



**WEBCASTING
YOUR
SERVICE
CHURCH IDEA KIT**





© 2011 Christian Copyright Solutions (a div. of Righteous Oaks Music, Inc.). All rights reserved. Permission is granted to duplicate this publication in its entirety and share with other churches and ministries. Any revisions, adaptations, editing or changes to this publication are strictly prohibited without obtaining permission.

INTRODUCTION

So you're hopping on the bandwagon and you want to stream your Sunday service? The Internet has been a great medium for sharing the gospel and spreading information about your church, groups, and service times. Now that nearly everyone is browsing through a broadband connection, it's easier than ever to share your entire services both live and on-demand through your website.

If you're interested in streaming your services but haven't taken the leap quite yet, we've written a brief guide that walks you through the basics and will have you streaming in no time! Here's what we cover:

Table of Contents

KEEPING IT LEGAL MUSIC COPYRIGHT LICENSES, CONSENT FORMS AND NOTICES	4
CAPTURE CAMERAS, COMPUTERS AND EQUIPMENT	7
STREAM CONFIGURATION AND SERVICE PROVIDERS	11



STEP ONE: **KEEPING IT LEGAL**

*YOU'LL NEED:
content licenses, releases, posted notices*

Streaming Your Worship Service

If you're only featuring the sermon portion of your service, you probably won't require any special licensing for your webcast. If you want to include the worship service in your webcast, however, it is important to plan carefully for legal considerations in order to protect your church from risks and liabilities, including:

- 1 **Copyright content licensing for music, visuals and media**
- 2 **Consent and release forms for participants**
- 3 **Posting notices in area of filming and recording**
- 4 **Work-made-for hire agreements**

"But isn't my church covered under the religious service exemption?"

The religious service exemption in U.S. copyright law allows churches to perform copyrighted music in the course of services at a place of worship without obtaining licensing. But, It does not cover the re-transmission of those services over radio, television or the internet. If your church's services include copyrighted music, you need a streaming performance license to webcast those services.



CCS's WORSHIPcast License is the only comprehensive blanket performance license that gives you permission to stream your performances of more 16 million Christian and secular songs from the catalogs of ASCAP, BMI and SESAC. All genres are covered...Contemporary Christian and Gospel to Rock, Country and Holiday music.

WORSHIPcast doesn't just cover services. It also covers concerts, special events and studio recordings of your worship team. WORSHIPcast allows your church to stream performances of live and archived services. You can make edits, cut-up your services, and even use performances of copyrighted works in your church promo videos on your website! Additional music licenses may also be required for various uses.



If you want to include visual aids like videos or media you have purchased, you'll need to obtain a streaming license or ensure that streaming via the web is allowed under the rights included when you purchased the video. In addition, you'll need permission to stream song lyrics and other copyrighted content. CCS's PERMISSIONSplus service can obtain these clearances on your behalf on an individual license basis.

For more information visit CopyrightSolver.com or call 1-877-947-9687.



Consent and Release Forms

“So, how do we minimize the risks of trouble?”

First of all, get an explicit release form from anyone who will be featured in materials or from anyone whose children will be featured in webcasts. So if you are going to put a performance of the children’s choir online, get a release signed for each child. If you are going feature someone’s baptism in a webcast, get a release signed from that person. In addition to providing legal protection, it is also pretty courteous to ask.

You can integrate the release form into other forms. For example, if you are going to webcast moments at a retreat, you could add a small release form check box to the permission slips.

Notices Where Filming

At public events, you can put up signs notifying folks that it is being recorded, just as when you go to a public concert. You still want to get a release signed by anyone you will feature prominently.

Works-Made-for-Hire

Make sure that your church owns all of the rights to any copyrighted material created by your staff, volunteers, consultants or contractors. This could include photographs, dramatic material, literary works, videos, recordings and graphic designs. To assure ownership and the right to use material in your webcast, be certain that you have work-made-for-hire agreements in place, or a license or letter of permission signed.

If you have questions or concerns, contact Christian Copyright Solutions at 1-877-947-9687.



STEP TWO: **CAPTURE**

*YOU'LL NEED:
a video camera and a computer*

You can't have video without a video camera, so that's where we'll start. If you've ever shopped for a video camera, you know there are thousands of options and navigating which will fit you the best can be overwhelming. We'll focus on the options that are most important for streaming applications.

