

# 300W LED BEAM MOVING HEAD LIGHT

## User Manual



## 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 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 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  $\pm 10\%$ . 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.

After the power is turned off, it takes 20 minutes for the lamp to be fully cooled before it can be powered on again.

In order to ensure the normal use of this product, please read this instruction carefully.

## 4. Product introduction

Light source power:300W;

Power supply: high-efficiency and reliable switching power supply;

Color wheel: a color wheel, each color wheel consists of 14 color chips + white light;

Pattern plate: 14 pattern effects;

Wide adjustable range of beam angle;

Lens group optical system, motorized focus, linearly adjustable beam angle  $3.8^\circ -45^\circ$  ;

Horizontal  $540^\circ$  , resolution 8Bit/16Bit;

Vertical  $270^\circ$  , resolution 8Bit/16Bit;

Overheating protection;

Control mode: DMX512/master-slave/automatic;

Protection level: IP20;

## 5. 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. A 120ohm impedance matching resistor (minimum 1/4 W) must be inserted between terminals 2 and 3 of the termination plug.

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

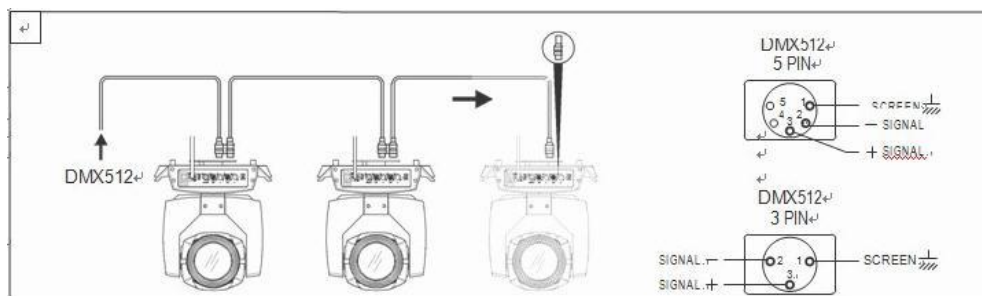


Figure 1 Schematic diagram of DMX signal line connection

## 6. Lamp installation

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

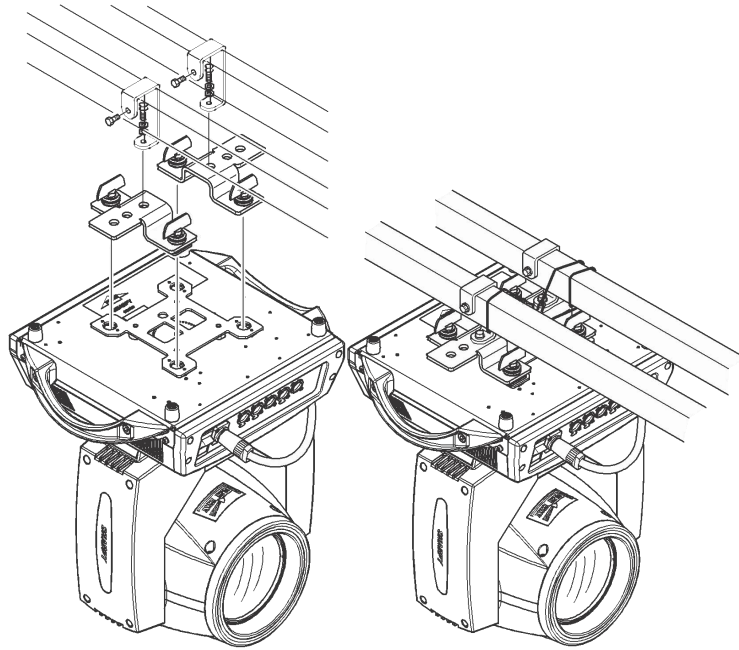


Figure 2 Schematic diagram of upside-down lamps

## Manual operation

This interface is used to control the current fixture and automatically enter the host state (do not receive DMX signal, send DMX signal to the bus to the slave).

24 channel mode Manual selection.

