lighting PLUS

User manual



LM10

Please read the instructions carefully before use

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STATEMENT

The product has well capability and intact packing when leave factory. All of the user should comply with warning item and manual, any misuse cause of the damages are not included in our guarantee, and also can not be responsible for any malfunction & problem owing to ignore the manual.

1.Safety Instructions

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
•Unpack and check carefully there is no transportation damage before using the unit.
•Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
•It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
•The unit is for indoor use only. Use only in a dry location.
•The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
•Disconnect main power before replacement or servicing.
•Make sure there are no flammable materials close to the unit while operating as it is fire hazard.
•Use safety cable when fixes this unit. DO NOT handle the unit by taking its head only, but always by taking its base.
•Maximum ambient temperature is Ta: 40℃. DO NOT operate it where the temperature is higher than this Unit surface temperature may reach up to 85℃. DO NOT touch the housing bare-hand during its operation. Turn off the power and allow about 15 minutes for the unit to cool down before replacing or serving.
•the event of serious operating problem, stop using the unit immediately.Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.
•DO NOT touch any wire during operation as high voltage might be causing electric shock.

Warning:

•To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.
•The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

Caution:

•There are no user serviceable parts inside the unit. DO NOT open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact your nearest dealer.

Installation:

•The unit should be mounted via its screw holes on the bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. And make sure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the unit's weight. Also always use a safety cable that can hold 12 times of the weight of the unit when installing the fixture.
•The equipment must be fixed by professionals. And it must be fixed at a place where is out of the touch of people.

2.Technical Specifications

Voltage: AC110-220V

Light source:9*20w 4in1 RGBW led

Shaking head laser +LED Wash

Rated frequency: 50 ~ 60Hz

Power: 300W

Laser color: RGB full color

Laser power: RGB 10W

Laser light source: R3w/638nm G3w/525nm B4w/447nm

Laser pattern: 256 laser animation pattern

Modulation signal: TTL modulation (analog modulation)

Scanning system: galvanometer scan 30KPPS

Scanning Angle: plus or minus 20 degrees

Stepper motor: two phase 57 motor 2

Horizontal: 540 degrees Vertical: 270 degrees

Control mode: DMX512, voice control, self-walking, computer ILDA interface, cable Art-Net,

Control channels: 20CH/30CH DMX512 control channels

DMX special effects: single pattern mode, can be broken pen, stroboscopic, rotating, moving, tumbling, subgraph, gradually drawing, color change, change the size and other functions.

Function: Pangolin QSFB3/FB4 or fire Phoenix laser software control.

ilda control uses an automatic electronic transfer switch with scanning system error protection and laser light protection.

Notice for use: The ambient temperature is controlled at 0~35°C, and the dry and dust-less environment can reduce the laser power attenuation and extend the life of the lamp

