380W Beam Moving Head

User's Manual

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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, pay attention to cleaning the fan, fan mesh and lens frequently.
- Do not use alcohol or other organic solvents to wipe the lamp housing to avoid damage.

2. Statement

When this product leaves 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 the company's guarantee, and the failure and problems caused by ignoring the operation 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 work in an environment where the temperature exceeds 60 degrees.
- Do not place this product in a place where it is easy to loosen or vibrate.
- In order to avoid the risk of electric shock, the maintenance of this product requires professional maintenance.
- When the light bulb is in use, the power supply voltage should not change by more than ±10%. If the voltage is too high, the life of the light bulb will be shortened. If the voltage is too low, the light color of the light bulb will be affected.
- After the power is turned off, it takes 20 minutes for the lamp to cool down before it can be powered on again.
- In order to ensure the normal use of this product, please read this instruction carefully. Signal line connection (DMX).

Use RS-485 cable that meets specifications: shielded, 120ohm characteristic impedance, 22-24 AWG, low capacitance. Do not use microphone cables or cables with different specified characteristics. Terminal connections must use 3 or 5 pin XLR type male/female connectors. (minimum 1/4 W).

IMPORTANT: The wires must not touch each other or the metal case.

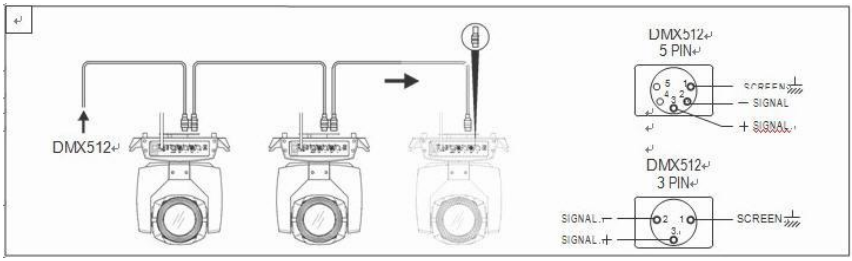


Figure 1 DMX signal line connection diagram

4. Lamp installation

The lamps can be placed horizontally, obliquely and upside down. Be sure to pay attention to the installation method when hanging it obliquely and upside down.

As shown in Figure 2, before positioning the lamps, the stability of the installation site must be ensured. When reversing the hanging installation, it must be ensured that the lamps do not fall off the support frame, and a safety rope needs to be passed through the support frame and the lamp to lift. Auxiliary hanging by hand to ensure safety and prevent the lamp from falling and sliding.

During the installation and debugging of the lamps, pedestrians are prohibited from passing below, and regularly check whether the safety ropes are worn and whether the hook screws are loose.

Our company is not responsible for all the consequences caused by the fall of the lamp due to the unstable hanging installation.

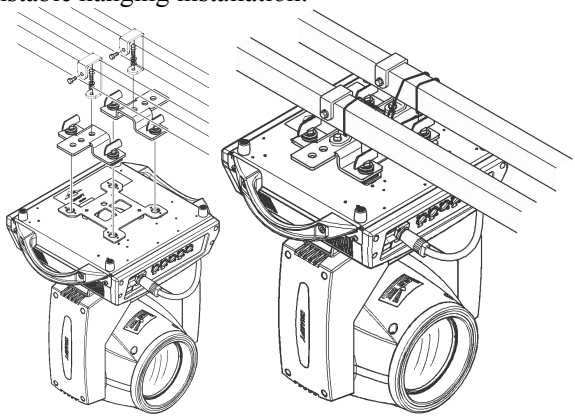


Figure 2 Schematic diagram of upside-down lamps

Chapter 2 Panel Operation

1. Overview

The schematic diagram of the luminaire panel is shown in Figure 3. The title above displays the name of the luminaire, and the bottom is the status bar, which displays the current luminaire's 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.

The fixture supports DMX/RDM protocol. When the fixture is searched by the RDM host, the three letters "RDM" will appear on the panel, indicating that the fixture is enumerated normally.

