Livestream Studio™ User Manual

For use with Livestream Studio™ version 3.1.85

Published on February 23, 2016. For the most recent manual version, visit
livestream.com/studio/manual

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Software features

livestream

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

Free
LIMITED VERSION

2	Camera Inputs
1	Remote Camera Input
1	Media Player
1	Graphics Track
✔	Stream to Livestream

DOWNLOAD FREE

For Windows 7+

$799
FULL VERSION

25	Camera Inputs
10	Remote Camera Inputs
2	Media Players
3	Graphics Tracks
✔	Stream to Livestream
✔	Stream to Other Providers
✔	Media Recording
✔	Live Video Output
✔	ISO Recording
✔	Multi-Screen Feature
✔	Phone Support - 7 Days a Week

BUY FULL VERSION

For Windows 7+

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

Getting started with Livestream Studio

Hardware specifications

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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**: Quad-core Intel® i7 2nd generation

- **Motherboard**: Intel® X77 chipset motherboard

- **GPU**: NVIDIA GeForce 210 GPU

- **RAM**: 8GB RAM DDR3 1333 MHz

- **HDD**: 500GB free (7200RPM/SSD preferred)

Optimal 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)

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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
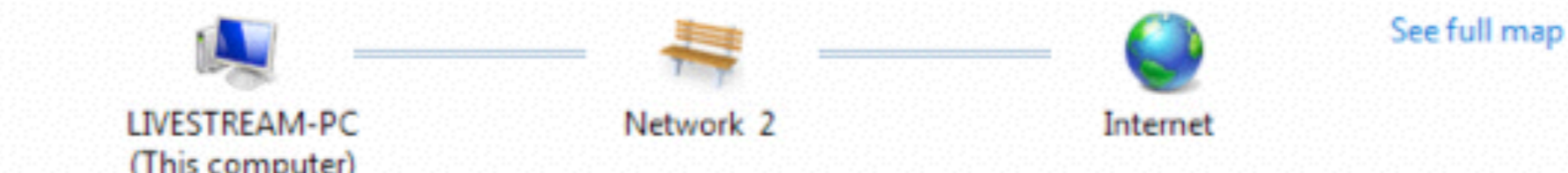
Internet connection

livestream

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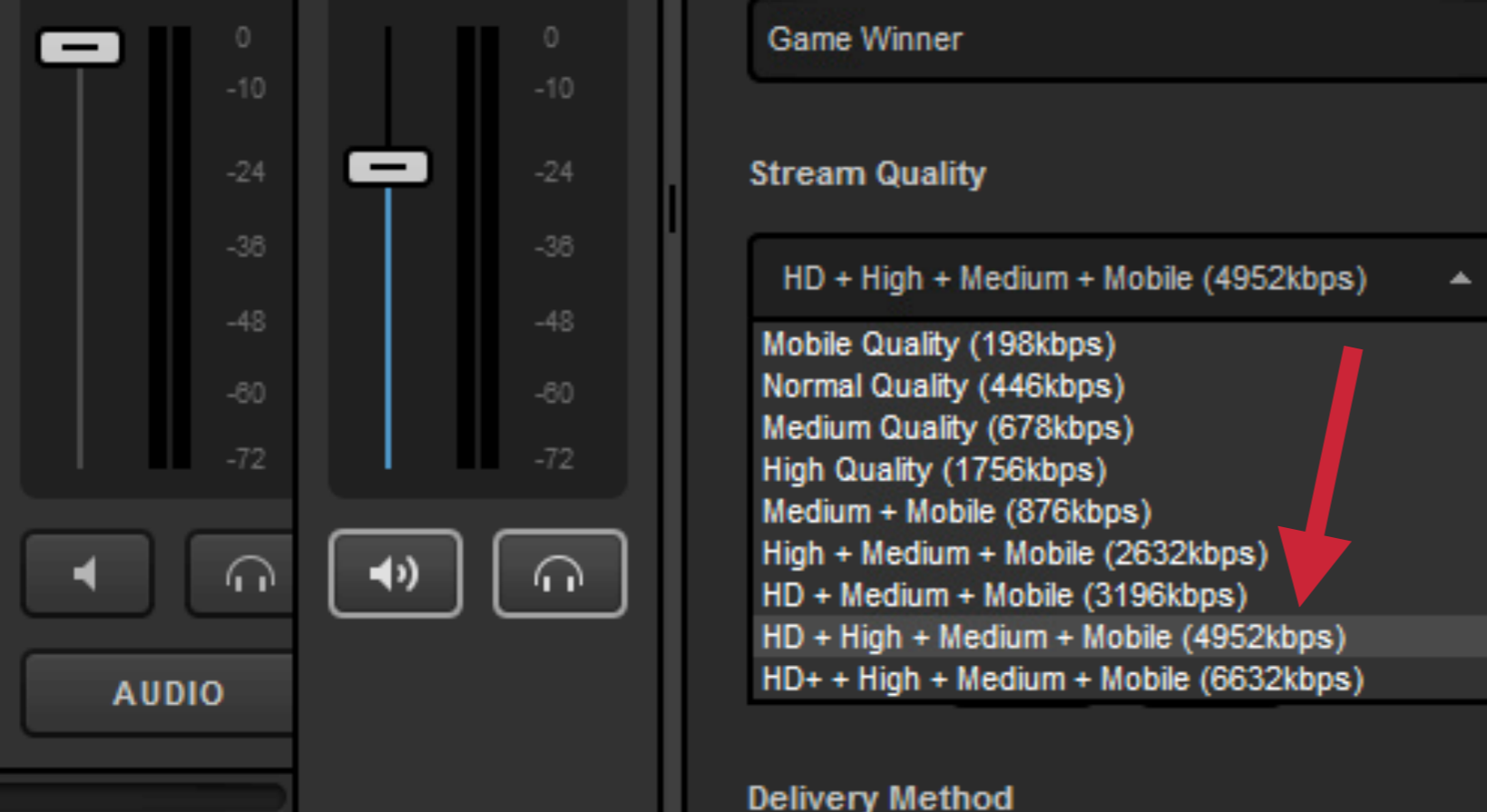
It is recommended that you have an upload speed at least twice as fast as the bitrate at which you wish to stream to help avoid issues related to local bandwidth fluctuation.

Check your upload speed at www.speedtest.net. 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

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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.

livestream

Logitech C920 HD Pro Webcam

B&H # LOWCC920 • Mfr # 960-000764

- HD 1080p Video At 30 fps
- Wide 78° Diagonal Field Of View
- Carl Zeiss Glass Autofocus Lens
- Omni-Directional Dual Stereo Microphones
- Multiple Mounting Options
- UVC H.264 Compliant
- Plug-And-Play

★★★★½ (127)

IN STOCK
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Price: $79.99
Instant Savings: $10.00
Limited supply at this price

You Pay: **$69.99**

1 🛒 ADD TO CART

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✴ Buy Used from **$44.95**

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.

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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

Free Expedited Shipping ⓘ

PayPal CREDIT   6 months No Payments

You Pay: **$1,499.00**

1   🛒 ADD TO CART

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▪▪ Essential Kits
$ Trade-in your gear for cash

Ratings: ★★★★⯨ 262 reviews ➕ write a review

Product Highlights

- 1/3" CMOS Sensor
- 10x HD Zoom Lens

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.

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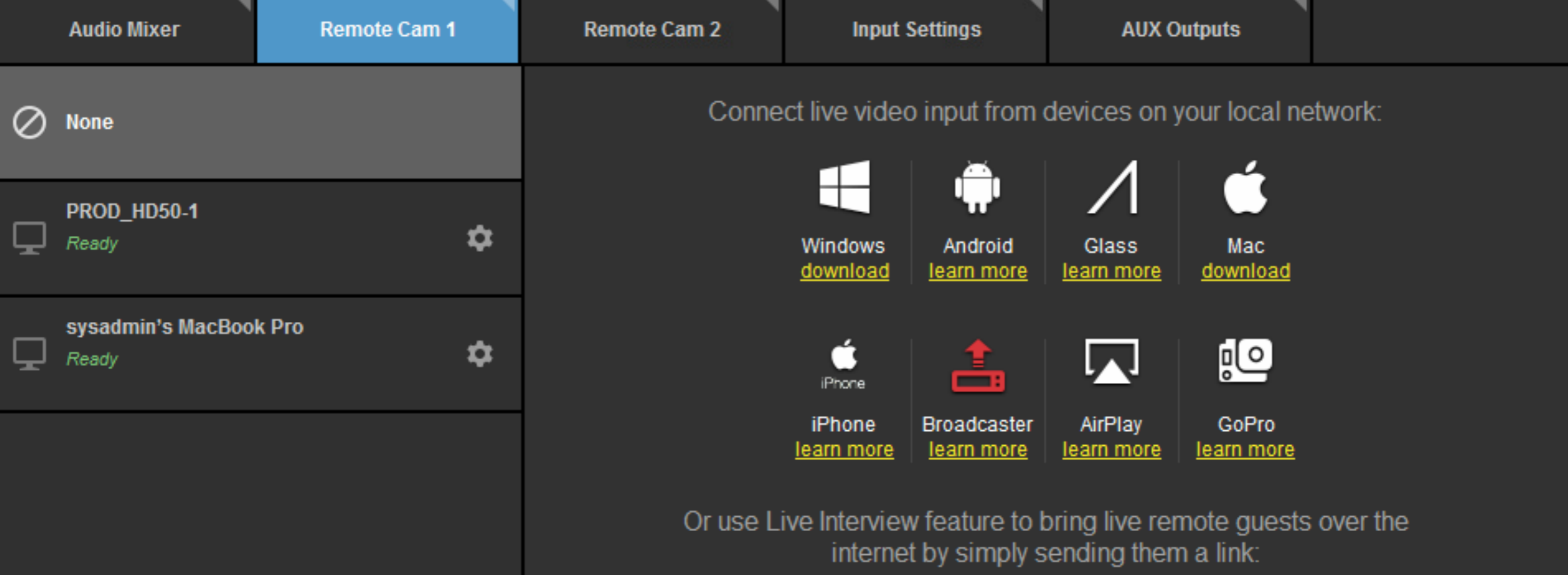
This setup will introduce some input latency and the picture quality will be diminished compared to plugging into Livestream Studio directly.

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.

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

Getting started with Livestream Studio

Connecting cameras to your system

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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.
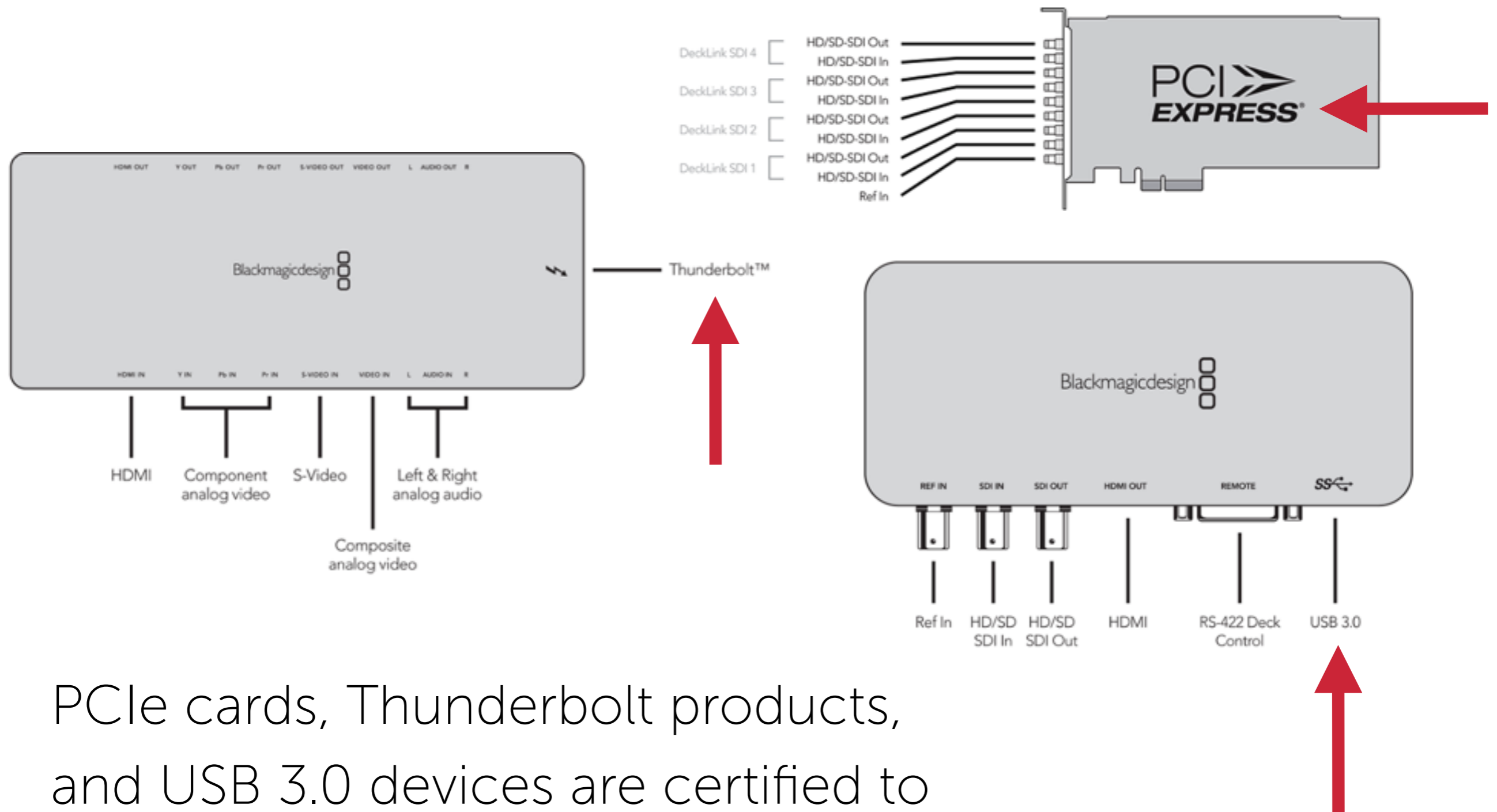
PCIe cards, Thunderbolt products, and USB 3.0 devices are certified to work with Livestream Studio. A full list of compatible devices is available in the <u>help center</u> and <u>Appendix A</u>.

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.

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

'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**.

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.

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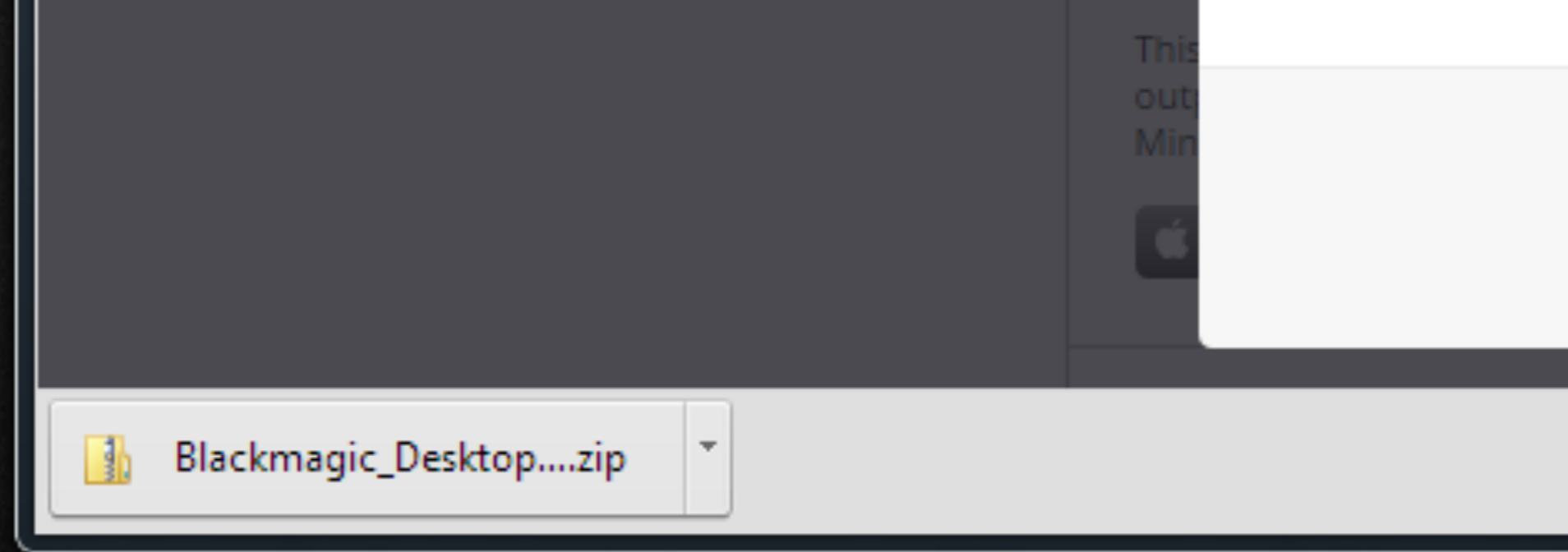
When the download completes, open the .zip file and follow the simple on-screen steps to install. Once installation is complete, restart your computer.

