# KoolMoves

**User Guide**

**Filters**

PRINTING HISTORY

February 2006     Version 0.1

# Table of Contents

# Introduction

## *About This User Guide*

This user guide is an adjunct to the KoolMoves manual, and is not intended as a stand alone document.  The sole purpose of this user guide is to illustrate a narrow area of functionality in the KoolMoves application.  Users of this guide are expected to have reasonable access to the KoolMoves user manual, as this guide contains references to the operation of KoolMoves and its interface, both of which are covered extensively in the manual.  This user guide has been composed and typeset in Windows™ Word®, and exported to the Adobe™ Portable Data File (PDF®) format.

Any questions about or comments on this user guide can be Private Messaged to pherbrick via the KoolMoves support forum at http://www.flashkit.com/board/forumdisplay.php?forumid=24.

# Flash 8 Filter Effects

Flash 8 filters allow for the quick creation of compelling designs, and unlike imaging applications (like GIMP or Photoshop) that have traditionally been used to apply filter effects, in Flash the filtering can actually be animated. Because the filters are natively supported and rendered in real time by Flash Player 8, there is an associated processing cost; if your movie's performance is suffering, consider preprocessing static images before loading into your movie, and rethinking the parameters on your animated filter effects.

With KoolMoves 5.2, these powerful filter effects can be applied to movie clip, button and dynamic text objects. Other object types, shapes, and imported images can be placed in a movie clip and filtered indirectly.

**Note:** Due to how Symbol Library components are implemented, filter effects can not be applied at authoring time to them.

**Note:** Due to how Buttons are implemented, filter effects can only be applied to buttons in the main movie and not to the individual states. This means that the same filter effect(s) is applied to all states.
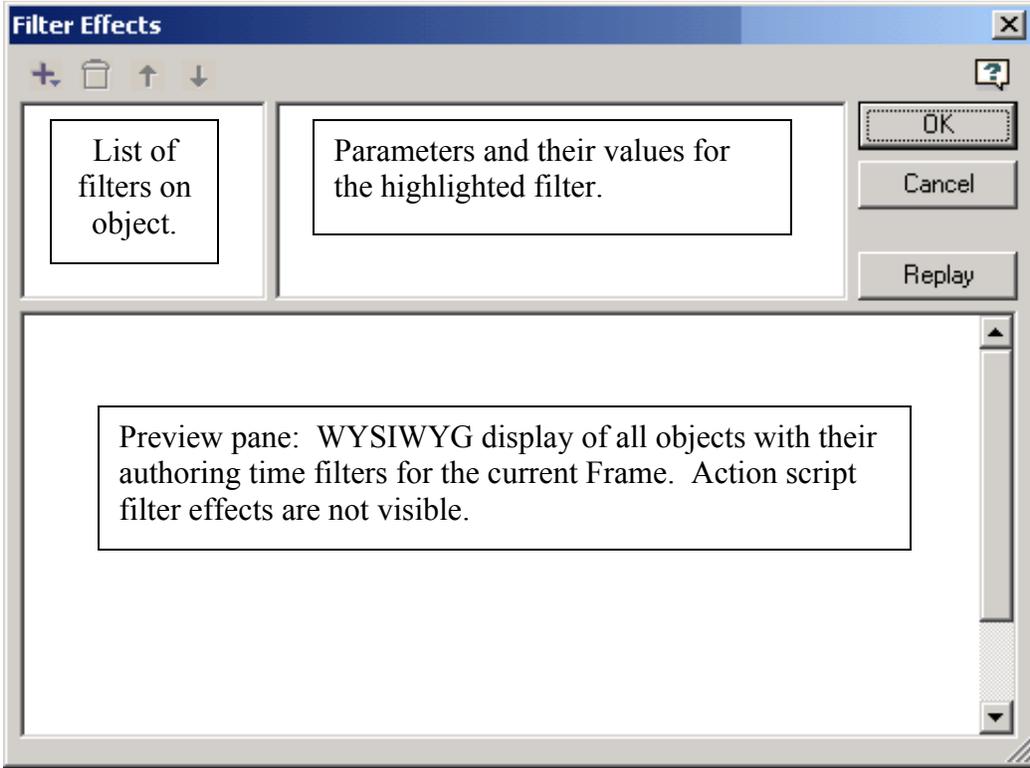
Available filters include:
- Adjust Color: Modify an object's Hue, Saturation, Brightness and Contrast.
- Bevel: Commonly used with buttons and user interfaces, beveling gives a sense of depth to an object.
- Blur: Define X and Y pixel offsets to smudge an object.
- Drop Shadow: Applies a shadow, and more if you wish.
- Glow: Creates a glowing outline around an object.
- Gradient Bevel: Same shape and appearance as Bevel, except a gradient is used.
- Gradient Glow: The glowing outline has a gradient color scheme.

