

1. Black and White Conversions

Photoshop and [Photoshop Elements](#) offer both destructive and non-destructive black and white conversion techniques. Destructive methods are ones that can't be re-adjusted afterwards. Once you've made the conversion, the only way to change it is to undo the conversion and start again. Non-destructive methods use Photoshop's adjustment layers. The changes that you make to your photo are stored in a layer, and the original photo remains unchanged underneath. Then, when you're done, you flatten the image and it's at this stage that Photoshop makes all the changes to the photo permanent. You can edit the conversion at any time before flattening the image by clicking on the adjustment layer's icon (circled).



Non-destructive photo editing is always better than destructive editing. The destructive methods are included here for completeness.

These instructions are for Photoshop CS 3 and [Photoshop Elements 6.0](#). Other versions will be similar.

2. Convert to Greyscale (Destructive)

The simplest black and white conversion method, converting to grayscale discards all the colour information in the photo.

Photoshop CS 3:

Image > Mode > Grayscale

Click 'Discard'

Photoshop Elements:

Image > Mode > Grayscale

Click 'OK'

Pros: Quick and easy.

Cons: You have no control over the conversion.



3. Use the Hue/Saturation Tool (Non-destructive)

This method gives exactly the same result as converting to grayscale. The only advantage is that it's available as an adjustment layer, and can be used as part of a non-destructive editing process.

Photoshop CS 3 and Photoshop Elements:

Layer > New Adjustment Layer > Hue/Saturation

Click 'OK'

Move the saturation slider all the way to the left (-100) and press 'OK'

Pros: Quick and easy and can be applied as an adjustment layer in both Photoshop CS 3 and Elements 6.

Cons: You have no control over the conversion.



4. LAB Color Method (Destructive)

This technique converts your photo from RGB mode to Lab mode, which records the brightness and colour values separately, then discards the colour information leaving a black and white image. It's not available in [Photoshop Elements](#).

Photoshop CS 3:

1. Image > Mode > Lab Color
2. Go to the Channels window if it's already open (if not go to Window > Channel) and select the Lightness channel
3. Image > Mode > Grayscale
4. Click 'OK'

Pros: Gives a better black and white conversion than the convert to grayscale and hue/saturation methods.

Cons: Destructive editing process that doesn't give you much control.

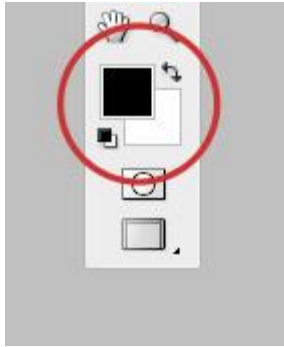


5. Gradient Map (Non-destructive)

The gradient map tool maps a black and white gradient to the brightness values of your photo. Dark areas become black or dark grey and highlights white or light grey.

Photoshop CS and [Photoshop Elements](#)

Press 'D' to reset the foreground and background colours to black and white.



Layer > New Adjustment Layer > Gradient Map

Click 'OK'

Pros: Quick and easy non-destructive black and white conversion

Cons: No control over the conversion



6. Channel Mixer (Non-destructive)

The Channel mixer is the first black and white conversion tool listed here that begins to use the full potential of the information contained in the colour photo. Colour photos have three colour channels; red, green and blue. These primary colours combine to make the millions of colours in your photo.

The Channel mixer conversion method lets you adjust the ratios between the red, green and blue channels. Lightening the value of a channel lightens colours close to it on the colour wheel and darkens the colours that are opposite it. Increase the value of the red channel for instance, and you'll make the red tones in your photo lighter, and the blue ones darker. This has the effect of lightening skin tones and darkening blue skies.

The Channel mixer is the digital equivalent of black and white photographers using colour filters. Setting the brightness of the red channel to 100% gives the same effect as using a red filter on the lens with [black and white film](#). It's not available in [Photoshop Elements](#).

Photoshop CS:

Layer > New Adjustment Layer > Channel Mixer

Tick the monochrome box.

Move the Red, Green and Blue sliders to the left and right to lighten and darken different tones in the photo. The total of the three sliders should be 100% at all times.

Click 'OK' when you're done.

Examples:

Original photo:



Red 80%, Green 10%, Blue 10%. The setting of 80% red has darkened the blue sky and lightened the red balloon:



Red 20%, Green 40%, Blue 40%. The setting of 20% red has lightened the blue sky and darkened the red balloon:



Pros: Gives you a high degree of control over the black and white conversion.

Cons: Not as flexible as the next two techniques. Not available in [Photoshop Elements](#).

7. Photoshop Elements: Convert to Black and White Tool (Destructive)

This method is a simplified version of Photoshop's Channel Mixer adjustment layer. It's only available in [Photoshop Elements](#) and isn't available as an adjustment layer (so it's destructive editing). Having said that, if you can live with the small previews, it's a very flexible black and white conversion technique.

