

#### Smartphone Video Guide

We all shoot video with our smartphones, but most of us aren't trying to make the next great Oscar-winning film. We're just trying to capture moments that are important to us, or footage that we think will resonate with others.

There are a lot of little things you can do to make sure the video you shoot with your smartphone is something worth watching — whether those moments are funny, touching, stupid, or downright shocking. So here's a starter guide to help make sure you're shooting the best video your smartphone allows.

#### Clean the lens

It sounds silly and simple, but this is always a great place to start. It's the equivalent of remembering to take the lens cap off of a camera. It's something so obvious that it's often easy to forget. Before you shoot any video with your smartphone, make sure the camera's view isn't obstructed, and give it a quick swab. Moistened cleaning wipes are the best for this job, but a quick breath and your shirt will do the trick, too.

### Check and set your settings

Smartphones might be limited in functionality compared to more dedicated video cameras, but that doesn't mean they're only capable of shooting one type of video. Most premium smartphones these days have a few different resolutions and frame rates to choose from.

On Android phones, these settings are usually right inside the main camera app, either tucked behind the settings gear wheel, or accessible via a toggle button. Apple, however, has buried these options in the main settings menu. You have to back all the way out of the camera app, go into Settings, scroll down to Photos & Camera, and then scroll down to the Camera section.

Once you've found them, here's a quick breakdown of the three most commonly used video settings:

- 1080p at 30 frames per second: the *other* standard resolution / frame rate combination. The difference here is your video has more frames displaying every second, which gives the footage an even more fluid look that is closer to how you would have seen the scene in real life. The choice between 30 fps and 24 fps is mostly an aesthetic one both should display correctly wherever you post.
- 1080p at 24 frames per second: one of the two most standard settings for shooting video. 1080p is the resolution, a stand-in term for how many pixels (1920 x 1080) are captured in each frame of the video. 24 frames per second (fps) means you're capturing 24 frames every second. That speed is just above the low end of what our brain is able to perceive as fluid video, but with just enough imperceptible stutter that it creates a pleasing, cinematic look. (That balancing act between fluid motion and intangible surrealism is why 24 frames per second is what filmmakers use in most movies.) Note: You'll only be able to shoot in 24 fps if you use an app that allows this frame rate, like Filmic Pro.
- 1080p at 60 frames per second: shooting at 60 fps will give you an even *more* fluid-looking video. It's also where we can start to talk about...

#### Slow motion

Anything shot at 60 fps or higher (like 120 fps or 240 fps) can be turned into slow motion footage. If you have a phone that shoots in 120 or 240 fps, there's a good chance it already has a way to slow this footage down for you. For reference, 120 fps is about five times slower than normal speed, and 240 fps is 10 times slower.

To shoot in slow motion on an iPhone, open the camera app and swipe right on the modes listed above the shutter button until you get to "Slomo." (You can also just tap on it when you see it at the edge of the app.) In order to change how slow your footage is, you'll have to go back out of the camera app to the main Settings page and change the speed there. With most Android phones, these settings can again be easily changed inside the camera app.

To view the slow motion video, tap on it in your phone's photo gallery or camera roll. Your phone will automatically slow down the middle 80 percent of the video. To change when the slo-mo effect starts and stops on an iPhone video, tap the settings icon below the video, and then drag the little hash marks to the left and right.

Bonus tip: iPhones automatically separate all slo-mo videos into their own album in the "Albums" section of Photos. Look for them there instead of scrolling through all your videos.

#### 4K video

Many premium smartphones are now capable of shooting 4K video, too — typically at a resolution of  $3840 \times 2160$ . To shoot in 4K, you just have to select this option wherever your phone lets you change resolution settings.

Do you need to shoot in 4K? Probably not. Most people don't choose to watch (or even have the ability to watch, in some situations) 4K videos. But that doesn't mean you shouldn't bother, because there are a few concrete benefits. For one thing, you're future-proofing the video that you shoot. In a few short years almost every screen will likely be capable of displaying 4K resolution or higher, and so shooting in 4K now helps ensure that your videos will look their best down the road.

You're also capturing more detail when you shoot in 4K, which means you can take advantage of the fact that most people watch videos in 1080p. If you didn't frame a particular shot the way you'd like, or you want to focus on a specific subject in the scene, you can crop in on a 4K video without "losing" quality in the final 1080p version. You'll need an editing app that lets you crop and compress videos for this, though.

Or you can just shoot in 4K and rest easy knowing that you captured the most detail possible. Just remember that it's going to take up far more space than a video shot at 1080p.

