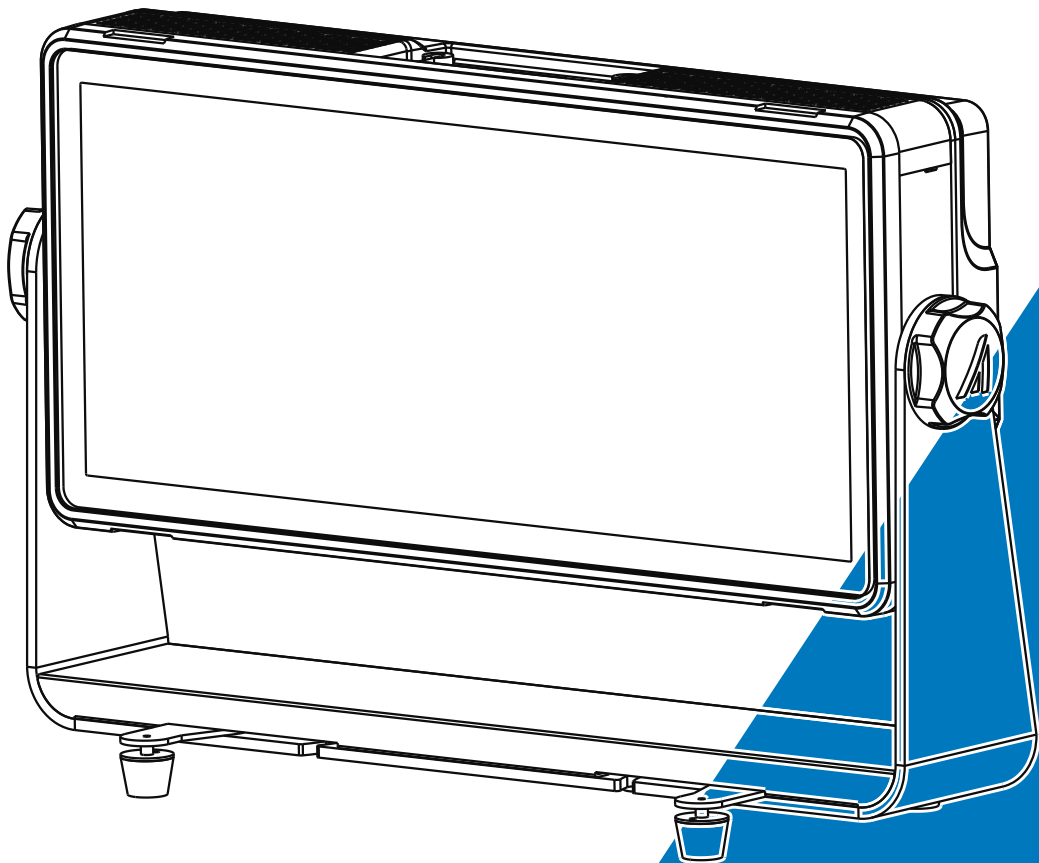




***THUNDERSTRUCK***  
LP-2304



**User Manual**

Please read the instruction carefully before use

## Menu

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## 1. Safety Instructions



### WARNING

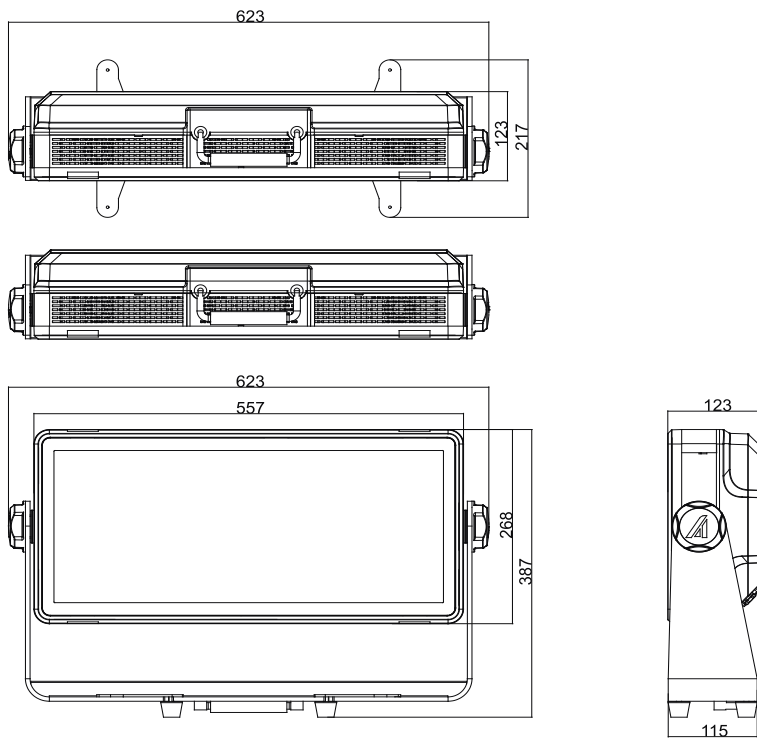
Please read the instruction carefully which includes important information about the installation, usage and maintenance.

