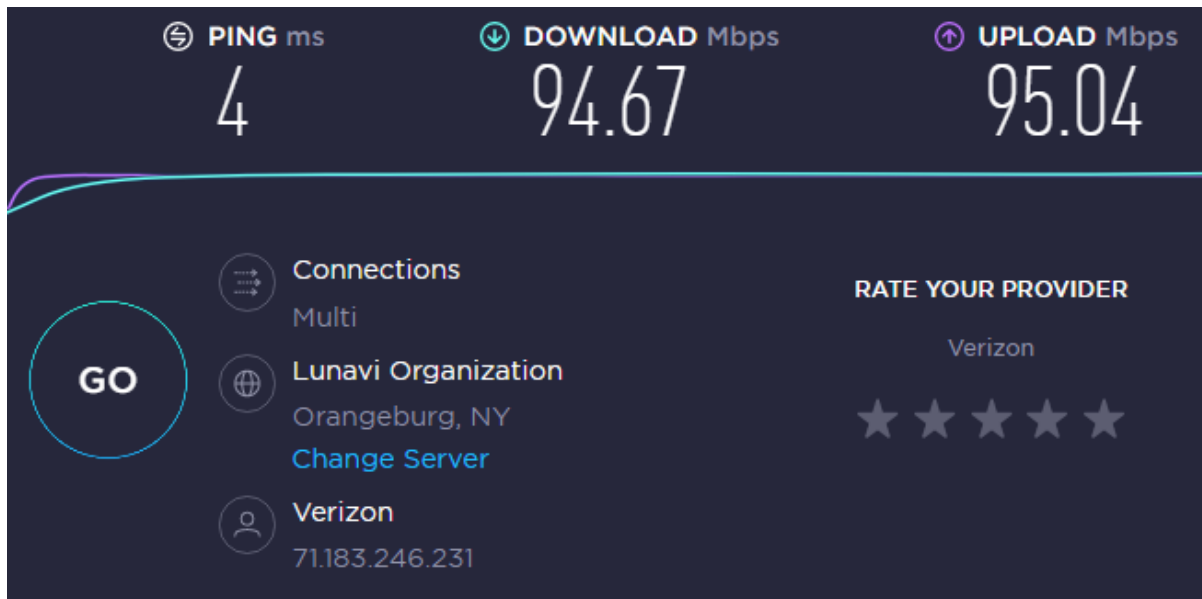


Internet Service

- When it comes to livestreaming “upload speed” is more important than download speed.
 - Check your internet speed by visiting: <https://www.speedtest.net/>
 - Allow the test to run and generate your download and upload score.
 - You will want to have at least 10Mbps upload speed for a stable HD (720p) livestreaming experience.



Sample Speed Test Report

Tips:

- If you are running into upload speed issues contact your ISP (Internet Service Provider). They may be able to offer a better plan that is cost effective. Many churches are paying more for older plans that offer less!
- Wired is ALWAYS better than WiFi! In older church buildings thick walls can inhibit wireless internet connections rendering them incompatible with livestreaming. If possible look into running an ethernet cable into the sanctuary.

Streaming Services

Facebook- Free

- Pros
 - Can stream from your computer.
 - Can reach a wide viewer base.
 - Can interact w/ viewers using the chat.
- Cons
 - Audio is not as clear when compared to using broadcasting software (i.e. OBS).
 - Can be intimidating to set up and schedule livestreams.
 - Can only stream to one platform at a time (unless you use a paid service).

YouTube- Free

- Pros
 - Can stream from your computer.
 - Can reach a wide viewer base.
 - Can interact w/ viewers using the chat.
- Cons
 - Audio is not as clear when compared to using broadcasting software (i.e. OBS).
 - Can be intimidating to set up and schedule livestreams.
 - Can only stream to one platform at a time (unless you use a paid service).

Restream/StreamYard- Est. \$190-\$240/yr.

