

MOVING HEAD™

OBV-5

User manual



CAUTION!

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

contents

Features	1
Description of the appearance	2
Inspection	3
Safety instructions	4
Lamp Installation	5
Rigging	6
Connection with the mains	7
Linking	7
Instruction for gobo replacement	8
DMX Channel Chart	9
Control Board	14
Maintenance	15
Replacing the Fuse	16
Appendix A	16
Product Specifications	17

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

Great effect variety

- 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.
- Two separated 11-dichroic color + white wheels, creating moving colors as beautiful as the rainbow.
- 9+1 fixed gobos and 6+1 rotating gobos allocated in two different gobo wheels; and all gobos are easily changed.
- Various kinds of glass gobos are available for clients' choices.
- Rotating three facet prism.
- 10,000K and 6500K Temperature correction filter.
- 3200K temperature correction filter.
- 1-7Hz fast flashing and 0-100% linear dimmer.
- IRIS linear adjustment.
- Remote-controlled focus.
- Remote-controlled lamp switch ON/OFF.

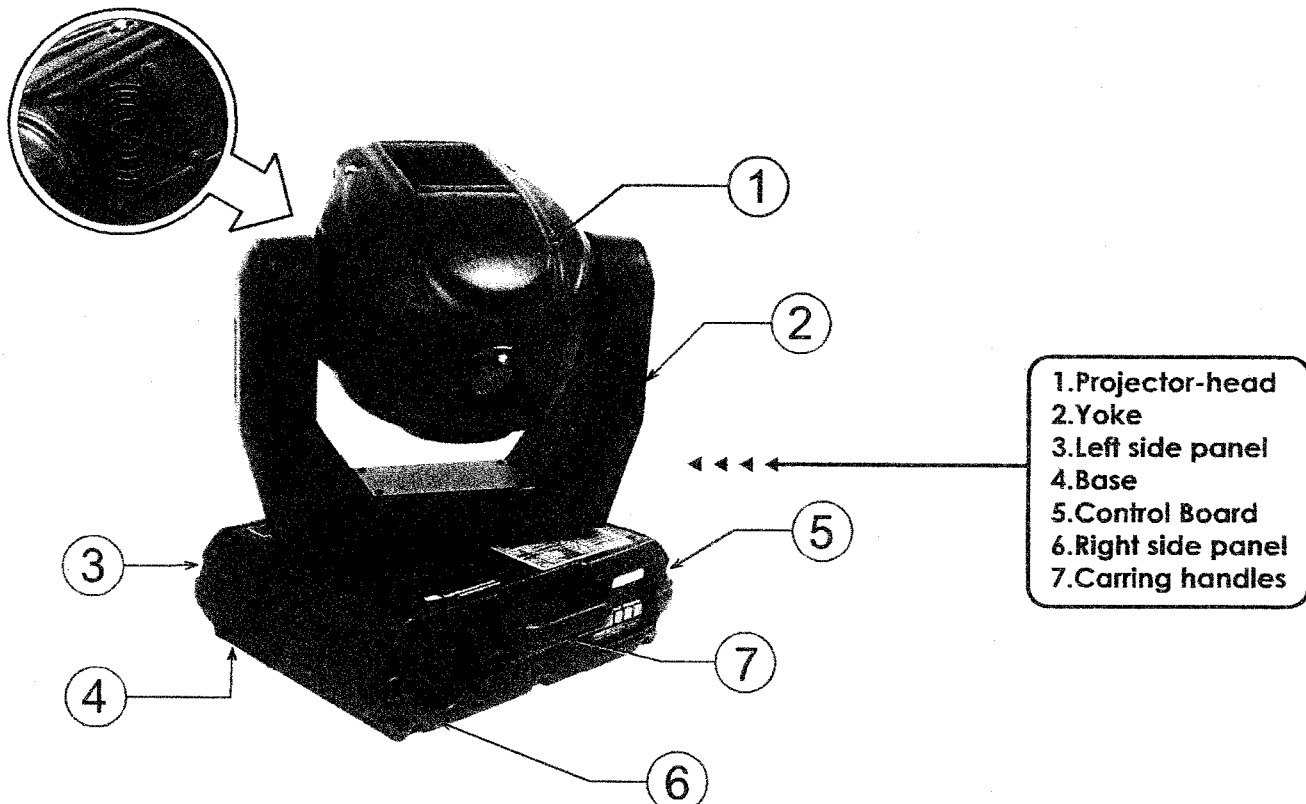
Sophisticated appearance and structure design

- Stylish, high impact resistant polymer shell, which is lighter than anyone 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.

