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[OPTI]™ GoBoRange

User Manual

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IMPORTANT SAFETY INSTRUCTIONS

When using your projection equipment basic safety precautions should be followed:

1. Read and understand all instructions before using the equipment.
2. Close supervision is necessary when any appliance is used by, or near, children. Do not leave appliance unattended while in use.
3. Care must be taken, as burns can occur from touching hot parts.
4. The appliance switch is provided with the symbol 'O' indicating 'OFF' and 'I' indicating 'ON'.
5. Do not operate appliance with a damaged cord, or if the appliance has been dropped, or damaged, until it has been examined by a qualified service person.
6. Position the cord so that it will not be tripped over, pulled, or come into contact with hot surfaces.
7. If an extension cord is necessary, a cord with a current rating at least equal to that of the appliance should be used. Cords rated for less amperage than the appliance may overheat.
8. Always unplug appliance from electrical outlet before cleaning and servicing and when not in use. Never yank cord to pull plug from outlet. Grasp plug and pull to disconnect.
9. Let appliance cool completely before packing. Loop cord loosely around appliance when storing.
10. To reduce risk of electric shock, do not immerse product in water or other liquids.
11. To reduce the risk of electric shock, do not dismantle this appliance, but take it to a qualified repairers when servicing is required. Incorrect reassembly can cause electric shock when the product is subsequently used.
12. The use of an accessory attachment not recommended by the manufacturer may cause a risk of fire, electric shock, or personal injury.
13. Always connect this appliance to a grounded outlet.
14. Always disconnect this unit from its source of supply before replacing the projection lamp.
15. A safety chain or cable must be fitted to the projector and secured to an immovable object at all times. The securing point must be able to withstand the shock weight of the projector should it fall.
16. The axis across the width of the projector should remain horizontal if possible. Tilting the projector along this axis may reduce lamp life.
17. DO NOT attempt lamp replacement while the unit is still hot as there is a risk of burns from the lamp.
18. After any maintenance or cleaning all parts must be absolutely dry before refitting to the projector.
19. During focussing of the projected image beware of moving the projection lens too far as this may cause the lens to become separated from the projector, and perhaps dropped and broken which may cause injury.
20. The procedures described in the Maintenance section must be carried out by qualified service personnel who should work under the authority of the manufacturers recognised agent.

SAVE THESE INSTRUCTIONS

Introduction

Welcome to the world of [OPTI]™ projected effects technology. Your new projector is ideal for a wide range of applications and is so simple to use.

Just clip on your accessories, plug in the projector, focus and away you go for up to 9000 hours before needing to change the lamp.



DO'S & DON'TS

Do

1. Read the instruction manual and technical specification sheet before installation or use.
2. Ensure that the main mounting point will withstand the weight.
3. Use a safety chain firmly linking the projector mounting bracket to another point strong enough to withstand the shock should it fall.
4. Refer electrical installation or maintenance to qualified personnel.
5. Tightly fasten all devices securely before use.
6. The projector must be earthed at all times during operation.

Don't

1. Operate the projector in wet conditions or allow liquid to enter.
2. Touch the lamp glass with bare hands.
3. Cover the air inlets while the projector is operating.
4. Remove the lamp hatch while the projector is hot.
5. Remove the lamp hatch while the projector has power connected.
6. Allow flammable materials within 100mm when lamp is hot.
7. Flash test the mains input.
8. Use accessories with the GoBoShow not designed for use with it.
9. Operate if the lamp or heat filter are damaged or deformed.
10. Attempt any electrical maintenance of the unit.

MOUNTING

The first question to be addressed either in planning or on site, after deciding which gobos and effect accessories are required, is where you want your image(s) to project.

The next thing to do is select a secure mounting point for the projector with an alternative fixing point for the safety chain/cable and, of course, provide mains power.

Methods of mounting

1. Suspended from above with the mounting bracket firmly fixed to a suitable mounting point.
2. Fixed with the mounting bracket under the projector bolted to an immovable flat surface or bar.
3. Fixed with the mounting bracket rotated to the rear of the projector and firmly attached to any verticle surface.