The display and operation are similar to "Android operating system", and you can operate it by clicking the corresponding item with your fingertip or a blunt object.

Note: Do not tap the display with a pointed or sharp object to prevent damage.

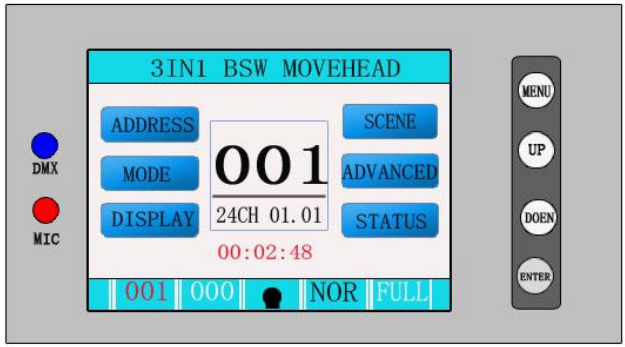


Figure 3 Schematic diagram of the display panel

2. Menu operation

1. Select the menu item

- The left area is the TFT display area and the touch area. Click the contents of the panel with your finger or blunt hardware to complete the parameter setting or check the status and other operations.
- The area on the right is the auxiliary input. If you do not use the touch function that comes with TFT, you can use the auxiliary input to select the item 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 be opened:

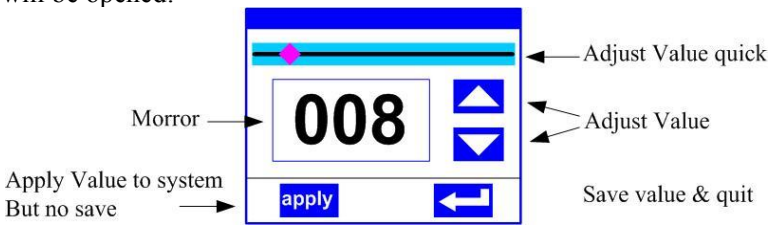


Figure 4 Value setting page

- **Set value：** You can directly pull the slider to quickly set the required value, or you can click the "up" or "down" button on the right to set the required value precisely or use the auxiliary input to set.
- **Applied value：** When the data is set through the "up" or "down" button, and then press the "apply" application button in the lower left corner, the value is immediately sent to the fixture, but the value is not saved.
- **Save 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 it is turned on.

3. Set boolean value parameter

- 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 the modified parameter will be saved to the internal storage. Press the parameter

option on the right, the corresponding option will be grayed out. When the hand is released, the corresponding parameters are changed and saved. If pressing the parameter option is not the parameter you want to change, you can move your finger to other places on the screen, and the corresponding parameter will not be changed.

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

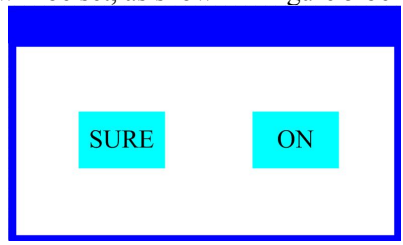
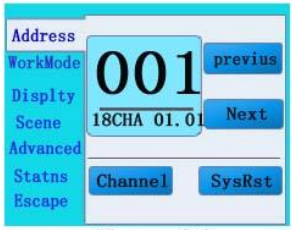


Figure 5 confirm input window

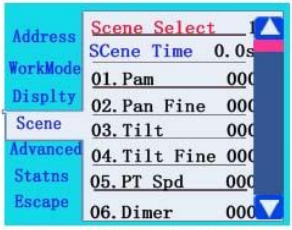
4. Subpages (parameters)



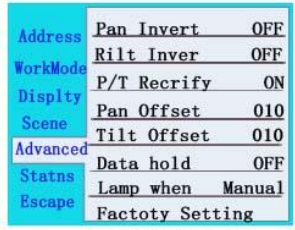
Picture 6-1

Picture 6-2

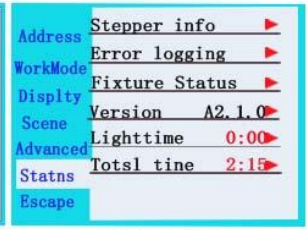
Picture 6-3



Picture 6-4



Picture 6-5



Picture 6-6

Picture 6

3. 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 DMX address code

Through the page shown in Figure 6-1, the DMX address and channel mode of the fixture can be set.

