Nikon

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PHOTO EDITING FOR PHOTOGRAPHERS

Capture NX

User's Manual

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Table of Contents

Introduction

Capture NX™ is a powerful editing and photographic processing application designed specifically for digital photographers. Its simple, straight-forward user interface makes image enhancement easy, and exclusive features based on U Point™ photo editing technology provide a fully non-destructive workflow, which takes the guess work out of editing.

Capture NX's patented U Point technology gives the user a number of unique tools, the most remarkable being the Control Point, which is used to adjust tone and color in an image. Control Points allow you to work directly on the image without the need for selections or layers and to apply your enhancements globally or selectively, giving you the power to increasingly refine your enhancements in order to create a natural-looking effect. Control Points let you apply and undo enhancements easily and quickly without compromising image integrity.

When you are ready to save and archive your images, Capture NX enables you to save your image in the NEF file format, which saves your image file without degrading your image.

Control Points are a unique editing concept that gives the user a completely different kind of control over color and tone enhancement in an image. A Control Point is placed directly on the image and its value is defined by the user. Each Control Point operates together with the next, affecting the image progressively as more and more Control Points are applied. Select a Control Point to adjust color or to control the White, Black, and Neutral points. Because the enhancements you make are maintained separately from the original image data and without regard for the original file format, Capture NX enables you to make and change image enhancements repeatedly without degrading the quality of the image. Capture NX protects the original data as well as your enhancements when you save your image as a NEF file. With the NEF file format, you can always open the image and the enhancements, and close the image at any time without ever degrading the original image data.

RAW File Format Benefits

Shooting RAW has a number of distinct advantages over shooting and saving processed files. The RAW format records important archival information about the conditions under which the image was captured. This information can be used by Capture NX to make unique adjustments to enhance the image. The following are some of the camera settings and RAW adjustments that can be applied within Capture NX:

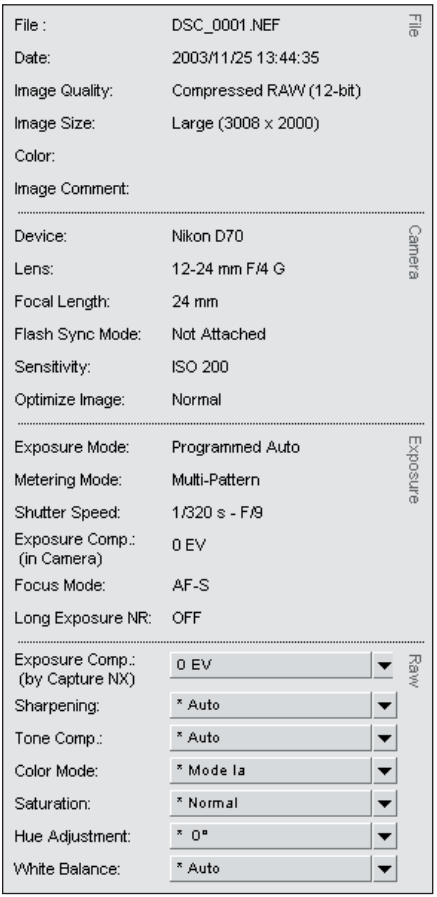
- Color Mode (Page 45)
- White Balance (Page 46)
- Tone Compensation (Page 48)
- Saturation (Page 49)
- Sharpening (Page 49)
- Exposure Compensation (Capture NX) (Page 50)
- Hue Adjustment (Page 50)
- Color Moiré Reduction (Page 51)
- Dust Off (page 51)
- Auto Color Aberration (page 52)
- Vignette Control (page 52)

Capture NX contains full support for Nikon RAW NEF images and can be used with any JPEG and TIFF (RGB or LAB based) files.

With JPEG and TIFF files, you can begin enhancing the files immediately by selecting one of the enhancements from the Menus.

Camera Relationship

Capture NX was designed to support all of the features of your Nikon camera, allowing you to change many of the settings that you applied to the image in your camera. After opening a RAW NEF file within Capture NX, you can view the shooting, camera, and exposure information of the file within the Camera Settings Palette.



To display the contents of the Camera Settings Palette, click on the + button within the Camera Settings Palette.

Settings that you can edit have a pull-down Menu, which gives you access to the various controls for each of these settings. Within the Camera Settings Palette you are given access to a number of adjustments that are unique to RAW NEF files. These adjustments can be located in the RAW section of the Camera Settings Palette.

For more information regarding the various controls provided within the Camera Settings Palette, please see page 39.

System Requirements & Installation

System Requirements

Operating System

Windows XP Home Edition, Windows XP Professional, Windows 2000 Professional

Mac OS X (version 10.3.9 or later)

Processor

WINDOWS

Pentium III 1GHz or better (Pentium 4 2GHz or better recommended)

MACINTOSH

G4, G5

RAM

256 MB minimum (1GB recommended)

Hard-disk space

200 MB required for installation

Monitor resolution

800 × 600 pixels (1024 x 768 or higher recommended) with 16-bit color (High Color/thousands of colors) with 24-bit color (True Color/millions of colors) recommended

Installation

To install Capture NX, place the Capture NX setup CD into your computer's CD or DVD drive. Open the CD either through the My Computer icon on your desktop (Windows) or by double-clicking on the CD icon that appears on your desktop (Mac OS).

Double-click on the Setup icon that appears within the window that is displayed to begin the setup wizard.

Please note: *On Windows machines, Microsoft .NET Framework version 1.1 will automatically be installed if not already present on the computer. The computer must be restarted when installation is complete.*

Once the setup wizard has installed the files onto your computer, you will be provided with options to setup your color management preferences. The color management settings provided within the Setup Wizard enables you to

set the default functionality for Capture NX, and can be later changed within the Preferences.

You are provided with two options to set the working color space:

Use the color space of the file to be opened as the working color space
This option causes Capture NX to always use the profile embedded in the image that is opened as the working color space.

Please note: *If Capture NX cannot determine the profile of the embedded image, the profile identified as the Default RGB color space will be used as the working space for that image.*

Always use the default RGB color space as the working color space
This option enables the option **Use This Instead of Embedded Profile** within the Color Management section of the Capture NX Preferences. This option causes Capture NX to automatically convert the image from the embedded profile to the profile as defined in the Default RGB space.

You are also provided with the ability to select the profile to use as the Default RGB space:

Default RGB Space
Use this option to set the RGB space that is used for your images. This profile is used when the **Always use the default RGB color space as the working color space** option is selected, or if the image's color space cannot be determined when the **Use the color space of the file to be opened as the working color space** option is selected.

After you have selected the color management options to utilize for your copy of Capture NX, you can complete the installation process.

If prompted to supply a product key when starting Capture NX, enter your name and product key.

The product key may be found on the CD-ROM case. **Do not lose this key.** It is required when installing or upgrading this software and cannot be replaced if lost.

Please note: *Nikon cannot guarantee the operation of Capture NX when using other Nikon software at the same time.*

U Point™ Technology

A key feature in Capture NX is U Point technology. The controls powered by U Point technology enable you to modify sections of a photo directly, without having to go through the time-consuming process of making a mask required in other software applications.

U Point technology powers Capture NX's series of Control Points: The Color Control Point, the Black/White/Neutral Control Points, and the Red-Eye Control Point. These Control Points enable you to create color and tonal enhancements directly on the image, without first making selections. You can also see the effects of a Control Point immediately.

The Control Points powered by U Point technology enable you to work with your images without the need to perform a complicated series of operations in a particular order. Each Control Point works together with other Control Points of the same type. With every Control Point that you apply to the image comes greater control over specific objects in the image. The more Color Control Points you apply, for example, the greater control you have over color in the image. The additional Control Points ensure that the adjustments you make are being applied to the current object only, and placing a Control Point on an object with default settings prevents other Control Points from affecting that object.

While the Black, White, and Neutral Control Points were designed to control the entire image globally, both the Red-Eye and Color Control Points were designed to control elements locally.

The Color Control Points work by identifying an object based on a number of criteria. When you place your first Color Control Point, the U Point technology identifies the unique elements of the object on which you place a Control Point, including its position, color, saturation, and texture. By identifying these elements, the Color Control Point can determine the boundaries of the object in order to affect only that object and objects with like elements. Through a unique mixing function, the effects of the Color Control Point are applied throughout the image so as to create a natural-looking, seamless result. On the next page you will find a series of steps showing the original image, the effect of the Control Point, and the selection of the Control Point.

Step 1. A Color Control Point is placed on the sky for greater darkness and saturation. Although this Control Point mainly affects the sky, some of the clouds are affected as well.

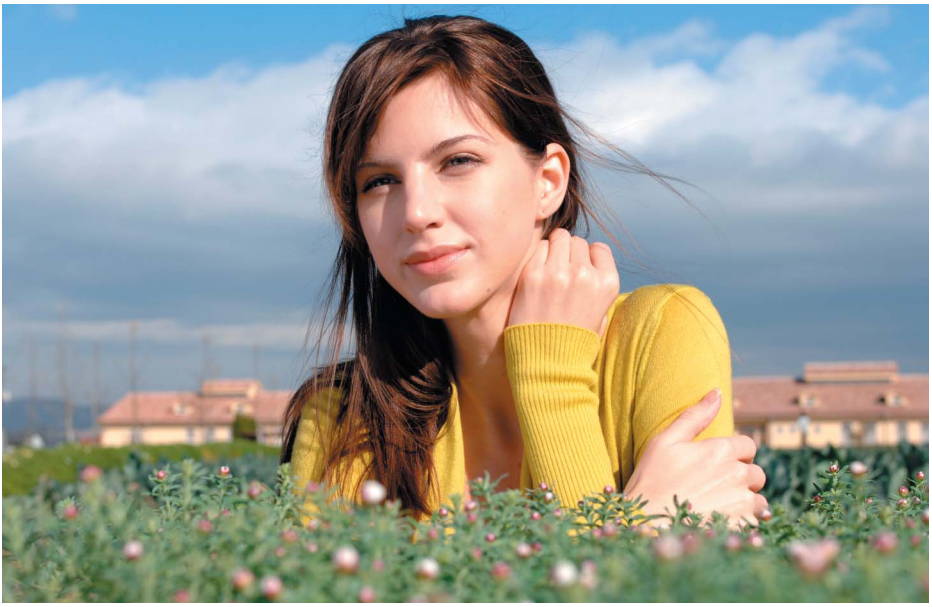
Step 1. Selection

Step 2. Next, a Color Control Point is placed to identify the clouds in the image. This new Control Point applies only to tones in the clouds, not the sky, and prevents the first Control Point from affecting the clouds.

Step 2. Selection

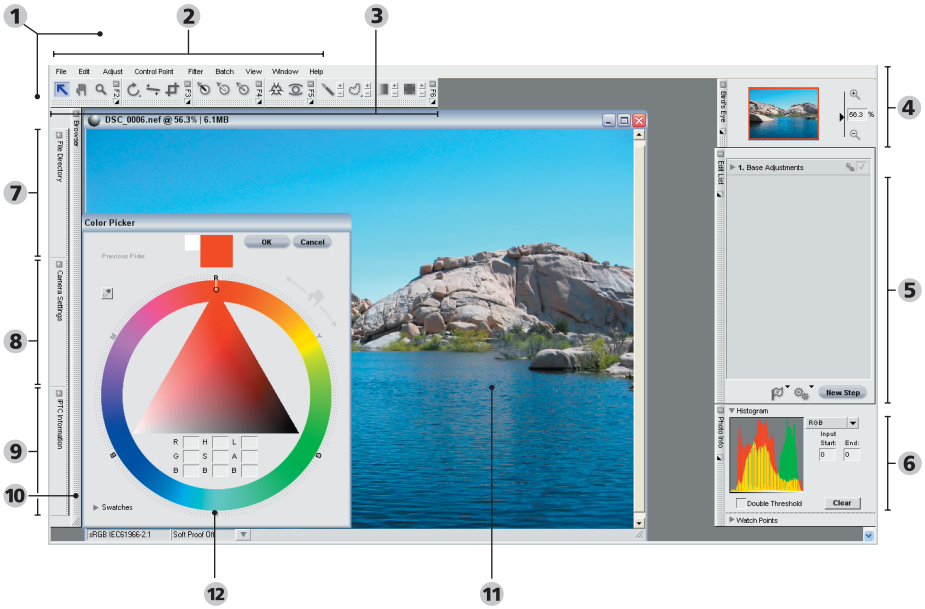
Step 3. Finally, Control Points are added for skin tones and foliage. A Control Point added to the model's face brightens and increases the vibrancy of the skin. Another added to the foliage darkens the leaves and draws attention to the model.

Step 3. Selection



Before

After



The Capture NX Interface

1 Editor (*Page 13*) 2 Menu Bar (*Page 113-208*) 3 Toolbar (*Page 71-94*)

4 Bird's Eye (*Page 97*) 5 Edit List (*Page 43*) 6 Photo Info (*Page 99*)

7 File Directory (*Page 37*) 8 Camera Settings (*Page 39*) 9 IPTC (*Page 41*)

10 Browser (*Page 29*) 11 Image Window (*Page 105*) 12 Color Picker (*Page 109*)

The Capture NX Interface

Capture NX's interface was designed to put all of the important tools for enhancing a digital photograph right at your fingertips. This section contains a brief overview of each of the main elements that make up the Capture NX interface.

Editor

The main window of Capture NX, the Editor, is the window you see when you are editing images outside of the Browser. Within the Editor you can open and close images as well as access each of the different control palettes.

Menu Bar

The Menu Bar provides access to nearly all of the features and enhancements within Capture NX. Please see chapters 20 through 28 for information on the features located within each Menu.

Toolbar

The Toolbar is made up of five smaller Toolbars, each containing tools that provide similar controls. You can use these tools to perform various edits, from zooming to rotating the image to applying enhancements selectively. Please see pages 71-94 for more information on each of the individual Toolbars.

Bird's Eye

The Bird's Eye Palette shows either a portion of the image that is visible in the active image window or the position of the area displayed within the Light Table mode of the Browser. The portion of the image or the Browser visible in the active image window is indicated by a red outline within the Bird's Eye Palette. For more information on the Bird's Eye Palette, please see page 97.

Edit List

The Edit List is the master control list for the features and enhancements of Capture NX. Anything that affects your image will have an entry within the Edit List. Every entry can be removed, altered, or duplicated from this list.

The Edit List automatically organizes each entry by Steps. This provides you with the ability to turn on or off one or more steps at any time to monitor the effect of that step on your image. You can selectively apply steps with the selective tools found in the Toolbar, you

can place multiple enhancements within one step by linking enhancements, and you can create batch processes based on the contents of the steps. You can also manually create new steps using the New Step button.

The Edit List also contains a special step called the Base Adjustments step. The Base Adjustments step contains all of the enhancements unique to RAW images, as well as enhancements that can be used to prepare your images.

For more information regarding the Edit List and all of its uses and features, please see page 43.

Photo Info

The Photo Info Palette displays the information you choose to display next to your image to help you determine the optimal settings you want to use for each enhancement. The Photo Info Palette contains a live histogram, a graphic interactive display that reflects the statistical makeup of the image. Additionally, through the use of Watch Points, you can monitor the effects of the changes you make to the color values in the image. Please go to page 99 for more information regarding the Photo Info Palette.

File Directory

The File Directory provides you with an easy-to-access Palette which displays the contents of an entire folder in the Browser. Please see page 37 for a complete description of the File Directory Palette.

Camera Settings

By opening the Camera Settings Palette, you can see all of the camera-generated data for the current image, from information regarding the camera that created the image to exposure information. Additionally, the Camera Settings Palette enables you to edit a number of settings which were set within the camera for RAW NEF image files. For a complete description of the Camera Settings Palette, please see page 39.

IPTC

The IPTC Palette provides you with a place that you can view, add, or modify information for your images, such as the caption, keywords, categories, and copyright information. Please see page 41 for more information on the IPTC Palette.

Browser

Capture NX's Browser enables you to browse, sort, and organize your images, as well as to rotate or apply batch processes to multiple images simultaneously. Images can be opened from the Browser into the Editor to provide additional control. Please see page 29 for information on the Browser.

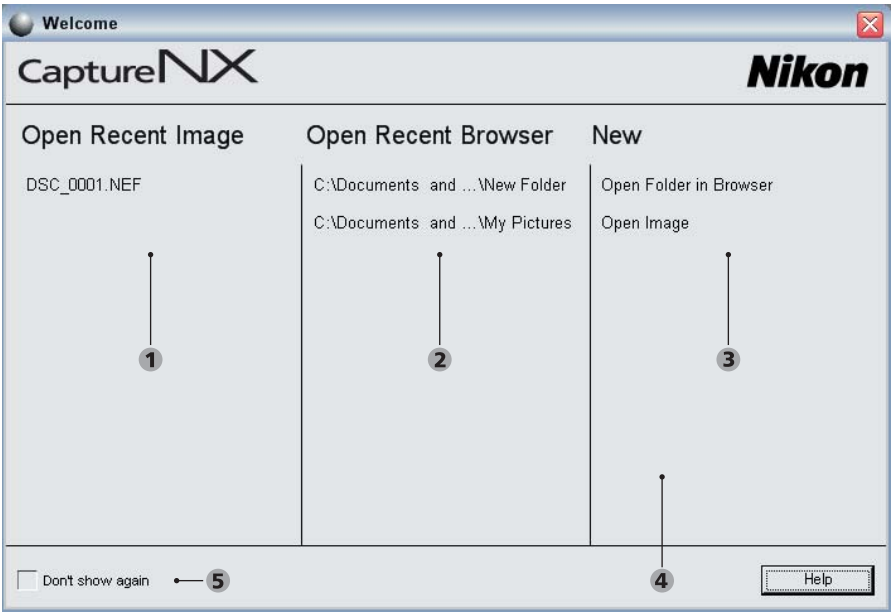
Image Window

An Image Window displays an image within Capture NX, along with important information and controls for that image. Please see page 105 for information regarding the features and functionality of an Image Window.

Getting Started

Opening Capture NX

Capture NX can be opened by selecting Capture NX from the Start Menu within Windows or by double-clicking on the application icon in the Applications folder within the Mac OS.



Welcome Screen

1 Open Recent Image 2 Open Recent Browser 3 New 4 Drag an Image Here (*Mac Only*)
5 Don't Show Again

Windows OS:

Click on the Start button at the bottom of your screen and select either All Programs (Windows XP) or Programs (all other Windows versions). Navigate to the Capture NX folder and select Capture NX to launch the application.

Mac OS:

Double-click on the Macintosh HD icon on your desktop and navigate to the Applications folder. Double-click on the Capture NX folder and then double-click on the Capture NX application icon to launch the application. Alternatively, if you have selected to add Capture NX to your dock, simply click on the Capture NX icon within the dock to launch the application.

Welcome Screen

Upon launching, Capture NX will display the Welcome Screen, which lists the last files and folders that you accessed, and give you the option to open an image or a folder in the Browser.

Open Recent Image

This section contains a list of the most recent images that were opened within Capture NX. The last image edited can be found at the top of the list, with the remaining images you have edited listed in chronological steps. Double-click on any of these images to open them immediately within the Editor.

Open Recent Browser

This section contains a list of the most recent folders viewed within the Browser, with the most recent folder displayed at the top. Other recently browsed folders are displayed beneath that folder in chronological order. Double-click on one of the displayed folders to open that folder immediately within the Browser.

New

This section enables you to browse for an image or folder to open within Capture NX. Click on the Open Image button to display an Open Image window. Click on the Open Folder button within the Browser to display a folder browser window, which will enable you to browse for a folder to display within Capture NX's Browser.

Drag an Image Here Section

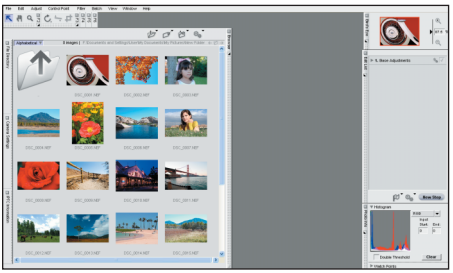
The Mac OS version of Capture NX contains an empty area within the Welcome Screen labeled "Drag an image here to open it." Dragging an image into this space from the Mac OS Finder opens that image immediately within Capture NX. In the Windows OS you can drag an image into any part of the Capture NX window to open it.

Don't Show Again

Select this checkbox to prevent the Welcome Screen from appearing when Capture NX is launched. You can navigate to the **Help** Menu at any time, open the Welcome Screen, and uncheck the Don't Show Again box in order to display the Welcome Screen whenever Capture NX is launched.

Browsing and Opening Images

Capture NX provides you with a number of ways of locating and opening images in order to enhance them: you can use Capture NX's Browser, you can navigate through your hard disk to locate a file with Open Image, or you can use PictureProject to send one or more images directly to Capture NX to enhance.



Using the Browser

Capture NX contains an enhanced browser that provides you with advanced labeling, sorting, and editing functions. You can use the Browser to rotate or apply batch processes directly to one or more thumbnails, or you can view multiple images and select the best image from the thumbnails to open directly within Capture NX's Editor.

To view the Browser, click on the + button of the Browser located at the top of the Browser frame. The Browser will by default display the contents of the My Pictures folder (Windows) or the Pictures (Mac OS) folder.

You can then navigate within this folder by double-clicking on any of the folders displayed within the Browser. Once you have found the image you want to edit, double-click on that image.

If you would like to navigate to a different window other than the My Pictures (Windows) or the Pictures folder (Mac OS), click on the + button within the File Directory frame. This will cause the File Directory Palette to become visible. Within the File Directory Palette you are provided with a full directory list, enabling you to navigate to any folder on your hard drive.

Using Open Image

By selecting Open Image from the **File** Menu, you can navigate to any folder on your hard drive and open a single photo. By default, Capture NX will display the My Pictures folder (Windows) or the Pictures folder (Mac OS).

Using PictureProject

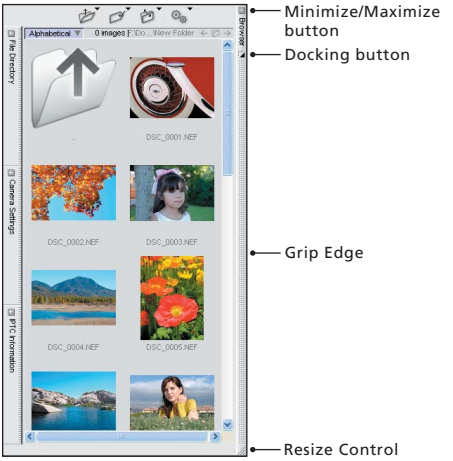
PictureProject (Version 1.6.4 and later) supports opening one or more images directly within Capture NX.

Begin by highlighting one or more images within the current view of PictureProject and clicking on the Edit in Capture NX button. This will cause all of the images you highlighted to open within the Editor of Capture NX.

Window Functionality Within Capture NX

Each window within Capture NX provides you with a number of different controls for that window.

Minimize / Maximize Button



This button either expands or collapses a window. In some situations, the window cannot be collapsed until the operation within the window has been completed.

Docking Button

This button is visible only when the window has been expanded. This button enables you to undock the window, allowing that window to float freely on your desktop. This can be handy if you utilize two monitors and you want to place the window on the second monitor, or if you want to bring one of the Toolbars closer to your image. By clicking on this button again, you can re-dock the window to its default location.

Grip Edge

This edge provides you with an area to grab and reposition the window. If the window is currently docked, clicking and dragging the window with this edge will automatically undock the window and allow you to reposition the window anywhere on your screen. To re-dock the window to its normal location, simply click on the button.

Resize Control

This part of the window enables you to resize the window to suit your needs. Simply click here and drag to change the window's size. Some windows have a maximum and minimum size, which may prevent them from becoming larger or smaller than that maximum or minimum size.

Exiting Capture NX

To close the Capture NX window and exit Capture NX, select Exit from the **File** Menu (Windows) or select Exit from the **Capture NX** Menu (Mac OS).

If there are any unsaved images open, a warning message will remind you to save those images. If there are any images that are currently awaiting batch processing, a message will remind you that you have unprocessed images in the Processing Queue.

File Format Differences

Capture NX supports three different file formats that can be used to save any edited image file: the NEF format, the TIFF format, and the JPEG format.

NEF

The NEF, or Nikon Electronic image Format, was designed to act as the archive file for your images. The NEF file format saves the complete contents of the Edit List along with the full image information from the original image, and all changes made to the image are stored separately within the file. The NEF format maintains the high level of quality of the original file without any loss in image quality while maintaining a relatively small image size. NEF format images remain nearly the same size as the original image file, regardless of the number of enhancements that are applied within the image.

Capture NX utilizes a new cache system with NEF files that helps increase the speed of opening NEF images that were previously edited within Capture NX. This cache system creates a cache file whenever an NEF image is saved which Capture NX can use the next time that image is opened. By utilizing the cache system, Capture NX can utilize cache file data to reduce the amount of data that needs to be processed, thereby greatly increasing the speed of opening NEF images. Please see page 133 for information on the cache system.

Please note: *Previous versions of Nikon Capture and PictureProject are not able to display enhancements that are unique to Capture NX within NEF files. If you would like to share your NEF files with someone who does not have a copy of Capture NX, it is recommended that you save a copy of your image into the TIFF or JPEG file format to ensure that all of the enhancements that you have made are available.*

NEF image files are generated by all Nikon Digital SLR cameras as well as a number of COOLPIX cameras. Some of the Digital SLR cameras offer you the ability to create an uncompressed NEF image file. These uncompressed NEF image files can later be compressed within Capture NX, if you choose, to save additional hard disk space.

Please note: *Compressed NEF files cannot be saved in Capture NX as uncompressed NEF image files.*

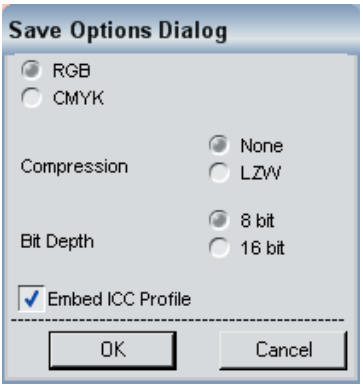
RAW FILE SUPPORT

Capture NX provides RAW support to the entire line of Nikon digital cameras that produce NEF RAW files. Supported cameras include:

COOLPIX 5000	D1
COOLPIX 5400	D1X
COOLPIX 5700	D1H
COOLPIX 8400	D2X
COOLPIX 8700	D2Xs
COOLPIX 8800	D2H
D50	D2Hs
D70S	D70
D200	D100

TIFF

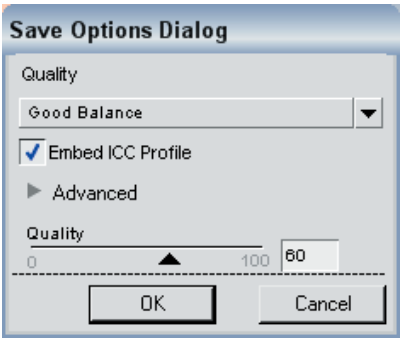
The TIFF file format is commonly used as a standard for high-quality image reproduction. Saving your image to this format will result in a file that contains the final state of your image as you see it on your monitor, with full image quality. Once an image is saved to the TIFF format and closed, you will not be able to access the contents of the Edit List to make any adjustments to the enhancements that were applied to the image.



The TIFF file format provides you with the choice to compress the image using a lossless compression, the choice to save the file as a 16-bit or an 8-bit image (RGB only), and the ability to save the image with RGB or CMYK data. The option to save the image as a 16-bit file is only provided if original image was a RAW or 16-bit file. Changing the image from 16-bit to 8-bit will make the image file smaller, but doing so may also reduce the level of quality of the image. It is recommended that you create an 8-bit copy of your image for situations in which only 8-bit files are compatible.

Please Note: *TIFF saved with CMYK data can only be saved with 8-bits per channel of color information.*

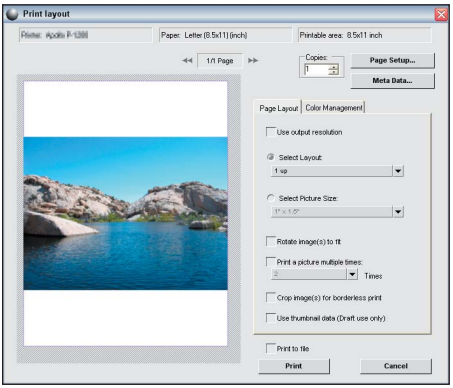
JPEG



One of the most widely used file formats, the JPEG file format enables you to save a greater number of images using the same amount of hard disk space as the other file formats. To create such a small file size, a form of compression is used that irreversibly affects the quality of the image. Because of this compression, it is recommended that you only use the JPEG file format for images that will be distributed electronically, or when a small image file is required.

How to Print

Printing is very easy in Capture NX. You can select Print from the **File** Menu at any time to print the current image, or you can select multiple images from within the Browser to create a Print Package. Print Packages are essentially a collection of images printed at the same time, often with more than one image appearing on the same page. Print Packages make the most out of your printer and paper, enabling you to create proof sheets so that you can review and select images based on the output, rather than the computer monitor.

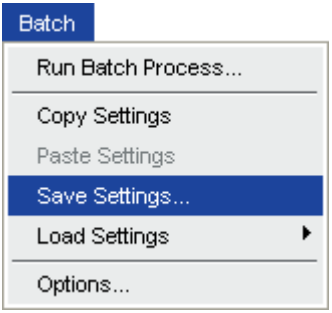


Once you have selected Print from the **File** Menu, you can identify how to color manage your prints and whether or not you want to create a Print Package. For a complete description of the various settings within the Capture NX Print dialog, please see page 117.

Batch Processing

Batch Processing is the automatic application of one or more enhancements to a series of images. Typically a photographer will use a batch process to apply a predefined series of adjustments to several images at once. Capture NX supports a number of batch processing methods. You can run a traditional Batch Process, selecting a folder of images and a Settings File to apply to those images, you can copy and paste your enhancements from one image to another, or you can select multiple images in the Browser and apply a Settings File or paste some enhancements directly to those images. One method of applying a batch process is to create a Settings File that contains a series of enhancements to apply to your image.

Creating a Settings File



Settings Files consist of a series of instructions that Capture NX can use to enhance one or more images in the future. Settings Files are created by identifying enhancements that you want to save from the current image. Later, when you apply the new Settings File to an image or group of images, Capture NX will apply the same enhancements with the same settings

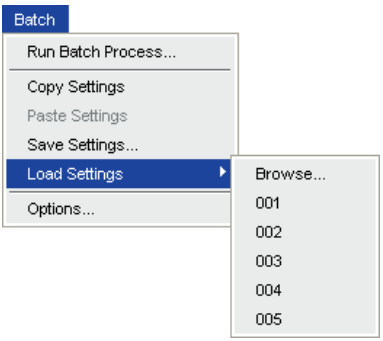
to those images, just as if you had applied them to each image individually. Settings Files are often used to apply a unique series of enhancements that can work for a wide variety of images, such as applying a black and white conversion to be used as a basis for an additional enhancement, or adding a warm sepia-tone to the image.

To create a Settings File, open an image, either by using the Open Image command or by double-clicking on an image in the Browser.

Make whatever enhancements and adjustments that are necessary to the image. Once you have completed the adjustments to the image, you can start creating the Settings File.

Navigate to the **Batch** Menu and select Save Settings. This will call up the Save Settings dialog window, which includes a representation of the Edit List from the current image, complete with the image settings. Simply check off the different steps from this image that you want to save into the Settings File. Once you have selected all of the enhancements and steps that you would like to apply to additional images, enter a name for the Settings File. While it is recommended that you leave the Settings File in the default folder location, since this will make it easy to locate when you are ready to apply a batch process, you are given the option to select a different location to place the Settings File. For more information regarding the Save Settings command, please see page 182.

How to Apply a Batch Process With a Settings File

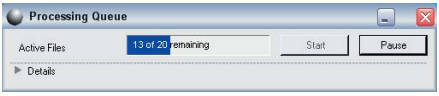


Once you have created a Settings File, you can begin applying the enhancements from within that Settings File to any image, either within the editor, within the Browser, or even to a folder on your computer.

To apply a batch process in the Editor or Browser, navigate to the Load Settings section of the Batch Menu and locate the Settings File that you want to apply. By selecting the Settings File from this location, you will apply those settings either to the current image in the editor or to the selected files within the Browser.

If you are applying a Settings File to multiple images in the Browser, the thumbnails for the images will automatically become updated and a small icon will appear next to each selected image, indicating that it needs to be processed. A Processing Queue window will also appear, enabling you to begin the batch process. Click on the Start button to begin processing the images with the default settings. By default, the batch process will save the

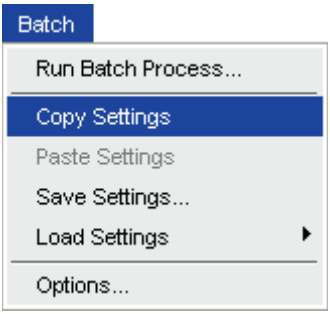
images with the NEF file format with the same name and in the same folder as the original image.



You are provided with the option within the Processing Queue of selecting a different file format, destination folder, and file name. For more information on the Processing Queue, please see page 184.

How to Apply a Batch Process by Copying and Pasting Enhancements

While Settings Files are very useful if you have a series of enhancements that can be applied to a large number of images, there may be instances where you may want to apply a series of enhancements to a small batch of images. By first enhancing one of the images from the series, you can copy and paste the enhancements to any number of images without going through the process of creating a Settings File.



To begin the copy and paste method, open an image that is representative of the range of images in the batch. Perform whatever enhancements you think appropriate to the image, navigate to the **Batch** Menu, and select Copy Settings. By default, Capture NX will copy all of the enhancements that are applied to the representative image. If you would like to copy only individual enhancements, simply click on an enhancement within the Edit List to highlight it prior to selecting Copy Settings. If you would like to highlight and select more than one enhancement, hold the Ctrl (Windows) or Command (Mac OS) keys while selecting enhancements from the Edit List. This will select multiple enhancements to be copied once you select the Copy Settings option.

After you have copied the desired settings, locate the images to which you want to apply the enhancements. You can either select a different image that you have opened within the Editor, or you can select one or more images from within the Browser. Navigate again to the **Batch** Menu and select Paste Enhancements. This will apply all of the enhancements that you have selected and copied into the target images. It is important to note that all of the new enhancements will be applied in the same order that they were applied in the representative image, but they will be applied after any enhancements that already existed within the target images.

How to Apply a Batch Process in the Browser

In addition to being able to apply batch processes within the Editor or using the Batch Process feature, Capture NX offers you the ability to apply a batch process directly within the Browser.

Begin by selecting and highlighting any number of images from within the Browser. Next, select the Settings file you wish to apply to those images by navigating to Load menu within the **Batch** menu. After you have selected the Settings File to apply from the **Batch** menu, the Processing Queue window will appear, enabling you to start the batch process at any point. Once you select the Start button within the Processing Queue, Capture NX will process each of the images that you selected to enhance using the default saving settings. This saves the images using the NEF file format in the same folder location with the same file name. If you would like to change these settings, click on the  button within the Processing Queue to display the full set of controls provided within the Processing Queue.

You are provided the option within the Processing Queue of selecting a different file format, a different destination folder, and a different file name.
 For more information on the Processing Queue, please see page 184.

The Browser

Capture NX contains a very powerful browser that enables you to browse, sort, and organize your images, as well as to rotate or apply batch processes to multiple images simultaneously.

The Browser

1 Inverse Sort Button (*Page 30*) **2** Folder Menu (*Page 31*) **3** Label Menu (*Page 32*)
4 Sort Menu (*Page 34*) **5** Batch Menu (*Page 34*)

You can access the Browser in two different ways:

1. By clicking on the + button on the docked Browser bar.

2. By selecting the Open Folder in Browser selection from the **File** Menu.

Once the Browser is open, you can navigate to different folders in a number of ways: by double-clicking on a folder icon within the Browser window, by using the File Directory Palette or by using the Open command within the Folder Menu of the Browser.

Please see page 37 for more information regarding the File Directory feature.

Use the Direct Select Tool to select and move images within the Browser. Use the Hand Tool to pan throughout the Browser. The Zoom Tool enables you to zoom in and out of the Browser, increasing and decreasing the size of the thumbnails. Additionally, while you have selected the Zoom Tool, rolling over an image will cause a larger version of that image to become visible.

Within the Browser, you are able to control the location of the current window that you are viewing as well as four Menus that contain controls designed to work specifically within the Browser.

Under the four folder buttons are commands that control the location of the current folder.

Folder Back

This button navigates to the last folder that you opened within the Browser. This button is not accessible when viewing the first folder of that editing session.

Folder Open

This button opens a list of previously viewed folders. You can then select one of the folders that you previously viewed to quickly navigate to that folder.

Folder Forward

This button navigates back to the last folder that you viewed before using the Folder Back button. This button is not accessible until you use the Folder Back button once.

Inverse Sort Button

This button reverses the order of the images displayed within the Browser. You can invert the sort direction at any time, including after using any of the sort options such as the Alphabetical, Date, or Label sorting methods.

By right-clicking (Windows) or control-clicking (Mac OS), you are provided with additional controls for your images within a contextual Menu. Opening this Menu on an image within the Browser, you can:

➲ Open an image or group of images.

➲ Compare images either in the Browser or in the Editor. Please see

page 199 for additional information regarding comparing.

➲ Label your images. Please see page 32 for additional information on labeling images.

➲ Rename your images using the same rename functionality found in the Batch process. Please see page 185 for additional information regarding renaming images.

➲ Copy, Paste, and Load settings to apply in a batch process. Please see page 181 for information regarding batch processes.

Folder Menu

The Folder Menu within the Browser contains different controls for the view of the current folder.

Open

Select this option to open a folder browser dialog that enables you to locate a folder to display within the Browser.

Open in Split Window

Select this option to open a folder browser dialog that enables you to locate a folder to display in an additional browser window that becomes available next to the current folder. By opening two different folders, you can quickly sort images from one location into another.

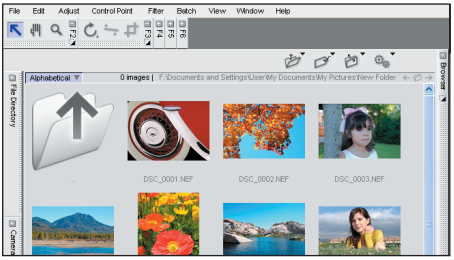
New Folder

This option creates a new unnamed folder inside the current folder that you are viewing within the Browser window.

View

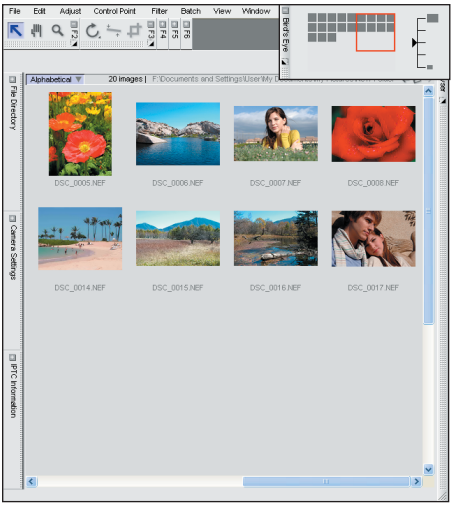
The View sub-Menu enables you to choose from different methods to view the contents of the current folder.

ROWS



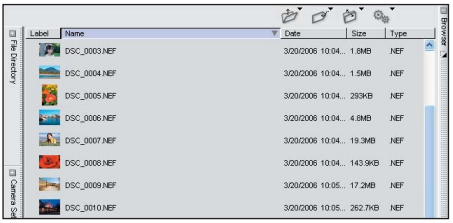
The Rows view is the default view for the Browser. This view causes the images to become displayed in a row format; resizing the Browser will cause the images to become resorted.

LIGHT TABLE



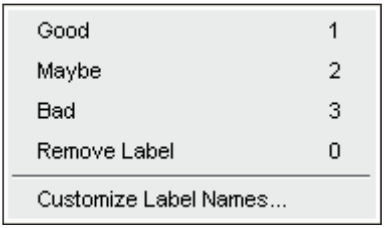
The Light Table view simulates a light table; resizing the Browser will not resort the images. You can navigate both horizontally and vertically through the Light Table view. The Bird's Eye Palette is accessible within this view to see your current location in relation to the images on the Light Table.

DETAILS



This view places important information about each image in a column and enables you to sort by each of the columns.

Label Menu



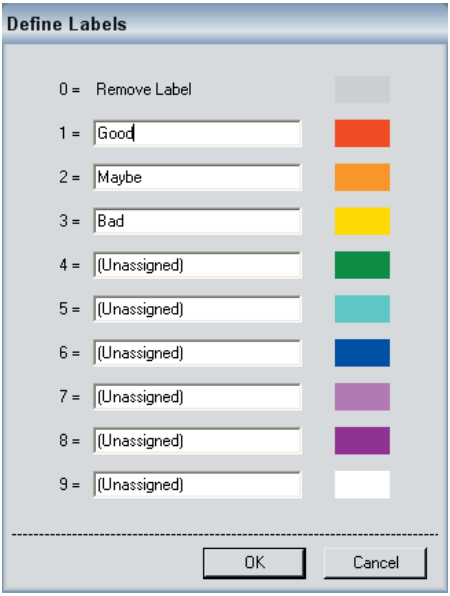
The Label Menu within the Browser contains tools to assist you with labeling your images, which is important when it comes time to sort and archive your images.

