Nikon

SOFTWARE

Capture NX2

User's Manual

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Introduction

Capture NX 2 contains a wide range of improvements designed to make it an even more complete and powerful photo editing application specifically designed for photography. The interface and tools in Capture NX 2 provide you with a new intuitive approach to the art and science of image editing that saves you valuable time and effort. Capture NX 2 is the latest version in a long line of quality tools from Nikon designed to speed up workflow for photographers. With Capture NX 2 you will work with industry leading tools that deliver quality and performance you expect from a photo editing application.

RAW File Format Benefits

Unique among image editing software, Capture NX 2 provides you with the ability to achieve the highest quality results for processing NEF (Nikon Electronic Format) RAW files as well as powerful tools that can enhance any image.

Shooting RAW has a number of distinct advantages over shooting and saving processed files such as JPEG and TIFF 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 2 to make unique adjustments to enhance the image after capture. The following are some of the camera settings and RAW adjustments that can be controlled within the **Develop** section of the **Edit List** palette:

- Color mode or Picture control (depending on the camera model)
- White balance
- Tone compensation
- Saturation
- Sharpening
- Exposure compensation
- Hue adjustment
- Color moiré reduction
- Image Dust Off
- Auto color aberration
- Active D-Lighting (depending on the camera model)

Camera Relationship

Capture NX 2 was designed to support JPEG and TIFF files and to provide unique features that fully support Nikon digital cameras, allowing you to change many of the settings selected in your camera. After opening a NEF RAW file within Capture NX 2, you can view the shooting, camera, and exposure information of the file within the **Metadata** palette.

U Point® Technology

A key feature in Capture NX 2 is U Point technology. The controls powered by U Point technology enable you to modify sections of a photograph directly or control where an enhancement is being applied selectively, all without having to go through the time-consuming process of creating a selection normally required in other software applications.

U Point technology has been widely recognized as one of the most revolutionary technologies in the market today and now that technology powers even more tools in Capture NX 2. U Point technology provides precise and direct control to a variety of tools within Capture NX 2, providing powerful yet simple photographic manipulation. U Point technology powers Capture NX 2's series of control points: the color control point, the black, neutral, and white control points, the red-eye control point, and the new selection control point. These control points provide you with the ability to create color and tonal enhancements, fix issues, or selectively apply photographic enhancements within any image, all being applied directly to the image and with immediate feedback.

The U Point-powered control points found within Capture NX 2 enable you to work with your images without the need to perform a complicated series of operations in a particular order.

Control points work by identifying an object based on a number of criteria. When you place your first control point, 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, and in conjunction with the **Size** slider, the control point can determine the boundaries of the object in order to affect only that object and objects with like elements. With every control point that you apply to the image comes greater control over specific objects 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. Through a unique mixing function, the effects of the control points are applied throughout the image so as to create a natural-looking, professional result.

U Point technology powered tools are designed to make enhancements fast, professional, and of the highest quality. The results will be nothing short of amazing.

Chapter 5
System Requirements & Installation

System Requirements

Windows

OS	Preinstalled versions of Windows Vista 32-bit Home Basic/Home Premium/Business/Enterprise/Ultimate editions (Service Pack 1) or Windows XP Home Edition/Professional (Service Pack 2)
Processor	Pentium 4 or better
RAM	768 MB minimum (1 GB recommended)
Hard-disk space	200 MB required for installation
Screen resolution	1024 × 768 pixels (1280 × 1024 or higher recommended) with 16-bit color (32-bit color recommended)

Macintosh

OS	Mac OS X (version 10.4.11 or 10.5.2) ✐ **Please note**: Capture NX 2 is not compatible with the Case Sensitive or Case Sensitive, Journaled disk formats.
Processor	PowerPC G4, PowerPC G5, Intel Core Duo, Intel Core 2 Duo, Intel Xeon, or better
RAM	768 MB minimum (1 GB recommended)
Hard-disk space	200 MB required for installation
Screen resolution	1024 × 768 pixels (1280 × 1024 or higher recommended) with 16-bit color (32-bit color recommended)

For the latest information on this application, visit the following sites:

For users in the U.S.A.: *http://www.nikonusa.com*
For users in Europe and Africa: *http://www.europe-nikon.com /support*
For users in Asia, Oceania and the Middle East: *http://www.nikon-asia.com*

Installation

Windows

To install Capture NX 2 into the Windows operating system, follow these steps:

1 Place the Capture NX 2 setup CD into your computer's CD or DVD drive. Open the CD through the **My Computer** icon on your desktop, and double-click on the setup icon that appears within the window that is displayed to begin the setup wizard.

If you downloaded Capture NX 2, locate and double-click on the setup file that was saved to your computer to begin the setup wizard. (Product keys can only be purchased over the Internet in some countries and regions.)

2 Capture NX 2 will check to see if the Microsoft .NET Framework is installed and available on your computer. If not, the Capture NX 2 setup wizard will attempt to download and install the appropriate version of the .NET Framework, which is required for Capture NX 2.

3 Follow the steps in the installer to select the appropriate location to install Capture NX 2 to.

4 Once the software has been installed, follow the steps for color management found in the "Color Management Options" section later in this chapter.

5 At the last screen, select which file types to associate with Capture NX 2. Those file types associated with Capture NX 2 that are then opened from within the Windows Explorer will be opened directly into Capture NX 2.

Macintosh

To install Capture NX 2 into the Macintosh operating system, follow these steps:

1 Place the Capture NX 2 setup CD into your computer's CD or DVD drive. Double-click on the CD icon that appears on your desktop and double-click on the setup icon that appears within the window that is displayed to begin the setup wizard.

If you downloaded Capture NX 2, locate and double-click on the setup file that was saved to your computer to begin the setup wizard. (Product keys can only be purchased over the Internet in some countries and regions.)

2 Follow the steps in the installer to select the appropriate location to install Capture NX 2 to.

3 Once the software has been installed, follow the steps for color management found in the "Color Management Options" section later in this chapter.

4 Complete the installation process.

Color Management Options

Once the setup wizard has installed the files onto your computer, you will be provided with options to set up your color management preferences. The color management settings provided within the setup wizard enables you to set the default functionality for Capture NX 2 and can be later changed within the "Preferences" dialog.

To determine how Capture NX 2 manages the color of opened images, follow these steps:

1 Select how the working color space is determined when a file is opened in Capture NX 2. 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
When selected, Capture NX 2 will always use the profile embedded in the image that is opened as the working color space.

If Capture NX 2 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
When selected, Capture NX 2 will automatically convert the image from the color profile embedded in the image to the color profile selected in the **Default RGB Color Space** pull-down menu.

2 Select the color space to be used as the default working color space.

Click on the **Default RGB Color Space** pull-down menu and select the desired color space to be used either if Capture NX 2 cannot determine the embedded profile or if the **Always use the default RGB color space as the working color space** option is selected.

Complete the installation process of Capture NX 2.

Running Capture NX 2 in Trial Mode or Activating Product

Upon first launching Capture NX 2 after completing the setup process, you are presented with the Capture NX 2 splash screen. The Capture NX 2 splash screen presents you with the options of either running Capture NX 2 for 60 days with full functionality in trial mode or entering your product key.

To run Capture NX 2 in trial mode, click on the **Continue Trial** button from the Capture NX 2 splash screen. The **Continue Trial** button will be accessible for the entire 60 days of the trial mode. At the end of the 60 day trial, you will only be able to access the **Purchase Product Key**, **Enter Product Key**, and **Exit** buttons.

To activate Capture NX 2, click on **Enter Product Key** and enter your name, company (optional), and product key. You may enter a product key and active Capture NX 2 at any point.

If you purchased Capture NX 2 from a camera store or retailer, the product key may be found on the CD-ROM case. If you purchased Capture NX 2 as an electronic download, the product key will be found in the email you received as a receipt of the purchase. Do not lose this key. It is required when installing or upgrading this software and cannot be replaced if lost. (Product keys can only be purchased over the Internet in some countries and regions.)

Upgrading From Capture NX Version 1

When upgrading from Capture NX version 1, follow the installation instructions as listed previously in this chapter. Both Capture NX version 1 and Capture NX 2 can be installed on the same computer at the same time.

When activating an upgrade version, your Capture NX version 1 product key will be requested. First, enter your name, company (optional), and Capture NX 2 product key. You will then be prompted to enter your Capture NX version 1 product key.

After entering both the Capture NX 2 and Capture NX version 1 product keys, your copy of Capture NX 2 will be activated and the application will open.

Nikon User Support Information (U.S.A.)

Thank you for choosing Nikon, and welcome to our family of digital imaging products.

We are confident your Nikon product will meet and exceed the high level of quality, reliability, and innovative design you have come to expect from Nikon.

Please contact us if you have any questions or suggestions. We value your feedback and want to be sure you are completely satisfied with your purchase. To assist us in serving you better, we ask that you please register your product on-line at *www.prodreg.com/nikon*.

If you have any questions or suggestions about Nikon Digital Imaging products, please call the Nikon Digital Imaging Hotline:

1-800-NIKON-UX (1-800-645-6689)

Technical Support - 24hours a day, 7 days a week

Other Services - Monday through Friday, 10am to 10pm EST.

Technical support for your Nikon Digital Imaging product is free. Support for computer related issues is free for either six or twelve months from the date of your first call to Nikon, depending on your product. Please ask our customer service representative for details. Also, visit6 our technical support web site at *www.nikontechusa.com* for FAQs, software updates, manuals, and solution forums. Information on other exciting Nikon products is available at *www.nikonusa.com*.

Technical support and repair services are only available in the United Sates, the Caribbean, and South and Central America. If you are in this service area but cannot reach our toll-free number, please call 1-631-547-4311. Software and other items cannot be shipped outside of this service area.

Thank you for choosing a Nikon Digital Imaging product.

Chapter 6

Getting Started

Launching Capture NX 2

In the Windows operating system, Capture NX 2 can be opened by navigating to the start menu, selecting the programs menu, rolling over the Capture NX 2 menu item, and selecting Capture NX 2.
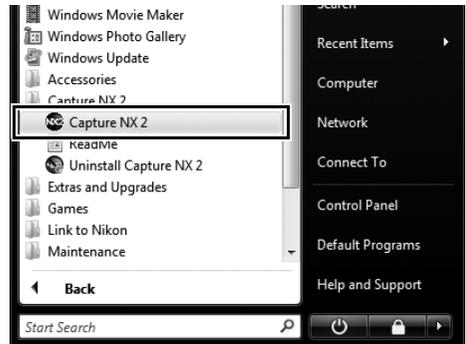
In the Macintosh operating system, double-click on the Macintosh HD icon on your desktop and navigate to the "Applications" folder. Double-click on the Capture NX 2 folder, and then double-click on the Capture NX 2 application icon.
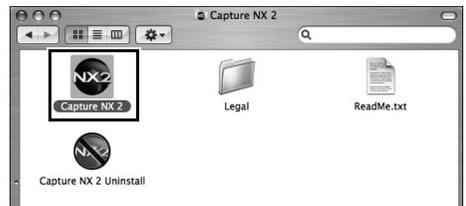
Convert Capture NX Version 1 Labels

If you labeled images on your computer using Capture NX version 1, Capture NX 2 provides you with the opportunity to convert those labels to the system used by Capture NX 2 and ViewNX. When Capture NX 2 is launched, it will check for any existing Capture NX version 1 labels stored on your system. If Capture NX version 1 labels are found, the **Convert Labels** dialog is displayed.

Click on **Yes** to begin converting the labels used by Capture NX version 1 into labels compatible with Capture NX 2 and ViewNX. Selecting this option will not remove the labels from your system and images labeled by Capture NX version 1 will continue to be accessible within Capture NX version 1.

🖉 **Please note**: If you have many images labeled by Capture NX version 1, this process may take some time.

Click on **No** to prevent Capture NX 2 from converting your labels. If you do not wish to see the **Convert Labels** dialog the next time Capture NX 2 is launched, check the **Don't Show Again** checkbox.
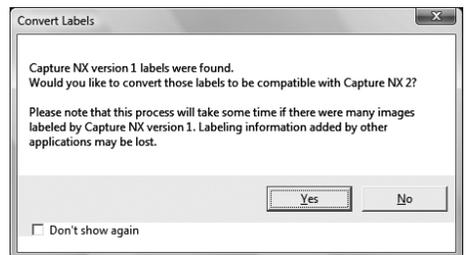
Welcome Screen

Upon launching, Capture NX 2 will display the "Welcome" screen, which lists the last files and folders that you accessed.

Windows

Macintosh

① **Open Recent Image**	The **Open Recent Image** section contains a list of the most recent images that were opened within Capture NX 2. The last image edited can be found at the top of the list, with the remaining images you have edited listed in chronological order. Click on the image name to open the image within Capture NX 2.
② **Open Recent Folder**	The **Open Recent Folder** section contains a list of the most recent folders accessed within the **Browser** palette, with the most recent folder displayed at the top. Click on one of the displayed folders to open that folder within the **Browser** palette.
③ **Don't Show Again**	The **Don't show again** checkbox enables you to prevent the "Welcome" screen from being displayed after launching Capture NX 2. Check this box to prevent the "Welcome" screen from appearing when Capture NX 2 is launched. To access the "Welcome" screen again, navigate to the **Help** menu and select **Show Welcome Screen**. You can then uncheck the **Don't show again** checkbox in order to display the "Welcome" screen whenever Capture NX 2 is launched.
④ **Drag an image here to open it (Macintosh Only)**	The **Drag an image here to open it** section is available only in the Macintosh version and enables you to open an image by dragging it from the Macintosh Finder onto this section. In the Windows operating system, you can drag an image from the Windows Explorer into the Capture NX 2 window to open the image within Capture NX 2.

Browsing and Opening Images

Capture NX 2 provides you with a number of ways of locating and opening images in order to enhance them.

Using the Browser

To open an image using the browser, follow these steps:

1 Open the **Folders** palette, the **Browser** palette will automatically open. Click on the folder within the Folders palette that you wish to display within the browser.
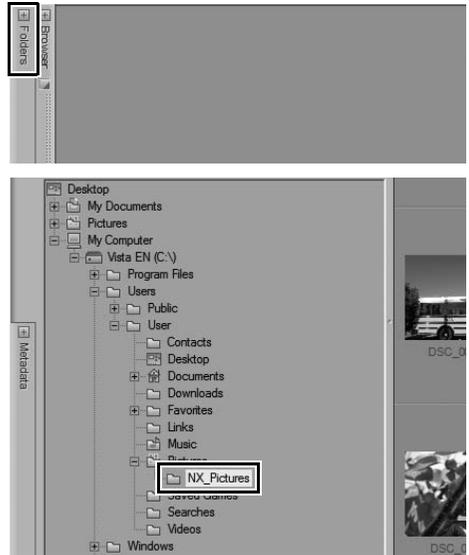
2 Locate and double-click on the image that you wish to open.

Using Open Image

To open an image using **Open Image…**, follow these steps:

1 Navigate to the **File** menu and select **Open Image…**.
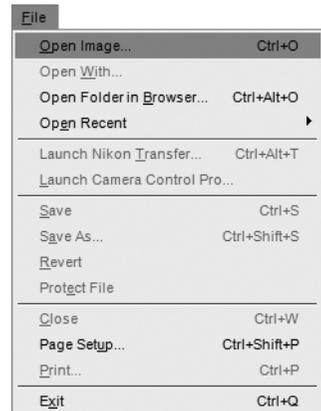
2 Within the dialog that is displayed, locate an image to open, and click on the **Open** button.
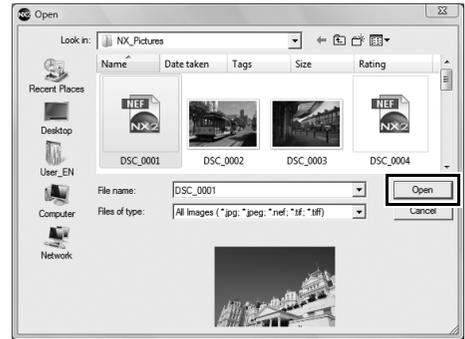
Using ViewNX

To open an image from ViewNX, follow these steps:

1 Select one or more images to open into Capture NX 2.

2 Click on the **Open with Capture NX** button within the ViewNX interface.

Using Nikon Transfer

To open a folder of images transferred to your computer using Nikon Transfer, follow these steps:

1 Within Nikon Transfer, navigate to the "Preferences" tab.

2 Click on the pull-down menu for the **Open destination folder with other application after transfer** option.

3 Select **Browse…**.

4 Select **Capture NX 2** from the displayed "Select program" window and click **OK**.

After the next transfer is completed, the folder identified in the primary destination folder will be displayed within the Capture NX 2 browser. You can then open one or more images by double-clicking on them within the browser.

File Format Differences

Capture NX 2 supports three different file formats: NEF, TIFF, and JPEG.

NEF

The NEF, or Nikon Electronic Format, was designed as the archive file format for your images. The NEF file format saves the complete contents of the **Edit List** palette along with the original image. All changes made to the image are stored separately within the file, enabling a non-destructive image editing workflow. NEF allows for relatively small file sizes with no loss in image quality. Within Capture NX 2, NEF images remain nearly the same size as the original image file, regardless of the number of enhancements that are applied within the image.

✍ **Please note**: The file size of NEF files may increase slightly after being saved in Capture NX 2 due to the inclusion of a full resolution, high quality JPEG preview. This JPEG preview ensures that other applications can accurately display the current state of the image. This file size increase will occur only after the first save within Capture NX 2, while subsequent saves may cause small file size variations due to the inherent nature of the JPEG compression used on the embedded JPEG preview or due to the size of the JPEG preview having been changed with the **Crop** or **Size / Resolution** tools.

There are two different types of NEF files: NEF RAW files and converted NEF files. NEF RAW files are created by a camera using the RAW file type option. Converted NEF files are files that started off as either TIFF or JPEG files, but were saved as NEF using Capture NX 2 or a previous Nikon Capture application.

Both NEF RAW files and converted NEF files benefit from the ability to store enhancements separate from the original image details.

✍ **Please note**: Only NEF RAW files support changes to settings made within the camera and other RAW specific enhancements.

NEF RAW File Support

NEF RAW files are generated by all Nikon Digital SLR cameras as well as some COOLPIX cameras. Capture NX 2 provides support for NEF RAW files from the entire line of Nikon digital cameras that produce NEF RAW files.

For the latest information on supported digital cameras, visit the Nikon website for your area.

For users in the U.S.A.: *http://www.nikonusa.com*
For users in Europe and Africa: *http://www.europe-nikon.com/support*
For users in Asia, Oceania, and the Middle East: *http://www.nikon-asia.com*

TIFF

TIFF is commonly used as a standard for high-quality image reproduction. Saving your image in TIFF will result in a file that contains the final state of your image as shown within Capture NX 2, with full image quality. Once an image is saved in TIFF and closed, you will not be able to change the edits previously applied to the image within the **Edit List** palette.

JPEG

The JPEG file format is one of the most widely used file formats. This 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 when a small file size is required.

Workflow Suggestions

While there is no single workflow optimized for every image, there are some basic guidelines to consider. When using Capture NX 2 to edit images, the following order is recommended:

1 Start with characteristics that affect the entire image, such as removing digital noise, fixing color casts, and reducing tonal issues (such as brightness of contrast issues).
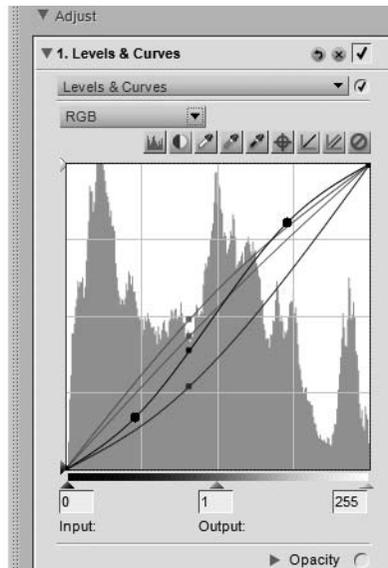
2 Next, modify elements that affect only localized areas, such as blemishes and small distracting elements.

3 Then, apply effects that add a style or mood to the image.
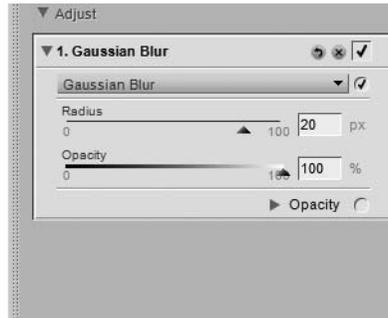
4 Finally, prepare the image for output by resizing and sharpening.

Following these simple guidelines can help improve the quality of your images and provide a more structured approach to enhancing your images.

Printing

Capture NX 2 provides you with a full range of printing options. The print function is both easy and powerful, enabling you to create high quality, fully color managed prints. 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** palette 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 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 screen.

Printing a Single Image

Capture NX 2 provides you with a variety of different printing options for a single image.

Printing an Image to Fill the Current Page

To print an image so that it fills the entire page, follow these steps:

1 Navigate to the **File** menu and select **Print…**.

2 Ensure the **Use Output Resolution** checkbox is unchecked.
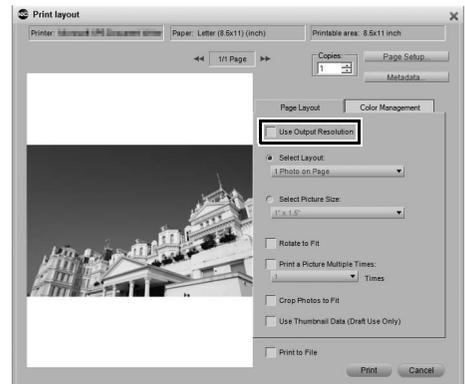
3 Click on the **Select Layout** option and choose **1 Photo on Page**.
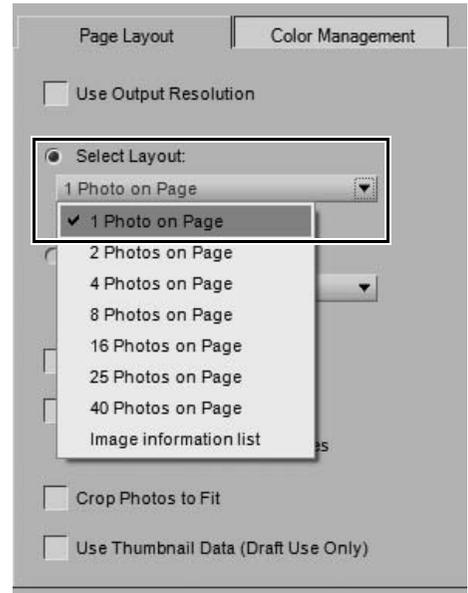
4 If the image's orientation is different from the paper you will print to (such as when you print a landscape oriented picture), check the **Rotate to Fit** option.
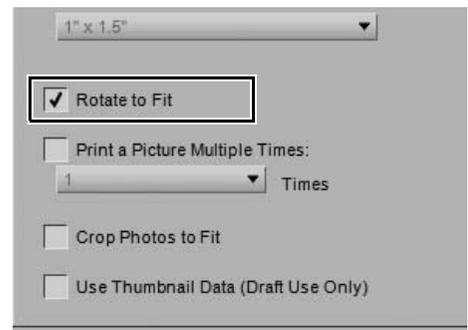
5 If desired, check the **Crop Photos to Fit** option to ensure the entire printable surface is utilized. If the image's aspect ratio is different from that of the paper, some image detail may be cropped away.
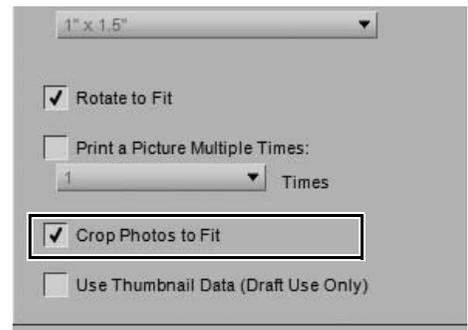
6 Review the settings within the "Color Management" tab and then click **Print**.

Printing an Image Using the Settings Found Within the Size / Resolution Dialog

To print an image using the size and resolution settings made with the **Size / Resolution** tool, follow these steps:

1 Ensure that the appropriate size and resolution are set for the image by navigating to the **Edit** menu and selecting **Size / Resolution…**. If necessary, modify the settings and click **OK**.

Edit	
Undo	Ctrl+Z
Redo	Ctrl+Shift+Z
Cut	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Duplicate	Ctrl+D
Delete	Del
Rename	F2
Select All	Ctrl+A
Deselect All	Ctrl+Alt+A
Flip	▶
Rotate	▶
Size / Resolution...	Ctrl+Alt+S
Fit Photo...	
Preferences	▶

2 Navigate to the **File** menu and select **Print…**.

File	
Open Image...	Ctrl+O
Open With...	
Open Folder in Browser...	Ctrl+Alt+O
Open Recent	▶
Launch Nikon Transfer...	Ctrl+Alt+T
Launch Camera Control Pro...	
Save	Ctrl+S
Save As...	Ctrl+Shift+S
Revert	
Protect File	
Close	Ctrl+W
Page Setup...	Ctrl+Shift+P
Print...	Ctrl+P
Exit	Ctrl+Q

3 Check the **Use Output Resolution** option. If the image is larger than the page, click on the **Page Setup** button and select the appropriate paper size that the image will fit upon.
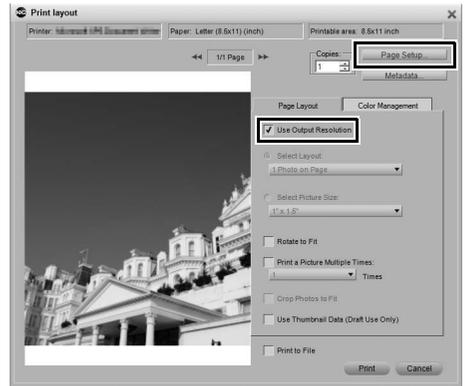
4 If the image's orientation is different from the paper you will print to (such as when you print a landscape oriented picture), check the **Rotate to Fit** option.
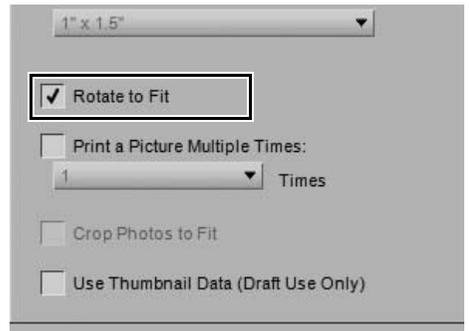
5 Review the settings within the "Color Management" tab and then click **Print**.
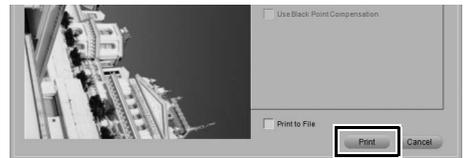
Printing contact sheets

To print a series of images as a contact sheet, follow these steps:

1 Open the **Browser** palette and select the images you would like to print. To select multiple files, hold either the Shift key and click on the first and last images of a range, or hold the Ctrl (Windows) or command (Macintosh) keys while single-clicking on each additional file you want to add. To select all of the images in the current folder, navigate to the **Edit** menu and click on the **Select All** option, or use the shortcut Ctrl + A (Windows) or command + A (Macintosh).

Edit	
Undo	Ctrl+Z
Redo	Ctrl+Shift+Z
Cut	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Duplicate	Ctrl+D
Delete	Del
Rename	F2
Select All	Ctrl+A
Deselect All	Ctrl+Alt+A
Flip	▶
Rotate	▶
Size / Resolution...	Ctrl+Alt+S
Fit Photo...	
Preferences	▶

2 Navigate to the **File** menu and select **Print…**.

File	
Open Image...	Ctrl+O
Open With...	
Open Folder in Browser...	Ctrl+Alt+O
Open Recent	▶
Launch Nikon Transfer...	Ctrl+Alt+T
Launch Camera Control Pro...	
Save	Ctrl+S
Save As...	Ctrl+Shift+S
Revert	
Protect File	
Close	Ctrl+W
Page Setup...	Ctrl+Shift+P
Print...	Ctrl+P
Exit	Ctrl+Q

3 Ensure the **Use Output Resolution** option is not selected.
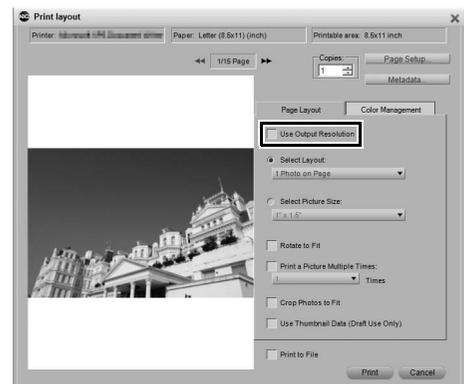
4 Click on the **Select Layout** option, and then in the provided pull-down menu, choose the number of images you would like to display on a single page. Alternatively, you can use the **Select Picture Size** option and select the size of each picture. Capture NX 2 will automatically tile the available images to fit onto one or more pages.
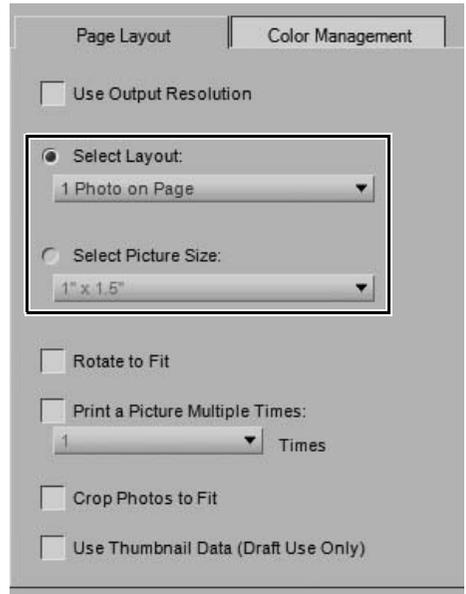
5 Click on the page backward or page forward buttons to review the available pages.

6 To add information about each picture, such as the file name, shooting data, or date shot, click on the **Metadata…** button.
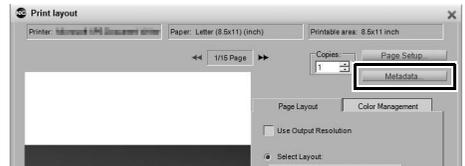
7 Review the settings within the "Color Management" tab and then click **Print**.

For more information on the various options available in the "Print layout" window, please see "Print…" in Chapter 18, "File Menu".

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 2 contains even more methods of batch processing than before. You can select a folder of images and select a series of enhancements to apply to those images, you can add an XMP/IPTC preset to a series of images, you can set up a live edit batch process, or you can set up a watched folder.

Applying a series of enhancements to a folder of images

1 Enhance an image that is representative of the images that you would like to apply a batch process to.

2 Navigate to the **Batch** menu and select **Save Adjustments…**. This will call up the "Save Adjustments" dialog and let you create a settings file.

3 Check each of the checkboxes for the enhancements that you would like to apply in the batch process and provide a name for the settings file. Click **OK**.
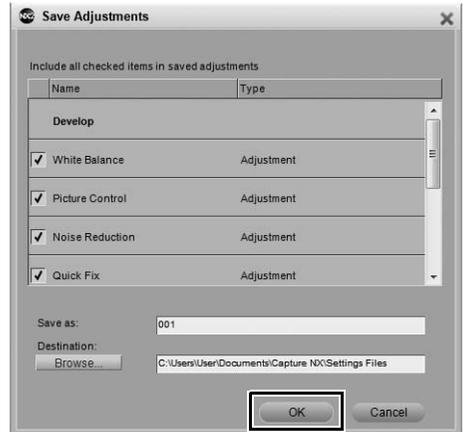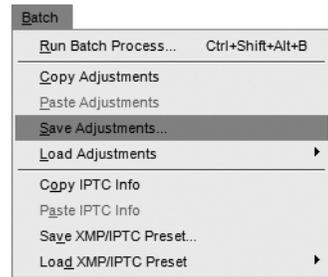
4 Navigate to the **Batch** menu and select **Run Batch Process…**. You will then be presented with the Batch Process dialog.
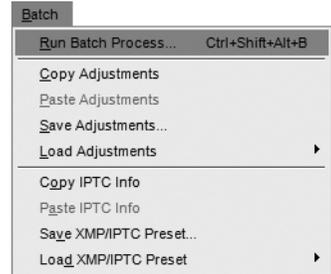
5 Click on the **Browse…** button in the **Source** section and locate the folder of images you wish to process.

6 Check the **Apply Settings** checkbox, ensure that **Use Settings File** is selected, and click on the **Browse…** button. Locate the settings file created in step 3 and click **OK**.
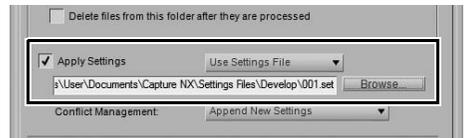
7 Check the **Rename** box if you would like to change the name of the processed files. Click on the **Edit…** button to call up the File Naming dialog and determine the naming convention for the processed images.

8 Use the **Select File Format** pull-down menu to select the file format for the processed images.

9 In the **Destination** section, select the folder that the processed images should be placed in and click **OK**.
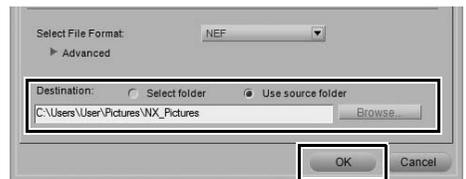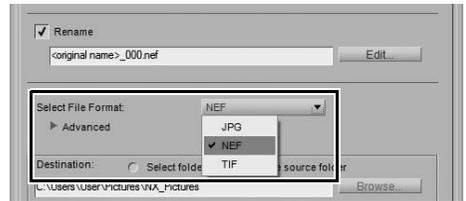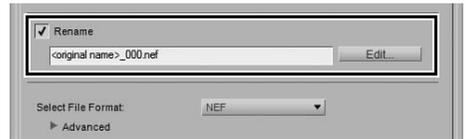
The **Processing Queue** will be displayed and the batch process will start. To pause the batch process, click on the **Pause** button within the **Processing Queue**. To prevent an image from being processed, highlight the image in the queue and then click on the **Clear from list** button under the queue. To cancel the process, click on the ✕ button to stop the batch process and close the **Processing Queue**.
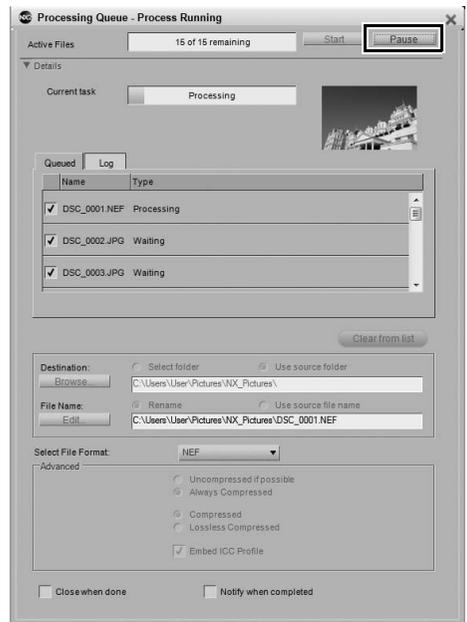
Adding XMP/IPTC data to a series of images using an XMP/IPTC preset

1 Open an image within Capture NX 2, open the **Metadata** palette, and add the desired XMP/IPTC data to an image.

2 Navigate to the **Batch** menu and select **Save XMP/IPTC Preset…**. Within the dialog that is displayed, select the checkboxes for each of the XMP/IPTC fields that you would like to apply to additional images, add a name for the XMP/IPTC preset, and click **OK**.
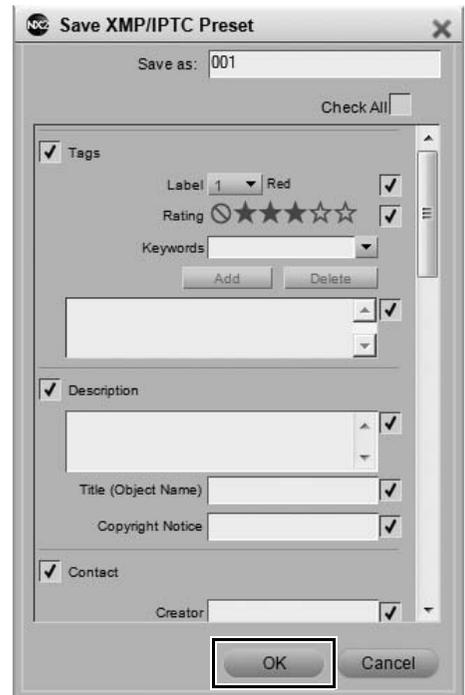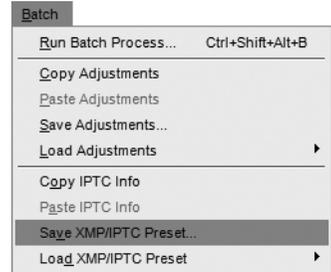
3 Open the **Browser** palette and select the images you would like to apply the XMP/IPTC information to. To select all of the images in the current folder, navigate to the **Edit** menu and choose **Select All**.

Edit	
Undo	Ctrl+Z
Redo	Ctrl+Shift+Z
Cut	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Duplicate	Ctrl+D
Delete	Del
Rename	F2
Select All	Ctrl+A
Deselect All	Ctrl+Alt+A
Flip	▶
Rotate	▶
Size / Resolution...	Ctrl+Alt+S
Fit Photo...	
Preferences	▶
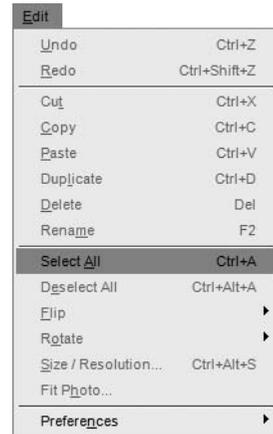
4 Navigate to the **Batch** menu, click on the **Load XMP/IPTC Preset** menu, and then locate the XMP/IPTC preset that you saved in step 2.

Batch		
Run Batch Process...	Ctrl+Shift+Alt+B	
Copy Adjustments		
Paste Adjustments		
Save Adjustments...		
Load Adjustments	▶	
Copy IPTC Info		
Paste IPTC Info		
Save XMP/IPTC Preset...		
Load XMP/IPTC Preset	▶	001
		Browse...
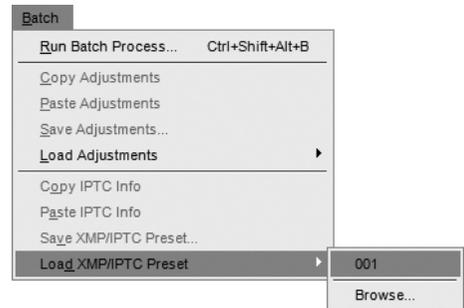
The XMP/IPTC information you added to the XMP/IPTC preset will then be added to all of the selected images.

