



**rosco**

**GUIDE TO  
MOTION  
EFFECTS**

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# MOVING IMAGES

The DHA I Rosco range of standard gobos, dichroic colours, Prismatic™, Colour Waves™ and Image Glass™ presents lighting designers with a wealth of opportunity but the potential of the Motion Effects range truly means that the only limitation is imagination.

The rationale behind the system is simple - there are occasions on which the colour temperature, budget or control of moving lights can be inappropriate whilst a traditional luminaire coupled with a DHA I Rosco effects unit, is perfect. In these instances, using a gobo as a starting point, dynamically changing lighting effects can be created with a quality of image and light which cannot be achieved through any other means.

## *i-cue intelligent mirror™*

### MOVING LIGHT

The ability to move your projected image from one position to another has long been an important part of a designer's palette, but there are occasions on which the colour temperature of most moving lights won't work, or when a production's budget doesn't stretch to a moving light. In these instances the Rosco I-Cue Intelligent Mirror™ is the perfect solution.

The Rosco I-Cue Intelligent Mirror™ is an ellipsoidal spotlight attachment that allows you to use your luminaire with much greater flexibility and control. The unit slides into the colour slot of the ETC Source 4, Altman Shakespeare, Strand SL and Selecon Pacific. The major function of the unit is to re-position the beam of light so that a single spotlight in a fixed position can be used for multiple specials in dozens of locations. With its on-board DMX the unit is controlled directly from your lighting console giving you precise control of the mirror's pan and tilt motion. A Power Supply Unit is necessary to get 24v DC to the I-Cue and you can daisy chain multiple units from one Power Supply. Rosco's I-Cue is compatible with many common PSU's including: Wybron-Forerunner PSU; Rainbow-Mini, Maxi, and Micro PSU's; Christie Lites-Colour Q PSU; AC Lighting-Chroma Q PSU. Rosco also offers a line of Power Supply Units which are specifically designed for optimal compatibility with both I-Cue™ and Indexers. (see page 37)



**The I-Cue requires an external power supply which can be ordered in addition.**

#### I-Cue Reference:

Unit	Order code	Web code
I-Cue Intelligent Mirror™	810000120	810000120

# ANIMATION

DHA I Rosco's animation system creates the illusion of lateral movement of an image and is based upon the interaction of a static gobo in a standard profile fixture, with a moving disc placed in the path of the gobo projection.

The principles are simple but the results are stunning and diverse. The effect can be changed from burning flames to rippling water or from scudding clouds to falling snow, simply by changing the gobos and/or the animation disc. The quality of the effect can also be varied greatly by changing the focus of the lantern and the orientation and speed of the animation unit. The combination of gobos, discs, focus, direction and speed of movement are almost limitless and we strongly recommend that you spend some time experimenting to see what effects can be achieved. Demonstrations in our offices or at your premises can be arranged for this purpose.

## **Using the system components**

An animation unit consists of a motorised drive which fits into the colour runners of a lantern and an etched stainless steel disc which fits onto the motor unit and is rotated in front of the lens. With a static gobo in the gate of the lantern the pattern of holes on the rotating disc interacts with the optics of the lantern giving the impression that the image is moving.

The effect achieved is a directional rippling or shimmering of the static gobo image. The properties of the effect will vary depending on the pattern of the gobo, the choice of animation disc, the speed of the motor, the direction of the rotation and the focus of the lantern. With so many variables the effects available are truly limitless.

## **Most common uses for the animation system**

The quality of light from a tungsten lamp when combined with the DHA I Rosco Animation System and any one of the hundreds of Rosco filters, is perfect for creating moving clouds, burning fires and flowing water – effects which have been used in theatrical environments for many years. In addition, the range of 11 available discs means that you can also create the effect of a speeding train, or rising bubbles, or snowfall.

# animation by the infinity

Available for any fixture with a 19.05 cm gel frame such as the Altman 1K or a 16.51cm gel frame such as the Strand SL, Selecon Pacific and the ETC Source 4, the Infinity is an economical and simple means of creating lateral animation without the need for a DMX signal.

Control is on-board and the speed and direction of your choice of animation disc can be altered through a switch and a simple potentiometer.

For added ease of use there is a heat resistant handle so that you can easily remove the unit from the lantern at any time.

**The Infinity is supplied with a PSU, an adaptor plate and a 42cm (DD) disc of your choice.**



## Infinity Fitting Reference:

Unit	Disc	Lanterns	Order Code	Web Code
Infinity	DD 42 cm	Altman 1K ETC Source 4 Strand SL Selecon Pacific	205825000000	205825000000
	Tangential Breakup		78DD11	30011
	Radial Breakup		78DD12	30012
	Spiral Breakup		78DD13	30013
	Linear Breakup		78DD14	30014
	Triangle Breakup		78DD15	30015
	Cloud Breakup		78DD16	30016
	Elliptical Breakup		78DD17	30017
	Dot Breakup		78DD18	30018
	Flicker Wheel		78DD19	30019
	Coarse Radial Breakup		78DD20	30020
	Coarse Tangential Breakup		78DD21	30021

Although the principles remain the same, the control of the DHA AMU is via an external controller (see page 35), directly from a mains supply or via a DMX Lighting desk. The DHA AMU and associated discs are available for a wide range of lanterns and enable technicians and programmers to programme cues remotely, once the units have been rigged.

**The DHA AMU is a standalone product and the relevant disc and choice of controller must be specified at the time of order and are charged in addition.**

## DHA AMU Fitting Reference:

Unit	Disc	Lanterns	Order Code	Web Code
<b>AMU125</b>	DC 36.4 cm	ADB DS51 ADB DS54 ABDW54 CCT Minuette CCT Helios LDR Canto 250 LDR Suono 10/28 LDR Suono 20/40 LDR Suono D10/28 LDR Suono D20/40 Novalite 500W followspot Selecon Acclaim Selecon Acclaim Zoomspot Selecon Astral Strand Hilite 23 Strand Minim 23 Times Square Q3Z Zero 88 Focus	78AMU125/V	N/A
<b>AMU150</b>	DC 36.4 cm	Coemar Zenith Strand Prelude Strand Quartet TBA Thomas 650W	78AMU150/V	N/A
<b>AMU155</b>	DC 36.4 cm	ADB A59Z	78AMU155/V	N/A
<b>AMU160</b>	DC 36.4 cm	Altman Shakespeare ETC Source 4 ETC Source 4 Junior ETC Source 4 Junior Zoom Strand SL (excl SL5 & SL10)	78AMU160/V	N/A
<b>AMU185</b>	DD 42 cm	Altman Leko Altman 1K Altman 360Q CCT Silhouette 30 CCT Silhouette 40	78AMU185/V	N/A

DHA AMU Fitting Reference cont.....

Unit	Disc	Lanterns	Order Code	Web Code
<b>AMU185</b>	DD 42 cm	CCT Silhouette Project CCT Silhouette Freedom LDR Canto 575 LDR Canto 1200th LDR Nota 8/22 LDR Nota 18/36 LDR Tono 8/22 LDR Tono 18/36 Lee Colortran Windsor 16/34 Lee Colortran Windsor 24/28 Niethammer HPS 017-030 Niethammer HPS 117-130 Selecon Zoomspot 1200 Selecon Pacific 12/28 Selecon Pacific 23/50 Selecon Pacific 20, 30, 40, 50, 90 Strand Cantata Strand Optique Strand Harmony Strand T-Spot Strand Leko (excl 11)	78AMU185/V	N/A
<b>AMU190</b>	DE 51.6 cm	ETC Source 4 Zoom (excl Junior)	78AMU190/V	N/A

**AMU Disc Fitting Reference:**

<b>Unit</b>	<b>Disc</b>	<b>Order Code</b>	<b>Web Code</b>
<b>AMU125 / 150 / 155 / 160</b>			
	DC		
Tangential Breakup		78DC11	N/A
Radial Breakup		78DC12	N/A
Spiral Breakup		78DC13	N/A
Linear Breakup		78DC14	N/A
Triangle Breakup		78DC15	N/A
Cloud Breakup		78DC16	N/A
Elliptical Breakup		78DC17	N/A
Dot Breakup		78DC18	N/A
Flicker Wheel		78DC19	N/A
Coarse Radial Breakup		78DC20	N/A
Coarse Tangential Breakup		78DC21	N/A
<b>AMU185</b>			
	DD		
Tangential Breakup		78DD11	30011
Radial Breakup		78DD12	30012
Spiral Breakup		78DD13	30013
Linear Breakup		78DD14	30014
Triangle Breakup		78DD15	30015
Cloud Breakup		78DD16	30016
Elliptical Breakup		78DD17	30017
Dot Breakup		78DD18	30018
Flicker Wheel		78DD19	30019
Coarse Radial Breakup		78DD20	30020
Coarse Tangential Breakup		78DD21	30021
<b>AMU190</b>			
	DE		
Tangential Breakup		78DE11	N/A
Radial Breakup		78DE12	N/A
Spiral Breakup		78DE13	N/A
Linear Breakup		78DE14	N/A
Triangle Breakup		78DE15	N/A
Cloud Breakup		78DE16	N/A
Elliptical Breakup		78DE17	N/A
Dot Breakup		78DE18	N/A
Flicker Wheel		78DE19	N/A
Coarse Radial Breakup		78DE20	N/A
Coarse Tangential Breakup		78DE21	N/A

# animation discs

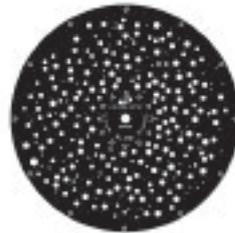
**Pattern 11: Tangential Breakup** produces a subtle rippling motion, particularly when moving parallel with the lines of the gobos. It is most suitable for rising flames, flowing water and other effects where a single direction of movement is required.



