

MOVING HEAD™

OBY-3

User manual



CAUTION!

Risk of electric shock
Read instructions before installing
or connecting to power

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Congratulations!

Thank you for purchasing OBY Series that elaborate manufactured by Geni abundant experience of stage-lights. Hereafter you can get high quality and low breakdown products on the market from *Geni Electronics Co., Ltd.*; OBY Series concentrated unexpectedly lighting effects for animating stages.

If any question or suggestion you have, please offer the precious recommendation for improving our products and designs better; and create perspective and expectancy about future lighting.

Features

Ideal & powerful effects

- Smooth and silent revolving of a big range of 570-degree in X axis and 270-degree in Y axis, automatic electronic sensor to zero.
- 11 sharp dichroic colors + white.
- 6+1 easily replaceable rotating gobos.
- Various kinds of glass gobos are available for clients' choices.
- Rotating three facet prism.
- 1-7Hz fast flashing and 0-100% linear dimmer.
- Remote-controlled focus.
- Remote-controlled lamp switch ON/OFF.

Attractively smooth design

- Stylish, high impact resistant polymer shell, which is lighter than any one else of the same class in the market.
- Solid square base is convenient set on the TRUSS, or directly stand on the ground or stage for uses.
- Systematic modular construction design has all inner function wheels and PCBs modularized, which allows version update or customization more convenient.
- Sophisticated optical system makes light output more bright and sharp.

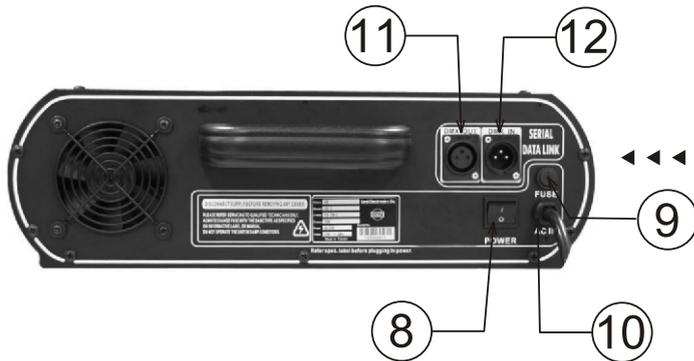
Simple and easy operation

- Standard USITT DMX512 protocol, 13 or 11 DMX Channel.
- High-torque stepper motors, smooth and precise micro-stepping control.
- LED screen controls DMX coding and built-in functions' election, as well as also display lamp's time usage.

Description of the appearance



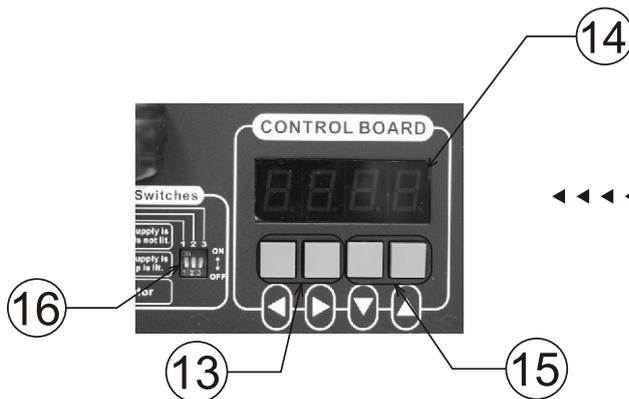
- 1. Projector-head
- 2. Yoke
- 3. Left side panel
- 4. Base
- 5. Control Board
- 6. Right side panel
- 7. Carrying handles



- Left side panel:*
- 8. Power-switch
 - 9. Fuse-holder
 - 10. Powercord
 - 11. DMX-output
 - 12. DMX-input



- Right side panel:*



- Control Board:*
- 13. MENU (Function buttons)
 - 14. Display
 - 15. SELECT (ON/OFF or address number)
 - 16. DIP Switch

Inspection

Carefully unpack the carton, and make sure if any damage or loss caused by transportation.

Contact your Geni dealer to assure your right by telephone or facsimile immediately if damage has occurred or if something is missing.