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)

To check that your system is receiving a video in through the device, open Blackmagic Media Express.
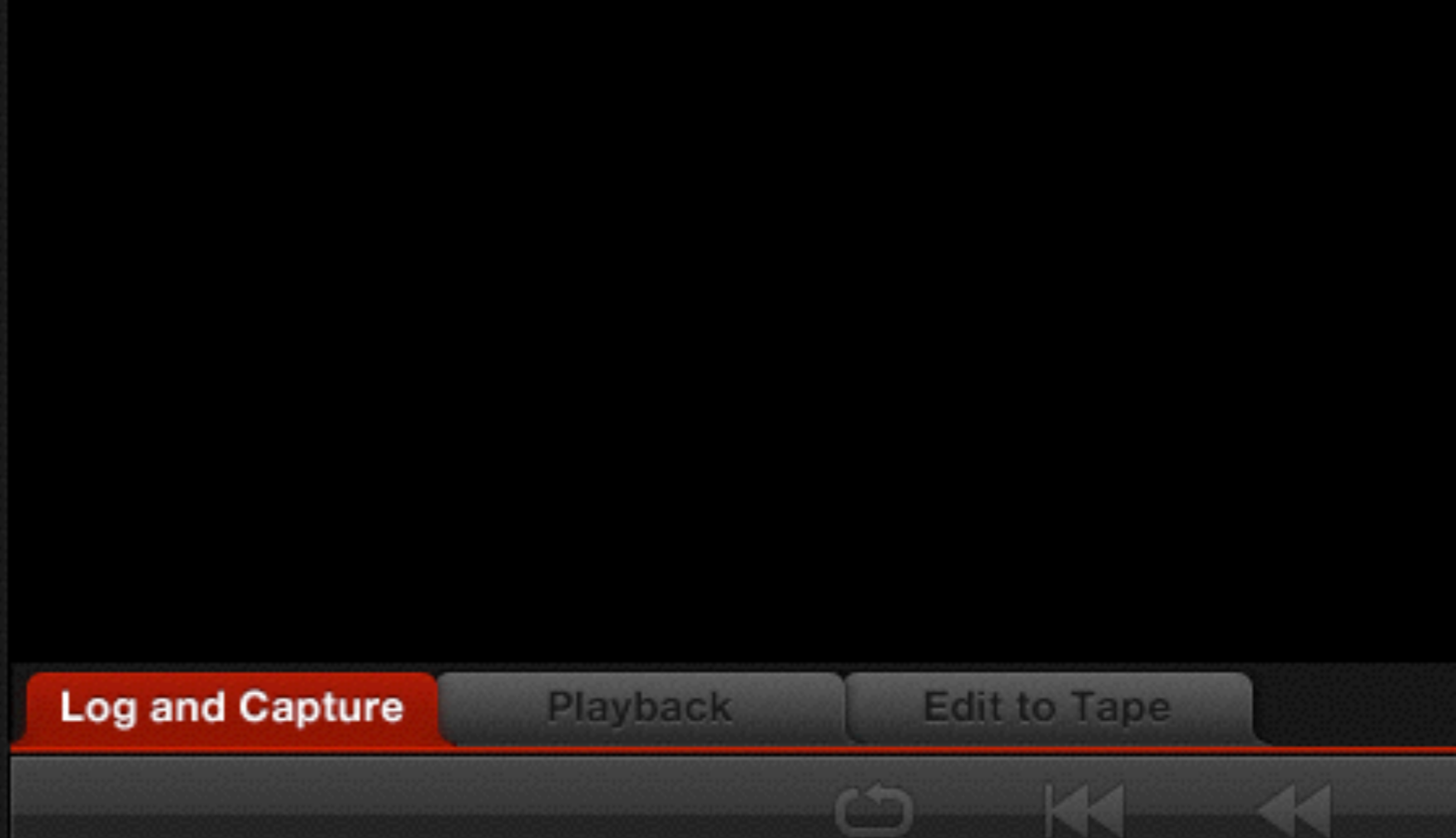
Click on the '**Log and Capture**'
tab underneath the player.
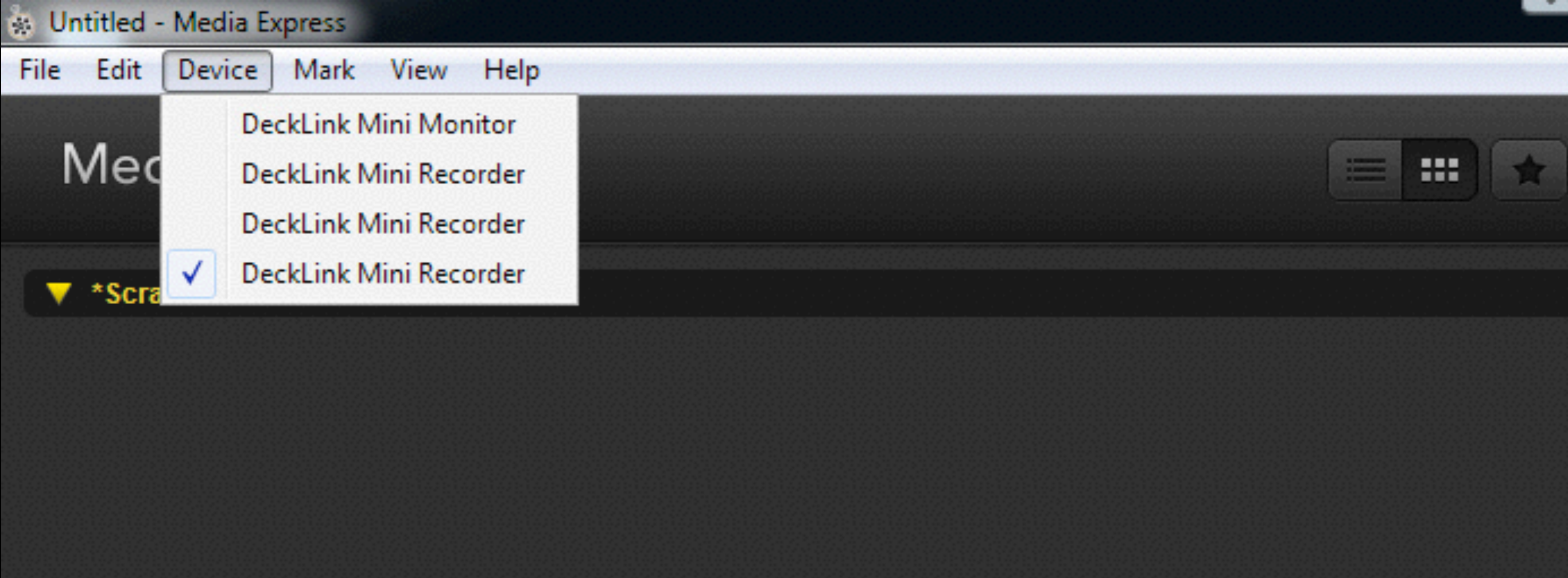
Select the device you want to check on the 'Devices' menu.

Next, go to 'Edit' and select the
'Preferences' menu.
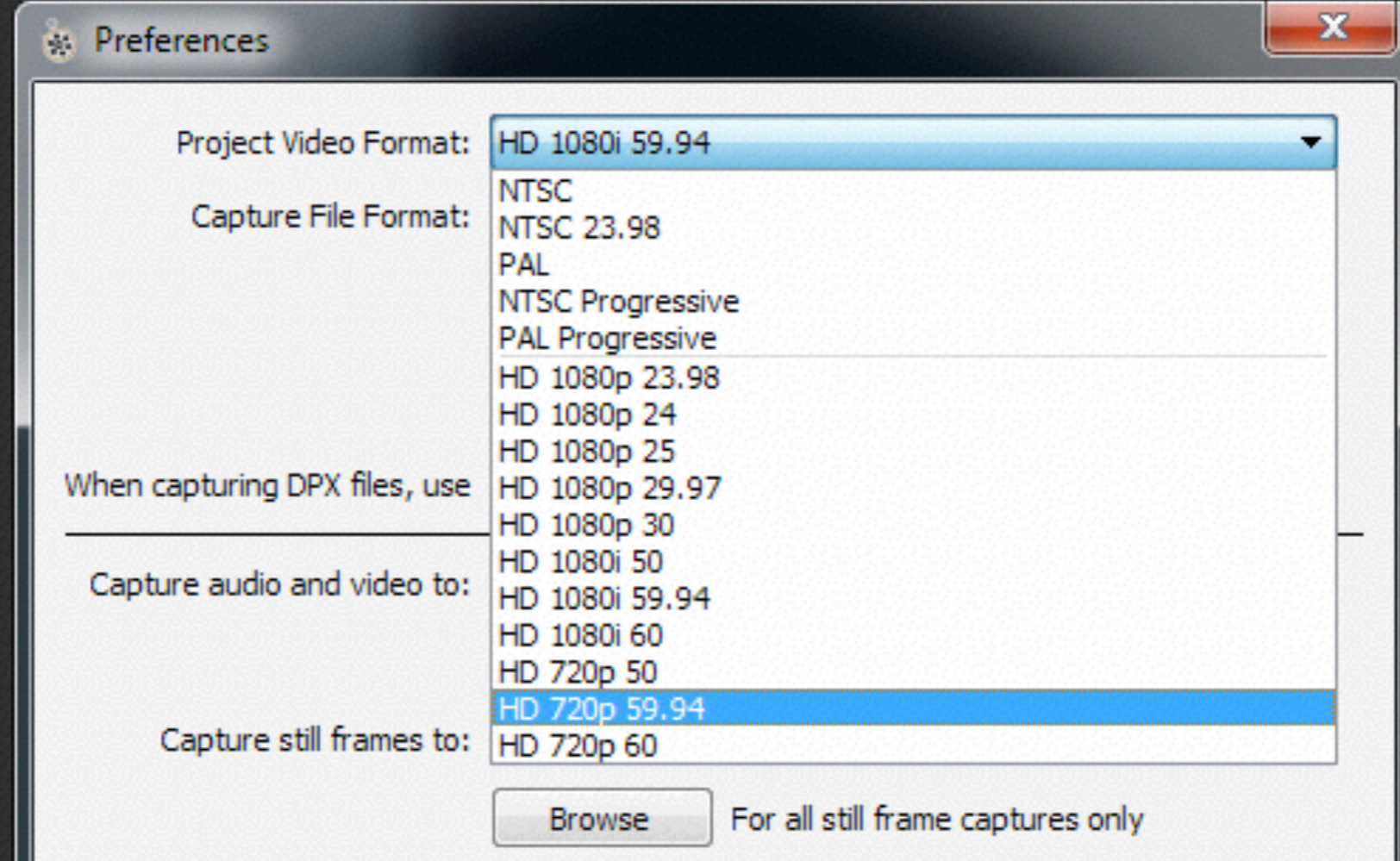
Under 'Project Video Format,' select the format your camera is outputting, then click 'OK' at the bottom of the window.
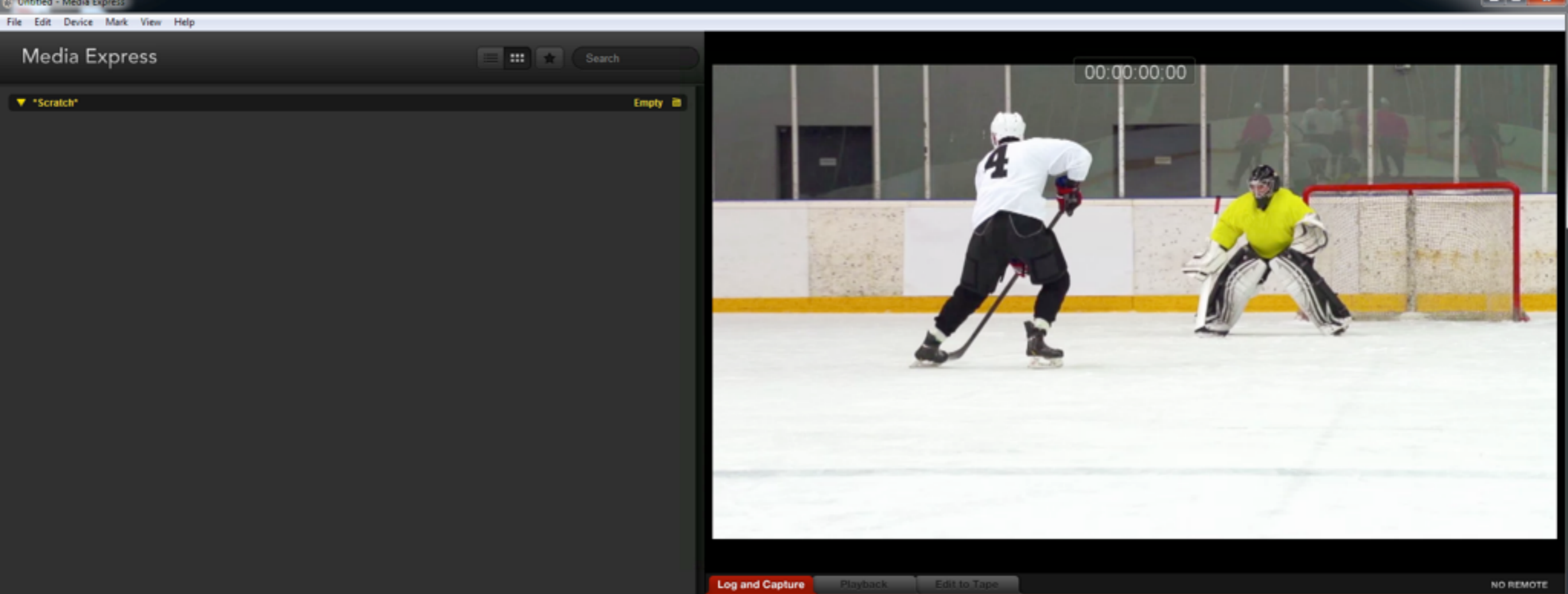
Your video signal should now appear in the Media Express player, confirming that you have a video signal coming into your system.