**Pattern 17: Elliptical Breakup** produces bi-directional movement similar to the Spiral Breakup, but with constantly changing direction of movement. This is specifically useful for snow or similar effects where 'flurries' of movement would be expected.



**Pattern 12: Radial Breakup** provides a strong regular movement suitable for flickering flames, water ripple, reflected water, and shimmer for heat haze or mirage effects.



**Pattern 18: Dot Breakup** causes motion while maintaining a more focussed projection of the gobo image. It is suggested for effects such as falling leaves or rising bubbles.

**Pattern 13: Spiral Breakup** similar to pattern 12 (Radial Breakup) but with some movement at right angles to the main motion, as is seen in windblown rain, snow or flames. It is particularly worth experimenting with the angle of the gobo and the orientation of the disc to achieve all the possibilities with this pattern.



**Pattern 19: Flicker Wheel** can be used in conjunction with a high motor speed for passing train effects or just to break up the beam of a lantern for simple strobe effects.



**Pattern 14: Linear Breakup** provides rhythmic movement and can be used to simulate a breeze through the branches of a tree or rhythmic undulations of sea waves.



**Pattern 20: Coarse Radial Breakup** is particularly effective for animating light from a non-focussing source (non profile lantern) whilst providing a minimal loss in intensity due to the high 'white to black' ratio of the radial pattern. Also effective for similar uses to radial breakup.

**Pattern 15: Triangle Breakup** gives a more pronounced and rapid rhythmic effect than pattern 14 (Linear Breakup) and is suitable for use with split colour as a psychedelic effect or for a rough sea effect.



**Pattern 21: Coarse Tangential Breakup** is most suitable for use in profile lanterns without the use of a gobo, in Fresnel or PC lanterns, or on M16 mini parcans, to create the effect of flames, etc.



**Pattern 16: Cloud Breakup** is designed for a softer directional movement particularly at slow or very slow speeds. Use for cloud effects with cloud gobos or for a soft slow-flowing stream effect.



**Pattern 22: Colour Wheel** accepts five gels (held in place with standard paper fasteners) to give continual colour changes.

# *using animation with profile lanterns*

## **Choose your gobo**

The humble gobo is the basis for the moving effect and should be chosen first. Given the range of over 1500 metal and glass images and the 11 possible animation discs, the range of effect available is endless. As a result it is always worth investing a little time in experimenting in order to create just the effect you are looking for.

## **Focus**

If you were to put the gobo in hard focus you would almost certainly be disappointed with the resulting movement. However, put the gobo greatly out of focus and suddenly you have created intense movement, although at the expense of the clarity of the gobo image. Your perfect projection will probably be between these two states and depends entirely on the effect you are trying to create. Remember too that the quality of the result and the impression of movement will be dependent on which side of the hard focus the lantern is set.

## **Disc Pattern**

Beside each disc in this guide there is an indication of the applications for which it has been designed and there are some more detailed 'Effects Ideas' on pages 11- 18. However, these really are just a taster of the possible effects from this unit, so don't be afraid to experiment.

## **Direction and Orientation**

Animation units can be mounted with the disc spindle either above or to the side of the lens tube. When the spindle is above the lens tube the movement will be perceived as horizontal whilst with the spindle to the side of the lens tube the movement will be vertical. The movement reverses on the other side of the hard focus plus the direction of the movement can be altered on both the Infinity and the DHA AMU.

## **Speed**

As the entire animation system is based on the illusion of movement, so the apparent speed of movement is dependent on the disc speed, the complexity of the gobo and the disc being used. Whichever AMU you are using, speed is easily controlled enabling you to 'tweak' the rotation to best create the effect you are looking for.

## **Colour**

Filter from any of the Rosco ranges of filter can be attached directly to the Animation Disc by using the discs' etched tabs or by using scroll tape and there are some amazing effects to be created by using more than one colour, randomly attached to the disc. In addition the gobo slot of certain lanterns can also house a Permacolor Filter, a Colorwave or a Prismatic.

## **Using animation with non-profile lanterns**

Animation can be effective in Parcans, Fresnels and PC lanterns. The image of the disc may be more defined but there is often a greater degree of coverage. The results will depend on the optics of the fixture so it is worth experimenting by removing the lenses from the Fresnel and PC lanterns or by changing the lamp type in the Parcans or Mini Parcans.

The ideas outlined below are intended as suggestions only. The precise look of any effect will depend on many factors including the lantern used, the focus of the lantern and the projection surface.

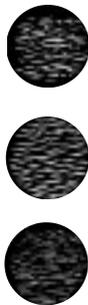
## WATER

### RIPPLING WATER



**Disc 12**

mounted above lens  
very slow rotation



**GOBO**

955

or

958

or

833

**Alternative gobos:**

Linear Breakups 401, 402, 501, 504  
Shower 882

**Alternative Animation discs:**

Coarse Radial Breakup 20 gives a bolder movement, Spiral Breakup 13 adds some flowing movement.

Use slower speeds for gentler or more distant movement. For rough water substitute a more 'wavy' gobo design such as Reflected Water 906, Flames-4 960, or Fire/Waves 238-275, and use Coarse Radial Breakup 20 or Elliptical Breakup 17 (for an irregular movement) and a higher motor speed.

### WAVES



**Disc 15**

mounted beside lens  
very slow / slow rotation



**GOBO**

504

or

238-275

**Alternative gobos:**

Linear Breakups 401, 402, 501, 504,  
Reflected Water 906.

**Alternative Animation discs:**

Linear Breakup 14, Elliptical Breakup 17 (irregular rhythm) Try a few strips of colour attached to the disc or split colour in the colour frame. Experiment with the focus.

## REFLECTED WATER



**Disc 12**

either orientation  
very slow/slow rotation

+



**GOBO  
903**

or



**906**

### Alternative Animation disc:

Elliptical Breakup 17 (irregular movement).

## REFLECTED WATER - (Afocal Lantern)



**Disc 11**

mounted beside lens  
very slow/slow rotation

+



**"BIRDIE"**

(M16 mini parcan)

### Alternative Animation disc:

Coarse Radial Breakup 20 gives bolder movement. Coarse Tangential Breakup 21 for flame effects.

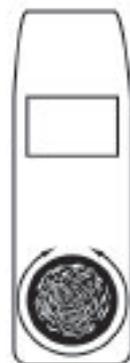
## WHIRLPOOL



**Disc 13**

either orientation  
medium rotation

+



**GOBO ROTATOR**

**Gobo  
893**

A whirlpool may be created using gobo 893 with either the rotator or the animation alone. However, the combination of the two is particularly effective. Alternatively, two 893 gobos could be used in a double gobo rotator.

**FLOWING WATER**



**Disc 11**

mounted beside lens  
very slow/slow rotation



**GOBO  
955**

or



**958**

or



**960**

**REFLECTION in WATER**



**Disc 20**

mounted beside lens  
very slow/slow rotation



**GOBO  
847**

Disc 20. Almost any gobo that has a definite image such as a building (eg 847 Norman), realistic tree, or cloud, can be made to look like it is being reflected in the surface of moving water by putting it in the lamp so that the image is projected upside down and taken just out of focus.

Our animation range is very versatile in producing fire and flame effects and good results may be obtained from many different disc patterns together with any of the flames and fire gobos available from our extensive catalogue range.

