Tips for Video Recording and Streaming

The important takeaway to know right from the start is that a smartphone and some planning can provide you with everything you need for a decent, reliable live stream of your service/event. There are always things that can be added for those with the willingness to learn and who can afford to purchase accessories. Don’t stress out, though. Go with the simplest setup you can that allows you to do what you need to do. We have enough to worry about!

That said, some of the recommendations below acknowledge that we might be relying on streaming and online services for some time. As we go, we will all learn and embrace these technologies, just as our people will. It appears that we will be relegated to online worship for the foreseeable future, and some parishes are exploring how they can improve their use of technology in worship and ministry.

Basics of Video Streaming

1. **Lighting.** You want good light in front of you and behind the camera. Avoid being backlit with the brightest light in the shot behind you, which will put you in shadow.
   a. Natural lighting, as from a window, is ideal, but any lighting is better than low lighting.
   b. To add lighting, bring a lamp closer, add a lamp, point a shop light at an opposite wall or ceiling
   c. For those who will do a lot of video recording/broadcasting, there are video lights, often LED, created just for lighting your videos. Just search for video lighting on the web or Amazon and you’ll see examples of such lights.

2. **Camera placement.** The camera is best on plane or slightly above you when you’re filming. If using a computer, that could be achieved as simply as raising your computer up on a stack of books. Phones and cameras can be put on tripods, or you can use random items to create a flat, raised surface to hold your device.
   a. A head and shoulders shot is often sufficient. A full-length shot is not necessary, nor do you want your face to fill the whole frame.
   b. Don’t forget to clean your camera lenses periodically! If your image looks hazy, it’s likely because of a dusty lens, which happens easily with iphones given the fact that they stay in our pockets.

3. **Sound.** Ideally there will be limited background noise, but when filming from home, in particular, there will be background noise. Plan ahead as much as possible to reduce such noise
(put dogs out, distract kids, ask family not to move unnecessarily during filming, turn off HVAC during filming, etc.).

a. The closer the camera (assuming built-in mic) is to you, the better the sound quality will be. External mics, for those that have them, are the best option. There are a number of simple, affordable iPhone compatible microphones or computer microphones are available online, for those who might want to add one.

b. Speak clearly and project your voice to facilitate a better recording. Speaking too softly or mumbling may make it hard for listeners to follow what you’re saying.

c. The more fabric in the room, the less echo. Carpeted rooms are best. You can also lay blankets on hard floors to reduce echo.

4. **Background.** As you are able, give thought to what will be behind you. Some backgrounds will be distracting. A blank wall, or a staged background at home, for example, can add to your broadcast. Perhaps sitting in front of a fireplace, a piece of art, or a window (as long as you have more light on your face than coming through the window) can be nice.

5. **Internet Needs.** To stream clearly and successfully, high speed internet is best. Upload speeds of at least 5Mbps are ideal, although you can get by with less (use speedtest.net to check your download and upload speeds). This is largely a function of where you live, what services are available, and what speeds you pay for. Just know that if you’re going to rely on quality streaming you need quality internet to broadcast it over.

**Technology**

1. **Cameras.** Nowadays, most smart phones have good enough cameras that they, alone, are sufficient for online streaming. With proper lighting, the quality on smart phones can be quite good. In fact, smart phones tend to capture higher quality video than the cameras in laptops and desktops because the latter were only designed for basic, low-grade videoconferencing, whereas Apple continues to improve the cameras in their phones. If you are recording for later broadcast and you will be editing with software (iMovie, Adobe Premier, etc.), digital camcorders and cameras can be a good option, although microphones on many basic cameras will be worse than recording on your smart phone.

2. **Microphones.** A dedicated microphone can improve sound quality tremendously. The simplest microphones for camera and phone simply plug into a port on your device, replacing the built-in microphone. For those who can afford or justify the expense, there are wireless options that connect a receiver to your device with a separate unit connected to the microphone itself, which then sends the sound to the receiver and your phone/camera.

This latter option is just like what many of us use in church, except the receiver plugs into the camera and not a full sound system. A simple online search for microphones will give you many options. You can read reviews to get a sense of what will work best for you. You might go to Amazon, for example, and search “iPhone microphone”. Generally, devices with many (hundreds or thousands) positive reviews are safe bets. Few reviews or clearly hyperbolic reviews all posted within a short window may indicate dishonest business practices.
Microphone options might include “lavaliers,” the kind that clip on a lapel, or “shotgun”, which are mounted near the camera and are aimed at the person speaking. It’s hard to list suggestions here because of the range of devices being used.

3. **Streaming software and hardware.** There are a lot of options when it comes to devices and software that allow you to stream more complex programs that include multiple cameras, sound inputs, or videos. Like most things, there is a spectrum of products, from those designed to run by a single person, to those that work best with a full team of persons. At the end of the day, this option is for those who are tech-savvy, have a few volunteers to work on this, or who are willing to learn and experiment.

   With a computer and at least one person off camera there is almost no limit to what is possible. Inclusion of photos, videos, graphics, and more can be included in a live stream. There is, however, nothing wrong with keeping your plan simple.