YOU'LL WANT A CAMERA THAT:

1 Supports live capture via a computer (most cameras that support Firewire support this feature)

This enables your camera to feed the video stream to a computer in real-time without having to transfer the data off of tape or card after recording.

2 Minimum resolution of 720x480 (1280x720 or 720P is preferred)

Even though you'll most likely be streaming at lower resolutions like 360P or even 240P, it's important to have a camera that can handle larger resolutions for two reasons. First, you won't run into limitations and have to buy new equipment if you do want to provide 480P or 720P streams in the future. Second, if you'd like to use any of your video for promo videos, announcements, or other video projects, you want to have a high-quality and high-resolution source materials to work from.

It's important to become very familiar with the operations of the camera you choose. Spend some time with the manual and explore all the features of your camera. Many of the more popular models have training videos available online where you can follow along with your very own hands-on training session.

There are tons of manufacturers out there and plenty of them make good cameras, but we suggest purchasing from one of the following manufacturers: Canon, Sony, JVC, and Panasonic. These four companies stand above the rest in quality, experience and customer satisfaction.

We've compiled a list of suggestions for cameras that work well within various budget frameworks:

GOOD



Canon Vixia HV40
(\$650 street)

BETTER



Canon Rebel T2i
w/ zoom lens
(\$650 street)

BEST



Canon XF100
(\$3000 street)

ULTIMATE



Canon XF305
(\$7500 street)

Now that you're filming, it's time to do something with all that footage streaming from your camera.

There are two things to focus on here: **hardware** and **software**.

Encoding video is a very resource intensive process for a computer. We highly recommend that there be a computer that is dedicated solely to the streaming of the service. We do not recommend piggybacking an encoding/streaming program on the back of a system that's already running your visuals for the sanctuary.

Here are some basic guidelines for a video encoding/streaming computer:

PC	Minimum	Recommended
Operating System	Windows XP	Windows 7 (64 bit)
Processor	2.5GHz Dual-Core Intel	3.0GHz Quad-Core Intel
Memory	2 GB	8 GB
Storage	7200rpm SATA	7200rpm SATA
Networking	Wired Ethernet	Wired Ethernet
Peripherals	Onboard Firewire	PCI-E Firewire Card
Displays	1280x720 LCD	Dual 1920x1080 LCDs

Mac	Minimum	Recommended
Operating System	OS X 10.5 "Leopard"	OS X 10.7 "Lion"
Processor	2.0GHz Dual-Core Intel	2.7GHz Dual-Core Intel
Memory	2 GB	4 GB
Storage	7200rpm SATA	7200rpm SATA
Networking	Wired Ethernet	Wired Ethernet
Peripherals	Onboard Firewire	Onboard Firewire
Displays	1280x720 LCD	1920x1080 LCDs

If you're not a techie, then some of these specs might seem a little confusing. Here are the basics for both platforms. If you want to use a PC, then shy away from bargain basement systems. Any middle-of-the road Dell, Lenovo, or HP should do if you follow the specs. This will probably serve as a future video-editing rig in addition to streaming, so build accordingly. Better components will typically only increase the price of the machine by \$300-\$400 but can make a huge difference in speed and performance.

If you want to use a Mac rig then nearly any new Mac will do. The Mac Mini is a great way to get started without investing thousands of dollars in computer equipment. It also supports dual monitors out of the box (you'll need an adapter for the second monitor).

Regardless of whether you decide to go PC or Mac, you'll want to make sure that you run all of the system updates as soon as you get it. Also, to ensure maximum compatibility with different types of video and audio files, you'll want to make sure you have the most updated versions of the following plug-ins:

PC	Mac
<ul style="list-style-type: none">• Adobe Flash Player• Quicktime Player• Windows Media Player• K-Lite Codec Pack• Java Runtime• Flash Media Live Encoder	<ul style="list-style-type: none">• Adobe Flash Player• Quicktime Player• Windows Media Component for QuickTime• Perian• Flash Media Live Encoder

