

Capture NX-D Reference Manual

Introduction
What Capture NX-D Can Do for You2
The Capture NX-D Window4
Palettes5
The Toolbar7
The Status Bar8
The Menu Bar8
Viewing Pictures
Viewing Pictures9
Side-by-Side Comparison12

Filters	
Rating	14
Labelling	15
Filtering	16
Image Adjustment	
The Edit Palette	17
Exposure Compensation (RAW Images)	19
White Balance (RAW Images)	20
Picture Control (RAW Images)	21
Tone/Tone (Detail)	22
Tool Buttons	23
Copying Adjustments	28
File Format	31

Other Features	
Cropping Pictures	32
Batch Processing	34
Printing Pictures	36
Printing Image Information	37
Index Prints	38
Menu Guide	
Menu Guide	39

- Visit the website below for tips and tricks and for updates to the beta version of Capture NX-D. We recommend that you visit this site frequently to ensure that you get the most from this product. http://beta.nikonimglib.com
- Save where otherwise stated, illustrations are from Windows 8.1. Default camera and software settings are assumed.
- The links at the top of each page can be used for chapter navigation. Click
 ↑ to return to this page.



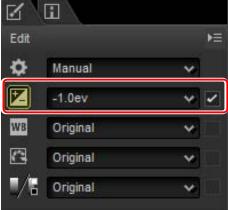
What Capture NX-D Can Do for You

Capture NX-D lets you retouch pictures by, for example, adjusting brightness and hue, and can also be used to edit RAW images taken with Nikon digital cameras and save them in other formats.

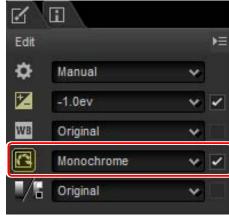
Retouch Pictures

With Capture NX-D, it's easy to adjust such settings as brightness and white balance (page 17). Certain settings, such as exposure compensation and Picture Controls, are available only with RAW images.





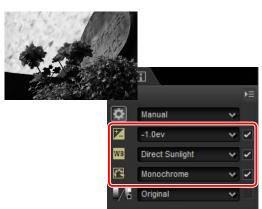




Copy Adjustments

Save adjustments and apply them to other images (<u>page 28</u>) or copy them to other computers (<u>page 30</u>). Saved adjustments can be applied to multiple images using batch processing (<u>page 34</u>).





Save Pictures in Other Formats

Retouched or processed RAW (NEF/NRW) images can be saved in JPEG or TIFF formats for use in other applications (page 31).







Retouching Pictures in Capture NX-D

Capture NX-D stores image adjustments in a separate "sidecar" file that is updated automatically as settings are changed.

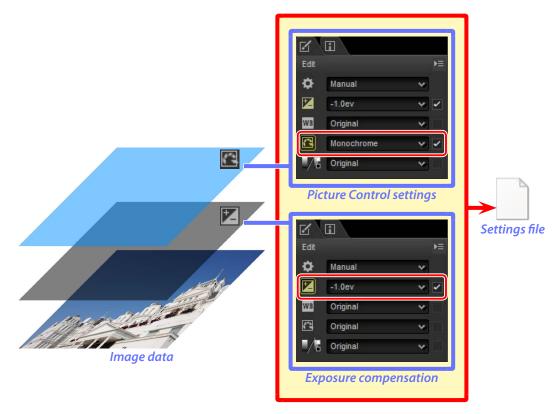
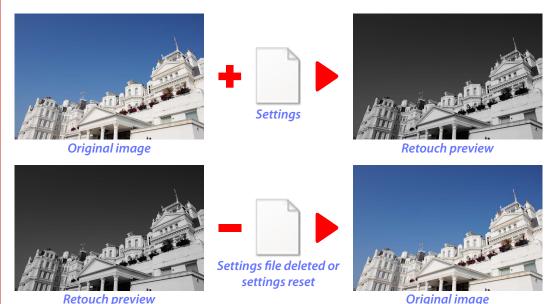


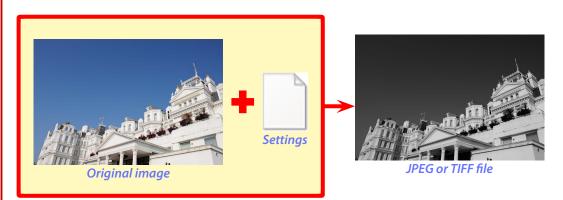
Image Adjustments

Image adjustments are stored in a "NKS_PARAM" folder in the same folder as the original image. All changes will be lost if this folder or the image adjustment file is deleted; similarly, because the image and the image adjustment file are linked via the file name, changes will be lost or applied to another image if the image adjustment file is renamed.

Because changes to settings are stored separately from the original image data, the original picture can be restored at any time with no drop in quality.

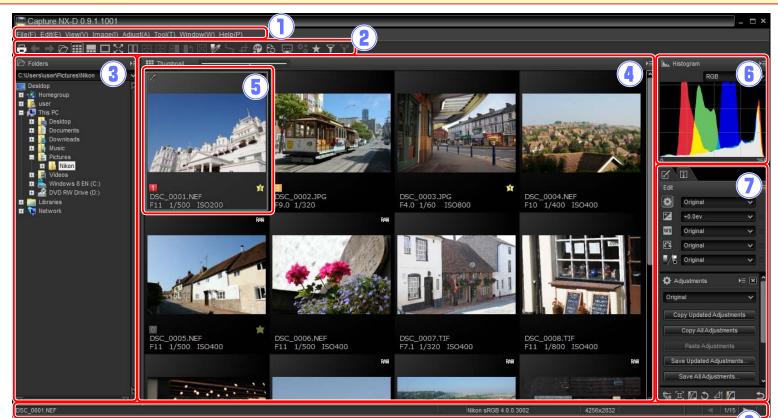


When files are converted to JPEG or TIFF, the changes are applied to the image as it is saved to create a new, modified image data file.



Menu Guide Introduction **Viewing Pictures Filters Image Adjustment Other Features**

The Capture NX-D Window



- (1) Menu bar: Access the menus (page 8).
- (2) Toolbar: Choose a view and access image adjustment tools (page 7).
- (3) Folder palette: Select a folder to display its contents in the image area (page 5).
- (4) Image area: View the images in the current folder.
- (5) Selected image: Selected images are highlighted in gray. Double-click to preview (page 9).
- (6) Histogram palette: View the tone distribution for the selected image (page 5).
- (7) Edit/metadata palettes: Retouch images using the tools in the edit palette or switch to the metadata palette to view image information (page 6).
- (8) Status bar: View information on the selected image (page 8).

The Navigation Palette

A navigation (bird's eye) palette (page 5) appears when a preview is displayed by double-clicking a thumbnail in the image area.

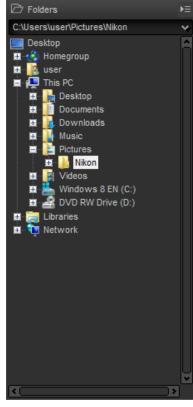


Palettes

Capture NX-D offers the following palettes.

The Folder Palette

The folder palette lists the folders in the computer's storage system. Click a folder to view the images it contains in the image area or preview display.



The folder palette menu gives access to recent folders. Frequently-used folders can be added to and then accessed from this menu.



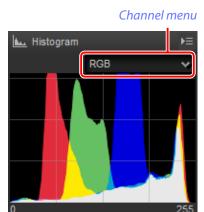
Folder palette menu

Palette Menus

To access the palette menu, click the triangle () at the top right corner of the palette. Select **Undock** to open the palette in a floating window that can be moved freely about the display.

The Histogram Palette

The histogram palette provides a constantly-up-dated histogram for the selected thumbnail or the image in the preview display. The histogram shows the tone distribution for the color channel selected in the channel menu. Choose **RGB** to view overlapping distributions for the red, green, and blue channels: tone ranges in which the distributions for red and green overlap are shown in *yellow*, those in which red and blue overlap in *magenta*, those in which green and blue overlap in *cyan*, and those in which all three colors overlap in *white*.



The Navigation (Bird's Eye) Palette

The navigation palette is displayed above the folder palette when you double-click a thumbnail to display a preview.

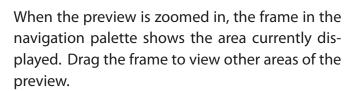






Image Adjustment Menu Guide **Viewing Pictures Filters** Introduction Other Features

Palettes

The Edit Palette

Use the tools in the edit palette to adjust the Edit tab image currently selected or previewed in the image area. The tool list (page 17) offers Exposure Compensation, White Balance, Picture Control, and Tone/Tone (Detail) tools that can be accessed via pull-down menus or by clicking the tool icon and adjusting settings in the adjustments palette (page 17). Additional tools can be accessed using the tool buttons (page 18) at the bottom of the palette. The adjustment manager tool (page 18) can be used to copy adjustments to other images or save current settings for later use. To reset all tools and restore the image to the state it was in when first opened in Capture NX-D, click the restore button (note that any changes made to JPEG and TIFF images in other applications since they were last opened in Capture NX-D will not be reset).