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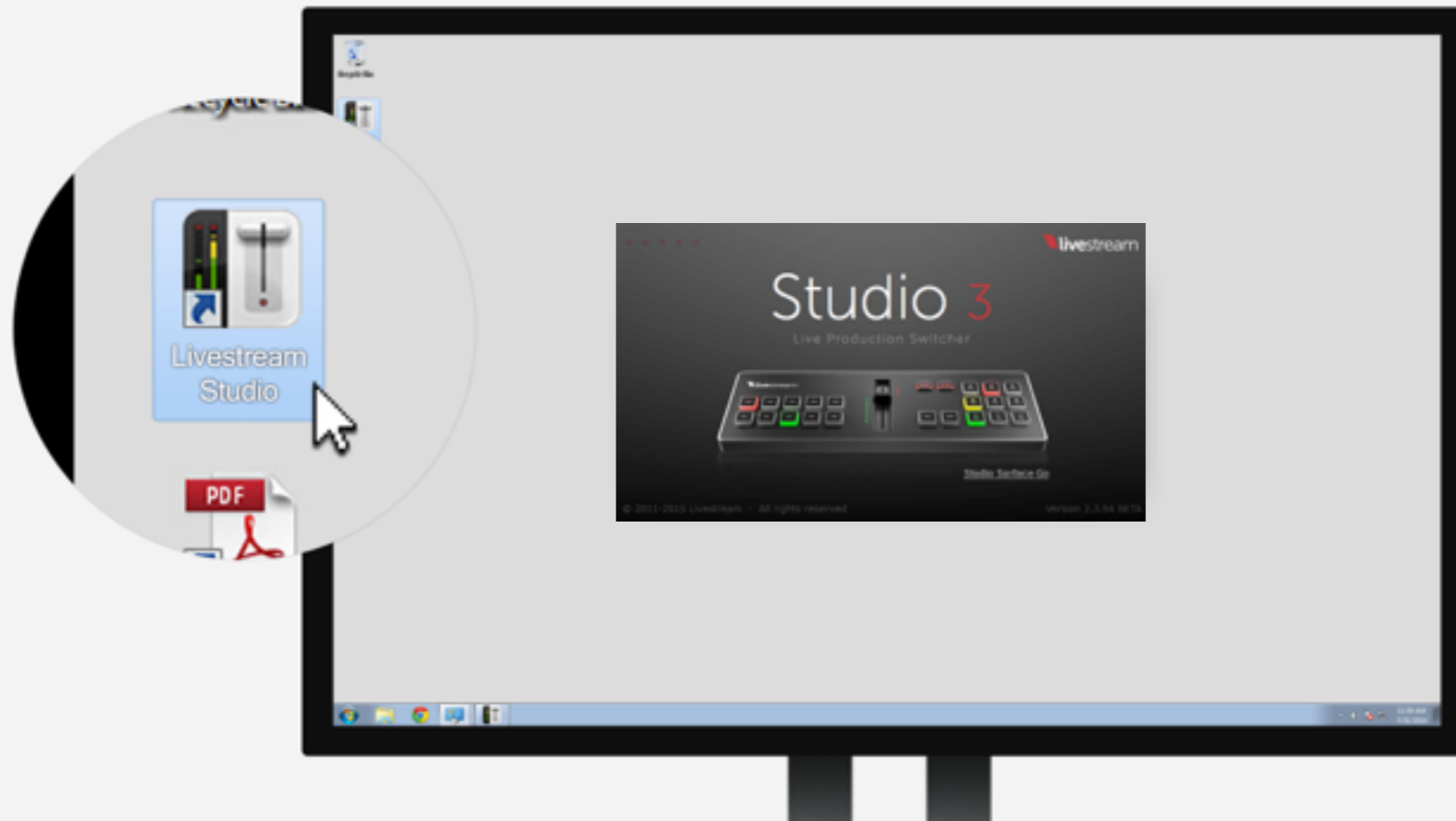
If you purchased a Livestream
Studio hardware product,
Livestream Studio software is
pre-installed on your unit.

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 livestream.com/studio by clicking on the 'Download Free' button.
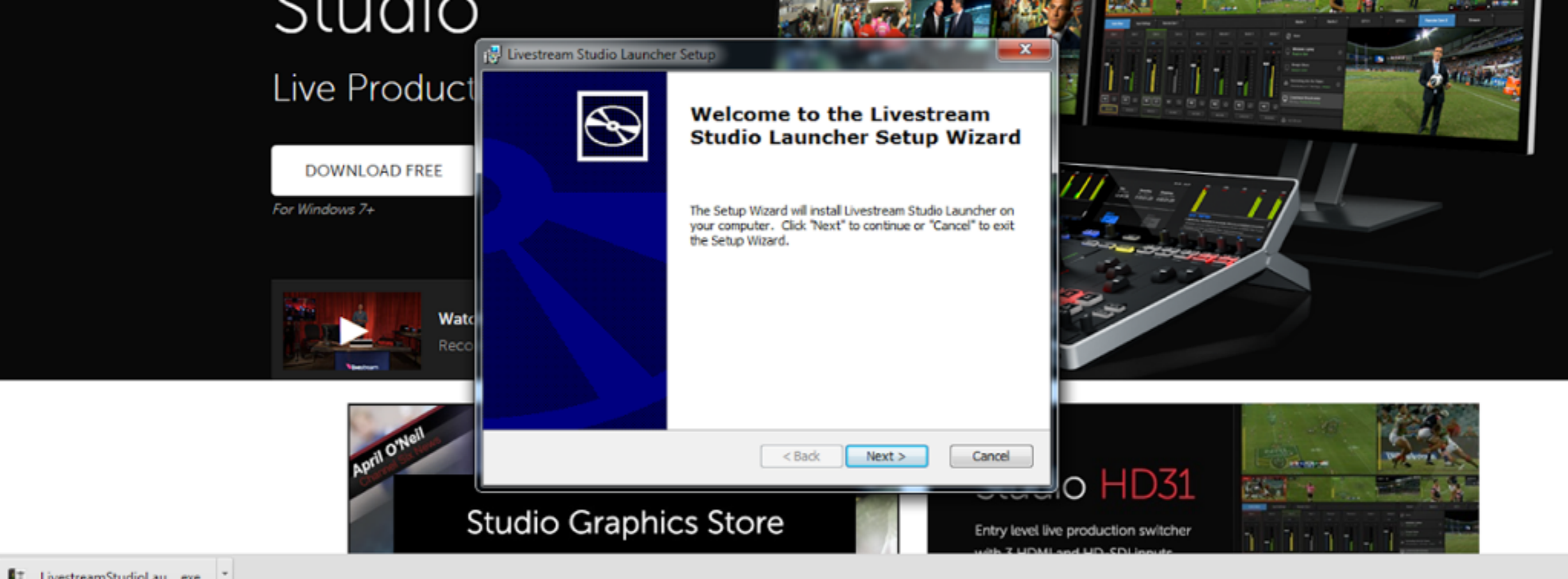
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Once the download completes,
click on the installer file and run it.
It will bring you to the installation
wizard for the Livestream Studio
Launcher.
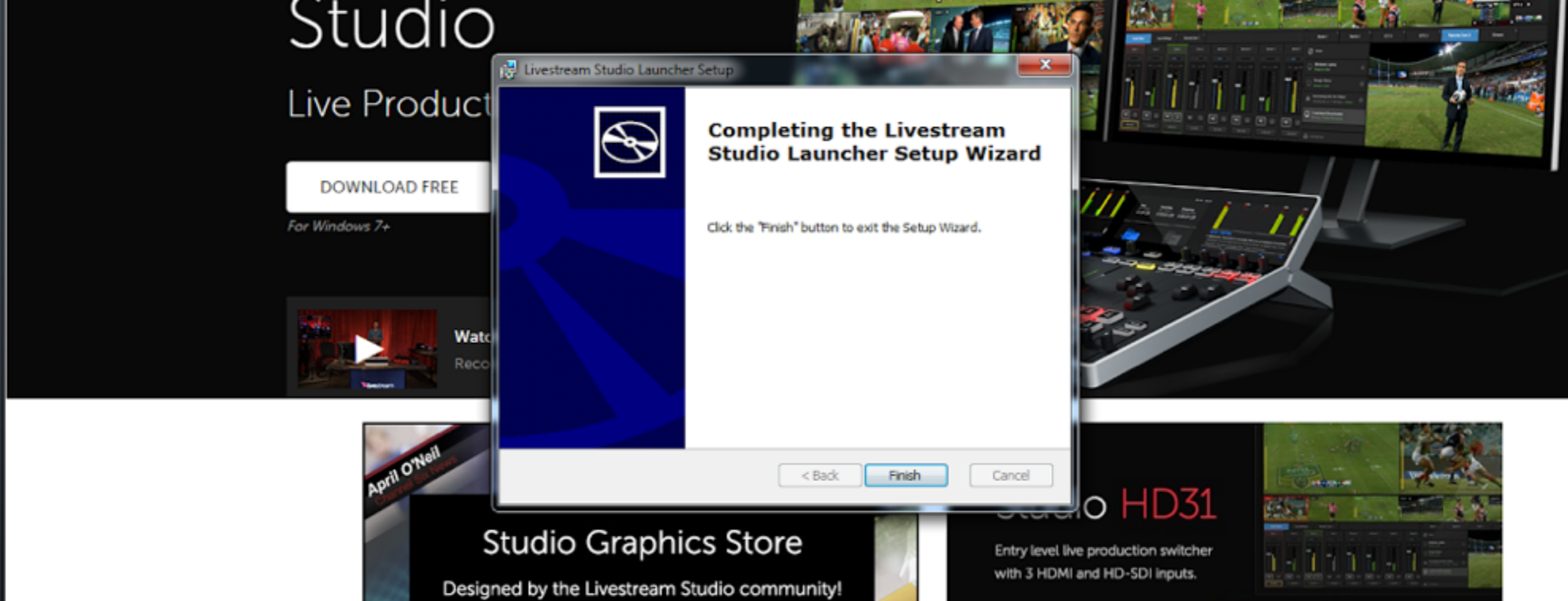
Follow the on-screen steps to
complete the installation process,
then click 'Finish' in the wizard.
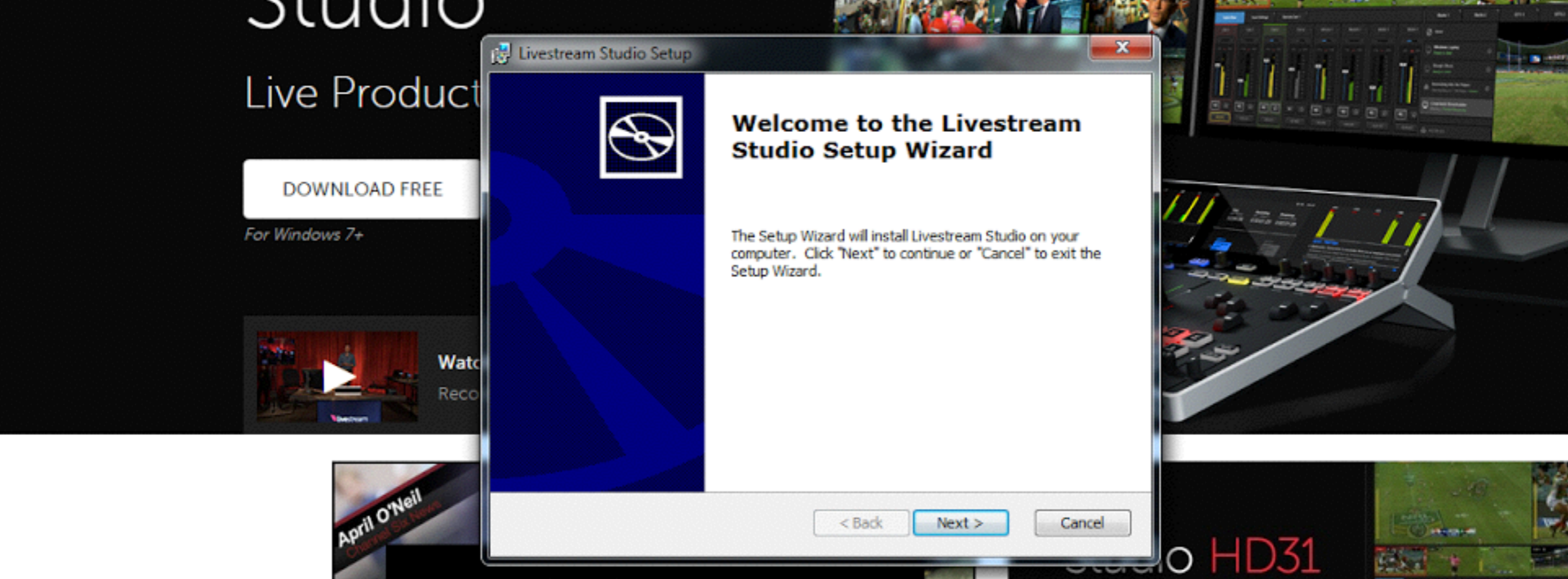
The Livestream Studio Launcher
will open and prompt you to
install the software via another
installation wizard.

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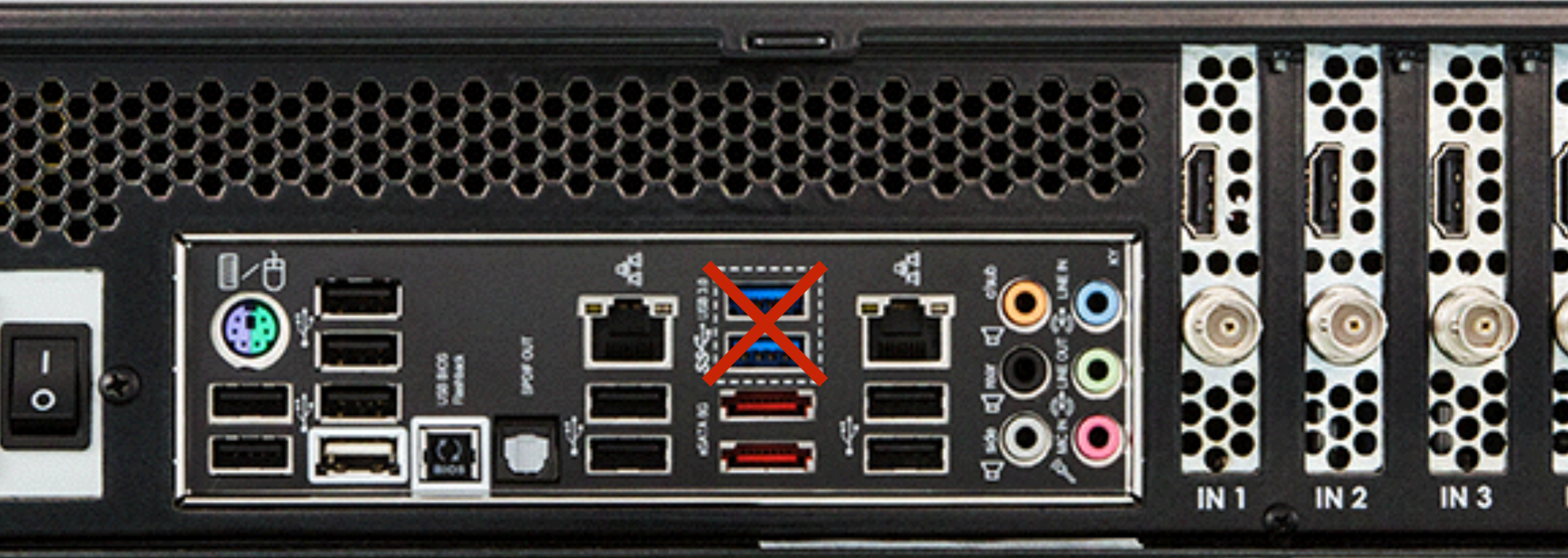
Be sure to plug the dongle into a USB 2.0 port (black), **not** a USB 3.0 port (blue).

