

**DLW**

# **Product Manual**

DLW L1000 PRO

DLW L1000H PRO

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## Safety Information



**Note:** Please check the complete package after received , and please unpack and check if the fixture is damaged during shipping. If the fixture is damaged during shipping, please do not use it and contact the manufacturer/local technicians as soon as possible.

The following identifications are used to identify the product and identify the important safety information in the user manual.

|                       |                                            |                                                                |                                            |                                    |                                                                    |                                                |                            |
|-----------------------|--------------------------------------------|----------------------------------------------------------------|--------------------------------------------|------------------------------------|--------------------------------------------------------------------|------------------------------------------------|----------------------------|
|                       |                                            |                                                                |                                            |                                    |                                                                    |                                                |                            |
| Caution!              | Indoor used only!                          | Refer to the manual before installation/ power on/ maintenance | Caution Eelectric shock hazard!            | Properly grounded                  | Caution wear goggles!                                              | Caution! High surface temperature Don't touch! | Caution! Must wear gloves! |
|                       |                                            |                                                                |                                            |                                    |                                                                    |                                                |                            |
| Caution Prevent fire! | Do not stare at the operating light source | Do not interfere with the track of the operating fixture       | Minimum distance of illuminated objects(m) | Rated maximum ambient temperature! | Don't install the fixture on the surfact of combustible materials! | Replace any cracked protective shields         |                            |

### Notes:

- The fixture is used professionally only, please don't used it for any other purposes.
- Please refer to the latest user manual before using the fixture. The fixture is out of warranty if problems are caused by any incorrect use or negligence of the user manual.
- The fixture is used indoor only; the protection level rate is IP20. Please keep the fixture dry and avoid to use the fixture under the environment of damp, overheating or dusty. Please keep the fixture away from water or any other liquids.
- In order to avoid damage the fixture, it is required more than 1 person when moving the fixture. When hanging the fixture, the hanging device must be tested. The hanging device should be able to bear more than 10 times of weight of the fixture. Please make sure the housing and G-clamp are fixed and do not have damage after installed. Please use the safety chain to keep the fixture fixed on the truss safely.
- The fixture should be installed in a well-ventilated place. Keep the distance of the fixture and the obstacles more than 0.9 meter, and please check the fans and ventilation hole sare not blocked.

- Please don't install the fixture on the surfaces of the inflammable goods directly. (  )
- Please check the voltage before the professional technicians install the fixture.  
The voltage must be the same with the voltage which marked on the fixture.  
Overloading protection or leakage protection are also required.
- Before power on the fixture, please check whether the fuse meets the technical requirements.  
Please don't replace the fuse without professional instructions and short circuit it when the fixture is powered on. And then confirm whether the input
- voltage meets the technical requirements and the ground wire is properly connected.
- Please cut off the power supply when replacing the fuse. (  )
- Rated maximum ambient temperature when the fixture is working:  $t_a = 40^{\circ}\text{C}$ .
- The safe/shortest distance to the illuminate object: 5m.
- when the fixture working stably, the maximum surface temperature:  $t_c = 75^{\circ}\text{C}$ .
- The shortest safety distance to combustile material: 0.7m.
- Please don't touch the fixture when it is working stably. It's highest surface temperature can reach  $75^{\circ}\text{C}$ .
- The distance should be longer than 3.5 m when the installation location of the fixture is designed to be stored for a long time.
- When using the fixture, please pay attention to severe damage caused by the shock from fire, heat, or the UV violation.
- Please don't stare at the working fixture directly without any eye protection.
- Please replace the protective cover and lens if any visible damage happened or the damage has reached the malfunction level. (  )
- The fixture must be installed, operated, and maintained by professionals strictly according to the user manual.
- All the information of the user manual is for your reference only. All fixtures should be subject to the actual product, which is subject to change without prior notice.

## Package & Transportation

### Fixture package

- Please cut off the power supply and cool it down for over 15minutes before packing the fixture.
- Lock the protection lock for pan and tilt well.
- Please place the fixture in the plastic bag, and then carefully put it into the flight case vertically, the accessories are placed at special area in flight case, then close the lid and lock the flight case. Please don't put it upside down.

### Transport protection lock

- Protective locks for pan and tilt movement are installed in the fixture for safe transportation.

### Unpacking

- Open the packing box, and then open the inner packing bag.
- Grasp the handle of the fixture, take it out from the case carefully.
- Unlock the protective lock before power on the fixture.

Notice: Please check the complete package after received the fixture, please check whether the fixture is damaged or not during shipping after opened the packing. If the fixture is damaged during shipping, please don't use it first, and contact the manufacture/local technicians as soon as possible.

### Accessories with fixture

| Accessories   | Qty |
|---------------|-----|
| User Manual   | 1   |
| Warranty Card | 1   |
| Signal Cable  | 1   |

## Product Introduction Specifications

### Electrical parameters

AC 200 - 240V 50 / 60 Hz

Input Power:1150W rated electrical current:5.75A, PF≥0.98

### Light Source parameters

- DLW L1000 PRO Light source : 1000W LED white source module(high brightness).
- DLW L1000H PRO Light source :1000W LED white source module(high CRI).
- LED module expected lifespan:20000Hrs.

### Optics parameters

- Lens:High-definition lens with anti-reflective film.
- Zoom range: 6°~56°

### Effect configuration

- 2 prisms, one is 4-facet linear and one is 6-facet circle, can be independent and overlapping combined, can be bidirectional rotating, can be auto-focus.
- Two atomized frosts with high-bright output.
- 0-100% linear dimmer,4 dimming curve options, 4 dimming speed options.
- Electric strobe 1-25Hz,multiple strobe effects.
- Fast electric Iris,5-100% linear adjustment, multi-effects changing with macro function.

### Fixture movement

- PAN=540°, 16bit.
- TILT=270°, 16 bit.

### Electronic Control

- Channel:32Ch/35Ch/60Ch.
- Control Protocols:DMX512,RDM,Art-Net,sACN,wireless function(optional).
- Control Portals: XLR-3+ XLR-5; RJ45 (optional).
- Menu display: 2.4" LCD screen; choice of Chinese and English language, menu available to be displayed 180° reversely.
- Built-in self-rechargeable battery, menu can be edited without power supply (optional version); Support connecting with power bank to enter the menu and edit address code and other settings.

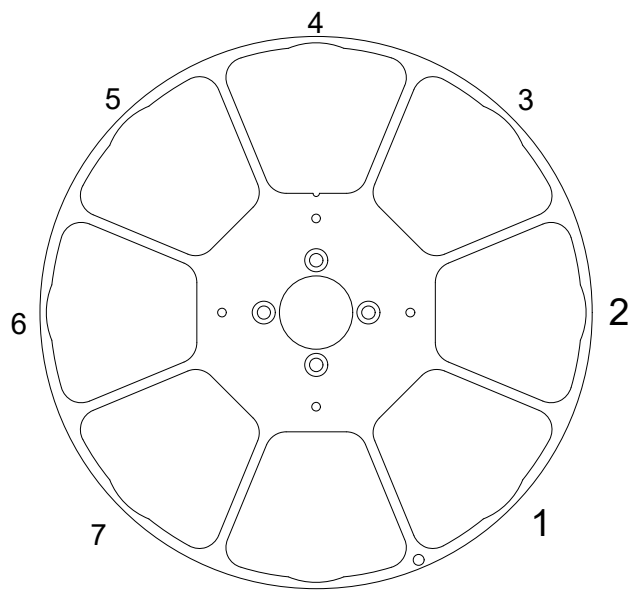
- Electronic sensors testing, fan intelligent detect and controllable.
- Eco mode(sleep mode when standby)
- Non-touching magnetic encoder positionable system for pan/tilt.

### Framing System

- 4 x framing blades with precise positioning and no graphics distortion.
- The framed graph can rotate 360°.

### Color System

- CMY infinite color mixing, high saturated color (RGB) output, pure colors.
- CTO color temperature, 3200K-6200K linear adjustment.
- One static color wheel, 7 color filters plus open, color wheel can rotate in both direction, effects of rainbow, stepping, gradual changing colors. (Pic1).