The Metadata Palette

The metadata palette lists information on the im- Metadata tab age currently selected or previewed in the image area, including exposure, the model of camera used to record the picture, and the date and time of recording. The metadata palette can be displayed in the position normally occupied by the folder palette (page 5) by selecting Dock to Left in the palette menu.



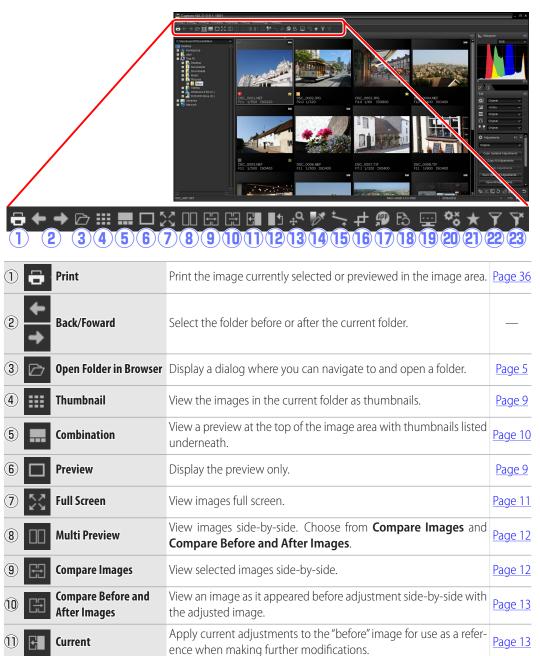
The Edit and Metadata Palettes

Use the tabs at the top left corner to switch between the edit and metadata palettes.

The Toolbar

Introduction

Use the toolbar to choose a view and access image adjustment tools.



12	■ 5	Original	Restore the "before" image to the state it was in before any adjustments were made.	Page 13
13	⊕ ^Q	Preview Display Mode	Access the fit, combination, zoom, and hand tools or choose a zoom ratio for the image in the preview palette.	_
14)	8	Gray Point Sample Tool	Click a point in the preview to adjust white balance so that the sampled point takes on a neutral gray color.	Page 20
15	*	Straighten Tool	Straighten images.	Page 26
16	4	Crop Tool	Crop images.	Page 32
17	₽	Open with	Open images in other applications.	_
18	ිට	Convert Files	Save images in JPEG or TIFF format. Adjustments are applied before the image is saved.	Page 31
19	<u></u>	Batch Process Status	View batch process status.	Page 34
20	\$×	Cancel Batch Process	Cancel batch processing.	_
21)	*	Rating/Label Filtering	Filter images by rating or label.	Page 16
22	7	Filtering	Filter images by rating, label, or camera settings.	Page 16
23	7*	Cancel Filtering	End filtering and view all images.	

Introduction

Viewing Pictures

Filters

(6)

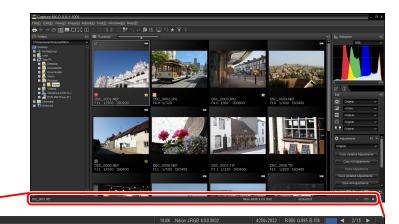
Image Adjustment

Other Features

Menu Guide

The Status Bar

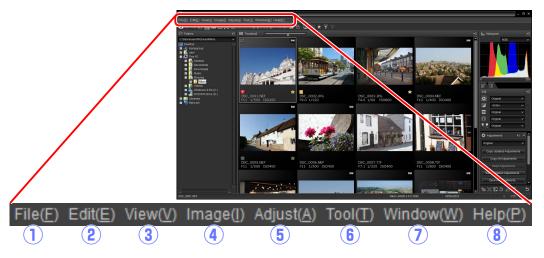
View information on the image selected or previewed in the image area.



1	DSC_0001.NEF	File name	The file name.
2 10.6% Zoom ratio		Zoom ratio	The zoom ratio at which the preview is currently displayed.
3 Nikon sRGB 4.0.0.3002 Color space The color space of the image in the preview display.			
4	4256×2832	lmage size	The size (in pixels) of the image in the preview display.
5	R:056 G:095 B:154	Color value	The color of the pixel under the cursor in the preview and combined displays.
6	◄ 2/15 ▶	Position in folder	The position of the current image and the total number of images in the folder. Click to view other images

The Menu Bar

Access image adjustment tools or save images in other formats.



- 1) File Convert files to other formats, run batch processes, and print and rename files.
- 2 Edit Select, copy, paste, and delete images.
- **3 View** Choose a view mode, adjust zoom, and sort and select images.
- 4 Image Straighten, rate, and label images or display a grid or the focus point, shadows, or highlights.
- **5 Adjust** Copy, paste, save, and load image adjustment settings.
- **6 Tool** Access image adjustment tools.
- **7 Window** View and hide palettes.
- 8 **Help** View online help or the current software version number.

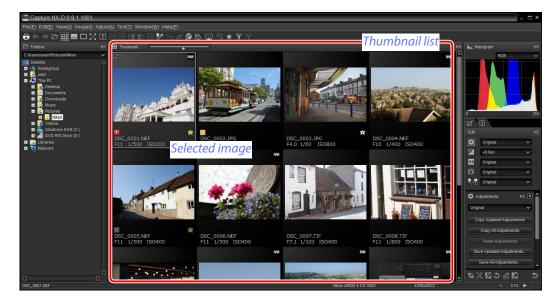
Image Adjustment Menu Guide Introduction **Viewing Pictures Filters Other Features**

Viewing Pictures

Capture NX-D offers the following viewing options.

Thumbnails

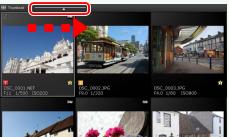
At default settings, Capture NX-D lists the images in the current folder as thumbnails. Selected images are highlighted in gray.



Thumbnail Size

Use the slider above the image area to choose the thumbnail size.

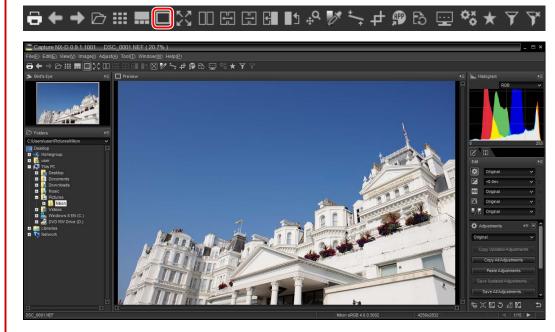


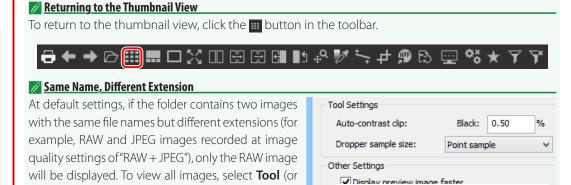




Previews

Double-click a thumbnail or select a thumbnail and click the button in the toolbar to display a preview.





Show a NEF/NRW + JPEG image as separate files

Color reproduction proce

Color reproduction process:

on the Mac, Capture NX-D) > Preferences > Show

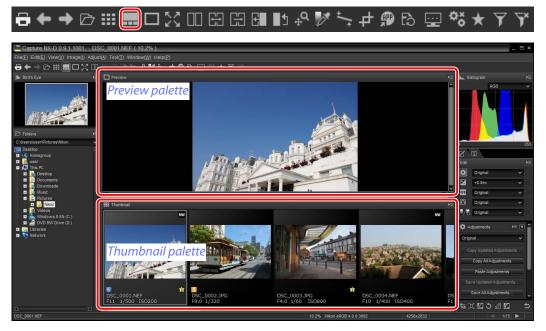
a NEF/NRW image as separate files.

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Viewing Pictures

Thumbnails and Previews Combined

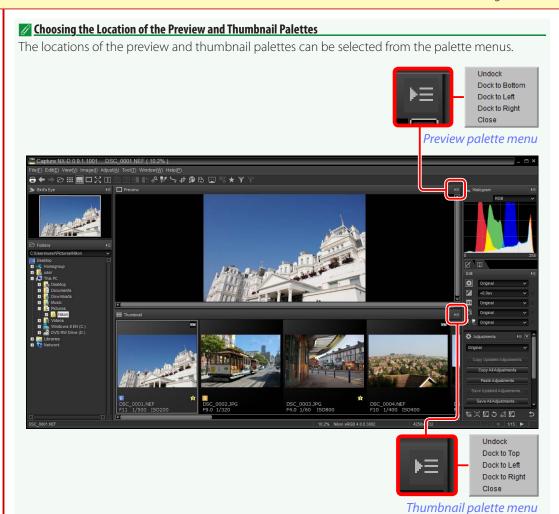
To preview the current image with thumbnails above, below, or to one side, click the button in the toolbar.



Click thumbnails to preview other images.