## FIRE

### BLOWING FLAMES



**Disc 13**

either orientation  
slow/medium rotation



**GOBO**  
**175**

or

**176**

#### Alternative gobos:

Any of the Fire and Flames gobos may be used. Use strips of red, orange or yellow gel attached to the disc.

#### Alternative Animation disc:

Elliptical Breakup 17 (gives irregular movement). Dot Breakup 18.

### RISING FLAMES



**Disc 11**

mounted beside lantern  
slow rotation



**GOBO**  
**176**

or

**859**

Try split colour in the colour frame.

### RISING FLAMES - (Afocal Lantern)



**Disc 21**

mounted beside lantern  
medium rotation

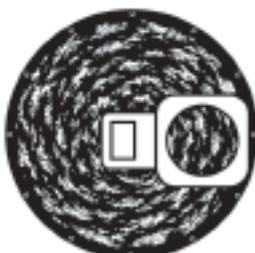


**"BIRDIE"**

(M16 mini parcan)

Attach strips of colour to the disc.

### WHITE RISING SMOKE



**Disc 16**

mounted beside lantern  
very slow/slow rotation



**GOBO**  
**5004**  
**Colorizer™**

**GOBO**  
**77561**

or

**78338**

Taken far out of focus, this can look like white/grey smoke rising up - the different colours in the Colorizer™ help the illusion of dimension in the cloud. Layering this with a generally linear steel gobo such as 77561 or 78338 oriented vertically could help give the image a more defined overall shape.

The versatility of gobo animation makes this an ideal technique for creating all sorts of weather effects

## CLOUDS, RAIN AND SNOW

### CLOUDS



**Disc 16**  
mounted above lens  
very slow rotation

+



**GOBO**  
**163**

or

**164**

or

**167**

Any non meshed cloud gobo.



**168**

or

**170**

### RAIN



**Disc 13**  
mounted beside lens  
medium rotation

+



**GOBO**  
**882**

or

**503**

For driving rain, angle the gobo then try turning the disc over to find the best direction for the spiral pattern.

### SNOW



**Disc 17**  
mounted beside lens  
slow rotation

+



**GOBO**  
**884**

## OTHER EFFECTS

### PASSING TRAIN



**Disc 19**

mounted above lens  
fast rotation

+



**GOBO**

**901**

or



**902**

Blanking some holes in the disc with tape can be used to interrupt the regular pulsation of the effect, as between railway carriages.

### BUBBLES



**Disc 18**

mounted beside lens  
medium rotation

+



**GOBO**

**635**

or



**99650**

or



**915**

This can give the impression of rising bubbles in an aquarium, underwater environment, or a close-up of a fizzy drink. Using gobo 915 (Foam) gives a more frothy effect, like a washing machine foaming over or the head on a glass of beer.

### HALLOWEEN MOON



**Disc 21**

mounted above lens  
slow rotation

+



**GOBO**

**700/G**

or



**961**

and



**99119**

This makes it look like clouds are passing in front of a full moon, horror-movie style. Alternatively, try the same disc with gobo 961 (Rising "Saigon" Sun) layered with 99119 (Winter Tree 2) or any other bare-branch tree gobo, for a smaller moon seen through the branches of a dead tree.

Some examples of common uses for our Moving Effects

## TREES

### LIGHT THROUGH TREES



**Disc 17**

either orientation  
slow rotation

+



**GOBO  
405**

Almost any disc pattern can be used to animate a wide range of breakup gobos in this way.

### TREE IN BREEZE



**Disc 14**

mounted beside lens  
slow rotation

+



**GOBO  
110**

We produce a wide range of tree, branch and foliage gobos.

### LEAFY TREES



**Disc 20**

mounted above lens  
slow rotation

+



**GOBO  
5008  
Colorizer™**



**GOBO  
119**

Try using a Universal Iris Slot gobo holder to put a Colorizer™ 5008 (green and yellow stippled) behind a 119 (Leaf breakup) gobo which gives a very nice additional layer of colour and visual depth when the gobo is taken just out of focus enough to blur the edges of the steel. The Featherlight version (6205) might be more realistic, since it has more white space and lets more light through. Discs 12 and 20 give a gentle breeze effect, disc 17 is slightly more dynamic as it changes the direction of movement slightly as it rotates.

## OTHER EFFECTS

### SHIMMERING VIGNETTE



**Disc 20**

mounted above lens  
medium/fast rotation

+



**GOBO  
7255**

or



**7256**

or



**614**

This effect gives the vignette gobos a lightly flickering, shimmering quality that makes the points around the edge appear to jump around the outside of the circle. This is ideal to spotlight "magical" characters, such as (perhaps) the Good Witch in the Wizard of Oz. An interesting alternative to using a rotator, or when used at the same time as a rotator.

### DYNAMIC MOIRÉ EFFECTS



**Disc 14**

mounted above lens  
medium rotation

+



**GOBO  
74002**

or



**74022**

The linear and triangle discs can produce a range of interesting and slightly mesmerising abstract effects with moiré patterns. As the linear openings in the discs line up with different parts of the pattern on the gobo, different moiré effects appear and disappear as the whole image stays in motion. This works best with gobos that have a pattern that crosses through the image area like the two examples shown, as opposed to a radial or concentric pattern. Putting the gobo in a rotator could add another dimension of movement. These effects are good for back or side light especially if haze is used.

### DANCING STARS



**Disc 18**

mounted beside lens  
slow rotation

+



**GOBO  
932**

# X24 x-effects projector

## X24 X-Effects Projector

There are times when a designer needs to cover large areas or spaces with animated effects and when the light output of a traditional profile lantern is inadequate for the job. Rosco has designed the X24 X-Effects Projector for just such applications.

The X24 X-Effects Projector provides large scale 3-D effects previously unavailable to lighting designers. The device utilises a 200-watt Enhanced Metal Arc source, whose short arc allows for an output of 5000 lumens, and a 7000 hour lamp life. The colour temperature is similar to a Xenon source at 6000°K, but with nearly two times the luminous effectiveness (or efficacy).

The effect itself is created by rotating two "X" size glass gobos off-centre of the optical path. This results in a projection that does not appear to have a visible direction or pattern. On-board potentiometers control the speed and direction of both gobos.

X24 X-Effects Projectors are supplied equipped with a 200 watt Enhanced Metal Arc source and a customer-chosen lens train and are available with on-board DMX control or as a stand alone analogue fixture.

In addition to the "X" size gobos, users can also add Permacolor dichroic colour filter or single colour glass gobos into the lens housing, achieving more specific effects. Any gobo design will of course be out of focus, but will add an overall contour or shape to the optical effect.. Fire and Water filters are available as standard on order codes:

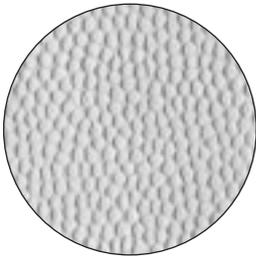
X-Filter Fire: 205375200495

X-Filter Water: 205372111110



Position 1 is the disc closest to the lamp  
Position 2 is the disc closest to the lens

## MOVING CLOUDS



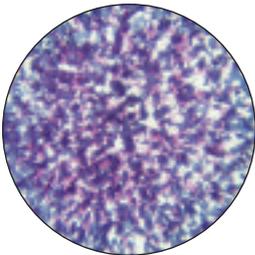
**Position 1 - Image Glass™**  
**255336051114**  
**Honeycomb**

o r



**Position 1 - Image Glass™**  
**255336171114**  
**Hammered**

Optional



**Position 1 - Colorizer™**  
**Blue/Lavender Stippled**  
**255550041114**



**Position 2 - Image Glass™**  
**255336201114**  
**Ice**

Mount the X-24 on its side so that the effect moves sideways. Set both discs moving in the same direction. If they are roughly the same speed it will appear as though the clouds are moving smoothly in a steady wind. Adjust one disc to move faster than the other to create a more rolling effect, as if a storm is gathering. The greater the difference in the speed of the two discs, the more turbulent the effect will be. Substituting the Colorizer in position 1 will give a much more stormy look and depth of colour, but because it is not textured glass the dimensionality of the effect will be slightly flatter.

This effect could also work as rising smoke if the unit is mounted to give vertical motion rather than horizontal.