- Please keep this User Manual for future consultation. If you sell the fixture to another user, be sure that they also receive this instruction booklet.
- Please unpack and check carefully there is no transportation damage before using the fixture.
- Please disconnect main power before servicing and maintenance.
- 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.
- The ambient temperature is  $T_a$ :  $0^{\circ}\text{C}$ – $40^{\circ}\text{C}$ . DO NOT operate it where above or below the range of temperature.
- DO NOT connect the device to any dimmer pack.
- The housing must be replaced if they are visibly damaged.
- Unit surface temperature may reach up to  $85^{\circ}\text{C}$ . Don't 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 servicing.
- There are no user serviceable parts inside the fixture. Do not open the housing or attempt any repairs by yourself. In the unlikely event your fixture may require service, please contact your nearest dealer.
- In the event of serious operating problem, stop using the fixture immediately. Never try to repair the fixture 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.
- **Installation:**
- The unit is fully operational in three different mounting positions, hanging upside-down from a ceiling or set on a flat level surface. To avoid internal damage to the unit, never mount the unit on its side as illustrated above. Be sure this fixture is kept at least 0.5m away from any flammable materials (decoration etc.). Always use and install the supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.

- 1. Bolt each clamp to the Omega holder with screw and lock nut through the hole in the holder.
- 2. Faster the omega holders on the bottom of the base by inserting quick-lock fasteners into the holes of the base and tighten fully clockwise.
- 3. Hang the fixture to the support through clamp and faster the screws, Faster the safety cable through the bottom of the base and over the support.

## 2. Technical Specifications

- 13 channel Modes;
- Ideal for discotheques, clubs, bars, parties, Mobile DJs, etc.
- **Input Voltage:** AC100V~240V, 50/60Hz
- **Total Power consumption:** 1500W
- **Power Cord Daisy Chain:** 1Fuxtuer(120V); 2 Fuxtuer(220V);
- **Beam Angle:** 110°
- **IP Grade:** IP 65
- **LED Sources:** 0.4W RGBW x 2304
- **Dimension:** 623x123x387mm
- **Weight:** 16 Kgs

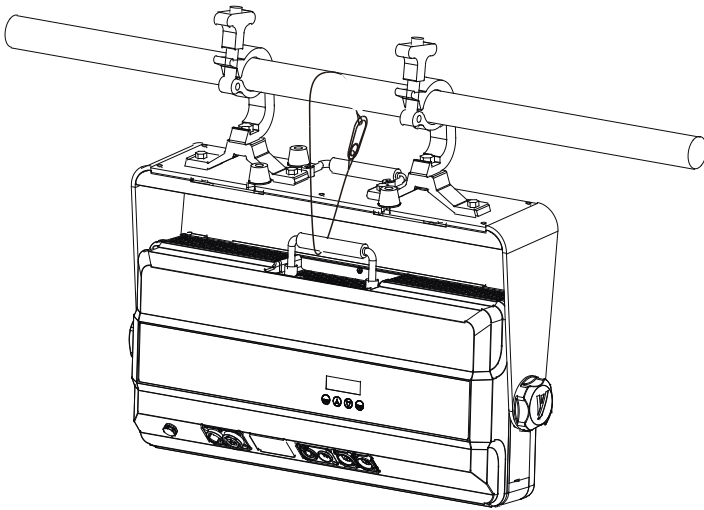


### 3. Installation and Connection

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. Always ensure 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.

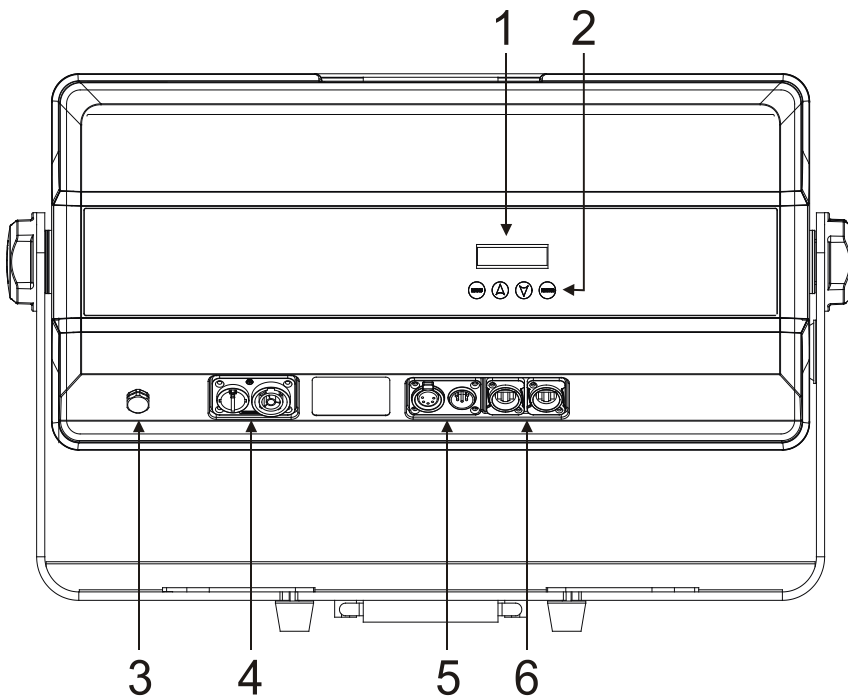
The equipment must be fixed by professionals. And it must be fixed at a place where is out of the touch of people and has no one pass by or under it. The unit should be mounted in the height of 0 to 30m.

