LEAHUA

Maris Max

LH-M1940

This manual contains important information. Please read before operating fixture.

Guangzhou Leahua Lighting Technology Ltd
http:// www.leahualighting.com

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Accessories

Name	Quantity	Remark
User manual	1pc	
Folding clamp	1set	
Power cable	1pc	
DMX signal cable	1pc	
Safety cord	1pc	Optional

1. Safety Instructions

WARNING!!! To reduce the risk of fire, electric shock, or injury to persons, follow these important safety instructions:

- Check before use

Before operation, inspect the fixture for transportation damage. Do not use it if damaged. Unauthorized modification or improper use is not covered by warranty.

- Environment

The fixture is IP65-rated, suitable for indoor/outdoor use, and can operate in humid or dusty areas. Keep it away from excessive heat, fire, vibration, electrical surges, and strong light.

- Personnel & operation

Installation and operation must be performed by qualified personnel. Ensure all covers are securely in place, wear protective gear, and do not open the housing or attempt self-maintenance.

- Optical safety

Do not look directly into the light source. Do not use with dimmer packs. Maintain a minimum distance of 20 m from illuminated surfaces, and replace damaged optical components immediately.

- Electrical safety

Ensure correct voltage, proper grounding, and compliant power cords. Do not use damaged cables, and unplug by holding the plug. Avoid operating under heavy rain or extreme humidity, and avoid frequent on/off switching.

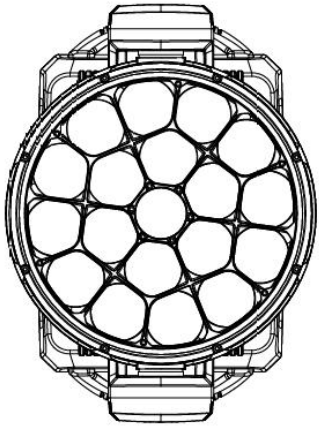
- Installation

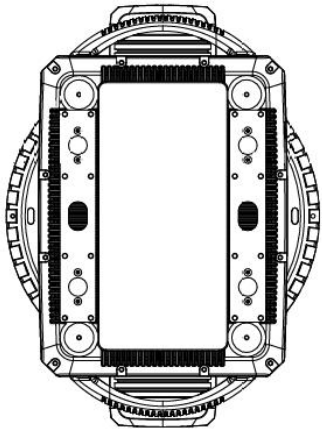
Use the safety cord through the provided safety holes. Keep at least 50 cm ventilation clearance and do not mount on flammable surfaces or aim the beam at combustible objects (minimum 20 m).

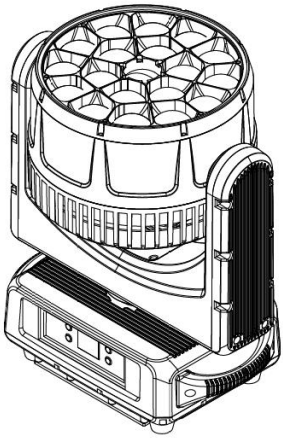
- Temperature & normal conditions

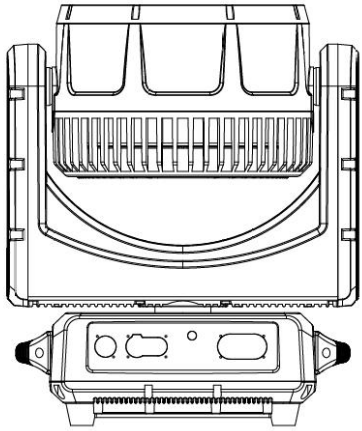
Housing temperature may reach 45–75° C during operation. Slight smoke or odor may occur at first ignition and is considered normal.

