

# Livestream Studio<sup>TM</sup> User Manual

For use with Livestream Studio<sup>™</sup> version 4.2.0

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### Table of Contents

L.	Getting started with Livestream Studio		7
	1.1	Software features	7
	1.2	Hardware specifications	10
	1.3	Internet connection	14
	1.4	Selecting cameras	20
	1.5	Connecting cameras to your system	33
2.	Installing	and launching Livestream Studio	50
3.	Adding ar	nd formatting video inputs	59
	3.1	Setting project format	59
	3.2	Configuring input sources	72
	3.3	Inputs Calibrator	83
	3.4	Video input troubleshooting	92
4.	Configuring video outputs		101
5.	Setting auxiliary outputs		108
5.	<u>Multi-view</u>		124
	6.1	<u>User Interface</u>	124
	6.2	External multi-view	131

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Inh	$  \cap \cap$	$f( \cap n)$	tontc	$(c \cap n^{\dagger})$
Ian	にし			

7.	Switching	143	
	7.1	<u>Mouse / Touch</u>	143
	7.2	Hot keys	150
	7.3	Transition controls	157
8.	<u>Audio woi</u>	177	
	8.1	Configuring audio sources	177
	8.2	Audio monitoring	188
	8.3	Using audio controls	197
9.	Recording	]	215
	9.1	Recording settings	215
	9.2	Starting and stopping your recording	224
10.	Streaming		228
	10.1	Using Livestream	228
	10.2	Using other streaming providers	261
11.	<u>Stream to</u>	Multiple Providers	320
12.	<u>Hardware</u>	encoding	343
13.	4K, 1080p, and Custom Encoding		

1

1

### Table of Contents (cont.)

4.	<u>Media play</u>	363	
	14.1	Configuring settings	363
	14.2	Importing video clips	373
	14.3	Controls and options	380
	14.4	Replay functionality	401
	14.5	Exporting media	407
5.	Adding rer	413	
	15.1	Remote Desktop Client for Windows	413
	15.2	Remote Desktop Client for Mac	425
	15.3	iOS devices	438
	15.4	Android devices	450
	15.5	Google Glass	461
	15.6	Livestream Broadcasters	478
	15.7	<u>GoPro Cameras</u>	505
	15.8	Live Interview	511
	15.9	Apple Airplay Receiver	526
	15.10	Other streams	533

16.

17.

## Table of Contents (cont.)

Adding graphics overlays		
16.1	Activating graphics overlay channels	540
16.2	Adding and designing a new layer	546
16.3	Grouping graphics layers	580
16.4	Exporting and importing layer templates	591
16.5	Pushing and pulling graphics overlays	598
16.6	Importing a layer: Livestream Graphics	620
16.7	Importing a layer: Excel spreadsheet	629
16.8	Importing a layer: .CSV file	651
16.9	RSS feeds	671
16.10	<u>Google</u>	683
16.11	<u>Twitter</u>	714
16.12	<u>Clock</u>	726
16.13	<u>Timer</u>	734
16.14	<u>.CSV over HTTP</u>	765
16.15	Animated graphics	777
Chroma ke	Ξλ	789

### Table of Contents (cont.)

18.	Tie functionality	811	
19.	Synchronizing input and remote sources	827	
20.	Advanced input cropping	836	
21	Triggering mid-roll advertisements	850	
22.	Integrating tally lights	869	
23.	<u>Closed captioning</u>	879	
24.	Advanced streaming options	886	
25.	RTMP server setup	897	
26.	Web Control	918	
27.	Graphics Overlays in Web Control	931	
28.	Project saving & loading	954	
29.	Locating software and support information	972	
Appendix A: Certified capture devices		976	
Арр	Appendix B: Supported formats for transcoding 9		

## Getting started with Livestream Studio

Software features





- Livestream Studio is a live
- production switcher that enables
- multi-camera switching and
- mixing in other elements while
- recording and streaming live.

#### Studio Software Pricing



The features available depend on whether you are using Livestream Studio's free version or paid version, detailed here and on <u>livestream.com/studio/software</u>.

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Getting started with Livestream Studio

Hardware specifications





Livestream Studio currently runs only on Windows 64-bit systems with Microsoft DirectX End-User Runtime 10 or better.



Minimum hardware specifications for running Livestream Studio:

- **CPU**: 6 core Intel® i7 2nd generation
- Motherboard: Intel® X79 chipset
- GPU: NVIDIA ® GeForce GT 620
- **RAM**: 8-16GB DDR3 1333MHz
- HDD: 500GB free (7200RPM/SSD preferred)



It is possible to run Livestream Studio on a laptop that meets these specifications. However, laptops typically have fewer USB 3.0 and Thunderbolt ports, which gives you fewer inputs.



## Getting started with Livestream Studio

Internet connection





If you intend to use Livestream Studio to stream, you will also need to consider your Internet connection, specifically your available upload speed.





For best results, use a network dedicated to only your system, connected via Ethernet.

Note: Livestream Studio hardware products do **not** include a built-in Wi-Fi receiver. You will need a USB Wi-Fi adapter or 3G/4G USB modem if Ethernet is not available.





It is recommended that you have an upload speed at least twice as fast as the bitrate at which you wish to stream to help avoid issues related to local bandwidth fluctuation.





Check your upload speed at <u>www.speedtest.net</u>. We recommend running multiple tests if your bandwidth fluctuates.



Your network should also have the following Firewall ports open to incoming and outgoing communication (in order of importance):

- TCP 1935
- TCP 80
- TCP 443
- UDP 53\*\*

\*\*Many corporate and academic networks' security policies will block this port, as it provides DNS.

## Getting started with Livestream Studio

Selecting cameras





The next step is to add cameras to your setup. Most producers will use two to five direct camera inputs, depending on their needs.







Livestream Studio is compatible with USB webcams, consumer HDMI camcorders, and high-end SDI cameras via certified Blackmagic Design capture devices.





One recommended webcam is the Logitech HD Pro Webcam c920, which can connect to your computer directly via USB 2.0.





Webcams typically cost less than \$100 and are good for showing a single headshot or a static wide shot. However, they have short cables and cannot produce true HD quality video.







Consumer HDMI cameras can also work with Livestream Studio when connected via a Blackmagic Design capture device with an HDMI input.





#### Canon XA10 HD Professional Camcorder

B&H # CAXA10 • Mfr # 4922B002		
IN STOCK	You Pay: \$1,499.00	
Free Expedited Shipping ()	ADD TO CART ADD TO WISH LIST Shop Used Dept. from \$1,199.95	
	<ul> <li>Essential Kits</li> <li>Trade-in your gear for cash</li> </ul>	
Ratings: 🚖 🚖 🚖 🎲 262 reviews	□ write a review	
Product Highlights		
1/3" CMOS Sensor	<ul> <li>10x HD Zoom Lens</li> </ul>	

HDMI cameras range in size and cost. Panasonic camcorders can cost less than \$200, whereas the popular Canon XA10 is typically around \$1,500.





These cameras produce a true HD quality image. However, they are not ideal for long distances, as consumer HDMI cables are rarely longer than 10-15 feet.





A workaround for a long-distance HDMI camera is connecting it to Livestream Broadcaster Pro on the same local network and using it as a remote camera source.



This setup will introduce some input latency and the picture quality will be diminished compared to plugging into Livestream Studio directly.





Professional SDI cameras work very well if your needs mean that cameras must be far away from Livestream Studio. SDI cables can be as long as you need and still produce true HD quality video.







#### Sony HXR-NX3 NXCAM Professional Handheld Camcorder

INCLUDES FREE	Sony AC Adapter / Twin Charger a Battery Kit	and NP-F970 Info-Lithium	VALUE \$218.00
B&H # SOH	XRNX3 = Mfr # HXR-NX3		
IN STOCK		You Pay: \$	3,099.00
Free Expedited Shipping (1)		1 ADD TO CART	
		<ul><li>Shop Used Dept.</li><li>Essential Kits</li></ul>	from \$2,795.00
		💲 Trade-in your gea	r for cash

The benefits that come with using an SDI camera can be costly. For example, the Sony NXCAM Professional Camcorder is over \$3,000.





Livestream Studio can support 4K cameras if you use compatible 4K capture cards with them, such as the Blackmagic Design Intensity Pro 4K, pictured above.

**Note**: that streaming in 4K using Livestream Studio is currently not available.

## Getting started with Livestream Studio

Connecting cameras to your system





Livestream Studio should recognize any USB webcam once its drivers are automatically installed by Windows.





For other cameras, you will need a Blackmagic Design capture device in order for Livestream Studio to recognize the input.

**Note**: HD31, HD51, HD510, HD550, and HD1710 all have Blackmagic cards and drivers pre-installed.




#### Please note that **no** Blackmagic USB 2.0 capture device is compatible with Livestream Studio.



Connect the capture device to your computer if the device is not already installed.



			Search by model	Q,
Fusion	ATEM Live Production Switchers	ATEM Camera & Studio Converters	Disk Recorders	Capture and Playback

Go to <u>http://</u> <u>www.blackmagicdesign.com/</u> <u>support</u>. To install the device's drivers, click on 'Capture and Playback.'

Software Update       11 Aug 2015         Desktop Video 10.4.3       This software update adds Windows 10 support for all Desktop Video products including DeckLink, UltraStudio and Intensity as well as general performance and stability enhancements. Read more         Image: Mac OS X       Image: Windows	Desktop Video Manual This instruction manual includes information for installation and setup of all Blackmagic Design desktop video products including DeckLink, UltraStudio and Intensity models. Download Mac OS X, Windows & Linux	Blackmagic Design @Blackmagic_News       11 Sep 2015         New DeckLink Quad 2. Get 8 independent 3G-SDI capture and playback channels in the one PCIe card! Only \$995 <ul> <li></li></ul>
Developer SDK 11 Aug 2015 De Atop Video 10.4.3 SDK Mis SDK provides developer support for Desktop Video 10.4.3 that allows updating of hardware control and software interfaces for Desktop Video products. Mac OS X Windows Uties Linux	Support Note       07 May 2015         Windows PCIe System Requirements       Of May 2015         This support note identifies minimum Windows system requirements when installing PCIe based video capture and playback with Desktop Video products.         Read More       Windows	Blackmagic Design @Blackmagic_News       02 Sep 2015         New Desktop Video Update 10.5. Provides support for UltraStudio 4K Extreme as well as general performance improvements.       12
Software Update 14 Jul 2015 Desktop Video 10.4.2 This software update adds support for the new DeckLink 4K Pro for capture and playback via Dual Link 12G-SDI in	Support Note 03 Dec 2014 Windows Thunderbolt System Requirements This support note identifies minimum Windows system requirements when installing Thunderbolt based video	BIACKmagic Design 13 Jul 2015 Blackmagic_News DeckLink 4K Pro now shipping! Get PCIe capture and playback card with Dual Link 12G-SDI for SD, HD, Ultra

'Desktop Video' is the device driver that you will need. Click the 'Windows' button under the corresponding version to start the download.

Note: At this time, we recommend downloading Desktop Video version **10.4.3**.

Company			Tell us how you use th	is Blackmagic Product
			,,	
Email*				
Phone*				
Country*	United States	•	Which features should	we add?
City*				
State*	•			
State				

You will be prompted to register your device, which is not required. If you wish to skip registration, click 'Download Only' in the bottom left corner.





When the download completes, open the .zip file and follow the simple on-screen steps to install. Once installation is complete, restart your computer.





Now that the drivers are installed, turn on your cameras and connect them to your Blackmagic devices.

Pictured: Blackmagic UltraStudio SDI (left), Blackmagic DeckLink Mini Recorders (right)







Livestream Studio



To check that your system is receiving a video in through the device, open Blackmagic Media Express.





## Click on the '**Log and Capture**' tab underneath the player.





## Select the device you want to check on the 'Devices' menu.





## Next, go to 'Edit' and select the 'Preferences' menu.



Project Video Format:	HD 1080i 59.94
Capture File Format:	NTSC NTSC 23.98 PAL NTSC Progressive PAL Progressive
	HD 1080p 23.98 HD 1080p 24
When capturing DPX files, use	HD 1080p 25 HD 1080p 29.97 HD 1080p 30
Capture audio and video to:	HD 1080i 50 HD 1080i 59.94
	HD 1080i 60 HD 720p 50
Capture still frames to:	HD 720p 59.94 HD 720p 60

Under 'Project Video Format,' select the format your camera is outputting, then click 'OK' at the bottom of the window.





Your video signal should now appear in the Media Express player, confirming that you have a video signal coming into your system.

### Installing and launching Livestream Studio





If you purchased a Livestream Studio hardware product, Livestream Studio software is pre-installed on your unit.



## Studio Software

Live Production Switcher Software

DOWNLOAD FREE

BUY FULL VERSION

For Windows 7+

The software can be downloaded onto any Windows 64-bit system from <u>livestream.com/studio</u> by clicking on the 'Download Free' button.



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Once the download completes, click on the installer file and run it. It will bring you to the installation wizard for the Livestream Studio Launcher.





#### Follow the on-screen steps to complete the installation process, then click 'Finish' in the wizard.



The Livestream Studio Launcher will open and prompt you to install the software via another installation wizard.





When the installation is finished, the most recent version of Livestream Studio will launch on your system.





Please note that if you download the software onto your own system, the full features will not be available unless the purchased USB dongle is plugged in.





Be sure to plug the dongle into a USB 2.0 port (black), **not** a USB 3.0 port (blue).

**Note**: The HD31, HD51, HD510, HD550, and HD1710 all have internal dongles and they do not need an external USB dongle.

# Adding and formatting your video inputs

Setting project format





In the upper right corner of Livestream Studio, you will see a small gear wheel button. Click on it to access Livestream Studio settings.

	Settings: P	roject Format		CANCEL	
	Project Format				
	Inputs	Project Video Format	HD 720p 59.94	*	in the second
and the second se	Outputs	Project Audio Format	HD 1080i 50 HD 1080i 60 HD 720p 59 94		
	Audio In	Multi-View Deinterlacing Method	HD 720p 50 HD 720p 50 HD 720p 60 HD 1080p 29.97		
	Recording	Broadcast Standard	HD 1080p 25 HD 1080p 30 HD 1080p 23.98		
	Media Player		HD 1080p 24 HD 1080p 59.94 HD 1080p 50		
	Streaming		NTSC 4:3 NTSC 16:9		
	Web Control		PAL 16:9		

The first tab is '**Project Format**.' Here you have a wide variety of HD broadcast quality formats to choose from by default.

A PERSONAL ADDRESS PROVIDED ADDRESS PROVIDADORESS PROVIDED ADDRESS PROVIDADORES PROVIDADORES PROVIDADORES PROVIDADORES PROVIDADORES PROVIDADORES PROVIDADORES PROVIDADORES PROVID	n ag na		
Inputs		HD 1080i 59.94	
		HD 1080i 50	
Outnuta	Project Audio Format	HD 1080i 60	
Outputs		HD 720p 59.94	
		HD 720p 50	
Anderte	Multi-View Deinterlacing	HD 720p 60	
Audio in	Method	HD 1080p 29.97	
		HD 1080p 25	
Birth and the second		HD 1080p 23.98	
Recording		HD 1080p 24	
		HD 1080p 30	
		NTSC 4:3	
Media Player		NTSC 16:9	
		PAL 4:3	
		PAL 16:9	
Streaming			

If you are planning to stream, either a 1080p or 720p format will produce the best quality, as they eliminate the need to de-interlace.

Note: All formats will be true broadcast quality when recording and sending video out.

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Outputs	Project Audio Format	48kHz Stereo	-	
Audio In	Multi-View Deinterlacing Method	All Frames	-	
Recording	Broadcast Standard	💿 Ultra HD		
Media Player		High Definition mode		
Streaming		Low Definition mode		
Web Control				
RTMP Server				GFX1 🌣

Further down in the menu, there is an option for Broadcast Standard. High Definition mode is selected by default, but Ultra HD, Low CPU Performance, and Low Definition mode give Livestream Studio more flexibility with other setups.

Project Format			
	Project Video Format	UHD 4k 29.97	•
Inputs		UHD 4k 29.97	
Outputs	Project Audio Format	UHD 4K 30	
		UHD 4K 23.98 UHD 4K 24	
Audio In	Multi-View Deinterlacing Method	All Frames	
Recording	Broadcast Standard	Ultra HD	

Selecting 'Ultra HD' will allow you to choose a 4K format as your project format. This means that your internal processing, recording and output via blackmagic device will be done in a 4K format.



Any camera sources that are not in 4K can be converted under the '**Input Settings**' tab. Please note that using the converter may increase your CPU usage.

#### Stream Quality



While your outputs and ISO recordings will be in your selected project format, streams to Livestream cannot be sent at a higher resolution than 720p. Streams to Twitch, YouTube, and Facebook can reach up to 1080p.



	<b>-</b>				and the second se	1923-00000
TTTTTTT	Project Format					
	Inputs	Project Video Format	720p 30	10R	· Fr	
12100	Outputs	Project Audio Format	720p 25			
	Audio In	Multi-View Deinterlacing Method			0	
-	Recording	Broadcast Standard	Ultra HD			
	Media Player		High Definition mode     Low CPU Performance			
	Streaming		Low Definition mode			
	Web Control	Note:	oda is sumantly active. Full HD inputs will			
	RTMP Server	auto-downscale to 720p	. You can adjust the settings above.	GFX1 💠	GFX2 🌣	GF

Selecting 'Low CPU Performance mode' restricts you to 720p formats only; all higher resolution inputs will auto-downscale to 720p to help preserve CPU resources. HDmultibitrate streaming qualities will still be available for use.

	Settings: Pi	roject Format		CANCEL	SAVE	
	Project Format					
100000	Insute	Project Video Format	480p 30		*	
And in case of the local division of the loc	Inputs		480p 30 480p 29 97			
	Outputs	Project Audio Format	480p 25 432p 30			
	Audio In	Multi-View Deinterlacing Method	432p 25 432p 25 360p 30			
	Recording	Broadcast Standard	360p 25 NTSC 4:3			
	Media Player		PAL 4:3 PAL 16:9			
	Streaming	Note: Low Definition Mode is o	urrently active. HD a	and Full HD input	s will	
	Multi-Screen	above.		ujust tile settilli	JS .	

Selecting 'Low Definition mode' provides only standard definition project formats, which are ideal for use on low performance computers and laptops.



Input Settings	Audio Mixer	Remote Cam 1	Remote Cam 2	
CAM1 ~				
🔅 GENERAL	Converter	- <del>C</del> ON	Тір	
¦†¦ AUDIO	CAM1 Format		For best video output converter. You can try	quality please avoid using a changing your project format
CONVERT	Auto (HD 720p 59.94)	-	in the Settings > Proje format of the incoming	ect Format tab or change the g source to match your project
Ч⊐. СКОР	Project Format		iormat.	
TALLY	480p 29.97			
C DELAY				

#### Any HD input sources will convert to the selected project format automatically.

	Emily Knox 👻 🚰 Penalty Shot 👻	Open event [
lease avoid using a g your project format at tab or change the to match your project	Stream Title Game winnter	
	Stream Quality	
	A80p Quality (1128kbps)	
	Delivery method	
	Bonded network	
	Standard Standard	
	Settings	
	Notify Followers	

In the streaming module, you will only be able to stream in a resolution equal to your selected project format regardless of which streaming provider you use, in order to limit CPU demand.





Video Output HDMI 1920×1080p

> Audio Output 2ch PCM

> > 71

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Check each camera's settings to ensure that they all match each other as well as your project format. This will keep your CPU usage low. Adding and formatting your video inputs

Configuring input sources


octango. m	pulo			Ľ	OANOLL		
Project Format							
Inputs	Inputs						
	Name	Video Sour	ce	Audio Sou	irce	Surface	
Outputs		None		None		None	
Audio In		None		None		None	
Recording		None		None		None	
Media Player		None		None		None	
		None		None		None	
Streaming							
Web Control							

The next tab in Settings is '**Inputs**.' This is where you can choose every input source to use in your production, including graphics overlays, media, remote cameras, etc.

Settinge: Inpute



RTMP Server   Multi-Screen   Ad Insertion   Hotkeys   Mouse / Touch   Studio Surface   Advanced		
Multi-Screen         Ad Insertion         Hotkeys         Mouse / Touch         Studio Surface         Advanced	RTMP Server	
Ad Insertion   Hotkeys   Mouse / Touch   Studio Surface   Advanced	Multi-Screen	
Hotkeys   Mouse / Touch   Studio Surface   Advanced	Ad Insertion	
Mouse / Touch Studio Surface Advanced	Hotkeys	
Studio Surface       Advanced	Mouse / Touch	
Advanced	Studio Surface	
	Advanced	

Notice that on the bottom left corner of the window, there are '+' and '-' buttons. These allow you to add or remove inputs.



Project Format									
Inputs	Inj	puts							
		Name	Video Se	ource		Audio	ource	Surface	
Outputs			None			None	-	None	
Audio In			None DeckLink N	/ini Rec	order	[1] SDI			
Recording		Name	DeckLink M DeckLink M	lini Rec lini Rec	order:	[1] HDMI [2] SDI			
Media Player		Name	DeckLink M DeckLink M DeckLink M	lini Rec lini Rec lini Rec	order order order	[2] HDMI [3] SDI [3] HDMI			
Streaming			DeckLink M DeckLink M DeckLink M	lini Rec lini Rec lini Rec	order order	[4] SDI [4] HDMI [5] SDI			
Web Control							_		
RTMP Server									

#### Start on the **Video Source** column. Click on the dropdown menu to select your source.

Project Format						
Inputs	Inj	puts				
Outputs		Name	None -	Audio Source	Surface None	
Audio In			DeckLink Mini Recorder DeckLink Mini Recorder	[3] SDI [3] HDMI		
Recording			DeckLink Mini Recorder DeckLink Mini Recorder	[4] SDI [4] HDMI		
Media Player			DeckLink Mini Recorder Screen 1: 24EN43	[5] 5D1 [5] HDMI		
Streaming			Screen 2: BMD USMR GFX 1 GFX 2			
Web Control						
RTMP Server						

One source you will notice is the name of your computer's display. Select this to add a local screen capture as an input.

**Note**: This feature was designed for systems with multiple monitors connected. Please note that local screen capturing will increase CPU usage.

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Recording	GFX1	GFX 1	-	Disabled	None			
Media Player	GFX2	GFX 2	-	Disabled	None			
04i	GFX3	GFX 3		Disabled	None			
streaming	MEDIA1	Media 1	-	Embedded	None			
Web Control	MEDIA2	Media 2	-	Embedded	None			
RTMP Server	REMOTE1	Remote Cam	-	Embedded	None			
Multi-Screen	REMOTE2	Remote Cam	-	Embedded	None			
Ad Insertion	RTMP1	RTMP 1	-	Embedded	None			
H-floore	RTMP2	RTMP 2	-	Embedded	None			
Hotkeys	COLOR1	Colors/Bars	1 🔻	Embedded	None			

The video source is also where you choose which graphics overlay channels, media bins, remote camera sources, RTMP inputs, and color sources you are using.



Next, move on to the **Audio Source** column. For each input, you can choose where the audio is coming from based on what is available for that source (embedded, analog, etc.).



Settings, inputs	Settings: I	Inputs
------------------	-------------	--------

CANCEL SAVE

Project Format									
Inputs	Ing	outs							
		Name	Video Sourc	e	Audio Sou	irce	Surfa	ce	
Outputs	=	CAM1	DeckLink Min		Embedded		None		Π
Audio In		JB	DeckLink Min		Embedded		None		
Recording		CAM3	DeckLink Min		Embedded		None		
Media Player		GFX1	GFX 1		Disabled		None		
		OEV2	GEX 2		Disabled		None		
Streaming		GINE	017/2		Charles		none		
Streaming		GFX3	GFX 3		Disabled		None		
Web Control		MEDIA1	Media 1		Embedded		None		

You will notice that under the **Name** column, your sources are labeled automatically. If you want to use your own names, click on that source's name and type in your preferred name for that source.



Settings: In	puts		CANC	EL SAVE
Project Format				
Inputs	Inputs	Video Source	Audio Source	Surface
Outputs	CAM1	DeckLink Mini 👻	Embedded -	None -
Audio In	CAM2	DeckLink Mini 🔻	None Core Module 1 - Track	1
Recording	CAM3	DeckLink Mini 🔻	Core Module 1 - Track Core Module 1 - Track Core Module 1 - Track	2 3
Media Player	GFX1	GFX 1 🚽	Core Module 1 - Track	5
Streaming	GFX2	GFX 2 🗸	Disabled -	None –
	GFX3	GFX 3 🚽	Disabled 🛛 🔻	None 🔻

If you have a Studio Surface connected to your system, you can assign the tracks under the **Surface** column. If you do not have Studio Surface, your only option will be 'None.'

Settings: In	put	S		C	CANC	EL	SAVE	
Project Format								
Inputs	Inp	Name	Video Source	Audio Co	1000	Curf		
Outputs		CAM1	DeckLink Mini -	Embedded		None	ace ⊽	Π
Audio In		CAM2	DeckLink Mini 👻	Embedded		None		
Recording		CAM3	DeckLink Mini 👻	Embedded		None	Ŧ	
Media Player		GFX1	GFX 1 🔍	Disabled		None		
Streaming		GFX2	GFX 2 🔍	Disabled		None		

When you have finished setting your output and desired inputs, press 'Save' in the upper right corner.





You should now see your camera sources and other video sources available in Livestream Studio.



# Adding and formatting your video inputs

Inputs calibrator

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Support	
License	
About	
	Note: If your HDMI / SDI inputs are not in the correct order, you can configure them in the <u>Livestream Inputs Calibrator.</u>

If you are using a Livestream Hardware unit (e.g. HD51, HD550, etc.) and your inputs do not appear to be in the correct order, there is a tool to fix this. Go back into Settings and click the '**Inputs**' tab. At the bottom of the menu, there is a note that links to the Livestream Inputs Calibrator.

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Clicking the link will pop up a notification that Livestream Studio will need to close to proceed. Click 'OK.'





When Livestream Studio closes, a new window will pop up that will prompt you to unplug all of your cameras from all of your Blackmagic Design devices. After you do this, click 'Start Calibrating.'



Livestream Inputs Calibrator		_		$\times$
Select prefered input	type and o	lick "I	vext"	
O HDMI	<ul> <li>SDI</li> </ul>			
			NEXT	×.

Select your preferred input type, either HDMI or SDI. You will only need one camera for this process, so if you are alternating input types, choose the one that you are using more of; the calibration will still work. Then click 'Next.'





If you have not disconnected all of your cables yet, do so now, then click 'Done.'





Connect a camera to 'IN 1' on your system. The calibrator will indicate when it has detected it and completed calibrating it.





The calibrator will automatically prompt you to move to the next input. Unplug your camera from 'IN 1' and plug it into 'IN 2.' Repeat this for all five Blackmagic Design cards.





After you have gone through all inputs, the calibrator will inform you that calibration is complete. Click 'Save' and Livestream Studio will reopen with your inputs in the proper order.

**Note**: Calibration is project-based. If you create a new project, you may need to calibrate your input sources again.

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# Adding and formatting your video inputs

Video input troubleshooting





If a video source's signal is missing, the likely cause is that input's format does not match the Project Format setting.



Project Video Format:	HD 1080i 59.94
Capture File Format:	NTSC NTSC 23.98 PAL NTSC Progressive PAL Progressive
When capturing DPX files, use	HD 1080p 23.98 HD 1080p 24 HD 1080p 25 HD 1080p 29.97 HD 1080p 30
Capture audio and video to:	HD 1080i 50 HD 1080i 59.94 HD 1080i 60 HD 720p 50
Capture still frames to:	HD 720p 50 HD 720p 59.94 HD 720p 60

One way of troubleshooting is closing Livestream Studio and confirming the format in Blackmagic Media Express.





The best practice is to change the format at the source to match the Project Format setting.



		8		6		6
	Audio Mixer	۲	Remote Cam 1	Remote Cam 2	Input Settings	
CAM	1	•				
۵	GENERAL		Input Source	Name		
	AUDIO		Input Source Name			
֩	CONVERT		CAM1			
Έ	CROP					

If you have a camera or other video source that cannot match your project format (e.g., webcam, laptop, etc.), you can find a workaround on the '**Input Settings**' tab.

Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings	
CAM1		Neme		
CAM1	Input Source	Name		
CAM2	Input Source Name			
CAM3	CAMI			
·넏, CROP				
SPEC TALLY				

From the dropdown menu, select the source that you need to adjust, then navigate to the '**Convert**' tab on the left.

	Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings	
CAM	1 -				
\$	GENERAL	Converter	- OFF	Tip	
ţ	AUDIO	CAM1 Format		For best video output converter. You can try	quality please avoid using a changing your project format
¢	CONVERT	Auto (HD 720p 59.94)		in the Settings > Proje format of the incoming	ect Format tab or change the source to match your project
Ψ.	CROP	Project Format		format.	
		HD 720p 59.94			
0	DELAY				
<b>G</b>	CLOSED CAPTIONS				

This is the **any-to-any converter**. Use the dropdown menu to select the format your video source is outputting: the format may be auto-detected.



CAM	L <del>-</del>	Converter		
₽	GENERAL	Converter	- <del>C-</del> ON	
	AUDIO	CAM1 Format		
¢	CONVERT	Auto (HD 720p 59.94)	-	
τ	CROP	Project Format		
		HD 1080i 59.94	4	
	DELAY	i Show Tips		

When you select the correct format, the convert button will turn orange and say 'ON.' You will also see your video signal in Livestream Studio.





Take caution in using the converter. It will increase your CPU usage and decrease image quality and motion accuracy. Only use the converter when necessary.



#### Configuring video outputs



#### Settings: License

CANCEL

SAVE



If you have multiple Blackmagic devices that can output, you can send up to 25 video signals separately to different sources such as monitors, projectors, etc.

Recording			DeckLink Mini Monitor - SDI	Program (Dirty)	
Media Player					
Streaming					
Multi-Screen					
Ad Insertion	1				
Hotkeys		+			

# Navigate to the '**Outputs**' tab in settings and first select which device will be used to output.

Recording		DeckLink Mini Monitor - SDI	Program (Dirty)	
Media Player				
Streaming				
Multi-Screen				
Ad Insertion				
Hotkeys	+			

## Click the '+' button to add another output device.



	Device	Camera
Recording	DeckLink Mini Monitor - SDI	- Program (Dirty) -
Media Player	Intensity Shuttle - HDMI	→ Program (Dirty) →
		Program (Dirty)
Ctrooming		Program (Clean)
Streaming		CAM1
an a		CAN2
Multi Scroon		CANZ
wulu-screen		CAM3
		CAM4
Ad Incortion		CAM5
Aumsenuon		GFX1
	+ -	GFX2
Hotkeys		GFX3

Next, select which source will be output through each device. You can output your Program feed or any other input source (e.g., CAM1).

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Project Format		
Inputs	Outputs	
Outputo	Number of AUX Mixes	
Outputs	0	-
Audio In	Device	Camera

## When you have finished setting your output(s), click 'Save.'





You will now see the selected source(s) being sent to your monitor, projection system, etc.



#### Setting auxiliary outputs


	Settings: O	outputs	CANCEL	10
EEE CONTRACTOR	Project Format			THE NEW MER
	Inputs	Outputs		Van D
	Outputs	Number of AUX Mixes		
	Audio In	0 1 2	Camera	
100 -	Recording	3 4	- Program (Dirty) -	
	Media Player		•	
	Streaming			
	Web Control			

Another feature under '**Outputs**' is the ability to choose to have up to four auxiliary output mixes. This can be helpful for changing picture-in-picture and output sources (monitors, projectors, etc.).



	Inputs	Outputs		JA 20
	Outputs	Number of AUX Mixes		
	Audio In	Device	Camera	
-	Recording	DeckLink Mini Monitor - SDI	Program (Dirty) 🚽	
	Media Player		Program (Dirty) Program (Clean) AUX 1	
	Streaming		AUX 2 CAM1	
	Web Control		CAM2 CAM3 GFX1	
	RTMP Server		GFX2 GFX3	
CAM3 ¢	7	+ -		MEDIA1 🌣

You can set any output to use an auxiliary source in the '**Outputs**' menu if you intend to change the sources shown to your onsite viewers.

Audi	io Mixer	Remote Cam 1	Remote Cam 2	Input Settings	AUX Outputs	
AUX 1	CUT AUTO 45 F	CAM1 CAM2	CAM3 MEDIA1	MEDIA2 REMOTE1	REMOTE2	
AUX 2	CUT AUTO 45 F	CAM1 CAM2	CAM3 MEDIA1	MEDIA2 REMOTE1	REMOTE2	
AUX 3	CUT	CAM1 CAM2	CAM3 MEDIA1	MEDIA2 REMOTE1	REMOTE2	

When you set your auxiliary outputs, you should see an '**AUX Outputs**' tab appear in the lower right section.



