

# 150W LED BSW 3in1 Moving Head Light



**USER MANUAL**



**KEEP THIS MANUAL FOR FUTURE NEEDS**

## 1. General Information:

Thank you very much for choosing our product. For safety purpose, please read this manual carefully before your operation. This manual included installation and using information. Please install and operate it according to this manual.

**Unpacking:** Once receive it, please handle it carefully and check if there is some shatter because of transportation and the following fittings are OK.

In the carton, there are four things available:

Moving head light: 1PC

Power cable: 1PC

Fast Lock: 2PCS

User manual: 1 PC

**Warning!** To prevent or reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

**Caution!** There are no user serviceable parts inside this unit. Do not attempt any repairs yourself. Doing so will void your manufacturer's warranty. In the unlikely event your unit may require service please contact us.

## 2. Safety Instructions



WARNING

Please read carefully the instruction, which includes important information about the installation, usage and maintenance.

- 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°C. DO NOT operate it where the temperature is higher than this.
- Unit surface temperature may reach up to 85°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.

If using a 230V 50Hz power supply, DO NOT connect in series more than 11 units; use another main supply for the next 11 fixtures.  
If using a 120V 60Hz power supply, DO NOT connect in series more than 5 units; use another main supply for the next 5 fixtures.

**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 and has no one pass by or under it.

### 3. Technical Specifications

Voltage: AC 100~240V, 50/60Hz

Power Consumption: 250W

Light Source: 1pc 200W White LED

Beam Angle: 11°(on full open)

2°/4°/6°/8°/10° (with beam reducer)

3°/6°/9°/12°/15° /20°(with zoom lens)

Spot Angle: Fix Gobo: 2°- 15°(with zoom lens)

Rotating Gobo: 10°-17°(with zoom lens)

Wash Angle: 15°-28°

Movement: Pan: 540°, Tilt: 270°, Pan/Tilt moving speed adjustable.

Automatic Pan/Tilt correction.

Easy calibration and maintenance by magnetic home positioning.

Control Mode: DMX512, Auto, Master/Slave, Sound Control

DMX Channel: 17CH/20CH

Dimmer: 0~100% smooth dimming

Strobe: Independent shutter and various strobe effect.

Color Wheel: 8 colors + white, Rainbow effect in both directions.

Fixed Gobo Wheel: 7 gobos + Blank, Gobo shake

Rotating Gobo Wheel: 6 gobos + Blank, Gobo shake

Prism: 3 facet prism rotating in both directions

Frost+Zoom Wheel: Motorized zoom and frost function

Focus: Motorized focus

Display: LCD Display

Weight: 12 Kg

Dimension: 452× 290×256mm

### 4. Interface Description

#### Main Interface

<b>2</b>	
<b>1</b>	<b>3</b>
	<b>4</b>
<b>5</b>	<b>6</b>
<b>7</b>	<b>8</b>

1. Current DMX Address
2. To show customer's LOGO
3. Yes DMX/NO DMX: with/without DMX Signal
4. Current DMX Channel Mode, 17ch/20ch
5. Current Master/Slave Mode
6. Current Running Mode: DMX512/Auto/User
7. System Error information. If a red "x" is displayed, it means that the self-check found an error.  
(Press the down key to view the error information)
8. Temperate: 000°C

## 5. Subinterface

### 5.1 Setting

<b>DMX Address</b>	<b>000-999</b>	DMX Address set(The max value is 512, when set 513-999, it will turn to 512)	
<b>Channel Mode</b>	<b>17/20</b>	DMX Channel Set, 17CH/20CH	
<b>Reset</b>	<b>Motor Power</b>	<b>On</b>	All motors power on and reset
		<b>Off</b>	All motors power off
	<b>Pan Tilt</b>		Pan&Tilt Reset
	<b>Color</b>		Color wheel motor reset
	<b>Gobo</b>		Gobo wheel motor reset
	<b>Beam Path</b>		Focus/Angle/Prism motors reset
<b>Run</b>	<b>DMX</b>	DMX Mode	
	<b>Auto</b>	Auto running as built-in effects	
	<b>User</b>	Running as User Program. In OPTION-User Program to set up editing scene	
<b>Manual</b>	<b>Lock Manual Ctrl</b>	<b>No/Yes</b>	Yes: Only can manual control
	<b>Pan</b>	<b>000-255</b>	Manual Set