#### Method for using lamp hook and safety rope



## 4. How to set the unit

### 4.1 Rear Panel



① **Display:** Show the various menus and the selected functions;

② **Button:**

MENU	To select the programming functions
------	-------------------------------------

DOWN	To go forward in the selected functions
UP	To go backward in the selected functions
ENTER	To confirm the selected functions

③ **Breathable punishment**

④ **Power input/output**

For DMX512 link, use 3/5-pin XLR plug cable to input DMX signal, and to link the next unit.

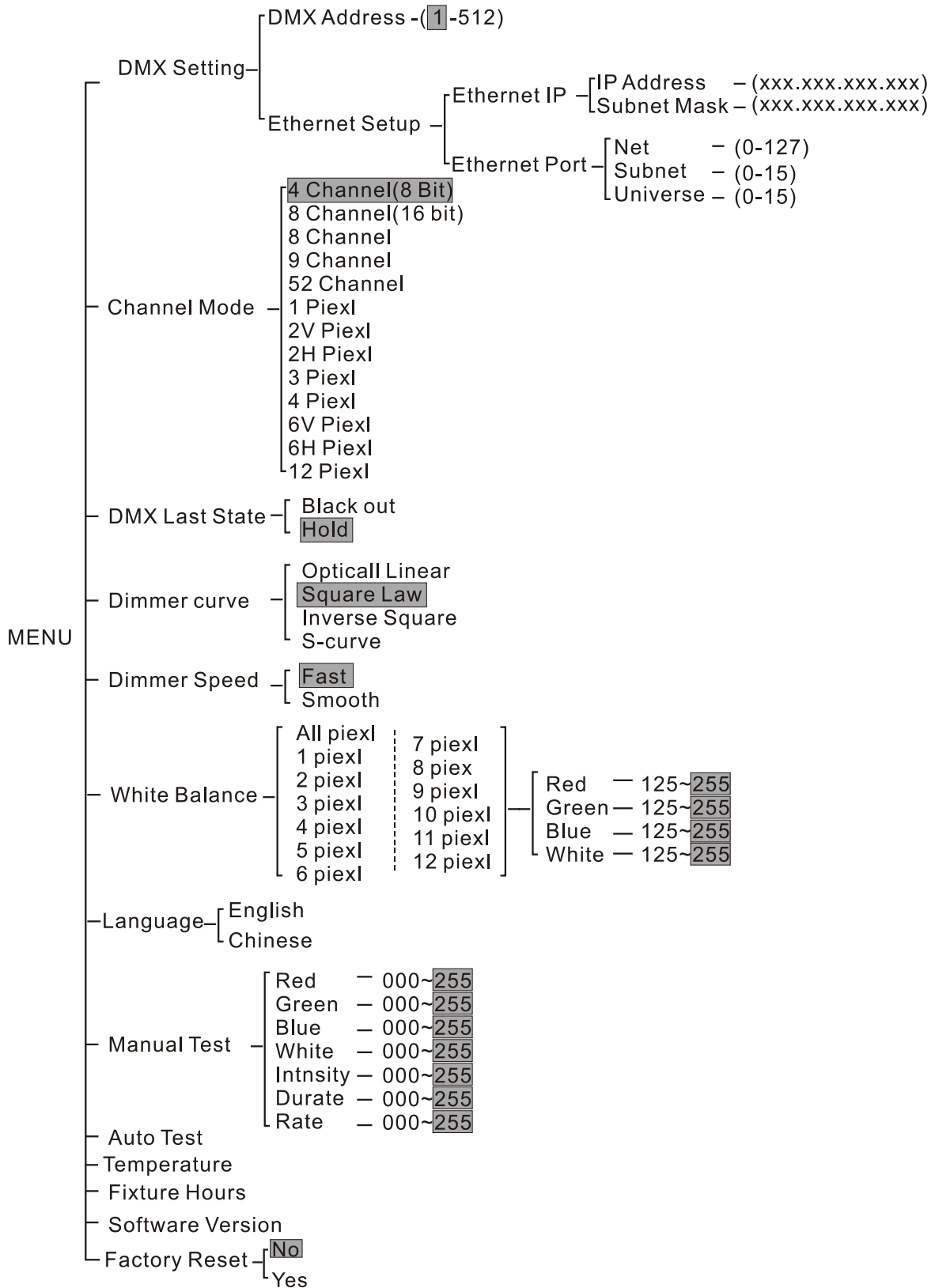
⑤ **DMX input/output:**

For DMX512 link, use 3/5-pin XLR plug cable to input DMX signal, and to link the next unit.

⑥ **Ethernet in/ Ethernet Thru:** For ArtNet link

## 4.2 Main Function

To select any functions, press **MENU** button until the required one is shown on the display. Select the function by **ENTER** button. Use **DOWN** and **UP** button to change the mode. Once the required mode has been selected, press **ENTER** button to setup or it will return to the main functions without any change after idling 8 seconds automatically. Back to the functions without any change press **MENU** button. The main functions are shown below:





## DMX Setting

Select the **DMX Setting**, press the **ENTER** button and the display will blink. Use the **DOWN** and **UP** button to change the DMX 512 address (001-512) or Ethernet Setup, In Ethernet Setup menu, fixture Ethernet parameter, IP Address/Subnet Mask/Net(0-127)/Subnet(0-15)/Universe(0-15), Must be consistent with the value of the controller, Fixture receives the corresponding ArtNet signal control. Once the address has been selected, press the **ENTER** button to setup or exit menu mode without any change after 8 seconds automatically. Back to the previous functions without any change press the **MENU** button.

