

LED 250W BSW User Manual



operation instructions

Please read the manual carefully and keep it properly before ussing the product



Precautions and Installation

1. Maintenance and upkeep

- This lighting fixture should be kept dry and avoid working in humid environments
- Intermittent use will effectively extend the lifespan of this lighting fixture
- To achieve good ventilation and lighting effects, it is important to regularly clean the fan, fan mesh, and lens.
- Do not wipe the lamp housing with organic solvents such as alcohol to avoid damage.

2. Declaration

This product has good performance and complete packaging when it leaves the factory. All users should strictly follow the warning items and operating instructions stated above. Any damage caused by misuse is not covered by our company's guarantee, and any faults and problems caused by ignoring the operating manual are not within the scope of responsibility of the distributor.

This manual is subject to technical changes without prior notice

3. Product precautions

- To ensure the service life of the product, it should not be placed in damp or leaking places, and should not be operated in environments with temperatures exceeding 60 degrees Celsius
- Do not place this product in areas that are prone to looseness or vibration.
- To avoid the risk of electric shock, please seek professional assistance for the repair of this product.
- When using the light bulb, the voltage variation of the power supply should not exceed $\pm 10\%$. If the voltage is too high, it will shorten the lifespan of the light bulb, and if the voltage is too low, it will affect the light color of the light bulb.
- After a power outage, it takes 20 minutes for the lighting fixture to cool down sufficiently before it can be powered on again for use.
- To ensure the normal use of this product, please read this instruction carefully.

4. Product Introduction

- Light source power: LED 200W
- Rated power: 250W (high-efficiency and reliable switching power supply)
- Power Supply: (90V-240V) High Efficiency and Reliable Switching Power Supply
- Color palette: One color palette, each consisting of 7 color chips and white light
- Pattern plate: 7 fixed pattern effects, 6 rotating dynamic pattern effects
- Effect Wheel: Two Prisms (One Pentaprism Effect and One 6-Row Mirror Effect)
- Dimming: 0-100% electronic dimming
- Adjustable range of beam angle
- Adopting a photoelectric reset system, it can automatically retrieve the reset in case of accidental misoperation;
- Horizontal 540° ;

- Vertical 270 ° ;
- Control mode: DMX512/master-slave/automatic/voice control
- Protection level: IP20;

5. Signal line connection (DMX)

Use RS-485 cables that meet specifications: shielded, 120ohm characteristic impedance, 22-24 AWG, low capacitance impedance. Do not use microphone cables or cables with different specified characteristics. The connection of terminals must use 3 or XLR type male/female connectors. (Minimum 1/4 W).

Important reminder: The wires should not come into contact with each other or with the metal casing.