And if that dazzling array of choices wasn't enough, consider the following:
- More than one filter effect can be applied to an object,
- The same filter effect can be applied more than once to an object,
- The order in which filters are applied will affect an object's final appearance, and
- Changing a parameter in one filter can affect another filter's effect due to stacking.
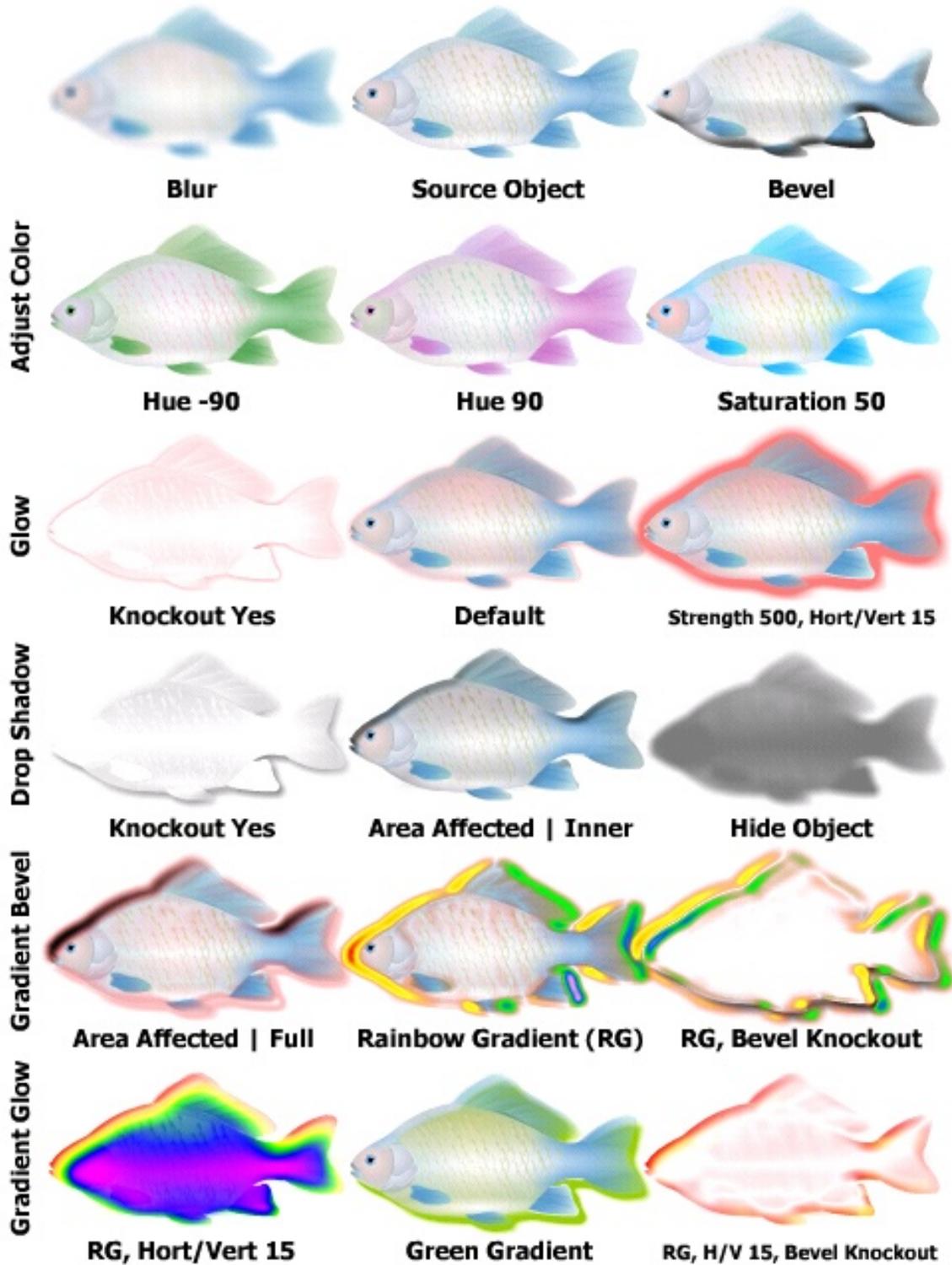
Filter effects are applied either in the authoring environment through the easy to use Filter Effects interface, or dynamically with ActionScript code. After selecting an object (movie clip, button or dynamic text), the Filter effects interface can be accessed through the menu (Effects > Filter…) or by selecting the Filter Effects tool button in the Toolbox.

**Filter Effects**

| | | |
|---|---|---|
| List of filters on object. | Parameters and their values for the highlighted filter. | OK |
| | | Cancel |
| | | Replay |

Preview pane: WYSIWYG display of all objects with their authoring time filters for the current Frame. Action script filter effects are not visible.

In the Filter Effects window, click on the "+" to list and select a filters. Click on the trashcan to delete a filter, and use the arrows to change a filter's relative position.

