

100WLED pattern + light with computer
moving head light

user's manual

(RDM, color display, touch operation)



Please read the instructions carefully before use

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Chapter 1 Precautions and Installation

1. Maintenance

The lamp should be kept dry and avoid working in a humid environment.

Intermittent use will effectively extend the life of the lamp.

In order to obtain good ventilation and lighting effects, it is necessary to clean the fan, fan net and lens frequently.

Do not wipe the housing of the lamp with organic solvents such as alcohol to avoid damage.

2. Statement

When this product is shipped from the factory, the performance is intact and the packaging is complete. All users should strictly abide by the warnings and operating instructions stated above. Any damage caused by misuse is not covered by our company's guarantee. Failures and problems caused by ignoring the operating manual are not within the scope of the dealer's responsibility. .

This manual is subject to technical changes without notice.

3. Product precautions

In order to ensure the service life of the product, this product should not be placed in a humid or leaking place, and it should not be used in an environment where the temperature exceeds 60 degrees.

Do not place this product in a place that is easy to loosen or shake.

In order to avoid the risk of electric shock, the maintenance of this product requires professional maintenance.

When the bulb is in use, the power supply voltage should not change more than $\pm 10\%$. Too high voltage will shorten the life of the bulb, and too low voltage will affect the light color of the bulb.

After the power is cut off, it takes 20 minutes to use the lamp to fully cool down before it can be powered on again.

In order to ensure the normal use of this product, please read this manual carefully. Signal line connection (DMX)

Use RS-485 cables that meet the specifications: shielded, 120ohm characteristic impedance, 22-24 AWG, low capacitive reactance. Do not use microphone cables or cables with different specified characteristics. The connection of the terminal must use 3 or 5 pin XLR type male/female connector. (Minimum 1/4 W).

Important note: The wires cannot touch each other or the metal shell.

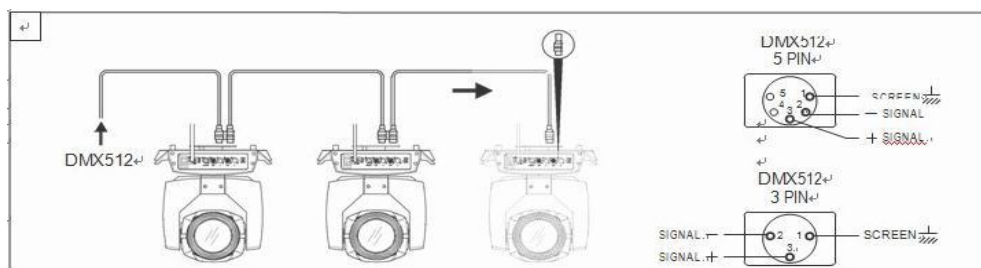


Figure 1 Schematic diagram of DMX signal line connection
Lamp installation

Lamps can be placed horizontally or obliquely

Hang and hang upside down. Be sure to pay attention to the installation method when hanging diagonally and upside down.

As shown in Figure 2, before locating the luminaire, ensure the stability of the installation site. During the reverse hanging installation, you must ensure that the luminaire does not fall down on the support frame. A safety rope needs to pass through the support frame and the luminaire lift. Hand assist hanging to ensure safety and prevent the lamp from falling and sliding.

When the lamps are installed and debugged, pedestrians are prohibited from passing underneath. Regularly check whether the safety ropes are worn and the hook screws are loose.

Our company will not bear any responsibility for all the consequences caused by the falling of the lamp due to the unstable installation of the hanging.

