

A Lower Cost Recording\Streaming System for Improved Quality

Many congregations have started streaming their worship during social distancing and now have discovered that they may want to continue streaming their worship on a more permanent basis. If you are one of those congregations and have a desire to improve the quality of your recordings or upgrade your equipment this document is an attempt to give you some options.

An example of a congregation that wants to upgrade is one that was recording their worship with an iPhone, editing it and then uploading the finished video to YouTube. Now the congregation is considering allowing a few people into the sanctuary, practicing social distancing but still continue recording the worship service. However, the iPhone will no longer work for them since it would need to be positioned very closely to the pulpit. So they need a solution where they can record with a camera near the back of the sanctuary; that is, they need a camera with a zoom lens. Below are various ideas for providing solutions for congregations about saving money and still improving quality.

Ways of improving your sound and video for that matter

1. **Purchase a high-quality webcam** (usually superior to the built-in webcams on laptops); such as this Logitech webcam at Staples
https://www.staples.com/Logitech-C920-HD-1080p-Pro-Computer-Webcam-with-Dual-Stereo-Microphones-960-000764/product_445476
2. **Purchase a high quality USB microphone** such as the one Bruce Reyes-Chow uses https://www.staples.com/Blue-Microphones-Snowball-iCE-USB-Microphone/product_962397
3. **If using an iPhone, purchase a mic compatible with the iPhone** such as [this one](#) from Amazon. You will also need your lightning mic adapter that came with your iPhone for newer models. If you cannot find yours amazon has them to purchase [Here](#).
4. **Connect your laptop or camcorder to your sound system mixer.** If you are using a camcorder, you will need one with an audio input. On a laptop, you will also need an audio input. The simplest way to connect to the mixer is to use the earphone out of your sound mixer and connect it to your camcorder or laptop input using a cable such this one from B&H Photo \$22

https://www.bhphotovideo.com/c/product/663902-REG/Lectrosomics_MC65_MC65_TRS_188_to.html

5. **Be sure to keep speakers and musicians close to their microphones.** Also remember that the best music production will be available if you use the YouTube or Facebook streaming platform only. You can also use this method of sound connection for Zoom meetings but zoom is not set up for music production. It is designed more for interactive meetings. **You can improve music production on zoom by changing the audio settings.** This tutorial gives a step by step procedure for changing them.

<https://www.cascadespresbytery.org/wp-content/uploads/2020/04/better-music-sound-in-zoom-tutorial.pdf>

6. **The camcorder will give you superior sound and video** but requires more equipment and setup as well as expense. Below is the least expensive way to set up a camcorder streaming system. You can also set up a multicamera streaming system but the price tag rises quickly because you will need a video mixer. Multi camera systems are not covered in this tutorial.

Some Churches are Pre-recording their worship services and then posting them online

If you are using this method you can record your video and upload them to YouTube, Vimeo, Facebook or your favorite site. You may want to edit your videos in this case. A simple and inexpensive video editing software option is [here](#). If you purchase, be sure to create an account and download your software from the account pages, otherwise you may be using the demo version. Mac users can use iMovie which normally comes with your operating system or can be easily downloaded. If you are confused by the interface and would like assistance, Steve Parker may be able to assist you.

[Contact](#)

High Quality Basic Setup

Panasonic HC-V770K (for better sound quality, a camcorder such as this that has an audio input is needed) \$450

https://www.bhphotovideo.com/c/product/1109405-REG/panasonic_hc_v770_full_hd_camcorder.html

Epiphan Webcaster \$269 (no computer needed) Facebook or YouTube
https://www.bhphotovideo.com/c/product/1338511-REG/epiphan_esp1382_webcaster_x2_facebook_live.html/overview This device allows you to connect wirelessly to your WIFI internet source or to connect directly to your router by way of ethernet cable.

HDMI to HDMI mini cable \$18 (You will need this to connect your camcorder to the Epiphan Webcaster) https://www.bhphotovideo.com/c/product/1062798-REG/hyperthin_sahtm08black_hyperthin_mini_hdmi_to.html

Magnus GP-100 Light-Duty Tripod (basic tripod. You may want to purchase a sturdier tripod for more stability. \$12.95 <https://www.walmart.com/ip/50-Inch-Aluminum-Camera-Tripod-For-Canon-Nikon-Sony-Samsung-Olympus-Panasonic-Pentax-eCost-Microfiber/134062957>

(note: the adapters and cables below are designed to fit a number of sound and internet systems. If you are streaming wirelessly you will need a strong signal. If you want a better, more stable stream, use ethernet cables. You may not need all of the audio adapters below depending on the sound mixer in your worship space.)

ethernet cable 50' \$18 https://www.bhphotovideo.com/c/product/633523-REG/Comprehensive_CAT6_50BLK_50_15_2_m_Cat6.html

Audio Cable Lectrosonics MC65 TRS ¼" to 3.5mm Cable (10', 3.05 m) \$22
https://www.bhphotovideo.com/c/product/663902-REG/Lectrosonics_MC65_MC65_TRS_188_to.html

Movo Photo F-XLR 3.5mm TRS Female to XLR Male Adapter \$13
https://www.bhphotovideo.com/c/product/1500857-REG/movo_photo_f_xlr_3_5mm_trs_mini_jack_female.html

Neutrik XLR Female to XLR Female Adapter \$8.88
https://www.bhphotovideo.com/c/product/491522-REG/Neutrik_NA3FF_XLR_Female_to_XLR.html