

Photoshop 1: Adjustments (& with RAW)

General Photoshop instruction

Photoshop is a vast application that has evolved over many years. It is so huge in terms of functionality that I have never met anybody who really knows all of Photoshop. In just a few lessons we can only scratch the surface.

I will teach those parts of Photoshop that I use all the time: the really useful bits for a graphic designer and a photographer. I hope you all are, or will become, at least serious amateur photographers!

I will divide what I teach in Photoshop into two sections...


1. Image adjustments: manipulating things like white balance, exposure, contrast, cropping, saturation, etc., and in modern times these are done mostly in Photoshop Camera Raw (or the Camera Raw Filter), even when you are not working with a RAW image.
2. Image manipulation: this is when one cuts portions of images out, uses layers, retouches, and does many wonderful things within the main Photoshop space.

And as a bonus we will go through making sophisticated mock-ups using pre-made PSD files.

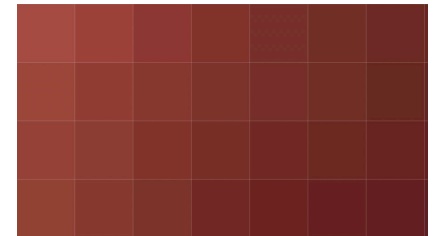
Note that...

1. Some things which one can do in Photoshop, like build a composite layered image or tint an image, can be done equally well in InDesign. In InDesign one can better see the desired end result in the context of a document.
2. All that can be done in Photoshop Camera Raw can be done also in the Lightroom Classic application which is included in your Adobe Creative Cloud suite. Lightroom Classic has an easier interface for general settings, and a work-flow that is geared to photography.

In 2017, Adobe renamed Lightroom to become "Lightroom Classic", and introduced a new Lightroom package (confusingly called just "Lightroom") which includes also Lightroom for your smartphone and any other tablet device, plus 100GB of synced cloud storage. For example, when you take a photo from your phone with Lightroom, the photo is then automatically synchronised to cloud storage, and can then be edited on you computer. Etc. This pack is included as part of your Adobe Creative Suite subscription — you own this! Try it out sometime.

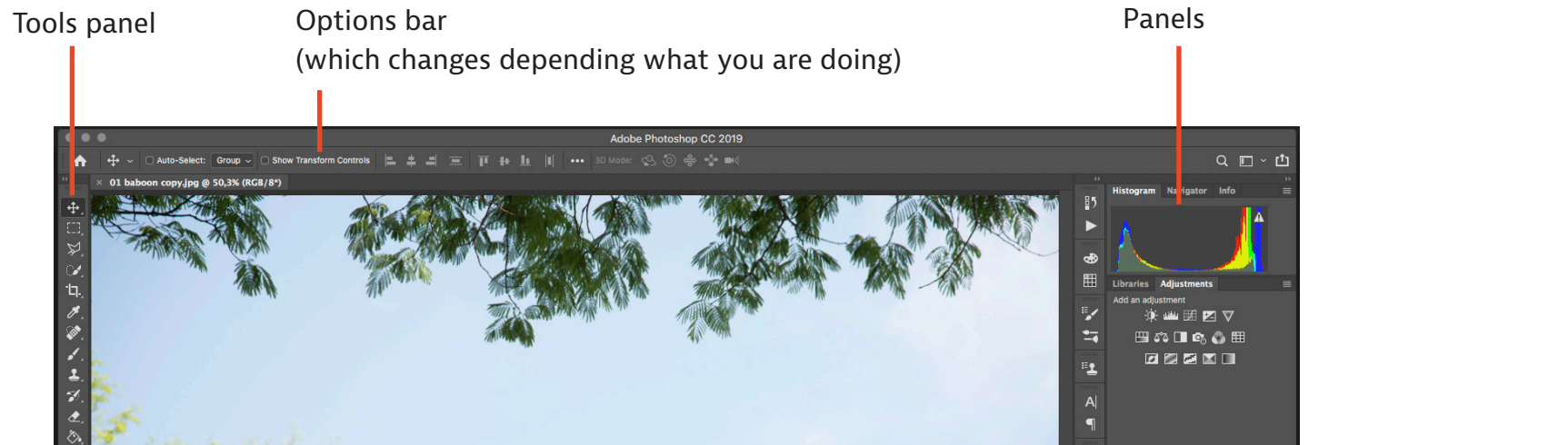
Open any "busy" image in Photoshop. Zoom in continually until you have zoomed to the maximum (by repeatedly unpinching or repeatedly pressing  +). You will see a series of dots (small rectangles). Each dot is called a "Pixel". Photographs are made of pixels.