Converting NEF RAW files into JPEG or TIFF files

Capture NX 2 can quickly and easily convert NEF RAW files that are produced by your Nikon digital camera into JPEG or TIFF files, which can then be opened and used by other applications. To convert your NEF RAW files into JPEG or TIFF files, follow these steps:

To convert a folder of files from NEF RAW to JPEG or TIFF

1 Navigate to the **Batch** menu and select **Run Batch Process…**.

2 Within the **Source** section, click on the **Browse…** button to select the folder you wish to convert from NEF into JPEG or TIFF.
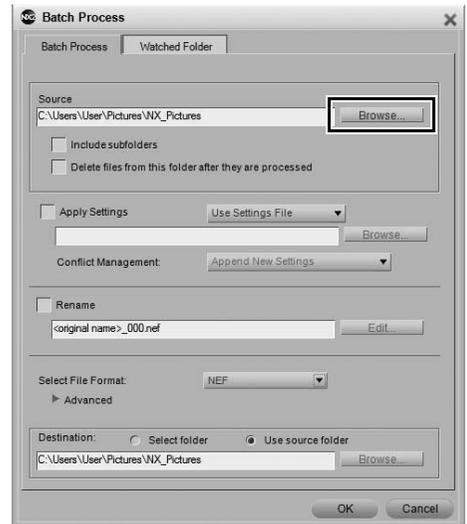
3 Next, ensure that the **Apply settings** checkbox is not checked.
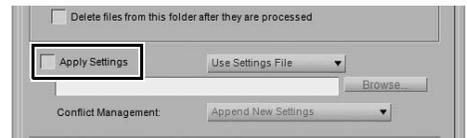
4 Check the **Rename** box if you would like change the name of the files as they are converted from NEF to JPEG or TIFF.
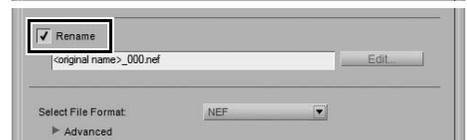
5 From the **Select File Format** pull-down menu, select the file format to convert the images to, either TIFF or JPEG.
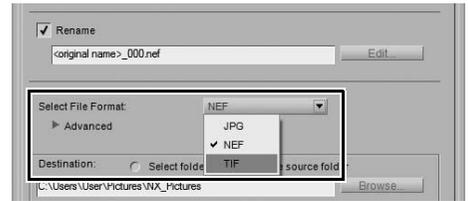
6 Click on the **Advanced** show/hide triangle to control the options for the selected file format.
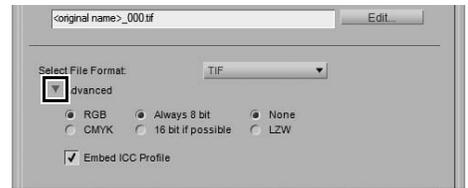
7 For the **Destination** option, choose where the new JPEG or TIFF files should be placed by using the **Select folder** option to place them in a new folder or using the **Use source folder** option to place them in the same folder as the original NEF files.

8 Click **OK** to add the files into the **Processing Queue** and start converting the files.

You can check the status of the conversion process in the **Processing Queue** and you can pause the process by clicking on the **Details** show/hide triangle in the **Processing Queue** and clicking on the **Pause** button. To cancel the process, click on the ✖ button to stop the batch process and close the **Processing Queue**.

To convert selected files from the Browser

1 Open the **Browser** palette and select the files you want to convert from NEF RAW to JPEG or TIFF. To select multiple files, either hold the Shift key and click on the first and last images of a range, or hold the Ctrl key (Windows) or command key (Macintosh) while single-clicking on each additional file you want to add.

2 Navigate to the **File** menu and select **Save As…**. Alternatively, you can use the keyboard shortcut of Ctrl + Shift + S (Windows) or command + shift + S (Macintosh).

3 In the **Destination** section, select either the **Select folder** option to choose a new folder to place the converted image files into or **Use source folder** to place the image files into the same folder as the original NEF files.
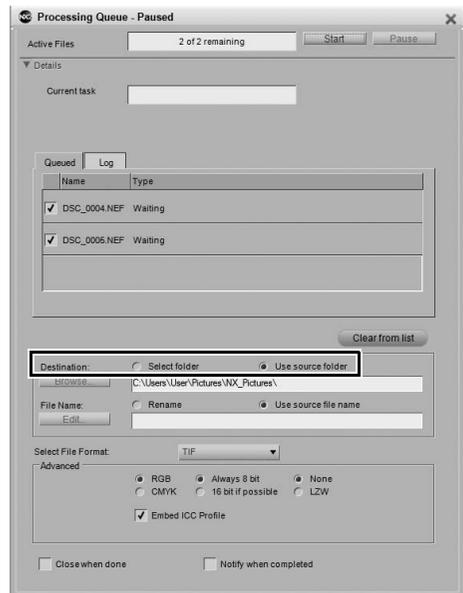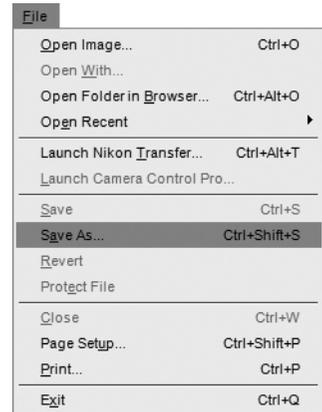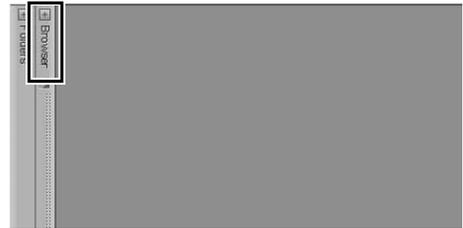
4 In the **File name** section, select the file format to convert the images to, either TIFF or JPEG.

5 The **Advanced** section provides you with options for the selected file format.
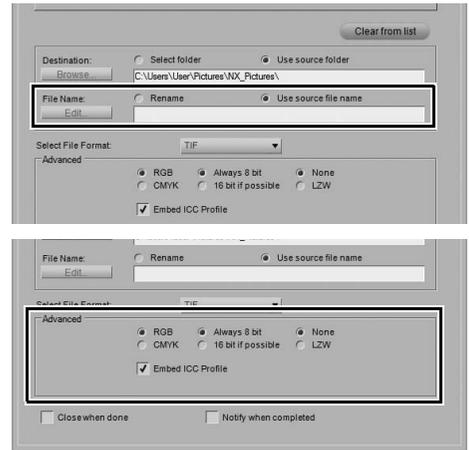
Click **Start** to begin converting the files.

Chapter 7

Preferences

Preferences modify the default behavior of Capture NX 2. Preferences can be found either under the **Edit** menu in Windows or the **Capture NX 2** menu in Macintosh. There are nine different categories of preferences:

• General
• Color Management
• Levels & Sampling
• Display
• Cache Settings
• XMP/IPTC Presets
• Labels
• Manage Settings
• Workspaces

Shortcut

Ctrl + K (Windows)
command + K (Macintosh)

If Capture NX 2 displays unexpected behavior, the preferences may be damaged. Restoring preferences to their defaults may resolve this issue. To restore the preferences to the default settings, click on the **Reset** button within the Preferences dialog.

General
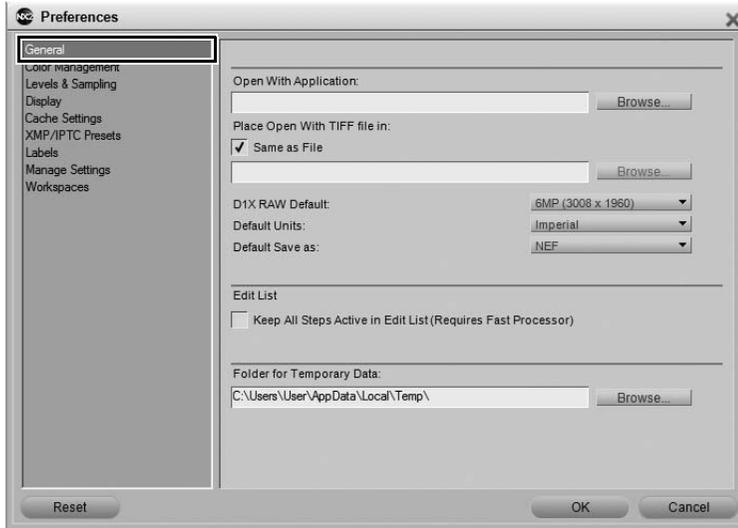
Open With Application

Choose this option to select the application you wish to use when opening files with the **Open With…** command in the **File** menu.

Place Open With TIFF File In

The **Place Open With TIFF file in** option allows you to determine where to place the TIFF files created by the **Open With…** command in the **File** menu.

Check the **Same as File** checkbox to place the TIFF file created by the **Open With…** command in the same folder as the source file.

D1X RAW Default

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

Default Units

Choose from inches and millimeters.

Default Save As

Use this option to determine the default file type in the "Save As…" dialog. The following options are available:

- **Same as original file**
  Select the **Same as original file** option to set the default file type in the "Save As" dialog to the file type of the image being saved.
- **Previous file format**
  Select the **Previous file format** option to set the default file type in the "Save As" dialog to the file type of the image that was last saved.
- **NEF**
- **TIFF**
- **JPEG**

Keep all Steps Active in Edit List

Use this option to control how the editing of steps in the **Edit List** palette is handled. When this option is turned off, the editing of a step in the **Edit List** palette causes any following step to be temporarily disabled. When this option is turned on, steps will not be temporarily disabled, and you will be able to see the impact of the changes made with all steps being considered.

Please note, when this option is turned on, additional processing will be required as all enhancements will be processed in real time. Turning this option on is only recommended for computers with powerful processors.

Folder for Temporary Data

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

Color Management
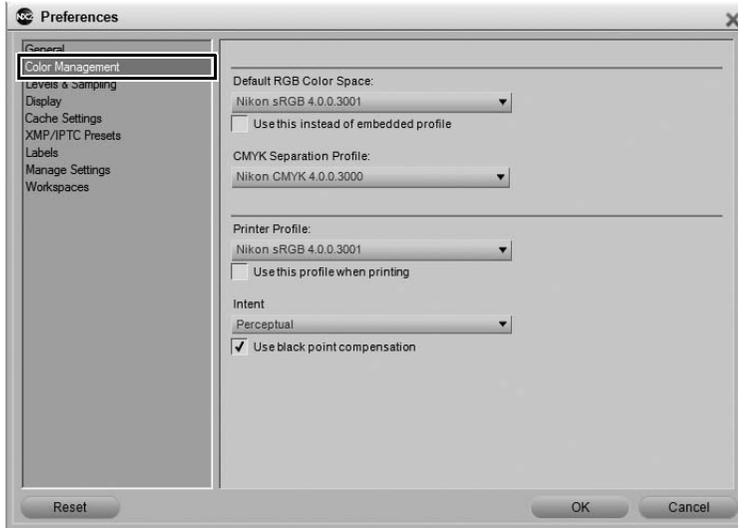
Default RGB Color Space

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 2 to automatically convert the image from the embedded profile to the profile as defined in the **Default RGB Color Space** option. This option is automatically enabled if you selected the **Always use the default RGB color space as the working color space** option during installation.

CMYK Separation profile

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

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.

Intent

Use this preference to set the default rendering intent for the various color management features throughout Capture NX 2. 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 maintains the relationships of colors so that the printed image appears natural to the human eye. While this intent maintains the relationship of colors, the actual color values will be changed.

Saturation
This rendering intent produces highly saturated colors, but it may not produce accurate colors in a photograph.

Relative Colorimetric
This rendering intent maps all of the colors that fall outside of the gamut of the target profile to the closest reproducible color. This profile reproduces accurately all of the colors that are within the range of colors reproducible by your printer. 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 relative colorimetric, except that it maps the white point of the image to the white point of the destination profile. It is recommend that you use absolute colorimetric only 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 2 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 print contains 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.

Levels & Sampling
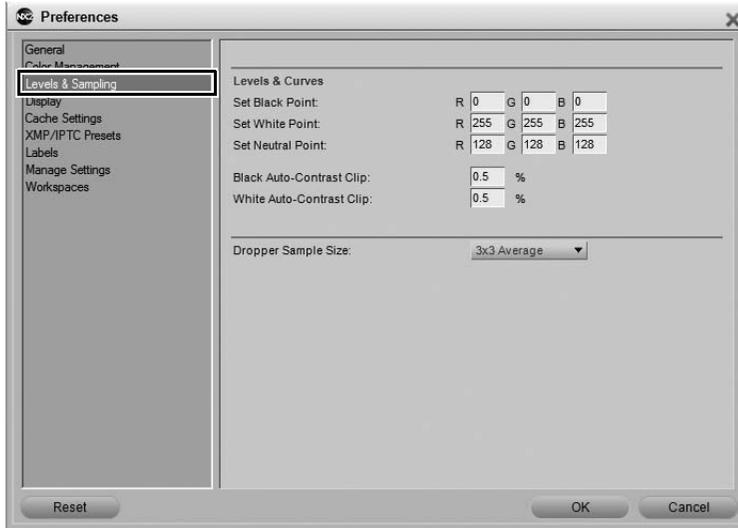
Levels & Curves

The options within the "Levels & Curves" section enable you to set the default values for controls found within the "Levels & Curves" step.

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" step.

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

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" step.

Black Auto-Contrast Clip
Set this number to determine the percentage of the darkest pixels to exclude when using the **Auto-Contrast** option in the "Levels & Curves" step.

White Auto-Contrast Clip
Set this number to determine the percentage of the lightest pixels to exclude when using the **Auto-Contrast** option in the "Levels & Curves" step.

Dropper Sample Size

Use this option to set the sample size of the droppers used within the "Color Picker", "Levels & Curves", and "Watch Point" elements of Capture NX 2. When **Point Sample** is selected, a single pixel will be sampled when a dropper is used. With the **3 x 3 Average** and **5 x 5 Average** options, the average of the pixels sampled will be used. Choosing a large sample size reduces precision, but also minimizes the effects of noise; choosing a small sample size has the opposite effect.

Display
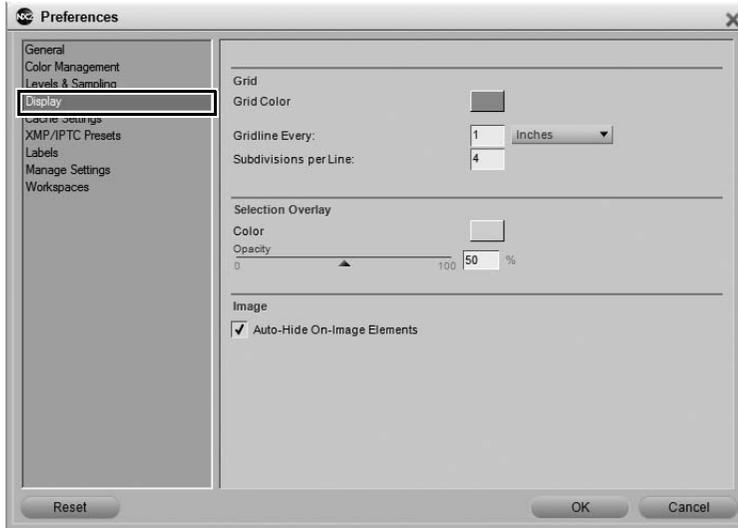
Grid

The options within the "Grid" section enable you to control what is displayed when the **Show Grid** option is turned on from the **View** menu.

Grid Color
Click on the color patch to bring up the color picker and select the color for the gridlines displayed on top of the image when the **Show Grid** option is enabled.

Gridline Every
Use this option to set the frequency of and the unit of frequency of the gridlines when the **Show Grid** option is enabled.

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

Selection Overlay

The options within the "Selection Overlay" section enable you to control the appearance of the overlay displayed when **Selection Display** > **Show Overlay** is selected in the **View** menu. The options selected within this section will determine how the current step's selection is superimposed on top of the image.

Color
Click on the color patch to bring up the color picker and select the color of the overlay that is used to represent the current step's selection.

Opacity
Use this option to determine the opacity of the overlay that is displayed on the image. A value of 100% will completely obscure the image's detail, with lower values allowing more and more of the original image's detail to be visible.

Image

Auto-Hide On-Image Elements
Use this option to automatically hide elements that appear on top of the image whenever the mouse exits the image window. Active selections, control points (that are not currently selected), watch points, and the grid will automatically be hidden when the mouse cursor exits the image window to give you a clear view of your image. These items will reappear when the mouse cursor returns into the image window. Turn this option off to always see those on-image elements.

Cache Settings
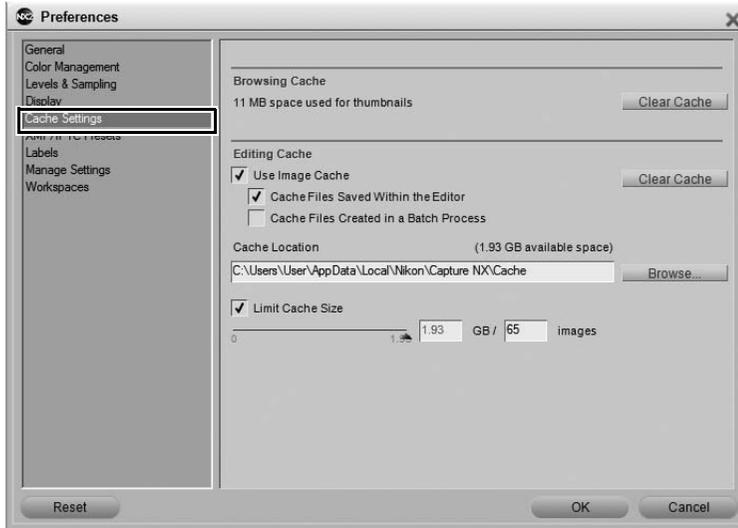
Capture NX 2 utilizes two caching systems: a browsing cache and an editing cache. Both cache systems speed up the interaction of Capture NX 2 by storing processed information on the hard disk, enabling Capture NX 2 to use the cached information instead of reprocessing the files.

The browsing cache is used for the thumbnails created and displayed in the **Browser** palette, while the editing cache is used for NEF files saved during editing.

Browsing Cache

In order to increase the speed of displaying thumbnails, Capture NX 2 utilizes a thumbnail cache for the **Browser** palette. This cache is created after the image is first processed, making subsequent browsing of the same folder significantly faster. You can view the amount of space used by the browsing cache as well as clear the cache to reclaim disk space using the **Clear Cache** button. After clearing the cache, you will not lose any image data, however thumbnails will need to be recreated, taking additional time.

Editing Cache

The **Editing Cache** option enables NEF images (both NEF RAW and converted NEF files) that were previously opened within Capture NX 2 to open more quickly. Capture NX 2 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 **Editing Cache** option is enabled, saving NEF files will automatically create a cache file in the folder specified by the **Cache Location** option. This cache file contains information that Capture NX 2 can use to greatly accelerate the opening of this file in the future.

With the default settings, Capture NX 2 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 2 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 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.

After a file has been added to the editing cache, a lightning bolt icon will be placed next in the image window and next to the image in the **Browser** palette. This icon indicates that the file is currently within the editing cache.

Use Image Cache
Check this box to enable Capture NX 2 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 2 to cache files when an image is saved using the **Save** or **Save As…** options in the **File** menu.

Cache Files created in a Batch Process
Check this box to enable Capture NX 2 to cache files whenever a batch process is used to save images using the NEF file format. This includes both batch processes and watched folders.

Clear Cache
Click on this button to delete all editing cache files created by Capture NX 2.

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

Limit Cache Size
Check this box in order to set a limit to the amount of disk space Capture NX 2 will use for cache files.

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

XMP/IPTC Presets
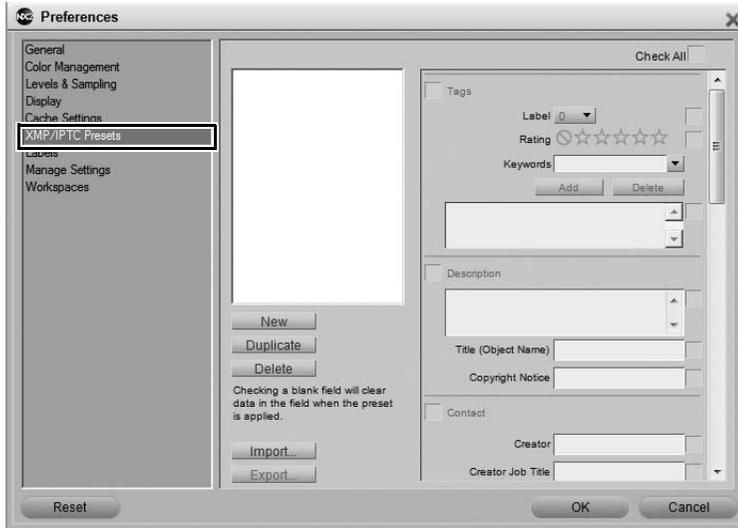
XMP/IPTC presets enable you to create different sets of XMP/IPTC data that can then be applied to either a single image or to a group of images.

Available Presets

Presets that you create or save within Capture NX 2 will be displayed within the "Available Presets" window. You can click on any of the available presets to display the contents in the field editor, duplicate the preset using the **Duplicate** button, or delete the preset using the **Delete** button. To create a new preset, either save a preset using the **Save XMP/IPTC Preset** option in the **Batch** menu, or click on the **New** button at the bottom of the "Available Presets" window.

Field Editor

The field editor displays all of the available fields and contents for an XMP/IPTC preset. Enter the values you would like to automatically apply through the XMP/IPTC preset. After entering a value, the checkbox for that field as well as for the section will be turned on. Only those fields with a checkbox next to them will be added to an image when the XMP/IPTC preset is applied to an image or group of images.

To prevent a field from being modified by the XMP/IPTC preset, uncheck the box for that field.

To clear a field in an image or group of images, delete the content of that field in the field editor and check the box. This will result in a blank field with a checkbox next to it, indicating that when this XMP/IPTC preset is applied to an image, that image will have a blank field for the corresponding field. This is helpful if you would like to clear away one or more XMP/IPTC fields in an image or group of images.

New

The **New** button creates a new, empty XMP/IPTC preset. After clicking on this button, you will be provided with a dialog to enter the name for the XMP/IPTC preset. This name will be displayed in the **Load XMP/IPTC Preset** sub-menu of the **Batch** menu.

After creating a new XMP/IPTC preset, enter the values for that preset in the fields displayed in the field editor.

Duplicate

Clicking on this button will duplicate the contents of the XMP/IPTC preset selected in the "Available Presets" list and provide you with a window to enter the name for the new XMP/IPTC Preset.

Delete

Click on the **Delete** button to permanently delete the XMP/IPTC preset selected in the "Available Presets" list.

Import

Click on the **Import** button to import an XMP/IPTC preset from a file on your computer. You will be prompted for the location and name of the file for the XMP/IPTC preset that you wish to load. XMP/IPTC preset files use the file extension ".XMP".

Export

Click on the **Export** button to create an XMP/IPTC preset as a file with the extension ".XMP". You will be prompted for the location and name of the file for the XMP/IPTC preset that you wish to save.

Labels
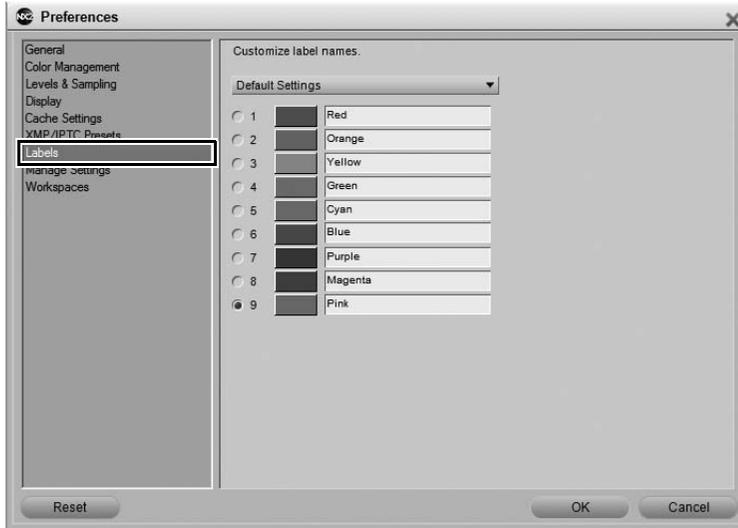
Label Compatibility

Use the **Label Compatibility** pull-down menu if you use another digital asset management software application to tag and sort your images. Capture NX 2 supports a number of digital asset management software applications. If you select the appropriate option from the pull-down menu, Capture NX 2 will be able to read the label and rating information added by that application.

Each option controls the maximum and default number of labels available, along with their color and label name.

The **Default Settings** option shows all nine labels, however you may choose to display fewer than nine labels.

The **Custom** option lets you determine not only the number of labels available, but also the names for each label to be used.

For example, if you use only one label to determine those images to keep, use the **Custom** option to select only one label and name that label accordingly.

Alternatively, if you prefer to create a variety of labels based on different types of images, use the **Custom** option to select the number of labels you wish to use and then name each label accordingly.

🖉 **Please note**: Changing the label names can reduce compatibility with other applications, including ViewNX.

Available Labels

The maximum number of labels available depends on the selection in the **Label Compatibility** pull-down menu. You can choose the number of labels to display by clicking on the radio button next to the desired number of labels.

Manage Settings

The **Manage Settings** section enables you to determine which settings are displayed within the **Load Adjustments** sub-menu of the **Batch** menu. Use this dialog to identify which settings files to display within the **Load Adjustments** sub-menu or to add or delete available settings files.

To learn more about creating settings files, please see the "Save Adjustments" section in Chapter 22, "Batch Menu".
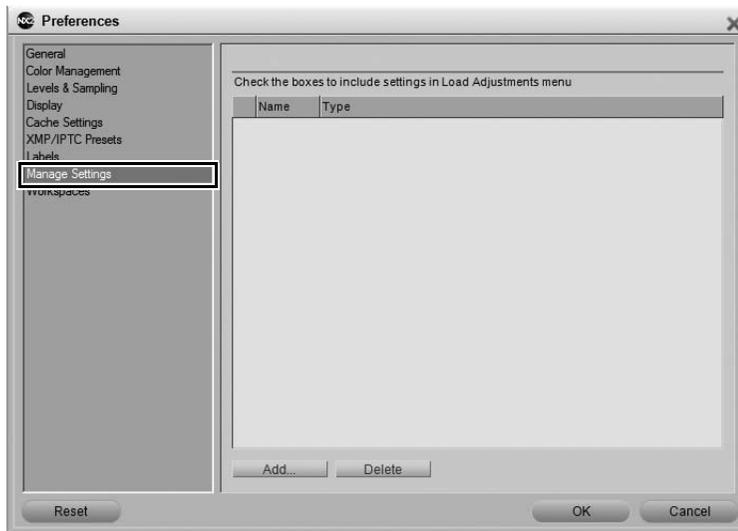
Add

Clicking on the **Add** button will open a file browsing window, enabling you to navigate and locate a settings file that resides on your computer. If you use the **Add** option, the settings file that you selected will automatically be copied to the Capture NX 2 "Settings" folder and added to the list of available settings files both in the "Manage Settings" tab as well as in the **Load Adjustments** sub-menu of the **Batch** menu.

Delete

The **Delete** button will delete the highlighted setting from within the "Manage Settings" tab as well as from the Capture NX 2 "Settings" folder.

Workspaces

The "Workspaces" section of the preferences enables you to modify the workspaces provided within Capture NX 2.

By default, Capture NX 2 provides you with four different workspaces. Within this tab, additional workspaces can be added or removed and you can determine the shortcuts to assign each available workspace.
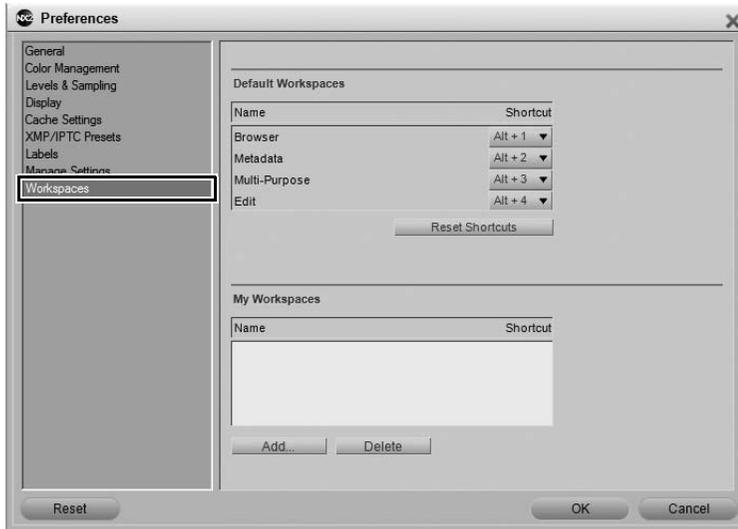
Default Workspaces

The workspaces listed under "Default Workspaces" are the default workspaces provided by Capture NX 2, and are always available.

To change the shortcut to use for a specific workspace, click on the pull-down menu next to the name of the workspace and select the new shortcut to use. If you select a shortcut that is already in use by another workspace, that other workspace's shortcut will automatically be set to **None**.

My Workspaces

Any workspaces that you create will be listed under "My Workspaces". To change the shortcut to use for a specific workspace, click on the pull-down menu next to the name of the workspace and select the new shortcut to use. If you select a shortcut that is already in use by another workspace, that other workspace's shortcut will automatically be set to **None**.

Reset Shortcuts

Clicking on the **Reset Shortcuts** button will reset the shortcuts used for the "Default Workspaces" to the default shortcuts.

Add

Clicking the **Add** button will create a new workspace based on the current palette and screen arrangement. A dialog will be displayed enabling you to enter a name for the new workspace.

Delete

Clicking the **Delete** button will remove the highlighted workspace from in the "My Workspaces" section. Please note that, you cannot delete a default workspace.

Chapter 8

Interface

Capture NX 2'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 2 interface, as well as information about the new workspaces, working with multiple screens, using the image window, and working with palettes and menus.

Overview
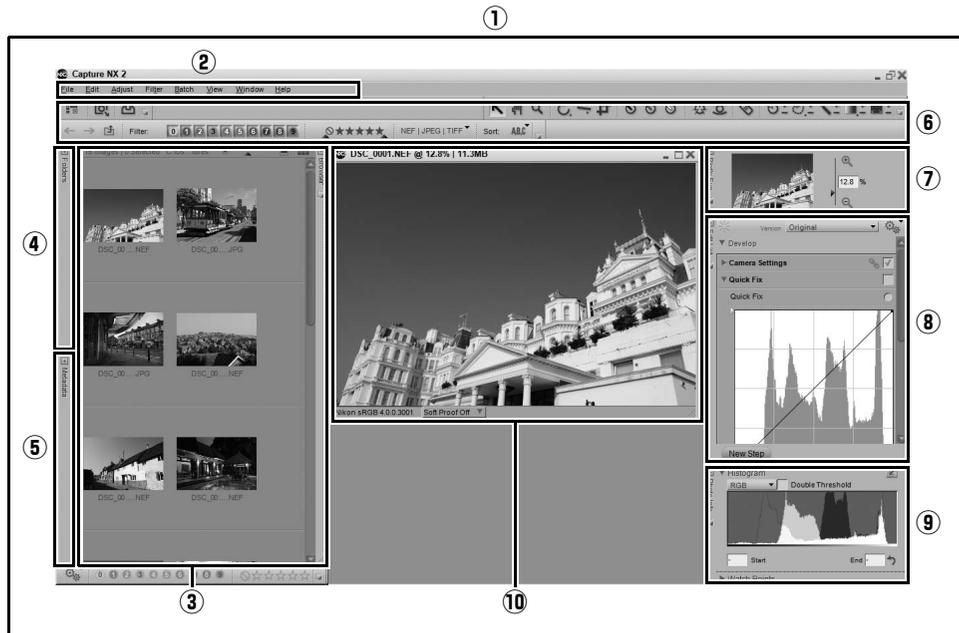
① Editor	The main window of Capture NX 2, the editor, is the window you see when you are editing images. Within the editor, you can open and close images as well as access each of the different control palettes.
② Menu Bar	The menu bar provides access to nearly all of the features and enhancements within Capture NX 2. Please see chapters 18 through 25 for information on the features located within each menu.
③ Browser	Capture NX 2'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. For more information, please see Chapter 9 "The Browser".

④ **Folders**	The folders palette provides you with an easy-to-access palette which displays the content of an entire folder in the browser. For more information, please see Chapter 10, "The Folders Palette".	
⑤ **Metadata**	The **Metadata** palette displays information about the image provided automatically by the camera as well as XMP/IPTC data of the image. With this palette, you can review camera, lens, flash, and exposure information unique to the selected image as well as review and add XMP/IPTC data to one or more images. For more information, please see Chapter 11, "The Metadata Palette".	
⑥ **Toolbar**	The toolbar provides access to the various tools available within Capture NX 2. You can use these tools to perform various edits, from zooming to rotating the image, to applying enhancements selectively. For more information, please see Chapter 13, "The Toolbar".	
⑦ **Bird's Eye**	The **Bird's Eye** shows a portion of the image that is visible in the active image window, providing the ability to navigate through the image while zoomed in. For more information, please see Chapter 14, "Bird's Eye".	
⑧ **Edit List**	The **Edit List** palette is the master control list for the features and enhancements of Capture NX 2. Anything that affects your image will have an entry in the **Edit List** palette. Every entry can be removed, altered, or duplicated from this list. The **Edit List** palette automatically organizes each entry by steps in chronological order. This provides you with the ability to turn on or off one or more steps at any time to monitor the effect 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. For more information, please see Chapter 15, "Edit List".	
⑨ **Photo Info**	The Photo Info palette combines the **Histogram** and **Watch Points** functionalities into a single palette. The Histogram section shows a live histogram that reflects the statistical makeup of the image. The Watch Points section enables you to monitor the effects of the changes you make to the color values in the image. For more information, please see Chapter 16, "Photo Info".	
⑩ **Image Window**	Image windows display images within Capture NX 2, along with important information and controls for the images. For more information, please see the section "Image Window" later in this chapter.	

Workspaces
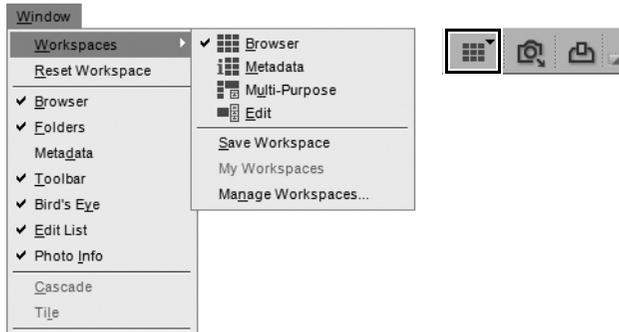
Workspaces are new in Capture NX 2, enabling you to quickly change tasks while displaying only the palettes and windows necessary for that task. Capture NX 2 comes with four different default workspaces and provides you with the ability to create custom workspaces. Selecting a particular workspace will arrange all of the palettes and windows according to the stored settings for that workspace including the position, state of the palette (maximized or minimized), as well as other settings that affect what is displayed within a palette or window.

The settings for the default workspaces were created based on the tools used in typical tasks. Custom workspaces however can be created to meet your specific workflow needs.

To change workspaces, navigate to the **Window** menu, select the **Workspaces** menu, and then select the workspace to which you would like to switch. Alternatively, use the workspace selector found within the activity toolbar, or use the corresponding shortcut.

Browser

Use the browser workspace to browse and sort through your images. In this workspace, the browser fills the screen, the **Folders** palette is open, and all other palettes are closed.

While in this workspace, use the folders palette to find the folder you wish to work on and then use the tagging and filtering tools to rate and label your images and then filter and sort your images to find only those images you want to work further on in Capture NX 2's editor.

When the browser workspace is used on a single screen, opening an image or group of images from the browser will automatically toggle the edit workspace.

> **Shortcut**
> Alt + 1 (Windows)
> option + 1 (Macintosh)

Metadata

The metadata workspace is designed to provide you with optimum workspace to review and add metadata to your images. Within this workspace only the **Browser** and **Metadata** palettes are displayed.

The **Metadata** palette displays both information about the camera and exposure along with XMP/IPTC information. Use the browser to select the image or group of images you want to review or add XMP/IPTC information to.

When the metadata workspace is used on a single screen, opening an image or group of images from the browser will automatically toggle the edit workspace.

> **Shortcut**
> Alt + 2 (Windows)
> option + 2 (Macintosh)

Multi-Purpose

The multi-Purpose workspace is best used on high resolution monitors and was designed to enable you to browse and edit images simultaneously. Selecting this workspace opens the **Browser** palette to reduced size and displays the **Bird's Eye**, **Edit List**, and **Photo Info** palettes. Any images that are currently being worked on are displayed between the **Browser** and **Edit List** palettes.

Opening images from the browser in the multi-purpose workspace will not toggle the edit workspace; instead, the multi-purpose workspace will be maintained.

> **Shortcut**
> Alt + 3 (Windows)
> option + 3 (Macintosh)

Edit

The edit workspace is typically used when editing images. Only the **Toolbar**, **Bird's Eye**, **Edit List**, and **Photo Info** palettes and the images currently open in the editor are displayed, ensuring that maximum space is available for editing images without distractions.

> **Shortcut**
> Alt + 4 (Windows)
> option + 4 (Macintosh)

Creating Custom Workspaces

Capture NX 2 provides you with the ability to create your own custom workspaces. Use these custom workspaces to save the position and state of all of the palettes and windows for use in the future. This can help you save time and ensure that the palettes and windows are arranged in a way that best fits your workflow.

Custom workspaces save the current state on all active screens, enabling you to create a single workspace that controls the position and state of palettes across multiple screens.

To create a custom workspace, follow these steps:

1 Arrange the palettes and windows according to your taste.

2 Navigate to the **Window** menu and select the **Workspaces** sub-menu, then select **Save Workspace**. Alternatively, click on the workspace selector and select **Save Workspace**.
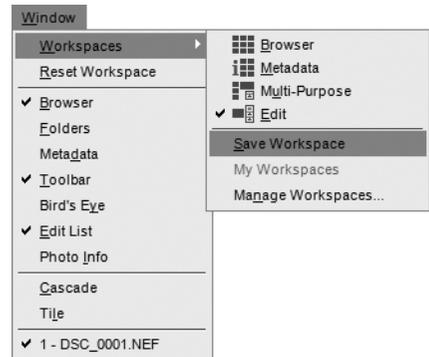
3 Type in the name of the new workspace and click **OK**.
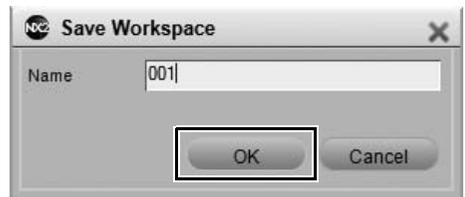
You can then assign a shortcut to this new workspace by following these steps:

1 Navigate to the **Edit** menu (Windows) or **Capture NX 2** menus (Macintosh), select the **Preferences** sub-menu, and select **Workspaces**. Alternatively, click on the workspace selector and select **Manage Workspaces**.
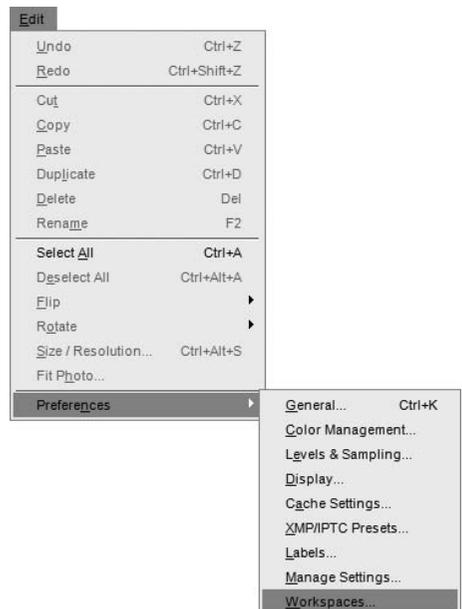
2 In the "Workspaces" tab of the "Preferences" dialog, click on the pull-down menu next to the name of the workspace you created and select the shortcut you would like to use. If you select a shortcut already in use by another workspace, the shortcut for that other workspace will automatically be set to **None**.
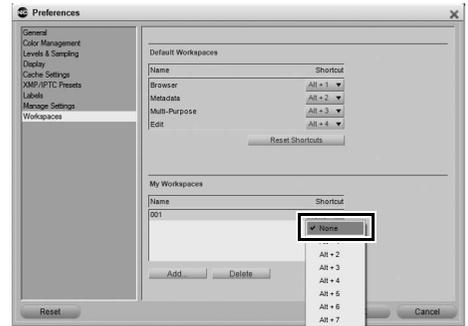
To access your custom workspaces, navigate to the **Window** menu and select the **My Workspaces** sub-menu, then select the desired workspace to apply. Alternatively, click on the workspace selector, select the **My Workspaces** sub-menu and select the desired workspace.

