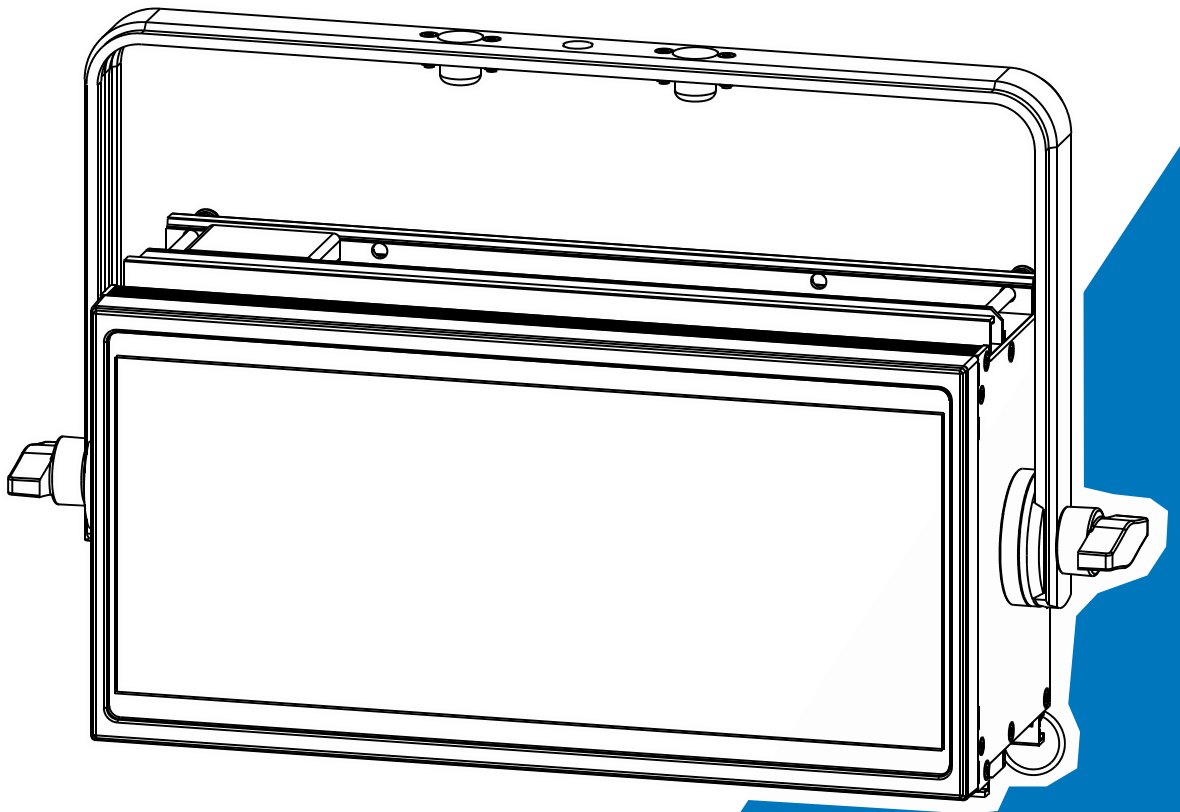


Acme[®]

THUNDER



User Manual

Please read the instruction carefully before use

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1. Safety Instruction



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

WARNING

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

Important:

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

- Unpack and check carefully that there is no transportation damage before using the unit.
- This product is suitable for wet locations. Do not immerse in water.
- DO install and operate by qualified operator.
- DO NOT allow children to operate the fixture.
- Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.
- 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, otherwise the unit will be overheated.
- 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.
- Minimum ambient temperature TA: 0°C. Maximum ambient temperature TA: 40°C.
- DO NOT connect the device to any dimmer pack.
- Make sure there are no flammable materials close to the unit while operating to avoid fire hazard.
- Examine the power wires carefully; replace them immediately if there is any damage.
- Unit's surface temperature may reach up to 75°C. DO NOT touch the housing bare-handed during its operation.
- Avoid any inflammable liquids, water or metal objects entering the unit. Once it happens, cut

off the mains power immediately.

- DO NOT operate in dirty or dusty environment, do clean fixtures regularly.
- DO NOT touch any wire during operation as there might be a hazard of electric shock.
- Avoid power wires together twist other cables.
- The minimum distance between light output and the illuminated surface must be more than 0.5 meters.
- In the event of serious operating problem, stop using the unit immediately.
- Never turn on and off the unit time after time.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.
- DO NOT open the unit as there are no user serviceable parts inside.
- 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 if needed.
- Disconnect the mains power if the fixture is has not been used for a long time.
- DO use the original packing materials before transporting it again.
- DO NOT look directly at the light while the LED is on.
- DO NOT start on the unit without LED enclosure or when housing is damaged.

