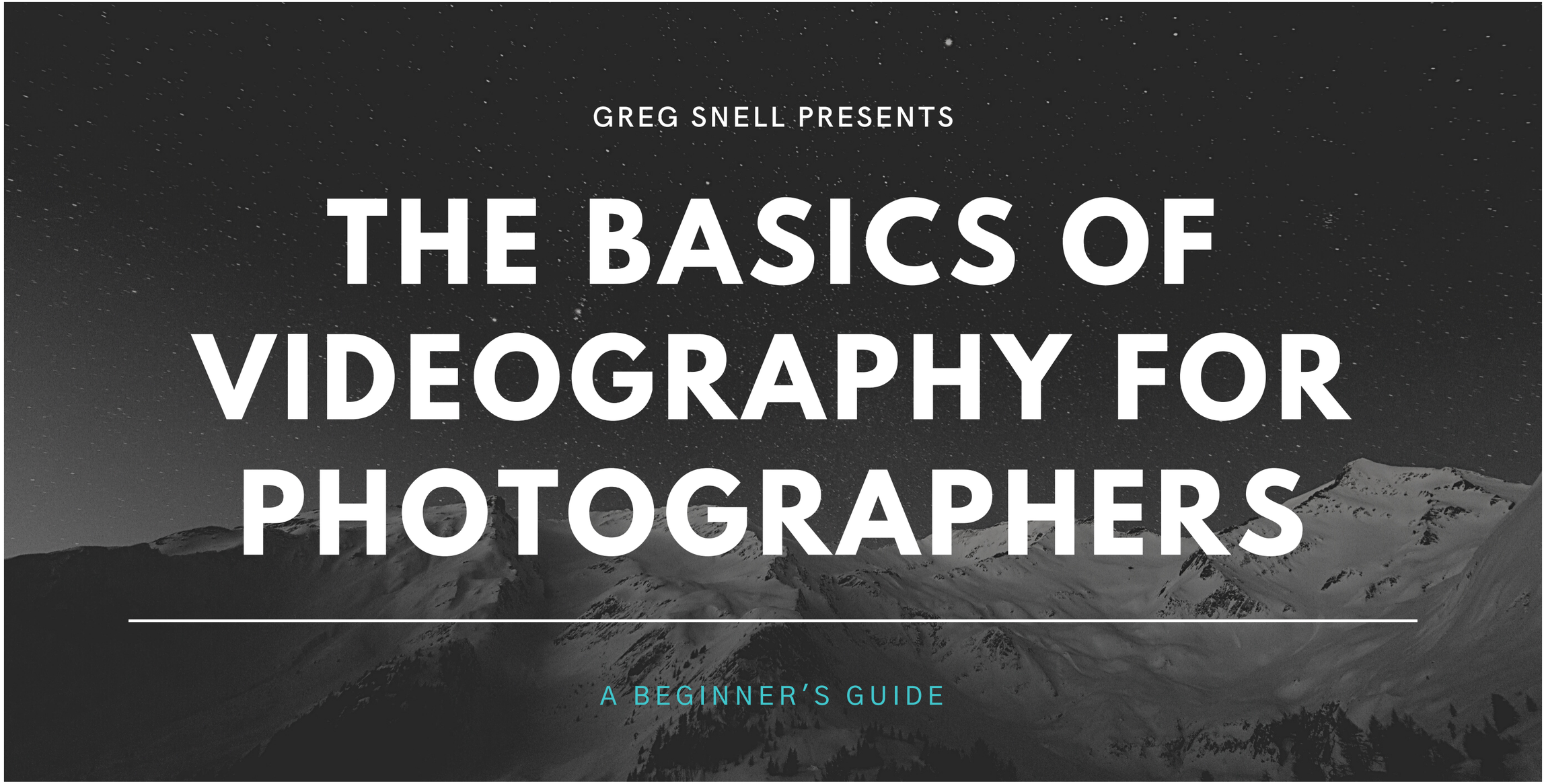


GREG SNELL PRESENTS

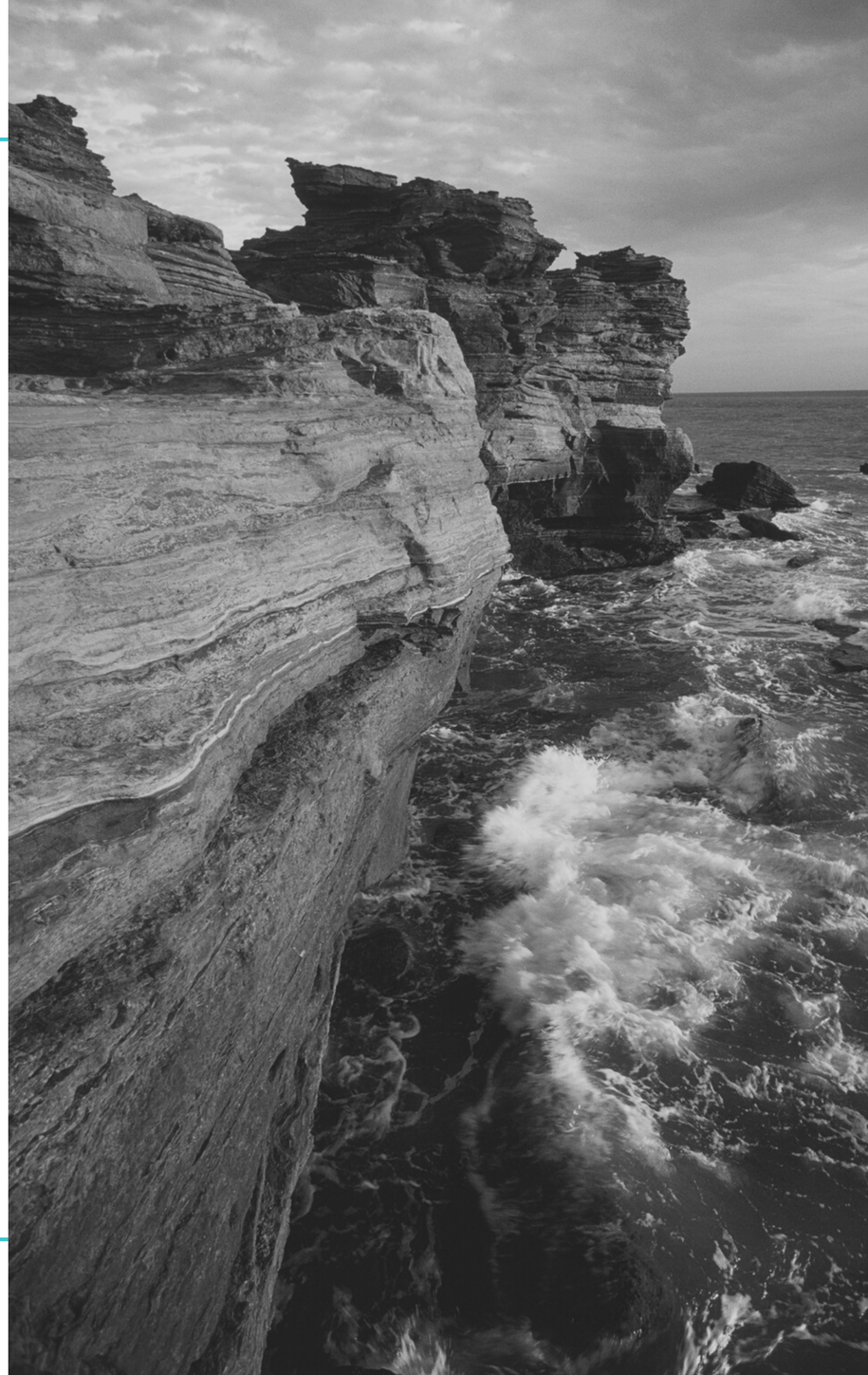
THE BASICS OF VIDEOGRAPHY FOR PHOTOGRAPHERS

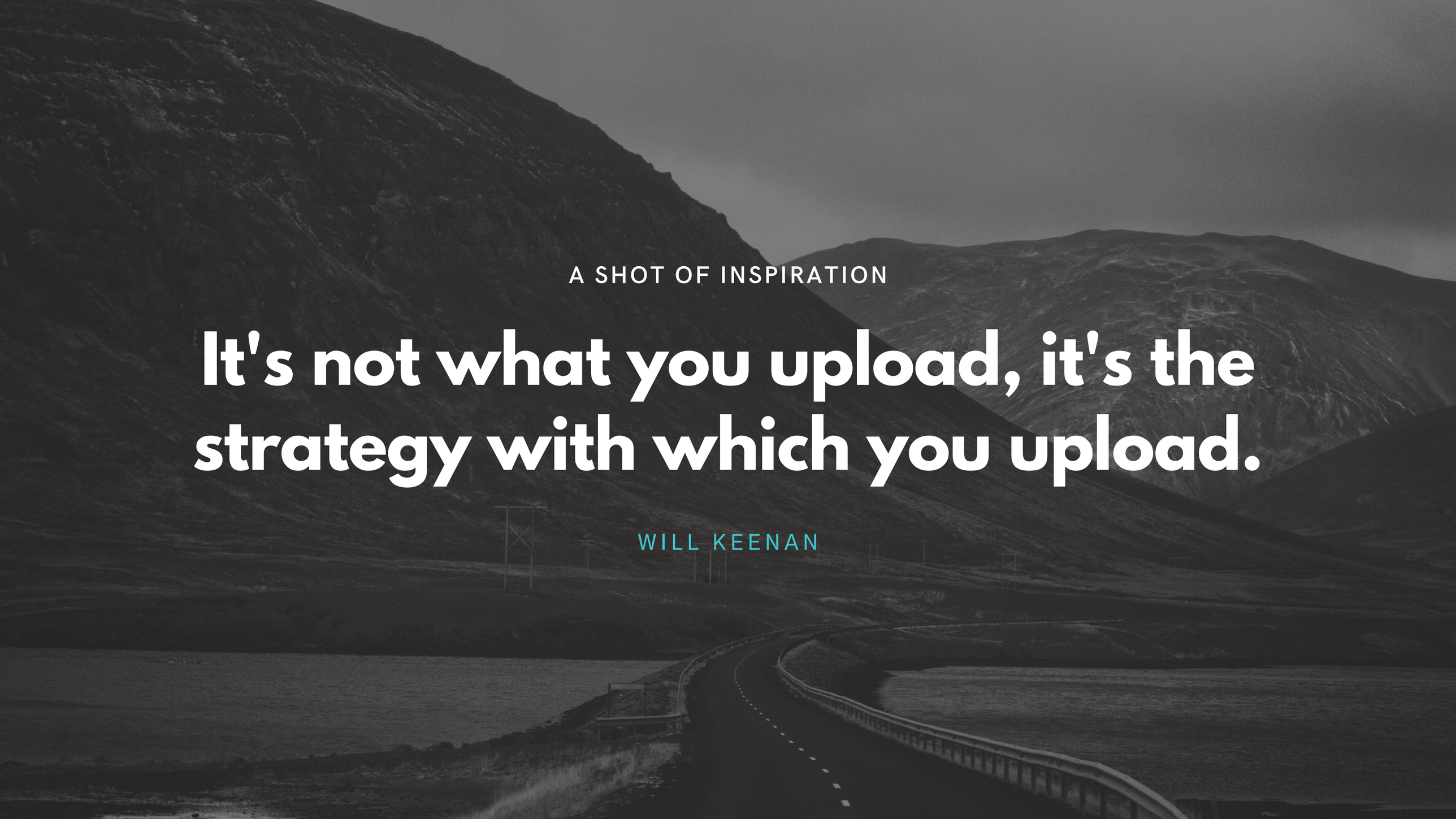
A BEGINNER'S GUIDE

PRESSO OUTLINE

WHAT WE'RE GOING TO COVER

- Setting your Camera's Frequency – NTSC vs PAL
- Codecs and Compression – H.264 vs H.265
- Resolutions – Full HD – 4K – 8K
- Frame Rates and Slow Motion
- Exposure and the 180 Degree SHUTTER Rule
- Colour & Picture Profiles
- Lenses & Focal Lenghts
- Auto Focus vs Manual Focus
- Camera Movements
- Audio Recording
- Video Extras – Timelapse | 360 | Anamorphic | Hyperlapse




A SHOT OF INSPIRATION
It's not what you upload, it's the strategy with which you upload.
WILL KEENAN

INTRODUCTION

THE BASICS OF VIDEOGRAPHY FOR PHOTOGRAPHERS

You’re already a good photographer. You understand your camera and your photos look awesome.

