

FEATURING: EXCLUSIVE CONTENT FROM YOUTUBE'S LEADING EDUCATORS

FROM DRONE ZERO TO DRONE HERO

37 DRONE TIPS TO GET YOU
FLYING LIKE A FILMMAKER

BY STEWART & ALINA CARROLL
WWW.DRONEFILMGUIDE.COM

FREE

"JUST BECAUSE YOU
CAN FLY HIGH DOESN'T
MEAN YOU SHOULD"



ABOVE: MAVIC 2 PRO // 3 PHOTO PANORAMA STICHED IN LIGHTROOM
USING THE DRONE WE WERE ABLE TO QUICKLY ACCESS THIS POINT OF THE RIVER AND ACHIEVE A COMPOSITION THAT WOULD
HAVE BEEN VERY DIFFICULT BY CONVENTIONAL MEANS

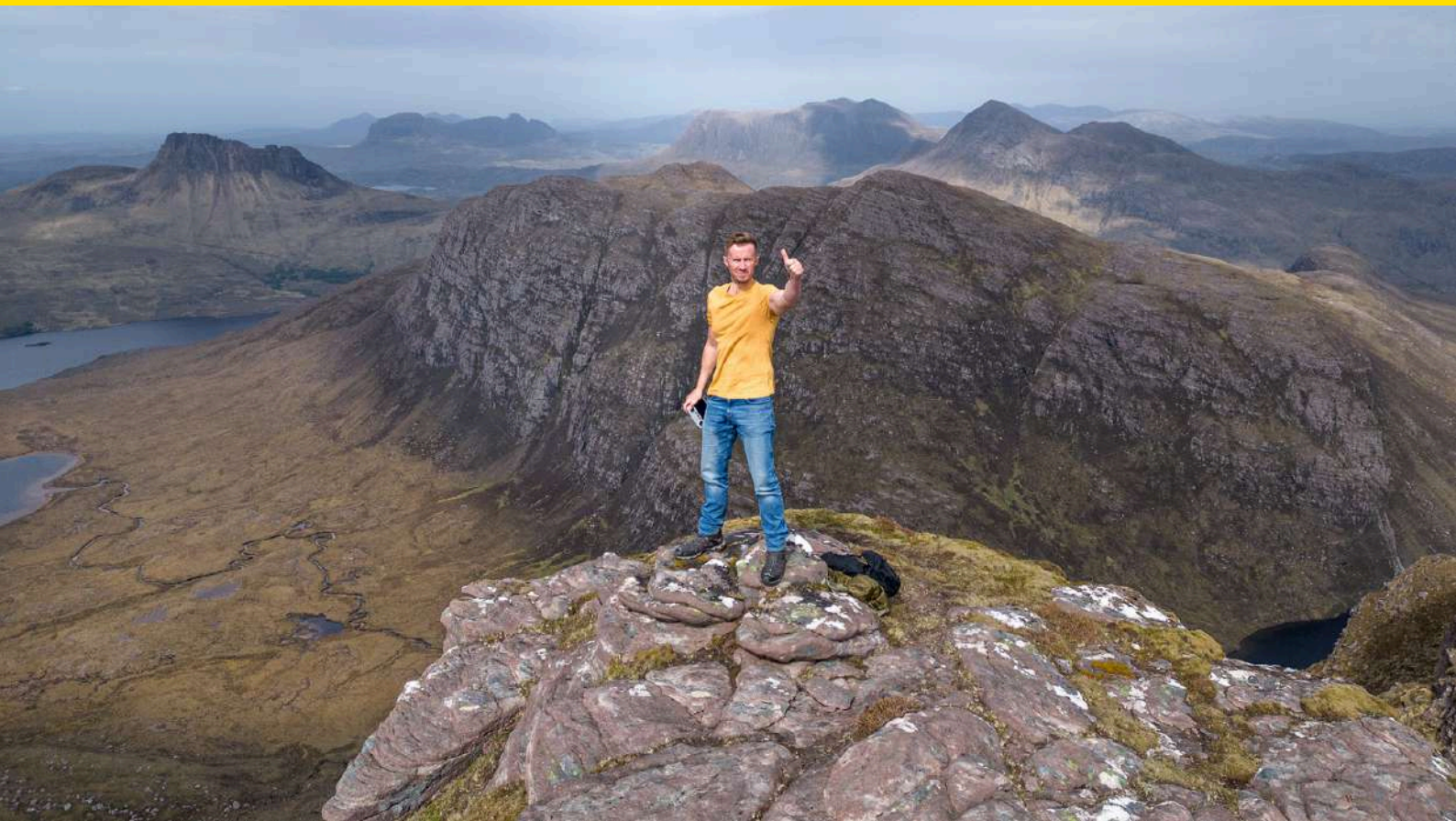


PART ONE

10 THINGS I WISH WE KNEW ON DAY ONE

Hindsight is a wonderful thing. Tap into our experience and turbocharge your drone journey!

1. Depth perception is poorer than lateral perception.
2. Wind speed is higher in the air than it is on the ground.
3. Learn how to use the 'Find My Drone' app.
4. Ascent speed is faster than descent speed.
5. Landing flying backwards is easier and safer.
6. Familiarise yourself with the app before you fly.
7. Learn how to use the map to bring your drone home.
8. Learn the intricacies of return-to-home.
9. Understand the battery warning system.
10. Understand the impact of high/low temperatures on your equipment.



TIP

One

Your depth perception is poorer than your lateral perception.