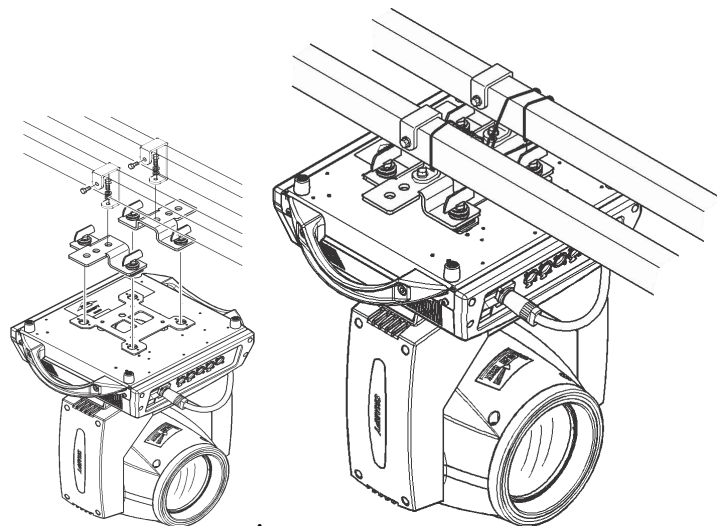


Figure 2 Schematic diagram of upside down lamps

Chapter 2 Panel Operation

Overview

The schematic diagram of the luminaire panel is shown in Figure 3. The upper title displays the name of the luminaire, and the lower is the status bar, which displays the current luminaire signal, bulb status, and fault (when there is a fault message that has not been checked, it will display "ERR", otherwise it will display "NOR") Wait.

This lamp supports the DMX/RDM protocol. When the lamp is searched by the RDM host, the three letters "RDM" will appear on the panel, indicating that the lamp is enumerated normally. The display and operation are similar to the "Android operating system", you can click on the corresponding item with your fingertip or a blunt object to operate.

Note: Do not use pointed or sharp objects to click on the display to prevent damage.

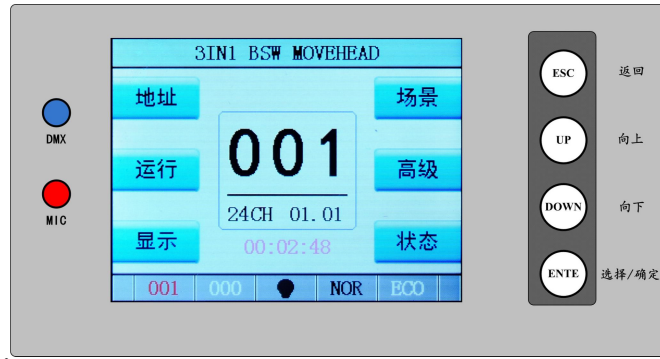


Figure 3 Schematic diagram of the display panel

2. Menu operation

1. Select a menu item

The left area is the TFT display area and the touch area. Click the content of the panel with your finger or blunt-faced hardware to complete parameter setting or viewing status.

The area on the right is auxiliary input. If you don't use the touch function that comes with TFT, you can use the auxiliary input to select items that need to be set or viewed to complete the operation.

2. Parameter value input

When the selected parameter item needs to enter a value, the window shown in Figure 4 will open:

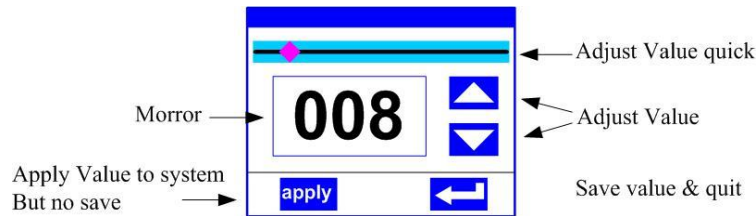


Figure 4 Value setting page

1. Set the value: You can directly pull the slide bar to quickly set the required value, or click the "up" or "down" button on the right to set the required value accurately or use the auxiliary input to set it.

2. Apply the value: When the data is set by the "up" or "down" button, and then press the "apply" application button in the lower left corner, the value will be sent to the fixture immediately, but the value has not been saved.

3. Save the value: At any time, click the "OK" button in the lower right corner to save the current value to the internal memory, and the saved value will be applied to the fixture next time you turn it on.

1. Set Boolean parameters

When the set parameter is a Boolean value (such as ON or OFF), you can directly click the corresponding item to switch the parameter value, and this type of parameter will be saved to the

internal memory after modification. Press the parameter option on the right, and the corresponding option will be grayed out. When you let go, the corresponding parameters will be changed and saved. If pressing the parameter option is not the parameter you want to change, move your finger to another place on the screen at this time, and the corresponding parameter will not change.

