Cell Phone Photography

What this presentation will provide

- Understanding of how current phone cameras are different due to advanced technology
- What features are available for control of your phone photography
- What other features are included that may not be associated with DLSR cameras

What this presentation will not provide

Step by Step tutorials on how to use features

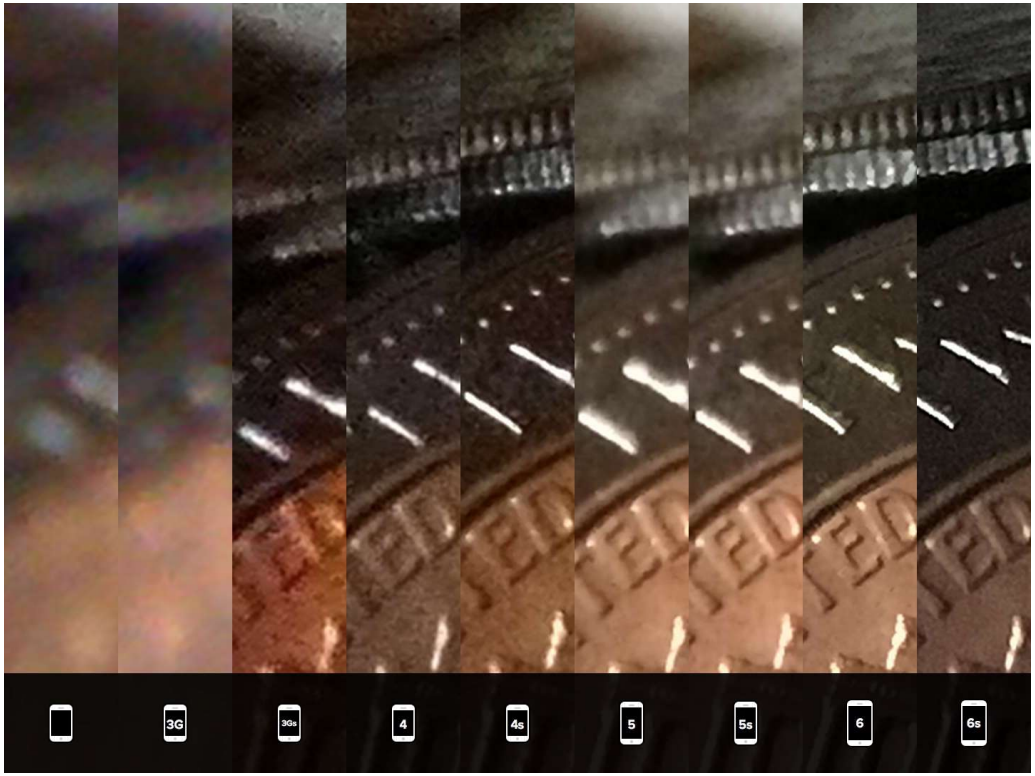
Detailed instructions on photo management

Ways that Smartphones have improved over the years

More Megapixels	Bigger Sensors	Wider Apertures	Better Flash
Faster Focus	Optical Image Stablization	Dual Cameras	Improved Processing

Technology Improvements

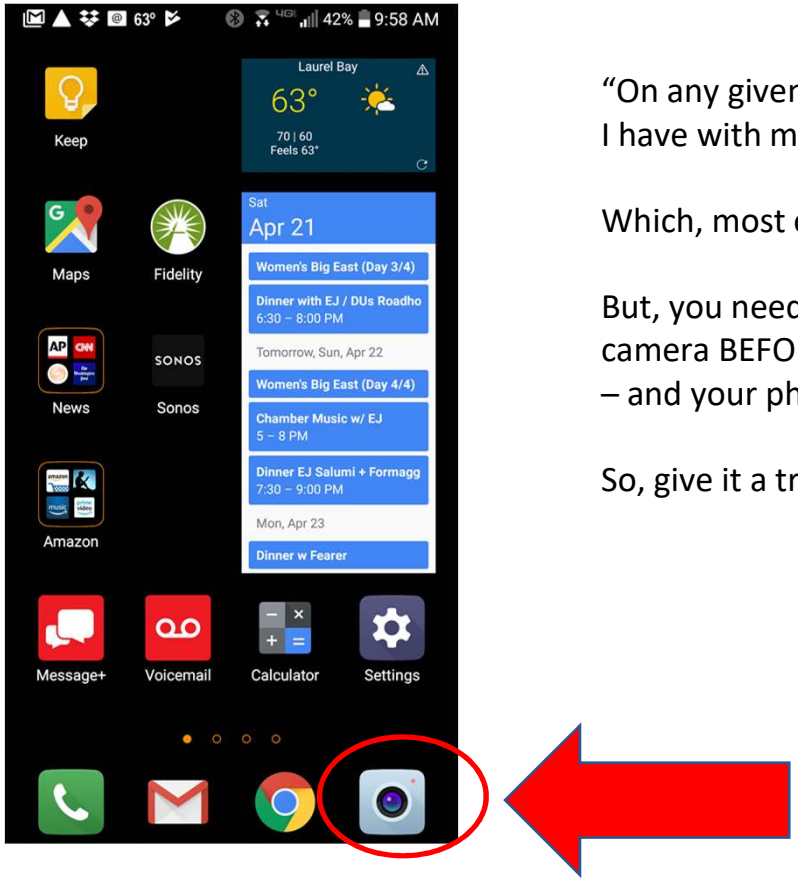
Megapixels	2-megapixels to 12-megapixels
Sensor Size	1/3.2” to 1/2.3”
Apertures	f2.8 to f1.6
Flash	Xenon to quad-LED
Focus	Contrast to phase detection to infrared laser
Cameras	Single to Dual (wide angle and telephoto)



Comparison Example

- Original iPhone to iPhone 6S
- Low-light Detail

Cell Phone Photography – Android Specifics



"On any given day, the best camera I own is the one I have with me"

Which, most of the time, is my phone.

But, you need to know how to use your cell phone camera BEFORE you stumble across that great shot – and your phone IS your best camera!

So, give it a try!

Camera Screen

Normal / Wide Angle

Auto / Manual

Flash – OFF / ON

Camera – Front/Back

Filters

Mode

Camera Settings

Camera Screen – Lens, Auto, Flash, Selfie

Auto / Manual
Auto=Point+Shoot
Manual=DSLR

Flash – OFF / ON
Obvious. Don't turn on Flash unless absolutely necessary

Camera – Front/Back
Standard camera vs Selfie.

Shutter (Not Shown)
Holding down Shutter icon takes photos in burst mode

Get started in Auto, try Manual when comfortable

Normal / Wide Angle Lens

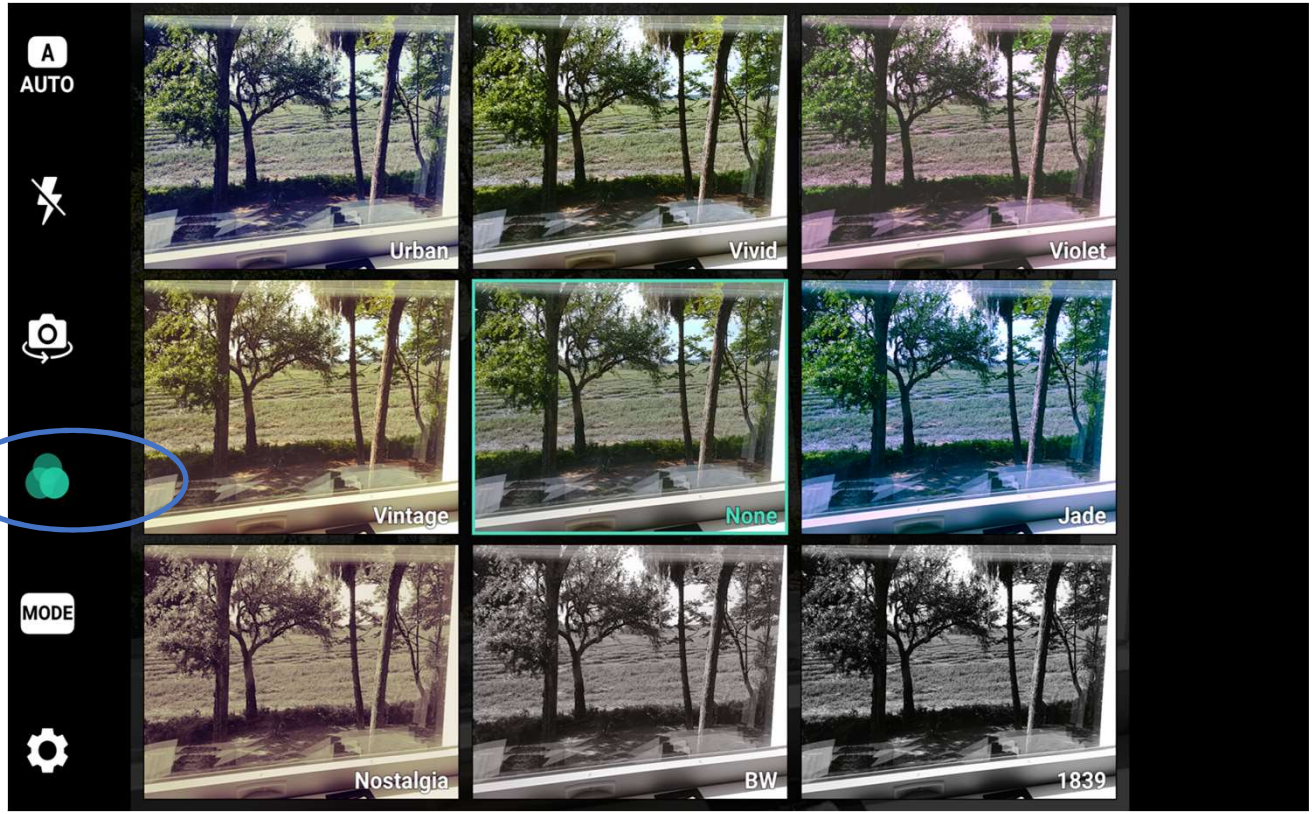
Camera Screen → Filters

Filter

Applies filter to JPG version of photo.

