

CHAPTER 9: The Filter Menu

The Filter menu contains commands for adjusting color levels, tone, brightness/contrast; to lighten or darken an image; and to apply image maps and filters. It also lets you apply third party plug-in filters (such as those compatible with Adobe Photoshop™).

Last Filter

The Last Filter command [Command-F] is the first command listed in the Filter menu. The command changes to reflect the last filter used, and is a shortcut to apply that filter with the same settings once again.

Adjustment

The Adjustment command displays a hierarchical menu with commands for adjusting the image for a document or selection.

The Levels... command lets you adjust the brightness, contrast and gamma in an image. The command opens a dialog box containing a histogram of the

image. (A histogram displays the frequency distribution of the number of pixels in an image at a specific color level.

The three pointers on the histogram control the Input levels—shadows, Gamma (midtones), and highlights—and increase the contrast. Values can also be entered for each in the textboxes above.

The Output levels reduce the contrast. Values can be entered in the textboxes, or the two pointers on the Output bar can be moved.

The effect of the adjustments to the image are shown in the After image at the lower left. You can choose the portion of the image to be shown in the Before and After boxes by clicking and dragging the selection rectangle in the small image at the top left.

The Channel pop-up menu lets you select which channels to be displayed in the histogram (the channels will vary depending on the type of image—RGB, CMYK, etc.)

The Display pop-up menu adjusts the histogram display. Selected options are marked with a bullet (•).

Normal includes all the blacks, whites and colors in the image. No

Black/White ignores all pixels at the first index (0) and the last index (255).

Some filters group pixels at these extreme positions, so it is common for the large number of pixels at these locations to overshadow the others in between.

Compressed compresses the high peaks in the histogram, making the distribution of the other grays in the image easier to see. Cumulative sums the number of pixels in the image that are darker than a selected gray level.

The bottom portion of the pop-up menu controls the type of display for the histogram. Gradient displays gradient range that accurately depict the black, white and grays in the image. Solid Black fills the histogram area with black.

Outline displays the histogram as a line.

Checking the Live checkbox applies changes to the entire screen.

The Curves... command lets you adjust an image's brightness, contrast and gamma at any point along the gray scale.

It opens a dialog box that displays an image map. The horizontal axis in the chart represents the colors in the original image (black to the left, white to the right). The vertical axis represents the colors in the output image (black at the bottom, white at the top). The 45° line indicates the original and output images are the same.

The tools are used to make adjustments in the curve. The Pointer tool selects a region of the map. The Pencil tool makes free-form modifications to the map. The Line tool (contrast) draws straight lines in the map. The Curve tool draws a 1.6 gamma curve in the map. Dragging horizontally produces a shallower curve; vertically produces a steeper curve.

The Map pop-up menu lets you open existing image maps and save new maps.

The Channel pop-up is identical to the pop-up described under the Levels command.

The Slider pop-up lets you adjust Brightness, Contrast, Gamma and Posterization of the image. Adjustments can be made by moving the slider button or clicking the pointers at each end. The Reset button returns the settings to their defaults.

The preview selection image, Before and After images and the Live checkbox all function as described under the Levels command earlier in this chapter.

The Auto Contrast command is a shortcut to improve an image by optimizing the brightness and contrast. This may be the only contrast adjustment needed.

The Brightness/Contrast... command [Command-B] also lets you adjust the brightness and contrast of an image. The command opens a dialog box with sliders. The top slider adjusts Brightness in percentages from $\pm 100\%$. The bottom slider adjusts Contrast in percentages from $\pm 100\%$. Adjustments are made by moving the slider bar, clicking on the pointers at each end of the slider or entering a percent in the textbox.

Checking the Live checkbox applies any changes made to the entire screen.

The Lighten/Darken... command [Command-L] opens a dialog box to adjust the image levels. Vary the amount of lightening or darkening by moving the slider bar,

clicking on the pointers at each end of the slider or entering a percent in the textbox. Checking the Live checkbox applies changes made to the entire screen.

The Brightness RGB ... command opens a dialog box similar to Brightness/Contrast, but with individual sliders for red, green and blue. Adjustments are made by moving the slider bar, clicking on the pointers at each end of the slider or entering a percent in the textbox.

Checking the Lock checkbox links all sliders together.

Clicking the Reset button returns all settings to their defaults.

Checking the Live checkbox applies changes made to the entire screen. The Contrast RGB ... command opens a dialog box similar to Brightness RGB, with individual sliders for red, green and blue. Adjustments are made by moving the slider bar, clicking on the pointers at each end of the slider or entering a percent in the textbox.

Checking the Lock checkbox links all sliders together.

Clicking the Reset button returns all settings to their defaults.

Checking the Live checkbox applies changes made to the entire screen.

Image Map

The Image Map command displays a hierarchical menu with commands for changing the map for a document or selection.

The Invert command [Command-I] creates a negative of the image: white becomes black; black becomes white; 30% black becomes 70% black, etc.

The Equalize command adjusts the distribution of the colors in the image to make all saturation levels move even.

The Threshold... command opens a dialog box to convert the image to only pure black and white.

