



Digital Photography

For beginners

Week 7

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Critique



Supports Systems

There are many different support systems available to the Photographer, I will cover Just a few in this session

The Tripod

A tripod is a portable three-legged frame, used as a platform for supporting the weight and maintaining the stability of some other object. A tripod provides stability against downward forces and horizontal forces and movements about horizontal axes. The positioning of the three legs away from the vertical centre allows the tripod better leverage for resisting lateral forces.

The Monopod

A monopod, also called a unipod, is a single staff or pole used to help support cameras, video cameras, binoculars, rifles or other precision instruments in the field. The best way to use a monopod is to lean slightly into it and think of your legs as being the missing other 2 poles of a tripod, this should create a reasonably stable position for you to shoot from. The advantage of a Monopod over a tripod is that it allows you to setup in tight environments.

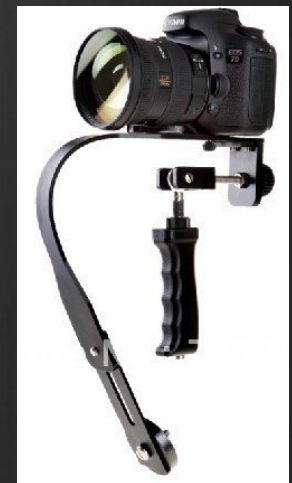
The Gorillapod

A Gorillapod is not a small group of wandering primates; rather, it is a flexible camera tripod that consists of dozens of articulating ball-and-socket joints that allow you to secure your camera to almost any object. The Gorillapod tripod is perfect for the photographer on the go.



The Steadicam

Steadicam is a brand of camera stabilizer mount for motion picture cameras that mechanically isolates it from the operator's movement. It allows for a smooth shot, even when moving quickly over an uneven surface. This device also has its place in photography, often used by press photographers using a remote firing device to capture images. The Steadicam was invented by cameraman Garrett Brown and introduced in 1975.



The Beanbag

The camera beanbag is a simple but effective device for supporting your camera when you have no tripod or monopod handy. Often used by wildlife photographers as this makes a great support for placing over your car side window or other surfaces.



Legs & Stockings

This often causes the odd raised eyebrow, however, in an emergency you will find these useful. Imagine you are out in your car trying to shoot a bird in a field, and you have no way of holding your large lens stable without scratching it on the car window. If you are male, drive to a supermarket and purchase a heavy opaque pair of stockings or tights and a large bag of brown rice, fill the foot of the stocking with rice, tie a knot allowing for some movement of the rice, double back the stocking, tie again and repeat until you run out of stocking, if you are a female, remove your tights or stocking and repeat the above procedure.

WARNING

Gentlemen, do not attempt to remove tights or stockings from a lady unless you ask first, if you fail to do so, you may find you are no longer able to continue shooting.

Night Shots (Low Light)

Shooting in low light, as with many other forms of photography, requires a bit of thought beforehand in order to get the most from the time you have. First and foremost will be making sure you have the right equipment with you.

Besides your camera and lenses, the top of the list of things you will need will be a tripod – the sturdier the better as exposures can get up to 30 seconds and sometimes even longer which is where even the slightest vibration or movement of the camera can ruin a shot.

Other items that you can get by without but if you have them will be very helpful include:

- ❖ **Remote release** – these come in many forms including infra-red/wired/wireless. I've used all of them at some point or another and would now always opt for a wireless trigger. They can be inexpensive and give you a good mix of reliability and range. There are now also apps that you can use on your smartphone with a suitable cable that act as a release and can offer some great features above and beyond being a simple trigger.

Night Shots (Low Light) cont.

- ❖ **A torch** – trying to get your camera to autofocus in very low light can be a right headache at times, shining a torch on your desired area of focus will allow it to lock on quickly (but remember to switch to manual focus when it has!) It is also useful for changing settings on camera and just generally seeing your way around! Also, you may find it useful to cover the torch with a **red filter**, this reduces the work the eye has to do to adjust from white light to darkness.
- ❖ **ND Grad filters** – by no means essential, but if still a bit of colour in the sky these can be helpful to ensure things in foreground are correctly exposed, particularly if already in shadow when beginning to shoot.
- ❖ **Warm clothes!** Depending on where you are in the world, it can get very cold very quickly as it goes dark, nothing worse than standing round shivering as your 60 second exposure ticks very slowly by!

