2 Camera Raw

It may often be the case that you only need to make basic adjustments to your images. If so, you can perform non-destructive edits to your images in Camera Raw without even opening Photoshop.

Camera Raw was designed to make initial adjustments to Raw images before taking them into Photoshop, but it has grown into a fairly comprehensive editing solution in its own right. If you are not a Photographer you may not have come across Raw images before. In addition to capturing JPG and TIFF images, many high end compacts and all dSLR's are able to save images in the Raw format. This means that the image is saved at the maximum bit depth and is not processed. The resulting file contains the maximum amount of information the camera is able to capture.

Note: Every camera manufacturer has its own proprietary Raw format. Adobe Camera Raw can read Raw data hundreds of different cameras. However, if you by a brand new camera its Raw format may not be supported by the program until the next update. Check the Adobe website for the latest version of Camera Raw. If there is no update available and you want to use Camera Raw you can download the Adobe DNG Converter from the Adobe website. The utility will convert Raw files into Adobes own format, the Digital Negative (DNG).

In the last few versions of Photoshop it has also been possible to open JPG and TIFF formats in Camera Raw. However, in versions prior to CS5 you need to set the behaviours for JPG and TIFF files in the General Preferences if you want them to automatically open in Camera Raw. In Bridge CS5 the Camera Raw preferences are available from the Edit menu, fig 2.1.
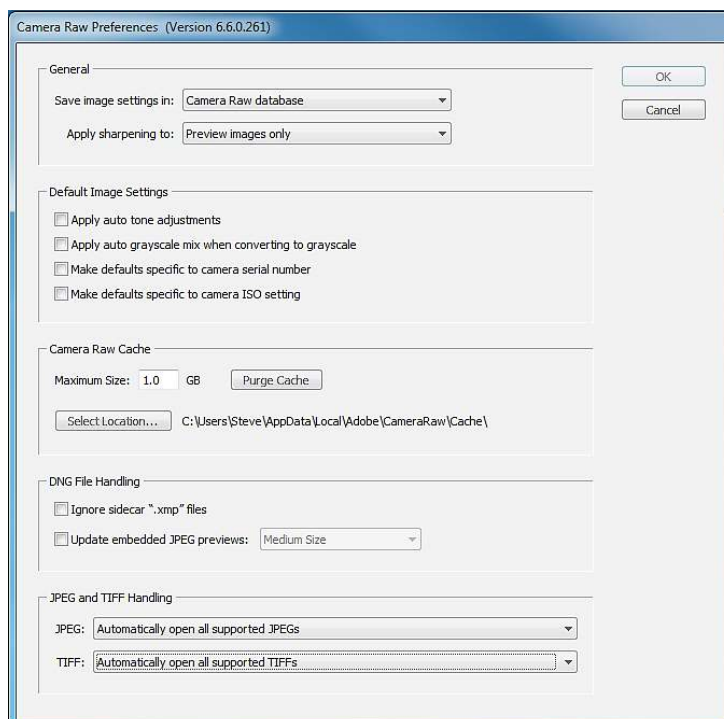

Fig 2.1 the Camera Raw Preferences in Bridge CS5.

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Whenever you edit a file in Camera Raw your original image remains unchanged. Instead of saving an altered version of the image, Camera Raw saves a small "sidecar" file which will appear in the same folder as the image and have a XMP file extension. It is important that the XMP file remains with the image, because it records all of the edits that you have made in Camera Raw. If you use the Adobe DNG format, it has the benefit of being able to store the Camera Raw edits in the original file and so a sidecar file will not be created. You can also choose to have the edit data saved to the Camera Raw Database in the Camera Raw Preferences, fig 2.1. If you go down this route, please note that if you transfer the image to another machine, the edit information will not be transferred unless it is in the DNG format.

The Camera Raw Interface

Fig 2.2 the Adobe Camera Raw interface version 6.6

Across the top left of the interface are a series of tools, for editing your image. From left to right, they are:

1. The Zoom Tool – Click and drag to magnify part the image. Double click on the icon to go to a 100% view.
2. The Hand Tool – Navigate when zoomed into an image by using the hand tool to move the image around. Double click on the hand tool to fit the image to the work area.
3. The White Balance Tool – Click on a neutral colour in the image to set the white balance and remove any colour cast.

4. The Colour Sampler Tool – Use this tool to see the RGB values of specific pixel values. The values are given in the RGB section located below the Histogram in the top right.

