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Videomaker

YOUR GUIDE TO CREATING AND PUBLISHING GREAT VIDEO NOVEMBER-DECEMBER 2021

SONY ZV-E10

A fully-featured video camera that's cheaper than a smartphone

- Super 35 sensor
- Interchangeable lens mount
- Blemish filters
- LOG profiles
- Designed for creators

review: page 6

Also reviewed:
DJI Air 2S
page 12

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On Sale: October 19, 2021

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VIEWFINDER

by Matthew York

Peace through video

Is it possible that an individual with a camera can help to bring about peace? It is possible, but we must keep in mind the power of the visual image. It has the power to bring about what Einstein said was the key to peace: understanding. As we see our world today so deeply divided, maybe there is no better time than now to start thinking about how this power might be harnessed.

There are many examples of films, especially documentaries, that have brought about change. Think of the 2013 film "Blackfish," which exposed some of the cruelty behind the scenes of those famous orca shows. It caused a dramatic change in how places like Sea World do business. Even feature films like "The Day After Tomorrow" have brought awareness to important causes like climate change. It all comes down to understanding.

The camera can be used to open a window. It can link people who look at one another as being very different. Tolstoy said, "Art is a microscope which the artist fixes on the secrets of his soul, and shows to people these secrets which are common to all." In other words, visual art, in particular, can show us how we are all really the same inside.

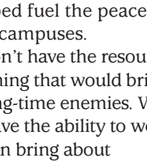
One of the most commonly used tactics in propaganda is to dehumanize or demonize the supposed enemy. The goal is to make the opponent seem so not like us that we feel disgust or even hatred toward them. A video made with a goal of peacemaking can show that the enemy is not so different after all. They have the same feelings, hopes and dreams that we do. If we can see their faces and their feelings, it's hard to really hate them.

Another big step toward peace is listening. Real listening seems to be a precious commodity in our world of competing voices. Again, video is a great tool for helping your audience

hear what other people are saying. We're not talking about just a sound bite phrase. A long-form interview where the audience can see the facial expressions, connected to the words and emotions, will provoke deeper understanding.

Of course, we cannot forget how seeing the real cost of war can help lead to peace. Many video journalists and documentary filmmakers have taken on the subject of the horrors of war in an effort to bring about peace. It's not just in the graphic depiction of the dead and wounded either. Images of the bombed-out homes and cries of the children make it hard to condone a conflict. There is little doubt that the images of the war in Viet Nam on the nightly news helped fuel the peace rallies on college campuses.

Maybe we all don't have the resources to produce something that would bring peace between long-time enemies. We do, however, all have the ability to work on projects that can bring about understanding. It just takes an idea, a listening ear and good images.



Matthew York is ***Videomaker***'s Publisher/Editor.

You can comment on this article by going online:
www.videomaker.com/?p=72082867

Videomaker

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November - December 2021

What's on *Videomaker.com*

Advice Wanted

Question:

Jason: I'm looking to conduct interviews with local pilots, aircraft mechanics, restorers, etc. for a series of profiles and promos. My question is, how do I best utilize the equipment I have while keeping it simple so I can shoot and conduct the interview?

Reply:

Woody: First and foremost is a script. A script will let you know when you will cut away to a visual and can get away with a camera movement. Set a target next to the camera for them to talk to instead of the camera to set a good eyeline. They can be responding to it, maintaining eyeline while you switch to camera B for a tighter shot or a camera movement to add some interest. Also, remember it doesn't have to be continuous shooting; you can start and stop anywhere. You can ask questions over different angles.

You'll wind up with something that looks like a multi-person gig in the end. Just make sure you film yourself asking the question in the same environment for a sound match. It might take a try or two to get your talent used to speaking to a target, but they usually take to it relatively fast.

See more at: *videomaker.com/forum/topic/one-man-show-any-advicerecommendations*

DJI Air 2S drone review

In our DJI Air 2S drone review, we compare it to the Mavic 2 Pro and the Mavic Air 2. We look at its image quality, performance and tell you what we liked and didn't like. By the end of this video, you will know if you should buy this drone. *www.videomaker.com/reviews/drones/dji-air-2s-drone-review-this-thing-is-rad/*

Sony ZV-E10 review

We put the new Sony ZV-E10 to the test and tell you if you should buy one. We go over all of the good and bad things about the Sony ZV-E10 covering, the soft skin effect, product showcase, a fully articulating screen, no video record limit time and more. *https://www.videomaker.com/reviews/cameras/the-sony-zv-e10-review-for-video-shooters/*

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The key features of the new FUJIFILM X-T30 II camera

Fujifilm just announced the sequel to its popular digital camera, the FUJIFILM X-T30, dubbed with the fitting title: the FUJIFILM X-T30 II.

FUJIFILM X-T30 II OVERVIEW

The FUJIFILM X-T30 II shares similar hardware with its predecessor. It houses a 26.1MP "X-Trans CMOS 4" sensor and an "X-Processor 4" image-processing engine. Together, they enable autofocus up to 0.02 seconds, going toe-to-toe with the X-T4's autofocus speeds. Additionally, phase detection pixels are placed across the entire sensor, resulting in practically 100 percent coverage across the sensor. This opens up more flexibility when using autofocus. The camera shoots using data equivalent to 6K to generate 4K video to provide higher quality and less noise than standardly shot 4K video. However, Fujifilm has increased the camera's frame rate cap to 240 frames per second for slow-mo video shooting.

Image courtesy: Fujifilm

IMPROVED AUTOFOCUS SYSTEM

Fujifilm says it has improved the X-T30 II's autofocus system. This includes improved performance when tracking moving subjects. Also, the camera can use autofocus in dark conditions at -7.0EV. It also retains Face / Eye autofocus functions to keep the subject's face/eye in focus, even in portrait photography. However, we wish the new camera in-body image stabilization support.

A NEW LCD SCREEN

The X-T30 II features a 1.62-million-dot LCD monitor on the rear panel, increasing on the previous model's overall dot count. For more information, visit *fujifilm.com/jp/en/news/hq/6846*.

Tamron just released two new lenses for Sony E-mount

Tamron has just revealed two new lenses for the Sony E-mount. Those lenses are the 28-75mm f/2.8 Di III VXD G2 and the 35-150mm f/2-2.8 Di III VXD.

Let's take a look at each lens and break down what we know so far:

TAMRON 28-75MM F/2.8 DI III VXD G2

Tamron's made a few tweaks to the original 28-75mm f/2.8 DI III RXD's design with hopes of making it more comfortable for users to operate and improving its performance. Its autofocus system runs at faster speeds and higher accuracy. Spec-wise, the Tamron 28-75mm f/2.8 Di III VXD G2 has a minimum focusing distance of 7.1-inches at the wide and a maximum magnification ratio of 1:2.7.

TAMRON 35-150MM F/2-2.8 DI III VXD

The 35-150mm f/2-2.8 Di III VXD is a major release for Tamron and Sony E-mount. According to Tamron, the 35-150mm f/2-2.8 Di III VXD is the first-ever mirrorless zoom with a maximum wide-open aperture of f/2 for Sony E-mount. Just like the 28-75mm f/2.8 Di III VXD G2, the lens features the VXD autofocus motor. So, we can expect it to have a higher functioning autofocus system.

Image courtesy: Tamron

PRICING AND AVAILABILITY

There's no specific release date pinned down for the Tamron 35-150mm f/2-2.8 Di III VXD or 35-150mm f/2-2.8 Di III VXD. We can expect the lenses to release sometime this year. We'll also have to wait for Tamron to reveal the lenses' prices at a later date. For more information, visit *tamron-usa.com*.

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Sony ZV-E10

by Nicole LaJeunesse

A vlogging camera built for content creators

Sony
www.sony.com

STRENGTHS
- Impressive low light performance
- Good dynamic range
- Fully articulating screen
- Integrated three-capsule microphone + headphone jack

WEAKNESSES
- Lackluster image stabilization
- Tinny wind reduction filter
- No touchscreen menu navigation

SUMMARY
The Sony ZV-E10 is a compact interchangeable-lens camera geared toward online content creators. If you currently shoot on a phone, camcorder or point-and-shoot, this camera offers a solid upgrade.

RECOMMENDED USERS
- Narrative filmmaking

$698

If you're thinking about getting a dedicated video camera to improve the quality of your video content, the Sony ZV-E10 might just be the answer. However, it does have a few quirks to keep in mind. Let's take a closer look at this creator-focused camera.

Where the Sony ZV-E10 fits in

With the ZV-E10, Sony delivers a solid interchangeable-lens camera for content creators. This definitely is a video-first camera. However, it's very similar to the Sony A6100. In fact, the A6100 and the ZV-E10 share the same image sensor and a lot of the same features. However, they differ in their intentions. The ZV-E10 has a clear focus on making vlogging easier for the everyday creator.

You can see this focus in the design of the camera. The ZV-E10 doesn't have an electronic viewfinder (EVF). Instead, it has a fully articulating screen that you can use to monitor yourself from in front of the camera. Like other contemporary Sony cameras, the E10 can capture Log video in S-Log2 and S-Log3. To further support content creators, the E10 has the same three-capsule mic from the Sony ZV-E1. This design allows you to be in front of or behind the camera; the mic will pick up your voice just as well either way. Plus, the ZV-E10 has two new features, Product Showcase and Soft Skin mode. All of this points to a camera designed for online video production.

Image quality on the Sony ZV-E10

The image quality from this camera is as good as you can expect for its price.

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Introducing the world's most advanced digital film camera!
URSA Mini Pro 12K is a revolution in digital film with a 12,288 x 6480 Super 35 sensor built into the award winning URSA Mini body. The combination of 80 megapixels, new color science and the flexibility of Blackmagic RAW makes working with 12K a reality. URSA Mini Pro 12K features an interchangeable PL mount, built in ND filters, dual CFast and UHS-II SD card recorders, USB-C expansion port and more.
Digital Film in Extreme Resolution
URSA Mini Pro 12K gives you the benefits of shooting with film including amazing detail, wide dynamic range and rich, full RGB color. Incredible definition around objects makes it ideal for working with green screen and VFX including compositing live action and CGI. Super sampling at 12K means you get better color and resolution at 8K as well as smooth antialiased edges.
Cinematic 12K Super 35 Sensor
The URSA Mini Pro 12K sensor has a resolution of 12,288 x 6480, 14 stops of dynamic range and a native ISO of 800. Featuring equal amounts of red, green and blue pixels, the sensor is optimized for images at multiple resolutions. You can shoot 12K at 60 fps or use in-sensor scaling to allow 8K or 4K RAW at up to 120 fps without cropping or changing your field of view.
Record to Blackmagic RAW
Blackmagic RAW makes cinema quality 12-bit, 80 megapixel images at up to 60 frames a reality! Constant quality encoding options adapt compression to match the detail of the scene. Constant bitrate gives you the best possible images at a consistent file size. You can record to two cards simultaneously so you can shoot high frame rate 12K or 8K on CFast or UHS-II cards.
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Shooting RAW in 12K preserves the deepest control of detail, exposure and color during post. Best of all, Blackmagic RAW is designed to accelerate 12K for post production, so it's as easy to work with as standard HD or Ultra HD files. Blackmagic RAW stores metadata, lens data, white balance, digital slate information and custom LUTs to ensure consistency of image on set and in post.
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*Camera shown with optional accessories and lens.
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TECH SPECS

Lens Mount: Sony E
Sensor Type: 23.5 x 15.6 mm (APS-C) CMOS
Sensor Resolution:
• Actual: 25 Megapixel
• Effective: 24.2 Megapixel (6000 x 4000)
Crop Factor: 1.5x
Aspect Ratio: 1:1, 3:2, 4:3, 16:9
Image Stabilization: Digital (Video Only)
ISO Sensitivity: Auto, 100 to 32000 (Extended: 50 to 51200)
Shutter Speed:
• Mechanical Shutter
1/4000 to 30 Second
• Bulb Mode
1/4000 to 1/4 Second in Movie Mode
External Recording Modes:
• 4:2:2 8-Bit
• UHD 4K (3840 x 2160) up to 29.97p
Recording Limit: Unlimited for UHD 4K (3840 x 2160) at 29.97p
Audio Recording: Built-In Microphone (Stereo)
External Microphone Input: (Stereo)
Live Streaming: Yes
Webcam Functionality: Yes
Focus Mode: Automatic (A), Continuous-Servo AF (C), Direct Manual Focus (DMF), Manual Focus (M), Single-Servo AF (S)
Autofocus Points:
• Phase Detection: 425
• Contrast Detection: 425
Autofocus Sensitivity: -3 to +20 EV
Size: 3.0"
Resolution: 921,600 Dot
Display Type: Articulating Touchscreen LCD
Media/Memory Card Slot:
Single Slot: SD/SDHC/SDXC/Memory Stick Duo Hybrid (UHS-I)
Connectivity: 3.5mm Microphone, 3.5mm Headphone, USB Type-C (USB 3.1), HDMI D (Micro)
Wireless:
• Wi-Fi
• Bluetooth
Battery: 1 x NP-FW50 Rechargeable Lithium-Ion, 7.2 VDC, 1080 mAh (Approx. 440 Shots)
Dimensions: (W x H x D) 4.5 x 2.5 x 1.8" / 115.2 x 64.2 x 44.8 mm
Weight: 12.1 oz / 343 g (Body with Battery and Memory)

It's similar to the image you get out of the Sony A6100. The main difference is that this camera is clearly designed for video, so you get more of the creature comforts video shooters have come to expect.

The ZV-E10 shoots at a bit rate of up to 100 megabits per second (Mbps). That's great. It could be better, but at this price point, you're not likely to find many other cameras offering anything more than that. As far as bit-depth goes, the camera shoots in 8-bit, but that is what we'd expect at this level.

Dynamic range

To test the ZV-E10's dynamic range, we used our DSC Labs Zyla 21 chart, which uses a backlight and incrementally darker shaded bars to produce a range of light intensity. In our tests, we saw 12 stops of dynamic range, maybe 13, but there's not a lot of information in the extremes of that range.

Now 12-stops of dynamic range is nothing to scoff at. In fact, 12 stops of dynamic range is pretty great for a camera this affordable. To get this much dynamic range, we shot in Slog3 cine gamut 3. Although that'll get you the most dynamic range, your skin tones may suffer.

Low light

When it comes to shooting in low light, the ZV-E10 does best under ISO 12800. That's actually a huge, huge range. We shot a spooky lego figure under some dramatic lighting in the studio to analyze how much noise appeared in the shadows and how distracting it was from our subject.

> THE IMAGE QUALITY FROM THIS CAMERA IS AS GOOD AS YOU CAN EXPECT FOR ITS PRICE.

The noise starts at 800, but the image is greatly usable all the way up past ISO 6400 to 12800. We shot with the ZV-E10 at ISO 12800 without much issue, but we wouldn't go beyond that and expect professional results.

Things we liked about the ZV-E10

Let's start with what we liked most — the new Product Showcase and Skin Filter options. Skin Filter is very similar to the blemish removal tools that you encounter on Instagram or Snapchat. Having this option in the camera is definitely going to be helpful for those who already make these adjustments in post-production; you can just do it as you shoot.

Next up in the pros column is the camera's Product Showcase option. This feature helps the camera recognize when you are holding something up to the camera for a close-up. The idea is that you won't have to hold your hand up behind your tube of lip gloss for the gloss to be in focus. We were definitely able to fool it, so it didn't work all the time. Still, it's definitely a nice feature to have.

> ... THE IMAGE IS GREATLY USABLE ALL THE WAY UP PAST ISO 6400 TO 12800.

Built for vloggers

We all know how important audio quality is to viewer retention — and how hard it can be to capture good audio on the fly. Sony aims to solve this problem with the ZV-E10's three-capsule mic and headphone jack. Having these two features together is really great at this price point. It's necessary to be able to monitor your audio as you record it. That way, you aren't going to be fooled by seeing your meters move, only to find out later all you can hear is the wind blowing.

Fully articulating screen

We also liked its fully articulating screen. This is great, definitely necessary for shooting vlogs. And lastly, it's not new for Sony cameras, but it's important for video in general: this camera has no record limit. That means you won't be limited to shooting in 30-minute increments.

The ZV-E10 has a great tether, so you're able to send files to another device if you need to. In fact, you can even send files when the camera is off, and it can also function as a USB webcam. You just connect it via the camera's USB-C port. You can also charge the camera through this port, allowing you to extend the camera's battery life through long shoots.

Expect an hour to an hour and a half battery life on a single charge

Things we didn't like

Now for the things we didn't like about the Sony ZV-E10. Number one on that list is its image stabilization. It's just not that great, though it does work better when you have Active SteadyShot on. Its downfall, however, is the fact that it adds a significant crop. That's in addition to the crop that you're getting from the smaller sensor. Image stabilization of some kind is necessary for vlogging, but this crop could cause an issue. Therefore, it would be better to rely on lens-based stabilization or even a gimbal mount.

Vlogging pain-points

The next thing that we don't like is that there's still no touch function in the menu, even though it's a touchscreen. This is frustrating, especially if you're shooting a vlog. If you're in front of the camera, you'll have to flip the camera around and change

your shot just to change a menu function.

Lastly, the ZV-E10's wind noise reduction makes voices sound like they're coming from a tin can. The audio definitely doesn't sound as good as when it's off.

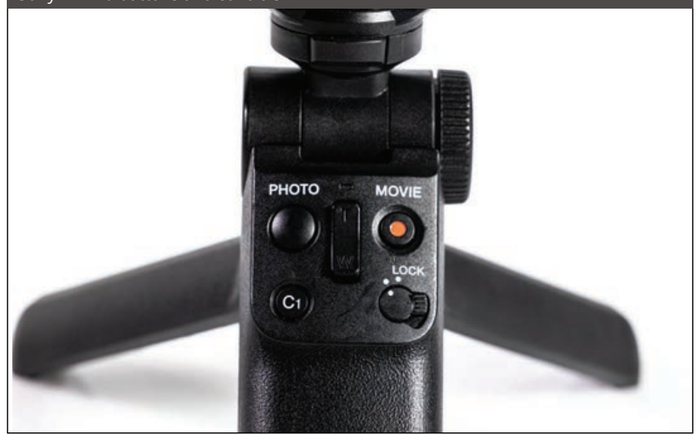
Battery life and heat management

As for its battery life, you can expect an hour to an hour and 20 minutes — maybe — per battery charge. However, we did see some overheating — nothing new for Sony's lineup. Now, you can turn off Auto Power OFF Temperature. By default, the setting is set to standard, and you also could put it up to high. However, we don't know for certain what long-term damage this practice may cause. We don't imagine it's good for the camera to always do that. Instead, we'd recommend you turn it on when you need to have those long shoot times. Then turn it off again when you no longer need it.

