

Adobe Camera Raw (ACR) 8.x

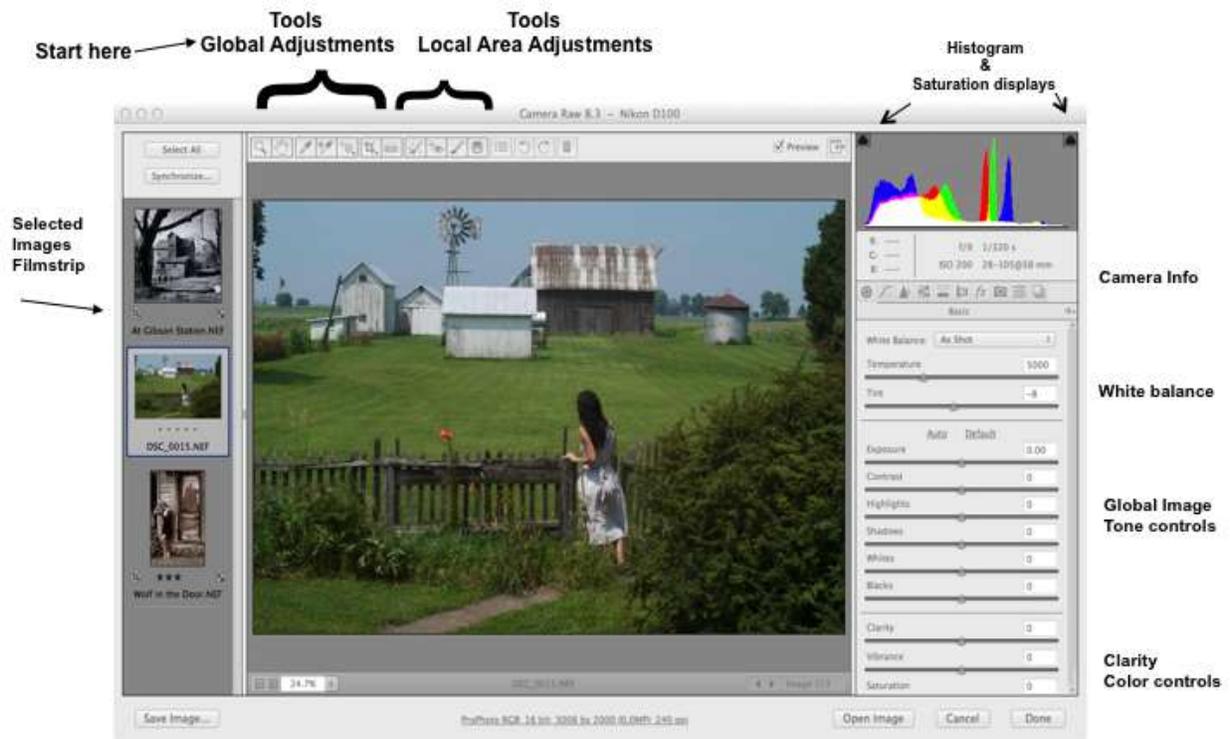
Why use RAW?

- A Raw file is all of the data from the camera's sensor without any interpretation or changes
- Raw files can present millions more colors and tones than are available in jpg files. This makes for smoother transitions in color, such as a photo of a sunset, and allows much greater tonal adjustments without noise or banding.
- More flexibility and control for you to determine how an image appears
- Less noise than jpgs
- Better for fixing noise reduction in high ISO images
- Even though you can make changes to jpgs in ACR, it will degrade the image to some degree
- Cameras always throw away data to create the jpg, so you are never starting with all the data possible

Benefits of making changes in Adobe Camera Raw

- Changes are non-destructive. No pixels are changed; rather, instructions are created to tell ACR and Photoshop how to interpret the image.