The human eye is remarkably adept at discerning lateral motion, allowing us to track objects moving side to side with relative ease. For example, if you see your drone gliding sideways toward a tree, your brain quickly processes the visual cues provided by the relative motion, enabling you to react appropriately and adjust the drone's trajectory to avoid a collision.

However, as the distance between your drone and yourself increases, accurately gauging not only the distance but also the drone's movement in the forward or backward direction becomes significantly more challenging. Once objects are more than approximately 50 feet (15 meters) away, our depth perception begins to decline rapidly.

This perceptual challenge naturally increases the risk of misjudging the drone's proximity to potential hazards, such as trees, power lines, buildings etc.

Even experienced pilots must exercise caution when flying beyond a certain range, as the combination of visual limitations and environmental factors can result in unintentional collisions. Trust me!



TIP

Two

Wind speed is higher in the air than it is on the ground.

Just because the wind conditions are tolerable on the ground doesn't necessarily tell you much about what it'll be like once your drone is 120 metres up in the air. It might sound obvious to some, but in the heat of the moment when your drone is being pushed by the wind, the implications of this fact might not be so clear.

While ground-level winds may seem manageable, they can double or even triple as you ascend. In situations when you struggle to get your drone back because of unexpected high winds, it is advisable to lower it down as much as is safe to do so before attempting to fly back. This will help you conserve as much power as possible for the journey home.

We have had several hair-raising moments thanks to windy conditions. Way back in 2015 we nearly lost our Phantom 2 (not helped by the prop guards we had on). Our Phantom 4 nearly landed in the sea on a couple of occasions when it lacked the power to fly home. And more recently, our original Mavic Mini nearly bit the dust in the Scottish Highlands.

Top Tip: Use Sport Mode if you are fighting unexpected wind conditions to give you the extra power required to get home!



TIP

Three

**Know how to use
the Find My
Drone app.**

Much like Apple's Find My iPhone function, which helps users locate their lost devices, DJI offers a similarly useful feature through its app called "Find My Drone."

One of the standout features of the "Find My Drone" function is the ability to make your drone emit a beeping sound. This can significantly simplify your search-and-rescue efforts, especially if your drone is within earshot but out of sight.

Top Tip: In the worst-case scenario, even if your drone's battery has dwindled to the point where it is no longer operational, the DJI Fly app will still provide you with the last known location and coordinates of your drone.



**TIP**

Four

**Ascent speed
is faster than
descent speed.**

All of DJI's drones can ascend faster than they can descend. Keep this in mind when you are squeezing out every last bit of life in your battery as the time it took to fly up 100m could be doubled for the return journey.

Looking at the chart below, an Air 3 and Mavic 3 can descend at twice the speed of Mini 4 Pro. Mindful that the higher the drone is flown, the longer it can take to descend back to the ground, in scenarios where battery levels are critical, a longer descent can result in lost connectivity or, worse, a crash if the drone fails to make it back in time.

Drone	Ascent Speed	Descent Speed
Phantom 4	6 m/s	4 m/s
Mavic 2	6 m/s	4 m/s
Mini 4 Pro	4 m/s	3 m/s
Air 3	8 m/s	6 m/s
Mavic 3	8 m/s	6 m/s



TIP

Five

**It's safest and
easiest to land
flying
backwards.**

For any higher-risk manoeuvres, such as landing, it is safest to have your drone oriented away from you. This ensures that forward is still forward and left is still left, which allows for a more intuitive flying experience. When the drone is facing you, the controls can become confusing because all the directions are reversed, creating a "back-to-front" stick orientation that can lead to mistakes in critical moments.

By flying the drone backwards during landing, you maintain a clear understanding of the drone's movements and direction.

I definitely recommend you practise flying box patterns with the drone facing towards you. This will help you become familiar with the reversed controls, but many pilots find it takes a considerable amount of time to adjust. Even with years of experience, I still prefer to fly backwards when preparing for a landing. This approach minimises the risk of errors and ensures a safer landing process, ultimately leading to a more successful flight experience.

Top Tip: If you are catch landing, always follow this advice!



TIP

Six

**Familiarise
yourself with the
app before you
fly.**

Familiarising yourself with the drone app, such as the DJI Fly app, is crucial for ensuring a smooth and stress-free flying experience. Drone apps often contain a myriad of settings and features that can significantly impact your flight, including critical options like Return-to-Home (RTH) settings, flight modes, camera controls, and much more.

Attempting to locate and modify essential settings, such as RTH, in a time-sensitive situation can be extremely stressful – trust me!

When you find yourself in a situation where the battery is low and the drone enters a battery warning state, it is vital to have a solid understanding of the app's layout and functions.

With the drone switched on and sitting on the table in the comfort of your own home, take the time to dig through the various menus and settings before you take off.



TIP

Seven

**Learn how to use
the map to bring
your drone home.**

Provided you have a signal between your controller and your drone, the map will give you all the info you need to bring the drone home should you lose sight of it. This capability is invaluable for maintaining awareness of your drone's position and navigating it back safely.

In all honesty, if you know how to use the map, there's really no excuse for ever losing your drone. Just point that blue arrow back to the home point and fly straight!





TIP

Eight

Learn the intricacies of Return-to-Home.

RTH is designed primarily as a failsafe to help pilots retrieve their drones safely in case of signal loss or low battery. While RTH is a helpful tool, there are numerous situations and flight scenarios where relying on it without proper awareness can lead to crashes or mishaps.