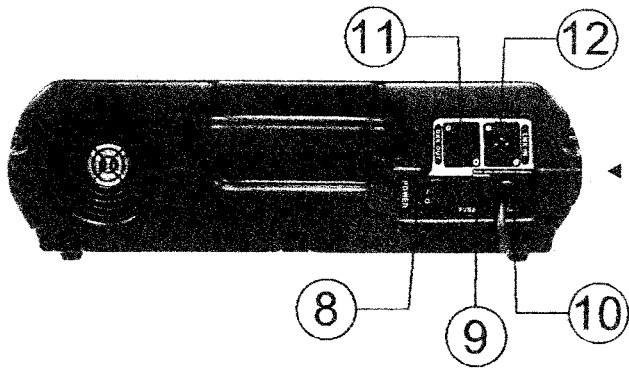
Simple and easy operation

- Standard USITT DMX512 protocol, 16 or 14 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.

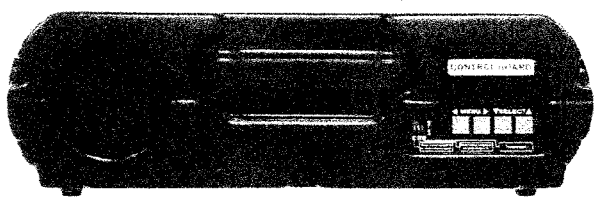
Description of the appearance



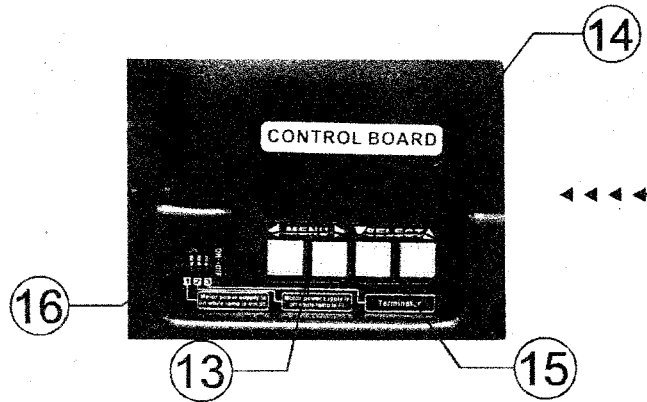
- 1. Projector-head
- 2. Yoke
- 3. Left side panel
- 4. Base
- 5. Control Board
- 6. Right side panel
- 7. Carrying handles



- 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

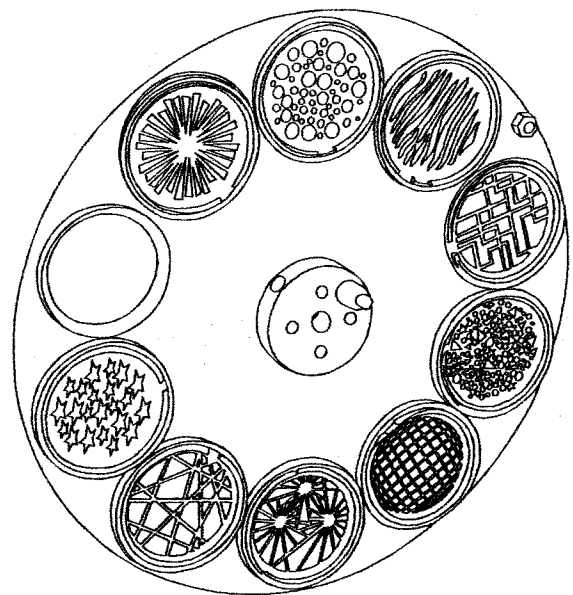
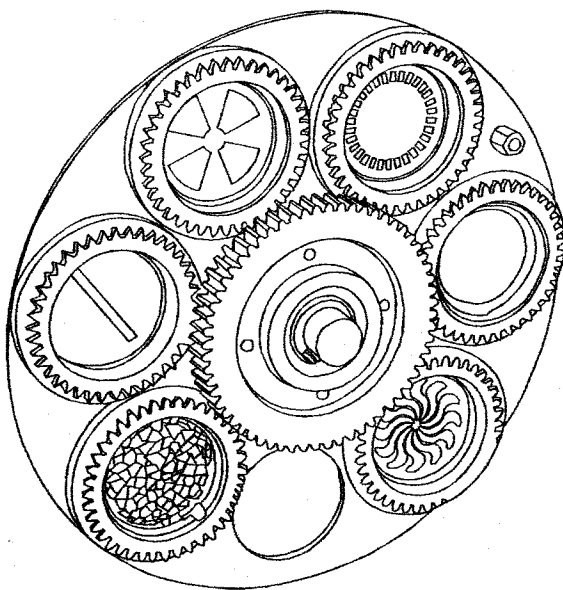
Inspection

