

introduction

This catalogue illustrates the full range of OPTI projectors, effects and accessories and gives some examples of the use of custom gobos and effects.

The use of gobos is becoming extremely popular for creating custom effects in retail and exhibition applications. A 'gobo' is an object made from metal and/or glass that fits into a projector and creates an image for projection. OPTI manufacture glass gobos using a wide range of processes. Gobos can be produced to fit most luminaire products.

PROJECTORS

The range of projectors shown in this catalogue are designed for one purpose. To produce the best possible projected effects in any environment.

Projectors can be mounted anywhere to be as conspicuous or inconspicuous as required.



EFFECTS & GOBOS

Gobos fit into effects accessories which fit into the gate of projectors to create projected effects. Such as constant motion underwater or sky through a window created by combining standard and custom gobos and wheels.



See the GoBo range 'User Guide' and pages 18 to 20 of this Catalogue for more examples and types of gobos that we produce.



EFFECT ACCESSORIES

Effect accessories are designed to add function and versatility to effects being projected by the Projectors.

From simply holding the gobo with the image to adding or changing colours, changing the image or creating different types of movement.



Solar 6" Wheel Rotator



GS Slide/Gobo Autochanger



Solar Slide/Gobo Rotator

MIRRORS

Mirrors add dynamic motion to Effect Projection.

Mirrors available, for most OPTI projectors, include Linear Motion, Circular Motion and the GoBo range DMX controllable X-Y Mirror.



Barrel Mirror



DMX & IR REMOTE CONTROL

The GoBo range DMX and Shutter board allows Autochangers, X-Y Mirrors and new VSD Wheel Rotators to be controlled from a DMX lighting desk or, for an Autochanger or X-Y Mirror to control the Shutter. Autochangers and new VSD Wheel Rotators, for all Projectors, can also be controlled from an IR remote handset.



GoBoPro with DMX and Shutter, Autochanger and XY Mirror

IR Remote

effects projector



The OPTI Solar 100C is lightweight, compact and simple to use with optical image quality and reliability synonymous with the OPTI name. The OPTI Solar 100C is ideal for close proximity projection, low ambient light conditions and dynamic point of sale or display applications. The OPTI Solar 100C is fitted with a fan cooled quartz halogen 100 watt 12 volt M28 lamp with an average life of 2,000 hours. An 85mm focussing lens is supplied as standard.

The twin gate accepts most of the accessories found in the OPTI Solar range.

The wide range of Solar accessories (pages 9 and 21 to 26) combined with alternative focal length lenses (page 7) enable a vast variety of effects to be easily created and modified as desired.

OPTI Solar 100C

FG2056W (White)



TECHNICAL INFORMATION

Overall size	340mm long (without lens) x 125mm wide x 81mm deep (225mm deep with hanging bracket).
Weight	3.5kg.
Standard lens	3 Element 85mm f2.8 42.5mm Helical Focus Groove.
Mains voltage	110 - 120V ~ or 220 - 240V ~ 50/60Hz.
Power consumption	115 Watts maximum.
12V ~ output current	400mA maximum.
Lamp type	M28 12V 100W EVA.
Lamp life	Average 2000 hours.
Total light output	575 lumens with new lamp.
Colour temperature	3100 K.
Cooling	Tubeaxial fan.



The OPTI Solar 100C (above) is shown with the hanging bracket used as a stand projecting a 6 inch Liquid Wheel on a Solar Wheel Rotator.

The OPTI Solar 100C (main picture) is shown projecting a 50mm Effect Cassette on a Solar 50mm Cassette Rotator with the image reflected by a Solar Deflector Mirror mounted on the lens.

effects projector

The OPTI Solar 250 has been in production since 1973. Over 70,000 units have been made, with countless accessories and effects, most of which are still in use around the world. Minor changes have been made to the simple classic design but it's ease of use, robust engineering and wide range of effects accessories (pages 21 to 26) and lenses (page 7) still make the OPTI Solar 250 a key lighting effects tool for the 21st century.

The OPTI Solar 250 has an Osram Xenophot M33 250 watt, 1,200 lumen quartz halogen lamp with an average life of 300 hours is currently factory fitted. An 800 lumen 2,000 hour lamp is also available as well as a Light Guard to prevent downward light spill. K range Mirrors can be fitted to the OPTI Solar 250 using K Mirror Mounting Brackets (page 26).

The OPTI Solar 250 is available as standard in white. Other colours, like black (below), are available to special order in minimum order quantities.



The OPTI Solar 250 Light Guard (FG2028) fits underneath the projector to prevent light spill.

OPTI Solar 250

FG2020W (White)

The standard white OPTI Solar 250 (main picture) is shown projecting a 3" Cassette on a Solar 3" Cassette Rotator.

The black OPTI Solar 250 (left), available to special order, is shown projecting a 50mm Cassette on a Solar 50mm Cassette Rotator.

TECHNICAL INFORMATION

Overall size	333mm long (without lens) x 130mm wide x 140mm deep (225mm deep with hanging bracket).
Weight	5.79kg.
Standard lens	3 Element 85mm f2.8 42.5mm Helical Focus Groove.
Mains voltage	110 - 120V ~ or 220 - 240V ~ 50/60Hz.
Power consumption	350 Watts maximum.
12V ~ output current	3A maximum.
Lamp type	Osram Xenophot M33 24V 250W (or Iwasaki Eye) EVC.
Lamp life	Average 300 hours (or 2000 hours).
Total light output	1200 lumens (or 800 lumens) with new lamp.
Colour temperature	3300 K (or 3000 K).
Cooling	Tubeaxial fan.



effects projector

The OPTI GoBoShow comes with or without a factory fitted DMX and Shutter option and is based around the well proven metal halide Osram HQI 150 watt lamp.



The white OPTI GoBoShow (above) shown with Six Static Slide/Gobo Autochanger.

The black OPTI GoBoShow (main picture) shown with Eight Static Gobo Autochanger and optional Stand.

With an average life of 9,000 hours (2 years at 12 hours a day) and specially coated optics to increase overall light output to 1,550 lumens, the OPTI GoBoShow meets the demand for clarity of projected images over long periods.

The OPTI GoBoShow, available in black or white, is easy to install, compact, lightweight and runs quietly with low operating costs. In addition to the standard 85mm lens supplied, OPTI offer a range of alternative focal length lenses (page 7).

The rails of the OPTI GoBoShow provide low voltage power for motorised accessories. On the DMX and Shutter version the rails also pass communication signals. Programmable accessories such as Autochangers, or the X-Y Mirror, can automatically control the shutter function, as well as allowing remote operation from a DMX lighting desk. For other accessories, which accept our full range of effects and custom gobos, see pages 9 and 21 to 27.

The OPTI GoBoShow fans cool the optics and heat sensitive effects and allow duplicate 35mm slides to be used for short term use at events like exhibitions.



Rear of projector showing the DMX and Shutter Option control panel.

OPTI GoBoShow

- GS2051 (Black)
- GS2051W (White)
- GS2041 (with DMX and Shutter, Black)
- GS2041W (with DMX and Shutter, White)

TECHNICAL INFORMATION

Overall size	517mm long x 289mm wide x 166mm deep (293mm deep with hanging bracket).
Weight	7.7kg.
Standard lens	3 Element 85mm f2.8 48.5mm smooth barrel.
Mains voltage	110 - 120V ~ or 220 - 240V ~ 50/60Hz.
Power consumption	325 Watts maximum.
12V ~ output current	3A maximum.
Lamp type	Osram HQI-T 150W single ended.
Lamp life	Average 9000 hours (change before 9000 hours).
Total light output	1550 lumens with new lamp.
Colour temperature	4200 K.
	Cooling Tubeaxial exhaust and 3 speed centrifugal fans.
DMX & Shutter	(Factory Fitted Option) 1 Channel of DMX.
DMX plug	5 pin XLR.



effects projector

The OPTI GoBoPro has been developed for use in higher ambient light conditions. A variety of accessories (pages 9 and 21 to 27) enable the OPTI GoBoPro to accept both our full range of standard projection effects (pages 10 to 17), as well as custom gobos (pages 18 to 20). Informative and dramatic effects are easily created and are simple and cost effective to change when required. In addition to the standard 85mm lens supplied, OPTI offer a range of alternative focal length lenses (page 7).

