CE Maximum sound pressure

TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

1MORE Stylish True Wireless In-Ear Headphones-I

ISSUED TO
Tiinlab Acoustic Technology Limited

Tianliao Building 1403, Zone A Tianliao Industrial Park, Taoyuan Str., Nanshan Dist., Shenzhen, P.R. China

Report No:	BL-SZ1910199-102
EUT Name:	**1MORE Stylish True Wireless In-Ear Headphones-I**
Model Name:	E1026BT-I
Brand Name:	1MORE
Test Standard:	Refer to clause 3.1
Test conclusion:	Pass
Test Date:	Jan. 12, 2019
Date of Issue:	Jan. 23, 2019

Prepared by: Jian Pan
Jian Pan
(Safety Engineer)
Date Jan. 23. 2019

Approved by: Simon Qi
Simon Qi
(Vice Chief Engineer)
Date Jan. 23. 2019

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Revision History

Version	Issue Date	Revisions
Rev. 01	Jan. 23, 2019	Initial Issue

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1 GENERAL INFORMATION

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province. P.R. China
Phone Number	+86 755 6685 0100

1.2 Identification of the Responsible Testing Location

Test Location	National Quality Supervision & Testing Center for Information Network (Jiangsu)
Address	3F, D Building, No.1368, Wuzhongdadao Avenue, Suzhou, China
Accreditation Certificate	The National Quality Supervision & Testing Center for Information Network (Jiangsu) has met the requirements of the CNAS Accreditation Criteria for Testing Laboratories, has demonstrated compliance with ISO/IEC Standard 17025:2005. The accreditation certificate number is L1000.

1.3 Test Environment Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

1.4 Announce

(1) The test report refer to the BALUN report mode v1.7.

(2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.

(3) The test report is invalid if there is any evidence and/or falsification.

(4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.

(5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.

(6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Tiinlab Acoustic Technology Limited
Address	Tianliao Building 1403, Zone A Tianliao Industrial Park, Taoyuan Str., Nanshan Dist., Shenzhen, P.R. China

2.2 Manufacturer Information

Manufacturer	Tiinlab Acoustic Technology Limited
Address	Tianliao Building 1403, Zone A Tianliao Industrial Park, Taoyuan Str., Nanshan Dist., Shenzhen, P.R. China

2.3 Factory Information

Factory	/
Address	/

2.4 General Description for Equipment under Test (EUT)

EUT Name	1MORE Stylish True Wireless In-Ear Headphones-Ⅰ
Model Name Under Test	E1026BT-Ⅰ
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	/
Software Version	/
Dimensions (Approx.)	/
Weight (Approx.)	/

2.5 Technical Information

Ratings	Input: 5Vdc, 1.0A
Audio Characteristics	Speaker Output frequency range: 20 to 20KHz
Warning for Sound pressure warning level	[]No; []Yes; [X] N/A
For headphones and earphones:	
Speaker Impedance	4ohm
Input method	[]Line in [X] Others: Bluetooth Specification VR4.1
Others	--
Note:	

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	EN 50332-1: 2013	Sound system equipment - Headphones and earphones associated with portable audio equipment – Maximum sound pressure level measurement methodology and limit considerations Part 1: General method for “one package equipment”
2	EN60950-1: 2006 + A11:2009 + A1:2010. + A12:2011 + A2:2013	Zx. Protection against excessive sound pressure from personal music players

3.2 Possible test case verdict

Possible test case verdicts:
-test case does not apply to the test object. : N/A -test object does meet the requirement.....: P(Pass) -test object does not meet the requirement..: F(Fail)

3.3 Test items

Tests performed (name of test):

- ☒ Sound pressure Measurement
- ☒ Maximum sound pressure test
- ☐ Average sound pressure (Long term LAeq,T) test
- ☐ Output voltage Measurement
- ☐ Maximum output voltage test
- ☐ Player output voltage test of the “warning” appears
- ☐ Wide band characteristic voltage Measurement test