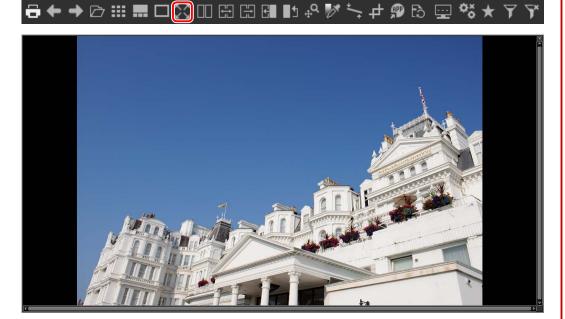
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lmage Adjustment Menu Guide Introduction **Viewing Pictures Filters Other Features**

Viewing Pictures

Viewing Images Full Screen

To hide the menus, toolbar, and palettes and view the current image full screen, click the 🔀 button in the toolbar.



Use the left and right arrow keys on the keyboard to view additional images.





Full-screen display is also available in the multi-preview view (page 12).





Compare images

Compare before and after images

To exit the full-screen display and return to the previous view, click the **x** button or press the **Esc** key.





Side-by-Side Comparison

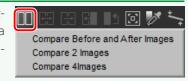
To compare multiple images side-by-side, or to compare before and after views of the same image, click the button in the toolbar and choose (Compare Images) or (Compare Before and After Images).





Compare Images

On computers with at least 4 GB of memory and a 64-bit operating system, clicking the button displays a menu that offers a four-image option in addition to the standard two-image compare images option.



Compare Images (🖽)

Compare images side-by-side. When either image is zoomed or scrolled, the other will be zoomed or scrolled to match.



When you click the button, the current image will be displayed on the left. To select images for display, click the desired preview box and then click a thumbnail. Only images in the same folder can be selected for side-by-side comparison.





The selected preview is highlighted in white. Image adjustments apply only to the selected preview, as do the histogram and navigation palette displays.



No adjustment



Exposure compensation set to +1.0 EV

Comparing Images in the Preview Display

Clicking the button opens the images side-by-side in the preview display.



Side-by-Side Comparison

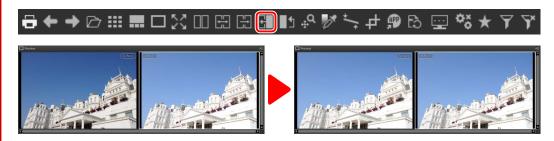
Compare Before and After Images ()

Compare before and after views of the current image.



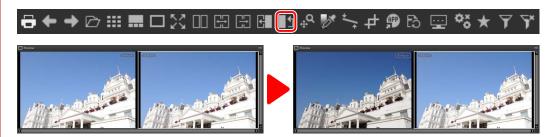
■ Updating the "Before" Image

To update the "before" image to reflect current image adjustments, click the button in the toolbar. The "before" image can then be used as a reference for subsequent changes to image adjustment settings.



■ Restoring the "Before" Image

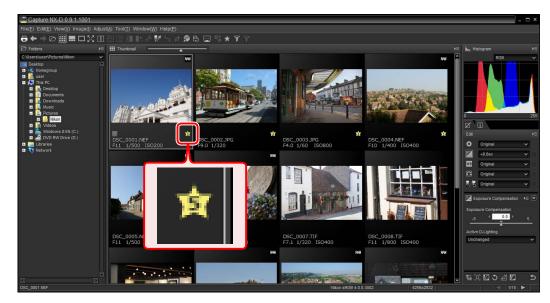
To restore the "before" image to its unadjusted state, click the button in the toolbar. The "before" image will be restored to the state the image was in when first opened in Capture NX-D (note that any changes made to JPEG and TIFF images in other applications since they were last opened in Capture NX-D will not be reset).





Rating

Pictures can be assigned ratings of from (no rating) to five stars.



Ratings are assigned using the thumbnail rating icons or the **Apply Ratings** option in the **Image** menu.

- 1 Select pictures.
 - ✓ To select multiple pictures, keep the Ctrl key (or on Mac computers, the

 //command key) pressed while clicking each image in turn. To select two pictures and all images between them, click the pictures while pressing Shift.



2 Click the ★ icon and choose a rating of from (no rating) to five stars.







To assign the picture a three-star rating, click the third star from the left. The first three stars will be highlighted in yellow.

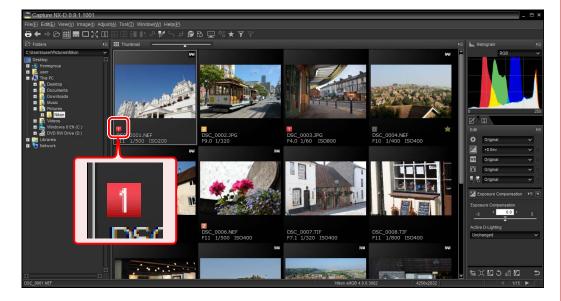
"Apply Ratings"

Selected files can also be rated using the **Apply Ratings** option in the **Image** menu.



Labelling

To make pictures easier to sort and locate, you can assign them labels of from "0" (no label) through "9", each with its own unique color.



Ratings are assigned using the thumbnail label icons or the **Apply Labels** option in the **Image** menu.

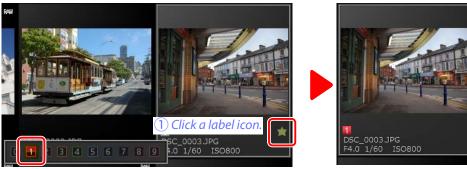
1 Select pictures.

✓ To select multiple pictures, keep the Ctrl key (or on Mac computers, the

//command key) pressed while clicking each image in turn. To select two pictures and all images between them, click the pictures while pressing Shift.



Click a label (1); in the case of unlabelled images, the label "0" only appears when the cursor is over the picture) and choose a label of from "0" (no label) through "9" (2)).



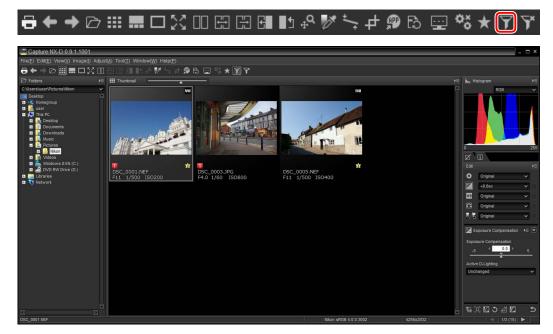
(2) Click a label.

"Apply Labels"

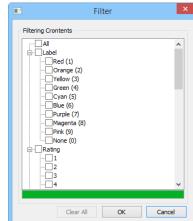
Selected files can also be rated using the **Apply Labels** option in the **Image** menu.

Filtering

To filter pictures using criteria such as ratings, labels, and photo information, click the button in the toolbar.



A dialog will be displayed where you can select filters. Only pictures that match at least one of the selected criteria will appear in the thumbnail list.



Filters

The options for the **Model**, **Focal Length**, **Shutter Speed**, **F Number**, and **ISO Sensitivity** filters are restricted to values found in the images in the current folder.

Quick Filters

Use the ★ button in the toolbar to quickly filter pictures by rating and label.



1 Click the ★ button to display the filter bar.



2 Choose a filter or filters from the options in the filter bar.



If you select multiple ratings, all pictures with ratings in the selected range will be displayed. For example, selecting ratings of three and five stars displays pictures with ratings of three, four, and five stars.

Only pictures that match at least one of the selected criteria will appear in the thumbnail list.



Viewing All Pictures

To cancel filtering and display all pictures in the current folder, click the 🔽 button in the toolbar.



The Edit Palette

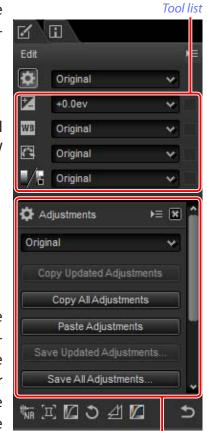
Most image adjustments are performed using the edit palette, which consists of a tool list, an adjustments palette, and tool buttons.

The Tool List

The tool list contains the items listed below. All but **Tone/Tone (Detail)** apply exclusively to RAW (NEF/NRW) images.

Exposure Compensation	Page 19
WB White Balance	Page 20
Picture Control	Page 21
Tone/Tone (Detail)	Page 22

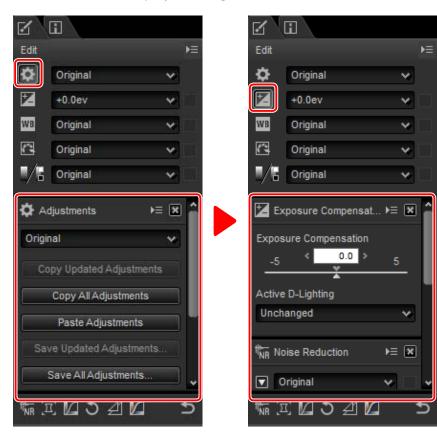
Settings for these tools can be selected from the pull-down menus. Selecting **Recorded Value** restores settings to the values in effect when the image was first opened in Capture NX-D. At other settings, a check () appears in the box to the right of the pull-down menu, and changes can be hidden by removing the check from the box ().