Working with Multiple Screens

Capture NX 2 has been improved to better support multiple screens. Palettes and windows can be freely placed on any available screen. Furthermore, you can set workspaces independently on each connected screen. Custom workspaces can also be created, capturing the state of multiple screens, enabling you to quickly and easily switch between single screen and multiple screen configurations.

When working with multiple screens, Capture NX determines which screen is the primary screen and which screen is the additional screen differently for the different operating systems.

For the Windows operating system, the primary screen is the screen where the application window is placed. You can move the application window by clicking on the Restore button, moving the application window to another screen, and then clicking on the Maximize button. The remaining screen will be the additional screen.

For the Macintosh operating system, the primary screen is the screen that contains the Menu Bar and Dock. The screen that does not have the Menu Bar and Dock will be the additional screen.

Additional screen Sub-Menu

Capture NX 2 continuously checks for the presence of additional screens. As soon as an additional screen is found, a new sub-menu called the **Additional Screen** sub-menu is added to the **Workspaces** sub-menu of the **Window** menu as well as to the **Workspaces selector** menu.

The **Workspaces** sub-menu will continue to control the workspace of the primary screen. The **Additional Screen** sub-menu will control the workspace to be applied to the additional screen.

To use the default workspaces in a multiple screen configuration, follow these steps:

1 Navigate to the **Window** menu, select the **Workspaces** sub-menu, and select the workspace you would like to use on your primary screen.

2 Navigate back to the **Window** menu, select the **Workspaces** sub-menu, select the **Additional Screen** sub-menu and then select the workspace to use on the additional screen.

✐ **Please note**: Only default workspaces can be applied in this manner. Custom workspaces always are applied to all available screens.

✐ **Please note**: Some workspaces cannot be used in conjunction with another. The following table shows the available combinations.

		Additional Screen				
		Desktop	Browser	Metadata	Multi-Purpose	Edit
Primary Screen	Browser	✔	—	—	—	✔
	Metadata	✔	—	—	—	✔
	Multi-Purpose	✔	—	—	—	—
	Edit	✔	✔	✔	—	—

Desktop

The desktop workspace provided within only the **Additional Screen** sub-menu, hides all palettes on the additional screen, letting you see either the operating system's desktop or other running applications.

Swap Workspaces

The **Swap Workspaces** option is available in the **Additional Screen** sub-menu and exchanges the contents of both screens. Use this function to swap the contents of the primary screen for the contents of the additional screen and vice versa.

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 2 is not in the full screen or presentation modes.

Each image window displays important information about the image:

① **Image Name**	This is the file name you have given the current image.
② **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, **Bird's Eye** palette, or the zoom controls in the **Window** menu.
③ **File Size**	This shows you the size in megabytes of the current image you are working on.
④ **Color Profile**	The color profile area shows you the profile that is currently applied to your image. You can change the color profile with the **Color Profile** option in the **Adjust** menu. For more information about the **Color Profile** option, please see the section "Color Profile" in Chapter 20, "Adjust Menu".

⑤ **Soft Proof**

The soft proof feature 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.

To turn soft proofing on, follow these steps:

1 Click on the pull-down menu next to the soft proof status area in the image window.

2 In the "Soft Proof" window that appears, click the **Soft Proof On** option.

3 Select the appropriate **Target Profile**, **Intent**, and **Use Black Point Compensation** state options and then click **OK**.
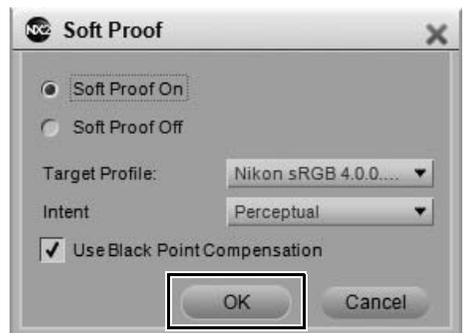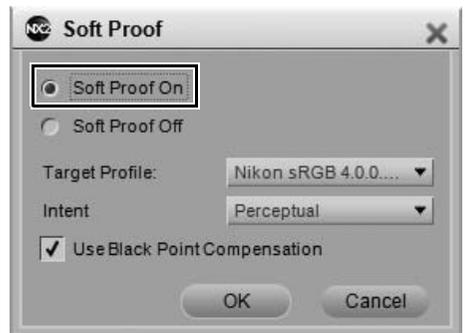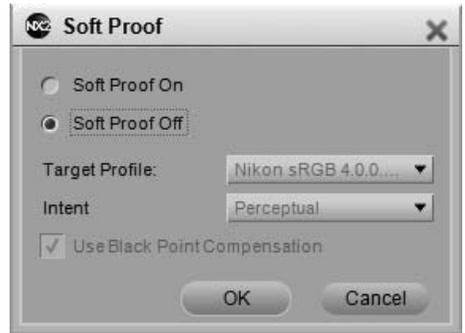
You can turn soft proof off by repeating step 1 and selecting the **Soft Proof Off** option in the "Soft Proof" window.

Soft proof offers the following options:

Target Profile

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

Intent

Choose from four different rendering intents. The different rendering intents control how colors in your image are mapped to 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.

Capture NX 2 provides the following intents:

❏ **Perceptual**

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

❏ **Saturation**

This rendering intent produces highly saturated colors, but it may not produce accurate colors in a photograph.

❏ **Relative Colorimetric**

This rendering intent maps all of the colors that fall outside of the gamut of the target profile to the closest reproducible color. This profile reproduces accurately all of the colors that are within the range of colors reproducible by your printer. 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 relative colorimetric, except that it maps the white point of the image to the white point of the destination profile. It is recommend that you use absolute colorimetric only 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.

> **Shortcut**
>
> Toggle **Soft Proof** on and off:
>
> Ctrl + Y (Windows)
> command + Y (Macintosh)

Window & Palette Functionality

Each palette within Capture NX 2 provides you with a number of different controls for that palette.
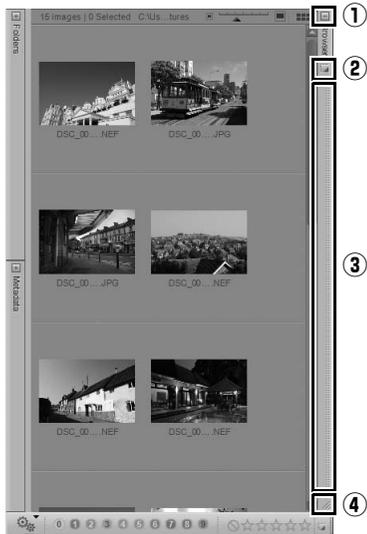
① Minimizing & Maximizing Palettes	Clicking on the Minimize / Maximize button either expands or collapses a palette. In some situations, the palette cannot be collapsed until the operation within that palette has been completed.	
	Alternatively, you can click on the palette's title bar to switch between the maximized and minimized states.	
② Docking & Undocking Palettes	Clicking the dock button enables you to either dock or undock a palette. When undocked, the palette will float freely and can then be positioned anywhere. This can be handy if you utilize two screens and you want to place a palette on the additional screen. Clicking the dock button on an undocked palette will cause that palette to become docked in its default position.	
	The position of undocked palettes are recorded when a custom workspace is created, enabling you to position the palettes where you want and then recall that position at any time in the future.	
③ Grip Edge	Click and drag on the grip edge to reposition a palette. Click the dock button to reposition the palette in its default position.	
④ Resize Control	The resize control is found in the bottom corner of a palette that can be resized and enables you to resize the palette to suit your needs. Simply click and drag the resize control to change the palette's size. Some palettes have a maximum or minimum size.	

Finding Palettes

Undocking many palettes can sometimes make it difficult to locate that palette. All palettes and windows can be located using the **Window** menu. The most frequently used palettes and windows are listed directly in the **Window** menu, while less frequently used undocked palettes and windows are listed in the **Undocked Palettes** section of the **Window** menu.

Click on the palette or window that you want to locate and it will be brought to the front of whichever screen it is positioned on, on top of other floating palettes and windows.

Chapter 9

The Browser

Browser Overview

The browser has been greatly updated for Capture NX 2 to provide even more control over browsing and sorting through your images. The **Browser** palette now contains enhanced tagging and rating functionality, new filtering and sorting functions, as well as compatibility with other organizational software applications. Additionally, the labels utilized by Capture NX 2 are based on the XMP standard. Depending on the application and the options selected with the Capture NX 2 preferences, utilizing the XMP standard can help ensure that labels added by other applications that also utilize the XMP standard can be seen in Capture NX 2. For example, as both ViewNX and Nikon Transfer utilize the XMP standard, labels and ratings can be shared between all three applications.
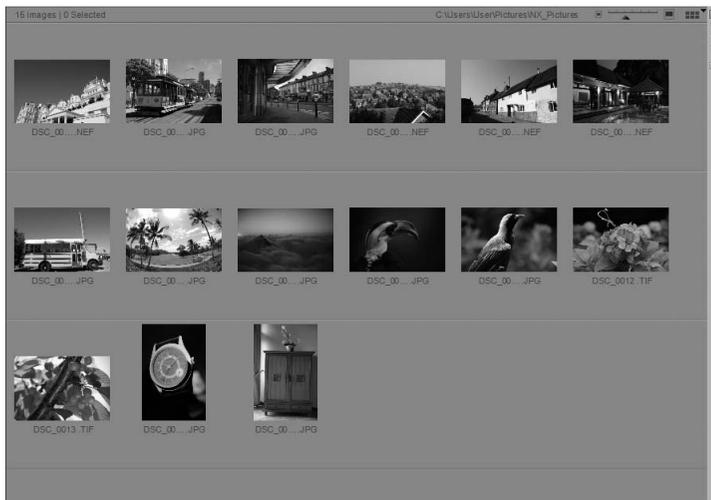
To open the **Browser** palette, either click the maximize button in the browser title bar or select the **Browser** workspace from the **Workspaces** sub-menu of the **Window** menu.

Opening a Folder of Images in the Browser

The browser provides you with a number of ways of displaying a folder of images. By default, the browser displays the "My Pictures" (Windows) or "Pictures" (Macintosh) folder. To open a folder of images in the browser, double-click the folder icon in the browser or use the **Folders** palette, the **Open Folder in Browser** command in the **File** menu, or Nikon Transfer.

Using the Folders Palette

To select a folder to display using the **Folders** palette, follow these steps:

1 Click on the maximize button for the **Folders** palette to display your computer's folder hierarchy.

2 Navigate to the folder you want to display in the browser and click on that folder.

Using Open Folder in Browser

Another way to display a folder in the browser is to use the **Open Folder in Browser** command in the **File** menu. To use this technique, follow these steps:

1 Navigate to the **File** menu and select the **Open Folder in Browser** command.

File	
Open Image...	Ctrl+O
Open With...	
Open Folder in Browser...	Ctrl+Alt+O
Open Recent	▶
Launch Nikon Transfer...	Ctrl+Alt+T
Launch Camera Control Pro...	
Save	Ctrl+S
Save As...	Ctrl+Shift+S
Revert	
Protect File	
Close	Ctrl+W
Page Setup...	Ctrl+Shift+P
Print...	Ctrl+P
Exit	Ctrl+Q
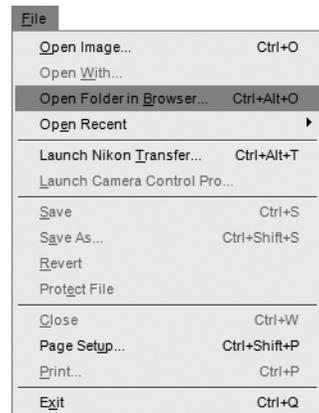
2 In the navigation dialog that appears, navigate to the appropriate folder and click on that folder to highlight it.

3 Click **OK** to open the folder in the browser.

Using Nikon Transfer

You can also use Nikon Transfer to open a folder of images transferred to your computer. To open a folder in the browser after the transfer operation has completed, follow these steps:

1 Within Nikon Transfer, navigate to the "Preferences" tab.

2 Click on the pull-down menu for the **Open destination folder with other application after transfer** option.

3 Select **Browse…**.

4 Select **Capture NX 2** from the displayed "Select Program" window and click **OK**.

After the next transfer is completed, the folder identified in the primary destination folder will be displayed within the Capture NX 2 browser. You can then open one or more images by double-clicking on them within the browser.

Navigating Within the Browser

At the top-left of the **Browser** palette are three buttons that help you choose which folder to display within the browser.
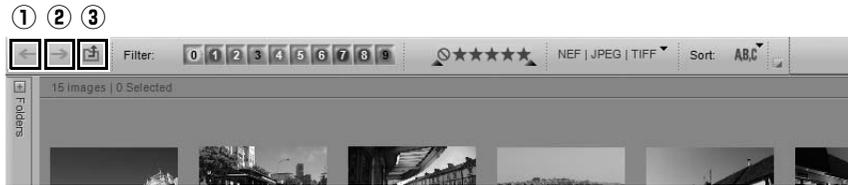
① **Previous Folder**	Click on the "Previous Folder" button to navigate to the last folder that you opened within the browser. You can view the folder history by holding this button down, and can jump to a folder by selecting it. This button is not accessible when viewing the first folder of that editing session.
② **Next Folder**	The "Next Folder" button navigates back to the last folder that you viewed before using the "Previous Folder" button. This button is not accessible until you use the "Previous Folder" button once.
③ **Folder Up**	Use the "folder up" button to navigate to the parent folder of the currently displayed folder within the browser.

Filtering Tools

Capture NX 2 contains new filtering tools to help you display only images according to label, rating, or file type.

① Filter by Label

The filter by label tool lets you choose which images to display within the browser based on labels that you applied previously, either within Capture NX 2 or within one of the software applications with which Capture NX 2 provides compatibility. Capture NX 2's compatibility mode can be set with the **Label Compatibility** option of the "Labels" tab of the "Preferences" dialog.

To use the filter by label tool, follow these steps:

1 Click on one of the labels to display only images that have that label applied to them. Click on additional labels to display images with those additional labels as well.

2 After clicking on more than one label, you can hide images with specific labels by clicking on that label again, turning the filtering for that label off.

3 To display all images again, click on the checkmark next to the filter by label tool.

② Filter by Rating

The filter by rating tool lets you choose which images to display within the browser based on the ratings that you applied previously, either within Capture NX 2 or within one of the software applications with which Capture NX 2 provides compatibility.

To use the filter by rating tool, follow these steps:

1 To display only images with a specific rating, click once on the corresponding icon to display only images with that rating.

2 To display images that fall within a range of ratings, click and drag on the filter by rating tool to describe the range of ratings. For example, if you would like to see all images that have two, three, or four stars, click on the two-star icon and drag to the four-star icon, then release the mouse button.

3 To display all images again, click on the checkmark next to the filter by rating tool.

③ File Type to Display

The filter by file type tool lets you show only images with a specific file type. Click on the pull-down menu and select one of the available options. You are provided with the following options:

NEF + JPEG | TIFF	The **NEF + JPEG | TIFF** option shows all images within a specific folder, but only displays the NEF image in each NEF + JPEG pair.
NEF | JPEG | TIFF	The **NEF | JPEG | TIFF** option shows all images within the current folder, including the JPEG image in each NEF + JPEG pair.
NEF only	The **NEF only** option displays only NEF files within the current folder.
JPEG only	The **JPEG only** option displays only JPEG files within the current folder.
TIFF only	The **TIFF only** option displays only TIFF files within the current folder.

Sorting Tools
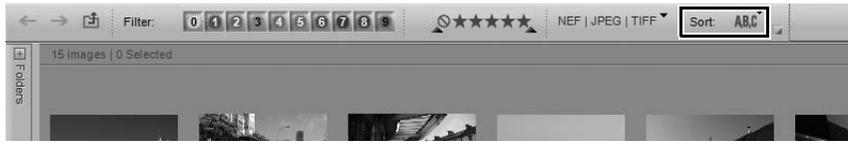
The "Sorting Tools" let you choose the order that images are displayed in within the current folder.

Sort By

The **Sort** section determines the primary sorting method for the current folder. After selecting the primary sorting method, choose to have the images sorted in either ascending or descending order using the **Ascending** and **Descending** options.
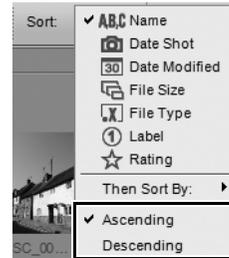
Then Sort By

The **Then Sort By** section determines the secondary sorting method for the current folder. This is helpful if there are many images grouped together after the **Sort** option has been selected.
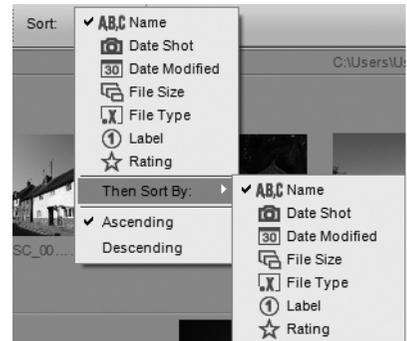
Labeling and Rating Toolbar

The labeling and rating toolbar can be found at the bottom of the browser palette and provides you with tools to add labels and/or ratings to your images.

Add Label

The add label section of the labeling and rating toolbar displays the available labels based on the **Label Compatibility** option of the "Labels" tab in the "Preferences" dialog. To add a label to your image or group of images, follow these steps:

1 Select one or more images in the browser.

2 Click on the desired label.

> **Shortcut**
> *label number (keys 0 through 9)*

Add Rating

The add rating section of the labeling and rating toolbar enables you to add a rating to one or more images. To add a rating to your image or group of images, follow these steps:

1 Select one or more images in the browser.

2 Click on the desired rating.

> **Shortcut**
> Ctrl + *rating number (keys 1 through 5)* (Windows)
> command + *rating number (keys 1 through 5)* (Macintosh)

Browser Header

Displayed at the top of the browser is the browser header. This section provides information about the current folder as well as control over the size of the thumbnails displayed within the folder.

On the left side of the browser header is the number of images within the current folder and the number of selected images.

On the right side of the browser header is the thumbnail size selector, which enables you to determine the size of the thumbnails displayed within the browser. To the left and right of the thumbnail size selector are the smaller thumbnails and larger thumbnails buttons. Clicking on either of these buttons will make the thumbnails one size smaller or one size larger.

Browser View Selector

The top and right-most button in the browser is the browser view selector. This pull-down menu lets you switch between the two browser views available in Capture NX 2: thumbnail grid and thumbnail list.

Thumbnail Grid

The thumbnail grid is the default browser view. Images are displayed in a grid format; resizing the browser causes the images to be resorted.

In thumbnail grid view, the thumbnail size selector offers a choice of seven thumbnail sizes.

Thumbnail Information Overlay

❏ **Label Icon**

The label icon displays the label currently applied to the image and can be adjusted either by clicking on this icon and selecting the appropriate label from the pull-down menu or by clicking on the desired label in the labeling and rating toolbar.

❏ **Name**

The image's file name and extension are displayed under the thumbnail. To rename the current file, click once on the file name to highlight it and a second time to change the file name. You will not be able to change the file's extension in this manner. To change the file's extension, use the **Save As…** command in the **File** menu.

To rename more than one file, select multiple files in the browser, right-click (Windows) or control-click (Macintosh) and in the displayed contextual menu, select **Rename**. This will call up the "File Naming" dialog and enable you to change the names of more than one file. For more information on the "File Naming" dialog, please see "File Naming Dialog" in Chapter 22, "Batch Menu".

❏ **Edited Icon**

This icon is displayed on NEF images whenever that image has been edited and saved using the Capture NX 2 editor or by ViewNX.

❏ **Rating Icon**

The rating icon displays the rating currently applied to the image. To set the rating for an image, click on the desired rating on the rating icon underneath the thumbnail or in the ratings and labels toolbar.

❏ **XMP/IPTC Data Icon**

The XMP/IPTC data icon is displayed whenever the current image has XMP/IPTC data added to it. XMP/IPTC data can be added either by the camera, with another image editing application, or using the **Metadata** palette within Capture NX 2.

❏ **Voice Memo Icon**

The voice memo icon is displayed for images that have a voice memo attached to them.

❏ **Hi-Speed Crop Icon**

This icon is displayed on images shot using the camera hi-speed crop option.

❏ **NEF + JPEG Pair Icon**

The NEF + JPEG pair icon is displayed for images that were shot using the camera "NEF + JPEG" image quality option.

❏ **Protected Icon**

Images with the protect icon displayed cannot be edited in Capture NX 2 until they are unlocked. Images can become locked either using the camera protect button or by turning the **Protect File** option on in the Capture NX 2 **File** menu.

To remove the protect icon, navigate to the **File** menu and select the **Protect File** item.

In the thumbnail grid display, information about each image is shown beneath its thumbnail.

Thumbnail List

The thumbnail list places important information about each image in a column and enables you to sort by each of the columns.
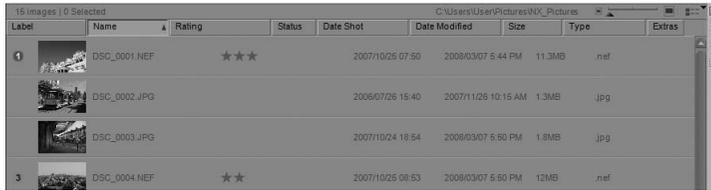
In thumbnail list view, the thumbnail size selector offers a choice of three thumbnail sizes.

The available columns in the thumbnail list are:

❑ **Label**

The **Label** column displays the label for each image.

❑ **Name**

The **Name** column displays the image's file name and extension. To rename a file, click once on the file name to highlight it and then click a second time to change the file name.

To rename more than one file, select multiple files in the browser, right-click (Windows) or control-click (Macintosh) and in the displayed contextual menu, select **Rename**. This will call up the "File Naming" dialog and enable you to change the names of more than one file. For more information on the "File Naming" dialog, please see "File Naming Dialog" section of Chapter 22, "Batch Menu".

❑ **Rating**

The **Rating** column displays the rating. To set the rating for an image, click on the desired rating on the rating icon underneath the thumbnail or within the ratings and labels toolbar.

❑ **Status**

The **Status** column displays an edited icon for NEF images that have been edited and saved within the Capture NX 2 editor or by ViewNX. If the file contains versions, the number of versions contained within the image will be displayed in this column. For more information on version, please see Version in Chapter 15, "Edit List".

❑ **Date Shot**

The **Date Shot** column displays the date the image was created.

❑ **Date Modified**

The **Date Modified** column displays the date the image was last modified.

❑ **Size**

The **Size** column displays the size of the file, in KB or MB.

❑ **Type**

The **Type** column displays the image's file type.

❑ **Extras**

The **Extras** column displays additional information about the image. You cannot sort images by this column.

XMP/IPTC Data Icon	The XMP/IPTC data icon is displayed whenever the current image has XMP/IPTC data.
Voice Memo Icon	The voice memo icon is displayed for images that have a voice memo attached to them.
Hi-Speed Crop Icon	This icon is displayed on images shot using the camera hi-speed crop option.
NEF + JPEG Pair Icon	The NEF + JPEG pair icon is displayed for images that were shot using the camera "NEF + JPEG" image quality option.
Protected Icon	Images with the protect icon displayed cannot be edited in Capture NX 2 until they are unlocked. Images can become locked either using the camera protect button or by turning the **Protect File** option on in the Capture NX 2 **File** menu. To remove the protect icon, navigate to the **File** menu and select the **Protect File** item.

Opening Images from the Browser

Images in the browser can be opened in the editor either by double-clicking on the desired image, or selecting multiple images and use the **Open Image** command from the **File** menu. Alternatively, you can press the enter key on your keyboard to open the selected images.

If the Capture NX 2 is open on a single screen, opening an image will cause the browser to automatically minimize. To prevent this from happening, either position the browser on another screen (by manually undocking and repositioning the browser or using the additional screen workspace option) or use the multi-purpose workspace.

Chapter 10
The Folders Palette

The **Folders** palette displays the folders on your hard disk in the same manner as the operating system. Capture NX 2's **Folders** palette is now split into two sections: the "Favorite Folders" section and the "Folder Structure" section.
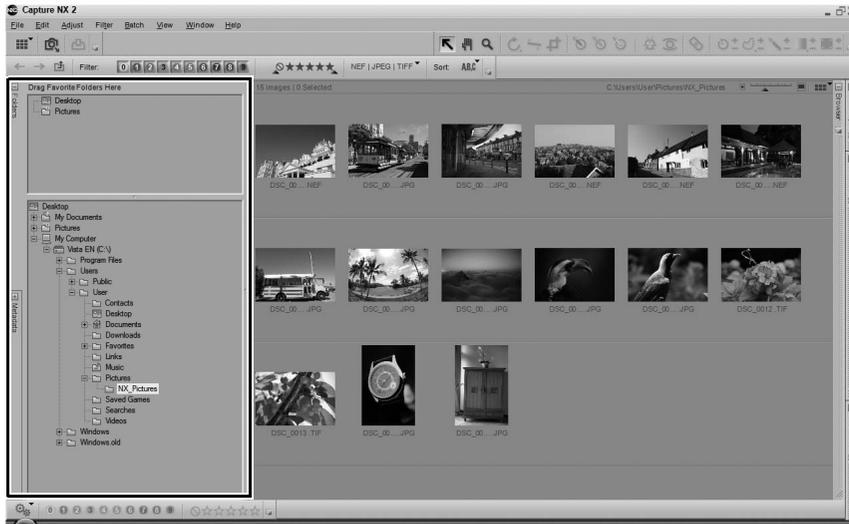
Favorite Folders Section

The "Favorite Folders" section provides quick access to the most often used folders and enables you to add and remove folders to and from this section.

Adding Favorites

To add a folder to the "Favorite Folders" section, click and drag a folder from the "Folder Structure" section into the "Favorite Folders" section.

Deleting Favorites

To delete a folder from the "Favorite Folders" section, right-click (Windows) or control-click (Macintosh) on the folder you wish to delete and select **Delete** from the displayed contextual menu.

✐ **Please note**: Deleting a favorite will not delete the folder or its contents from your hard disk. Only the link to that folder will be removed from your computer.

Click and drag on the bar that divides the "Favorite Folders" section and the "Folder Structure" section to adjust the amount of space dedicated to either section.
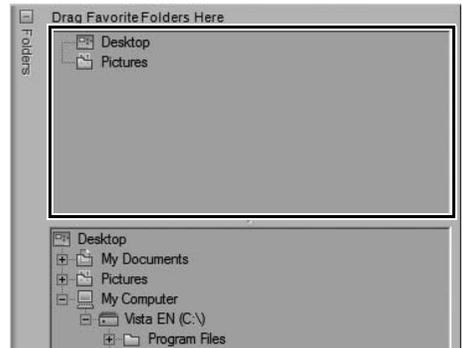
Folder Structure Section

The "Folder Structure" section displays a hierarchical view of the folders available on your computer. Use this section to locate a specific folder and display the contents of that folder within the browser. Double-click on a folder to open the browser and display the contents of that folder.

Chapter 11
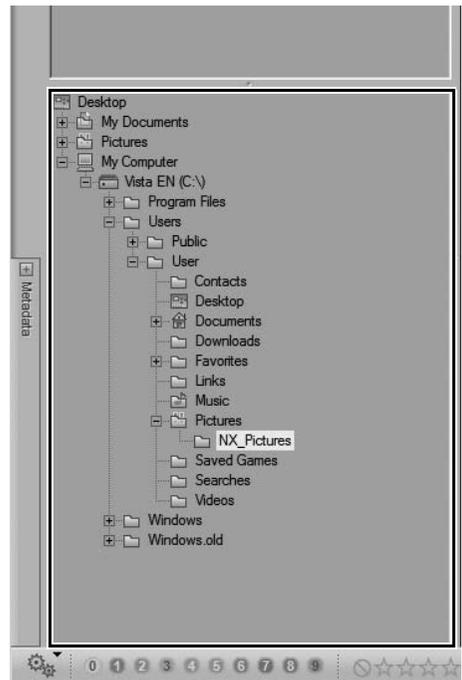
The Metadata Palette

The **Metadata** palette contains a list of information regarding the current image as well as access to the IPTC information for that image. Use this palette to review the image's camera and exposure information as well as to add XMP/IPTC information to one or more images.
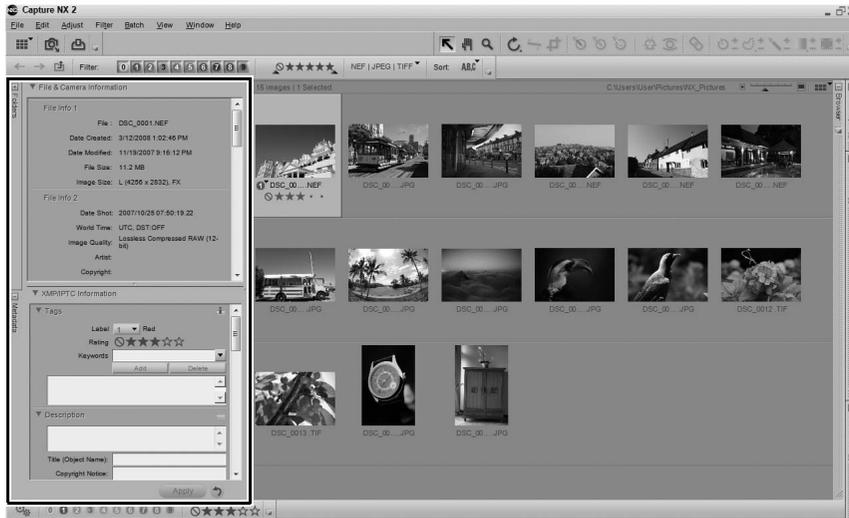
File & Camera Information Section

Within the "File & Camera Information" section, you can see information regarding the camera, the time and date the image was shot, the exposure data, as well as the settings used within the camera that affected the current image.

When more than one image is selected, information that is shared between images will be displayed while information that is different in each image will be identified with a "–".

Click on the show/hide triangle next to a section's header to expand or collapse that section.

Click and drag on the bar that divides the "File & Camera Information" section and the "XMP/IPTC Information" section to adjust the amount of space dedicated to either section.
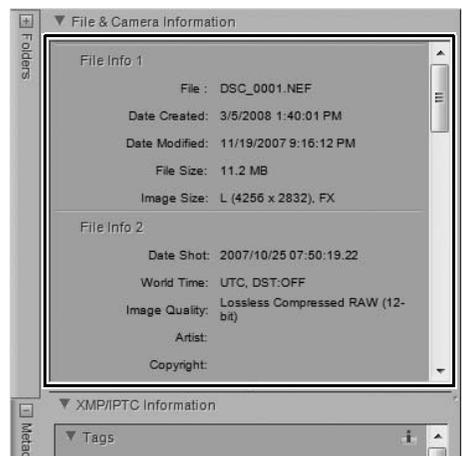
XMP/IPTC Information Section

The "XMP/IPTC Information" section 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 "XMP/IPTC Information" section 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 **Creator**, **Headline**, **Keywords**, **Categories**, 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.

Adding Image Information

You can view and change the contents of the different IPTC fields on images within both the browser and the editor.

To add IPTC information to one or more images, follow these steps:

1 Open the **Metadata** palette and expand the "IPTC Information" section.

2 Select one or more images in the browser. Alternatively, you can add IPTC information to the current image open within the editor.

3 Enter information for each field that you would like to contain IPTC information. It is not necessary to enter a value in every field.
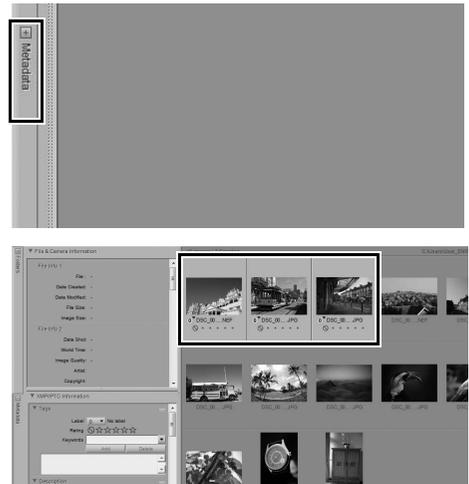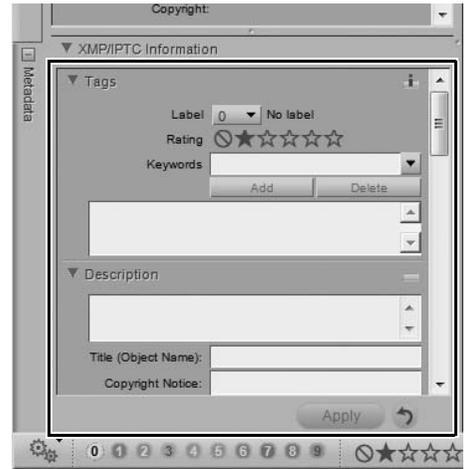
4 Click on the **Apply** button.

When more than one image is selected, information that is shared between images will be displayed while information that is different in each image will be identified with a "−". You can replace the different contents of each image with the same information by replacing the "−" with the desired text. You can also clear out different information by simply deleting the "−".

If you make a mistake and want to revert back to the original IPTC contents, click the **Reset** button before clicking **Apply**. Please note that after you click the **Apply** button, you will not be able to reset the contents of the "XMP/IPTC Information" section.

Copying and Pasting IPTC Information

The contents of the "XMP/IPTC Information" section can be copied from one image and pasted to one or more additional images. To copy and paste IPTC information, follow these steps:

1 Select an image in the browser. Alternatively, you can copy ITPC information from the image currently open in the editor.

📝 **Please note**: IPTC information can be copied only from a single image.

2 Navigate to the **Batch** menu and select **Copy IPTC Info**. Alternatively, you can click on the batch menu located to the left of the labeling and rating toolbar and select **Copy IPTC Info**.
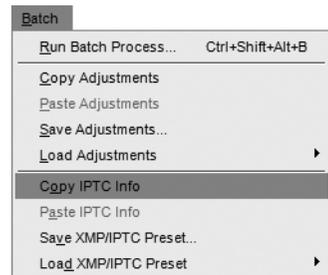
3 Select one or more images within the browser or select another image within the editor.

4 Navigate to the **Batch** menu and select **Paste IPTC Info**. Alternatively, you can click on the batch menu located to the left of the labeling and rating toolbar and select **Paste IPTC Info**.

🖉 **Please note**: IPTC information can be copied to multiple images; however, existing IPTC content will be overwritten by the copied IPTC information.

Batch	
Run Batch Process...	Ctrl+Shift+Alt+B
Copy Adjustments	
Paste Adjustments	
Save Adjustments...	
Load Adjustments	▶
Copy IPTC Info	
Paste IPTC Info	
Save XMP/IPTC Preset...	
Load XMP/IPTC Preset	▶
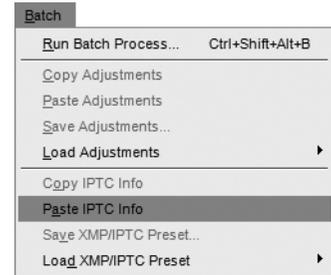
Creating XMP/IPTC Presets

XMP/IPTC presets enable you to create a collection of frequently used XMP/IPTC information that can be later applied to one or more images in a more efficient manner. Multiple XMP/IPTC presets can be created and later accessed within Capture NX 2, making it possible for you to create different XMP/IPTC presets for different tasks.

To create an XMP/IPTC preset, follow these steps:

1 Select an image in the browser. Alternatively, you can create an ITPC preset from the image currently open in the editor.

🖉 **Please note**: An XMP/IPTC Preset can only be created from a single image.

2 Navigate to the **Batch** menu and select **Save XMP/ IPTC Preset**. Alternatively, you can click on the batch menu located to the left of the labeling and rating toolbar and select **Save XMP/IPTC Preset**.

Batch	
<u>R</u>un Batch Process...	Ctrl+Shift+Alt+B
Copy Adjustments	
Paste Adjustments	
Save Adjustments...	
Load Adjustments	▶
C<u>o</u>py IPTC Info	
Pa<u>s</u>te IPTC Info	
Sa<u>v</u>e XMP/IPTC Preset...	
Loa<u>d</u> XMP/IPTC Preset	▶
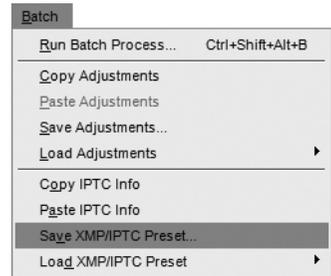
3 In the "Save XMP/IPTC Preset" dialog that appears, type in the name for the new XMP/IPTC Preset. This is the name that will be displayed in the **Load XMP/ IPTC Preset** sub-menu.
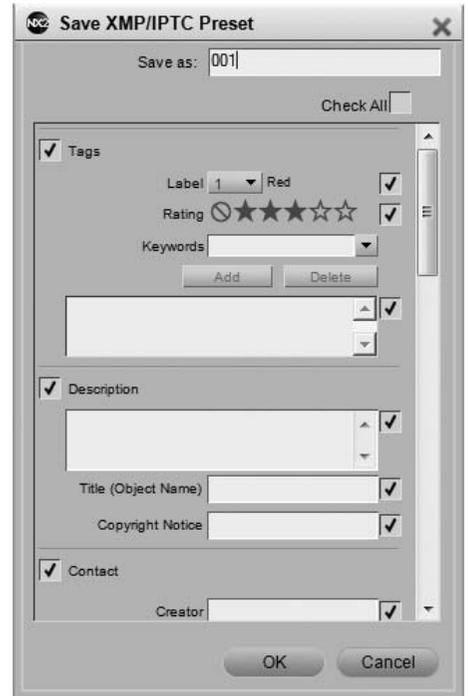
4 Next, review the fields that will be created in the XMP/IPTC preset. Fields that contain a checkmark in the box to the right will be added to the preset. Fields that contain information within them are automatically checked, while fields that are empty will not be automatically checked.

5 Change any of the text within the fields if necessary and check or uncheck any additional fields that you would like to add or remove from the XMP/IPTC preset. Checking a blank field will cause that XMP/IPTC preset, when loaded, to clear out any text found within that field in the images that the XMP/IPTC preset is applied to.

6 Click **OK**.
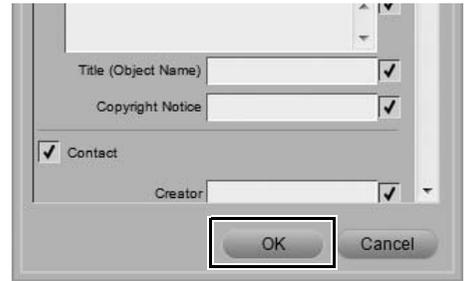
Loading XMP/IPTC Presets

After creating one or more XMP/IPTC presets using the **Save XMP/IPTC Preset** option, you can load an XMP/IPTC preset to one or more images. To use an XMP/IPTC preset to load XMP/IPTC information to one or more images, follow these steps:

1 Select one or more images within the browser. Alternatively, you can add ITPC information to an image open within the editor.