Available Labels

Capture NX by default has four labels available within the Label Menu: Unlabeled, Good, Bad, and Maybe. You can personalize and use up to nine labels, plus Unlabeled. Each label has a preset number which indicates the color, shortcut, and icon that is used for that particular label. The shortcut

is essentially the number of the label. For example, you can set an image to Unlabeled with the shortcut of 0. To remove an image's label, simply highlight it and press the 0 key on your keyboard.

Customize Label Names



The Customize Label Names command will open the Customize Label Names dialog. In this dialog you can identify the names of up to nine individualized labels. If you do not want to use a label, simply delete the text within the associated box, and that label will be removed from the Label Menu.

Sort Menu

The Sort Menu within the Browser enables you to change the arrangement of your images within the Browser. You may at any time rearrange the images manually by clicking and dragging an image to the desired location.

Alphabetical

Choose this sort method to arrange the images alphabetically, based on the file's name.

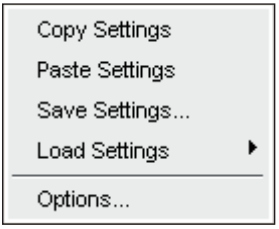
Date

Choose this sort method to arrange the images chronologically, based on the creation of the image.

By Labels

This sub-menu contains the current available labels and enables you to choose to display only images labeled with one of those available labels. By selecting any of the options within this Menu, you will switch the view to the Sort By Labels view, which shows a list of all of the possible labels with a Show/Hide Triangle next to the label name. Clicking on the ▶ button will expand that label area and show you all of the images with that label. To switch back to the normal view, select one of the other sorting methods, such as Alphabetical or Date.

Batch Menu

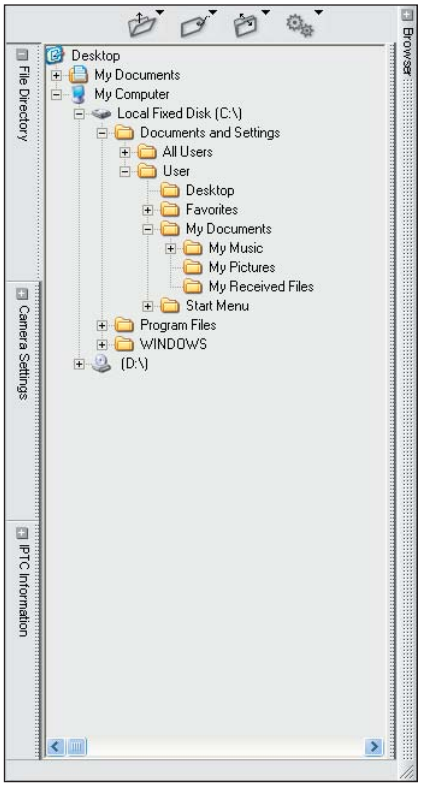


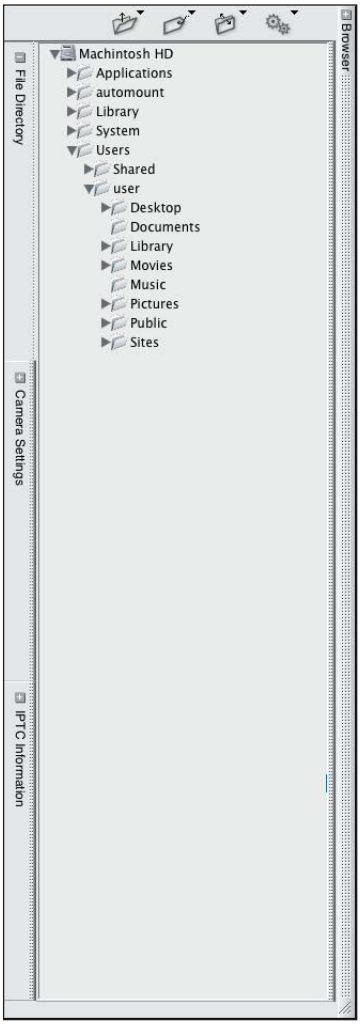
The Batch Menu within the Browser contains a duplication of the contents of the **Batch** Menu from the Menu Bar and enables you to quickly access and apply batch processes to your images.

For more information regarding the Batch functionalities of Capture NX, please see page 181.

File Directory

The File Directory displays the files on your hard disk in the same manner as the Operating System, within the Capture NX window, offering file copying and file moving functions. Double-clicking on any folder from within the File Directory will open that folder within the Browser.

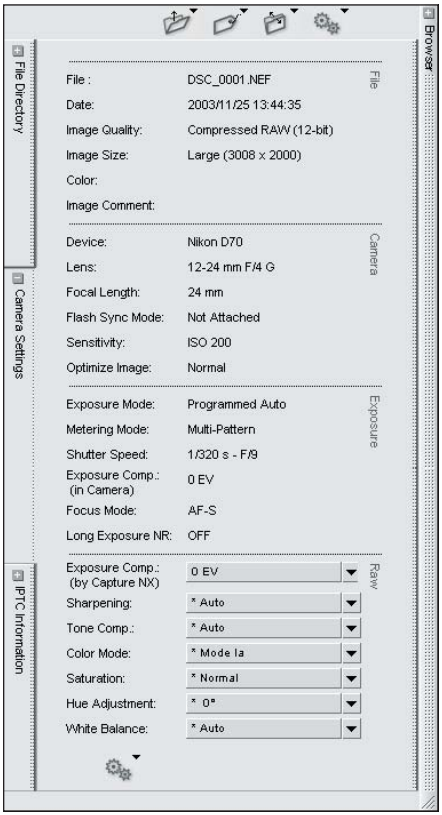




Camera Settings

The Camera Settings Palette contains a list of all of the pertinent information regarding the current image. Within this Palette, you can see information regarding the camera, the time and date the image was shot, the exposure data, as well as the settings made within the camera that affected the current image. Any editable settings are accessible with a pull-down Menu, which you can use to change the settings that you set within your camera.

When working with images within the Browser, you can view the image information for the currently selected image within the Camera Settings Palette. When working with images within the Editor, you can access and change settings on the image directly within the Camera Settings palette.



IPTC

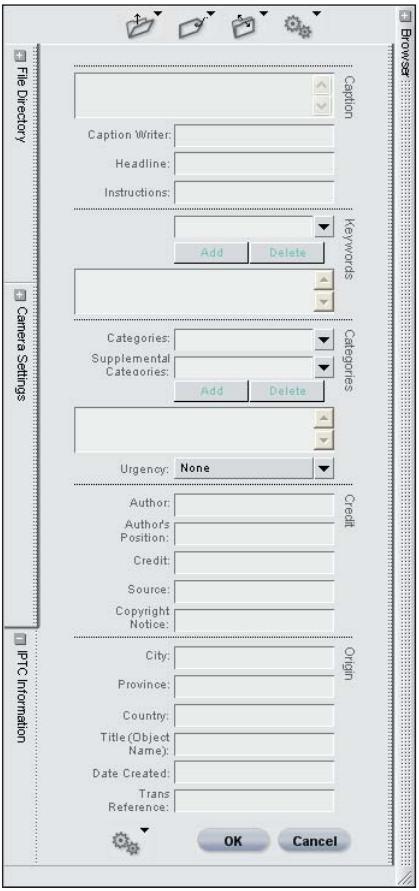
The IPTC Palette contains a standardized list of text fields that can be used to indicate the copyright and usage requirements of your images. The contents of the IPTC Palette, named after the committee that created the standard, the International Press Telecommunications Council, was originally designed to simplify and clarify information needed when sharing photographs with different publications.

These fields enable you to add important information by attaching labels such as Caption, Keywords, Categories, Credit, and Origin to the image. For more information about IPTC and how it is used, please visit the following web page:

http://www.iptc.org/

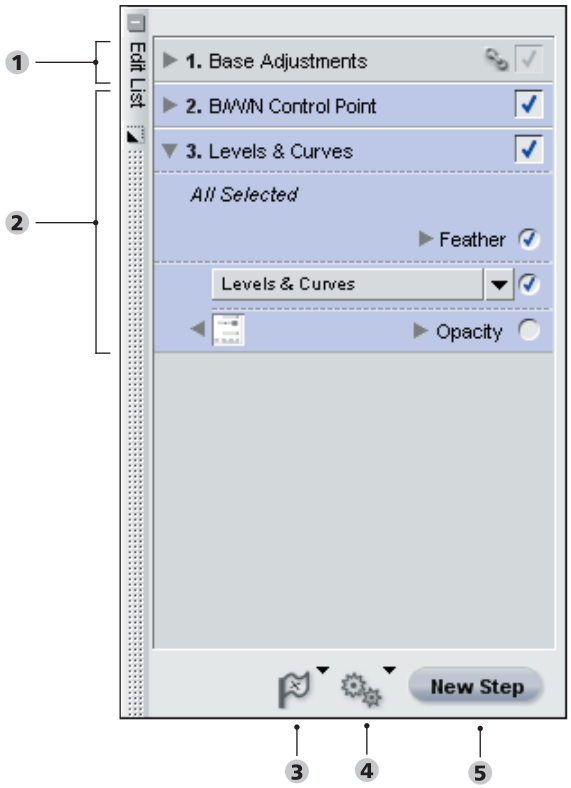
You can view and change the contents of the different IPTC fields on images both within the Browser as well as within the editor. When working in the Browser, you can also select multiple images and modify the contents of the IPTC fields of those images directly.

Once you are finished adding or editing the IPTC information, simply click OK.



The Edit List

The Edit List is the central location for all of the controls provided within Capture NX. The Edit List stores all of the enhancements that have been applied to your image in chronological order. The Edit List can be used as a history that allows you to go back and modify any of the adjustments that you have previously made to your images.



The Edit List

1 Base Adjustments *(Page 44)* 2 Enhancement Steps *(Page 59)* 3 Versions Menu *(Page 65)*
4 Batch Menu *(Page 66)* 5 New Step Button *(Page 66)*

Every enhancement that you apply to your images within Capture NX will be recorded within the Edit List. The Edit List contains the following sections:

- Base Adjustments Step
- Enhancement Steps
- Versions Menu
- Batch Menu
- New Step Button

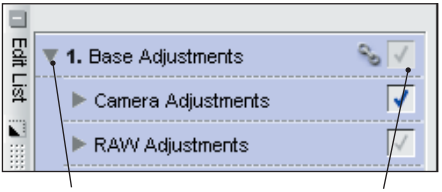
The Edit List is saved with all of the adjustments intact when you save the file as a NEF file.

The Edit List also acts as the basis for batch processing your images. See the Batch sections later in this chapter and on page 181 to learn more about how to use the Edit List to create batch processes.

Since the Edit List shows a chronological description of the enhancements that have been applied to your image, you can use the Edit List to return to any previous enhancement and adjust the settings. To do this, either double-click on the step or enhancement that you want to modify, or single-click on the ▶ next to that step or enhancement to display the contents. Once you have displayed the contents of an enhancement, you can modify the settings that were applied. By modifying a previous step, you will temporarily disable all of the steps that occur after the current step you are modifying. Once you have completed any modification to that step, click on the Apply Checkbox next to the last step that you want to reapply. Capture NX will automatically apply all of the steps between the step you have just modified and the last step that you checked. You can then, of course, check or uncheck any steps or enhancements that you wish.

Base Adjustments Step

The Base Adjustments step contains RAW specific enhancements as well as enhancements that can be applied to JPEG and TIFF images. The Base Adjustments step can be expanded and collapsed at any time by clicking on the ▶ next to the Base Adjustments step in the Edit List.



The Base Adjustments step is broken up into five sub-categories. Each of the five sub-categories can be expanded and collapsed at any time by clicking on the ▶ next to each of the sub-categories within the Base Adjustments step.

- Camera Adjustments (Available with RAW images only)
- RAW Adjustments (Available with RAW images only)
- Lens Adjustments (Available for all images)
- Light & Color Adjustments

(Available for all images)

- Detail Adjustments
  (Available for all images)

When you open an NEF file that was generated with a camera, both the Camera Adjustments and RAW Adjustments options are available to you. Within these two options, you are able to adjust the settings that were set within your camera, as well as modify enhancements that are available only for RAW files.

Each enhancement within the Base Adjustments contains a Show/Hide Triangle and an Apply Checkbox.

Show/Hide Triangle

The Show/Hide Triangle shows and hides the contents of that specific enhancement's dialog window. Click on the to toggle between these two states.

Apply Checkbox

The Apply Checkbox enables you to turn on and off a specific enhancement. This checkbox is automatically checked once any adjustments are made to the enhancement. To turn a specific enhancement off, simply uncheck the Apply Checkbox.

Camera Adjustments

The contents of the Camera Adjustments section of the Base Adjustments step can be applied only to a RAW NEF image file. The Camera Adjustments section will be presented automatically if the image is a RAW NEF image. Tools that apply only to RAW images do not appear in the menus. Tools specific to RAW images are available in the Base Adjustments Step.

Please note: *Any feature applied within the Camera Adjustments is applied to the entire image and cannot be adjusted using any of the Selective Tools.*

COLOR MODE RAW ONLY

The Color Mode feature enables you to choose between the same Color Modes as those that you can set in your camera. By allowing you fine control over chroma, brightness, and color gamut, the Color Mode feature creates a subtle look for your image, comparable to the distinct differences apparent in the variety of film stock available to photographers.

To change the Color Mode, click on the button for Color Mode and choose one of the options from the pull-down Menu. The default value will be the value that you originally set in your camera. After changing the parameter for this feature, an * will be displayed next to the value originally set within your camera.

Click OK to accept and apply the new Color Mode, or click Cancel to keep the original Color Mode set in your camera.

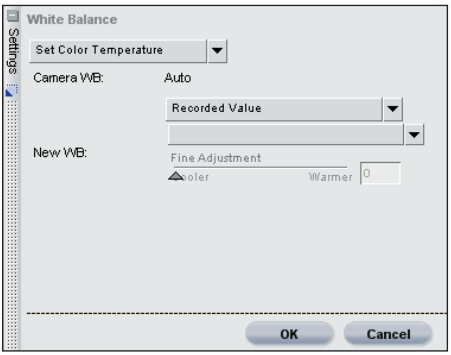
To revert to the original setting at any point, simply uncheck the Apply Checkbox next to Color Mode.

WHITE BALANCE RAW ONLY

The White Balance feature is designed to enable you to change the white balance that was set within your image. Changing the white balance enables you to not only correct the white balance setting that was originally chosen, but also to alter the white balance in order to introduce a cold or warm cast into the image.

To change the white balance, click on the ▶ button for White Balance to display the White Balance dialog. Within the White Balance dialog, you can either select a color temperature for the white balance, or you can set a gray point from within the image.

Set Color Temperature Mode



In this mode, you can allow Capture NX to automatically calculate the white balance, or you can set the white balance manually by using one of the available presets.

Camera White Balance

This displays the white balance set by the camera when the image was captured.

New White Balance

This pull-down Menu provides you with a number of controls for setting a new white balance value.

➲ Recorded Value
Selecting this value will set the white balance to the setting recorded by the camera.

➲ Calculate Automatically
When you select this value, Capture NX will determine the best white balance setting to provide neutral colors throughout the image.

➲ Incandescent
Select this value if the lighting in your photograph's scene was provided by an incandescent or tungsten light source. You can further modify the setting with the Fine Adjustment Slider.

Fine Adjustment Slider
This slider enables you to shift the selected color temperature by + or - 50 Mired.

➲ Daylight
Select this value if the lighting in your photograph's scene was provided by the sun. You can further modify this setting with the Daylight sub-menu and the Fine Adjustment Slider.

Daylight Sub-Menu

This sub-menu enables you to choose from three different daylight situations.

➲ Direct Sunlight
This option sets the color temperature to 5,200K and is suited for photographs taken in direct

sunlight.

➲ Cloudy

This option sets the color temperature to 6,000K and is suited for photographs taken under overcast skies.

➲ Shade

This option sets the color temperature to 8,000K and is suited for photographs taken in open shade.

Fine Adjustment slider

This slider enables you to shift the selected color temperature by + or - 50 Mired.

➲ Standard Fluorescent and High Color Rendering Fluorescent

Select either of these values if your image was shot under fluorescent lighting, based on the type of fluorescent light bulb that was used. If you are unsure of which type of light bulb was used, experiment with the different settings until the image appears natural to you. You can further modify these settings with the Fluorescent sub-menu and the Fine Adjustment Slider.

Fluorescent sub-menu

This sub-menu enables you to choose between the most commonly available fluorescent light bulb temperatures.

➲ Warm White (3,000K)

➲ 3,700K

➲ Cool White (4,200K)

➲ 5,000K

➲ Daylight (6,500K)

Fine Adjustment Slider

This slider enables you to shift the selected color temperature by + or - 50 Mired.

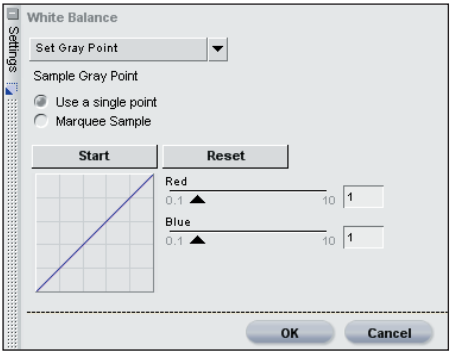
➲ Flash

Select this option if your image was shot using a Nikon Speedlight as the light source. You can further modify this setting with the Fine Adjustment Slider.

Fine Adjustment Slider

This slider enables you to shift the color temperature from 4277K to 7479K.

Set Gray Point



In this mode you can identify an object within your photograph that was neutral gray in the scene and base the white balance off that object, or you can take an average of a section of your photograph and calculate the white balance off that section.

Use Single Point

By selecting this option and clicking start, you will be able to identify a single point that should be neutral gray. This is

best used on an image that contains a Gray card illuminated by the main light source.

To choose a point, select Use Single Point and click Start. The cursor will change to an eyedropper when moved over the active image. Click a neutral gray point to set the white balance. You will notice that the Red and Blue sliders may have moved, and that these changes may have also been reflected in the small graph. You can further modify the white balance settings by moving the Red and Blue sliders manually. The Red slider enables you to shift the image's white balance from cyan to red, adjusting the gain for the Red Channel. The Blue slider enables you to shift the image's white balance from yellow to blue, adjusting the gain for the Blue Channel. Click on the reset button at any time to return the values to the default settings.

Use Marquee Sample

By selecting this option and clicking start, you will be able to draw a marquee on the image to identify a section for Capture NX to use as the basis for setting the white balance. Use this option when the scene was illuminated by a number of different light sources. Select a section that was illuminated by the light source you want to set the white balance to.

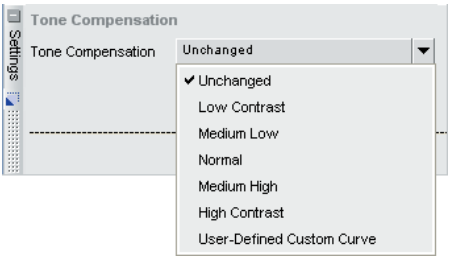
To choose a section, select Use Marquee Sample and click Start. The cursor will change to an area-selection eyedropper when moved over the active image; drag to select an area. White balance will be set to the average for the selected area.

You will notice that the Red and Blue sliders may have moved, which may have also been reflected in the small graph. You can further modify the white balance settings by moving the Red and Blue sliders manually. The Red slider enables you to shift the image's white balance from cyan to red, adjusting the gain for the Red Channel. The Blue slider enables you to shift the image's white balance from yellow to blue, adjusting the gain for the Blue Channel. Click on the reset button at any time to reset the values to the default settings.

Click OK to accept the new white balance, or click Cancel to retain the white balance set in your camera.

To revert to the original white balance setting at any point, simply uncheck the Apply Checkbox next to White Balance.

TONE COMPENSATION RAW ONLY



The Tone Compensation feature enables you to adjust the image contrast that was set in the camera.

To change the tone compensation, click on the button for Tone Compensation and select one of the options from the pull-down Menu.

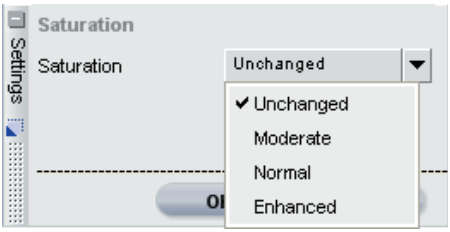
Choose from the following list:

- Unchanged – This will revert to the contrast set in the camera.
- Low Contrast
- Medium Low
- Normal
- Medium High
- High Contrast
- User Defined Custom Curve – This will set the contrast to a user-defined custom curve. (Not available with COOLPIX-series cameras.)

Click OK to accept the new setting, or click Cancel to retain the Tone Compensation set in your camera.

To revert to the original Tone Compensation setting at any point, simply uncheck the Apply Checkbox next to Tone Compensation.

SATURATION RAW ONLY

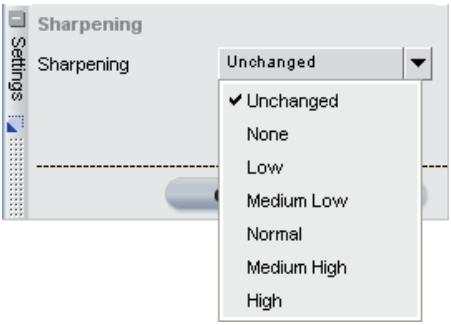


The Saturation feature enables you to adjust the saturation that was set in the camera.

To change the saturation, click on the ▶ button for Saturation and select one of the options from the pull-down Menu. Choose from the following list:

- Unchanged – This will revert to the saturation set in the camera.
- Moderate
- Normal
- Enhanced

SHARPENING RAW ONLY



The Sharpening feature enables you to adjust the amount of sharpening that was set in the camera.

To change the sharpening, click on the ▶ button for Sharpening and select one of the options from the pull-down Menu. Choose from the following list:

- Unchanged – This will revert to the sharpening set in the camera.
- None
- Low
- Medium Low
- Medium
- Medium High
- High

Click OK to accept the new sharpening

settings, or click Cancel to retain the sharpening set in your camera.

To revert to the original sharpening setting at any point, simply uncheck the Apply Checkbox next to Sharpening.

Please note: *As the D1 does not record image-sharpening settings in image files, selecting Unchanged is equivalent to selecting None when working with images recorded with the D1.*

RAW Adjustments

The contents of the RAW Adjustments section of the Base Adjustments step can only be applied to a RAW NEF image file. This section will be displayed automatically if the image is a RAW NEF image. Tools that apply only to RAW images do not appear in the menus. Tools specific to RAW images are available in the Base Adjustments Step.

Please note: *Any feature applied within the RAW Adjustments is applied to the entire image and cannot be adjusted using any of the Selective Tools.*

EXPOSURE COMPENSATION

RAW ONLY

The Exposure Compensation feature emulates increasing or decreasing exposure in the camera.

To change the Exposure Compensation, click on the ▶ button for Exposure Compensation and move the slider. This feature enables you to choose from –2 to +2EV.

Click OK to accept the Exposure Compensation effect, or click Cancel to prevent the Exposure Compensation effect from changing your image.

If you would like to remove the Exposure Compensation effect at any time, simply uncheck the Apply Checkbox next to Exposure Compensation.

Please note*: The Exposure Compensation feature is very useful for improving images that were not correctly exposed; however, if your image contains overexposed areas (with lost detail in the highlights) or underexposed areas (with lost detail in the shadows), you will not be able to recover detail using this feature.*

HUE ADJUSTMENT RAW ONLY

The Hue Adjustment feature enables you to alter the hue of your entire image from (–9° to +9°) without affecting brightness or saturation. Skin tones will become increasingly yellow as this value is raised above 0°. Values below 0° produce redder skin tones.

To change the Hue Adjustment, click on the ▶ button in the Hue Adjustment and move the slider. After changing the parameter for this feature, an * will be displayed next to the value originally set within your camera.

Click OK to accept the new setting, or click Cancel to retain the Hue Adjustment as set in your camera.

To revert to the original Hue Adjustment setting at any point, simply

uncheck the Apply Checkbox next to Hue Adjustment.

COLOR MOIRÉ REDUCTION RAW ONLY

The Color Moiré Reduction feature enables you to apply a noise reduction process available only on RAW images.

To apply Color Moiré Reduction, click on the ▶ button and select one of the options from the pull-down Menu. This process can reduce color moiré artifacts (color interference caused by regular overlapping patterns). You can control the strength of this feature from Off, to Low, Medium, or High.

Click OK to accept the Color Moiré Reduction effect, or click Cancel to prevent the Color Moiré Reduction effect from changing your image.

If you would like to remove the Color Moiré Reduction effect at any time, simply uncheck the Apply Checkbox next to Color Moiré Reduction.

Additional noise reduction features can be found in the **Adjust** Menu on page 156.

DUST OFF RAW ONLY

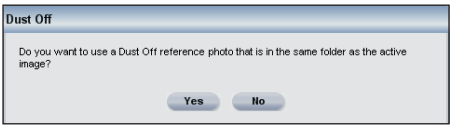
The Dust Off feature can reduce artifacts in the image created by dust which was present on the low pass filter, located behind the camera's lens. Because these dust particles create artifacts at consistent locations on the sensor, the Dust Off feature can register their location on the sensor in a reference image. The noise in subsequent images are compared to that profile and minimized.

Please note: *The position as well as amount of dust on the low-pass filter may change. It is recommended that you take reference images regularly and use a reference image that was taken within one day of the photograph you wish to treat.*

To apply Dust Off, click on the ▶ button for Dust Off to display the Dust Off dialog window. Click on the Change button to locate a Dust Off reference photo to apply to the current image.

For certain cameras that create Dust Off reference photos with the .NDF extension (such as the D2H and D2X), Capture NX will attempt to identify a reference photo located within the same folder as the current image.

➲ If Capture NX locates a Dust Off reference photo in the current folder, you will be presented with the option of using that photo for the Dust Off process.



- If you select Yes, Capture NX will apply the Dust Off effect using that reference photo.
- If you select No, you will be presented with a folder search window to enable you to locate on your computer's hard drive a folder that contains a Dust Off reference photo.

➲ If Capture NX locates more than

one Dust Off reference photo within the same folder, you will be presented with an options dialog to select which image to use. It is recommended that you select the image that was taken as close to the time of the current image as possible.

➲ If Capture NX does not locate a Dust Off reference photo within the same folder as the current image, you will be presented with a folder search window to enable you to locate on your computer's hard drive a folder that contains a Dust Off reference photo.

If Capture NX locates more than one Dust Off reference photo within the same folder, you will be presented with an options dialog to select which image to use. It is recommended that you select the image that was taken as close to the time of the current image as possible.

For all other cameras, you will be presented with a folder search window to enable you to locate on your computer's hard drive a folder that contains a Dust Off reference photo.

- If Capture NX locates more than one Dust Off reference photo within the same folder, you will be presented with an options dialog to select which image to use. It is recommended that you select the image that was taken as close to the time of the current image as possible.

Alternatively, you may select one of the last three locations that was selected within the Location pull-down Menu.

Once you have located the correct Dust Off reference photo, click OK to apply the Dust Off effect to your image.

If you would like to remove the Dust Off effect at any time, simply uncheck the Apply Checkbox next to Dust Off.

Please note: *If a large amount of dust is detected in the current image,* Capture NX *Editor will display a warning stating that the results of Image Dust Off cannot be guaranteed. Click Yes to proceed.*

AUTO COLOR ABERRATION

RAW ONLY

The Auto Color Aberration feature enables you to automatically reduce color aberrations (colored fringes or halos) that appear within your images. This feature is turned on by default, automatically reducing color aberrations in RAW images. If you would like to remove the Auto Color Aberration effect at any time, uncheck the Apply Check box next to Auto Color Aberration within the RAW Adjustments section of the Base Adjustments step.

Please note: *This option is not available with multiple exposures or images created with image overlay (D2X only).*

Lens Adjustments

The contents of the Lens Adjustments section of the Base Adjustments step are available with RAW images or when the image was shot with the AF DX 10.5 mm f2.8G Nikkor fisheye lens.

VIGNETTE CONTROL RAW ONLY

The Vignette Control feature is used to correct for loss of marginal lumination, a phenomenon associated with camera lenses that causes a drop in brightness at the edges of a photograph. Vignette Control is most effective when performed on images taken at maximum aperture. If the picture in the active image window is a RAW image taken with a lens equipped to transmit distance information (a type G or D lens) mounted on a camera that can record this information, Capture NX will use the lens information recorded with the image to automatically select an optimal value for Vignette Control. When this lens information is not available, the Vignette Control effect will be based on default lens characteristics. To determine whether a given combination of lens and camera will record distance information, see the table below.

Camera	Type G or D lens	Any other Type of Lens
D50, D70, D70S, D100, D2H, D2Hs, D2X, D2Xs, D200	Distance Information Recorded	Distance Information Not Recorded
D1X/D1H (firmware version 1.10 or later)	Distance Information Recorded	Distance Information Not Recorded
D1X/D1H (firmware version 1.01 or earlier)	Distance Information Not Recorded	Distance Information Not Recorded
D1	Distance Information Not Recorded	Distance Information Not Recorded

To apply the Vignette Control feature to your image, click on the ▶ button next to Vignette Control to display the Vignette Control dialog window.

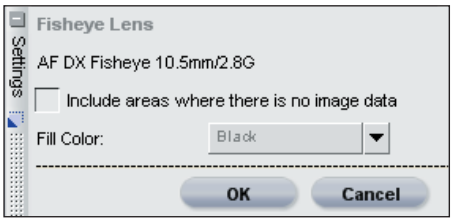
Drag the Intensity slider to the right to brighten the edges of the currently active photo, or drag the Intensity slider to the left to darken the edges of the photo.

If the image was taken under any situation in which the Distance Information was not recorded, please take care when adjusting the Vignette Control settings so as to not over apply the Vignette Control effect.

Once you have created the desired effect with the Vignette Control feature, click OK to apply the Vignette Control effect to your image.

If you would like to remove the Vignette Control effect at any time, simply uncheck the Apply Checkbox next to Vignette Control.

FISHEYE LENS



The Fisheye Lens feature enables you to modify an image taken with a compatible fisheye lens to make that image appear to have been taken with a wide-angle rectilinear lens. This feature is only compatible with images taken with an AF DX 10.5 mm f2.8G Nikkor fisheye lens.

Include Areas Where There is No Image Data

By default, the Include Areas Where There is No Image Data option will be turned off, cropping off any area where image information is not present.

Turn the Include Areas Where There is No Image Data option on to display the full image, including areas where there is no image data. This shows you the full image after the fisheye-to-rectilinear transformation. You will notice that parts of the image have been curved to transform the image into a rectilinear image. Due to the process employed by the fisheye-to-rectilinear transformation, there is more information along the longest side of the image.

Some areas of the image will not contain any image information due to the transformation process.

Once you are satisfied with the resulting effect from the Fisheye Lens feature, click OK. You can cancel this feature at any time by clicking on the Cancel button.

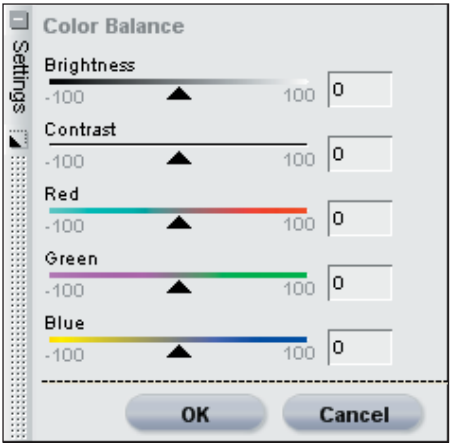
Light & Color Adjustments

The contents of the Light & Color Adjustments section of the Base Adjustments step can be applied to any image, either NEF, JPEG, or TIFF format.

Please note: *Any feature applied within the Light & Color Adjustments is applied to the entire image and cannot be adjusted using any of the Selective Tools.*

The features located within the Light & Color Adjustments Section are also provided under the Menus, as well as in the Adjust & Filter pull-down Menu of Enhancement Steps of the Edit List. You can selectively apply these features by accessing them from either the Menus or from the Adjust & Filter pull-down Menu.

COLOR BALANCE



The Color Balance feature provides you with simple controls for adjusting the overall brightness, contrast, and color balance of the entire image.

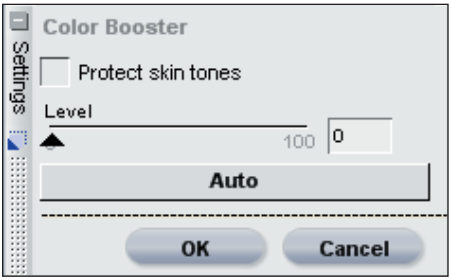
To apply the Color Balance feature, click on the button next to Color Balance to display the Color Balance dialog.

For a complete explanation of the features of the Color Balance Tool, please see page 150.

Once you have achieved the desired effect, click on the OK button to accept the Color Balance effect for your image. Click on the Cancel button if you would like to prevent the Color Balance feature from affecting your image.

If you would like to remove the Color Balance effect at any time, simply uncheck the Apply Checkbox next to Color Balance.

COLOR BOOSTER



The Color Booster enables you to optimally adjust the saturation, or vividness, of colors. Use the Color Booster to increase the saturation of colors of the active image.

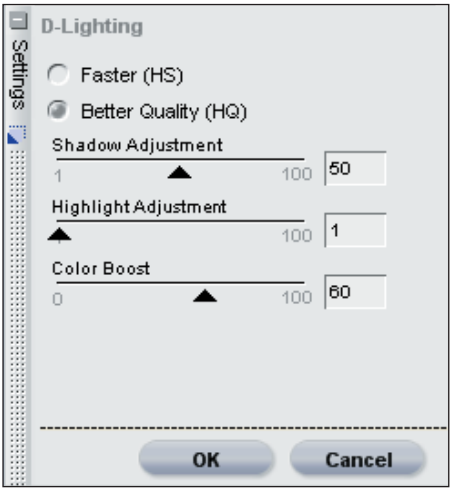
To apply this feature, click on the ▶ button next to Color Booster to display the Color Booster dialog.

For a complete explanation of the features of the Color Booster Tool, please see page 151.

Once you have achieved the desired effect, click on the OK button to accept the Color Booster effect for your image. Click on the Cancel button if you would like to prevent the Color Booster feature from affecting your image.

If you would like to remove the Color Booster effect at any time, simply uncheck the Apply Checkbox next to Color Booster.

D-LIGHTING



D-Lighting reveals details in shadows and highlights, correcting for underexposure, backlighting, or insufficient flash, without harming the properly exposed areas or introducing unwanted artifacts. D-Lighting can also help reveal detail in overexposed areas in brightly lit scenes.

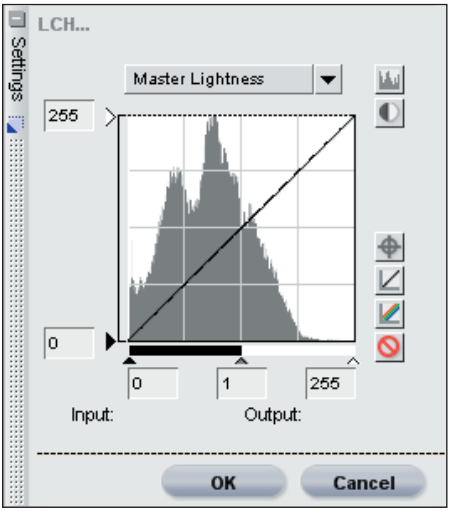
To apply D-Lighting, click on the ▶ button next to D-Lighting to display the D-Lighting dialog.

For a complete explanation of the features of the D-Lighting feature, please see page 143.

Once you are satisfied with the results of the D-Lighting feature, click on the OK button. If you want to cancel the D-Lighting feature, click on the Cancel button.

If you would like to remove the D-Lighting effect at any time, uncheck the Apply Checkbox next to D-Lighting.

LCH



The LCH Editor controls the Luminosity, Chroma, and Hue of the active image using individual editor dialogs. The LCH Editor enables you to individually control the Luminosity of the colors of the entire image.

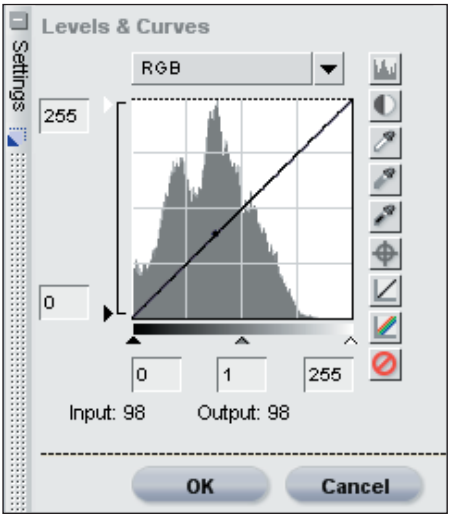
To use the LCH Editor, click on the ▶ button next to LCH, which will display the LCH dialog.

For a complete explanation of the features of the LCH Editor, please see page 145.

Once you are satisfied with the results of the LCH feature, click on the OK button. If you want to cancel the LCH feature, click on the Cancel button.

If you would like to remove the LCH effect at any time, uncheck the Apply Checkbox next to LCH.

LEVELS & CURVES



The Levels & Curves feature combines two of the most often used tonal enhancing features into one easy-to-use editor. The Levels & Curves feature enables you to adjust contrast, tone (brightness) levels, and color balance to make maximum use of the tone range and color gamut offered by a particular output device, such as a printer or monitor.

The Levels & Curves feature provides you with controls to make tonal adjustments to specific portions of the active image's tone range. These adjustments can be applied to the entire image or to specific color channels, making it possible to enhance the image while preserving detail.

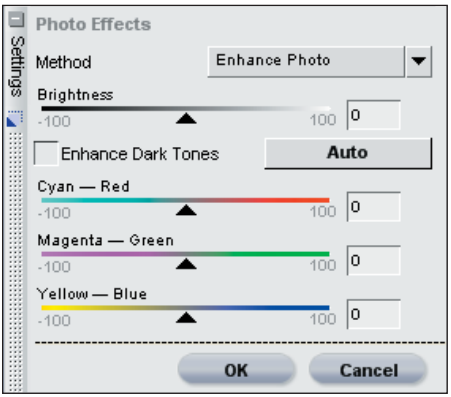
To use the Levels & Curves Editor to enhance the tonal values of your image, click on the ▶ button next to Levels & Curves. This will provide you with the Levels & Curves dialog.

For a complete explanation of the features of the Levels & Curves tool, please see page 137.

Once you are satisfied with the results of the Levels & Curves Editor, click on the OK button. If you want to cancel the Levels & Curves Editor, click on the Cancel button.

If you would like to remove the Levels & Curves effect at any time, uncheck the Apply Checkbox next to Levels & Curves.

PHOTO EFFECTS



The Photo Effects feature enables you to take creative control of your image. With this tool, you can covert an image to a Black and White, Sepia, or Tinted image. The Photo Effects feature also allows you to control the tonality of the image, to enhance dark tones, and to control the color balance.

To use the Photo Effects feature, click on the button next to Photo Effects. This will provide you with the Photo Effects dialog.

For a complete explanation of the Photo Effects feature, please see page 173.

Once you are satisfied with the results of the Photo Effects feature, click on the OK button. If you want to cancel the Photo Effects feature, click on the Cancel button.

If you would like to remove the changes from the Photo Effects at any time, uncheck the Apply Checkbox next to Photo Effects.

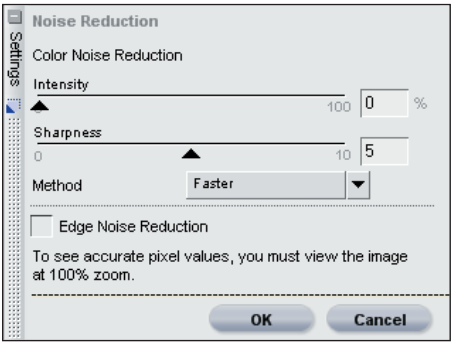
Detail Adjustments

Any of the features in the Detail Adjustments section of the Base Adjustments step can be applied to any image, NEF, JPEG, or TIFF format.

Please note: *Any feature that is applied within the Detail Adjustments is applied to the entire image and cannot be adjusted using any of the Selective Tools.*

The features located within the Detail Adjustments section are also provided under the Menus as well as in the Adjust & Filter pull-down Menu of Enhancement Steps of the Edit List. You can selectively apply these features by accessing them from either the Menus or the Adjust & Filter pull-down Menu.

NOISE REDUCTION



The Noise Reduction feature enables you to reduce the effects of digital noise that sometimes appears in images taken with digital cameras.

To begin using the Noise Reduction feature, click on the ▶ button next to Noise Reduction. This will display the Noise Reduction dialog.

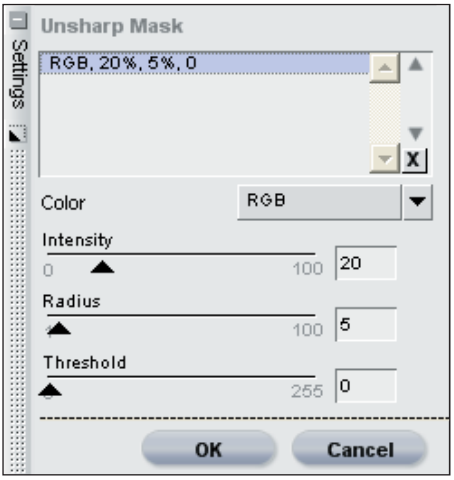
Please note: *It is recommended that you zoom your image to 100% while determining the amount of noise reduction to apply to your image.*

For a complete explanation of the features of the Noise Reduction feature, please see page 156.

Once you are satisfied with the results of the Noise Reduction feature, click on the OK button. If you want to cancel the Noise Reduction feature, simply click on the Cancel button.