One of the most common and unexpected issues with RTH arises when the drone ascends rapidly upon the initiation of the function. This can lead to disastrous consequences if the drone is flying under something at that point (e.g. a canopy of trees). Some drones have upward facing sensors which can help avoid collision but small tree branches are always a hazard for any obstacle avoidance system.

To mitigate this risk, you can adjust the RTH settings to "hover" upon initiation. This adjustment instructs the drone to maintain its current altitude instead of ascending.

Omnidirectional obstacle avoidance definitely helps these days but it's still not an excuse to switch your brain off and let RTH take over!



TIP

Nine

Understand the battery warning system.

A considerable number of drone crashes come about from pilots not paying sufficient attention to battery warnings.

To safeguard your nerves—and, most importantly, your drone—practice flying smart by keeping a close eye on your battery levels throughout your flight. Incorporate routine checks into your flying habits, and be mindful of indicators on the DJI Fly app that show battery percentage, flight time remaining, and estimated time to return home.

Additionally, set the Return-to-Home (RTH) altitude within the app ahead of time, so that your drone can safely ascend above obstacles if necessary.



TIP

Ten

Understand the impact of high or low temperatures on your equipment.

The performance of your drone can be significantly impacted by extreme hot and cold temperatures. For most DJI drones, the recommended temperature range for operation is generally between 0°C to 40°C (32°F to 104°F).

When flying in cold weather, the performance of lithium-polymer (LiPo) batteries—the power source for most DJI drones—can decline noticeably. Cold temperatures can cause the battery to discharge more quickly and reduce the overall flying time. If the temperature drops significantly, you might find that the drone has less flight time than anticipated.

Additionally, if you are flying on an extremely hot or cold day and your tablet or mobile phone, often used as part of the control system, suddenly shuts off, it can be alarming. The abrupt loss of display means you can no longer access the first-person view (FPV) feed, making it challenging to maintain visual awareness of your drone's location and orientation. You can still control the drone but it's not a comfortable situation to be in.

**"THERE IS NO SUCH THING AS A BETTER
FRAME RATE - JUST DIFFERENT FRAME
RATES FOR DIFFERENT PURPOSES"**



ABOVE: MAVIC 2 PRO // CROP OF A 9 PHOTO PANORAMA STICHED IN LIGHTROOM
THIS IS AN HDR IMAGE



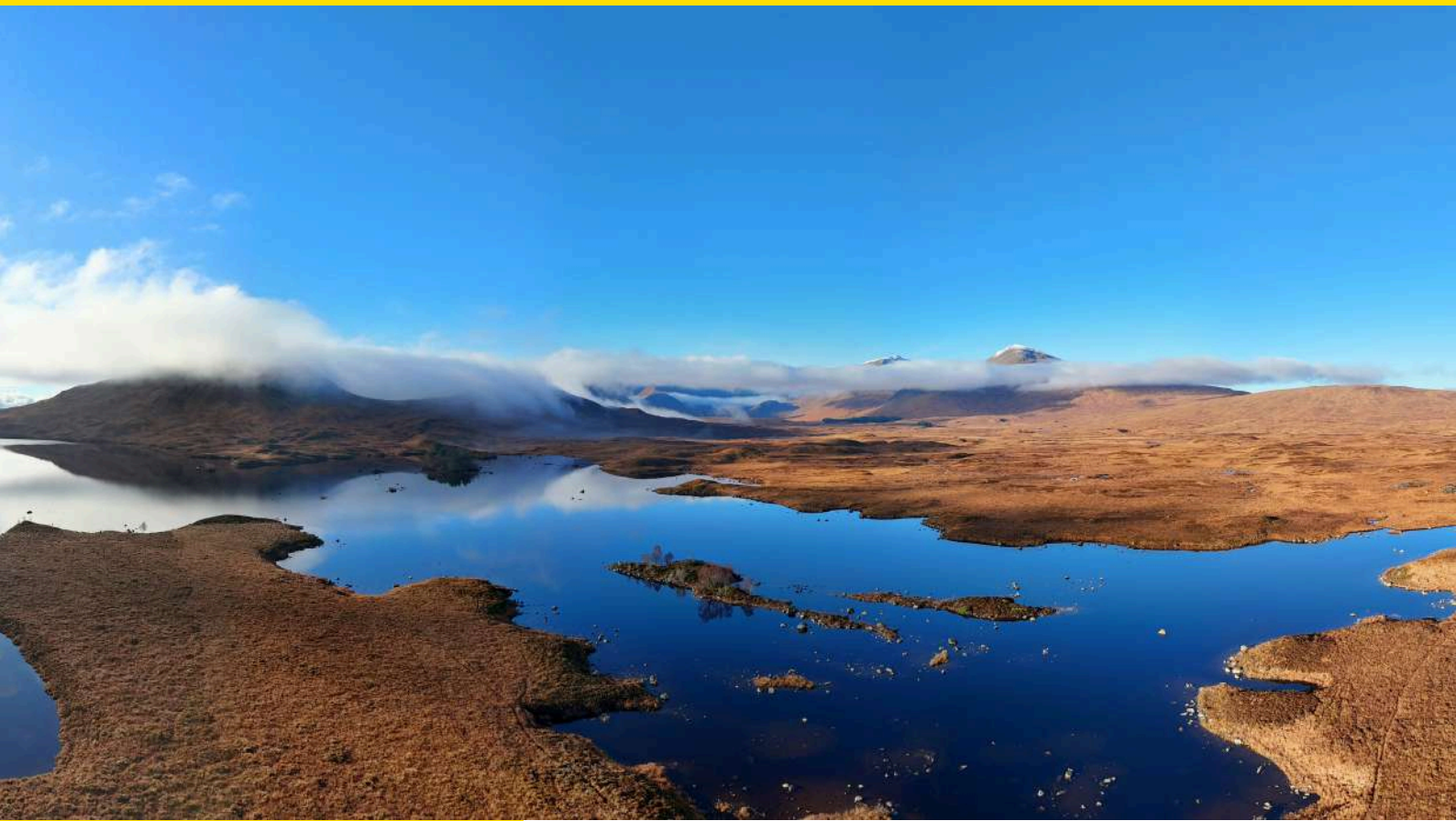
PART TWO

5 STEPS TO DRONE CINEMATOGRAPHY GREATNESS

Create stunning aerial cinematography with ANY drone!

