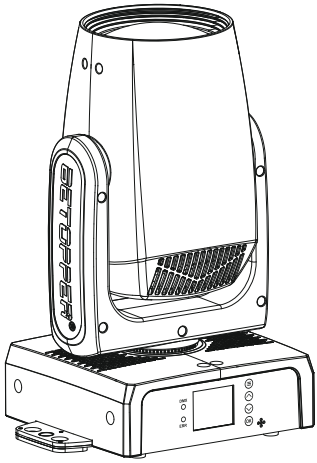
BETOPPER®

User Manual

Moving-head Beam

LB150 / LB150 Plus



website : http://www.betopperdj.com
YouTube : @betopperofficial
Instagram : @betopperdirect
TikTok : @betopperdj
facebook : @Betopper
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Please read this manual carefully before using the product

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Safety Guidance ⚠

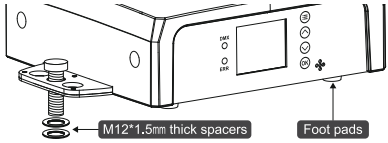
Please read this manual carefully, which includes important information of installation, using and maintenance !

Warning : Please save this manual for future reference, and if you sell this product to other users, make sure they also get this manual.

Notice : The equipment is packed in good condition when it leaves the factory. Please operate it according to the user manual. Machine failure caused by human factors is not covered by the warranty.

- Before using the product, please check carefully to ensure that the light has no damage caused by transportation.
- This light is only suitable for use in dry places indoors.
- The installation and operation of lights should be performed by professionals.
- Do not allow children to operate the machine.
- Use safe ropes when securing the equipment, and lift up the bottom when moving the light.
- The equipment must be installed in a well-ventilated place, at least 50 cm away from adjacent surfaces.
- Make sure the ventilation holes are unobstructed to prevent the light from overheating during operation.
- Before operation, ensure that the power supply voltage matches the power supply voltage required by the equipment.
- Please ground the light to prevent electric shock.
- Do not operate the light in an environment above 40 °C.
- It is prohibited to connect light directly to dimming devices.
- A new light may produce a small amount of smoke or odor when it is working, which will disappear after 15 minutes of operation.
- Do not place flammable objects next to the light when it is in operation to prevent fire hazards.
- Before turning on the light, please carefully check whether the power cord is damaged. If damaged, please replace it immediately.
- When the light is in operation, the surface temperature of the shell can reach 70 ℃ , please do not touch it with bare hands.
- Prevent flammable liquids, water or metal and other conductive objects from entering the light to avoid electric shock or fire. If any foreign object enters the light, please cut off the power supply immediately.
- Avoid operating in dirty and dusty environments, and clean and maintain the lights regularly.
- Do not touch the wires when the light is running to prevent electric shock.
- Avoid the power cord from getting entangled with other wires.
- The distance between the light and the irradiated surface should be greater than 1 meter .
- Disconnect the power supply before replacing the fuse or bulb.
- When replacing a fuse or bulb, use the same type.
- If a serious operating failure occurs, please stop using it immediately.
- If there is obvious damage to the light housing, lens or UV filter, please replace it in time.
- There are no usable parts inside the light, please do not open the light casing without authorization
- Please do not operate the machine by yourself. Non-professional operation may cause damage to the equipment or malfunction. If maintenance is required, please contact the nearest authorized service center.
- Please cut off the power supply when the light is not used for a long time or is under maintenance.
- When transporting again, please use the original packaging materials.
- To avoid fire or electric shock, do not expose the light to rain or wet areas.
- Do not look directly at the light when it is running .
- When hanging the light sideways or hanging it, please correctly install the safety rope.

Installation Note:
When using the bottom M12 holes, remove the 4 foot pads first and add 4pcs M12*1.5㎜ thick spacers per hole (Use 2 spacers for each M12 screw hole), to avoid the base to be close to the wall to affect the heat dissipation.



The following symbols are used to identify important safety information in the product and user manual:



Technical parameters

Power and light source
Power supply：AC 100~ 240V , 50 /60Hz
Power：150W
Light source：100W LED module light source（LB150 Plus） / 100W COB white light source（LB150）
Color temperature：10000 ~ 12000K Lifespan: 50,000 hours
Beam Angle：1.72°

Scan
Horizontal scan：540° (16 bit precision scan)；Vertical scanning: 270° (16 bit precision scanning)
The advanced scanning system is faster, more stable, quieter and has a reset function for automatic error correction

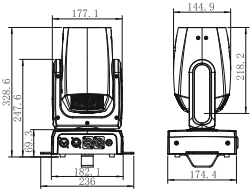
Color：1 color wheel: 11 fixed color filters + open, the color filter can be positioned arbitrarily

Gobo：1 fixed gobo wheel: 11 gobos + open, with gobo shaking and arbitrary gobo positioning functions.