Permanently changes the JPG file exported to your laptop or desktop editing software.

In you don't need the photo immediately, do your editing in Lightroom or your usual editing software. It will do a much better job and you won't have to learn another set of tools.

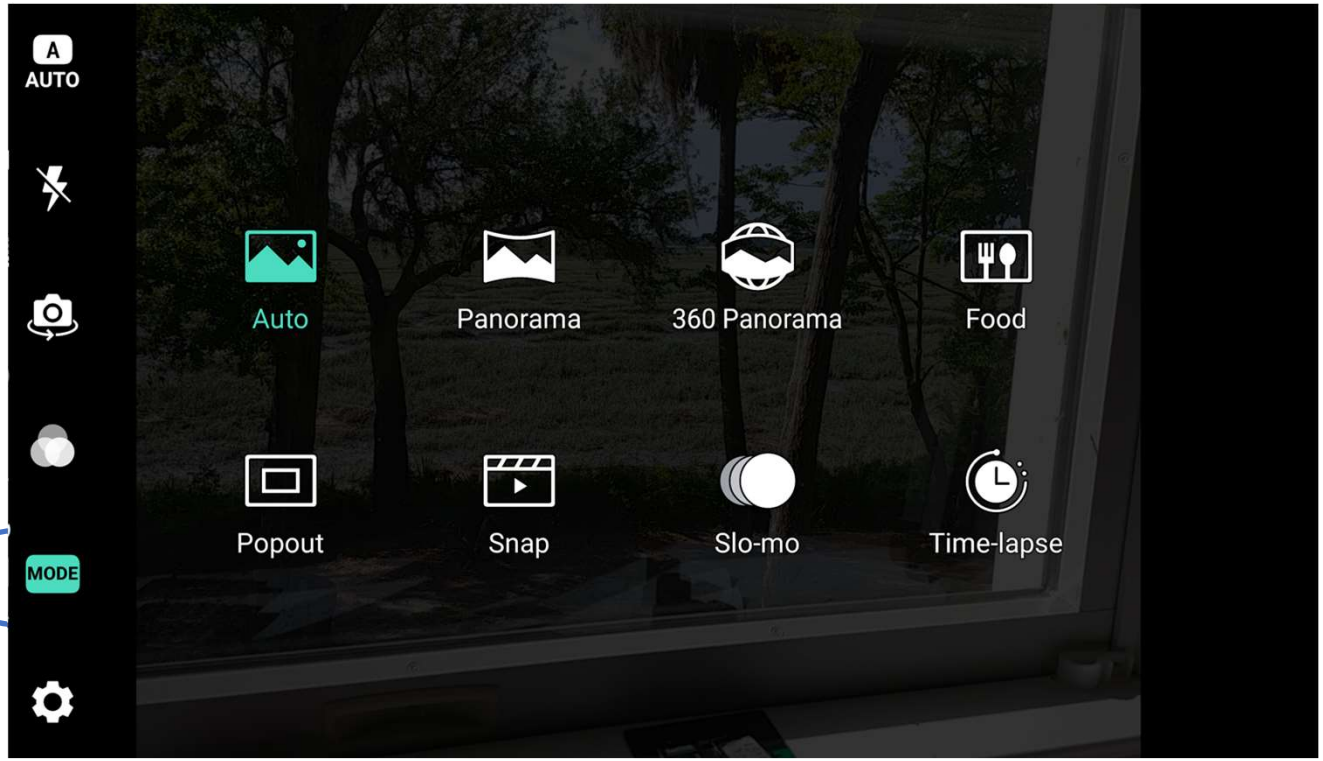


Camera Screen → Mode

Mode

Auto is standard camera mode. This terminology is confusing with Auto(P+S) / Manual(DSLR) above.

Only other mode we'll discuss is Panorama (if we have time).



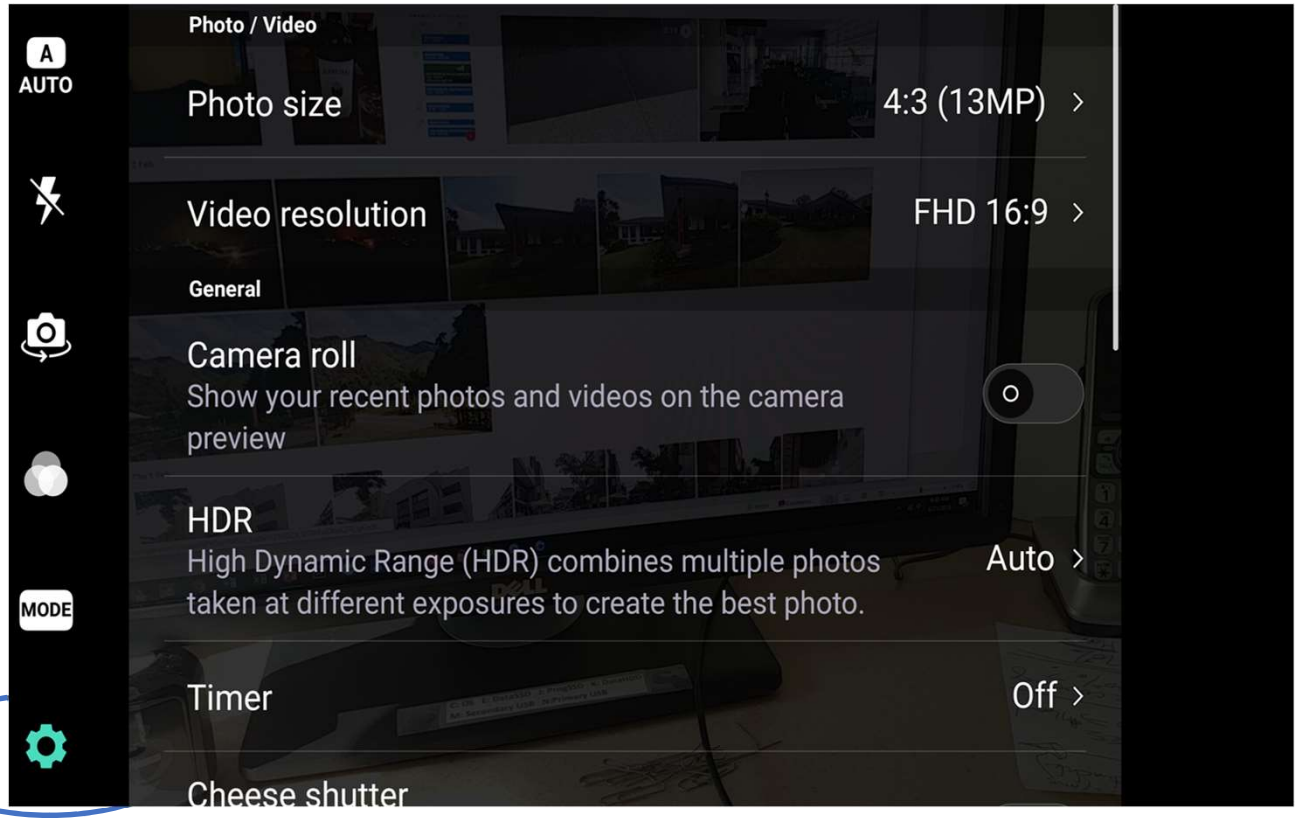
Camera Screen → Settings – Top Half

Camera Settings

“Settings” are a real Rabbit Hole, but there are lots of worthwhile thing down here.

So, give them a try. We’ll recommend settings we find most useful.

And, just to make things more confusing, the settings differ between Auto(P+S) and Manual(DSLR).