2 Navigate to the **Batch** menu and select the **Load XMP/IPTC Preset** sub-menu, and select the XMP/IPTC preset you would like to load into your images. Alternatively, you can select an XMP/IPTC preset from the **Load XMP/IPTC Preset** sub-menu of the batch menu located to the left of the labeling and rating toolbar.
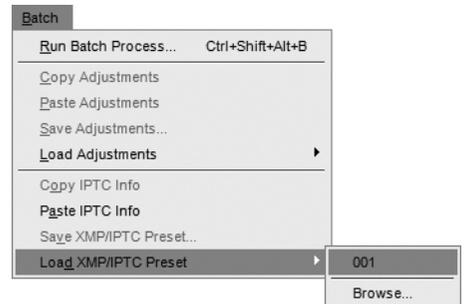
Managing XMP/IPTC Presets

XMP/IPTC presets are managed from the "Preferences" dialog. Use the "XMP/IPTC Presets" tab of the "Preferences" dialog to add, delete, modify, import, and export XMP/IPTC Presets.

For more information on managing XMP/IPTC presets, see "XMP/IPTC Presets" in Chapter 7, "Preferences."

Chapter 12

Activity Toolbar

The activity toolbar provides access to three of the most often accessed functions within Capture NX 2: workspaces, importing images, and printing images.

Workspace Selector

Use the workspace selector to access the different workspaces available within Capture NX 2. For more information on workspaces, please see the Workspaces section of Chapter 8, "Interface".

Launch Nikon Transfer

The launch Nikon Transfer button will cause Nikon Transfer to load in a separate application window. Use Nikon Transfer to transfer images from an attached camera or compact flash card, with the ability to automatically add XMP/IPTC information, create backup copies of images, as well as automatically opening the Capture NX 2 browser to display the transferred images.

Print

Click the print button to open the Capture NX 2 "Print Layout" dialog and begin printing your images. For more on the Capture NX 2 "Print Layout" dialog, please see the "Print" section in Chapter 18, "File Menu".

Chapter 13

The Toolbar

Tool Options Bar

The tool options bar can be found directly beneath the toolbar and provides access to controls specific to a tool. The crop tool, auto retouch brush, lasso and marquee tools, selection brush, selection gradient, and fill / remove tools all utilize the tool options bar to display additional controls.

Direct Select Tool

The direct select tool enables you to select many of the different objects within Capture NX 2.

- Multiple objects can be selected by holding down the Ctrl key (Windows) or command key (Macintosh) 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 within an image window as well as thumbnails within the browser can be selected by clicking and drawing a bounding box around the Control points or thumbnails that you want to select.

The following object types can be selected:

- Control points
- Images in the browser
- Steps in the **Edit List** palette

✐ **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. Select this tool when viewing an image that does not fit in the image window. Click and drag to reposition the contents of the window.

Double-click this tool to fit the current image to the editor 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: **Spacebar**

Zoom Tool

The zoom tool is used to zoom into and out from an image. Select this tool and click on the image to zoom in. Hold the Alt key (Windows) or option key (Macintosh) and click to zoom out.

Double click on the zoom tool 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 (Macintosh)**

Zoom out when any other tool is active:
**Ctrl + Alt + spacebar keys (Windows)
command + option + spacebar keys
(Macintosh)**

Rotate Tool

The rotate tool is used to rotate images 90° clockwise or counter-clockwise. Click on this button to rotate the image 90° in the direction indicated. Hold the Alt key (Windows) or option key (Macintosh) and click on this button to rotate the image 90° other direction. To choose the direction of rotation, click and hold this icon.

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

Rotating an image within the editor will cause a step to be created within the **Edit List** palette, enabling you to remove the rotation at any point in the future. When you save your images with the NEF file format, you can remove the rotation after the image has been saved or closed. Rotating an image found in the browser will be applied in a non-destructive fashion, however there will not be a rotation step added to the **Edit List** palette.

Shortcut

Rotate the image 90° clockwise:
Ctrl + R (Windows)
command + R (Macintosh)

Rotate the image 90° counter clockwise:
Ctrl + Shift + R (Windows)
command + shift + R (Macintosh)

Straighten Tool

Select this button to add a **Straighten** step to the **Edit List** palette. In the **Straighten** step, you can rotate an image incrementally clockwise or counter-clockwise, or you can trace a line within your image that should be either horizontal or vertical and allow the straighten tool to automatically straighten your image.

To straighten your image using the straighten tool, follow these steps:

1 With an image open within the editor, click the straighten tool in the toolbar.

2 Locate a line within the image that should be either vertical or horizontal and click on the start of the line. Holding the mouse button down, draw the entire length of the line, letting go when you have reached the end of that line. The straighten tool will then calculate the direction and degree of the rotation to apply to the image to make the line you described either horizontal or vertical.

3 If you made a mistake while drawing the line, you can click on the line you added to the image and adjust one of the two anchor points found at either end of the line, or you can re-draw the line by clicking and dragging within the image window again.

4 By default, Capture NX 2 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 information are created when the image is rotated, and are represented by pure white pixels. To prevent Capture NX 2 from automatically cropping the image, check the **Include areas without image data** option in the **Straighten** step of the **Edit List** palette.

5 If you are satisfied with the straightening effect, continue editing your image using the other tools available within Capture NX 2 or perform a save. The straightening effect is now applied to your image. To cancel the straightening effect, click on the **Delete** button found at the bottom of the **Straighten** step within the **Edit List** palette or click on the **Straighten** step and press the delete key on your keyboard.
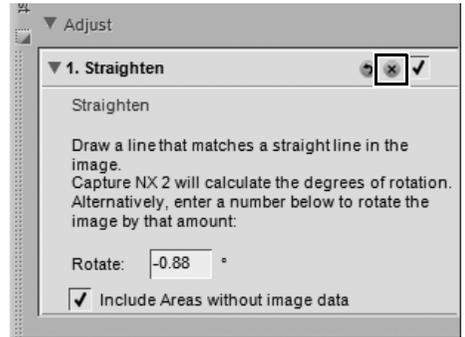
Crop Tool

The crop tool enables you to remove areas from the margins of your image or to change the aspect ratio of your image. To add a crop to your image, follow these steps:

1 Click on the crop tool in the toolbar.

2 Within the tool options section of the toolbar, determine the crop method you would like to use.

3 Click and drag the mouse over the image in the active image window to make a selection. The area outside of the selection will be masked to enable you to focus on the result of the selection.

4 Click on any of the edges or corners of the crop selection to modify the size and shape of the crop.

5 Double-click within the crop or press the enter key to apply the crop. This will cause the image information outside of the crop to be hidden and a new **Crop** step to be added to the **Edit List** palette. If the image is saved in the NEF format, you will be able to remove the **Crop** step to display the hidden information again. The hidden information will be discarded if the image is saved in JPEG or TIFF.

✐ **Please note**: If the crop is not applied with the enter key or by double-clicking within the crop, the crop will be discarded.

The crop tool offers the following tool options:

Crop Method

Choose from one of three different cropping methods.

❏ **Free Crop**

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

❏ **Fixed Aspect Ratio**

Choose from one of the predetermined aspect ratios or select **Custom** to enter the desired aspect ratio. This cropping method limits the crop tool to describing rectangles that match that aspect ratio.

Show Crop Assistance Grid

Select **Show Crop Assistance Grid** to display a grid of nine equally-sized rectangles superimposed on the image within the crop rectangle. The crop assistance grid is designed to assist you in cropping the image. Based on the photographic "rule of thirds", the crop assistance grid helps guide your crop so that the main points of interest lie close to the points where the 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.

You can also choose to temporarily superimpose this grid onto your image by holding down the Alt key (Windows) or option key (Macintosh) while you are in the crop mode.
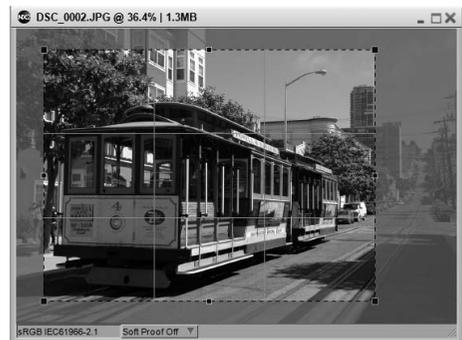
> **Shortcut**
> C key

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. Black control 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** option in the "Histogram" section of the **Photo Info** palette is designed specifically to help you locate the darkest and lightest sections of your image.

Original Image   **Final Image**

To add a black control point to your image, follow these steps:

1 Click on the black control point icon in the toolbar. The cursor will change to a crosshair.

2 Identify the object you would like to be the darkest object in the image and click on that object to place a black control point. A **B / W / N Control Point** step will be added to the **Edit List** palette, with a black control point sub-step. You can reposition the black control point by clicking and dragging it. Please note that you may only add one black control point to each **B / W / N Control Point** step.
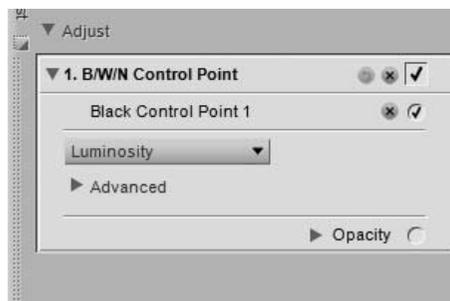
3 Adjust the effect of the black control point by either clicking and dragging the luminosity slider or by entering a value directly into the text box in the black control point sub-step of the **B / W / N Control Point** step in the **Edit List** palette.
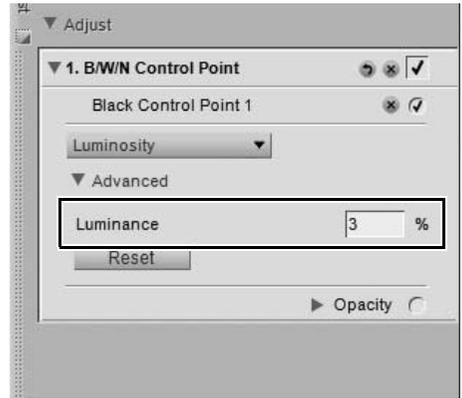
After a black control point is added to the image, the following options will be available in the **B / W / N Control Point** step of the **Edit List** palette:

Black Control Point Method

Use the black control point method pull-down menu to switch between controlling only the luminosity of the Black Control Point or the individual red, green, and blue values.

Luminosity Method

The **Luminosity** method 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 contains a neutral black. Within this mode, you are presented with only a luminosity slider on the black control point and only a **Luminosity** setting within the black control point sub-step in the **Edit List** palette.

RGB Method

The **RGB** method of the black control point enables you to set the individual red, green, and blue values of the darkest color in the image. This option is helpful if your printer requires a non-neutral black. Within this mode, you are presented with individual red, green, and blue sliders on the black control point and red, green, and blue entries within the black control point sub-step in the **Edit List** palette.
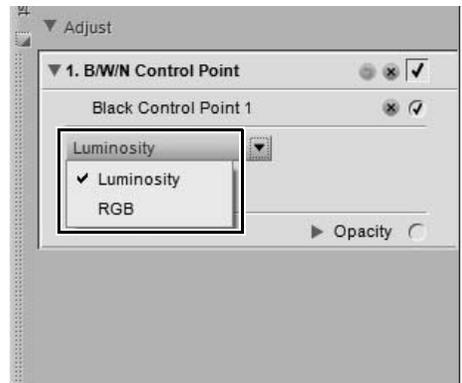
Advanced

Click on the **Advanced** show/hide triangle to display the additional controls for the black control point. The values set for the selected black control point are displayed enabling you to enter a new value directly to adjust the effect of the control point.
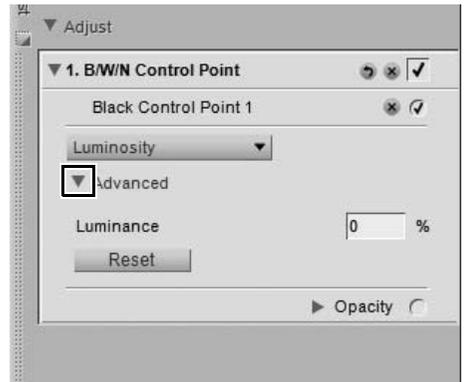
Neutral Control Point

Neutral control points enable you to correct a color cast in your photograph by forcing the targeted color to become neutral. 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. Equalizing the red, green, and blue values for a specific color causes that color becomes neutral, or without a specific color or hue. Neutral control points are often most helpful if the image contains a neutral point of reference, for example, a gray card. By selecting an object that is established as neutral, Capture NX 2 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 shift that affects the entire image.

One of the unique features of the neutral control points found in Capture NX 2 is that multiple neutral control points can be added to the same image. This feature enables you to identify different objects and 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 in the same **B / W / N Control Point** step of the **Edit List** palette to affect the entire image, correcting different objects and in the process removing multiple color casts.

Original Image

Final Image

To add a neutral control point to your image, follow these steps:

1 Click on the neutral control point icon in the toolbar. The cursor will change to a crosshair.

2 Identify an object that should be neutral and click on that object to place a neutral control point. A **B / W / N Control Point** step will be added to the **Edit List** palette, with a neutral control point sub-step. You can reposition the neutral control point by clicking and dragging it. Please note that you may add multiple neutral control points.

3 Adjust the effect of the neutral control point by either clicking and dragging the red, green, and blue sliders, or by entering values directly into the text boxes in the neutral control point sub-step of the **B / W / N Control Point** step in the **Edit List** palette.
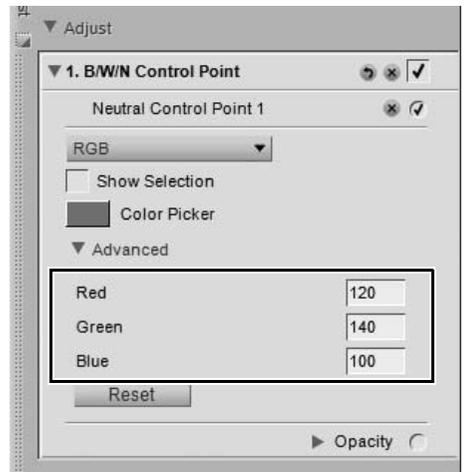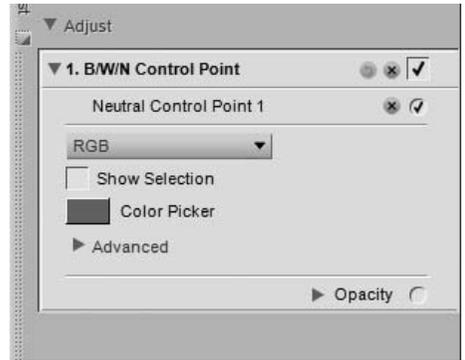
After a neutral control point is added to the image, the following options will be available in the **B / W / N Control Point** step of the **Edit List** palette:

Neutral Control Point Method

Use the neutral control point method pull-down menu to switch between controlling only the color balance of the Neutral Control Point or affecting the luminosity, or brightness, as well.

RGB Method

The **RGB** method of the neutral control point affects only the color balance within the image while maintaining the same brightness.

Affect Luminosity Method

The **Affect Luminosity** method of the neutral control point adds an additional slider, the **Luminosity** slider, and allows you to change both the color balance as well as the brightness.
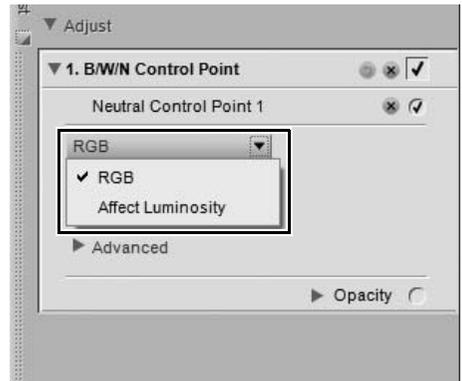
Show Selection

The **Show Selection** checkbox enables you to see where the current neutral control point is affecting the image. Areas inked in white are being affected by the neutral control point, while areas inked in black are not being affected by the neutral control point. You can quickly access the **Show Selection** option by right-clicking (Windows) or control-clicking (Macintosh) on the neutral control point and selecting **Show Selection**.
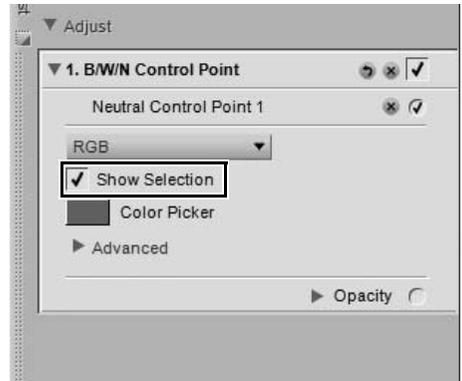
Color Picker

The **Color Picker** color swatch indicates the current color that is being used as the basis for the neutral control point's effect. Clicking on the **Color Picker** color swatch displays the Capture NX 2 color picker and enables you to select a color to set the object selected by the neutral control point to. 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 2 provides three 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" section of the color picker, and then select a color from the "Sky Tones" 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.

Advanced

Click on the **Advanced** show/hide triangle to display the additional controls for the neutral control point. The values set for the selected neutral control point are displayed enabling you to enter a new value directly to adjust the effect of the control point.

Click on the **Reset** button to reset the selected color control point to the default values.
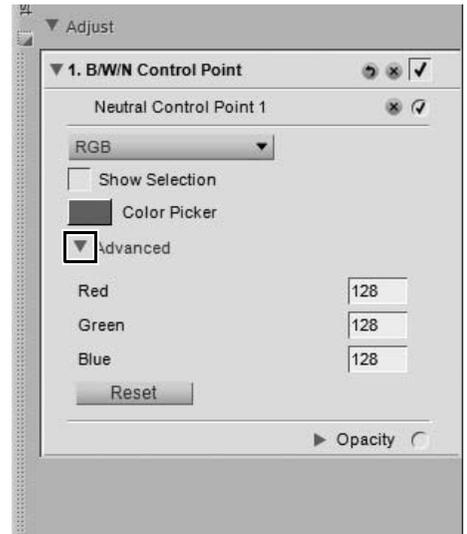
White Control Point

The white control point enables you to place a control point directly onto your image, causing the targeted color to become white, which is an important first step in removing a color cast from the light tones in your image. White control 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** option in the "Histogram" section of the **Photo Info** palette is designed specifically to help you locate the darkest and lightest sections of your image.

Original Image

Final Image

To add a white control point to your image, follow these steps:

1 Click on the white control point icon in the toolbar. The cursor will change to a crosshair.

2 Identify the object you would like to be the lightest object in the image and click on that object to place a white control point. A **B / W / N Control Point** step will be added to the **Edit List** palette, with a white control point sub-step. You can reposition the white control point by clicking and dragging it. Please note, you may only add one white control point to each **B / W / N Control Point** step.

3 Adjust the effect of the white control point either by clicking and dragging the luminosity slider or by entering a value directly into the text box in the white control point sub-step of the **B / W / N Control Point** step in the **Edit List** palette.
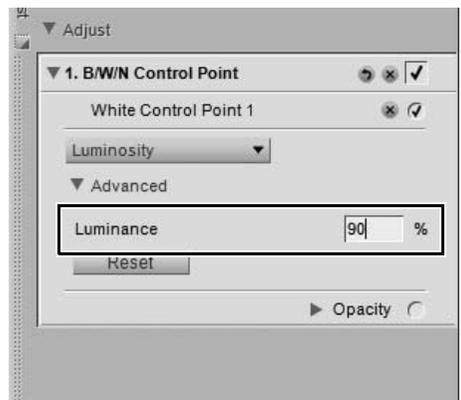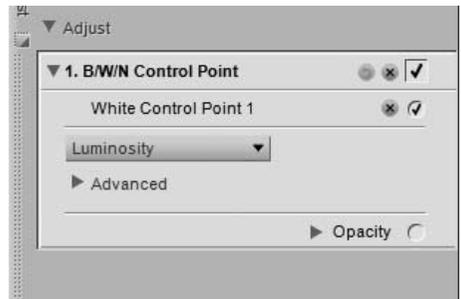
After a white control point is added to the image, the following options will be available in the **B / W / N Control Point** step of the **Edit List** palette:

White Control Point Method

Use the white control point method pull-down menu to switch between controlling only the luminosity of the white control point or the individual red, green, and blue values.

Luminosity Method

The **Luminosity** method of the white control point always changes the color that you have targeted by setting the white control point to a neutral white. This is often the most efficient mode to use, as most calibrated printers work best when the image contains a neutral white. In this mode, you are presented with only a luminosity slider on the white control point and only a **Luminosity** setting within the white control point sub-step of the **Edit List** palette.
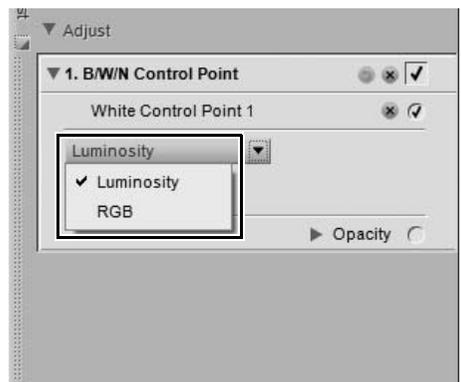
RGB Method

The **RGB** method of the white control point enables you to set the individual red, green, and blue values of the lightest color in the image. This option is helpful if your printer requires a non-neutral white. Within this mode, you are presented with individual red, green, and blue sliders on the white control point and red, green, and blue entries within the white control point sub-step of the **Edit List** palette.

Advanced

Click on the **Advanced** show/hide triangle to display the additional controls for the white control point. The values set for the selected white control point are displayed enabling you to enter a new value directly to adjust the effect of the control point.
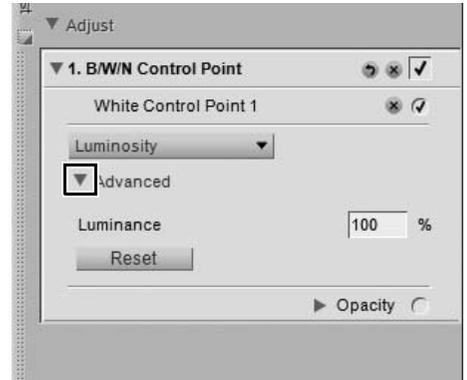
Color Control Point

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.

Original Image

Final Image

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 color control point so that it affects similar colors of the objects which are farther away from the color control point. Each new color control point works together with other color control points in the same step to affect more and more specific objects. Using additional color control points ensures that the adjustments that you make are being applied to the current object only. Placing a color control point on an object with default settings prevents other color control points from affecting that object.

To add a color control point to enhance your image, follow these steps:

1 Click on the color control point icon in the toolbar. The cursor will change into a crosshair.

2 Click on an object within the active image window that you want to enhance. A color control point will be placed upon the image and a **Color Control Point** step with a single color control point sub-step will be added to the **Edit List** palette.

3 Adjust the size slider to determine the reach the current color control point has on the image. The greater the value for the size slider, the more objects with similar colors and values as selected by the color control point will be affected.
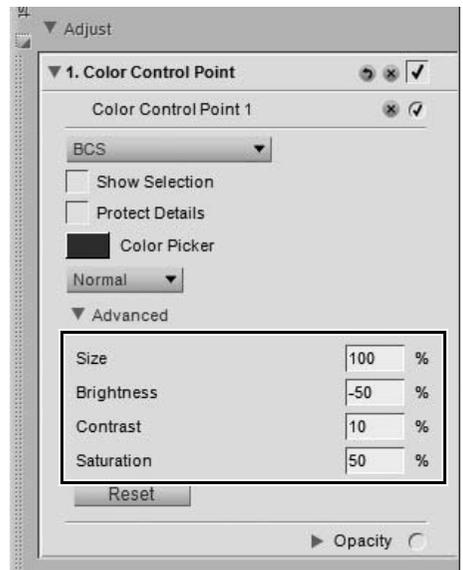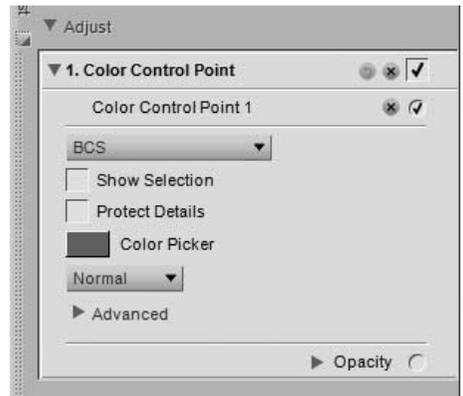
4 Adjust the remaining sliders connected to the color control point to adjust the color and light of the selected object.

Additional color control points can be added to the image by repeating the steps listed above.

To delete a color control point, click on the color control point in the image or in the **Edit List** palette and press the delete key on the keyboard.

After a color control point is added to the image, the following options will be available in the **Color Control Point** step of the **Edit List** palette:

Color Control Point Mode

The color control point mode pull-down menu enables you to determine which elements of the current object to affect with the color control point. Alternatively, click on the triangle displayed beneath the last slider of the control point. This will enable you to toggle between the current mode and the All 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 all available sliders: size, hue, saturation, brightness, contrast, red, green, blue, and warmth.
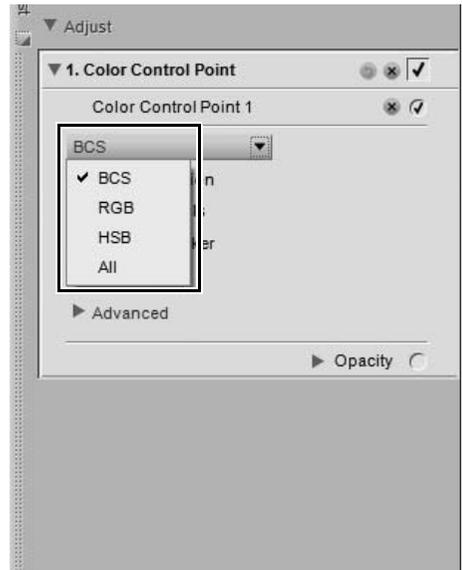
Show Selection

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 (Macintosh) on the color control point and selecting **Show Selection**.

To see the selection of multiple color control points, select more than one color control point by holding the Ctrl key (Windows) or command key (Macintosh), clicking on more than one color control point with the direct select tool, and then selecting **Show Selection**. This will display the combined selection of the selected control points. To hide the selection for multiple color control points, select the same color control points again and select **Show Selection** again. Alternatively, you can disable the **Show Selection** option for each color control point individually.

Protect Details

The **Protect Details** checkbox limits the controls of a Color Control Point so that it only has a **Size** slider and prevents any Color Control Point from affecting the object identified by the Color Control Point with **Protect Details** turned on. A Color Control Point with Protect Details turned on acts in the same way as a Color Control Point with all sliders set to the default values. Use this feature to ensure that a Color Control Point is protecting the values of the targeted object.

Color Picker

The **Color Picker** swatch enables you to select a color from the Color Picker and change the currently selected object to that color.

Method

The **Method** pull-down menu 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 **Method** pull-down menu where you can choose from one of the available methods. To utilize more than method on an image you must create a new step color control point step for each different method. The different methods are:

Basic

The Basic method is the fastest and most direct method to apply the color control points 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.
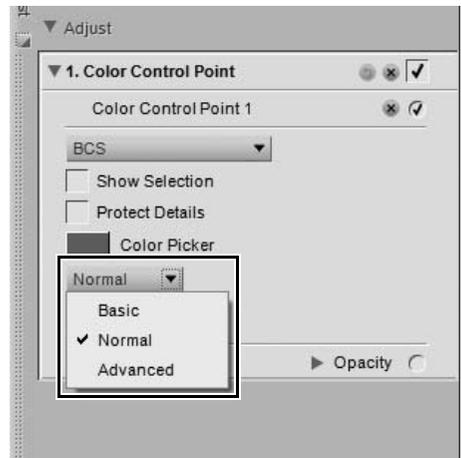
Advanced

The Advanced method provides superior results when lightening shadows or working with images with a high level of noise or grain.

Click on the **Advanced** show/hide triangle to display the additional controls for the color control point step. The values set for the selected color control point are displayed enabling you to enter a new value directly to adjust the effect of the control point.

Shortcut

Add a Color Control Point:	Ctrl + Shift + A (Windows)
	command + shift + A (Macintosh)
Duplicate a Color Control Point:	Hold the **Alt** button while selecting and dragging a color control point to duplicate and place the duplicated color control point in a new location (Windows)
	Hold the **option** button while selecting and dragging a color control point to duplicate and place the duplicated color control point in a new location (Macintosh)

Click on the **Reset** button to reset the selected color control point to the default values.

Red-Eye Control Point

The red-eye control point enables you to manually remove the red-eye effect sometimes caused by flash photography.
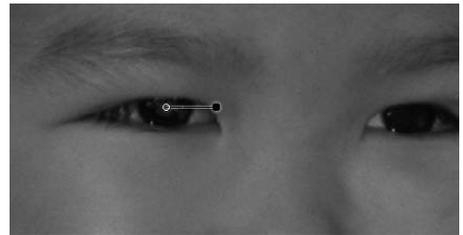
To remove red-eye from an image using the red-eye control point tool, follow these steps:

1 Click on the red-eye control point icon in the toolbar. The cursor will change into a crosshair.

2 Click on the red portion of the eye that contains red-eye to place a Red-Eye Control Point.

3 Control the red-eye control point's effect using the size slider.
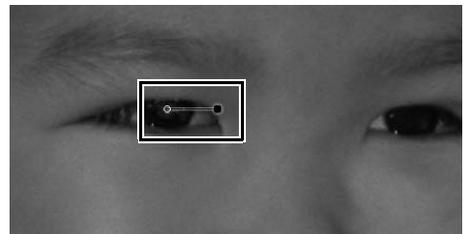
Auto Retouch Brush

The auto retouch brush enables you to automatically repair unwanted details found within the image. Use this tool to remove dust spots, blemishes, or distracting objects, with a unique blending algorithm that matches the surrounding structure, color, and tonality.
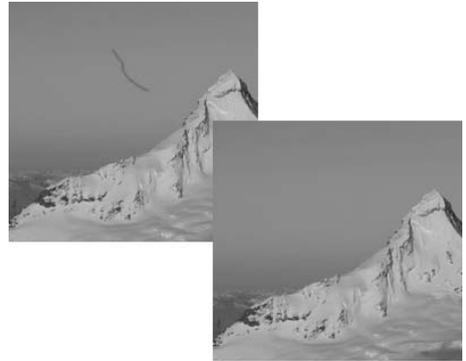
To use the auto retouch brush, follow these steps:

1 Click on the auto retouch brush icon in the toolbar. The cursor will change into a brush cursor and the auto retouch brush controls will be displayed within the tool options bar.

2 Modify the **Size** option within the tool options bar.

3 Click and paint on top of the entire object that you would like to automatically replace. Ensure that all parts of the object that should be replaced are painted over before releasing the mouse button. Do not worry about being precise when painting out the object, as a small amount of painting outside of the object can yield better results.

4 If you made any mistakes, use the **Undo** command in the **Edit** menu or click on the **Reset** button in the **Auto Retouch Brush** step that was added in the **Edit List** palette.
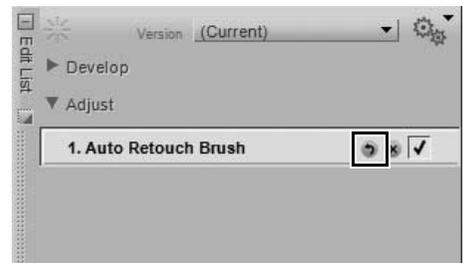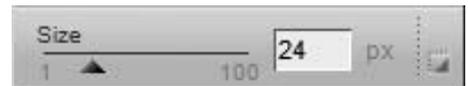
The auto retouch brush provides you with the following controls:

Size

Changing the **Size** option increases or decreases the size of the brush.

> **Shortcut**
>
> R key
>
> Decrease brush size: [
> Increase brush size:]

Selection Control Point

Selection control points utilize U Point technology to selectively apply the effect of an enhancement. You can use a selection control point to selectively apply any enhancement found in either the **Adjust** or **Filter** menus.

To use a selection control point, follow these steps:

1 Add an enhancement to the image from the **Adjust** or **Filter** menus. Use the enhancement's controls to achieve the desired result.

2 Click on the selection control point icon in the toolbar.

    a. If you click the **(+)** icon for the selection control point, the **Base Mask** slider in the **Selection** section of the **Edit List** palette will automatically move to 0% after adding the first selection control point, hiding the effect of the current enhancement. Click on the image to add a selection control point with the opacity slider automatically set to 100%. This will result in the current enhancement's effect only applied to the area selected by the control point.

    b. If you click the **(–)** icon for the selection control point, click on the image to add a selection control point with the opacity slider automatically set to 0% to the image. The enhancement will be applied to the entire image, except for the area selected by the control point.

3 Adjust the size and opacity sliders to achieve the desired result. The higher the size value, the more objects similar to the object selected by the control point will be selected as well. The higher the opacity slider, the more the current enhancement will be applied to the objects selected by the control point.

4 Add additional selection control points, or use the selection brush tool to further modify where the current enhancement is being applied to the image.

> **Shortcut**
> Ctrl + Shift + C (Windows)
> command + shift + C (Macintosh)

Lasso and Marquee Tools

The lasso and 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 and marquee tools will also limit the effect of the selection brush as well as the selection gradient and fill / remove tools. You can use the lasso and marquee tools to limit the placement of any enhancement found within the **Adjust** or **Filter** menus, as well as the color, black, neutral, and white control points.

There are four lasso and marquee tools to choose from. You can select among these four tools by holding the mouse down on the lasso and marquee icon in the toolbar and selecting from the tools that appear.
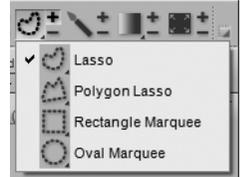
Lasso Tool

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

Polygon Lasso Tool

The polygon lasso tool enables you to draw a selection by connecting anchor points with straight lines. These anchor points can be moved to alter the selection while still retaining straight lines to the other anchor points.

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

Rectangle Marquee Tool

The rectangle marquee tool enables you to draw a rectangular selection.

Hold down the Shift key while drawing the selection to constrain the selection to a square.

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

Oval Marquee Tool

The oval marquee tool enables you to draw a round selection.

Hold down the Shift key while drawing the selection to constrain the selection to a circle.

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

To make a selection using the lasso and marquee tools, follow these steps:

1 Click on the lasso and marquee icon in the toolbar. Selecting the **(+)** icon next to the lasso and marquee icon will let you create a selection in which only the objects contained within the selection will be affected. Selecting the **(–)** icon next to the lasso and marquee icon will let you create a selection in which only the objects outside of the selection will be affected.

2 Click and draw a selection around the objects that you want to affect in the active image window.

3 To add to the selection, ensure that the **(+)** icon is selected and click and draw outside of the selection.

4 To subtract from the selection, select the **(–)** icon and draw within the selection.

5 To move the selection, ensure the **(+)** icon is selected and click on the selected area to reposition the selection.

6 After you have finished modifying the selection, select an enhancement from the **Adjust** or **Filter** menus. That enhancement will only be applied within the area identified by your selection. If you created a selection in a step that already contains an enhancement, you can use the selection brush, selection gradient or fill / remove tools to add or remove the current enhancement to or from the image only within the selection.

7 To remove the selection, either double-click within the active image window or navigate to the **Edit** menu and select **Deselect All**.
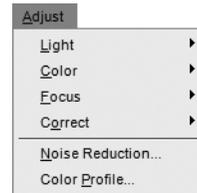
The lasso and marquee tools provide you with the following options in the tool options bar:
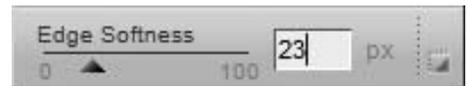
Edge Softness

The **Edge Softness** option enables you to soften the edge of the selection that is being made by the lasso and marquee tools.

Shortcut
Lasso tools: L key
Marquee tools: M key

Selection Brush Tool

The selection brush enables you to selectively paint in or paint out the enhancements found in the current step. You can use the selection brush to selectively apply any enhancement found within the **Adjust** or **Filter** menus, as well as the color, black, neutral, and white control points.

✐ **Please note**: If you start painting a selection without an enhancement active or in an empty new step, the selection display will automatically be set to overlay mode. While in overlay mode, the selection will be displayed as a semi-transparent color superimposed on your image. After an enhancement is selected from the **Adjust** or **Filter** menus, the selection display will automatically revert to "None", ensuring that you see only the selected enhancement applied where you painted with the selection brush.

To use the selection brush, follow these steps:

1 Select an enhancement to be applied to your image either from the **Adjust** or the **Filter** menus.
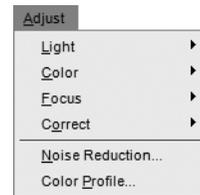
2 Click on the selection brush icon in the toolbar. Click on the **(+)** icon if you would like to apply the current enhancement only to the area you will paint, or click on the **(–)** icon if you would like to apply the current enhancement to the entire image, except for where you paint.

✐ **Please note**: If you first click on the **(+)** icon, the base selection slider in the selection section of the current step in the **Edit List** palette will automatically move to 0% after the first paint stroke, enabling you to add the enhancement only to where you paint. You may at any point adjust the base selection slider and place it at a different value.

3 In the tool options bar, adjust the **Size**, **Brush Hardness**, and **Opacity** of the brush.
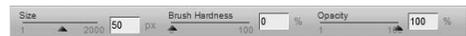
4 Click and draw within the active image window to add or remove the effect, depending on if you selected the **(+)** or **(–)** icon.

5 At any point, switch to the opposite mode by clicking on either **(+)** or **(–)** to add to or remove from the selection drawn. You can temporarily switch to the opposite mode by holding down the Alt key (Windows) or Option key (Macintosh).

6 To delete a selection created by the selection brush tool, click on the delete button found in the current step's selection information section next to the "Paint & Fill Mask" section. Alternatively, ensure that the image window is active by clicking on the image window's title bar and press the delete key.

The selection brush provides you with the following options in the tool options bar:

Brush Hardness

Changing the **Brush Hardness** option 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 the **Opacity** option increases or decreases 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 **(+)** mode of the selection brush or it will remove more of the current step's enhancements from the image when using the **(−)** mode of the selection brush.

> **Shortcut**
>
> Each number 0 through 9 sets the brush's opacity to a 10% increment, i.e. 1 = 10%, 2 = 20%, etc. 0 = 100%. Pressing another number key after the first number key will modify the opacity further giving control in 1% increments, i.e. pressing 55 in close succession will result in 55%, while pressing 06 in close succession will result in 6%.

Pressure Controls

The **Pressure Controls** pull-down menu enables you to control the different brush elements when using a pressure-sensitive input device, such as a pen tablet.

The different options available within the **Pressure Controls** pull-down menu are:

Size
The **Size** option enables you to control the size of the brush using the pressure of the pressure-sensitive input device. Applying more pressure makes the brush larger, while less pressure makes the brush smaller. The maximum size of the brush is based on the **Size** option.

Opacity
The **Opacity** option enables you to control the opacity of the brush using the pressure of the pressure-sensitive input device. Applying more pressure provides more opacity, while less pressure provides less opacity. The maximum opacity of the brush is based on the **Opacity** option.

Opacity and Size
The **Opacity and Size** option enables you to control both the size and the opacity of the brush using the pressure of the pressure-sensitive input device. Applying more pressure provides a larger brush with greater opacity, while less pressure provides a smaller brush with lower opacity. The maximum size and opacity of the brush are based on the **Size** and **Opacity** options.

None
The **None** option ensures that neither the size nor the opacity are affected when using a pressure-sensitive input device.

> **Shortcut**
>
> B key

Selection Gradient Tools

The selection gradient tools enable you to gradually blend between applying and removing the current step's effects on your image. You can use the selection gradient tools to selectively apply any enhancement found within the **Adjust** or **Filter** menus, as well as the color, black, neutral, and white control points.

✎ **Please note**: If you start applying a selection without an enhancement active or in an empty new step, the selection display will automatically be set to overlay mode. While in overlay mode, the selection will be displayed as a semi-transparent color superimposed on your image. After selecting an enhancement from the **Adjust** or **Filter** menus, the selection display will automatically revert to "None", ensuring that you see only the selected enhancement applied where you indicated with the selection gradient tool.

