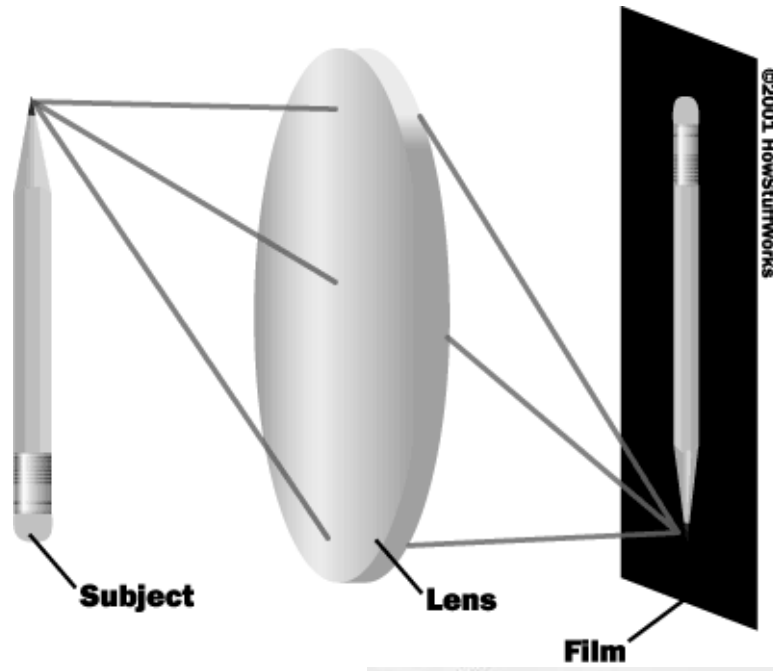


Camera Anatomy

- Aperture/F-Stop
- Zoom
- Focus
- Audio (XLR input, audio in)
- Gain Control
- External Power and Charging
- Firewire/USB port
- Sensor Size/number of sensors

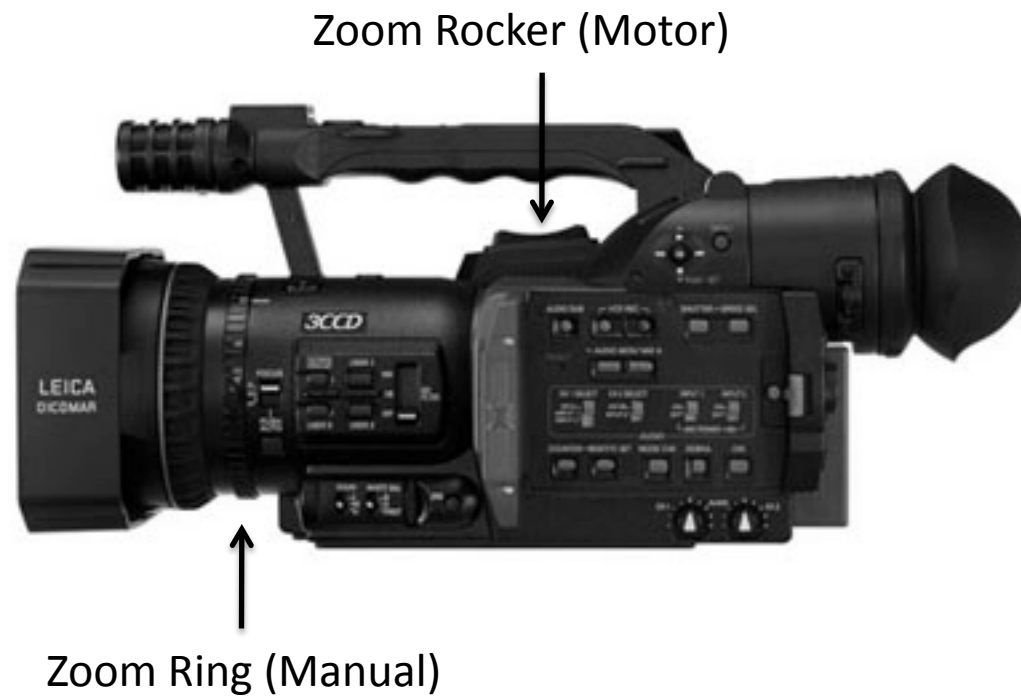
Lenses & Image Sensors



← Iris

Zoom Rocker/Ring

- Controls focal-length / field of view.
- Typically, avoid using this while recording.



