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# User Guide for Mac

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12.1



# Contents

## Preface 9

Copyright and Trademark Notice	9
MPEG-2 License Requirements	10
Customer Support	10
We'd Like to Hear from You!	10
Limited Warranty and Disclaimers	10
Warranty Remedies	11
Software Updates	11
Restrictions and Conditions of Limited Warranty	11
Limitations of Warranties	11

## Introduction 13

Introduction	13
Topics	13
Wirecast One Workflow	13
Tutorials	14
Two Ways to Use this Application	15
Presenter Is Operator	15
Presenter Plus Operator	15
Startup	16
Main Window Layout	17
Using AutoLive	19
Preview	19
Master Audio	21
Main Shot List	22
Control/Status Bar	22
Layers	24
Layer Windows	24

## Installation 27

Introduction	27
Topics	27

Installing	27
Activating	28
Uninstalling	29
System Requirements	29

## Tutorials 33

Introduction	33
Tutorials	33
Tutorial 1: Basic Concepts	34
Tutorial Prep	35
The Main Window	36
What Is a Shot?	36
Switching Between Shots	37
Transitions	38
Transition Speed	40
Go Button	40
Layers	41
Auto Live	43
Turn AutoLive Off	43
Multiple Changes	44
Preview	45
Tutorial 2: Editing Shots	49
Tutorial 3: Broadcasting	51
Streaming	51
Telestream Cloud Settings	52

## Main Window 57

Introduction	57
Topics	57
Overview	57
Control/Status Bar	58
Preview/Live Broadcast Area	59
Countdown Clock Display	60
Transition Controls	61
Changing Transitions	61
Transition Speed	62
Go Button	62
Touch Bar (MacBook Pro only)	62
Add Shot Menu	63
Shot Selection Area	66
Changing Shots	67
Moving a Shot to Another Layer	69
Resizing the Shot Icons	69
Layers	69
What is a Layer?	70
Changing Layers	70

Moving a Shot to Another Layer	71
AutoLive	71
Live Icons	72

## Shot Editor 73

Introduction	73
Topics	73
Overview	74
Shot Layers Tab	75
Shot Layer Properties Tab	76
Audio Properties Tab	78
Chroma Key Properties Tab	80
Smooth Transition Properties Tab	81
Additional Properties Tab	82
Capture Devices Properties	82
RealTek Example	82
NDI™ Sources	83
Clock Properties	85
Image Carousel Properties	88
QR Code Generator Properties	89
Media File Properties	90
Screen Capture Properties	91
Solid Color Properties	92
Text Shot Properties	94
Web Page Properties	97
Web Stream Properties	98
Titles Properties	99
Twitter Feed Properties	102
SyphonInject™ Sources	105

## Social Media 107

Introduction	107
Topics	107
Facebook	107
Twitter	110
Settings	110
Create Shot	111
Message Feed	112

## Preferences 115

Introduction	115
Topics	115
Accessing Preferences	115
Resetting Preferences	116
General	117

Performance	118
Licenses	119
Serial Numbers	119
Manual Activation	119
Deactivate Serial Numbers	120
Demonstration Mode	120
Software Update	120
Upgrades Included	121
Hot Keys	121
Advanced	123

## Menus and Windows 125

Introduction	125
Topics	125
Wirecast One Menu	125
File Menu	126
Edit Menu	126
Switch Menu	128
Media Menu	128
Output Menu	129
Layout Menu	131
Social	132
Facebook	132
Twitter Menu	132
Window Menu	133
Help Menu	133

## Broadcasting 135

Introduction	135
Topics	135
Canvas Size	136
Virtual Camera	137
Output Settings	138
Configuration	139
Encoder Presets	140
RTMP Server	143
Telestream Cloud Settings	143
CDN Partners	149
Bambuser, BoxCast, Churchstreaming.tv, Dailymotion, DaCast Streaming Services, ESE Networks, Lightcast, Livestream, Meridix Live Sports Platform, Onstream media, Pitchtime, SermonAudio, StreamingChurch.tv, StreamShark.io, StreamSpot, Streaming Media Hosting, Stretch Internet, Sunday Streams, Titled Globe, Tulix Streaming, Ustream, WebCast-TV, WorshipStream,	149
Azure Media Services, Sermon.net, Verizon Digital Media Services.	151
Brightcove, Limelight	152
Akamai	153

Twitter/Periscope	155
Twitch	157
Vimeo	159
Wowza Streaming Engine.	162
Zixi	163
Facebook Live	165
Facebook Live - With User Code	171
Microsoft Stream	178
YouTube	178
Streaming	180
Record To Disk	182

## Encoder Presets 185

Introduction	185
Topics	185
The Encoder Presets Window	186
Creating New Presets	187
Profile Options	187
MainConcept H.264	188
x264	191
ProRes	194

## Making Great Broadcasts 197

Introduction	197
Topics	197
Overview	197
High Quality Audio	198
Good Lighting	198
Triangular Lighting	199
Broadcast Settings	200
Bandwidth	200
Motion	200
Encoder Settings	200

## Acknowledgements 201

Acknowledgements	201
Overview	201
Steinberg VST Plug-In SDK Licensing Agreement (Version "3.6.6- 17.06.2016")	201
FFmpeg Project	203
Syphon	211
MIT	211



# Preface

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- Support: [desktopsupport@telestream.net](mailto:desktopsupport@telestream.net)

Website Links:

- How to Buy: <http://www.telestream.net/purchase/store.htm>
- Support:  
<http://www.telestream.net/telestream-support/wire-cast/support.htm>
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## We'd Like to Hear from You!

Telestream welcomes comments, feedback, and suggestions about your experience with Wirecast ONE. You can reach us at [desktopsupport@telestream.net](mailto:desktopsupport@telestream.net)

If you have suggestions about improving the tutorials or this guide, other Telestream documents, or our Website, please Email us at [techwriter@telestream.net](mailto:techwriter@telestream.net).

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Telestream, LLC.

848 Gold Flat Road

Nevada City, CA 95959

You can call Telestream, LLC. via telephone at (530) 470-1300.

# Introduction

## Introduction

This guide is intended to help you understand how each feature of Wirecast One operates and to provide you with information to help you make the best presentations possible.

## Topics

- [Wirecast One Workflow](#)
- [Tutorials](#)
- [Two Ways to Use this Application](#)
- [Using AutoLive](#)
- [Main Window Layout](#)

## Wirecast One Workflow

Wirecast One is an entry level version of Wirecast. It has all the essential features of Wirecast without including the features found in the Studio and Pro versions. It is the most affordable way to get streams up and running. It allows a single camera input and streaming to one selected destination.

Wirecast One features include:

- Support for single camera (or NDI) input
- Works with UVC, Directshow, and AVFoundation capture cards and devices (e.g. Epiphan)
- Advanced integration with capture cards from Blackmagic, Magewell and AJA
- NDI™ (Mac/PC) and Syphon (Mac only screen capture alternative) sources
- Wi-Fi iOS sources with Wirecast Go
- IP cameras and web stream input (RTMP, MMS, HTTP, RTSP, HLS, MPEG-Dash and UDP)

- Add additional media: audio, video, graphics
- Screen capture
- Web page display and capture
- ASIO Professional Windows Audio support
- Multi-channel audio ingest
- Three Master Mixing Layers
- Unlimited Shots per Master Mixing Layer
- Audio & video sync
- Chromakey
- Clocks, timers, and stopwatches
- Image Filters (Mattes)
- Integrated Facebook Polling
- Integrated Text and Titles (lower thirds)
- Live viewer counts (Facebook, YouTube, and Twitch)
- Multi-channel audio ingest
- Image carousels
- Twenty-three transitions included
- Integrated Twitter comments, curation, and display
- GPU-accelerated encoding (requires Intel or Nvidia GPU)
- RTMP, RTP multi + unicast
- Built-in destinations: Periscope/Twitter, Brightcove, Facebook, YouTube, DaCast, Akamai, Wowza, Microsoft Azure, and more...
- Record to disk (MP4, MOV)
- Facebook Live: groups, 24/7 ambient streaming, paired encoding, geo and sponsor tagging, live cross-posting
- Virtual Camera and Microphone output
- Monitor output data and statistics
- Basic Support. Includes free software upgrades, Online Case Submission (with a 24-hour Response Time Target), Knowledge Base, Telestream Community Forum.

## Tutorials

It is suggested that you first work through the tutorials in the *Tutorials* section. They are quick, informative, and the easiest way to become familiar with Wirecast One.

Wirecast One also provides a built-in tutorial environment that corresponds with the tutorials provided in *Tutorials*. The tutorials take about thirty minutes and provide a brief overview of how to set up a basic presentation and create your own broadcast.

It is also suggested that you read *Making Great Broadcasts*. This topic shows you how you can easily make changes in your setup and improves the quality of your presentations.

## Two Ways to Use this Application

There are two different ways you can use Wirecast One:

- **Presenter Is Operator** The person conducting the presentation also operates Wirecast One.
- **Presenter Plus Operator** The presenter concentrates on the content and someone else operates Wirecast One. In this mode, the presenter never needs to know in detail how Wirecast One works.

### Presenter Is Operator

In this mode of operation, the person conducting the presentation simultaneously operates Wirecast One.

Here are some suggestions for using Wirecast One when you are both the presenter and operator:

- **Keep it simple** Set up Wirecast One to make it easy for you to be the operator and the presenter. Set up your logo and titles so that you need to make very few changes during your presentation. Use a minimum number of shots so it's easy for you to see which shot to choose.
- **Keep the AutoLive feature on** This enables you to present your shots with just one click. Though this limits your ability to perform complex presentations, it is the best way when the presenter is also the operator. To turn AutoLive on or off, select it under the Switch menu.
- **Pre-configure your shots** Make sure that all the shots are created prior to your presentation. Do not try to create or modify shots while broadcasting them.
- **Use hot-keys for switching shots** Wirecast One provides a hotkey editor that enables you to easily assign hotkeys to your shots.

### Presenter Plus Operator

In this mode of operation, an engineer (or operator) is responsible for using Wirecast One, and the presenter concentrates on the content of the presentation.

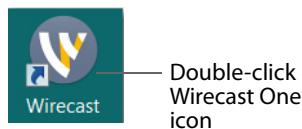
Here are some suggestions for using Wirecast One when you have both an operator and a presenter:

- **Keep the AutoLive feature off** This enables you to make several changes at one time before taking the changes live. However, to quickly make a shot live, press the Command+Ctrl keys and click the shot. The AutoLive control is located under the Switch menu

- **Open the Preview window** The operator should use Preview mode to examine everything before it becomes live. The Preview display control is located under the Layout menu.
- **Use the Layer Windows to make more shots available** Select New Layer Window from the Window menu to open additional layer windows so you can quickly flip between shots on several layers.

## Startup

To start Wirecast One, double-click the Wirecast One icon that was placed on your desktop during installation.



Double-click  
Wirecast One  
icon

When Wirecast One starts up, you can (optionally) view the new features by clicking on the play button. Click *Continue* when you are finished.

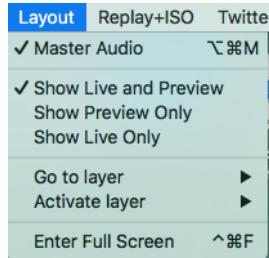


Click the play button

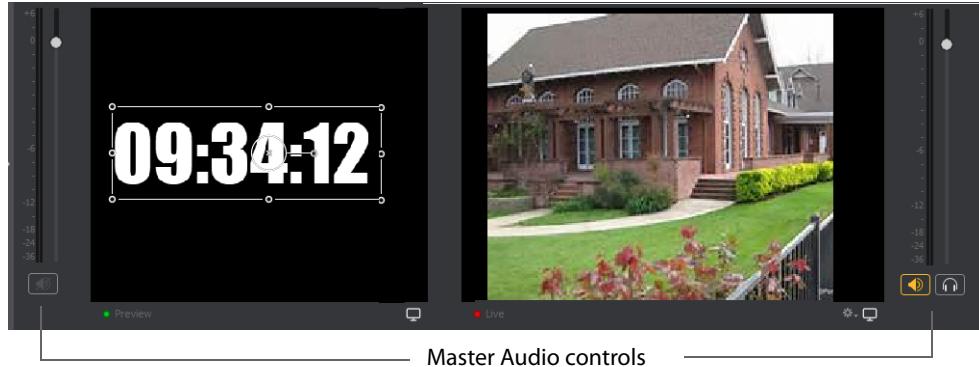
Click Continue

# Main Window Layout

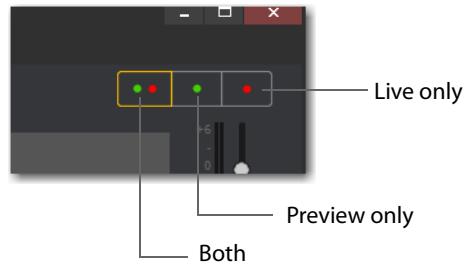
Wirecast One enables you to select which functions are displayed in the Main window. These functions are added or removed from the main window using the Layout menu.



**Master Audio** Displays or hides the Master Audio controls. (A check mark to the left of the menu item indicates that the audio controls are displayed.) Master Audio controls are located on the left and right sides of the Main window.



**Show Live and Preview** Enables you to select between displaying: the Preview Window only, the Live Window only, or both. A check mark to the left of the menu item indicates which of these three modes are active. You can also select one of these three modes by clicking on the mode selection buttons in the top right corner of the screen.

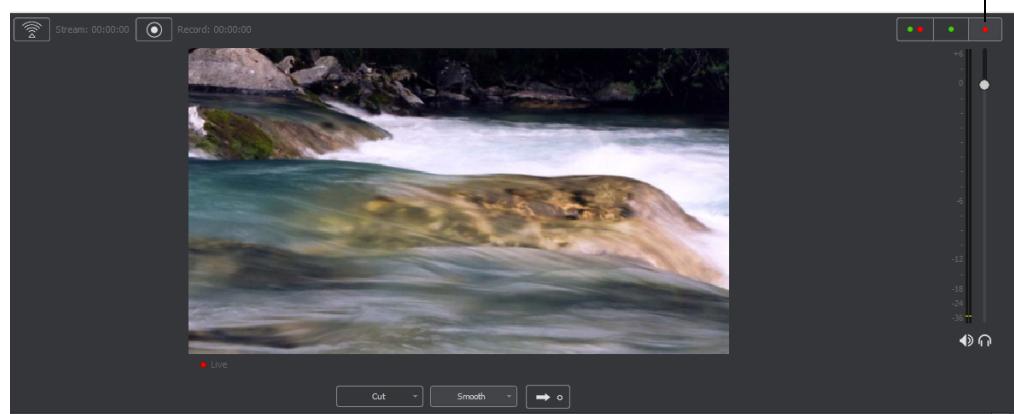


**Show Preview Only** selection:

Preview Only button



Live Only button



**Show Live and Preview** selection:

Live and Preview button



# Using AutoLive

Some users of Wirecast One may want to single-click a shot to make it become live. Other users may want to make several changes to the broadcast before making them live. You can use both methods in Wirecast One.

The AutoLive feature is designed to offer a single-click operation for those users who want to simply click from shot to shot. The Edit window (or other windows) is not affected by the status of AutoLive.

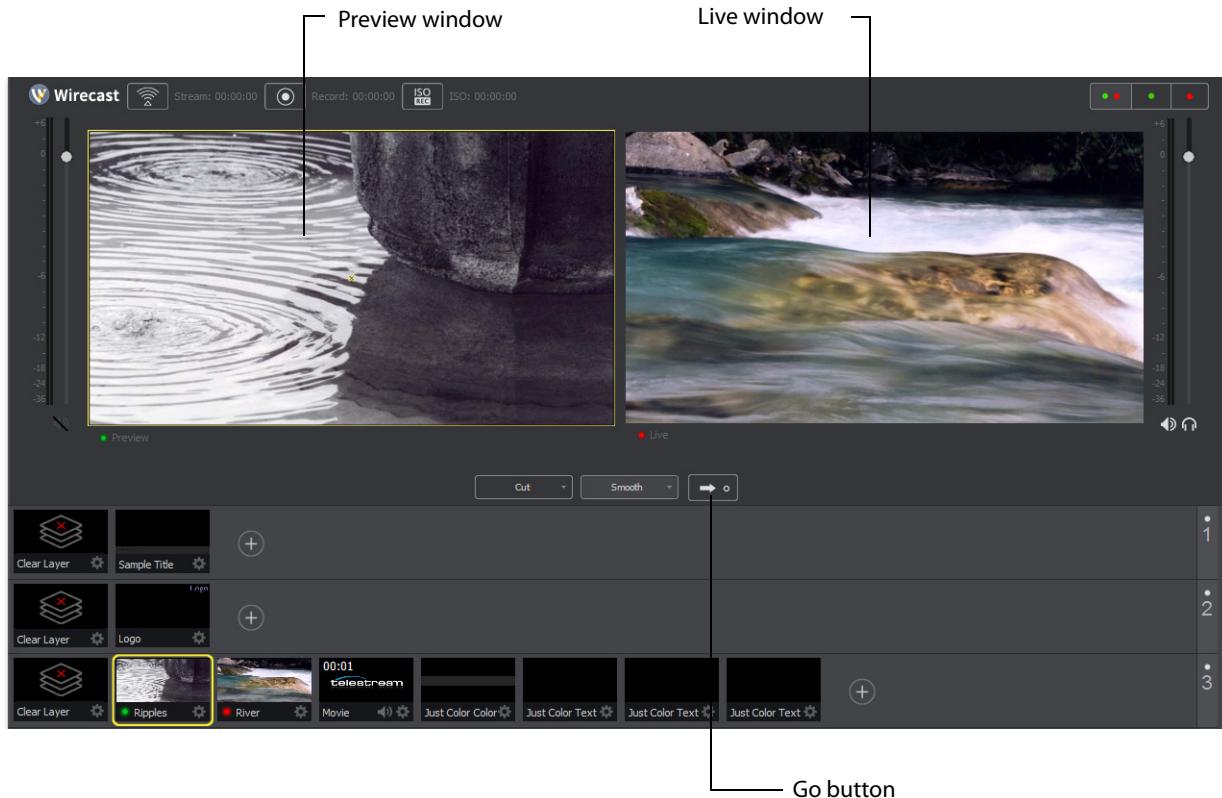
When AutoLive is on, clicking a shot in the Main window automatically places the shot in the Live window. As a result, the Go button becomes inactive.



When AutoLive is off, clicking on a shot displays it in the Preview window, then clicking the Go button is required to place the shot in the Live window.

## Preview

Preview displays what the broadcast will look like when you click the Go button. (The Go button is only active when AutoLive is off.) To display the Preview window, select *Layout > Show Live and Preview*, or *Layout > Show Preview Only*.

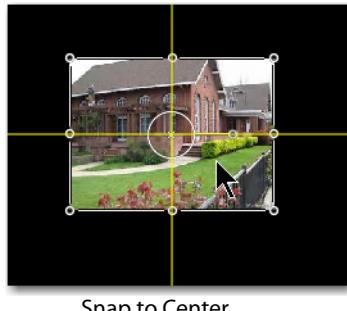


When you select an image in the Preview window, Resize and Rotate handles appear. Click and drag any of these handles to resize or rotate your image.



You can also snap an image in the Preview window to various alignments: Snap to Center, Snap to Edge, Snap to Corner, or Snap to an Image. The yellow guide lines appear when the image is ready to snap into place. To temporarily disable the snap action, hold down the Command key while moving an image into place (the yellow

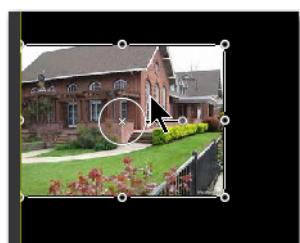
snap lines will not appear). Additionally, after selecting an image, the arrows keys can be used to nudge it into placement.



Snap to Center



Snap to Corner



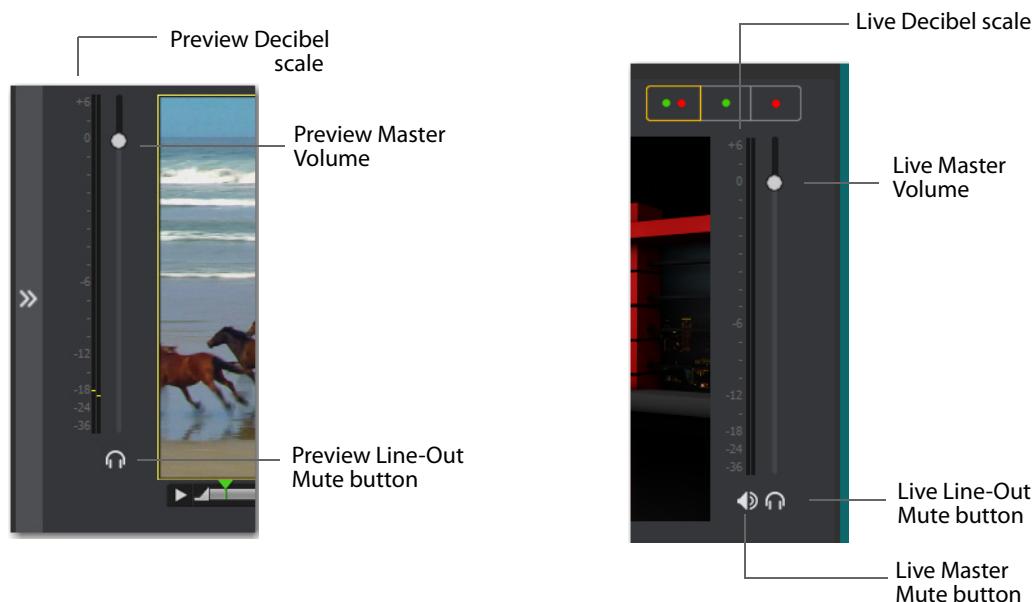
Snap to Edge



Snap to an Image

## Master Audio

The Master Audio panel enables you to control the output volume level, mute audio output, and mute the line-out feed for Preview and Live windows. To display Master Audio for Preview and Live displays, click *Layout > Master Audio*. Click again to hide the Master audio controls.



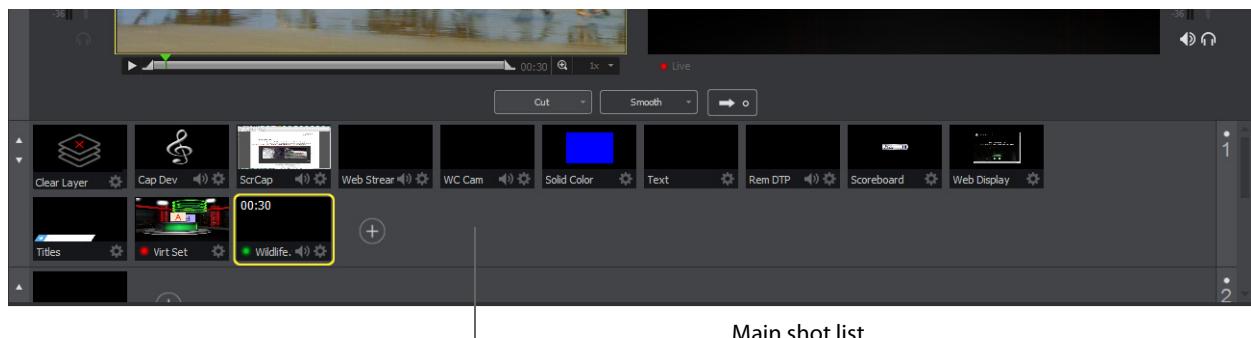
The Preview and Live Master Volume control enables you to adjust the master audio volume for Preview and Live separately. Click and drag the slider control up or down to set the volume. The decibel scale next to the slider indicates the audio level. When you take a Preview shot live, the Live audio controls are set to the levels set in Preview.

The Master Mute button mutes the Live window audio (what your viewers hear). Even when you mute the output, the encoder still generates audio but it is silent. If you do not want to broadcast audio, modify the Encoder Presets to not process audio through the encoder.

The *Preview Line-Out Mute* button and *Live Line-Out Mute* button control local volume (what you hear), not broadcast volume. When Line-Out is muted, audio is not sent to your headphones or speakers, but your viewers still hear the audio. The two controls are mutually exclusive -- you cannot have both on at the same time, but you can mute both.

## Main Shot List

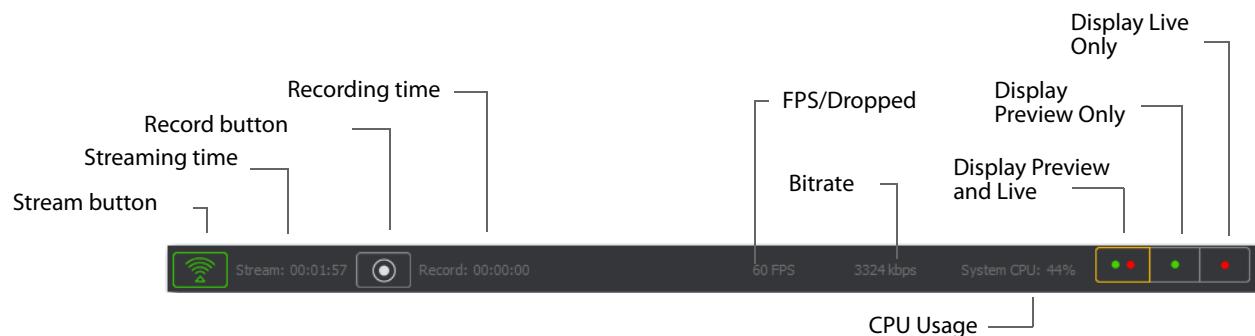
The Main window displays the Shot List at the bottom of the window.



Main shot list

## Control/Status Bar

Control buttons and status information are displayed at the top of the Main window.



Wirecast One displays the following controls and statistics:

- **Stream button** Click to begin streaming.

- **Streaming time** Displays how long you have been streaming. This value does not reset when you start/stop the broadcast. It is cumulative, which enables you to save portions of a broadcast to disk and still know the total amount of time.
- **Record Button** Click to begin recording.
- **Recording Time** This displays how long you have been recording. This value does not reset when you start/stop the broadcast. It is cumulative, which enables you to save portions of a broadcast to disk and still know the total amount of time.
- **FPS/Dropped** Displays the current FPS (frames per second) rate, or the number of frames dropped while streaming. Click on display to toggle between *FPS* and *Dropped Frames* modes. (Displayed only while streaming.)
- **Bitrate** Displays the streaming bitrate. (Displayed only while streaming.)
- **CPU Usage** Displays the usage of the CPU in percent. (Displayed only while streaming.)
- **Display Buttons** These three buttons enable you to choose to display the Preview window, the Live window, or both in a divided display.

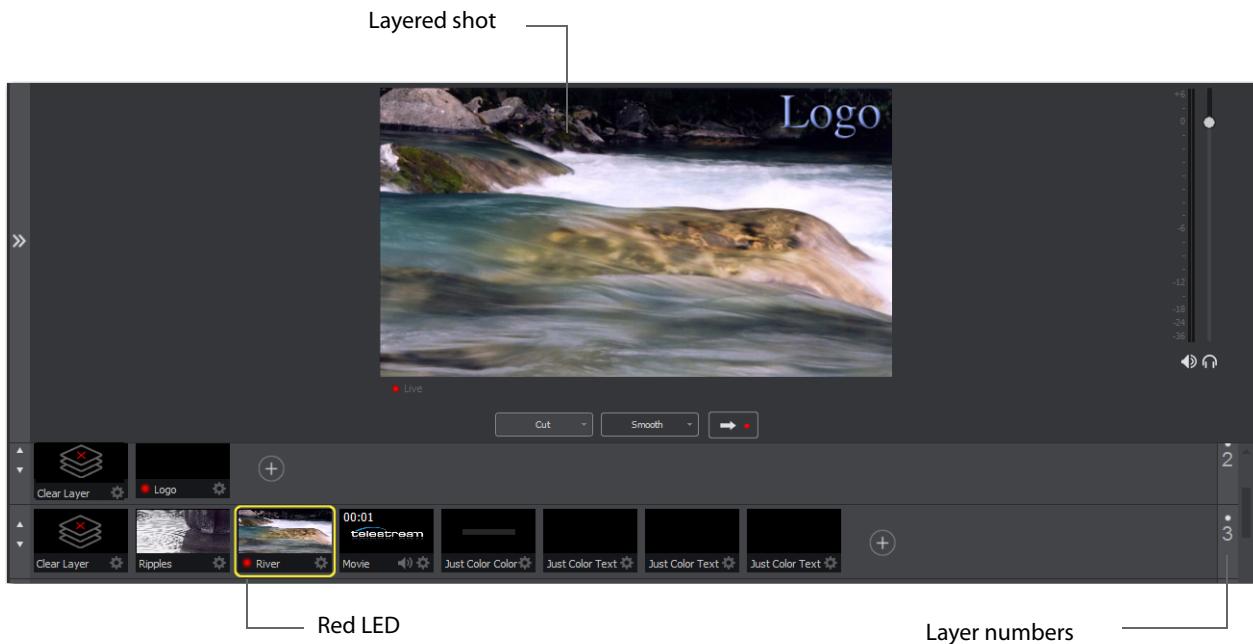
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**Note:** To avoid decrease in video quality, Wirecast One should not be used at CPU usage above 80%. See the Telestream Website for suggested configurations. You can also view streaming statistics by selecting *Output > Show Statistics*.

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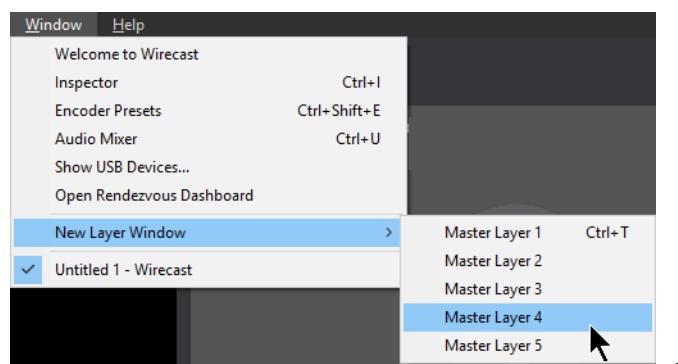
## Layers

Wirecast One displays three layers in the Main Shot List window. They are numbered 1 through 3 along the right side of the window. Each layer contains multiple shots that can be selected by clicking one. A red LED indicates that a shot is Live. (If AutoLive is turned on, when a shot is selected it is displayed in the Live window.) If you select multiple shots -- by selecting shots on multiple layers -- they will all be displayed in the Live window. But the shots are displayed in a layering manner, where layer 1 is on top and layer 3 is at the bottom (and layer 2 is layered in between). In the example below, the Logo in layer 2 is displayed on top of the River shot in layer 3.

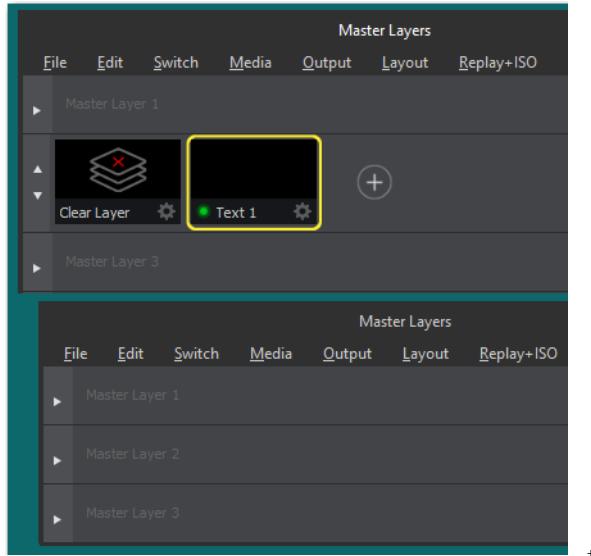


## Layer Windows

You can also open the Shot List in a separate window. Select *Window > New Layer Window* to display a list of the layer windows you can open (Master Layer 1 through 5). Select the layer you want to open and a new, separate layer window is displayed.



This separate Shot List window works exactly like the Shot List panel in the Main window, except it enables you to open multiple Shot List panels.





# Installation

## Introduction

This topic guides you through installing (or upgrading) and activating Wirecast One.

## Topics

- [\*Installing\*](#)
- [\*Activating\*](#)
- [\*Uninstalling\*](#)
- [\*System Requirements\*](#)

## Installing

To install Wirecast One, follow these steps:

1. Download the installer from the Website at: <http://www.telestream.net/Wirecast One/overview.htm>

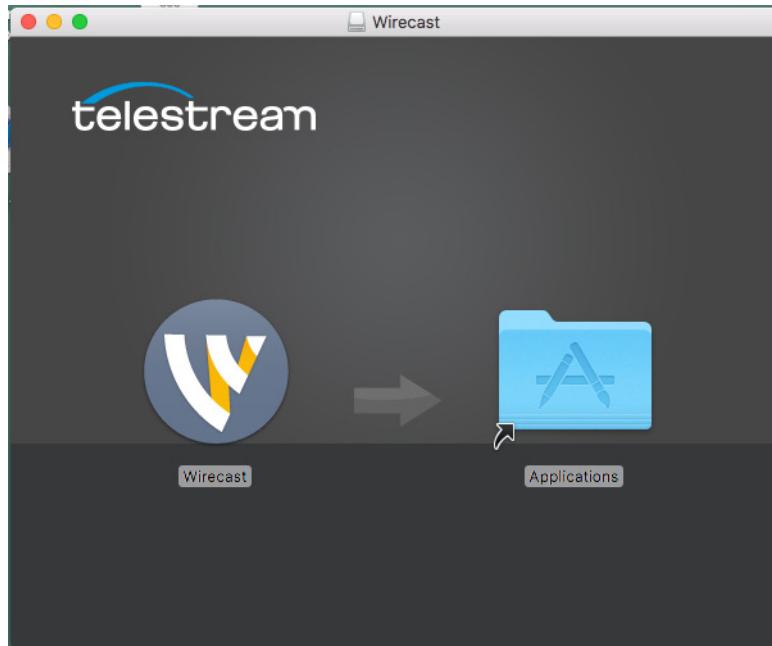
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**Note:** During installation, you will be asked if you want to install the Virtual Microphone feature. If you do (recommended), check the displayed check box and continue the installation. Installing Virtual Microphone requires administrative rights.

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2. Run the installer (.dmg) program.
3. Click Agree to the license terms.

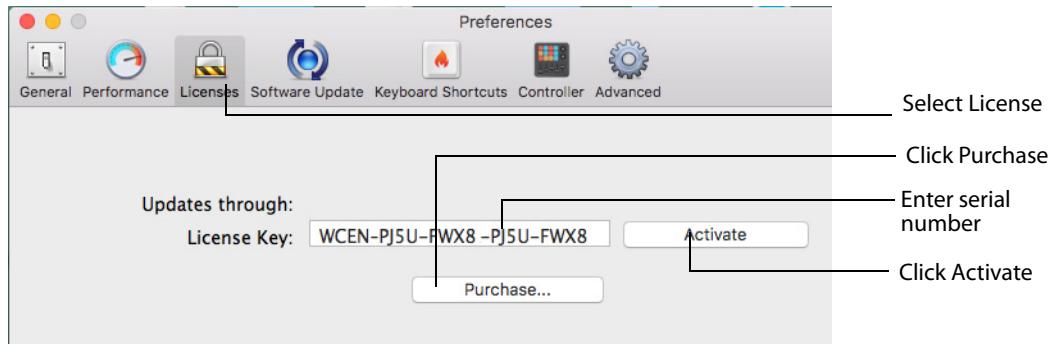
4. Open the Wirecast One in the downloads folder, then click and drag the icon into the Applications folder. If a version of Wirecast One already exists, the installer asks you if you want to replace the previous version.



## Activating

When you purchased Wirecast One a serial number was provided. This serial number must be registered in the Wirecast One program to unlock the features of Wirecast One. To register Wirecast One follow these steps:

1. Run the Wirecast One program.
2. Select *Preferences* from the Wirecast One menu, select *Licenses*, then click *Purchase*. Once you purchase and obtain your license number, enter it into the Serial Number field and click *Activate*.



3. Close the Preferences window.

Your Wirecast One program should now be fully activated.

# Uninstalling

1. To uninstall Wirecast One, place the Wirecast One program in the Trash folder.

# System Requirements

## Operating System

- Minimum: MacOS Sierra
- Recommended: MacOS High Sierra
- (Wirecast One does not support OS X El Capitan or previous versions)

## Processor

- Minimum: i5 dual-core @ 2.3GHz  
**NOTE:** May be insufficient for 1080p+ or 60 fps workflows
- Recommended: i7 quad-core @ 2.8GHz+

## Memory

- Minimum: 4GB RAM
- Recommended: 16GB+ RAM

## Hard Drive

- Minimum: 2GB, 7200 RPM for record to disk  
**NOTE:** Additional hard disk space required for record to disk
- Recommended: 500GB+, Solid State OS Drive

## Graphics Card

- Minimum: Intel HD, DirectX 11 capable  
**NOTE:** Insufficient for advanced Multi-Viewer workflows
- Recommended: Nvidia GeForce or AMD Radeon, 1GB+ video memory

## Internet Connectivity

- Minimum: Open HTTP/HTTPS port 80, RTMP port 1935
- Recommended: If behind a firewall, check with your CDN for any sites to whitelist

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**Note:** The following recommendations are based on a single simultaneous stream of 720p30 x264 @ 4.0Mbps.

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## Bandwidth

- Add 4 Mbps
  - Add 5+ Mbps
- NOTE:** To maintain reliability, bandwidth per guest decreases as more are added

## Processor

- i5 quad-core
- i7 quad-core

---

**Note:** These are minimum recommended processors. More demanding workflows may require a more capable CPU.

---

### Internet Connectivity

- Requires internet connectivity with HTTP/HTTPS port 80, and RTMP port 1935 open for streaming.
- An internet connection is recommended for Wirecast One license activation.
- For lowest quality (240p) streaming an upload rate of at least 650Kbps is required.
- 720p streaming requires an upload rate of at least 2500 Kbps.
- 1080p streaming requires an upload rate of at least 4500 Kbps.
- Consider lowering your canvas frame rate and/or streaming resolution to lower CPU usage.
- It is recommended that an upload rate of at least double the desired rate be available.
- Solid State Drive or fast RAID array recommended for ISO Recording and Replay functionality. Actual data rates will vary depending on quality level selected for ProRes recording, as well as the resolution and frame rate selected.
- For ProRes recording please refer to Apple's ProRes data rate specifications

### Recommended Hardware Specifications

- Intel Core i3 CPU @ 1.7 Ghz or higher recommended for 540p streaming with x264 @ 30 fps.
- Intel Core i5 CPU @ 2.5 Ghz or higher recommended for 720p streaming with x264 @ 30 fps.
- Intel Core i7 CPU @ 3.0Ghz or higher recommended for 1080p streaming with x264 @ 30fps.

---

**Note:** 60 FPS streaming will result in increased CPU usage and a high bit rate (4Mbps or higher) for good quality.

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- Minimum 4GB RAM, 2GB free hard disk space. Additional hard disk space required for recording to disk.

### Hardware Accelerated Encoding Requirements

- Intel Quick Sync Video encoding requires an Intel CPU with an Intel® QuickSync Video core. List of Intel CPUs supporting QuickSync.
- NVIDIA NVENC encoding requires an nvidia GPU with Kepler architecture or newer. NVIDIA only maintains a general list of supported GPUs.

- Apple Hardware Accelerated H.264 encoding requires a Mac with an integrated Intel GPU.



# Tutorials

## Introduction

The best way to get started using Wirecast One is to quickly work through all its main features. This tour presents a series of three tutorials, each designed to help you understand how to create and stream presentations using Wirecast One.

As you work through these tutorials, you will also become familiar with important Wirecast One concepts and how you can use them to deliver high quality broadcasts. The more you know about Wirecast One, the better it will serve your streaming objectives.

Because each tutorial builds on the skills and knowledge you learn in the previous tutorials, it is recommended that you take the tutorials in succession. Working through all the tutorials takes about thirty minutes.

As you gain hands-on experience creating video and audio presentations - which leads to a working knowledge of Wirecast One and its components and architecture - you will gain proficiency in using Wirecast One.

## Tutorials

- [\*Tutorial 1: Basic Concepts\*](#)
- [\*Tutorial 2: Editing Shots\*](#)
- [\*Tutorial 3: Broadcasting\*](#)

---

**Note:** You can run all of the tutorials without a license. However, a watermark on the video and an occasional voice-over on the audio are present until a valid license is activated.

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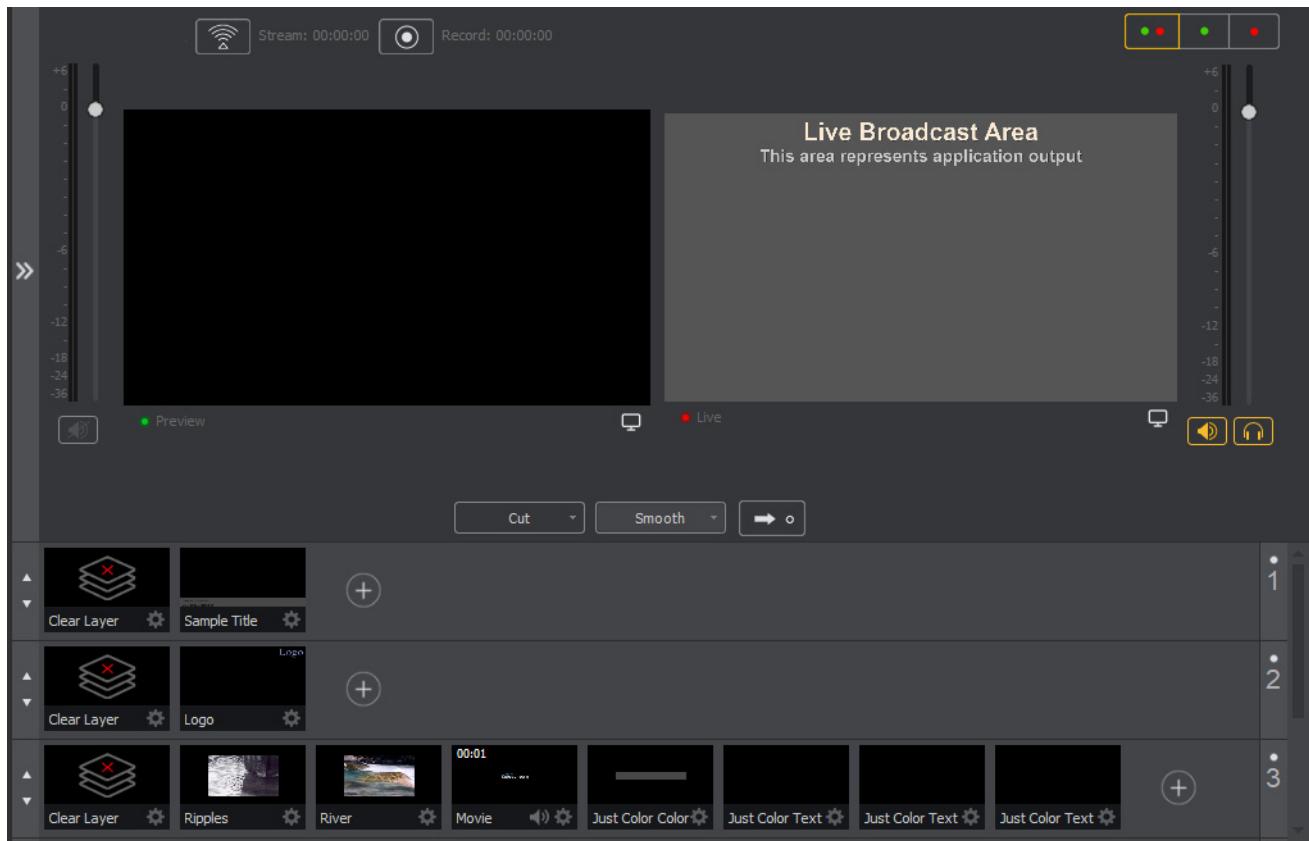
**Note:** For licensing information, select *Preferences* from the Wirecast One menu, select *License*, then click *Purchase*. Or, you can contact Telestream at: [desktopsales@telestream.net](mailto:desktopsales@telestream.net).

---

# Tutorial 1: Basic Concepts

The goal of this tutorial is to provide you with a quick but successful experience creating and streaming a presentation using Wirecast One.

This tutorial requires that you open the tutorial document in Wirecast One. To do this, select *Create Document for Tutorial* from the Help menu in Wirecast One.



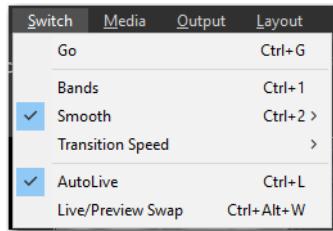
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**Note:** If you are running the tutorial with Wirecast One in demonstration mode, the Wirecast One logo appears from time to time and audio output has a periodic voice-over.

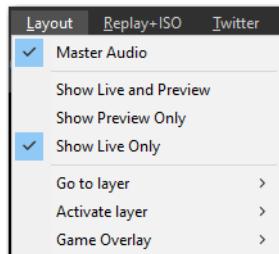
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## Tutorial Prep

To prepare for this tutorial you need to make several changes. Under the Switch menu, make sure Smooth and AutoLive options are turned on (check mark displayed), and *Live/Preview Swap* is turned off (no check mark displayed).

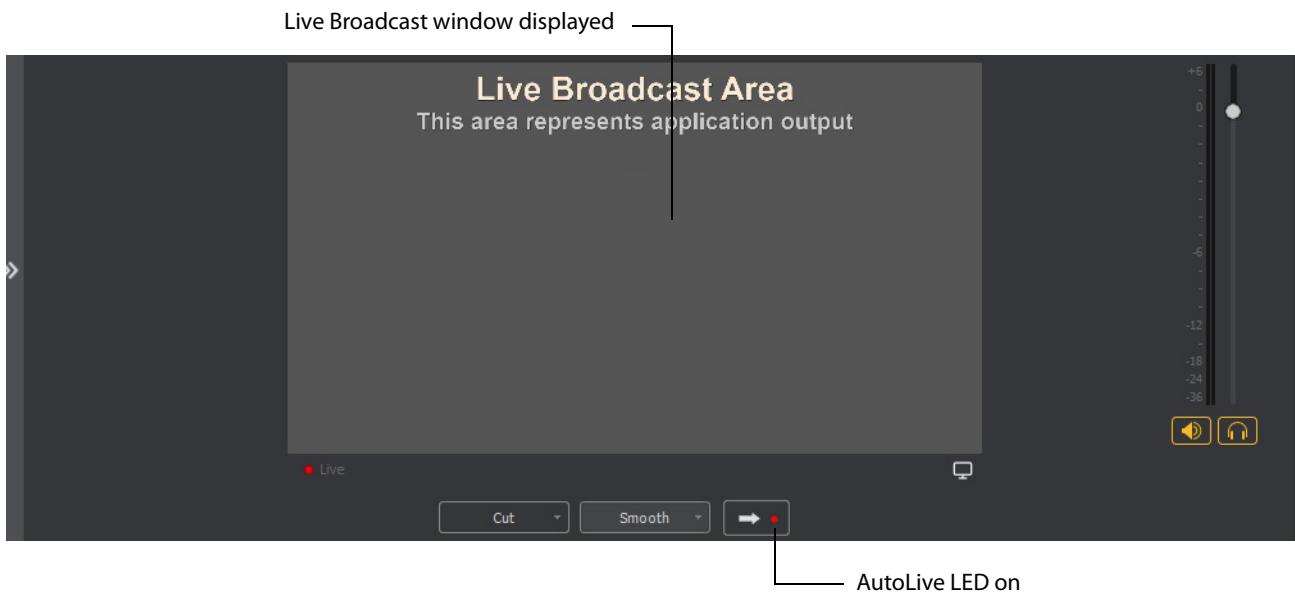


Under the Layout menu, make sure *Show Live Only* is selected (check mark displayed).



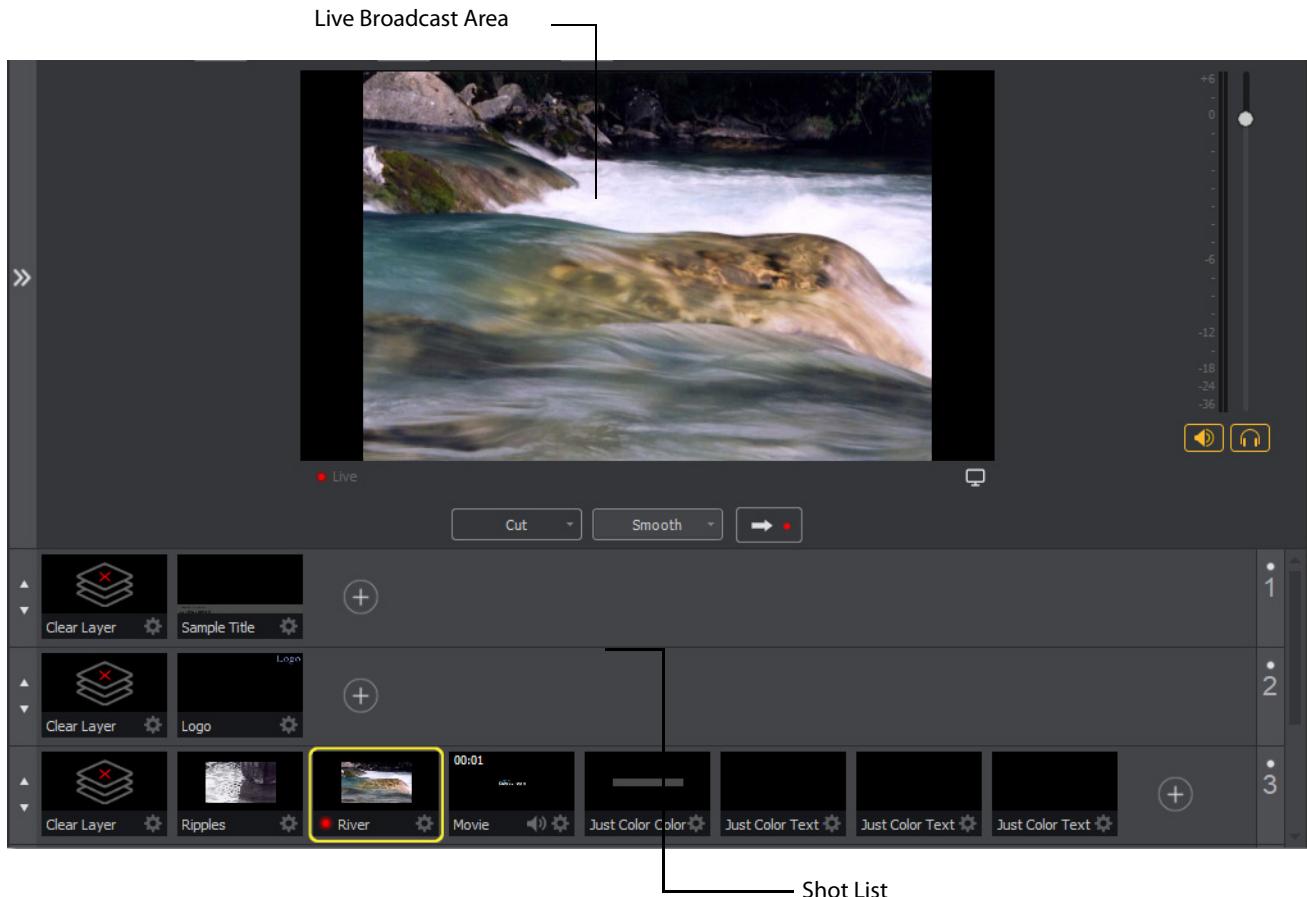
All of these options will be changed later in the tutorial.

The Wirecast One Main window shows the AutoLive LED turned on and the Live Broadcast window (only) displayed.



## The Main Window

Wirecast One has two main display areas: Live Broadcast area and the Shot List. The Live Broadcast area is in the upper portion of the window displaying what Wirecast One streams to your viewers (or what it records to disk). The Shot List, in the lower half of the window, displays the shots available for streaming.



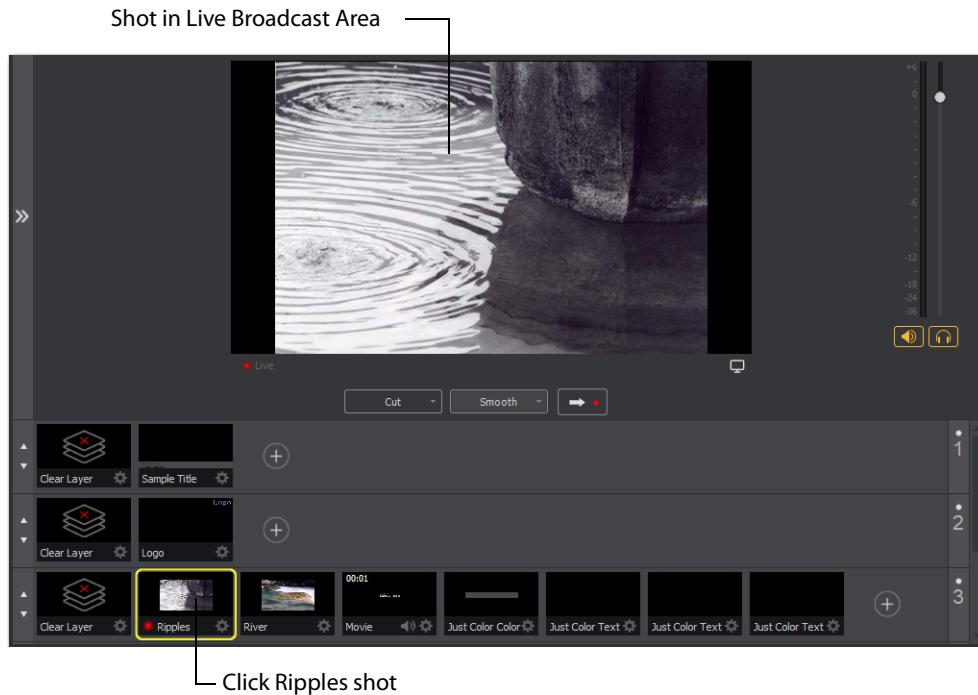
## What Is a Shot?