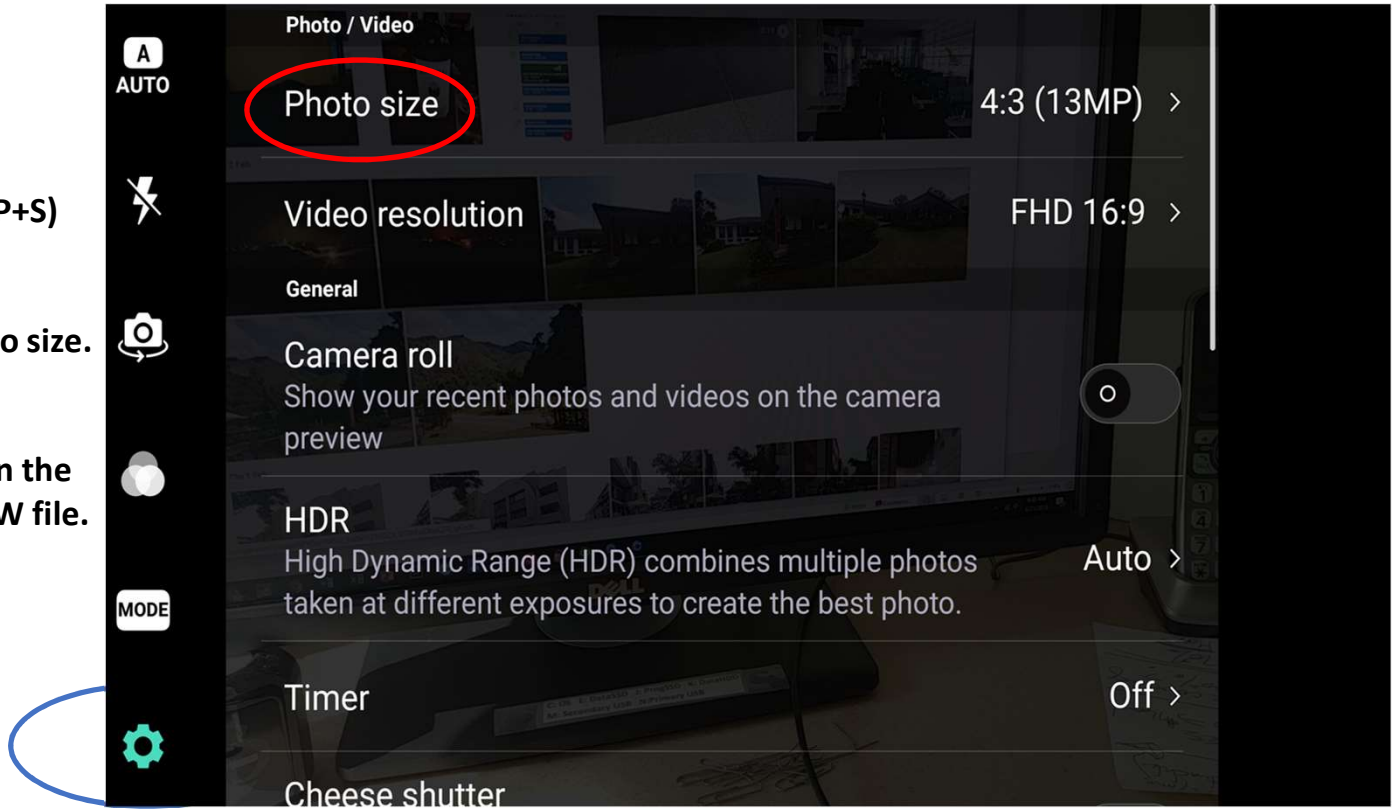
Camera Screen → Settings – Photo Size

Camera Settings

Let's begin in Auto(P+S) mode.

First Setting is photo size.

Sets the resolution (number of pixels) in the exported JPG or RAW file.



Camera Screen → Settings – Photo Size Detail

Camera Settings

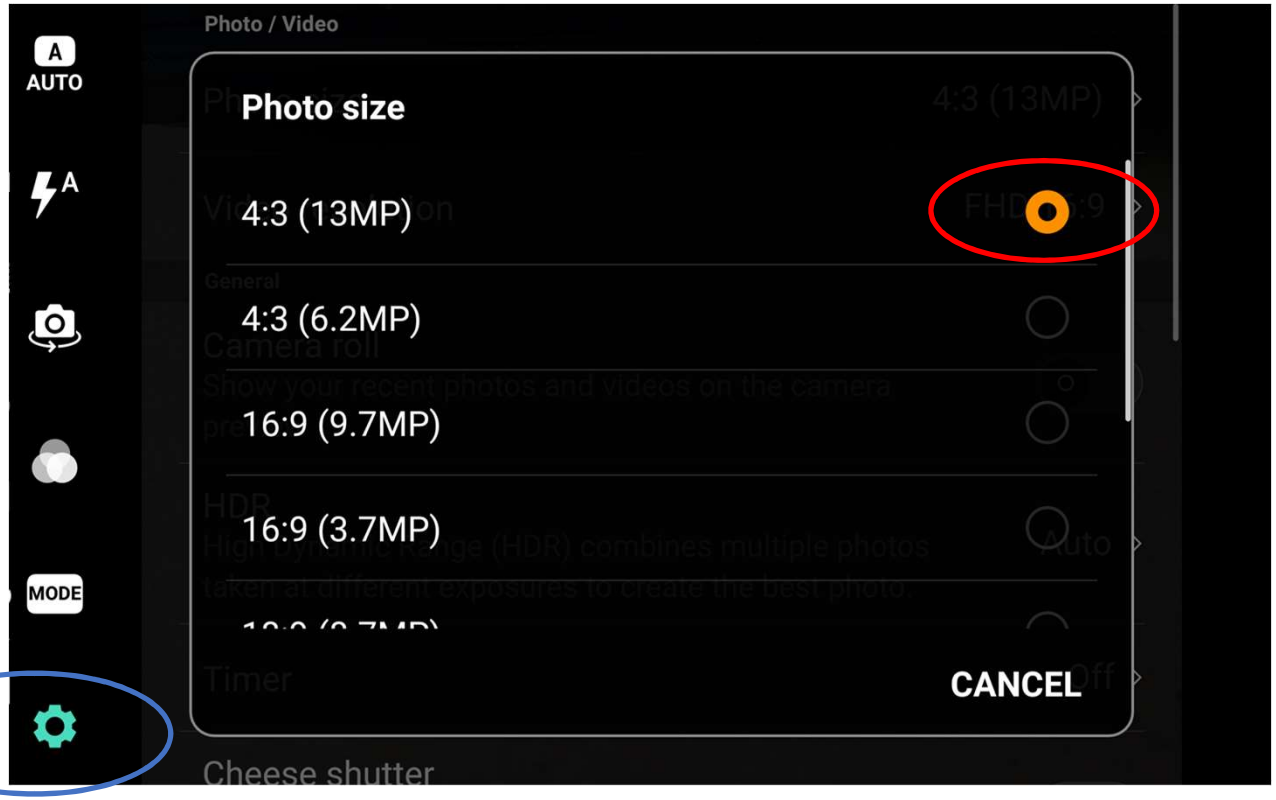
Photo size controls two options: aspect ratio and image size (resolution = number of pixels).

Recommend 4:3 aspect ratio to match your DSLR.

Recommend max image size/resolution.

As mentioned earlier, sensor resolution is very good - matches some DSLRs.

BUT file size is LARGE.



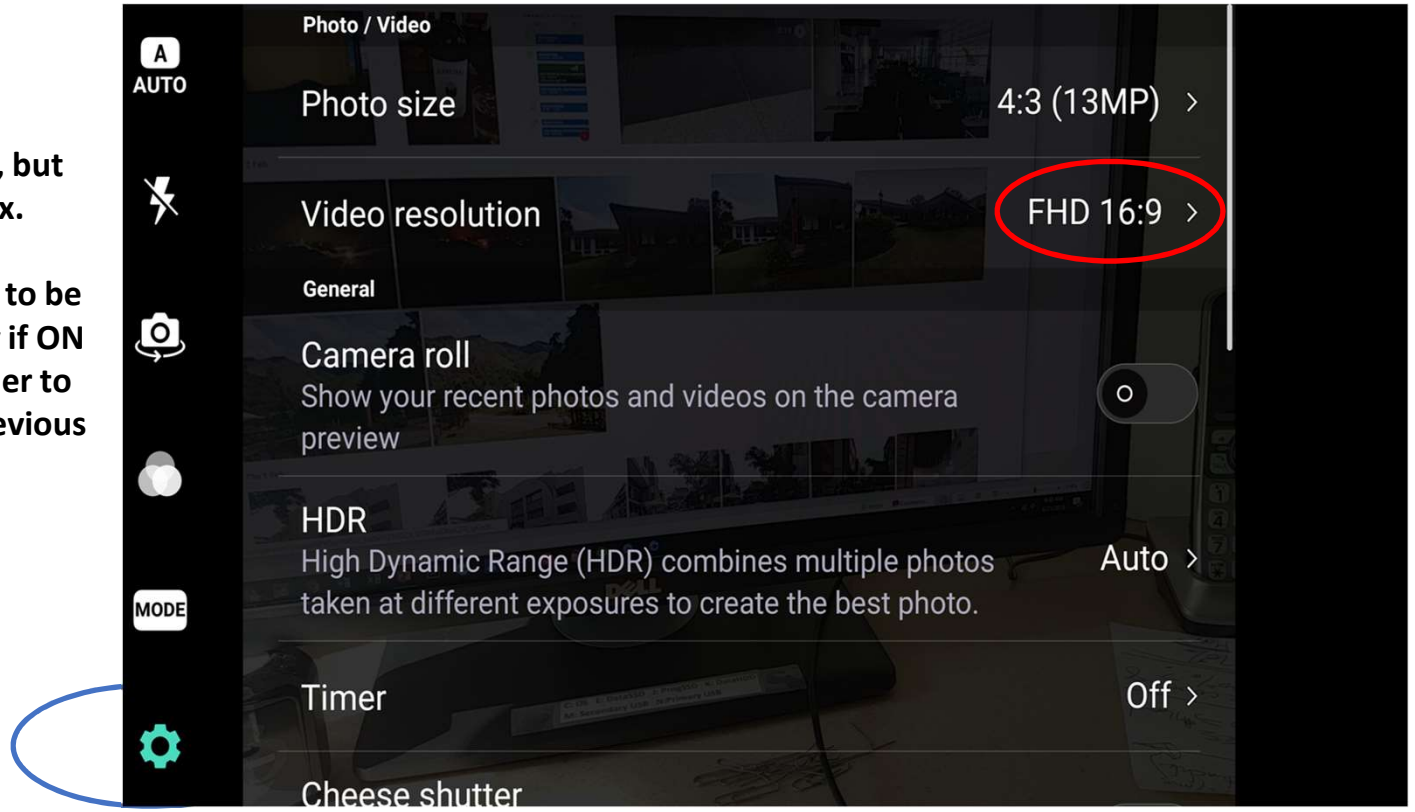
Camera Screen → Settings

Video Resolution / Camera Roll

Camera Setting

Won't discuss video, but set resolution to max.

Camera roll appears to be camera specific. Try if ON setting makes it easier to "check out" your previous photos as you are shooting.