Adjust Color
Bevel
Blur
Drop Shadow
Glow
Gradient Bevel
Gradient Glow

**Blur**

**Source Object**

**Bevel**

**Adjust Color**

**Hue -90**

**Hue 90**

**Saturation 50**

**Glow**

**Knockout Yes**

**Default**

**Strength 500, Hort/Vert 15**

**Drop Shadow**

**Knockout Yes**

**Area Affected | Inner**

**Hide Object**

**Gradient Bevel**

**Area Affected | Full**

**Rainbow Gradient (RG)**

**RG, Bevel Knockout**

**Gradient Glow**

**RG, Hort/Vert 15**

**Green Gradient**

**RG, H/V 15, Bevel Knockout**

Thanks to Propeller-Head Graphix (www.propellerhead-graphix.com/) for the fish.
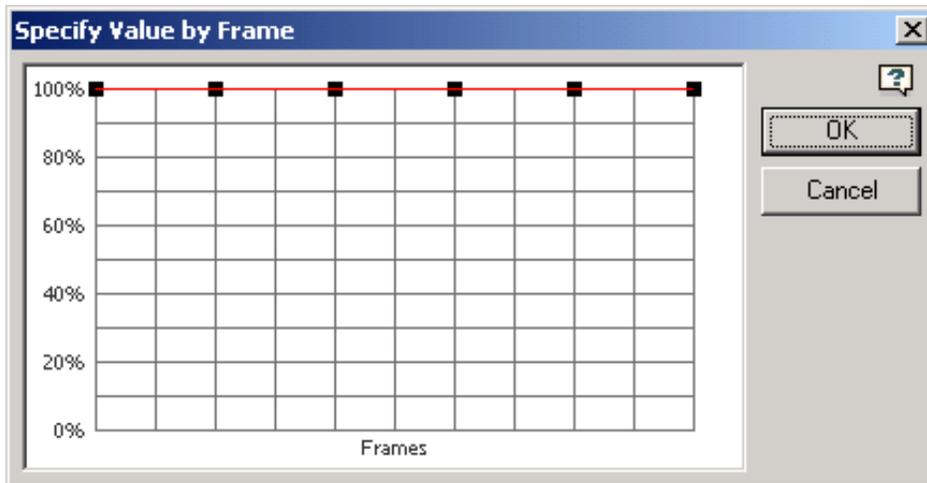
## *Blur*

Blur is the simplest Filter effect.  It has only three parameters:  X (pixels), Y (pixels) and Quality (low/medium/high).  In practice it gets even simpler – try to avoid using the high quality setting in filters if possible – it can chew up your movie's performance.
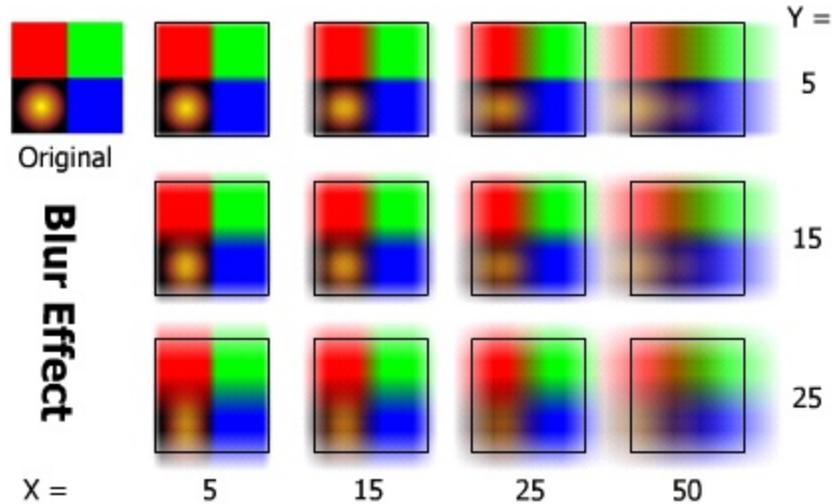
| Blur | Horizontal extent (pixels) | 5 | 100% all frames |
|---|---|---|---|
| | Vertical extent (pixels) | 5 | 100% all frames |
| | Quality | low | |

Click on a field to edit the value.  Click on the X to | Vertical extent (pixels) | 5 | ✓ ✗ | cancel the changes, click on the check mark or another field to save your changes.  If your changes were not saved, you probably clicked on the OK button and left the interface without first saving your entry.  Get in the habit of clicking within the parameter fields before clicking on OK.

Click on "100% all frames" to change a parameter's value over the length of the movie.  This is used to help in animating an effect, but more about that later.  In the blur example, the vertical parameter has a value of 5 (5 times 100%) for the entire length of the movie.