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-5 Moving Head
- B. Operating Manual
- C. Bracket
- D. GOBO
- E. Lamps (Optional)



Safety instructions

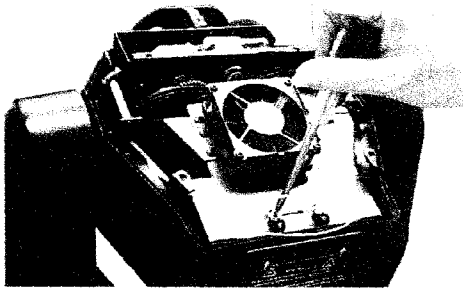
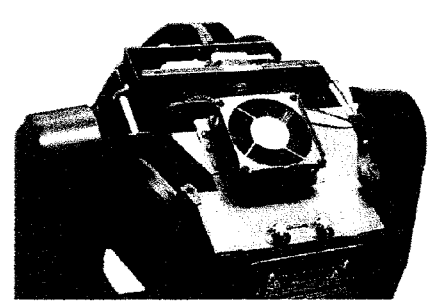
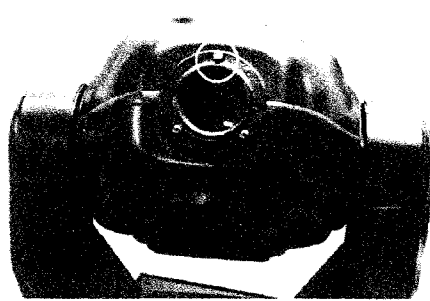
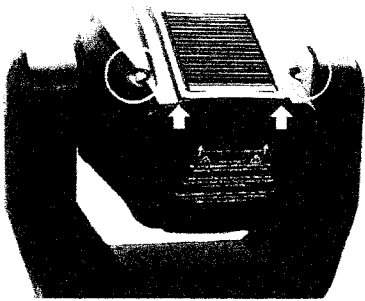
- This appliance must be earthed (grounded).
- Disconnect power before removing covers or servicing.
- Keep case closed while operating.
- OBY-5 contains no user serviceable parts. Refer servicing to qualified technicians only.
- Lamp and components become hot during operation. Allow time to cool before 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

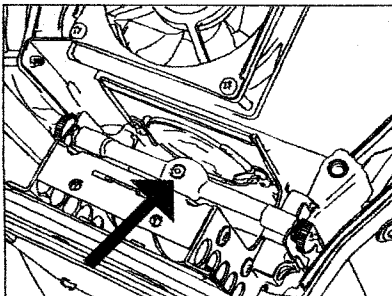
! Warning !

Remove the power cord before installing the lamp.

Keep projector-head upward (See Figure below.) and loosen three screws on the cover with appropriate tool then open the top cover and put it aside.



Loosen and grab the screws on the shutter cover with appropriate tool.