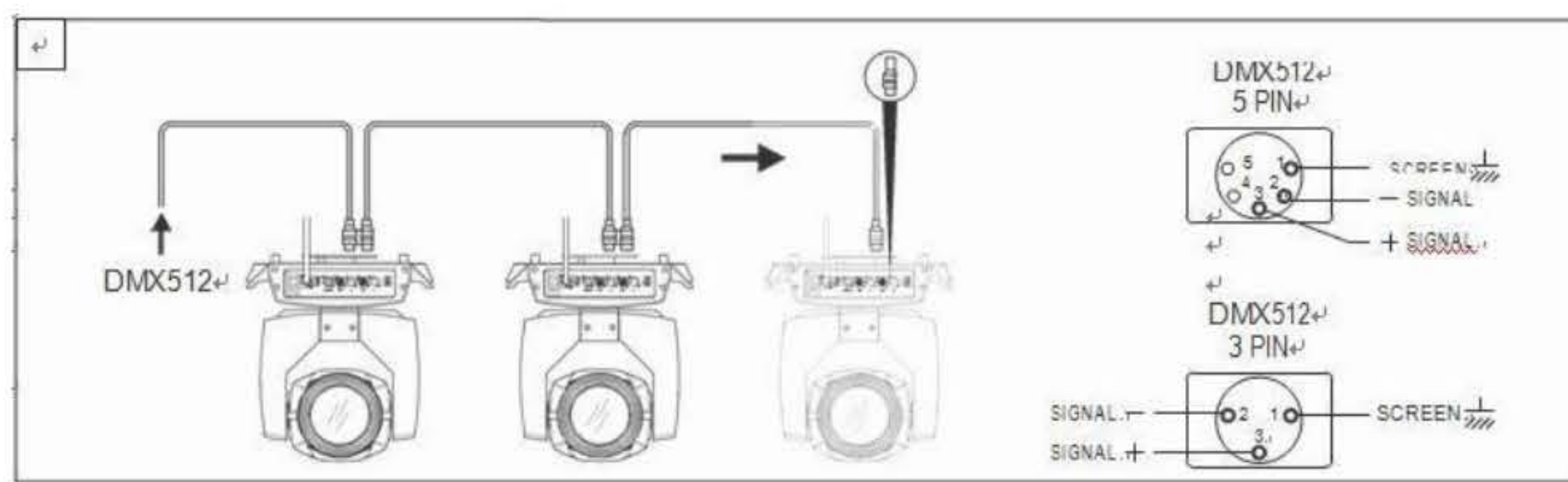


Figure 1 Schematic diagram of DMX signal line connection

6. Installation of lighting fixtures

The lighting fixtures can be placed horizontally, hung diagonally, and hung upside down. Be sure to pay attention to the installation method when hanging diagonally or upside down.

As shown in Figure 2, before positioning the lamp, it is necessary to ensure the stability of the installation site. When reversing the hanging installation, it is necessary to ensure that the lamp does not fall off the support frame. A safety rope needs to be used to pass through the support frame and lamp handle for auxiliary hanging to ensure safety. Prevent lamps from falling and sliding.

During the installation and debugging of the lighting fixtures, pedestrians are prohibited from passing underneath. Regular inspections should be conducted to ensure that the safety ropes are not worn and that the hook screws are not loose.

Our company shall not be held responsible for any consequences arising from the fall of the lighting fixtures due to unstable hanging installation.

