

SHOOTING AND PROCESSING VIDEO FOR WILDLIFE



Richard Seeley Photography

Agenda

- Shooting Wildlife Videos
 - ▣ Why video?
 - ▣ Resolution
 - ▣ Frame Rate, bit rate
 - ▣ Exposure – shutter speed, aperture, iso, histogram, shutter release button
 - ▣ Manual v. Autofocus
 - ▣ Stability
 - Tripod, Leveler, fluid head
 - Image stabilization
 - Zoom, camera movement
 - ▣ Sound – microphone

Agenda

- Shooting Wildlife Videos - Continued

- ▣ Shooting Scenarios

- Subject Center Stage
 - Subject Behavior in focal plane
 - Subject Moving To/From camera
 - Subject Erratic Movement, 3D motion
 - Handheld v. Tripod

- Processing Video

- ▣ Post Processing Software

Why Video?

- ❑ Hybrid Shooter
 - ▣ One camera body for both stills and video
 - ▣ Be able to switch easily between the two
 - ▣ Sony A1, A9, A7R4 (Mirrorless)
- ❑ Some moments cannot be captured in just one frame
- ❑ Motion, behavior, change over time best seen in video

Video Resolution

- HD, 4K, 8K
- High Definition, HD –
 - ▣ 1920x1080 pixels, aka Full HD
 - ▣ 1 frame is about 2MP
- 4k – UHD, DCI
 - ▣ UHD – Ultra High Definition, 3840x2160, 16:9 aspect ratio
 - ▣ DCI – Digital Cinema Initiative, 4096x2160, movie industry standard
 - ▣ 1 frame is about 8.3 MP
 - ▣ Found in a wide range of DSLR and Mirrorless cameras
 - ▣ I shoot at 4K resolution mostly
 - Can always downsize to lower resolution, if necessary.

Video Resolution

- ❑ 8K – 7680x4320 pixels (4 times the pixels of 4K)
 - ▣ 1 frame is about 33 Megapixels
 - ▣ New Mirrorless cameras feature 8K video
 - Canon R5, Sony A1, Nikon Z9 rumored to have 8K video
 - ▣ My Samsung S20 Ultra 5G cell phone shoots 8K video
 - ▣ Some monitors and TV's becoming available – expensive, but prices coming down. Sony 75" HDR 8K LED - \$4000
 - ▣ 8K videos can be found on YouTube
 - ▣ 8K video processing severely slows the performance of my computer system – I am ordering more memory!

Video Frame Rate

- ❑ Frames per second (fps), higher frame rate, higher quality
- ❑ 24fps – for a “cinematic” look – more motion blur, the standard film look, most realistic, standard for film industry
- ❑ 30fps – better for TV for a crisper. Cleaner image
- ❑ 60fps – smoother video, more detail, good for busy motion, more data for better editing, 4K@60fps is a Holy Grail, some experts say “most realistic”
 - ▣ Canon R5 and Sony A1 have 4K/60
- ❑ 120fps – slow motion, 4x slower than 30fps
- ❑ 240fps – super slow motion
- ❑ I shoot at 4K/60fps and 4K/120fps on my Sony A1

Video Bit Rate

- ❑ Amount of video data per unit of time
- ❑ Megabits per second (Mbps)
- ❑ Higher bit rate, sharper the video (larger file size)
- ❑ I select highest bitrate available
- ❑ In general, select highest resolution, highest bit rate, and 30fps or 60fps in your camera

Video Formats/Codecs

□ Video Codec

▣ Coder-Decoder – a program that encodes and decodes a video data stream. Also compresses and decompresses the data to save space.

- H.264, H.265/HEVC, MPEG-4, DivX, XAVCS (Sony)
- H.264 is a standard and widely used Codec
- H.265 is becoming available – double the efficiency of H.264

Video Formats/Codecs

▣ Video Container

- A bundle of the elements that make up a video file
 - Codec, video data, audio data, text
- .MP4, .MOV, .AVI, .WMV, .FLV file extensions
- .MP4 universal standard
- Also known as video file format

