FPTV’s Advanced Cinematic Production Rig

Getting the most out of creative camera work

In this class we will...

- Walk through the camera and accessories
- Discuss cinematography concepts
- Cover tips and tricks to further your film creation knowledge

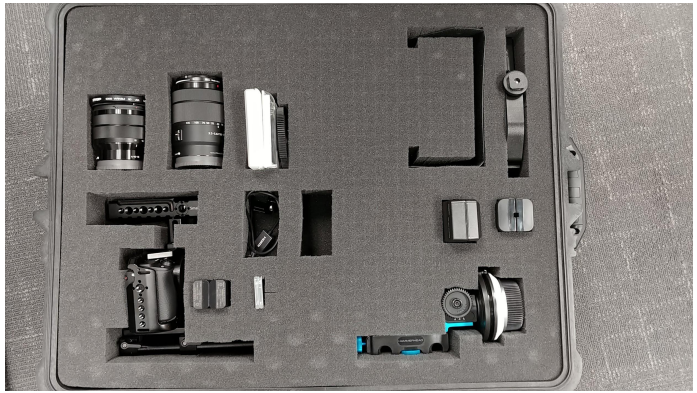
What is included

- The FPTV Narrative Production rig consists of the following:
- Sony A6400 in its cage with handle attached
- Three A6400 batteries
- Sony A6400 battery charger
- Micro USB charger with cable
- Two Sandisk 64GB Sd cards
- Sony 10 - 18mm lens with variable Neutral density filter attached
- Sony 18-135mm lens with variable Neutral Density filter attached
- Two Circular Polarizer filters
- Lens teeth ring
- Follow focus
- Two Dracast monitor batteries in the foam slot
- One monitor battery charger
- Feelworld Monitor
- Monitor hood
- Micro HDMI to HDMI cable

The Camera

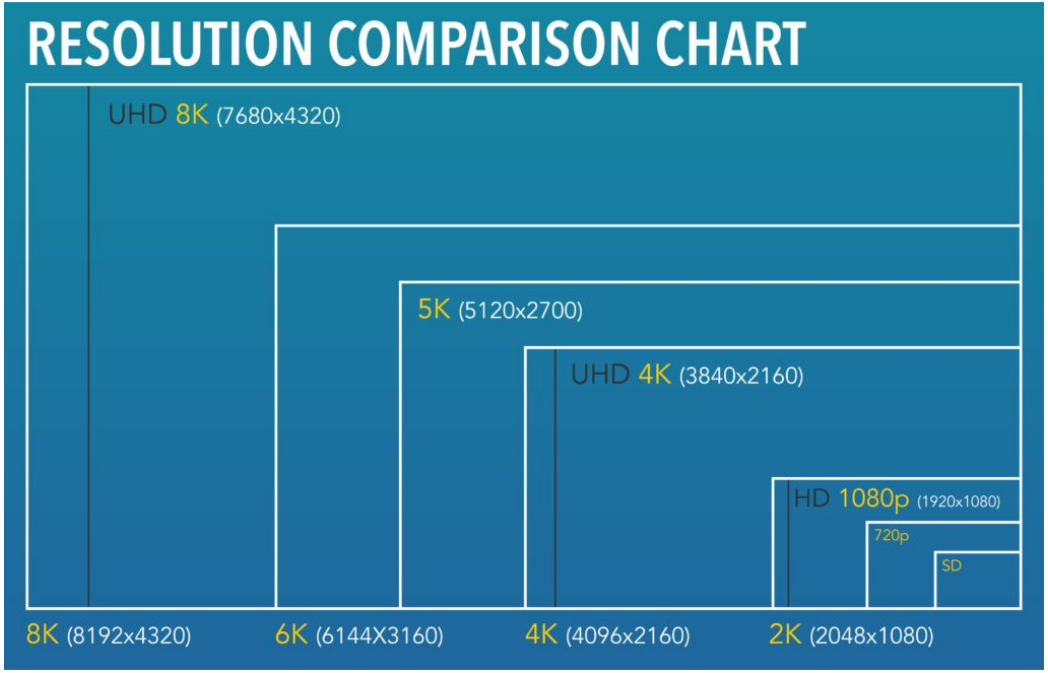
Sony A6400

- Shoots 4K Ultra HD Footage
- Cage and monitor included
- Fits two lenses with varying focal lengths



Resolution Explained

A discussion of resolution and the implications of shooting in higher qualities and codecs.



