

Shooting with Phone cameras and iPads

<http://iphonefilmmaker.com>

Software you can use for iPhones and iPads that have manual settings: focus, exposure, ISO, shutter speed, frame rates.

- ProShot
- MoviePro
- ProCam
- Filmic Pro
- Filmic Classic

Problems with Phone Cameras

- little lenses and sensors aren't great for capturing images
- batteries don't last long
- limited functions
- limited lens choices
- fixed aperture (on most phones)
- some don't have manual focus
- almost no depth of field
- they're light, which makes your video extra shaky
- noisy sensors
- rolling shutter
- Poor recording format (h.264, 4:2:0 with temporal compression)
- Pretty bad in low light

Great things about Phone Cameras

- but they can go places other lenses can't:
 - inside a coffee cup
 - pressed up against a window
 - pressed against a wall
- they're easy to take with you, spontaneity is a friend
- they're light, easy whip around
- big viewfinder
- also: no depth of field

When shooting with phones, they use a highly compressed video format (h.264) that doesn't handle contrast very well. This means you will have less freedom to manipulate your image in editing. Getting everything right in the composition during recording is much more important (though it's always important).

Some things you can do to improve your composition:

- Simplify the colours. Have a planned colour scheme.
- Use one kind of lighting. No mixed lighting! Unless you really want to.

- Position subjects in a way to create a visual order. Use the big screen on your phone and device to help you with that. Check out Fibonacci spirals and diagonals. Some phone camera apps come with Fibonacci grids.
- Use limited motion. Even better, use a stand to hold your camera. Shakiness can make your video look bad.
- Shoot with a lot of light, but make sure it's balanced. White sheets are great to bounce light off of. Reduce contrast as much as possible so you don't have harsh blacks and whites. It's easy to add contrast in editing, but very hard to remove it.
- Lockdown the exposure (shutter speed and ISO)
- Use a low ISO (400 or lower) and light your scene better. This will reduce noise.
- If shooting film-like images, use 24fps, 1/48 shutter speed. If looking to stabilize footage later, use a higher shutter speed (1/250). If you'd like to edit it in slow motion, use a higher frame rate.
- Lockdown the focus
- Turn your WIFI off to keep battery life
- Do a test shoot *before* you shoot your footage. Find out how long your battery will last and how much time you can record to your camera.
- Shoot wide, unless you really want to shoot portrait
- Make your frame size as wide as possible (not always true, but it can be a cheat to make your video look less video-like)
- Make sure the bitrate (quality) on your shot is as high as you can make it. Note, this will mean your phone will fill up much more quickly

Special note: the audio recorded on your phone will usually be very bad! Use an external recorder, like a Microtrack, and try to sync the sound later. Keep your microphone close to your subject.

Something else that's great about phone cameras is, they're fun! Experiment with them. Put lenses over top of them and move them around. Tie your phone to a helium balloon (don't let go) and carry it with you. Pop it on a record player and let it spin.

Shooting with DSLRs

You can make great HD videos with DSLRs. Some benefits:

- With a DSLR you can use a high quality lens with a large sensor, giving you plenty of options for the image you're recording.
- The large sensor also means less noise, so low light quality is usually better and you can increase your ISO much more than a camera phone
- Plus, with a DSLR you can change lenses to suit your purposes.
- There is software out there that will enable RAW video recording on your camera (Magic Lantern). Please don't install this software on our cameras, it will void the warranty.
- It is very easy to access manual controls on a DSLR, compared to an iPhone
- It's easy to attach filters to your lens, e.g. polarising filters, ND filters

A few problems with DSLRs

- Rolling Shutter
- Microphones and lack of headphone connection
- Poor recording format (h.264, 4:2:0 with temporal compression)
- 10-15 min recording limit
- High contrast recording format. It's easy to overexpose.
- Aliasing and moiré patterns
- Heat up over time
- Short battery
- Shaky footage

Solutions:

- Go into settings and make sure contrast, sharpness and saturation are set low. You can add these when editing, it's easier to add later than remove. If you know you'll be making a black and white video, shoot in black and white.
- Use the Cinestyle camera preset. It tries to minimise contrast for you in camera.
- Use histograms to make sure your exposure isn't too high or too low
- Use a rig, tripod or monopod to stabilize footage. DSLRs have a neck strap which is great for stabilizing.
- Use a colour checker
- Have lots of extra batteries charged and ready to go

Special note: the audio recorded in a DSLR will be very bad! Use an external recorder, like a Microtrack, and try to sync the sound later. Keep your microphone close to your subject.