The confirmation of important Boolean parameters will pass, and the confirmation window will be set, as shown in Figure 5 below:

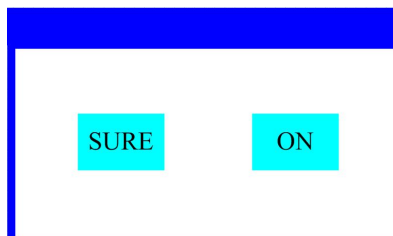


Figure 5 Confirm the input window

1. Subpage (parameters)



图 6-1地址设置



图 6-2运行设置



图 6-3显示设置



图 6-4场景设置



图 6-5高级设置

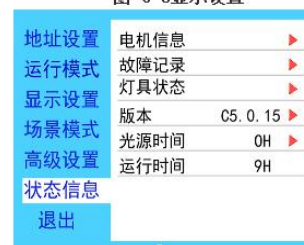


图 6-6状态信息

2. Function menu description

- Enter the setting interface, as shown in Figure 6-1:
- In the main interface, you can enter the corresponding parameter setting interface by selecting six buttons.
- In the parameter setting interface, you can press the blue option on the left to quickly switch to other setting interfaces.
- 1. Set the DMX address code
- Through the page shown in Figure 6-1, you can set the DMX address and channel mode of the fixture.
- The menu setting of the lamp optimizes the address setting, and the operations of several setting address codes are as follows:
- Choose "previous" or "next", the lamp will automatically calculate the address code of the next or previous unit according to the current address code and channel data, which can be quickly set;

- Click the value of the address code to enter the value editing window, where you can set any valid address code, the lamp will automatically obtain the current channel number of the lamp, and automatically filter the unusable address code (512-current channel number). 灯具 Support RDM protocol, you can set the address code of the lamp remotely through RDM.
- Two buttons are provided:
- Channel mode: different channel modes can be selected cyclically;
- Fixture reset: reset all motors.

1. Set the working mode of the lamp

Through the page shown in Figure 6-2, you can set the operating mode of the lamps and control the lights. The lamp supports four operating modes (DMX mode, self-propelled mode, sound control mode and scene mode). For detailed parameter value settings, please refer to the previous section. The specific parameter descriptions are shown in the following table:

Operating mode

DMX mode	Console mode, receiving DMX signal, RDM signal	
Self-propelled mode	Lamps and lanterns run automatically according to the built-in program	
Voice control mode	When the lamp detects a strong sound, the lamp will automatically run a scene according to the built-in program, otherwise the last scene will be kept	
Scene mode 01	Run in the set scene mode, support custom editing of up to 10 scenes	
	1~10	Output specified scene
	automatic	Automatically output the scenes in the sequence of the set scene time (non-zero), and the scene with the time of 0 will be automatically skipped and ignored
Master-slave selection	Valid in non-DMX mode, select the data output mode, the lamp will automatically detect the DMX status and automatically switch the output to prevent data conflicts	
	Host	The lamp runs as built-in, if there is no DMX signal, it will output data (synchronized), otherwise it will not output data
	Slave	The lamps are operated as built-in, no data is output (not synchronized with other lamps)
	automatic	If there is no DMX signal, the lamp will operate as built-in, otherwise, the lamp will operate as DMX signal
Light bulb switch	(Lamp light source) A confirmation dialog box pops up, select "SURE" to confirm the current operation, turn on or off the bulb, and the switching interval is limited to 30 seconds	
	closure	The current lamp output is turned off
	Turn on	The current light output is already on

The scene mode is suitable for a single or a small number of lamps. It only needs to output a fixed scene, or a simple program needs to be run. You can edit it in the scene page without connecting to the console.

If the light source of the lamp is a bulb, after turning off the bulb, please wait 10 minutes before turning on the bulb.