The menu settings of the lamps optimize the address settings. The operations of several address codes are as follows:

- Select "Previous" or "Next", the lamp will automatically calculate the next or previous address code according to the current address code and channel data, which can be set quickly;
- Click the address code value to enter the value editing window, where you can set any valid address code, the fixture will automatically obtain the current channel number of the fixture, and automatically filter the unavailable address code (512-current channel number).
- The lamps support RDM protocol, and the address code of lamps can be set remotely through RDM.

Two buttons are provided:

- Channel mode: Different channel modes can be selected cyclically;
- Lamp reset: reset all motors.

2. Set the working mode of the lamp

Through the page shown in Figure 6-2, you can set the running mode of the light fixture and control the light bulb. The lamp supports four operating modes (DMX mode, self-propelled mode, voice 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, receive DMX signal, RDM signal	
self-propelled mode	The lamps run automatically according to the built-in program	
voice control mode	When the luminaire detects a strong sound, the luminaire automatically runs a scene according to the built-in program, otherwise it keeps the last scene	
scene mode 01	Runs in the set scene mode, supports custom editing of up to 10 scenes	
	1~10	output the specified scene
	automatic	Automatically loop and output scenes in the order of the set scene time (non-zero), and the scene with time of 0 is automatically skipped and ignored
Master-slave selection	It takes effect when not in DMX mode, select the data output mode, the lamp automatically detects the DMX state and automatically switches the output to prevent data conflict	
	host	The light fixture operates as built-in, if there is no DMX signal, it will output data (synchronization), otherwise it will not output data
	Slave	The lamps operate as built-in and do not output data (do not synchronize with other lamps)
	automatic	If there is no DMX signal, the luminaire operates as built-in, otherwise, the luminaire operates as the DMX signal
light bulb on/off	(Bulb light source) A confirmation dialog box pops up, select "SURE" to confirm the current operation, turn on or off the light bulb, and the switching time interval is limited to 30 seconds	
	off	The current lamp output is already off
	on	The current light output is already on

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

If the light source of the lamp is a light bulb, after turning off the light bulb,

please wait 10 minutes before turning on the light bulb.

3. Panel display settings

The lamps support Chinese and English bilingual, upside down display, etc., enter the corresponding parameter settings as shown in Figure 6-3, and the specific menu contents are shown in the following table:

Display setting

Language	Set the displayed language	
	English	English display
	中文	Chinese display
screen protector	Set the display content or method of the screen after there is no operation on the screen for 30 seconds	
	off	Keep the last operation page, bright screen
	Mode 1	screen off
	Mode 2	The screen is black, and the address code of the current fixture is displayed in the lower left corner
	Mode 3	Display trademark information, address code and operating mode
screen rotation	Set the display orientation of the screen	
	off	Do not reverse the display
	on	reverse display
	automatic	Automatically detect the direction of the lamps and lanterns, and automatically switch the display direction
DMX instructions	Set the indication method of the 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, off when there is no signal
Signal indication 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 fully bright during operation	
	1~10	10 levels
touch screen switch	Choose whether to disable the touch screen, when the screen touch is accidentally damaged, the touch function can be disabled, use the auxiliary input to set the light	
touch correction	When the screen touch is not accurate, you can enter the correction page to correct the screen	

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

4. Scene Mode

Enter the page shown in Figure 6-4, and 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 order 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 seconds to 25.5 seconds
1. X axis	0-255	Set the data of each channel, the display content and sequence are in one-to-one correspondence with the channel table of the fixture
……	0-255	
……	0-255	
N. Fuction	0-255	

If you edit valid reset data in the reset channel in the scene, the fixture will reset, but after reset, the value of the corresponding reset channel will be automatically cleared to prevent multiple consecutive resets.