2. Appearance









3. Technical Specifications

Power

Input Voltage: AC90-260V, 50/ 60Hz

Power Consumption:800W

Light source

Light Source: 19×40W RGBW LED

Color Temperature Output of Fixture:10500K

Variable CTO: 2500-8000K

Life expectancy: 20000Hrs(factory rated)

Zoom range

Zoom range: 5°- 45°

Control

Display: LCD display

Control mode: DMX512, master-slave, auto, RDM

Channel: Standard 21 / 22CH, Shapes 35 / 36CH, Pixel Engine: RGB 22 + 57(79)CH, RGBW 36 + 76(112)CH

Effect

Beam,wash,FX（Kaleidoscope effects),bi-directional rotating front lens

Dimming/Strobe

Dimming：0-100% linear dimming system

Strobe: 1-25 F.P.S, speed adjustable

Head movement

Pan/ Tilt: 540° / 205° 16bit with auto-correction

Housing

Housing:Die-cast aluminum

Protection rate: IP65

Working temperature

Working temperature: -10℃-45℃

Connection

Power connection: Powercon in/out

DMX connection: DMX 3-pin + 5-pin in/ out

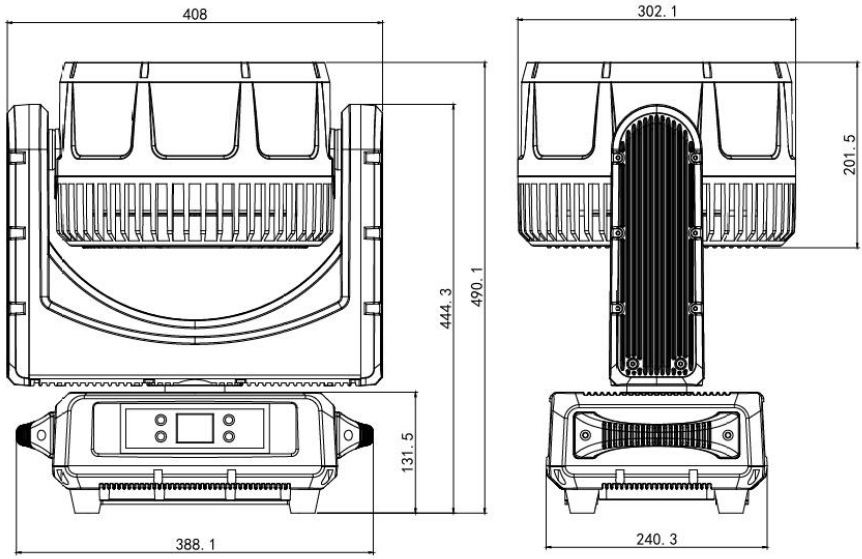
Product dimensions

408×302.1×490.1 mm

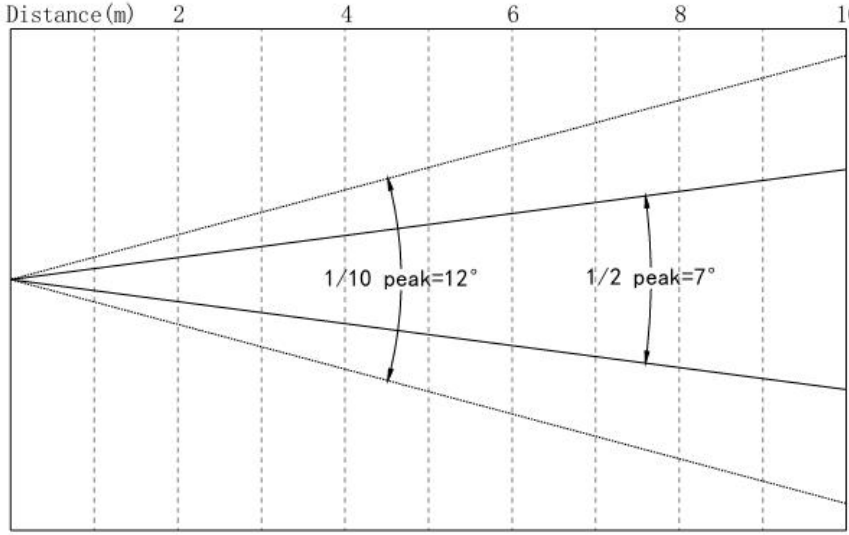
Net weight

22.63KG

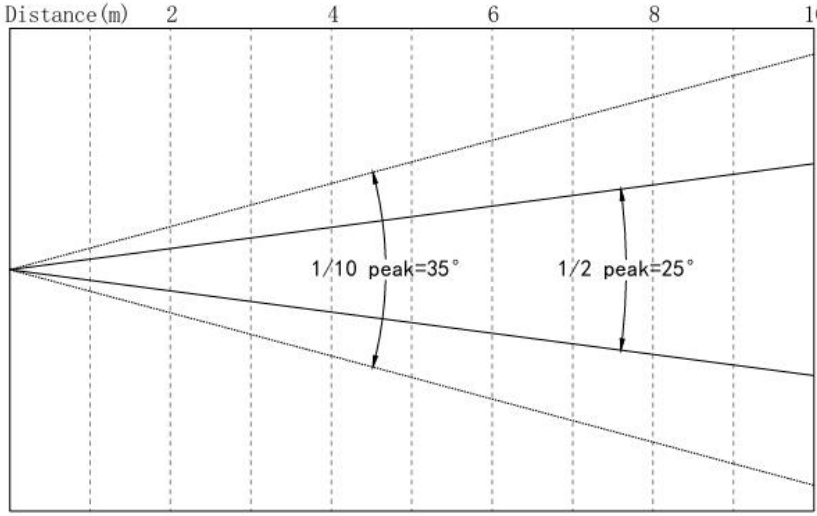
Dimensions:



Light output:



RGBW全亮(lux)	94442	32383	15715	8998



RGBW全亮(lux)	14135	3440	1549	866

4. Operation

4.1 Front panel operation:

MENU	To enter into move backward or leave the menu
UP	To go backward to move up in the menu
DOWN	To go forward to move down in the menu
ENTER	To perform the desired functions

Pressing any button from the home screen will show the selectable menu items from the menu map. When a menu function is selected, the display will immediately show the first available option for the selected menu function. To select a menu item, press <ENTER>.
Use the <UP> and <DOWN> buttons to navigate the menu options. Press the <ENTER> button to select the menu function currently displayed, or to enable a menu option. To return to the previous option or menu without changing the value, press the <MENU> button.

4.2 Board instruction:

Main menu	Secondary menu	Third menu/parameters
Address	001-512	DMX address setting
Set	Run mode	DMX/Sound/Auto1/Auto2
	Channel	21CH/22CH/35CH/36CH
	Invert Pan	On/Off
	Invert Tilt	On/Off
	Hall Crct	On/Off

	Encoder Crct	On/Off
	Signal keep	On/Off
	Screen saver	On/Off
	Invert screen	Auto/On/Off
	Update slave	On/Off
	Language	中文/English
	Screen lock	On/Off
	Speed mode	Normal/Fast
	Load Default	OK/Cancel
Manual	Current channel mode channel	0-255
Calibration	Password	Lamp Calibration
Reset	Reset Effect	
	Reset Scan	
	Reset All	
Note	Reset Info	Display reset error information
	DMX Data	Receive the channel value of the console
	Sensor Info	Hall
		X Enco
		Y Enco
	Hardware	10.10.01.0
	Software	04.13.14.0

Screen Automatic Rotation Function

The system can automatically rotate the screen according to the direction of gravity without manual rotation. You can also turn off the automatic rotation function.

Manual Test

This interface is used to control the current lamps. Press "enter" key to enter the editing state. Press the "Up" and "Down" keys to change the channel value. Press "enter" again to save the modified values and exit editing; press "Menu" to exit editing without saving the modified values.

System Calibration

Enter the password "0000" and press "Enter" to enter.

Option	Instruction
Motor calibration	After entering the sub-interface, you can adjust the travel of X-axis, Y-axis, focusing and rotating motor. The adjustment range is 0~255, and 127 means no adjustment.
Power calibration	After entering the sub-interface, the power of 19 lamp beads can be adjusted, and the adjustment range is 0~255, with 255 indicating the maximum power.
White balance calibration	After entering the sub-interface, the white balance of red, green, blue and white of the total LED of the lamp and LED1-19 can be adjusted, with 255 indicating the maximum white balance.
Other calibration	Voice sensitivity calibration and password modification.

