Working with Layers

Layers are one of the most powerful tools in Photoshop and Elements. They enable you to use non-destructive editing techniques for maximum flexibility. Non-destructive editing is when you keep your image adjustments, creative styles and cloning on separate Layers from your image. It may sound dull but it's essential if you want to be able to fine-tune and adjust your images over and over again without degrading quality. The great thing about Layers is that they can be used at different levels of complexity.

Layers are a somewhat strange concept because when you look at the main image window you see all Layers working in conjunction, in a single image. It's not until you move to the Layers palette that you can see the individual Layers that make up your image. Layers can be controlled using the Layers menu in both Photoshop and Elements, and also using the menus and buttons found on the Layers palette itself.

New Layer
This icon opens up a new empty Layer into the stack above the active Layer

Adjustment Layers
The half white/half black icon opens up the Adjustment Layers menu

Layer Masks
Used for making composites and localised adjustments

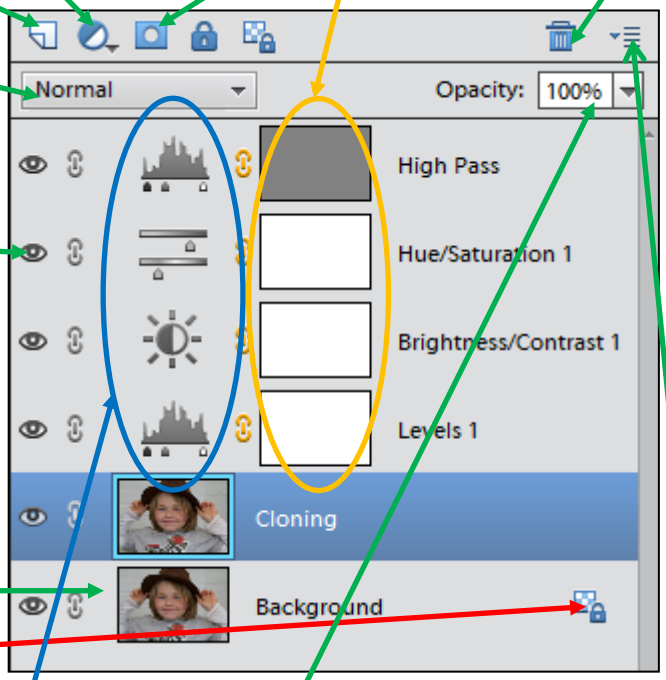
Delete Layer
Drag any Layer to the dustbin and it will be deleted

Blending modes
Control the way Layers interact with one another using options in this menu

Layer visibility
The eye icon next to each Layer is used to turn the visibility of Layers on and off

Layer stack
These are the Layers that make up the image visible in the main image window

Background
The Background Layer is always at the bottom and should be locked



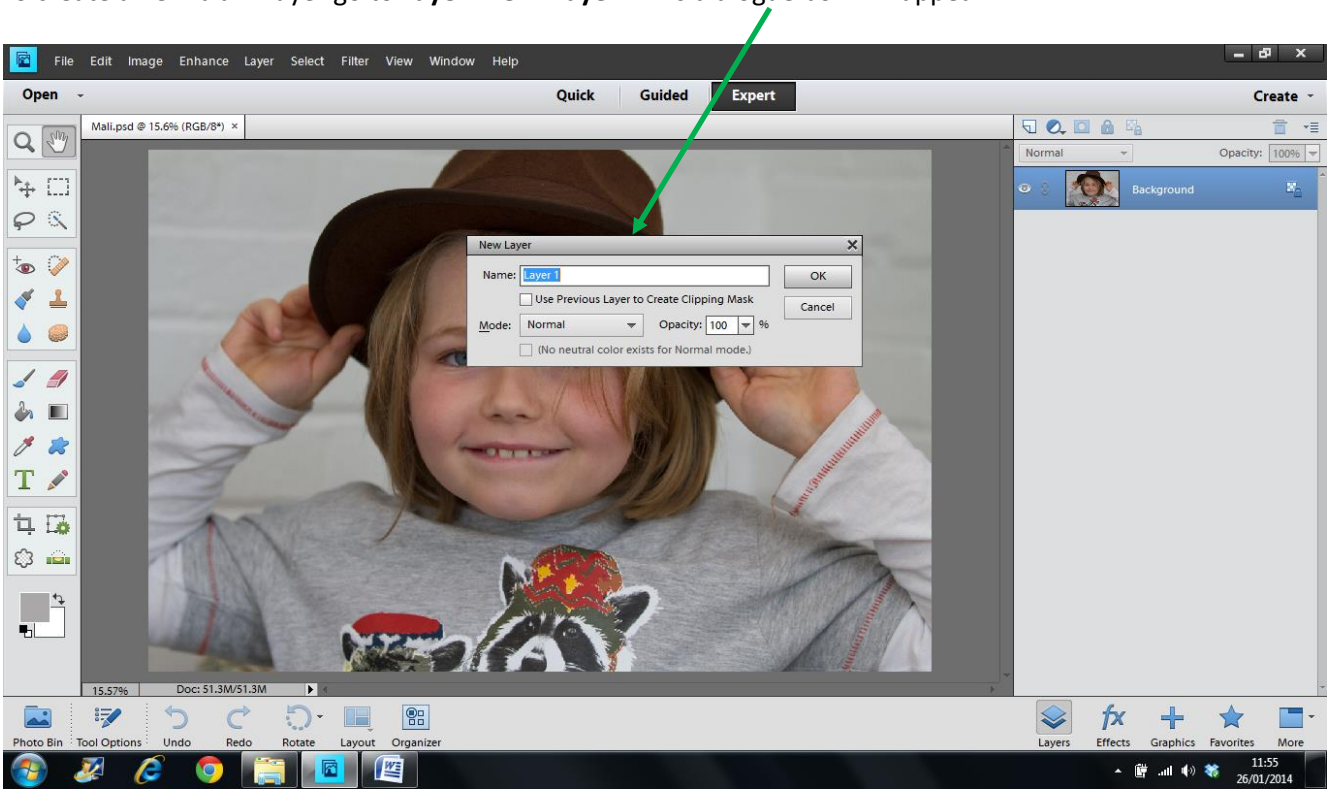
Layer Icons
Double click to re-adjust layer