As well as the improvements made to the optical performance of the OPTI GoBoPro this projector is also now available with a factory fitted DMX and Shutter option. This provides remote control of the on-board shutter, as well as Autochanger and X-Y Mirror accessory functions, from any industry standard DMX lighting controller, or stored memory facility. The DMX signal is sent along the same rails that provide the low voltage to standard powered accessories. The DMX and Shutter version of the OPTI GoBoPro allows programmable accessories to automatically operate the shutter when used without external DMX control.

A new extremely high colour temperature 8,500K Sylvania BA 250 watt metal halide lamp, with an average life of 2,000 hours, and the addition of coated condensor optics have improved the light output performance of the OPTI GoBoPro to 2,800 lumens.

The OPTI GoBoPro has an adjustable 3-speed fan to cool heat sensitive effects which in combination with an Autochanger enables the use of duplicate 35mm photographic slides for short term use.



Rear of projector showing the DMX and Shutter Option control panel.



The white OPTI GoBoPro (main picture) is shown with Variable Speed & Direction Gobo Rotator and Barrel Mirror.

OPTI GoBoPro

- GS2054 (Black)
- GS2054W (White)
- GS2042 (with DMX and Shutter, Black)
- GS2042W (with DMX and Shutter, White)

TECHNICAL INFORMATION

Overall size	577mm long x 289mm wide x 166mm deep (293mm deep with hanging bracket).
Weight	11kg.
Standard lens	3 Element 85mm f2.8 48.5mm smooth barrel.
Mains voltage	110 - 120V ~ or 220 - 240V ~ 50/60Hz.
Power consumption	400 Watts maximum.
12V ~ output current	3A maximum.
Lamp type	Sylvania BA 250/2 single ended.
Lamp life	Average 2000 hours (change before 2200 hours).
Total light output	2800 lumens with new lamp.
Colour temperature	8500 K.
Cooling	Tubeaxial exhaust and 3 speed centrifugal fans.
DMX & Shutter	(Factory Fitted Option) 1 Channel of DMX.
DMX plug	5 pin XLR.



effects projector

The OPTI K4 projects clear images over long distances or in high ambient light conditions.

Weighing just over 12kg the OPTI K4 is lightweight, cool and deceptively powerful for a projector of its size.

Enhancements have been made to the performance of the OPTI K4 since it was first introduced. Improvements to the Philips MSR 575/2 metal halide lamp specification and new coated condensor optics inside the projector now enables the OPTI K4 to achieve an impressive 5,200 lumen light output at lens with an average lamp life of 1,000 hours and a higher colour temperature of 7,200 K.

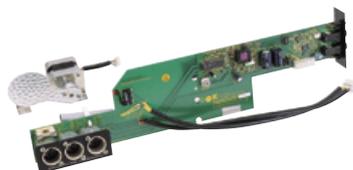
If longer lamp life is preferable to a higher light output then either the Philips MSD 575 or Sylvania BA 575 SED lamps can also be used with the OPTI K4. Lumen output at lens is then reduced to 4,500, whilst average lamp life is increased to 2,000 hours.

Whichever lamp is used in the OPTI K4, the internal electronic ballast with automatic voltage sensing allows this projector to be used anywhere in the world.

The OPTI K4 is supplied with an 85mm focussing lens as standard. Alternative focal length lenses (page 7) along with acceptance of most of the OPTI Solar and K Range Effects and Accessories (pages 9 and 21 to 26) make the OPTI K4s versatility almost infinite.

Options

Two easily fitted plug in options are available for the OPTI K4 to add functionality and versatility. Additionally a DMX to analogue converter box is also available which enables control of the Shutter/Dimming option via DMX.



Shutter/Dimming FG2041



Hour Meter FG2044



DMX to Analogue Box (2 DMX Channels) FG4170C



OPTI K4

FG2033 (Black)

FG2033W (White)

TECHNICAL INFORMATION

Overall size	655mm long (without lens) x 315mm wide x 210mm deep (400mm deep with hanging bracket).
Weight	12.3kg.
Standard lens	3 Element 85mm f2.8 52.5mm Helical Focus Groove.
Mains voltage	110 - 120V ~ or 220 - 240V ~ 50/60Hz.
Power consumption	880 Watts maximum.
Fuses	8A @ 100 - 120V ~ or 4A @ 220 - 240V ~
Lamp type	Philips MSR 575/2 (or Philips MSD 575 or Sylvania BA 575 SE D).
Lamp life	Average 1000 hours (or 2000 hours).
Total light output	5200 lumens with new lamp (or 4500 lumens).
Colour temperature	7200 K (or 6000 or 5600 K).
Cooling	Centrifugal fan, air duct & plenum system. 

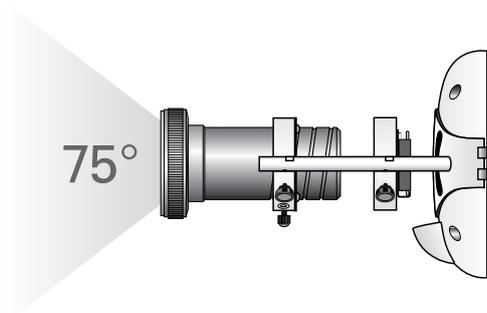
focal lengths & inclusive angles

All OPTI Kinetics projectors are supplied with an 85mm focal length lens as standard. These and alternative focal length lenses are available individually and are shown below.

Lens Angles

The focal length of a lens determines how wide an angle the image is projected.

In simple terms the larger the number of the focal length of the lens the narrower the beam. The lower the number the wider the angle. This angle is called the 'inclusive angle'.



The illustration above shows the OPTI K4 25mm lens which has our largest inclusive angle.

The 'inclusive angle' of each lens can be plotted on design drawings to determine the projected image size.

Barrel Size	42.5mmØ	48.5mmØ	52.5mmØ	Inclusive Lens Angle ¹
Focal Length	Solar 100C Solar 250	GoBoShow GoBoPro	K4	
25mm	-	FG6175 ²	FG6175	75
45mm	-	GS6180	FG6180	47
60mm	FG6150	GS6190	-	36
85mm	FG6160	GS6205	FG6205	25
100mm	FG6170	-	-	23
120mm	-	GS6191	-	18
150mm	-	GS6192	-	14

¹ Inclusive lens angle may be used when plotting a drawing.

² Requires Lens Mount (GS6100).

Solar Lenses



GoBo range Lenses



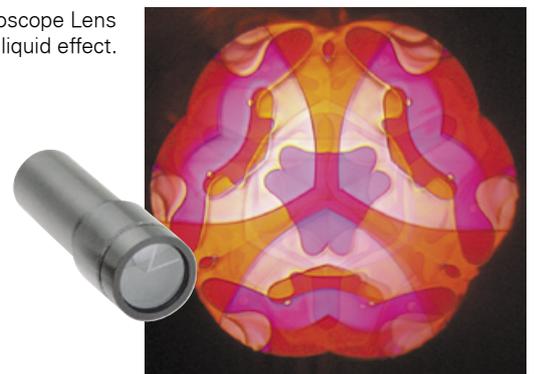
K4 Lenses



Kaleidoscope Lens FG6110

The OPTI Kaleidoscope Lens replaces the focussing lens and repeats an effect as a six sided image. The barrel diameter is 42.5mm. This fits directly into the OPTI Solar 250 and 100C projectors. Adaptor rings are supplied with the Kaleidoscope Lens to enable it to be used with all OPTI projectors.

OPTI Kaleidoscope Lens used with a liquid effect.



Solar Zoom Attachment FG6120

For Solar projectors an add-on Zoom Attachment is available. This clips onto the front of either the 60mm, 85mm or 100mm lenses and varies their focal length by a factor of 0.8 to 1.3. For example the 100mm lens would have a range of 80mm to 130mm focal length.

lens selection

Calculations

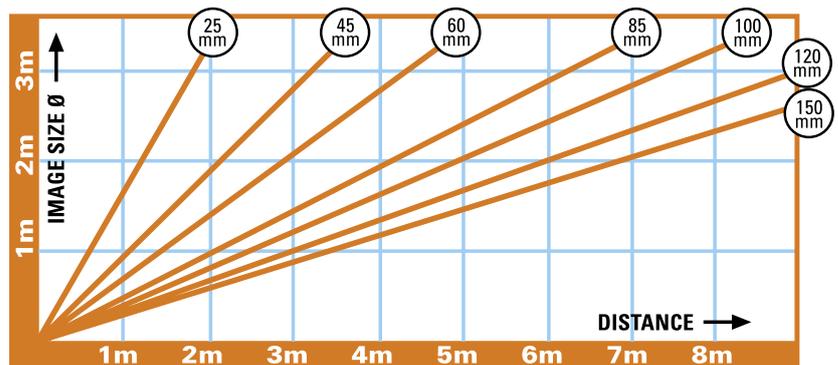
The formulae below appear on our website www.optikinetics.com under 'Lenses' in an easy to use form where you can simply type in the known factors, hit the 'Calculate' button and the calculation is done for you. Otherwise it's out with your calculators or in case of difficulty contact us, or your local OPTI representative, for assistance with choosing the right lens for your application. All dimensions in millimetres.

