



## What is a drone, and why use one for photography?

Drones are small, unmanned aerial or ground-based vehicles that are operated for fun—much like a hobbyist's radio-controlled helicopter or car. Some are equipped for photography and allow you to capture images from angles you can't normally reach. Flying drones are sometimes called UAVs (unmanned aerial vehicles). Most drones are operated with radio controllers, but can also be programmed and controlled via tablet or smartphone. What differentiates a drone from a toy radio-controlled vehicle is that a drone is able to fly or drive itself without the need for constant input from the operator.

Drones can be a lot of fun. But in addition to fun, many drone users fly in order to take personal photos and videos. Drones with high-definition video and still cameras are becoming very popular. Photographers of all skill levels can use drones to take pictures from unique perspectives. Whether it's taking video of your friends surfing, or capturing a scenic mountain panorama, having a camera in the sky can bring new life to your photos and movies.

### Which drone do I need to get great photos and videos from the air?

If you already own an action camera, you may want to check out models that are equipped with a camera mount rather than systems with a built-in camera. For ease of use and smooth video, some models come with a built-in camera and a stabilized gimbal. Most systems with built-in cameras provide downloadable apps for iOS and Android that let you watch the video live via Wi-Fi.

### Taking Aerial Photos 101

Drones are revolutionizing photography in much the same manner as digital cameras and cell phones did. The creative options are endless when you can get an entirely new perspective on your subjects from the air. For serious photography, avoid most of the lower-end toy models. While fun, you may soon outgrow the low resolution and limited creative control. Instead, look for models designed for photography and video, with features like a stabilized gimbal and a high-quality built-in camera or camera mount. The stabilized gimbal will be essential in capturing high-quality video because it will keep the video smooth throughout your flight.

### Camera settings and file formats

To begin, first decide on the "field of view" (also known as crop factor) you wish to capture in your photos. Many action cameras have options to crop out smaller portions of your photos and help remove the distortion caused by the wide-angle fisheye lenses. Some built-in gimbals can point the camera straight down for a dramatic overhead view without the curved horizon you'd see on a shot that's pointed forward.

If you decide to take pictures of the horizon or have other straight lines that get distorted by the wide lens, there's still hope. In many cases, the effects of the wide lens can be corrected in post processing, where you can compensate for lens distortion, adjust exposure and saturation, and increase sharpening. Most popular action cameras can also take images in the widely used JPEG format, but shooting in RAW will let you take full advantage of the sensor's dynamic range. Once you've configured your image settings on the camera, it's almost time for take-off. Before flying, be sure to mount the camera securely, remove any lens caps or cases, and thoroughly clean the lens using a soft cloth specifically designed for lenses.

### Fly or take pictures, but not both

Often, you will need help from someone that can fly the drone so that you can concentrate on taking great photos from the drone's live video feed. If you don't have a helper or are using your own action camera (which you may not be able to control via Wi-Fi because of interference with the drone's controls), you can still get great pictures by setting the drone to automatically snap photos every few seconds. You can configure this setting before taking off so you can fly without using the camera controls. A setting of five seconds between shots (while setting the number of shots to infinity) will produce frequent photos but still keep storage requirements at a manageable level. When you land, remember to turn off the interval shooting or power down the camera so that you don't run down your battery or fill up your memory card.

### Quick tips for better aerial photos

-While in the air, here is some best advice for improving your photos:

-Try to take a lot of scenes from a variety of angles and distances. This will give you plenty of material to work with later as you edit and compile your best shots.

-Focal points and depth of field are much more difficult to control since you're using a small sensor and lens without manual aperture controls. Try to keep everything in focus and use adjustment layers in post-processing to recreate out-of-focus areas when necessary.

-For added protection of your drone, always use propeller guards and be sure to land with plenty of battery life left.

-The normal principles of color and composition still apply: shoot during the "golden hours" after sunrise and before sunset to get the best light, think about the "rule of thirds"

to place your subject, and try to avoid large areas of over-exposed highlights or under-exposed shadows.

-Seek out vibrant colors or your photos will be dominated by greens, grays, and browns (earth tones) or, when you're over water, blues. Find a colorful building, group of boats or patch of sun umbrellas to liven up your palette.

## **Fly Responsibly**

Learn more about [flying responsibly](#) . Many countries, including the United States, regulate the use of unmanned aircraft. Before flying, make sure to understand the rules that apply to you.