Wirecast One uses the concept of a “shot” to construct presentations. A shot contains some form of media (pictures, video, etc.), along with any settings for that media. In its simplest form, a shot contains one piece of media such as a photo or a video clip. But it can also be something more complex, like a live camera with a title and background music.

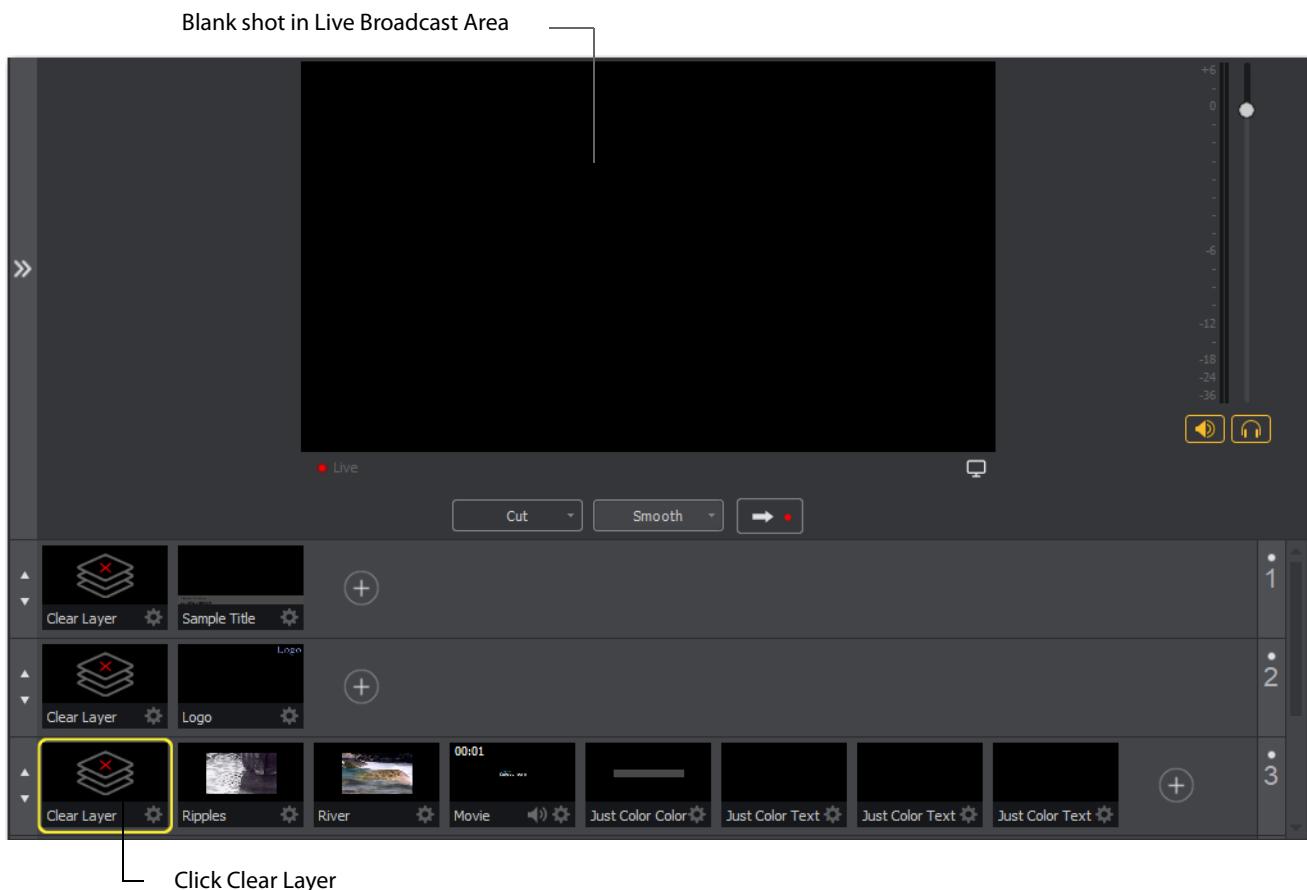
A shot can be edited and its settings can be changed (See [Tutorial 2: Editing Shots](#)). Shots are important because they enable you to configure a lot of information before you stream your presentation. This enables you to concentrate on creating a good production during your broadcast.

## Switching Between Shots

Individual shots are displayed in the Shot List. Click the Ripples shot in the Shot List area and the image fades into the Live Broadcast Area display. This is called “taking a shot live”.



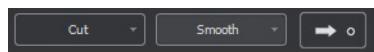
Click the shot labeled *Clear Layer* and the Ripples image fades to a blank screen. The *Clear Layer* shot enables you to display a blank shot, which is sometimes needed.



## Transitions

In the previous examples, a “fade action” occurred when you clicked on a shot. This is because the *smooth* transition is the default.

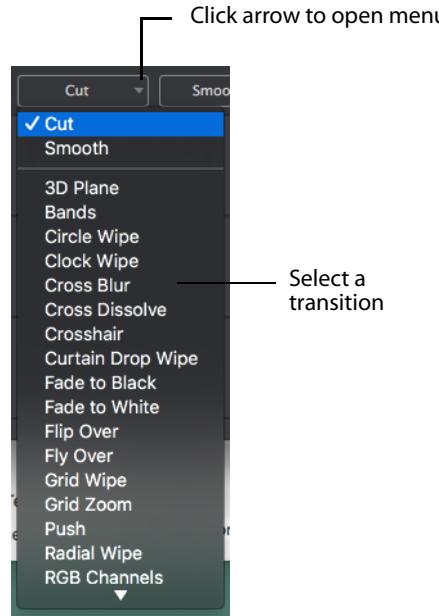
Transition controls are located just below the Live Broadcast Area where the two default transitions are shown: *Cut* and *Smooth*.



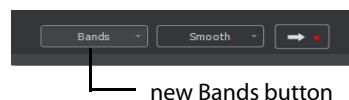
When *Cut* is selected, transitions are executed immediately. When *Smooth* is selected, transitions fade in and out (as demonstrated above).

But there are more than just two kinds of transitions, and only two transitions can be assigned to the Transition Panel. To select a different transition, click the small arrow on the right side of either transition button. When the list appears, select a new transition.

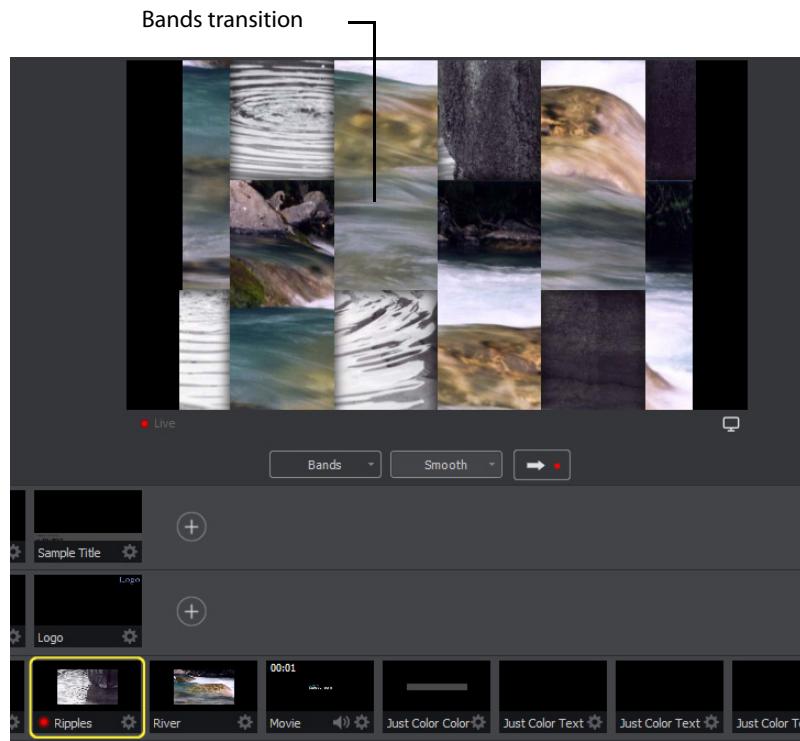
to be assigned to that button. You can also click the transition button itself and drag the mouse downward until the menu of selections is displayed.



For example, to change the left transition button from *Cut* to *Bands*, click the *Cut* button and drag downward until the menu appears. Select *Bands* from the menu. *Bands* should now be displayed as the left button.



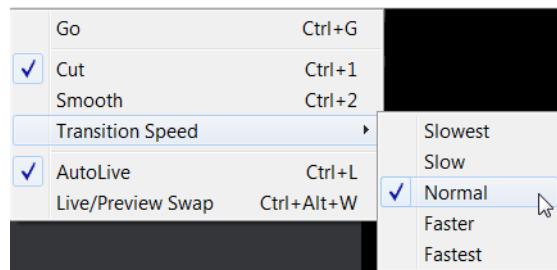
Now click back and forth between the River and Ripples shots using Bands (Bands button selected).



These two transition buttons can also be selected by using the following key combinations: Command+1 and Command+2.

## Transition Speed

You can also control how fast a transition occurs, by selecting *Switch > Transition Speed*. Your choices range from *Slowest* to *Fastest*.



## Go Button

The Go Button (or Command+G) enables you to make a transition.



Clicking the Go button does nothing when Wirecast One is in AutoLive mode. The only exception is that it will update a live shot if you have made changes to it using the Shot Editor. Later in this tutorial you will discover how to use the Go button to transition between different shots when AutoLive is off.

## Layers

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**Note:** Before you start this section, please select Smooth as your transition.

---

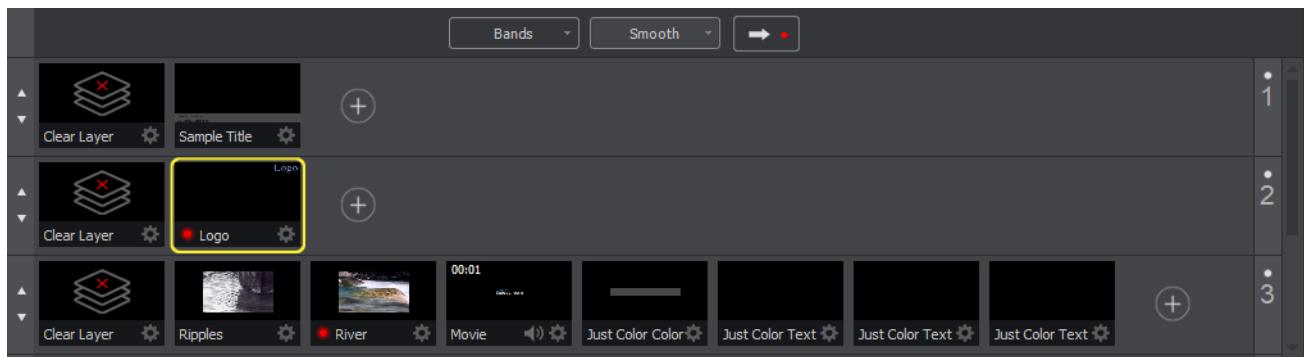
Wirecast One enables you display several shots in the Preview and Live windows at the same time by rendering them one on top of another according to Wirecast One's Layer system. This is an excellent way to add and remove objects in your broadcast.

Wirecast One displays five layers in the Main Shot List window. They are numbered 1 through 5 along the right side of the window. Each layer contains shots that can be selected by clicking a shot. A red LED indicates that a shot is selected. When a shot is selected it is displayed in the Live Broadcast window. If you select multiple shots (by selecting a shot on more than one layer) they will all be displayed in the Live Broadcast window. The shots are displayed in a layering manner, where layer 1 is on top and layer 5 is at the bottom (and layers 2 through 4 are layered in between).

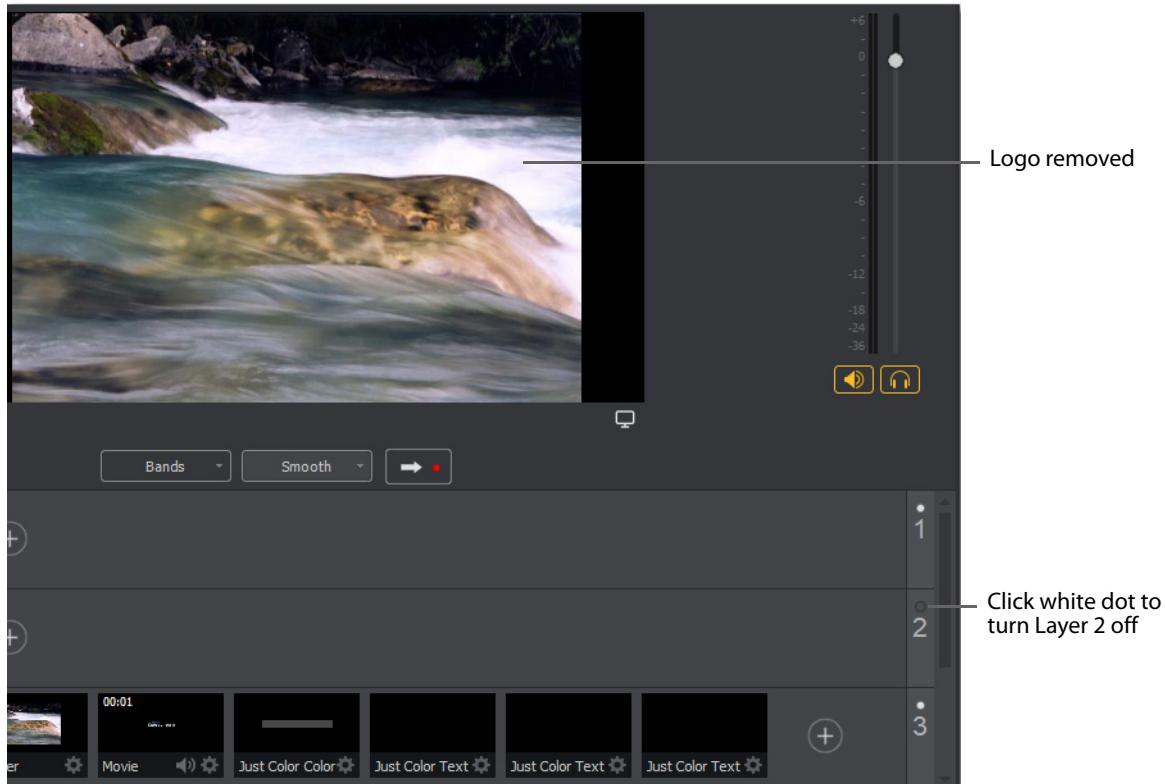
Select the Logo shot in layer 2 and the River shot in layer 3. The result is a layered shot containing both images.



Layers are displayed in a particular order: Layer 1 is on top, Layer 2 below it, Layer 3 below Layer 2, etc. This tutorial, so far, has been operating on Layers 2 and 3. Clear Layer, Ripples, River shots (and more) are on Layer 3, but Layer 2 has only a logo and a Clear Layer shot.



Each layer can be turned on or off by clicking the white LED light on the far right side of the layer window. Click the Layer 2 LED to remove the Logo shot.



Click the LED again to turn Layer 2 back on and restore the Logo image.

## Auto Live

So far in this Tutorial, Wirecast One has been running in AutoLive mode. This means that any selection you make in the Shot List is automatically placed into your Live Broadcast window. This mode is very useful for those users who want to set up all of their shots at once and then single-click them as they run their presentation. But the disadvantage of this single-click method is that you can only see one shot change at a time. Once you click a shot, your viewers also see it (with no preview for you of how it looks before broadcasting the new shot).

### Turn AutoLive Off

An red LED, next to the Go button is lit when you are in AutoLive mode.



For this tutorial, make sure AutoLive is off by un-checking *AutoLive* in the Switch menu. When you do this a dialog box is displayed informing you that AutoLive is off and transitions must be made using the Go button. Click *OK* in the dialog box to continue.

Try clicking the Ripples and River shots, and notice that nothing happens in the Live Broadcast window because AutoLive is turned off. Now click the Ripples shot and then click the Go Button. The Ripples shot is immediately placed into the Live Broadcast window. Click the River shot and, as expected, nothing happens. Click the Go button and the River shot replaces the Ripples shot in the Live Broadcast window.

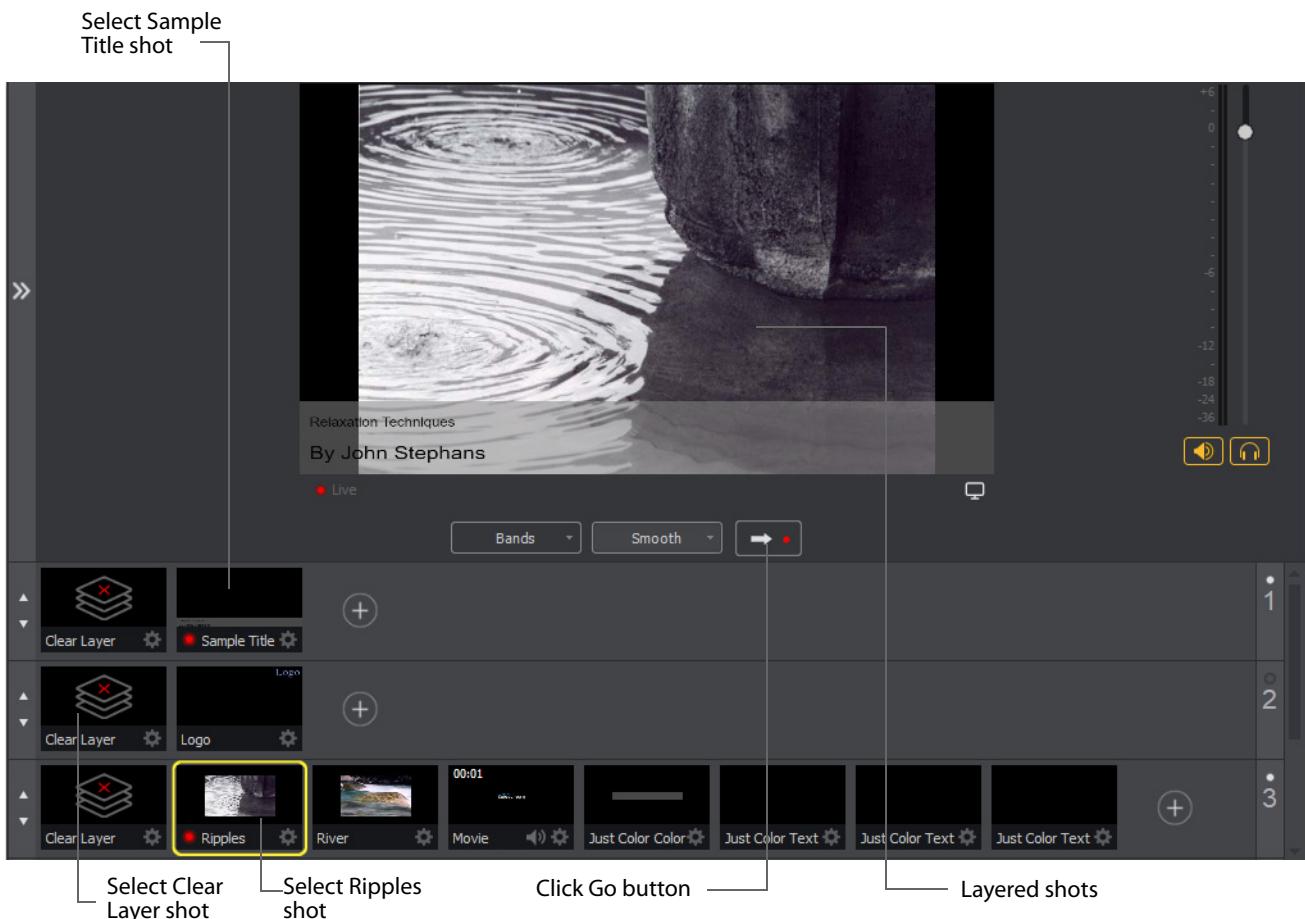
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**Note:** When AutoLive is off, you must always click the Go button (or press the Command+G keys) to display the selected shot in the Live Broadcast Area.

---

## Multiple Changes

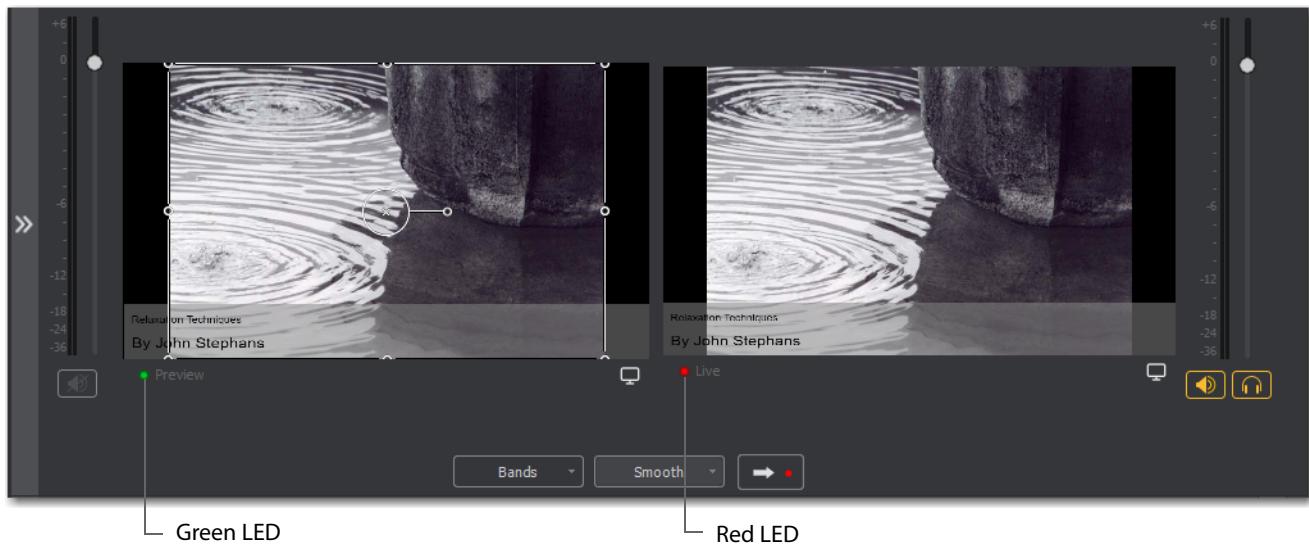
The benefit of having AutoLive off is that you can make several changes to your shot first, and then have all changes placed into the Live Broadcast window at the same time. To do this, first verify that AutoLive is off. Click *Sample Title* in layer 1, click *Clear Layer Shot* in Layer 2, and then click the *Ripples* Shot in Layer 3. Click the Go button (or Command+G) to make the *Ripples* and *Sample Title* shots live at the same time.



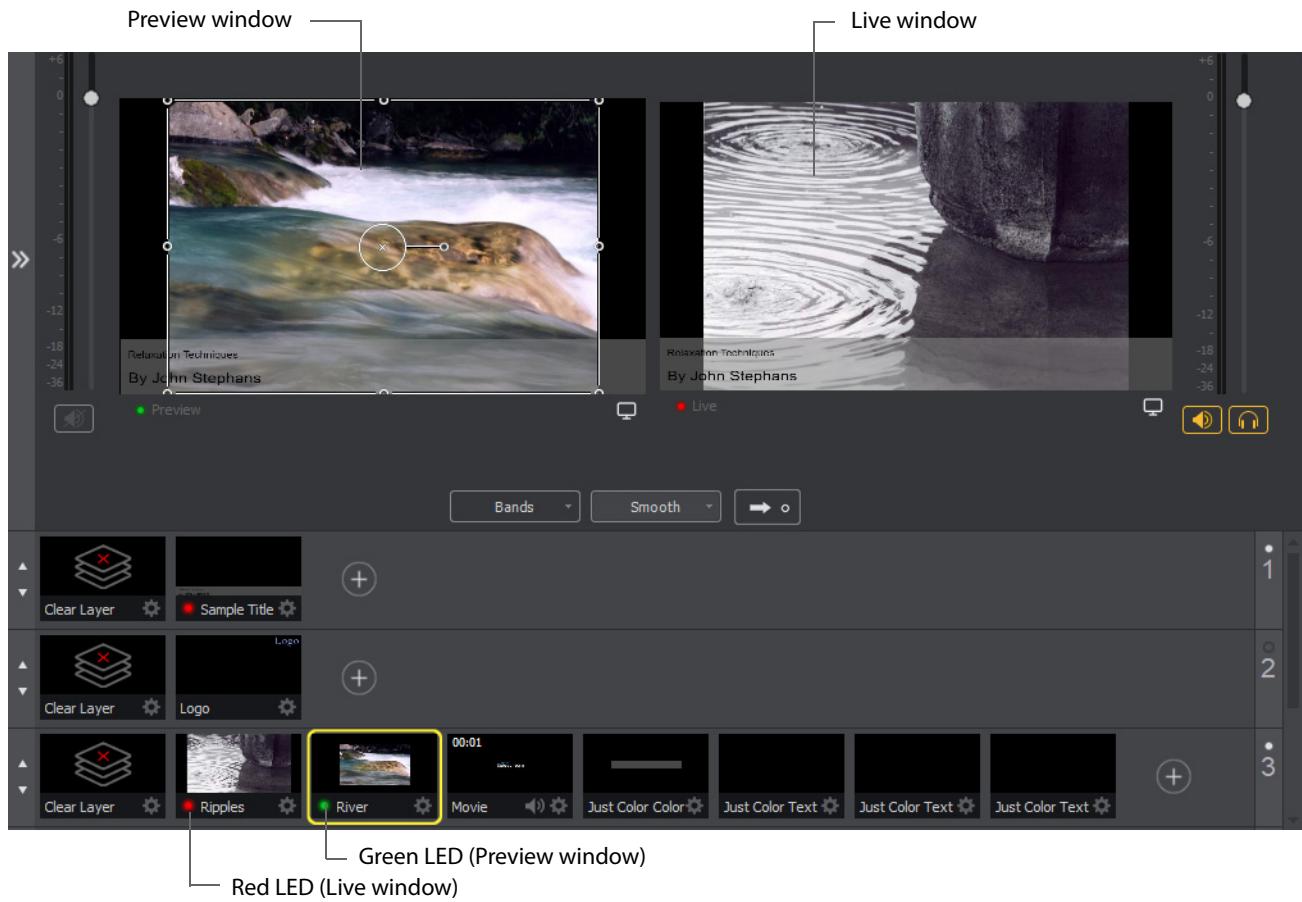
## Preview

One problem you may have noticed while running this tutorial is that you cannot see the changes you are making before broadcasting them. To solve this problem, Wirecast One enables you to see a preview of what you broadcast.

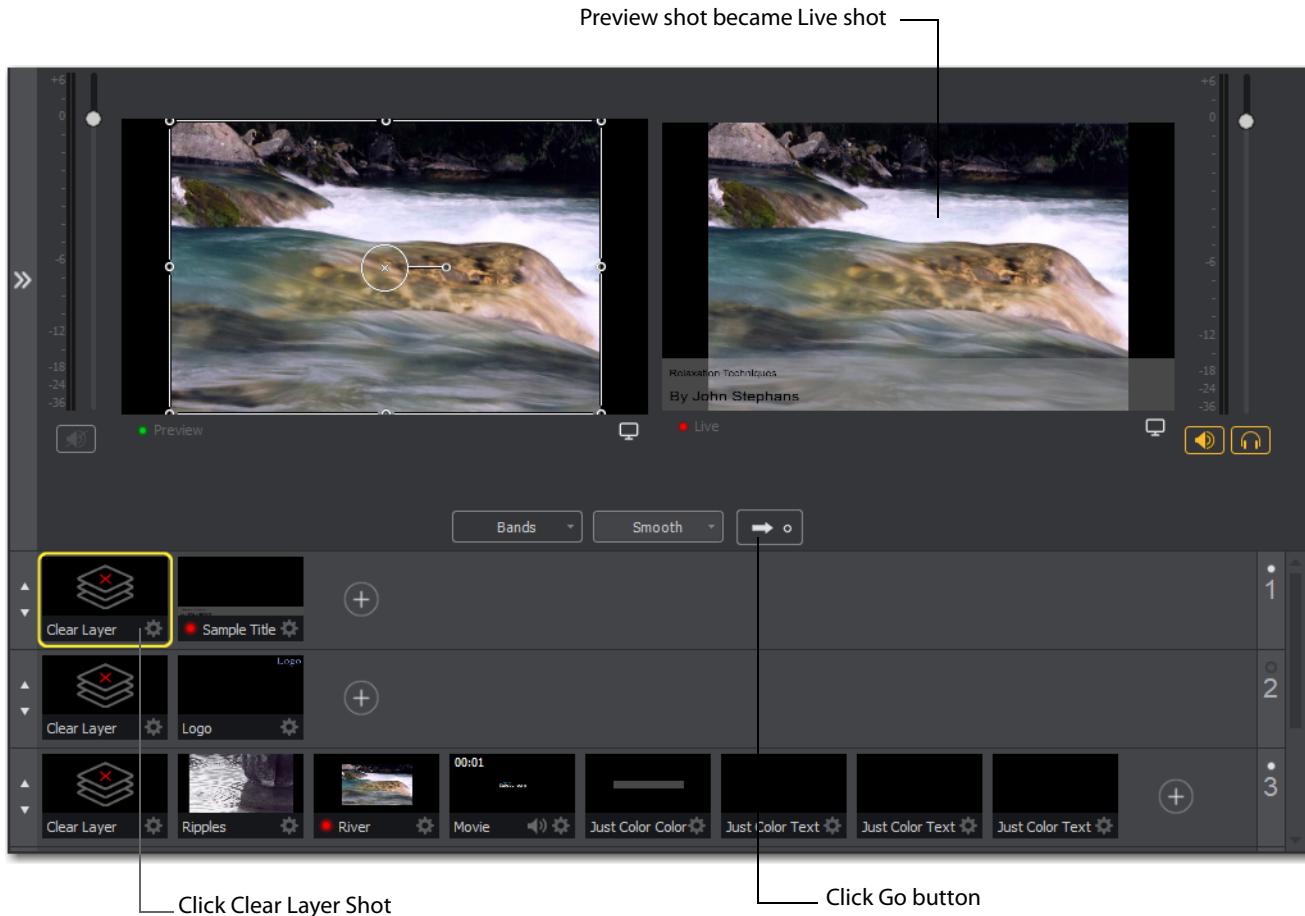
Select *Layout > Show Live and Preview* from the Main menu. A preview window is displayed to the left of the Live Broadcast window. The Preview window uses a green LED to identify it. The Live Broadcast window uses a red LED to identify it. These two colors (green and red) are also used to identify which shots are associated with the Preview or Live windows.



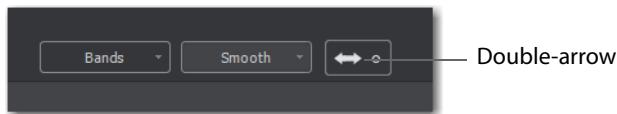
Click the River shot on Layer 3. The River shot is displayed in the Preview window. When shots are selected they display a green or red LED to indicate selection for Preview or Live windows.



Now click the Go button to place the River shot into the Live window. Click the Clear Layer shot in Layer 1 to remove the title from the River shot in the Preview window.

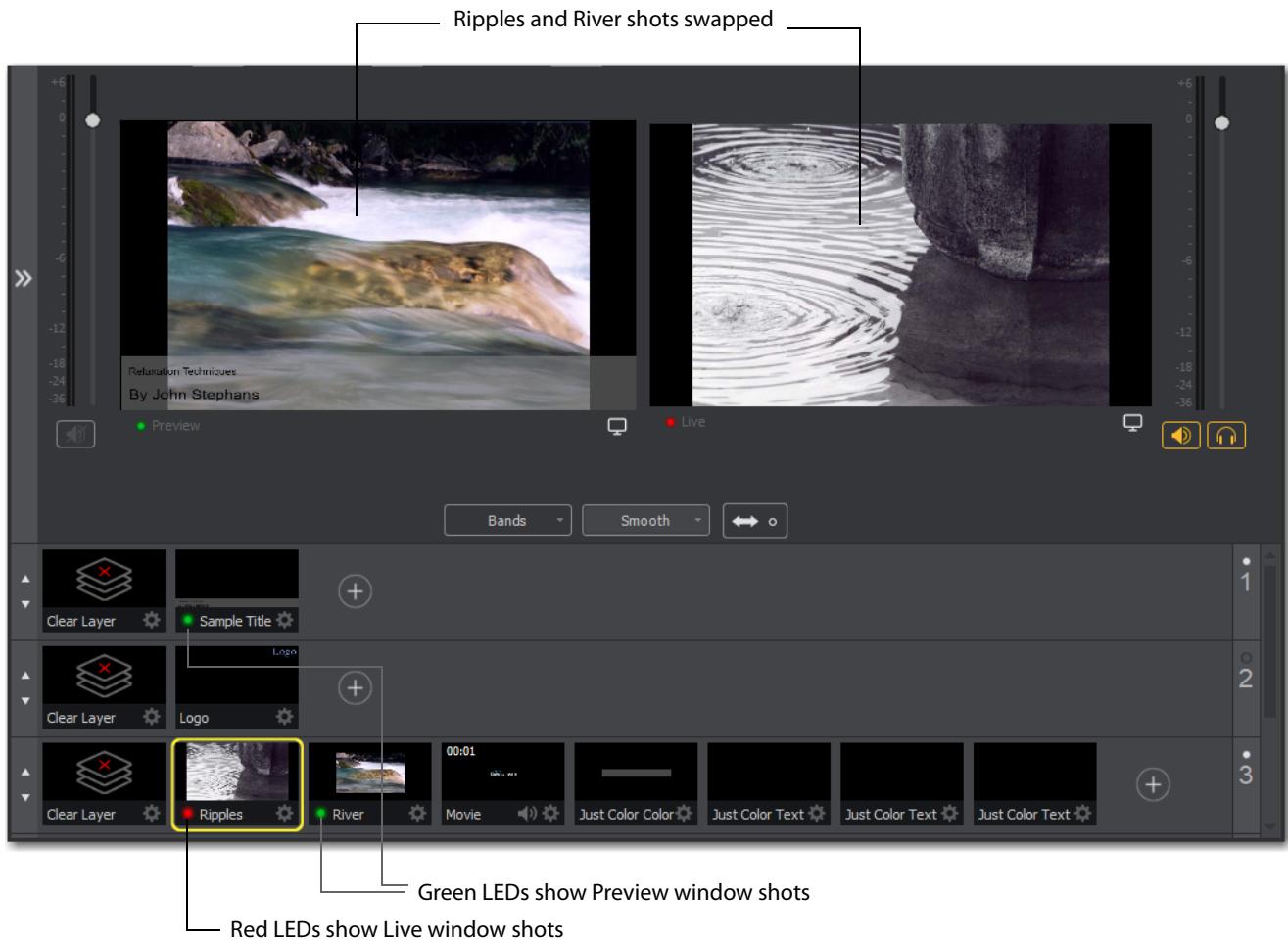


Turn on the Live/Preview Swap option by selecting Switch > Live/Preview Swap (check mark displayed). Notice that the Go Button displays a double-arrow, indicating that the Live/Preview Swap option is on.



Select the Ripples shot and click the Go button to place the Ripples Shot into the Live window. Notice that the Ripples and River shots have swapped (between Preview and Live windows). The shot LED's have also changed color. The green shot LEDs indicate all shots included in the Preview window and the red LEDs indicate the shots included in

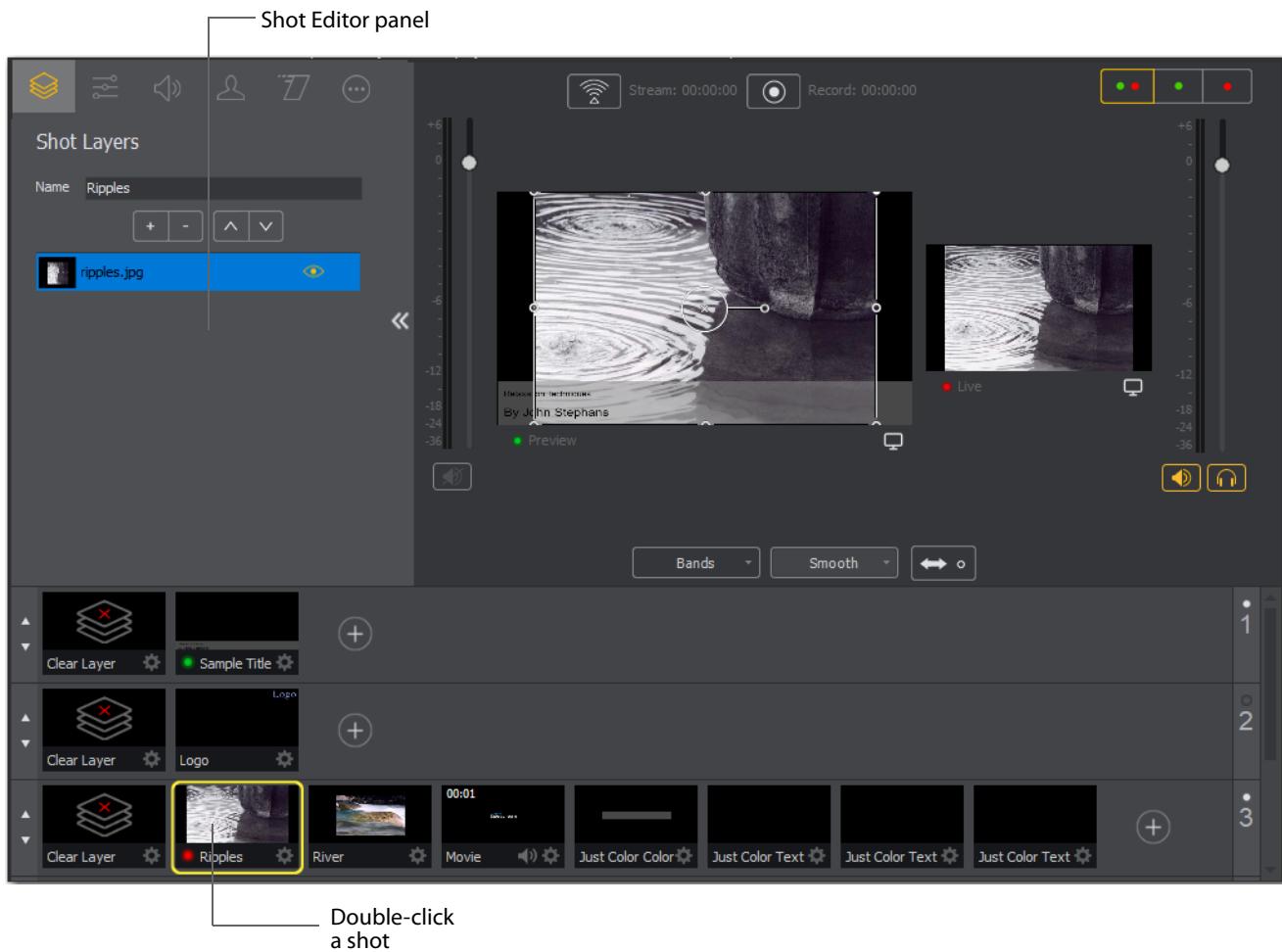
the Live window. This lets you know what your last Live window looked like as you prepare your next shot in the Preview window.



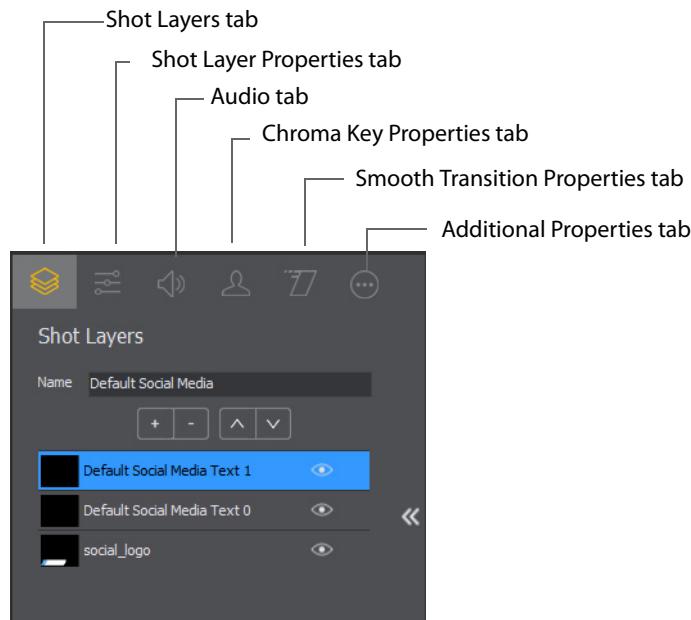
## Tutorial 2: Editing Shots

The first tutorial used only the Main window, and explained various ways in which you can use an existing shot. But shots can also be created and edited. This tutorial demonstrates how to edit your shots.

To edit a shot, double-click its icon in the Shot List. This opens the Shot Editor panel.



The shot editor has six tabs: Shot Layers, Shot Layer Properties, Audio, Chroma Key Properties, Smooth Transition Properties, and Additional Properties.



**Shot Properties** Enables you to add and delete sources and change the display order (change layering within the shot).

**Shot Layer Properties** Enables you to change the size, position, and other properties of a shot source.

**Audio Properties** Enables you to set audio levels and other controls. You can also monitor audio levels.

**Chroma Key Properties** If a source in your shot uses a chroma key, this tab enables you to configure the chroma key settings. Each source in a shot can have its own chroma key settings.

**Additional Properties** Enables you to set any additional properties for a source in your shot: System Device properties, Screen Display properties, Twitch Widgets (Chat and Followers), etc.

See [Shot Editor](#) for details on how to use the Shot Editor.

# Tutorial 3: Broadcasting

This tutorial demonstrates how to setup and broadcast your Wirecast One presentations. You can broadcast to a specific computer (Unicast), multiple viewers (Multicast), or even record your broadcast to disk.

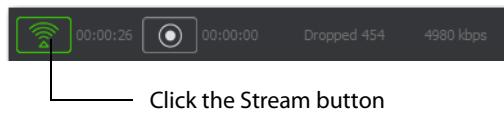
There are two main components for broadcasting your presentation (or saving it to disk): Encoding and Selecting a Destination.

You need to decide how you are going to encode your broadcast. Encoding is the type of compression used (JPEG, MPEG4, etc.). Wirecast One comes configured with many common encoding options. (See [The Encoder Presets Window](#) for details.).

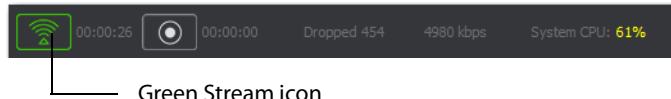
A destination for the broadcast must be selected. You can send it to a server for broadcast or save it to disk.

## Streaming

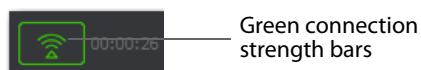
Click the *Stream* button to start streaming.



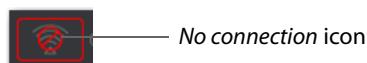
The Stream icon will blink until a connection is made. Once you are connected the Stream icon turns green. If you cannot connect an error message will display.



Connection strength is indicated by how many bars are displayed in the Stream icon. Fewer bars indicates a weaker (slower) connection.

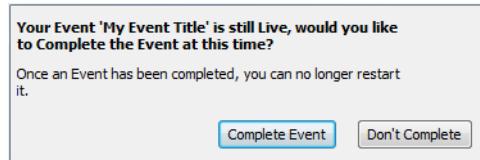


If the connection is ever broken, a *no connection* icon is displayed in place of the bars.

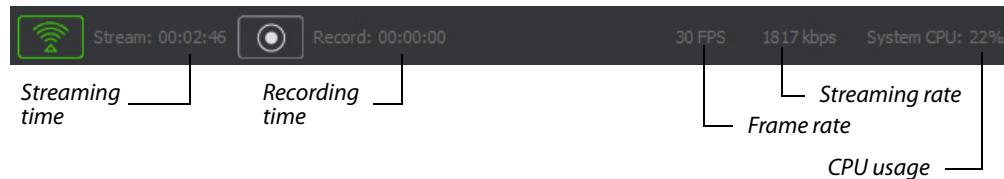


When the connection recovered, the *no connection* icon is replaced with the green bars.

Click *Stream* again to stop streaming. You can also record your broadcast by clicking *Record*. When you stop streaming, if you.



While streaming, status is displayed.



If you are streaming to Facebook, additional status is displayed on the right side of the status bar.



If you are streaming via the Cloud, additional status is displayed on the right side of the status bar.



## Telestream Cloud Settings

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**Note:** Cloud-based streaming and distribution is available in Wirecast One for an additional monthly subscription. Visit the Telestream website for more information.

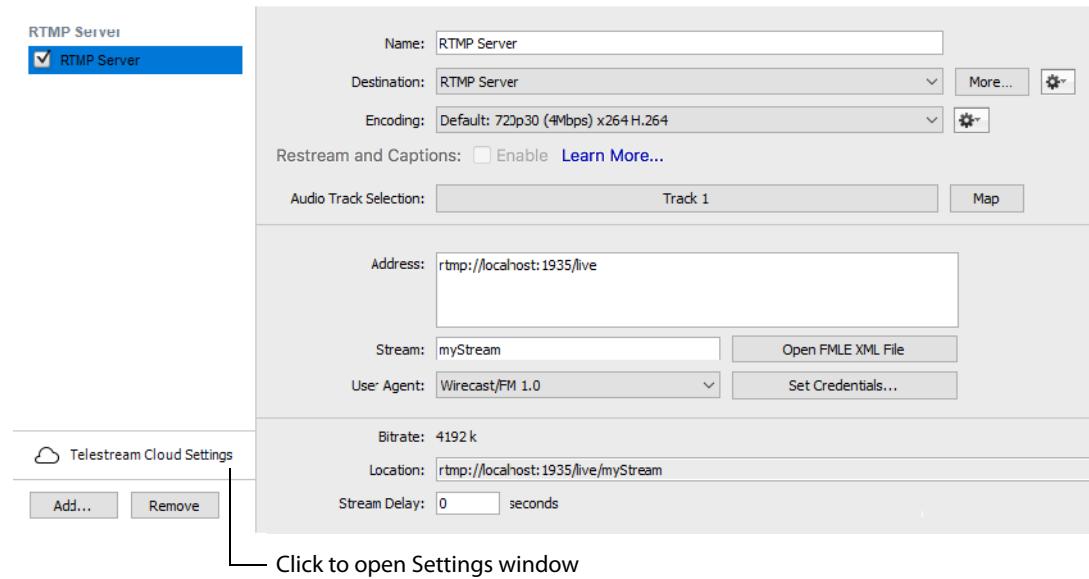
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The Telestream Cloud enables you to add automated live captioning to your broadcast. But it also allows you to do “re-streaming” (multi-distribution of your broadcast through the Cloud).

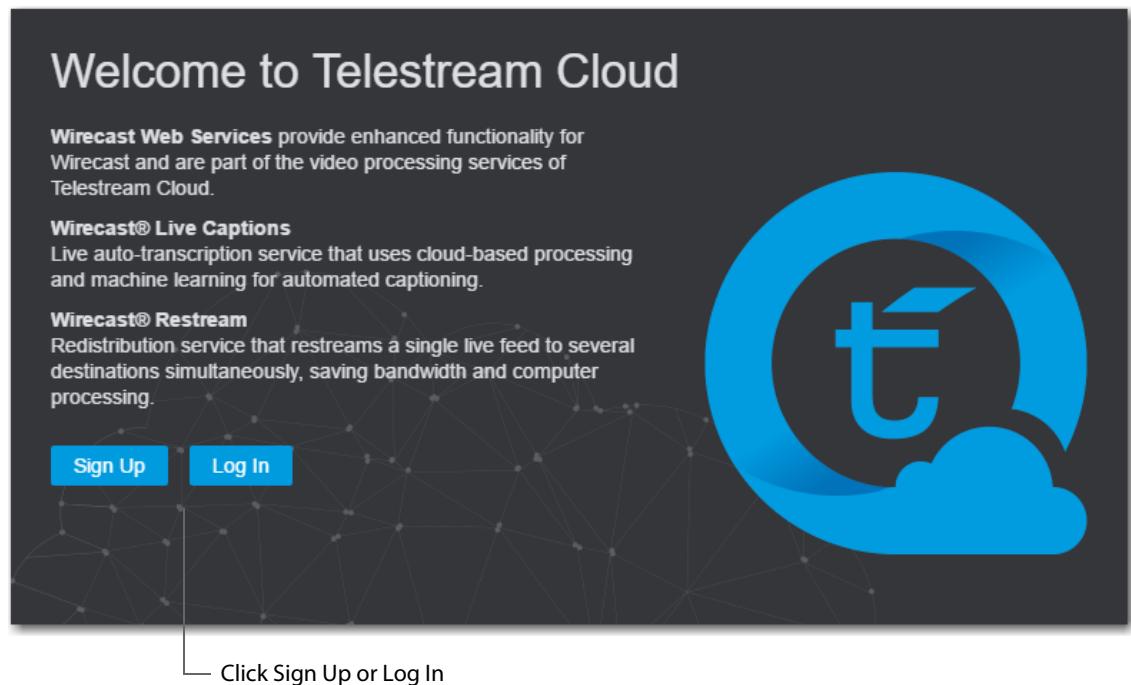
When you request automated captioning, the Cloud server will send out the audio portion of your broadcast for translation into text. When the text is received, it is embedded as 608/708 captions in the outgoing stream.

When you request stream redistribution, the Cloud takes your single stream source received from Wirecast One and distributes it to multiple endpoints in a high bandwidth environment.

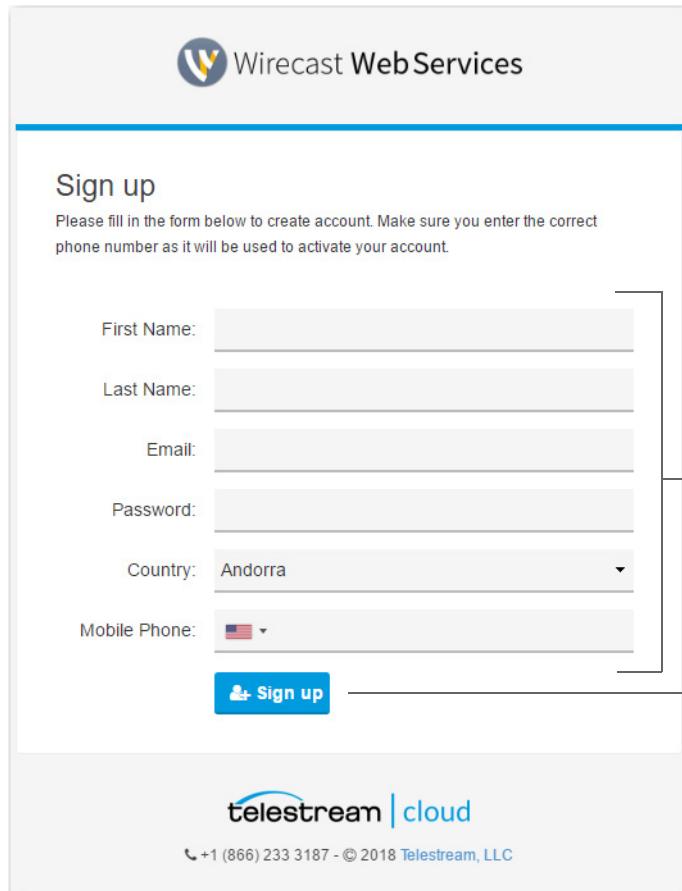
Cloud settings are accessed on the Output Settings window (*Output > Output Settings*). Click *Telestream Cloud Settings* to open the Cloud Settings window.



If you are not already Logged In to the Cloud, a Welcome window will display. Log in by clicking *Log In*. If you are not Signed Up with Telestream Cloud, you can do so by clicking *Sign up*.



If you click Sign Up, a sign up window will display. Enter all requested information and click Sign Up.



The image shows a screenshot of the Wirecast WebServices sign-up page. At the top, there's a logo with a stylized 'W' and the text 'Wirecast WebServices'. Below that, a heading says 'Sign up' followed by a sub-instruction: 'Please fill in the form below to create account. Make sure you enter the correct phone number as it will be used to activate your account.' The form contains six input fields: 'First Name:' (text input), 'Last Name:' (text input), 'Email:' (text input), 'Password:' (text input), 'Country:' (dropdown menu set to 'Andorra'), and 'Mobile Phone:' (text input with a dropdown arrow). Below the form is a blue button labeled 'Sign up' with a small user icon. At the bottom of the page, there's a footer with the 'telestream | cloud' logo and the text '+1 (866) 233 3187 - © 2018 Telestream, LLC'.

First Name: \_\_\_\_\_

Last Name: \_\_\_\_\_

Email: \_\_\_\_\_

Password: \_\_\_\_\_

Country: Andorra

Mobile Phone: \_\_\_\_\_

**Sign up**

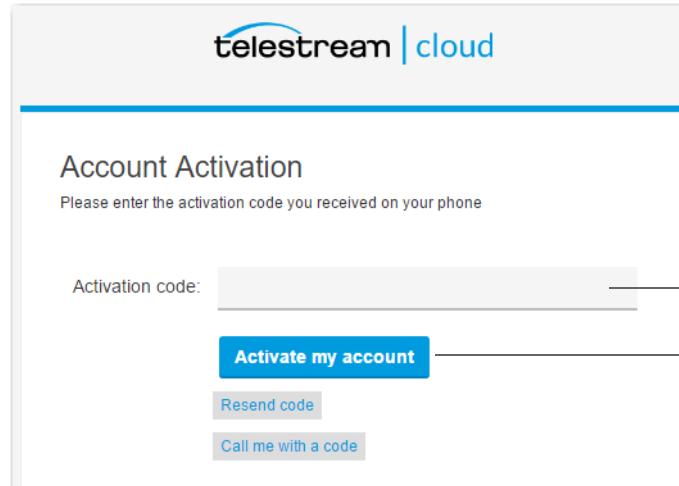
telestream | cloud  
+1 (866) 233 3187 - © 2018 Telestream, LLC

Enter information

Click Sign Up

When the Activate Account window displays, wait until you receive your Activation Code via phone call or text. Enter the activation code and click *Activate my account*. If

you do not receive an activation code, or if the code does not work, request a new one by clicking *Resend Code*.



