

Caffeine Software

PixelNhance

User Guide



Version 1.5.9



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Preface

Welcome to the *Caffeine Software PixelNhance User Guide*

This user guide explains how to install and use PixelNhance to enhance your image by adjusting settings such as contrast, sharpness, and color balance. The user guide also describes how to set up iPhoto to integrate with PixelNhance.

The *Caffeine Software PixelNhance User Guide* assumes that you have working knowledge of Mac OS X and does not describe functionality and features related to the operating system. The user guide also assumes that you are familiar with general digital image concepts.

The Caffeine Software website at <http://www.caffeineSoft.com> always provides the latest version of the user guide. On the website, you can also find documentation for the other Caffeine Software applications referred to in this user guide.

Support and Contact

Caffeine Software values quality support and is always available for your questions and comments.

2051 Rutledge Place
Santa Clara, CA 95051

info@caffeineSoft.com
<http://www.caffeineSoft.com>

Fax: 408-249-2989

***1* Installation and Setup**

This chapter explains how to install PixelNhance, set up iPhoto to integrate with PixelNhance, and uninstall PixelNhance or replace it with a newer version.

Installing PixelNhance

When you download PixelNhance, the disk image is automatically unstuffed and placed in your specified location. The disk image is named PixelNhance.dmg.

To install PixelNhance:

1. Double-click on the disk image, PixelNhance.dmg.
2. The PixelNhance window opens in Finder.
3. Drag the PixelNhance icon to your Applications folder.



4. Drag the PDF for the *Caffeine Software PixelNhance User Guide* into the folder of your choice to save the document. You can also double-click on the PDF in the PixelNhance window to read the user guide.

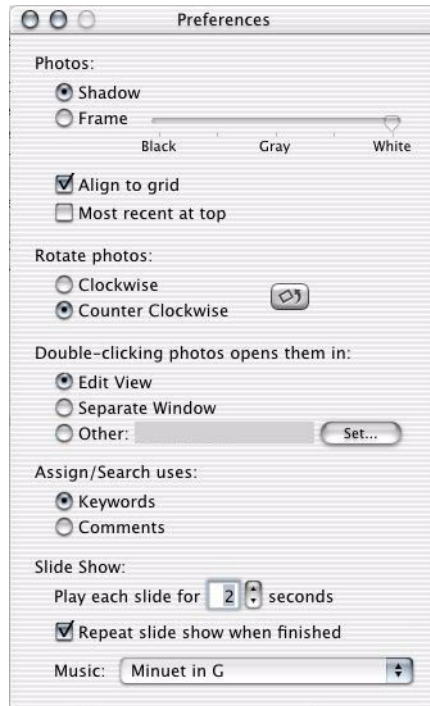
You can now open and use PixelNhance to modify your digital images.

Setting Up iPhoto to Integrate with PixelNhance

You can set up iPhoto to integrate with PixelNhance so that image documents open up in PixelNhance when you double-click on the thumbnails in iPhoto.

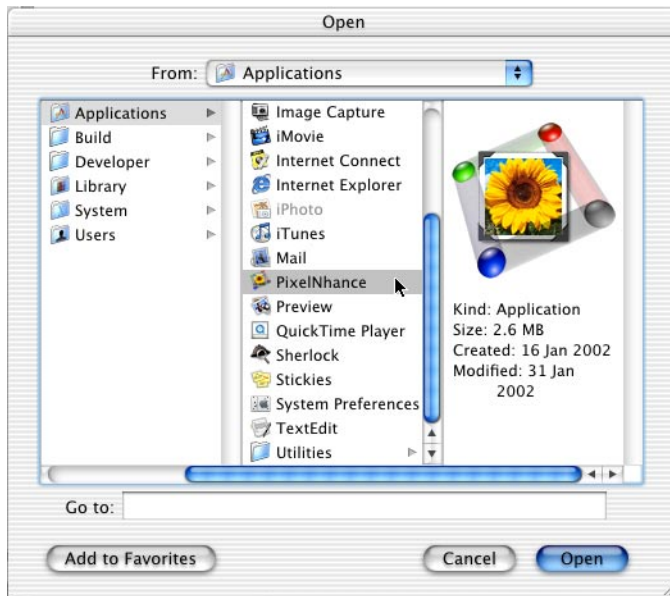
To set up iPhoto to integrate with PixelNhance:

1. Launch iPhoto.
2. Open the Preferences window.



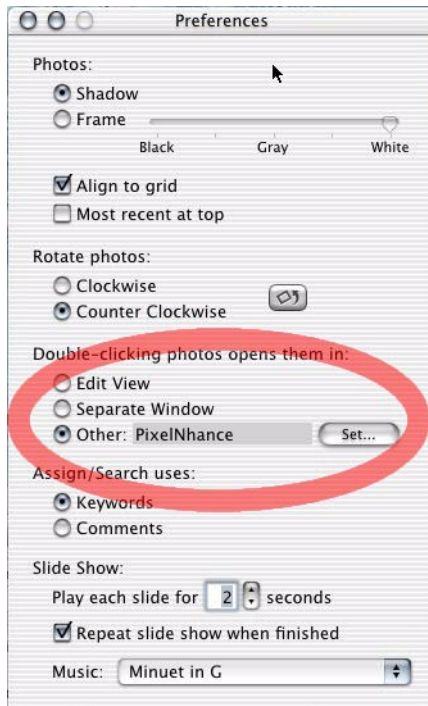
3. Select *Other* for the *Double-clicking photos opens them in:* option.

4. Select PixelNhnance in the browser that automatically opens.



5. Click the Open button.

iPhoto is now set up to open images in PixelNhnance.



Uninstalling and Upgrading PixelNhance

To uninstall PixelNhance, simply delete the PixelNhance application icon from Finder. To upgrade to a newer version of PixelNhance, you can drag the icon of the newer version into the folder where the original one is installed.

If you get an error when you try to uninstall or upgrade as described above, you need to use Terminal. This situation arises, for example, if you are trying to uninstall or replace a version of PixelNhance that came installed with your Apple computer. In this case, to upgrade PixelNhance, you must uninstall the original version with Terminal and then install the newer version.

Note *This security functionality applies not only to PixelNhance but all other applications that came with your Apple computer.*

To uninstall with Terminal, you need administrator access in the account that you logged into Mac OS X with. For more information about administrator access, see Apple documentation.

To uninstall PixelNhance with Terminal:

1. Open Terminal (Applications > Utilities > Terminal).
2. At the prompt, enter:

```
sudo rm -rf /Applications/PixelNhance.app
```

and press Return.

3. After the *Password:* prompt, enter the password that you used to log into Mac OS X with and press Return.

When the uninstall finishes, a new Terminal prompt appears.

2 Using PixelNhance

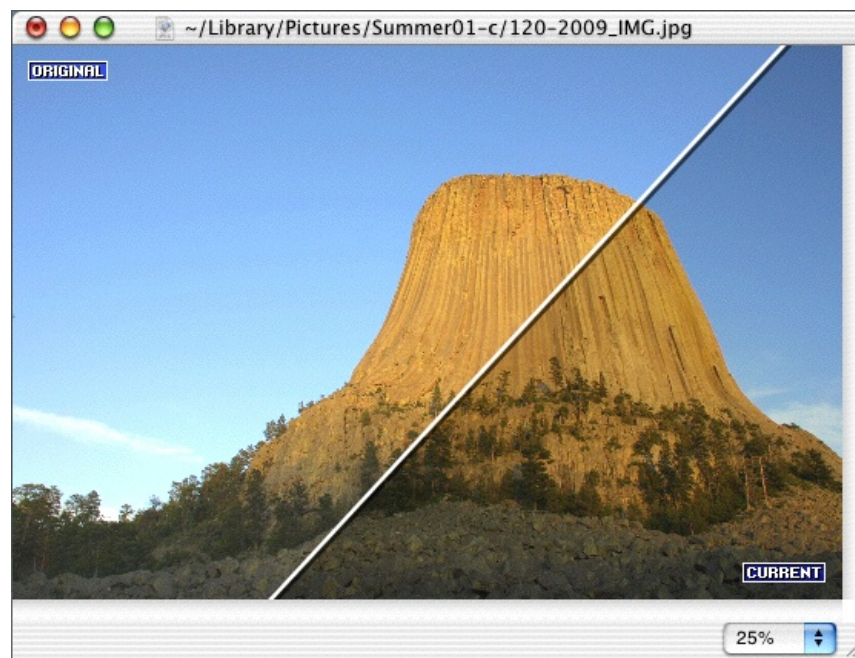
This section provides an overview of PixelNhance and describes viewing and enhancing your documents.