Opacity
This controls the density of the Layer and increases transparency

Layers Panel Menu
Controls the different layer controls

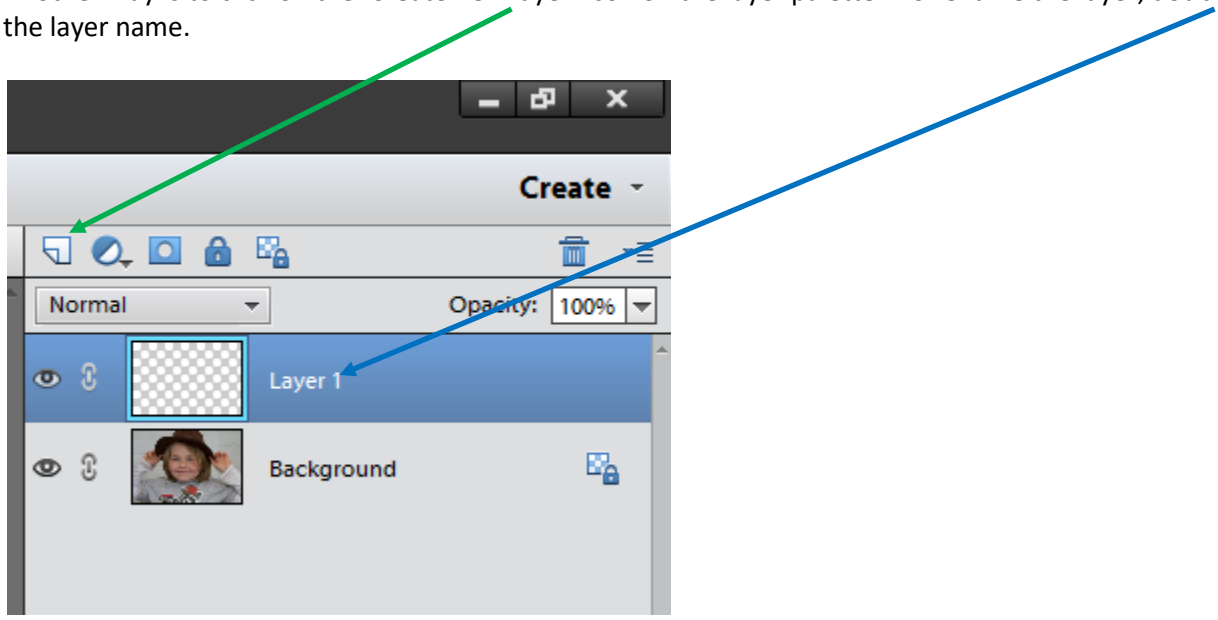
New Layer

To create a new blank layer go to **Layer>New>Layer**. This dialogue box will appear:



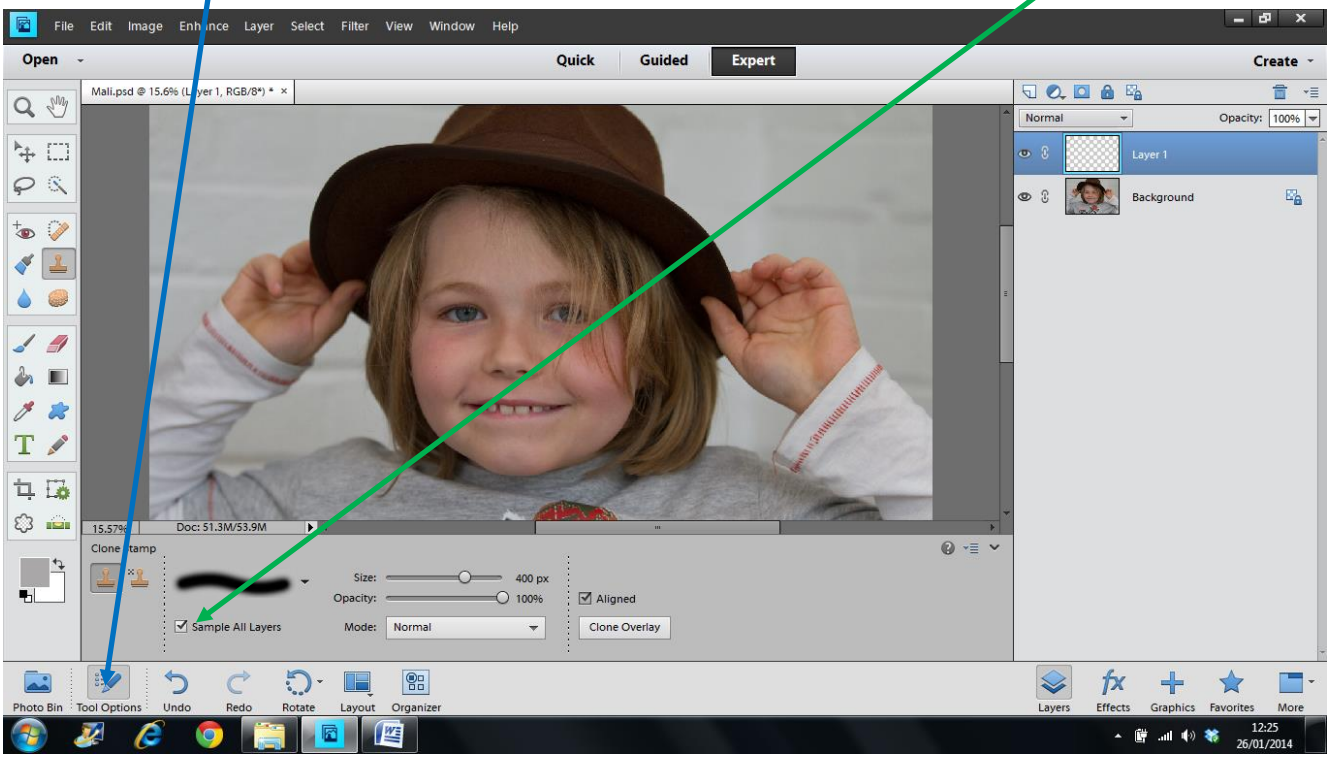
Name the layer for what you are intending to do with it (e.g. Cloning) and click on **OK**, leaving all other settings as they are.

Another way is to click on the 'Create new layer' icon on the layer palette. To rename the layer, double click the layer name.



This is a blank layer, with no pixels, so you need to ensure that you are sampling pixels from another layer to work on.

Once you have chosen the tool you are going to use (e.g. Clone Tool), ensure that the **Sample All Layers** is ticked under **Tool Options** (in Elements):



In Photoshop change the **Sample** box to show **All Layers** or **Current & Below**.

Adjustment Layers

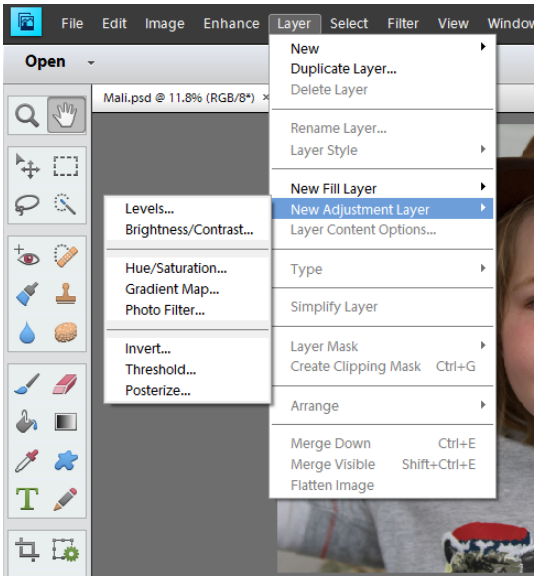
Adjustment Layers can be used to perform a wide range of enhancements including brightness and contrast control, colour correction, converting to black & white and many more. There are a greater variety of Adjustment Layers in Photoshop than Elements, but the options in Elements are perfectly sufficient for most people's needs.

Adjustment Layers affect all Layers beneath them in the Layers stack, not just the selected Layer. This means you can change the look of a layered image by creating an Adjustment Layer over the top, rather than tweaking each Layer individually. The second big advantage is that Adjustment Layers are non-destructive. This means the actual pixels in the image are never changed, so you can always go back and start from scratch.

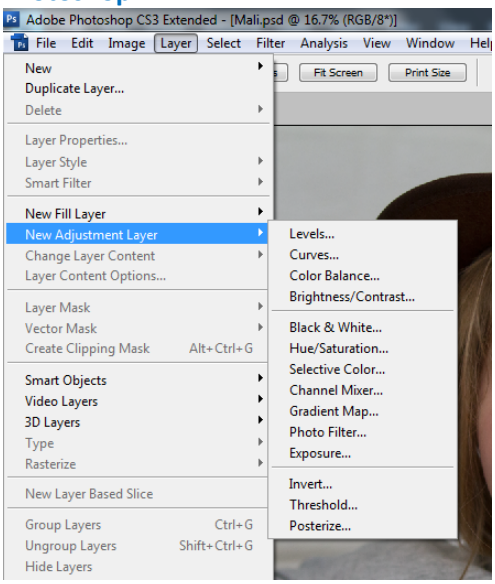
To create an Adjustment Layer, click the half black & white icon in the Layers palette, or Layer>New Adjustment Layer, and make your choice from the list that pops up. You can add as many Adjustment Layers as you like, one at a time, and then change the Layer order for different looks. To re-adjust your Adjustment Layer simply double-click the relevant Layer's icon in the Layers palette and the control dialogue will open up.