Once you are logged in, clicking the *Telestream Cloud Settings* button will open the Cloud Settings window.

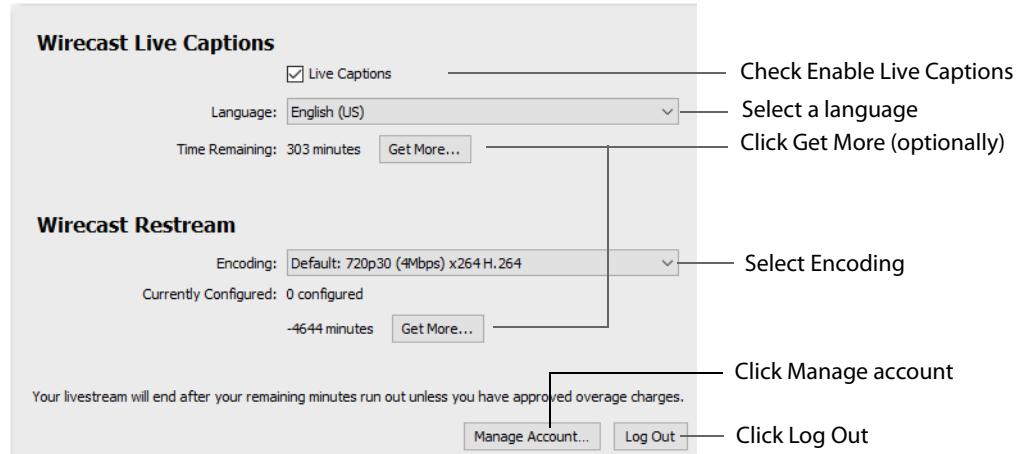
For captioning, select a language. You can, optionally, enable live captioning.

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**Note:** When you check this option, *all* of your streaming destinations via the Cloud will include automatic live captions.

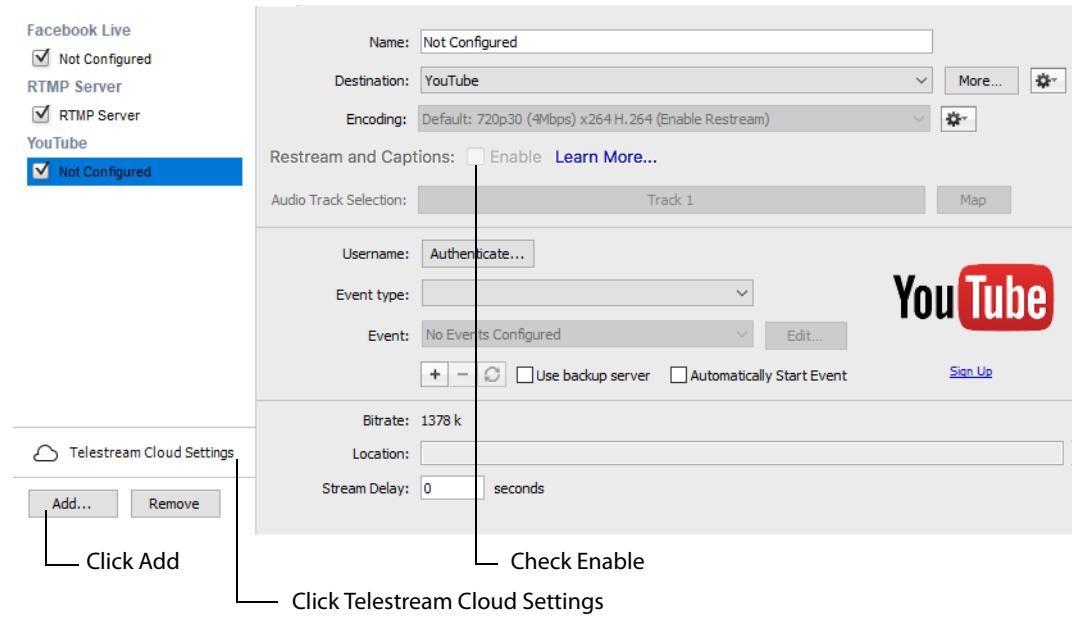
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For re-streaming, select Encoding for all destinations that are re-streamed via the Cloud. Click the *Get More* or the *Manage Account* button to navigate to the Telestream Cloud Dashboard.



When you are ready to select multiple streaming destinations to be used by the Cloud, open the Output Settings window (*Output > Output Settings*) and select multiple streaming destinations by clicking the *Add* button. Check *Enable* for all destinations to

be included in the Cloud streaming distribution. Click *Telestream Cloud Settings* to open the Cloud Settings window.



---

**Note:** When *Enable* is checked, *Encoding* is grayed-out. This is because encoding for all distributed streams is set on the Cloud Settings page.

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# Main Window

## Introduction

This section describes in detail how to use Wirecast One's main window.

## Topics

- [\*Overview\*](#)
- [\*Control/Status Bar\*](#)
- [\*Preview/Live Broadcast Area\*](#)
- [\*Countdown Clock Display\*](#)
- [\*Transition Controls\*](#)
- [\*Add Shot Menu\*](#)
- [\*Shot Selection Area\*](#)
- [\*Layers\*](#)
- [\*AutoLive\*](#)
- [\*Live Icons\*](#)

## Overview

Wirecast One's main window is comprised of these display areas:

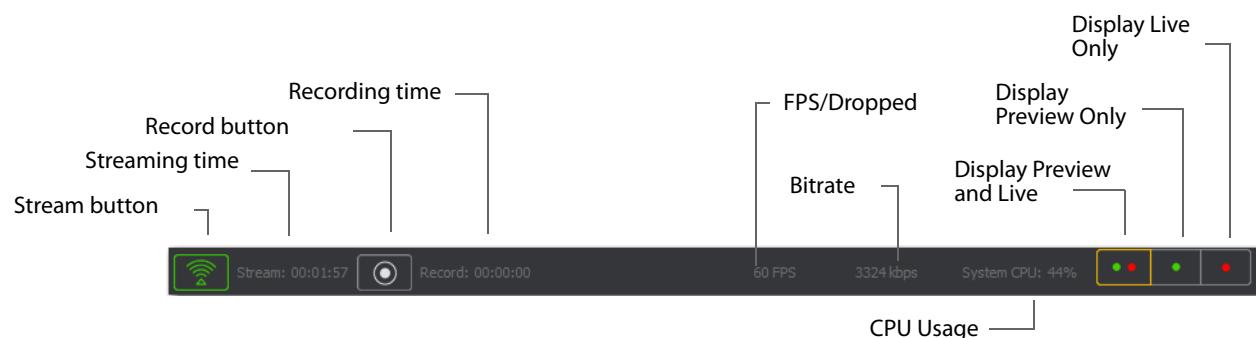
- **Controls/Status Area** The top area with the Stream and Record buttons.
- **Preview/Live Broadcast Area** The large area in the center.
- **Transition Controls** The area with the Transition (Cut and Smooth) and Go buttons.

- **Shot Selection Area** The area displaying the shot icons (available shots).



## Control/Status Bar

Control buttons and status information are displayed at the top of the Main window.



Wirecast One displays the following controls and statistics:

- **Stream button** Click to begin streaming.
- **Streaming time** This displays how long you have been streaming. This value does not reset when you start/stop the broadcast. It is cumulative. This enables you to save portions of a broadcast to disk and still know the total amount of time.

- **Record Button** Click to begin recording.
- **Recording Time** This displays how long you have been recording. This value does not reset when you start/stop the broadcast. It is cumulative.
- **FPS/Dropped** Displays the current FPS rate or the number of frames dropped while streaming. Click on display to toggle between FPS and Dropped. (Displayed only while streaming.)
- **Bitrate** Displays the streaming bitrate. (Displayed only while streaming.)
- **CPU Usage** Displays the usage of the CPU in percent. (Displayed only while streaming.)
- **Display Buttons** These three buttons enable you to choose to display the Preview window, the Live window, or both in a divided display.

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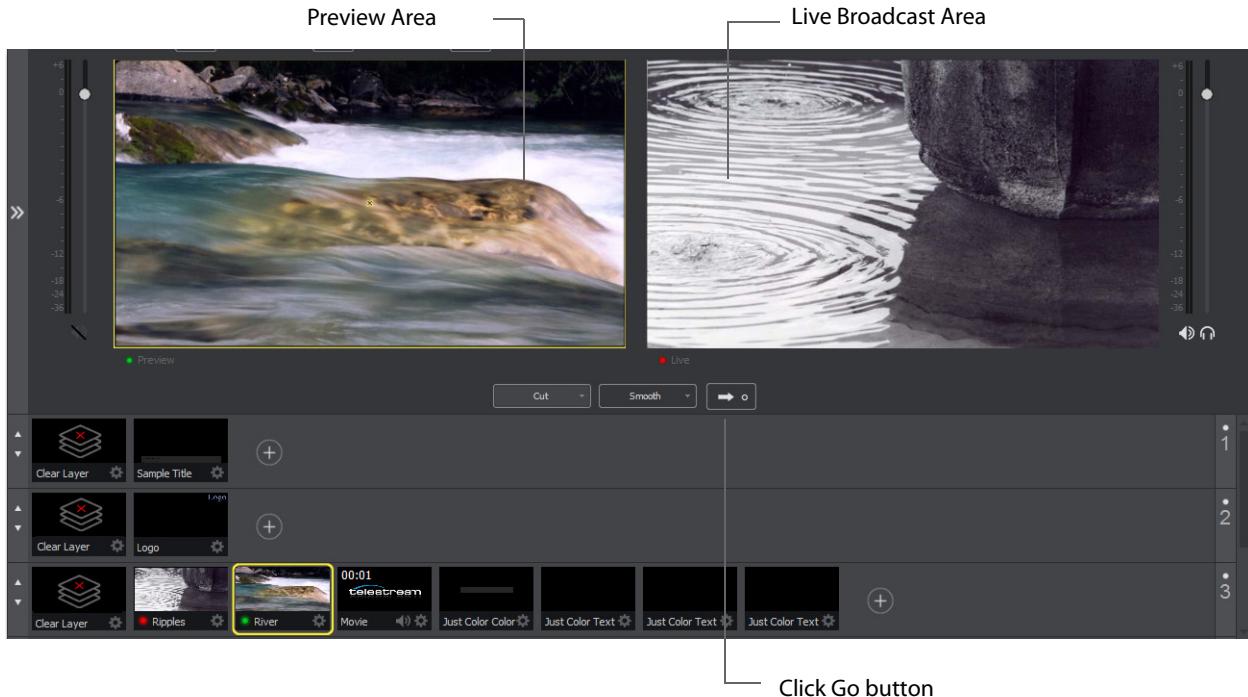
**Note:** To avoid decrease in video quality, Wirecast One should not be used at CPU usage above 80%. See the Telestream Website for suggested configurations.

---

## Preview/Live Broadcast Area

When you open a new document, the Live area shows what is broadcast to your viewers before the encoding or compression. When AutoLive is off, you can make several changes without your viewers seeing the change. This is most useful when you are using an engineer to run your broadcast. When you are making changes to your broadcast, you may want to see those changes before broadcasting them. Preview allows you to do this.

To see the preview, select *Preview* from the Layout menu. This sets up the Main Window with the Preview Area on the left and the Live Broadcast Area on the right. Clicking the Go button makes the preview shot become Live.



## Countdown Clock Display

The Main window displays a countdown clock whenever a video shot is playing. If you have multiple video shots playing, click the gear menu icon to select which shot will be associated with the countdown clock.



# Transition Controls

The transition area is in the middle of the Main Window:



There are two Transition buttons, but each can be configured to present one of many possible transition types. In the image above, the two configured transitions are: Cut and Smooth. Since Smooth is selected (button darkened), any transition executed by clicking Go is a smooth transition.

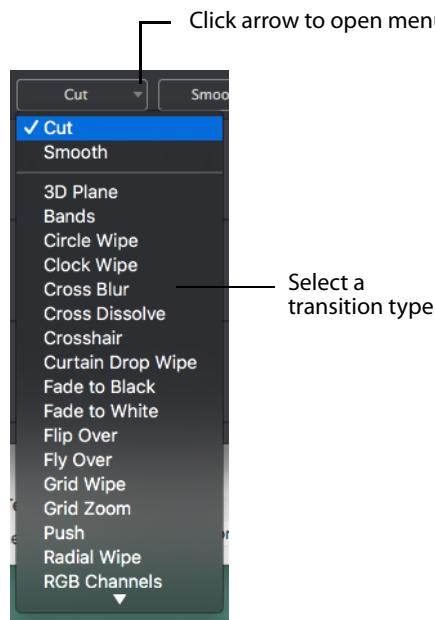
## Changing Transitions

If you click the Cut button, it becomes selected and making it the current transition type:



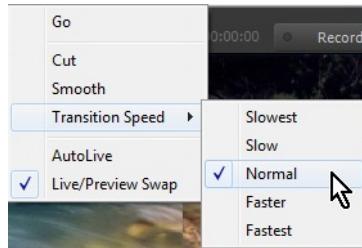
You always have two different transition types available. You can also select one of the two buttons by pressing Command+1 or 2 keys for the two transition types displayed.

If you click the down-arrow on the right side of either transition button, you can select a new transition to assign to that button.



## Transition Speed

The transition speed is set by selecting *Switch > Transition Speed*. There are five settings: Slowest, Slow, Normal, Faster, and Fastest.



## Go Button

The Go Button (or Command+G) enables you to make a transition occur at any time.



Clicking the Go button does nothing when Wirecast One is in AutoLive mode, except to update a live shot if you have made changes to it using the Shot Editor.

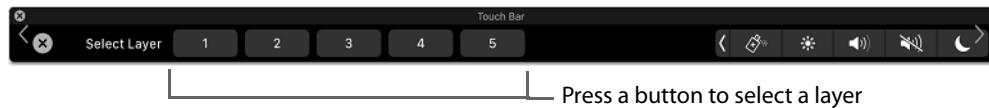
## Touch Bar (MacBook Pro only)

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**Note:** Touch bar shot switching is only available when using a MacBook Pro equipped with a Touch Bar.

---

The Touch Bar switcher will appear every time a Wirecast One document is the front-most window. If another window is front-most, the Touch Bar will be removed. Press a layer button to select any of the five shot layers.



The Touch Bar displays one layer at a time. The layer selection button display the layer number. You can change layers by pressing this button. The shot buttons correspond to every shot on the selected layer. The Go button is identical the one in the WC main window. When you change the Live/Perview Swap state, the Go button will update to reflect the new mode. If Auto-live is enabled, the Go button will be removed from the Touch Bar.



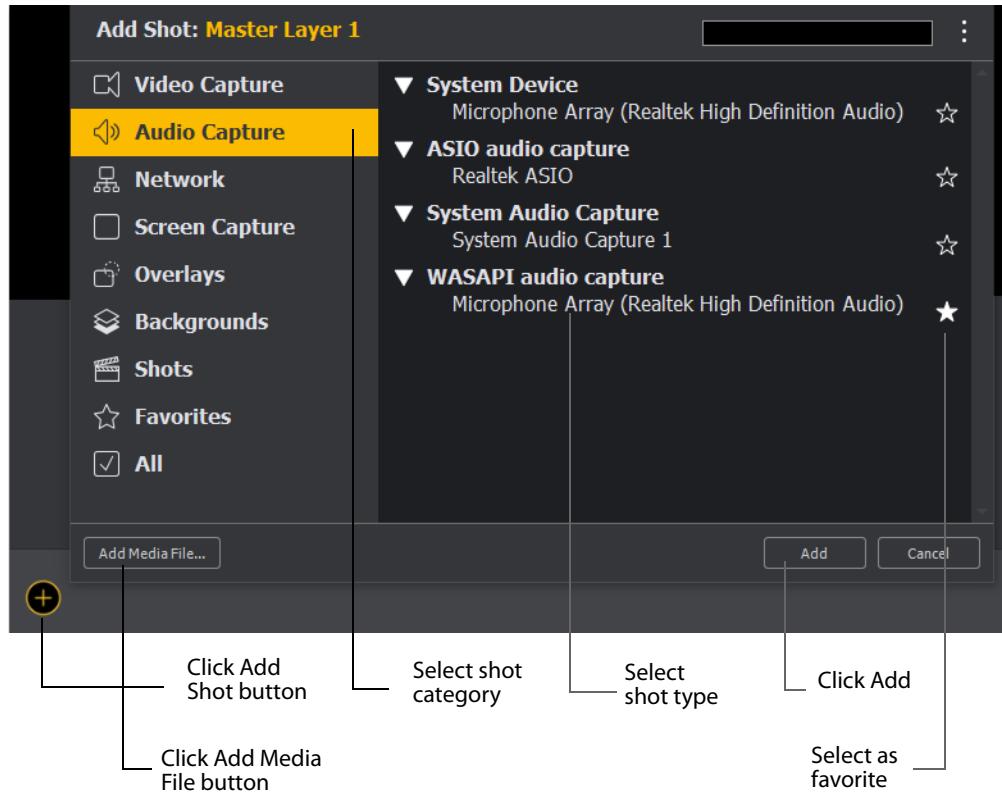
All buttons have a fixed width and their title will clip if longer than the default space allowed. This guarantees you to always have a fixed-size touch target. The shot buttons will display a *green* LED if they are currently in the Preview window, and they will display *red* if in the Live Broadcast window. If the LED is not lit, the shot is in neither window. This mirrors the behavior of the shot list in the main Wirecast One user interface. If there are more shot buttons than horizontal space allows, the shot area in the Touch Bar becomes scrollable.

## Add Shot Menu

The Add Shot menu provides a way to add live sources, file sources, shot graphics, shot audio, and shot templates, etc. Click the Plus Button (+) to open the Add Shot menu.

When the Add Shot menu displays, select a shot category, select the type of shot to add, then click the *Add* button. To add a media file, click the *Add Media File* button., navigate to a media file, click *Open*, then click the *Add* button.

To select a source as a *Favorite* (cause it to display in the Favorites menu) click the star icon to turn it white.



### Video Capture

- **System Device** Select a system device and click the *Add* button. (See [Capture Devices Properties](#)).

## Audio Capture

- **System Device** Select a system device and click the *Add* button. (See [Capture Devices Properties](#)).
- **ASIO Audio Capture** Select an ASIO audio capture device and click the *Add* button.
- **System Audio Capture** Select an audio capture device and click the *Add* button.
- **WASAPI Audio Capture** Select a WASAPI capture device and click the *Add* button.

## Media Files

- **Browse Disk** Select to navigate to a media file.

## Network

- **iOS Cam** Select an ISO Camera device and click the *Add* button.
- **Web Display** Creates a new Web Display shot. Select and click the *Add* button. (See [Web Page Properties](#)).
- **Web Stream** Creates a new Web Stream shot. Select and click the *Add* button. (See [Web Stream Properties](#)).

## Screen Capture

- **Screen Capture** Creates a new Screen Capture shot of any monitor or window on your computer. You can also capture your iPhone or iPad in Wirecast One by connecting your device using an Apple certified lightening cable, and then adding it as a source by selecting *Screen Capture* from the Source menu. Select and click the *Add* button. (See [Screen Capture Properties](#)).

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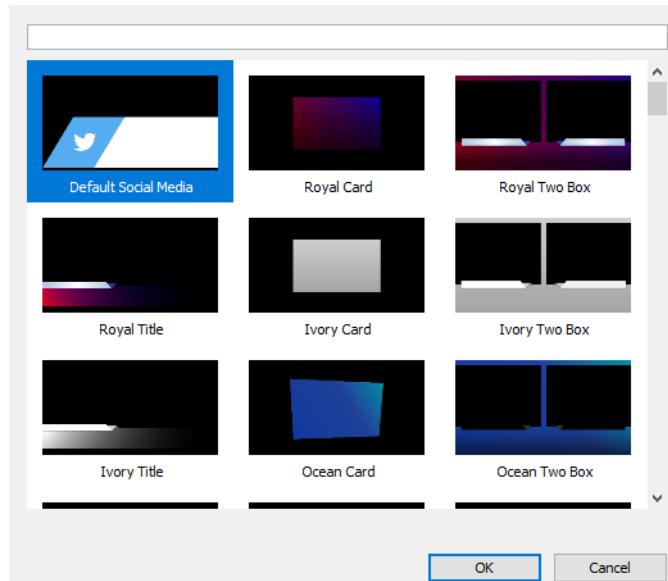
**Note:** Some apps when screen captured, take control of your mouse and the cursor is not displayed. You can, at any time, press command + Tab keys to reduce the capture window size and enable you to use your mouse. You must be using an iOS device running 8.x connected to your Mac OSX 10.10 Yosemite computer with a lightening cable. The cable should be Apple certified to guarantee proper detection. You will need to "trust" the computer in order for it to be detected.

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## Overlays

- **Clock** Creates a new Clock shot that displays time. Select and click the *Add* button. (See [Clock Properties](#)).
- **Image Carousel** Creates a new Image Carousel shot that shows a sequence of images. Select and click the *Add* button.(See [Image Carousel Properties](#)).
- **QR Code Generator** Creates a QR code display to present to your viewers in a live broadcast. (See [QR Code Generator Properties](#)).
- **Text** Creates a new Text shot. Select and click the *Add* button. (See [Text Shot Properties](#)).

- **Title** Creates a new Title shot. When the window of titles displays, select a title and click OK. Click the *Add* button when finished. (See *Titles Properties*).



- **Twitter Feed** Creates a Twitter Feed shot. Select and click the *Add* button. (See *Twitter Feed Properties*).

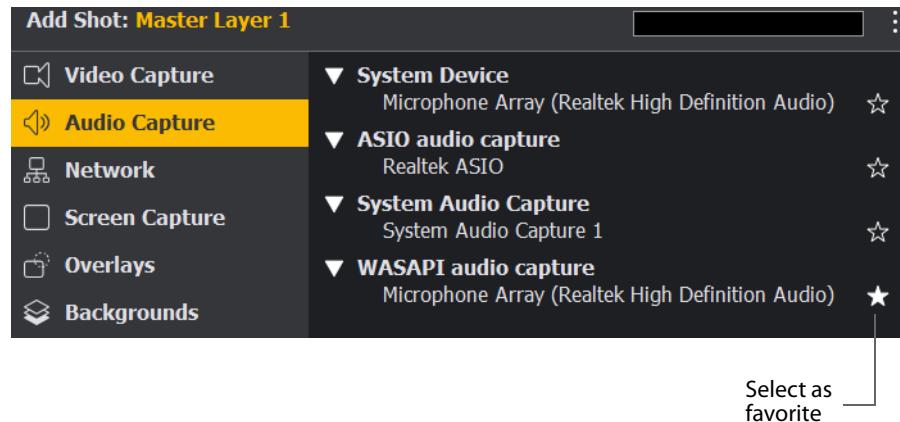
## Backgrounds

- **Web Page** Creates a new Web Display shot. Select and click the *Add* button. (See *Web Page Properties*).
- **Solid Color** Creates a new Solid Color shot. Select and click the *Add* button. (See *Solid Color Properties*).

## Shots

- **New Shot** Creates a new shot. Select and click the *Add* button.
- **New Shots From Clipboard** Creates a new shot that has been copied to the clipboard. This is how you duplicate a shot. Select and click the *Add* button.

**Favorites** Displays a list of shots that have been marked as a Favorite by clicking on the star on the right side of each shot in the Add Shot Menu.

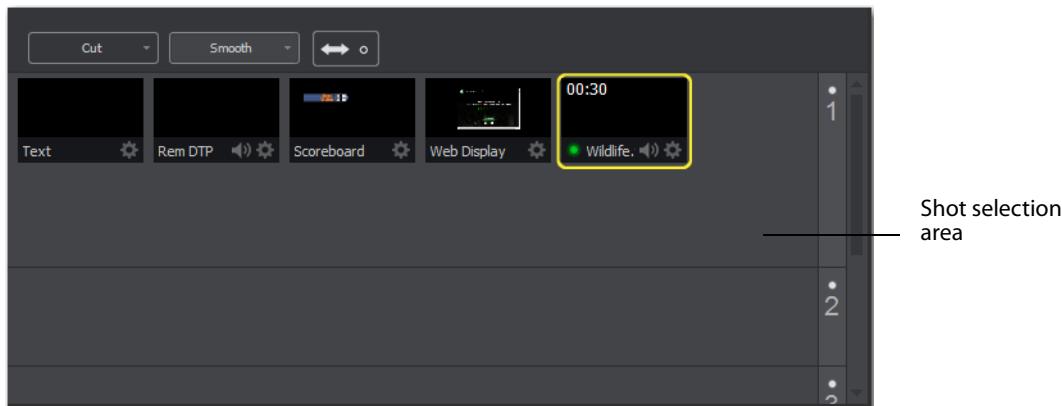


**All** Displays all sources in one list.

**Add Media File** Creates a Media File shot (video clip or picture). When selected, a navigation widow displays. Navigate to a media file location, select a media file, and click Open. (See *Media File Properties*).

## Shot Selection Area

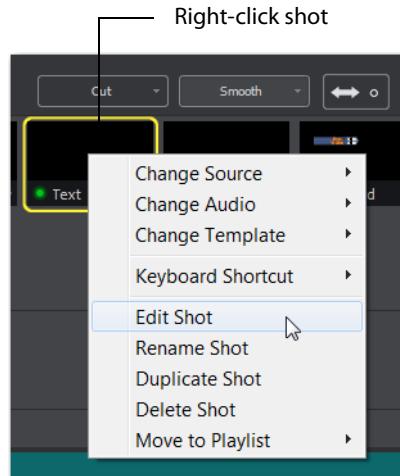
The bottom part of the Main Window contains the Shot Selection Area, also called the Shot List.



The shot icons can be made to display any live activity in the source it represents (cameras, streaming, etc.). See *Performance* in the Preferences section for turning on Live Icons.

## Changing Shots

Right-click on any shot to display the shot menu.

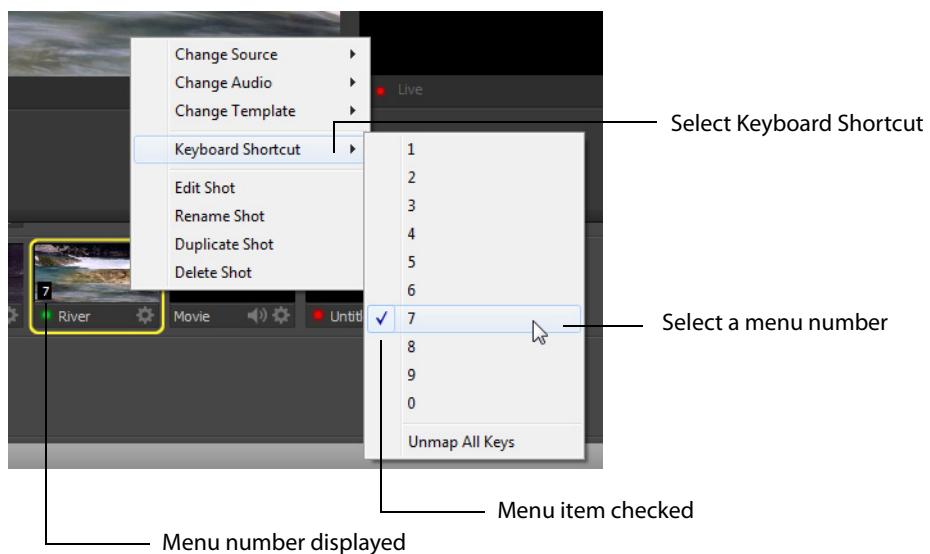


**Change Source** Select Change Source to change the source of your shot. Upon selection, a menu of sources will display enabling you to make a selection.

**Change Audio** Select Change Audio to change the audio of your shot. Upon selection, a menu of audio sources will display enabling you to make a selection.

**Change Template** Select Change Template to change the template of your shot. Upon selection, a menu of templates will display enabling you to make a selection.

**Keyboard Shortcut** You can create a keyboard shortcut to any shot. To do this, select Keyboard Shortcut, then select a menu number to associate with that shot. After you have selected a menu number, that menu item is checked and the number is displayed in the shot icon.



To take a shot using the assigned hotkey, press the number key assigned to that shot.

You can assign multiple shots to the same menu number as long as they are on different layers. When you use the assigned hotkey all the shots assigned to it will be taken. Selecting a checked menu item will uncheck it and unassign the shot.

Select *Unmap All Keys* to remove all hotkey assignments.

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**Note:** See also the section on [Hot Keys](#) for Hot Key management.

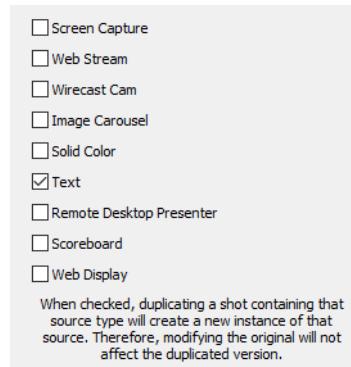
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**Edit Shot** You can edit a shot by clicking the double arrows (located on the left side of the Preview window) to the right, revealing the shot editing panel. You can also edit a shot by double-clicking on it, by right-clicking it and selecting Edit Shot, by selecting Edit Shot from the Edit menu, or by selecting it and pressing the Command+E keys.

**Rename Shot** You can rename a shot by right-clicking it and selecting Rename Shot, or by selecting Rename Shot from the Edit menu. You can also rename a shot by selecting it and pressing the Command+R keys.

**Duplicate Shot** You can duplicate a shot by right-clicking it and selecting Duplicate Shot, or by selecting Duplicate Shot from the Edit menu. You can also duplicate a shot by selecting it and pressing the Command+D keys.

**Duplicate Shot Options** Check a source to create a new instance of it when duplicating the shot containing it. Multiple selection is allowed.



**Delete Shot** You can delete a shot by right-clicking it and selecting Delete Shot, or by selecting Delete Shot from the Edit menu. You can also delete a shot by selecting it and pressing the Command+Backspace keys.

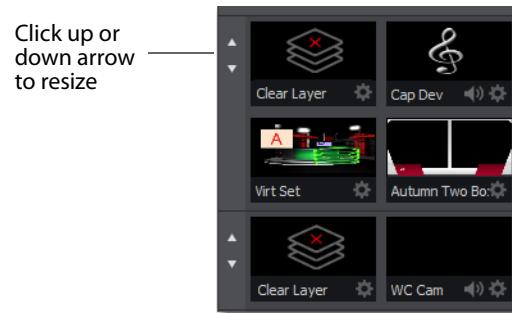
## Moving a Shot to Another Layer

You can move a selected shot to another layer by selecting *Move to Layer* from the Edit menu, then selecting the target layer from the drop-down menu. You can also move the cursor to the bottom of a shot icon (until the cursor becomes a hand), and then drag the shot icon to a different layer.

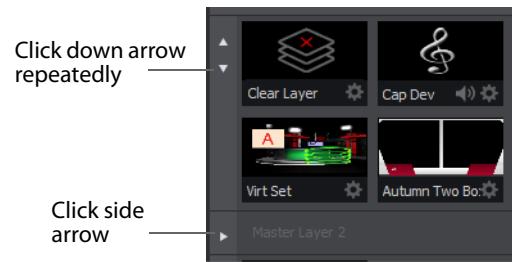
When shots are created, they are assigned to a specific layer. They exist on that layer until they are moved or deleted. (See [Layers](#).)

## Resizing the Shot Icons

You can resize the shot icons on any layer by clicking the up or down arrow on the left side of the layer window. Click the up arrow to make all the icons larger; click the down arrow to make them smaller. Clicking the down arrow when the shot icons are in their smallest state causes the layer window to become hidden.



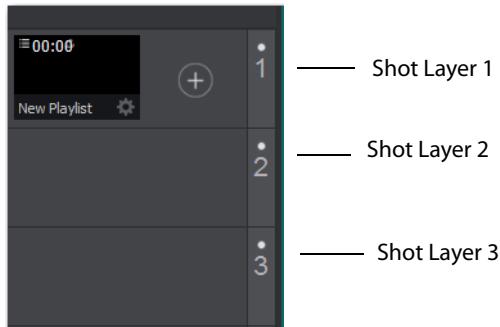
To show or hide a layer, click the down arrow until layer is hidden. To show a layer, click the side arrow that represents a hidden layer.



## Layers

Wirecast One allows you to put shots on any of three different layers. Layering shots enables Wirecast One to merge them together, from back (lowest layer) to front, to form a single visual image during broadcast.

When Wirecast One first opens, all of the three layers of shots are displayed. You must scroll down (or expand the window) to see the other layers.

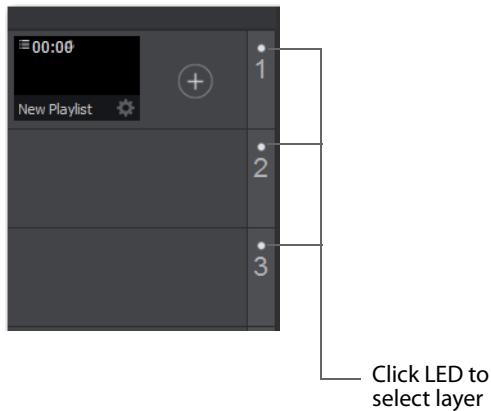


## What is a Layer?

Layers are, by default, named 1 through 3. Layers determine the order when presenting images in the Live Broadcast Area. The Bottom layer (3) is drawn first, then the other layers are added, in order, up to Layer 1. Using multiple layers is a powerful way to show a company logo, a background, or a title, independent from each other.

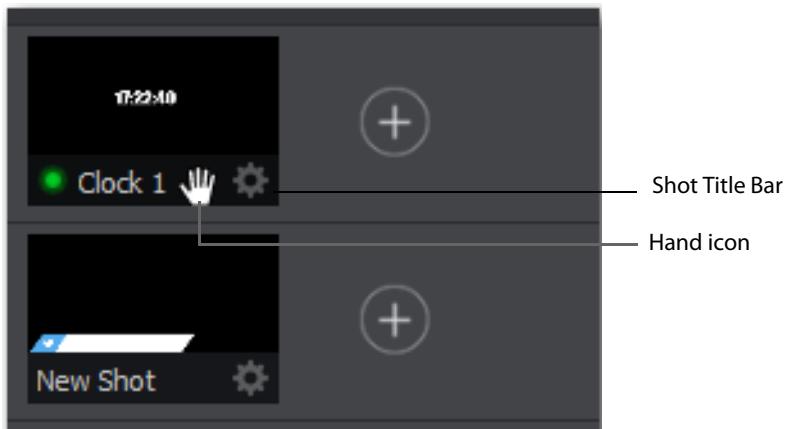
## Changing Layers

To select a layer, click its LED to turn it on (click it again to turn if off). When a layer is selected, the selected shot in that layer is displayed in the Preview/Live Broadcast area. If multiple layers are selected all selected shots are displayed.



## Moving a Shot to Another Layer

A shot can be moved to another layer by clicking and dragging the shot from one layer to another within the Main Shot window. To do this, hover over the shot Title Bar with the mouse until the hand icon displays, then click and drag the shot to another layer.



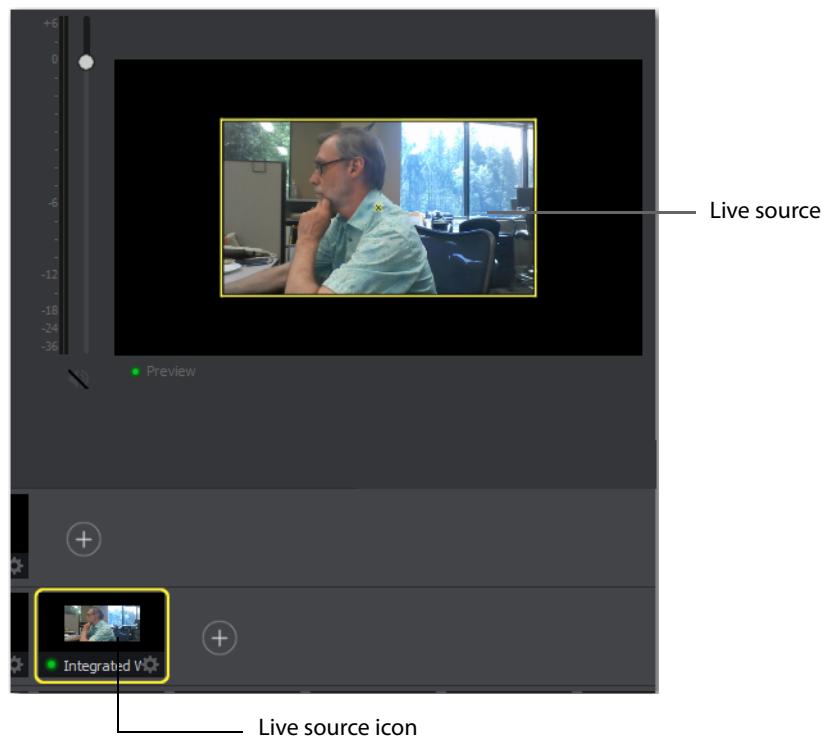
When shots are created, they are assigned to a specific layer. They exist on that layer until you move them or delete them.

## AutoLive

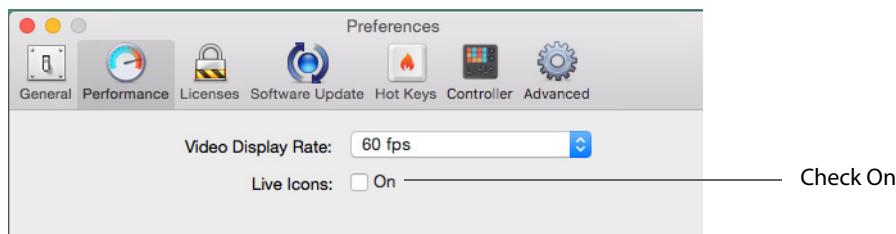
AutoLive is turned on and off by selecting *Switch > AutoLive*. When AutoLive is on, changes made in the Shot List are automatically taken Live in the broadcast (using the current transition and duration). If you click a shot when AutoLive is off, the shot is not sent to live broadcast. In this mode you take the shot live manually, by clicking the Go button, or by pressing the Command+G keys.

## Live Icons

You can, optionally, make your live source icon display its source (camera, Web stream, etc.) in real time. This means that inside the icon, you will see what the live source sees.



To turn on the *Live Icon* option (default is *off*), select the *Performance* tab in Preferences, then check the Live Icons checkbox.



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**Note:** There tends to be a degrading quality when an icon is live. So, if the CPU is reaching its maximum, turn off Live Icons to reduce CPU usage.

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# Shot Editor

## Introduction

The Shot Editor is used to view a shot, edit it, or create a new one. This section describes how to use the Shot Editor.

## Topics

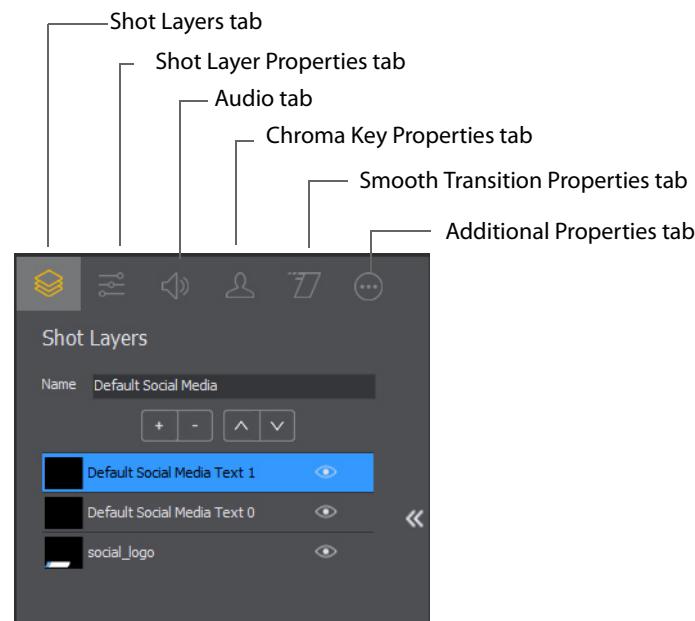
- [\*Overview\*](#)
- [\*Shot Layers Tab\*](#)
- [\*Shot Layer Properties Tab\*](#)
- [\*Audio Properties Tab\*](#)
- [\*Chroma Key Properties Tab\*](#)
- [\*Smooth Transition Properties Tab\*](#)
- [\*Additional Properties Tab\*](#)
  - [\*Capture Devices Properties\*](#)
  - [\*Image Carousel Properties\*](#)
  - [\*Clock Properties\*](#)
  - [\*QR Code Generator Properties\*](#)
  - [\*Media File Properties\*](#)
  - [\*Screen Capture Properties\*](#)
  - [\*Solid Color Properties\*](#)
  - [\*Text Shot Properties\*](#)
  - [\*Web Page Properties\*](#)
  - [\*Web Stream Properties\*](#)
  - [\*Titles Properties\*](#)
  - [\*Twitter Feed Properties\*](#)
  - [\*SyphonInject™ Sources\*](#)

# Overview

To edit a shot, double-click the shot to open the shot editor. You can also single-click the shot to select it, then click the double-arrow on the left of the Main window to open the shot editor panel.



The shot editor has six tabs: Shot Layers, Shot Layer Properties, Audio, Chroma Key Properties, Smooth Transition Properties, and Additional Properties.



**Shot Layers** Enables you to add and delete sources and to change the display order (layering within the shot).

**Shot Layer Properties** Enables you to change the size, position, and other properties of a shot.

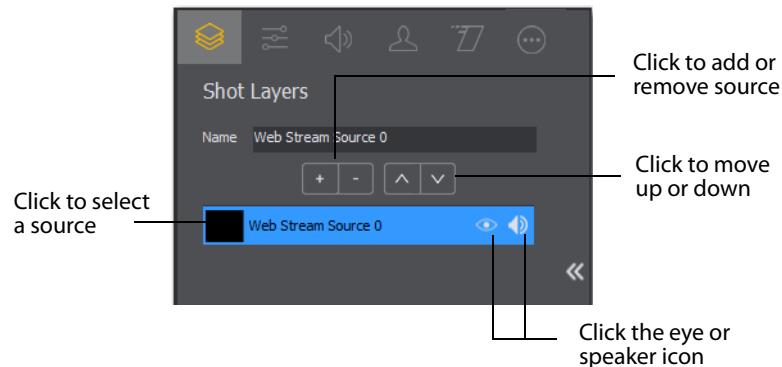
**Audio** Enables you to set and monitor the audio level.

**Chroma Key Properties** If a source in your shot uses a chroma key, this tab enables you to configure the chroma key settings. Each source in a shot can have its own chroma key settings.

**Additional Properties** Enables you to set any additional properties for a source in your shot: System Device properties, Screen Display properties, Twitch Widgets (Chat and Followers), Text properties, etc.

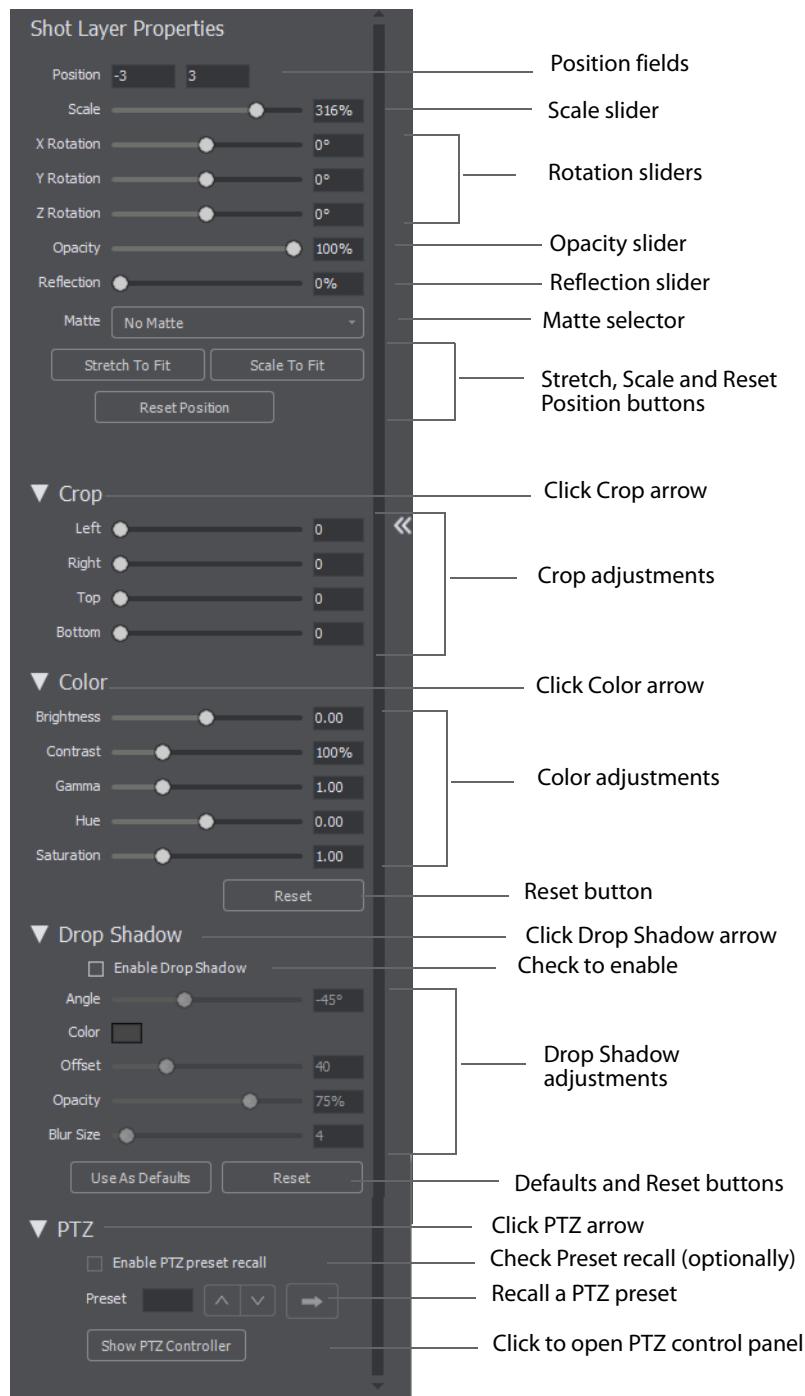
## Shot Layers Tab

The Shot Layers tab lists all of the sources in the shot. You can add sources by clicking the plus (+) button, or delete a sources by select selecting it and clicking the minus (-) button. You can also reorder the sources in the list by selecting a source then clicking the up or down arrow to move it. Additionally, you can toggle (on or off) the visibility of a source by clicking the eye icon, or toggle the source audio by clicking the speaker icon.



# Shot Layer Properties Tab

The Shot Layer Properties tab enables you to make adjustments to the sources in your shot.



**Position** Displays the position of the selected source in your shot. Position "0 0" represents the middle of the shot area. To move a source, click and drag it to a new location in the shot.

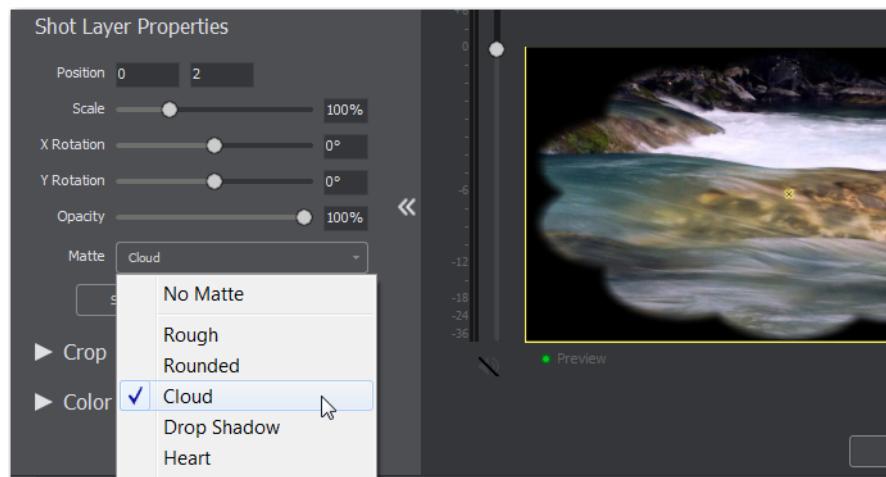
**Scale** Slide the *Scale* slider to change the size of your source. (See also *Scale To Fit* below).

**X Y Z Rotation** Slide the X (Horizontal), Y (Vertical), or Z (Straight-through) axis sliders to rotate the source. (See also *Reset Position* below).

**Opacity** Slide the *Opacity* slider to adjust the degree of transparency of your image.

**Reflection** Slide the *Reflection* slider to adjust the degree of reflection below your image.

**Matte** A Matte is the border around a shot. Select a matte to be used by clicking the down-arrow on the Matte menu. Default is *No Matte*. You can also use any media file as a *custom matte*. To do this, create a new shot of the media file you want to use as a matte. This file now appears in the Matte drop-down menu where you can select it.



**Stretch to Fit** Click the *Stretch to Fit* button to stretch the source to expand to its maximum size in the shot. This may distort the display of the source.

**Scale to Fit** Click the *Scale to Fit* button to force the source to expand to its maximum size in the shot.

**Reset Position** Click the *Reset Position* button to force the source to return to its original size (scale) and rotation positions.

**Crop** Click the *Crop* triangle to open the cropping adjustment pane. Slide the Left, Right, Top, and Bottom sliders to crop your source image.

**Color** Click the *Color* triangle to open the color adjustment pane. Slide the color controls to adjust the color.

**Reset** Click the *Reset* button to reset the color controls to their default settings.

**Drop Shadow** Click the Drop Shadow triangle to open the Drop Shadow adjustment pane. Check the checkbox to enable the controls.

- **Angle** Move the slider to change the angle of the Drop Shadow.
- **Color** Click in the color field to open the color palette. Select a shadow color and luminance by sliding the vertical and horizontal sliders. Click outside the color edit box to close the palette.
- **Offset** Move the Offset slider to adjust the direction (0 to 360 degrees) the shadow text is offset from the actual text.
- **Opacity** Slide the Opacity slider to adjust the degree of transparency of your source.
- **Blur Size** Move the slider to adjust the amount of blur in the drop shadow.

**Use As Defaults** Click to set the current drop shadow configuration as the default setting. All future enabled drop shadows will be set this by default. Clicking this button does not retroactively update previously created shots. Drop shadow settings on individual shots can still be changed.

**Reset** Click to restore the drop shadow settings back to the default values. You can also restore the drop shadow settings to Wirecast One application defaults by holding the Shift key down and clicking *Reset*.

**PTZ** Click the PTZ triangle to open the PTZ control panel.

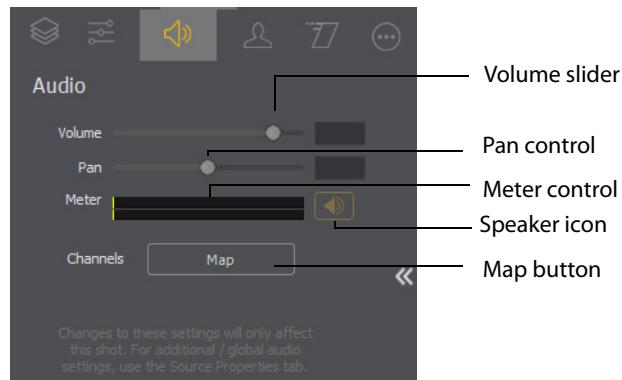
**Enable PTZ Preset Recall** Check the checkbox to enable the PTZ recall controls.

**Preset** Click the up and down arrows to find a PTZ preset to recall, then click the Right Pointing Arrow button to recall the preset.

**Show PTZ Controller** Click to display the PTZ Controller panel. (See [PTZ Controller](#)).

## Audio Properties Tab

The Audio Properties tab enables you to control and monitor audio. You can set the audio level, mute and monitor the audio, and map channel outputs.



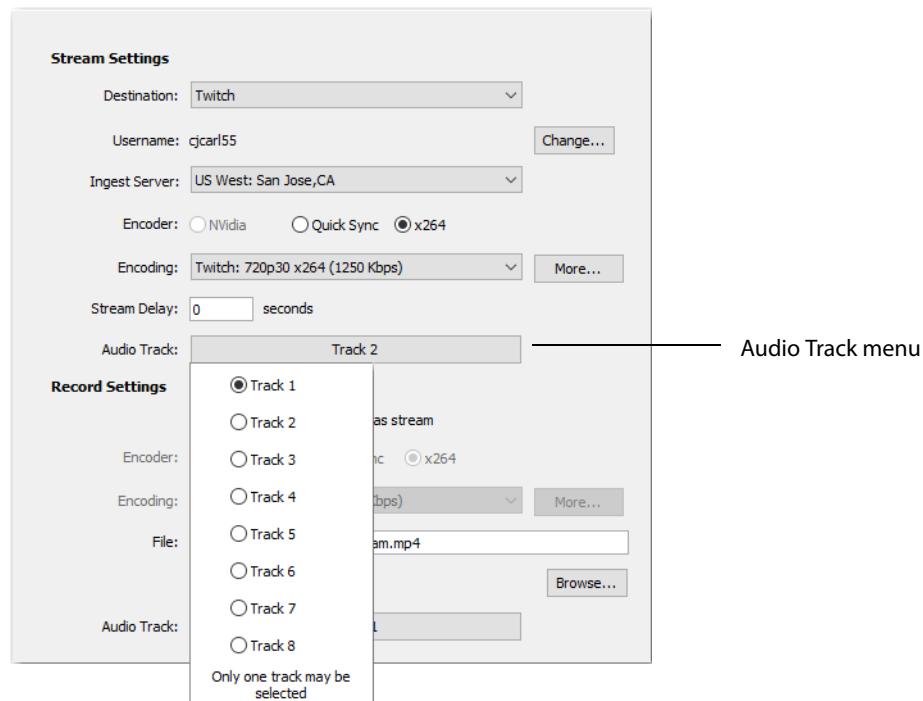
**Volume** Adjust the slider to set the audio volume level.