5. The Targeted Adjustment Tool – Select a parameter from the drop down list (fig 2.3) and click and drag in the image to change the values. Dragging to the right increases the value and dragging to the left decreases the value. You can also choose to drag up and down.Fig 2.3 the Targeted Adjustment Tool drop down menu options.
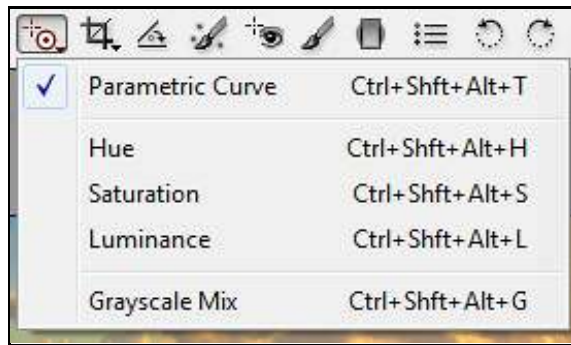
6. The Crop Tool – Crop your image non-destructively with this tool. Use the drop down menu (fig 2.4) to select a specific aspect ratio or clear a previous crop.

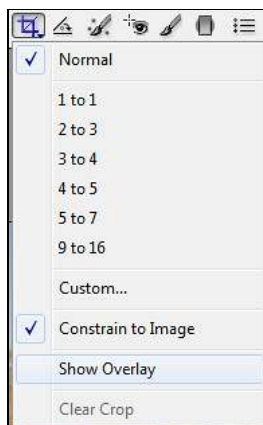Download free eBooks at bookboon.com
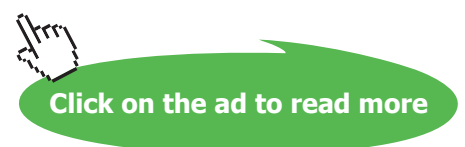
Fig 2.4 the Crop Tool drop down menu options.

7. The Straighten Tool – Click and drag along an edge in your image that should be vertical or horizontal. When you select another tool the image is automatically straightened and cropped.

8. The Spot Removal Tool – Use this tool to remove sensor dust spot from your image. Click and drag over the dust spot and Camera Raw will automatically select a clear area to fill your selection. You can adjust these areas by clicking inside one of the circles and dragging.

9. The Redeye Removal Tool – Click and drag over the eye area and the redeye will automatically be fixed. Use the panel on the right to adjust the pupil size and darken values if necessary.

10. The Adjustment Brush – Apply basic adjustments to localized areas of the image by painting them onto the image using this tool. The adjustments that can be applied with this tool will appear in the panel on the right once the tool has been selected, fig 2.5.

    The Auto Mask checked box at the bottom of the panel (fig 2.5), restricts the area in which you can paint to a similar range of pixel values. This can be very useful if you need to paint up to an edge but not go over it.
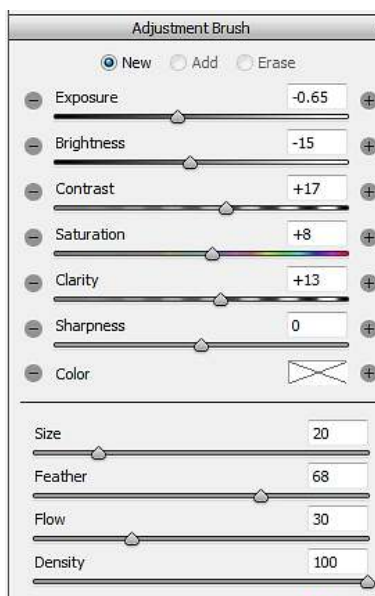

Fig 2.5 the Adjustment Brush panel.

11. The Gradient Filter – This tool works in a similar fashion to the Adjustment Brush, but instead of painting, you click and drag to create a gradient which applies the adjustment values you have chosen. At the start of the gradient the adjustment is applied at 100%, gradually reducing to 0% at the end point of the gradient.

12. The Open Preferences Dialogue – Opens the same Dialogue box that is available from the Bridge menu, fig 2.1.

13. Rotate Anti-Clockwise – Rotates the image 90 degrees anti-clockwise

14. Rotate Clockwise – Rotates the image 90 degrees clockwise

Basic Adjustments

On the right of the Camera Raw interface are a series of 10 tabbed panels. We are going to take a look at the first of these panels, the Basic panel. It is often the case, that 80-100% of the image adjustments that you need to make can be achieved using only this panel, fig 2.6.
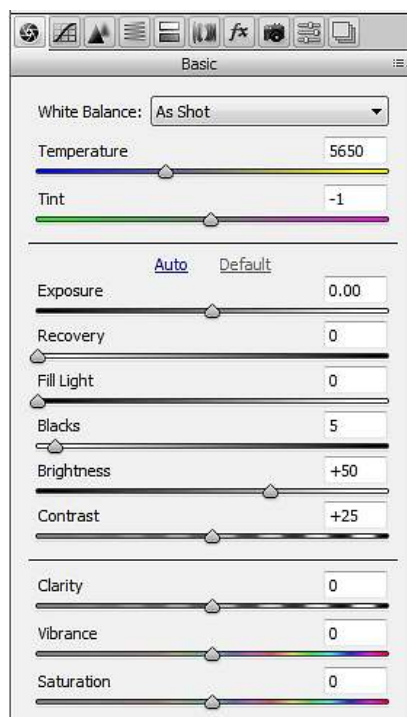

Figure 2.6 the Basic Adjustment tabbed panel.

