# 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

## Professional DJ Media Player

## Model: SC6000 PRIME

## 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: April 27, 2020**

# REVISION HISTORY

| Rev. | Issue Date | Revisions | Effect Page | Revised By |
|---|---|---|---|---|
| 00 | April 27, 2020 | Initial Issue | ALL | Angel Cheng |
| | | | | |

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**Report No.:** T191125N07-MF

# 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** |
| IEEE C95.1: 2019<br>KDB 447498 D03<br>47 C.F.R. Part 1, Subpart I, Section 1.1310<br>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:*

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

| | | | |
|---|---|---|---|
| **EUT** | Professional DJ Media Player | | |
| **Model** | SC6000 PRIME | | |
| **Brand** | DENON DJ | | |
| **RF Module** | Broadcom | **Model:** | AP6256 |
| **Frequency band (Operating)** | ☒ IEEE 802.11b/g, 802.11n HT20: 2412MHz~2462MHz<br>☒ Bluetooth 4.0: 2402MHz~2480MHz | | |
| **Device category** | ☐ Portable (<20cm separation)<br>☒ Mobile (>20cm separation)<br>☐ Others | | |
| **Exposure classification** | ☐ Occupational/Controlled exposure (S = 5mW/cm$^2$)<br>☒ General Population/Uncontrolled exposure (S=1mW/cm$^2$) | | |
| **Antenna Specification** | WLAN EMBEDDEN ANTENNA / Gain: 4.600 dBi (Numeric gain: 2.88) worst | | |
| **Maximum Average output power** | IEEE 802.11b Mode :<br>IEEE 802.11g Mode :<br>IEEE 802.11n HT20 Mode :<br>Bluetooth 4.0 Mode : | 16.99 dBm<br>11.44 dBm<br>11.37 dBm<br>5.25 dBm | (50.003 mW)<br>(13.932 mW)<br>(13.709 mW)<br>(3.350 mW) |
| **Maximum Tune up Power** | IEEE 802.11b Mode :<br>IEEE 802.11g Mode :<br>IEEE 802.11n HT20 Mode :<br>Bluetooth 4.0 Mode : | 17.50 dBm<br>11.50 dBm<br>11.50 dBm<br>5.50 dBm | (56.234 mW)<br>(14.125 mW)<br>(14.125 mW)<br>(3.548 mW) |
| **Evaluation applied** | ☒ MPE Evaluation*<br>☐ SAR Evaluation<br>☐ N/A | | |
| **Reported Date** | April 16, 2020 | | |

# 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 (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 / cm²*

# 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 / cm²*

IEEE 802.11b Mode :

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm² | Limit (mW/cm2) | Result |
|---|---|---|---|---|---|---|---|
| High | 2462 | 56.234 | 2.88 | 20 | 0.0322 | 1 | Pass |

IEEE 802.11g Mode :

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm² | Limit (mW/cm2) | Result |
|---|---|---|---|---|---|---|---|
| Mid | 2437 | 14.125 | 2.88 | 20 | 0.0081 | 1 | Pass |

IEEE 802.11n HT 20 Mode:

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm² | Limit (mW/cm2) | Result |
|---|---|---|---|---|---|---|---|
| High | 2462 | 14.125 | 2.88 | 20 | 0.0081 | 1 | Pass |

Bluetooth 4.0 Mode :

| Ch. | Frq.(MHz) | P (mW) | Gain (num.) | D (cm) | Power density in mW / cm² | Limit (mW/cm2) | Result |
|---|---|---|---|---|---|---|---|
| Low | 2402 | 3.548 | 2.88 | 20 | 0.0020 | 1 | Pass |