

Adobe Camera Raw (ACR) 5.x

Why use RAW?

- A Raw file is all of the data from the camera's sensor without any interpretation or changes
- Over 3 times more colors available than jpgs. Makes for smoother transitions in color, such as a photo of a sunset.
- 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.

Making adjustments to your image

ACR 5.x is only useable in Photoshop CS4 and Elements 6.0 or greater

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.

Auto / Default – Auto lets Camera Raw determine what needs to be done to the image. Much better in versions 5.2 or 5.3 than previous versions of ACR. A good first choice to improve 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

Note on Camera Exposure

- When taking photos, monitor your exposure by frequently looking at the histogram. Don't overexpose - look for the telltale "blinking spots"

White balance tool

- 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

Exposure slider

- Determines the overall brightness of your image, this affects the ENTIRE brightness range.
- Determines if any area in the image will be white

Blacks slider

- Determines how dark the darkest area of your image will be
- Adjust the Blacks slider before adjusting the Fill Light and fine tune with the Blacks slider again

Brightness slider

- Controls the overall brightness of the image by concentrating its adjustment in the middle range of the image. Moderate movement of the slider does not affect either ends of the histogram

Contrast slider

- Determines the amount of separation between light and dark areas

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 from becoming over saturated

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%
- Controls contrast in the middle tones
- New in ACR 5.x the Clarity slider now can be moved in the negative direction, which produces a softening effect.

Recovery slider

- This slider allows you to recover lost detail caused by in-camera overexposure or over aggressive adjustment of the exposure slider.
- This only affects the far right of the histogram (extreme highlights)

Fill light slider

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

Saturation slider

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

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

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

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.

Post crop vignetting (new in 5.x)

- 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

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.

Spot removal 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.

Targeted adjustment (new in 5.x)

- 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

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
- Gradients can be vertical, horizontal or on a 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, masks in the raw convertor) by "painting" specific areas you want to modify
- Can have multiple masks 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 or 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.

Tone curves

- 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 Basic tab and the Tone Curves work independently – they don't contradict or override each other.

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.

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.

Workflow options – located at the bottom center of the screen

- Allows for color space selection (Adobe RGB 1998 & sRGB) are used most
- Select 8 or 16 bit

Save image button

- Provides numerous saving options

Setting ACR preferences

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

Toggle full screen button

Color sampler tool

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

ACR menu button – small button to the right of the TAB name

- Somewhat hidden – allows for numerous settings, defaults and previous conversions

White balance

- Allows for the selection of various lighting conditions, note the setting on your camera does not change the data in camera raw, but it does pass thru the setting to ACR

Sharpening

- In the lower left of the window, change the viewing size to 100%
- The Masking blocks sharpening on non-edge areas of the image. Hold the ALT key to see what is being sharpened. The white areas or lines are there sharpening is occurring.
- The Sharpening “amount” only affects luminosity. The amount of 150 can be fine. Hold the Alt key while moving a slider to see the effect.
- Luminance is brightness of the image vs. the colors of the image

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.
- Luminance tab – 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.

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.
- 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. Zoom into 100% before making changes. May not be necessary for most cameras. More likely on point and shoot cameras.
- 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).

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.