Input Settings	AUX Outpu	uts		GFX 1	GFX 2	GFX 3	Media 1	Media 2
GFX2 V	GFX3 ~	MEDIA1	STREAM OUT					
0 +10 0 0 dB == OVR 0 -10 -14	+10 dB == OVR 0 -10 -14	0 +10 0 dB == OVR 0 -10 -14	0 dB == OVR 0 -10 -14	Browse Graphics S Import Layer	Store 12		April O'	leil lews
-24	-24 -38	-24	-24 -36	RSS Google Twitter	জ ৪ জ		Studio G	raphics
-48 -60 -72	-48 -60 -72	-48 -60 -72	-48 -60 -72	Clock Timer	0		Lower thirds, To designed by the	witter overlay e Livestream S
	€) ∩ AUDIO	AUDIO	•	.CSV over HTTP New Layer	:≡ +		Browse Graphi	cs →

To utilize this with your picture-inpicture graphics, go to a Graphics tab (e.g., 'GFX 1') and create a new layer.

te Cam 2					
3 MED					
	Layer 1	▼ +T + ■ + ■	+■◀ +≣	<b>ව</b> ් 📘	
3 MEDI	A1 MEDIA2 REI	NOTE1 REMOTE2	Auto-Loop Setting 30 second inte	gs erval between new items	

The GFX Designer will open. Click on the 'Video' button to bring a video source into your graphics layer.





Click on the dropdown menu to change any settings, including your video source. Note that AUX sources are now among your options.



When you have finished setting your video source in the graphics layer, close out of the GFX Designer and make sure that layer is visible.



Audi	o Mixer	Remote Cam 1	Remote Cam 2	Input Settings	AUX Outputs	GFX 1
AUX 1	CUT AUTO 45 F	CAM1 CAM2	CAM3 MEDIA	.1 MEDIA2 RE	EMOTE1 REMOTE2	
AUX 2	CUT AUTO 45 F	CAM1 CAM2	CAM3 MEDIA	.1 MEDIA2 RE	EMOTE1 REMOTE2	
	СИТ	CAM1 CAM2	CAM3 MEDIA	1 MEDIA2 RE	EMOTE1 REMOTE2	

# Navigate to the '**AUX Outputs**' tab of the AUX source you are using.





Here you can select which of your inputs you want to see in the AUX output. You can choose among camera inputs, media sources, and remote cameras.





Push the graphics channel to Program to allow you and your viewers to see it.





To change the source in your graphics overlay, go back to the 'AUX Outputs' tab and click on the desired source. That source will turn green, indicating that it is being previewed.



To switch sources, use either the 'Cut' or 'Auto' button to the left.

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Note that if you click on the transition type under 'Auto,' you can choose both the type and speed of the transition used for each AUX source.



Click a transition control and the 'AUX Outputs' tab will indicate that the new source is being pushed through that auxiliary source by highlighting that source in red.



You will also see the change in your graphics overlay in Preview and Program.



## Multi-view

User interface





Livestream Studio includes a multi-view that allows you to see all of your video sources and graphics overlays in one display.



Settings: Multi-Screen

CANCEL SAVE



If you are not seeing your full multi-view, go to the '**Multi-Screen**' tab in settings, and check 'Enable Primary Screen Multi-View,' then click 'Save.'



At the top of this multi-view are two larger monitors, which are called Preview (left) and Program (right).





Preview is where you would typically review any video source or graphics overlay prior to transitioning it to your recording and/or stream.



Program is the content that is currently showing in your recording and/or stream; it is what your viewers are currently watching.





Below Preview and Program is an arrangement of smaller monitors with every camera input, graphics overlay channel, media bin, remote camera, and color source that you are using.



#### Multi-view

External multi-view





If you have a second monitor connected to your system, you have the option of displaying all or part of your multi-view by using your system's graphics card.



Change the appearance of your displays

	Detect 1 Identify
Display:	2. DELL U2311H -
Resolution:	1920 × 1080 (recommended)
Orientation:	Landscape 🔹
Multiple displays:	Extend these displays 🔹

First, check your computer's display settings in Control Panel. In 'Screen Resolution,' go to the Multiple displays menu and select 'Extend these displays.'

Note: Different Windows operating systems may display slightly different options.

	Settings: M	Iulti-Screen CANCEL SAVE				
	Project Format	Enable Primary Screen Multi-View	10 B		the state	
	Inputs	Two Rows of Tabs Mode (High Screen Resolution is Required)				
	Outputs	Connected Display 1. Intel(R) HD Graphics 4600 (Screen 2: DELL P2714  DENTIFY		2		
	Audio In	Resolution: Framerate:				TIE
	Recording Media Player	1920x1080 - 59.94p - APPLY				
	Streaming					
	Web Control	DISABLE				
	RTMP Server	Drag Sources into Preview to Show in the Multi-View	FX1 ¢	GFX2 ¢	GFX3 💠	MEDIA
MILLIAN A R	Multi-Screen			-	<u>-</u>	-
	Ad Insertion	GFX2 GFX3 MEDIA1 MEDIA2	EMOTE2 🗘	RTMP1 ¢ No Stream More Details	RTMP2 ¢ No Stream More Details	RTMP
	Hotkeys					

In Livestream Studio, go to settings and click on the 'Multi-Screen' tab. With the second monitor connected, you will notice it looks different from before.



	Settings: M	ulti-Screen Cancel SAVE	
	Project Format	Enable Brimany Coroon Multi View	And have
and a	Inputs	Two Rows of Tabs Mode (High Screen Resolution is Required)	
	Outputs	Connected Display	
	Audio In	1. Intel(R) HD Graphics 4600 (Screen 2: DELL P2714'      IDENTIFY     1. Intel(R) HD Graphics 4600 (Screen 2: DELL P2714T)	
	Recording	1920x1080 - 59.94p - APPLY	
	Media Player	Layout	
	Streaming		
	Web Control		

You should see your display listed in the 'Connected Display' dropdown menu. Select the display and click 'Identify.'

	Settings: M	ulti-Screen CANCEL SAVE	
	Project Format	Conchine Driver and Martin Minus	And have
and a	Inputs	Two Rows of Tabs Mode (High Screen Resolution is Required)	
	Outputs	Connected Display	
	Audio In	Intel(R) HD Graphics 4600 (Screen 2: DELL P2714"      IDENTIFY     Intel(R) HD Graphics 4600 (Screen 2: DELL P2714T)	
	Recording	1920x1080 - 59.94p - APPLY	
	Media Player	Layout	
	Streaming	DISABLE	
	Web Control		

Select the resolution and frame rate at which you want Livestream Studio's multi-view to output.



	Inputa	Two Rows of Tabs Mode (High Screen Resolution is Required)	
	Outputs	Connected Display	
	Audio In	1. Intel(R) HD Graphics 4600 (Screen 2: DELL P2714" TIDENTIFY	
	Recording	Resolution: Framerate: 1920x1080 - 59.94p - APPLY	
	Media Player	Layout	
	Streaming	DISABLE	
	Web Control		
A	RTMP Server	Drag Sources into Preview to Show in the Multi-View	∋FX1 ¢ GFX2 ¢
A	Multi-Screen	PROGRAM PREVIEW CAM1 CAM2	. <b>E</b>

# Next, determine which layout you want to use in your external display.



Below the layout selection, use your mouse to drag and drop each video source you want to see into the appropriate box below.



	Web Control				
	RTMP Server	Drag Sources into Preview to Show	v in the Multi-View	FX1 ¢	GFX2 🗘
N - A	Multi-Screen	REMOTE1 REMOTE2 R	TMP1 RTMP2		<u>-</u>
	Ad Insertion	RTMP 3 LOGO	IE VIEWERS	ЕМОТЕ2 💠	RTMP1 ¢ No Stream
and the second	Hotkeys	STREAM			<u>More Details</u>
gs RTMP 1	Mouse / Touch	Preview		GFX 3	Media 1
GFX2 ~	Studio Surface	PROGRAM	PREVIEW		
	Advanced	TIME	CAM2		

In addition to video sources, you can include a logo, time of day, viewer count, and stream status.





If you drag a logo into your external multi-view, click on it to be given the option to upload a logo image.



A	Multi-Screen	REMOTE1 REMOTE2 RT	IP1 RTMP2			<u>-</u>
	Ad Insertion		VIEWERS		EMOTE2 💠	RTMP1 🏚 No Stream
	Hotkeys	STREAM		U		More Details
put Settings RTMP 1	Mouse / Touch	Preview			GFX 3	Media 1
~ GFX2 ~	Studio Surface	PROGRAM	PREVIEW			
	Advanced	LOGO +	CAM2			
	Support	Show Audio Levels Overlays Show Warning Overlays	Show Screen Overlays Allow Mouse on Multi-View			ril O'Neil
10 -10 14 -14	License					Channel Six News
-24	About					

Underneath the multi-view preview, you will see options for showing or hiding specific overlays on the multi-view and for whether you want to allow your mouse onto that display.



When you have set your multiview to your desired preferences, click 'Save.' You will see the multiview appear on your external monitor.

## Switching video sources

Mouse / Touch

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To put any of your sources into Preview, hover over the source in the multi-view with your mouse, and simply click it.




That source will now be in the Preview monitor, and you should notice a green border around it in the multi-view.



If you want to put a source directly into Program without previewing it, hover your mouse over it in the multi-view and right-click it.





That source will now be in Program and will have a red border surrounding it in the multiview.





You can also double-click on the Preview monitor, which will automatically transition that source into Program.



	Project Format	Left click on multiview	000,404		
	Inputs		Auto PROGRAM		
2	Outputs		Cut PROGRAM		
	ouques	(	Nothing		
	Audio In	Right click on multiview	PREVIEW		
	Recording		Auto PROGRAM		
	Media Player		Nothing		
	Streaming	Double click on Preview	Auto PROGRAM		
САМ 3	Multi-Screen		Nothing	12:07pm	GFX3
	Ad Insertion	(	RESET TO DEFAULT		<u>-</u>
	Hotkeys				MEDIA
	Mouse / Touch				

To adjust how sources are put into Preview and Program using your mouse, navigate to the '**Mouse / Touch**' tab in settings. Select the desired actions, then click 'Save.'



## Switching video sources

Hot keys





You can also use the Livestream Studio keyboard or any standard keyboard to control actions in Livestream Studio.





By default, pressing the 1 key will put your first input source into Preview.





Pressing 2 puts the second source in Preview, 3 puts the third source in Preview, and so forth.





Similarly, to put your first input source directly into Program, press the F1 key on your keyboard.





F2 will put the second source into Program, F3 the third source, and so forth.



100	Settings: H	otkeys	CANCEL SAVE		
	Project Format				
	Inputs	RESET TO DEFAULTS		STIT	
	Outputs	Preview Source 1 1 Preview Source 2 2 Preview Source 3 3			
	Audio In				S
	Recording				
	Media Player	Preview Source 4 4			
	Streaming	Preview Source 5 5			
	Web Control	Preview Source 6 6			

You can customize your keyboard controls by going to the '**Hot Keys**' tab in Livestream Studio settings. Click 'Save' when done.

## Switching video sources

Transition Controls





A standard multi-camera production typically involves putting a source into Preview, then using a transition control to switch it into Program.





Livestream Studio's transition controls can be found in the upper right corner of the software interface.





One transition is Cut, which switches Preview and Program immediately with no overlap occurring between them. Clicking the 'Cut' button activates this transition.





Another commonly used transition is Dissolve, which is an overlapping crossfade between the changing sources.





Finally, a Wipe is an animated transition where the Preview source overlays the Program source during the switch.



GFX	1	GFX 2	GFX 3	Media 1	Stream	Transitions	₩
Main					Fa	de	
GFX 1					Trai	nsition Duration	
GFX 2						Frames	
GFX 3							

In Livestream Studio, you can configure fades and wipes under the '**Transitions**' tab in the lower right corner.





You will notice on the left side that you can choose to set a transition for both your main mix (i.e., any source in Preview) and each individual graphics overlay channel.



Fade is the first option in the menu, which is the dissolve transition. When you select it, you can set the amount of time you want an automatic transition between sources to last.



You can also double-click the duration time under the transition controls to change the speed of any automatic transition quickly.



The rest of the options in this menu are different kinds of wipes. Selecting one will show additional settings on the right.





'Reverse Direction' will push the wipe in the opposite direction that it moves by default.







'Flip Flop' will alternate the wipe between the default direction and the reverse direction.







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100 px

Feathering allows you to determine how hard or soft the edge of the wipe animation will be, in pixels. The more pixels you cover, the more faded the line will be.



Some wipes also have options for adjusting their positions and appearance on the screen when they are used.





If you have adjusted your settings but want to start over, press 'Reset Transition Settings' to return that transition back to its default settings.



To activate an automatic transition, click '**Auto**' in the upper right corner.





## The sources will then switch based on the duration you set for that transition.





You can always employ a manual transition by clicking and dragging the virtual T Bar below the transition buttons. This allows you to control the speed of that transition.





By default, you can also press 'Enter' on your keyboard to cut between sources, while pressing the spacebar will activate an auto-transition.



## Audio workflow

Configuring audio sources





Livestream Studio's built-in audio mixer can be found in the lower left corner of the interface.





Each input source will have a corresponding audio source that you can monitor and adjust.



	Settings: Audio In			CANCEL	CANCEL SAVE			
K XIIII	Project Format	Name	Audio Source	5	urface			
	Inputs	Name	Audio Source	Surrace	unace			
	Outputs							
	Audio In							
	Recording							
	Media Player							
	Streaming							
the second s	Web Control							

You may have a separate audio mixer or a microphone can connect to your system directly via USB or line-in. You use the '**Audio In**' tab in settings to control the audio.




# Press the '+' button at the bottom of the window to add an audio source.





### Under 'Audio Source,' click the dropdown menu to select your source.

Note: Windows will need to have that device's drivers installed in order for Livestream Studio to recognize it.



Settings: A	udio In		CANCEL	CANCEL SAVE				
Project Format								
Inputs	Name	Audio Source	Surt	ace				
mputa	AUDIO1	Microphone (USB PnP Sour	nd Device) 👻 None					
Outputs								
Audio In								
Recording								
Media Player								
	Settings: Au Project Format Inputs Outputs Audio In Recording Media Player	Settings: Audio In   Project Format   Inputs   Outputs   Audio In   Recording   Media Player	Settings: Audio In   Project Format   Inputs   Outputs   Audio In   Recording   Media Player	Settings: Audio In   Project Format   Inputs   Outputs   Audio In   Recording   Media Player	Settings: Audio In CANCEL     Project Format   Inputs   Outputs   Audio In   Recording   Media Player     CANCEL     SAVE     CANCEL     SAVE     Name   Audio Source   Microphone (USB PnP Sound Device)     None			

Livestream Studio will automatically label the source (e.g., 'AUDIO1'). Click on the name if you wish to change it.





This source can also be assigned to a track on Studio Surface if you have one connected. Otherwise, 'None' will be the only option available.





Click 'Save' in settings. You should now see your audio source included with your other sources in the Audio Mixer.



Audio Mixer		Re	emote Cam 1	Remote Cam 2	Input Settings	RTMP 1	RTMP 2
AUD	101	¥	INPUT 1				
\$	GENERAL		-90 +30				
łił	AUDIO		= OVR				
G	DELAY						
			-36 -48 -60 -72				
			LR				

In the Audio section under the '**Input Settings**' tab, you can see all audio channels that are coming into your input source.





Use the 'L' (left) and 'R' (right) buttons under each channel to select where you want each channel of audio to be heard.

**Note**: Most setups typically have one or two channels per input source, but Studio can accept up to eight per source.

## Audio workflow

Audio monitoring





In order to mix your audio effectively, you need to be able to hear it. Start by plugging headphones or speakers into the headphone jack on your system.





You may not hear any audio right away, even if you see audio levels. If so, go to your Windows Control Panel.



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In Sound settings, look for 'Speakers - RealTek High Definition Audio.' Select that source, click 'Set as Default,' then click 'OK.'





In Livestream Studio, check the headphone volume meter in the upper right and adjust the level to the desired volume.

**Note**: This does not affect audio levels of the inputs, Preview, or Program.



You will know which sources you are hearing in your headphones by checking the Audio Mixer. The bottom of each source has a headphone button.



Any headphone button with a white border is currently being heard in your headphones. You can monitor as many sources at any given time as you need.





Click on the headphone button to stop monitoring the corresponding source.



This also applies to monitoring Program audio, which is typically represented by 'Record Out' or 'Stream Out.'



## Audio workflow

Using audio controls





For each audio source in the Audio Mixer, you can see that source's levels, as well as a corresponding fader, speaker button, and 'Audio' button.

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When switching sources, you may notice the 'Audio' buttons highlighted yellow as you make the transitions.



This indicates that the audio source is heard in Program because its corresponding video input is in Program. It is not heard when the video input is not in Program.



If there is a particular audio source you want outputting to Program at all times, click the 'Audio' button, and it will turn red.





This locks that input source's audio into Program. Even if you continue switching video sources, you will still hear that audio source.





Click the 'Audio' button again to disable the locking. What you hear will revert to the default setting of following the video source into and out of Program.



If there is a particular source's audio that you do not want to hear at any point, click on the corresponding speaker button.





The button should go from white to black, and the levels will fade from green to gray. This indicates that the source is muted.

Note: Muted sources can still be monitored through headphones as long as the headphone button is activated.



You can turn off muting for any source by clicking its speaker button again.

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You can also link audio sources to each other. For example, if you have all audio coming from CAM1, you may want to link other cameras to that source for seamless transitions.



Click on the name of the source at the top of the audio module. You will notice you have the option to link to any other input source.



Linking an input will cause the linked source to override the audio that had been coming in. The mixer will indicate which source's audio is being heard.



CA	M1 ~	CA CA	M2 c-a M1	CA CI	AM3 6-0 AM1	GFX	(1 ~	G	FX2 ~	ME	DIA1 ~	REM	DTE1	STREAT	D OUT
0 -	+10	0	+10	<b>—</b>	+10	0	+10	0	+10	0	+10	0	****		
	= OVR		OVR	0 de =	OVR	9 dB ==	• OVR		OVR		OVR	0 dB 💻	- OVR		OVR
					•				0				0		
	-10 -14		-10 -14		-10 -14				-10 -14				-10 -14		-10 -14
7	-24		-24		-24	7			-24	7			-24	7	-24
	-36		-38		-36				-36				-35		-35
	-48		-48		-48				-48				-48		-48
	-80		-80		-80				-80				-80		-60
	-72		-72		-72		-72		-72				-72		-72
۹»)	G	••	n	(۱)	G	<b>(</b> )	<b></b>	•>		۹»	Q	•>		<b>(</b> )	$\widehat{}$
AU	DIO	AU	DIO	AU	DIO	AUD	10	A	OIDIO	AU	DIO	AU	DIO		

You can link multiple inputs to one audio source for smooth transitions.



Most producers link 'Record Out' and 'Stream Out' together for consistent Program audio across all output sources. Those two sources cannot be linked to any other source.



To adjust the levels of any audio source, click and drag the corresponding fader for that source.





If audio levels are too high, the mixer's OVR meter for any overmodulating source will blink red.





You can also adjust the gain of each source by clicking and dragging the small gain meter above that source's level meter.

## Recording

Recording settings



퉬 Livestream Studio	11/20/2012 4:45 PM	File folder	
🌗 Sample Videos	7/14/2009 1:32 AM	File folder	
Transcoding	5/8/2013 11:31 AM	File folder	
動 Program Dirty - 2014.02.19 13.46.21	3/18/2014 1:26 PM	MP4 Video	
Program Dirty - 2014.08.21 08.45.22	8/21/2014 8:45 AM	Video Clip	1
Program Dirty - 2014.08.21 09.09.05	8/21/2014 9:09 AM	Video Clip	8
Program Dirty - 2014.09.10 11.26.29	9/10/2014 11:26 AM	Video Clip	
Program Dirty - 2014.09.10 11.26.56	9/10/2014 11:26 AM	Video Clip	
	111		

Livestream Studio's record option allows you to produce up to four high-resolution recordings, saved as Motion JPEG .AVI files with uncompressed audio.
### Settings: Recording



Project Format		
Video In / Out	Default Record Location BROWSE C:\Users\User\Videos\	
Audio In	Note about ISO Recording: This Livestream Studio license is limited to 4 simultaneous	
Recording	recordings. Enabling multiple ISO recording requires high performance hard drive. <u>See our recommended options for</u> internal and external drives	

In settings, go to the '**Recording**' tab. Set the location where you want your recordings to be saved.



					The second s	
	Recording	ISO Recording		Program (dirty) 🔻		
	Media Player		-	Specify Record Location		
	Streaming					
	Multi-Screen					
IIIA H	Ad Insertion					GFX3 ¢ We'll be rig
	Hotkeys			BROWSE		E MEDIA1 🌣
	Mouse / Touch			Program (dirty)		
7	Studio Surface			Program (dirty)	GEX 3	Media 1

Set which source(s) you want to record and specify if you want to save the file in a particular location.

**Note**: 'Program (dirty)' includes graphics overlays. 'Program (clean)' records Program with no graphics overlays.





Choose a timecode type and the bitrate of your recording. A higher bitrate will produce a higher quality recording, but also requires more hard drive storage.



You may want to use a source for basic replay during your production or export clips of your recording as an .mp4. If so, make sure the recording is going into one or both media bin(s).





Navigate to the '**Advanced**' tab and scroll down to 'Split Recordings by Time Interval.' These options adjust the length of extended recordings:

**Disable file splitting**: One recording is saved, regardless of length

Split Every 24 Hours: A new file is created after 24 hours have been recorded

Split at a Date/Time: A new file is created at a specified time

**live**stream



## All recorded files will appear in whichever location you specified in settings.

**Note**: This feature applies to both high-resolution ISO recordings as well as the H.264 recording that is created when streaming.

	A Company of the second		
Settings: R	ecording	CANCEL SAVE	
Project Format	Default Record Location BROWSE	Windows10-51Wideos	
Inputs	Default Record Eddation	Noscistivilladivisito-Sittvideosi	
Outputs	Note about ISO Recording: This Livestream Studio license is limit	ted to 4 simultaneous	
Audio In	performance hard drive. <u>See our reco</u> internal and external drives.	orging requires high ommended options for	
Recording	ISO Recording 👽 Prog	ıram (dirty) 🔻	
Media Player	S S	pecify Record Location	
Streaming			

When your recording settings are configured the way you want them, click 'Save.'





Starting and stopping your recording





To begin your high resolution recording(s), press 'Record' at the top left of Livestream Studio.





The 'Record' button will turn red and change to 'Recording.' You can also track your recording time and hard drive space.





When you are ready to stop recording, press the 'Recording' button at the top of the interface. All recorded files will be located where you specified in the Recording settings.



## Streaming

Using Livestream



HELP

GET STARTED

The easiest way to stream from Livestream Studio is with the Livestream platform. To get started, go to <u>livestream.com</u> and click 'Log in.'



		livestream	
	lt's Dif	Login to Your Account	's Live
All in	Learn how the wor	Email Address	) events each year.
	S	Password	
		Login Forgot password? Join Livestrean	
		Login with Facebook	

If you do not already have a Livestream account, click 'Join Livestream.'





Type in your email address and click 'Create Account.' You can also join by connecting your Facebook account.



If you use an email address, you will be prompted to check your email.



email will look like. It comes from <u>notifications@livestream.com</u>. Click the blue 'Activate My Account' button to continue.

#### **Create Your Account**

1	Full Name
07	Password
	Create Account
	or Login

# Type in your name and create a password for your account. Then click 'Create Account.'





#### Find Friends to Follow

Connect your Facebook account to find friends already using Livestream.



You will be given the option to connect your Facebook account, which allows you to find friends on Livestream. You may skip this step if you wish.





Now that your account is created, you need to create an event. Click the image placeholder in the upper right corner and select 'Create Event.'

	Emily I Usually just t	Create New Event	FOLLOWERS 49	
	Share	Title	© 😤 🙏 🏶 🚈	and a second
	+ Create Event Create Event	Give it a descriptive name Starts Times are in (EDT)		
	Upcoming & Live Events	05/10/2016 - 10:32 AM Ends		
		05/10/2016 - 11:32 AM		
-		Select Category		
		CREATE EVENT		

A small window will pop up prompting you to give your event a name, time, and category. Fill in the information, then click 'Create Event.'



You will be redirected to your newly created event page, currently in draft mode. From here, you can add a location, description, and an image to help brand your event.



PUBLISH

 $\odot$ 

ē



Be sure to click 'Publish' in the upper right corner to ensure that viewers can see your event. All event settings can be changed at any time.

#### Set Up Your Stream

Select a provider below to configure stream settings



In Livestream Studio, click on the '**Stream**' tab. Here you will see a few providers to choose from. Select '**Livestream**.'



#### Stream Title

Enter a title for your stream	
Stream Quality 720p + 480p + 360p + 240p (4862 kbps) 💌	
Aspect Ratio          Image: Spect Ratio       Image: Spect Ratio         I	
O ↔ Intel(R) 8257rk Connection 0.00 kbps	Ok
+ <b>\</b>	GO LIVE

Once logged in, you will see the option to give your stream a title, select a quality, and notify your followers.



You will notice an additional quality available in the stream quality menu, **HD+ + High + Medium + Mobile**. The new 'HD+' quality streams 720p at 4 mbps, which helps reduce video pixelation in streams with more activity (e.g. sports).



Livestream 2	🕂 Change Provider	🔲 Log
Stream Title	Yoga on the Roof	
Stream Quality	Test Event Buddy and Buttons	~
Medium Quality (678kbps) 🔻	Ice Hockey	
Advanced Settings	Skyline Create New Event	Ľ
GOLIVE		Test Event 4

On the bottom left corner of the module, you can see which event you are set to stream to. Click on the title to select a different event or create a new one.

Enter a title for your stream			
Stream Quality			
Medium Quality (678kbps)	-		
Notify Followers			
Advanced Settings			
COLIVE			
GULIVE			www.livestrea

For more options, click on 'Advanced Settings' underneath the 'Notify Followers' checkbox.



Livestream	←] Change Provider	Log
Hide Advanced Settings		ſ
Aspect Ratio		
16:9		0
4:3		
Custom 16 : 9		
Delivery Method		l l
Bonding if needed		
Bonded networks		
GOLIVE	Pe www.livestream.com/accounts/4509833/eve	enalty Shot <del>-</del> ents/3744269

You can adjust your aspect ratio if needed and choose your delivery method.



You have three network options for how your stream can be delivered: 'Bonding If Needed,' 'Bonded Network,' or 'Standard.'





'Bonding If Needed' will allow you to pick Primary and Backup connections. This means that if your Primary connections fail, your Backup connections will push the stream out.



Delivery Method	00:00:08;44 29.56 FPS 76.07 Kbps 1 Viewer	Perfect Streaming
Bonding If Needed	Network Dashboard	Dorfort Circosping
Bonded Network	<ul> <li>✓ &lt;&gt; Intel(R) I210 Connection #2 50.66 Kbps</li> </ul>	Perfect Streaming
Standard	✓ <> Intel(R) I210 ork Connection	Network cable unplugged

'Bonded Network' will allow you to choose which networks will be used and distribute the stream across all networks as evenly as possible.



Network Dashboard			
۲	<b>«··</b> »	Intel(R) I210 Connection #2	108.86 Kbps
	<b>«··</b> »	Intel(R) I210 ork Connection	

'Standard' will send your stream through only one selected network. This option should be selected if you intend to use Livestream Studio as a backup encoder.



#### Bonded Network Optimization



For slow speed connectivity

For fast speed connectivity

#### Network Dashboard

Intel(R) I210 ... Connection #2 0.00 Kbps <···>

<···> Intel(R) I210 ... ork Connection

At the bottom of the module, you will see your bonded network optimization options, if you selected 'Bonded if Needed' or 'Bonded Network.'

**live**stream

#### **Bonded Network Optimization**

For slow speed connectivity

For fast speed connectivity

#### **Network Dashboard**



'For fast speed connectivity' should be selected if you have a faster, reliable upload speed.



#### **Bonded Network Optimization**

For slow speed connectivity

For fast speed connectivity

#### Network Dashboard

⟨···⟩ Intel(R) I210 ... Connection #2
 0.00 Kbps

<--> Intel(R) I210 ... ork Connection

'For slow speed connectivity' sends less Forward Error Correction (FEC) overhead and fewer FEC packets, allowing for a more efficient recovery and delivery time. This is ideal for slower connections.


#### Stream Quality



When you have finished configuring these streaming settings, you can go live by clicking the 'Go Live' button.





Once live, the Stream module will show your network status at the top with your streaming status (time, framerate, bitrate, and viewer count) at the bottom.

254

**live**stream

Livestream	🚺 Log 🛨 💼
V Killer e2200 Per (NDIS 6.20) 89.41 Kbps Perfect Streaming	12:32pm EST Video broadcasting is starting Establishing
Vetwork cable unplugged Network Card	connection with server.
C C Remote NDIS aring Device 0.00 Kbps No internet connection	12:32pm EST H.264 recording started.
	Perfect Streaming - 12:32pm EST
STREAMING 00:00:25:04       Perfect Streaming       Penalty Shot         29.97 FPS       215 Kb/s       2 Viewers       www.live.stream.com/accounts/4509833/events/3744269	

Click 'Log' on the upper right corner of the module to see a more detailed log of what actions or issues are occurring during your broadcast and when they occur. You can click 'Log' again to hide it.





The live player will immediately appear. It takes about 30 seconds for the stream to load.

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	₩
Livestream					C	Log 🚽	
Save Recordi Do you want to post th your event page? This page to watch the bro SAVE & POST	ng? he recording of your broadd will allow visitors on your adcast at a later date. SAVE DRAFT	ast to event DELETE			1 \ 5 ( 1   	I2:32pm EST /ideo broadcasting is starting Establishing connection with server. I2:32pm EST H.264 recording started. Perfect Streaming - 12:32 EST I2:34pm EST H.264 recording stopped 2015.09.04 12:32.18@1 ops.mp4).	.pm 1 1 <u>756k</u>

Click the 'Streaming' button to stop your stream. You will have the option to save and post your broadcast, save a draft, or delete it without posting it.



Selecting 'Save & Post' will make the video clip available for immediate playback for any viewers who missed the live event.

Livestream 1	←] Change Provider	Log
Stream Title		
Enter a title for your stream		
Stream Quality		
Medium Quality (678kbps)		
Votify Followers		
Advanced Settings		
GOLIVE		Test Event

After choosing which action to take with your archived stream, you will be brought back to your event's streaming settings in the module.

	GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	
ω	Livestream	1	_			←] Cha	inge
	Stream Title	Emily Knox					
	Game Winner	Open Profile Page	2				
	Stream Qualit	Open Account Settings	Ľ				
	Normal Quali	Log Out	J				
	🛃 Notify Folk	owers					
	Advanced Set	tings					

At any point, you can view your profile page, account settings, or log out of your Livestream account in Livestream Studio by clicking the profile icon next to 'Livestream.'

## Streaming

Using other streaming providers



GFX 1	GFX 2	GFX 3	Media 1	Media 2	Strea	im <sup>°</sup>	Transitions	5	*
Livestream						←] Cha	nge Provider		Log
Stream Title									
Enter a title for your	stream								
Stream Quality		_							
Normal Quality (446)	kbps) •	r							
Votify Followers									
Hide Advanced Settin	I <u>QS</u>								

If you use a different streaming provider, click 'Change Provider' in the upper right corner of the module.

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	\$
Select provider:	Livestream 🔺				CANCEL	SELECT	Log
	Livestream						
Stream Title	Original Livestream						
	Youtube						
Enter a title for your s	Ustream	J					
Stream Quality	Stream To File						
Stream Quality	RTMP						
Medium Quality (678	Zixi						
	Twitch	2					
🗹 Notify Followers	Facebook						
<u>Hide Advanced Settin</u>	<u>gs</u>						

On the upper left of the module, a dropdown menu will appear with all your options. Highlight your provider, then click 'Select.'



Original Livestream	←] Change Provider	🔲 Log
Stream Title		
Enter a title for your stream		
Stream Quality		
Medium Quality (678kbps)		
Advanced Settings		



The next option, Original Livestream, has a very similar streaming interface as Livestream.

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Strean
Original Livestrea	am 🔔				
Stream Title Enter a title for your	eeknox Log Out				
Stream Quality					
Medium Quality (678	Skbps)	-			
Advanced Settings					

To log out of your Original Livestream account, click the profile icon next to 'Original Livestream.'



YouTube will require you to log in through Google and authorize Livestream Studio to access your account.



🕂 Change Provider 🛛 🗌 Log

#### Stream Quality

480p Quality (1128kbps)

Advanced Settings



Penalty Shot

The streaming module in YouTube Live offers a very similar interface as the Livestream streaming module.