Custom Selection

- ❑ Set a Custom selection with your video parameters
 - ❑ (button, Mode Dial, etc.)
- ❑ My Mode Dial – Sony A7R4
 - ❑ 1 – Birds in Flight Settings
 - ❑ 2 – Scenics
 - ❑ 3 – Video
 - ❑ Film Ikon – Video variants
 - ❑ S&Q (Slow and Quick) – Video Slow-Motion
- ❑ Quickly “dial in” to switch to video without looking at the dial
- ❑ Danger of the Video Button
 - ❑ Uses current settings, which can be wrong



Exposure Setup

- Manual Mode – gives me the most flexibility
- Shutter Speed
 - ▣ Rule of thumb – set shutter speed to $1/2x$ of frame rate
 - $24\text{fps} = 1/48$ ($1/50$); $30\text{fps} = 1/60$ sec; $60\text{fps} = 1/120$ sec; $120\text{fps} = 1/250$ sec
 - Gives most realistic everyday feel of motion.
 - ▣ Shutter is open for $1/2$ of frame duration. Comes from historic movie film cameras.
 - But, have latitude on shutter speed.
 - ▣ Can override “rule” for better exposure
 - ▣ But too much higher, then get very “choppy” video playback
 - ▣ Too much lower, then looks blurry
 - ▣ Have gone as high as $1/200$ sec at 30fps (rule would be $1/60$) with no visual difference to me.

Exposure - continued

□ ISO

- ▣ I use AutoISO as default setting
- ▣ Many videographers say “fix” the ISO, so exposure does not uncontrollably change on you.
- ▣ AutoISO adjusts the ISO to maintain a fixed exposure
- ▣ Start with AutoISO and can always adjust ISO later.
- ▣ Harder to see noise on videos as compared to stills, so have more latitude on ISO and video can tolerate more noise

Exposure - Continued

- Balanced Exposure
 - ▣ Live View, inspect LCD and Viewfinder (if Mirrorless)
 - ▣ Use Histogram in real time
 - ▣ Adjust shutter speed (some latitude), aperture and ISO to get a balanced exposure
 - ▣ Some cameras offer Highlight Metering – prevents overexposure of white areas (i.e. bald eagle head, white pelicans, gulls) - Sony A1, Sony A9, Sony A7R4, Canon R5(?)

Focus

- ❑ Manual v. Autofocus
- ❑ Many experts say use manual focus
 - ▣ Reduce risk that autofocus loses focus
 - ▣ Really depends on quality of autofocus system
 - ▣ Very difficult to follow an animal in motion using manual focus – known as “follow focus”
- ❑ I use autofocus to follow animal movement
 - ▣ 3D movement
 - ▣ Shoot through the Viewfinder (Mirrorless)
 - ▣ Tap and Track on the LCD screen

Holding Focus – Autofocus

- ❑ 4K 60fps for fast motion
- ❑ Sony A1, 200-600 lens +1.4xTC
- ❑ Autofocus
Tracking, motion left/right, to/fro from camera, high speed, acceleration
- ❑ Panning
- ❑ Window Mount
- ❑ Not yet stabilized in Premier Pro
- ❑ Pronghorns up to 60mph, fastest land animal in North America



Stability

- ❑ Tripod
- ❑ Leveler
 - ▣ Fast tripod leveling
 - ▣ Level panning
- ❑ Fluid Head
 - ▣ Smooth movement
 - ▣ Smooth start and stop
 - ▣ Smooth pan and tilt
- ❑ Window Mount

Leveler

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Home > Photography > Tripods & Support > Tripod Head Accessories > Camera & Tripod Levelers > Really Right Stuff TA-3-LB-HK

Really Right Stuff TA-3 Leveling Base with Platform and Hook

BH #RETA3LBHK • MFR #TA-3-LB-HK ★★★★★ 14 reviews 4 Questions, 8 Answers



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- For RRS Versa S.3 Tripods
- Hook for Stabilizing Weight
- Load Capacity: 25 lb
- 30 Degrees Total Leveling

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The TA-3 Leveling Base with Platform and Hook from Really Right Stuff is a useful foundation for all types of tripod heads and is suitable as a panorama base. Compatible with the Really Right Stuff Versa Series 3 tripods, this version has a platform and a hook to attach weighty objects to stabilize the tripod. Constructed of CNC machined 6061 aircraft-



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Fluid Head Benro S7





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Highlights ▾

- 15.4 lb Load Capacity
- Flat Base with 3/8"-16 Thread
- 4-Step Counterbalance
- Continuous Pan Drag

