

# **250w/310w/370w Beam Moving Head**

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User manual

Please read the instructions carefully before use

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## statement

The product has well capability and intact packing when leave factory. All of the user should comply with warning item and manual, any misuse cause of the damages are not included in our guarantee, and also can not be responsible for any malfunction & problem owing to ignore the manual.

# 1. Safety Instructions

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.

- ☒ Unpack and check carefully there is no transportation damage before using the unit.
- ☒ Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
- ☒ It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- ☒ The unit is for indoor use only. Use only in a dry location.
- ☒ The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- ☒ Disconnect main power before replacement or servicing.
- ☒ Make sure there are no flammable materials close to the unit while operating as it is fire hazard.
- ☒ Use safety cable when fixes this unit. DO NOT handle the unit by taking its head only, but always by taking its base.
- ☒ Maximum ambient temperature is  $T_a: 40^{\circ}\text{C}$ . DO NOT operate it where the temperature is higher than this Unit surface temperature may reach up to  $85^{\circ}\text{C}$ . DO NOT touch the housing bare-hand during its operation. Turn off the power and allow about 15 minutes for the unit to cool down before replacing or serving.
- ☒ In the event of serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.

⊠ DO NOT touch any wire during operation as high voltage might be causing electric shock.

**Warning:**

⊠ To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.

⊠ DO NOT open the unit within five minutes after switching off.

⊠ The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

**Caution:**

There are no user serviceable parts inside the unit. DO NOT open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact your nearest dealer.

**Installation:**

The unit should be mounted via its screw holes on the bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. And make sure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the unit's weight. Also always use a safety cable that can hold 12 times of the weight of the unit when installing the fixture.

The equipment must be fixed by professionals. And it must be fixed at a place where is out of the touch of people.

## 2. Technical Specifications

Light Source: Philips MSD Silver 250W      Color temperature: 7800K

OSRAM SIRIUS HRI ® 311W      Color temperature: 8000k

OSRAM SIRIUS HRI ® 371W      Color temperature: 8000k

Power supply: 100-240v, 50/60hz

Power rated: 370W(90V)

Power off display function:

Connect the USB socket when the power is off, you can enter the menu to set the address code and other settings.

Optical System: Efficient optical system, Powerful light output, High quality optical lens

Movement:

Horizontal: 540° (16bit Precision scan)

Vertical: 270° (16bit Precision scan)

Reset function with automatic error correction

Dimming/strobe:

0%~100% smooth dimming, multiple speed strobe effect

Color Wheel:

1 color wheel: 12 color +4color effect+ white, half-color effect, rainbow effect

with bidirectional rotation.

Gobo Wheel:

1 fixed pattern plate: 14 pattern pieces + white, with pattern dithering and pattern arbitrary positioning function.

Magnetic positioning function, convenient for initial position correction and maintenance

Prism:

Prism1: 8 prism that can be rotated and overlapped in two-way

Prism2: 24 honeycomb prism that can be rotated and overlapped in two-way

Focusing angle: Zoom: 1.8° (Fixed focus )

Fog:Independent fog and soft light effect

Heat dissipation:Fan cooling

General controller:DMX 512 controller

DMX signal input/output: 3-pin XLR signal line interface

N.W:14KGS G.W(Carton):15.5KGS

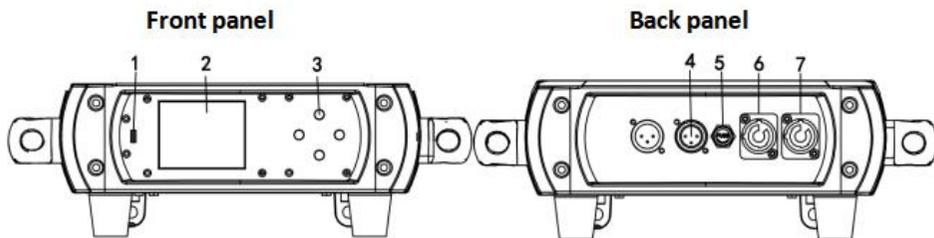
Product Dimension:

492.5\*313.1\*255mm

Package Dimension (Carton):

580× 520 × 405mm

### 3. Description



1. USB socket: USB connection data.

2. Display screen: display function menus, the button will automatically lock the setting after 30 seconds of standby, to prevent operation errors, long press the MENU button for 2 seconds to activate the button.
3. Button:

<b>MENU</b>	Return
<b>▲ DOWN</b>	To the next option
<b>▼ UP</b>	Go to previous option
<b>ENTER</b>	Enter menu selection function\Confirm selected function

4. DMX Input/ Output: For DMX 512 connection, use 3-pin XLR signal cable to connect the fixture and DMX console, and input DMX signal.
5. Fuse: Over current protection.
6. Power Input: Connect to power supply.
7. Power Output: Connect the power supply (110V power supply can connect up to 3 pieces of beam, 220V power supply can connect up to 6 pieces of beam)

## **4. Lamp bulb**

There is high voltage inside the bulb, which may break during operation. The ultraviolet light emitted by the bulb is harmful to the eyes and skin. Do not stare directly at the fixture during operation.

