

Basic Video Streaming

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for San Francisco Presbytery

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What We'll Cover

- Video/Audio Gear
- Setting up Gear for Streaming
- Streaming Options

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Selecting a Camera

- Needed Features
 - HD (4k is nice, but not needed)
 - HDMI Output (so you can get the picture to a Zoom computer)
 - Audio Input (so you can accept a microphone) and Output (so you can monitor)
- <http://bhphotovideo.com> Search on "Consumer Camcorders"



\$250 Canon Vixia HF R800 Kit



\$800 Panasonic HC-VX1



\$1300 Sony HXR-NX88

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Using Your Smartphone as a Camera



EpocCam

(among others)
\$8 app makes your Smartphone
look like an external camera

USB or Wireless (WiFi) connection

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Using an External Video Camera

- HDMI is a common External Connector for Cameras
- Computers accept USB (or USB-c) as input
 - **Computers generally use HDMI for OUTPUT, not Input**
- Use an HDMI-to-USB converter: \$50-100



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Using More than One Camera



Using the Zoom Video Menu

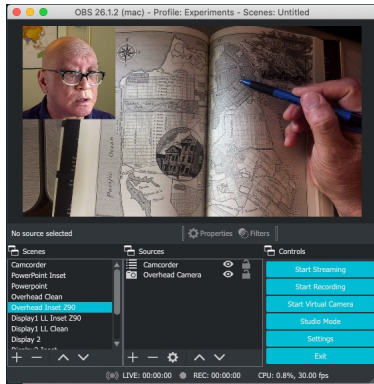


BlackMagic ATEM Mini
Multiple HDMI Inputs
USB-C Output to Computer
About \$300

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Advanced Live Production – OBS

Open Broadcaster Software



- Software Video Mixer
- Free/Open Source
- Basic Effects
 - Fades and Wipes
 - Graphics
 - Video playback
 - Picture-in-Picture

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Microphones, Etc.



Instrument Mic
Shure PGA81



Vocal Mic
Shure SM58



Headworn Wireless
Sennheiser Speechline



Wireless Lavalier Microphone
Sennheiser ew100-g4



Direct Input for Guitars, Bass, Keyboard etc
On-Stage DB200

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Using an External Mic into a Computer

Focusrite Scarlett 2i2 USB Audio Interface



- Input: XLR Audio
- Output: USB to your Computer

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More than One Audio Input – Audio Mixer



- Inputs XLR Audio
- Output: XLR Audio
- Many Integrate a USB Interface

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Streaming Experiences

- Zoom
 - 1-to-1 interaction: everyone can Chat, turn on mic
 - Everyone has control over what they want to see
- Facebook
 - Events are easy to publicize directly on Social Media; Video integrated on Webpage
- YouTube
 - Widely known video hosting; Live Chat
- Custom
 - To a TV Station
 - To a Re-stream Service (Castr, restream, etc) for multiple destinations

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Practicalities – it's not just equipment...

- How many Cameras?
 - Will you have enough people to run them?
- How many microphones?
 - Will you have someone mixing the audio live?
- Need to show pre-made Video?
- Who will maintain and debug?

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Questions?