

Videography Beginners Course

The background image is a scenic landscape. In the foreground, two people are camping on a grassy hill. One person is standing next to a yellow and white tent, and the other is sitting nearby. The hill overlooks a vast valley filled with a dense city, likely Rio de Janeiro, with a large body of water (Bay of Guanabara) visible in the distance. The surrounding mountains are covered in lush green vegetation. The sky is clear and blue, suggesting a bright day.

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



Frame Rates & Resolutions

180* Shutter Rule,
Resolution
Conventions,
Slow-motion filming,



Colour Grading & Standards

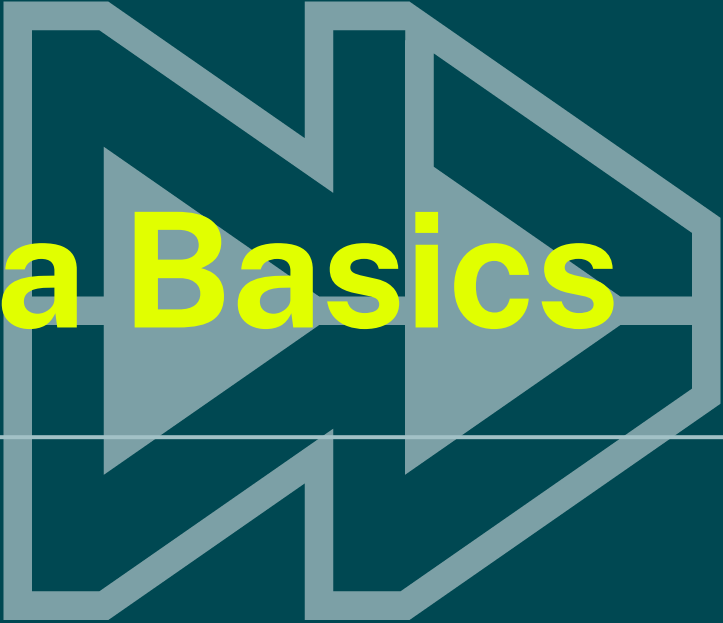
Picture Profiles,
Luts,
Lens Corrections,



Composition & Lighting

Angles,
Foregrounding,
Backgrounding,
Transitions,

Part 1: Camera Basics

A large, light blue logo consisting of a stylized 'N' and 'W' intertwined, with a play button symbol in the center.

NEWMAN
WORKSHOP

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

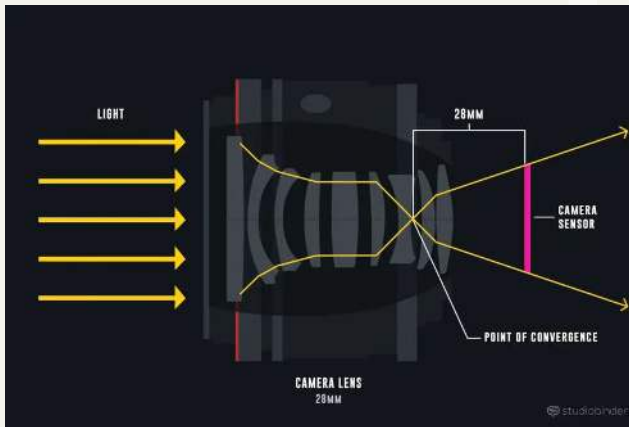
There are different types of sensors that provide different qualities of image and video.