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

5. Set the working parameters of the lamps

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

Advanced settings

X-axis reversed	Set the X-axis rotation direction	
	OFF	not reverse
	ON	reverse
Y-axis reversed	Set the Y-axis rotation direction	
	OFF	not reverse
	ON	reverse
Optocoupler Correction	Set whether the fixture detects XY out of step and corrects it	
	OFF	Do not correct position after out of step
	ON	Automatically correct position after out of step, and record out-of-step fault
X-axis offset	Set the position of the X-axis zero point of the fixture	
	4-150	
Y-axis offset	Set the position of the Y-axis zero point of the fixture	
	4-48	
data retention	Set the output state of the fixture when the fixture has no DMX signal	
	off	No signal, so the motor and light source return to the position and state when the reset was completed
	on	No signal, keep the last frame of DMX data output
On light mode	Set how the bulb turns on for the first time after power up	
	Power on and open the bubble	Turn on the bulb first when power on, reset the lamp after 30 seconds
	Open after reset	Reset the lamp after 3 seconds of power-on, and turn on the bulb after the reset is complete
	Manual opening	After the reset is complete, turn on the bulb manually through the menu or console
Factory settings	A confirmation box will pop up, after selecting "SURE", the lamp parameters will return to the factory settings	

When the power-on 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, the reset procedure will be started. If the on-site power consumption is stable, the power-on bulb mode is recommended. .

When the lamp cannot correct the position, please first check whether the "Optocoupler Correction" is turned off.

When the signal is unplugged, if the position of the fixture is not output as expected, please check the "Data Hold" setting first.

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

6. Check the current status of the lamps

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

status information

Motor information	Displays the information status of all motors and signals within the luminaire	
	Hall	If not displayed, it means the motor has no Hall calibration, 0 means the motor leaves the calibration position, 1 means the motor is at the calibration position
	state	Displays motor reset completion status
	X axis	Display real-time position value of X-axis optocoupler feedback
	Y axis	Display real-time position value of Y-axis optocoupler feedback
	optocoupler	Display the level status of the two signals of the X and Y axis optocouplers, binary
Fault/Status Log	Display the last 8 fault records when the lamp is reset and running. The fault records will not be saved after the power is turned off, and the current power-on cycle will be valid.	
	fault data	Total number of faults detected after power up
	12：:03	The power-on time when the fault occurs, in minutes
	Hall fault	The motor does not detect a valid Hall signal when the corresponding motor is reset
	Hall short circuit	When the motor is reset, the Hall signal detected by the motor is always valid
	Optocoupler failure	No valid optocoupler signal is detected when the corresponding motor is reset
	out of step	The corresponding motor is out of step during operation
	striker	When the corresponding motor is reset, it hits the positioning rod
	bulb failure	Bulb accidentally goes out
	sensor failure	The temperature sensor signal is abnormal,
	fan failure	Main fan not working properly
Lamp status	Display key status data of the current fixture for reference	
	communication	0~100%, Communication quality of the data link inside the luminaire
	error count	The total number of error frames detected after power-on, accumulated

	light source temperature	Display the temperature of the current light source, "---" means no detection
	Display panel temperature	Displays the current display panel temperature or nearby ambient temperature
	Sensor 1 temperature	Displays the current motherboard temperature or the ambient temperature where the motherboard is installed
Version Information	Display the information and version of the current lamp, an important reference for after-sales maintenance	
	equipment	The name of the fixture, the same as the device information of the RDM
	model	The model of the luminaire, the same as the model information of the RDM
	display board	Display board firmware version and serial number
	Motherboard 1	The firmware version and serial number of motherboard 1
Light source time	Record the total cumulative time when the light source is turned on, in minutes, and the user can manually clear it as a time reference for the regular maintenance of the light source.	
Lamp time	Record the total cumulative time of the lamp being turned on, in minutes, which cannot be cleared.	

