2460Z

24*60W Wash Zoom Moving Head

<u>User Manual</u>
Please read manual carefully before use

CONTENTS

Thank you for choosing our LED lights. Each facility has been rigorously tested. Please check whether the facility has been damaged during transportation. If you find any parts are missing or broken, please contact the manufacturer immediately. Please do not return the product without any notice!

1.Safety Instructions

⚠️ Please read this manual carefully, which includes important information on installation,use and maintenance.

Attention

● Please keep this USER MANUAL for future consultation. If you sell the facility to another user, be sure that they also receive this USER MANUAL.

● Please open and check in details and make sure there is no transportation damage.

● Before operating, ensure that the voltage and frequency of power supply match the power requirements of the facility.

● It's important to ground the yellow/green conductor to earth in order to avoid electric shock.

● The facility must be installed in a location with adequate ventilation, at least 50 cm from adjacent surfaces. Be sure that no ventilation slots are blocked.

● Make sure the power is disconnected before removing the facility.

● Make sure there are no flammable materials close to the unit while operating as it is fire hazard.

● Use safety cable when fixes this facility. Do not handle the facility by taking its head only, but always by taking its base.

● Maximum ambient temperature is 40 ℃. Do not operate it where the temperature is higher than this.

● Please stop using the facility for serious operating problems. Stop using the facility immediately. Never try to repair the facility by yourself, but be a professional technician. Please contact the supplier's service department

for technical support.

- Do not touch any wire during operation as high voltage might be causing electric shock.
- When the housing or lens is damaged, it must be replaced.
- Direct sunlight or any other strong light source penetrating the lens of the light will cause serious internal damage to the facility. During unpacking, installation, use and long-term outdoor idleness, it is forbidden to expose the lens of the facility to direct sunlight or any other strong light source at any angle. It is forbidden to aim the beam of one light directly at another light.
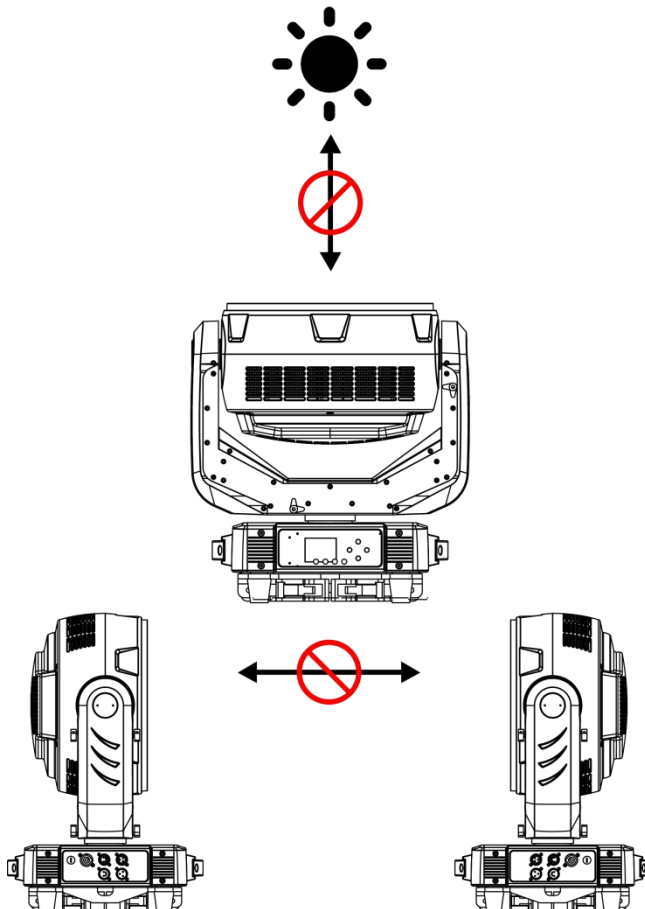
Caution

There are no accessories available, do not open the housing and try to repair the facilities yourself. Please contact our company for after service.

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 facility must be installed by professionals, and keep it far away from fire, walking road, and easy touched place.

