

IMRELAX 150W LED Module Beam Moving Head Light



User Manual

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Chapter 1 Precautions and Installation

1. Maintenance

- I The lamp should be kept dry and avoid working in a humid environment.
- I Intermittent use will effectively prolong the life of the lamp.
- I In order to obtain good ventilation and lighting effects, pay attention to cleaning the fan, fan mesh and lens frequently.
- I Do not use alcohol or other organic solvents to wipe the lamp housing to avoid damage.

2. Statement

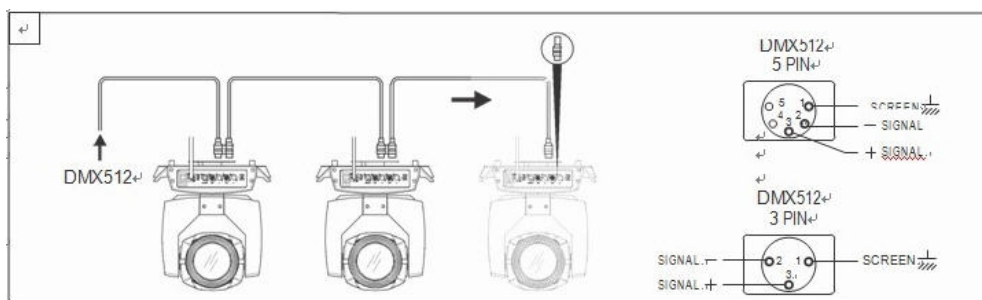
When this product is shipped from the factory, the performance is intact and the packaging is complete. All users should strictly abide by the warnings and operating instructions stated above. Any damage caused by misuse is not covered by the company's guarantee, and the failure and problems caused by 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 Notes

- I 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.
- I Do not place this product in a place prone to loosening or vibration.
- I In order to avoid the risk of electric shock, the maintenance of this product should be performed by professionals.
- I When the light bulb is in use, the power supply voltage change should not exceed $\pm 10\%$. 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.
- I After the power is cut off, the lamp needs to be fully cooled after 20 minutes before it can be powered on again.
- I To ensure the normal use of this product, please read this instruction carefully. Signal line connection (DMX)
- I 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.



Picture 1 Schematic diagram of DMX signal line connection

4. Fixture 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.

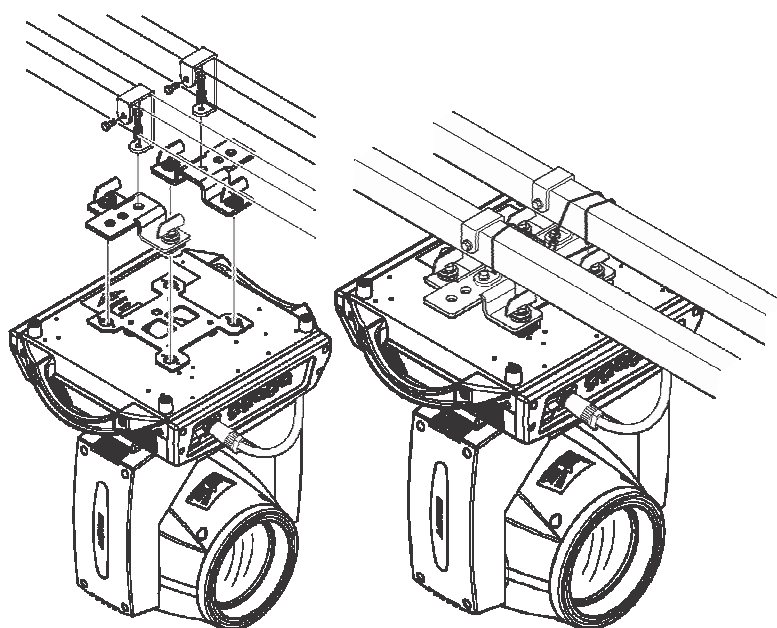


Photo 1 Schematic diagram of upside-down lamps

Chapter 2 Panel Operation

1. Overview

The schematic diagram of the luminaire panel is shown in Picture 3. The title above shows 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 no fault information, 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.

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



Picture 3 Schematic diagram of the display panel

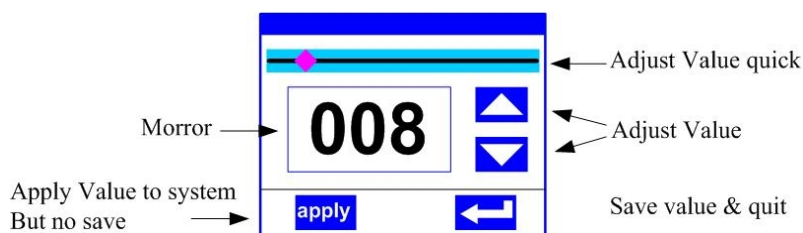
2. Menu operation

1. Select menu item

- I The left area is the TFT display area and the touch area. You can click the contents of the panel with your fingers or dull hardware to complete the parameter settings or check the status.
- I 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 Picture 4 will open.