Chapter 3 Channel Description

1. Channel table

The channel of this fixture can be viewed in the scene mode, and the channel mode is set in the "Address Setting" page. The specific details are shown in the following table:

Chanel	Name	Value	Description
CH1	Color	0-4	white light
		5-9	white light + color 1
		10-14	color 1
		15-19	Color 1 + Color 2
		20-24	color 2
		25-29	Color 2 + Color 3
		30-34	color 3
		35-39	Color 3 + Color 4
		40-44	color 4
		45-49	Color 4 + Color 5
		50-54	color 5
		55-59	Color 5 + Color 6
		60-64	color 6
		65-69	Color 6 + Color 7
		70-74	color 7
		75-79	Color 7 + Color 8
		80-84	color 8
		85-89	Color 8 + Color 9
		90-94	color 9
		95-99	Color 9 + Color 10
		100-104	color 10
		105-109	Color 10 + Color 11
		110-114	color 11
		115-119	Color 11 + Color 12
		120-124	color 12
		125-129	Color 12 + Color 13
		130-134	color 13
		135-139	Color 13 + Color 14
		140-144	Color 14
		145-149	Color 14 + White Light
		150-202	Forward flow from fast to slow
		203-255	Reverse flow from slow to fast

CH2	**Strobe**	0-3	Off light
		4-103	Slow to fast pulse strobe
		104-107	consecrated
		108-207	Gradual strobe from slow to fast
		208-212	consecrated
		213-251	Random strobe from slow to fast
		252-255	consecrated
CH3	**Dimming**	0-255	0-100% Dimming
CH4	**Gobo**	0-4	White light
		5-9	Gobo 1
		10-14	Gobo 2
		15-19	Gobo 3
		20-24	Gobo 4
		25-29	Gobo 5
		30-34	Gobo 6
		35-39	Gobo 7
		40-44	Gobo 8
		45-49	Gobo 9
		50-54	Gobo 10
		55-59	Gobo 11
		60-64	Gobo 12
		65-69	Gobo 13
		70-74	Gobo 14
		75-79	Gobo 15
		80-84	Gobo 16
		85-89	Gobo 17
		90-128	Forward flow from fast to slow
		129-131	Stop
		132-170	Reverse flow from slow to fast
		171-175	Slow to Fast Dither Gobo 1
		176-180	Slow to Fast Dither Gobo 2
		181-185	Slow to Fast Dither Gobo 3
		186-190	Slow to Fast Dither Gobo 4
		191-195	Slow to fast jitter Gobo 5
		196-200	Slow to Fast Dither Gobo 6
		201-205	Slow to Fast Dither Gobo 7
		206-210	Slow to Fast Dither Gobo 8
		211-215	Slow to fast jitter Gobo 9

		216-220	Slow to Fast Dither Gobo 10
		221-225	Slow to Fast Dither Gobo 11
		226-230	Slow to Fast Dither Gobo 12
		231-235	Slow to Fast Dither Gobo 13
		236-240	Slow to Fast Dither Gobo 14
		241-245	Slow to Fast Dither Gobo 15
		246-250	Slow to Fast Dither Gobo 16
		251-255	Slow to Fast Dither Gobo 17
CH5	**Prism 1**	0-127	Remove the prism
		128-255	Insert Prism 1
CH6	**Prism rotation**	0-127	0-400 degrees
		128-187	Forward flow from fast to slow
		188-195	stop
		196-255	Reverse flow from slow to fast
CH7	**Prism 2**	0-127	Remove the prism
		128-255	Insert Prism 2
CH8	**Prism 2 rotation**	0-127	0-400 degrees
		128-187	Forward flow from fast to slow
		188-195	stop
		196-255	Reverse flow from slow to fast
CH9	**focusing**	0-255	from far to near
CH10	**X axis**	0-255	0-540 degrees
CH11	**X-axis fine-tuning**	0-255	0-2 degrees
CH12	**Y axis**	0-255	0-270 degrees
CH13	**Y-axis fine-tuning**	0-255	0-1 degrees
CH14	**XY speed**	0-255	from fast to slow
CH15	**atomization**	0-127	none
		128-255	insert atomization
CH16	**colorful**	0-127	none
		128-255	Insert colorful
CH17	**Light bulb**	100--105	Turn off the lights for more than 3 seconds
		200-205	Turn on the light cannon for more than 3 seconds
CH18		240-255	More than 3 seconds to reset

