Telestream   **W** Wirecast 8

Release Notes

System Requirements

	Minimum	Recommended
Operating System	Windows 7, 8, 10, macOS Sierra, Mac OS X El Capitan	Windows 10, macOS Sierra
Processor	i5 dual-core @ 2.3GHz[1]	i7 quad-core @ 2.8GHz+
Memory	4GB RAM	16GB+ RAM
Hard Drive	2GB[2], 7200 RPM for record to disk	500GB+, Solid State OS Drive
Graphics Card	Intel HD[3], DirectX 11 capable	Nvidia GeForce or AMD Radeon, 1GB+ video memory
Internet Connectivity	Open HTTP/HTTPS port 80, RTMP port 1935, port 7272 for Remote Desktop Presenter	If behind a firewall, check with your CDN for any sites to whitelist

[1] May be insufficient for 1080p+ or 60 fps workflows
[2] Additional hard disk space required for record to disk.
[3] Insufficient for advanced Multi-Viewer workflows.

Languages Supported:

- English
- German
- Italian

- Brazilian Portuguese
- Chinese (Simplified)
- Japanese

- Korean
- Czech
- Dutch

- French
- Spanish
- Swedish

An internet connection is recommended for Wirecast 8.0 license activation.

ATTN: Wirecast 8 has dropped support of HDV licenses/cameras.
~ Please click here for additional information ~

***NewBlueFX Titler Live Express & Present** – Includes over 60 title templates for lower-thirds and overlays (Mac & Windows).*

- *Purchase of Wirecast 8 Studio includes a free copy of NewBlueFX Titler Live Express.*
- *Purchase of Wirecast 8 Pro includes a free copy of NewBlueFX Titler Live Present.*

    www.telestream.net/wirecast/newblue.htm

***Remote Desktop Presenter** - Please use the Remote Desktop Presenter version 2.0.8, available as a separate download from Telestream:* www.telestream.net/dtp

Best Practices

Minimum Required Upload Speed:

- It is recommended that an upload speed rate of at least double the selected video bitrate be available, especially for a total target bit-rate of 10Mbps (Megabits per second) or less, or when there are multiple outgoing streams.
- Upload speed can be tested at a website such as TestMy.net/upload.
- Additional tasks that can consume upload bandwidth on the network should also be considered when determining how much of the available upload bandwidth can be allocated towards streaming.

Rendezvous

Wirecast Rendezvous uses WebRTC technology that can be very resource intensive. For the best experience, we suggest considering the following table when choosing hardware:

	Studio *(2 guests + 1 host)*	Pro *(7 guests + 1 host)*
Bandwidth[4]	Add 4 Mbps	Add 5+ Mbps[5]
Processor[4]	i5 quad-core[6]	i7 quad-core[6]

[4]Based on a single simultaneous stream of 720p30 x264 @ 4.0Mbps.
[5]Bandwidth per guest will scale downwards as more are added to maintain reliability.
[6]Minimum recommended processor with example stream[4]. More demanding workflows may require a more capable CPU.

ISO Recording:

- 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 (Mac) or MJPEG recording (Windows), as well as the resolution and frame rate selected.
    - For Mac ProRes recording please refer to Apple's ProRes data rate specifications.
    - Windows MJPEG Best Quality Guidelines (Megabytes per second):
        - *1080i and 1080p 29.97 and 30 FPS, MJPEG Best Quality* – ~25MB/sec
        - *1080p 60 FPS, MJPEG Best Quality* – ~50 MB/sec
        - *720p 59.94 and 60 FPS, MJPEG Best Quality* – ~20 MB/sec
- Total expected data rate should be compared to available disk write speed to ensure adequate disk throughput.

Failure to ensure the available disk write speed is greater than the highest expected total data rate may result in frames being dropped from recordings (ISO, Replay, and Record-to-Disk).

Best Practices (cont.)

