



Test Report No.: FM191209N037

## RF EXPOSURE REPORT

|           |   |
|-----------|---|
| Applicant | Zound Industries International AB         |
| Address   | Centralplan 15 SE-111 20 Stockholm Sweden |

|                                     |   |
|-------------------------------------|---|
| Manufacturer or Supplier            | Zound Industries International AB         |
| Address                             | Centralplan 15 SE-111 20 Stockholm Sweden |
| Product                             | True wireless headphones                  |
| Brand Name                          | URBANEARS                                 |
| Model                               | Urbanears Luma                            |
| Additional Model & Model Difference | N/A                                       |
| Date of tests                       | Dec. 09, 2019 ~ Jan. 02, 2020             |

FCC Part 2 (Section 2.1093)

KDB 447498 D01

IEEE C95.1

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

|   |   |
|---|---|
| Tested by Andy Zhu<br>Project Engineer / EMC Department | Approved by Glyn He<br>Assistant Manager / EMC Department |
|   |   |

Date: Mar. 10, 2020

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Bureau Veritas Shenzhen Co., Ltd.  
Dongguan Branch

No. 96, Guantai Road (Houjie Section), Houjie  
Town, Dongguan City, Guangdong Province.  
523942. People's Republic of China.

Tel: +86 769 8998 2098  
Fax: +86 769 8593 1080  
Email: [customerservice.dg@cn.bureauveritas.com](mailto:customerservice.dg@cn.bureauveritas.com)



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## RELEASE CONTROL RECORD

| ISSUE NO.    | REASON FOR CHANGE | DATE ISSUED   |
|--------------|-------------------|---------------|
| FM191209N037 | Original release  | Mar. 10, 2020 |

Bureau Veritas Shenzhen Co., Ltd.  
Dongguan Branch

No. 96, Guantai Road (Houjie Section), Houjie  
Town, Dongguan City, Guangdong Province.  
523942. People's Republic of China.

Tel: +86 769 8998 2098  
Fax: +86 769 8593 1080  
Email: [customerservice.dg@cn.bureauveritas.com](mailto:customerservice.dg@cn.bureauveritas.com)



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## 1. CERTIFICATION

|                        |                                   |
|------------------------|-----------------------------------|
| <b>FCC ID:</b>         | 2AAGF-LUMA                        |
| <b>PRODUCT:</b>        | True wireless headphones          |
| <b>BRAND NAME:</b>     | URBANEARS                         |
| <b>MODEL NO.:</b>      | Urbanears Luma                    |
| <b>ADDITIONAL NO.:</b> | N/A                               |
| <b>TEST SAMPLE:</b>    | Engineering Sample                |
| <b>APPLICANT:</b>      | Zound Industries International AB |
| <b>STANDARDS:</b>      | FCC Part 2 (Section 2.1093)       |
|                        | KDB 447498 D01                    |
|                        | IEEE C95.1                        |

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## 2. RF EXPOSURE DEFINE

The corresponding SAR Exclusion Threshold condition, listed below:

1) 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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, 16 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
- 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.

2) At 100 MHz to 6 GHz and for test separation distances  $> 50$  mm, the SAR test exclusion threshold is determined according to the following:

- a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100MHz to 1500 MHz
- b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at  $> 1500$  MHz and  $\leq 6$  GHz
- 3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.
  - a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  for test separation distances  $> 50$  mm and  $< 200$  mm.
  - b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$  for test separation distances  $\leq 50$  mm.
  - c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

## 3. CLASSIFICATION

The antenna of this product, under normal use condition, is at less than 20cm away from the body of the user. So, this device is classified as **Portable Device**.



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## 4. SAR TEST EXCLUSION THRESHOLDS

The tuned conducted Average Power (declared by client)

| Mode      | Frequency (MHz) | Target Power (dBm) | Tolerance (dBm) | Lower Tolerance (dBm) | Upper Tolerance (dBm) |
|-----------|-----------------|--------------------|-----------------|-----------------------|-----------------------|
| GFSK      | 2402-2480       | -1.5               | +/-1.5          | -3                    | 0                     |
| 8DPSK     | 2402-2480       | -1.5               | +/-1.5          | -3                    | 0                     |
| BT-LE(1M) | 2402-2480       | -1.5               | +/-1.5          | -3                    | 0                     |
| BT-LE(2M) | 2402-2480       | -1.5               | +/-1.5          | -3                    | 0                     |

The measured conducted Average Power

| Mode      | Frequency (MHz) | Averaged Power (dBm) |
|-----------|-----------------|----------------------|
| GFSK      | 2402            | -1.12                |
| 8DPSK     | 2402            | -0.95                |
| BT-LE(1M) | 2402            | -1.13                |
| BT-LE(2M) | 2402            | -1.06                |

### SAR Test Exclusion Thresholds

| Frequency (MHz) | Maximum source-based time averaged conducted output power (dBm) | Minimum separation distance (mm) | Result of Eq. 1 | Limit for 1-g SAR | Limit for 10-g extremity SAR | Verdict         |
|-----------------|---|----------------------------------|-----------------|-------------------|------------------------------|-----------------|
| 2402-2480       | 0   | 5                                | 0.31            | 3.0               | 7.5                          | Exempt from SAR |

### Conclusion

Therefore this device complies with FCC's RF radiation exposure limits for general population without SAR evaluation.