The projector must be securely attached to a mounting point capable of supporting its weight. All nuts, bolts and other fixings must be securely tightened, as well as the hanging bracket knobs and locking levers on the projector itself.

If the projector is to be mounted on Trilite, hanging clamps should be used between the mounting bracket of the projector and the truss. These brackets are available from OPTI via your nearest dealer.

For any of the above a safety chain or cable must be used as an additional safety precaution. This should be looped through the mounting bracket and secured to a fixing point capable of supporting the weight of the projector and accessories should it fall.

4. Using the special 'stand' mounting bracket your projector can sit on any flat surface.

Adjusting the Mounting Bracket

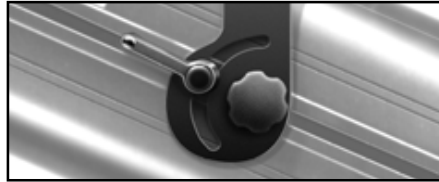
The mounting bracket can be adjusted in two ways:

1. Rotated on it's axis to the desired position.
2. Moved along the body of the projector to alter the centre of gravity. Useful when using a number of accessories.

For both operations the central knobs and locking levers on both sides of the projector must be loosened and then tightened securely once the desired position is obtained.

To move the mounting bracket from above to below the unit:

1. Remove the central knobs and locking levers.
2. Remove bracket and reposition under the unit. The semi circular locating channel must face toward the rear of the unit.
3. Replace and securely tighten the knobs and locking levers.



POWER SUPPLY

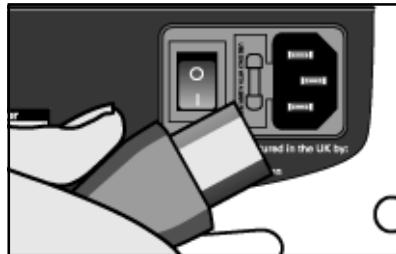
230 or 240V ~ 50Hz, 120 or 100V ~ 60Hz

Mains supply is via the fused mains input socket. An IEC power cable is supplied with prepared wire ends to connect to the mains supply plug.

WARNING

This appliance must be earthed at all times.

To turn on the projector simply plug in the IEC lead and click switch to 'ON' position marked I.



Wiring of the plug

European colour coding:

GREEN/YELLOW > green, green/yellow, \perp or 'E' terminal.
 BLUE > black or 'N' terminal.
 BROWN > red or 'L' terminal.

American colour coding:

GREEN/YELLOW > ground terminal.
 WHITE > neutral terminal.
 BLACK > live terminal.

THE RAILS

The rails on the projector are adjustable and provide the power (12V~) to the effect accessories.

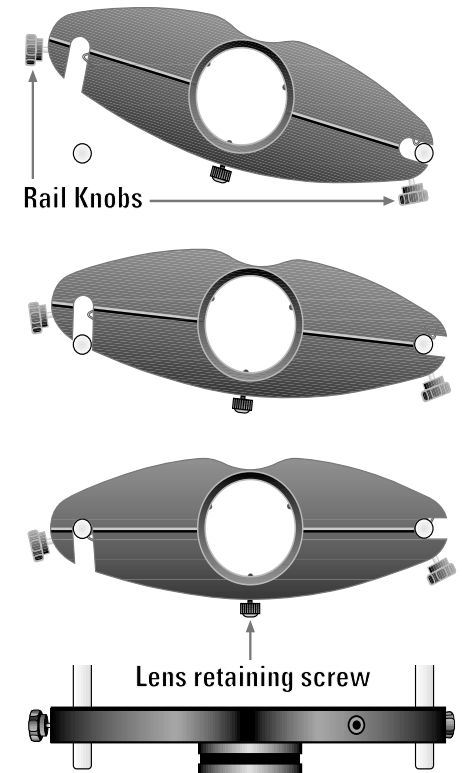
Options and DMX controlled accessories also get their communications through the rails. Simply clip on the rail mounted accessory, secure with the rail knobs and switch on the projector. So easy.

For most accessories (except mirrors and solar accessories) there are no leads or cables necessary. Mirrors actually fit onto the lens housing and have a jack lead which plugs into the Lens Housing. Solar accessories (except Autochangers and Solar System which cannot be used) must be fitted into a Solar Gate Adaptor in conjunction with an adaptor lead which plugs into the jack socket.