1. **IMAGE SIZE** = $\frac{\text{PROJECTION DISTANCE}}{\text{FOCAL LENGTH}} \times \text{OBJECT SIZE}^*$
2. **PROJECTION DISTANCE** = $\frac{\text{IMAGE SIZE}}{\text{OBJECT SIZE}^*} \times \text{FOCAL LENGTH}$
3. **FOCAL LENGTH** = $\frac{\text{PROJECTION DISTANCE}}{\text{IMAGE SIZE}} \times \text{OBJECT SIZE}^*$
4. **OBJECT SIZE** = $\frac{\text{IMAGE SIZE} \times \text{FOCAL LENGTH}}{\text{PROJECTION DISTANCE}}$

* 40mm diameter is the OBJECT SIZE of most OPTI Standard Effects. Custom Images have a maximum OBJECT SIZE of 35mm.

Lens & Image Size Graph

Enables image size or projection distance to be read for all lens variants offered.



Lens Selector Chart

Shown here are image sizes and projection distances for all OPTI lenses based on an object size of 35mm diameter.

LENS BARREL SIZE (& PROJECTOR)	FOCAL LENGTH OF LENS (INCLUSIVE ANGLE)						
	25mm (75°)	45mm (47°)	60mm (36°)	85mm (25°)	100mm (23°)	120mm (18°)	150mm (14°)
42.5mm Solar100C Solar 250	-	-	FG6150	FG6160	FG6170	-	-
48.5mm GoBoShow GoBoPro	FG6175 ¹	GS6180	GS6190	GS6205	-	GS6191	GS6192
52.5mm K4	FG6175	FG6180	-	FG6205	-	-	-
DISTANCE IN METRES	IMAGE DIAMETER IN METRES						
1	1.40	0.78	0.58	0.41	0.35	0.29	0.23
1.5	2.10	1.17	0.88	0.62	0.53	0.44	0.35
2	2.80	1.56	1.17	0.82	0.70	0.58	0.47
2.5	3.50	1.95	1.46	1.03	0.88	0.73	0.58
3	4.20	2.33	1.75	1.24	1.05	0.88	0.70
4	5.60	3.11	2.33	1.65	1.40	1.17	0.93
5	7.00	3.89	2.92	2.06	1.75	1.46	1.17

¹ Requires Lens Mount (GS6100).

Solar/K range



For use on all OPTI projectors, the OPTI Clock Attachment features moving hour, minute and second hands.

The Clock Attachment is available as standard with either a Modern or Roman face. It can also be customised to suit any application, to promote a company, its products or services.

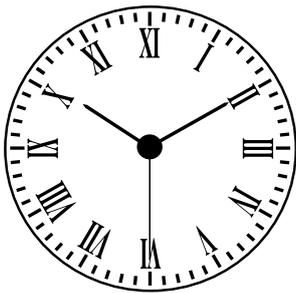
A battery and real time clock ensure that accurate time is kept, for up to 10 years, during times when the projector is switched off.

- Roman FG6008
- Modern FG6010
- Custom FG6011

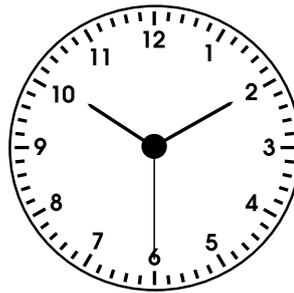
GoBo range



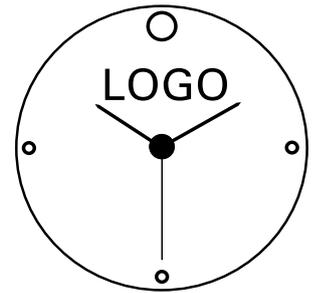
- Roman GS6008
- Modern GS6010
- Custom GS6011



Roman



Modern



Custom

Photograph courtesy of Sphera Productions.



A standard Roman face clock projection counts down to the New Year at The City Hall in Cartagena, Columbia.

Photograph courtesy of AB Audio Visual.



A customised clock in use at the entrance to a health club.

[OPTI]™ Effect Cassettes

sizes

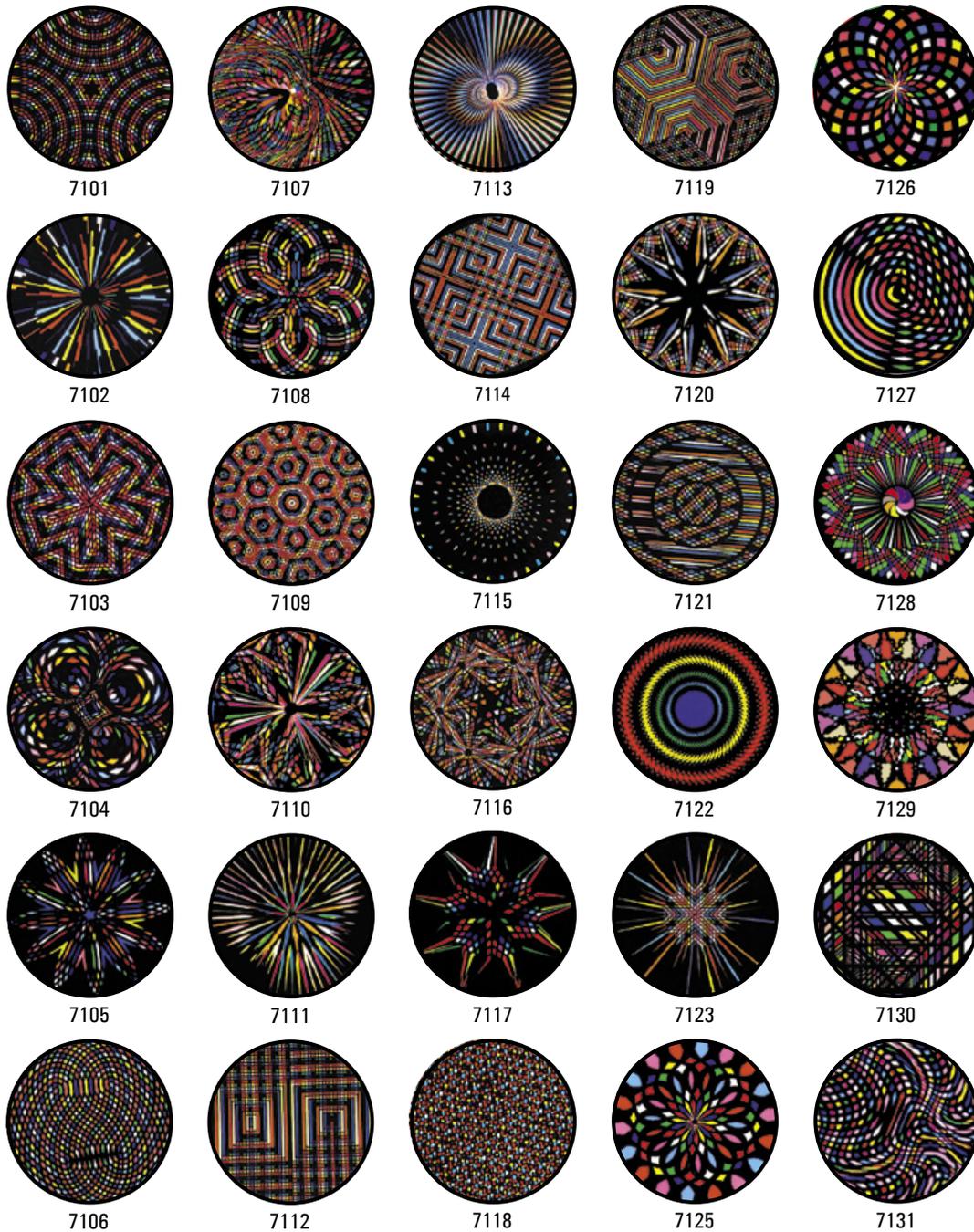
OPTI Effect Cassettes are available in two formats 3 inch and 50mm. Both combine two pieces of printed glass, one static and the other rotating to create *image movement.

