

## BCC Median Filter

The BCC Median filter makes each pixel look like the majority of its neighboring pixels. It produces a smeary painterly look, but with sharp edges (at neighborhood boundaries). The Median filter also reduces noise by eliminating “spikes,” or pixels that are very different from their neighbors (also referred to as “salt and pepper noise”).



*Original image*



*Filtered image*

The **Mode menu** determines how similarity is determined between a pixel and neighboring pixels. The area is chosen by the Median Length, Median Width, and Median Angle controls, which form a rectangle that can rotate. The default setting produces a line (a very thin rectangle).

- When *Pixel Selected by Channel* is chosen, the median is calculated for the chosen channel, then the neighboring pixel(s) that have the median channel value are averaged and replace the current pixel. For example, if the Channel menu is set to Red, then the median Red value is calculated. All neighbor pixels with that same median Red channel value are averaged.
- When *Selected Channel Only* is chosen, each pixel is altered so that its chosen channel is the median value. The other aspects of the pixel remain unchanged. For example, if the Channel menu is set to Red, the Green and Blue channels are unaffected, but the Red channel is set to the median value.
- When *RGBA Separately* is chosen, each pixel is replaced by a new pixel. The four (or three, if Preserve Alpha is enabled) channels are the median values of those channels, calculated separately.
- When *Most Common Pixel* is chosen, each pixel is replaced by the neighboring pixel that is least different than the other neighbors.

Use the **Channel menu** to specify which channel to blur. The choices are *Luminance*, *Lightness*, *Brightness*, *Hue*, *Saturation*, *Alpha*, *Red*, *Green*, or *Blue*.

The **Preserve Alpha checkbox** determines whether the blur uses alpha channel information. With Preserve Alpha selected, the blur does not appear in areas governed by the alpha channel (in other words the effect has zero opacity in alpha areas), with Preserve Alpha deselected, the effect is 100% opaque over the alpha channel.

**Median Length** and **Median Width** set the width of the median blur on the X-axis and the Y-axis, respectively. **Median Angle** sets the angle of the median blur.

The **Enable Fractional checkbox** allows you to smoothly animate Median Length and Median Width by blending two passes of the effect. The fractional parts of the length and width control the blend.

**Median Level** controls the amount of blur applied to the chosen pixels. At a value of 0, no blur is applied. Higher values produce more blur.

**Softness** controls the softness of the edges between affected and unaffected pixels. Increasing Softness produces a blur with softer edges.

The **Compositing menu** sets how the blur is applied to the image, using the available Apply Modes. The Apply Modes are described in detail in Appendix A in your User Guide. However, this menu includes three additional Apply Modes, *None*, *Under* and *Over*.

- *None* simply renders the blur and ignores the underlying image.
- *Under* renders the blur under the underlying image. The blur is only visible in areas where the image is transparent. This is most useful for images with an alpha channel.
- *Over* renders the blur over the underlying image.

**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 affect of the filter by mixing it with the source image. At a value of 0, the image is unaffected by the filter.

### Motion Tracker Parameter Groups

The Motion Tracker parameter groups allow you to track the motion of an object, then use the motion path data to control another aspect of the effect. The parameters that can be affected depend upon the filter. For example, track a logo on a t-shirt and apply a Glow to the logo. For more information, see “Working with the Motion Tracker Parameter Groups” on page 29.

### 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.