The Lenses: Focal Lengths

Focal Lengths

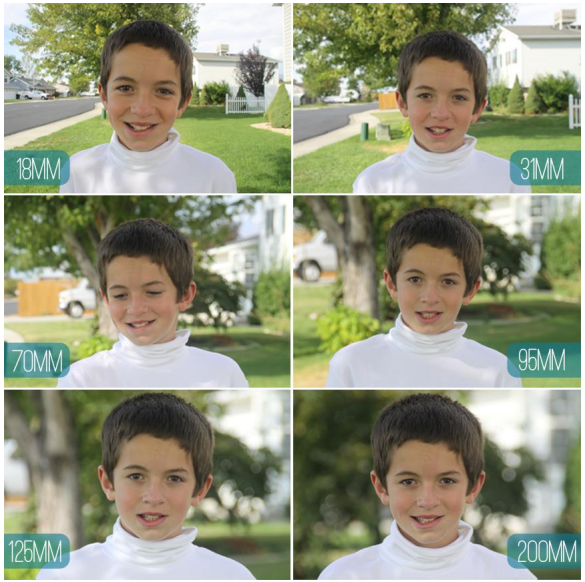
Low focal lengths have a wider field of view than lenses with long focal lengths.

The 16mm is much wider and zoomed out than, say, the 100 mm lens.

Focal Lengths

Different focal lengths affect the background in very different ways. Zooming in on a lens is different than moving close to the subject.

Notice how depth of field and elongation of the background change as focal lengths increase.



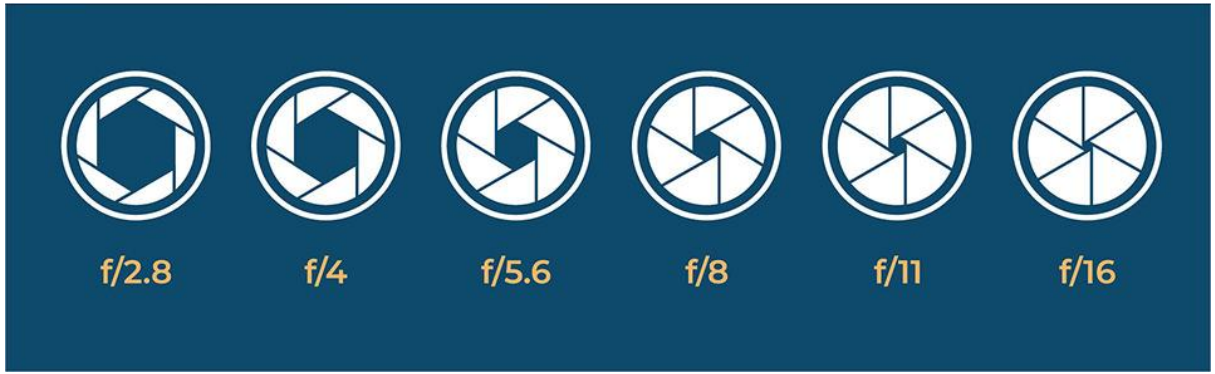
The Lenses: F Stops

F Stops

F Stops are a way to quantify how open (or closed) the aperture of your lens is.

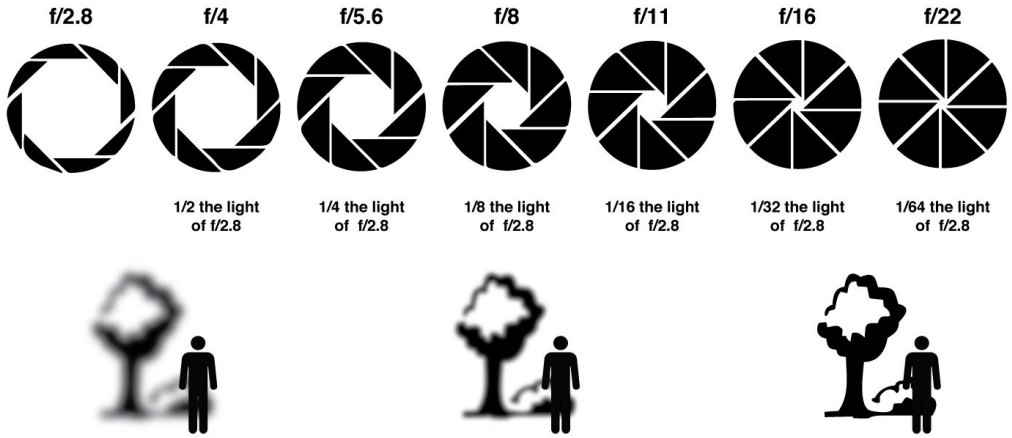
As you open the aperture of the lens you are decreasing your F Stop number.