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*.
  > *This may change in the future, as the Apple API decides what hardware acceleration method is to be used. At the time of this writing, only Quick Sync via an Intel GPU is supported.*

High frame-rate streaming (60fps):

- High frame-rate streaming will result in increased CPU usage and require a higher bit rate (4Mbps or higher) for a quality encode.
- Simply switching to a higher frame-rate without ensuring the CPU and bitrate are sufficient may result in a lower quality encode.

CPU Usage:

- Consider lowering your canvas frame rate and/or streaming resolution to lower CPU usage.
- Maintained system CPU usage greater than 60% will increase the likelihood of dropped frames.

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8.0 - New Features

NEW - Wirecast Rendezvous | Multi-site production with remote guests

- Easily bring in remote guests without additional hardware or software for the guest
- Send them a link and they can join on a smart device or Chrome/Firefox browser
- Add up to 2 guests in Studio, 7 guests in PRO (Note: Subject to available bandwidth)
- Screen share and Tally lights
- Companion iOS app (Wirecast Go) for mobile guests

NEW - Completely new rendering engine

- Huge performance increases
- (WIN) Upgrade to Direct 3D 11
- Added Z-rotation
- Resize, rotate, and crop handles directly in the Preview Window.
- Asset Snap-to-grid, Guidelines, and Centering.
- Add Reflection and/or Drop Shadow to any source.

NEW - Multi-Viewer Output System

- Support for up to 17 slot multi-viewer output (up to 4 in Studio) to any attached display.
- Send different configurations (1x, 2x, 4x, 10x, 17x) to different monitors.

NEW - Multi-Channel Audio Ingest

- Support for up to 16 channels of input via each connected professional audio interface, each NDI source, and/or each capture card input with embedded audio.

NEW - Multi-Track Audio Support **(Pro only)** – up to 8 tracks

- Multi-language streaming.
- Multi-language recordings.
- Isolate audio sources for post-production.
- Behind-the-scenes or other commentary track support.

NEW - Major encoding engine upgrade

- Substantially less system resource usage for most content when encoding with x264.
- Higher quality x264 encoding.
- Tighter bit rate variations when utilizing CBR (constant bit rate).

NEW - Automatic color space matrix with options for override

- No more washed out looking sources, Wirecast will auto detect the color space and apply any appropriate conversions to maintain color quality throughout the entire workflow.

8.0 - New Features(cont.)

NEW - NewBlue Titler Live 3 - Complete titling suite with social media titling templates, sports templates, and much more.

- ▪ **Overview:**
  - ■ Free live Facebook comments with Titler Live 3:
    - ● **Express** – *Free with Wirecast 8 Studio purchase*
    - ● **Present** – *Free with Wirecast 8 Pro purchase*
  - ■ Curate and push live comments from any web browser on your network.
  - ■ Animate comments as they fly in or out.
  - ■ Upgrade to **Social** or **Complete** to add Youtube and Twitter.
  - ■ Updated, expanded, and improved Titler Live modules.
- ▪ **Versions:**
  - ■ **Express** – *Free with Wirecast 8 Studio* – Includes templates for many common titling needs. Does not include Title Designer.
  - ■ **Sport** – Sports titles and graphics, scoreboards, integration with Sportzcast live scoreboard data sources.
  - ■ **Social** – Display social messages through high-end, animated designs from Twitter, Facebook and Youtube. Even poll your audience in real-time, displaying results graphically.
  - ■ **Present** – *Free with Wirecast 8 Pro* – Everything you need to title and produce live shows, events, conferences, church streams, etc.
  - ■ **Complete** – All the above for a complete titling solution for any event.

NEW - New Transitions
- ▪ 23 included live transitions.
- ▪ New 'Smooth' transition features allow curve types and animation effects like 'spring'.

NEW - (WIN) Implement WASAPI Audio Capture
- ▪ Reduced audio latency and increased channel support compared to Direct Sound.
- ▪ Support for newer WASAPI only multi-channel audio devices.

NEW - (WIN) Implement ASIO Audio Ingestion
- ▪ Support for the industry standard Windows pro audio API.