Focus Ring

- Avoid Auto-Focus! (It Hunts!)



Focus Ring (Rotate to Set)

Auto/Manual Control

Audio Inputs



XLR (Balanced) Input

Gain Control

- It's the inverse of aperture, kind of...
- Makes image brighter, rather than darker
- There's a cost:
 - NOISE!
 - (So don't use it, if you can avoid it)

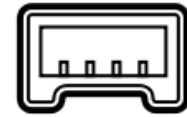
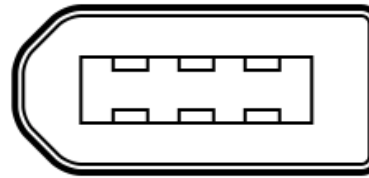
External Power and Charging

- Some (cheap) cameras charge the battery on the camera itself.
- Better: Camera with separate charger
 - (charge one battery while shooting with another)

Computer Interface

- Firewire (IEEE 1394)

- Standard for DV and HD.



- Almost all Apple computers have built-in Firewire.

- Few PCs have built-in, but can purchase PC Card or PCI card.

- USB

- Some cameras use it, but there's no standard.

- There might be compatibility issues.

- AVOID THIS.

Image Sensor

- Size
 - Bigger Sensor = Better Low-Light Performance, Shallower Depth of Field
- Number of Sensors
 - Traditionally, 3-CCD Cameras Reproduce Color Better

Tripod Components

- Fluid-Head
 - Uses a fluid bearing for smooth pan/tilt.
 - Typically more expensive.
- Non-fluid head
 - Cheaper, but FAR less smooth pan/tilt
 - OK for static (non-moving) shots.

HD versus non-HD

- HD does not mean it's a good camera
- What can you use to keep HD quality?
 - HD Tapes keep : What are they and how do they affect HD quality (which are more expensive)
 - HD Projector
 - BluRay
 - DVD players cannot display HD content
 - Authoring BluRay is expensive and complex.

Codecs

- “Compressor-Decompressor”
- Defines how audio and video are stored electronically.
- MiniDV was simple
 - there’s only one used by MiniDV cameras
- High Def is complex...
 - AVCHD
 - HDCAM
 - Etc...

Tape-based, Hard Disk, Mini-DVD types of cameras:

- Built-In Hard Disk
 - Limited storage
 - Must dump to computer frequently
 - No tapes/media
 - Codec issues
 - No log and capture
- Solid-State or Removable Disk
 - Same as built-in hard disk, but with removable cartridge
- MiniDV Tape-Based
 - Can run out of tapes
 - Have to store tapes
 - Log and Capture is a lengthy
 - Simple and robust
- miniDVD
 - Compresses and not really worth editing with because of amount of compression

What to look for in a camera when you buy it:

- Does it have the basic features you want or need (plan future)
- Go to a store and try one out
- If HD, make sure the camera is compatible with your operating system
- If HD, make sure codec is compatible with your editing system (listed on the features page online) – mostly important for iMovie and Final Cut Express
- Remember about your tripod, don't buy a good camera if you cannot support it with a good tripod
- Talk to people who know what they are talking about before buying (Tempe Camera, not Best Buy)
- Don't buy camera if it looks like too good of a deal, lots of scams out there

Cameras to look at:

- Cannon 5D Mark II: Really good HD photo camera that shoots video, but can only shoot 6-7 minute long clips (DSLR) - \$2500 (available for rental at tempe camera)
- Panasonic DVX100: Standard Def with all the bells and whistles - \$2500
- Cannon XHA1 HD Camera: High def with all the bells and whistles - \$3295

So what should you do? RENT!!!

- Cannon XHA1 HD Camcorder - \$225/weekend, \$450/week
- Cannon XHA1S HD Camcorder - \$3295 to buy
- Tripods - \$18/day, \$500-\$750 to buy
- So....If you want to buy, then you should plan on using it for roughly 7-10 full weeks/year

Do your Research:

- Take the time to learn how a camera works
- Make sure to try it in the store first
- Double-check that the camera you select works with your computer/operating system and non-linear editor.

Resources:

- dvinfo.net/conf – forum where people talk about cameras
- taperesources.com
- Tempe Camera
- bhphotovideo.com