Levels below the threshold

point turn black and levels above the threshold point turn white. The threshold point may be set by moving the slider bar, clicking on the pointers at each end of the slider or entering a percent in the textbox. Checking the Live checkbox applies changes made to the entire screen.

The Posterize... command allows you to create special effects by limiting the number of colors in the image. The number of levels is entered in the text box or by moving the slider bar, clicking on the pointers at each end of the slider or entering a percent in the textbox. Checking the Live checkbox applies changes made to the entire screen.

Blur

The Blur command displays a hierarchical menu with several different blur commands.

The first Blur command opens a dialog box where the image can be blurred by moving the slider bar, clicking on the pointers at each end of the slider or entering a number in the textbox.

The Blur (1) and Blur More (2) commands are pre-set and have no dialog box.

Convolution

The Convolution command displays a hierarchical menu with two commands. The Kernel command opens a dialog box with a pop-up menu of all the kernel filters available through the Kernel brush on the Tools palette. No sliders or controls are featured, just the before and after view are shown.

The Custom Convolution command opens a dialog box that lets you create and/or apply a convolution filter to a document or selection.

A convolution filter is an "area operator." The filter looks at an area, performs a mathematical operation, and then makes a decision about how to change

the center pixel (see Appendix A, Filtering Fundamentals for more information on convolutions.)

The Size pop-up lets you choose several choices of grids.

The Symmetry pop-up menu lets you choose between None, Horizontal, Vertical, Horz/Vert, or Radial.

The Divide by pop-up menu lets you choose between One, Auto Sum and Other.

The Post Process pop-up menu offers None, Scale, Offset, Difference or Sub Diff (subtract difference).

The center pixel cell in the grid is the point all convolution kernels calculate for. Select a grid cell by clicking on it and enter a number in the box.

The Test button lets you apply the convolution to the After image to see the effect.

The New button resets all cells in the grid (except the center) to zero.

The Open button opens a standard Open box that lets you open the existing kernels stored in the Convolution folder in the Color It! Stuff folder.

The Save button opens a standard Save box that lets you save the convolution kernel.

Noise

The Noise command displays a hierarchical menu with commands for adding or subtracting noise from an

image. Noise is pixels of random colors scattered through-out an image.

The Add Noise... command opens a dialog box. Adjust the Levels (the harshness) by moving the slider bar, clicking on the pointers at each end or entering a number in the textbox.

Choose the type of noise with the Uniform or Gaussian radio buttons.

Uniform applies random noise along a linear distribution; Gaussian selects the values along a Gaussian curve.

The De-speckle... command opens a dialog box used to reduce noise in an image. Adjust the Intensity by moving the slider bar, clicking on the pointers at each end of the slider or entering a value between 1 and 16 in the text box.

Sharpen...

The Sharpen command opens a hierarchical menu of commands that let you to sharpen fuzzy

images by increasing the contrast of adjacent pixels.

The Unsharp Mask opens a dialog box that lets you adjust the sharpening.

Adjust the Intensity by moving the slider bar, clicking on the pointers at each end of the slider or entering a value between 1 and 16 in the text box.

The Percent text box determines the amount of sharpening. Values above 100% magnify the intensity of the sharpening

The Level text box sets how much contrast and difference must exist between the sharpening pixel and the original before replacing it.

The Sharpen (1) and Sharpen More (2) commands are pre-set and have no

dialog box.

Stylize

The Stylize command opens a hierarchical menu with commands for changing the visual appearance of the image.

The Mosaic command opens a dialog box that lets you group pixels into mosaic squares. The filter averages the gray values of the pixels within the square and

changes them all to that value. Adjust the Levels by moving the slider bar, clicking on the pointers at each end of the slider or entering a value between 2 to 64 in the text box.

The Solarize command applies an image map that changes the image by inverting the upper 50% of the colors.

Video

The Video command opens a hierarchical menu with commands for adjusting images for video use.

The NTSC Video Safe...command changes the image to eliminate extremely dark or light (saturated) colors which do not display well on standard NTSC video devices such as televisions and video recorders.

The Compressed radio button remaps gray levels from 0-255 to 12-243.

The Cropped radio button remaps gray levels by changing all levels below 12 to 12. All levels above 243 are changed to 243.

The De-Interlace... command opens a dialog box where you can choose from several methods for de-interlacing images from video devices.

Other

The Other command opens a hierarchical menu with other commands for adjusting images.

The Minimum command opens a dialog box where you can adjust the Intensity by moving the slider bar, clicking on the pointers at each end of the slider or entering a

value between 1 and 16 in the text box.

The Maximum command opens a dialog box where you can adjust the Intensity by moving the slider bar, clicking on the pointers at each end of the slider or entering a value between 1 and 16 in the text box.

Third Party Plug-in Filters

Color It! supports third-party plug-in filters compatible with Adobe Photoshop™ and Digital Darkroom™. These filters must be put in the Plug-ins folder inside the Color It! Stuff folder. If Color It! is running, you must quit and restart the application for these plug-in filters to be available. The filters may appear in different locations on the Filters menu depending on how they were written.