



# RF Exposure Evaluation Report

**APPLICANT** : INMUSIC BRANDS INC

**EQUIPMENT** : 6" Active Studio Monitor w DSP, BT, App  
8" Active Studio Monitor w DSP, BT, App

**BRAND NAME** : M-Audio

**MODEL NAME** : MA51, MA51\*\*\*\*\*, FORTY SIXTY, Forty Sixty,  
FORTY SIXTY\*\*\*\*\*, Forty Sixty\*\*\*\*\*. ("\*" can  
be "0-9", "A-Z", "a-z", blank, "-", "+" or any  
character, symbol, alphanumeric.)  
MA52, MA52\*\*\*\*\*, FORTY EIGHTY, Forty Eighty,  
FORTY EIGHTY\*\*\*\*\*, Forty Eighty\*\*\*\*\*. ("\*" can  
be "0-9", "A-Z", "a-z", blank, "-", "+" or any  
character, symbol, alphanumeric.)

**FCC ID** : Y4O-MA52

**STANDARD** : 47 CFR Part 2.1091  
FCC KDB 447498 D01 v06

The product evaluation date was started from Feb. 19, 2024 and completed on Feb. 19, 2024. We, Sporton International Inc. (Shenzhen), would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and FCC KDB 447498 D01 v06, and pass the limit. Without written approval of Sporton International Inc. (Shenzhen), the test report shall not be reproduced except in full.



Approved by: Si Zhang

**Sporton International Inc. (Shenzhen)**

**1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055**

**People's Republic of China**



## **Table of Contents**

<b>1. ADMINISTRATION DATA .....</b>	<b>4</b>
1.1. Testing Laboratory .....	4
<b>2. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT) .....</b>	<b>5</b>
<b>3. MAXIMUM RF AVERAGE OUTPUT TUNE UP POWER AMONG PRODUCTION UNITS .....</b>	<b>6</b>
<b>4. RF EXPOSURE LIMIT INTRODUCTION .....</b>	<b>7</b>
<b>5. RADIO FREQUENCY RADIATION EXPOSURE EVALUATION .....</b>	<b>8</b>
5.1. Standalone Power Density Calculation .....	8



**Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA3D1820	Rev. 01	Initial issue of report.	May 15, 2024



## **1. Administration Data**

### **1.1. Testing Laboratory**

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Testing Laboratory			
Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR01-SZ	CN1256	421272

Applicant	
Company Name	INMUSIC BRANDS INC
Address	200 Scenic View Drive,Suite 201,Cumberland,Rhode Island 02864,United States

Manufacturer	
Company Name	INMUSIC BRANDS INC
Address	200 Scenic View Drive,Suite 201,Cumberland,Rhode Island 02864,United States

**2. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	6" Active Studio Monitor w DSP, BT, App 8" Active Studio Monitor w DSP, BT, App
Brand Name	M-Audio
Model Name	MA51, MA51*****, FORTY SIXTY, Forty Sixty, FORTY SIXTY*****, Forty Sixty*****, (“*” can be “0-9”, “A-Z”, “a-z”, blank, “-”, “+” or any character, symbol, alphanumeric.) MA52, MA52*****, FORTY EIGHTY, Forty Eighty, FORTY EIGHTY*****, Forty Eighty*****, (“*” can be “0-9”, “A-Z”, “a-z”, blank, “-”, “+” or any character, symbol, alphanumeric.)
FCC ID	Y4O-MA52
Wireless Technology and Frequency Range	Bluetooth: 2402 MHz ~ 2480 MHz
Mode	Bluetooth BR/EDR/LE
Antenna Gain	Bluetooth: 2.40 dBi
Antenna Type	Bluetooth: FPC Antenna
HW Version	N/A
SW Version	N/A
EUT Stage	Identical Prototype

**Remark:**

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are two samples: sample 1 (MA52) and sample2 (MA51) with different size and some of parts, the differences have no influence on the MPE analysis results.

**Comments and Explanations:**

1. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.
2. The maximum RF output tune up power, antenna gain also the safe distance used for evaluate RF exposure were declared by manufacturer.



**3. Maximum RF average output tune up power among production units**

**<Bluetooth>**

Mode	Maximum Average power(dBm)
Bluetooth BR/EDR	6.00
Bluetooth LE	6.00



#### **4. RF Exposure Limit Introduction**

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
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

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



## **5. Radio Frequency Radiation Exposure Evaluation**

### **5.1. Standalone Power Density Calculation**

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Average EIRP (mW)	Power Density at 20cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
Bluetooth	2402.0	2.40	6.00	8.400	6.918	0.001	1.000

**Note:** For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band.

### **Conclusion:**

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.

-----THE END-----