OPTI 3 inch Effect Cassettes are used with the Solar Cassette Rotator (page 22).

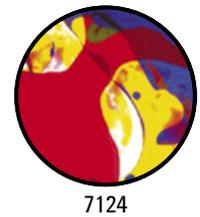
OPTI 50mm Effect Cassettes are gear driven and are used with either 50mm Effect Cassette Rotators (page 22) or with Four 50mm Effect Cassette Autochangers (page 24) which may be operated remotely by infrared or via DMX.



multi coloured



liquid



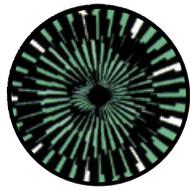
Liquid Cassettes contain vivid coloured immiscible liquids. They are recommended for use with the OPTI Solar 100C and Solar 250. Colours may fade more rapidly in other higher-powered OPTI projectors.



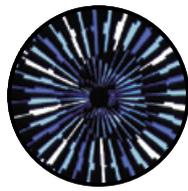
mono coloured



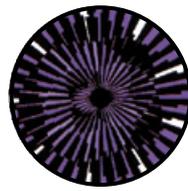
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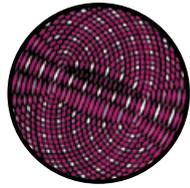
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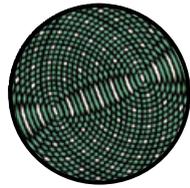
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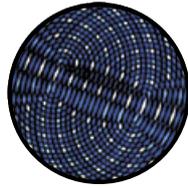
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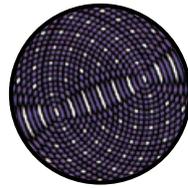
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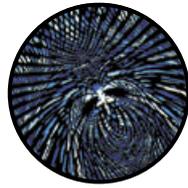
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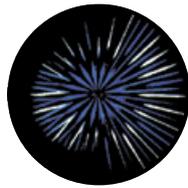
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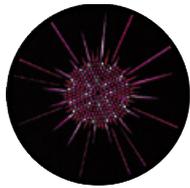
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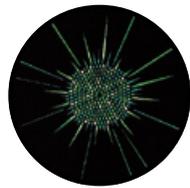
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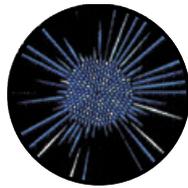
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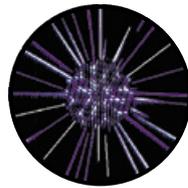
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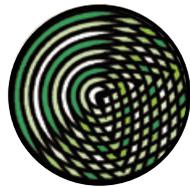
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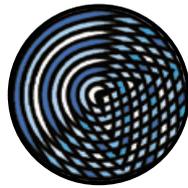
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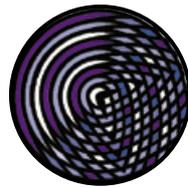
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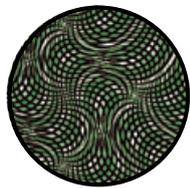
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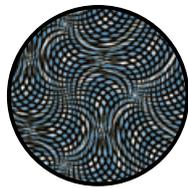
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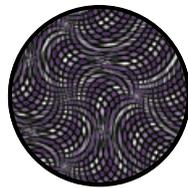
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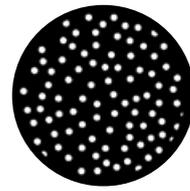


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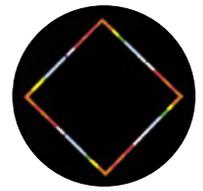


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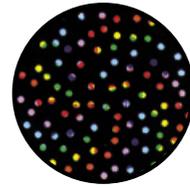
beam effect



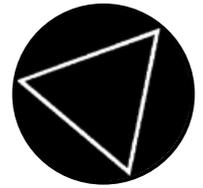
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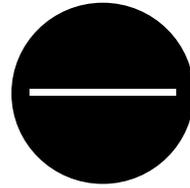
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7142



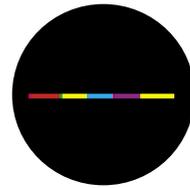
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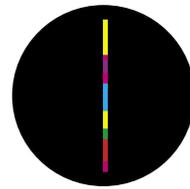
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7151



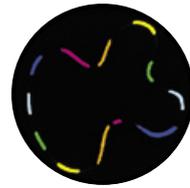
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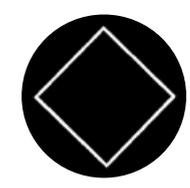
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7146



7147



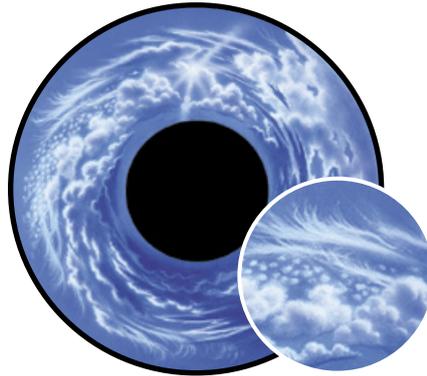
7148

Beam Cassettes are best used through a smoke haze. They create 'laser like' animated beams of light. See page 16 (Beam Wheels) for an idea of *what these effects look like.