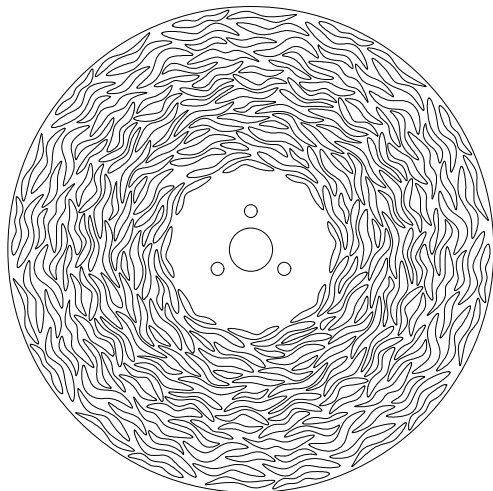


Pic1

- 1.High CRI
- 2.Pink
- 3.Orange
- 4.Purple
- 5.Deep Blue
- 6.Green
- 7.Deep Red

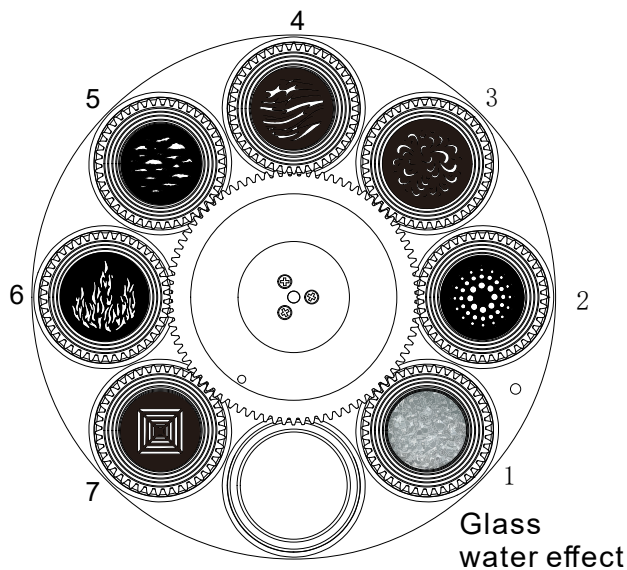
Gobo System

- 1 Gobo animation wheel,cloud,fire,water flow.



Pic2

- 1 rotating gobo wheel with 7 unique gobos + 1 open circle, can bi-directional rotate with effects of self-rotation, running water and shaking, the gobos can be accurately controlled at 16bit.



Pic3

Gobo Specifications

- The gobo plates are made from material, it can be customized according to user needs.

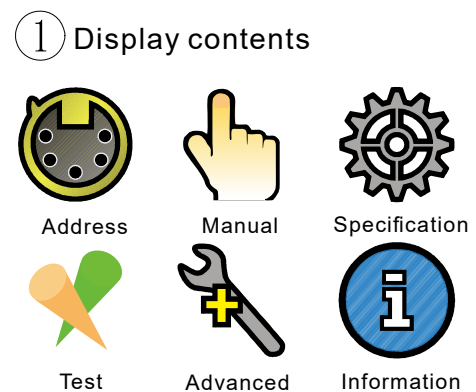
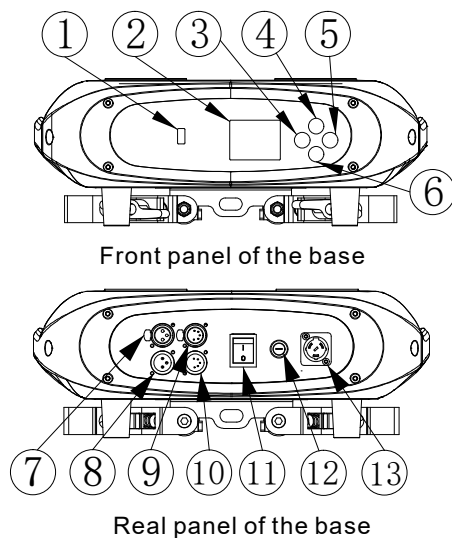
The size for customized gobo plates:

| Material                                                            | Outer diameter | Effective Diameter | Thickness |
|---------------------------------------------------------------------|----------------|--------------------|-----------|
| Metal Gobo                                                          | ø22.8mm        | ø 18mm             | 0.5mm     |
| Glass Gobo                                                          | ø22.5mm        | ø 20mm             | 3.5mm     |
| Gobo plates adopt high temperature glass(or high temperature metal) |                |                    |           |

## Fixture Size & Weight

- Fixture size: 417X417X767(mm)
- Flight case size:1045X648X845mm
- Net weight:35Kg
- Flight case netweight:43Kg
- IP Rate: IP20

## Operation Panel Instruction



PIC4

As shown in pic4:

- |                                |                        |                            |                    |
|--------------------------------|------------------------|----------------------------|--------------------|
| 1.USB                          | 2.LCD screen           | 3.Left Direction key(Back) | 4.Up Direction key |
| 5.Right Direction key(Confirm) | 6.Down Direction key   | 7. DMX output              | 8.DMX input        |
| 9.DMX(Ethernet) output         | 10.DMX(Ethernet) input | 11. Switch                 | 12.Fuse box        |
| 13.Power Supply                |                        |                            |                    |

## Panel instruction

- Up Direction key:Select Sub-menu cyclically(upward).Circulate downward to adjust data value.
- Down Direction key: Select Sub-menu cyclically (downward). Circulate downward to adjust data value.
- Left Direction key(Back):Back to menu.
- Right Direction key(Confirm):Confirm the selected data value o rselect cyclical data window.

Detailed Operation Table of Display panel

|                                                                                                           |                     |                                    |         |
|-----------------------------------------------------------------------------------------------------------|---------------------|------------------------------------|---------|
| <b>Specification</b><br> | 1.Pan Inverse       | Off, On                            |         |
|                                                                                                           | 2.Tilt Inverse      | Off, On                            |         |
|                                                                                                           | 3.PT Encoder        | Off, On                            |         |
|                                                                                                           | 4.PT Speed          | FAST,NORMAL,SLOW                   |         |
|                                                                                                           | 5.Dim Curve         | Curve_CV1,Line_CV2,S_CV3,SquareCV4 |         |
|                                                                                                           | 6.LED PWM           | 1.2KHz, 6KHz,12KHz,24KHz,25KHz     |         |
|                                                                                                           | 7.Dim Speed         | Speed1,Speed2,Speed3,Speed4        |         |
|                                                                                                           | 8.FAN mode          | Theater,Quiet,AUTO,HIGH            |         |
|                                                                                                           | 9.Display blackout  | Off, On                            |         |
|                                                                                                           | 10. display inverse | Off, On                            |         |
|                                                                                                           | 11. Language        | English,Chinese                    |         |
|                                                                                                           | 12.Sleep Mode       | Off, On                            |         |
|                                                                                                           | 13.Fixture          | .....                              |         |
|                                                                                                           | EXIT                |                                    |         |
| <b>Manual</b><br>       | 1.Channel           | 1.Pan                              | 000~255 |
|                                                                                                           |                     | 2.Tilt                             | 000~255 |
|                                                                                                           |                     | 3.Strobe                           | 000~255 |
|                                                                                                           |                     | 4.Dimmer                           | 000~255 |
|                                                                                                           |                     | 5.Focus                            | 000~255 |
|                                                                                                           |                     | 6.Zoom                             | 000~255 |
|                                                                                                           |                     | 7.Cyan                             | 000~255 |
|                                                                                                           |                     | 8.Magenta                          | 000~255 |
|                                                                                                           |                     | 9.Yellow                           | 000~255 |
|                                                                                                           |                     | 10. CTO                            | 000~255 |
|                                                                                                           |                     | 11. Color wheel                    | 000~255 |
|                                                                                                           |                     | 12. Gobo wheel                     | 000~255 |
|                                                                                                           |                     | 13. R-Gobo                         | 000~255 |
|                                                                                                           |                     | 14.Iris                            | 000~255 |
|                                                                                                           |                     | 15.Animation                       | 000~255 |
|                                                                                                           |                     | 16.Animation rotation              | 000~255 |
|                                                                                                           |                     | 17.Prism1                          | 000~255 |
|                                                                                                           |                     | 18. R-Prism1                       | 000~255 |
|                                                                                                           |                     | 19. FRAME 1A                       | 000~255 |
|                                                                                                           |                     | 20. FRAME 1B                       | 000~255 |
|                                                                                                           |                     | 21. FRAME 2A                       | 000~255 |
|                                                                                                           |                     | 22. FRAME 2B                       | 000~255 |
|                                                                                                           |                     | 23. FRAME 3A                       | 000~255 |
|                                                                                                           |                     | 24. FRAME 3B                       | 000~255 |
|                                                                                                           |                     | 25. FRAME 4A                       | 000~255 |
|                                                                                                           |                     | 26. FRAME 4B                       | 000~255 |
|                                                                                                           |                     | 27. FRAME ROT                      | 000~255 |
|                                                                                                           |                     | 28. Frost                          | 000~255 |
|                                                                                                           |                     | 29. CONTROL                        | 000~255 |
|                                                                                                           |                     | EXIT                               |         |
|                                                                                                           | 2.Fixture Reset     | NO,YES                             |         |
|                                                                                                           | EXIT                |                                    |         |
| <b>Address</b><br>     | 1.DMX512 Address    | 001~512                            |         |
|                                                                                                           |                     | EXIT                               |         |
|                                                                                                           | 2.Channel Mode      | Basic                              |         |
|                                                                                                           |                     | Standard                           |         |
|                                                                                                           |                     | Extend                             |         |
|                                                                                                           |                     | EXIT                               |         |
|                                                                                                           | 3.No DMX Mode       | Dmx hold                           |         |