NEW - (MAC) Added Syphon client support for Mac
- ▪ Improved quality and performance over macOS native functionality when capturing Syphon enabled apps on macOS (Adobe After effects and Character Animator, Many VJ tools, Unity engine, and many more).

8.0 - New Features(cont.)

NEW - New Clock, Timer, and Stopwatch Source

- World clock, time and date functionality - all completely customizable.
- Start, stop, and reset with the click of a mouse.

NEW - Add option to override automatic format detection in capture cards

- Now you can override the automatic detection system and specify the exact setting you need for your workflow.

NEW - De-interlacing hot toggle

- De-interlacing can now be toggled per source in the moment. No need to restart the app.

NEW - Add support for .WebM files

- Support for the popular .WebM format when bringing in media files.

NEW - Add support for Sony XAVC-S video format

- Support for the popular XAVC-S format used in Sony cameras.

NEW - Replay - Option to mute audio during playback

- Now, you can set your replay files to include audio, without having to manually mute each replay clip when used in a live setting with narration. Great for enhancing your post-production workflow.

NEW - Wirecast Go iOS App

- iOS only, updated and improved
- Integrates with Rendezvous natively
- Replaces Wirecast Cam for Lan/Wifi camera use

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8.0 - Improvements & Fixes

Improvements:

- **IMPROVED -** [Facebook] Logout option to clear security information
- **IMPROVED -** [Facebook] Improve filtering of the With (Sponsor) field to display better results
- **IMPROVED -** [Facebook] Update hyperlinks in Advanced Options to a graphical icon
- **IMPROVED -** [Facebook] Highlight first entry in search fields by default
- **IMPROVED -** [Facebook] Improve readability of highlighted text for search fields on Mac
- **IMPROVED -** [Facebook] Improve responsiveness when switching events on Mac in 8.0 builds.
- **IMPROVED -** [Facebook] Add warning dialog to the "Delete Event" button
- **IMPROVED -** [Facebook] Test for stale URLs (i.e. one that cannot be streamed to) when validating Facebook settings
- **IMPROVED -** (WIN) Put cursor at the end of the field when using Enter to accepting a search value
- **IMPROVED -** (WIN) Refactor Virtual Microphone / Camera Installation & Registration
- **IMPROVED -** Add a "Select All" menu item to allow users to select all sources in Preview
- **IMPROVED -** Add a link to download Remote Desktop Presenter from the add sources menu if it isn't installed yet
- **IMPROVED -** Add boxed icon for virtual microphone toggle
- **IMPROVED -** Add Select All and Unselect All buttons to the "Edit Visible Destinations" window.
- **IMPROVED -** Add Twitter Source to Plus button in shot inspector
- **IMPROVED -** Allow simultaneous CPU and GPU buffers during output
- **IMPROVED -** Asynchronous media file indexing
- **IMPROVED -** Audio Mixer: Click 'R' to pan to 50R / Click 'L' to pan to 50L
- **IMPROVED -** Change arrow cursor to hand cursor when hovering over the "Click for help..." links in "Facebook Advanced Options"
- **IMPROVED -** Delay the "missing sources" prompt a second or two after opening a document
- **IMPROVED -** Do not include dynamic outputs in the logic that determines the canvas size.
- **IMPROVED -** Double clicking the vertical split bar between the preview and live panels should toggle between a 75% split and a 50% split
- **IMPROVED -** Eliminate 3 second wait when adding new video sources
- **IMPROVED -** Include "http://" by default in Web Display
- **IMPROVED -** Increase Default Font Size & Change default color to White
- **IMPROVED -** Make newly added video sources scale to fit by default.
- **IMPROVED -** Optimize video format conversions used in ISO recording
- **IMPROVED -** Organize Add Source Menu
- **IMPROVED -** Periscope - Change the "Start Broadcast" menu item to "Go Live"
- **IMPROVED -** Playlists always transitions all layers rather than just the playlist layer.
- **IMPROVED -** Remove Blank Shot that appears with New Document
- **IMPROVED -** Remove Camera Preview window
- **IMPROVED -** Removed Apply button in Capture Card settings as it applies with changes automatically
- **IMPROVED -** Request: Relabel the document recovery message
- **IMPROVED -** Request: Replace the "Clear Layer" (Blank Shot) icon