Packing List:

A. OBY-3 Moving Head

B. Operating Manual

C. Bracket

D. GOBO

E. Lamps (Optional)

Safety instructions

- This appliance must be earthed (grounded).
- Disconnect power before removing covers or servicing.
- Keep case closed while operating.
- OBY-3 contains no user serviceable parts. Refer servicing to qualified technicians only.
- Lamp and components become hot during operation. Allow time to cool before handling.
- Keep flammable material at least one meter away from unit.
- Do not operate in wet conditions or near liquids.
- Keep air vents clear to avoid overheating.
- Lamp produces hazardous UV light. Do not look directly at lamp when lit.
- Replace any blown or damaged fuses only with those of identical values.

Lamp Installation

! Warning !
Remove the power cord before installing the lamp.



Remove the power cord and set the unit as to the figure. Loosen the screws with appropriate tools and extract A. (See the figure.)



Loosen the screws with appropriate tools then extract B.

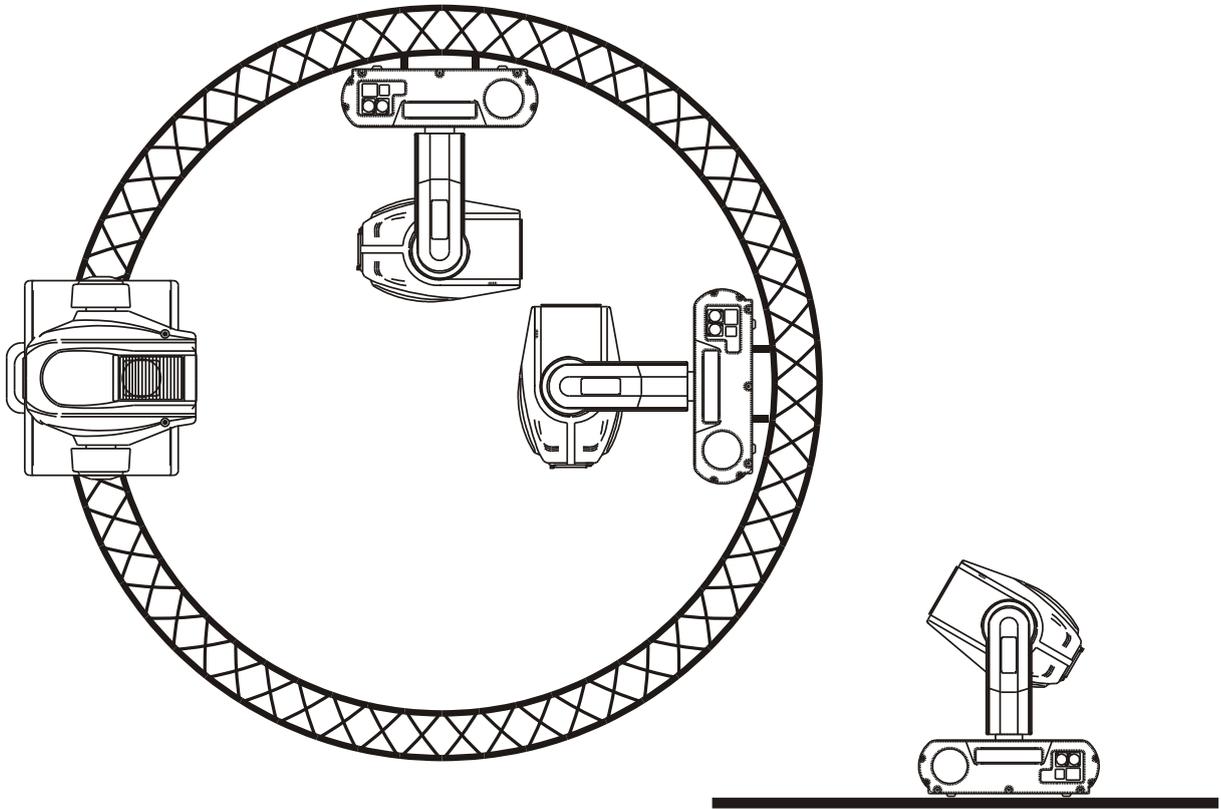


Please glove your hand to remove the lamp from the package in order to keep the lamp life. Insert the lamp in the lampholder securely and then put back B and A for the complete installation.