Whether you’ve been creating videos for years, or if you’re just about to get started, do you understand the basics of videography?

How can you make the most of your camera’s video settings to produce the best quality footage possible?

In this short and detailed presentation we cover everything you need to know about the basics of videography. How you can go from taking great photos to making incredible videos.

RECORDING STANDARD & FREQUENCIES

NTSC vs PAL

The set frequency or recording standard of your camera will determine your base frame rate and how your camera interprets electrical lights & flickering.

NTSC = North America & 24fps or 30fps

NTSC is the North American Standard based on 60Hz of alternating current (AC power). If you set this your camera will have a base frame rate of either 24fps or 30fps. It's your choice and we'll cover why you'd choose which a bit later.

PAL = UK & Europe & 25fps

PAL is the European Standard based on 50Hz of alternating current (AC power). If you set this your camera to PAL your base frame rate will be 25fps

CODECS & COMPRESSION

Codecs reduce the size of recorded media by disregarding information that is not essential within the image.

H.264

H.264 is known as Advanced Video Coding (AVC) and is industry standard for video compression. The compression works by processing frames of video using a block-oriented, motion-compensation-based standard. It is widely used by online streaming services like Vimeo, YouTube, Netflix, Amazon Prime, and more.

H.265

H.265 (also called HEVC – High Efficiency Video Coding) is the successor and redesign of H.264. This newer compression codec processes information in what's called Coding Tree Units (CTUs). These CTU's give the codec the ability to compress information more efficiently with better motion compensation and spatial prediction than AVC. However requires more advanced hardware to compress the data recorded.

RESOLUTION

Resolution is measured in the number of pixels on a screen. Pixels are displayed in columns and rows.

HD = 720P

High Definition (HD) is a base resolution of 1,280 columns by 720 rows of pixels. It's also known as 720p. We're going to skip right over this because you'll probably almost never record in this resolution anymore. Ha.

FULL HD

Full HD is also known as 1080p. This is most likely how you consume most of the content you watch. It's also probably the standard resolution set on your camera to begin with. Full HD is 1,920 columns x 1,080 rows of pixels.

4K

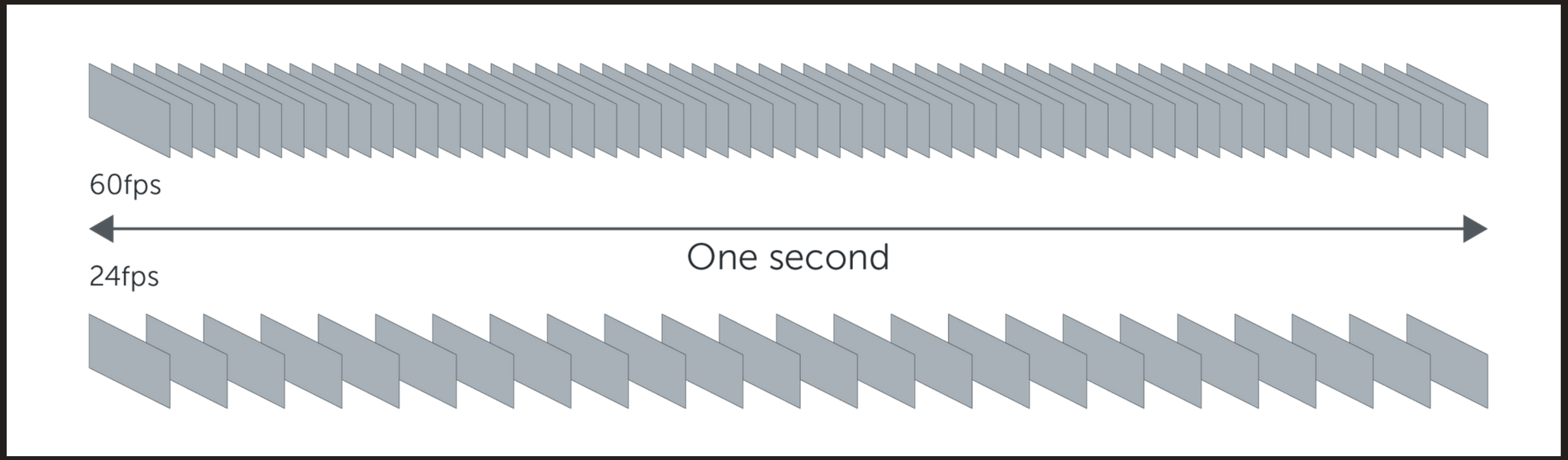
4K is something I'm certain you've heard of. 4K is also known as UHD or Ultra High Definition. In this case there are 3,840 columns x 2,160 rows of pixels displayed. 4K is quickly becoming industry standard resolution.