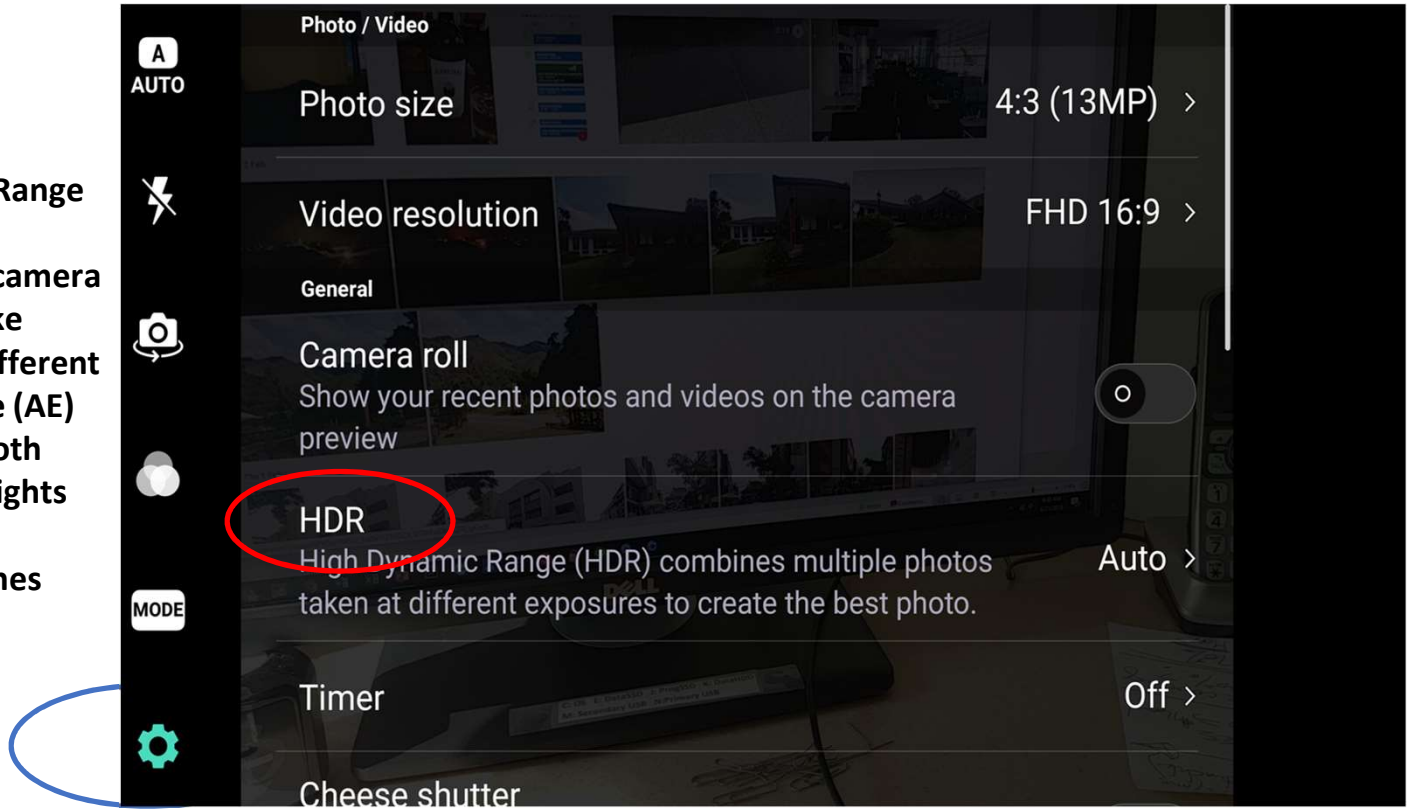
Camera Screen → Settings – HDR

Camera Settings

HDR - High Dynamic Range

In Auto (P+S) mode, camera can automatically take multiple photos at different Aperature / Exposure (AE) settings to capture both shadows and bright lights successfully. Then it automatically combines them to on JPG.

A really nice feature.



Camera Screen → Settings – HDR Detail

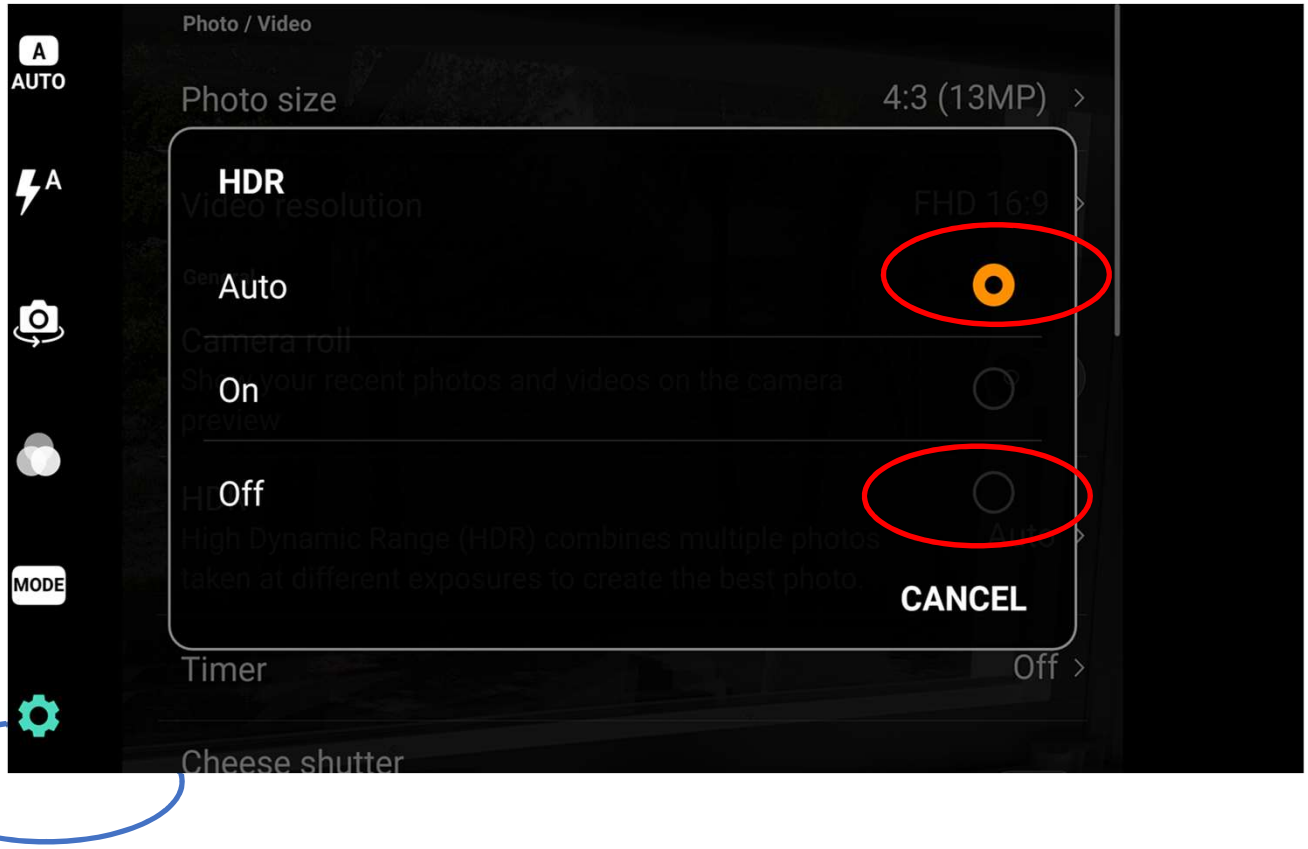
Camera Settings

Either set to Auto and let camera automatically select HDR mode when camera senses "clipping" would occur.

Or set it Off and only turn it on when necessary.

On balance, I'd recommend Auto.

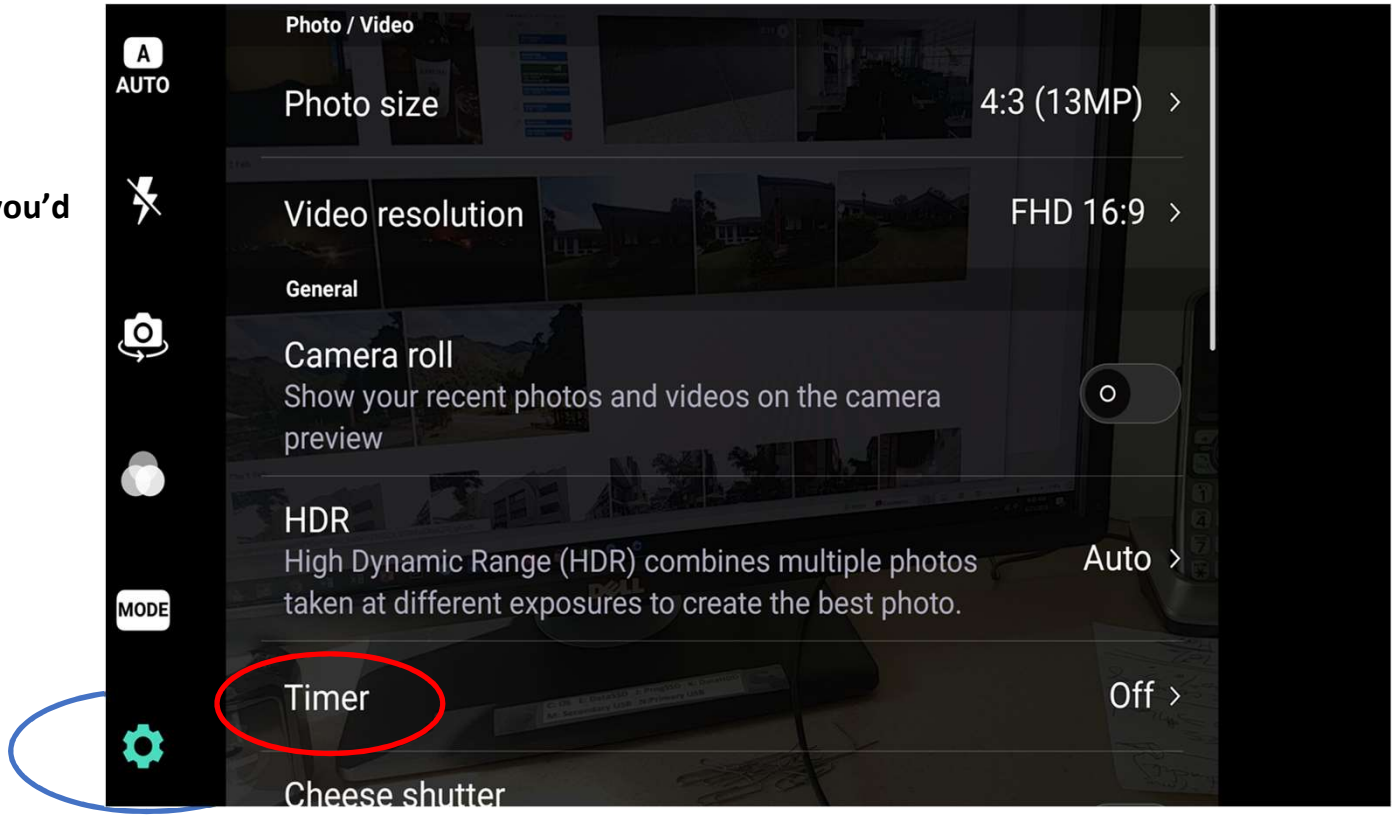
But, don't leave it ON. HDR can cause some blurring, especially if anything is moving.