Adjustment palette

The Adjustment Palette

Use the adjustment palette to make detailed adjustments. Clicking a tool button or an icon in the tool list displays settings for the selected item.



Tools that have been modified using the adjustment palette are identified by the label **Manual** in the tool list pull-down menus.

Viewing Pictures Introduction

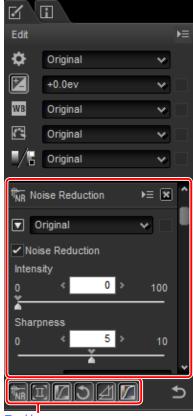
Filters

Tool Buttons

The following tools can be accessed using the tool buttons at the bottom of the edit palette. Note that some of these tools can be used only with RAW (NEF/NRW) images; for information, see the section for each tool.



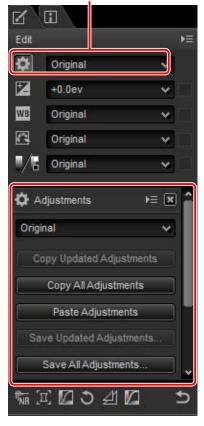
These tools are accessed by clicking the buttons and adjusting settings in the adjustment palette. The buttons for tools that have been modified from default values are highlighted in yellow (e.g., ₩NB).



Tool buttons

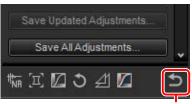
The Adjustment Manager Tool

Use the adjustment manager tool to copy adjust- Adjustment manager ments to other images or save current settings for later use (page 29).



The Restore Button

Click the restore button to reset all tools and restore the image to the state it was in when first opened in Capture NX-D (note that any changes made to JPEG and TIFF images in other applications since they were last opened in Capture NX-D will not be reset).



Restore button

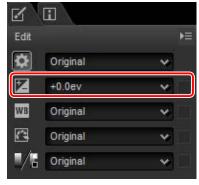
Retouching Multiple Images

Image adjustments apply simultaneously to all the images currently selected in the thumbnail list.



Exposure Compensation (RAW Images)

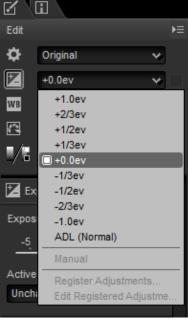
Adjust overall exposure, making images lighter or darker.



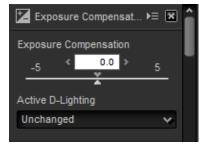
The pull-down menu in the tool list can be used to choose from values between +1.0 and -1.0 EV.







For values between +5.0 and -5.0 EV, incremented in steps of 0.01 EV, use the **Exposure Compensation** control in the image adjustment palette.



The image adjustment palette also offers an **Active D-Lighting** menu that can be used to bring out details in highlights and shadows.









Extra high

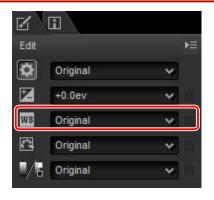
Normal

Active D-Lighting

Active D-Lighting is available only with RAW images taken using cameras that support Active D-Lighting.

White Balance (RAW Images)

Adjust white balance.



The pull-down menu in the tool list offers a choice of preset values.



Incandescent



WB W Fluorescent (6500K) Fluorescent (7200K) Reco High Color Rendering . High Color Rendering High Color Rendering . Fine A High Color Rendering Cooler High Color Rendering Flash FLG1 Tint FLG2 TNA₁ TNA2

Original

Shade

Incandescent Direct Sunlight

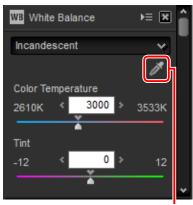
Fluorescent (3000K) Fluorescent (3700K)

Fluorescent (4200K) Fluorescent (5000K)

Sodium-vapor Lamps Fluorescent

Edit

White balance can be fine-tuned using the **Color Temperature** and **Tint** controls in the image adjustment palette. **Tint** can be set to values between –12 and +12: choose lower values for less green and more magenta, higher values for the opposite effect. The range of values available for **Color Temperature** vary with the option selected for white balance.



Gray point sample tool

White balance can also be set by sampling the image: click the (Gray Point Sample Tool) button and click anywhere in the image to sample a single pixel, or drag the cursor over the image to use the average color value for the selected area. White balance for the entire image will be adjusted so that selected pixel or area takes on a neutral gray color.



Blue area sampled



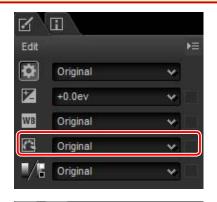
White balance adjusted to give blues a gray cast and the overall image a "warm" cast

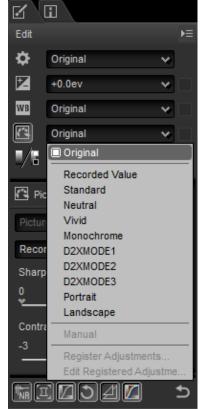
Picture Control (RAW Images)

Choose a Picture Control.

The pull-down menu in the tool list offers the following Picture Controls:

- Standard: Standard processing for balanced results.
- Neutral: Minimal processing for natural results.
 Choose for pictures that will later be extensively processed or retouched.
- **Vivid**: Pictures are enhanced for a vivid, photoprint effect.
- Monochrome: Display the picture in monochrome.
- **D2XMODE1/D2XMODE2/D2XMODE3**: These custom Picture Controls produce results similar to the corresponding "Color Mode" settings for D2X and D2XS cameras.
- **Portrait**: Process portraits for complexions with natural texture and a rounded feel.
- Landscape: Create vibrant landscapes and cityscapes.





The controls in the image adjustment palette can be used to finetune individual Picture Control parameters, including sharpening, contrast, and saturation. What parameters are available depends on whether a monochrome Picture Control is selected.

- Sharpening: Control the sharpness of outlines. Choose higher values for more sharpening.
- **Contrast**: Adjust contrast. Choose lower values for less contrast, higher values for more contrast.







Monochrome

- Brightness: Adjust brightness without losing detail in highlights and shadows.
- **Saturation** (non-monochrome only): Control the vividness of colors. Choose lower values for less saturation, higher values for more saturation.
- Hue (non-monochrome only): Adjust hue.
- **Filter Effect** (monochrome only): Simulate the effects of color filters on monochrome photographs.
- **Toning** (monochrome only): Choose the tint used in monochrome photographs.
- **Toning Saturation** (monochrome only): Choose the saturation of the tint used in monochrome pictures. Does not apply to black-and-white images.

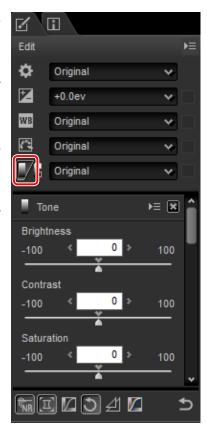
Tone/Tone (Detail)

Adjust overall brightness and contrast, or make adjustments that affect only highlights and shadows.

Tone

Clicking the icon shown at right displays the following controls in the image adjustment palette:

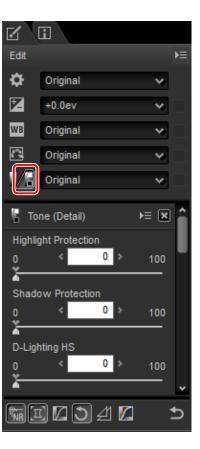
- **Brightness**: Adjust overall brightness. Choose from values between –100 and +100: the higher the value, the brighter the result.
- **Contrast**: Adjust overall contrast. Choose from values between –100 and +100: the higher the value, the greater the contrast.
- **Saturation**: Control the vividness of colors. Choose from values between –100 and +100: the higher the value, the more vivid (saturated) the result.



Tone (Detail)

Clicking the icon shown at right displays the following controls in the image adjustment palette:

- **Highlight Protection**: Preserve details in highlights. Values range from 0 to 100: choose higher values to reduce brightness in highlights.
- **Shadow Protection**: Preserve details in shadows. Values range from 0 to 100: choose higher values to increase brightness in shadows.
- D-Lighting HS: Brighten shadows in backlit or poorly-lit pictures or reduce loss of detail in highlights. Higher values reduce the contrast between shadows and highlights.



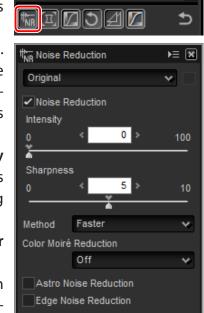
Tool Buttons

Use the tool buttons for access to tools not in the tool list.