Panel display settings

The lamp supports Chinese and English bilingual, upside down display, etc., enter the corresponding parameter settings as shown in Figure 6-3, the specific menu content is shown in the following table:

display setting

Language	Set the displayed language	
	English	English display
	Chinese	Chinese display
screen protector	Set the display content or mode of the screen after 30 seconds of no operation on the screen	
	closure	Keep the last operation page, bright screen
	Mode 1	Screen off
	Mode 2	Black screen, the address code of the current fixture is displayed in the lower left corner
	Mode 3	Display brand information, address code and operating mode
Screen rotation	Set the display direction of the screen	
	closure	Do not reverse the display
	Turn on	Reverse display
	automatic	Automatically detect the direction of the lamp hanging lamp, and automatically switch the display direction
DMX instructions	Set the indication mode of DMX signal indicator	
	Mode 1	On when there is a signal, off when there is no signal
	Mode 2	Off when there is a signal, on when there is no signal
	Mode 3	Flashes when there is a signal, and goes off when there is no signal
Signal indicating brightness	Set the brightness of the signal indicator	
	1~10	10 levels
Screen backlight	Set the brightness of the screen backlight after 10 seconds of no operation, and it will be all on during operation	
	1~10	10 levels
Touch screen switch	Choose whether to disable the touch screen. When the touch screen is accidentally damaged, the touch function can be disabled, and the auxiliary input can be used to set the lamp	
Touch correction	When the screen touch is not accurate, you can enter the calibration page to calibrate the screen	

For lamps that support touch operation, if there is a bad touch, you can enter the calibration page to re-calibrate the touch accuracy of the touch screen. Under normal circumstances, please do not enter this page. If the touch is damaged, please choose to disable the touch switch.

Scene mode

Entering the page shown in Figure 6-4, the fixture enters the scene editing mode. Under this page, the fixture does not receive DMX console data, and the edited data is reflected on the fixture immediately.

The content of the page depends on the currently selected channel, and the displayed channel content and sequence are consistent with the fixture channel table. Through this page, 10 scenes can be edited, as shown in the following table:

Scene mode		
Scene selection	Select the current need to operate the scene	
	1~10	10 scene setting formats
Scene time	Set the retention time of the current scene in automatic mode, the unit is 0.1 seconds	
	0	The current scene does not participate in automatic scene output
	1-255	0..1 second to 25.5 seconds
1. X axis	0-255	Set the data of each channel, the display content and sequence correspond to the channel table of the lamp one by one
...	0-255	
...	0-255	
N. Function	0-255	

If the reset channel in the scene edits the effective reset data, the lamp will be reset, but after reset, the value of the corresponding reset channel will be automatically cleared to prevent multiple consecutive resets.

View this page, you can get the current channel table sequence of the fixture. For specific channel data, please refer to the detailed channel description.

Set lamp working parameters

Enter the page shown in Figure 6-5, adjust the on-site parameters of the lamp, and facilitate the on-site installation of the lamp, etc.:

advanced settings

X axis reverse	Set the X axis rotation direction	
	closure	Not reverse
	Turn on	Reverse
Y axis reverse	Set Y axis rotation direction	
	closure	Not reverse
	Turn on	Reverse
Optocoupl	Set whether the lamp detects XY out-of-step and corrects it	

er correction	closure	Do not correct position after out of step
	Turn on	Automatically correct the position after out-of-step, and record the out-of-step fault
X axis offset	Set the position of the zero point of the X-axis of the lamp	
	4-150	
Y axis offset	Set the position of the Y-axis zero point of the lamp	
	4-48	
Data retention	Set the output state of the lamp when there is no DMX signal	
	closure	No signal, so the motor and light source return to the position and state when the reset is complete
	Turn on	No signal, keep the last frame of DMX data output
Light-on mode	Set the way the bulb is turned on for the first time after powering on	
	Power on and open bubble	Turn on the bulb first when powering on, and reset the lamp after 30 seconds
	Open bubble after reset	Reset the lamp 3 seconds after power-on, and turn on the bulb after the reset is complete
	Manually open the bubble	After the reset is completed, manually turn on the bulb through the menu or console
Factory settings	A confirmation box pops up, after selecting "SURE", the lamp parameters return to the factory settings	

When the power-on and bubble-opening mode is selected, after the lamp is powered on, it will wait for the bulb for 30 seconds to fully start the bulb. After the internal voltage is stable enough, start the reset procedure. If the on-site power consumption is stable, it is recommended to power-on and turn on the bulb mode. .