In this chapter we distil the art of creating stunning aerial cinematography into 5 step framework that you can apply to your drone filming activities (and any other filming activities for that matter). Follow this framework and you will make the transition from drone pilot to drone filmmaker.

1. Create suspense.
2. Create depth.
3. Use motion effectively.
4. Understand your light source.
5. Create effective compositions.



TIP

One

**Create suspense
by not revealing
your cards on the
table in the first
frame.**

If there's only one thing you take away from this entire book then it's the following – **don't lay all your cards on the table in the very first frame.** Give your viewers a reason to keep watching. The technique to achieve this is to reveal your subject. This can take 2 forms:

1. A camera movement (e.g. a tilt up) that reveals new parts of the frame.
2. Have elements of your composition move into or out of the frame, e.g. a person entering the frame.

If you strategically reveal elements of a scene gradually, it builds anticipation. Viewers become more invested in the unfolding narrative as they're eager to see what is concealed.

By doing a simple tilt up reveal of a landscape for example (as opposed to simply showing the landscape in the first frame), you can build tension as the audience is eager to see what the camera movement is going to reveal.

Let's take a look at how Hollywood put this technique to good use!

Example 1

"Thelma & Louise"

©1991 Pathe Entertainment Inc.



In this haunting shot near the end of *Thelma & Louise* we see the fugitives trying to make their escape – at face value, quite successfully. Moments later however, we see the full extent of their predicament as 9 police cars flood the frame. The impact of this shot is far more powerful than if we had seen all of the cars in the opening frame of this sequence. In terms of camera movement, the camera is merely pointed down and flying forwards. The reveal is by way of new subjects entering the composition at the bottom of the frame.

Example 2

"Cliffhanger"

©1993 Carlco Pictures Inc., Le Studio Canal+



This shot from the extraordinary opening sequence of *Cliffhanger* starts off with a beautiful establishing shot of the Dolomite mountains. It is only after 15 seconds or so that we realise that this is not just an establishing shot however. As the camera continues moving towards the peaks we start to see some red smoke, eventually resulting in the reveal of our two mountaineers who have got themselves in a tricky situation. In this instance, the simple movement of flying forwards reveals new elements of the scene and tells a wonderfully suspenseful story.



TIP

Two

Create depth by layering foreground, mid-ground and background elements.

When capturing drone footage, we are working within a 2D medium to convey a 3D reality. To create compelling images that resonate with viewers, we can emphasise depth in our compositions. This can be achieved by layering elements in three distinct planes: the foreground, mid-ground, and background. These layers guide the viewer's eye through the frame, enhancing engagement and interest.

When arriving on location look for natural and architectural features—such as trees, walls, and buildings—that can be integrated into your shots. Flying past these elements not only adds visual dynamism but also creates an increased sense of motion, as the depth cues interact within the frame. This technique helps the audience feel more immersed in the scene.

Additionally, depth can be used to build suspense and enhance storytelling. For instance, by flying up from behind a tree, you can reveal a subject in the mid-ground. These methods not only enrich the visual narrative but also create an emotional connection between the audience and the unfolding story, making the viewing experience more impactful and memorable.

Example 1

"Volcano"

©1997 Twentieth Century Fox Film Corporation

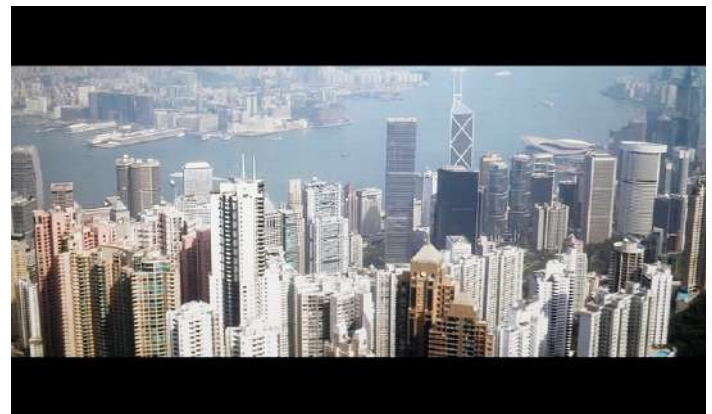
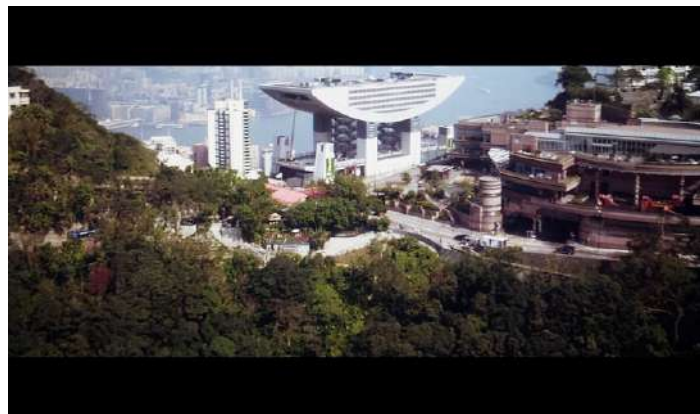