As you can see in the comparison chart below, as the X/Y parameters increase, the area affected by the filtered image increases on the X and Y axes, respectively.  Blurs are commonly used to indicate speed, motion, relative levels of intoxication and decreased visual acuity (e.g., things off in the distance or depth of vision).
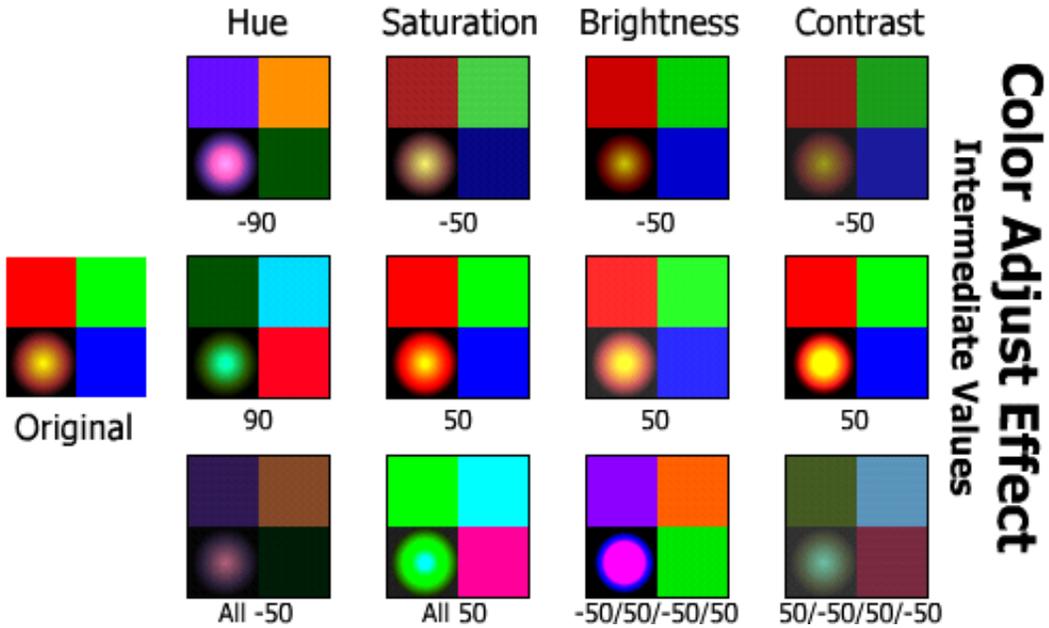


## Adjust Color

The Adjust Color filter uses the HSB (hue, saturation, and brightness) color model.  The HSB color model (as opposed to the RGB model which is based on how a monitor generates a color) is based on how artists mix colors.  Please see the entry Color Models – RGB vs HSB in Chapter 5 for an explanation of the two color models.

Contrast is a measure of the difference between the lightest and darkest values appearing in an image. High-contrast images contain mainly dark values and white values with few steps or tones in between.  Contrast filtering either lightens or darkens the underlying image.
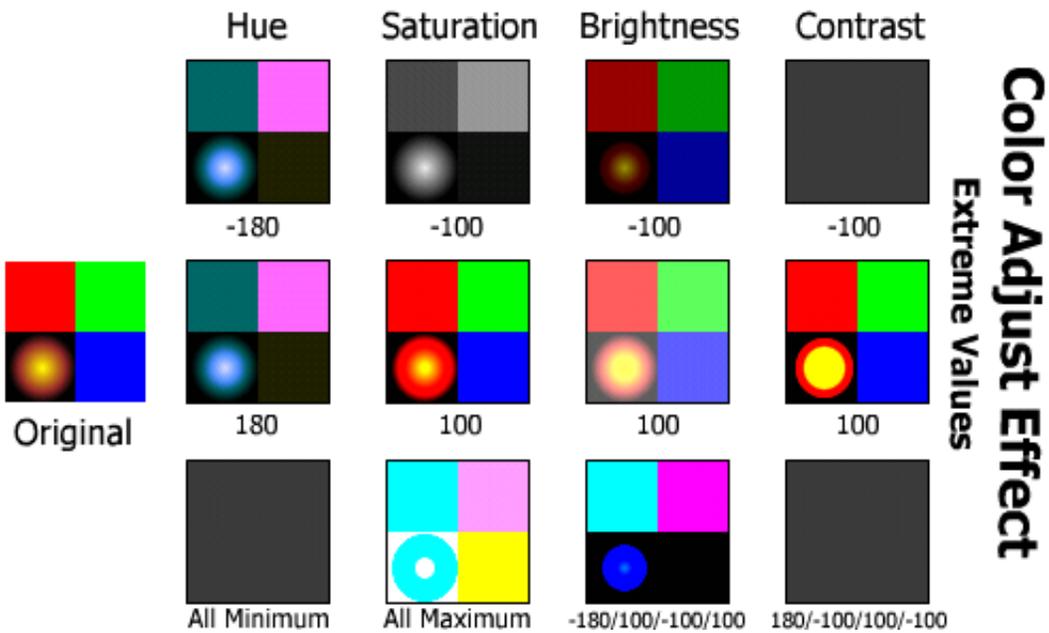
Adjust color has only four parameters, but each one can vary independently of the others during the movie.  Hue has a range of −180 to +180, while the other parameters range from −100% to +100%.

