Black & White Photography

Unit Two:
Black & White Conversion

While the black & white conversions methods listed here are based on the use of Photoshop you should be able to adapt them to other image editing programs. However, if you do not have any suitable way to try these conversion techniques you can (as a very last resort) use the mono mode that many digital cameras have in their advanced menu settings. While this will produce satisfactory results you do lose a great deal of subtle control over how the tones in the final image will reproduce.

Making a simple conversion to a greyscale in your image-edition program should also be avoided as the end result will almost always lack visual strength. Preferably use one of the conversion techniques listed below as this is method is very basic and is a simplistic way of doing things with almost no control.

1: Making a "Straight Conversion." Use this technique only if you have a very old version of Photoshop: older than CS.

When your original RGB image shows good detail and tonal distinction, you can start with a direct conversion to greyscale and then fine-tune by adjusting Levels or Curves. Start by choosing Image > Mode > Greyscale. Then lighten the midtones by adding a Curves Adjustment layer. By using an Adjustment layer you will be able to make changes to the Curves at any time in the future. To add a Curves Adjustment layer, click the black-and-white circle at the bottom of the Layers palette. In the Curves dialog box you can "peg" (lock) the areas of the curve that you want to remain the same, and then make your adjustments.

2: Mixing channels. All versions of Photoshop and Elements will allow you to use this technique.

In an image whose colours have distinctly different hues but similar values (lights and darks), the Channel Mixer can be invaluable. With your image in RGB Colour mode, add an Adjustment layer by clicking the Create New Adjustment Layer button as described in step 1, but this time choose Channel Mixer from the list. If you are using CS4 you can simply click on the Channel Mixer icon in the new Adjustments panel.

In the Channel Mixer dialog box, turn on the Monochrome option by clicking the check box and making sure the Preview box is checked. Then move the Red, Green and Blue colour sliders to experiment with different contributions from each channel (for suggested values refer to the table below).

Simulating B/W filters in Photoshop

To simulate specific Black & White filter effects use the Channel Mixer, while making sure that the Monochrome check box is enabled.

Note the values for each filter add to 100. It is recommended that the percentage totals should not exceed 100%, when all three channels are added, in order to maintain the density or overall brightness of the image. Of course creative interpretation should always take precedence over numbers, but you do need to be aware that there is a risk of losing highlight detail.

You can also manually enter these values in the Channel Mixer dialog box.

Try using the following channel settings as starting points:

FILTER	Red values	Green values	Blue values
None	40	20	40
Yellow	60	28	12
Orange	78	22	00
Red	90	10	00
Green	10	70	20

You can even emulate the qualities of different black and white films. However to get the complete effect you will also need to add noise and grain to achieve a true look of the film.

Film Type	Red values	Green values	Blue values
Agfa 200X	18	41	41
Agfapan 25	25	39	36
Agfapan 100	21	40	39
Agfapan 400	20	41	39
Ilford Delta 100	21	42	37
Ilford Delta 400	22	42	36
Ilford Delta 3200	31	36	33
Ilford FP4	28	41	31
Ilford HP5	23	37	40
Ilford Pan F	3	36	31
Ilford SFX	36	31	33
Ilford XP2 Super	21	42	37
Kodak Tmax 100	24	37	39
Kodak Tmax 400	27	36	37
Kodak Tri-X	25	35	40

3: Controlled Greyscale through Hue/Saturation Layers.

Creating a greyscale through Hue/Saturation layers gives a subtle control of the final tonal rendition to an image. This powerful technique was developed by Dr. Russell Brown.

First of all create a new Hue/Saturation adjustment layer (by clicking on the relevant icon at the bottom of the Layers palette, or by going to Layer > New Adjustment Layer, and then choosing Hue/Saturation from the list). Now, making sure that the new Hue/Saturation layer is highlighted, change the Blending Mode from Normal to Color.

Now create another Hue/Saturation layer – this time double click the layer icon and set the saturation slider to -100 (Move the slider as far to the left as possible). It is important that this is the top-most Hue/Saturation adjustment layer.

Finally, open the lower Hue/Saturation layer and adjust the Hue slider to produce a range of tonal variations. You can now target 'individual colours' by changing the Edit option from Master to Reds etc. This gives you a fine control that is lacking in most other greyscale conversions.

4: Photoshop CS3 & CS4

If you have a copy of Photoshop CS3 or CS4 you can forget all of the above procedures, and use the new stand-alone black & white conversion options either in the Raw Converter (ACR), or in Photoshop.