Manfrotto also has a full line of affordable fluid heads

My Setup

- ❑ Sony A7R4
- ❑ Sony 100-400 f/4.5-5.6 lens
- ❑ Benro S7 Fluid Head
- ❑ ReallyRightStuff Leveler
- ❑ Gitzo Tripod



Window Mount

- ❑ Sony A1 - Rich
- ❑ Sony 200-600 lens
- ❑ Benro S7 Fluid Head
- ❑ Kirk Enterprises Window Mount WM-2
- ❑ Canon R5 - Charlie
- ❑ Canon 800 f/4 lens
- ❑ Manfrotto Fluid Head
- ❑ Window Mount



Kirk WM-2 Multi-Purpose Window Mount for Tripod Head (I



Beware Camera Shake

- ❑ Every time touch camera/lens, it will shake the video
- ❑ Zoom, changing menus, pressing buttons
 - ▣ Consider turning off video, make changes, then restart
- ❑ Use Shutter Release button to start/stop video, if an option
- ❑ Image Stabilization (IS)
 - ▣ Generally recommended that IS be turned off when using a tripod
 - However, check the instructions for your lens for accurate info
 - Some newer lenses smart enough to detect when mounted on tripod and will automatically turn off stabilization. Nice, since easy to forget
 - ▣ Image Stabilization ON for handheld video.

Sound

- ❑ Leave “Sound” turned on. Can always delete/edit in postprocessing
- ❑ Use a microphone for better sound quality




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Key Features

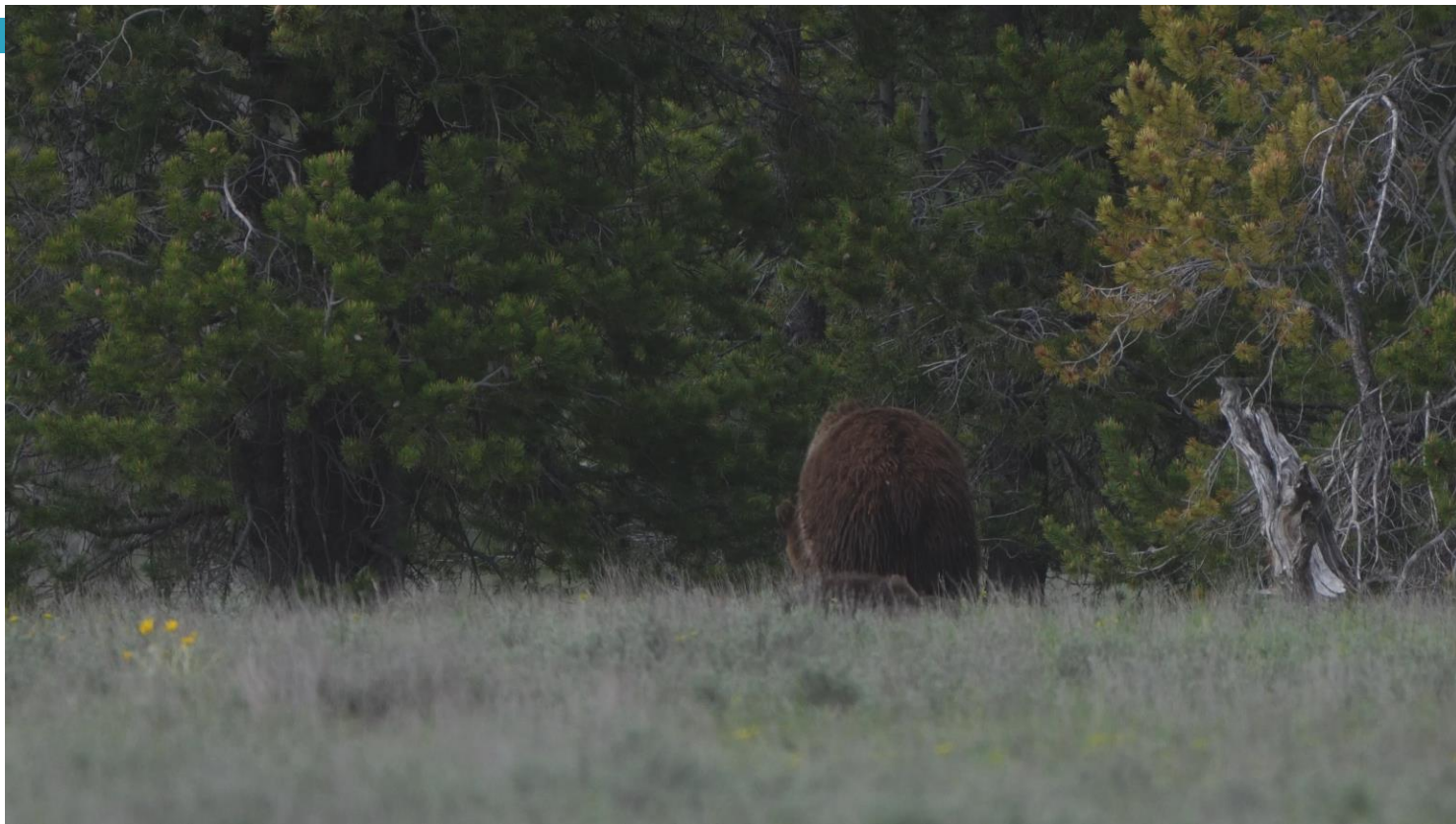
- Mobile Journalist, Vlogger, Run & Gun
- 100-Hr Removable Battery, AAAs, or USB
- For Cameras and Portable Recorders
- Gain, Bass Roll-Off & Treble Boost