When the position of the lamp cannot be adjusted, please check whether the "Optical Coupler Calibration" is turned off first.

After unplugging the signal, if the position of the lamp is not output as expected, please check the "data hold" setting first.

When setting the XY offset, after completing the setting, please control XY with the maximum stroke first to check that after the setting, X Y will not hit the positioning rod or the housing.

1. View the current status of the fixture

Enter the page shown in Figure 6-6, you can view the information and real-time status of the lamp to get the status of the lamp. If the lamp needs after-sales service, please provide the status information displayed on this page as a basis for judgment, as shown in the following table:

status information

Motor information	Display the information status of all motors and signals in the lamp	
	Hall	No display, it means the motor has no Hall calibration, 0 means the motor has left the calibration position, 1 means the motor is at the calibration position
	state	Display the completion status of the motor reset
	X axis	Display the real-time position value of the X-axis optocoupler feedback
	Y axis	Display the real-time position value of Y-axis optocoupler feedback
	Optocoupler	Display the level status of the two signals of the X and Y axis optocoupler, binary
Fault/status record	Display the latest 8 fault records when the lamp is reset and running. The fault record will not be saved after the power is off. The current power cycle is valid	
	Failure data	Total number of faults detected after power-on
	12:03	Power-on time when the fault occurs, in minutes
	Hall failure	Corresponding to the motor did not detect a valid Hall signal when the motor was reset
	Hall short circuit	Corresponding to the detection of the motor's Hall signal when the motor is reset, it is always valid
	Optocoupler failure	No valid optocoupler signal is detected when the corresponding motor is reset
	Out of step	Corresponding motor loses step during operation
	Bump	Corresponding to hit the positioning rod when the motor is reset
	Lamp failure	The light bulb has been blown out unexpectedly
	Sensor failure	The temperature sensor signal is abnormal,
	Fan failure	The main fan is not working properly
Lamp status	Display the key status data of the current luminaire for reference	
	Communication	0~100%, the communication quality of the internal data link of the lamp
	Error count	The total number of error frames detected after power-on, accumulated
	Light source temperature	Display the current temperature of the light source, "---" means no detection
	Display board temperature	Display the temperature of the current display board or the ambient temperature nearby
	Sensor 1 temperature	Display the current motherboard temperature or the ambient temperature of the motherboard installation location
Version Information	Display the information and version of the current lamp, an important reference for after-sales maintenance	
	equipment	The name of the lamp, the same as the device information of RDM

	model	Lamp model, same as RDM model information
	display board	Display the firmware version and serial number of the board
	Motherboard 1	Firmware version and serial number of motherboard 1
Light source time	Record the total cumulative time when the light source is turned on, the unit is minute, and the user can manually clear it as a time reference for regular maintenance of the light source	
Lamp time	Record the total cumulative time the lamps are turned on, in minutes, cannot be cleared	

Chapter 3 Channel Description

Channel table

The order of this lamp channel can be checked in the scene mode. The channel mode is set in the "Address Setting" page. The specific details are shown in the table below:

Channel1	Name	Value	Description
CH1	Strobe	0-3	Guan Guang
		4-127	Pulse stroboscopic from slow to fast
		128-191	Gradual strobe from slow to fast
		192-251	Random strobe from slow to fast
		252-255	Consecrate
CH2	Dimming	0-255	0-100% dimming
CH3	X axis	0-255	0-540 degrees
CH4	Y axis	0-255	0-270 degrees
CH5	XY speed	0-255	From fast to slow
CH6	colour	0-7	White light
		8-15	White light + color 1
		16-23	Color 1
		24-31	Color 1 + color 2
		32-39	Color 2
		40-47	Color 2 + color 3
		48-55	Color 3
		56-63	Color 3 + color 4
		64-71	Color 4
		72-79	Color 4 + color 5
		80-87	Color 5
		88-95	Color 5 + color 6
		96-103	Color 6
		104-111	Color 6 + color 7
112-119	Color 7		