1. In order to protect the fixture, please turn off the fixture first when turning off the lamp, and then disconnect the power after running for at least 5 minutes.
2. Do not touch the bulb with bare hands. Once touched by hand, wipe with alcohol and then dry with soft linen.
3. When the lamp is on, the bulb operates under high pressure, so there is a risk of rupture. The degree of danger is related to the length of use time, temperature and unreasonable operation and other factors. Therefore, please do not use bulbs that

exceed the service life.

4. Make sure the bulb is installed in the center to ensure the best results.

## 5. How To Control The Unit

Turn on the machine, press the ENTER button to enter the menu mode, use the UP and DOWN buttons to find the menu, when the preset menu is displayed on the display, press the ENTER button to confirm, use the UP and DOWN buttons to select the submenu, press the ENTER button to save the setting. Automatically return to the previous menu. Press the MENU button to return, or wait 30 seconds and automatically exit the menu mode.

When there is no power connection, press the MENU button for 3 seconds to enter the menu mode. After setting, press the ENTER button for 1 second or wait for 40 seconds and then automatically exit the setting function after power off.



Menu function				
Level 1 menu	Level 2 menu	Level 3 menu	Level 4 menu	Level 5 menu
Set address	0-512			
Advanced settings	X axis reversal	Open/ Close		(Default off)
	Y axis reversal	Open/ Close		(Default off)
	Display screen reverse	Positive/Reverse /Auto		(Default Positive)
	The screen is always on	Open/ Close		(Default off)
	Optocoupler correction	Open/ Close		(Default off)
	Language	Chinese/ English		(Factory default Chinese)
	Error message	Open/ Close		(Default on)
	Touch screen calibration	Yes/ No		
	Factory settings			
	Drop out			

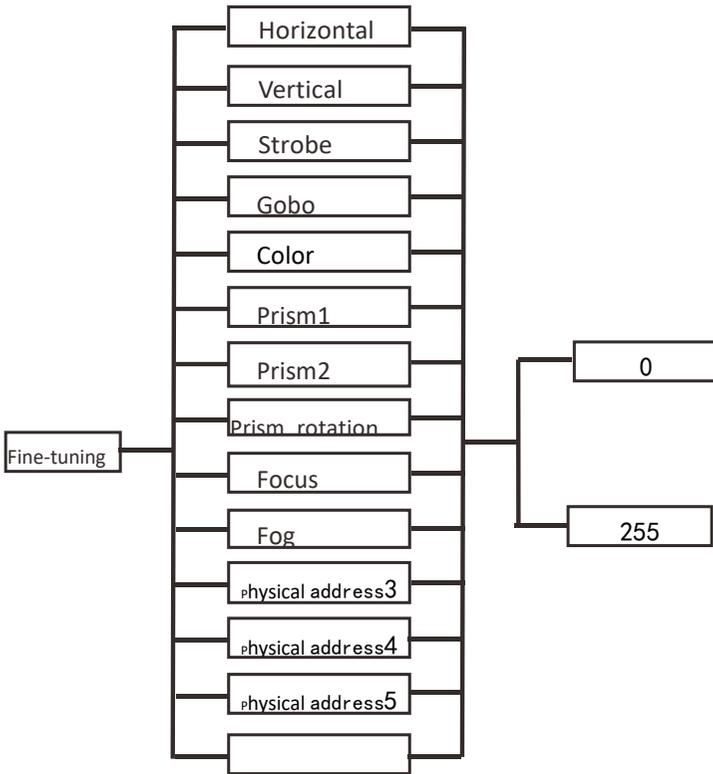
Operating mode	Select channel mode				
	View the current channel				
	Manual control of Fixture	DMX Mode			
		Self-propelled mode			
		Voice mode			
		Scene mode	automatic /1-10		
		Master-slave mode	Auto/Master/Slave		
		Scene setting	Scene selection		01-10
			Scene time		0.00S
			drop out		
			X axis		0-255
			....		0-255
16 Reset function			0-255		
	X axis/ Y		Yes/ No		

		Fixture reset	axis	
			Color	Yes/ No
			Gobo	Yes/ No
			Strobe	Yes/ No
			Focus and prism	Yes/ No
			All	Yes/ No
		drop out		
	drop out			
System message	Device version number			
	equipment status			
	broken record			
	Light source time			
	Equipment running time			
	drop out			
	Bright light bulb	Yes/ No		
	Turn on the electric light bulb	Yes/ No		
	Console control light bulb	Yes/ No		
	Turn on lamp delay	0-535		

