

TAF
Testing Laboratory
1309

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Project No.: TM-2202000152P Report No.: TMWK2204001472KR

> 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

FCC ID: JFZLP60XBTA

#### RF EXPOSURE REPORT

For

**Automatic Wireless Turntable** 

Model: AT-LP60XBT-USB

Data Applies To: N/A

Trade Name: audio-technica

Issued to

Audio-Technica Corporation 2-46-1 Nishi-naruse, Machida, Tokyo 194-8666, JAPAN

Issued By

Compliance Certification Services Inc.
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)
Issued Date: April 25, 2022

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. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

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# **REVISION HISTORY**

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	April 25, 2022	Initial Issue	ALL	Angel Cheng



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## 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	No non-compliance noted				
47 C.F.R. Part 2, Subpart J, Section 2.1091	-				

### **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.

Komil Tani





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#### 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	Automatic Wireless Turntable					
Model	AT-LP60XBT-USB	AT-LP60XBT-USB				
Brand	audio-technica					
RF Module	GT-tronics HK Ltd	GT-tronics HK Ltd Model: QC356FNA				
Frequency band (Operating)	<ul> <li>■ 802.11b/g/n HT20: 2412MHz ~ 2462MHz</li> <li>802.11n HT40: 2422MHz ~ 2452MHz</li> <li>☑ Others 2402MHz ~ 2480MHz (BT3.0 BT 4.0 BT5.0)</li> </ul>					
Device category	Portable (<20cm separation)  Mobile (>20cm separation)  Others					
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm²) ☐ General Population/Uncontrolled exposure (S=1mW/cm²)					
Antenna Specification	Multilayer Chip Antenna	Multilayer Chip Antenna / Gain: 0.4 dBi (Numeric gain: 1.10) worst				
Maximum Average output power	GFSK: 8-DPSK GFSK(4.0) GFSK(5.2)	-1.25 dBm -1.11 dBm	(1.552 mW) (0.750 mW) (0.774 mW) (0.721 mW)			
Maximum Tune up Power	GFSK: 8-DPSK: GFSK(4.0) GFSK(5.2)	2.50 dBm -0.80 dBm -0.50 dBm	(1.778 mW) (0.832 mW) (0.891 mW) (0.794 mW)			
Evaluation applied	<ul><li>✓ MPE Evaluation*</li><li>✓ SAR Evaluation</li><li>✓ N/A</li></ul>					
Reported Date	March 25, 2022					

Note: RF power data reference report (TMTN2202000202NR & TMTN2202000203NR)



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#### 4. TEST RESULTS

No non-compliance noted.

# **Calculation**

Given

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

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:

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

 $S = Power density in mW / cm^2$ 



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# 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

 $S = Power density in mW / cm^2$ 

GFS	K:							
Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)	Result	
High	2480	1.778	1.10	20	0.0004	1	Pass	
8-DF	8-DPSK:							
Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)	Result	
High	2480	0.832	1.10	20	0.0002	1	Pass	
GFSK(4.0):								
Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)	Result	
High	2480	0.891	1.10	20	0.0002	1	Pass	
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Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)	Result
High	2480	0.794	1.10	20	0.0002	1	Pass