Reset

Option	Instruction
Reset Effect	other than XY Effect motor reset
Reset Scan	XY axis reset
Reset All	Lamp reset

System Information

Option	Instruction
Reset information	If the red ERR indicator lights up, it means that the lamps are running incorrectly, and the details can be viewed in the

	sub-interface.
DMX data monitoring	From this, the sub-interface is entered, and the channel value is displayed numerically for viewing.
Sensor information	Real-time monitoring the status of optical coupler, Hall and other sensors on the lamp.
Hardware version number	Hardware information of lamps
Software version number	Lamp software version

5. DMX Protocol

Basic Engine

21CH	22CH	35CH	36CH	Value	Function
1	1	1	1	0-255	Red
2	2	2	2	0-255	Red Fine
3	3	3	3	0-255	Green
4	4	4	4	0-255	Green Fine
5	5	5	5	0-255	Blue
6	6	6	6	0-255	Blue Fine
7	7	7	7	0-255	White
8	8	8	8	0-255	White Fine
9	9	9	9	0-255	Linear CTO,from 8000K-2500K
10	10	10	10	0-255	Macro Color, See Marco Color Table
11	11	11	11	0-3	Light Off
				4-103	Strobe Linear from slow to fast
				104-107	Light ON
				108-207	Pulsation Linear from slow to fast
				208-212	Light ON
				213-225	Random Strobe at low frequency
				226-238	Random Strobe at medium frequency
				239-251	Random Strobe at high frequency
				252-255	Light ON
12	12	12	12	0-255	Dimmer
13	13	13	13	0-255	Dimmer Fine

14	14	14	14	0-255	Pan
15	15	15	15	0-255	Pan Fine
16	16	16	16	0-255	Tilt
17	17	17	17	0-255	Tilt Fine
18	18	18	18	0-11	No Function
				12-24	Pan Tilt Fast(Default)
				25-37	Pan Tilt Normal
				38-102	No Function
				103-105	Pixel Map Enabled
				106-255	No Function
19	19	19	19	0-25	No Function
				26-76	Effects Reset
				77-127	Pan / Tilt Reset
				128-255	All Reset
20	20	20	20	0-255	Zoom
21	21	21	21		Zoom Rotation
				0-127	Linear Zoom Rotation
				128-190	Anticlockwise Rotation from fast to slow
				191-192	Stop
				193-255	Clockwise Rotation from slow to fast
-	22	-	-	0-255	Reserve
-	-	22	22		Shape Selection
				0-7	No Function
				8-70	Built-in 63 effects(see below table)
				71-255	No Function
-	-	23	23	0-255	Shape Speed(see below)
-	-	24	24	0-255	Shape Fade(see below)
-	-	25	25	0-255	Shape R
-	-	26	26	0-255	Shape G
-	-	27	27	0-255	Shape B

-	-	28	28	0-255	Shape W
-	-	29	29	0-255	Shape Dimmer
-	-	30	30	0-255	Backgroud Dimmer
-	-	31	31	0-255	Shape Transition
-	-	32	32	0-255	Shape Offset (see below)
-	-	33	33	0-255	Foreground Strobe
-	-	34	34	0-255	Background Strobe
-	-	35	35	0-255	Background Select (see below)
-	-	-	36	0-255	Reserve

Shape sele	**Macro Name**	**Description**	**Shape speed**	**Shape Offset**
0-7	Macro off	-	-	-
8	Pixel1	The rings used by the marco are turned on with the foreground color.	-	-
9	Ring1			
10	Ring2			
11	Ring3			
12	Pixel1+ Ring1			
13	Pixel1+ Ring2			
14	Pixel1+ Ring3			
15	Single ring	-	**0-63**=Radius size,static. **64-158**=Max to min speed, closing effect **159-160**=STOP **161-255**=Min to max speed,	0-9→continuous 10-255→random distribution of flash
16	Filled rings	-		
17	On/C 1	-		
18	On/C 2	-		