Suitable place: disco bar, bar, nightclub, concert, advertising promotion, etc

Cooling system: fan forced cooling

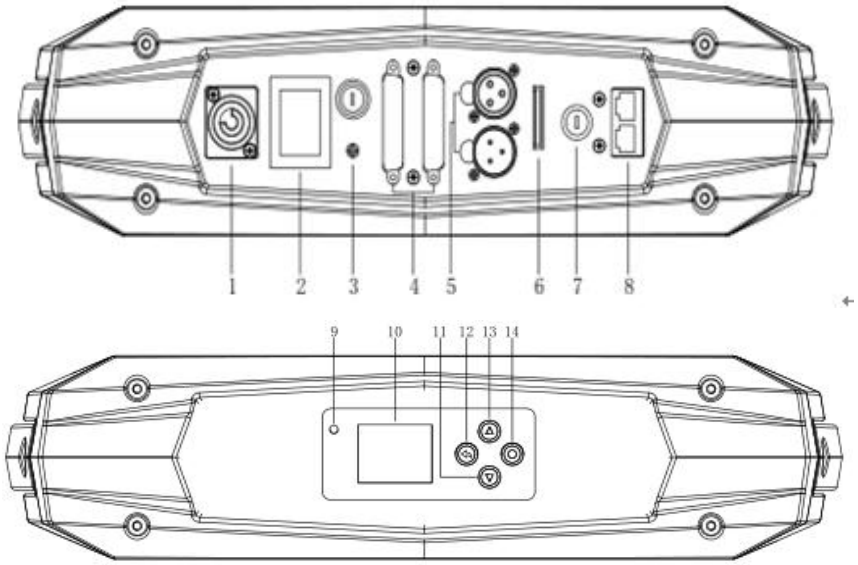
Light Size: 32x25.5x52cm

N.W:11KG

Carton Size:55.5*38*43cm

G.W:14KG

3.Control Menu



NO.	Interface Name	
1	Power input interface	
2	Power switch	
3	Ground	
4	DB25 ILDA interface (IN/OUT)	
5	DMX512 interface (IN/OUT)	
6	SD card	
7	Safety key	
8	E-stop control (optional)	
9	Red indicating light	NO light/ normal light,The device system is in the dead state
		Flash : The equipment system is running normally
	Green indicating light	No light or all light:The device system is in a dead state
		Flash : The equipment system is running normally
	Blue indicating light	NO light: No external ILDA signal detected
		Normal light: ILDA switch is turned on or external signal is connected
		Flash:The external ILDA signal is detected and the light output
10	Menu display window	
11	▼DOWN Touch key-press	
12	⮌MENU Touch key-press	
13	▲UP Touch key-press	
14	●ENTER Touch key-press	

Using the touch button and LCD menu display function, the menu operation is simple and easy to use, and the system software is automatically loaded when the system is turned on, and the main menu interface is displayed.
Use the **▲UP**、**▼DOWN** buttons to select the required function menu icon.
Press the **●ENTER**、**⮌MENU** buttons to confirm the selected function or return to the previous menu. (After the screen is powered on, there is no key operation for a long time, and the screen enters the standby state only by long pressing the ENTER button to wake up and unlock)
6.1 TFT LCD display control panel function menu setting ,as following：
TFT LCD display control panel function menu setting ,as following：

Menu 1	Menu 2	Menu 3	Description
Operation	DMX-512	DMX Address	address setting（1-512）
		CH model	CH mode : 6/40CH
		Channel value view	DMX-512 Channel value view CH1—CH40 (such as 40CH channel value display 1-40)
	Auto mode	Show	beam effect, animation effect
		Master-slave	ON/OFF
		Sound	ON/OFF
		dimmer brightness	Default 064
	SD card mode	dimmer brightness	Default 064
		Display mode	(single/order/all)
		Page	001-008
		Cue	001-048
		Motor speed	0-255
		Pan starting point	0-255
		Pan ending point	0-255
		Tilt starting point	0-255
		Tilt ending point	0-255
		Pan duration time	0-255
		Tilt duration time	0-255
	Test mode	Pan horizontal motor	0-255
		Tilt horizontal motor	0-255
		EO Enable Output	ON/OFF
		Test pattern	1-4
		Dimmer	0-255
		Overall size	0-255
		LED color	BLACK off WHITE RED

Operation			GREEN BLUE
	ILDA mode	ON/OFF	Turn on ILDA and only receive ILDA signal. The device will not emit light when running in other modes.
	Use mode	Value setting (CH1-CH27 can customize the value of each channel of the light)	program has a built-in console, restore the factory settings and save the data, if the data is cleared, press the reset option
Advanced settings	Motor setup	Pan horizontal reverse	ON/OFF
		Tilt horizontal reverse	ON/OFF
		Pan running angle	360/540
	Pattern setup	Overall size	0-255
		Pan Zoom	0-255
		Tilt Zoom	0-255
		Pan invert	ON/OFF
		Tilt invert	ON/OFF
		Replace XY	ON/OFF
	Color setup	Color setup	RGB/One
		red(1-100)	0-255
		green(1-100)	0-255
		blue(1-100)	0-255
		Dimmer(1-100)	0-255
	Scan setup	15K-40K	The K number of the scanner is selected. The lower the K number, the more flashing the pattern, and the playback effect of the device is different.
		Scanner protect ON/OFF	ON， A single beam of light closes out
	Other setup	Sound Sensitivity	Default 80
Screen setting	CN/EN	CN/EN	displays Chinese and English options
	screen reverse	ON/OFF	180° rotation of the screen，
Reset settings	Motor reset	ON/OFF	
	Reset factory setting	ON/OFF	
	factory setting		Used by factory technicians
Device status	Pan reset error	ON/OFF	The X/Y scanner motor is stuck in a certain position and an error occurs, and the device will not emit light in any mode
	Tilt reset error	ON/OFF	
	SD card error	ON/OFF	SD card error: the card is not inserted or the information of the