		120-127	Color 7 + white light
		128-190	Positive flow from fast to slow
		191-192	stop
		193-255	Reverse flow from slow to fast
CH7	pattern	0-9	White light
		10-19	Pattern 1
		20-29	Pattern 2
		30-39	Pattern 3
		40-49	Pattern 4
		50-59	Pattern 5
		60-69	Pattern 6
		70-79	Pattern 7
		80-84	Jitter pattern 1 from slow to fast
		85-89	Jitter pattern 2 from slow to fast
		90-94	Jitter pattern 3 from slow to fast
		95-99	Jitter pattern 4 from slow to fast
		100-104	Jitter pattern 5 from slow to fast
		105-109	Jitter pattern 6 from slow to fast
		112-127	Jitter pattern 7 from slow to fast
		128-190	Positive flow from fast to slow
		191-192	stop
		193-255	Reverse flow from slow to fast
CH8	Rotating pattern	0-9	White light
		10-19	Pattern 1
		20-29	Pattern 2
		30-39	Pattern 3
		40-49	Pattern 4
		50-59	Pattern 5
		60-69	Pattern 6
		70-79	Jitter pattern 1 from slow to fast
		80-89	Jitter pattern 2 from slow to fast
		90-99	Jitter pattern 3 from slow to fast
		100-109	Jitter pattern 4 from slow to fast
		110-119	Jitter pattern 5 from slow to fast
		120-127	Jitter pattern 6 from slow to fast
		128-190	Positive flow from fast to slow
		191-192	stop
193-255	Reverse flow from slow to fast		
CH9	Pattern rotation	0-127	0-400 degrees

		128-190	Positive flow from fast to slow
		191-192	stop
		193-255	Reverse flow from slow to fast
CH10	Prism 1 rotation	0-19	without
		20-63	Prism
		64-255	Positive flow from slow to fast
CH11	focusing	0-255	From far to near
CH12	X-axis fine adjustment	0-255	0-2 degrees
CH13	Y-axis fine adjustment	0-255	0-1 degrees
CH14	Auxiliary light strobe	0-10	shut
		11-249	Strobe from slow to fast
		250-255	Consecrate
CH15	Auxiliary light effect	0-3	shut
		4-7	Red
		8-11	green
		12-15	Blue
		16-19	yellow
		20-23	green
		24-27	purple
		28-31	White
		32-63	Horse racing 1
		64-95	Happy Horse 2
		96-127	background
		128-149	Warm
		150-199	Gradual change from slow to fast
		200-255	Change colors from slow to fast
CH16	Function	0-25	No effect
		26-76	Reset XY in more than 3 seconds
		77-127	More than 4 seconds to reset the effect motor
		128-255	More than 5 seconds to reset all

Chapter 4 Common Faults and Precautions for Use 12

. Common troubleshooting

The lamp contains professional components such as microcomputer circuit board and high-voltage power supply. For your safety and product life, non-professionals should not disassemble the lamp and related accessories without authorization.

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

Possible cause: The bulb is not completely cooled, or the bulb has reached the end of its life, the

treatment is as follows:

Due to abnormal operation, the bulb has not been completely cooled, so let the lamp body cool for more than 10 minutes to make the interior completely return to normal state, and then turn on the power again;

Check whether the bulb has reached the end of its service life, and replace it with a new one;

Check whether the bulb and the lighter circuit are leaking, falling off or having poor contact;

Replace with a new lighter.

- 2. The light beam appears dim

Possible cause: The lamp has been used for a long time or the light path is not clean. The treatment is as follows:

Check whether the bulb has reached the end of its service life, and replace it with a new one;

Check whether the optical components or bulbs are clean, and whether there is dust on the bulbs and other optical components. Regular cleaning and maintenance of the bulbs and components in the lamps are required.