If you would like to remove the Noise Reduction effect at any time, simply uncheck the Apply Checkbox next to Noise Reduction.

UNSHARP MASK



The Unsharp Mask feature increases the apparent sharpness of your image by enhancing the edges of objects in your image. Unsharp Mask works by increasing the contrast of edges throughout your image. This feature provides you with controls over Intensity, Radius (halo width), and Threshold. One of the unique features of the Unsharp Mask Tool from Capture NX is that it always applies its sharpening to the luminosity of the image, which prevents any unwanted color shifts from occurring within your image.

To begin using the Unsharp Mask feature, click on the ▶ button next to Unsharp Mask. This will bring up the Unsharp Mask dialog, enabling you to begin adjusting the different settings.

Please note: *It is recommended that you zoom your image to 100% while determining the amount of sharpening to apply to your image.*

For a complete explanation of the Unsharp Mask feature, please see page 153.

Once you are satisfied with the results of the Unsharp Mask feature, click on the OK button. If you want to cancel the feature, click on the Cancel button.

If you would like to remove the Unsharp Mask effect at any time, uncheck the Apply Checkbox next to Unsharp Mask.

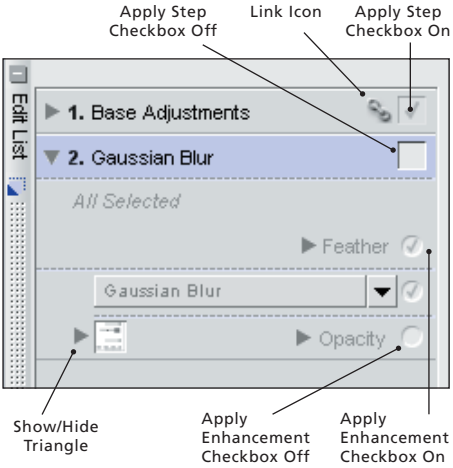
CROPPING & RESIZING

The Cropping & Resizing feature appears within the Detail Adjustments section of the Base Adjustments step whenever the current image has been cropped or resized in a previous version of Capture or within PictureProject. If you would prefer to disable the crop and resizing applied within previous versions of Capture or within PictureProject, simply uncheck the Apply Checkbox for this item.

STRAIGHTENING

The Straightening feature appears whenever the current image has been straightened in a previous version of Capture or within PictureProject. If you would prefer to disable any straightening applied within previous versions of Capture or within PictureProject, simply uncheck the Apply Checkbox for this item.

Enhancement Steps



Enhancement Steps can either be automatically created by Capture NX or manually started using the New Step button. Read more about this feature on page 66. Enhancement Steps include all steps that occur after the Base Adjustments step and have slightly different functionality.

There are two significant differences between the Base Adjustment Steps and the Enhancement Steps:

Enhancement Steps only contain the enhancement that you identify, either from the Menus or through the Adjust & Filter pull-down Menu that can be present in Enhancement Steps. A second distinction is that Enhancement Steps can be selectively applied using any of the Selective tools from the toolbar. Read more about the Selection Tools on Page 89.

In addition, any of the items located within the Enhancement steps can be

copied, pasted, removed, or added to a batch process by clicking and highlighting the enhancement. Please see the section Working with Enhancements on page 66 for additional information regarding copying, pasting, or removing enhancements. You may also want to read the section on batching on page 181 for information about adding those features to a batch process.

You can use any of three methods to create a new Enhancement step: you can select an editing feature from the Menus; you can select one of the Control Point Tools (if none of that Control Point type has already been applied within the current step); or you can click on the New Step button. Each step contains the following items:

Show/Hide Triangle

The Show/Hide Triangle shows or hides the contents of that specific enhancement's dialog window. Click on the button to toggle between these two.

Apply Step Checkbox

The Apply Step Checkbox enables you to turn on and off a specific step, thereby turning off all of the effects of that step. This checkbox is automatically checked when a step is first created. To turn a specific step off, simply uncheck the Apply Step Checkbox.

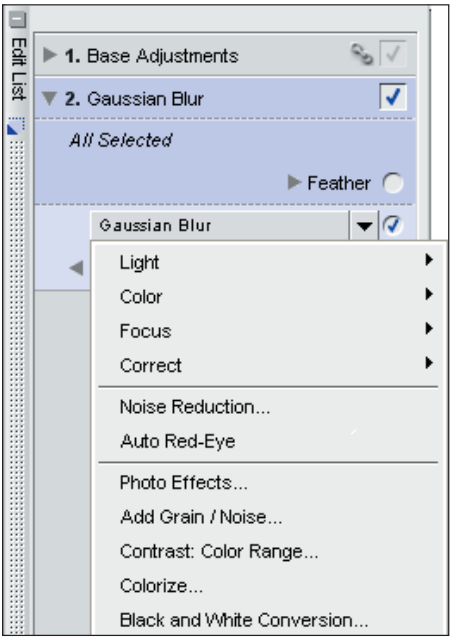
Apply Enhancement Checkbox

The Apply Enhancement Checkbox enables you to turn on and off the effect of enhancements within the current step. This checkbox is automatically checked once an enhancement is applied within the step. To turn a specific enhancement off, simply uncheck the Apply Enhancement Checkbox.

Link Icon

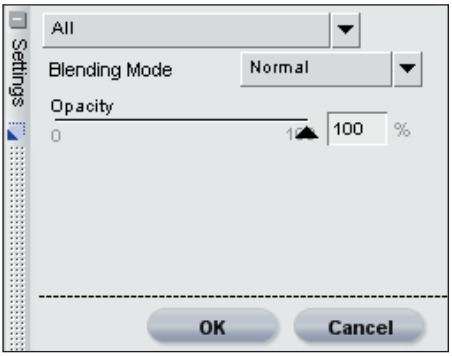
The Link Icon indicates if the current step contains linked enhancements. Read more about linking enhancements on page 68.

Adjust & Filter Pull-Down Menu



Any feature from either the **Adjust** Menu or the **Filter** Menu that is added to a step will appear within an Adjust & Filter pull-down Menu. Additionally, new steps created with the New Step button will contain an empty Adjust & Filter pull-down Menu. You can use this Menu to gain access to any of the enhancements that are available within the **Adjust** or **Filter** Menus instead of navigating to the actual **Adjust** or **Filter** Menus.
Additionally, you can use this Menu to perform a Swap Enhancement function. Please refer to page 69 for more information about this function.

Opacity Mixer



The Opacity Mixer provides you with the ability to blend either the current enhancement or all Control Points of the same type with the rest of the image.

The Opacity Mixer option becomes available as soon as you add any features from the **Adjust**, **Control Point**, or **Filter** Menus. Click on the button next to the Opacity Mixer entry located directly beneath the feature that you wish to blend differently. This will display the Opacity Mixer dialog.

Within the Opacity Mixer Dialog you can adjust the opacity and channels that the current enhancement will affect, and you can blend the enhancement in different ways with the effects from the previous steps.

CHANNELS

Start by selecting the Channels you wish to apply the current enhancement to. The available options are All, Luminance and Chrominance, and RGB.

All

Selecting this from the Channels pull-down Menu applies the current enhancement to all of the channels of the image.

When this option is selected in the Channels pull-down Menu, you are provided with an Opacity slider to alter the effect of the enhancement.

➲ Opacity
Use this slider to control the entire opacity of the current effect. Move the slider to the left to reduce the opacity of the effect if the effect is too strong for your taste.

Luminance and Chrominance
The Luminance and Chrominance option enables you to control the amount of the current effect on either the Luminance (lightness) or Chrominance (color) portions of your image.

When this option is set within the Channels pull-down Menu, you are provided with two sliders:

➲ Opacity (Luminance Channel)
Use this slider to control the amount of the current effect on the Luminance portion of the image. Move this slider to the left to reduce the amount of the current effect on the luminance aspect of the image. This can be done to ensure that the current enhancement is being applied only to the color aspects of the image.

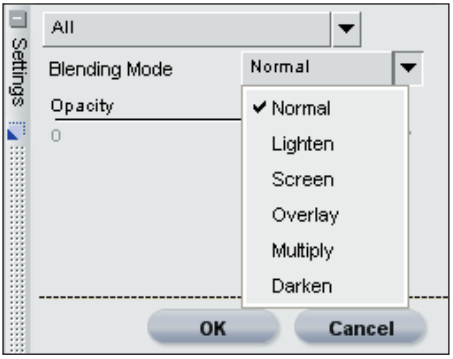
➲ Opacity (Chrominance Channel)
Use this slider to control the amount of the current effect on the Chrominance portion of the image. Move this slider to the left to reduce the amount of the current effect on the chrominance aspect of the image. Reduce this slider to 0% to apply the current enhancement to the Luminance portions of the image so that no effect on the color is being made.

RGB
Selecting this option from the Channels pull-down Menu provides you with the ability to control the current enhancement's effect on the Red, Green, and Blue channels separately using individual sliders:

➲ Opacity (Red Channel)
This slider controls the amount of the current effect on the Red channel of the image. You can move this slider to the left to prevent the current effect from being applied to the Red channel, or you can reduce the other two sliders to ensure the current effect is being applied to the Red channel only.

➲ Opacity (Green Channel)
This slider controls the amount of the current effect on the Green channel of the image. You can move this slider to the left to prevent the current effect from being applied to the Green channel, or you can reduce the other two sliders to ensure the current effect is being applied to the Green channel only.

➲ Opacity (Blue Channel)
This slider controls the amount of the current effect on the Blue channel of the image. You can move this slider to the left to prevent the current effect from being applied to the Blue channel, or you can reduce the other two sliders to ensure the current effect is being applied to the Blue channel only.



BLENDING MODE

You can also select different blending modes from the Blending Mode pull-down Menu that are available for all of the different Channels options.

The Blending Mode determines how the image created by the current enhancement blends with the image prior to that enhancement. Using blending modes provides you with an advanced way of applying the current enhancement to your image. The different blending modes available are Normal, Lighten,

Blending Mode	Result
Normal	The Normal blending mode is the default blending mode for applying enhancements. When all channels for the enhancement are applied at 100%, the result is considered a normal enhancement.
Lighten	The Lighten blending mode is achieved by applying the effects of the Lighten enhancement only if those elements are lighter than the corresponding area in the original image. That is, only areas that are brighter due to the enhancement will be applied to the image.
Screen	The Screen blending mode is achieved by increasing the pixel values of the resulting image with the pixel values of original image. The resulting image is always brighter than the original image prior to the enhancement.
Overlay	The Overlay blending mode is achieved by either adding or subtracting the pixel values of the resulting image from the original image. Capture NX determines whether to add or subtract based on the value of the resulting image. Values above 128 make the final image brighter in the corresponding area; values below 128 make the final image darker in the corresponding area, while the value of 128 does not change the final image.
Multiply	The Multiply blending mode is achieved by subtracting the pixel values of the resulting image from the pixel values of the original image. The resulting image is always darker than the original image prior to the enhancement.
Darken	The Darken blending mode is achieved by applying the effects of the Darken enhancement only if those elements are darker than the corresponding area in the original image. That is, only areas that are darker due to the enhancement will be applied to the image.

Screen, Overlay, Multiply, and Darken.

Once you have selected the channel, the Blending Mode, and Opacity, click OK to accept the Opacity Mixer's effect. Click Cancel to prevent the Opacity Mixer from affecting the image.

If you would like to remove the Opacity Mixer's effect from the enhancement at any time, simply uncheck the Apply Checkbox next to the Opacity Mixer for that enhancement.

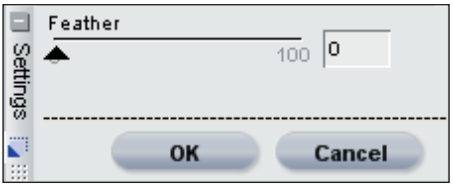
Selection Notification Area

The Selection Notification Area is displayed in all Enhancement steps, that is, all non-Base Adjustment Steps. This area indicates whether the current step is being applied to the entire image, as indicated with the *All Selected* message, or only to selected areas of the image, as indicated by one of the other selection messages. If the message *Partially Selected* is displayed, the current step has been selectively applied using one of the selection tools. If the message Nothing Selected is displayed, the current step is not affecting the image at all.

You can at any point view where the current step is being applied to the image by selecting the Show Selection option from the **View** Menu.

Feather Control

The Feather Control option is presented whenever a selection has been made on the image. This feature enables you to soften the edges of selections that have already been made using one of the selection tools. By softening the edges of the selection, you can reduce any visible artifacts created during the selection process.



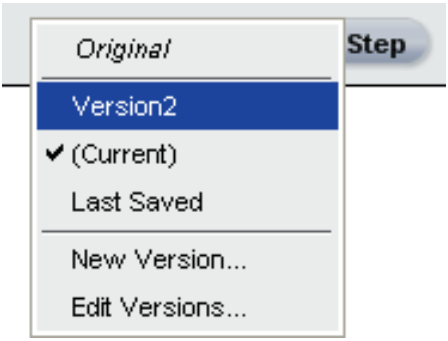
To use the Feather Control feature, click on the button next to Feather Control within the Selection Notification area. This will display the Feather Control dialog and enable you to modify the amount of feather to apply to the current step's selections.

Increase the Feather Amount slider until the desired result is achieved. The higher the setting within the Feather Amount slider the more gradual the transitions will be from the areas in the current step to other areas in the image.

Click on the OK button to accept the Feather Control's effect, or click on the Cancel button to remove the effect.

At any point after selecting OK, you can remove the Feather Control effect by unchecking the Apply Checkbox next to Feather Control within the Selection Notification Area.

Versions Menu 



Versions represent an advanced way of working with and maintaining a number of different versions of the same image within one image file. Two different types of versions are available, and access to these versions is provided by clicking on the button within the Edit List.

Automatically Generated Versions

The first type of versions are created automatically. Capture NX will create three different automatic versions that provide you with control over reviewing different states of the current image.

ORIGINAL

This version is always present within the Versions Palette for all open images. The Original version provides you with a quick way of reverting your image to its original state prior to any changes that were made within Capture NX. With NEF files, the original version will revert to the original file prior to any adjustments made within previous Capture NX, Capture, or PictureProject sessions.

LAST SAVED

This version becomes available within the Versions Palette as soon as the image is saved. This version provides you with the ability to revert to the last saved step within the versions.

Please note: *Selecting this option from the Versions Palette will retain all of the changes made since the last save, while selecting Revert from the* **File** *Menu will remove all changes made since the last save.* *Please see page 116 for more information on the Revert feature.*

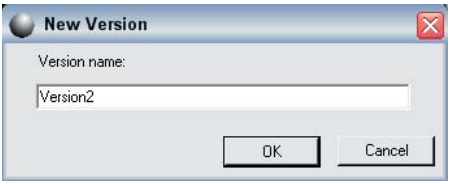
(CURRENT)

This version is temporarily available whenever changes have been made after a save and you switch to a different version. This version makes it possible to switch to any other state and then return to where you left off. It also enables you to toggle quickly from one state to another, returning to your current position to review the difference.

Manually Generated Versions

Capture NX also enables you to create versions manually. These manually generated versions save the current state of the Edit List, including all changes made, so that you can create more than one version of the same image within the same file. Due to the non-destructive nature of Capture NX, you are able to create an unlimited number of versions, to switch from one version to the next, and to save those versions for future use, all without destroying the relationship between pixels.

NEW VERSION . . .



To create a version, click on the button and select New Version from the pop-up Menu. Enter a name for the new version, and then click OK. The new version will be available within the Versions Menu and will represent the state of the current edit list of the current image.

EDIT VERSIONS . . .

You can also edit the available versions which enables you to rename or delete the versions from the current list. Simply select the Edit Versions options from the Versions pop-up Menu to view the Edit Versions dialog.

Highlight the version you would like to alter, and then select either the Rename or Delete button.

Batch Menu

The **Batch** Menu within the Edit List provides you with a duplication of the controls found within the main **Batch** Menu. Please refer to page 181 for a full description on how to use Batch functionality within Capture NX.

New Step Button

Clicking on the New Step Button will create a new, empty Enhancement step within the Edit List. Click on this button if you want to manually generate a new step within the Edit List to start a new series of enhancements. This is especially helpful if you would like to start a new step to quickly paint in a selection with one of the selection tools.

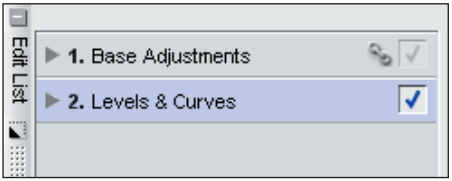
Please note: *Capture NX will automatically create new steps for you; however, the New Step Button can be useful in certain situations.*

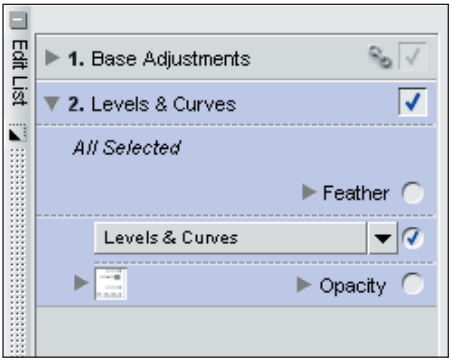
Working with Enhancements

The Edit List provides you with many ways of working with enhancements. Within the Edit List you can edit, delete, copy, paste, link, or swap enhancements.

Editing Steps and Enhancements

To Edit a Step or Enhancement, first expand the desired step by clicking on the button next to the step.





This will display the contents of that step, including the enhancements that were applied within the step. Either double-click on the enhancement or click on the button next to the enhancement that you want to modify. All steps and enhancements that have been applied after the one that you are modifying will be temporarily disabled, and Capture NX will display either the controls for the enhancement that you are modifying, or that enhancement's dialog window.

Simply modify the enhancement in the same manner that you added the enhancement previously. You can then reapply all of the steps and enhancements that were added after the enhancement that you just modified by clicking on the Apply Checkbox for the last step that you want to reapply.

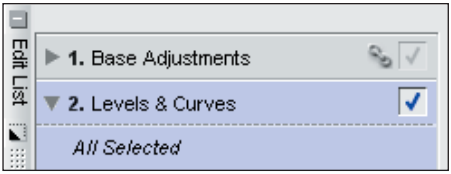
Deleting Steps and Enhancements

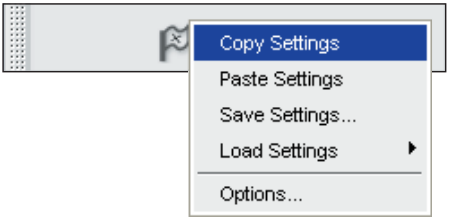
If at any time you would like to completely remove an entire step or any enhancements within a step, simply click on that step or enhancement to highlight it. Then select Delete from the **Edit** Menu or press the Delete key on your keyboard. Your image will then be updated to reflect this change.

Copying and Pasting Steps and Enhancements

Entire Steps and Enhancements can be copied from one image and then pasted to another, or they may even be pasted again within the same image. You must first select and copy the desired step or enhancement to the clipboard.

To do this, first click and highlight the step or enhancement that you wish to copy.





Hint: *To copy more than one step at a time, hold the Control (Windows) or Command (Mac OS) and click to highlight multiple steps or enhancements. You may also select a range of steps or enhancements by clicking on the first step or enhancement in the range that you want to copy, and then while holding the Shift key down, selecting the last step or enhancement in the range that you want to copy.*

Once that step or enhancement has been highlighted, select the Copy Settings option from the **Batch** Menu (either the **Batch** Menu from the main window, or the Batch Menu within the Edit List).

You are now ready to paste the step or enhancement. Unless you are applying the copied step or enhancement to the current image, navigate to the image that you want to paste the enhancement to and select Paste Settings from

the **Batch** Menu (either the **Batch** Menu from the main window or the Batch Menu within the Edit List).

The copied step or enhancement will be placed after any current enhancements in the Edit List have been applied.

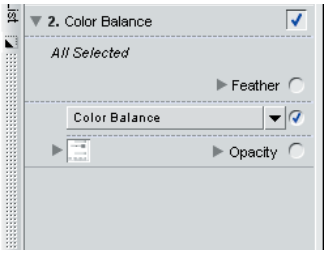
You may also copy and paste the Base Adjustments step. Due to the unique nature of the Base Adjustments step, any single image cannot have more than one Base Adjustments step, nor can it have more than one of any of the adjustments located within the Base Adjustments step. When you copy and paste the Base Adjustments step, the contents of Base Adjustments step that already resides within the target image will be replaced by the contents of the Base Adjustments from the source image. To prevent the entire Base Adjustments step from being overwritten, select the individual enhancements from within the Base Adjustments step to copy and paste.

Linking Enhancements

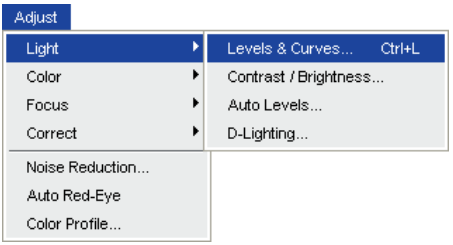
Linking enhancements within the Edit List enables you to apply the selective controls that are used within one step to more than one enhancement. By default, each enhancement is applied to a separate step. By linking two or more enhancements together in the same step, each of those enhancements can benefit from the same selective controls that were applied to that step.

To link enhancements, simply hold down the Shift key while selecting another enhancement from the main Menus.

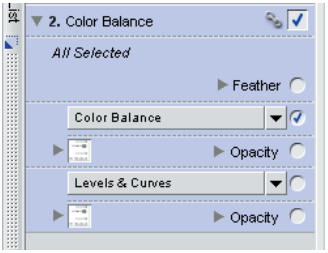
Please note: *You may link any number of enhancements together within the same step, but please note that the greater the number of enhancements that are applied within the same step, the slower Capture NX may be in displaying the results of any adjustments.*



Step 1. Apply an enhancement to your image.



Step 2. Holding the shift key down, navigate to the Adjust or Filter menu from the Menu Bar and select the enhancement you want to link to the current step.



Step 3. The new enhancement will be linked to the current step, providing you with two separate enhancements within the same step.

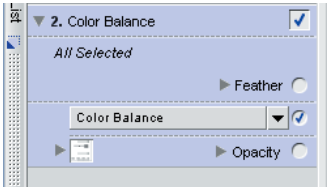
Swapping Enhancements

Any of the enhancements from the **Adjust** and **Filter** Menus may be swapped or substituted for any of the other items located within the Adjust or Filter Menu at any time.

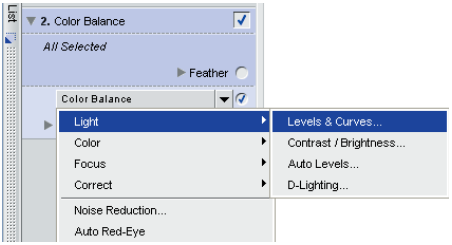
To swap an enhancement that has already been applied for another enhancement, click on the Adjust and Filter pull-down Menu. The current enhancement will be displayed at the top, and contents of both the Adjust and Filter Menus will be displayed beneath the current enhancement. Select another enhancement from the Menu and the current enhancement will be replaced with the new enhancement.

This is especially useful if you have made a selection, applied an enhancement to a step, and then you want to see how a different enhancement will affect the image within the area identified by your selection.

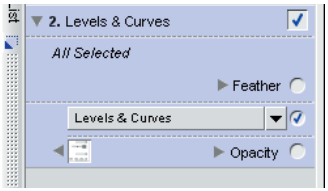
For example, after selecting the sky in an image and selecting the Levels & Curves adjustment, you may want to switch the Levels & Curves adjustment for the Color Balance feature. This saves you time by allowing you to reuse a selection even if the enhancement did not produce the desired result.



Step 1. Click on the Adjust & Filter pull-down menu for the enhancement that you want to swap.



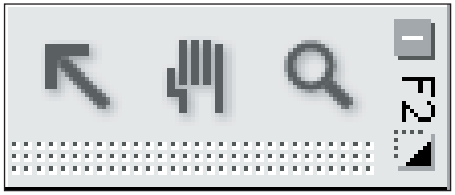
Step 2. Select the new enhancement that you want to apply from the list of enhancements provided to you.



Step 3. The new enhancement that you have selected will now be displayed in the Edit List.

Toolbar F2 - View Tools

These tools enable you to control and change the view of your images. This Toolbar can be viewed and hidden quickly by using the shortcut 'F2'.



Direct Select Tool

The Direct Select Tool enables you to select many of the different objects within Capture NX.

• Multiple objects can be selected by holding down the Ctrl (Windows) or Command (Mac) key when selecting additional objects.

• A range of objects can be selected by clicking on the first object of the desired range and then holding down the Shift key and clicking on the last object of the desired range.

• Control Points can be selected by clicking and drawing a bounding box within an image window, enabling you to select all Control Points that appear within that bounding box.

The following object types can be selected:

• Control Points
• Images in the Browser
• Steps in the Edit List

Please note*: Only one type of object can be selected at a time.*

Shortcut : A key

Hand Tool

The Hand Tool enables you to move within an image or Browser window. Select this tool when viewing an image or Browser window that contains more information than is displayed within the current window. Click and drag to reposition the contents of the window.

Double-click on this tool in order to zoom the current image so that the entire image fits into the space available.

Shortcut : H key

Temporarily switch to the Hand Tool when any other tool is active by pressing the Spacebar.

Zoom Tool

The Zoom Tool enables you to zoom into and out of an image or Browser window. Select this tool and click on the image to zoom into the image. Hold the Alt (Windows) or Option (Mac OS) key and click to zoom out.

Double-click on the icon in order to zoom the current image to 100%.

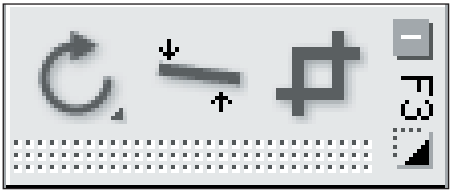
Shortcut : Z key

Zoom-in when any other tool is active:
Ctrl + Spacebar keys (Windows)
Command + Spacebar keys (Mac OS)

Zoom-out when any other tool is active:
Ctrl + Alt + Spacebar keys (Windows)
Command + Option + Spacebar keys (Mac OS)

Toolbar F3 - Edit

This Toolbar contains tools that can be used to do very coarse adjustments to your images. This Toolbar can be viewed or hidden quickly by using the shortcut 'F3'.



Rotate

The Rotate Tool enables you to rotate your image 90 degrees clockwise or counter-clockwise. Click on this button to rotate your image 90 degrees clockwise. Hold the Alt (Windows) or Option (Mac OS) key down and click on this button to rotate your image 90 degrees counter-clockwise. To reverse the direction from rotating 90 degrees clockwise to rotating 90 degrees counter-clockwise, click and hold on this icon to change the rotational direction.

Multiple images can be rotated simultaneously by selecting multiple images in the Browser and then clicking on this button.

Rotating an image will cause a step to be created within the Edit List, enabling you to remove the rotation at any point in the future. When you save your image as a NEF file format, you can remove the rotation after the image has been saved and closed.

Shortcut:

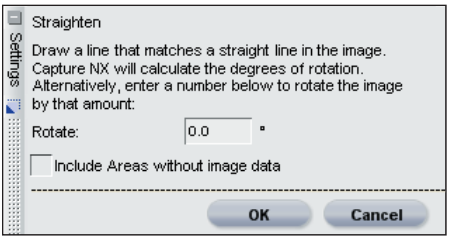
Rotate the image 90 degrees to the right:
Ctrl + R (Windows)
Command + R (Mac OS)

Rotate the image 90 degrees to the left:
Ctrl + Shift + R (Windows)
Command + Shift + R (Mac OS)

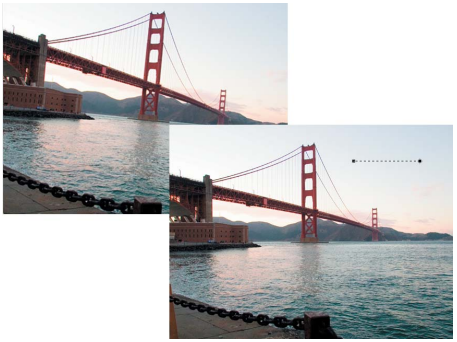
Straighten

Select this button to have the Straighten dialog appear. Within the Straighten dialog, you can rotate an image incrementally clockwise or counter-clockwise, or you can trace a line that should be either horizontal or

vertical and allow the Straighten Tool to automatically straighten your image. The Straighten Tool is not accessible while working within the Browser.



Once the Straighten dialog appears, you can identify a reference line in the image by tracing a horizontal line or a vertical line in the image, or you can enter a numerical rotation amount, which will straighten the image by degrees. To trace a horizontal or a vertical line, simply click anywhere on your image and drag as long as the Straighten dialog remains visible. You will be provided with one anchor at the point at which you begin to trace the line and a second where you finish

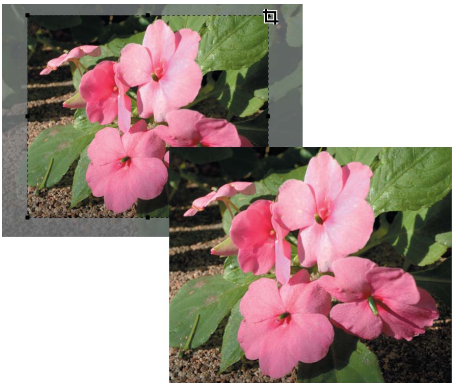


tracing the line. You can further refine the rotation amount by clicking on either anchor point to re-adjust the trace. Alternatively, if you know how many degrees to rotate, simply enter those numbers into the Straighten dialog. Positive numbers will rotate the image clockwise, while negative numbers will cause the image to rotate counter-clockwise.

Within the Straighten dialog, you can select whether or not to display the full image data. By default, Capture NX will automatically crop the image using the same aspect ratio to hide all areas of the image where there is no image information. These areas that lack image information are created when the image is rotated, and are represented by pure white pixels. Check this box in order to show all areas without image data.

Straightening an image will cause a step to be added to the Edit List, enabling you to remove or alter the straighten effect at any point in the future. If you save the file as an NEF file, you can remove or alter the straighten effect at any point, even after the image has been saved and closed.

Crop



The Crop Tool enables you to remove areas from the margins of your image or to change the aspect ratio of your image. The Crop Tool is not accessible while working within the Browser.

After selecting this tool, draw a rectangle by clicking on one corner and dragging across your image. This rectangle represents the area of the image that will be kept after cropping your image. To adjust that area, click on any of the eight anchor points and drag the rectangle to fit the area you wish to save. To remove the area outside the rectangle, double-click anywhere inside the rectangle or press Enter. To cancel the crop, click once outside of the crop, or click the Esc key.

Cropping an image will cause a step to be added to the Edit List, enabling you to remove the cropping effect at any point in the future. When saving as a NEF file format, you can remove the cropping effect at any point, even after the image has been saved and closed.

Shortcut : C key

Crop Options Dialog

At any point in the editing process you can bring up the Crop Options to change how the Crop Tool performs. To bring up the Crop options, double-click on the icon or right (Windows) or Control (Mac OS) click anywhere within the image after selecting the Crop Tool.

CROP METHOD

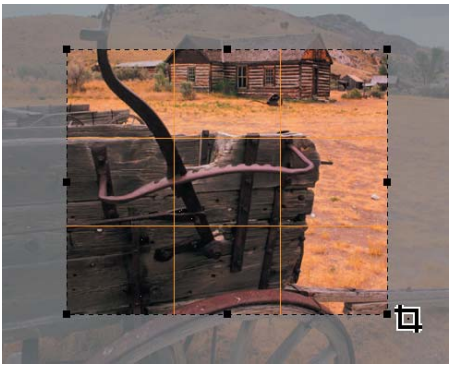
Free Crop

This crop method enables you to freely draw a cropping rectangle.

Fixed Aspect Ratio

This method enables you to select from one of the predetermined Aspect Ratios or a custom ratio in order to limit the crop tool according to ratio you selected.

Show Crop Grid

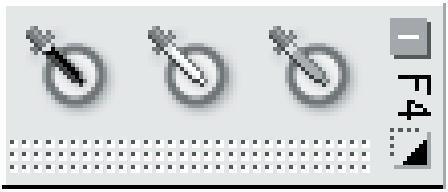


By checking the Show Crop Grid Checkbox, a grid of nine equally-sized rectangles will be superimposed over the image within the crop rectangle. The Crop Grid is designed to assist you in cropping the image.

You can also choose to temporarily superimpose this grid onto your image by holding down the Alt key (Windows) or the Option key (Mac OS) while you are in the crop mode. Based on the photographic "rule of thirds," the Crop Grid helps guide your cropping so that the main points of interest lie close to the points where the four lines intersect. It also draws your attention to the natural horizontal or vertical lines in the image, such as a horizon or a large building, which often benefit from being placed close to one of the four lines.

Toolbar F4 – Black, White, and Neutral Control Points

This Toolbar contains the Black, White, and Neutral Control Points, which provide a new and exciting way of correcting the tonal range and color of your images. All three of these Control Points enable you to identify and control the tonal value and color of the image and provide you the ability to adjust, move, and remove their effects at any point in the future. This Toolbar can be quickly viewed and hidden by using the shortcut 'F4'.



Black Control Point

The Black Control Point enables you to place a Control Point directly on your image, and to cause that targeted color to not only become black, but also to neutralize the dark tones of your image. The Black Control Point is not accessible while working within the Browser.

Black points are normally set on what should be the darkest point of the image and are used to set one end of the dynamic range of the image. The Double-Threshold function within the Photo Info's Histogram section is designed specifically to help you locate the darkest and lightest sections of your image. Please see page 100 for more information on how to use the Double-Threshold function. A Black Control Point is often used in conjunction with a White Control Point.

For additional information regarding the Black Control Point, please see page 163.

White Control Point

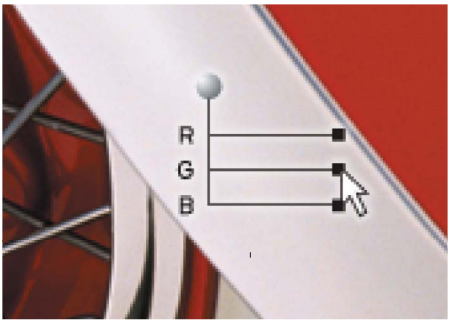
The White Control Point enables you to place a Control Point directly onto your image, causing the targeted color to become white, which is the first step in removing a color cast from the light tones in your image. The White Control Point is not accessible while working within the Browser.

White points are normally set on what should be the lightest point of the image and are used to establish one end of the dynamic range of the image. The Double-Threshold function within the Photo Info's Histogram section is designed specifically to help you locate the darkest and the lightest sections of your image. Please see page 100 for more information on how to use the Double-Threshold function. A White Control Point is often used in conjunction with a Black Control Point.

For additional information regarding White Control Points, please see page 165.

Neutral Control Point

Neutral Control Points enable you to correct a color cast in your photograph by forcing the targeted color to become a defined color or to become neutral. The Neutral Control Point is not accessible while working within the Browser.



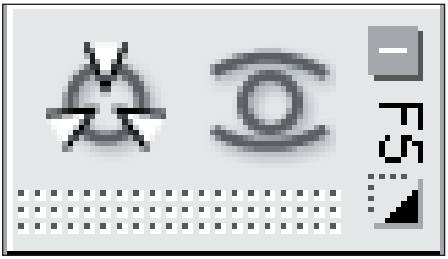
In its default operation, the Neutral Control Point will change the color values in the targeted color so that the red, green, and blue values for that color are equal. By equalizing the red, green, and blue values for a specific color, that color becomes neutral, or lacks saturation. Desaturating can be helpful if the image contains a neutral point of reference, a gray card, for example. By selecting an object that is established as neutral, Capture NX is able to calculate the difference between that object and the color that is currently representing that object. The Neutral Control Point will remove the difference in color from the targeted object, as well as from the entire image. This results in a color change that affects the entire image.

Please note: *In its default state, the Neutral Control Point will not affect the luminosity of your image; it will only affect the relationship of colors in your image.*

For additional information regarding the functionality of a Neutral Control Point, please see page 167.

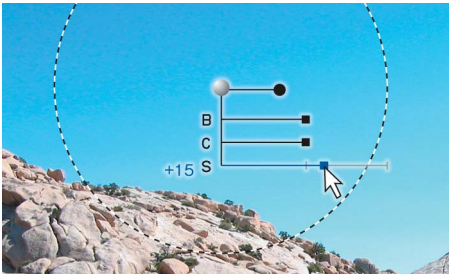
Toolbar F5 – U Point technology-based Tools

This Toolbar contains U Point technology-based tools that enable you to quickly enhance colors and details in your image. This Toolbar can be viewed and hidden easily by using the shortcut 'F5'.



Color Control Point

The Color Control Point represents a unique way of adjusting the color and light in an image. Each Color Control Point enables you to perform advanced color changes in a selective fashion without the need to create selections or masks. The Color Control Point is not accessible while working within the Browser.



Each Color Control Point that is placed on an object in your image identifies the characteristics of the color as well as the level of detail of that object, enabling you to make adjustments to the color of that object. With the use of the size slider, you are able to increase the reach or scale of the current Control Point so that it affects similar colors of objects which are farther away from the Color Control Point. Each new Control Point works together with the other Control Points to affect more and more specific objects. Using additional Control Points ensures that the adjustments that you make are being applied to the current object only. Placing a Control Point on an object with default

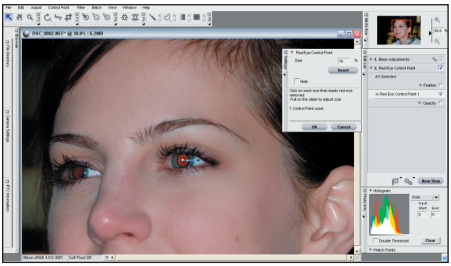
settings prevents other Control Points from affecting that object.

For a complete description on the functionality of the Color Control Point, please see page 161.

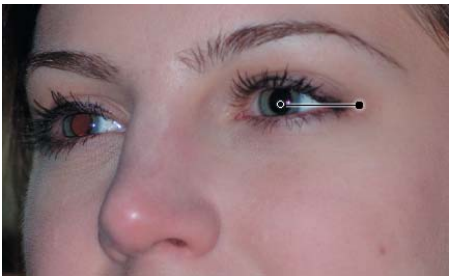
Shortcut:

Ctrl + Shift + A (Windows)
Command + Shift + A (Mac OS)

Red-Eye Control Point



The Red-Eye Control Point enables you to manually remove the red-eye effect sometimes caused by flash photography. Simply select the Red-Eye Control Point and place it on an eye that has red-eye. The Red-Eye Control Point is not accessible while working within the Browser.

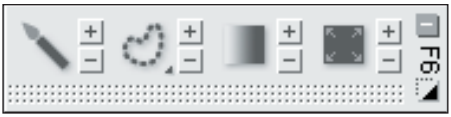


Control the Red-Eye Control Point's effect by increasing or decreasing the Size slider.

The Hide option completely removes the effect of the Red-Eye Control Point temporarily, enabling you to see the before and after effect of the Color Control Point on your image. You can quickly access the Hide option on the Red-Eye Control Point by right-clicking (Windows) or control-clicking (Mac OS) and selecting Hide.

Toolbar F6 - Selection Tools

This Toolbar contains various selection tools that can be used to selectively apply any of the enhancements available within Capture NX. This Toolbar can be viewed and hidden easily by using the shortcut 'F6'. These tools are not accessible while working within the Browser.



Selection Brush

The Selection Brush enables you to selectively paint in or paint out the enhancements found in the current step. The Selection Brush Tool is not accessible while working within the Browser.

Select the Selection Brush and then select either the Plus Brush or the Minus Brush options to control where the enhancements in the current step are applied.

Selecting the Plus Brush enables you to add the current step's enhancements to the image. If the current step has already been applied to the entire image (as indicated within the Edit List's Selection Notification Area as All Selected), selecting the Plus Brush and then painting will immediately remove the current step's effect from the image and apply it only to the area you are painting. You can toggle to this tool with the + key after selecting the Brush Tool from the Toolbar, or you can temporarily toggle to this tool by holding down the Alt (Windows) or Option (Mac OS) key while the Minus Brush is selected.

Original Image

Final image

Step 1. The Brightness / Contrast enhancement is applied to the image and then using the Plus Brush, it is painted only onto the flower.

Step 1. Selection

Step 2. Next, the Minus Brush is used to remove some of the effect that was applied to the background.

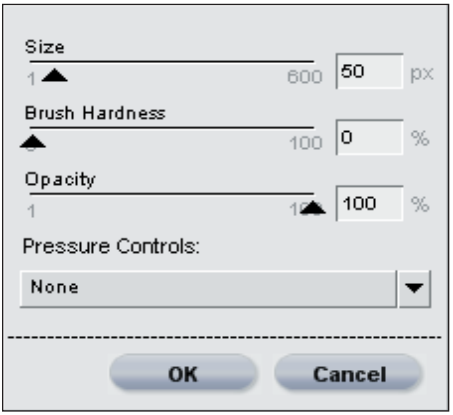
Step 2. Selection

Selecting the Minus Brush enables you to remove the current step's enhancements selectively. You can toggle to this tool with the - key after selecting the Brush Tool from the Toolbar, or you can temporarily toggle to this tool by holding down the Alt (Windows) or Option (Mac OS) key while the Plus Brush is selected.

