RF EXPOSURE REPORT

REPORT NO.: SA140515D01

MODEL NO.: V5US14

FCC ID: R48V5US

RECEIVED: Jun. 26, 2014

TESTED: Sep. 10 ~ Oct. 8, 2014

ISSUED: Oct. 14, 2014

APPLICANT: MEILOON INDUSTRIAL CO., LTD

ADDRESS: No. 77, Lane 1775, Chuen-Ryh Road, Taoyuan City, Taiwan

ISSUED BY: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA140515D01	Original release	Oct. 14, 2014

1. CERTIFICATION

PRODUCT:	Universal Wireless Speaker
MODEL NO.:	V5US14
BRAND:	WREN
APPLICANT:	MEILOON INDUSTRIAL CO., LTD
TESTED:	Sep. 10 ~ Oct. 8, 2014
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	FCC Part 2 (Section 2.1091) KDB 447498 D03 IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Jessica Cheng , **DATE:** Oct. 14, 2014

(Jessica Cheng / Senior Specialist)

APPROVED BY : Rex. Lai , **DATE:** Oct. 14, 2014

(Rex Lai / Assistant Manager)

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm^2)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

Pd = (Pout*G) / (4*pi*r2)

where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

Function	FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
(Bluetooth EDR)	2402 ~ 2480	1.71	-0.29	20	0.0003	1.00
WLAN (2.4G)	2412 ~ 2462	22.45	2.79	20	0.0665	1.00
WLAN (5.0G)	5180 ~ 5240	13.42	6.62	20	0.0201	1.00
	5260 ~ 5320	13.09	6.62	20	0.0186	1.00
	5500 ~ 5700	13.04	6.62	20	0.0184	1.00
	5745 ~ 5825	13.18	6.62	20	0.0190	1.00

CONCULSION:

Both of the modules can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

1. BLUETOOTH + WLAN =0.0003 /1 + 0.0665 /1 = 0.0668

FREQUENCY BAND (MHz)	MAX POWER (dBm)			TOTAL POWER (dBm)	POWER LIMIT (dBm)
	WIFI (2.4G)	WIFI (5.0G)	Bluetooth EDR		
2400	22.45	-	1.71	22.49	30
5180 ~ 5240	-	13.42	-	13.42	30
5260 ~ 5320	-	13.09	-	13.09	30
5500 ~ 5700	-	13.04	-	13.04	30
5745 ~ 5825	-	13.18	-	13.18	30

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