So should you buy the Sony ZV-E10?

If you are considering this camera, make sure you budget for it. This is an interchangeable-lens camera, so you need to make sure you have the budget for lenses. Also, budget in batteries and media cards.

Sony ZV-E10 buttons and controls



Getting down to the actual camera, though, if you're making your content on a phone, this is a huge upgrade. You're going to get more control over your depth of field and field of view. The image quality is going to be better thanks to the larger sensor. The ZV-E10 gives you all of those controls that you need to be deliberate.

Final thoughts

The Sony ZV-E10 is definitely built for content creators, so it's got a wealth of workflow benefits there. However, if you're not coming from a smartphone or a fixed-lens camera, this might not be an upgrade for you. Make sure that the features it offers are beneficial to what you're trying to do. For those looking to vlog with an interchangeable-lens camera for the first time, the ZV-E10 is a solid choice.

> ... IF YOU'RE MAKING YOUR CONTENT ON A PHONE, THIS IS A HUGE UPGRADE.

The Sony ZV0E10 houses a 23.5 x 15.6 mm (APS-C) CMOS sensor

Nicole is a professional writer and a curious person who loves to unpack stories on anything from music, to movies, to gaming, and beyond.

You can comment on this article by going online: www.videomaker.com/?p=72082783

BASIC
VIDEO EDITING

Let's start with the basics. This is the perfect course for new video editors for experience video editors lookin to brush up on the fundamentals. This course covers why you should edit, how to organize your workflow and what to avoid. It also goes in-depth on the tools and techniques ever editor needs to know.

To watch the full course, head over to:
VIDEOMAKER.COM/EDIT

DJI Air 2S

by Pete Tomkies

DJI's powerful, all-in-on drone

DJI
www.dji.com

STRENGTHS
- 1-inch sensor
- Obstacle avoidance
- Tracking
- 5.4K video

WEAKNESSES
- Low internal storage
- Not compatible with the DJI FPV Goggles V2 yet

SUMMARY
With only a few tiny setbacks, the DJI Air 2S is a fantastic drone for shooting professional-quality aerial video.

RECOMMENDED USERS
- Narrative Filmmaking
- Corporate and Event Videography
- Marketing Video Production
- Online Video Production

$999

Drone shots are a fantastic way to add energy and production value to your videos. As the market leader, DJI has released a lot of drones in the last few years. Assessing their differences and working out which one is best for you can be difficult. In this review of the DJI Air 2S, we will help you make the right choice. In addition to discussing its pros and cons, we will compare the Air 2S with the Air 2 and the Mavic 2 Pro.

All the details

The Air 2S has a one-inch sensor camera. It can shoot up to 30 fps in 5.4K, 60 fps in 4K and 120 fps in HD. Its maximum video bitrate is 150 Mbps in H.264 and H.265 codecs. Additionally, it can record in 10-bit D-Log for HDR video with a higher dynamic range.

There's also a range of automated settings to enable you to capture complex cinematic shots easily. Its battery life promises a flight time of half an hour. For comparison, the Air 2 and Mavic 2 Pro have a slightly better battery life, but only by a matter of minutes.

The Air 2S has a robust set of safety features. We were impressed by the obstacle detection and avoidance systems in our tests. The drone also has an AirSense transponder to warn its user of other aircrafts in the area and prevent collisions.

The DJI Air 2S' camera comes equipped with a 1-inch sensor

While the Air 2S is technically a little heavier than the Air 2, it's not by much. Its form factor is nearly identical to the Air 2. The extra weight comes from the upgraded camera and additional crash avoidance sensors. Though, the extra weight isn't a problem; the Mavic 2 Pro is larger and weighs around 50% more than the Air 2S.

Improved camera

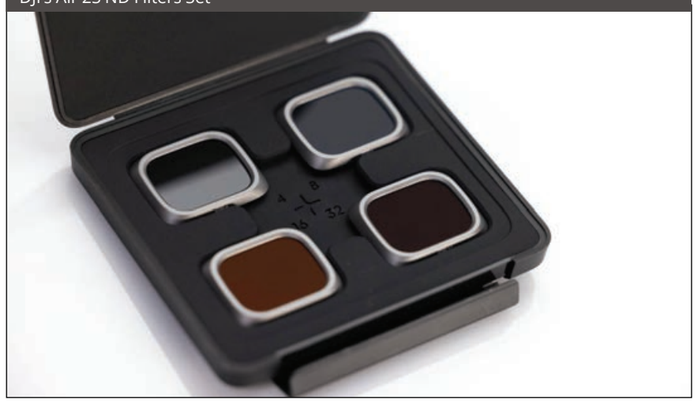
One of the main differences between the Air 2S and the Air 2 is their camera sensor sizes. Moving from a half-inch to a one-inch sensor means the Air 2S now has the same size sensor as the Mavic 2 Pro. The Mavic has a Hasselblad camera, but the Air 2S camera is not labeled with a brand. However, the camera's form factor is very similar, and we were really impressed by the Air 2S' image quality.

The Air 2S can shoot 5.4K resolution video, which is great. Shooting at higher resolutions allows you to have an oversampled image and downscale to 4K in post-production. This results in a much sharper image than you would get shooting at 4K resolution. The extra pixels also give you more flexibility when in post-production, allowing you to crop in or stabilize the shot.

> ... THE DRONE FOLLOWED OUR SUBJECT WITH NO PROBLEMS.

The camera has a field of view of 88°, equating to a full-frame equivalent focal length of 22mm. Its aperture is fixed at f/2.8, so you will need to use ND filters if you want to avoid overly high shutter speeds on bright days. Additionally, the camera has a shooting range of 0.6m to infinity.

DJI's Air 2S ND Filters Set



Internal storage

One negative about the Air 2S is the amount of internal storage, which is only 8 GB. It's the same as the Air 2 and Mavic 2 Pro but will only last around half a flight if you're filming from takeoff. 32 or 64 GB would get you through a few batteries and you wouldn't need to worry about offloading your footage until you're finished. However, you can add microSD cards up to 256 GB to increase recording time, but we still would have liked to see more internal storage.

Obstacle avoidance

The Air 2S adds upward obstacle sensing to the forward, backward and downward detection featured in the Air 2. But what does that mean in practice?

To test the tracking, we went to a nearby park to fly the Air 2S. We set the drone to follow our subject and had him walk through a bunch of low-hanging trees. Even though we were completely hands-off, the drone followed our subject with no problems. Our subject was even able to run away from the drone and it still safely avoided the trees. The Air S2's obstacle avoidance worked spectacularly and is one of the drone's top features.

The only thing we found the Air 2S didn't detect was a chain-link fence. We didn't fly into a fence, but we tested the drone against one. The Air 2S saw the poles, the uprights, and the horizontals, but it didn't see the chain-link fence itself. However, when we were in a little dome area, it did tell us that there was something above us and in front of us, which was really impressive.

Intelligent Flight Modes

The Air 2S has a selection of Intelligent Flight Modes. Spotlight Mode locks the camera on a subject while you control the drone to move it around. The Air 2S has two ActiveTrack tracking modes. In Trace mode, the Air 2S will follow a subject at a constant distance. When set to Parallel mode, it tracks the subject at a constant angle and distance from the side.

Point Of Interest mode sets the Air 2S to circle around a subject at a set radius and speed. This mode supports both static and moving subjects. In our tests, tracking and Point Of Interest worked together really well. We set the drone orbiting our subject then had him run away from it. The Air 2S followed him

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TECH SPECS

Maximum Horizontal Speed:
- 42.5 mph / 19 m/s (S Mode)
- 33.6 mph / 15 m/s (N Mode)
- 11.2 mph / 5 m/s (T Mode)

Maximum Ascent Speed: 13.4 mph / 6 m/s
Maximum Descent Speed: 13.4 mph / 6 m/s
Maximum Wind Resistance: 23.5 mph / 10.5 m/s
Flight Ceiling: 3.1 Miles / 5000 m
Maximum Flight Time: 31 Minutes
Maximum Hover Time: 30 Minutes
Maximum Tilt Angle: 35°
Vision System: Downward, Forward, Backward
Obstacle Sensory Range: 1.3 to 144.4' / 0.4 to 44.0 m
Forward Field of View:
- 71° (Horizontal)
- 56° (Vertical)

Backward Field of View:
- 44° (Vertical)
- 57° (Horizontal)

Remote Controller / Transmitter Operating Frequency: 2.4 GHz, 5.8 GHz
Maximum Operating Distance: 7.5 miles / 12 km
Sensor Type: 1" CMOS Sensor
Sensor Resolution Effective: 20 Megapixel
Focal Length: 22mm (35mm Equivalent
Field of View: 88°
Maximum Aperture: f/2.8
Minimum Focus Distance: 2' / 0.6 m
ISO Sensitivity: Video: 100 to 6400 (Auto)
Video: 100 to 12,800 (Manual)
Video Format:
- 5472 x 3078p at 24/25/30 fps (150 Mb/s MOV/MP4 via H.264/AVC, H.265/HEVC)
- 3840 x 2160p at 24/25/30/48/50/60 fps (150 Mb/s MOV/MP4 via H.264/AVC, H.265/HEVC)
- 2688 x 1512p at 24/25/30/48/50/60 fps (150 Mb/s MOV/MP4 via H.264/AVC, H.265/HEVC)
- 1920 x 1080p at 24/25/30/48/50/60/120 fps (150 Mb/s MOV/MP4 via H.264/AVC, H.265/HEVC)

Media/Memory Card Slot Single Slot: SD/SDHC/SDXC [256 GB Maximum]
Gimbal:
- Number of Axes: 3 (Pitch, Roll, Yaw)
- Control Range
- Pitch: -90 to 24°
- Yaw: -80 to 80°

Angular Speed: Pitch: 100°/s
Battery Chemistry: Lithium-Ion Polymer (LiPo)
Capacity: 3500 mAh / 40.42 Wh
Overall Dimensions:
- 7.1 x 3.0 x 3.8" / 180.0 x 77.0 x 97.0 mm (Folded)
- 7.2 x 3.0 x 10.0" / 183.0 x 77.0 x 253.0 mm (Unfolded)

Weight: 21.0 oz / 595 g

DJI Air 2S Low-Noise Propellers

while he was running, and when he slowed down, it continued to orbit him again.

QuickShots and MasterShots

QuickShots are a selection of preprogrammed camera moves that make it easy to achieve dynamic drone shots. Dronie is the classic drone selfie where the drone flies away and up with the camera locked on the subject. Rocket has the drone fly up while the camera points down. Circle sets the drone circling the subject while in Helix mode; it flies up and around the subject on a spiral path. More advanced QuickShots include Boomerang and Asteroid modes.

The MasterShots feature is another difference between the Air 2S and the Air 2. In MasterShots mode, the drone keeps the subject in the center of the frame while executing a series of different maneuvers in a sequence. It then edits the video clips together to generate a short cinematic video montage. If you are shooting a vlog, it gives you a great sequence to cut away to. It's also beneficial if you work as a solo shooter and have less time to plan a range of moves.

One downside of using MasterShots is that you can't shoot in D-Log when using this mode. However, it's a feature that's intended to deliver ready-to-use sequences straight from the drone. If your project or sequence requires you to shoot D-Log, it makes sense that you probably wouldn't be using an autonomous flight mode.

DJI Smart Controller and flight batteries

Performance

Every DJI drone we've ever flown, which is just about every release they've had over the last five years, has the same experience. When we're flying it, the menu feels the same. The controls feel the same. They have a very controlled experience across the full breadth of their drones.

Unfortunately, the Air 2S isn't compatible with the DJI's FPV Goggles yet. Having flown with the FPV Goggles, it's nice to be able to have the world blocked out. We were shooting in the bright sun, and it was hard to see our cell phone screen. If the goggles were available, we could have focused on our shots instead of being concerned about the glare on our controller. Thankfully, DJI will roll out FPV Goggles support for the Air 2S sometime in the near future.

Final thoughts

So, should you buy the Air 2S? We really liked it. We were not expecting to be blown away by this drone, but it did everything we wanted it to do. It was easy to fly. The battery life was great. It has a great range of automated camera moves and MasterShots sequences will save content creators a lot of time.

Tracking is very intuitive to use. The Air 2S has fantastic obstacle avoidance. It's well worth the upgrade from the Air 2. The improvements in obstacle detection deliver better subject tracking as well as helping to keep your drone safe.

> THE AIR 2S HAS FANTASTIC OBSTACLE AVOIDANCE. IT'S WELL WORTH THE UPGRADE ...

The Air 2S doesn't have all the features of the Mavic 2 Pro, but it is better than the Air 2. We like the upgrade to a one-inch sensor. It's something that we hope to see more of because you get a better image from a bigger sensor. We were really impressed by the image quality from the Air 2S.

Overall, the DJI Air 2S was great to fly and we really were happy with its image. We wouldn't hesitate to recommend the Air 2S to anyone looking for a compact drone that shoots professional-quality video. We'd recommend the DJI Air 2S Fly More Combo bundle, which gives you extra batteries and ND filters. It also comes with a shoulder bag and at a good price.

Pete Tomkies is a freelance cinematographer and camera operator from Manchester, UK. He also produces and directs short films as Duck66 Films. Pete's latest short Once Bitten... won 15 awards and was selected for 105 film festivals around the world.

You can comment on this article by going online: www.videomaker.com/article/72082801

BEST CAMCORDERS FOR ANY VIDEO SHOOTER 2021

With so many choices on the market, from affordable cinema cameras to DSLRs to mirrorless cameras, the advantages of a fixed-lens camcorder may not be as easy to see as they once were, but they're definitely still there.

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Professional camcorders are often smaller, lighter, less expensive, and have more controls than other camera options. With so many choices on the market, from affordable cinema cameras to DSLRs to mirrorless cameras, the advantages of a fixed-lens camcorder may not be as easy to see as they once were, but they're definitely still there.

At the end of this article, we'll go over some of the special considerations unique to this form factor. But first, here are the best camcorders currently on the market.

Best beginner camcorder

Panasonic HC-VX1

The Panasonic HC-VX1 is an affordable camera with a good looking image, better than average low light performance and UHD 4K recording. With loads of light, the image quality of the Panasonic HC-VX1 is impressive, especially for its small sensor. Add in its 25mm to 600mm zoom and three optical image stabilizer systems, and the HC-VX1 shines above the rest. The 1/2.5-inch back-illuminated MOS sensor offers impressive image capture even at 12 decibels (dB) of gain. Although at that level there is significant noise, it still has good color reproduction. This means that if you find yourself in a less than ideal lighting situation, it's likely you will still be able to capture something worth watching.

Overall, with a top resolution of UHD 4K at 30 fps and the ability to capture up to 26-megapixel stills, Panasonic crams a lot of value into the HC-VX1.

Best enthusiast camcorder

Panasonic HC-X2000

The Panasonic HC-X2000 is designed for run & gun use; it's a compact and lightweight camera that can be carried anywhere and provides fast and high-quality 4K 60p recording. The camera features a wide-angle 25mm lenses and 24x optical zoom along with 4K high-precision AF, face detection AF/AE, 5-axis hybrid O.I.S, 120 fps super slow motion and 10-bit internal recording (4:2:2 to 4K 30p, 4:2:0 to 4K 60 p).

And it offers pro functions including two manual rings, an ND filter, 24-bit high-resolution linear PCM audio recording and built-in Wi-Fi for live HD streaming over Ethernet without any additional equipment. Even better, the heat-dispersing design with a thin fan and long-life battery offer an amazing continuous recording time of 4 1/2 hours (at 4K 60p / 200 Mbps).

The HC-X2000 also offers 3G-SDI support for connecting to an external recorder, plus a detachable Handle Unit. The detachable Handle Unit features a built-in LED video light, with dimmer from 30 to 100 percent. It also includes 2-channel XLR audio inputs and audio and zoom controls. With two SD memory card slots, the camcorder provides Relay Recording by switching between slots, as well as Simultaneous or Background recording modes.

Panasonic HC-VX1

Panasonic HC-X2000

Sony PXW-Z190

> "JUST KEEP IN MIND THAT A LENS IS NOT A MAGIC WAND, IT'S JUST A TOOL."

Best professional camcorder

Sony PXW-Z190

The Sony PXW-Z190 has three 1/3-inch CMOS sensors. It can capture up to 8-bit 4K video at 60 fps and 10-bit HD 4:2:2 to SD cards. It has a 25-times optical zoom, giving it a 35mm equivalent focal length of 28.8mm to 720mm. Sony also includes their electronic variable ND filter first released in the FS5. Seven stops of variable ND gives outdoor shooters loads of latitude. This means you can keep the f-stop low and the depth of field shallow. The camera also supports the HLG HDR workflow — HLG is the only HDR standard that is backward-compatible with SDR viewing.

One of our favorite features on the Z190 is that you can assign each one of the two record buttons to a different SD card. The dual card slots also allow for simultaneous 4K recording and HD proxy capture. In addition, the camera has built-in 2.4/5 GHz Wi-Fi. This allows for remote control of the iris, zoom, focus and white balance from your smartphone.

If you're a content creator who needs a camera with a fast workflow and you don't have control over the situations you shoot in, the Z190 is a great choice. Newsgathers, documentarians and event videographers would all benefit from this camera's toolset.

Special considerations for camcorders

You can get an overview of the important tech specs to consider before any camera purchase in our article on How to buy a camera. However, there are a couple of considerations that are unique to this particular form factor.

The lens

On a fixed-lens camcorder, the lens is custom-designed for that camera. While this may not greatly affect image quality, it does typically improve things like autofocus and image stabilization. These features can make a camcorder much easier to shoot with.