		Upload 🗘 🌒
Trending	Subscriptions	
		Emily Knox 0 subscribers Creator Studio
		OTHER ACCOUNTS
		Emily Knox
		Add account Sign out

In a browser, go to your YouTube account and click on your profile image in the upper right corner to enter your Creator Studio.



In the menu on the left, select 'Livestream Streaming.'



CREATOR STUDIO		OFFLINE @	Still h
VIDEO MANAGER	~		
((•)) LIVE STREAMING		This stream is	
Stream now BETA Events		OFFLINE	
	~		
	~		

There will be two options: 'Stream Now (Beta)' and 'Events.'



This live stream is public. To create an unlisted or private stream	n, schedule an event.
	Advanced settings
ENCODER SETUR	
ENCODER SETOP	
Server URL	
rtmp://a.rtmp.youtube.com/live2	
rtmp://a.rtmp.youtube.com/live2 Stream name/key	

The 'Stream Now (Beta)' option can only be done via the RTMP section of Livestream Studio's 'Stream' module. Scroll to the bottom of the page to get the RTMP URL and Stream Key.



CREATOR STUDIO	Events 0
DASHBOARD	Actions - View: Upcoming -
VIDEO MANAGER V	
((•)) LIVE STREAMING	
Stream now BETA	
Events	
COMMUNITY V	You don't have any upcoming events. Schedule a new event
CHANNEL ~	

It is recommended to use the 'Events' workflow. Click this option on the left, and either select a preexisting event or create a new one.

CRE	ATOR STUDIO		💉 Info and S	ettings	Ingestion Settings	Cards	Live Control Room
<b>!i</b>	DASHBOARD		Hockey Ga	ame			
8	VIDEO MANAGER	~					
((•))	LIVE STREAMING		Main Camera	Add a Cam	iera		
	Stream now BETA		Thumbnail				
	Events			Pleas	se upload as large an image edded on other sites. You c	e as possible (su an upload a JPG	ggested: 1280x720) since the imag , GIF, BMP, or PNG file. Maximum fi
*	COMMUNITY	~		Bro	wse		

After creating or selecting your event, go to 'Ingestion Settings' and select 'Main Camera.'



Hocke	ey Game
-------	---------

Main C	Add a Camera
Thum	ail Please upload as large an image as possible (suggested: 1280x720) since the image will also be used as the preview image when your event is embedded on other sites. You can upload a JPG, GIF, BMP, or PNG file. Maximum file size is 2MB. Browse
Choos Select	maximum sustained bitrate of your encoder * range that corresponds to the maximum sustained output your encoder provides. c ingestion ect a bitrate 👻
0	3000 Kbps - 6000 Kbps (1080p) 1500 Kbps - 4000 Kbps (720p) 500 Kbps - 2000 Kbps (480p)
	400 Kbps - 1000 Kbps (360p) 300 Kbps - 700 Kbps (240p)

Select the highest quality and bitrate you want to use under 'Basic Ingestion.' Your settings should auto-save. Otherwise, click 'Save Changes' in the upper right corner.



Back in Livestream Studio, select your event (bottom right corner) and select the same quality you chose in the YouTube Live configuration.

livestream

Change Provider

Log

**Stream Quality** 

720p Quality (2628kbps) 🔹

Advanced Settings



Penalty Shot 
https://www.youtube.com/watch?v=R0kYt-UchUQ

Press the 'Go Live' button to start sending the signal to YouTube. Note that per YouTube's workflow, it will not be live immediately.





Back in YouTube, navigate to the Live Control Room. After some time (typically less than a minute), YouTube will indicate that your stream is ready to be previewed. Click the 'Preview' button to load the stream preview.

### Hockey Game

Start Encoder	Preview Stream	You're Live!		
Start Stream	aing			Help
Sync to preview pl	layer 🕜			
STREAM STATUS	February 23, 2016 at 11:15 A	M (GMT-5)	AVERAGE LIVE VIEW DURAT	TION 00:00
GOOD	The health is good.		TOTAL VIEW TIME (HOURS)	0
720P STREAM			PEAK CONCURRENT	0

Wait a few more seconds and YouTube will be ready to take your stream live. Click the 'Start Streaming' button to start broadcasting your stream to your YouTube event. Please stand by. 10:57

PUBLIC VIEW

The YouTube player will soon switch from the countdown clock to showing your stream from Livestream Studio.





When you are ready to finish broadcasting your event, go back to your Live Control Room and click 'Stop Streaming.'



Your event is now over, and you can press the red 'Streaming' button in Livestream Studio to stop sending your signal to YouTube.



If necessary, you can click the person icon in the 'Stream' module and click 'Log Out' to log out of your YouTube account.

Gut	lich	
Authorize <b>Livestream St</b>	udio to use your account?	E
Log In Sign Up		
Username		
Password		
Log In	Cancel	Ŧ

Livestream Studio has a similar integration with Twitch. Enter your Twitch account information and click 'Log In.'



I WITCH	← Change Provider	Log
Stream Quality 480p Quality (1128kbps)		
Game Name		
Enter the name of your game		
Stream Title Penalty Shot		
GOLIVE	http://www.twite	<u>h.tv/eeknox</u>

# Set your quality, game name, and stream title.

Hide Advanced Settings
Aspect Ratio
16:9
● 4:3
Custom 16 : 9
Ingestion List
EU: Amsterdam, NL 👻
Archive
Broadcast archived automatically only if it is configured in account settings
Don't archive broadcast

Clicking 'Advanced Settings' will allow you to configure further settings, such as ingestion location, archive settings, and aspect ratio.

Fwitch			Log
•	••• Killer e2200 Ger (NDIS 6.30)	142.10 Kbps	Perfect Streaming
0 <	↔ Remote NDISaring Device	0.00 Kbps	No internet connection
•	> Sierra Wireletwork Adapter		Network cable unplugged



Click 'Go Live' when you are ready to start broadcasting. Livestream Studio will indicate that the stream has started and display your streaming status. When you are ready to finish streaming, click the 'Streaming' button.



		GF	▼X 1	GFX 2		GFX 3	Media 1
	STREAM OUT	Twitch	1				
+10		Stream	Eeknox				
VR )	0 dB == OVR 0	480p	Open Acco	ount Dashboard	ß		
10 14	-10 -14	Game N	Log Out				
24	-24	Hockey	,				

When you are not streaming, you can click the profile icon next to 'Twitch' to view your Twitch account dashboard or log out of your account from Livestream Studio.

	GFX 1		GFX 2		GFX 3	Media 1	Media 2	Strea	am T	Transitions	;	₩
69	Livestream								←] Char	ige Provider		Log
						Log In to Lives	tream					
	Use your Livestream account to log in											
						Email address						
					م	Password						
						LOG IN & CONTI	NUE					
						Don't have an account?	<u>Sign up</u>					

## Under the '**Stream**' tab, click 'Change Provider.'


GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	*
Select provider:	Facebook 🔺				CANCEL	SELECT	Log
	Livestream						
	Original Livestream						
	Youtube						
	Ustream		Log In to Livest	ream			
	Stream To File	Use your Livestream a	ccount to log in				
	RTMP						
	Zixi		Email address				
	Twitch						
	Facebook	P	Password				
			LOG IN & CONTIN	IUE			
		1	Don't have an account?	Sign up			

### Click the dropdown menu on the left side. Select 'Facebook' from the menu, then click 'Choose.'

-						
F	a	re	h	n	٦I	<
•	-	~~	~	<u> </u>	-	•

#### Facebook

Log in to use your Facebook account with Livestream Studio.

Email or Phone:	
Password:	
	Forgot password?



Enter your Facebook account credentials and click 'Log In.'







### Continue as Emily

Livestream Studio will receive the following info: your public profile, friend list, custom friends lists and videos.

Edit the info you provide



Okay Cancel

Studio will request permissions to see certain information from your Facebook profile, the ability to post to your timeline, and manage your pages and groups. Click 'Okay' to continue.



Facebook	←] Change Provider	Log
Post As		
Emily Knox 👻		
Description		
Enter a title for your stream		
Share With		ľ
Public		
Stream Quality		
480p Quality (1128kbps)		
GO LIVE		

You will be directed to the Facebook streaming module, where you can configure the settings for your stream.



Facebook	← Change Provider	Log
Post As Emily Knox Emily Knox Test page for streaming Enter a title for your stream Share With		
Public <ul> <li>Stream Quality</li> <li>480p Quality (1128kbps)</li> <li> <li> </li></li></ul>		
GO LIVE Wide		

Choose whether to stream as yourself or as another page or group of which you are the administrator.

C-3

Facebook	←] Change Provider	🔲 Log
Post As Emily Knox -		
Description       Hockey Game		
Public  Visible To		
Specify people or lists and press Enter <b>Friends</b>		
GO LIVE lists and press Enter		

Enter a name for your stream. This name will appear above the player in the Facebook timeline post.

Share With				
Public 🔺	1			
Public All Friende	1			
Friends of Friends	Friends 🗙			
Custom				
inden From	_			
Specify people or lists and press Enter				
Stream Quality				
490a Quality (1129/haa)	ו			

Choose the audience with which you want to share your stream.

SIX I	51712	Give	initial i	Stroum	naiolaollo	
Facebook				←] Ch	ange Provider	🔲 Log
Custom	<b>*</b>					ſ
Visible To		1				
close		Family 🗙				
Close Friends						
Specify people or lis	ts and press Enter	Ī				
Stream Quality						
1080p Quality (4628	3kbps) 🔻	]				l
Stream Aspect Ratio	0					
0 1-1	16:0					
GOLIVE						

If you select 'Custom,' you can select specific friend lists or groups who can view your content by typing their names and pressing Enter on your keyboard.



Facebook				←] Ch	ange Provider	🔲 Log
Custom	-	]				
Visible To						
Specify people or lis	sts and press Enter	Family 🗙 Clo	se Friends 🗙			
Hidden From						
Specify people or lis	sts and press Enter	)				
Stream Quality						
1080p Quality (4628	Skbps) 🔻	]				ļ
Stream Aspect Rati	o					
GOLIVE						

Selected groups will appear to the right. Click the corresponding 'X' icons to remove them.



						·
Facebook 💵				←] Ch	ange Provider	Log
Custom	•					ſ
Visible To						
Specify people or lis	sts and press Enter	]				
Hidden From						
close		Family 🗙				
Close Friends						
1080p Quality (4628	Skbps) 🔻	]				l
Stream Aspect Ratio	o					
<u></u> 1:1	16:9		 			
GO LIVE						

You can also hide your content from specific groups. Type in the names of any users or lists that you do not want to see your stream, and then press 'Enter' on your keyboard.



Facebook 💄				←] Ch	ange Provider	Log	
Custom	*						
Visible To							
Specify people or list	ts and press Enter						
Hidden From		1					
close		Family 🗙					
Close Friends							
1080p Quality (4628	kbps) 🔻	]					
Stream Aspect Ratio	<b>b</b>						
<u></u> 1:1	16:9		 				
GO LIVE							

Groups can be removed from this section also by clicking their corresponding 'X' icons.



Facebook		←] Change Provider	Log
Stream Quality 480p Quality (1128kbps) 360p Quality (878kbps) 480p Quality (1128kbps) 720p Quality (2628kbps) 1080p Quality (4628kbps) Network Dashboard			
○ <··> Intel(R) Etherntion (2) I218-V		Switched off	<u>Turn it on</u>
● 《··》 Intel(R) I210 ork Connection		Switched off	<u>Turn it on</u>
	0.001/5m2		01
GO LIVE (h Devi Area Network)			

# Next, choose the quality for your stream.

C-3

ю	Facebook	←] Change Provider	🔲 Log
	Stream Quality 720p Quality (2628kbps)		
ľ	Square     Wide     Network Dashboard	Outitate die 7	Turn it on
	<ul> <li>Intel(R) Etherntion (2) 1218-V</li> <li>Intel(R) I210 ork Connection</li> </ul>	Switched off	<u>Turn it on</u> Turn it on
	GO LIVE In Devil., Area Network)		Ok Turn it on

Choose whether you want the stream to appear in a wide (16:9) or square (1:1) player.



Fa	acebook 🔍	🕂 Change Provider	Log
s (	Stream Format		
N	Network Dashboard		
Q	√·· Intel(R) Etherntion (2) I218-V	Switched off	<u>Turn it on</u>
Q	Intel(R) I210 …ork Connection	Switched off	<u>Turn it on</u>
	o 🗢 Is-office 👻 0.00 Kbps ∎		Ok
C	Iluetooth Devi Area Network)	Switched off	<u>Turn it on</u>
	GOLIVE		

## Make sure your network is connected.

Facebook	←] Change Provider	Log
Stream Format       Square     Image: Square		
Network Dashboard		
Intel(R) Etherntion (2) I218-V	Switched off	<u>Turn it on</u>
● 《··》 Intel(R) I210 ork Connection	Switched off	<u>Turn it on</u>
O		Ok
Bluetooth Devi Area Network)	Switched off	<u>Turn it on</u>
GOLIVE		

To start streaming to your Facebook timeline, click 'Go Live' at the bottom right.

#### Log Facebook 土 亩 Video broadcasting is Network Dashboard starting... Establishing connection with server. Intel(R) Ethern...tion (2) I218-V Switched off Turn it on H.264 recording started. (···> Intel(R) I210 ... ork Connection Switched off Turn it on Perfect Streaming - 5:26pm 141.82 Kbps Perfect Streaming Is-office 🔹 🔻 Sluetooth Devi... Area Network) Switched off Turn it on Perfect Streaming STREAMING 00:00:17;04 30.00 FPS 139 Kb/s

Once you are live, you can click the link in the bottom right corner to view your video on Facebook.



#### 🌠 Emily Home 👥 💭 🛞 🗎 🖬 🔻



Q

The stream will appear in your Facebook timeline after a few seconds.



•	Facebook		🚺 Log 🖻	Łđ
	Network Dashboard		5:27pm EST Video broadcasting is starting Establishing	
I	Switched off <u>Turn</u>	<u>n it on</u>	connection with server.	
	Switched off <u>Turn</u>	<u>n it on</u>	H.264 recording started.	
I	Is-office ▼ 151.33 Kbps Perfect Stream	ming	Perfect Streaming - 5:27p EST	
I	Konstant Switched off Turn     Switched off Turn	<u>n it on</u>		
1	Perfect Streaming			
	00:01:47;01 30.00 FPS 144 Kb/s	<u>288/</u>		

To end the stream, click the red 'Streaming' button. Your video will be available for on-demand playback on your timeline.

Facebook	←] Change Provider	Log
Post As		
Emily Knox 👻		
Description		
Enter a title for your stream		
Share With		ľ
Public		
Stream Quality		
480p Quality (1128kbps)		
GO LIVE		

You will be directed to the Facebook streaming module, where you can configure settings for your stream.



The next two streaming options are RTMP and Zixi, which have very similar interfaces.



RTMP

← Change Provider 🛛 🚺 Log

Quality				
quanty				Delete 🗙
Medium 🔻 🗘	Resolution:	1280 x 720 px	Bitrate:	2320 Kb/s
Mobile 🔻 🌣	Stream Name		RTMP URL	
HD - 🌣				
Custom 🔻 🌣	OPEN FMLE XML			Show Quality Settings
🕂 Add Quality				
GO LIVE				

Both streaming options allow for selecting up to four preset bitrates for streaming at. Click the corresponding gearwheel to import or type in your RTMP or Zixi URL and stream name. RTMP

←] Change Provider

Log

Quality				Delete 🗙
Custom 🔻 🌣	Resolution:	512 x 288 px	Bitrate:	446 Kb/s
Custom 🔻 🌣	Stream Name		Name	
Custom 👻 🌣			Custom	
Custom 🔻 🜣	RTMP URL			
🕂 Add Quality			OPEN FMLE XML	J
COLUVE	Show Quality Settings			
GULIVE				

You can also create up to four custom bitrates for streaming to your RTMP or Zixi server. Click 'Add Quality' to do so. RTMP

⊢

Log

Quality	Width	Height	
Custom 🔻 🗘	512	288	
	Video Bitrate	Audio Sample Rate	
Custom 👻 🗘	350	44100 🔻	
Custom 🔻 🜣	Audio Bitrate		
Custom 👻 🌣	96 🔻		
	H.264 Encoding Profile		
	Baseline		
Advanced Settings	Main		
<u>Advanced betungs</u>	💿 High		

Each custom setting will require you to set the resolution, video and audio bitrates, audio sample rate, and encoding profile.

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	` <b>⊬</b>
RTMP					←] Cha	ange Provider [	Log
Quality				Dele	ete 🗙		ſ
Medium 🔻	🌣 Resolution:	1280 x 720	<b>) px</b>   Bitrate:	2320 K	b/s		
Mobile 🔻	🗘 Stream Name		RTMP URL				
HD -	\$						
Custom 🔻	¢ OPEN FMLE	XML		Show Quality Sett	ings		
🕂 Add Quality							

Any quality can be deleted from the module by clicking 'Delete' in the upper right corner.



UT en UT	RTMP	← Change Provider	🔲 Log
DVR	Hide Advanced Settings		
0	RTMP User Agent		
-10 -14	FMLE/3.0		
-24	Aspect Ratio		
-36	16:9		
-48	O 4:3		
-80	Custom 16 : 9		
72	Network Dashboard		
n l	Killer e2200 Ger (NDIS 6.30) 0.00 Kbps		Ok

Further down in the module is where you can open 'Advanced Settings.' Here you can set your aspect ratio. For RTMP, you will need to select the user agent that your server supports.



		GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	5	*
STF RE	CORD OUT	Zixi					€] Ch	ange Provider	<b>D</b> I I	.og
c		FEC Overhead								
0 dB	== OVR 0	30								
	-10	FEC Packet Size								
┥	-14 -24	30								
	-38	Latency								
	-48	500								
	-80	Delivery Method								H
	~	Bonding if neede	b							
	-72	Bonded networks	3							
<b>■</b> ()	$\cap$	Standard								

Zixi users will see the option to set the FEC overhead, FEC packet size and latency under their 'Advanced Settings.'

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream
Stream To File					←] Cha
MP4 File Save Locati BROWSE ers\Live	ion estream HD31\Videos\				
Stream Quality High Quality (1756kb	ops) 🔻				
Advanced Settings					

Another option, 'Stream to File,' allows you to encode an .mp4 file to your hard drive without the need to stream live.



	Select MP4 File Location		<u> </u>	45 F
2	Search Vi	ideos .	ρ	TIE BG T
	Organize 🔻 New folder	E - 0		_
	<ul> <li>Favorites</li> <li>Desktop</li> <li>Downloads</li> <li>Google Drive</li> <li>Recent Places</li> </ul>		E	ADVER
	<ul> <li>Libraries</li> <li>Documents</li> <li>Music</li> <li>Pictures</li> <li>Videos</li> </ul>			MEDIA1 ¢
	Nomegroup		-	<u>-</u>
Settings	Folder: Select Folder	er Cancel		Stream

Click 'Browse' to select where the file will be saved. By default, the .mp4 file will save to your Videos folder.

	High Quality (1756kbps) 🔻	
I	Hide Advanced Settings	
I	Aspect Ratio	
	16:9	
	O 4:3	
I	Custom 16 : 9	
	Choose Encoding Profile	
	Baseline	
	Main	
	💽 High	
	ENCODE	

Choose the bitrate for your stream. You can click 'Advanced Settings' to set your aspect ratio and encoding profile.

**Note**: Selecting 'Custom Quality' will prompt you to choose your resolution, video & audio bitrate, and audio sample rate.

**live**stream

#### Stream To File

MP4 File Save Location	
BROWSE ers\Livestream HD31\Videos\	
Stream Quality	
High Quality (1756kbps) 🔻	
Advanced Settings	
ENCODE	

When you are ready to start your recording, click 'Encode.'

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	*
Stream To File						Log	土 亩
MP4 File Save Loca BROWSE Isers Stream Quality High Quality (1756	ation \Windows10-51\Videos\ ikbps)					12:02pm EST Video encoding is start 12:02pm EST H.264 recording started Perfect Streaming - 12:0 EST	<b>ing</b> 1. 02pm
ENCODING 00:00:08;38	Perfect Streamin 29.90 FPS 41	g 9 Kb/s	2016.05	5.10 12.02.10@1756 <u>C:/Users/Windows1</u>	6kbps.mp4 10-51/Videos		

The module and the streaming log will indicate that the encoding has started. The name of the file will be displayed in the bottom right corner. Click 'Encoding' to stop the recording.



### Stream to Multiple Providers



It is now possible to stream to multiple providers at the same time with Livestream Studio.

Your video is only encoded once, so CPU demands for this feature are similar to those for streaming to just one provider.

However, bandwidth requirements will be higher. Multiple streams will use as much bandwidth as the qualities selected for <u>each</u> provider.

**Example**: If 720p + 480p + 360p + 240p (4862 Kbps) Stream Quality is selected for Livestream and 'Highest Quality' is selected for Facebook (in this case, 720p), then the total outgoing bitrate will average 4862 + 2128 = **6990 Kbps**. We always recommend having twice the upload speed on your network as the selected bitrate, with about **14 Mbps upload speed** in this case.

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	*
		S	et Up Your S	tream			
		Select a provi	der below to config	gure stream setting	<u>js</u>		
		Γl	f	RTMP	MP4		
		Livestream Add Provider	Facebook	RTMP Stre	am to File		
		Z/ 🕻	3 Q	USTREAM	<b>U</b>		
		Zixi You1	Tube Periscope	Ustream	Twitch		

Start by clicking a provider's logo to add it to Studio (this example will use Livestream).



<b>live</b> stream	×	
Log in to Livestream		
Email Password		
LOG IN & CONTINUE Don't have an account? <u>Sign Up</u>		

## Log in to the selected provider to configure your stream settings.



Choose your stream destination (i.e. the Livestream event, RTMP server, etc. to which you want to broadcast), then click 'Select.'
Enter a title for your stream					
Stream Quality 720n + 480n + 360n + 240n (4862 kbns)					
Aspect Ratio 16:9 0 4:3 0 1:1 0 Custom 16 9 Network Dashboard					
Intel(R) 8257rk Connection 0.00 kbps					
+ 1					

Now, add a second provider by clicking the '+' button in the lower left corner of the Stream module.



Stream Title	٦ Original Livestream		
Enter a title for your stre	YouTube		
Stream Quality	🚥 Ustream		
720p + 480p + 360p + 2	📾 Stream to File		
Aspect Ratio	me RTMP		
<b>\</b> Livestream	<b>Z</b> ⁄ Zixi	]: 💿	
<b>f</b> Facebook	💭 Twitch		
More Providers >	Periscope	00 kbps	
+ N			

From the list, select a second provider to stream to (this example will show Facebook).



<b>f</b> Facebook	×	
Facebook	<b>^</b>	
Log in to use your Facebook account with Livestream Studio.		
Email or Phone: Password:	ш	
Log In		
Forgot account?		0
Create New Account	Ŧ	

Log in to that provider and allow any permissions that the provider requests in order to use that provider with Studio.

Facebook 🚨 DONE	Facebook 🚨 DONE
Post As Emily Knox	Post As Emily Knox
Emily Knox Test page for streaming Livestream Studio Customer Group Mevo Beta Group & Test Streams Livestream Studio Cloud Beta	Stream To Page
Livestream Broadcaster Customer Group Livestream Platform Customer Group	Share With Public
Public	Public All Friends
Advanced Settings	Friends of Friends Self Custom

Configure your stream's destination for that provider: which profile is streaming to which page or group and your desired audience.



Facebook 🚨 DONE	Facebook 🚨 DONE
Post As Emily Knox	Public
Stream To	Hide Advanced Settings
Page -	Select Quality Highest Quality
Share With Public	Select Network
Advanced Settings	Auto     Auto

You can click 'Advanced Settings' to configure additional settings for that provider if you wish. Then, click '**Done**.'



GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	*
<b>Stream Title</b> Enter a title for your s	stream						Log
Stream Quality 720p + 480p + 360p	+ 240p (4862 kbps) 🔻						
Aspect Ratio							
16:9 3 4:3	0 1:1 O Cust	om 16 : 9	)				
Network Dashboard	I						
O ↔ Intel(R)	8257rk Connection	0.00 kbps					Ok

Configure additional settings for your stream, such as title, bitrate, and aspect ratio.



Stream Qu	ality
240p (42	8 kbps) 🔻
Appart De	No.
Азрестка	
0 16:9	0 4:3 0 1:1 0 Custom 16 : 9
	🗹 Livestream delete 🗙 🌣
Network	
<u> </u>	livestream.com/accounts/4509833/events/2864836 :bps

If you need to change a setting for a particular provider, hover the cursor over the provider's icon at the bottom of the screen, then click the gearwheel in the pop-up that appears.

Note: You can also click the icon to make the menu pop up.

Stream	
Jucan	

Game 1	
Stream Quality 720p + 480p + 360p + 240p (4862 kbps) 💌	
Aspect Ratio	
Network Dashboard	
Intel(R) 8257rk Connection 0.00 kbps	Ok
+ <b>\</b> f	GO LIVE

### Click 'Go Live' in the bottom right corner to start your stream.





The Stream module in Studio will show the streaming status for each provider, as well as the overall outgoing bitrate.





Open a web browser and go to your selected stream destinations (e.g. <u>livestream.com</u> and <u>facebook.com</u>). You will see exactly the same live content in each player.



Network Dashboard	
Intel(R) 8257rk Connection 6.34 Mbps	Perfect Streaming
	Second delete 🗙 🛛 🕸
	Perfect Streaming         29.98 FPS       2.07 Mbps       0 Viewers
	Emily Knox facebook.com/eeknox/videos/10208039973182385/
Perfect Streaming 29.98 FPS 4.27 Mbps 2 Viewers	Perfect StreamingSTREAMING29.98 FPS2.07 Mbps0 Viewers

You can deactivate a provider by hovering your mouse over its icon and unchecking the checkbox in the upper left corner of the pop-up box. If this is done while you are streaming, only the stream on that provider will stop.



You can reactivate that provider at any time by checking the checkbox, whether or not you are live.

Netw	ork Da	ashboard				
	<··>	Intel(R) 8257rk Connection	6.33 Mbps			Perfect Streaming
Т		Perfect Streaming	\$	Perfect Streaming		STREAMING
Т		29.98 FPS 4.27 Mbps	2 Viewers	29.98 FPS 2.06 Mbps 0 Viewer	;	00:10:48;13

When your event is over, click 'Streaming' in the lower left corner to end the stream.

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	*
		Stream E	nded	DONE			
		2 Max viewers	Oh 11m DURATION				
		Actions: Emily Knox Save & F	/ Ice Hockey Post 💿 Save draft	O Delete			

Studio will let you know that the stream has ended and display the maximum viewers your event had, along with the stream duration.



GFX 1 GFX	X 2	GFX 3	Media 1	Media 2	Stream	Transitions	*
		Chrone Fr	a da d	DOUE			
		Stream Er	nded	DONE			
		2 MAX VIEWERS	Oh 11m				
		Actions: Emily Knox / Save & P	/ Ice Hockey ost 💿 Save draft	O Delete			

Certain providers may have actions for you to take after the broadcast. For example, Livestream will ask if you want to post the video on demand, save it as a draft, or delete it ('Save draft' is selected by default.) Choose your desired option, then click 'Done.'

Stream Title	
Game 1	
Stream Quality	
720p + 480p + 360p	+ 240p (4862 kbps) ▼
Aspect Ratio	
16:9 3 4:3	O 1:1 O Custom 16 : 9
Notwork Daphboard	Second delete X
	Emily Knox
	Tacebook.com/app scoped user 10/10/2002/2008/2213/3
+ 📭	f

If you want to remove a provider from your workflow entirely, hover your mouse over the icon and click 'Delete.' You can add it back to the workflow at any time.





341

**live**strean

It is important to note that Facebook will not stream alongside any other streaming provider than Livestream. Facebook must be disabled in Studio prior to streaming to YouTube, etc.



```
If you wish to stream to both
Livestream and Facebook but have
limited bandwidth, you may want to
look into <u>Facebook Live for Livestream</u>
<u>on the Livestream Platform</u>.
```



### Hardware encoding



Studio version 4.2 introduces **hardware encoding** as an option for streaming. This moves the video encoding to a dedicated GPU, greatly reducing your CPU usage while streaming.

This currently only applies to computers with Intel processors that include Quick Sync Video (<u>which are</u> <u>listed here</u>) or have an NVIDIA GeForce card with Kepler, Maxwell, or Pascal architecture, which includes NVENC.\*

\*See next page for details

The HD31, HD51 4K, and HD550 4K are the only *Livestream-built* units that have the required hardware that includes this feature, although many Windows laptops include it as well.

#### GeForce Product Lineup



GeForce GTX	GeForce GT	THE POW	ER OF		
The ultimate GPU for gamers. Delivers fastest performance and Il the latest gaming echnologies.	Supercharged performance for your HD videos and photos, immersive 3D movies, and entry level gaming.	GEFORCE	GTX 10	)50	
Desktop	Desktop		GeForce GTX 1050 Ti	GeForce GTX 1050	GeFor
VIDIA TITAN X SeForce GTX 1080	GeForce GT 730 GeForce GT 710	GPU Architecture	Pascal	Pascal	Maxwo
GeForce GTX 1070 GeForce GTX 1060		NVIDIA CUDA <sup>®</sup> Cores	768	640	640
GeForce GTX 1050 (new!)		Frame Buffer	4 GB GDDR5	2 GB GDDR5	2 GB G
eForce GTX 980 Ti eForce GTX 980		Memory Speed	7 Gbps	7 Gbps	5.4 Gb
GeForce GTX 970 GeForce GTX 960 GeForce GTX 950		Boost Clock Relative	1.3x	1.3x	1x

To determine if your graphics card includes NVENC, go to the <u>GeForce Hardware Products page</u> and click the name of the model card you have and check its specs. If it advertises Kepler, Maxwell, or Pascal GPU architecture, then hardware encoding is supported.

Note: We have tested the following GeForce models: GTX1050 , GTX950, GT730, GTX650

**live**stream



Hardware encoding in Livestream Studio is enabled by default. To find the setting, click the 'Settings' icon in the upper right corner of the interface.



Settings: S	treaming	CANCEL	
Project Format	Hardware encoding	Enabled	
Inputs	Antilag	<ul> <li>On</li> </ul>	
Outputs		Off Off	
Audio In	Antilag Duration	5000 <b>ms</b>	
Recording	Key Frame Interval	2 seconds	
Media Player	Encoder Queue	Stop streaming when queue is	
Streaming		300 frames	
Web Control	Bitrate	<ul> <li>Variable</li> </ul>	

## Navigate to the 'Streaming' menu.

Settings: S	treaming	CANCEL	
Project Format	Hardware encoding	Enabled	
Innute			
inputs	Antilag	On	
Outputs		O off	
Audio In	Antilag Duration	5000 <b>ms</b>	
Recording	Key Frame Interval	2 seconds	-
Media Player	Encoder Queue	Stop streaming when queue is	
Streaming		300 frames	

At the top of the menu, you will see 'Hardware Encoding' checked. If you wish to disable it, click the checkbox to uncheck it.

Settings: S	treaming	CANCEL	AVE
Project Format	Hardware encoding	Enabled	
Inputs	Antilag	<ul> <li>On</li> </ul>	
Outputs		O off	
Audio In	Antilag Duration	5000 <b>ms</b>	
Recording	Key Frame Interval	2 seconds	
Media Player	Encoder Queue	Stop streaming when queue is	
Streaming		300 frames	

# Click 'Save' in the upper right corner.



	Edition	Windows 10 Pro
otifications & actions	Version	1607
wer & sleep	OS Build	14393.447
	Product ID	00330-80000-00000-AA648
orage	Processor	Intel(R) Core(TM) i7-4790K CPU @ 4.00GHz 4.00 GHz
fline maps	Installed RAM	16.0 GB (15.9 GB usable)
fline maps blet mode	Installed RAM System type	16.0 GB (15.9 GB usable) 64-bit operating system, x64-based processor
fline maps blet mode	Installed RAM System type Pen and touch	16.0 GB (15.9 GB usable) 64-bit operating system, x64-based processor No pen or touch input is available for this display
fline maps blet mode ultitasking	Installed RAM System type Pen and touch Change product	16.0 GB (15.9 GB usable) 64-bit operating system, x64-based processor No pen or touch input is available for this display key or upgrade your edition of Windows

As an example, here is the processor being used on a Windows 10 computer.



The CPU usage when hardware encoding is turned off—streaming a single bitrate averaging 2128 Kbps with two media bins and one animated graphics overlay—is nearly 100%. The stream timed out after about one minute due to insufficient resources.

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By comparison, the CPU usage with the same workflow while hardware encoding is turned <u>on</u> was cut in half, down to 48%.



## 4K, 1080p, and Custom Encoding



Studio now has more quality and multi-bitrate streaming options than ever before.

These include the ability to stream in 1080p, custom qualities, and the ability to stream in 4K.



