

Photography Beginners Course



Summary

5 Main Sections



Camera Basics

How Cameras Work,
Manual Shooting
Triangle,
Common Lenses,
Common Sensors,



Focus Types

Auto Focus ,
Manual Focus,
Eye Tracking,
Adjusting Focus



File Formats

-Raw Vs JPEG
-File Sizes



General Standards

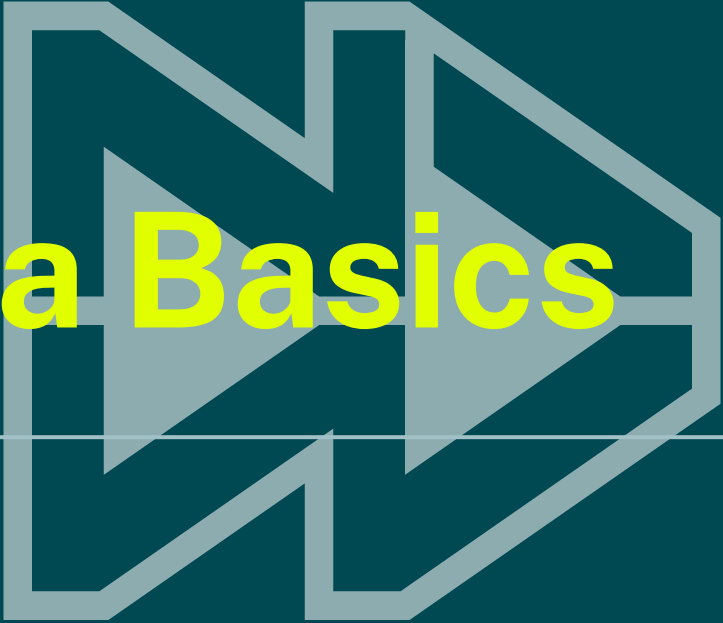
-Shutter Speed Guide
-Aperture Guide
-ISO Guide
-Histograms



Composition & Lighting

Angles,
Foregrounding,
Backgrounding,
Transitions,

Part 1: Camera Basics

The logo is a stylized, light blue geometric shape composed of several nested, angular lines that form a complex, symmetrical pattern resembling a stylized 'N' or a series of interlocking triangles.

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How Does A Camera Work?

1) Light Travels through The Lens

Upon taking a photograph/starting a video, the camera's shutter opens and allows light to the sensor through the lens.

Different Lenses = Different Focusing

There many different types of lenses you can swap to change the focal length and aperture and

2) Focused Light Hits Sensor

This focused light then hits the sensor which is then converted to a digital image. Film cameras do the same, except instead of a focus sensor it's a film strip.

Different Sensor = Different Image Quality

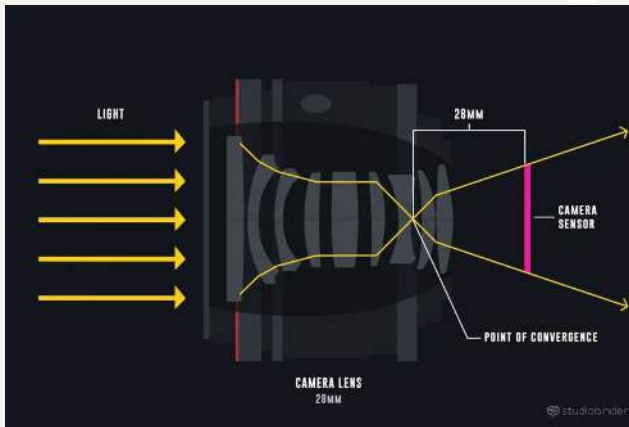
There are different types of sensors that provide different qualities of image and video.



Different Types Of Lenses:



Lens Features:



Focal Length

- How the lens magnifies and alters the angle of view
- Low focal length = wider angle
- Fisheye lens (16mm etc) = superwide

Stabilization

- Counteract the movement of the camera to provide less blurry footage and photo
- Very important for video

Aperture

- An adjustable opening to control the light let into the lens
- Higher lens = higher depth of field
- More expensive lenses = lower aperture (1.8F etc.)

