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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

Professional single deck media player

Model: SC5000 PRIME

Data Applies To: JP07

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.
Tainan Laboratory
No.8,Jiucengling, Xinhua Dist., Tainan City
712, Taiwan (R.O.C.)
TEL: 886-6-580-2201
FAX: 886-6-580-2202
http://www.ccsrf.com
E-Mail : service@ccsrf.com
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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	October 25, 2016	Initial Issue	ALL	Sunny Chang

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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	Professional single deck media player		
Model	SC5000 PRIME		
Brand	DENON DJ		
RF Module	SMSC	**Model:**	AP6335
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	PCB Antenna / Gain: 4.600 dBi (Numeric gain: 2.88) worst		
Maximum Average output power	IEEE 802.11b Mode :	11.810 dBm	(15.171 mW)
	IEEE 802.11g Mode :	16.590 dBm	(45.604 mW)
	IEEE 802.11n HT20 Mode :	16.380 dBm	(43.451 mW)
	Bluetooth 4.0 Mode :	2.080 dBm	(1.614 mW)
Maximum Tune up Power	IEEE 802.11b Mode :	11.910 dBm	(15.524 mW)
	IEEE 802.11g Mode :	16.690 dBm	(46.666 mW)
	IEEE 802.11n HT20 Mode :	16.480 dBm	(44.463 mW)
	Bluetooth 4.0 Mode :	2.180 dBm	(1.652 mW)
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A		

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:

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

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 / cm^2

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 / cm^2

IEEE 802.11b Mode :

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)	Result
Mid	2437	15.524	2.88	20	0.0089	1	Pass

IEEE 802.11g Mode :

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)	Result
MId	2437	46.666	2.88	20	0.0268	1	Pass

IEEE 802.11n HT20 Mode :

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)	Result
Mid	2437	44.463	2.88	20	0.0255	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
Mid	2442	1.652	2.88	20	0.0009	1	Pass