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
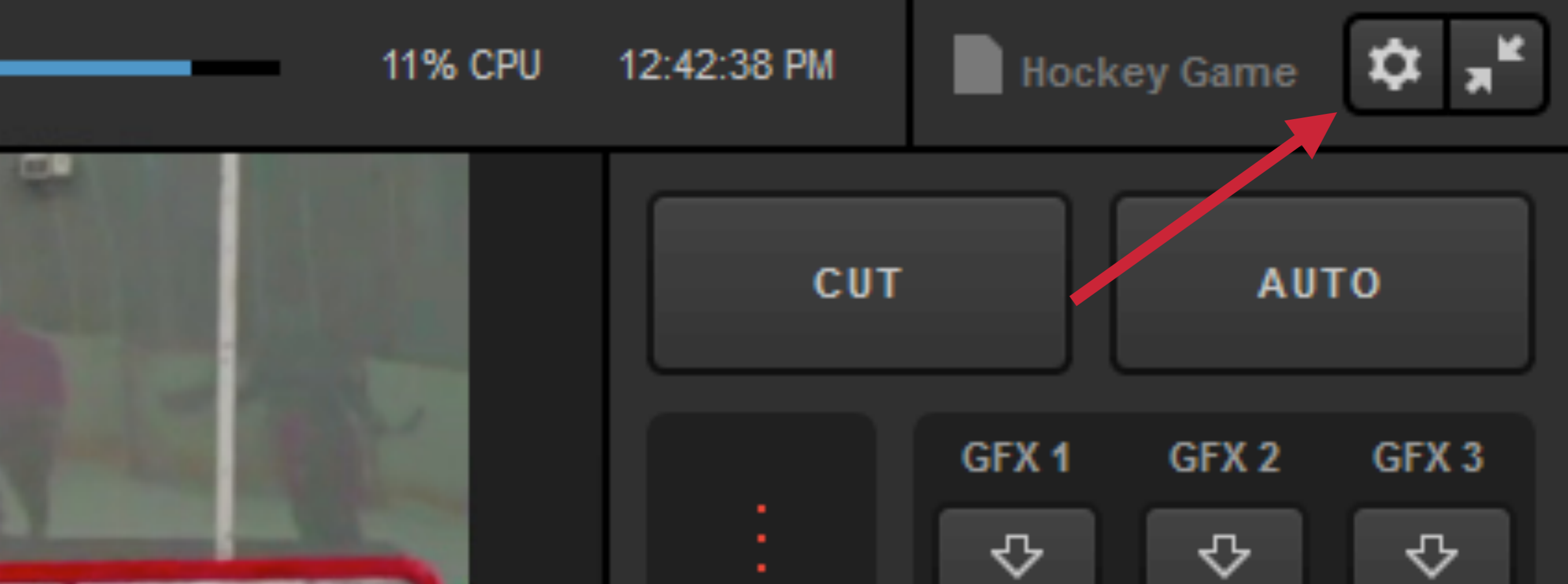
In the upper right corner of Livestream Studio, you will see a small gear wheel button. Click on it to access Livestream Studio settings.
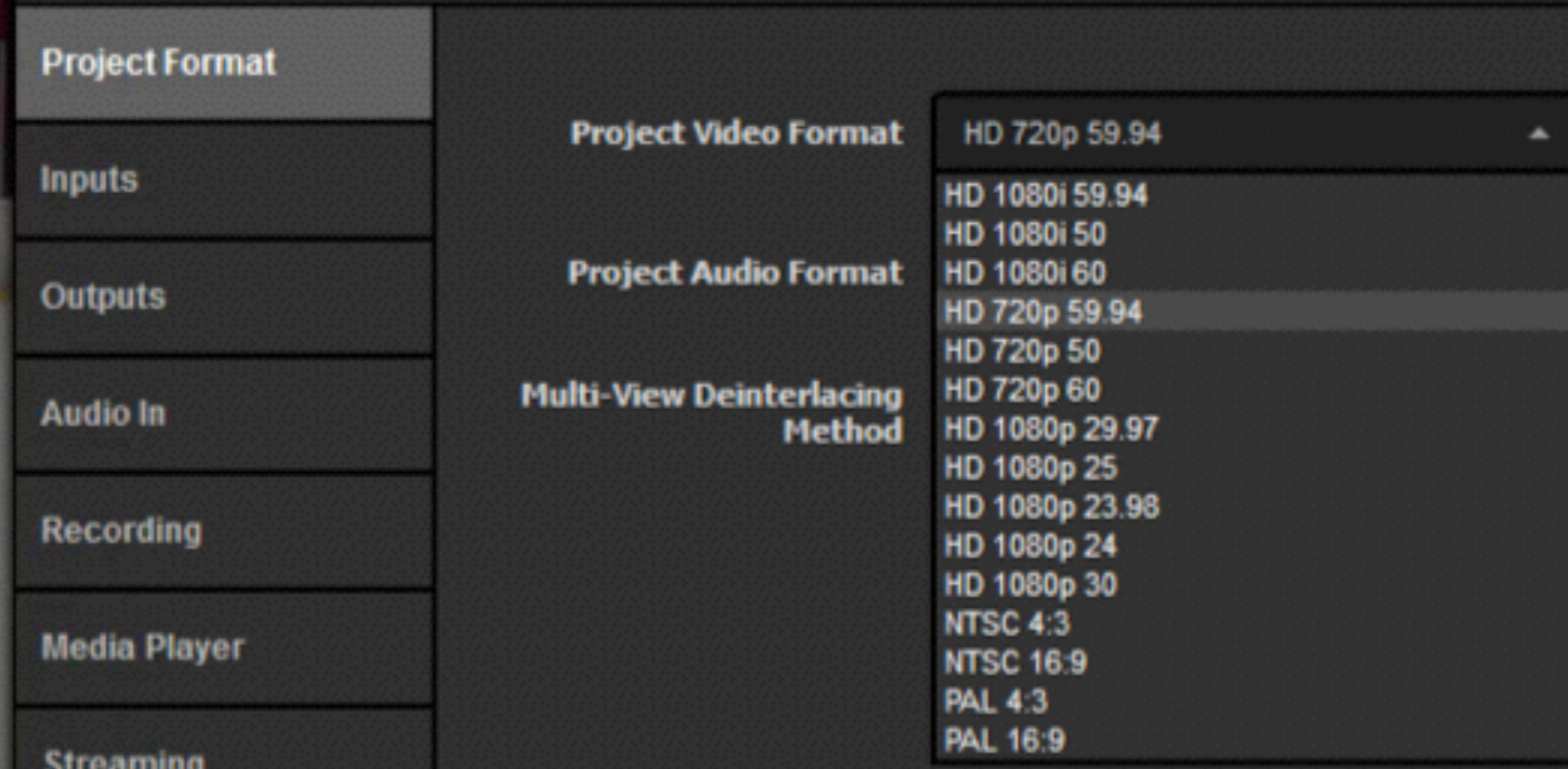
The first tab is 'Project Format.'
Here you have a wide variety of
HD broadcast quality formats to
choose from by default.

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.

Inputs		
Outputs	**Project Audio Format**	48kHz Stereo ▼
Audio In	**Multi-View Deinterlacing Method**	All Frames ▼
Recording	**Broadcast Standard**	○ Ultra HD
Media Player		● High Definition mode
		○ Low Definition mode
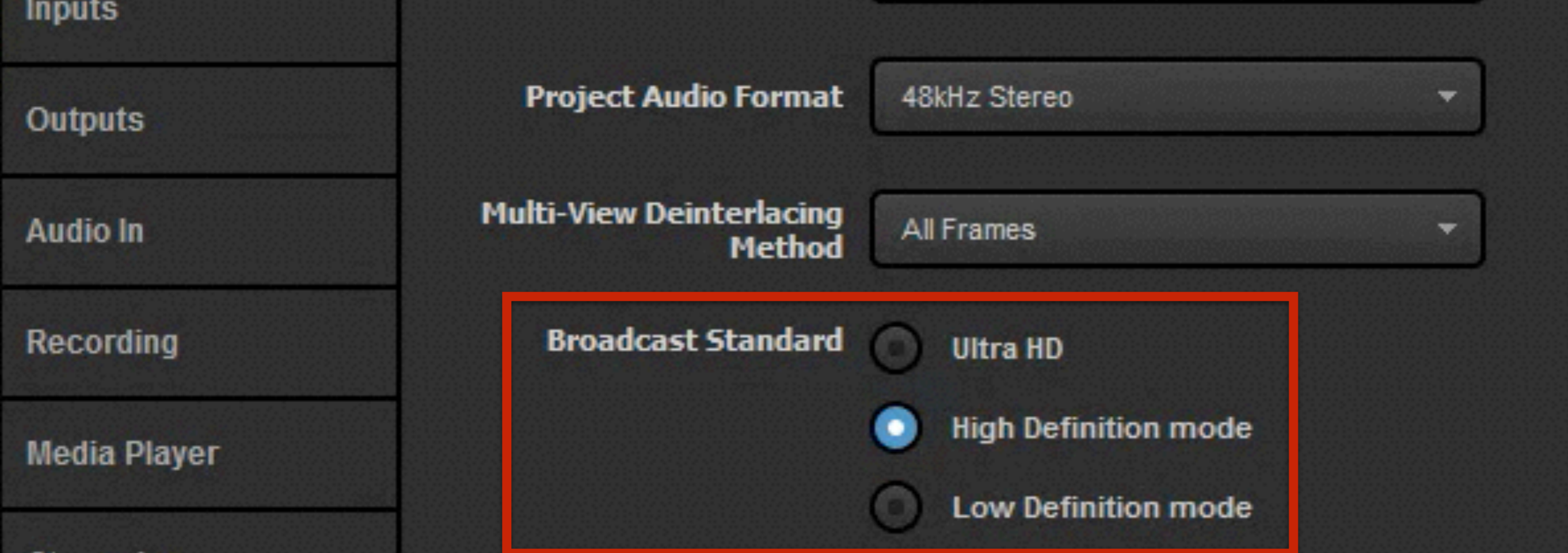
Further down in the menu, there is an option for Broadcast Standard. High Definition is selected by default, but Ultra HD and Low Definition mode give Livestream Studio more flexibility with other setups.
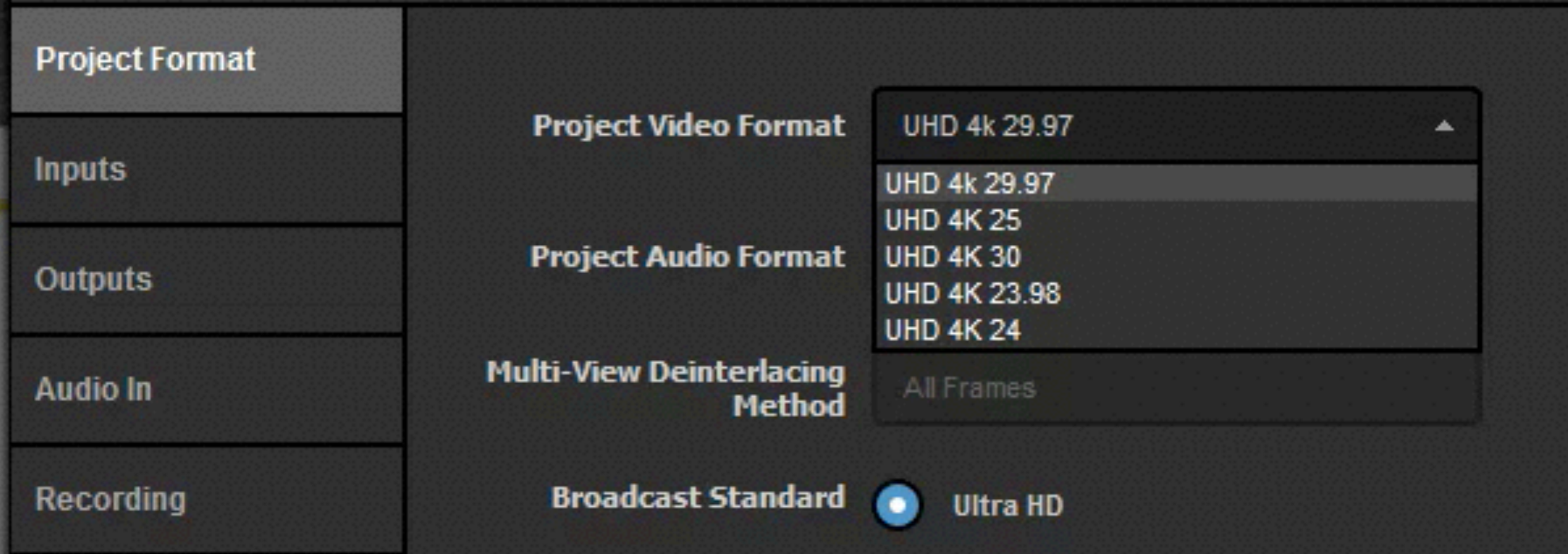
Selecting 'Ultra HD' will allow you to
choose a 4K format as your project format.
This means that your internal processing,
recording and output via blackmagic
device will be done in a 4K format.
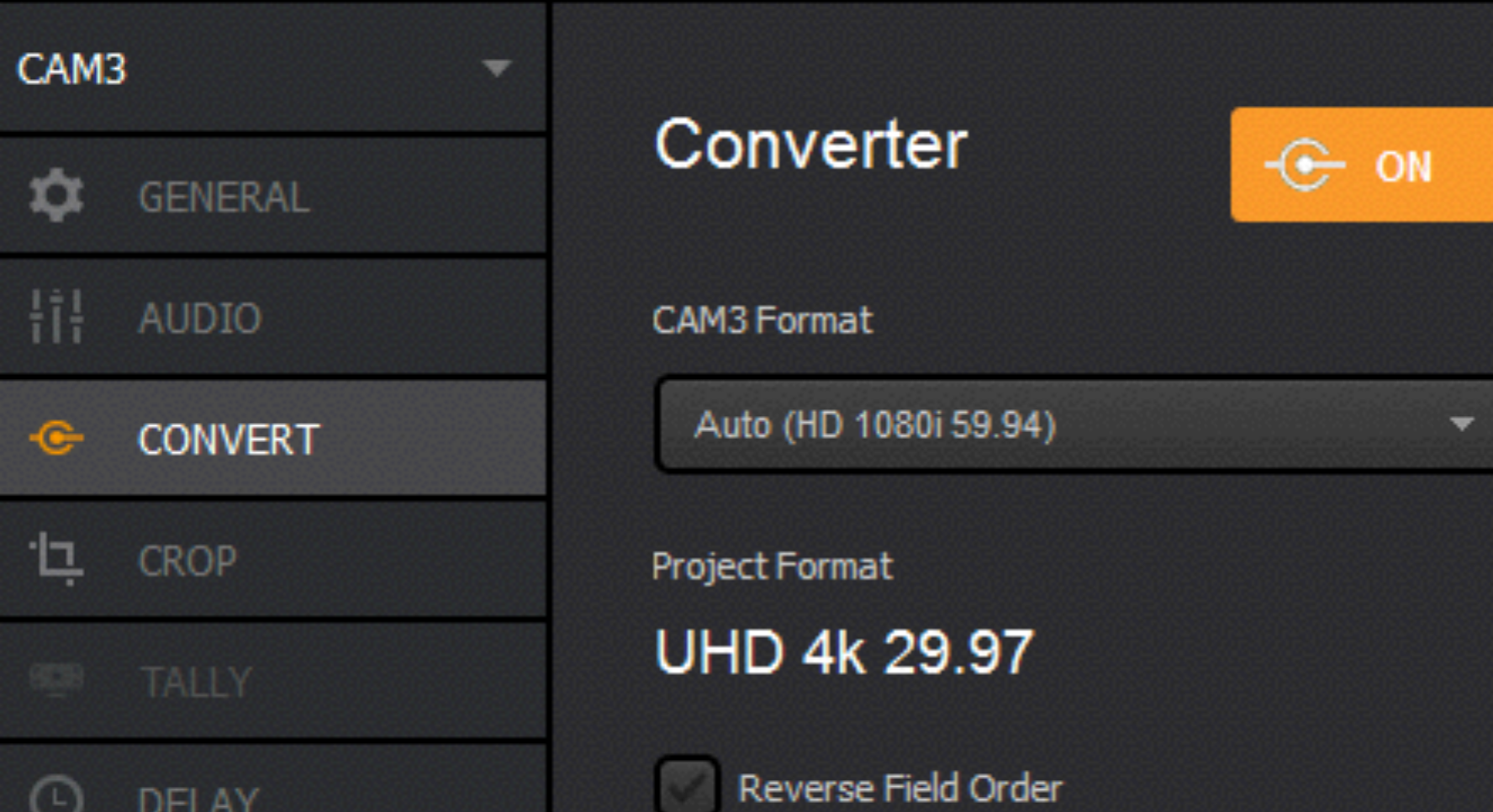
Any camera sources that are not in 4K can be converted under the '**Input Settings**' tab. Please note that using the converter may increase your CPU usage.