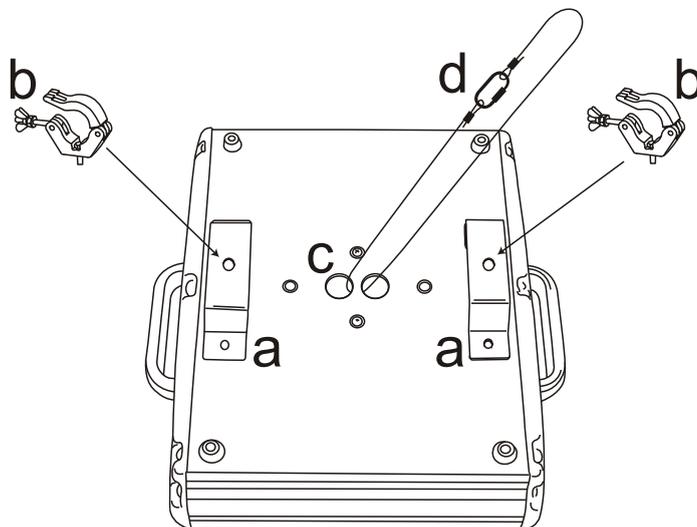
If you want to change the lamp, please extract the used lamp firstly, then execute the above-mentioned processes.

Rigging:

Oby-3 can be set on the flat stage floor directly or use clamp to mount on any kinds of trusses for fitting the mobility of various venues.



Mount two attached brackets(a) on the bottom (See Figure), and collocate the appropriate clamps(b) to rig with trusses. Must use the safety ropes that can hold the ten times as heavy as the fixture through the eye bolts(c) on the bottom of the base and trusses; then join the safety ropes with screw-on carabines(d).



Connection with the mains

Connect the device to the mains with the power-plug.
The occupation of the connection-cables is as follows:

Cable	Pin	International
Brown	Live	L
Blue	Neutral	N
Yellow/Green	Earth	

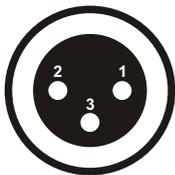
The earth has to be connected! In general, lighting effects should not be connected to dimming-packs.

Linking

Use 3-pin XLR data cables to link the controller to DMX lighting equipment.

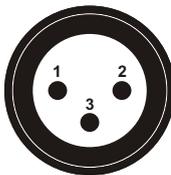
3-pin XLR connectors are follows:

DMX-output
XLR mounting-socket:



1:Ground
2:Signal(-)
3:Signal(+)

DMX-input
XLR mounting-plug:



1:Ground
2:Signal(-)
3:Signal(+)

Building a serial DMX-chain:



Connect the DMX output of the first fixture with the DMX input of the next fixture. And execute all the setups following the above-mentioned instruction.

Flip the DIP SWITCH #3 of last fixture to ON position for terminal confirmation.

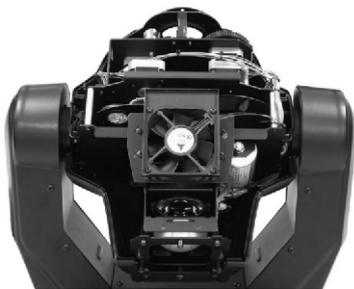
Instructions for gobo replacement



Please choose the suitable gobo dimensions of this fixture. ([Appendix A](#))

Rotating GOBO wheel

1. Loosen the arrow-indicated screws in order with appropriate tools.



2. Open the top cover.



3. Push GOBO & the spring ring out with the fingers carefully. (*Caution: Avoid falling the spring ring into the fixture.)

4. Insert the new GOBO and the spring ring (*Press the spring ring tight with the appropriate tools in order to keep GOBO compact), screw up the top cover.

DMX Channel chart

Function of the control channels - 16 bit protocol

Channel 1 - Dimmer intensity

CH 1	← 0		255 →
Dimmer	Dark		Bright
0-255 Gradual adjustment of the dimmer intensity from 0 to 100 %			

Channel 2 - Shutter, Strobe

CH 2	← 0	Closed → 7 8 1Hz	Strobe 7Hz → 255
Shut			
0-7 Shutter closed			
8-255 Strobe-effect from slow to fast (max. 7 flashes/second)			

Channel 3 - Colorwheel 1

CH 3	0-13	14-27	28-41	42-55	56-69	70-83	84-97	98-111	112-125	126-139	140-153	154-167	168-255
Color													
	0 - 13	14 - 27	28 - 41	42 - 55	56 - 69	70 - 83	84 - 97	98 - 111	112 - 125	126 - 139	140 - 153	154 - 167	168 - 255
	Open/white	Steel Blue	Orange	Green Blue	Bright Blue	Bright Pink	Red	Deep Blue	Yellow	Dark Pink	Moss Green	Light Blue	Color wheel rotation slow to fast