## Channel Mode

Select the **Channel Mode**, press the **ENTER** button. Use the **DOWN** and **UP** button to select the Channel, there are 13 channel Modes. Once selected, press the **ENTER** button to store. Press the **MENU** button back to the last menu without any change or idling 1 minute to exit menu mode.

## DMX Last State

Select the **DMX Last State**, press the **ENTER** button. Use the **DOWN** and **UP** button to select **Blackout** or **Hold**. Once selected, press the **ENTER** button to store. Press the **MENU** button back to the last menu without any change or idling 8 seconds to exit menu mode.

## Dimmer curve

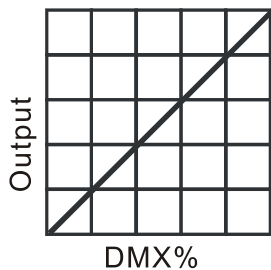
Select the **Dimmer curve**, press the **ENTER** button. Use the **DOWN** and **UP** button to select the curve you need. Once selected, press the **ENTER** button to setup or exit menu mode without any change after 8 seconds. Back to the functions without any change press the **MENU** button again.

**Dimmer mode 1**

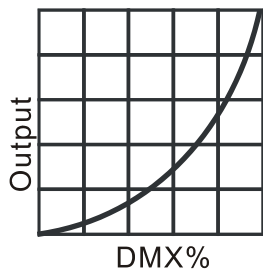
**Dimmer mode 2**

**Dimmer mode 3**

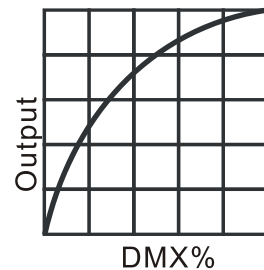
**Dimmer mode 4**



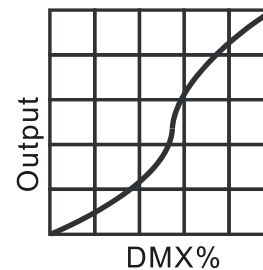
**Optically Linear**



**Square Law**



**Inverse-Square Law**



**S-Curve**

Mode 1(Optically Linear): The increase in light intensity appears to be linear as DMX value is increased.

Mode 2(Square Law): Light intensity control is finer at low levels and coarser at high levels.

Mode 3(Inverse Square Law): Light intensity control is coarser at low levels and finer at high levels.

Mode 4(S-cure): Light intensity control is finer at low levels and high levels and coarser at medium levels.

### **Dimmer Speed**

Select the **Dimmer Speed**, press the **ENTER** button. Use the **DOWN** and **UP** button to select Fast or Smooth. Once selected, press the **ENTER** button to setup or exit menu mode without any change after 8 seconds. Back to the functions without any change press the **MENU** button again.