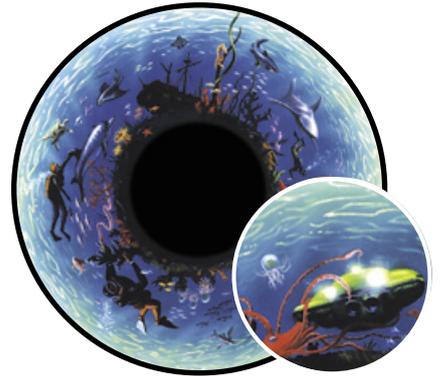
[OPTI]™ 6" Effect Wheels



AVIATION - FG7040



CLOUD - FG7045



DEEP - FG7049



CAVE - FG7042



COG - FG7046



DEVIL - FG7050



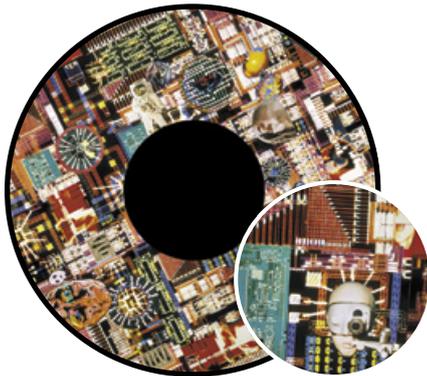
CHAOS - FG7043



COMIC VIOLENCE - FG7047



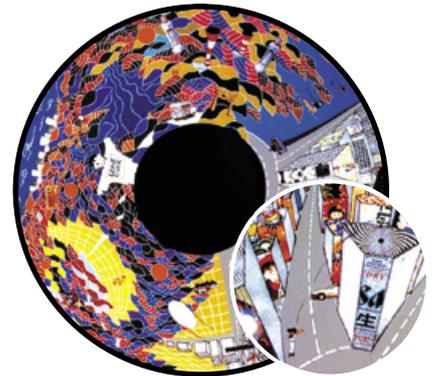
EARTHQUAKE - FG7051



CIRCUIT - FG7044



DECADE - FG7048



EASTERN HORIZONS - FG7052

[OPTI]™ 6" Effect Wheels



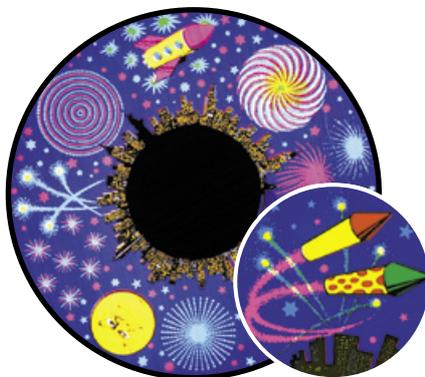
FIRE - FG7053



GRAFFITI - FG7057



MAZE - FG7061



FIREWORK - FG7054



INNER SPACE - FG7058



MUNCHIES - FG7062



FLAGS - FG7055



JIGSAW - FG7059



PREHISTORIC - FG7063



FLORAL - FG7056



MAYA - FG7060



QUEST - FG7085

[OPTI]™ 6" Effect Wheels



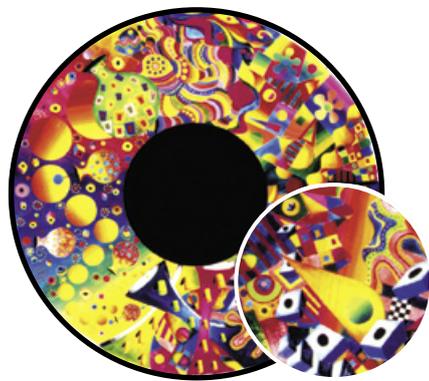
SAFARI - FG7064



TOONS - FG7068



WILDLIFE - FG7071



SHAPELAND - FG7065



TRUCKSTOP - FG7069



WORLD - FG7086



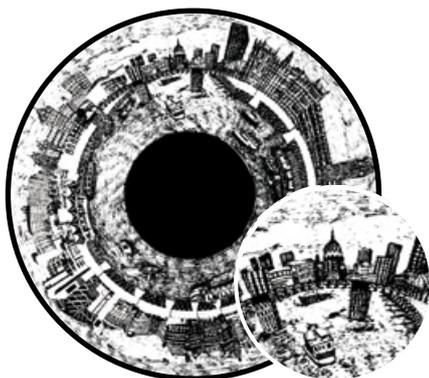
SPACE RITUAL - FG7066



UTOPIA - FG7070



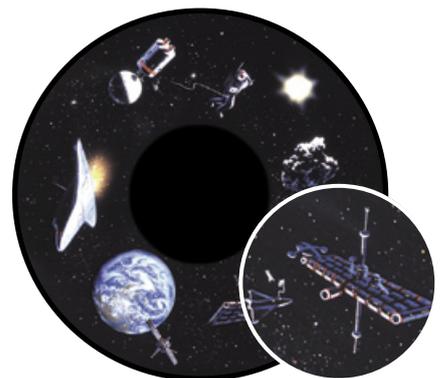
ZODIAC - FG7072



THAMES - FG7067



WEATHER - FG7087

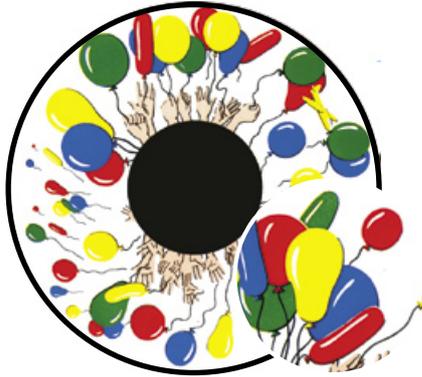


2001 - FG7073

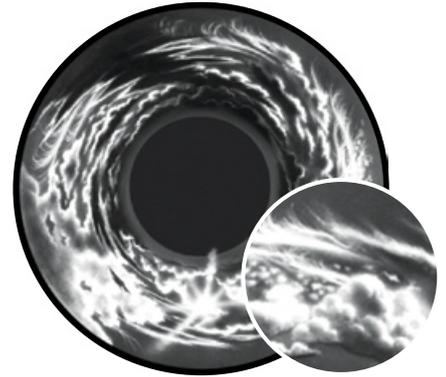
[OPTI]™ 6" Effect Wheels



AVALON DAWN - FG7039



BALLOONS - FG7041



WHITE CLOUDS - FG7282



BUTTERFLIES - FG7280



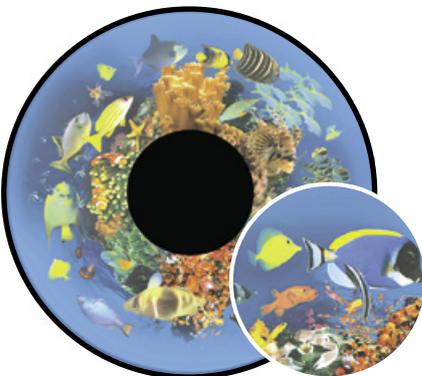
IN THE COUNTRY - FG7281



SEASONED WOODS - FG7088



WHALES - FG7250



TROPICAL FISH - FG7253



TROPICAL BIRDS - FG7254

Distortion Wheels

Mild (FG7037/1), medium (FG7037/2) and heavy (FG7037/3) textured surface 6 inch clear wheels.

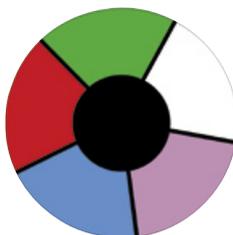
Mounted onto an OPTI Wheel Rotator, or into an OPTI Wheel Safe, they may be used in front of an effect to modify it. Combined with each other Distortion Wheels produce soft abstract imagery.



Set of 3
FG7037

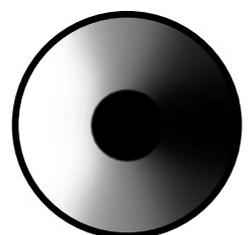
Spektraflash FG7084

The Spektraflash Wheel fits onto a Wheel Rotator for use in any OPTI effects projector. The colour of the effect changes rapidly or slowly dependent upon which speed wheel rotator is used.



Fader Wheel FG7299

The Fader Wheel fits onto a Wheel Rotator and is used in front of other effects, on any OPTI Effects Projector, to fade the projected image in and out.



[OPTI]TM 6" Effect Wheels

Organic Wheel FG7083

Organic Wheels are individually hand painted onto toughened glass treated with a textured polymer. Each one is unique.

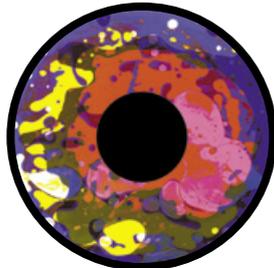


Liquid Wheels

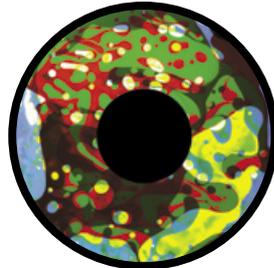
Liquid Wheels combine vivid coloured immiscible liquids. The standard range is shown below.



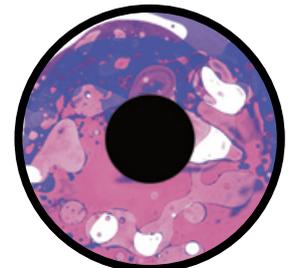
FG7038



FG7038A



FG7038B



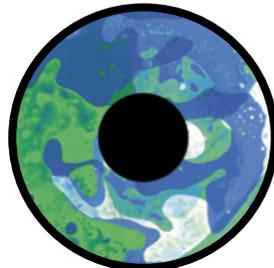
FG7038C



FG7038D



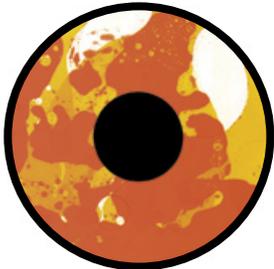
FG7038E



FG7038F



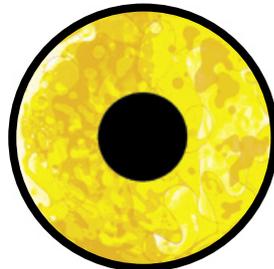
FG7038G



FG7038H



FG7038I



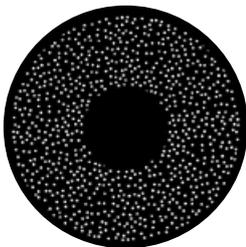
FG7038J



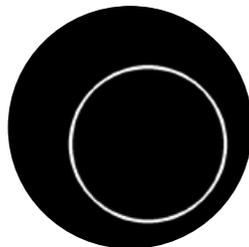
FG7038K

Beam Wheels

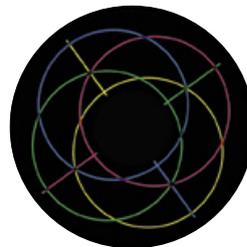
Used through a smoke haze these effects produce 'laser-like' beams of light as illustrated. Similar effects can be achieved using Beam Cassettes (page 11).