Fitting the Lens Housing or any Rail Mounted Accessory

Fit with the moulded lens retainer rings facing forward and the lens retaining screw underneath.

1. Loosen the rail knobs to ensure that they are not proud of the casing.
2. At an angle, clip on the horizontal rail locating slot and push home past the contact spring.
3. Locate the upright locating slot over the other rail and push home past the contact spring.
4. Slide to desired position along rails ensuring that the housing is parallel to the front of the unit.
5. Tighten both rail knobs securely.
6. To remove or adjust position loosen both rail knobs and reverse procedure.



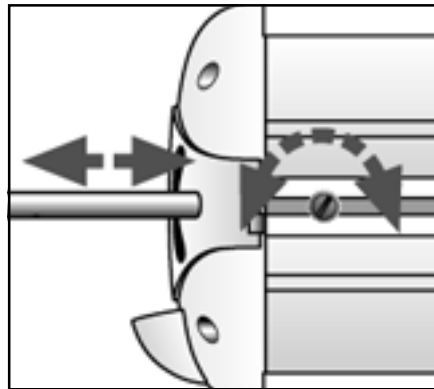
WARNING

Before removing hatch the projector must be disconnected from mains.

Adjusting the Rails

The rails are set to accommodate most combinations of accessories however should you wish to adjust them there is a simple procedure.

1. Loosen screws at the front of the central groove on each side of the projector.
2. Slide rails to desired position.
3. Carefully tighten screws without using excessive force.

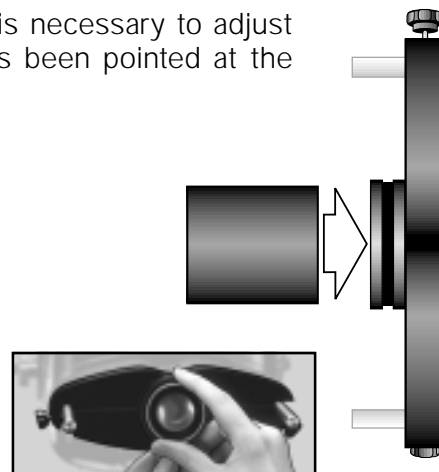


LENS FITTING & FOCUSING

To project a crisp focused image it is necessary to adjust the focussing lens after the unit has been pointed at the desired projection surface.

Fitting and Focussing the lens

1. Loosen lens retaining screw (see page 5, left).
2. Insert lens from the front with focal length arrow at front.
3. Slide lens back or forward until projected image is in focus.
4. Securely tighten lens screw.
5. To remove the lens simply reverse procedure.




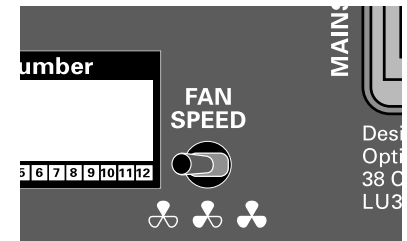
FAN ADJUSTMENT


GoBoShow and GoBoPro projectors are fitted with two fans.

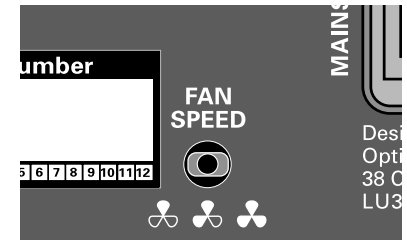
The first fan, situated in the top of the unit, cools the lamp and interior components.


The second fan, situated in the underside of the unit, is to cool gobos and effects in the gate of the projector and is adjusted by a 3 position switch on rear panel.

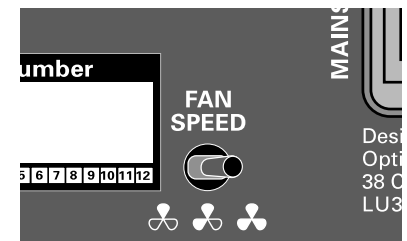
 This is the LOW setting which cools the gate to *50°C. All standard effects may be used on this setting including liquid wheels and cassettes which will operate more actively at this higher temperature. It is advisable not to use slide transparencies.



