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**IEEE C95.1
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
TEST REPORT**

RF EXPOSURE REPORT

**For
DIRECT DRIVE TURNTABLE**

Model: TT

Data Applies To: N/A

Trade Name: CAMBRIDGE AUDIO

Issued to

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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Revision History

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1. 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.

2. EUT SPECIFICATION

EUT	DIRECT DRIVE TURNTABLE		
Model	TT		
RF Module	CSR	Model:	BM875
Frequency band (Operating)	☐ 802.11b/g/n HT20: 2.412GHz ~ 2.462GHz 802.11n HT40: 2.422GHz ~ 2.452GHz 802.11a/n HT20: 5.180GHz ~ 5.240GHz / 5.745 ~ 5.825GHz 802.11n HT40: 5.190GHz ~ 5.230GHz / 5.755~ 5.795GHz 802.11ac VHT80: 5.210GHz / 5.775GHz ☒ Others		
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	Dipole Antenna / Gain: 1.24 dBi (Numeric gain: 1.33) worst		
Maximum Average output power	Bluetooth 3.0:	0.45 dBm	(1.109 mW)
	Bluetooth 4.0:	3.94 dBm	(2.479 mW)
Max tune up Power	Bluetooth 3.0:	0.55 dBm	(1.135 mW)
	Bluetooth 4.0:	4.04 dBm	(2.535 mW)
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A		



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3. 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:

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

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

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

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²



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4. 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

Bluetooth 3.0 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)	Result
Mid	2441	1.135	1.33	20	0.0003	1	Pass

Bluetooth 4.0 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)	Result
High	2480	2.535	1.33	20	0.0007	1	Pass