- **IMPROVED -** Smaller resize range for audio mixer
- **IMPROVED -** Support for Viewership when streaming to multiple destinations
- **IMPROVED -** System Audio Capture Should say "Select Audio device: instead of "Audio Settings"
- **IMPROVED -** Take out the padding around the Preview and Master audio meters
- **IMPROVED -** Update Twitch Encoding Settings
- **IMPROVED -** Use the boxed icons from the Mixer in the main UI for Monitor and Mute.
- **IMPROVED -** Users do not need to restart the app for deinterlacing to work

Fixes:

- **FIXED -** (HiDPI) Wirecast icon is low resolution
- **FIXED -** (MAC) (High Sierra) Installer text is hard to read
- **FIXED -** (MAC) Application becomes inaccessible if a user attempts to "Authorize" to "YouTube" while offline
- **FIXED -** (MAC) Audio timestamps passed to external display output plugins are broken
- **FIXED -** (MAC) CEF process separation caused some pages to no longer load correctly
- **FIXED -** (MAC) Crash with specific URL's in the "Web Display" widget
- **FIXED -** (MAC) Dragging the main document UI to the minimum size causes Preview and Live to disappear when the shot editor is open
- **FIXED -** (MAC) OpenGL crash when opening a specific document
- **FIXED -** (MAC) Record to disk - ProRes Proxy codec records H.264 video
- **FIXED -** (MAC) Wirecast can crash when selecting a font for title text on Mac
- **FIXED -** (MAC)Apple H.264 hardware encoder disappears when in use
- **FIXED -** (Widgets) Black hex color boxes are unreadable in the "New Source Dialog" window for multiple widget sources
- **FIXED -** (WIN) "Drop Shadow" font style does not match other menu options in the "Preview Inspector"
- **FIXED -** (WIN) "Record to Disk - Window Media" is cropped off in the "Output Statistics" window
- **FIXED -** (WIN) (NDI) Clicking "Reconnect" button quickly 5 or more times causes Wirecast to hang
- **FIXED -** (WIN) (NDI) Source doesn't always show up in the capture devices
- **FIXED -** (WIN) 32-bit Virtual camera DirectShow filter fails to register
- **FIXED -** (WIN) Authentication error message shows up twice for several destinations
- **FIXED -** (WIN) Colors do not look right and scaling is off when capturing from YCbCr 4:2:0 video sources
- **FIXED -** (WIN) Crash after exiting Wirecast while tearing down DirectShow device
- **FIXED -** (WIN) Cursor does not change to the "pointer" hand when hovering over hyperlinks in Windows
- **FIXED -** (WIN) Damaged resource notification refers to Mac file type in Windows
- **FIXED -** (WIN) DINPro font does not work in Text Widget
- **FIXED -** (WIN) Encoder audio settings should be limited to 192kbps on Windows only
- **FIXED -** (WIN) External Display Output on Windows will sometimes be very pixelated
- **FIXED -** (WIN) Incorrect error message is displayed when attempting to record Program Replay to a