Specifications
Channel mode：12 international standard DMX512 channels
Prism plate：1 prism plate, 8+16 prisms
Focus：Manual focus
Strobe：Electronic strobe, the highest frequency can reach 14Hz, and random strobe and pulse strobe can be selected.
Dimming：0~100% linear dimming, 4 dimming curves optional

Control mode：DMX, Master/Slave, Auto, Sound
Display：1.7-inch touch LCD display
Software：The machine can be reset from the console; the light source and light usage time are displayed, allowing customers to understand the light usage status in a timely manner
Other functions：Input signal isolation protection function ensures stable signal transmission without interference
RDM Function：DMX signal input/output: 3-core XLR signal line interface
Wireless function：(optional)
Heat Dissipation：Fan cooling

Dimensions and weight
Product size：236x174x329mm
Net weight：4.6kg



Illumination

100W LED module light source：

Distance (m)	3	6
Intensity (Lux)	156465	39125
Diameter (m)	0.14	0.29

1.72°

100W COB white light source：

Distance (m)	3	6
Intensity (Lux)	125388	31344
Diameter (m)	0.14	0.29

1.72°

Introduction of the control panel



①Signal indicator：Green color shows DMX signal is connected.
②Error indicator：Red color shows there is ERROR message , check it from the “Information”menu
③LCD Display ④Enter to Main menu/Return ⑤Detail UP/Down ⑥Enter
⑦DMX IN & DMX OUT：For DMX512 operation, use 3-pin XLR cable to link the unit and DMX controller (5-pin XLR is optional)
⑧POWER IN/OUT：Use to connect to supply power
⑨FUSE(5A)：Protect the unit from damage of over current or short-circuit

Configuration instructions

① Light body	1 Set	③ Signal connection cable	1 Set	⑤ User manual	1 Set
② Power connection cable	1 Set	④ Safety rope	1 Set	⑥ Hanging plate	1 Set

Main functions

(Press the menu button to enter the menu mode, use the up and down buttons to select the menu option you want. Press the ok button to enter the selected function, the main functions are as follows：)

Address code	001 - 512		Default 001
Operation mode	Dmx		Default
	AUTO：Energetic		
	AUTO：Calm		
	AUTO：Romantic		
	sound control		
Master-slave selection	Slave		
	Master		
	Automatic		Default
Manual control	X-axis	0-255	
	X-axis fine adjustment	0-255	
	Y-axis	0-255	
	Y-axis fine adjustment	0-255	
	Xy speed	0-255	
	Strobe	0-255	
	Dimming	0-255	
	Color wheel	0-255	
	Picture plate	0-255	
	Prism	0-255	
Set up	X-axis reverse	Closure	Default
		Open	
	Y-axis reverse	Closure	Default
		Open	
	Data retention	Closure	
		Open	Default
	Voice control sensitivity	0-100	
	Refresh rate	600hz	Default
		2000hz	
		4000hz	
		6000hz	
		20000hz	
	Dimming curve	Straight line	Default
		Square curve	
		Inverse square curve	
		S-curve	
	Motor calibration (Press up-down-up-down Buttons to enter)	Pan	-127~+127
		Tilt	-127~+127
		Color wheel	-127~+127
		Gobo wheel	-127~+127
		Prism	-127~+127
Display setting	Language	Chinese	Default
		English	
	Screen protector	Closure	Default
		Mode 1	
	Screen reverse	Closure	Default
		Open	
State	Motor information		
	Lighting status		
	Version		
	Light source time		
	Lighting time		
Light reset	Xy motor reset		
	Head motor reset		
	Reset all		
Reset	Cancel		
	Confirm		

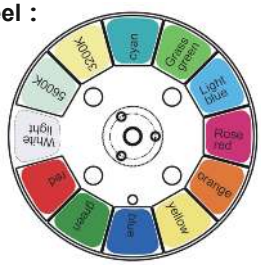
Initial position adjustment

Ress the menu button to enter the menu mode and enter the motor calibration function. Press the up-down-up-down button. Enter the initial position setting for each motor. Use the up / down button to adjust the initial position value (-128-127), press the ok button to confirm. Press the menu button to exit.