Noise Reduction

Selecting this tool displays the following controls in the image adjustment palette:

- Intensity: Choose from values between 0 and 100. Choosing a value greater than 0 activates noise reduction. The higher the value, the smoother the image and the less visible the artifacts caused by image "noise".
- **Sharpness**: Choosing high values for **Intensity** may smooth the image to the point that details are lost; this can be countered by increasing **Sharpness**.
- Method: Select Faster for faster processing, Better
 Quality for more accurate noise reduction.
- Color Moiré Reduction (RAW images only): Choose from settings of Off, Low, Medium, and High to reduce color moiré (an image artifact visible where regular patterns overlap).
- **Astro Noise Reduction** (RAW images only): Reduce the occurrence of randomly-spaced bright pixels in long exposures.
- Edge Noise Reduction (RAW images only): Make outlines more distinct by reducing the occurrence of noise artifacts around edges.



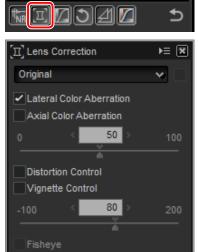
Lens Correction

Selecting this tool displays the following controls in the image adjustment palette:

- Lateral Color Aberration: Reduce lateral color aberration (colored fringes and halos) in RAW images. At default settings, this option is not applied to JPEG and TIFF images.
- Axial Color Aberration: Reduce blurred colors caused by axial color aberration. Choose from values between 0 and 100: the higher the value, the greater the effect.
- Distortion Control: This option uses the lens information recorded with photographs to reduce the barrel distortion associated with wide-angle

lenses and the pin-cushion distortion associated with telephoto lenses.

- **Vignette Control**: Adjust for variations in peripheral illumination that occur with some lenses. Choose from values between –100 and +200: the higher the value, the greater the increase in brightness at the edges of the image.
- **Fisheye**: Process photos taken with AF DX Fisheye-Nikkor ED 10.5mm f/2.8G or AF DX Fisheye-Nikkor ED 16mm f/2.8D lenses so that they appear to have been taken with a wide-angle rectilinear lens.



LCH

The LCH color space models color using values for lightness (a property similar but not identical to brightness or luminance), **c**hroma (color saturation), and **h**ue. These parameters can be accessed via the channel menu in the image adjustment palette when the LCH tool is selected.



■ Master Lightness

Adjust overall lightness without affecting chroma or hue.

- 1) Auto Contrast: Increase contrast by setting the white and black points to exclude a set proportion of the brightest and darkest pixels in the image.
- 2 Add Anchor Point: Click this button and then click the image in the preview palette to add a point to the curve corresponding to the lightness of the pixel under the cursor.
- (3) **Reset Current Channel**: Reset the master lightness curve to linear.
- 4 Reset All Channels: Reset the master lightness, color lightness, chroma, and hue curves to linear.
- (5) White-point output-level slider: Choose the maximum output level (white point).
- (6) **Histogram**: The histogram shows how the pixels in the image are distributed with respect to lightness. The horizontal axis corresponds to lightness (in the range 0–255), the vertical axis to the number of pixels.

- (7) Luminosity curve: The slope and shape of the curve determines the lightness of the image in the corresponding portion of the tone range.
- 8 Black-point output-level slider: Choose the minimum output level (black point).
- (9) Black-point input slider: Choose the minimum (black point) input level.
- (10) Gamma: Choose the midpoint (gamma value).
- (1) White-point input slider: Choose the maximum (white point) input level.

■ Color Lightness

Adjust the lightness of selected colors without affecting chroma or hue. This can be used, for example, to brighten the blue of a dark skies.

- 1) Add Anchor Point: Click this button and then click the image in the preview palette to add a point to the curve corresponding to the value for the pixel under the cursor.
- 2 Reset Current Channel: Reset the color light-
- (3) **Reset All Channels**: Reset the master lightness, color lightness, chroma, and hue curves to linear.
- 4 Color lightness curve: Moving a point on the curve upwards makes colors in the affected portion of the color range brighter, while moving it downward makes the affected colors darker.
- Color Lightness

 Color
- (5) **Width slider**: Adjust the width of the curve that passes through the selected point, increasing or decreasing the range of colors affected by the change.

■ Chroma

Increase or decrease color saturation over the entire image or a portion of the color range, making colors more or less vivid.

- 1) Add Anchor Point: Click this button and then click the image in the preview palette to add a point to the curve corresponding to the chroma of the pixel under the cursor.
- 2 Reset Current Channel: Reset the chroma curve to linear.
- (3) **Reset All Channels:** Reset the master lightness, color lightness, chroma, and hue curves to linear.
- 4 Chroma curve: Moving a point on the curve upwards makes colors in the affected portion of the color range more vivid, while moving it downward makes the affected colors less vivid (grayer).
- Chroma

 1 2 3

 Chroma

 1 0.01

 O.01

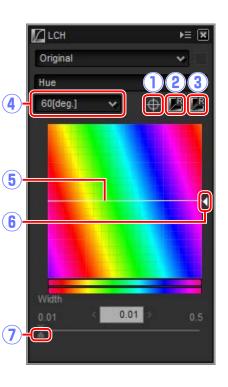
 O.01

 O.05
- (5) **Output slider**: Increase or decrease the saturation of all colors in the image.
- **(6) Width slider**: Adjust the width of the curve that passes through the selected point, increasing or decreasing the range of colors affected by the change.
- (7) Exclude Gray: Increasing chroma may make neutral colors (grays) seem over-saturated. Select this option to increase chroma without affecting grays.

■ Hue

Map selected colors in the original (input) image to a specific range of colors in the final (output) image. One application might be to deepen the colors in a pale blue sky.

- 1) Add Anchor Point: Click this button and then click the image in the preview palette to add a point to the curve corresponding to the hue of the pixel under the cursor.
- 2 **Reset Current Channel**: Reset the hue curve to linear.
- (3) **Reset All Channels**: Reset the master lightness, color lightness, chroma, and hue curves to linear.
- 4 Scale: Click to change the vertical scale from 60 ° through 120 ° to 180 ° and back again (in this case the degrees refer to a 360 ° color wheel). Increasing the scale increases
 - the range of hues visible in the display, while decreasing the scale increases precision.
- (5) **Hue curve**: Select a point on the curve that corresponds to the desired input color and drag it up or down until it intersects with the desired output color.
- 6 Output slider: Modify the hue of all colors in the image.
- 7 Width slider: Adjust the width of the curve that passes through the selected point, increasing or decreasing the range of colors affected by the change.



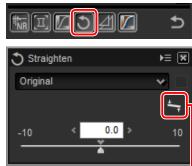
Menu Guide Introduction **Viewing Pictures Filters Image Adjustment Other Features**

Unsharp Mask

Tool Buttons

Straighten

Straighten pictures by up to $\pm 10^{\circ}$. Choose lower values to rotate the picture to the left, higher values to rotate it to the right.



Straighten tool

To straighten pictures manually, click the straighten tool in the image adjustment palette and drag the cursor parallel to a line in the preview (this option can not be used with thumbnails; page 9). The image will be rotated by up to $\pm 10^{\circ}$ to make the reference line horizontal or vertical, and the degree of rotation will be displayed in the text box in the image adjustment window.



Drag cursor parallel to reference line

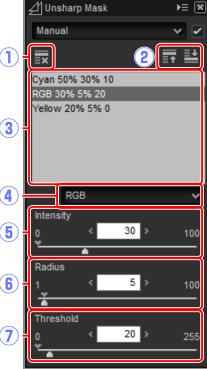


Image rotated to make reference line horizontal

Increase sharpness by making edges more distinct. The contrast of edges is increased while other areas are left untouched.

- 1 Delete: Delete the currently-selected mask from the unsharp mask list.
- (2) Move Up/Move Down buttons: Move the currently-selected mask up or down in the unsharp mask list.
- (3) Unsharp mask list: A list of unsharp masks, identified by color channel, intensity, halo width, and threshold (e.g., "Red, 50%, 10%, 0"). Masks apply in the order listed; to change the order, use the up/down but- (4) tons.
- 4 Color: Choose the color channel to which the unsharp mask applies.
- (5) Intensity: The amount edge contrast will be increased.
- (6) Radius: The greater the radius, the wider the edges in the sharpened image will appear.
- (7) **Threshold**: The limit at which sharpening will be applied. If the threshold is zero, sharpening will apply to all pixels in the image. Increasing the threshold increases the amount of contrast that must be present between pixels before the mask will be applied, with the result that only more distinctly contrasting edges will be affected.





// Image Size

Straightening does not change the dimensions of the image. Any portions of the image that do not fit in its original dimensions are cropped out, while areas that have been added to the image are filled in black.

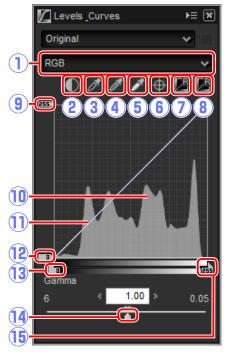
Levels & Curves

Adjust contrast, tone (brightness), and color balance. Adjustments can be made over the



entire image or to specific portions of the tone range (for example, the gamut of a specific printer, monitor, or other output device), allowing enhancements to be made without sacrificing detail.