Overview of the interface



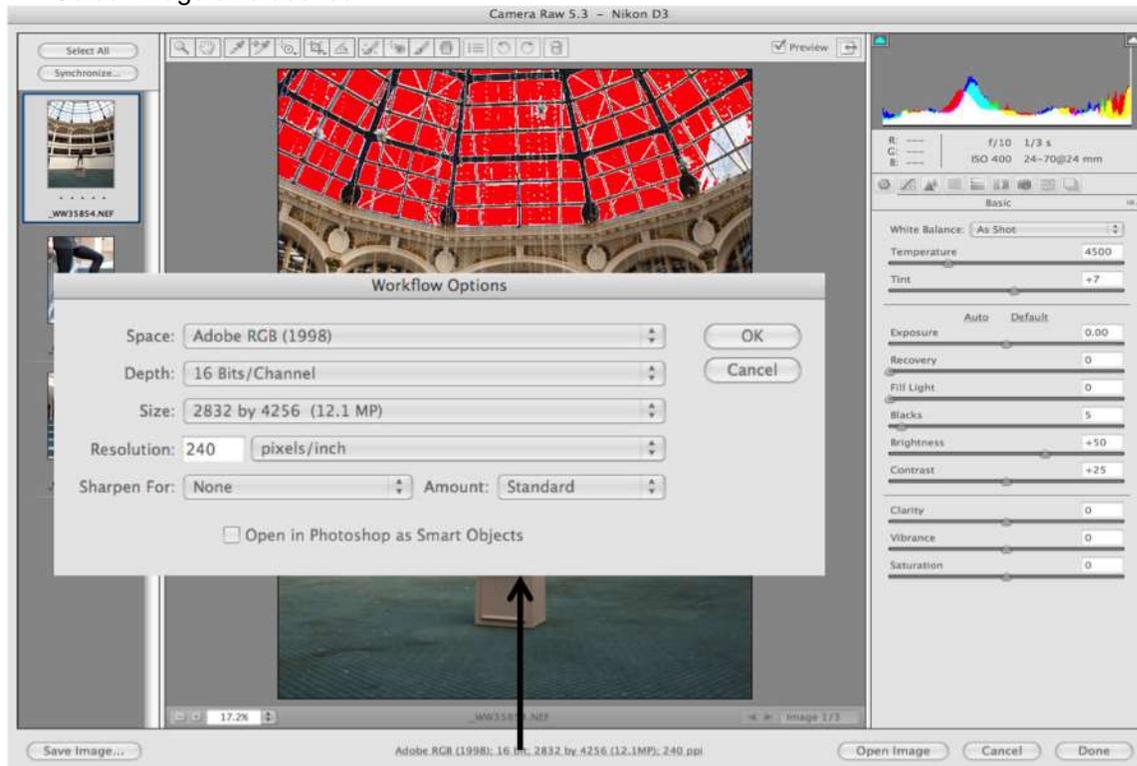
File controls:

Opening ACR

- CTRL+R opens Adobe Camera Raw without running Photoshop, therefore it uses less memory
- Alternative – In Bridge, highlight the image you want to use, press the Space bar. This will display it full screen. If you want to see it at 100% just click once on the image. To see the entire image, click on it again. If you like it, just press the letter R to open it in ACR. If you don't want to open it, press the Escape key.

Workflow options – located at the bottom center of the screen – these set the parameters of the image when opened in Photoshop.

- Allows for color space selection (Adobe RGB 1998 & sRGB) are used most
 - Adobe 1998 if you are printing, sRGB for internet or commercial printer
- Select 8 or 16 bit
- Select image size desired



Save image button

- Provides numerous saving options to save a processed copy (JPEG or TIF or DNG)

Open image button

- Opens the image (s) in Photoshop
- To open as a smart object, hold the Shift and the button changes to Open Object

Cancel button

- Does not apply any changes you have made

Done button

- Applies any changes to the ACR image file in Bridge

Setting ACR preferences

- Allows the option of opening (or not opening) JPEG and/or TIFF in ACR
Numerous other options are available

Controls for adjustments to your image

Histogram

- Probably the second most important item to watch (after the image itself) while adjusting your image
- The far left (value 0) is pure Black and the far right value (255) is pure white
- Most printers should be capable of printing values from about 10 to about 245.
- Values outside the range of 1-254 are defined as CLIPPING, for practical use that will be outside the capability of your printer

Histogram clipping buttons

- Upper left checkbox is the shadow checkbox
- Upper right checkbox is the highlight checkbox
- More detailed information (by RGB channel) can be obtained by holding down the Alt key while dragging the Exposure or Shadow slider

White Balance options:

The drop down Menu

- Always a good start.