2. Technical Specification

Light Source	24*60W 4in1 RGBW LED
LED Lifetime	≥ 50000H
Power Voltage	AC100-240V,50-60Hz
Power Consumption	1500W
Beam Angle	3.5°-45°
Control Modes	DMX512/ Auto/ Sound/ Master/ Manual/ RDM ArtNet (optional)
DMX Channel	20/ 24/ 32/ 44 Channel
Protection Rating	IP20
Display	TFT2.4 display; Chinese and English languages can be switched at will, and the font can be reversed 180°
Data In/Out Socket	3-pin /5-pin XLR sockets
Power Socket	Power-Con in/ out
Housing Material	ABS High temperature resistant plastics

Pan	540°accuracy 2.11°/step, fine-tuning accuracy: 0.008°
Tilt	270°accuracy 0.86°/step, fine-tuning accuracy: 0.0034°
Pan/Tilt Resolution	Automatically correct pan/tilt position
MAX. Connection	2units（230V，50Hz） 2.5mm² power cable
	1 units（110V，60Hz） 2.5mm² power cable
Dimension	354mm×444mm×477mm
Net Weight	25 kg
Carton Package	610*485*580mm 1in1 GW: 31 kg
Flight Case	915*530*755mm 2in1 GW: 90.32 kg
Features	Full light range dimming, 65536-level dimming accuracy; fast strobe 1~25Hz; single-point control of lamp beads; three-in-one effects of dyeing, beam, and bee eye; preset multiple color macro functions; preset multiple effect macro functions
Configuration	Signal cable 1pc
	Power cable 1pc
	Manual 1pc

3. DMX Set Up

Pin1: Ground   **pin2: Negative**   **pin3: Positive**
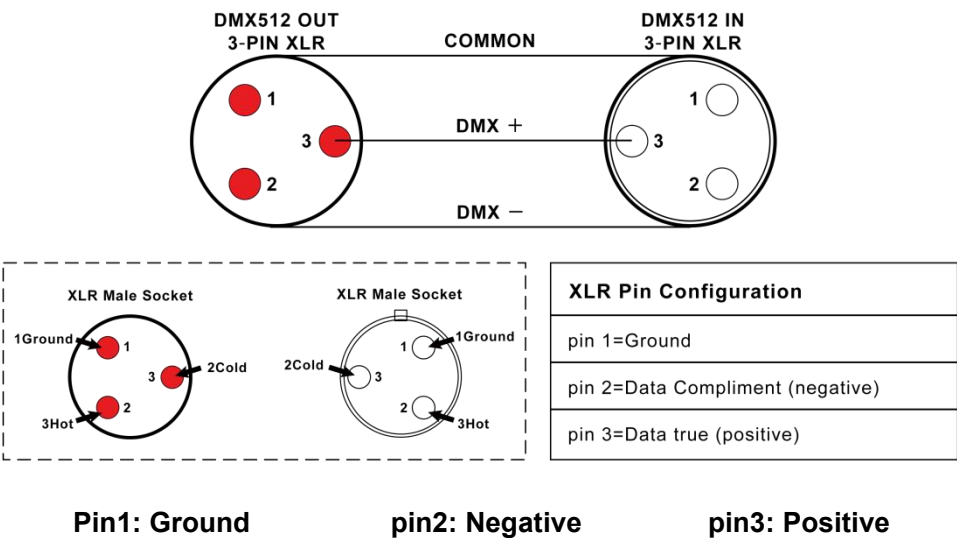
DMX Connection

To ensure optimal transmission of DMX data, please connect facilities in the shortest way. The connection order won't affect the DMX address code. For example, if the address code is set to 1, no matter where the facility is connected, its address code will not change. This is determined by the principle of the DMX controller.

Operation method

You can operate in the following three modes:
● Auto mode - the light can automatically complete all color changes
● DMX control mode - each light can be individually controlled by a standard DMX512 console
● Master mode - any light can work as a host in any of the above modes, and the other lights will work synchronously as slaves

4. Display

There are four buttons on the LED panel: MENU, UP, DOWN, and ENTER.