Overview

PixelNhance is a real-time image enhancement application that lets you quickly and easily determine the best settings for your document. While you adjust settings such as color balance and sharpness in the Control window, you immediately see the effects on your image.

To use PixelNhance, you do not need a degree in image processing. You do not even need to know what color balance is. You can see the results of your setting adjustments right there in the unique split-screen document window.

One side of the document window shows the image with the original settings. The other side shows the image with the settings that you currently have in the Control window. You can move and rotate the divider that separates the two regions.



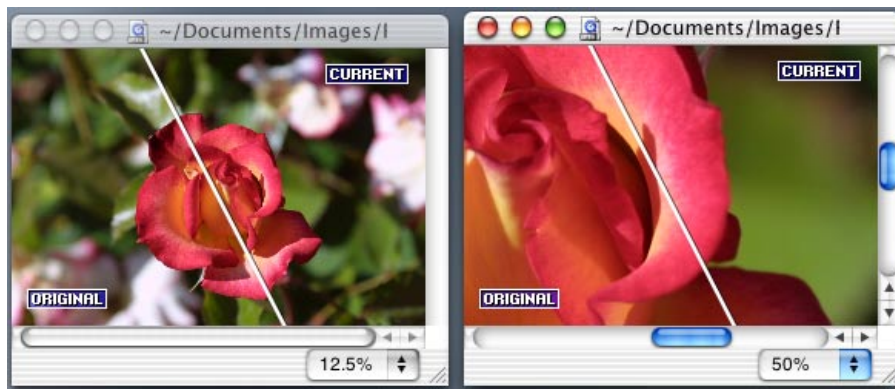
Aside from color balance and sharpness, you can also use PixelNhance to control the saturation, brightness, and contrast levels in your document. You can also reduce the noise in the image, as well as determine saturation levels for specific tones.

With all these options presented in an intuitive and powerful interface, you can use PixelNhance to easily yet significantly modify and improve your images.

Viewing the Image Document

You can open image documents of any standard file type in PixelNance. The document window divides the image, reflecting the original settings on one side and the current PixelNance settings on the other. As you adjust the settings in the Control window, you see in real time the effects on your image.

You can view your document in various levels of zoom, from 12.5% to 1600%. No matter what level the document view is at, and no matter how you use the scroll bars to view different parts of the image, the divider is stationary and visible in the document window.



In the preferences, however, you can choose not to display the divider or the labels for the two sections of the document window. With the divider hidden, you can still see the two sections and move or rotate the border.

To move the divider or border:

1. Click near the center of the line.
2. Drag the line horizontally, vertically, or diagonally, depending on the orientation of the line. For example, if the line is vertical, you can move it side to side.

To rotate the divider or border:

1. Click near either end of the line.
2. Drag the line in the direction that you want to rotate. For example, if you click on the right end of a horizontal divider and drag upward, the divider rotates in the counter-clockwise direction.

Adjusting Image Settings

Use the Control window to adjust settings for your document. You immediately see the corresponding effects on your image. These settings are available in PixelNhance:

- [Brightness and Contrast](#), on page 12
- [Levels \(Histogram\)](#), on page 13
- [Color Balance](#), on page 14
- [Saturation](#), on page 15
- [Tone Saturation](#), on page 16
- [Sharpness](#), on page 17
- [Noise Reduction](#), on page 18

To see real-time effects, use the graphical interface in the Control window to modify the settings; for example, drag the sliders with your mouse. For all controls, you can alternatively specify a numerical value, such as -20 to decrease contrast by 20%.