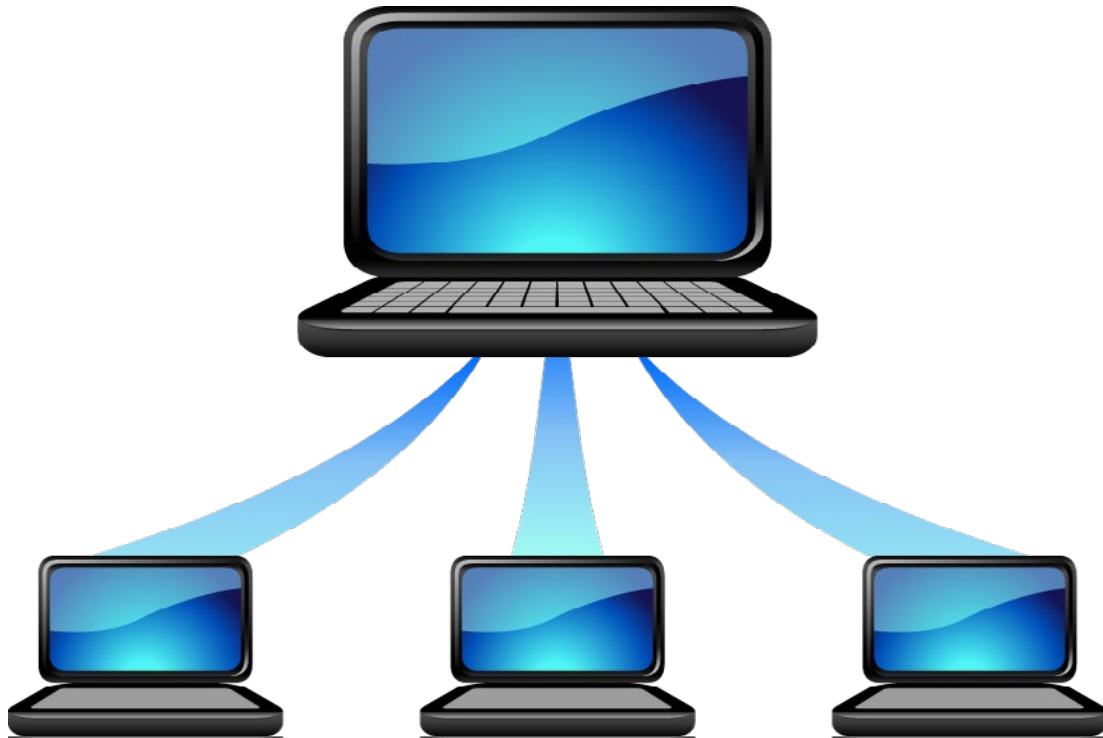
There are tons of options for encoding software, but we'll focus on two cross-platform options: one free and one paid.

Flash Media Live Encoder (Free) [link](#)

Adobe's Flash Media Live Encoder is the most used and supported free encoder available. FMLE is available for both PC and Mac and supports nearly most common audio/video streaming formats. FMLE is only an encoder so you won't have the ability to switch cameras live, handle transitions, or on-screen graphics. If your church already uses or has access to a hardware video mixer then FMLE's limitations probably won't hold you back, but if you're looking for a "studio in a box" solution, you'll want to use a more comprehensive broadcasting solution.

Wirecast 4 (\$449) [link](#)

Wirecast is the more "professional" package that includes broadcasting tools that go well beyond that of Adobe's free encoder. Wirecast isn't just a streaming encoder, it's a full-featured live production suite. It allows you to instantaneously switch between multiple video feeds (cameras), import pre-recorded video, audio, graphics and slides, chroma key scenes (green screens), picture in picture, and 3D graphics and transitions. Wirecast also comes in a "pro" version that includes support for 3D virtual sets and integrated on-screen scoreboards for sporting events.



STEP THREE: **STREAM**

YOU'LL NEED:

a streaming service provider, encoding software, and a broadband internet connection

Choosing a Streaming Service Provider

Now that you have the right camera, computer and software, you'll need a streaming service provider. A streaming provider takes the feed you send from your computer and streams it across the web to viewers. There are hundreds of streaming providers out there so it's important to use one that fits your church. We suggest using a service that is designed specifically for churches. These providers have experience in the church market and are more equipped to help you through the process.

We highly recommend WorshipStream for churches that want to stream their services. They offer several packages that fit any church's budget, and will even provide you with a custom viewing page designed for your church. They also provide content storage, social networking integration, an administration portal, content recording/archiving, and a video-on-demand content library. If you run into any issues, they provide 24/7 customer support for all of their packages and services.



WORSHIPSTREAM

For more information visit WorshipStream.com or call 1-888-245-0680.