Settings: St	treaming	CANCEL	SAVE	
Project Format	Hardware encoding	Enabled		
Inputs	Antilag	On		18mg
Outputs	(	Off		
Audio In	Antilag Duration	5000 <b>ms</b>		
Recording	Key Frame Interval	2 seconds		
Media Player	Encoder Queue	Stop streaming when queue is		
Streaming		300 frames		

In order to see these new quality options, you must enable hardware encoding on your Studio system.



GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions
<b>Stream Title</b> Enter a title for your						
Stream Quality 240p (428 kbps) 240p (428 kbps) 360p (678 kbps) 480p (1628 kbps) 720p (2128 kbps) 1080p (4628 kbps) 360p + 240p (1106 kb 480p + 360p + 240p ( 720p + 360p + 240p ( 720p + 480p + 360p + 1080p + 360p + 240p	ops) 2734 kbps) 3234 kbps) 240p (4862 kbps) (5734 kbps)					

Navigate to the 'Stream' tab. After configuring your streaming providers, navigate to the 'Stream Quality' dropdown menu; more lower-quality multi-bitrate options are available.

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions
Stream Title Enter a title for your	stream		)			
Stream Quality 240p (428 kbps) 1080p + 480p + 360p 1080p + 720p + 360p 1080p + 720p + 480p 2160p (20128 kbps) 2160p + 1080p (2475) 2160p + 720p (22256) 2160p + 360p + 240p 2160p + 480p + 360p	+ 240p (7362 kbps) + 240p (7862 kbps) + 360p + 240p (9490 kbps) 6 kbps) kbps) (21234 kbps) + 240p (22862 kbps)					
2160p + 720p + 360p 2160p + 720p + 480p	+ 240p (23362 kbps) + 360p + 240p (24990 kbps	5)				

As you continue to scroll down in the menu, you will see higher quality options, including 1080p and 2160p (4K) bitrates.

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions
Stream Title Enter a title for your	stream		)			
Stream Quality 240p (428 kbps)		•				
2160p + 1080p (2475 2160p + 720p (22256 2160p + 360p + 240p 2160p + 480p + 360p 2160p + 720p + 360p 2160p + 720p + 480p 2160p + 1080p + 360 2160p + 1080p + 480	6 kbps) (21234 kbps) + 240p (22862 kbps) + 240p (23362 kbps) + 360p + 240p (24990 kbps) p + 240p (25862 kbps) p + 360p + 240p (27490 kbp p + 360p + 240p (27490 kbp	s) ps)				
2160p + 1080p + 720 Custom (678 kbps)	p + 480p + 360p + 240p (29	9618 KDps)				

If none of the preset options suits your needs, scroll to the bottom of the quality menu to create a custom quality to stream at.



#### Stream Title

Stream Quality				
Custom (678 kbps)			<b>*</b>	
Custom 1 360p 🏾 🇯	+ Add	l Quality		
Aspect Ratio				
16:9 34:3	1:1	Custom		
Network Dashboard				

Selecting 'Custom' begins at 360p, the equivalent of a medium-quality stream. Click the gearwheel to open up the bitrate settings.



Edit Quality		CANCEL	NE	E	Edit Quality	CANCEL	DONE
Bitrate:	<b>678 kbps</b>   R	esolution: 640 x 360 J	px	L	Audio Bitrate	1	
Name			_ II	E	Audio Sample Rate	J	
Custom 1		OPEN FMLE XML			44100 👻	]	
Width	Height			1.00	H.264 Encoding Profile		
640	360				Baseline		
Video Bitrate					Main		
550					U High		

Here is where you can choose a name for this particular quality, set the width, height, video bitrate, audio bitrate, audio sample rate, and encoding profile. Once you have configured the settings, click 'Done.'
GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	₩
Stream Title	stream						og
Stream Quality	)						
Custom 1 320p 10 Aspect Ratio 16:9 0 4:3	Custom 2 360p	Custom 3 240p 🔅	Custom 4 480p	+ Add Quality			
Network Dashboard	I						
						0.11/	

```
You can add up to four custom
bitrates by clicking 'Add Quality.' Each
quality can be edited individually by
clicking the corresponding
gearwheels.
```



GFX 1	GFX 2	GFX 3	Media 1		Media 2	Stream	Transitions	*
		Edit Quality		CANC	CEL DO	NE		
		× Delete Quality Bitrate:	2 Mbps	Resolution:	856 x 480	px		
		Name Custom 4		] (	OPEN FMLE XML			
		Width 856	Height 480					

You can remove a quality by going into its 'Edit Quality' menu and clicking 'Delete Quality.'

## Media Playback

Configuring settings





Livestream Studio includes up to two media bins that allow you to include pre-recorded videos in your production.

Settings		CANCEL			
Project Format		~	· VA DO		
Inputs	Media Autoplay	Pause playback Pause playback from EXIT transition and continue from current position on ENTRY position	-		
Outputs		Continue playback	2 Alle		
Audio In		Continue playback from EXIT transition and playback from IN point on ENTRY position			
Recording	Transcoder Files Location	BROWSE 's\Livestream\Videos\Transcoding\			
Media Player	Transcoding Cache	300 GB			
Streaming	Transcoding Bitrate	75 (Mbps) 👻			
orreating	Basic Replay	10 seconds before current timestamp			

### In settings, go to the '**Media Player**' tab to configure settings for your media bins.

Settings: M	edia Player	CANCEL	
Project Format			
Inputs	Media Autoplay	<ul> <li>Pause playback</li> <li>Continue playback</li> </ul>	
Outputs	Transcoding	Files Location	P. Maria
Audio In		BROWSE Windows10-51\Videos\Transcoding\	
Recording		Cache CLEAR CACHE 1816 MB used	
Media Player		Set cache size 300000 MB	
Streaming		Bitrate	

'Media Autoplay' allows you to choose if a video will either pause or continue playing when a media source is transitioned out of Program. It also determines whether the video will continuing playing from its current location ('Pause') or start from the beginning of the IN point ('Continue').

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Audio III	position							
Recording	Transcoder Files Location	BROWSE	rs\Livestream\Videos\Transcoding\					
Media Player	Transcoding Cache	300	GB					
Streaming	Transcoding Bitrate	75 (Mbps) 🔻						
Multi-Screen	Basic Replay	10 sec	onds before current timestamp					
Ad Insertion		("R"), set a ne using the abo	w in-point of the current recording ve setting.					
Admocraon	Export Location	BROWSE	C:\Users\Livestream\Videos\					

'Transcoder Files Location' is where any transcoded videos (i.e., videos you bring into your media bin) will be saved. You can bring those videos into a media bin again without transcoding.



'Transcoding Cache' lets you control the amount of data stored in the transcoding folder before files are deleted.





'Transcoding Bitrate' determines the bitrate to which the videos are transcoded. Higher bitrates will have higher resolution but also create larger files.





'Basic Replay' lets you tell Livestream Studio how far back from the current timestamp to set an In point. The Out point will be set to the current timestamp.





You can export videos or portions of videos from your media bin. You can choose their export location and settings here.



Settings: M	ledia Player	CANCEL	
Project Format	Madia Autoplay	Dause playback	A AN
Inputs	пеціа Ацторіаў	<ul> <li>Continue playback</li> <li>Continue playback</li> </ul>	
Outputs	Transcoding	Files Location	R
Audio In		BROWSE Windows10-51\Videos\Transcoding\	
Recording		Cache CLEAR CACHE 1816 MB used	
Media Player		Set cache size 300000 MB	

### When your media bin settings are configured to your liking, click 'Save.'

## Media Playback

Importing video clips

**live**stream



To add a video clip, press the '+' button in the bottom left of the media bin.



Desktop	includes: 2 locations							1
Desktop Downloads Recent Places Libraries Documents Music Pictures Videos Videos Homegroup Computer Local Disk (C:)	2014.12.04 10.04.41	2015.01.17 14.09.08	Additional clips	Sample Videos	Transcoding	2015.01.17 14.39.49@1756kb ps	2015.01.17 15.01.58@2628kb ps	
File na	ame: CAM 3 - 2015.01.1	7 14.09.08				Media files (*.avi     Open	*.wmv *.asf *.r 💌 Cancel	

This will allow you to browse your computer for the desired video. When you find the video you want to import, click 'Open.'

**Note**: See <u>Appendix B</u> for supported video formats.

-	GFX 1	GFX 2	GFX 3	Media 1	Media 2	Strea
ея ]	16.28% CAM 3 - Transcor	2015.01.17 1 ding	×			

The video will begin transcoding in the media bin. Keep in mind that the longer the video is, the longer it will take to transcode.



When the video has finished transcoding, you will be able to play it back in the media bin in Livestream Studio.





In addition to any clips you import, active recordings will also appear at the bottom of your media bin if you selected that option in settings. You can view them as they are recording.





To delete a video from your bin, click the 'X' to the right of the video name. This will not delete any files from your computer's hard drive.



# Media Playback

Controls and options





Each media bin comes with a variety of controls and options for playing back your clips.





To queue a clip in your media bin, simply click on it with your mouse to highlight it. It will also appear in the player to the right.



Checking 'Autoplay' will tell Livestream Studio to start playing the queued video when the media bin source is taken into Program.



If you have multiple videos that you want to play back-to-back, select the 'play as list' button. When one video ends, the next one will start playing immediately.



If you have one clip that you want to repeat, select the 'loop' button.





If you highlight both 'play as list' and 'loop,' the media bin will playback all videos in order and then loop back to the first clip when the last one has finished.



Under the player to the right is a blue timeline where you can track playback of your clip. Use your mouse to drag the red cursor to any point within the clip.





With your mouse, you can drag and drop both ends and set In and Out points if you want to playback only a portion of your clip.





You can also set In and Out points by dragging the scrubber to the desired point and pressing the corresponding In or Out bracket button above the timeline.





The first and last buttons jump the clip to the beginning of the full clip, regardless of whether there are set In and Out points.





The next pair of controls in will jump to the beginning and end, respectively, of the clip's set In and Out points.



The next pair of controls can jog your clip forward and backward, respectively, frame by frame.





The play control surrounded by brackets will play the clip starting from the In point and finishing at the Out point.





When clicked, this play button will turn into a pause button, allowing you to stop playback at any point.





Next, you can play back the full video from wherever the scrubber is located by using this play control.





This play button also turns into a pause button when the clip is playing back.




These controls all have hot keys assigned to them. Check your settings to see what they are by default or change them to your preference.





When playing back the last clip of a playlist or any clip that is not looping, Studio will give warning indicators as you are near the end of a clip. Yellow indicates 20 seconds or less are remaining.



When the media bin player turns red, that indicates 10 seconds or less are remaining.





When the clip reaches the end, it will automatically transition to the source in Preview.

**Note**: This functionality will only work if 'Autoplay' is checked. It is recommended to have 'TIE BG' selected so that the video sources switch.



# Media Playback

Replay functionality





When you start recording and have recordings set to go to your media bin, you will see the recorded files populate in the media bin immediately.

CAM3 - 2016.05.12 14 00:00:09;59	14:35:08;58
+ 🖌 Autoplay 🗄 🗗	14:35:08;58

By default, pressing 'R' on the keyboard will set an In point for the previous 10 seconds, and an Out point for the current timestamp.



When you bring that media source into Program, it will start playing that 10 second segment and will give a countdown for how much time is left.

**Note**: Ensure that neither 'Play as List' or 'Loop' are selected.



When the clip reaches its Out point, it will automatically switch to the Preview source, using the previous transition type you used (Cut or Auto).

Note: Be sure to keep 'TIE BG' selected and 'Autoplay' checked.

	Outputs	Transcoding	Files Location		
	Audio In		BROWSE Windows10-51\Videos\Transcoding\		
	Recording		Cache CLEAR CACHE 1883 MB used		
	Media Player		Set cache size 300000 MB		
	Streaming		Bitrate		
	Multi-Screen				
CAM2 🌣	Ad Insertion	Basic Replay	10 sec. before current timestamp	X1 🗢	GFX2
	Hotkeys	Export Location	BROWSE C:\Users\Windows10-51\Videos\		<u>-</u>
	Mouse / Touch	Video Settings	Resolution 1280 X 720		MEDIA
	Chudia Cuntana		Bitrate 5000 kbps		9

The default setting for the amount of time your replay covers can always be adjusted in under the 'Media Player' tab in settings.

# Media Playback

Exporting media





The media bin has an export tool that permits turning any part of your clips into its own H.264 .mp4 file on your system. First, select a video you want to export.



Set In and Out points for your clip. If you want to export the full video, make sure the brackets enclose the entire timeline.





When you are ready to export your clip, click on the arrow icon next to the video's name.





The double arrow button at the top of the interface turn blue and show a small progression bar as your clip is exporting.





Click on the button to view your transcoding queue. This will tell you how much time is left in your clip and the status of any other transcoded or exported video.



## Adding remote cameras

Remote Desktop Client for Windows



	incucorrouch		GFX3	GFX 3	Disabled	None		
	Studio Surface		MEDIA1	Media 1	Embedded	None		
	Advanced		COLOR1	Colors/Bars 1	Embedded	None		
	Support		REMOTE1	Remote Cam 1	Embedded	None		GFX
	ouppoint		REMOTE2	Remote Cam 2	Embedded	None		
0	License	F+						
0 dE	About							

Livestream Studio includes up to 10 remote camera modules that can be added in the '**Inputs**' tab in settings.



	Audio Mixer	Remote Cam 1	Input Settings	C	colors/Bars 1	RTMP 1	RTMP 2
Ø	None						
Ţ	<b>User-PC</b> Ready	\$	Conn devic	nect live vide ces on your l	o inputs from ocal network	Als Liv	o you can use our e Interview feature
Ţ	Caroline's Macbook Ready	Pro 🌣	Windows	Android	AirPlay M	j lac	×
Ţ	User-PC (2) Ready	\$	iPhone		0		Live Interview learn more
Ç A	PRODHD500313 Ready	\$	Phone	BroadCaster	mevo Go	0140	

The remote camera modules will appear in the lower right corner.



#### Livestream Studio Remote Camera

Last updated on Sep 25, 2014 09:19AM EDT



Starting with Livestream Studio™ version 1.4, users have the option of using a remote desktop on the same local network as a source. There also the option of adding an existing New Livestream broadcast as a

source.

Remote Desktop Client for Windows Click here to download

One option is a Windows desktop that is connected to the same network as Livestream Studio. Download the Remote Desktop Client software on that computer from the Livestream <u>Help Center</u>.





In order for the Windows remote camera to work, your remote computer must be connected to the same network as your Livestream Studio system.



Open the downloaded file and follow the on-screen steps to run the installation wizard, then click 'Finish.'



Remote Camera will launch in the background of your PC. Right-click on the icon in the bottom toolbar and click 'Settings.'



Livestream	n Remote Camera Settings	CANCEL SAVE	
Computer Name	Remote PC		
	🛃 Blackmagic - DeckLink SDI Quad [1]	SHOW SETTINGS	
	Blackmagic - DeckLink SDI Quad [2]	SHOW SETTINGS	
	Slackmagic - DeckLink SDI Quad [3]	SHOW SETTINGS	
	🛃 Blackmagic - DeckLink SDI Quad [4]	SHOW SETTINGS	
	Blackmagic - DeckLink Studio 2	SHOW SETTINGS	
	Desktop - VX2239 SERIES		
	Desktop - VX2450 SERIES		
Encoder Quality	O HD 1080p		
	НD 720р		
	SD 480p		
Encoder Framerate	Half-speed FPS (30p)		
	Full-speed FPS		

Here you can adjust your remote camera's name as well as set your video and audio signals from every source going into that PC.





Back in Livestream Studio, under the Remote Cam tab, you should see your PC listed as a source, assuming that computer is on the same network.





Click on the gearwheel to select the video source (if you have more than one such as desktop, webcam, etc.), audio source, and other settings depending on the source.





You can crop the source within a matching aspect ratio if you want to show only part of the image. Use your mouse to drag and drop the border in the module on the right side.





Remote camera will be in your multi-view and can be transitioned into Preview and Program the same way as other sources. Expected latency is one second or less.



## Adding remote cameras

Remote Desktop Client for Mac







### <u>Click here</u> to download Livestream Studio Remote Desktop Client for Mac OS X.





Double-click the Livestream Studio Remote Camera Beta.dmg file in Finder to start the installer.



### Drag the Livestream Studio Remote Camera into the Applications folder.





Go to the Applications folder and double-click the Livestream Studio Remote Camera to open the application.



This window will pop up, indicating that the remote camera icon will appear on the menu bar at the top of your screen. You can choose to prevent this message from appearing again.

AI @ \$ 6 @ 5 @
✓ Launch on startup Check for Updates
Settings
Download Audio Redirector About
Stop
Close

```
When the Remote Client is
running, you can click the icon
and click 'Settings' to make further
adjustments to your remote
camera source.
```





Here, you can change your computer's name (as it appears in Livestream Studio), what sources will be available, and the resolution and framerate the video signal will stream over your network to Livestream Studio.
Hotkeys		MEDIA1	Media 1	Embedded	None	
Mouse / Touch		MEDIA2	Media 2	Embedded	None	
Studio Surface		REMOTE1	Remote Cam 1	Embedded	None	
Studio Surrace		REMOTE2	Remote Cam 2	Embedded	None	
Advanced						
Support		F -				
	1. 1. 1. 1. 1.	CERCERCERCE CONTRACTOR				

Once the application is installed and running on your Mac, be sure your Livestream Studio and Mac systems are connected to the same network. Then add a remote camera source in the 'Inputs' menu.



Windows<br/>downloadAndroid<br/>learn moreGlass<br/>learn moreMac<br/>downloadImage: Second conductorImage: Second conductorImage: Second conductorMac<br/>downloadImage: Second conductorImage: Second conductor

Live Interview

In the Remote Camera module, look for your Mac in the list of remote sources, and click it to activate.





Emily's MacBook Pro



Your first video source will appear. Click the gearwheel in the selection menu to access more settings.



	d Ende
Video Source	
Desktop 👻	
Monitor	-
Color LCD 👻	
Audio Source	
LivestreamDesktopAudioCapture -	
Capture mouse cursor	
	Sec. 2
	a second



Here, you can change which video and audio sources are being shown from your Mac. If you select a desktop monitor, you can also choose to hide or show the mouse cursor.

	<b>A</b> 1	۲	\$	0	3	5	2
✓ L C S D A	aunch heck f ettings ownlo bout	on s for U s ad A	tarti pdat	up tes	direc	tor	
S	top						
C	lose						

Please note the application will run in the background of your Mac system until you close it, which you can do by clicking the icon in the menu bar and selecting 'Close.'



## Adding remote cameras

iOS devices



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Wi-Fi		
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ls-guest		<b>₽ 奈 (i</b> )
studio1		<b>≜ 奈 (i</b> )
Other		

In order for the remote camera to work, the iOS device must be connected to the same network as your Livestream Studio system.



To use the camera from an iOS device, install the Livestream app from the App Store on your device.



Launch the Livestream app and log in to your account.





# Tap the menu icon in the upper right corner, then tap the gearwheel.

● ○ ○ Verizon 🗢	12:23 PM	◙∦97%
≡	Settings	
Edit Profile		>
Change Password		>
Connected Accourt	nts	>
Media		>
Playback Options		>
Auto-Notify Followe	ers	>
Livestream Broadc	aster	>
Studio Remote Car	mera	>
Leave Feedback		
Livestream Terms of	of Service	
Open Source Licer	nses	>
open oource beer		

Logout

Tap the menu icon in the upper right corner, then tap the gearwheel.



When 'Enable Studio Remote Camera' is enabled, a blue 'Livestream Studio Remote Camera' button will appear. Press it to open the camera.



Your camera will open and the app will show "Waiting for Studio to connect..."





Look in the remote camera module in Livestream Studio. You should see your iOS device appear in the list of remote cameras. Click it to connect.





Your iOS device will indicate that Livestream Studio has connected.



Your camera's image will also appear in Livestream Studio. Expected latency is one second or less.







The iPhone app allows you to use the camera in either portrait or landscape mode. Both will give additional options in the upper right corner.

## Adding remote cameras

Android devices





For remote camera to work in Livestream Studio, your Android device must be connected to the same network as your Livestream Studio system.



Using an Android device as a remote camera works very much like an iOS device. Download the Livestream app from Google Play.



Launch the app and log in to your Livestream account.







Tap the hamburger icon in the upper right corner, and then tap the gearwheel.



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$\equiv$ Settings	← s	tudio Remote Camera
	USE AS RE	MOTE CAMERA
Edit Profile	This feature remote sou	e will enable you to use the camera as a urce in Livestream Studio. <u>Learn more</u>
Change Password	about this f	feature.
Connected Accounts		
Playback Options		
Auto-Notify Followers		
Show Notifications		
Livestream Broadcaster		
Studio Remote Camera		
Leave Feedback		

Tap 'Studio Remote Camera,' then tap 'Use As Remote Camera.'





The camera will open and will show that it is attempting to connect to Livestream Studio.



In Livestream Studio, your Android device should appear under the Remote Camera module. Click on it to activate.





In addition to seeing the camera in Livestream Studio, the Livestream Android app will indicate that it has connected.



Clicking the gearwheel next to your device in the remote camera module will allow you to switch which of the device's cameras to use and choose an audio source.



The upper right corner of the Android screen allows you to turn on your flash, mute your microphone, or switch the device's cameras.

## Adding remote cameras

Google Glass



To use a Google Glass as a remote camera, go to Google Glassware in the Glass mobile app or <u>www.google.com/myglass</u> to ithe Livestream app on Google Glass.





Toggle the switch to 'On' to install the Livestream Glassware.

ଓ 🖿	∦ 🖻 🛛 🕴 💱 🖉 🔒 11:23
< <b>C</b>	<b>live</b> stream
D.	Login with Facebook
1	or
	Email Address
	Password
	Login
	Forgot password
	Don't have an account?
	Join Livestream
	Close
	f G G

You will then be prompted to log in to your Livestream account. This allows Google Glass to recognize your events.





Open the app on Google Glass by saying, "Ok Glass, start broadcasting" or swipe to the Livestream app from the main screen and tap the side of the Glass.





'Broadcast' will appear. Tap again to enter the application.





If left untouched, the app will start streaming to your most recent event. Tap the Glass before the load bar finishes to be brought to the event selection menu.





#### Swipe left and right to select your events or select 'Create event' to make a new event from Glass.




## Tap the desired event to start streaming.





When you are live, tap the Glass to be brought to additional options (the first being 'Stop Broadcast').





Swipe all the way to the right, then tap on the Glass when you see 'Enable Studio.'





Entering this mode will allow any Livestream Studio on the same wireless network to use your camera as a remote video source. To learn more visit new.livestream.com/studio/remote-cams

Tap to continue

You will be brought to this notification screen, which notes that Glass should be on the same network as Livestream Studio in order to be recognized. Tap to continue.



Glass will wait for a Livestream Studio on the same network to connect and indicate when it has connected.





Once connected to Livestream Studio, Glass will appear as a remote camera source. Click on it to activate it in the module.





If you tap on the side of the Glass, the first option you will see is 'Switch Quality,' allowing you to adjust the video quality sent to Livestream Studio.







Tapping that option will give you three options: low, normal, and high.





If you swipe to the right from 'Switch Quality,' you will see 'Disable Studio,' allowing you to remove the Glass from Studio and stream to events again.

### Adding remote cameras

Livestream Broadcasters





A camera connected to Livestream Broadcaster can also be a remote camera in Livestream Studio. Start by powering on the device.





When Livestream Broadcaster attempts to connect, press the joystick on the bottom to access the menu.





Use the joystick to toggle down to 'Stream Mode,' then press it in to access that menu.





Under this menu, toggle to Studio, then press the joystick in to select it.



After switching to Studio mode, connect Livestream Broadcaster to the same network that your Livestream Studio is connected to.





Once Livestream Broadcaster is connected, you will be brought to the main display indicating if Livestream Studio is connected and the quality the stream is set for.





Push the bottom joystick to get to the main menu in Livestream Broadcaster. Use the joystick to toggle between the different options and settings.





Or use Live Interview feature to bring live remote gues internet by simply sending them a link:



In Livestream Studio, the remote camera should appear in the module. Click on it to see the video signal.





Livestream Broadcaster will indicate that it has started streaming at the selected quality.





To stop the stream from Livestream Broadcaster to Livestream Studio, you can either press the button next to 'Stop' on the device, or deselect it in Livestream Studio.





If you are using a Broadcaster mini, the connecting process is slightly different. First, activate WiFi and Bluetooth on your mobile device, and that the Livestream mobile app is installed.

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< Settings		Wi-Fi		
	Wi-Fi			
~	BCSTR-Mini-5G		a 🗢 🚺	
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	studio1		ê 奈 (Ì)	
	Other			
Ask to Join Networks		5	$\bigcirc$	
Knov netw	Known networks will be joined automatically. If no known networks are available, you will have to manually select a network.			

Go into your device's WiFi settings and connect to your desired network (i.e., the network your Studio system is connected to).







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≡	Settings	
Edit Profile		>
Change Password		>
Connected Accou	nts	>
Media		>
Playback Options		>
Auto-Notify Follow	ers	>
Livestream Broado	aster	>
Studio Remote Ca	mera	>
Leave Feedback		
Livestream Terms	of Service	
Open Source Lice	nses	>
Version		4.0
	Logout	

Go into the Livestream app, tap the hamburger menu icon, and then the gearwheel icon. Select 'Livestream Broadcaster.'

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Cancel	Broadcasters	?
Broadcaster mini		******
Broadcaster-mini-00 Ready to Pair	0271	* >
Broadcaster Pro		
+ Add New		
Broadcaster PRE 2015		
Livestream Broadca	ster	1. It
+ Add New		

Your Broadcaster mini will appear as 'Ready to Pair.' Tap it to begin the pairing process.



If you are on a secure network, you will be prompted to enter the password.



The Broadcaster mini will take about a minute to connect and pair to your account.



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Once it has paired, select your Broadcaster mini from the Broadcasters menu.



It will open the camera view finder. Click on the gearwheel in the top right corner to access settings.

🚥 Verizon 🗢	9:50 AM	۰ 🖉 🖇 96% 💶		
Cancel	Advanced Settings	Save		
Quality	Ada	ptive Normal >		
HDMI Input F	ormat	Auto >		
Aspect Ratio		Auto >		
Audio Input		HDMI >		
Audio Channe	els	Stereo >		
WiFi Network		Source -		
Name	Broadcaste	r-mini-00271 >		
Studio Mode				
Use your Broadcaster mini as an input for Livestream Studio				
Bestart Broadcaster mini				

Scroll down and you will see Studio Mode. Toggle the switch on (green) to enable Studio Mode. Then click 'Save' in the upper right corner.



The mobile app will indicate that your Broadcaster mini is in Studio mode.





In Livestream Studio, your Broadcaster mini will appear in the list of remote cameras. Click on it to preview your camera source.





To bring a Broadcaster Pro into Livestream Studio, power on the device and use the bottom Menu joystick to connect it to the same network that your Livestream Studio system is connected to.





# After connecting it, push in the joystick to enter the menu and select 'Stream Mode.'





#### Toggle the joystick to 'Studio.'





### The Broadcaster Pro will indicate that it is connected and ready to send its signal to Livestream Studio.





In Livestream Studio, you will see your Broadcaster Pro appears as a source under the Remote Camera module. Click on it to preview it.


## Adding remote cameras

GoPro cameras





To connect a GoPro Hero 3 or 4 as a remote camera, first enable the Wi-Fi on the camera by pressing the Wi-Fi button the side of the camera.

Note: GoPro Hero 4 will have lower latency (less than 1 second) than GoPro Hero 3 (1-2 seconds).

**live**stream



If your Livestream Studio system does not have a built-in Wi-Fi receiver\*, you can purchase a USB receiver, such as TP-LINK TL-WN727N 150Mbps, and plug it in to a USB port or a USB hub.

\*Livestream Studio hardware products (HD31/HD51/HD510/HD550/ HD1710) do **not** include built-in Wi-Fi receivers.



i	- 💐	See full map
USER-PC (This computer)	Multiple networks	Internet
View your active networks	1	Connect or disconnect
Network 5 Public network	Access type: Connections: 📮	Internet Local Area Connection 2
goprosupport Home network	Access type: HomeGroup: Connections:	No Internet access Ready to create Wireless Network Connection 4 (goprosupport)

Check your system's network settings to ensure that Wi-Fi is enabled and connected to your GoPro camera.



Once your system recognizes the GoPro's Wi-Fi, the GoPro will appear as a source in your remote camera modules.





#### HERO3+ Black Edition (10.5.5.109)



Select the GoPro to activate it. You can then switch it into Program as desired.



## Adding remote cameras

Live interview





The Live Interview feature is available under the remote camera tab. To add it as a source, click 'Add Stream,' then 'Live Interview.'



You will be provided two URLs: a Live Interview Link and a Moderator Link. Press the 'Copy' button to copy the corresponding URL to your clipboard and provide the Live Interview URL to your guest.





When the guest opens the provided Interview URL in Google Chrome, a prompt will ask for a name and to and allow the camera and microphone to be accessed. When these simple steps are finished, the guest can click 'Join Interview.'



The guest will continue to see the camera feed, but will also see that a connection has been established and that an internal chat can be accessed.

< Back	Live Interview	Select guest (1) 🔫	Chat	Ō
Status Please, select guest from the list	No interviewees selected		Emily Connected to chat	4:12 PM
Live Interview Link			Connected to chat	
https://interview.livestream.com/interview/? COPY				
Moderator Link				
https://interview.livestream.com/interview/r COPY				
Remove from list			Type your text here	

You will also see this chat in Livestream Studio, allowing you to communicate with the guest.

Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings		•	
< Back		Live Interview		Select guest (1) 🔺	Chat	亩
Status		No interviewees	selected	None	Emily Connected to chat	4:12 PM
Please, select guest from Live Interview Link	the list	Please select gue	est from the list.	Emily	Emily Connected to chat	4:12 PM
https://interview.livestream	.com/interview/? COPY				YOU Hello	4:12 PM
Moderator Link						
https://interview.livestream	.com/interview/r COPY					

You can bring in the guest's camera by clicking the dropdown in the upper right corner of the module and clicking the guest's name.





After clicking the name, you can use the guest's camera as a remote camera source, which you can switch to whenever you are ready.



The guest's view will change to seeing his/her camera in the lower left corner and a larger view of what is currently in Program. The guest will also hear Program audio.





CHAT	Ē
Producer Connected to chat	2:14 P M
Me Connected to chat	2:14 P M
Producer	2:19 P M
Hello	

When the guest's camera is selected, he/she will see a 'Preview' notification in the upper right hand corner of the screen.





Ē
2:14 P M
2:14 P M
2:19 P M

When the guest's camera is switched into Program, the guest will see a red 'On Air' notification in the upper right corner.

**Note**: The guest will hear all other Program audio but by default, will not hear guest audio.



The guest has controls at the bottom of the screen that allow the guest to mute his/her microphone or stop the guest video from sending. The gearwheel will allow the guest to change video and audio sources.





The moderator URL can be given to someone who can choose between different guests' sources. The moderator's camera will not be shown, but the moderator will be able to hear audio from all connected interviewees.

523

**live**stream

	Live Interview 1 No User	rs ~	Chat		
9e75-dd8509feda46 COPY	Define settings to activate this stream Please, select interviewee's from the list		YOU Hello	2:19 PM	1
			Moderator Connected to chat	2:33 PM	
9e75-dd8509feda46 COPY			Emily Connected to chat	2:34 PM	
			Emily Connected to chat	2:35 PM	
			Moderator Hi	2:35 PM	

The moderator is also connected to the chat to communicate with all guests and the producer.





The moderator can also mute and pause selected guests' camera sources by using the controls on the bottom left of the screen.



## Adding remote cameras

Apple Airplay Receiver





Another remote camera option is the ability to bring in any Apple device that includes Apple Airplay. To do so, click 'Add Stream,' then 'Apple Airplay Receiver.'

**live**stream



Livestream Studio will prompt you to turn on AirPlay on your iOS device. On an iPhone, this can be done by swiping up from the bottom of the screen.



When you press the AirPlay icon, a menu will appear on your iPhone prompting you to select a source.





Livestream Studio will indicate your system's name; select that from the menu.



	AirPlay	Done
<b>◄</b> »)	iPhone	
	Apple TV (4)	
	Livestream Studio - USE	R-PC 🗸
	Mirroring	
	livestream-laptop-2014-r	nm
	Livestream's Mac mini	
With A on you wirele	AirPlay Mirroring you can send e ur iPhone's display to an Apple ssly.	everything TV,

When you select it, enable mirroring.

< Back	Livestream Studio - USER-P	°C
Status Downloading 227.32 Kbps stream - Perfect streaming		AirPlay Done
Perieu su canning		◄)) iPhone
Name		Apple TV (2)
Livestream Studio - USER-PC		Livestream Studio - I7M-PC
		Livestream Studio - USER-PC 🧹
		Mirroring
		Livestream's Mac mini
		MacBookPro AV
		MacBookPro AV Ex
		With AirPlay Mirroring you can send everything on your iPhone's display to an Apple TV.
Remove from list		WITTERH Starty.