Longer exposures can also produce 'noise' within an image. Similar to when using higher **ISO's** to reduce this most DSLR's will have some sort of 'long exposure noise reduction' setting somewhere within the menu system. If you turn this on when you have taken your image, the camera will then close the shutter and take a similar length exposure. You won't see this second exposure and it doesn't get saved to your memory card, but the camera will use it to subtract any hot pixels showing from your original image which can greatly reduce noise. The only problem is that this can get annoying though as every exposure will then take double the time to capture! This technique is often used by Astrophotographers when shooting planets, galaxy's and the moon.

White balance can be tricky in low light with all kinds of artificial light spilling across your scene. For this reason I would suggest shooting in **RAW** to give you the flexibility to adjust this later, plus it will capture more detail in the image which can sometimes be an issue in very dark areas.

Don't let rain put you off either, wet surfaces can look brilliant as light bounces off them!

And if you are feeling really creative, time-lapse sequences can look fantastic as the light slowly disappears.

How do I get set for the night lights?

Here's a guide to the rough settings you're likely to need for popular low-light subjects.

NAILING NIGHT EXPOSURES

Subject	Shutter speed	Aperture	ISO setting
Aerial fireworks	20 secs	f/11	100
Fairground rides	15 secs	f/16	100
Traffic	30 secs	f/22	100
Floodlit football	1/125 sec	f/4	1250
Lightning strike	Bulb	f/11	100
Stage show	1/60 sec	f/4	400
Rock gig	1/125 sec	f/4	800
Floodlit cathedral	4 secs	f/16	100
Full moon	1/250 sec	f/8	100
Moonlit landscape	4 mins	f/5.6	100
Skyline at dusk	1/30 sec	f/5.6	100
Skyline at night	15 secs	f/5.6	100

These 2 charts offer starting points for shooting in low light conditions.

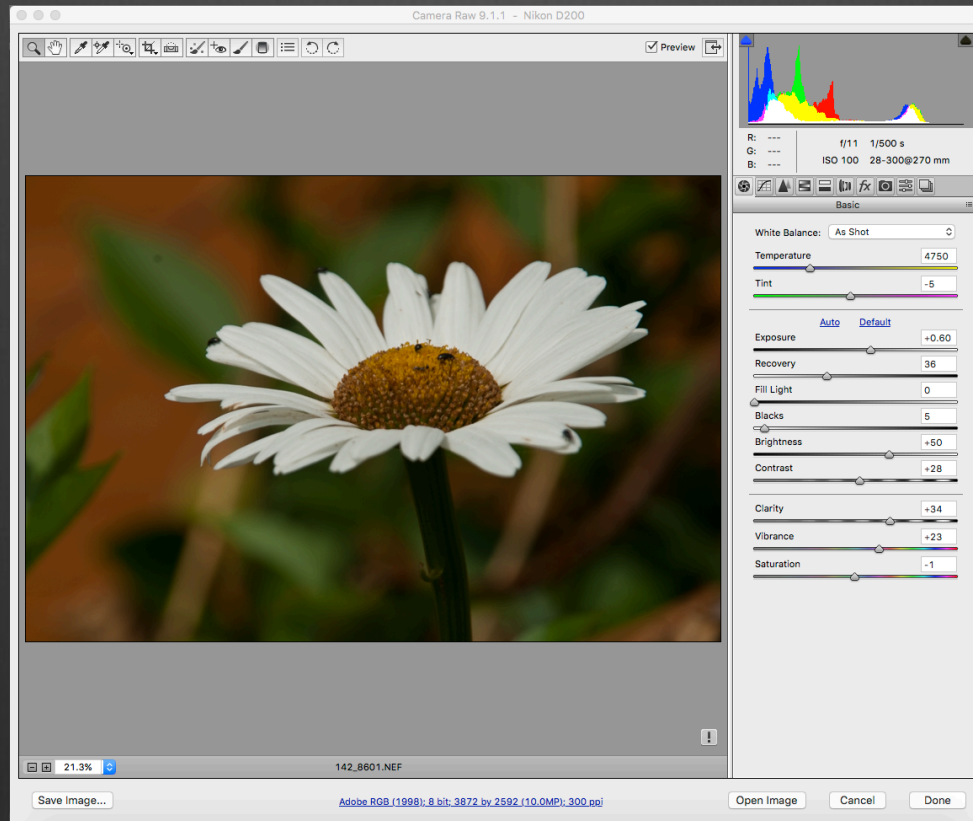
Note that the fireworks settings are different in the 2 charts, this is a personal choice of photographer, the white chart being my preferred settings.