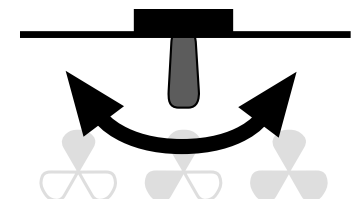
 This is the MEDIUM setting which cools the gate to *45°C. All standard effects may be used on this setting including liquid wheels and cassettes which will be more active at this temperature than with maximum cooling. Duplicate 35mm transparencies may be used but for maximum life it is recommended that the highest setting is used.



 The HIGH setting cools the gate temperature to *40°C. All effects may be used but liquids will be less active. The maximum possible life will be obtained for duplicate 35mm transparencies.



* These temperatures are approximate and were taken on a unit with a 150W lamp at an ambient room temperature of approximately 20°C. For more powerful lamps see the Technical Specification sheet.



GoBoShow LAMP & OPTICAL SYSTEM

The average life of the HQI-T 150W lamp is 9000 hours. The lamp must be changed before 9000 hours use.

Replacing the lamp

In order to replace the lamp, certain precautions must be taken to ensure safety. The procedure is as follows:

Removing the old lamp

1. Disconnect the mains supply and wait for at least 20 minutes for the projector to cool.
2. Undo hatch securing screw and remove hatch cover.
3. Open the retaining spring clips either side of the lamps ceramic base.
4. Holding the lamp by the ceramic base carefully pull out from the socket.

Fitting the new lamp

1. Remove new lamp from packaging using soft cloth, tissue or wearing thin gloves. Bare hands must not touch glass. If this occurs the lamp must be cleaned using a soft lint-free cloth moistened with pure alcohol.
2. Carefully position the lamp horizontally level with pin holes
3. Push in place past spring clips locating securely into pin holes.
4. Replace and secure hatch cover and tighten screw.

CAUTION

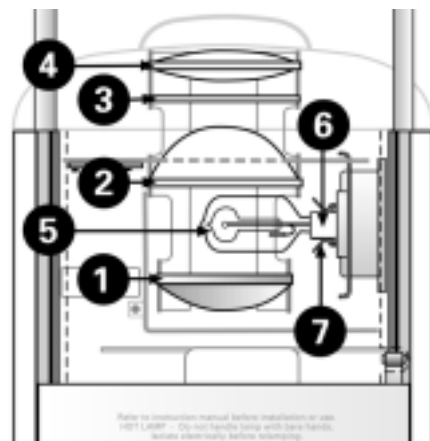
DO NOT attempt lamp replacement while the unit is still hot.

Optical System

1. Mirror.
2. Primary Lens.
3. Heat Filter.
4. Secondary Lens.
5. Lamp.
6. Lamp Base.
7. Spring Clips.

Accessible components may be cleaned using a soft lint-free cloth moistened with pure alcohol.

Any damaged parts must be replaced by qualified personnel.

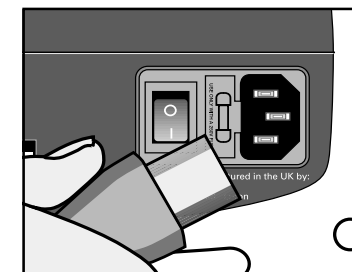


GoBoShow TECHNICAL

General:	Advanced long life effects projector.
Overall size:	517mm long x 289mm wide x 166mm deep (293mm with mounting bracket).
Weight:	7.7kg.
Mains voltages:	Factory set to 240V~ 50Hz; 230V~ 50Hz; 120V~ 60Hz
Power consumption:	325 Watts maximum.
Mains fuse (rear panel):	T2A 20mm [240V]; T2A 20mm [230V]; T4A 20mm [120V].
Ambient temperature:	0 - 45°C.
Cooling:	Tubeaxial exhaust fan (for internal systems); 3 speed centrifugal fan and forced air duct system (for effects).
Orientation:	Horizontal $\pm 90^\circ$.
Lamp type:	Osram HQI-T 150W single ended.
Lamp life:	Average 9000.
Colour temperature:	4200K.
Projector light output:	1550 Lumens at lens.
Object plane:	36mm Ø (diameter).
Projection lens:	Coated 3 element 85mm; f2.8 48.5mmØ as standard. (45mm, 60mm, 120mm and 150mm available).
Protection Deg:	IP20.
Rail Voltage:	12V~.