Cinematographers are known to stick with certain lenses that reproduce color and contrast exactly as desired. Lens makers have caught on. They strive to keep the look of their lenses consistent over their entire line, from cinema lenses to still camera lenses to camcorder lenses.

For example, Zeiss lenses are known for producing high contrast images with cool colors; Canon is known for lenses that produce warm colors with less contrast. Leica lenses produce images that have more balanced color and contrast. If you're trying to match the look of footage shot with lenses from Canon, Zeiss, Leica and others, finding a camcorder with that glass is a good start.

Just keep in mind that a lens is not a magic wand, it's just a tool. That tool combines with others including your camera, lighting design, and production design to create your final look.

Zoom range

There are a lot of lens options on the market. Why would you choose a camera with a fixed zoom lens? Many ENG camera operators choose to shoot with the same zoom lens on their camera, even though the B4 lens mount offers many other lens options. Perhaps, this is because the focal range is sufficient to get the shots that they need and the aperture range is also adequate. They really don't need any other lenses. This approach holds true for many other types of shooting. It's not uncom-

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ONE OF THE MAIN ADVANTAGES OF USING A CAMCORDER OVER A DSLR OR MIRRORLESS CAMERA IS ACCESS TO MANUAL CONTROLS

mon to see all the Steadicam shots on a feature film captured using a single zoom lens. You might find that the same is true for your production workflows.

Often, it's easiest to compare the focal range of camcorder lenses by referring to their equivalent zoom range in 35mm full-frame. Many cameras have a 10X optical zoom. This often translates to covering a 35mm FF equivalent of approximately 30mm to 300mm.

Digital zoom

Beware of zoom ranges that include digital zoom. When an optical zoom is used to push from a wide to a telephoto shot, the camera still captures the full active area of the image sensor. When digital zoom is used, the camera is actually cropping the active area of the image sensor. For this reason, a digital zoom can often degrade image quality. The camera is actually looking at a smaller number of pixels than the output resolution.

For example, a camera with a UHD 4K image sensor may have an active sensor resolution of 3840 x 2160 pixels. However, if you use a 4X Digital Zoom, your active image area will then only be 1920 x 1080. This will then be scaled back up to 3840 x 2160 causing a significant loss of detail in the image. Depending on the scaling capabilities of the camera, you may see a shift in color and contrast as well.

External controls and connectivity

One of the main advantages of using a camcorder over a DSLR or mirrorless camera is access to manual controls. You'll also get more input and output ports on the camera. Many smaller cameras lack video outputs, audio outputs and even microphone inputs. While most controls are accessible through the menu, many controls on smaller cameras, such as audio levels, are not there at all.

Likewise, not many zoom lenses have powered zoom controls built-in. This type of control can make your lens a lot easier and faster to adjust. Additionally, many new camera lenses lack manual iris control, which can make certain operating situations very challenging. These features are standard on most fixed-lens professional camcorders.

As you shop for a new camcorder, consider which features and settings you'll need to access most frequently. Do you often move between indoor and outdoor shooting locations? Quick access to white balance control will speed up production. Exposure changing with every shot? Make sure manual iris control is an option. Customizable function buttons are another feature to look out for.

Also, consider what additional accessories you'll need to support your workflow. If you need to connect an external microphone (or two), be sure to check what audio inputs are offered. If you want to use an external recorder, note whether the camcorder features HDMI output, SDI out or both.

What do you want your audience to see?

Your stylistic choices and your practical needs will dictate the gear you'll want to shoot with. If you want your audience to see vivid images on a big film festival screen, you'll want a camcorder with great color. Need to stream your video live? There are cameras built for just that. If you want a camcorder that can give you a cinematic look but is still good for run-and-gun shooting, a versatile model is your best option.

With a fixed-lens camcorder, you'll save the expense of buying multiple camera lenses. Plus, you'll never have to worry about leaving the one you need most at home. Whether you're web streaming live events, creating YouTube videos, shooting indie films, or doing a little bit of everything, there's a professional camcorder out there to suit your needs.

You can comment on this article by going online: www.videomaker.com/?p=95547

Four Models To Choose From

SGM-250
Battery or phantom-powered XLR shotgun microphone, great for boom work.

SGM-250P
Phantom-powered only XLR shotgun microphone, great for boom work or camera mounting.

SGM-250CX
Short shotgun mic with attached XLR cable ideal for on-camera mounting.

SGM-250MX
Short shotgun mic with attached Mini XLR cable, perfect for use with Blackmagic Pocket series cameras and Canon C70.

Consistent Performance Across The Series

Natural Sound
The 250 Series microphones have become notable in the industry for their natural, professional sound. While other microphone manufactures hype-up the bass response, making the audio sound muddy, or over-accentuate high-mids, making dialogue tracks sound harsh, users can expect all of the 250 Series microphones to accurately record the sound of their scenes.

Professional-Grade Performance
Low noise, full-range frequency response and a narrow supercardioid pickup pattern for professional dialogue capture.

Sonic Consistency
While each microphone model has its own unique physical characteristics, users can expect the same superb sound quality and side-noise rejection across the board. That's because each model uses the same high-quality microphone element and the same length interference tube.

World Class Build Quality Backed by 10-Year Warranty
Each microphone is assembled by hand in Azden's factory in Japan. This craftsmanship is backed by a 10-year warranty.

Learn more at azden.com/ni-go-maru

THE BEST DRONES FOR AERIAL VIDEO

As you search out your new drone, keep in mind both your production needs and your budget. There are plenty of drones to choose from at a variety at price points, so be sure to select one that fits your production style — whether you need a drone to follow you down a hiking trail or one that will bring back high-quality cinematic images.

New drones come onto the market all the time, and it can be difficult to know exactly which specs deserve your attention. We'll go over the most important features to look for as you shop at the end of this article, but first, let's look at our picks for the best drones for video production available now.

You'll notice a bit of a monopoly on this list, but DJI truly dominates the marketplace with videographer-friendly drones at all levels. We look forward to testing out more drones from other brands as they are released. To the other drone-makers — consider this a challenge! ▶▶

Best Beginner Drone

DJI Mini 2

When it comes to video recording, the DJI Mini 2 sports a 4K camera mounted to a 3-axis gimbal. DJI claims the drone can stay in the air for up to 31 minutes, and it supports HD video transmission at up to 10 kilometers, which is a definite improvement from its predecessor.

The Mini 2 boasts easy to use flight features, such as Smart Return to Home, automatic takeoff and precise hovering. The 12 MP camera, along with 4K/30fps video, creates stunning aerial footage.

This drone is also highly portable with a similar folding design to other drones in the Mavic line. Another bonus? US owners won't have to register the drone with the FAA to fly it. The FAA requires all drones above 250g to be registered. The Mini 2 weighs just 249g.

Best Enthusiast Drones

DJI Air 2S

There's a lot to the DJI Air 2S. For under $1,000, the DJI Air 2S offers various pro-level specs like high-resolution video capture and different color profiles to choose from: (8 bit), D-Log (10 bit) or HLG (10 bit). DJI claims the 10-bit Dlog-M color profile captures one billion colors, resulting in vibrant hues and a lot of detail to work with in post-production.

Internally, the Air S2 houses a one-inch sensor—which is capable of shooting either 5.4K video up to 30 fps or 4K video up to 60 fps. As for its lens, the Air 2S features a 22mm lens with an f/2.8 fixed aperture. Also, the DJI Air 2S can shoot RAW format photos with a dynamic range of up to 12.6 stops. In total, the DJI Air S2 weighs 595g and has a flight time of 31 minutes.

While the DJI Air 2S gives you many spec options to work with, it can take control of itself when need be. Its MasterShots feature allows the drone to record pre-programmed flight paths and create automatic edits for you to review.

Also, DJI's updated the Air 2S with four obstacle sensors. So, you can stay confident your Air 2S will be safe the entire flight.

Best Professional Drone

DJI Inspire 2

The Inspire 2 can be built in multiple configurations, depending on the camera you require. Plus, you can add in a second controller for independent gimbal and camera control. Depending on the configuration, the Inspire 2 can be bought for as low as $3,000. However, that's without a camera or ProRes and CinemaDNG codecs.

The unit we reviewed in 2017 was configured at $7,795. Added from the base model are dual controllers, a 480GB SSD and the Zenmuse X5S camera and gimbal. If there is anything DJI does well, it's a unified user experience. No matter if you fly the Mavic Pro or the Inspire 2, the user experience is almost identical. Sure each will have their individual flight characteristics, but overall DJI drones all feel similar.

Recording to an onboard SSD, you can shoot in Cinema DNG, 4444 ProRes and many others. It has a Micro Four Thirds image sensor and lens mount and the image quality is fantastic. You get ISO, aperture and shutter speed control, so getting the best exposure isn't difficult. Neutral density filters will most likely be necessary on a sunny day, so make sure to know the size of the threads on your lens and save room in your budget to buy a few NDs. Your shooting will benefit from it. Additionally, you can shoot up to 60 frames per second when shooting H.264. It will even make proxy files on the fly to a MicroSD card.

How to Choose

Like with any new piece of gear, there's plenty to consider when choosing a new drone for video production. That said, there are two key factors that will help you narrow down your options.

The first factor to consider is your shooting style and production needs. Are you looking for a super-stable drone, capable of supporting the best available camera, or do you need something light and portable that you can take with you on your next adventure? The answer will help steer you towards or away from certain brands and product lines.

The second factor, which is sometimes at odds with the first, is, of

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THE BEST DRONES FOR AERIAL VIDEO

course, your budget. Once you determine the shooting styles you'll need your drone to accommodate, you can start balancing the features you want with the price tag you can afford. The perfect drone for you sits at the point where these two considerations intersect. We'll help you find it.

Camera Considerations

Many more drones now offer built-in cameras designed specifically to work with their particular drone. Thus, because of weight and balance restrictions, this is usually the easiest and most economical option. New camera designs mean these built-in cameras will also often give you a far better image than what you'd get by attaching your own camera. Like other kinds of cameras, most aerial cameras today offer UHD 4K video recording and high-res still image capture. More advanced camera drones offer DCI 4K, RAW and log recording. Plus many include higher bit rates, bit depths and frame rates. These high-end drones are ideal for times when you need a truly cinematic image.

BYOC (bring your own camera)

Though aerial cameras today are significantly more advanced than they were even a few years ago, there may still be times when you need a certain feature on a particular camera to get the shot you want. For these instances, you can find drones built to support action cameras, mirrorless cameras, DSLRs or even cinema cameras. Most of these pro-level drones will necessarily be larger and more expensive. Plus, there are often strict limits as to which cameras and lenses the drone actually supports. Pay attention to supported camera models and weight limits when considering a drone without a built-in camera.

Again, let your shooting style and production needs be your guide here. Thus, the more options you need in terms of resolution, frame rates and exposure controls, the more you are likely to pay. In the end, we recommend that you avoid mounting your own camera and that you instead shop for a built-in camera option that suits your needs. The cameras available on drones today are more than adequate in most shooting situations.

Getting a Stable Image

Likewise, you'll also need to look at the gimbal, if one is included, and note how far it can rotate. A good gimbal will allow more flexibility in the air and provide a smooth, vibration-free image.

While shopping, you're likely to encounter fixed-position cameras embedded into the body of the drone itself, in addition to 2- and 3-axis gimbal options. That said, 3-axis gimbals will give you the best performance in shake and vibration reduction, so we recommend sticking with this option for the smoothest, most cinematic results. Fixed-position cameras are still workable, but they undeniably give you significantly less freedom in your camera movements, since the camera's perspective will be tied to the trajectory of the drone. 2-axis gimbals sit in the middle ground between these two options and are a viable compromise in most situations.

Consequently, for the most flexibility in your camera movements and compositions, look for a drone with a 3-axis gimbal that allows for an unobstructed 360-degree pan. This will give you separate control over the drone's direction of travel and the camera's perspective, allowing you to perform more complex camera moves.

Staying Aloft

Drones designed for video production are most often equipped with four rotors and are therefore labeled quadcopters. Hexacopters, or drones with six rotors, are also available, though less common.

That said, hexacopters are typically able to travel higher and faster, carry a larger payload and provide additional safety and stability over their quadcopter counterparts. As a result, this makes hexacopters a better choice if you plan to fly heavier or more expensive cameras. However, they also typically cost more, are larger and are more difficult to transport. Plus, they can cost more to repair.

Aside from rotor failure, the other factor that may force you to take your drone out of the air early is battery life. For each drone on your shortlist, consider the anticipated flight time per battery. How much does an extra battery cost? How long will you need to be in the air? These are the questions to answer before making your final purchasing decision.

Design and Construction

When it comes to the physical build of the drone, there are a few different factors to consider. For example, size and weight are important for portability, but these will also impact flight characteristics and flight time. As a result, lighter drones with smaller payloads can often stay in the air longer relative to battery size and capacity, but they may also be more susceptible to wind. That said, there are also more folding drones on the market than ever before. These drones fold down to a more compact size for transport between flights, easily fitting into a backpack or small carry bag.

Speaking of folding, you'll also want to consider whether or not you need retractable landing gear. This will affect how wide your field of view can be and how far you can rotate the camera before the drone interferes with your shot. More and more affordable drones now feature retractable landing gear, but depending on the shots you plan to capture with your drone, this may be higher or lower on your wish list. For the most part, you can get away with rotating the drone itself to get that epic panning shot.

Moreover, most drones are constructed from hard plastic or carbon fiber, both of which are light yet durable. Especially for larger drones, check to see if a travel case is included with your purchase. Keeping your drone safe during travel is one of the hidden costs of drone ownership.

Recording Media

Recording media is another hidden cost that may influence your purchasing decision, based on your budget and current workflow. The majority of drones use affordable microSDs, but some higher-end drones will require more expensive SSDs.

So, as you shop, check the video recording format and bit-rate to give you an idea of much video footage can be stored on the accepted media and plan accordingly. Also, factor in an extra battery or two. There's a chance you'll want to have some extra media on hand for drone shoots.

Monitoring and Control Options

We've spent a lot of time going over the must-have features for the aircraft itself, but what about that vital piece that will never leave the ground? Drone controllers come in a few different form factors, but they typically look like modified RC controllers.

Most often, you'll need to mount your phone to the control as a preview monitor and to expand the controller's functionality. Thus, some models have the preview monitor built-in, but this is somewhat rare. When considering monitoring and control options, also look at latency, maximum control and video transmission distance — 1 mile is typical.

Aside from manual control, most drones today also offer automated flight modes like track, follow, orbit, waypoint flight and more. Obstacle avoidance is another important flight control feature, especially if you're controlling both the flight path and the camera angle.

More futuristic still are drones that can be controlled through gestures. This feature is still more or less a novelty, but there are some situations where gesture control may come in handy. Just know that you like won't be able to rely on it for any professional work.

Fit for Flight

With so many options, it helps to narrow down your search criteria. As you search out your new drone, keep in mind both your production needs and your budget. There are plenty of drones to choose from at a variety at price points, so be sure to select one that fits your production style — whether you need a drone to follow you down a hiking trail or one that will bring back high-quality cinematic images.

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DJI Mini 2

DJI Air 2S

DJI Inspire 2

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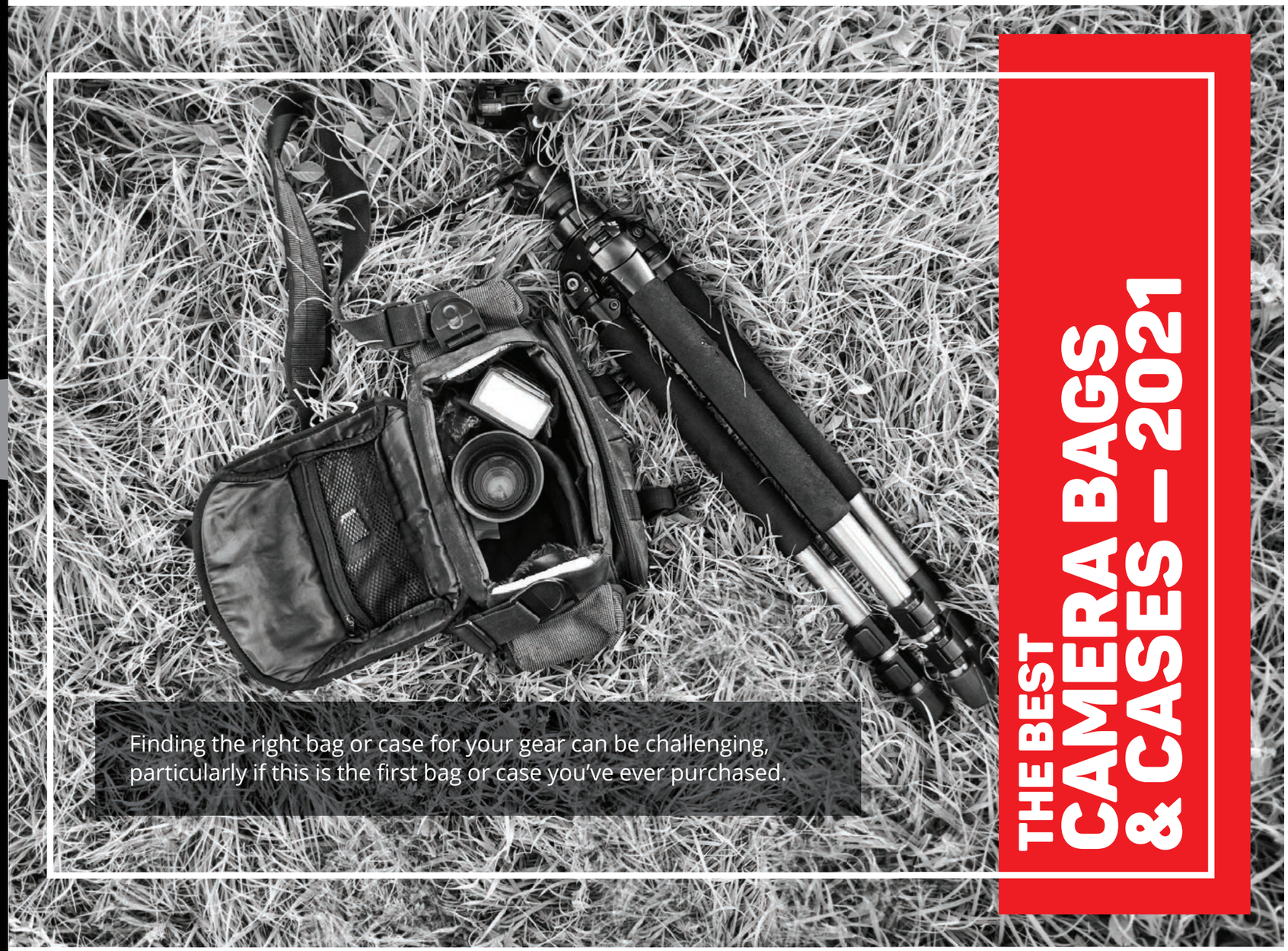

THE BEST CAMERA BAGS & CASES — 2021

Finding the right bag or case for your gear can be challenging, particularly if this is the first bag or case you've ever purchased.