Channel 4 - Rotating gobo wheel

CH 4 Gobo	0-23 	24-47 	48-71 	72-95 	96-119 	120-143 	144-167 	168-255 
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Channel 5 - indexing & Rotating gobo rotation

CH 5 Gobo Rotate	0 0°	Gobo Angle	127 360°	128	Rotate Clockwise	191	192	Rotate Counterclockwise	255	Low Speed	High Speed	High Speed	Low Speed
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0 – 127	Rotating gobo angle adjustment from zero to 360 degrees.
128 – 191	Forwards gobo rotation from fast to slow
192 – 255	Backwards gobo rotation from slow to fast

Channel 6 - Prism-wheel

CH 6 Prism & Rotate	0	1	2	7	8	Rotate Clockwise	132	133	Rotate Counterclockwise	253	254 - 255	Triple Prism Static
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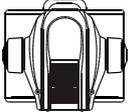
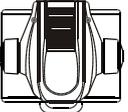
0 – 1	Open position
2 – 7	Triple prism static
8 – 132	Triple prism forwards rotation from fast to slow
133 – 253	Triple prism backwards rotation from slow to fast
254 – 255	Triple prism static

Channel 7 - Focus

CH 7 Focus	0 	127 	255 
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0 – 255	Focus adjustment from near to far
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Channel 8 - Pan reguration

CH 8 Pan Cors.	0 0° 	Pan Adjustment	255 570° 
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CH-11	The “head” of the unit is allowed to turn horizontally from zero to 570 degrees.
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Channel 9 Tilt regravation

CH 9 Tilt Cors.		Tilt Adjustment	
	The "head" of the unit is allowed to turn vertically from zero to 270 degrees		

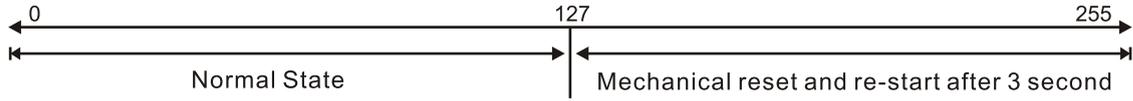
Channel 10 Pan fine-tune

CH 10 Pan Fine	While rotating horizontally the "head" is allowed to be fine tuned from zero to 2.2 degrees.
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Channel 11 Tilt fine-tune

CH 11 Tilt Fine	While rotating vertically the "head" is allowed to be fine tuned from zero to 1 degree.
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Channel 12-Reset

CH 12 Reset	
0 – 127 Normal state 127 – 255 Mechanical reset and re-start after 3 seconds	

Channel 13-Lamp switch

CH 13 Lamp SW	
0 – 47 Standby 48 – 95 Lamp "on" 3 seconds later 96 – 159 Standby 160 – 207 Lamp "off" 3 seconds later 208 – 255 Standby	

Function of the control channels - 8 bit protocol

DMX Channel	Function
1	DIMMER
2	SHUT
3	COLOR
4	GOBO
5	GOBO ROTATE
6	PRISM AND ROTATE
7	FOCUS
8	PAN COARSE
9	TILT COARSE
10	AUTO RESET
11	LAMP ON/OFF

Control Board



<i>Addr</i>	Press ▲ to increase DMX Address; ▼ to decrease. Press ▲▼ simultaneously to zero DMX address.
<i>L.P.T.</i>	Used lamp time Press ▲▼ simultaneously to zero lamp time , unit: hour
<i>Shut</i>	Off : Normal On: Shutter closes during changing color、gobo or prism. Shutter opens after color、gobo and prism are properly positioned.
<i>Colo</i>	Off: Color wheel linear movement On: Color wheel fixed step advance
<i>Focu</i>	Off: Normal On: Focus adjustment
<i>r.PAn</i>	X-axis- Off: left to right On: right to left
<i>r.tilt</i>	Y-axis- Off: down to up On: up to down
<i>l.b.br</i>	Off: 8bit control model On: 16bit control model
<i>dENo</i>	Off: Normal On: Self-demonstration
<i>SoFT</i>	Off: Quick paced function demonstration. On: Slow paced function demonstration.
<i>dP.SE</i>	Off: Display off ; On: Display on While 'Off ', press any key to turn on the display
<i>r.SEt</i>	Off: Normal On: Self-zero all motors once
<i>dF.SE</i>	Off: Normal On: Reset the unit as ex-works. Default returns to "OFF" position.
<i>LAMP</i>	Off: Lamp off On: Lamp on

- ⊙ Press ◀▶ simultaneously returning to " Addr ".
- ⊙ Press ◀▶ simultaneously in advance before switching on the unit, release ◀▶ to erase all recorded data after switching the unit as ex-works.
- ⊙ Once operation stopped, the unit stores all data. When restarting the unit, it starts with the latest play of last operation before turning off the unit.