Aperture inside of a camera lens



F Stops in Correlation to Depth of Field

“As F Stops decrease Depth of Field decreases.”



Notice that the depth of field is most shallow when the lens is wide open at F 2.8.

Change the F Stop of the camera lens...

Locate the scroll wheel on the top right of the camera body. Simply scroll to the right or to the left to bring up the aperture controls on the screen. You will notice that they are measured in F Stops like 2.8, 4, 5.6, etc. Again, lower apertures are wider open and, therefore, allow more light to contact the sensor. **If you are shooting in low light you will want your F Stop to be the lowest it can possibly be.**

Depth of Field

What is in focus in your frame?

Deep depth of field

Shallow depth of field

Depth of Field What is in focus in your frame?

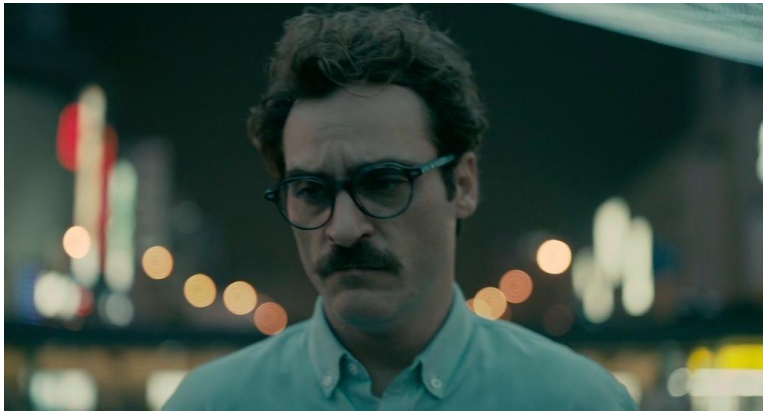
Deep depth of field

Shallow depth of field

Two ways to achieve shallow depth of field

Zooming in

Widening aperture



Camera: ISO

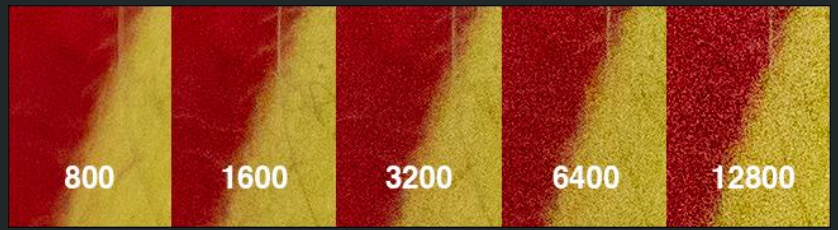
ISO Defined

ISO, as defined from DigitalTrends.com stands for “International Organization of Standardization, which is the main governing body that standardizes sensitivity ratings for camera sensors (among many other things). The term was carried over from film, when the ISO rating was known as the ‘film speed’ and ‘ASA.’”

ISO is the sensitivity of the digital sensor that you are shooting with. ISO can be changed easily on digital cameras by simply flipping a switch.

ISO

Increasing ISO improves low light performance but also increases digital noise in the image.