These are our picks for the best camera bags and cases available today. At the end of the list, we'll go over the most important features to consider as you shop for a new bag or case. By the end of this article, you should have a firm grasp on what you need and what you want, so that you can choose the best bag for your unique workflow.

Best soft camera bag
Tenba Cineluxe Roller 21
Strengths:
- Extra-wide opening
- Sturdy and weather-resistant construction
- Roller bag makes for easy transportation

Weaknesses:
- Price

The Cineluxe Roller 21 from Tenba is a wheeled bag that is designed to fit a range of gear from assembled pro camcorders to cine cameras to ENG rigs. The bag has a doctor bag design which makes for quick and easy access to your gear. It features adjustable interior dividers, two padded straps, a lens pillow and a camera security strap.

The design of the Cineluxe Roller 21 is optimal for travel, perfect for videographers on the go. The bag features shock-absorbing wheels, a retractable tow handle and is carry-on size. It also features sturdy, weather-resistant construction.

The interior dimensions are 18x11x8.75" and the exterior 21x14x11". It weighs 8.4 pounds. ▶▶

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THE BEST CAMERA BAGS & CASES — 2021

Best hard camera case
Pelican 1510 Carry On Case with Divider

Strengths:
- Meets current FAA carry on requirements
- Robust construction
- Dividers to organize your kit

Weaknesses:
- Heavy

When it comes to hard cases, Pelican has a wide offering of products in materials designed for all uses including industrial, military and even underwater use. Many of their larger size cases include handles and wheels. Additionally, Pelican cases are great for stacking. Pelican has a great reputation for producing virtually indestructible cases, carrying a lifetime warranty. Most of the cases are waterproof, dust-proof and crush-proof. Additionally, many of the cases feature O-rings as well as pressurization valves. The specs for each case include important factors such as weight limits for buoyancy.

While we can confidently recommend most cases from this brand, our pick for best hard case goes to the Pelican 1510 Carry On Case. This 22 x 13.8 x 9-inch case is designed to travel with you. It meets current FAA carry on requirements, so you don't have to worry about checking your valuable gear when flying. For even easier transportation, the case also features an extension handle and wheels in addition to folding front and side handles. The included dividers promise to help keep your camera, lenses and other accessories organized.

Best camera backpack
Think Tank BackLight Elite 45L

Strengths:
- Designed to carry a lot of gear
- Rear-panel access for increased security
- Weather-resistant material

Weaknesses:
- Expensive

This video-focused backpack can hold a DSRL or mirrorless camera body with an attached lens, along with several separate lenses, smaller action cameras or even a small drone like the DJI Mavic. The Think Tank BackLight Elite 45L can accommodate lenses up to 600mm. The included dividers allow you to safely store and organize all that gear in a convenient wearable form factor. Along with all your camera gear, the Elite 45L still makes room to accommodate a laptop up to 17".

The BackLight Elite gives you lots of ways to quickly access your gear when you need it with well-placed openings and lots of extra cargo compartments and accessory loops. A nice feature is that, like the other BackLight backpacks, the Elite 45L features rear-panel access which adds security when traveling since your camera gear is protected behind your back. For even more versatility, the top pouch and waist belt of the backpack is removable and can be combined to make a fanny pack

A water-repellent coating and durable Sailcloth construction promise a lightweight, weather-resistant pack, and quality zippers and clips should add to the pack's longevity.

Best designer camera bag
Manfrotto Advanced² Camera Messenger

Strengths:
- Spacious
- Modern appearance
- Customizable inserts

Weaknesses:
- Not suited for larger cameras

The Manfrotto Advanced² Camera Messenger is 14-inches and includes a small hidden tripod holder. This is a bag for DSLRs, mirrorless cameras and compact cinema cameras. Internal dimensions are 14.17 x 5.12 x 10.24. When it comes to weight, the bag weighs 2.65 pounds.

Inside of the bag, there are interchangeable dividers, so you can make the bag a custom fit for your gear. It also has a strap connector that can connect to any standard trolley or luggage handle, making it easy to wheel the bag while transporting it.

The Advanced² Camera Messenger is made from fabric treated to be water-resistant. The fabric is water repellent and there's a rain cover that is also supplied. The rain cover can be used if the weather conditions get heavier.

Factors we considered

In general, a one-size-fits-all purchasing approach for bags and cases will probably leave you disappointed. I own more than a dozen bags and cases that I use on a regular basis. Why so many? The bag for my camcorder is different than the backpack for my DSLR. Likewise, I wouldn't transport a drone in a case designed for a cinema camera.

Occasionally, I'll swap out gear if I'm in need of a case for a specific activity, but the gear needs to be similar–like exchanging bags between my DSLR and my Micro Four Thirds (MFT) cameras. Consider your unique circumstances when choosing a bag or case, such as how you intend to use it, the amount of gear you will be carrying in the bag, the quality of its craftsmanship, and the amount of money you have available to spend.

To start, there are two basic types of cases — hard and soft. Each has its own benefits as well as specific disadvantages. Initially, narrowing down your purchasing decision to a hard or soft case may save you a lot of time as you search for the case that's right for you and your gear.

Hard camera cases

The first obvious advantage of hard cases is that they are crush proof. However, cases are only impact resistant to a certain degree. Some manufacturers will include impact resistance information in their specifications. Many of the larger hard cases have telescoping handles and wheels for easy transport. Hard cases are great for storing and transporting gear because they offer more durability and more protection in challenging environments like snow, water, dust and sand. They also tend to be stackable, which is great for storing lots of gear in really small spaces. ►►

> HAVING DISCREET CAMERA BAGS WHILE TRAVELING CAN OFTEN BE A WISE CHOICE.

Hard cases typically feature high-impact plastic polymers, which are lighter in weight than wood or metal, but still incredibly durable. Many cases have a way to attach a padlock without compromising their airtight integrity. When shopping for a case, sturdy latches and hinges should be a priority. Some hard cases come with o-rings — rubber or neoprene gaskets that lines the opening of the case. This allows them to float or be submerged in water for a short period of time. Hard cases can also have a purge valve for quick equalization after changes in atmospheric pressure. This is important because, without it, a vacuum can be created making the case extremely difficult to open.

Many cases have a way to attach a padlock without compromising their airtight integrity.

Pic foam vs custom foam

Hard cases often come unlined, but there are easy ways to pad your case with either pic foam or custom cut foam. Padding a case yourself versus buying a pre-padded case usually comes down to one or more factors, such as the ability to customize your padding, availability and the cost of the case.

Pic foam comes in blocks. You just tear off the little cubes until your gear fits in snugly. Custom cut foam is probably the best at protecting gear, but it does cost a bit more than other solutions. With that said, there are quite a few drone cases on the market that feature precut custom foam at very reasonable prices.

That said, sadly, foam is not forever. Over time it will start to break down and even dry-rot, turning into troublesome dust. Foam also doesn't fair well against water, dust or sand. Sometimes, the foam can be vacuumed or set out to dry, but often it must be replaced. The good news about pic foam is that it's relatively inexpensive to buy a new block and just start over. Pic foam can even replace custom cut foam if you need a more economical option.

Soft camera cases

All the advantages of hard cases create disadvantages in terms of portability. Even though many hard cases have wheels and/or carry straps, they can also be very heavy. Having your camera in a backpack, holster or in a bag slung over your shoulder is incredibly convenient for cinematographers who want the ability to quickly pull out their cameras and start shooting. Soft casing varies in the amount of padding, water resistance, weight and durability of the materials based on a manufacturer's design and specifications. You may find a bag design that you really like which could ultimately dictate the choice of shell materials for the case.

Gear dividers for soft cases usually consist of fabric that can be wiped down with a damp cloth when necessary. Dividers can be flexible or rigid and are often padded; typically, they are included with your soft-sided bag purchase. Dividers are more durable than foam, but they lack the same level of protection. Many bag manufacturers have their own divider system that can even include pockets or pouches to better organize and protect your gear.

Because of the diverse selection of soft-sided bags, closure mechanisms vary greatly as well. Velcro, zippers, and buckles tend to be the most prevalent with many bags incorporating more than one of these systems for added protection.

Water resistant vs waterproof vs submersible

While both you and I can easily deduce the meanings of these words, the industry has more technical definitions. Many water resistant bags won't protect your gear from a heavy downpour. Some bags feature an additional rain jacket that you can place over the bag for this exact reason. On the opposite end of the spectrum, several manufacturers of waterproof and watertight hard cases have technical specs on how deep their cases can be submerged, or how long some of these cases will float on water.

A camera bag for every occasion

In many instances, the decision of hard versus soft cases will not only be affected by the type of gear you're carrying but how and where you plan on using that gear.

> THE TYPE OF TRANSPORTATION AVAILABLE FOR YOUR GEAR OFTEN DICTATES THE TYPE OF CASE YOU'LL NEED.

Gear on the move

The type of transportation available for your gear often dictates the type of case you'll need. Gear transported in the cargo area of an airplane, ship, or train needs the sturdiness, padding, and locking capabilities of a hard case. Luggage-style cases designed to fit into a plane's overhead bin are usually soft-sided due to the weight restrictions of a carry-on bag; however, they still need ample padding. A bag design that allows you to easily remove your camera when you go through airport security is also a big plus.

Bags transported on public transportation such as a bus or train might come with their own unique considerations. Having discreet camera bags while traveling can often be a wise choice. While you might be thrilled that you finally got your first Canon camera and want to wear that gear bag that says "Canon" with pride, that creepy guy following you from the train station down the dark streets of a strange, unfamiliar city might also like to have his first Canon camera, courtesy of you.

While bags being transported in your car may not necessitate a specific design, excessive walking with your gear might make you strongly consider lightweight bags like a backpack, shoulder bag or sling. If you are transporting a lot of gear on a truck, the stacking ability of hard cases can be very important.

Consider a hard case when bringing gear to locations with extreme environmental factors such as excessive heat or cold. Locations that expose your gear to torrential rain or blowing sand could also benefit from storage in a hard case.

Designs for easy access

Top-loading holsters typically have a very small form factor and provide quick, easy access to your camera; many can be worn on a belt, as a belt or as a sling. Often, shoulder bags can also offer quick access to your camera, lenses and filters. Backpacks tend to distribute weight on both of your shoulders, which I find to be a big benefit when carrying heavy gear on a long shoot; a top-loading camera compartment on a backpack is a great choice for shoot-and-go activities.

First impressions

Just like a job interview, clients will often base their opinions of you as a professional not only by the gear you bring to a shoot but also by what you bring it in. Because of this, those bags and cases not only organize, protect and carry your gear; they also make a statement. You want those first impressions to be positive. They will help set the tone for your shoot and often your whole project.

Final thoughts

Finding the right bag or case for your gear can be challenging, particularly if this is the first bag or case you've ever purchased. Try to consider how and when you'll be using your gear and what you envision as the most convenient way to carry it all. If you look hard enough, you can find a soft-sided bag or case to fit almost any budget. Don't skimp on your bags and cases. All of your gear deserves proper protection to ensure it lasts a very long time!

Contributors to this article include W. H. Bourne and the *Videomaker* Editorial Staff.

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JOHN FORD

THE TECHNIQUE OF ONE OF AMERICA'S GREATEST DIRECTORS

BY MORGAN PAAR

Regarded as one of the greatest directors of all time, John Ford is an icon in American film history. With four Best Director Academy Awards, the most of any director, and a massive filmography made up of over 140 films, there's much to learn from Ford, his life's work and his technique

John Ford is one of those directors who had a profound impact in the industry.

"The best director in the world" – Ingmar Bergman

The "king of directors" – Frank Capra

"A John Ford film was a visual gratification" – Alfred Hitchcock

"I have respected John Ford from the beginning. Needless to say, I pay close attention to his productions, and I think I am influenced by them." – Akira Kurosawa

"I like the old masters, by which I mean John Ford, John Ford and John Ford." – Orson Welles

"...a son of a bitch who happens to be a genius." – Henry Fonda

Early career

John Ford started out as a jack-of-all-trades filmmaker working for his older brother Francis. The year was 1914, thirteen years before the first "talkie" film. John started out as an assistant, handyman, stuntman and occasional actor for his brother, twelve years John's senior. John worked hard, eventually becoming his brother's chief assistant and cameraman, until his first directorial debut in 1917.

In a career that spanned over 50 years, John Ford won six Oscars, though it is notable that none were for his Westerns. He was the first recipient of the American Film Institute's Lifetime Achievement Award in 1973 and president Nixon bestowed the nation's highest civilian honor on Ford, the Presidential Medal of Freedom. A visit to IMDb or Wikipedia will show a long list of accolades from around the world. But what made a John Ford film?

John Ford Stock Company

Ford famously used a "Stock Company" of actors and crew, a large collection of professionals used in film which included household names such as John Wayne, Henry Fonda, Will Rogers, Maureen O'Hara and James Stewart, to name a few. Knowing his cast and crew well helped Ford to become known as one of the busiest directors in Hollywood, churning out at least one film per year –many years multiple films — between 1913 and 1971.

Film director John Sayles said, "Ford proved able to satisfy the expectations of producers and audiences alike while adding small touches, whether gritty or sentimental, that gave his films an extra human dimension often lacking in the generic programmers of the day. He gambled with his reputation as an efficient, no-nonsense helmer-for-hire in the production of "The Iron Horse" (1924), his over-budget schedule-busting epic about the construction of the transcontinental railroad in the 1860s. Ford was pressured by the studio but allowed to finish, and the film became a huge financial and critical success."

"The secret is to make films that please the public and that also allow the director to reveal his personality," Ford once said.

Directing is not an art

Ford believed his directing to be a job as opposed to an art form or some arcane skill. "Anybody can direct a picture once they know the fundamentals. Directing is not a mystery, it's not an art," Ford said in a rare interview. Another time he exclaimed, "It's no use talking to me about art, I make pictures to pay the rent."

Character moments

Characters often enter a Ford film as stereotypical caricatures but their humanity soon peaks through as richly detailed characters discovered between gunfights and horse chases. ▶▶

"In between the chases and seemingly life threatening action sequences, sit character moments that advance plot and narrative…" Adam Scovell of CelluloidWickerMan.com states. Adam continues, "While enjoying any number of his films, it's almost as if Ford is happily smuggling in complex relationships and ideas under the guise of cowboys and Indians or other exciting visuals and narratives."

Starting in the silent film era, Ford learned how to communicate without words and he brought this skill into the talkie film era. Seemingly simple facial expressions or glances would convey emotions that most directors would need dialog to communicate.

"It's what is between the lines, so often, that makes Ford films Ford films… And Ford purposely would go out and seize these moments, these director moments, because he understood that that was the essence of what separated motion pictures from other forms," said director, screenwriter, and producer Walter Hill.

"He'd always said, "If you don't need all of those lines, throw them out," said actor Harry Carey Jr. about Ford hating dialog.

Blocking

"Nobody ever staged better. Nobody ever staged actors to camera better. But at the same time it seems organic," said Walter Hill.

"The way he frames things and the way he stages and blocks his people, often keeping the camera static while the people give you the illusion that there's a lot more kinetic movement occurring when there's not. In that sense, he's a classic painter. He celebrates the frame, not just what happens inside of it," remembered Steven Spielberg.

Although Ford preferred not to move the camera during a scene, one technique Ford used was to have the camera mirror the movement of a character. Director David Fincher emulated this technique in films such as *Fight Club* and *Gone Girl*.

"Essentially what he tries to do is have the camera exactly match the velocity and direction of the moving character in the frame. When the character stops the camera stops to, and starts again when the person starts to move again. Matching movement here isn't close, it's perfect," notices Nerdwriter in his excellent YouTube video "How David Fincher Hijacks Your Eyes."

Efficient filmmaker

John Ford often shot only one take of a scene believing that the first take usually has the best emotion. In addition, he often shot his scenes in order and "edited in the camera" in order to keep control of the story from an editor or a producer.

Ford once said, "I don't give 'em a lot of film to play with. In fact, Eastman used to complain that I exposed so little film. I do cut in the camera. Otherwise, if you give them a lot of film, 'the committee' takes over. They start juggling scenes around and taking out this and putting in that. They can't do it with my pictures. I cut in the camera and that's it. There's not a lot of film left on the floor when I'm finished."

"The Informer" (1935) – Image courtesy – Turner Classic Movies

"It's what is between the lines, so often, that makes Ford films Ford films… And Ford purposely would go out and seize these moments, these director moments, because he understood that that was the essence of what separated motion pictures from other forms,"

Walter Hill

"The way he frames things and the way he stages and blocks his people, often keeping the camera static while the people give you the illusion that there's a lot more kinetic movement occurring when there's not. In that sense, he's a classic painter. He celebrates the frame, not just what happens inside of it,"

Steven Spielberg

While many directors shooting film stock have a shooting ratio of 6:1, 10:1 or more, Ford focused on the 4:1 neighborhood, meaning for every minute of film the movie-goer sees, four minutes of film was actually shot.

Another well-known filmmaker who had low shooting ratios was Ford's contemporary, Alfred Hitchcock. But their similarities in film production may not have stretched further than this. Hitchcock was well known for his extensive storyboarding and planning while Ford seemed to compose his films straight from his head, mostly shunning written or graphic outlines such as storyboards and even scripts at times.