A typical reasonably good camera might have a pixel resolution (dimension) of about 6000 x 4000.



Opening an image

Download the class material from iscom.millner.fr/down/Photoshop-1.zip
Open the ZIP file which is a single directory, and open this directory in Adobe Bridge.
Open the image "01 baboon.jpg" in Photoshop (by just double-clicking on the JPG in Bridge).
So that we are on the same (useful) workspace, go » **Windows** » **Workspace** » **Photography**
And note a certain similarity with InDesign!



Cropping and straightening

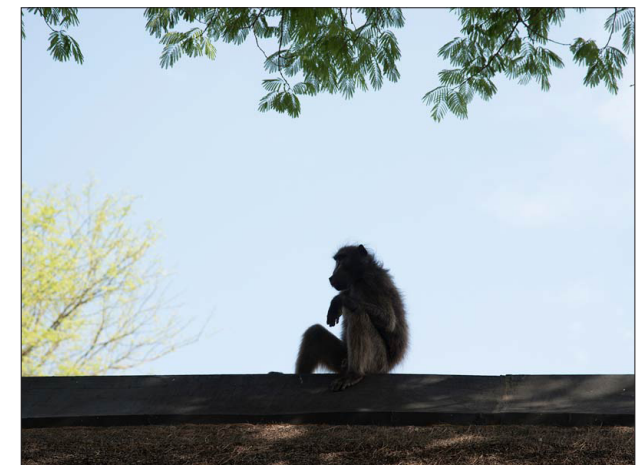
Suppose that one wants to straighten the image such that the top of the roof is horizontal and that one wants the image to have a crop ratio of 4:3...

In the tools panel, click on the Crop icon (or go **C** for "crop").



In the options bar, make the ratio 4 and 3 (for 4 wide to 3 deep).

By dragging just outside the corner, rotate to make the roof horizontal; maybe crop-out some of the roof foreground.



Adjustments with the Camera Raw Filter

Go » [Filter](#) » [Camera Raw Filter](#) and the Camera RAW space opens. Look around.



First click on the full screen tool top right (or press **F**) to have more space to work in.

As you can see, the baboon — the subject of the photo — is underexposed. Make sure that the “Basic” panel is open.

First try a “quick and dirty” with the basic settings:

1. Click on “Auto” near the top (see 1): see how the sliders move and the picture transforms.
2. Change the White Balance from “As Shot” to “Auto” (see 2) and the colour temperature changes.