Subject	SS	F-stop	ISO
Milky Way:	30"	f2.8	3200
Star Trails:	2 min	f2.8	200
Aurora:	10"	f2.8	6400
Full Moon:	1/800	f4	800
Fireworks:	½"	f8	200
Night/City:	BRKT	0+ -	200
Light Trails:	2-10"	f8	Auto

Photoshop

Less is more

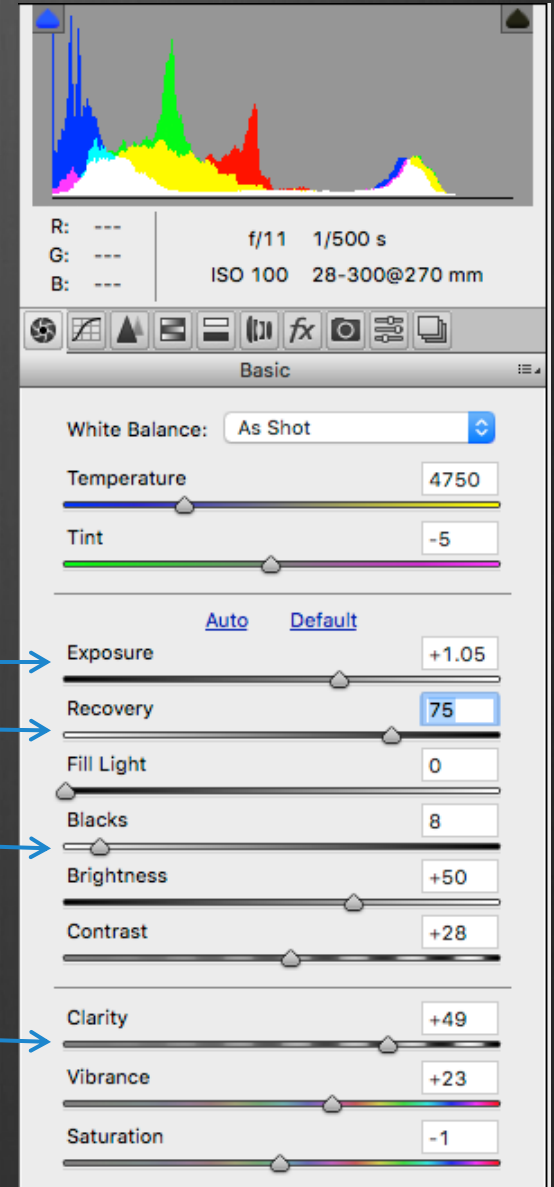
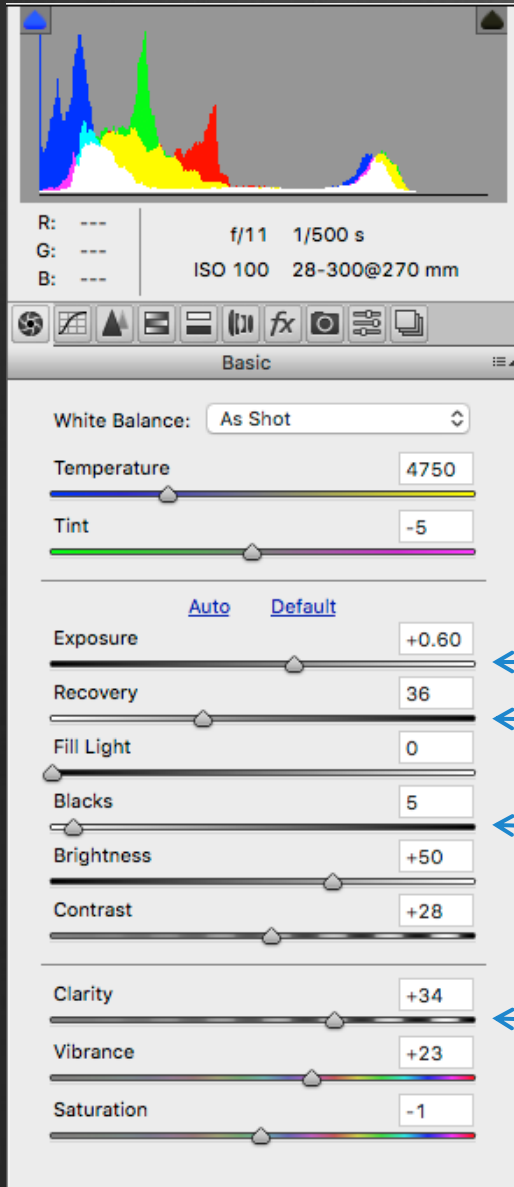
When shooting in **RAW** you will need to make some minor adjustments to enhance your image, this does not mean completely changing the way the image looks. Using Adobe Photoshop RAW is the most powerful tool to make those minor adjustments.