If you tick the 'Preview' box when using an adjustment layer, you can see the effect on your image as you make the changes.

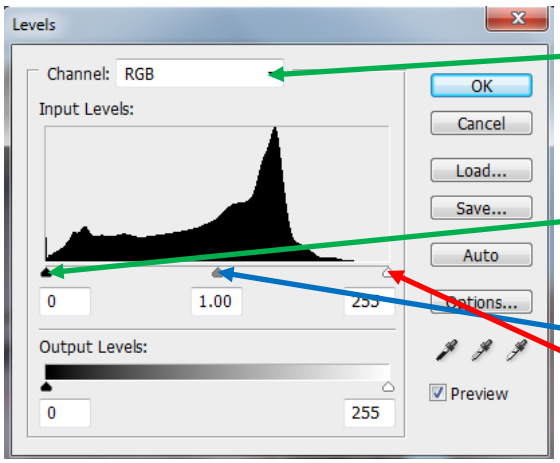
Elements



Photoshop



Levels – This is used to correct the tonal range and colour balance of an image by adjusting intensity levels of image shadows, midtones and highlights.



Channels
RGB - adjust all channels at the same time
Red/Green/Blue – adjust each channel individually

Shadows –

Midtones –

Highlights -

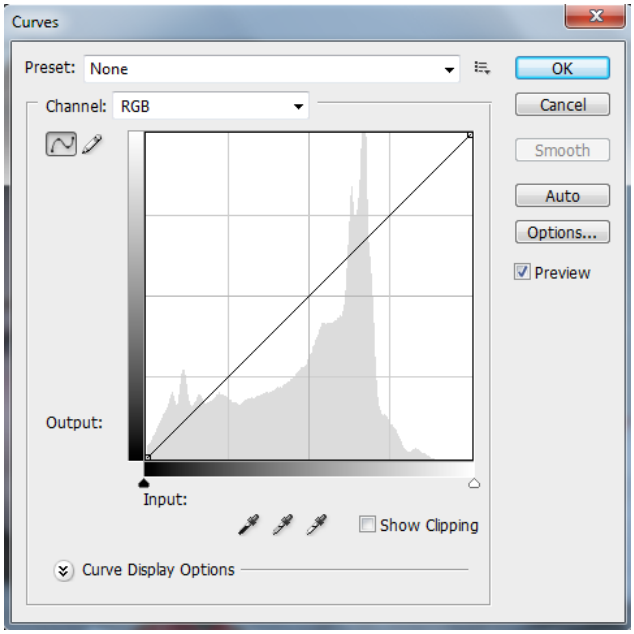
adjust the shadows/midtones/highlights by dragging the sliders

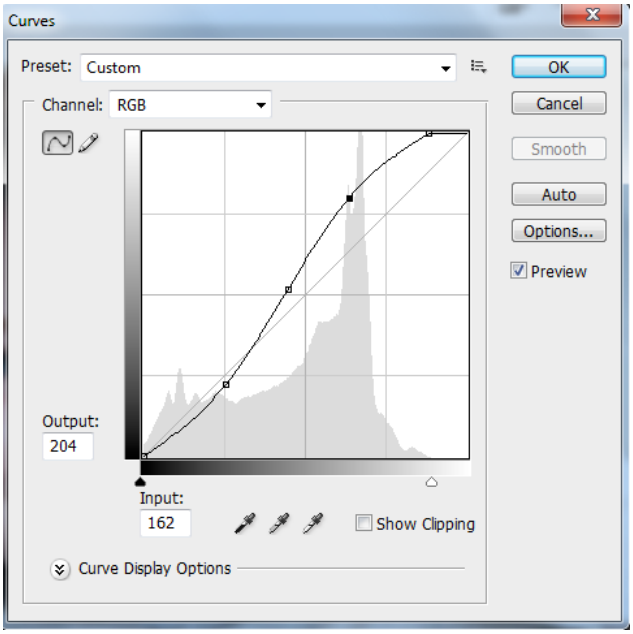
Curves (Photoshop only) – in the Curves dialog box, the tonal range is represented by a straight diagonal baseline.

Click on the Show Clipping tick box – the image will go white. Drag the Black point slider to the right until some colour starts appearing. Click on the White point slider (the image will go black) and drag to the left until some colour starts appearing. Remove the tick from the Show Clipping tick box.

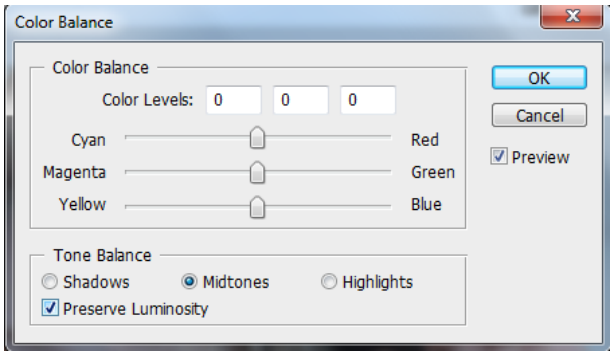
Click on the middle of the diagonal baseline. This locks this point and it won't move unless you drag it. Click on the baseline midway between the centre point and the black point and drag down slightly. Click on the baseline midway between the centre point and the white point and drag up slightly. The line should now be a shallow 'S' curve.