Hint: *You may also select this tool prior to making any enhancements, that is, in a new Enhancement Step that contains no other enhancements. The Colorize enhancement will automatically become available and you can paint in the Colorize enhancement on your image. By switching the Colorize enhancement to any other enhancement within the Edit List you can first paint in where you want to apply an enhancement. Then, using the Adjust & Filter pull-down Menu, you can select the enhancement that you want to use instead of the Colorize enhancement for the area you had just indicated by painting. For more information on Swapping Enhancements within the Edit List,* *please see page 69.*

Shortcut: B key

Brush Options Dialog



The Brush Options dialog can be accessed either by double-clicking on the icon, or right (Windows) or Control (Mac OS) clicking anywhere in the image once the brush has been selected.

SIZE

Changing this slider increases or decreases the size of the brush.

Shortcut:

Decrease brush size: [
Increase brush size:]

BRUSH HARDNESS

Changing this slider affects the shape of the brush, ranging from a soft-edged brush to a hard-edged brush.

Shortcut:

Decrease brush hardness: Shift + [
Increase brush hardness: Shift +]

OPACITY

Changing this slider affects the opacity of the brush strokes that are applied. Increase this value and the brush will either add more of the current step's enhancements to the image when using the Plus Brush or it will remove more of the current step's enhancements from the image when using the Minus Brush.

PRESSURE CONTROLS

This pull-down Menu enables you to control the different brush elements using a pressure-sensitive input device, such as a Pen Tablet.

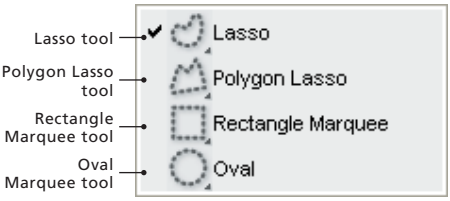
➲ Size – This option controls the size of the brush when you are using a pressure-sensitive input device.

➲ Opacity – This option controls the opacity of the brush when you are using a pressure-sensitive input device.

➲ Size + Opacity – This option controls both the size and the opacity simultaneously when you are using a pressure-sensitive input device.

➲ None – This option ensures that neither the Size nor the Opacity are affected when using a pressure-sensitive input device.

Lasso & Marquee Tools



The Lasso & Marquee tools enable you to create a selection on your images that will limit where an enhancement affects your image. The selection created by the Lasso & Marquee tools can also limit where any of the other selection tools are applied. The Lasso & Marquee Tools are not accessible while working within the Browser.

There are four Lasso & Marquee tools. You can select among these four tools by holding the mouse down on the button in the Toolbar and selecting from the tools that appear.

The Lasso Tool is the default tool and enables you to freely draw a selection on the image.

The Polygon Lasso Tool enables you to draw a selection with straight edges by connecting straight lines. Anchor points are created at each of the connections, and these anchor points can be moved to alter the selection.

Please note: *Any additional selections made will remove these anchor points.*

The Rectangle Marquee Tool enables you to draw a square selection.

Hold down the Shift key after you begin drawing the selection to constrain the selection to a square.

Hold down the Alt (Windows) or Option (Mac OS) key while drawing the selection to draw the selection from the center instead of the corner.

The Oval Marquee Tool enables you to draw a round selection.

Hold down the Shift key after you begin drawing the selection to constrain the selection to a circle.

Hold down the Alt (Windows) or Option (Mac OS) key while drawing the selection to draw the selection from the center instead of the corner.

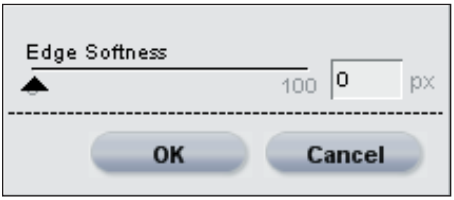
After selecting which Lasso & Marquee Tool to use, you can choose to make the tool either a Plus or Minus Tool by clicking on the + or − icons. You can temporarily switch to the opposite tool by pressing the Alt (Windows) or Option (Mac OS) key.

Once you have made a selection using one of the Lasso & Marquee tools, you can use one of the other selection tools to add or remove the current enhancement while limiting to the area created by the Lasso & Marquee tool.

To completely deselect, double-click anywhere within the image.

Shortcut: L key

Lasso & Marquee Options Dialog



The Lasso & Marquee Options can be accessed either by double-clicking on the tool in the Toolbar, or right (Windows) or Control (Mac OS) clicking on the image after selecting one of the Lasso & Marquee tools.

EDGE SOFTNESS

The Edge Softness option enables you to soften the edge of the selection that is being made by the Lasso & Marquee tools.

Selection Gradient

The Selection Gradient Tool enables you to gradually blend between applying and removing the current step's effect on your image. The Selection Gradient Tool is not accessible while working within the Browser.

Begin by selecting either the Plus or Minus Gradient with the + or − icon. You can temporarily switch to the opposite tool by pressing the Alt (Windows) or Option (Mac OS) key. Using a Plus Gradient will add to any previously applied selections, while using a Minus Gradient will subtract from any previously applied selections.

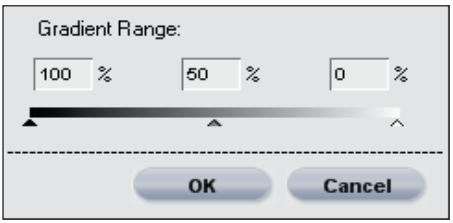
To apply a gradient, begin by clicking and dragging a line on your image. The spot at which you first click will define the start of the gradient; the spot at which you let go of the mouse will define the end of the gradient. The distance between the two spots will define how quickly the gradient will transition, and the difference in the vertical and horizontal displacements will define the angle.

Once the gradient has been drawn, you can click and drag either of the two end points to modify the gradient's effect.

You can apply multiple gradients to an image; however, as soon as you add an additional gradient, the previous gradient's anchor points will no longer be accessible.

Shortcut: G key

Gradient Options Dialog



The Gradient Options can be accessed by either double-clicking on the icon in the Toolbar, or right (Windows) or Control (Mac OS) click anywhere on the image after selecting the Gradient Tool.

GRADIENT RANGE

This slider enables you to preset the value of the gradient. The values repre-

sent the percent of opacity, and allow you to set the maximum, the minimum, and the midpoint values of the gradient. By moving the midpoint, you can force transition of the gradient to shift quickly on one side of the midpoint and more gradually on the opposite side. To reset this to default, simply remove any values from these boxes.

Fill / Remove Tools

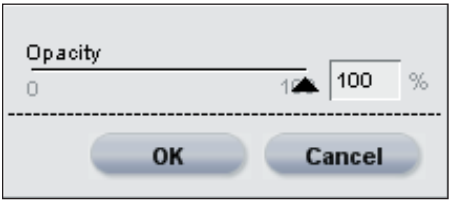
The Fill / Remove Tools enable you to either fill or remove the current effect, either in the entire image or an area within a selection. The Fill / Remove Tools are not accessible while working within the Browser.

To fill the current step's effect into the image or selection, simply click on the + icon. To remove the current step's effect from the entire image or selection, click on the − icon.

Fill / Remove Options Dialog

The Fill / Clear Options can be accessed by double-clicking on the icon in the Toolbar.

OPACITY



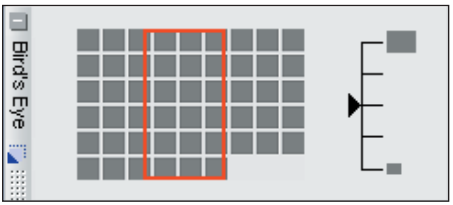
Changing the Opacity slider lets you control whether or not the Fill or Remove Tool will completely fill or clear the effect from the current step. When using a value lower than 100% and then clicking on either the Fill or Remove buttons, the effect will not be completely filled or cleared from the image. This enables you to remove or add the effect from the current step to a lesser degree.

The Bird's Eye

The Bird's Eye Palette enables you to view a portion of the image which is visible in the active image window. This is especially helpful when you are zoomed into your image and you cannot see the entire image in the active image window.

A smaller version of your entire image is displayed in the Bird's Eye Palette, and the portion of your image visible in the active image window is indicated by a rectangle. You can click and drag the rectangle to change the portion of the image seen within the active window.

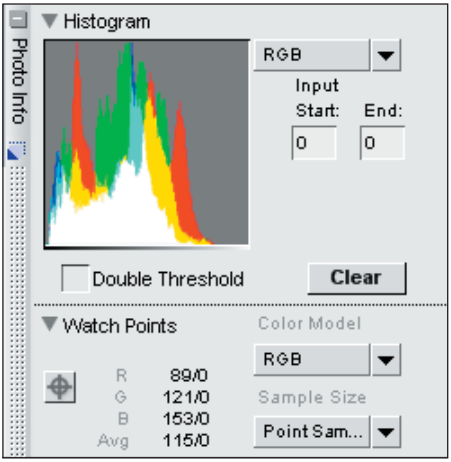
To use the Bird's Eye Palette to zoom in and out of your image move the zoom bar, click on the or the buttons, or enter a zoom ratio directly into the text box.



The Bird's Eye Palette is also available when working in the Browser only while the Browser is set to the Light Table view mode. While in the Light Table view mode, you will see small rectangles that represent your images, with a rectangle that displays the current position of the Browser on the Light Table. You can also click and drag the rectangle to change the portion of the Light Table that is visible within the Browser.

Photo Info

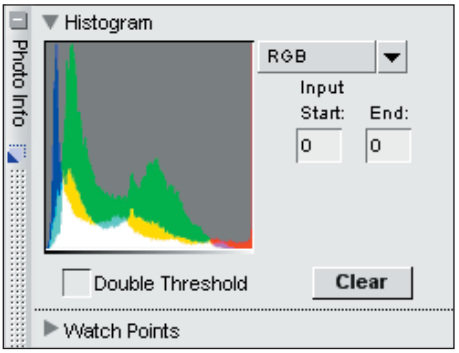
The Photo Info Palette provides you with a real-time display of important information about your image. Within the Photo Info display you have access to both a live histogram and Watch Points from the current image.



If the Photo Info Palette is collapsed, click on the + button to display its contents. Both the Watch Point and Histogram sections contain Show/Hide Triangles that can hide or expand the contents of either section. By default, the Photo Info Palette displays the Histogram portion of the Photo Info Palette.

To hide or display either section, simply click on the ▶ button for that section.

Histogram

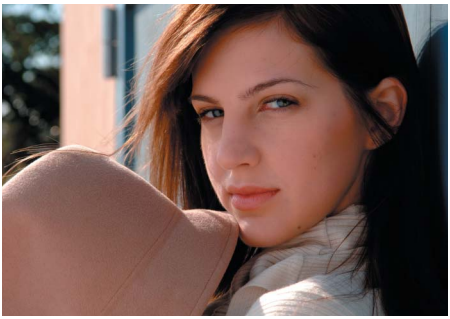


The Histogram Palette displays a real-time updated histogram of the distribution of levels within the current window.

Each histogram represents a bar graph of the total number of pixels that appear at different levels of luminosity. The horizontal axis represents the luminosity level, while the vertical axis represents the number of pixels at each luminosity level found within the current image. The left side of the horizontal axis represents the darkest tones within the image, while the right side represents the lightest tones within the image.

You may choose a number of different elements of the image to be displayed

within the histogram with the Channels pull-down Menu. By default, all three channels (Red, Green, and Blue) are displayed. When all three channels are displayed, individual Red, Green, and Blue histograms are superimposed over one another. Where the individual histograms overlap, secondary colors are displayed. Areas that are white contain pixel values of all three colors at that value.



You may also choose to display only the Red, Green, or Blue histograms individually.

You can select an area of the histogram which will cause the pixels from the selected range to blink within the image window. To select a range, simply drag the mouse over the histogram display. Click Clear to cancel the current selection. Alternatively, you can manually indicate a starting value as well as an ending value for this range by typing the corresponding pixel values into the Start and End text boxes.

Please note*: Values for the different channels range from 0 to 255, with values for 12 and 16-bit images being scaled to fit in this range.*

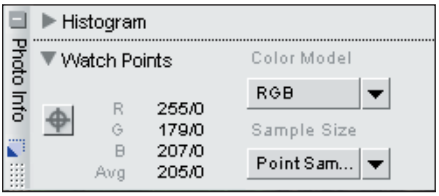
Double-Threshold

The Double-Threshold checkbox enables you to determine the darkest and lightest colors within the current image. Check this box to turn on the Double-Threshold effect. This will add two sliders at the bottom of the Histogram window and cause the entire image to become neutral gray. By dragging the two sliders towards the center of the histogram window, you will begin displaying pixel values in the image. Drag the shadow slider to the right to begin displaying dark pixels (displayed as black pixels on the background). Dragging the highlight slider to the left will cause light pixels (displayed as white pixels on the background) will begin to be displayed.

This feature is typically used to assist you with locating the lightest and darkest items for placing white and black points (either Control Points or points from within the Levels & Curves feature). It is recommended that you drag the sliders towards the center only

far enough so that a few pixels appear, and then place the white or black point at the corresponding area that contains a cluster of pixels in close proximity.

Watch Points



The Watch Points section of the Photo Info Palette displays the position and color of the pixel under the mouse pointer.

Within the Watch Points section, you are provided with the following controls:

Create Watch Point Button

By clicking on this button, you can add up to four Watch Points to your image. When you click on this button, the mouse cursor will change and enable you to place a Watch Point directly on the image. A Watch Point icon will be placed on the image displaying where you placed a Watch Point and an entry will be added to the Watch Point section that continually monitors the colors of the selected pixel.

You can move and reposition any of the Watch Points placed on your image by simply clicking and dragging that point. You can delete the Watch Point by clicking on the X button within the Watch Point section of the Photo Info Palette that corresponds to the Watch Point you wish to remove.

Color Model

This pull-down Menu enables you to select the color model used to describe the colors within the Watch Point section. You can choose between the RGB and HSB color models.

Sample Size

Use this option to change the number of pixels which are used in sampling for both the current color under the mouse pointer as well as for each of the Watch Points.

➲ The Point option samples only a single pixel. This is helpful if you want to be very precise when selecting a color and are able to target a pixel of a specific color.

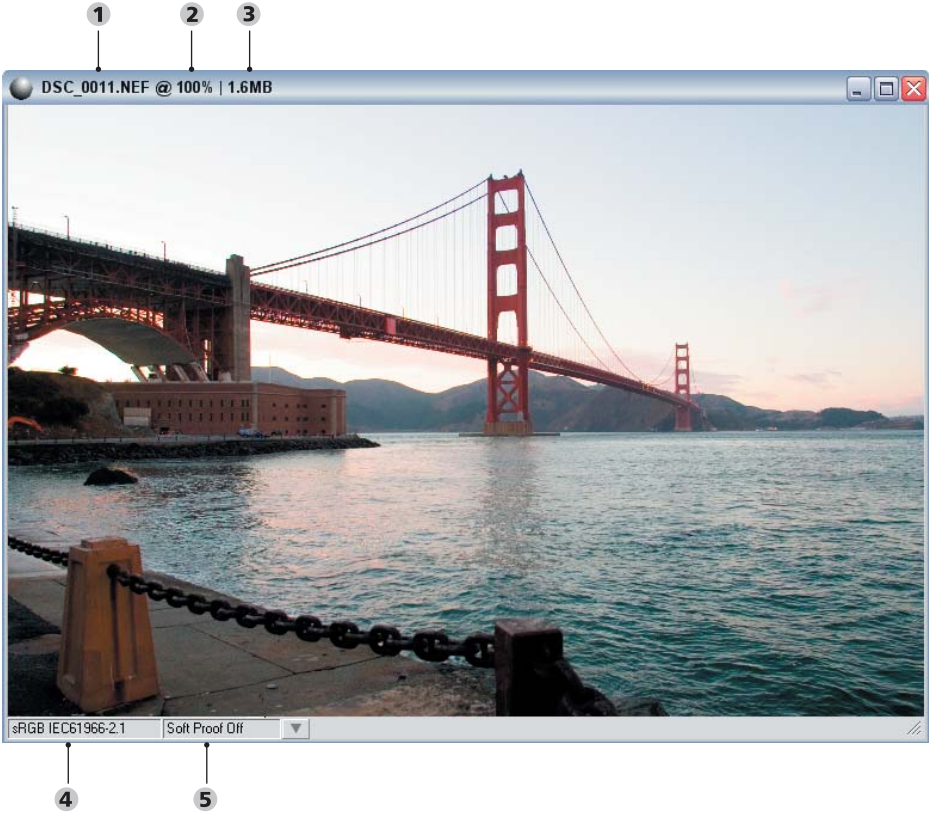
➲ The 3 × 3 average option samples a total of nine pixels in a grid of three pixels by three pixels and averages the colors of each pixel before displaying the result. Since areas within a photograph are generally made up of small variations of color, selecting this option provides a more accurate rendition of the color of the targeted area.

➲ The 5 × 5 average option samples a total of twenty-five pixels in a grid of five pixels by five pixels and averages the colors of each pixel before displaying the result. This option is recommended for higher resolution images.

Please note: *Values for the different channels range from 0 to 255, with values for 12 and 16-bit images being scaled to fit into this range.*

The Image Window

Image Windows are the frames that contain your images and provide you with important data which can help you enhance the image. Image Windows are displayed as long as Capture NX is not in Full Screen mode. If you cannot see the Image Window around your image, simply exit the Full Screen Mode by selecting Full Screen from the **View** Menu or by pressing the F key.



The Image Window

1 Image Name 2 Zoom Ratio 3 File Size 4 Color Profile 5 Soft Proof

Each Image Window displays important information about the image:

Image Name

This is the file name you have given the current image.

Zoom Ratio

The Zoom Ratio is the current zoom ratio of the image. A value of 100% means you are looking at the actual image data, while anything lower than 100% is showing you only a portion of the image. A zoom ratio over 100% is showing you an enlarged view of the individual pixel details. You can zoom in and out using the Zoom Tool or the Bird's Eye Palette.

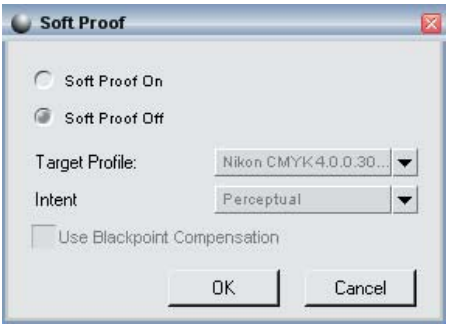
File Size

This shows you the size in megabytes of the current image you are working on.

Color Profile

The Color Profile area shows you the profile that is currently applied to your image. You can change the color profile in the **Adjust** Menu with the Color Profile feature, described on page 157.

Soft Proof



The Soft Proof function enables you to preview the effect of an output profile on your image, approximating the results you can expect from your printer. The Soft Proof function provides you with controls to preview the use of different profiles. It also allows you to set different parameters for the color management system to use.

TARGET PROFILE

Select the color profile from the list to preview the result of the color management system and to preview how the different color management settings will affect your image.

INTENT

The Intent option lets you choose between four different rendering intents to apply to your image. The different rendering intents control how colors from your image are made to fit into the colors that your printer can produce (as indicated by the printer profile).

Please note*: Different printer and paper combinations, as well as the different software used to create*

printer profiles, benefit from different rendering intents. Experiment with the different rendering intents within your workflow to find the option that works best.

The four rendering options are*:*

Perceptual

This rendering intent attempts to maintain the relationships of colors so that the printed image appears natural to the human eye. While this intent maintains the relationships of colors, the actual color values will be changed.

Saturation

The Saturation rendering intent attempts to produce highly saturated colors, but it may not produce accurate colors in a photograph.

Relative Colorimetric

This rendering intent maps the white point of the image to the white point defined by the printer profile and reproduces all of the colors that are within the range of colors reproducible by your printer accurately. All colors that are outside of the range that your printer can produce are shifted to the closest color possible. This option preserves as many natural colors as possible and is often the best choice for printing photographs.

Absolute Colorimetric

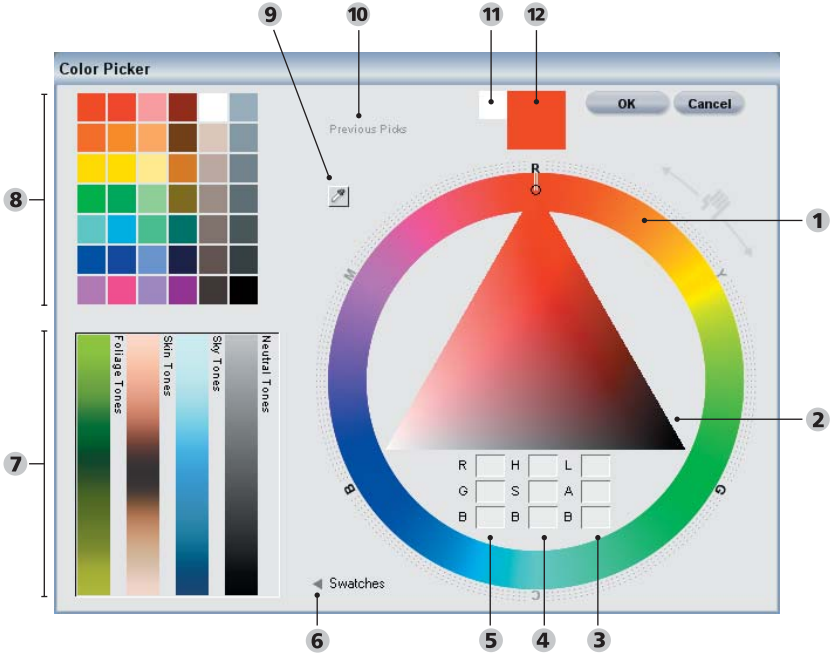
This rendering intent is similar to the Relative Colorimetric, except that it does not map the white point of the image to the white point of the destination profile. It is recommended that you use Absolute Colorimetric if you want to proof your images for a specific print device other than your printer, since this rendering intent will attempt to reproduce the results of the output device, including the effect of a different paper color.

USE BLACK POINT COMPENSATION

Check this box to utilize Black Point Compensation. This ensures that the black point from the image is mapped to the black point of your printer, enabling the full color range of the printer to be used. If your prints contain either gray shadows or too little detail, try turning this option off. Unless you are having problems with a specific print and profile combination, it is recommended that you always use this option.

The Color Picker

The Color Picker is available from a number of enhancements and provides you with the ability to select any color within the RGB, HSB, or LAB color spaces. Additionally, you are provided with swatches as well as memory colors to provide you with preselected colors.



The Color Picker

1 Color Wheel 2 Color Triangle 3 LAB Selection Boxes 4 HSB Selection Boxes
5 RGB Selection Boxes 6 Swatches Show/Hide Triangle 7 Memory Color Ranges
8 Swatches 9 Color Eyedropper 10 Previous Picks 11 Last Selected 12 Current Color

Within the Color Picker you are provided with the following controls:

Color Wheel

The Color Wheel enables you to select the targeted hue for the color. When you click within the Color Wheel, the hue will immediately change to the color that you clicked on. By clicking and dragging on the area outside of the wheel, you can precisely rotate the hue to modify the current selected color. The tip of the Color Triangle points to the hue of the color that is selected. The Color Triangle will then be updated with the color and the range of saturation and lightness that you can affect.

Color Triangle

The Color Triangle provides you with the control over the saturation and lightness of the hue of the color that was identified with the Color Wheel. The top of the Color Triangle contains the purest color of the targeted hue, representing 100% saturation. The left edge of the Color Triangle provides you with control over the lightness of the color as the color approaches white, while the right edge of the Color Triangle provides you with control over the lightness of the color as the color approaches black. The bottom edge contains neutral colors, with the middle of the bottom edge representing neutral gray.

RGB Selection Boxes

The RGB Selection Boxes display the current color in Red, Green, and Blue. You can change the targeted color by entering different values directly into the RGB Selection Boxes.

HSB Selection Boxes

The HSB Selection Boxes display the current color in Hue, Saturation, and Brightness. You can change the targeted color by entering different values directly into the HSB Selection Boxes.

LAB Selection Boxes

The LAB Selection Boxes display the current color in Luminosity, A (Green through Red), and B (Blue through Yellow). You can change the targeted color by entering different values directly into the LAB Selection Boxes.

Last Selected &Previous Picks

The Last Selected & Previous Picks color swatches provide you with access to the last five selected colors. The Last Selected color swatch shows you the color that was last selected, while the Previous Picks color swatches show you the four previous colors selected prior to the color shown in the Last Selected swatch.

Color Eyedropper

The Color Eyedropper enables you to select any color from any image currently displayed within the Capture NX Editor. Simply select the Color Eyedropper button and then use the cursor to select a color from any image currently displayed within Capture NX. The color displayed within the Color Picker will be updated with the color

selected by the Color Eyedropper.

Swatches Show/Hide Triangle

Clicking on the button will display the Swatches section of the Color Picker, which contains a selection of preset swatches and four Memory Color Ranges.

Swatches Section

The Swatches section contains two sections that provide you with additional control in selecting a color to use with the current enhancement.

SWATCHES

The Swatches section provides you with a predetermined selection of swatches. Simply select the swatch that contains the appropriate color for the current enhancement, and then click OK within the Color Picker.

MEMORY COLOR RANGES

The Memory Color Ranges represent four different ranges of color that contain memory colors. Memory colors represent colors that you see on a regular basis, such as the color of the sky, the color of a person's skin, or the color of foliage. Additionally a neutral color range is displayed in order to provide you with quick access to a range of completely neutral tones, which are essentially colors without saturation or hue.

File Menu

Open Image...

The Open Image function provides you with a File Open dialog allowing you to locate an image to open and edit.

Shortcut:
Ctrl + O (Windows)
Command + O (Mac OS)

Open With...

The Open With command enables you to open the current image with all of the current enhancements in a separate application. You can select the alternative application that will open the image within the application preferences.

Open Folder in Browser...

Select this option to display a browser window to locate a folder to open the Capture NX Browser.

Open Recent

This area displays the most recent ten images opened with Capture NX. Simply click on any of the items displayed in this list to open it within Capture NX.

Save

Use the save feature to save the changes to the image.

Certain file formats provide you with options when saving:

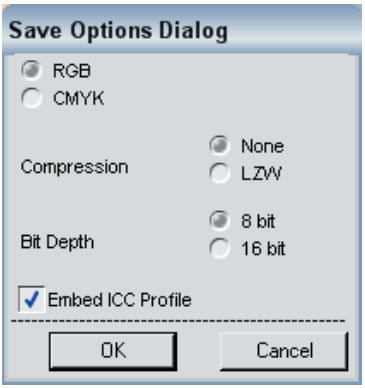
NEF

COMPRESSION

Choose whether or not you want to compress your NEF file.

Please note: *This option is only accessible if the NEF file created within your camera was not compressed.*

TIFF



COLOR MODEL

Choose from two different color models to save your image data in:

RGB

This color model saves your image information with Red, Green, and Blue color channels, and is recommended for most images.

CMYK

This color model saves your image information with Cyan, Magenta, Yellow, and Black color channels, and is recommended only if you will be saving your image for printing with a device that requires a CMYK image.

COMPRESSION

Choose from two different compression options:

None

This option does not compress the image information.

LZW

This option employs a lossless compression scheme based on the LZW compression algorithm.

BIT DEPTH

Choose to save your image either as an 8- or 16-bit per channel image.

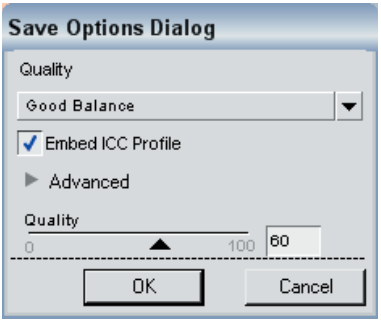
Please note: *The 16-bit option is not available with the TIFF file format set to CMYK, and you may only save the image as a 16-bit image if the original image was 16-bit.*

EMBED ICC PROFILE

Check this box if you would like to embed the current profile in your image. It is recommended that you leave this box checked

unless your printer requests that you do not embed the color profile in the image.

JPEG



QUALITY

Choose from Highest Compression Ratio, Good Compression Ratio, Good Balance, Good Quality, Excellent Quality settings. The higher the quality, the larger the file size.

EMBED ICC PROFILE

Check this box if you would like to embed the current profile in your image. It is recommended that you leave this box checked unless your printer requests that you do not embed the color profile in the image.

ADVANCED

The Advanced Show/Hide Triangle provides with access to the Quality Slider.

Quality

The Quality Slider provides you with more control over the level of compression that is used when saving the image in the JPEG format.

Shortcut:
Ctrl + S (Windows)
Command + S (Mac OS)

Save As....

The Save As feature enables you to save the current image into a different file, with the ability to change the location, the file name, and file extension.

NEF

COMPRESSION

Choose whether or not you want to compress your NEF file.

Please note: *This option is only accessible if the NEF file created within your camera was not compressed.*

TIFF

COLOR MODEL

Choose from two different color models to save your image data in:

RGB

This color model saves your image information with Red, Green, and Blue color channels, and is recommended for most images.

CMYK

This color model saves your image information with Cyan, Magenta, Yellow, and Black color channels, and is recommended only if you will be saving your image for printing with a device that requires a CMYK image.

COMPRESSION

Choose from two different compression options:

None

This option does not compress the image information.

LZW

This option employs a lossless compression scheme based on the LZW compression algorithm.

BIT DEPTH

Choose to save your image either as an 8- or 16-bit per channel image.

Please note*: The 16-bit option is not available with the TIFF file format set to CMYK, and you may only save the image as a 16-bit image if the original image was 16-bit.*

EMBED ICC PROFILE

Check this box if you would like to embed the current profile in your image. It is recommended that you leave this box checked unless your printer requests that you do not embed the color profile in the image.

JPEG

QUALITY

Choose from Highest Compression Ratio, Good Compression Ratio, Good Balance, Good Quality, Excellent Quality settings. The higher the quality, the larger the file size.

EMBED ICC PROFILE

Check this box if you would like to embed the current profile in your image. It is recommended that you leave this box checked unless your printer requests that you do not embed the color profile in the image.

ADVANCED

The Advanced Show/Hide Triangle provides with access to the Quality Slider.

Quality

The Quality Slider provides you with more control over the level of compression that is used when saving the image in the JPEG format.

Shortcut:
Ctrl + Shift + S (Windows)
Command + Shift + S (Mac OS)

Revert

Select the Revert option to remove any changes from the file that were made since the last file save.

Close

The Close option closes the current image. If there are any unsaved changes made to the image, you will be provided with an option of saving those changes.

Shortcut:
Ctrl + W (Windows)

Command + W (Mac OS)

Print Setup...

The Print Setup option provides you with controls for setting up your printer and print environment. Within this option you can set the paper size,

paper source, and orientation, as well as other options which depend on the printer and operating system. It is recommended that you open and adjust the settings within this dialog prior to selecting Print.

Print...

The Print option enables you to set all of the necessary parameters in order to print your image. Additionally, a number of options are presented to enable you to create Print Packages, add meta data to the print, and color manage your prints.

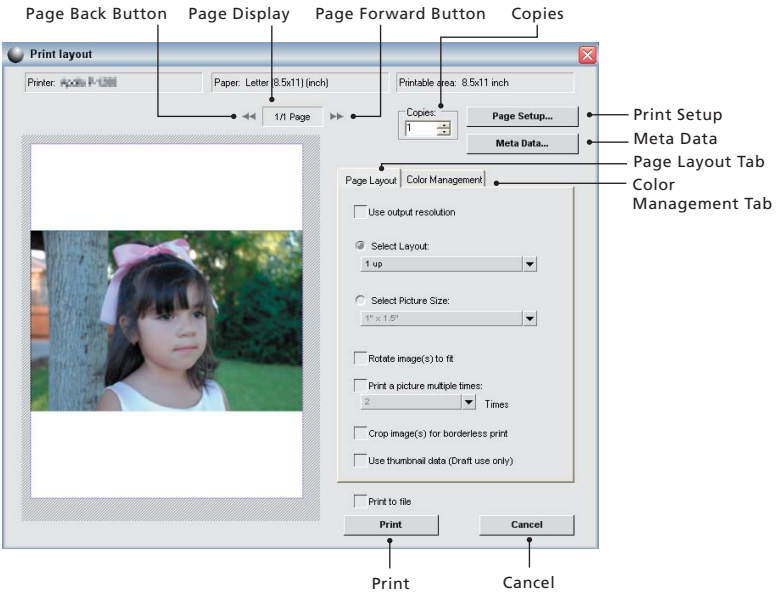
You may elect to print the active image by selecting Print from the **File** Menu, or you can select a range of pictures to print by highlighting multiple images within the Browser and selecting Print. By selecting multiple images within the Browser and selecting print, you can create Print Packages, contact sheets, or print multiple images in a batch.

After selecting Print from the **File** Menu, the Print dialog will appear. Within the Print dialog you will see a preview of the current image as well as options to alter the orientation and display of that image.

The following controls are provided within the Print dialog:

Page Display and Page Forward and Back Button

The Page Display shows you how many pages will be sent to your printer based on the number of images you have selected. The Page Forward and Back buttons enable you to preview the different pages that will be sent to the printer.



Generally these options are only applicable when you have selected multiple images from the Browser to print.

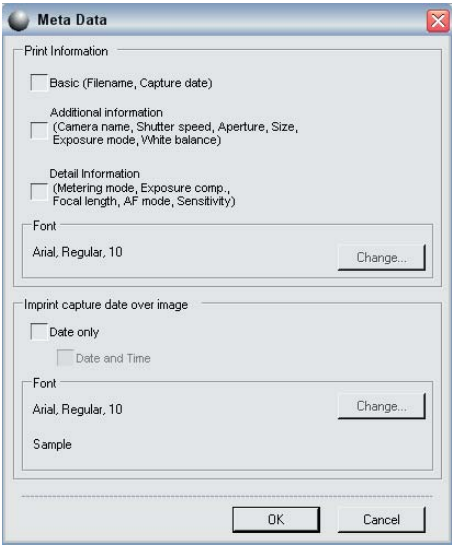
Copies

This option enables you to select the number of copies of the current pages that will be sent to the printer.

Print Setup

Click on this button to bring up the Print Setup dialog.

Meta Data



Clicking on this button will open the Meta Data dialog, where you can choose the meta data, such as file and camera information, you want printed around the image.

PRINT INFORMATION

The options within the Print Information section place specific information regarding your image beneath each image. You can choose from three different sets of information:

Basic Information

Basic contains the file name and capture date of the image.

Additional Information

Checking the Additional Information checkbox will also add the camera name, shutter speed, aperture, image size, exposure mode, and white balance for the image.

Detailed Information

This option adds the metering mode, exposure compensation, focal length, AF mode, and sensitivity (ISO) to the image.

Font

The font that will be used to display the Meta Data is indicated here. Click on the Change button to adjust the settings.

IMPRINT CAPTURE DATE OVER IMAGE

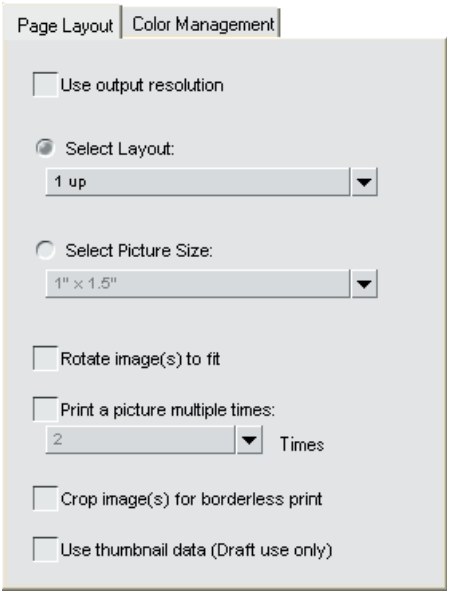
The options within this section enable you to superimpose either the date or the date and the time onto the image itself.

Font

The font that will be used to imprint the date and time is indicated here.

Click on the Change button to adjust the settings.

Page Layout Tab



The options within the Page Layout tab enable you to identify the size and layout of your image as well as any Print Package settings that you may want to apply.

USE OUTPUT RESOLUTION

This option will prevent any size or resolution changes from being made to the image due to the settings in the Print dialog. This will ensure that the size of the image is determined based on the parameters within the Size / Resolution dialog. This option will disable all of the options except for the option labeled Rotate Image(s) to Fit.

SELECT LAYOUT

This mode of printing enables you to select from a list of potential Print Packages. Select the desired package from the pop-up Menu and the Print Preview will be updated accordingly.

SELECT PICTURE SIZE

This mode of printing enables you to set up different Print Packages based on the desired size of the images. Select this option and then choose from the desired print size from within the pop-up Menu.

Please note: *The contents of the pop-up Menu change based on the units of measurement set up within the Preferences.*

ROTATE IMAGE(S) TO FIT

Click on this checkbox to rotate the current image if the orientation of the image does not match the orientation of the paper.

CROP IMAGE(S) FOR BORDERLESS PRINT

Check this option to automatically crop the images so that your prints do not contain any wasted space. If your images do not match the aspect ratio of the paper, portions of the image may be cut off. For example, most images produced by a digital camera have between a 1:1.334 and 1:1.5 aspect ratio, meaning that their longest side is 1⅓ to 1½ times larger than the shortest side. Most paper sizes have between a 1:1.25 and 1:1.5 aspect ratio. Printing an image with an aspect ratio of 1:1.5 onto a paper size with an aspect ratio 1:1.25 will require some cropping of the image's data to

achieve a borderless print.

Original Image: 8" x 12"

Image Automatically Cropped to 8"x10"

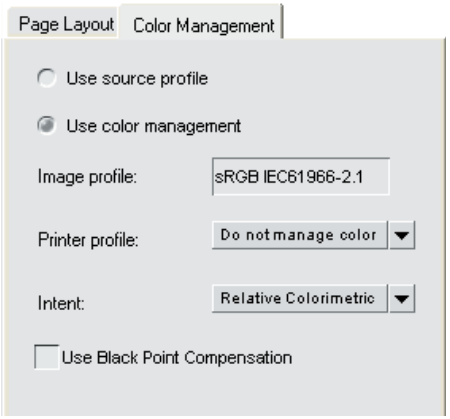
PRINT A PICTURE MULTIPLE TIMES

This option enables you to indicate how many times each image should be printed within a Print Package. Simply identify the number of times to print each image in the pull-down Menu, and the Print Package will be updated accordingly.

USE THUMBNAIL DATA

This option uses only the data contained within the image's thumb-nail to print the image. This results in a faster print, but with significantly lower quality, and is recommended for drafts or proof sheets only.

Color Management Tab



The Color Management tab enables you to set the Color Management options for the images when they are printed. The settings within the Color Management tab default to the settings indicated within the Capture NX Preferences.

Please note*: If you assign color management within the print dialog, it is very important that you turn off color management within your printer driver. Refer to your printer's documentation on how to disable color management within your printer.*

IMAGE PROFILE

This displays the current profile assigned to the image.

PRINTER PROFILE

Use this Menu to select the correct profile to use with your printer. If you are unsure of which profile to use, simply select the Image Profile option at the top of the list.

INTENT

The Intent option lets you choose one of four different rendering intents to apply to your image. The different rendering intents control how colors from your image are made to fit into the colors that your printer can produce as indicated by the printer profile.

Please note*: Different printer and paper combinations, as well as the different software used to create printer profiles, benefit from different rendering intents. Experiment with the different rendering intents within your workflow to find the option that works best.*

The four options are:

Perceptual

This rendering intent attempts to maintain the relationships of colors so that the printed image appears natural to the human eye. While this intent maintains the relationships of colors, the actual color values will be changed.

Saturation

The Saturation rendering intent attempts to produce highly saturated colors, but it may not produce accurate colors in a photograph.

Relative Colorimetric

This rendering intent maps the white point of the image to the white point defined by the printer profile and reproduces accurately all of the colors that are within the range of colors reproducible by your printer. All colors that are outside of the range that your printer can produce are shifted to the closest color possible. This option preserves as many natural colors as possible and is often the best choice for printing photographs.

Absolute Colorimetric

This rendering intent is very similar to the Relative Colorimetric, except that it does not map the white point of the image to the white point of the destination profile. It is recommended that you use Absolute Colorimetric if you want to proof your images for a specific print device other than your printer, since this rendering intent will attempt to reproduce the results of the output device, including the effect of a different paper color.

USE BLACK POINT COMPENSATION

Check this box to utilize Black Point Compensation. This ensures that the black point from the image is mapped to the black point of your printer, ensuring that the full color range of the printer is used. If your prints contain either gray shadows or too little detail, try turning this option off. It is recommended that you always use this option. The exception is if you notice any problems with a specific printer and profile combination.

Once you have set the parameters for the print, click the Print button. The images selected to print will be collected and rendered, if necessary, and then printed.

Shortcut:

Ctrl + P (Windows)
Command + P (Mac OS)

Exit

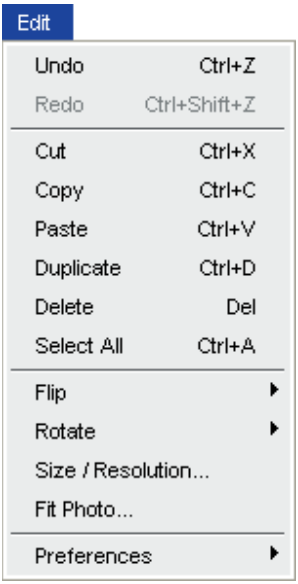
Select this option to quit out of Capture NX.

Shortcut:

Ctrl + Q (Windows)
Command + Q (Mac OS)

Please note*: Within the Mac OS, Exit can be found under the* Capture NX *Menu.*

Edit Menu



Undo

The Undo feature enables you to take one step backward and remove changes that were made to the image or that were made within the current dialog. You can undo an unlimited number of changes within the same step, and nearly all changes you make on your image are undoable. Due to the non-destructive editing model that Capture NX uses, you can also undo an enhancement by removing it or altering the settings within the Edit List without any loss of image quality.