Stream Quality

Medium Quality (678kbps) ▲

Mobile Quality (198kbps)
Normal Quality (446kbps)
Medium Quality (678kbps)
High Quality (1756kbps)
Medium + Mobile (876kbps)
High + Medium + Mobile (2632kbps)
HD + Medium + Mobile (3196kbps)
HD + High + Medium + Mobile (4952kbps)
HD+ + HD + High + Medium + Mobile (8952kbps)

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 and YouTube can reach up to 1080p.

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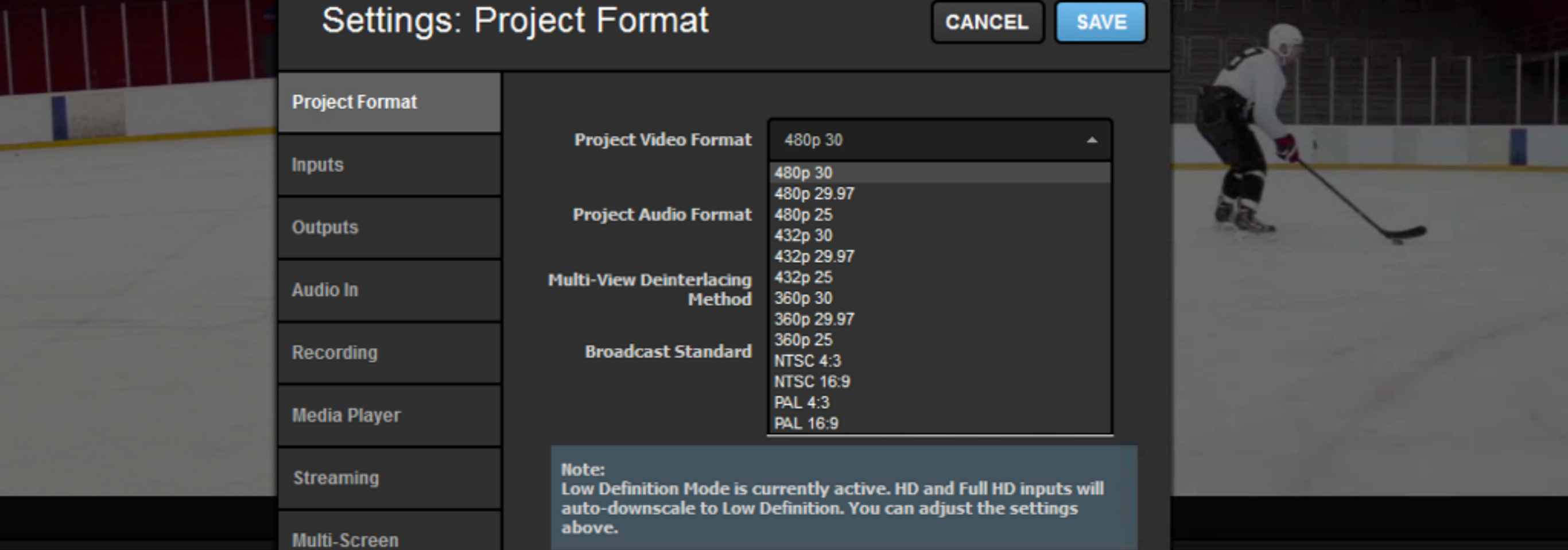
Selecting 'Low Definition mode' provides lower standard definition project formats, which are ideal for use on low performance computers and laptops.

Audio Mixer

Remote Cam 1

Remote Cam 2

CAM1

⚙ GENERAL

AUDIO

⟲ CONVERT

CROP

TALLY

DELAY

CLOSED CAPTIONS

Converter

⟲ ON

Tip

For best video output quality please avoid using a converter. You can try changing your project format in the Settings > Project Format tab or change the format of the incoming source to match your project format.

CAM1 Format

Auto (HD 720p 59.94)

Project Format

480p 29.97

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

livestream

lease avoid using a
g your project format
at tab or change the
to match your project

Emily Knox ▾   Penalty Shot ▾

Stream Title

Game winnter

Stream Quality

480p Quality (1128kbps)

Delivery Method

◯ Bonded network

⦿ 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.

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HDMI Status
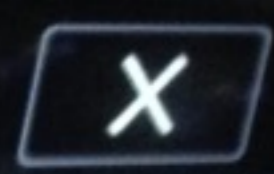
Video Output
HDMI 1920×1080p

Audio Output
2ch PCM

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.

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Adding and formatting your video inputs

Configuring input sources

livestream
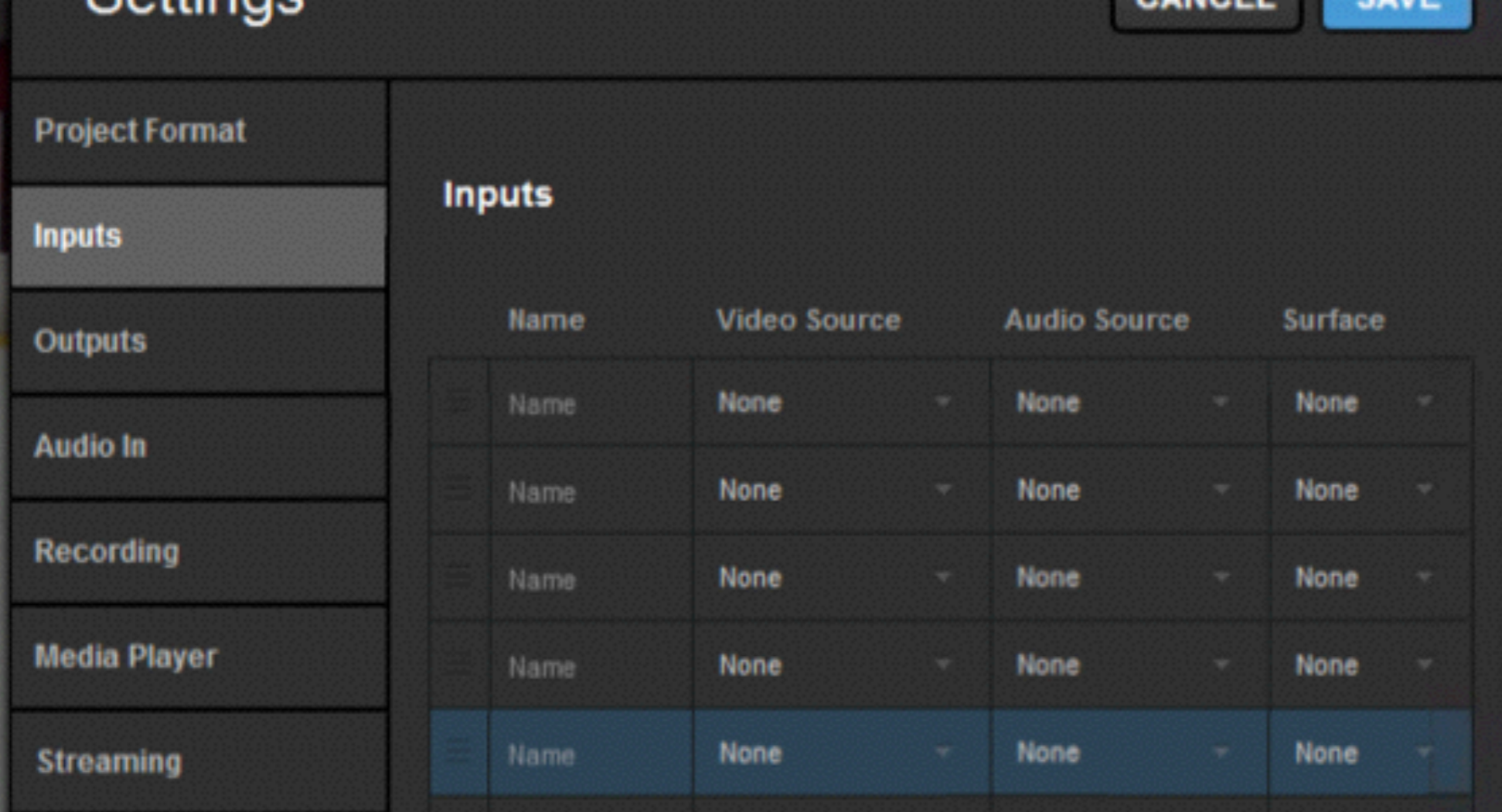
The next tab in Settings is 'Inputs.' This is where you can choose every input source to use in your production, including graphics overlays, media, remote cameras, etc.
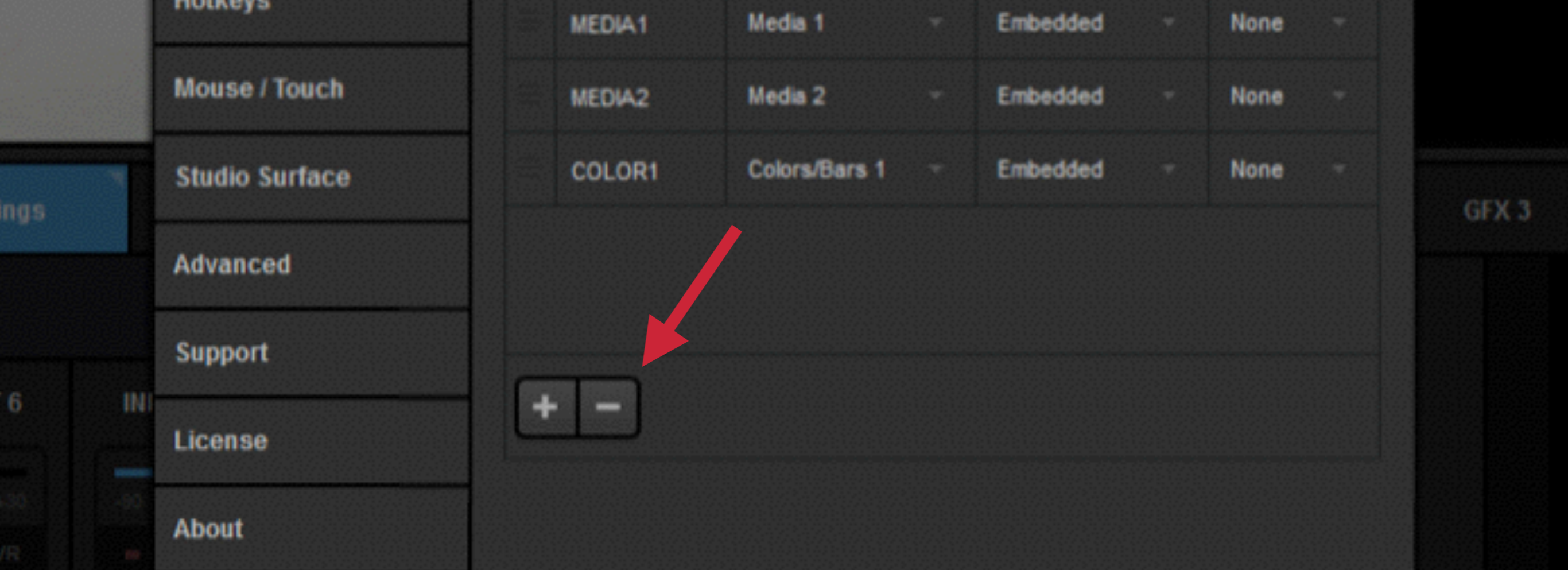
Notice that on the bottom left corner of the window, there are '**+**' and '**-**' buttons. These allow you to add or remove inputs.
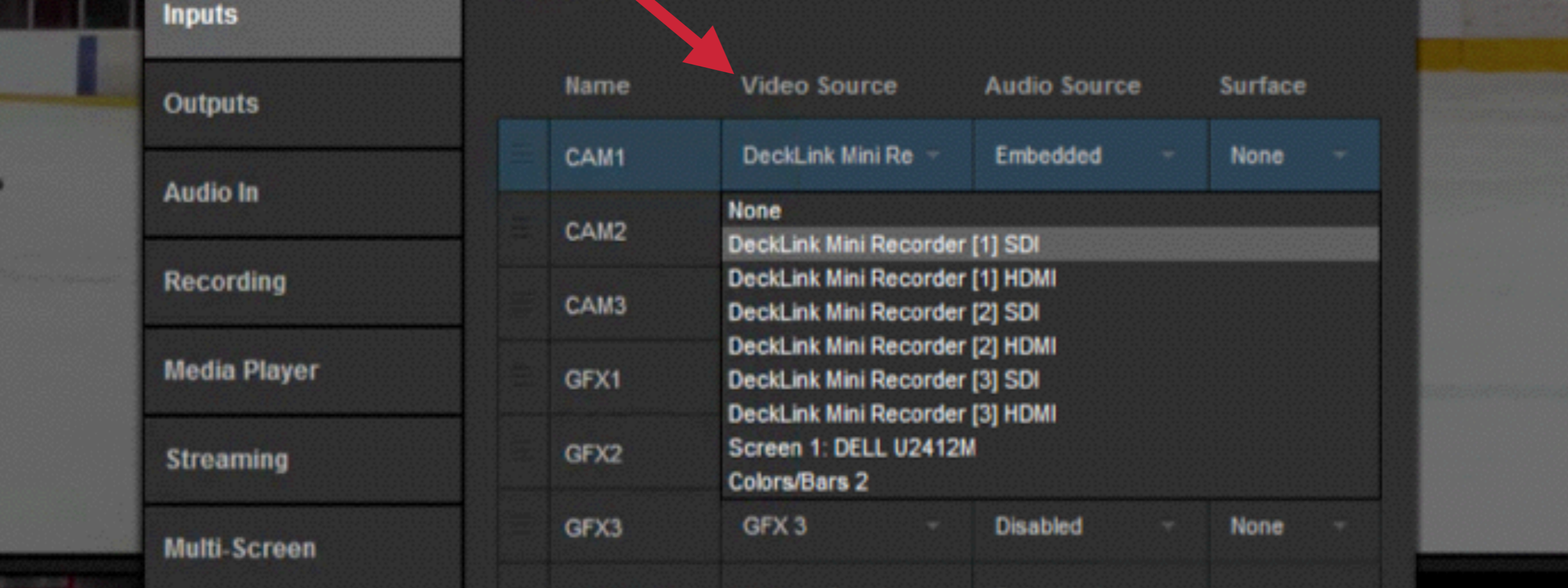
Start on the **Video Source** column. Click on the dropdown menu to select your source.

Recording	CAM3	DeckLink Mini Re ▾	Embedded ▾	None ▾
Media Player	GFX1	None		
		DeckLink Mini Recorder [1] SDI		
Streaming	GFX2	DeckLink Mini Recorder [1] HDMI		
		DeckLink Mini Recorder [2] SDI		
		DeckLink Mini Recorder [2] HDMI		
Multi-Screen	GFX3	DeckLink Mini Recorder [3] SDI		
		DeckLink Mini Recorder [3] HDMI		
Ad Insertion	REMOTE1	Screen 1: DELL U2412M		
		Colors/Bars 2		
	REMOTE2	Remote Cam 2 ▾	Embedded ▾	None ▾
Hotkeys	MEDIA1	Media 1 ▾	Embedded ▾	None ▾

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

	Name	Video Source	Audio Source	Surface
	CAM1	DeckLink Mini Re	Embedded	None
			Embedded	
	CAM2	DeckLink Mini Re	Embedded	None
	CAM3	DeckLink Mini Re	Embedded	None
	GFX1	GFX 1	Disabled	None
	GFX2	GFX 2	Disabled	None

Sidebar: Inputs, Outputs, Audio In, Recording, Media Player, Streaming

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.).