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Equipped with expanded power options, extended tonal control, and a redesigned windscreen in a smaller footprint than the VideoMic Pro, the Rode VideoMic Pro+ is

Shooting Scenarios – Subject Center Stage

- ❑ Tripod
- ❑ No camera movement (no pan, no zoom, no tilt)
- ❑ Sony A7R4
- ❑ Sony 200-600 lens + 2X TC +1.5x Crop+2X Clear Image Zoom (3600mm)
- ❑ 4K@30fps
- ❑ Grand Teton National Park
- ❑ Grizzly 399 with 4 cubs



Feigned Retreat – Bighorn Rams

- ❑ Tripod
- ❑ No Camera Movement
- ❑ HD@30fps
- ❑ Canon 5DM2
- ❑ Canon 500 mm f/4 lens
- ❑ Georgetown, CO
- ❑ Surprise



Full House – Piping Plovers

- Tripod
- No Camera Movement
- HD@30fps
- Canon 5DM3
- Canon 500 mm f/4 lens
- Ipswich, MA
- Surprise



Shooting Scenarios - Panning

- ❑ Tripod
- ❑ Panning
- ❑ HD@30fps
- ❑ Canon 5DM4
- ❑ Bugling captured with Rode microphone
- ❑ Rocky Mountain Nat park



Shooting Scenario – Handheld Slow Motion

- ❑ HD@120 fps
- ❑ Image Stabilization “ON”
- ❑ Autofocus
- ❑ Stance
 - ▣ Hold camera in close and tight
 - ▣ Feet apart and stable, turn smoothly at waist
 - ▣ Shoot thru viewfinder (Mirrorless)
- ❑ Shaky motion is less visible, more forgiving
- ❑ Image Stabilization in Post Processing
- ❑ My favorite for shooting video

Fight for the Fish - Panning

- ❑ Handheld
- ❑ Slow Motion, 120fps
- ❑ HD, 1920x1080
- ❑ Sony A9 (one week old)
- ❑ Sony 100-400 f/4.5-5.6 lens
- ❑ Haines, Alaska
- ❑ Autofocus



