



Report No.: SZEM190201101204

Page: 1 of 8

## SAR Evaluation Report

**Application No.:** SZEM1902011012CR  
**Applicant:** NEW AUDIO LLC.  
**Address of Applicant:** 132 W. 31st 7th Floor, New York, 10001, United States  
**Manufacturer:** NEW AUDIO LLC.  
**Address of Manufacturer:** 132 W. 31st 7th Floor, New York, 10001, United States  
**Factory:** Shenzhen Grandsun Electronics Co., Ltd.  
**Address of Factory:** Gaoqiao Industry Zone, Pingdi Town, Longgang District, Shenzhen, China  
**Equipment Under Test (EUT):**  
**EUT Name:** MW65 Bluetooth Headphone  
**Model No.:** MW65  
**Trade mark:** Master&Dynamic  
**FCC ID:** 2AGA7-MW65  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2019-02-20  
**Date of Test:** 2019-02-22 to 2019-03-06  
**Date of Issue:** 2019-03-11

|                      |              |
|----------------------|--------------|
| <b>Test Result :</b> | <b>PASS*</b> |
|----------------------|--------------|

\* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu  
EMC Laboratory Manager



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## 2 Version

| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2019-03-11 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |  |                             |  |
|--------------------------|--|-----------------------------|--|
| Authorized for issue by: |  |                             |  |
|                          |  | Bill Chen                   |  |
|                          |  | Bill Chen /Project Engineer |  |
|                          |  | Eric Fu                     |  |
|                          |  | Eric Fu /Reviewer           |  |

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## 4 General Information

### 4.1 General Description of EUT

|                             |   |
|-----------------------------|---|
| Power supply:               | Rechargeable battery:DC 4.2V 720mAh 2.664Wh(Charge by Type C) |
| For BT:                     |   |
| Bluetooth Version:          | V4.2(This test report is for classic mode.)                   |
| Operation Frequency:        | 2402MHz to 2480MHz  |
| Spectrum Spread Technology: | Frequency Hopping Spread Spectrum(FHSS)                       |
| Modulation Type:            | GFSK, π/4DQPSK, 8DPSK   |
| Channel Spacing:            | 1MHz  |
| Number of Channels:         | 79  |
| Sample Type:                | Portable production   |
| Antenna Type:               | PIFA  |
| Antenna Gain:               | 3.64dBi   |
| For BLE:                    |   |
| Bluetooth Version:          | V4.2(This test report is for BLE mode.)                       |
| Operation Frequency:        | 2402MHz to 2480MHz  |
| Modulation Type:            | GFSK  |
| Channel Spacing:            | 2MHz  |
| Number of Channels:         | 40  |
| Sample Type:                | Portable production   |
| Antenna Type:               | PIFA  |
| Antenna Gain:               | 3.64dBi   |

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## 4.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch  
No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China  
518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

## 4.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

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#### **4.4 Deviation from Standards**

None.

#### **4.5 Abnormalities from Standard Conditions**

None.

#### **4.6 Other Information Requested by the Customer**

None.



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## 5 SAR Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

##### 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 5.1.2 Limits

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

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

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  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 is applied to determine SAR test exclusion

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### 5.1.3 EUT RF Exposure

For BT

The Max. power (including tune-up tolerance) is 4.90 dBm on the lowest channel 2.48 GHz (\*)  
4.90 dBm logarithmic terms convert to numeric result is nearly 3.09 mW

According to the formula. calculate the test exclusion thresholds:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}]$

$\text{General RF Exposure} = (3.09 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.48 \text{ GHz}} = 0.97$  (1)

SAR requirement:

$S = 3.0$  (2)

(1) < (2)

So the SAR report is not required.

(\*) Max. power refer to Report No.:SZEM190201101202

For BLE

The Max. power (including tune-up tolerance) is 4.84 dBm on the lowest channel 2.44 GHz (\*)  
4.84 dBm logarithmic terms convert to numeric result is nearly 3.05 mW

According to the formula. calculate the test exclusion thresholds:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}]$

$\text{General RF Exposure} = (3.05 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.44 \text{ GHz}} = 0.95$  (1)

SAR requirement:

$S = 3.0$  (2)

(1) < (2)

So the SAR report is not required.

(\*) Max. power refer to Report No.:SZEM190201101203

- End of the Report -

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