2. Technical Specifications

Power Voltage:

AC 100~240V, 50/60Hz

Power Consumption:

515W

Light Source:

1188x0.8W RGBW LED

Beam Angle:

110°

Spot Angle:

152°

Dimmer/Strobe:

Smooth dimming from 0-100%; outstanding strobe effect with variable speed

Control:

DMX Channel: 4(8 bit)/8(16 bit)/8/9(16 bit)/16 Channels

Control Mode: DMX512, RDM

Firmware Upgrade via DMX link

Construction:

Display: OLED display

Data In/Out: 3-pin IP XLR (5-pin IP XLR is optional)

Power In/Out: Waterproof Power Connector in/out

Protection Rating: IPX4

Features:

Variable CTO

High brightness, smooth color mixing, powerful wash effect

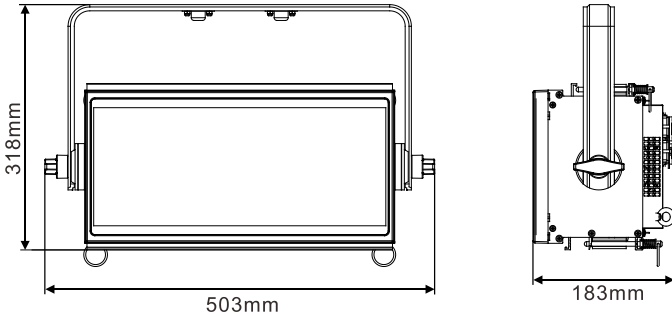
3 x led zones can be controlled individually

Equipped with a special patented plug structure, can be easily combined with each other or with other THUNDER series

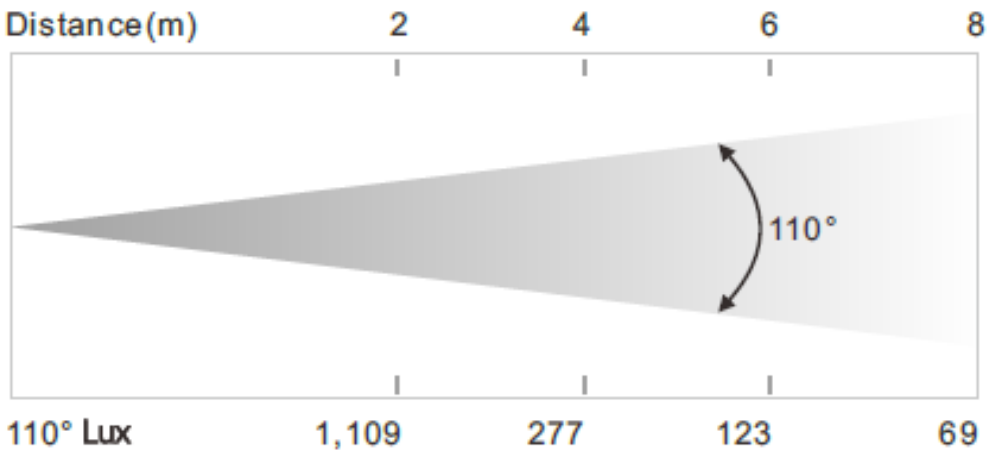
Dimension/Weight:

503x183x318mm, 10.5kgs

19.8"x7.2"x12.5" in, 23.1lbs



Photometric Diagram:

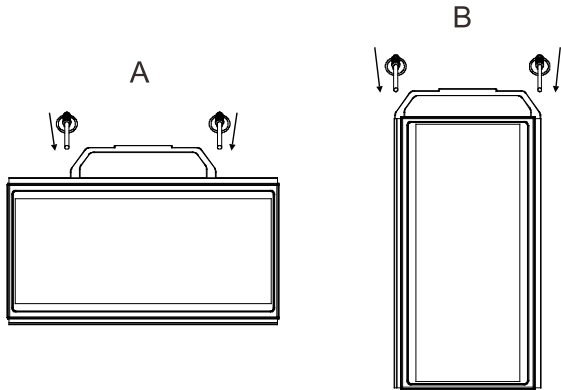


3. Installation and Connection

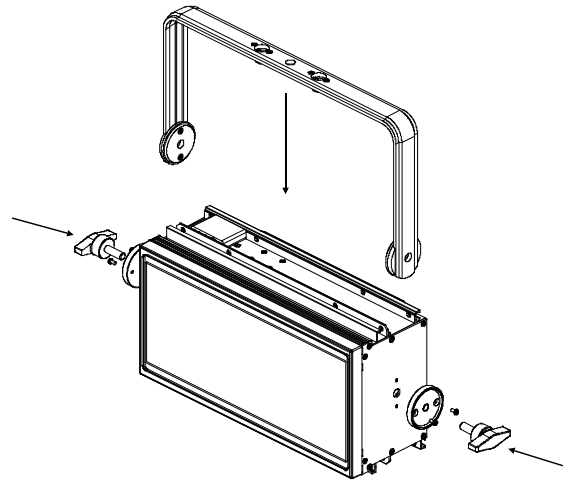
The unit should be mounted via its screw holes on the bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. Always ensure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the unit's weight. 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 installation height of the equipment is between 0 and 30 meters.