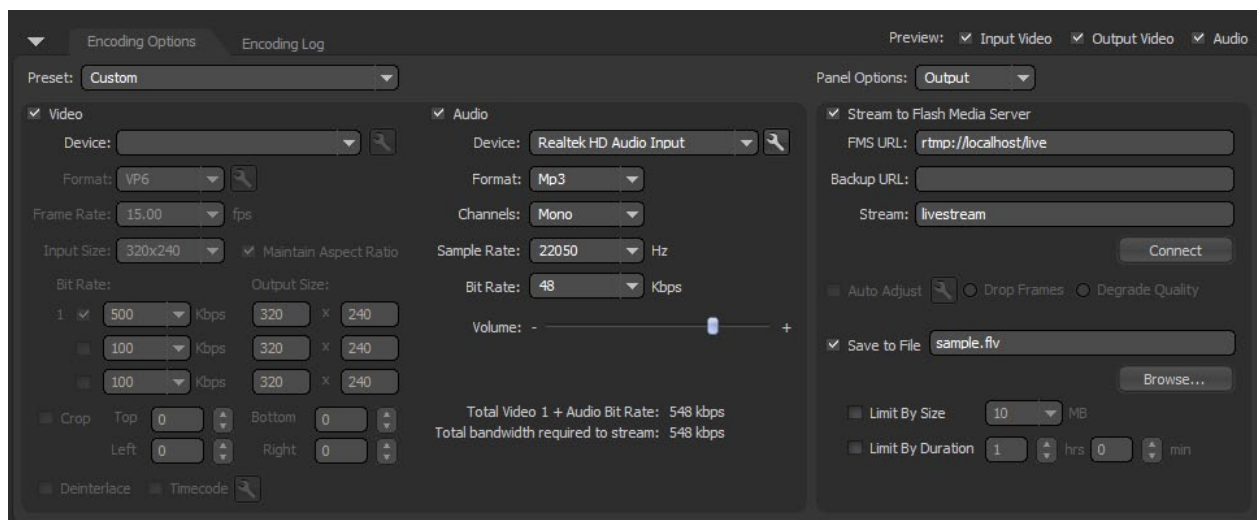
Now that you have a service provider, you'll need to configure your software to transmit the live stream. The next steps walk you through setting up your stream and connecting with your content provider.

Configuring Your Software

While every software package will look different and have options specific to the software's features, all streaming packages will require certain settings to encode and connect to a streaming service. For demonstration purposes, we'll be walking you through the settings using Adobe's Flash Media Live Encoder.

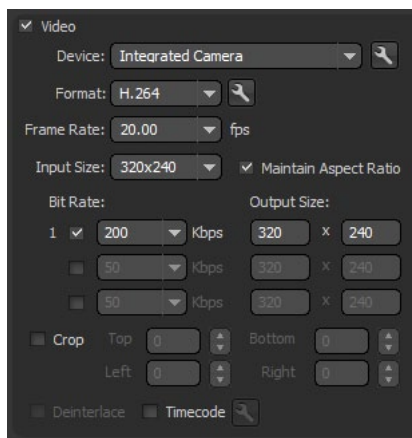
Encoding Options

Below a screenshot of Adobe's Flash Media Live Encoder's option panels. We'll briefly walk you through all the settings to ensure the smoothest and highest quality broadcast for your church.



Encoding Options

Below a screenshot of Adobe's Flash Media Live Encoder's option panels. We'll briefly walk you through all the settings to ensure the smoothest and highest quality broadcast for your church.



Video Options

Device

This option select the device, camera, or feed that FMLE will be encoding. If you're using a video camera that's plugged directly into the computer, the name of the camera may be listed as an option; or if you're using a video capture card fed by a video mixer, the drop-down may include the name of the video capture card.

Once you select the device desired, the preview frame should begin playing what's coming through your camera or capture card.

Format

Most streaming services will require either a H.264 stream or a VP6 stream. These are just ways for the program to compress and encode the video. Unless your streaming provider requires otherwise, we suggest the H.264 stream format.

Frame Rate

The frame rate is how many "pictures" your camera takes per second to create video. Most cameras will support 30.00 or 29.97 frames per second. However, some many newer cameras support a native frame rate of 24 frames per second. Refer to the specs for your video camera and select the option that matches your camera's output.

Input Size

Some cameras allow for multiple resolutions, some only output their native resolution. Most cameras will output a resolution of at least 720x480 while higher end high-definition cameras can output at 720p (1280x720) or 1080p (1920x1080). For webcasting, these higher resolutions can be overkill and place unnecessary encoding overhead on your computer. 640x480 (4:3 standard aspect ratio) and 640x360 (16:9 widescreen aspect ratio) will be sufficient for encoding.