- (1) **Channel**: The current color channel.
- 2 **Auto Contrast**: Increase contrast by setting the white and black points to exclude a set proportion of the brightest and darkest pixels in the image, creating a curve that makes optimal use of the output tone range while preserving details in shadows and highlights.
- 3 **Black Point**: Click this button and then click the image in the preview palette to set the black point for the red, green, and blue channels to the value for the pixel under the cursor.
- 4 **Midpoint**: Click this button and then click the image in the preview palette to set the midpoint for the red, green, and blue channels to the value for the pixel under the cursor.



- (5) White Point: Click this button and then click the image in the preview palette to set the white point for the red, green, and blue channels to the value for the pixel under the cursor.
- (6) Add Anchor Point: Click this button and then click the image in the preview area to add a point to the curve corresponding to the value of the pixel under the cursor.
- (7) **Reset Current Channel**: Reset the curve for the current channel to linear.

- 8 Reset All Channels: Reset all curves to linear.
- (9) White-point output-level slider: Choose the maximum output level (white point). Dragging the slider down lowers the brightness of the brightest pixels.
- (1) **Histogram**: The histogram shows how the pixels in the image are distributed with respect to brightness. The horizontal axis corresponds to brightness (in the range 0–255), the vertical axis to the number of pixels.
- 1 Tone curve: The slope and shape of the curve determines the brightness of the image in the corresponding portion of the tone range.
- (2) Black-point output-level slider: Choose the minimum output level (black point). Dragging the slider up increases the brightness of the darkest pixels.
- (13) Black-point input slider: Any pixels in the portion of the tone range to the left of the black point are output at the minimum output level. Dragging the slider to the right steepens the curve and enhances contrast but may cause loss of details in shadows.
- (4) Gamma: Dragging the slider to the left increases the brightness of mid-tones, while dragging it to the right makes mid-tones darker.
- (15) White-point input slider: Any pixels in the portion of the tone range to the right of the white point are output at the maximum output level. Dragging the slider to the left steepens the curve and enhances contrast but may cause loss of details in highlights.

Sampling the Current Channel

By default, the black point, midpoint, white point, add anchor point, and auto contrast controls respectively set the black point, anchor points, white point, and contrast for all channels. To apply these controls only to the current channel, press **Ctrl** (or on Mac computers, the **option** key) while clicking the control.

Viewing Pictures Filters Menu Guide **Image Adjustment Other Features**

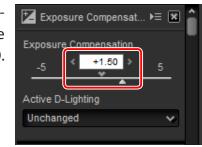
Introduction **Copying Adjustments**

Image adjustments can be copied and applied to other pictures, speeding the process of enhancing pictures taken under similar conditions.

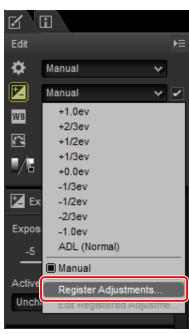
Adding Adjustments to the Tool List

Current settings can be added to the menus in the tool list.

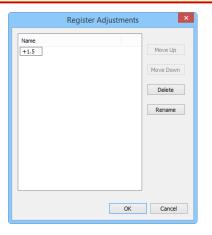
Select a tool from the tool list and adjust settings in the adjustment palette. Here we have set exposure compensation (page 19) to +1.50.



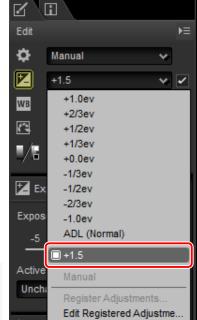
Select Register Adjustments from the pulldown menu in the tool list.



Enter a name for the new setting and click OK. In this example, we have named the setting +1.5.



The new setting is added to the pull-down menu and can now be applied to other pictures.



Selecting Edit Registered Adjustments from the pull-down menu displays a dialog where you can rename or delete previously-saved settings.

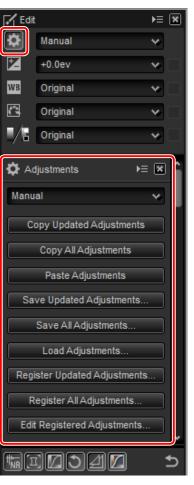
Introduction Viewing Pictures

Filters

The Adjustment Manager Tool

The adjustment manager can be used to apply multiple adjustments simultaneously.

- Copy Updated Adjustments: Copy all adjustments that have been changed since the current folder was selected.
- Copy All Adjustments: Copy all adjustments.
- Paste Adjustments: Apply adjustments copied using Copy Updated Adjustments or Copy All Adjustments to the currently-selected image or images.
- Save Updated Adjustments: Save all adjustments that have been changed since the current folder was selected.
- Save All Adjustments: Save all adjustments.
- Load Adjustments: Select an adjustments file saved using Save Updated Adjustments or Save All Adjustments and apply it to the currently-selected image or images.
- Register Updated Adjustments: Any adjustments that have been changed since the current folder was selected are saved and added as an option to the adjustment manager pull-down menu.
- **Register All Adjustments**: All current adjustments are saved and added as an option to the adjustment manager pull-down menu.
- Edit Registered Adjustments: Reorder, rename, or delete adjustments previously added to the adjustment manager pull-down menu.

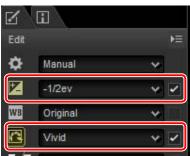


■ Copying Adjustments to Other Pictures

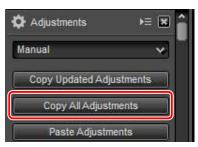
Follow the steps below to copy adjustments and apply them to other images.

Adjust settings in the edit palette. Here we have set exposure compensation (page 19) to $-\frac{1}{2}$ EV and selected the **Vivid** Picture Control (page 21).





Click the adjustment manager icon and select Copy Updated Adjustments or Copy All Adjustments from the options in the adjustment palette. Here we have selected Copy All Adjustments.

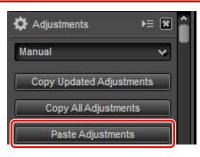


3 Select images. In this example, the selected image has already been adjusted using the exposure compensation (page 19) and white balance (page 20) tools.





4 Click the adjustment manager icon and select **Paste Adjustments** from the options in the adjustment palette.



The adjustments copied in Step 2 are applied to the images selected in Step 3. Because we selected **Copy All Adjustments** in Step 2, exposure compensation changes to $-\frac{1}{2}$ EV while white balance reverts to **Original**.

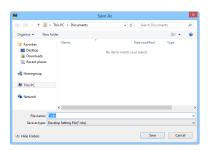




✓ Had we selected Copy Updated Adjustments in Step 2, the exposure compensation and Picture Control for the selected image would have been set to the values selected in Step 1, while white balance would have remained at the value selected in Step 3.

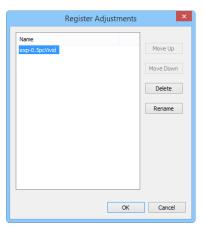
■ Copying Adjustments to Other Computers

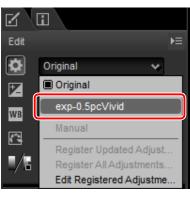
The Save Updated Adjustments and Save All Adjustments options save image adjustments to a file which can be copied to other computers. The adjustments can then be applied to selected pictures on the other computers using Load Saved Adjustments.



■ Adding Adjustments to the Adjustment Manager

Use the **Register Updated Adjustments** and **Register All Adjustments** options to add adjustments to the adjustment manager pull-down menu.





Copying Adjustments from RAW to JPEG or TIFF Images

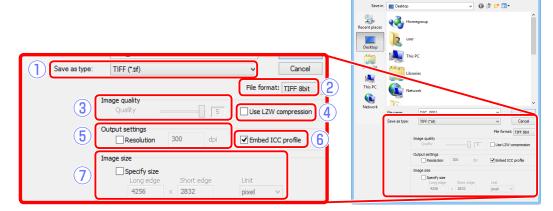
When adjustments are copied from RAW (NEF/NRW) to JPEG or TIFF images, exposure compensation, Picture Controls, and other settings that are available only with RAW images will not be applied.

File Format

To save RAW (NEF/NRW) images in JPEG or TIFF format, click the button in the toolbar.



A dialog will be displayed where you can choose a file format and adjust such settings as compression and image size.



- (1) Save as type: Choose JPEG or TIFF.
- (2) File format (TIFF only): Choose the bit depth for TIFF images (8 or 16 bits per channel).
- (3) **Quality** (JPEG only): Use the slider to choose a value between 1 and 5. The lower the value, the lower the compression ratio and the higher the image quality; the higher the value, the higher the compression ratio and the smaller the file size.
- 4 Use LZW compression(TIFF only): Compress TIFF files using "lossless" LZW compression.
 - LZW compression may sometimes increase file size when applied to 16-bit images.
- (5) **Resolution**: Select this option to choose the output resolution.
- **(6) Embed ICC profile:** Select this option to embed the current color profile in the image.

(7) Specify size: Select this option to resize pictures saved in the new format. The new size can be entered in pixels, centimeters, or inches. When you enter a value for either Long edge or Short edge, the remaining value will automatically be adjusted to maintain the original aspect ratio.