- Pros
 - Can stream to multiple platforms at one time (i.e. YouTube, Facebook, Twitter)
 - Can stream from your computer.
 - Can utilize built-in studio features (i.e. countdown timer, lower thirds, slides, etc.)
- Cons
 - Requires a yearly subscription
 - May require an upgraded subscription if you want to stream in 1080p.
*This limitation only applies if you stream directly from the web studio. You can broadcast in 1080p if you use a studio like OBS.

Things to Consider About Setups

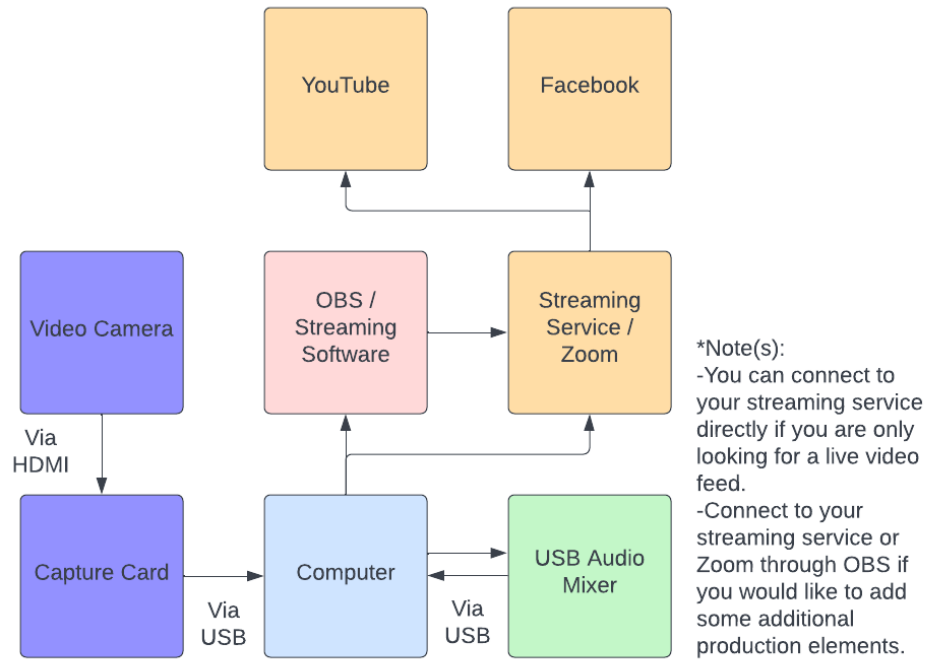
Below are some example setups. But certain things are not included that you will need to buy:

- Cables for connecting devices (depends on the length you need).
 - HDMI
 - USB
 - Ethernet (Cat5/5e/6/6e are all fine cables)
 - SDI Cables (If you choose a multiple PTZ camera setup)
- Peripherals such as mouse or keyboard.
 - *Some pre-built computers come with these.

Some things you should consider buying with the example equipment:

- Investing in a two monitor setup (allows for easier livestreaming).
- Investing in an Elgato Stream Deck if you choose a PC or Laptop setup.
 - The Elgato Stream Deck allows you to easily switch between scenes.

Entry Tier Setup (A) - Recommended Entry Level



Equipment (Sample List)

*Availability and price may vary.

Video:

- [Panasonic HC-V180K \(\\$229.99\)](#)
- [Elgato Cam Link 4K Capture Card \(\\$113.45\)](#)
- [Amazon Basics Mini-HDMI to HDMI Cable \(\\$8.36\)](#)

Computer:

- Laptop - [Asus VivoBook F512 w/ Dedicated Graphics \(\\$612.99\)](#)
 - Would recommend budgeting between \$500-700.
 - Look for a laptop with “dedicated graphics” usually from Nvidia or AMD.