After you find the settings that you want, you can apply them to the open document. If you have the Levels controls open, you apply only the Levels settings, no matter what you did with other settings.

You can always return to apply settings that you adjusted earlier for the currently open document. For example, you first specify to increase the brightness by 10% and then move on to apply Noise Reduction settings without applying the Brightness setting. Your 10% increase setting is still there when you return to the Brightness / Contrast controls.

When you switch between controls without applying any adjusted settings, the document window reflects only the currently open settings. For example, after you switch from Brightness / Contrast to Noise Reduction, you no longer see the 10% brightness increase in the Current section of the image.

When you switch from Noise Reduction back to Brightness / Contrast after applying the Noise Reduction settings, however, the applied noise reduction remains, reflected in both the Original and Current sections of the image. The Current section also automatically reflects the 10% brightness increase that you previously specified.

Tip *Press the Float button if you want the Control window to always appear above other windows.*



Float Button

To adjust image settings in a document:

1. Open your image document.
2. In the Control window, click on the icon of the settings that you want to adjust.
3. Manipulate the controls and see the effects on your document.
You can click the Reset button to revert the current controls back to default. This reset does not undo any applied settings.
4. Click the Apply button to apply the currently open settings to your image.
5. Repeat steps 2 through 4 for all the settings that you want to adjust.

Tip To revert the document back to the settings that it was last saved with, select *Revert to Saved* from the Image menu. You undo any settings that you already applied to the document.

6. Save the document.

Using PixelNhnance with TIFFany3

You can drag the icon at the bottom right corner of the Control window into an Action Catalogue in TIFFany3, the image processing application from Caffeine Software. The currently open settings become an Action, a specific set of filter settings that you can customize and apply to any image in TIFFany3.

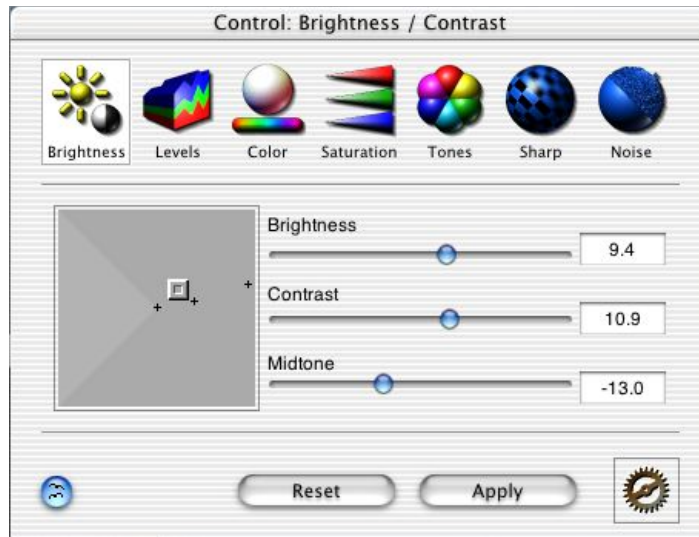


Dragging Noise Reduction Settings as Action into TIFFany3 Action Catalogue

For example, the Saturation setting is open in the Control window and set to -15. If you drag the icon into TIFFany3, you create an Action in TIFFany3 that decreases saturation in images by 15%. None of the other settings are included in this Action.

For more information about TIFFany3, see *Caffeine Software TIFFany3 User Guide*.

Brightness and Contrast



Use the Brightness and Contrast controls to adjust the overall brightness and contrast of your document, as well as the brightness of only the midtones. The midtones are the areas in the image that are neither highlights nor shadows.