### Optical image stabilization vs. digital / electronic image stabilization

A number of phones now come with optical image stabilization, like the newest iPhones and Samsung's Galaxy phones. What does that mean? It's when the camera uses information from the phone's gyroscope and accelerometer to precisely move the camera's optics to compensate for the movement of the phone. So if your hand is shaking a bit, or you're walking while you're shooting, the phone can calculate and correct for that movement.

"Try shooting with and without digital image stabilization to judge whether you like the effect"

Some other phones, like Google's Pixel phones, use what's known as digital image stabilization. It's also sometimes called electronic image stabilization, and it works on the same principal: the phone is using information from its various sensors to counteract unwanted movements to create steadier video. But in this case, nothing's actually moving to compensate. Instead, the camera app is cropping in a bit from the full field of view and using the extra pixels to simulate optical image stabilization. This means that digital image stabilization, much like digital zoom, typically results in a loss of image quality for the sake of steadier video.

More often than not, steadier video is good. So try shooting a similar scene with and without digital image stabilization to get a sense of how it's affecting your video. You'll find that some phones, like the Pixel, are very good at reducing the amount of quality lost, making the trade-off worth it. Others might not be the same. And some phones overcorrect so much that you might not like the stabilization effect at all. (Some video-editing apps allow you to apply similar digital stabilization after the fact anyway.)

Bonus tip: shoot video in Instagram's Hyperlapse app at 1X speed for reliably good digital image stabilization.

#### Brace yourself

This applies to shooting video with any smartphone, regardless of whether it has optical, digital, or no image stabilization at all. Finding ways to brace yourself while you shoot video is the key to making your footage look smooth.

There are, of course, a number of ways to do this. One is to simply tuck your elbows into your side as you hold your phone out in front of you. Use two hands. You can also place your phone up against something for support. A clean window or piece of glass is handy, but also, remember that the camera on your phone is typically not right in the center. This means you can lean your phone up against a heavy object on a flat surface without covering up the camera.

#### Photo by Ben Popper / The Verge

If you really want to make sure you get a steady shot, you can always buy some accessories for your phone. A tripod with a clamp for your phone (or a case that screws into a small pocket tripod) is the easiest and cheapest route. But the best results come from stabilizer rigs made by companies like DJI and FeiyuTech, or even this one from Rigiet. These will run a few hundred dollars and will take some time to master, but they're the best way to make sure you're shooting steady footage with your phone.

#### Pace yourself

Shooting a lot of video, especially 4K video, is going to clog up your phone's storage faster than almost anything else. So making sure you have a solution in place to back that footage up is key.

Find a storage solution that works for you, whether that's cloud-based (Google Drive, iCloud, Dropbox, etc.) or local storage (external hard drives, or maybe even just your laptop or desktop) and get into the habit of backing up your footage regularly.

#### Break the rules

Don't let anyone tell you not to shoot vertical video. Seriously! Platforms like Facebook, YouTube, and Vimeo now allow vertical video uploads, so there's no reason not to experiment with something different. I used to be against vertical video, whatever that means, but that's so silly. Video that's shot in horizontal / landscape orientation is still generally the most pleasing to watch, but that doesn't mean it's the only way you should shoot.

The same goes for all these other "rules." Once you're comfortable with all of this stuff, finding ways around them is half the fun. Like with photography, smartphones have democratized the ability to shoot video in a way that we never could have dreamed. Take advantage of that and try something different!

### Editing

One of the most subjective aspects of shooting video with your smartphone is what you do with it. Some people are fine just posting raw clips to Facebook, Instagram, or Twitter, while others like to spend hours creating something that looks like it was shot on a more professional camera. Finding the right workflow takes a lot of trial and error. The best way to approach it is to start simple.

You can do light video editing in your smartphone's own photos app, like trimming the length of the video, or maybe applying a few basic filters. To do anything more advanced, though, you're going to have to try out some different video-editing apps.

"Finding the right editing app and workflow takes a lot of trial and error"

One of the easier apps on iOS is Apple's own iMovie. It comes with some premade effects, and templates for text overlays. It's not terribly flexible, though. GoPro's Quik video editor is similar, and it will work with videos you shot on your smartphone even if you don't own a GoPro. But it also can automatically create an edit for you. Just select the clips you want the app to pick from, and in a few seconds it will spit back an edited video. You can go back in and tweak the edit from there. The results aren't always pretty, but it handles some of the most bothersome first steps of video editing.

More advanced options include Splice, Adobe Premiere Clip, and Filmic Pro for advanced editing. Google's Photos app, which is available on the iPhone, and Apple's own Photos app will also automatically edit together videos for you if you allow them, but you'll have less control over the finished product.

On Android, you're probably going to have a bit more basic control over your video in the stock photos app. But look to apps like Power Director or Filmic Pro, which are good if you really want to spend some money for advanced features.