Camera Screen → Settings – Timer

Camera Settings

Does exactly what you'd expect.

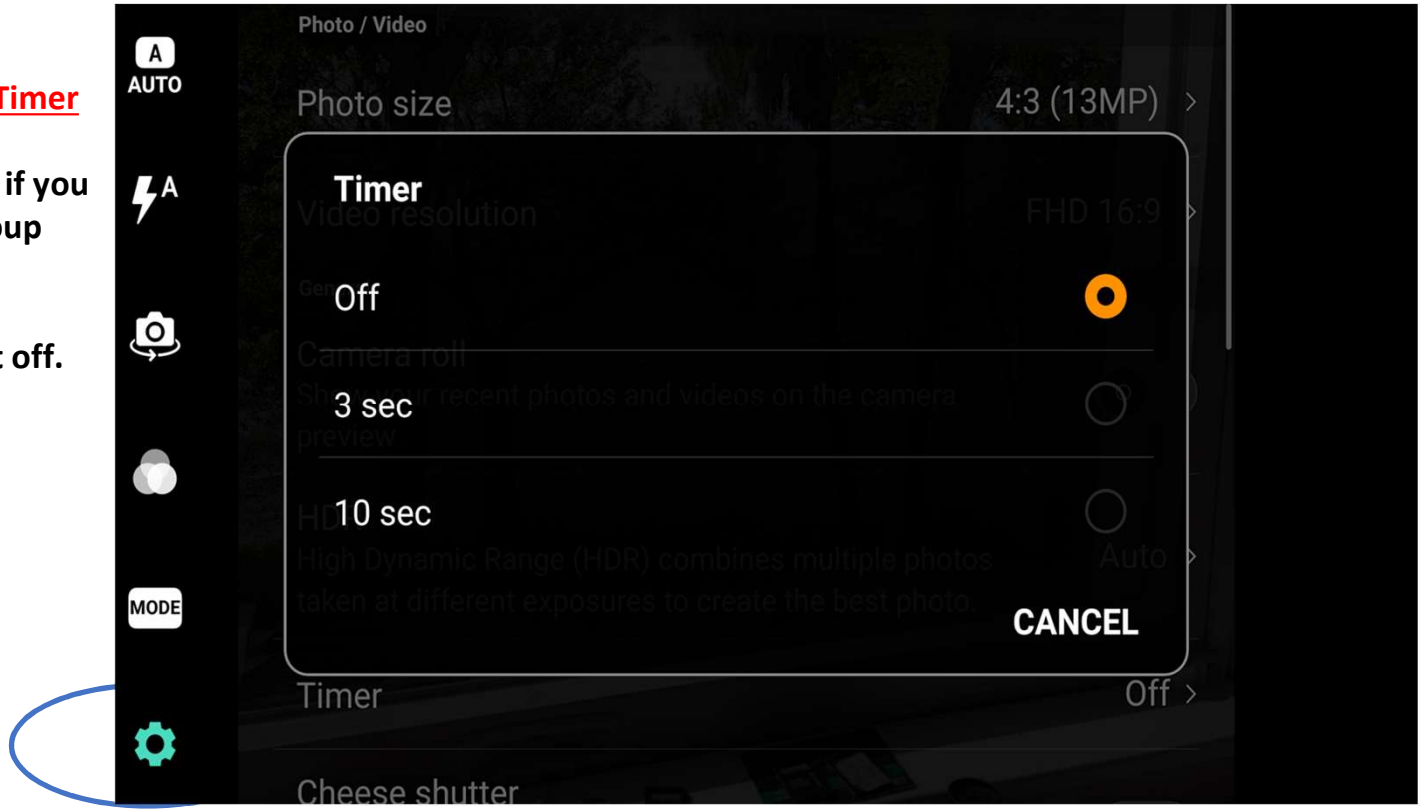


Camera Screen → Settings – Timer Detail

Camera Settings - Timer

Moderately useful if you want to be in a group photo.

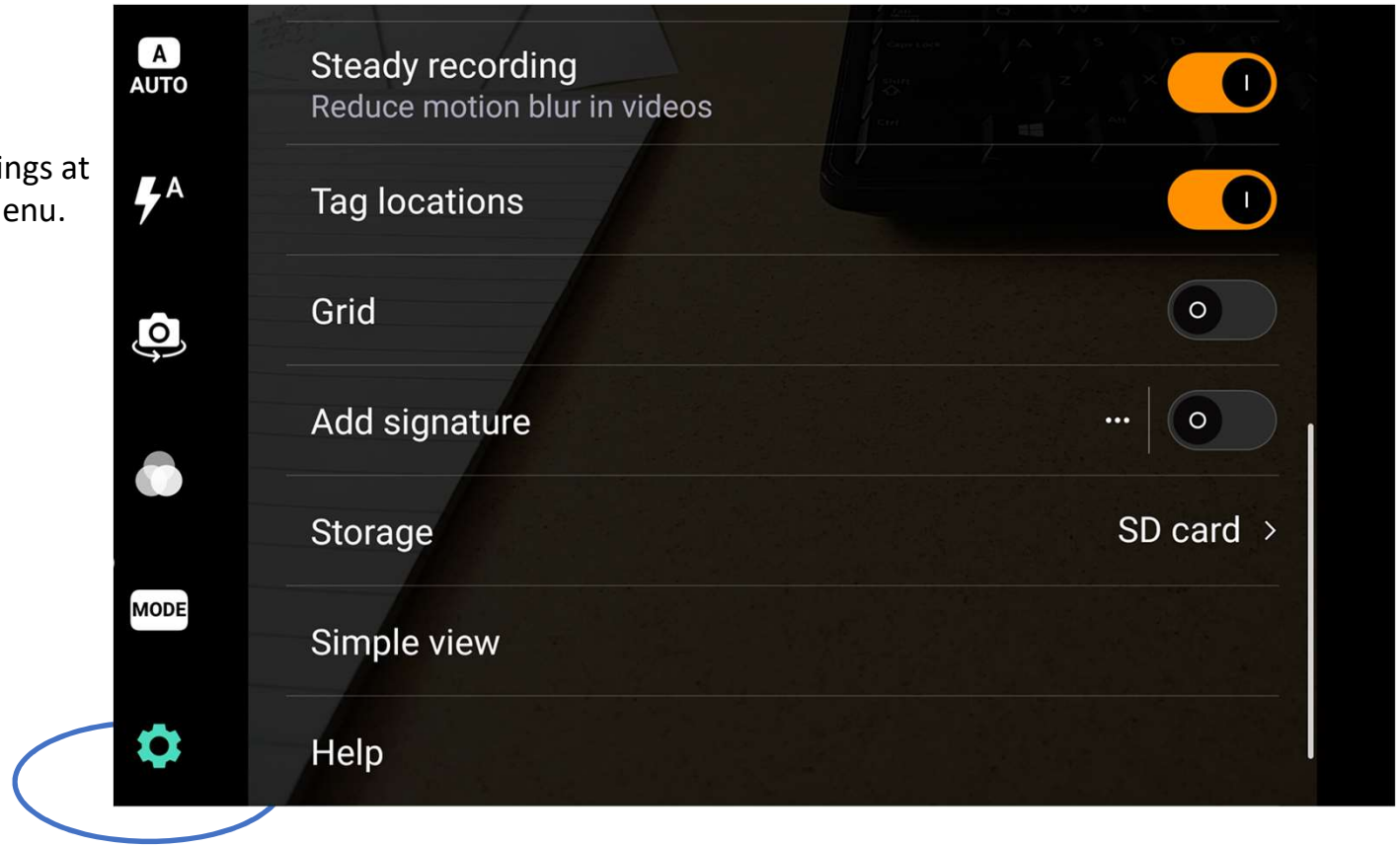
Otherwise, leave it off.



Camera Screen → Settings – Scroll to Bottom Half

Camera Settings

There are more settings at the bottom of the menu.