As you make these adjustments, keep looking at the image and only drag the line until you are happy with the results. There is no right or wrong – it is up to you.





Color Balance (Photoshop only) – This changes the overall mixture of colours in the image for general colour correction.



Make sure that 'Preview' is ticked, so that you can see the effect of the changes you are making on the image. A tick in 'Preserve Luminosity' prevents any changes to the brightness of the image while changing the colour.

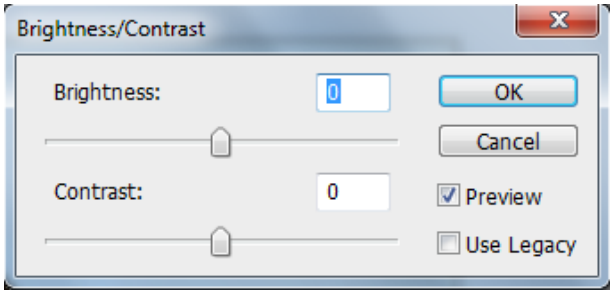
Select Shadows, Midtones or Highlights to select the tonal range in which you want to focus the changes. Dragging a slider towards a colour will increase it and will decrease the colour you are dragging away from. The values above the colour bars show the colour changes for Red, Green and blue channels. Values can range from -100 to +100.

Brightness/Contrast – This lets you make simple adjustments to the tonal range of an image.

Moving the Brightness slider to the right increases tonal values and expands image highlights, to the left decreases values and expands shadows. The Contrast slider expands or shrinks the overall range of tonal values in the image.

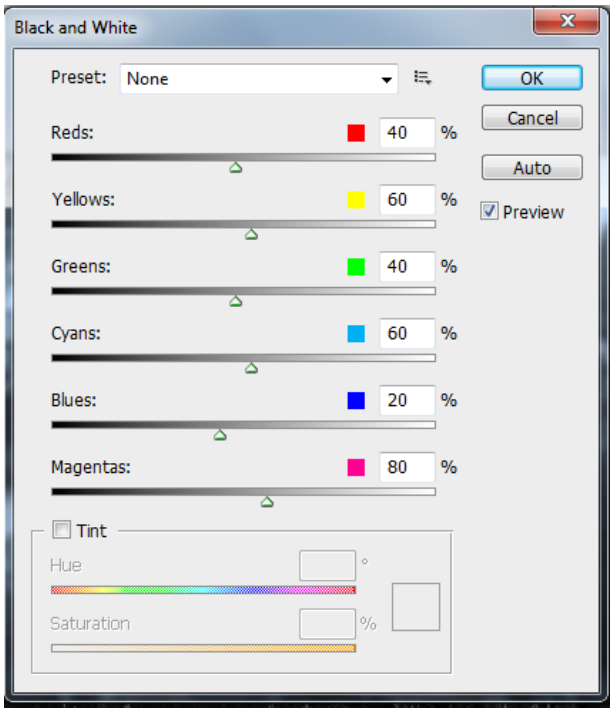
With the 'Preview' box ticked you will see the effect on your image as you move the sliders. Don't tick the 'Use Legacy' box as this can cause clipping or loss of detail in highlight or shadow areas.

The numbers at the right of each slider reflects the Brightness or Contrast value, (Brightness from -150 to +150; Contrast from -50 to +100).



Black & White (Photoshop only) - This is a simple way of converting your image to black and white.

Drag the sliders to change the brightness of the tones which contain a large proportion of the corresponding colour.

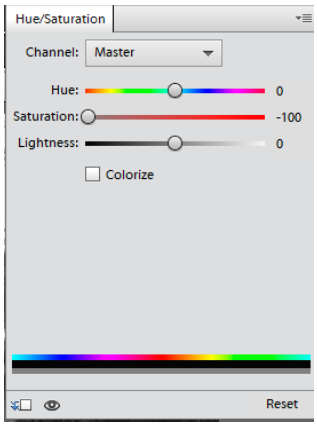


Hue/Saturation – This lets you adjust the hue, saturation, and brightness of a specific colour or simultaneously adjust all the colours in an image. It is also another simple way of converting your image to black and white.

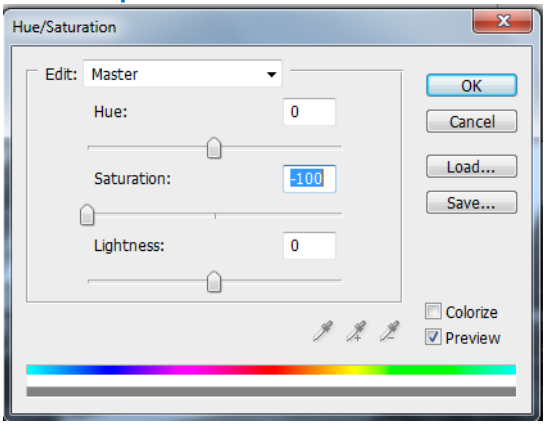
Select 'Master' to adjust all colours, or select an individual colour from the drop-down box. The colour bars at the bottom of the dialog box represent the colours in the image prior to any adjustment (top bar) and after the adjustment has been made (bottom bar).

