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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

### RF EXPOSURE REPORT

For

Prof. 2-deck DJ media player and Mixer

**Model: PRIME 2** 

Data Applies To: N/A

**Trade Name: DENON DJ** 

Issued to

inMusic Brands, Inc. 200 Scenic View Drive, Cumberland, RI 02864, U.S.A.

Issued By

Compliance Certification Services Inc. No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.) Issued Date: May 16, 2019

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,不可部分複製。

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# **REVISION HISTORY**

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	May 16, 2019	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 STAN	IDARDS
STANDARD	TEST RESULT
IEEE C95.1 2005 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

Ctatamonto of Conformity

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.

Reporter:

Angel Cheng

Report coordinator

Compliance Certification Services Inc.



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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	Prof. 2-deck DJ media play	Prof. 2-deck DJ media player and Mixer							
Model	PRIME 2								
Brand	DENON DJ	DENON DJ							
RF Module	SMSC	SMSC Model: AP6335							
Frequency band (Operating)	<ul><li>☑ IEEE 802.11b/g, 802.1</li><li>☑ Bluetooth 4.0: 2402MF</li></ul>		2MHz~246	62MHz					
Device category	☐ Portable (<20cm separated) ☐ Mobile (>20cm separated) ☐ Others	,							
Exposure classification	☐ Occupational/Controlle ☑ General Population/Un (S=1mW/cm²)			em²)					
Antenna Specification	PCB Antenna / Gain: 4.6	600 dBi (Nu	ımeric gai	n: 2.88) worst					
Maximum Average output power	IEEE 802.11b Mode : IEEE 802.11g Mode : IEEE 802.11n HT20 Mode Bluetooth 4.0 Mode :	12.710 11.640 11.620 2.500	dBm dBm	(18.664 mW) (14.588 mW) (14.521 mW) (1.778 mW)					
Maximum Tune up Power	IEEE 802.11b Mode : IEEE 802.11g Mode : IEEE 802.11n HT20 Mode Bluetooth 4.0 Mode :	13.000 12.000 12.000 2.500	dBm dBm	(19.953 mW) (15.849 mW) (15.849 mW) (1.778 mW)					
Evaluation applied	MPE Evaluation*								
Reported Date	May 16, 2019								



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#### 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:

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

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

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

IEEE 802.11b Mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)	Result
High	2462	19.953	2.88	20	0.0115	1	Pass

IEEE 802.11g Mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)	Result
High	2462	15.849	2.88	20	0.0091	1	Pass

IEEE 802.11n HT 20 Mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)	Result
High	2462	15.849	2.88	20	0.0091	1	Pass

Bluetooth 4.0 Mode:

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	2.88	20	0.0010	1	Pass