Lamp contro	Half power delay	0-535		
	Reset lamp time	Yes/ No		
	Lamp maintenance	internal use	0-255	
		Remaining maintenance time	Repeat/no	
	drop out			
Appli cation service	Service Contact			
	Equipment maintenance times			
	Equipment fine-tuning calibration			
	Device data clear			
	Equipment usage records			
	drop out			

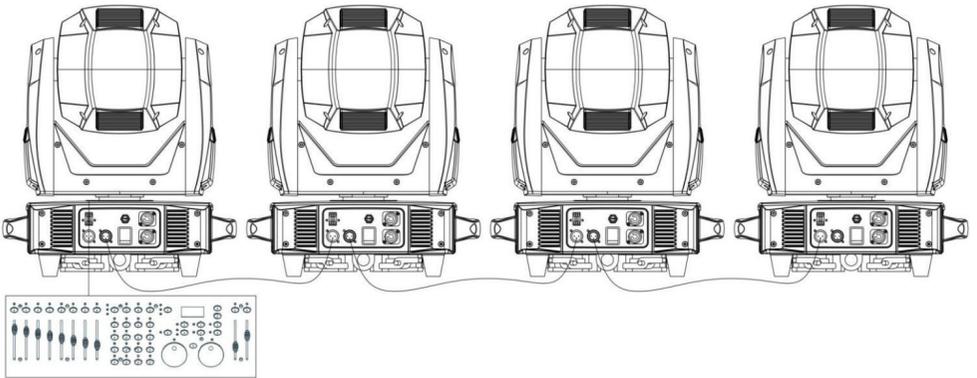
### Device fine-tuning settings

Select the device fine-tuning setting, press the ENTER button to confirm, the device fine-tuning setting (password: 1212), enter the initial setting menu to adjust the initial position of each motor. Press the ENTER button to confirm. Use the UP/DOWN button to select the submenu, press the ENTER button to save and automatically return to the previous menu. Press the MENU button to exit.

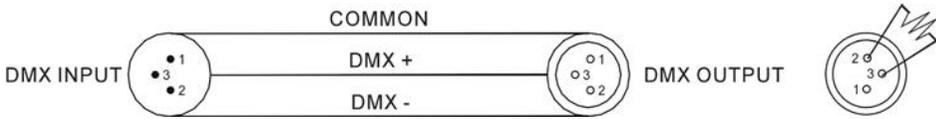


## 6. Universal DMX controller control :

### Connection



DMX512 控台



1. In order to reduce signal errors and avoid signal attenuation and interference during transmission, a 90-120Ω (0.25W) resistor can be added between the 2-core and 3-core of the DMX output of the last machine.,
2. Connect the fixture with XLR signal cable, one end is connected to the output port of the fixture, and the other end is connected to the input port of the next fixture. XLR signal lines can only be used in series, not in parallel. DMX512 signal transmission speed is very fast. Damaged signal wires, weak soldering, poor contact, etc., will affect signal transmission and cause the system to shut down.
3. When the machine power supply of a unit is disconnected, the connection of DMX output and input is bypassed in order to maintain the connection of the DMX line.
4. Each lamp must have an address code, which can receive the information sent by the console, and the range is 0-511 (usually 0&1 and 1 are the same).
5. The terminal of the DMX512 system needs to be equipped with a terminal to reduce errors in signal transmission.
6. 3-pin XLR connector:3 core XLR: PIN 1: GND, PIN 2: negative signal, PIN 3: positive signal.

## Channel settings

Press the ENTER button to enter the menu mode, select the operating mode → select channel mode,  
 press the ENTER button to confirm, the current channel mode will flash on the display, use the UP and  
 DOWN buttons to select the full mode 24 (CH), press the ENTER button to save.  
 Press the MENU  
 button to return to the previous menu or wait 30 seconds and automatically exit the menu mode.

## Address code setting

When using a general DMX controller to control fixture, you need to

set the starting address (1-512) for the fixture so that the machine can receive DMX signals.

Press the ENTER button to enter the menu mode, select the DMX function, press the ENTER button to confirm, the current address will flash on the display, then use the UP/DOWN button to select the address code (1-512), press the ENTER button to save. Press the MENU button to return to the previous

menu or wait 30 seconds and automatically exit the menu mode.