MENU   UP   DOWN   ENTER

Please press the "MENU" to exit or return to the previous menu, press "UP" or "DOWN" to select the upper and lower menus or adjust the values, and press "ENTER" to confirm.
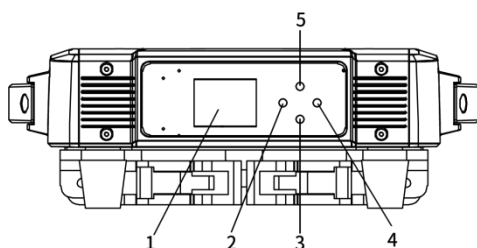
FRONT VIEW   **REAR VIEW**
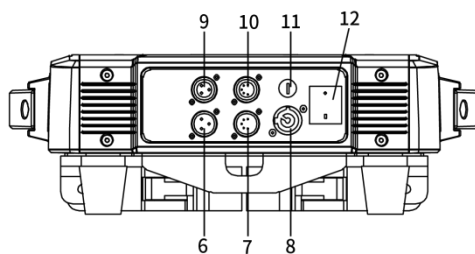
After powering on, the facility will automatically return to the last operation when it was powered off, then get into standby status. For more details, please refer to the information below↓

5. Menu

1-MENU 2-UP 3-DOWN 4-ENTER			
Menu	1.Pan Degree	1.540 2.360	Pan running angle selection
	2.Mic Sense	001-100	Voice control sensitivity adjustment
	3.Pan Invert	1.NO 2.YES	Pan forward and reverse setting
	4.Tilt Invert	1.NO 2.YES	Tilt forward and reverse setting
	5.No Signal	1.Black Out 2.Hold	
	6.Fan Set	1.Auto 2.Low 3.High	
	7.Default	1.Yes	Restore factory settings
		2.No	
	8.Adjust	Pass Word：****	Changing the values of

		1.Pan: 0-255	Pan/Tilt/Focus/Rotation can correct the angle; changing the values of R/G/B/W can adjust the white balance
		2.Tilt: 0-255	
		3.Focus: 0-255	
		4.Rotation: 0-255	
		5.Red：0-255	
		6.Green：0-255	
		7.Blue：0-255	
		8.White：0-255	
Address	001-512		Setting address 001-512
Mode	1.DMX 512		Setting control mode
	2.Auto		
	3.Sound		
	4.Manual	1.Pan: 0-255	Manual control
		2.Tilt: 0-255	
		3.Focus: 0-255	
		4.Rotation: 0-255	
		5.Red：0-255	
		6.Green：0-255	
		7.Blue：0-255	
		8.White：0-255	
		9.Strobe：0-255	
	5.Master/Alone	1.Master	Master or alone
		2.Alone	
Channel	1.20 Channels	21 CH	Select control mode

	2.24 Channels	25 CH	
	3.32 Channels	33 CH	
	4.44Channels	129 CH	
Display	Display	1.YES 2.NO	Display font forward and reverse settings
Language	1.English		Select language
	2.Chinese		
Reset	1.NO		Reset
	2.YES		
Information	1.CH Value		Display all Mode information
	2.Tem**℃		Show LED board temperature
	3.Soft V1.0		Program version number
	4.IP	002.050.164.014	Default IP
	5.Mask	255.000.000.000	Default sub mask

6. LUX Data

Beam Angle =3.5°

R lux	14000	9900	3850
G lux	30800	19200	11900
B lux	7410	4320	2070
W lux	46400	31400	16900
4in1 lux	98000	59400	32500

Beam Angle =45°

R lux	1410	549	154
G lux	3100	1140	494
B lux	813	294	94
W lux	4560	1680	640
4in1 lux	9030	3350	1290

Distance (m)	3	5	8
Spot diameter (m) 3.5°	0.57	0.75	1.1
Spot diameter (m) 45°	2.8	4.3	
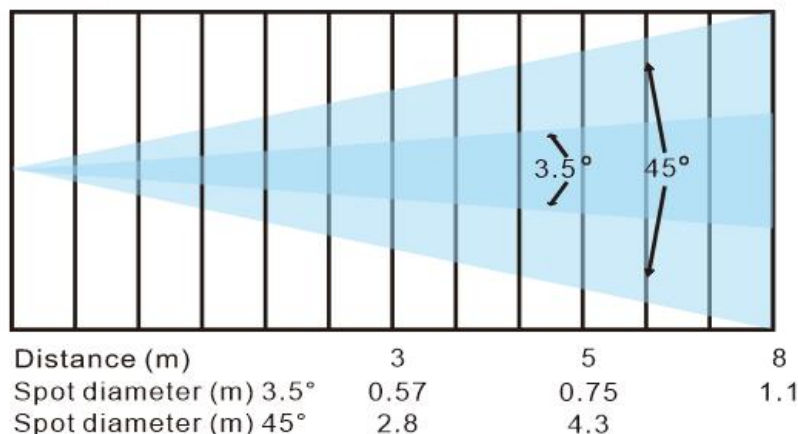
7. DMX Channel List