**Pan** Adjust the slider to pan between left and right audio.

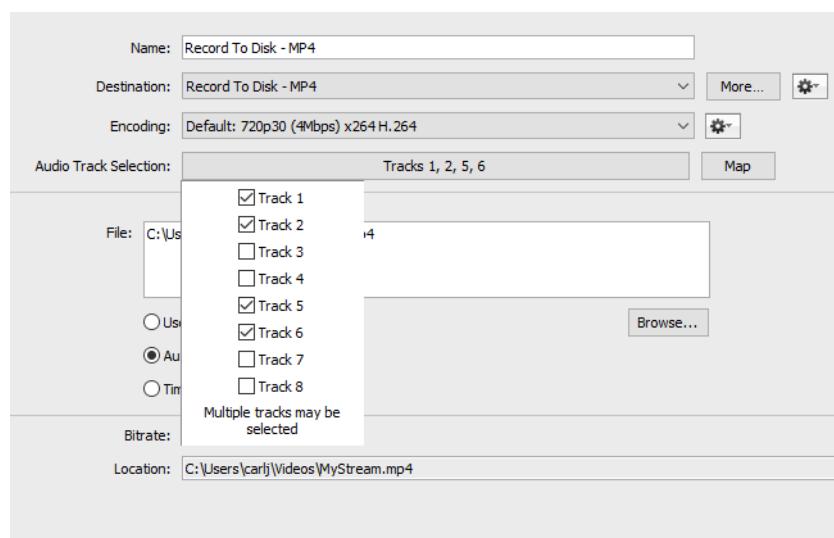
**Meter** Monitors the audio level. You can also mute the audio by clicking the audio icon.

**Speaker** Click to mute the audio output. Icon turns gray when muted. Click the icon again to un-mute the audio.

The audio track that is actually used is selected from the Audio Track menu in the Output Settings window. Unlike recording (below), only one track can be selected.



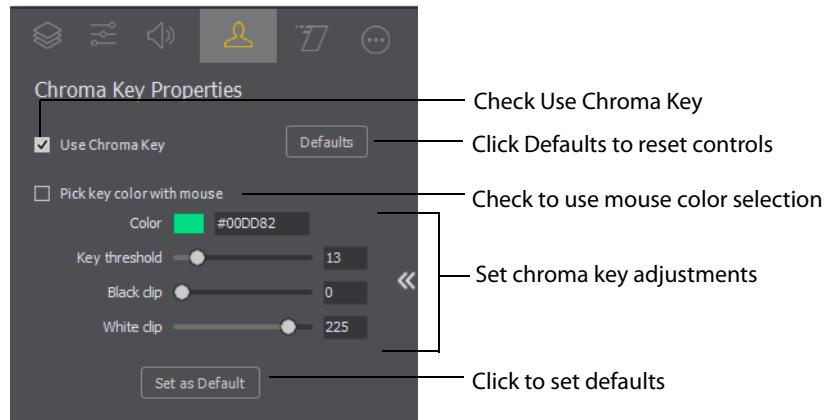
If you are recording, you can select multiple audio tracks.



## Chroma Key Properties Tab

Chrome Key (also called “green screen”) enables you to replace all green areas of your display (or any other color you choose) with a background image. For example, if you are in front of the traditional green screen, by “keying out” the green and leaving the background transparent, you will appear to be in front of your background.

The Chroma Key Properties tab enables you to turn on/off chroma keying and make chroma key adjustments.



**Use Chroma Key** Check to turn on chroma keying. Uncheck to turn it off. Click the Defaults button to reset all Chroma Key controls.

**Pick key color with mouse** Check to use your mouse to select a chroma key color. Hover over the a desired color in the selected source, and click the left mouse button to select that color. All adjustments will be made using the selected color as the key.

**Color** Click the color square to open the Color Pallet. Select a color to use as the chroma key color and click OK.

**Key Threshold** Slide the *Key Threshold* slider to adjust the amount of keying in your source.

**Black Clip** Slide the *Black Clip* slider to adjust the black threshold level (how much black is used in keying).

**White Clip** Slide the *White Clip* slider to adjust the white threshold level (how much white is used in keying).

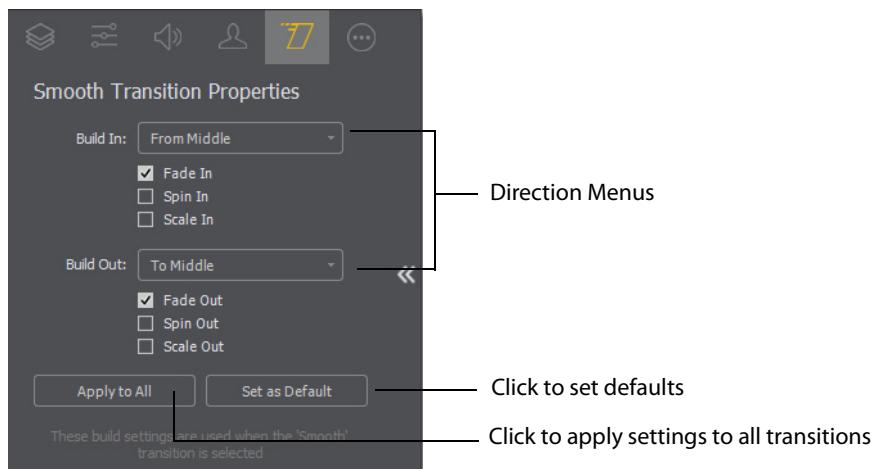
**Set As Default** Click to set the current Chroma Key configuration as the default setting. All future Chroma Keys will be set this by default. Clicking this button does not retroactively update previously created shots. Chroma Key settings on individual shots can still be changed.

## Smooth Transition Properties Tab

The Smooth Transition Properties tab provides control over how objects (image, movie, title, etc.) are added or removed in the Live Broadcast window. Wirecast One only performs motion during a Smooth transition. If you are using any other transition, the motion settings are ignored.

There are two types of motion. When an object is added to your broadcast it is called *Build In*; When it is removed it is called *Build Out*. Motion only occurs when an object enters or leaves the Live Broadcast window. For example, if you have two shots, each with a foreground and the media in the foreground is the same, then a Smooth transition is performed between the foregrounds. However, no motion is performed. Or, if a logo is positioned in the top left corner in an existing shot, and it is in the bottom right corner in a new shot, when you make the new shot Live the logo smoothly transitions from the top left corner to the bottom right corner. But the Build In and Build Out settings are ignored.

However, if you have two shots with a Foreground, but the media in each is different, the Build Out is performed for the existing shot, and the Build In is performed for the new shot.



**Direction Menus** These provide selections of where the Build In comes from (top, bottom, right, etc.) when it is added, and where the Build Out goes when it is removed.

**Fade In / Fade Out** Checking these checkboxes causes an object to be added or removed gradually. If unchecked, the object is instantly added or removed, much like a cut transition.

**Spin In / Spin Out** Checking these checkboxes causes an object to be added or removed in a spinning fashion.

**Scale In / Scale Out** Checking these checkboxes causes an object to be added or removed in a scaled fashion.

**Apply To All** Click this button to make the Transition Settings the same for all sources in a shot. This is useful if you want to make all of your motion the same for all of the elements in the shot.

**Set As Default** Click this button to make these Transition Settings the default settings for all new shots. These default settings will be applied in all future WC documents.

## Additional Properties Tab

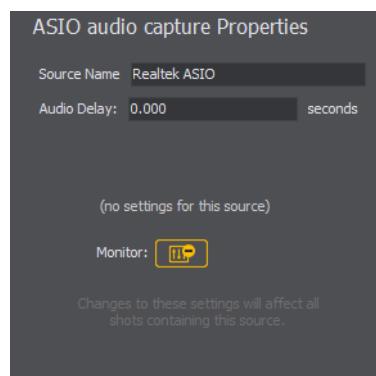
The Additional Properties tab provides various adjustments to your selected source, depending on the kind of source selected. There are many kinds of sources: System Devices, Screen Captures, Web Displays, etc.

## Capture Devices Properties

Capture Device enables you to capture just the audio of the output. Capture Devices have a variety of settings. To open a Capture Device source, select *Capture Devices* from the source menu in the shot window.

### RealTek Example

Here is an example of a Realtek High microphone array.



**Source Name** Displays the name of the source. To change the source name, enter a new one.

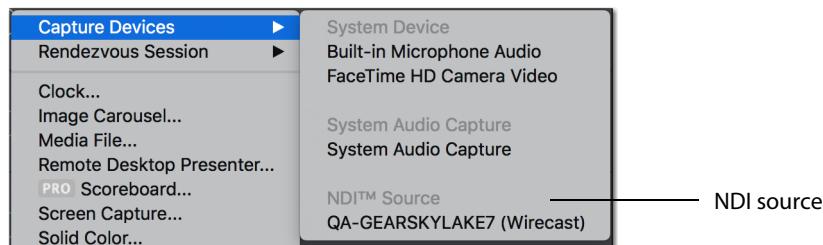
**Audio Delay** Enter the amount of time (in seconds, as short as 1 ms) to delay the audio signal to sync it up with a video source.

**Monitor** Click the *Monitor* icon to cause audio to play through your monitor output. The icon is gold when selected (turned on). If unselected, audio will not play through the monitor output for this source. Selected is the default.

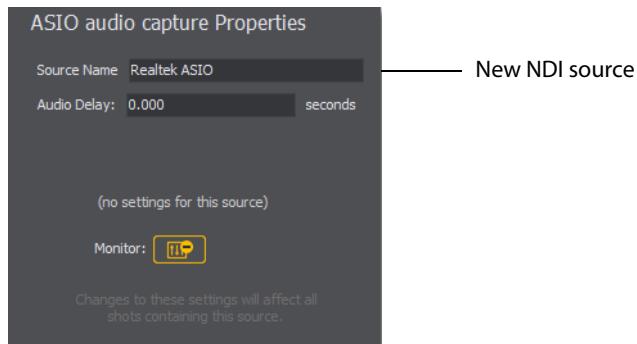
## NDI™ Sources

**Note:** NDI source counts toward the “one camera limit” that exists in Wirecast One.

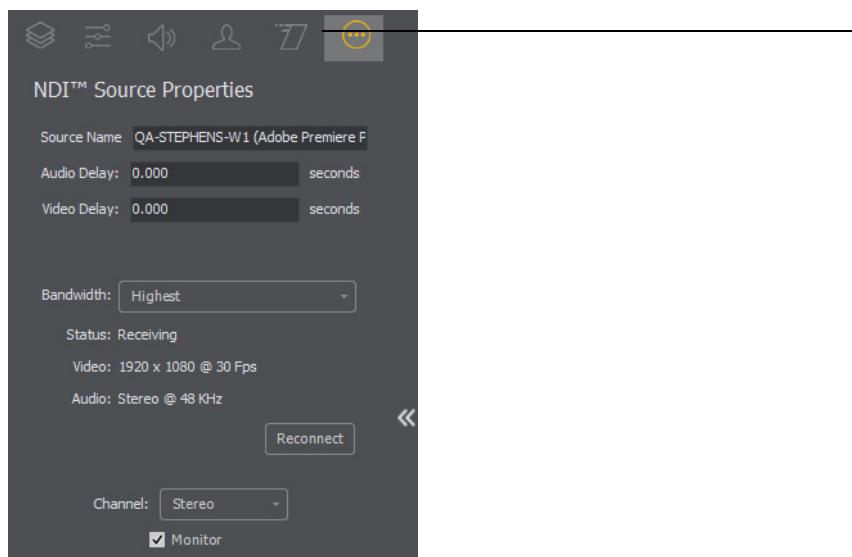
Any NewTek NDI™ sources on your local network will be discovered by Wirecast One and listed as an NDI™ Source under Capture Devices in the Source Input Menu.



Adding an NDI™ source will create a new shot for that source.



If you have selected an NDI™ source, the NDI™ Source Properties tab will display. In addition to the controls above, an NDI™ source has the following controls.



**Video Delay** Enter the amount of time (in seconds, as short as 1 ms) to delay video.

**Bandwidth** Select the bandwidth to use: *Highest* (max quality), *Lowest* (max efficiency), or *Audio Only* (video bandwidth not applicable).

**Reconnect** Click to reconnect the NDI™ source.

**Channel** Select *Stereo*, *Left*, or *Right* to determine the audio source for both channels. *Stereo* sends the left audio source to the left channel and the right audio source to the right channel. *Left* sends the left audio source to the both channels (left and right). *Right* sends the right audio source to the both channels (left and right).

**Monitor** Check the *Monitor* check box to cause audio to play through your monitor output. If the check box is unchecked, audio will not play through the monitor output for this source. Checked is the default.

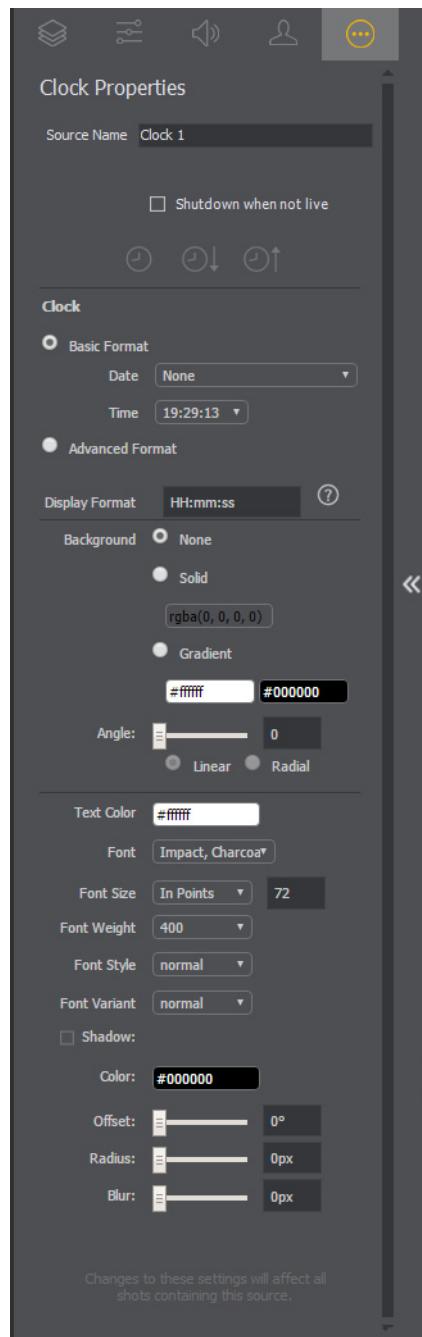
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**Note:** NDI™ networking requires that your network has port 5353 open for mDNS device discovery, as well as one port per video channel (starting from port 5960 and onward) transmitted by an NDI™ source, plus one additional port for messaging.

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## Clock Properties

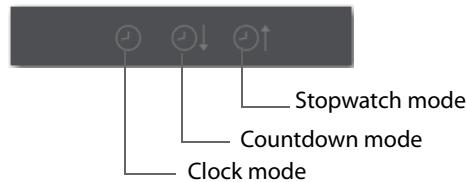
A Clock shot displays time. Clock Properties have the following settings.



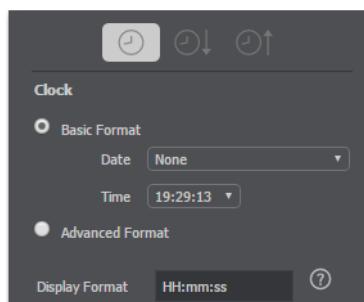
**Source Name** Displays the name of the source. To change the source name, enter a new one.

**Shutdown** Check to force the clock to shutdown when not live.

**Clock Modes** Select Clock, Countdown, or Stopwatch.

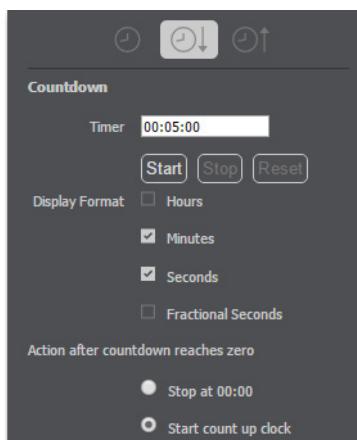


#### **Clock Mode:**



- **Basic** Select *Basic* for basic clock functionality. Select Date and Time display formats from the drop-down menus. (Display Format window is disabled).
- **Advanced** Select *Advanced* to enter a custom hour-minute-second format. Enter custom time format into Display Format window. Click question mark ("?") icon to display custom format types.

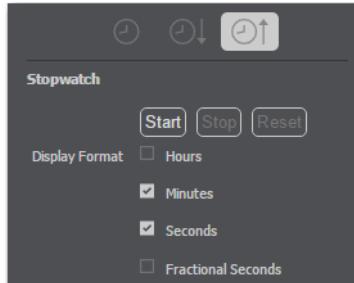
#### **Countdown Mode:**



- **Timer** Enter the time value from which to start counting.
- **Start, Stop, Reset** Click *Start* to begin counting down. Click *Stop* to end counting down. Click *Reset* to reset clock to Timer value.
- **Display Format** Select time elements to display: Hours, Minutes, Seconds, and Fractional Seconds.

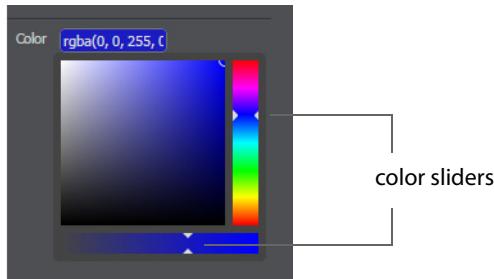
- **Action After** Select *Stop at 00:00* to prohibit count up mode. Select *Start count up clock* to cause clock to start counting up after count down is finished.

#### Stopwatch Mode:



- **Start, Stop, Reset** Click *Start* to begin counting. Click *Stop* to end counting. Click *Reset* to reset stopwatch to zero.
- **Display Format** Select time elements to display: Hours, Minutes, Seconds, and Fractional Seconds.

**Background** Select *Solid* and click in the color field to open the color palette. Select a color and luminance by sliding the vertical and horizontal sliders. Click outside the color edit box to close the palette.



Select *Gradient* and click in the color field to select a new background gradient color from the palette.

**Angle** When Gradient is selected, the Angle slider is activated. Move the slider to change the angle of the gradient display. Select also *Linear* (line) or *Radial* (circle) to change the shape of the gradient display.

**Text Color** Click the box to open the color selection panel. Select a new text color from the palette.

**Font** Select the desired font used for your messages. If you select Web Font, a Web Font field will display below. You can also select any of the fonts installed on your computer.

**Font Size** Select the type of font size: points, small, medium, large, etc. If *In Points* is selected, a box to enter font size (in points) is displayed.

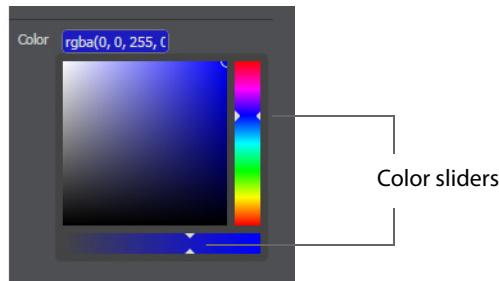
**Font Weight** Select the font weight: 100 to 900.

**Font Style** Enter the font style: Normal, Italic, or Oblique.

**Font Variant** Select a font variant: *Normal* (capital and small characters displayed normally), or *Small-caps* (Capitals with small letters displayed as small capital letters).

**Shadow** Check to activate the text shadow slider controls.

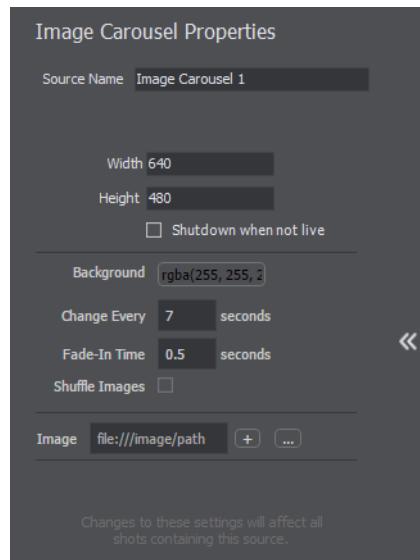
- **Color** Click in the color field to open the color palette. Select a shadow color and luminance by sliding the vertical and horizontal sliders. Click outside the color edit box to close the palette.



- **Offset** Move the Offset slider to adjust the direction (0 to 360 degrees) the shadow text is offset from the actual text.
- **Radius** Move the Radial slider to adjust the distance the shadow text is offset away from the actual text.
- **Blur** Move the Blur slider to adjust the amount of blur in the shadow text

## Image Carousel Properties

An Image Carousel shot shows a sequence of images. Image Carousel Properties have the following settings.



**Source Name** Displays the name of the source. To change the source name, enter a new one.

**Width/Height** Displays the width and height of the display source. To change the width or height, enter a new value.

**Change Every** Sets how often the images are changed, in seconds.

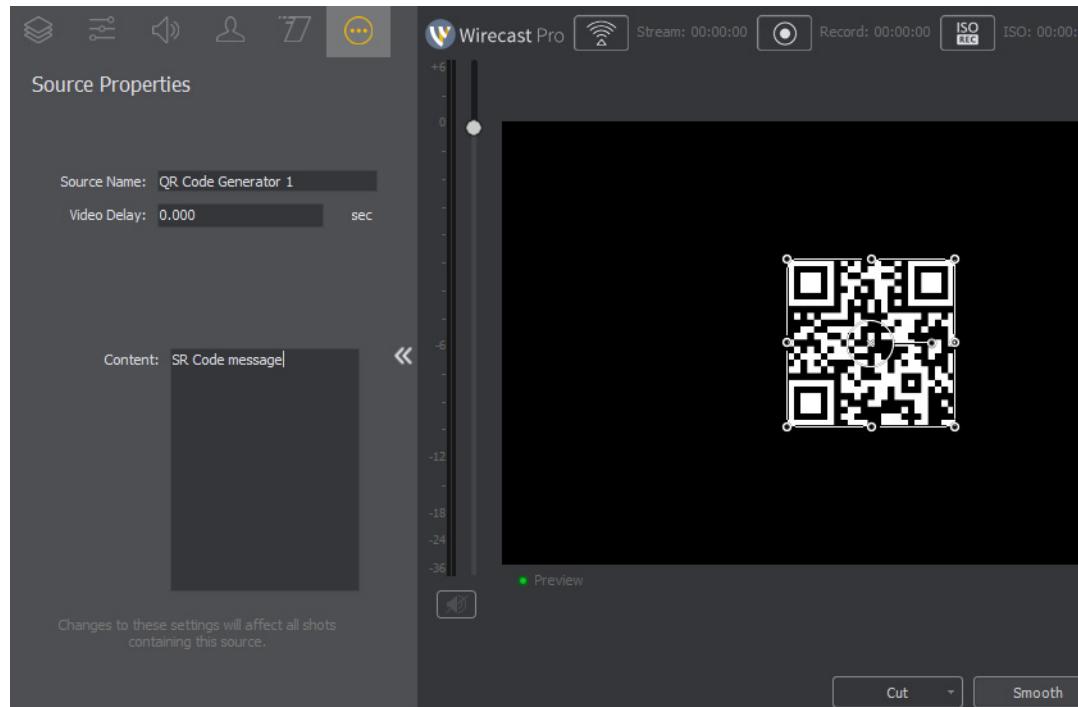
**Fade-In Time** Sets how long it takes for each image to fade in, in seconds. Enter zero for instantaneous display of images.

**Shuffle Images** Check to shuffle the display order of the images. When unchecked, images are displayed as they are ordered in the image list.

**Image** Displays Carousel images in a list. Click the plus (+) icon to add an image to the list. To remove an image, click the "X" to the right of the image on the list. You can also click the browse button (...) to navigate to an image to add.

## QR Code Generator Properties

QR Code Generation has the following settings.



**Source Name** Displays the name of the source. To change the source name, enter a new one.

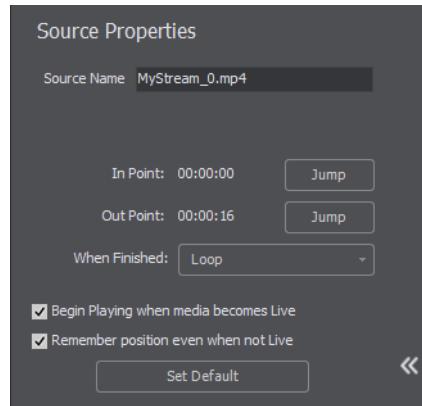
**Video Delay** Enter the amount of time (in seconds, as short as 1 ms) to delay video.

**Content** Enter the message you want to be embedded in the QR code displayed in your broadcast.

## Media File Properties

A Media File is a video clip or a picture. To open a Media File source, select *Media Files* from the source menu in the shot window, and then navigate to your file. You can also click the *Add Media File* button at the bottom of the Add Shot window.

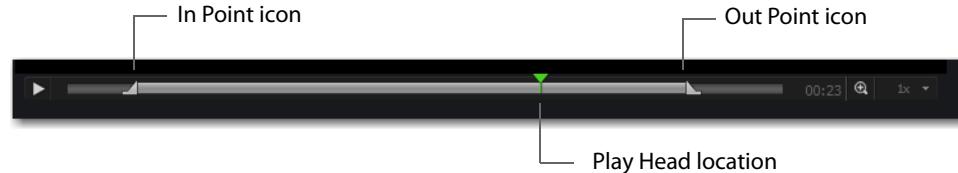
Media Files have the following settings.



**Source Name** Displays the name of the source. To change the source name, enter a new one.

**In Point** Click *Jump* to move the play head to the In Point in the media file. The In Point is set by dragging the In Point icon to the desired beginning position on the play bar.

**Out Point** Click *Jump* to move the play head to the Out Point in the media file. The Out Point is set by dragging the Out Point icon to the desired ending position on the play bar. The green triangle is the current location of the Play Head.



**When Finished** Select what happens when the media finishes playing. *Loop* causes the media to begin playing again. *Hold* cause the media to stop and hold the last frame in the Live window. *Remove* causes the media to be removed from the Live window when it finishes playing.

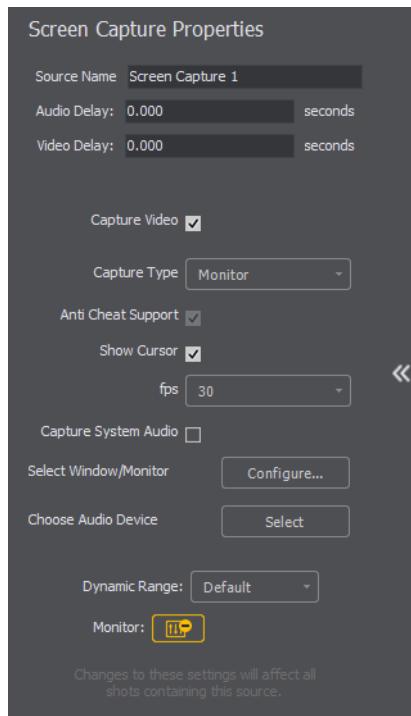
**Begin playing when media becomes Live** When checked, the media begins playing as soon as it is made Live.

**Remember position even when not Live** When checked, the media will always start playing where ever it was playing when it was stopped, even if it was removed from the Live window and made Live again. When unchecked, the media will start from the beginning every time it is taken Live.

**Set Default** Click to set the media display to default settings.

## Screen Capture Properties

A Screen Capture displays any monitor or window on your computer. To open a Screen Capture source, select *Screen Capture* from the source menu in the shot window. Screen Captures have the following settings.



**Source Name** Displays the name of the source. To change the source name, enter a new one.

**Audio Delay** Enter the amount of time (in seconds, as short as 1 ms) to delay audio.

**Video Delay** Enter the amount of time (in seconds, as short as 1 ms) to delay video.

**Capture Video** Check to enable Capture Type, Show Cursor, and fps settings (described below).

**Capture Type** Select *Monitor* (captures your entire monitor), *Window* (captures the currently selected window), or *Game* (captures the game currently played on your PC). If you select *Game*, you can also configure how your game is captured by selecting options offered under Select Window/Monitor (described below).

**Anti Cheat Support** Enables anti-cheating support for game capture.

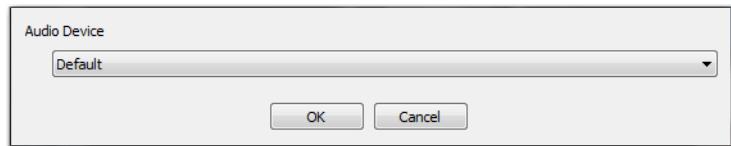
**Show Cursor** Check to show the cursor in your streaming. Uncheck to hide it.

**fps** Select the FPS, from 10 to 60 frames per second as the capture rate. An FPS of 60 is the best frame rate, but it requires greater streaming bandwidth.

**Capture System Audio** Check to capture system audio when streaming. Uncheck to mute the audio.

- **Select Window/Monitor** Click the *Configure* button to display the *Select Window* dialog.

**Choose Audio Device** Click the *Configure* button to display the *Select Audio Device* dialog, then select an audio device from the drop-down menu.



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**Note:** Some apps, when screen captured, take control of your mouse and the cursor is not displayed. You can, at any time, press command + Tab keys to reduce the capture window size and enable you to use your mouse.

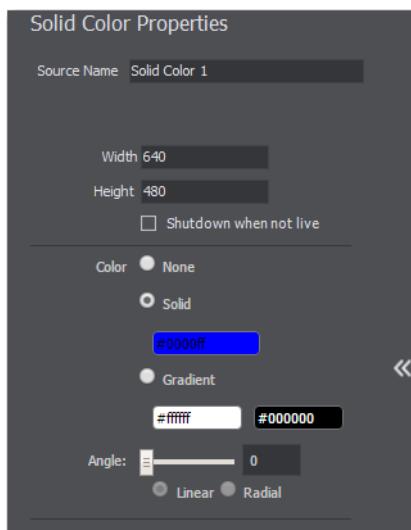
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**Dynamic Range** Select dynamic range setting: Default, Full or Limited.

**Monitor** Click the *Monitor* icon to cause audio to play through your monitor output. The icon is gold when selected (turned on). If unselected, audio will not play through the monitor output for this source. Selected is the default.

## Solid Color Properties

*Solid Color* displays a solid color background. To open a Solid Color source, select *Solid Color* from the source menu in the shot window. Solid Color Properties have the following settings.

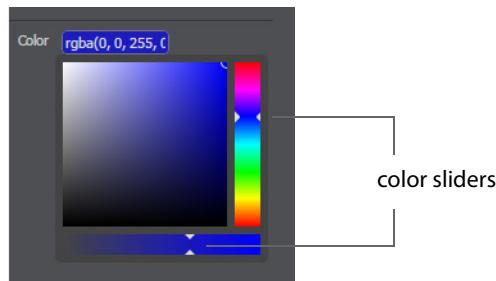


**Source Name** Displays the name of the source. To change the Source Name, enter a new one.

**Video Delay** Enter the amount of time (in seconds, as short as 1 ms) to delay video.

**Width/Height** Displays the width and height of the display source. To change the width or height, enter a new value.

**Color** Select *Solid* and click in the color field to open the color palette. Select a color and luminance by sliding the vertical and horizontal sliders. Click outside the color edit box to close the palette.

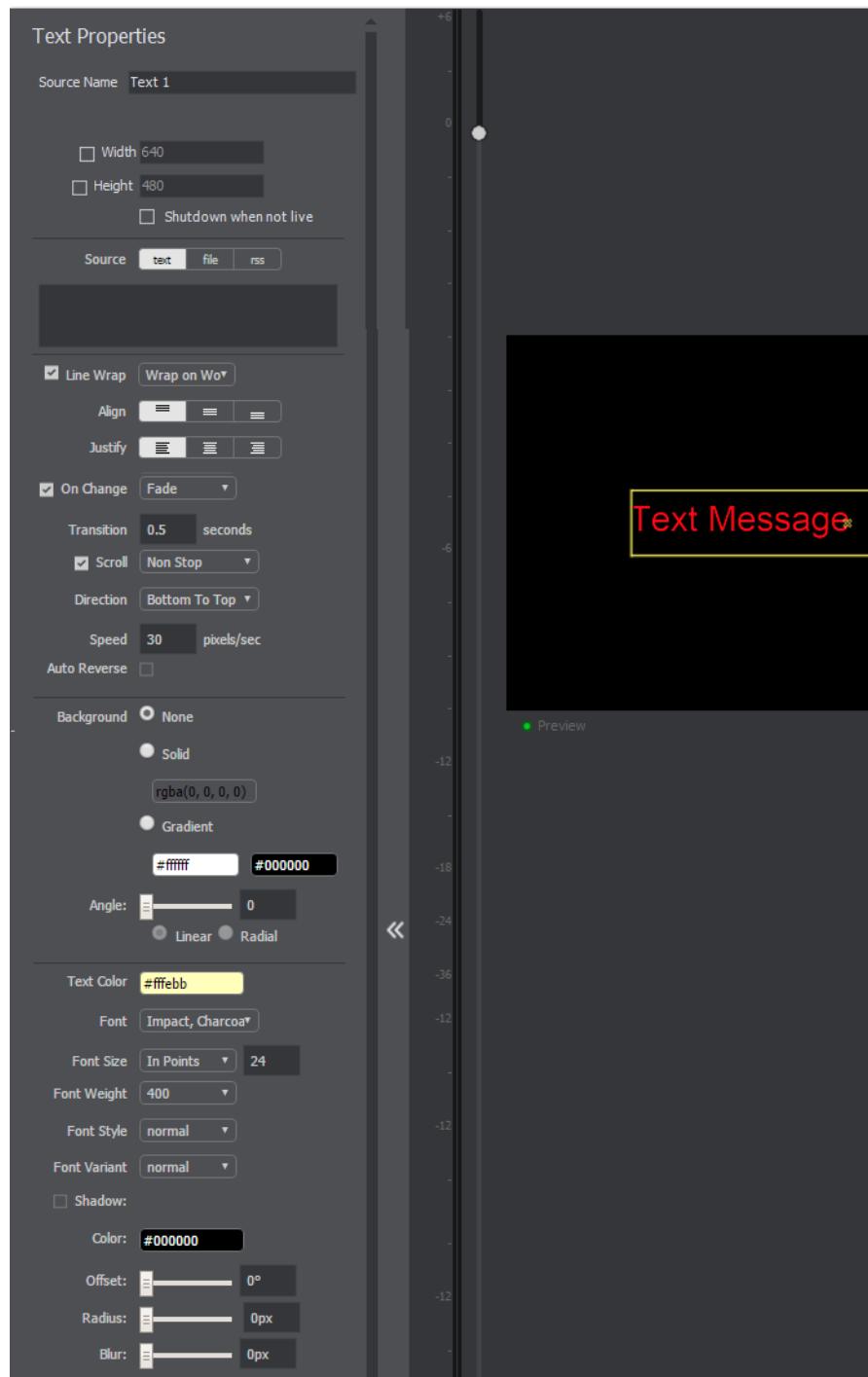


Select *Gradient* and click in the color field to select a new background gradient color from the palette.

**Angle** When Gradient is selected, the Angle slider is activated. Move the slider to change the angle of the gradient display. Select also *Linear* (line) or *Radial* (circle) to change the shape of the gradient display.

## Text Shot Properties

*Text* displays a text phrase. To open a Text source, select *Text* from the source menu in the shot window. Text Properties have the following settings.



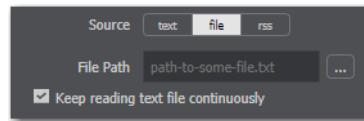
**Source Name** Displays the name of the source. To change the Source Name, enter a new one.

**Width/Height** Displays the width and height of the display source. To change the width or height, enter a new value.

**Shutdown** Check to cause the text to not be displayed until the shot is placed into the Live window.

**Source** Select the source of your text: *Text* (directly entered) or *File* (navigate to a text file), or *RSS* (ticker tape RSS feed).

- If you select *Text*, enter your text in the text box below the source selector.
- If you select *File*, enter a file name in the File Path box displayed, or click the navigation button (three dots) and find your text file. The text from your file will be automatically displayed. The file has to contain UTF-8 encoded text in order for it to be rendered correctly. Only the first 64KB of the text file will be loaded and displayed. You can also check the *Keep reading text file continuously* to keep the text display in your broadcast up to date with file changes.



- If you select *RSS*, enter a URL in the URL box displayed.

**Line Wrap** When checked, the displayed text wraps around to the next line to fit into the window as it is resized. Select wrap mode from the drop-down menu: *Wrap on Word* or *Break Word*.

**Align** Enables you to align the text at the top, middle, or bottom of the display.

**Justify** Enables you to justify the text along the left, center, or right side of the display.

**On Change** When checked, a transition menu is displayed offering a choice of transition types: Fade, Drop In, Drop Out, and Slide. Transitions occur when text is changed.

**Transition** Enter the length (in seconds) of the transition time. (This field is displayed only when the *On Change* box is checked.)

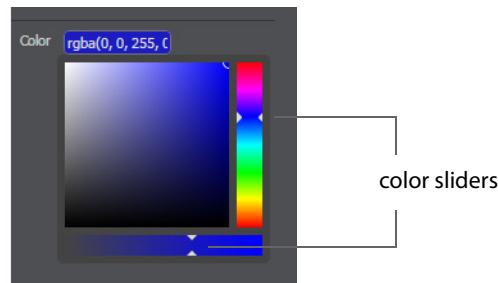
**Scroll** When Scroll is checked, you can enter both a scroll mode and a direction. There are two scroll modes: *Non Stop* and *If it Does Not Fit*.

**Direction** Select the direction of the scrolling: Top to Bottom, Bottom to Top, Left to Right, or Right to Left. This field is displayed only when the *Scroll* box is checked.

**Speed** When Scroll is checked, enter the speed (in pixels per second) that you want your message to scroll through the display.

**Auto Reverse** When checked, the display reverses the scrolling direction when it reaches the top or bottom of the list.

**Background** Select *Solid* and click in the color field to open the color palette. Select a color and luminance by sliding the vertical and horizontal sliders. Click outside the color edit box to close the palette.



Select *Gradient* and click in the color field to select a new background gradient color from the palette.

**Angle** When Gradient is selected, the Angle slider is activated. Move the slider to change the angle of the gradient display. Select also *Linear* (line) or *Radial* (circle) to change the shape of the gradient display.

**Text Color** Click the box to open the color selection panel. Select a new text color from the palette.

**Font** Select the desired font used for your messages. If you select Web Font, a Web Font field will display below. You can also select any of the fonts installed on your computer.

**Font Size** Select the type of font size: points, small, medium, large, etc. If *In Points* is selected, a box to enter font size (in points) is displayed.

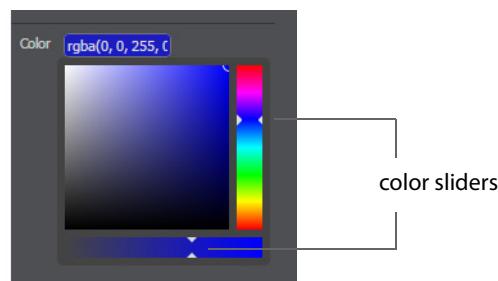
**Font Weight** Select the font weight: 100 to 900.

**Font Style** Enter the font style: Normal, Italic, or Oblique.

**Font Variant** Select a font variant: *Normal* (capital and small characters displayed normally), or *Small-caps* (Capitals with small letters displayed as small capital letters).

**Shadow** Check to activate the text shadow slider controls.

**Color** Click in the color field to open the color palette. Select a shadow color and luminance by sliding the vertical and horizontal sliders. Click outside the color edit box to close the palette.



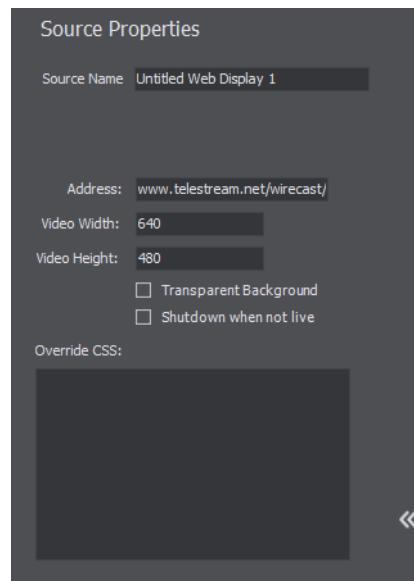
**Offset** Move the Offset slider to adjust the direction (0 to 360 degrees) the shadow text is offset from the actual text.

**Radius** Move the Radial slider to adjust the distance the shadow text is offset away from the actual text.

**Blur** Move the Blur slider to adjust the amount of blur in the shadow text

## Web Page Properties

Web Page shows a web source defined by a web address (URL). To open a Web Page source, select *Web Page* from the source menu in the shot window. Web Page Properties have the following settings.



**Source Name** Displays the name of the source. To change the source name, enter a new one.

**Address** Displays the web address (URL) of the source. To change the address, enter a new one.

**Width/Height** Displays the width and height of the display source. To change the width or height, enter a new value.

**Transparent Background** Check to make the background transparent in your shot.

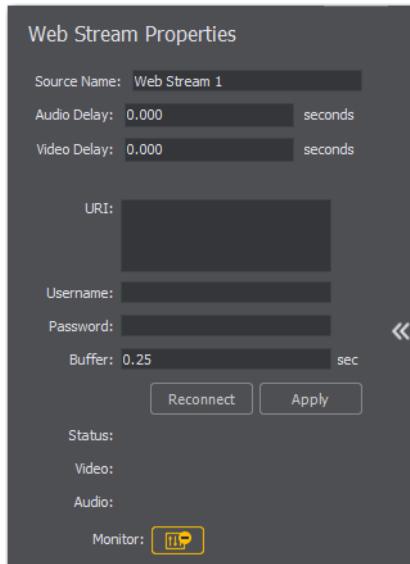
**Shutdown when inactive** Check to turn off the audio and disable it from the shot when playing videos.

**Override CSS** Enter Cascading Style Sheet code to override the default code for this web display.

## Web Stream Properties

The Web Stream option allows RTMP, RTSP, MMS, or HTTP streams to be taken directly into Wirecast OneWirecast One S. This is useful for incorporating remote IP Cameras or other network streams into a broadcast. Sources are automatically detected and are also identified by *IP Camera Profile*. To open a Web Stream source, select *Web Stream* from the source menu in the shot window.

Web Stream Properties have the following settings.



**Source Name** Displays the name of the source. To change the Source Name, enter a new one.

**Audio Delay** Enter the amount of time (in seconds, as short as 1 ms) to delay audio.

**Video Delay** Enter the amount of time (in seconds, as short as 1 ms) to delay video.

**URI** Enter the address of your input stream. (For example: *rtsp://127.0.0.1:8080/my\_stream.sdp*, or *http://10.0.0.1/my\_stream*, or *rtmp://hades.telestream.net:1935/live/myStream*).

**Username** Enter your username for your URI stream.

**Password** Enter your password for your URI stream.

**Buffer** Enter a buffer time in seconds.

**Reconnect** Click to reconnect the Web Stream source.

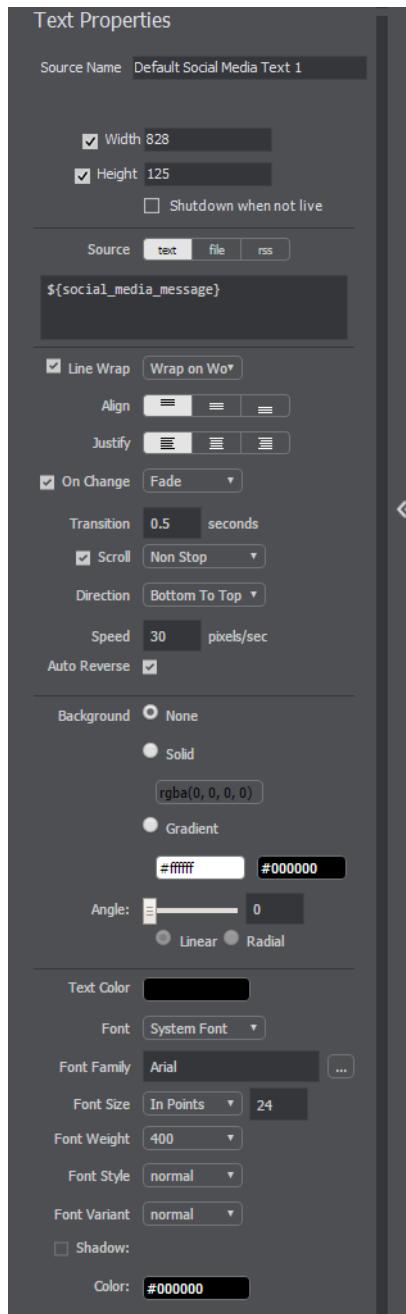
**Apply** Click the Apply button to update any changes.

**Monitor** Click the *Monitor* icon to cause audio to play through your monitor output. The icon is gold when selected (turned on). If unselected, audio will not play through the monitor output for this source. Selected is the default.

## Titles Properties

A Title is a text displayed in a banner window. Wirecast OneWirecast One S offers a wide variety of title banner templates to use in your streaming. To open a Title source, select *Titles* from the source menu in the shot window.

Titles have the following settings.



**Source Name** Displays the name of the source. To change the source name, enter a new one.

**Width/Height** Displays the width and height of the display source. To change the width or height, enter a new value.

**Shutdown** Check to cause the text to not be displayed until the shot is placed into the Live window.

**Source** Select the source of your text: *Text* (directly entered) or *File* (navigate to a text file), or *RSS* (ticker tape RSS feed). If you select *Text*, enter your text in the text box below the source selector. If you select *File*, enter a file name in the File Path box displayed, or click the navigation button (three dots) and find your text file. The text from your file will be automatically displayed. The file has to contain UTF-8 encoded text in order for it to be rendered correctly. Only the first 64KB of the text file will be loaded and displayed. If you select *RSS*, enter a URL in the URL box displayed.

**Line Wrap** When checked, the displayed text wraps around to the next line to fit into the window as it is resized. Select wrap mode from the drop-down menu: *Wrap on Word* or *Break Word*.

**Align** Enables you to align the text at the top, middle, or bottom of the display.

**Justify** Enables you to justify the text along the left, center, or right side of the display.

**On Change** When checked, a transition menu is displayed offering a choice of transition types: Fade, Drop In, Drop Out, and Slide. Transitions occur when text is changed.

**Transition** Enter the length (in seconds) of the transition time. This field is displayed only when the *On Change* box is checked.

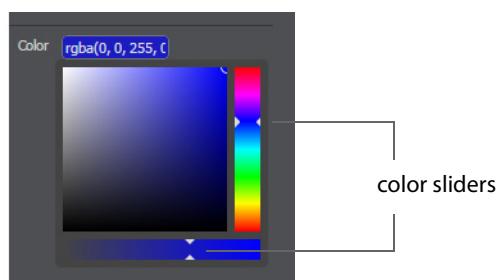
**Scroll** When Scroll is checked, you can enter both a scroll mode and a direction. There are two scroll modes: *Non Stop* and *If it Does Not Fit*.

**Direction** Select the direction of the scrolling: Top to Bottom, Bottom to Top, Left to Right, or Right to Left. This field is displayed only when the *Scroll* box is checked.

**Speed** When Scroll is checked, enter the speed (in pixels per second) that you want your message to scroll through the display.

**Auto Reverse** When checked, the display reverses the scrolling direction when it reaches the top or bottom of the list.

**Background** Select *Solid* and click in the color field to open the color palette. Select a color and luminance by sliding the vertical and horizontal sliders. Click outside the color edit box to close the palette.



Select **Gradient** and click in the color field to select a new background gradient color from the palette.

**Angle** When Gradient is selected, the Angle slider is activated. Move the slider to change the angle of the gradient display. Select also *Linear* (line) or *Radial* (circle) to change the shape of the gradient display.

**Text Color** Click the box to open the color selection panel. Select a new text color from the palette.

**Font** Select the desired font used for your messages. If you select Web Font, a Web Font field will display below. You can also select any of the fonts installed on your computer.

**Font Family** Select the style of the font: Arial, Bookman, etc.

**Font Size** Select the type of font size: points, small, medium, large, etc. If *In Points* is selected, a box to enter font size (in points) is displayed.

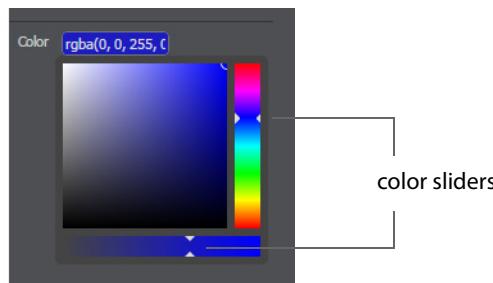
**Font Weight** Select the font weight: 100 to 900.

**Font Style** Enter the font style: Normal, Italic, or Oblique.

**Font Variant** Select a font variant: *Normal* (capital and small characters displayed normally), or *Small-caps* (Capitals with small letters displayed as small capital letters).

**Shadow** Check to activate the text shadow slider controls.

**Color** Click in the color field to open the color palette. Select a shadow color and luminance by sliding the vertical and horizontal sliders. Click outside the color edit box to close the palette.



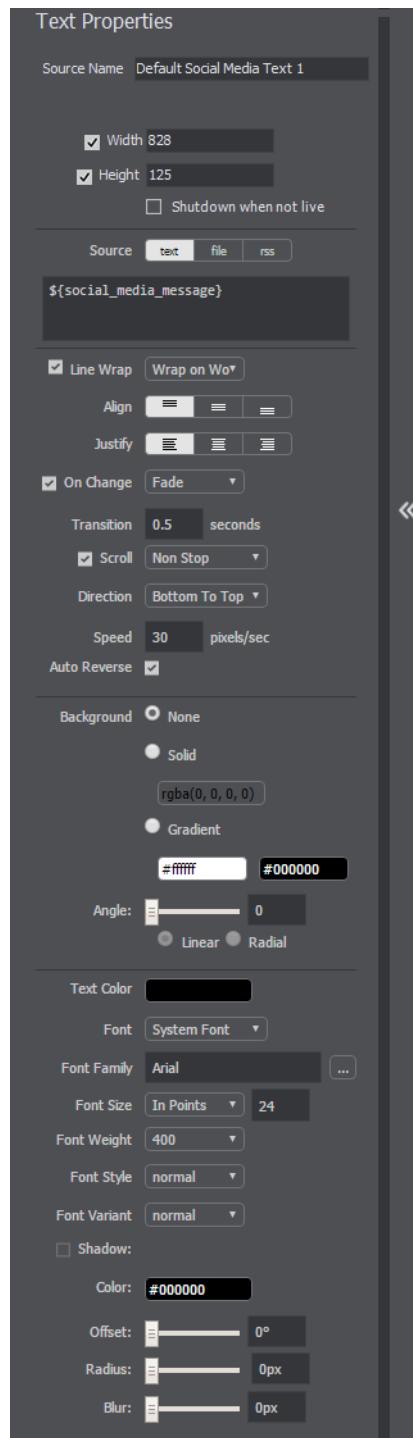
**Offset** Move the Offset slider to adjust the direction (0 to 360 degrees) the shadow text is offset from the actual text.

**Radius** Move the Radial slider to adjust the distance the shadow text is offset away from the actual text.

**Blur** Move the Blur slider to adjust the amount of blur in the shadow text

## Twitter Feed Properties

Twitter Feed displays a list of Twitter messages. Twitter Feed Properties have the following settings.



**Source Name** Displays the name of the source. To change the source name, enter a new one.

**Width/Height** Displays the width and height of the display source. To change the width or height, enter a new value.

**Shutdown** Check to cause the text to not be displayed until the shot is placed into the Live window.

**Source** Select the source of your text: *Text* (directly entered) or *File* (navigate to a text file), or *RSS* (ticker tape RSS feed). If you select *Text*, enter your text in the text box below the source selector. If you select *File*, enter a file name in the File Path box displayed, or click the navigation button (three dots) and find your text file. The text from your file will be automatically displayed. The file has to contain UTF-8 encoded text in order for it to be rendered correctly. Only the first 64KB of the text file will be loaded and displayed. If you select *RSS*, enter a URL in the URL box displayed.

**Line Wrap** When checked, the displayed text wraps around to the next line to fit into the window as it is resized. Select wrap mode from the drop-down menu: *Wrap on Word* or *Break Word*.

**Align** Enables you to align the text at the top, middle, or bottom of the display.

**Justify** Enables you to justify the text along the left, center, or right side of the display.

**On Change** When checked, a transition menu is displayed offering a choice of transition types: Fade, Drop In, Drop Out, and Slide. Transitions occur when text is changed.

**Transition** Enter the length (in seconds) of the transition time. This field is displayed only when the *On Change* box is checked.

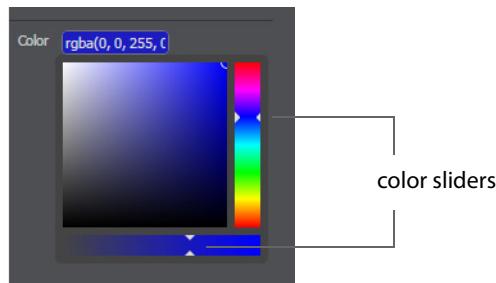
**Scroll** When *Scroll* is checked, you can enter both a scroll mode and a direction. There are two scroll modes: *Non Stop* and *If it Does Not Fit*.