Please refer to the following chart to set the address codes of the first 4 fixtures

Channel mode	Fixture 1 address code	Fixture 2 address code	Fixture 3 address code	Fixture 4 address code
16 Channel	1	1 7	33	49
13 Channel	1	1 4	27	40

## 7. DMX channel(16/13DMX channels):

Full mode (CH)	Standard mode 16 (CH)	Lite mode 13 (CH)	Channel name	Channel value
1	1	Horizontal	000-255	0-540 degree
2		Horizontal Fine-tuning	000-255	16bit Adjustable

3	2	Vertical	000-255	0-270 degree
4		Vertical Fine-tuning	000-255	16bit Adjustable
5	3	XY speed	000-255	From fast to slow
6	4	Dimming	000-255	Light spot from dark to light
7		Dimming fine-tuning	000-255	16bit adjustable
8	5	Strobe	0-7	No function
			8-15	Open
			16-131	Synchronous strobe, from slow to fast
			132-167	Fast closing and slow opening, from slow to fast
			168-203	Slow to close and fast to open, from slow to fast
			204-239	Pulse strobe, from slow to fast
			240-247	Random strobe, from slow to fast
			248-255	Open
9	6	Color wheel	0-4	White light
			5-9	Deep red
			10-14	Blue
			15-19	Green
			20-24	Orange
			25-29	Magenta
			30-34	Yellow

			35-39	Cyan
			40-44	Red
			45-49	Navy blue
			50-54	Dark green
			55-59	Yellow-green
			60-64	CTO5600K
			65-69	Four-color effect
			70-75	White light → dark red (half color value 73)
			76-82	Crimson → blue (half color value 79)
			83-88	Blue → green (half color value 86)
			89-95	Green → orange (half color value 92)
			96-101	Orange→purple (half color value 99)
			102-108	Fuchsia → yellow (half color value 105)
			109-114	Yellow → cyan (half color value 112)
			115-121	Cyan → plum red (half color value 118)
			122-127	Plum red → dark blue (half color value 125)
			128-133	Dark blue → dark green (half color value 131)

			134-140	Dark green → yellow-green (half color value 137)
			141-146	Yellow-green→CTO5600K (half color value 144)
			147-152	CTO5600K→four-color effect (half-color value 150)
			153-159	Four-color effect → white light (half-color value 154)
			160-219	Positive rainbow, from fast to slow
			220-223	Stop
			224-255	Reverse rainbow, from slow to fast
10	7	Gobo Wheel	0-3	White light
			4-7	Gobo1
			8-11	Gobo2
			12-15	Gobo3
			16-19	Gobo4
			20-23	Gobo5
			24-27	Gobo6
			28-31	Gobo7
			32-35	Gobo8
			36-39	Gobo9
			40-43	Gobo10
			44-47	Gobo11
			48-51	Gobo12

			52-55	Gobo13
			56-59	Gobo14
			60-64	Gobo14 dithering effect, from slow to fast
			65-68	Gobo13dithering effect, from slow to fast
			69-72	Gobo12dithering effect, from slow to fast
			73-76	Gobo11dithering effect, from slow to fast
			77-80	Gobo10dithering effect, from slow to fast
			81-84	Gobo9dithering effect, from slow to fast
			85-88	Gobo8dithering effect, from slow to fast
			89-92	Gobo7dithering effect, from slow to fast
			93-96	Gobo6dithering effect, from slow to fast
			97-100	Gobo5dithering effect, from slow to fast
			101-104	Gobo4dithering effect, from slow to fast
			105-108	Gobo3dithering effect, from slow to fast
			109-112	Gobo2dithering effect, from slow to fast

			113-115	Gobo1dithering effect, from slow to fast
			116-119	White light
			120-189	Dynamic wheel rotates forward, from slow to fast
			190-193	Stop
			194-255	Dynamic wheel reverse rotation, from slow to fast
11	8	Prism 1	0-15	No Function
			16-255	Eight Prism
12	9	Prism 2	0-15	No Function
			16-255	24 honeycomb prism
13	10	Prism rotation	0-127	Prism rotation position
			128-189	Forward rotation, from fast to slow
			190-193	Stop
			194-255	Reverse rotation, from slow to fast
14	11	Fog	0-7	No Function
			8-255	Fog
15	12	Fog	0-255	No function
16	13	Functional channel	0-129	Fog
			130-139	No function
			140-149	Turn on the bulb
			150-159	XY Reset
			160-169	Color reset

			170-179	Gobo reset
			180-189	Strobe reset
			190-199	No function
			200-209	Focus/prism reset
			210-229	Reset all
			230-239	No function
			240-255	Turn off the bulb

## 8. Trouble shooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

### **A. The unit does not work, no light and the fan does not work**

1. Check the connection of power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED.

### **B. Not responding to DMX controller**

1. DMX LED should be on. If not, check DMX connectors, cables to see if link properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

### **C. One of the channels is not working well**

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition

## 9. Fixture Cleaning

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.