read-only folder
- **FIXED -** (WIN) ISO recordings of DirectShow sources do not start until the source is in the canvas (preview or live)
- **FIXED -** (WIN) Mouse Scroll wheel does not work in Asset Manager
- **FIXED -** (WIN) Output settings window not populating Taskbar or Windows Peak
- **FIXED -** (WIN) Preview/Live flickers with GeForce GTX 980M
- **FIXED -** (WIN) Recordings created in VLC are crashing Wirecast
- **FIXED -** (WIN) 'Replay+ISO', 'Replay' and 'Twitter' menu items don't have hotkey shortcut letters underlined
- **FIXED -** (WIN) Scrubbing the scrollbar for the 'Titles' window too fast will cause the application to hang
- **FIXED -** (WIN) Setting YouTube event to a pre-POSIX start date will crash the application
- **FIXED -** (WIN) Starting NDI or Blackmagic output with specific settings will cause crash
- **FIXED -** (WIN) Titles browsing will not depict thumbnails on initial launch of window
- **FIXED -** (WIN) Verify that AVerMedia Live Gamer HD2 GC570 works with Wirecast
- **FIXED -** (WIN) Windows video playback and encoded output on GTX960 is stuttering
- **FIXED -** (WIN) Wirecast installer shows when opening document from explorer
- **FIXED -** (WIN) YUV sources have washed out colors with NVIDIA GPUs
- **FIXED -** [Facebook] (WIN) Reduce jerkiness when switching between scheduling states
- **FIXED -** [Facebook] authentication page has scroll bars on the bottom and side
- **FIXED -** [Facebook] Progress indicator will not stop if user cancels authentication prematurely
- **FIXED -** [Facebook] refactor destination
- **FIXED -** [Facebook] sponsor setting does not recognize verified page properly
- **FIXED -** [Facebook] Text in the Description Field is a little too far right on Mac
- **FIXED -** [Facebook] Time box is slightly misaligned compared to the Start Date menu
- **FIXED -** [Facebook] Title and Description fields inherit strings from deleted events
- **FIXED -** [Facebook] Unable to Tab from Title field to Description field in Output Settings
- **FIXED -** [Facebook] Users can bypass the Facebook configuration validation by having another destination
- **FIXED -** 1080p Anamorphic setting is not 1440x1080
- **FIXED -** Adding audio filter de-highlights the headphones icon in the audio mixer
- **FIXED -** Audio bitrate settings that are not valid for the encoder are populating the list
- **FIXED -** Audio Effects disappear with playlist shot switching
- **FIXED -** Blackmagic encoder presets causing a crash
- **FIXED -** Changing encoder resolution with Auto Canvas breaks color controls
- **FIXED -** Changing the UI to show program results in black bars
- **FIXED -** Clear Layer can be deleted via Edit menu
- **FIXED -** Corrupted encoding presets could cause documents to fail to open
- **FIXED -** Crash in project with many duplicating titles and playlists
- **FIXED -** Crash when importing an MOV in QuickTime Animation format
- **FIXED -** Crash when switching between Audio FX and/or slider settings within the same slot
- **FIXED -** Cropped DP Shot does not hold settings after closing Wirecast
- **FIXED -** Cropping then moving the image causes resizing
- **FIXED -** Cursor rapidly switches icons during hover after adding a WebStream device to the Shot Bin

- **FIXED -** Default window height does not show the auto-populated shot on the 3rd layer
- **FIXED -** Disable keyboard shortcut for deleting a shot while the shot editor is open
- **FIXED -** Disconnecting secondary monitor while External Display Output is active does not terminate external viewport
- **FIXED -** Display persists through the External Display Output after closing document
- **FIXED -** External Display Obscuring Wirecast on some systems when external display is unplugged
- **FIXED -** External Display Output only available to the first Wirecast document
- **FIXED -** Hang when ending stream while still recording
- **FIXED -** Image shifts slightly whenever the user uses the crop attribute
- **FIXED -** Image Slideshow source does not convert from OBS converter
- **FIXED -** Indefinite hang in the GlobalHotkeyMonitor
- **FIXED -** ISO - Segmented and Replay recordings will drop one frame in between segments
- **FIXED -** ISO not creating files - Bluefish 444 Epoch 4K Neutron
- **FIXED -** Localization: Japanese: "Channel" is not localized when certain Broadcast Destinations are selected
- **FIXED -** Localization: Japanese: "Refresh" does not fit within the associated button in the USB Devices window
- **FIXED -** Localization: Locate missing Asset prompt displays placeholder text
- **FIXED -** Localization: Matte selections in the Configure Visual Effects tab are not localized
- **FIXED -** Localization: Multiple strings are not localized in the Desktop Presenter configuration pane
- **FIXED -** Localization: Select Screen Region text is cut off due to line-wrapping beyond the text box
- **FIXED -** Localization: Text does not display properly in the USB Devices window
- **FIXED -** Localization: Text is cut off on the Configure Cropping tab
- **FIXED -** Localization: The Wirecast Menu is not localized
- **FIXED -** Long audio interface names in audio mixer are being cut off
- **FIXED -** Minimize and maximize buttons react on mouse down rather than mouse up
- **FIXED -** Missing Twitch ingest servers in output settings
- **FIXED -** Multiple error messages generated for incorrect authentication to custom partner destinations
- **FIXED -** Pixelated text in lower third
- **FIXED -** Problems invalidating or updating Playlist Shot UI Tabs after the Playlist Shot is moved to another Master Layer
- **FIXED -** Record to Disk - MP4 x264 files have an edit list that excludes almost every frame in the first GOP
- **FIXED -** Remove Hitbox CDN as it no longer exists
- **FIXED -** Replay mark in displays incorrectly within the UI for ISO Recordings
- **FIXED -** Replay/ISO menu has two listings for "Configure" and "Configure ISO Outputs"
- **FIXED -** Same shortcut won't work if assigned to multiple actions
- **FIXED -** Scoreboard text size is too big