**Direction** Select the direction of the scrolling: Top to Bottom, Bottom to Top, Left to Right, or Right to Left. This field is displayed only when the *Scroll* box is checked.

**Speed** When *Scroll* is checked, enter the speed (in pixels per second) that you want your message to scroll through the display.

**Auto Reverse** When checked, the display reverses the scrolling direction when it reaches the top or bottom of the list.

**Background** Select *Solid* and click in the color field to open the color palette. Select a color and luminance by sliding the vertical and horizontal sliders. Click outside the color edit box to close the palette.



Select *Gradient* and click in the color field to select a new background gradient color from the palette.

**Angle** When Gradient is selected, the Angle slider is activated. Move the slider to change the angle of the gradient display. Select also *Linear* (line) or *Radial* (circle) to change the shape of the gradient display.

**Text Color** Click the box to open the color selection panel. Select a new text color from the palette.

**Font** Select the desired font used for your messages. If you select Web Font, a Web Font field will display below. You can also select any of the fonts installed on your computer.

**Font Family** Select the style of the font: Arial, Bookman, etc.

**Font Size** Select the type of font size: points, small, medium, large, etc. If *In Points* is selected, a box to enter font size (in points) is displayed.

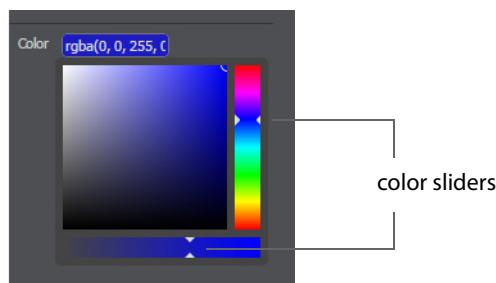
**Font Weight** Select the font weight: 100 to 900.

**Font Style** Enter the font style: Normal, Italic, or Oblique.

**Font Variant** Select a font variant: *Normal* (capital and small characters displayed normally), or *Small-caps* (Capitals with small letters displayed as small capital letters).

**Shadow** Check to activate the text shadow slider controls.

**Color** Click in the color field to open the color palette. Select a shadow color and luminance by sliding the vertical and horizontal sliders. Click outside the color edit box to close the palette.



**Offset** Move the Offset slider to adjust the direction (0 to 360 degrees) the shadow text is offset from the actual text.

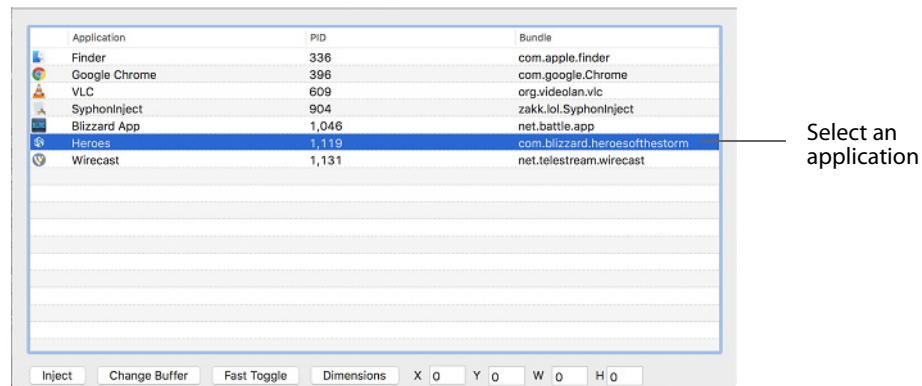
**Radius** Move the Radial slider to adjust the distance the shadow text is offset away from the actual text.

**Blur** Move the Blur slider to adjust the amount of blur in the shadow text.

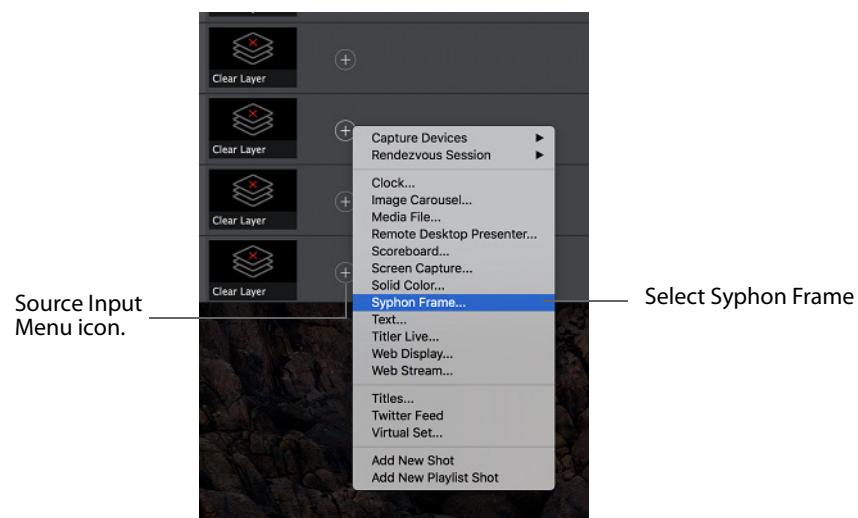
## SyphonInject™ Sources

SyphonInject™ enables you to insert applications into your Wirecast One streaming. To do this, follow these steps:

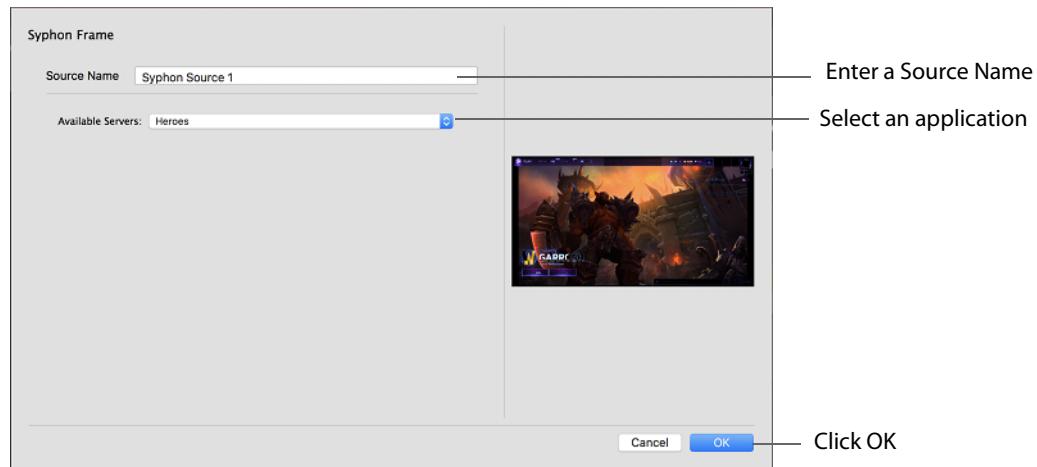
1. Download and install SyphonInject™.
2. Run SyphonInject™ and select an application.



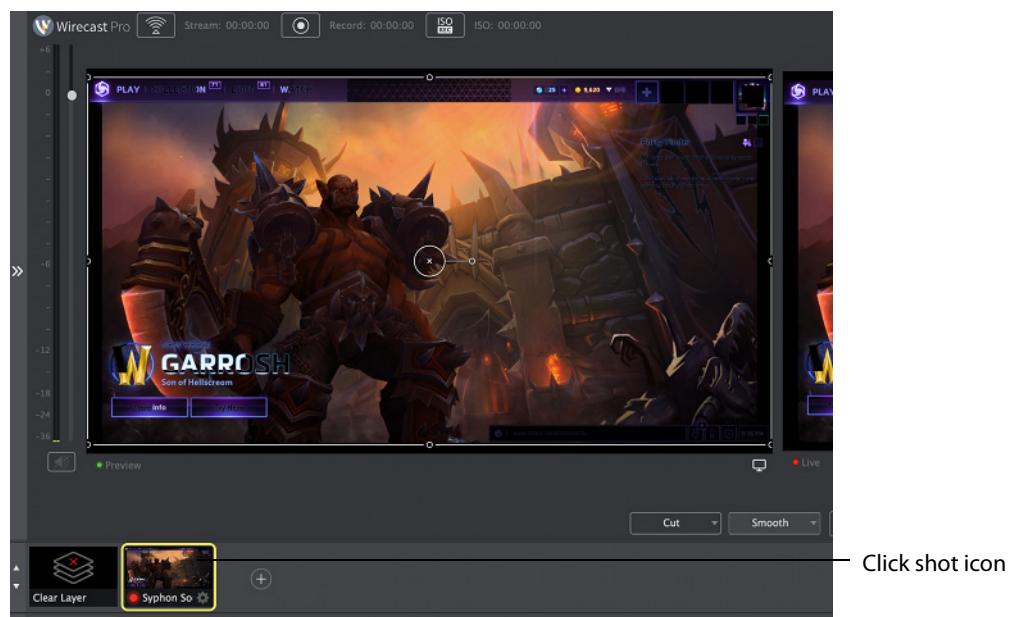
3. From the Source Input menu, select *Syphon Frame*.



4. When the Syphon Frame window displays, enter a source name and select an application from the drop-down menu. Click OK when finished.



5. Your application will be added as a shot. Click the shot icon to display it in your Preview window.



# Social Media

## Introduction

Two social media options are provided: Facebook and Twitter. Facebook enables you to receive polling data from viewers. Twitter enables you to add Twitter messages to your broadcast along with filtering what messages are displayed.

## Topics

- [Facebook](#)
- [Twitter](#)

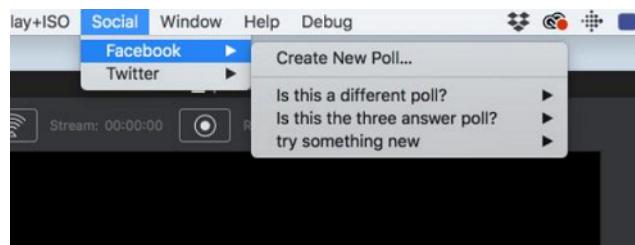
## Facebook

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**Note:** Facebook Polls are only shown in the Facebook UI when the Facebook Video is playing, and fully open.

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Facebook polls are controlled through the Social menu in Wirecast One. Select *Social > Facebook > Create New Poll* to create a new poll.



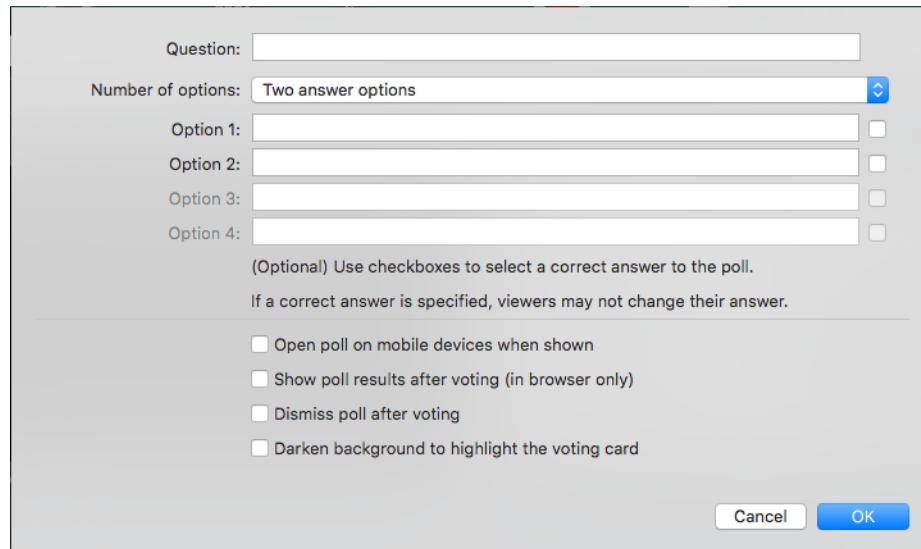
The *Social > Facebook* menu contains the *Create New Poll* option as well as any previously created polls. Polls are not saved with the document. They are saved with the WC application, the same as preferences are.

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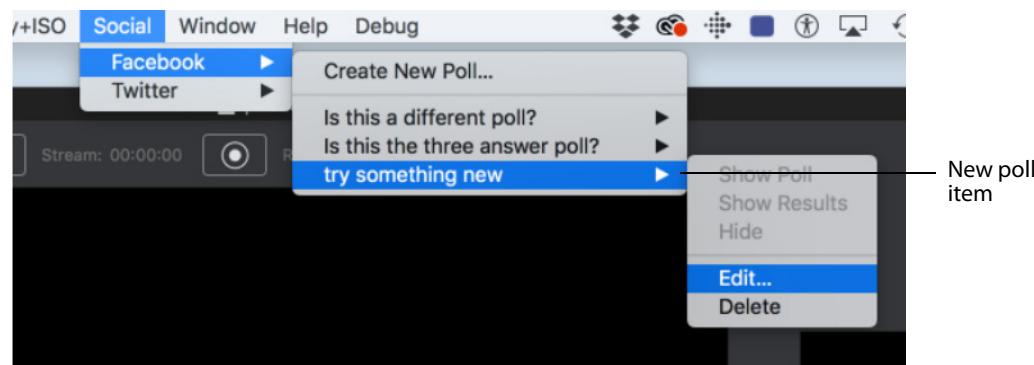
**Note:** Wirecast One can only use Facebook Polls created within the WC application itself. Facebook Polls created within the Facebook Live User Interface cannot be imported to Wirecast One.

---

When a new poll is created, a dialog for specifying the poll options is displayed. You may enter a question, select whether there are 2, 3, or 4 answer options, and you can specify each option. You must enter a question and the correct number of options for the poll to be created. There are also four optional check boxes to aid you in how your polling is implemented. Click **OK** to create your new poll.



Once the poll has been created, it is listed in the menu. When you select a poll, you see additional options to edit the poll, or delete the poll.

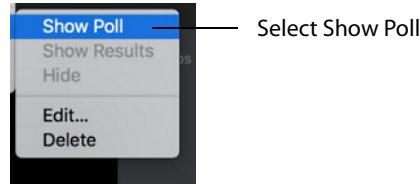


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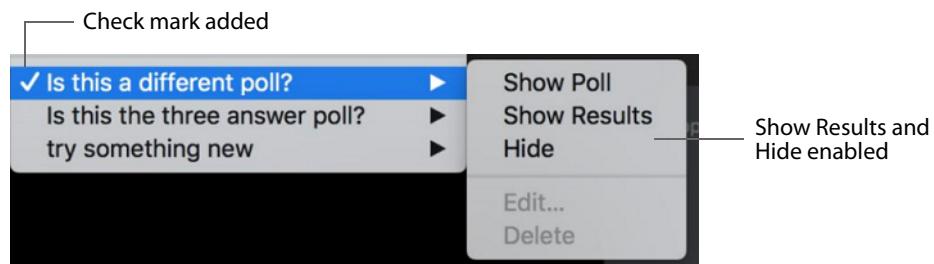
**Note:** Facebook does not allow you to edit a poll that is being shown, so this option is not enabled while streaming to Facebook and using a poll.

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The options to Show Poll, Show Results and Hide are available when streaming to Facebook. As soon as you start streaming, the *Show Poll* option is enabled. Select *Show Poll* to show a poll in your stream.

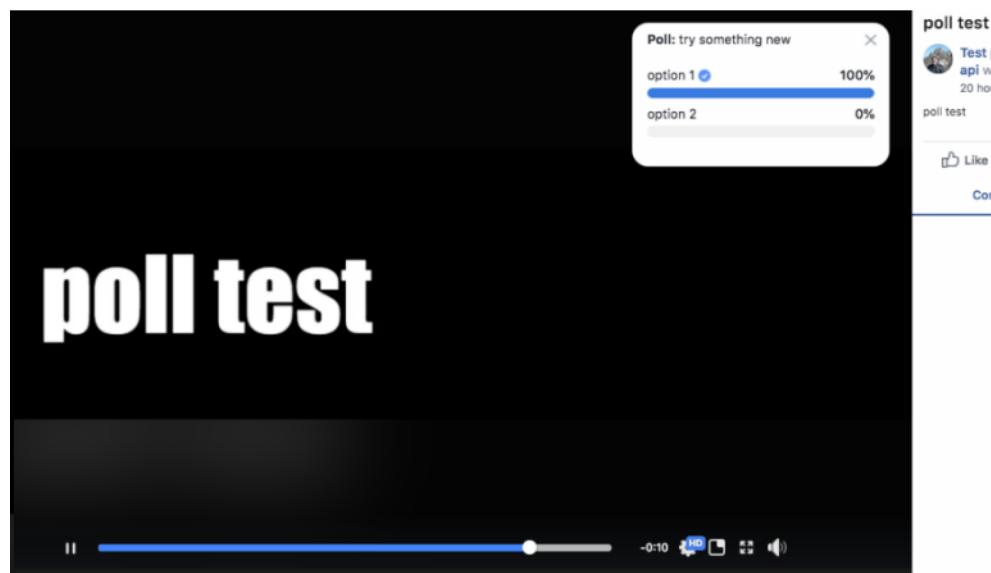


There is a lag of 5 to 15 seconds between selecting a poll and having it shown in your stream. When a poll is actually shown in your stream, a check mark is added to its menu item and the *Show Results* and *Hide* options are enabled.



You may show a poll or show its results (which closes voting) at any time while streaming to Facebook once the poll has been activated. You may only hide it if it is the active poll. Showing a different poll, or showing a different poll's results, will hide any other polls being shown. This allows you to decide if you want to show a poll, or show the results of the poll, and then hide it.

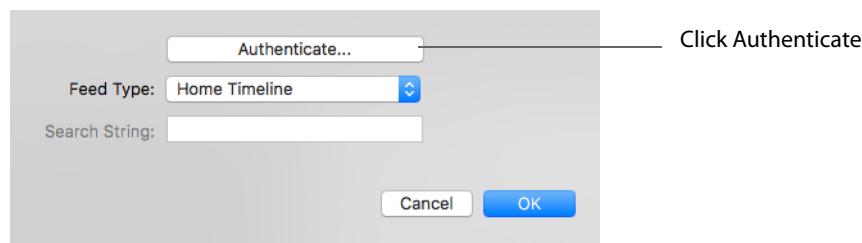
On Facebook, polls are not automatically shown. The viewer must click on the video to see or vote on a poll.



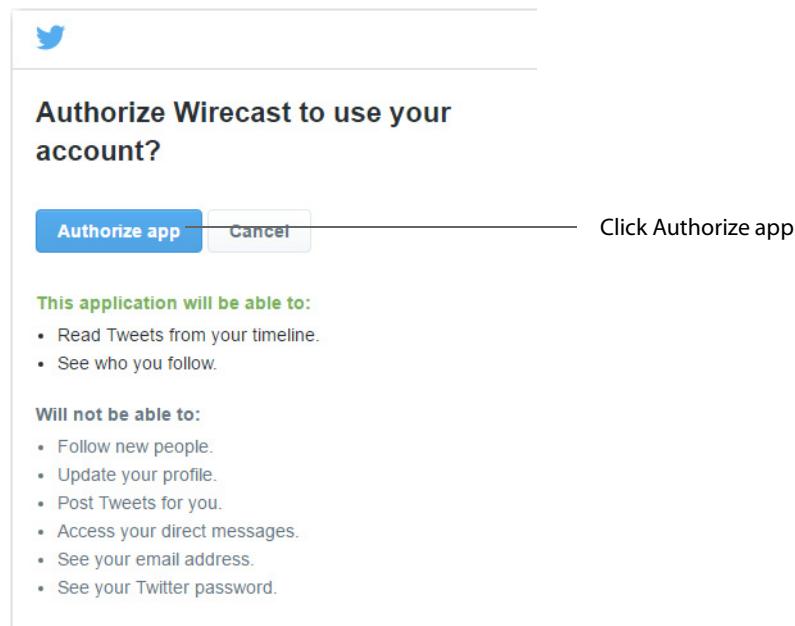
# Twitter

## Settings

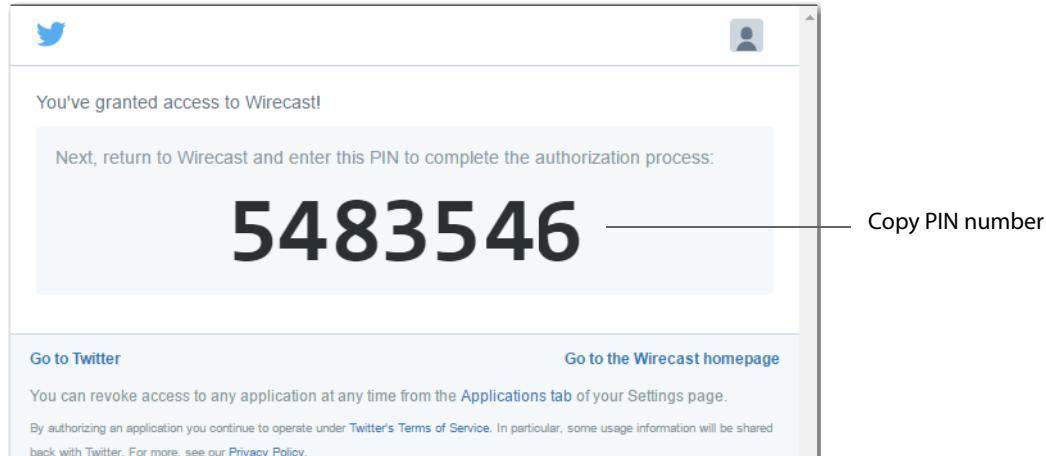
The first thing you need to do is Authenticate your account with Twitter. To do this select *Social > Twitter > Settings*, then click the *Authenticate* button. Enter your pin when the PIN field displays. Select a Feed Type: Home Timeline, User Timeline, Favorites, Search. If you select Search, the Search String field becomes active. Click *OK* when you are finished.



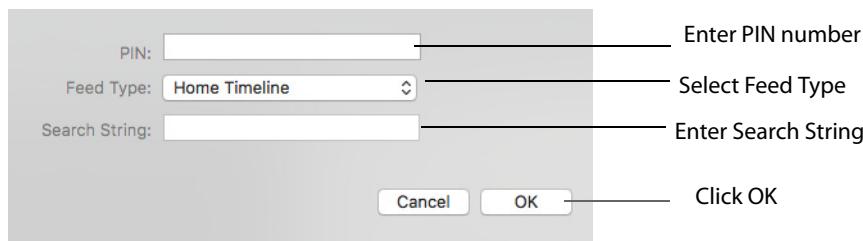
When the Twitter window displays, click *Authorize app*.



When the PIN window displays copy the PIN number. and close the window.



In the Twitter Settings window, enter (or paste) the newly copied PIN number, select the Feed Type, enter a Search String, then click OK.



Feed Types:

- **Home Timeline**
- **User Timeline**
- **Favorites**
- **Search** Displays Twitter feeds that contain a search string.

The Search String field is only active when you select Search as the Feed Type. Enter any word or phrase to use in searching for Twitter feeds that contain your selected words

## Create Shot

To create a new Twitter shot, select *Twitter > Create Shot*. When the new shot icon is displayed in the Sot List, click it to place it in the Preview window. You can click and drag the Twitter message box to any location in the shot. Click the Go button to take it live.

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**Note:** when a message feed is selected (see the *Message Feed* section below), the message will be automatically filled in.

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## Message Feed

Click Twitter > Message Feed to add some Twitter messages to your broadcast. When the message window displays, search (optionally) for the messages you want to broadcast.

The screenshot shows a search bar at the top with the text "coffee". Below it is a table with columns: Live, Time, User ID, and Message. The table contains 12 rows of tweet data. A callout box labeled "Enter search word" points to the search bar. A "Delete All" button is located in the top right corner of the table area.

Live	Time	User ID	Message	Delete
<input type="radio"/>	10/23/14 12:05 PM	Telestream	Educator Vaida Bogdan gives us the inside scoop! http://t.co/4GEgoMaBDN	X
<input checked="" type="radio"/>	10/22/14 4:02 PM	BeepityBloop	<b>Hot coffee, baby.</b>	X
<input type="radio"/>	10/20/14 1:54 PM	Telestream	Headed to #SMPTE2014 tomorrow? Get info abt! http://t.co/hFCatdGuOq	X
<input type="radio"/>	10/16/14 1:48 PM	Telestream	The beginning of something new! http://t.co/	X
<input type="radio"/>	10/14/14 9:15 AM	Telestream	Happy to announce a new release of MacCaptioning mandates! http://t.co/gGAg6Fe79G	X
<input type="radio"/>	10/9/14 10:05 AM	Telestream	See how Steve Smith and Wayfarers Chapel use for the lucky couple! http://t.co/ZogFOZGje	X
<input type="radio"/>	10/8/14 3:25 PM	Telestream	Telestream has products up for awards ts!! http://t.co/6VNKYrtgdy	X

To select messages to be rotated in your broadcast, first check *Rotate Selected Every*, and enter the number of seconds of the rotation interval. Select the messages you want rotated by checking the box at the left of each message. Select a starting message.

The screenshot shows the same interface as above, but with several features highlighted with callout boxes:

- "Check Rotate Selected Every" points to the checkbox in the top right corner of the table area.
- "Enter rotation interval" points to the input field next to the "Rotate Selected Every" checkbox, containing the value "5".
- "Select messages" points to the checkboxes on the far left of each row.
- "Select starting message" points to the radio button in the first row of the table.
- "optionally check Auto Refresh and enter number of seconds" points to the "Auto Refresh Every" section at the bottom left, which includes a checkbox and an input field set to "90".

You can also (optionally) check *Auto Refresh* and enter number of seconds. The gear icon allows you to select or unselect all messages. Once you have selected your messages, close the Message Feed window.



# Preferences

## Introduction

Wirecast One is designed so that you can configure most of your options directly in your Wirecast One document or the Shot Editor. The Preferences window enables you to set up Wirecast One, manage your licenses, update your software, and set advanced video options.

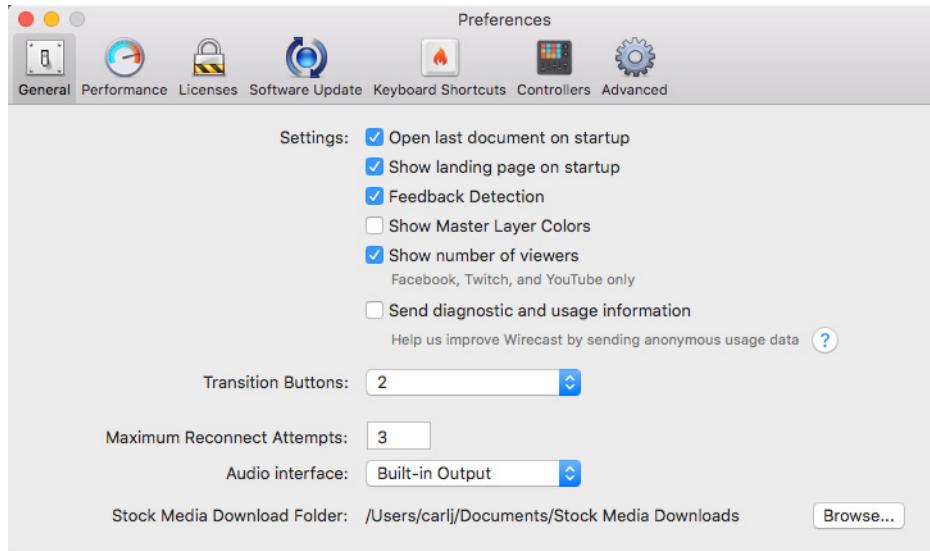
## Topics

- [Accessing Preferences](#)
- [General](#)
- [Performance](#)
- [Licenses](#)
- [Software Update](#)
- [Hot Keys](#)
- [Advanced](#)

## Accessing Preferences

To open the Preferences window, select Preferences from the Wirecast One menu (or press the Command+ Comma ("") keys). Preferences are grouped under five topics:

General, Performance, Licenses, Software Update, and Advanced. Click one of these topics to view and change its preferences.



Wirecast One automatically saves your preferences every time you make a change. The changes are immediately applied.

## Resetting Preferences

To reset your preferences, quit Wirecast One and then delete the files located at:

`~/Library/Preferences/Vara Software/Wirecast One Preferences`.

Or, you can use Support Assistant to reset preferences (see *Send Support Information* under [Help Menu](#)).

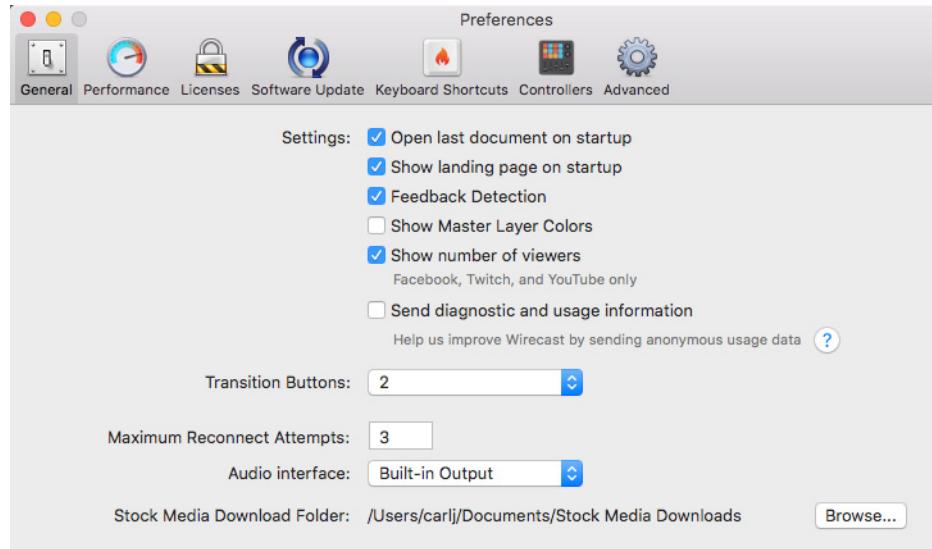
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**Note:** You should match the output to the canvas size as close as possible to preserve video resolution and quality. For example, a 800x600 source results in significant loss of quality if an aspect ratio of 640x480 is selected. Using 720x576, which is much closer in size, helps preserve video quality.

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# General

General preferences enable you to setup the Wirecast One environment.



**Open last document on startup** When checked, the last document you used is opened when Wirecast One starts up.

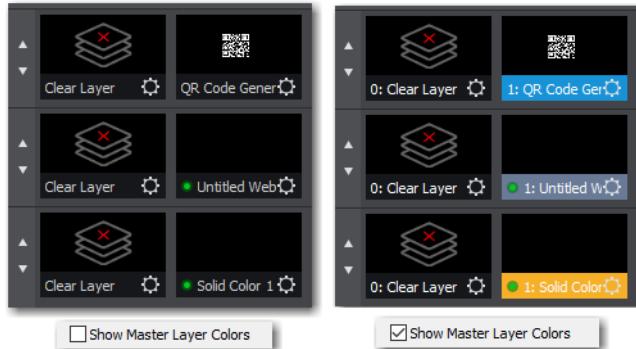
**Show landing page on startup** When checked, the Welcome screen is always displayed when Wirecast One starts up. You can disable this automatic display by unchecking this option, or by unchecking the box in the corner of the Welcome display. But you can only turn this automatic display back on by checking this box in the *Preferences > Advanced* window.

**Feedback Detection** When checked, the computer audio is disabled (live feed is unaffected) whenever feedback is detected. Checked is the default. When feedback is detected, a warning is displayed with an option to turn off feedback detection.

**Show Number of Viewers** When checked, enables the viewership indicator while streaming.



**Show Master Layer Colors** Check to display colors associated with each Master Layer.



**Transition Buttons** Select the number of transition buttons (one to three) displayed in the main window.

**Maximum Reconnect Attempts** Enter the number of times you want Wirecast One to try to reconnect to a host provider. The default is three.

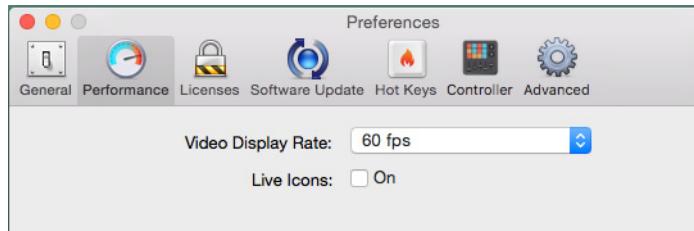
**Audio Interface** Select the audio playback driver used.

## Performance

Performance preferences enable you to select the display rate used for all internal video rendering.

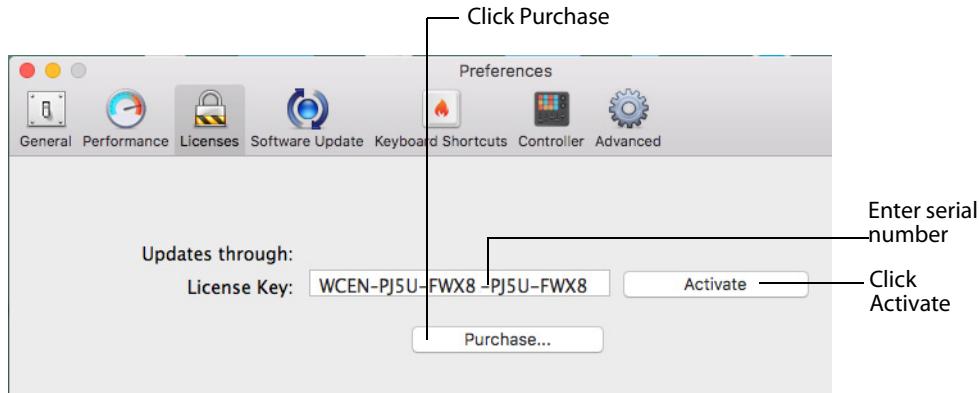
You can set the Video Display Rate to 24, 25, 30, 50 or 60 fps. If using PAL sources, choosing 25 may eliminate dropped or duplicate frames. It is recommended that you set this frame rate to match the frame rate of your output video encoder.

You can turn on the Live Icons feature, which makes all icons in the Shot Area display any live activity in the device it represents (cameras, streaming, etc.). You can also set the fps of the Live Icon display using the slide bar control.



## Licenses

The licenses preferences enable you to register and license Wirecast One. To purchase a license, click *Purchase*. To activate a license, enter your serial number and click *Activate*.



## Serial Numbers

The Buy Upgrade Preference window displays the products and serial numbers that you have received for Wirecast One.

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**Note:** The serial number is always composed of numbers and upper case letters (excluding upper case letter O), but it never contains quotation marks. When you receive a serial number, it may be enclosed in quotation marks (e.g., "123-456-789").

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If you wish to purchase a serial number from the web store, click *Buy*. When Wirecast One displays the Enter Serial Number window, enter the serial number and click *Activate*. Wirecast One validates the serial number and unlocks Wirecast One. If you previously purchased a copy of Wirecast One and want to use that serial number, enter that serial number to unlock Wirecast One.

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**Note:** If you do not want to purchase a serial number directly in Wirecast One, you can also purchase a serial number at [www.telestream.net](http://www.telestream.net).

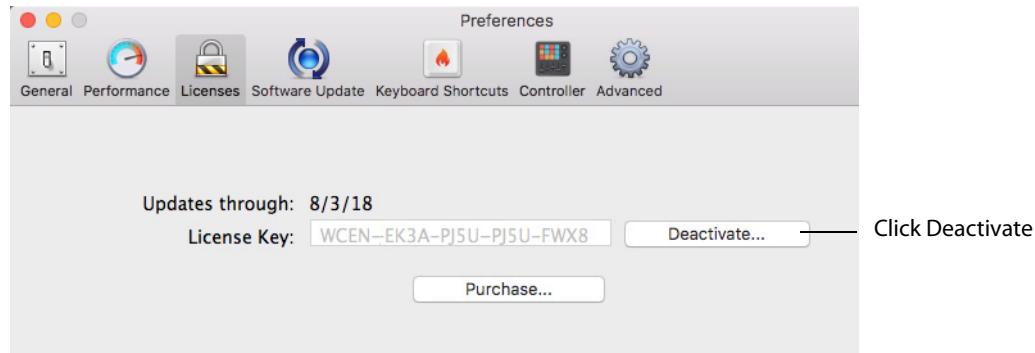
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## Manual Activation

If your computer is not on the Internet, you can use another computer to activate your license and unlock Wirecast One. To manually activate your license, download the Manual Activation Guide at: <http://www.telestream.net/telestream-support/wire-cast/training.htm> and follow the steps in the guide to unlock Wirecast One.

## Deactivate Serial Numbers

Deactivating a serial number allows you to re-activate it on another computer. You can always reactivate a serial number by re-entering it. To deactivate a serial number, click the *Deactivate* button on the Licenses tab in Preferences. Wirecast One deactivates the serial number and adds water-marking to the video and audio whenever licensed features are used. When you deactivate a serial number, it is removed from the table.

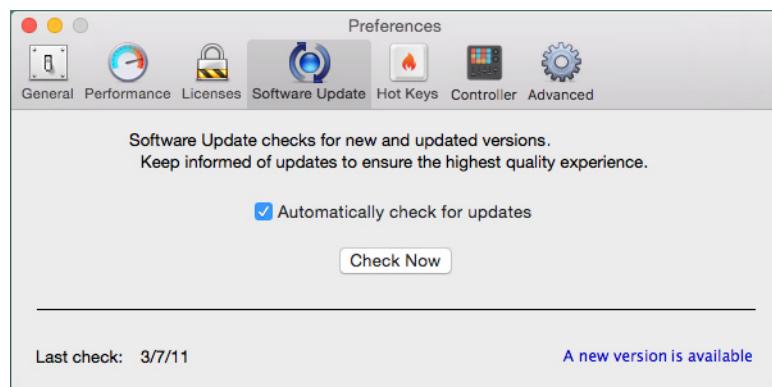


## Demonstration Mode

When no serial number is entered or activated, Wirecast One water-marks all output (both to disk and network). The video water-mark is a periodic overlay of the Wirecast One logo. Audio water-mark is a periodic voice over. If you have a Wirecast One serial number and are using a Wirecast One Pro feature without a Pro license, that output is also water-marked.

## Software Update

Software update preferences enable you to obtain Wirecast One updates.



**Automatically Check Updates** Check the Automatically Check For Updates checkbox to cause Wirecast One to check for updates on the Telestream Website each time Wirecast One is launched. No personal information is transferred to Telestream during this action.

**Check Now** Click *Check Now* to immediately check for updates on the Telestream Website ([www.telestream.net](http://www.telestream.net)). No personal information is transferred to Telestream during this action.

## Upgrades Included

With each purchase of Wirecast One— whether it is an upgrade purchase or full license – you receive a Standard Support subscription for 1 year from the date of purchase. This subscription can be renewed annually.

Optionally, customers can choose to upgrade this Standard Support subscription to a Premium Support subscription at any time, for an additional fee. Premium Support subscriptions can also be renewed annually.

Your support subscription is tied to your Wirecast One license. As long as your license is entered into the software and your Premium or Standard support subscription is active, you will be allowed to upgrade to the latest unlocked version of Wirecast One for free. To do this, download and install the latest version of Wirecast One and you will automatically have access to all the new features (depending on your license level).

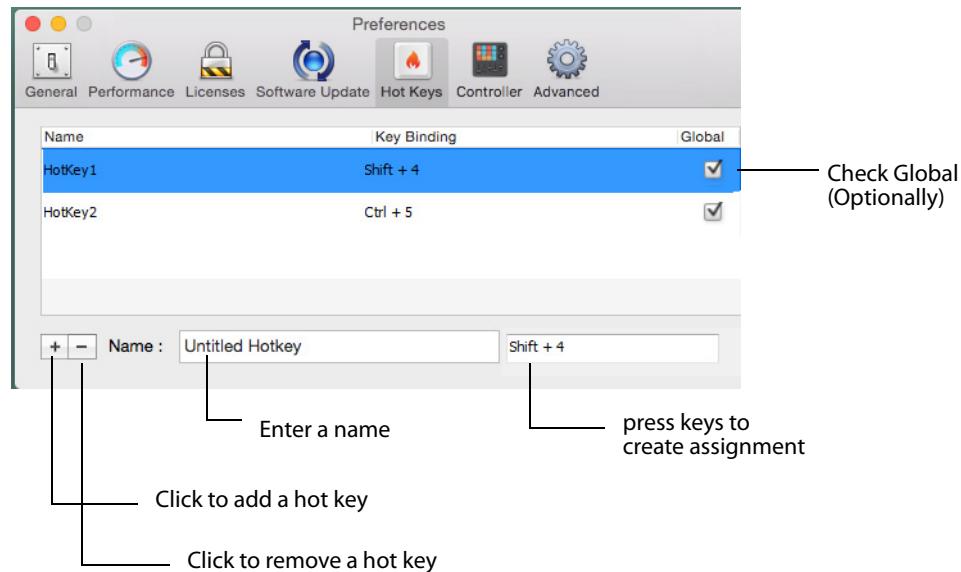
If your support subscription is expired, or you have not entered your license into the software, you will not be able to upgrade to an unlocked version and the software will revert to *demo* mode. However, you may continue to use the last valid version of the software released during your support subscription coverage.

If your support subscription is about to expire (12 months from the date of purchase), Wirecast will prompt you to renew it. If you do not renew it before it expires, you may re-subscribe at any time for an additional fee.

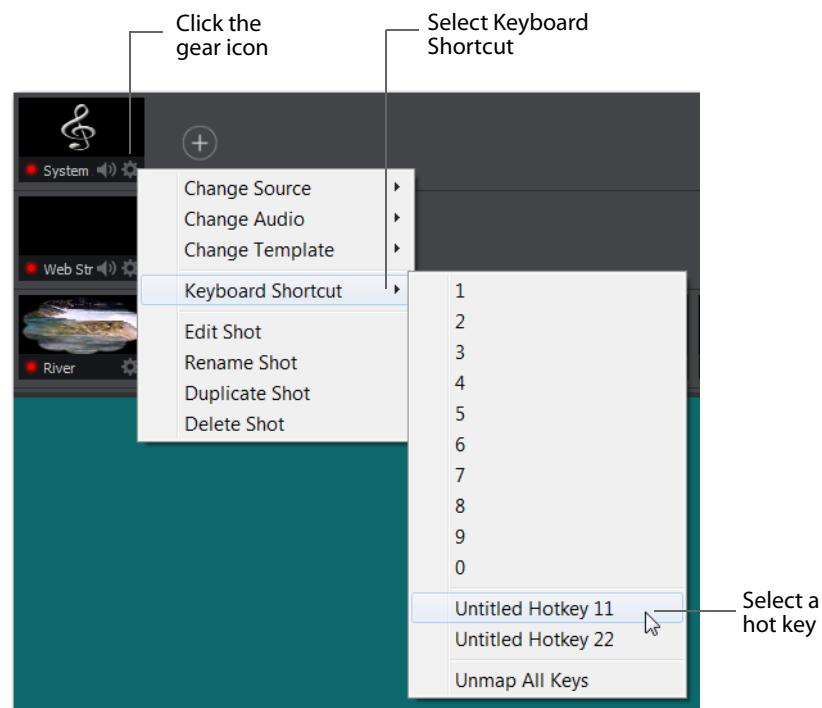
## Hot Keys

Hot Key preferences enable you to create custom hot key assignments. To add a new hot key, click the add (+) button. Press the keys you want to define that hot key and enter a name for your hot key. To remove a hot key, select it in the hot key list and click the remove (-) button. Additionally, you check the Global check box to make your hotkey “global”. This means that even if the Wirecast One window is not the active

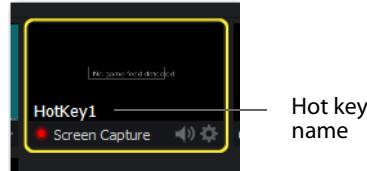
window, the hot key will still work. Otherwise (if Global is not checked) the window must be selected in order for the hotkey to work.



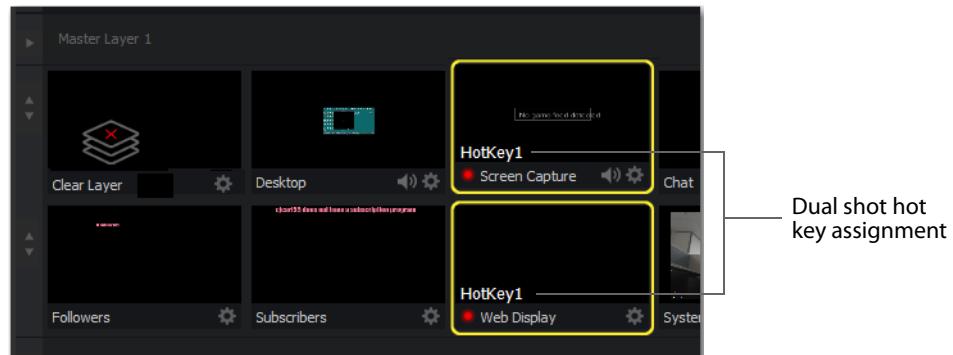
Hot keys are associated with a shot by selecting the Keyboard Shortcuts menu (by clicking the shot gear icon), then selecting a hotkey. This selection binds the hot key to the shot.



Once a hot key is assigned to a shot, the name of the hot key displays in the shot icon.

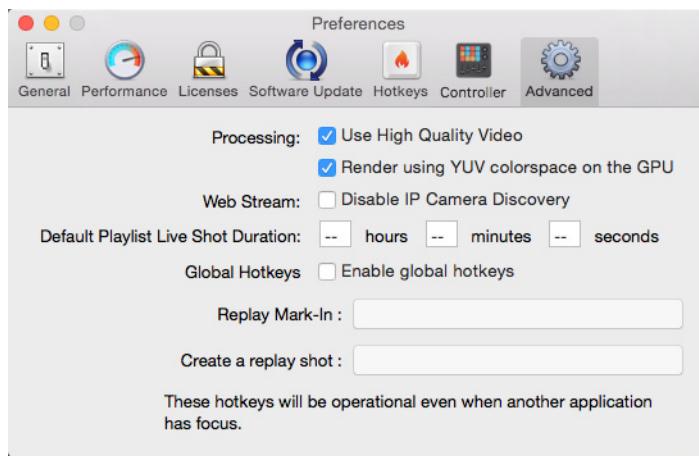


You can assign multiple shots to the same hot key. This is useful when you want different shots on different layers to be activated at the same time using one hot key. To do this, assign the hot key to the first shot (as described above), then assign the same hot key to a second shot on another layer. The shot name will display in both shot icons.



## Advanced

Advanced preferences enable you adjust advanced settings for Wirecast One.



### Use High Quality Video

Check the Use High Quality Video checkbox to increase the quality of decoding performed on your source media files. If CPU usage is near 95%, or if the frames per second (fps) is consistently well below your target, uncheck *Use High Quality Video* to remedy this. Checked is the default.

## Render using YUV Colorspace

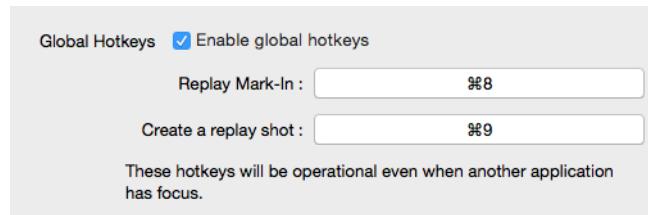
If *Render using YUV colorspace* is checked, video frames will be rendered on the GPU using YUV rather than RGB. This will typically provide a performance advantage and save on memory. Performance will improve when streaming to most destinations (including Virtual Camera Out). The best way to know if this option is advantageous to use on your system is by trial and error, and observe the results.

## Disable IP Camera Discovery

Check *Disable IP Camera Discovery* to turn off automatic discovery of IP Cameras.

## Global Hot Keys

Check *Enable global hotkeys* to define hotkeys for “Replay Mark-In” and “Create a Replay Shot” functionality. To assign a hot key, first select one of the functions by clicking in its edit box, then press a key stroke sequence to be used as the hot key (i.e. command + 8).



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**Note:** These Global Hot Key settings are specifically for Replay. This is so you can activate Replay functions when the application window is not in focus while playing games, etc.

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# Menus and Windows

## Introduction

These topics describe the menus, menu items, and keyboard shortcuts in Wirecast One.

## Topics

- [\*Wirecast One Menu\*](#)
- [\*File Menu\*](#)
- [\*Edit Menu\*](#)
- [\*Switch Menu\*](#)
- [\*Media Menu\*](#)
- [\*Output Menu\*](#)
- [\*Layout Menu\*](#)
- [\*Twitter Menu\*](#)
- [\*Window Menu\*](#)
- [\*Help Menu\*](#)

## Wirecast One Menu

**About Wirecast One** Displays the version you are running.

**Preferences** Opens the Preferences window. If the Preferences window is already open, it becomes the active window.

**Services** Presents the Macintosh Services available.

**Hide Wirecast One** Hides all of the windows.

**Hide Others** Hides all non-application windows.

**Show All** Shows all non-application windows.

**Quit Wirecast One** Closes all documents and exits. If the broadcast is playing, you are asked to stop the broadcast first. If a document has not been saved, you are asked to save it.

## File Menu

**New** Creates a new, empty Wirecast One document.

**Open** Displays the Open dialog window for opening a Wirecast One document.

**Open Recent** Displays up to fifteen of the most recently accessed documents. Every time a document is opened or saved it is entered into this list.

**Import Media** Enables you to import media into Wirecast One. A new shot is automatically created using the new media.

**Save** Saves the document. If the document has not already been saved, the Save As... dialog window is displayed.

---

**Note:** Wirecast One auto-saves your Stream/recording. All formats (WMV, MOV, MP4) will be recoverable in increments of 20 seconds. Any recording less than 20 seconds is corrupted. ISO also recovers. In the case of an unexpected shutdown, the recoverable video is available in increments of one minute.

**Save As** Displays the Save As... dialog window so that the document can be saved using a new file name.

**Close Window** Closes the currently active Wirecast One window. If the window is a document, all of its Shot Editor windows are closed as well. If Wirecast One is still broadcasting, you are asked to stop the broadcast. If the document has not been saved, you are asked to save the document before closing.

## Edit Menu

**Undo** Reverses your last change in Wirecast One. Undo is only available in some windows (such as the Preview window). Wirecast One offers an unlimited number of undo actions (within computer memory limitations). Undo information is stored on a per-window basis. Also, if you close a window then reopen it, your undo information is lost.

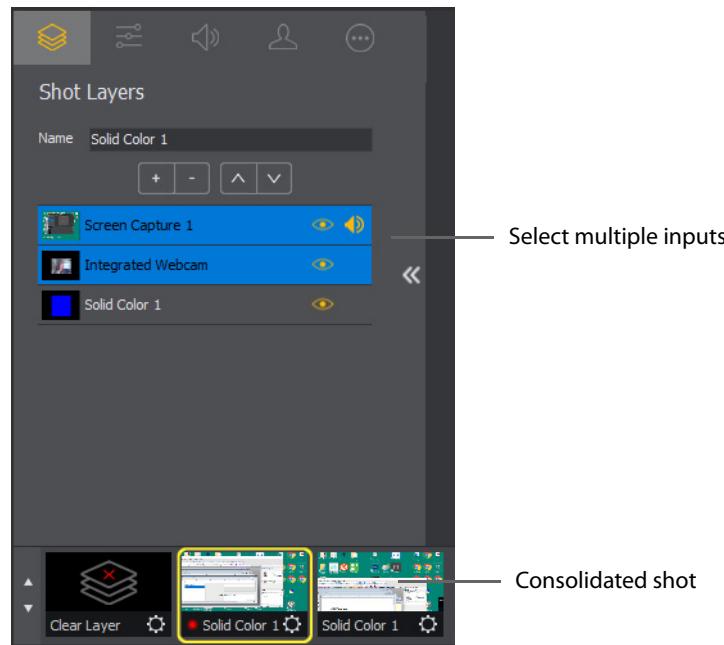
**Redo** Reverses your last undo action. Redo is only available in some windows (such as the Preview window). Wirecast One offers an unlimited number of redo actions (within your computer's memory limitations). Redo information is stored on a per-window basis. Also, if you close a window then reopen it, your redo information is lost.

**Cut** Cuts selected text.

**Copy** Copies selected text to clipboard.

**Paste** Pastes selected text from clipboard to location of cursor.

**Paste as new Consolidated Shot** A *consolidated shot* is a shot created by selecting multiple sources in the Shot Layers tab of the Shot Editor and then creating a new shot using these selected sources. To do this, select multiple inputs, select *Edit > Copy*, then selecting *Edit > Paste as new Consolidated Shot* to create a new shot in the selected layer.



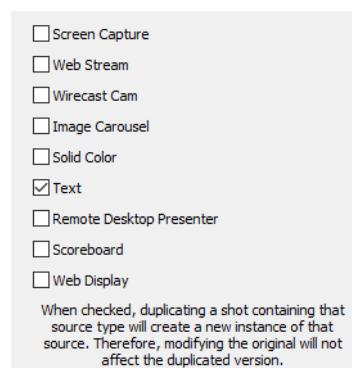
**Select All** Selects all text in the active window.

**Edit Shot** Opens the Shot Editor. (See *Shot Editor*). You can also double-click a shot, or right-click and select *Edit Shot*, to open the Shot Editor.

**Rename Shot** Enables you to rename a shot. You can also right-click a shot and select *Rename Shot*.

**Duplicate Shot** Duplicates the currently selected shot. You can also right-click a shot and select *Duplicate Shot*.

**Duplicate Shot Options** Check a source to create a new instance of it when duplicating the shot containing it. Multiple selection is allowed.



**Add Shot** Creates a new empty shot. You can also right-click a shot and select Add Shot.

**Delete Shot** Deletes the currently selected shot. You can also right-click a shot and select Delete Shot.

**Move To Layer** Moves a shot to the selected layer. When shots are created, they are assigned to a specific layer. They exist on that layer until they are moved or deleted. You can also click and drag a shot to another layer.