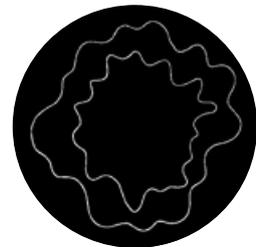
DOT
FG7078



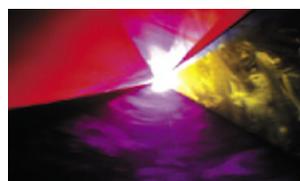
FLAT BEAM
FG7079



MULTI BEAM
FG7080



WAVY LINE
FG7081

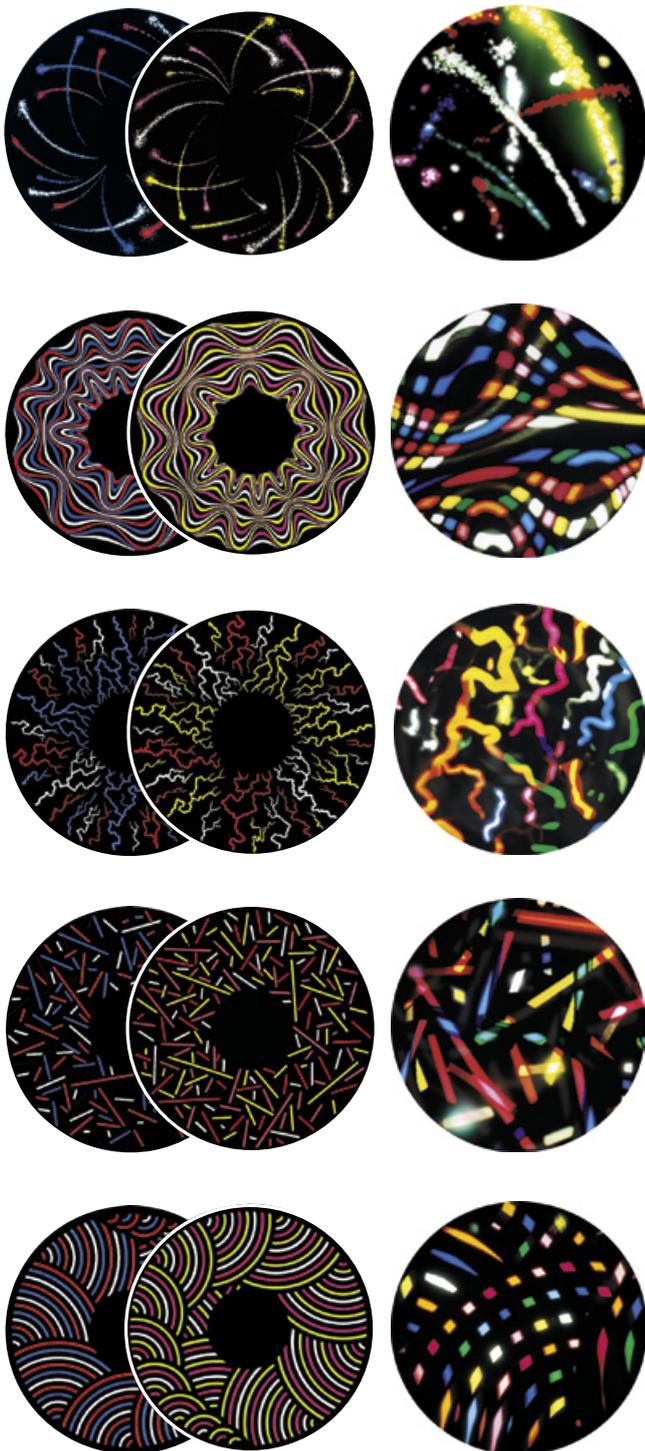


[OPTI]™ 6" Effect Wheel Sets

To create spectacular constantly changing effects using the 6 inch wheel format OPTI offers two different sets of 10 interchangeable lightweight polycarbonate 6 inch wheels. Two special Wheel Rotators are also included which counter rotate the wheels close to each other at different set speeds.

Rotagraph FG6040

One pair create an exciting firework effect, another pair lightning. The rest are a variety of colour effect designs. All combine to make 45 possible effects.



Dynagraph FG6050

Any of the 45 possible combinations of two patterned wheels chosen rotate in opposite directions to produce a flickering matrix of colour and movement.



applications

OPTI manufacture glass gobos using a wide range of processes for our own, as well as other lighting manufacturers, equipment.

Gobo is a theatrical word for a slide. Usually circular they fit into a projector and with light passing through them they are focussed to create a projected image.

The use of gobos has become extremely popular for brand enhancement and portraying messages in retail, exhibition and architectural applications.

Photo courtesy of Robolight SA.



A standard Cloud Wheel is projected onto the ceiling whilst a back projected custom clock enforces the corporate identity in a stylish and dynamic fashion.



Rear projection onto self adhesive vinyl film applied to windows attracts attention even in bright daylight.

Photo courtesy of Jim Buchanan.



Powerful projected imagery paints with light to create interactive art. Light displays like this labyrinth at Sterling Castle in Scotland bring history to life. Complex keystone correction of the original design was necessary to compensate for the very shallow angle of projection. The lens glare from the OPTI K4 projecting this image can just be seen top left.



In-store projections help draw attention to specific promotions. Here the central circular image remains static whilst the outer text constantly rotates. Achieved with a single OPTI projector and a twin glass gobo custom cassette.

processes

OPTI houses a fully equipped Mac graphic studio, Class 100 clean rooms, photographic dark room, plus silkscreen printing, as well as chrome, aluminium and dichroic etching facilities. Below are the main types of glass gobo that are typically produced. These range from black and white through to full colour.

1. Black & White

We recommend black and white gobos for maximum impact in high ambient light conditions, cost effectiveness, and rapid delivery. Chrome or Aluminium coated glass is chemically etched off using a photographic process as a mask. This creates high resolution black and white half tone or line images with outstanding definition.



2. Black & White + Colour Filter

The easiest way to achieve a coloured gobo is to simply add one of our range of 8 dichroic colours, shown below, behind a black and white gobo. Other colours are available to special order.



3. 1 Colour

For images that require a clear white design against a colour background or a single colour out of white. Choose from one of our range of 8 standard dichroic colours, shown below. Other colours are available to special order. Includes a circular border glass to edge the image neatly.



4. Black & White + 1 Colour

To create black, white and single colour projected images chrome or aluminium etched gobos are combined with an etched dichroic filter from our range of 8 colours, shown below. Other colours are available to special order.



5. Black & White + 2/3 Colours

To create black, white and two or three colour projected images chrome or aluminium etched gobos can be combined with an etched dichroic filter from our range of 8 colours, shown below, plus an etched dichroic process colour (cyan, yellow or magenta). The third colour is secondary, created from the combination of the selected colours. Other colours are available to special order.



6. Full Colour

OPTI utilise the Beacon etched 4 colour dichroic process. These gobos are made from a thin sandwich of dichroic cyan, yellow, magenta and chrome or aluminium (black) coated glasses. The thinness of the glasses allows the image to be accurately focussed whilst the dichroic colours ensure durability over long periods of use



Full colour gobos are actually four colour. Just like the lithographic printing, that produced this catalogue, the images are made up from a series of fine dots.

Standard Dichroic Colours

This is the range of 8 Standard OPTI Dichroic colours. Any of these can be used as a straight filter to colour a black and white image or etched to create a coloured image.



production

Gobo Sizes

The gobo formats that we produce for use in our own projectors are 50mm diameter single gobos, 50mm and 3 inch Cassettes - which combine two glasses, one static and one rotating, and 6 inch Wheels. Duplicate 35mm slides are also offered for use in all our projectors, except the K4. These fit into the same holder as 50mm gobos on various accessories and are an economic solution for a few days use at trade shows and other short term promotions or events. For longer term use, or use in our K4 projector, glass gobos must be used.

Many other sizes of gobo exist. We are able to offer most commonly found formats, such as those listed here, from stock. More unusual sizes are available to order.