In this opening shot to *Volcano*, we fly forwards towards the buildings, skirting over them to reveal the cityscape on the other side. The existence of the skyscrapers serve not only to create depth in the image but also as an obstruction to seeing what is on the other side. As an audience, we are eager to see the reveal of the city. Depth is being used as a tool to create suspense. Furthermore, there is a tremendous sense of motion as we shoot past the buildings, adding to the excitement of the shot.

Example 2

"Rush Hour 2"

©2004 Unlike Film Productions



You will see this technique used over and over again in Hollywood cinema. Indeed, this opening shot for *Rush Hour 2* was so good they virtually replicated it frame for frame in *Rush Hour 3*! Again, we fly in looking at the trees initially, then we see the buildings on the top of the hill, then the full splendour of the Hong Kong skyline is revealed. Depth creates three dimensionality in the shot, an increased sense of motion, and suspense as we wait to see what is on the other side of the hill.



TIP

Three

**Add value with
camera
movement.**

Using motion effectively is crucial for enhancing the narrative you wish to convey. While it can be enticing to utilise intelligent flight modes that automatically add movement, keep in mind that motion should serve the story, revealing essential elements or transitions without detracting from the overall message.

For example, when performing an orbit manoeuvre, think about what new parts of the frame will be seen during the movement. Begin your shot with the end in mind. By doing so, you can guide the viewer's attention to critical details or subjects that enhance the narrative.

Point of Interest, Active Track, Spotlight etc., are amazing tools for creating complex camera movements. However, keep in mind that sometimes the simplest movements can be the most effective. A subtle slide to the side can shift the viewer's perspective, revealing additional context or emphasising depth in the composition.

Ultimately, the key to captivating aerial cinematography lies in prioritising purposeful movement over complexity.

Example

"Shawshank Redemption"

©1994 Castle Rock Entertainment



A complex shot in a film that doesn't just put aerial shots in for the sake of it. In Part 1 we see a bus of some sorts heading to this large, grey building. We don't know what this building is or why the bus is going there.



By flying over the top of the building we see that the building is in fact a prison, the yard of which is filled with inmates all headed in the same direction. Why? What is it they want to see?



The camera flies over the courtyard and back outside the wall of the prison to reveal the bus pull up alongside the building. Now we realise the bus is full of new arrivals being transferred to the prison for the first time.



Finally we cut to a shot inside the bus of one of the new arrivals looking understandably anxious. In this incredible shot, the motion of the camera continues to reveal new parts of the story as it moves around the prison. It's an incredible (and chilling) demonstration of cinematography.



TIP

Four

**Understand
your light
source - the
sun.**

In drone cinematography, the position of the sun plays a crucial role in determining the quality of your footage. When the sun is **behind the camera**, it bathes the scene in even lighting, allowing for balanced exposure across the frame. This positioning helps to illuminate both the sky and the ground effectively, resulting in vibrant colours and clear detail.

In contrast, when the sun is in **front of the camera**, the situation becomes more challenging. The direct light can create harsh contrasts, leading to overexposed highlights in the sky and underexposed shadows in the landscape, especially in small sensor cameras that have limited dynamic range.

These cameras struggle to capture the full spectrum of light, making the preservation of detail in both bright and dark areas more challenging. However, with careful consideration of the sun's position, you can still achieve successful results. If you find yourself uncertain about how to proceed, it's wise to position the camera behind the sun. This approach not only maximises the potential for stunning visuals but also ensures that the footage remains well-exposed and visually appealing.