## Switch Menu

**Go** Performs a transition (same action as clicking the Go button).

**Transitions** Wirecast One has two transition buttons that can be assigned any transitions (cut, smooth, etc.) that Wirecast One supports. The Switch menu lists the currently assigned transitions by name. These two transitions can also be selected by pressing the control key and either the 1 or 2 key. (See *Transition Controls* to modify which transitions appear in this menu.)

**Transition Speed** Enables you to select one of five transition speeds ranging from Slowest to Fastest.

**AutoLive** Toggles (turns on and off) the AutoLive feature. AutoLive is a fundamental feature of Wirecast One which enables you to control how you make shots become part of the live broadcast. (See *AutoLive*.)

**Live/Preview Swap** Toggles (turns on and off) the Live/Preview Swap feature. When on, the Live Broadcast and Preview windows trade panes (swap) when the Go button is clicked.

## Media Menu

**Start Playing All Movies** Starts playing any movies that are not currently playing.

**Pause All Movies** Pauses all movies that are currently playing.

**Show Asset Manager** Displays devices that can be configured. Some devices (cameras, etc.) may be configurable. For example, you can configure an iSight camera to manually change its focus, contrast, brightness, etc. Other devices have multiple inputs you can choose (AlchemyTV Card, etc.). (See *Asset Manager*.)

---

**Note:** The Configure Devices menu selection is present only if a device is connected to Wirecast One. The configuration user interface is provided by the device maker. It is beyond the scope of this document to describe all of the features available for all devices. See the documentation provided with your device on how to configure it.

# Output Menu

**Output Settings** Opens the Output Settings window.

**Start/Stop Broadcasting** Starts (or stops) broadcasting to the network. You can also click the Broadcast button on the Window Bar in the Main Window.

**Start/Stop Recording** Starts (or stops) recording to disk. If you have not yet configured the Output Settings for this document, you are prompted to do so. You can also click the Record button on the Window Bar in the Main Window.

**Show Recordings** Opens all the folders of all the file directories in the Output Settings.

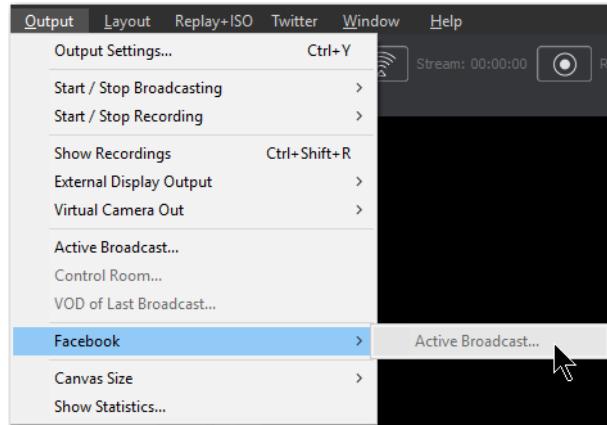
**Virtual Camera Out** Enables you to present the output of Wirecast One as if it were a camera (a virtual camera), allowing it to be automatically detected by other applications when they are launched. Outputs only the Live Program feed. (See *Virtual Camera* in Broadcasting section for more detailed information).

---

**Note:** *Active Broadcast* is enabled only for Periscope/Twitter and YouTube., *Control Room* and *VOD of Last Broadcast* are enabled only when you are logged into YouTube.

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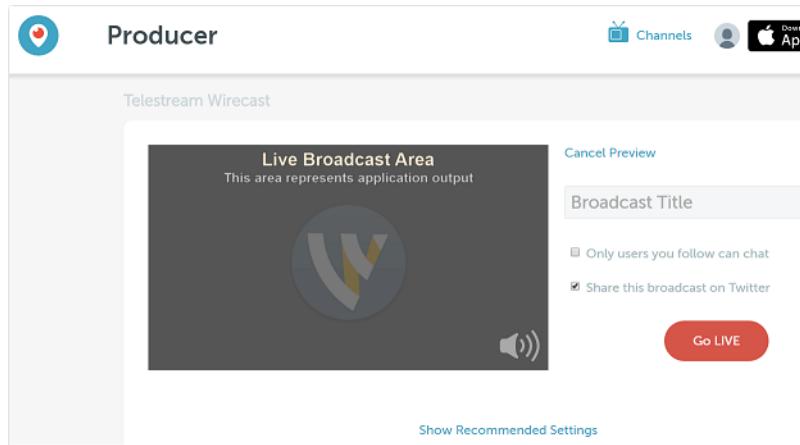
**Facebook (Facebook Live Only)** Select *Active Broadcast* to display your Facebook Live event.



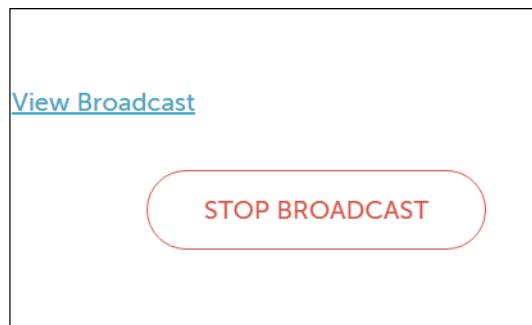
**Periscope/Twitter** Opens menu to monitor your Periscope/Twitter broadcast.

- **Active Broadcast** Once you have logged into your Periscope/Twitter account and you start streaming, you can select *Active Broadcast* to display the your broadcast window in a browser.
- **Producer Dashboard** Once you have logged into your Periscope/Twitter account, you can select *Producer Dashboard* to display the Periscope/Twitter dashboard

window in a browser. In the dashboard you can start your broadcast by clicking the *Go Live* button.



To stop your broadcast click the *Stop Broadcast* button.



- **Toggle Broadcast** Click to toggle between *Go Live* and *Stop Broadcast* on the Producer Dashboard.

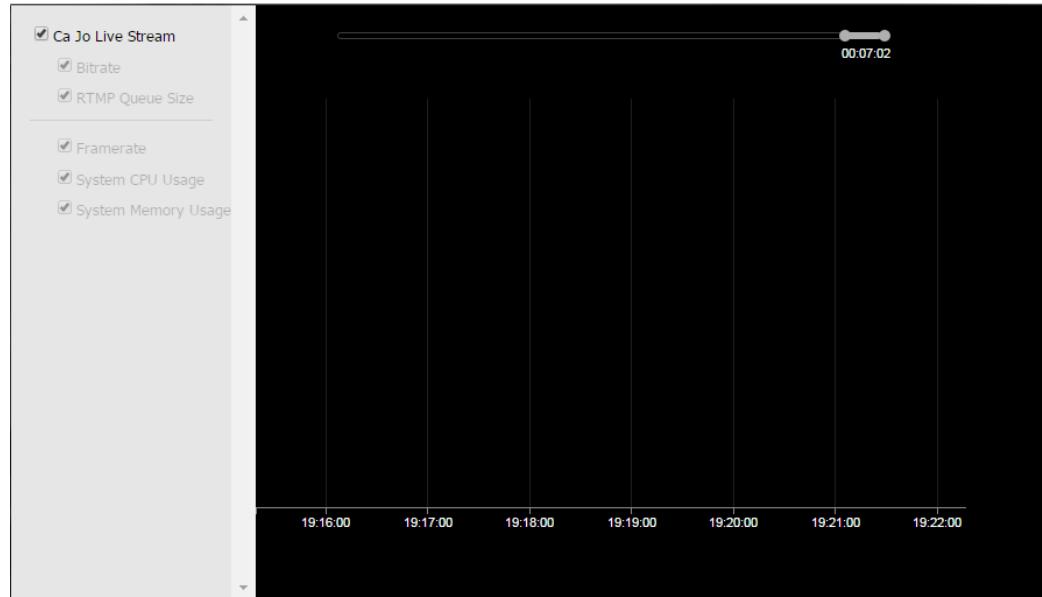
**Canvas Size** Sets the canvas size resolution used when broadcasting a Wirecast One document.

---

**Note:** You should match the output to the canvas size as close as possible to preserve video resolution and quality. For example, a 800x600 source results in significant loss of quality if a resolution of 640x480 is selected. Using 720x576, which is much closer in size, helps preserve video quality.

---

**Show Statistics** Displays the statistics window for your broadcast. You can select (for display): Bitrate, RTMP Queue Size, Framerate, System CPU Usage, and System Memory Usage.



## Layout Menu

**Master Audio** Shows (or hides) the Master Audio controls.

**Show Live and Preview** Displays the Live and Preview windows.

**Show Preview Only** Displays the Preview window only.

**Show Live Only** Displays the Live window only.

---

**Note:** The above three controls are the same as the Live/Preview Control buttons at the top of the main window.

---



**Go to Layer** Displays the selected layer. You can also press command + Shift keys with the T, F, N, B, or A keys to select a layer. Each of these letter keys represents a layer name: Title, Foreground, Normal, Background, and Audio.

**Activate layer** Activate (checked) or deactivate (unchecked) a layer. You can also click the LED on the right side of each layer window.

**Game Overlay** Shows or hides an overlay that displays streaming statistics.

## Social

Two social media options are provided: Facebook and Twitter. Facebook enables you to receive polling data from viewers. Twitter enables you to add Twitter messages to your broadcast along with filtering what messages are displayed.

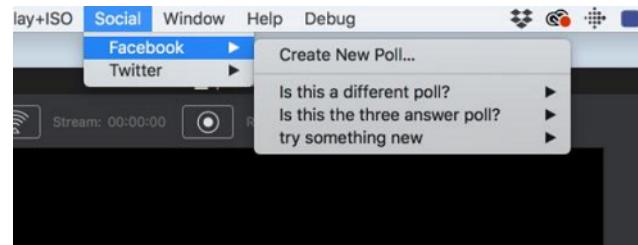
## Facebook

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**Note:** Facebook Polls are only shown in the Facebook UI when the Facebook Video is playing, and fully open.

---

Facebook polls are controlled through the Social menu in Wirecast One. Select *Social > Facebook > Create New Poll* to create a new poll.



The *Social > Facebook* menu contains the *Create New Poll* option as well as any previously created polls. Polls are not saved with the document. They are saved with the WC application, the same as preferences are.

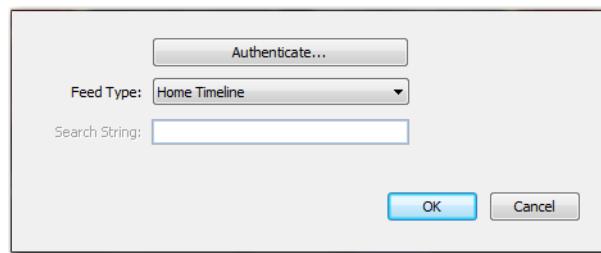
(See [Facebook](#) in the Social Media section of this user guide for more detailed information).

## Twitter Menu

**Message Feed** Brings up your Twitter feed.

**Create Shot** Creates a shot with a social media title in Master Layer 1.

**Settings** Brings up the Social Media Settings dialog.



- **Authenticate** Click to authenticate your account with Twitter. Enter your pin when the PIN field displays.

- **Feed Type** Select a Feed Type: Home Timeline, User Timeline, Favorites, Search. If you select Search, the Search String field becomes active.
- **Search String** Enter a search string. (Active only when Search is selected in Feed Type above.)

(See [Twitter](#) in the Social Media section of this user guide for more detailed information).

## Window Menu

**Minimize** Minimizes the front-most window.

**Zoom** Maximizes the front-most window (zooms to the full size of the screen).

**Welcome to Wirecast One** Displays the Welcome screen.

**Encoder Presets** Opens the Encoder Presets window.

**Show USB Devices** Opens a list of all USB devices.

### STUDIO

**New Layer Window** Opens a new Master Layer window for the layer selected.

**Document Windows** All open document windows are listed at the bottom of this menu.

## Help Menu

**Wirecast One Help** Opens the online help version of the User Guide.

**Open Wirecast One PDF User Guide** Opens the PDF version of the User Guide.

**Open Tutorial HTML** Opens the Wirecast One Tutorial in your browser. To follow the tutorial, you'll need to Create a Document for the Tutorial as well.

**Create Document for Tutorial** Creates a new Wirecast One Document which contains the media necessary for following the Tutorial.

**Buy/Upgrade** Opens *Buy Upgrade* in the Preferences window. This window allows you to purchase licenses and to activate or deactivate them.

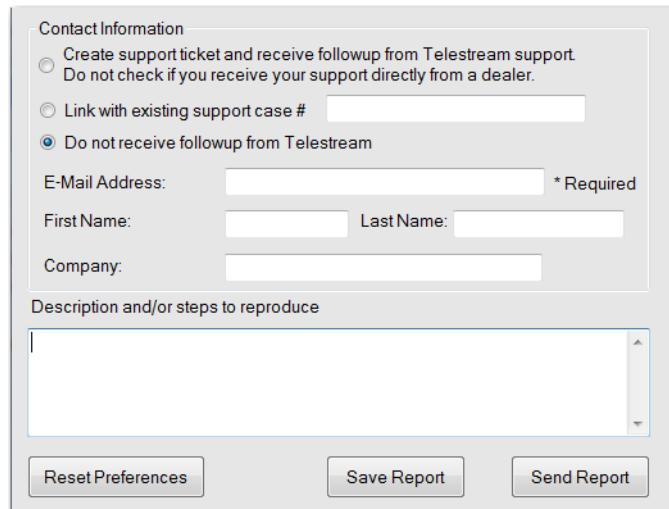
**Provide Feedback** Opens the Telestream Website feedback page where you can enter any feedback you may have about our product or company.

**Send Support Information** Opens a Support Assistant dialog window. To create a new support ticket, select *Create a support ticket*. The information is sent to the Telestream support team for evaluation. If you have been previously issued a case number, select *Link with existing support case #* and enter your case number. You can also select *Do not receive follow-up from Telestream*. This enables you to send support information to Telestream without receiving a response. Click *Save Report* to save the information to a file on your computer. Click *Send Report* to send the information to Telestream.

---

**Note:** You must click *Send Report* to create a ticket. If you click *Save Report*, a ticket will not be created.

---



The screenshot shows a 'Contact Information' dialog box with the following fields:

- Contact Information** section:
  - Create support ticket and receive followup from Telestream support.
  - Do not check if you receive your support directly from a dealer.
  - Link with existing support case #
  - Do not receive followup from Telestream
- E-Mail Address:  \* Required
- First Name:  Last Name:
- Company:
- Description and/or steps to reproduce:
- Buttons at the bottom:
  - Reset Preferences
  - Save Report
  - Send Report

**Visit Telestream Website** Opens the Telestream Website home page.

**Acknowledgments** Opens an on-line help to Acknowledgments.

# Broadcasting

## Introduction

---

**Note:** Wirecast One will not prevent your computer from entering sleep mode. Therefore, to ensure uninterrupted streaming, you should disable sleep mode on your computer while using Wirecast One.

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**Note:** To avoid a decrease in video quality, Wirecast One should not be used at CPU usage above 80%. See the Telestream Website for suggested configurations.

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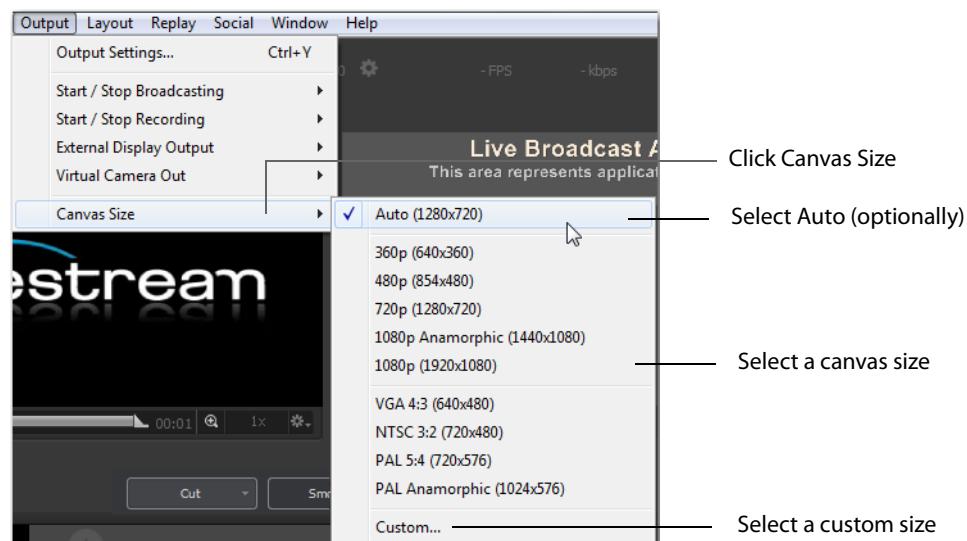
## Topics

- [Canvas Size](#)
- [Virtual Camera](#)
- [Output Settings](#)
- [Encoder Presets](#)
- [RTMP Server](#)
- [Telestream Cloud Settings](#)
- [Bambuser, BoxCast, Churchstreaming.tv, Dailymotion, DaCast Streaming Services, ESE Networks, Lightcast, Livestream, Meridix Live Sports Platform, Onstream media, Pitch-time, SermonAudio, StreamingChurch.tv, StreamShark.io, StreamSpot, Streaming Media Hosting, Stretch Internet, Sunday Streams, Titled Globe, Tulix Streaming, Ustream, WebCast-TV, WorshipStream,](#)
- [Azure Media Services, Sermon.net, Verizon Digital Media Services.](#)
- [Brightcove, Limelight](#)
- [Akamai](#)
- [Twitter/Periscope](#)
- [Twitch](#)
- [Vimeo](#)
- [Wowza Streaming Engine.](#)
- [Zixi](#)

- [Facebook Live](#)
- [Facebook Live - With User Code](#)
- [Microsoft Stream](#)
- [YouTube](#)
- [Streaming](#)
- [Record To Disk](#)

## Canvas Size

When *Output > Canvas Size* is selected, a drop-down menu with various canvas sizes is displayed allowing you to select the canvas size you want. You can also select *Auto*. This automatically sets the canvas size to the highest resolution that was selected when the encoder was chosen.

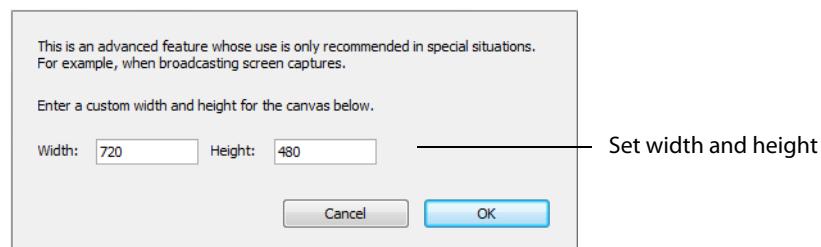



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**Note:** Canvas size selection *1080p Anamorphic (1440x1080)* is a narrower (1440) display stretched to display as 1080.

---

There is also a *Custom* option that enables you to set the canvas width and height.

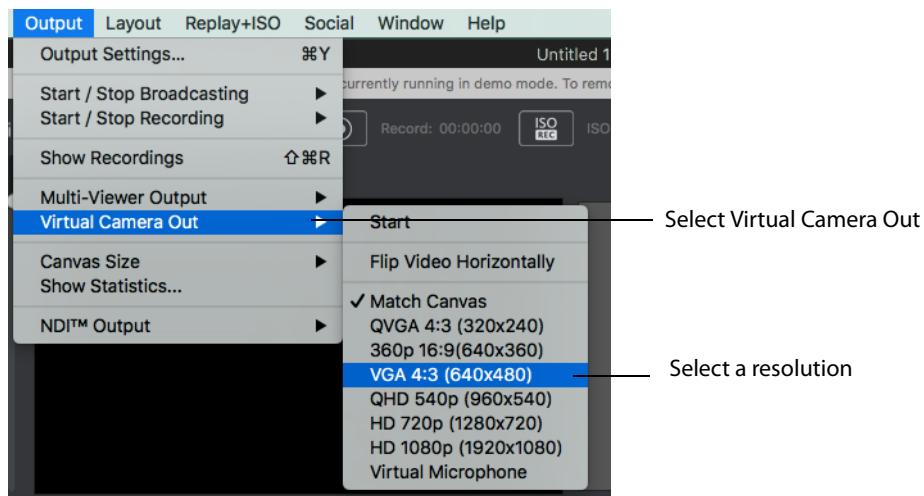


Wirecast One can manage a wide variety of input sources, enabling you to have several live camera sources. However, really high-quality video sources can cause more harm than good. For example, an HD camera feed into a Wirecast One canvas that is set to HD resolution and then broadcast out in HD, requires a lot of work for the graphics processor. If the frame rate starts to drop but the CPU usage stays steady, it creates a bottleneck. The solution is to reduce the frame size going through Wirecast One. Therefore, there is no need to bring input video in at HD resolution if Wirecast One is streaming out a lower resolution.

Keep in mind that resizing down is good but resizing up reduces quality. As a rule, you should try to keep your resolution as constant as possible from source to output. There is no benefit from using an HD camera if you're only broadcasting a low resolution stream. This only increases the work your computer must do without any increase in output quality.

## Virtual Camera

Wirecast One enables you to present the output of Wirecast One as if it were a camera (a virtual camera), allowing it to be automatically detected by other applications when they are launched. To setup Wirecast One as a virtual camera, select *Output > Virtual Camera Out*, then select the output resolution to use. You can also select *Match Canvas* to cause the resolution to be the same as the current canvas size.



**Start** Once you have selected an output resolution, select *Start* to make Wirecast One output available to other applications on your computer.

Some of the applications Wirecast One can work with using virtual camera are:

- Google+ Hangouts
- Skype
- GoToMeeting

---

**Note:** Virtual Camera only works with one application at a time.

---

**Flip Video Horizontally** When checked (selected) the Virtual Camera video is flipped horizontally.

**Virtual Microphone** When selected, enables you to present the audio output of Wirecast One as if it were a microphone (a virtual microphone), allowing it to be automatically detected by other applications when they are launched.

---

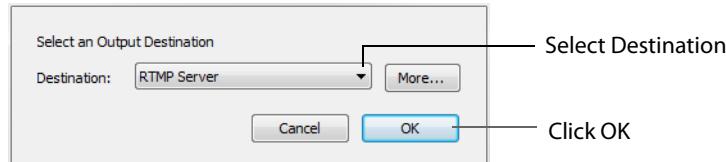
**Note:** Virtual Microphone can only be installed during Wirecast One installation.

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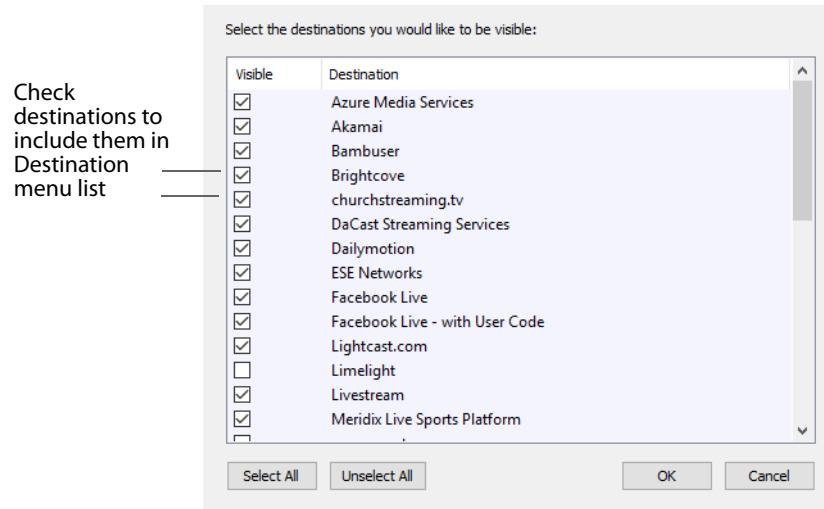
## Output Settings

To configure output settings select *Output > Output Settings* to open the Output Settings window.

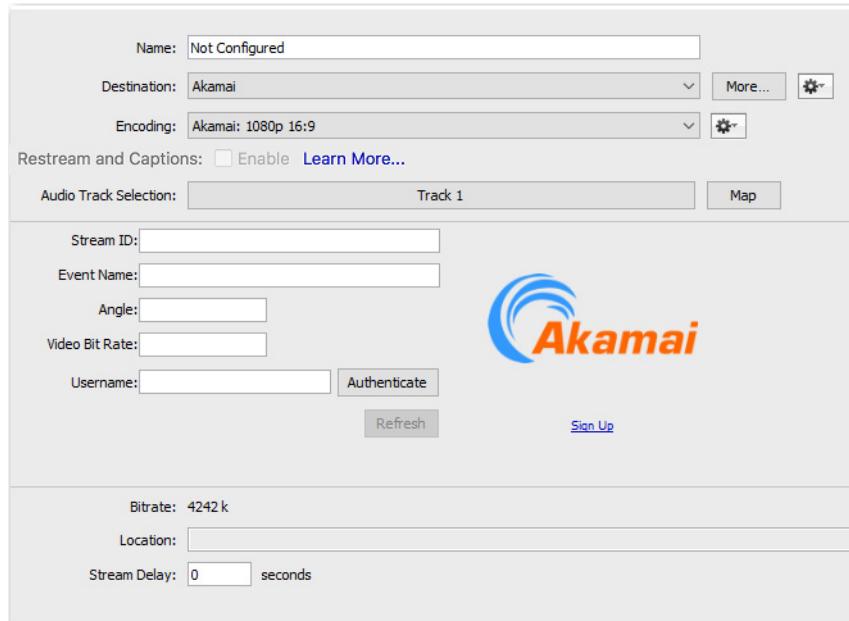
When the dialog box displays, select a destination, then click OK.



You can also click *More* to display a list of all available destinations. Check the checkbox for each destination you want to include in the destination menu list.



The Output Settings window displays the destination you selected. Each destination window has a unique set of controls including a way to authenticate your connection.



## Configuration

There are two items to configure before broadcasting: Destination and Encoding.

When you broadcast with Wirecast One, you must pre-configure at least one destination. A destination can be a broadcast server, content distribution network or local disk recording.

Each encoding preset uses a different broadcast technology (RTMP, Windows Media, etc.). The destinations described below depend on the Encoder Presets you have chosen.

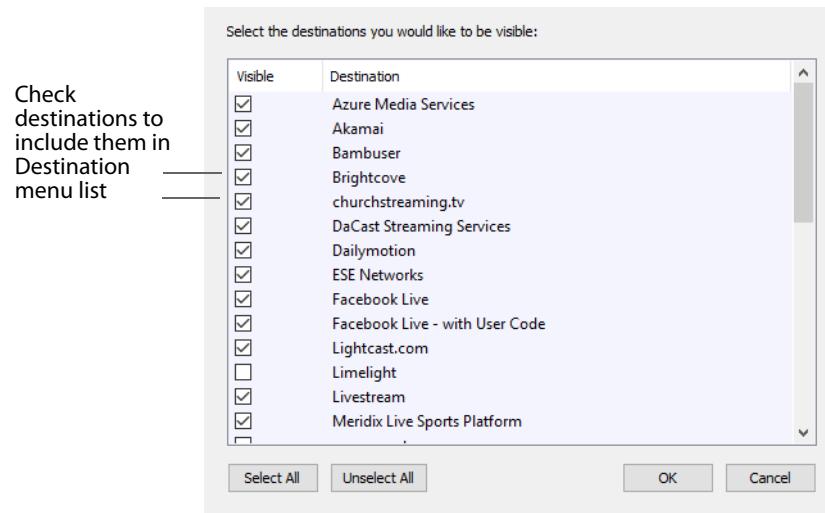
The *Encoder* determines how your presentation is encoded (or compressed). There are many options available. Wirecast One simplifies this process by providing several simple presets to choose from. (See also [The Encoder Presets Window](#)).

## Encoder Presets

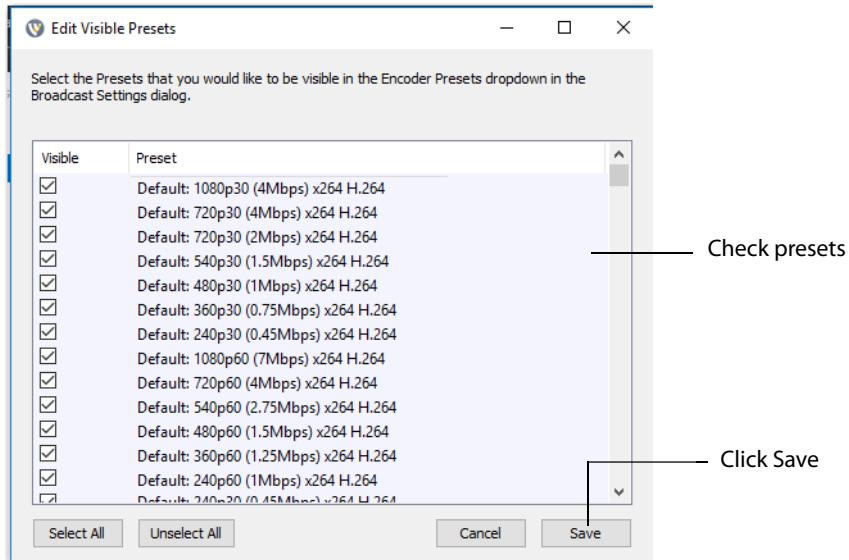
The Encoder menu is located near the top of the Output Settings window. The Destination menu is located above the Encoder menu. The More button and Gear menu provide optional settings.



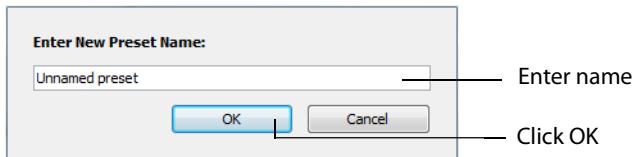
**More** Click *More* to display a list of all available destinations. Check the checkbox for each destination you want to include in the destination menu list.



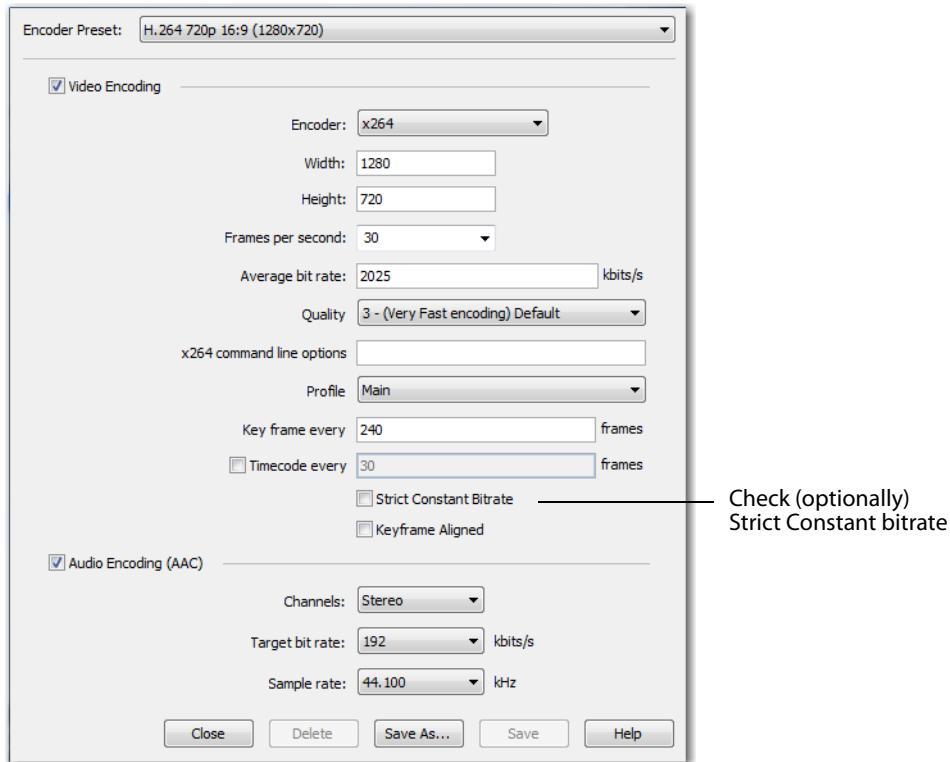
**Filter** Select *Filter* from the Gear menu to display a check list of encoder presets. Check the presets you want to display in the Encoder presets menu. Click *Save* when finished.



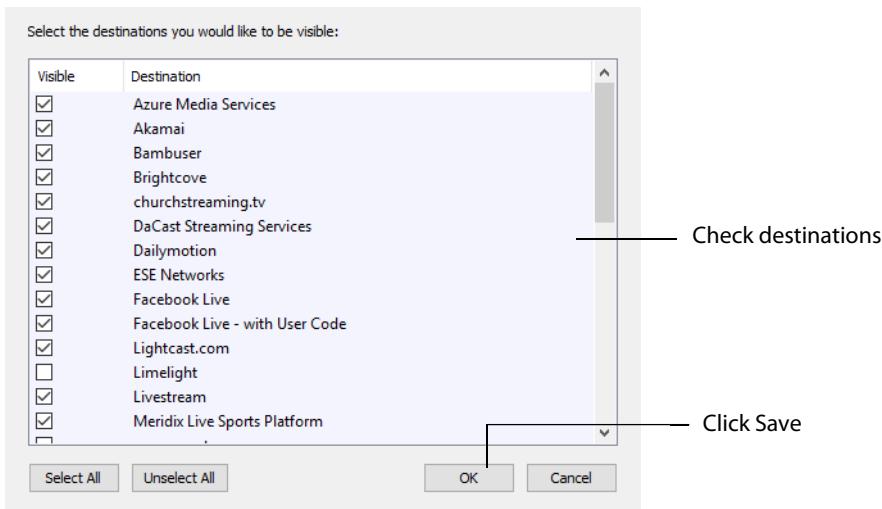
**New Preset** Select *New Preset* from the Gear menu to create a new encoder preset. Enter a name for your new preset and click *OK*. (See [Creating New Presets](#)).



**View Details** Select *View Details* from the Gear menu to modify an encoder preset. (See [Creating New Presets](#)). One important option is Strict Constant Bitrate. When checked, the bitrate is strictly held at the bitrate entered in *Average bit rate*.



**More** Click the *More* button to display a check list of destinations. Check the destinations you want to display in the Destination menu. Click *Save* when finished.



## RTMP Server

Wirecast One can stream to an RTMP/ H.264-compatible streaming server (RTMP Server Media Server, Wowza Media Server, etc.).

To configure RTMP Server Streaming, follow these steps:

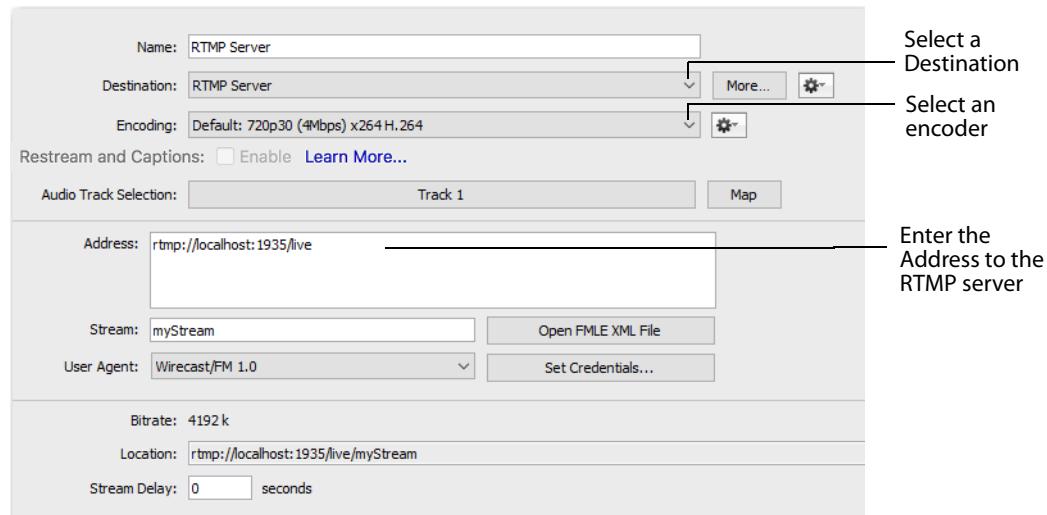
1. Select *Destination > RTMP Server*.
2. Select an encoder.
3. Enter the Address to the RTMP server. The default RTMP port is 1935, but you may need to configure your firewall to allow connections on this port.
4. Wirecast One can import a RTMP Server Encoder configuration file (XML file). Click Open FMLE XML File, and navigate to the configuration file and select either version 2.5 or version 3.0. Wirecast One reads the Address and Stream information from that file. Many online streaming services offer FMLE configuration files which Wirecast One can use.

---

**Note:** Only the Address and Stream information from the XML configuration file is used. No Encoding information is imported.

---

5. Click OK to save your settings:



## Telestream Cloud Settings

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**Note:** Cloud-based streaming and distribution is available in Wirecast One for an additional monthly subscription. Visit the Telestream website for more information.

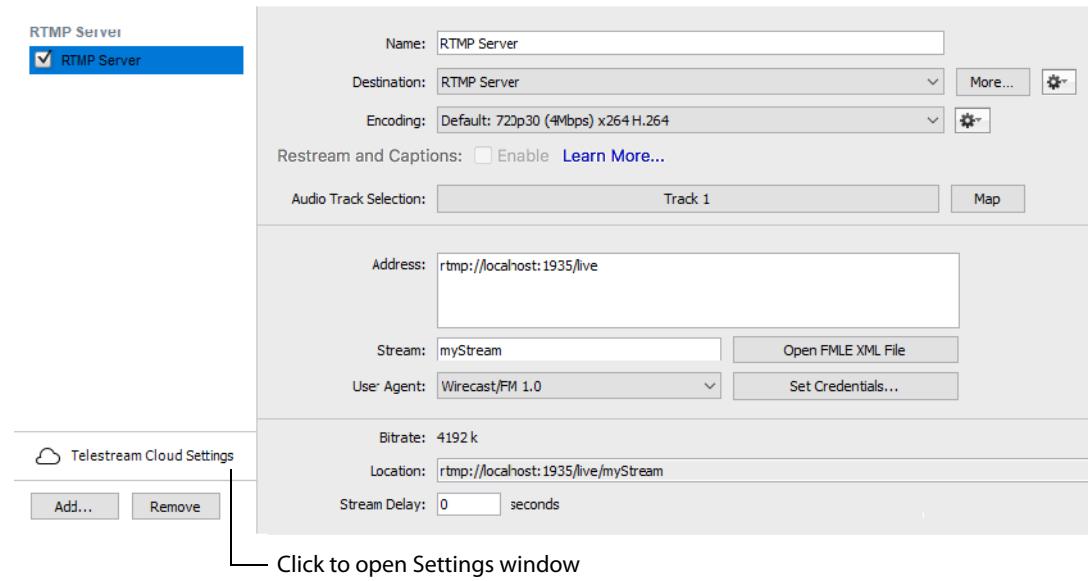
---

The Telestream Cloud enables you to add automated live captioning to your broadcast. But it also allows you to do “re-streaming” (multi-distribution of your broadcast through the Cloud).

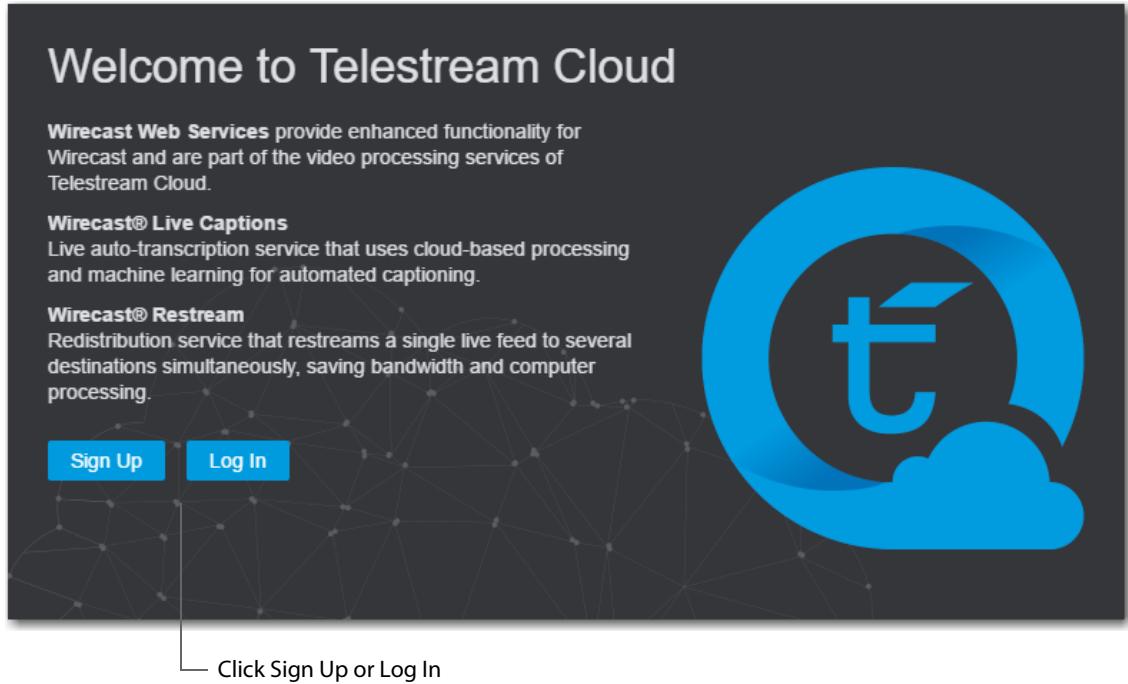
When you request automated captioning, the Cloud server will send out the audio portion of your broadcast for translation into text. When the text is received, it is embedded as 608/708 captions in the outgoing stream.

When you request stream redistribution, the Cloud takes your single stream source received from Wirecast One and distributes it to multiple endpoints in a high bandwidth environment.

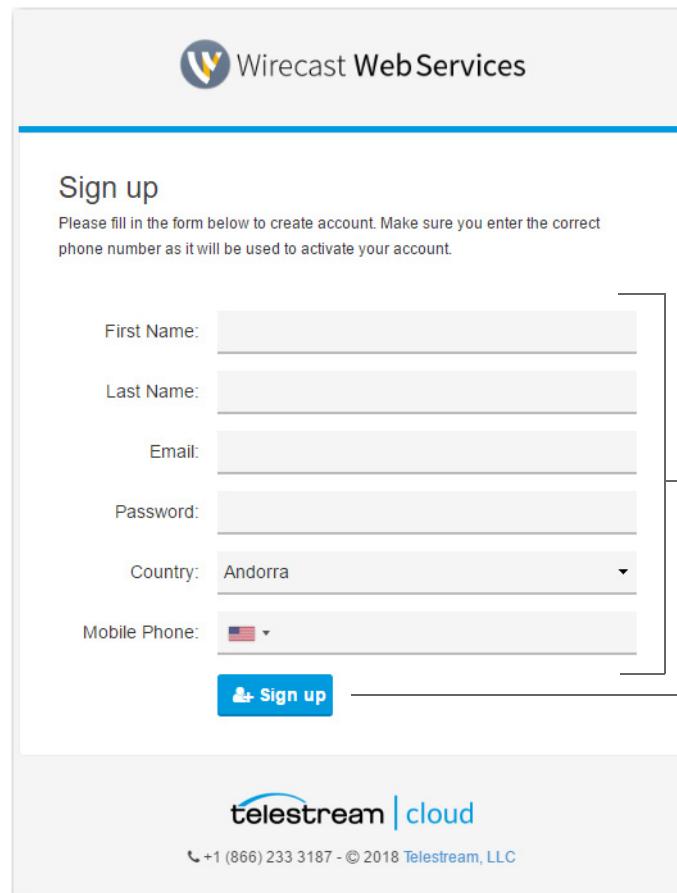
Cloud settings are accessed on the Output Settings window (*Output > Output Settings*). Click *Telestream Cloud Settings* to open the Cloud Settings window.



If you are not already Logged In to the Cloud, a Welcome window will display. Log in by clicking *Log In*. If you are not Signed Up with Telestream Cloud, you can do so by clicking *Sign up*.



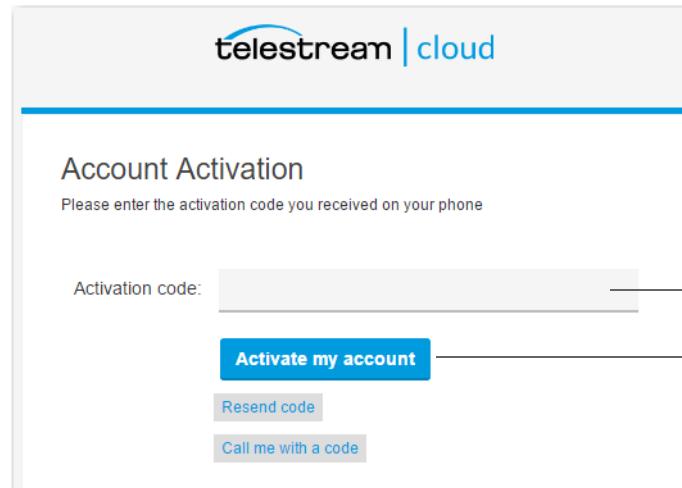
If you click Sign Up, a sign up window will display. Enter all requested information and click Sign Up.



The image shows a screenshot of the Wirecast WebServices sign-up page. The page has a header with the Wirecast logo and "Wirecast WebServices". Below the header, there's a title "Sign up" and a sub-instruction: "Please fill in the form below to create account. Make sure you enter the correct phone number as it will be used to activate your account." The form contains six input fields: "First Name", "Last Name", "Email", "Password", "Country" (with "Andorra" selected), and "Mobile Phone" (with a dropdown showing the USA flag). A blue "Sign up" button is at the bottom left. To the right of the input fields, a vertical callout box points to each field with the text "Enter information". Another callout points to the "Sign up" button with the text "Click Sign Up". At the bottom of the page, there's a footer with the Telestream cloud logo and the text "+1 (866) 233 3187 - © 2018 Telestream, LLC".

When the Activate Account window displays, wait until you receive your Activation Code via phone call or text. Enter the activation code and click *Activate my account*. If

you do not receive an activation code, or if the code does not work, request a new one by clicking *Resend Code*.



Once you are logged in, clicking the *Telestream Cloud Settings* button will open the Cloud Settings window.

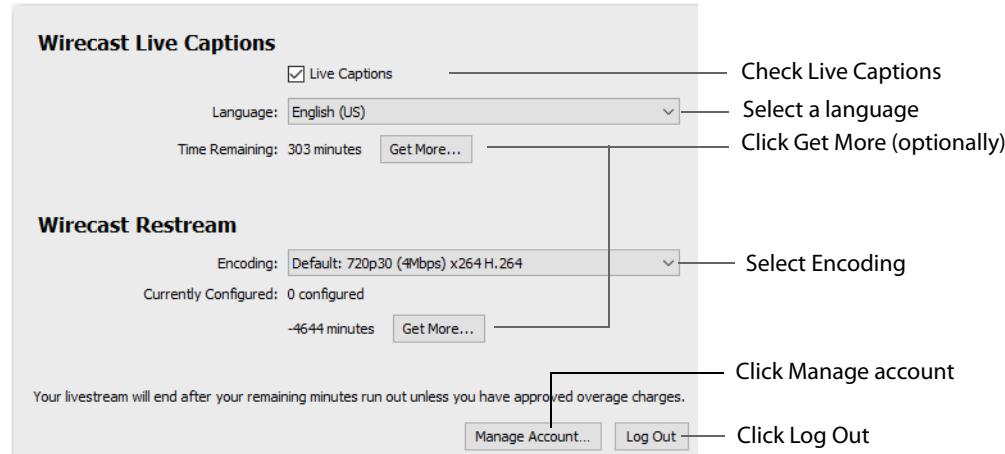
For captioning, select a language. You can, optionally, enable live captioning.

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**Note:** When you check this option, *all* of your streaming destinations via the Cloud will include automatic live captions.

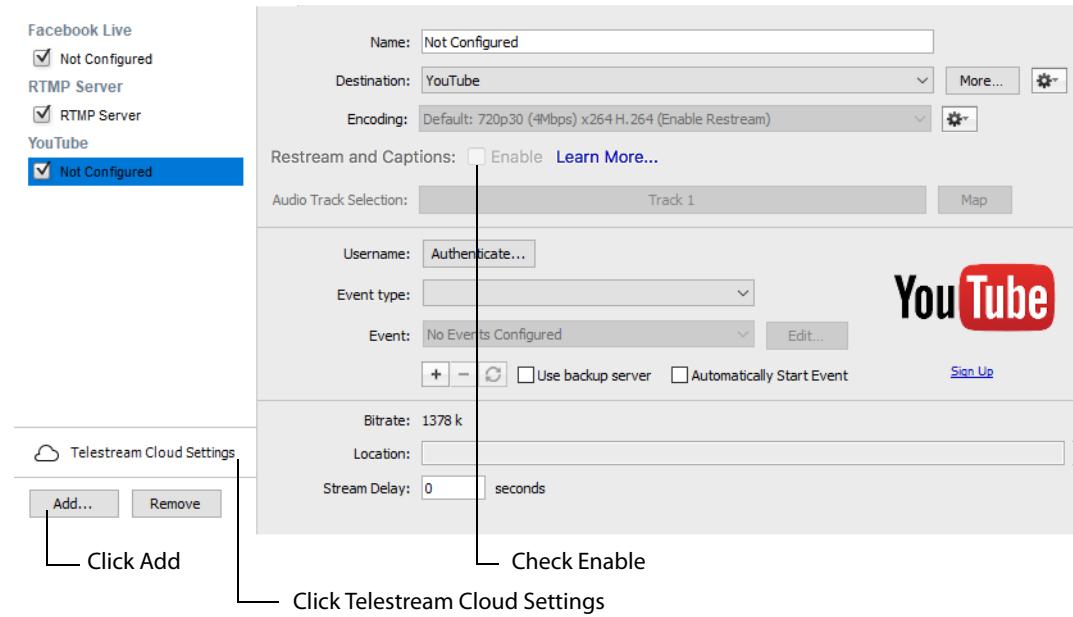
---

For re-streaming, select Encoding for all destinations that are re-streamed via the Cloud. Click the *Get More* or the *Manage Account* button to navigate to the Telestream Cloud Dashboard.



When you are ready to select multiple streaming destinations to be used by the Cloud, open the Output Settings window (*Output > Output Settings*) and select multiple streaming destinations by clicking the *Add* button. Check *Enable* for all destinations to

be included in the Cloud streaming distribution. Click *Telestream Cloud Settings* to open the Cloud Settings window.



---

**Note:** When *Enable* is checked, *Encoding* is grayed-out. This is because encoding for all distributed streams is set on the Cloud Settings page.

---

## CDN Partners

Listed below are the Content Distribution Network (CDN) partner destinations available in Wirecast One. Most destinations share a common user interface and only require a user name and password. Destinations that do not conform to this paradigm, or require additional parameters, are presented separately.

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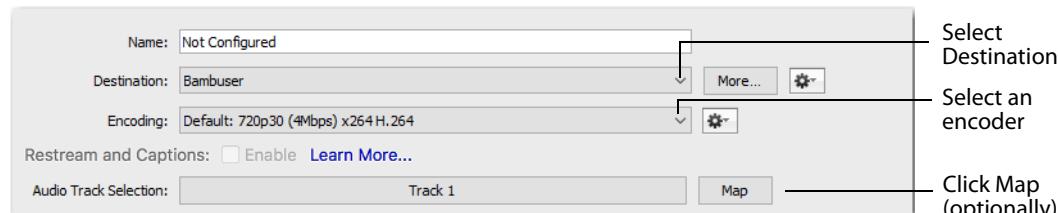
**Note:** The list of CDN partners in Wirecast One is subject to change at any time.

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**Bambuser, BoxCast, Churchstreaming.tv, Dailymotion, DaCast Streaming Services, ESE Networks, Lightcast, Livestream, Meridix Live Sports Platform, Onstream media, Pitchtime, SermonAudio, StreamingChurch.tv, StreamShark.io, StreamSpot, Streaming Media Hosting, Stretch Internet, Sunday Streams, Titled Globe, Tulix Streaming, Ustream, WebCast-TV, WorshipStream,**

To stream to one of these CDN partners, follow these steps:

1. Optionally, enter a Name for your destination.
2. Select a CDN partner from the Destination menu.



3. You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.

Multi-Track Input Mapper								
Source	Channel	Track 1	Track 2	Track 3	Track 4	Track 5	Track 6	Track 7
Microphone Array (Realtek High Definition Audio)	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

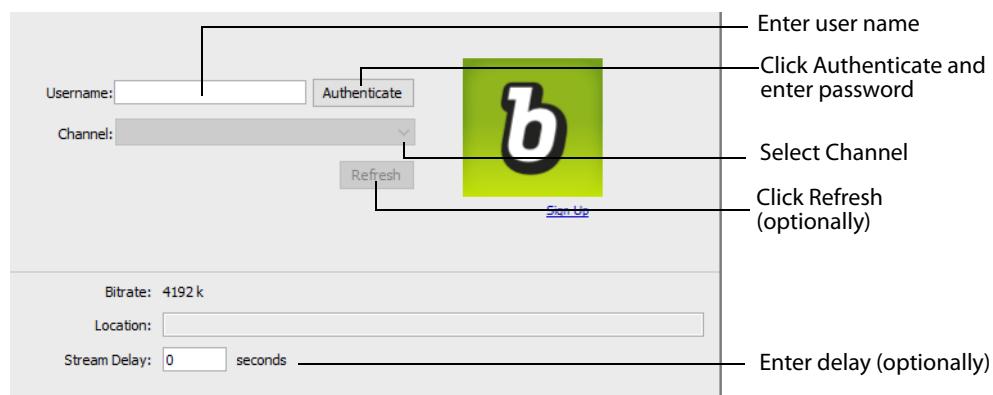
4. Enter your username or email.
5. Click *Authenticate* to enter your password and generate the RTMP URL. You only need to do this one time because Wirecast One stores the channel information for future streams. The default RTMP port is 1935. You may need to configure your firewall to enable connections on this port.