Camera Raw

To the left is the Adobe RAW toolbox, you can adjust the various tools by using the sliders.

On the left are the original settings and on the right the adjusted settings. 4 adjustments have been made.





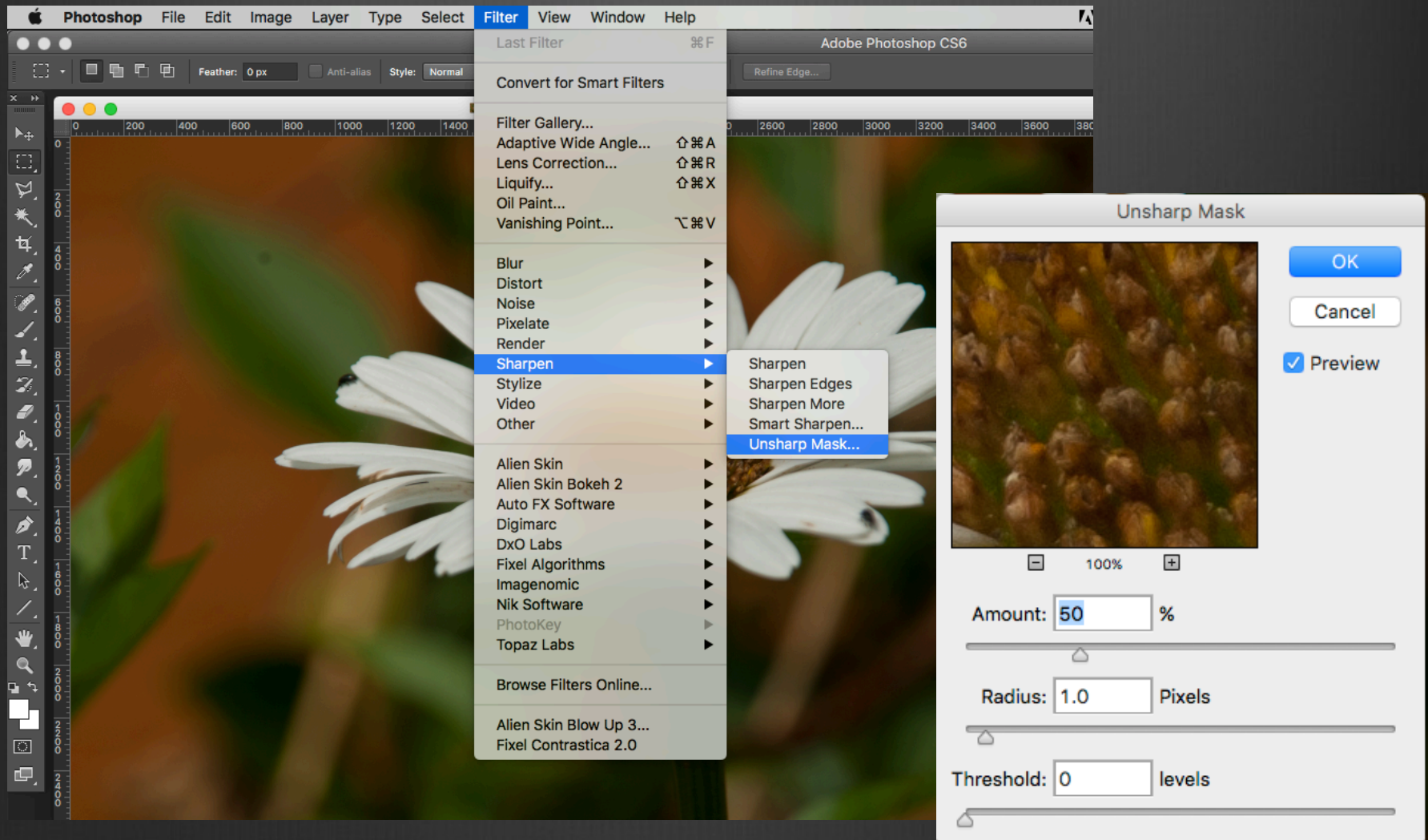
On the left is the original shot, note that the white petals contain some detail.



