KDB 447498 D03
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

Turntable

Model: ST

Trade Name: CAMBRIDGE AUDIO

Issued to

Audio Partnership PLC
Gallery Court, Hankey Place, London, SE1 4BB, United Kingdom

Issued By

Compliance Certification Services Inc.

No.11, Wugong 6th Rd., Wugu Dist.,

New Taipei City 24891, Taiwan. (R.O.C.)

Issued Date: August 03, 2021

REVISION HISTORY

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	August 03, 2021	Initial Issue	ALL	Angel Cheng

TABLE OF CONTENTS

1. TEST RESULT CERTIFICATION

We hereby certify that:

The equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirement of the applicable standards. The test record, data evaluation and Equipment under Test (EUT) configurations represented herein are true and accurate accounts of the measurement of the sample's RF characteristics under the conditions specified in this report.

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted

Statements of Conformity
Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

Approved by:

Kevin Tsai
Deputy Manager
Compliance Certification Services Inc.

2. LIMIT

According to §15.247(i), 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 levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

3. EUT SPECIFICATION

EUT	Turntable		
Model	ST		
Brand	CAMBRIDGE AUDIO		
RF Module	Sunitec	**Model:**	BM875
Frequency band (Operating)	☐ 802.11b/g/n HT20: 2412MHz ~ 2462MHz 802.11n HT40: 2422MHz ~ 2452MHz ☒ Others 2402MHz ~ 2480MHz (BT3.0 BT 4.0)		
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation) ☐ Others		
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm^2) ☒ General Population/Uncontrolled exposure (S=1mW/cm^2)		
Antenna Specification	ANTENNA WIFI FOR FPC / Gain: 1.24 dBi (Numeric gain: 1.33)		wor
Maximum Average output power	GFSK: 8-DPSK GFSK(4.0)	-1.07 dBm 2.60 dBm 4.89 dBm	(0.782 mW) (1.820 mW) (3.083 mW)
Maximum Tune up Power	GFSK: 8-DPSK: GFSK(4.0)	-0.50 dBm 3.00 dBm 5.50 dBm	(0.891 mW) (1.995 mW) (3.548 mW)
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A		
Received Date	May 21, 2021		
Reported Date	July 21, 2021		

Remark:

1. RF power data reference report (T210521N01-RP1)
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

4. TEST RESULTS

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ ***Equation 1***

Where d = Distance in cm
P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm²

5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where *P = Power in mW*

G = Numeric antenna gain

S = Power density in mW / cm²

GFSK:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)	Result
Mid	2441	0.891	1.33	20	0.0002	1	Pass

8-DPSK:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)	Result
Mid	2441	1.995	1.33	20	0.0005	1	Pass

GFSK(4.0):

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)	Result
High	2480	3.548	1.33	20	0.0009	1	Pass