|                                                                                                                       |                      |                     |           |
|-----------------------------------------------------------------------------------------------------------------------|----------------------|---------------------|-----------|
| <div>Information</div> <div>  </div> |                      | Black out           |           |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | EXIT                 |                     |           |
|                                                                                                                       | 1.Fixture Hour       | Fixture Hour        | XXXXXX    |
|                                                                                                                       |                      | LED Hour            | XXXXXX    |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | 2.Version            | PANEL Ver :         | XXXX      |
|                                                                                                                       |                      | XY Ver:             | XXXX      |
|                                                                                                                       |                      | DRV1 Ver:           | XXXX      |
|                                                                                                                       |                      | DRV2 Ver:           | XXXX      |
|                                                                                                                       |                      | DRV3 Ver:           | XXXX      |
|                                                                                                                       |                      | DRV4 Ver:           | XXXX      |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | 3.Temperature        | PANEL Temperature : | XXX-XXX   |
|                                                                                                                       |                      | XY Temperature:     | XXX-XXX   |
|                                                                                                                       |                      | DRV1 Temperature :  | XXX-XXX   |
|                                                                                                                       |                      | DRV2 Temperature :  | XXX-XXX   |
|                                                                                                                       |                      | DRV3 Temperature :  | XXX-XXX   |
|                                                                                                                       |                      | DRV4 Temperature :  | XXX-XXX   |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | 4.Fan Speed          | PANEL Fan :         | XXXX-XXXX |
|                                                                                                                       |                      | XY Fan:             | XXXX-XXXX |
|                                                                                                                       |                      | DRV1 Fan:           | XXXX-XXXX |
|                                                                                                                       |                      | DRV2 Fan:           | XXXX-XXXX |
|                                                                                                                       |                      | DRV3 Fan:           | XXXX-XXXX |
|                                                                                                                       |                      | DRV4 Fan:           | XXXX-XXXX |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | 5.RDM ID             | XXXXXXXX            |           |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | 6.System Error       | NONE                |           |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | EXIT                 |                     |           |
| <div>Advanced</div> <div>  </div>  | 1.Factory Reset      | NO                  |           |
|                                                                                                                       |                      | YES                 |           |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | 2.Fixture Time Reset | NO                  |           |
|                                                                                                                       |                      | YES                 |           |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | 3.LED Time Reset     | NO                  |           |
|                                                                                                                       |                      | YES                 |           |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | 4.Calibration        | .....               |           |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | EXIT                 |                     |           |
| <div>Test</div> <div>  </div>      | 1.Auto test          |                     |           |
|                                                                                                                       |                      | NO                  |           |
|                                                                                                                       |                      | YES                 |           |
|                                                                                                                       |                      | EXIT                |           |
|                                                                                                                       | EXIT                 |                     |           |
|                                                                                                                       |                      |                     |           |
|                                                                                                                       |                      |                     |           |

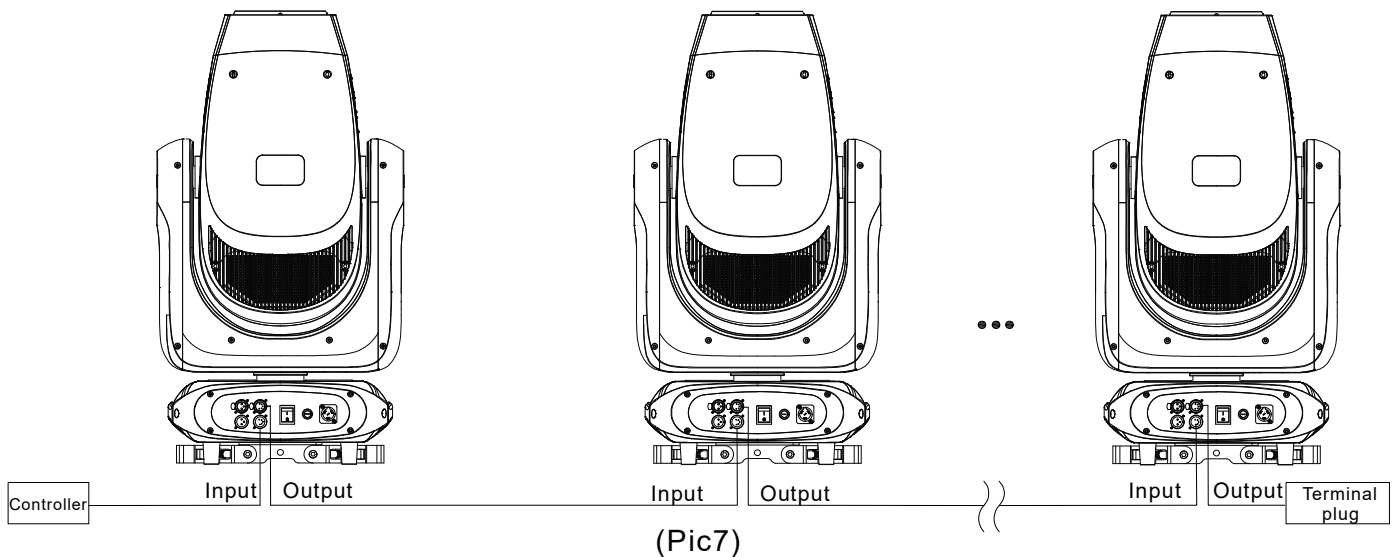
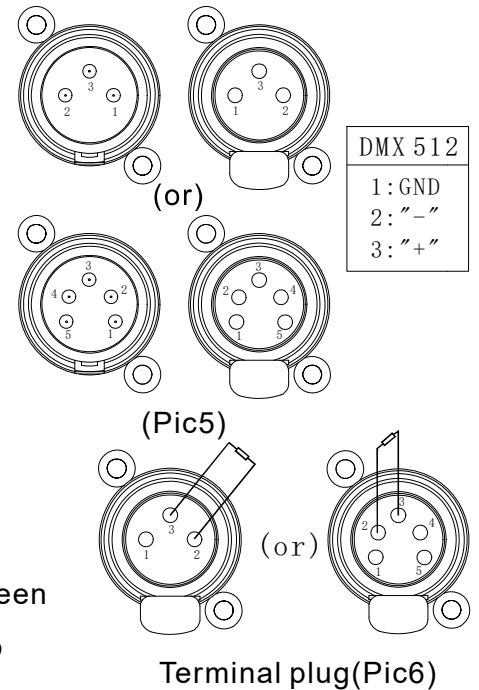
## Signal connection

The fixture adopts 3pin/5pin socket to control DMX input and output, Pin1 is connected to grounded, Pin2 is connected to"-", Pin3 is connected to"+"(Pic5).