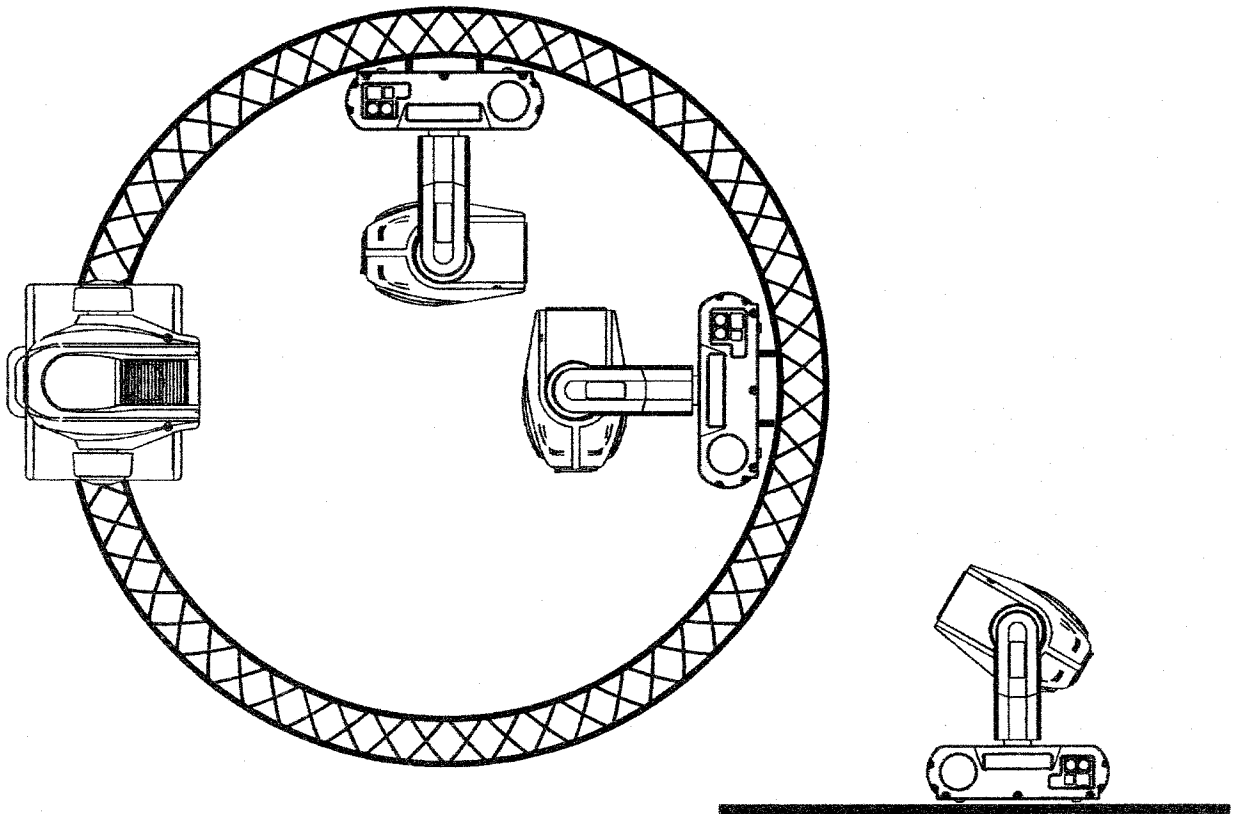


Wear the gloves and extract the lamp from the package, loosen the screws on both sides of the lamp, then slide the lamp paralleled into the lamp socket. Adjust the round point of the lamp upward (See Figure.) and fasten the screws snugly.

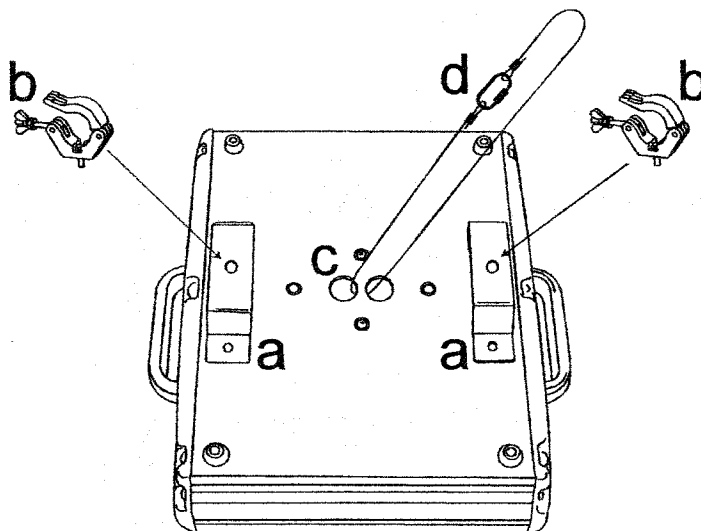
Reverse the above-mentioned processes for the complete installation.

Rigging:

Oby-5 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	

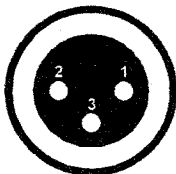
The earth has to be connected! In general, lighting effects should not be connected to dimming-packs.