Here is a simple conversion:

1. It is always good practice to use an adjustment layer. Use either the new Adjustment panel in CS4 or the fly-out menu from the bottom of the Layers palette (the black-and-white circle).
2. By default, Photoshop gives a suggested set of fixed conversion values.
3. At this point, you can choose to use the Auto button to map contrast amongst various tones. The effects of "auto" will vary from image to image, but, in essence, Photoshop is adjusting sliders to give a well-contrasted adjustment.
4. For further control, each of the individual sliders can be moved to control the tonal value of that region.
5. However, the most useful control in CS4 is the ability to interact directly with your image. If you are using the Adjustments panel you first need to click on the top left icon. You then need only to click upon any region of the image and then (whilst holding down the left mouse button) move right or left to lighten or darken it! You will notice that whichever region you click upon maps to the appropriate slider in the black and white control.
6. To the left of the OK button is a Preset Options toggle – click it if you want to save your settings for future use.
7. The same Preset button will also allow you to load other settings, or the Preset window will allow you to access one of the many presets that ship with CS4.

Photoshop's Black and White Stand-alone feature is very powerful and, between the auto function and a series of presets, you can accomplish a great deal in a couple of clicks. Here are a few suggested values to experiment with:

High Contrast Landscape
First click "Auto"
Increase Greens to 150
Decrease Blues to -75

Better Overall Landscapes
First click "Auto"
Increase Yellows to 125
Change Greens to 75
Change Blues to 25

Better Portraits
First click “Auto”
Increase Reds to 50
Increase Yellows to 100

Mixed Light, with focus on the people
First click “Auto”
Increase Reds to 200
Increase Yellows to 85
Decrease Greens to -85
Decrease Cyans to -20
Blues at 0

As with anything subjective, these are “season to taste”, so use these as a starting point for experimentation, but enjoy the creative freedom!

5. Conversion using ACR

If you shoot in RAW (and you should be!) you can now use Adobe Camera Raw (ACR) to convert to black & white at the time of processing your RAW file.

In the Hue/Saturation/Luminance tab, click the Convert to Grayscale box for either a default or auto conversion, depending on your preference settings. Much as with the stand-alone conversion options in Photoshop you have 8 colour sliders to selectively adjust the tonal qualities of the image. Keep in mind that because ACR edits are non-destructive, you can always reset the Camera Raw defaults and return to a full colour image preview.

THE TASK:

1/ While the general emphasis of this unit is on the conversion process of the black & white image we would still expect you to take a set of new photographs and not rely on previously made ones.

2/ Take your time to explore a series of carefully considered photographs with a particular emphasis on the conversion process. It is still important to use previsualisation as the cornerstone to this approach.

3/ Be aware of how the image is composed within your camera viewfinder and consider all elements that make a good monochrome image. Each brief we set you during this course will add to your growing knowledge and skill with monochrome photography.

4/ Convert your images to black & white, paying particular attention to tonal quality. Choose the most appropriate conversion technique.

IMPORTANT POINTS TO CONSIDER:

Use previsualisation to ‘control’ your photography for each image.

Use your camera histogram to fine tune your exposures. Do not blow your highlights.

Take your time and study the environment before you make your photographs.

You are refining your photographic skills, and so be prepared to put time and effort into this unit. Do not rush to complete this course. The more images you make the greater will be your resulting skills in black & white photography.

Where possible use a tripod to ensure that your photographs are sharp. This will also give you additional time to consider and previsualise your photographs.

Take a wide range of photographs and explore slight variations of the same scene/idea. It does not cost you anything to shoot with digital and providing that your memory card has enough space take as many photographs as you can.

Use a personal digital workflow to refine your photographs with your photo-editing software.

Carefully convert your images paying particular attention to the tonal range and quality of the image.

WHAT YOU NEED TO SUBMIT:

Email us THREE new photographs that have been carefully previsualised and appropriately converted to monochrome.

We will also expect you to comment on each image, focusing on the B&W conversion process. Discuss any alterations you made to the tonal values etc and evaluate the final outcome for each image.

The three photographs should not be taken at the same time or in the same location. You are refining

your photographic skills both in camera and in post-capture and so the more images you shoot the greater will be your success rate.

These photographs should be about 500 pixels along their longest length. You will therefore need to resize your images in your chosen software, and then save them as a high quality jpg.

The images should then be inserted in to a MS Word document, together with your written reflection/comments under each image.

Your personal tutor will then give you a written critique of each photograph, highlighting good and bad points, and suggesting ways to further refine and improve your images.

FURTHER READING

There is an amazing amount of information and images accessible through the internet, and we would actively encourage you to explore this resource in relation to the focus of this unit and monochrome photography in general. Take time out to analyse the work of others. Good photography will inspire you and will help you develop your own skills.