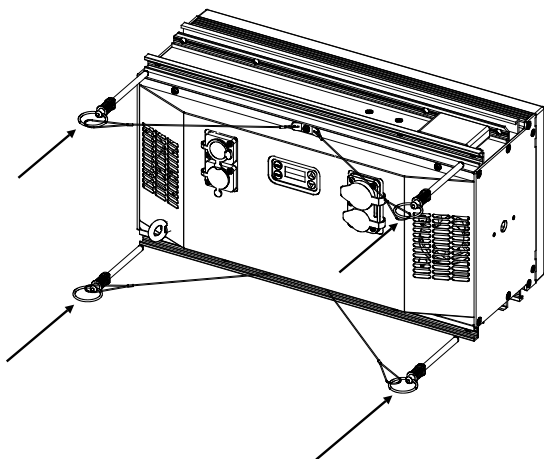
Installation mode of the hanging bracket:



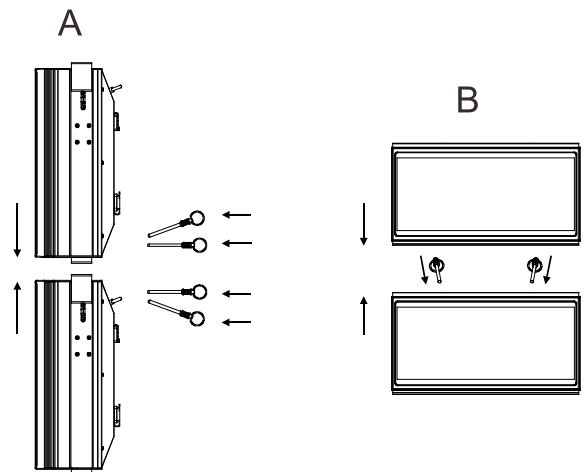
Installation mode of a single angle-adjustable equipment's hanging bracket:



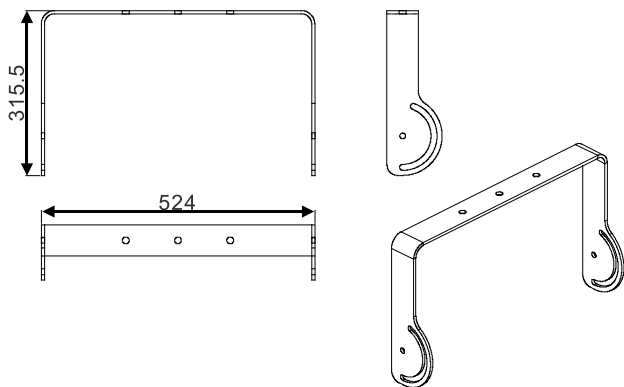
Installation mode of the bolt:

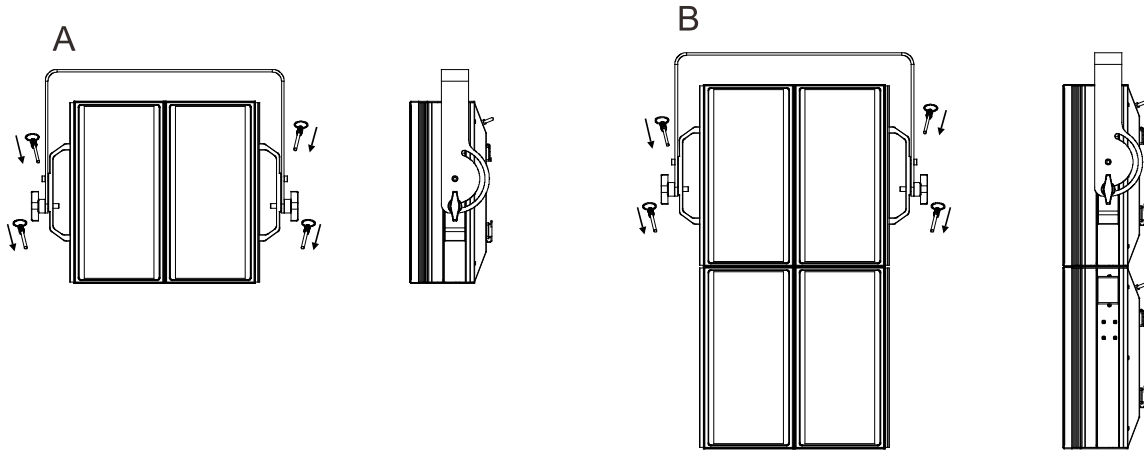


Assembly method between two equipment:



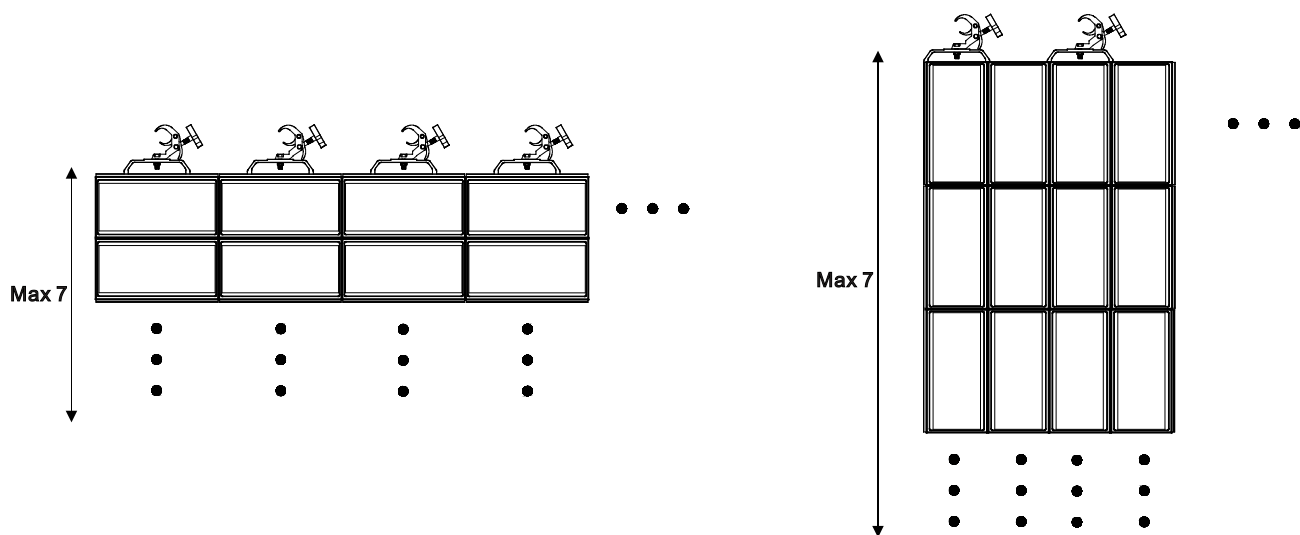
Installation mode of the big hanging bracket (operational):



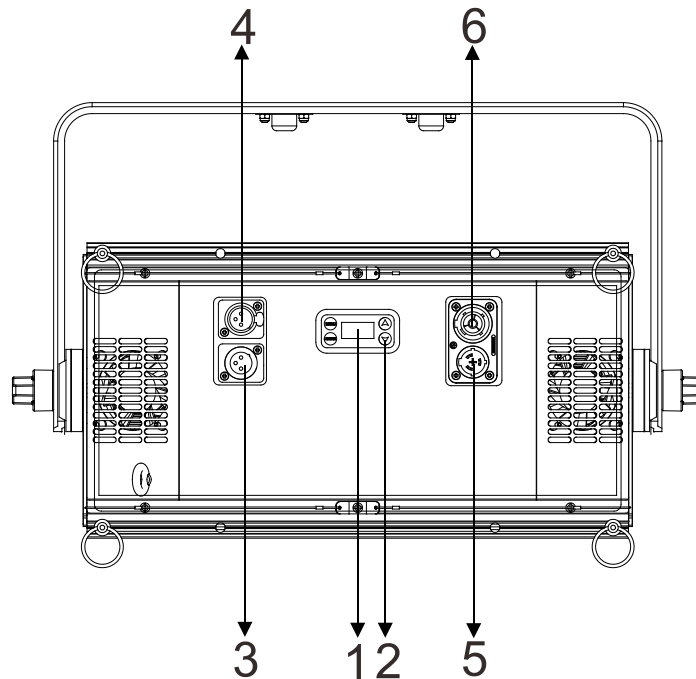


Assembly method between multiple equipment:

Warning: no more than 7 equipment can be spliced vertically



4. Control Panel



1. Display: To show the various menus and the selected function

2. Button:

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

3. DMX IN:

For DMX512 operation, use 3-pin XLR cable to link the units together (5-pin XLR is optional)

4. DMX OUT:

For DMX512 operation, use 3-pin XLR cable to link the next unit (5-pin XLR is optional)