	Name	Video Source	Audio Source	Surface
	CAM1	DeckLink Mini Re ▾	Embedded ▾	None ▾
	JIB|	DeckLink Mini Re ▾	Embedded ▾	None ▾
	CAM3	DeckLink Mini Re ▾	Embedded ▾	None ▾
	GFX1	GFX 1 ▾	Disabled ▾	None ▾
	GFX2	GFX 2 ▾	Disabled ▾	None ▾
	GFX3	GFX 3 ▾	Disabled ▾	None ▾

Inputs
Outputs
Audio In
Recording
Media Player
Streaming
Multi-Screen

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.

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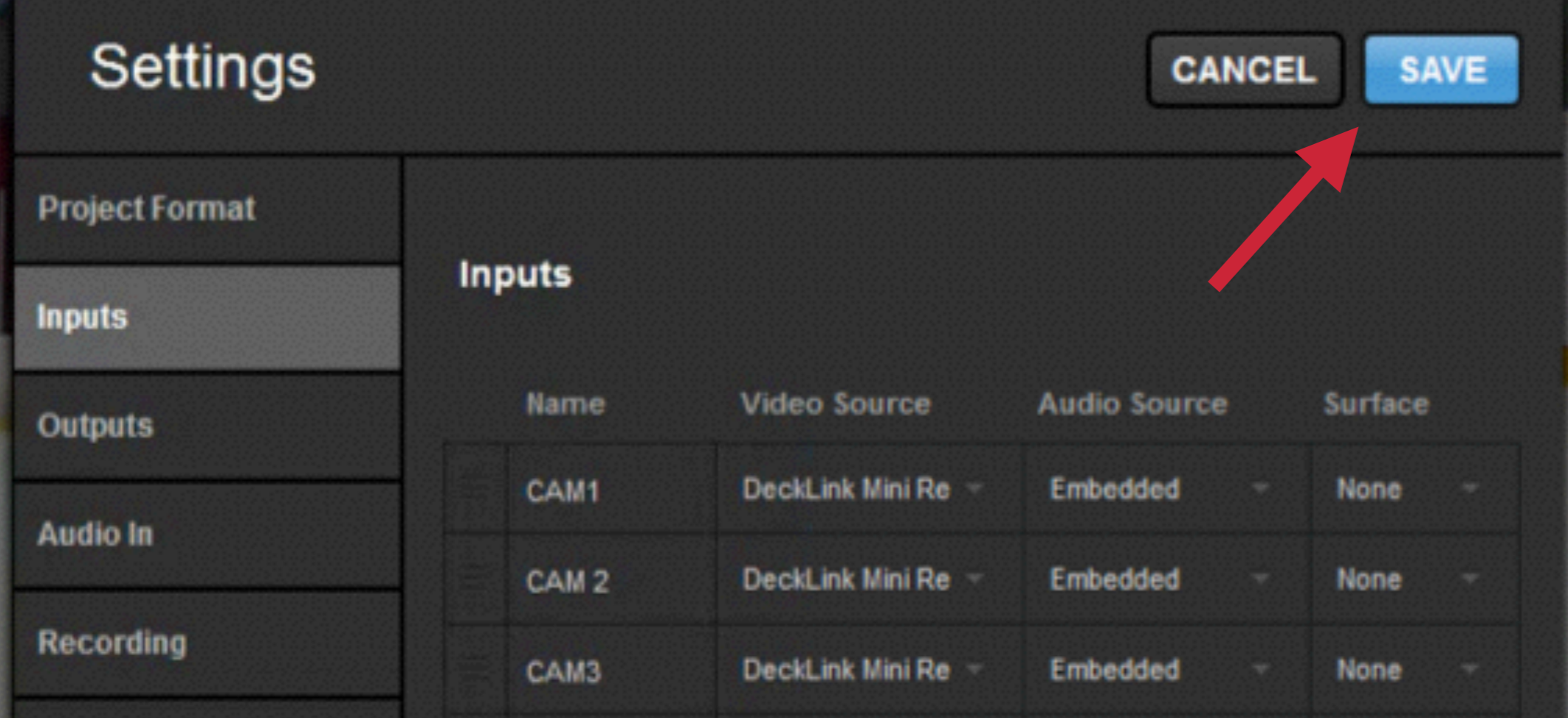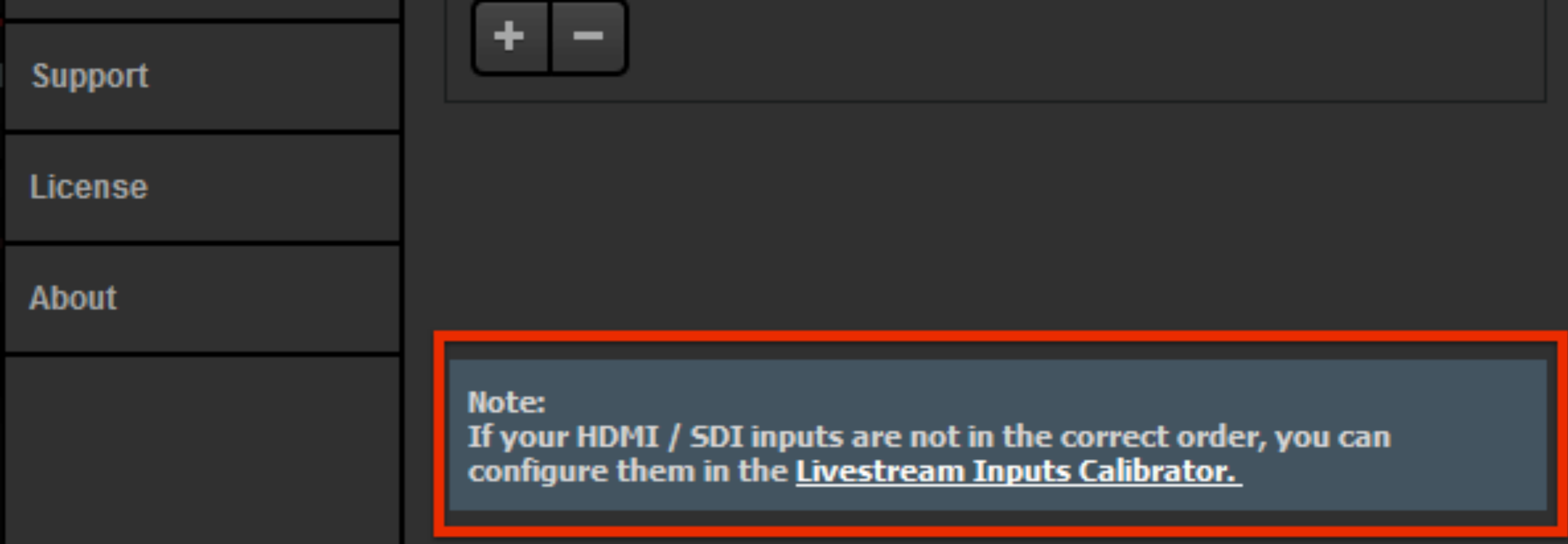
When you have finished setting your output and desired inputs, press 'Save' in the upper right corner.

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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Note:
If your HDMI / SDI inputs are not in the correct order, you can configure them in the **Livestream Inputs Calibrator.**

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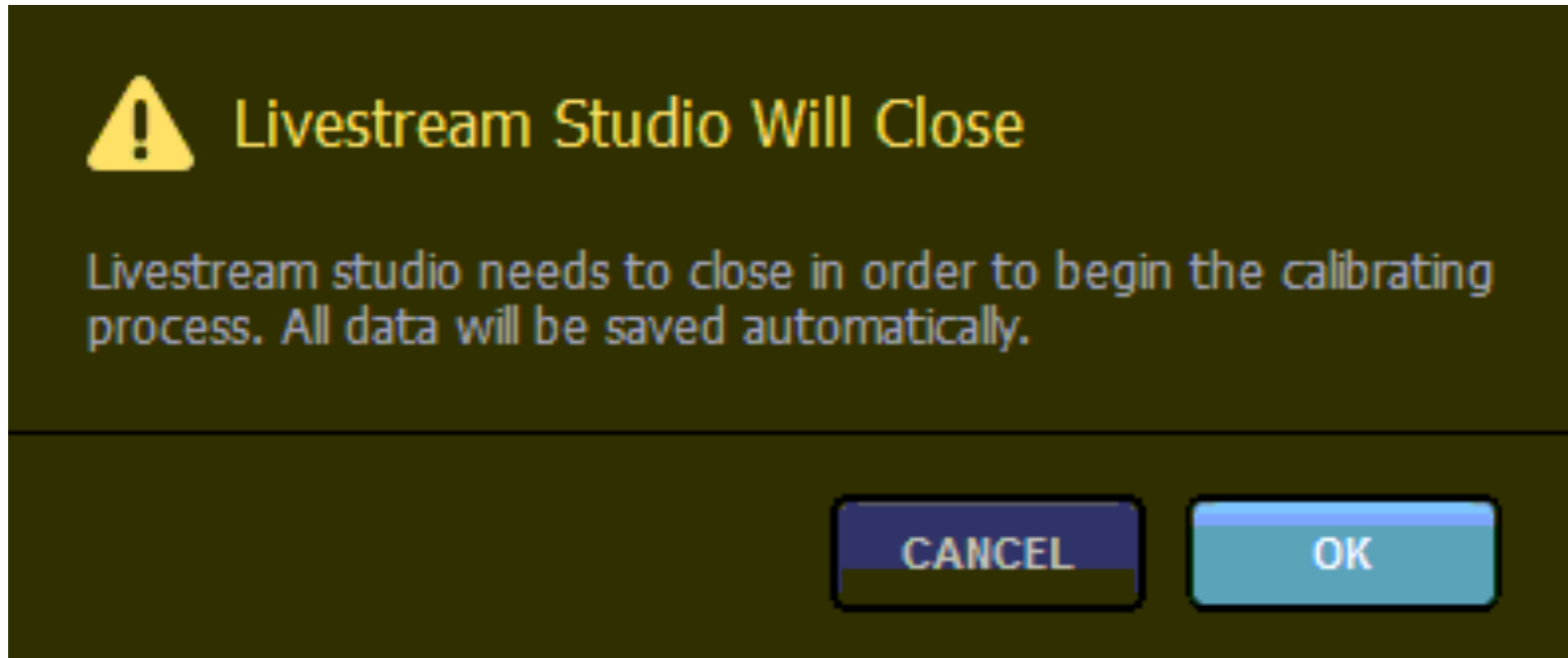
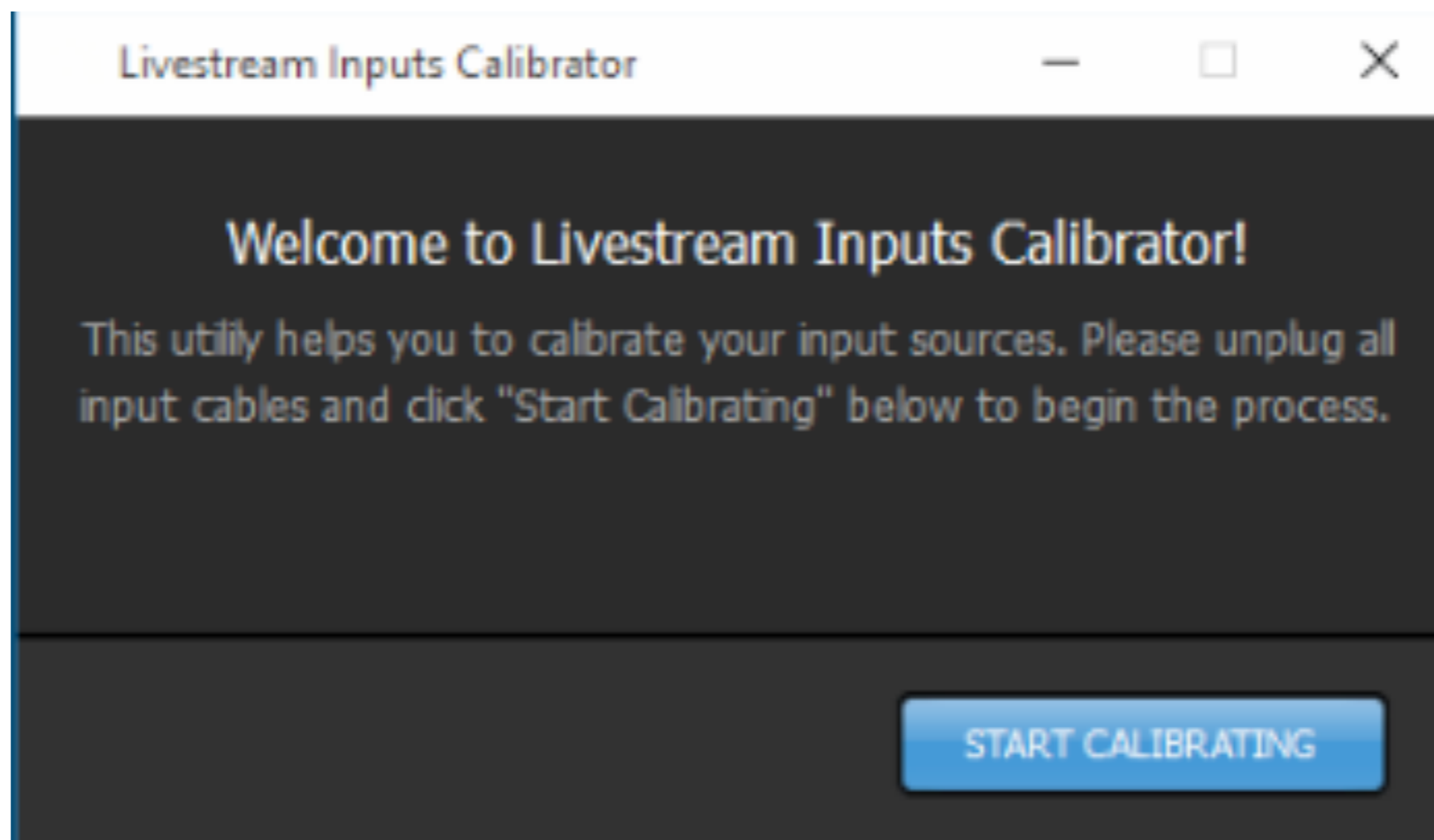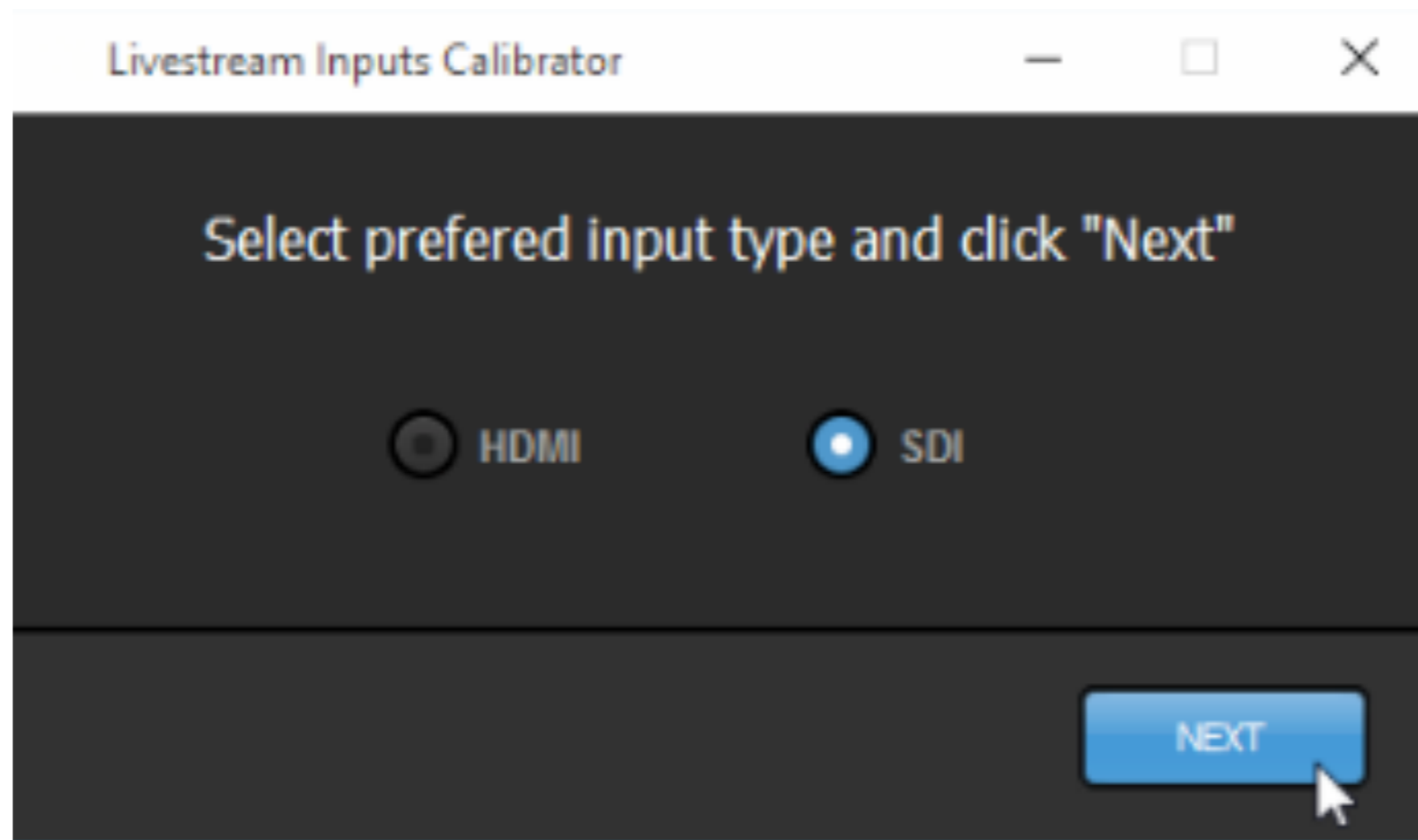Clicking the link will pop up a notification that Livestream Studio will need to close to proceed.
Click 'OK.'

