

Convert a colour image to Monochrome using Channels

What this is about

The most flexible way to convert a colour image to monochrome is to use the individual colour channels and combine parts of each channel using masks.

To do this, we first need to convert each of the R, G & B channels into separate layers. As this process is one that is likely to be repeated many times, it's worth recording an action to do this.

About Actions

When we record an action, everything we do is recorded within the action. When we play the action, each of the recorded steps is performed on the image we have open in Photoshop.

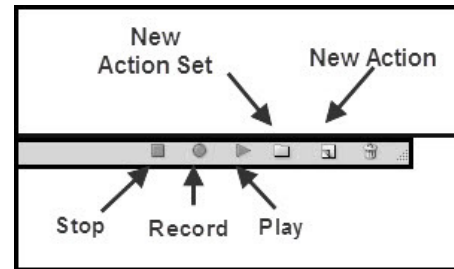
Actions are stored by Photoshop in "Action Sets". The first step in recording an action is to create the Action Set which will contain the action.

Open palettes and image

- Use the Window menu to make sure you have the Layers, Channels and Actions palettes open.
- Open a colour image that you wish to convert to mono.

Create Action Set

- Click on the "New Action Set" icon - at the bottom of the Actions Palette.
- Give this a suitable name - e.g. "B & W Channels"



Record the action

1. Click on the "New Action" icon - at the bottom of the Actions Palette.
2. Choose a suitable name e.g. "B & W Channels". (I chose the same name for convenience but you can, of course, use any name you want.)
3. Click the "Record" button to start recording the action.

The conversion process

4. In the Channels palette, click on the word "Red" to show only the red channel.
5. Use the shortcuts Ctrl A (select All), Ctrl C (copy) to copy this channel.
6. Click on "RGB" channel to return to the full colour version of the image.
7. Switch to the Layers palette, then use Ctrl V (paste) to paste the red channel as a new layer.
8. Double-click on this layer's name and type-in the new name "Red".
9. Go back to the Channels palette and click on the word "Green" to show only the green channel.
10. Use the shortcuts Ctrl A and Ctrl C to copy this channel.
11. Click on the "RGB" channel to return to the full colour version of the image.
12. Switch to the Layers palette, then use Ctrl V to paste the green channel as a new layer.
13. Double-click on this layer's name and type in the new name "Green".
14. Repeat steps 9 - 13 for the Blue channel.
15. Click the "Stop" icon to finish the recording.



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Using the action

After all that work, you'll be pleased to find that running the action on a new image is very straightforward!

Open a different colour image, make sure that you can see the Actions palette, then just click on Run button for the action you have recorded.

That's all there is to it.

Completing the monochrome conversion

Now that the three channels are readily available in the layers palette, it's time to inspect each in turn to see which parts of each give the best rendition of the image.

It's quite likely that one channel will be best for the majority of the image, with the other two channels suiting some parts of the image.

Re-order the layers stack

Rearrange the layer stack so that the channel which will contribute most is at the bottom of the three channel layers. The top layer in the stack should be the channel that will contribute least to the conversion.

Add layers masks

In this example, the Red channel will contribute most to the conversion and the Blue channel will contribute least. The order in the layer stack, reading from the top down, is Blue, Green, Red.

1. Click on the Blue layer to highlight it.
2. From Photoshop's menu bar, choose Layer > Layer Mask > Hide All> This will add a layer mask to the Blue Layer. Because this layer mask is filled with Black, the Blue Layer is effectively hidden from view.
3. Repeat step 2 for the Green layer.

The layers palette will now look like this.



Optimise the conversion.

Use a brush (shortcut B) with White as the foreground colour to paint-back detail from the Blue and Green channels as desired.

NB

- Use a soft-edged brush (zero hardness).
- Set the opacity low - say just 5% to build-up the effect gradually.
- Make sure that you paint on the layer mask and not on the image!