

realm[®]
streaming

How-To Guide



These days, streaming is everywhere. From going live on social media to streaming your favorite shows on television, it's become one of the most common ways we engage and keep up with our interests. Wouldn't it be great if you could reach your congregation and new visitors in the same way?

Whether your church is large or small, streaming is a great way to engage your congregation and expand your audience. Regardless of your budget, streaming is attainable. We've put together this guide to share our recommendations on the equipment you will need to stream, including:

Cameras

Record your stream

Microphones

Record your audio

Encoders

Tools that convert & encode video data to deliver it through the internet

Switchers

Allow you to switch between multiple camera angles, overlays and, other media files for your stream

External Video Capture Card

Converts your camera inputs to a digital format that a computer can use

We have also included the minimum requirements for compatibility for any other equipment you may already own that will work as well.



BASIC SETUP

The least expensive way to begin streaming is using your smartphone, tablet, or laptop as your camera and microphone. You will also need to download or purchase a [RTMP Encoder](#), and we recommend a [tripod](#) to keep your streaming steady.

Smartphone or Tablet

- Built-in camera
- Built-in microphone
- Download Larix, a free livestreaming encoder app, in the [Android](#) or [iOS](#) store

Laptop

You will need a [laptop](#) with USB 3.0 ports for the best connection. In most laptops, the 3.0 USB port is blue.

- Option 1: Use the built-in camera and microphone
- Option 2: Use a webcam and its microphone
- Download [Open Broadcast Software](#), a free RTMP encoder supported on Windows and Mac



RECOMMENDED SETUP

This configuration is the most common for single or multi-camera streaming.

Cameras

- Option 1: High definition webcam, such as the [Logitech C920 HD PRO](#) or [similar models](#)
- Option 2: High definition camcorder, such as the [JVC GY-HM250](#)

Make sure the source you choose has a clean HDMI or SDI output.

External Video Capture Card

We recommend these options, but there are less expensive options available online or at a local reseller that will work as well.

- [Black Magic Design ATEM Mini](#) (best value)
- [Black Magic Design Intensity Shuttle Thunderbolt](#)
- [Elgato HD60 S](#) (check which cameras are compatible)

External Microphones

These microphones are the most popular. You can find less expensive mics online or at a local reseller, but anticipate lower sound quality with the latter.

Condenser mics are good for direct vocals, e.g. face-to-face, interviews, podcasts, etc.

- [Yeti](#) (USB only)
- [Samson G-Track Pro](#) (USB only)

Multi-functional mics for short and long-range.

- [Rode VideoMicro](#) - Compact on-camera/smartphone microphone (3.5mm audio output)
- [Rode VideoMic](#) - Directional on-camera microphone (3.5mm audio output)
- [Rode VideoMic NTG](#) - On-camera shotgun microphone (3.5mm audio output)
- [Comica](#)

Encoder Solutions

Software

- [vMix](#) - Most use cases only require a vMix Basic HD lifetime license. (best value)
- [Wirecast](#) or Wirecast Pro
- [StreamYard](#) (cloud-based, no downloading or installation required)

Hardware

- [Videon EdgeCaster](#)
- [Blackmagic Design Web Presenter](#)
- [AJA Helo](#)

Switcher

If you're using multiple cameras or inputs, you'll need a hardware switcher that has a webcam output to USB connector to plug into your laptop's USB 3 port, such as the [Blackmagic Design ATEM Mini](#).



ADVANCED SETUP

In this configuration, you'll need the same equipment as the basic level but the encoder and camcorder are of higher quality and more expensive.

Professional Encoder

- [Makito X H.264 Video Encoder](#)

Professional Camcorders

- [Canon XF705 Professional Camcorder](#)

Requirements

The hardware and network requirements apply to all configurations.

Minimum Hardware Requirements

iOS and Android always on the latest version

- iPhone 7 or newer models
- iPad Air 2 or newer models
- Android mobile on version Pie or better
- Android tablet on version Oreo or better

Windows 10 | MacBook Pro / macOS the latest Catalina version

- Screen Resolution: 1920x 1080
- Processors: Intel Core i7 Processor 3Ghz+
- Memory (RAM): 16 GB minimum, 32 GB preferred
- Hard Drive: 500 SSD minimum
- Secondary 1 TB HDD if you plan to store lots of recordings
- Graphics Card: [GeForce](#)
- External Video Capture Card: [DeckLink](#)

Other resources: [vmix.com/products/vmix-reference-systems.aspx#sapphire](https://www.vmix.com/products/vmix-reference-systems.aspx#sapphire)

Minimum Network Requirements

Wired (preferred) vs wireless. We like to refrain from using a shared network as that will take away from the upload bandwidth needed for the stream.

Fixed bandwidth – talk to your ISP if this is an available option. Try to stay away from variable bandwidth as it does not provide consistency.

At a minimum, your **upload bandwidth** should be 5 Mbps. We recommend that it should be at least double what you're streaming. Only use up to half of your maximum upload bandwidth for all streams combined. See our [Recommended Encoder Settings](#) guide for more information. Some common scenarios below:

ISP advanced optimization

- Multiple ISP (as a fallback but it is expensive) – talk to your ISP
- Redundant Connections (automatic fallback to LTE) – talk to your ISP
- Multiple encoders (only works with multiple ISP's)

Speed Test

Run a speed test at fast.com, and bookmark this in your browser! This site starts testing your download speed automatically upon landing on its page. When it finishes, you need to click on the “**Show more info**” at the bottom to test your **Upload Speed** measured in Mbps (1Mbps = 1000Kbps).

Streaming does require some time and research to determine the best option for your church and, depending on your budget, may require additional expenses. We hope this helps with your decision making process.

Just remember that your investment will pay off when you're able to reach your congregation in new ways and allow visitors to experience your church virtually.

Choosing the Right Ministry Partner

The know-how you need from experts you trust.

ACS Technologies is the original pioneer of Church Management Software (ChMS). We are firmly dedicated to serving local churches all over North America by providing the best-in-class ministry software and service solutions that help you fulfill Christ's mission for your Church.

Tools and support to strengthen churches.

We build great software, but we don't stop there. We have a "service-first" approach that truly sets us apart. With hundreds of dedicated support and consulting personnel, your staff can reach our team 24/7. We're in your corner to help you with the ministry challenges you face every day.

Ideas and solutions powered by integrity.

Integrity is real for us, and it means consistently being faithful stewards by doing the right thing for church success. We have earned the trust of pastors, church staff, congregants, our employees, and colleagues for over 40 years.

A plan to meet your needs and move your ministry.

We're not just interested in satisfied customers. We see ourselves as your real ministry partner and will work with you to make disciples that will last for an eternity. We're excited to talk about your goals, create a plan together, and set you up with the software, service, and resources you need.

We believe in YOU!

ACS Technologies believes in the local church. Over 75% of our team has experience serving in their local churches. We know firsthand that serving the Church means serving people, and we take seriously our commitment to helping ministries like yours achieve their God-given mandate - to make disciples in their communities, states, and across the world.

Let's Talk

We know the challenges of switching or implementing new technology and how that can be intimidating. But we also know the unbelievable changes that have happened within churches that have partnered with us for their ministry needs. Let's connect and see how we can assist you in the greatest thing you do - grow God's Kingdom.

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