Camera Screen → Settings – Bottom

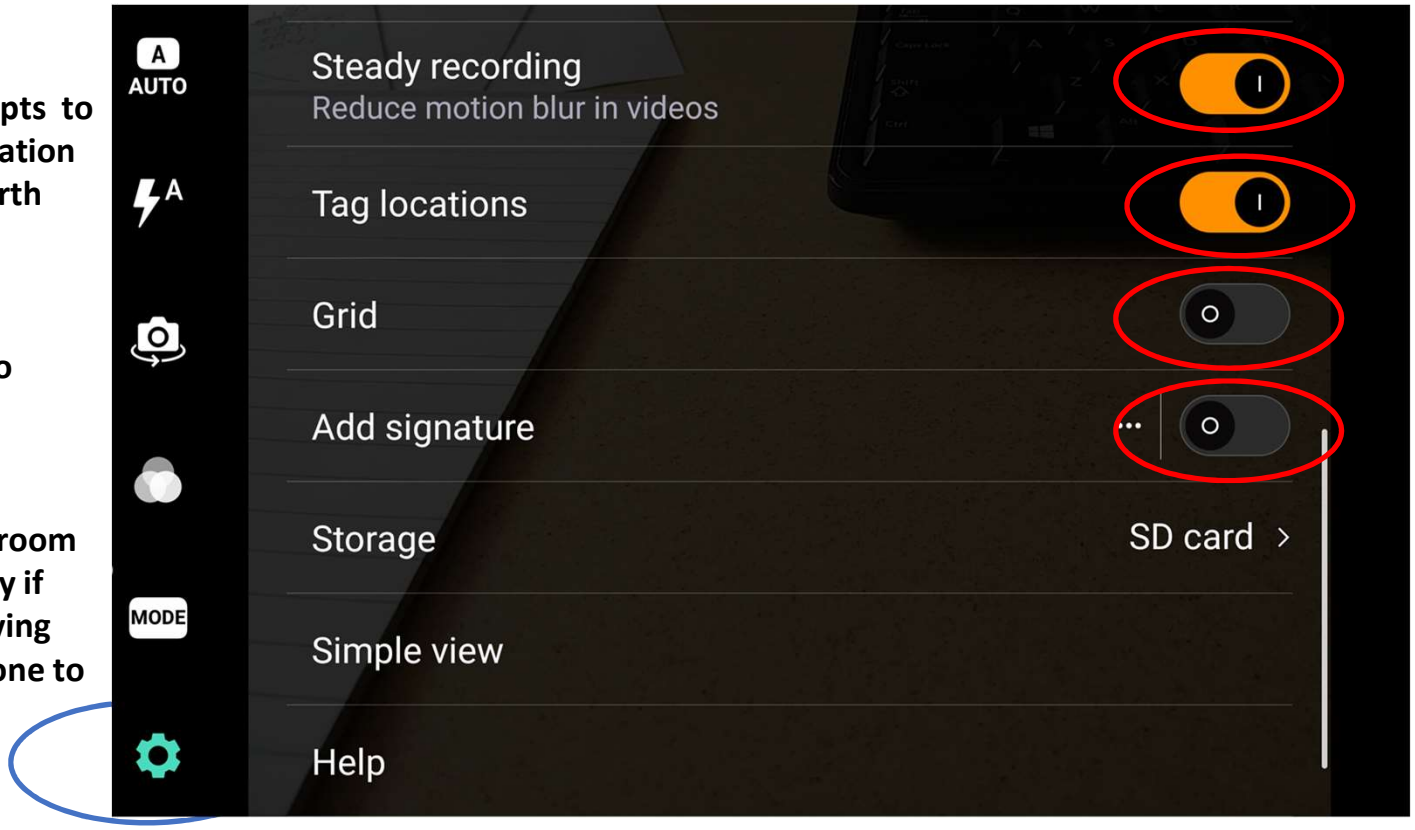
Steady Recording / Tag / Grid / Signature

Camera Settings

Steady recording attempts to provide image Stabaiiization for video. Probably worth using.

Tag location builds GPS location data into photo metadata.

Really nice feature in combination with Lightroom Map function, especially if your travelling and moving around a lot. Another one to try!



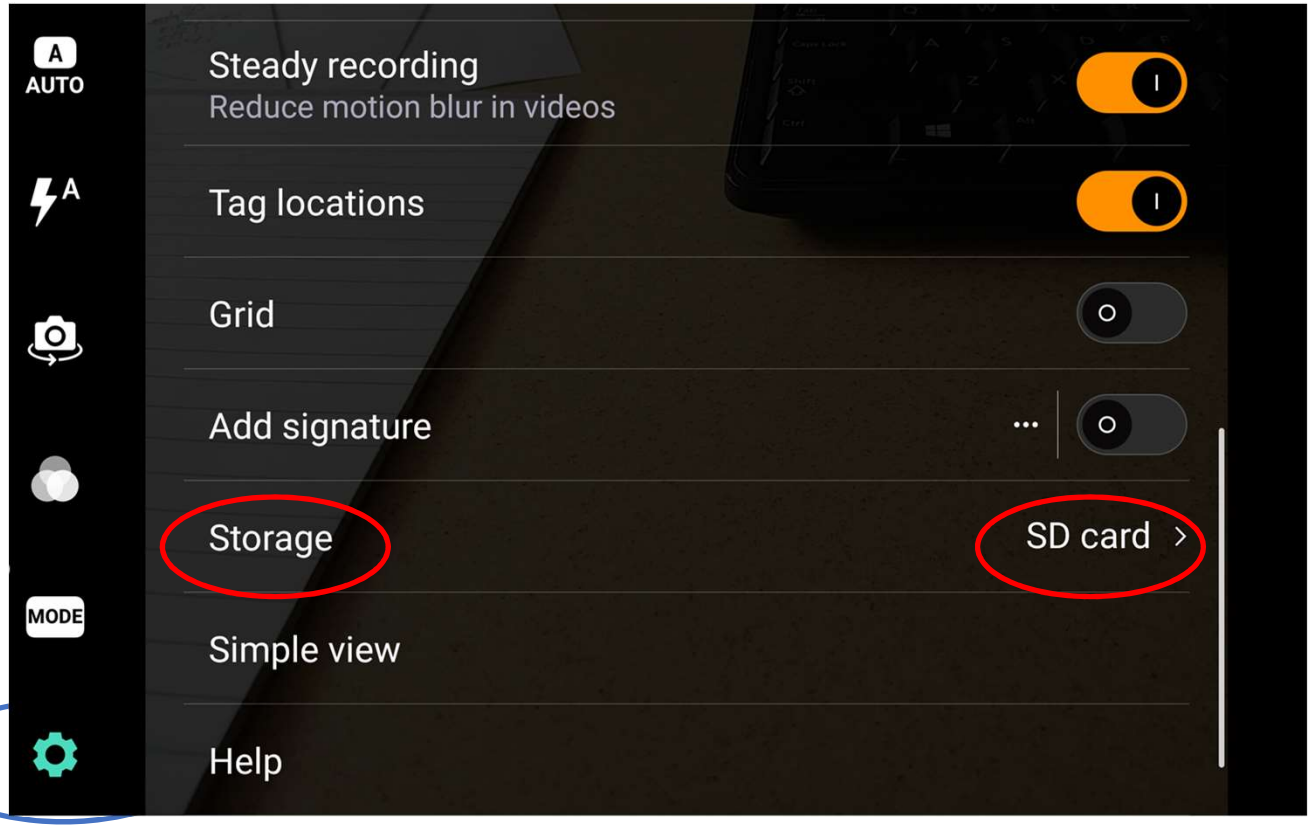
Camera Screen → Settings – Storage

Camera Settings - Storage

Here is a REALLY important one. Image sizes are really large (5+MB for JPGs and 15+ MB for RAW). Which is good.

But, you won't want to store them on your phone's internal storage for long.

Get a micro-SD card (32 GB for $15 at Amazon) and put it in your phone. Once inserted, you'll never need to remove it.



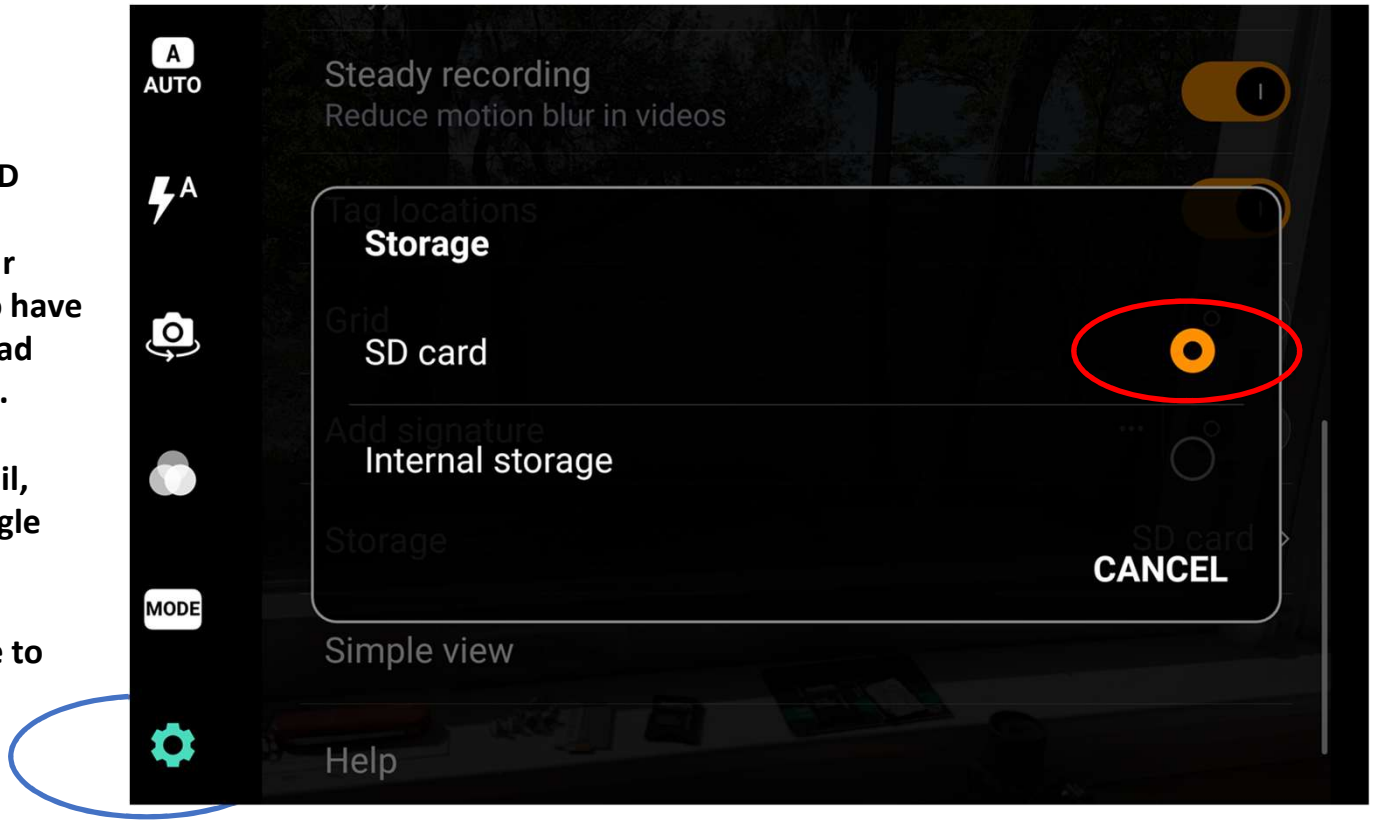
Camera Screen → Settings – Storage Detail