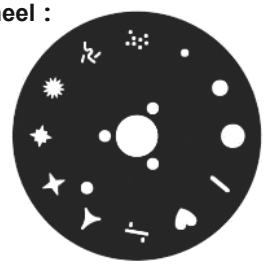
Level / Vertical / Strobe / Color Wheel / Gobo Wheel / Prism

Gobo Wheel&Color Wheel

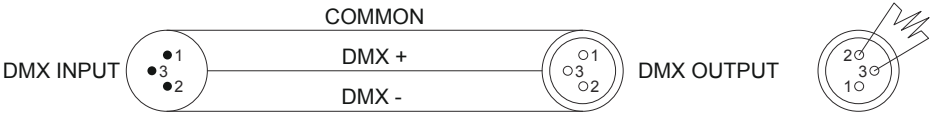
Color Wheel :



Gobo Wheel :



Universal DMX controller control



DMX Connection

1. In order to reduce signal errors and avoid signal attenuation and interference during transmission, you can add a 120 OHM 1/4W resistor between the 2nd and 3rd pins of the DMX output end of the last machine.
2. Use XLR signal cables to connect the lights, one end to the output port of the lights, and the other end to the input port of the next light. XLR signal cables can only be used in series, not in parallel. DMX512 signal transmission speed is very fast. Damage to the signal cable, loose welding, poor contact, etc. These will affect signal transmission and cause the system to shut down.
3. When the machine power of a unit is cut off, the DMX output and input connections are connected to maintain the connectivity of the DMX line.
4. Each light must have an address code that can receive information from the console, ranging from 0-511 (usually 0&1 is the same as 1).
5. The terminal of the DMX512 system needs to be equipped with a terminator to reduce errors in signal transmission.
6. 3 PIN XLR: PIN1: GND, PIN 2: Negative signal(-), PIN3: Positive signal(+).

Channel Settings

Press the MENU button to enter the main menu, Select DMX in the operation mode and press the ENTER button to confirm. Press the LEFT button to return to the previous menu or wait for one minute to automatically exit the Main menu.

Address code setting

When using a universal DMX controller to control the light, you need to set the starting address (1-512) for the light so that the machine can receive the DMX signal. Press the MENU 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 for one minute to automatically exit the menu mode.

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

Channel Mode	Lighting1 Address code	Lighting2 Address code	Lighting3 Address code	Lighting4 Address code
12 CH	1	13	25	37

Channel value table

12CH	Value	Function
1	000-255	Pan
2	000-255	Pan fine
3	000-255	Tilt
4	000-255	Tilt fine
5	000-255	PAN/TILT speed (speed from 100 —> 1%)
6	000-255	Dimming
7	Light switch/strobe	Light switch/strobe
	000-010	Light off
	011-99	Normal strobe (from slow to fast)
	100-109	Light on
	110-179	Pulse strobe (from slow to fast)
	180-189	Light on
	190-250	Random strobe (from slow to fast)
	251-255	Light on
8	Color wheel	Color wheel
	000-010	White light
	011-015	Color 1
	016-020	Color 2
	021-025	Color 3
	026-030	Color 4
	031-035	Color 5
	036-040	Color 6
	041-045	Color 7
	046-050	Color 8
	051-055	Color 9
	056-060	Color 10
	061-065	Color 11
	172-191	White light
	192-225	The color wheel rotates clockwise from fast to slow
	226-255	The color wheel rotates counterclockwise from slow to fast
9	Gobo wheel	Gobo wheel
	000-010	White light
	011-015	Pattern 1
	016-020	Pattern 2
	021-025	Pattern 3
	026-030	Pattern 4
	031-035	Pattern 5
	036-040	Pattern 6
	041-045	Pattern 7
	046-050	Pattern 8
	051-055	Pattern 9
	056-060	Pattern 10
	061-065	Pattern 11
	066-070	Pattern 12
	071-075	Pattern 13
	076-080	White light
	081-087	Pattern 1 shaking from slow to fast
	088-094	Pattern 2 shaking from slow to fast
	095-101	Pattern 3 shaking from slow to fast
	102-108	Pattern 4 shaking from slow to fast
	109-115	Pattern 5 shaking from slow to fast