Examples of Other Sizes

SIZE/TYPE	Gobo Ø mm	Object Ø mm
B	86.0	64
D	53.3	40
E	37.5	24
Cyberlight	44.0	36
Mac 500	27.8	23
HPE Miniscan	25.5	22
Mac 250	22.5	17

Cassettes

The unique OPTI Cassette combines two glass gobos, one which rotates and the other static, in an easy to use format. Typically these are produced with outer text constantly revolving around a fixed logo in the centre.

The 'click-fit' 50mm format is simple and safe to use and has the advantage of being able to change the glasses. For example if the outer text requires updating, whilst the logo remains unchanged, the 50mm piece of glass can be replaced.



50mm and 3 inch Effect Cassettes.

6" Wheels

Depending on the nature of the artwork custom 6 inch wheels are produced by either screen printing or using Ilfochrome® colour transparencies. For use on our higher powered projectors the latter are laminated onto toughened glass.



Artwork and Ordering

We prefer to receive artwork digitally, although hard copy is also acceptable. If none is available we can quote to produce artwork for you.

For line artwork and lettering please use Illustrator® or Freehand® with type saved as outlines or paths. Save or export files as 'pdf's' for e-mailing.

For photographic half-tone images use Photoshop® or Paint Shop Pro®, saving the images, at 1,200dpi, as 'jpg's' for e-mailing or transmitting via ISDN.

When making an enquiry or ordering please let us know which type of projector the gobo is for. We will also need to know if the image will be back or front projected and whether or not this will be via a mirror. All this information helps us to get it right first time for you.

Digital artwork should be sent to
 e-mail graphics@optikinetics.com with cc to optiuk@optikinetics.com

Solar & GoBo ranges



2 Facet
FG6210

3 Facet
FG6220



4 Facet
FG6230

FG6060



Clip-on Prisms

Available for the Solar range with two, three or four facets. Clip-on Prisms attach to the front focussing lens of the OPTI Solar 250, 100C, GoBoShow and GoBoPro projectors and reproduce the effect being projected two, three or four times respectively. OPTI Clip-on Prisms can be swivelled to alter the spread of the images.

Panoramic Rotator

The OPTI Panoramic Rotator is a motorised vertical prism that attaches to the front focussing lens and scans repeated images through 360°.



Panoramic Rotator on an OPTI Solar 100C projector.

Solar/K range



FG6033



FG6037

Slide/Gobo Holders

Accept either a 50mm diameter gobo or duplicate 35mm slide.

Solar Slide/Gobo Holder

(with 1/2 rpm Wheel Rotator)

Allows OPTI 6 inch Effect Wheels to be used in combination with a 50mm diameter gobo or duplicate 35mm slide. For example a Cloud Wheel with a window silhouette gobo or a Distortion Wheel in front of a gobo or slide with text will cause the image to undulate.

Extended Slide/Gobo Holder

The GoBo range Extended Slide/Gobo Holder allows the use of 50mm diameter gobos or duplicate 35mm slides in combination with OPTI 6 inch Effect Wheels as per the examples given above. An additional GoBo range Wheel Rotator and Extension Shaft (page 27) are required for this.

GoBo range



GS6033*



Fitting a GS Slide/Gobo Holder.



Extended GS6033E*

Solar/K range

GoBo range



FG6382

Slide/Gobo Rotators

The Solar and standard GoBo range Rotators turn a 50mm diameter gobo or duplicate 35mm slide at a constant speed of approximately 2 rpm.

The GoBo range Variable Speed & Direction (VSD) Rotator allows speed adjustment from 1/10 - 5 rpm in either direction.



Standard	GS6037*
VSD	GS6028*



FG6320

3" Cassette Rotator

Rotates any standard or custom OPTI 3 inch Effect Cassette at approximately 2 rpm.



FG6381

3" Slide Cassette

The 3 inch Slide Cassette fits onto the OPTI 3 inch Cassette Rotator (above) and allows either a 50mm gobo or duplicate 35mm slide to be rotated.



FG6326

Cassette Safe

The Cassette Safe fits into the front gate runners of Solar and K range projectors as an added safety feature.

Solar Gate Adaptor

Allows Solar range projection accessories to be used with OPTI GoBoShow and GoBoPro projectors.



GS6319*



FG6391

50mm Cassette Rotators

For use with the OPTI 50mm Effect Cassette format. Rotation speed approximately 2 rpm.



50mm Cassettes simply 'click-fit' onto the 50mm Cassette Rotators.



GS6391*

Solar/K range



6 minute	FG6380
1/2 rpm	FG6340
5 rpm	FG6350
20 rpm	FG6360
Animator (bi-directional)	
30 rpm	FG6379
VSD	
50 min - 5 rpm	FG6378SM



1/2 rpm	FG0066
5 rpm	FG0064



6 inch wheel being fitted to a Solar Wheel Rotator using a small cross head screw driver.

6" Wheel Rotators

Available in a range of speeds and used to rotate OPTI 6 inch Effect Wheels producing a constantly moving image.

1/2 rpm is recommended for use with the Liquid Wheel and most other 6 inch Effect Wheels.

The higher speeds can be used with Distortion, Spektraflash and Fader Wheels to create fast dynamic effects although these wheels can also be used with slower speed rotators to create subtle moving images.

Slow/Medium VSD Wheel Rotators have an improved speed range of 50 minutes per revolution to 5 rpm and are remotely controllable by infrared (page 25). The GoBo range version, when used on an OPTI GoBoShow or GoBoPro with Shutter and DMX option, can be controlled via DMX.

Extension Shaft

Extension Shafts fitted to each of two GoBo range Wheel Rotators enable two 6 inch Effect Wheels to be combined on one projector. Effects such as those shown in our GoBo Projector Range User Guide (free on request) can be created. The Extension Shaft can also be used with Solar & K Range Wheel Rotators to fit effects closer together.

Wheel Safes

OPTI Wheel Safes are enclosed versions of OPTI Solar Wheel Rotators that give added protection to OPTI 6 inch Effect Wheels. Available as standard in 1/2 and 5 rpm. Other speeds are available to special order.

GoBo range



1/2 rpm	GS6340*
5 rpm	GS6350*
20 rpm	GS6360*
VSD	
50 min - 5 rpm	GS6378SM*
3 - 50 rpm	GS6378MF*



Extension Shaft GS6340E



A VSD Wheel Rotator on an OPTI GoboPro with Avalon Dawn 6 inch wheel.

Solar/K range

GoBo range

All Autochanger variants are remotely controllable via infrared (see opposite page). The GoBo versions may also be controlled via DMX when used on either the OPTI GoBoShow or GoBoPro projectors fitted with the DMX and Shutter option (pages 4 - 5). Automatic shutter closing during changes can also be programmed from these Autochangers when used on these projectors fitted with the DMX and Shutter option.

Eight Static Gobo Autochanger

Accepts any combination of up to eight 50mm diameter gobos. The number of images to be displayed and the time that they are to be shown are programmable. Requires 1 channel when operated via DMX.



GS6049*

Six Static Slide/Gobo Autochangers

Accept any combination of up to six 50mm diameter gobos or duplicate 35mm slides. The number of images to be displayed and the time that they are to be shown are programmable. Blanking Plates (FG6038) are available to fill any unused positions when used on projectors without automatic shuttering. Requires 1 channel when operated via DMX.



FG6384



GS6039*

Four Rotating Slide/Gobo Autochangers

Accept any combination of up to four 50mm diameter gobos or duplicate 35mm slides. The number of images to be displayed, the time that they are to be shown, plus the speed and direction of rotation are all programmable. Blanking Plates (FG6038) are available to fill any unused positions when used on projectors without automatic shuttering. Requires 3 channels when operated via DMX.



FG6383



GS6035*

Four 50mm Cassette Autochangers

Accept any combination of up to four 50mm Effect Cassettes. The number of positions to be displayed, the time that they are to be shown, plus the speed and direction of rotation are all programmable. Requires 3 channels when operated via DMX.



FG6386



GS6386*

Solar/K range

GoBo range

Infrared Remote Control

The infrared handset, with a range of up to 30m, provides remote control of all functions of currently produced OPTI Autochangers and Slow/Medium VSD Wheel Rotators. This is particularly useful in smaller installations, both temporary and permanent, where no other form of control is available.

Infrared operation can override, and then later allow the user to return to, an existing programme stored on the Autochanger.

When used with OPTI GoBoShow or GoBoPro projectors fitted with the DMX and Shutter option the infrared handset also provides remote control of the Open/Closed function of the shutter.