White balance tool (Upper left)

- Sets the selected area to neutral gray (R-G-B all the same value)
- Select an area that is a light shade of gray. (Shadows in clouds are great)
- Best used on diffused white highlights that contain detail

Temperature slider lets you select the temperature of the lighting in degrees Kelvin.

- Moving the slider to the left lowers the color temperature and makes the image more blue (cooler)
- Moving the slider to the right raises the color temperature and makes the image more yellow (warmer)

Tint slider

- Moving the slider to the left (negative values) will add green
- Moving the slider to the right (positive values) will add magenta

Global Area image controls:

Zoom tool

- Select tool and click on image to zoom in
- To zoom out, hold Alt key and click on image
- Hold down the space bar for the hand tool
- Double-click on the tool icon to zoom image to 100%

Zoom buttons – lower left on screen

- Same function as the zoom tool

Hand (pan) tool

- Use to slide image around if you can't see the entire image. Hold down left mouse button and drag image
- Double-click on the tool icon to make entire image fit in the view size of your screen.

Color sampler tool

- Lets you select up to nine samplers to monitor the effects of image adjustments

Toggle full screen button

Crop and straighten

Crop tool

- Lets you select a ratio, pixels or inches and auto adjusts to landscape or portrait, after cropping the selected area will switch to full frame when another tool is selected.
- To create a small file (maybe for web or email) hold the left mouse button as you click on the Crop tool and then select Custom. In the Custom field on the screen that appears, select Pixels or inches and enter the size you want. Then use Save Image to save a copy of the cropped image.

Straighten tool

- With the Straighten tool selected drag a line parallel to a line or subject in your image that you want to be vertical or horizontal. It will automatically determine if you're trying to straighten a vertical line or the horizon line.

Global Tone Controls:

Exposure slider

- Determines the overall brightness of your image, this affects the mid-tone brightness range.

Contrast slider

- Determines the amount of separation between gray areas primarily in the mid-tones of the image, and does not impact endpoint saturation (Whites and Blacks)

Highlights slider

- Controls the brightness of areas that are "Not quite white", and can stretch the contrast in these areas. It can reduce saturation of whites, but is not likely to increase saturation in the whites.

Shadows slider

- Controls the brightness of areas that are a little brighter than black, adding "fill light" to dark areas

Whites slider

- This is the new "White Point" set, and can increase (luminance) over-saturation in the white areas.

Blacks slider

- This is the new "Black Point" set, and can increase (luminance) saturation in the black areas.

Clarity slider

- Adds depth to an image by increasing local contrast. This setting is similar to a large-radius unsharp mask. When using this setting, it is best to zoom in to 100%
- Clarity slider now can be moved in the negative direction, which produces a softening effect.

Vibrance slider

- Moving this slider to the right will increase saturation in the colors which are not very saturated to begin with
- It can prevent skin tones (and reds) from becoming over saturated

Saturation slider

- Saturates all colors within your image
- Note, moving the Vibrance and Saturation in opposite directions can produce interesting results

Jack Davis 5-step tango for global adjustment

- 1) Color (White) Balance and Crop
- 2) Auto - Works inside the Crop – (Undo)
(Good for White And Black point set)
- 3) Manually Re-Set -
 - Exposure (Mid-tones)
 - Clarity (Punch)
 - Shadow
 - Highlight
- 4) Whites and Blacks to Taste
Re check white-set and Black point (Check Saturation)
- 5) Vibrance (and Saturation, Maybe) and Vignette– To Taste

Processing multiple RAW images

- Select multiple images / (double left-click)
- Select one image to adjust
- Click on Select All
- Make appropriate settings in ACR – changes will affect all images
- When finished, click on appropriate box (open image – done – save image)

Alternative method:

- After opening multiple images into ACR, select one by clicking on it
- Make changes to the one “master” image
- When done with the “master” image, click on Select All
- Click on Synchronize – a dialogue box will appear
- Select the individual items desired by clicking on the check boxes or selecting items from the drop down menu at the top
- Click OK and then exit ACR

Alternative method 2:

- If you have changed one raw file and would like to repeat those changes, right-click on the file you've changed
- If you only want to change one file or just a few, select Develop Settings from the right-click menu, then select Previous Conversion
- If you want to use the changes of one raw file you made some time ago (so you can't use Previous Conversion), right-click on the file with the changes, select Develop Settings, then Copy Settings. Then select the file(s) to which you want to apply the changes, right-click and select Develop Settings, then Paste Settings.