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

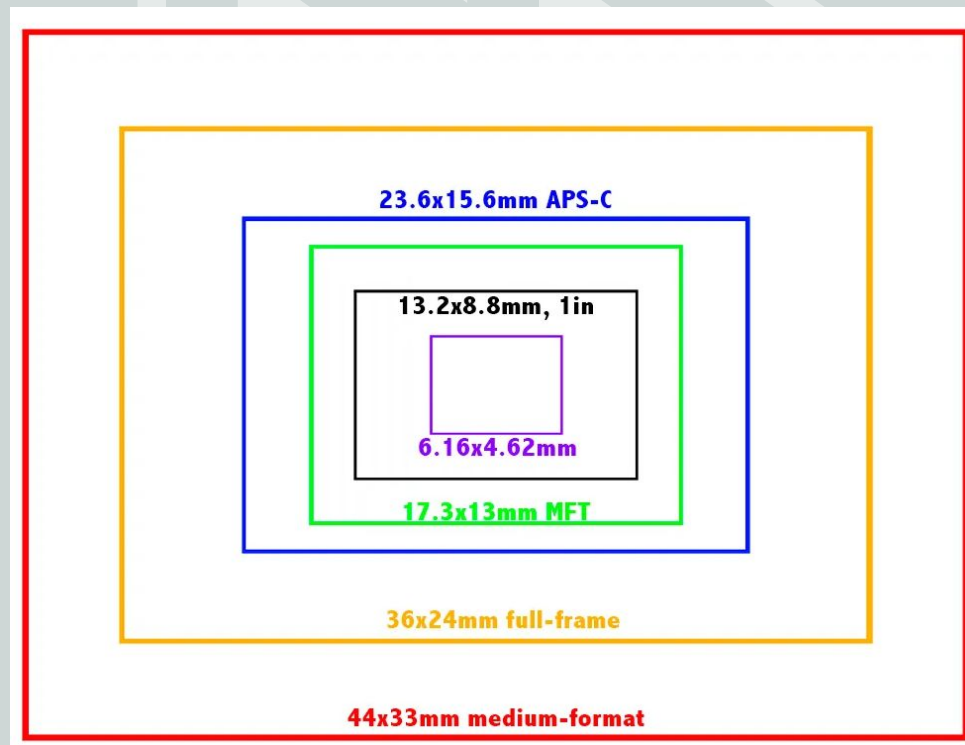
APS-C Sensor:

- 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:

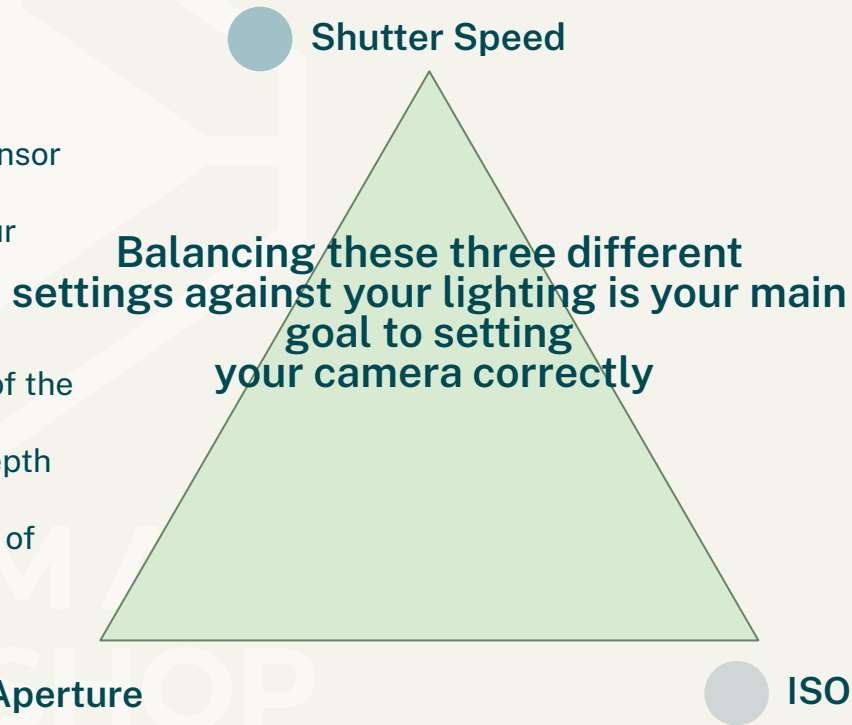
- The amount of time the camera exposes light to the sensor before it refreshes
- Shutter speed will determine the amount of motion blur your footage and photos have