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.'

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.'
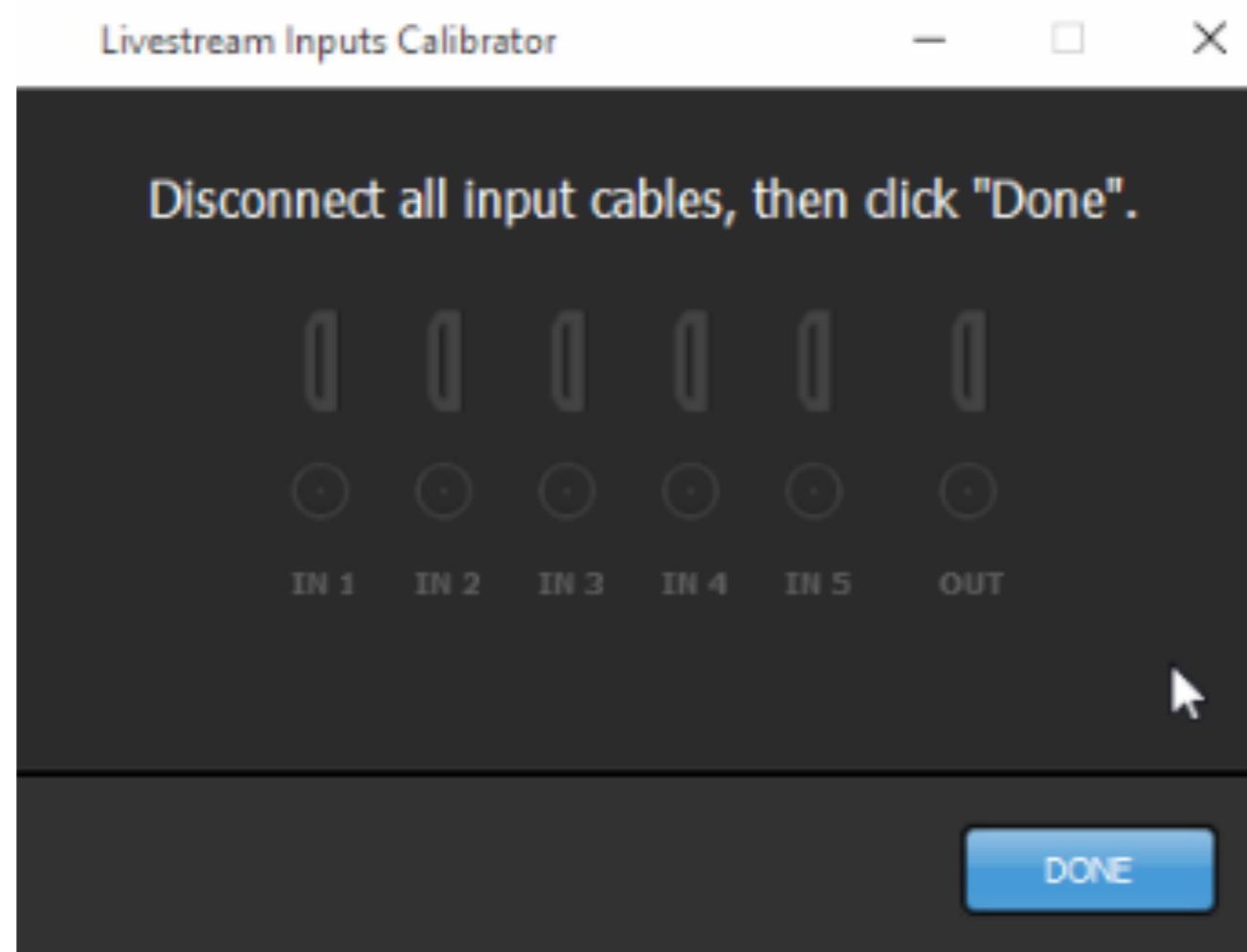
If you have not disconnected all of your cables yet, do so now, then click 'Done.'
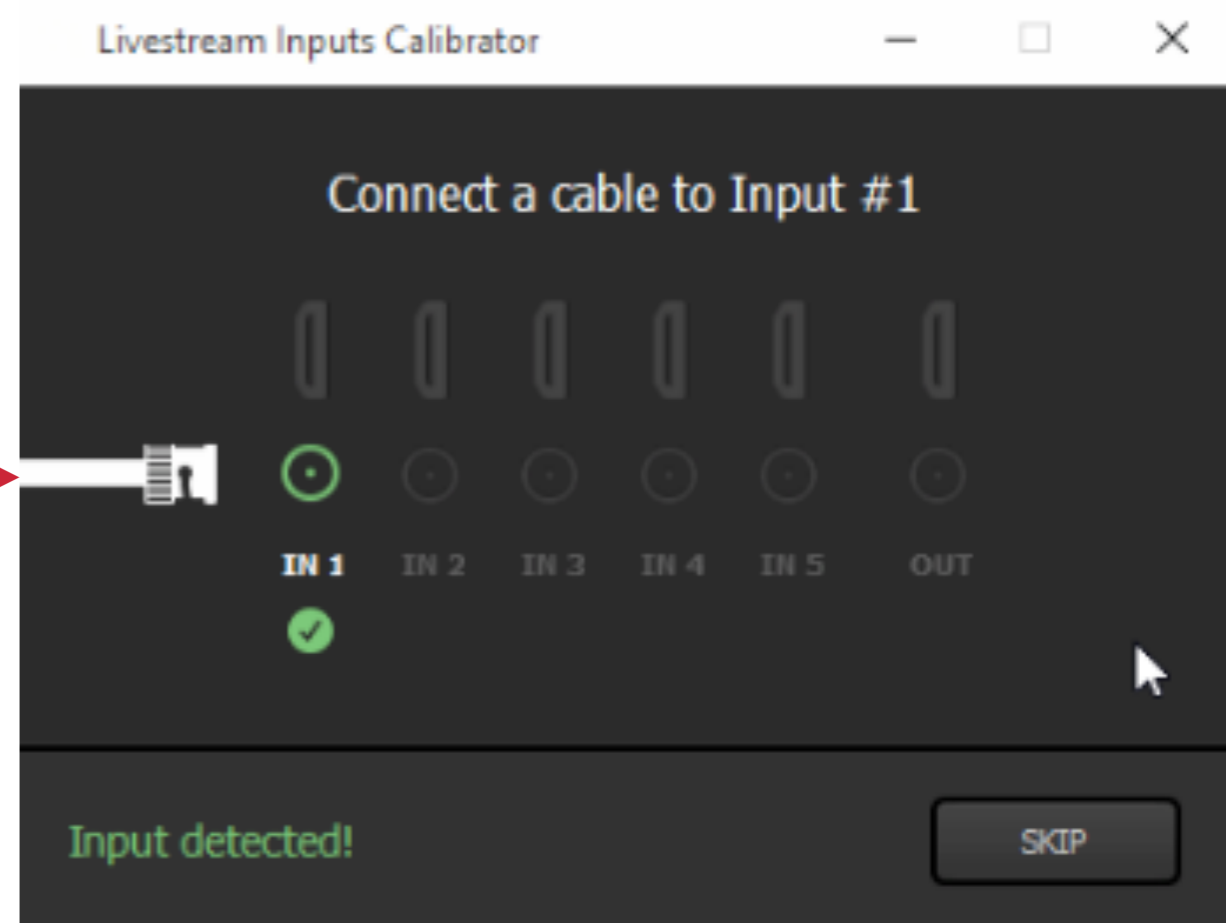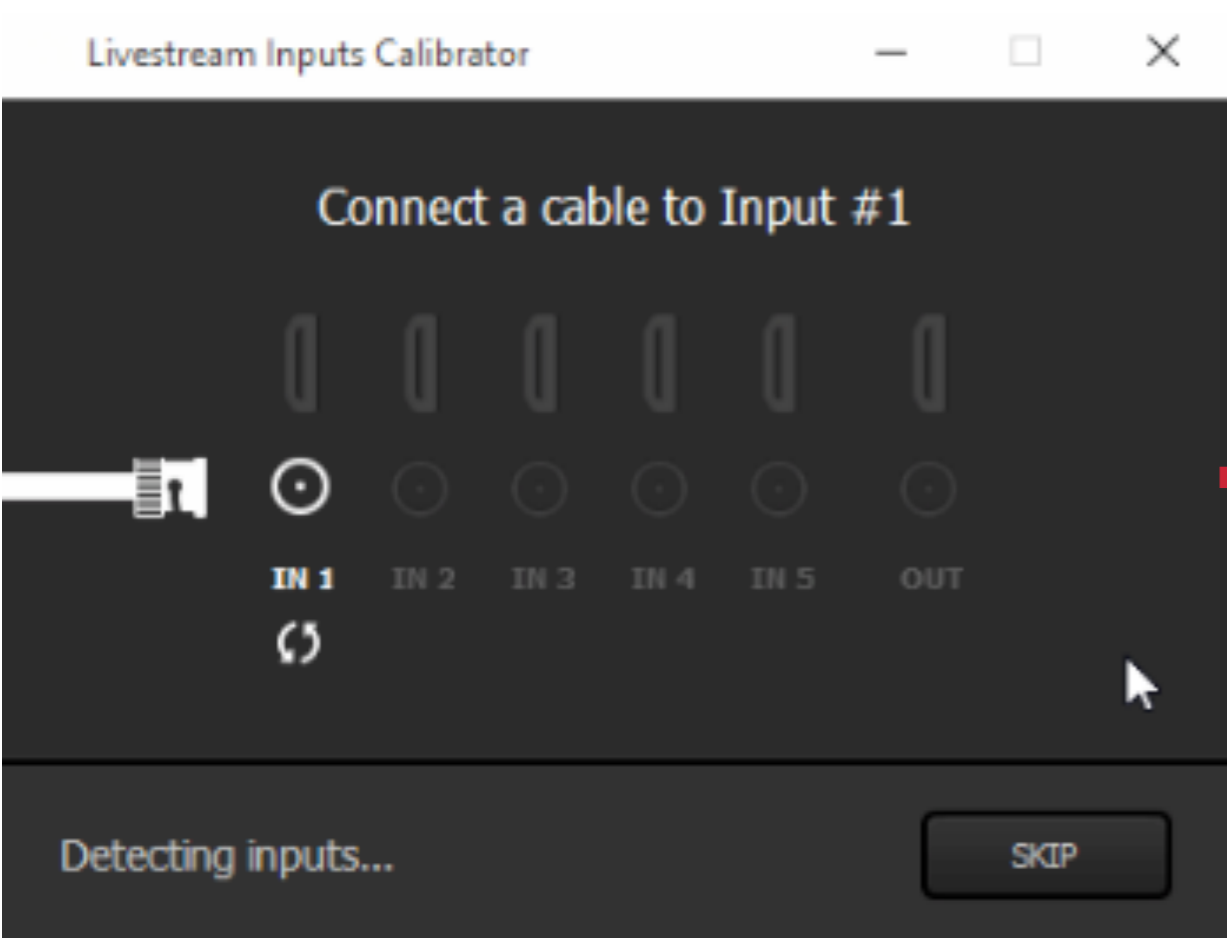
Connect a camera to 'IN 1' on your system. The calibrator will indicate when it has detected it and completed calibrating it.
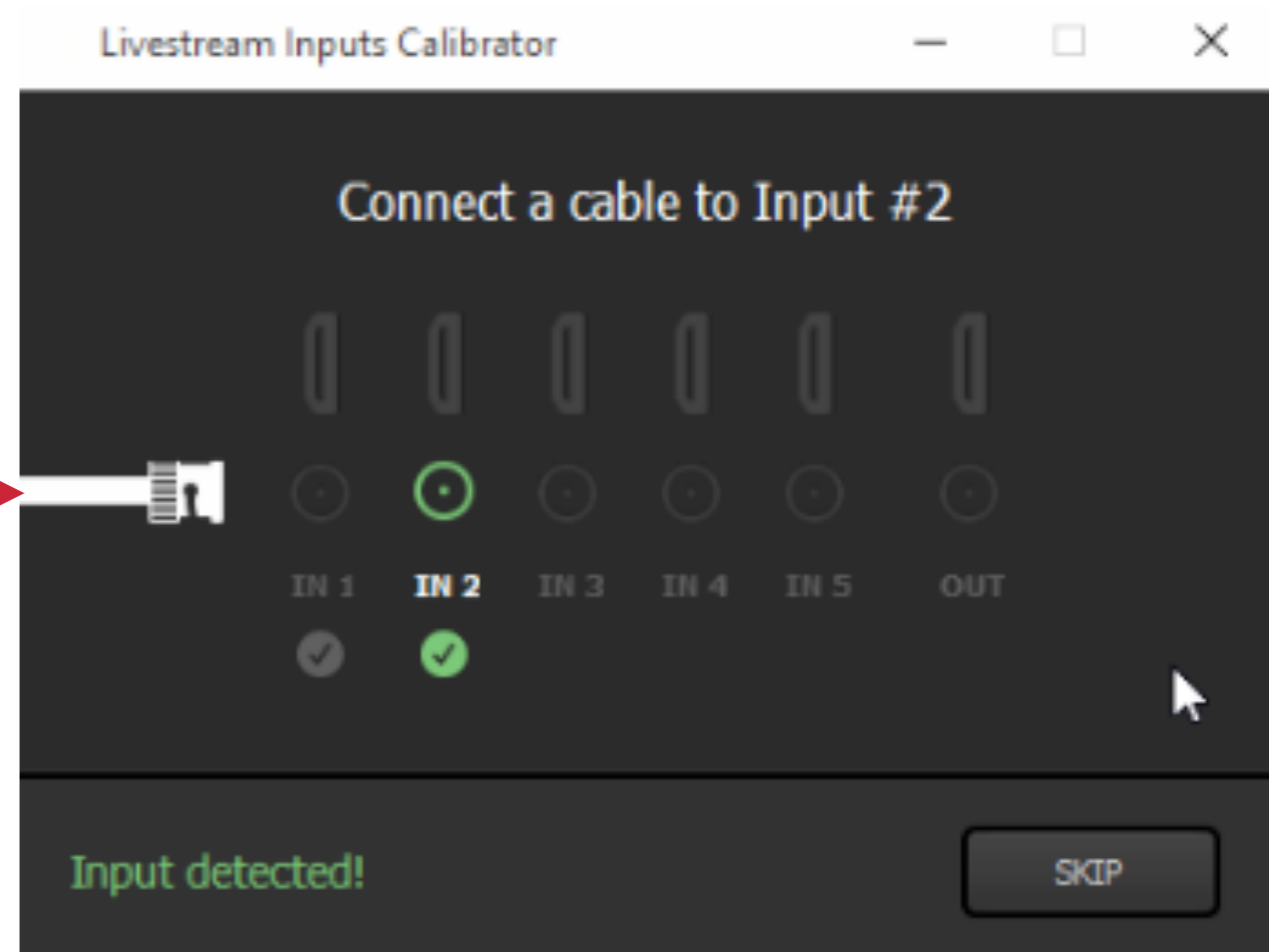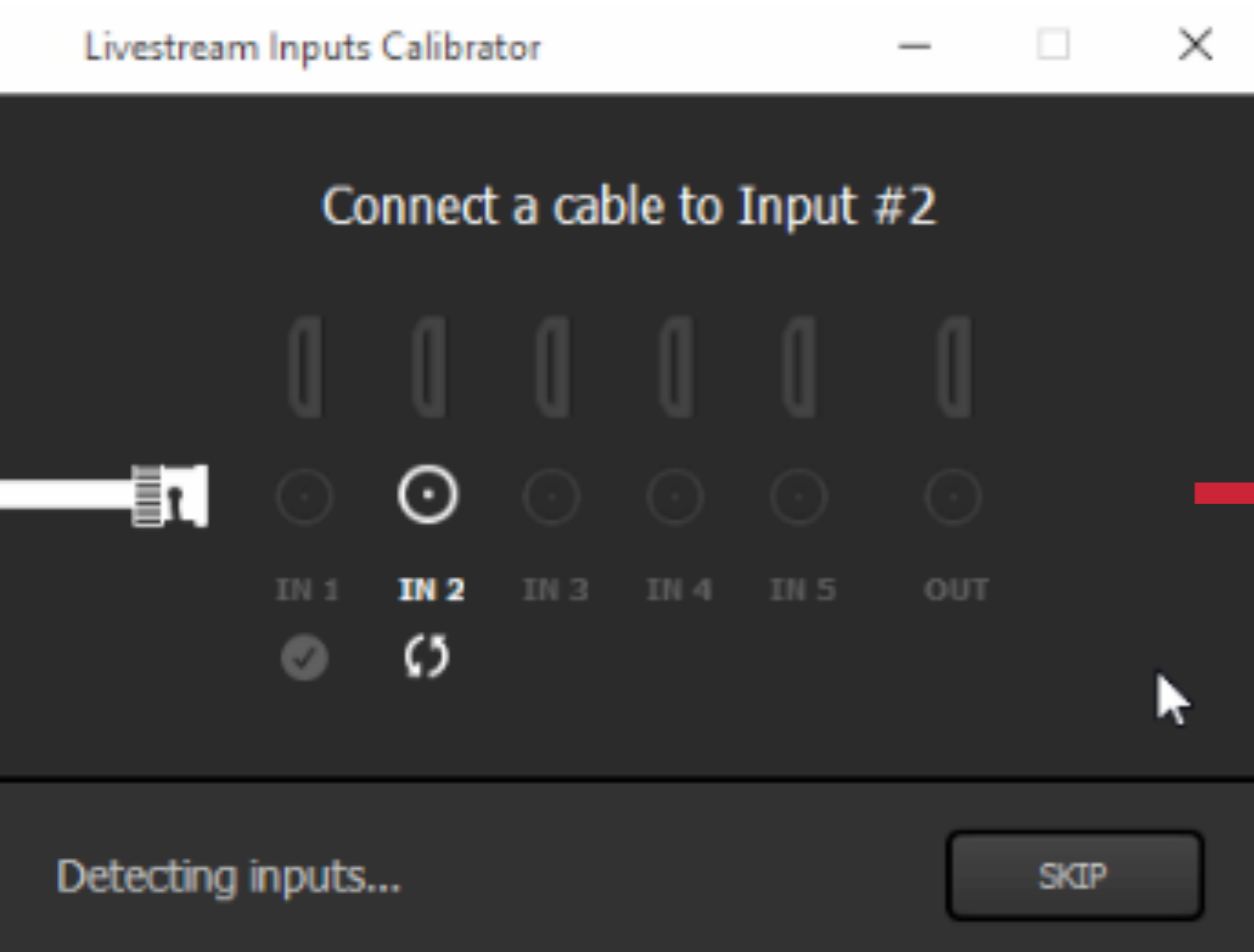
The calibrator will automatically prompt you to move to the next input. Unplug your camera from 'IN 1' and plug it into 'IN 2.' Repeat this for all five Blackmagic Design cards.
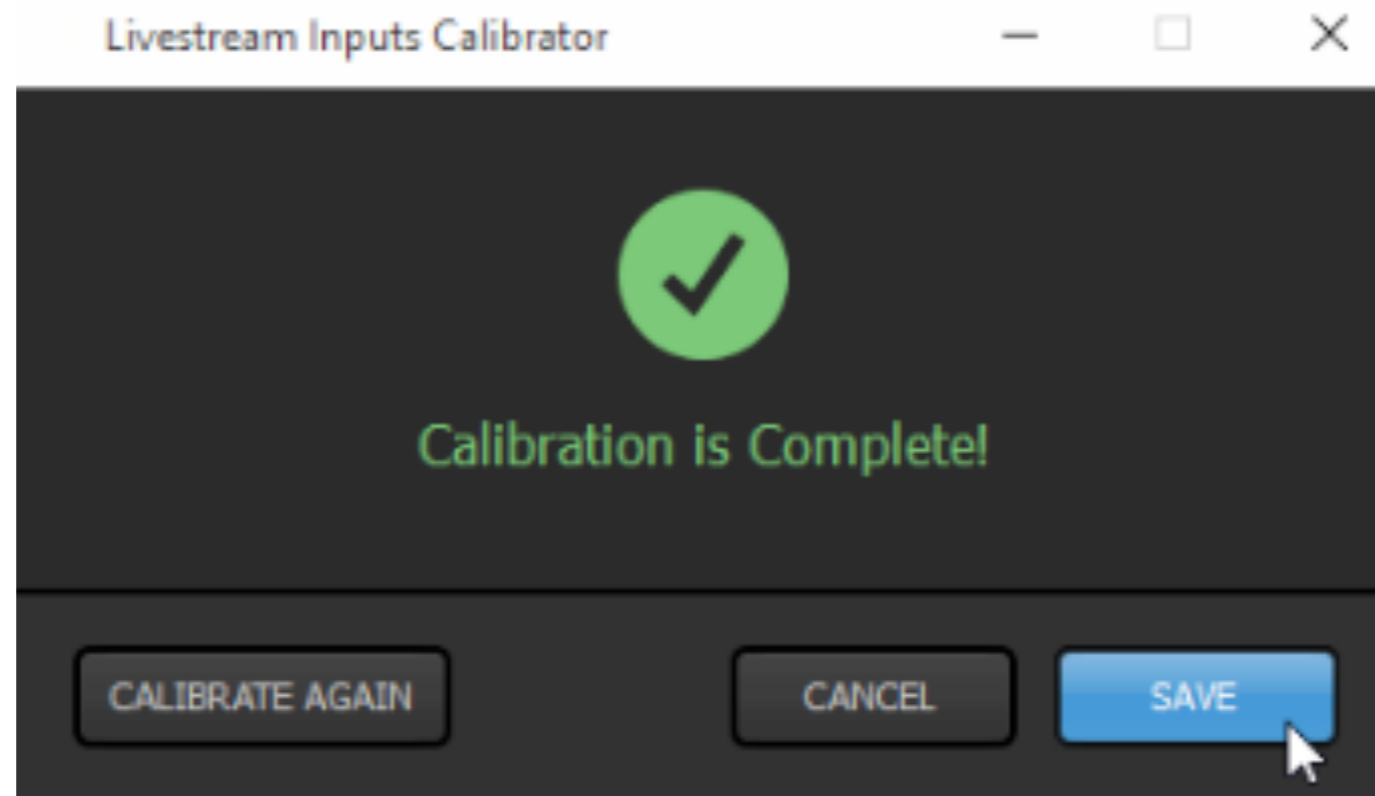
After you have gone through all inputs, the calibrator will inform you that calibration is complete. Click 'Save' and Livestream Studio will reopen with your inputs in the proper order.