8K

8K is likely going to be the resolution of the future. The 8K ratio is 7,680 x 4,320. Currently it is difficult to work with 8K footage but camera technology is improving year after year and it's inevitable that eventually the market will follow.

FRAME RATES & SLOW MOTION

THE TERM FRAME RATE IS REFERRING TO THE NUMBER OF INDIVIDUAL STILL IMAGES CAPTURED BY YOUR CAMERA PER SECOND. THIS IS WHY YOU MAY SEE PEOPLE USE THE ACRONYM FPS (FRAMES PER SECOND).



FRAME RATES & SLOW MOTION

24fps

It has been determined that the closest frame rate to the way humans naturally see motion blur and movement is 24fps.

30fps

30 frames per second is used for most Reality TV and television broadcasting. I believe it suits YouTube/online viewing very well.

60fps

60 frames per second can be used for very sharpe and detailed footage of fast action like video game streaming or live streaming or twitch. It's also good for 50% slow motion effect in post.

120fps

120 frames per second and higher is used to record fast moving scenes. You can then stretch this footage in post to match a base frame rate on your timeline THUS creating epic SLOW MOTION.

EXPOSURE TRIANGLE

APERTURE

ISO

SHUTTER SPEED

CONTROL THE EXPOSURE

Aperture

Think of your camera's aperture like the pupil of your eye. Just like our pupil, the aperture can open and close to change the amount of light that passes through.

Shutter Speed

The shutter speed you set controls how long light hits the sensor each second. Shutter speed (matched with frame rate) also controls motion blur effects which are super useful and a great tool to master in videography.

ISO

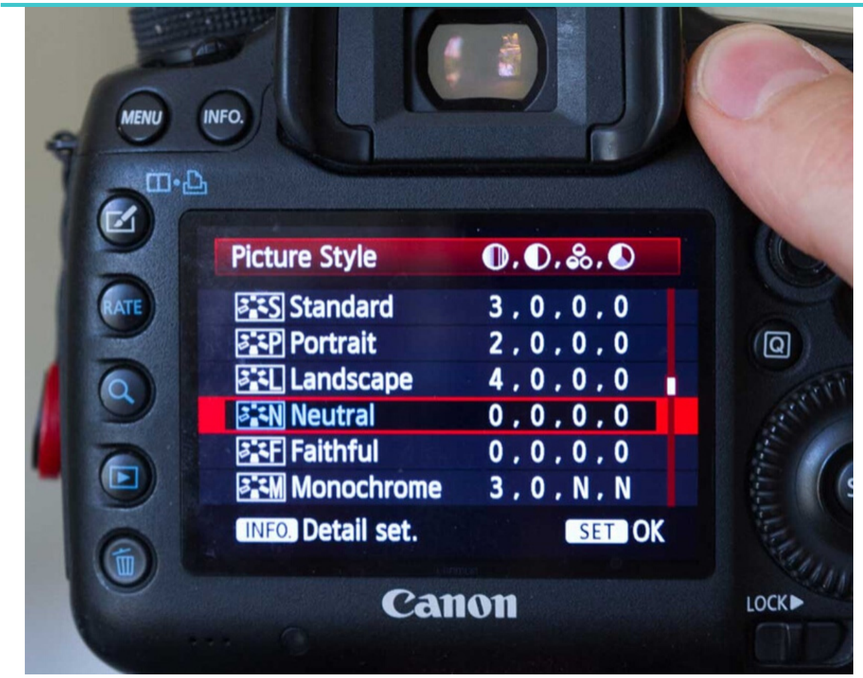
ISO is a factor that brightens a photo in-camera after your sensor has already been exposed to the light. ISO is especially useful when you have no other way to brighten your photo.