Minimal Focal Length

- Lenses are long-sighted
- The minimal focal length is how close you can get before your camera will be unable to focus

4 Notable Different Sensors:

Full Frame:

- Main sensor used in many digital cameras
- True Frame (50mm lenses looks like 50mm)
- Likely to have higher megapixels due to size of the sensor
- Higher dynamic range
- High image quality

Medium Format:

- Largest Sensor
- Punches OUT x0.79 (50mm lenses looks like 39.5mm)
- Likely to have higher megapixels due to size of the sensor
- Usually highest quality image and video
- Incredibly expensive
- Potentially heavier
- Can be overkill unless doing billboard photography

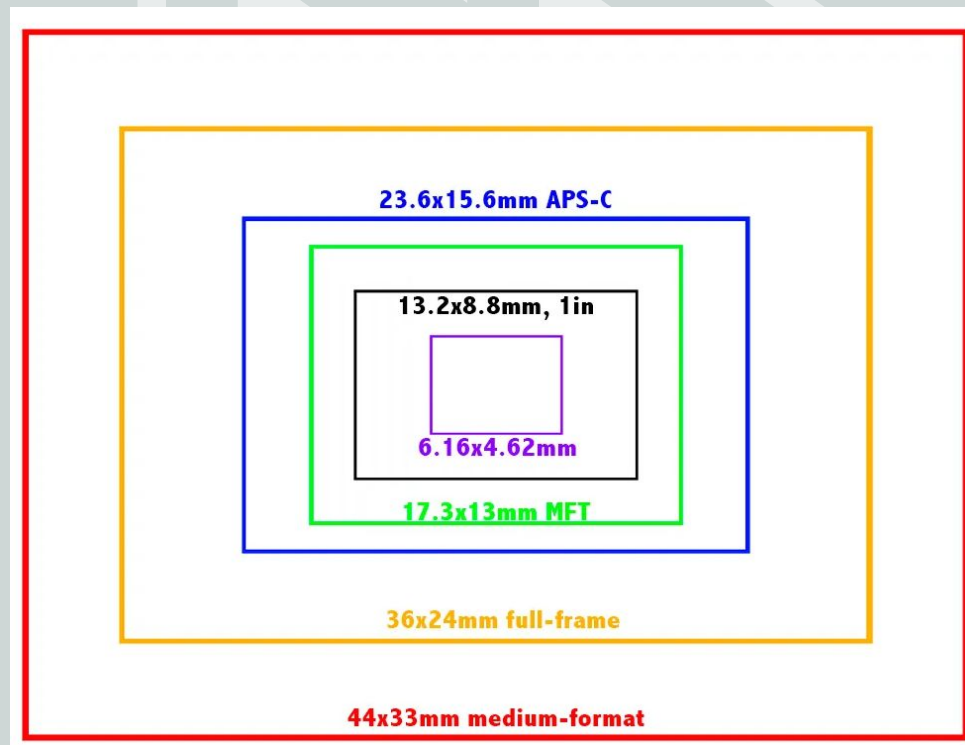
APS-C Sensor:

- Common “cropped sensor”
- Crops at 1.6X (50mm lenses looks like 75mm)
- Likely to have lower dynamic range and image quality than full frame (but not always)
- Great for budget, lightweight, well lit photography/video
- Worse in low light, studio situations

Micro Four Thirds Sensor (MFT) :

- Smallest of notable Sensors
- Made for smaller, lighter cameras
- Different Ratio, less Megapixels (so chance of less quality)
- Also cropped sensor, will punch in by 2X compared to Full Frame
- Good price, good offset.
- Harder to film due to level of punching in.

Different Sensors Sizes:



Manual Shooting Triangle

Balancing:

-Shutter Speed:

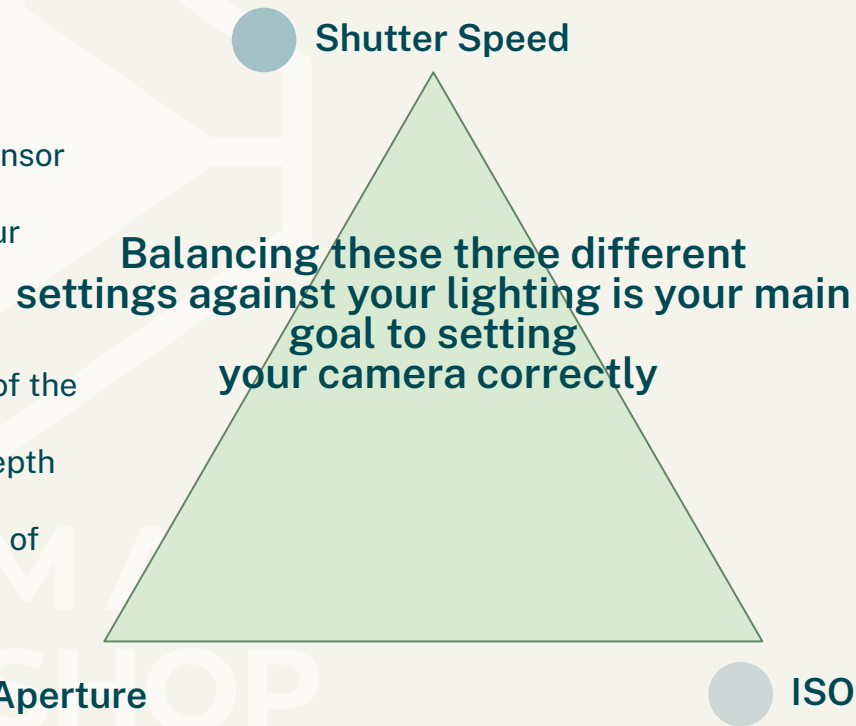
- The amount of time the camera exposes light to the sensor before it refreshes
- Shutter speed will determine the amount of motion blur your footage and photos have

-Aperture:

- The focal distance. Blurs the background/foreground of the shots
- Low Aperture (1.8f etc) Lets in more light, shallower depth of field
- High Aperture (14f etc) Lets in less light, deeper depth of field

-ISO

- Artificial Gain
- More ISO = lighter image, but also more grain



Low Vs High ISO



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High Vs Low Aperture

Higher f-stop number



Lower f-stop number



High Vs Low Shutter Speed



Aperture: f/3.5 **Shutter Speed:** 1/4 **ISO:** 100



Aperture: f/2.5 **Shutter Speed:** 1/500 **ISO:** 6400

Light Vs The Manual Shooting Triangle

Lighting is the most important part of balancing these three controls.

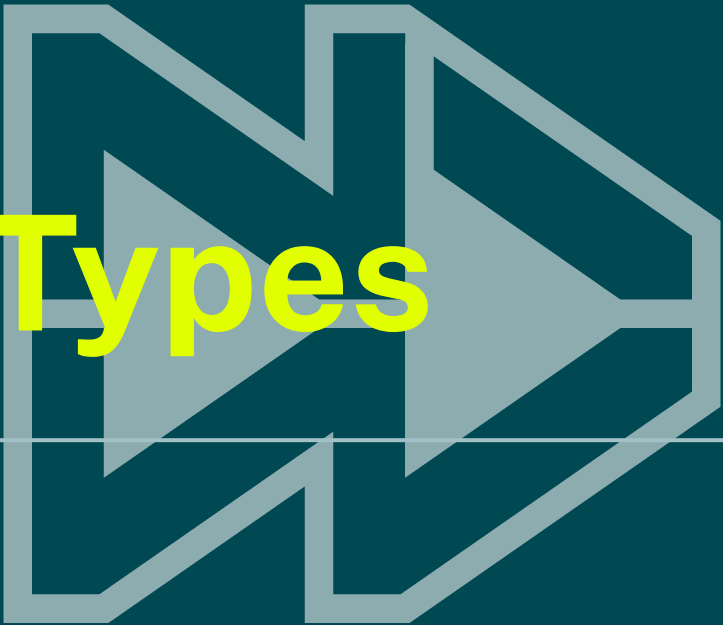
More light = more flexibility with the other controls

Less light = more compromise

These rules are very important for shooting indoors.



Part 2: Focus Types

The logo is a stylized, light blue geometric shape. It features a central square with a large 'X' inside. The 'X' is formed by two overlapping triangles. The outer edges of the shape are composed of several straight lines, creating a complex, angular border.

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Focus Explained

Focus Types

Continuous Autofocus / AI Servo

Camera will continuously select an area to focus on repeatedly while focus button is pressed.