5. POWER IN: Used to connect to supply power

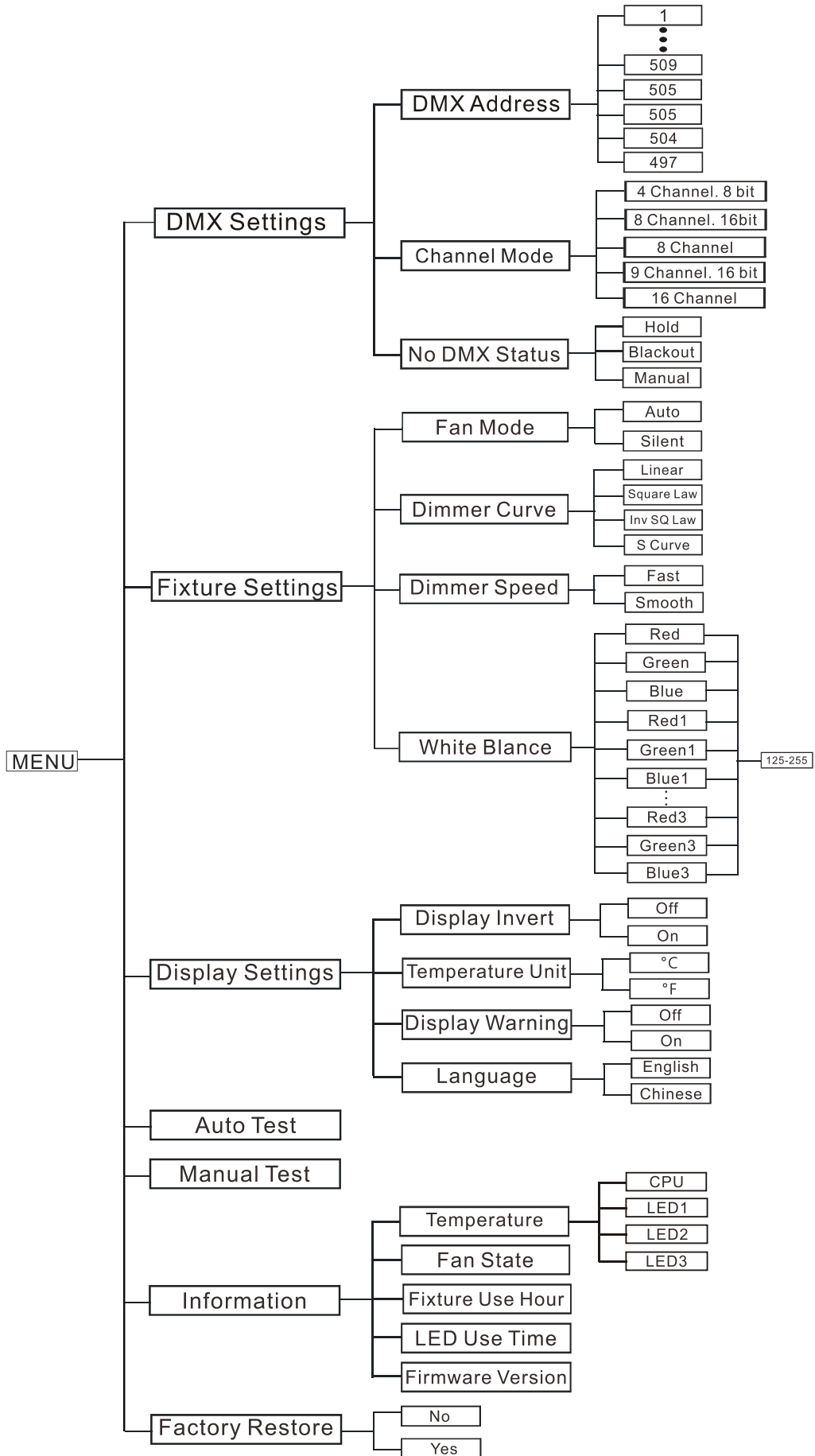
6. POWER OUT: Used to connect to the next fixture

5. How To Set The Unit

5.1 Main Function

Turn on the unit, press the MENU button into menu mode, and press the UP/DOWN button until the required function is shown on the monitor. Select the function by the ENTER button. Use the UP/DOWN button to choose the submenu, press the ENTER button to store and automatically return to the last menu. Press the MENU button or let the unit idle 30 seconds to exit menu mode.

The main functions are shown below:



DMX Settings

To select **DMX Settings**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **DMX Address, Channel Mode** or **No DMX Status**.

DMX Address

To select **DMX Address**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to adjust the address from **001** to **509/505/505/504/497**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Channel Mode

To select **Channel Mode**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **4 Channel 8 bit, 8 Channel 16 bit, 8 Channel, 9 Channel 16 bit** or **16 Channel**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

No DMX Status

To select **No DMX Status**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Hold**(fixture continues to obey the last command it received Via DMX if DMX signal stops), **Blackout**(fixture blacks out if DMX signal stops) or **Manual**(the fixture will automatically read the DMX value in the “Manual Test” menu for operation after selecting this mode), press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Fixture Settings

To select **Fixture Settings**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Fan Mode, Dimmer Curve, Dimmer Speed** or **White Balance**.

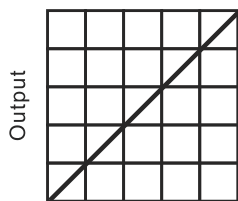
Fan Mode

To select **Fan Mode**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Auto** or **Silent**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Dimmer Curve

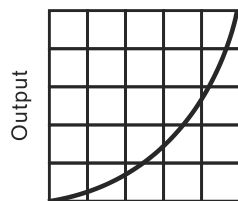
To select **Dimmer Curve**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Linear**, **Square Law**, **Inv SQ Law** or **S Curve**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Dimmer Modes



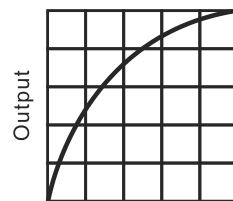
DMX %

Optically Linear



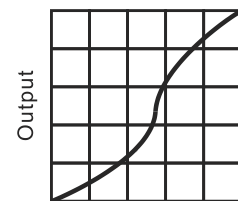
DMX %

Square Law



DMX %

Inverse Square Law



DMX %

S-curve

Optically Linear: The increase in light intensity appears to be linear as DMX value is increased

Square Law: Light intensity control is finer at low levels and coarser at high levels

Inverse Square Law: Light intensity control is coarser at low levels and finer at high levels

S-Curve: Light intensity control is finer at low levels and high levels and coarser at medium levels

Dimmer Speed

To select **Dimmer Speed**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Fast**(Fast Speed) or **Smooth**(Slow Speed), press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

White Balance

To select **White Balance**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Red**, **Green**, **Blue**, **Red1**, **Green1**, **Blue1**, **Red2**, **Green2**, **Blue2**, **Red3**, **Green3** or **Blue3**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Display Settings

To select **Display Settings**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Display Invert**, **Temperature Unit** or **Display Warning**.