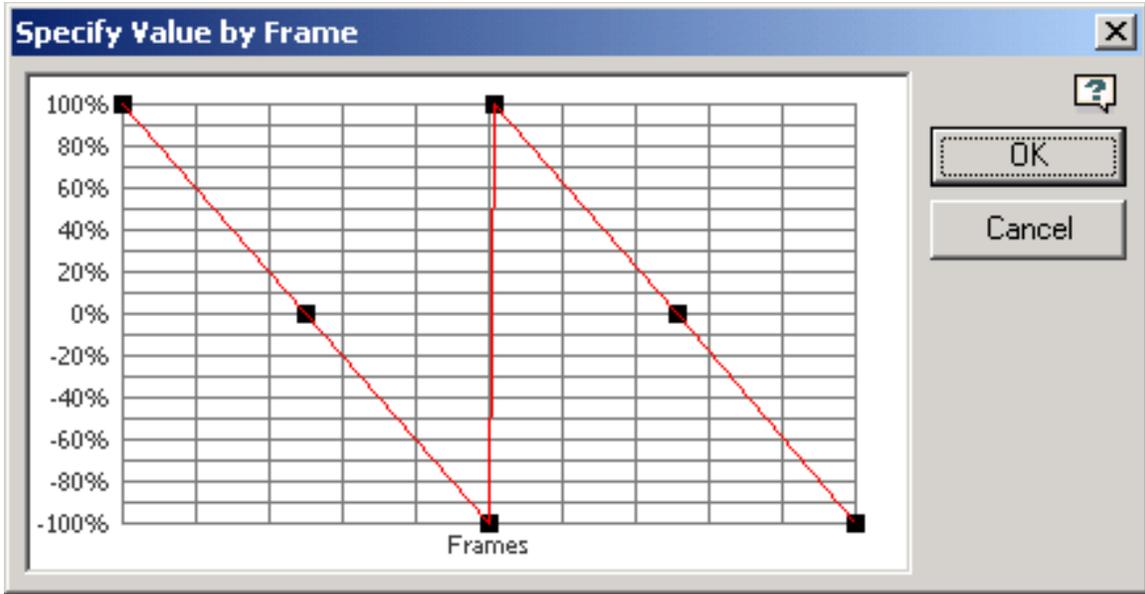| | |
|---|---|
| Hue (-180 - 180) | 0 |
| Saturation (-100 - 100) | 0 |
| Brightness (-100 - 100) | 0 |
| Contrast (-100 - 100) | 0 |

The comparison tables below illustrate how the HSBC parameters affect and interact on red, green, blue and a simple color gradient.
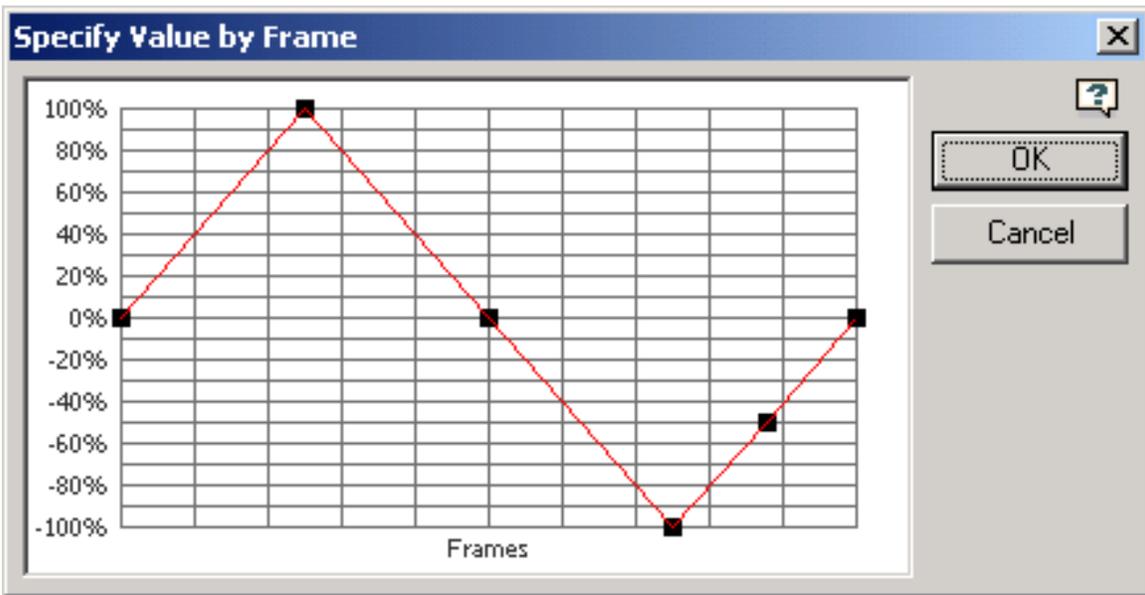
From the Extreme Value chart below two things are obvious:  Setting contrast to -100 is a bad idea, and Hue follows a cyclical pattern, as its extreme value settings look identical.