▶ **20CH Mode**

CH	Function	DMX Value	Description
1	Red	0-255	Red dimming
2	Red adjust	0-255	Red adjustment
3	Green	0-255	Green dimming
4	Green adjust	0-255	Green adjustment
5	Blue	0-255	Blue dimming
6	Blue adjust	0-255	Blue dimming
7	White	0-255	White dimming
8	White adjust	0-255	White adjustment
9	Color temperature	0-15	No function
		16-35	R 100%, G UP, B 0%
		36-55	R DOWN, G 100%, B 0%
		56-75	R 0%, G 100%, B UP
		76-95	R 0%, G DOWN, B 100%
		96-115	R UP, G 0%, B 100%
		116-135	R 100%, G 0%, B DOWN
		136-155	R 100%, G UP, B UP
		156-175	R DOWN, G DOWN, B 100%
		176-195	R 100%, G 100%, B 100%, W 100%
		196-200	2800 K

CH	Function	DMX Value	Description
		201-205	3200 K
		206-210	4000 K
		211-215	4500 K
		216-220	5000 K
		221-225	5600 K
		226-230	6500 K
		231-235	7000 K
		236-240	7500 K
		241-255	8000 K
10	Macro color	0-9	No function
		10-19	Macro color 1
		20-29	Macro color 2
		......	Per 10 value one color......
		240-249	Macro color 24
		250-255	Macro color 25
11	Dimmer	0-255	Dark to bright linear dimming
12	Dimmer adjust	0-255	Dimmer adjustment
13	Strobe	0-3	Strobe dimming
		4-203	Synchronous strobe speed from slow to fast (1Hz-25Hz)
		204-255	Random strobe
14	Pan	0-255	Pan control

CH	Function	DMX Value	Description
15	Pan adjust	0-255	Pan adjustment control
16	Tilt	0-255	Tilt control
17	Tilt adjust	0-255	Tilt adjustment control
18	Zoom	0-255	From narrow to wide
19	Dimming Mode	0-49	Mode -1
		50-99	Mode -2
		100-149	Mode -3
		150-255	Mode -4
20	Reset	0-250	No function
		251-255	Reset within 5s

► **24CH Mode**

CH	Function	DMX Value	Description
1	Pan	0-255	Pan control
2	Pan adjust	0-255	Pan adjust
3	Tilt	0-255	Tilt control
4	Tilt adjust	0-255	Tilt adjust

CH	Function	DMX Value	Description
5	Pan/tilt speed	0-255	Speed from fast to slow
6	Zoom	0-255	From narrow to wide
7	Dimmer	0-255	Dark to bright linear dimming
8	Strobe	0-3	Strobe dimming
		4-203	Synchronous strobe speed from slow to fast (1Hz-25Hz)
		204-255	Random strobe
9	R dimming	0-255	Dark to bright linear dimming
10	G dimming	0-255	Dark to bright linear dimming
11	B dimming	0-255	Dark to bright linear dimming
12	W dimming	0-255	Dark to bright linear dimming
13	Color temperature	0-15	No function
		16-35	R100%,G UP,B0%
		36-55	R DOWN,G100%,B0%
		56-75	R0%,G100%,B UP
		76-95	R0%,G DOWN,B100%
		96-115	R UP,G0%,B100%
		116-135	R100%,G0%,B DOWN
		136-155	R100%,G UP,B UP
		156-175	R DOWN,G DOWN, B 100%
		176-195	R100%,G100%,B100%,W100%
		196-200	2800K