Hummingbird on Salvia – 3D Motion

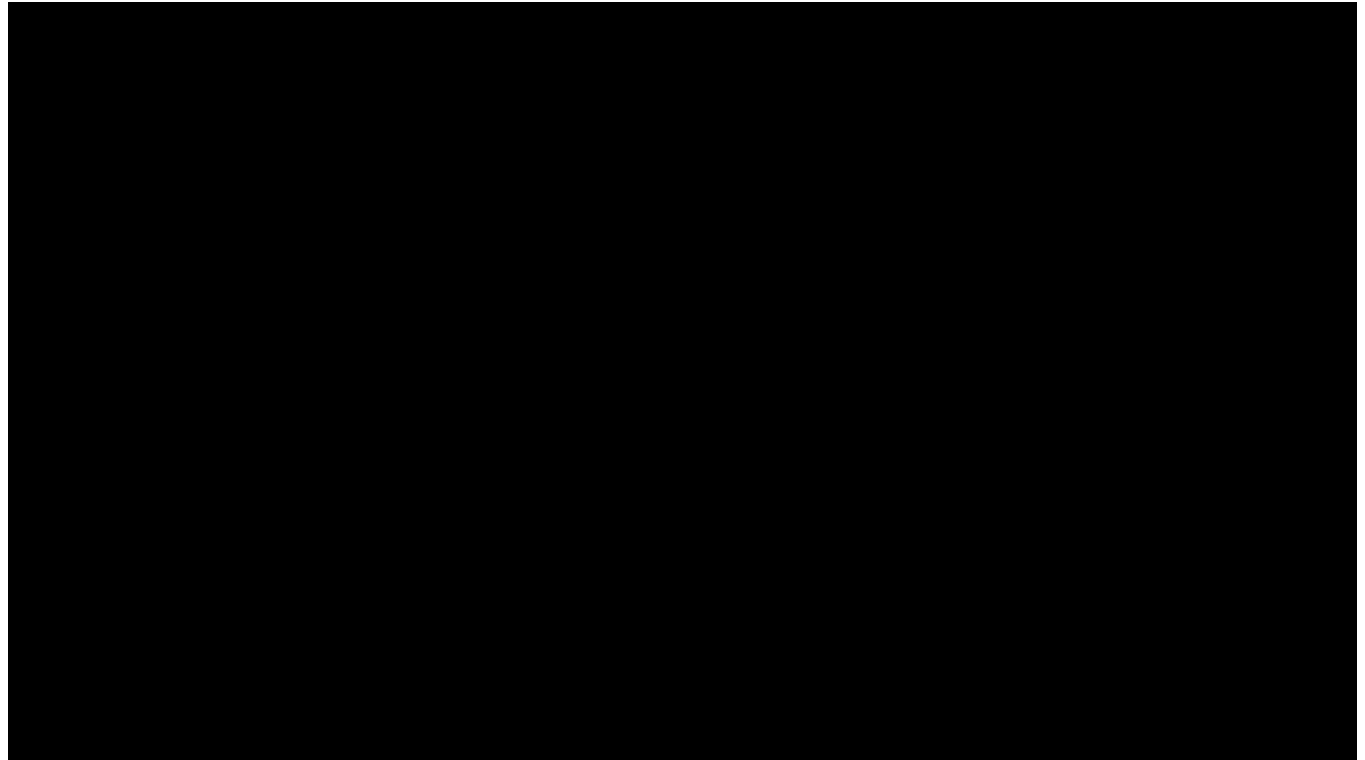
- Handheld
- Slow Motion, 120fps
- HD 1920x1080
- Sony A9
- Sony 100-400 f/4.5-5.6 lens
- Silverthorne
- Autofocus

R.W. Seeley
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Story – Hatchling to Fledgling

- 4k @30fps
- 3840x2160
- Shooting every few days over three weeks
- Dillon, CO
- Edit in Adobe Premiere Pro
- Sony A7R3, Sony 100-400 lens
- Shutter speed 1/160 sec
- Adding music can enhance the video



Processing Your Video

□ Processing Video

▣ Post Processing Software

- Basic Functions needed
 - Trimming, Cut Outs, Ripple Delete, Joining, Stabilization, Transitions, Speed and Duration,
 - Exposure Modification, Export, Cropping, Frame Capture
- Adobe Premiere Pro - \$19.99 per month
- DaVinci Resolve – free for basic functions
 - DaVinci Resolve Studio - \$299 - \$999 depending on version
 - Image Stabilizer produced better results than Premiere for one test.
- CyberLink Power Director - \$139
- <https://kdenlive.org/en/> - Free
- <https://ffmpeg.org/> - Free

Processing Your Video - Continued

- ▣ Other Software

- LRTimelapse – smooths the exposure for sunrise/sunset in TimeLapse photography
- ExifTool – best for metadata info for images and videos - Free

For More Info

- ❑ Presentation can viewed/downloaded on my Blog and website – Google “richard seeley photography”
- ❑ Arts Alive Gallery, First and Main, Frisco
- ❑ Majestic Art Gallery, Main Street, Idaho Springs



Thank You