Shortcut:

Ctrl + Z (Windows)
Command + Z (Mac OS)

Redo

The Redo feature becomes available after the undo command has been used and enables you to reapply anything that was undone with the undo command.

Shortcut:

Ctrl + Shift + Z (Windows)
Command + Shift + Z (Mac OS)

Cut

The Cut command clears an object and places it within Capture NX's clipboard, making that object accessible to paste. The Cut command can be used on the following objects:

- Text within a text box
- Selected Control Points
- Images within the Browser

Shortcut:

Ctrl + X (Windows)
Command + X (Mac OS)

Copy

The Copy command takes the selected object and places a copy of that selected object within Capture NX's

clipboard, making that object accessible to paste. The Copy command can be used on the following objects:

- Text within a text box
- Selected Control Points
- Images within the Browser

Shortcut:
Ctrl + C (Windows)
Command + C (Mac OS)

Paste

The Paste command takes the last object placed within Capture NX's clipboard and places it within the current active area. The Paste command can be used on the following objects:

- Text within a text box
- Selected Control Points
- Images within the Browser

Shortcut:
Ctrl + V (Windows)
Command + V (Mac OS)

Duplicate

The Duplicate command makes an immediate copy of the currently selected object. The Duplicate command can make a copy of the following objects:

- The current image
- Images within the Browser
- Selected Control Points

Shortcut:
Ctrl + D (Windows)
Command + D (Mac OS)

Delete

The Delete command removes the currently selected object. The Delete command can be performed on the following objects:

- Selected text
- Selected Control Points
- Images within the Browser
- Selected steps or enhancements within the Edit List

Shortcut:
Delete

Select All

The Select All option highlights all of the objects within the active area. Use Select All within:

- A text box to select all of the text
- An image to select all of the Control Points currently within the image
- The Edit List to select all of the steps
- The Browser to select all of the images

Shortcut:
Ctrl + A (Windows)
Command + A (Mac OS)

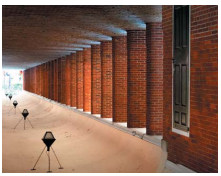
Flip

Use the Flip command to mirror the image across one of two axes:

- Choose Horizontal to mirror the image across the vertical axis.
- Choose Vertical to mirror the image across the horizontal axis.

Original

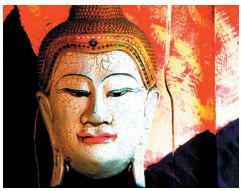
Horizontal Flip



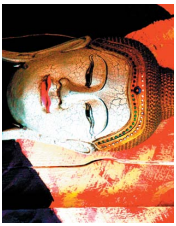
Vertical Flip

Rotate

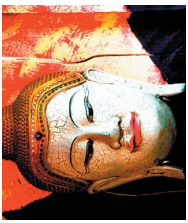
With these commands you can rotate your image 90 degrees clockwise or counter-clockwise, or you can straighten the image.



Original



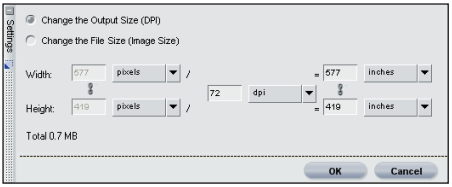
Rotate Right



Rotate Left

Please see page 75 for a description of the functionality of the rotate and straighten features.

Size / Resolution



The Size / Resolution command changes the size of your image, with control over either redistributing the image data or interpolating the image data.

Within the Size / Resolution dialog, you can choose between one of two resize modes:

Change the Output Size (DPI)

Within this mode, you can adjust both the resolution as well as the final image size. The first parameter that you change (either the resolution or the final image size) will simply redistribute the currently available pixels. If you then choose to alter the remaining parameter, Capture NX will interpolate the image data using a bi-cubic interpolation method. In doing so, image data is either created or discarded so that the image fits within the newly set parameters. To illustrate, if you first set the resolution to 300 dpi, the image height and width will automatically update to redistribute the current image pixels into an image set to 300 dpi. If you then change the image height or width, the resolution will remain at 300 dpi, and Capture NX will either create or remove new pixel infor-

mation in order to match the new size of the image.

Change the File Size (Image Size)

Within this mode you can change the image's size either by entering in the actual pixel dimensions or by indicating the percentage of increase or decrease. Either method will interpolate the image either up or down to change the final image size according to the parameters set.

Fit Photo...

The Fit Photo command enables you to fit a series of images to a maximum size. This is especially helpful if you want to resize a large number of images that may be set to different orientations, some portrait and some landscape. The Fit Photo will keep the proportions of the images while changing their sizes.

Resizing simply involves entering the largest allowable image dimensions (width and height) into the dialog windows. It is recommended that you enter the same size into both windows, based on the longest side of the image. For instance, if you want to resize a folder of images of varying dimensions to 4"x 6", enter 6 inches into both the height and width boxes. This will ensure that both portrait and landscape oriented images have their longest size set to 6 inches.

Preferences

The Preferences command modifies the default behavior of Capture NX.

Shortcut:

Ctrl + K (Windows)
Command + K (Mac OS)

Please note: *Within the Mac OS, the Preferences can be found under the Capture NX Menu.*

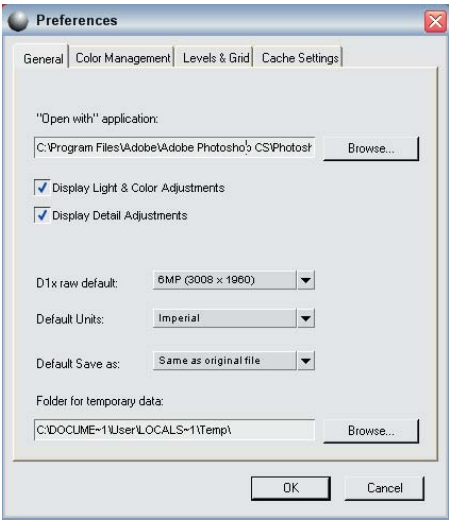
Hint: *You can reset the preferences to the default settings by using the following shortcut while* Capture NX *is launching:*

Shortcut:

Ctrl + Shift + Alt (Windows)
Control + Shift + Command (Mac OS)

The four sections of the Preferences command are:

General



OPEN WITH APPLICATION

Use this option to browse for the program file for the application that you wish to use when utilizing the Open With command from the **File** Menu.

DISPLAY LIGHT & COLOR ADJUSTMENTS

Turn this option off if you do not wish to use the Light & Color Adjustments section of the base adjustments step for non-RAW images.

DISPLAY DETAIL ADJUSTMENTS

Turn this option off if you do not wish to use the Detail Adjustments section of the base adjustments step for non-RAW images.

Please note: *The two RAW sections, Camera Adjustments and RAW Adjustments, will still be displayed for RAW images.*

D1X RAW DEFAULT

Use this option to set the default size of NEF images taken with the D1X. This option utilizes a unique resizing algorithm to resize D1X images to a 10 Megapixel equivalent image.

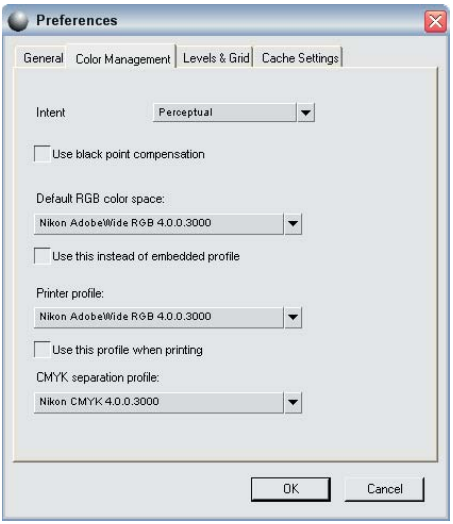
DEFAULT UNITS

Use this option to set the unit of measurement either to Inches or Millimeters.

FOLDER FOR TEMPORARY DATA

This option enables you to set the location where temp data is stored. If possible, set this option to use a folder on a disk other than the primary start-up disk.

Color Management



INTENT

Use this preference to set the default rendering intent for the various color management features throughout Capture NX. The different rendering intents control how colors from your image are made to fit into the colors that your printer can produce as indicated by the printer profile.

Please note: *Different printer and paper combinations, as well as the different software used to create printer profiles, benefit from different rendering intents. Experiment with the different rendering intents within your workflow to find the option that works best.*

The four options are:

Perceptual

This rendering intent attempts to maintain the relationships of colors so that the printed image appears natural to the human eye. While this intent maintains the relationships of colors, the actual color values will be changed.

Saturation

The Saturation rendering intent attempts to produce highly saturated colors, but it may not produce accurate colors in a photograph.

Relative Colorimetric

This rendering intent maps the white point of the image to the white point as defined by the printer profile and reproduces accurately all of the colors that are within the range of colors reproducible by your printer. All colors that are outside of the range that your printer can produce are shifted to the closest color possible. This option preserves as many natural colors as possible and is often the best choice for printing photographs.

Absolute Colorimetric

This rendering intent is very similar to the Relative Colorimetric, except that it does not map the white point of the image to the white point of the destination profile. It is recommended that you use Absolute Colorimetric if you want to proof your images for a specific print device other than your printer, since this rendering intent will attempt to reproduce the results of the output device, including the effect of a different paper color.

USE BLACK POINT COMPENSATION

Check this box to set the default state of the various color management options throughout Capture NX to utilize Black Point Compensation. Black Point Compensation ensures that the black point from the image is mapped to the black point of your printer, ensuring that the full color range of the printer is used. If your prints contain either gray shadows or too little detail, try turning this option off. It is recommended that you always use this option, except when you notice problems with a specific printer and profile combination.

DEFAULT RGB COLOR SPACE

Use this option to set the default RGB space that is used for your images.

USE THIS INSTEAD OF EMBEDDED PROFILE

This option causes Capture NX to automatically convert the image from the embedded profile to the profile as defined in the Default RGB space.

PRINTER PROFILE

This preference enables you to set the default profile to use for your printer as well as within the Soft Proof feature.

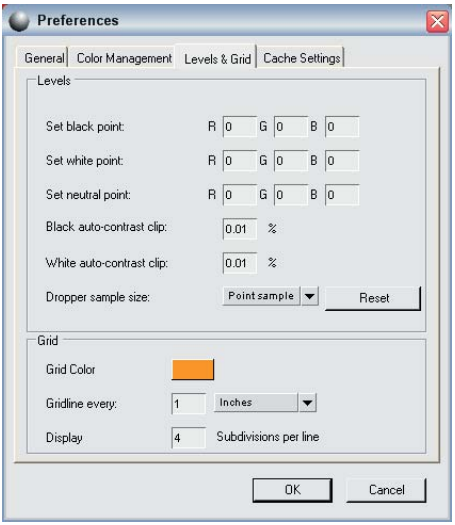
USE THIS PROFILE WHEN PRINTING

Check this option to automatically change the color profile within the color management section of the print dialog to the profile set with the Printer Profile option.

CMYK SEPARATION PROFILE

This preference enables you to set the default separation profile to be used when saving images as TIFF in CMYK.

Levels & Grid



SET BLACK POINT

Use this option to set the black point to a different color other than the default of 0, 0, 0 when setting a black point within the Levels & Curves dialog.

SET WHITE POINT

Use this option to set the white point to a different color other than the default of 255, 255, 255 when setting a white point within the Levels & Curves dialog.

SET NEUTRAL POINT

Use this option to set the neutral point to a different other color than the default of 128, 128, 128 when setting a neutral point within the Levels & Curves dialog.

BLACK AUTO-CONTRAST CLIP

Set this number to determine the percentage of the darkest pixels to exclude when using the Black Point Dropper within the Levels & Curves dialog.

WHITE AUTO-CONTRAST CLIP

Set this number to determine the percentage of the lightest pixels to exclude when using the White Point Dropper within the Levels & Curves dialog.

DROPPER SIZE SAMPLE

Use this option to set the sample size of the droppers within the Levels & Curves dialog.

Point Sample

The Point Sample option samples only a single pixel. This is helpful if you want to be very precise when selecting a color and are able to target a pixel of a specific color.

3x3 Average

The 3 × 3 Average option samples a total of nine pixels in a grid of three pixels by three pixels and averages the colors of each pixel before displaying the result. Since areas within a photograph are generally made up of small variations of color, selecting this option provides a more accurate rendition of the color of the targeted area.

5x5 Average

The 5 × 5 Average option samples a total of twenty-five pixels in a grid of five pixels by five pixels and averages the colors of each pixel before displaying the result. This option is recommended for higher resolution images.

COLOR

Click on the color patch to bring up the Color Picker and select the color for the gridlines when the Show Grid option is enabled. See page 196 for more information about the Show Grid option.

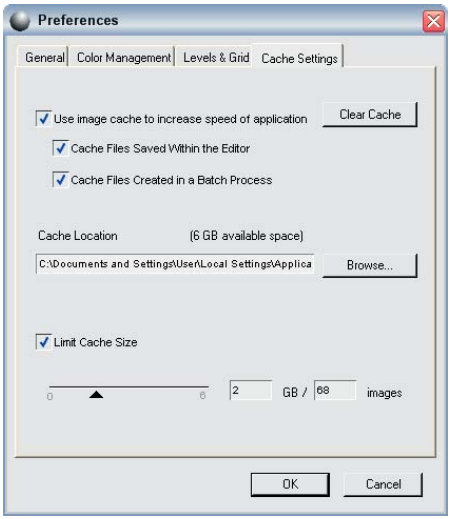
GRIDLINE EVERY

Use this option to set the frequency and the unit of the frequency of the gridlines when the Show Grid option is enabled. See page 196 for more information about the Show Grid option.

SUBDIVISIONS PER LINE

This option enables you to set subdivisions, or smaller gridlines, that are displayed between the major gridlines defined by the Gridline Every preference.

Cache Settings



The Cache functionality enables NEF images that were previously opened within Capture NX to open more quickly. Capture NX provides you with different options to control how NEF images are cached, as well as how much hard disk space is dedicated to the cache files.

While the Cache functionality is enabled, saving an NEF file will automatically create a cache file in the folder indicated within this tab of the preferences. This cache file contains information that Capture NX can use to greatly accelerate the opening of this file in the future.

With the default settings, Capture NX will utilize up to 2 gigabytes of hard disk space to store cache files. If all 2 gigabytes of allocated space are utilized by cache files, Capture NX will begin to replace the oldest cache files with new cache files. In this manner, the files you interacted with most recently will open the fastest. It is important to note that no unique information is stored within these cache files, and if a cache file is replaced, your image file will not lose any information or quality. It will simply require additional processing in order to open, which will take additional time.

You can alter the cache settings to change when cache files are created, where the cache files are placed, and how much hard disk space should be utilized for these cache files.

USE IMAGE CACHE

Check this box to enable Capture NX to utilize cache files to increase the speed of opening NEF files.

Cache Files Saved Within the Editor

Check this box to enable Capture NX to cache files that are saved within the Editor.

Cache Files Created in a Batch Process

Check this box to enable Capture NX to cache files whenever a batch process is used, either within the Editor or within the Browser. This includes both Batch Processes and Watched Folders.

CLEAR CACHE

Click on this button to delete all cache files created by Capture NX.

CACHE LOCATION

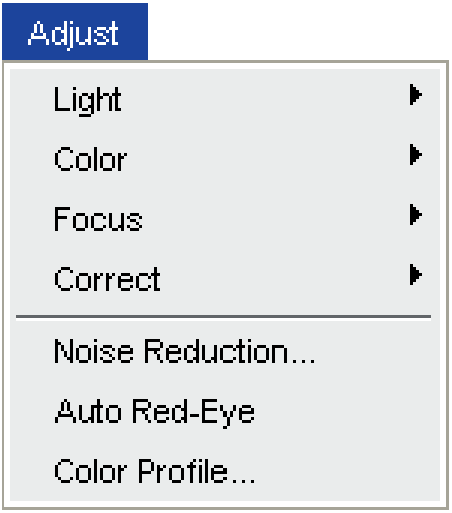
Click on the Browse button to select a new location to place the cache files.

LIMIT CACHE SIZE

Check this box in order to set a limit to the amount of space Capture NX will use for cache files.

You can then use the slider to change the amount of space available for the Capture NX cache system. Next to the slider you will see the amount of space currently allocated to the Capture NX cache system, along with an approximate number of images that can be stored within the space.

Adjust Menu



Please note: *Tools that apply only to RAW images do not appear in the menus. Tools specific to RAW images are available in the Base Adjustments Step.*

Light

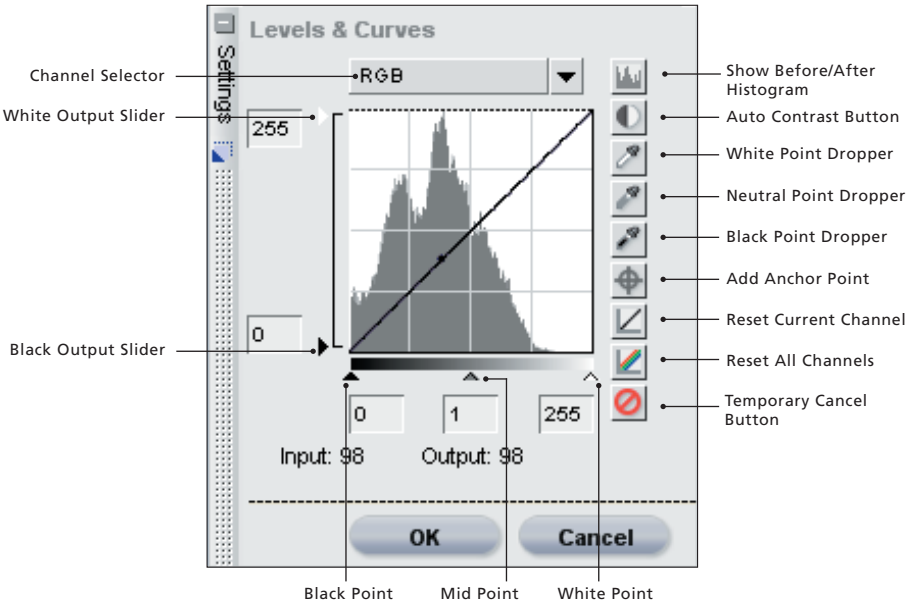
Levels & Curves

The Levels & Curves feature combines two of the most often used tonal enhancing features into one easy-to-use editor. The Levels & Curves feature enables you to adjust contrast, tone levels (brightness), and color balance to make maximum use of the tone range and color gamut offered by a particular output device, such as a printer or monitor.

The Levels & Curves feature provides you with controls to make tonal adjustments to specific portions of the active image's tone range for either the entire image or to specific color channels, making it possible to enhance the image while preserving detail.

Within the Levels & Curves dialog, you are provided with the option of first selecting which channel, or portion of colors, that you want to affect. The Levels & Curves Editor begins by default editing all of the channels (Red, Green, and Blue) within the image simultaneously. If you would like to change this, simply click on the Channel pull-down Menu to select one of individual channels, Red, Green, or Blue.

Hint: *You can access each of these*



different channels quickly by using the following keyboard shortcuts:

RGB Channels: Ctrl + ~ (Windows) Command + ~ (Mac OS)

Red Channel: Ctrl + 1 (Windows) Command + 1 (Mac OS)

Green Channel: Ctrl + 2 (Windows) Command + 2 (Mac OS)

Blue Channel: Ctrl + 3 (Windows) Command + 3 (Mac OS)

Within this editor you are presented with a histogram that represents the total luminosity values within your image. Superimposed above this histogram, a Curve is displayed that enables you to control the relationship of input luminosity values to output luminosity values.

The luminosity histogram represents a bar graph of the total number of pixels that appear at different levels of luminosity. The horizontal axis represents the luminosity level, while the vertical axis represents the number of pixels at each luminosity level found within the current image. The left side of the horizontal axis represents the darkest tones in your image, while the right side represents the lightest tones in the image, based on the active channel selected.

When editing all channels simultaneously, the histogram represents lightness from black to white. When editing an individual channel, the histogram represents lightness from the absence of that color to the maximum brightness of that color.

The histogram is very helpful in determining how to adjust the settings

within the Levels & Curves editor.

You can begin to modify the lightness of your image either by moving the Black, White, and Mid Point Sliders or by editing the Curve directly.

BLACK, WHITE, AND MID-POINT SLIDERS

The Black, White, and Mid Point Sliders will automatically adjust the Curve for you.

Black Point Slider

Move the Black Point Slider to the right to set all luminosity values from the point you have selected and to the left to complete black (or to the absence of the channel's color when working on an individual color channel), while redistributing all of the values to stretch the luminosity range to match the entire possible range of values. It is recommended that you move the Black Point Slider all the way to the right to match up with the left-most information from the displayed histogram. This adjusts the current image so that the darkest values in the image match the darkest value that can be displayed in a digital file.

White Point Slider

Move the White Point Slider to the left to set all luminosity values from the point you have selected and to the right to complete white (or to the maximum lightness of the channel's color when working on an individual color channel), while redistributing all of the values to stretch the luminosity range to match the entire possible range of values. It is recommended that you move the White Point Slider all the way to the left to match up with the right-most information from the displayed histogram. This adjusts the current image so that the lightest values in the image match the lightest value that can be displayed in a digital file.

Mid Point Slider

Move the Mid Point Slider either to the left or to the right in order to lighten or darken the mid-tones of the image.

You may also click directly on the Curve to add an anchor point that can be moved and adjusted. By increasing the slope of the Curve you will increase the contrast in the image. Decreasing the slope of the Curve will decrease the contrast in the image. The anchor points may also be set to minimize the amount of change that occurs to a tonal range of the image.

Anchor points can be removed by simply clicking and dragging the anchor point outside of the Histogram.

The Levels & Curves editor provides you with a number of additional controls:

BLACK AND WHITE OUTPUT SLIDERS

These two sliders enable you to set the maximum and minimum brightness levels of the image. By dragging the Black Output slider up, you lighten the darkest luminosity level in the image, and by dragging the white output

slider down, you darken the lightest luminosity level in the image. These two sliders are often used if the darkest and lightest colors should not be black and white.

SHOW BEFORE / AFTER HISTOGRAM BUTTON

This button toggles back and forth between before and after histograms. The before histogram always remains the same and represents the histogram before any adjustments have been made on the image by the current channel. The after histogram always updates itself based on the changes made by the Levels & Curves editor.

AUTO CONTRAST BUTTON

Click on this button to automatically distribute the colors of each individual channel by modifying the white and black points within each individual channel. Ctrl (Windows) or Option (Mac OS) click to affect the current channel only.

Capture NX automatically selects white and black points that exclude a certain percentage of the brightest and darkest pixels in the image, steepening curves for enhanced contrast. The exact percentage of pixels excluded can be specified in the Preferences dialog. By default, 0.5% of the brightest and darkest pixels are excluded, producing a curve that makes optimal use of the output tone range, while preserving details in shadows and highlights.

WHITE POINT DROPPER

Clicking on this button will change the mouse cursor into a White Point Dropper cursor. By then clicking on your image, you will set the White Point Sliders for all three color channels to the value of the color selected by the White Point Dropper. Use this tool along with the Double-Threshold command from the Photo Info Palette to identify the lightest value in the image that you want to be white. The White Point Dropper will affect both the tonality of the active image as well as the color balance. For more information on the Double-Threshold feature, please see page 100.

Hint: *For even more control over setting the white point in your image, try using the White Control Point from the* **Control Point** *Menu.* *For more information on White Control Points, please see page 165.*

NEUTRAL POINT DROPPER

Clicking on this button will change the mouse cursor into a Neutral Point Dropper cursor. When you click on your image, Capture NX will attempt to make the selected color neutral without affecting the tonal values by setting the mid point sliders for all three color channels. The Neutral Point Dropper attempts to affect only the color balance of the image; however, if the targeted color contains a significant amount color, this feature will affect the tonality of the image.

Hint: *For even more control over*

setting a neutral point in your image, try using the Neutral Control Point Handle from the **Control Point** *Menu.* *For more information on Neutral Control Points, please see page 167.*

BLACK POINT DROPPER

Clicking on this button will change the mouse cursor into a Black Point Dropper cursor. By then clicking on your image, you will set the Black Point Sliders for all three color channels to the value of the color selected by the Black Point Dropper. Use this tool along with the Double-Threshold command from the Photo Info Palette to identify the darkest value in the image that you want to be black. The Black Point Dropper will affect both the tonality of the active image as well as the color balance. For more information on the Double-Threshold feature, please see page 100.

Hint*: For even more control over setting the black point in your image, try using the Black Control Point from the* **Control Points** *Menu found on page 161.*

ADD ANCHOR POINT

Clicking on this button will change the mouse cursor into a crosshair cursor. By then clicking on your image, you will add an anchor point to the curve at the location on the curve that represents the color that your mouse is hovering over. You can then use the newly created anchor point to enhance your image. Ctrl (Windows) or Option (Mac OS) click to affect the current channel only.

RESET CURRENT CHANNEL

Clicking on this button will reset only the current channel to the default values.

RESET ALL CHANNELS

Clicking on this button will reset all channels within the Levels & Curves editor to their default values.

TEMPORARY CANCEL BUTTON

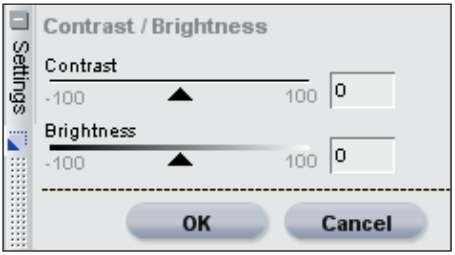
As long as you hold this button down, the effect of the Levels & Curves editor will be temporarily hidden.

Once you are satisfied with the results of the Levels & Curves Editor, click on the OK button. If you want to cancel the Levels & Curves Editor, simply click on the Cancel button.

Shortcut:

Ctrl + L (Windows)
Command + L (Mac OS)

Contrast / Brightness



The Contrast / Brightness feature was designed specifically to provide you with an efficient method of adjusting both the contrast and brightness elements of your images while maintaining a high level of quality. The Contrast / Brightness enhancement is a perfect way

to produce quick contrast or brightness effects that you can paint in selectively using one of the selective tools. Use the included controls to adjust your image.

CONTRAST

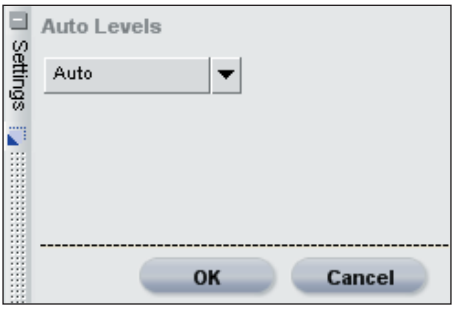
The Contrast Slider provides you with the ability to affect the contrast of your image. The contrast algorithm was designed to prevent any unwanted color shifts from occurring. Moving this slider to the left will decrease the contrast throughout the image, while moving the slider to the right will increase contrast.

BRIGHTNESS

The Brightness Slider provides you with the ability to either brighten or darken your image without creating unwanted color shifts. Move this slider to the left to darken your image, or move the slider to the right to brighten the image.

Once you are satisfied with the results of the Contrast / Brightness feature, click on the OK button. Simply click on the Cancel button to prevent this feature from affecting your image.

Auto Levels



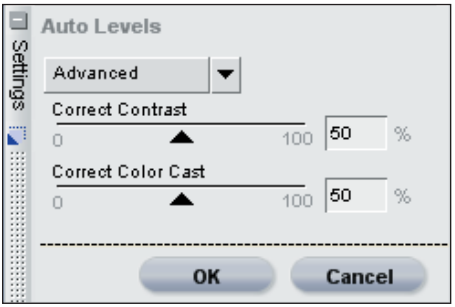
Use the Auto Levels feature to enable Capture NX to analyze your image in order to determine the correct adjustments to spread the available color information within your image across the entire range of tonal possibilities. While similar to the Auto Contrast button within the Levels & Curves dialog, the Auto Levels feature provides you with additional controls.

Choose between the two different Auto Levels methods from within the Method pull-down Menu.

AUTO

Applying the Auto method results in a redistribution of the individual color channels, similar to stretching each color channel within the Levels & Curves, to the entire range of the histogram.

ADVANCED



The Advanced method begins with the same result as the Auto method but provides you with two sliders to control the result:

Correct Contrast

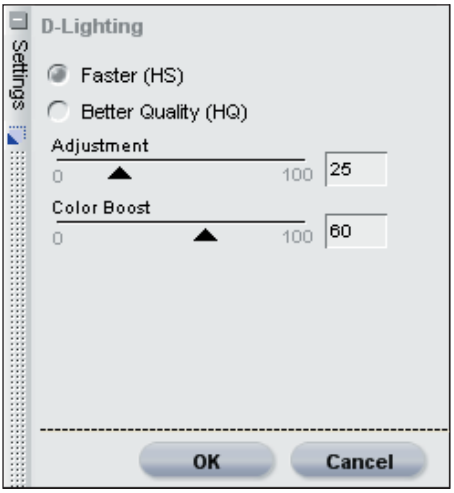
Use the Correct Contrast slider to either increase or decrease the amount of contrast that is being applied to your image. A value of 100 is equivalent to the contrast effect of the Auto method.

Correct Color Cast

Use the Correct Color Cast slider to either increase or decrease the amount of Color Cast reduction that is being applied to your image. A value of 100 is equivalent to the color cast reduction result of the Auto method.

Click OK to accept the effect of the Contrast / Brightness enhancement, or click cancel to prevent this feature from affecting your image.

D-Lighting



D-Lighting reveals details in shadows and highlights, correcting for underexposure, backlighting, or insufficient flash, without harming the properly exposed areas or introducing unwanted artifacts. D-Lighting can also help reveal detail in overexposed areas in brightly lit scenes.

Begin by choosing the method you wish to use when applying D-Lighting to your image.

FASTER

This method enables you to quickly enhance the shadow areas and reveal additional detail in the highlights of the active image as well as to boost the colors of the entire image to produce a natural-looking effect.

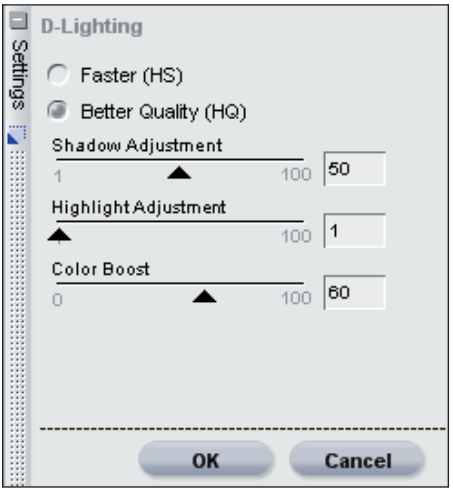
Adjustment Slider

Move the Adjustment slider to the right to bring out details in the shadows and highlights of the active image.

Color Boost Slider

Move the Color Boost slider to the right to increase saturation throughout the entire image.

BETTER QUALITY



This method enables you to take additional control over the shadows and highlights in the image, producing a better quality enhancement than the Faster method.

Shadow Adjustment Slider

Move the Shadow Adjustment slider to the right to bring out additional detail in the shadows of the active image.

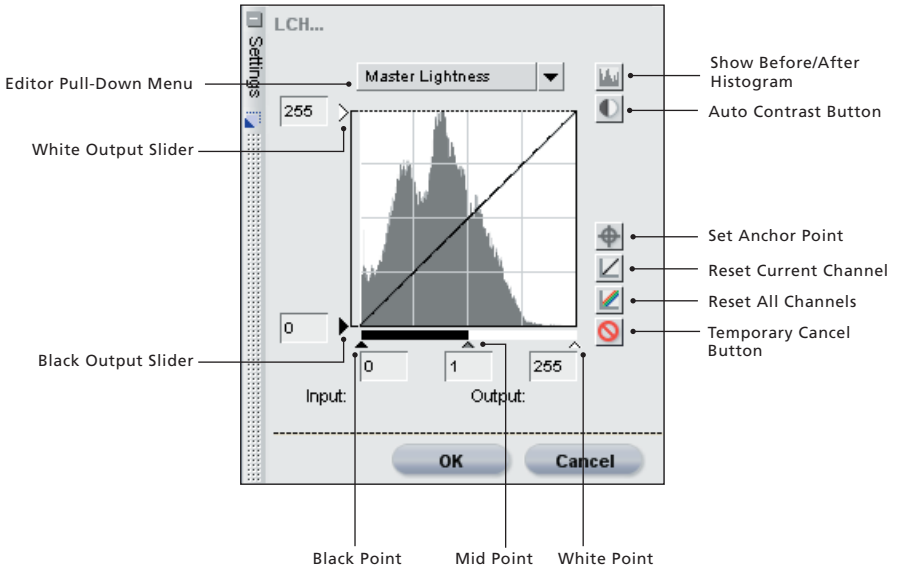
Adjust Highlights Slider

Move the Adjust Highlights slider to the right to reveal additional detail in the highlight areas of the active image.

Color Boost Slider

Move the Color Boost slider to the right to increase saturation throughout the entire image.

Once you are satisfied with the results of the D-Lighting feature, click on the OK button. If you want to cancel the D-Lighting feature, simply click on the Cancel button.



Color

LCH

The LCH Editor enables you to individually control the Luminosity, the Color Lightness, Chroma, and Hue of the active image using individual editor dialogs.

From the Editor pull-down Menu, select the first aspect of the current image that you want to edit. Choose from Master Lightness, Color Lightness, Chroma, and Hue.

Hint: *You can access each of these different Editors quickly by using the following keyboard shortcuts:*

Master Lightness Editor: Ctrl + ~ (Windows) Command + ~ (Mac OS)

Color Lightness Editor: Ctrl + 1 (Windows) Command + 1 (Mac OS)

Chroma Editor: Ctrl + 2 (Windows) Command + 2 (Mac OS)

Hue Editor: Ctrl + 3 (Windows) Command + 3 (Mac OS)

MASTER LIGHTNESS

The Master Lightness Editor is similar to a Levels & Curves dialog, but it affects only the lightness of the image without affecting the color. This is a great way to affect the tonality of your image without introducing unwanted color casts.

Within this editor, you are presented with a histogram that represents the total luminosity values within your image. A Luminosity Curve superimposed above this Luminosity Histogram enables you to control the relationship of input luminosity values to output luminosity values.

The Luminosity Histogram represents a bar graph of the total number of pixels that appear at different levels of luminosity. The horizontal axis represents the luminosity level, while the vertical axis represents the number of pixels at each luminosity level found within the current image. The left side of the horizontal axis represents the darkest tones of your image, while the right side represents the lightest tones in the image. The histogram is very helpful in determining how to adjust the settings within the Master Lightness editor.

You can begin to modify the lightness of your image by either moving the Black, White, and Mid Point Sliders or by editing the Luminosity Curve directly.

Adjusting the Black, White, and Mid Point Sliders will automatically adjust the Luminosity Curve for you.

Black Point Slider

Move the Black Point Slider to the right to set all luminosity values from the point and to the left to complete black, while redistributing all of the values to stretch the luminosity range to match the entire possible range of values. It is recommended that you move the Black Point Slider all the way to the right to match up with the left-most information from the displayed histogram. This adjusts the current image so that the darkest values in the image match the

darkest value that can be displayed in a digital file.

White Point Slider

Move the White Point Slider to the left to set all luminosity values from the point and to the right to complete white, while redistributing all of the values to stretch the luminosity range to match the entire possible range of values. It is recommended that you move the white point slider all the way to the left to match up with the right-most information from the displayed histogram. This adjusts the current image so that the lightest values in the image match the lightest value that can be displayed in a digital file.

Mid Point Slider

Move the Mid Point Slider either to the left or to the right to lighten or darken the mid-tones of the image.

You may also click directly on the Luminosity Curve to add an anchor point that can be moved and adjusted. By increasing the slope of the curve, you will increase the contrast in the image. Decreasing the slope of the curve will decrease the contrast in the image. The anchor points may also be set to minimize the amount of change that occurs to a tonal range of the image.

Anchor points can be removed by simply clicking and dragging the anchor point outside of the Luminosity Histogram.

The Master Lightness editor contains a number of additional controls:

Black and White output sliders

The Black and White output sliders enable you to set the maximum and minimum brightness levels of the image. By dragging the Black Output Slider up, you lighten the darkest luminosity level in the image, and by dragging the White Output Slider down, you darken the lightest luminosity level in the image. These two sliders are often used if the darkest and lightest colors should not be black and white.

Show Before / After Histogram Button 

This button toggles back and forth between Before and After Histograms. The Before Histogram always remains the same and represents the Histogram before any adjustments have been made on the image by the Master Lightness editor. The After Histogram always updates itself, based on the changes made by the Master Lightness editor.

Auto Contrast Button 

Click on this button to automatically move the Black and White Point Sliders to match the darkest and lightest values of the luminosity histogram.

Set Anchor Point 

Click on this button and then click on the active image to select a color to place an anchor point on the Luminosity Curve.

Reset Current Channel 

Click on this button to reset only the Master Lightness editor to the default

values.

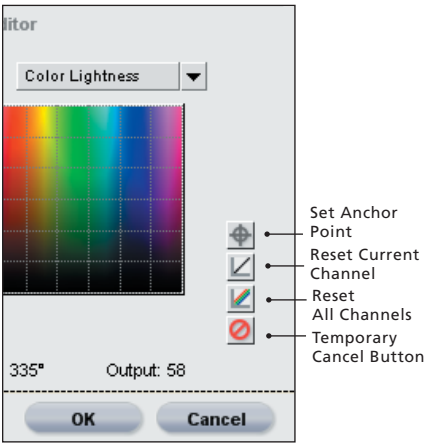
Reset All Channels

Click on this button to reset all editors within the LCH editor to their default values.

Temporary Cancel Button

Hold this button down to temporarily hide the effect of the Master Lightness editor.

COLOR LIGHTNESS



The Color Lightness editor enables you to control the brightness of colors in the image without affecting Chroma or Hue. You can use this editor to target and brighten specific colors, such as lightening a person's skin tone, or darkening the sky of a landscape without affecting other objects.

Within this editor, you are provided with the Hue Map, representing the full spectrum of colors on the horizontal axis, with the brightness of the colors on the vertical axis. A Color Lightness Curve, superimposed above the Hue Map, can be used to isolate and adjust the lightness of individual colors.

Clicking on the curve will create an anchor point. Moving that anchor point upward makes colors in the affected portion of the color range brighter. Taking that same anchor point and moving it downward makes the affected colors darker.

Using the Width slider increases or decreases the range of similar colors affected by the color identified with the anchor point.

Anchor points can be removed by simply clicking and dragging the anchor point off of the Hue Map.

The Color Lightness editor contains a number of additional controls:

Set Anchor Point

Clicking on this button will enable you to click on the active image and select a color to place an anchor point on the Color Lightness Curve.

Reset Current Channel

Clicking on this button will reset only the Color Lightness editor to the default values.

Reset All Channels

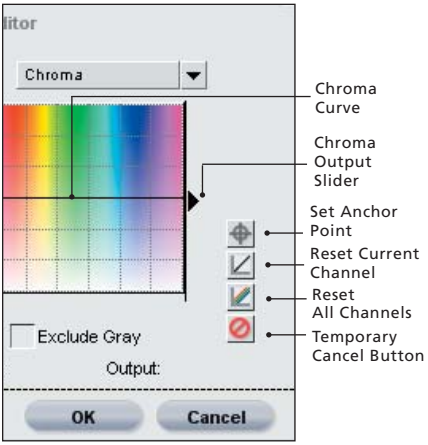
Clicking on this button will reset all editors within the LCH editor to their default values.

Temporary Cancel Button

Hold this button down to temporarily

hide the effect of the Color Lightness editor.

CHROMA



The Chroma Editor enables you to edit the Chroma, or saturation, of the entire image or of specific colors within the active image without affecting Luminosity or Hue.

Within the Chroma Editor, you are provided with a Hue Map, representing the full spectrum of colors on the horizontal axis, with the Chroma of the colors of the vertical axis. Superimposed above this Hue Map, you are provided with a Chroma Curve that can be used to isolate and adjust the Chroma of individual colors.

Clicking on the curve will create an anchor point. Moving that anchor point upward makes colors in the affected portion of the color range more saturated. Taking that same anchor point and moving it downward makes the affected colors less saturated.

Anchor points can be removed by simply clicking and dragging the anchor point off the Hue Map.

Use the Width slider to increase or decrease the range of similar colors affected by the color identified with the anchor point.

The Output slider affects the saturation of all of the colors throughout the image evenly. Moving this slider up will increase the saturation of all colors, while moving this slider down will decrease the saturation of all colors.

The Chroma Editor contains a number of additional controls:

Exclude Gray

Check this box to prevent any saturation increases from affecting neutral colors (grays) in the image. This is helpful as neutral colors (grays) may seem oversaturated when chroma is raised.

Please note: *The Exclude Gray option has no effect when chroma is lowered below the value in the original image.*

Set Anchor Point

Click on this button and then click on the active image to select a color to place an anchor point on the Chroma Curve.

Reset Current Channel

Click on this button to reset only the Chroma Editor to the default values.