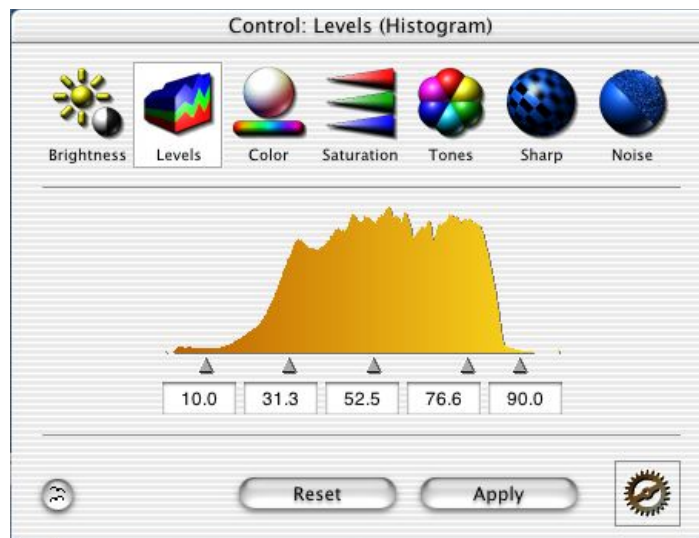
Move the sliders to the right to increase the values or to the left to decrease the values. You can alternatively enter the percentage that you want to increase or decrease the settings by. Use the box on the left to adjust both brightness and contrast at once. The setting depends on the direction that you move:

- **Up** - Increases brightness
- **Down** - Decreases brightness
- **Right** - Increases contrast
- **Left** - Decreases contrast

When you drag diagonally, you adjust both brightness and contrast according to the combination of the vertical and horizontal directions. For example, if you drag toward the bottom right corner of the box, you increase contrast and decrease brightness. In general, if you stay within the light gray triangle on the left side of the box, you should not lose any detail in the image as a result of contrast and brightness enhancements.

Tip *PixelNhan*ce automatically calculates three suggested settings, marked with a plus sign (+) in the box. These settings, although not always accurate, are usually helpful for pictures taken in the daytime.

Levels (Histogram)

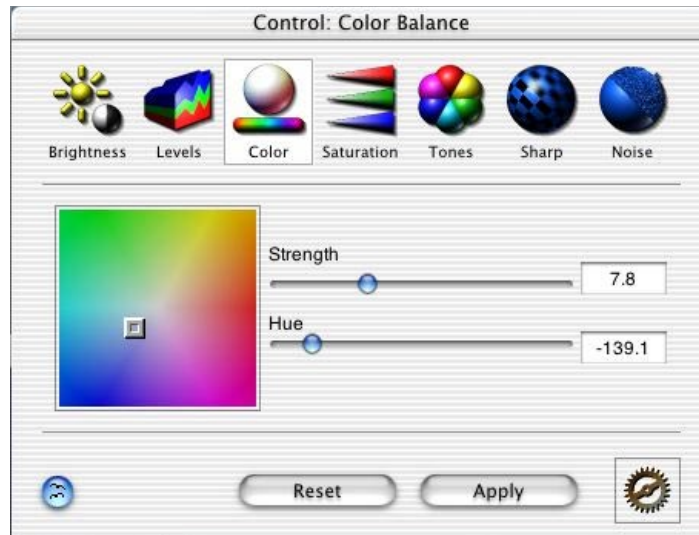


Use the Levels (Histogram) controls to enhance the contrast by expanding or compressing the dynamic range of brightness in your image. The histogram displays the brightness distribution — the left edge represents the black value and the right edge represents the white value. In the graph, you can see how much area in your document is black, white, or shades in between. The 0 value for black designates pixels with no shade of white, 100 designates pixels that are completely white, and 50, for example, designates pixels that are in the exact middle of the gradient between black and white.

You can adjust the five controls below the histogram to modify the range of brightness. You usually start with the black and white settings, moving both inward to increase the contrast in the image. As shown in the histogram above, you can safely move both controls by 10% because most areas of the image do not lie within the darkest and brightest ranges. All areas with 10% or less brightness becomes completely black, and areas with 90% or more brightness becomes completely white. The rest of the shades are compressed accordingly. As a result, you enhance the contrast of the darker and brighter areas of your document without losing the details to complete darkness or brightness.

You can also adjust the midtone level to increase or decrease the brightness of the overall image without affecting the shadow or highlight areas. Use the quarter-tone levels for even more detailed enhancements. Move outward the quarter-tone control between the black and midtone setting to bring out more detail in the shadow areas. Move the other quarter-tone control outward for more detail in the highlight areas.