Dissolves, wipes and fade to blacks

Another famous Ford technique — something mostly out of fashion these days — is the dissolve as a transition or his use of fade to black. Film director Akira Kurosawa might have been inspired to use wipes the way Ford used dissolves and George Lucas, who has been influenced by both Ford and Kurosawa, uses all three: dissolves, wipes and fades to blacks. Any of the Star Wars films are good examples. ▶▶

Ford the historian

"His films had a powerful influence on Americans' conception of their own history and values," said John Sayles.

The critic and film historian Joseph McBride said, "[Ford] chronicled our national history on-screen with an epic vision that spanned nearly two centuries, from the Revolutionary War to the Vietnam War. While Ford's vision of America is intensely patriotic, it does not flinch from confronting the country's tragic failures, the times when we did not live up to our ideals. Whatever the events he depicts, Ford's natural allegiance is always with the spirit of the American common people."

"His movies celebrated the striving, pioneering spirit of America, and the key virtues that defined the national character: freedom, integrity, courage, perseverance. He gloried in our country's majestic, untamed open spaces," said John Farr of BestMoviesByFarr.com.

"Ford has chronicled the story of the United States in no small detail, ranging in over 180 years from before the revolution into the 1950s. And throughout his work… the personal story is always shown in perspective with the flow of history behind." said filmmaker, critic and film historian Peter Bogdanovich.

"Ford always insisted that these heroic myths — as untrue as they might be — are necessary for the society to function," wrote cinephile Ryan Gumbley.

Influence

Orson Welles reportedly watched Ford's masterpiece Stagecoach 40 times in preparation for making Citizen Kane.

"I try to rent a John Ford film, one or two, before I start every movie. Simply because he inspires me and I'm very sensitive to the way he uses his camera to paint his pictures," Steven Spielberg once said.

"Ford has been such an extraordinary influence on my life and my cinematic enjoyment of art and life, really. And he has been such a heavy influence on me and still is," explains Martin Scorsese.

Someone asked Akira Kurosawa, "How did you learn? Did you study particular painters? Were they Japanese painters or European painters?" Kurosawa replied, "I studied John Ford," Swapnil Dhruv Bose writes in Far Out magazine.

Akira Kurosawa

Akira Kurosawa watched Ford's Westerns as a child and became immensly influenced. The most obvious example is the use of an anti-hero who goes up against innumerable enemies as exemplified by Kambei in Kurosawa's Seven Samurai and Ringo Kid in Ford's Stagecoach.

Like Ford, Kurosawa used epic wide shots, often with a character moving across the screen on the horizon as can be seen in many of Ford's Westerns.

Many modern-day directors revel in drawn-out confrontations and violence but not Ford or Kurosawa. Ford once said, "My pictures do not always show violence. Very, very few of them do. And if they do show violence, it's over very quickly. I suggest it more than anything else…I do it quickly or I do it by suggestion."

"Stagecoach" (1939) – Image courtesy – World Magazine

"His films, whether Westerns or in other genres, are notable for a turn-of-the-20th-century ideal of American masculinity—loyal, self-deprecating yet competent, dependable in a scrap, bound by duty, courtly if somewhat tongue-tied with the ladies, with a winking fondness for alcohol but no patience for foul language or sloppy behavior."

John Sayles

"His movies celebrated the striving, pioneering spirit of America, and the key virtues that defined the national character: freedom, integrity, courage, perseverance. He gloried in our country's majestic, untamed open spaces,"

John Farr

"The Grapes of Wrath" (1940) – Image courtesy – Film at Lincoln Center

"The compositional habits of Ford and Kurosawa were also similar, focusing on the chiaroscuro of light and shadows [think Caravaggio] and the framing of actors through doorways," Swapnil Dhruv Bose points out.

Finally, Kurosawa, like Ford, amplified natural aural elements such as wind, fire, rain and horses.

Criticism

John Ford took a lot of flak for his depiction of women and anybody who was not white.

"One of my American Western heroes is not John Ford, obviously. To say the least, I hate him. Forget about faceless Indians he killed like zombies. It really is people like that that kept alive this idea of Anglo-Saxon humanity compared to everybody else's humanity…" Quentin Tarantino told Henry Louis Gates in the online magazine The Root.

Many articles and even books discuss the "toxic culture of Cold War machismo" as Stephen Metcalf wrote of John Wayne and John Ford in The Atlantic. Metcalf explained how Ford, afraid of his own femininity, created macho characters portrayed by actors such as John Wayne.

"Ford helped create an archetypical code of masculine ethics and behavior that has profoundly affected the American psyche," said John Sayles. "His films, whether Westerns or in other genres, are notable for a turn-of-the-20th-century ideal of American masculinity—loyal, self-deprecating yet competent, dependable in a scrap, bound by duty, courtly if somewhat tongue-tied with the ladies, with a winking fondness for alcohol but no patience for foul language or sloppy behavior."

"How do you describe someone you really admired and loved, and yet he had so many aggravating traits? He was an instinctive con-man, it was impossible to know when to believe him or when to disbelieve him. Everything he said or did was for effect. That is why he was so difficult to interview; he would deliberately say the opposite of what he knew you wanted to hear. He could be kind, gracious and gentle, with a wonderful sense of humor. But he could also be vindictive and mean. All one can do with John Ford is accept him with all of his faults and virtues, and love him," Maureen O'Hara said.

Conclusion

John Farr summarized John Ford this way, "Ford the man was a mass of contradictions: on set, he was autocratic and extremely tough on his actors, frequently humiliating them publicly. Yet he was also intensely loyal, building his own stock company of players and technicians who'd come back and endure his abuse time and again because they knew they were working with a genius and creating something special."

Morgan Paar is a multiple award-winning filmmaker and photographer who specializes in travel video, stills and articles. Paar has been location independent for over three years producing video, teaching filmmaking and consulting around the world. www.NomadicFrames.com

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by Sean Berry

How to light a green screen

Green screens can be great tools to implement into even the smallest of productions, but green screen lighting is just as essential.

We've all seen bad green screen effects before. Truthfully, they stick out like a sore thumb. One of the most common reasons for this unfortunate occurrence is improper green screen lighting.

For example, an improper lighting setup could leave an uneven shadow gradation on the green screen, making it much harder for editors to chromakey the green out of the shot. When it comes to professional chromakeying, good lighting makes a huge difference in the quality of the effect. While lighting a green screen is relatively easy, it can be a bit tricky if you're new to chromakeying and have never done it before. You want to make sure you light your screen correctly. Otherwise, it's going to take a lot of fixing in post and could even ruin the take and force a reshoot.

So, if you want to learn how to light a green screen correctly, you've come to the right place. Here, we'll discuss everything you need to know about green screen lighting.

What's the purpose of lighting your green screen?

The ultimate goal of any successful green screen lighting setup is to make sure the light runs smoothly across the green screen. This allows you or your editor to easily key out the green in post. Any uneven inconsistencies on the screen will make it harder to key out the screen in post. Your setup needs to have a balance luminance, meaning the entire screen is one luminance (the same exact green hue).

Things to consider before lighting the screen

Always light your subjects first

Before you light your green screen, you should always first make sure your subjects are properly lit for the scene. Your focus should first and foremost be put into ensuring your characters will believably look like they're living the environment you plan to key them into. Green screen lighting is simple to do, so you shouldn't put all of your energy into it. Lighting your subjects is a much more creative process and requires more attention, whereas lighting your green screen can only be done right or wrong.

Keep your subject at a distance from the screen

Many green screens are quite reflective, meaning if you're subject's too close to the green screen, there will be spillage. Spill, when in reference to green screening, is when the green luminance of the screen reflects onto the subject. This causes issues in post-production and will require extra time to ensure you don't key off parts of the subject.

Keep your subject as far away from the green screen as possible. The further away you get from the screen, the less chance there will be for spill.

Determine your screen's material

The material you choose for your green screen will affect the type of lighting setup you need. For instance, most high-budget productions build an entire set with green painted walls as their green screens. This is best because walls are always wrinkle-free, ensuring the luminescent is always balanced as long as there's enough light.

However, this option isn't cheap and isn't at all portable. Typically, people use either a fabric green screen or a fold-out screen. However, they require a little more work to set up and may have a few wrinkles on them. You want to make sure you get rid of as many wrinkles as you can to ensure the keying process goes smoothly. Keep your screen as tight as you can make it. Most fabric green screens are held up by a metal frame with tighteners.

Consider your screen's size

Your green screen's size is also something you need to consider. If you're working with a larger screen, it will require more light than a smaller screen. Regardless of the size of your screen, they both follow the same setup rules. You'll just need to shell out a few more bucks and get more lights. If you have the means, you can always make your own green screen for your home studio. Here's a guide on how to make your own DYI green screen.

How to position your lights for your green screen

When you're positioning your light, you want to make sure both lights you have on the left and right side are the same exact distance from the green screen. This ensures there aren't any hotspots. You also want to place your lights on the sides of the screen rather than head-on. This is because if you position the lights directly at your subject, the shadows from the subject will be in the camera's frame. To avoid this, have your lights placed on the sides so the shadows of the subject are out of frame.

When you're setting up your lights, you want to have a key light and fill light. You also need to have at least two screen lights. If you're using just one light, place the light above your subject.

> ANY UNEVEN INCONSISTENCIES ON THE SCREEN WILL MAKE IT HARDER TO KEY OUT THE SCREEN IN POST.

This will cast an even light onto your background. Make sure the light you use is powerful enough to light the entire area and is diffused enough to cast an even light across the screen.

Depending on your situation and your main lighting for your subject, there could be a number of different positions for lights that work. You can play around with the positioning of the lights to make sure they work with your main lighting. However, always make sure you mirror your lights for your green screen to keep the lighting exposure the same.

Expose your green screen correctly

To make sure your green screen is correctly exposed, you can get through your camera's settings and slightly lower the brightness than normal. This ensures you don't capture non-green colors. Set your camera to a lower ISO as well. Having a lower ISO prevents hints of various colors from showing up in your shot. However, if you lower your ISO too much, you run the risk of underexposing your shot, which is just as bad as overexposure.

Image courtesy: NewTek

To avoid spillage, keep your subject as far from the green screen as possible. Also, place the same number of lights on both sides of the green screen to ensure it is lit consistently.

Getting the right equipment for green screens

There are a few green screen lighting kits available online. There you can get the materials you need to set up a green screen. As for the lights, you still want to get quality lights, but if you want to save some money on budget lights, that's okay. You just want to make sure you get enough light and have the same type of light. No matter what, you never want to mix color temperatures. This will make different colored green hues on the green screen on the different sides of the green screen.

Take the time to do it right

Improper lighting for your green screen can put a wrench in your workflow. While you can usually fix most mistakes in post, it's going to take more time and effort away from finishing the project. It's always easier to fix any issues on set. So, the next time you're lighting a green screen, keep in mind what has been discussed here.

Correctly-done green screen effects can really immerse your audience into the story you're telling. Properly lighting your screen helps ensure your audience isn't taken out of the experience you want your audience to feel when watching your video.

Sean Berry is a blogger and Videomaker Associate Editor.

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by Stephen Mandel Joseph

Tools you need to shoot the stars

To keep up with a fast-rising genre in the world of photography, here are all the astrophotography tools you'll need to capture space

Even though astrophotography has created a new genre in the vast world of modern photography, it's nothing new historically. The practice has been around since the mid-19th century—ever since experimenters and amateur astronomers started using it as a tool to photograph space and the stars beyond.

However, for more than two decades, photographing the night sky and all its phenomena has developed into a cool hobby of tech and gear that would impress the likes of NASA.

Astrophotography involves several methods and special needs, unlike common photography. But even as more and more backyards become observatories, the process of astrophotography can be somewhat complicated to hobbyists and daunting for beginners. But once you get to know and understand the equipment used in astrophotography, you will soon be selecting the best techniques and picking the best approaches for taking professional-looking and top-tier images.

Astrophotography over traditional photography

Unlike ordinary photography, astrophotography requires its own set of tools and techniques to photograph astronomic and cosmic objects. To ensure capturing the most pleasing images, you have to take the distance of celestial objects, atmospheric changes, lighting, night or day shots and accuracy into consideration. Keep in mind that astrophotography is still science-based photography that's all about photographing astronomical objects. This is what sets it apart from the custom of more traditional, earthly photography. For the best results of astrophotography, camera settings and equipment have to pivot in a parallel mode from the earth, and devices have to ensure that taking photos is accurately timed.

Even for the amateur or hobbyist, successful astrophotography depends on the precise tracking of astronomic objects and preventing tracking errors with the right tools and equipment and modern developments in computer science and software. Unlike traditional photography, the art and science of astrophotography involve more than just point-and-shoot.

Choosing a starting point

With just a camera and telescope, any enthusiast can explore the vast hobby of astrophotography. But to make it more fun and rewarding, you need to consider a starting point. There are several types of astrophotography you can pursue. Photographing objects far away into the night sky can be a bonus for the hobbyist looking to capture stunning images of the nebulae and far away galaxies. This is known as deep space astrophotography.

For this particular photoshoot, you need to consider the challenges and obstacles of star trails and the use of special equipment. Or you can go as simple as photographing everything within our solar systems, such as the moon, the sun, and the planets. Or you can explore the type of astrophotography that uses a wide field of view. The bottom line here is that considering a starting point of what images you want to capture, whether in the night sky or somewhere out there in the Milky Way, the quality of the cameras and equipment you decide to use will make all the difference.

Choosing the right camera for the right job

The same way you have a variety of cameras to choose from for standard photography is the same way you have an abundance of choices for astrophotography. Your preference will narrow down to two vital factors: what images you plan on capturing and which camera is best for the job.

Whether you're a beginner or a hobbyist, many astrophotographers

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ZHWEEBILL2SE | $649

Apple 24" iMac with M1 Chip (Mid 2021, Blue)
APMJV93LLA | $1,299

Manfrotto 192N Pro Light Camcorder Case for Canon EOS
MAMBPLCC192N | $229.99

Sony WH-1000XM4 Wireless Noise-Canceling Over-Ear Headphones
SOWH1000XM4B | $348

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start with standard DSLRs, either full-frame or cropped. Mirrorless systems and smartphones can produce crisp and quality images; however, most beginners—and hobbyists, too—tend to start with what works for their budget and their photographing goals. If you decide to follow most amateur and beginning enthusiasts, the top three DSLR brands dominating the market continue to be Canon, Nikon and Sony.

There's a great deal to consider when purchasing the right camera for the job. The hobbyist who has some years of advancement in astrophotography recommends a DSLR (Digital Single-Lens Reflex) camera because they are cost-effective and multipurpose. Popular amongst these are the Canon Rebel T7i and Nikon D3400. As cameras with an entry-level body go, these two cameras support an overwhelming quantity of camera lenses and software apps. Sony offers mirrorless a7 series cameras, which tend to be notable for wide-angle landscape style astrophotography, but not for deep sky imaging.

This is why before spending your hard-earned money, it's important to research and determine which camera is right for your needs.

"iOptron SkyTracker with modified Kiss X50" by Eddie Yip is licensed under CC BY 2.0

The iOptron SkyTracker mounts directly onto your camera and makes it simpler to take longer exposures — allowing your camera to track the night sky without streaking or star trailing.

For example, a Canon 60Da is an excellent choice for capturing deep space images like the Andromeda galaxy. The Canon 5D Mark IV and Nikon D850, meanwhile, are perfect professional upgrades when you're ready for the big leagues of astro-cameras.

Outside of the popular DSLR camera bodies, dedicated astronomy cameras are designed specifically just for deep sky imaging through a telescope. Dedicated astronomy cameras come in two formats—one-shot-color, and mono. The ZWO ASI294MC-Pro captures amazing high-resolution images in full color. These cameras are ideal for capturing images under a dark sky.

Photographing space can come with complications. However, you don't need to break the bank with enough cameras and equipment to fund an entire NASA space program. Some cameras to consider for the DSLR camera bodies are the Canon EOS Rebel T7i, the Canon EOS 80a, the Nikon D5300 or the Nikon D7500. If you lean toward a dedicated astronomy camera, consider the ZWO ASI294MC-Pro (Color) or the ZWO ASI183MM Pro (Mono).

Another thing to keep in mind when considering a camera is CCD Imaging over DSLR. According to advanced users, one of the main reasons why you may want to consider a CCD camera for astrophotography is that CCD cameras can be up to 50 times more sensitive to light than DSLRs.

Think about your needs before your spending. Whether DSLR or dedicated cameras for astrophotography, consider the experience you're looking to have from the shoot. Are you looking to capture the moon and shooting stars, or are you looking to go as far as technology can take you into the Milky Way and deep space?

Choosing the right accessories

Astrophotography is more than just a camera or telescope. An equatorial mount with full GoTo, an 80 mm apochromatic refractor for long exposures, equatorial mounts that track the sky by moving and a Skytracker that follows the earth's rotation are just a partial list of essential accessories to add to your gear. For example, with a Skytracker, you can keep your focus on star systems without any trailing or fuzziness. A tripod is also essential for photographing the night sky. You can also enhance your long exposure times with a remote and an intervalometer to capture images in succession. And if you plan on being outside for long periods of time, gloves and warm clothing are much-needed accessories.

Filters can help you get better images of the sky. For example, (CLS) City Light Suppression helps to cut skylight pollution from cities. Light pollution is a major side-effect of urbanization in major cities. Light Pollution Suppression (LPS) filters cut down the extra light in the sky, and LPRO Max filters for wide-angle landscapes are explicitly designed for astrophotography. Essentially, these filters are meant to give you far more natural-looking star colors.

It's also pertinent to have the best lenses in your gear for your Canon, Nikon or Sony DSLR cameras. The best lenses for astrophotography will make shooting the stars and night sky stress-free. Knowing which lens is ideal for shooting the Milky Way will improve the quality of your images. Astrophotography with the right camera lens offers a far more enjoyable experience.

Time to get lost in the stars

Thanks to advancements in digital cameras, video technology, computer software and gear, astrophotography has become just as popular for the backyard hobbyist as it has for the trained scientist. From the beginner to the enthusiast, everyone can enjoy capturing space images and seeing into faraway galaxies. Beginner-level tools, accessories and equipment are available to anyone looking to start the journey of surveying the cosmos. Webcams, CCD, over-the-counter cameras, single lens and digital single-lens cameras, telescopes and computer software have become available for the enthusiast at any level. All that's left to do is choose the right tools for you, then start shooting.