Please adopt professional DMX512 STP signal cable, usually its effective range is within 150m. When long distance signal transmission is required, please add DMX 512 signal amplifier.

To avoid the signal reflection during the transmission, please add a terminal which is 120Ω 1/4W resistance between DMX output pin2 and pin 3 of the last fixture. Plug the pin to the DMX output connector of the last fixture. (Pic6)

Connect the fixture from the DMX output of controller to DMX input of the first fixture, and then connect the first fixture's DMX output to the second fixture's DMX input and so on, until all fixtures are being connected. Then please install a terminal plug in DMX output of the last fixture. (Pic 6) The method of connection as show bellow. (Pic 7)



Notice: ● Don't use multi- output connector for connecting separately, It must connect the branch with DMX512 signal amplifier to separate them if it is required.

● Standard amplifier cable is not reliable for long-distance data transmission; Please adopt professional DMX 512 STP signal cable.

● The signal of the fixture only has one input and one output. Two input/output for each fixture are not available.

## Power connection

Input voltage and frequency must be identical to the voltage and frequency marked on the fixture. When many fixtures are working at the same time, it is strongly recommended to control each fixture on/off individually.

## Connection type

L(Live line)Brown wire

N(Null line)Blue wire

E(Earth line)Yellow and green wire

### Notice:

- When connect power supply, please make sure the E line (yellow &green.) is properly connected. And it is corresponded with the relative electrical installation standards.
- Insulation class between LV power supply and controlling conductor: I
- Please confirm the voltage of the power supply is corresponded to the voltage on the fixture's identifications before professionals install it. Please also make sure it has overload or leakage protection.
- If the external cable is damaged, don't change it by yourself, please contact the manufacture/local as soon as possible.

## Installation instruction& requirement

The user need to arrange regular safety inspection for the fixtures and parts that are connected to the fixture. Please have professionals to operate if operating conditions and professional instructions are insufficient. Incorrect installation by non-professionals may leading to property loss or life danger.

Make sure there is no damage to rigging and clamps and they can bear at least 10 times weight of the fixture. Check if the truss or pipe construction can bear at least 10 times total weight of all equipment, like clamps, cables and other accessories.

### G-clamp Installation

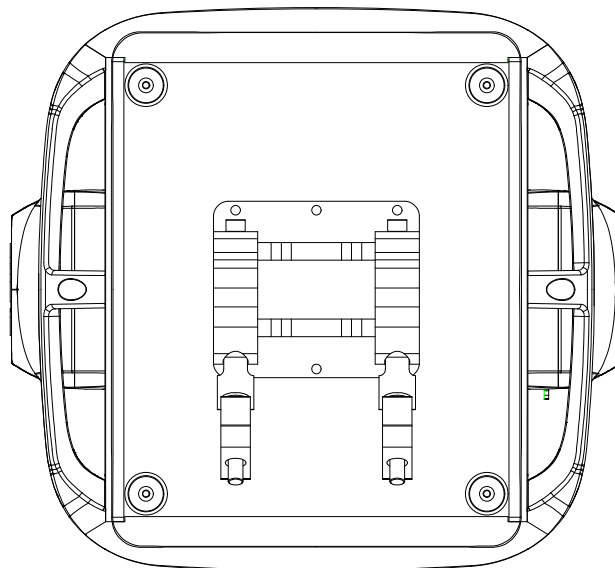
The fixture comes with the G-clamp(Pic8)

### Fixture Installation

Fixture is installed on the stage or truss, and the G-clamp can be locked on the truss tightly and quickly. (Pic 9)

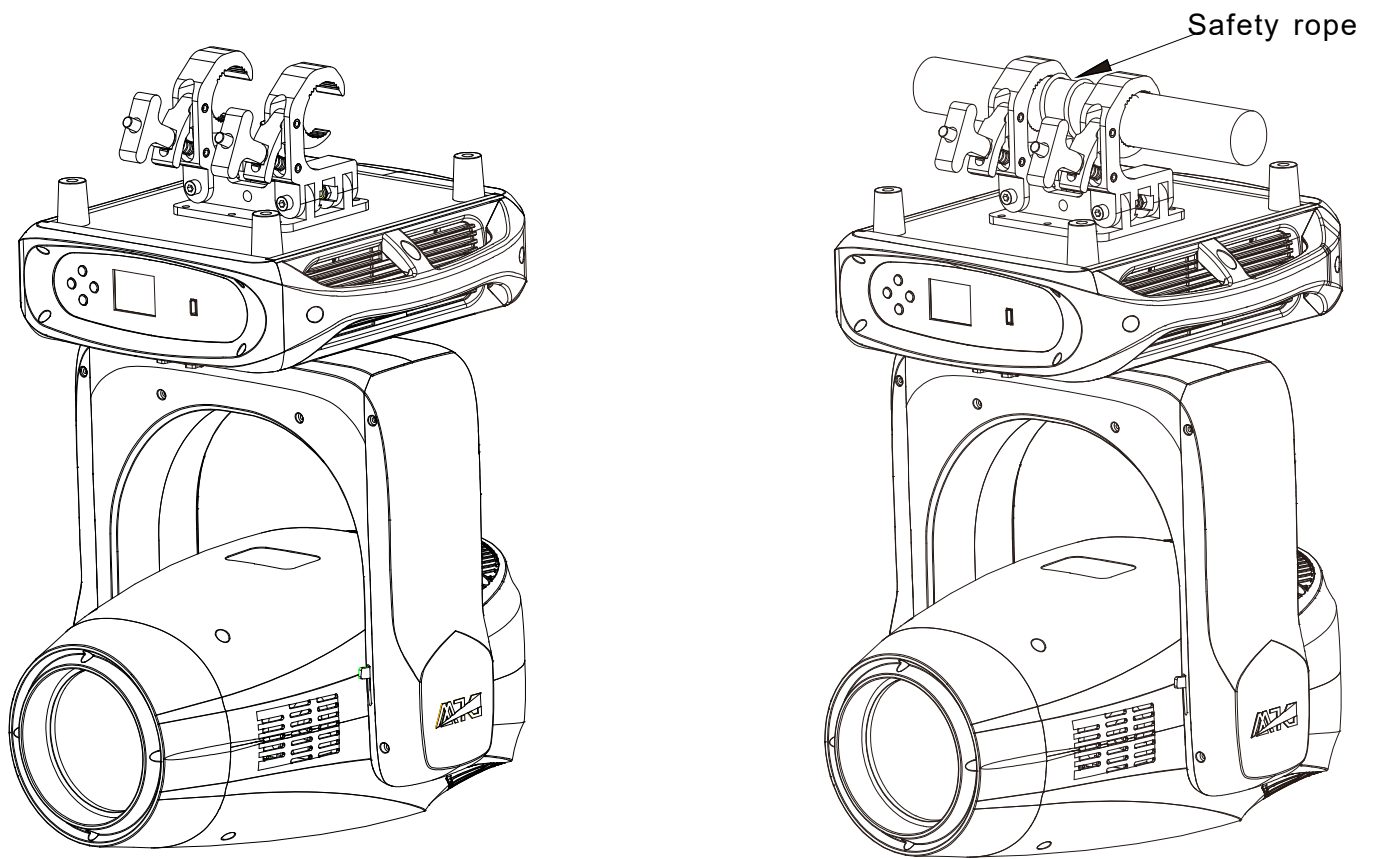
Notice:

- User must check if the G-clamp and safety chain are damaged or not.
- The fixture must be fixed by 2 G-clamps, clockwise turning them to fast-lock tightly, and adding a safety chain to connect the hole in the base, don't connect it to the handle.
- Please unlock the lock of pan/tilt before power on.
- Side hanging for lang time is not recommended.