You can also use this to colourise a monochrome image. Place a tick in the 'Colorize' box. Use the 'Hue' slider to change the colour and use the 'Saturation' and 'Lightness' sliders to adjust the saturation and lightness of the colour.

Elements

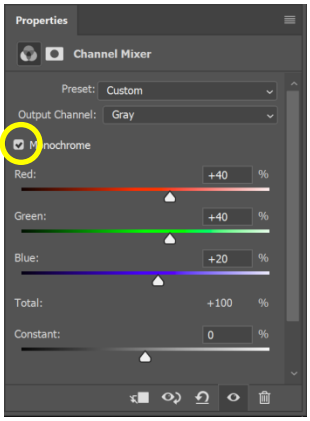


Photoshop



Channel Mixer (Photoshop only)

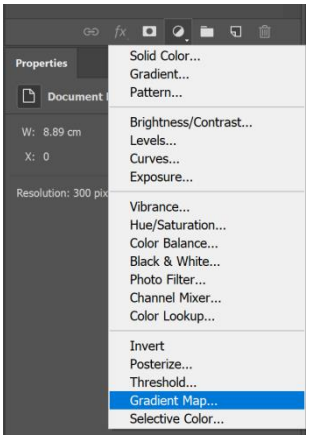
This adjustment layer is useful for converting an image to black and white.



On the Properties panel for the Channel Mixer layer, click the box that says Monochrome. To fine tune your image, adjust the red, blue and green sliders until you get the effect you desire. Keep the adjustments small to avoid destroying the highlights and shadows in your image.

Gradient Map (Elements and Photoshop)

This is the most powerful of all the black and white conversion tools on Photoshop. It allows you to control every aspect of the tonality of your image. It is also the most complicated and hardest to use method of black and white conversion.



I don't use the remaining adjustment layers:

Selective Color - You can modify the amount of a process colour in any primary colour selectively—without affecting the other primary colours.

Photo Filter – The Photo Filter adjustment mimics the technique of placing a coloured filter in front of the camera lens to adjust the colour balance and colour temperature of the light transmitted through the lens. Photo Filter also lets you choose a colour preset to apply a hue adjustment to an image. If you want to apply a custom colour adjustment, the Photo Filter adjustment lets you specify a colour using the Adobe Color Picker.

Exposure – Adjusts tonality by performing calculations in a linear colour space.

Invert - The Invert adjustment inverts the colors in an image.

Threshold - The Threshold adjustment converts greyscale or colour images to high-contrast, black-and-white images. You can specify a certain level as a threshold. All pixels lighter than the threshold are converted to white; all pixels darker are converted to black.

Posterize - The Posterize adjustment lets you specify the number of tonal levels (or brightness values) for each channel in an image and then maps pixels to the closest matching level. For example, choosing two tonal levels in an RGB image gives six colours: two for red, two for green, and two for blue.

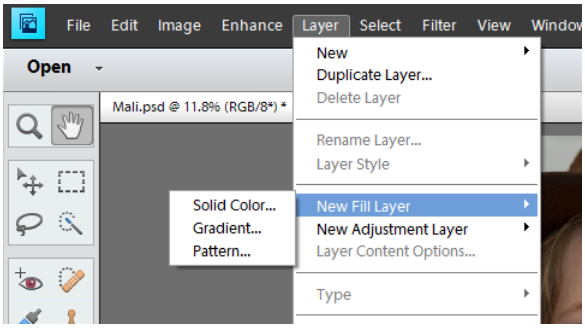
This adjustment is useful for creating special effects, such as large, flat areas in a photograph. Its effects are most evident when you reduce the number of grey levels in a greyscale image, but it also produces interesting effects in colour images.

If you want to see what each adjustment layer does, feel free to experiment.

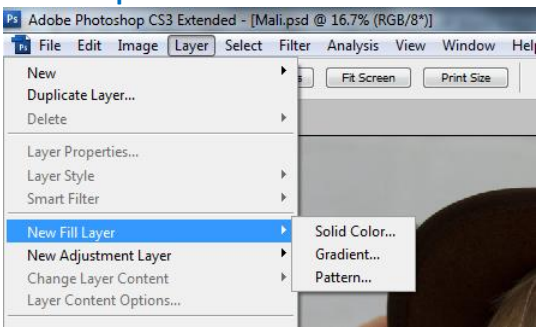
Fill Layers

Fill Layers let you fill a layer with a solid colour, a gradient, or a pattern. Unlike Adjustment Layers, Fill Layers do not affect the layers underneath them. The main use for a fill layer is dodging and burning – i.e. making parts of the image, or the whole image, brighter or darker.

Elements



Photoshop



Solid Color – Fills the adjustment layer with the current foreground colour. Use the Color Picker to select a different fill colour.