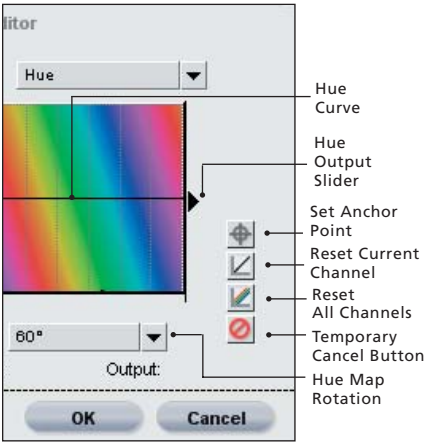
Reset All Channels

Click on this button to reset all editors within the LCH editor to their default values.

Temporary Cancel Button

Hold this button down to temporarily hide the effect of the Chroma editor.

HUE



The Hue Editor enables you to edit the Hue of the entire image or of specific colors within the active image without affecting Luminosity or Chroma. This editor enables you either to completely change the color of an object within the active image, or to provide a subtle shift in color to ensure that the object has a more natural hue.
Within the Hue Editor, you are provided with a Hue Map, representing the full spectrum of colors on a rotated horizontal axis. By default, the Hue Map is rotated 60 degrees. Additional rotational values can be selected within the Hue Map Rotation pull-down Menu. Superimposed above this Hue Map you are provided a Hue Curve that can be used to isolate and adjust the Hue of individual colors.

Clicking on the curve will create an anchor point. Moving that anchor point will shift the colors in the affected portion of the color range to a different color, as represented within the Hue Map. This change depends on the rotation of the Hue Map: the higher the rotation value, the farther the shift of color that is possible.

Anchor points can be removed by simply clicking and dragging the anchor point off of the Hue Map.

Use the Width slider to increase or decrease the range of similar colors affected by the color identified with the anchor point.

The Output slider affects all of the hues in the image evenly. Moving this slider will shift all colors by the same amount.

The Hue Editor contains a number of additional controls:

Set Anchor Point

Click on this button and then click on the active image to select a color to place an anchor point on the Hue Curve.

Reset Current Channel

Click on this button to reset only the Hue Editor to the default values.

Reset All Channels

Click on this button to reset all editors within the LCH editor to their default values.

Temporary Cancel Button

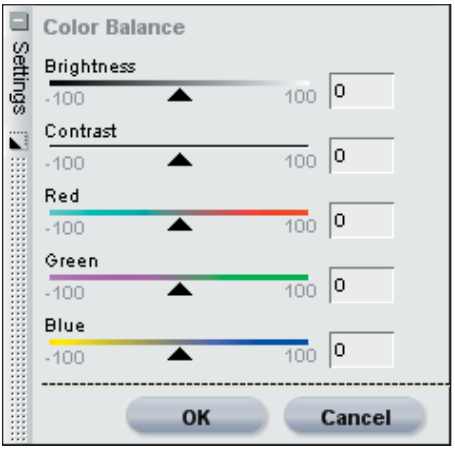
Hold this button down to temporarily hide the effect of the Hue Editor.

Hue Map Rotation

Use this pull-down Menu to select one of the available Hue Map rotations, from 60° to 120° to 180°.

Once you are satisfied with the results of the LCH feature, click on the OK button. If you want to cancel the feature, simply click the Cancel button.

Color Balance



The Color Balance feature provides you with simple controls for adjusting the overall brightness, contrast, and color balance of the entire image.

Move any of the sliders within the Color Balance dialog to alter that slider's effect on the image.

BRIGHTNESS

Adjust this slider to the left to decrease the brightness of the entire image or to the right to increase the brightness of the entire image.

CONTRAST

Adjust this slider to the left to decrease the contrast of the entire image or to the right to increase the contrast of the entire image.

RED

Adjust this slider to the left to remove red from the image which will cause the image to become more cyan. Adjust this slider to the right to add red to the image, which will also remove cyan from the image.

GREEN

Adjust this slider to the left to remove green from the image, which will cause the image to become more magenta. Adjust this slider to the right to add green to the image, which will also remove magenta from the image.

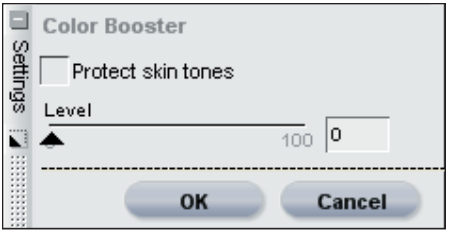
BLUE

Adjust this slider to the left to remove blue from the image, which will cause the image to become more yellow. Adjust this slider to the right to add blue to the image, which will also remove yellow from the image.

Once you have achieved the desired effect, click on the OK button to accept the Color Balance effect for your image. Click on the Cancel button if you would like to prevent the Color Balance feature from affecting your image.

Shortcut:
Ctrl + B (Windows)
Command + B (Mac OS)

Color Booster



The Color Booster enables you to optimally adjust the saturation, or the vividness, of colors. Use the Color Booster to increase the saturation of colors of the active image.

LEVEL

Move the Level slider to the right to boost the saturation of colors in the active image.

PROTECT SKIN TONES

When the Protect Skin Tones check box is enabled, you are able to boost the colors in your image without affecting skin tones.

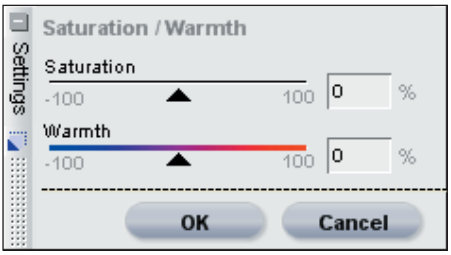
AUTO

Click on the Auto button to have Capture NX automatically determine the level of saturation to apply to the image based on the original brightness of the image.

Once you have achieved the desired effect, click on the OK button to accept the Color Booster effect for your image. Simply click on the Cancel button if you would like to prevent the Color Booster feature from affecting your image.

Please note: *The Auto button within the Color Booster is only available when selecting the Color Booster from the Color & Light Adjustments sub-step of the Base Adjustments step.*

Saturation / Warmth



The Saturation / Warmth feature was designed specifically to provide you with an efficient method of adjusting both the saturation and warmth of colors within your images. The Saturation / Warmth enhancement is a perfect way to produce quick saturation or warming effects by painting in selectively with one of the selective tools. Use the included controls to adjust your image.

SATURATION

The Saturation slider controls the vividness of colors throughout your image. Move this slider to the right to make colors more brilliant, or move the slider to the left to decrease the amount of color in the image. By moving the slider all the way to the left, you will be left with a black and white image.

WARMTH

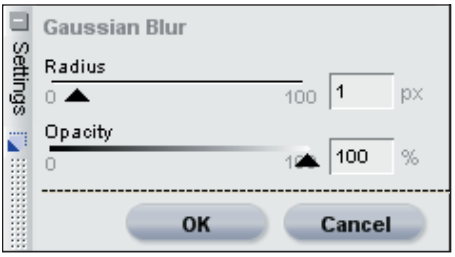
The Warmth slider controls the overall mix of cool and warm tones throughout

the image. Moving the slider to the left causes all colors throughout the image to become cooler, or bluer. Moving the slider to the right will warm all of the colors within the image to contain more red-orange.

Once you are satisfied with the results of the Saturation / Warmth feature, click on the OK button. Simply click on the Cancel button to prevent this feature from affecting your image.

Focus

Gaussian Blur



Use the Gaussian Blur enhancement to dramatically reduce the appearance of detail through the image. This enhancement is often used selectively to reduce the visual impact of objects or areas within an image in order to draw the viewer's eye away from that object or area. Alternatively, you can use it to add a smoothing effect, such as on skin tones, by adjusting the Opacity Slider within this enhancement.

Use the Radius and Opacity sliders to control the result of the Gaussian Blur enhancement.

RADIUS

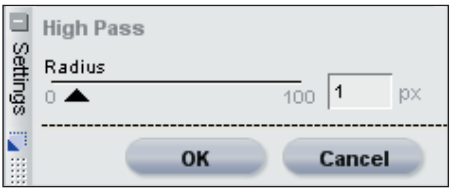
The Radius slider controls the intensity of the blur being applied to the image.

OPACITY

The Opacity slider blends the Gaussian blur with the details in the image to provide you control over the balance of detail and the blur effect. Combining a high radius with a low opacity creates a hazy, soft-focus effect, while combining a low radius with a medium opacity produces a dream-like mood.

Simply click OK to accept the Gaussian Blur effect, or click cancel to prevent this enhancement from affecting your image.

High Pass



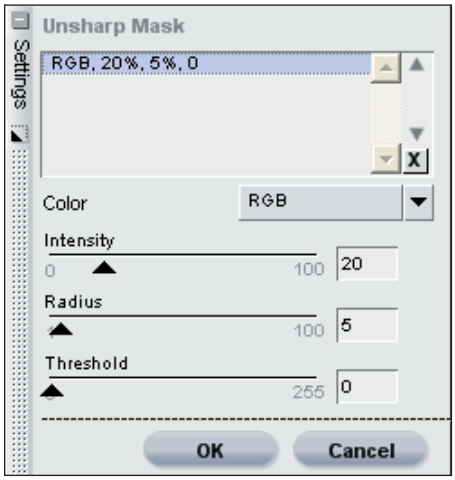
The High Pass feature attempts to block all image details, apart from those details that contain very strong edge definitions. This results in a neutral gray image with only the edges of the original image appearing. This enhancement is often used with the Opacity Mixer set to Luminance and Chrominance mode, with only the Opacity (Chrominance) set to 0% and the Blending Mode set to Overlay. Using the High Pass feature in this way can enable you to control the contrast of objects, or increase the apparent level of detail, depending on the Radius slider setting.

RADIUS

The Radius controls the size of the edge to display in the resulting image. Settings for this slider are dependant on the size of the image, so a radius setting that works well for one image may not be sufficient for an image with a higher resolution.

Click OK to apply the High Pass feature to your image. The cancel button can be selected to prevent the application of the High Pass feature.

Unsharp Mask



The Unsharp Mask feature increases the apparent sharpness of your image by enhancing the edges of objects in your image. Unsharp Mask works by increasing the contrast of edges throughout your image and features controls over Intensity, Radius (halo width), and Threshold. The Unsharp Mask Tool from Capture NX is unique in that it always applies its sharpening to the luminosity of the image, which prevents any unwanted color shifts from occurring within your image.

Please note: *It is recommended that you zoom your image to 100% while determining the amount of sharpening to apply to your image.*

CHANNEL

First select the channel that you wish to sharpen. Additional channels may be selected later, after you have modified the settings for the first channel. By default the RGB option will be selected, which enables you to sharpen all three channels (Red, Green, and Blue) of your image simultaneously. You can choose to sharpen RGB or any individual color channel individually (Red, Green, Blue, Cyan, Magenta, or Yellow).

INTENSITY

You can then select the intensity of the sharpening effect that you want to apply. The higher the sharpening intensity, the more pronounced the sharpening effect will be on your image. If the Intensity setting is set too high it can create an oversharpened and artificial looking image.

RADIUS

The Radius (halo width) slider enables you to increase the reach of the sharpening effect. The higher the radius setting, the wider the edges in the sharpened image will appear. A radius setting that is too high will produce visible halo artifacts, which can appear as white outlines around the objects.

THRESHOLD

The Threshold slider is designed to limit where sharpening is applied with the current settings. The higher the threshold setting, the less that objects in the image will be sharpened. This slider works to indicate how much of a difference between one pixel and its neighbors is necessary in order to apply sharpening. This slider is helpful in preventing smooth areas from picking up noise artifacts, such as when sharpening skin areas or landscapes with large amounts of sky. Too high a threshold setting will prevent any objects from being sharpened in the image, so it is important to find a good balance.

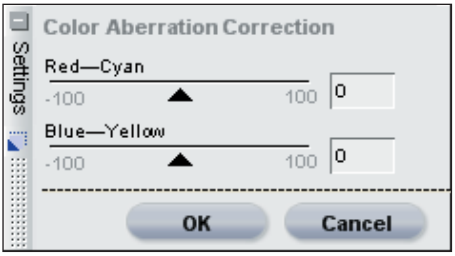
Once you have set the three sliders within the Unsharp Mask feature, you can return to the Channel Menu and select an additional channel to sharpen.

You may also select one of the channels that you have already applied sharpening to in the Channel Sharpening List box. After selecting one of the channels, you can modify those settings by rearranging the sliders, or you can delete the effect on that channel by clicking on the X button.

Once you are satisfied with the results of the Unsharp Mask feature, click on the OK button. If you want to cancel the feature, click on the Cancel button.

Correct

Color Aberration Control



The Color Aberration Control feature can be used to adjust and control potential color fringes that can occur in photographs. Color aberration is caused by the different angles at which the different color wavelengths are refracted when traveling through a lens element. The result, called a color aberration, appears as a color halo on the side of an object that is positioned away from the center of the image.

The controls provided within the Color Aberration Control feature help remove the color fringing by providing you with two sliders that shift colors into and away from the center of the image. It is recommended that you view the image at 100% while making color aberration changes. It is important to review the results of the changes, especially around the corners of the image, to balance the effect.

RED — CYAN

The Red — Cyan Slider contracts and expands the red channel to reduce either red or cyan fringing. Moving the slider to the left reduces red fringes, while moving the slider to the right

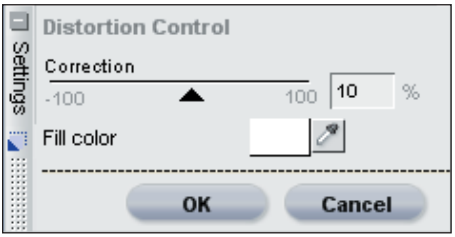
reduces cyan fringes.

BLUE — YELLOW

The Blue — Yellow Slider contracts and expands the blue channel to reduce either blue or yellow fringing. Moving the slider to the left reduces blue fringes, while moving the slider to the right reduces yellow fringes.

Once you are satisfied with the resulting effect from the Color Aberration Control feature, click OK. You can cancel this feature at any time by clicking on the Cancel button.

Distortion Control



The Distortion Control feature provides controls to reduce both pincushion and barrel lens distortions. Pincushion distortion normally affects images shot with wide-angle lenses and results in image details appearing as though they are being pulled into the center of the image. Barrel distortion, the opposite of pincushion distortion, normally affects images shot with telephoto lenses and results in an image that appears to have details that bow outward away from the center of the image. Pincushion and barrel distortion are more apparent at the edges of images.

To reduce pincushion distortion, drag the Control Slider to the right. To reduce barrel distortion, drag the Control Slider to the left.

When correcting a significant amount of pincushion distortion, the resulting image may become smaller than the original image. If this occurs, Capture NX will automatically fill the portion of the image frame that no longer contains image information with white. You can use the Fill Color pop-up Menu to select a different color to fill into these areas.

Once you are satisfied with the resulting effect of the Distortion Control feature, click OK. You can cancel this feature at any time by clicking on the Cancel button.

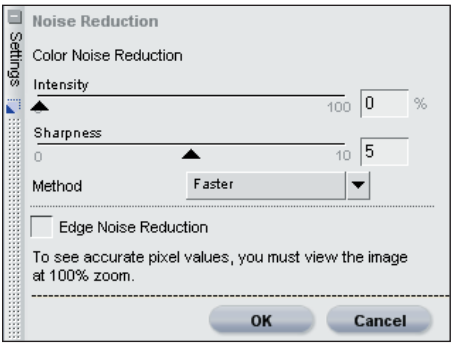
Opacity Mixer

The Opacity Mixer provides you with the ability to blend the current enhancement, or to blend the effects of all of the same type of control points, with the rest of the image.

For a complete description of the functionality of the Opacity Mixer, please see page 61.

Once you have selected the Channel, the Blending Mode, and the opacity for the channels for the current enhancement, click OK to accept the Opacity Mixer's effect. Click Cancel to prevent the Opacity Mixer from affecting the image.

Noise Reduction



The Noise Reduction feature enables you to reduce the effects of digital noise that sometimes appears in images taken with digital cameras.

Please note: *It is recommended that you zoom your image to 100% while determining the amount of noise reduction to apply to your image.*

INTENSITY

Start moving the Intensity slider to the right to increase the amount noise reduction being applied to your image. Be careful to not apply too much noise reduction, as high levels of noise reduction may cause loss of detail.

SHARPNESS

The Sharpness slider helps counter the loss of detail that can occur at high noise reduction levels. Move this slider to the right to increase the amount of sharpening that is applied to your image.

METHODS

Choose between the Faster or Better Quality methods in the Method pull-down Menu. Select Faster for faster processing or Better Quality for a more precise noise reduction effect.

EDGE NOISE REDUCTION

When you check the Edge Noise Reduction checkbox, Capture NX will reduce noise artifacts around the edges of objects within the image, resulting in more distinct outlines.

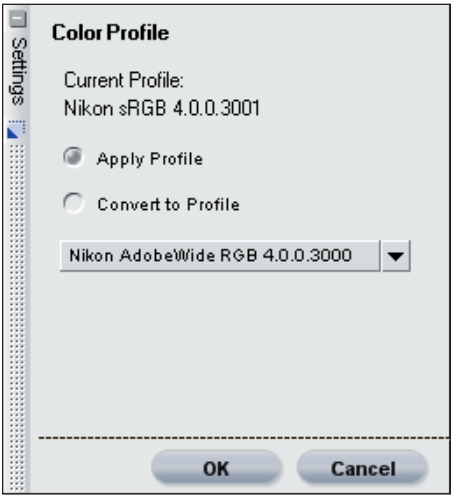
Once you are satisfied with the results of the Noise Reduction feature, click the OK button. If you want to cancel the Noise Reduction feature, simply click the Cancel button.

Auto Red-Eye

The Auto Red-Eye feature within the **Adjust** Menu differs from the Red-Eye Control Point feature located within the Toolbar. Please see page 171 for more information on this feature. The Auto Red-Eye feature automatically locates and removes red-eye from the current image.

The Auto Red-Eye effect is applied immediately when the Auto Red-Eye dialog is displayed. Click OK to accept the Auto Red-Eye effect, or click cancel to prevent the Auto Red-Eye effect from changing your image.

Color Profile



The Color Profile feature provides you with image-specific color management options within Capture NX. Use these options to apply a profile, or convert the current profile to prepare the image for your specific color managed workflow.

Capture NX utilizes the default Color Profile folder for your Operating System. If you add or create additional profiles on your system, please ensure that the new profiles are placed in this default location. Locations typically used for storing color profiles in are:

Windows XP: Windows/System32/Spool/Drivers/Color

Windows 2000: Windows/System32/Color

Mac OS X: Library/ColorSync/Profiles

The Color Profile dialog displays the current profile embedded within the image. Choose between the two different methods of altering the profile to color manage your image.

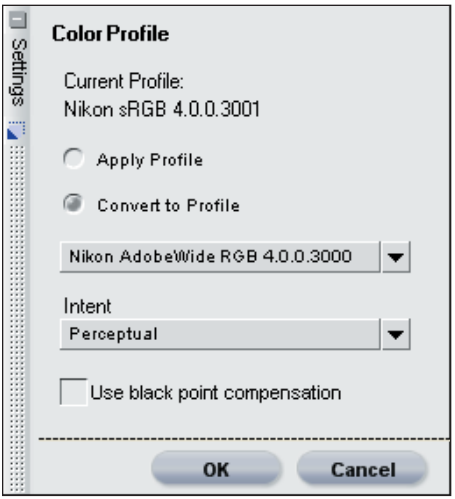
Apply Profile

Choose Apply Profile to assign a profile to the current image. This option is most often used when you would like to assign an input profile, such as a profile you created for your camera, to the image.

Please note*: When you apply a profile, your image may change on your monitor, but the color values will not change. This is because you have just identified the meaning of the colors throughout your image based on the profile created for the input device.*

This is an important first step in the color management workflow, as it makes it possible to then convert the image to an output process. Simply choose the input profile that you would like to apply to the current image from the list of profiles in the Profile pull-down Menu.

Convert to Profile



The Convert to Profile option enables you to convert the profile space of the current image to the profile space of the output device. The result is that the actual color values change, but the appearance of those colors does not change on your monitor. This is due to the fact that you have simply changed the values to ensure that the output device will produce the same colors that you see within the limitations of that output device.

The Convert to Profile function results are the same as when you use the color management option within the Print feature. Since an image may be printed on different printers, or in different situations on the same printer, it is often recommended that you do the profile conversion at the point of printing. Using the Convert to Profile feature is normally recommended only if you intend to have the image printed elsewhere, and only when that service has provided you with their output device's color profile.

To convert your image's profile to a different output profile, first select the target profile from the Profile pull-down Menu. You are then provided with two additional controls to affect how the image is converted:

INTENT

The Intent option lets you choose between four different rendering intents to apply to your image. The different rendering intents control how colors from your image are made to fit into the colors that your printer can produce, as indicated by the printer profile.

Please note: *Different printer and paper combinations, as well as the different software used to create printer profiles, benefit from different rendering intents. Experiment with the different rendering intents within your workflow to find the option that works best.*

The four options are:

Perceptual

This rendering intent attempts to maintain the relationships of colors so that the printed image appears natural to the human eye. While this intent maintains the relationships of colors, the actual color values will be changed.

Saturation

The Saturation rendering intent attempts to produce highly saturated colors but it may not produce accurate colors in a photograph.

Relative Colorimetric

This rendering intent maps the white point of the image to the white point defined by the printer profile and reproduces accurately all of the colors that are within the range of colors reproducible by your printer. All colors that are outside of the range that your printer can produce are shifted to the closest color possible. This option preserves as many natural colors as possible and is often the best choice for printing photographs.

Absolute Colorimetric

This rendering intent is very similar to the Relative Colorimetric, except that it does not map the white point of the image to the white point of the destination profile. It is recommended that you use Absolute Colorimetric if you want to proof your images for a specific print device other than your printer, since this rendering intent will attempt to reproduce the results of the output device, including the effect of a different paper color.

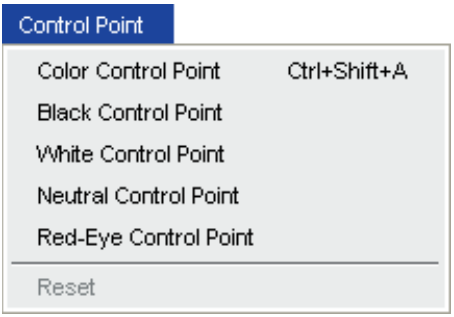
USE BLACK POINT COMPENSATION

Check this box to utilize Black Point Compensation. This ensures that the black point from the image is mapped to the black point of your printer, allowing the full color range of the printer to be used. If your prints contain either gray shadows or too little detail, try turning this option off. It is recommended that you always use this option, except when you notice problems with a specific printer and profile combination.

When you have finished setting the parameters for the Color Profile dialog, click on the OK button. To prevent any changes from being applied by the Color Profile dialog, click on the cancel button.

Please note*: Each color profile change will create a new step within the Edit List. You may at any time remove or change the color profile change within the current image editing session. If you save the image as a NEF file, you will also be able to go back to the Edit List and remove any of these changes without any loss of color detail.*

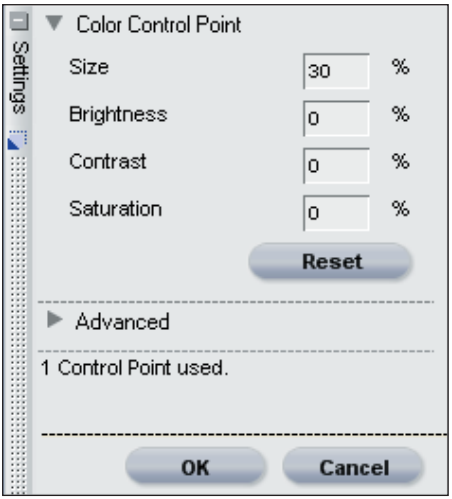
Control Points Menu



Color Control Points...

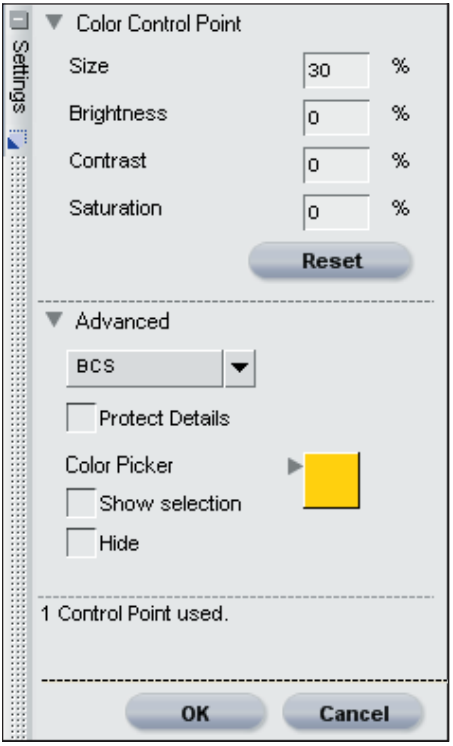
The Color Control Points represent a unique way of adjusting the color and light in an image. Each Color Control Point enables you to perform advanced color changes in a selective fashion, without the need to create selections or masks. The Color Control Point is not accessible while working within the Browser.

Selecting Color Control Point from the **Control Points** Menu enables you to place a Color Control Point on your image and presents you with a Color Control Point Dialog Box. Attached to the Color Control Point are four sliders, representing Size, Brightness, Contrast, and Saturation. Moving any one of these sliders will change how that Control Point interacts with your image, and that adjustment will update the values of that slider within the Color Control Point dialog.



Within the Color Control Point dialog are text boxes that represent the numerical values for each of the currently available sliders. By default, the Size, Brightness, Contrast, and Saturation values are visible. Additionally, you are presented with a Reset button that enables you to return the current Control Point to the default settings.

Clicking on the Advanced ▶ button will display the advanced settings for Color Control Points.



The Mode pull-down Menu enables you to change what elements of the current color that the Color Control Point will affect.

Please note: *Only one mode can be applied at a time, and any changes that are made in one mode will not be carried over to a new mode.*

BCS

The BCS mode is the default mode and provides you with Size, Brightness, Contrast, and Saturation sliders.

HSB

The HSB mode provides you with Size, Hue, Saturation, and Brightness sliders.

RGB

The RGB Mode provides you with Size, Red, Green, and Blue sliders.

All

The All mode provides you with Size, Hue, Saturation, Brightness, Contrast, Red, Green, Blue, and Warmth sliders.

Color Picker Swatch

The Color Picker Swatch enables you to select any color from the Color Picker. The object targeted by the current Color Control Point is then changed to the color identified with the Color Picker.

Protect Details

The Protect Details checkbox disables any changes currently being made by any Control Point on the targeted color. Choosing this option enables you to prevent any adjustments from affecting the object identified by the Control Point. The only control allowed to be applied to an image with the Protect Details option turned on is the Size slider, which can be used to adjust the range of details protected by the current Control Point.

Show Selection

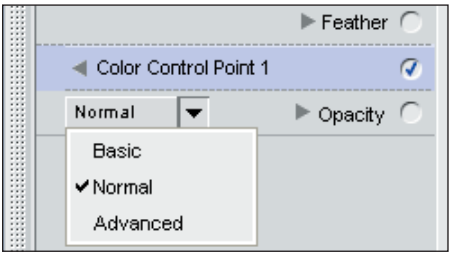
The Show Selection checkbox enables you to see where the current Color Control Point is affecting the image. Areas inked in white are being affected by the Color Control Point, while areas inked in black are not being affected by the Color Control Point. You can quickly access the Show Selection option by right-clicking (Windows) or

control-clicking (Mac OS) the Color Control Point and selecting Show Selection.

Hide

The Hide option completely removes the effect of the Color Control Point temporarily. This is helpful in comparing the before and after effect of the Color Control Point on your image. You can quickly access the Hide option by right-clicking (Windows) or control-clicking (Mac OS) on the Color Control Point and selecting Hide.

Color Control Point Method



The Color Control Point Method pull-down menu located within the Edit List beneath the group of Color Control Points determines how all of the Color Control Points in the current step are applied to the image. Each method utilizes different algorithms optimized for different types of images. Each step utilizing Color Control Points contains one Color Control Point Method pull-down menu where you can choose from one of the available methods. To utilize more than one Color Control Point Method on an image you must create a new step for each different method. The different methods are:

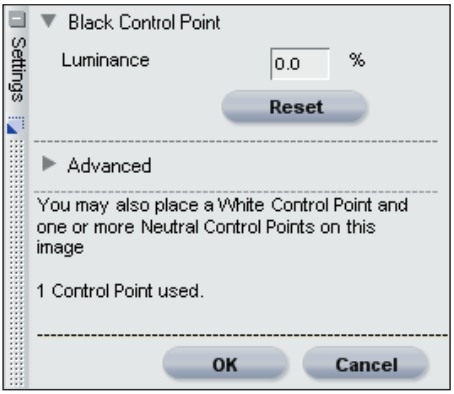
Basic - The Basic method is the fastest and most direct method to apply the handles from the current step to your image. This method is recommended for web graphics and illustrations.

Normal - The Normal method provides the best balance of speed and detail protection. This method is recommended for the majority of images.

Advanced - The Advanced method provides superior results when lightening shadows or working with images with a high level of noise or grain.

Shortcut:
Ctrl + Shift + A (Windows) or
Command + Shift + A (Mac OS)

Black Control Point...



The Black Control Point allows you to place a Control Point directly onto your image and to cause the targeted color not only to become black, but also to neutralize the dark tones of your image. The Black Control Point is not accessible while working within the Browser.

Black points are normally set on what should be the darkest point of the image and are used to establish one end of the dynamic range of the image. The Double-Threshold function within the Photo Info's Histogram section is designed specifically to help you locate the darkest and lightest sections of your image. Please see page 100 for more information on how to use the Double-Threshold function. A Black Control Point is often used in conjunction with a White Control Point.

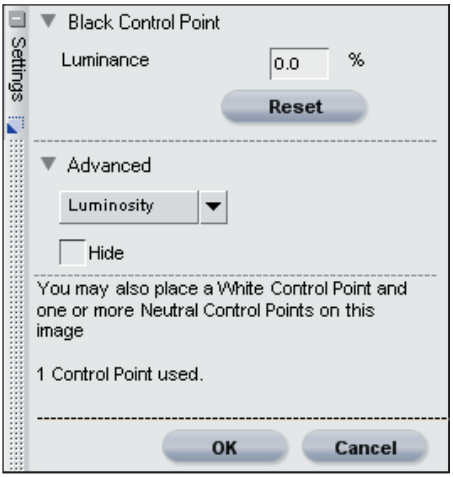
After you place a Black Control Point on your image, a Black Point Dialog Box appears next to the Edit List. The Black Control Point can be repositioned by clicking and dragging on it. It can be deleted by selecting the Control Point and pressing the Delete key on your keyboard, and it can be modified using the Control Point's slider.

After placing the Black Control Point, you can control the luminosity of the black point either by using a slider or by entering a luminosity value into the Black Point Dialog Box. Use the Reset button to return the settings of the Black Control Point to the default settings.

When you click on the Advanced ▶ button, the advanced controls for the Black Control Point are displayed within the Black Point Dialog Box.

Within the Advanced area of the Black Point Dialog Box, you have the option of changing the method of controlling the Black Control Point from controlling only the Luminosity to controlling the values for red, green, and blue separately. You can also hide the Black Control Point or reset it to the default settings.

Luminosity Mode



The Luminosity Mode of the Black Control Point always changes the color that you have targeted by setting the Black Control Point to a neutral black. This is often the most efficient mode to use, as most calibrated printers work best when the image is set to a neutral black. Within this mode, you are presented with only one slider on the Black Control Point and only one entry box in the Black Point dialog.

RGB Mode

The RGB Mode of the Black Control Point enables you to set the individual red, green, and blue values of the target to black. This option is helpful if your printer requires a non-neutral black. Within this mode, you are presented with three sliders on the

Black Control Point and three entry boxes in the Black Point dialog, representing the red, green, and blue values of the black point.

Hide

The Hide option completely removes the effect of the Black Control Point temporarily. This option is helpful in order to compare the before and after effects of the Black Control Point on your image. You can quickly access the Hide option by right-clicking (Windows) or control-clicking (Mac OS) on the Black Control Point and selecting Hide.

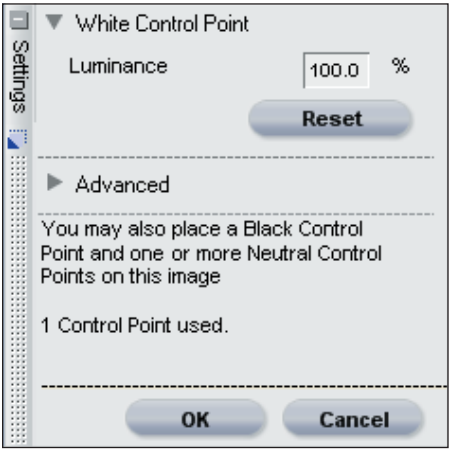
Each step may contain up to one Black and one White Control Point, while allowing for an unlimited number of Neutral Control Points.

White Control Point...

The White Control Point enables you to place a Control Point directly on your image and to cause the targeted object not only to become white, but also to neutralize the light tones of your image. The White Control Point is not accessible while working within the Browser.

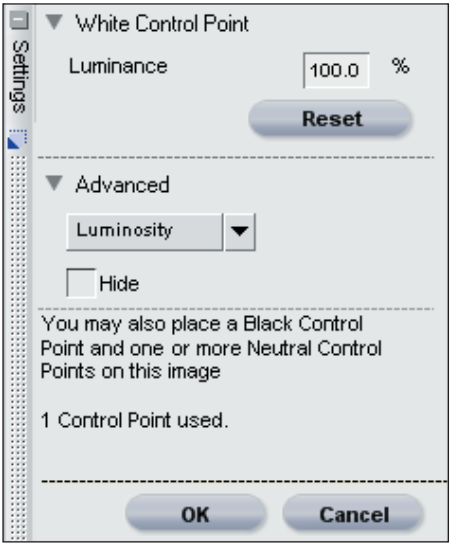
White points are normally set on what should be the lightest point of the image and are used to set one end of the dynamic range of the image. The Double-Threshold function within the Photo Info's Histogram section is designed specifically to help you locate the darkest and lightest sections of your image. Please see page 100 for more information on how to use the Double-Threshold function. A White Control Point is often used in conjunction with a Black Control Point.

After you place a White Control Point on your image a White Point dialog box appears next to the Edit List. The White Control Point can be repositioned by clicking and dragging on it. It can be deleted by selecting the control point and pressing the Delete key on your keyboard, and it can be modified by using the Control Point's slider.



After placing the White Control Point, you can control the luminosity of the white point either with the slider provided or by entering a luminosity value into the White Point Dialog Box. A Reset button is provided that enables you to reset the White Control Point to the default settings.

When you click on the Advanced ▶ button, the advanced controls for the White Control Point are displayed within the White Point Dialog Box.

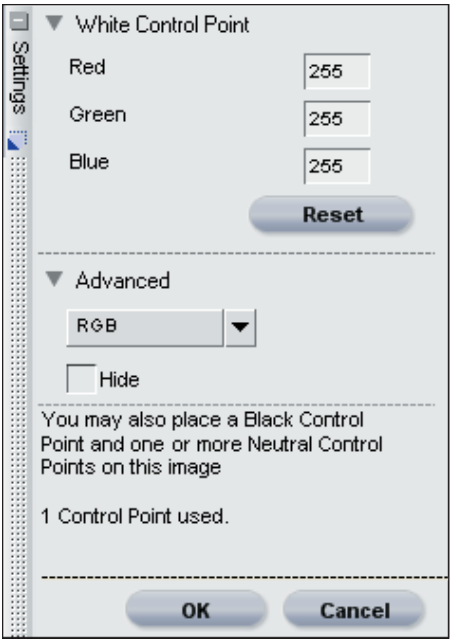


Once you have opened the Advanced area of the White Point Dialog Box, you can change between controlling the luminosity and controlling the individual red, green, and blue values of the White Control Point. You can also choose to hide the White Control Point or to reset the White Control Point to the default settings.

Luminosity Mode

The Luminosity Mode of the White Control Point always changes the color which is targeted by the White Control Point to a neutral white, based on the setting of this value. Because most calibrated printers work best when the image is set to a neutral white, the Luminosity Mode is often the most efficient mode to use. Within the Luminosity Mode you are presented with only one slider on the White Control Point and only one entry box in the White Point dialog.

RGB Mode



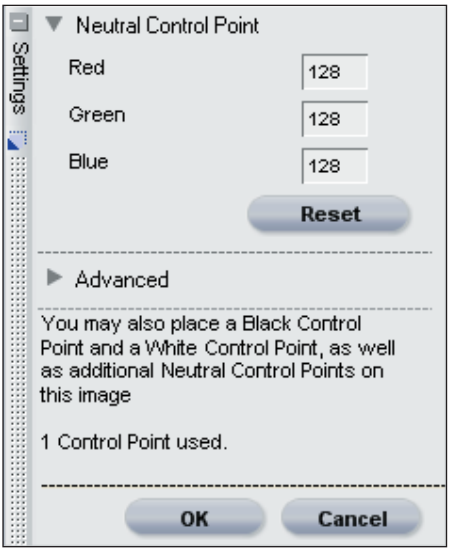
The RGB Mode of the White Control Point enables you to set the individual red, green, and blue values of the target white. This is helpful if your printer requires a non-neutral white. Within this mode, you are presented with three sliders on the White Control Point and three entry boxes in the White Point dialog, representing the red, green, and blue values of the white point.

Hide

The Hide option completely removes the effect of the White Control Point temporarily. This is helpful in comparing the before and after effect of the White Control Point on your image. You can quickly access the Hide option by right-clicking (Windows) or control-clicking (Mac OS) on the White Control Point and selecting Hide.

Each step may contain up to one Black and one White Control Point, while allowing for an unlimited number of Neutral Control Points.

Neutral Control Point...

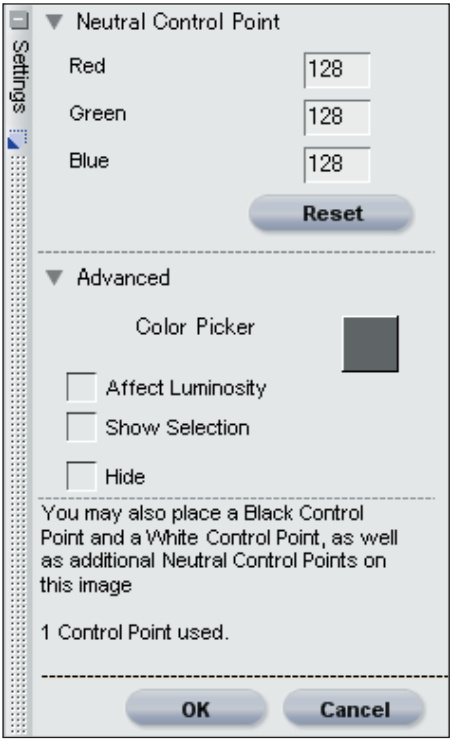


Neutral Control Points enable you to correct a color cast in your photograph by forcing the targeted color to become neutral or to become a defined color. The Neutral Control Point is not accessible while working within the Browser.

In its default operation, the Neutral Control Point will attempt to change the color values in the targeted color so that the red, green, and blue values for that color are equal. By equalizing the red, green, and blue values for a specific color, that color becomes neutral, or lacking in saturation. This can be helpful if the scene in which the photograph was taken contained

a neutral item, such as a gray card. By selecting an object that is intended to be neutral, Capture NX is able to calculate the difference between that object and the color that is currently representing that object. The Neutral Control Point will attempt to remove the difference in color from the targeted object as well as from the entire image. This results in a color change that affects the entire image.

Please note: *In its default state, the Neutral Control Point will not affect the tonal values of your image. It will affect only the relationship of colors in your image.*



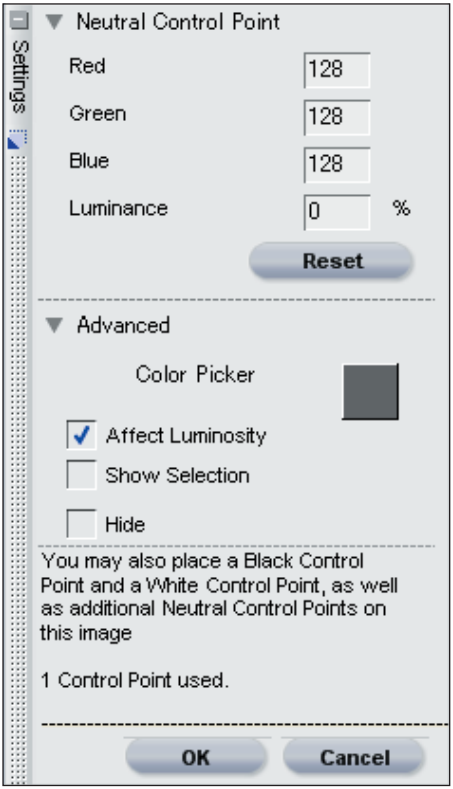
After placing a Neutral Control Point on your image, you will be presented with a Control Point containing sliders for red, green, and blue values in addition to a Neutral Point dialog next to the Edit List.

By default, all three sliders will remain equal relative to one another. By changing these values, you are, in effect, indicating that the targeted color should have been the color indicated by the slider values. That is, you can change the slider values to a color other than neutral gray that will cause Capture NX to replace the targeted color with the new color as defined by the sliders. The Neutral Control Point shifts the entire color cast in the direc-

tion that the slider is moved. By increasing the Red slider, for example, you are indicating that the object should contain more red than it currently displays. By increasing the Red slider you will add red to the entire image.

One unique feature of the Neutral Control Points is that multiple Neutral Points can be utilized in the same image in the same step. This feature enables you to identify different objects and allows you to neutralize more than one color cast that may appear in the image. When you use multiple Neutral Control Points, each Control Point will communicate with the other Neutral Control Points to affect the entire image, correcting different objects and in the process removing multiple color casts.