Linking

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

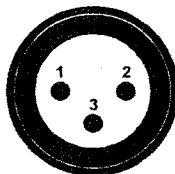
3-pin XLR connectors are follows:

DMX-output
XLR mounting-socket:



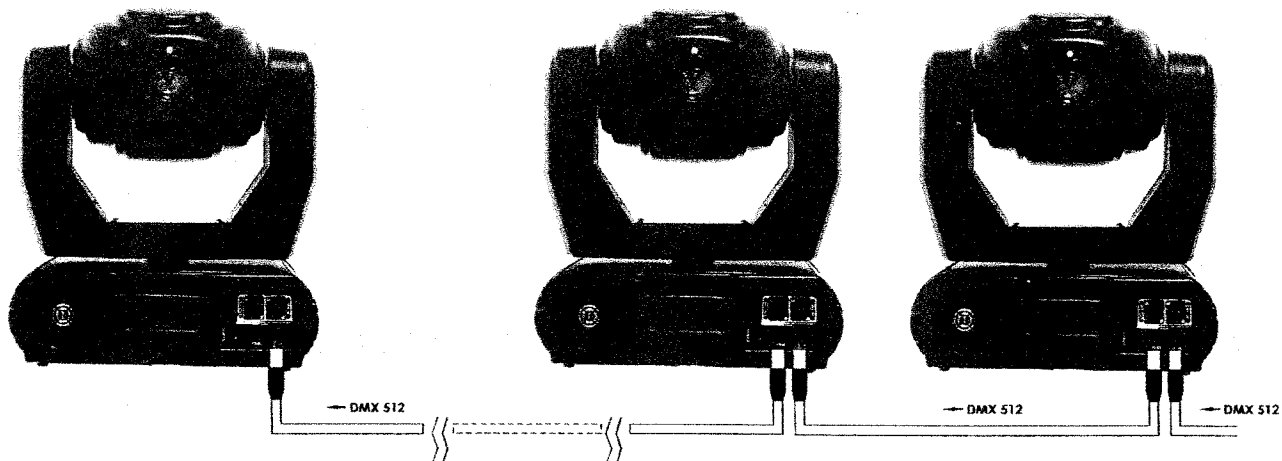
1: Ground
2: Signal(-)
3: Signal(+)

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.

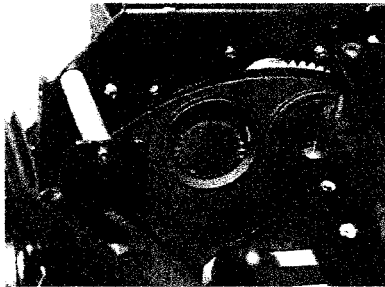
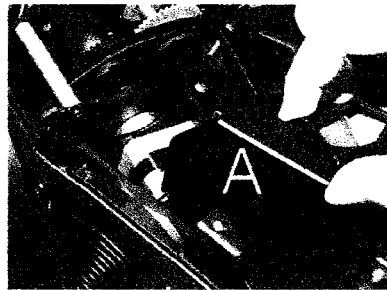
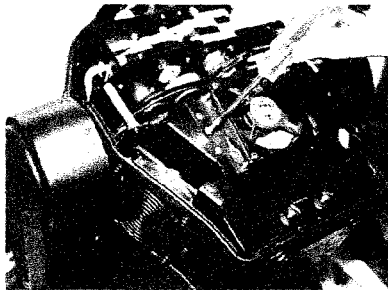
Instructions for gobo replacement

	DANGER! Install the gobos with the device switched off only. Unplug from mains before!
---	--

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

Rotating GOBO wheel

1. Open the top cover (*Refer to the steps of lamp installation.), and loosen the screws with appropriate tools then extract A. (See the figures below.)



2. Turn the open (circle) of the GOBO wheel to "U" shape gap in order to extract the rotating GOBO easily.



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), put A back and screw up the top cover.