Working with JPEG or TIFF images

- **DANGER** – be aware that changes made to JPEG or TIFF files are metadata based and the changes cannot be seen in a print or from another viewer until you use the SAVE IMAGE button in ACR or the File>Save As command in Photoshop

Targeted adjustment Tool

- Allows adjustments with your mouse on the image rather than just using slider
- Changes are global (effect the entire image)
- Click on the image in the area you want to change and hold the left mouse button down while dragging the mouse left or right
- In general, tonal changes are made in the curves pallet

Local Area Adjustments: (Also applies to Lightroom but NOT Photoshop elements)

Retouch tool

- Good for removing spots made from dust on camera sensor
- “Type” defaults to Heal. (Heal matches the texture, lighting and shading of the sampled area (green circle) to the selected area (red circle). Clone applies the sampled area to the selected area.)
- Click in the middle of the spot you want to remove. Hold the left mouse button and move the mouse. A red circle will form that will grow from the center.
- Once the circle is just big enough to encompass the spot, let go of the mouse button. In a second or two a green circle will appear. The green circle is what will replace the space inside the red circle. If you don't like where the green circle is, click on it with your mouse and drag it to a new location.
- If you move the mouse over the circle until a double-headed arrow appears, you can resize them.
- Uncheck Show Overlay in the upper right to hide the circles.

Graduated filter (new in 5.x)

- Provides local (non-global) changes to exposure, brightness, contrast, saturation, clarity, sharpness and color in the shape of a graduated filter
- Filter is defined by settings in the panel, and applied with a click and drag and release. The changes are fully applied (as defined) from the click point to zero applied at the release point, and graded in between. Practice to learn how to use this.
- Gradients can be vertical, horizontal or on any diagonal
- Hold the Shift key while dragging to keep gradient vertical or horizontal
- Can have multiple gradients in one image
- Remove the filter by pressing Delete while gradient is selected or active

Adjustment Brush (new in 5.x)

- Provides local (non-global) changes to exposure, brightness, contrast, saturation, clarity, sharpness and color (in other words, local area adjustments in the raw convertor!!!) by “painting” specific areas you want to modify.
- Can have multiple paints with multiple values in one image
- Click on + or – by a slider to increase or decrease that slider and reset all other sliders.
- A “Pin” is created automatically by selecting “New” at the top and then “painting” in the area of the image you plan to change. Use “Show Pins” to see the Pin for each adjustment.
- Start the Density at 50% unless you're sure you want 100%.
- Flow says how quickly it goes to the max density set in the Density slider. It is like airbrush flow and is more noticeable when using a pressure pen rather than a mouse.
- Automask attempts to control the brush to areas of similar color and is best used for hard edged objects in the photo.
- With Automask selected, using the Alt key switches the brush to Erase mode. Do this to clean up a mask.
- Click Show Mask to see the mask but it makes it a hard to see the result until you turn it off
- You can vary the same adjustment by painting one area at 100% density and another area at a lower density.
- Click on the box with an X in it beside Color in order to add a color.

Preview checkbox

The Preview checkbox at the top will only preview the current tab's changes unless you are on the Presets tab. On the Presets tab it is a global preview and will toggle off all the changes.

Red-eye removal

- With the Red-eye Removal tool selected, drag a selection in the photo around the red eye.
- Camera Raw sizes the selection to match the pupil. You can adjust the size of the selection by dragging its edges.
- Drag the Pupil Size slider on the toolbar to adjust the size of the area corrected.
- Drag the Darken slider to the right to darken the pupil area within the selection and the iris area outside the selection.
- Deselect Show Overlay to turn off the selection and check your correction.

Other Adjustment Windows (beside the "Basic" Tab)

Tone curve

- Parametric tab lets you change the curves using sliders. The areas of the curves affected by the four bottom sliders can be changed by moving any of the 3 sliders at the base of the graph.
- The Point tab allows more specific changes by selecting and moving points on the graph. You can also choose preset options from the Curve menu. They can then be further adjusted by clicking anywhere on the line in the graph.
- The Global Targeted Adjustments Tool resets the Tone Curve
- The Basic tab and the Tone Curves work independently – they don't contradict or override each other.