4. **Video editing.** If you want to improve your “broadcast” and being live limits what is possible, you’re probably going to want to pre-record parts and then create a video and upload it to YouTube, Vimeo, or some other video sharing service later. To do that you need some basic software. For those using Apple computers, iMovie is simple to use and quite effective at basic editing. Others find Adobe Premiere a great resource. Premiere is not inexpensive, but it is powerful and well-made software. And there are other options, too, like Final Cut, Corel, Pinnacle, and others.

   An edited video allows you to include graphics, photos, and videos in your broadcast. You can adjust sound, layer music, and reduce background noise in your recordings. You can create transitions between items, and you can add text to the screen for lyrics or headings.

5. **Stream a recording live.** If you want to stream a recording live and you don’t have a streaming service like the ones touched on in #3, there are other options, like Livereacting.com, onestream.live, or others. These services allow you to stream a recorded video “live” to YouTube or Facebook live. The service is pre-recorded, but the stream is live at the time of the event. The benefit to this is that it will often boost participation and view counts, and it allows you to interact with your congregation/audience live via comments. A “live” broadcast can also capture some of the sense that we are worshipping together, in “common,” as opposed to individually on demand. Video streaming services are not free, but they tend to cost less than many other options.
Case Studies

1. **Diocese of Georgia**

As many congregations would not have the tech skills on hand and had enough to worry about in pastoring their congregation, the Diocese of Georgia started streaming worship the week after suspending in-person worship. The first liturgy offered streamed live using a Mevo camera designed for the purpose. A spike in persons online that Sunday morning led to lagging video and the feed being lost once just as worship began. Since that initial offering, the Diocese has pre-recorded liturgies and used onestream.live to offer the videos on Facebook and YouTube. The video is made in advance, but the stream goes live at the time of worship to offer the experience of worshipping at the same time for a large group. The videos then remain online for anyone to watch after the premiere. This has allowed the diocesan staff to schedule officiants, preachers, readers, and singers from across the central and south Georgia and combine the videos into a single streaming worship service. This has included virtual choirs with individuals singing to a music track combined into a single video with as many as 26 singers forming a choir in the final video.

*Equipment:*
- Smart phones owned by those taking part in the liturgy
- Zoom H5 microphone for video of the Bishop and Bishop Elect
- Adobe Premiere for video editing

Examples are online here: https://www.youtube.com/user/EpiscopalDioceseofGA

2. **Christ Church, Frederica** *(Contact: Tom Purdy, tom@ccfssi.org)*

Christ Church has been live streaming services for years. Initially they used a computer-based system and Livestream.com, but it was cumbersome. Two years ago they switched to a Sling Studio setup and stream to Facebook and YouTube live. The setup they use in church, and now from the Rectory (and for Diocesan walkabouts - it’s portable), allow a single person to control a “complex” broadcast easily, even when on camera. They recently invested additional resources in their church setup in anticipation of an even greater, continued importance on streaming services in the coming months. Here’s how they do it.

*Equipment:*
- Sling Studio base unit ($1000 for basic unit)
- GoPro Cameras connected to Sling Studio wireless transmitters ($300 each)
- iPhone cameras (staff phones)
- An iPad to run the Sling Studio app ($300)
- The above has been our setup for two years through Easter 2020.

Recent additions in anticipation of the return to church streaming:
- A quality point-tilt-zoom camera from PTX Optics ($1800) – has not been used live yet
- Restream.io subscription to stream to multiple places at once ($45/mo)
Local network devices and joystick controls to run PTZ camera more easily ($700) – has not been installed or used yet

Once we learned how to use the Sling Studio and its app, we found it is relatively easy for one person to run the entire system. On Easter Sunday this year, for example, Tom Purdy ran the entire broadcast, live, from the Rectory. This included live portions of the service and interspersed videos for music, readings, etc. Tom did all the video editing beforehand, locating images to be used and putting it all together in iMovie on his laptop. Parishioners used smart phones to record themselves singing or reading, and then sent them to Tom. The organist recorded the music on her iPhone and also sent singers practice tracks to sing along to while recording. Tom layered music and vocals. The Parish Administrator did the video editing for the anthem. For reference, Tom estimates the time commitment for video editing to be approximately 8-10 hours of work.

For services like Easter 2 or the Great Vigil of Easter, all parts were recorded, edited, and then broadcast live using the Sling Studio.

For simpler broadcasts, like evening prayer, Christ Church staff simply use iPhones direct to Facebook Live.

Examples of videos can be seen on YouTube and Facebook.

3. **St. Thomas Savannah** (contact Melanie Lemburg: revmelanie@stthomasioh.org)

St. Thomas had used Facebook live for one funeral and a few VBS skits prior to all this. On the first Sunday, Aimee and Melanie used Aimee’s iPhone 11 and a music stand to go live on the church Facebook page in the nave of the church and conducted a Morning Prayer service with the two of us seated in front of the altar. We turned on the church sound system and wore our microphones for that. We put the phone on selfie mode, so we could engage with the comments in a virtual coffee hour after the liturgy. We received feedback that it was difficult to hear us and that it sounded “echoey,” and one of our parishioners in PR suggested we purchase an inexpensive microphone to plug directly into the phone. This has been a game-changer for us. (We bought the Pop Premium 16 foot dual head lavalier from Amazon for 22.99.)