CH	Function	DMX Value	Description
		201-205	3200K
		206-210	4000K
		211-215	4500K
		216-220	5000K
		221-225	5500K
		226-230	5600K
		231-235	6500K
		236-240	7000K
		241-245	8000K
14	Macro color	0-9	No function
		10-19	Macro color 1
		20-29	Macro color 2
		....	....(10 numbers 1 macro color)
		240-249	Macro color 24
		250-255	Macro color 25
15	Static pattern	0-36	No function
		37-73	pattern 1
		74-110	pattern 2
		.....	.........(37 value per 1 pattern)
		222-255	pattern 6
16	Dynamic pattern	0-9	NO function

CH	Function	DMX Value	Description
		10-19	Single color dynamic pattern 1
		20-29	Single color dynamic pattern 2
		.....	......(10 DMX value per pattern)
		80-89	Single color dynamic pattern 8
		90-99	mixed color dynamic pattern 1
		100-109	Mixed color dynamic pattern 2
		....	........(10 DMX value per pattern)
		220-229	Mixed color dynamic pattern 14
		225-255	Mixed color dynamic pattern 15
17	Pattern translation (work with CH 16)	0-255	Select dynamic pattern scene
18	Dynamic pattern speed (work with CH 16)	0-9	No function
		10-132	Forward, from fast to slow
		133-255	Go backward, from slow to fast
19	Back color R	0-255	Dark to bright linear dimming
20	Back color G	0-255	Dark to bright linear dimming
21	Back color B	0-255	Dark to bright linear dimming
22	Back color W	0-255	Dark to bright linear dimming
23	Dimming Mode	0 - 49	Mode -1
		50 - 99	Mode -2
		100-149	Mode -3

CH	Function	DMX Value	Description
		150-255	Mode -4
24	Reset	0-250	No function
		251-255	Reset within 5s

▶**32CH Mode**

CH	Function	DMX Value	Description
1	Pan	0-255	Pan control
2	Pan adjust	0-255	Pan adjust
3	Tilt	0-255	Tilt control
4	Tilt adjust	0-255	Tilt adjust
5	Pan/Tilt speed	0-255	Speed from fast to slow
6	Zoom	0-255	From narrow to wide
7	Dimmer	0-255	Dark to bright linear dimming
8	Dimming	0-255	Dimming
9	Strobe	0-3	Strobe dimming
		4-203	Synchronous strobe speed from slow to fast (1Hz-25Hz)
		204-255	Random strobe
10	Red dimming	0-255	Red dimming
11	Red	0-255	Red
12	Green dimming	0-255	Green dimming
13	Green	0-255	Green

CH	Function	DMX Value	Description
14	Blue dimming	0-255	Blue dimming
15	Blue	0-255	Blue
16	White dimming	0-255	White dimming
17	White	0-255	White
18	Dimming Mode	0-49	Mode -1
		50-99	Mode -2
		100-149	Mode -3
		150-255	Mode -4
19	Color temperature	0-15	No function
		16-35	R100%,G UP,B0%
		36-55	R DOWN,G100%,B0%
		56-75	R0%,G100%,B UP
		76-95	R0%,G DOWN,B100%
		96-115	R UP,G0%,B100%
		116-135	R100%,G0%,B DOWN
		136-155	R100%,G UP,B UP
		156-175	R DOWN,G DOWN, B 100%
		176-195	R100%,G100%,B100%,W100%
		196-200	2800K
		201-205	3200K
		206-210	4000K

CH	Function	DMX Value	Description
		211-215	4500K
		216-220	5000K
		221-225	5500K
		226-230	5600K
		231-235	6500K
		236-240	7000K
		241-255	8000K
20	Macro color	0-9	No function
		10-19	Macro color 1
		20-29	Macro color 2
		....	..(10 DMX value 1 macro color)
		240-249	Macro color 24
		250-255	Macro color 25
21	Static pattern	0-36	No function
		37-73	pattern 1
		74-110	pattern 2
		.....	.........(37 DMX value per pattern)
		222-255	pattern 6
22	Dynamic pattern	0-9	NO function
		10-19	Single color dynamic pattern 1
		20-29	Single color dynamic pattern 2