			Opening effect	
19	Random pixels1	-	**0-63**=STOP **64-158**=Max to min speed, Instant-on +fad eout. **159-160**=STOP. **161-255**=Min to max speed. Fadein+Fadeout	0-255→ select random distribution from 2 up to 20 fixtures
20	Random pixels2	-		0-255→ select pixel density
21	Rainbow1 (variable speed)	-	**0-63**=Angle 0-3 60° ,static. **64-158**=Max to min speed, c.cw rotation **159-160**=STOP **161-255**=Min to max speed. cw rotation	0-255→angle offset from 0 to 360°
22	Rainbow2 (Fixed speed with variable color offset)	-	**0-63**=STOP **64-158**=C.cw ro tation **159-160**=STOP **161-255**=cw rot ation The value **64-1 58 or 161-255** change the rain bow angle	-
23	Fan	-	**0-63**=Angle offset.0-360° **64-158**= Max to min speed,	0-255→angle offset from 0 to 360°
24	Bar1	-		
25	Half moon	-		
26	Triangle	-		

27	Segment1	-	C.cw rotation **159-160**=STOP **161-255**=Min to max speed, Cw rotationt	
28	Arc 1	-		
29	Arc 2	-		
30	Bar 2	-	**0-63**=STOP,indexed speed **64-158**=Max to min speed, C.cw rotation. **159-160**=STOP. **161-255**=Min to max speed cc rotation.	0-255→select shape width
31	Random explosion	-		0-255→select random distributi
32	Segment2	-		See 30
33	x Bump	-		0-255→select macro offset
34	Image	-		
35	Bumping section	-		
36	Ramp by6	-		0-255→select shape width
37	Ramp by4	-		
38	Lef/Right scrolling bar	-		
39	Up/Down scrolling bar	-		
40	Bar 3	-		0-255→select macro offset
41	Vertical arc 1	-		
42	Vertical arc 2	-		
43	Horizontal arc 1	-		
44	Horizontal arc 2	-		
45	Mirrored pixel	-		0-255→select shape width

46	Pixel animation1	-		
47	Pixel animation2	-		
48	Pixel animation3	-		
49	Pixel animation4	-		
50	Pixel animation5	-		
51	Semi arc	-		
52	Bumping arc section	-		0-255→select macro offset
53	Pixel animation6	-		
54	Vertical ramp by2	-		0-255→select shape width
55	Following pixel by2	-		
56	Syncopation	-		0-255→select macro offset
57	Bumping 1	-		
58	Bumping 2	-		
59	Bumping 3	-		
60	Vertical pixel scrolling	-		0-255→ select macro width
61	Random vertical section	-		0-255→ select random distribution
62	Random central section	-		

63	Random ring 2	-		
64	Random ring 3	-		
65	Random ring1+3			
66	Random ring2+3	-		
67	Single pixel ring1	-		0-255 - select the number of rotating
68	Single pixel ring2	-		
69	Single pixel ring3	-		
70	Spiral	-		See 60
71-255	-	-	-	-

Shape Select	Shape Fade	Background Select
0-7	-	-
8	0-15=Snap effect 16-255=Fade effect and gamma selection	0-7=wash 8-23 =Bkgnd rings selection 24-255= wash
9		
10		
11		
12		
13		
14		
15		0-7= wash 8-23 =Bkgnd rings selection 24-255= wash
16		
17		
18		
19		0-7=wash

20		8-23 =Bkgnd rings selection 24-254= wash All Fixtures: 255=Mirror effect
21		See 8
22		See 8
23		0-7= wash 8-23=Bkgnd rings selection 24-254= wash For all fixtures: -Macro 25,26 255= Mirror Effect with bkgnd color -Macro 27,28,29 255 = Show Alternative Color
24		
25		
26		
27		
28		
29		
30	Linear fade	0-7=wash 8-23=bkgnd rings selection 24-254=wash 255 = Mirror effect with bkgnd color Note: Mirror effect unavailable for macro 31. Macro 67,68,69:the mirror effect is available only for options 1,3,9
31	Linear fade and wake length	
32		
33	Linear fade	
34		
35		
36	Linear fade and wake length	
37		
38		
39		
40	Linear fade	
41		
42		
43		
44		
45	Linear fade and wake length	
46		

47		
48		
49		
50		
51		
52	Linear fade	
53		
54	Linear fade and wake length	
55		
56	Linear fade	
57		
58		
59		
60	Linear fade and wake length	
61	Linear fade	
62		
63		
64		
65		
66		
67	Linear fade and wake length	
68		
69		
70	Linear fade and wake length	
71-255	-	

Pixel Engine

Pixel Engine need to be enabled through the **Function** Channel 18 (Value 103-105)

RGB working with **Standard(**22CH), open 18CH(103-105), 23CH is Red LED1, 24CH is Green LED1, 25CH is Blue LED1.....