Gradient – Click the gradient to display the Gradient Editor, or click the inverted arrow and choose a gradient from the pop-up palette. Set additional options if desired:

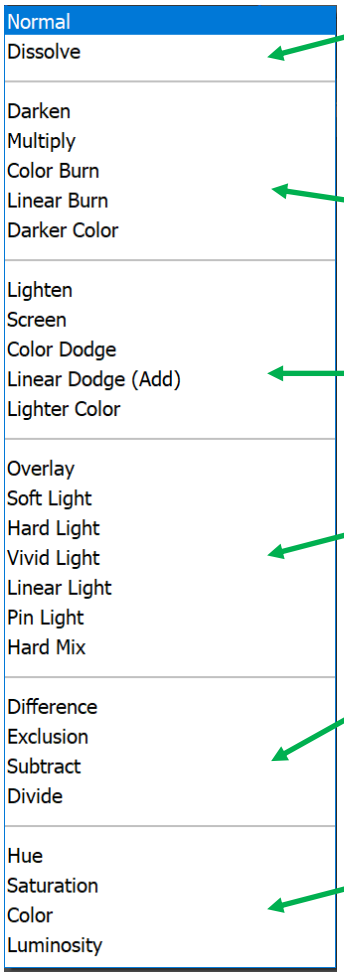
- Style specifies the shape of the gradient.
- Angle specifies the angle at which the gradient is applied.
- Scale changes the size of the gradient.
- Reverse flips the orientation of the gradient.
- Dither reduces banding by applying dithering to the gradient.
- Align With Layer uses the bounding box of the layer to calculate the gradient fill.
- You can drag in the image window to move the centre of the gradient.

Pattern –

- Click the pattern, and choose a pattern from the pop-up palette.
- Click Scale, and enter a value or drag the slider.
- Click Snap To Origin to make the origin of the pattern the same as the origin of the document.
- Select Link With Layer if you want the pattern to move along with the layer as the layer moves. When Link With Layer is selected, you can drag in the image to position the pattern while the Pattern Fill dialog box is open.

Blending Modes

Blending modes are an often overlooked Layer function that is one of the most useful and creative controls on the Layers palette. They control the way Layers blend with the Layers below them, providing a method of applying adjustments and special effects. By default the Blending mode is set to Normal, but by simply opening the pull-down menu you're entering the next stage of creativity. Not all Blending modes work in every situation. The effects of others are so obscure it's difficult to find a use for them in photography. To get some idea of how Blending modes work, experiment by applying them to different Adjustment Layers, and also copied Background Layers.



Normal category
Normal has no effect on pixels unless opacity is reduced to below 100%. Dissolve turns some of the pixels of the Layer transparent – rarely, if ever, used by photographers.

Subtractive category
This group of Blending modes darken colours.

Additive category
These Blending modes lighten colours, focusing on midtones.

Complex category
These modes generally affect contrast. They have varying effects that depend on whether the active or underlying Layers contain colours lighter than 50% grey.

Difference category
These modes create colours based on differences between colours in the active and underlying Layers. These modes are rarely, if ever, used by photographers.

HSL category
These Blending modes work with the representation of colour, Color and Luminosity are the most commonly used modes here.

Each Blending Mode gives a different result that depends on the tones in the image. The layers below are called the base layers and the layer you are blending is called the base layer. These are the most useful Blending Modes for photographers:

Normal – this is the default mode for all layers.

Darken - the resultant colour is whichever is darker out of pixels on the base layers below and the blend layer. The darkest of the two is what will be visible and if the two are identical, nothing would happen. Any black would remain black.

Multiply - the base layers and the blend layer's tones are combined, always making a darker result colour. Pure white would remain pure white. It is great for adding texture or darkness.

Lighten - the base and blend colours are examined and whichever tones are lightest will be kept. No change happens if the two are the same. Use this mode if you want to add light elements without brightening everything as the Screen Mode would.

Screen - this is the opposite of Multiply. Screen Mode multiplies the inverse of the base and blend colours, so the resultant colours are always lighter. Black on the blend layer would be unchanged.

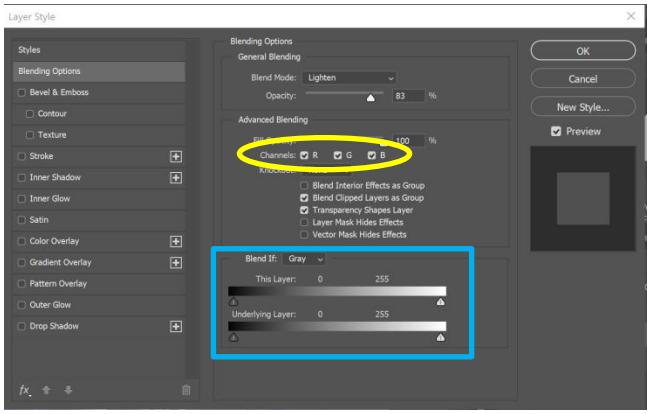
Overlay - this is a mix of Multiply and Screen. Depending on whether tones on the base layer are darker or lighter than midtone grey, they will get dimmer or brighter. It is a great way of adding contrast.

Soft Light - less intense than Overlay. You get a brighter or darker result, depending on the tones of the blend layer, a bit like dodging and burning. A good choice when adding texture or contrast subtly.

Color - this mode only adds the hue and saturation of the blend colour, while preserving the lightness of the base colour. Perfect for any colouring and toning effects.

