna	HST	N/A	EMC0089	2014-11-5	2015-11-5
16	Low loss coaxial cable	HST	2 m	EMC1008	2014-11-5	2015-11-5
17	Monopole Antenna	HST	N/A	N/A	2014-11-5	2015-11-5
18	Noise Generaror	Ningbo Zhongce	DF1681	EMC0009	2014-11-5	2015-11-5
19	1-18 GHz Antenna	R & S	HF906	1.01	2014-5-10	2015-5-10
20	3m Semi-anechoic Chamber	ABLATROSS	SAC-3	1.001	2014-5-10	2015-5-10
21	EMI Receiver	R & S	ESCI-3	1.002	2014-5-10	2015-5-10
22	Spectrum Analyzer	R & S	FSP30	1.003	2014-5-10	2015-5-10
23	BiConiLog Antenna	SCHWARZBECK	SWB-VULB 9163	1.042	2014-5-10	2015-5-10
24	Pre-amplifier	B & Z TECHNOLOGIES	SCA-SCU18	1.01.1	2014-5-10	2015-5-10
25	Biconical Antenna	SCHWARZBECK	VULB9163	1.011	2014-5-10	2015-5-10

End of report