**Pan Angle**

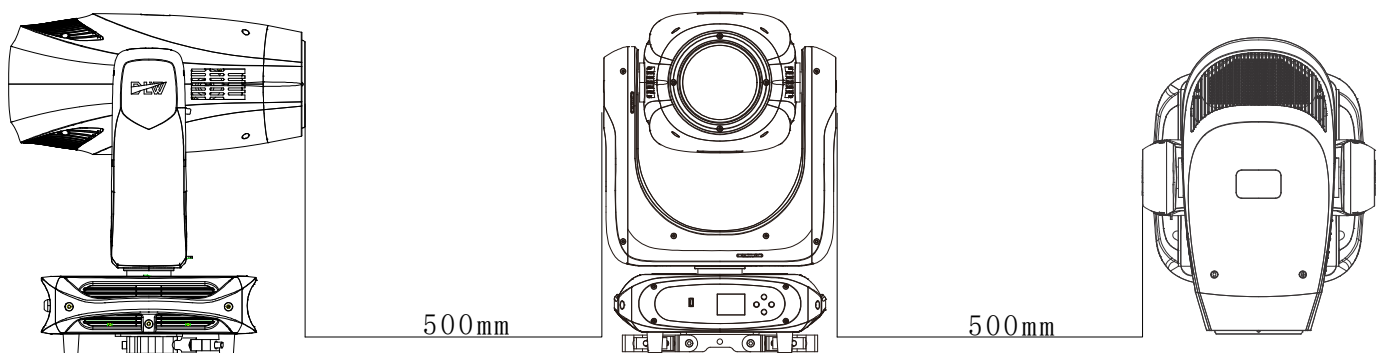
**Pic8**



Pic9

### Fixture Placement

When place the fixture, please check there is no inflammable object or inflammable material around the fixture. Then place the fixture vertically upward. The shortest safety distance for adjacent fixtures is  $\geq 0.5$  m when they are working. Fixtures installation show as follow (pic 10).



Pic10

### DMX Channel Sheet (Brief)

| Channel | 32CH                | 35CH                | 60CH                  |
|---------|---------------------|---------------------|-----------------------|
| 1       | Pan                 | Strobe              | Pan                   |
| 2       | Pan Fine            | Dimmer              | Pan Fine              |
| 3       | Tilt                | Dimmer Fine         | Tilt                  |
| 4       | Tilt Fine           | Cyan                | Tilt Fine             |
| 5       | Strobe              | Magenta             | Strobe                |
| 6       | Dimmer              | Yellow              | Dimmer                |
| 7       | Dimmer Fine         | CTO                 | Dimmer Fine           |
| 8       | Focus               | Color Wheel         | Focus                 |
| 9       | Zoom                | Gobo1               | Focus Fine            |
| 10      | Cyan                | Gobo 1 Rotate       | Zoom                  |
| 11      | Magenta             | Gobo 1 Rotate Fine  | Zoom Fine             |
| 12      | Yellow              | Animation           | Cyan                  |
| 13      | CTO                 | Animation Rotate    | Cyan Fine             |
| 14      | Color Wheel         | Framing Blade 1A    | Magenta               |
| 15      | Gobo1               | Framing Blade 1B    | Magenta Fine          |
| 16      | Gobo 1 Rotate       | Framing Blade 2A    | Yellow                |
| 17      | Iris                | Framing Blade 2B    | Yellow Fine           |
| 18      | Animation           | Framing Blade 3A    | CTO                   |
| 19      | Animation Rotate    | Framing Blade 3B    | CTO Fine              |
| 20      | Framing Blade 1A    | Framing Blade 4A    | Color Wheel           |
| 21      | Framing Blade 1B    | Framing Blade 4B    | Color Wheel Fine      |
| 22      | Framing Blade 2A    | Framing Blade Roate | Gobo1                 |
| 23      | Framing Blade 2B    | Frost               | Gobo 1 Rotate         |
| 24      | Framing Blade 3A    | Prism               | Gobo 1 Rotate Fine    |
| 25      | Framing Blade 3B    | Prism Rotate        | Iris                  |
| 26      | Framing Blade 4A    | Iris                | Iris Fine             |
| 27      | Framing Blade 4B    | Zoom                | Animation             |
| 28      | Framing Blade Roate | Zoom Fine           | Animation Fine        |
| 29      | Prism               | Focus               | Animation Rotate      |
| 30      | Prism Rotate        | Focus Fine          | Animation Rotate Fine |
| 31      | Frost               | Pan                 | Framing Blade 1A      |
| 32      | Fixture control     | Pan Fine            | Framing Blade 1A Fine |
| 33      |                     | Tilt                | Framing Blade 1B      |
| 34      |                     | Tilt Fine           | Framing Blade 1B Fine |
| 35      |                     | Fixture control     | Framing Blade 2A      |
| 36      |                     |                     | Framing Blade 2A Fine |
| 37      |                     |                     | Framing Blade 2B      |
| 38      |                     |                     | Framing Blade 2B Fine |

|    |  |  |                          |
|----|--|--|--------------------------|
| 39 |  |  | Framing Blade 3A         |
| 40 |  |  | Framing Blade 3A Fine    |
| 41 |  |  | Framing Blade 3B         |
| 42 |  |  | Framing Blade 3B Fine    |
| 43 |  |  | Framing Blade 4A         |
| 44 |  |  | Framing Blade 4A Fine    |
| 45 |  |  | Framing Blade 4B         |
| 46 |  |  | Framing Blade 4B Fine    |
| 47 |  |  | Framing Blade Roate      |
| 48 |  |  | Framing Blade Roate Fine |
| 49 |  |  | Prism 2                  |
| 50 |  |  | Prism Rotate             |
| 51 |  |  | Frost                    |
| 52 |  |  | Fixture control          |
| 53 |  |  | Pan/Tilt speed           |
| 54 |  |  | Color speed              |
| 55 |  |  | Focus/zoom speed         |
| 56 |  |  | Gobo speed               |
| 57 |  |  | Reserved                 |
| 58 |  |  | Reserved                 |
| 59 |  |  | Reserved                 |
| 60 |  |  | Reserved                 |

### DMX Specific Channel Sheet

| 32CH | 35CH | 60CH | Specifications | DMX Value | Function                        |
|------|------|------|----------------|-----------|---------------------------------|
| 1    | 31   | 1    | Pan            | 0-255     | 0°->540°                        |
| 2    | 32   | 2    | Pan Fine       |           |                                 |
| 3    | 33   | 3    | Tilt           | 0-255     | 0°->270°                        |
| 4    | 34   | 4    | Tilt Fine      |           |                                 |
| 5    | 1    | 5    | Strobe         | 0-19      | Closed                          |
|      |      |      |                | 20-49     | Open                            |
|      |      |      |                | 50-200    | Strobe from slow to fast        |
|      |      |      |                | 201-210   | Open                            |
|      |      |      |                | 211-255   | Random strobe from slow to fast |
| 6    | 2    | 6    | Dimmer         | 0-255     | Closed-open(0%-100%)            |
| 7    | 3    | 7    | Dimmer Fine    |           |                                 |
| 8    | 29   | 8    | Focus          | 0-255     | From far to near                |
| -    | 30   | 9    | Focus Fine     |           |                                 |
| 9    | 27   | 10   | Zoom           | 0-255     | From large to small             |
| -    | 28   | 11   | Zoom Fine      |           |                                 |
| 10   | 4    | 12   | Cyan           | 0-255     | Cyan 0-100%                     |
| -    | -    | 13   | Cyan Fine      |           |                                 |
| 11   | 5    | 14   | Magenta        | 0-255     | Magenta 0-100%                  |
| -    | -    | 15   | Magenta Fine   |           |                                 |
| 12   | 6    | 16   | Yellow         | 0-255     | Yellow 0-100%                   |
| -    | -    | 17   | Yellow Fine    |           |                                 |
| 13   | 7    | 18   | CTO            | 0-255     | CTO 0-100%                      |
| -    | -    | 19   | CTO Fine       |           |                                 |
| 14   | 8    | 20   | Color Wheel    |           |                                 |
|      |      |      |                | 0-119     | Color Linear Movement           |
|      |      |      |                | 120-120   | Open                            |
|      |      |      |                |           | Full color mode                 |
|      |      |      |                | 121-125   | Color 1                         |
|      |      |      |                | 126-130   | Color 2                         |
|      |      |      |                | 131-135   | Color 3                         |
|      |      |      |                | 136-140   | Color 4                         |
|      |      |      |                | 141-145   | Color 5                         |
|      |      |      |                | 146-150   | Color 6                         |
|      |      |      |                | 151-155   | Color 7                         |
|      |      |      |                | 156-160   | Open                            |