Stephen Mandel Joseph is a published writer, art student, and filmmaking enthusiast. He has directed several Sci-Fi 3D animated shorts and a short drama film on video. He currently resides in New York City.

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by Blag Ivanov

Sound editing vs. sound mixing

When it comes to sound editing vs. sound mixing, the closely related processes have distinct differences that set them apart from one another

Sound editing is the vehicle that moves a project's audio from the production to post-production stage. The main difference between sound editing vs. sound mixing is that editing focuses on the production, while mixing takes the edited product and hones it during post-production.

The majority of sound editing takes place during production. This covers all stages of production from shooting and recording on set to sound effects, foley and ADR. Any process that generates new audio content requires editing before it is ready for use in post-production, therefore it is all treated as editing. Likening this process to food production makes sound editing the harvesting of a fresh audio crop. The recordings are cut down to size, cleaned and shipped off for further assembly and packaging.

Sound mixing takes those raw elements and combines them to produce a cohesive, self-contained world made up of dialogue, footfalls, effects and music. In the scope of the previous analogy, this is that art of cooking, canning and packaging.

Sound Editing

At a glance, editing and mixing appear quite similar because the same general tools are used for both processes. That being said, they produce significantly different results. The segregation of duties between editing and mixing is a bit more nuanced than the clear-cut choices of when to use Adobe Premiere instead versus After Effects.

Tools – Less Is More

It is easy to perceive the production phase as focused on the shots, when in truth production covers all content generation. For the sound department, editing equates to sound stage recording, ADR, foley, effects and music. This content is edited and added to the project file pool.

Sound editing still uses the same traditional toolset from a point in time when tape was still the medium of choice. Back then, editing involved cutting, gluing and splicing takes and scenes together. Creating a fade between two parts used to mean cutting two pieces of tape at an angle and gluing them together. This is the origin of the razor-shaped cutting, glue and fade tools seen in today's digital audio workstations (DAWs).

The administrative purpose of editing today is assembling all the approved takes into a new project and lining them up to the video proxy file. The early stages of sound editing involve lots of cutting and deleting to clean up the project.

Digitization has made editing a more visual process, mainly by introducing waveforms. There is absolutely nothing wrong with using visual cues. However, an overreliance on waveforms and lack of listening will result in abrupt cuts, awkward metering and disrupted breaths between words. For example, don't just rely on using Pro Tools' strip silence functionality on an aggressive setting. Fortunately, most software editing is non-destructive and cut regions can be extended.

Timing

Editing is more than the removal of background noise. A good sense of rhythm, timing and aesthetics play a big part in crafting compelling cuts, fades and edits. With tape editing, the physical mechanics of the process means that there is not much room to defer a fade for a later time. Splicing two lengths of tape together only leaves two options: cut and fade. The angle and direction of the fade can be changed to make it fade in or fade out at different speeds, but ultimately these are all fades.

What has changed is that editing work no longer needs to be front loaded early on. This workflow progression frees the engineer to make some editing and mixing decisions down the line.

Getting your hands dirty

The editing world is a sandbox and should be treated like one. When the opportunity to try something new comes along, it's encouraged to make the effort to try it out. John Roesch, a professional foley artist who worked on "Indiana Jones and the Raiders of the Lost Ark" has maintained that you can't tell good foley from the real thing. Nearly all the audio effects in "Raiders" were foley, with much of the sound recorded on set being full of noise from effects machines and sequences.

Foley is absolutely worth getting involved with, and building up a collection of props only helps improve your foley abilities. The same applies to found sound and capturing new sounds as they come; having a portable recorder on hand never hurts.

Sound Mixing

Sound mixing focuses on refining those freshly-edited tracks and working towards an end point. Direction may come from yourself or others if working with a team. This stage greatly benefits from a production plan and a destination. Sound mixing for the purpose of this article consolidates the work of the sound designer and mixing engineer, formerly known as "sound men".

Tools of The Trade

The editing stage uses a more modest set of tools compared to the considerably more lavish approach sound mixing offers. The digitization of tools does not stop at the editing stage. All of the outboard gear used in audio production nowadays have digital equivalents. The same can be said for sampled instruments. There are so many cases today where people don't bat an eyelid at hearing a string-section-in-a-box, quite possibly because the gap has grown narrow enough.

Common tools in the signal processing chain are: EQ, compressors, limiters, noise gates, reverb, delay, chorus, flanger and phaser. Automation is the final piece that ties everything

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altogether and sets all the changes in stone.

In Practice

Mixing is more than an exercise of balancing levels, trimming EQ's and adding effects. It requires imagination, intent, patience and a good ear. Decisions have purpose and, if you squint hard enough, use good theory.

Equalizers are used to sculpt sounds and bring out clarity. That is why we trim out the resonance on the lower end of vocal performances and give the midrange a bump. Delays and reverbs are equally capable of creating ambience, atmosphere or outright hypnotic sequences. Compressors can give a sound punch or give consistency to dialogue.

Work is completed in chunks and sections, even when working alone. Do not try to lift everything at once. Complete sections are much easier to manage as exported stems or groups – more on that later. Granted that track limits today have increased, Pro Tools support a maximum of 768 tracks with Logic Pro offering north of 1,000. Groups make life easier and keep your project tidy, which makes automation much easier. Automation is similar to scripting in the sense that it's typical to automate any manual task performed more than a handful of times.

Moments from history

There comes a moment where you realize that certain sound designers and editors played a very special part in some of your favorite shows and films. Their productions raised the bar to new heights and gave new memories to countless audiences.

These films are now decades old and still share a common thread to today's blockbuster productions. It is like going back in time and seeing the first uses of tools and methods considered standard practice today. Yes, today's films are louder and bolder, but the roots remain the same.

The San Francisco Boys

Ben Burtt and Richard L. Anderson graduated from the USC film school in 1975 and worked together on the first "Star Wars" and Indiana Jones films. Both have incredibly successful careers in the industry and shared an Oscar for their work on "Raiders of the Lost Ark."

The two were part of a group of two dozen young sound editors, dubbed by Frank Warner, known as the San Francisco Boys. The combination of fresh talent and visionary directors like Francis Ford Coppola and George Lucas helped drive the medium to new heights. It was the directors' attention to sound that enabled and drove this new generation of sound designers and editors.

The sound design for "Apocalypse Now" is the work of sound designer Walter Murch, another USC alumni who studied with George Lucas. The effects featured recordings of guns firing live ammunition, helicopters, and explosions.

"Raiders of the Lost Ark" still feels more modern than its age, and it's not alone. The years surrounding 1981 saw a number of films pushing the boundaries of sound and video. "Star Wars," "Apocalypse Now" and "Raiders of the Lost Ark" appeared in the span of four years. They challenged the pretext of what was possible and went on to inspire generations of filmmakers and editors alike.

Learning from the best

Using multitrack recording to the tune of 24 tracks or more, sometimes slaving together multiple tape machines, became a necessity. The early stages use higher track counts, though these numbers come down as more sections are mixed and split into groups. Burtt has discussed needing to control the levels of the brass and woodwinds separately, doing so with track groups, as to not lose the music elements inside the sound effects. Today this is both normal and necessary, as tracks are to be mixed and bounced in place as stems. Tracks can be sent to busses and managed that way, too.

The passion and attention that this brought was incredibly positive. The impactful audio found in those films was made possible by the craft that people like Burtt helped bring about, one that is still alive and well today.

Ben Burtt's and Richard L. Anderson's work on India Johns: Raiders of the Lost won both of them a Special Achievement Academy Award.

Blag spends his time between DevOps and audio. He works at a software company and is a contributing editor at Videomaker where he mainly focuses on, you guessed it, audio!

You can comment on this article by going online: www.videomaker.com/?p=72079187

by Robin Cripe

You set the expectations for your video

The internet is a saturated market, and differentiating yourself isn't easy. Before you can find an audience, you have to find passion.

One of the hardest things to do as a content creator is to find an audience. When seeking out your viewership, you might be tempted to follow the latest trend or search out an unoccupied niche. These approaches aren't inherently wrong, but they ignore the most important element to success: passion.

Passion should be what separates your YouTube channel from the millions of channel and content creators in the internet. A discerning audience wants more than just slick, well-produced video content — they want authenticity.

It's easy to underestimate the perceptiveness of your audience. To many, they're just numbers: How many views, likes, shares, subscribers can you collect? But it's important to recognize that your audience can tell when you're not having fun with your video. They know when your content lacks excitement and enthusiasm. One of the quickest ways to ruin any momentum you or your channel might have is to start creating content according to what you think other people want rather than what you want. Without that original passion, your audience will inevitably drift away.

When seeking out your viewership, you might be tempted to follow the latest trend or search out an unoccupied niche. These approaches aren't inherently wrong, but they ignore the most important element to success: passion. Passion should be what separates your YouTube channel from the millions of channel and content creators in the internet. A discerning audience wants more than just slick, well-produced video content — they want authenticity.

There are a lot of videos out there. They span nearly every conceivable topic. Audiences will instinctively gravitate towards the content creators who love the videos they produce. Worry less about whether you're making something for a specific audience and create content for yourself. Trust in your audience to find you rather than the other way around. Having enthusiasm and excitement for the subject is infectious — and inciting passion in an audience is the best way to secure clicks, likes, subscribers and shares and to keep people coming back to your channel.

None of this means you should ignore criticism or suggestions from your audience. Paying attention to your audience is one of the most critical considerations when building a channel. No one ever achieved success by ignoring criticism. But what is most important is letting that critique complement your content rather than define it.

It also doesn't mean you should be ignoring your metrics. Figure out what works and what doesn't — which of your videos draw in the most views? How far does your audience make it into your video? What percentage stays until the end? Carefully consider this information whenever you create and edit a new video. Let it influence future content, just don't let it dictate.

Pursuing your own passion is not only advantageous when it comes to growing an audience; it also helps maintain a career. When you're pursuing your own passion rather than someone else's, you'll find greater joy in what you do.

Enjoying your work leads to higher quality content, but it also makes for a more sustainable career. Burnout is a very real thing. It's important to do what you can to avoid it. Don't produce videos you don't like and avoid videos on subjects that don't interest you. Nothing will wear you out faster than disliking your own content.

Believe in your content. Talk about what fascinates you. Find ways to make your content unique. Listen to your audience. But, most importantly, follow your passion. Don't let anyone else set your expectations. Do that and the rest will follow.

Robin works in development for One Mobile Projector per Trainer, a non-profit that supplies aid organizations with video production training and equipment to improve the quality and impact of their message

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by Kyle Cassidy

Photography for video shooters

Even expert videographers can benefit from some photography 101, which is why we've compiled several tips and tricks to mastering the craft.

Still photography and videography are closely related fields. In fact, videography is just still photography at a clip of 30 times per second. But in concentrating on scenes rather than individual images, some of us get sloppy when putting videos together. Thinking of yourself as a still photographer making a series of beautiful images will help your final production be much better. To help promote that state of mind, here's a little photography 101 to get you in the still-image spirit.

Still cameras vs. video cameras

Back in ye-olden days, movie cameras and still cameras had very little in common, apart from using the same 35mm film. As still photography cameras got smaller and smaller, professional film and video cameras remained enormous — requiring heavy tripods or sturdy operators to function.

All of this started to change in 2008 when Nikon released the D90, the first digital SLR that was also an HD video camera. Today the distinction between pro video cameras and pro still cameras has shrunk to the point that cameras like Sony's Alpha series can be found in the hands of either a pro videographer or a pro still shooter, packed with features to delight both.

It all starts with planning and focus

Just like you wouldn't rent a bunch of gear, assemble a film crew and show up at a place with no idea what you're going to make a movie of, still photography benefits from pre-planning and study. Photography is a really broad spectrum and the skills and equipment that are useful for landscapes might not translate into portraits, for example. And while you're getting ready to begin your photographic adventure keep this in mind: the technical stuff is the least important. This may seem like a radical idea but it's true. Ideas are more important than f-stops and being able to talk to people is more important than a really great tripod. Concentrate on your ideas and the technical skills will come — this is because you can learn the technical things from a book (or better yet, a bunch of YouTube videos). While you're planning, ask yourself two questions:

> CONCENTRATE ON YOUR IDEAS AND THE TECHNICAL SKILLS WILL COME ...

- What do you want to photograph?
- Who photographs that already and does it well?

You might want to photograph people, or do behind the scenes stills for your video productions, or landscapes, or products against a white seamless backdrop, or you may want to add stills to your already existing wedding package. Once you've thought about this, start looking for people who are doing that type of photography really well already – great places to do this are Instagram and Flickr. Start collecting great photos (you can use Pinterest to keep folders of the most inspirational photos you find) and think about how the photographer executed them – where were they standing? Were they using wide lenses? Telephoto lenses? Did they light it themselves or use natural light? Check out books from your local library (the librarians would love to see you, it's been a while since you've been there), go to gallery shows, trade books with your friends or buy things in bookstores.

How to take good photos

Taking a good photo is more than having something nicely lit and sharply in focus. In fact, some of the most memorable and meaningful photos in history have been not perfectly lit and not perfectly in focus. A photograph is good because it is compelling to the eye – it doesn't have to be beautiful, but it needs to reach out and grab the viewer inside. Your photos should strive for an emotional connection; they should reflect the emotion you feel when you take them and help people experience something they weren't present for.

Equipment

As most directors will tell you, you can make a compelling story with very limited equipment – more equipment just makes it easier. The same is true with still photography. Many of the classic film photographs of the last 100 years were made with extremely modest equipment, certainly equipment that would slow down most of today's working pros.

It used to be that still photography cameras and video cameras were very different beasts, but over the past decade the two have merged to the extent that you can get one camera that's very good for both shooting video and taking stills. If you're in the market for new gear, be sure to take into consideration all of the things that you'll use it for. Will you want to shoot 4k? Will you want a camera that has audio in?

Don't get the kit lens

When buying a camera (and this is true for both stills and video) camera companies often throw in a "kit" lens in a bundle that includes a bunch of stuff like a camera bag and lens tissues and whatnots. They do this because the markup on the camera itself is very low, but the markup on accessories is really high. The kit lens is usually a mid-range zoom that does a bunch of things decently but nothing really well. Get yourself a camera body and a single fast prime lens, two accessories that will vastly improve your shooting capabilities.

You can actually use your phone

This isn't exactly a secret buried in our photography 101 tutorial, but the cameras in smartphones today are way better than a lot of the early professional digital cameras and they do extraordinarily impressive work. ▶▶

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Storytelling

Just because you're using a single frame instead of 30 frames per second doesn't mean that you're not still telling stories – it just means that you need to be much more careful about your framing because you only get one chance.

With every photo ask yourself "what story am I telling with this photo?" Story examples might be "this place is beautiful", "this moment is important" or "this thing needs to be recorded accurately." From there, ask yourself "can I do something to tell the story of that last photo better?" Can you move yourself or your camera? Can you improve the lighting? Can you make it clearer? When you can't think of anything else you could possibly do to improve that image, you're done.

Editing tools and tips

There are a few things that are essential parts of your final image. One of these is post processing. Sometimes you've done everything you can to capture the best possible frame, but there are still things you can do to make your image better. Almost no photo comes out of the camera the best that it can be, everything could benefit from a little TLC in the darkroom (or the modern digital equivalent). And, in fact, every photo starts its life with a wide range of futures before it. Like raw video footage before a LUT has been applied (and for more on LUT's in video's, check this out).

Every photo can look a myriad of different ways when it's finished. The secret is not processing heavily, but processing properly. Local photo competitions around the world are packed with photos that started out mediocre and became terrible because their creator knew just enough about Adobe Photoshop to ruin them. When budgeting for your equipment, put some money, or at least time, aside to take a course on some photo editing software like Adobe Lightroom, which can teach you how to not only fix major problems, but also to do minor adjustments with exposure and color that can nudge your photos from good to great.

How you process your photo will determine its finished quality. Always process your photos properly and don't go overboard with the edits.

> WITH EVERY PHOTO ASK YOURSELF "WHAT STORY AM I TELLING WITH THIS PHOTO?"

Getting your photos seen

Taking a good photos is only half the battle, as you'll know if you've seen John Maloof's 2013 documentary "Finding Vivian Maier." The film is about a gifted, prolific but heretofore anonymous street photographer whose amazing photographs sat unseen in a storage locker for decades before being discovered.

It used to be that after you had a set of decent photographs you'd put together a portfolio and start sending it to art galleries, hoping that one of them would decide to show your work. Then, you would spend hundreds or thousands of dollars carefully framing your work, hang them in a beautiful gallery and, if you were lucky, a few hundred people would walk through and look at them. While that still happens, the internet has changed a lot of things. There are photographers on websites like Instagram who show their photos to tens or hundreds of thousands of people a day without ever having made a single print.

A website

The first thing that a serious photographer should have is a website. You can use a builder site like Wix or Squarespace, or you can hire a web designer. Your website should have your contact info and a collection of your best photos. People will judge your work by what they see, it's better to have 10 great photos than 10 great photos and 20 mediocre ones.

Instagram

A lot of photographers use Instagram as their primary method of displaying photos. There are advantages to this, like its incredibly high user-base, but there are disadvantages too. Namely, Instagram likes for things to be cropped square, although photographers have found creative ways around this by posting multiple photos in the same post. Instagram also allows you to use hashtags which people people searching for topics. Your photo of a terrific sunset might include the hashtags #photography, #sunsets and #mountains. Instagram's organic discovery features allows people to gravitate to photographers they like if they're using hashtags well.

Image hosting

It used to be Flickr was the king of image-hosting websites and every photographer had one. Flickr's still there, but a whole host of other image hosting sites like Smugmug and others are providing stiff competition. Image-hosting sites can not only let people look at your photos, but can help you sell them and provide printing services and be one-stop shopping. This makes things easy for photographers who do a lot of business in print sales — the ability to let your customers order directly from your website and not have to handle fulfilment is tremendously convenient.

Putting the concepts into practice

Like making videos, creating still photos is a difficult and rewarding art that benefits from study. Spend a lot of time looking at photos in the way you do films — what photographers do you like? And when you deconstruct their images, what is it that you like about them? Take the tools you find useful and turn them to the subjects that interest you and drive and compel you.