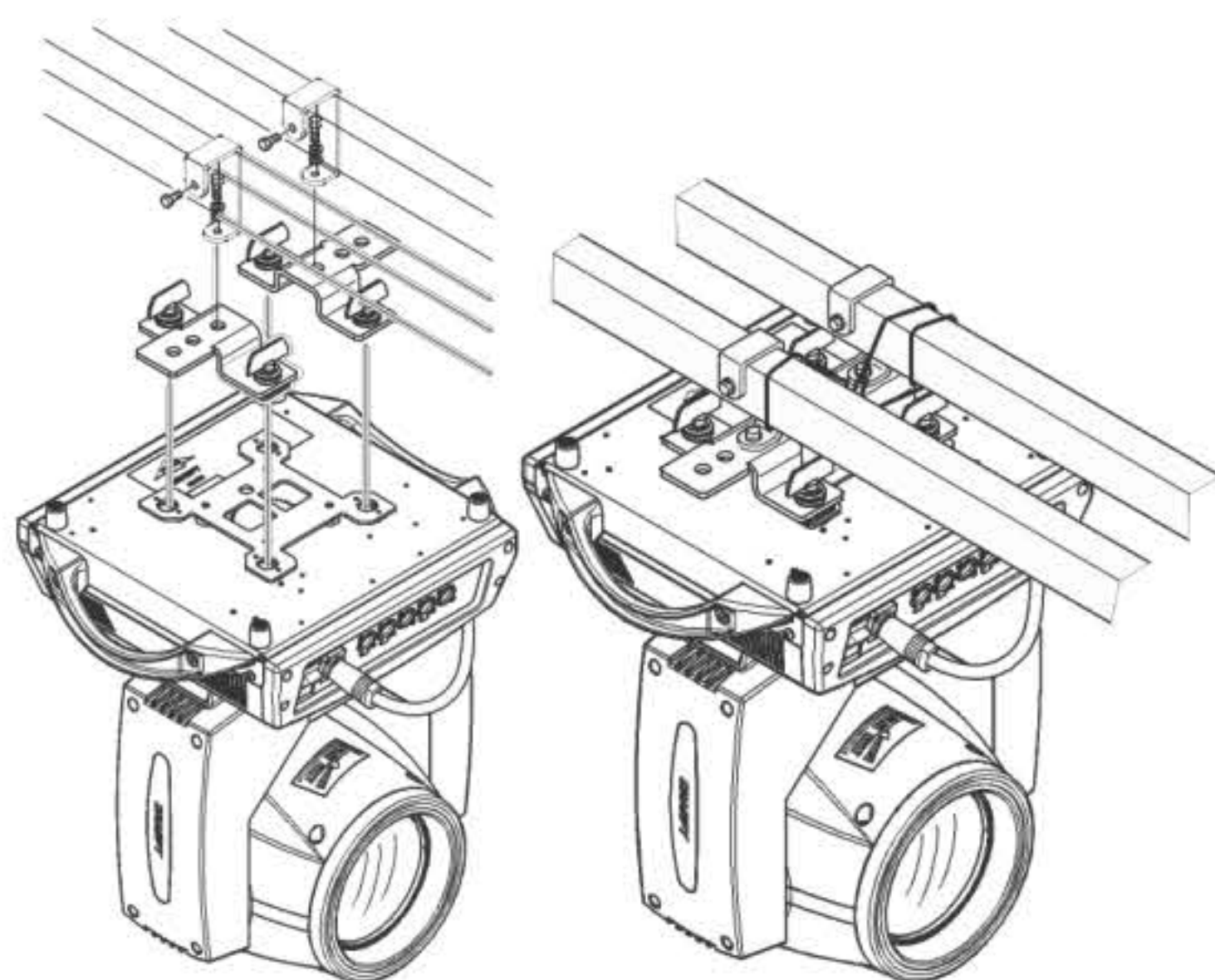


图2 倒挂灯具示意图

Control Panel

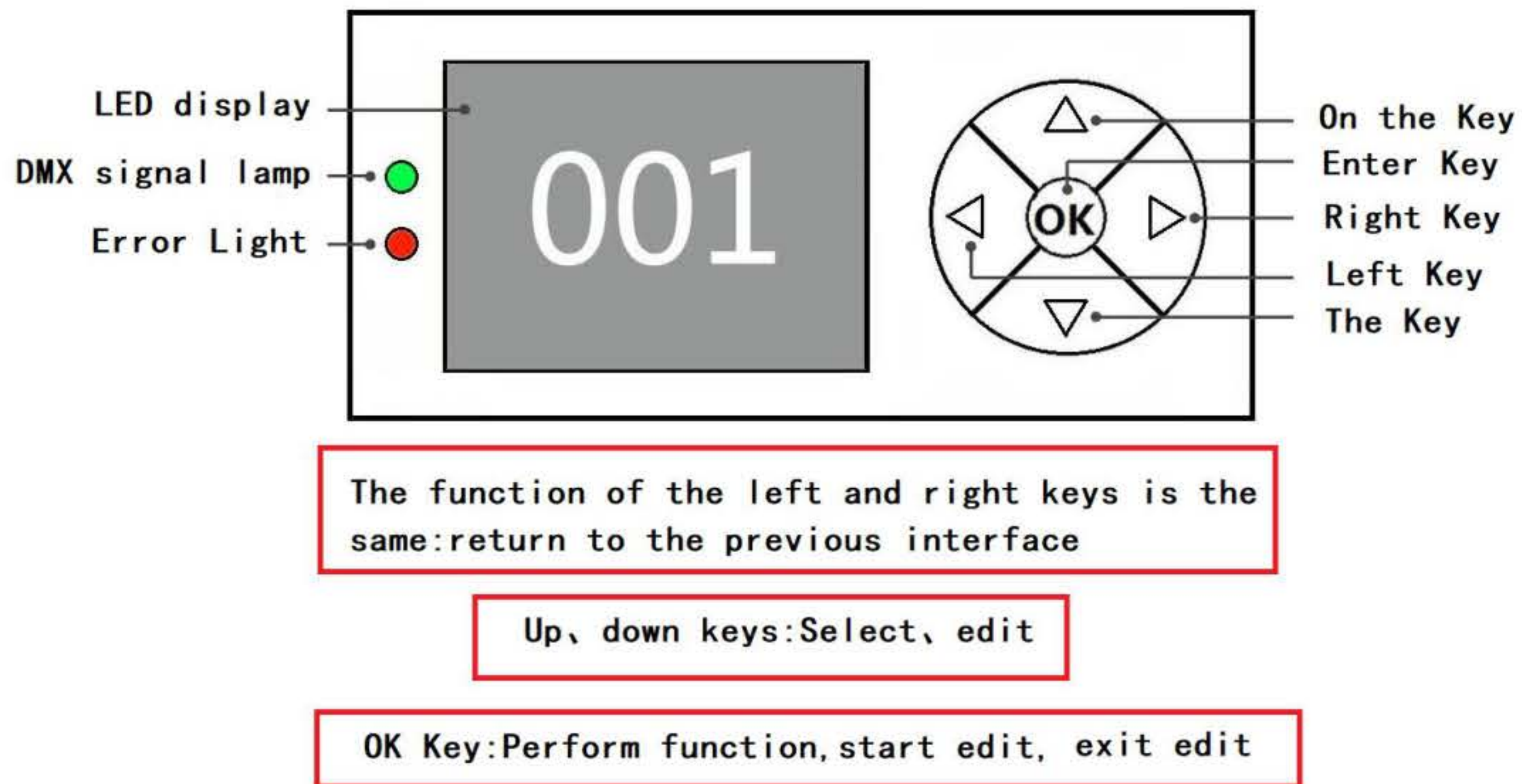


Figure 3 Schematic diagram of display panel

Taking "Modifying DMX Address Code" as an example, the following will introduce the usage of the buttons:

- 1、 If the current interface is not the main interface, press the "left" button (once or multiple times) to return to the main interface
2. In the main interface, press the "up" or "down" key to select the "DMX Settings" button
3. Press the "OK" button to enter the "DMX Settings" interface
4. Press the "up" or "down" key to modify the DMX address code
5. Press the 'OK' button to exit the editing mode
6. Right click on the main interface to enter the calibration interface shortcut key.
7. Attention: The shortcut keys at the bottom of the main interface, Chinese/English, screen hover and reset, can only be manually touched and cannot be pressed.

2.2.1 DMX Settings

Button description: Pressing up or down is 1 or -1 mode; Right click to next; Press the left and confirm button to save and exit.

2.2.2 Menu

Primary Menu	submenu	three-level menu	Four level menu	Five level menu	
DMX Settings	1-512 Address Code Selection				
Display Settings	Display reverse direction	Normal/Reverse			
	Brightness settings	0-100			
	Backlight off	01/02/03/Always on			
	Menu Return	01/02/03/Closed			
	Brightness flicker	Open/Close			
	Language settings	Chinese			
	Back to previous level				
Feature settings	PT setting	Horizontal inversion	Open/Close		
		Vertical inversion	Open/Close		
		Optocoupler detection	Open/Close		
		Back to previous level			
	Power Saving Mode	Open/Close			
	Channel Mode	Standard/Simplified/Custom			
	operation mode	Slave/voice control/self-propelled			
	Signal reset	Open/Close			
	signal reset	Open/Close			
	dimming mode	Fast/Smooth			
	Self travel time	0-20S			
	Back to previous level				
Lamp settings	Default lighting	Open/Close			