Speed of focus adjustment can be changed on certain cameras

Single Shot Autofocus

Camera will auto focus when prompted (pressing/holding a button) on a particular area and lock to that area

Re-focusing the camera will adjust the area again

Manual Focus

Camera will focus on an area via rotating of lens or control via the camera.

Camera will remain in the same area of focus unless adjusted by rotating the lens or a control on the camera

Auto Focus Area

How The Camera Chooses What To Focus On

Eye Tracking

The camera will look for eyes and focus to the eye using an algorithm.

Eye tracking can be split between human and animal.

This software is also becoming more widely extended with AI on modern cameras to include other tracking elements (basketballs etc).

Wide

Wide Focus considers the whole frame and focuses on the main element within the shot.

Camera will aim to focus on the majority of objects in the camera.

Zone

Zone provides an area within the camera to focus on which is adjustable.

Great for adjusting to an overall area without looking at specific focusing

Fantastic for composition

Flexible Spot

Flexible Spot provides a very specific area within the camera to focus on which is adjustable

Great for adjusting to focus on a specific object

Fantastic for composition

Focusing Tips

-Focus Peaking Is Essential For Manual Focus

Focus peaking allows you to see what part of the image is focused on via lots of dots that highlight the clear part of the image.

-Digital Zoom Helps Assist With Shallow Focus:

Digitally zooming in via a function on the camera will allow you to check to make sure the image you are shooting is clear.

-Lower Aperture = Harder To Focus Manually:

A low aperture (3.5 and under) will likely require auto focus to make sure you are not losing your subject in the photo.



Part 3: File Formats



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RAW Vs. JPEG/JPG

RAW

- Non Destructive, allow for max editing
- Contains Metadata (info on how photo was taken)
- Uncompressed (allows for the photo to be as high quality as your camera can produce)
- Larger file size
- Isn't compatible with most social platforms

JPG

- Destructive, baked in elements.
- Contains no metadata (info on how photo was taken)
- Compressed
- Smaller file size,
- Quality is adjustable
- Compatible across almost all platforms

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Shoot In RAW, Export In JPG.

- RAW file format lets you adjust your photos fully when editing in Lightroom.
- However, to apply your edits and be able to use your photos, you must export (create a version) of your edited photos.
- When you export your photos, you can export them in JPG (other file formats are available but JPG is your most common/flexible format).
- Keeping raw format photos also allow you to make multiple edits.

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Is There Ever A Reason To Shoot In JPG?

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-Yes!

-If you are on a shoot which requires photos for that day and you are not planning on editing them, you can shoot in JPG to speed up your workflow.

-Instead of having to take the RAW photos off the camera into Lightroom or Photoshop, you can put the photos straight onto a device to upload.

-Some cameras provide the option to shoot in both at the same time, providing a RAW copy and a JPG copy. However this will fill up your SD card faster.

Part 4: General Standards

The logo is a stylized, light blue geometric design. It features a large, bold letter 'N' on the left, which is partially enclosed by a thick, light blue outline that forms a square-like shape. To the right of the 'N', there are two light blue triangles pointing towards each other, creating a central negative space. Below the 'N' and triangles, there are two more light blue triangles pointing outwards, mirroring the ones above. The entire logo is composed of thick, light blue lines and shapes.

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Shutter Speed Guidelines:

- Handheld photography is shakier than using a tripod.
- Shooting under 1/200 while handheld will likely show blurring across your whole image due to your hand movement.
- I would recommend staying at or above 1/200 for handheld photography.
- For photography where the camera is still, you can shoot with a lower shutter speed.



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Aperture Guidelines.



- When shooting a group of people, your autofocus will likely choose one person

- If the group is in a line, their positioning will still vary. Leaning etc.