-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



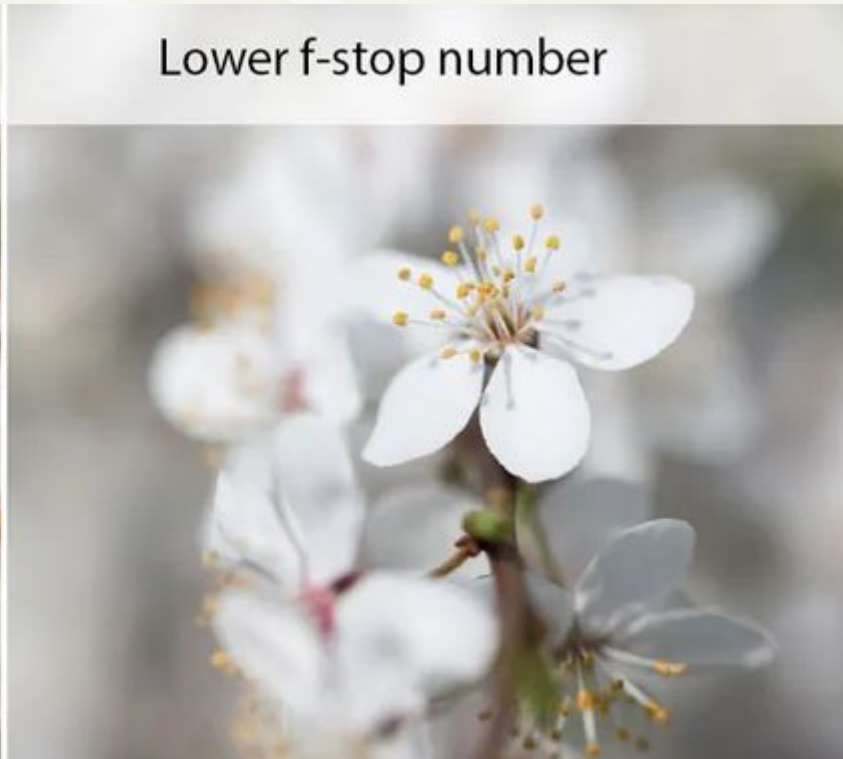
WORKSHOP

High Vs Low Aperture

Higher f-stop number



Lower f-stop number



High Vs Low Shutter Speed



Light Vs The Manual Shooting Triangle

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

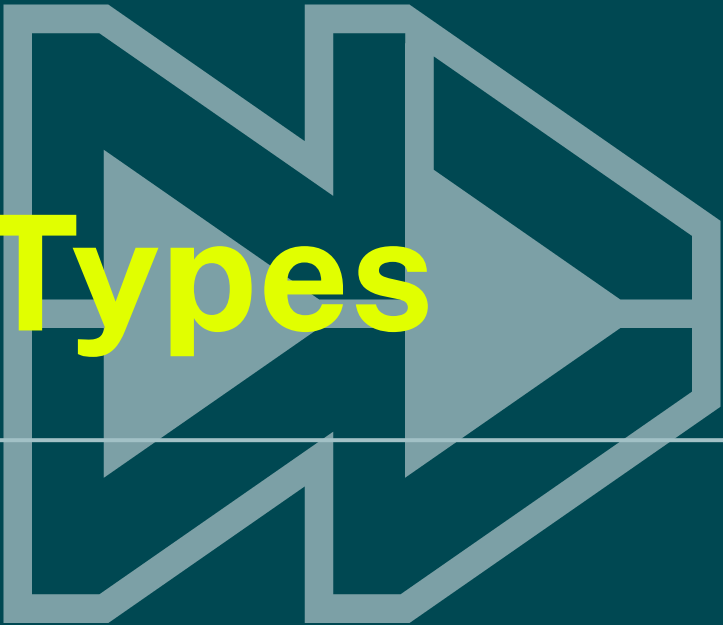
More light = more flexibility with the other controls

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, formed by two overlapping triangles. The 'X' is composed of two sets of parallel lines that create a 3D effect, with the lines extending towards the corners of the square. The overall shape is a square with a thick border.

NEWMAN
WORKSHOP

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 footage.



Part 3: Frame Rates and Resolutions

The logo for Newman Workshop is a large, stylized letter 'N' composed of thick, light blue geometric lines. A semi-transparent light blue triangle is positioned in the center of the 'N', pointing to the right.

NEWMAN
WORKSHOP

Frames Per Second (FPS)

24fps

- Cinematic Frame Rate
- Traditional frame rate for TV and Film
- Lower frame rate = easier for cameras

30fps

- Standard for many videos on social media
- Not too different from 24fps
- Also easier for cameras

60fps

- Smoother footage
- Good for sports
- Can be a more limited option for cheaper cameras

120fps

- Extremely smooth footage
- Fantastic for slow-motion footage
- Only achievable on higher quality cameras

NEW MAN
WORKSHOP

A Case Study: The Hobbit



Notable Resolutions

1280 x 720

-720p

-Lower Resolution, noticeable low quality

-Classified as High Definition (HD)

-Many modern cameras can operate 720p at high frame rates

1920 x 1080

-1080p

-Standard Resolution, looks good on phones and smaller screens (28" and under)

-Classified as Full High Definition (FHD)

-Most modern cameras can operate 1080p at regular frame rates

2560 x 1440

-1440p

-Higher Resolution, looks good on larger screens

-Classified as Quad High Definition (QHD)

-Some modern cameras can operate 1440p, usually at lower frame rates (30FPS)

3840 x 2160

-4K

-Very High Resolution, looks good on most screens

-Classified as Ultra High Definition (UHD)

-Most expensive cameras will be capable of 4K at different frame rates.