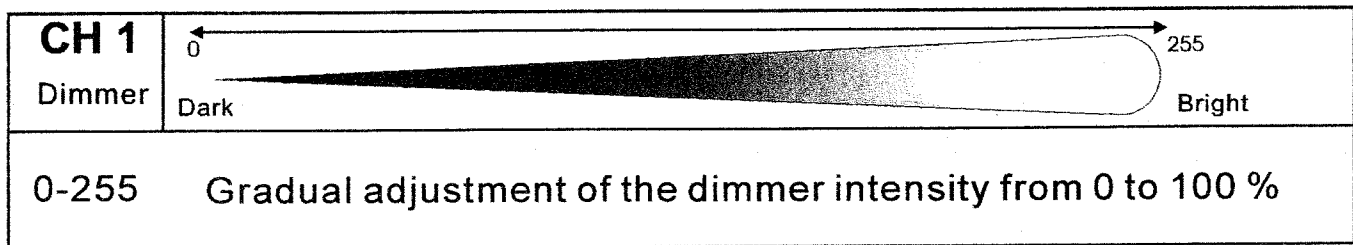
Fixed GOBO wheel

The instructions are the same as changing the rotating GOBO; only winkle the spring ring out with appropriate flat screw driver before push GOBO out.

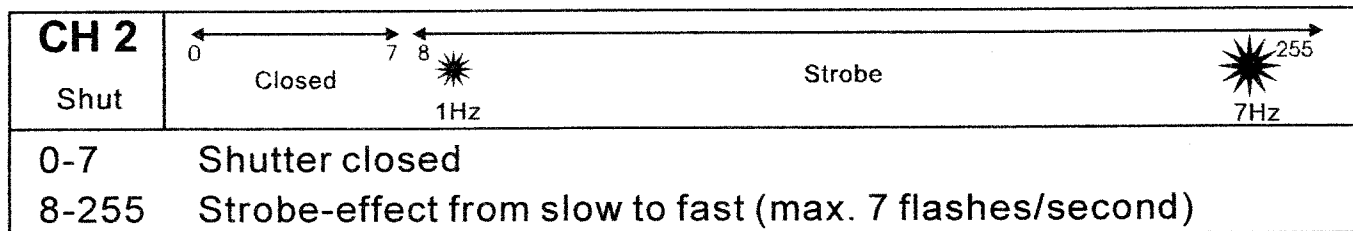
DMX Channel chart

Function of the control channels - 16 bit protocol

Channel 1 - Dimmer intensity



Channel 2 - Shutter, Strobe



Channel 3 - Color wheel 1

CH 3 Color 1	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
0 - 13	Open/white												
14 - 27	Steel Blue												
28 - 41	Orange												
42 - 55	Green Blue												
56 - 69	Bright Blue												
70 - 83	Bright Pink												
84 - 97	Red												
98 - 111	Deep Blue												
112 - 125	Yellow												
126 - 139	Dark Pink												
140 - 153	Moss Green												
154 - 167	Light Blue												
168 - 255	Color wheel rotation slow to fast												

Channel 4 - Color wheel 2

CH 4	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 2													
	0 – 13	Open/white											
	14 – 27	Steel Blue											
	28 – 41	Rose Pink											
	42 – 55	Yellow											
	56 – 69	Pale Blue											
	70 – 83	C.T Orange											
	84 – 97	Pale Blue- C.T Orange											
	98 – 111	Steel Blue-Orange											
	112 – 125	Green-Yellow											
	126 – 139	Rose Pink-Moss Green											
	140 – 153	Rose Pink-Yellow-Steel Blue-Green											
	154 – 167	Yellow-Moss Green-Orange-Steel Blue											
	168 – 255	Color wheel rotation slow to fast											

Channel 5 - Fixed gobo wheel

CH 5	0-15	16-31	32-47	48-63	64-79	80-95	96-111	112-127	128-143	144-159	160-255
Gobo 1											

Channel 6 - Rotating gobo wheel

CH 6	0-23	24-47	48-71	72-95	96-119	120-143	144-167	168-255
Gobo 2								

Channel 7 - indexing & Rotating gobo rotation

CH 7	Gobo Angle				Rotate Clockwise		Rotate Counterclockwise	
Gobo 2	0°	127	128	191	192	255		
Rotate			Low Speed		High Speed	High Speed		
	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 8- Prism-wheel

CH 8 Prism & Rotate						
	<p>0 – 1 Open position</p> <p>2 – 7 Triple prism static</p> <p>8 – 132 Triple prism forwards rotation from fast to slow</p> <p>133 – 253 Triple prism backwards rotation from slow to fast</p> <p>254 – 255 Triple prism static</p>					

