

# MONO CONVERSIONS

Notes on the methods that can be used to convert images into black and white using Lightroom and Photoshop.

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## Preamble

These are expanded notes relating to a talk given to the Melbourn and District Photographic Club on 07 Feb 2023

This can be regarded as a small addition to an excellent presentation by Pete North in Feb 2019 *Monochrome – Why When and How*, highly recommended.

<http://melbournphotoclub.com/wp-content/uploads/2019/02/Monochrome-Why-When-How-for-website-1.pdf>

## Aim of these notes

These notes are intended to describe the different ways mono images can be created from colour images in Lightroom and Photoshop. It is not the intention to demonstrate how to fully edit images, but rather to list the ways that could be used to generate mono images for subsequent editing.

## Lightroom, Adobe Camera Raw (ACR), Photoshop

Lightroom is built on ACR and is aimed at photographers. It contains a cataloguing system (database), a set of printing and export options and, at its core, ACR which is essentially the Develop module. All edits are non-destructive.

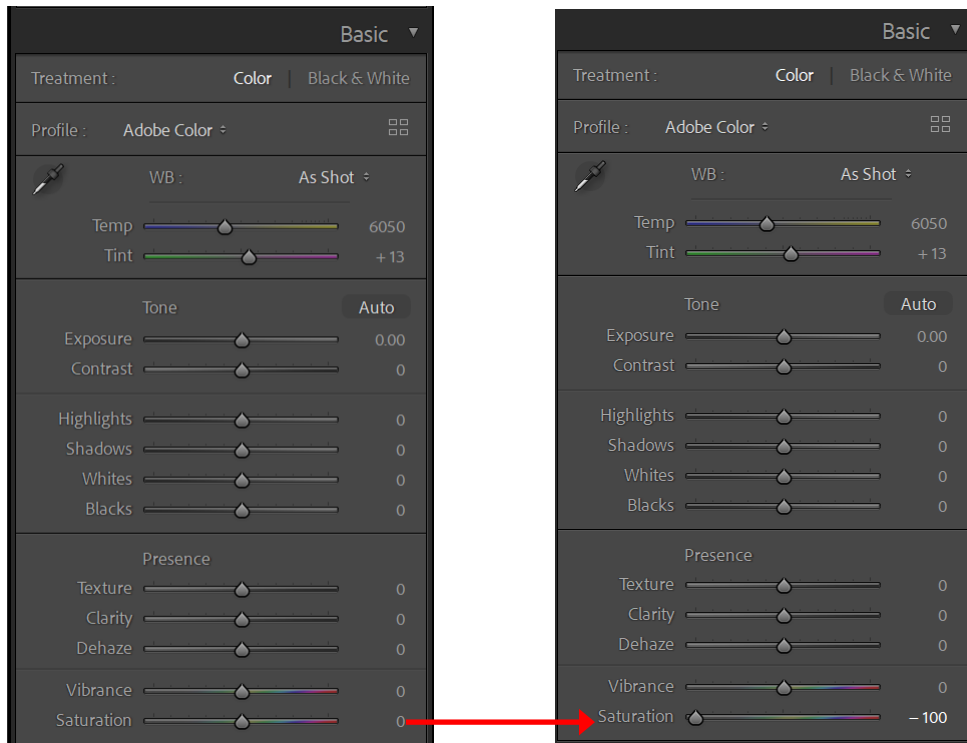
Photoshop is a sophisticated graphics editing software package for graphic designers, photographers, digital artists, and many others for image editing and manipulation. ACR is implemented as a plugin, which can be made non-destructive as a smart object layer. It can also carry out other types of manipulation that Lightroom cannot.

## Pre-conversion

In most cases it is worth carrying out basic image adjustments (exposure, white/black balance, highlights shadows, spot removal *etc*) before converting to mono.

## Lightroom Method 1 – Desaturate

**How:** In the *Basic* panel move the *Saturate* slider leftwards to -100.

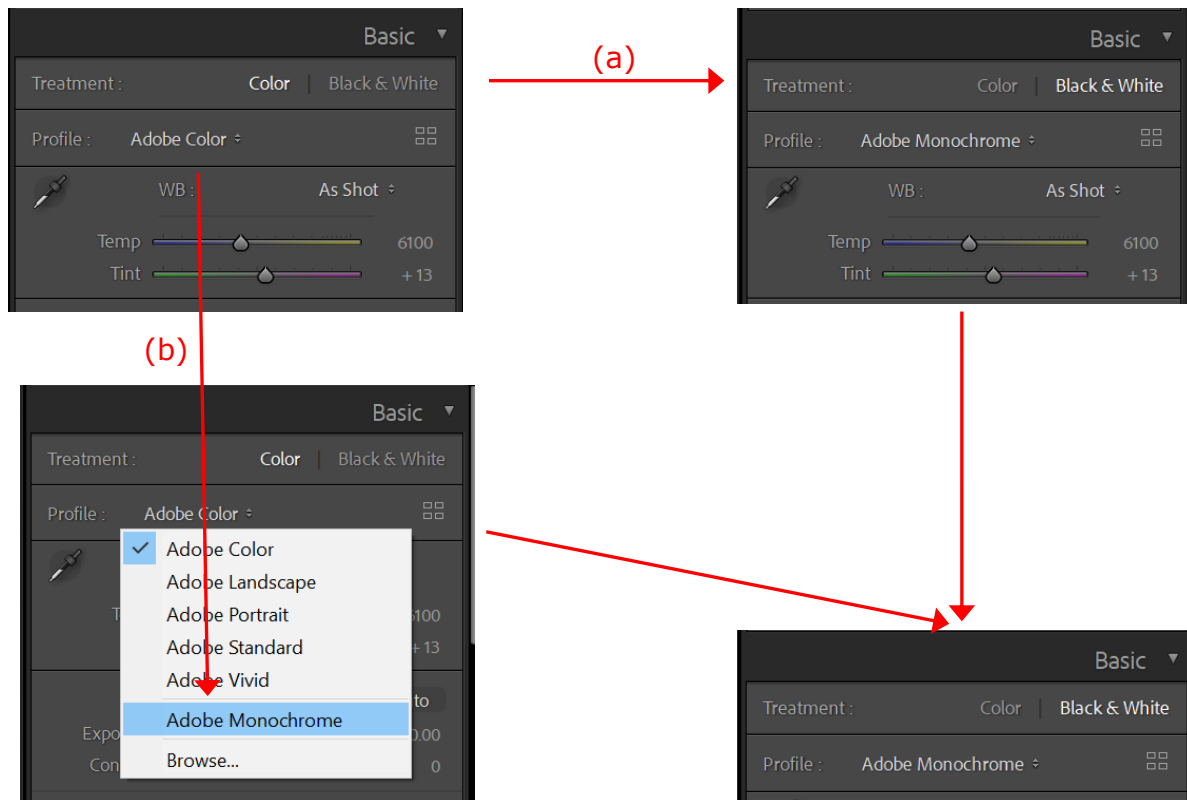


This will remove all the colour. Although all other options in the *Basic* panel will work (except *Vibrance*), No fine editing can be carried out using the *HSL/Color* panel – none of the sliders will work.