Higher Frame Rate + Higher Resolution = Higher Quality Requirements

-Cheaper cameras will not have access to higher frame rates and higher resolutions, especially together.

-Some cameras will compromise the frame rate at higher resolutions. For example a Sony A7III (currently around £1000 new) will achieve 30FPS at 1440p. However at 1080p the camera is capable of 120fps

Part 4: Picture Profiles & Grading

The logo is a large, light blue, stylized graphic. It consists of a square frame with a large 'N' shape inside. The 'N' is formed by two vertical bars and a diagonal bar. The diagonal bar is composed of two segments, each containing a right-pointing triangle. The entire graphic is rendered in a light blue color.

NEWMAN
WORKSHOP

Colour Grading Starts In The Camera

-The majority of colour grading (editing the colour of a video) is performed in a video editor, however professional grading starts in the camera.

-Picture Profiles allow you to adjust the raw footage to provide a stronger foundation for your edit. This involves controlling the gamma (brightness levels), colour and more.

Original LOG Format



After Color Grading



Look Up Tables



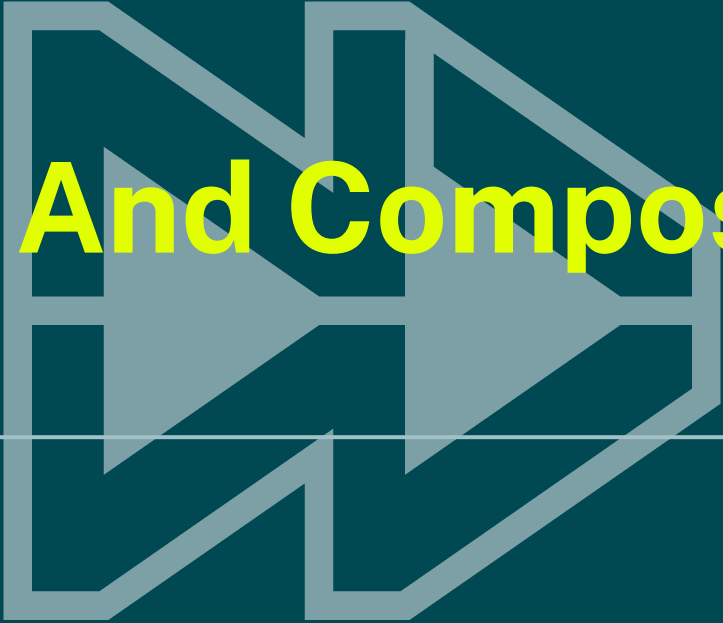
-LUT's (Look Up Tables) are files that transform your video using a mathematical formula (like a preset).

-LUT's work in tandem with Picture Profile to give you a strong colour scheme

-Each brand has different LUTs connected to different formats for Picture Profiles (HLG-3, S-Log, H-Log etc). Finding one that works well together requires experimentation

-LUTs can be found and/or purchased online

Part 5: Lighting And Composition

The logo is a large, light blue geometric shape composed of multiple overlapping triangles and rectangles, creating a complex, symmetrical pattern that resembles a stylized 'N' or a series of interlocking shapes.

NEWMAN
WORKSHOP

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:



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

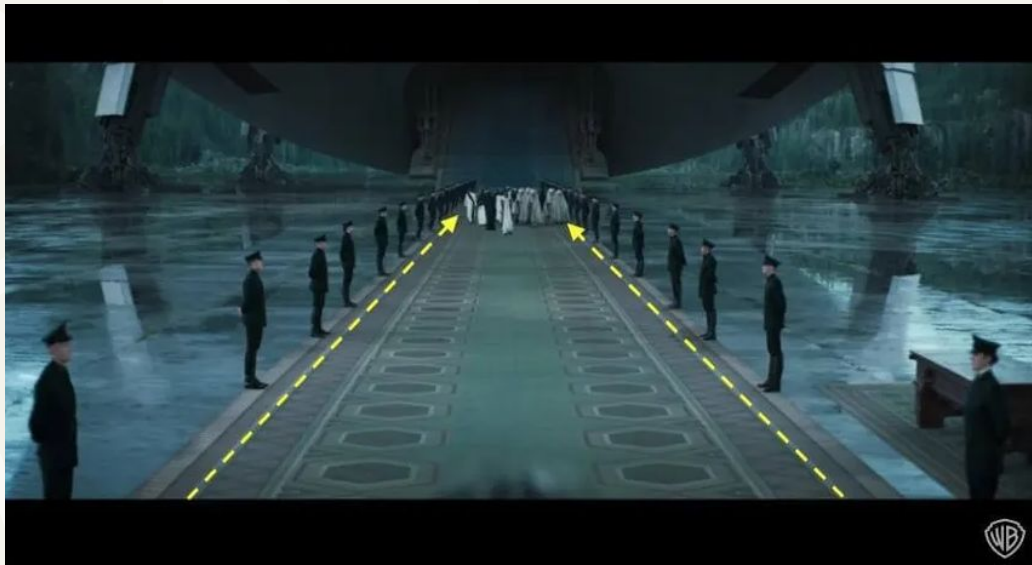
-Breaking the rule of thirds with a symmetrical shot, placing the subject in the centre, can create a heavy focus and an uneasy feeling for the viewer.