Example 1

Phantom 4 Standard
4K Screenshots



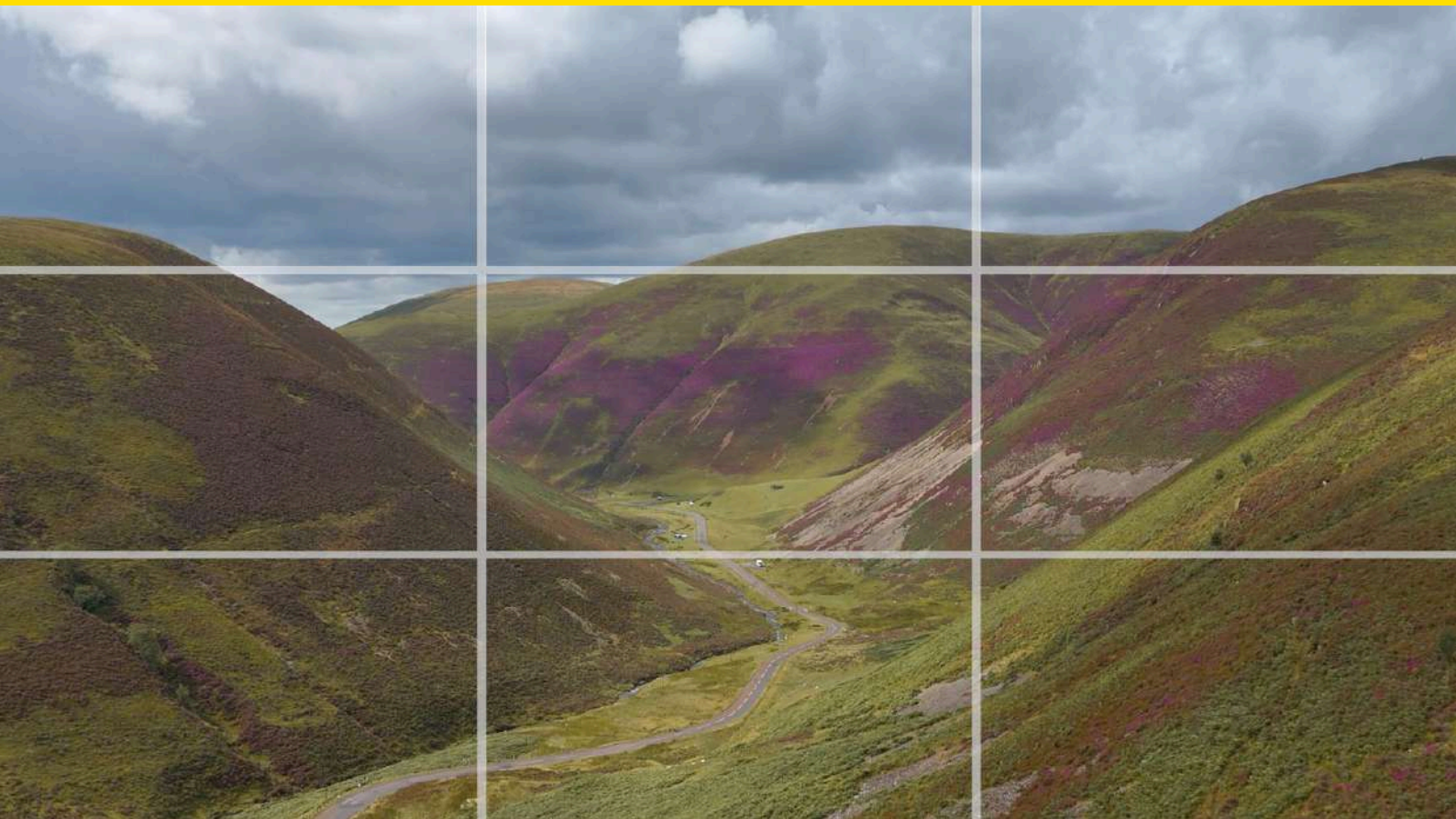
In the first shot above, the sun is behind the camera, coming in from the left. As a result, we have a nice balanced exposure with both the sky and the ground being illuminated by the sun in roughly equal measure. By contrast, in the second image, when flying towards the sun we have a challenge in the form of a blown out sky. Different cameras handle this scenario differently and many beginners don't realise why some shots look balanced and others don't.

Example 2

"The Grand Tour"
©2017 W. Chump & Sons Ltd.



The majority of aerial shots you see in TV and cinema are filmed at the so-called golden hours of sunrise and sunset. Low sun creates warm tones and long shadows. Just look at the difference between these shots. In the first we see the nice bright, saturated colours the sun gives us. In stark contrast, the dull, shadowless second shot has a far different feel to it. There is no right or wrong here but assuming you are gunning for the nicest possible footage, low sun at the start or end of the day is the best way to achieve this.



TIP

Five

Create pleasing compositions that engage the viewer.

Thoughtful composition helps create visually engaging and impactful images. These techniques guide the viewer's eye contributing significantly to the overall storytelling. Here are 3 common compositional techniques that every filmmaker should consider:

1. Rule of Thirds: This technique involves dividing the frame into a grid of nine equal parts, creating four intersecting points. Placing key elements along these lines or at intersections can create a more balanced and dynamic composition.

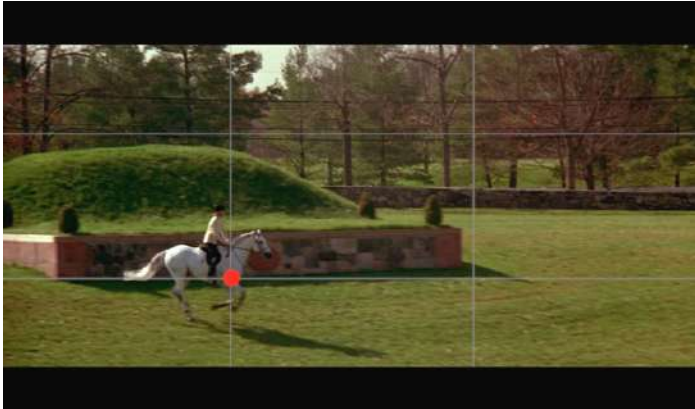
2. Leading Lines: These are natural lines found within a scene that draw the viewer's eye toward the main subject or point of interest, adding depth and guiding the narrative flow.

3. Focal Points: Establishing a strong focal point within a frame—such as a character or an object—anchors the composition and directs attention.

By integrating these techniques into your drone cinematography, you can elevate the visual appeal of your work and effectively communicate your story.

Example 1

"Conspiracy Theory"
©1997 Warner Bros.



The placement of the horse in the lower left third of the frame is no accident. In this composition, the horse has 'looking space' as it has room to travel into and through the frame. If the horse was located in the lower right third the shot would be imbalanced and the resulting visual tension uncomfortable for the viewer.

Example 2

"Expendables 2"
©2012 Barney's Christmas, Inc.



Same rules apply whether you are filming planes...

Example 3

"Triple Frontier"
©2019 Netflix US



...or helicopters!