CH	Function	DMX Value	Description
		.....	......(10 DMX value 1 pattern)
		80-89	Single color dynamic pattern 8
		90-99	Mixed color dynamic pattern 1
		100-109	Mixed color dynamic pattern 2
		....	........(10 DMX value 1 pattern)
		220-229	Mixed color dynamic pattern 14
		230-255	Mixed color dynamic pattern 15
23	Pattern translation (with 22 CH)	0-255	Select dynamic pattern scene
24	Dynamic pattern speed (work with 22 CH)	0-9	No function
		10-132	Forward, from fast to slow
		133-255	Go backward, from slow to fast
25	Pattern effect fade	0-255	Pattern effect fade
26	Background total dimming	0-255	Background total dimming from 0 - 100%
27	Background strobe	0-255	Background strobe
28	Back color Red	0-255	Dark to bright linear dimming
29	Back color Green	0-255	Dark to bright linear dimming
30	Back color Blue	0-255	Dark to bright linear dimming
31	Back color White	0-255	Dark to bright linear dimming
32	Reset	0-250	NO function
		251-255	Reset within 5s

▶44CH Mode

CH	Function	DMX Value	Description
1	Pan	0-255	Pan control
2	Pan adjust	0-255	Pan adjust
3	Tilt	0-255	Tilt control
4	Tilt adjust	0-255	Tilt adjust
5	Pan/Tilt speed	0-255	Speed from fast to slow
6	Zoom	0-255	From narrow to wide
7	Dimmer	0-255	Dark to bright linear dimming
8	Dimming	0-255	Dimming -adjust
9	Strobe	0-3	Strobe dimming
		4-203	Synchronous strobe speed from slow to fast (1Hz-25Hz)
		204-255	Random strobe
10	Red dimming	0-255	Red dimming
11	Red	0-255	Red
12	Green dimming	0-255	Green dimming
13	Green	0-255	Green
14	Blue dimming	0-255	Blue dimming
15	Blue	0-255	Blue
16	White dimming	0-255	White dimming
17	White	0-255	White trim
18	Dimming Mode	0-49	Mode -1

CH	Function	DMX Value	Description
		50 - 99	Mode -2
		100-149	Mode -3
		150-255	Mode -4
19	Color temperature	0-15	No function
		16-35	R 100%,G UP,B 0%
		36-55	R DOWN,G 100%,B 0%
		56-75	R 0%,G 100%,B UP
		76-95	R 0%,G DOWN,B 100%
		96-115	R UP,G 0%,B 100%
		116-135	R 100%,G 0%,B DOWN
		136-155	R 100%,G UP,B UP
		156-175	R DOWN,G DOWN, B 100%
		176-195	R 100%,G 100%,B 100%,W 100%
		196-200	2800K
		201-205	3200K
		206-210	4000K
		211-215	4500K
		216-220	5000K
		221-225	5500K
		226-230	5600K
		231-235	6500K

CH	Function	DMX Value	Description
		236-240	7000K
		241-255	8000K
20	Macro color	0-9	No function
		10-19	Macro color 1
		20-29	Macro color 2
		....	....(10 DMX value 1 macro color)
		240-249	Macro color 24
		250-255	Macro color 25
21	Static pattern	0-36	No function
		37-73	pattern 1
		74-110	pattern 2
		.....	.........(37 DMX value 1 pattern)
		222-255	pattern 6
22	Dynamic pattern	0-9	NO function
		10-19	Single color dynamic pattern 1
		20-29	Single color dynamic pattern 2
		.....	......(10 DMX value 1 pattern)
		80-89	Single color dynamic pattern 8
		90-99	Mixed color dynamic pattern 1
		100-109	Mixed color dynamic pattern 2
		....	........(10 DMX value 1 pattern)