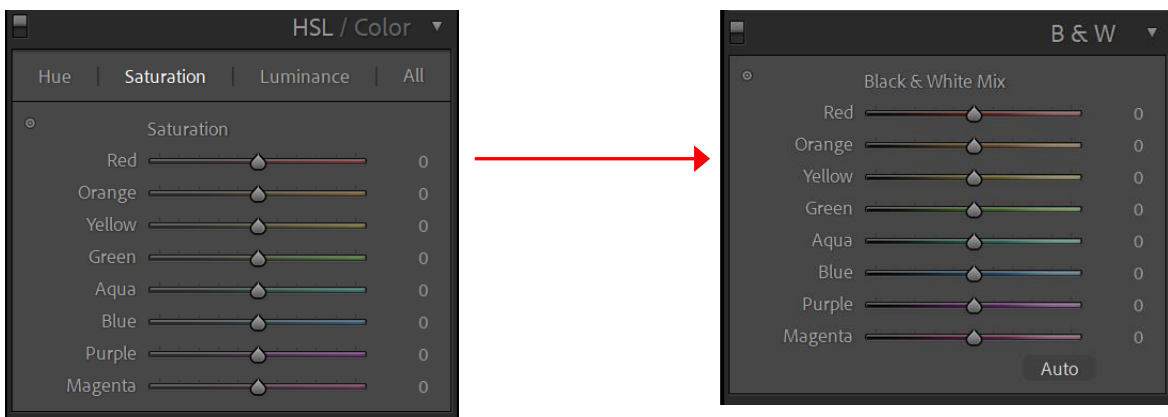
This method is NOT recommended.

## Lightroom Method 2 – Black & White conversion

**How:** In the Basic panel (a) select Black & White or (b) in the Profile option, select Adobe monochrome. Both have the same effect.



The basic black and white conversion can now be adjusted using the Lightroom options, including the *HSL/Color* panel, which becomes the *B & W* panel.



## Lightroom Method 3 – Use of Profiles (and Pre-sets)

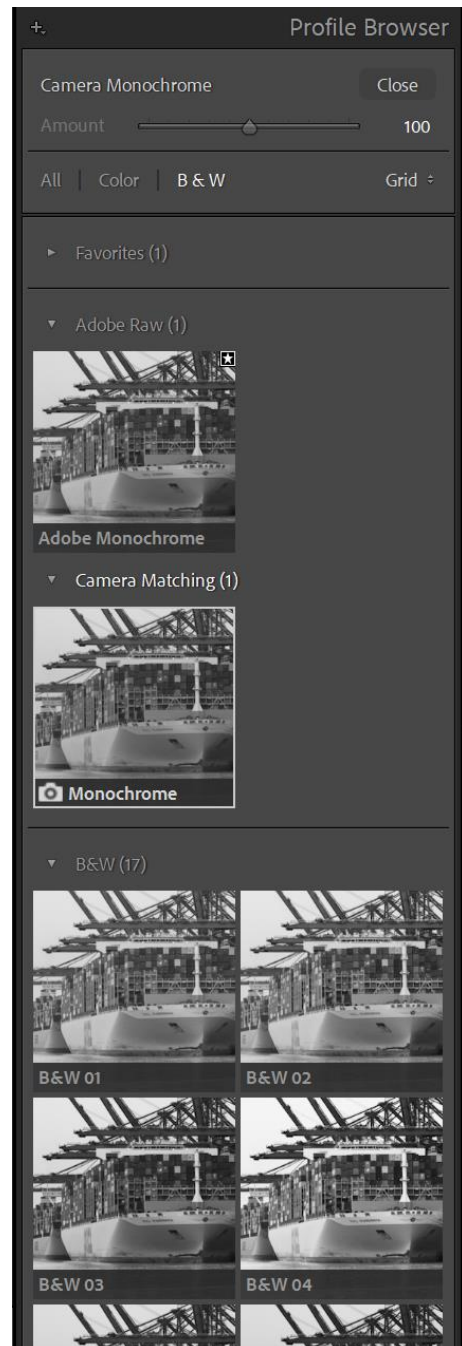
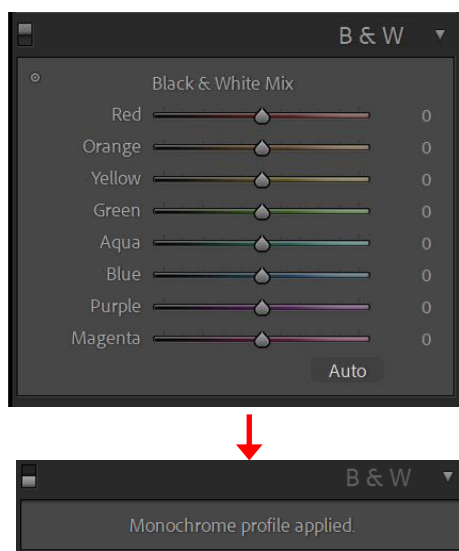
**How:** Clicking the '4-squares' icon will open the Profile Browser. Click the Close option when finished selecting.



*Adobe Monochrome* is the default option. Under *B&W* there are several creative options listed including options that mimic the use of different filters (red, orange, blue, green etc).

Scrolling over these will show the effect in the main image being edited and can present a better starting point for further processing.