The OPTI Solar 250 with a Six Static Slide/Gobo Autochanger.



The OPTI GoboPro on a Stand with a Four Rotating Slide/Gobo Autochanger and X-Y Mirror.

GS9999



Solar/K range

GoBo range

Static mirrors are used to simply reflect light to where it's required whilst moving mirrors add dynamism to the image being projected thereby catching attention. All OPTI mirrors can be adjusted through 360 degrees to project images onto walls, ceilings, floors or any other surface.



FG6310

Solar Deflector Mirror (top left)

For use with the OPTI Solar 250 and 100C projectors.



FG6313

K Deflector Mirror (left)

For use with the OPTI K4 and earlier K range projectors.

GoBo Deflector Mirror (right)

For use with both the OPTI GoBoShow and GoBoPro projectors.



GS6310



FG6311

Linear Motion

Moves an image backwards and forwards, in a straight line, between two points. The length of travel is manually adjustable on the FG version. The speed and length of travel are manually adjustable on the GS version.



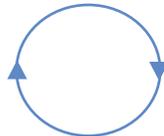
GS6317



FG6312

Circular Motion

Moves the image in a continuous circle. The size of circle is manually adjustable on the FG version. The speed, direction and size of circle are manually adjustable on the GS version.



GS6316



FG6314

Barrel

Repeatedly pans an image in a straight line in one direction. The speed, direction and length of travel are manually adjustable. Particularly effective in influencing pedestrian traffic flow.



GS6315



FG2029

K Mirror Mounting Brackets

Enable K range Mirrors to be fitted to the OPTI Solar 250.

Solar/K range

GoBo range

X-Y Mirror

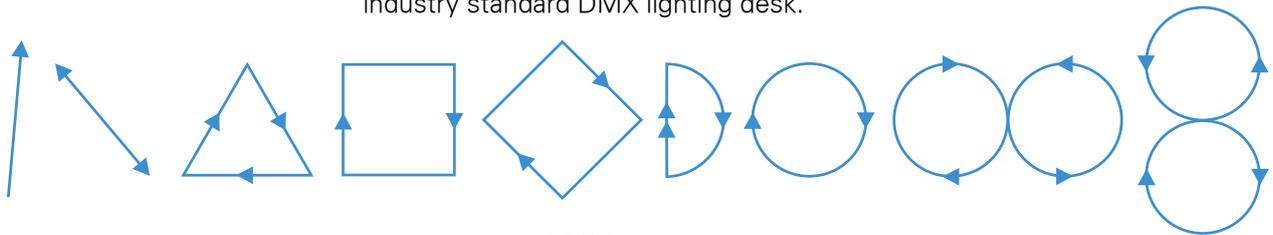
Controlled via DMX, or used in stand alone mode, the OPTI GoBo X-Y Mirror projects images exactly where they are required, when they are required.

The unique co-axial motor drive mechanism enables continuous 360 degree mirror rotation in one axis, this combined with 80 degree tilt provides the maximum possible image movement available from this type of equipment.

The X-Y Mirror has two main modes of operation. Choose from one of the nine pre-programmed patterns of image movement, create your own pattern or, when used with an OPTI GoBoShow or GoBoPro fitted with DMX and Shutter option, control remotely via an industry standard DMX lighting desk.



GS6314



TECHNICAL INFORMATION		
DMX Channels	8 bit mode	3 Channels of DMX
	16 bit mode	5 Channels of DMX
Power Supply	12V ~ (supplied via projector rails)	



The OPTI Gobo range X-Y Mirror shown fitted to an OPTI GoBoPro on a Stand with an Autochanger.

dmx club strobeflower

The OPTI DMX Club Strobeflower is a unique, high visual impact strobe system that delivers high colour temperature multiple light beams, which cut through any light show.

Controllable by DMX the OPTI Club Strobeflower retains its analogue capability. Two channels of DMX are used, one to control the flash rate of the lamp and the other the movement of the beams.



FG4165

DMX to Analogue Box

An external DMX to analogue converter box enables earlier non DMX Club Strobeflowers to be upgraded. Requires 2 channels of DMX.



FG4170B

Club Strobeflower Controller

The 19 inch rack mountable analogue controller will run up to 16 OPTI Club Strobeflower Heads.

TECHNICAL INFORMATION

Packed sizes	Head	470mm x 305mm x 325mm
	Controller	525mm x 285mm x 175mm
Packed weights	Head	8.0kg.
	Controller	3.6kg.
Mains voltage		110 - 120V ~ or 220 - 240V ~ 50/60Hz.
Tube lamp		QCA - 48
Power consumption	Head	110 Watts maximum (1.0A @ 110 - 120V ~ or 0.5A @ 220 - 240V ~).
	Controller	5 Watts maximum.
Fuses	Head	F3.5A @ 110 - 120V ~ or F2A @ 220 - 240V ~.
	Controller	T0.5A.
DMX	Head	2 Channels.



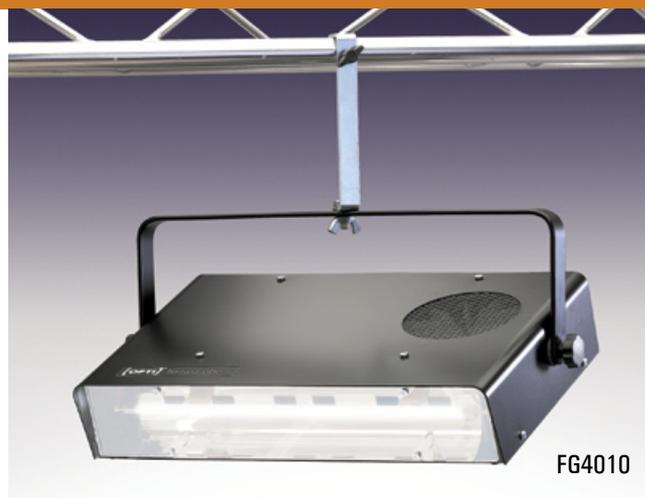
terrastrobe

The OPTI Terrastrobe has a 400 watt output based on a capacitor discharge circuit.

The Terrastrobe can be remotely triggered by either the OPTI Single or 4 Channel Strobe Control Units or from a lighting desk using the DMX to analogue converter box.

TECHNICAL INFORMATION

Packed sizes	Terrastrobe	535mm x 375mm x 160mm
	1 Channel Controller	205mm x 230mm x 130mm
Packed weights	Terrastrobe	6.5kg.
	1 Channel Controller	0.7kg.
Mains voltage	4 Channel Controller	2.0kg.
		220 - 240V ~ 50/60Hz.
Tube lamp		OXA 430
Power consumption	Terrastrobe	400 Watts maximum.
	1 Channel Controller	2 Watts maximum.
Fuses	4 Channel Controller	5 Watts maximum.
		Terrastrobe
	1 Channel Controller	T100mA.
	4 Channel Controller	T100mA.



FG4010

Strobe Control Units

The OPTI Strobe Control 1 Channel unit will remotely trigger one or several strobes simultaneously. The OPTI Strobe Control 4 Channel unit offers automatic or audio triggering of four, or multiples of four, strobes in a choice of four programme sequences.



4 Channel FG4120



1 Channel FG4130

DMX to Analogue Box (1 Channel of DMX) FG4170A



bubble bank

The OPTI Bubble Bank creates a myriad of bubbles that stream upwards about 2 metres and outwards up to 6 metres.

The OPTI Bubble Bank is supplied with one 1/2 litre of OPTI Bubble Juice Concentrate and one mixing/dispenser bottle. For best results use only OPTI Bubble Juice Concentrate.



FG1010



TECHNICAL INFORMATION

Packed size	430mm x 255mm x 295mm
Packed weight	4.6kg.
Mains voltage	110 - 120V ~ or 220 - 240V ~ 50/60Hz.
Power consumption	70 Watts maximum (0.6A @ 110 - 120V ~ or 0.3A @ 220 - 240V ~).
Fuse	T5A 250V (110 - 120V ~) or T2.5A 250V (220 - 240V ~).
Liquid	OPTI Bubble Juice - 0.5 litre concentrate (supplied) Also available in 5 litre concentrate.
Dispenser bottle	1/2 litre solution of concentrate (40 minutes running time).
Operating position	Horizontal.

