BCC Z-Blur Filter

Use the BCC Z-Blur filter with a Z-map image to emulate a rack focus effect. Move the focal plane through the source image, using the Z-map to control the focus. Adjust the focal point, depth of field and blur parameters to finetune the area of the image to blur.

You can also set a channel from the image clip, then use that channel to control the z-blur effect. This type of effect is most noticeable in real life with a long focal lens, such as a 105mm or greater zoom lens.

Use a Z-map image that has bright pixels where the image pixels are close, and dark pixels where the image pixels are far away, or vice versa. You can invert the Z-Map using the Invert Z Channel checkbox.

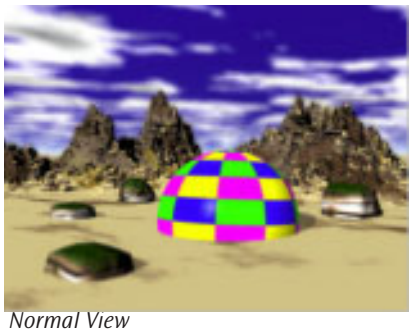
The following source image and Z-map are used in the examples in this section.

Source image

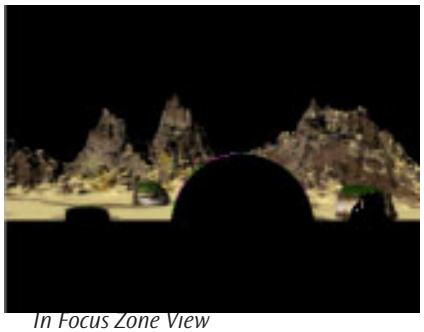
Z-map image

The **View menu** lets you display either the final render or the mask that defines the focus field in the Composite window.

- Choose ***Normal*** to view the final render in the Composite window.
- ***In-Focus Zone*** displays only the areas of the image that are in focus. These are at a Z-depth of "Depth of Field" around the "Focal Point."
- ***Z Map*** shows the final Z-map, so that you can readily see the effect of the above two controls. Z-Map also colors the 0-level (where there is no blur) dark blue.



Normal View



In Focus Zone View

Use the **Blur Type menu** to choose the type of blur to apply. The choices are ***Faster*** or ***Smoother***. Smoother uses a different blur algorithm which produces a better looking result but takes twice as long to render.

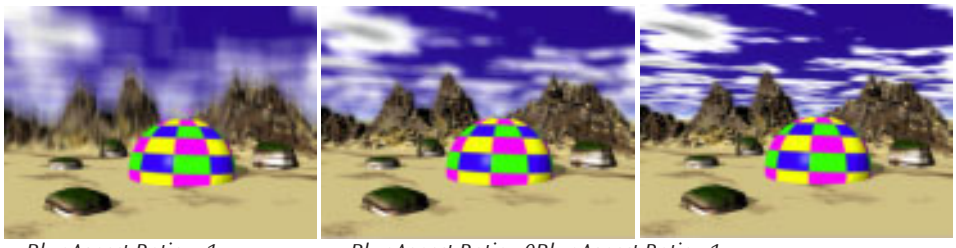
Use the **Z Layer menu** to assign the media that is used to create the depth map.

You must assign media to the **Use Z Layer menu** to see any result from the filter. The default media assigned to the Z Layer track in the timeline is ***None***, not the filtered track.

The **Z Channel menu** sets the channel to use for the depth map. Choose ***Alpha, Red, Green, Blue, Luminance, Lightness*** or ***Brightness***. ***Luminance*** adjusts the tonal values in the image without affecting the hues. It can also be useful in retaining sharpness in the image which Brightness can reduce. ***Lightness and Brightness*** adjust the tonal values in the image, but they also affect the hues.

Max Blur sets the maximum amount of blur to apply to the image. When Max Blur is set to 0, no blur is applied to the image.

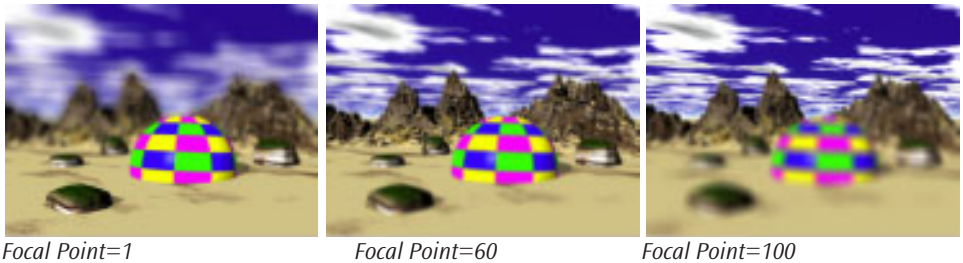
Blur Aspect Ratio controls the aspect ratio of the blur. Positive values produce a horizontal blur and negative values create a vertical blur. In the example below the clouds are blurred.