Multiple Streams

FMLE can output more than one stream simultaneously. This is useful for some streaming services that provide different quality streams depending on the viewer's connection speed (example: many YouTube videos allow you to select the quality/resolution like 240p/320p/480p and up). For most churches, one stream will be plenty.

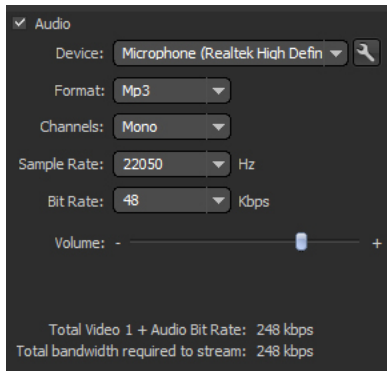
Bit Rate

Bit rate is the amount of data being used to encode 1 second of video. The higher the bit rate, the better the video will look to users. However, if the bit rate it set too high then you or your users' internet connections may not have enough bandwidth to keep up with the stream. This can cause issues such as dropped frames, jittery video/audio, and constant buffering. A video bit rate of 300Kbps-650Kbps will be sufficient for most applications.

Output Size:

The output size setting controls the resolution of the video stream. The maximum output size that most churches will want to use is 640x480 (4:3) or 640x360 (16:9). However, if your bit rate for video is 450Kbps or less, you'll probably want to use a lower output size.

Audio Options



Device

This option works the same way as the video device option. It simply selects the source of the audio used for the stream. The best option for bringing in audio is to run an output from your church's soundboard directly into the computer. This eliminates the need for addition mixing and/or adjustments throughout service. Be sure to set your audio levels high enough for readings on the volume meter (green, yellow, and red stacked lights inside the preview portion of FMLE) but not high enough to peak in the reds.

Format

Most churches will use "mp3" format for streaming broadcasts. If you are told by your streaming provider to use AAC, you'll need to purchase a plug-in for FMLE from MainConcept here: <http://www.mainconcept.com/aacencoder>.

Channels

If you're only streaming sermon and spoken word portions of your service, then "Mono" will be sufficient. However, if you're planning on streaming your worship/music service, then you'll want to select the "Stereo" option.

Note: To legally stream your worship/music services on the web, you'll need to obtain a streaming license for your church. This is NOT covered under your standard CCLI Church Copyright License. For more information on copyright considerations, read the "Keeping it Legal" section of this guide.

Sample Rate

Keep the sample rate set to the default setting of 44100Hz.

Bit Rate

The best setting for your audio bit rate depends on a few different factors. If you're only going to be streaming your sermon or spoken word portions of your service in mono then 56 or 64 Kbps is sufficient. However, if you'll be streaming the worship/music portion of your service in stereo, then you'll want at least a 128Kbps setting (160Kbps is even better).

Notes on Audio

A stereo stream contains two channels (left and right) while a mono stream only contains one. If you're streaming a stereo stream at 128Kbps, you're actually streaming two separate 64Kbps streams. So a 128Kbps mono stream is twice the "quality" of a 128Kbps stereo stream.

Music sounds much better in stereo than mono because the spatial positioning (left to right) of the individual instruments. Spoken word typically sounds just fine in mono because you're only dealing with one signal source (the speaker's microphone).

Stream Options

FMS URL and Stream:

These will be provided for you by your streaming service provider. We highly recommend that you copy and paste this information because it must be 100% accurate to work properly.

Save to File:

Unless you're saving the video through other means, we suggest that you enable this option. This feature saved a copy of the stream to your computer for later use. If you want to use some of your service for DVD projects, audio podcasts, or promotional use then this feature will come in handy!

When you're ready to broadcast, click "Connect" then "Start."

Visit CopyrightSolver.com
or call 1-877-947-9687 for more details:



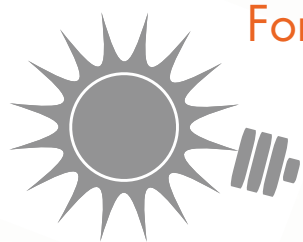
PERFORMmusic License for your church facilities & events



PERMISSIONSplus for professional copyright clearances



WORSHIPcast License for streaming music performances



For FREE copyright educational information
visit CopyrightCommunity.com