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

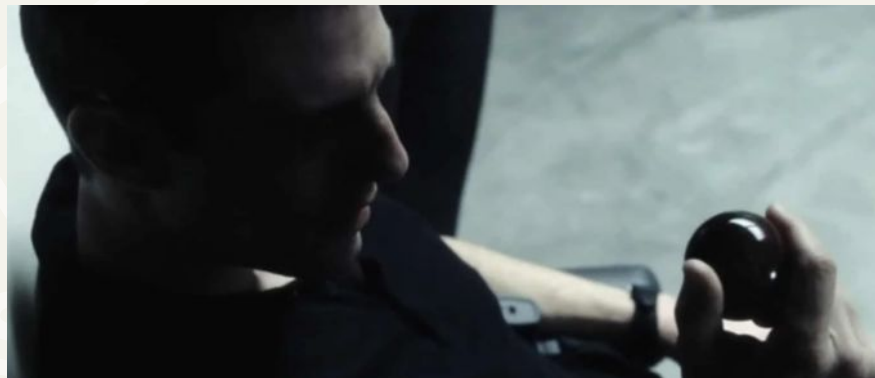


Staging & Blocking:

-Staging is the art of placing different subjects in a frame to intensify elements and provide storytelling.

-Blocking is how the subjects and camera will move and interact in a scene.

-This is very useful in both videography and cinematography. Capturing a moment by organising the subjects first is essential to creating strong scenes.



Case Study: HBO's Chernobyl



Final Notes:

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

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

- Composition,
- Lighting,
- Resolution/Frame Rate,
- Aperture,
- ISO,
- Stabilisation (keep the camera steady)
- Shutterspeed,

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

- White Balance,
- Adding Grain
- Depth Of Field,
- Cropping/straightening footage

Part 6: Extra Notes



NEWMAN
WORKSHOP

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 Premiere Pro:

[-https://www.adobe.com/creativecloud/plans.html](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 (photoshop, Animation, etc.)

-Very Expensive unless accessible through an institution/workplace

Da Vinci Resolve (Recommended):

[-https://www.blackmagicdesign.com/products/davinciresolve](https://www.blackmagicdesign.com/products/davinciresolve)

-Contains a very good free version!

-Useable across Apple, Windows, and Linux

-Incredibly powerful and an amazing starting point.

-Specialism in colour grading

-Skills taught in Adobe Premiere should be transferable in Da Vinci Resolve.

Camera's We Used:

SONY ZV-1:

https://www.sony.co.uk/compact-cameras/products/zv-1?locale=en_GB

-£559 New.

-Fixed lens, not much flexibility

-4K recording

-Decent frame rates

Canon XA70:

<https://www.canon.co.uk/video-cameras/xa70/>

-£2179 New.

-Fixed lens (very good lens however)

-Overkill for starting out

-4K recording

-Good frame rates

-Lots of extra capability for sound/add-ons

-Fantastic controls and simplicity

Camera Recommendations:

-Canon R50:

<https://www.canon.co.uk/store/canon-eos-r50-v-mirrorless-camera-body/6895C021/>

-£720 For Body, £860 with Lens (NEW)

-4K

-1080p at 120FPS (great for slow motion footage)

-Compact Camera

-Interchangeable lenses

-Full Frame

-Would last you a long time

-Sony A7II:

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

-£450 second hand

-1080p at 60FPS (no 4K)

-Interchangeable lenses

-Full Frame

-Much older than Canon R50

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

-Wouldn't last you as long but will get the job done

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:

Email: kit@newmandesignltd.co.uk

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.

NEWMAN
WORKSHOP