

# Tone and colour correction

Steve Brabner

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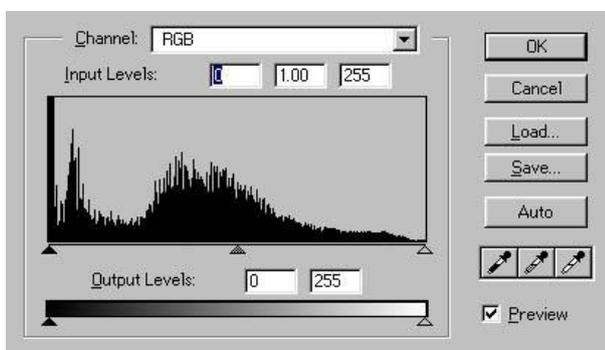
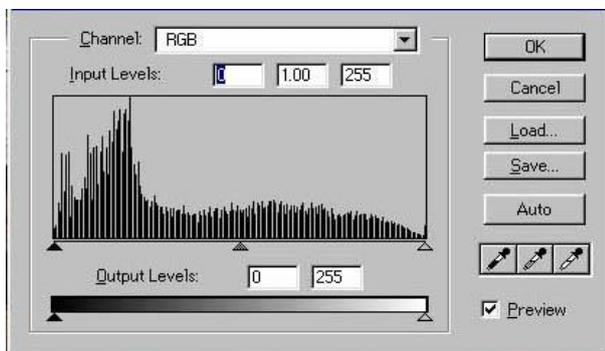
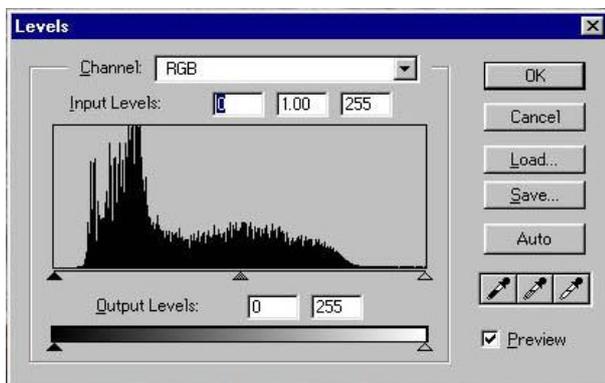
These notes were written to accompany tuition at Amersham Photographic Society, focusing on just the key facts needed to master each aspect of digital image manipulation with Photoshop Elements.

## 1. What is tonal correction?

We may use words like ‘flat’, ‘lifeless’ or ‘contrasty’ to describe an image that has something wrong with it. To fix the image we need to apply *tonal correction*. In fact almost all images that we open in Photoshop would benefit from some tonal adjustment, and this should be on the list of things that we check automatically whenever we open a new image.

## 2. Photoshop Levels

Using Photoshop without using *Levels* is like riding a bike without a saddle – it’s possible, but you’re guaranteed problems at a fundamental level.



*Enhance>Adjust Lighting>Levels* displays a chart (or histogram) of the number of pixels with each tone, from 0 (black) to 255 (white). Ideally, in a typical picture, all 256 levels should be used, but like in real life, you may have to make the most of what you’ve got. The keyboard shortcut for *Levels* is *Ctrl+L*. Shown left (top) is a typical histogram from an image with a full range of tones. Unfortunately, the gaps at both ends of the histogram confirm the lack of bright highlights and black shadows, producing a ‘flat’ image. If it can’t be re-scanned to capture more tones, then the next-best thing is to stretch them out by dragging the black and clear triangular sliders inwards to where the histogram begins and ends. *This is important and should be checked for every image that you open*. Sometimes there will be images with no black or white content, in which case no adjustment may be necessary – but this is the exception.

*Tip:* hold down the *Alt* key whilst sliding the black or clear sliders to see any pixels going to pure black (0) or white (255). You can then decide whether this matters or not in your image. Crisp blacks and whites have now been produced, but the new histogram (left, middle) inevitably has gaps of missing tones caused by the stretching. If the gaps get too large, posterisation will occur, with areas of flat tone becoming visible.