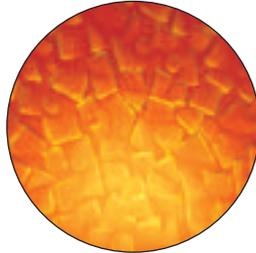
Position 1 is the disc closest to the lamp  
Position 2 is the disc closest to the lens

## FIRE



**Position 1 -Colorwaves™**  
**255331021114**  
**Amber Ripple**

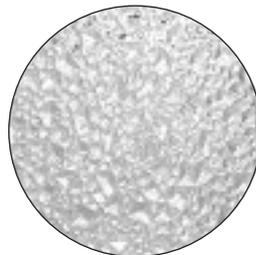
o r



**Position 1 -Colorwaves™**  
**255333021114**  
**Amber Mosaic**

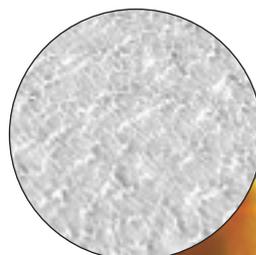
Lens Mount: Optional X-Fire Filter gobo or dichroic colour filter.

Set both discs moving upward, with the disc in Position 2 moving slightly faster. Adjust focus until the edges of the individual flames are distinct. The more angular patterns, such as the Sparkelite or Mosaic, will create a more active, jumping flame than the smoother patterns. The X-Fire Filter in the lens will give the overall effect a more directional impression and give it a subtle "fire-like" shape, or a pale dichroic tint can help neutralise some of the green cast inherent in the metal halide lamp in the X-24.



**Position 2 -Image Glass™**  
**255336221114**  
**Sparkelite**

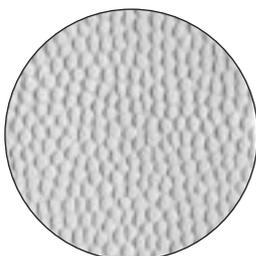
o r



**Position 2 -Standard  
Water disc**  
**2053721211104**



## FALLING SNOW or RAIN

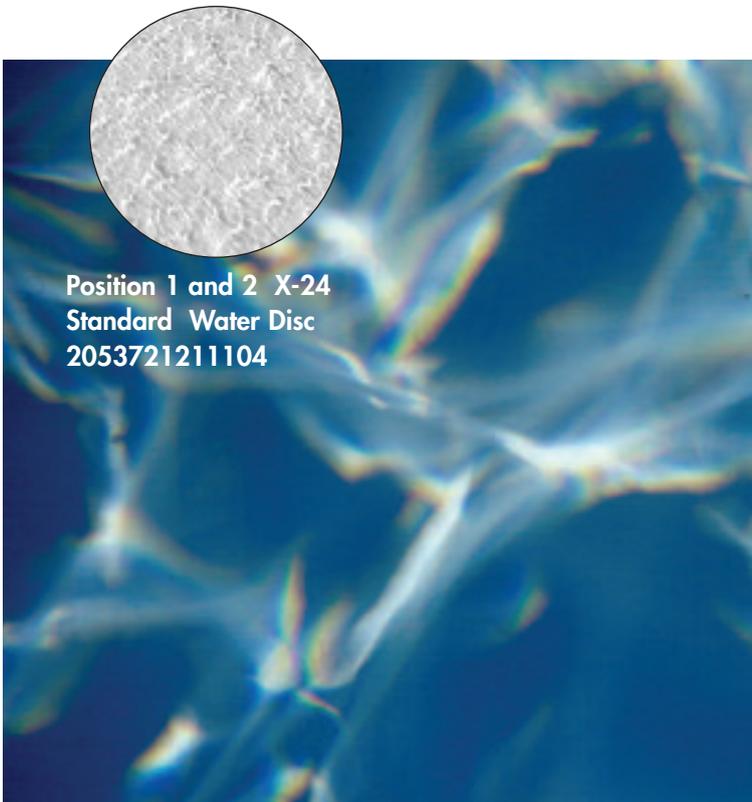


**Position 1 and 2 Image™**  
**Glass 255336051114**  
**Honeycomb**

This effect is suggested for backdrops. Set both discs moving downward, one slightly faster than the other. Adjust the focus to remove any halation for the most realistic effect.

**Position 1** is the disc closest to the lamp  
**Position 2** is the disc closest to the lens

## WATER

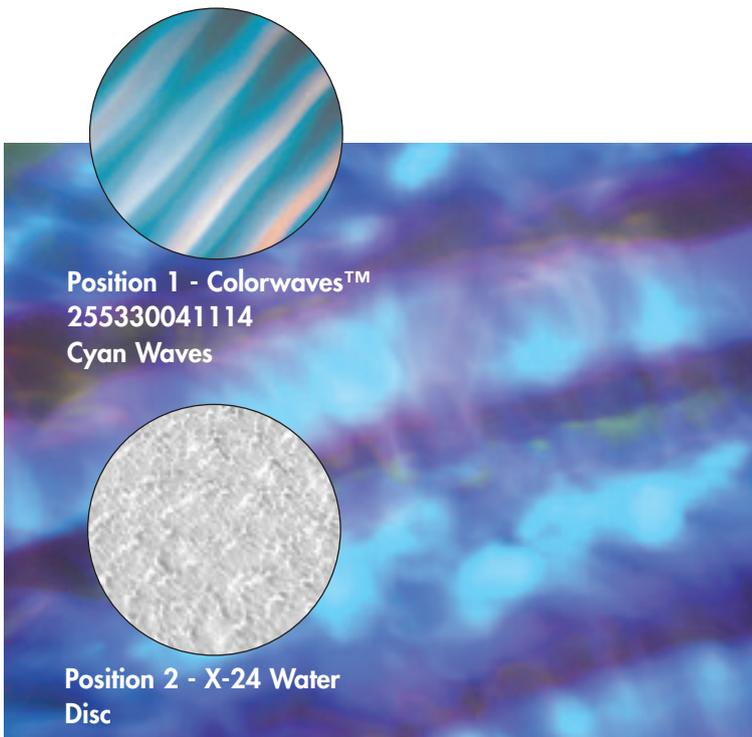


Lens mount: Optional X-Water Filter gobo or dichroic colour filter

If the water is meant to flow, set the direction for both discs to be the same. Adjust the speed, keeping in mind that the closer the two discs are to each other in speed the smoother the flow will appear. Try having one disc move slightly faster than the other to keep a sense of directionality to the effect, but to still have it ripple randomly. For a standing ripple, set the discs to move in opposite directions, again adjusting the speed of each disc to get the amount of turbulence desired.

Adjusting the focus to a sharp image will give the impression of looking into moving water, while softening the focus will make the image appear more like a reflection. The "X-Water Filter" gobo is a glass disc that also fits in the lens, and can add a depth of colour because of its blue-and-clear pattern.

## AURORA BOREALIS



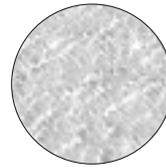
Orient the cyan Waves disc to get the pattern in a predominantly horizontal position, and then set the movement control to stationary. Set the disc in position 2 at the slowest possible upward speed. Adjust the focus so that the whole image appears to undulate as much as possible. Other Image Glass™ discs can provide different qualities of movement, but the key is that the motion be slow and subtle.

# x-size gobos

## X-Size gobos

Supplied at 111mm diameter including an aluminium bezel.

2 x Standard Water Effect Glass gobos are supplied with the projector.

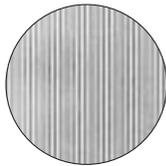


2053721211104  
Water Effect

## Image Glass™



2553360011114  
Flower



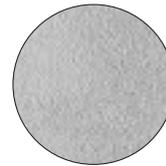
2553360111114  
Lined



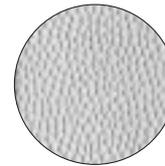
2553360211114  
Plume



2553360311114  
Lt. Plume



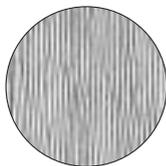
2553360411114  
Pebble



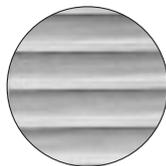
2553360511114  
Honeycomb



2553360611114  
Waves



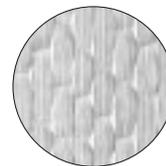
2553360711114  
Irregular Strands



2553360811114  
Banded Lines



2553360911114  
Lazy Swirls



2553361011114  
Basket Weave



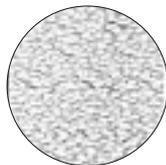
2553361111114  
Pin Feathers



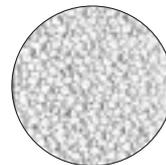
2553361211114  
Fractured Layers



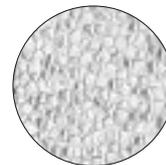
2553361311114  
Winter Frost



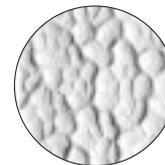
2553361411114  
Random Blisters



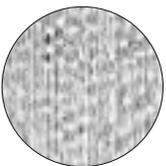
2553361511114  
Coalescing Bubbles



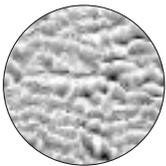
2553361611114  
Raised Mosaic



2553361711114  
Hammered



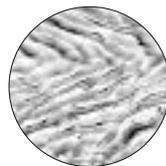
2553361811114  
Wood Grain



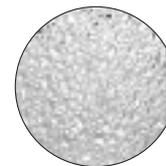
2553361911114  
Ripples



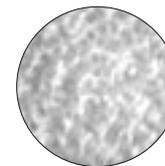
2553362011114  
Ice



2553362111114  
Dune



2553362211114  
Sparkelite

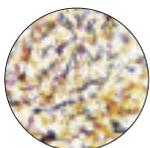


2553362311114  
Reflections

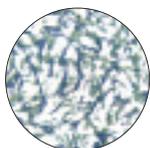
## Colorizers™

### Featherlight Series

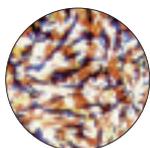
Similar to the Stippled Colorizers, but with a less dense “feather duster” pattern to allow more white light through.