Photoshop Elements:

Enhance > Convert to Black and White

Move the colour sliders to the left and right to lighten and darken the corresponding tones. Use the Contrast slider to compensate for changes in contrast. You can also select a preset style from the menu on the left. Click 'OK' when you're done.

Pros: Flexible black and white conversion using the colour channels.

Cons: Destructive editing method and small image previews make it hard to assess the changes.



8. Twin Hue/Saturation Method (Non-destructive)

This technique uses two Hue/Saturation adjustment layers. The top layer is a straight monochrome conversion. The bottom layer changes the colours of the original photo, which in turn changes the tones in the black and white conversion. It gives you a very fine degree of control.

Photoshop CS and Photoshop Elements:

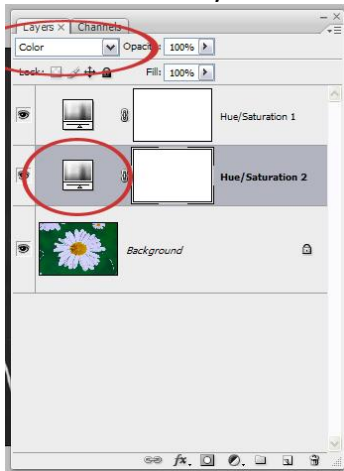
Layer > New Adjustment Layer > Hue/Saturation and click 'OK'
Move the Saturation slider all the way to the left (-100) and click 'OK'
Activate the background by clicking on it
Layer > New Adjustment Layer > Hue/Saturation and click 'OK'
Click 'OK'

Change the blending mode of the bottom Hue/Saturation layer to 'Color' (circled below)

Double click the bottom Hue/Saturation layer's icon (circled below)

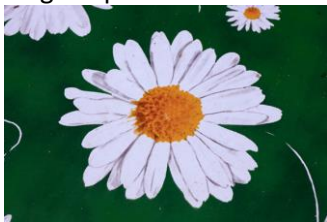
Move the Hue slider left or right and watch the tones change! You can also experiment with the Saturation and Lightness sliders.

Click 'OK' when you're done.



Examples:

Original photo:



Hue +81, Saturation +22:



Hue +68, Saturation +56:



Pros: Extremely fine degree of control over the monochrome conversion.

Cons: None, except that it doesn't give you the same amount of control as the next technique.

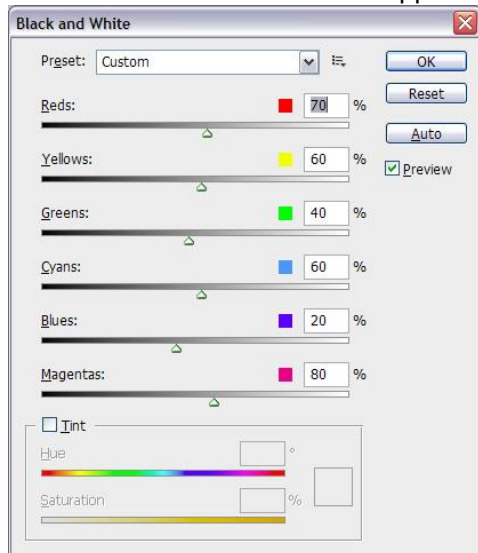
9. and White Adjustment Layer Method (Non-destructive)

Available in Photoshop CS 3 onwards, the black and white adjustment layer gives you all the control of the channel mixer and twin hue/saturation techniques via six colour sliders. But the most exciting feature is it's 'targeted adjustment tool'. With this tool you can stroke tones in your photo to make them lighter or darker. It's an intuitive and precise conversion technique.

Photoshop CS 3:

Layer > New Adjustment Layer > Black and White

Click 'OK'. The Black and White toolbox appears:



Move the six colour sliders right or left to brighten or darken the respective tones in the photo. You can also choose from the presets in the drop down menu at the top.

Move the cursor over the photo and hold the left mouse button down. The cursor changes, indicating that the targeted adjustment tool is activated. With the mouse button held down, move the mouse to the right to lighten the tones under the cursor, or left to darken them.

Click 'OK' when you're done.

Examples:

Original photo:



Reds 70, Yellows 60, Greens 40, Cyans 60, Blues 20, Magentas 80:



Reds 27, Yellows 244, Greens 40, Cyans 101, Blues 146, Magentas -144:



Pros: The most flexible black and white conversion method available.

Cons: Only available in Photoshop CS 3 or 4.

10. Conclusion

It's worth taking the time to experiment with these different methods when deciding how to approach black and white conversion. Some may work better for you than others, but always remember to keep an original copy of the image if using a destructive method!