CH	Function	DMX Value	Description
		220-229	Mixed color dynamic pattern 14
		230-255	Mixed color dynamic pattern 15
23	Pattern translation (work with 22 channels)	0-255	Select dynamic pattern scene
24	Dynamic pattern speed (work with 22 channels)	0-9	No function
		10-132	Forward, from fast to slow
		133-255	Go backward, from slow to fast
25	Pattern effect fade	0-255	Pattern effect fade
26	Background total dimming	0-255	Background total dimming from 0 - 100%
27	Background strobe	0-255	Background strobe
28	Back color Red	0-255	Dark to bright linear dimming
29	Back color Green	0-255	Dark to bright linear dimming
30	Back color Blue	0-255	Dark to bright linear dimming
31	Back color White	0-255	Dark to bright linear dimming
32	Reset	0-250	NO function
		251-255	Reset within 5 s
33	R 1 LED dimming	0-255	Red 1 LED dimming
34	G 1 LED dimming	0-255	Green 1 LED dimming
35	B 1 LED dimming	0-255	Blue 1 LED dimming
36	W 1 LED dimming	0-255	White 1 LED dimming
37	R 2 LED dimming	0-255	Red 2 LED dimming

CH	Function	DMX Value	Description
38	G 2 LED dimming	0-250	G 2 LED dimming
39	B 2 LED dimming	0-255	Blue 2 LED dimming
40	W 2 LED dimming	0-255	White 2 LED dimming
41	R 3 LED dimming	0-255	Red 3 LED dimming
42	G 3 LED dimming	0-255	Green 3 LED dimming
43	B 3 LED dimming	0-255	Blue 3 LED dimming
44	W 3 LED dimming	0-255	White 3 LED dimming

8. Mounting

When installing the unit, the trussing or area of installation must be able to hold 10 times the weight without any deformation. When installing the unit must be secured with a secondary safety attachment, e.g. an appropriate safety cable. Never stand directly under the facility while mounting, uninstalling or repairing facilities.

High-altitude mounting requires for extensive experience, including working load limits calculating , installation material, and periodic safety check of installation materials and facilities. If you're lack of mentioned qualifications, do not attempt the installation yourself. These installation should be checked by a

skilled person annually.
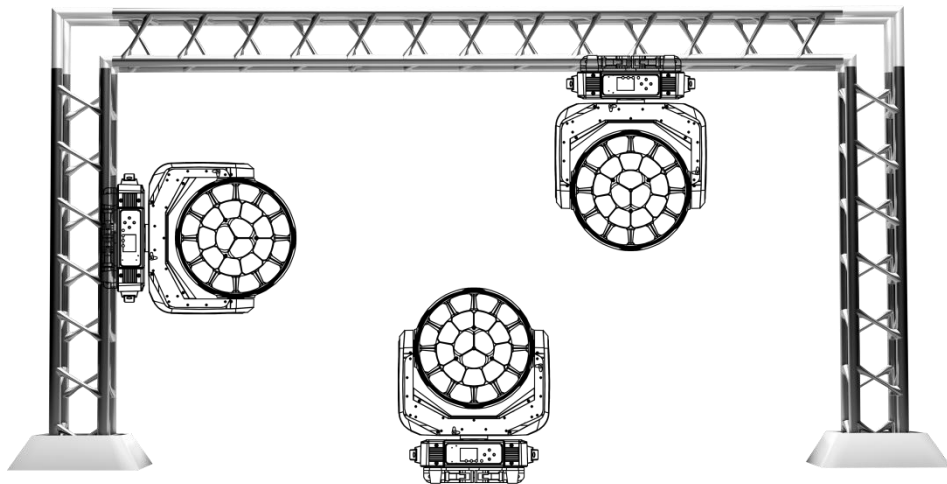
2460Z works properly in above different mounting, hanging upside-down from a ceiling, sideways on trussing, or set on smooth horizontal surface. Be sure this facility is at least 12m (40ft) away from flammable materials (decoration etc.). Always use and install the safety cable to prevent accidental damage or injury from the facility failure. Never use handles for secondary attachment.

NOTICE: The suitable environment temperature of the facility is from -25˚ C to 45˚ C. Do not place this facility in an environment where the temperatures are under or above the temperatures stated. This will help the fixture run at its best and extend the lifetime.