|    |    |    |                  |         |                                           |
|----|----|----|------------------|---------|-------------------------------------------|
|    |    |    |                  |         | Color water flow effect                   |
|    |    |    |                  | 161-200 | Clockwise rotation from fast to slow      |
|    |    |    |                  | 201-203 | Stop                                      |
|    |    |    |                  | 204-243 | Anti-clockwise rotation from slow to fast |
|    |    |    |                  |         | Color Water flow effect                   |
|    |    |    |                  | 244-247 | Fast                                      |
|    |    |    |                  | 248-251 | Medium                                    |
|    |    |    |                  | 252-255 | Slow                                      |
| -  | -  | 21 | Color Wheel Fine |         |                                           |
| 15 | 9  | 22 | Gobo1            |         | Positioning mode                          |
|    |    |    |                  | 0-10    | Open                                      |
|    |    |    |                  | 11-17   | Gobo 1                                    |
|    |    |    |                  | 18-24   | Gobo 2                                    |
|    |    |    |                  | 25-31   | Gobo 3                                    |
|    |    |    |                  | 32-38   | Gobo 4                                    |
|    |    |    |                  | 39-45   | Gobo 5                                    |
|    |    |    |                  | 46-52   | Gobo 6                                    |
|    |    |    |                  | 53-59   | Gobo 7                                    |
|    |    |    |                  | 60-66   | Open                                      |
|    |    |    |                  | 67-73   | Gobo1 shake from slow to fast             |
|    |    |    |                  | 74-80   | Gobo2 shake from slow to fast             |
|    |    |    |                  | 81-87   | Gobo3 shake from slow to fast             |
|    |    |    |                  | 88-94   | Gobo4 shake from slow to fast             |
|    |    |    |                  | 95-101  | Gobo5 shake from slow to fast             |
|    |    |    |                  | 102-108 | Gobo6 shake from slow to fast             |
|    |    |    |                  | 109-115 | Gobo7 shake from slow to fast             |
|    |    |    |                  | 116-127 | Open                                      |
|    |    |    |                  |         | Rotate mode                               |
|    |    |    |                  | 128-189 | Anti-clockwise rotation from fast to slow |
|    |    |    |                  | 190-255 | Clockwise rotation from slow to fast      |
| 16 | 10 | 23 | Gobo1 Rotate     |         | Positioning mode                          |
|    |    |    |                  | 0-127   | Indexing(0-360Degree)                     |
|    |    |    |                  |         | Rotate mode                               |
|    |    |    |                  | 128-189 | Anti-clockwise rotation from fast to slow |
|    |    |    |                  | 190-193 | Stop                                      |
|    |    |    |                  | 194-255 | Clockwise rotation from slow to fast      |

|    |    |    |                          |         |                                                   |
|----|----|----|--------------------------|---------|---------------------------------------------------|
| –  | 11 | 24 | Gobo1 Rotate Fine        | 0-255   |                                                   |
| 17 | 26 | 25 | Iris                     | 0-255   | Iris large to small                               |
| –  | –  | 26 | Iris Fine                |         |                                                   |
| 18 | 12 | 27 | Animation                | 0-255   | Animation insert                                  |
| –  | –  | 28 | Animation Fine           |         |                                                   |
| 19 | 13 | 29 | Animation Rotate         |         | Positioning mode                                  |
|    |    |    |                          | 0-124   | Anti-clockwise rotation from fast to slow         |
|    |    |    |                          | 125-130 | Stop                                              |
|    |    |    |                          | 131-255 | Clockwise rotation from slow to fast              |
| –  | –  | 30 | Animation Rotate Fine    |         |                                                   |
| 20 | 14 | 31 | Framing Blade 1A         | 0-255   | Framing blade rotate from outside->inside         |
| –  | –  | 32 | Framing Blade 1A Fine    |         |                                                   |
| 21 | 15 | 33 | Framing Blade 1B         | 0-255   | Framing blade rotate from outside->inside         |
| –  | –  | 34 | Framing Blade 1B Fine    |         |                                                   |
| 22 | 16 | 35 | Framing Blade 2A         | 0-255   | Framing blade rotate from outside->inside         |
| –  | –  | 36 | Framing Blade 2A Fine    |         |                                                   |
| 23 | 17 | 37 | Framing Blade 2B         | 0-255   | Framing blade rotate from outside->inside         |
| –  | –  | 38 | Framing Blade 2B Fine    |         |                                                   |
| 24 | 18 | 39 | Framing Blade 3A         | 0-255   | Framing blade rotate from outside->inside         |
| –  | –  | 40 | Framing Blade 3A Fine    |         |                                                   |
| 25 | 19 | 41 | Framing Blade 3B         | 0-255   | Framing blade rotate from outside->inside         |
| –  | –  | 42 | Framing Blade 3B Fine    |         |                                                   |
| 26 | 20 | 43 | Framing Blade 4A         | 0-255   | Framing blade rotate from outside->inside         |
| –  | –  | 44 | Framing Blade 4A Fine    |         |                                                   |
| 27 | 21 | 45 | Framing Blade 4B         | 0-255   | Framing blade rotate from outside->inside         |
| –  | –  | 46 | Framing Blade 4B Fine    |         |                                                   |
| 28 | 22 | 47 | Framing Blade Roate      | 0-160   | Framing rotate from 0->360°                       |
|    |    |    |                          | 161-202 | Framing Anti-clockwise rotation from fast to slow |
|    |    |    |                          | 203-243 | Framing clockwise rotation slow to fast           |
|    |    |    |                          | 244-255 | Null                                              |
| –  | –  | 48 | Framing Blade Roate Fine |         |                                                   |
| 29 | 24 | 49 | Prism                    | 0-31    | Open                                              |
|    |    |    |                          | 31-95   | Prism1                                            |
|    |    |    |                          | 96-191  | Prism2                                            |
|    |    |    |                          | 192-255 | Prism1&2                                          |
|    |    |    |                          |         | Positioning mode                                  |

|    |    |    |                  |         |                                                     |
|----|----|----|------------------|---------|-----------------------------------------------------|
| 30 | 25 | 50 | Prism Rotate     | 0-127   | 0~360°                                              |
|    |    |    |                  |         | Rotate mode                                         |
|    |    |    |                  | 128-189 | Clockwise rotation fast back from fast to slow      |
|    |    |    |                  | 190-193 | Stop rotate                                         |
|    |    |    |                  | 194-255 | Anti-clockwise rotation fast back from slow to fast |
| 31 | 23 | 51 | Frost            | 0-31    | Open                                                |
|    |    |    |                  | 31-95   | Frost1                                              |
|    |    |    |                  | 96-191  | Frost2                                              |
|    |    |    |                  | 192-255 | Frost1&2                                            |
| 32 | 35 | 52 | Fixture control  | 0-9     | Null                                                |
|    |    |    |                  | 10-14   | Fixture reset                                       |
|    |    |    |                  | 15-29   | Specification reset                                 |
|    |    |    |                  | 30-34   | Pan-tilt reset                                      |
|    |    |    |                  | 35-49   | Reserved                                            |
|    |    |    |                  | 50-54   | 1.2KHz                                              |
|    |    |    |                  | 55-59   | 6 KHz                                               |
|    |    |    |                  | 60-64   | 12KHz                                               |
|    |    |    |                  | 65-69   | 24KHz                                               |
|    |    |    |                  | 70-255  | Reserved                                            |
| -  | -  | 53 | Pan/Tilt speed   | 0-255   | Stepping time from fast to slow                     |
| -  | -  | 54 | Color speed      | 0-255   | Stepping time from fast to slow                     |
| -  | -  | 55 | Focus/zoom speed | 0-255   | Stepping time from fast to slow                     |
| -  | -  | 56 | Gobo speed       | 0-255   | Stepping time from fast to slow                     |
|    |    | 57 | Reserved         |         |                                                     |
|    |    | 58 | Reserved         |         |                                                     |
|    |    | 59 | Reserved         |         |                                                     |
|    |    | 60 | Reserved         |         |                                                     |

## Maintenance & cleaning of the fixture

The fixture needs to be maintained and cleaned daily, because its lifespan depends on working environment and daily maintenance. Please contact our company engineer for any questions and feedback which are out of this user manual to our professional engineer.

