OET Bulletin 65 (MPE)
Test Report

Report No.: AGC00370131102FE08

FCC ID	:	XAO-FREEDOM
PRODUCT DESIGNATION	:	LED Stage lighting
BRAND NAME	:	N/A
TEST MODEL	:	Freedom Par Tri-6, Freedom Par Quad-4
CLIENT	:	CHAUVET & SONS,INC.
DATE OF ISSUE	:	Dec.17, 2013
STANDARD(S)	:	OET Bulletin 65
REPORT VERSION	:	V1.0

Attestation of ***G***lobal ***C***ompliance (Shenzhen) Co., Ltd.

TABALE OF CONTENTS

1. TEST RESULT CERTIFICATION

Applicant	CHAUVET & SONS,INC.
Address	5200 NW 108TH AVENUE SUNRISE,FLORIDA,33351, USA
Manufacturer	CHAUVET & SONS,INC.
Address	5200 NW 108TH AVENUE SUNRISE,FLORIDA,33351, USA
Product Designation	LED Stage lighting
Brand Name	N/A
Test Model	Freedom Par Tri-6
Series Model	Freedom Par Quad-4
Different Description	All the same except for the battery capacity and LED panel.
Date of test	Dec.12, 2013 to Dec.16, 2013
Deviation	None
Condition of Test Sample	Normal

We (AGC), Attestation of Global Compliance (Shenzhen) Co., Ltd. for compliance with the requirements set forth in the FCC Standard OET Bulletin 65 (Edition 97-01) Supplement C (Edition 01-01). The results of testing in this report apply to the product/system which was tested only.

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Checked By	Kidd Yang	Dec.17, 2013
Authorized By	Solger Zhang	Dec.17, 2013

2. TECHNICAL INFORMATION

Note: the following data is based on the information by the applicant.

EUT DESCRIPTION

The EUT is “LED Stage lighting” designed as a “Communication Device”. It is designed by way of utilizing the FHSS technology to achieve the system operation
A major technical description of EUT is described as following:

Operation Frequency	2.402 GHz to 2.450GHz
RF Output Power	12.73dBm(Max)
Spread-Spectrum Technique	FHSS
Modulation	MSK
Number of channels	16
Antenna Designation	PCB antenna
Antenna Gain	3.0dBi
Power Supply	DC 14.8V Battery
Power adapter	Input: AC120V/60Hz;Output:DC16.8V

3. RF EXPOSURE MEASUREMENT

3.1 INTRODUCTION

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

The 1992 ANSI/IEEE standard (See Listed limit table) specifies a minimum separation distance of 20 cm for performing reliable field measurements to determine adherence to MPE limits.

If the minimum separation distance between a transmitter and nearby persons is more than 20 cm under normal operating conditions, compliance with MPE limits may be determined at such distance from the transmitter. When applicable, operation instructions and prominent warning labels may be used to alert the exposed persons to maintain a specified distance from the transmitter or to limit their exposure durations and usage conditions to ensure compliance.

3.2 FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (Minutes)
0.3 -- 1.34	614	1.63	(100)*	30
1.34 -- 30	824/f	2.19/f	($180/f^2$)*	30
30 -- 300	27.5	0.073	0.2	30
300 -- 1500	--	--	f/1500	30
1500 -- 100,000	--	--	1.0	30

*Note:

1. f= Frequency in MHz * Plane-wave Equivalent Power Density
2. The averaging time for General Population/Uncontrolled exposure to fixed transmitters is not applicable for mobile and portable transmitters. See 47 CFR §§2.1091 and 2.1093 on source-based time-averaging requirement for mobile and portable transmitters.

4. CLASSIFICATION OF THE ASSESSMENT METHODS

According to user manual, The antenna of the product, under normal use condition is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm separation distance and the prohibition of operating to a person has been printed on the user's manual. So, this product under normal use is located on electromagnetic far field between the human body.

$S=PG/4\pi R^2$
Where:
S=power density
P=power input to antenna
G=power gain of the antenna in the direction of interest relative to an isotropic radiator R=distance to the center of radiation of the antenna

5. EUT OPERATION CONDITION

Make the EUT to transmit at lowest, middle and highest channel individually.

6. TEST RESULTS

Note: report the worst result in this part.

Antenna Gain=2dBi (Numeric 1.6), π=3.14.

Frequency	Output Power	Output Power	Power Density	Power Density Limit	Result
MHz	dBm	mW	mW/cm^2	mW/cm^2	Pass/Fail
2424.3	12.73	18.75	0.04	1	Pass

Note: *The output power is refer to AGC00370131102FE03.*
The minimum separate distance which used for MPE calculate is 20cm.
So according to the user manual, under normal use condition is at least 20cm away from the body of the user.