

SETTING UP AND USING CURVES FOR COLOUR CORRECTION

Setting your preferences

Curves is a powerful tool, one that intimidates a lot of people, so they don't use it. Not using Curves means you are not taking advantage of a major feature within Photoshop and severely restricting your editing capability. In particular, it is an ideal tool for accurate colour correction; better than the 'Color Control' tool or 'Levels' where you are restricted to just 3 sliders for adjustments. However, to get the best from Curves it needs to be set up correctly, as does the Eyedropper tool.

Go to the Toolbox and click on the Eyedropper tool. It's near the bottom. If you look at the Options Bar, at the top of the screen just under the Menu Bar, you will see that the default Sample Size is Point Sample. The problem with this setting is that it will sample just one pixel rather than giving you an average of the area you are clicking in, which is much more accurate. To correct this, click the Point Sample pop-up menu and change to to 3 x 3 Average. If you work on really high resolution images you could select 5x5 Average – or even one of the higher options if you wish. However, 3 x 3 or 5 x 5 should give you an accurate colour selection. The Eyedropper tool is now set.

Now, set up Curves.

Open a picture that you want to colour correct. There are 2 ways the next step can be done and since this is just the setup procedure either will suffice.

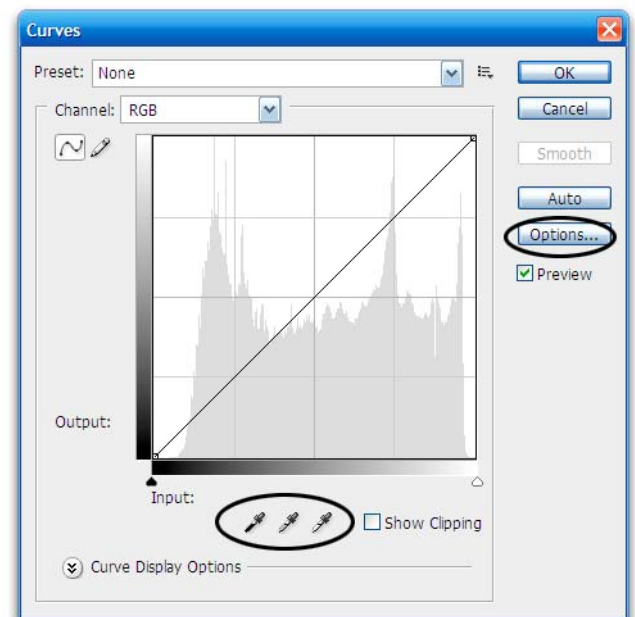
Go to the Image menu > Adjustments > Curves (Command+M or Ctrl+M)

Or

Click the 'Create new or adjustment layer' icon at the bottom of the Layers palette. It's the black and white circle. Most of the options that are available in the Image > Adjustments menu are available here, including the one we want – Curves. Select that one. A new layer will appear above your image and the Curves dialog box will open. It is good practice, whenever possible, to use adjustment layers. They are infinitely editable and do not affect the original image data – unless you flatten your picture.

The Curves dialog box may look intimidating at first but, once set up, the subsequent technique you can use makes it very quick and easy to use. First, we need to set up some preferences.

Below the centre of the Curves grid you will see 3 eyedroppers. (This diagram shows the CS3 dialog box but previous versions of Photoshop are similar – without the Curve Display Options). The eyedropper on the left sets the shadow colour; the one in the middle sets the midtone colour and the one on the right sets the highlight colour. Double-click the shadow eyedropper. This will activate the Colour Picker prompting you to select your target shadow colour. By default the RGB fields will each be set to 0. Click in the R box and set it to 10. Tab to the G box and set that to 10 as well then tab to the B box and set 10. Click OK. If you want slightly darker shadows you could select 5, 5, 5 as your target colours but I find that 10 gives good shadow areas with maximum detail.



While you are in the Colour Picker note that there are other options: HSB, Lab and CMYK. Changing the numbers in one area will affect the numbers in the others. The reason that we set the RGB numbers and not any of the others is that RGB is primarily the colour space we work in.

Double-click the highlight eyedropper (on the right). Once again the Colour Picker will be activated prompting you to select your highlight colour. The RGB boxes will probably be set to 255, 255, 255. Click in the R box and set this to 245. Repeat for the G and B boxes. Your highlight colour is now set. Setting the highlight to 245 means that your highlights will not be paper-white. There will be a hint of a tone so they won't look burned out.