Camera Settings

Since phone micro-SD cards can't be easily removed (unlike your DSLR), you'll need to have another way to upload photos to Lightroom.

Options include email, USB teathering, Google Drive, or Dropbox.

We won't have time to discuss tonight.



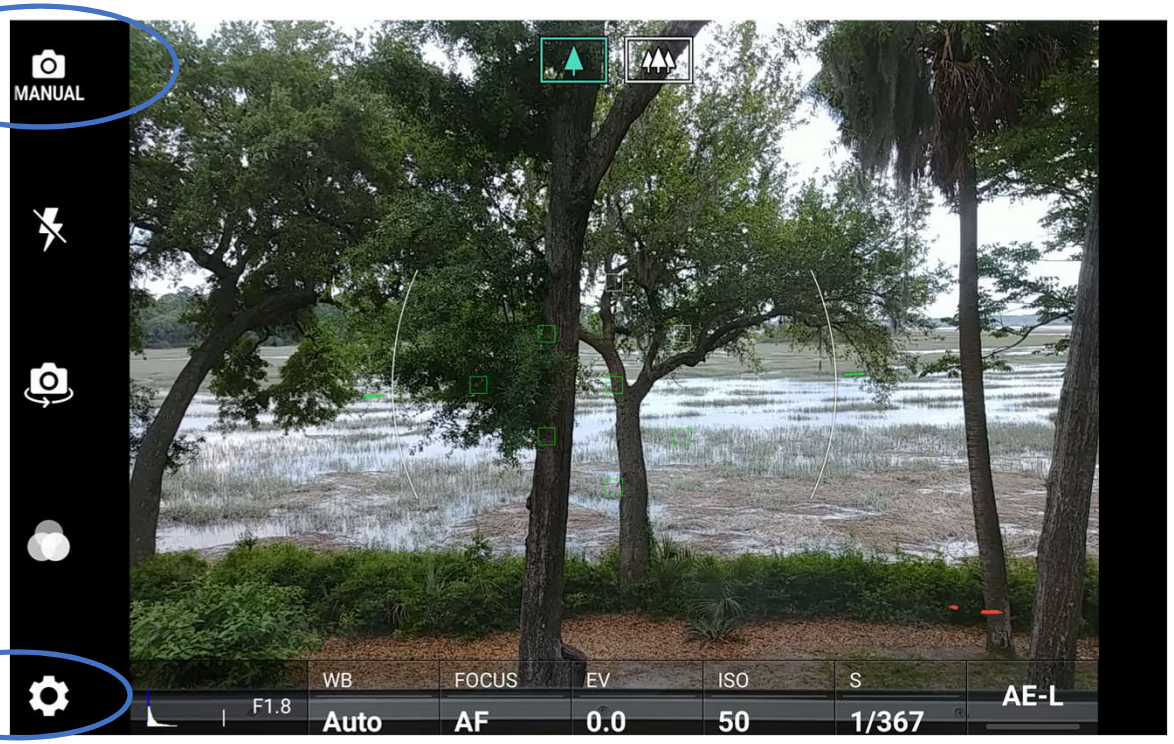
Camera Screen - Manual (DSLR) Mode

Camera Settings

Converts phone from a Point and Shoot camera to a DSLR-like display.

Nice thing is, the phone still does most of the work (just like your DSLR in Auto or Program mode).

But you see what it is doing and can change WB, AF, ISO, and Exposure. There is even an exposure histogram.



Camera Screen → Settings – Storage Detail

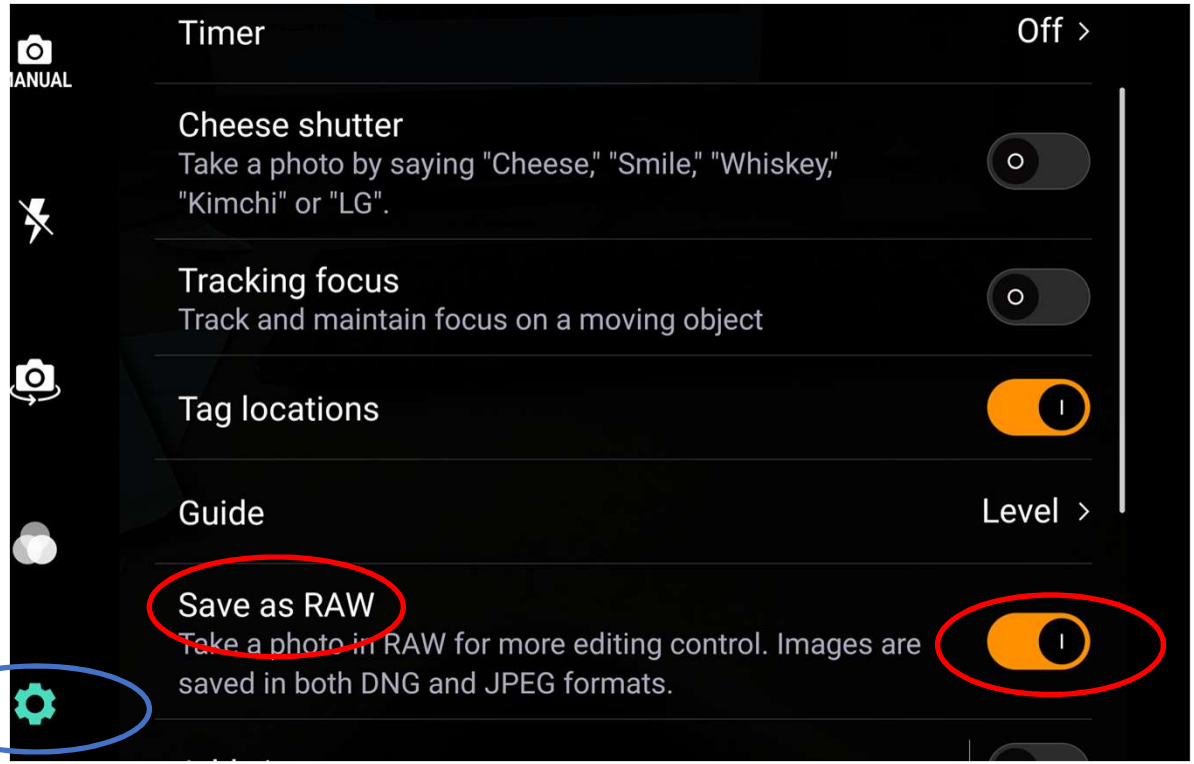
Camera Settings - Manual

Many settings are the same as Auto (P+S).

Some don't exist at all.

BUT, you can chose between saving image as JPG and RAW file.

If you're going to the extra effort to shoot in Manual (DSLR) mode, I'd capture as RAW file, just like your DSLR. Gives you more flexibility in LR as well.