3.4 Test Equipment Used

Description	Manufacturer	Model	Serial No.	Cal. Due
Audio analyzer	UPV	4216	NTIe-511-030-09-P	2018.10.07
Audio Power Amplifier	B & K	2716-C	NTIe-511-017-10-C	2018.10.07
Head and Torso	B & K	4128-C	NTIe-511-017-12-C	2018.07.04
Noise signal	B & K	2690-A-0S2	NTIe-511-030-11-P	2018.07.07
Sound calibrator	B & K	4231	NTIe-511-020-24-C	2018.10.07
Anechoic chamber	/	AN02	NTIe-511-077-00-C	2019.01.07

4 Sound pressure Measurement

4.1 EUT Operating Conditions

Devices under test (DUT) shall be powered by a stabilized power supply, at their nominal supply voltage, with a tolerance of ±3%.

When testing devices, all measurements shall be taken at the following settings:

- Noise reduction system: OFF
- Volume control: maximum
- Tone control: adjusted in order to maximize the sound pressure level

The EUT is working at MP3 play mode during the test.

The test signal is a stationary wide-band signal, the spectral content of which is representative of the musical signals. The test signal shall be recorded at an RMS value of-10dB (ref 0 dB full scale).

The EUT is working at FM play mode during the test.

The test signal applied at the input of the RF generator shall be set at an RMS value of -6dB related to the amplitude of a sinusoidal waveform at 250Hz, producing a peak to peak deviation of
±75kHz.

4.2 Test Method

a. The sound pressure level produced by headphones or earphones can be measured by subjective methods or by objective methods. The subjective method becomes inadequate and hazardous when high levels are to be evaluated. The objective method can give both a good reproducibility and a good correlation subjective test.
b. The method of EN 50332-1 is based on the use of a Head and Torso Simulator (HATS) in accordance with IEC 60959. This manikin is fitted with an occluded ear simulator and an ear canal extension.
c. The sound pressure level measured by the ear simulator microphone represents the pressure found at eardrum level and differs from that of the free field pressure by the HATS transfer function. In order to keep good correlation with noise measurements and epidemiological studies on hearing impairment, raw measurement data will be converted into free field values. This will be done by subtracting the free field frequency response of the HATS expressed in third octave frequency bands.
d. Weighting curve A shall be used in order to conform to current regulations and standards.
e. The result is given as free field related A-weighted equivalent continuous sound pressure levels.
f. Tests are repeated five times for each ear, and the headphone shall be removed and repositioned before each measurement.
g. The maximum sound pressure level considered as the test result is the mean value of all measurements.