Setting ACR preferences

- Allows the option of opening (or not opening) JPEG and/or TIFF in ACR
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Sharpening

Sharpening enhances the definition of edges in an image. These controls are available in the Detail panel. The zoom level must be set to 100% or greater in order to view the effects of these controls.

- Amount: Adjusts edge definition. Increase the Amount value to increase sharpening. A value of zero turns off sharpening. In general, set Amount to a lower value for cleaner images. The adjustment locates pixels that differ from surrounding pixels based on the threshold you specify and increases the pixels' contrast by the amount you specify.
- Radius: Adjusts the size of the details that sharpening is applied to. Photos with very fine details may need a lower radius setting. Photos with larger details may be able to use a larger radius. Using too large a radius generally results in unnatural results.
- Detail: Adjusts how much high-frequency information is sharpened in the image and how much the sharpening process emphasizes edges. Lower settings primarily sharpen edges to remove blur. Higher values are useful for making the textures in the image more pronounced.
- Masking: Controls an edge mask. At a setting of zero, everything in the image receives the same amount of sharpening. At a setting of 100, sharpening is mostly restricted to areas near the strongest edges.

Noise Reduction

- Luminance: Adjusts grayscale noise.
- Color: Adjusts chroma noise.

HSL/Grayscale

- Use to control the individual color ranges.

- If you check the “Convert to Grayscale” check box, the three tabs will be replaced by one tab called Grayscale Mix allowing you to change the contribution of each color range to the grayscale version.
 - the Orange slider is the best tool to adjust skin tones. Not available in Photoshop and is better for skin tones than anything in Photoshop.
- Hue/Sat adjustment
 - Good specific color control, saturation control and adjustment of Hue with the Targeted Adjustment tool.

Split toning – for coloring a grayscale image

- Hue sets the color of the tone, Saturation sets the magnitude of the result.
- Hue and Saturation can be adjusted for highlights separately from shadows.
- The Balance slider controls the influence between the highlight tone and the shadow tone. Sliding it to the left increases the influence of the shadow tone. Sliding it to the right increases the influence of the highlight tone.
- Tip: increase the Shadow saturation, then pick the hue desired, then reduce the saturation to taste.
- The best way to use this tab is to only change the Shadows, and then use the Balance slider to liking.

Lens Correction

- Can correct aberrations in color and vignetting that some lenses may display. There are manual and Profile tabs and both are useful.
- The profile tab now has data for 100’s of lenses and will correct lens distortion (Barrel and pincushion distortion) as well as take a shot at chromatic aberration. Very effective.
- In Manual, the top control distortion will correct lens distortion if your lens is not in the database, or can be used to fine tune the database profile
- One can also rotate the image here and can be used with the crop tool very effectively.
- Vertical and horizontal transform will correct for the camera up-looking Geometric distortions and horizontal distortions
- The best tool on this tab is the Lens Vignetting. It actually changes the density of the image creating a more realistic vignette. (Post Crop Vignetting adds black or white color to the image).

Effects (fx)

Grain

Post crop vignetting

- Provides a way to add a vignette that starts at the new edges created after cropping an image
- It paints black on the image though and does not look as good as Lens Vignetting
- Take Feather to zero for a hard lined edge

Camera calibration

- Use to create custom calibration if you believe camera raw is not correctly interpreting your raw images.
- The later versions of ACR now come with specific camera profiles. ACR looks at the file, determines what specific camera model was used then provides several different manufacturer’s in-camera color selections in the Camera Profile drop down list.

Presets

Presets are a set of ACR adjustments that you may use over and over.

Click on the paper Icon at the lower RHC of the presets frame to create a new Preset. Any adjustment that you have made is available to for the new preset. Title it so you can remember it.

One that I do use a lot is called, "Bill's White Lightening CB' and represents the Color Balance values I get from a gray card with my studio strobes.
I will make it for you.

Snapshots

- Lets you save snapshots of your work, tracking steps along the way
- Snapshots are saved even after you exit ACR.
- Good for backtracking in a multi-step process
- The snapshots are not just the changes made since the last snapshot but rather, they contain all the settings at the time of the snapshot.

- For example: As shot; global first cuts; B&W Mono; Browntone Mono, Could even be two versions of the same image if the final needs minimal adjustments in PS.