Within the Neutral Point dialog, you will find entry boxes to manually enter red, green, and blue values directly for that Neutral Control Point. A Reset button is provided that enables you to return the settings of the Neutral Control Point to the default settings.



Additional controls for the Neutral Control Point can be found by clicking on the Advanced ▶ button. Additional controls to further enhance the functionality of the Neutral Control Point are located within the Advanced area of the Neutral Point dialog.

Affect Luminosity

The Affect Luminosity checkbox enables you to control the luminosity with the Neutral Control Point. When you check this box, an additional Luminosity slider and entry box will be added to the Neutral Control Point and the Neutral Point dialog.

Changing this value when only one Neutral Control Point is applied will affect the mid-tones throughout the image. When more than one Neutral Control Point is applied to the same image within the same step, any changes that are made to the Luminosity slider will affect the targeted color as well as the range of colors which are similar to the targeted color.

Color Picker

The Color Picker color swatch indicates the current color that is being used as the basis for the Neutral Control Point's effect. The Color Picker color swatch also enables you to access any color through the Color Picker. One of the best ways to use the Neutral Control Point is to place the Control Point on an object that is represented by a memory color, and select the corresponding memory color range from the Color Picker. Capture NX provides four of the most common memory colors that represent colors that you see on a regular basis, such as the color of the sky, the color of a person's skin, or the color of foliage. You might, for example, place a Neutral Control Point on the sky, click on the Color Picker color swatch, open the swatches portion of the Color Picker, and then select a color from the Sky memory color range. This will remove any color cast from the image by removing the difference between the targeted color of the sky and the defined sky memory color from the entire image.

Show Selection

The Show selection checkbox enables you to see where the current Color Control Point is affecting the image. Areas inked in white are being affected by the Color Control Point, while areas inked in black are not being affected by the Color Control Point. You can quickly access the Show selection option by right-clicking (Windows) or control-clicking (Mac OS) the Color Control Point and selecting Show selection.

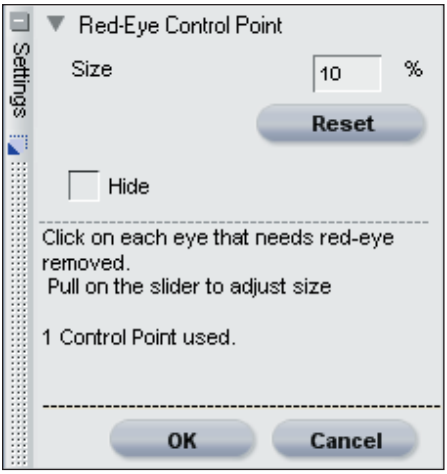
Hide

The Hide option completely removes the effect of the Neutral Control Point temporarily. This is helpful in comparing the before and after effect of the Neutral Control Point on your image. You can quickly access the Hide option by right-clicking (Windows) or control-clicking (Mac OS) on the Neutral Control Point and selecting Hide.

Each step may contain up to one Black and one White Control Point, while allowing for an unlimited number of Neutral Control Points.

Red-Eye Control Point...

The Red-Eye Control Point enables you to manually remove the red-eye effect often caused by flash photography. Simply select the Red-Eye Control Point and place it on an eye that has red-eye. The Red-Eye Control Point is not accessible while working within the Browser.



Control the Red-Eye Control Point's effect by increasing or decreasing the Size slider.

Hide

The Hide option completely removes the effect of the Red-Eye Control Point temporarily. This is helpful in comparing the before and after effect of the Red-Eye Control Point on your image. You can quickly access the Hide option by right-clicking (Windows) or control-clicking (Mac OS) on the Red-Eye Control Point and selecting Hide.

Reset

The Reset function within the **Control Points** Menu enables you to reset the currently selected Control Points to their default states.

Filter Menu

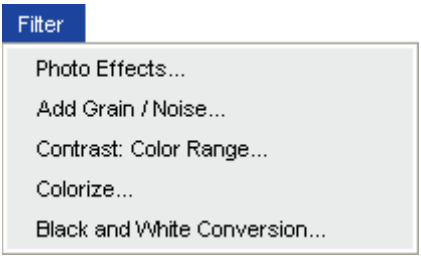


Photo Effects...

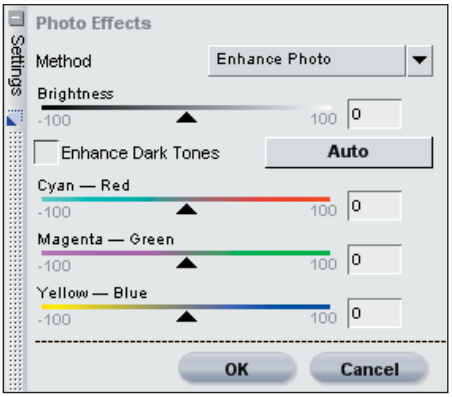
The Photo Effects feature enables you to take more creative control of your image. With this tool you can convert your image to a Black and White, Sepia, or Tinted image. You can also control the tonality of the image, enhance dark tones, and control the color balance.

To use the Photo Effects feature, click on the ▶ button next to Photo Effects. This will provide you with the Photo Effects dialog.

First, select the method that you want to use to affect your image. Choose from Enhance Photo, Black and White, Sepia, and Tinted.

Please note: *Only one of these modes can be applied to your image.*

Enhance Photo



Enhance Photo is the default method available to you when you open the Photo Effects feature. This mode enables you to control the tonality in your image, enhance dark tones, and control the color balance of the entire image.

BRIGHTNESS

The Brightness Slider enables you to control the tonality throughout your image. Move this slider to the left to darken your image or to the right to brighten the image.

CYAN — RED

The Cyan — Red Slider enables you to shift the colors of your image from cyan to red. Moving this slider to the left

removes red from the image, which will cause the image to become more cyan. Adjusting this slider to the right adds red to the image, removing cyan from the image.

MAGENTA — GREEN

The Magenta — Green Slider enables you to shift the colors of your image from magenta to green. Moving this slider to the left removes green from the image, which will cause the image to become more magenta. Adjusting this slider to the right adds green to the image, removing magenta from the image.

YELLOW — BLUE

The Yellow — Blue Slider enables you to shift the colors of your image from yellow to blue. Moving this slider to the left removes blue from the image, which will cause the image to become more yellow. Adjusting this slider to the right adds blue to the image, removing yellow from the image.

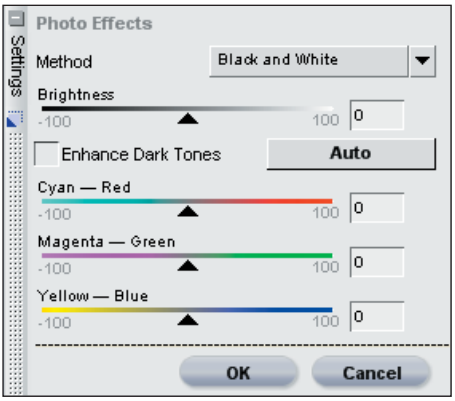
ENHANCE DARK TONES

The Enhance Dark Tones check box causes the Photo Effects feature to bring out additional detail in the shadows of the active image.

AUTO

When you click on the Auto button, Capture NX will analyze the image and determine a recommended setting for the Brightness slider. It will also determine automatically if the Enhance Dark Tones option will be applied.

Black & White



The Black and White converts the current image to Black and White, while providing you with controls over how the image is converted to Black and White.

BRIGHTNESS

The Brightness Slider enables you to control the tonality throughout your image. Move this slider to the left to darken your image or to the right to brighten the image.

CYAN — RED

The Cyan — Red Slider enables you to alter the black and white effect on your image. When you move this slider to the right, objects that contain cyan become lighter, while objects containing red become darker. Moving this slider to the left causes objects that contain cyan to become darker and objects containing red to become brighter.

MAGENTA — GREEN

The Magenta — Green Slider enables

you to alter the black and white effect on your image. When you move this slider to the right, objects that contain magenta become lighter, while objects containing green become darker. Moving this slider to the left causes objects that contain magenta to become darker and objects containing green to become brighter.

YELLOW — BLUE

The Yellow — Blue Slider enables you to alter the black and white effect on your image. When you move this slider to the right, objects that contain yellow become lighter, while objects containing blue become darker. Moving this slider to the left causes objects that contain yellow to become darker and objects containing blue to become brighter.

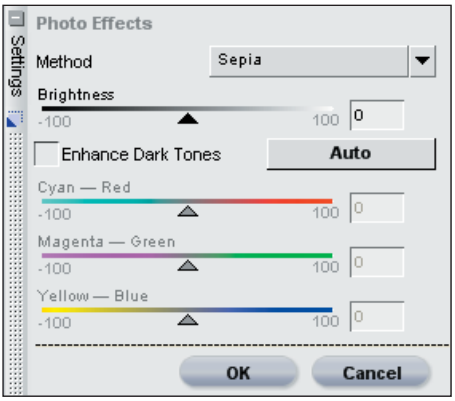
ENHANCE DARK TONES

The Enhance Dark Tones Check Box causes the Photo Effects feature to bring out additional detail in the shadows of the active image.

AUTO

When you click on the Auto button, Capture NX will analyze the image and determine a recommended setting for the Brightness slider. It will also determine automatically if the Enhance Dark Tones option will be applied.

Sepia



The Sepia mode emulates the darkroom effect of applying a sepia tone to a black and white print.

BRIGHTNESS

The Brightness Slider enables you to control the tonality throughout your image. Move this slider to the left to darken your image, or to the right to brighten the image.

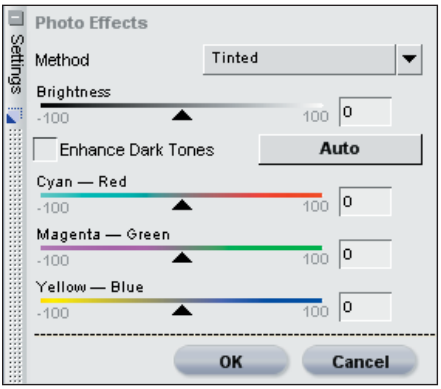
ENHANCE DARK TONES

The Enhance Dark Tones Check Box causes the Photo Effects feature to bring out additional detail in the shadows of the active image.

AUTO

When you click on the Auto button, Capture NX will analyze the image and determine a recommended setting for the Brightness slider. It will also determine automatically whether to enable the Enhance Dark Tones option or not.

Tinted



The Tinted mode emulates the effect of printing a black and white negative on color paper, while using different colored filters to change the overall hue of the image.

BRIGHTNESS

The Brightness Slider enables you to control the tonality throughout your image. Move this slider to the left to darken your image or to the right to brighten the image.

CYAN — RED

The Cyan — Red Slider enables you to control the amount of cyan or red in the filter being used. Moving this slider to the left removes red from the filter, causing the filter and the image to become more cyan. Adjusting this slider to the right adds red to the filter and the image.

MAGENTA — GREEN

The Magenta — Green Slider enables you to control the amount of magenta or green in the filter being used. Moving this slider to the left removes green from the filter, causing the filter and the image to become more magenta. Adjusting this slider to the right adds green to the filter and the image.

YELLOW — BLUE

The Yellow — Blue Slider enables you to control the amount of yellow or blue in the filter being used. Moving this slider to the left removes blue from the filter, causing the filter and the image to become more yellow. Adjusting this slider to the right adds blue to the filter and the image.

ENHANCE DARK TONES

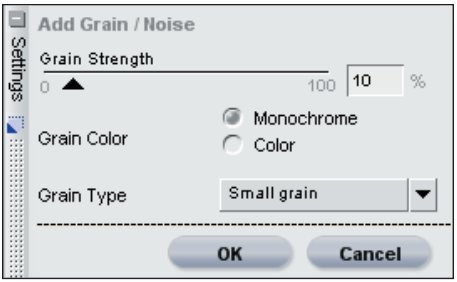
The Enhance Dark Tones Check Box causes the Photo Effects feature to bring out additional detail in the shadows of the active image.

AUTO

When you click on the Auto button, Capture NX will analyze the image and determine a recommended setting for the Brightness slider. It will also determine automatically whether to enable the Enhance Dark Tones option or not.

Once you are satisfied with the results of the Photo Effects feature, click on the OK button. If you want to cancel the Photo Effects feature, simply click on the Cancel button.

Add Grain/Noise...



The Add Grain / Noise feature enables you to add the stylistic effect of either grain or noise to your image. The grain feature emulates different sizes of film grain within your image, while the noise feature applies random detail to your image to approximate digital camera noise.

Within the Add Grain/Noise dialog you are provided with the following controls:

GRAIN STRENGTH

Move this slider to the right to increase the amount of grain or noise that is applied to your image.

GRAIN COLOR

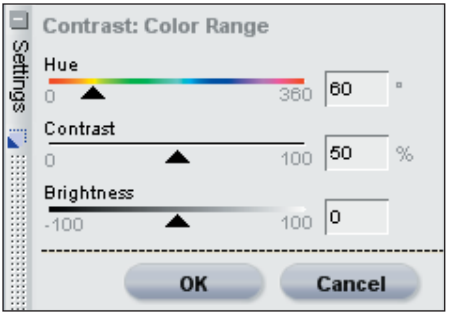
Use this feature to control whether or not the grain or noise is made up of color or black and white details.

GRAIN TYPE

Use this feature to choose the method of grain or noise to apply to your image. Choose from Small Grain, Medium Grain, Large Grain, and Noise.

Click OK to accept the Add Grain/Noise effect, or click Cancel to prevent the effect from being applied to your image.

Contrast: Color Range...



The Contrast: Color Range feature enables you to control the contrast between selected colors within an image without introducing a color cast to the entire image. Using this tool isolates and identifies specific colors and color relationships in much the same way that black and white tones are controlled using colored filters.

Within the Contrast: Color Range dialog you are provided with the following controls:

HUE

The Hue Slider selects the targeted color range to apply contrast to. The color that is selected will be lightened in the image, while the complementary color will be darkened. For example, select the red portion of the spectrum to emulate a red filter, which will lighten reds and darken cyan, red's complementary color.

CONTRAST

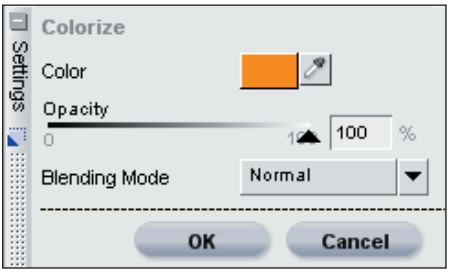
The Contrast Slider controls the amount of contrast that is affected between the color selected in the Spectrum slider and that color's complementary color. Moving this slider to the left will decrease this effect, while moving this slider to the right will increase the effect by making the selected color lighter and the complementary color darker.

BRIGHTNESS

The Brightness Slider controls the overall luminosity of the image. Move this slider to the left to darken the entire image or move this slider to the right to brighten the entire image.

Once you are satisfied with the results of the Contrast: Color Range feature, click on the OK button. If you want to cancel the Contrast: Color Range feature, simply click on the Cancel button.

Colorize...

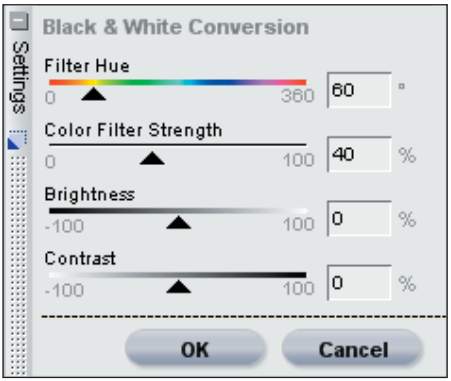


The Colorize enhancement enables you add a color to your image, either selectively or globally, with one of the selective tools. The Colorize enhancement is also the tool that is automatically applied when you select one of the selective tools in a step that has not already had an enhancement applied to it.

Within the Colorize enhancement you can select the color to be applied to the image either with an eye dropper, which can sample any color of any image currently visible within Capture NX, or a with Color Patch that links to the Color Picker.

Once you are satisfied with the results of the Colorize feature, click on the OK button. If you want to cancel the Colorize feature, simply click on the Cancel button.

Black and White Conversion...



The Black and White Conversion transforms a color image to a black and white version of the original while providing control over the highlights, the shadows, and the relationship to the original. This feature provides controls similar to controls used in traditional black and white photography, with the added power of digital image manipulation.

FILTER COLOR

The Filter Color Slider enables you to choose the hue of the filter that is used to convert the image from color to black and white.

FILTER STRENGTH

Use the Filter Strength Slider to control the intensity of the filter used in the black and white conversion. The higher the strength set in this slider the more intense the result of the filter will be.

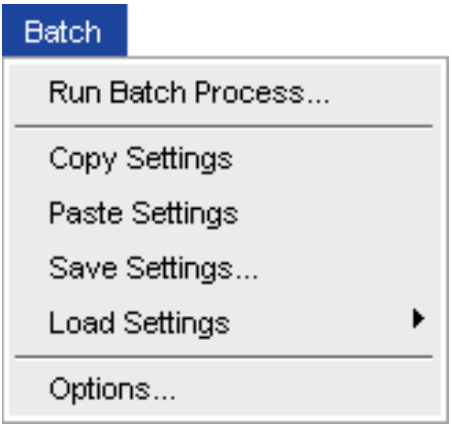
BRIGHTNESS

The Brightness Slider controls the overall luminosity of the image. Move this slider to the left to darken the entire image or move this slider to the right to brighten the entire image.

CONTRAST

Use the Contrast Slider to change the contrast of your image. Moving this slider to the left will decrease the contrast throughout the image, while moving the slider to the right will increase contrast.

Batch Menu



Run Batch Process...

The Run Batch Process command opens the Batch Options Dialog directly to the Batch Process tab. Use this option if you already have a Settings File that you would like to begin applying to a folder of images. For more information regarding the Batch Process command, please see page 188.

Copy Settings

The Copy Settings command enables you to copy to Capture NX's clipboard either the entire series of settings from the current image or only the highlighted steps or enhancements from the Edit List. Once the enhancements are on the clipboard, you can paste them into a different image, a group of images, or back into the same image.

To copy the entire series of settings from the current image, simply select this option from one of the **Batch** Menu options. To copy selected settings from the Edit List, click to highlight a specific step or enhancement.

Hint: *You can copy more than one step at a time. Hold the Control (Windows) or Command (Mac OS) and click to highlight multiple steps or enhancements. You can also select a range of steps or enhancements by clicking on the first step or enhancement in the range that you want to copy, and while holding the Shift key down, selecting the last step or enhancement in the range that you want to copy.*

Paste Settings

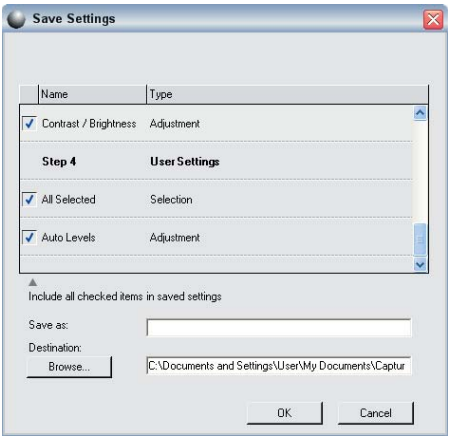
The Paste Settings command enables you to paste any settings that are currently within Capture NX's clipboard into the active image or into selected images within the Browser.

To use Paste Settings, ensure that you have previously copied settings, and then select this option. You can paste

settings into the current image either in the Editor or in the Browser, or you can paste settings into a series of images selected within the Browser. The pasted settings will be appended onto the end of the Edit List for the selected images.

Due to the unique nature of the Base Adjustments step, any single image cannot have more than one Base Adjustments step, nor can it have more than one instance of any of the adjustments located within the Base Adjustments step. When you copy and paste the Base Adjustments step into an image, the existing contents of the original Base Adjustments step will be replaced by the contents of the most recent Base Adjustments. To prevent the entire Base Adjustments step from being overwritten, simply select the individual enhancements from within the Base Adjustments step to copy and paste.

Save Settings...



Select the Save Settings command to open the Save Settings dialog. It is within the Save Settings dialog that you create Settings Files that will be used for batch processes in the future.

When the Save Settings dialog opens, you are presented with a representation of the current image's Edit List. It is from this Edit List that you can select and identify which enhancements will be saved into a Settings File.

Within the Save Settings dialog, you can select to save the IPTC data that was applied to the current image, to save the various steps and enhancements applied within those steps, or to save the selective enhancements applied to the current image. Simply click on the checkboxes of the enhancements or adjustments that you wish to save into a Settings File. You can identify which settings should be checked in advance by highlighting the settings that you plan to save into a Settings File within the Edit List prior to selecting Save Settings.

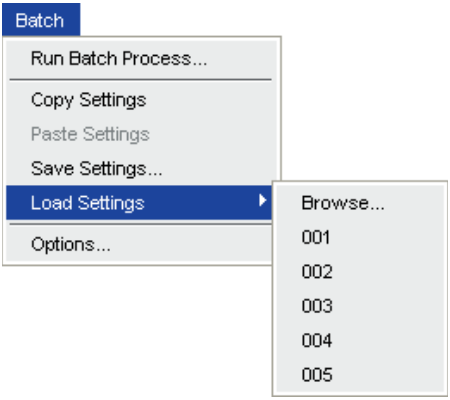
Enter the name that you would like to use for the Settings File. The name you enter here will be displayed within the Load Settings sub-menu.

Capture NX will then place the Settings File in the Capture NX settings folder. By default, all Settings Files located within the settings folder will be displayed within the Load Settings sub-menu. If you would like to place the Settings File in a different location, simply click on the browse button. You will still be able to load that Settings File by using the Browse option under

the Load settings sub-menu.

If you save only one enhancement into a Settings File, Capture NX will place that Settings File into a folder named after the enhancement selected. If you would like to place that file in a different location, click on the Browse button and navigate to a different folder.

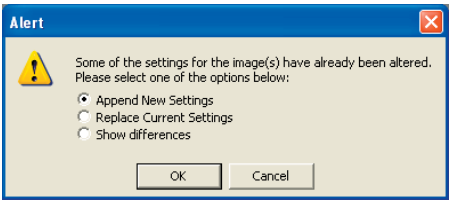
Load Settings



The Load Settings sub-menu contains a list of currently available Settings Files that can be applied to an image or group of images as a batch process. You can control the contents of this list within the Batch Options, displayed on page 187.

Select the Settings File that you want to apply, and Capture NX will apply those settings to the current image if you are in the Editor, or to the highlighted images if you are in the Browser. Alternatively, you can apply the batch process to a specified folder by selecting Run Batch Process from the **Batch** Menu. When applying batch processes to JPEG and TIFF files, the Processing Queue will immediately become available.

Batch Process Alert Box



When applying a batch process to NEF files, Capture NX will identify any possibilities for conflicts by presenting you with an Alert Box that allows you to make a decision about how to apply the batch process. In the alert box, you are provided with three options:

APPEND NEW SETTINGS

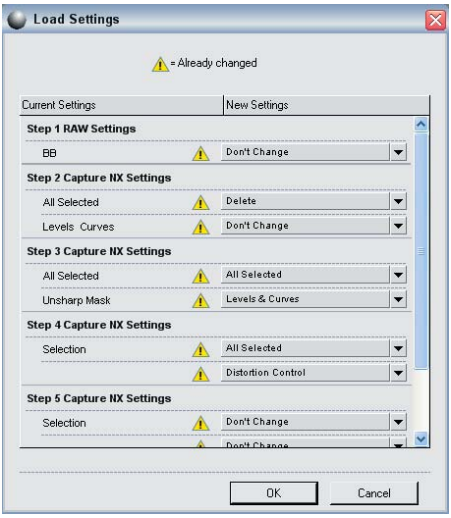
This setting will add all of the enhancements from the Settings File to the end of the Edit List.

Please note: *This option is not available if the Settings File contains settings from the Base Adjustments step.*

REPLACE CURRENT SETTINGS WITH NEW SETTINGS

This setting will completely overwrite all of the settings within the targeted image file with the settings from the Settings File.

SHOW DIFFERENCES



This option provides you with an advanced decision matrix that enables you to both append and replace settings based on your decisions.

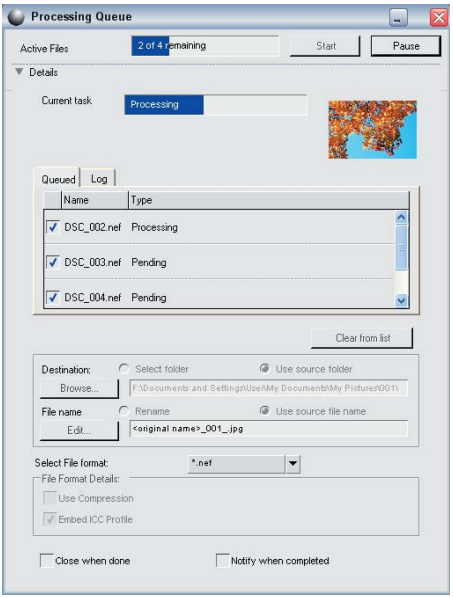
➲ The Show Differences dialog shows you the current settings within the targeted image or group of images and provides you with a pop-up Menu that contains the options located within the Settings File. Begin by indicating whether or not to use the original Base Adjustment settings or the Base Adjustment settings from within the Settings File.

You can then begin choosing which setting should be applied at each step. The new settings pull-down Menu for each step beyond the Base Adjustments step contains a list of all of the enhancements located within the Settings File. You can choose to keep the original contents of the step, to replace the contents of that step with any of the possibilities from within the Settings File, or to delete that step entirely.

The Show Differences dialog always displays one additional step beyond the steps available within the target image. You can use this additional step to append one of the enhancements to the end of the Edit List. As soon as you select an enhancement to apply within this extra step, a new extra step will be provided to you.

Continue modifying the contents of the Edit List until you have identified how to enhance the image and click OK. You will then be presented with the Processing Queue.

Processing Queue



The Processing Queue provides you with the status of the current batch process and enables you to start and pause the batch process. Additionally,

you are presented with the queue of images still waiting to be processed, along with a log that contains a list of all of the images that have already been processed, and the ability to change the destination, file name, and file format of the images.

The Processing Queue can be minimized and you can continue to work on other images while the Processing Queue processes your images in the background.

To process the batch with the default settings, simply click on the Start button.

Please note: *While the process is ongoing, you cannot modify any of the additional controls within the Processing Queue. If you wish to modify the settings at any time, simply pause the process.*

To display the full list of controls within the Processing Queue, click on the ▶ button next to Details. Here you will see an additional progress bar that will show you the current task being applied as well as a thumbnail of the current image being processed.

QUEUE WINDOW

The Queue window shows a list of images that are currently waiting to be processed. If you do not wish a particular image to be processed, uncheck the box for that image.

LOG WINDOW

The Log window contains a list of all of the images that have already been processed.

CLEAR FROM LIST

The Clear From List button enables you to clear the highlighted image from the Queue window. This is helpful if you do not want to process an image with the current batch process.

DESTINATION

The Destination section enables you to identify the location to use when saving the image.

Select Folder

By Choosing the Select Folder option, you can manually identify the destination folder you wish to use for the images after the batch process. Click on the browse button to identify the location to place the processed images.

Use Source Folder

The Use Source Folder option will place the processed files in the folder in their original folder.

FILE NAME

The file name section enables you to identify the naming convention to use when saving the images.

Rename

By selecting Rename, Capture NX will rename the images using the naming system found within the File Naming window. Click on the Edit button to display the File Naming window.

Please see page 186 for more information on the File Naming Dialog.

Use Source File Name

Select Use Source File Name to save the processed image with original file name.

FILE FORMAT

Use the File Format pull-down Menu to select the file format to use for the processed images.

BIT-DEPTH

Use the Bit-Depth selector to identify the bit-depth to set the images to.

Please note: Capture NX *will always use the setting identified here, but any images that originated as 8-bit files will remain as 8-bit files and not be converted to 16-bit if the 16-bit option is selected.*

COMPRESSION

The Compression pull-down Menu enables you to choose what type of compression to apply to the images. The contents of this Menu depend on the file format chosen.

EMBED ICC PROFILES

The Embed ICC Profiles in images is only available when you have selected JPEG or TIFF as the file format to use. Enable this setting to embed the current profile in the image while saving.

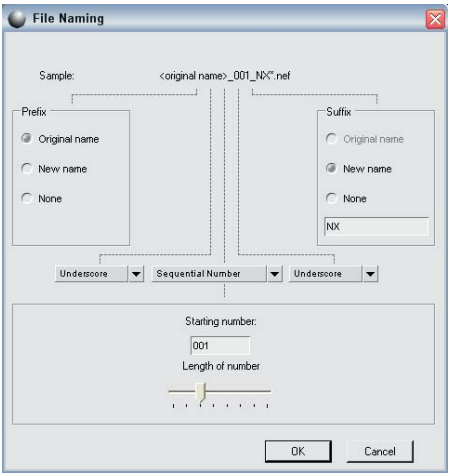
CLOSE WHEN DONE

Check the Close When Done checkbox to cause the Processing Queue window to close when the batch process has completed.

NOTIFY WHEN COMPLETED

This option will create a system beep to notify you that the process has been completed.

File Naming Dialog



The File Naming Dialog provides you with options for setting up a file naming convention to use when batch processing multiple images. You are provided with three sections to identify the file name, and can control how those different sections are separated.

PREFIX

The contents of this section will be applied to the beginning of the file name. You can choose from:

Original Name

This option will place the original file name at the beginning of the new file name.

New Name

This option will enable you to type in a new name to enter at the beginning of the new file name.

None

This option will prevent a prefix from being added to the beginning of the new file name.

MIDDLE

The middle section can contain a sequential number, the date the image was shot, or the time and date the image was shot.

SUFFIX

The contents of this section will be applied to the end of the file name. You can choose from:

Original Name

This option will place the original file name at the end of the new file name.

New Name

This option will enable you to type in a new name to enter at the end of the new file name.

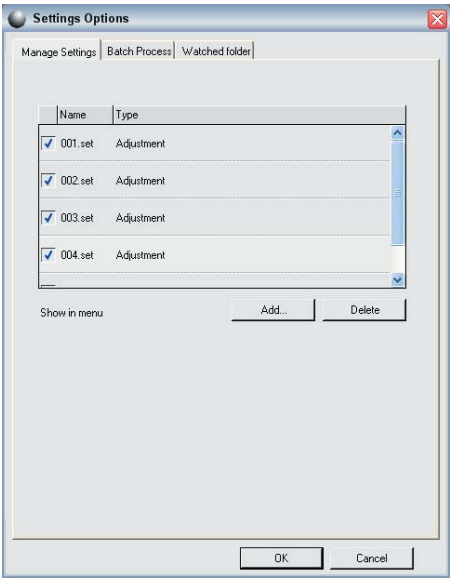
None

This option will not place anything at the end of the new file name.

Batch Options

The Batch Options dialog contains different options that can be used to modify the contents of the Load Settings folder, as well as batch processes that can be applied by Capture NX.

Manage Settings Files



The Manage Settings Files enables you to determine which settings are displayed within the Load Settings Menu. By default, the Load Settings Menu displays all Settings Files that are within the Capture NX settings folder or within any sub folders within the Capture NX settings folder.

Use this dialog to identify which Settings Files to display. Uncheck any of the Settings Files that you do not want to display within the Load Settings sub-menu.

ADD

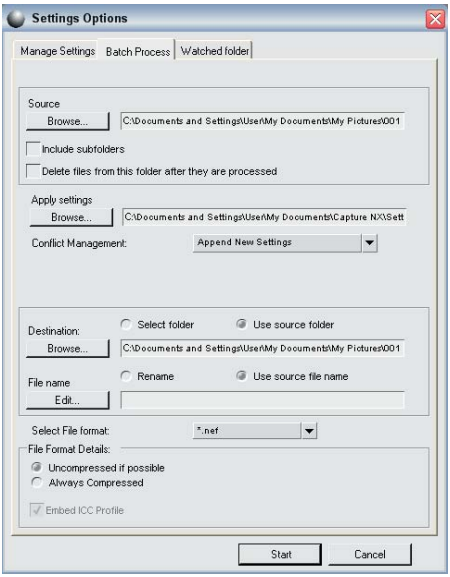
Additionally, you can add settings to the Load Settings Menu by selecting the Add button. This will call up a file browsing window, enabling you to navigate and locate a Settings File that resides on your computer. By using the

Add feature, the Settings File that you selected will automatically be copied to the Settings folder of Capture NX.

DELETE

The Delete button will delete the highlighted setting from within the Manage Settings window as well as from the Capture NX settings folder.

Batch Process



The Batch Process tab enables you to run a batch process by allowing you to select a source folder, a Settings File, the destination, and the file name and file format for the processed images.

SOURCE

Browse

Click on the Browse button within the source section to locate the folder that contains the images you wish to apply a batch process to.

Include Subfolders

Check the Include Subfolders checkbox if you would like to process the contents of the folder along with the contents of any folders within the targeted folder.

Delete Files From Folder After They Have Been Processed

The Delete Files From Folder After They Have Been Processed option will delete the original files after the batch process has been completed.

APPLY SETTINGS

Browse

Click on the Browse button within the Apply Settings section to locate a Settings File to apply to the images.

CONFLICT MANAGEMENT

The Conflict Management pop-up Menu enables you to choose how Capture NX should resolve potential conflicts that may arise while performing a Batch Process. You can choose from the following options:

Append New Settings

The Append New Settings option is the default option when applying a Batch Process. This option will automatically add the enhancements from the Settings File to all of the images affected by the Batch Process.

Replace Current Settings

The Replace Current Settings option will apply the enhancements from the Settings File to all images, and will overwrite any enhancements that may already be contained with the images affected by the Batch Process.

Show Differences

The Show Differences option enables you to interact with the Show Differences dialog for any images that already contain enhancements. With this process, you can choose which enhancements to replace, and which enhancements to keep within the images affected by the Batch Process.

DESTINATION

The Destination section enables you to identify the location to use when saving the image.

Select Folder

By choosing the Select Folder option, you can manually identify the destination folder you wish to use for images after the batch process. Click on the browse button to identify the location to place the processed images.

Use Source Folder

The Use Source Folder option will place the processed files in their original folder.

FILE NAME

The File Name section enables you to identify the naming convention to use when saving the images.

Rename

By selecting Rename, Capture NX will rename the images using the naming system found with the File Naming window. Click on the Edit button to display the File Naming Dialog.
Please see page 186 for more information on the File Naming Dialog.

Use Source File Name

Select Use Source File Name to save the processed image with the original file name.

FILE FORMAT

Use the File Format pull-down Menu to select the file format to use for the processed images.

BIT-DEPTH

Use the Bit-Depth selector to identify the bit-depth to set the image to.

Please note: *Capture NX will always use the setting identified here, but any images that originated as 8-bit files will remain as 8-bit files and will not be converted to 16-bit if the 16-bit option is selected.*

COMPRESSION

The Compression pull-down Menu enables you to choose what type of compression to apply to the images. The contents of this Menu depend on the file format chosen.

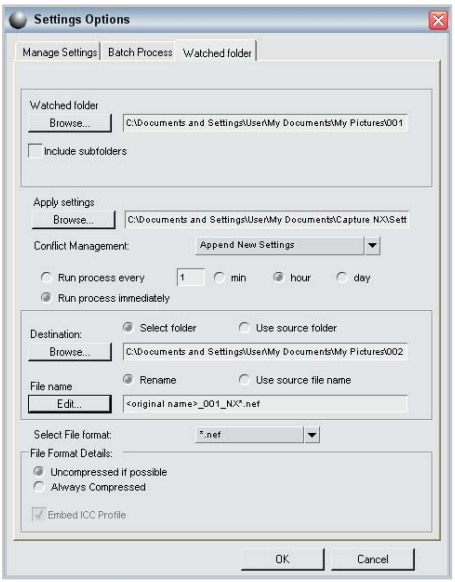
EMBED ICC PROFILES

The Embed ICC Profiles checkbox is only available when you have selected JPEG or TIFF as the file format to use. Enable

this setting to embed the current profile in the image while saving.

After you have identified all of the parameters for the batch process, click Start. This will call up the Processing Queue and enable you to begin the Batch Process.

Watched Folder



The Watched Folder enables you to start an ongoing batch process. Once a Watched Folder process has been started, it will continually look for new images within the targeted folder and apply a batch process on them until the Watched Folder process is canceled. This is especially helpful when you send your images directly from your camera to a specific folder on your computer rather than using a compact flash card. The Watched Folder feature contains the following controls:

WATCHED FOLDER

Browse

Click on the Browse button to locate the folder that you would like Capture NX to monitor for new images to apply a batch process to.

Include Subfolders

Check the Include Subfolders checkbox if you would like Capture NX to monitor the contents of any folders within the targeted folder as well as the contents of the targeted folder.

APPLY SETTING

Browse

Click on the browse button within the Apply Settings section to locate a Settings File to apply to the images.

CONFLICT MANAGEMENT

The Conflict Management pop-up Menu enables you to choose how Capture NX should resolve potential conflicts that may arise while a Watched Folder Process is running. You can choose from the following options:

Append New Settings

The Append New Settings option is the default option when applying a Batch Process. This option will automatically add the enhancements from the Settings File to all of the images affected by the Batch Process.

Replace Current Settings

The Replace Current Settings option will apply the enhancements from the

Settings File to all images, and will overwrite any enhancements that may already be contained with the images affected by the Batch Process.

Skip Image and Continue

The Skip Image and Continue option will automatically skip any image in which a conflict was identified without processing that image. An error entry will be created within the Log file informing you the name of the image and the time that the conflict was identified.

RUN PROCESS EVERY

Enter a number to determine how frequently Capture NX should review the targeted folder for new images. You are presented with the following options for the units of time:

- Minute
- Hour
- Day

RUN PROCESS IMMEDIATELY

The Run Process Immediately will continually monitor the targeted folder for new images and apply the Settings File to any new images as soon as they are placed within the targeted folder.

DESTINATION

The Destination section enables you to identify the location to use when saving the image.

Select Folder

By choosing the Select Folder option, you can manually identify the destination folder you wish to use for the images after the batch process. Click on the browse button to identify the location to place the processed images.

Use Source Folder

The Use Source Folder option will place the processed files in their original folder.

FILE NAME

The File Name section enables you to identify the naming convention to use when saving the images.

Rename

By selecting Rename, Capture NX will rename the images using the naming system found with the File Naming window. Click on the Edit button to display the File Naming Dialog.

Please see page 186 for more information on the File Naming Dialog.

Use Source File Name

Select Use Source File Name to save the processed image with the original file name.

FILE FORMAT

Use the File Format pull-down Menu to select the file format to use for the processed images.

BIT-DEPTH

Use the Bit-Depth selector to identify the bit-depth to set the images to.

Please note: *Capture NX will always*

use the setting identified here, but any images that originated as 8-bit files will remain as 8-bit files and will not be converted to 16-bit if the 16-bit option is selected.

COMPRESSION

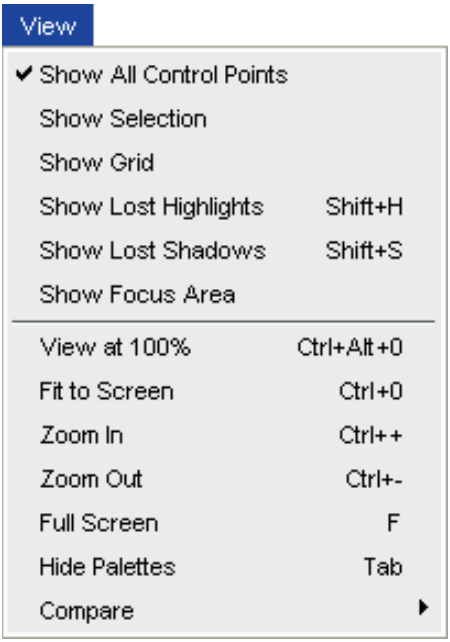
The Compression pull-down Menu enables you to choose what type of compression to apply to the images. The contents of this Menu depend on the file format chosen.

EMBED ICC PROFILES

The Embed ICC Profiles checkbox is only available when you have selected JPEG or TIFF as the file format to use. Enable this setting to embed the current profile in the image while saving.

Once you have identified the parameters to use for the Watched Folder, click OK. This will bring up the Processing Queue, indicating that the current process is a Watched Folder. You are able to minimize the Processing Queue and continue working on other images while the Watched Folder process continues in the background.

View Menu



Show All Control Points

The Show All Control Points option is selected by default whenever you are working on a step that contains any of the Control Points, either Black, White, Neutral, Color, or Red-Eye Control Points. By selecting this option, all Control Points will be hidden so that you can see the image without any of the Control Point icons appearing on top of the image.

Show Selection

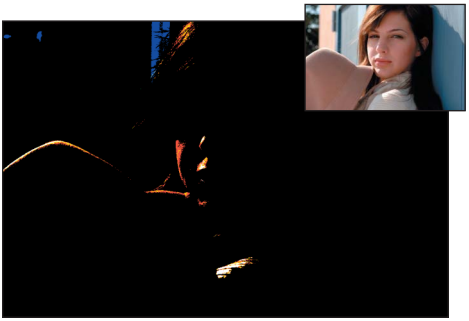
The Show Selection option enables you to display the Selection for the current step. The Selection displays where the current enhancements are being applied within the image due to changes made with the selective tools. Additionally, if you select a Control Point and then select the Show Selection feature, that Control Point's Selection will be displayed. The effect from the selective tool will be superimposed on top of the Control Point's Selection so that you can see how the selective tools have affected where the Control Point is applied to the image.

