



Project No.: TM-2202000339P  
Report No.: TMWK2204001489KR

FCC ID: XEG-TN180BT-Q

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**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**

## **ANALOG TURNTABLE**

**Model: TN-180BT**

**Data Applies To: N/A**

**Trade Name: TEAC**

*Issued to*

**TEAC CORPORATION**  
**1-47 Ochiai, Tama-shi, Tokyo 206-8530, Japan**

*Issued By*

**Compliance Certification Services Inc.**  
**No.11, Wugong 6th Rd., Wugu Dist.,**  
**New Taipei City 24891, Taiwan. (R.O.C.)**

**Issued Date: May 05, 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	May 05, 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 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:

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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

<b>EUT</b>	ANALOG TURNTABLE		
<b>Model</b>	TN-180BT		
<b>Brand</b>	TEAC		
<b>RF Module</b>	Brito	<b>Model:</b>	MD-BLT-QR3040I
<b>Frequency band (Operating)</b>	<input type="checkbox"/> 802.11b/g/n HT20: 2412MHz ~ 2462MHz 802.11n HT40: 2422MHz ~ 2452MHz <input checked="" type="checkbox"/> Others 2402MHz ~ 2480MHz (BT3.0 BT 4.0 BT5.0)		
<b>Device category</b>	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others		
<b>Exposure classification</b>	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm <sup>2</sup> ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> )		
<b>Antenna Specification</b>	PCB Antenna / Gain: 1.45 dBi (Numeric gain: 1.40) worst		
<b>Maximum Average output power</b>	GFSK:	-0.337 dBm	(0.925 mW)
	8-DPSK	-1.527 dBm	(0.704 mW)
	GFSK(4.0)	-4.173 dBm	(0.383 mW)
	GFSK(5.2)	-4.449 dBm	(0.359 mW)
<b>Maximum Tune up Power</b>	GFSK:	-0.2 dBm	(0.955 mW)
	8-DPSK:	-1.0 dBm	(0.794 mW)
	GFSK(4.0)	-3.7 dBm	(0.427 mW)
	GFSK(5.2)	-4.0 dBm	(0.398 mW)
<b>Evaluation applied</b>	<input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A		
<b>Reported Date</b>	April 06, 2022		

**Note: RF power data reference report (TMTN2202000247NR & TMTN2202000248NR)**

## 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:

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

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

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 / cm<sup>2</sup>

## 5. MAXIMUM PERMISSIBLE EXPOSURE

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

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

Where  $P = \text{Power in mW}$

$G = \text{Numeric antenna gain}$

$S = \text{Power density in mW / cm}^2$

### GFSK:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)	Result
Low	2402	0.955	1.40	20	0.0003	1	Pass

### 8-DPSK:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)	Result
Low	2402	0.794	1.40	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
Low	2402	0.427	1.40	20	0.0001	1	Pass

### GFSK(5.2):

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)	Result
Low	2402	0.398	1.40	20	0.0001	1	Pass