<table>
<tr><td rowspan="10">Device status</td><td></td><td></td><td>card cannot be read</td></tr>
<tr><td>communication error</td><td>ON/OFF</td><td>The reason for the error is that the control board is not powered on or the chip is broken or there is a problem with the signal line</td></tr>
<tr><td rowspan="8">CPU version</td><td colspan="2">display hardware</td></tr>
<tr><td colspan="2">display software</td></tr>
<tr><td>Hardware control</td><td rowspan="6">The reason for the error is that the control board is not powered on or the chip is broken or there is a problem with the signal line</td></tr>
<tr><td>Software control</td></tr>
<tr><td>motor hardware</td></tr>
<tr><td>motor software</td></tr>
<tr><td>LED hardware</td></tr>
<tr><td>LED software</td></tr>
<tr><td rowspan="6">Device information</td><td>running mode</td><td colspan="2">Current device work mode</td></tr>
<tr><td>CH mode</td><td colspan="2">Current device channel value</td></tr>
<tr><td>address</td><td colspan="2">Current device address</td></tr>
<tr><td>effect version</td><td colspan="2">Current device effect version</td></tr>
<tr><td>Animation effect</td><td colspan="2">Current device Animation effect</td></tr>
<tr><td>house current device temp</td><td colspan="2">Current device house current device temp</td></tr>
</table>

4.DMX Channels

20CH

Channel	Description	Value	Description
CH1	horizontal motor	0～255	horizontal motor
CH2	horizontal motor 16Bit	0～255	horizontal motor 16Bit
CH3	vertical motor	0～255	vertical motor
CH4	vertical motor 16Bit	0～255	vertical motor 16Bit
CH5	Laser ON/Off	0	Off
		1～255	On From 1-100%
CH6	Pattern Model	0～26	Pattern Effect
	Auto Model	27～127	Choose Auto Speed
	Sound Model	128～255	Choose Sound Sensitivity
CH7	Pattern and Effect Library	0～255	Choose the 1,2,3,4,5.....
CH8	Pattern Choose	0～255	Choose Pattern,1 Pattern/2 date
CH9	Strobe	1～255	Strobe Speed Choose
CH10	Color	0~63	Color Choose
		64～95	Color change speed
		96～127	Color Effect change speed
		128～159	Flaw Speed Effect Choose
		160～191	Flaw speed effect Choose
		192～223	Flaw speed effect Choose
		224～255	Gradient Speed Effect Choose
CH11	Rotate	0～127	Rotate Angle Choose
		128～192	Forward Speed Choose
		193～255	Reverse Speed Choose
CH12	Pan Move	0～127	Pan Move Choose
		128～255	Pan Move Speed Choose
CH13	Tilt Move	0～127	Tilt Move Choose
		128～255	Tilt Move Speed Choose

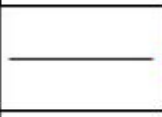
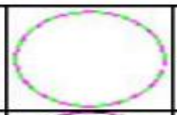
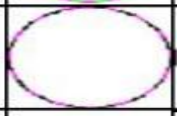
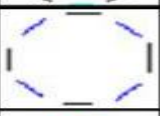
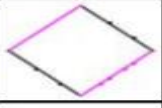
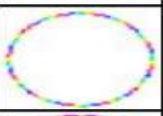
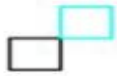
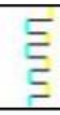
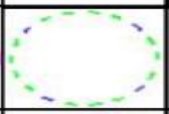
CH14	Zoom	0～127	Gobo Big to Small
		128～255	Zoom Speed Choose
CH15	Pan wave	1～127	Wave Speed Choose
	Tilt Wave	128～255	Wave Speed Choose
CH16	Wash Dimmer	1～255	Wash Bright Choose
CH17	Strobe	1～255	Strobe Speed Choose
CH18	Color Choose	1～255	5 Data/Effect
CH19	Auto Speed	1～255	Build in Effect Choose
CH20	Moving Head Reset	0～250	None

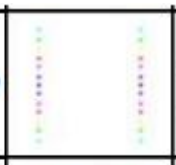
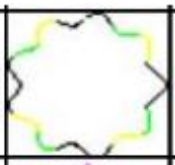
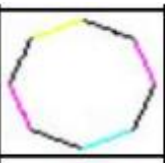
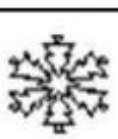
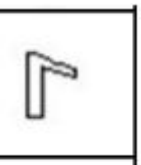
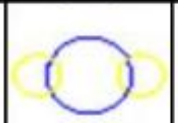
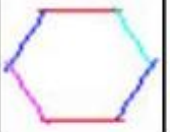
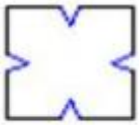
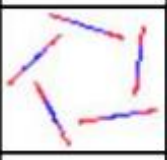
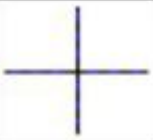
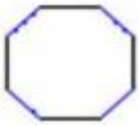
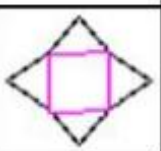
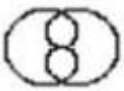
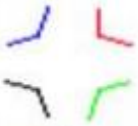
30CH