### **White Balance**

Select the **White Balance**, press the **ENTER** button to confirm. It can be adjusted with the whole fixture, or it can be adjusted independently for each block. Use the **UP** and **DOWN** button to select **Red/Green/Blu/White**, press the **ENTER** button to store, then use the **UP** and **DOWN** button to adjust the value from (125~255), press the **ENTER** button to confirm. (DMX signal will be the first priority under Manual Mode.) Once selected, press the **ENTER** button to store. Press the **MENU** button back to the last menu without any change or idling 8 seconds to exit menu mode.

### **Language**

Select the **Language**, press the **ENTER** button to confirm. Use the **UP** and **DOWN** button to adjust English or Chinese. Once selected, press the **ENTER** button to store. Press the **MENU** button back to the last menu without any change or idling 8 seconds to exit menu mode.

## Manual Test

Select the **Manual Mode**, press the **ENTER** button to confirm. Use the **UP** and **DOWN** button to adjust the value for **Red,Green,Blue,White, Intensity, Durate** or **Rate** from 0~255, press the **ENTER** button to confirm. (DMX signal will be the first priority under Manual Mode.) Once selected, press the **ENTER** button to store. Press the **MENU** button back to the last menu without any change or idling 8 seconds to exit menu mode.

## Auto Test

Select **Auto Test**, press the **ENTER** button to confirm. The unit will test by itself automatic. Press the **MENU** button back to the last menu or idling 8 seconds to exit menu mode.

## Temperature

Select **Temp.**, press the **ENTER** button to confirm. Display will show the temperature of the fixture. Press the **MENU** button back to the last menu or idling 8 seconds to exit menu mode.

## Fixture Hours

Select **Fixture Hours**, press the **ENTER** button to confirm. Display will show the number of working hours of the unit. Press the **MENU** button back to the last menu or idling 8 seconds to exit menu mode.

## Software Version

Select **Software Version** , press the **ENTER** button to confirm. The display will show the version of software of the unit. Press the **MENU** button back to the last menu or idling 8 seconds to exit menu mode.

## Factory Reset

Select **Factory Reset**, press the **ENTER** button to confirm. Use the **UP** and **DOWN** button to adjust the **NO/Yes**. Select **Yes**, fixture will resume factory settings. Press the **MENU** button back to the last menu or idling 8 seconds to exit menu mode.

**Fault report :** 1、 Fan.Error      2、 Temp.Error

<b>RDM function table</b>	
DMX START	0-512
MANUFACTURER	ACME
DEVICE MODEL DESCRIPTION	THUNDERSTRUCK
DMX PERSONALITY	DMX 4/4Channel( 8 bit)  DMX 8/8Channel (16 bit)  DMX 8/8 Channel  DMX 52/52 Channel  DMX12/1 Pixel  DMX16/2V Pixel  DMX16/2H Pixel  DMX20/3 Pixel  DMX24/4 Pixel  DMX32/6V Pixel  DMX32/6H Pixel  DMX56/12 Pixel
DEVICE LABEL	THUNDERSTRUCK
IDENTIFY DEVICE	Off/On
DEVICE HOURS	
SOFTWARE	
RESET DEVICE	Warm/Cold

## **5. How to control the unit**

### 1. By DMX controller;

No need to turn the unit off when you change the DMX address, as new DMX address setting will be affected at once. Turn on the unit, under the DMX signal , the LED will display the saved channel address (001-512) .

## 6. DMX512 configuration

### Channel Mode:

4 CHANNEL(8 Bit)

CHANNEL	VALUE	FUNCTION
1	0-255	(R)Strobe intensity 0 →100%
2	0-255	(G)Strobe intensity 0 →100%
3	0-255	(B)Strobe intensity 0 →100%
4	0-255	(W)Strobe intensity 0 →100%

8 CHANNEL(16 Bit)

CHANNEL	VALUE	FUNCTION
1	0-255	(R)Strobe intensity 0 →100%
2	0-255	(R)Dimmer fine 0 →100%
3	0-255	(G)Flash intensity 0 →100%
4	0-255	(G)Dimmer fine 0 →100%
5	0-255	(B)Flash intensity 0 →100%
6	0-255	(B)Dimmer fine 0 →100%
7	0-255	(W)Strobe intensity 0 →100%
8	0-255	(W)Dimmer fine 0 →100%

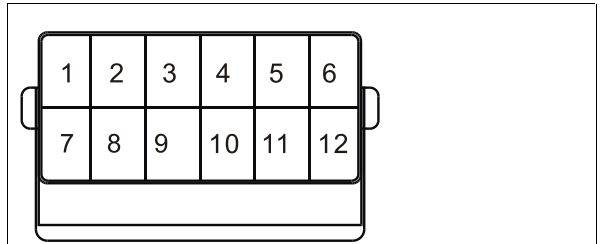
8 CHANNEL

CHANNEL	DMX VALUE	FUNCTION
1	0-255	(R)Strobe intensity 0 →100%
2	0-255	(G)Strobe intensity 0 →100%
3	0-255	(B)Strobe intensity 0 →100%
4	0-255	(W)Strobe intensity 0 →100%
5	0-255	(RGBW)Strobe intensity 0 →100%
6	0-255	Strobe duration 0 →100%
7	0-6	No flash
	7-255	Strobe rate ♪ ♪ ♪
8	0-5	No effect
	6-50	Ramp up
	51-100	Ramp down
	101-150	Ramp up-down
	151-200	Lightning
	201-255	Random