Viewing Pictures Filters Image Adjustment Other Features

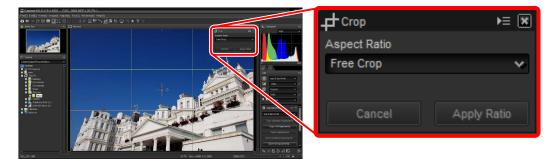
Cropping Pictures

Introduction

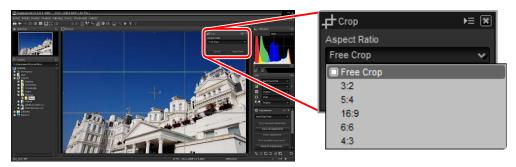
To crop unwanted areas from images, click the # button in the toolbar.

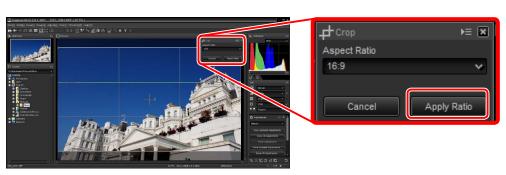


The crop palette will be displayed. Follow the steps below to crop images.



1 Choose an aspect ratio in the crop palette and click **Apply Ratio**. A crop with the selected aspect ratio will appear over the preview image.

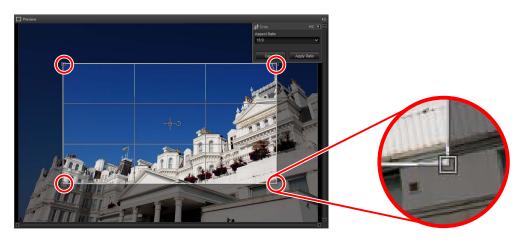




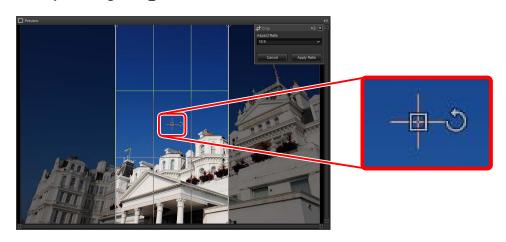
The aspect ratio can be changed after you have resized and positioned the crop.

2 Drag the corners of the crop to resize it without changing the aspect ratio. If you selected **Free Crop** in Step 1, you can also drag the edges of the crop.

Menu Guide



To position the crop, drag the + icon in the center. The crop can be rotated 90 ° by clicking the 5 icon.

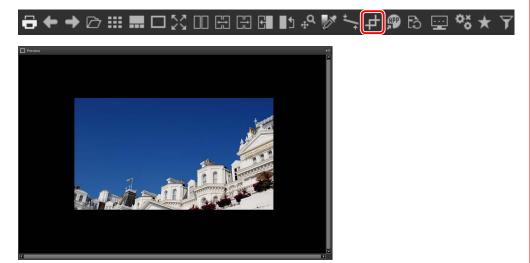


The crop can only be rotated in increments of 90 °.

Menu Guide

Cropping Pictures

3 Click the **button** in the toolbar to crop the image.





Crops are not applied to the original image data. The crop can be changed at any time by clicking the button in the toolbar.



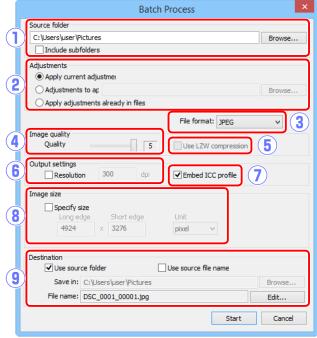


Crops are applied when images are converted to JPEG or TIFF (page 31).

Menu Guide Introduction **Viewing Pictures Filters Image Adjustment** Other Features

Batch Processing

The File > Run Batch Process option can be used to perform the same image adjustments on all pictures in a selected folder and then export the processed images in a selected file format. Batch processing options are shown below.

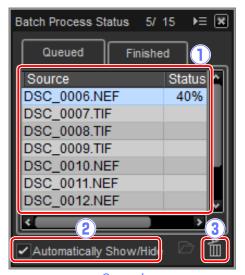


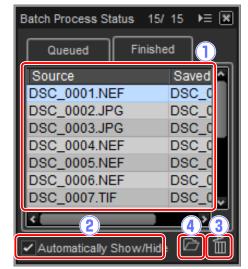
- (1) **Source folder**: Click **Browse** to choose a source folder. To include all images in sub-folders under the selected folder, select Include sub-folders.
- (2) Adjustments: Select Apply current adjustments to process the images using the adjustments for the current image. To apply adjustments previously saved from the adjustment manager, choose Adjustments to apply and click Change adjustments to choose an adjustments file. To export the images in the selected folder in another format without changing the settings currently selected for each image, choose Apply adjustments already in files.
- (3) **File format**: Select the format in which the processed files will be saved. Choose from JPEG, TIFF 8bit, and TIFF 16bit.

- (4) Quality (JPEG only): Use the slider to choose a value between 1 and 5. The lower the value, the lower the compression ratio and the higher the image quality; the higher the value, the higher the compression ratio and the smaller the file size.
- (5) Use LZW compression(TIFF only): Compress TIFF files using "lossless" LZW compression.
 - LZW compression may sometimes increase file size when applied to 16-bit images.
- (6) **Resolution**: Select this option to choose the output resolution.
- (7) **Embed ICC profile**: Select this option to embed the current color profile in each image.
- (8) Specify size: Select this option to resize pictures saved in the new format. The new size can be entered in pixels, centimeters, or inches. When you enter a value for either **Long edge** or **Short edge**, the remaining value will automatically be adjusted to maintain the original aspect ratio.
- (9) **Destination**: Select **Use source folder** to save the processed files to the current folder. To choose a different folder, remove the check from this option and click Browse. To save the processed files under the same names as the originals, select **Use source file name** (if a file with the same name and extension already exists in the current folder, the processed file will be renamed by adding a number to the file name); to choose different names, remove the check from this option and click Edit.



Clicking **Start** starts processing and displays a progress dialog. Progress can be viewed in the **Queued** and **Finished** tabs.

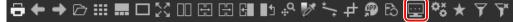




Queued

Finished

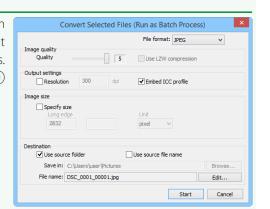
- 1 Source: A list of the files that are awaiting processing or have been processed.
- 2 Automatically Show/Hide: Removing the check from this option hides the progress dialog. The progress dialog can be displayed by clicking the button in the toolbar.



- (3) **Delete**: Click to remove the file selected in the **Queued** tab from the queue, or to delete the log for the file selected in the **Finished** tab.
- 4 View folder: Open the destination folder in the operating system file browser.

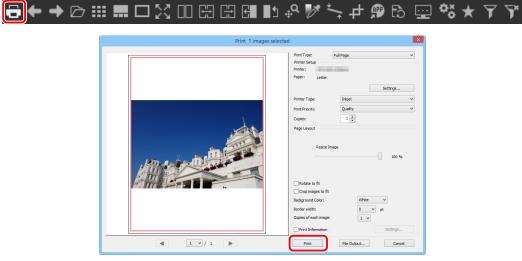
File Conversion

If multiple files are selected when the button in the toolbar is used to export files in another format (page 31), the files will be exported as a batch process. Adjust settings as described for items (3) through (9) on page 34.



Printing Pictures

To print pictures on a printer connected to the computer, select the pictures and click the button in the toolbar. The "Print" dialog will be displayed.



Adjust settings as described on the following page and click **Print** to print the picture as shown in the preview.

The "Print" Dialog

Print Type		 Full Page: Print one picture per page. Index Print: Print multiple images per page (page 38). 				
		• Standard Photo Sizes : Print pictures at a standard photo size. Capture NX-D automatically chooses the number of pictures printed on each page.				
	Printer	Click Settings to choose the printer and paper size and adjust other printer settings.				
Pri	Printer Type	Choose Inkjet when printing on an inkjet printer.				
Printer Setup	Print Priority	When printing NEF/NRW (RAW) pictures, choose Speed to use the preview data embedded in the image for faster printing, or Quality to use the original image data for higher quality output.				
	Copies	Choose the number of copies of each page printed.				
	Rotate to fit	Rotate pictures to print them at the largest possible size.				
	Crop images to fit	Pictures are enlarged to fill the print area. Portions that do not fit in the print area are cropped out.				
Pag	Background Color	Choose the background color. Choose White to print with no background.				
Page Layout	Border width	Choose the width of the borders printed around the image (the color of the borders varies with the background color). Choose 0 to print without borders.				
	Copies of each image	Choose the number of copies of each photo printed.				
	Print Information	Print the file name, date of recording, or photo information under each picture (page 37).				