**"IT'S NOT ABOUT THE
DRONE...IT'S WHAT YOU DO
WITH IT THAT COUNTS"**



ABOVE: MAVIC 2 PRO // CROP OF A 9 PHOTO PANORAMA STICHED IN LIGHTROOM
LOCATION: GLENCOE



PART THREE

8 SIGNS YOU'RE A BEGINNER DRONE PILOT

Teleport yourself from beginner to expert by avoiding making these mistakes!

This is a list of 8 telltale signs that you're a beginner BUT that does not mean only beginners make these mistakes. Far from it! We see experienced pilots and filmmakers falling into these traps all the time. Some could be down to experience and some are down to judgement so it can be hard to decipher what the right course of action is at times.

Sure, rules are there to be broken but more often than not they are there to be followed, so in the absence of a better idea, avoid making these 8 beginner mistakes!



1: AIMLESS FLYING

In the fullness of time, you want each of your drone shots to contribute to the story you are trying to tell. Even if you are just shooting a travel vlog for YouTube, with expectations higher than ever for our drone shots, you need to make them count. What is it you are trying to do?

Establish the scene by showing a wide shot of the beach? Or are you trying to engage your audience by showing some close-up action?

Whilst the creative side of drone cinematography is largely subjective, one thing is clear...**no one wants to see 5 minutes of aimless flying.**

2: FLYING TOO HIGH

Tempting though it is to see the world from the highest possible vantage point when you first get a drone, rarely is this the best way of presenting your subject. The higher you go, the lesser the sense of motion when the drone moves, making it harder to create excitement in your shots and engage your audience.

If you're filming a building for example, no-one wants to see a roof inspection and some distracting outbuildings. Fly in at a low angle from behind some trees to create some depth. **Just because you can fly high doesn't mean you should.**

3: SHAKY FOOTAGE

With our little drones, we are looking to emulate the results produced by classic Hollywood aerial cinema. Little twitches and jerks in the middle of the footage make it feel like it was filmed on a little drone so get your settings dialled down to smooth and eliminate that stutter.



4: USING AUTO WB

Some of the things we discuss are subjective and some are objective. This is very much the latter...**never use auto white balance**. You will never see this in television or cinema. Set a manual white balance of Sunny or Cloudy, or a custom WB of 7000K for example if you are shooting at dusk. Even if you feel the colour temperature is slightly off, it's an easy fix in post-production. **The most important thing is that you do not see white balance change during the shot itself.**

5: USING AUTO EXPOSURE

99% of the time you should be filming on manual exposure. Generally speaking, if you see an exposure change during a shot then it will look more like a news report or a sports broadcast. **If you're wanting to create nice cinematic footage then you need to shoot with a constant, manual exposure.** An exception to this could be if there is a deliberate, dramatic shift in exposure, e.g. you start filming inside and then fly outside.

6: WRONG FRAME RATE

Oh boy, books have no doubt been written on this subject. Let's keep this short...if you want cinematic looking footage, shoot at 24/25 fps (24 US, 25 Europe). This is the industry standard to which the eye has become accustomed over the last century so who are we to argue. BUT by all means, if you are filming for commercial reasons and want the 'smoother' look that 50/60 fps provides then go for it. **There is no such thing as a better frame rate, just different frame rates for different purposes.**



7: SHOTS ARE TOO LONG

It hurts to acknowledge this fact, but not everyone wants to watch 30 second drone shots one after the other. I know, it sucks, but that's the reality of the situation. As such, you need to fly with the edit in mind.

If that shot took you 30 seconds to complete, do you have a plan to reduce it to 5 seconds in post? Now not every edited shot has to be 2-5 seconds but generally speaking, the goal of the exercise is to keep your viewer engaged so with that in mind, plan to keep your shots short.

8: BAD EXPOSURE

A tell-tale sign that you're at the beginning of your drone journey is bad exposure, notably, blown-out highlights. This is generally the result of over-exposing the footage at the time of filming. It's a terrible risk for us as drone pilots because when we look at our monitors outside, screen glare can make things look dark so we crank up the exposure (brightness) of the shot to compensate.

Use the histogram to give you an objective measure of exposure, not influenced by screen glare, monitor brightness, your eyesight etc. And above all, protect those highlights by making sure they don't peak on the far right of the histogram.

Key Point: Ideally you have a perfectly balance exposure however if needs be, it is easier to raise your exposure in post (i.e. brighten shadows and mid-tones) than it is to lower your exposure in post (i.e. recover colour information in blown-out highlights).



ABOVE: MAVIC 2 PRO PHOTOGRAPHED WITH PANASONIC GH5
LOCATION: GLEN ETIVE



PART FOUR

14 WAYS TO NOT CRASH YOUR DRONE

**Protect your investment
and learn from our
mistakes!**

I don't go out of my way to have an incident when flying...quite the opposite in fact.

That being said, in my 10 years of being a licensed commercial drone pilot, I've had my fair share of spills so in the interests of helping you learn from my mistakes, here are 14 ways to NOT crash your drone! 😊

1: AVOID AUTOMATED FLIGHT MODES

Flight automation modes such as quick shots, active track, return-to-home, automatic takeoff etc., are amazing but generally speaking they all have different implications for your drone's obstacle avoidance. If you don't understand these nuances then those sideways sensors you were relying on might not do the trick when you hoped they would. Until you understand all this, give the automated flight modes a miss.

2: AVOID SPORTS MODE

Sports mode is so fast, so noisy and so much fun! BUT it's also the quickest way to destroy your investment if you're not careful. Useful to help you get your drone home in strong wind but just remember those obstacle avoidance sensors are switched off!