**Note:** The *Camera Matching* profile displays a profile based on the camera make/model of your raw file and can provide a look which cannot be achieved with the *B&W* profile panel. However, unlike the *Adobe Raw* and *B&W* profile options, it will disable the *B & W* panel sliders.



**Pre-sets:** Several black and white pre-sets can be found under *Presets* in the *Develop* module (left-hand side) panel. Selecting any of these pre-sets will alter all the relevant sliders in the editing panels on the right-hand of the *Develop* module. However, selecting a Profile will alter the image but all the sliders will not be affected, allowing for a 'full range' of further manipulation.

## Lightroom – Tips

As mentioned at the start, it is often advisable to edit the colour image in colour first before the black and white conversion.

Exaggerate colours first to give more range in the *B & W* panel post conversion e.g. a work flow might be:

1. Alter white balance.
2. Alter tint to see more colours.
3. Use the calibration saturations then values (separating and exaggerating colours).
4. Carry out the b/w conversion (tap 'V' on keyboard default convert to b/w).
5. Lower exposure.
6. In Basic panel alter white point, highlights the shadows, blacks.
7. Use the B & W (HSL/Color) mixer for fine tuning.
8. Add Presence – dehaze *etc.*
9. Local adjustments to straighten, lens correction.

Other workflows:

e.g. if sky detail is lost

Select b/w profile

Lower exposure, highlights

Shadow up, white up

Contrast up

Clarity

Dehaze

Or:

Highlights up, shadows down

Whites up, blacks down

Increase contrast, exposure down

Remove saturation a little bit

Then b/w conversion

...then local adjustments

## Lightroom Method 4 – The ‘Perfect b/w pre-set’!

An interesting/curious method from Mark McGee, check out:

<https://www.youtube.com/watch?v=84cKoPi3lj4>

### How:

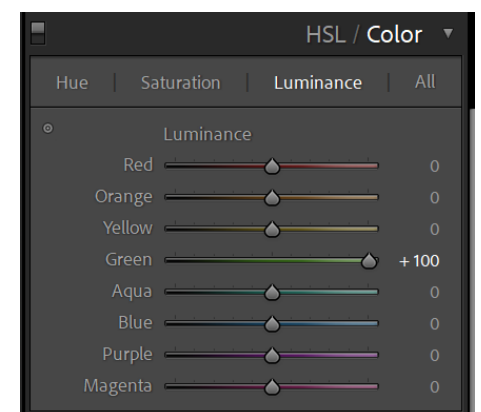
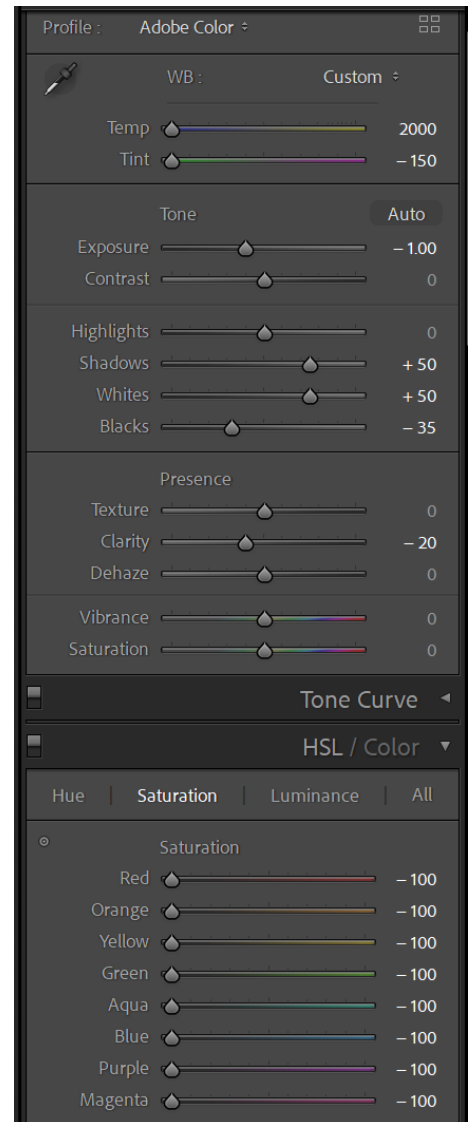
1. *HLS* - desaturate all 8 colours.
2. *Exposure* to -1 stop.
3. *Black* to -35 (crushed).
4. *Whites* to +50.
5. *Shadows* to +50.
6. (in his portrait example Mark removes the background by selecting the subject, inverting, moving Texture & Clarity to full left; Black -60).
7. White Balance *Temp* slider to full left (shifts white balance to green).
8. *Tint* slider also to full left.
9. Increase *HSL/Color* Luminance for Green to far right (to compensate).
10. Match *Clarity* to -20 (just to match clarity on same image with b/w only).

Can save as a pre-set (without masking) and use on other images.

Once applied, move the Tint slider back up to achieve desired effect.

Seems to work well with portraits giving providing depth and natural contrast.

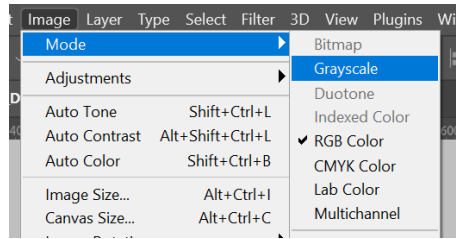
Can be applied to non-human subjects.