Kyle is a videomaker, photographer, writer. Impulsively sneaks Bigfoot references into articles.

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by Sean Berry

Commercial photography guide

Commercial photography can be a lucrative and fulfilling profession. However, it's going to take some skill and planning to make it into a long-term career

Becoming a commercial photographer takes more than just skill with a camera. In reality, it takes a lot of planning and dedication to make it into a sustainable career. The fact of the matter is, the commercial photography industry is a vast industry with no clear path towards success.

While that might sound discouraging at first, it's one of the benefits of becoming a commercial photographer. You have a lot of freedom to develop your style and branding and find out what kind of commercial photography you want to do. It will take time, but it's possible to achieve with the right amount of determination and hard work.

What is commercial photography?

Commercial photography is a career where photographers take images for commercial purposes. Often, commercial photographers take pictures for businesses and clients to market their services or promote a product. Though, those are just a few services commercial photographers offer. They work closely with brands and clients, collaborating to ensure the end product is cohesive with both its branding and marketing campaign's messaging. Many commercial photographers work as freelancers and work for hire. It's common for commercial photographers to have a network of clients they consistently work with.

It's a commercial photographer's job to ensure that every image they take looks striking and works the client's brand.

Common areas of commercial photography

Product

Product photography is one of the most common areas of commercial photography. It involves taking images of products for commercial use. Product photographers use things like flattering, soft lighting and sharp focus to ensure the products look their best. Elements like camera angle, lighting type and the background will depend on the product and the brand. For instance, in the example pm the left, the photographer incorporated the colors of the Coca-Cola Zero design into the background. This choice not only creates a striking contrast between the black and red, but it also keeps in line with Coca-Cola's branding.

Portrait

Commercial portrait photography usually includes people in certain instances or actions that help promote the uses of a product or service. This type of photography allows brands to communicate to their audience the benefits of the product and why it's relevant. It's also a way to get people to associate a person (often a celebrity) with a product or brand. An example of this is the photos of the McDonald's marketing campaign featuring BTS. The campaign uses images of all the BTS members eating different portions of a McDonald's meal. In turn, this encourages people to associate the members with McDonald's and the meal's contents — influencing BTS fans to purchase the meal.

Fashion

Fashion photography promotes new clothing lines and show off the latest fashion trends — think fashion magazines. Commercial photographers can either shoot fashion with a standard focus or a more creative, artsy approach. Some advertisers will want to craft a story between the model and the clothing they're wearing, resulting in a unique advertisement for the clothing line.

Interior

Interior photography can help clients and real estate agents show off the best parts of a building's interior. Commercial photographers working in this space focus on presenting the building in the best possible light. Those selling homes might consider working with an interior photographer to market their homes in hopes of attracting potential buyers.

What you need to become a professional photographer

Have a portfolio

While you don't necessarily need formal photography training to become a professional photographer (although understanding the basics is a must), you'll need a portfolio to land work with clients. Your portfolio is essential, especially when starting out without much prior experience. Potential clients will want to see what you can do technically. They'll also want to make sure your style as a photographer works with them or you're versatile enough to make your style work with what they're looking for.

Have either a physical or digital portfolio you can show — preferably both. You want to ensure it's easy for potential clients to find your work. Take the time and create your portfolio online using a website builder. A few good options are Wix, Squarespace and Weebly. A solid online portfolio will categorize your areas of expertise, show off your best pieces in those areas and provide a breakdown of your process for each photo. Also, keep your portfolio as simple as possible. You don't want to fill your portfolio with unnecessary works or designs. Keep it clean and straight to the point.

Image courtesy: McDonald's

Commerical portrait photographers work to associate a person with a product. An example of this is the photos taken for McDonald's collaboration with South Korean boy band BTS.

Develop your brand as a photographer

The commercial photography market is highly competitive and full of talented, experienced photographers. Skill will only get you so far. You need to find your own style and branding to make sure you stand out from the rest of the crowd. It will take time to find your style, so feel free to experiment whenever you can. First, determine your brand's personality. Is your brand professional and clean or is it more artsy and drastic? Once you find your personality, find ways to convey it emotionally in your work. Your personal brand will also determine what kind of clients you work with and help

Fashion photography often tells a creative, unique story to promote new clothing lines or rising fashion trends.

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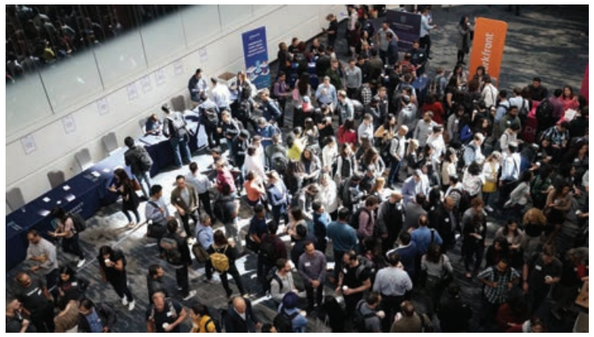
Interior photographers are needed to present the interior of a home or building in the best light possible to attract potential buyers.

you decide the type of clients you are open to working with.

Know the laws

As a professional photographer, it's up to you to know your rights and what you need to do to operate within the law. Specifically, know your image's usage rights. Since you're taking photos for clients, you have to make sure both you and your clients understand the licensing rights you agree to. For instance, if you're selling your commercial photos as stock photos, you can set up usage fees — fees clients pay to use your images. You also want to make sure that you agree with your clients that you can include your work in your portfolio after finishing a project. This is all done in the early stages of negotiation.



It can be hard finding work, so network with as many adversaries and clients as you can. You can also attend networking events to make new connections.

Tips for starting your commercial photography career

Network

When it comes down to it, the more people you know, the more work you'll be able to get. That's the truth of being work-for-hire. So be sure to stay in touch with clients you work with. While they might not need your services at the moment, they may recommend others to you. You can also attend networking events. There are usually a few events in larger cities. If you live far from one, you may need to travel, but it's worth it.

Keep your gear up to date

While you don't need to have all the latest gear, you should keep tabs on new releases. The industry standard for equipment is constantly changing, so you want to be sure you're keeping up with what clients will expect you to have. Of course, have a budget and don't feel pressured to go past it. If your gear works, then you don't need to upgrade just for the sake of it.

Know current trends

You want to stay on top of what's popular in your area of photography. Not only will you impress your clients, but you'll also help your and their bottom line. Capitalizing on what is popular (or what's soon to be popular) will attract more eyes to your photos and the business. Look at what competitors are doing and find what's working for them and do your own spin on it.

Skills you'll need

- Knowledge about digital photo equipment
- Communication with brands and clients
- An understanding of business strategy and practices
- Creativity

Conclusion

Making a career out of commercial photography isn't going to happen overnight. It's going to be a long journey. You have to build your portfolio and find your unique style and voice in the industry. Once you do that and start forming a circle of connections, you're well on your way to making a sustainable income as a commercial photographer.

Sean Berry is a blogger and ***Videomaker*** Associate Editor.

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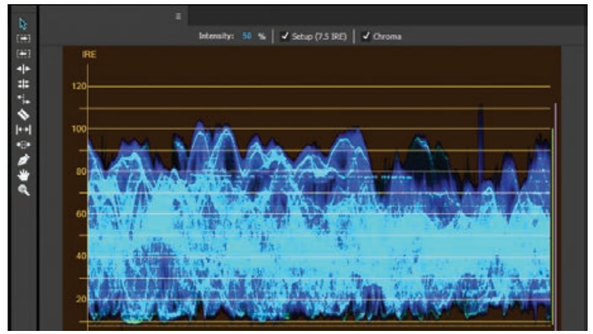
Demystifying common video editing terms for the self-taught editor

Video editing is one of those unique practices that is common for both personal and professional use, and can be taught through long, intensive programs at top-tier schools or self-taught at a learn-as-you-go pace. Some people do it for fun, and others make an excellent living with it.



There are also a bunch of us who have taught ourselves how to use editing tools for business. While there is absolutely nothing wrong with this practice, the lack of a formal education can sometimes create odd little gaps that leave our understanding of our editing software and its true capabilities incomplete.

Sometimes, we lack a fundamental theory or understanding that explains a technique or tool, and sometimes we just don't know what the heck something will do if we click on it.

Sometimes, erasing the knowledge gap is as simple as just reading what a few of the basic tools are, what they do and when they can be used. Heck, I edited for years before I did my first slip, and there was a tear in my eye the first time I used the rate stretch tool in one of my projects.

Let's look at a few such tools.

Rolling Edit: This tool provides the invaluable ability to roll an edit point between two clips in a timeline. When using the Rolling Edit Tool, you can move an edit point, timing the in point of one clip and the out point of the other clip, all without changing the combined duration of the two clips.

Sounds pretty handy for those times when you've already cut an entire project and you just need to nudge an edit, right?

Ripple Edit: This tool is used to trim the in or out point of a clip in a timeline. However, it does something very special. The Ripple Edit Tool closes any gaps caused by the edit and preserves all of the edits to the left or right of the just-trimmed clip. Therefore, if I drag the end of a clip back, the trailing clips will snap in to fill the now-empty space.

Rate Stretch: This tool allows a user to shorten a clip in a timeline by speeding up its playback or to lengthen it by slowing it down.

> UNDERSTANDING THE TOOLS OF EDITING CAN SHAPE AND DEFINE A WORKFLOW.

The Rate Stretch Tool changes the speed and duration of a clip, but leaves the in and out points of the clip unchanged. This can be very handy when a 1.2 second b-roll clip needs to fill a one second spot. Or a five second clip needs to fill a seven second spot.

Slip: This tool simultaneously changes the in and out points of a clip in a timeline while keeping the time span between them constant. For instance, if you have trimmed a 20 second clip down to 10 seconds, but you need to adjust exactly which 10 seconds appear in the clip, the Slip Tool is the ticket.

Slide: This tool allows users to move a clip to the left or right in a timeline while simultaneously trimming the two clips that surround it. The combined duration of the three clips, and where they appear in the timeline, remains unchanged.

So there are the basics for a handful of editing tools. There are more, obviously, but learning these tools, rather than endlessly switching between the basic Selection and Razor tools, can make a huge difference in the amount of time spent fiddling with an edit.

Understanding the tools of editing can shape and define a workflow that will lead to greater editing transparency, thus keeping your focus off of the shortcuts and firmly on the project's creative vision. Whether you cut in Premiere Pro, Media Composer, HitFilm or Final Cut Pro X, with the right knowledge, your editing software can become simply a tool to be bent to your creative will.

Russ Fairley is a writer, producer and musician.

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by Sean Berry

Premiere Rush vs. Premiere Pro

When comparing Premiere Rush vs. Prmiere Pro, both are solid video editing tools by Adobe. The right software between the two depends on your needs

Adobe is one of the largest and most widely used creative software companies in the world. From novices to Hollywood professionals, video editors from around the globe use the Adobe Creative Cloud to complete the work they do. Two of the collection's most popular applications amongst video creators are Adobe Premiere Pro and Premiere Rush.

While both applications are video editing software, they work best in different situations. If you're just starting in Adobe Creative Cloud, it can be a little confusing to know which application is best for your needs. Here, we'll go over each application, the differences between Premiere Rush vs. Pro and help you decide which application you should use and when.

What is Adobe Premiere Pro?

Premiere Pro is Adobe's heavy-hitting, flagship editing software for many professional video editors. The software, the follow-up to Adobe Premiere (released back in 2003), is a timeline-based video editing application. Essentially, that means all your media (video clips, audio, graphics, etc.) are layered onto Premiere Pro's interface linearly and progresses horizontally as you move later in the timeline.

Many professional-level productions (in commercials, film and television) use Premiere Pro to create pro-level edits. For example, Tim Miller and his crew edited the R-rated superhero movie Deadpool entirely in Premiere Pro. It was also used to edit Terminator: Dark Fate, Hail, Caesar! and Mindhunter.

Premiere Pro comes with everything you'd need to make a professional edit. It comes with a dozen customizable effects, presets and an interface that you'd be hard-pressed to find something similar video editing software.

Some of the key features of Premiere Pro

Keyframes

Keyframes are one of the most essential features of Premiere Pro, and they're something that sets the software apart from most editing applications. They allow you to make many edits to clips and graphics on the timeline. For instance, if you want a graphic to fade in at an exact frame and move at precisely four seconds after appearing in frame, you can do that in Premiere Pro with exact accuracy. Every single clip and effect you create in Premiere, you can keyframe them, giving you immense control.

Comprehensive color editing tools

While Premiere Pro offers a few color presets, you can dive deep into color edits and customize the look of your clips. You have access to tools like RGB curves and can adjust shadows, mid-tones, and highlights. You can also save color edits as presets so you can quickly apply the same color grade to multiple video files, saving you lots of time in post.

Support for multiple file formats

Premiere Pro supports a wide variety of native video formats. So, you don't have to go through conversion to ensure your files are supported. It saves you a lot of time when you're adding in media files.

Who should use Adobe Premiere Pro?

Premiere Pro is an application for video editors wanting to make an edit that goes past the standard adjustments you would do on standard software. If you're new to video editing or Premiere Pro, loading into the program for the first time can feel like being thrown into a cockpit without knowing how to fly a plane. Admittedly, there's a lot to Premiere Pro and it can be overwhelming for beginners. While Premiere Pro can do all of the basic editing functions, like trimming or overlaying music, it might take a little while to learn Premiere Pro to get the edit you want.

What is Adobe Premiere Rush?

Premiere Pro is the video editor featuring all the tools you'd ever need – comparatively, Premiere Rush is a trimmed-down, simpler video editor. As the name suggests, Premiere Rush is an application for quick edits on videos. While it is much simpler than Premiere Pro, that's isn't necessarily a bad thing. Anyone can pick up Premiere Rush and start editing videos with little to no prior experience. It features a timeline to add in a set number of video clips and a few audio and graphic layers.

Some of the key features of Premiere Rush

Basic clip editing tools

Like many other basic editing applications, Premiere Rush can do basic video edits on clips. This includes cropping, rotating, resizing and color correction. However, its color correction is slightly more comprehensive than the standard editor. It offers a few color grading presets and there are a few sliders you can adjust to get the look you like.

Audio tools

Premiere Rush also features a few audio adjustment tools. You can control the volume of different media files. For example, you can turn down a music file and increase the audio of a video clip. Additionally, there are tools to reduce noise and balance sound.

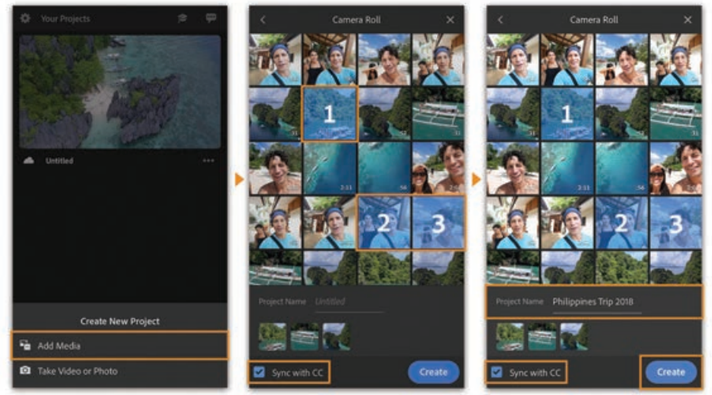
Mobile App

Premiere Rush shines when you use it with its mobile app. Available for iOS and Android, the Rush app allows you to either do an entire edit or start your edit on the go. This is highly useful for video professionals who travel a lot. Creators can create videos for social posts right on their smartphones. Also, video professionals can trim their clips while traveling, preparing them for a more extensive edit in Premiere Pro.

Who should use Adobe Premiere Rush?

Adobe Premiere Rush is an excellent program for beginners or those looking to do quick edits on their videos. It offers all the tools you need to make a clean, concise edit for posting on social media. Online creators who just need to do basic edits on their videos may want to use Premiere Rush, especially if they're on the go. The Rush app allows anyone to start edits right on their phone and finish it on mobile or desktop.

Premiere Rush files can also be converted into Premiere files. So pros can start in Rush, do basic edits and later import the files into Premiere Pro. It's a great starting point for professionals who may be traveling and want to get started on editing.



Premiere Pro offers a professional experience with industry-standard video editing features, while Premiere Rush makes it simple to create quality videos on the go.

Should you use Adobe Premiere Pro or Premiere Rush?

Adobe Premiere Pro and Premiere Rush are both helpful editing tools. They're just beneficial in different situations. Premiere Pro is Adobe's flagship video editing application; it's got nearly everything a professional video editor will ever need — which is excellent for more complex edits, but might be a little overkill for basic edits. Not everyone needs to pull out the big guns every time they need to make an edit on a video. For instance, trimming clips down to share on social media can be done in Premiere Pro, but it can probably be done faster in Premiere Rush. However, its inclusion of color correction, graphics and keyframes makes Premiere Pro a top-tier editor and only limited to the skill level and creativity of the user. However, what it lacks is simplicity and mobility. This is where Adobe Premiere Rush comes in.

Rush has all the fundamentals you would desire in video editing software. You can import media into its timeline, trim video clips, do basic color correction, add preset graphics and incorporate audio tracks into the project. Rush is an excellent software for people wanting to make a quick edit on their video or content creators making an edit on their video to share to social media. Additionally, Rush has a companion mobile app. You can start edits on your phone while traveling from set and finish them later on your desktop (since Premiere Rush saves to the Cloud.) Where Premiere Pro's strength lies in its expansive library of tools, Rush shines in its simplicity. It won't take long to learn the application to make a decent edit.

Two solid video editors – a good problem to have

Premiere Pro and Premiere Rush are each great in their own way when it comes down to it. The one you choose to use will depend on your workflow and the job you're working on. If you need a more extensive, complex edit, Premiere Pro is the way to go. If you want to make a quick edit or prepare your footage for a more expansive edit later, Premiere Rush is the better choice. Regardless of what you choose, both programs can help you create professional-level edits on your videos.

Sean Berry is a blogger and Videomaker Associate Editor.

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by Mark Levy

Do you need a model release?

