



KPT Equalizer

Welcome to KPT Equalizer, which provides a set of powerful image-modification filters in one interactive plug-in application. Whether you're correcting or creating, KPT Equalizer opens up new and exciting possibilities for image manipulation.

This chapter provides specific information about working with KPT Equalizer, including:

- [Overview of KPT Equalizer](#)
- [Working with the Equalizer Filter](#)
- [Working with the Bounded Sharpen Filter](#)
- [Working with the Contrast Sharpen Filter](#)
- [Using Keyboard Commands](#)

Refer to [KPT 6 Basics](#) for more information about using standard features of the KPT user interface.

Overview of KPT Equalizer

The filters that make up KPT Equalizer let you apply sharpening, smoothing, and blurring effects to any image or selection. You can correct images by applying traditional sharpen/blur effects or create special effects—such as Gaussian Blurs—by dramatically changing or maxing-out filter settings.

The process of sharpening comes from a traditional film compositing technique for bringing an image into sharp focus. In digital media, sharpening refers to a method of increasing the contrast between adjacent pixels in an image.

If you examine a digital image closely, you will observe that it is made up of individual units of color called pixels. When an image is crisp and focused, the pixels that define the image's details (or *edges*) display a high contrast. In a blurred image—or one with smooth gradients—these pixels display less contrast.



In digital media, the amount of contrast between adjacent pixels creates the appearance of sharpness or blurriness.

KPT Equalizer features three flexible filters: Equalizer, Bounded Sharpen, and Contrast Sharpen. These filters give you precise control over how you apply effects to your image:

- **Equalizer** provides a nine band panel for pixel modification on an image or selection. You can adjust the level of pixel contrast within different frequencies and control the strength of the overall effect.
- **Bounded Sharpen** transforms blurry images. Used in conjunction with a resampling filter (like Photoshop's "Resize"), this filter helps maintain image sharpness. You can recover sharpness and detail in an image that has been increased up to two times its original size.
- **Contrast Sharpen** lets you increase the contrast between light and dark areas in an image or selection.

To launch KPT Equalizer:

- 1 Open the image you want to modify in the host application.

If the image includes multiple layers, select the layer on which you want to apply the effect.

If you want to apply the effect to a selected area, make that selection now. Otherwise, make sure that no selections are active in the host application.

- 2 Select the **Filter menu** > **KPT6** > **KPT Equalizer** .

KPT Equalizer launches and occupies the entire screen.

To select a KPT Equalizer filter:

- Choose a filter from the Sharpen Types panel.



Working with the Equalizer Filter

The Equalizer filter lets you apply effects to an image or selection based on pixel frequency. It includes two control panels:

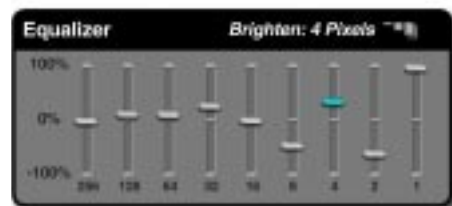
- The Equalizer panel contains sliders that control the amount of contrast within each pixel frequency.
- The Parameters panel controls the overall effect.

Using the Equalizer Sliders

The relationship between pixel values within an image is called *visual frequency*. Gradual changes over a large area are low frequencies; rapid changes (such as edges and noise) are high frequencies.

The Equalizer panel represents frequencies as nine numbered sliders, ranging from 1 to 256. The 256 slider adjusts the lowest frequency in the image, producing a gradual effect. The 1 slider adjusts the highest frequency, affecting

the edges and noise in the image. The other sliders adjust intermediary frequencies—the lower the slider number the higher the frequency.



The 256 slider adjusts low frequencies, or gradual features in an image. The 1 slider adjusts high frequencies, the edges and noise in an image.

The Equalizer sliders have a range of 100% to -100%. When you set a slider to 100%, you maximize (or brighten) the contrast of pixels in that frequency. When you set a slider to -100%, you minimize (or dim) the contrast of pixels in that frequency. When you set a slider to 0%, the pixels are not affected.