Picture 4 Figure 4 Value setting page

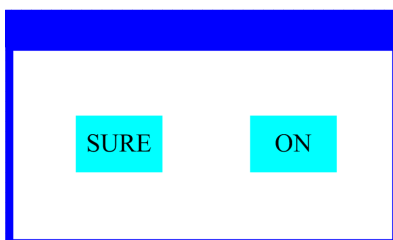
- I **Set the value:** You can directly pull the slider to quickly set the required value,

or click the "Up" or "Down" button on the right to set the required value precisely or use the auxiliary input to set.

- I Apply 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.
- I 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 it is turned on.

3. Set boolean parameter

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



Picture 5 Confirm Input Window

4. Subpages (parameters)



图 6-1地址设置

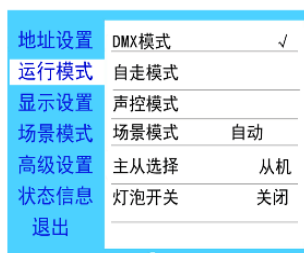


图 6-2运行设置

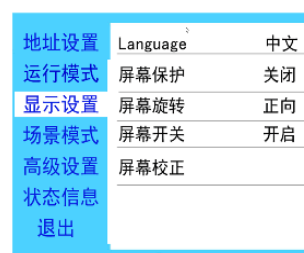


图 6-3显示设置



图 6-4场景设置

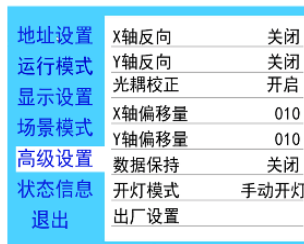


图 6-5高级设置

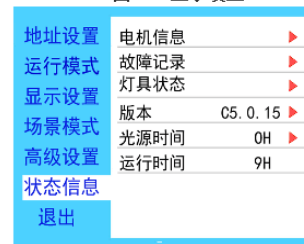


图 6-6状态信息

3. Function menu description

Enter the setting interface, as shown in Picture 6-1:

- I In the main interface, you can enter the corresponding parameter setting interface by selecting six buttons.
- I 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

- I Through the page shown in Picture 6-1, the DMX address and channel mode of the fixture can be set.
- I The menu settings of the lamps optimize the address settings. The operations of several address codes are as follows:
- I Select "Previous" or "Next", the fixture will automatically calculate the address code of the next or previous unit according to the current address code and channel data, which can be set quickly;
- I 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 number of channels of the fixture, and automatically filter the unusable address code (512-current number of channels).
- I The lamps support the RDM protocol, and the address code of the lamps can be set remotely through RDM.
- I Two buttons are provided:
- I Channel mode: Different channel modes can be selected cyclically;
- I Lamp reset: reset all motors.

2. Set the working mode of the light fixture

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.:

System Mode

DMX Mode	Console mode, receive DMX signal, RDM signal	
Auto Mode	The lamps run automatically according to the built-in program	
Sound Control	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.	
Master Slave	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.	
	Master	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).

	Auto	If there is no DMX signal, the luminaire operates as built-in, otherwise, the luminaire operates as the DMX signal.
--	------	---

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 Setting

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:

Menu Setting

Language	Set the displayed language	
	English	English display
	中文	Chinese display
	Mode 2	The screen is black, and the address code of the current fixture is displayed in the lower left corner.
Screen Rotation	Set the display orientation of the screen	
	YES	Do not reverse the display
	NO	Reverse display
	自动/Auto	Automatically detect the direction of the lamps and lanterns, and automatically switch the display direction.
DMX Directive	Set the indication method of the DMX signal indicator	
	Mode 1	On when there is a signal, off when there is no signal

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, choose to disable the touch switch.

4. Scene Display Setting

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:

Manual Mode

1. X Pan	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. Funtion	0-255	

If valid reset data is edited in the reset channel in the scene, the fixture 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 list order of the fixture, please refer to the detailed channel description for specific channel data.

5. Set the working parameters of the light fixture

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, etc.:

Advance Setting

X-axis reversed	Set the X-axis rotation direction	
	OFF	NO reverse
	ON	Reverse
Y-axis reversed	Set the Y-axis rotation direction	
	OFF	NO 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
Light up mode	No signal, keep the last frame of DMX data output	
	Light up when power on	Turn on the bulb first when power on, reset the lamp after 30 seconds
	Light up when reset	Reset the lamp after 3 seconds of power-on, and turn on the bulb after the reset is complete
	Light up manual	After the reset is complete, turn on the bulb manually through the menu or console
Factory Setting	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. View the current state of the fixture

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
	Status	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
Errors 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.	
	Errors data	Total number of faults detected after power up
	12: :03	The power-on time when the fault occurs, in minutes
	Hall error	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 Error	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 Error	Bulb accidentally light off
	Sensor Error	The temperature sensor signal is abnormal,
	Fan Error	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
	Errors 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
	Fixture	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.
Used time		Record the total cumulative time of the lamp being turned on, in minutes, which cannot be cleared.