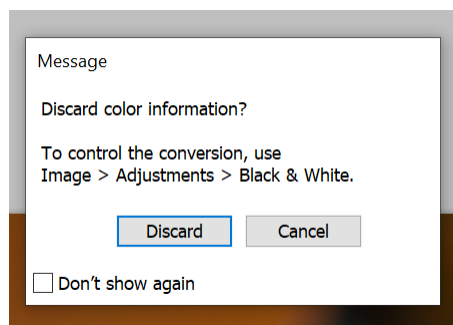
## Mono Conversions

### Photoshop Method 1 – Convert to Grayscale

**How:** From the top menu bar, *Image -> Mode -> Grayscale*.

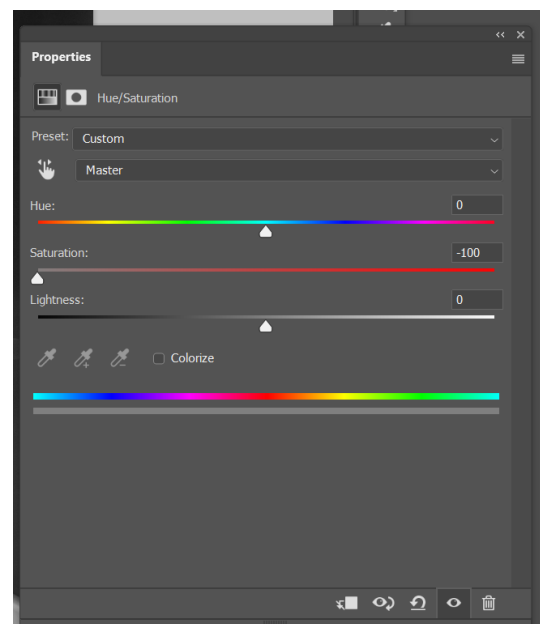
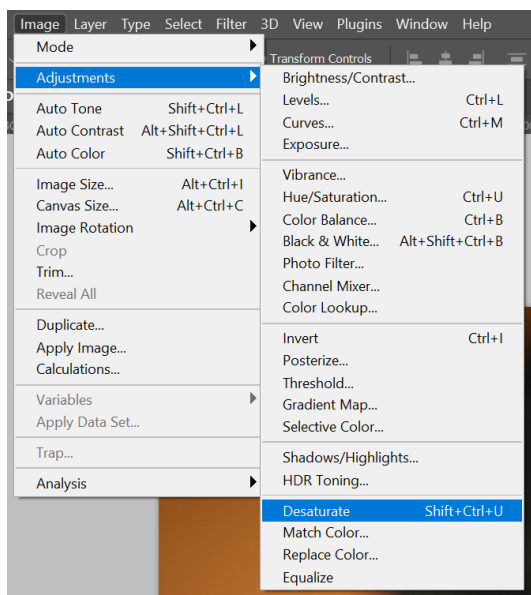


However, you lose 2/3 of the image information NOT recommended. Photoshop even gives you a warning message:



### Photoshop Method 2 – Desaturate

**How:** From the top menu bar, *Image -> Adjustments -> Desaturate*, or Add a *Hue/Saturation* layer and move Saturation slide to left (-100).



The 3 RGB channels are maintained but cannot be adjusted, NOT recommended.

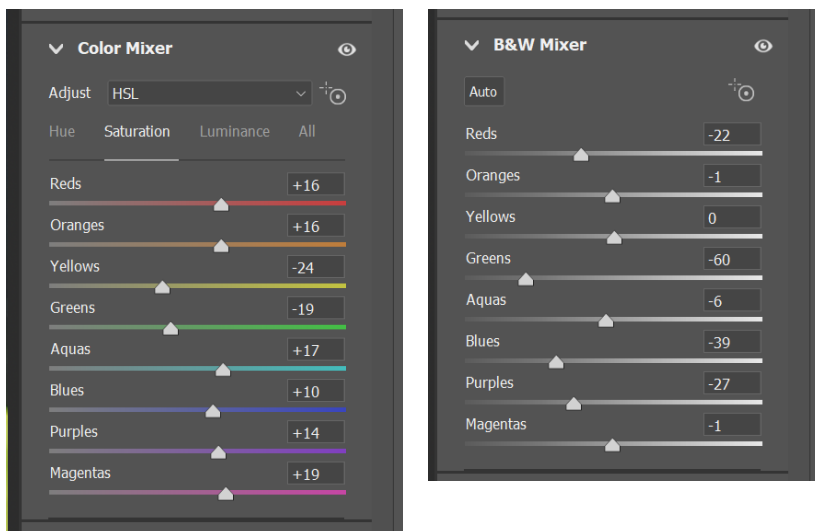


## Photoshop Method 3 – Adobe Camera Raw

Whenever a RAW image file is opened into Photoshop, ACR is invoked. This is the most common way to start the b/w process in Photoshop.

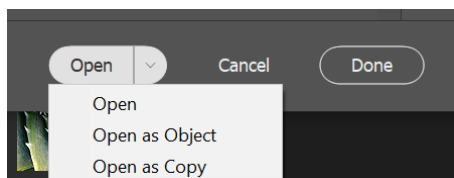
All operations discussed in Lightroom Methods 2 (Black and White conversion) & 3 (Profiles) work in the same manner in the Photoshop ACR plugin.

The only difference is that the Lightroom *HSL/Color* and *B & W* panels are named *Color Mixer* and *B&W Mixer* in ACR.



Altering the various *Basic* panel adjustment and then fine tuning with the *B&W Mixer* should provide the majority of editing requirements.

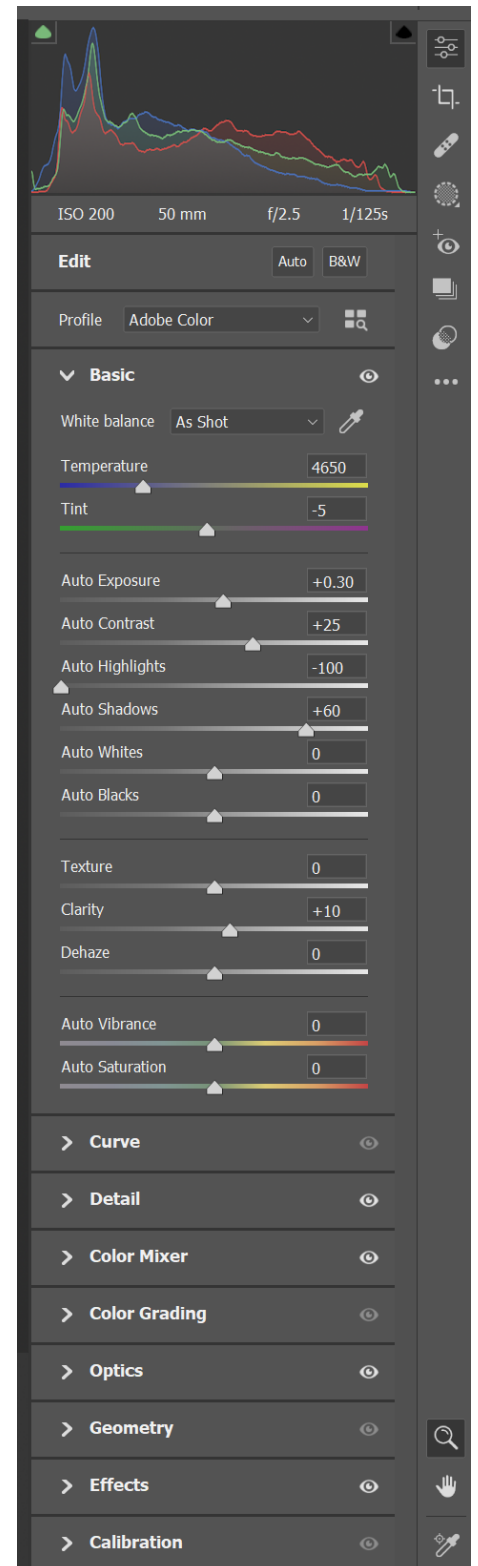
On finishing with ACR there are a number of options.