If you're finding this discussion of pixel frequencies and contrast values confusing, don't worry. The joy of working with KPT Equalizer filters is that you don't have to struggle with technical details because you can easily observe filter effects in the Preview window. Let your mouse and eyes guide you; adjust the sliders and observe how your image changes. This is the best way to understand the Equalizer sliders.



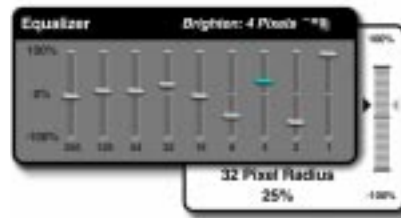
Original Image



Examples of effects you can create with the Equalizer filter.

To adjust a frequency slider:

- Drag the slider up or down,
- Click in the numeric field in the Extended panel and enter a value, or
- Apply a setting from the Presets Library.



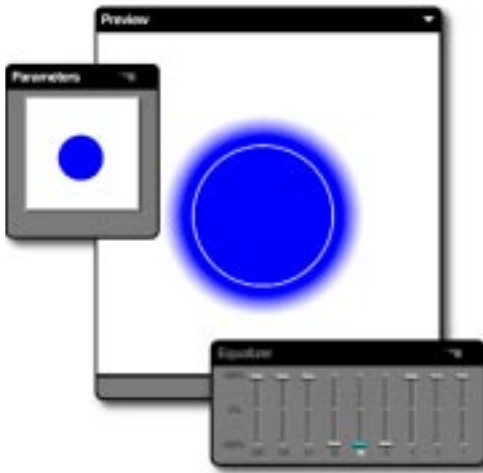
You can adjust frequency sliders in three ways: by dragging a slider up or down, entering a value, or applying a preset. Refer to [“Setting Sliders”](#) for more information about adjusting sliders. Refer to [“Working with the Presets Library”](#) for more information about using Presets.

To select and move multiple sliders:

- 1 Shift+Click the sliders to select them.
- 2 Drag one slider to move all sliders in the selection.

You can create special effects by maxing-out filter settings. For example, accentuate the midband frequencies (8, 16) and deaccentuate highbands (1, 2, 4) for a softened look. Remove low frequencies (64, 128, 256) for a washed-out look.

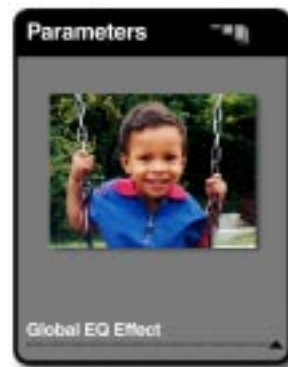
If you are working with a masked selection (an image that does not take up the entire Preview window), be careful how you adjust the frequency sliders. If you set the low frequency slider (256, 128, 64), colors at the edge of the selection may bleed.



The colors at an image's edges may bleed into the mask if you use certain slider settings.

Using the Global EQ Slider

The Parameters panel for the Equalizer filter contains the Global EQ slider for controlling the overall effect. This slider works in conjunction with the frequency sliders to apply settings from the Equalizer panel to the image at the specified percentage.



The Equalizer filter Parameters panel.

For example, when the Global EQ slider is 0%, the settings in the Equalizer panel have no effect on the image. When the Global EQ slider is 100%, the settings in the Equalizer panel are applied fully to the image.

The Parameters panel also contains a selection rectangle for adjusting your view of the image in the Preview window. Refer to [“Working with the Preview Window”](#) for more information about adjusting the preview area.

To set the Global EQ slider:

- Drag the slider marker in the Parameters panel, or
- Click in the numeric field in the Extended panel and enter a value.



You can adjust the Global EQ slider in two ways: by dragging the slider or entering a value. Refer to ["Setting Sliders"](#) for more information about adjusting sliders.

