

ABOVE AND BEYOND

Take it to the next level with these photo, video, and flying tips from the pros

BY TEAM PHOTODRONE

Learning a new craft, such as filming from a drone, can be a time-consuming adventure. As with any learning curve, advice from experts in the field is invaluable and worth its weight in gold. That's why we asked eight of the best aerial shooters we know to share their tips and tricks on how you can improve your photos and video. Heed their outstanding advice and you'll be well on your way to becoming a pro cinematographer/photographer yourself!



Know Your Gear

The main thing I will tell someone looking to improve his or her video is to really know your equipment. You should always be a student of the craft and equipment. Continuously be learning and trying new things—that's really the only way to get better at anything. If you don't know how to set up your camera, your video will look bad. If you don't know how to fly your drone and use it to the full extent, you are missing out. Read the instructions.

DREW ROBERTS, WILD RABBIT AERIAL PRODUCTIONS

Drew Roberts is the founder, CEO, and chief pilot of Wild Rabbit Aerial Productions. Drew, educated at the Art Center College of Design, is a commercial photographer and FAA-licensed pilot.

Make Small Tweaks

Look for little things that will add to the quality of your videos, like polarizing filter for your Phantom or Yuneec drone. Sometimes, little things like this will improve your video a lot.

Pictured above (left to right): Katee Laine (producer and camera operator), Drew Roberts (lead pilot), Nathan Labruzzo (drone technician and pilot), and Parker Davis (intern). The Wild Rabbit team travels to the job in this custom-made van, loaded with everything they need for the shoot.



Practice by Tracking a Moving Object

Going to the park and practicing flying will improve your flying, but what we like to do is set up a real-life shoot that we would be hired for. If we can find a safe place to do it, we practice following a car or some other moving object. This hones our skills and allows us to improve our flying and shooting at the same time. Tracking practices will really help hone pilot and camera-operator skills. Park flying is great for testing gear or breaking in a new rig.



Know before You Fly

When I'm asked by pilots how to figure out if they are flying too close to an airport, I recommend the newly released B4UFLY app for Apple and Android systems. Inside the app, users find out if it is safe to fly at their current location. By tapping twice at that location, a status indicator will pop up and tell the user one of three messages: "Proceed with Caution," "Warning—Action Required," or "Flight Prohibited."

Use a Ground Reference

Practice flying in a circle while holding a constant airspeed and altitude. Once you're comfortable with that, practice flying a rectangular pattern and then move onto figure-8 patterns. Repeat this until it's easy and you are able to safely maneuver your multirotor. You should also practice constant airspeed climbs and descents as well as spot landing. Using a line on the field as a ground reference for slight maneuvers will help improve your flying skills.



Practice flying a rectangular pattern and then move onto figure-8 patterns. Repeat this until it's easy and you are able to safely maneuver your multirotor.



GUS CALDERON, AIRSPACE CONSULTING

As an FAA-certified commercial pilot, Gus Calderon's approach to the operation of small unmanned aerial systems (UAS) is focused on safety. He has more than 20 years of experience in aviation and has owned and operated an FAA-certified air charter operation and flown corporate jets.



Get an Aerial Perspective

I have flown indoors many times, and I am comfortable doing my rounds in a big room or hallway. But a cave is a different world. As contradictory as it sounds, flying in a small cave is much easier than in a large one. For starters, you have very little depth perception—especially with your machine 500 or 1,000 feet away. Then there are no GPS signals, so you have to fly in ATTI mode, a mode that allows your machine to drift. Most of the time, my eyes are glued to the screen. But every 15 or 20 seconds, I look up to get a view from where I'm standing. Sometimes I have to just stop in midair and see what's around me to know how close or far away I am from the wall or ceiling.



ROMEO DURSCHER, DJI

Born and raised in Switzerland, Romeo Durscher moved to San Jose, California, to work on a NASA space mission. After almost 13 years of working on NASA's Solar Dynamics Observatory, Romeo joined DJI, a global leader in UAS, as its director of education.