- **FIXED -** Selecting between options on the Source Properties tab causes Video/Audio to stutter with Blackmagic devices
- **FIXED -** Selecting Solid Background under Text Properties Defaults to a Background with 0%

Opacity
- **FIXED -** Selecting the currently selected External Display Output causes the output image to disappear
- **FIXED -** Shot-level audio settings affect other shots using the same sources
- **FIXED -** Strict CBR sometimes fluctuates more than it should
- **FIXED -** Support for Blackmagic Production Camera 4K
- **FIXED -** Text Properties Background Color - Auto Switching to None
- **FIXED -** Text Properties window contents can be highlight selected
- **FIXED -** Text Tool - Clicking on Shadow Attribute Sliders does not apply correctly
- **FIXED -** TextField - Undo/Redo doesn't always function
- **FIXED -** The aspect ratio of a text source can become corrupted in certain situations
- **FIXED -** The mix minus and mute state is not being updated between the Audio Mixer and Source Properties
- **FIXED -** There are too many encoding templates to display them all in the Output Settings dialog's Encoding popup menu
- **FIXED -** Tooltip for create replay shot button is "Update Replay Shot"
- **FIXED -** Twitch output configuration is sluggish in the "Output Settings"
- **FIXED -** Unable to access the "Output Settings" while outputting to "Virtual Camera Out"
- **FIXED -** Update Monitor Checkbox to button in mixer
- **FIXED -** Update Twitch API to V5
- **FIXED -** Video can stutter on some occasions with Replay Templates
- **FIXED -** Virtual Camera not working in Skype
- **FIXED -** When attempting to connect to Facebook, re-clicking the stream button causes hang
- **FIXED -** When modifying the Output Settings you need to press Create in the Facebook config
- **FIXED -** Wirecast 6.0.5 Update Can't Stream Audio with Sample Rates <44.1KHz
- **FIXED -** Wirecast/Ustream will crash if audio mixer is present when first opening
- **FIXED -** With certain equipment workflows, audio dropouts can occur during shot switching
- **FIXED -** x264 Encoding Produces Increasing/Excessive Keyframes
- **FIXED -** x264 Outputs with a resolution of 480x270 can cause the encoder to fail

Known Issue(s):

- (WIN) Canvas Sizes of NTSC 480 or PAL 576 can result in a corrupt output on Windows machines using an encoding method other than Intel Quick Sync. This should be fixed in the first bug fix release.
  Click here for information on a simple workaround.
- (WIN) Windows 7 users require the Windows 7 Platform Update.
  Click here for more information.
- (MAC) Initiating a stream with a still, complex color image can result in the stream not publishing correctly.
  Click here for information on a simple workaround.

Version 8.0 contains hundreds of bug fixes, not all of which can be listed here. There are also additional user interface/user experience enhancements, and vast improvements to the general stability and performance of the application that are not able to be listed here.