Channel	Description	Value	Description
CH1	horizontal motor	0～255	horizontal motor
CH2	horizontal motor 16Bit	0～255	horizontal motor 16Bit
CH3	vertical motor	0～255	vertical motor
CH4	vertical motor 16Bit	0～255	vertical motor 16Bit
CH5	Laser ON/Off	0	Off
		1～255	On From 1-100%
CH6	Auto Out	0～26	Default Auto Speed
		27～127	Choose Auto Speed
	Sound Out	128～255	Choose Sound Sensitivity
CH7	Pattern and Effect Library	0～255	Choose the 1,2,3,4,5.....
CH8	Pattern Choose	0～255	Choose Pattern,1 Pattern/2 date
CH9	Strobe	1～255	Strobe Speed Choose
CH10	Color	0~63	Color Choose
		64～95	Color change speed
		96～127	Color Effect change speed
		128～159	Flaw Speed Effect Choose
		160～191	Flaw speed effect Choose
		192～223	Flaw speed effect Choose
		224～255	Gradient Speed Effect Choose

CH11	Color segmentation	0～255	Color segmentation Effect Choose
CH12	Line Scan Speed	0～127	Line Scan Speed Choose
	Point Scan Speed	128～255	Point Scan Speed Choose
CH13	Rotate Z	0～127	Rotate Z Angle Choose
		128～255	Rotate Z Speed Choose
CH14	Rotate X	0～127	Rotate X Angle Choose
		128～255	Rotate X Speed Choose
CH15	Rotate Y	0～127	Rotate Y Angle Choose
		128～255	Rotate Y Speed Choose
CH16	Pan Move	0～127	Pan Move station Choose
		128～255	Pan Move Speed Choose
CH17	Tilt Move	0～127	Tilt Move Station Choose
		128～255	Tilt Move Speed Choose
CH18	Zoom	0～127	Pattern Big to Small
		128～255	Zoom Speed Choose
CH19	Gradient	1～255	Gradient Speed Choose
CH20	Pan Wave	1～127	Wave Speed Choose
	Tilt Wave	128～255	
CH21	Wash Dimmer	1～255	Wash Bright Choose
CH22	Strobe	1～255	Strobe Speed Choose
CH23	Red Dimmer	1～255	Red Bright Choose
CH24	Green Dimmer	1～255	Green Bright Choose
CH25	Blue Dimmer	1～255	Blue Bright Choose
CH26	White Dimmer	1～255	White Bright Choose
CH27	Auto Effect	1～255	Auto Effect Speed Choose
CH28	Auto Speed	1～255	Build in Effect Speed
CH29	Motor Speed	0～255	XY Motor Speed Choose
CH30	Moving head system	0～250	None
		251～255	Reset After 3S

Built in effect list

	DMX value	Page 1	Page 2	Page 3	Page 4	Page 5	Page 6	Page 7
Cue	0-15	invalid(black)						
Cue 1	16-27							
Cue 2	28-39							
Cue 3	40-51							
Cue 4	52-63							
Cue 6	64-75							
Cue 6	76-87							
Cue 7	88-99							
Cue 8	100-111							
Cue 9	112-123							
Cue 10	124-135							
Cue 11	136-147							

Cue 12	**148-159**							
Cue 13	**160-171**							
Cue 14	**172-183**							
Cue 15	**184-195**							
Cue 16	**196-207**							
Cue 17	**208-219**							
Cue 18	**220-231**							
Cue 19	**232-243**							
Cue 10	**244-255**							

5.Trouble Shooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work, no light and the fan does not work

1. Check the connection of power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if link properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on

PCB of the unit or the previous one.

4. Try to use another DMX controller.
5. Check if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

C. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motors drive IC on the PCB might be out of condition

6.Fixture Cleaning

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

Clean with soft cloth using normal glass cleaning fluid.

Always dry the parts carefully.

Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.