Create a Panorama

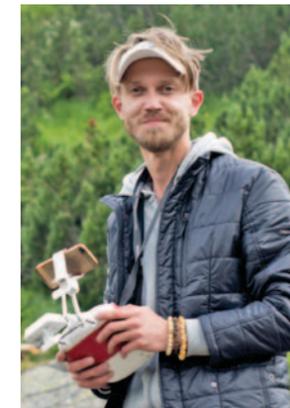
When approaching a new site, I pick the location that I want to have right in the picture, and I launch the drone straight up from the very edge of it. Once it is high enough, I simply rotate the drone around its axis. The camera is on time lapse, taking two pictures per second. If the conditions allow for a steady flight, sometimes those pictures overlap each other enough to stitch an aerial panorama together afterward. Because these cameras have super-wide-angle lenses, a barrel distortion is unavoidable, but programs like Adobe Lightroom have built-in filters, which can reverse that effect. Once I have a series of corrected panorama shots, they can be combined. I used the program Hugin, for example, to assemble the shot of the Napoleon castle on Guadeloupe.

ANDREAS FORRER, PH.D, ARCHEOLOGY RESEARCHER

Currently working on a thesis related to archaeological excavations in Greece, Andreas Forrer is certain that the pictures from his DJI Phantom of these sites will be helpful for the analytical work that follows.



Don't be in a hurry. It's better to take one good image than 10 average ones.



KAROLIS JANULIS, ARTIST

Having won numerous awards for his aerial photography, Karolis Janulis is enthusiastic about showing his works to a wider audience around the world.

Watch the Shadows

Shadows in the street can bring life to some wonderful compositions in aerial photography. Just wait a little longer until the shadows fill in and extend. Don't be in a hurry to take a photo. It's better to take one good image than 10 average ones.

