



BUREAU  
VERITAS

Test Report No.: FM200526S010

## RF EXPOSURE REPORT

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

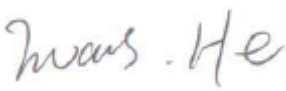
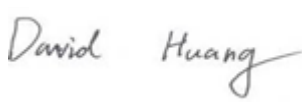
|                                     |                                           |
|-------------------------------------|-------------------------------------------|
| Manufacturer or Supplier            | Zound Industries International AB         |
| Address                             | Centralplan 15 SE-111 20 Stockholm Sweden |
| Product                             | HEADPHONES                                |
| Brand Name                          | Marshall                                  |
| Model                               | MAJOR IV                                  |
| Additional Model & Model Difference | N/A                                       |
| Date of tests                       | Jun. 03, 2020 ~ Jul. 09, 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 Evans He<br>Project Engineer / EMC Department                             | Approved by David Huang<br>Supervisor / EMC Department                                                          |
|  | <br><br>Date: Aug. 04, 2020 |

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## Table of Contents

|                                        |   |
|----------------------------------------|---|
| RELEASE CONTROL RECORD .....           | 3 |
| 1. CERTIFICATION.....                  | 4 |
| 2. RF EXPOSURE DEFINE .....            | 5 |
| 3. CLASSIFICATION .....                | 5 |
| 4. SAR TEST EXCLUSION THRESHOLDS ..... | 6 |



Test Report No.: FM200526S010

## RELEASE CONTROL RECORD

| ISSUE NO.    | REASON FOR CHANGE | DATE ISSUED   |
|--------------|-------------------|---------------|
| FM200526S010 | Original release  | Aug. 04, 2020 |



Test Report No.: FM200526S010

## 1. CERTIFICATION

|                        |                                   |
|------------------------|-----------------------------------|
| <b>FCC ID:</b>         | 2AAGF-MAJORIV                     |
| <b>PRODUCT:</b>        | HEADPHONES                        |
| <b>BRAND NAME:</b>     | Marshall                          |
| <b>MODEL NO.:</b>      | MAJOR IV                          |
| <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                        |



## 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, 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)  $\cdot$  (f(MHz)/150)] mW, at 100MHz to 1500 MHz

b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)  $\cdot$  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**.



## 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       | 2                  | $\pm 2$         | 0                     | 4                     |
| 8DPSK | 2402-2480       | 2                  | $\pm 2$         | 0                     | 4                     |

The measured conducted Average Power

| Mode  | Frequency (MHz) | Averaged Power (dBm) |
|-------|-----------------|----------------------|
| GFSK  | 2402            | 2.13                 |
| 8DPSK | 2402            | 2.05                 |

### 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       | 4                                                               | 5                                | 0.78            | 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.