4.3 Test Setup

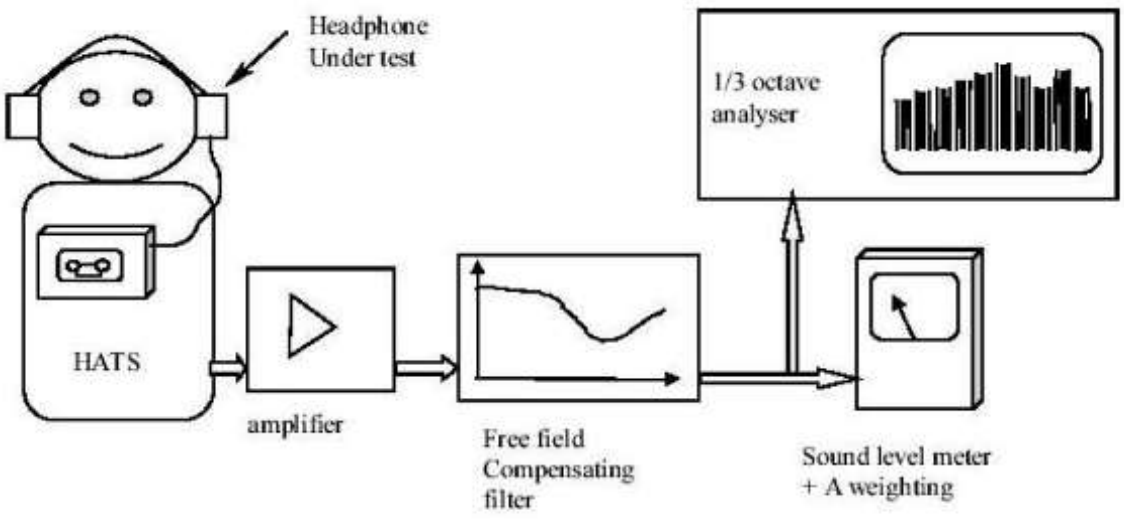

Figure 1 — Measuring arrangement

4.4 Test Result

Maximum sound pressure level

Maximum sound pressure level								P
EQ Mode	Channel	Unit	Test Result					
			1	2	3	4	5	Mean value
Normal	L	dB	98.58	98.97	99.13	97.84	98.27	98.56
	R	dB	98.22	97.79	98.47	98.13	99.10	98.34

Average sound pressure (Long term LAeq,T)

Average sound pressure(Long term LAeq,T)								N/A
EQ Mode	Channel	Unit	Test Result					
			1	2	3	4	5	Mean value
Normal	L	dB	--	--	--	--	--	--
	R	dB	--	--	--	--	--	--

5 Output voltage Measurement

5.1 EUT Setup and Operating Conditions

Devices under test (DUT) shall be powered by a stabilized power supply, at their nominal supply voltage, with a tolerance of ±3%.

When testing devices, all measurements shall be taken at the following settings:

- Noise reduction system: OFF
- Volume control: maximum
- Tone control: adjusted in order to maximize the sound pressure level

The EUT is working at MP3 play mode during the test.

The test signal is a stationary wide-band signal, the spectral content of which is representative of the musical signals. The test signal shall be recorded at an RMS value of -10dB (ref 0 dB full scale).

5.2 Test Method

a. The measuring instruments shall conform to EN 60804, class 1.
b. Player output shall be loaded with a resistive load of 32Ω.
c. The maximum output voltage shall be defined as unweighted true r.m.s voltage at the load, using averaging time of 30s or more.

5.3 Test Result

Maximum output voltage

Maximum output voltage			N/A
Item	Channel	Unit	Test Result
Maximum output voltage (Normal)	L	mV	--
	R	mV	--

Player output voltage of the “warning” appears

Player output voltage of the “warning” appears			N/A
Item	Channel	Unit	Test Result
Maximum output voltage (Normal)	L	mV	--
	R	mV	--

6 Wide band characteristic voltage Measurement

6.1 EUT Setup and Operating Conditions

Devices under test (DUT) shall be powered by a stabilized power supply, at their nominal supply voltage, with a tolerance of ±3%.

When testing devices, all measurements shall be taken at the following settings:

- Noise reduction system: OFF
- Volume control: maximum
- Tone control: adjusted in order to maximize the sound pressure level

The test signal is a stationary wide-band signal, the spectral content of which is representative of the musical signals. The test signal shall be recorded at an RMS value of -10dB (ref 0 dB full scale).

6.2 Test Method

a. The characteristic voltage WBCV is the input signal voltage when sound pressure level reaches 94dB SPL.
b. The acoustical measurements are preferably done by using a suitable HATS.
c. Headphone/earphones shall be positioned on the HATS correctly, so that the measured sound pressure level is maximized.

6.3 Test Result

Wide band characteristic voltage

Wide band characteristic voltage			N/A
Item	Channel	Unit	Test Result
Wide band characteristic voltage	L	mV	--
	R	mV	--

7 CONCLUSION

7.1 The limit values

Items	limit values
Maximum sound pressure level	≤100dB
Average sound pressure(Long term LAeq,T)	≤85dB
Maximum output voltage	≤150mV
Player output voltage of the “warning” appears	≤27mV
Wide band characteristic voltage	≥75mV

7.2 Conclusion

According to the test result and limits, the product was fulfilled the requirement of standard: EN60950-1: 2006-A12:2011(Zx. Protection against excessive sound pressure from personal music players)

ANNEX A TEST SETPHOTO

ANNEX B EUT EXTERNAL PHOTOS

Photo 1: Overview

Photo 2: Overview

Photo 3: Overview

Photo 4: Overview

--END OF REPORT--