Working with the Bounded Sharpen Filter

The Bounded Sharpen filter addresses a problem that plagues many sharpening filters—the over-sharpening of parts of an image that results in a halo effect. Using careful contrast adjustment or clamped sharpening, Bounded Sharpen controls the value of pixels that define an image's details (edges) to prevent over-sharpening. Used in conjunction with a resampling filter (like Photoshop's "Resize"), this filter can help to maintain sharpness that might otherwise be lost. You can adjust both the degree of sharpening and the strength of the anti-halo effect.



Before and after Bounded Sharpen.

One use of the Bounded Sharpen filter is to correct images that have been resized. For example, if you increase the size of an image in Photoshop, it will become blurry because there is no detail in the original image to correctly identify edges. In general, Bounded Sharpen can restore sharpness to images.

Using the Bounded Sharpen Sliders

The Parameters panel for the Bounded Sharpen filter contains two sliders:

- Sharpen Percent controls the strength of the effect on a scale of 0% to 500%. At 0%, the filter has no effect; at 500%, the filter increases pixel contrast dramatically.
- RGB Tolerance controls the filter's anti-halo sensitivity on a scale of 0 to 128 pixels. This setting addresses the difference between values that are next to each other. Edges will have large differences, smooth features will have small ones. RGB Tolerance is a threshold for that difference. At the lowest setting, the filter restricts the amount of modification to edge pixels. At the highest setting, the filter applies everywhere in the image.

The Parameters panel also contains a selection rectangle for adjusting your view of the image in the Preview window. Refer to [“Working with the Preview Window”](#) for more information about adjusting the preview area.

To set the Sharpen Percent and RGB Tolerance sliders:

- Drag the slider marker in the Parameters panel,
- Click in the numeric field in the Extended panel and enter a value, or
- Apply a setting from the Presets Library.



You can adjust the Bounded Sharpen sliders in three ways: by dragging a slider marker, entering a value, or applying a preset. Refer to [“Setting Sliders”](#) for more information about adjusting sliders. Refer to [“Working with the Presets Library”](#) for more information about using Presets.

Working with the Contrast Sharpen Filter

The Contrast Sharpen filter enhances local contrast in an image. You can adjust the radius that the filter uses to analyze each portion of the image.



Before and after using the Contrast Sharpen filter.

Using the Sharpen Radius Slider

The Parameters panel for the Contrast Sharpen filter contains the Sharpen Radius Pixels slider. This slider controls the width of the area that the filter analyzes when adjusting pixel contrast. It is based on a scale of 0 to 250

pixels. At lower settings, the filter creates a gradual effect. At higher settings, the filter optimizes the contrast globally to create more dramatic lights and darks in the image.

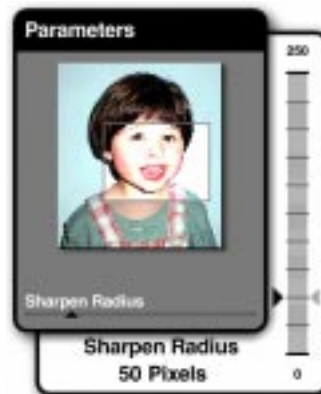
Note

Use settings in the low range (1-10 pixels) to achieve the most interesting effects with the Contrast Sharpen filter.

The Parameters panel also contains a selection rectangle for adjusting your view of the image in the Preview window. Refer to [“Working with the Preview Window”](#) for more information about adjusting the preview area.

To set the Sharpen Radius slider:

- Drag the slider marker in the Parameters panel,
- Click in the numeric field in the Extended panel and enter a value, or
- Apply a setting from the Presets Library.



You can adjust the Contrast Sharpen slider in three ways: by dragging the slider marker, entering a value, or applying a preset.

Using Keyboard Commands

Keyboard commands are especially useful for operations that you perform frequently. This section lists KPT Equalizer-specific commands. Refer to [“Using Keyboard Commands”](#) for information about general KPT keyboard commands.

What you press:	The results you get:
Shift+Click	Select or deselect multiple sliders
Click in gray area of panel	Deselect all but last selected slider