There are two selection gradient tools to choose from. You can select among these tools by holding the mouse down on the selection gradient icon in the toolbar and selecting from the tools that appear.

Linear Gradient Tool

The linear gradient tool adds the current effect to the image with a gradual transition from applying to hiding the effect in a straight line, with the direction and start and end points determined by the line drawn when applying this tool.

Radial Gradient Tool

The radial gradient tool adds the current effect to the image in a circular pattern, with a gradual transition from applying to hiding the effect radiating from a central point, with the center, start, and end points determined by the line drawn when applying this tool.

To use a selection gradient tool to selectively apply the current step's enhancements to your image, follow these steps:

1 Select an enhancement to be applied to your image either from the **Adjust** or the **Filter** menus.

2 Click on the selection gradient icon in the toolbar. Click on the **(+)** icon if you would like to determine first where the enhancement starts, or click on the **(–)** icon if you would like to determine first where the enhancement ends.

3 Click and draw a line within the active image window. Depending on if you chose the **(+)** or the **(–)** icons, the point where you start the line will either be the part where the effect is added at 100% to the image or where the effect is removed entirely from the image. If you use the linear gradient tool, the enhancement will be applied in a straight line, following the direction of the line you created. If you use the radial gradient tool, the enhancement will be applied in a circular pattern, radiating from the point that you selected by first clicking on the image.

4 After drawing the gradient, the line that you created will still be visible, along with start, mid, and end anchor points. Click on an anchor point to reposition the gradient and control the gradient's effect on the image.

5 At any point, switch to the opposite mode by clicking on either **(+)** or **(–)** to add another gradient. Each additional gradient will blend with the previously drawn gradients. You can mix different gradient types (linear and radial) as well as **(+)** and **(–)**.

✐ **Please note**: Once you have added an additional gradient, the anchor points for the previously drawn gradient will no longer be accessible.

6 To delete a selection created by a gradient tool, click on the delete button found in the current step's selection information section next to the "Paint & Fill Mask" section.
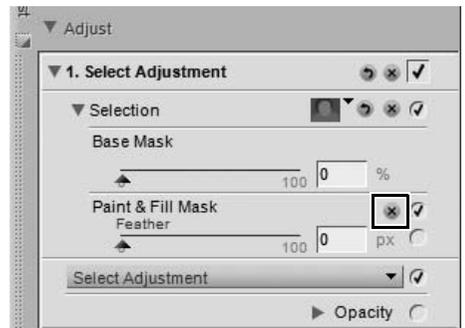
The following controls for the selection gradient tools are provided to you within the tool options bar:

Gradient Range

The gradient range slider enables you to change the values of the next gradient that will be drawn on the image. The values represent the percent of opacity, and allow you to set the maximum, minimum, and midpoint values of the gradient. By moving the midpoint, you can force the transition of the gradient to shift more quickly on one side of the midpoint and more gradually on the opposite side.

Fill / Remove Tools

The fill / remove tools enable you to either fill the current step's enhancements or clear the selections made by the selection brush, gradient tools, or fill tool, either in the entire image or the area within a selection created by the lasso and marquee tools.

To fill or remove the current step's enhancements, follow these steps:

1 Click on the fill / remove tools icon within the toolbar. Click on the **(+)** icon to fill the current step's enhancements or click on the **(–)** icon to clear the selection previously made by a selection brush, gradient tool, or fill tool. The cursor will change.

2 Click within the active image window to either fill or remove the current step's enhancements, depending on in you chose the **(+)** or **(–)** icons. If there is a selection made by one of the lasso or marquee tools, click within a selected area to fill or remove the effect from within that area.

3 To delete a selection created by the fill or remove tool, click on the delete button found in the current step's selection information section next to the "Paint & Fill Mask" section. Alternatively, ensure that the image window is active by clicking on the image window's title bar and press the delete key.

Chapter 14

Bird's Eye

The **Bird's Eye** always displays the entire image, even if the active image window only displays a zoomed-in portion of the image. When zoomed-in, the areas visible within the active image window are shown as a rectangle superimposed on top of the entire image. Drag the rectangle to change what is displayed within the active image window.

Displayed to the right of the thumbnail within the Bird's Eye is a zoom control along with a readout that displays the current zoom ratio. You can change the current zoom ratio by either clicking on the ⊕ icon, ⊖ icon, moving the slider, or typing in the desired zoom ratio directly.

The Bird's Eye can be hidden or displayed by clicking on the maximize/minimize button.

Chapter 15

Edit List

The **Edit List** palette is the central location for all of the controls provided within Capture NX 2. The **Edit List** palette was greatly improved, with the position of many tools and features moved to provide better access. Additionally, the workflow when using the **Edit List** palette has been updated by improving the interaction with steps and enhancements.
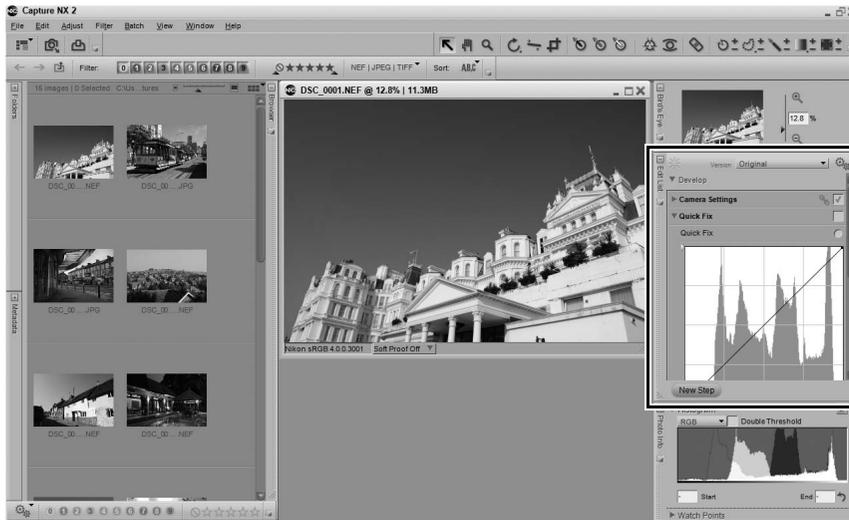
Introduction to the Edit List

The **Edit List** palette stores all of the enhancements that have been applied to your image in chronological order. The **Edit List** palette 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.

Every enhancement that you apply to your images within Capture NX 2 will be recorded within the **Edit List** palette. The contents of the **Edit List** palette are saved when you save the file as an NEF file.

Since the **Edit List** palette shows a chronological description of the enhancements that have been applied to your image, you can use the **Edit List** palette 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 show/hide triangle 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 2 will automatically apply all of the steps between the step you have just modified and the last step that you checked. To prevent this from happening, enable the **Keep All Steps Active in Edit List (Requires Fast Processor)** option in the "General" section of the "Preferences" dialog.

The following controls are common throughout the **Edit List** palette and provide you control over the functionality and enhancements that are presented within the **Edit List** palette:

① **Show/Hide Triangles**	The show/hide triangle shows and hides the contents of the section or enhancement. Click on the triangle to toggle between showing and hiding the contents of the associated section or enhancement.
② **Apply Checkbox**	Apply checkboxes are used to turn enhancements on or off. Adjustments to an enhancement automatically enable the corresponding Apply checkbox; to turn the enhancement off, simply remove the check.
③ **Reset Button**	The **Reset** button is provided for each section within the "Develop" section and provided for each enhancement within the "Adjust" section. The **Reset** button reverts the active section or enhancement to the last state prior to the current interaction. Clicking the **Reset** button within one of the sections of the "Develop" section causes the settings within that section to revert back to their enhancements prior to the changes you just made.
④ **Delete Button**	The **Delete** button is provided only for enhancements within the "Adjust" section. Clicking on the **Delete** button will remove that enhancement from the "Adjust" section or will remove the selection created within the "Selection Information" section of a step within the "Adjust" section.

Version

The **Version** menu can now be found at the top of the **Edit List** palette, providing you with direct control of this powerful feature. 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 within this menu.

The current version is displayed within the **Version** menu, click on the menu to access one of the other versions.

The **Version** menu provides you with the following options:

Original

The **Original** version is always present within the **Version** menu and provides you with a quick way of reverting the image to its original state, prior to any changes that were made within Capture NX 2. With NEF RAW files, the original version will revert all settings to the state as set by the camera at the time of capture.

Last Saved

The **Last Saved** version becomes available within the **Version** menu for NEF files as soon as the image is saved. This version provides you with the ability to revert the **Edit List** to its state at the point of the last save.

(Current)

The **(Current)** version is temporarily available whenever changes have been made to an image and the **Version** menu is switched to another version. This version enables you to toggle quickly from one of the available versions back to the current state to review the differences made between that version and the current state.

New Version…

To create a custom version, select the **New Version…** option from the **Version** menu. After selecting **New Version…**, enter a name for the new version and click **OK**. An entry will be added to the **Version** menu with that name containing the state of the **Edit List** palette at the time that the version was created. Due to the non-destructive nature of Capture NX 2, you are able to create virtually unlimited number of versions, switch from one version to the next, and save those versions for future use, all without altering the original image information.

Edit Versions

You can also edit the custom versions that were added, providing you with the ability to rename or delete the custom versions listed in the **Version** menu. Select the **Edit Versions** option from the **Version** menu, 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 quick access to tools that can be used to copy and paste adjustments and XMP/IPTC information, and create and load settings files for batch processing.

Develop Section

The "Develop" section, formerly the **Base Adjustments** step in Capture NX version 1, has been greatly improved for Capture NX 2. This section provides you with camera and RAW specific enhancements as well as a new "quick fix" mode that can be used on any file format.

✐ **Please note**: Enhancements within "Develop" section cannot be deleted or applied selectively.

To use the "Develop" section, follow these steps:

1 Click on the show/hide triangle next to the "Develop" section to display its contents.

2 For NEF RAW files, click on the show/hide triangle next to **Camera Settings** to adjust the various settings available within your camera.

3 For both NEF RAW files as well as JPEG and TIFF files, you can use the "Quick Fix" section to make adjustments to access often used enhancements for images.

4 Finally, click on the show/hide triangle next to the **Camera & Lens Corrections** section to use the special enhancements available for NEF RAW files as well as lens specific controls.

5 After making adjustments to the "Develop" section, you can then add steps into the "Adjust" section by selecting enhancements from the **Adjust** and **Filter** menus or using the various tools from the Toolbar.
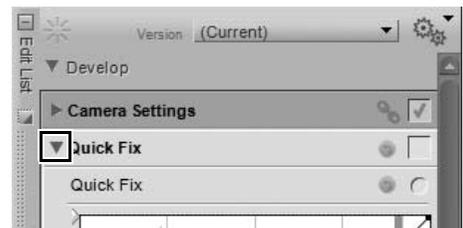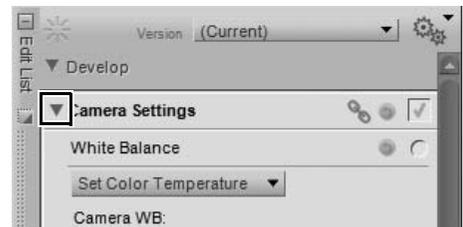
The "Develop" section provides you with the Camera Settings section, the Quick Fix section, and the Camera & Lens Corrections sections.
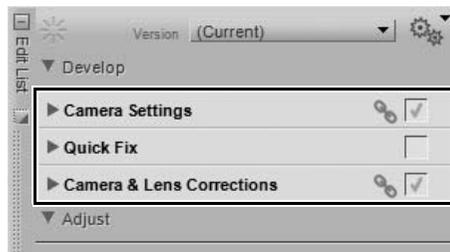
Camera Settings RAW ONLY

The **Camera Settings** section provides you control over options set within the camera at the time the image was captured. Within this section, you can modify White Balance, Picture Control settings, Non-Picture Control settings, and Active D-Lighting settings.

White Balance

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.

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**

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 WB**

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

• **New WB**

This pull-down menu provides you with a number of controls for setting a new white balance value.
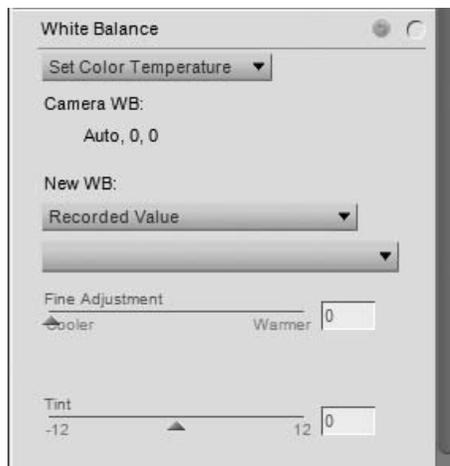
Use Gray Point	Selecting this option will use the white balance values selected in the **Set Gray Point** mode.
Recorded Value	Selecting this value will set the white balance to the setting recorded by the camera.
Calculate Automatically	When you select this value, Capture NX will determine the best 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.
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.
Standard Fluorescent/ High Color Rendering Fluorescent	Choose these options if the image was taken under fluorescent lighting. 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. • **Standard Fluorescent/High Color Rendering Fluorescent** Sub-Menu This sub-menu enables you to choose between the most commonly available fluorescent light bulb temperatures. • **Warm White (3000K)** • **3700K** • **Cool White (4200K)** • **5000K** • **Daylight (6500K)** • **High Temperature Mercury Vapor (7200K)**

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.
	
	If the image was taken with a color filter from a Nikon Color Filter Set attached to the flash, choose from the following options:
	
	• **None**
	
	• **FL-G1**
	• **FL-G2**
	  Choose FL-G1 or FL-G2 if the image was taken with an FL-G1 or FL-G2 filter for fluorescent light.
	
	• **TN-A1**
	• **TN-A2**
	  Choose TN-A1 or TN-A2 if the image was taken with a TN-A1 or TN-A2 filter for incandescent light.

Sodium Vapor Lamps	Select this option when shooting under mixed lighting in sports venues that use sodium vapor lamps.

Settings other than Set Gray Point and Recorded Value can be further modified using the Fine Adjustment and Tint sliders.

Fine Adjustment Slider	This slider enables you to shift the selected color temperature by up to ± 50 Mired.
Tint Slider	The Tint slider provides you with the ability to remove either a green or magenta cast from the image. Move the Tint slider to the left to remove green from the image (by adding magenta) or move the slider to the right to remove magenta from the image (by adding green).

❏ 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 a 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.
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.

Picture Control

Images from cameras that use the color mode system can use either the **Non-Picture Control** mode or the **Picture Control** mode. Images from cameras that use the Picture Control system can only use the **Picture Control** mode.

The **Picture Control** options are available for cameras that use both the color mode and Picture Control systems.

The controls provided within the **Picture Control** option are:

❏ **Picture Control Mode**

Nikon's unique Picture Control system makes it possible to share image processing settings among compatible devices and software. Picture Controls adjust image processing settings, or enable you to make independent adjustments to sharpening, contrast, brightness, saturation, and hue. These settings can be saved under new names as custom Picture Controls to be recalled or edited at will.

Custom Picture Controls can also be saved to a memory card for use in compatible software, and software-created Picture Controls can be loaded into the camera. Any given set of Picture Controls will produce nearly the same results on all cameras that support the Nikon Picture Control system.

The **Picture Control** option provides five different modes to choose from. Choose between:

Unchanged	This is available only for cameras that utilize the Picture Control system and allows you to select the settings set within the camera at the time the image was captured.
Standard	Standard processing for balanced results.
Neutral	Minimal processing for natural results.
Vivid	Pictures are enhanced for a vivid, photoprint effect.
Monochrome	Convert pictures to monochrome photographs.
D2XMODE 1 D2XMODE 2 D2XMODE 3	A set of three optional Picture Controls that produce results similar to the corresponding "Color mode" settings for the D2X and D2XS.

✐ **Please note**: In Picture Control mode, you can add optional Picture Controls downloaded from Nikon websites. Note that any optional Picture Controls used on the camera must also be installed on the computer. If you attempt to open an image containing a Picture Control that has not been installed, a dialog will be displayed warning that the **Standard** Picture Control will be applied. Click **OK** to open the image.
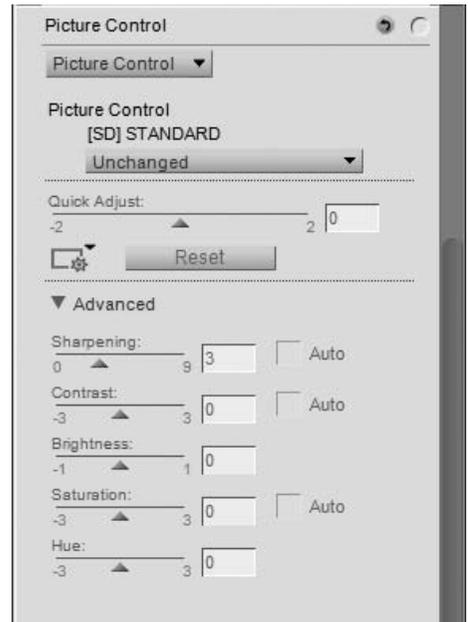
❏ **Quick Adjust**

The **Quick Adjust** slider adjusts the **Sharpening**, **Contrast**, and **Saturation** sliders to recommended values that match the enhancement created by the Picture Control.

Move this slider to the left to decrease the **Sharpening**, **Contrast**, and **Saturation** sliders. Move this slider to the right to increase these sliders.

The **Quick Adjust** slider is not available with neutral and monochrome Picture Controls.

❏ **Manage Picture Control Menu**

The **Manage Picture Control** menu provides you with options to save, load, and manage customized Picture Control options. Clicking on this icon will present you with the following options:

Save as a new Custom Picture Control	This option lets you create a new custom Picture Control option to use on additional images. Once you create a new custom Picture Control, it will be added to the Picture Control pull-down menu and become a selectable option. Please note, the **Quick Adjust** slider for any custom Picture Control options is not accessible.
Load Custom Picture Control Settings	Select this option to load a previously created custom Picture Control settings file. Once the custom Picture Control settings file is loaded, it will be added to the list of options. Please note, the **Quick Adjust** slider for any custom Picture Control options is not accessible.
Launch Picture Control Utility	This option will launch the Picture Control Utility application. The Picture Control Utility can create and modify custom Picture Control settings as well as import and export custom settings to a memory card.

❏ **Sharpening**

The **Sharpening** section enables you to adjust the amount of sharpening that will be applied to the image.

Turn on the **Auto** option in order to allow Capture NX 2 to determine the appropriate amount of sharpening for the current image. The **Sharpening** slider is not accessible while the **Auto** option is turned on.

You may also adjust the amount of sharpening added to the image manually using the **Sharpening** slider. Move this slider to the left to decrease the amount of sharpening added to the image or move it to the right to increase the amount of sharpening.

❏ **Contrast and Brightness**

The **Contrast** and **Brightness** options enable you to control the tonality of the current image. The results created by the **Contrast** and **Brightness** section are dependent on the **Picture Control** option selected.

Enable the **Auto** checkbox in order to allow Capture NX 2 to determine the appropriate amount of contrast for the current image. The **Contrast** slider is not accessible while the **Auto** option is turned on.

The **Contrast** slider enables you to manually adjust the amount of contrast added to the image. Move this slider to the left to decrease the amount of contrast added or move the slider to the right to increase contrast.

The **Brightness** slider enables you to control the brightness within the image. Move the slider to the left to darken the image or move the slider to the right to brighten the image.

❏ **Saturation and Hue Adjustment**

The **Saturation** and **Hue** options enable you to control characteristics of the color of the image. The results of the **Saturation** and **Hue** section are also dependent on the Picture Control option selected.

Turn on the **Auto** option to enable Capture NX 2 to determine the appropriate amount of saturation, or color intensity, for the current image. The **Saturation** slider is not accessible while the **Auto** option is turned on.

Use the **Saturation** slider to adjust the amount of saturation for the current image. Move this slider to the left to reduce the saturation and make the colors less vibrant, or move the slider to the right to increase the saturation and make the colors more vivid.

The **Hue** slider enables you to alter the hue of your entire image without affecting brightness or saturation. Moving this slider to the left will cause skin tones to become increasingly red while moving this slider to the right will produce more yellow skin tones.

❏ **Filter Effects** `Monochrome ONLY`

The **Filter Effects** pull-down menu enables you to change the contrast within monochrome images by emulating the use of different colored filters used in traditional black and white photography. Each filter changes the relationship of objects found within the image based on their color.

You are provided with the following options:

Off	This option provides a default black and white conversion.
Yellow	The **Yellow** filter emulates the use of a yellow filter in front of the lens at the time of capture and causes yellow objects to become lighter and blue objects to become darker. Use this option to optimize contrast for brighter skin tones.
Orange	The **Orange** filter emulates the use of an orange filter in front of the lens at the time of capture and causes orange objects to become lighter and darkens blue and violet objects. Use this option to optimize contrast for landscape shots featuring blue skies.
Red	The **Red** filter emulates the use of a red filter in front of the lens at the time of capture and causes red objects to become lighter and darkens cyan objects. Use this option to create strong contrasts in sunny scenes.
Green	The **Green** filter emulates the use of a green filter in front of the lens at the time of capture and causes green objects to become lighter and magenta objects to become darker. Use this object to create lighter foliage and for more restrained tones in skin and lips.

❏ **Toning** `Monochrome ONLY`

The **Toning** options enable you to emulate the use of toners found in traditional photography, or to add a tint to the image.

Choose from:

Black-and-White	This toning option will result in a black and white image without any additional tint or tone.
Cyanotype	The **Cyanotype** toning option emulates the appearance of images created using the traditional cyanotype process. Images created with the **Cyanotype** toning option will have a characteristic blue tone.
Sepia	The **Sepia** toning option emulates the use of sepia toner, a popular traditional black and white toning process. Images created using the **Sepia** toning option will appear with a dark-brown tint applied to them.
Red	The **Red** toning option will tint the image with a red tint.
Yellow	The **Yellow** toning option will tint the image with a yellow tint.
Green	The **Green** toning option will tint the image with a green tint.
Blue Green	The **Blue Green** toning option will tint the image with a turquoise tint.
Blue	The **Blue** toning option will tint the image with a cyan tint.
Purple Blue	The **Purple Blue** toning option will tint the image with a violet tint.
Red Purple	The **Red Purple** toning option will tint the image with a magenta tint.

❏ **Toning Saturation** `Monochrome ONLY`

The **Toning Saturation** slider controls the vividness of the effect or color selected in the Toning pull-down menu. Move this slider to the left to create a more subtle toning effect, or move the slider to the right to create a very strong, vibrant effect.

Non-Picture Control

The **Non-Picture Control** options are available for cameras that use the Color Mode system.

❏ **Color Mode**

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 subtle enhancements for your images.
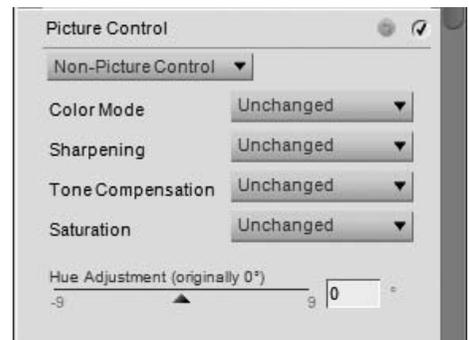
❏ **Sharpening**

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

Choose from the following options:

• **Unchanged**

This will revert to the sharpening set in the camera.

• **None**

• **Low**

• **Medium Low**

• **Normal**

• **Medium High**

• **High**

❏ **Tone Compensation**

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

Choose from the following options:

• **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.

❏ **Saturation**

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

Choose from the following options:

• **Unchanged**

This will revert to the saturation set in the camera.

• **Moderate**

• **Normal**

• **Enhanced**

❏ **Hue Adjustment**

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 the value is raised above 0°. Values below 0° produce redder skin tones.

Active D-Lighting

Active D-Lighting, available only for cameras that provide this functionality within the camera itself, was designed for photographing subjects where it is difficult to capture detail in both highlights and shadows. If Active D-Lighting is enabled ion the camera when a photograph is taken, the image will be underexposed to preserver highlight information. If that image is later processed in Capture NX 2, Active D-Lighting will be applied to brighten the shadows and create the appropriate levels of tonality throughout the image, resulting in an image in which details are present in both highlights and shadows.
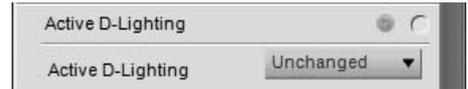
This functionality is provided in addition to the D-Lighting functionality found in the **Adjust** menu.

You can use the provided pull-down menu to modify the amount of Active D-Lighting applied to your image. Choose from the following options:

❏ **Unchanged**

This option reverts back to the setting used within the camera when the image was captured.

❏ **Off**

This option prevents any Active D-Lighting from being applied to the image.

❏ **Low**

This option applies a low level of Active D-Lighting to the image and is recommended for images shot with very high ISO.

❏ **Normal**

This option applies a moderate level of Active D-Lighting to the image and is recommended for the majority of images.

❏ **High**

This option applies a high level of Active D-Lighting to the image and is recommended for images shot with low ISO.

Quick Fix

Tone Curve

The **Tone Curve** tool provides you with a curve editor that controls the tonality of the image. Within the **Tone Curve** tool, you are presented with a curve that enables you to control the relationship of input luminosity values to output luminosity values.

Click anywhere on the curve to add an anchor point. Move the anchor point to alter the relationship of input and output values. Moving a point up makes objects of that value brighter, while moving a point down makes objects of that value darker. The curve is automatically adjusted to ensure a smooth transition between each point added to the image.

Anchor points can be removed by simply clicking and dragging the anchor point outside of the curve editor or by clicking on an anchor point to select it and pressing the delete key.

The **Tone Curve** tool provides you with the following additional controls:

❏ **White and Black Output Slider**

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

level in the image. These two sliders are often used if the darkest and lightest colors in the image should not be pure white (255, 255, 255) and pure black (0, 0, 0).

❏ **Black Point Slider**

Move the black point slider to the right to set all luminosity values from the point you have selected to the left to complete black. This will redistribute 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.

❏ **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.

❏ **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. This will redistribute 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.

Exposure Compensation

The **Exposure Compensation** slider provides control over the tonality of the image. Move this slider to the left to darken the entire image or move it to the right to lighten the entire image.

Contrast

The **Contrast** slider provides control over the contrast of the image. Move this slider to the left to reduce the contrast of the entire image or move it to the right to increase the contrast of the entire image.

Highlight Protection

The **Highlight Protection** slider recovers detail in highlights. While this slider works for both NEF RAW as well as JPEG and TIFF files, it is much more successful in NEF RAW files. This is because additional highlight information is stored within an NEF RAW file that the **Highlight Protection** slider can use when recovering highlight details. Move this slider to the right to reveal additional detail in highlight areas.

Shadow Protection

The **Shadow Protection** slider recovers details in shadows. Move this slider to the right to reveal additional detail in shadow areas.

Saturation

The **Saturation** slider provides you with control over the saturation of the entire image. Move this slider to the left to decrease saturation or move this slider to the right to increase saturation throughout the image.

Camera & Lens Corrections

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

To apply color moiré reduction, click on the show/hide triangle 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**.

Image Dust Off **RAW ONLY**
The **Image Dust Off** tool 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 **Image Dust Off** tool 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 Image Dust Off, click on the **Change** button to locate an Image Dust Off reference photo to apply to the current image.

For certain cameras that create Image Dust Off reference photos with the .NDF extension, such as the D2H and D2X, Capture NX 2 will attempt to identify a reference photo located within the same folder as the current image.

- If Capture NX 2 locates an Image Dust Off reference photo in the current folder, you will be presented with the option of using that photo for the Image Dust Off process.

    If you select **Yes**, Capture NX 2 will apply the Image 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 an Image Dust Off reference photo.

- If Capture NX 2 locates more than one Image 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 2 does not locate an Image 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 an Image Dust Off reference photo.

    If Capture NX 2 locates more than one Image 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.
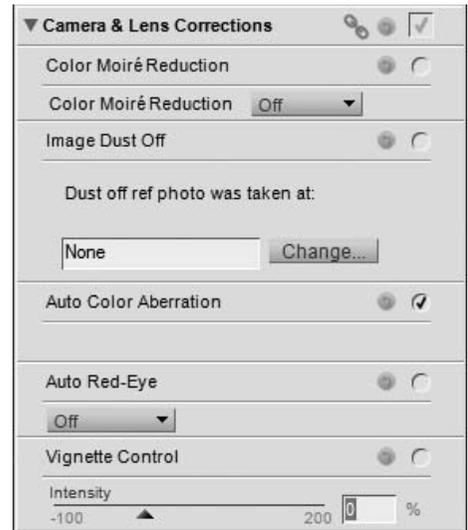
For all other cameras, you will be presented with a folder search window to enable you to locate on your computer's hard drive a folder that contains an Image Dust Off reference photo.

• If Capture NX 2 locates more than one Image 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.

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

If you would like to remove the Image Dust Off effect at any time, simply uncheck the "Apply" checkbox next to **Image Dust Off**.

✐ **Please note**: If a large amount of dust is detected in the current image, Capture NX 2 will display a warning stating that the results of Image Dust Off cannot be guaranteed. Click **Yes** to proceed.

Auto Color Aberration
Use the **Auto Color Aberration** tool to automatically reduce color aberrations (colored fringes or halos). By default, this feature is automatically applied to RAW (NEF) images but not to TIFF and JPEG images. Use the "Apply" checkbox next to **Auto Color Aberration** in the **Develop** > **Camera & Lens Corrections** section to toggle auto color aberration reduction on or off.

Auto Red-Eye
The **Auto Red-Eye** tool automatically locates and removes red-eye from the current image.

Auto red-eye is applied immediately when the "Auto Red-Eye" dialog is displayed. Click **Reset** or uncheck the "Apply" checkbox to prevent auto red-eye from changing your image.

Vignette Control   D-SLR ONLY
The **Vignette Control** tool can be used on NEF, JPEG, and TIFF files and 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 2 will use the lens information recorded with the image to automatically select an optimal range for the **Intensity** slider.

When this lens information is not available, the **Intensity** slider's range 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
D40, D40X, D50, D60, D70, D70S, D80, D100, D2H, D2HS, D2X, D2XS, D200, D3, D300	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 vignette control to your image, follow these steps:

1 Click on the show/hide triangle next to **Camera & Lens Corrections**.

2 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 vignette control.
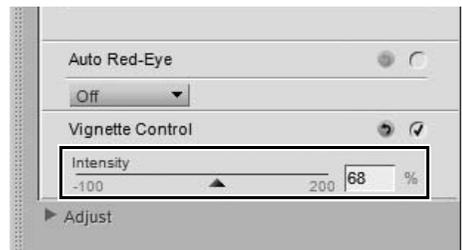
If you would like to remove the vignette control effect, click on the **Reset** button or uncheck the "Apply" checkbox next to **Vignette Control**.

Fisheye Lens

The **Fisheye Lens** tool is only displayed when the active image was shot with either the AF DX Fisheye-Nikkor 10.5mm f/2.8G ED or AF Fisheye-Nikkor 16mm f/2.8D lenses. This 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.

The **Fisheye Lens** tool provides you with the following controls:

❑ **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.

❑ **Fill Color**

The **Fill Color** pull-down menu is only available when the **Include Areas Where There is No Image Data** option is turned on. Use this option to select the color to fill areas of the image that are displayed and do not contain any image information due to the transformation process.

Adjust Section
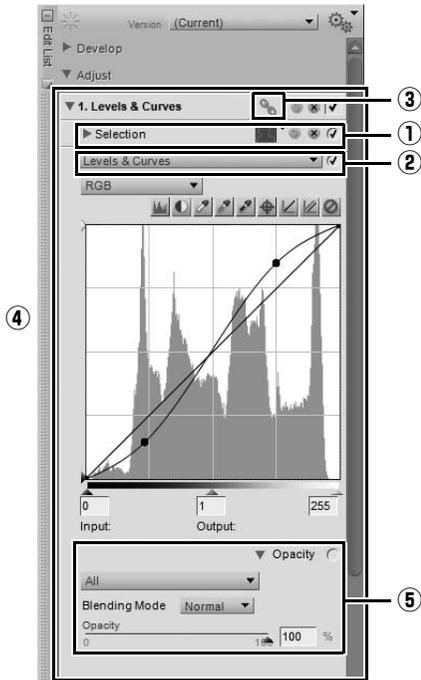
All enhancements added to the **Edit List** palette using one of the tools or features from the menus are added as adjustment steps to the "Adjust" section.

Each adjustment step can contain the following elements:

① Selection Information

The selection information area is displayed whenever a step has been selectively applied and provides information and control for selections made to the current adjustment step. Whenever you use a selection control point, selection brush, lasso tool, marquee tool, or the fill or remove tools, the selection information area is added to the step and reflects the selection made. Controls are provided to help you make any necessary adjustments to those selections.

Only enhancements selected from the **Adjust** or **Filter** menus, or color, black, neutral, or white control points can be modified with one of the selection tools.

At any time, click on the reset button to revert the selection to the last state or click on the delete button to remove all selection information.

The following information and controls are provided within the selection information area:

Selection Display Control
Use the selection display control pull-down menu to select how to display the current selection made within the image window.

Choose from the following options:

❑ **Hide Selection**

The **Hide Selection** option prevents the current selection from being displayed in the image window, showing only the image.

❑ **Show Overlay**

The **Show Overlay** option displays the selection as a semi-transparent color overlay, superimposed on top of your image. Anywhere this color overlay is displayed, the current step's adjustment is being applied. Anywhere the image is displayed, no enhancement is being applied. You can control the color and opacity of the overlay within the "Preferences" dialog.

❑ **Show Mask**

The **Show Mask** option displays the current selection as a black and white mask; black areas indicate that no enhancement is being applied to that area while white areas are being affected by the current step's enhancements.

Base Mask

The **Base Mask** slider provides control over the amount of application the current step is providing on the image. At 0%, the current step will not affect the image, while at 100%, the current step will have full affect on the image.

When using the **(+)** option for one of the selection tools, such as a Selection Control Point or Selection Brush, the **Base Mask** slider will automatically move to 0%. This enables the selection tool to create a mask whose effect is visible in the image. You may at any point move that slider back to another value.

The effect of the **Base Mask** slider is considered in combination with the other types of selective control provided within an adjustment step. The effects of the other selection tools will be considered before displaying the final image.

Selection Control Points Section

The "Selection Control Points" section displays a list of the selection control points added to the current step. Clicking on the show/hide triangle for any of the selection control points listed here will display the **Size** and **Opacity** settings for that selection control point. Click on the numerical readout to enter a new value for that selection control point, or click on the selection control point label to highlight the selection control point. You can then delete the selection control point to prevent it from affecting the application of the current step's enhancement.

The effect of the "Selection Control Points" section is considered in combination with the other types of selective control provided within an adjust step. The effect of the selection control points is applied on top of the **Base Mask** slider. That is, selection control points set to a higher opacity value than the **Base Mask** slider will apply more of the current step's enhancement to the area selected by that Selection Control Point. Selection Control Points set to a lower opacity value than the **Base Mask** slider will apply less of the current step's enhancement to the area selected by that selection control point.

To remove a selection control point, click on the delete button next to the control point that you would like to remove.

Paint & Fill Mask Section

The "Paint & Fill Mask" section controls the effect made by a selection brush, selection gradient, or the fill and remove tools.

The effect of the "Paint & Fill Mask" section is considered in combination with the other types of selective control provided within an adjust step. The effect of the "Paint & Fill Mask" section is applied on top of both the **Base Mask** slider and selection control points. Selections made with the selection brush, selection gradient, and fill and remove tools will be made to the current step, regardless of the selection made in the **Base Mask** slider and by selection control points.

To remove the effect of a brush, selection gradient, or the fill and remove tools, click on the delete button next to the "Paint & Fill Mask" section.

Feather

The **Feather** slider enables you to soften the edges of selections made by the selection brush, lasso, or marquee tools.

Move the **Feather** slider to the right to increase the amount of softening that is applied to the edges of the selection.

② Adjust & Filter pull-down menu

An adjustments and filters pull-down menu is displayed for any step that was created by selecting an enhancement from either the **Adjust** or **Filter** menus, or by selecting the **New Step** button.

You can use the adjustments and filters pull-down menu to gain access to any of the enhancements that are available within the **Adjust** or **Filter** menus.

Additionally, you can use this pull-down menu to perform a swap enhancement function, which is discussed later in this chapter.
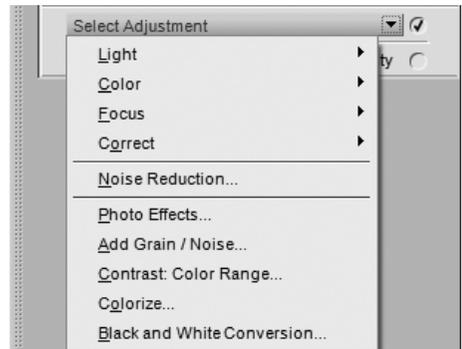
③ Link Icon

A link icon indicates whether the current step contains linked enhancements. Please see the "Linking Enhancements" section later in this chapter for more information on linked enhancements.
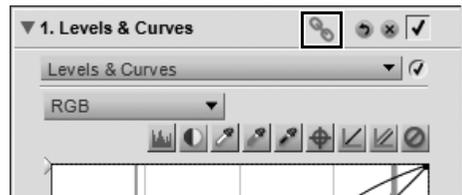
④ Enhancement Controls

Controls for the enhancement added to an adjustment step are displayed within the **Edit List** palette, within that adjustment step. Use the provided controls to adjust the effect of the enhancement, or use the reset button to revert the enhancement's controls or delete button to remove the enhancement.

⑤ Opacity Mixer

The opacity mixer provides you with the ability to blend the current enhancement with the rest of the image.

The opacity mixer becomes available as soon as you add any features from the **Adjust** or **Filter** menus, or a color, black, neutral, or white control point to the image. Click on the **Opacity** show/hide triangle of the adjustment step to display the opacity mixer controls.

The opacity mixer provides you with the following control:
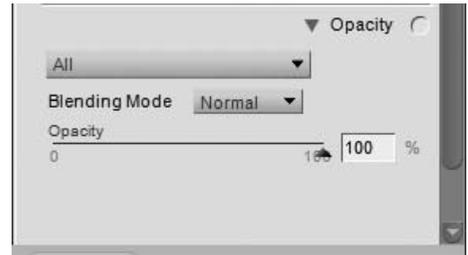
Channels

The channels pull-down menu enables you to select the channels against which you control the opacity of the current enhancement. Each option within this pull-down menu provides you with different sliders with which to control the opacity of the current enhancement. Choose from the following options:

❏ **All**

The **All** option applies the current enhancement to all of the channels of the image. You are provided with the following sliders to control the effect on the image:

• **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.

❏ **Luminance & Chrominance**

The **Luminance & Chrominance** option enables you to control the current effect on either the luminance (lightness) or chrominance (color) portions of your image. You are provided with the following sliders to control the effect on the image:

• **Opacity (Luminance Channel)**

Use this slider to control the current effect on the luminance portion of the image. Move this slider to the left to reduce 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 Ch.)**

Use this slider to control the current effect on the chrominance portion of the image. Move this slider to the left to reduce 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 only so that no effects to the color portions are 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 the following sliders:

• **Opacity (Red Channel)**

This slider controls 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 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 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 may also select different blending modes from the **Blending Mode** pull-down menu available for each of the 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 are:

❏ **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 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 2 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 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.

Working with the Edit List

Deleting Steps and Enhancements

Steps and enhancements can be deleted independently of each other. Clicking on a step or enhancement will cause it to become highlighted within the **Edit List** palette. You can then press the delete key on your keyboard or select **Delete** from the **Edit** menu to clear that step or enhancement from the image.