---

**Note:** If you do not have a username and password, you can sign up with a CDN partner by clicking *Sign Up*.

---

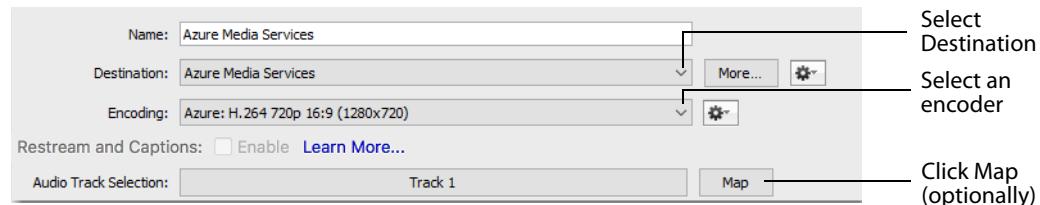
6. Select your channel.
7. Optionally, you can refresh your connection by clicking *Refresh*.
8. Optionally, enter a Stream Delay value. This provides a time buffer between your live stream from Wirecast One and the actual broadcast itself. You can set the delay from 0 to 999 seconds. However, greater delays require greater memory use. The amount of memory used is displayed when you enter the amount of delay.
9. Click OK when finished.



## Azure Media Services, Sermon.net, Verizon Digital Media Services.

To stream to one of these CDN partners, follow these steps:

1. Optionally, enter a Name for your destination.
2. Select a CDN partner from the Destination menu.
3. Select an encoder.



4. You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.

Multi-Track Input Mapper								
Source	Channel	Track 1	Track 2	Track 3	Track 4	Track 5	Track 6	Track 7
Microphone Array (Realtek High Definition Audio)	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Enter the domain name or IP address (this is provided by the CDN partner).
6. Enter the stream name of your broadcast (this is provided by the CDN partner).

---

**Note:** If you do not have a stream name and password, you can sign up with the CDN partner by clicking *Learn More*.

---

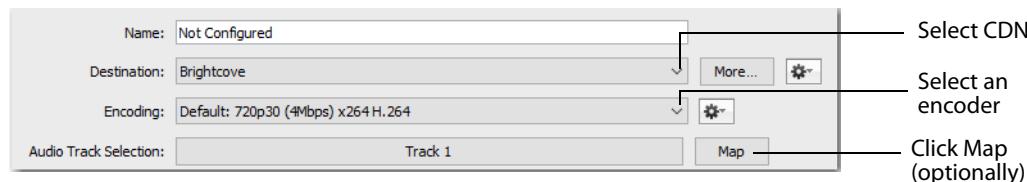
7. Optionally, enter a Stream Delay value. This provides a time buffer between your live stream from Wirecast One and the actual broadcast itself. You can set the delay from 0 to 999 seconds. However, greater delays require greater memory use. The amount of memory used is displayed when you enter the amount of delay.
8. Click OK when finished.

The screenshot shows the 'Stream' settings dialog. It includes fields for 'Address' (rtmp://localhost:1935/live), 'Stream' (myStream), 'Bitrate' (2153 k), 'Location' (rtmp://localhost:1935/live/myStream), and 'Stream Delay' (0 seconds). A large play button icon is centered. Callouts point to these fields with labels: 'Enter Address', 'Enter Stream name', and 'Enter delay (optionally)'.

## Brightcove, Limelight

To stream to one of these CDN partners, follow these steps:

1. Optionally, enter a Name for your destination.
2. Select a CDN partner from the Destination menu.
3. Select an encoder.



4. You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.

Source	Channel	Multi-Track Input Mapper							
		Track 1	Track 2	Track 3	Track 4	Track 5	Track 6	Track 7	Track 8
Microphone Array (Realtek High Definition Audio)	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Enter the domain name or IP address (this is provided by the CDN partner).
6. Enter the stream name of your broadcast (this is provided by the CDN partner).
7. Click *Set Credentials* to enter your Username and Password.

---

**Note:** If you do not have a stream name and password, you can sign up with the CDN partner by clicking *Learn More*.

---

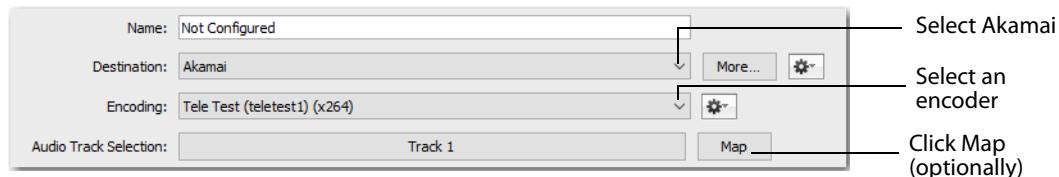
8. Optionally, enter a Stream Delay value. This provides a time buffer between your live stream from Wirecast One and the actual broadcast itself. You can set the delay from 0 to 999 seconds. However, greater delays require greater memory use. The amount of memory used is displayed when you enter the amount of delay.
9. Click *OK* when finished.

Address:	Enter Address
Stream:	Enter Stream name
brightcove	
<a href="#">Learn More...</a>	
Bitrate:	4192 k
Location:	
Stream Delay:	0 seconds
Enter delay (optionally)	

## Akamai

To stream to Akamai, follow these steps:

1. Optionally, enter a Name for your destination.
2. Select *Akamai* from the Destination menu.
3. Select an encoder.



4. You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.

Multi-Track Input Mapper								
Source	Channel	Track 1	Track 2	Track 3	Track 4	Track 5	Track 6	Track 7
Microphone Array (Realtek High Definition Audio)	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Enter your Akamai Stream ID and Event Name.
6. Enter your Akamai Angle and Video Rate.
7. Enter your user name and click *Authenticate* to enter your log in information.

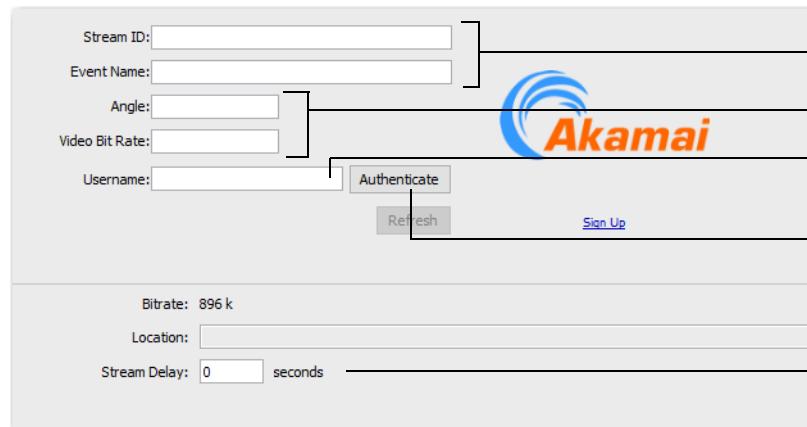
---

**Note:** If you do not have a username and password, you can sign up with Akamai by clicking the Akamai icon, or by clicking *Sign Up*.

---

8. Optionally, enter a Stream Delay value. This provides a time buffer between your live stream from Wirecast One and the actual broadcast itself. You can set the delay from 0 to 999 seconds. However, greater delays require greater memory use. The amount of memory used is displayed when you enter the amount of delay.

**9. Click OK.**



The image shows a screenshot of the Akamai streaming configuration interface. At the top right is the Akamai logo. Below it are several input fields and buttons:

- Stream ID:** [Text input field]
- Event Name:** [Text input field]
- Angle:** [Text input field]
- Video Bit Rate:** [Text input field]
- Username:** [Text input field]
- Authenticate:** [Button]
- Refresh:** [Button]
- Sign Up:** [Link]

Below these fields, there are three informational labels with arrows pointing to specific fields:

- Enter Stream ID and Event Name** points to the Stream ID and Event Name fields.
- Enter angle and video rate** points to the Angle and Video Bit Rate fields.
- Enter a user name** points to the Username field.

At the bottom of the interface, there are three more fields:

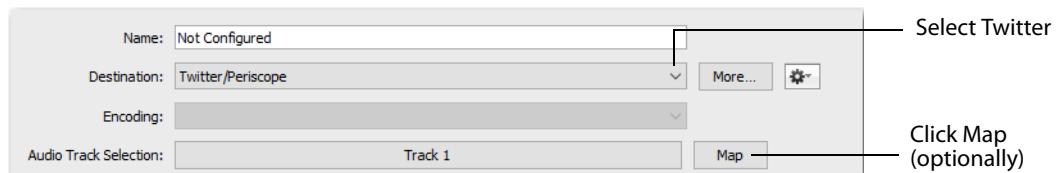
- Bitrate:** 896 k
- Location:** [Text input field]
- Stream Delay:** 0 [Text input field] seconds

An arrow points from the text "Enter delay (optionally)" to the Stream Delay field.

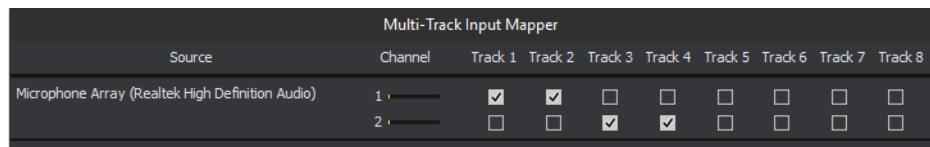
## Twitter/Periscope

To stream to Twitter/Periscope follow these steps:

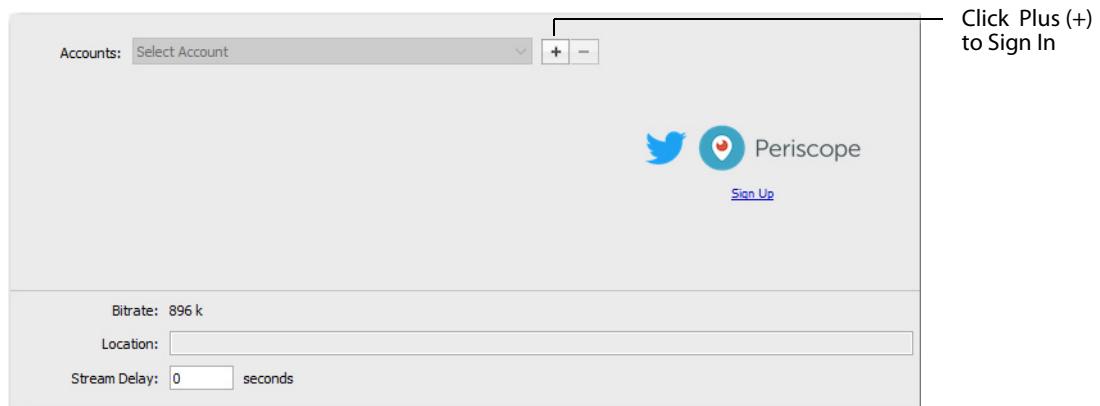
1. Optionally, enter a Name for your destination.
2. Select *Twitter/Periscope* from the Destination menu.



3. You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.



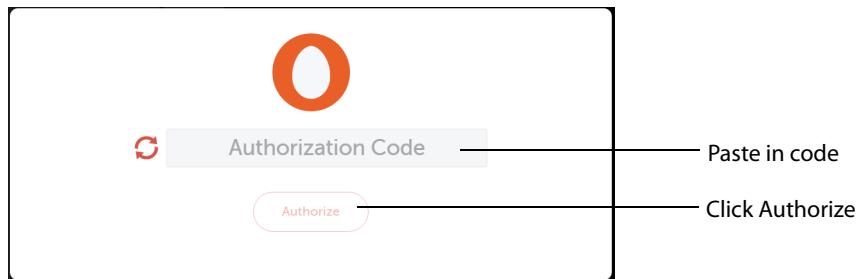
4. Click Plus (+) to enter your username and password.



**5.** Copy the Authorization Code and click on the link below it.



**6.** When the Authorization Code window displays, paste in the code and click *Authorize*.



---

**Note:** If the Authorization Code window does not display, or if an error window displays, try clearing your browser history or try using a different browser, and then sign in again.

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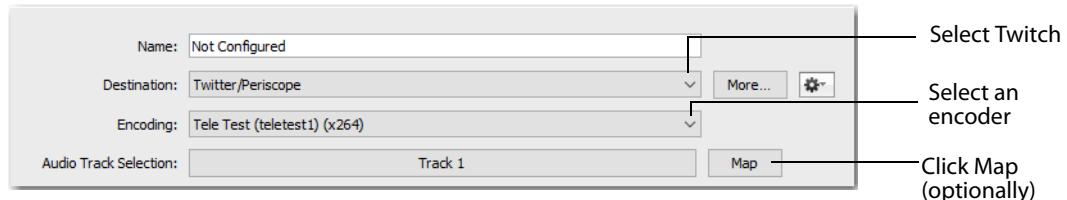
**7.** Optionally, enter a Stream Delay value. This provides a time buffer between your live stream from Wirecast One and the actual broadcast itself. You can set the delay from 0 to 999 seconds. However, greater delays require greater memory use. The amount of memory used is displayed when you enter the amount of delay.

**8.** Click OK.

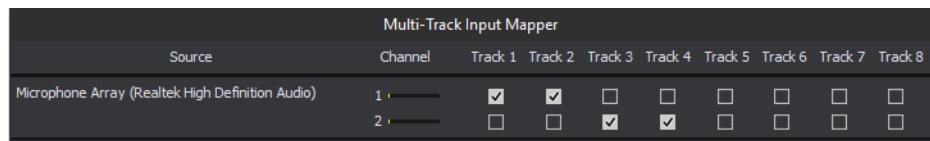
## Twitch

To stream to Twitch, follow these steps:

1. Optionally, enter a Name for your destination.
2. Select *Twitch* from the Destination menu.
3. Select an encoder.



4. You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.

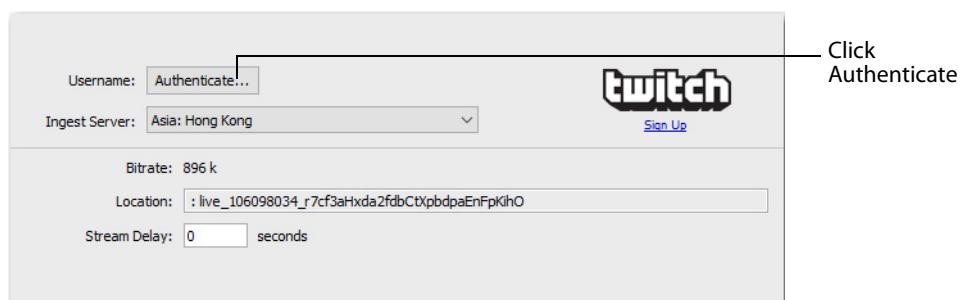


5. Enter your Twitch username.
6. Click *Authenticate* to open the Twitch Log In window.

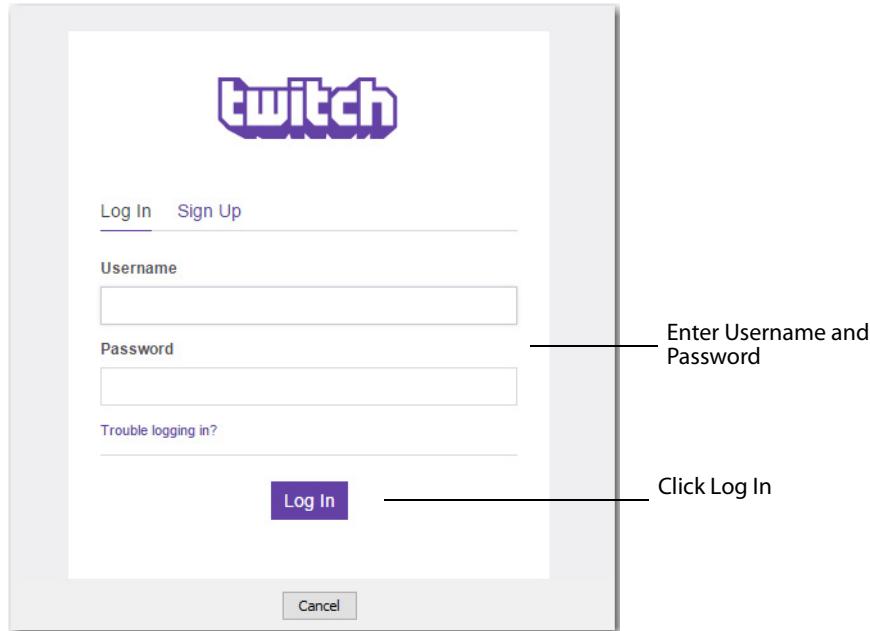
---

**Note:** If you do not have a username and password, you can sign up with Twitch by clicking the Twitch icon or by clicking *Sign Up*.

---



7. When the Twitch Login window displays, enter your username and password and click *Log In*.



8. Optionally, enter a Stream Delay value. This provides a time buffer between your live stream from Wirecast One and the actual broadcast itself. You can set the delay from 0 to 999 seconds. However, greater delays require greater memory use. The amount of memory used is displayed when you enter the amount of delay.

9. Click *OK* when finished



## Vimeo

To stream to Vimeo, follow these steps:

1. Optionally, enter a Name for your destination.
2. Select *Vimeo* from the Destination menu.
3. Select an encoder.



4. You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.

Source	Channel	Track 1	Track 2	Track 3	Track 4	Track 5	Track 6	Track 7	Track 8
		1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Microphone Array (Realtek High Definition Audio)	2		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Click *Authenticate* to enter your username and password.

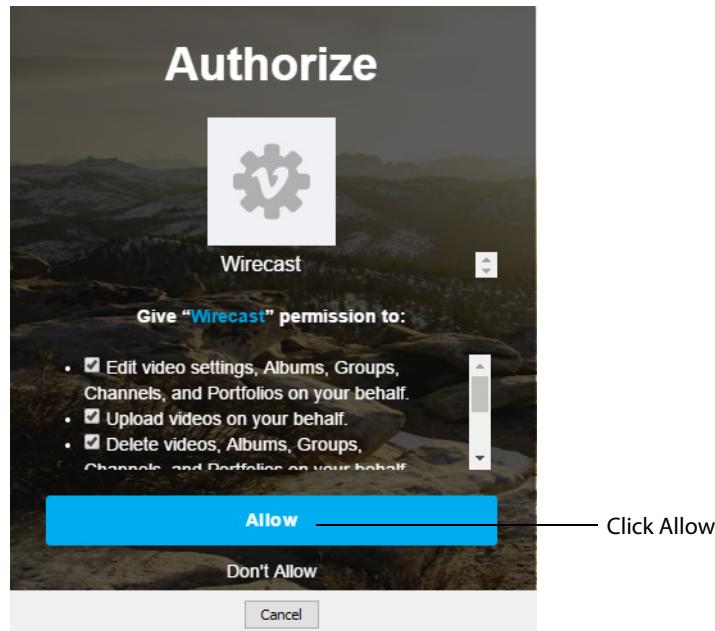
The screenshot shows the Vimeo Authenticate page. It includes fields for Username (Authenticate...), a dropdown for Live Streams (No Live Events Available), and a 'Sign Up' button. Below these are controls for adding and removing streams. A progress bar at the bottom indicates the Monthly Stream Quota, with 'Used' in red and 'Remaining' in green. A callout points to the 'Authenticate...' field with the text 'Click Authenticate and enter username and password'.

---

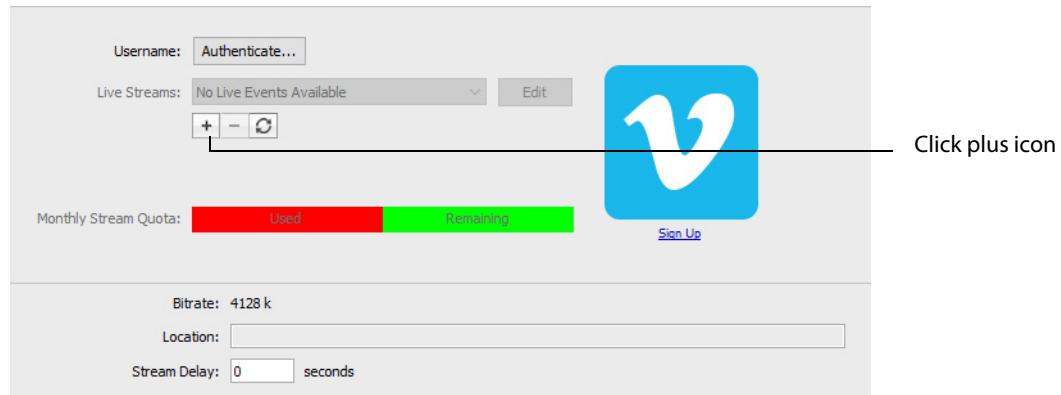
**Note:** If you do not have a username and password, you can sign up with Vimeo by clicking *Sign Up*.

---

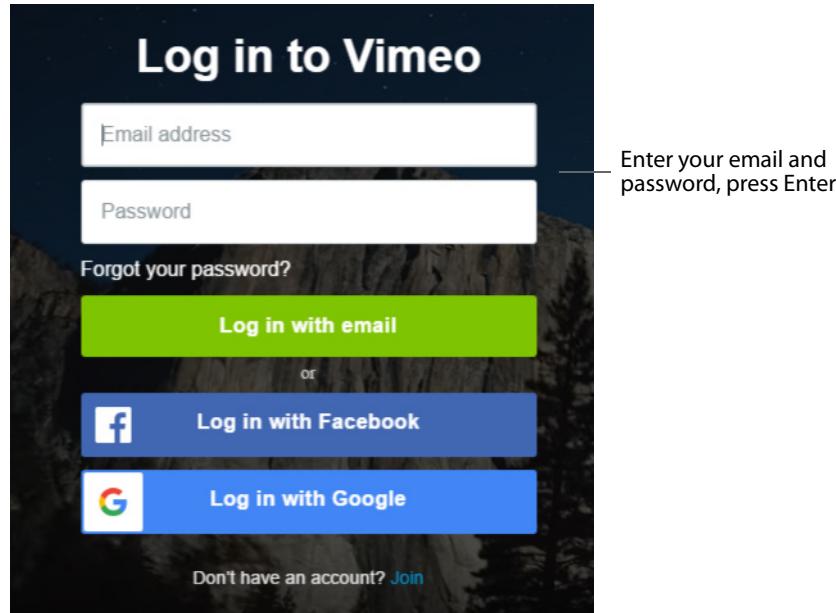
6. When the Authorization window displays, click *Allow*.



7. Click the plus (+) icon to add a new event.

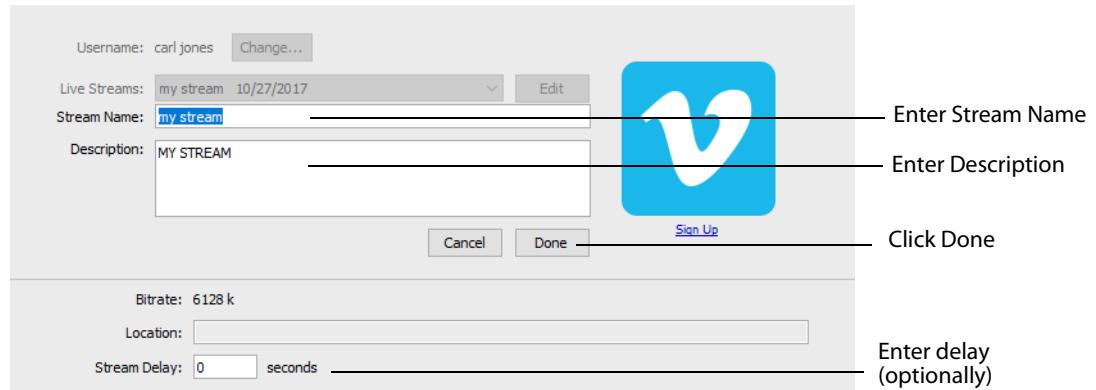


8. Enter your email and password, then press *Enter*.



9. Optionally, enter a Stream Delay value. This provides a time buffer between your live stream from Wirecast One and the actual broadcast itself. You can set the delay from 0 to 999 seconds. However, greater delays require greater memory use. The amount of memory used is displayed when you enter the amount of delay.

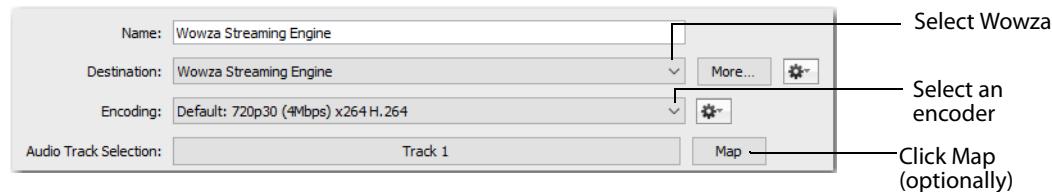
10. Click *OK* when finished



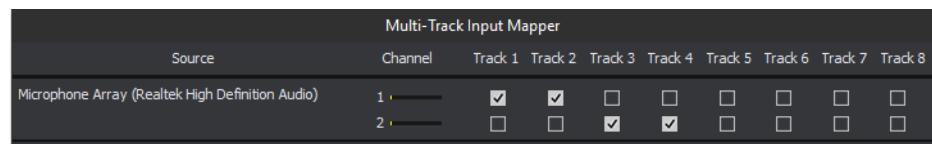
## Wowza Streaming Engine.

To stream to Wowza Streaming Engine, follow these steps:

1. Optionally, enter a Name for your destination.
2. Select *Wowza* from the Destination menu.
3. Select an encoder.



4. You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.



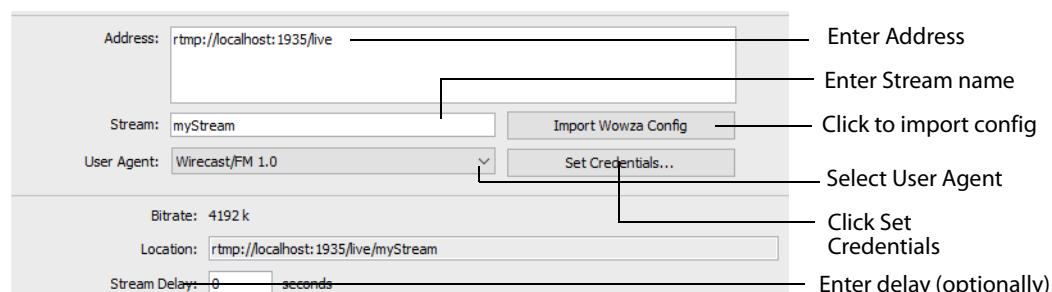
5. Enter the domain name or IP address (this is provided by the CDN partner).
6. Enter the stream name of your broadcast (this may be provided by the CDN partner).
7. Click Import Wowza Config to import a Wowza configuration to use.
8. Select User Agent. Default is Wirecast One/FM1.0.
9. Click Set Credentials to enter your Username and Password.

---

**Note:** If you do not have a stream name and password, you can sign up Wowza.

---

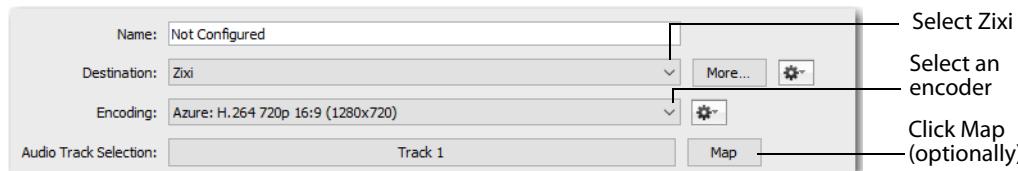
10. Optionally, enter a Stream Delay value. This provides a time buffer between your live stream from Wirecast One and the actual broadcast itself. You can set the delay from 0 to 999 seconds. However, greater delays require greater memory use. The amount of memory used is displayed when you enter the amount of delay.
11. Click OK when finished.



## Zixi

To stream to Zixi, follow these steps:

1. Optionally, enter a Name for your destination.
2. Select *Zixi* from the Destination menu.
3. Select an encoder.



4. You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.

Multi-Track Input Mapper									
Source	Channel	Track 1	Track 2	Track 3	Track 4	Track 5	Track 6	Track 7	Track 8
Microphone Array (Realtek High Definition Audio)	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Enter Zixi connection information.
6. Enter your Zixi channel name and password.
7. Click *Apply* to generate the RTMP URL. You only need to do this one time because Wirecast One stores the channel information for future streams. The default RTMP port is 1935. You may need to configure your firewall to enable connections on this port.

---

**Note:** If you do not have a username and password, you can sign up with Zixi by clicking the Zixi icon, or by clicking *Sign Up*.

---

8. Optionally, enter a Stream Delay value. This provides a time buffer between your live stream from Wirecast One and the actual broadcast itself. You can set the delay from 0 to 999 seconds. However, greater delays require greater memory use. The amount of memory used is displayed when you enter the amount of delay.

9. Click OK.

The screenshot shows a configuration interface for a Zixi connection. At the top left, there are five input fields: 'Broadcaster Address' (empty), 'Broadcaster Port' (2088), 'Latency [milliseconds]' (4000), 'Channel Name' (empty), and 'Password' (empty). To the right of these fields is a large Zixi logo. Below the logo is a 'Refresh' button, followed by an 'Apply' button and a 'Sign Up' link. In the bottom section, the 'Bitrate' is set to '4192 k'. There is a 'Location' field (empty) and a 'Stream Delay' field containing '0 seconds'. A callout line points from the text 'Enter Zixi connection info' to the 'Broadcaster Address' field. Another callout line points from 'Enter Channel Name and Password' to the 'Channel Name' and 'Password' fields. A third callout line points from 'Click Apply' to the 'Apply' button. A fourth callout line points from 'Enter delay (optionally)' to the 'Stream Delay' field.

Broadcaster Address: \_\_\_\_\_

Broadcaster Port: 2088

Latency [milliseconds]: 4000

Channel Name: \_\_\_\_\_

Password: \_\_\_\_\_

Refresh

Apply Sign Up

Bitrate: 4192 k

Location: \_\_\_\_\_

Stream Delay: 0 seconds

Enter Zixi connection info

Enter Channel Name and Password

Click Apply

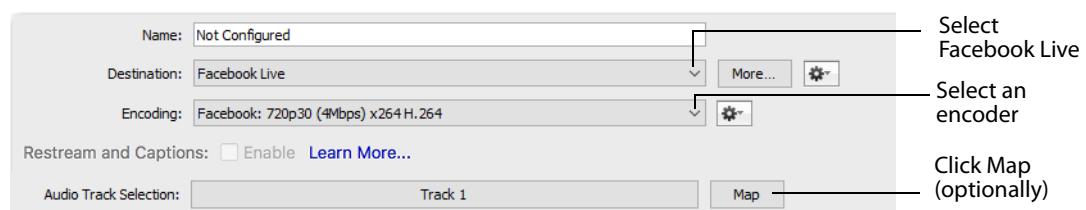
Enter delay (optionally)

# Facebook Live

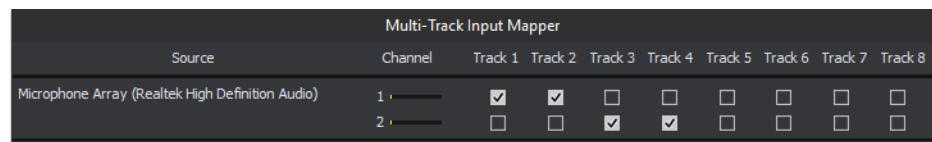
**Note:** You cannot stream to any other destination when Facebook is active.

To stream to Facebook, follow these steps:

1. Optionally, enter a Name for your destination.
2. Select *Facebook Live* from the Destination menu (if not already selected).
3. Select an encoder from the *Encoding* menu.
4. Choose the audio track to be used by selecting it from the *Audio Track Selection* menu.

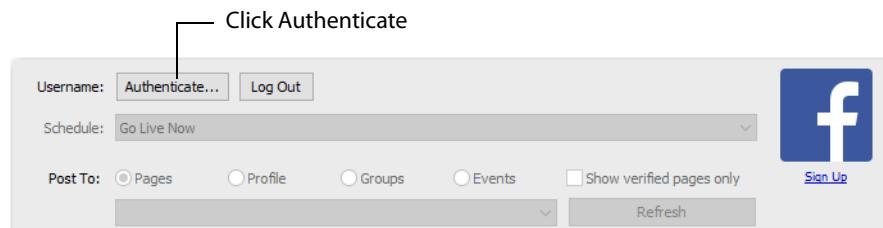


5. You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.



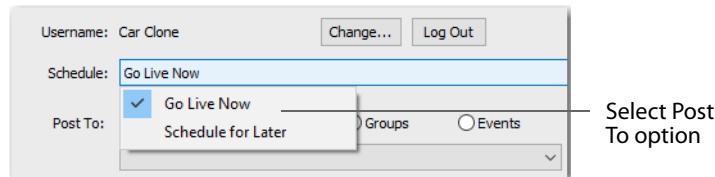
**Note:** If you change the encoding settings while streaming to Facebook, an error will occur. The encoder settings are set by Facebook.

6. Click *Authenticate* and Login to Facebook. If you are already logged into Facebook, you can click the *Change* button to login to a different Facebook account.

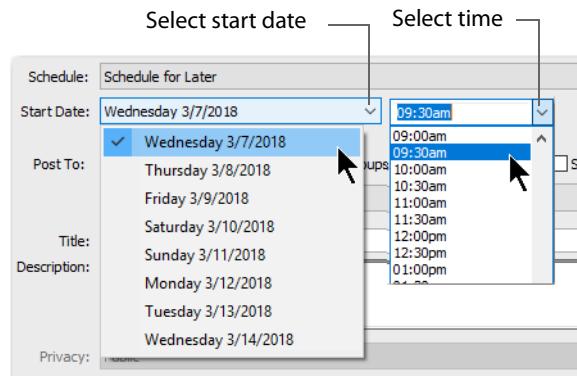


**Note:** If you do not have a username and password, you can sign up with Facebook by clicking the Facebook icon, or by clicking *Sign Up*.

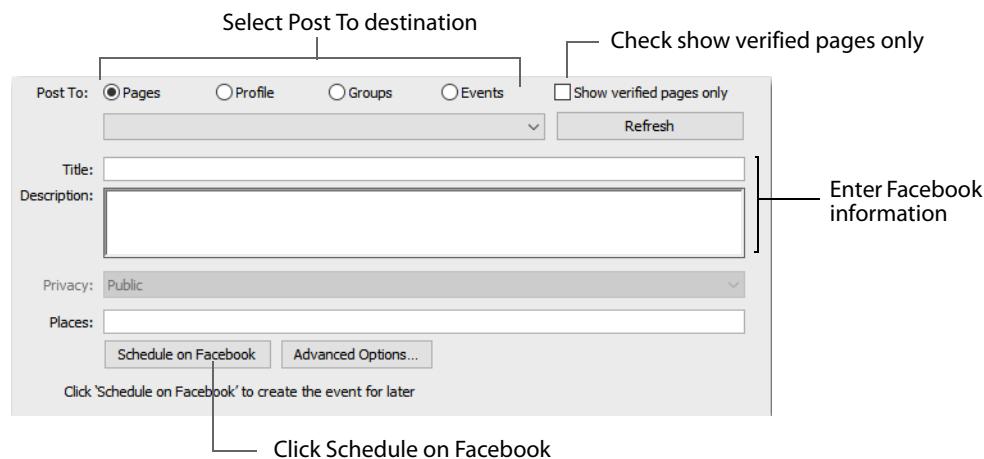
**7.** Select *Go Live Now* or *Schedule for Later* from the Post To menu.



**8.** If you selected *Schedule for Later*, select also a start date and a time.



**9.** Select *Pages*, *Profile*, *Groups*, or *Events* from the Post To destination menu. Click *Refresh* to refresh the page list. If planning to use co-branded content, check the *Show verified pages only* checkbox to filter out all non-verified pages. Enter a Title and a Description. Click *Schedule on Facebook* to refresh after changing any settings.

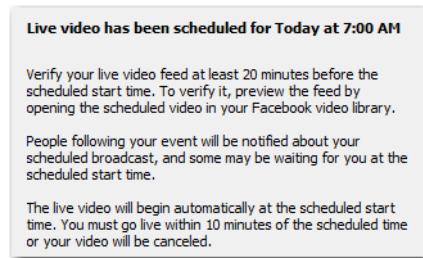



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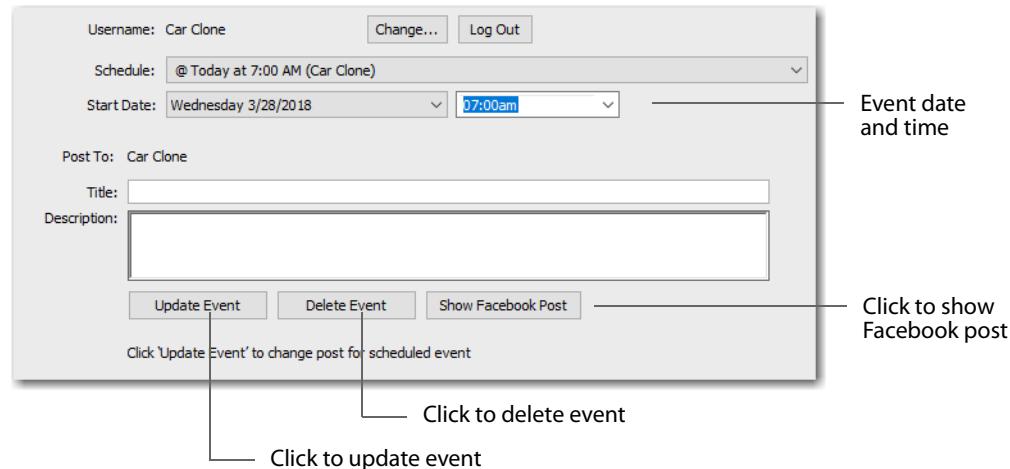
**Note:** When Scheduling events on Facebook you must start the broadcast within ten minutes after the designated start time. Otherwise, the event will be ended by Facebook.

---

10. After you request Facebook to schedule your event, Wirecast One will display a notice verifying the day and time of the event.

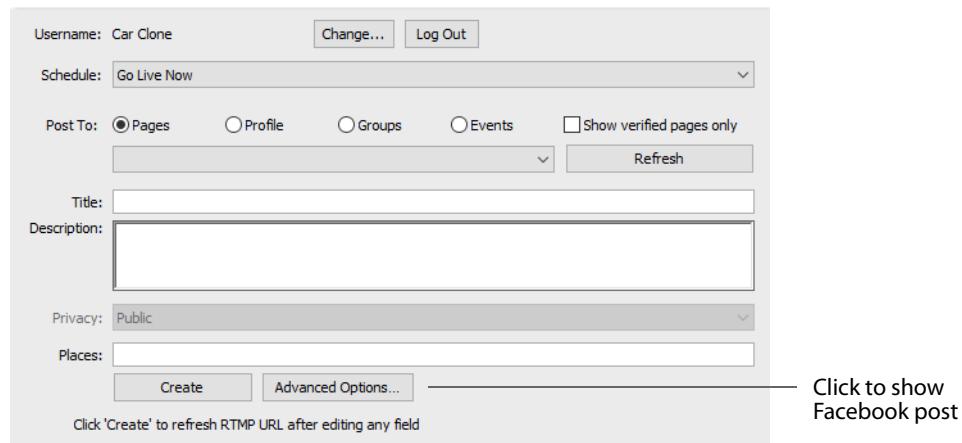


11. Once your event is scheduled, the event date and time are displayed and you can update or delete the event. You can also click *Show Facebook Post* to display your event in a browser.

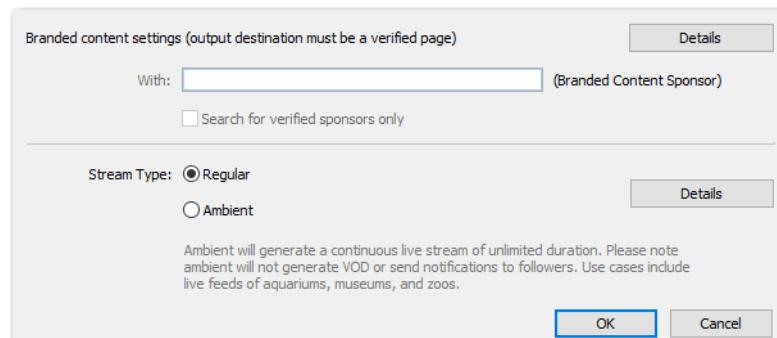


- **Update Event** If you selected a previously scheduled event from the Schedule menu, you change the Date, Time, Title, and Description and click *Update Event*.
- **Delete Event** If you wish to delete a previously scheduled event, select that event from the Schedule menu and click *Delete Event*.

12. If you selected *Go Live Now*, select also *Pages*, *Profile*, *Groups*, or *Events* and enter a Title and Description (as described in step 9 above). Optionally, click Advanced Options.

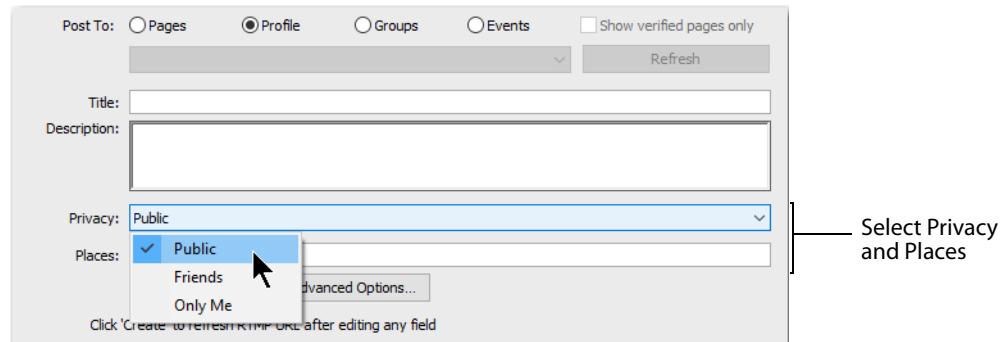


13. When the Advanced Settings window displays, setup co-branding details and Stream Type.



- **With** Facebook permits users with a verified page (blue check mark) to select a sponsor for branded content within their posts. When the user selects a verified page, they will see a blue check mark badge next to the page selection menu and gain access to the With field. Typing in the With field brings up the same results as you might see when following a normal browser based workflow. Branded content is only supported for *Pages* and is disabled for *Groups* and *Events*. Additional information about Branded content restrictions can be found at: <https://developers.facebook.com/docs/graph-api/advanced/branded-content>.
- **Stream Type** Select a stream type: *Regular* or *Ambient*. *Ambient* generates a continuous live stream of unlimited duration.

14. If you selected to post to a *Profile*, select also a level of Privacy: *Public*, *Friends*, or *Only Me*. Enter also any *Places* information to put the live stream on the *Facebook Live Map* and enable everyone to see where people are streaming from.



15. The places map looks like this:



16. Click *Create* to start an event on Facebook.

Username: Car Clone Change... Log Out

Schedule: Go Live Now

Post To:  Pages  Profile  Groups  Events  Show verified pages only

Title:

Description:

Privacy: Public

Places:

**Create** Advanced Options...

Click 'Create' to refresh RTMP URL after editing any field

Click Create

17. Click *OK* when finished.

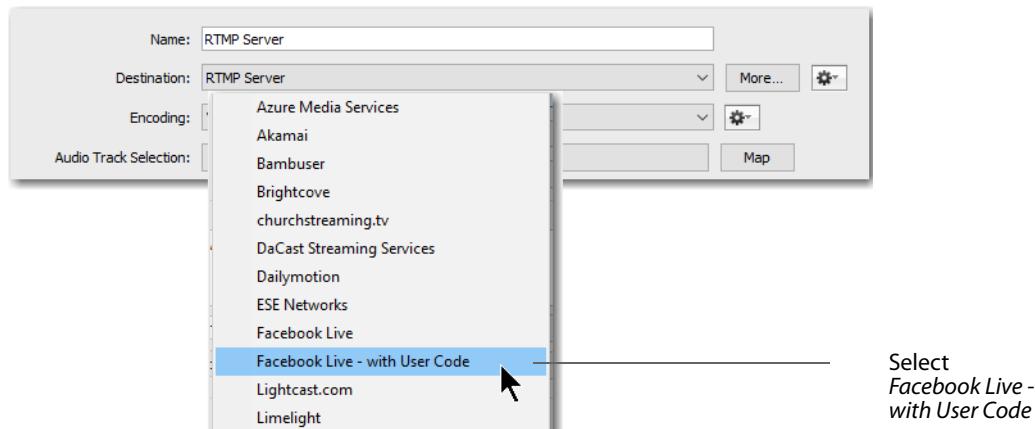
## Facebook Live - With User Code

*Facebook Live - With User Code* enables you to stream to Facebook without needing to know the account password to log in to Facebook. The only interaction (after output settings is set up) is to begin the streaming in Wirecast One, at which point Facebook detects the Wirecast One stream and enters the preview mode.

This is a "set and forget" process. Once you have setup and established connection with a Facebook Encoder, the output settings never need to be re-entered. Each time a stream is initiated, the authentication from the account is retrieved and saved in the Wirecast One settings, and a new broadcast is searched sought.

To stream to *Facebook with User Code*, follow these steps:

1. Sign In to the Facebook account you want to access.
2. In Wirecast One, select *Output > Output Settings*. Then select *Facebook Live - with User Code*.



3. Optionally, enter a Name for your destination.
4. Select *Facebook Live - with User Code* from the Destination menu (if not already selected).
5. Select Automatic in the *Encoding* menu.

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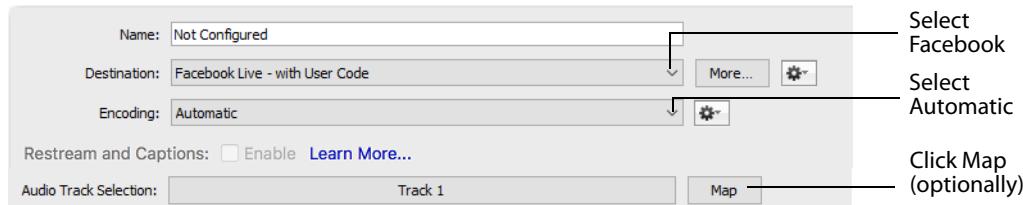
**Note:** Selecting *Automatic* sets the target bitrate and encoding size based on your canvas. Wirecast One sends your canvas size to Facebook which responds with the preferred width, height and bandwidth to use for that size canvas.

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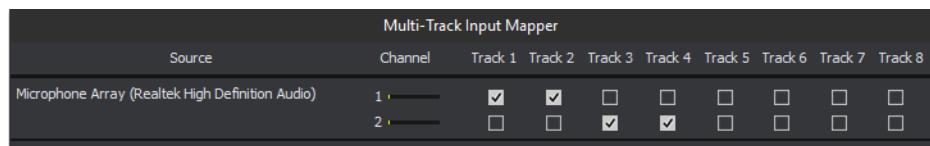
Also, in restricted bandwidth situations it is recommended that you choose a preset with the desired bitrate for your actual bandwidth.

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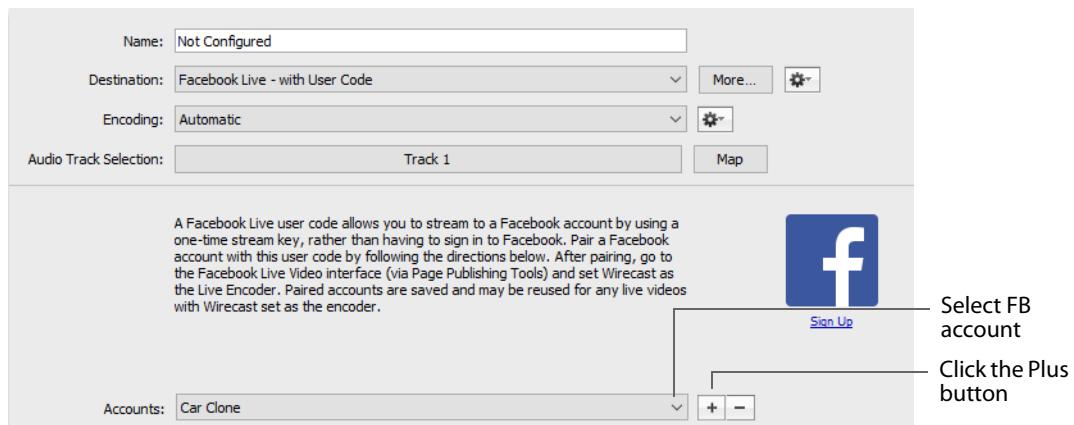
- 6.** Choose the audio track to be used by selecting it from the *Audio Track Selection* menu.



- 7.** You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.



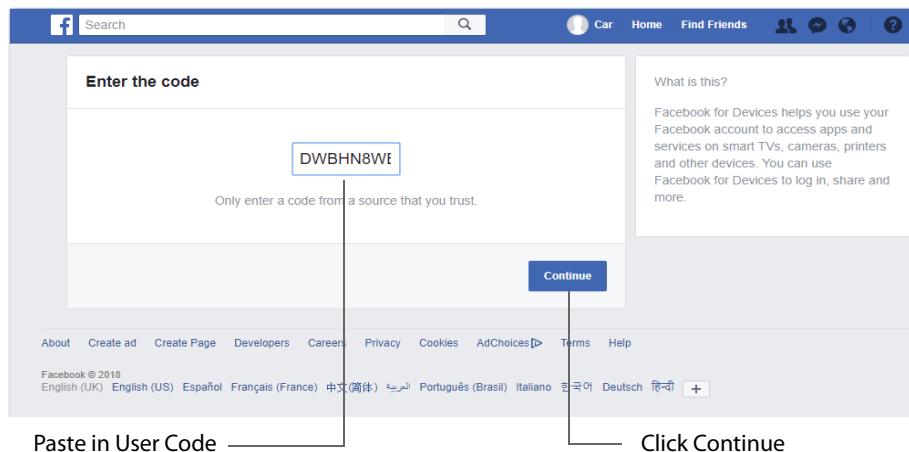
- 8.** Select your Facebook account from the drop-down menu, then click the Plus button (+) to start the pairing process with a Facebook user.



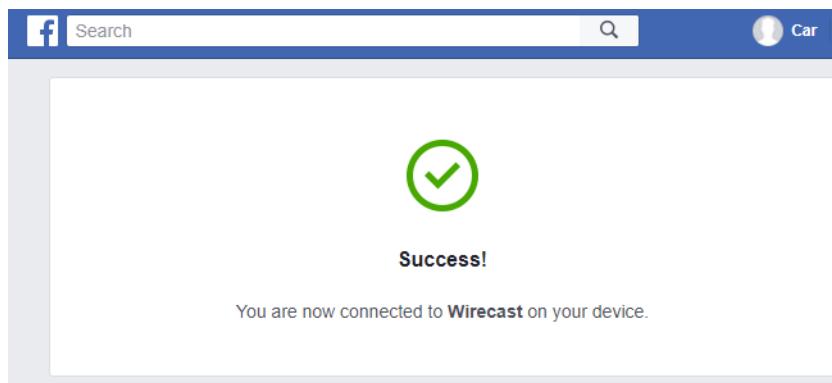
**9.** Copy the user code obtained from Facebook, and click on the link provided.



**10.** When the Facebook window displays, paste in the User Code and click *Continue*.

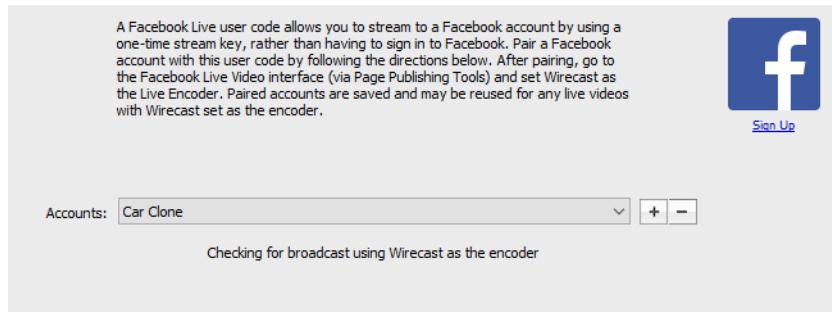


**11.** Facebook will display a Success window when the code is accepted.

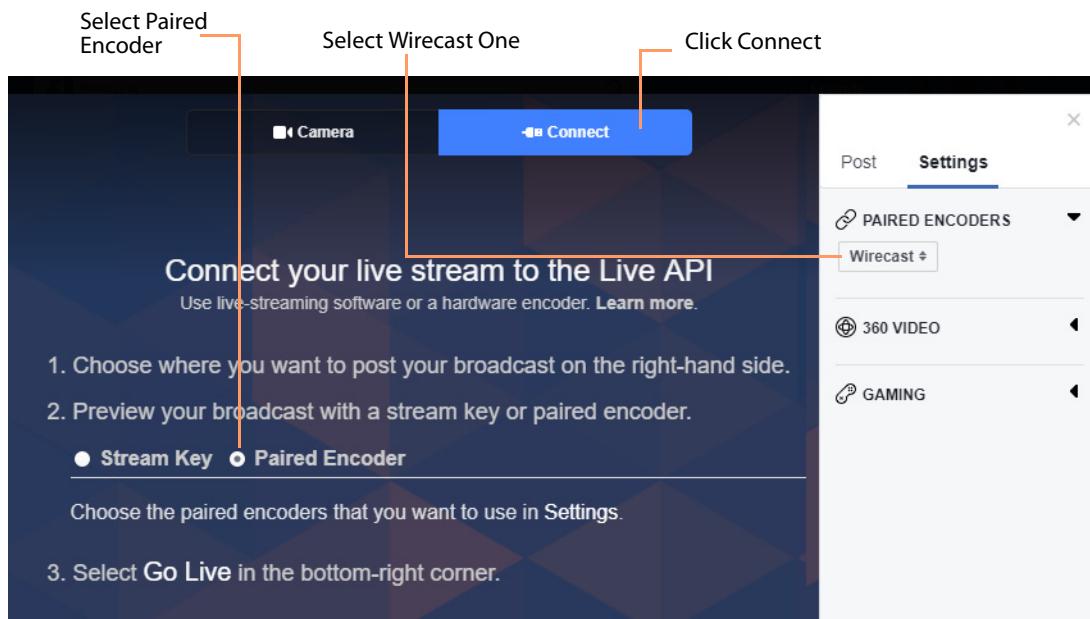


**12.** Wirecast One displays a "Loading" paired encoders message while it searches to see if it is registered as an encoder with Facebook. Once Wirecast One is properly

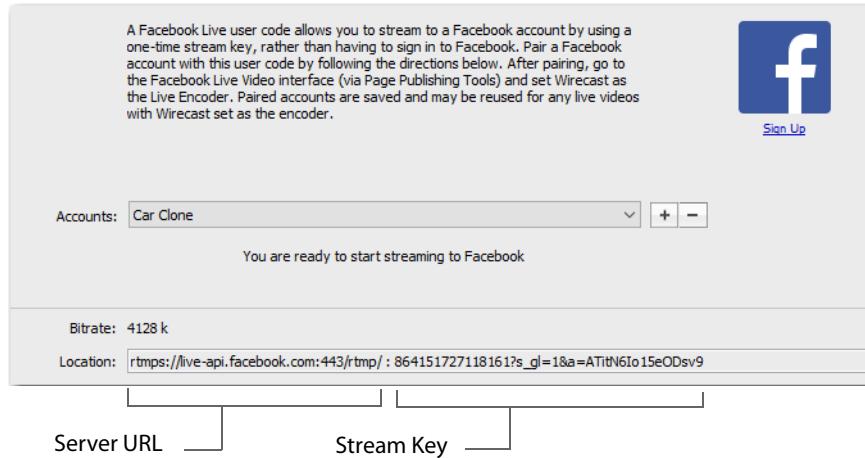
registered as an encoder for the account, it starts “Checking” to find the broadcast (live video) where it is set as the encoder.