9 CHANNEL

CHANNEL	DMX VALUE	FUNCTION	
1	0-255	(R)Strobe intensity 0 →100%	
2	0-255	(G)Strobe intensity 0 →100%	
3	0-255	(B)Strobe intensity 0 →100%	
4	0-255	(W)Strobe intensity 0 →100%	
5	0-255	(RGBW)Strobe intensity0 →100%	
6	0-5	Open	
	6-127	Strobe rate 4 44 444	
	128-130	Open	
	131-136	Ramp up Slow speed	
	137-146	Ramp up Intermediate speed	
	147-154	Ramp up Fast speed	
	155-163	Ramp down Slow speed	
	164-172	Ramp down Intermediate speed	
	173-181	Ramp down Fast speed	
	182-190	Ramp up-down Slow speed	
	191-199	Ramp up-down Intermediate speed	
	200-208	Ramp up-down Fast speed	
	209-217	Lightning Slow speed	
	218-226	Lightning Intermediate speed	
	227-235	Lightning Fast speed	
	236-241	Random Slow speed	
	242-247	Random Intermediate speed	
	248-255	Random Fast speed	
	7	0-5	No effect
		6-11	Color1
		12-17	Color2
		18-23	Color3
		24-29	Color4
		30-35	Color5
36-41		Color6	
42-47		Color7	
48-53		Color8	
54-59		Color9	
60-65		Color10	
66-71		Color11	
72-77		Color12	
78-83		Color13	
84-89		Color14	
90-95		Color15	
96-101		Color16	
102-107		Color17	
108-113		Color18	
114-119		Color19	
120-125		Color20	
126-131		Color21	
132-137		Color22	
138-143		Color23	
144-149		Color24	
150-155		Color25	
156-161		Color26	
162-167		Color27	
168-173		Color28	
174-179		Color29	
180-185		Color30	
186-191		Color31	
192-197		Color32	
198-202		Red → White whole area Slow speed	
203-207		Red → White whole area Intermediate speed	
208-211		Red → White whole area Fast speed	
212-216		Red → White 6 areas Slow speed	
217-221		Red → White 6 areas Intermediate speed	
222-225		Red → White 6 areas Fast speed	
226-230		7 colors Random whole area Slow speed	
231-235		7 colors Random whole area Intermediate speed	
236-239		7 colors Random whole area Fast speed	
240-244		7 colors Random 6 areas Slow speed	
245-249		7 colors Random 6 areas Intermediate speed	
250-255		7 colors Random 6 areas Fast speed	
8		0-21	No Effect
		22-30	Effect 1
		31-39	Effect 2
		40-48	Effect 3
		49-57	Effect 4
		58-66	Effect 5
		67-75	Effect 6
		76-84	Effect 7
		85-93	Effect 8
		94-102	Effect 9
	103-111	Effect 10	
	112-120	Effect 11	
	121-129	Effect 12	
	130-138	Effect 13	
	139-147	Effect 14	
	148-156	Effect 15	
	157-165	Effect 16	
	166-174	Effect 17	
	175-183	Effect 18	
	184-192	Effect 19	
	193-201	Effect 20	
	202-210	Effect 21	
	211-219	Effect 22	
	220-228	Effect 23	
	229-237	Effect 24	
	238-246	Effect 25	
	247-255	Effect 26	
	9	0-127	Effect speed Slow to Fast Forward
		128-255	Effect speed Slow to Fast Reverse