Maintenance

Refer maintenance to qualified technicians. Please disconnect power and signal wire before maintaining fixtures.

In order to preserve OBY-3 in good condition, keep the routine maintenance by following date.

The Steps are as follows:

- The dichroic colour-filters, the metal gobo-wheel, the internal lenses and cooling fans should be cleaned with soft brush monthly.
- The interior of the fixture should be cleaned at least half-yearly using a vacuum-cleaner or an air-jet.
Caution: Be careful not to damage the interior mechanical structures or circuits when using the air-jet.
- To ensure a proper function and smooth rotation of the gobo-wheel, we recommend lubrication in six-month intervals.
Caution: Avoid the damage of interior structures when fixtures rotated, do not use excess lubrication.

Due to emit fog frequently, the optical lens and gobos would be oily; thus luminosity would be weak. We recommend using moist cloth or a trace of detergents to wipe them every two weeks. (Prohibit using the detergents consisted of alcohol and solvents.)

Replacing the Fuse

If the fixture does not function, that may be the fuse was burned out. It may be time to replace the fuse of same type and specification for eliminating this fault.

Remove the electric power and flip the switch to " off " position before replacing the fuse.

Replace the fuse as follows:

Step 1: Unscrew the screw of the fuse holder on the housing counterclockwise with appropriate tools.

Step 2: Remove the broken fuse and then replace the new fuse.

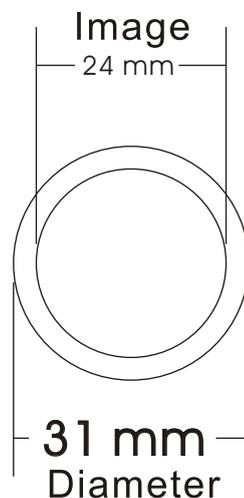
Step 3: Reinsert and tighten the screw on the fuse-holder.

Step 4: Turn the power on for test.

Please contact with the dealer if the fixture still cannot work or the fuse burns out again.

Appendix A

GOBO Size



Product Specifications

Construction

Housing: High impact resistant polymer cover
Colors: Black or white
Metal finish: Electrostatic powder coating

Physical

Dimension (L x W x H); 400 x 380 x 540 mm
Weight: 24 kg

AC supply

AC input: Certified power cord with plug or without plug
Voltage: 100V, 120V, 220V, 230V, 240V 50/60Hz
Fuse: 120V: 8A. 230V: 5A
Power Consumption: 350VA

Control and programming

Signal pin out: pin 1 shield, pin 2 (-), pin 3 (+)
Setting and addressing: LED control pane)
Protocol: USITT DMX-512
Pan/tilt resolution: 8 or 16 bit
DMX channels: 11-13
Signal input: 3-pin XLR male
Signal output: 3-pin XLR female

Source

Lamp: 250 W discharge
Base: GY9.5
Approved models: Philips MSD-250/2 (2000 hr; 8500K)
Philips MSD-250 (2000 hr; 6700K)
Osram HSD-250/2 (2000 hr; 7800K)
Osram HSD-250 (2000 hr; 6000K)
Control: Automatic and DMX remote on/off

Electromechanical effects

Color wheel : 11 dichroic colors + white
Rotating gobo wheel: 6 replaceable gobos + white
Gobo rotation: adjustable speed and direction
Dimmer: 0-100 linear dimmer
Strobe: 1-7Hz fast flashing
Rotating 3-facet prism: in/out variable speed and direction

Focus: 2m - infinity
Pan: 0°-570°
Tilt: 0°-270°
Wheel control: auto-electronic reset

Gobos

Metal gobo: Diameter: 31 mm
Maximum image diameter: 25 mm
Metal type: white iron
Glass gobo; Diameter: 31 mm
Maximum image diameter: 25 mm
Glass type: heat-resistant and intensify glass
Glass coating; dichroic

Accessories

Half-coupler clamp

