

BCC Levels Gamma Filter

Levels Gamma provides options for adjusting contrast and eliminating noise in your image. Video shot at night or in poorly lit settings often contains noise in the dark areas. Increasing Input Black removes this noise by treating all areas darker than the Input Black setting as black. Washed out or overexposed images do not contain the full range of levels. Increasing Input Black and/or decreasing Input White can boost the contrast of the image.

Input Black sets the channel values of the input image that are treated as pure black by the filter. All pixels whose value is lower than the Input Black value become the Output Black color. For example, if Input Black is set to 50, all pixels with a value of 50 or less are output to a value of 0. The remaining values (50-255) are remapped to produce a smooth gradient from black to white.



Input Black=0



Input Black=75



Input Black=125

Input White sets the channel values of the input image that are treated as pure white by the filter. All pixels whose value is higher than the Input White value become the Output White color. For example, if Input White is set to 200, all pixels with a value of 200 or more are output to a value of 255. The remaining values (0-200) are remapped to produce a smooth gradient from black to white.



Input White=255



Input White=175



Input White=125



You can create dramatic posterization-like effects by adjusting the input levels so that only a small range of input values are used, and/or by processing chosen channels of the image.

The posterization effect below was created by increasing Input Black and decreasing Input White to create a steeper gradient between the luminance values in the image.



Source image



Filtered image

Gamma controls the slope of the curve used to convert from the input color values to output values in pixels brighter than Input Black and darker than Input White. Increasing Gamma from the default of 100 lightens the image and decreases contrast, while decreasing Gamma darkens the image and increases contrast.



Gamma=50



Gamma=100



Gamma=150

Output Black sets the channel value at which black source pixels are output. For example, if Output Black is set to 15, all pixels whose values are 0-15 are output to a value of 15. If you are working with broadcast material, you may need to raise the Output Black value in order to avoid NTSC-illegal black levels.



Output Black=0



Output Black=75



Output Black=125

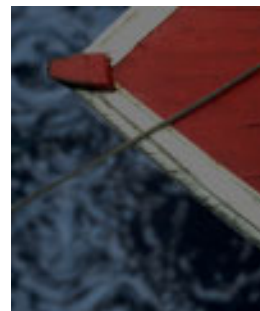
Output White sets the channel value at which white source pixels are output. For example, if Output White is set to 240, all pixels whose values are 240-255 are output to a value of 240. If you are working with broadcast material, you may need to decrease the Output White value to avoid NTSC-illegal white levels



Output White=255



Output White=175



Output White=125

Channels determines which channels the filter affects. The choices are *RGB*, *Red*, *Green*, *Blue*, *Red and Green*, *Red and Blue*, *Green and Blue*, *Difference*, and *Alpha*. Difference uses the difference between each filtered channel and the corresponding source 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.

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.