

## BCC Safe Colors Filter

The BCC Safe Colors filter prevents clips from having saturation values that exceed the legal limits of broadcast standards. Use this filter to limit the values that are present in the image.

The **View Mode menu** lets you view the pixels in the image that are affected by the filter.

- **Final Output** displays the final rendered effect.
- **Zebra Pattern** displays the image with a cross-hatch zebra pattern overlay where pixel values are outside of the legal broadcast limits (as determined by the filter parameters.) Note that the zebra pattern animates only when playing the timeline.
- **Clipped Pixels** displays the image with red values superimposed over areas that are not within the legal broadcast limit (as determined by the filter parameters.) The blue/green pixels are unaffected by the filter. If you view only the red channel, the affected pixels display as a mask.

**Sat. Rolloff Start** sets the starting value of the saturation values that are outside of the legal broadcast limit as determined by the filter parameters. This parameter sets the lower limit of pixels that are affected.

**Saturation Limit** sets the absolute ceiling for color saturation. Reducing this parameter reduces the saturation in the final output. Only the pixels that exceed the Saturation Rolloff Limit are affected. Saturation values are mapped linearly into the range between the Saturation Rolloff Limit and the Saturation Limit (the upper limit). If the two limits are the same value, it just hard-clips the saturation. As the lower limit is reduced, the filter starts soft-clipping the saturation.

If you choose Clipped Pixels in the View Mode menu, the red channel indicates how much the pixel's saturation is scaled. A nonzero value indicates how much the pixel's saturation is reduced. For example, a red channel value of 64 would correspond to reducing the saturation by 1/4 (multiplying it by .75), while a value of 128 indicates that the saturation was reduced by 1/2. 255 would indicate that the saturation was completely removed (reduced by 1), producing a monochrome image.

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

### The PixelChooser Parameter Group

The PixelChooser is included in many Boris filters and provides several methods to selectively filter an image.



For more information on the PixelChooser, see Chapter 10, “The PixelChooser” in the User Guide, or open the help file for the standalone PixelChooser filter.