Audio

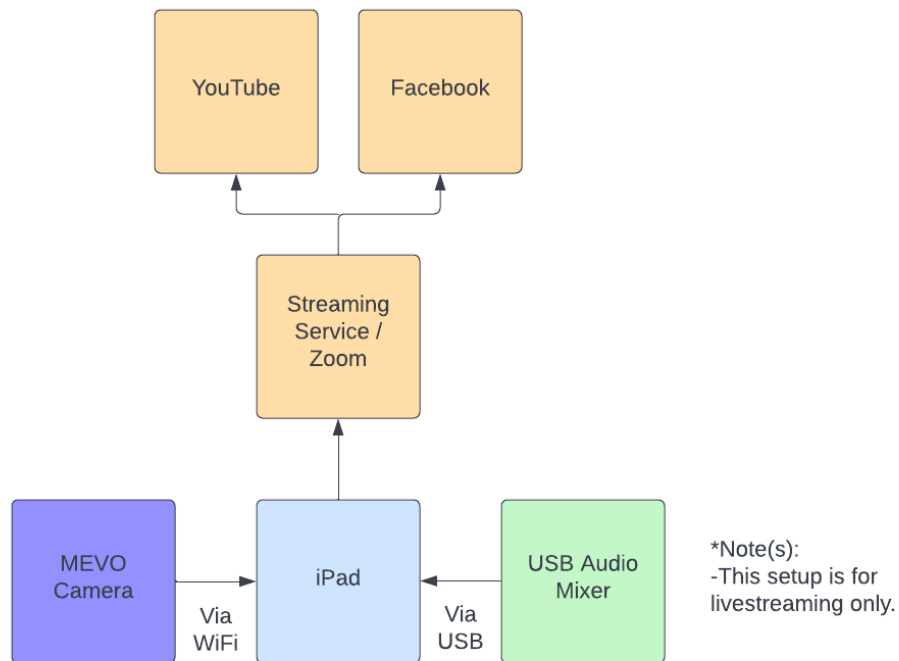
- [Mackie ProFXv3 10-Channel USB Mixer \(\\$249.99\)](#)
 - Can act as an input device for livestreams.
 - Can act as an output device for computer audio.

*Whatever is not mic'd will not be heard.

Estimate: \$1,200 - \$1500

***May cost more or less depending on current equipment (i.e. microphones, etc.)**

Entry Tier Setup (B) - Alternative



Equipment (Sample List)

*Availability and price may vary.

Video:

- [Logitech Mevo Start \(\\$399.00\)](#)

Optional

- [Stand, wall clip, ethernet adapter, etc.](#)

Computer:

- [iPad \(\\$329.00\)](#)

Audio:

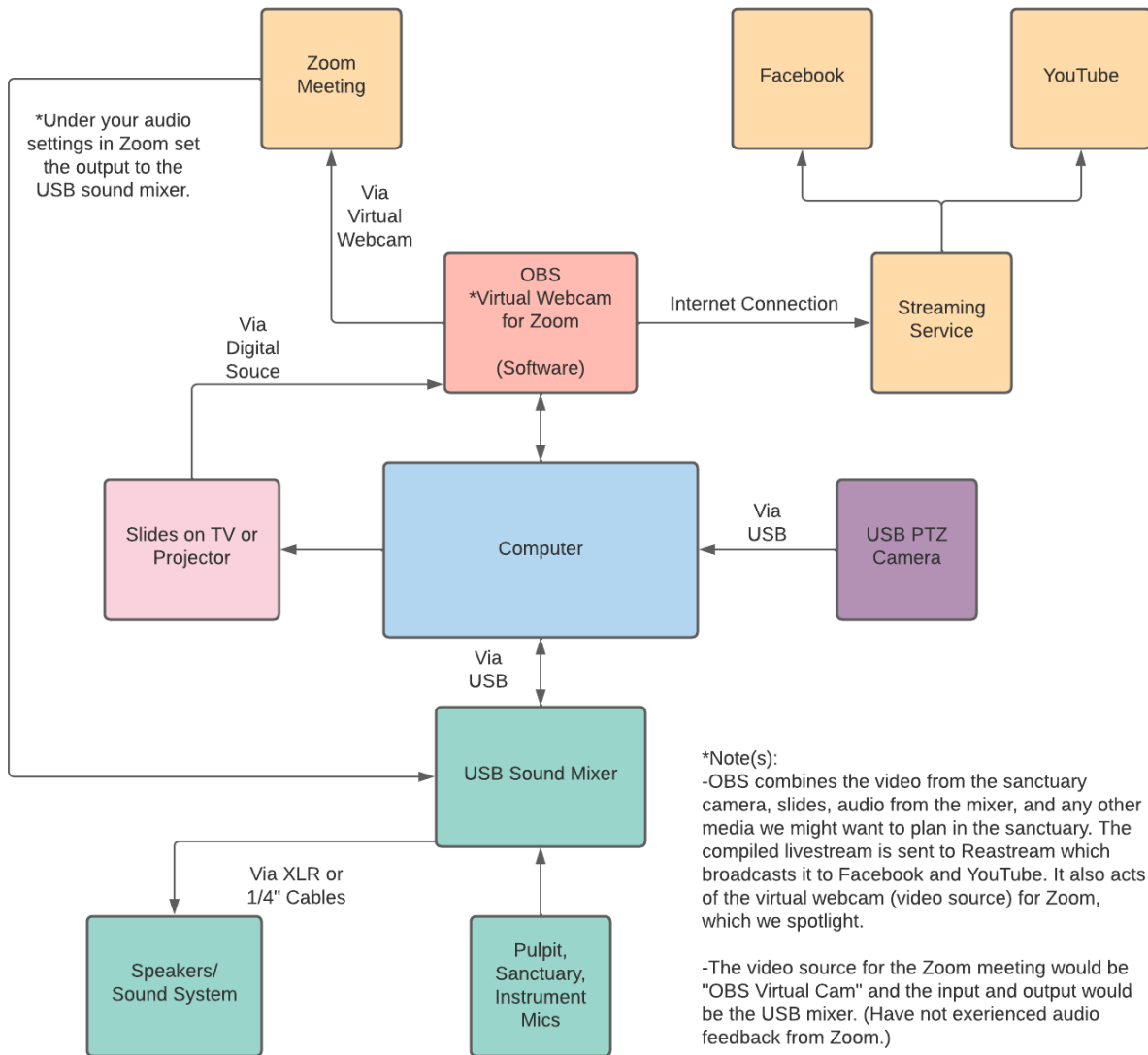
- [Mackie ProFXv3 16-Channel USB Mixer \(\\$349.99\)](#)
 - Can act as an input device for livestreams.
- [USB to Lighting Adapter \(\\$29.99\)](#)

Estimate: \$1,000 - \$1300

***May cost more less depending on current equipment (i.e. microphones, etc.)**

****Can expand this to a multi-camera setup down the line by adding more Mevo cameras.**

Mid-Tier Setup



Equipment (Sample List)

*Availability and price may vary.

Computer:

- Laptop - [Asus VivoBook F512 w/ Dedicated Graphics \(\\$612.99\)](#)
 - Would recommend budgeting between \$500-700.
 - Look for a laptop with “dedicated graphics” usually from Nvidia or AMD.
- Desktop - [CyberPower \(\\$1039.00\)](#)
 - Room for upgrade and replaceable parts.
 - Long term investment compared to a laptop.

*Desktop does not include a monitor(s).

Audio:

- [Mackie ProFXv3 16-Channel USB Mixer \(\\$349.99\)](#)
 - Can act as an input device for livestreams.
 - Can act as an output device for computer audio.

*Whatever is not mic'd will not be heard.

Video:

- [AviPAS USB PTz Camera w/ 20x Optical Zoom \(\\$895.00\)](#)