RGB	Value	Function

CH		
23	0-255	Red LED1
24	0-255	Green LED1
25	0-255	Blue LED1
.....	0-255	Red LED.....
.....	0-255	Green LED.....
.....	0-255	Blue LED.....
77	0-255	Red LED19
78	0-255	Green LED19
79	0-255	Blue LED19

RGBW working with **Shapes(**36CH), open 18CH(103-105), 37CH is Red LED1, 38CH is Green LED1, 39CH is Blue LED1,40CH is White LED1.....

RGBW CH	Value	Function
37	0-255	Red LED1
38	0-255	Green LED1
39	0-255	Blue LED1
40	0-255	White LED1
.....	0-255	Red LED.....
.....	0-255	Green LED.....
.....	0-255	Blue LED.....
.....	0-255	White LED.....
109	0-255	Red LED19
110	0-255	Green LED19
111	0-255	Blue LED19
112	0-255	White LED19

Macro Color table

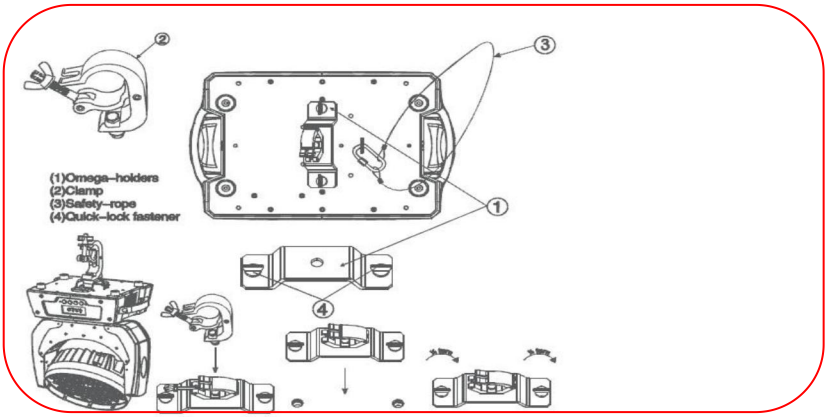
DMX Value	Color

0-9	Macro color OFF
10	Red
11	Green
12	Blue
13	Cyan
14	Yellow
15	Magenta
16	White 7000 K
17	White 3700 K
18	White 5000 K
19	Black
20-22	Medium Yellow
23-26	Straw Tint
27-28	Surprise Peach
29	Fire
30	Medium Amber
31	Gold Amber
32-34	Dark Amber
35-44	Sunrise Red
45	Light Pink
46-48	Medium Pink
49-61	Pink Carnation
62-67	Light Lavender
68-77	Lavender
78-88	Sky Blue
89-99	Just Blue
100-109	Dark yellow green
110-111	Spring Yellow
112	Light Amber
113	Straw
114	Deep Amber
115-116	Orange
117	Light Rose

118	English Rose
119	Light Salmon
120	Middle Rose
121-122	Dark Pink
123-124	Magenta
125	Peacock Blue
126	Med Blue Green
127	Steel Blue
128	Light Blue
129-130	Dark Blue
131-133	Leaf Green
134-135	Dark Green
136-137	Mauve
138-141	Bright Pink
142-144	Medium Blue
145	Deep Golden Amber
146	Pale Lavender
147-148	Special lavender
149-150	Primary Green
151-156	Bright Blue
157-161	Apricot
162-167	Pale Gold
168-171	Deep Orange
172-173	Bastard Amber
174	Flame Red
175-178	Daylight Blue
179	Lilac Tint
180-183	Deep lavender
184-190	Dark Steel Blue
191-206	Congo Blue
207	Alice Blue
208	Dirty White
209-255	White

6. Installation

6.1 Mounting & Rigging



Mounting & Rigging

- Attach Mounting Hardware

Install the 2 × ¼-turn quick-lock Omega brackets to the base, then secure suitable rated C- or O-clamps to the brackets.