It is recommended that you edit your image in the Basic panel by starting at the top and working your way down to the bottom.

White Balance – This consists of a drop down menu and two sliders. The drop down menu contains a number of white balance presets similar to the one found in most cameras, fig 2.7 (left). However, this list is only available when working with Raw file formats.
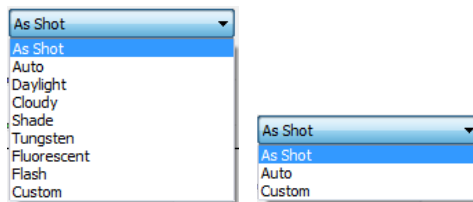
Fig 2.7 White Balance presets for Raw (left) and JPG/TIFF (right)

You can adjust the White Balance manually using the Temperature and Tint sliders, regardless of which image format you are using.

- Exposure – Lightens or darkens the entire image in standard f-stop increments.
- Recovery – Moving this slider to the right will darken the very brightest values in your image to recover detail in the highlights.
- Fill Light - Moving this slider to the right will lighten the darkest areas of the image in an attempt to recover detail in the shadows.
- Blacks – Set the black point in the image. Moving the slider to the right will send more pixel values to pure black.
- Brightness – Makes the light areas lighter whilst leaving the darkest areas alone.
- Contrast – Increase the contrast of the image by making the dark areas darker and the light areas lighter.

- Clarity – Moving this slider to the right makes the image look sharper and clearer by adding micro contrast adjustment to edges. Moving the slider to the left will soften the image which can be nice when used on portraits.
- Vibrance – Alters the saturation of colours in the image, but has less effect on colours that are already saturated or contain flesh tones.
- Saturation – Affects the saturation all of the colours in the image equally.

Camera Raw Workflow Options

An often overlooked setting in Camera Raw is the Workflow Options. These settings are accessed by clicking on the blue hyperlink (fig 2.8) at the bottom of the Camera Raw work area. In the Workflow options dialogue box we have the option to:

- Set the colour space for the image
- The Depth option allows you to set the number of bits per RGB channel.
- Set the image size. You can increase or decrease the image size in set increments.
- Set the image resolution.
- Add a preset amount of sharpening. You can choose to add sharpening for the screen or matte/glossy prints.
- Select to always open the image in Photoshop as a Smart Object (see the section on Smart Objects).
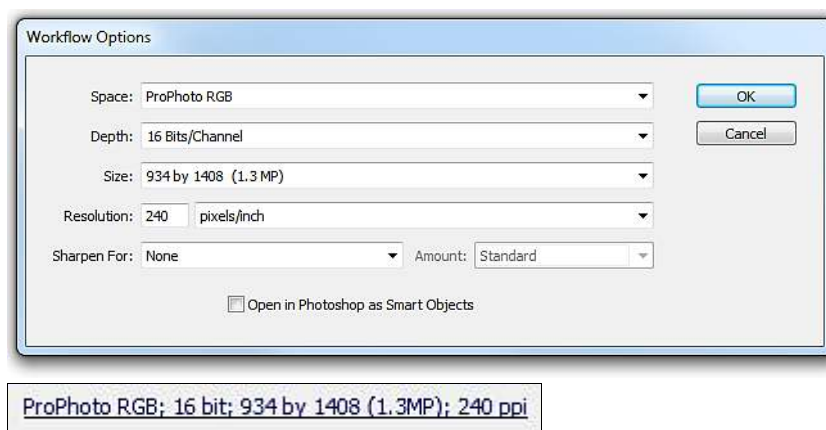
Fig 2.8 the Camera Raw Workflow Options, accessed from the hyperlink at the bottom of the work area.

Saving Images from within Camera Raw

In the bottom left corner of the Camera Raw work area there is an option to "Save" your image. This means that you can edit an image in Camera Raw and save out a finished version as a JPG, TIFF, DNG or PSD without ever opening Photoshop. The Workflow Options can be very helpful at this point because you can change the settings according to suit the purpose of the file. For example, you may wish to create a small, low resolution file to attach to an Email. However, it is important that you change the Workflow Options back to their original settings, otherwise all of your subsequent documents will be formatted as small, low resolution images.