Channel 9- Iris

CH 9 Iris					
	<p>0 Closed</p> <p>1 – 159 Min. Diameter to max. diameter</p> <p>160 – 207 Iris-in from slow to fast</p> <p>208 – 253 Iris-out from fast to slow</p> <p>254 – 255 Open</p>				

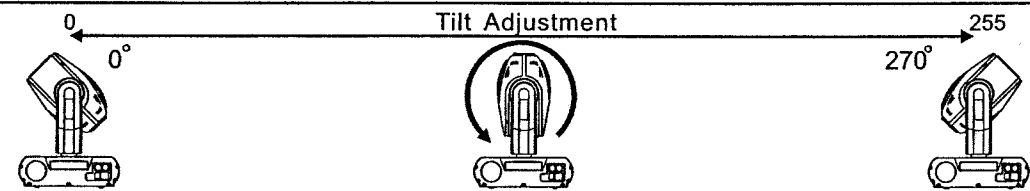
Channel 10- Focus

CH 10 Focus	0	127	255
0 – 255 Focus adjustment from far to near			

Channel 11- Pan reguration

CH 11 Pan Cors.			
	<p>CH-11 The head of the unit is allowed to turn horizontally from zero to 570 degrees.</p>		

Channel 12 Tilt reguration

CH 12 Tilt Cors.	 <p>The diagram illustrates the tilt adjustment range. A horizontal line at the top is labeled 'Tilt Adjustment' with arrows pointing from 0 on the left to 255 on the right. Below this line, three illustrations of the unit's head are shown at different angles: 0° (pointing left), 270° (pointing right), and 255° (pointing right, slightly lower than 270°). A circular arrow around the middle illustration indicates the direction of rotation.</p>
<p>The "head" of the unit is allowed to turn vertically from zero to 270 degrees</p>	

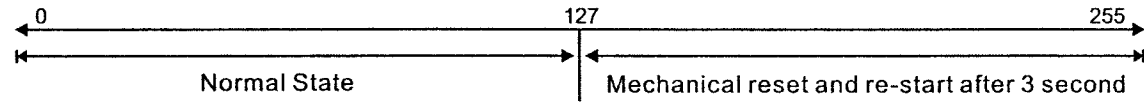
Channel 13 Pan fine-tune

CH 13 Pan Fine	<p>While rotating horizontally the "head" is allowed to be fine tuned from zero to 2.2 degrees.</p>
--------------------------	---

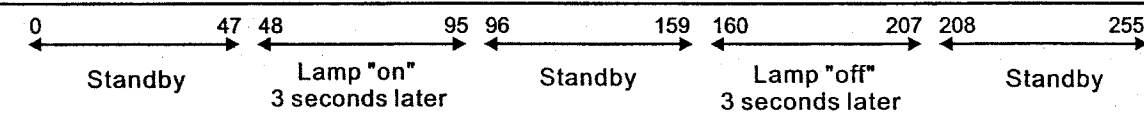
Channel 14 Tilt fine-tune

CH 14 Tilt Fine	<p>While rotating vertically the "head" is allowed to be fine tuned from zero to 1 degree.</p>
---------------------------	--

Channel 15- Reset

CH 15 Reset	 <p>The diagram shows a horizontal axis from 0 to 255. A vertical line is drawn at 127. The region from 0 to 127 is labeled 'Normal State'. The region from 127 to 255 is labeled 'Mechanical reset and re-start after 3 second'.</p>
<p>0 – 127 Normal state 127 – 255 Mechanical reset and re-start after 3 seconds</p>	

Channel 16- Lamp switch

CH 16 Lamp SW	 <p>The diagram shows a horizontal axis from 0 to 255 with tick marks at 0, 47, 48, 95, 96, 159, 160, 207, 208, and 255. The sequence of states is: Standby (0-47), Lamp "on" 3 seconds later (48-95), Standby (96-159), Lamp "off" 3 seconds later (160-207), and Standby (208-255).</p>
<p>0 – 47 Standby 48 – 95 Lamp "on" 3 seconds later 96 – 159 Standby 160 – 207 Lamp "off" 3 seconds later 208 – 255 Standby</p>	