Chapter 3 Channel Description

1. Channel List

Channel	Name	Value	Description
CH1	X/Pan	0-255	0-540 degree
CH2	X/Pan fine	0-255	0-2 degree, 16bit
CH3	Y/TILT	0-255	0-270 degree
CH4	Y/TILT fine	0-255	0-1 degree, 16bit
CH5	XY Speed	0-255	from fast to slow
CH6	Dimmer	0-255	0-100% Linear dimmer adjustment
CH7	Strobe	0-3	Close
		4-99	Slow to fast pulse strobe
		100-199	Gradual strobe from slow to fast
		200-249	Random strobe from slow to fast
		250-255	Open
CH8	Colors	0-4	White
		5-9	White + 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
		150-2032	Forward flow from fast to slow
		203-255	Reverse flow from slow to fast
CH9	Gobos	0-4	White
		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
		70-128	Forward flow from fast to slow
		129-131	Stop
		132-190	Reverse flow from slow to fast
		191-195	Jitter from slow to fast Gobo 1
		196-200	Jitter from slow to fast Gobo 2
201-205	Jitter from slow to fast Gobo 3		
206-210	Jitter from slow to fast Gobo		

			4
		211-215	Jitter from slow to fast Gobo 5
		216-220	Jitter from slow to fast Gobo 6
		221-225	Jitter from slow to fast Gobo 7
		226-230	Jitter from slow to fast Gobo 8
		231-235	Jitter from slow to fast Gobo 9
		236-240	Jitter from slow to fast Gobo 10
		241-245	Jitter from slow to fast Gobo 11
		246-250	Jitter from slow to fast Gobo 12
		251-255	Jitter from slow to fast Gobo 13
CH10	8-Facet Prism	0-127	None
		128-255	8-Facet Prism
CH11	46-Facet Prism	0-127	None
		128-255	46-Facet Prism
CH12	Prism Rotation	0-127	Degree Adjust
		128-190	Forward flow from fast to slow
		191-192	Stop
		193-255	Reverse flow from slow to fast
CH13	Rainbow Color	0-127	None
		128-255	Rainbow Color
CH14	Frost	0-127	None
		128-255	Frost
CH15	Focus	0-255	From Far to near
CH16	LED Strip Effect	0-255	Build-in LED Strip program
CH17	LED Strip Effect Speed	0-255	From Fast to Slow
CH18	Reset	240-255	Reset all over 5 seconds

Chapter 4 Common faults and precautions for use

1. Common Error Solution

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

- I Due to abnormal operation, the bulb is not completely cooled, so 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;
- I Check whether the bulb has reached its service life and replace it with a new bulb;
- I Check whether the circuit between the bulb and the lighter is leaking, falling off or in poor contact;
- I Replace the bulb driver 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:

- I Check whether the bulb has reached its service life and replace it with a new bulb;
- I Check whether the optical components or light bulbs are clean, and whether there is dust accumulated on the light bulbs and other optical components. Regular cleaning and maintenance of the light bulbs and various components in the lamp.

3. Gobo Projection blur

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

4. Lights work intermittently

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

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

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

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

- I 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);

- I Add signal amplifier, add 120 ohm terminal resistance
- 6. The lamp does light up
- I Possible reasons: bad power line, deal with as follows:
- I Check whether the fuse on the power input socket is blown, and replace the fuse;
- I The lamp has poor circuit contact due to vibration during long-distance transportation
- I Check the input power supply, computer board and other plug-in components.

2. Notes for using

- I Check whether the local power supply meets the rated voltage requirements of the product, and whether the leakage protector and overcurrent protector meet the load requirements;
- I Do not use the power cord with damaged insulation, and do not overlap the power cord with other wires;
- I 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, the dust will block, resulting in poor heat dissipation and abnormal lamps.
- I When installing lamps, the fixing screws must be fastened, and safety cables must be attached, and checked regularly;
- I 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 2.5 meters from the irradiated object. Please do not install the lamp directly on the surface of combustible materials;
- I 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;
- I 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;
- I In order to ensure that multiple lamps and lanterns better follow the scene effect, the lamps and lanterns should not be in the current scene unfinished 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 synchronously;
- I During use, if the lamp is abnormal, stop using the lamp in time to prevent other faults from being induced.

3. Notes 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:

- I To use a console or host device that supports the RDM protocol host;
- I 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;
- I All lamps must be set to DMX mode to ensure that there is only one host on the signal line;
- I 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;
- I 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.

PS: The advance menu PASSWORD is: 1324

More information welcome to visit: www.imrelax.com

Thank you very much! :)