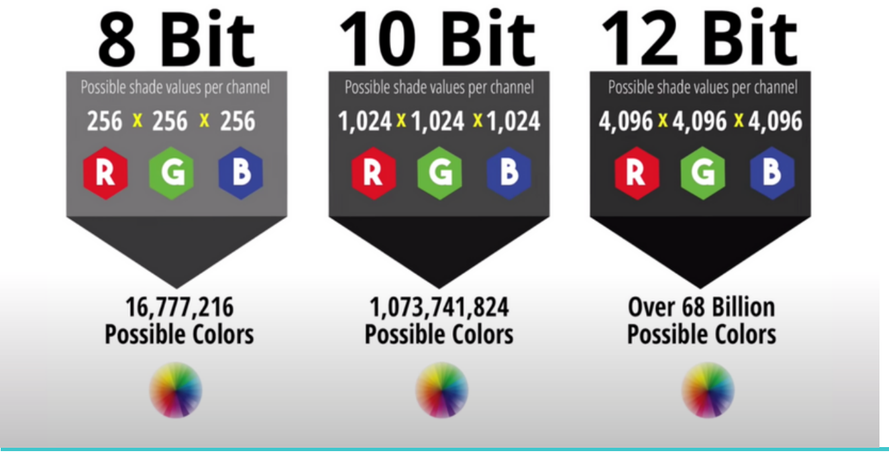
THE 180° SHUTTER RULE

Don’t confuse this with the 180 Degree Rule used for Dialogue in Cinematography

The 180° Shutter Rule is based on motion blur & your desired frame rate in any given scene.

The theory is to always match your frame rate with a shutter speed of double the value in order to create the smoothest motion playback. This allows for the most realistic motion blur effect and will enhance the viewers experience. 30fps = 1/60 Shutter | 24fps = 1/50 Shutter





COLOUR & PICTURE PROFILES

FOR VIDEO YOUR BEST BET IS TO SET THE STANDARD OR NEUTRAL PICTURE PROFILE. IT'S ALSO GOOD TO SHOOT IN A FLAT LOGARITHMIC PROFILE IF AVAILABLE.

THESE LOW CONTRAST SETTINGS ALLOW FOR LARGER DYNAMIC RANGE AND MORE COLOUR, SHADOW & HIGHLIGHT INFORMATION TO WORK WITH IN POST.

BIT DEPTH, WHITE BALANCE & GRADING

COLOUR BIT DPETH, CHOOSING YOUR WHITE BALANCE + COLOUR CORRECTION & GRADING IS A HUGE TOPIC AND DESERVES IT'S OWN PRESENTATION.

HOWEVER FOR THE BASICS IT'S IMPORTANT TO UNDERSTAND YOUR LIKELY SHOOTING AT 8 BIT WHICH ALLOWS A LIMITED AMOUNT OF COLOUR DATA TO BE RECORDED AND PROCESSED IN POST WHICH YOU CHANGE JUST LIKE EDITING AN IMAGE.

LENSES & FOCAL LENGTHS

Wide Angle Focal length

Generally any lens with a focal length of less than 35mm is considered wide angle. Wide angle lenses are very useful for filming establishing shots of an entire scene or getting in close and capturing tight spaces, like indoors or in a car.

Standard Focal lengths

The stock standard Full-frame focal length is around 24-70mm or 50mm. The standard lens offers a natural looking perspective. These focal lengths are especially good for mid shots (hip to head) of characters or people speaking in your scene.

LENSES & FOCAL LENGTHS

Portrait Focal length

On a Full-frame sensor camera you're looking at lenses with a focal length of around 85-100mm. These are especially good for undistorted closeups. They are usually quite fast lenses too, meaning they have a wide maximum aperture which makes them good in low light & more of that sweet bokeh.

Telephoto Focal length

Anything 135mm and above is considered a telephoto lens. Longer telephoto lenses are good for flattening perspective, isolating the subject from the background and bringing distant objects closer to the viewer.

AUTO FOCUS VS. MANUAL FOCUS

AUTO FOCUS

PROS

Having auto focus you can rely on (with good face detect) is extremely useful when Vlogging and filming yourself.

