



**FCC RF EXPOSURE REPORT**

*For*

**Speaker**

**MODEL NUMBER: AIR4**

**FCC ID: TQYETONAIR4**

**IC: 6233A-ETONAIR4**

**REPORT NUMBER: 4788304691.1-4**

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*Prepared for*

**JAZZ HIPSTER CORPORATION  
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*Prepared by*

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Revision History

| Rev. | Issue Date | Revisions     | Revised By |
|------|------------|---------------|------------|
| --   | 01/31/2018 | Initial Issue |            |

## TABLE OF CONTENTS

|                                       |   |
|---------------------------------------|---|
| 1. ATTESTATION OF TEST RESULTS .....  | 4 |
| 2. TEST METHODOLOGY .....             | 5 |
| 3. FACILITIES AND ACCREDITATION ..... | 5 |
| 4. REQUIREMENT .....                  | 6 |

## 1. ATTESTATION OF TEST RESULTS

### Applicant Information

Company Name: JAZZ HIPSTER CORPORATION  
Address: 2Fd., No.512, Yaun-San Rd. Ghang-Ho City Taiwan

### Manufacturer Information

Company Name: ETON Deutschland Electro Acoustic GmbH  
Address: 89231 Neu - Ulm, Pfaffenweg 21, Germany

### EUT Description

Product Name: Speaker  
Brand Name: ETON  
Model Name: AIR4  
Sample ID: 1337271  
Sample Status: Good  
Sample Received date: January 03, 2018  
Date Tested: January 04~January 19, 2018

| APPLICABLE STANDARDS |              |
|----------------------|--------------|
| STANDARD             | TEST RESULTS |
| FCC 47CFR§2.1091     | Complies     |

Tested By:



Miller Ma  
Engineer Project Associate

Checked By:



Shawn Wen  
Laboratory Leader

Approved By:



Stephen Guo  
Laboratory Manager

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091.

## 3. FACILITIES AND ACCREDITATION

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accreditation Certificate | <p><b>A2LA (Certificate No.: 4102.01)</b><br/>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p><b>IAS (Lab Code: TL-702)</b><br/>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has demonstrated compliance with ISO/IEC Standard 17025:2005, General requirements for the competence of testing and calibration laboratories</p> <p><b>FCC (FCC Designation No.: CN1187)</b><br/>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules</p> <p><b>IC(Company No.: 21320)</b><br/>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320.</p> <p><b>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)</b><br/>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793.</p> <p>Facility Name:<br/>Chamber D, the VCCI registration No. is G-20019 and R-20004<br/>Shielding Room B, the VCCI registration No. is C-20012 and T-20011</p> |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

## 4. REQUIREMENT

### LIMIT AND CALCULATION METHOD

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

### RF EXPOSURE LIMIT

| Frequency Range (MHz) | E-field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (Minutes) |
|-----------------------|----------------------------|-----------------------------------|-----------------------------------------|-------------------------------------------------------------------|
| 0.3 -- 1.34           | 614                        | 1.63                              | (100)*                                  | 30                                                                |
| 1.34 -- 30            | 824/f                      | 2.19/f                            | (180/f <sup>2</sup> )*                  | 30                                                                |
| 30 -- 300             | 27.5                       | 0.073                             | 0.2                                     | 30                                                                |
| 300 -- 1500           | --                         | --                                | f/1500                                  | 30                                                                |
| 1500 -- 100,000       | --                         | --                                | 1.0                                     | 30                                                                |

### CALCULATION METHOD

$$S=PG/4\pi R^2$$

Where:

S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

# **CALCULATED RESULTS**

| BT(GFSK) Mode |              |       |                              |                   |                    |                     |             |
|---------------|--------------|-------|------------------------------|-------------------|--------------------|---------------------|-------------|
| Frequency     | Antenna Gain |       | Tune up power with tolerance | Max Tune Up Power | Power Density      | Power Density Limit | Test Result |
| MHz           | (dBi)        | (num) | (dBm)                        | (dBm)             | mW/cm <sup>2</sup> | mW/cm <sup>2</sup>  | --          |
| 2441          | 4.97         | 3.14  | 7 +/- 1                      | 8                 | 0.003942114        | 1.0                 | Complies    |

| BLE Mode  |              |       |                              |                   |                    |                     |             |
|-----------|--------------|-------|------------------------------|-------------------|--------------------|---------------------|-------------|
| Frequency | Antenna Gain |       | Tune up power with tolerance | Max Tune Up Power | Power Density      | Power Density Limit | Test Result |
| MHz       | (dBi)        | (num) | (dBm)                        | (dBm)             | mW/cm <sup>2</sup> | mW/cm <sup>2</sup>  | --          |
| 2440      | 4.97         | 3.14  | 6 +/- 1                      | 7                 | 0.003131332        | 1.0                 | Complies    |

| WIFI Mode(WORST-CASE): 11b Channel 1 |              |       |                              |                   |                    |                     |             |
|--------------------------------------|--------------|-------|------------------------------|-------------------|--------------------|---------------------|-------------|
| Frequency                            | Antenna Gain |       | Tune up power with tolerance | Max Tune Up Power | Power Density      | Power Density Limit | Test Result |
| MHz                                  | (dBi)        | (num) | (dBm)                        | (dBm)             | mW/cm <sup>2</sup> | mW/cm <sup>2</sup>  | --          |
| 2437                                 | 4.97         | 3.14  | 15 +/- 1                     | 16                | 0.024873055        | 1.0                 | Complies    |

- Note: 1. Antenna Gain=4.97dBi (Numeric 3.14),  $\pi=3.141$ .  
 2. The minimum separation distance of the device is greater than 20 cm.  
 3. Calculate by WORST-CASE mode.  
 4. Owing to the maximum Calculated Result is below the limit, so it deemed to comply with the basic restrictions without testing which means that no SAR is required.  
 5. Max Tune Up Power by manufacturer's declaration  
 6. Bluetooth and WIFI cannot be transmit simultaneously.

**END OF REPORT**