Luminosity - this mode creates a result colour with the hue and saturation of the base colour and the luminance of the blend colour. This mode creates the inverse effect of Color Mode.

If you double click on a layer or go to **Layer > Layer Style > Blending Options** you will access lots some additional controls.



At the top of the panel there is the regular Blending Mode setting and the Opacity setting. But, in the Advanced Blending and Blend If sections, you get more control. There are lots of options, but the main two useful for photographers are Channels and Blend If.

The Channels lets you remove specific colour channels from the blending process. With the Red, Green and Blue (RGB) ticked, all channels will be used for blending, but untick one and you will notice an immediate change in the form of a colour shift. This can look striking or subtle depending on the Blending Mode and the nature of the layer being blended.

Blend If allows you to take more control over which tones will be blended on the blend layer and those below. Use the drop-down to choose between working on individual Red, Green or Blue colour channels or a composite (Grey). The two sliders, This Layer and Underlying Layer, set the tonal values of pixels that are to be in range of the blending effect, running from 0 to 255. For example, if you want the darker areas of the layer below to be unaffected, move the black point to the right on the Underlying Layer slider. If you wanted the brightest pixels to be unaffected, move the white point to the left.

Flattening the Layers

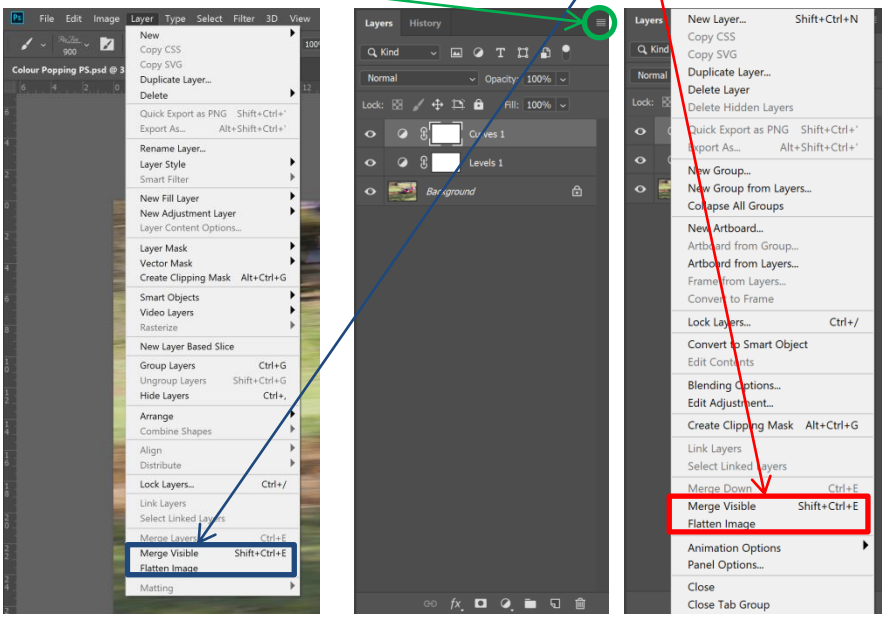
An image with multiple layers will be quite large. To reduce the size of an image file you can flatten your layers into a single layer. This will include all of the adjustments you have made on various adjustment layers, text layers, fill layers, etc, into a single layer. You will not be able to go back and amend any of the adjustments you have made once the image has been flattened.

You can also flatten two or more layers during the post processing of an image. You may wish to do this if you are combining two or more images into a single image, which you would then continue to work on. Once you have combined the multiple images, flattening the image will give you a new Background Layer (which you can then lock to prevent it being changed) and reduce the size of the new combined image.

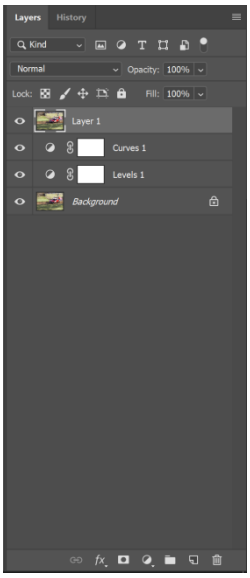
Saving the file as a JPEG automatically flattens the image. If you wish to save the file as a PSD (Photoshop file) or a TIFF you can keep the different layers. This will result in a large file, which can be reduced by flattening the layers. You will need to do this prior to sending your image to a commercial printer.

During the processing of the image, you may need to 'stamp' the adjustments on a single layer, which you can do by merging all of the previous adjustments into a single layer, whilst keeping all of the previous adjustment layers.

To flatten or merge the layers of an image click on Layer>Merge Visible or Layer>Flatten Image. Alternatively use the Layers Panel menu and click on Merge Visible or Flatten Image.



Merge visible will only merge the layers that are switched on. If you have switched a layer off using the layer visibility icon (the eye), this will not be merged and will remain separate. Flattening the image will flatten all layers, however the effect of any layers with the visibility turned off will not be included, the layer will just be discarded.



If you wish to retain all of your adjustment layers for reference or to be able to adjust them at a later stage, you can use Merge Visible to combine the layers into a single layer by holding the Alt key (Option key for Mac) whilst clicking on Layer>Merge Visible or the Layer Panel menu and Merge Visible. This will create a new layer at the top of all the other adjustment layers, which contains all of the adjustments in the layers below.