Options	illustrate	
1CH. X	0~255	Press the "OK" key to enter the editing state. At this time, the hundreds digit is selected, and the channel value can be changed by pressing the "Up" and "Down" keys. Press the "OK" key again to select ten edits. Press the "OK" key again to select the one digit editing. Press again to exit the editing state
.....	0~255	
14CH. focusing	0~255	
16CH. reset		Press the "OK" button to see the confirmation dialog box, press the "OK" button again to enter the reset interface, and all motors are reset.
24CH. Lamp bead scene control	The speed goes from fast to slow	
20CH. Gobo speed	0~255	Displayed when the channel mode is "Extended CH20"

## Settings

Options	illustrate	
operating mode	DMX	Slave state: receive DMX signal from console or host
	AUTO	Master status: self-propelled and send DMX signal to slave
	random	
	Sound	
DMX address	1~512	Press the "OK" key to enter the editing state. At this time, the hundreds digit is selected, and the "up" and "down" keys are pressed to change the address code. Press the "OK" key again to select ten edits. Press the "OK" key again to select the one digit editing. Press again to exit the editing state
Motor is reset	On/off	
Channel mode	24CH	24-channel mode
Language	Chinese/English switch	
Screen rotation	On/off	
X reverse	off	
	on	
Y reversal	off	
	on	
XY swap	off	
	on	Swap the channels of the XY axes (including fine-tuning)
XY encoder	on	Use the encoder (optical coupler) to judge the out-of-step and automatically correct the position
	off	Correct position without encoder (optocoupler)
DMX signal	Keep	Continue to operate as it is
	clear	The motor returns and stops running
Color wheel changes linearly	on	Color wheel changes linearly
	off	Color wheel non-linear change, half color change
Restore default settings		Press the "OK" button to see the confirmation dialog box, press the "OK" button again to restore the default settings

## Information

Options	illustrate	
DIS		Dashboard software version
MT		Motor board software version
Reset calibration	X-axis calibration	After entering the sub-interface, you can adjust the reset position of the X-axis, Y-axis and other motors to make up for the error in the hardware installation. The adjustment range is $-128^{+127}$ , and +0 means no adjustment.
	Y-axis calibration	
	Color calibration	
	Pattern Calibration	
	Focus calibration	
	Dimming calibration	
	Prism 1 Calibration	
	Prism 2 Calibration	
	Fog calibration	
Sensor monitoring	X-axis Hall	0 when magnetism is detected, 1 otherwise
	Y-axis Hall	0 when magnetism is detected, 1 otherwise
	Color Wheel Hall	0 when magnetism is detected, 1 otherwise
	Gobo Hall	0 when magnetism is detected, 1 otherwise
	Focus Hall	0 when magnetism is detected, 1 otherwise
	Prism 1 Hall	0 when magnetism is detected, 1 otherwise
	Prism 2 Hall	0 when magnetism is detected, 1 otherwise
	X-axis encoder disk status	2 digits, each digit corresponds to a photoelectric switch in the encoder disc
	Y-axis encoder disk status	2 digits, each digit corresponds to a photoelectric switch in the encoder disc
	X-axis encoder disc step value	When walking in the positive direction, the step value should increase, and when walking in the opposite direction, the step value should decrease. Every time you go to the same point, the value is the same as normal
Y-axis encoder disc step value	When walking in the positive direction, the step value should increase, and when walking in the opposite direction, the step value should decrease. Every time you go to the same point, the value is the same as normal	
System error		If the red ERR indicator is on, it means that the lamp is running incorrectly, and the

		details can be viewed from this sub-interface. After viewing, you can press the "Clear" button to clear the error record
DMX monitoring		Real-time monitoring of console signals

<b>Error message</b>	<b>Illustrate</b>
MT board connection failed	The motor board is not responding. There is a problem with the serial communication line connecting the display board and the motor board, or there is a problem with the motor board.
X axis reset failed	There is a problem with the X-axis photoelectric switch, or the X-axis motor or motor board
Y axis reset failed	There is a problem with the Y-axis photoelectric switch, or the Y-axis motor or motor board
X axis Hall error	X-axis Hall, or there is a problem with the motor board
Y axis Hall error	Y-axis Hall, or there is a problem with the motor board
Color wheel reset failed	The color wheel Hall, or the color wheel motor has a problem
Pattern disk reset failed	Gobo Hall, or gobo motor is faulty
Focus reset failed	Focusing Hall, or there is a problem with the focusing motor
Lamp control failed	Failure to brighten or debubble, there is a problem with the lighter or bulb

## Channel Description

### 1. Channel table

Channel	24 channel mode
1	X
2	X fine-tuning
3	Y
4	Y fine-tuning
5	XY Speed
6	Dimming
7	Cut light /Strobe
8	Color wheel
9	Gobo wheel
10	Prism 1
11	Prism rotation
12	Prism 2
13	Reserve
14	Focusing
15	Atomization and colorful
16	Reset
17	Lamp with LED dimming
18	LED strobe
19	Red
20	Green
21	Blue
22	LED Macro function
23	Lamp bead scene
24	LED scene speed