Knowing when you need a model release form will protect you from future lawsuits. Use this guide to determine when a model release is warranted.

Whether you're working on a documentary, hip-hop music video, social media ad or anything in between, remember that if you're going to be recording people, make sure they sign a model release form. This basic-but-crucial step gives you permission to use footage of that person, control over what you can ultimately do with the final product and peace of mind that you're protected from unwanted future lawsuits.

What can happen if you don't have a model release form signed? Your subject can get cold feet right when you decide to publish and distribute your final product, effectively precluding you from using any footage or soundtrack of that person. If they're central to your video, that can be a disaster. If you publish the work, your subject can come to you after the fact and demand compensation or can force you to take down the content if they suddenly don't want their likeness publicized. We strongly recommend you have a video release on hand at the beginning of each shoot and make sure your subjects sign it before moving forward with the project.

Use this four-step checklist to determine if a model release form is needed. First, ask yourself, "can I identify the subject as a unique person or thing?" If not, you will not need a photo release. With individuals, the photo release is called a model or talent release. If your actors are identifiable subjects, they should sign model releases, but people whose faces the camera never captures, need not.

Next, "how will this photo be used?" If your video is to entertain the public or if you are shooting for commercial purposes, you will need photo releases. On the other hand, newspapers, TV news stations, online reporters and photojournalists aren't required to obtain permission to take people's pictures at newsworthy events. They are considered editorial sources rather than commercial operations. Their chief purpose is to inform and educate. So, if you're shooting for editorial purposes for a news organization, generally you shouldn't have to have permission or releases.

Next, "is the video to be taped on public or private premises?" The owners of private areas, such as homes and corporate buildings, generally have more rights than do caretakers of public settings such as streets, museums and zoos. In other words, taping on public property may not require a photo release, but taping on private property generally does.

Lastly, "will there be compensation?" If you don't pay your actors, the release may not actually be an enforceable contract. In California, for example, the release is considered merely a "gratuitous promise." Look up your state's requirement for compensation. Be safe and pay each of your actors at least a dollar.

Right of privacy

People in public have limited rights of privacy. The more famous the public figures, the stronger your right to shoot them.

But even if you are not starting a production company or trying to sell a shot to a stock media site, if you plan to use images of unknown people you will need model release forms. That said, it's a good idea to have them signed at the beginning of your shoot.

Be sensitive to people's privacy in public if what you're covering is a tragic event such as a car accident, house fire or medical situation. Shooting the medical personnel, firefighters or police isn't generally a problem, but shooting the victims is. Often, news people will shoot half-angles of faces they want to obscure. While video recording police in the line of action is your right, if they and you are on public property, and if you are obstructing traffic or endangering others or preventing them from doing their job, they can take action against you.

Private property

As long as you are in a public place, you might not need to get a location release but you might need permits to shoot. Many city and state governments have film commissions that run the video red-tape for location shooting permits. Here is a link to a Videomaker forum that directs you to the U.S. Film Commission offices in each state.

Each state's office can tip you to the specific city office. When you need to gather permits for location shooting, plan far enough in advance, and let the commission(s) know the exact times and dates for your shoot, along with the amount of gear and the number of anticipated crew members. Will you need to shut down streets? Entrances to public buildings? Parks? This requires even more red tape, so have your needs all planned as well as a budget for possible processing fees.

Shooting on private property requires permission of the owner or authorized agent. Places like your local museum, mall or zoo might seem to be public property, but they aren't and they have rules for photo and video that are usually printed in the fine print on the back of your entry ticket. If you are shooting for only a day in the park with family and friends, even if you plan to post it to YouTube, that will generally be permitted, but if you are shooting for commercial purposes, you might not be able to proceed without permission. When you are selling your images for anything other than editorial (educational or informational) coverage, the property owners might simply not want you to create a commercial product.

When do you need a release?

In summary, here are reasons you will need to have signed model release forms.

- If you are using a person in your video for a commercial video.
- If the event you are shooting isn't at a public venue – that is, if the event is private, even if it's in a seemingly public place.
- If the event is private, you might need permission from the owner or agent of the property, but that can be implied or agreed upon with the person or organization that is booking the venue.
- Places that appear to be public but aren't, like a ballpark, amusement park and other large private venues.
- You shoot someone (unknown or celebrity) in a public place who happens to be holding a can of Pepsi Cola, for example. You can use that image, except if you are using it as an advertisement for that, or any other company.
- When someone's face is seen in an advertisement or endorsement or as a representative of a business, product or service.
- If an advertisement or endorsement includes any company or product trademark or a recognizable building.
- If the shot was taken on or of private property.
- If the shot was taken on public property of events happening on private property, like a wedding, people having a barbeque, inside someone's home without their knowledge or consent.
- Shooting minors, especially very young children, under any circumstances without their guardian's consent.

Where can I find a model release form?

Most of your shooting will be non-editorial, which means you should carry a supply of talent releases. The appropriate release should be considered a standard item of video production, like extra batteries. Many places have sample forms, including from Videomaker. We sell a "Book of Forms" that has samples of every form you can possibly think of, from a model release

figure 1.

Spoken agreement

(Read this aloud)

I, _____, give _____ the right to use my name, likeness, still or moving image, voice, appearance, and performance in a videotape program. This grant includes without limitation the right to edit, mix or duplicate and to use or re-use this videotape program in whole or part. I acknowledge that I have no interest or ownership in the videotape program or its copyright. I also grant the right to broadcast, exhibit, market, sell, and otherwise distribute this videotape program, either in whole or in part, and either alone or with other products for any lawful purpose. In consideration of all of the above, I hereby acknowledge receipt of reasonable and fair consideration.

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MODEL RELEASE FORM SAMPLE **figure 2.**

PHOTOGRAPHER NAME: _____
LOCATION: _____
DATE _____

For and in consideration of benefits to be derived by me from the participation in activities of _____ (the Photographer), including, but not limited to, the above listed photo/video shoot, I, the undersigned Participant, hereby authorizes the Photographer, and any agents, officers, employees or servants of the Photographer, to record and photograph my image and/or voice for purposes that include, but are not limited to, the creation of educational and/or other informational materials, entertainment or teaching. I consent to my name being used with my photograph or moving image. I specifically acknowledge and agree that any photo and/or video appearance of me may be displayed online and used in any manner or medium and for any purpose desired by the Photographer.

I understand and agree that these audio, video, film and/or print images may be used, edited, duplicated, distributed, reproduced, broadcast and/or reformatted in any form and manner without payment of fees to me or to anyone else on my behalf forever, and I hereby relinquish all right, title and interest therein to the Photographer.

I release the Photographer and any agents, officers, employees or servants thereof from any and all liability relating to the taking, reproduction and/or use of such photographs, video images and/or sound recordings. I hereby certify that I am at least 18 years of age and that I am legally competent to sign this form. If I am under the age of 18, I have had my parent or legal guardian sign this form, below, along with myself.

PARTICIPANT'S FULL NAME _____
(PRINTED) _____
SIGNATURE _____
EMAIL/PHONE_____

form template to a talent release form, to video production shooting lists, location release forms, video production costs checklists and production tracking lists for starting a production company. Some of these can be downloaded individually on our site: https://www.videomaker.com/l/book_of_forms. The entire book can be downloaded or purchased as a printed copy with a CD of forms.

This link will take you to one online release form offered on the Videomaker website. You can check out our "Videomaker Complete Book of Forms" here.

Spoken agreement

When you don't have a written release, or are interviewing a lot of people in a very short time, you can sometimes get away with a verbal release. Have the person read a short script while on camera. That verbal agreement must include the person's name, the date, the video production company or producers' name and clearly defined understanding of what the shoot is for. Here is an example. (**figure 1.**)

Remember, unless the photo release states commercial use, the signed release may not be sufficient to use the footage to sell goods or services.

What happens if you fail to obtain a photo release but choose to make and use the video anyway? If this happens, make sure you obtained the photo without trespassing on private property. Photo releases fall under the First Amendment, but you do not want to violate an individual's right of privacy or publicity. If, as a videographer, you have obtained an image of a clearly identifiable person or object, you can remove identifiable features (e.g., tattoos), if possible. Some videographers digitally alter the image, which is why you see blurred or silhouetted shots, especially on broadcast news footage. Feel free to use the following form (**figure 2.**) for your talent's signature and date.

Living in a free country like the United States, you might have the right to shoot almost whenever, whoever or wherever you want. But the person or owner of the location that you are shooting has rights to privacy, and their rights can supersede yours. Use your model release forms and location release forms wisely.

Mark Levy has been contributing articles to ***Videomaker*** magazine since 1988. He is past president of the Amateur Movie Makers Association and has won awards internationally for his short films and videos. He practices intellectual property law (patents, trademarks, and copyrights) in Evergreen, Colorado.

You can comment on this article by going online: www.videomaker.com/?p=72081226

by Sean Berry

What is astrophotography?

Many photographers can make the transition from traditional photography to astrophotography. Here's what you need to know to do it yourself.

Since the 1800s, many technological developments have allowed the art of astrophotography to become both a lucrative profession and a popular pastime for many. Being a subset of photography, it's common for many traditional photographers to transition into astrophotography. Both areas share a lot of the same gear requirements and needed skills.

However, there are a few things you need to know and acquire before photographers can jump into astrophotography. To really master the art of astrophotography, it will take time, studying and investment. It's going to take even longer if you want to make a career out of astrophotography. Regardless of your intent, there are a few things you should know before venturing out to capture the night sky.

Definition

The definition of astrophotography is a type of photography that captures a celestial object or events. Essentially, if in space and you capture it with a camera, you're engaging in astrophotography. Now, there are different levels of astrophotographers, ranging from amateurs to professionals working for the likes of NASA.

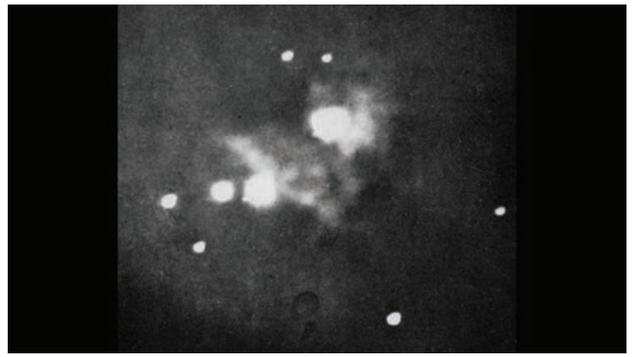

Image courtesy: Henry Draper

Hentry Draper is credited with taking the first image of the Great Nebula of Orion — shot back in 1883.

History of astrophotography

Astrophotography has a long history, but it's quite a new form of photography.

The first known attempts at astrophotography were from Louis Jacques Mandé Daguerre (the father of the daguerreotype). In 1839, he tried to photograph the moon. Though the image turned out fuzzy, it helped form a new type of photography dedicated to capturing celestial objects and events.

Other early major achievements in astrophotography come from John William Draper (who took the first successful photo of the moon) and Léon Foucault (who took the first photograph of the sun). Additionally, in 1883, Henry Draper — an American doctor and an amateur astronomer — took the first photograph (daguerreotype) of an astronomical nebula (the Great Nebula of Orion)

Initially, astrophotography was primarily for scientific purposes and discovery. However, over the years, as technology's become more advanced and accessible to the public, it has expanded its role. Today, you don't need to be a professional with the most high-tech equipment to engage with astrophotography. Today's hobbyist astrophotography market has grown into a formidable industry.

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Canon EOS Ra. Image courtesy: AstroBackyard

To shoot the stars, you need a capable, dedicated astronomy camera like the Canon EOS Ra.

Professional vs. amateur astrophotographers

Astrophotography is a popular hobby for many photographers. While professional and amateur astrophotographers both capture objects in space, there are many differences between them. Typically, amateur astrophotographers focus on capturing aesthetically-pleasing images. They're less concerned with capturing or recording the events for scientific purposes. This group of astrophotographers uses a wide range of gear, including anything from telescopes they bought online to homemade equipment.

While professional astrophotographers aim to capture a high-quality image, it's for different reasons. Instead of aesthetic purpose, professionals want to ensure the images they're capturing are clear and composed well to capture the celestial object or event. Later, they'll use the information they capture for scientific research and data.

Education needed

To become a professional astrophotographer working for organizations like NSA, you have to spend a decent amount of time in college studying relevant fields. The most common degrees astrophotographers have are Masters or Ph.D.'s in science, computer science or engineering. Additionally, it would be best if you had classes in astronomy and advanced photography. Having a formal education is essential in this area of the industry because it's very competitive.

Gear you need

When you're starting in astrophotography, start slow. There's a lot of gear you can get, but when you're just starting out, a DSLR or Mirrorless camera and a sturdy tripod will suffice. As you learn the basics, you can start adding to your gear. Here's a rundown of the equipment you can look into as you break into astrophotography.

Star-tracker mount. Image courtesy: AstroBackyard

Star trackers are motorized mounts that allow you camera to follow things like starts, comets or plants.

Camera

Typically, the standard types of cameras used for astrophotography are top-of-the-line DSLRs and Mirrorless cameras with manual modes. While you can use other cameras, such as your phone, the quality of the image won't come close. You need access to various settings and specs that you can't get without using a professional camera. Typically, you're going to want a camera with an ISO that goes up to either 2000, 3200 or 6400. While an ISO of 800 or 1600 is acceptable, it will not deliver as much quality as the higher ISO levels. When working at a higher ISO, make sure your noise levels are in check as well. While higher ISOs generally deliver more picture quality, it can result in noise if you go too high.

Lens

The type of lens you use is just as important as the kind of camera you use. Opt for a wide-angle lens with a wide aperture — you're going to need to welcome as much light into your camera's sensor as possible. Having a wider aperture allows more light to enter the lens. Shoot for a 34mm aperture lens, a focal length of about 14 to 20 mm and an f-stop of f/2.8 or faster.

Star-tracker mount

This mount is specifically for astrophotography. To capture clear images of objects in space, you need to have long exposure times. Since the earth is continuously rotating faster than any of us realize, you need to have this mount to ensure the image is clear. Otherwise, you'll end up with blurry trails as the sensor isn't moving along with the light as the earth rotates.

Tripod

Tripods are essential in astrophotography. They allow you to keep your camera steady for long periods, which lets your camera to take in as much light as it needs. If you don't use a tripod (or if you use an unsteady one), you run the risk of your images coming out blurry. There are several good tripods out there. Ideally, you'll want one that is portable and easy to transport because you're going to be shooting outdoors. Check out our tripod buyer's guide for some of our suggestions.

Tips from beginning astrophotographers

Use manual focus

No matter how good a camera's autofocus is, it's going to struggle to focus on stars. The only way you can ensure your image is in focus is to have your camera and lens set to manual mode. You'll have to make the focusing adjustments yourself, but that's the only practical way you can get the night sky in focus.

Consider you environment

The best time to shoot astrophotography is at night. However, the best time to scout out a shooting location is in the day. You want to pick out a place with stable terrain, so it would be as easy as possible to keep your camera stable throughout the shoot. Also, be sure to pick a place that's safe to travel to in the middle of the night.

There are a few apps out there that can simulate the night sky. They can help you plan out your shot and determine if your location is a good spot.

Bring extra batteries and memory cards

Astrophotography takes up a lot of power and memory. Extra batteries and memory cards will save you from having to cut your shooting session shot.

There's no better time to start than now

Astrophotography requires a similar skill set to traditional photography. It would be best if you had a basic understanding of compassion and know the settings layout of your camera. It also has its unique requirements, such as an understanding of constellations and timing. You also need the right kind of gear capable of capturing celestial objects at night.

That being said, if you want to pick up astrophotography, start slow and work your way up. Learn your gear and what settings work best. As you learn, your skills will improve and your images will follow suit

Sean Berry is a blogger and ***Videomaker*** Associate Editor.

You can comment on this article by going online: www.videomaker.com/?p=72080193

MARKET PLACE

MARKET PLACE

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TAKE FIVE

5 quick production tips

by Sean Berry

5 time-saving tips for busy video producers

When schedules get tight, video producers need to save as much time as they can. Here are five helpful tips to help you save time on set.

Video producers deal with a lot on set and are always pressed for time. Time is money and you can't waste it. That's why we collected these 5 time-saving tips for video producers.

To prevent wasting your time, you need to be vigilant to identify and deter any potential problems. Use these 5 time-saving tips to help you run your shoot much more efficiently:

1. Light a stand-in

Lighting your set can take up a ton of time. It can be much more efficient if you get all the preliminary positioning done before your actors arrive. You don't need to wait for them to arrive to get the lighting ready. Use a friend or crew member as a stand-in to get the lighting, audio and camera set.

2. Mic a position, not your actor

One way to save time on your set is to use a lavaliere mic for most scenes. Attaching a lav microphone to your actor can take up a lot of time, but it isn't always necessary. If you shoot multiple interview subjects, it may be easier to mic the position, rather than individually mic each interviewee.

3. Group and shoot shots by setup

Another way you can save time is to shoot your segments out of sequence. It requires some organizational skills and a good eye for continuity, but shooting segments out of sequence can be a huge time saver.

4. Pack the same way every day

Knowing where everything is will save you time. Pack everything you bring to set the same way every day. This will allow you know instantly where something is so you can grab it right away. You can stay focused and get what you need in a matter of seconds.

5. Silence your cell

Never allow your phone to interrupt your important work on set. Cell phones can be a huge distraction. Silence it so you can focus on the tasks at hand.

We hope these 5 time-saving video tips will end up saving you a lot of time on your set. You can learn more about these time-saving tips by reading "5 Time-Saving Corners to Cut on the Set."

Mic a location, not individuals to save time.

Sean Berry is a blogger and Videomaker Associate Editor.

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8 TIPS
For Making Eye-Popping Video
the First Time You Pick Up a Camera
It's more achievable than you think.

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- How to organize your thoughts into a video story.
- The secret to shooting footage that looks good on any screen.
- How video is different than real life... and how to take advantage of that while editing.
- The single most important tip for keeping an audience interested. This remarkably simple editing tip will free you from your old style of thinking so you can see the world the way the video pros do.
- The two easy steps to handling your video camera like a pro and capturing the best possible footage.
- The mistake that can sink a first video and how you can avoid it.

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