Display Invert

Select **Display Invert**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Off**(normal display) or **On**(invert display), press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Temperature Unit

Select **Temperature Unit**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select °C or °F, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Display Warning

Select **Display Warning**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Off** or **On**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Auto Test

Select **Auto Test**, press the **ENTER** button to confirm, the unit will run built-in programs to automatically test. Press the **MENU** button back to the last menu or exit menu mode after auto test.

Manual Test

Select **Manual Test**, press the **ENTER** button to confirm, the present channel will show on the display, use the **UP/DOWN** button to select channels, press the **ENTER** button to confirm, then use the **UP/DOWN** button to adjust the value, press the **ENTER** button to store, the fixture will run as the channel value indicates. Press the **MENU** button back to the last menu or exit menu mode idling 30 seconds.

(The fixture will return to the previous DMX state after exiting Manual Test menu and the Manual Test parameters will be automatically saved after power off and restart.)

Information

To select **Information**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Temperature, Fan State, Fixture Use Hour, LED Use Time** or **Firmware Version**.

Temperature

Select **Temperature**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **CPU, LED1, LED2** or **LED3**, fixture temperature will show on the display, press the **MENU** button to exit.

Fan State

Select **Fan State**, press the **ENTER** button to confirm, fixture fan state will show on the display, press the **MENU** button to exit.

Fixture Use Hour

Select **Fixture Use Hour**, press the **ENTER** button to confirm, fixture use hour will show on the display, press the **MENU** button to exit.

LED Use Time

Select **LED Use Time**, press the **ENTER** button to confirm, LED use time will show on the display, press the **MENU** button to exit.

Firmware Version

Select **Firmware Version**, press the **ENTER** button to confirm, firmware version will show on the display, press the **MENU** button to exit.

Factory Restore

To select **Factory Restore**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **No**(normal) or **Yes**(the fixture will reset to factory restore), press **ENTER** button to store. Press the **MENU** button to exit.

RDM FUNCTIONS

Select the MANUFACTURER menu to display the manufacturer of the fixture.

Select the SOFTWARE VERSION menu and the program version number of the fixture will be displayed.

Select the DMX START ADDRESS menu to change the DMX 512 address (001-512).

Select the DEVICE MODEL DESCRIPTION menu to display the model of the fixture.

Select the DEVICE LABEL menu to change the model of the fixture.

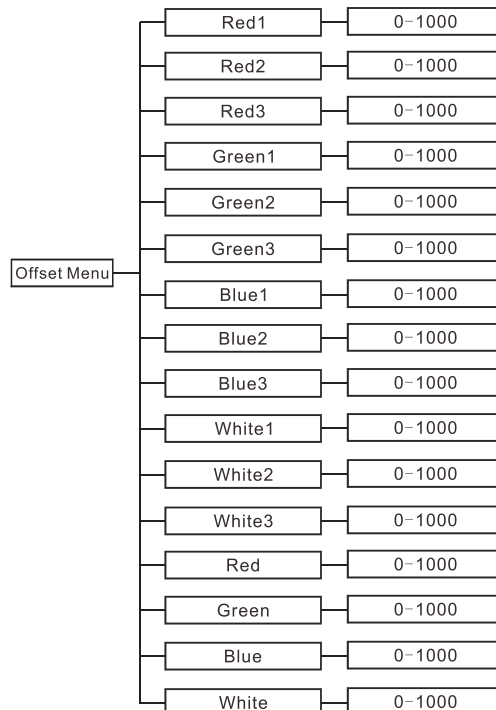
Select the DMX PERSONALITY menu to set the channel mode of the fixture (4/8/8/9/16 channel).

Select the DMX PERSONALITY DESCRIPTION menu to display the current channel mode of the fixture.

Select the DEVICE HOURS menu to display the running time of the fixture.

5.2 Home Position Adjustment

Press the MENU button into menu mode, then press the ENTER button for about 3 seconds into offset mode to adjust the home position. Select the function by the ENTER button. Use the UP/DOWN button to choose the submenu, press the ENTER button to store and automatically return to the last menu. Press MENU button to exit.



Red1

Enter offset mode, Select **Red1**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Red2

Enter offset mode, Select **Red2**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Red3

Enter offset mode, Select **Red3**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Green1

Enter offset mode, Select **Green1**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Green2

Enter offset mode, Select **Green2**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Green3

Enter offset mode, Select **Green3**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Blue1

Enter offset mode, Select **Blue1**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Blue2

Enter offset mode, Select **Blue2**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Blue3

Enter offset mode, Select **Blue3**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

White1

Enter offset mode, Select **White1**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

White2

Enter offset mode, Select **White2**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

White3

Enter offset mode, Select **White3**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Red

Enter offset mode, Select **Red**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Green

Enter offset mode, Select **Green**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

