

Service Streaming Guide for Audio/Video

When I was asked to write up a quick streaming 101 guide for churches to reach their congregations with the life-giving Word during the coming weeks of COVID-ian captivity, my immediate response was, “There’s about an infinite number of ways.” In other words, there’s not a quick answer, but there is an answer.

I will do my best to lay out some options for you in a progressive thought process that will aid you in making decisions for what is best for your situation. I will do this in a top-down manner that starts with the big picture and then narrows down toward the exact equipment selections that will make reaching your congregation possible. I will also primarily focus on audio streaming and recording. Video is fun, but it requires extra resources and preparation to really engage properly.

When dealing with technology, it is always critical to begin with a big picture. It is too easy to get so focused on the specs and the bells and whistles that we either over-purchase/engineer a solution or simply miss the mark altogether. Our big picture here is to deliver the Word of God in a clear, understandable manner that reaches the ears of our congregation in a way that can be heard, understood, and digested. I mean this from a technical perspective. I leave the words themselves, their clear delivery, and their understanding by the congregation up to the capable hands of the pastor and the Holy Spirit.

In short, whatever electronic delivery format we end up with, the words themselves should be captured and transmitted clearly so that they can be heard and understood with no technical distractions to take away from a parishioner’s ability to digest them. Even simpler: we need to get the Word and nothing but the Word from point A (the pastor’s lips) to point B (the parishioner’s ears).

Big picture in hand, we now look at how to do this. The first question: “Will we record the message and then deliver it, or will we deliver it live?” If you are not already online with your congregants in some way, the easiest way with the fewest pitfalls is to record and deliver. Recording and delivering begins with a device of some sort to record the message. The device can be as simple as a personal recorder such as the one on the right. If you don’t already have one in your office, you can typically pick one up at Walmart or your local electronics store for around \$35. While many of them have external connections that you can connect to your sound system for direct recording of your microphone, this can really be as simple as setting it in front of you in the pulpit as you preach and then projecting into it as you would to your congregation.

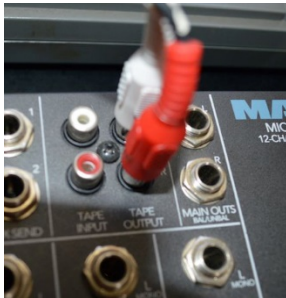


When selecting a recorder, there are a series of questions that come into play.

1. Will you continue to use this device after the immediate need? If you plan on using it to record church board meetings for minutes or as a personal note taker, features like automatic recording on voice detection might be desirable (though you will want to shut this feature off for recording sermons).
2. What is the recording medium and will it be easy to transfer audio files from that medium to a computer later? Many of these devices simply connect directly to a computer via a USB cable.

Others utilize SD or microSD cards. Do you need to get the appropriate USB cable or does it come with the device? If the device uses cards, does your computer have a reader that will read the cards or do you need to get one? If the device doesn't come with a card, make sure to get that too.

3. How important is sound quality to you? Most of the cheaper devices you will find at Walmart were designed for simple note taking with cheap microphones. They tend to be a bit thin sounding (much like what you hear from a telephone speaker). Also in terms of sound quality, you will want to check the bit rate specifications on the package. Make sure the recorder records at 64kbps with 128kbps preferable. Many of them have the ability to set the bit rate among several different qualities. While lower bit rates than 64kbps are still useable, they tend to begin sounding "swirly" or garbled.
4. Do you have a sound system that you can plug a recorder into in order to take the audio directly from the pulpit microphone? If so, the cheap options do not typically offer connections to allow that to happen. If you would like to take the audio directly from the sound system, you will need to figure out that interface. Some sound systems use an audio mixer that might have what is called a "2-track" or "tape output". The connections look like the image to the left. If your sound system has this, it is possible to use a stereo splitter cable that has a stereo mini plug on one end that splits out to the left and right connectors (as pictured) to connect the tape output of your soundboard to the external microphone input jack that the less expensive recorders often have. Failing that, there are several recorders out there that offer professional connections that are more expensive but won't completely break the bank.



5. Have you considered just using your cell phone? Most smartphones have very usable microphones built into them and a quick search on the app store should turn up any number of free audio recorder apps. Your biggest challenge (though not a difficult one) is getting the resulting audio files off of your phone. You could just upload directly to your platform from your phone. You can also typically plug your phone into your computer via USB to do file transfers.
6. Have you considered just using a laptop? Most laptops now have webcams and microphones built in. There are also quite a few options for external microphones, ranging from the simple desktop stick microphone all the way up to sophisticated podcasting microphones. Of course, balancing your laptop on the edge of the pulpit might not be your cup of tea, but it is most certainly a very viable option. If you are interested in going this route, a quick search in the Microsoft store should turn up a few options.