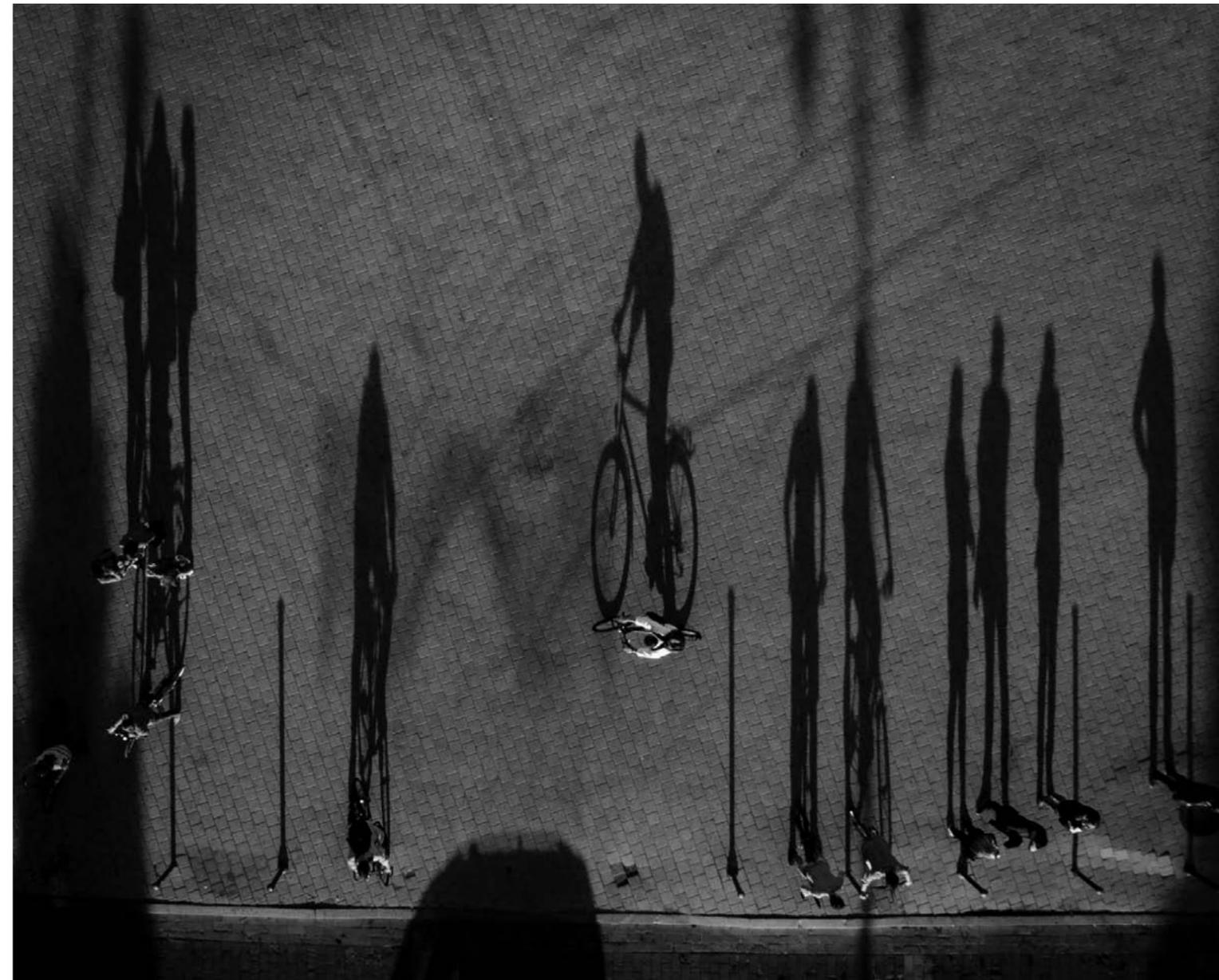


JOHN REID, SENIOR EDITOR, ROTORDRONE

A senior editor at Air Age Media, John Reid works on many national magazines geared toward lifestyle-hobby enthusiasts, and his photography is regularly published in Air Age titles.

Practice Reverse Control

When the multirotor is facing away from you, its controls are oriented correctly, but when the multirotor is facing toward you, the controls are backward. There is really no easy way around this. You just have to practice flying your multirotor going away from you and coming back toward you until you feel comfortable flying both ways. The best way to learn this is by flying a horizontal figure-8 in the sky, first clockwise and then counterclockwise. This maneuver will give you the skills you need to fly toward yourself from both the left and right. A related issue is when the multirotor is far away, you may have trouble figuring out where the front of the aircraft is. To solve this, use different color props along with colored tape or brightly colored front booms to help you orient the aircraft in the sky at a distance.





**ROBERT C. RODRIGUEZ,
PRESIDENT & CEO OF
THE SOCIETY OF AERIAL
CINEMATOGRAPHY**

Having worked in the entertainment industry for more than two decades, Robert Rodriguez is the founder of the Society of Aerial Cinematography (thesoac.com), a community of professionals supporting aerial cinematography in the film and television industries.



Use Shortcuts

I'm going to let you in on a secret: No matter what program you select, you have to take shortcuts to be your creative best. I'm not talking about cutting corners on quality; I'm talking about learning how to use your editing software by feel, like you would a musical instrument. Nothing takes you out of the moment more than having to go through all the menus to look for a feature that you could otherwise accomplish with a few keyboard combinations. If the J, K, L, I, and O keys on your keyboard aren't worn out, you're not working efficiently. [Editor's note: These keys navigate through and mark video footage rapidly and are common on almost all video-editing programs.]

Keep It Simple

One key rule for editing video footage from your drone is to keep it simple. Most editing software has a ton of available effects. Don't feel you need to use them all! Transitions, effects, and filters that are plastered all over the timeline just make the video look amateurish. It will be abundantly clear that you are relying on cheesy effects to distract from lack of footage or inspiration. It's better to present a piece that's shorter than you intended than posterize eight shots to fill time. There is a time and a place for using effects and transitions, and it's usually—but not always—at the beginning and end of a sequence. Use transitions as needed, but please use them sparingly.