	<b>Tilt</b>	<b>000-255</b>	
	<b>P/T Speed</b>	<b>000-255</b>	
	<b>Dim</b>	<b>000-255</b>	
	<b>Strobe</b>	<b>000-255</b>	
	<b>Color</b>	<b>000-255</b>	
	<b>SHOW</b>	<b>000-255</b>	
	<b>XY Macro</b>	<b>000-255</b>	
	<b>Macro Speed</b>	<b>000-255</b>	
	<b>Gobo</b>	<b>000-255</b>	
	<b>GoboWheel</b>	<b>000-255</b>	
	<b>Rot Gobo</b>	<b>000-255</b>	
	<b>Prism1</b>	<b>000-255</b>	
	<b>Prism1 Rot</b>	<b>000-255</b>	
	<b>Frost/Angle</b>	<b>000-255</b>	
	<b>Focus</b>	<b>000-255</b>	
<b>OPTION</b>	<b>M/S Mode</b>	<b>Master/Slave</b>	Master/Slave set
	<b>Pan/Tilt</b>	<b>Manual Pan/Tilt</b>	On: Pan/Tilt manual move
		<b>Invert Pan</b>	On: Pan invert move
		<b>Invert Tilt</b>	On: Tilt invert move
		<b>Speed Chn RT</b>	Yes/No
	<b>DimCurve</b>	<b>Linear</b>	Choose the dimmer curve
		<b>Log</b>	

		<b>S-Curve</b>	
		<b>SquareRoot</b>	
		<b>Square</b>	
	<b>Fan Mode</b>	<b>Normal</b>	
		<b>Silent</b>	
	<b>User Program</b> (Details see 5.2 part)	<b>Manual</b>	Manual set the steps 01-12
		<b>Record</b>	<b>Select Step: 01-12</b>
			<b>Time: 000-255</b>
			<b>Record</b>
	<b>Clear ALL</b>	Clear all data	
	<b>DMX Error</b> (When lose the DMX signal, the Run Mode)	<b>Power On</b> (When Power on, If no DMX signal)	<b>Middle: Pan&amp; Tilt in Middle position, the other values are 0</b>
			<b>No Effect: All values recover to 0</b>
		<b>Run Time</b> (During running, if lose the DMX signal)	<b>Black out: Clear the last DMX value</b>
<b>Hold: Keep the last DMX value</b>			
<b>ADVANCED</b>	<b>Calibrate</b>	<b>Pan:-500-500</b>	
		<b>Tilt:-500-500</b>	
		<b>Color:-500-500</b>	
		<b>Gobos:-500-500</b>	
		<b>Prism1:-500-500</b>	
		<b>Frost:-500-500</b>	
		<b>Focus:-500-500</b>	
		<b>R.GoboWheel:</b>	

		<b>-500-500</b>		
		<b>Prism1HalfStep:</b> <b>-500-500</b>		
		<b>FrostHalfStep:</b> <b>-500-500</b>		
	<b>Display</b>	<b>Auto Lock:</b> <b>On/Off</b>	Display auto lock	
		<b>Sleep:No/30sec/2</b> <b>min/10min</b>	Display sleep time: Always on/Off after 30s/2min/10min	
		<b>Flip:On/Off</b>	Display reverse	
	<b>Language</b>	<b>English</b>		
		<b>Chinese</b>		
	<b>FactorySetting</b>	Logo:Yes/No		
	<b>Adj Recover</b>	When changed the display, it will recover the motors' value to the new display		
<b>INFORMATION</b>	<b>DMX Monitor</b>	Show current DMX value		
	<b>System Errors</b>	Show the System Errors		
	<b>LED</b>	<b>UsageTimes</b>	Use Times	
		<b>Clear Times</b>	Clear the time	
	<b>Factory Test</b>	For product testing, temporary use only		
	<b>Product Code</b>	Current product code		

## 5.2 User Program:

The fixture only supports 1 scene, 12 steps, and each step 17 channels

Supported Editing Methods: Direct editing the numbers, And recording of the console's value

Users need to edit it by themselves, and all scenes are empty by default.

When editing the scene, it's better to set "Run" to "DMX", and not set as "User". Channel values cannot be edited normally in "User" mode

## Description:

### 1. Direct editing the numbers

In “OPTION”-“User Program”-“Manual”, There will show “Step01”-“Step12”.

Set “Step01”, The first one is set the step keep time(**Time**), **000-255**, the Time must be greater than 0, otherwise the step is ignored. Then is **Chn01-Chn20**, the value is **000-255**, to set each Channel’s value. Press **MENU** back to exit. Same as other steps.