Blur Aspect Ratio=-1 *Blur Aspect Ratio=0Blur Aspect Ratio=1*

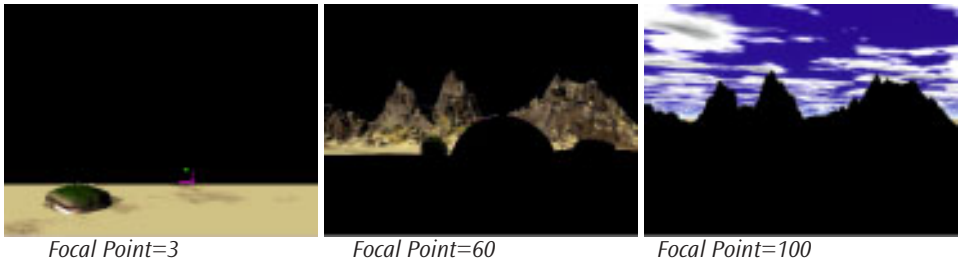
Focal Point determines the center point of focus along the focal plane. Animate the Focal Point parameter to shift the positioning of the focal mask. The examples below show the same Z-Blur effect, but the second set of images shows the focus view, and indicates that the focus shifts from the foreground (ball) to the sky (background).

Normal View



Focal Point=1 *Focal Point=60* *Focal Point=100*

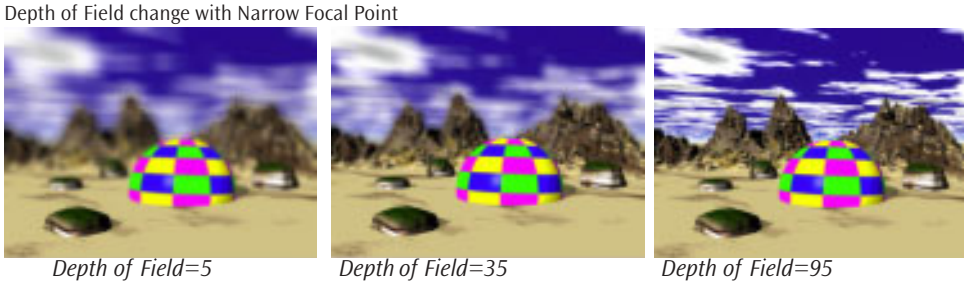
Focus View



Focal Point=3 *Focal Point=60* *Focal Point=100*

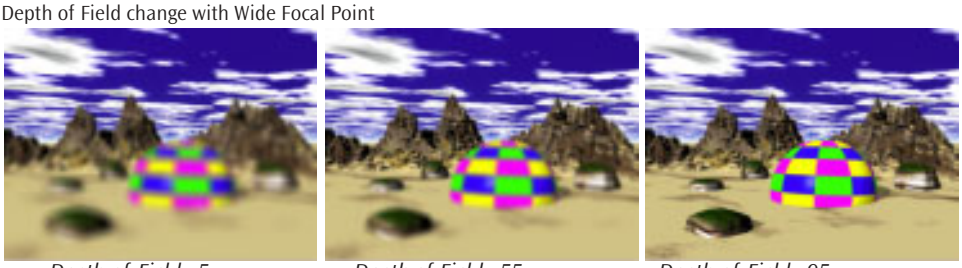
Depth of Field determines the areas of the image that blur. Increasing Depth of Field decreases the amount of the image that blurs. The examples below show the same Z-Blur effect. The first set of images shows the difference in Depth of Field with a Focal Point of 5, and the second set of images shows the difference in Depth of Field with a Focal Point of 5. As the depth of field increases, the entire image becomes more in focus.

Depth of Field change with Narrow Focal Point



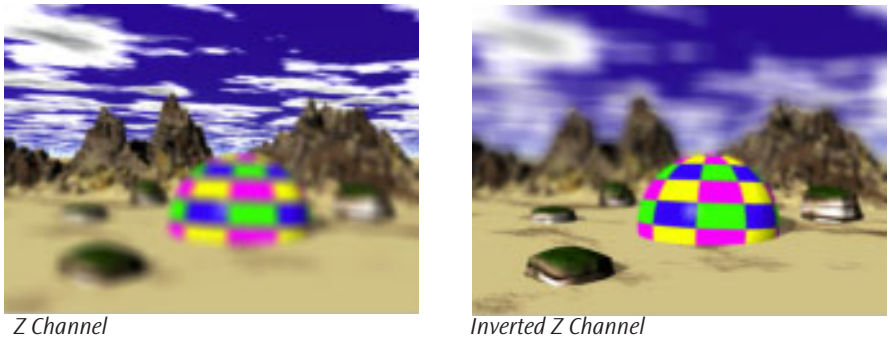
Depth of Field=5 *Depth of Field=35* *Depth of Field=95*

Depth of Field change with Wide Focal Point



Depth of Field=5 *Depth of Field=55* *Depth of Field=95*

The **Invert Z Channel checkbox** inverts the mask you assigned to the Z Layer track in the timeline. The following example shows Luminance as the Z Channel.



Z Channel *Inverted Z Channel*

Smooth Z Channel blurs the Z-map before the channel is extracted.

Z Channel Gamma alters the slope of the Z-map after the channel is extracted.

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.

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.