- 3. Blurred pattern projection

Check whether the electronic focus channel value is suitable for the current projection distance.

- 4. The lamps work intermittently

Possible cause: The internal circuit enters the protection state, and the processing is as follows:

Check whether the fan is operating normally or whether it is dirty, causing the internal temperature of the lamp to rise;

Check whether the internal temperature control switch is in the closed state;

Check whether the bulb has reached the end of its service life, and replace it with a new one.

- 5. After the lamp is reset normally, it does not accept the control of the console

Possible cause: The signal line is faulty or the lamp parameter setting is not normal, the treatment is as follows:

Check the start address code and check the connection of the DMX signal line (whether the signal line cable is intact, and whether the connection of the Deng Nong head is loose);

Add signal amplifier and 120 ohm terminal resistance;

- 6. The lamps cannot be started

Possible reason: bad power line, the treatment is as follows:

Check whether the fuse on the power input socket is fused, and replace the fuse;

Lamps have poor line contact due to vibration during long-distance transportation

Check the input power, computer board and other plug-in devices.

- 2. Precautions for use

Check whether the local power supply meets the rated voltage requirements of the product, and the leakage protector and overcurrent protector meet the requirements of the load;

Do not use power cords with damaged insulation, and do not overlap power cords with other wires;

The lamp adopts strong wind cooling, which is easy to accumulate dust. It must be cleaned once a month, especially the heat dissipation vent, otherwise it will be blocked by the accumulation of dust, resulting in poor heat dissipation and abnormalities in the lamp.

When installing the lamps, the fixing screws must be fastened, with safety cables, and regular inspections;

When installing and positioning the luminaire, keep a minimum distance of 10 meters between any point on the surface of the luminaire and any flammable and explosive object, and the distance from the irradiated object is 2.5 meters. Please do not install the luminaire directly on the surface of combustible 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 will not be triggered normally due to the overheating protection of the lamp;

The closing time using the on-off valve should not exceed 5 minutes. If you need to close the light for a long time, you should use the console (lighting control channel) to turn off the light;

In order to ensure that multiple lamps can better comply with the scene effect, the lamps should not be in the unfinished current scene all the time, that is, start the next scene action. It is best not to exceed 3 minutes in this state to ensure that multiple lamps can run simultaneously;

During use, if there is an abnormality in the lamp, stop using the lamp in time to prevent other malfunctions.

- 3. Precautions for the use of RDM

RDM is an extended version of the DMX512-A protocol. It is a remote device management (Remote Device Management) protocol. The traditional DMX512 protocol communication is one-way communication. The protocol is based on the RS-485 bus. RS-485 is a time-sharing multipoint, half-duplex protocol. , Only one port is allowed to output from the host at the same time, so, pay attention to the following points when using RDM:

Use a console or host device that supports the RDM protocol host;

To use a two-way signal amplifier, the traditional one-way signal amplifier is not suitable for the RDM protocol, because the RMD protocol requires feedback data, and the use of a one-way amplifier will block the returned data, resulting in not being able to search for the lamps;

All lamps 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 the terminals 2 and 3 of the terminal plug. When the signal line is relatively long, reducing signal reflection will use the differential signal to be more stable, which is conducive to the quality of communication;

When it appears that the lamp accepts DMX control, but cannot search for the lamp by RDM, first check the signal amplifier, and then check whether there is a bad connection between the 2 and 3 lines of the signal line.

Technical parameter:

Voltage: AC100-240V 50-60HZ

Total power rate: 200W

Light source 1: 1 white 90W LED lamp beads (15V, 6.5A)

Light source 2: 12 0.2W RGB three-in-one lamp beads

Color: 1 white light + 7 colors

Pattern 1: 1 white light + 7 patterns

Pattern 2: 1 white light + 6 rotating patterns (4 glass images + 2 metal)

Channel: 16CH

Prism: 3 prisms

Control mode: DMX, master-slave, self-propelled, voice control