Enormously increased stopping distances and collision avoidance switched off...in the hands of the uninitiated, sports mode is a disaster waiting to happen.

3: DO A SITE SURVEY

At risk of stating the obvious, look around you when you arrive on site. In the heat of the moment, it's so easy to plonk your drone down under a tree and take off without giving any thought to your surroundings. Trust me, I've done it.



4: DON'T RELY ON OBSTACLE AVOIDANCE

Obstacle avoidance is a crutch to bail you out from time to time. It's not an excuse for closing your eyes and switching your brain off! There are many reasons obstacle avoidance can fail you, low light and telephone wires being two such ways. Feel reassured that obstacle avoidance is there as a backup but don't rely on it.

5: TAKE YOUR TIME

This is a big one for me. Flying a drone can be fairly stressful at the best of times, especially if you're trying to produce professional results. The last thing you need is time pressure to add extra tension to the mix.

6: DON'T FLY BACKWARDS

Okay, I'm not saying never fly backwards. Like many of these tips, I'm just highlighting that the risks increase when doing so. It's so easy to have your head buried in the screen and not notice that your \$1,500 investment is headed straight for a tree. You can't see it on the monitor after all and you haven't looked at the drone for the last 5 minutes anyway!



ABOVE: THE RESULT OF FLYING BACKWARDS WITH A PHANTOM 4!



7: WAIT FOR GPS LOCK

If you can't wait the 10 seconds required for the GPS status bar to turn green then you really shouldn't be in control of a drone.



ABOVE: GPS STATUS BAR DISPLAYED IN DJI GO 4 APP

8: FLY VLOS

I know, know...BORING! What's the point in having a drone with a 15km transmission range if you fly visual line of sight (VLOS)? Fair point. I wish the drone manufacturers would stop marketing these enormous 'out of sight' ranges as a plus point when everywhere on the planet it is a legal requirement to keep your eyes on the drone at all times. Now, I'm a realist and I know just how tempting those long-distance flights are but just keep in mind that your chances of crashing increase by approximately 1,000 times when you can't see your drone!

9: AVOID WATER

Water and electronics don't mix. This includes clouds...which are wet. We took the DJI Air 3 below up into the clouds for some moody, atmospheric shots. It came back down soaking wet! Probably not the best idea!



ABOVE: LOOK AT ALL THE DROPS OF WATER ON THE DRONE!



10: LEARN TO CATCH LAND

On numerous occasions I've taken a drone off only to wonder how on earth I'm going to land it in the same spot. Sometimes it's not possible to locate a fantastic, flat and solid take off spot that makes for an easy landing. Catch landing a drone is a little dangerous so **I'd strongly recommend you wear a glove when doing so** but it's an invaluable option to have when required.

11: SIGNAL LOSS

If you can't control your drone because of signal failure then you could have a problem. Sure, RTH will probably kick in but what did I say about not relying on it?! The signal on the likes of DJI's OcuSync is pretty indestructible but it's not infallible.

Certainly, if you have a wifi transmission system then you need to pay much more attention here. Your Apple watch, other phones, power lines, marine radars, buildings, cell phone towers and radio antenna can all play havoc with your signal. **Learn how your drone will react in the event of a loss of signal between your controller and your drone.**

12: FLY AN AIRWORTHY DRONE

This one falls into the stating the obvious category but it's still worth mentioning. Your propellers are extremely vulnerable so keep a good eye on them in addition to the little plastic lugs that secure them to the motors. We've seen cracks in the drone airframe before and batteries that don't seat as well as they should into the body of the aircraft. A brief visual inspection before each flight could save you a world of heartache.

13: USE THE DJI SIMULATOR

If you are right at the start of your journey as a drone pilot then DJI's simulator is worth a look. It's reasonably realistic and you can even simulate wind conditions. As for when you're out for the first time, stick it in Beginners' Mode to limit the height and distance you can fly. These drones can get away from you pretty quickly!



ABOVE: THE DJI FLIGHT SIMULATOR

14: READ THE MANUAL

And finally, if in doubt, read the manual! In reality, that means taking the time to go on YouTube can learn as much as you can about your drone, the batteries, how to fly etc. So much information out there and if you are looking for the ultimate online aerial training then of course, we have our 9 hour [Drone Cinematography Masterclass 3.0!](#)



TAP HERE TO
LEARN MORE!

"ARE YOU INTERESTED IN TAKING
YOUR DRONE SKILLS TO THE NEXT
LEVEL?"



ABOVE: ALINA

WHAT NEXT?

YOU NOW HAVE THE FOUNDATION.

IF YOU WANT TO TAKE THIS FURTHER AND BUILD REAL, MARKETABLE SKILLS:

DRONE CINEMATOGRAPHY MASTERCLASS 3.0



- **9 HOURS** of intensive drone education taking you from drone owner to aerial cinematographer.
- Building on the legacy of our original Masterclass launched in 2018, with over **40 LESSONS**, version 3.0 is the most current, comprehensive aerial education available online.
- Featuring **STUNNING WORKSHOPS** filmed in the Scottish Highlands!
- Build **MARKETABLE SKILLS** as you differentiate yourself from your peers.

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LEARN MORE!



"I'm struggling to write anything tangible because I'm still mind blown! Having only owned a drone for about 3 weeks I'm excited to start putting my new mindset as a film maker into practice. It's not a one-off course, but material to refer to for life."

Shaun Lewis