The histogram (left, bottom) is of another image with the opposite problem. The camera has clipped the shadows, forcing them to black. There’s no cure for this – the data’s gone, and a better exposure) is needed. Note that the histogram is always as high as the highest pile of pixels, so if it doesn’t appear to reach the top anywhere there’s probably a tall single column of pure white or pure black at one edge.

The middle (grey) triangular slider enables us to change the distribution of mid-tones. For example, an image with a predominance of darker mid-tones can be improved by dragging this slider a little to the left to give more of the tonal range to the shadows.

**Beware** – it's very tempting for beginners to modify an image with *Enhance>Adjust Lighting>Brightness/Contrast*, but these adjustments are effectively moving the black and white sliders without being able to see the histogram, and they usually do permanent damage to your image data. **Forget about them!**

*Tip:* in many dialogue boxes, depressing the *Alt* key changes the *Cancel* button into a *Reset* button, but recent versions of Photoshop Elements have a dedicated *Reset* button for *Levels*. Finally, don't forget that *Levels* can be used on selections and individual layers for localised changes.

Now that you have some idea of the tools available, you could try *Enhance>Auto Levels* and *Enhance>Auto Contrast*, which offer an automated attempt to fix tonal problems in your image. Of course, the software doesn't know what your image should look like, so there's a fair chance that they will make it worse rather than better. However, they only take a second to try and you may be surprised at the improvement. *Edit>Undo* or (*Ctrl+Z*) is always available to go back one or more steps. *Enhance>Adjust Lighting>Shadows/Highlights* improves the detail in shadow and highlight areas of the image as well as mid-tone contrast. This is a powerful feature that simplifies an area of tonal correction, although the default setting of 35% for the position of the *Lighten Shadows* slider control is usually too high.

### 3. Colour correction

The three eyedropper buttons in the *Levels* box allow us to select pure black, grey and white pixels in the image respectively. The most useful of these is the middle (*Set Gray Point*) eyedropper. Selecting this button and then clicking on any area of the image which should be neutral in colour will automatically adjust the entire image to make that area pure grey. Try clicking around the image and you may fix a colour cast with very little effort. Grey paving slabs, white highlights and deep black shadows are good areas to try first.

*Enhance>Adjust Colour>Remove Colour Cast* does the same job but just duplicates one function of the extremely powerful *Levels* dialogue box. *Enhance>Adjust Color>Adjust Color Curves* is another tool capable of adjusting highlights, mid-tones and shadows, but is more complex to master and less well implemented in Photoshop Elements than Photoshop CS. It is not an essential technique for beginners, although experts love to boast about their mastery of it, and whole books have been written on the subject!

### 4. Hue and saturation

The intensity and tint of colours in your image can be adjusted by means of a slider at *Enhance>Adjust Colour>Adjust Hue/Saturation*. Reducing the saturation can produce a washed-out effect, and conversely, pale colours can be boosted by increasing the saturation. As with all manipulations, an active selection will limit the effect to an area that you choose. Reducing the saturation slider to zero is one of several ways to create a black and white image from a colour original. The *Hue* slider is less useful as it is rather difficult to control but it does have one very handy feature. By selecting the *Colorize* tick-box, the image is rendered as a tinted monochrome. By adjusting the *Hue* and *Saturation* sliders, any number of attractive colour washes or traditional toning effects can be simulated, for example, sepia (brown) or selenium (blue). This is a simple and powerful effect.

### 5. Adjustment layers

This paper does not assume familiarity with *Layers*, and so describes the corrections of tone and colour directly on to an image. Once a basic understanding of *Layers* has been achieved, the same corrections can be applied as *Adjustment Layers*. The controls are exactly the same, but the great advantage is that they are not permanent and can be retrospectively adjusted (or deleted) at any time. It is highly recommended that tone and colour correction is always adjusted in *Adjustment Layers* when possible.