The Time’s unit is 0.1s, For example, The value set as 123, the keep time is 12.3s

### 2. Recording of the console’s value

In “OPTION”-“User Program”-“Record”. In “Record”, you need record the steps: Select “Step:01-12”, Then Set the step keep time(**Time:000-255**), Finally Press “Record”, it will pop-up confirmation box, select “Yes” (black selection box). The values of the current 20 channels of the console will be recorded, and "Success" will be displayed. You can click the **ENTER** button to return to the [**Record**] editing interface to continue recording the next steps.

The operation only records the value of 20 channels, no matter the current channel mode is 17CH or 20CH. The operation can be performed in any **Run** Mode, It only need keep to get the DMX signal from controller.

**Remark:** When recording, no matter whether there is data in the target step, the original data will be directly overwritten. There is no prompt during the operation and it cannot be undone. Please operate with caution! !

## Playback Instructions:

In “Run”, set to “User”, ready to play

If an abnormality occurs during playback, check whether the keep time value of each step is 0 or too small, and the motor enters the next step before it can react.

## 5.3 System Errors:

Error	Description
Storage	Indicates whether the memory is functioning normally. If the memory is not functioning properly, menu information cannot be recorded or read, and lamp time recording and user program data may also be lost.
RAM Err	Chip memory allocation failed. If this error occurs, please contact the manufacturer.

Bus	If the error occurs, each functional motor will not be able to operate normally. please check whether the communication connection lines between the boards are in poor contact.
Lamp	The communication between CPU and lamp driver. If this communication go out of work, the CPU cannot determine the lamp is on or off, and some functions may be affected.
Lamp Driver	The communication between CPU and lamp driver. If this communication go out of work, the CPU cannot determine the lamp is on or off, and some functions may be affected.
Pan Raster	Pan photoelectric switch, or problem with X-axis motor
Tilt Raster	Tilt photoelectric switch, or problem with Y-axis motor
Color Wheel Raster	Color Wheel Hall , or Color Wheel motor have problem
Gobo Wheel Reset faster	Gobo Wheel Hall , or Gobo Wheel motor have problem
Fan Stalling	The blower stops rotating and the lamp will be automatically turned off after a certain period of time.

## 6. DMX Channel Table

17CH	20CH	Function	DMX Value	Description
1	1	Pan	0-255	Pan 540degree Move
	2	Pan Fine	0-255	Pan Fine
2	3	Tilt	0-255	Tilt 270degree Move
	4	Tilt Fine	0-255	Tilt Fine
3	5	P/T Speed	0-255	Speed from fast to slow
4	6	SHOW MODE	0-15	No Function
			16-22	SHOW1 - Color 2 + Gobo 1
			23-29	SHOW2 - Color 3 + Gobo 2
			30-36	SHOW3 - Color 4 + Gobo 3

			37-43	SHOW4 - Color 5 + Gobo 4
			44-50	SHOW5 - Color 6 + Gobo 5
			51-57	SHOW6 - Color 7 + Gobo 6
			58-63	SHOW7 - Color 8 + Color 9 + Gobo 7
			64-73	SHOW8 - Color 2 + Color 3 + Rot Gobo 1
			74-83	SHOW9 - Color 3 + Rot Gobo 2
			84-93	SHOW10 - Color 4 + Rot Gobo 3
			94-103	SHOW11 - Color 5 + Rot Gobo 4
			104-113	SHOW12 - Color 6 + Rot Gobo 5
			114-127	SHOW13 - Color 6 + Color 7 + Rot Gobo 6
			128-137	SHOW14 - Color 6 + Color 7 + Gobo 1 + Prism + Prism rotate
			138-147	SHOW15 - Color 6 + Gobo 2 + Prism
			148-157	SHOW16 - Color 7 + Color 8 + Gobo 3 + Prism + Prism rotate
			158-167	SHOW17 - Color wheel rainbow flow rotate + Gobo wheel rotate + Prism + Prism rotate
			168-177	SHOW18 - Color wheel rainbow flow rotate + Rot Gobo 6 rotate and shake + Prism
			178-191	SHOW19 - Rot Gobo 2 rotate + Prism
			192-201	SHOW20 - Color 2 + Rot Gobo 1 rotate and shake + Prism + Prism rotate
			202-211	SHOW21 - Color 3 + Color 4 + Rot Gobo 2 rotate and shake + Prism + Prism rotate
			212-221	SHOW22 - Color 5 + Rot Gobo 3 rotate and shake + Prism + Prism rotate
			222-231	SHOW23 - Color 4 + Rot Gobo 4 rotate and shake + Prism + Prism rotate
			232-241	SHOW24 - Color 4 + Rot Gobo 5 rotate and shake + Prism + Prism rotate