Notes as bellow: 

- The power supply must be cut off before open the shell.
- Please open the shell after the fixture cooled completely
- Cleaning the optics components gently to avoid scratching the surface coating,  
To avoid damaging plastic and scratching the surface coating,  
Please don't use any harmful liquid or hard objects.
- Wiping the particulate Matter with tasteless tissue-paper or cotton cloth with clean,  
distilled water. Don't wipe the surface, but blow away floating things with pressure gas,  
any residues must be cleaned with distilled water from center to edge, and then dry it  
with soft cotton cloth.
- Please change the lens in time when it cracks or has other damages
- It is out of warranty any damage caused by fan with overmuch dust, smoke fluidity and  
abnormal using fixture.
- There is temperature protection device of the fixture, when the temperature is too high  
the LED module will be off automatically. When this happens, please check if the fan is  
working well or not. Plus, checking if the fan filter is blocked by dust. Please only reset the  
fixture after the qualified professional technicians finish troubleshooting.
- Weekly cleaning and maintenance for the fan filters and lens is recommended. Please  
do a complete maintenance half a year.

## Troubleshooting

The following are some problems in process of operation, and there are some suggestions for troubleshooting:

Fixture doesn't response, when power on

- Check if power input is normal.
- Check if power switch is on.
- Check if fuse is burned.

**Console losing control:**

- Check if the display is flicker, if yes, check if DMX signal connector and signal cable are connected well.
- If the display is not flickering, but the fixture is still have no response to the control channel instructions, please check if IP address is correctly set.
- If DMX signal is not stable, please check XLR socket and signal cable are connected well.
- Change another console for testing.

**channel failure:**

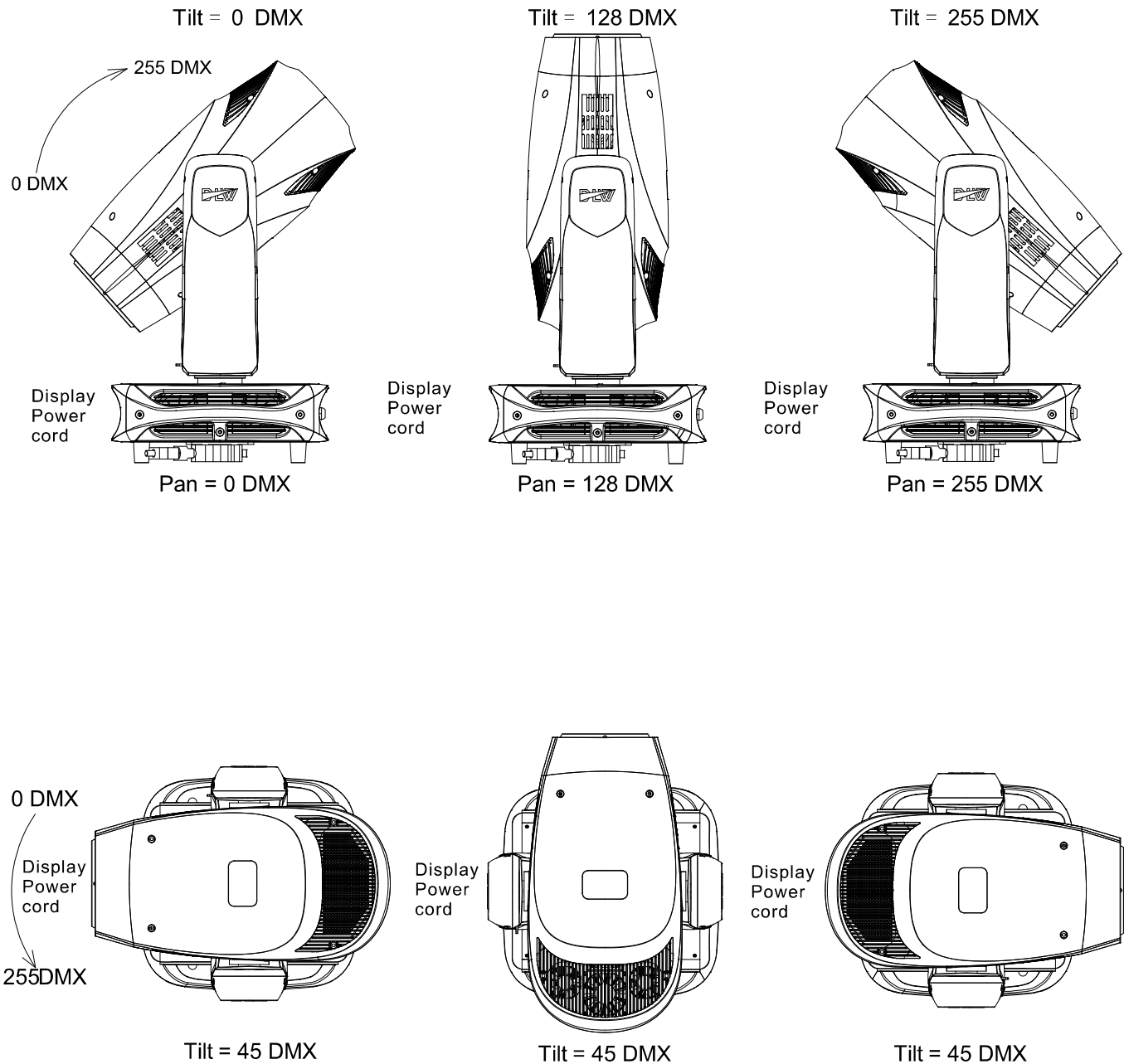
- Step motor or motor leading wire Maybe damaged.
- Drive circuit of motor may be damaged.

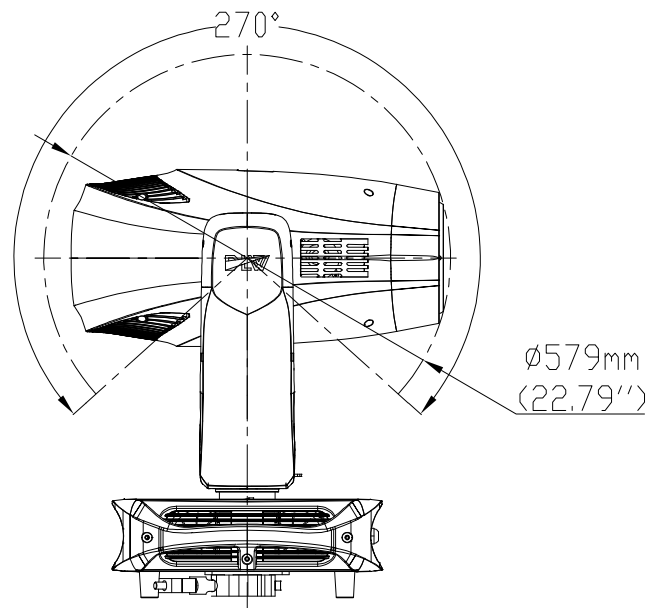
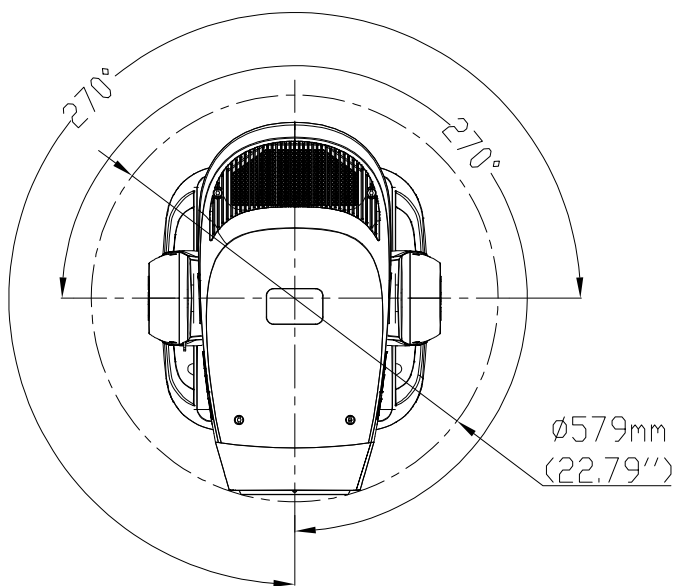
**Lamp blinking:**

- Check if the voltage is too high or too low, when the lamp is abnormal lighting.
- It is necessary to change the fan if the inner temperature is too high.

