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

Stand-alone MPC touch display

Model: MPC Live

Data Applies To:ACV8

Trade Name: AKAI PROFESSIONAL

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
Issued Date: October 26, 2016

This report shall not be reproduced except in full, without the written approval of Compliance Certification Services.

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	October 26, 2016	Initial Issue	ALL	Daphne Liang

This report shall not be reproduced except in full, without the written approval of Compliance Certification Services.

TABLE OF CONTENTS

1. LIMIT 4
2. EUT SPECIFICATION 4
3. TEST RESULTS 5
4. MAXIMUM PERMISSIBLE EXPOSURE 6

This report shall not be reproduced except in full, without the written approval of Compliance Certification Services.

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	Stand-alone MPC touch display		
Model	MPC Live		
Brand	AKAI PROFESSIONAL		
RF Module	SMS	**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 : 11.800 dBm (15.135 mW) IEEE 802.11g Mode : 16.550 dBm (45.185 mW) IEEE 802.11n HT20 Mode : 16.480 dBm (44.463 mW) Bluetooth 4.0 Mode : 2.090 dBm (1.617 mW)		
Maximum Tune up Power	IEEE 802.11b Mode : 11.900 dBm (15.488 mW) IEEE 802.11g Mode : 16.650 dBm (46.238 mW) IEEE 802.11n HT20 Mode : 16.580 dBm (45.499 mW) Bluetooth 4.0 Mode : 2.190 dBm (1.656 mW)		
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A		

This report shall not be reproduced except in full, without the written approval of Compliance Certification Services.

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

This report shall not be reproduced except in full, without the written approval of Compliance Certification Services.

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	15.488	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	46.238	2.88	20	0.0265	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
Low	2412	45.499	2.88	20	0.0261	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	1.656	2.88	20	0.0009	1	Pass

This report shall not be reproduced except in full, without the written approval of Compliance Certification Services.