Filming moving subjects and tap focus detect.

Recording from a gimbal.

Shooting both video and stills & switching often.

CONS

Hunting and constant inconsistencies.

Unable to manually pull focus at desired speeds and control interest of viewer on specific subject during recording.

No peaking availability when in auto focus.

MANUAL FOCUS

PROS

Choosing where and when to focus.

Enabling focus pulling to direct interest within scene.

Availability to use Cine Lenses and internal Focus Peaking.

Extreme Close Ups and Low Light Conditions.

CONS

Unreliable when vlogging.

Extremely difficult to track moving subjects.

Very difficult to work with when filming from a gimbal or glide cam.

No tap focus which a huge benefit with newer mirrorless cameras.

ONE OF THE MOST FUNDAMENTAL STORYTELLING TOOLS IN VIDEO PRODUCTION IS...

MOVEMENT.

CAMERA MOVEMENTS

ZOOM

Zoom is without a doubt the one camera move that most people are most familiar with. It involves changing the focal length of the lens to make the subject appear closer or further away in the frame.

PAN

Panning is when you move your camera horizontally, left to right or right to left, while its base is fixated to a certain point. Look to your left, then look to your right··· that's panning.

TILT

Tilting is when you move the camera vertically, up to down or down to up, while its base is fixated to a certain point. Nod your head up and down··· that's tilting.

PEDESTAL

Pedestal is when you're moving the camera up or down without changing its vertical or horizontal axis. You are not tilting the lens up, rather you are moving the entire camera up. Imagine your holding the camera while kneeling, then you stand but without changing the angle or axis of the camera··· this is pedestal.

DOLLY

Dolly movement is when you move the entire camera forwards and or backwards, typically on some sort of track or with a motorized vehicle. Think of walking forward with a stable and static camera angle··· you are now a human dolly.

TRUCK

Trucking is exactly like dollying, but it involves movement from left or right, or right to left. Think of walking sideways with a stable and static camera angle, maintain the same distance from your subject··· you are now a human trucking movement.

AUDIO RECORDING

Audio is often THE MOST IMPORTANT thing.

Having good video footage is of course important, but without audio to tie it all together, the footage is silent.

There's no atmosphere created by those normalised sounds we're all so used to, like birds singing or the drum of city streets. Audio recording for video is extremely important.

DIFFERENT TYPES OF RECORDING AUDIO

BUILT IN MICROPHONE

Your camera 100% has a built in microphone. It's quality is likely shit. Most built-in microphones record a heavily compressed audio track and shouldn't be relied on for good audio.

SHOTGUN MICS

This is the most common form of microphone for video creators esspecially in the era of YouTube. Shotgun Mics record one channel of audio (mono) and are often plugged directly into your camera. The audio is automatically synced to the video as you record. They are often small, lightweight, and great quality for their relatively low cost.

LAVALIER or (LAV) MICS

A lavalier (Lav) microphone is a small microphone used to allow for hands-free operation. They are most commonly found with small clips for attaching to collars or other clothing of the subject. Lav Mics are extremely useful for filming interviews, indoors where there may be an echo effect, field reporting, documentary, standing a good distance from your camera, and finally shooting video from a tripod.

STEREO MICS

Stereo mics when associated with mirrorless and DSLR video recording are similar to shotgun mics, but they record two channels of audio instead of just one. Stereo recording with video creates more of a sense of place, or a listening environment, than a mono mic can. Outdoors for example a stereo mic is great because it can enhance the presence of the outdoor environment.

VIDEO EXTRAS

TIMELAPSE

Timelapse is an incredibly powerful video feature and really an art within itself. I am confident you have seen some absolutely brilliant timelapses, but have you tried to make one yourself?

360 VIDEO

This is done using an omnidirectional camera or a collection of cameras pointing in all directions. The most common ones on the market are the GoPro Fusion and Insta 360 One X.

DRONES

An Unmanned Aerial Vehicle (UAV), or a Remotely Piloted Aircraft (RPA), and also known as··· a drone. Recreational drones have completely changed video production and film making within the last 5 years.

HYPERLAPSE

A Hyperlapse is simply a moving timelapse. It is a technique for creating more dynamic timelapse sequences.

QUESTIONS?

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SNELL MEDIA SUMMER 2020