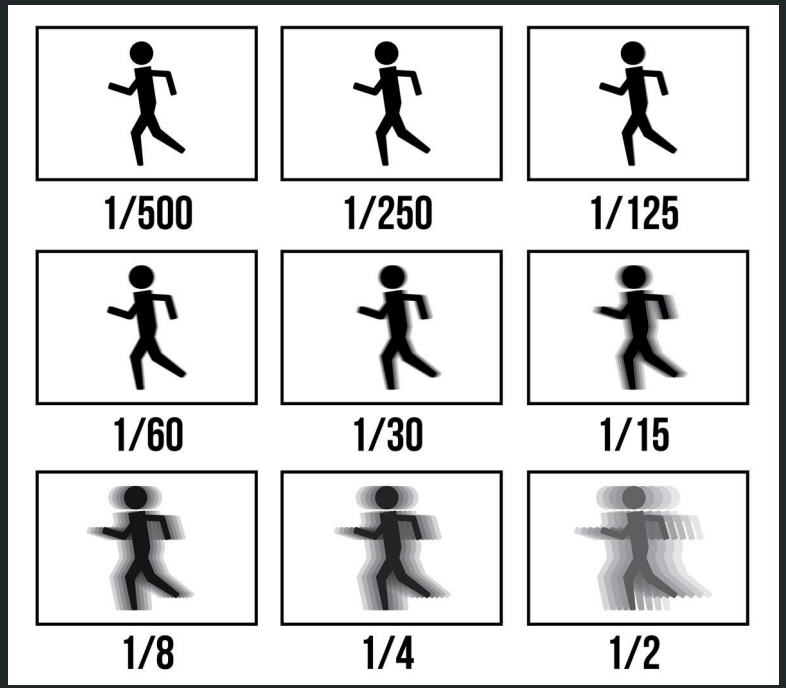
Increase or Decrease ISO on the A6400

On front scroll wheel press the rightmost button. It will be labeled as “ISO”. When clicked, this will take you to the ISO page where you can preview different ISOs and select the one that best fits your needs.

Camera: Shutter Speed

Changes in Shutter Speed

Shutter speed can be a way to control exposure, but is mostly useful for controlling motion blur.



Shutter Speed

How it is measured.

Shutter speed is measured in fractions that correlate to seconds. Remember, you are changing the amount of time (in seconds) that the shutter is open for.

Increase or Decrease Shutter Speed on the A6400

To change the shutter speed of the A6400 locate the click wheel and spin it either to the left or the right. The screen will change to show you the shutter speed, and will update in real time as you click back and forth between the available shutter speeds.

The Golden Rule for Shutter Speed

You should always have your shutter speed set to double of what your frame rate is. For example, if you are shooting at a frame rate of 30fps (frames per second) then you should be shooting at a shutter speed of 1/60.

Lenses: Neutral Density

What is Neutral Density?

Neutral Density is the proper way of controlling the amount of light intake of the camera. Essentially, neutral density functions as sunglasses for the camera when the sunlight outside is too intense to be shot in.

Without ND

With ND

To use ND on the A6400

There should be a variable ND filter on the front of both lenses. Simply twist the front of the circular fixture and you will see the exposure change.

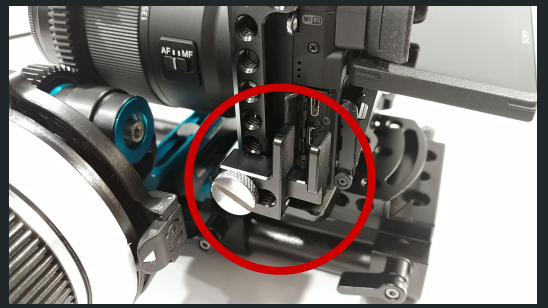
Camera: External Monitor

Feelworld External Monitor

The 5.7” monitor allows the user to view a better preview of the framing, composition and color of his/her frame.

1) Slide the cold shoe adapter into the top handle. Tighten the screw down.

2) Attach the cable clamp to the A6400 cage.



Feelworld External Monitor

3) Plug in the Micro HDMI into the camera and secure with the clamp.

4) Plug the HDMI cable into the left side of the Feelworld Monitor.

Feelworld External Monitor

5) Slide one of the provided Sony NPF batteries into the back of the Monitor.

6) Power the monitor on by pressing and holding the power button for three seconds.

Follow Focus

Follow Focus

A follow focus can be used to make getting correct focus more ergonomic and less cumbersome. It mounts to the rails of the camera system and the gears allow the user to pull focus from the side rather than directly on the lens.

Assembling the follow focus.

Step 1: Wrap the included teeth ring around the focus ring of the camera lens.

Assembling the follow focus.

Step 2: Slide the teeth into the grip and make sure that the ring is attached tightly around the lens.

Assembling the follow focus.

Step 3: Slide the follow focus unit underneath the camera lens and make sure that the teeth of the follow focus gear line up directly with the teeth ring.

Lenses: Polarizing Filter

Polarizing Filters

Polarizing filters allow for unique and useful effects to be done in camera. When used properly, polarizing filters can remove reflections from windows and increase saturation (and clarity) in skies and water.

Polarizing Filters

You will need to remove the Neutral Density filter from the front of the lens and screw on the polarizing filter. Once that is done, you can then twist the front portion of the filter independently to remove reflections and saturate skies.

Polarizing Filter Quick Tips

The Polarizer filters cut about one stop of light intake for the camera. Also, you cannot use the Polarizer filter in conjunction with the Neutral Density filter.

You’re all set!