**Done:** Closes the Camera Raw dialog box and stores file settings either in the camera raw database file, in the sidecar XMP file, or in the DNG file.

**Open:** Opens a copy of the camera raw image file in Photoshop.

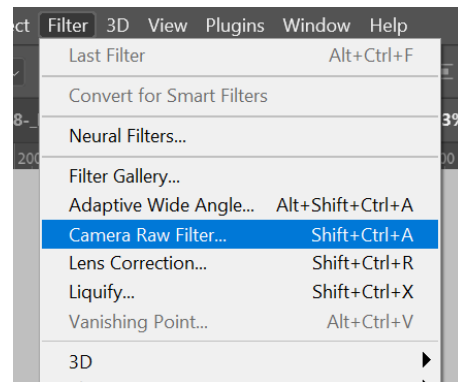
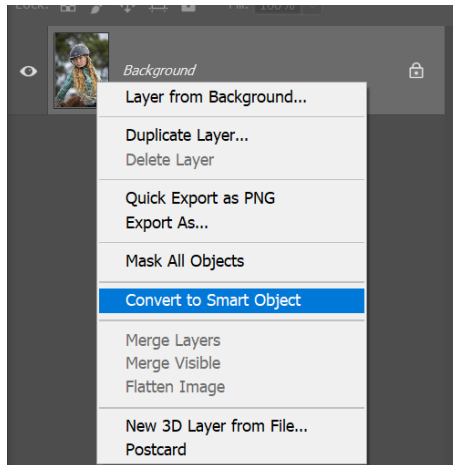
**Open as Object:** Opens a copy of the raw image as a Smart Object in Photoshop enabling you to invoke ACR at any time by double-clicking the Smart Object icon. [Recommended option].



## Mono Conversions

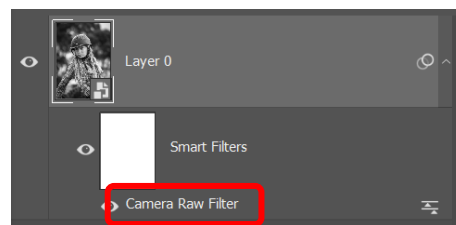
If you are not using a RAW file, e.g. using JPEG or TIFF images, these will open into Photoshop as 'normal'. To make use of the ACR editing plugin:

1. Select the layer, Right-click and select *Convert to Smart Object*.
2. To invoke ACR, select layer and from the top menu Filter -> *Camera Raw Filter...*



Convert to black and white and finesse with the *Basic* panel and *B&W Mixer*; click *OK* to go back to photoshop.

To re-edit in ACR, select the layer and double-click the *Camera Raw Filter* line.

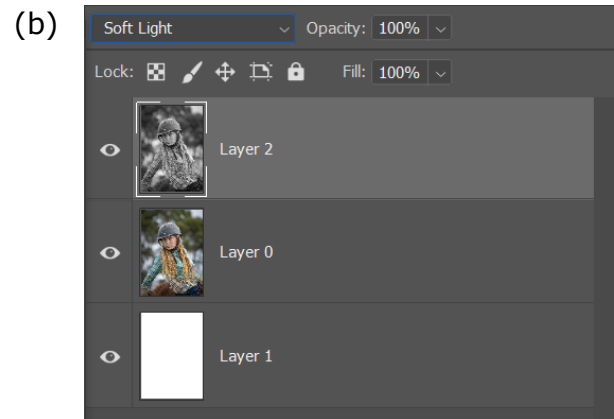
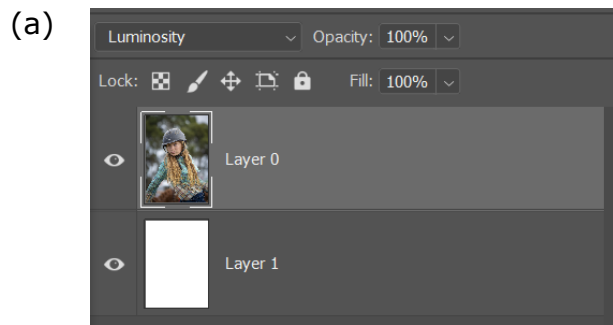


There are a number of other ways to carry out black and white conversions in Photoshop as details in the following pages.

## Photoshop Method 4 – Luminosity blend mode

### How:

1. Your image will show as a background layer when opened in Photoshop.
2. Convert the *Background* layer to Layer 0 by clicking the lock icon on the layer.
3. Add new layer, move it below Layer 0, fill with white (Shift-F5).
4. Change Layer 0 blend mode to *Luminosity* (a), the main image will be b/w.
5. Combine both layers to a new layer by selecting and Shft+Ctrl+Alt+E.
6. Change blend mode to *Screen* (lighten) or *Multiply* (darken) or any other blend mode/opacity combination (b).