After a few seconds, your device's screen will appear as a remote camera source, which you can then switch into Livestream Studio as desired.

## Adding remote cameras

Other streams









If you have a camera streaming in another location, you can pull that stream into your Livestream Studio as a remote camera source by clicking 'Add Stream.'



			<u> </u>		<u> </u>	
PROD_HD50-1	4		<b>1</b>			
Ready	<b>\$</b>	Windows <u>download</u>	Android <u>learn more</u>	Glass <u>learn more</u>	Mac <u>download</u>	
Event from Livestream	\$	, si a cara da	<u></u>		٥ů	
RTMP Stream		iPhone				
		iPhone learn more	Broadcaster learn more	AITPIay learn more	GoPro learn more	
Zixi Stream						
Apple Airplay Receiver (Beta)		Or use Live Interview	w feature to	bring live rei	mote guests o	over th
		interne	t by simply s	sending then	n a link:	
Live Interview			🔥 Live	Interview		
Add Stream				more		

In addition to 'Apple Airplay Receiver' and 'Live Interview,' there are three options.





Due to backend configuration changes, 'Event from Livestream' is temporarily unavailable to all users until further notice.







Or use Live Interview feature to bring internet by simply send



You can pull in an RTMP or Zixi stream. Click 'Add Stream' and select which one you are using.



< Back	RTMP Player 1
Status <i>Please, enter a RTMP stream URL</i> Stream Url	Define Stream URL to activate this stream. Fill in the Stream URL text box in settings.
Name RTMP Player 1	
Remove from list	

Enter the appropriate playback URL for accessing the stream into the text box in the module, then press Enter.



Status Downloading 111.32 Kbps stream - Perfect streaming	
Stream Url	
rtmp://cp86438.live.edgefcs.net/live/livestream6_2 74@41365	
Name	J
Remove from list	

#### RTMP Player 1



The stream will appear in the remote camera module. Expected latency will vary depending on connectivity strength, but will likely hover around ten seconds.



# Adding graphics overlays

Activating graphics overlay channels

**live**stream
GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions
+			Channel Six Channel Six Studio C Lower thirds, designed by the Browse Graph	<b>Craphics Sto</b> Twitter overlays, sco he Livestream Studi hics -	oreboards, and could be community!	ntdowns

Livestream Studio gives you the option to use three graphics overlay channels, all of which can include multiple layers of static or data-driven graphics. ₩

	Settings: A	dvanced	CANCEL	
	Project Format			
	Inputs	Projects Location	BROWSE ents\Livestream Studio Beta Projects\	
Real Providence	Outputs			
	Audio In	Graphic Overlay Tracks	3 GFX Tracks 🔻	
-	Recording	Startup	Disable Windows Aero Theme on Start	~
	Media Player	Other	Tally Lights	
	Streaming		Send Diagnostic and Usage Data to Livestream	
	Streaming	Tabs	Allow tabs to be opened as	

To ensure you have the desired number of graphics overlay channels available, go to your settings and navigate to the Advanced tab.



	Settings: Ad	vanced		
	Project Format			
	Inputs	Projects Location	BROWSE ents\Livestream Studio Beta Projects\	
	Outputs	Crossfade Audio on Cut	5 Frames	
	Audio In	Graphic Overlay Tracks	3 GFX Tracks	16
P	Recording	Startup	1 GFX Track 2 GFX Tracks 3 GFX Tracks	~
	Media Player	Other	Tally Lights	
	Streaming		Send Diagnostic and Usage Data to Livestream	
		Tabs	Allow tabs to be opened as separate windows	

The second option is 'Graphic Overlay Tracks.' This is where you select the number of GFX tabs you want available to you in the Livestream Studio interface.

	Inputs		puts						
			Name	Video Source		Audio Source	Surfac	e	
Contraction of the second	Outputs		CAM1	DeckLink Mini Re 🔻		Embedded 🛛 👻	None		
	Audio In		CAM2	DeckLink Mini Re 🔻		Embedded 🚽	None		100
- 1	Recording		САМЗ	DeckLink Mini Re 🔻	-	Embedded 🚽	None	-	~
	Media Player	Ξ	GFX1	GFX 1 🚽		Disabled -	None	~	
	Ctra aming	=	GFX2	GFX 2		Disabled -	None	- <b>-</b>	
	Streaming	=	GFX3	GFX 3 🚽	-	Disabled 🚽	None	-	
	Web Control		MEDIA1	Media 1 🚽	r	Embedded 🚽	None	-	
CAM2 🌣	RTMP Server		MEDIA2	Media 2 🚽		Embedded -	None		MEDIA2 🌣
	Multi-Screen		REMOTE1	Remote Cam 1	-	Embedded 🔍	None	~	

In the '**Inputs**' tab, add your GFX channels as video sources if you wish to see them in your multi-view. This is especially helpful if you are using picture-in-picture.





After saving your settings, you will see the desired number of GFX channels and any GFX channels added to your multi-view.

## Adding graphics overlays

Adding and designing a new layer





The first step in adding graphics overlays to the GFX channel is adding a layer. Press the '+' button to get started.



Many options will pop up. To get started, select 'New Layer' at the bottom of the list.



The layer will appear on the left side of the module. Click either paintbrush button to enter the GFX designer to build your graphic.



## Clicking the '+T' button will add static text to your graphics layer.



	your text here ∞ ×	
*	Arial Port Normal STYLE POL ALON VERT ALON VERT ALON VERT ALON	•
Remote Can	SHADOW 5 5 5 5 6 X Y BLUE COLDER	GFX 3
AM 3 ~ GF	BORDER   Outside   *costton   BOX SETTINGS    Crop Text Within Box	
-24	Layer 1 ▼  T + 🖾 + 📾 + 🖬 + 🗐 💭 😋 🔁 🛄 🔳	

Click the attached gearwheel button for editing options (font, size, color, etc.)

**live**stream



The next button allows you to add either a static or dynamic image to your graphics layer.





A static image is any image file you can import, which will always be visible when that graphics layer is also visible. The image will not change.



A dynamic image will change if the hosted file is also changed. In the designer, you choose the file where it is located and its dimensions.

**live**stream



The next option you can add is a video source. Clicking this will allow you to choose which video source you want to include in your graphics channel, place it, size it, etc.





556

**live**stream

The following button allows you to add text or image data fields. Here is where you set where assets will be, their sizes, font colors, etc. The content of those fields is added in a later step.



## Further to the right, the two arrow buttons are for 'Undo' and 'Redo.'





The next button will provide you with a box identifying the title safe (inner box) and action safe (outer box) areas. This lets you know that your graphics will not be cut off the screen.



The next three buttons allow you to change how the GFX Designer displays transparency. This has no impact on the appearance of your graphics overlays.





Once you have your graphic designed, you may decide you want to switch where some of your data fields are located.





To do this, click on the list icon in the GFX Designer. You will notice an option to 'Map fields...'



3		Please Map Text Fiel	ds ×	
		Match	None -	
CAM2 0		P1 Score P2 Score	m None *	
A A A A A A A A A A A A A A A A A A A		Player 1	None -	
emote Cam 1 Remote Cam 2		Player 2	In None -	
CAM3 < GFX1	{{Player 1} {{Player 2}	Team 2	None +	
		Main Board	None -	
	Scoreboard +		CANCEL	

This window will pop up, allowing you to move data from one field to another field.

Note: Text fields can only be mapped to text fields; image fields can only be mapped to image fields.

PZ Score	-	None	
Player 1	+	None	
Player 2	+	None P1 Score P2 Score Player 1	
Team 1	+	Team 1 Team 2 Match	
Team 2	+	None	
Main Board	+	None	
		CANCEL MAP	
	P2 Score Player 1 Player 2 Team 1 Team 2 Main Board	P2 Score Player 1 Player 2 Team 1 Team 2 Main Board	Player 1   Player 2   Player 2   Player 2   Payer 1   Player 1   Player 1   Player 2   Team 1   Team 2   Main Board   CANCEL

Use the dropdown menus to select where fields should be mapped to. When you are done, click the 'MAP' button.





The fields will remap immediately, which you will notice in the GFX Designer.





Right clicking on your content in the designer allows you to undo and redo actions, move content between layers, copy, paste, etc.



When you are done designing your graphics overlay, close out of the designer by clicking the 'X' button in the upper right corner.



GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Iransitions	*
	•	Na	ime		Title		
+ /		E + ROW	+ COLUMN			AUTO PUSH/P	ULL

You can re-enter the designer by clicking on any paintbrush button in the graphics overlay module.





If you hover your mouse over your GFX layer, you will notice a name appear at the top of the image. Double-click the text to rename this GFX layer.

**live**stream

GFX 1	GFX 2	GFX 3	Media 1	Media 2	Stream	Transitions	•
	•	Nar	ne	~	Title		×
((Hams)) : =	\$						
+		≡ + ROW	+ COLUMN			AUTO PUSH/P	ULL

You can adjust other settings for that graphics layer by clicking the gear wheel button. The settings shown will change based on the type of graphics overlay being used.

< Back Lower Third : Yello Delete		Name	Title ~
Auto-Loop	≡ ⊙		
START AUTO-LOOP			
Auto-Loop Settings			
10 second interval between new items			
Start from beginning once end is reached			
Remove item from list after shown			
Auto-Loop Direction			
Top-to-bottom			
	<b></b>		

Most GFX layer settings will be related to your data fields. If you added a text or image field, a column for each should have been created to the right, which you can rename.

K Back Lower Third : Yello Delete		Name	Title	
Auto-Loop	•			
START AUTO-LOOP				
Auto-Loop Settings				
10 second interval between new items				
Start from beginning once end is reached				
Remove item from list after shown				
Auto-Loop Direction		Add Text Type Column		
Top-to-bottom		Add Image Type Column		
+ 🖌 🛛 🔤	+ ROW	+ COLUMN		AUTO PUSH/PULL

You can also add a column by clicking '+ COLUMN' underneath where the data populates and add that asset in the GFX Designer.

< Back Lower Third : Yello Delete			Name	Title	
Auto-Loop	101	$\odot$	Tom lannaco	Producer Support	
START AUTO-LOOP					
Auto-Loop Settings					
10 second interval between new items					
Start from beginning once end is reached					
Remove item from list after shown					
Auto-Loop Direction					
Top-to-bottom					
Bottom-to-top					

In the one row that appears, you can add content to those fields by clicking in the cell. You can then type any desired content into a text field.



<ul> <li>Favorites</li> <li>Desktop</li> <li>Downloads</li> <li>Recent Places</li> <li>Libraries</li> <li>Documents</li> <li>Music</li> <li>Pictures</li> <li>Videos</li> <li>Homegroup</li> <li>Computer</li> <li>Local Disk (C:)</li> <li>Network</li> </ul>	Pictures libra Includes: 2 locations	Livestream Studio Beta	Sample Pictures		Arrange by: Folder -	
File nar	me:			•	*.jpg *.jpeg *.png *.bmp Open 💌 Cancel	•

Double-clicking an image field will allow you to browse your computer for an image to put in that image field.

	< Back Lower Third : Yello Delete		Name	~ Title	
	Auto-Loop	=	Tom lannaco	Producer Support	
	START AUTO-LOOP				
	Auto-Loop Settings				
	10 second interval between new items				
	Start from beginning once end is reached				
	Remove item from list after shown				
	Auto-Loop Direction				
	O Top-to-bottom				
C	+ 🖊 📧 🗉	+ R0	W + COLUMN		AUTO PUSH/PUL

Click the adjacent radio button to highlight it blue. This will make that row of data visible when that layer is shown in Preview or Program.



Back Lower Third : Yello Delete			Name ~	Title	
Auto-Loop	III		Tom lannaco	Producer Support	
START AUTO-LOOP					
Auto-Loop Settings					
10 second interval between new items					
Start from beginning once end is reached					
Remove item from list after shown					
Auto-Loop Direction					
Top-to-bottom					
+ 🖌 📧 🗉		- ROW	+ COLUMN		AUTO PUSH/PULL

To use the same graphics overlay template for different information or data, click '+ ROW' on the bottom.

< Back Lower Third : Yello Delete			Name 🗸	Title
Auto-Loop	III	۲	Tom lannaco	Producer Support
START AUTO-LOOP	111	0	Penalty Shot	New York, N.Y
Auto-Loop Settings         10       second interval between new items         Image: Start from beginning once end is reached         Image: Remove item from list after shown				
Auto-Loop Direction Top-to-bottom				
+ 🖊 📧 🗉		+ ROW	+ COLUMN	AUTO PUSH/PULL

Fill in the data cells with the information you want to use for those text or image fields.


< Back Lower Third : Yello Delete			Name	Title	
Auto-Loop	111	0	Tom lannaco	Producer Support	
START AUTO-LOOP	111		Penalty Shot	New York, N.Y.	
Auto-Loop Settings					
10 second interval between new items					
Start from beginning once end is reached					
Remove item from list after shown					
Auto-Loop Direction					
Top-to-bottom					
+ /		+ ROW	+ COLUMN		AUTO PUSH/PULL

#### Click the corresponding radio button to make that row of data visible in your graphics layer.



Back Lower Third : Yello Delete			Name ~	Title
Auto-Loop		0	Tom lannaco	Producer Support
START AUTO-LOOP	III	٢	Penalty Shot	New York, N.Y.
Auto-Loop Settings		0		
10 second interval between new items		0		
Start from beginning once end is reached Remove item from list after shown	ш	$\odot$		
Auto-Loop Direction	III	0		
Top-to-bottom	111	0		
+ 🔽 📧 🗉	C	+ ROW	+ COLUMN	AUTO PUSH/PUL

You can add as many rows and columns as necessary for any given graphics overlay layer.



START AUTO-LOOP	111	0	Tom lannaco	Producer Support
Auto-Loop Settings	111	۲	Penalty Shot	New York, N.Y.
10 second interval between new items	111	0		
Start from beginning once end is reached	11R	0		
Auto Loop Direction		$\odot$		
Top-to-bottom	III	0		
Bottom-to-top	ш	0		
Start from top/bottom				
Start from selected list item				

The settings allow you to loop your data content automatically. You can change the interval between switches, whether the loop re-starts, if rows are kept, and what direction the loop moves.



### Adding graphics overlays

Grouping graphics layers





Up to three layers within one graphics overlay channel can now be grouped together. To do so, create and design your layers as you normally would.

	•		Smith Score 🗸	McDonald Score 🗸	Smith 🗸 🗸	McDonald 🗸 🗸	USA
		III	0	0	Smith	McDonald	USA
S	*						
	•						
	*						
	•						
	/						
((Name)) :=	*						

Hold down the Shift or CTRL keys on your keyboard and select which layers you want to group together by clicking them.



GFX 1	GFX 2	By Copying	Me	edia 1	Nedia 2	Stream
	Create Group >	By Moving	<del>3</del> ~	McDonald Score 🗸	Smith 🗸	McDonald
	Delete selected	∃ ③ 0		0	Smith	McDonald
	\$					
	•	]				
		]				
	*					

Once you have selected up to three layers, right click on your mouse. You will see the option to create a group, followed by 'By Copying' and 'By Moving.'



'By Copying' will make a copy of all selected layers in that graphics channel, in addition to the individual layers. This allows you to use those layers separately as well as in a group.



'By Moving' will merge the two layers into a group without making a copy. This is ideal when you only intend to use those graphics simultaneously, thus reducing clutter within the graphics overlay channel.



	GFX 1	GFX 2			GFX 3	M	ledia 1	Media 2		
	Lower Third : White G	radient	≣			Smith Score 👻	McDonald S~	Smith		
	🖝 Group 1		•	ш	$\circ$	0	0	Smith		
	Timer		0							
	Scoreboard		Ξ							
I										

If you prefer to use the list view mode in the graphics overlay channels, you can depict where groups are by the folder icon next to the group name.

((Name))/	*	
Group 1		00:05:00
Timer	0	
Scoreboard	≣	
+ /		

## You can rename the group by double-clicking it.



		II	
CAM2 ¢			GFX3 🕏
		¢	REMOTE
8	{{Scoreboard: {{Scoreboard: }		-
Remot	{{Scoreboard: {{Scorb}{Scoreboard: {{Scorb}{Scorb}}}}}}}}}}}}}}} } } } } } } } } } } }	N	Nedia 1
		e ~	McDonald S~
Tip			0
For bes convert		J	

The paintbrush button will take you to the designer where both layers are combined, allowing you to make any needed appearance changes.

Timer O Scoreboard			
Scoreboard	Timer	0	
	Scoreboard	\$	

Below the group is a list of each layer within the group. You can still configure the individual settings for each layer below by clicking the appropriate gearwheel.





Using groups will allow you to reduce the number of layers that need to be made visible by the user within one graphics channel. Making the group visible will make all included layers visible.



### Adding graphics overlays

Exporting and importing layer templates

**live**stream

AUX Outputs		GFX 1	GFX	2		GFX 3		Media 1	Media 2	Stream	
		Lower Third : Yellow E	Boxes	•			Name		*	Title	
PUT 7	INPUT 8	//kamata		/		۲	Tom la	nnaco		Producer Support	
+30	-90 +30		Duplicate	•	P	0	Penalt	y Shot		New York, N.Y.	
OVR 0	= 0VR		Copy / M	love	>	۲	Aman	da Vicari		Event Co-Founder	
-4 -10 -14	-4 -10 -14		Export to	)	<b>&gt;</b>	٥	Ed Yea	alu		Event Co-Founder	
-24	-24		Convert		> _	0	Kristin	McCue		Co-Host	
-38	-38		Delete		<u>_</u>						
-48	-48	 									
-60	-80	 									
-72	-72										

If you know you will need this graphic and data again, you can save time later by exporting it as an .lsgfx file. Right-click on the layer and select 'Export to...'



			J		Name	
SHORE SHORE SHO				۲	Tom lannaco	P
10101100	((Name))	Duplicate		0	Dapath Chat	N
No. 11 Controls		Copy / Move	>	File		
000000000000000000000000000000000000000		Export to	>	File (w	ith dynamic images)	E
80		Convert	>	0	Ed Yealu	E
000000000000000000000000000000000000000		Delete	×	0	Kristin McCue	С
100000000						

Select 'File' or 'File (with dynamic images).' The latter should be selected if you have image fields or dynamic images in your designed graphics layer that you want to be saved within the exported file.



O PREVIEW	Organize 🔻 Ne	w folder							800 -	0			
	🔆 Favorites	^	Name	^	Date modified T	ype	Size						I
	E Desktop				No items match	your search.					And in case of the local division of the loc		
	b Downloads												
	Google Drive Recent Places												
	alla riccontribuco												EÉ
	Calibraries											LI HT	
	Documents	E											
	Pictures												
a to part to	Videos											-	_
	Nomegroup											1	
	Computer												
	Local Disk (C:)												
	G Network	-								_			
	File name:	Lower	Third Yellow Boxes							•			
-	Save as type:	*.lsgfx								•			
										_ [			
	Hide Folders						L	Save	Cancel		GF	(2 <b>¢</b>	G
l	A DESCRIPTION OF TAXABLE			Contraction of the local division of the loc	Statement of the second se	State of Sta	or the Party of th	and the second se					

Your system's browse window will open, where you can choose where to save your graphics template and name it.





Once that is done, you can import your .lsgfx file by clicking the '+' button, then selecting 'Import Layer,' followed by 'Livestream Graphics.'



PREVIEW	Organize 🔻 New fold	ler				iii • 🔟 🌘	
	🔆 Favorites	Name	Date modified	Туре	Size		
	📃 Desktop	Lower Third Yellow Boxes	2/5/2015 9:01 AM	LSGFX File	58 KB		and the second s
	Downloads						
	🔒 Google Drive						
	🔛 Recent Places						
	Cibraries						THE FEED OF ME
	Documents						
	J Music						
	Pictures						
	🚼 Videos						
	🜏 Homegroup						
	Computer						
	A Local Disk (C)						
	Local bisk (ci)						
	🗣 Network						
	File n	ame: Lower Third Yellow Boxes			▼.lsgfx	-	
					Open	Cancel	

Your system's browse window will appear, where you can find your saved .lsgfx file. Select it and click 'Open.'



GFX 1	GFX 2		GFX 3	Media 1	Media 2	Stream	Transitions
	•			Name		Title	
		Ξ	۲	Tom lannaco		Producer Support	
	*	Ξ	0	Penalty Shot		New York, N.Y.	
		Ш	0	Amanda Vicari		Event Co-Founder	
		Ш	0	Ed Yealu		Event Co-Founder	
		H	0	Kristin McCue		Co-Host	

The file will load in your graphics overlay channel for you to use and edit as needed.



### Adding graphics overlays

Pushing and pulling graphics overlays

**live**stream



Now that your graphic is designed and configured, you can start adding it to your production. First, make sure your layer is visible by clicking the eyeball icon. It should be highlighted blue.

Lower Third : Yellow Boxes	•				Name 🗸	Title
	/		III	$\odot$	Tom lannaco	Producer Support
	*		III	0	Penalty Shot	New York, N.Y.
	•		ш	0	Amanda Vicari	Event Co-Founder
	_		Ξ	0	Ed Yealu	Event Co-Founder
0	\$		111	0	Kristin McCue	Co-Host
	•		111	0		
		Case of	=	0		

If you have multiple layers in your graphics overlay channel, highlight the eye icon of any layer that you want to be visible; more than one layer can be visible at a time.



Lower Third : Yellow Boxes	: <b>E •</b>			Name 🗸	Title
Layer 1	:≣ <b>∘</b>	111	٢	Tom lannaco	Producer Support
Layer 2	∷≡	101	0	Penalty Shot	New York, N.Y.
Clock	Q	100	0	Amanda Vicari	Event Co-Founder
		111	0	Ed Yealu	Event Co-Founder
		HI	0	Kristin McCue	Co-Host
		Ш	0		
		111	0		
+ /	⊗: :≡	1	+ ROW	+ COLUMN	🔶 AUTO PUSH/I

Please note that if you have multiple layers in one module, you can click the display buttons on the bottom to show your layers in list mode to manage them more easily.



Lower Third : Yellow Boxe	* / •			Name	Title
Layer 1	:≣ •		0	Tom lannaco	Producer Support
Layer 2	∷≡	111	۲	Penalty Shot	New York, N.Y.
Clock	0	Ш	0	Amanda Vicari	Event Co-Founder
		THE	0	Ed Yealu	Event Co-Founder
			0	Kristin McCue	Co-Host
			0		
			$\odot$		
+ /	⊗: :≡		+ ROW	+ COLUMN	AUTO PUSH/PI

You can still access settings, the GFX Designer, and change visibility for each layer when using this view.



If you want to put a graphics overlay channel in Preview before pushing it to Program, click the corresponding 'PRV' button in the upper right corner of the interface.





You should now see the visible layers of your graphics overlay channel in Preview.





You should also notice the yellow 'PUSH' button flashing. Click it to bring your graphics overlays into Program.





### Your visible layers are now seen in both Preview and Program.





This is also indicated by 'PUSH' no longer flashing and the 'PULL' button turning red.



	•			Name	Title 🗸
	/	1.11	0	Tom lannaco	Producer Support
	•	Ш	0	Penalty Shot	New York, N.Y.
#4:31pm			$\odot$	Amanda Vicari	Event Co-Founder
	<u> </u>	111	$\odot$	Ed Yealu	Event Co-Founder
0	*	111	0	Kristin McCue	Co-Host
	•	111	0		
	-		0		

Now try making a change to your graphics overlay channel, such as changing a layer's visibility or selecting a different row of data in a currently visible layer.





# You will notice the change is visible in Preview but is not yet seen in Program.





The 'PUSH' button has also started flashing again. This means that Livestream Studio has detected a change in that GFX channel and is ready to change it in Program. Click it when you are ready to show the change to viewers.



# You should now see the change reflected in both Preview and Program.





For each layer, you have the option to have every change automatically pushed to Program immediately by selecting the 'AUTO PUSH/PULL' button on the bottom right.




Please note that if the graphics overlay is not yet in Program, you will need to push it manually by clicking 'PUSH' in the upper right corner.



PROGRAM	CUT		AU	ro
		GFX 1	GFX 2	GFX3
		¢ PUSH	∲ PUSH	∲ PUSH
		ID PRV	ID PRV	ID PRV
Amanda Vicari	15 7	457	457	45 F
Even : Co-Fecinder	AD	VERT		FTB

	•			Name ~	Title	~
	~	Ξ	Ο	Tom lannaco	Producer Support	
	٠	Ξ	$\odot$	Penalty Shot	New York, N.Y.	
#43ipm	•		$\bigcirc$	manda Vicari	Event Co-Founder	
	<u> </u>	1	Θ	Ed Yealu	Event Co-Founder	
0	٠	Ξ	Ο	Kristin McCue	Co-Host	
	•	Ξ	Ο			
	$\leq$	Ξ	0			
+ 🗸	: :≡		+ ROW	+ COLUMN		AUTO PUSH/PULL

To remove a visible graphics overlay quickly while 'AUTO PUSH/PULL' is enabled, simply click on the highlighted radio button of the visible row.

**live**stream

CUT	GFX 1 V PULL	AUT GFX 2 QFX 2 PULL	GFX 3
157 THE BG	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	O PUSH O PRV 457 TIE	♦ PUSH PUSH Ø PRV 45 T TIE
A	WERT		FTB

Lower Third : Yellow Boxes	•			Name ~	Title v	
	~	Ξ	Ο	Tom lannaco	Producer Support	
	٠	Ξ	$\odot$	Penalty Shot	New York, N.Y.	
64.31pm	•		۲	Amanda Vicari	Event Co-Founder	1
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0	٠	Ξ	Ο	Kristin McCue	Co-Host	
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+ /	88i i=		+ ROW	+ COLUMN	AUTO PUSH/PULL	

Now the graphic has been removed from Program and the radio button has faded in the graphics module to indicate this.





Click the red 'PULL' button that corresponds to that channel to remove everything from that graphics overlay channel from Program.





Doing so will remove that graphics overlay from Program, but you will still see it in Preview if the 'PRV' button is still selected.





To remove a graphics overlay from Preview, click the corresponding green 'PRV' button.





## You should no longer see your graphics overlay in either Preview or Program.



## Adding graphics overlays

Importing a layer: Livestream Graphics

620

**live**stream



Livestream's <u>Graphics Store</u> has numerous templates that can be downloaded and imported into Livestream Studio. Click 'Browse Graphics Store' to get started.





Lower Third: Black / Red Gloss

Free · Lower Third



Twitter: Bird Free · Twitter

Free · Sport Scoring



Twitter: Box

Free · Sport Scoring



This will open your browser to the Studio Graphics Store. When you find a graphic you wish you use, click on the down arrow below the image to download it.





An .lsgfx file will be downloaded onto your hard drive. To use the graphic in Livestream Studio, click the '+' button in the graphics overlay channel, then click Import Layer > Livestream Graphics.



Browse your computer for the .lsgfx file you just downloaded (this is typically found in the 'Downloads' folder on PC's). When you find the file, click 'Open.'



•			Name ~	Title	
/	111	0	Your name	Your title	
\$	111	0	Another Name	Another title	

The layer will appear in your graphics overlay channel. Click the gear wheel to enter its settings.



< Back Lower Third : Yello Delete			Name	Title
Auto-Loop		0	Your name	Your title
START AUTO-LOOP		0	Another Name	Another title
Auto-Loop Settings				
10 second interval between new items				
Start from beginning once end is reached				
Remove item from list after shown				
Auto-Loop Direction				
Top-to-bottom				
Bottom-to-top				
	1			

For lower third graphics, there are two text type columns and two rows included by default.



If you open the GFX Designer, you will see clearly which text fields the two columns correspond to and can adjust them as necessary.



< Back Lower Third : Yello Delete			Name 🗸 🗸 🗸	Title 🗸 🗸	Mage 🗸 🗸
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START AUTO-LOOP	H	0	Another Name	Another title	₽ E
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		0			₽ <sup>+</sup>
Start from beginning once end is reached Remove item from list after shown		0			<u>ک</u>
Auto-Loop Direction					
Top-to-bottom					
Bottom-to-top					
+ /		+ ROW	+ COLUMN		AUTO PUSH/PULL

Just as with any manually built graphic, you can add as many columns for data fields or rows of content as necessary.

## Adding graphics overlays

Importing a layer: Excel spreadsheet

**live**stream

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	3	Penalt	y Shot		New Y	York, N.Y.						
	4	4 Amanda Vicari				Co-Founde	r					
	5	Ed Yea	lu		Event	Co-Founde	r					
	6	Kristin	McCue		Co-Ho	ost						
	7											

Rather than manually inputting your data in Livestream Studio, you can import all your data from an Excel (.xlsx) spreadsheet.



A	Home Layout Tables C	harts SmartArt Formulas Dat	ta Review					
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4	Amanda Vicari	Event Co-Founder	http://img.new.livestream.com/events/0000000003					
5	Ed Yealu	Event Co-Founder	http://img.new.livestream.com/events/000000000	39				
6	Kristin McCue	Co-Host	http://img.new.livestream.com/events/0000000000	39				
7								
8								
9								

If you want to include images, make a column with the URLs where the images are hosted.





To get started, click the '+' button, then navigate to 'Import Layer.' Select 'Excel Spreadsheet.'

**live**stream



The browse window will appear, allowing you to select your .xlsx file and import it.



	•			Column 1 🗸 🗸 🗸	Column 2 🗸 🗸 🗸	Column 3 🛛 🗸 🗸
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		111	0	Kristin McCue	Co-Host	http://img.new.livestream.com/ev
+ /	: :≡					AUTO PUSH/PULL

The data from your spreadsheet will appear on the right side of the module. Click the gear wheel to enter its settings.

< Back	Excel	Delete			Column 1	Column 2
File			111		Name	Title
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Watch file for update				0	Penalty Shot	New York, N.Y.
Excel Setting	s row as column titles			0	Amanda Vicari	Event Co-Founder
Read only	1			0	Ed Yealu	Event Co-Founder
Auto-Loop				0	Kristin McCuo	Co Host

Checking 'Watch file for update' will prompt Livestream Studio to make any changes to the data that are made in the original .xlsx file on your hard drive.



< Back Excel Delete			Name 🗸 🗸 🗸	Title 🗸 🗸	[img] Photo
File	ш	٢	Tom lannaco	Producer Support	http://img.new.livestream.com
BROWSE am\Documents\GFXdemo.xlsx	111	0	Penalty Shot	New York, N.Y.	http://img.new.livestream.com
✓ Watch file for update	111	0	Amanda Vicari	Event Co-Founder	http://img.new.livestream.com
Excel Settings Use first row as column titles	E	0	Ed Yealu	Event Co-Founder	http://img.new.livestream.com
Read only		0	Kristin McCue	Co-Host	http://img.new.livestream.com
Auto-Loop					
START AUTO-LOOP					

Checking 'Use first row as column titles' will change row A in your spreadsheet to be titles of the corresponding columns in the GFX layer.



X 3		Media 1		Media 2	Stream		Transitions	₩		
	Name		Title		[img] Photo					
)	Tom lannaco		Producer Support			Change to Image Column				
Э	Penalty Shot			New York, N.Y.		Hide in Surface				
0	Amano	la Vicari		Event Co-Founde	er	htt	p://img.new.livestream.co	om/ev		
Э	Ed Yea	lu		Event Co-Founde	er	htt	p://img.new.livestream.co	om/ev		

Click on the name of any column to change the data type that is in the column (text or image).



< Back Excel Del	ete		Name v	Title 🗸	🛃 [img] Photo 🗸 🗸
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Excel Settings Use first row as column titles		• 0	Ed Yealu	Event Co-Founder	<b>l</b> uter
Read only			Kristin McCue	Co-Host	liter
Auto-Loop					
START AUTO-LOOP					
	:=				

If you want to be able to edit the information within Livestream Studio, uncheck 'Read Only.' Otherwise, changes can only be made in the original file.

**Note**: Any edits made to in Livestream Studio will not change content in the original document.

**live**stream

Auto-Loop	h	111	۲	Tom lannaco	Producer Support
Auto-Loop Settings 10 second interval between new items			0	Penalty Shot	New York, N.Y.
		m	0	Amanda Vicari	Event Co-Founder
Start from beginning once end is reached			0	Ed Yealu	Event Co-Founder
Remove item from list after shown			0	Kristin McCue	Co-Host
Auto-Loop Direction		100	0		
Bottom-to-top		101	0		
Auto-Loop Starting Item					
Start from top/bottom					
Start from selected list item					

Scroll down to find your Auto-Loop settings, including interval between rows, direction, and starting point.





Next, click on the paintbrush icon at the bottom of the graphics module to enter the GFX Designer.

**live**stream



Select 'Excel' in the dropdown menu and click the list icon to insert your text and image fields into the designer.