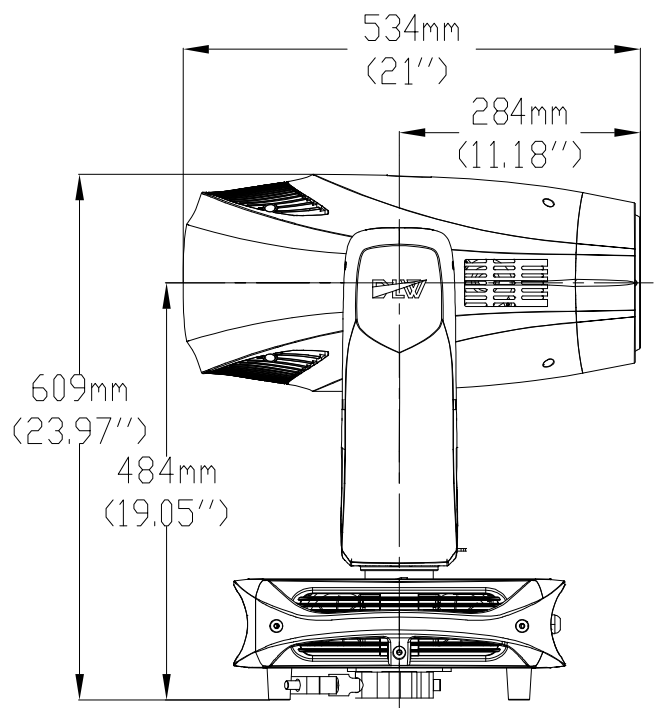
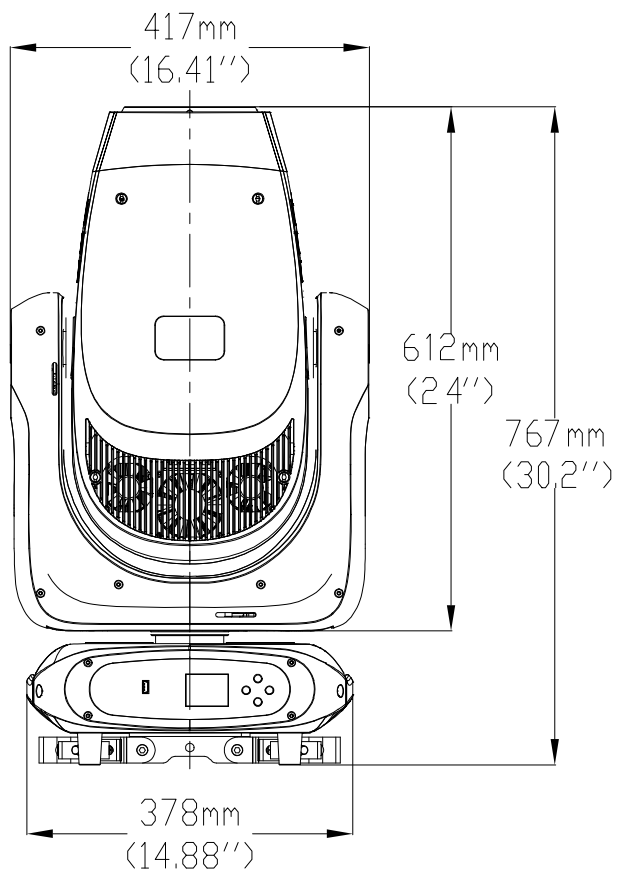
Attachment 1 Angle range and the measurement figure of the fixture

● Angle range of the fixture

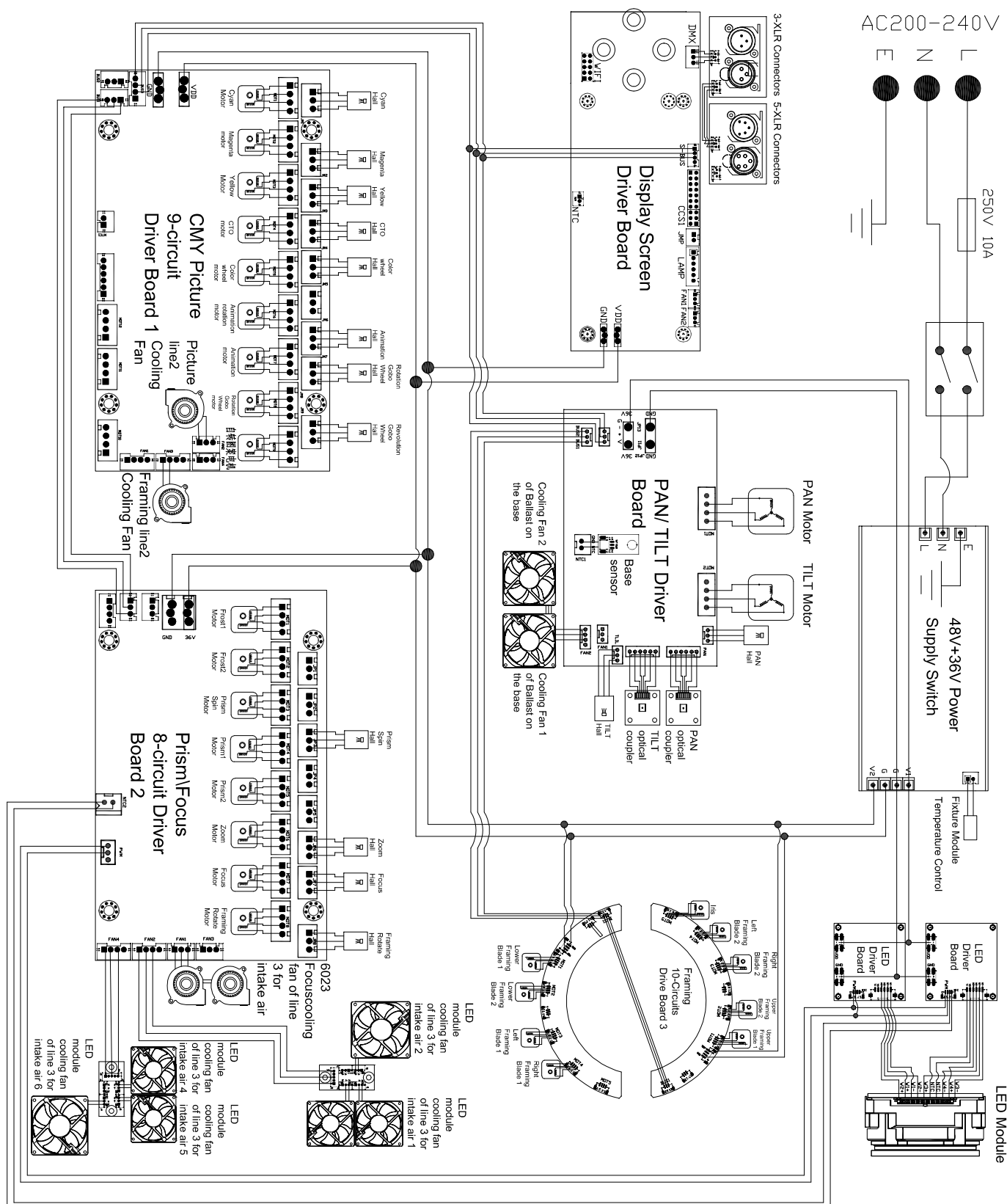




● The measurement figure of the fixture



## Attachment 2 Electrical Diagram



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