Show Grid

Select this option to impose a grid pattern over the current image.

The color and spacing of the grid can be set within the Preferences.

Show Lost Highlights



The Show Lost Highlights feature identifies areas in which detail may have been lost in the highlights by locating pixels with the maximum value for one or more channels. This information can be used when adjusting the tonality of the image, such as when applying white points, to ensure that the optimal amount of detail is retained within the image.

When you enable the Show Lost Highlights command, the entire image will become black while displaying any areas that contain maximum values for one or more channels. Only those areas that contain maximum values will be displayed within the image window when this option is enabled. That is, only the pixels that contain a value of 255 will be displayed for each of the three channels.

The resulting image will contain white, primary, and secondary colors only. The following table describes values these colors represent:

White	This area contains values of 255 for the Red, Green, and Blue channels.
Yellow	This area contains values of 255 for the Red and Green channel.
Magenta	This area contains values of 255 for the Red and Blue channels.
Cyan	This area contains values of 255 for the Green and Blue channels.
Red	This area contains values of 255 for the Red channel.
Green	This area contains values of 255 for the Green channel.
Blue	This area contains values of 255 for the Blue channel.

With this display on, you can adjust the settings of one of the enhancements that has already been applied to reduce the brightening effect and prevent details from becoming blown out.

Shortcut: Shift + H

Show Lost Shadows

The Show Lost Shadows feature identifies areas in which detail may have been lost in the shadow areas by locating pixels with the minimum value for one or more channels. This information can be used when adjusting the tonality of the image, such as when applying black points, to ensure that the optimal amount of detail is retained within the image.

By enabling the Show Lost Shadows command, the entire image will become white while displaying any areas that contain minimum values for one or more channels. Only those areas in which the channels contain a minimum value will be displayed within the image window when this option is enabled. That is, only the pixels that contain a value of 0 will be displayed for each of the three channels.

The resulting image will contain black, primary, and secondary colors only. The following table describes values these colors represent:

Black	This area contains values of 0 for the Red, Green, and Blue channels.
Blue	This area contains values of 0 for the Red and Green channels.
Green	This area contains values of 0 for the Red and Blue channels.
Red	This area contains values of 0 for the Green and Blue channels.
Cyan	This area contains values of 0 for the Red channel.
Magenta	This area contains values of 0 for the Green channel.
Yellow	This area contains values of 0 for the Blue channel.

With Show Lost Shadows enabled, you can modify any enhancements that may make the image too dark.

Shortcut: Shift + S

Show Focus Area

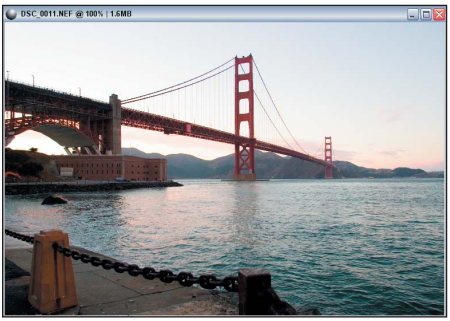
The focus area in the image displayed in the active window can be shown by selecting Show Focus Area from the **View** Menu.

Please note: *Use the Show Focus Area feature only on images that have*

not been enhanced. Using the Show Focus Area feature after the image has been rotated, straightened, cropped, or after applying the Fisheye Lens or Distortion Correction features may result in the focus area being displayed incorrectly.

Please note: *The focus area will not be displayed if the image was created using a COOLPIX-series camera, a non-CPU lens, or a manual focus lens.*

View at 100%



Select this option to set the zoom ratio for the current image to 100%.

Shortcut:

Ctrl + Alt + 0 (Windows)
Command + Option + 0 (Mac OS)

Fit to Screen

Select this option to set the zoom ratio for the current image so that the entire image fits into the space available on your monitor.

Shortcut:

Ctrl + 0 (Windows)
Command + 0 (Mac OS)

Zoom In

Select this option to zoom one step into the active image.

Shortcut:

Ctrl + '+' (Windows)
Command + '+' (Mac OS)

Zoom Out

Select this option to zoom one step out of the active image.

Shortcut:

Ctrl + - (Windows) or
Command + - (Mac OS)

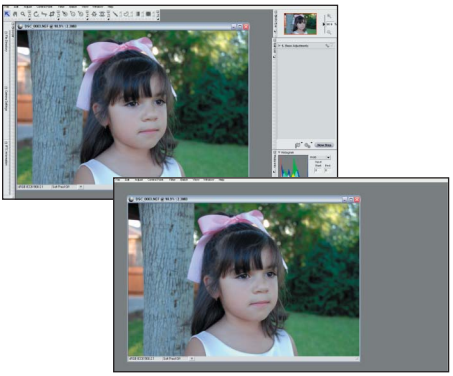
Full Screen

This feature toggles the Full Screen mode on and off and places the current image on a medium gray background to help reduce clutter when the Full Screen mode is enabled.

While in Full Screen mode, you can use the Pan tool to reposition the image away from the center of the application window.

Shortcut: F key

Hide Palettes



Select this feature to quickly hide all of the palettes in the work area.

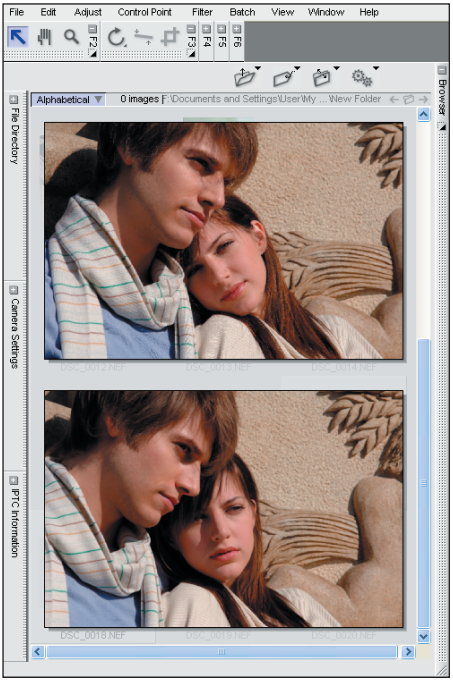
Shortcut: Tab key

Compare

The three different Compare modes of Capture NX provide you with different options for comparing images. The first two options, Compare in Editor and Compare in Browser, are only accessible from within the Browser and provide you with the ability to compare two different images. The Compare With Original option is only accessible in the Edit mode and enables you to compare the current state of the image with the original state of that same image.

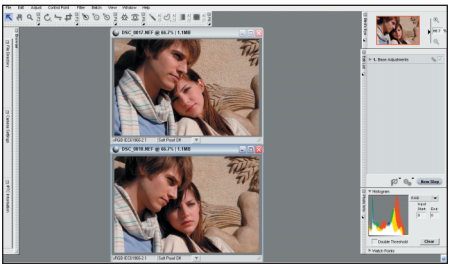
Compare in Browser

Use this option to compare between two, three, or four different images in the Browser. Simply select the images in the Browser and select Compare in Browser from the **View** Menu. This will display as many as four equally-sized images within the Browser side by side.



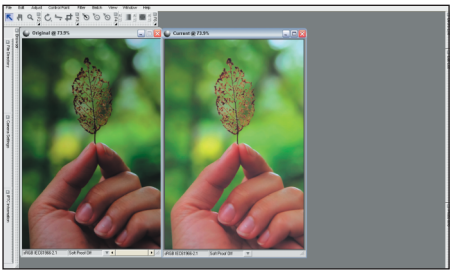
While comparing the images you can click on an image and label it using one of the label shortcuts. You can delete it, or you can open it within the Edit mode by double-clicking on the image. To exit the Compare in Browser mode, either reselect Compare in Browser from the **View** Menu or click anywhere outside of the compared images.

Compare in Editor



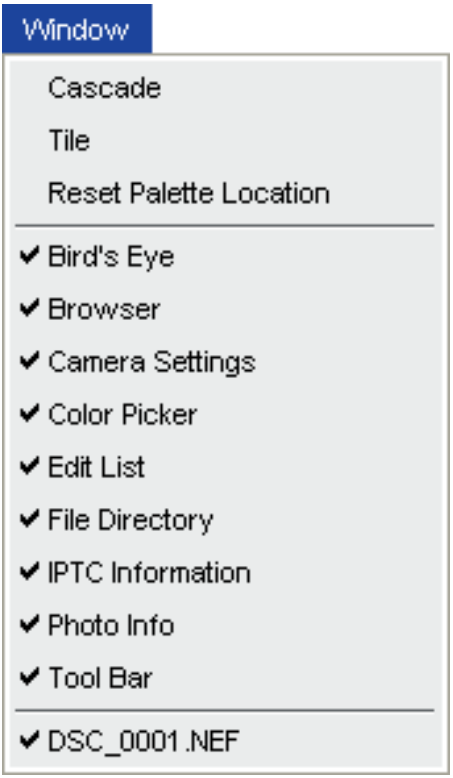
Use this option to compare two different images in the Editor. Select two different images in the Browser and select Compare in Editor from the **View** Menu. This will open both images within the Editor and zoom the images so that they fit within the available space of your monitor. While you are comparing these two images, you can use the Zoom Tool or the Hand Tool to zoom in and pan on one image, creating the identical effect on the other image. This enables you to zoom in and out quickly while comparing details in similar images. To exit the Compare in Editor mode, simply close one or both images.

Compare With Original

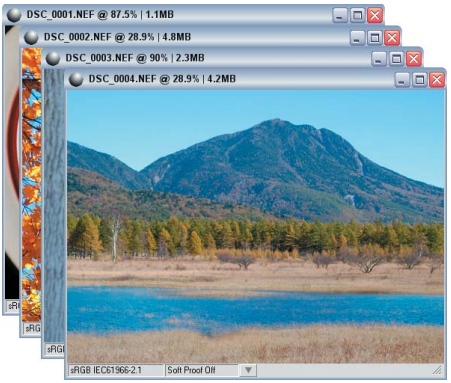


Use this option to compare the original with the current state of the active image within the Edit mode. Select this option from the **View** Menu when you are working on an image in the Editor, and Capture NX will automatically open a duplicate window of the same image and resize it so that the two windows fit within the available space of your monitor. The image either on the left or on the top, depending on the orientation of the image and the available space on your monitor, represents the original state of the image, while the image on the right or on the bottom displays the current state of the image. While you are comparing these two images, you can zoom and pan in one image and the identical effect will occur on the other image. To exit the Compare With Original mode, simply reselect the Compare With Original option from the **View** Menu.

Window Menu

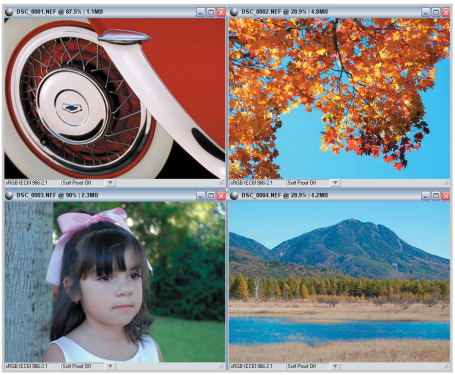


Cascade



The Cascade option resizes and arranges all of the currently opened image windows over the top of one another so that each window is the same size and all of the windows appear within the space available on your monitor.

Tile



The Tile option resizes and arranges all of

the currently open image windows so that they all appear on the screen in a grid.

Reset Palette Location

This option resets the location and the state of all of the palettes to the default setting.

Bird's Eye

Selecting the Bird's Eye option from the **Window** Menu will show the Bird's Eye Palette. If the Bird's Eye Palette is not visible, it will make the Bird's Eye Palette visible.

Browser

Selecting the Browser option from the **Window** Menu will show the Browser. If the Browser Palette is not visible, it will make the Browser Palette visible.

Camera Settings

Selecting the Camera Settings option from the **Window** Menu will show the Camera Settings. If the Camera Settings Palette is not visible, it will make the Camera Settings Palette visible.

Color Picker

Selecting the Color Picker option from the **Window** Menu will make the Color Picker visible.

Edit List

Selecting the Edit List option from the **Window** Menu will show the Edit List. If the Edit List Palette is not visible, it will make the Edit List Palette visible.

File Directory

Selecting the File Directory option from the **Window** Menu will show the File Directory. If the File Directory Palette is not visible, it will make the File Directory Palette visible.

IPTC Information

Selecting the IPTC Palette option from the **Window** Menu will show the IPTC Palette. If the IPTC Palette is not visible, it will make the IPTC Palette visible.

Photo Info

Selecting the Photo Info option from the **Window** Menu will show the Photo Info. If the Photo Info Palette is not visible, it will make the Photo Info Palette visible.

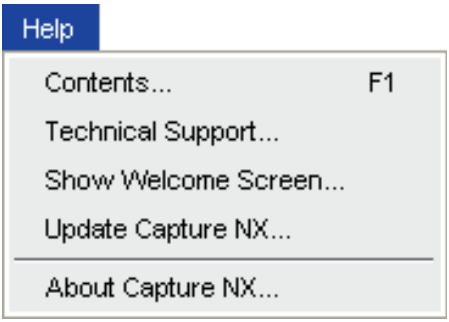
Toolbar

Selecting the Toolbar option from the **Window** Menu will show all of the Toolbars. If the Toolbars are not visible, it will make all of the Toolbars visible.

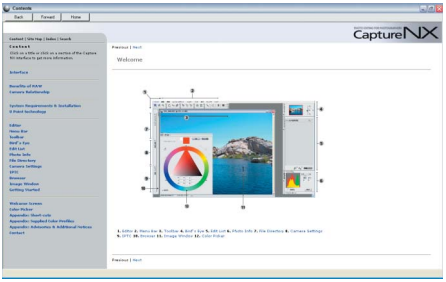
Shortcut:

You can open each Toolbar individually using the F2, F3, F4, F5, and the F6 keys.

Help Menu



Contents



The Contents option brings up the Help contents within your default Internet browser. Navigate through the Help to access the information within this user's manual using a searchable format.

Shortcut:

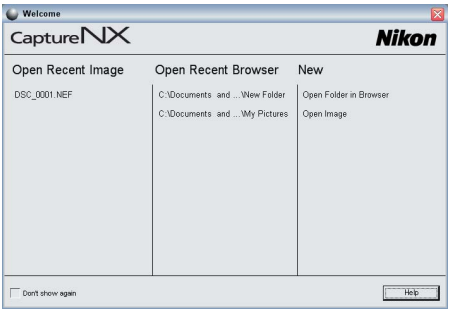
F1 key (Windows)
Command + ? (Mac OS)

Technical Support

The Technical Support option will launch your Internet browser and provide you with links to the different Technical Support options available for Capture NX. Follow one of those links to reach the online technical support options.

Please note: *Clicking on one of these options will require an Internet connection.*

Show Welcome Screen



Selecting the Show Welcome Screen option from the **Help** Menu will display the Welcome Screen. This is helpful if you have selected the Don't Show Again Checkbox and you want to access the Welcome Screen again.

About Capture NX

The About Capture NX option shows you the version number of Capture NX, which can be helpful when contacting technical support.

Please note*: Within the Mac OS, the About Capture NX option can be found under the Capture window.*

Appendix: Short-cuts

Tool	Windows	Macintosh
Keyboard Modifier		
Direct Select (arrow)	**A**	**A**
Holding down the Ctrl (Windows) or Option (Mac OS) key while dragging an image in the Browser copies the image.		
Pan (hand)	**H**	**H**
Spacebar while working with any other tool temporarily switches that tool to the Hand Tool.		
Zoom	**Z**	**Z**
Control + Spacebar (Windows) or Command + Spacebar (Mac OS) while in any other tool will temporarily turn to the zoom in tool. Ctrl + Alt + Spacebar (Windows OS) or Command + Option + Spacebar (Mac OS) while in any other tool will temporarily turn into the zoom out tool.		
Rotate 90 degrees Clockwise	**Ctrl + R**	**Command + R**
Rotate 90 degrees Counter-Clockwise	**Ctrl + Shift + R**	**Command + Shift + R**
Crop	**C**	**C**
Holding down the Alt / Option key while in the middle of a crop shows the Crop Gridlines.		
Color Control Point	**Ctrl + Shift + A**	**Command + Shift + A**
Decrease Size of Brush	**[**	**[**
Increase Size of Brush	**]**	**]**
Softer Brush	**Shift + [**	**Shift + [**
Harder Brush	**Shift +]**	**Shift +]**
Plus Brush	**B**	**B**
Holding down Alt (Windows) or Option (Mac OS) while brushing with the Plus Brush temporarily turns the brush into a Minus Brush.		
Minus Brush	**B**	**B**
Holding down Alt (Windows) or Option (Mac OS) while brushing with the Minus Brush temporarily turns the brush into a Plus Brush.		
Fill	**Alt + Backspace**	**Option + Delete**
Clear	**Shift + Backspace**	**Shift + Delete**
Plus Gradient	**G**	**G**

Holding down Alt (Windows) or Option (Mac OS) while working with the Plus Gradient temporarily turns the gradient into a Minus Gradient.		
Minus Gradient	**G**	**G**
Holding down Alt (Windows) or Option (Mac OS) while working with the Minus Gradient temporarily turns the gradient into a Plus Gradient.		
Plus Lasso	**L**	**L**
Holding down Alt (Option) (Windows) or Option (Mac OS) while working with the Plus Lasso temporarily turns the lasso into a Minus Lasso.		
Minus Lasso	**L**	**L**
Holding down Alt (Windows) or Option (Mac OS) while working with the Minus Lasso, the Minus lasso operates as a Plus Lasso.		
Select All	**Ctrl + A**	**Command + A**
Show Lost Highlights	**Shift + H**	**Shift + H**
Show Lost Shadows	**Shift + S**	**Shift + S**
Full Screen	**F**	**F**
Hide Palettes	**Tab**	**Tab**
Levels & Curves	**Ctrl + L, Ctrl + M**	**Command + L, Command + M**
Open	**Ctrl + O**	**Command + O**
Save	**Ctrl + S**	**Command + S**
Save As	**Ctrl + Shift + S**	**Command + Shift + S**
Print	**Ctrl + P**	**Command + P**
Print Setup	**Ctrl + Shift + P**	**Command + Shift + P**
Exit	**Ctrl + Q**	**Command + Q**
Undo	**Ctrl + Z**	**Command + Z**
Redo	**Ctrl + Shift + Z**	**Command + Shift + Z**
Cut	**Ctrl + X**	**Command + X**
Copy	**Ctrl + C**	**Command + C**
Paste	**Ctrl + V**	**Command + V**
Duplicate	**Ctrl + D**	**Command + D**
Delete	**Backspace**	**Delete**
Preferences	**Ctrl + K**	**Command + K**
Color Balance	**Ctrl + B**	**Ctrl + B**
Zoom In	**Ctrl + '+'**	**Command + '+'**
Zoom Out	**Ctrl + '-'**	**Command + '-'**
Fit to Screen	**Ctrl + 0**	**Command + 0**
Zoom to 100%	**Ctrl + Alt + 0**	**Command + Option + 0**
Apply Labels - Tag 1	**1**	**1**
Apply Labels - Tag 2	**2**	**2**
Apply Labels - Tag 3	**3**	**3**

Apply Labels - Tag 4	4	4
Apply Labels - Tag 5	5	5
Apply Labels - Tag 6	6	6
Apply Labels - Tag 7	7	7
Apply Labels - Tag 8	8	8
Apply Labels - Tag 9	9	9
Apply Labels- Remove Label	0	0
Sort By Label - Label 1	Shift + 1	Shift + 1
Sort By Label - Label 2	Shift + 2	Shift + 2
Sort By Label - Label 3	Shift + 3	Shift + 3
Sort By Label - Label 4	Shift + 4	Shift + 4
Sort By Label - Label 5	Shift + 5	Shift + 5
Sort By Label - Label 6	Shift + 6	Shift + 6
Sort By Label - Label 7	Shift + 7	Shift + 7
Sort By Label - Label 8	Shift + 8	Shift + 8
Sort By Label - Label 9	Shift + 9	Shift + 9
Sort By Label - Unlabeled	Shift + 0	Shift + 0
Toggle Plus / Minus Tool to Plus	+	+
Toggle Plus / Minus Tool to Minus	-	-

Appendix: Supplied Color Profiles

1. Standard RGB Profiles Supplied in Capture NX

1.1 Profiles with a Gamma Value of 1.8 Apple RGB: NKApple.icm (Windows)/ Nikon Apple RGB 4.0.0.3000 (Macintosh)

This profile is used in desk-top publishing applications and in Adobe Photoshop versions 4.0 or earlier, and is the typical RGB profile for Macintosh monitors. The corresponding RGB setting in Adobe Photoshop is "Apple RGB." This profile is suitable for working with images displayed on the Macintosh.

ColorMatch RGB: MKCMatch.icm (Windows)/ Nikon ColorMatch RGB 4.0.0.3000 (Macintosh)

The ColorMatch profile is native to Radius PressView monitors. It has a wider gamut than Apple RGB, with a particularly wide area devoted to the reproduction of blues. The corresponding RGB setting in Adobe Photoshop is "Color Match RGB."

1.2 Profiles with a Gamma Value of 2.2 sRGB: NKsRGB.icm (Windows)/ Nikon sRGB 4.0.0.3001 (Macintosh)

This RGB profile is used in the majority of Windows monitors. It closely resembles the RGB commonly used in color television, and is also used in the digital television broadcasting system that is on its way to becoming the industry standard in the United States of America. Software and hardware manufacturers use it as a default color profile and guarantee operation when it is used. It is also on its way to becoming the standard for images on the web. This profile is suited to users who plan to use their digital images "as is," without editing or printing them. It however suffers from the drawback of a narrow gamut with a limited area available for reproducing blues. The corresponding RGB setting in Adobe Photoshop 5.0 and 5.5 is "sRGB," the corresponding setting in Adobe Photoshop 6.0 "sRGB IWC61966-2.1."

Bruce RGB: NKBruce.icm (Windows)/ Nikon Bruce RGB 4.0.0.3000 (Macintosh)

This color profile attempts to expand on the ColorMatch RGB gamut by defining

the chromaticity for G as lying between the values for G in the Adobe RGB and ColorMatch color-space profiles. It was proposed by Bruce Fraser, who claims that it includes most of the colors in the SWOP CMYK gamut. The R and B used in the Bruce RGB and Adobe RGB color-space profiles match.

NTSC (1953): NKNTSC.icm (Windows)/ Nikon NTSC (1953) 4.0.0.3000 (Macintosh)

This is the color space for video defined by the National Television Standards Committee (NTSC) in 1953 and used in early color televisions. This color space is also used in some Far-East newspaper and printing organizations. The corresponding RGB setting in Adobe Photoshop is "NTSC (1953)."

Adobe RGB (1998): NKAdobe.icm (Windows)/ Nikon Adobe RGB (1998) 4.0.0.3000 (Macintosh)

A color-space profile defined in Adobe Photoshop 5.0. It has a wider gamut than sRGB and includes the colors found in most CMYK gamuts, making it suitable for users involved in desktop publishing. The corresponding RGB setting in Adobe Photoshop 5.0 is "SMPTE-240M," the corresponding setting in Adobe Photoshop 5.5 or later "Adobe RGB (1998)."

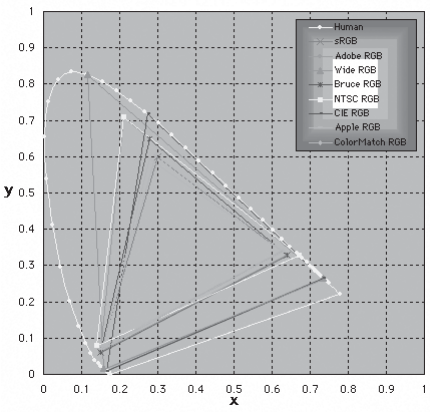
CIE RGB: NKCIE.icm (Windows)/ Nikon CIE RGB 4.0.0.3000 (Macintosh)

A video color-space profile established by the Commission Internationale de l'Éclairage (CIE). While it boasts a fairly wide gamut, it suffers from the drawback that the area devoted to the reproduction of cyan is relatively small. The corresponding RGB setting in Adobe Photoshop is "CIE RGB."

Adobe Wide RGB: NKWide.icm (Windows)/ Nikon Adobe Wide RGB 4.0.0.3000 (Macintosh)

This color-space profile, designed by Adobe, incorporates most of the visible colors. This however has the consequence that most of the colors it can express can not be reproduced on standard monitors and printers. The corresponding RGB setting in Adobe Photoshop 5.0 or later is "Adobe Wide RGB." The gamut of colors that can be expressed in the above color-space profiles is shown in the following chromaticity (x, y) graph. The greater the area enclosed by the triangle that represents the color-space profile, the wider its gamut.

Gamut



2. Technical Data for RGB Profiles Supplied with Capture NX

The following table shows the gamma values for profiles supplied in Capture NX, together with the chromaticity values for the white point and for red, green, & blue.

Profile	White Point			Gamma value	Chromaticity (X,Y)				
	Color temperature		Value		Name		R	G	B
Apple RGB	6500 K (D65)	x	0.3127159	1.8	Trinitron	x	0.625	0.28	0.155
		y	0.3290015			y	0.34	0.595	0.07
Color Match RGB	5000 K (D50)	x	0.3457029	1.8	P22-EBU	x	0.63	0.295	0.155
		y	0.3585386			y	0.34	0.605	0.077
sRGB	6500 K(D65)	x	0.3127159	2.2	HDTV (CCIR 709)	x	0.64	0.3	0.15
		y	0.3290015			y	0.33	0.6	0.06
NTSC (1953)	Std Illuminant C	x	0.3101	2.2	NTSC (1953)	x	0.67	0.21	0.14
		y	0.3162			y	0.33	0.71	0.08
Bruce RGB	6500 K (D65)	x	0.3127159	2.2	Bruce RGB	x	0.64	0.28	0.15
		y	0.3290015			y	0.33	0.65	0.06
Adobe RGB (1998)	6500 K (D65)	x	0.3127159	2.2	Adobe RGB (1998)	x	0.64	0.21	0.15
		y	0.3290015			y	0.33	0.71	0.06
CIE RGB	Std Illuminant C	x	0.3333333	2.2	CIE RGB	x	0.735	0.274	0.167
		y	0.3333333			y	0.265	0.717	0.009
Adobe Wide RGB	5000 K(D50)	x	0.3457029	2.2	700/525/450 nm	x	0.735	0.717	0.009
		y	0.3585386			y	0.265	0.826	0.018
Default Windows monitor	6500 K(D65)	x	0.3127159	2.2	HDTV (CCIR 709)	x	0.64	0.3	0.15
		y	0.3290015			y	0.33	0.6	0.006
Default Macintosh monitor	5000 K (D50)	x	0.3457029	2.2	Trinitron	x	0.625	0.28	0.155
		y	0.3585386						

Capture NX and Adobe Photoshop Color Profiles

Capture NX output profile	Adobe Photoshop profile
sRGB (Nikon sRGB 4.0.0.3001)	sRGB
Apple RGB (Nikon Apple RGB 4.0.0.3000)	Apple RGB
Color Match RGB (Nikon Color Match RGB 4.0.0.3000)	Color Match RGB
Bruce RGB (Nikon Bruce RGB 4.0.0.3000)	–
NTSC (1953) (Nikon NTSC (1953) 4.0.0.3000)	NTSC (1953)
Adobe RGB (1998) (Nikon Adobe RGB (1998) 4.0.0.3000)	Version 5.5 or later: Adobe RGB (1998) Earlier versions: SMPTE-240M
CIE RGB (Nikon CIE RGB 4.0.0.3000)	CIE RGB
Adobe Wide RGB (Nikon Adobe Wide RGB 4.0.0.3000)	Version 5.5 later: Adobe Wide RGB Earlier versions: Wide Gamut RGB

Appendix: Advisories & Additional Notices

General

Make Backup Copies

Make backup copies of important pictures before processing. Nikon will not be held liable for damages or lost profits that may result from product malfunction.

WARNING!

Do not play the Capture NX installer CD on audio CD equipment. Playing a CD-ROM on an audio CD player could cause hearing loss or damage the equipment.

Nikon Message Center Agent

Automatic Update

Capture NX is equipped with an automatic update function known as Nikon Message Center. Nikon Message Center checks for updates to a variety of Nikon digital products, including Nikon software. At default settings, Nikon Message Center will automatically check for updates if the computer is connected to the Internet when Capture NX starts. If an update is available, the Nikon Message Center window will be displayed. Click **Available Messages** to view the updates available for your Nikon digital products and software, then click **Install** to download and install the desired updates. To personalize your list of Nikon digital products or to view a list of the installed software supported under Nikon Message Center, click **My Products**.

The Opt-in / Opt-out Dialog

The first time Nikon Message Center starts, a dialog allowing you to opt in or out of Nikon mailings will be displayed. Select the desired options and click OK to display the Nikon Message Center window.

Downloading Updates

An Internet connection is required to download updates. The user bears all applicable fees charged by the phone company or Internet service provider.

Dial-up Connections

When using a dial-up connection, be aware that the connection is not automatically terminated when download is complete. Be sure to terminate the connection manually.

Privacy

Information provided by the user as part of this service will not be given to third parties without the user's permission.

Installation

Windows XP Home Edition/ Professional, Windows 2000 Professional, Mac OS X

When installing, using, or uninstalling Capture NX under the above operating systems, log on to an account with administrator privileges.

Camera Adjustments

Sharpening, Tone Comp., Color Mode, and Saturation

In the case of images taken with D2-series, D1-series, D200, D100, D70S, D70, or D50 cameras, the sharpening, tone compensation, color mode, and saturation settings in effect at the time the photograph was taken are marked with an asterisk (no asterisk will be displayed if "Auto" was selected for sharpening, tone compensation or saturation). Choose Unchanged for results identical to those obtained with the camera; other settings may not produce the same results.

White Balance

"Mired"

Any given change in color temperature produces a greater difference in color at low color temperatures than it would at higher color temperatures. For example, at a color temperature of 6000 K, a change of 1000 K produces almost no change in color, while a change of the same amount at 3000 K would produce a large difference in color. Mired, calculated by multiplying the inverse of the color temperature by 10^6, is a measure of color temperature that takes such variation into account, and as such is the unit used in color-temperature compensation filters.

Change in Color Temp	Mired
4000 K - 3000 K = 1000 K	83 Mired
7000 K - 6000 K = 1000 K	24 Mired

Gain

The values for red and blue gain chosen in the White Balance palette are multiples of the value set for gain when the photograph was taken.

Choosing a Value for Gain

Very large and small values for gain can result in a drop in image quality.

Color Mode

Color Mode

If **Use this instead of embedded profile** is selected in the Color Management tab of the Preferences dialog, the default RGB color profile identified within the Preferences will be used as the working color space for all images, regardless of the mode selected. If **Use this instead of embedded profile** is not selected, Adobe RGB will automatically be chosen as the working color space for Mode II images. The working color space for Mode I, Ia, III, and IIIa images will either be the color space selected with the camera (D2X, D2Xs, D200 only) or sRGB (all other cameras). The working color space for NTSC images (D1 only) will be NTSC. Modes I and Ia, which are adapted to the sRGB color space, are suited to portraits that will be printed or used "as is" with little or no modification. Mode II is adapted to the Adobe RGB color space. This color space is capable of expressing a wider gamut of colors than sRGB, making it the preferred choice for pictures that will be extensively processed or retouched. Modes III and IIIa, which are adapted to the sRGB color space, are suited to nature or landscape shots that will be printed or used "as is" with little or no modification.

Exposure Compensation

Highlights in images saved in Nikon Capture 4.4 or earlier with a negative value selected for exposure compensation may display differently when opened in Capture NX.

Dust Off

Cameras That Support Image Dust-Off

The following cameras support Image Dust Off: D2-series cameras, D1X / D1H (firmware version 1.10 or later), D200, D100, D70S, D70, and D50. Image Dust Off is not supported with COOLPIX cameras, D1 cameras, or with earlier versions of the camera firmware for the D1X and D1H. Message Center window.

Creating Dust Off Reference Photos

To create a Dust Off reference photo for cameras other than the D2 series, D200, D70S, D70, or D50:

1) Select a CPU lens

Mount a CPU lens on the camera. It is recommended that you use a lens with a focal length of at least 50 mm. If you are using a zoom lens, zoom in to the maximum telephoto position.

2) Adjust the camera settings

Choose the following settings in the order shown below:

a) Sensitivity (ISO equivalency): choose the minimum setting

b) Image quality: choose NEF (RAW)

c) Exposure mode: choose aperture-

priority auto (A)

d) Aperture: choose the minimum aperture (largest f/-number)

e) Focus: choose manual focus and set focus to infinity

3) Take a photograph

With the lens about 4 inches (10 cm) from a featureless white object, such as a wall, frame the object so that it fills the viewfinder and take a photograph. The resulting Dust Off reference photo will be recorded as an NEF (RAW) image.

4) Transfer the photograph to the computer

Creating Dust Off Ref Photos (D1-Series and D100 Cameras)

In addition to D2-series, D200, D70S, D70, and D50 cameras, Dust Off ref photos can be taken with the D1X / D1H (firmware version 1.10 or later), and D100. Dust Off ref photos cannot be created with the D1 or with earlier versions of the camera firmware for the D1X and D1H. Dust Off ref photos taken with the D100, D1X, or D1H have the extension ".nef"; do not change this extension.

Camera Shake

A slight amount of blurring caused by camera shake will not affect Dust Off ref photos.

Image Dust Off

Image Dust Off only affects relatively featureless areas of the image.

Reusing Dust Off settings

Before pasting or loading Image Dust Off settings for another image, be sure that the image was created with the same camera used to record the Image Dust Off reference file. If the reference file was created with a different camera, a warning will be displayed.

Vignette Control

Vignette control cannot be used to correct vignetting caused by PC Nikkor lenses or Speedlight photography.

Opening Images

RAW Images Created with the D1X

The default size for RAW images created with the D1X when opened in the Capture NX Editor can be chosen using the D1X RAW Default option within the Preferences dialog. Choose from six megapixels (3,008 × 1,960 pixels) and ten megapixels (4,016 × 2,616).

TIFF (CMYK) Images

Images saved in TIFF format with CMYK image data cannot be reopened in Capture NX.

Saving Images

Images Saved in Capture NX

Images saved in Capture NX can not be viewed on a camera.

NEF Files (Nikon Capture 4 or Earlier)

NEF files created with Capture NX cannot be opened in earlier versions of Nikon Capture. Capture NX can however be used to open NEF images created with earlier versions of Nikon Capture.

TIFF CMYK Images

Images saved in TIFF format with CMYK image data cannot be reopened in Capture NX.

LZW Compression

File size may sometimes increase when images are saved in TIFF (16- bit) format using LZW compression.

JPEG

Image quality may drop when images are saved in JPEG format. No drop in image quality occurs when images are saved in NEF.

"Lost" Highlights and Shadows

Before saving images in a format other than NEF, adjust settings to avoid "losing" highlights or shadows in large areas of the image. Information lost through editing cannot be recovered once an image is saved in a format other than NEF.

Versions

Versions for NEF images are saved with the image and recalled whenever the image is opened in Capture NX. Versions for JPEG and TIFF images are lost when the image window is closed.

Size / Resolution

Please note*: When an image is saved in NEF format, the entire image will be saved together with information on resolution and the size and dimensions of the current crop.*

File Naming Conventions

Windows: File names may not contain quotes or any of the following characters: "\" "/" ":" "." "*" "?" "<" ">" and "|"..

Macintosh: File names may not contain Colons (":") and if the file is to be shared with a user of Microsoft Windows, the file may not contain quotes or any of the following characters: "\" "/" "." "*" "?" "<" ">" and "|".

Printing

Setting up Your Printer

Note that the printer must be properly connected and the printer drivers correctly installed.

Please note: *If the image will not fit in the printable area at the current printer and paper size settings when you click the Print button to begin printing, a message will be displayed warning that the image will be cropped to fit the printable area. Choose a larger paper size or reduce the size of the image using the Size/Resolution palette.*

Size / Resolution

Please note: *The units for size and resolution are lost when settings are saved using the Save option.*

Color Management Preferences (Windows)

Multiple Displays

In a multiple display environment, choose a single profile suited to all displays.

Supported Color Profiles

Capture NX supports only ICC (International Color Consortium) monitor and CMYK profiles. Particular care should be exercised when choosing a CMYK profile, as the profile supplied by the manufacturer of your output device may not be an ICC profile.

Please note: *See Appendix: Supplied Color Profiles (214) for more information on the default RGB color-space profiles.*

Please note: *The "NKCMYK.icm" (Windows) and "Nikon CMYK 4.0.0.3000" (Macintosh) CMYK profiles provided with Capture NX are general-purpose, almost neutral profiles that are not based on a specific ink set, making them suited for use where output conditions are not known.*

Color Management Preferences (Macintosh)

Default Color-Space Profiles

See Appendix: Supplied Color Profiles for more information on the default RGB color-space profiles. The "NKCMYK.icm" (Windows) and "Nikon CMYK 4.0.0.3000" (Macintosh) CMYK profiles provided with Capture NX are general-purpose, almost neutral profiles that are not based on a specific ink set, making them suited for use where output conditions are not known.

Please note*: See Appendix: Supplied Color Profiles (214) for more information on the default RGB color-space profiles.*

Levels & Curves

The Curves Tool and the LCH Editor

The Curves tool controls the distribution of tones in the red, green, and blue channels and in the RGB master channel, and provides visual feedback on the amount of tone information lost through editing. The LCH Editor is a better tool for making fine adjustments to luminosity (brightness), color saturation, and hue; note, however, that changes to these settings may produce results that exceed the dynamic range of the RGB channels.

Auto Contrast Settings

Auto contrast, shadow, and highlight settings can be adjusted in the Levels & Grid tab of the Preferences dialog.

The Curve Edit Display

Although values for input and output in the Curves palette range from zero to 255 (eight-bit precision, familiar to users of other image editing software), the results of any changes to curves are calculated at a precision of sixteen bits. This allows twelve-bit RAW data to be modified without lowering the quality of the output.

The Histogram (RAW / 16-Bit TIFF Images Only)

To reduce display times when dealing with large amounts of image data, Capture NX may display a histogram containing vertical lines.

Sampling White Point or Black Point for the Current Channel

By default, sampling sets the white point or black point for all channels and displays the master channel. To set the white or black point for the current channel only, sample the image while pressing Ctrl (Windows) or Command (Macintosh). Midpoint cannot be sampled for a single channel; regardless of the channel currently selected, sampling the image for midpoint always sets the mid point for all channels and displays the master channel.

Gamma

Gamma (also written "γ") is a fundamental property of video systems which determines the intensity of the output signal relative to the input. When calculating gamma, the maximum possible input intensity is assigned a value of one, and the minimum possible intensity (no input) is assigned a value of zero. Output is calculated by raising input to a power that is the inverse of the gamma value (output = input (1/ γ)). In practical terms, raising the gamma value has the same effect as moving the midpoint slider to the left, raising mid-tone output values and brightening the image while leaving the maximum and minimum values untouched. Lowering the gamma value has the same effect as moving the midpoint slider to the right, lowering mid-tone output values and darkening the image. The default value for gamma is one, which produces a linear curve in which input and output values are the same. Gamma can be set to any value between 0.05 and 6.00.

Opening NEF Files Saved in Nikon Capture 3.5x or Earlier

In Capture NX, changes to color balance apply before changes to curves. In Nikon Capture 3.5 and earlier, changes to curves were applied before changes to color balance, with the result that settings may change when the images saved in Nikon Capture 3.5x or earlier are opened in Capture NX.

D-Lighting

Digital DEE

D-Lighting replaces the Digital DEE tool available in earlier versions of Nikon Capture. Note that Digital DEE settings are ignored when joint settings files created with earlier versions of Nikon Capture 4 are loaded into Capture NX, while Digital DEE settings saved with NEF images in earlier versions of Nikon Capture 4 are lost when these images are opened in Capture NX. Digital DEE settings files (extension ".ndd") cannot be loaded into Capture NX.

Lack of Gradation

D-Lighting will not have the desired effect on images which show complete lack of gradation (i.e., are completely black or completely white) in shadows or highlights.

Unsharp Mask

Unsharp Mask

Unsharp Mask sharpens edges without affecting color balance by making adjustments only to luminosity (brightness). The effect is the same as performing Unsharp Mask with the Luminosity channel selected in the Adobe Photoshop Lab color model. If Unsharp Mask is applied to a single channel, such as red, the values for ab (chrominance) are used to determine what points in the image are red, and Unsharp Masking applied to the Luminosity channel for those points only. An intensity of around 20% in Capture NX is roughly equivalent to 100% in Adobe Photoshop. No sharpening will be applied if Intensity is set to zero. Intensity must be set to at least 1% if sharpening is to apply.

Color Aberration Control

Lateral Chromatic Aberration

The refractive index of the lens varies slightly with the wavelength (color) of light. This results in changes in image magnification towards the edges of the image, producing a phenomenon known as lateral (or transverse) chromatic aberration.

Batch Processing

Before Using Batch Processing

To ensure that desired results are achieved, we recommend processing a test image before beginning batch processing. Batch processing will apply the same adjustments to each image selected, and cannot be used to adjust settings separately for each image; instead, the images must be opened one at a time in order to make separate adjustments manually for each image.

Error Messages

If an invalid file name or other error is identified while creating a batch process, a message will be displayed. Review the message and adjust the batch settings as directed in the message.

Index

D

E

F

G

H

I

J

L

M

N

O

P

R

S

T

U

V

W

Z

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