From here, you can drag and drop each field to wherever you want it to be displayed.

**live**stream

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emote Cam 2 Input S			¢ ×		Media 1
GFX1 ∽ GFX	{{Nar	ne}}			~

Click the gearwheel icon on each field to choose font, size, color, opacity, etc.





Feel free to add any additional elements to your graphics overlay using the other icons at the bottom of the designer.



	GFX 1	GFX 2		GFX 3	Media 1		Media 2	Stream
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-36 -48	Excel Settings Use first row as	column titles		0	Ed Yealu		Event Co-Founde	er.
-80	Read only			0	Kristin McCue		Co-Host	

Close out of the GFX Designer when you have finished. To use the graphic, click 'Back' to view the layer module.

GFX 1	GFX 2		GFX 3	Media 1		Media 2	Stream	Stream	
	•	]		Name		Title	~	M	[img] Photo
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		Ш	0	Kristin	McCue	Co-Host		<b>l</b> ider	

Make sure the eye icon corresponding to that layer is highlighted blue, meaning that it is visible.



You can then click the associated 'PRV,' 'PUSH,' and 'PULL' buttons to utilize that graphics overlay.



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You can also use an .xlsx file as a Livestream Studio Certified Data Source (LSCDS). <u>Click here</u> to download the template (recommended).


```
Private Sub Worksheet_Change(ByVal Target As Range)
Dim rw As Range
Dim lastRow As Long
For Each rw In Target.Rows
If Cells.Item(1, Target.Column).Value = "PROGRAM" And UCase(rw.Value) = "ON" Then
lastRow = Cells(Rows.Count, Target.Column).End(xlUp).Row
For i = 2 To lastRow
If UCase(Cells(i, Target.Column).Value) = "ON" And i <> Target.Row Then
Cells(i, Target.Column).Value = "OFF"
End If
Next
End If
Next
End Sub
```

The provided template has the validation script built in. However, you can also add the above validation script to your own Excel document.





You should notice a small Livestream logo in your graphics layer, which indicates that Livestream Studio recognizes the file as an LSCDS.



## Adding graphics overlays

Importing a layer: .CSV file

**live**stream



Using a .CSV file as a data source for Livestream Studio is very similar to bringing in an Excel document. From 'Import Layer,' select '.CSV File.'





Browse your computer for the desired .CSV file, then open it.



	•			Column 1 🗸 🗸 🗸	Column 2 🗸 🗸 🗸	Column 3 🗸 🗸 🗸
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			0	Penalty Shot	New York, N.Y.	http://img.new.livestream.com/ev
		11	0	Amanda Vicari	Event Co-Founder	http://img.new.livestream.com/ev
		H.	0	Ed Yealu	Event Co-Founder	http://img.new.livestream.com/ev
		111	0	Kristin McCue	Co-Host	http://img.new.livestream.com/ev
	-		ELOSE LOSE			

The data from your .CSV file will appear on the right side of the module. Click the gearwheel to enter its settings.



GFX 1 GFX 2			GFX 3		Media 1	Media 2		Stream	
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Check 'Watch file for update' to prompt Livestream Studio to make any changes that are made to the original .CSV file on your hard drive.



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Vatch file for up	odate			0	Amanda Vicari	Event Co-Founde	r	http://img.new	lives
CSV Settings Use first row as	column titles ┥		E H	0	Ed Yealu	Event Co-Founde	r	http://img.new	lives
Read only				0	Kristin McCue	Co-Host		http://img.new	lives
Separators									

Selecting 'Use first row as column titles' will have all fields in the first row of your document be the titles of the corresponding columns in Livestream Studio.



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If you want to be able to edit the information within Livestream Studio, uncheck 'Read Only.' Otherwise, changes can only be made in the original file.

Note: Any edits made in Livestream Studio will not change content in the original .CSV file.

**live**stream

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w as	column titles		0	Ed Yea	lu		Event Co-Found	er	http	://img.new.livestream.co	om/ev	
EC		0	Kristin McCue			Co-Host			http://img.new.livestream.com/ev			

To see images in this GFX layer, the .CSV file must include URLs where the images are hosted.



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	*	Title		[im	g] Photo	~
aco		Producer Suppor	rt	1	Change to Image Colur	mn
hot		New York, N.Y.		hu	Hide in Surface	UIII/6V
vicari		Event Co-Founde	er	http	o://img.new.livestream.c	om/ev

In order to see the images, click on the column's title to change it from a Text Column to an Image Column.



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Separators											
Comma	•										

Changing that column to an image field will allow Livestream Studio to reference the URLs and see the images.



GFX 1	GFX 2			GFX 3	٦	Media 1	Media 2	Stream		Trans
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START A	UTO-LOOP		Ξ	$\odot$	Kristin	McCue	Co-Host		<b>L</b> eter	

Further down in the settings, you can adjust the separators in the document as well as the character encoding (which is typically detected automatically).

Auto-Loop		111	۲	Tom lannaco	Producer Support
Auto-Loop Settings		ш	0	Penalty Shot	New York, N.Y.
10 second interval between new items		m	0	Amanda Vicari	Event Co-Founder
Start from beginning once end is reached		111	0	Ed Yealu	Event Co-Founder
Remove item from list after shown		111	0	Kristin McCue	Co-Host
Auto-Loop Direction		111	0		
Bottom-to-top		101	0		
Auto-Loop Starting Item					
Start from top/bottom	U				
Start from selected list item					

Scroll down further to find your Auto-Loop settings, including interval between rows, direction, and starting point.





Next, click on the paintbrush icon to enter the GFX Designer.





Select '.CSV' in the dropdown menu, then click the list icon to insert your columns.



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		-80 -80 -80		

From here, you can drag and drop each field to wherever you want it to be displayed.



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		¢ ×	naco		Producer Sup	port
{{Name}}			Shot		New York, N.Y.	

Click the gearwheel icon to choose font, size, color, etc. for each data field.



Feel free to add any additional elements to your graphics overlay using the other icons at the bottom of the GFX Designer.





Close out of the GFX Designer when you have finished designing your graphic. To use that graphic, click 'Back' to view the layer module.



	GFX 1	GFX 2		GFX 3	Media 1		Media 2 Stre	eam	
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			1H	0	Ed Yealu		Event Co-Founder		<b>l</b> iter
			Ш	0	Kristin McCue		Co-Host		<b>l</b> iter

Make sure the eye icon corresponding to that layer is highlighted blue, meaning that it is visible.



You can then click the associated 'PRV,' 'PUSH,' and 'PULL' buttons to utilize that graphics overlay.

**live**stream

## Adding graphics overlays

RSS feeds



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-24	Twitter	y	Lower thirds Twitter overlays sco
-36	Clock	0	designed by the Livestream Studi
-48	Timer	0	Browse Graphics ->
-60	.CSV over HTTP	∷≡	
-72	New Layer	+	
R	+ /		

If you want to include an RSS feed in your production, select 'RSS' from the graphics menu.



The RSS layer will appear in the graphics overlay channel. Click the gear wheel to enter its settings.

GFX 1	GFX 2	GFX 3	Media 1	Stream
< Back	RSS Delete			
RSS Feed URL <ul> <li>Please enter URL</li> <li>Please enter URL</li> <li>Basic Authentication</li> <li>User name</li> <li>Password</li> <li>Remember me</li> </ul>				<b>Jo data</b>

If access to your RSS feed requires authentication, check 'Basic Authentication' and enter your credentials.

Keack RSS Delet	e		Title 🗸 🗸	Link v	Description ~	Date 🗸
RSS Feed URL			NIH complementary a	http://nccam.nih.gov/n	Picture:	12/18/2014 6:00:26 PM
http://nccam.nih.gov/rss/nccamfeed.xml		0	Frequently Asked Que	http://nccam.nih.gov/n	Answers to frequently	12/17/2014 2:08:59 PM
Basic Authentication		0	Stress and Relaxation	http://nccam.nih.gov/h	Relaxation techniques	12/17/2014 4:11:58 PM
Auto advance data interval		0	What's It Like To Be a	http://nccam.nih.gov/r	Lucy Bauer holds a P	12/15/2014 6:08:05 PM
Records number limitation		0	Dietary Supplements	http://www.fda.gov/Saf	FDA is warning health	12/12/2014 8:01:42 AM
Last 120 minutes		0	Chronic Low-Back Pai	http://nccam.nih.gov/r	This blog post by NC	12/15/2014 9:33:57 AM
+ / 🛛	≡					AUTO PUSH/PULL

When you enter the RSS URL, the data should populate on the right and give you access to further settings.



Set the time interval in seconds that you want Livestream Studio to look for new information from your RSS feed under 'Auto advance data interval.'





To control the number of posts from your RSS feed, you can choose to only include posts within a recent time frame.

30 seconds	Ш	٠	NIH complementary a	http://nccam.nih.gov/n	Picture:	12/18/2
Records number limitation		0	Frequently Asked Que	http://nccam.nih.gov/n	Answers to frequently	12/17/2
Last 120 minutes	Ш	0	Stress and Relaxation	http://nccam.nih.gov/h	Relaxation techniques	12/17/2
Last 10 records	Ш	0	What's It Like To Be a	http://nccam.nih.gov/r	Lucy Bauer holds a P	12/15/2
Read only	H	0	Dietary Supplements	http://www.fda.gov/Saf	FDA is warning health	12/12/2
Auto-Loop	111	$\odot$	Chronic Low-Back Pai	http://nccam.nih.gov/r	This blog post by NC	12/15/2
+						🕇 AL

You can also limit Livestream Studio to pull only a certain number of most recent posts.





If you wish to edit any data within Livestream Studio, uncheck 'Read only.'

Note: Any edits made to data sources in Livestream Studio will not change content in the original source.



12/10/20
ly 12/17/201
12/17/201
P 12/15/201
th 12/12/201
C 12/15/201
h 12/11/201
n 12/4/2014
AUT
ti I I y

At the bottom of the settings are the Auto-Loop options for this graphics layer.





Next, enter the GFX Designer, and select 'RSS' from the dropdown. Click the list icon to select your data fields.

GFX 1	GFX	2	GFX 3		Media 1		Media 2	Stream	Transitions	*	
		•	]		Title	~	Lin	k √	Description ~	Date	~ [
(llace)		/	=	٢	NIH co	mplementary a	http	o://nccam.nih.gov/n	Picture:	12/18/2014 6:00:26	PM
		J	0	Freque	ently Asked Que	http	o://nccam.nih.gov/n	Answers to frequently	12/17/2014 2:08:59	PM	
			Ш	0	Stress	and Relaxation	http	o://nccam.nih.gov/h	Relaxation techniques	. 12/17/2014 4:11:58	РМ
			Ш	0	What's	It Like To Be a	http	o://nccam.nih.gov/r	Lucy Bauer holds a P	12/15/2014 6:08:05	PM
			Ш	0	Dietaŋ	Supplements	http	o://www.fda.gov/Saf	FDA is warning health	12/12/2014 8:01:42	AM
			Ш	$\odot$	Chroni	c Low-Back Pai	http	o://nccam.nih.qov/r	This blog post by NC	12/15/2014 9:33:57	AM
+ /										AUTO PUSH/P	ULL

Close out of the GFX Designer and return to the layers module to make the layer visible. You can now include content from the RSS feed into your production via the graphics overlay controls.

## Adding graphics overlays

Google

**live**stream



To integrate information from a Google spreadsheet, select 'Google' from the graphics menu.




You do not need to log in if you select 'Enter a public Google spreadsheet.' Selecting this will allow you to enter the document's URL.



GFX 1	GFX 2	GFX 3	Media 1	Stream	Transitions	*
Back Google S Select from my Google	preadsheet Delete e spreadsheets		Sign in with y	oogle our Google Accoun	t	
<ul> <li>Enter a public Google</li> <li>Please login</li> </ul>	spreadsheet					
			Email			
			Password			
+ /				Sign in		

If you want to use your own private Google document, you will need to log in to a Google account to allow access to your Google drive.

ct nominy coogle apreadanceta		
r a public Google spreadsheet	- Livestream Studio would like to:	
	8 View and manage your spreadsheets in Google Drive (	Ð
	By clicking Accept, you allow this app and Google to use your information in accordance with their respective terms of service and privacy policies. You can change this and other Account Permissions at any time.	œ
	Cancel Accept	

The Google module will ask permission to view and manage your spreadsheets. Click 'Accept.'

< Back Select Spreadsheet			Column 1	Column 2
Penalty Shot Lower Thirds		۲	Name	Title
Uploader Test Tracker	111	$\odot$	Tom lannaco	Producer Support
Author: laura.marciano	III	0	Penalty Shot	New York, N.Y.
Nightly Support Report Data Author: Iaura.marciano	. III	0	Amanda Vicari	Event Co-Founder

Once you have access to your Drive, select the document with the information you want to include in your graphic. The selected document's data will populate on the right.



GFX 1	GFX 2		GF	X 3	Media 1	Media 2	Stream		Tran
< Back Google Sp	oreadsheet Delete			Column 1		Column 2		Colum	ın 3
Select from my Go	ogle spreadsheets	111	۲	Name		Title		Image	,
Enter a public Goog	gle spreadsheet	111	0	Tom lanna	со	Producer Support		https://	/img.new.l
Logged in as tom.iannaco@livestream	LCOM	- UI	0	Penalty Sh	ot	New York, N.Y.		https://	/img.new.li
LOG OUT			0	Amanda V	icari	Event Co-Founder		https://	/img.new.li
Spreadsheet Penalty Shot Lower Th	rds CHANGE	111	0	Ed Yealu		Event Co-Founder		https://	/img.new.li
Use first row as co	olumn titles	101	0	Kristin McC	Cue	Co-Host		https://	/img.new.li

Once you select your spreadsheet, click the 'Back' button to access settings for this layer.



< Back Google Spreadsheet Delete		Column 1	Column 2	
Spreadsheet	Ш		Name	Title
Penalty Shot Lower Thirds CHANGE	Ξ	$\odot$	Tom lannaco	Producer Support
Read only	щ	$\odot$	Penalty Shot	New York, N.Y.
Auto-Loop	m	$\odot$	Amanda Vicari	Event Co-Founder
START AUTO-LOOP	III	0	Ed Yealu	Event Co-Founder
Auto-Loop Settings	Ξ.	0	Kristin McCue	Co-Host

You can always use a different spreadsheet in your Google Drive by clicking the 'Change' button.



< Back Google Spreadsheet Delete			Name	Title
Spreadsheet	111		Tom lannaco	Producer Support
Vise first row as column titles	111	$\odot$	Penalty Shot	New York, N.Y.
Read only		$\odot$	Amanda Vicari	Event Co-Founder
Auto-Loop	111	0	Ed Yealu	Event Co-Founder
START AUTO-LOOP	111	0	Kristin McCue	Co-Host
Auto-Loop Settings				

To turn your first row into column titles, check 'Use first row as column titles.'



Back Google Spreadsheet Delete			Name	Title	Imag	<b>]</b> 0
preadsheet			Tom lannaco	Producer Support	https	Change to Image Column
Penalty Shot Lower Thirds CHANGE		0	Penalty Shot	New York, N.Y.	bile	Hide in Surface
Read only	Ξ	$\odot$	Amanda Vicari	Event Co-Founder	https	s://img.new.livestream.com/ev
uto-Loop	H	$\odot$	Ed Yealu	Event Co-Founder	https	s://img.new.livestream.com/ev
START AUTO-LOOP		0	Kristin McCue	Co-Host	https	s://img.new.livestream.com/ev
30 second interval between new items						
· 🖍 💿 📰						AUTO PUSH/PUL

Click on any column title to change the type of data included in that field (text or image).

**live**stream

< Back Google Spreadsheet Delete			Name	Title 🗸	Image
Spreadsheet	111		Tom lannaco	Producer Support	https://img.new.livestream.com/eve
Use first row as column titles	111	$\odot$	Penalty Shot	New York, N.Y.	https://img.new.livestream.com/eve
Read only	111	$\odot$	Amanda Vicari	Event Co-Founder	https://img.new.livestream.com/eve
Auto-Loop	111	$\odot$	Ed Yealu	Event Co-Founder	https://img.new.livestream.com/eve
START AUTO-LOOP	un -	0	Kristin McCue	Co-Host	https://img.new.livestream.com/eve
Auto-Loop Settings 30 second interval between new items					
+ 🖌 🔤 🗉					AUTO PUSH/PULL

Uncheck 'Read only' if you want to be able to edit the information within Livestream Studio. Otherwise, changes can only be made in Google Docs.



START AUTO-LOOP		-		Tom Tannaco	Producer Support	nups.mmg.new
Auto-Loop Settings			0	Penalty Shot	New York, N.Y.	https://img.new
30 second interval between new items			0	Amanda Vicari	Event Co-Founder	https://img.new
Start from beginning once end is reached			0	Ed Yealu	Event Co-Founder	https://img.new
Auto-Loop Direction	n		0	Kristin McCue	Co-Host	https://img.new
Top-to-bottom						
Bottom-to-top						
Auto-Loop Starting Item						
Start from top/bottom						
Start from selected list item						

Scroll down further in the settings to configure your Auto-Loop preferences.





The next step is to start designing your graphic. Click on the paintbrush button to enter the GFX Designer.





In the Google Spreadsheet layer, click on the list icon to see your columns. Click on one to insert it into the GFX Designer.





Click on the gearwheel button to access more options for your font, colors, etc.

**live**stream

< Back Google Spreadsheet Delete			Name	Title
Select from my Google spreadsheets	111	۲	Tom lannaco	Producer Support
Enter a public Google spreadsheet		0	Penalty Shot	New York, N.Y.
Logged in as tom.iannaco@lvestream.com LOG OUT		0	Amanda Vicari	Event Co-Founder
		0	Ed Yealu	Event Co-Founder
Spreadsheet		0	Kristin McCue	Co-Host
Penalty Shot Lower Thirds CHANGE				

Close out of the GFX Designer when you have finished. In the graphics overlay channel, click 'Back' in the upper right corner to return to the layer module.



GFX 1	GFX 2		GF	X 3	Media 1	Media 2		
	•			Name		Title		
		111	۲	Tom lanna	co	Producer Support		
. ((Name))) 8 合 ⊙		80	0	Penalty Sh	ot	New York, N.Y.		
		111	0	Amanda Vi	cari	Event Co-Founder		
			0	Ed Yealu		Event Co-Founder		

Make sure the Google spreadsheet layer is visible by selecting the eye icon. This will allow you to include information from your spreadsheet as a graphics overlay in Livestream Studio.



Livestream Studio Certified Datasource Sample By Studiolivestream 会会会会会 0 ratings Rate It Report abuse

Template of Google Spreadsheet for Livestream Studio integration.

Use this template Browse template gallery

PROGRAM	Text Column 1	[img]Image Column 1
ON	Data 1	https://www.google.com/images/srpr/logo11w.png
OFF	Data 2	https://www.google.com/images/srpr/logo11w.png
OFF	Data 3	
OFF	Data 4	
OFF	Data 5	
OFF	Data 6	
OFF	Data 7	
OFF	Data 8	
OFF	Data 9	

You can also configure your spreadsheet to push changes remotely by formatting it as a Livestream Studio Certified Data Source (LSCDS).A template for a Google spreadsheet that follows these parameters is available <u>here</u>.

	Penalty Sh	ot Lower Thirds	☆ 🖿		-						
	File Edit V	iew Insert Format	Data	Tools	Add-ons	Help	All chan	ges save	ed in D	rive	
		\$ % .0 <sub>1</sub> .0 <u>0</u> '	123 -	Cr	eate a form	I	BZ	5 A	-	﴾₀ - [	∄ -
$f_{\times}$	Tom lannaco			50							
	А	В		00	npr gallery.	••	E			F	
1	Name	Title	Image	Sc	cript editor						
2	Tom lannaco	Producer Support	https:/	Ç,	oelling		nts/0000	000000	39017	f/81d29	ef2-9
3	Penalty Shot	New York, N.Y.	https:/	0	Jennig		nts/0000	000000	39017	f/81d29	ef2-9
4	Amanda Vicari	Event Co-Founder	https:/	✓ Er	hable autoco	omplete	nts/0000	000000	39017	f/81d29	ef2-9
5	Ed Yealu	Event Co-Founder	https:/			loo	nts/0000	000000	39017	f/81d29	ef2-9
6	Kristin McCue	Co-Host	https:/	INC	Juncation ru	ies	nts/0000	000000	39017	f/81d29	ef2-9
7				Pr	otect sheet.						

If you want to turn an existing spreadsheet into an LSCDS, start in Google Docs by going to 'Tools,' then 'Script Editor.'

```
function onEdit(event)
var sheet = event.source.getActiveSheet();;
var cRow = event.range.getRow();
var program = sheet.getRange("A2:A");
var fRow = program.getRow();
var lRow = program.getLastRow();
if (event.range.getColumn()==1)
  var values = event.range.getValues();
  for (var i in values)
    var row = values[i];
    for (var j in row)
      {
       if (values[i][j]=="ON")
         for (var a = fRow; a \le lRow; a++)
           if (a!=cRow)
             sheet.getRange(a,1).setValue ("OFF");
          }
```

Enter the validation script above. It can also be found <u>here</u>, then save the script and name it.

▦	Penalty Sh	ot Lower Thi	irds ☆ 🖿							
	File Edit V	iew Insert Fo	rmat Data Tools	Add-ons Help	Script Center Men	u All changes	saved in Drive			
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$f_{X}$										
	A	В	С	D	E	F	G	н	I.	
1	PROGRAM	Name	Title	Image						
2		Tom lannaco	Producer Support	https://img.new.l	livestream.com/eve	nts/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88_1	70x2
3		Penalty Shot	New York, N.Y.	https://img.new.l	livestream.com/eve	nts/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88_1	70x2
4		Amanda Vicari	Event Co-Founder	https://img.new.l	livestream.com/eve	nts/0000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88_1	70x2
5		Ed Yealu	Event Co-Founder	https://img.new.l	livestream.com/eve	nts/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	75968d3fa88_1	70x2
6		Kristin McCue	Co-Host	https://img.new.l	livestream.com/eve	nts/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	75968d3fa88_1	70x2
7										
8										
9										
10										

## Now you can start adding data to your sheet. You should have 'PROGRAM' in cell A1.

**live**stream

⊞	Penalty Sh	ot Lower Thi	irds ☆ 🖿						
	ile Edit V	iew Insert Fo	rmat Data Tools	Add-ons Help	Script Center Mer	u All changes	saved in Drive		
		\$ % .0	.00 123 - Arial	- 10 -	BISA	≫a - ⊞ -		L - 🚍 👓 T	. <u>II</u> 7 -
f×	ROGRAM								
	А	В	С	D	E	F	G	н	I.
1	PROGRAM	Name	Title	Image					
2	ON	Tom lannaco	Producer Support	https://img.new.li	vestream.com/eve	ents/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88
3	OFF	Penalty Shot	New York, N.Y.	https://img.new.li	vestream.com/eve	ents/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88
4	OFF	Amanda Vicari	Event Co-Founder	https://img.new.li	vestream.com/eve	ents/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88
5	OFF	Ed Yealu	Event Co-Founder	https://img.new.li	vestream.com/eve	ents/000000000	39017f/81d29ef2-	972c-4e60-a0b2-6	e75968d3fa88
6	OFF	Kristin McCue	Co-Host	https://img.new.li	vestream.com/eve	ents/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88
7	OFF								
8	OFF								
9	OFF								
10	OFF								

The remaining cells in the first column should say either 'ON' or 'OFF' as shown above. These represent the radio buttons in Livestream Studio's data module.



	Penalty	Shot Low	er i niras

<u> </u>	File Edit	View Insert Format	Data Tools	Add-ons Help	Script Center Menu	All changes	saved in Drive		
		Freeze rows	•	No frozen rows	I S A	♦₀ - ⊞ -	89 - 1	- = co T	• <u>•</u>
$f_{X}$	PROGRAM	Freeze columns	►						
	А			Freeze 1 row	E	F	G	н	1
1	PROGRAM	✓ Gridlines		Freeze 2 rows					
2	ON	<ul> <li>Protected ranges</li> </ul>		Freeze 3 rows	am.com/events/	0000000000	39017f/81d29ef2-	972c-4e60-a0b2-	e75968d3fa
3	OFF	✓ Formula bar		Freeze 4 rows	am.com/events/	0000000000	39017f/81d29ef2-	972c-4e60-a0b2-	e75968d3fa
4	OFF	All formulas	Ctrl+`		am.com/events/	0000000000	39017f/81d29ef2-	972c-4e60-a0b2-	e75968d3fa
5	OFF			Freeze 5 rows	am.com/events/	0000000000	39017f/81d29ef2-	972c-4e60-a0b2-	e75968d3fa
6	OFF	Hidden sheets	⊳	Freeze 6 rows	am.com/events/	0000000000	39017f/81d29ef2-	972c-4e60-a0b2-	e75968d3fa
7	OFF			Freeze 7 rows					
8	OFF	Compact controls	Ctrl+Shift+F	Freeze 8 rows					
9	OFF	Full screen		Freeze 0 reve					
10	OFF			Freeze 9 rows					
11	OFF			Freeze 10 rows					

In the 'View' menu, select 'Freeze rows' > 'Freeze 1 row,' and 'Freeze columns' > 'Freeze 1 column.' This will indicate column titles and row visibility in Livestream Studio.

Penalty Sh	ot Lower Thi	irds ☆ 🖿						
File Edit Vi	iew Insert Fo	rmat Data Tools	Add-ons Help	Script Center Me	nu All changes	saved in Drive		
	\$ % .0	.00_ 123 - Arial	- 10	- B I -5 A	<u>·</u> · <del>`</del> → · ⊞ ·		L ≕ ⊂• I	<b>.</b>
Tom lannaco								
А	В	С	D	E	F	G	н	I
PROGRAM	Name	Title	[img]Image					
NC	Tom lannaco	Producer Support	https://img.nev	v.livestream.com/ev	ents/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	75968d3fa8
OFF	Penalty Shot	New York, N.Y.	https://img.nev	v.livestream.com/ev	ents/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	75968d3fa8
OFF	Amanda Vicari	Event Co-Founder	https://img.nev	v.livestream.com/ev	ents/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	75968d3fa8
OFF	Ed Yealu	Event Co-Founder	https://img.nev	v.livestream.com/ev	ents/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	75968d3fa8
OFF	Kristin McCue	Co-Host	https://img.nev	v.livestream.com/ev	ents/000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	75968d3fa8
OFF								
OFF								
OFF								
OFF								

Continue to add data to your spreadsheet as desired. If you want any column to be an image field, put '[img]' at the beginning of the name.



Ħ	Penalty Sh	ot Lower Thi	rds ☆ 🖿						
	File Edit V	iew Insert For	rmat Data Tools	Add-ons Help	Script Center Mer	nu All changes	saved in Drive		
		<b>₽</b> \$%.0 <sub>4</sub>	.00 123 - Arial	- 10 -	BISA	· ◆ · ⊞ ·	88 · 🔳 · 18	- = co T	I III 7 - X
f×	Tom lannaco								
	Α	B –	с	D	E	F	G	н	1
1	PROGRAM	Name	Title	[img]Image					
2	ON	Tom lannaco	Producer Support	https://img.new.l	livestream.com/ev	ents/0000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88_
3	OFF	Penalty Shot	New York, N.Y.	https://img.new.l	livestream.com/ev	ents/0000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88_
4	OFF	Amanda Vicari	Event Co-Founder	https://img.new.l	livestream.com/ev	ents/0000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88_
5	OFF	Ed Yealu	Event Co-Founder	https://img.new.l	livestream.com/ev	ents/0000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88_
6	OFF	Kristin McCue	Co-Host	https://img.new.l	livestream.com/ev	ents/0000000000	39017f/81d29ef2-	972c-4e60-a0b2-e	e75968d3fa88_
7	OFF								
8	OFF								
9	OFF								
10	OFF								

Enter the URLs of the images in the column that you want Livestream Studio to reference.



#### Data validation

Cell range:	Sheet1!A2:A	
Criteria:	List of items ‡	ON,OFF
On invalid data	a: O Show warning	ng   Reject input
Appearance:	✓ Display in-cel	I button to show list
	Show help:	Click and enter a value from the list of items Reset
Save	Remove validation	Cancel

## In the 'Data' menu, click 'Validation' and enter the parameters shown above.



 $\times$ 

Text is exactly 🜲	ON	Format: Text Color:	Range:	х
		Background Color:	A:A	
Text is exactly 🜲	OFF	Format: Text Color:	Range:	x
		Background Color:	A:A	
Add another ru	le			

Highlight all of column A. Then, under 'Format,' click 'Conditional Formatting' and add the above rules.

< Back Google Spreadsheet Delete			Name		Title	🛃 Image	
Spreadsheet Penalty Shot Lower Thirds CHANGE	Ш	٢	Tom lanna	ico	Producer Support	<b>L</b> er	
Read only	111	0	Penalty Sh	iot	New York, N.Y.	<b>L</b> er	
Auto-Loop	111	0	Amanda V	icari	Event Co-Founder	<b>L</b> er	
START AUTO-LOOP	111	$\odot$	Ed Yealu		Event Co-Founder	<b>L</b> er	
Auto-Loop Settings	111	$\odot$	Kristin Mc	Cue	Co-Host	<b>L</b> er	
30 second interval between new items	m	0				et 🛛	

When you have the necessary data in your spreadsheet, select it from your Google documents in Livestream Studio and leave it in 'Read only' mode.



	•			Name	Title
		111	٢	Tom lannaco	Producer Support
8, 1 C	\$	III	$\odot$	Penalty Shot	New York, N.Y.
		111		Amanda Vicari	Event Co-Founder
				Ed Yealu	Event Co-Founder
		111		Kristin McCue	Co-Host

You should notice a small green checkmark appear in the layer thumbnail, indicating that it is a Livestream Studio Certified Data Source.



f×	OFF						
	А	В	С	D	E	F	G
1	PROGRAM	Name	Title	[img]Image			
2	ON 🔹	Tom lannaco	Producer Support	https://img.new.li	vestream.com/ev	ents/000000000	39017f/81d29ef2-
3	OFF -	Penalty Shot	New York, N.Y.	https://img.new.li	vestream.com/ev	ents/000000000	39017f/81d29ef2-
4	OFF -	Amanda Vicari	Event Co-Founder	https://img.new.li	vestream.com/ev	ents/000000000	39017f/81d29ef2-
5	OFF	Ed Yealu	Event Co-Founder	https://img.new.li	vestream.com/ev	ents/000000000	39017f/81d29ef2-
6	OFF	Kristin McCue	Co-Host	https://img.new.li	vestream.com/ev	ents/000000000	39017f/81d29ef2-
7	ON						
8	UFF -	1					
9	OFF -						
10	OFF -						
11	OFF -						

Now if someone has your Google document open in a browser, they can change any 'OFF' field to 'ON.'



(	ON					GF	х з	Media 1	Medi
	Α	В	С	h			Namo		Title
	PROGRAM	Name	Title				Name		IIIIe
	OFF	Tom lannaco	Producer Su		111		Tom lannad	0	Producer
	OFF	Penalty Shot	New York, N	J		0	Penalty Sho	ot	New York
	OFF	Amanda Vicari	Event Co-Fo						
	ON	Ed Yealu	Event Co-Fo	D	H		Amanda Vi	cari	Event Co-
	OFF	Kristin McCue	Co-Host		111	۲	Ed Yealu		Event Co-
•	OFF	r							
	OFF	r					Kristin McC	ue	Co-Host

The 'ON' will turn red and the change will be reflected in the graphics module in Livestream Studio.

# Adding graphics overlays

Twitter





You can include a graphics layer of a Twitter feed. To get started, you may want to consider downloading a Twitter template from the Livestream Graphics Store.







### Authorize Livestream Studio HD to use your account?



#### This application will be able to:

Read Tweets from your timeline

When you import the Livestream Graphic, you will be prompted to log in to a Twitter account. This is simply to authorize the Twitter application in Livestream Studio.



#### Livestream Studio HD

new.livestream.com/studio

Video switching software with graphic overlays and streaming capability.



	GFX 1	GFX 2			GFX 3		Media 1	Media 2	Stream	Transitions >>
			•			> E	Name 🗸 🗸 🗸	Username 🗸 🗸	Tweet 🗸 🗸	Time Stamp 🗸 🔾
			/	111	0		cnnbrk	CNN Breaking News	Bus station bombin	12/22/2014 11:49:4
	۲۰۰۰۴ ۲۰۰۰۴		\$	Ξ	۲	8	cnnbrk	CNN Breaking News	New president for "	12/22/2014 11:23:5
					0		cnnbrk	CNN Breaking News	Pope Francis slam	12/22/2014 9:42:52
				H	0		cnnbrk	CNN Breaking News	NYPD commission	12/22/2014 9:06:48
					0		cnnbrk	CNN Breaking News	A driver rammed int	12/22/2014 7:57:13
				H	0	C.W	cnnbrk	CNN Breaking News	Gunman called to a	12/21/2014 8:56:29
	+ /		⊠: ∷≡							AUTO PUSH/PULL

The layer module will open with a default account. Click the gearwheel to enter the graphic's settings.