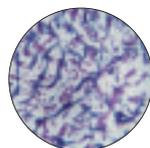
2555620111114  
Blue, Lavender and Yellow



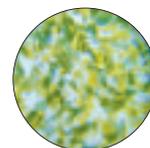
2555620211114  
Blue and Green



2555620311114  
Red, Lavender and Yellow



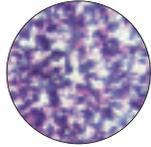
2555620411114  
Blue and Lavender



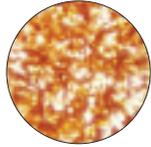
2555620511114  
Green and Yellow

# x-size gobos

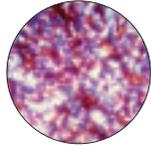
## Stippled Series



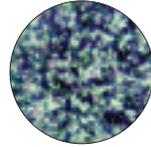
255550041114  
Blue and lavender



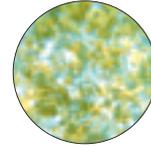
255550051114  
Amber and red



255550061114  
Red, blue and  
lavender



255550071114  
Green, blue and  
lavender



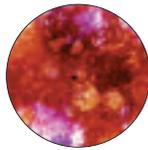
255550081114  
Green and yellow

## Free Flow Series

A combination of colours smoothly blended together in a unique, flowing design.



255561011114  
Cool:  
Blues, reds and  
lavenders



255561021114  
Warm:  
Red, ambers,  
blues  
and lavenders



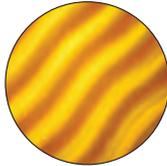
255561031114  
Midnight:  
Blues, lavenders  
and greens

## Colorwaves™

### WAVES



255330011114  
WAVES - RED



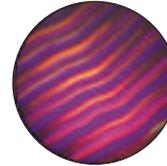
255330021114  
WAVES - AMBER



255330031114  
WAVES - MAGENTA

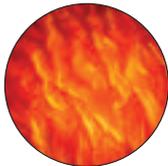


255330041114  
WAVES - CYAN

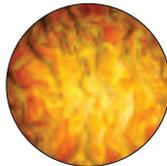


255330051114  
WAVES - INDIGO

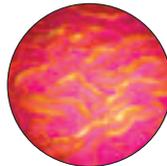
### RIPPLE



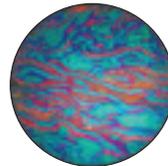
255331011114  
RIPPLE - RED



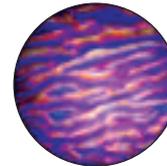
255331021114  
RIPPLE - AMBER



255331031114  
RIPPLE - MAGENTA



255331041114  
RIPPLE - CYAN

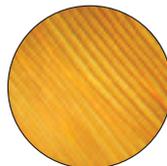


255331051114  
RIPPLE - INDIGO

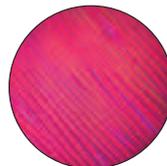
### STRANDS



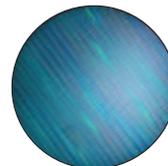
255332011114  
STRANDS - RED



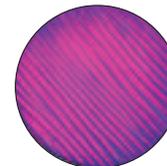
255332021114  
STRANDS - AMBER



255332031114  
STRANDS - MAGENTA

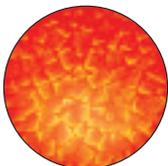


255332041114  
STRANDS - CYAN

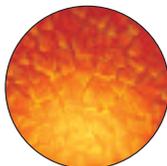


255332051114  
STRANDS - INDIGO

### MOSAIC



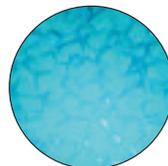
255333111114  
MOSAIC - RED



255333021114  
MOSAIC - AMBER



255333031114  
MOSAIC - MAGENTA



255333041114  
MOSAIC - CYAN



255333051114  
MOSAIC - INDIGO

# x-size gobos

## X24 X-Effects Projector Reference:

Item	Order code	Rosco USA Code
X24 Effects Projector DMX	205370150120	205370150120
X24 Effects Projector Analogue	205370200120	205370200120
X24 19 degree lens	206371190000	206371190000
X24 30 degree lens	206371300000	206371300000
X24 50 degree lens	206371500000	206371500000
X24 70 degree lens	206371700000	206371700000
X24 200W Lamp	206371010000	206371010000
X24 X-Effects Colorwave Red Waves 111mm	255330011114	255330011114
X24 X-Effects Colorwave Amber Waves 111mm	255330021114	255330021114
X24 X-Effects Colorwave Magenta Wave 111mm	255330031114	255330031114
X24 X-Effects Colorwave Cyan Wave 111mm	255330041114	255330041114
X24 X-Effects Colorwave Indigo Wave 111mm	255330051114	255330051114
X24 X-Effects Colorwave Red Ripple 111mm	255331011114	255331011114
X24 X-Effects Colorwave Amber Ripple 111mm	255331021114	255331021114
X24 X-Effects Colorwave Magenta Ripple 111mm	255331031114	255331031114
X24 X-Effects Colorwave Cyan Ripple 111mm	255331041114	255331041114
X24 X-Effects Colorwave Indigo Ripple 111mm	255331051114	255331051114
X24 X-Effects Colorwave Red Strands 111mm	255332011114	255332011114
X24 X-Effects Colorwave Amber Strands 111mm	255332021114	255332021114
X24 X-Effects Colorwave Magenta Strands 111mm	255332031114	255332031114
X24 X-Effects Colorwave Cyan Strands 111mm	255332041114	255332041114
X24 X-Effects Colorwave Indigo Strands 111mm	255332051114	255332051114
X24 X-Effects Colorwave Red Mosaic 111mm	255333011114	255333011114
X24 X-Effects Colorwave Amber Mosaic 111mm	255333021114	255333021114
X24 X-Effects Colorwave Magenta Mosaic 111mm	255333031114	255333031114
X24 X-Effects Colorwave Cyan Mosaic 111mm	255333041114	255333041114
X24 X-Effects Colorwave Indigo Mosaic 111mm	255333051114	255333051114
X24 X-Effects Image Glass Flower 111mm	255336001114	255336001114
X24 X-Effects Image Glass Lined 111mm	255336011114	255336011114
X24 X-Effects Image Glass Plume 111mm	255336021114	255336021114
X24 X-Effects Image Glass Light Plume 111mm	255336031114	255336031114
X24 X-Effects Image Glass Pebble 111mm	255336041114	255336041114
X24 X-Effects Image Glass Honeycomb 111mm	255336051114	255336051114
X24 X-Effects Image Glass Waves 111mm	255336061114	255336061114
X24 X-Effects Image Glass Irr.Strands 111mm	255336071114	255336071114