Hues are typically organized in a circle.  To have the Hue value flow from 0 to +/–180 and back again, set the value to 180 and then click on the Value by Frame field (default value is "100% all frames").  This opens the Specify Value by Frame window; arrange the six control points as shown below.  Over five frames, these 6 control points will have the adjust color filter cycle through the complete set of hues, twice.
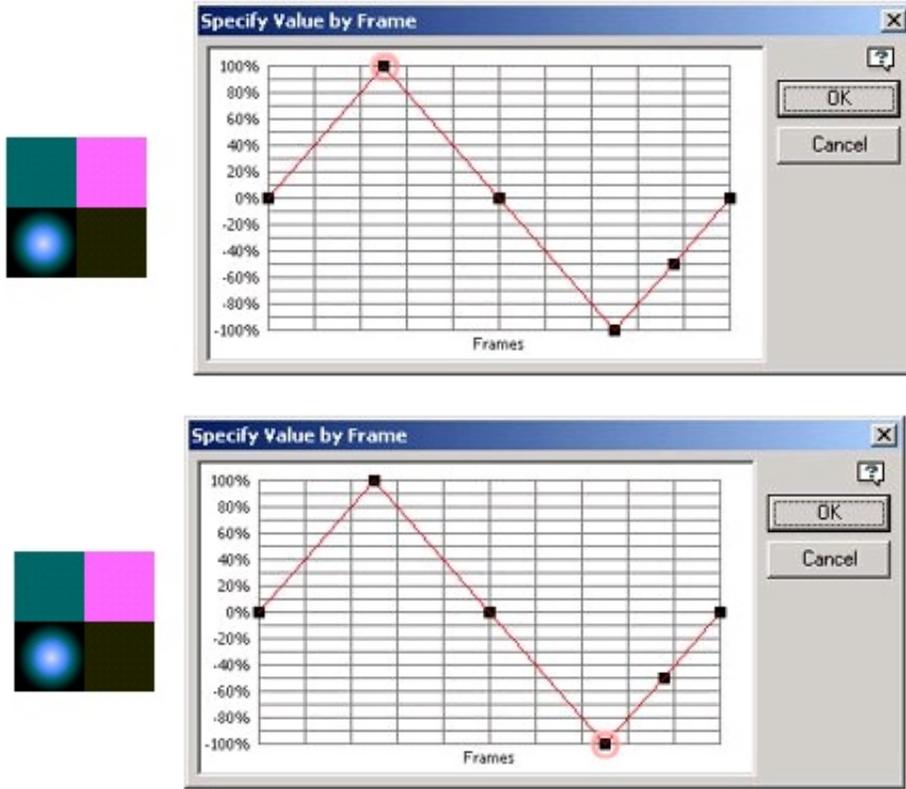
For a more sine wave type of experience, where the sequence of hues displayed reverses on itself, arrange the control points as shown below.  The extra control point can be located anywhere along the pattern, as long as it doesn't throw off the pattern.



The image above (Specify Value by Frame) was imported into a movie and used as part of the background over five frames.  A red circle was placed over the associated control point for each key frame.  In the sample sine wave flash screen captures below, you can see that the Hue parameter cycled through the same appearance at 180 and –180, on Frames 2 and 4, respectively. The number of frames doesn't have to be five – it just worked out well based on the number of control points available ,the type of pattern desired, and the use of tweening to move the red circle around.

Okay, it's a pretty lame example in print media, but combining the Adjust Color filter with the Value by Frame dialog is a quick and easy way to achieve strobe/pulsating effects in movies, and the Value by Frame feature is sure to become a favorite of sprite and banner designers. Meanwhile, below is a non abstract image with some illustrative color adjustments.



Original          Hue: Extreme          Saturation: -100          Saturation: 100

Brightness: -100          Brightness: 50          Contrast: 25          Contrast: 75

## *Drop Shadow*

The Drop Shadow filter should not be confused with the Drop Shadow effect (also found under the Effects Menu or Tab). One difference is that the drop shadow effect can not be applied to movie clips, buttons or dynamic text. The filter also has several advantages over the effect: 1) angle of shadow is adjustable, 2) angle of shadow (and other properties) can be animated, 3) under certain conditions the filters work with motion scripts, and 4) additional properties (Strength, Object Area, Knockout effect and Hide Object) are available for greater flexibility and impact.

Drop Shadows are usually located below the original image – the one exception is when Object area affected is set to inner, in which case the shadow is applied over the source object. With the exception of Object area affected, Knockout effect and Hide object, all of the following parameters directly influence the appearance of the drop shadow.

| | | |
|---|---|---|
| Angle (degrees) | 45 | 100% all frames |
| Horizontal extent (pixels) | 5 | 100% all frames |
| Vertical extent (pixels) | 5 | 100% all frames |
| Offset distance (pixels) | 3 | 100% all frames |
| Alpha (0 - 255) | 127 | 100% all frames |
| Color | black | |
| Strength (%) | 1000 | |
| Object area affected | outer | |
| Quality | low | |
| Knockout effect | no | |
| Hide object | no | |

Angle, Offset, Color, Alpha, and Quality should be familiar from other parts of the manual, but to recap:
- Angle sets the direction the shadow is shifted away relative to the original image. 0 degrees shifts the shadow directly to the right.
- Horizontal/Vertical extent work as they did in the Blur effect; the higher the value, the greater the blurriness and diffusion. Increase Strength value if the shadow (and glow in Glow filter) get spread too thin.
- Offset is the number of pixels that the shadow is shifted in the Offset direction.
- Click on the color field to change the shadow color.
- Alpha sets the relative opacity of the shadow.
- Quality – try to keep from using high.

