

RF EXPOSURE REPORT

FOR

Applicant	:	JL Audio Inc.
Address	:	10369 N Commerce Parkway, Miramar, FL 33025 USA.
Equipment under Test	:	Marine source unit
Model No.	:	CMM-30
Trade Mark	:	/
FCC ID	:	2AD9E-CMM30
Manufacturer	:	JL Audio Inc.
Address	:	10369 N Commerce Parkway, Miramar, FL 33025 USA.

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park,
Dongguan City, Guangdong Province, China, 523808

Tel.: +86-0769-38826678, **E-mail:** ddt@dgddt.com, <http://www.dgddt.com>

REPORT

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Test Report Declare

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Model No.	:	CMM-30
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Manufacturer	:	JL Audio Inc.
Address	:	10369 N Commerce Parkway, Miramar, FL 33025 USA.

Standard Used: KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is assessed by Dongguan Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

After evaluation, our opinion is that the equipment In Accordance with above standard.

Report No:	DDT-R22030808-2E18		
Date of Receipt:	Mar. 08, 2022	Date of Test:	Mar. 08, 2022 ~ Jun. 07, 2022

Prepared By:

Sam Li
Sam Li/Engineer

Approved By:



Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Jun. 08, 2022	

1. General Information

1.1. Description of equipment

EUT* Name	: Marine source unit
Model Number	: CMM-30
EUT function description	: Please reference user manual of this device
Power Supply	: 14.4V DC (10V – 16V)
Radio Specification	: Bluetooth V5.0
Operation Frequency	: 2402 MHz - 2480 MHz
Modulation	: GFSK, $\pi/4$ -DQPSK, 8DPSK
Data Rate	: 1 Mbps, 2 Mbps, 3 Mbps
Antenna Gain	: 0 dBi
Sample Type	: Series production
Sample Number	: S22030808-04 for conducted test S22030808-05 for radiation test

Note: EUT is the abbreviation of equipment under test.

1.2. Assess laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, G-20118

2. RF Exposure evaluation for FCC

According to 447498 D01 General RF Exposure Guidance v06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

$f(\text{GHz})$ 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

BT Manufacturing Tolerance

GFSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	3	4	2
Tolerance ±(dB)	1	1	1
π/4DQPSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	2	4	1
Tolerance ±(dB)	1	1	1
8DPSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	2	3	1
Tolerance ±(dB)	1	1	1

BLE Manufacturing Tolerance

GFSK (Peak)			
Channel	Channel 0	Channel 19	Channel 39
Target (dBm)	2	3	1
Tolerance ±(dB)	1	1	1

Estimtion Result

Worse case is as below: [2441 MHz, 5 dBm, 3.16 mW] output power]

$(3.16/5) \cdot [\sqrt{2.441(\text{GHz})}] = 0.99 < 3.0$ for 1-g SAR

Then SAR evaluation is not required

END OF REPORT