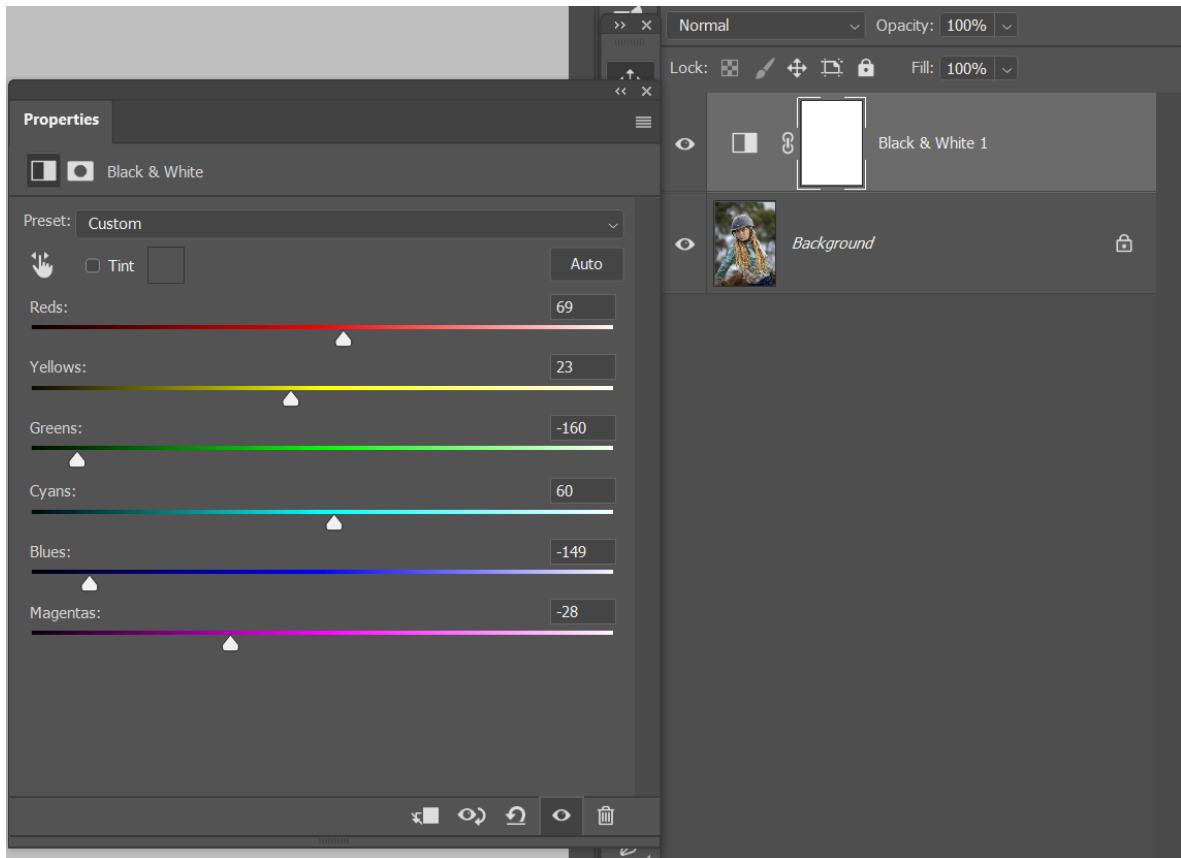


Add further adjustment layers/ masks etc.

## Photoshop Method 5 – Black & White Adjustment layer

**How:** Just add a *Black & White* adjustment layer.

This is very simple and provides a set of 6 colour sliders to adjust the b/w image. By comparison, the ACR Lightroom *B & W(HSL/Color)* panel and Photoshop *B&W Mixer*, offer more control with 8 sliders.



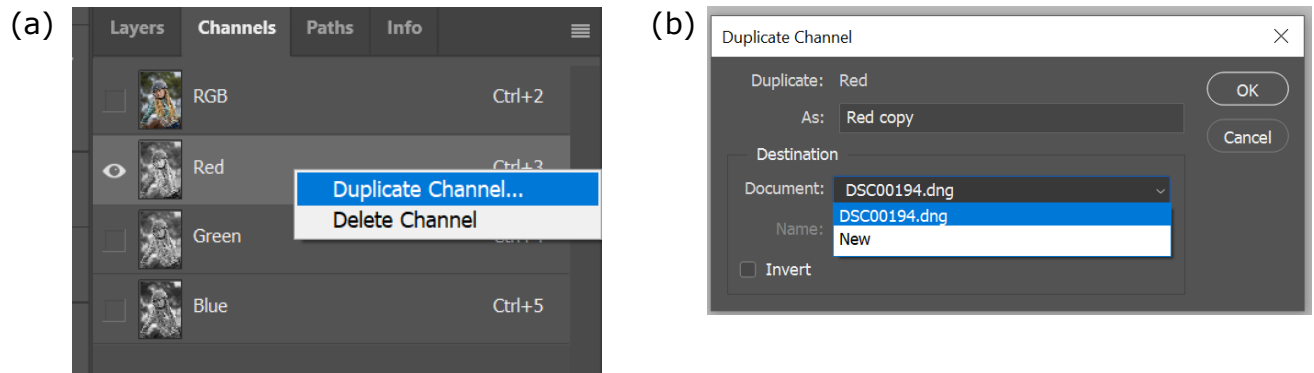
This forms the base image onto which further adjustment layers are added e.g. *Brightness/Contrast, Levels, etc* to further edit the b/w image.

The *Black & White* adjustment provides gives control over shadows and highlights but if pushed too far, artifacts/grains may appear to degrade the image.

## Photoshop Method 6 – Channel Selection

### How:

1. Select the *Channels* palette.
2. Select and cycle through each of the R, G and B channels to determine which offers the best image.
3. Select the channel, right-click and select *Duplicate Channel...* (a).