Strength has a range of 0 – 1000%, with a default value of 100%. By itself, high strength values make drop shadows look pumped up. use it creatively with the other parameters to make some nice graffiti and other stuff.

Object area affect | inner places the shadow within the source object. It goes without saying that the source object and shadow should have different colors.

Knockout effect uses the source object as an inverse mask over the drop shadow, creating a negative silhouette effect.

Hide removes the source object while leaving the drop shadow behind.

## Glow

| | | |
|---|---|---|
| Horizontal extent (pixels) | 5 | 100% all frames |
| Vertical extent (pixels) | 5 | 100% all frames |
| Alpha (0 - 255) | 127 | 100% all frames |
| Color | | |
| Strength (%) | 100 | |
| Object area affected | outer | |
| Quality | low | |
| Knockout effect | no | |

The Glow filter is similar to drop shadow, except that the effect surrounds the object equally on all sides, so there are no offset or angle parameters. Also no hide parameter.

Hort 50, Vert 25, Strength 300%.

Strength 1000%, Knockout Yes.

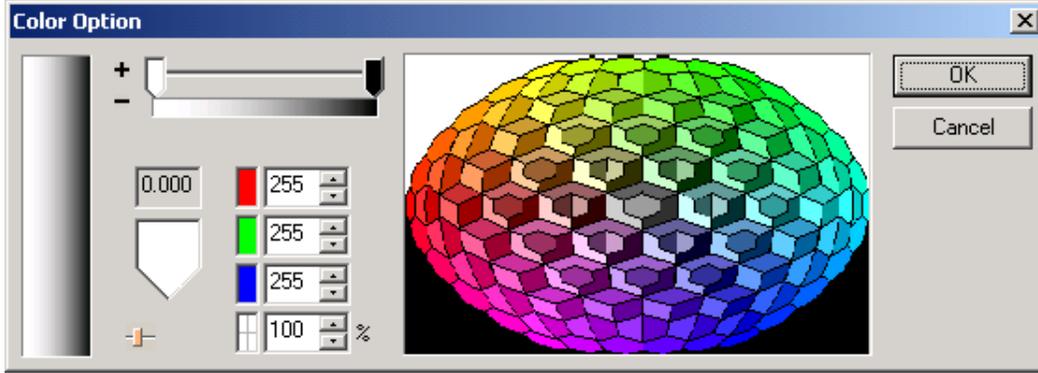Strength 300%, Area affected - Inner.

## Gradient Glow

The Gradient Glow filter has been described as a cross between the Glow and Drop Shadow filters. With the exception of the Gradient parameter and an additional Area Affected value (total), there is nothing here that has not already been covered.

| | | |
|---|---|---|
| Angle (degrees) | 45 | 100% all frames |
| Horizontal extent (pixels) | 5 | 100% all frames |
| Vertical extent (pixels) | 5 | 100% all frames |
| Offset distance (pixels) | 5 | 100% all frames |
| Gradient | <click to view> | |
| Strength (%) | 100 | |
| Object area affected | outer | |
| Quality | low | |
| Knockout effect | no | |

The Color Option dialog is a grossly simplified version of the Shape Fill dialog covered in Chapter 5: there is no linear option, the first color control node can not be dragged or have a transparency other than 100%, and color selection is limited to the hexcone color ball. However, combine it with the other parameters and you get some rainbow glows as well as some nice tie-dye patterns. Use the Angle and Offset parameters to shift the gradient.

Below you can see how the same gradient can be used in more than one way.
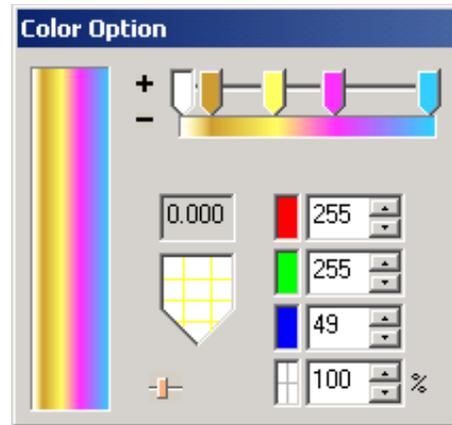


Hort 50, Vert 25, Offset 0, Strength 300%, Knockout Yes.



Hort 25, Vert 35, Offset 0, Strength 300%, Area Affected | Inner.



Angle 225, Hort 5, Vert 5, Offset 5, Strength 100%, Area Affected | Full.

## *Bevel*

Bevels apply a highlight and a shadow to opposite sides of the object to give the illusion of depth. Except for the Highlight parameters and the added complexity of having a lot of parameters to deal with, there is nothing new in this effect.