# x-size gobos

## X24 X-Effects Projector Reference cont.....

Item	Order Code	Rosco USA code
X24 X-Effects Image Glass Banded Lines 111mm	255336081114	255336081114
X24 X-Effects Image Glass Lazy Swirls 111mm	255336091114	255336091114
X24 X-Effects Image Glass Basket Weave 111mm	255336101114	255336101114
X24 X-Effects Image Glass Pin Feathers 111mm	255336111114	255336111114
X24 X-Effects Image Glass Fractured Layers 111mm	255336121114	255336121114
X24 X-Effects Image Glass Winter Frost 111mm	255336131114	255336131114
X24 X-Effects Image Glass Random Blisters 111mm	255336141114	255336141114
X24 X-Effects Image Glass Coalescing Bubbles 111mm	255336151114	255336151114
X24 X-Effects Image Glass Raised Mosaic 111mm	255336161114	255336161114
X24 X-Effects Image Glass Hammered 111mm	255336171114	255336171114
X24 X-Effects Image Glass Wood Grain 111mm	255336181114	255336181114
X24 X-Effects Image Glass Ripples 111mm	255336191114	255336191114
X24 X-Effects Image Glass Dune 111mm	255336211114	255336211114
X24 X-Effects Image Glass Sparkelite 111mm	255336221114	255336221114
X24 X-Effects Image Glass Ice 111mm	255336201114	255336201114
X24 X-Effects Image Glass Reflections 111mm	255336231114	255336231114
X24 X-Effects Image Glass Standard Water Effect (2 discs) 111mm	205372121114	205372121114
X24 X-Effects Colorizer Blue/Lavender Stippled 111mm	255550041114	255550041114
X24 X-Effects Colorizer Amber/Red Stippled 111mm	255550051114	255550051114
X24 X-Effects Colorizer Red/Blue/Lavender Stippled 111mm	255550061114	255550061114
X24 X-Effects Colorizer Green/Blue/Lavender Stippled 111mm	255550071114	255550071114
X24 X-Effects Colorizer Green/Yellow Stippled 111mm	255550081114	255550081114
X24 X-Effects Colorizer Cool Free Flow 111mm	255561011114	255561011114
X24 X-Effects Colorizer Warm Free Flow 111mm	255561021114	255561021114
X24 X-Effects Colorizer Midnight Free Flow 111mm	255561031114	255561031114
X24 X-Effects Colorizer Blue/lavender/Yellow Feather 111mm	255562011114	255562011114
X24 X-Effects Colorizer Blue/Green Feather 111mm	255562021114	255562021114
X24 X-Effects Colorizer Red/Lavender/Yellow Feather 111mm	255562031114	255562031114
X24 X-Effects Colorizer Blue/Lavender Feather 111mm	255562041114	255562041114
X24 X-Effects Colorizer Green/Yellow Feather 111mm	255562051114	255562051114

Discs to fit the Original X-Effects Projector can be ordered by substituting a **0** for the **4** at the end of the code and are supplied with a different bezel designed specifically for the original unit.

**The X24 X-Effects Projector is supplied with a lamp, 2 x Standard Water effect Glass, 1 lens assembly and a scaffold clamp. Please specify lens at the time of order.**

# ROTATION

**The DHA | Rosco** range of rotators caters for just about every application for which circular movement of an image is the desired effect. There are a number of available options depending on the degree of control and versatility needed for the production, the lanterns being used and, of course, the budget.

## Using the system components

The principles of gobo rotation are simple and obvious. Place one or two gobos in the path of the light by using a motorised drive unit in the iris slot of a lantern, then use the motors to turn the gobos around their central axis. The effects achieved will vary depending on your choice of gobo(s), the speed and direction of the rotation and the use of any other textured or coloured gobos in the gobo slot.

Whilst the Vortex™ is designed to be a 'plug and play' standard rotator there are a number of purchasing and control options open to you when considering a DHA rotator.

The DHA Rotators house 12v DC vari-speed motors but it may be possible to specify fixed speed units on special order. Such units will not need an external controller and can be powered directly from a mains supply. Our 'off the shelf' DHA rotators require a DC Controller or a DMX DC Controller on which each gobo requires one channel. Therefore a 4 channel DC Controller will control 2 DHA Double Gobo Rotators or 4 DHA Single Gobo Rotators with splitter cables.

Whichever style of rotator you prefer, the rotators with a B-size gobo holder will accept metal or glass gobos, or any combination of gobos, Prismatic™, Image Glass™ and Colorwaves™, whilst the D-size rotators are only suitable for metal gobos.

In some instances an adaptor plate may be required to ensure the correct fit and we would ask that you seek the advice of a Rosco Technical Sales Advisor before conducting such modification.

Spacing between the gobos is an important consideration when using the double rotators for very specific effects. The DHA rotators have been designed such that the gobos are positioned less than 1.5mm apart enabling both to be in sharp focus. However, there may be occasions on which you would prefer one or other of the gobos to be out of focus and in these instances the retaining rings can be rearranged to offer 3 levels of spacing between the gobos. Making use of this approach effectively creates a mini animation system and some spectacular effects are possible.

## Most common uses for the gobo rotators

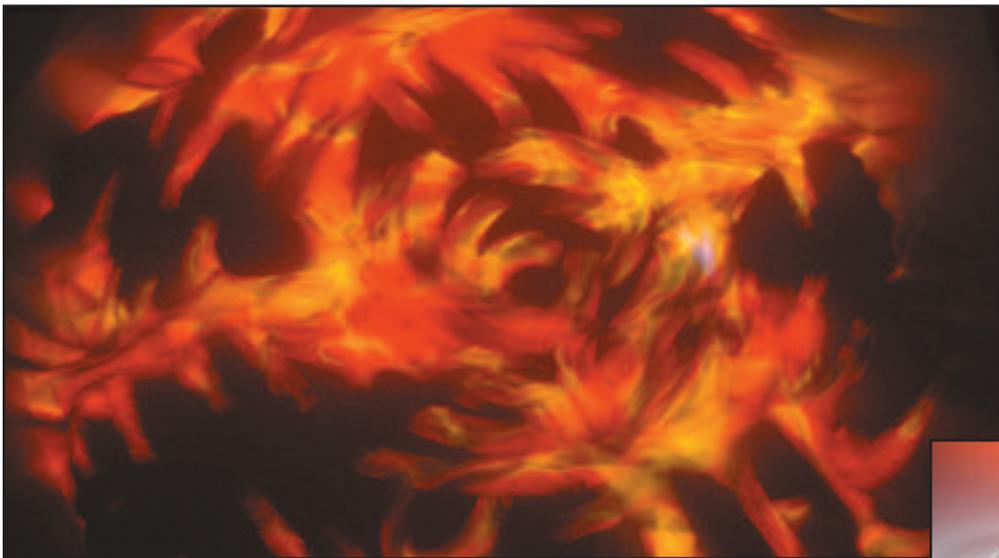
Circular motion forms the basis of all manner of the effects found in productions today but the gobo rotators come into their own when creating visually interesting textures and break ups. A raging whirlpool, moving wheels, a time tunnel or ticking clock hands are perhaps some of the more obvious uses, but when any of the Rotation gobos from the DHA | Rosco range are combined with smoke and colour a wealth of abstract and fascinating effects can be achieved.

# rotation by the vortex™

**Note – All effects are available in 115v and 230v – Please specify at time of order.**

The Vortex 360 Dual Gobo Rotator™ is a simple to use, silent, low cost approach to gobo rotation and brings the opportunity to create stunning effects to all manner of applications. The sleek design incorporates a heat resistant handle which makes working with the unit extremely quick and safe whilst an on-board 3 way toggle switch enables you to determine the direction of rotation and to turn the unit on and off locally. A simple potentiometer sets the speed of rotation.

The Vortex™ is designed to be 'plug and play' and as such can be powered directly from a mains socket, using the transformer supplied, or – with the addition of a PSU – from a dimmer. The rationale of the control is simplicity itself with both gobos rotating at the same speed in opposite directions but with the advantage that you can set either the front or the rear gobo to go clockwise.



The Vortex™ is supplied with a 240v power supply as standard.

## Vortex™ Fitting Reference:

Unit	Gobos	Lanterns	Order Code	Web Code
<b>Vortex 360™</b>	B-Size Glass or Metal	Altman Shakespeare ETC Source 4 Strand SL Selecon Pacific	205830000000	205830000120
	B-Size Glass or Metal	Robert Juliat 600 series	205831000000	N/A

# rotation by the dha single gobo rotator

Designed to house one rotating gobo, held in place with a spring clip and controlled by a DHA DC Controller or a DMX DC Controller (see page 35), the DHA Single Gobo Rotator is ideal for projecting such single images as a company logo or a turning wheel.

Rosco can supply fixed speed rotators to special order, although our standard product is vari-speed. All rotators come with a fixing point for safety chains.