Copying and Pasting Steps and Enhancements

Steps and enhancements can be copied directly from the **Edit List** palette and pasted into another image, a series of images found in the browser, or into the original image.

To copy and paste steps and enhancements, follow these steps:

1 Select one or more steps or enhancements within the **Edit List** palette by clicking and highlighting them.
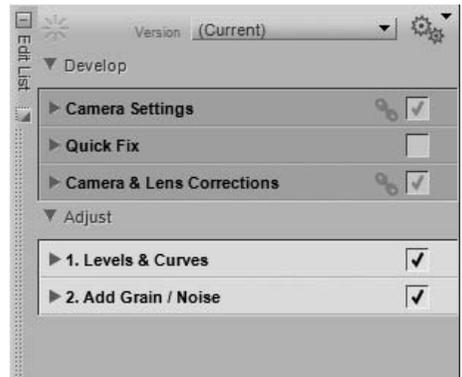
2 Navigate to the **Batch** menu and select **Copy Adjustments**. Alternatively, you can click on the batch menu icon located at the top of the **Edit List** palette and select **Copy Adjustments**.
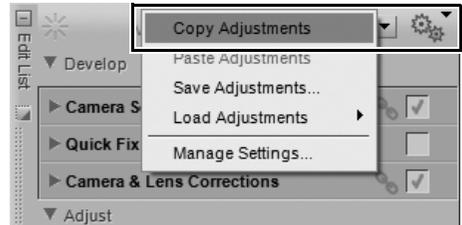
3 Select another image open within the editor or select one or more images within the browser.

4 Navigate to the **Batch** menu and select **Paste Adjustments**. Alternatively, you can click on the batch menu icon located at the top of the **Edit List** palette and select **Paste Adjustments**. If you selected images from within the browser, the **Batch** palette will be displayed, enabling you to choose the location and file format for the processed images, and start a batch process.
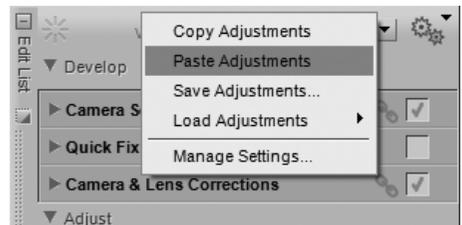
Linking Enhancements

Linking enhancements within the **Edit List** palette 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, follow these steps:

1 Select the first enhancement from either the **Adjust** or **Filter** menus. Adjust the controls for the first enhancement to suit your taste.
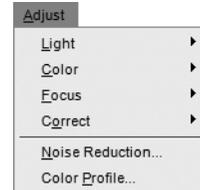
2 While holding down the Shift key, select the second enhancement from either the **Adjust** or **Filter** menus. This will cause another enhancement to be added to the same step. You can then modify the second enhancement's controls to suit your taste.

3 If desired, use one of the selection tools to determine where to apply both enhancements to the image.

✐ **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 2 may be in displaying the results of those adjustments.

Swapping Enhancements

Enhancements from the **Adjust** and **Filter** menus may be swapped or substituted by selecting another available item from the adjustments and filters menu.

To swap one enhancement for another, follow these steps:

1 Click on the adjustments and filters pull-down menu in the step that contains the enhancement you would like to swap.

2 Select a different enhancement from the adjustments and filters pull-down menu. The selected enhancement will not be used in place of the previous enhancement within this step.

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

New Step Button

Clicking on the **New Step** button will create a new, empty adjustment step within the "Adjust" section of the **Edit List** palette. Click on this button if you want to manually generate a new step within the **Edit List** palette to start a new series of enhancements.

📝 **Please note**: Capture NX 2 will automatically create a new step whenever an enhancement is selected from the menu or toolbar; the **New Step** button can be useful in certain situations.

Chapter 16
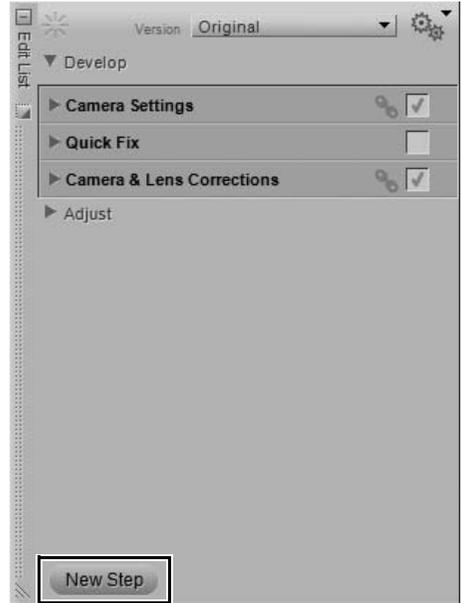
Photo Info

The **Photo Info** palette display combines the histogram and the watch points functionalities into a single palette. The "Histogram" section shows a live histogram that reflects the statistical makeup of the image. The "Watch Points" section enables you to monitor the effects of the changes you make to the color values in the image.

Each section can be hidden or displayed by clicking on the show/hide triangle next to that section.
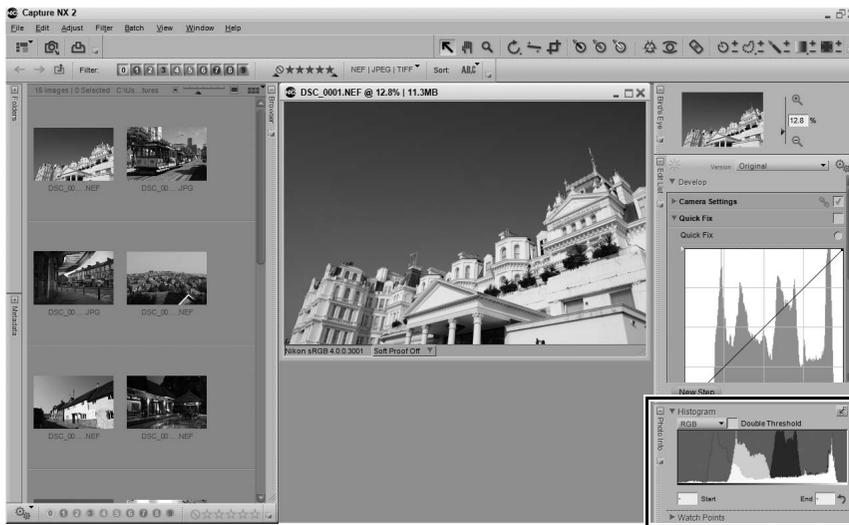
Histogram

The "Histogram" section displays a real-time updated histogram, representing a bar graph of the total number of pixels that appear at different levels. 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.

📝 **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.

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 the **Clear** button to cancel the current selection.

This "Histogram" section provides you with the following controls:
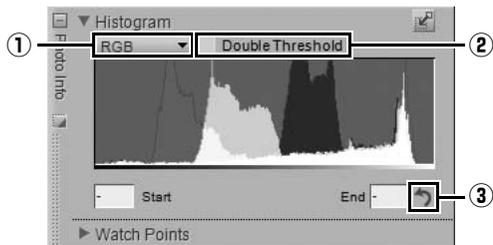
① Channels

The channels pull-down menu enables you to select the channel you wish to have displayed within the "Histogram" section.

The following channel options are available:

RGB

The **RGB** option displays the red, green, and blue histograms, 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.

Red

The **Red** option displays only the red channel within the histogram window.

Green

The **Green** option displays only the green channel within the histogram window.

Blue

The **Blue** option displays only the blue channel within the histogram window.

② Double Threshold

The **Double Threshold** option enables you to determine the darkest and lightest colors within the current image. By turning this option on, two additional sliders will be added to the bottom of the Histogram display and the entire image will become neutral gray. The left-hand slider is the **Shadows** slider while the right-hand slider is the **Highlights** slider. By dragging the **Shadows** and **Highlights** sliders towards the center of the histogram window, you will begin displaying pixel values within the image. Black pixels represent the darkest pixels in the image while white pixels represent the lightest pixels in the image.

To use the **Double Threshold** feature, follow these steps:

1 Enable the **Double Threshold** checkbox within the "Histogram" section of the **Photo Info** palette.

2 If no black pixels appear in the image, slowly drag the shadows slider to the right. Once you notice black pixels appearing, release the mouse button. If large groups of black pixels are displayed, try moving the slider back to the left slightly. It is recommended that you find a value for the shadows slider as close as possible to where the first black pixels appear.

3 Then, if no white pixels appear in the image, slowly drag the highlights slider to the left. Once you notice white pixels appearing, release the mouse button. If large groups of white pixels are displayed, try moving the slider back to the right slightly. It is recommended that you find a value for the highlights slider as close as possible to where the first white pixels appear.

4 Your image now shows the lightest and darkest pixels. This feature is typically used to assist you with finding those pixels for placing white and black points (either control points or points from within the Levels & Curves feature). After placing white and black points, disable the **Double Threshold** checkbox to continue working on your image.

Shortcut

Toggle the **Double Threshold** option on and off: Shift + T

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③ **Clear**

Press the **Clear** button to clear ranges added to the histogram or the values set for the shadows and highlights sliders of the **Double Threshold** option.

Watch Points

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

✎ **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.

Within the "Watch Points" section, you are provided with the following controls:
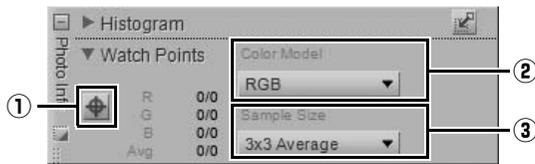
① Add Watch Point Button

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 to a crosshair 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 Points" section that continually monitors the colors of the selected pixel or area.

You can move and reposition any of the watch points by clicking and dragging that point using the direct select tool. You can delete a watch point by clicking on the Delete Watch Point button next to that watch point.

② 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 **RGB** (red, green, and blue) and **HSB** (hue, saturation, and brightness) color models.

③ Sample Size

Use this option to change the number of pixels which are used in sampling for both the current color under the mouse cursor as well as for each of the watch points. The default value for this option can be selected within the "Levels & Sampling" section of the "Preferences" dialog, or you can override the default and select from one of the following available options:

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.

3 x 3 Average
The **3 x 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.

5 x 5 Average
The **5 x 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.

Chapter 17

The Color Picker

The color picker is available in specific enhancements and provides you with the ability to select any color within the RGB, HSB, or LAB color spaces. The fisheye lens, neutral control point, color control point, distortion control, colorize, and certain Color Efex Pro plug-ins from Nik Software can utilize the color picker for their enhancements.

You are also provided with preselected colors that consist of common swatches as well as memory colors.

To select a color within the color picker, follow these steps:

1 Click on the desired color's hue within the color wheel to immediately move to that color or click and drag the outside gripper edge to slowly change the color's hue.

2 Click on the section of the color triangle to determine the saturation and brightness of the color.

3 Once you have selected the color you would like to use in the current enhancement, click **OK**.
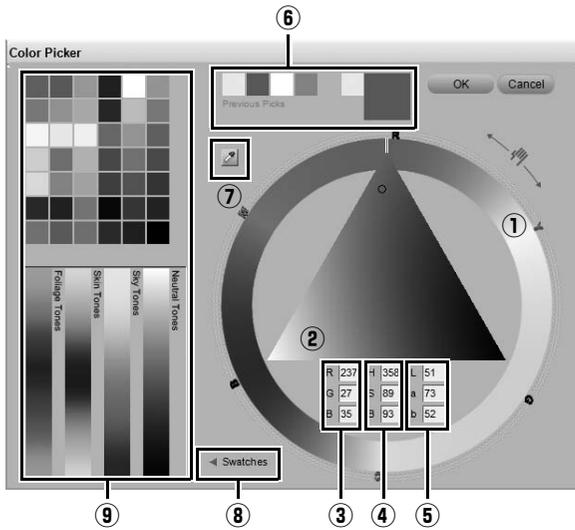
The color picker provides you with the following controls:

① 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 gripper edge along the outside edge of the wheel, you can precisely rotate the hue to modify the current selected color. The top of the color triangle points to the hue of the color that is selected. The color triangle will then be updated with the range of saturation and lightness that you can affect for that newly selected color.
② Color Triangle	The color triangle provides you with control over the saturation and lightness of the hue of the color that was selected with the color wheel. The top of the color triangle represents 100% saturation of the targeted hue. 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 presenting middle gray.
③ RGB Selection Boxes	The RGB selection boxes display the current color's red, green, and blue values. You can change the targeted color by entering different values directly into the RGB selection boxes.
④ HSB Selection Boxes	The HSB selection boxes display the current color's hue, saturation, and brightness values. You can change the targeted color by entering different values directly into the HSB selection boxes.
⑤ LAB Selection Boxes	The LAB selection boxes display the **L** channel (luminosity), the **a** channel (green through red), and the **b** channel (blue through yellow) values. You can change the targeted color by entering different values directly into the LAB selection boxes.

⑥ **Last Selected & Previous Picks**	The **Last Selected** and **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.
⑦ **Color Eyedropper**	The color eyedropper enables you to select any color from any image currently displayed within the Capture NX 2 editor. Simply select the color eyedropper button and then use the cursor to select a color from any image currently displayed within Capture NX 2. The color displayed within the color picker will be updated with the color selected by the color eyedropper.
⑧ **Swatches Show/ Hide Triangle**	Clicking on the **Swatches** show/hide triangle will display the swatches section of the color picker, which contains a selection of present swatches and four memory color ranges.
⑨ **Swatches Section**	The swatches section contains two additional sections that provide you with even more control in selecting a color to use with the current enhancement. • **Preset Swatches** The preset swatches section provides you with a predetermined selection of color 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 three different ranges of color that can be classified as 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 colors without saturation or hue.

Chapter 18

File Menu

Open Image…

The **Open Image…** option provides you with a "File Open" dialog, allowing you to locate an image to open and edit.

✐ **Please note**: Images saved in the Grayscale and CMYK color modes cannot be opened within Capture NX 2.
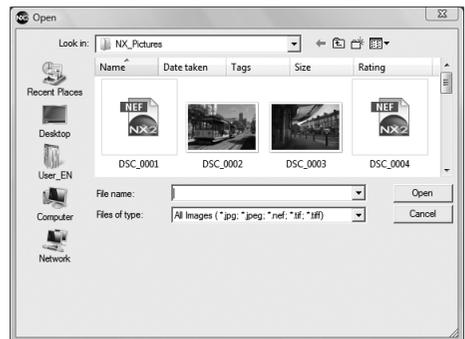
Shortcut
Ctrl + O (Windows)
command + O (Macintosh)

Open With…

The **Open With…** command enables you to open the current image with all of the current enhancements applied to it in a separate application. You can select the alternative application with will open the image within Capture NX 2's "Preferences" dialog.

Open Folder in Browser…

Select this option to locate a folder to open within Capture NX 2's browser.

Open Recent

This area displays the most recent ten images opened within Capture NX 2. Simply click on any of the items displayed in this list to open it again within Capture NX 2.

Launch Nikon Transfer…

Select this option to launch Nikon Transfer.

Launch Camera Control Pro…

Select this option to launch Camera Control Pro. This option is only available if Camera Control Pro is installed on your computer.

Save

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

When using the Save feature on JPEG files, a dialog box will be displayed if the compression settings found in the original image cannot be determined. Saving NEF or TIFF files will use the same settings found in the original file.

JPEG

Quality
Choose from **Highest Compression Ratio**, **Good Compression Ratio**, **Good Balance**, **Good Quality**, or **Excellent Quality** settings. The higher the quality, the larger the file size. The higher the compression, the smaller the file but the greater the chance of image degradation.

The **Quality** slider provides you with more control over the level of compression that is used when saving the image in the JPEG format.
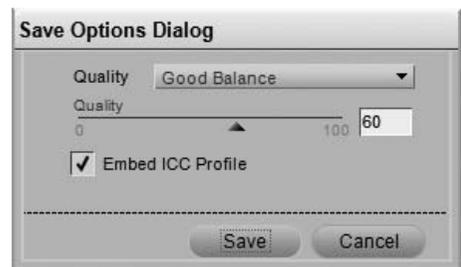
Embed ICC Profile

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.

> **Shortcut**
>
> Ctrl + S (Windows)
> command + S (Macintosh)

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 the file format.

Each file format provides you with different options when saving:

NEF

Use Compression

Choose whether or not you want to compress your NEF RAW file. You are provided with the following options:

❏ **Compressed**

Files are compressed using a non-reversible algorithm, reducing file size by about 40 to 55 percent with negligible loss of image quality.

❏ **Lossless compressed**

Files are compressed using a reversible algorithm, reducing file size by about 20 to 40 percent with no loss of quality.

✎ **Please note**: This option is only accessible if the NEF if the 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 images for printing with a device that requires a CMYK image.
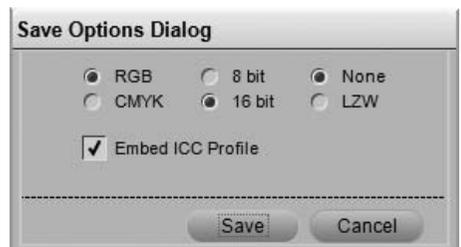
Compression

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 for CMYK TIFF images, 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**, or **Excellent Quality** settings. The higher the quality, the larger the file size.

❏ **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.

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. The higher the compression, the smaller the file but the greater the chance of image degradation.
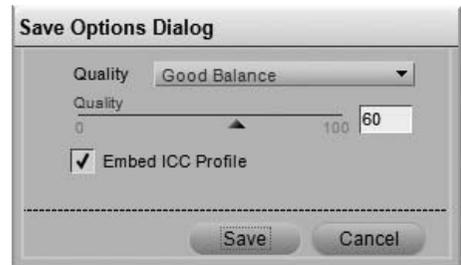
> **Shortcut**
>
> Ctrl + Shift + S (Windows)
> command + shift + S (Macintosh)

Revert

Select the **Revert** option to remove any changes from the file that were made since the last **Save** or **Save As** operation.

Protect File

Protected images cannot be edited within Capture NX 2. Protection can be turned on within the camera or within another Nikon image editing application. To turn off protection and enable the image to be edited by Capture NX 2, select the **Protect File** item to uncheck it.

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 (Macintosh)

Page Setup…

The "Page Setup" dialog provides you with controls for setting up your printer and print environment. With 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 the "Page Setup" dialog prior to selecting **Print**.

> **Shortcut**
> Ctrl + Shift + P (Windows)
> command + shift + P (Macintosh)

Print…
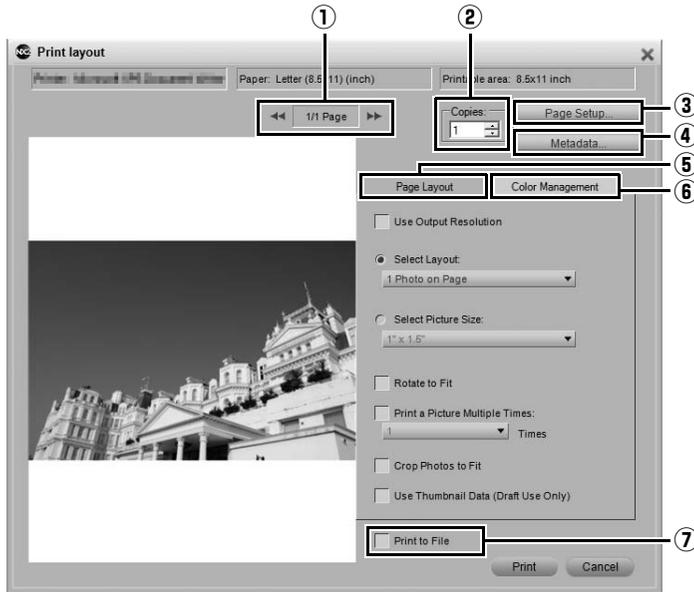
The "**Print Layout**" dialog enables you to set all of the necessary parameters in order to print your image. Additionally, a number of options are presented to enable you to create print packages, add metadata, and color manage your prints.

You can 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, you can create print packages, contact sheets, or print multiple images.

After **Print** is selected from the **File** menu, the "Print Layout" dialog will appear. Within the "Print Layout" 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:

① Page Display and Page Forward and Back Buttons

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 page 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.

② Copies

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

③ Page Setup

Click on this button to bring up the "**Page Setup**" dialog.

④ **Metadata**

Clicking on this button will open the "**Metadata**" dialog, where you can choose the metadata, 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**

The basic information section contains the file name and date shot 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.

❏ **Detail 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 Metadata is indicated here. Click on the **Change** button to adjust the settings.

Imprint Date Shot 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.

⑤ **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 Layout" 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 **Rotate to Fit**, **Print a Picture Multiple Times**, and **Use Thumbnail Data**.

Select Layout

This mode of printing enables you to select from a list of potential print packages. Select the desired number of images to print on each page from the pull-down 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 pull-down menu change based on the units of measurement set up within the "Preferences" dialog.

Rotate 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 Photos to Fit

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 1 1/3 to 1 1/2 times larger than the shortest side. Most paper sizes have between a 1:1.25 and 1:1.5 aspect ratios. 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.

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 thumbnail to print the image. This results in a faster print, but with significantly lower quality, and is recommended for drafts or proof sheets only.
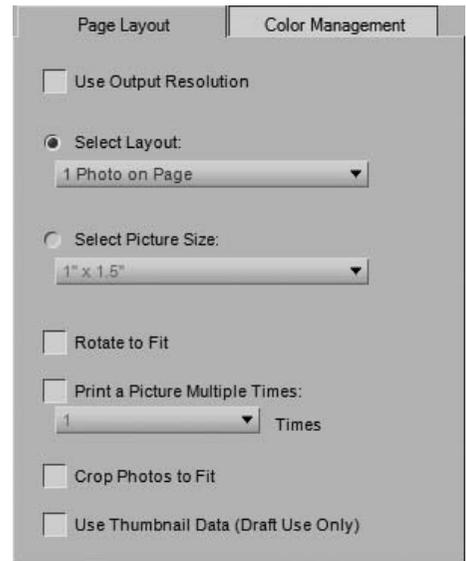
⑥ Color Management Tab

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 "Preferences" dialog.

🖉 **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.

Capture NX 2 provides the following intents:

Perceptual	This rendering intent maintains the relationships of colors so that the printed image appears natural to the human eye. While this intent maintains the relationship of colors, the actual color values will be changed.
Saturation	This rendering intent produces highly saturated colors, but it may not produce accurate colors in a photograph.
Relative Colorimetric	This rendering intent maps all of the colors that fall outside of the gamut of the target profile to the closest reproducible color. This profile reproduces accurately all of the colors that are within the range of colors reproducible by your printer. 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 relative colorimetric, except that it maps the white point of the image to the white point of the destination profile. It is recommend that you use absolute colorimetric only 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.

⑦ **Print to File**

If the **Print to File** box is checked, the **Print** button will change into a **Save** button. Click the **Save** button, to save the current layout displayed within the print preview area as a JPEG file. You can select the location and the quality of the JPEG file that is created.

> **Shortcut**
> Ctrl + P (Windows)
> command + P (Macintosh)

Exit

Select this option to quit Capture NX 2.

> **Shortcut**
> Ctrl + Q (Windows)
> command + Q (Macintosh)

✍ **Please note**: Within the Macintosh operating system, this feature is called **Quit** and can be found under the Capture NX 2 menu.

Edit Menu

Edit
Undo	Ctrl+Z
Redo	Ctrl+Shift+Z
Cut	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Duplicate	**Ctrl+D**
Delete	Del
Rename	F2
Select All	Ctrl+A
Deselect All	Ctrl+Alt+A
Flip	▶
Rotate	▶
Size / Resolution...	Ctrl+Alt+S
Fit Photo...	
Preferences	▶

Undo

The **Undo** command 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 2 uses, you can also undo an enhancement by removing it or altering the settings within the **Edit List** palette without any loss of image quality.

> **Shortcut**
> Ctrl + Z (Windows)
> command + Z (Macintosh)

Redo

The **Redo** command 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 (Macintosh)

Cut

The **Cut** command clears an object and places it within Capture NX 2'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 (Macintosh)

Copy

The **Copy** command takes the selected object and places a copy of that selected object within Capture NX 2'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
- Enhancements selected within the edit list

> **Shortcut**
> Ctrl + C (Windows)
> command + C (Macintosh)

Paste

The **Paste** command takes the last object placed within Capture NX 2's clipboard and places it within the current active area. The **Paste** command can be used on the following objects:

- Text when a text box is active
- Selected control points when an image window is active
- Images when the browser is active
- Enhancements when the edit list is active

> **Shortcut**
> Ctrl + V (Windows)
> command + V (Macintosh)

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 when the image window is active and no control points are selected
• Images within the browser
• Control points

Delete

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

• Selected text
• Selected control points
• Selected images within the browser
• Selected steps or enhancements within the **Edit List** palette
• Selection created by the selection brush, selection gradient, fill or clear tools within an image window

Rename

The **Rename** function is only available while in the browser. Select this function to rename the currently selected image or group of images. When a single image is selected, you can enter the new name for the image directly within the browser. When selecting a group of images, selecting **Rename** will bring up the "File Naming" dialog, enabling you to select the options for renaming that group of images.

For more information on the "File Naming" dialog, please see the "File Naming Dialog" section of Chapter 22, "Batch Menu".

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 displayed on the image
• The **Edit List** palette to select all of the steps
• The browser to select all of the images currently displayed

Shortcut
Ctrl + A (Windows)
command + A (Macintosh)

Deselect All

The **Deselect All** option deselects the currently active selection. Use **Deselect All** within:

• A text box to deselect any selected text
• An image to deselect all selected control points or to remove any selection created by a lasso or marquee tool
• The **Edit List** palette to deselect any selected steps
• The browser to deselect any selected images

Shortcut
Ctrl + Alt + A (Windows)
command + option + A (Macintosh)

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

The **Rotate** sub-menu provides you with options to rotate your image 90° clockwise or counter-clockwise or to straighten your image.

Rotating an image within the editor will cause a step to be created within the **Edit List** palette, enabling you to remove the rotation at any point in the future. When you save your images with the NEF file format, you can remove the rotation after the image has been saved or closed. Rotating an image found in the browser will be applied in a non-destructive fashion, however there will not be a rotation step added to the **Edit List** palette.

You are provided with the following options within the **Rotate** sub-menu:

Original

Rotate Right

Rotate Left

90 Degrees CW

Selecting **90 Degrees CW** will cause your image to be rotated 90° clockwise.

> **Shortcut**
> Ctrl + R (Windows)
> command + R (Macintosh)

90 Degrees CCW

Selecting **90 Degrees CCW** will cause your image to be rotated 90° counter-clockwise.

> **Shortcut**
> Ctrl + Shift + R (Windows)
> command + shift + R (Macintosh)

Straighten

Select **Straighten** to add a straighten step to the **Edit List** palette. In the **Straighten** step within the **Edit List** palette, you can rotate an image incrementally clockwise or counter-clockwise, or you can trace a line within your image that should be either horizontal or vertical and allow the straighten tool to automatically straighten your image.

To straighten your image using the straighten tool, follow these steps:

1 With an image open within the editor, click on the straighten tool in the toolbar.

2 Locate a line within the image that should be either vertical or horizontal and click on the start of the line. While holding the mouse button down, draw the entire length of the line, letting go when you have reached the end of that line. The straighten tool will then calculate the direction and degree of the rotation to apply to the image to make the line you described either horizontal or vertical.

3 If you made a mistake while drawing the line, you can click on the line you added to the image and adjust one of the two anchor points found at either end of the line, or you can re-draw the line by clicking and dragging within the image window again.

4 By default, Capture NX 2 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 information are created when the image is rotated, and are represented by pure white pixels. To prevent Capture NX 2 from automatically cropping the image, click on the **Include areas without image data** checkbox within the **Straighten** step of the **Edit List** palette.
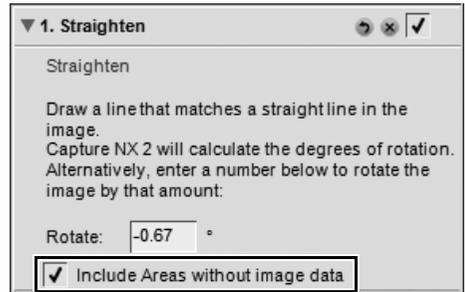
5 If you are satisfied with the straightening effect, continue editing your image using the other tools available within Capture NX 2 or perform a save. The straightening effect is now applied to your image. To cancel the straightening effect, click on the **Delete** button for the **Straighten** step within the **Edit List** palette or click on the **Straighten** step and press the delete key on your keyboard.
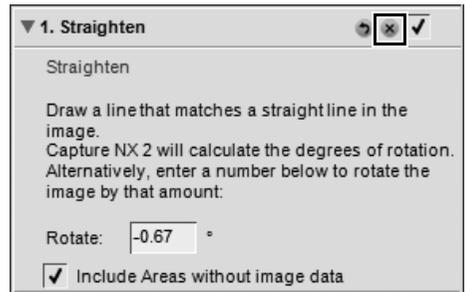
Size / Resolution

Size / Resolution 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:

Resample Image

The **Resample Image** option enables you to change the file to match a specific output size and resolution. Enter the desired **Width**, **Height**, and **Resolution**, or pixel dimensions, and the image will be interpolated using a bi-cubic interpolation method. Image data is either created or discarded so that the image fits within the newly set parameters.

Don't Resample Image

The **Don't Resample Image** option enables you to redistribute the image information without changing image data. While in this mode, image detail cannot be either created or discarded. Entering either the new **Width** or **Height** or the new **Resolution** will automatically adjust the other set to match. For example, changing the height of an 8 inch by 10 inch image at 300 dpi to 4 inches will result in a 4 inch by 5 inch image at 600 dpi.

🖉 **Please note**: Images cannot be made to have any one side larger than 21600 pixels.

After you have chosen the new size and resolution for your image, click on the **Apply** button to accept the changes.
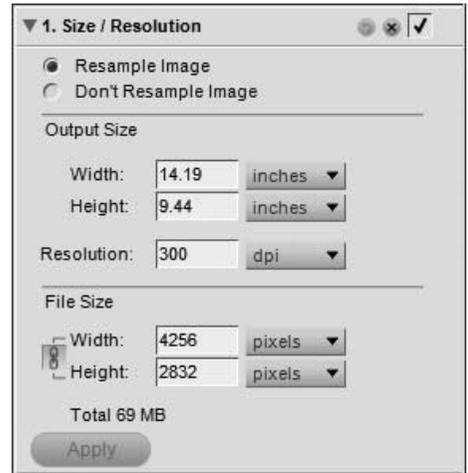
Shortcut

Ctrl + Alt + S (Windows)
command + option + S (Macintosh)

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 batch resize a number of images that may each have mixed orientations, some portrait and some landscape orientation. The **Fit Photo** command will ensure that each image is set to the appropriate size, regardless of their orientation.

The **Fit Photo** command can be used to create a settings file to be used in a batch process by following these steps:

1 Navigate to the **Edit** menu and select **Fit Photo**.
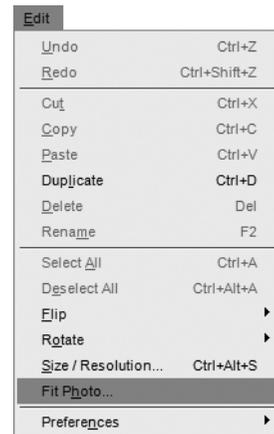
2 Select the appropriate units of measurement. If the images will be printed, it is best to use inches, centimeters, or millimeters. If the images will be displayed on a web page or other electronic display medium, select **pixels**.
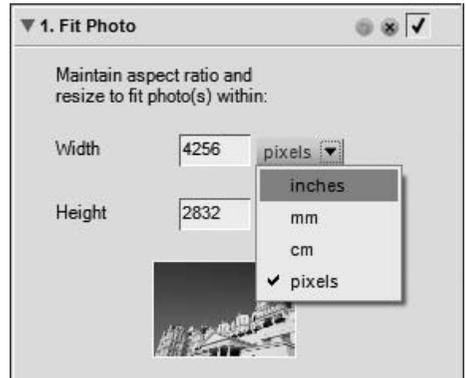
3 Enter the largest value of the image size into both the **Width** and **Height** boxes. For example, if you want to resize a folder of images of mixed orientations to 4" × 6", enter 6 inches into both **Width** and **Height** boxes. This will ensure that all images have their longest size set to 6 inches, with the remaining side determined automatically based on the aspect ratio of the processed image.

4 Click **Apply**.

5 Navigate to the **Batch** menu and select **Save Adjustments**.
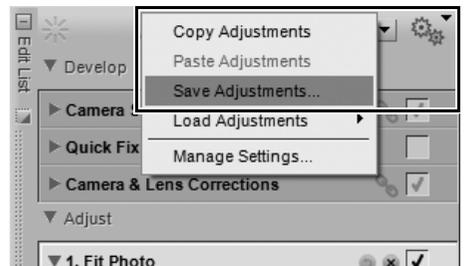
6 In the "Save Adjustments" dialog, ensure that the **Fit Photo** step is checked, enter an appropriate name for the new settings file, and click **OK**.

Name	Type
☐ Auto Red-Eye	Adjustment
☐ Vignette Control	Adjustment
Step 1	**Fit Photo**
☐ All Selected	Selection
☑ Fit Photo	Adjustment

Save as: 001

Destination:
Browse... C:\Users\User\Documents\Capture NX\Settings Files\

OK   Cancel
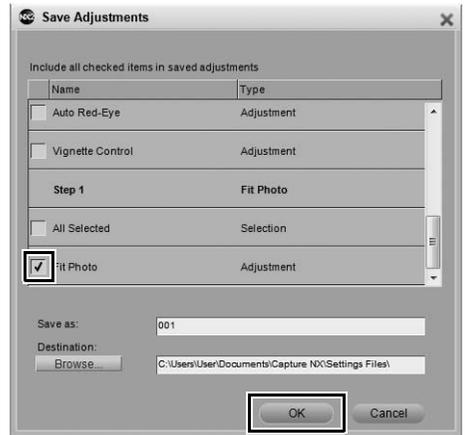
You now have a settings file available that can be used in a batch process to apply the **Fit Photo** command to a series of images.

✎ **Please note**: In order to change an image with the **Fit Photo** command, you must click on the **Apply** button.

Chapter 20
Adjust Menu

Adjust

Light	▶
Color	▶
Focus	▶
Correct	▶
Noise Reduction...	
Color Profile...	
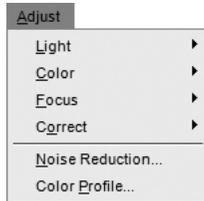
🖊 **Please note**: Tools that apply only to RAW images do not appear in the menus. Tools specific to RAW images are available in the **Develop** step of the **Edit List** palette.

Light > Levels & Curves

The **Levels & Curves** tool combines two of the most often used tonal enhancing features into one easy-to-use editor. The **Levels & Curves** tool 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** tool 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.

To use the **Levels & Curves** tool to edit your images, follow these steps:

1 Navigate to the **Adjust** menu, select the **Light** sub-menu, and select **Levels & Curves**.
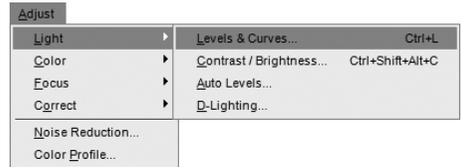
2 Select the channels to be adjusted using the channel selector. Typically, the **RGB** option is used when editing images.
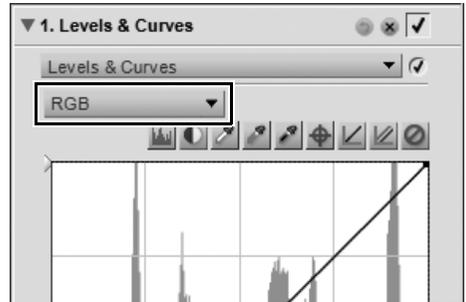
3 Click directly on the curve to add an anchor point that can be moved and adjusted. By increasing the slope of the curve you will increase the contrast in the image. Decreasing the slope of the curve will decrease the contrast in the image. The anchor points may also be set to minimize the amount of change that occurs to a tonal range of the image.
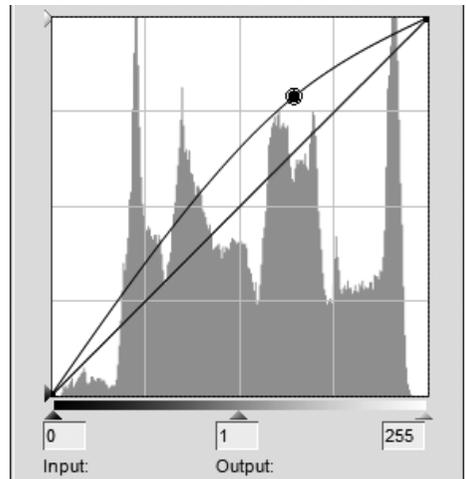
4 Delete any unwanted anchor points by clicking and dragging the anchor point outside of the curve editor.

The **Levels & Curves** tool provides you with the following controls:
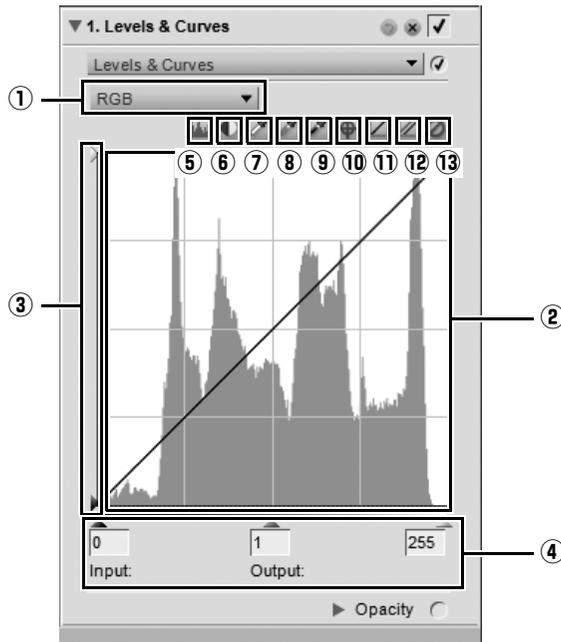
① Channel Selector

The channel selector lets you select which channel, or portion of colors, you want to affect. The default is to edit all three channels, red, green, and blue, simultaneously. Click on this pull-down menu to select an individual channel to edit.

> **Shortcut**
>
> (while a **Levels & Curves** step is active):
>
> RGB Channels: **Ctrl + ~ (Windows)**
> **command + ~ (Macintosh)**
>
> Red Channel: **Ctrl + 1 (Windows)**
> **command + 1 (Macintosh)**
>
> Green Channel: **Ctrl + 2 (Windows)**
> **command + 2 (Macintosh)**
>
> Blue Channel: **Ctrl + 3 (Windows)**
> **command + 3 (Macintosh)**

② Curve Editor

The curve editor is where the majority of enhancements are made within the **Levels & Curves** tool. Within the curve editor, you are presented with a histogram that presents 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 displays a bar graph representing 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 found at each luminosity level 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 the channel selector is set to the **RGB** option, 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** step.

Click anywhere on the curve to add an anchor point. Move the anchor point to alter the relationship of input and output values. Moving a point up makes objects of that value brighter, while moving a point down makes objects of that value darker. The curve is automatically adjusted to ensure a smooth transition between each point added to the image.

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

③ Black and White Output Sliders

These two sliders enable you to set the maximum and minimum brightness levels of the image. By dragging the white output slider down, you darken the lightest luminosity level in the image, and by dragging the black output slider up, you lighten the darkest luminosity level in the image. These two sliders are often used if the darkest and lightest colors in the image should not be pure white (255, 255, 255) and pure black (0, 0, 0).

④ Black, Mid Point, and White Sliders

The black, mid-point, and white 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 to the left to complete black (or to the absence of the channel's color when working on an individual color channel). This will redistribute 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.

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.

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). This will redistribute 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.