Camera Screen - Manual (DSLR) Mode

Camera Controls (Left to Right)

Exposure histogram

Aperture (F-Stop)

White Balance

Focus (Auto / Manual)

Exposure Value (Brighter / darker)

ISO – Film Speed

Shutter Speed

Aperture / Exposure Lock

Exposure Histogram | F-Stop | Autofocus | White Balance | Film Speed | Exposure Value | AE Lock | Shutter Speed

Camera Screen - Manual (DSLR) Mode

Camera Controls (Left to Right)

Exposure histogram

Aperture (F-Stop)

White Balance

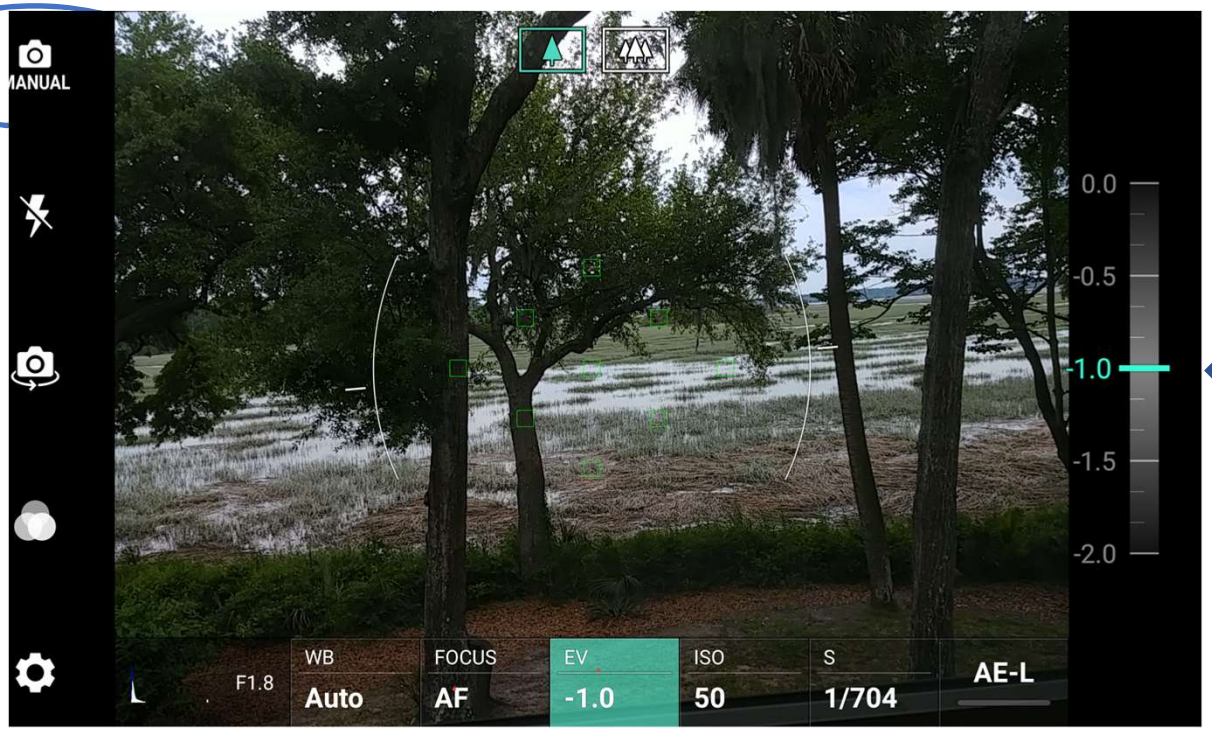
Focus (Auto / Manual)

Exposure Value (Brighter / darker)

ISO – Film Speed

Shutter Speed

Aperture / Exposure Lock



Exposure Histogram

F-Stop

White Balance

Autofocus

Exposure Value

Film Speed

Shutter Speed

AE Lock

Camera Screen - Manual (DSLR) Mode

Camera Controls (Left to Right)

Exposure histogram

Aperture (F-Stop)

White Balance

Focus (Auto / Manual)

Exposure Value (Brighter / darker)

ISO – Film Speed

Shutter Speed

Aperture / Exposure Lock

Exposure Histogram | F-Stop | Autofocus | White Balance | Film Speed | Exposure Value | AE Lock | Shutter Speed

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Camera Controls (Left to Right)

Exposure histogram

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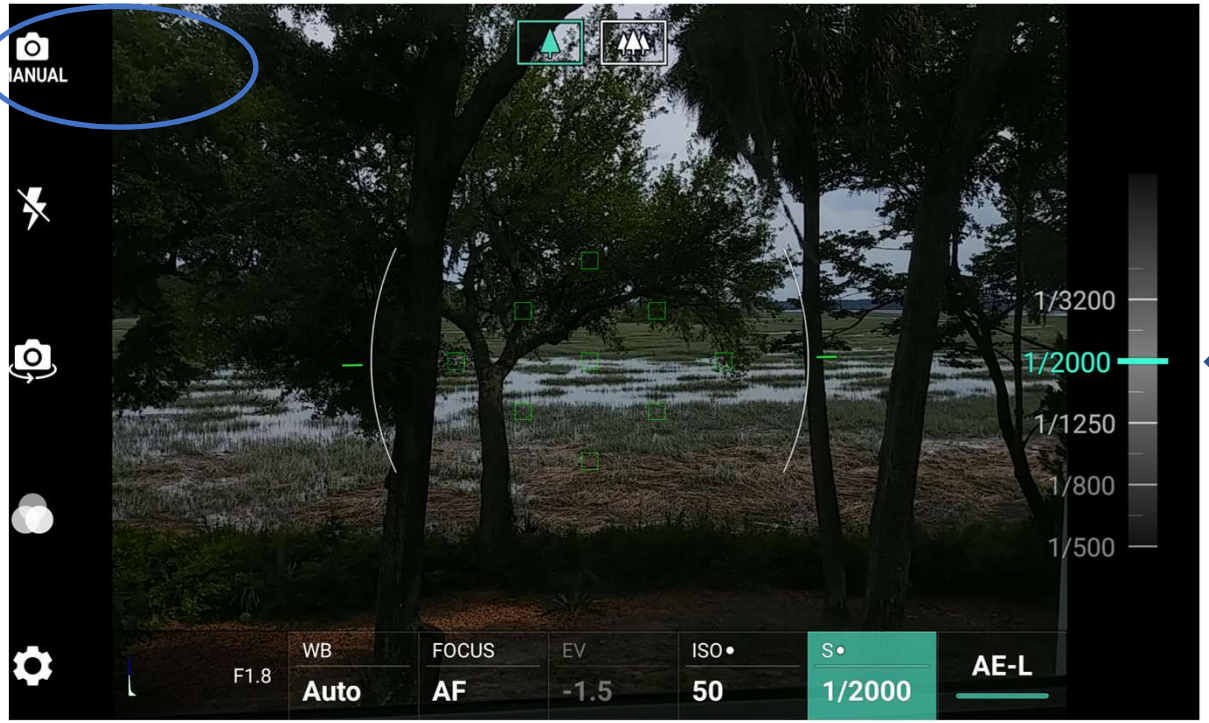
Shutter Speed

Aperture / Exposure Lock



Exposure Histogram

F-Stop

Autofocus

White Balance

Film Speed

Exposure Value

AE Lock

Shutter Speed

Camera Screen - Manual (DSLR) Mode

Camera Controls (Left to Right)

Exposure histogram

Aperture (F-Stop)

White Balance

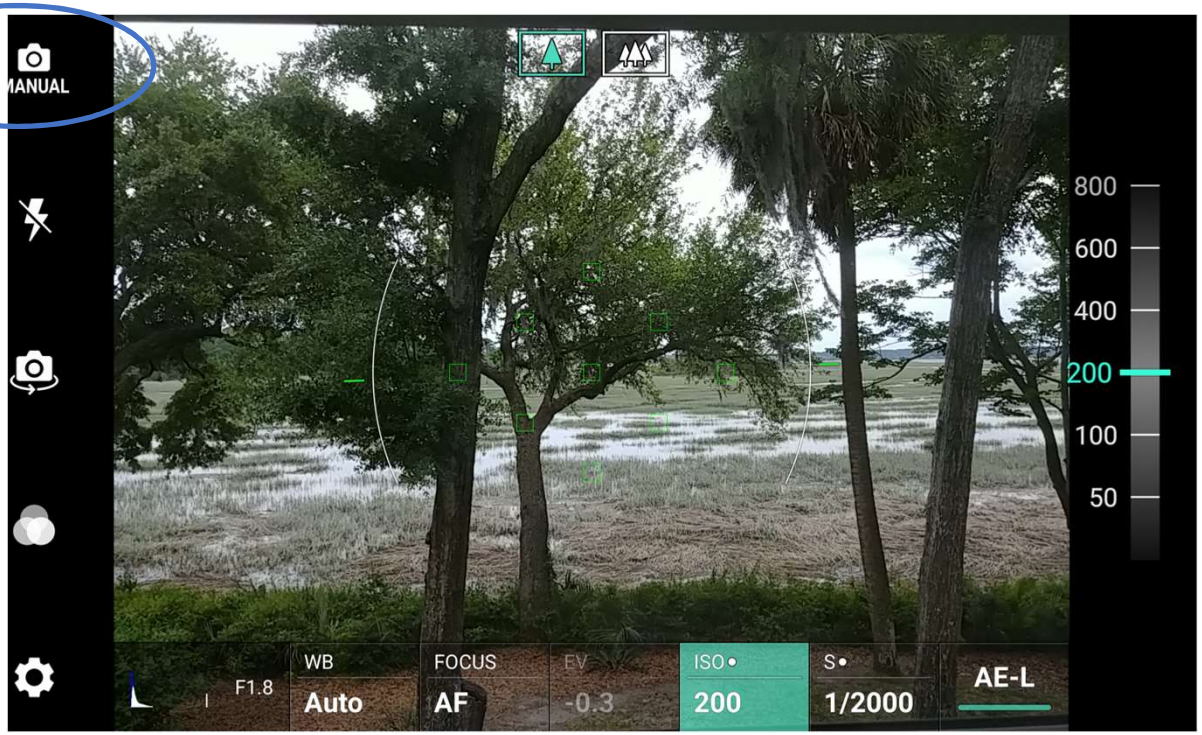
Focus (Auto / Manual)

Exposure Value (Brighter / darker)

ISO – Film Speed

Shutter Speed

Aperture / Exposure Lock



Exposure Histogram

F-Stop

Autofocus White Balance

Film Speed Exposure Value

AE Lock Shutter Speed

Cell Phone Photography – Auto or Manual

Final Question:

"Which should I use – Auto or Manual?

Manual	Auto
Simpler	More Control over Exposure / Shutter speed
Auto HDR	RAW

Since it is trivial to switch between them

I suspect the answer is "Both"

Cell Phone Photography – Conclusions (?)

With a little bit of practice, the next time you're packing for a trip, the question won't be

"Do I need to bring my camera?"

It will be

"Do I need to bring a second camera?"

This presentation is available on the CIPC website / For Members / Technical Tips:

http://www.ciphotoclub.com/technical-tips.html

ENJOY!