< Back Twitter Box D	elete	
Enter a Twitter username or hashtag   @ivestream   Remember to use the "@" symbol before usernames and the "#" symbol before hashtags   Logged in as eeknox   LOG OUT   Poll Twitter for new Tweets every   0   seconds   Records number limitation		No data

Select a username or hashtag to poll. Keep in mind that you must include "#" in the front of hashtags and "@" in front of usernames. When you have typed in the desired asset, press Enter.



GIAT GIAZ		017.0		inculu i	moulu 2	Stream	nunsiuviis	1
< Back Twitter Box Dele	te		₽ ~	Name 🗸 🗸	Username v	Tweet v	TimeStamp	- [
Poll Twitter for new Tweets every	1		7	Livestream	Livestream	RT @brucierosch:	12/22/2014 11:32:0	
60 seconds		0	7	Livestream	Livestream	Our holiday "Bundle	12/19/2014 4:35:08	
Records number limitation		0	7	Livestream	Livestream	LIVE from @WTEN:	12/19/2014 2:17:51	
No Time Limitation		0	7	Livestream	Livestream	RT @theJeffAdams	12/19/2014 12:11:3	
Last 120 minutes		0	7	Livestream	Livestream	RT @evelinechang:	12/19/2014 10:11:5	
Read only		0	1	Livestream	Livestream	@open_source_s	12/19/2014 10:06:1	
+ / 📧	:=						🔶 AUTO PUSH/PU	LL

On the right, tweets from that username or hashtag will load on the right. Further settings will also become available to you on the left.

GFX 1	GFX 2		GFX 3		Media 1	Media 2
< Back Twitt	er Box Delete			M	Name 🗸	Username 🗸 🗸
Poll Twitter for new T	weets every	Ш	٢		Livestream	Livestream
60 seconds	111	0	2	Livestream	Livestream	
Records number limitation		111	0	-	Livestream	Livestream
No Time Limitation		Ш	0		Livestream	Livestream

You can select how often Livestream Studio should look for new tweets. Newer tweets appear at the top of the module.


You can also tell Livestream Studio how many tweets to look for within a certain time frame. Select 'Read Only' if you do not want to edit the tweets.

START AUTO-LOOP	Ξ	٢	7	Livestream	Livestream	RT @brucierosch:	12/22/2014 11:32:0
Auto-Loop Settings	Ξ	Ο	•1	Livestream	Livestream	Our holiday "Bundle	12/19/2014 4:35:08
5 second interval between new items	Ξ	Ο	2	Livestream	Livestream	LIVE from @WTEN:	12/19/2014 2:17:51
Start from beginning once end is reached Remove item from list after shown	Ξ	0	•	Livestream	Livestream	RT @theJeffAdams	12/19/2014 12:11:3
Skip to newest	Ξ	Ο	7	Livestream	Livestream	RT @evelinechang:	12/19/2014 10:11:5
Auto-Loop Direction Top-to-bottom	Ξ	٢	1	Livestream	Livestream	@open_source_s	12/19/2014 10:06:1
Bottom-to-top	Ξ	٢	-	Livestream	Livestream	RT @open_source	12/19/2014 10:02:3
Auto-Loop Starting Item Start from top/bottom	Ξ	٢	-	Livestream	Livestream	RT @HofstraU: Mid	12/19/2014 9:10:26
Start from selected list item	=	0		Livestream	Livestream	LIVE NOW: The Ver	12/18/2014 4:31:01
+ 🖌 🛛 🔤						[	AUTO PUSH/PULL

## Scroll down in the settings to configure any desired Auto-Loop options.





You can adjust the placement, font, size, and color of any of the data fields in the GFX Designer.





If you do not wish to use a Livestream Graphics template, you can also create your own by selecting 'Twitter' from the graphics menu.



			<u> <u> </u></u>
		Avatar	
		Name	
		Username	
		Tweet	
		TimeStamp	
Twitter	▼ +T + ■		ତ ୯ 🕀 🔚 🔳
-14 -14	-14		
-24 -24	-24	Poll Twitter for new Tw	eets every

Follow the login steps as you did before, then open the GFX Designer. Click on the list button in the Twitter layer, and you can add any data field from Twitter such as the tweet, username, avatar, etc.



## Adding graphics overlays

Clock





You may want to overlay a timeof-day clock into your production. This can be done by selecting the 'Clock' option in the graphics overlay channel.



This will add a clock layer to the graphics channel. Click on the paintbrush icon to open the GFX Designer for that layer.

		{{hh}}:{{mm}}:{{ss}} {{ap}} = 01:05:06 pm	
		{{HH}}:{{mm}}:{{ss}} = 13:05:06	
		{{hh}}:{{mm}}{{ap}} = 01:05am	
		{{HH}}:{{mm}} = 13:05	
		{{Day}}, {{Dx}} of {{Month}}, {{h}}:{{mm}} {{ap}} {{TZ}} = Monday, 3rd of Apr	ril, 9:08
	Presets >	{{Day}}, {{Dx}} of {{Month}}, {{HH}}:{{mm}} {{TZ}} = Monday, 3rd of April, 2	1:08 FL
	Time >	Meula I	
	Frame >		
	Date >		
Clock +T + + + + + + + + + + + + + + + + + +	+=		

Click on the list icon for options of time fields to add. Consider checking the presets first to save the time needed to add individual fields.

	{{hh}}}:{{mm}}}{{a	ap}}		
		Arial  FONT FONT COLOR Normal FONT FONT FONT FONT FONT FONT FONT FONT		
		Standard Casing		
		SHADOW 5 5 5 5 6 x y BLUR COLOR		
AM2 \$		Outside 1 Course		GF
	Clock T	Crop Text Within Box	୭୯ 🕀 💶	ME

Once you have added the time fields you need, click the gearwheel button to change each one's font, size, color, etc.





Drag and drop the clock to where you want to have it appear. When you are done designing the clock, close out of the GFX Designer.

**live**stream



There are no additional settings for the clock layer other than deleting it. Click 'Back' to return to the layer module.





Click the eye icon to ensure the clock layer is visible when you want to include it in your production.



## Adding graphics overlays

Timer





To integrate a countdown or timer overlay into your production, select 'Timer' in the graphics overlay channel.



## Click the gear wheel icon to enter that layer's settings.



< Back	Timer	Delete
Count Type		Π
<ul> <li>Countdown to</li> </ul>		
Countdown from	ı	
Timer		
Countdown To		
Use start time of	streaming event	
November	▼ 8 ▼	
03 👻 41	▼ PM ▼	U
+ /		

The settings for that layer will appear on the left side, with the reflected timer displaying on the right.





'Countdown to' allows you to set a specific time and date for when the countdown should end. The countdown will update on the right side.



Below the time/date setting are options for what the graphics overlay should do when the countdown completes.



'Hide Layer + Push' will keep GFX 1 in Program, but remove the timer GFX layer from being visible. Other layers in GFX 1 will remain in Program.

**live**stream



'Pull from PGM' will pull all layers under that GFX channel from Program when the countdown ends.





'Transition' can be used when the GFX channel is cued as a source (not an overlay). It will take the Preview source once the countdown ends.



The transition type can be selected in the settings for that GFX layer.

**live**stream



Leaving all options unchecked will keep the completed countdown graphic in Program.



	< Back	Timer	Delete
8	Count Type	to	Î
+30	O Countdown	from	
	Countdown Fro	m	
	Format		l l
	hh:mm:ss		
	00:00:40		
	00.00.10		
R	START	S	тор
	tte		

The next option is 'Countdown from,' where you set the time that the countdown will start.



+30		
OVR	O Timer	
0 -4	Countdown From	
-10		
-14	Format	00
-24	hh:mm:ss	
-38	O mm:ss	
-48		
60	00:00:10	
-72	START STOP	
R	+ /	

The format of this countdown can either be hours:minutes:seconds, or minutes:seconds.



< Back	Timer		Delete
00:10:00			
START		STOP	
Start on First Pus	h		
Reset on Hide			
Pause on Hide			

Type in the time you want to count down from. Clicking 'Start' will begin the countdown manually.



	< Back	Timer	Delete
1	00:09:51		
	PAUSE	s	ТОР
	Start on First Pus	h	1
	Start on Push		
	Reset on Hide		
	Pause on Hide		
	Action on Finish		
	Hide Layer + Pusi	h	
	Pull from PGM		ŀ

Click 'Pause' if you want the countdown to stop but stay at the current time, allowing you to resume from that point.





Clicking 'Stop' will both stop the countdown and reset it to the beginning.



< Back	Timer	Delete			
Start on First Pusi	h				
Start on Push					
Pause on Hide					
Action on Finish				0	00:10:00
Hide Layer + Pust	h				
Pull from PGM     Transition					
Cut					
Auto					
+ /					

Below the Start and Stop options, there are options for what the clock should do when pushed, pulled, or finished.



Scroll down further in the layer settings to find the hotkey option. Click the checkbox to enable it.





Click on the box that reads 'None.' This will highlight it blue.





Once it is blue, use the buttons on your keyboard to create a hotkey (e.g., Shift+P)

**Note**: It cannot be a hotkey command that already has an action in Livestream Studio assigned to it.



Now you can push your countdown graphic to Program like normal.



0 +10		Countdown From
0 dB == OVR	0 dB == OVR	Format
0	0	hh:mm:ss
-10	-10	o mm:ss
-24	-24	
-36	-38	01:44
-48	-48	START STOP
-60	-60	
-72	-72	Start on First Push
		Start on Push

Instead of pressing the buttons in the GFX module, you can use your keyboard to quickly and easily pause and continue your clock.

< Back	Timer	Delete
Count Type		$\cap$
Countdown to		
Countdown from		
Timer		
Timer Controls		
Format		
💿 hh:mm:ss		U
O mm:ss		
00:00:00		
ĽĽ		

The last option for this layer is 'Timer,' which gives you a clock that counts up from zero.


Timer Controls   Format   Image:
Format <ul> <li>hh:mm:ss</li> <li>mm:ss</li> <li>00:00:00</li> </ul> START STOP
00:00:00 START STOP

As with the 'Countdown from' option, you can set the format and start and stop the timer.





Below these controls are the actions the graphic will take when first pushed to and pulled from Program.





The Timer also includes the ability to add a hotkey command for pausing and resuming.





With any of the three options, be sure to click the paintbrush icon to enter the GFX Designer.





In the Timer layer, click on the list icon to add time fields. Check the presets first, as this may save time in designing the graphic.



	T GFX 1 Designer		A CALLER AND A CALLER AND A
	{{mm}}:{{ss}} ◎ ×		R. C.
	Arial * Fort Normal * 70 *	□	
CAM2 0	Standard Casing		GFX3 ¢
	X     V     BUR     COLOR       BORDER     1     Image: Color       Position     BUR     Color		L NEDIAT
1 Remote Cam 2	Crop Text Within Box		1 Media 2
Tio			

Click the gearwheel to customize how the clock looks.

GFX 1	GFX 2		GFX 3	Media
< Back	Timer	Delete		
Format <ul> <li>hh:mm:ss</li> <li>mm:ss</li> </ul>				
00:00				
START	STOP			

When finished, close out of the GFX Designer, then click 'Back' in the graphics layer settings.





Your timer graphic can now be made visible and pushed to Program when desired.



## Adding graphics overlays

.CSV over HTTP



Import Layer	,	[	
RSS	٣		nril O'Neil
Google	8		Channel Six News
Twitter	y		
Clock	O		Studio Graphics
Timer	0		Lower thirds, Twitter overlay
.CSV over HTTP	∷≡		designed by the Livestream :
New Layer	+		Browse Graphics ->
+ /			

If you are hosting a .CSV file on a web server, you can use the data in Livestream studio by selecting '.CSV over HTTP.'

GFX 1	GFX 2	GFX 3	Media 1	Stream	Tran
< Back	CSV Delete				
URL <ul> <li>Please enter URL</li> <li>Please enter URL</li> <li>Basic Authentication</li> <li>User name</li> <li>Password</li> <li>Remember me</li> </ul>				<b>Jo data</b>	
+ /					

If your file requires authentication in order access it, check 'Basic Authentication' and enter your credentials.



GFX 1	GFX 2	GFX 3	Media 1	Stream	Transitions
< Back	CSV Delete				
URL com/LivestreamStudio/LSC Please enter URL Basic Authentication Auto advance data inter 30 seconds CSV Settings	DS/LS_CSV_Sample.csv		N	lo data	
+ 🖍					🔶 AU

In the settings, input the URL where the .CSV file is located, then press 'Enter' on your keyboard.



	GFX 1	GFX 2		GFX 3	Media 1	Media 2	Stream	Transitions	₩
	< Back	CSV Delete			Text Column 1		🛃 Image Column 1		
	URL				Data 1		Google		
	http://cdn.livestream.	com/LivestreamStudio/L	Ξ	$\odot$	Data 2		Google		
	Basic Authentica	tion							
	Auto advance data i	nterval							
	30 seconds								
	CSV Settings								
	Read only		IJ						
6								Constant of the second se	

Your data will populate on the right with further settings becoming available on the left.





Set the amount of time in seconds that Livestream Studio should refresh and look for new data in your .CSV under 'Auto advance data interval.'



If you want to make changes to your .CSV via Livestream Studio, uncheck 'Read only.' Otherwise, leave it checked.



Scroll down to tell Livestream Studio what your column separators are and the types of characters being used (typically auto-detected).



Auto-Loop	Ξ	$\odot$	Data 1	Google
START AUTO-LOOP	H	0	Data 2	Google
Auto-Loop Settings				
30 second interval between new items				
Start from beginning once end is reached				
Auto-Loop Direction				
Top-to-bottom				
Bottom-to-top				
Auto-Loop Starting Item				
Start from top/bottom				
Start from selected list item	U			

At the bottom are your Auto-Loop settings if you want Livestream Studio to rotate through your .CSV data.





To design the graphic, click the paint brush icon to enter the GFX Designer.

**live**stream

		1000										
												Media 1
											xt Column	1
NPUT 5	IN										ata 1	
) +30	-90						Text Colum	nn 1			ata 2	
OVR	-						Image Colu	umn 1				
		csv			-	- <b>T</b> -	 •IE		5 ୯	⇔		
		-14	-	*	-14		 T Y	otart non ocganing o		,u		
			-2	4			A	uto-Loop Direction				
			-3	6				Top-to-bottom				
-48		-48	-4	8	-43			Bottom-to-top				

Select the 'CSV' layer from the dropdown and design your graphic as desired.





## You can now make it visible and control it using 'PRV,' 'PUSH,' and 'PULL' as desired.



## Adding graphics overlays

Animated graphics





Livestream Studio will accept a folder of images that it will loop through. To keep your images' backgrounds transparent, .PNG files are recommended.

☆ Favorites							-
🧮 Desktop							
🐌 Downloads							
🖳 Recent Places							
🥃 Libraries 🛛 🗉	3rd 1_00000	3rd 1_00001	3rd 1_00002	3rd 1_00003	3rd 1_00004	3rd 1_00005	3rd 1_00006
Documents		-	_	_	_	-	
🌙 Music							
Pictures							
😸 Videos							
輚 Homegroup	Livestream Lower 3rd 1_00007	Livestream Lower 3rd 1_00008	Livestream Lower 3rd 1_00009	Livestream Lower 3rd 1_00010	Livestream Lower 3rd 1_00011	Livestream Lower 3rd 1_00012	Livestream Lower 3rd 1_00013
Computer							
	Livestrea PNG imag	m Lower 3rd 1_00000	Date taken: Specify Dimensions: 1614 x 3	date taken 90 Date	Size: 438 KB created: 10/9/2014 10:	33 AM	

This feature is best for lower-third graphics and corner bugs. Larger animated graphics, such as backdrops, should come in through a media bin.



Your .PNG files must be less than 1.5 million pixels. To determine a .PNG file's pixels, view that file's properties and multiply the height by the width. For this graphic, which has subtle animations, 1614 x 390 = 629,460 pixels.

GF	K3 ~	MEDI	41	RECORD OUT			
dB	+10	0	+10 OVR	0.4B == 0VR	Bro	owse Graphics Store	Ľ
	0		0	0	Imp	oort Layer	>
	-10 -14		-10 -14	-10 -14	RS	S	٣
	-24	T	-24	-24	Go	ogle	8
	-30		-30	-30	Twi	tter	y
	-60		-80	-60	Clo	ck	0
	-72		-72	-72	Tim	ner	0
()	G	<b>(</b> )	∩	<b>•</b>	.03	SV over HTTP	∷≣
AUI	010	AUDIO			Ner	w Layer	+
					+		



#### **Studio Graphics Store**

Lower thirds, Twitter overlays, scoreboards, designed by the Livestream Studio commun

Browse Graphics →

To add an animated graphic, go to a graphics overlay channel and add a new layer.





782

**live**stream

In the GFX Designer, there is a button in the module to search for a series of images. Click on this button to browse your computer.



Open the folder that has your .PNG files and choose the first file inside that folder. All images in that folder that match your selected file's resolution will then import as a sequence into Livestream Studio.

	Mlomoll		
<u>_</u>	{{Name}} {{Title}}		GFX
77			<u>с</u> мес
			-
oote Cam 2			dia 1
L	ayer 1 ▼ +T +S +S +S +II	ာင် 🕀 📃 🔳	

From there, designing the graphic follows the same procedure as designing still graphics (adding data fields, etc.).

Layer 1	•			Text 🗸	Text 1	
((Name)) ((Title))	/	111	۲	Tom lannaco	Producer Support	
	\$	111	0	Penalty Shot	New York, N.Y.	
		111	0	Amanda Vicari	Event Co-Founder	
		111	0	Ed Yealu	Event Co-Founder	
		101	0	Kristin McCue	Co-Host	
+ /	:≣		+ ROW	+ COLUMN		AUTO PUSH/PULL

All other functions of the graphics overlay, including adding data, changing settings, and pushing and pulling the layer are the same as other graphics.





Lower 3rd Main Title Line

SECONDARY DESCRIPTION LINE



LOWER 3RD MAIN TITLE LINE

SECONDARY DESCRIPTION LINE



Lower 3rd Main Title Line SECONDARY DESCRIPTION LINE

All the templates above are available for free in the <u>Livestream Graphics Store</u>. Click on the images here to download the .lsgfx files.

This GFX file contains an animated image sequence. Livestream Studio requires its permanent copy on the disk. Please, specify the destination folder to extract the files.

UNION OL O	Nosers/Livestream h050/Pictures/Livestream Studio Beta/		
		CANCEL	SELECT

When you import an .lsgfx file that contains an animated graphic sequence, Livestream Studio will prompt you to select where you want to save the file on your computer's hard drive. Choose your destination and then click 'Select.'

**live**stream



The .lsgfx file will load in Livestream Studio and you can edit it in the same fashion as with any any other graphic.









### Studio Graphics Sto

Lower thirds, Twitter overlays, sco designed by the Livestream Studie

Browse Graphics →

Livestream Studio has the ability to key out colors through the graphics module. Start by adding a new layer to any graphics overlay channel.





# Click the paintbrush icon to enter the GFX Designer.





Next, click on the camera icon to add an input source to your graphics layer.

**live**stream


Click the gearwheel to select which input source you want to use for chroma key.





You can adjust how your input source looks inside the GFX Designer as necessary.





## Click the person icon to turn on chroma key.





Livestream Studio will automatically detect the most prominent color (green in this example) and key it out once chroma key is turned on.

**live**stream



Next, close out of the GFX Designer and put either a camera, media source, or graphics source into Program from your multi-view. The example above has a white background video from Media 2.



Now push your graphics overlay layer into Program by clicking the 'PUSH' button.





You should now see your chroma keyed input source overlaying your Program source.

**live**stream



To make further adjustments to your chroma key graphic, go back to the GFX Designer.



When you select your input source in the graphics overlay while chroma key is turned on, you will see other options in the upper right corner.





To erase all chroma keying on your input source, click the 'X' icon. Note that the green background has returned to the picture.





To apply automatic chroma keying (i.e., key out the most prominent color), click the icon of the eyedropper with an A.





The eyedropper-circle icon will allow you to do rough keying by hand. Select this option, then hover your mouse to the area you want to key (e.g. the back of the chair).





Click and drag your mouse to start real-time keying. You can increase or decrease the keying color range, which will be indicated by a circle around the area.

livestream



The end result should be similar to the image above, where the colors within the range that was selected are now on the chroma key palette and thus not visible.





The eyedropper with a plus sign either initializes the chroma key or adds color hues to the chroma key palette. This is helpful if there are shadows in your background that did not key out fully.





The eyedropper with a minus sign will exclude colors from your chroma key palette. This is helpful if a color on your set is similar to the color you keyed out and is faded. In this example, the orange chair is keyed out and the red sweater is also largely keyed out.

**live**stream



After using the eyedropper minus tool on the red sweater, you can now see the sweater; orange is still on the chroma key palette.

**live**stream



Please note that other graphics or images in the same graphics layer will be visible. Use caution with this type of workflow, as it will increase your CPU usage.



### Tie functionality





You may need to switch a video source and a graphics overlay simultaneously. This is where the '**TIE BG**' and '**TIE**' buttons come in.





At least one of these 'TIE' buttons must be selected at all times. This tells the transition controls what to reference when switching.





#### If only '**TIE BG**' is highlighted yellow, then only the video source in Preview will switch to Program when transitioning.





After using a transition control, notice how the video source switched, but GFX 1 remained in Preview because only '**TIE BG**' was selected.





To both switch the video source and bring in a graphics overlay at the same time, select '**TIE BG**' and the corresponding **TIE** button for your graphic.





Press the '**PRV**' button for the graphics overlay channel that is tied to your video source.

**live**stream



Your Preview and Program monitors should look similar to this, with a GFX channel in Preview. Use a transition control to switch the sources.





Now your video sources have switched and your graphics overlay has been pushed to Program.





If only the GFX 1 and GFX 2 '**TIE**' buttons are lit and both sources are in Preview, then both overlays will switch into Program when transitioning. The video will not change.





#### In this example, GFX 1 has a lowerthird graphic, and GFX 2 is a clock. Use a transition control to bring both into Program.





After the transition, both graphics overlays are now in Program, but the video source is the same since '**TIE BG**' was not selected.





To pull a graphics overlay out of Program simultaneously with a video source, tie the background and the graphics overlay together.



Next, you will need to remove the graphics overlay from Preview. This will tell the transition controls that the graphic is not being shown on the next switch.





Your monitors should look similar to this now, with Preview showing a different video source and no graphic. Use a transition control to switch the sources.





#### Now your video sources have changed, and your graphics overlay is no longer in Program.



# Synchronizing input and remote sources



		6		6			8
	Audio Mixer	•	Remote Cam 1	Remote Cam 2	Input Settings		
CAM1		•	land October - Name				
\$	GENERAL		Input Source Name				
	AUDIO		Input Source Name				
۲	CONVERT		CAMIT				
Έ	CROP						

You may notice a discrepancy in synchronization between direct camera inputs and remote cameras. Livestream Studio has a few workarounds. Start in the 'Input Settings' tab.
Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings				
CAM1 A							
CAM1	Input Source	Input Source Name					
CAM2	Input Source Name						
CAM3	CAM1						
·卢 CROP	T						

## On the left side, select the camera source you want to adjust.



CAM	1 -		
₽	GENERAL	Delay	OFF
	AUDIO	Video Delay (milliseconds)	
·@-	CONVERT	0 -100 -10	+10 +100
Ϊ	CROP	 0	2000
		Audio Delay (milliseconds)	
0	DELAY	0 -100 -10	+10 +100
œ	CLOSED CAPTIONS	 0	 2000

# Navigate to the '**Delay**' tab towards the bottom left side.



Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings	
CAM1 -				
🗯 GENERAL	Delay	ON C		
¦¦¦ AUDIO	Video Delay (milliseconds)			
- CONVERT	350 -100 -	10 +10 +100		
년 CROP	 0	2000		
😎 TALLY	Audio Delay (milliseconds)	)		
O DELAY	350 -100 -	10 +10 +100		
CLOSED CAPTIONS	1	l 2000		

You can delay any individual input's video and audio by up to two seconds to help keep your sources in sync. This can also resolve audio/video sync issues.



#### Alternatively, go to settings and navigate to the '**Advanced**' tab.





Towards the bottom of this menu, you can click on 'Reset Delay Settings' to set any manual adjustments made back the default setting of zero seconds for all sources.

	Tabs		Allow tabs to be opened as separate windows
)N	Video / Audio Delay		RESET DELAY SETTINGS
n	Remote Inputs Synchronization		Disable Synchronization
		0	Delay All Inputs by 1 Second and Synchronize
uch		0	Delay Remote Camera Inputs by 1 Second and Synchronize
	Solit Decordings by	0	Disable file enlitting

You can disable any synchronization if you do not notice any discrepancy between your inputs.





You can also delay either all inputs, or just remote inputs, by one second. This will allow Livestream Studio to sync those sources together.

#### Advanced input cropping

	Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings	RTMP 1	RTMP 2
CAM	1 -					
\$	GENERAL	General				
łił	AUDIO	Input Source Name				
÷	CONVERT	CAM1				
Ϊ	CROP					
0	DELAY					

You can create multiple virtual camera shots for each input source. To do so, navigate to the '**Input Settings**' tab.

Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings	RTMP 1	RTMP 2
CAM1 A					
CAM1	General				
CAM2	Input Source Name				
САМЗ					
CAM4					
CAM5					
🕒 DELAY					
CLOSED CAPTIONS					

Select which camera you would like to adjust by clicking the dropdown in the upper left corner of the module.



Click the '**Crop**' tab. Your input source will appear in the space to the right.





You can do a basic crop by clicking and dragging the corner of the image, then dragging and dropping the cropped frame.





### Click 'Advanced Mode' to reveal more cropping options.





To the right of your source are numbers 1-4 in different colors, each with a corresponding 'Take' and 'Edit' button.



Producers using 4K input sources should consider checking the '720 min crop size,' which will prevent any cropping from dropping below a 720p resolution and thus reduce quality loss.

**Note**: This option is only present when using 4K sources.



Clicking 'Edit' on any shot will allow you to adjust that particular shot without affecting the output. Click and drag the corners to crop the shot; notice that the border of your shot matches the color of the corresponding number.

**Note**: If your mouse has a scroll wheel, you can also use that to crop your shot.



Before clicking the glowing 'Take' button, check the 'Transition Duration' and 'Motion Damping Intensity' settings below.



Under 'Transition Duration,' you can choose how you fast you want to move between shots. 'Cut' will be an immediate switch. The following timer buttons indicate a virtual camera movement in increasing order of time (fast, medium, slow).

'Motion Damping Intensity' will adjust the smoothness of each camera motion. Instant will be a fast, real-time, and more jagged movement. Each option afterwards is slightly slower and smoother. This option does not impact 'Cut' transitions.



Once your Transition Duration and Motion Damping Intensity are set, click the glowing 'Take' button.



The 'Take' button will turn red and you will notice that your input will transition to the cropped area in your multi view.



	Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings	RIMP 1	RTMP 2
CAM	L –					
¢	GENERAL		. 4			
¦†¦	AUDIO			TR .	2	Z TAKE EDIT
-œ-	CONVERT		122			
Ϊ	CROP		- 4 52			
6 <u>0</u> 8	TALLY				4	4 TAKE EDIT
	DELAY					
		Transition Duration	Motio	n Damping Intensity 🔒		
		СИТ		STANT -	720 min croj	p size

You can build up to four different cropped areas per input using the corresponding 'Edit' buttons. Triggering mid-roll advertisements





This feature is only available for those who also have a Livestream Enterprise account, which includes integration with Google DoubleClick for Publishers.



#### Get the most from all of your digital ad inventory



With DFP Small Business, adding new partners is always plug and play, which allows us to be creative with our ad experience and scale revenue as users discover Scribd around the globe.

Matt Alecock, Ad Operations Manager, Scribd

#### DoubleClick for Publishers (DFP) Small Business

Get started today with our free ad management solution that helps growing publishers sell, schedule, deliver, and measure all of their digital ad inventory.





Doubleclick's solid web ad serving infrastructure holds them at the top level for ad technology, monetization, and publisher reliability.

Lindsay Warren, Director of Ad Operations, Flixster

#### DoubleClick for Publishers (DFP)

Take advantage of a comprehensive suite of tools designed to help large publishers accelerate their digital ad operations and generate even-greater returns.



You will need an account on Google DFP. Go to <u>http://www.google.com/</u> <u>doubleclick/publishers/welcome</u> to set up and configure your content.





Google DFP Integration (Pre-

Senable DFP Advertisements

DFP Network Code

DFP Network Code is required

Path to Ad Unit

ie. /directory/videodemo

Path to Ad is required

Show advertisements to owner

In your Livestream account settings, you will need to check 'Enable DFP advertisements' and provide a DFP Network Code and Path to Ad Unit.

Note: Detailed instructions on setting up DFP with Livestream can be found in the <u>help center</u>.

**live**stream

	Settings: Ac	Insertion CANCEL SAVE
	Project Format	
	Inputs	Livestream Studio supports mid-roll video ad insertion using Google DoubleClick for Publishers Ad Server. A Livestream Platform Enterprise Plan is required to use this feature. Learn More
	Outputs	
	Audio In	Ad Duration 30 seconds ()
	Recording	Background Fade to black
	Media Player	Automated Insertion
	Streaming	
	Multi-Screen	
	Ad Insertion	GFX3 💠 MEDIA1

## Back in Livestream Studio, go to the '**Ad Insertion**' tab in settings.



'Ad Duration' allows you to set the length of your ad segment. You should ideally enter the time of the longest advertisement you plan to run.





You can set a background to see in Program during your ad insertion. This is helpful if an ad's length is shorter than your set ad duration time and you want to display a slate or image during the extra time.

	Platform Enterprise Plan is requi	red to use this feature. <u>Learn</u>	
uts	more		
In	Ad Duration	30 seconds	
rding	Background	Fade to black	
	Transition	CUT	• ·
a Player		CUT AUTO	
ming			
Screen			

Choose if you want the ad to transition in using a cut or the automatic transition you have set for your main mix.





If your production requires having ads at specific intervals, you can check 'Automated Insertion' to bring advertisements in without manually triggering them.





Set how long in seconds you want to have between your advertising segments.





You can roll your ad segments more than once. Here, set how many times you want ads to roll before returning to your production.

Recording	Background	Fade to black 👻	
	Transition	CUT 🔫	
Media Player		Automated Insertion	
Streaming	Period between ads	600 seconds	
Multi-Screen	Number of ads per break	1 0	
Adlassetian		Start with advert	
Ad Insertion		Start insertion with streaming	GFX3 IÇ
Hotkeys			<b>-</b>
			- REMOTE
Mouse / Touch			==

'Start with advert' means the segment will begin with the advertisement rolling rather than whatever is being shown in your background.



'Start insertion with streaming' will show viewers your advertisement first when your broadcast begins, rather than starting with your content.



Settings: Ad	
Project Format	
Inputs	Livestream Studio supports mid-roll video ad insertion using Google DoubleClick for Publishers Ad Server. A Livestream Platform Enterprise Plan is required to use this feature. <u>Learn</u>
Outputs	<u>PIORE</u>
Audio In	Ad Duration 30 seconds ()
Recording	Background Fade to black -

When you have configured your settings as desired, click 'Save.'





When you go live to Livestream, you will notice the 'Advert' button highlight white. Click on it when you want to enter an advertisement segment.


## We'll be right back.



The 'Advert' button will turn red with a segment countdown. The top of the Program monitor will also indicate what is being shown (advertisement, background, etc.)

**live**stream



If you have a 30-second ad in Google DFP, but choose to have a 40-second segment, your background will show for the remainder of the segment.



## We'll be right back.

The ad segment will keep looping until you click 'Advert' again. Doing this will finish the segment and indicate when your player will return to content.



**live**stream

867



At the end of the last segment, the source in Preview will switch to Program and your production will continue showing content.



Integrating tally lights





A tally light is a small signal lamp on a professional video camera or monitor that indicates which camera is in Program.

**live**stream



#### For Livestream Studio, it is recommended to purchase a tally light system available from metaSETZ (<u>http://www.metasetz.com</u>).





Connect your tally light system to your computer via an available USB 2.0 port. The device's drivers should install automatically.





Connect each of your cameras to the metaSETZ Tally Light Controller using Ethernet cables.