Common faults and use precautions

1. Common fault handling

The lamps contain professional components such as microcomputer circuit boards and high-voltage power supplies. For your safety and product life, non-professionals should not disassemble lamps and related accessories without authorization.

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

Possible reasons: The bulb has not cooled down completely, or the bulb has reached its lifespan. The treatment is as follows:

- Because of abnormal operation, the bulb is not completely cooled, let the lamp body cool down for more than 10 minutes, so that the interior can be completely restored to the normal state, and then turn on the power again;
- Check whether the bulb has reached its service life and replace it with a new bulb;
- Check whether the circuit between the bulb and the lighter is leaking, falling off or in poor contact;
- Replace the lamp with a new one.

2. The beam appears dim

Possible reasons: The bulb 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 its service life and replace it with a new bulb;
- Check whether the optical components or light bulbs are clean, and whether there is dust accumulated on the light bulbs and other optical components. It is necessary to regularly clean and maintain the light bulbs and various components in the lamp.

3. Pattern projection blur

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

4. Lamps work intermittently

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

- Check whether the fan is running normally or whether it is dirty, causing the temperature inside the lamp to rise;
- Check whether the internal temperature control switch is closed;
- Check whether the bulb has reached its service life and replace it with a new bulb.

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

Possible reasons: The signal line is faulty or the parameter settings of the lamp are not normal. The processing is as follows:

- Check the starting address code and check the connection of the DMX signal cable (whether the signal cable is in good condition, and whether the connection of the cable head is loose);

- Add signal amplifier, add 120 ohm terminal resistance;

6. The lamps cannot be started

Possible reasons: bad power line, deal with as follows:

- Check whether the fuse on the power input socket is blown, and replace the fuse;
- The lamps are in poor line contact due to vibration during long-distance transportation
- Check the input power supply, 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 load requirements;
- Do not use the power cord with damaged insulation, and do not overlap the power cord with other wires;
- The lamps are cooled by strong wind, which is easy to accumulate dust. It must be cleaned once a month, especially the cooling air vents. Otherwise, it will be blocked by accumulated dust, resulting in poor heat dissipation and abnormal lamps.
- When installing lamps, the fixing screws must be tightened, and safety cables must be attached, and checked regularly;
- When installing and positioning the lamp, keep a minimum distance of 10 meters between any point on the surface of the lamp and any combustible or explosive material, and the distance from the irradiated object is 2.5 meters. Please do not install the lamp 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 startup 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 of 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 (light control channel) to turn off the light bulb;
- In order to ensure that multiple lamps and lanterns better follow the scene effect, the lamps and lanterns 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 and lanterns can run synchronously;
- During use, if there is an abnormality in the lamp, stop using the lamp in time to prevent other failures from being induced.

3. Precautions for using RDM

RDM is an extended version of the DMX512-A protocol and 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. , only one port is allowed to be output for the host at the same time, so pay attention to the following points when using RDM:

- To 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 no lamps being searched;

- 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 terminals 2 and 3 of the terminal plug. When the signal line is relatively long, reducing the signal reflection will make the differential signal more stable, which is beneficial to the quality of communication;
- When the lamp is controlled by DMX, but cannot be searched by RDM, first check the signal amplifier, and then check whether the 2nd and 3rd wires of the signal line are in poor contact.