## DHA Single Gobo Rotator Fitting Reference:

Unit	Gobos	Lanterns	Order Code	Web Code
RTR003	B-Size	Altman 1k <sup>1</sup> ETC Source 4 (Zoom and Fixed) Strand SL range	78RTR003/V	N/A
RTR004	B-Size	CCT Silhouette <sup>2</sup> CCT Project CCT Freedom <sup>3</sup> Selecon Zoomspot 1200 Selecon Pacific 12/28 <sup>3</sup> , 20, 30, 40, 50, 90, 23/50	78RTR004/V	N/A
RTR005	D <sup>4</sup> or M-Size	CCT Minuette CCT Helios Zero88 Focus ADB DS51, DS54, DW54	78RTR005/V	N/A

## DHA Single Rotator Adaptor Plate Fitting Reference:

Unit	Adapts	To fits lanterns	Order Code	Web Code
RAP003	RTR005	Vision 650W Spotlight Milano Sintesi 650W	78RAP003	N/A
RAP006	RTR005	Selecon Acclaim 650 Selecon Astral	78RAP006	N/A
RAP008	RTR005	ETC Source 4 Junior	78RAP008	N/A

### Notes:

- (1) Unsuitable for extended use due to heat at the gate
- (2) May require spacer kit
- (3) Uses M-size gobos so need a gobo adaptor (GAD B)
- (4) Does not take glass gobos

**The DHA Single Gobo Rotator must be used with an appropriate controller, one gobo of the correct size and (possibly) an adaptor plate, all of which should be ordered in addition.**

# rotation by the dha double gobo rotator

As the name would suggest the DHA Double Gobo Rotator holds two gobos which can be controlled via a DC Controller or a DMX DC Controller, in a variety of ways. Unlike its sister, the Vortex, the DHA Rotator houses two motors which independently drive the gobo rotation. As a result the gobos can turn in the opposite or the same direction and their rotation speeds can differ.

Rosco can supply fixed speed rotators to special order, although our standard product is vari-speed. All rotators come with a fixing point for safety chains.



## DHA Double Gobo Rotator Fitting Reference:

Unit	Gobos	Lanterns	Order Code	Web Code
<b>RTR203</b>	B-Size x 2	Altman 1k <sup>1</sup> ETC Source 4 (Zoom and Fixed) Strand SL range	78RTR203/V	205210000120
<b>RTR204</b>	B-Size x 2	CCT Silhouette <sup>2</sup> CCT Project CCT Freedom <sup>3</sup> Selecon Zoomspot 1200 Selecon Pacific 12/28, 20, 30, 40, 50, 90, 23/50 Lee Colourtran WindsorProfile	78RTR204/V	N/A

### Notes:

- (1) Unsuitable for extended use due to heat at the gate
- (2) May require spacer kit.
- (3) Uses M-size gobos so need a gobo adaptor (GAD B)

**The DHA Double Gobo Rotator must be used with an appropriate controller and one or two B-size gobos all of which should be ordered in addition.**

# rotation by the dha indexing single and double gobo rotator

Whilst the Vortex™ and the DHA Rotators create smooth, silent and continuous circular motion, the addition of indexing capabilities means that the movement can be paused and resumed at specific points or after specific amounts of time.

For example, should you want a clock hand to turn and then halt at Midnight exactly, but start again after 10 minutes, the indexing rotator is the perfect solution.

DMX Control is delivered via the on-board controller which houses a convenient DMX addressing facility, whilst all the standard rotator features that you would expect from a DHA unit remain unchanged. Reliability, smooth concentric motion, quiet action and variable focusing options interface seamlessly with timing and positioning requirements and availability of coarse (8 bit) or fine (16 bit) DMX control facilitates a high degree of control.

## Connection

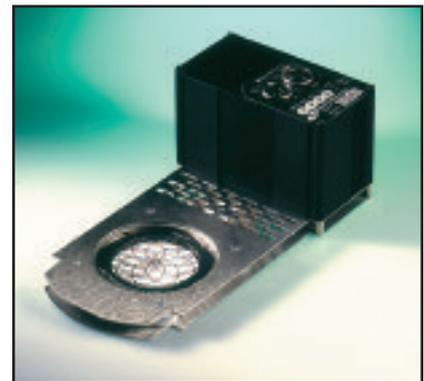
Power is delivered to the indexing rotators via an external power supply (PSU) which can be supplied in addition or which may already be available as part of a daisy chained configuration. Both the 24V power and the DMX connections are via 4-pin XLR connectors with loop through output. The connector is compatible with leading colour changing systems such as Rainbow and Chroma-Q as well as a whole raft of hardware and equipment.

## DMX Operation

There is a choice of three modes of DMX operation. Operation mode and DMX operation addresses are set via screwdriver-operated rotary switches.

### DMX Mode 1: DHA Rotator Emulation.

The rotation speed of each gobo (one in a Single Indexer, two in a Double Indexer) is controlled by two channels of DMX - Channel 1 controlling the forward rotation and channel 2 controlling the reverse rotation. Setting both channels at the same level will stop the gobo in an index position represented by the channel level. For example, both channels at zero level will stop the gobo at 0° rotation; both channels at 50% will stop the gobo at 180° rotation. In a Double Indexer channels 3 & 4 will control the second gobo in a similar fashion.



### DMX Mode 2: Standard DMX Operation 8 bit.

8-bit operation allows for basic indexing by providing control of rotation and index position using just one DMX address for each gobo. Indexed positions can be set by increasing the channel level. By increasing the level further, the gobo can be made to spin slowly and then more rapidly in an anti-clockwise direction.

### DMX Mode 3: Standard DMX Operation 16 bit.

16 bit operation allows for precision indexing of gobo positions using three channels of DMX per gobo. Channel 1 operates the clockwise and anti-clockwise spin whilst channel 2 and 3 operate the fine and coarse indexing modes. Accurate speed control from 0.2-20rpm and index resolution to 0.2° are possible.

LED status indicators show the presence of DMX & power supply, function mode of each motor and fault notification.

## Manual Operation

Manual operation of both the Indexer and Double Indexer is possible when the DMX is unavailable or remote control is not required. The direction and speed of each gobo is determined by setting the mode and DMX address with the rotary switches. Any combination of speed or direction of rotation is possible, and both are then fixed until the address is manually changed. This makes it ideal for retail or display purposes.

# rotation by the dha indexing single and double gobo rotator

## DHA Indexing Rotator Fitting Reference:

Unit	Gobos	Lanterns	Order Code	Web Code
<b>IRTR003</b>	B-Size x 1	Altman 1k <sup>1</sup> ETC Source 4 ETC Source 4 Zoom	78IRTR003/V	205111000120
<b>IRTR004</b>	B-Size x 1	CCT Silhouette <sup>2</sup> CCT Project CCT Freedom Selecon Zoomspot 1200 Selecon Pacific 412/28, 20, 30, 40, 50, 90 23/50 Lee Colortran Windsor Profile	78IRTR004/V	N/A
<b>IRTR203</b>	B-Size x 2		78IRTR203/V	205211000120
<b>IRTR204</b>	B-Size x 2			

**Notes:**

- (1) Unsuitable for extended use due to heat at the gate
- (2) May require spacer kit.
- (3) Uses M-size gobos so needs a gobo adaptor (GAD B)

**The DHA Indexing Rotators require an appropriate power supply and one or two gobos of the correct size, all of which should be ordered in addition.**

## *rotation by the mk2 gobo rotator*

For those occasions when your budget is extremely tight and the technical demands of the application are limited, the Mk2 range of gobo rotators may be the answer. Unlike the rest of the range, the Mk2 rotator's single motor drives a pair of Polypropylene belts which in turn rotate the gobos in opposite directions at the same speed. Control of the direction and speed is via on-board dip switches and potentiometers and an additional power supply will be required to provide mains voltage.

### **MK2 Rotator Fitting Reference:**

<b>Unit</b>	<b>Gobos</b>	<b>Lanterns</b>	<b>Order Code</b>	<b>Web Code</b>
	B-Size x 2	ETC Source 4 Selecon Pacific Strand SL	20RTR203MK2	N/A
<b>RTR001MK2</b>	M-Size x 1	ETC Source 4 Junior	20RTR001JUNIOR	N/A

**The MK2 Rotators require an appropriate power supply and one or two gobos of the correct size, all of which should be ordered in addition.**

## *rotation by the mk2 indexing gobo rotator*

When your application needs just a little more control sophistication, without the need for independent control of the motors, the MK2 Indexing Rotator comes into its own.

Designed to interface with a DMX lighting control, without the need for a separate controller, or to work in 'stand-alone mode', the MK2 Indexing Gobo Rotator enables you to stop, start and change the direction of rotation at specific timed intervals, assuming that you want the gobos to move in opposite directions and to always act in tandem.