Blue

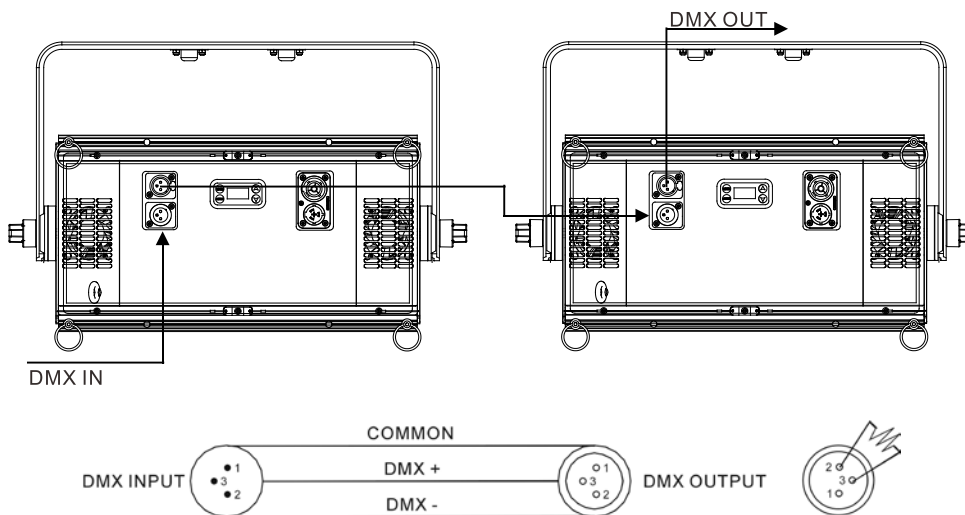
Enter offset mode, Select **Blue**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

White

Enter offset mode, Select **White**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 1000, press the **ENTER** button to store. Press the **MENU** button to exit.

6. Control By Universal DMX Controller

6.1 DMX512 Connection



1. At last unit, the DMX cable has to be terminated with a terminator. 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 unit.
2. Connect the unit together in a “daisy chain” by XLR plug cable from the output of the unit to the input of the next unit. The cable cannot be branched or split to a “Y” cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.
3. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units’ power is disconnected.

4. Each lighting unit needs to have a DMX address to receive the data by the controller. The address number is between 1-512.
5. The end of the DMX 512 system should be terminated to reduce signal errors.
6. 3 pin XLR connectors are more popular than 5 pins XLR.
 - 3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)
 - 5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+), Pin4, Pin5 not used.

6.2 Address Setting

If you use a universal DMX controller to control the units, you have to set DMX address from 1 to 512 so that the units can receive DMX signal.

Press the MENU button to enter menu mode, select DMX Settings, press the ENTER button to confirm, use the UP/DOWN button to select DMX Address, press the ENTER button to confirm, the present address will blinking the display, use the UP/DOWN button to adjust the address from 001 to 512, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Please refer to the following diagram to address your DMX512 channel for the first 4 units.

Channel mode	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address
4 channels	1	5	9	13
8 channels	1	9	17	25
8 channels	1	9	17	25
9 channels	1	10	19	28
16 channels	1	17	33	59

6.3 DMX512 Configuration

Please refer to below configurations to control the fixtures

Attentions:

1. The unit will maintain the last condition until reset if you cut-off the DMX signal.
2. For the channel Function, keep the value for about 3 seconds, then the corresponding function will take into effect.

4 Channels(8 bit) (Mode 1):

CHANNEL	DMX VALUE	FUNCTION
1	000-255	RED 0%→100%
2	000-255	GREEN 0%→100%
3	000-255	BLUE 0%→100%
4	000-255	WHITE 0%→100%

8 Channels(16 bit) (Mode 2):

CHANNEL	DMX VALUE	FUNCTION
1	000-255	RED 0%→100%
2	000-255	RED FINE
3	000-255	GREEN 0%→100%
4	000-255	GREEN FINE
5	000-255	BLUE 0%→100%
6	000-255	BLUE FINE
7	000-255	WHITE 0%→100%
8	000-255	WHITE FINE

8 Channels (Mode 3):

CHANNEL	DMX VALUE	FUNCTION
1	000-255	RED 0%→100%
2	000-255	GREEN 0%→100%
3	000-255	BLUE 0%→100%
4	000-255	WHITE 0%→100%
5	000-255	(RGBW) DIMMER INTENSITY 0%→100%
6	000-255	STROBE DURATION 0%→100%
7	000-006	Blackout
	007-255	Strobe Rate
8	000-005	No Effect
	006-050	Ramp Up
	051-100	Ramp Down
	101-150	Ramp Up→Down
	151-200	Lightning
	201-255	Random

9 Channels(16 bit) (Mode 4):

CHANNEL	DMX VALUE	FUNCTION
1	000-255	RED 0%→100%
2	000-255	RED FINE
3	000-255	GREEN 0%→100%
4	000-255	GREEN FINE
5	000-255	BLUE 0%→100%
6	000-255	BLUE FINE