9. Product Size

444
356
518
466
391
376

☒354
107
127
272
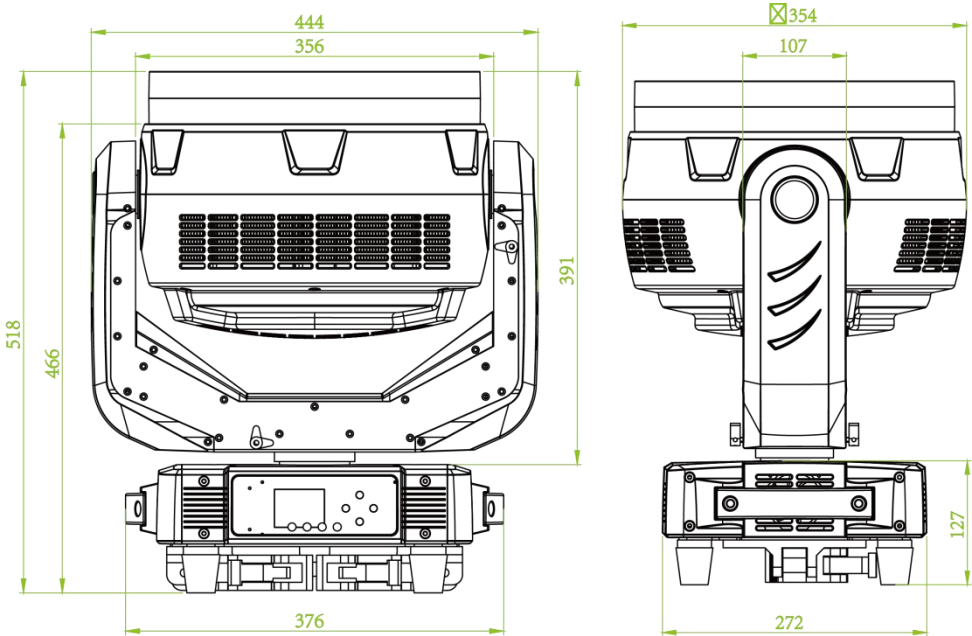
10. Attention

1. When the facility is powered on, please avoid looking directly at the facility.

2. When assembling/ replacing LED, be sure to cut off the main power of facilities before opening the cover upon the LED board.

11. 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 status of power connection and fuse.
2. Check the voltage.
3. Check the power indicator.

B. No response to DMX controller

1. If the display screen flashes, check the DMX signal connector and signal line whether the connection is correct.
1. If the display screen does not flash, but no response to channel control, check whether the address code or channel setting is correct.
1. If the DMX signal transmission is intermittent, check if the XLR and DMX cables are in good condition.
2. Try using another controller.
3. Check if the DMX cables is too close to the high-voltage wire, which may damage or interfere with the signal circuit.
6. The facility has not completed the self-check.

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 motor's drive IC on the PCB might be out of condition.

12. Fixture Cleaning

The lens and diffuser should be clean frequently to get better light effect. Wipe frequency according to the environment. Humidity, excessive smoke, and dirty environment will make lens dusty.
● Use soft cloth and special glass cleaner.
● Wipe lens surface at least every 30 days.
● Use vacuum cleaners or air guns to clean the interior structure of the facility, at least twice a year.

⚠Warning:
To avoid the danger of lighting strikes and fire, please do not place the facility in a humid environment. Do not disassemble it without permission, otherwise, the manufacturer will not provide warranty. If the facility fails, please contact the manufacturer first.

Product Warranty Card

Product: 24*60W Wash Zoom Moving Head

Model NO.: 2460Z   Manufacture Date:

User: Purchase Date:

Manufacturer: Sales Store:

Address: ATTN.:

ATTN.:   Phone:

Phone:

Note: The above blank must be filled in and sealed by the end user or sales point, otherwise no warranty will be provided. (Below please check the warranty period and terms)

Warranty Period: This facility is warranted for 2 years from the date of purchase.

Warranty Terms:

1. Except for man-made damage and natural disasters

2. If the facility fails to function properly during the warranty period, please contact our after service department or our local distributor directly.

1) Fail to present a valid warranty card.

2) Omissions, alterations, and trade sales names on the warranty card.

3) Failures and damage caused by force majeure.

4) Failures and damage caused during transportation and handling.

5) Failures and damage caused by failure to follow the instructions for use.

6) Failures and damage caused by disassembly, repair, and modification of the product without the manufacturer's authorization or by non-professionals.

7) Failures caused by the use of accessories not approved by the factory or not matched by the factory.

▲ **Thank you for reading this manual. Please keep it for future reference.**