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

Stand-Alone Media player

Model: MIXSTREAM PRO

Trade Name: **Numark**

Issued to

inMusic Brands, Inc.
200 Scenic View Drive, Suite 201, 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 20, 2021

Compliance Certification Services Inc.
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Member of the SGS Group

Report No.: T210201N03-MF

REVISION HISTORY

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	May 20, 2021	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:

Kevin Tsai
Deputy Manager
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	Stand-Alone Media player		
Model	MIXSTREAM PRO		
Brand	**Numark**		
RF Module	Broadcom	**Model:**	AP6256
Frequency band (Operating)	☒ IEEE 802.11b/g, 802.11n HT20: 2412MHz~2462MHz ☒ Bluetooth 4.0: 2402MHz~2480MHz		
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	WLAN EMBEDDEN ANTENNA / Gain: 4.6 dBi (Numeric gain: 2.88)		
Maximum Average output power	IEEE 802.11b Mode : IEEE 802.11g Mode : IEEE 802.11n HT20 Mode : Bluetooth 4.0 Mode :	12.88 dBm 9.41 dBm 9.54 dBm 4.80 dBm	(19.409 mW) (8.730 mW) (8.995 mW) (3.020 mW)
Maximum Tune up Power	IEEE 802.11b Mode : IEEE 802.11g Mode : IEEE 802.11n HT20 Mode : Bluetooth 4.0 Mode :	13.50 dBm 10.00 dBm 10.00 dBm 5.50 dBm	(22.387 mW) (10.000 mW) (10.000 mW) (3.548 mW)
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A		
Received Date	February 01, 2021		
Reported Date	March 08, 2021		

Remark:
1. RF power data reference report (T210201N03-RP1)
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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4. TEST RESULTS

No non-compliance noted.

Calculation

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

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

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \textbf{\textit{Equation 1}}$$

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 / 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
High	2462	22.387	2.88	20	0.0128	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	10.000	2.88	20	0.0057	1	Pass

IEEE 802.11n HT 20 Mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm2)	Result
High	2462	10.000	2.88	20	0.0057	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
Low	2402	3.548	2.88	20	0.0020	1	Pass