Shoot Plenty of B-Roll

Learn to use your B-roll, the material you cut away to during an interview or demonstrative video. For example, when the speaker mentions a feature of the drone, the video should cut away to a close-up of that feature or to footage of that drone in flight. Cutting away to B-roll also allows you to put words in your speaker's mouth or clean up someone whose favorite word is "um." With some creative audio editorial and plenty of B-roll, you can make anyone speak eloquently about any topic.



Be Organized

Be sure to get your workspace in order and take some time to organize projects intuitively. One of the worst things you can do is just dump everything into one bin and try to find it when needed. You should find what works best for you, but I suggest grouping shots by shoot date and then by scene or type. Keep your sequences in a separate bin, and label them clearly. Music, graphic elements, and pictures all do well tied up in their respective bins as well. This would also help if, for some reason, you weren't able to finish a job and someone else needed to take over the project; that person should be able to find everything without having to involve you.

A D

Most editing software has a ton of available effects. Don't feel you need to use them all! Transitions, effects, and filters that are plastered all over the timeline just make the video look amateurish.



WILLIAM LEVASSEUR, WL PRODUCTION

William Levasseur has worked in the media field since 2005, including a stint as a journalist at Radio-Canada. He then moved on to journalistic writing and broadcasting, and is now in the field of video production.

Shift to Manual Mode

Do an idiot check: Center your controls sticks, and check that you haven't flicked on the wrong switch by mistake. Shift to Manual mode; the GPS mode is both a blessing and curse. If the loss of control started while in GPS mode, some aspect of your aircraft automation might be at fault. Switch to Manual (or Attitude) mode, which might allow you to recover. This is why it is always good to learn how to fly in Manual mode.

Protect Your Lens

Don't sandblast your lens. Propellers lift a lot of dust during takeoff and landing, and those particles can hit the lens at high speeds and make minuscule scratches. Over time, your images will get blurrier and blurrier. You can point the gimbal upward to reduce the risk, but that's not foolproof. Pros carry a tarp and lay down a takeoff and landing safe zone. They will put something heavy on each corner so that it doesn't catch in the wind.



The most important light source for aerial video is the sun, so learn to use it.



Time Your Shoots

If you're filming a building or landscape, figure out what time of day the sunlight will be shining on the side that you want to shoot. Direct sunlight means more contrast and a livelier picture. Cloudy days are flatter because of the lack of highlights. In cinema, lighting a shoot is as important as framing it. The most important light source for aerial video is the sun, so learn to use it. Also, watch out for the shadow of your aircraft in the shot.

If you're filming over a lake or anywhere the camera is subjected to a lot of reflected light, you should use a polarized filter. The polarizer will cut some of the light but only the undesirable reflections.

Use Light Filters

When shooting on a sunny day, remember that cameras need sunglasses, too. If you're filming over a lake or anywhere the camera is subjected to a lot of reflected light, you should use a polarized filter. This tip comes from Patrice Larose, rental and professional video director at Lozeau camera store. "The polarizer will cut some of the light," he explains, "but only the undesirable reflections. This will allow us to get a lot more detail out of a thing like snow, without blocking all the rest of the light in the image." Circular polarized filters are usually sold mounted on a lens ring, and there are some available for sport cameras. But don't buy the thin flexible polarizing films; those are meant for studio lights.



Shot with fisheye lens



Shot without fisheye lens

Give Fisheye the Stink Eye

Most sports cameras have a fisheye lens that distorts your image, curving the horizon, roads, and buildings. There are a few ways of fixing that. You can install an aftermarket lens. But be warned; some of them cost upward of \$100. Otherwise, some cameras may offer a "narrow field of view" recording mode, which can help, at the cost of reduced resolution. Software is another option, and many editing software packages now come with presets for the most common cameras.

Get to Know Your Camera

Are you shooting at 720p with a camera that can do 4K? Could you be recording in RAW mode, but you aren't using it? Did you check your focus? Did you turn on the optical image stabilization? Getting to know your camera is important if you want to get the most out of it. Watch tutorials, and read the manual. Your camera may be better than you think.