	Settings		CANCEL SAVE			
	Project Format	Crossfade Audio on Cut	5 Frames	2 Pro	R	
	Inputs Outputs	Graphic Overlay Tracks	3 GFX Tracks 🔹		- lè	
	Audio In	Startup	Launch on startup Disable Windows Aero Theme			
	Recording	Other	on Start C Low Input to Output Latency			
	Media Player		Tally Lights Send Diagnostic and Usage Data			
	Streaming	Tabs	to Livestream     Allow tabs to be opened as     separate windows			
CAM2 0	Multi-Screen	Video / Audio Delay	RESET DELAY SETTING S		GEX3 0	REMOTE2 0
	Ad Insertion	Remote Inputs Synchronization	Disable Synchronization		We'll be right back.	
N. A.	Hotkeys	C	Delay All Inputs by 1 Second and Synchronize		MEDIA1 Ø	MEDIA2 Ø
	Mouse / Touch	C	Delay Remote Camera Inputs by 1 Second and Synchronize		£	<u>.</u>
note Cam 1 Remote Cam 2 Input Settings	Studio Surface	Split Recordings by Time Interval	Disable file splitting Split Every 24 Hours	GFX 3		
	Advanced	(	Split at a Date/Time	Marke Title		

Next, open Livestream Studio and go to the '**Advanced**' tab in settings.



## Make sure that 'Tally Lights' is checked, then click 'Save.'



Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings	
CAM1		NI		
CAM1	Input Source	Name		
CAM2	Input Source Name			
CAM3	CAMI			
·넙, CROP				
ET TALLY				

Select the '**Input Settings**' tab in the lower right corner, then choose a camera source from the dropdown menu for which to set a tally light.



CAMI	1	-		
¢	GENERAL		Tally Light	
$\frac{1}{1} \frac{1}{1} \frac{1}{1}$	AUDIO		Select Tally Output	7
-œ-	CONVERT		None Disital Arte TLCS Line 1	
.μ	CROP		Digital Arts TLC6 - Line 2 Digital Arts TLC6 - Line 3	
œ	TALLY		Digital Arts TLC6 - Line 4 Digital Arts TLC6 - Line 5 Digital Arts TLC6 - Line 6	
٩	DELAY		Digital Arts TLC6 - Line 7 Digital Arts TLC6 - Line 8	
		S		
		Depreson Stadio St		

#### Tip

For more details about supported Tally devices, please, read Livestream knowledge base article

Click 'Tally' on the left side, and select an available tally port to assign to that camera. Repeat this step for each camera source.



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**live**stream

As you switch between sources, you should now notice the tally lights turn on when the corresponding camera is in Program.

### Closed captioning





To enable closed captions forwarding to Livestream, go to settings and enter the 'Streaming' menu. At the bottom you will see 'Closed Captions.'



Check 'Closed Captions Enabled' to allow closed captioning data to be received.





Next, select whether the closed captions are available only with the source they are coming from ('Follow on switching'), if the captions should show regardless of what source is in Program ('From single camera'), or only when the source is in AUX program ('From AUX').



Audio Mixer	Kemole Cam 1	Nemote Cam 2	input settings	
CAM3 🍝				
CAM1	Closed Capti	ons		
CAM2	Enabled			
CAM3	i Show Tips			
CAM4				
DELAY				
CLOSED CAPTIONS				

Save your settings, then return to the '**Input Settings**' tab. Select the camera source(s) with the closed captioning data embedded, then click 'Closed Captions.'

		Closed Contions					
\$	GENERAL	Closed Captions					
	AUDIO	Enabled					
•@•	CONVERT	Closed Captions Channel	h				
Ĺ.	CROP	Off 🔺					
- <u>1</u>	TALLY	DTVCC service 1 (English) DTVCC service 2					
0	DELAY						
22	CLOSED CAPTIONS						

Check 'Enabled' and then select which channel your closed captions are coming through. This will require that the selected input source be a 10-bit input signal, rather than 8-bit.



When you go live, your captions will be available as an option in the Livestream player. Please note you will not see any captions in Livestream Studio and captions will not be recorded with your video on-demand.

**live**stream

# Advanced streaming options



	Settings		CANCEL	SAVE		
	Project Format	Antilao	On		Stand Del	
	Inputs	, and a second se	on on		- C'	
	Outputs	Antilag Duration	5000 ms		2	
	Audio In	Key Frame Interval	60 frames			
	Recording					
	Media Player	Encoder Queue	Stop streaming when queue is           300         frames			
	Streaming	Bitrate	Variable			
	Multi-Screen		Constant			
CAM2 0	Ad Insertion	Local MP4 Recording	BROWSE CAUsers/Livestreams	Videos\	GFX3 ¢ We'll be right ba	ck.
	Hotkeys	Other	Experimental UDP streaming	) (beta)	MEDIA1 🗢	nedia2 🏚

# Go to the '**Streaming**' tab in settings to change specific configurations for your stream.





Selecting 'On' for Antilag works to reduce latency on the viewing end. If a delay on the encoding side builds up past the chosen 'Antilag Duration,' the frame buffer will be cleared.

**live**stream



Turning Antilag off will continue to build a cache of frames without clearing the data, thus building latency to your viewers. If low latency is a critical component of your stream, this is not recommended.





'Key Frame Interval' can be changed if desired. 2 seconds is a standard setting, but you may want to consider a higher interval if your event has a lot of motion.



The encoder queue is the number of frames that Livestream Studio will allow to build up prior to a stream terminating due to bandwidth or CPU issues.





'Variable' bitrate will change the outgoing bitrate based on the movement in the video. Static images will send at a lower bitrate; high movement will increase the bitrate.





'Constant' bitrate will maintain the outgoing bitrate regardless of the amount of movement in the video.





It is strongly recommended to keep 'Enable H.264 Recording' checked to ensure you have a backup .mp4 file of your stream saved on your hard drive.





You can change the location where this .mp4 recording is saved. By default, it will go to your PC's 'Videos' folder.





'Streaming Mode' allows you to choose the outgoing framerate. The higher the bitrate you choose, the more CPU usage will increase.



### RTMP server setup



	Ad Insertion		REMOTE2	Remote Cam		Embedded	None		R	EMOTE1	¢	REN
-	Hotkeys		RTMP1	RTMP 1		Embedded	None		Ē			Ē
1	noticys		Name	None		None	None		_		<b>V</b>	
ut Settings	Mouse / Touch			Remote Cam 1	0				GF	X 3		Medi
	Studio Surface	Ľ	+ -	RTMP 3 RTMP 4								
	Advanced			RTMP 5 RTMP 6 RTMP 7								
0.84/11ve <u>Copy</u> <u>py</u>	Support			RTMP 8 RTMP 9 RTMP 10								
	License						 					
	About											

Livestream Studio users can now send a stream from a third-party encoder via RTMP directly to Studio. Go to 'Settings,' then 'Inputs.' You can add up to 10 RTMP input sources; save your settings.



	Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings	RTMP 1	RTMP 2
CAM	L <del>-</del>			•		
¢	GENERAL	General				
li i li	AUDIO	Input Source Name				
.e-	CONVERT	CAM1				
Ξ	CROP					
6 <u>0</u> 8	TALLY					
	DELAY					
Œ	CLOSED CAPTIONS					

Your RTMP inputs tab(s) will appear in the lower left corner of the interface; select one to continue.

Status	No Incoming Stream	
Server Name	live	
Authentication	OFF	
<u>Change Settings</u>		
Enable RTMP Server		
RTMP Server URL		
rtmp://24.103.40.84/live	СОРҮ	
Stream Name server1		
DOWNLOAD FMLE SETT	INGS	



#### No Incoming Stream

Configure your RTMP to send the stream. Use the following settings: Server URL: 'rtmp://24.103.40.84/live' <u>Copy</u>

Stream Name: 'server1' Copy

Your RTMP URL and Stream Name are displayed on the right side as well as further down in the left-hand side menu.
Status	No Incoming Stream	
Server Name	live	
Authentication	OFF	
<u>Change Settings</u>		
Enable RTMP Server		
rtmp://24.103.40.84/live	СОРУ	
Stream Name		
DOWNLOAD FMLE SETT	INGS	



#### No Incoming Stream

Configure your RTMP to send the stream. Use the following settings: Server URL: 'rtmp://24.103.40.84/live' Copy Stream Name: 'server1' Copy

By default, authentication is turned off. If you would prefer to have a username and password affiliated with your RTMP Server, click 'Change Settings.'





This will open the '**RTMP Server**' tab in Studio's settings. Check 'Authentication' and enter the desired username and password; then click 'Save.'





To save time copying and pasting, Studio gives you the option to 'Download FMLE Settings,' which you can then import into your encoder.



		Output Settings		
RTMP Flash Server	Name:	RTMP Server		
	Destination:	RTMP Server	<u></u>	More
	Encoding:	H.264 720p 16:9 (1280x720)	<u></u>	<b>☆</b> ▼
	Address:	rtmp://24.103.40.83/live		
	Stream:	server1	Open FMLE XML Fi	e
	User Agent:	Wirecast/FM 1.0	Set Credentials	
	Bitrate:	2217 k		
	Location:	rtmp://24.103.40.83/live : server1		

```
In your third-party encoder (e.g.,
Wirecast), open your RTMP
settings and enter the RTMP URL
and Stream Name from Studio
into the corresponding fields.
```

RTMP Flash Server	Enter your Username: Password:	credentials:	C     More     ∯▼       C     ∯▼
		Cancel OK	
	Stream:	server1	Open FMLE XML File
	User Agent:	Wirecast/FM 1.0	Set Credentials
	Bitrate:	2217 k	
	Location:	rtmp://10.100.2.198/live : server1	
	Stream Delay	0 seconds	

Enter your RTMP Input's username and password, if applicable; save these settings.





Start streaming from your third-party encoder to your RTMP Input.



	<u>-</u>	<b>-</b>	<u>-</u>		<u>-</u>
	REMOTE2 🌣	RTMP1 💠	RTMP	2 🗘	COLOR1 🕻
		A	No	Incoming stream More Details	
	-	5			6
1	GFX 1	GFX 2	GFX 3	Media 1	Media

In the Studio multi-view, you should see the video output from your third-party encoder appear in your RTMP Input.





You can transition your RTMP Input into Program, just as you would with any other source.

**live**stream



Stop the stream from your local encoder. This will allow you to access more advanced settings in the RTMP Input module.





On the left side of the module, scroll down to find more options.

Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings	RTMP 1	RTMP 2	Colors/Bars 1
rtmp://24.103.40.83/liv	сору		Incoming Stream			
Stream Name		Con	ifigure your RTMP to send	the stream. Use the follo	owing settings:	
server1		Serv	ver URL: 'rtmp://24.103.40	.83/live' <u>Copy</u>		
Transition to progra	am 🔒	Stre	am Name: 'server1' <u>Cop</u>	1		
Transition to program	n mode D					
Start stream 🚯						
When RTMP stream	ends:					
Stop streaming and de	elete 👻	Ð				

Checking 'Transition to Program' will automatically switch the RTMP input into Program as soon as Studio receives the stream.

Audio Mixer	Remote Cam 1	Remote Cam 2	Input Settings	RTMP 1	RTMP 2	Colors/Bars 1
rtmp://24.103.40.83/liv	е СОРУ		Incoming Stream			
Stream Name		Con	ifigure your RTMP to send	the stream. Use the follo	owing settings:	
server1		Serv	ver URL: 'rtmp://24.103.40 am Name: <i>'server1' <mark>Cop</mark>y</i>	.83/live' <u>Copy</u> /		
Transition to progra	am 🔒					
Transition to program	m mode D					
Start stream 🚯						
When RTMP stream	ends:					
Stop streaming and de	elete 👻	0				

'Transition to program mode,' which allows you to choose whether your input will Cut or Auto-Transition into Program once the stream is received.





### No Incoming Stream

Configure your RTMP to send the stream. Use the following settings: Server URL: 'rtmp://24.103.40.83/live' <u>Copy</u> Stream Name: 'server1' <u>Copy</u>

Next is 'Start Stream,' which can prompt Studio to automatically start streaming to your selected provider in Studio (e.g. Livestream) as soon as it receives the RTMP input.





'When RTMP stream ends' allows you to select what Studio should do when you stop streaming from your third-party encoder.





#### No Incoming Stream

Configure your RTMP to send the stream. Use the following settings: Server URL: 'rtmp://24.103.40.83/live' Copy Stream Name: 'server1' Copy

## The options are:

**No Action**: Studio will not react to the RTMP stream stopping

Stop Streaming and Post: Studio will end its stream and post the video on demand.

**Stop Streaming Draft**: Studio will end its stream and save the video as a draft post (Livestream only).

Stop Streaming and Delete: Studio will end its stream and delete the video on demand (Livestream only).

Switch to Preview and Keep Streaming: Studio will continue streaming, but transition the Preview source into Program. **live**stream



Now when you start your third-party encoder, your source will appear in Program and automatically stream to your chosen provider.





When you stop your thirdparty encoder, Studio will take whatever action you chose automatically.

## Web Control



Settings: W	/eb Control	CANCEL SAVE		
Project Format	Enable Web Control	What's Web Control?	a The	
Inputs				
Outputs			R	
Audio In				
Recording				
Media Player				
Streaming				
Web Control				

You can allow control of your Livestream Studio from anywhere in the world via Google Chrome. First, go to 'Settings.'

**Note**: This feature does not work in any other browser.

Project Format	Enable Web Control	ol Wha	t's Web Control?	0		
Inputs	Studio ID	Web Control Link		V		
Outputs	Dqa6Hjwugt 💉	studio-webcontrol.livestream.	.c Copy Link	2	The Party	the
Audio In	Users				1 and a state	all of
Recording	E-mail	Acces	ss to			
Media Player						
Streaming				-		
Web Control				-		
RTMP Server						0.5140
Multi-Screen	+ -				GFX2 \$	GFX3

Click the '**Web Control**' tab and check 'Enable Web Control.' This menu allows you to choose to whom you will grant Web Control access, and what the Web Control interface will look like.





Your Studio will have a random ID assigned to it automatically. Click the pencil icon to change the Studio ID.



	Project Format	Enable Web Control	v Whaťs V	Web Control?	
	Inputs	Studio ID	Web Control Link		V
	Outputs	DesCliverst		Convelink	10
		DqaoHjwugi 🖉	studio-webcontroi.livestream.c	Сору Link	N
	Audio In	Users			
6	Recording	E-mail	Access to	o	
	Media Player				
	Streaming				
	Web Control				

To the right of the Studio ID is the Web Control URL, which you can copy to your clipboard and access from a Google Chrome browser.



	Outputs	Dqa6Hjwugt 💉 studio-webcontrol.livestream.c Copy Link	
	Audio In	Users	
	Recording	E-mail Access to	
	Media Player		
	Streaming		
	Web Control		
CA112 A	RTMP Server		
	Multi-Screen	+ -	
	Ad Insertion	Layout	REMOTE1 🌣

Below is a list of users who have access to Web Control; this should be empty when you first open this menu. To add a user (such as yourself), click the '+' button.



	Audio In		
	Recording	Add User	5
	Media Player	Email	
	Streaming		
	Web Control	Access to	
CAM3 ¢	RTMP Server	None Administrator	G
	Multi-Screen	Full Access Read Only Multi View	-
	Ad Insertion	Layour	R

# Enter the user's email address and choose how much access you wish to grant them. The options are:

- Administrator
- Full access
- Read only
- Multiview
- Controls only

	Outputs	Dqa6Hjwugt 💉 studio-webcontrol.livestream.c Copy Link
	Audio In	
	Recording	Add User
	Media Player	Email
	Streaming	
	Web Control	Access to
CAM3 A	RTMP Server	Full Access
	Multi-Screen	CANCEL
	Ad Insertion	

Click 'Save' and then save your Studio settings. The user you have invited to access your Studio via Web Control will not be able to join it until you save your settings.





You have been invited to Livestream Studio Web Control!

Now you can control Livestream Studio ID Dqa6Hjwugt remotely from your browser. Use your Livestream account email and password to log in to Livestream Studio Web Control at studio-webcontrol.livestream.com.

OPEN WEB CONTROL

The email address that you invited will receive an email similar to the one shown above. Click 'Open Web Control.'





## Livestream Web Control

Manage Livestream Studio remotely from your browser. Learn more

You will be prompted to log in with a Livestream account. If you do not have one, you can create one by clicking 'Join Livestream'; you must use the email address that received the invite.



After logging in, you will automatically be directed to your Web Control interface. The interface includes Program, Preview, multi-view, transition & overlay controls, audio mixer, the stream module, plus the new RTMP Inputs module.

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The mouse controls function as they do in Studio (i.e. leftclicking a source will put it in Preview, right-clicking a source will put it in Program, etc.)





You can click the menu icon in the upper right corner if you wish to adjust what you can see. You can also log out here when you are done.



Graphics Overlays in Studio Web Control



Studio 4.0 introduced Web Control, allowing the ability to control certain aspects of Livestream Studio via a web browser that supports WebRTC (e.g., Google Chrome, Mozilla Firefox).

This update adds more functionality to this tool, which now includes the ability to add .lsgfx files via Dropbox, insert data, and have full control over your graphic overlays' settings.



			Upgrade acco	unt 🚨	🕒 Emily Knox 👻
<b>\$</b>	Dropbox			Search	Q
( Recents	Lower Thirds 🛛 🕞 Download 🗋 🙆 Delete 🎲 Rename	🎝 Move	🔲 Сору		
Files	Evan Jan6-Jan8 2017				
ුදු Team					
Paper	Get Started with Dropbox.pdf	1/5/201	7 1:59 PM		
Photos	Lower Thirds				Share
Generating	Lower Thirds				Share
Links					
Events					
• File requests					

A <u>Dropbox</u> account is required in order to use this feature. Log in to Dropbox and locate your folders (or create a new one).



Save the .lsgfx files you wish to use in Livestream Studio in this folder. Only .lsgfx files are supported in Studio Web Control. Browse Graphics / Lower Third



Lower Third: Black / Red Gloss



Lower Third: Yellow Boxes



Lower Third: Blue Angular Free · Lower Third

Sample .lsgfx files can be found in the <u>Studio Graphics Store</u>, or can be created when you export a graphics overlay layer that you <u>manually</u> <u>created</u> in Livestream Studio.





936

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Twitter and Google Sheets are not supported in Web Control at this time. However, Excel files, .CSV files, and RSS feeds can be controlled with Web Control.
	Settings: Di	ropbox	CANCEL SAVE			
	Project Format	Please Connect Dropbox A	ccount		-	
	Inputs	CONNECT DROPBOX		1 - Jak	D	
	Outputs		_	-0		
	Audio In			2	119	
	Recording					
	Media Player					
	Streaming					
	Web Control					
COLOR2 A	RTMP Server				REMOTEL A	REMOTE2
	Dropbox					KENIO I EZ

The first step is within the Livestream Studio software. Navigate to Settings, then select the 'Dropbox' tab.



	Settings: D	ropbox	(	CANCEL SAVE			
	Project Format		Please Connect Dropbox Acco	ount			
	Inputs		CONNECT DROPBOX		123	D	
	Outputs				TP.		
	Audio In				2	- ing	
	Recording						
	Media Player						
	Streaming						
	Web Control						
COLOR2 ¢	RTMP Server					REMOTE1 🌣	REMOTE2
	Dropbox						

#### Click 'Connect Dropbox.'



	Project Format	Connect Your Dropbox Account	
Va Do I	Inputs	**	
	Outputs		
	Audio In		
	Recording		
	Media Player		
	Streaming	Sign in to Dropbox to link with Livestream	
	Web Control	Studio	
	RTMP Server	Email	
M2 🗘 CAM3 🌣	Dropbox	Password	
	Multi-Screen	Forgot your password?	RTMP1 ¢ RTMP2 ¢ COLOR1 ¢
	Ad Insertion	Sign in	No Stream No Stream More Details

Log in to your Dropbox account by entering your account credentials and clicking 'Sign in.'



Studio will request permission to access your files in Dropbox. Click 'Allow.'



	Outputs	Select Folders Select a Local Folder and a Remote Dropbox Folder	older for local files.	
	Audio In	Local Folder		2
	Recording	Users\User\Documents\Dropbox\ BROWSE		
	Media Player	Remote Folder		
	Streaming	Oropbox		
	Web Control	Lower Thirds		
	RTMP Server			
COLOR2 ¢	Dropbox			REMOTE1 🌣
	Multi-Screen			RTMP2 🌣
	Ad Insertion	CANCEL SAVE		No Stream More Details

You will need to select a folder on your local drive to save your imported file to and a folder in your Dropbox from which to select .lsgfx files. Once you made you choices, click 'Save.'



	Settings: D	ropbox	CANCEL SAVE	
	Project Format	L Emily Knox ∽	Synchronized	
	Inputs	Local Folder		Stand De
and a second	Outputs	C:/Users/User/Documents/Dropbox/ Disk Usage: 15.41 KB/55.34 GB		-0
	Audio In	Remote Folder		2
_	Recording	/Lower Thirds		
	Media Player	CHANGE FOLDERS		
	Streaming	🛃 Use Files from Dropbox		
	Web Control			
	RTMP Server			

Studio will indicate that your Dropbox account is synchronized with Studio.





Next, log in to <u>Web Control</u> and open your Studio (assuming you have already <u>added yourself as a user</u>).

CAM1		CAM2		GFX1	GFX2		G
8		1		-	<u> </u>		-
lio Mixer	Stream	RTMP	Inputs	GFX1	GFX2	GFX3	
OR1 V	COLOR2 V	GFX1 🗸	GFX2	<ul> <li>✓ GFX3 ✓</li> </ul>	REMOTE1 ~	REMOTE2 ~	RTN
	0 dB == OVR	0 dB 😑 OVR	0 dB == 0	VR 0 dB == OVR	0 dB 🔲 OVR	0 dB == OVR	0 dB 💻
0 -24		0 -24			0 -24	0 -24	-
-48	-40	-98	-6		-48	-40	

You should notice the three graphics overlay tabs in the bottom portion of the screen; select one of them to continue.





You can either browse the free Graphics Store within the Web Control graphics overlay module, or scroll down and click 'Add Custom Layers.'



Any .lsgfx files saved in your selected Dropbox folder will be listed here. Click the name of the file you wish to use.



Audio Mixer	Stream		RTMP Inputs	GFX1	GFX2	GFX3	
	•		Name			~	Title
	\$	٢	Game 1				New York, NY
		0	Game 2				Boston, MA
+ + ADD GRAPH	iics ⊠∷ i≡	+ F	ROW + COLUMN	)			

The graphics file will load with its design and settings on the left and its data on the right.

**Note**: It is not possible to open the GFX Designer in Web Control. The appearance of the graphic can only be edited within the Studio software.

	R	TMP Inputs	GFX1	GFX2	GFX3		
		Title			×	Location	
Ξ	۲	Game 1				New York, NY	
Ξ		Game 2				Boston, MA	
ſ	+ ROW	+ COLUMN					슈 Auto PUSH/PULL

### On the right side, you have the ability to add data rows and columns and enable the Auto Push/Pull feature when selecting different rows.





Clicking the gearwheel on the left side will open the settings available with that graphic, such as auto-loop timing, direction, and starting point.





Overlaying graphics in Web Control is the same as in Studio software. Click the corresponding 'PRV' button to show your graphics overlay in Preview.





## Click 'PUSH' to transition the graphic overlay into Program.





## Now, you will see the graphic overlay in your Program monitor.





#### To remove it from Program, click the corresponding 'PULL' button.



# Project saving and loading





Livestream Studio gives you the ability to save, load, import, and export Livestream Project files, allowing you to keep configurations saved on your system so you can use them whenever you need to, without starting from scratch.





When you open Livestream Studio, by default you will be working on your previous project (or 'Untitled Project' if it is your first time opening Studio). Click on the title in the upper right corner to see more options.



To rename your project, simply type the name into the text box. When you click out of the window, the project will automatically be renamed. 🞧 🚽 🚽 11% CPU 12:42:38 PM 📄 Hockey Game 🌣 🛒



Now your project is renamed. As you configure it (e.g. add graphics templates, import media clips, arrange inputs, etc.), it will save automatically. This occurs regardless of the project being renamed, but now you can identify it.

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You can create a new project at any time by clicking on your project title and selecting 'New.'



#### Loading...



A new untitled project will open with default configurations. As mentioned above, you can rename the new project by clicking on the title.





To go back to working on a previously saved project, click on the project title and click 'Open.' A dropdown list of your projects will appear. Click the project that you want to work on.





### The selected project will then open as it last appeared in Livestream Studio.





We added an Import/Export feature if you want to save your project as a file. When your Studio project is configured the way you like it, click the project title, then 'Export.'





You will have the option to bundle or reference assets. Bundle is ideal if you need to move the file to a different hard drive or system, but creates a larger file. Reference is a smaller file, but will not move any associated assets (media clips, etc.) After selecting your preferred option, click 'Select.'

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Organize 👻 New fold	ler					0		
☆ Favorites	Name	Date modified	Туре	Size				
E Desktop		No items match	your search.					Ster 1
🗼 Downloads								N I
🔒 Google Drive								72 320
Salar Recent Places								Carlo and
Cibraries								
Documents							2	2
Music								
Pictures								
Videos								
Computer								
Local Disk (C:)								
CD Drive (D:) webC	-							
👊 Network								
						_		
File name: Hoc	key Game					-	· e	GFX1 🕏
Save as type: Lives	tream Studio project files (*.lsproj)					-		
Hide Folders				Save	Cance	el 🛛		REMOTE

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Choose where on your system you want to save the Livestream Project file (.lsproj). By default, Windows will open a newly created 'Livestream Studio Export Projects' folder under 'My Documents,' but you can save the file anywhere you want. Then, click 'Save.'



Windows will warn if you already have an .lsproj of the same name and give you the option of replacing it. If you click 'No,' you will have the option to rename it in Windows.





If you imported media files into your media bin, you will be asked whether to save the original video files or their transcoded versions (i.e., the files created after they were brought into Studio).





When you are ready to use that particular project file, you can click on the project title and then on 'Import.'



	Organize 👻 New folde	1			iii 🔹 🔲 🔞	
South Let	ጵ Favorites 📃 Desktop	Documents libr Arrange by: Livestraem Studio Beta Ex	Folder 🔻			
	<ul> <li>Downloads</li> <li>Google Drive</li> <li>Recent Places</li> <li>Libraries</li> <li>Documents</li> <li>Music</li> <li>Pictures</li> <li>Videos</li> <li>Videos</li> <li>Computer</li> <li>Local Disk (C:)</li> <li>CD Drive (D:) webCc</li> <li>Network</li> </ul>	Name Hockey Game.lsproj	Date mor 9/4/2015	Select a file to preview.		EDIA2 🏚 😋
		•	•			
	File na	me:		Livestream     Open	Studio project files ( ▼	

Find your .lsproj file in Windows, select it, and click 'Open.'

E





This will create a new project in Livestream Studio with the proper configurations set. You can rename this by clicking the project title if desired.





If you no longer intend to use the project you are working on, you can click the project title and then 'Delete.' This will not delete an exported file, but you will no longer be able to select it from the 'Open' menu.

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Locating software and support information




CANCEL

SAVE

	Project Format		
	Inputs	Live Input Source License: Up to 25 devices Live Video Output License: Up to 25 outputs	20R
	Outputs	Multi-screen License: Yes Media Players License: Up to 2 players	
	Audio In	Remote Camera License: Up to 10 remote cameras Recording License: Up to 4 concurrent recordings	
	Recording	Streaming License for Original Livestream: Yes Streaming License for New Livestream: Yes	
	Media Player	Streaming License for Ustream: Yes Streaming License for Youtube: Yes	
	Streaming	Streaming License for RTMP: Yes Streaming License for Custom Zixi: Yes	
	Multi-Screen	Maximum Live Streaming Resolution: 1080p Multi-bitrate Live Streaming: Yes	

If you are unsure of which Livestream Studio features you have, go to settings and click on the '**License**' tab for a complete list.



	Settings: Ab	out	CANCEL SAVE	
	Project Format			
	Inputs	Version 3.0.0		- AN
2	Outputs	Serial Number:		
	Audio In	RELEASE NOTES AND NEW FEATURES TOUR		2
	Recording	VISIT LIVESTREAM.COM		
	Media Player			
	Streaming	Third Party Copyrights Notic	es	

To find out what version of Livestream Studio you are running on your system, navigate to the '**About**' tab.

	Settings: S	upport	CANCEL	
G	Project Format	Support PIN:		
	Inputs	Sunnort is available 7 days a week 9:30 am to	8:20nm EST For US	-105
2	Outputs	support savalable 7 days a week 9.50am to 8.50pm EST. For OS support, call +1 (877) 977-8732 extension #2. For international call +1 (646) 490-1679 extension #2. When prompted, enter your		
	Audio In			
	Recording			
	Media Player			
	Streaming			
	Multi-Screen			

Finally, if you have any questions or issues regarding Livestream Studio, navigate to the '**Support**' tab to find ways to contact the Livestream Support team.

# Appendix A

Certified capture devices



#### PCIe Cards

- Blackmagic DeckLink SDI
- Blackmagic DeckLink SDI 4K
- Blackmagic DeckLink Duo 2
- Blackmagic DeckLink Quad 2
- Blackmagic DeckLink Optical Fiber
- Blackmagic DeckLink Studio
- Blackmagic DeckLink Studio 4K
- Blackmagic DeckLink HD Extreme 3D
- Blackmagic DeckLink 4K Extreme
- Blackmagic DeckLink Mini-Recorder (capture only)
- Blackmagic DeckLink Mini-Monitor (playback only)
- Magewell Pro Capture AIO
- Magewell Pro Capture HDMI

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## PCIe Cards (cont'd)

- Magewell Pro Capture Dual HDMI
- Magewell Pro Capture Quad HDMI
- Magewell Pro Capture SDI
- Magewell Pro Capture Dual SDI
- Magewell Pro Capture Quad SDI
- Magewell Pro Capture Mini HDMI
- Magewell Pro Capture Mini SDI

#### Thunderbolt devices

- Blackmagic UltraStudio Mini Recorder (capture only)
- Blackmagic UltraStudio Mini Monitor (playback only)
- Blackmagic UltraStudio 3D
- Blackmagic UltraStudio 4K

## Thunderbolt devices (cont'd)

- Blackmagic UltraStudio Express
- Blackmagic Intensity Shuttle for Thunderbolt
- Blackmagic Intensity Extreme

### USB 3.0 Devices

- Blackmagic UltraStudio Pro
- Blackmagic UltraStudio SDI
- Blackmagic Intensity Shuttle for USB 3.0
- Blackmagic ATEM 1 M/E Production Switcher
- Blackmagic ATEM 2 M/E Production Switcher



# Appendix B

Supported formats for transcoding

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### File Containers

Format	File Extensions	Media Source	Media Sink	Requires
3GP	.3g2, .3gp, .3gp2, .3gpp	MPEG-4 File Source	3GP File Sink	Windows 7
Advanced Streaming Format (ASF)	.asf, .wma, .wmv	ASF Media Source	ASF Media Sink	Windows Vista
Audio Data Transport Stream (ADTS)	.aac, .adts	ADTS File Source	None	Windows 7
AVI	.avi	AVI File Source	None	Windows 7
MP3	.mp3	MP3 File Source	MP3 File Sink	File Source: Windows Vista File Sink: Windows 7
MPEG-4	.m4a, .m4v, .mov, .mp4	MPEG-4 File Source	MPEG-4 File Sink	Windows 7
Synchronized Accessible Media Interchange (SAMI)	.sami, .smi	SAMI Media Source	None	Windows Vista
WAVE	.wav	AVI File Source	None	Windows 7

### Audio Codecs

Format	Decoder	Encoder	Requires
µ-law Codec	Audio Compression Manager (ACM) µ-law Codec	None	Windows Vista
Adaptive Differential Pulse Code Modulation (ACPCM)	ACM ADPCM Codec	None	Windows Vista
Advanced Audio Coding (AAC)	AAC Decoder	AAC Encoder	Windows 7
MP3	Windows Media MP3 Decoder	None	Windows Vista
GSM 6.10	ACM GSM 6.10 Codec	None	Windows Vista
Windows Media Audio (WMA)	Windows Media Audio Decoder, Windows Media Audio Voice Decoder	Windows Media Audio Decoder, Windows Media Audio Voice Decoder	Windows Vista

**Note**: Media Foundation provides wrappers for several ACM codecs listed in the previous table. However, Media Foundation does not support arbitrary ACM codecs.

#### Video Codecs

Format Decoder		Encoder	Requires
DV Video	DV Video Decoder	None	Windows 7
H.264	H.264 H.264 Video Decoder		Windows 7
MJPEG	MJPEG Decoder	None	Windows 7
MPEG-4 Part 2	MPEG-4 Part 2 Video Decoder	None	Windows 7
MPEG-4 v1/v2/v3	Windows Media MPEG-4 V3 Decoder, Window Media MPEG4 V1/V2 Decoder	None	Windows Vista
Windows Media Video (WMV)	Windows Media Video 9 Decoder, Windows Media Video 9 Screen Decoder	Windows Media Video 0 Encoder, Windows Media Video 9 Screen Encoder, Windows Media Video 7/8 Encoder	Windows Vista

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