⑤ Show Before / After Histogram

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 to the image by the current channel. The after histogram always updates itself based on the changes made in the **Levels & Curves** step.

⑥ Auto Contrast

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-click (Windows) or option-click (Macintosh) to affect the current selected channel only.

Capture NX 2 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.

⑦ Set White Point

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** option of the image information overlay control within the "Histogram" section of the **Photo Info** palette to identify the lightest value in the image that you want to be white. The select white point button will affect both the tonality of the active image as well as the color balance.

⑧ Set Neutral Point

Clicking on this button will change the mouse cursor into a neutral point dropper cursor. When you click on your image, Capture NX 2 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 select neutral point button affects 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.

⑨ Set Black Point

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 slider 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** option of the image information overlay control within the Histogram section of the **Photo Info** palette to identify darkest value in the image that you want to be black. The select black point button will affect both the tonality of the active image as well as the color balance.

⑩ Add Anchor Point

Clicking on this button will change the mouse cursor into an eyedropper 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-click (Windows) or option-click (Macintosh) to affect the current channel only.

⑪ Reset Current Channel

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

⑫ Reset All Channels

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

⑬ Temporary Cancel

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

> **Shortcut**
> Ctrl + L (Windows)
> command + L (Macintosh)

Light > Contrast / Brightness

The **Contrast / Brightness** step 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** step is a perfect way to produce quick contrast or brightness effects that you can selectively add to your image using one of the selection tools.

The **Contrast / Brightness** tool provides you with the following controls:

Contrast

The **Contrast** slider provides you with the ability to affect the contrast of your image. The contrast algorithm was designed to prevent 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 the image, or move the slider to the right to brighten the image.

Light > Auto Levels

The **Auto Levels** tool enables Capture NX 2 to analyze your image in order to determine the correct adjustments to spread the available color information across the entire range of tonal possibilities. While similar to the auto contrast button within the **Levels & Curves** step, the **Auto Levels** tool provides you with additional controls.

The **Auto Levels** tool provides you with the following controls:

Auto Levels Method

Click on the auto levels method pull-down menu to select between one of the two possible methods:

Auto

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

Advanced

The **Advanced** method begins with the same results as the **Auto** method, but provides you with access to the **Correct Contrast** and **Correct Color Cast** sliders.

Correct Contrast

The **Correct Contrast** slider is provided by selecting the **Advanced** method in the auto levels method pull-down menu. Use this slider to either increase or decrease the amount of contrast that is applied to your image. A value of 50 is equivalent to the contrast effect of the **Auto** method.
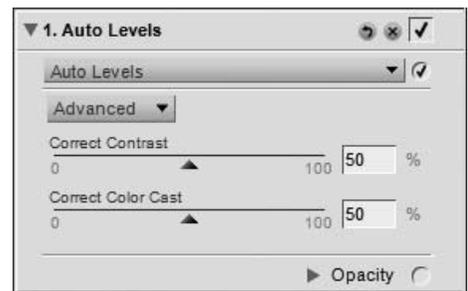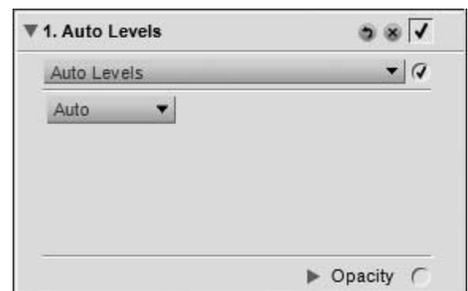
Correct Color Cast

The **Correct Color Cast** slider is provided by selecting the **Advanced** method in the auto levels method pull-down menu. This slider either increases or decreases the degree to which the color cast is reduced within the image. A value of 50 is equivalent to the color cast reduction result of the **Auto** method.

Light > D-Lighting

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

The **D-Lighting** tool provides you with the following controls:

Faster (HS) Method

The **Faster (HS)** method of D-Lighting 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
Move the **Adjustment** slider to the right to bring out details in the shadows and highlights of the active image.

Color Boost
Move the **Color Boost** slider to the right to increase saturation throughout the entire image.
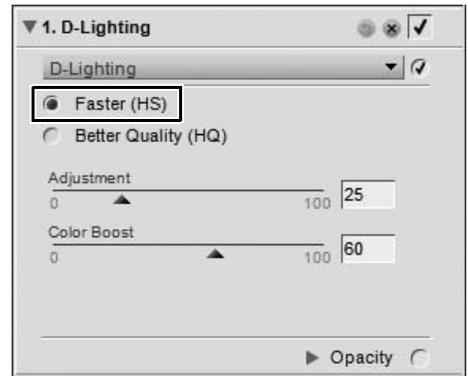
Better Quality (HQ) Method

The **Better Quality (HQ)** method enables you to take additional control over the shadows and highlights in the image, producing a better quality enhancement than the **Faster (HS)** method.

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

Highlight Adjustment
Move the **Highlight Adjustment** slider to the right to reveal additional detail in the highlight areas of the active image.

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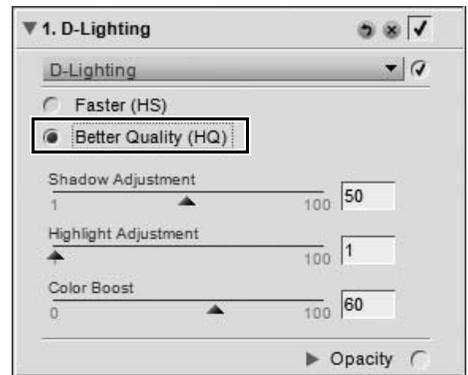
Color > LCH

The **LCH** tool enables you to individually control the luminosity, color lightness, chroma, and hue of the active image using individual editor dialog.
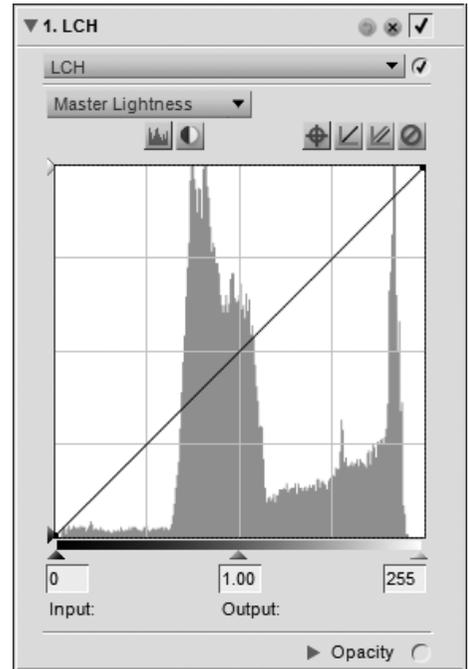
To use the **LCH** tool to edit your images, follow these steps:

1 Navigate to the **Adjust** menu, select the **Color** submenu, and select **LCH**.

2 Select the first channel to be adjusted using the channel pull-down menu.
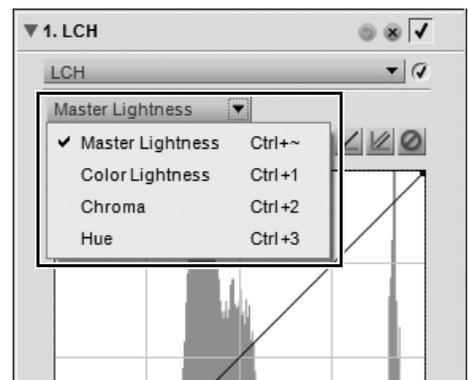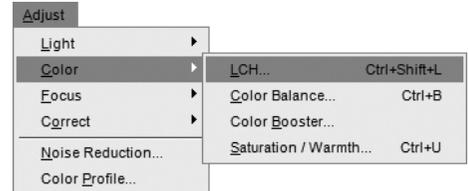
3 Click directly on the curve for the selected channel to add an anchor point that can be moved and adjusted. Depending on the channel selected, the adjustments made to the curve will have different effects on the image.

4 After making adjustments to the first channel, you may make additional adjustments by selecting another option from the channel pull-down menu. The enhancements made within each editor will remain, enabling you to make adjustments to different channels within the same **LCH** enhancement.
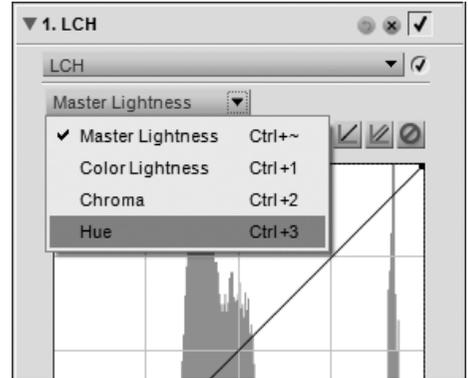
The **LCH** tool provides four different channels, each channel providing controls unique to that method. Use the channel pull-down menu to select which channel to use. The available channels are:

Master Lightness

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

> **Shortcut**
>
> (while a **LCH** step is active):
>
> Ctrl + ~ (Windows)
> command + ~ (Macintosh)

The **Master Lightness** channel provides you with the following controls:
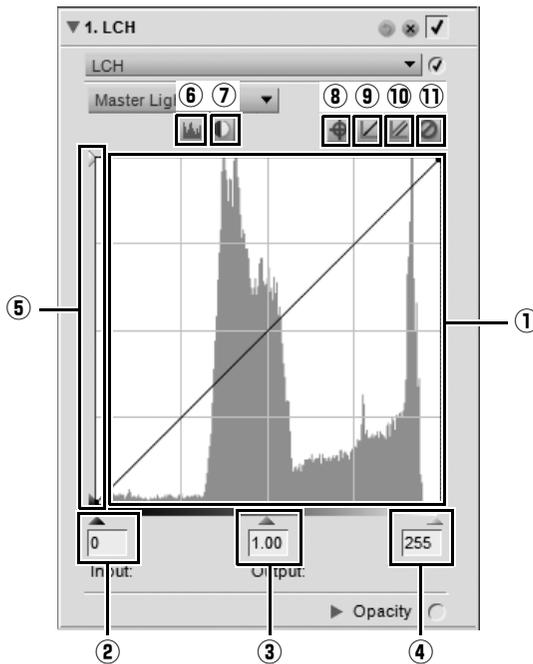
① Curve Editor	The curve editor is where the majority of the enhancements are made within the **LCH** feature. Within the curve editor, you are presented with a histogram that represents the total luminosity values within your image. A luminosity curve superimposed above this histogram enables you to control the relationship of input luminosity values to output luminosity values.
	The histogram displays a bar graph representing 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** channel.
	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 curve editor.

② **Black Point Slider**	Move the black point slider to the left to set all luminosity values from that point and to the right 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.	
③ **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.	
④ **White Point Slider**	Move the white point slider to the left to set all luminosity values from that 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.	
⑤ **Black and White Output Sliders**	The black and white output sliders enable you to set the minimum and maximum 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.	
⑥ **Show Before / After Histogram**	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 to the image in the **Master Lightness** channel. The after histogram is updated in real time, based on the changes made in the **Master Lightness** channel.	
⑦ **Auto Contrast**	Click on this button to automatically move the black and white point sliders to match the darkest and lightest values of the luminosity histogram.	
⑧ **Add 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.	
⑨ **Reset Current Channel**	Click on this button to reset only the **Master Lightness** channel to the default values.	
⑩ **Reset All Channels**	Click on this button to reset all channels within the **LCH** step to their default values.	
⑪ **Temporary Cancel**	Hold this button down to temporarily hide the effect of the **Master Lightness** channel.	

Color Lightness

The **Color Lightness** channel enables you to control the brightness of colors in the image without affecting chroma or hue. You can use this channel 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.

> **Shortcut**
>
> (while a **LCH** step is active):
>
> Ctrl + 1 (Windows)
> command + 1 (Macintosh)

The **Color Lightness** channel provides you with the following controls:
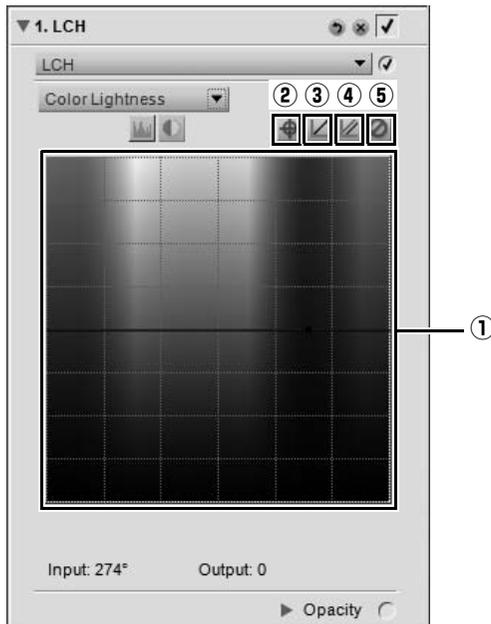
① Hue Map	The hue map represents the full spectrum of colors on the horizontal axis, with the brightness of the colors on the vertical axis. A color lightness curve, superimposed on the hue map, can be used to isolate and adjust the lightness of individual colors.
	Clicking on the curve will create an 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 or by clicking on an anchor point to select it and pressing the delete key.

② **Add 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 curve within the hue map.
③ **Reset Current Channel**	Clicking on this button will reset only the **Color Lightness** channel to the default values.
④ **Reset All Channels**	Clicking on this button will reset all channels within the **LCH** step to their default values.
⑤ **Temporary Cancel**	Hold this button down to temporarily hide the effect of the **Color Lightness** channel.

Chroma

The **Chroma** channel 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.

> **Shortcut**
>
> (while the **LCH** enhancement is active):
>
> Ctrl + 2 (Windows)
> command + 2 (Macintosh)

The **Chroma** channel provides you with the following controls:

① **Hue Map**	The hue map represents the full spectrum of colors on the horizontal axis, with the chroma of the colors on the vertical axis. Superimposed on 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 clicking and dragging the anchor points out of the hue map or by clicking on an anchor point to select it and pressing the delete key. Use the width slider to increase or decrease the range of similar colors affected by the color identified within 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.
② **Exclude Gray**	Check this box to prevent any saturation increases from affecting neutral colors in the image. This is helpful as neutral colors may seem oversaturated when chroma is raised. 📝 **Please note**: The **Exclude Gray** option has no affect when chroma is lowered below the value in the original image.
③ **Add 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.
④ **Reset Current Channel**	Click on this button to reset only the **Chroma** channel to the default values.
⑤ **Reset All Channels**	Click on this button to reset all editors within the **LCH** step to their default values.
⑥ **Temporary Cancel Button**	Hold this button down to temporarily hide the effect of the **Chroma** channel.

Hue

The **Hue** channel enables you to edit the hue of the entire image or of specific colors within the active image without affecting luminosity or chroma. This channel 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.

Shortcut

(while the **LCH** enhancement is active):

Ctrl + 2 (Windows)
command + 2 (Macintosh)

The **Hue** channel provides you with the following controls:

① Hue Map	The hue map represents the full spectrum of colors on a rotated horizontal axis. By default, the hue map is rotated by 60 degrees. Additional rotational values can be selected within the hue map rotation pull-down menu. Superimposed on this hue map, you are provided with a hue curve that can be used to isolate and adjust the hue of individual colors.
② Add 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.
③ Reset Current Channel	Click on this button to reset only the **Hue** channel to the default values.
④ Reset All Channels	Click on this button to reset all editors within the **LCH** step to their default values.
⑤ Temporary Cancel Button	Hold this button down to temporarily hide the effect of the **Hue** channel.
⑥ Hue Map Rotation	Use this pull-down menu to select one of the available hue map rotations, from 60° to 120° to 180°.

Shortcut

Ctrl + Shift + L (Windows)
command + shift + L (Macintosh)

Color > Color Balance

The **Color Balance** tool 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** step to alter that slider's effect on the image.

The **Color Balance** tool provides you with the following controls:

Brightness

Adjust the **Brightness** 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 the **Contrast** 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 the **Red** slider to the left to remove red from the image, causing the image to become more cyan. Adjust this slider to the right to add red to the image, removing cyan from the image.

Green

Adjust the **Green** slider to the left to remove green from the image, causing the image to become more magenta. Adjust this slider to the right to add green to the image, removing magenta from the image.

Blue

Adjust the **Blue** slider to the left to remove blue from the image, causing the image to become more yellow. Adjust this slider to the right to add blue to the image, removing yellow from the image.
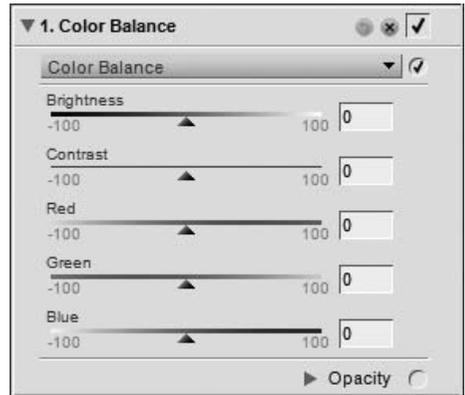
Shortcut

Ctrl + B (Windows)
command + B (Macintosh)

Color > Color Booster

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

The **Color Booster** tool provides you with the following controls:

Protect Skin Tones

When the **Protect Skin Tones** checkbox is enabled, you are able to boost the colors in your image without affecting skin tones.

Level

Move the **Level** slider to the right to boost the saturation of colors in the active image.

Color > Saturation / Warmth

The **Saturation / Warmth** tool 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** tool is a perfect way to produce quick saturation or warming effects by painting in selectively with one of the selective tools.

The **Saturation / Warmth** tool provides you with the following controls:

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. Moving the slider all the way to the left, will result in a grayscale 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.

> **Shortcut**
> Ctrl + U (Windows)
> command + U (Macintosh)

Focus > Gaussian Blur

Use the **Gaussian Blur** tool to dramatically reduce the appearance of detail throughout 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.

The **Gaussian Blur** tool provides the following controls:

Radius

The **Radius** slider controls the intensity of the blur being applied to the image.

Opacity

The **Opacity** slider blends the blur effect with the details in the image to provide you with control over the balance of detail. 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.

Focus > High Pass

The **High Pass** tool blocks 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 & Chrominance** mode with the **Opacity (Chrominance Ch.)** slider set to 0% and **Blending Mode** set to the **Overlay** option.
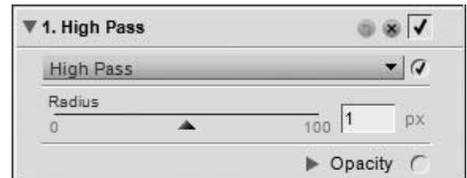
The **High Pass** tool provides you with the following controls:

Radius

The **Radius** controls the size of the edge to display in the resulting image. Settings for this slider are dependent 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.

Focus > Unsharp Mask

The **Unsharp Mask** tool increases the apparent sharpness of your images by enhancing the edges of objects in your image. The **Unsharp Mask** tool in Capture NX 2 is unique in that it always applies its sharpening to the luminosity of the image, which prevents any unwanted color shifts.

✎ **Please note**: It is recommended that you zoom your image to 100% while determining the amount of sharpening to apply.
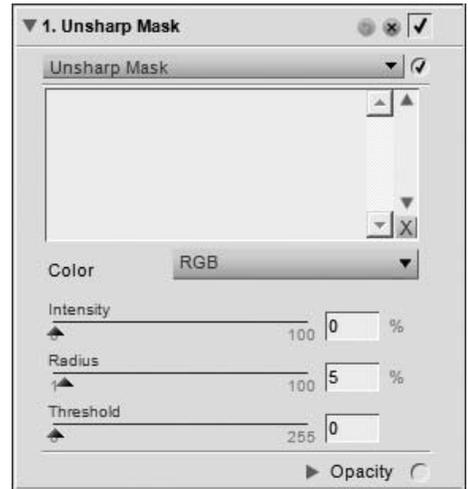
To use the **Unsharp Mask** tool, please follow these steps:

1 Navigate to the **Adjust** menu, select the **Focus** submenu and select **Unsharp Mask**.

2 Use the **Color** pull-down menu to select the areas within the image to sharpen. The color selected will determine the areas that are sharpened based on their color. To sharpen the entire image, select **RGB**.
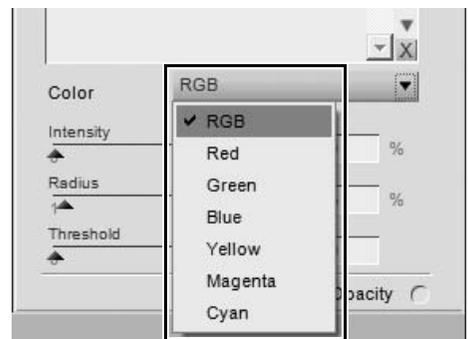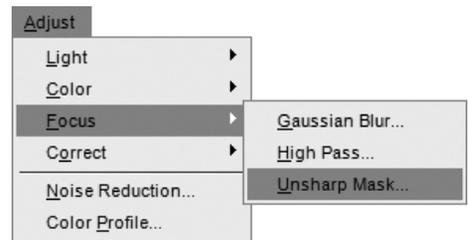
3 Adjust the **Intensity**, **Radius**, and **Threshold** sliders to achieve the desired sharpening result.
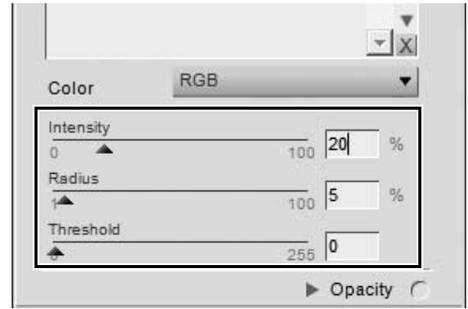
4 If desired, additional colors can be selected to sharpen with different values. Select a different option from the **Color** pull-down menu and adjust the **Intensity**, **Radius**, and **Threshold** sliders again to determine the sharpening to apply to the additional color.
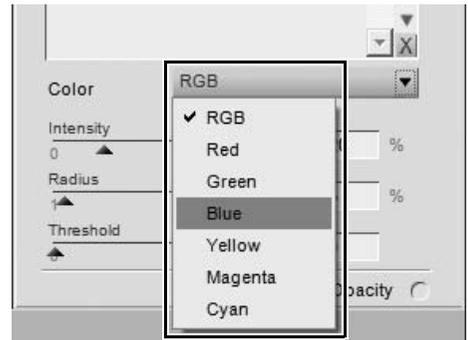
5 You can then adjust the order in which the sharpening affect is applied by selecting a color from the list and then pressing either the up or down arrow provided next to the list. Additionally, you can delete the sharpening affect applied to a color by highlighting that color from the list and clicking the delete button.
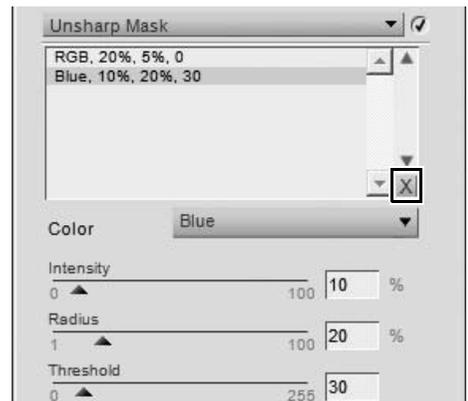
The **Unsharp Mask** tool provides you with the following controls:

Color

Use the **Color** pull-down menu to choose the areas in the image to sharpen based on their color. Select **RGB** to sharpen the entire image.

Intensity

The **Intensity** slider controls the amount of sharpening that will be applied to the color selected by the **Color** pull-down menu. 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 over-sharpened and artificial looking image.

Radius

The **Radius** slider enables you to increase the reach of the sharpening effect. The higher the radius setting, the wider the edges will appear in the sharpen image. A radius setting that is too high will produce visible halo artifacts, which can appear as white outlines around 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.

Delete

Use the delete button to delete the sharpening effect that is applied to a color. First select the color to highlight it in the displayed list and then click on the delete button.

Correct > Distortion Control

The **Distortion Control** tool provides controls to reduce both pincushion and barrel lens distortions. Pincushion distortion normally affects images shot with telephoto 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 wide-angle 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 the images.

The **Distortion Control** tool provides you with the following controls:

Correction

Use the **Correction** slider to reduce lens distortions from the image. Move this slider to the left to reduce pincushion distortion or move the slider to the right to reduce barrel distortion.
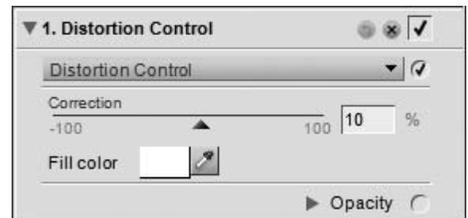
Fill Color

The **Fill Color** patch enables you to determine the color to use in the areas that lack image detail created when correcting for pincushion distortions. Click on this patch to access the color picker or click on the eye dropper to sample any color within an image open within Capture NX 2's editor.

Correct > Color Aberration Control

The **Color Aberration Control** tool can be used to adjust and control potential color fringes that can occur in photographs. Color aberration is caused by the various 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.

It is recommended that you view the image at 100% while making color aberration adjustments. It is important to review the results of the changes, especially around the corners of the image, to balance the effect.

The **Color Aberration Control** tool provides you with the following controls:

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.
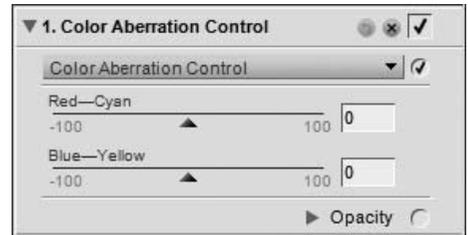
Noise Reduction

The **Noise Reduction** tool enables you to reduce the effects of digital noise that sometimes appear 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.
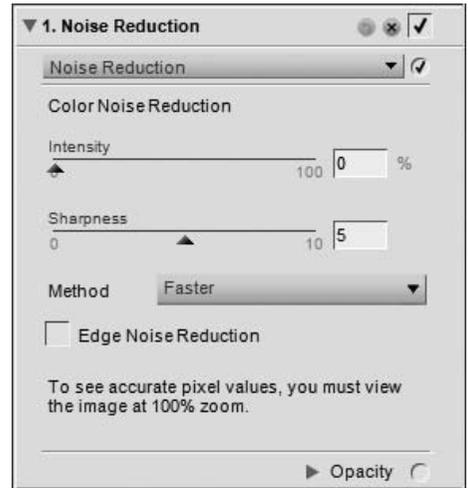
To use the **Noise Reduction** tool to reduce noise throughout your image, follow these steps:

1 Navigate to the **Adjust** menu and select **Noise Reduction**.

2 Select the **Method** to use on your image, either **Faster** or **Better Quality**.

3 Increase the **Intensity** slider until noise artifacts are no longer displayed within your image.

4 Increase the **Sharpness** slider until any image details that may have become softer after increasing the **Intensity** slider are visible again.

5 Adjust both the **Intensity** and **Sharpness** sliders until you reach a good balance of noise reduction and detail retention.

6 Check the **Edge Noise Reduction** checkbox if noise is visible along the edges of details within the image.

The **Noise Reduction** tool provides you with the following control:

Intensity

Move the **Intensity** slider to the right to increase the amount of noise reduction that is applied to the 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.

Method

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 2 will reduce noise artifacts around the edges of objects within the image, resulting in more distinct outlines.

Color Profile

The **Color Profile** tool provides you with image-specific color management options within Capture NX 2. Use these options to apply a profile, or convert the current profile to prepare the image for your specific color managed workflow.

Capture NX 2 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 Vista: Windows\System32\Spool\Drivers\Color

Windows XP: Windows\System32\Spool\Drivers\Color

Mac OS X: Library : ColorSync : Profiles

The **Color Profile** tool displays the current profile embedded within the image. Choose between the two different methods of altering the profile to color manage your image.

The **Color Profile** tool provides you with two different methods for altering the current profile, with each method providing different controls. The two available methods are:

Apply Profile

Choose the **Apply Profile** method 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.

Use the following controls to use the **Apply Profile** method:

> ### Profile Selector
> Use the profile selector pull-down menu to select one of the input profiles available and apply that profile to your image.
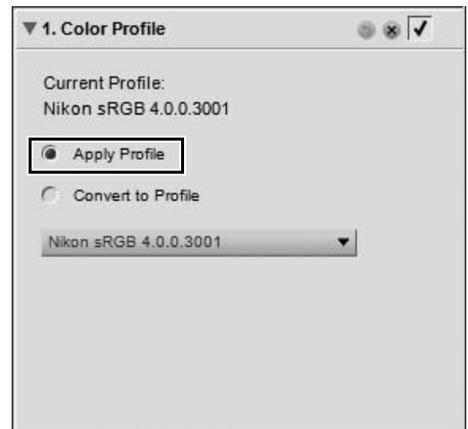
Convert to Profile

The **Convert to Profile** method 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** method results are the same as when you use the color management option within the "Print Layout" dialog. 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.

Use the following controls to use the **Convert to Profile** method:

Profile Selector

Use the profile selector to select one of the output profiles available on your computer to convert the image's colors profile to.

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 the 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.

Capture NX 2 provides the following intents:

Perceptual	This rendering intent maintains the relationships of colors so that the printed image appears natural to the human eye. While this intent maintains the relationship of colors, the actual color values will be changed.
Saturation	This rendering intent produces highly saturated colors, but it may not produce accurate colors in a photograph.
Relative Colorimetric	This rendering intent maps all of the colors that fall outside of the gamut of the target profile to the closest reproducible color. This profile reproduces accurately all of the colors that are within the range of colors reproducible by your printer. 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 relative colorimetric, except that it maps the white point of the image to the white point of the destination profile. It is recommend that you use absolute colorimetric only 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.

✐ **Please note**: Each color profile change will create a new step within the **Edit List** palette. You may at any time remove or change the color profile change within the current image editing session. If you save the image as an NEF file, you will also be able to go back to the **Edit List** palette and remove any of these changes without any loss of color detail.

After you have updated the color profile information for your image, click on the **Apply** button to accept the changes.

Chapter 21

Filter Menu

Filter
Photo Effects...
Add Grain / Noise...
Contrast: Color Range...
Colorize...
Black and White Conversion...   Ctrl+Shift+B

Photo Effects

The **Photo Effects** tool 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.

The **Photo Effects** tool provides four different methods, each method providing controls unique to that method. The available methods are:

Enhance Photo

Enhance Photo is the default method available to you when you open the **Photo Effects** tool. This mode enables you to control the tonality in your image, enhance dark tones, and control the color balance of the entire image.

The following controls are provided within the **Enhance Photo** method:

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** checkbox brings out additional detail in the shadows of the active image.

Auto
When you click on the **Auto** button, Capture NX 2 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.
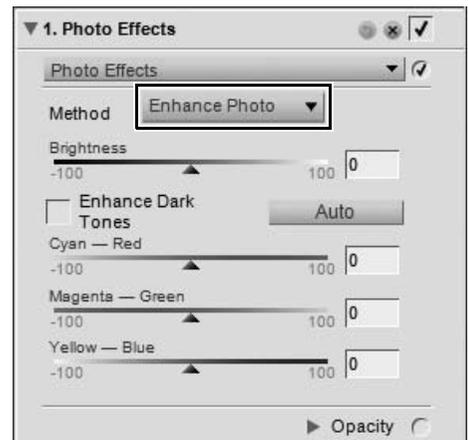
Cyan — Red

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.

Black and White

The **Black and White** method converts the current image to black and white, while providing you with controls over how the image is converted to black and white.

The following controls are provided within the **Black and White** method:

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** checkbox brings out additional detail in the shadows of the active image.

Auto

When you click on the **Auto** button, Capture NX 2 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.

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.
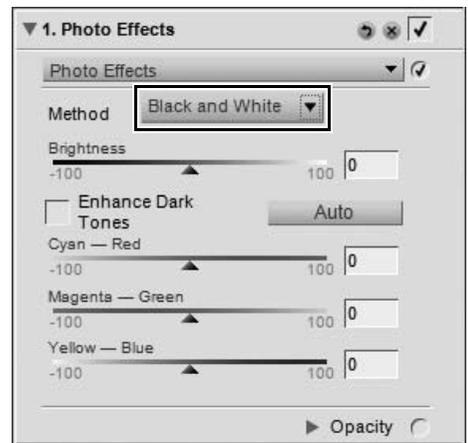
Magenta — Green

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.

Sepia

The **Sepia** method emulates the darkroom effect of applying a sepia tone to a black and white print.

The following controls are available within the **Sepia** method:

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** brings out additional detail in the shadows of the active image.

Auto

When you click on the **Auto** button, Capture NX 2 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.
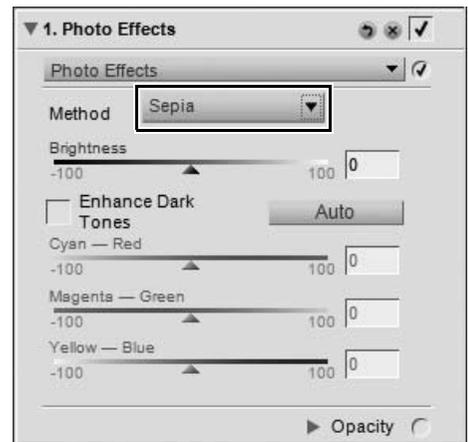
Tinted

The **Tinted** method 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.

The following controls are provided within the **Tinted** method:

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** checkbox brings out additional detail in the shadows of the active image.

Auto

When you click on the **Auto** button, Capture NX 2 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.

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.
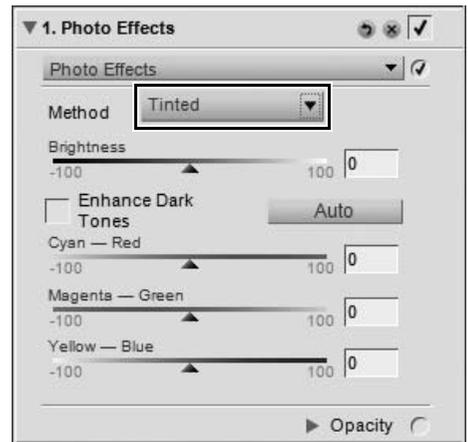
Add Grain / Noise

The **Add Grain / Noise** tool 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.

The **Add Grain / Noise** tool provides you 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**.
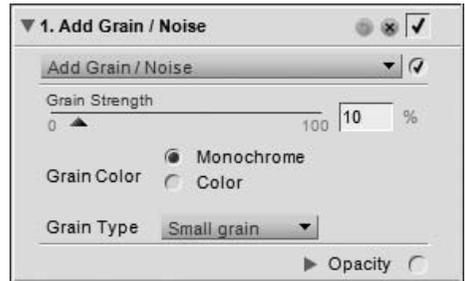
Contrast: Color Range

The **Contrast: Color Range** tool 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 while shooting black and white film.

The following controls are provided within the **Contrast: Color Range** tool:
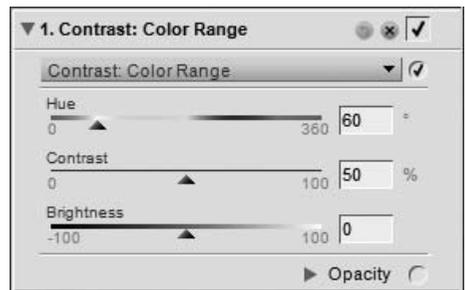
Hue

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 **Hue** 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.

Colorize

The **Colorize** tool enables you to add a color to your image.

The **Colorize** tool provides you with the following controls:

Color

Click on the **Color** patch to access the color picker or click on the eye dropper to sample any color within an image open within Capture NX 2's editor to select the color to add to the image.
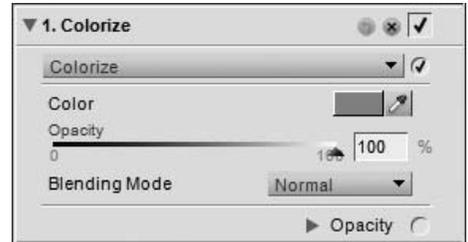
Opacity

The **Opacity** slider controls the intensity of the color that is being added to the image. A value of 100% will completely obscure the image's detail, with lower values allowing more and more of the original image's detail to be visible.

Blending Mode

The **Blending Mode** pull-down menu lets you select how the color is mixed with the colors from the image, using the same blending modes provided within the opacity mixer. For more information on the opacity mixer, see the "Opacity Mixer" section in Chapter 15, "Edit List".

Black and White Conversion

The **Black and White Conversion** tool transforms a color image to a black and white version of the original while providing control over the highlights, shadows, and the relationship of tonal ranges throughout the image. This feature provides controls similar to controls used in traditional black and white photography, with the added power of digital image manipulation.
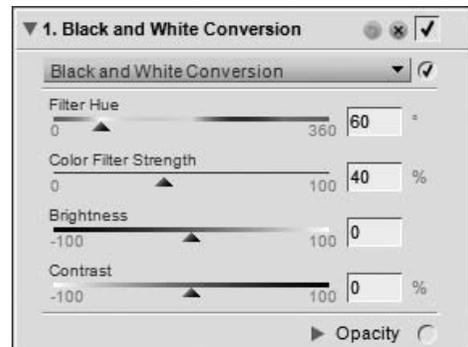
To use the **Black and White Conversion** tool, follow these steps:

1 Navigate to the **Filter** menu and select **Black and White Conversion**.

2 Adjust the **Filter Hue** and **Color Filter Strength** sliders to control the relationship of colors throughout the image and provide greater separation of tonal values.
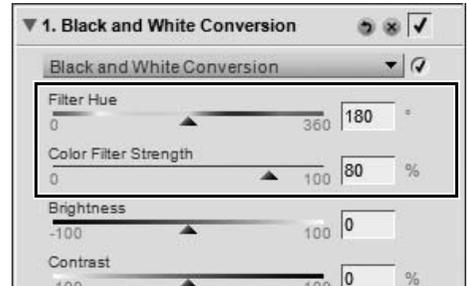
3 Adjust the **Brightness** and **Contrast** sliders in order to create the desired tonality of the image.
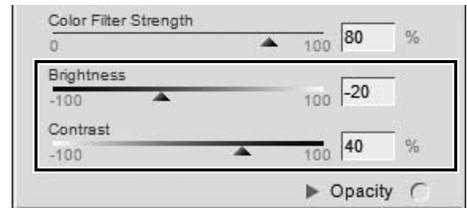
The **Black and White Conversion** tool provides you with the following controls:

Filter Hue

The **Filter Hue** slider enables you to choose the hue of the filter that is used to convert the image from color to black and white. Objects that are the color of the selected hue will become lighter while objects that are the opposite, or complementary color, of the hue selected will become darker.

Color Filter Strength

Use the **Color 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 different objects of the color selected by the **Filter Hue** slider and objects that are the opposite of the color selected by the **Filter Hue** slider 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.

> **Shortcut**
> Ctrl + Shift + B (Windows)
> command + shift + B (Macintosh)

Third-Party Plug-Ins

Capture NX 2 supports third-party plug-ins. After the plug-in is installed, additional entries are available in the **Filter** menu. Additional information can be found online.

Chapter 22

Batch Menu
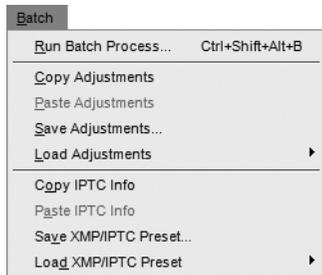
Run Batch Process

Select **Run Batch Process** to call up the **Batch Process** dialog in order to begin applying a batch process. Within the Batch Process dialog, you are presented with two different methods of applying a batch process: **Batch Process** and **Watched Folder**.

Batch Process

The Batch Process option enables you to run select a source folder of images, a settings file containing edits to apply to the images, the destination to place the processed images, and file name and file format options 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 this folder after they are processed**

The **Delete files from this folder after they are processed** option will delete the original files after the batch process has been completed.