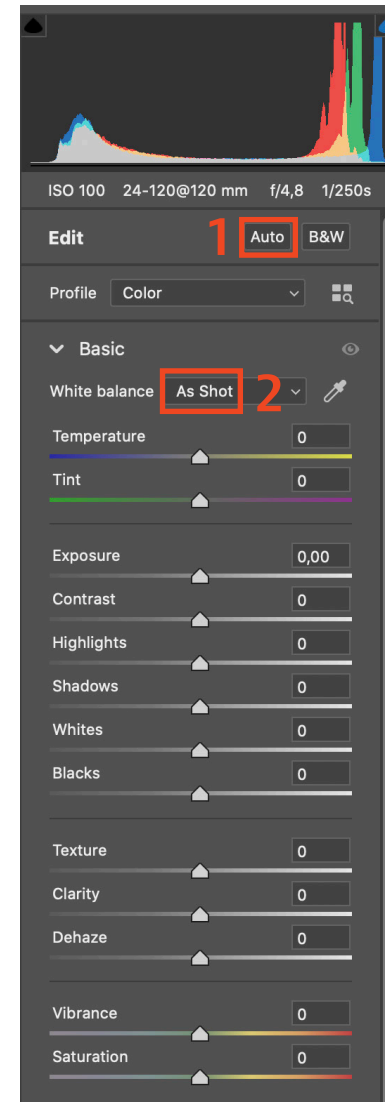
See how the image has been transformed into something one could use.

Now go **⌘Z** several times to get back to the beginning, and we will now do things manually and under our full control:

- The sky is about correctly exposed while the baboon is too dark, so let’s lift the shadows: move the Shadows slider about two thirds right to about +67.
- Maybe we could want some more clarity (more local contrast): move the Clarity slider maybe a quarter right to about +25.

You are still in the “Basic” settings area. Play with *all* the sliders to see what changes. See also how the histogram changes as you move the sliders. Play with the zoom settings bottom left.

Note that if you click on a slider but do not necessarily move it, you can use the up and down arrow keys to do small increments. Note too that you can key in a value (generally -100 to +100) for the sliders. If you double-click a slider the value returns to zero.



Some further explanation:

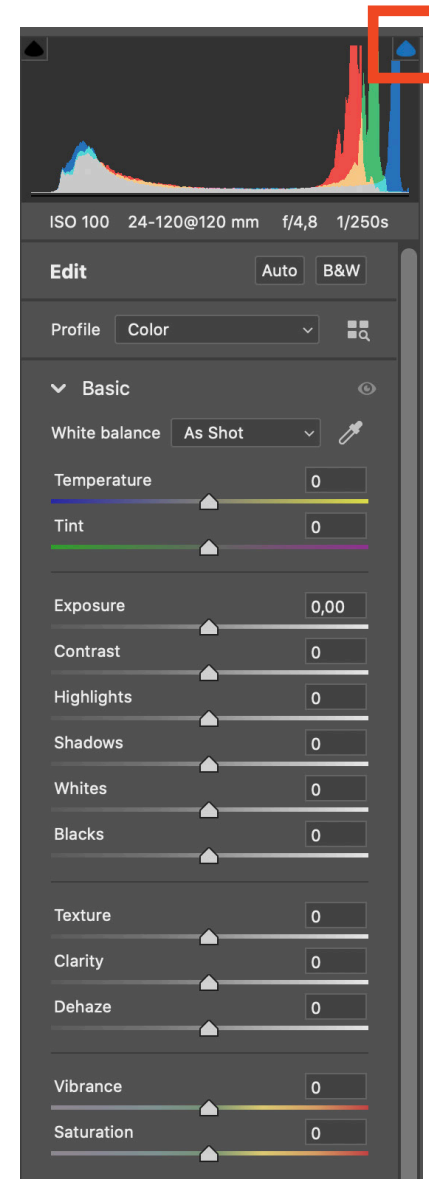
- The “Temperature” and “Tint” sliders are about setting the White Balance (also called the “colour temperature”). If you have a neutral white or grey colour in the photo you can use the White Balance Tool (the pipette) and mark this neutral spot.
- “Exposure” and “Contrast” are obvious.
- “Highlights” is to control the exposure of the lighter areas.
- “Shadows” is the same for the darker areas (and we used this for the baboon).
- “Whites” is to control the exposure of the very light areas.
- “Blacks” is the same for the very dark areas.

- “Clarity” is for local contrast.
- “Dehaze” is to, well, dehaze like when the subject is in mist or hazy.
- “Vibrance” is for saturation in the mid tone area.
- “Saturation” is for the intensity of the colour.