52 CHANNEL

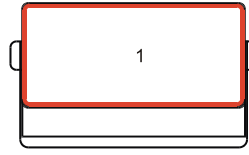


CHANNEL	DMX VALUE	FUNCTION
1	0-255	R DIMMER 0 → 100%
2	0-255	G DIMMER 0 → 100%
3	0-255	B DIMMER 0 → 100%
4	0-255	W DIMMER 0 → 100%
5	0-255	R DIMMER 0 → 100%
6	0-255	G DIMMER 0 → 100%
7	0-255	B DIMMER 0 → 100%
8	0-255	W DIMMER 0 → 100%
9	0-255	R DIMMER 0 → 100%
10	0-255	G DIMMER 0 → 100%
11	0-255	B DIMMER 0 → 100%
12	0-255	W DIMMER 0 → 100%
13	0-255	R DIMMER 0 → 100%
14	0-255	G DIMMER 0 → 100%
15	0-255	B DIMMER 0 → 100%
16	0-255	W DIMMER 0 → 100%
17	0-255	R DIMMER 0 → 100%
18	0-255	G DIMMER 0 → 100%
19	0-255	B DIMMER 0 → 100%
20	0-255	W DIMMER 0 → 100%
21	0-255	R DIMMER 0 → 100%
22	0-255	G DIMMER 0 → 100%
23	0-255	B DIMMER 0 → 100%
24	0-255	W DIMMER 0 → 100%
25	0-255	R DIMMER 0 → 100%
26	0-255	G DIMMER 0 → 100%
27	0-255	B DIMMER 0 → 100%
28	0-255	W DIMMER 0 → 100%
29	0-255	R DIMMER 0 → 100%
30	0-255	G DIMMER 0 → 100%
31	0-255	B DIMMER 0 → 100%
32	0-255	W DIMMER 0 → 100%
33	0-255	R DIMMER 0 → 100%
34	0-255	G DIMMER 0 → 100%
35	0-255	B DIMMER 0 → 100%
36	0-255	W DIMMER 0 → 100%
37	0-255	R DIMMER 0 → 100%
38	0-255	G DIMMER 0 → 100%
39	0-255	B DIMMER 0 → 100%
40	0-255	W DIMMER 0 → 100%
41	0-255	R DIMMER 0 → 100%
42	0-255	G DIMMER 0 → 100%
43	0-255	B DIMMER 0 → 100%
44	0-255	W DIMMER 0 → 100%
45	0-255	R DIMMER 0 → 100%
46	0-255	G DIMMER 0 → 100%
47	0-255	B DIMMER 0 → 100%
48	0-255	W DIMMER 0 → 100%
49	0-255	TOTAL DIMMER 0 → 100%
50	0-255	Strobe duration 0 →100%
51	0-6	Black out
	7-255	Strobe rate 4 44 444
52	0-5	No effect
	6-50	Ramp up
	051-100	Ramp down
	101-150	Ramp up-down
	151-200	Lightning
	201-255	Random

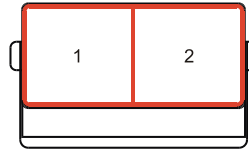
PIEXL DMX CHANNEL

PIXEL MODE	CHANNEL	DMX VALUE	FUNCTION	
1 pixel	1	0 - 255	Red Strobe Intensity 0 → 100%	
	2	0 - 255	Green Strobe Intensity 0 → 100%	
	3	0 - 255	Blue Strobe Intensity 0 → 100%	
	4	0 - 255	White Strobe Intensity 0 → 100%	
	5	0 - 255	Strobe Intensity 0 → 100%	
	6	0 - 254	0 - 650ms (50Hz AC)	Strobe Duration
		255	HYPER	
	7	0 - 5	No flash	Strobe Rate
		6 - 255	0.5 - 25Hz (50Hz AC); 0.6 - 30Hz (60Hz AC)	
	8			Strobe FX
		0 - 5	No effect	
		6 - 42	Ramp up	
		43 - 85	Ramp down	
		86 - 128	Ramp up - down	
		129 - 171	Random	
		172 - 214	Lighting	
		215 - 240	Spikes	
		241 - 245	Burst (use Rate at full)	
246 - 250		"Meltdown" Random Pixels w/ Solid Background		
251 - 255	"Meltdown" Random Pixels w/ Burst Background			
9	0 - 255	1 pix Red intensity 0 → 100%		
10	0 - 255	1 pix Green intensity 0 → 100%		
11	0 - 255	1 pix Blue intensity 0 → 100%		
12	0 - 255	1 pix White intensity 0 → 100%		
2 pixel V 2 pixel H	13	0 - 255	2 pix Red intensity 0 → 100%	
	14	0 - 255	2 pix Green intensity 0 → 100%	
3 pixel	15	0 - 255	2 pix Blue intensity 0 → 100%	
	16	0 - 255	2 pix White intensity 0 → 100%	
4 pixel	17	0 - 255	3 pix Red intensity 0 → 100%	
	18	0 - 255	3 pix Green intensity 0 → 100%	
6 pixel V 6 pixel H	19	0 - 255	3 pix Blue intensity 0 → 100%	
	20	0 - 255	3 pix White intensity 0 → 100%	
12 pixel	21	0 - 255	4 pix Red intensity 0 → 100%	
	22	0 - 255	4 pix Green intensity 0 → 100%	
6 pixel V 6 pixel H	23	0 - 255	4 pix Blue intensity 0 → 100%	
	24	0 - 255	4 pix White intensity 0 → 100%	
12 pixel	25	0 - 255	5 pix Red intensity 0 → 100%	
	26	0 - 255	5 pix Green intensity 0 → 100%	
	27	0 - 255	5 pix Blue intensity 0 → 100%	
	28	0 - 255	5 pix White intensity 0 → 100%	
	29	0 - 255	6 pix Red intensity 0 → 100%	
	30	0 - 255	6 pix Green intensity 0 → 100%	
	31	0 - 255	6 pix Blue intensity 0 → 100%	
	32	0 - 255	6 pix White intensity 0 → 100%	
	33	0 - 255	7 pix Red intensity 0 → 100%	
	34	0 - 255	7 pix Green intensity 0 → 100%	
	35	0 - 255	7 pix Blue intensity 0 → 100%	
	36	0 - 255	7 pix White intensity 0 → 100%	
37	0 - 255	8 pix Red intensity 0 → 100%		
38	0 - 255	8 pix Green intensity 0 → 100%		
39	0 - 255	8 pix Blue intensity 0 → 100%		
40	0 - 255	8 pix White intensity 0 → 100%		
41	0 - 255	9 pix Red intensity 0 → 100%		
42	0 - 255	9 pix Green intensity 0 → 100%		
43	0 - 255	9 pix Blue intensity 0 → 100%		
44	0 - 255	9 pix White intensity 0 → 100%		
45	0 - 255	10 pix Red intensity 0 → 100%		
46	0 - 255	10 pix Green intensity 0 → 100%		
47	0 - 255	10 pix Blue intensity 0 → 100%		
48	0 - 255	10 pix White intensity 0 → 100%		
49	0 - 255	11 pix Red intensity 0 → 100%		
50	0 - 255	11 pix Green intensity 0 → 100%		
51	0 - 255	11 pix Blue intensity 0 → 100%		
52	0 - 255	11 pix White intensity 0 → 100%		
53	0 - 255	12 pix Red intensity 0 → 100%		
54	0 - 255	12 pix Green intensity 0 → 100%		
55	0 - 255	12 pix Blue intensity 0 → 100%		
56	0 - 255	12 pix White intensity 0 → 100%		