12CH	Value	Function
9	116-122	Pattern 6 shaking from slow to fast
	123-129	Pattern 7 shaking from slow to fast
	130-136	Pattern 8 shaking from slow to fast
	137-143	Pattern 9 shaking from slow to fast
	144-150	Pattern 10 shaking from slow to fast
	151-157	Pattern 11 shaking from slow to fast
	158-164	Pattern 12 shaking from slow to fast
	165-171	Pattern 13 shaking from slow to fast
	172-180	White light
	181-221	The pattern flows clockwise from fast to slow
	222-255	The pattern flows counterclockwise from slow to fast
10	Prism	Prism
	000-010	Prism off
	011-155	Prism cut-in
	156-157	Stop
	158-205	Prism rotates clockwise (speed 100% —> 1%)
	206-207	Stop
	208-255	The prism rotates counterclockwise (speed 1% —> 100%)
11	Reserved Channel	Reserved Channel
12	Reset/Function Channel	Reset/Function Channel
	000-040	No function
	041-050	600HZ
	051-060	2000HZ
	061-070	4000HZ
	071-080	6000HZ
	081-090	20000HZ
	091-100	Dimming curve: Linear
	101-110	Dimming curve: square curve
	111-120	Dimming curve: inverse square curve
	121-130	Dimming curve: S curve
	131-140	XY motor reset
	141-150	effect reset
	151-160	All reset
	161-255	NO function

Trouble-shooting

The following are some common problems that occur during operation, along with some suggestions for trouble-shooting.

A. The light can not turn on

① Check the power connection and whether the fuse is intact.
② Check the voltage.
③ Check the indicator light on the power switch.

B. The light is not controlled by the console

① Check the DMX signal connector and signal cable to see if they are connected correctly . If the connection is unsuccessful, the indicator light will turn red.
② If the indicator light is green but the channel does not respond, check whether the address code is set correctly.
③ If the DMX signal transmission is intermittent, check whether the connection between the XLR socket and the signal cable is good.
④ Try using another controller.
⑤ Check if the DMX signal cable is too close to the high voltage wire, which may damage or interfere with the signal circuit.

C. A channel fails

① The stepper motor may be damaged or the motor leads may be broken.
② The motor drive circuit may be faulty.

Cleaning Dust Removal

The inside and outside of the lens and the reflector must be wiped frequently to make the lighting effect better. The frequency of wiping depends on the environment. Humid, smoky and dirty environments are prone to dust accumulation on the lens.

- Use soft linen cloth and special glass cleaner.
- Dry the parts carefully.
- Wipe the outside of the lenses at least every 30 days.

Cleaning dust inside light :
Every three months, the inside of the light should be dusted and the dust-proof cotton at the air inlet of the light should be cleaned.

After-sales service

Please fill in the following content properly and keep it safe forfuture maintenance. Accordingly, for your each purchase of our systems we havearchive Serial number and parameters for future reference.

Product warranty card

Testing : ☐ **Warranty :** ☐ **Non-warranty :** ☐

Mode : _____

Serial No. : _____

Distributor : _____

Address : _____

Tel : _____

1. All device products purchased from our company (and authorized agents) are entitled to a one-year warranty service for light sources, machinery, and electronics if they are used correctly; if there is no warranty, the company can also provide paid maintenance services according to the actual situation;

2. The following situations are not covered by the free warranty:
① The product has no serial number;
② The prohibition mark is damaged or there are obvious signs of self-disassembly;
③ The product has no replaceable components or components required by customized products, and unauthorized disassembly or replacement of components without permission leads to problems;
④ Failure or damage caused by improper use or improper maintenance or modification;
⑤ Damage caused by failure to operate in accordance with the instructions or the harsh environment of use;
⑥ Damage caused by impact during installation or handling by the purchaser;
⑦ For repaired or replaced products, the warranty will not be extended, and the power will decay slowly according to the normal life span, which is not within the scope of free warranty;
⑧ Failure and damage caused by fire, earthquake, flood, lightning and other natural disasters or abnormal power supply voltage

3. The company reserves the right of final analysis of the above terms.

If there is a problem with the product, please contact the company (or agent) in time, and we will solve it in the shortest time. At the same time, we sincerely hope that you can provide valuable comments and suggestions on our products, and we will spare no effort to improve our products.