It goes without saying that the source object should not have the same color as the Highlight or Shadow colors.

| | | |
|---|---|---|
| Highlight alpha (0 - 255) | 255 | 100% all frames |
| Shadow alpha (0 - 255) | 255 | 100% all frames |
| Highlight color | | |
| Shadow color | | |
| Angle (degrees) | 45 | 100% all frames |
| Horizontal extent (pixels) | 5 | 100% all frames |
| Vertical extent (pixels) | 5 | 100% all frames |
| Offset distance (pixels) | 5 | 100% all frames |
| Strength (%) | 100 | |
| Object area affected | inner | |
| Quality | low | |
| Knockout effect | no | |

 Default values.
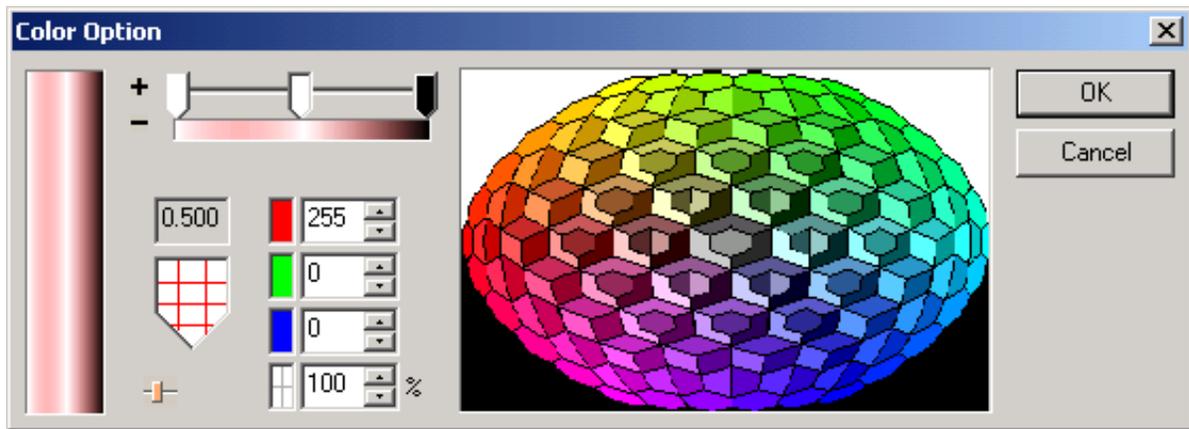
 Default values.

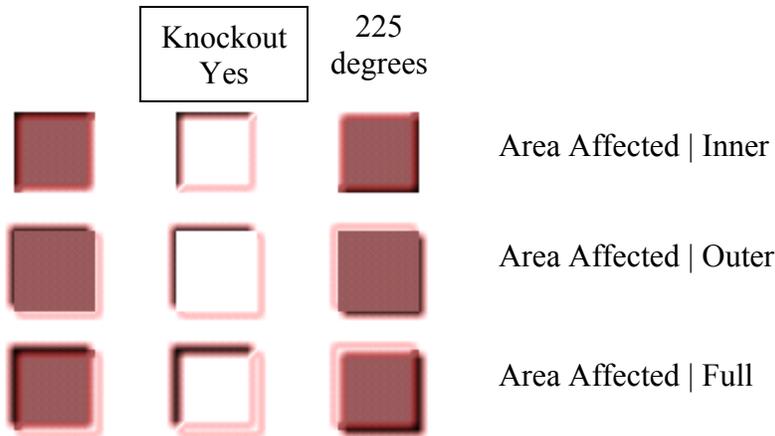 Default values.

 Area affected - Outer.

## *Gradient Bevel*

We just saw how many parameters Bevels have, you would reasonably expect the Gradient Bevel to be even more complex – but there are fewer parameters.  That's because the highlight and shadow color settings are in the Gradient parameter.

| Angle (degrees) | 45 | 100% all frames |
|---|---|---|
| Horizontal extent (pixels) | 5 | 100% all frames |
| Vertical extent (pixels) | 5 | 100% all frames |
| Offset distance (pixels) | 3 | 100% all frames |
| Gradient | <click to view> | |
| Strength (%) | 100 | |
| Object area affected | inner | |
| Quality | low | |
| Knockout effect | no | |

This Color Option dialog is slightly different from the one used in Gradient Glow; it starts with three nodes instead of two, and the central node is immovable with transparency permanently set to 100%.  This makes sense, separating the highlight color nodes from the shadow color nodes.



The following use the default color selections on a brown square.



Area Affected | Inner

Area Affected | Outer

Area Affected | Full

Note that the relative position of the highlight and the shadow have been flipped compared to the Bevel effect.  Don't know why MacroMedia did this, just allow for this in your design.

The filtered objects below share the same Color Option Dialog (i.e., I applied the filter and color gradient to one movie clip and then made two copies).

Offset 5

 No Filter

 Area Affected | Inner

 Area Affected | Outer

 Area Affected | Full