Working with the BCC Color Balance Filter

Color Balance performs a true photographic RGB color correction, allowing you to make independent adjustments to the red, green, and blue channels of the image.

General Controls Parameter Group

At times, you may want to view your clip without the effect that you’ve applied. The Bypass Effect checkbox lets you view the source footage without the effect. When the Bypass Effect checkbox is selected, it turns pink. When you applied a BCC effect to an Avid title or matte, enabling the Bypass Effect checkbox does not display the original title unfiltered, but rather displays the nested Graphic Fill of the matte key.

Bypass Effect is a parameter change; selecting the Bypass Effect checkbox will unrender a rendered effect. To bypass a rendered effect without unrendering, step into the effect in the Avid timeline to see the unaffected video.

Selecting the Safe Colors checkbox enables an NTSC/PAL color-safe filter that allows only colors that are safe for broadcast. BCC allows RGB values across the full 0-255 range. When this checkbox is selected, the RGB values are limited to the NTSC/PAL safe range of 16-235.

The Draft Mode checkbox allows you to preview your effect in a Draft Mode to speed previews. This is especially useful for effects with multiple track inputs. Deselect this option before rendering your effect.

The Apply to Title-Matte checkbox allows you to apply BCC filters to titles created in Avid’s Title tool. To apply an effect to a title, drag the effect onto the title (you do not have to Option-drag) and select the Apply to Title-Matte checkbox.

The Invert Matte checkbox allows you to invert any matte created by your effect. This is useful when you work with imported images.

The Layer Opacity slider sets the opacity of the filter layer, which allows you to fade effects. When Apply to Title-Matte checkbox is selected, Layer Opacity affects the graphic fill layer, which allows you to fade titles.
The Field Render menu sets the rendering optimization for BCC. For most filters, you can use the default of Speed Optimized. For effects that include edging or DVE moves, you may want to use Quality Optimized. Quality Optimized takes more time to render, but will generally correct any problems with jitter or rough edges on effects.

**Geometrics Parameter Group**

The controls in the Geometrics parameter group allow you to add basic DVE moves to any filter.

The Geometrics parameter group includes the following controls.

Selecting the Enable Geometrics checkbox allows you to use the parameters to reposition a track. When this checkbox is deselected, the other parameters have no affect.

**Position X** and **Position Y** adjust the horizontal and vertical location of the track.

**Scale X** and **Scale Y** change the size of the image along the X and Y axis, respectively. These parameters scale as percentages of the image’s original width and height. Thus, a Scale X value of 200 produces an image twice as wide as the original. Select the Lock Scale checkbox to keep the Scale X and Y values in proportion.

**Tumble**, **Spin**, and **Rotate** change the image’s perspective along the X, Y, and Z axes respectively. Tumble, Spin, and Rotate can animate over values greater than 360° in order to make the shape complete more than one full revolution.

The Crop controls crop the edges of the image. **Left Crop**, **Top Crop**, **Right Crop**, and **Bottom Crop** determine the width, in pixels, of the cropped area on each edge of the image.

For the Crop controls refer to the sides of the original image before it is transformed in 3D space. For example, if you tumble an image 180° so that it appears upside-down, cropping the Top affects the top of the original image, which is actually the bottom of the tumbled image.
The **Blend** control soften the edges of the image by reducing their opacity. The **Blend** parameter determines the width, in pixels, of the transparent band on each edge of the image. These values are unaffected by the Crop values, allowing you to soften the edges of an uncropped image.

**Drop Shadow Parameter Group**

The controls in the Drop Shadow parameter group allow you to add an animatable drop shadow to an effect.

The Drop Shadow parameter group includes the following controls.

- **Enable Drop Shadow checkbox** turns the shadow on and off. If this checkbox is not selected, the other parameters have no affect.

- **Source Opacity** sets the opacity of the source. You can use this parameter to fade in a title or other source, without fading in the shadow.

- **Distance** sets the distance (in pixels) between the shadow and the image.

- **Intensity** sets the opacity of the drop shadow, and is scaled as a percentage. At a value of 100, the shadow is completely opaque. Lower Intensity values allow the background image to be seen through the shadow. At a value of 0, the shadow is completely invisible.

- **Softness** controls the softness of the edges of the shadows. A setting of 0 produces a sharply defined shadow with hard edges. Increasing Softness produces shadows with softer edges.

- **Angle** sets the direction of the drop shadow. A setting of 0° places the shadow to the right of the image; a setting of 90° places it directly below the image.

- **Shadow Color** sets the color of the shadow.

**Color Balance 1 Parameter Group**

The **Color Balance Mode menu** specifies the method used to make the RGB balance adjustments.

- **Photo Positive** simulates a color correction effect on a device that produces a positive image, such as a video camera. Brighter pixels are affected more than darker ones, and pixels for which the channel is completely off (0) are not affected at all. Use Photo Positive to correct colors in the lighter sections of the image.

- **Photo Negative** simulates a color correction effect on a device that produces a negative image, such as an enlarger. Darker pixels are affected more than brighter ones, and pixels for which the channel is completely on (255) are not affected at all. Use Photo Negative to correct colors in the darker sections of the image.

- **Linear** mode adds the corrections equally to all pixels in the image.
This example shows the original image before any color adjustments are applied.

Red Balance, Green Balance, and Blue Balance adjust the relative intensity of each corresponding RGB channel.

Mix with Original blends the source and filtered images. Use this parameter to animate the effect from the unfiltered to the filtered image without adjusting other settings, or to reduce the effect of the filter by mixing it with the source image.

Increasing the Blue and Green values in this image using the Linear mode adds cyan uniformly throughout the image, giving the shadows a cyan cast.

The Photo Positive mode corrects the image selectively using luminance information, which allows you to adjust the light areas of the image without affecting the dark areas.
In this example, the Red value of the image is decreased using the Linear mode, which gives the light areas a cyan cast.

Using the Photo Negative mode adjusts the color selectively, allowing you to correct the dark areas without affecting the light areas.

**PixelChooser Parameter Group**

The PixelChooser is included in many Boris filters and provides several methods to selectively filter an image. You can use the PixelChooser to create a matte between filtered and unfiltered pixels, either by specifying a geometric region or by using the image’s luma or color information.

See the individual PixelChooser filter for more detailed information on the PixelChooser controls.