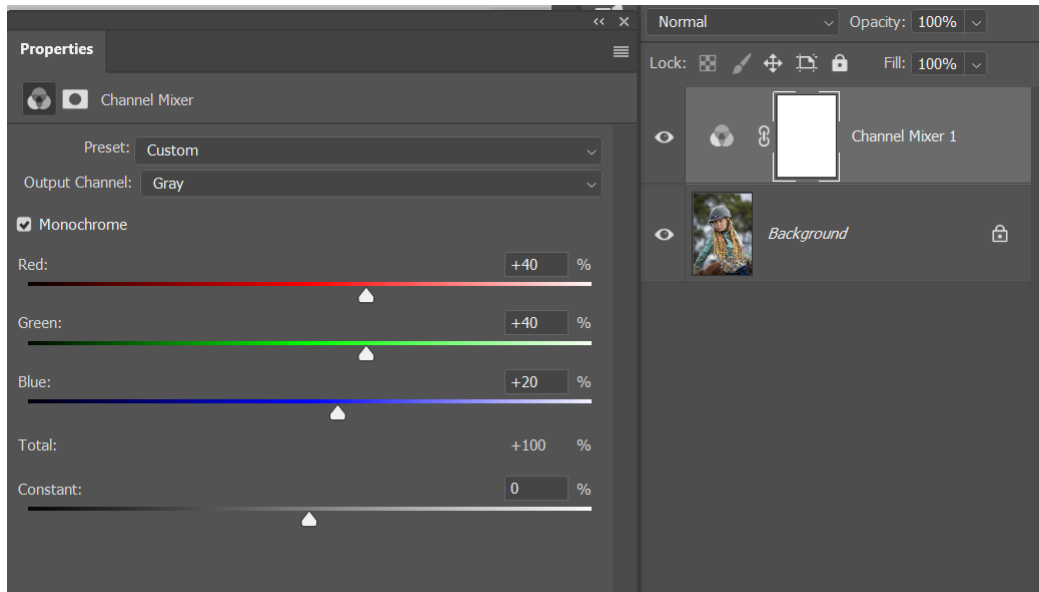
4. A *Duplicate Channel* box will appear (b). In the Document option:
  - a. Selecting the existing file name will save the channel as a new channel in the existing image .
    - i. In the Channels palette, select the new channel layer (*Red copy* in this case).
    - ii. Ctrl+A (to select), Ctrl+C (to copy).
    - iii. Move to layers palette and create a new layer, then Ctrl+V (to paste).
  - b. Selecting *New* will save the channel as a new image.
5. In both cases, select the new layer and then from top menu select *Image - > Mode -> Grayscale*.

This provides the base black and white image for further editing with the addition of other adjustment layers.

## Photoshop Method 7 – Channel Mixer

### How:

1. Add The Channel Mixer adjustment layer.
2. Check the Monochrome check box.
3. Adjust the three RGB sliders to achieve the desired result.



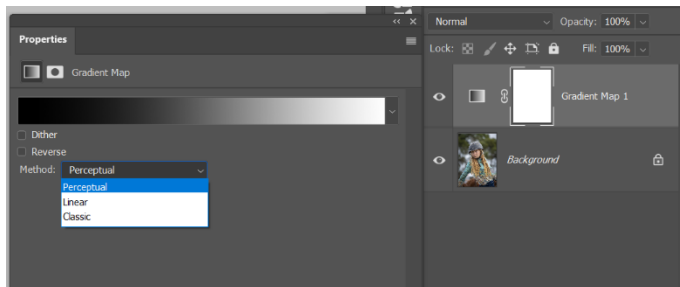
4. Each channel shows a %; keep the *Total* to 100%.
5. If the resultant image is too dark or too light, use the *Constant* slider to alter.

This provides the base black and white image for further editing with the addition of other adjustment layers.

## Photoshop Method 8 – Gradient Map

### How:

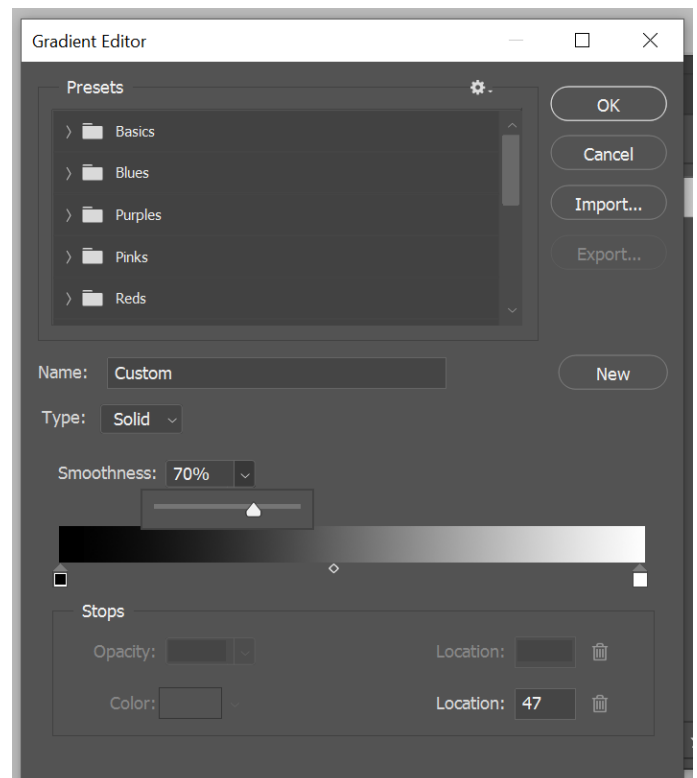
1. Check foreground/background colours are black (foreground) and white (background).
2. Add a *Gradient Map* adjustment layer.
3. Alter the *Method* to *Perceptual* or *Classic* (*Linear* is not very good), dependant on the image.



4. Click on the gradient to invoke the *Gradient Editor*.

The Gradient map replaces colours with the gradient; the *Perceptual* method may crush blacks.

Smoothness defaults to 100%, high contrast. Reduce the contrast, 0% will flatten out the image.



Clicking on either the black stop (box) or white stop will reveal a diamond, midway between the two boxes. Select and drag to alter the transition between black and white. The two stops and diamond can all be moved to create the look you are after.

**Note:** if you miss the diamond when selecting, another stop (box) will be added. In b/w conversion this is not required and can be removed by selecting the stop and dragging off the panel.