Once again a Power Supply will be required but there is no need for an additional DMX interface as a DMX control board is housed within the unit.

### **MK2 Indexing Rotator Fitting Reference:**

<b>Unit</b>	<b>Gobos</b>	<b>Lanterns</b>	<b>Order Code</b>	<b>Web Code</b>
<b>IRTR203MK2</b>	B-Size x 2	ETC Source 4 Selecon Pacific	20IRTR203MK2	N/A

**The MK2 Indexing Rotator requires an appropriate power supply and one or two gobos of the correct size, all of which should be ordered in addition.**

# CONTROL

## DC Controller

The DHA DC Controller acts as a power supply and speed controller for our full range of Varispeed effects units. It has four independent channels each giving control of the speed and direction of rotation.

## Load Compensation

Our DC Controller monitors the current supplied to each effect unit to automatically compensate when the motor encounters a heavy load. The result is a smooth, constant revolution of the effect - even at very low speeds or with uneven loads.

## Connections

The unit is fitted with two 4-pin female XLR connectors for controlling two Varispeed effects or Double Gobo Rotators (each connector carries two channels so additional signal splitters can be used to control 4 single effects). Also, two 5-pin male XLR connectors are fitted for remote control. Full interconnection instructions are provided with the units.

**Note: Without signal splitters the DC Controller can only be connected to two Varispeed effects units**

Effects	Signal Splitters	DC Controller channels
1 x DHA Animation Unit	No	2 channels – left and right
1 x Single DHA RTR	No	2 channels - left and right
2 x Single DHA RTR	No	4 channels - left and right for each unit
3 x Single DHA RTR	Yes (1)	6 channels - left and right for each unit
4 x Single DHA RTR	Yes (2)	8 channels - left and right for each unit
1 x Double DHA RTR	No	4 channels - left and right for each gobo
2 x Double DHA RTR	No	8 channels - left and right for each gobo

## Remote Control

Full remote control of Varispeed effects can be achieved from a lighting console (or any suitable 0-10v control signal). Each Varispeed effect is controlled by two channels from the console - one for forward and one for reverse.

## Protection

The unit is short-circuit protected and DVA Varispeed motors are fully protected when used with this controller.

## Mounting

The DC Controller is free standing for table-top use or can be attached to a 48mm bar by using one of our mounting kits.



**NB:** A DC Controller is **not** required to operate a Single or Double Indexer.

## DC Controller Reference:

Unit	Order Code	Web Code
DC Controller	78DCON	205460000120
DC Controller Signal Splitters	78DCON/SPLIT	205700010000
DC Controller Mounting Kit	78DCON/RIG	205700030KIT

## DMX DC Controller

The DMX DC Controller provides power and speed control for Varispeed effects in the same way as the DC Controller. It is intended for remote control via a DMX512 signal. Alternatively, effect speeds can be preset on the front panel controls.

### Control

The output circuitry of the DMX DC Controller is identical to that of the DC Controller; speed range, bi-directional drive, load compensation and output protection are all maintained. In addition to the convenience of the DMX system, the DMX DC Controller offers greater accuracy and allows effects to be easily repeated. Effects can be programmed, along with other lighting, directly into a cue sequence on a suitable lighting console.

### Connections

The unit is fitted with two 4-pin female XLR connectors for controlling Varispeed effects or Double Gobo Rotators (each connector carries two channels so additional signal splitters can be used to control 4 single effects) Also, two 5-pin XLR connectors are fitted for DMX IN and OUT. Mains connection is via a fuse-protected IEC inlet on the front panel and a cable is supplied. Full interconnection instructions are provided with the unit.

**Note:** Output, connector and use of Splitter as per DC Controller.

### DMX Operation

In DMX mode the DC Controller responds to eight consecutive channels of DMX512 data - the start address being set on the front panel. Each of the four DC Controller outputs is controlled by two DMX channels. On the lighting console each effect appears as two level controls - one for forward speed and one for reverse.

### Preset Operation

In the absence of a suitable DMX signal the four rotary switches on the front panel allow the levels of the four output channels to be preset. Each channel can be assigned a speed on an arbitrary 0 - 9 scale.

### Mounting

Although free standing, this device is particularly suited to 48mm bar mounting. Cabling to Moving Effects devices can be greatly shortened by sitting the DC Controller alongside the lantern and effect. This requires the appropriate DC Controller mounting kit.



**NB:** A DMX DC Controller is **not** required to operate a Single or Double Indexer.

Effects	Signal Splitters	DC Controller channels
<b>1 x DHA Animation Unit</b>	No	2 channels – left and right
<b>1 x Single DHA RTR</b>	No	2 channels - left and right
<b>2 x Single DHA RTR</b>	No	4 channels - left and right for each unit
<b>3 x Single DHA RTR</b>	Yes (1)	6 channels - left and right for each unit
<b>4 x Single DHA RTR</b>	Yes (2)	8 channels - left and right for each unit
<b>1 x Double DHA RTR</b>	No	4 channels - left and right for each gobo
<b>2 x Double DHA RTR</b>	No	8 channels - left and right for each gobo

#### DMX DC Controller Reference:

Unit	Order Code	Web Code
<b>DMX DC Controller</b>	78DCON/DMX	205450000120
<b>DC Controller Signal Splitters</b>	78DCON/SPLIT	205700010000
<b>DC Controller Mounting Kit</b>	78DCON/RIG	205700030KIT

# POWER

## Power Supply Units

Rosco's PSUs are compatible with nearly all the colour scrollers, gobo rotators and lantern accessories in common use today. Our range caters for daisy chains of 50 – 400 Watts and all PSUs can be mounted with a C-Clamp onto a pipe or truss and are RDM upgradeable.

COMPATIBLE EQUIPMENT	POWER NEED WATTS:
Rosco I-Cue	17 watts
AC Lighting/Apollo Chroma Q Broadway	22 watts
AX Lighting/Apollo Chroma Q M1, 2, 5, 8	36 watts
Apollo Roto-Q	12 watts
City Theatrical DMX Iris	8.5 watts
DHA Indexing Single Rotator	6 watts
DHA Indexing Double Rotator	6 watts
DHA MK2 Indexing Rotator	30 watts
Rainbow 6", 8", 12" Pro Colour Scroller	14 watts
Rainbow 1.5" Pro Colour Scroller	29 watts
Gam Indexable Twin Spin	14.4 watts
Gam SX-4, 6 Gobo Tray	10.8 watts
Wybron Forerunner	14 watts
Wybron Lightwand	10 watts

### PSU-50

The PSU-50 is the smallest of the Rosco Power Supplies and provides a constant load of 50 Watts.

### PSU-200

The PSU-200 is perfect for a mid sized rig and with its 4 outputs and 4 returns the power for all channels is connected in parallel meaning that each channel can output up to 200W as long as the sum of all channels is 200W or less.

### PSU-400

The PSU-400 is the most powerful of the Rosco Power Supplies and is a 48.2cm rack mountable unit with 4 outputs and 4 returns providing a constant load of 400 Watts. There are two banks of 200W available which means that each channel can output up to 200W as long as the sum of that channel and its paired channel is 200W or less. Its robust design houses a triple fan cooling system to ensure continuous service throughout even the most demanding of shows and it too can be upgraded to integrate with RDM.

#### Power Supply Reference:

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Unit	Order Code	Web Code
PSU50	205714020050	205714020050
PSU200	205714020200	205714020200
PSU400	205714020400	205714020400

## Projection Effect for the Derksen Projectors

Rosco is proud to be a distributor for the renowned Derksen range of Image Projectors and accessories, designed specifically with architectural applications in mind. Sleek, robust and reliable the Derksen fixtures incorporate fabulous optical capability with an attractive casing and an imaginative range of moving effects units.

For fuller details of the lanterns themselves we would refer you to our architectural catalogue or the Derksen web site at [www.derksen.de](http://www.derksen.de) but below are a few examples of possible effects and applications.

### Animation -

Create scudding clouds with the Cloud Effect

Create crackling fire with the Fire Effect

Create rippling water with the Water Effect

Create falling snow with the Snow Effect

Create blowing wind with the Wind Effect

### Rotation -

Create a real time clock with the Derksen Clock

Rotate two gobos with the Rotor

### Repositioning -

Move an image forward with the Running Mirror

Move an image forward and back with a Pivot Mirror

Move an image in an arc with the Circular Motion Mirror

Switch between gobos with the Magazine

Separate and rejoin an image with a Prism

Fade an image in and out with the Shutter



*Derksen GL 100*



*Derksen GL 200*



*Derksen GL 700*



*Derksen GL 1200*

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