

# RF EXPOSURE REPORT



Report No.: 18070576-FCC-H

Supersede Report No.: N/A

Applicant	4COM Technologies	
Product Name	Portable Bluetooth Speaker	
Model No.	TAGG SONIC ANGLE 1	
Serial No.	CO,S10	
Test Standard	FCC 2.1093	
Test Date	June 05 to 12, 2018	
Issue Date	June 13, 2018	
Test Result	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Equipment complied with the specification		<input checked="" type="checkbox"/>
Equipment did not comply with the specification		<input type="checkbox"/>
Aaron Liang	David Huang	
Aaron Liang Test Engineer	David Huang Checked By	
<p>This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only</p>		

Issued by:

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## Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

### Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

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## 1. Report Revision History

Report No.	Report Version	Description	Issue Date
18070576-FCC-H	NONE	Original	June 13, 2018

## 2. Customer information

Applicant Name	4COM Technologies
Applicant Add	1202, B-08 Building, GD-ITL Tower, Netaji Subhash Place, PitamPura, New Delhi - 110034
Manufacturer	Musilab Electronic Co.,Ltd
Manufacturer Add	No.5 Huanwei Street, Fugang, Qingxi Town, Dongguan, Guandong, China

## 3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao'an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	535293
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

#### **4. Equipment under Test (EUT) Information**

Description of EUT: Portable Bluetooth Speaker

Main Model: TAGG SONIC ANGLE 1

Serial Model: CO,S10

Date EUT received: June 04, 2018

Test Date(s): June 05 to 12, 2018

Antenna Gain: Bluetooth: 0dBi

Antenna Type: PIFA Antenna

Type of Modulation: Bluetooth: GFSK, π /4DQPSK, 8DPSK

RF Operating Frequency (ies): Bluetooth: 2402-2480 MHz

Number of Channels: Bluetooth: 79CH

Port: Please refer to the user's manual

Input Power: DC 5V/1A or 3.7V from built-in battery

Trade Name : N/A

FCC ID: 2AP44-TAGGANG1

## 5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

### 5.1 RF Exposure

#### **Standard Requirement:**

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this 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.

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:

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

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

$$\text{result} = P\sqrt{F} / D$$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm

## 5.2 Test Result

### Bluetooth Mode:

Modulation	CH	Frequency (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	1.539	1±1	2	1.585	0.49	3
	Mid	2441	1.090	1±1	2	1.585	0.50	3
	High	2480	1.037	1±1	2	1.585	0.50	3
π/4 DQPSK	Low	2402	0.529	1±1	2	1.585	0.49	3
	Mid	2441	1.518	1±1	2	1.585	0.50	3
	High	2480	1.342	1±1	2	1.585	0.50	3
8-DPSK	Low	2402	0.789	1±1	2	1.585	0.49	3
	Mid	2441	1.710	1±1	2	1.585	0.50	3
	High	2480	0.999	1±1	2	1.585	0.50	3

**Result:** Compliance

No SAR measurement is required.