Power Supply On/Off (page 4 of manual)

Plug in IEC power lead and switch ON 'I' or OFF 'O' on the Mains Inlet on the back of the projector.



GoBoPro LAMP & OPTICAL SYSTEM

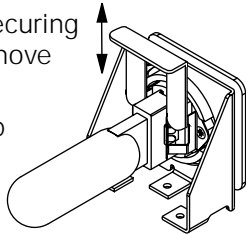
The average life of the HSD 250W lamp is 2000 hours. The lamp must be changed before 2000 hours use.

Replacing the lamp

In order to replace the lamp, certain precautions must be taken to ensure safety. The procedure is as follows:

Removing the old lamp

1. Disconnect the mains supply and wait for at least 20 minutes for the projector to cool.
2. Undo hatch securing screw and remove hatch cover.
3. Remove Lamp Retainer Clip by pulling up vertically.
4. Open the retaining spring clips either side of ceramic lamp base.
5. Holding the lamp by ceramic base carefully pull out from the socket.



Fitting the new lamp

1. Remove new lamp from packaging using soft cloth, tissue or wearing thin gloves. Bare hands must not touch glass. If this occurs the lamp must be cleaned using a soft lint-free cloth moistened with pure alcohol.
2. Carefully position the lamp horizontally level with pin holes
3. Push in place past spring clips locating securely into pin holes.
4. Replace Lamp Retainer Clip.
5. Replace and secure hatch cover and tighten screw.

CAUTION

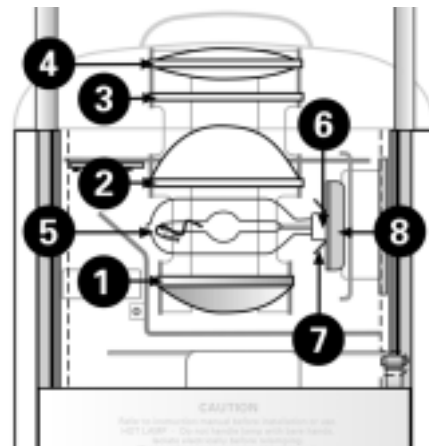
DO NOT attempt lamp replacement while unit is still hot.

Optical System

- | | |
|--------------------|------------------------|
| 1. Mirror. | 5. Lamp. |
| 2. Primary Lens. | 6. Lamp Base. |
| 3. Heat Filter. | 7. Spring Clips. |
| 4. Secondary Lens. | 8. Lamp Retainer Clip. |

Accessible components may be cleaned using a soft lint-free cloth moistened with pure alcohol.

Any damaged parts must be replaced by qualified personnel.



GoBoPro TECHNICAL

General:	Effects projector.
Overall size:	577mm long x 289mm wide x 166mm deep (293mm with mounting bracket).
Weight:	11kg.
Mains voltages:	Factory set to 240V~ 50Hz; 230V~ 50Hz; 120V~ 60Hz
Power consumption:	400 Watts maximum.
Mains fuse (rear panel):	T4A 20mm [240V]; T4A 20mm [230V]; T8A 20mm [120V].
Ambient temperature:	0 - 45°C.
Cooling:	Tubeaxial exhaust fan (for internal systems); 3 speed centrifugal fan and forced air duct system (for effects).
Orientation:	Horizontal ±90°.
Lamp type:	Osram HSD 250W single ended.
Lamp life:	Average 2000 hours.
Colour temperature:	8500K.
Projector light output:	2800 Lumens at lens.
Object plane:	36mm Ø (diameter).
Projection lens:	Coated 3 element 85mm; f2.8 48.5mmØ as standard. (45mm, 60mm, 120mm and 150mm available).
Protection Deg:	IP20.
Rail Voltage:	12V~.

Power Supply On/Off (page 4 of manual)

Plug in IEC power lead and switch ON 'I' or OFF 'O' on the Mains Inlet on the back of the projector.