My final point there bridges me nicely into our second option, livestreaming your audio/video. Livestreaming requires a computer, and if you are already recording directly into a laptop, you can always take the option to stream your sermon live. That being said, ask yourself the following questions:

1. How's your internet? If your internet is a bit shaky, you may want to just record and upload, as interrupted streaming and buffering can be very frustrating for your congregation. Keep in mind that you will be using upload bandwidth rather than download bandwidth. Many ISP's give you a decent amount of download speed, but skimp on the upload. You need to be able to sustain a constant bandwidth that is above the bandwidth of your audio or video stream. When in doubt, run a speed test at <https://www.speedtest.net> to see what your sustained up and down bandwidth are.
2. If you stream it, will they come? In other words, will your parishioners be interested in tuning in live to listen to the stream live or will they more likely watch the recording later? If the answer is the latter, then it might not be worth the extra hassle to deal with livestreaming.
3. Where are your parishioners already online? It is always best to deliver content to your congregation in a place that they already go online. Facebook and YouTube are two very popular platforms where many of our congregations already have a presence. Both platforms allow for posting of videos as well as livestreaming. If you have a strong website where your parishioners visit, YouTube allows for an embedded player. There are also options such as <https://www.sermon.net> who offer very low rates for a complete streaming solution that provides for embedding the content on your site along with other bells and whistles.

This, of course gets me neatly into my final consideration—delivery method. Whether you are recording and posting or livestreaming, your congregation has to be able to view your content. Most website hosts frown on trying to upload a bunch of media directly onto your site, so you are going to want to use a third party media host. I've already spilled the beans above. YouTube and Facebook both offer livestreaming as well as the ability to host media free of charge. YouTube is fairly easy to embed on your webpage if you wish to have your content on your own website. Both are very popular platforms.

I should point out that if you are planning to livestream, you can't easily stream to both Facebook and YouTube at the same time. Facebook's terms of service prohibit streaming to Facebook and another streaming host at the same time. Because of this, almost all streaming software will neatly lock you out of any additional streams aside from Facebook once you've set Facebook as a destination.

While a simple internet search for "church service streaming" will turn up quite a few options, I always mentioned <https://www.sermon.net> to folks looking for a simple solution for hosting their sermon audio. I don't have any agreements with them, nor are they paying me to mention them. I've just always found them to be a simple, low-cost option for churches. Early on, their basic option was free. Now it appears the basic option (audio streaming and storage) costs \$5 a month, which is still a real bargain. For \$20 a month you can do video too. I still find it appealing to do business with a company who is in the business of putting church services online. There are no worries about content getting randomly branded as "hate speech" and subsequently banned.

Another option in this arena that I found is <https://www.churchstreaming.tv>. While they are more full-featured than sermon.net, their price structure is definitely steeper, starting at \$79 per month. Right now, they are offering 90 days free because of the COVID crisis, so it may be a good option for some

of you. However, neither of these should disparage you from looking at YouTube and Facebook as two very good options that are free.

While sermon.net and churchstreaming.tv provide you with the tools you need for uploading, streaming, editing, and viewing your content, YouTube and Facebook will require you to use a third party piece of software if you wish to stream your content live. YouTube recommends the free Open Broadcaster Software that can be found at <https://obsproject.com/>. A look at the OBS site reveals that Open Broadcaster will work for Facebook streaming as well, keeping in mind the limitation on streaming to both at once (a limitation you can get around if you're willing to stream two separate streams from two different computers at the same time).

Though I haven't necessarily given you a grocery list of items to get here, I hope I have walked you through the thought processes needed to make informed decisions about how to proceed. It's not necessary to run out and buy a bunch of stuff this week. Remember our big picture. We want to reach our congregations with God's life-giving Word—point A to point B. You may already have the tools you need, whether that's a voice recorder you have in your desk drawer, your cellphone, or even a laptop. If you do decide to make a purchase, I will leave you with a few personal recommendations from brands and equipment that I either use or have used in the past.

If you're shopping at Walmart for a basic audio recorder, you're stuck with what they have on the shelves. If you want to get something a bit more professional, I have found that both Zoom and Tascam offer excellent options in handheld recorders that feature professional grade microphones. Zoom even has a field recorder that comes with a lavalier mic. Several options that I might recommend can be found at the link below:

https://www.sweetwater.com/store/wishlist/0e36f0d76b290cf667783543a46e8d4e/?utm_source=wishlist-friend&utm_medium=email&utm_campaign=0e36f0d76b290cf667783543a46e8d4e

If you're planning on using a laptop and would like a more professional microphone than the one built in, check out a few of these options. I've selected a range of prices, but tried to select only microphones that have built in stands. There are a host of others that require a mic stand and accessories if you want to explore. I've never used the \$35 option here, but I have used a more expensive podcast mic from the same company and found it to be excellent. That list is linked here:

https://www.sweetwater.com/store/wishlist/8aa923b8d1f28bbc7221d8e73fc2b3fc/?utm_source=wishlist-friend&utm_medium=email&utm_campaign=8aa923b8d1f28bbc7221d8e73fc2b3fc

I hope this is helpful to those looking to get started with streaming in a time when gathering in person can be difficult. Don't worry about making this perfect. Our goal, as always, is that God's people can hear His word proclaimed faithfully to them, and it's better to get started and improve with time than it is to plan for a project that never really begins. Thanks for reading, and may God continue to bless and keep you and your congregation as you seek to care for God's people and your communities.

In Christ's service,

John Elmer
Media Content and Services Manager
Concordia Theological Seminary, Fort Wayne