7	000-255	WHITE 0%→100%
8	000-255	WHITE FINE
9	000 001-004 005-009 010-013 014-018 019-022 023-027 028-031 032-036 037-040 041-045 046-049 050-054 055-058 059-063 064-067 068-072 073-076 077-081 082-085 086-090 091-094 095-099 100-103 104-108 109-112 113-117 118-121 122-126 127-130 131-135 136-139 140-144 145-148 149-153 154-157 158-162 163-166 167-171	LINEAR CTO(8000K-2500K) Null 8000K 7900K 7800K 7700K 7600K 7500K 7400K 7300K 7200K 7100K 7000K 6900K 6800K 6700K 6600K 6500K 6400K 6300K 6200K 6100K 6000K 5900K 5800K 5700K 5600K 5500K 5400K 5300K 5200K 5100K 5000K 4900K 4800K 4700K 4600K 4500K 4400K 4300K

	172-175	4200K
	176-180	4100K
	181-184	4000K
	185-189	3900K
	190-193	3800K
	194-198	3700K
	199-202	3600K
	203-207	3500K
	208-211	3400K
	212-216	3300K
	217-220	3200K
	221-225	3100K
	226-229	3000K
	230-234	2900K
	235-238	2800K
	239-243	2700K
	244-247	2600K
	248-255	2500K

16 Channels (Mode 5):

CHANNEL	DMX VALUE	FUNCTION
1	000-255	RED1 0%→100%
2	000-255	GREEN1 0%→100%
3	000-255	BLUE1 0%→100%
4	000-255	WHITE1 0%→100%
5	000-255	RED2 0%→100%
6	000-255	GREEN2 0%→100%
7	000-255	BLUE2 0%→100%
8	000-255	WHITE2 0%→100%
9	000-255	RED3 0%→100%

10	000-255	GREEN3 0%→100%
11	000-255	BLUE3 0%→100%
12	000-255	WHITE3 0%→100%
13	000-255	(RGBW) DIMMER INTENSITY 0%→100%
14	000-255	STROBE DURATION 0%→100%
15	000-006	Blackout
	007-255	Strobe Rate
16	000-005	No Effect
	006-050	Ramp Up
	051-100	Ramp Down
	101-150	Ramp Up→Down
	151-200	Lightning
	201-255	Random

7. Error Information

1. CPU-B Error

Check whether the 485 (DATA) leads on the PCB board are installed in place or disconnected.

Check whether the 485 (DATA) lead is disconnected.

Check whether the relevant signal circuit 485 (DATA) on the PCB board is damaged.

2. Fan3 can't start

Check if the fan is not running.

Check if the fan leads are installed in place or disconnected.

Check if the fan is damaged.

Check if there are other interference items in the fan operating range.

3. Fan3 can't stop

Check if the fan circuit on the motherboard breaks down.

Check if the component is damaged.

4. Fan3 speed too slow

Check if the fan is out of order.

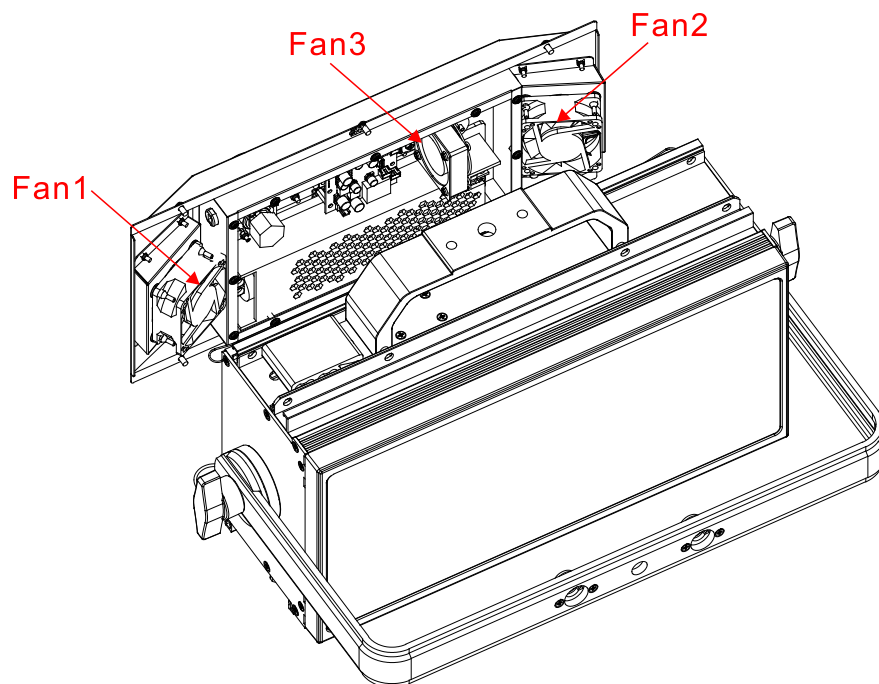
Check if there are other interference items in the fan operating range.

5. Fan3 speed too fast

Check if the fan is out of order.

Check if the fan circuit on the motherboard breaks down.

The position of each fan of the fixture:



8. Troubleshooting

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 connect power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED to see if it can be light up or not.

B. Not responding to DMX controller

1. Check DMX connectors, cables to see if they are linked properly.
2. 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 to see 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 motor's drive IC on the PCB might be out of condition.

9. 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 and use normal glass to clean liquid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days.

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