- An aperture around 3.5f - 5f will provide enough leeway to make sure everyone is in focus (on a full frame camera)

- For portrait photography with eye tracking, use the lowest aperture you can

- For portrait photography without, aim around 2.8F

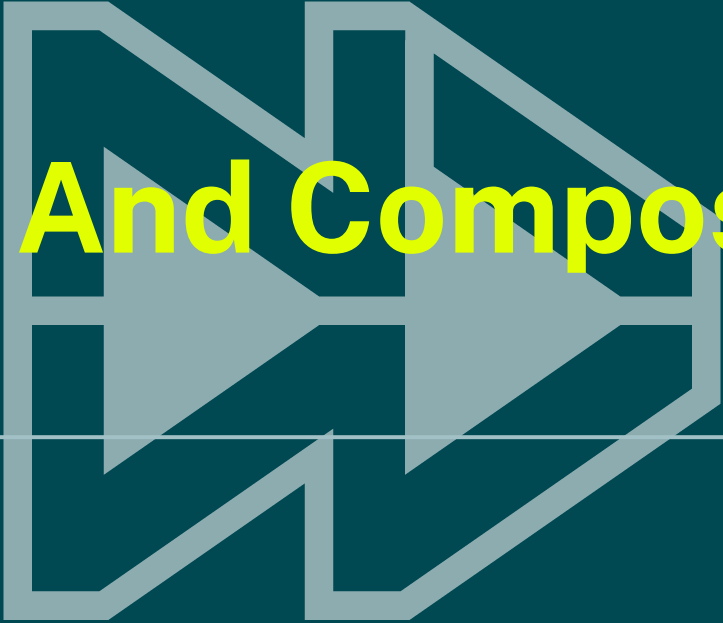
- (-We will experiment with adding in depth of field digitally for the editing session tomorrow)

ISO Guidelines:

- ISO can be forgiving at lower levels
- Shooting with the ISO on automatic is reasonable with good lighting
- A rule of thumb is to keep the ISO below 1000, however this requires good equipment
- We will use denoising provided by lightroom to adjust for higher ISO where necessary



Part 5: Lighting And Composition

The logo is a stylized, light blue geometric design. It features a large, bold letter 'N' on the left and a large, bold letter 'W' on the right. The two letters are connected by a central horizontal bar that contains two right-pointing triangles. The entire logo is composed of thick, light blue lines.

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3 Main Types Of Light

Light Types

```
graph TD; A[Light Types] --> B[Key Light]; A --> C[Fill Light]; A --> D[Back Light];
```

Key Light

- Main light for illuminating subject,
- Strongest lighting in scene
- Doesn't have to be front on, angled at the side usually creates a cinematic look

Fill Light

- Light to adjust shadows created by the key light
- provides a way of adjusting the contrast created by the key light

Back Light

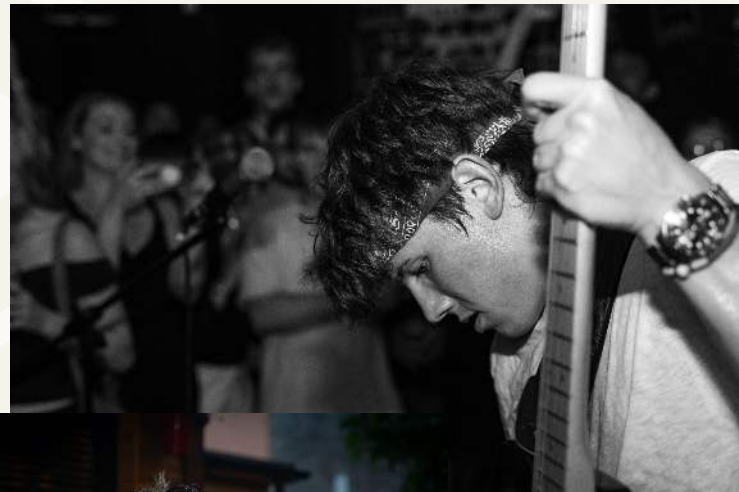
- Light to separate the subject from the background
- Can be done as practical lighting
- Creates the halo effect, the light edge around the subject

Lighting example:



Flash Photography

- Flash photography is another option for dimly lit areas
- Equally useful for a stylised shoot (strong contrast etc)
- Flashes are sometime a necessity and act as a consistent key light.
- External Flashes can be triggered off the camera and act as a key light without flattening your image. These are much more expensive



Composition Guidelines

-There are a large number of techniques to help create a particular atmosphere based on your project.

-Compositional guidelines are just that, guidelines. Breaking these rules can create interesting dynamics within your projects



Rule of Thirds

-Shooting in the rule of thirds provides a basic guideline for framing subjects against other elements, such as objects or non focus subjects.