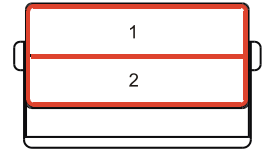
1 pixel



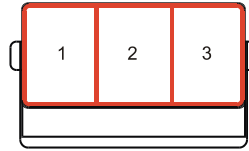
2 pixel V



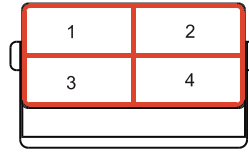
2 pixel H



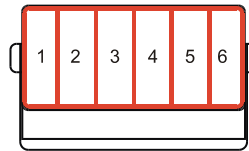
3 pixel



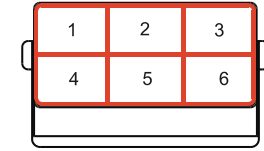
4 pixel



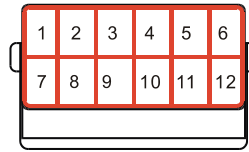
6 pixel V



6 pixel H



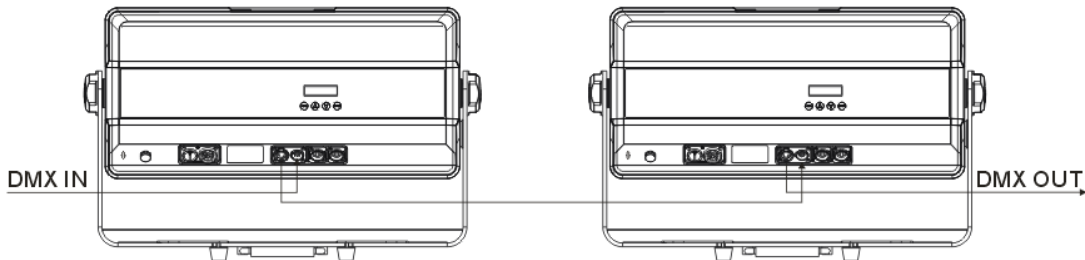
12 pixel





## 7. DMX512 Connection

### Mode connection:



1. Connect the fixture together in a “daisy chain” by XLR plug cable from the output of the fixture to the input of the next fixture. The cable cannot be branched or split to a “Y” cable. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system
2. The DMX output and input connectors are pass-through to maintain the DMX circuit when one of the units’ power is disconnected.
3. At last fixture, the DMX cable has to be terminated with a terminator to reduce signal errors. Solder a 120-ohm 1/4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.
4. Each lighting fixture needs to have an address set to receive the data sent by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1).
5. 3/5 pin XLR connectors:  
3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)

## 8. Troubleshooting

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

### A. The fixture does not work, no light

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

## **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 fixture 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.

## **9. Fixture Cleaning**

The cleaning of internal 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 fixture'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.



**Innovation, Quality, Performance**