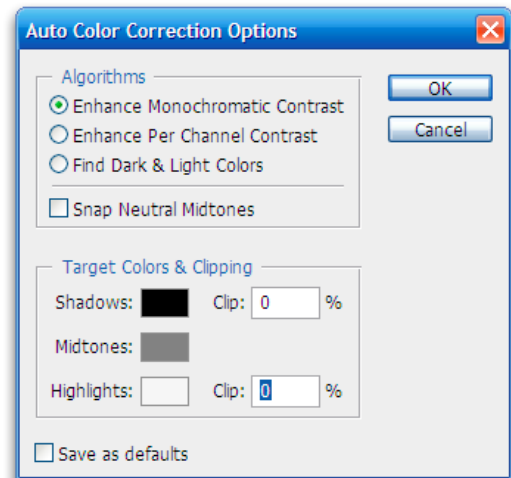
Double-click the midtone eyedropper which, once again, will activate the Colour Picker. This should be set to 128, 128, 128, which is correct. If it is not, click in the R, G and B boxes and set 128 as the values.

Before leaving the Curves dialog box there is one further option that can be set: The Auto Curves option.

At the right hand side of the dialog box you will see the Auto button and, immediately underneath that is the Options button. Click the Options button.

In the dialog box which then opens up, shown right, select 'Enhance Monochrome Contrast'. In the Target Colors & Clipping area set the Shadows and Highlight to 0. We don't want any clipping as, in effect, we have set that up already by setting 10 as the shadow colour and 245 as the highlight colour.

The preferences you have set for Curves will have also been embedded into the Levels preferences so, if you still feel uncomfortable with Curves, the Levels option is still available. Additionally, if you wish, now that you have set the Auto preference you can use the Auto Levels option from the Image > Adjustments menu. However, for the greatest flexibility the use of adjustment layers is recommended.



Using Curves for Colour Correction

Now that the Curves preferences are set you can use the tool confidently for colour correction by setting the highlight, shadow and midtone areas. Shadows and highlights should be neutral in colour and usually, with the initial digital capture, they are not. All digital cameras will introduce some form of colour cast, some more than others. You can now put that right quite quickly.

With the picture that you want to colour correct open, click the 'Create new fill or adjustment layer' icon at the bottom of the Layers palette. (The black and white circle). Select Curves from the menu. Now, you need to find something in your image that is supposed to be black and, in most photos, this won't be a problem. If you can't immediately locate a black area you can get Photoshop to show you exactly where that is. At the bottom of the Curves grid there are 2 triangles: a black one on the left and a white one on the right. Press and hold the Option/Alt key (Option-Mac, Alt-PC) down, click on the black triangle and slowly drag it to the right. As soon as you start to drag (holding the Option/Alt key down) the picture will go white. As you drag to the right the darkest areas of your picture will show first. That's Photoshop telling you where your black and shadow areas are. Make a mental note of the spot you want to click in, drag the slider back to the left and release the Alt key. Click the Shadow eyedropper then click the area you made a mental note of. You have set the shadow point of your picture and neutralised the colour at the same time.

Now you need to do the same for the highlights. Press and hold the Option/Alt key and drag the white triangle slowly to the left. As you start to drag the picture will go black. As you drag further

white areas will appear and that is Photoshop telling you where your whites and highlights are. Make sure you find a proper highlight area and not a specular highlight. Once you have determined your highlight spot return the slider to the right and release the Option/Alt key. Click the Highlight eyedropper and click the point you made a note of. You have now set your highlight point and neutralised any colour cast at the same time.

Setting the midtone point is not quite so straightforward but it's not difficult. However, you won't be able to use it with every image as not every image will have a mid grey point in it. When you don't have a mid grey point then you can't use this method. However, it's a good idea to check.

Click OK on the Curves dialog box to close it. We will revisit it later.

Make sure the layer with your picture on is active. This is probably the Background.

Click the Create New Layer icon at the bottom of the Layers palette – next to the Trash Can on the right. Then go to the Edit > Fill and, in the contents section pop-up menu select 50% Grey. The new layer will be filled with grey – 50% to be exact - and your image will be hidden. Now go to the top of the layers palette and change the blend mode from Normal to Difference. The image will go a strange colour but that's only temporary.

Create a New Adjustment Layer (black & white circle) and select Threshold from the menu. When the dialog box appears drag the slider all the way to the left – the picture will turn white. Now slowly drag the slider to the right and the first areas that appear black in your picture are your midtones. Find a decent size midtone, hold down the shift key and click the point to add a colour sampler point as a reminder. Click the cancel button on the Threshold dialog box and then drag the 50% Gray adjustment layer to the Trash Can. It has served its purpose.

Click the Eyedropper tool. This will reveal the sample point that you created.

Double-click the Curves adjustment layer to open it again. Click on the middle eyedropper and then click on the sample point you made earlier. This will neutralise the midtones and your image should now be fully colour corrected. The next logical step would be to correct the image tonally and this can also be done with the Curves tool.