Primary Menu	submenu	three-level menu	Four level menu	Five level menu	
	Manual lighting	Open/Close			
	Brightening time				
	Lamp status				
	Light bulb off				
	Back to previous level				
Information inquiry	Lamp model				
	Fan 1	fan speed			
	Number of power on cycles				
	power-on time				
	display board	Display board version			
	motor board	motherboard version			
	temperature				
	Back to previous level				
Channel control					
auxiliary tool	factory configuration	Horizontal rotation (0-255)			
	Zero position adjustment	Vertical rotation (0-255)			
		Fixed pattern (0-255)			
		Color palette (0-255)			
		Focusing (0-255)			
		Prism (0-255)			
		Prism 2 (0-255)			
		Aperture (0-255)			
		Atomization (0-255)			
		Strobe "One" (0-255)			
		Prism II "One" (0-255)			

Primary Menu	submenu	three-level menu	Four level menu	Five level menu	
		Atomization "One" (0-255)			
		Color "One" (0-255)			
		Focusing on 'One' (0-255)			
		Energy saving wind speed			
		Beam velocity			
		Color, wind speed			
		C high wind speed			
		Back to previous level			
	Channel definition				
	Factory Settings	keyboard	Four key/Flying Shuttle		
		Fan detection	turn off		
		Usage limit			
		Clear count			
		time limit			
		Clear time			
		password 1			
		Password 2			
		X drive wheel			
		X driven wheel			
		Y drive wheel			
		Y driven wheel			
		horizontal angle	360/540		
		vertical angle	0-255		
		XY speed	Normal/Fast/Slow		
		XY_POS	00/0128/1280/128128		
		LOGO	YES/NO		
	Verification code (not recommended to adjust, it	Verification code 01		Verification code 01=01, can be adjusted to zero position, verification code 01=01, verification	

Primary Menu	submenu	three-level menu	Four level menu	Five level menu	
	will change factory data)			code 02=02, can be set in the factory (not recommended to adjust, it will change the factory data of the lamp)	
		Verification code 02			
		Verification code 03			
		Verification code 04			
		Verification code 05			
		Back to previous level			
channel level				Real time feedback on the status of each channel	
Lamp reset	Execute/Cancel				
Exit menu					

channel description

1. Channel table

The channel of this lighting fixture can be viewed in scene mode, and the channel mode is set in the "Address Settings" page. The specific detailed data is shown in the table below:

channel table

channel	function	Channel value			effect
20 channels					
1	X motor	000	-	255	0-100%
2	Fine tuning of X motor	000	-	255	0-100%
3	Y-axis motor	000	-	255	0-100%
4	Y motor fine-tuning	000	-	255	0-100%
5	XY horizontal motor and vertical motor speed	000	-	255	Horizontal and vertical speed, fast to slow
6	stroboscopic	000	-	010	Closed light
		011	-	250	From slow to fast, regular strobe
		252	-	255	consecration
7	dimming	000	-	255	Dimming from 0% to 100%
8	color palette	000	-	005	white light
		006	-	010	White light+red
		011	-	015	red
		016	-	020	Red+Orange
		021	-	025	orange
		026	-	030	Orange+Yellow
		031	-	035	yellow
		036	-	040	Yellow+Green
		041	-	045	green
		046	-	050	green + blue
		051	-	055	blue
		056	-	060	Blue+Pink
		061	-	065	pink
		066	-	070	Pink+light blue
		071	-	075	light blue
		076	-	080	Light blue+white light
		081	-	168	Slow to fast forward rotation
		169	-	255	Reverse slowly to fast
9	fixed pattern	000	-	005	Pattern 1
		006	-	010	Pattern 2
		011	-	015	Pattern 3
		016	-	020	Pattern 4
		021	-	025	Pattern 5
		026	-	030	Pattern 6
		031	-	035	Pattern 7
		036		040	Pattern 8
		041	-	045	Pattern 2: Shake from slow to fast
		046	-	050	Pattern 3: Shake from Slow to Fast
		051	-	055	Pattern 4: Shake from Slow to Fast
		056	-	060	Pattern 5: Shake from slow to fast