The histogram shows the distribution of colour from dark (left) to light (right). I will now explain how you detect clipping (which means that the exposure is out of range — too dark or too light):

- Click on the symbol marked in the diagram on the top-right.
- Move the “Exposure” slider slowly to the right, and see what happens: the parts of the image that are too light become bright red, to show where there is too much exposure to show any detail. Click again on the symbol to switch this off.
- The same would work for shadows clipping (image too dark) with the symbol on the left.

Move the sliders such that you have an image that is to your utmost satisfaction. Click on the rectangle symbol near the bottom right of the image to scroll through the before-and-after.



HSL / Grayscale

Let's make the sky a little bluer:

- Close the "Basic" tab and open "Color Mixer".
- Make sure that "Adjust" is set to "Color"
- Click on dark blue.
- Move the "Luminance" tab left by a little, and the sky will become a little darker blue.

Simplified explanation:

Hue is the actual colour; *Saturation* is the "greyness" colour; and *Luminosity* the "whiteness" colour.

Let's make this into a black-and-white image

- Near the top, by "Edit", click on "B&W" for back and white
- Open the "B&W Mixer" panel.
- Experiment with the sliders, particularly the blue and green.

Detail menu

NOISE REDUCTION

Often photos are taken in low light hence high ISO values and this introduces noise. First we will apply noise reduction.

Open "02 shark.jpg" in Photoshop; go » [Filter](#) » [Camera Raw Filter](#).

- Open the details panel.
- Zoom to 100% (from bottom left control), or even to 200% for a retina screen.
- Hold the space-bar and drag the image so that the eye is approximately centre.
- Note that the image contains a lot of noise, so under "Noise Reduction" move the luminance maybe half way across to about 50, and note that the noise has mostly disappeared.

SHARPENING

While looking at the eye, move the "Sharpening" slider to maybe to 30.

Change the zoom to "fit in view", and note how the image has been improved.

You might want to go to the basic panel and improve the image, for example by increasing "Clarity" maybe to +50. Try this!

Click OK.

Note that noise reduction and sharpening can be done very well also in the conventional (non RAW) part of Photoshop.

Spot removal

If you are no longer in the Camera Raw filter area, the go » [Filter](#) » [Camera Raw Filter](#)



This photo was taken into a fish tank so there are a lot of spots.

Click on the plaster icon on the right (as shown here).

- With the “Size” on 4, “Feather” say 40 and “Opacity” of 100, click on the photo’s spots and blemishes. Note that with each click a sample is intelligently taken from elsewhere. You can drag the sampling spot if you have a better place to sample.
- If the blemish (spot) is oblong, you can drag instead of click. Try it.
- To make the spot size larger or smaller on an English keyboard, press “[” or “]”.
- The spot should not be any larger than it needs to be.
- Press Escape when done.

Note that spot removal (called “content aware fill”) can be very well — generally even better — done in the Photoshop area. More about this in the next Photoshop lesson.

The Photoshop Camera Raw filter tabs

- **Basic menu:** already discussed, and this is what you use most often.
- **Curve:** a powerful tool to manipulate exposures along the histogram. This is similar in Photoshop and might be discussed later.
- **Detail:** sharpening and noise reduction — as already discussed.
- **Color Mixer:** for colour manipulation — already discussed.
- **Color Grading:** to manipulate hue and saturation in the highlights and shadows. *You should experiment with this.*
- **Optics:** for lens correction — generally you use this only when working directly with RAW files.
- **Geometry:** used for example for straightening — we’ll be discussing this in another exercise.
- **Effects:** for grain and vignetting — try it and it will be obvious.
- **Calibration:** as the name suggests — quite an advanced topic.

Tools

The icons on the very right of this Camera Raw filter include tools. Here we worked mostly with the “Edit” tools. We covered also “spot removal”. We will discuss several more tools later.