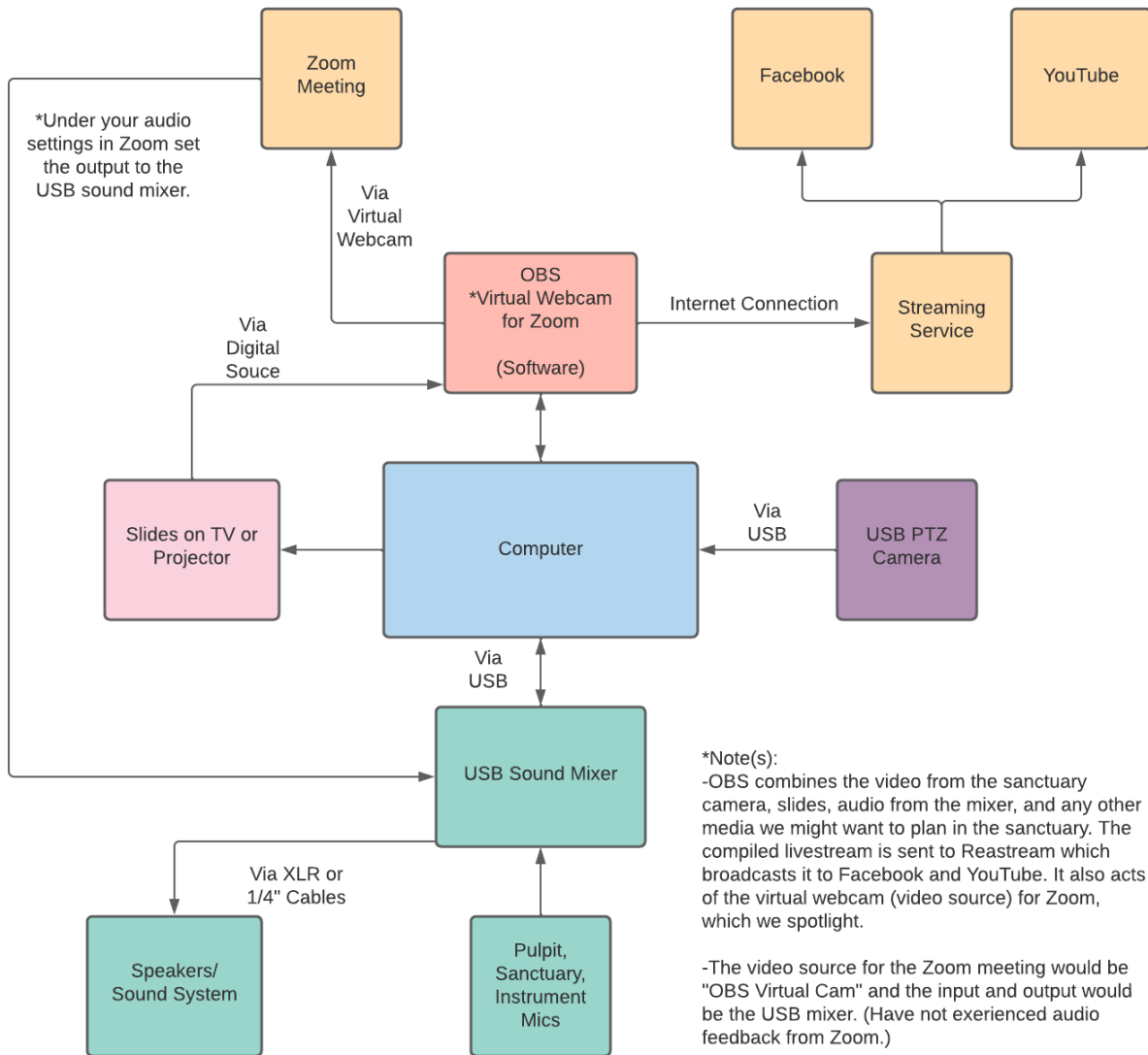
Optional

- [AV-3194IP Joystick Controller \(\\$560.00\)](#)
- [PTZ RS232 Cable \(\\$16.20\)](#)

Estimate: \$1900 - \$2500

***May cost more depending on current equipment (i.e. microphones, etc.)**

High-Tier Setup



Equipment (Sample List)

*Availability and price may vary.

Computer:

- Desktop - [CyberPower \(\\$1039.00\)](#)
 - Room for upgrade and replaceable parts.
 - Long term investment compared to a laptop.

*Desktop does not include a monitor(s).

Audio:

- [Mackie ProFXv3 16-Channel USB Mixer \(\\$349.99\)](#)
 - Can act as an input device for livestreams.

- Can act as an output device for computer audio.

*Whatever is not mic'd will not be heard.

Video:

- See "Multiple PTZ Equipment" PDF
- [AV-3194IP Joystick Controller \(\\$560.00\)](#)
- [PTZ RS232 Cable \(\\$16.20\)](#)