channel	function	Channel value			effect
20 channels					
		061	-	065	Pattern 6: Shake from slow to fast
		066	-	070	Pattern 7 shakes from slow to fast
		071		075	Pattern 7 shakes from slow to fast
		076	-	164	Forward rotation fast to slow
		165	-	166	stop
		167	-	255	Reverse slowly to fast
10	Rotating pattern	000	-	004	white light
		005	-	009	Pattern 1
		010	-	014	Pattern 2
		015	-	019	Pattern 3
		020	-	024	Pattern 4
		025	-	029	Pattern 5
		030	-	034	Pattern 6
		035	-	039	Pattern 1: Shake from slow to fast
		040	-	044	Pattern 2: Shake from slow to fast
		045	-	049	Pattern 3: Shake from Slow to Fast
		050	-	054	Pattern 4: Shake from Slow to Fast
		055	-	059	Pattern 5: Shake from slow to fast
		060	-	064	Pattern 6: Shake from slow to fast
		065	-	195	Forward rotation fast to slow
		196	-	255	Reverse slowly to fast
11	Gobo Rotation	000		004	non-functional
		005	-	128	Pattern angle adjustment
		129	-	192	Pattern turning fast to slow
		193	-	255	Pattern reversal slow to fast
12	Prism 1	000	-	127	non-functional
		128	-	255	Prism 1 cutting in
13	Prism Rotation	0		127	Prism Index
		128		197	Prism rotates clockwise fast to slow
		198	-	255	Prism rotates counterclockwise from slow to fast
14	Prism 2	000	-	127	non-functional
		128	-	255	Prism 2 cutting in
15	Prism 2 Rotation	000		127	Prism 2 slow rotation
		128	-	255	Prism 2 rotates slowly to quickly
16	magnify	000	-	127	non-functional
		128		255	Zoom in and cut in
17	focusing	000	-	255	Focusing 0-100%
18	Function Settings	210	-	215	XY motor reset, hold for 3 seconds
		220	-	235	Head reset, hold for 3 seconds
		240	-	255	Reset all motors and maintain for 3 seconds
19	Aperture effect	000	-	009	no effect
		010	-	019	Effect 1
		020	-	029	Effect 2
		030	-	039	Effect 3
		——	-	——	Switching effects at intervals of 10
		——	-	255	Effect 25
20	Aperture effect speed	000	-	255	Aperture effect speed 0% -100%

Common faults and usage precautions

1. Common fault handling

The lamp contains professional components such as microcomputer circuit boards and high-voltage power supplies. For your safety and product lifespan, non professionals are not allowed to disassemble the lamp and related accessories without authorization.

1. The light bulb does not light up (except for LED light sources)

Possible reasons: The bulb has not completely cooled down, or the bulb has reached its lifespan. The following measures should be taken:

- Due to abnormal operation, the bulb has not completely cooled down. The lamp body should be allowed to cool for more than 10 minutes to fully restore its internal normal state, and then the power should be restarted;
- Check if the light bulb has reached its service life and replace it with a new one;
- Is there any leakage, detachment, or contact between the bulb and the lighting circuit (excluding LEDs)
- Replace the lamp with a new one.

2. The beam appears dim(Excluding LED)

Possible reasons: The light bulb has been used for a long time or the light path is not clean. The following measures should be taken:

- Check if the light bulb has reached its service life and replace it with a new one;
- Check whether the optical components or light bulbs are clean, whether there is dust accumulation on the light bulbs and other optical components, and regularly clean and maintain the light bulbs and various components inside the lamp.