Color Balance

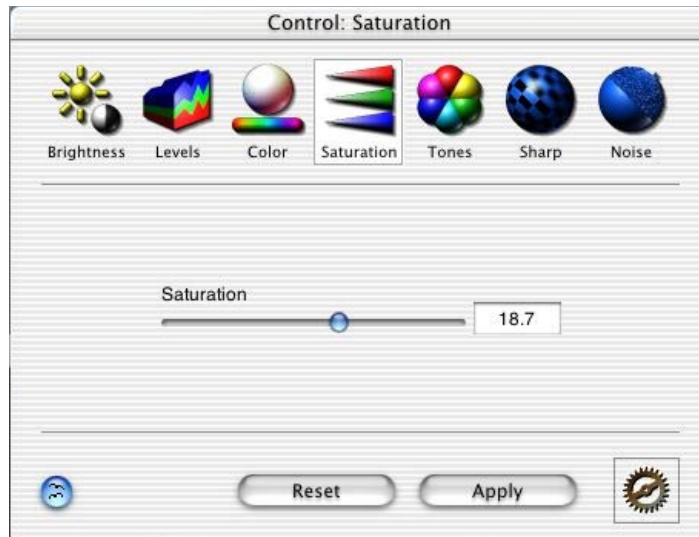


Use the Color Balance controls to adjust the color in your document. For example, your image has a yellow tint that you do not want. Select a color away from yellow in the spectrum and apply that hue to neutralize the color balance in the image.

The Hue setting signifies the color that you want to enhance in the document, and the Strength setting determines the intensity of the change. If you select a red hue with a strength of 20, you increase the red in the image by 20%. The number next to the Hue slider corresponds to the angle of the selection in the spectrum box on the left. For example, pure red is 0, and pure cyan is 180.

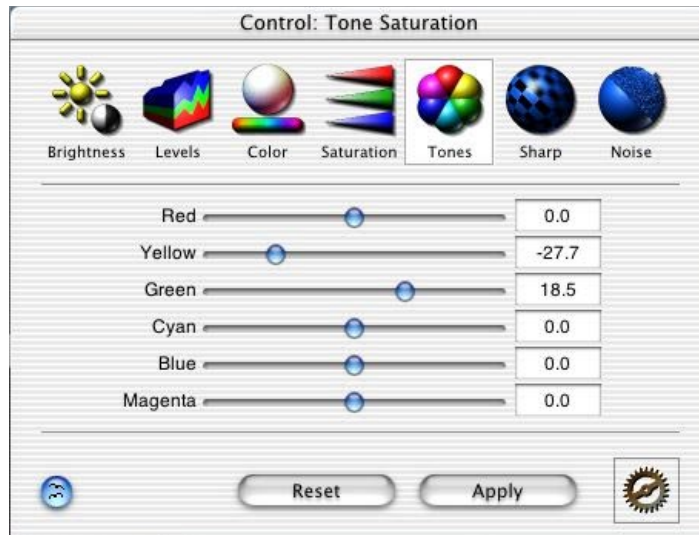
Use the spectrum box to adjust both hue and strength at the same time. To increase the strength, just move the selection toward the edge of the box. For example, for the most red possible, move the selection to the exact middle of the right edge of the box.

Saturation



Use the Saturation control to adjust the saturation in your image. Saturation is the richness or intensity of color. A document with no saturation at all is essentially grayscale, or black and white with shades of gray. You can increase or decrease saturation by percentage. For example, a setting of -10 decreases the saturation by 10%.