-Many cameras will have the option to set a grid, to help with framing while you shoot.



Symmetrical Framing

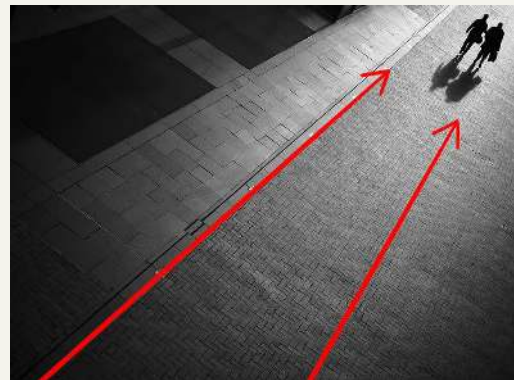
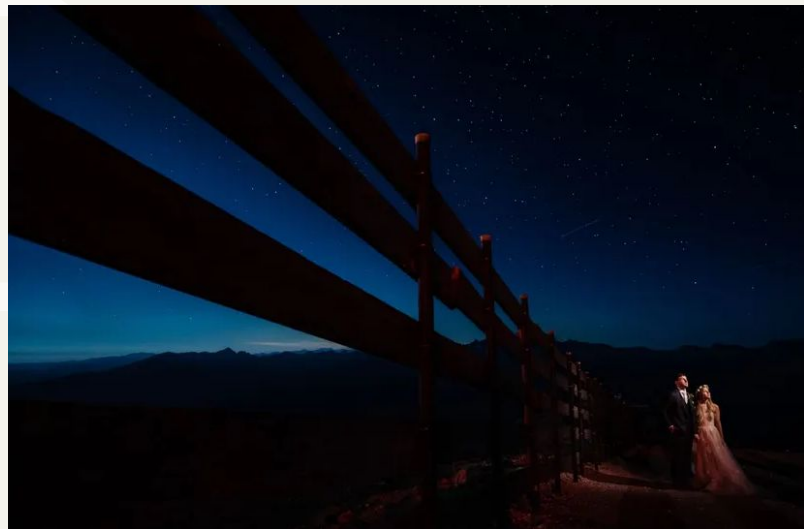
-Breaking the rule of thirds with a symmetrical shot, placing the subject in the centre, can create a heavy focus on the subject.



Leading Lines

-Using lines evident in your composition to focus towards the subject matter can create depth in your shooting.

-Leading lines direct the viewer's eye and



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Staging & Candid:

- Staging is the art of placing different subjects in a frame to intensify elements and provide storytelling.
- Candid Photography is the act of moving yourself into the correct area and catching naturally occurring events
- This is very useful in both videography and cinematography. Capturing a moment by organising the subjects or yourself first is essential to creating strong scenes.

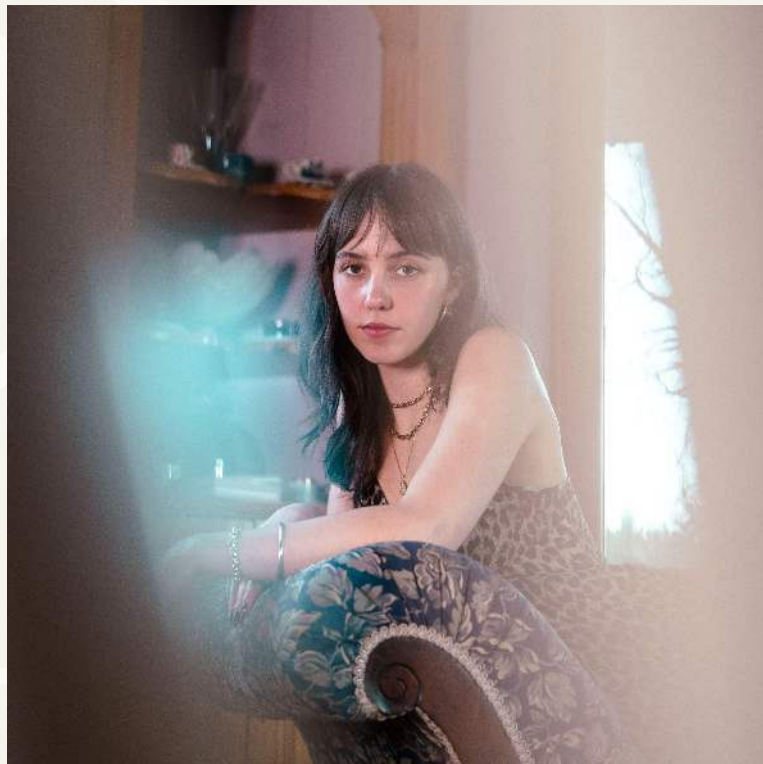
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Examples Of Staged And Candid Photography:



Foregrounding And Shooting Through

Shooting through can be very cinematic and provide texture and framing to your images.



-Staged Shot

-Centered

-Back-lit/Natural Light

-Framed through foreground

-Low Aperture

-Practical effects
(smoke)

- Mix of natural and geometric shapes



Final Notes:

-Some elements of photography can be altered in post, others are much more difficult:

Things to try and get right (in order of importance):

- File Format,
- Composition,
- Lighting,
- Aperture,
- ISO,
- Shutterspeed,

-Some notable elements that can be adjustable with editing in post:

- White Balance,
- Exposure/Highlights/Shadows
- Colour grading
- Adding Grain
- Depth Of Field,
- Cropping/straightening footage

Part 6: Extra Notes



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Where To Buy Equipment:

MPB:

<https://www.mpb.com/en-uk>

- (Second Hand, tests the camera to tell you the age/quality)
- Fantastic for most equipment, second hand cameras are substantially cheaper even with minimal wear.

London Camera Exchange:

<https://www.lcegroup.co.uk/>

- First Hand, Second Hand, and Trade-Ins.
- Allow you to send the equipment online to a store to test before purchase.
- There's a store in Hereford high town opposite Primark.

Editing Software:

Adobe Lightroom/Photoshop:

-<https://www.adobe.com/creativecloud/plans.html>

-What we used for our band shoot, industry standard.

-Part of Creative Suite, provides multiple types of software (Premiere Pro, Animation, etc.)

-Very Expensive unless accessible through an institution/workplace

-Option to just buy Lightroom/Photoshop without rest of creative suite for much cheaper

<https://www.rawtherapee.com/>
(Recommended):

-<https://www.rawtherapee.com/>

-Free!

-Useable across Apple, Windows, and Linux

-Incredibly powerful and an amazing starting point.

-Slightly less user friendly

-Skills taught in Lightroom should be transferable in RawTherapee

Camera Recommendations:

-Canon EOS R8

<https://www.mpb.com/en-uk/product/canon-eos-r8>

-£1000 For Body

-Compact Camera

-Interchangeable lenses

-Full Frame (good for low light)

-Newer so more features and integration with new tech.

-Would last you a long time

-Would cover video as well as photo

-

-Sony A7II: (reccomended)

<https://www.mpb.com/en-uk/product/sony-alpha-a7-ii>

-£450 second hand

-Interchangeable lenses

-Full Frame

-Much older than Canon R8

-Good for hobby without leaving you stuck if you want to continue further (as it's not a fixed lens)

-Will still produce excellent photos despite age

How To Price A Client Starting Out:

The Brief:

- What is the brief?
- An architect who is designed to make a house must charge more for a mansion over a bungalow.
- Work out what the client wants and set accordingly through an early discussion/meeting.

The Difficulty:

- If you think your brief is out of your skill range, consider charging less to set expectations.
- Also consider the turn-around on the project in relation to difficulty.
- If you are confident you can achieve the brief to a high quality and quickly, charge higher. Your skill-set is what they are paying for, not just the amount of time.

The Resources:

- If your project requires music and sound effects you will likely have to pay for it.
- Price in the monthly payments for software, and then also the value of equipment
- Also considering travelling too

The Client:

- Clients will have different budgets.
- Get an idea of your clients budget and then price accordingly
- A local band will likely have less money than a restaurant
- Sometimes the job is a game of passion vs price when deciding who to work with

Contact Details:

You are welcome to contact me via the following:

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Instagram: @the_newman_workshop

If you have any questions please send them my way. Please note I may not get back to you straight away due to my schedule.

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