The next Sunday, we did not use the church sound system and instead used the microphone plugged directly into Aimee’s iPhone, and the sound quality improved dramatically.

We continue to live-stream through Facebook every Sunday. The bandwidth of the wifi in the church does not support streaming, so we use the data on Aimee’s phone (she has unlimited). (To do this, she has to turn off the wifi on her phone for it to access data.) We also purchased a more stable tripod (also from Amazon: Selfie Stick Tripod, UBeesize 51" Extendable Tripod Stand with Bluetooth Remote for iPhone & Android Phone for $29.99) and have not had any problems with this method. Note: we’ve been intentional about not wanting this to look too “slick.” We’re going for a more folksy vibe. And we wanted to make it as easy and stress-free as possible. (Although I have weekly anxiety dreams about something going wrong with Facebook Live-stream.) To supplement this, we print copies of the bulletin in case
people want to pick those up and we email them out. Melanie also announces BCP page numbers as we go in the live-stream.

For Palm Sunday and Easter, we supplemented our live-stream offerings with videos including pictures and videos from parishioners with music added. Aimee purchased a video+music editing app (“video maker with music editor” which was $2.99 a week for the trial), and she does all of the video work from her iPhone.

For the Tik Tok videos, we use Aimee’s account and her iPhone, and then she posts them to St. Thomas Facebook page. (For the Bishop: Tik Tok is an app for making fun, lip-syncing music videos. It’s popular among the younger generation—college age and younger.)

A note of caution on the wired-microphones: We don’t move around much usually, so this one works for us. But the long cords still manage to get very tangled. So if you plan to move around, look for a wireless option like Tom suggested. For the Easter Vigil, we utilized music stands to clip the mikes to, and taped the wires down on the floor, so we wouldn’t trip over them, since that service had so much more movement than our usual services. We also worked for several hours on Good Friday evening to stage the whole Easter Vigil service and to see what it would look like on camera, with lighting, etc. I’d recommend spending time before you go live for your first endeavor trying to troubleshoot and work on some of the parameters that Tom mentioned in the document above such as lighting, what appears on screen, etc.

Examples can be found on the St. Thomas Facebook page and the more recent services are on the church website at www.stthomasioh.org.

4. **St. Anne’s Tifton**

St. Anne’s has streamed its services to Facebook Live for several years using a mounted camera in the sanctuary. However, once Tifton’s shelter-at-home ordinance took effect, the decision was made to broadcast worship from our homes.

This began simply with Morning Prayer on Sundays and Compline on weeknights, all livestreamed in the moment via Lonnie’s iphone, mounted on a selfie stick, duct taped to an old crate, placed on the fireplace hearth. (Seriously.)

For the first couple services, the Lacys did everything: readings, prayers, etc. We realized, however, that parishioners crave seeing one another. Over time we began to incorporate videos from others: first some music from our music minister, and then videos of members doing the readings. To make this work, everything is prerecorded ahead of time, though we try to make our part still “feel” live, e.g. leaving in little mistakes, yawns, dog barks. Parishioners email or dropbox their readings to Lonnie early in the week, who then edits it all together on Saturdays. We then upload it to onestream.live and have it go “live” on Facebook, Youtube, and the church website at 10 a.m. Sunday. Most of the time, weeknight Compline is still truly live, though occasionally we’ll cheat and pre-record in order to free up our own family time at night.

Our main takeaway: parishioners are *really* happy to see one another’s faces. Any way we can, we incorporate others, whether through parishioner readings or by simply inserting photo montages while the minister of music sings. Our Great Vigil of Easter was a steroidal version of all of this with lots of photos of Easters past and several pre-recorded, creative, hilarious versions of the Old Testament readings submitted by households ahead of time. It ended with a Peace montage.
with video submissions of parishioners saying “peace be with you.” We can’t do all that every week, but it went a long way to make people feel connected in a special way on Easter.

With Holy Week and Easter now behind us, our next project is an online version of our annual St. Anne’s Got Talent in which we’ll edit together talent show submissions with our senior warden acting as MC between each act. Again, anything we can do to help our parishioners “see” one another and laugh along the way.

One other discovery: we had been relying solely on Facebook Live in the beginning, but folks were really glad when we added YouTube. Not only does that allow non-Facebookers a way to watch, but YouTube is also apparently easier for folks to throw on the living room TV using their Roku, fire stick, etc.

Equipment:
Lonnie’s iPhone 7
Movo VX10 Universal Video Microphone, attached to the iPhone
Parishioners’ iPhones, laptops, etc.
iMovie for video editing
Onestream.live subscription for broadcasting pre-recorded videos “live”

Examples are online here: http://bit.ly/stannes-youtube