Tone Saturation

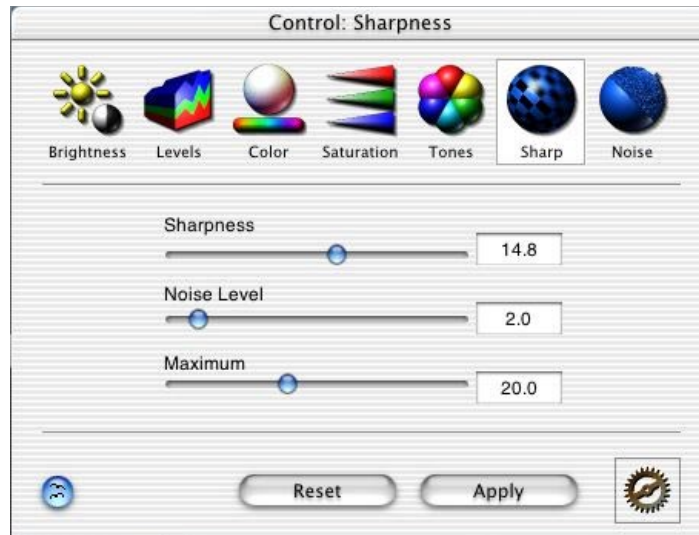


Use the Tone Saturation controls to adjust the saturation for particular tones in your image:

- Red
- Yellow
- Green
- Cyan
- Blue
- Magenta

For example, you can increase or decrease the saturation for just the green and magenta tones. These controls are especially helpful when you want to bring out or deemphasize certain colors. You can either increase or decrease the saturation up to a maximum of 50%.

Sharpness

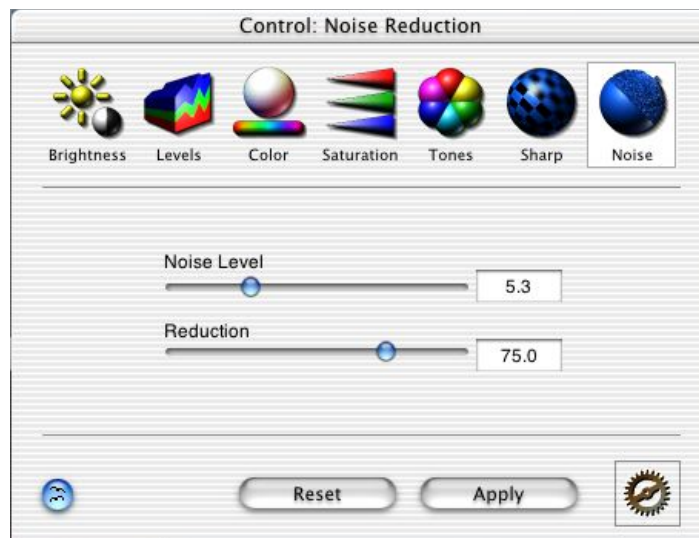


Use the Sharpness controls to adjust the sharpness of your image by either sharpening or blurring. To sharpen the document by 20%, set the Sharpness slider to 20. To blur the document by 25%, set the slider to -25.

Set the Noise Level slider to a threshold to prevent more noise, which can be created by small changes in brightness through the sharpening process. For example, increasing the sharpness by 15% in your image also happens to increase by 2.5% the brightness of certain pixels in an area of relatively uniform color. These pixels, with a brightness level which slightly deviates from that of surrounding pixels, would generate more noise. If you set the threshold at 5, PixelNhance does not touch these and any other pixels that would change by 5% or less in brightness when you apply the sharpness setting.

Adjust the Maximum slider for further control over the sharpening by specifying the maximum threshold of change in brightness. For example, if you set the maximum threshold at 50, PixelNhance leaves out any pixel that would change by more than 50% in brightness as a result of the sharpness setting. The maximum threshold ensures that you do not get areas that are too dark or too bright.

Noise Reduction



Use the Noise Reduction controls to reduce the noise in your image. Noise is created by pixels with a brightness level that randomly but slightly deviates from that of surrounding pixels in areas of uniform color.

First, you set the Noise Level slider while viewing an area of the image with relatively uniform color. As you increase the slider, PixelNance includes pixels with more deviance in brightness for noise reduction. For example, if the value is 2, the noise reduction applies only to pixels that deviate 2% or less in brightness from the surrounding pixels. Set the Noise Level threshold at the level of noise reduction that you want.

Next, specify the percentage of intensity for the noise reduction. For example, at 100%, all pixels within the Noise Level threshold are adjusted to the maximum.