- Position and Rig the Fixture

Mount the fixture onto a stable truss or structure using clamps rated to hold at least 10× the fixture's weight.

Always lift the fixture using the handles—not the clamps.

- Install the Safety Cable

Run the safety cable through the two safety-cable holes on the base and secure it to an independent safety point.

Ensure the safety cable is rated for 10× the fixture's weight.

- Ensure Ventilation

Verify that fans and ventilation openings are unobstructed and that sufficient space is available around the fixture.

- Lock / Unlock Pan & Tilt

Lock Pan and Tilt before moving the fixture.

Unlock them before powering on.
Never operate the fixture while Pan/Tilt is locked.

- Final Stability Check

Ensure all clamps, screws, and safety cable connections are firmly secured, and confirm the mounting structure can support the fixture's weight.

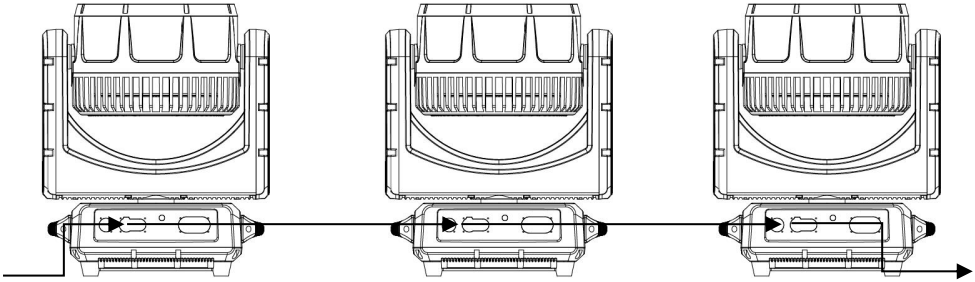
6.2 Power connection

Please checking the power equipment supported.
Please put the plug of power source wire connect with the main power source .

(EU)Wire	Wire(America)	Direction of wire	General marks
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/Green	Green	Earth	⏚

6.3 DMX Control Connection

This fixture supports DMX512 (1990) control protocol and is equipped with 3-pin XLR connectors for data input and output. Use a twin-screened DMX cable with conductors of at least 0.5 mm^2 , ensuring correct wiring for the selected connector type.
Connect the controller's DMX OUT to the first fixture's DMX IN, then link fixtures DMX OUT → DMX IN in a daisy-chain. For optimal signal integrity, install a **DMX terminator** on the DMX OUT of the final fixture.
Ensure no pin makes contact with the connector housing or other pins.
Before use, test cables with an ohm meter to verify correct polarity and to ensure no pins or shield are shorted to ground, as this may result in data errors or unstable operation.
For convenience, connect fixtures in the physical order they are installed, rather than by DMX address sequence.



DMX INPUT DMX OUTPUT

7. Maintenance & Cleaning

Regular maintenance is essential to ensure optimal performance and extend the service life of the fixture.

7.1 Cleaning

Disconnect the unit from power before any cleaning work.
Use a soft, lint-free cloth slightly dampened with mild detergent to clean the exterior surfaces.
Gently remove dust from ventilation slots, optical lenses, and cooling components using compressed air or a soft brush.
Avoid using solvents, alcohol, or abrasive materials that may damage the housing or optical elements.

7.2 Lubrication

This fixture is designed with sealed or maintenance-free moving parts. Under normal operating conditions, no additional lubrication is required.
If abnormal noise or movement resistance is observed, contact qualified service personnel before applying any lubricant.

7.3 Troubleshooting

If the fixture does not power on, verify the power supply, cables, and connectors.
For control issues, check DMX addressing, cable integrity, and ensure proper 3-pin/5-pin XLR connections.
Overheating or unexpected shutdown may indicate blocked ventilation; inspect and clean air inlets and outlets.
If problems persist after basic checks, discontinue use and contact authorized service technicians.

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