Apply Settings

Check this box if you would like to apply a settings file to your image or if you would like to revert any NEF files to their original state. Unchecking this box will ensure that the enhancements found within the image are not changed from their last saved state.

❏ **Batch Mode**

Use Settings File	By selecting this option, you will be able to select a settings file to apply to the images identified in the "Source" section. • **Browse** Click on the **Browse** button within the **Apply Settings** section to locate a settings file to apply to the images.
Use Original Settings	By selecting this option, Capture NX 2 will revert any NEF processed through the batch process to the state prior to when any enhancements were made to it through Capture NX 2. This includes both RAW NEF files, which will be processed to the original settings created by the camera, or Converted NEF files, which will remove all enhancements made within Capture NX 2.

Conflict Management

The **Conflict Management** pull-down menu enables you to choose how Capture NX should resolve potential conflicts that may arise while performing a batch process on NEF images. 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.

Rename

By checking the **Rename** checkbox, Capture NX 2 will rename the images using the naming system found within the File Naming dialog. Click on the Edit button to display the File Naming dialog. For more information, please see the "File Naming Dialog" section later in this chapter.

Select File Format

Choose a file format for processed images from the Select File Format pull-down menu. The following options are available:

❏ **NEF:**

Choose a compression setting in the Advanced section.

❏ **TIFF:**

In the Advanced section, choose a color model (RGB or CMYK), bit depth (Always 8 bit or 16 bit if possible), and compression type (None or LZW).

❏ **JPEG:**

Use the pull-down menu to choose from **Highest Compression Ratio**, **Good Compression Ratio**, **Good Balance**, **Good Quality**, and **Excellent Quality**, or select the desired balance between image quality and compression using the slider.

Check Embed ICC Profile to embed an ICC color profile in each image.

Destination

The **Destination** section enables you to identify the location to use when saving processed images.

❏ **Select Folder**

By selecting **Select Folder**, you can manually identify the folder that the processed images should be placed in. 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 same folder as the source image.

After you have identified all of the parameters for the batch process, click **OK**. This will call up the **Processing Queue** and enable you to begin the batch process. For more information about the Processing Queue, please see the section "Processing Queue" later in this chapter.

Watched Folder

Watched folders enable you to create ongoing batch processes. Once a watched folder process has been started, Capture NX 2 will continually monitor for new images within the watched folder and process the images until the 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 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 2 to monitor for new images process.

❏ **Include Subfolders**

Check the **Include Subfolders** checkbox if you would like Capture NX 2 to monitor the contents of any subfolders within the watched folder.
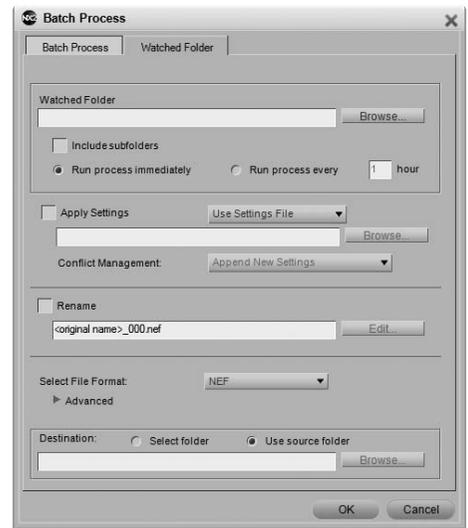
❏ **Run Process Immediately**

Select **Run Process Immediately** to continually monitor the watched folder for new images and process any new images as soon as they are placed within the targeted folder.

❏ **Run Process Every**

Enter a number to determine how frequently, in hours, Capture NX 2 should review the watched folder for new images.

Apply Settings

Check this box if you would like to apply a settings file to your image or if you would like to revert any NEF files to their original state. Unchecking this box will ensure that the enhancements found within the image are not changed from their last saved state.

❏ **Batch Mode**

Use Settings Files	By selecting this option, you will be able to select a settings file to apply to the images placed within the watched folder. • **Browse…** Click on the **Browse…** button within the "Apply Settings" section to locate a settings file to apply to the images.
Use Original Settings	By selecting this option, Capture NX 2 will revert any NEF processed through the watched folder to the state prior to when any enhancements were made to it through Capture NX 2. This includes both RAW NEF files, which will be processed to the original settings created by the camera, or Converted NEF files, which will remove all enhancements made within Capture NX 2.

Conflict Management

The **Conflict Management** pull-down menu enables you to choose how Capture NX 2 should resolve potential conflicts that may arise while performing a batch process on NEF images. You can choose from the following options:

❏ **Append New Settings**

The **Append New Settings** option is the default option when applying a watched folder. This option will automatically add the enhancements from the settings file to all of the images processed by the watched folder.

❏ **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 within the images processed by the watched folder.

❏ **Skip & Continue**

The **Skip & 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.

Rename

By checking the **Rename** checkbox, Capture NX 2 will rename the images using the naming system found within the File Naming dialog. Click on the Edit button to display the File Naming dialog. For more information, please see the "File Naming Dialog" section later in this chapter.

Select File Format

Choose a file format for processed images from the Select File Format pull-down menu. The following options are available:

❏ **NEF:**

Choose a compression setting in the Advanced section.

❏ **TIFF:**

In the Advanced section, choose a color model (RGB or CMYK), bit depth (Always 8 bit or 16 bit if possible), and compression type (None or LZW).

❏ **JPEG:**

Use the pull-down menu to choose from **Highest Compression Ratio**, **Good Compression Ratio**, **Good Balance**, **Good Quality**, and **Excellent Quality**, or select the desired balance between image quality and compression using the slider.

Check Embed ICC Profile to embed an ICC color profile in each image.

Destination

The **Destination** section enables you to identify the location to use when saving processed images.

❏ **Select Folder**

By selecting **Select Folder**, you can manually identify the folder that the processed images should be placed in. 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 same folder as the source image.

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.

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. This dialog is accessible when setting up a batch process or watched folder using the **Run Batch Process…** command from the **Batch** menu, within the **Processing Queue**, or when selecting multiple images in the browser and selecting **Rename…** from the **Edit** menu.

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 prevent a suffix from being added to the end of the new file name.

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.

✐ **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, click on the pause button. After you have modified the settings, click on the start button.

To display the full list of controls within the Processing Queue, click on the **Details** show/hide triangle. You will be presented with an additional progress bar that will show you the current task being applied as well as a thumbnail of the current image being processed, along with the following controls:
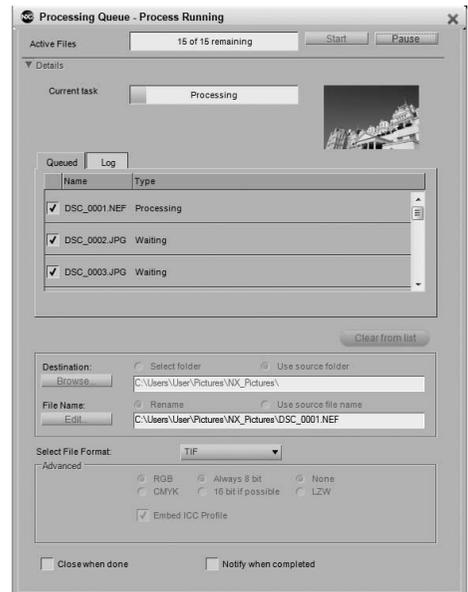
Queued

The **Queued** tab 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

The **Log** tab contains a list of all of the images that have already been processed along with any possible errors that have occurred.

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 processed images.

❏ **Select Folder**

By selecting **Select Folder**, you can manually identify the folder that the processed images should be placed in. 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 same folder as the source image.

File Name

The **File Name** section enables you to identify the naming convention to use when saving the images.

❏ **Rename**

Selecting **Rename** to have Capture NX 2 rename the images using the naming system found within the File Naming dialog. Click on the **Edit** button to display the File Naming dialog. For more information on the File Naming dialog, please see the section "File Naming Dialog" earlier in this chapter.

❏ **Use Source File Name**

Select **Use Source File Name** to save the processed image with the original file name.

Select 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 2 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.

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 Complete
When this option is selected, a message box will be displayed to notify you that the batch process has completed.

> **Shortcut**
> Ctrl + Alt + Shift + B (Windows)
> command + option + shift + B (Macintosh)

Copy Adjustments

The **Copy Adjustments** command enables you to copy to Capture NX 2's clipboard either the entire series of settings from the current image or only the highlighted steps or enhancements from the **Edit List** palette. 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, ensure that no steps are selected in the **Edit List** palette using the **Deselect All** command in the **Edit** menu and then select **Copy Adjustments** from the **Batch** menu.

To copy only selected enhancements, select one or more steps or enhancements and then select **Copy Adjustments** from the **Batch** menu.

Hint: You can copy more than one step at a time. Hold the control key (Windows) or command key (Macintosh) 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 Adjustments

The **Paste Adjustments** command enables you to paste any settings that are currently within Capture NX 2's clipboard into the active image in the editor or into selected images within the browser.

To use **Paste Adjustments**, ensure that you have previously copied adjustments using the **Copy Adjustments** command, 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 in the browser. The pasted settings will be appended onto the end of the **Edit List** palette for the selected images.

Due to the unique nature of the "Develop" section within the **Edit List** palette, copying and pasting the contents of the "Develop" section will replace the contents with the pasted settings in the images that were pasted into. To prevent the "Develop" section from being replaced, ensure that you select only steps from the "Adjust" section when performing the **Copy Adjustments** command.

Save Adjustments

Select the **Save Adjustments** command to open the "Save Adjustments" dialog. It is within the "Save Adjustments" dialog that you create settings files that will be used for batch processes in the future.

When the "Save Adjustments" dialog opens, you are presented with a representation of the current image's **Edit List** palette. It is from this list that you can select and identify which enhancements will be saved into the settings file.

The "Save Adjustments" dialog can be used to save all enhancements applied to the current image, or only selected steps and enhancements. Click on the checkboxes of the enhancements or adjustments that you wish to save into the settings file. By clicking and highlighting steps and enhancements within the **Edit List** palette prior to selecting **Save Adjustments**, you can cause the "Save Adjustments" dialog to open with the checkboxes for those adjustments and enhancements already checked.

Enter the name of that you would like to use for the settings file. The name you enter here will be displayed within the **Load Adjustments** sub-menu of the **Batch** menu.

Capture NX 2 will then create the settings file in the Capture NX 2 settings folder. To specify a different location, click on the **Browse** button and select an alternative location to store the settings file.

When saving to the default Capture NX 2 settings folder, Capture NX 2 will automatically place the settings file within a folder depending on the contents of the settings file. Settings files that contain only a single enhancement will be placed into a folder named after that enhancement. Settings files with multiple enhancements will be placed into a folder labeled "Multiple Settings". In this manner, your settings files will be organized enabling you to quickly locate a settings file that contains a specific type of enhancement.
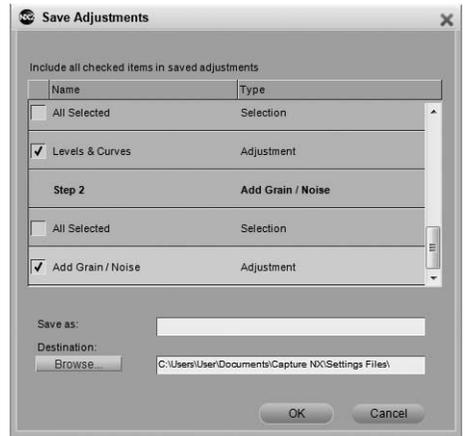
Load Adjustments

The **Load Adjustments** sub-menu provides you with a list of settings files that are currently available within Capture NX 2. You can add additional settings files to this list using the "Manage Settings" section of the "Preferences" dialog.

Selecting a settings file while in the editor will apply those settings to the current image.

Selecting a settings file from the **Load Adjustments** sub-menu after selecting images in the browser will open the **Processing Queue** and enable you to start a batch process immediately.
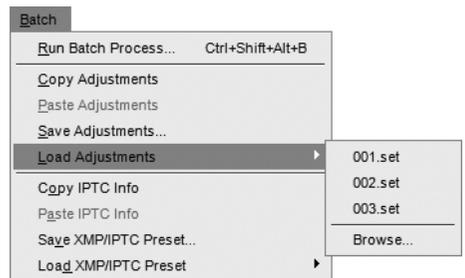
Copy IPTC Info

The **Copy IPTC Info** command will copy only the IPTC fields from the current image that contain entries to Capture NX 2's clipboard. You will then be able to use the **Paste IPTC Info** command to add those copied IPTC fields to one or more images.

Paste IPTC Info

Use the **Paste IPTC Info** command to apply the IPTC fields copied using the **Copy IPTC Info** command to one or more images.

Selecting **Paste IPTC Info** while working in the editor adds the copied IPTC fields to the active image. IPTC information already found within the current image will be overwritten by the IPTC information in the Capture NX 2 clipboard.

Selecting **Paste IPTC Info** while working in the browser adds the copied IPTC fields to the selected images. IPTC information already found within the selected images will be overwritten by the IPTC information in the Capture NX 2 clipboard.

Save XMP/IPTC Preset

The **Save XMP/IPTC Preset** option enables you to create an XMP/IPTC presets, a set of XMP/IPTC data that can then be applied to either a single image or to a group of images.

After selecting this option, a "Save XMP/IPTC Preset" dialog will be displayed, with the XMP/IPTC data found in the current image displayed. You can then modify the values displayed or enter values into the remaining fields. When a value is entered into a field, the checkbox for that field as well as for the section will be turned on. Only those fields with an active checkbox next to them will be added to an image when the XMP/IPTC preset is applied to an image or group of images.

To prevent a field from being modified by the XMP/IPTC preset, uncheck the box for that field.

To clear a field in an image or group of images, delete the content of that field in the field editor and check the box. This will result in a blank field with a checkbox next to it, indicating that when this IPTC preset is applied to an image, that image will have a blank field for the corresponding field. This is helpful if you would like to clear away one or more IPTC fields in an image.

Enter the name for the XMP/IPTC preset and click **OK**. The XMP/IPTC preset will then be accessible through the **Load XMP/IPTC Preset** sub-menu of the **Batch** menu.

Load XMP/IPTC Preset

The **Load XMP/IPTC Preset** sub-menu lets you select one of the available XMP/IPTC presets to load to one or more images.

Selecting an XMP/IPTC preset while in the editor will add the XMP/IPTC information to the current image, overwriting the content of any fields in the image that the XMP/IPTC preset is loaded into.

Selecting an XMP/IPTC preset while in the browser will add the XMP/IPTC information to the selected images, overwriting the content of any fields in the images that the XMP/IPTC preset is loaded into.

Chapter 23

View Menu
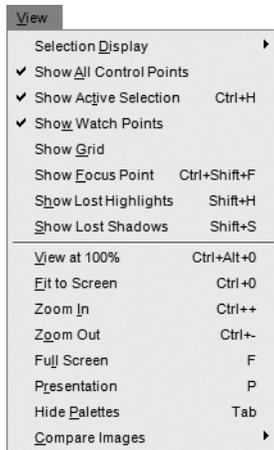
Selection Display

The options provided in the **Selection Display** sub-menu duplicate the selection display control pull-down menu found in a step within the **Edit List** palette. These options enable you to determine how to display the current selection made within the image window. To show the selection made by Color Control Points, use the **Show Selection** checkbox found within a color control point step.

For more information, please see the Color Control Point section of Chapter 13, "The Toolbar".

Choose from the following options:

Hide Selection
The **Hide Selection** option prevents the current selection from being displayed in the image window, showing only the image.
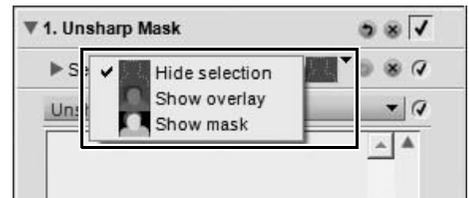
Show Overlay

The **Show Overlay** option displays the selection as a semi-transparent color overlay, superimposed on top of your image. Anywhere this color overlay is displayed, the current step's adjustment is being applied. Anywhere the image is displayed, no enhancement is being applied. You can control the color and opacity of the overlay within the "Preferences" dialog.

> **Shortcut**
> Toggle **Show Overlay** on and off:
> Shift + O

Show Mask

The **Show Mask** option displays the current selection as a black and white mask; black areas indicate that no enhancement is being applied to that area while white areas are being affected by the current step's enhancements.

> **Shortcut**
> Toggle **Show Mask** on and off:
> Shift + M

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, red-eye, or selection 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 Active Selection

The **Show Active Selection** option is selected by default whenever a selection is created with the lasso or marquee tools. By selecting this option, the active selection can be hidden.

✐ **Please note**: The active selection will continue to affect your image until you cancel the selection by either selecting **Deselect All** from the **Edit** menu or double-click within the image with one of the lasso or marquee tools selected.

> **Shortcut**
> Ctrl + H (Windows)
> command + H (Macintosh)

Show Watch Points

The **Show Watch Points** option is enabled by default. When this option is enabled, any watch points added through the **Photo Info** palette are displayed. By disabling this option, watch points can be hidden.

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" dialog.
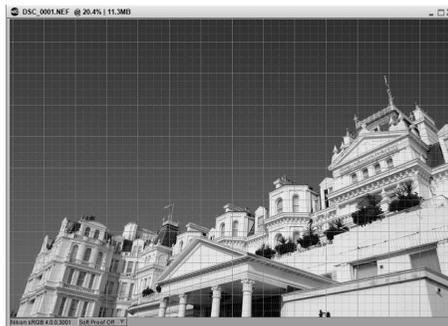
Show Focus Point

When working with images captured by a Nikon camera, you can display the focus area used when capturing the image by selecting **Show Focus Point** from the **View** menu.

✐ **Please note**: Use **Show Focus Point** only on images that have not been enhanced. Using the **Show Focus Point** feature after the image has been rotated, straightened, cropped, or after applying the **Fisheye Lens** or **Distortion Control** steps 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.

Show Lost Highlights

The **Show Lost Highlights** option identifies areas in which detail may have been lost in the highlights by locating pixels with the maximum values 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** option, 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 have 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** option identifies areas in which detail may have been lost in the shadow areas by locating pixels with the minimum value of 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** option, 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 channel.
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.

View at 100%

Select this option to set the zoom ratio for the current image to 100%.

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.

Zoom In

Select this option to zoom one step into the active image.

Zoom Out

Select this option to zoom one step out of the active image.

> **Shortcut**
>
> Ctrl + - (Windows)
> command + - (Macintosh)

Full Screen

The full screen display mode is useful for maximizing the space used by Capture NX 2. Use this display mode when editing images to minimize distractions and enable you to focus entirely on the image that is being edited. The full screen display mode places your images against a medium-gray background, ensuring that the decisions you make while editing your image are not influenced by the area surrounding your image. To return to the normal display mode, select this option again.

When working with multiple displays, the full screen mode will be placed upon the display that contains the active image. Additionally, all open images will be moved to that display.

To toggle between the currently open images, use the forward and back arrows found along the bottom edge of the screen. These will cycle between the images that are open within Capture NX 2.

> **Shortcut**
>
> The **F key** toggles from the full screen display mode to the normal display mode
>
> The **Esc key** exits the full screen display mode

Presentation

The presentation display mode is useful for presenting your images or to work on your images against a black background. In this mode, the menu bar and taskbar or system dock are hidden. Additionally, all docked palettes are also hidden. To access a specific palette, move your cursor to the edge of the screen where that palette typically resides. The palette will slide out from the edge of the screen and become accessible as long as your mouse is over it. Undocking a palette will cause that palette to always be visible. To return to the normal display mode, select this option again.

When working with multiple displays, the presentation mode will be placed upon the display that contains the active image. Additionally, all open images will be moved to that display.

To toggle between the currently open images, use the forward and back arrows found along the bottom edge of the screen. These will cycle between the images that are currently open within Capture NX 2.

> **Shortcut**
>
> The **P key** toggles from the presentation display mode to the normal display mode
>
> The **Esc key** exits the presentation display mode

Hide Palettes
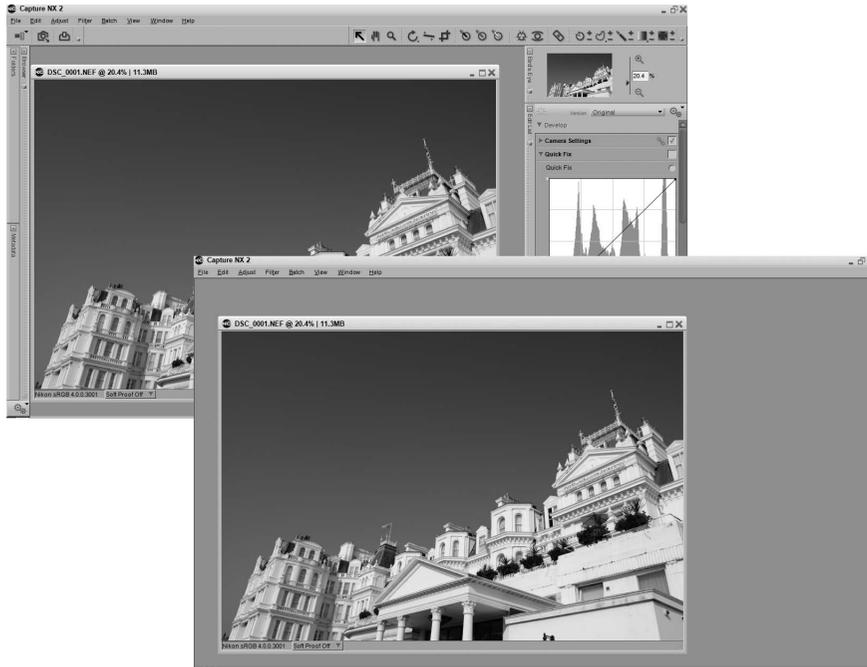
Select this feature to quickly hide all of the palettes in the work area.

Shortcut

Tab key

Compare Images

The three different compare images modes of Capture NX 2 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 available while working on an image within the editor and enables you to compare the current state of the image with the original state of that same image.

The different compare modes are:

Compare in Browser

Use this option to compare between two, three, or four 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.

Double-click on an image to open it within the editor.

To exit the **Compare in Browser** mode, either reselect the **Compare in Browser** option from the **View** menu or click anywhere outside of the compared images.

Compare in Editor
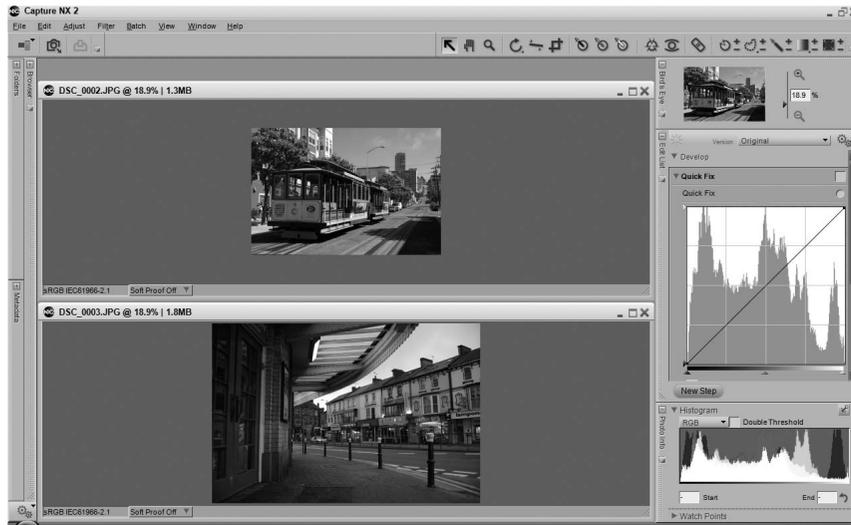
Use this option to compare two different images in the editor. Select two different images in the browser and select **Compare in Editor** from the **View** menu. This will open both images within the editor and zoom the images so that they fit within the available space of your screen. While you are 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
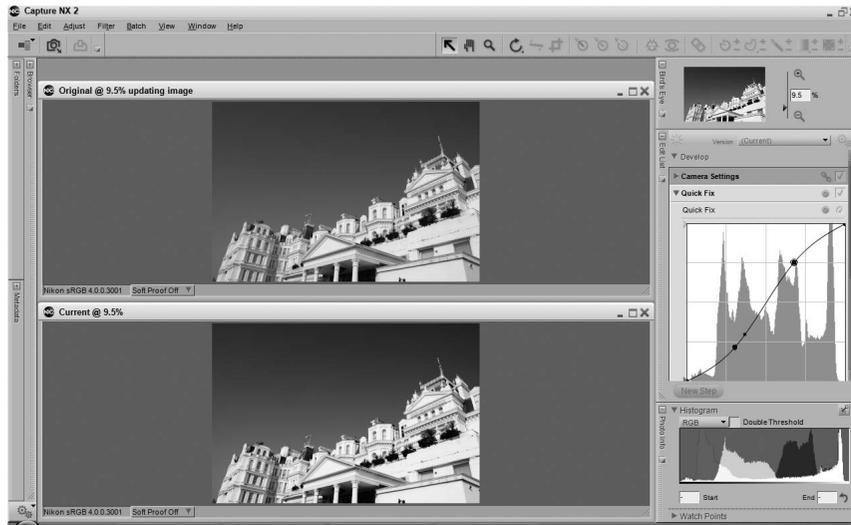
Use this option to compare the original with the current state of the active image within the editor. Select this option from the **View** menu when you are working on an image in the editor, and Capture NX 2 will automatically open a duplicate window of the same image and resize it so that the two windows fit within the available space of your screen. The image either on the left or on the top, depending on the orientation of the image and the available space on your screen, 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.

Chapter 24
Window Menu
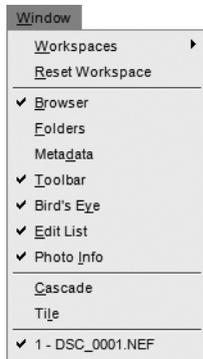
Workspace

The **Workspaces** sub-menu provides you with an alternative location to select a workspace to use to arrange Capture NX 2's palettes and windows. For more information about the different options provided within the **Workspaces** sub-menu, please see the "Workspaces" section in Chapter 8, "Interface".

Reset Workspace

Selecting the **Reset Workspace** option will reset all of the palettes and windows to their default locations, based on the current active workspace.

Browser

Selecting the **Browser** option from the **Window** menu will display the browser.

> **Shortcut**
> Ctrl + Alt + B (Windows)
> command + option + B (Macintosh)

Folders

Selecting the **Folders** option from the **Window** menu will display the **Folders** palette.

Metadata

Selecting the **Metadata** option from the **Window** menu will display the **Metadata** palette.

Toolbar

Selecting the **Toolbar** option from the **Window** menu will show the toolbar.

Bird's Eye

Selecting the **Bird's Eye** option from the **Window** menu will display the **Bird's Eye** palette.

Edit List

Selecting the **Edit List** option from the **Window** menu will display the **Edit List** palette.

Photo Info

Selecting the **Photo Info** option from the **Window** menu will show the **Photo Info** palette.

Cascade

The **Cascade** option resizes (if necessary) 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 screen.
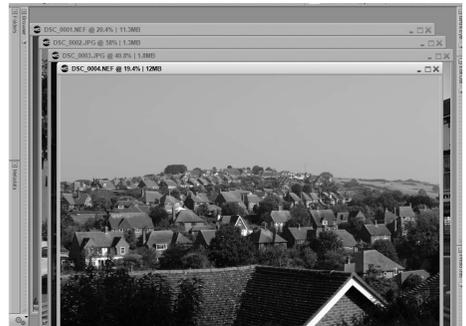
Tile

The **Tile** option resizes and arranges all of the currently open image windows so that they all appear on the screen in a grid.

Chapter 25

Help Menu

Contents

The **Contents** option brings up the help contents within your default Internet browser. Navigate through the help to access the information from this user's manual in a searchable format.

Shortcut
F1 key (Windows)
command + ? (Macintosh)

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 2. Follow one of those links to reach the online technical support options.

📝 **Please note**: These options 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.

Update Capture NX 2

Use this option to check for updates to Capture NX 2. Selecting this option will open the Nikon Message Center which will automatically check for any available updates and provide you with an option to download that update.

About Capture NX 2

The **About Capture NX 2** option shows you the version number of Capture NX 2, which can be helpful when contacting technical support.

✐ **Please note**: Within the Macintosh operating system, the **About Capture NX 2** option can be found under the **Capture NX 2** menu.

Chapter 26
Appendix: Short-cuts

The Browser

Tool	Windows	Macintosh
Open Browser	Ctrl + Alt + B	command + option + B
Label image(s) with label 1	1	1
Label image(s) with label 2	2	2
Label image(s) with label 3	3	3
Label image(s) with label 4	4	4
Label image(s) with label 5	5	5
Label image(s) with label 6	6	6
Label image(s) with label 7	7	7
Label image(s) with label 8	8	8
Label image(s) with label 9	9	9
Remove label from image(s)	0	0
Rate image(s) with 1 star	Ctrl + 1	command + 1
Rate image(s) with 2 star	Ctrl + 2	command + 2
Rate image(s) with 3 star	Ctrl + 3	command + 3
Rate image(s) with 4 star	Ctrl + 4	command + 4
Rate image(s) with 5 star	Ctrl + 5	command + 5
Clear image(s) rating	Ctrl + 6	command + 6
Filter by Label 1	Shift + 1	shift + 1
Filter by Label 2	Shift + 2	shift + 2
Filter by Label 3	Shift + 3	shift + 3
Filter by Label 4	Shift + 4	shift + 4
Filter by Label 5	Shift + 5	shift + 5
Filter by Label 6	Shift + 6	shift + 6
Filter by Label 7	Shift + 7	shift + 7
Filter by Label 8	Shift + 8	shift + 8
Filter by Label 9	Shift + 9	shift + 9
Filter by Label 0 (Unlabeled)	Shift + 0	shift + 0

Tool	Windows	Macintosh
Filter by Rating: 1 Star	Ctrl + Shift + 1	control + shift + 1
Filter by Rating: 2 Stars	Ctrl + Shift + 2	control + shift + 2
Filter by Rating: 3 Stars	Ctrl + Shift + 3	control + shift + 3
Filter by Rating: 4 Stars	Ctrl + Shift + 4	control + shift + 4
Filter by Rating: 5 Stars	Ctrl + Shift + 5	control + shift + 5

The Toolbar

Tool	Windows	Macintosh
Direct Select Tool	A	A
Hand Tool	H	H
Zoom Tool	Z	Z
Temporary Zoom Tool (in)	Ctrl + Space	command + space
Temporary Zoom Tool (out)	Ctrl + Alt + Space	command + option + space
Crop Tool	C	C
Color Control Point	Ctrl + Shift + A	command + shift + A
Auto Retouch Brush	R	R
Selection Control Point	Ctrl + Shift + C	command + shift + C
Lasso Tool	L	L
Marquee Tool	M	M
Selection Brush	B	B
Decrease brush size	[	[
Increase brush size	]	]
Decrease brush hardness	Shift + [	shift + [
Increase brush hardness	Shift +]	shift +]
Gradient Tool	G	G
Fill	Alt + Backspace	option + delete

Photo Info

Tool	Windows	Macintosh
Double Threshold (toggle on/off)	Shift + T	shift + T

File Menu

Tool	Windows	Macintosh
Open Image	Ctrl + O	command + O
Open Folder in Browser	Ctrl + Alt + O	command + option + O
Launch Transfer	Ctrl + Alt + T	command + option + T
Save	Ctrl + S	command + S
Save As	Ctrl + Shift + S	command + shift + S
Close	Ctrl +W	command +W
Page Setup	Ctrl + Shift + P	command + shift + P
Print	Ctrl + P	command + P
Exit	Ctrl + Q	command + Q

Edit Menu

Tool	Windows	Macintosh
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	Delete	del
Rename	F2	F2
Select All	Ctrl + A	command + A
Deselect All	Ctrl + Alt + A	command + option + A
Rotate Clockwise 90°	Ctrl + R	command + R
Rotate Counter-Clockwise 90°	Ctrl + Shift + R	command + shift + R
Size / Resolution	Ctrl + Alt + S	command + option + S
Preferences / Options in Capture NX 2	Ctrl + K	command + K

Adjust Menu

Tool	Windows	Macintosh
Levels & Curves	Ctrl + L / Ctrl + M	command + L / command + M
Contrast / Brightness	Ctrl + Alt + Shift + C	command + option + shift + C
LCH	Ctrl + Shift + L	command + shift + L
Color Balance	Ctrl + B	command + B
Saturation	Ctrl + U	command + U

Filter Menu

Tool	Windows	Macintosh
Black and White Conversion	Ctrl + Shift + B	command + shift + B

Batch Menu

Tool	Windows	Macintosh
Run Batch Process	Ctrl + Alt + Shift + B	command + option + shift + B

View

Tool	Windows	Macintosh
Show Selection Overlay (toggle on/off)	Shift + O	shift + O
Show Selection Mask (toggle on/off)	Shift + M	shift + M
Show Active Selection (toggle on/off)	Ctrl + H	command + H
Show Lost Highlights	Shift + H	shift + H
Show Lost Shadows	Shift + S	shift + S
Show Focus Area	Ctrl + Shift + F	command + shift + F
Zoom to 100%	Ctrl + Alt + 0	command + option + 0
Fit to Screen	Ctrl + 0	command + 0
Zoom In	Ctrl + +	command + +
Zoom Out	Ctrl + -	command + -
Full Screen	F	F
Presentation	P	P
Hide Palettes	Tab	tab

Window Menu

Tool	Windows	Macintosh
Browser Workspace	Alt + 1	option + 1
Metadata Workspace	Alt + 2	option + 2
Muti-purpose Workspace	Alt + 3	option + 3
Edit Workspace	Alt + 4	option + 4
Cycle between open images	Ctrl + Tab	control + tab

Help

Tool	Windows	Macintosh
Contents	F1	command + ?

Apple Specific Shortcut

Tool	Windows	Macintosh
Hide application	—	control + command + H

Chapter 27
Appendix: Supplied Color Profiles

Standard RGB Profiles Supplied in Capture NX 2

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".

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 IEC61966-2.1".

Bruce RGB: NKBruce.icm (Windows)/ Nikon Bruce RGB 4.0.0.3000 (Macintosh)
This color profile expands 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 cannot 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
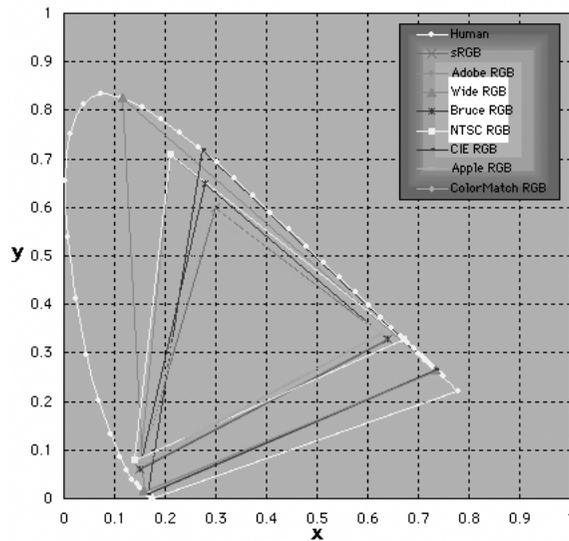
Technical Data for RGB Profiles Supplied with Capture NX 2

The following table shows the gamma values for profiles supplied in Capture NX 2, together with the chromaticity values for the white point and for red, green, and 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	0.115	0.157
		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	0.06
Default Macintosh monitor	5000 K (D50)	x	0.3457029	2.2	Trinitron	x	0.625	0.28	0.155
		y	0.3585386							

Capture NX 2 and Adobe Photoshop Color Profiles

Capture NX 2 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 or later**: Wide Gamut RGB **Earlier versions**: Adobe Wide RGB

Chapter 28
Appendix: 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 2 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

❏ **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 Vista, XP Home Edition/Professional, Mac OS X**

When installing, using, or uninstalling Capture NX 2 under the above operating systems, log on to an account with administrator privileges.

Camera Adjustments

❏ **Non-Picture Control Based Adjustments**

When images taken with D1-series, D2-series, D100, D200, D80, D70S, D70, D60, D50, D40, or D40X cameras are edited with the **Non-Picture Control** option selected in the **Camera settings** step in the "Develop" section of the **Edit List** palette, 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

Change in Color Temp.	Mired
4000 K – 3000 K = 1000 K	83 mired
7000 K – 6000 K = 1000 K	24 mired

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.

❏ **Gain**

The values for red and blue gain chosen in the "White Balance" section 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 selected in the "Preferences" dialog 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 and D2XS 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 2.

Image Dust Off

❏ **Cameras That Support Image Dust-Off**

The following cameras support Image Dust Off: the D3, D2-series cameras, D300, D1X / D1H (firmware version 1.10 or later), D200, D100, D80, D70S, D70, D60, D50, D40, and D40X. Image Dust Off is not supported with COOLPIX cameras, D1 cameras, or with earlier versions of the camera firmware for the D1X and D1H.

❏ **Creating Image Dust Off Reference Photos**

To create a Image Dust Off reference photo for cameras other than the D3, D2 series, D300, D200, D80, D70S, D70, D60, D50, D40, or D40X:

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 Image Dust Off reference photo will be recorded as an NEF (RAW) image.

4 Transfer the photograph to the computer

❏ **Creating Image Dust Off Ref Photos (D1-Series and D100 Cameras)**

In addition to D3, D2-series, D300, D200, D80, D70S, D70, D60, D50, D40, and D40X cameras, Image Dust Off ref photos can be taken with the D1X / D1H (firmware version 1.10 or later), and D100. Image Dust Off ref photos cannot be created with the D1 or with earlier versions of the camera firmware for the D1X and D1H. Image 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 Image Dust Off ref photos.

❏ **Image Dust Off**

Image Dust Off only affects relatively featureless areas of the image.

❏ **Reusing Image 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 flash 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 2 editor can be chosen using the **D1X RAW Default** option in 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 2.

Saving Images

❏ **Images Saved in Capture NX 2**

Images saved in Capture NX 2 cannot be viewed on a camera.

❏ **NEF Files (Nikon Capture 4 or Earlier)**

NEF files created with Capture NX 2 cannot be opened in earlier versions of Nikon Capture. Capture NX 2 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 2.

❏ **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 2. 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 tool.

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 2 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" (pg. 247) 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 2 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 2 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" (pg. 247) for more information on the default RGB color-space profiles.

Levels & Curves

❏ **The Levels & Curves and the LCH Tools**

The **Levels & 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 tool is a better suited to 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 & Sampling" tab of the "Preferences" dialog.

❏ **The Curve Edit Display**

Although values for input and output in the **Levels & Curves** tool 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 2 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). Mid-point cannot be sampled for a single channel; regardless of the channel currently selected, sampling the image for mid-point 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 $(1/\gamma)$). 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 2, 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 2.

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 2, 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 2. Digital DEE settings files (extension ".ndd") cannot be loaded into Capture NX 2.

❏ **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 masking applied to the **Luminosity** channel for those points only. An intensity of around 20% in Capture NX 2 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.

Chapter 29

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Chapter 30
Contact Information

Life-Long Learning

As part of Nikon's "Life-Long Learning" commitment to ongoing product support and education, continually-updated information is available on-line at the following sites:

❏ **For users in the U.S.A.:**
   http://www.nikonusa.com

❏ **For users in Europe and Africa:**
   http://www.europe-nikon.com/support

❏ **For users in Asia, Oceania and the Middle East:**
   http://www.nikon-asia.com

Visit these sites to keep up-to-date with the latest product information, tips, answers to frequently-asked questions (FAQs), and general advice on digital imaging and photography. Additional information may be avail-able from the Nikon representative in your area. See the URL below for contact information:

   http://nikonimaging.com

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