### Channel parameters (full version):

Channel	Function	No.	Effect
1	X axis	000-255	Horizontal 540 degree scan
2	Y axis	000-255	Vertical 270 degree scan
3	X-axis fine-tuning	000-255	Horizontal 1.2 degree fine-tuning
4	Y-axis fine-tuning	000-255	Vertical 1.2 degree fine-tuning
5	XY Speed	000-255	Speed from fast to slow
6	Dimming	000-255	The linear dimming 0-100%
7	Strobe	000-004 005-099 100-104 105-209 210-214 215-244 245-255	Shutter open Stroboscopic from slow to fast Shutter open → (Controlled by dimming channel) Pulse strobe from slow to fast Shutter open → (Controlled by dimming channel) Random strobe from slow to fast Shutter open → (Controlled by dimming channel)
8	Color wheel	000-004 005 -009 010 - 014 015 - 019 020 - 024 025 - 029 030 - 034 035 - 039 040 - 044 045 - 049 050 - 054 055 - 059 060 - 064 065 - 069 070 - 074 075 - 079 080 - 084 085 - 089 090 - 094 095 - 099 100 -104 105 -109 110 -114 115 -119 120 -124	White light white light + color 1 Color 1 Color 1+Color 2 Color 2 Color 2+Color 3 Color 3 Color 3+Color 4 Color 4 Color 4+Color 5 Color 5 Color 5+Color 6 Color 6 Color 6+Color 7 Color 7 Color 7+Color 8 Color 8 Color 8+Color 9 Color 9 Color 9+Color10 Color 10 Color 10+Color 11 Color 11 Color 11+Color 12 Color 12

		125 -129 130 -134 135 -139 140 -144 145 -149 150 - 200 201 - 255	Color 12+Color 13 Color 13 Color 13+White light Color 14 Color 14+White light Forward flow (from fast to slow) Reverse flow (slow to fast)
9	Gobo wheel	000 - 004 005 - 009 010 - 014 015 - 019 020 - 024 025 - 029 030 - 034 035 - 039 040 - 044 045 - 049 050 - 054 055 - 059 060 - 064 065 - 069 070 - 074 075 - 079 080 - 084 085 - 089 090 - 094 095 - 099 100- 104 105 - 109 110 - 114 115 - 119 120 - 124 125 - 129 130 - 134 155 - 195 196- 255	Fixed pattern 1 Fixed pattern 2 Fixed pattern 3 Fixed pattern 4 Fixed pattern 5 Fixed pattern 6 Fixed pattern 7 Fixed pattern 8 Fixed pattern 9 Fixed pattern 10 Fixed pattern11 Fixed pattern 12 Fixed pattern 13 Fixed pattern 14 Fixed pattern 2 Jitter (From slow to fast) Fixed pattern 3 Jitter (From slow to fast) Fixed pattern 4 Jitter (From slow to fast) Fixed pattern 5 Jitter (From slow to fast) Fixed pattern 6 Jitter (From slow to fast) Fixed pattern 7 Jitter (From slow to fast) Fixed pattern 8 Jitter (From slow to fast) Fixed pattern 9 Jitter (From slow to fast) Fixed pattern 10 Jitter (From slow to fast) Fixed pattern 11 Jitter (From slow to fast) Fixed pattern 12 Jitter (From slow to fast) Fixed pattern 13 Jitter (From slow to fast) Fixed pattern 14 Jitter (From slow to fast) Forward flow (from fast to slow) Reverse flow (slow to fast)
10	Prism 1	000-127 128-255	<b>There is no function</b> Prism 1 cut in
11	Prism rotation	000-127 128-190 191-192 193-255	<b>Prism rotating</b> Forward rotation (from fast to slow) Stop Reverse rotation (slow to fast)
12	Prism 2	000-127 128-255	<b>There is no function</b> Prism 2 cut in

13	Reserve		
14	Focusing	000-255	Pattern clarity from far to near
15	Atomization & Colorful	000-127 128-191 192-255	no Atomizer chip cut Colorful cut
16	Reset	000-025 026-050 061-085 251-255	Invalid area Small motor reset XY motor reset Reset all motors
17	LED dimmer	000-255	Lamp with LED dimming, brightness 0-100%
18	LED stroboscopic	000-255	Stroboscopic, from slow to fast
19	Red LED	000-255	from dark to light
20	Green LED	000-255	from dark to light
21	Blue LED	000-255	from dark to light
22	LED macro function	000-255	
23	LED scene	000-031 000-255	no function Scene atomization
24	LED scene speed	000-255	The speed goes from slow to fast

## Common faults and precautions for use

### 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

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 is 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 the lamp is installed and positioned, keep a minimum distance of 10 meters between any point on the surface of the lamp and any combustible or explosive material, and a distance of 2.5 meters from the irradiated object. 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 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 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, 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;