13. On Facebook, select *Paired Encoder*, set the Live Encoder to *Wirecast One*, and then click *Connect*.



- 14.** If Encoding is set to *Automatic*, Wirecast One searches for the live video broadcast from Facebook. When found, Wirecast One displays the server URL along with the stream key of the paired account. Click *OK* to close the Output Settings window.

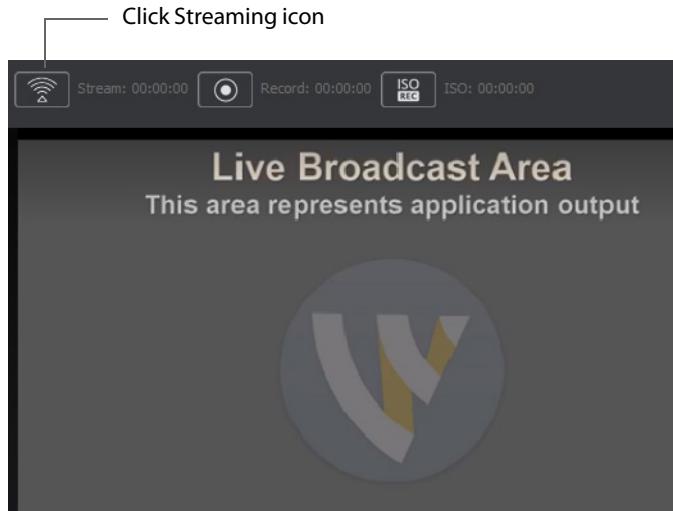


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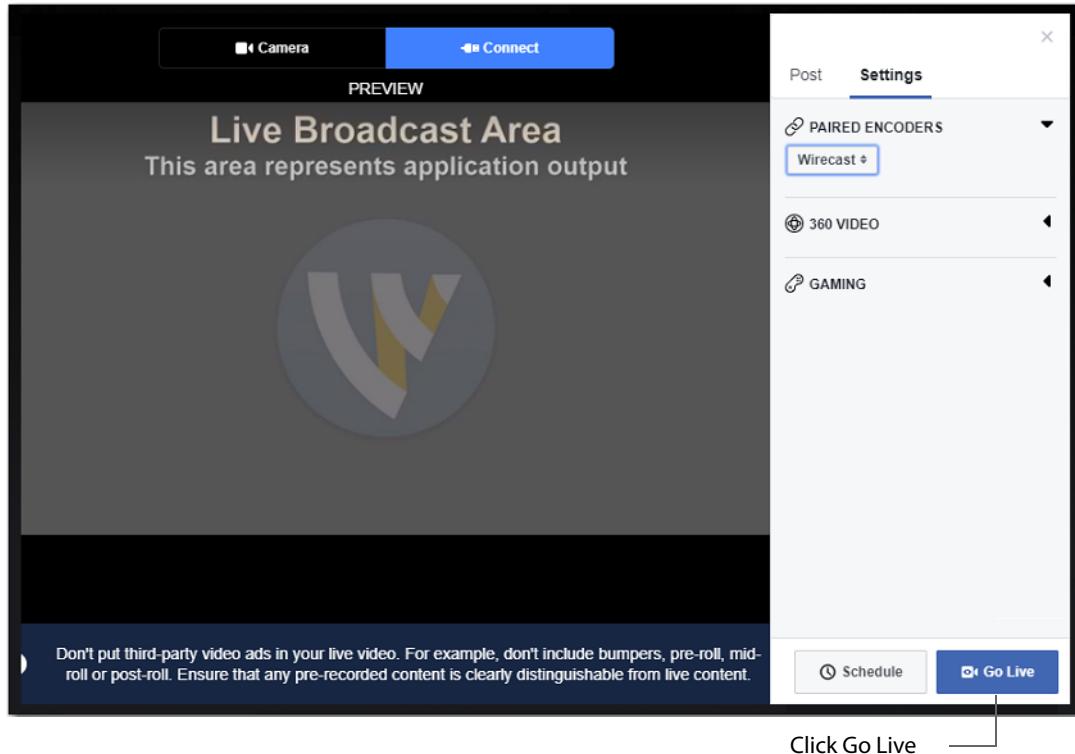
**Note:** In low bandwidth situations, you may choose an Encoding Preset other than *Automatic*. The stream URL will still be automatically determined, but the specified encoder preset is used instead of Automatic.

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- 15.** In Wirecast One, begin streaming to Facebook by clicking the *Streaming icon*.



16. When Facebook displays the Preview screen, click *Go Live*.

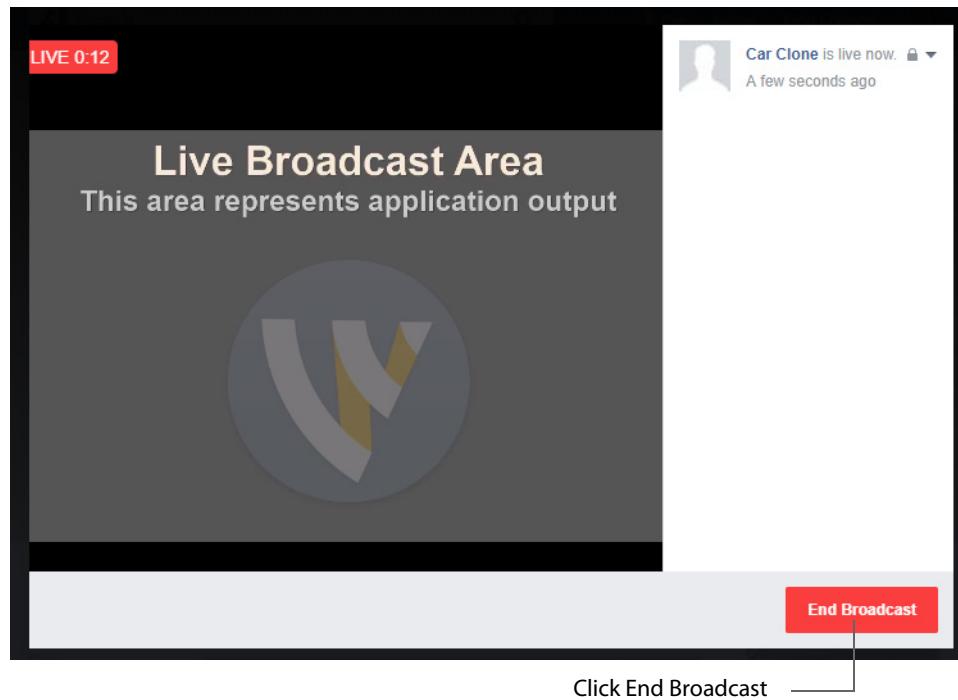


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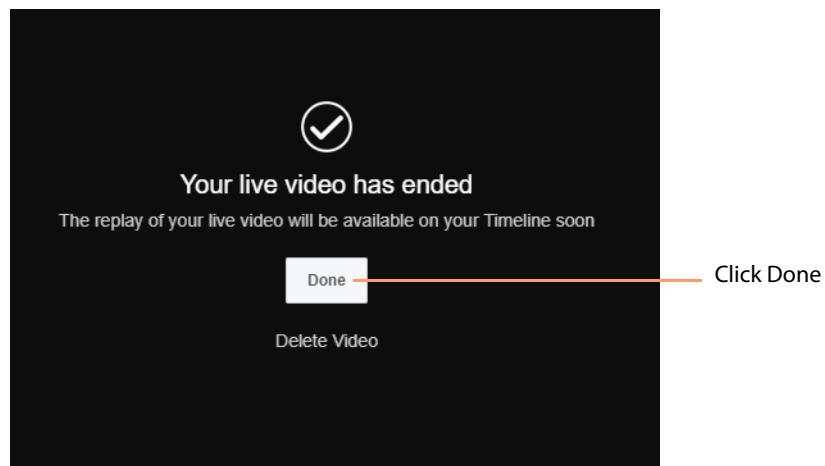
**Note:** Expect a 5-20 second lag between Wirecast One output and what is seen on Facebook.

---

17. When *Go Live* is clicked, Wirecast One detects this and automatically sends an *OnGoLive* message back to Facebook. This is what actually publishes the live video over Facebook. Facebook then displays the live broadcast with the elapsed time. Click *End Broadcast* to end the Facebook broadcast.



18. When Facebook displays the "video has ended" window, click *Done*. Wirecast One will detect this automatically and will stop streaming.



If you stop streaming from Wirecast One by re-clicking the *Streaming icon*, the Facebook broadcast remains live and keeps looking for the feed from Wirecast One. If you re-start streaming from Wirecast (by re-clicking the *Streaming icon* again),

Facebook will restart its streaming. However, if you do not re-start streaming from Wirecast One, Facebook will eventually time out and end its broadcast.

## Microsoft Stream

In order to broadcast using Microsoft Stream, you must first configure your streaming using Office 365. For a detailed procedure on how to do this visit the Telestream website at:

[http://telestream.force.com/kb/articles/Knowledge\\_Article/Wirecast%20One-10-Publish-to-Microsoft-Stream](http://telestream.force.com/kb/articles/Knowledge_Article/Wirecast%20One-10-Publish-to-Microsoft-Stream)

When the Output Settings window displays, select *Microsoft Stream* as your Destination and click *OK*.

When the Output window displays, select an Encoder and Audio Track for your stream. Paste in the address copied from Office 365 where streaming was initiated. Optionally, enter a Stream Delay if needed. Click *Ok* when finished.

You can also click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.

Source	Channel	Multi-Track Input Mapper							
		Track 1	Track 2	Track 3	Track 4	Track 5	Track 6	Track 7	Track 8
Microphone Array (Realtek High Definition Audio)	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Click *OK* when finished.

## YouTube

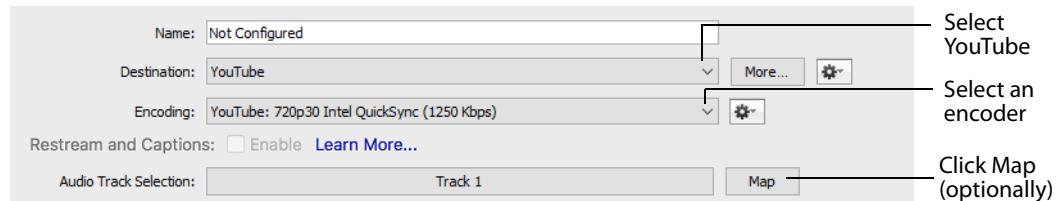
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**Note:** Custom encoders cannot be used to stream to YouTube. They may only be used to encode a recording to disk.

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To stream to YouTube, follow these steps:

1. Log into your YouTube account using your browser.
2. Optionally, enter a Name for your destination.
3. Select *YouTube* from the Destination menu.

**4.** Select an encoder.**5.** You can (optionally) click the Map button to open the Multi-Track Input Mapper. For each Channel, select (by checking the box) one or more inputs.

Multi-Track Input Mapper								
Source	Channel	Track 1	Track 2	Track 3	Track 4	Track 5	Track 6	Track 7
Microphone Array (Realtek High Definition Audio)	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**6.** Check (optionally) *Automatically Start Event* to automatically start your event on YouTube when you start streaming. Click the plus (+) icon to add a new event.

The screenshot shows the YouTube event configuration interface. It includes fields for Username (Authenticate...), Event type (dropdown), Event (No Events Configured), Bitrate (1378 k), Location, Stream Delay (0 seconds), and a 'Sign Up' link. A plus (+) icon is located near the Bitrate field.

Annotations:

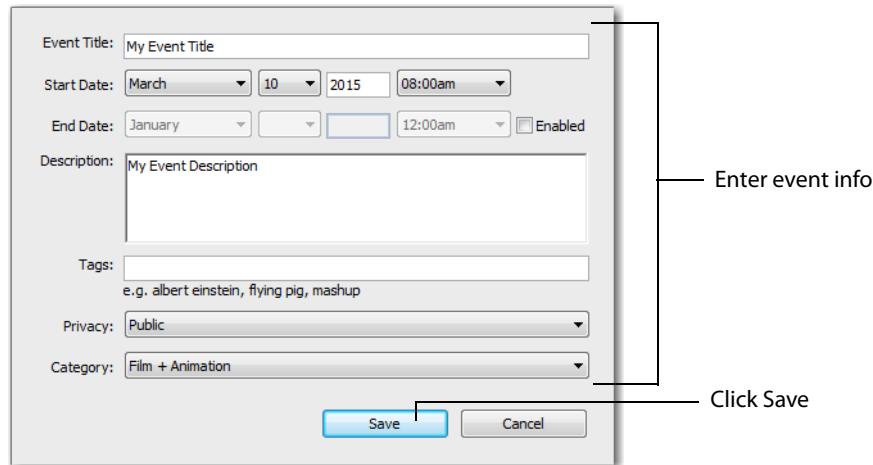
- Check Auto Start (optionally)
- Click plus icon

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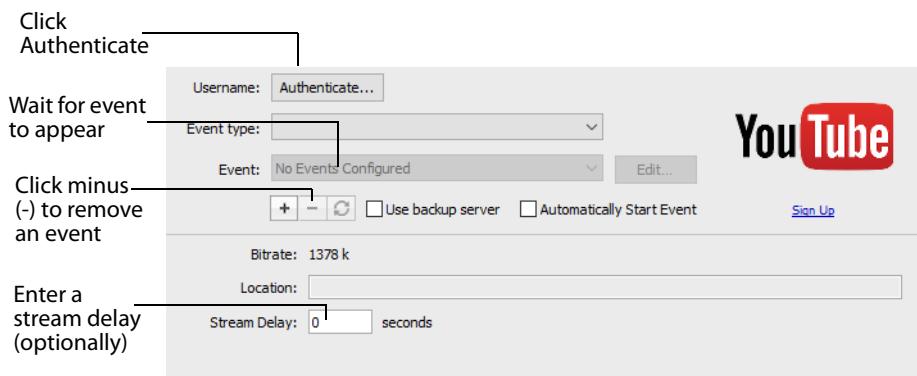
**Note:** If you do not have a YouTube account, click *Sign Up* (or go to [www.youtube.com](http://www.youtube.com)).

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**7.** Enter all of your event information and click *Save*.



**8.** Click *Authenticate*, enter your login information, and wait for your event to appear in the Event menu box. Click the minus icon (-) to remove a selected event. Optionally, enter a Stream Delay value. This provides a time buffer between your live stream from Wirecast One and the actual broadcast itself. You can set the delay from 0 to 999 seconds. Click *OK* when finished.



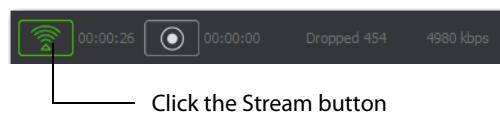

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**Note:** If you are not already signed in, an OAuth window is launched enabling you to sign into your YouTube account. Enter your account information and click *Sign In*.

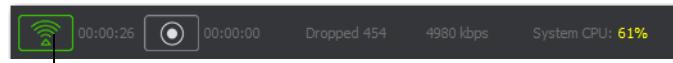
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## Streaming

Click the *Stream* button to start streaming.



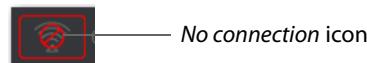
The Stream icon will blink until a connection is made. Once you are connected the Stream icon turns green. If you cannot connect an error message will display.



Connection strength is indicated by how many bars are displayed in the Stream icon. Fewer bars indicates a weaker (slower) connection.



If the connection is ever broken, a *no connection* icon is displayed in place of the bars.

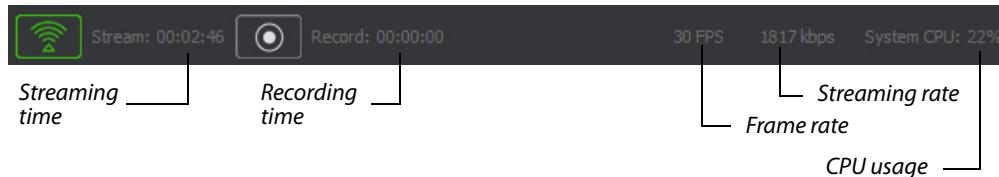


When the connection recovered, the *no connection* icon is replaced with the green bars.

Click *Stream* again to stop streaming. You can also record your broadcast by clicking *Record*. When you stop streaming, if you.



While streaming, status is displayed.



If you are streaming to Facebook, additional status is displayed on the right side of the status bar.



If you are streaming via the Cloud, additional status is displayed on the right side of the status bar.

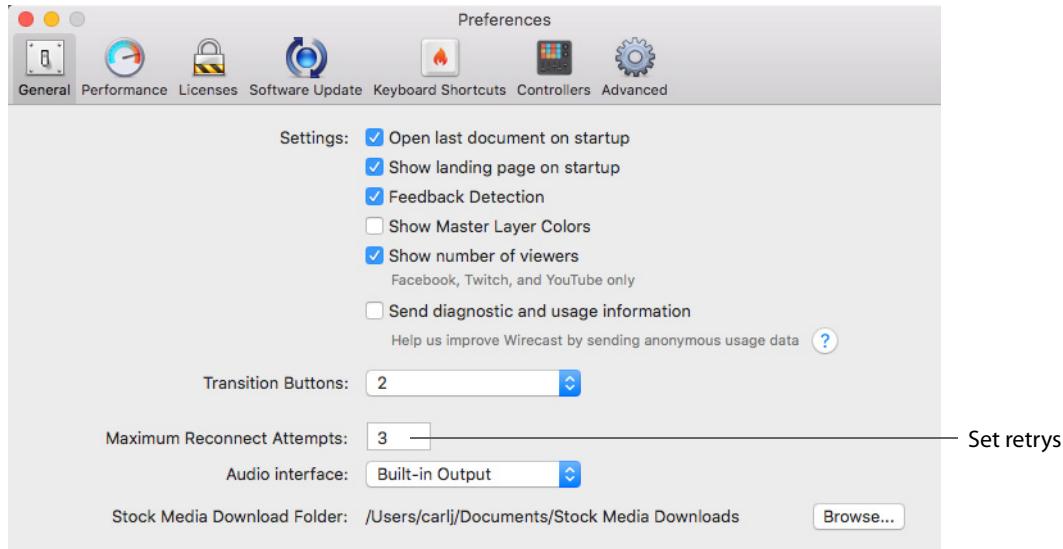



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**Note:** Cloud-based streaming and distribution is available in Wirecast One for an additional monthly subscription. Visit the Telestream website for more information.

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Wirecast One attempts to reconnect. Each time reconnection is attempted, the stream icon will blink. The number of reconnection tries is set in the General Preferences (Select *File > Preferences*, then click the *General* tab).



## Record To Disk

If you want to archive your stream, you can use the Record To Disk destination.

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**Note:** Wirecast One auto-saves your Stream/recording. All formats (WMV, MOV, MP4) will be recoverable in increments of 20 seconds. Any recording less than 20 seconds is corrupted. ISO also recovers. In the case of an unexpected shutdown, the recoverable video is available in increments of one minute.

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To record to disk, follow these steps:

1. Click the Record button at the top of the Wirecast One Main window.

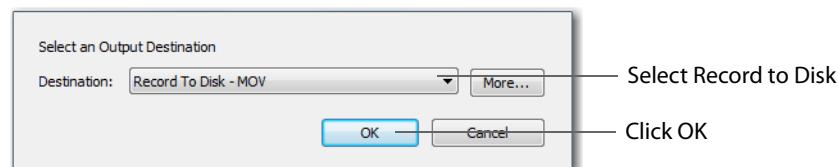
Click Record



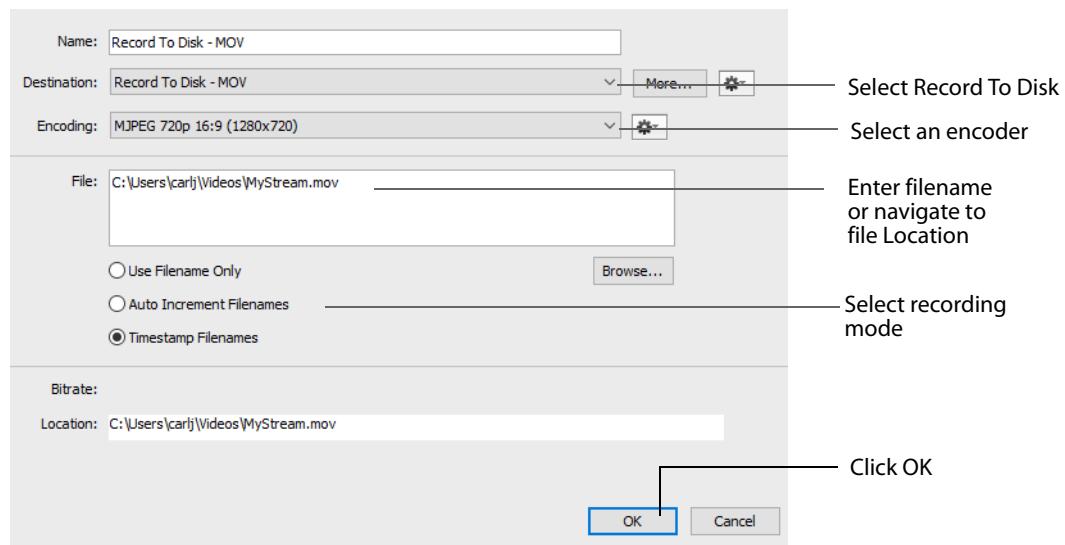
2. When the Output window opens, click the *Add* button at the bottom of the window to add a recording destination



3. When the dialog box displays, select *Record to Disk* and click *OK*.



4. In the Output Settings window select *Record To Disk* (for MP4 or Windows Media, MOV)  
5. Select an encoder.  
6. Click Browse or enter the path to where you want your recording located.  
7. Select the recording mode: Use Filename Only, Auto Increment Filenames, or Timestamp Filenames. If you select Auto Increment Filenames, your filename will have an incremental number appended to the end of it. This causes a new file to be created every time you start recording to disk, otherwise your previous file is overwritten (if you have selected Use Filename Only).  
8. Click OK.



---

**Note:** When recording to disk on FAT32 formatted drives, single files cannot be larger than 4GB in size. So, recording to disk on a FAT32 formatted drive may result in files that do not close properly if they exceed 4GB in size. It is recommended that you record to disk on a Mac OS X Extended formatted partition whenever possible.

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# Encoder Presets

## Introduction

Wirecast One supports a wide variety of encoders (also known as codecs).

An encoder is a program that compresses the audio and/or video output of Wirecast One for broadcast. Without an encoder, the uncompressed data is too large to successfully broadcast across a network. This is why encoders are so important.

The settings for encoders range from simple to very complex. Because of this, Wirecast One offers presets of the most common settings for encoders. This provides a starting point, reduces complexity, and enables you to experiment and adjust settings as you test your broadcast.

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**Note:** Encoder Presets can also be edited from the Output Settings window. To do this select *Output > Output Settings*, click the gear icon, then choose *View Details* from the drop-down menu.

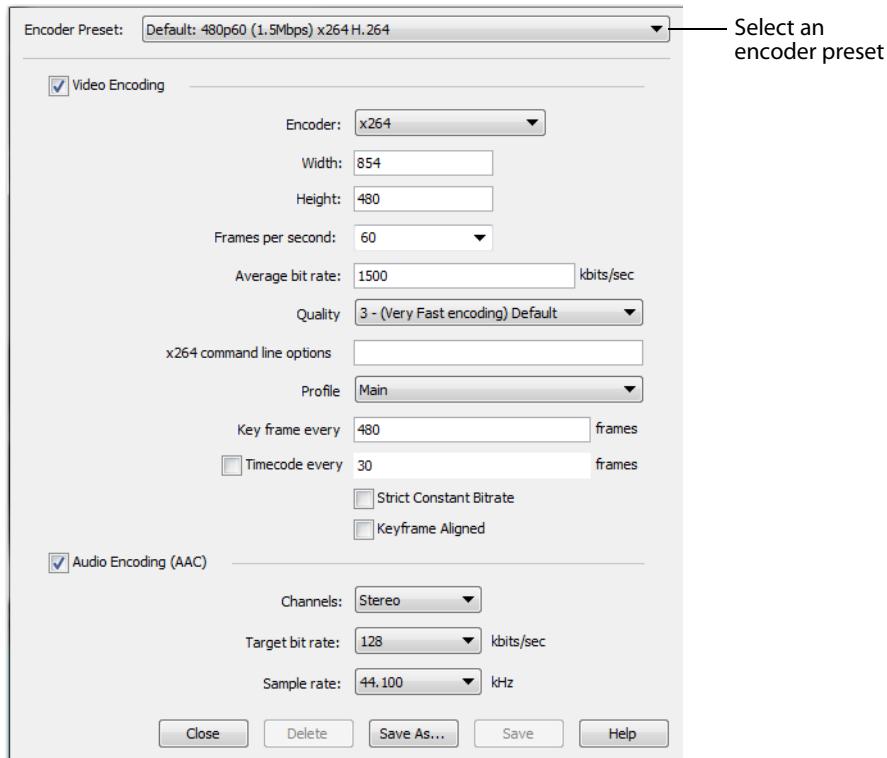
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## Topics

- [The Encoder Presets Window](#)
- [MainConcept H.264](#)
- [x264](#)
- [ProRes](#)

## The Encoder Presets Window

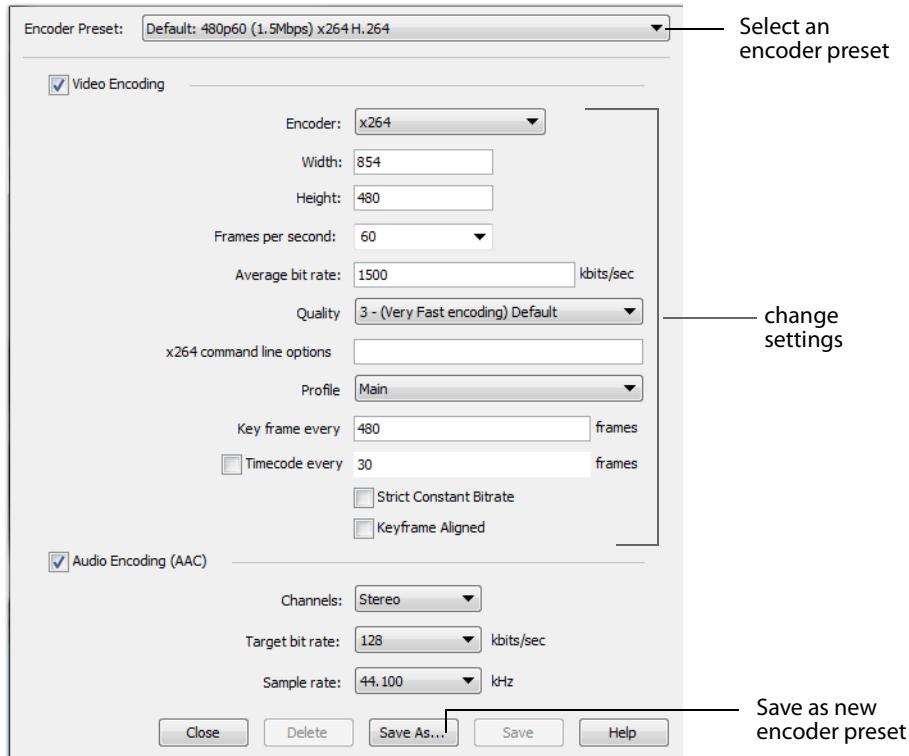
To open the Encoder Presets window, select *Window > Encoder Presets*. The Encoder Preset menu at the top of the window provides a list of encoder presets. Select a preset to edit.



## Creating New Presets

The default encoder presets cannot be changed. However, you can make a copy of any preset, modify it as needed, and save it under a new name. You can refer back to the default presets at any time since they are never modified.

To create a new preset, you must make a copy of an existing preset. To do this, select an existing preset from the Encoder Presets menu that is close to what you need, change settings as needed, then click Save As to save the preset with a new name.



## Profile Options

Many encoder presets enable you to select one of three profiles: Baseline, Main, or High.

**Baseline Profile (BP)** Baseline profile is primarily for low-cost applications that require additional data loss robustness. This profile is used in some video conferencing and mobile applications. It includes all features supported in the Constrained Baseline Profile, plus three additional features used for loss robustness (or for other purposes such as low-delay multi-point video stream compositing). The importance of this profile has faded somewhat since the definition of the Constrained Baseline Profile in 2009. All Constrained Baseline Profile bitstreams are also considered to be Baseline Profile bitstreams, since these two profiles share the same profile identifier code value.

**Main Profile (MP)** The Main profile is used for standard-definition digital TV broadcasts that use the MPEG-4 format as defined in the DVB standard. It is not, however, used for

high-definition television broadcasts, since the importance of this profile faded when the High Profile was developed in 2004 for that application.

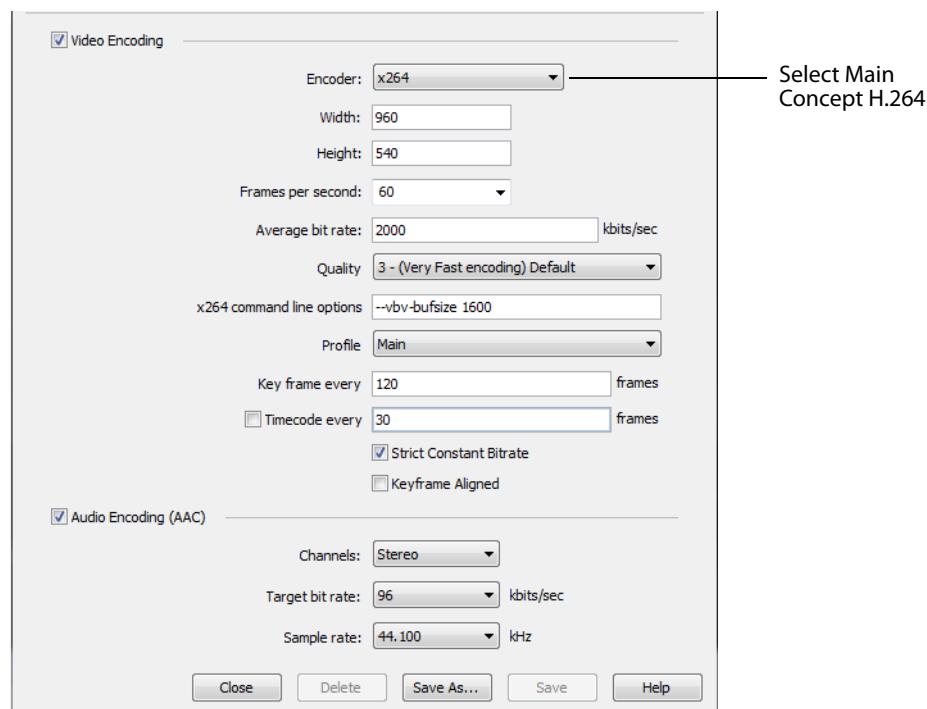
**High Profile (HiP)** The High profile is the primary profile used for broadcast and disc storage applications, particularly for high-definition television applications. For example, this profile is used by the Blu-ray Disc storage format and the DVB HDTV broadcast service.

1.

## MainConcept H.264

To modify a MainConcept H.264 preset, follow these steps:

1. Open the Encoder Presets window.
2. Select the MainConcept H.264 encoder preset from the Encoder menu.



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**Note:** To use a newly created preset (See [Creating New Presets](#)).

---

3. Check the Video Encoding checkbox. When checked, the video for your broadcast is encoded. When unchecked, a blank video screen is provided. This is the preferred method of producing audio-only broadcasts.
4. Enter the Width of your broadcast video.
5. Enter the Height of your broadcast video.
6. Select the desired frames per second (fps) of your broadcast. This value is a target value for the encoder and the exact value is not guaranteed.

7. Enter the average bit rate in Kbits (1000 bits) per second. This is the target bit rate of your video. Higher numbers provide better quality. The connection speed of your audience is a significant factor in determining your target bit rate. The encoder compresses the video to approximate this target. However, at different times during your broadcast the bit rate may be higher or lower than the target rate.
8. Select an encoder profile from the Profile menu. Three profiles are provided: Baseline, Main, and High. The Baseline profile is commonly used in mobile applications. It is also used in other applications which operate with limited processing power, storage capacity, and/or bandwidth. The Main profile is appropriate for general-purpose applications of broadcast media, such as high-bandwidth Internet broadcasting. The High profile provides the highest broadcast quality encoding.
9. Key Frame (optionally) allows you to enter the number of frames. A movie is a sequence of images and each image is called a frame. To compress video data, most encoders take a frame and make it a reference (also known as a key). This keyframe is sent as part of the broadcast, and all of the data after that keyframe is relative to it. The benefit of this is that the compressor only needs to send what has changed since the last keyframe. The main drawback of this is that over time it becomes harder for the encoder to distinguish the frame-difference information, especially if there is a lot of motion in the video. Another drawback is if your viewer's computer misses a keyframe, the video is distorted until the next keyframe is sent. However, you can control how often the encoder makes a new keyframe by setting the number of frames. The more keyframes you broadcast, the more bandwidth required and less compression, but results in better quality video.
10. Check (optionally) the Timecode Every checkbox and enter the number of frames between timecodes. Wirecast One can generate timecodes embedded in the flash stream. If a frames value of zero is entered, the timecode is never sent. Wirecast One sends metadata along with the frames. This data looks like an ONFi call. Various timecodes and timestamps are also sent with the stream.
11. Check (optionally) Strict Constant Bitrate. When checked, it forces the Average bit rate (see item 8 above) to maintain the exact bit rate entered. CBR pads the data (when necessary) to meet exact bitrate specified. Disabling CBR can result in slightly improved quality and decrease file size, but at the cost of greater bitrate fluctuations which could prove troublesome for certain streaming destinations. Selecting this option for recording is not recommended because it can result in decreased quality and larger files, with no real benefit.
12. Check (optionally) Keyframe aligned. When checked, it facilitates adaptive bitrate streaming by ensuring that keyframes from multiple streams are in sync, along with the keyframes timestamp, DTS and PTS values. But this is true only if those other streams also have the option turned on and have the same keyframe interval. To accomplish this, Wirecast One disables scene detection and manually inserts the keyframe at the exact keyframe interval specified. Therefore, to ensure quality and smooth switching in the player, the keyframe interval should be in the 1 to 4 second range. When Keyframe Aligned is enabled, absolute timestamp is also enabled.

13. Check (optionally) the Audio Encoding (AAC) checkbox. When checked, the audio for your broadcast is included. When unchecked, audio is absent. This is the preferred method of producing video-only broadcasts because the presence of silent audio uses bandwidth.
14. Select the number of channels: Mono or Stereo. Mono uses less bandwidth than stereo, but stereo is more pleasing to the listener.
15. Select the audio bit rate, in Kbits (1000 bits) per second, from the Target Bit Rate menu. This is the target bit rate of your audio. Higher numbers provide better quality. The connection speed of your audience is a significant factor in determining your target bit rate. The encoder compresses the audio to approximate this target. However, at different times during your broadcast the bit rate may be higher lower than the target rate. The total broadcast bit rate is a function of video bit rate plus audio bit rate.
16. Select the audio sample rate, in kHz (1000 Hz) per second, from the Sample Rate menu. This value specifies how many thousands of times per second to sample the audio in the broadcast. Higher values provide better quality sound, but at greater bandwidth.
17. Click Save to save your settings.

## x264

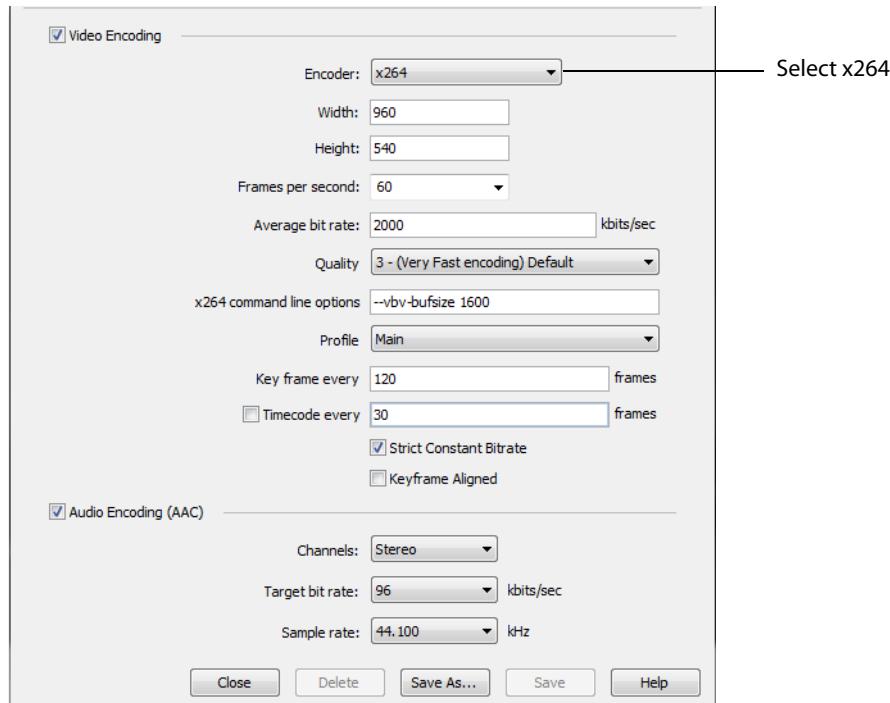
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**Note:** The x264 implementation of the H.264 standard results in better quality and lower CPU usage for any given bitrate, but at the cost of higher memory usage. The default implementation is based on the MainConcept codec and uses less memory.

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To modify an x264 preset, follow these steps:

1. Open the Encoder Presets window.
2. Select an x264 from the Encoder menu.



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**Note:** To use a newly created preset (See [Creating New Presets](#)).

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3. Check the Video Encoding checkbox. When checked, the video for your broadcast is encoded. When unchecked, a blank video screen is provided. This is the preferred method of producing audio-only broadcasts.
4. Enter the Width of your broadcast video.
5. Enter the Height of your broadcast video.
6. Select the desired frames per second (fps) of your broadcast. This value is a target value for the encoder and the exact value is not guaranteed.
7. Enter the average bit rate in Kbits (1000 bits) per second. This is the target bit rate of your video. Higher numbers provide better quality. The connection speed of your audience is a significant factor in determining your target bit rate. The encoder

compresses the video to approximate this target. However, at different times during your broadcast the bit rate may be higher or lower than the target rate.

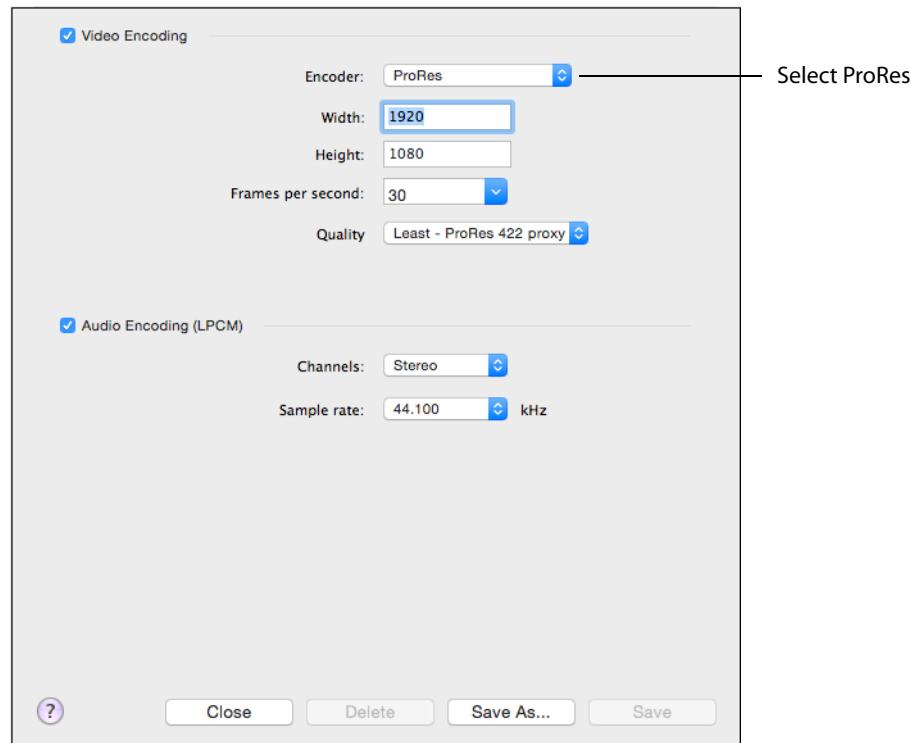
8. Select encoding quality (*Ultra fast* to *Very slow* encoding). Slower encoding results in better quality.
9. In the *x264 command line options* edit box, enter any command line options you want included.
10. Select an encoder profile from the Profile menu. Three profiles are provided: Baseline, Main, and High. The Baseline profile is commonly used in mobile applications. It is also used in other applications which operate with limited processing power, storage capacity, and/or bandwidth. The Main profile is appropriate for general-purpose applications of broadcast media, such as high-bandwidth Internet broadcasting. The High profile provides the highest broadcast quality encoding.
11. Key Frame (optionally) allows you to enter the number of frames. A movie is a sequence of images and each image is called a frame. To compress video data, most encoders take a frame and make it a reference (also known as a key). This keyframe is sent as part of the broadcast, and all of the data after that keyframe is relative to it. The benefit of this is that the compressor only needs to send what has changed since the last keyframe. The main drawback of this is that over time it becomes harder for the encoder to distinguish the frame-difference information, especially if there is a lot of motion in the video. Another drawback is if your viewer's computer misses a keyframe, the video is distorted until the next keyframe is sent. However, you can control how often the encoder makes a new keyframe by setting the number of frames. The more keyframes you broadcast, the more bandwidth required. The result is less compression but better quality video.
12. Check (optionally) Strict Constant Bitrate. When checked, it forces the Average bit rate (see above) to maintain the exact bit rate entered. CBR pads the data (when necessary) to meet exact bitrate specified. Disabling CBR can result in slightly improved quality and decrease file size, but at the cost of greater bitrate fluctuations which could prove troublesome for certain streaming destinations. Selecting this option for recording is not recommended because it can result in decreased quality and larger files, with no real benefit.
13. Check (optionally) Keyframe aligned. When checked, it facilitates adaptive bitrate streaming by ensuring that keyframes from multiple streams are in sync, along with the keyframes timestamp, DTS and PTS values. But this is true only if those other streams also have the option turned on and have the same keyframe interval. To accomplish this, Wirecast One disables scene detection and manually inserts the keyframe at the exact keyframe interval specified. Therefore, to ensure quality and smooth switching in the player, the keyframe interval should be in the 1 to 4 second range. When Keyframe Aligned is enabled, absolute timestamp is also enabled.
14. Check (optionally) the Timecode Every checkbox and enter the number of frames between timecodes. Wirecast One can generate timecodes embedded in the flash stream. If a frames value of zero is entered, the timecode is never sent. Wirecast One sends metadata along with the frames. This data looks like an ONFi call. Various timecodes and timestamps are also sent with the stream.

15. Check (optionally) the Audio Encoding (AAC) checkbox. When checked, the audio for your broadcast is included. When unchecked, audio is absent. This is the preferred method of producing video-only broadcasts because the presence of silent audio uses bandwidth.
16. Select the number of channels: Mono or Stereo. Mono uses less bandwidth than stereo, but stereo is more pleasing to the listener.
17. Select the audio bit rate, in Kbits (1000 bits) per second, from the Target Bit Rate menu. This is the target bit rate of your audio. Higher numbers provide better quality. The connection speed of your audience is a significant factor in determining your target bit rate. The encoder compresses the audio to approximate this target. However, at different times during your broadcast the bit rate may be higher or lower than the target rate. The total broadcast bit rate is a function of video bit rate plus audio bit rate.
18. Select the audio sample rate, in kHz (1000 Hz) per second, from the Sample Rate menu. This value specifies how many thousands of times per second to sample the audio in the broadcast. Higher values provide better quality sound, but at greater bandwidth.
19. Click Save to save your settings.

## ProRes

To modify a ProRes preset, follow these steps:

1. Open the Encoder Presets window.
2. Select the ProRes encoder preset from the Encoder menu.



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**Note:** To use a newly created preset (See [Creating New Presets](#)).

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3. Check the Video Encoding checkbox. When checked, the video for your broadcast is encoded. When unchecked, a blank video screen is provided. This is the preferred method of producing audio-only broadcasts.
4. Enter the Width of your broadcast video.
5. Enter the Height of your broadcast video.
6. Select the desired frames per second (fps) of your broadcast. This value is a target value for the encoder and the exact value is not guaranteed.
7. Set the quality of your encoding at high, medium, or low. Higher quality results in greater CPU usage.
8. Check (optionally) the Audio Encoding (AAC) checkbox. When checked, the audio for your broadcast is included. When unchecked, audio is absent. This is the preferred method of producing video-only broadcasts because the presence of silent audio uses bandwidth.

9. Select the number of channels: Mono or Stereo. Mono uses less bandwidth than stereo, but stereo is more pleasing to the listener.
10. Select the audio sample rate, in kHz (1000 Hz) per second, from the Sample Rate menu. This value specifies how many thousands of times per second to sample the audio in the broadcast. Higher values provide better quality sound, but at greater bandwidth.
11. Click Save to save your settings.



# Making Great Broadcasts

## Introduction

These topics provide helpful information about how to prepare for creating great presentations.

## Topics

- [Overview](#)
- [High Quality Audio](#)
- [Good Lighting](#)
- [Broadcast Settings](#)

## Overview

There are many ways to make a good live event even better. But this appendix focuses on two main things to remember about video streaming:

- **High Quality Audio Input** Great looking video with poor audio input appears unprofessional.
- **Good Lighting** Poor lighting can ruin an otherwise excellent live event. If you are doing chroma keying, this may become the most important part of your setup.

When video is saved to disk or sent over the network, it needs to be compressed. The compression process is done by encoders (codecs) which are optimized to work with clean input data. This means that if the audio or video is muddy to start with, it remains muddy after compression. Some codecs may even highlight poor input because the algorithm is built to look for differences.

Your goal should be to give the best possible quality audio and video to the compression process as possible. This means making sure what you see in the Live area is the best possible quality because Wirecast One takes exactly what you see and sends it to the codecs.

## High Quality Audio

Audio has an artistic aspect to it. You can make a great live event even better by remembering to focus on a few details. Here are some suggestions on producing clean audio.

- **Use a Good Microphone** Though this may sound obvious, a good microphone can make a huge difference. Most DV cameras have an audio input for an external microphone. Use this, whenever possible, instead of the built-in microphone that comes with the camera. Built-in microphones are usually not good quality and tend to pick up hum from the electronics inside the camera. Even when it is not a great microphone, an external microphone almost always sound better.
- **Use a Microphone Splitter** If you are doing an interview with one camera, you can use two microphones with a splitter (less than \$5). This often gives better results than one omni-directional microphone at a distance. You can also use a dual lapel microphone with a splitter.
- **Position the Microphone Properly** Place any microphone as close to the sound source as possible, even when using omni-directional microphones, because sound volume decreases greatly the farther away the microphone is placed. Stronger signals coming into the microphone results in better quality.
- **Use Lapel Microphones** Even inexpensive (less than \$20) lapel microphones can make a huge difference because it places the microphone much closer to the person speaking.
- **Control Environmental Noise** If a chair squeaks, use a different one. If you have a wood floor and you can hear people shuffling their feet as they talk, put down a rug. Do whatever it takes to keep noise at a minimum. Microphones pick up everything.

## Good Lighting

Do not underestimate the power of lighting. When an event is shot outdoors, a great deal of attention goes into lighting. For professionals, lighting is viewed as an artistic task. Many people make their living controlling lighting, so there is a lot to it. Here are a few suggestions to help you obtain reasonably good lighting:

- If you are using only one lighting source, do not shine it directly on your subject. You should diffuse the light by bouncing it off of a wall or by shining it through opaque material.
- Avoid deep shadows. Make sure you fill all areas of your subject with light. Sometimes this requires adjusting the light to bounce off a different wall or use two lights. Placing a light low and another one high is often a good way to light evenly.
- Do not light too evenly. If you evenly light a set, you may actually be worse off than not lighting the set at all. Take a sample shot and see if it looks natural. Good lighting usually has a little more light coming from above than any other direction. You should very rarely light just from below a subject.

- Beware of having too much light on your subject. If your subjects are people and you must use a lot of light, use make-up to compensate for the overly bright lighting. This is not necessarily a bad thing, but you must choose how much effort you want to go through to make a good live event. If your lighting balance is excellent, you can avoid using make-up on your subjects. The key in adjusting the lighting is to look at your subject and make sure they do not look washed out.
- Watch professional events and learn from them. As you watch, notice the lighting instead of watching the program. Notice how they employ the suggestions listed above.

These guidelines might seem to suggest subtle improvements, but good lighting can make an amateur video look professional and a professional video look fabulous. The important thing to remember is that one or two properly placed lights makes a huge difference in the quality of your live event.

## Triangular Lighting

One advanced and very effective approach to good lighting is known as *triangular lighting* (or *three light setup*). Although this may sound complicated, it is actually quite simple. It involves setting up three lights (sometimes using natural light as one of the light sources), in a configuration that achieves a good balance. Here are the main elements of Triangular Lighting:

- **Main Light (Key Light)** This is the strongest of your lights and does most of the work. This light normally comes from one side of the camera (the left, for example) and is slightly raised. However, using just the main light results in shadowing.
- **Fill Light** This is a soft light placed directly in front of the subject. It removes shadows and fills in the image. It is usually direct and usually comes from the same direction as the camera (or just to the side and behind it). It could be, for example, placed on the same level as the head of a person you are lighting. If you use only a fill light, your subject might appear too dark. The only purpose of a fill light is to add to the main light by filling in shadows. If your key light comes from the left of your camera, your fill light should come from the right, and vice versa.
- **Back Light (Rim Light)** This light is directed from behind the subject and above it. This is the hardest light to explain, but the best way is to describe it as an accent of your subject. If you look at a typical high school yearbook picture, you will notice that the top-left (or top-right) part of each head shot has a highlight of light in it. This light is the *back light*. It is also called a *rim light* because it makes a slight rim around the edge of the head of your subject. This light normally comes from behind and above the subject, and it is focused. Make sure it is not directed at the camera.

Most serious lighting starts with these three basic lights. There are also some great Websites that describe these techniques in great detail.

# Broadcast Settings

Once you have good video and audio coming into Wirecast One, the final item of importance is make sure the Broadcast Settings are configured correctly for your presentation. Though there are many broadcast parameters to modify, there are three that are the most important: bandwidth, motion, and encoder settings.

## Bandwidth

The first item of importance is knowing how much bandwidth is available. Bandwidth is how much data you can broadcast from your computer. This depends on the speed of your network connection and the type of connection your viewers are using. More specifically, it is the minimum speed between you and all of your viewers.

Thus, you must know who your viewers are and what kind of connection they have. This may be difficult to know because you must determine if their connection is cable modem or DSL and whether or not they reside on your local network.

In some situations, you are broadcasting for just your local network (in an office building, for example). In this case you should discuss your plans with your network administrator and verify that you will not disrupt the network with your broadcasts. Ask them what your upper limit bandwidth should be. Your available bandwidth is the minimum of what you can upload, combined with what your viewers can download.

## Motion

Once you know your bandwidth, you need to decide whether or not your video contains a lot of motion. Motion is how much things move around in your video presentations. An interview is considered low motion. A sports event, however, would probably be high motion. Wirecast One comes configured with defaults to help ease your configuration task. Choose a default configuration that meets your motion (and bandwidth) constraints.

## Encoder Settings

The parameters of the encoders are quite technical and can be overwhelming. It is beyond the scope of this document to describe the delicate balance required in setting them. There are professionals who fine-tune encoders to do exactly what is required. The Wirecast One default settings are generally optimal for the various network environments. (See [Encoder Presets](#) for information on changing the encoder settings.)

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