3. Pattern projection blurred

- Check if the electronic focus channel value is appropriate for the current projection distance.

3. The lighting fixtures work intermittently

Possible cause: The internal circuit has entered a protected state. The following measures should be taken:

- Check if the fan is running normally or if it has become dirty, causing an increase in the internal temperature of the lighting fixture;
- Check if the internal temperature control switch is in the closed state;
- Check if the light bulb has reached its service life and replace it with a new one

3. After the lamp is reset normally, it does not accept control from the console

Possible reasons: Signal line malfunction or abnormal lighting parameter settings. The following are the solutions:

- Check the starting address code and the connection status of the DMX signal cable (whether the signal cable is intact and whether the connector is loose);
- Add a signal amplifier and a 120 ohm terminal resistor;

4. The lighting fixture cannot be started

Possible cause: Poor power supply circuit. The following measures should be taken:

- Check if the fuse on the power input socket is blown and replace the fuse;
- Poor contact of the circuit caused by vibration during long-distance transportation of lighting fixtures
- Check the input power supply, computer board, and other plug-in components.

7. Precautions for use

- Check whether the local power supply meets the rated voltage requirements of the product, and whether the leakage protector, overcurrent protector, etc. meet the load requirements carried
- Do not use power cords with damaged insulation layers, and do not overlap power cords with other wires;
- The lighting fixtures use strong wind cooling, which is prone to dust accumulation. Therefore, it is necessary to clean them once a month, especially the heat dissipation vents, otherwise they may be blocked by dust accumulation, resulting in poor heat dissipation and abnormal lighting fixtures.
- When installing lighting fixtures, the fixing screws must be tightened and equipped with safety ropes, and checked regularly;
- When installing and positioning the lamp, any point on the surface of the lamp should be kept at a minimum distance of 10 meters from any flammable or explosive material, and at a distance of 2.5 meters from the illuminated object. Please do not directly install the lamp on the surface of flammable materials;
- It is recommended that the continuous working time of the lamp should not exceed 10 hours, and the interval between continuous starting of the lamp should not be less than 10 minutes, otherwise it may not be triggered properly due to bulb overheating protection;
- The closing time of the switch valve should not exceed 5 minutes. If it is necessary to close the light for a long time, the control panel (lamp control channel) should be used to turn off the lamp;
- In order to ensure that multiple lighting fixtures better comply with the scene effect, the lighting fixtures should not be in an unfinished state of the current scene, that is, starting the next scene action. It is best not to exceed 3 minutes in this state to ensure that multiple lighting fixtures can run synchronously;
- During use, if there are any abnormalities in the lighting fixtures, they should be stopped in a timely manner to prevent the occurrence of other malfunctions.

8. Precautions for using RDM

RDM is an extended version of the DMX512-A protocol, which is a remote device management protocol. Traditional DMX512 protocol communication is one-way, and the protocol is based on the RS-485 bus. RS-485 is a time-sharing multi-point, half duplex protocol that allows only one port to be the host output at a time. Therefore, when using RDM, the following points should be noted:

- To use a console or host device that supports RDM protocol host;
- To use a bidirectional signal amplifier, traditional unidirectional signal amplifiers are not suitable for the RDM protocol because the RMD protocol requires feedback data. Using a unidirectional amplifier will block the returned data, resulting in the inability to search for lighting fixtures;
- All lighting fixtures must be set to DMX mode to ensure that there is only one host on the signal line;
- A 120ohm impedance matching resistor must be inserted between terminals 2 and 3 of the terminal plug. When the signal line is relatively long, reducing signal reflection will make differential signals more stable and beneficial for communication quality;
- When a light fixture is controlled by DMX but cannot be searched by RDM, first check the signal amplifier, and then check if there is a poor contact between the 2 and 3 wires of the signal line.