Function of the control channels - 8 bit protocol

DMX Channel	Function
1	DIMMER
2	SHUT
3	COLOR 1
4	COLOR 2
5	GOBO 1
6	GOBO 2
7	GOBO 2 ROTATE
8	PRISM AND ROTATE
9	IRIS
10	FOCUS
11	PAN COARSE
12	TILT COARSE
13	AUTO RESET
14	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, but shutter closes only when iris is fading in/out. On: Shutter closes during changing color1 · color2 · gobo1 · gobo2 · prism or iris . Shutter opens after color1 · color2 · gobo1 · gobo2 · prism and iris are properly positioned.
<i>Col.1</i>	Off: Color1 wheel linear movement On: Color1 wheel fixed step advance
<i>Col.2</i>	Off: Color2 wheel linear movement On: Color2 wheel fixed step advance
<i>iris</i>	Off: Iris dims from narrow to wide On: Iris dims from wide to narrow
<i>Focus</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>dPSE</i>	Off: Display off ; On: Display on While 'Off ', press any key to turn on the display
<i>rSET</i>	Off: Normal On: Self-zero all motors once
<i>dFSE</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.

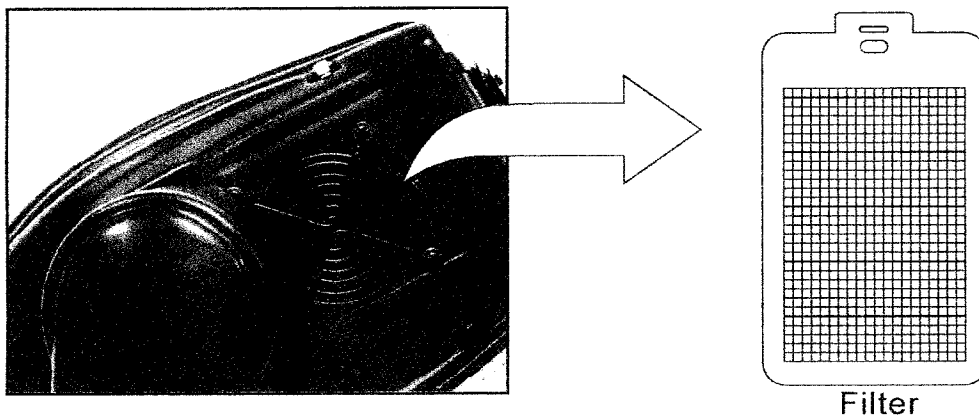
Maintenance

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

In order to preserve OBY-5 in good condition, keep the routine maintenance by following date.

The Steps are as follows:

- Take the filter out (See Figure.) and clean it every two weeks.



- 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.

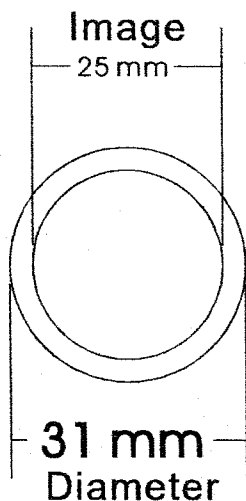
Step 3: Reinsert and tighten the screw on the fuse-holder.

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 540mm
Weight:	26kg

AC supply

AC input:	Certified power cord with plug or without plug
Voltage:	220V, 230, 240V 50/60Hz: 100V, 120V 50/60Hz
Fuse:	AC 230V: 7A/250V AC 100V~120V:15A/250V
Power Consumption:	800W

Control and programming

Signal pinout:	pin 1 shield, pin 2 (-), pin 3 (+)
Setting and addressing:	LED control panel
Protocol:	USITT DMX-512
Pan/tilt resolution:	8 or 16 bit
DMX channels:	14-16
Signal input:	3-pin XLR male
Signal output:	3-pin XLR female

Source

Lamp:	575W discharge
Base:	SFC10-4
Approved models:	Philips MSI-575/HR (1000 hr; 6000K) Philips MSI-575/2 (1000 hr; 6500K)

Control:	Automatic and DMX remote on/off
----------	---------------------------------

Electromechanical effects

Color wheel 1:	11 dichroic colors+white
Color wheel 2:	11 dichroic colors+white
Fixed gobo wheel:	9 replaceable gobos+white
Rotating gobo wheel:	6 replaceable gobos+white
Gobo rotation:	adjustable speed and position direction
Dimmer:	0-100% linear dimmer
Strobe:	1-7Hz fast flashing
Rotating 3-facet prism:	in/out variable speed and direction
Focus:	2m-infinity
Iris:	Mini 4° -Max 15°
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
-------------	---