On the right is the adjusted shot using the settings on the previous slide. First impressions are that the image has been improved by brightening the images, however take a close look at the petals, some detail has been lost, this can be improved by increasing the recovery setting.

Adjusting JPEG files in Photoshop.

When adjust JPEG images you will need to do 2 things, first you need to create an **Unsharp Mask**, secondly you need to adjust the Levels.



Adjusting Levels

The image illustrates the process of adjusting levels in Adobe Photoshop. It shows the Photoshop interface with the 'Image' menu open, highlighting the 'Levels...' option. The 'Levels' dialog box is shown in two states: 'Before' and 'After'.

Before State:

- Preset: Default
- Channel: RGB
- Input Levels: 0, 1.00, 255
- Output Levels: 0, 255

After State:

- Preset: Custom
- Channel: RGB
- Input Levels: 9, 1.00, 208
- Output Levels: 0, 255

The 'Result' label points to the final image, which shows a significantly brighter and more vibrant daisy flower compared to the original.

Assignment 7

Night Shots



For this assignment you are required to produce 3 different subject images, i.e. Moving vehicles, Buildings, Stars and subjects using a flash or torch.

The Golden Hour

Low light doesn't have to mean no light. In photography, the “golden hour” is the hour right after sunrise and the hour right before sunset. You know when the sun is along the horizon and casting a pink-orange light across the sky? That's the golden hour.

For many, the two golden hours are the most beautiful hours of the day. You should take advantage by planning shoots that take place during these hours. It's the perfect balance between colour and low light, allowing you to experiment in ways that aren't normally feasible. Adjust your exposure accordingly.

Exposure Bracketing

Not sure which exposure settings work best for your situation? Take multiple shots of the same scene but tweak one aspect of the exposure with each shot. Most modern camera have an automatic bracketing feature that takes a handful of shots in a row with an increasing gradation of exposure. You can then pick your favourite and discard the rest.

Shoot in RAW

Though shooting in JPG can save on storage space, it cuts out a lot of important photo data that can be useful in post-processing. RAW files are huge and uncompressed, which affords you greater flexibility when editing. Most low light photos need to be post-processed in some way or another so it's preferable to shoot in RAW for best results.

Convert to Infrared

Because infrared light is invisible to the naked eye, most digital cameras ignore it altogether. It's possible to convert these cameras to pick up infrared light, which can produce some stunning photographs when used well.