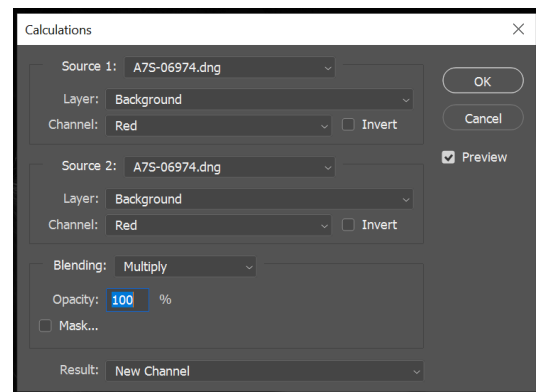
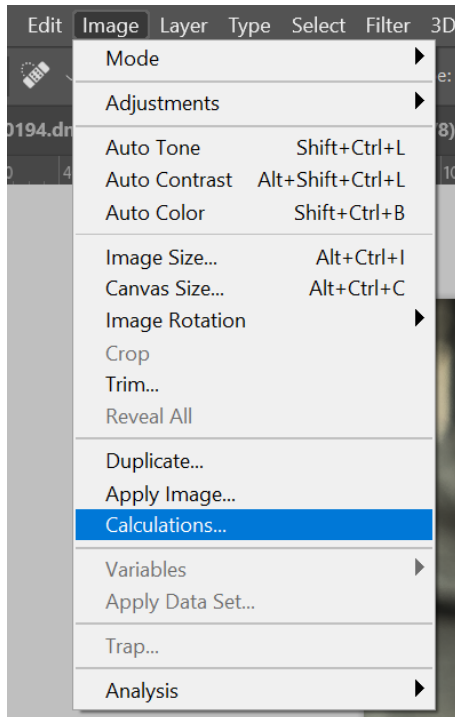
This is an excellent method of achieving good high contrast back and white images. A gradient map can help to improve the tonal separation in the image, making it easier to maintain detail in highlights and shadows.

The gradient map can be used as a layer above the background layer or above a *Black & White* layer to give added contrast or can be used in conjunction with a *Curves* or *Levels* layer.

## Photoshop Method 9 – Calculations method

The Calculations method converts an image to black and white by blending two channels, either by blending one channel with itself or by blending two different channels with one another.

**How:** Select the *Background* layer, and from the top menu *Image -> Calculations*, which will open the *Calculations* panel.



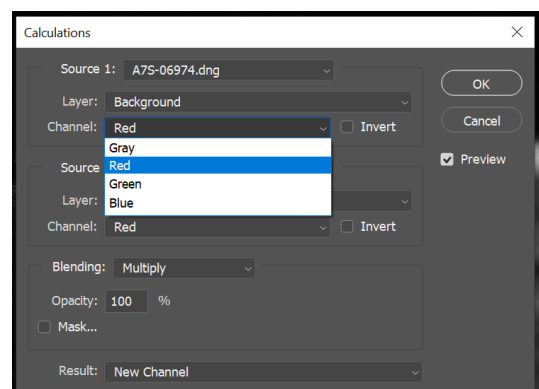
The *Calculations* panel allows the channels to be specified and then blended using one of the 23 different blend modes.

For black and white conversions, *Source 1* and *2* should refer to the same files and *Layer* should be the same.

The two channels to blend, *Channel 1* and *2* are chosen from the dropdown list, and all the blending modes are available in the *Blending* dropdown.

- Overlay - more contrast
- Soft light - little contrast
- Hard Light - a lot of contrast
- Light - to lighten
- Darken - to darken etc

Set *Opacity* at e.g. 80%.



Once the desired result has been obtained the required output should be selected in the *Results* option, generally *New Document* or *New Channel*. The former will output the image to a new document. The latter will create a new channel which can be converted into a layer by selecting the channel then Ctrl-A, Ctrl-C, select RGB channel, change to layers, create new layer and Ctrl-V to copy (similar to the method in Method 6 Channel selection points 4 i-iii).



## Photoshop Method 10 – Use of Lab Mode

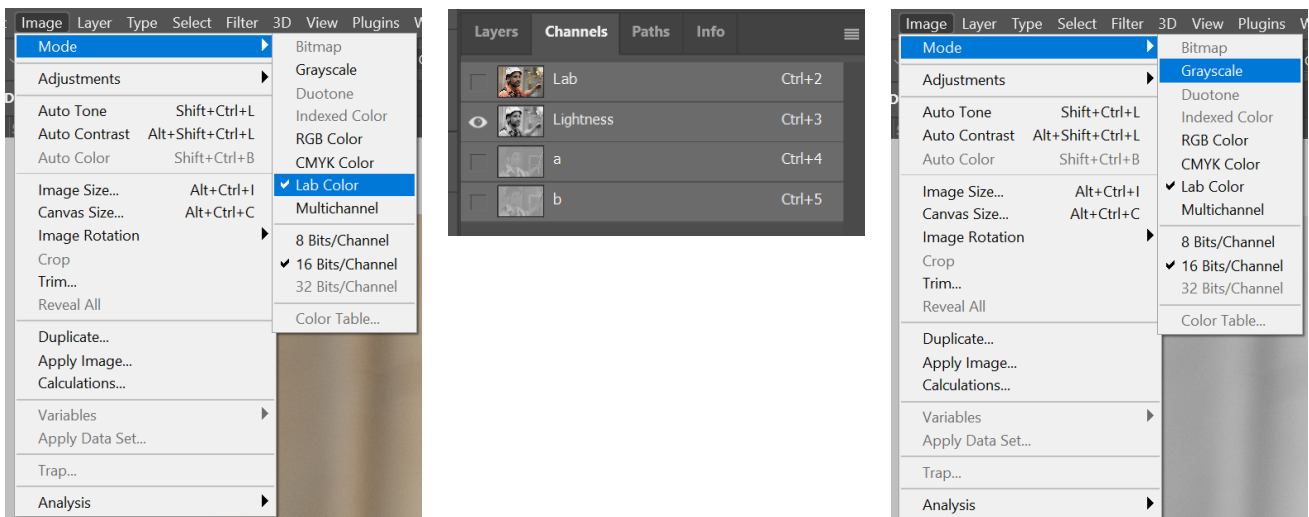
The Lab colour mode produces a bright and natural result that's often difficult to emulate using any of the other or the methods we discussed and can be especially useful for portraits. The acronym stands for:

- L- Lightens (measures a pixel's luminosity)
- A - a channel (colour data for magenta/green)
- B - b channel (colour data for yellow/blue)

Lab colour is widely used beyond photography, print and digital due to its' accuracy and wider gamut than CMYK or RGB modes and is used as a global colour mode as it can be matched with all the rest. There is no output from Lab colour, and it needs to be changed to RGB or CMYK for output.

### How:

1. From top menu, select *Image -> Mode -> Lab Color*.
2. Select the *Channels* panel -> select only *Lightness* (turn off *Lab, a* and *b*).
3. Select the *Layers* panel *Image -> Mode -> Grayscale* (& discard other channels).



A side-by-side comparison using a portrait b/w conversion using either the (a) *Hue/Saturation...* (b) *Black & White* with red filter pre-set or (c) *Lab color* method show that (c) provides the better results.