BCC Motion Blur Filter

The BCC Motion Blur filter creates a realistic blur on the motion in an image, simulating the effect of shooting a moving object on film. The blur is based on the motion of the pixels in the image. For example, you could apply the Motion Blur filter to a clip of a speeding car and the car's motion would blur while the background would not. The blur is most pronounced when the object moves quickly and more subtle when it moves slowly. Motion blur is not visible if the image is static.


Source image


Source image


Filtered image

Based upon optical flow technology, this filter examines past and future frames to determine the motion of the pixels in the image. Depending upon the selected settings, a blur or a smear is applied to the pixels that move from one frame to the next. You can use an image in the timeline as a source for motion and then apply the motion from the chosen image to the filtered track. Motion Blur is especially memory-intensive.

The **Source Layer menu** sets the media to blur with the source layer (the clip or track to which the filter is applied). You must assign the media that you want to use to the Source Layer menu. When this menu is set to None, the other parameters have no affect.

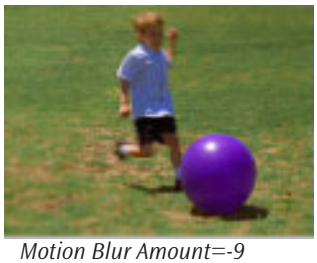
The **Blur Type menu** sets the type of motion blur that is created. The choices are ***Blur*** or ***Smear***. Smear blurs the pixels in one direction. Blur blurs the pixels symmetrically.


Original Image


Smear


Blur

Motion Blur Amt sets the amount of blur or smear that is applied to moving pixels. Positive values apply the blur or smear; negative values sharpen these pixels. The following example shows Blur as the Blur Type.


Motion Blur Amount=-9

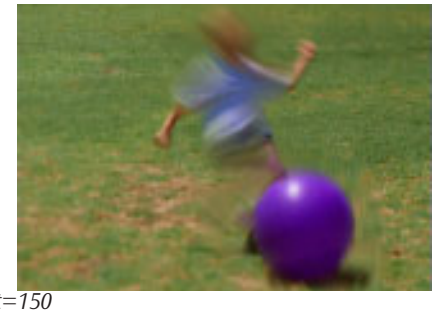

Motion Blur Amount=5


Motion Blur Amount=10

Smear Falloff determines the falloff when the Blur Type menu is set to Smear. Falloff is the transition between the smeared and unsmeared areas. At a value of 0, the Smear is fully applied; at a value of 100, the smear has no affect. This is ideal for animating the smear.

Velocity Limit determines the range of moving pixels that are filtered. At a value of 0, the filter will not find any moving pixels in the image; at a value of 1000 (maximum), the filter uses the full range of motion in the image.


Velocity Limit=10


Velocity Limit=150

The **FG Mask Layer menu** sets the media to use as a foreground mask to constrain the pixel movement. When this menu is set to ***None***, the media that is assigned to the FG Mask Layer has no affect.

The **FG Mask Channel menu** determines which channel is used to create the foreground mask. The choices are ***Red, Green, Blue, Luma*** or ***Alpha.*** This setting has no affect if you have assigned the FG Mask Layer menu set to None.

The **FG Blur Type menu** sets the type of motion blur that is created on the foreground mask. The choices are ***Blur*** or ***Smear.*** Smear blurs the pixels in one direction; Blur blurs the pixels symmetrically. This option is applied to the foreground calculation; the background image is controlled by the Blur Type menu. This setting has no affect if the FG Mask Layer menu is set to None.

FG Motion Blur Amount sets the amount of blur or smear applied to moving pixels in the foreground image. Positive values apply the blur or smear; negative values sharpen pixels.

FG Smear Falloff determines the falloff when the FG Blur Type menu is set to Smear. Falloff is the transition between the smeared and unsmeared areas.At a value of 0, the Smear is fully applied; at a value of 100, the smear has no affect on the image. This is ideal for animating the smear.

FG Velocity Limit determines the range of moving pixels in the foreground image that are filtered. At a value of 0, the filter will not find any moving pixels in the image; at a value of 2000 (maximum), the filter uses the full range of motion in the image.

Blur Threshold reduces the amount of color changes to each pixel by the threshold amount. Increasing Blur Threshold causes the parts of the image with abrupt changes in color to blur, while areas with subtle details remain unchanged.

The **Maximum Deviation** parameter sets the maximum deviation (based on 8-bit color) allowed for any channel. Reducing this value limits the amount any color can change. This control becomes more noticeable at values below 30. Very small amounts of Max. Deviation can be useful (especially combines with the PixelChooser) to reduce noise in video and digital stills that contain noise in their dark areas.

The **Apply Mode menu** controls how the filtered image is composited with the source image. For descriptions of all the possible Apply Modes, see Appendix A in the User Guide.

Apply Mix controls the mix of the specified Apply Mode with the ***Normal*** apply mode. If the Apply Mode is Normal, Apply Mix has no affect and the parameter does not appear. If Apply Mix is 0, Apply Mode has no affect. Increase Apply Mix to blend the Apply Mode setting with the Normal apply mode.

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.