			242-255	SHOW25 - Color wheel rainbow flow rotate + Rot Gobo 6 rotate and shake + Prism + Prism rotate
<b>5</b>	<b>7</b>	<b>PT Macro</b>	0-127	Off
			128-255	On
<b>6</b>	<b>8</b>	<b>Macro Speed</b>	0-255	Speed from fast to slow
<b>7</b>	<b>9</b>	<b>Color</b>	000-015	White
			016-018	White+Color 1
			019-021	Color 1
			022-024	Color 1+Color 2
			025-027	Color 2
			028-030	Color 2+Color 3
			031-033	Color 3
			034-036	Color 3+Color 4
			037-039	Color 4
			040-042	Color 4+Color 5
			043-045	Color 5
			046-048	Color 5+Color 6
			049-051	Color 6
			052-054	Color 6+Color 7
			055-057	Color 7
			058-060	Color 7+Color 8
			061-063	Color 8
			64-127	Color wheel indexing
128-190	Clockwise rotate from fast to slow			
191-192	Stop			

			193-255	Counterclockwise rotate from slow to fast
<b>8</b>	<b>10</b>	<b>Fixed Gobo</b>	000-007	White
			008-015	Gobo 1
			016-023	Gobo 2
			024-031	Gobo 3
			032-039	Gobo 4
			040-047	Gobo 5
			048-055	Gobo 6
			056-063	Gobo 7
			64-72	Gobo 1 Shake from slow to fast
			73-81	Gobo 2 Shake from slow to fast
			82-90	Gobo 3 Shake from slow to fast
			91-99	Gobo 4 Shake from slow to fast
			100-108	Gobo 5 Shake from slow to fast
			109-117	Gobo 6 Shake from slow to fast
			118-127	Gobo 7 Shake from slow to fast
			128-190	Clockwise rotate from fast to slow
			191-192	Stop
			193-255	Counterclockwise rotate from slow to fast
<b>9</b>	<b>11</b>	<b>Rot Gobo</b>	000-008	White
			009-017	Gobo 1
			018-026	Gobo 2
			027-035	Gobo 3
			036-044	Gobo 4
			045-053	Gobo 5

			054-063	Gobo 6
			64-73	Gobo 1 Shake from slow to fast
			74-83	Gobo 2 Shake from slow to fast
			84-93	Gobo 3 Shake from slow to fast
			94-103	Gobo 4 Shake from slow to fast
			104-113	Gobo 5 Shake from slow to fast
			114-127	Gobo 6 Shake from slow to fast
			128-190	Clockwise rotate from fast to slow
			191-192	Stop
			193-255	Counterclockwise rotate from slow to fast
<b>10</b>	<b>12</b>	<b>Gobo Rotate</b>	0	No function
			1-127	POSITION
			128-190	Clockwise rotate from fast to slow
			191-192	Stop
			193-255	Counterclockwise rotate from slow to fast
<b>11</b>	<b>13</b>	<b>Angle/Frost</b>	0-63	No function
			64-127	Frost
			128-255	Angle
<b>12</b>	<b>14</b>	<b>Prism</b>	0-9	PRISM EXCLUDED
			10-255	PRISM INSERTED
<b>13</b>	<b>15</b>	<b>Prism Rotate</b>	0-127	Prism Position
			128-190	Counterclockwise rotate from fast to slow
			191-192	Stop
			193-255	Clockwise rotate from slow to fast

<b>14</b>	<b>16</b>	<b>Focus</b>	0-255	Focus from far to near
<b>15</b>	<b>17</b>	<b>Strobe</b>	0-7	OFF
			8-15	ON
			16-131	Strobe from slow to fast
			132-139	ON
			140-181	Fast open-slow close from slow to fast
			182-189	ON
			190-231	Fast close-slow open from fast to slow
			232-239	ON
			240-247	Random strobe from slow to fast
			248-255	ON
<b>16</b>	<b>18</b>	<b>Dimmer</b>	0-255	0-100% linear dimmer from dark to bright
	<b>19</b>	<b>Dimmer Fine</b>	0-255	Dimmer fine
<b>17</b>	<b>20</b>	<b>Reset</b>	Below effects, it need stay 4s in the corresponding value, and at same time it need be activate in the menu	
			0-209	No function
			210-215	P/T Reset
			216-219	No function
			220-235	Effect motors Reset
			236-239	No function
			240-255	All reset

## 7. CLEANING

To make sure the stable run of the moving head, you should keep it clean. All fans, lens and color filters, do not use any soluble detergent when cleaning the color filter avoiding the damage to LED.