Notes on Printing

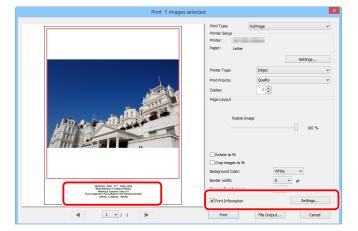
Pictures can not be printed from the full-screen display.

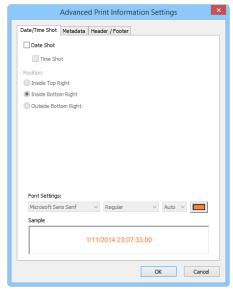
To print to a JPEG file, click **File Output**.

The most recently-used settings are recalled when the print dialog is next displayed.

Printing Image Information

To choose the information printed under each picture, select **Print Information** in the "Print" dialog (page 36), click **Settings**, and adjust the settings described on the following page.





Print Information

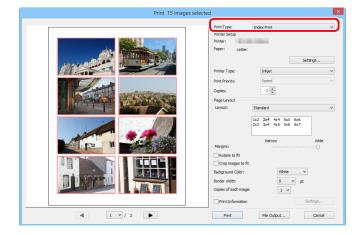
Print information is not rotated when **Rotate to fit** is selected in the "Print" dialog. Metadata that does not fit in the print area will be omitted.

Advanced Print Information Settings

Dat	Date Shot	Print the date of recording in the position selected for Position .		
e i	Time Shot	Print the time of recording together with the date.		
Date/Time Shot	Font Settings	Choose the font, style, font point size, and color used to print the date/time stamp. The results can be previewed in the "Sample" area.		
	Metadata	Choose the file and photo information printed with each picture. The font, style, and font point size can be selected in the "Font Settings" area and previewed in the "Sample" area.		
Header/Footer	Header	Enter the text and choose the alignment for the header that will be printed at the top of each page.		
	Page Number	Choose whether to print the page number and the total number of pages and select the position and alignment. The page number can be positioned at the page Top (in the header) or Bottom (in the footer).		
	Footer	Enter the text and choose the alignment for the footer that will be printed at the bottom of each page.		
	Font Settings	Choose a font, style, and font point size for the header, footer, and page number. The results can be previewed in the "Sample" area.		

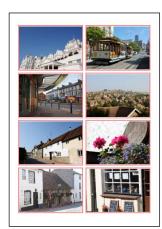
Index Prints

To print multiple images per page, select **Index Print** for "Print As" in the "Print" dialog (page 36) and choose the number of pictures printed per page.



Standard

Choose the number of pictures per page from a list box. The size of the pictures is automatically adjusted according to the option selected.



 $A2 \times 4$ layout

Image Size

Pictures are printed at the size entered for "Width" and "Height" (the minimum size is $20.0 \text{ mm} \times 20.0 \text{ mm}$ and the maximum the same as the page size). The number of pictures per page is automatically adjusted according to the size selected.



Pictures printed at 50 mm × 50 mm

Column and Row

Choose the number of columns and rows printed per page (the minimum is 1 and the maximum 10). The size of the pictures is automatically adjusted according to the options selected.



 $A3 \times 3$ layout

Menu Guide

Menu Guide

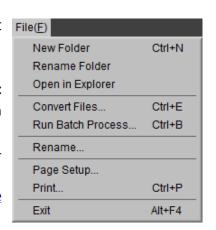
The Capture NX-D Menu (Mac Only)

- Preferences: Open the Capture NX-D preferences dialog.
- Quit Capture NX-D: Quit Capture NX-D.



The File Menu

- New Folder: Create a new sub-folder in the current File(F) folder.
- Rename Folder: Rename the current folder.
- Open in Explorer (Windows)/Open in Finder (Mac OS): Open the current folder in the operating system file browser.
- Convert Files: Convert the currently-selected image or images to JPEG or TIFF format (page 31).
- Run Batch Process: Perform batch processing (page 34).
- Rename: Rename the current image.
- Page Setup: Adjust printer settings.
- **Print**: Print images (page 36).
- Exit (Windows only): Exit Capture NX-D.

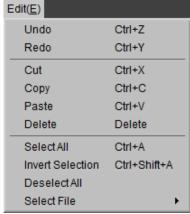


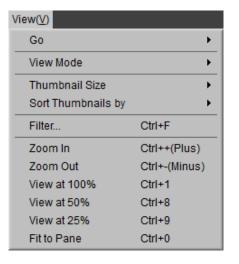
The Edit Menu

- Undo: Undo the most recent operation.
- **Redo**: Redo an operation after performing **Undo**.
- Cut/Copy/Paste: Cut, copy, or paste the current selection.
- Delete: Delete the current selection.
- Select All: Select all images in the current folder.
- Invert Selection: Select all images in the current folder that are not currently selected and deselect any images that are currently selected.
- Deselect All: Deselect all images.
- Select File: Select all files in the current folder that match the criteria chosen in the **Select File** submenu.

The View Menu

- **Go**: Navigate the folder hierarchy.
- View Mode: Choose how images are displayed (page 9).
- Thumbnail Size: Choose the thumbnail size (page 9).
- Sort Thumbnails by: Sort thumbnails.
- Filter: Filter images according to selected criteria (page 16).
- Zoom In/Zoom Out/View at/Fit to Pane: Zoom the preview in or out.



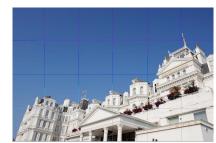


The Image Menu

- Next Image/Previous Image: View the next or previous image in the current folder.
- **Open With**: Open the current image in another application. Use the **Register** option to add applications to the menu.
- **Rotate**: Rotate the current image 90 or 180 degrees.

Image(<u>I</u>)	
Next Image	ArrowRight
Previous Image	ArrowLeft
Open With	•
Rotate 90°CW	
Rotate 90°CCW	
Rotate 180°	
Show Grid	CtrI+G
Show Focus Point	Shift+F
Show Lost Highlights	Shift+H
Show Lost Shadows	Shift+S
Apply Labels	<u> </u>
Apply Ratings	•

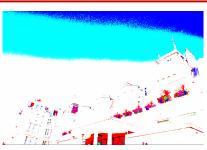
• Show Grid: Display a grid over the preview.



• **Show Focus Point**: Show the focus point in the preview display.



- Show Lost Highlights: View areas of the image with the maximum value for brightness and in which details may have been lost to overexposure ("washed out"). A different color is used to show the lost highlights for each of the RGB, red, green, and blue channels.
- Show Lost Shadows: View areas of the image with the minimum value for brightness and in which details may have been lost to underexposure. A different color is used to show the lost shadows for each of the RGB, red, green, and blue channels.





• Apply: Label (page 15) or rate (page 14) selected images.

The Adjust Menu

- **Restore**: Reset all image adjustments.
- Copy Updated Adjustments: Copy only those adjustments that have been changed since the current folder was last opened.
- Copy All Adjustments: Copy all adjustments.
- Paste Adjustments: Apply to the current image adjustments copied using Copy Updated Adjustments or Copy All Adjustments.

Adjust(A)		
Restore	Ctrl+R	
Copy Updated Adjustments		
Copy All Adjustments	Ctrl+Shift+C	
Paste Adjustments	Ctrl+Shift+V	
Save Updated Adjustments		
Save All Adjustments	Ctrl+Shift+S	
Load Adjustments	Ctrl+Shift+O	
Cancel Crop Area		

- Save Updated Adjustments: Create a file containing only those adjustments that have been changed since the current folder was last opened.
- Save All Adjustments: Save all adjustments to a file.
- Load Adjustments: Load adjustments from a file created with **Save Updated Adjustments** or **Save All Adjustments** and apply them to the current image.

• Cancel Crop Area: Cancel the current crop (page 32).

Ε

W

C

R

Ctrl+K

The Tool Menu

- Fit: Double-click the display to alternately zoom the preview to fit the palette and zoom to a 100% view.
- Combination Tool: As above, except that the preview can be scrolled by dragging the cursor.
- Zoom Tool: Click to zoom in. To zoom out, click while pressing the Alt key (or on Mac computers, the option key).
- Hand Tool: Drag to scroll the preview.
- Gray Point Sample Tool: Set white balance by sampling the preview (page 20).
- Crop Tool: Crop the preview (page 32).
- Straighten Tool: Straighten the image in the preview palette (page 26).
- Launch Picture Control Utility: Launch the Picture Control Utility.
- Synchronize Edits: Select this option to apply current settings to any images subsequently added to the current folder.

 $Tool(\underline{T})$

Fit

Combination Tool

Gray Point Sample Tool

Launch Picture Control Utility

Zoom Tool

Hand Tool

Crop Tool

Straighten Tool

Synchronize Edits

Preferences...

• Preferences (Windows only): Open the Capture NX-D preferences dialog.

The Window Menu

- Histogram/Edit/Metadata/Bird's Eye/Folders: View or hide the selected palette.
- Show Tool Bar: View or hide the toolbar.
- Show Status Bar: View or hide the status bar.
- Show Palettes: View or hide all palettes.



The Help Menu

- Capture NX-D Help: View online help.
- About Capture NX-D: Display the product version number.