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

Adding and formatting your video inputs

Video input troubleshooting
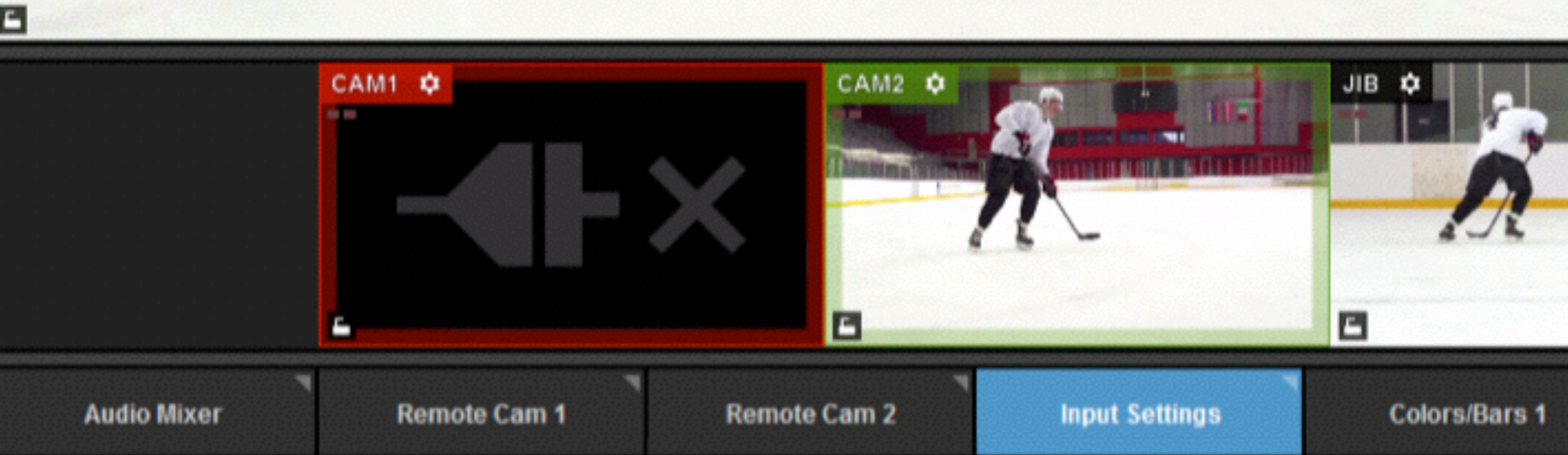
livestream

If a video source's signal is missing, the likely cause is that input's format does not match the Project Format setting.
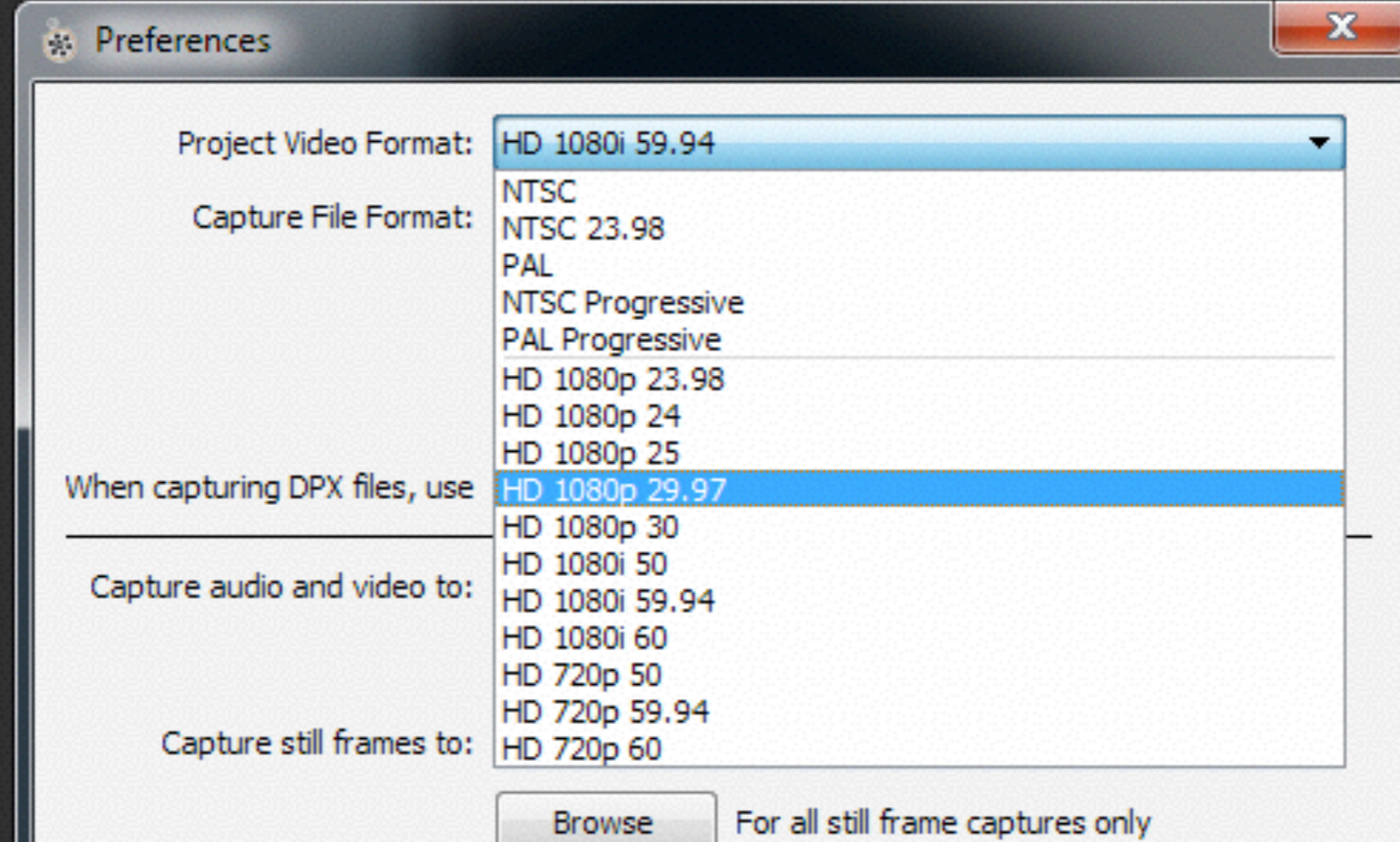
One way of troubleshooting is closing Livestream Studio and confirming the format in Blackmagic Media Express.

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

Audio Mixer | Remote Cam 1 | Remote Cam 2 | **Input Settings**

CAM1

⚙ GENERAL

▮▯▮ AUDIO

⊝ CONVERT

⊐ CROP

Input Source Name

Input Source Name

CAM1
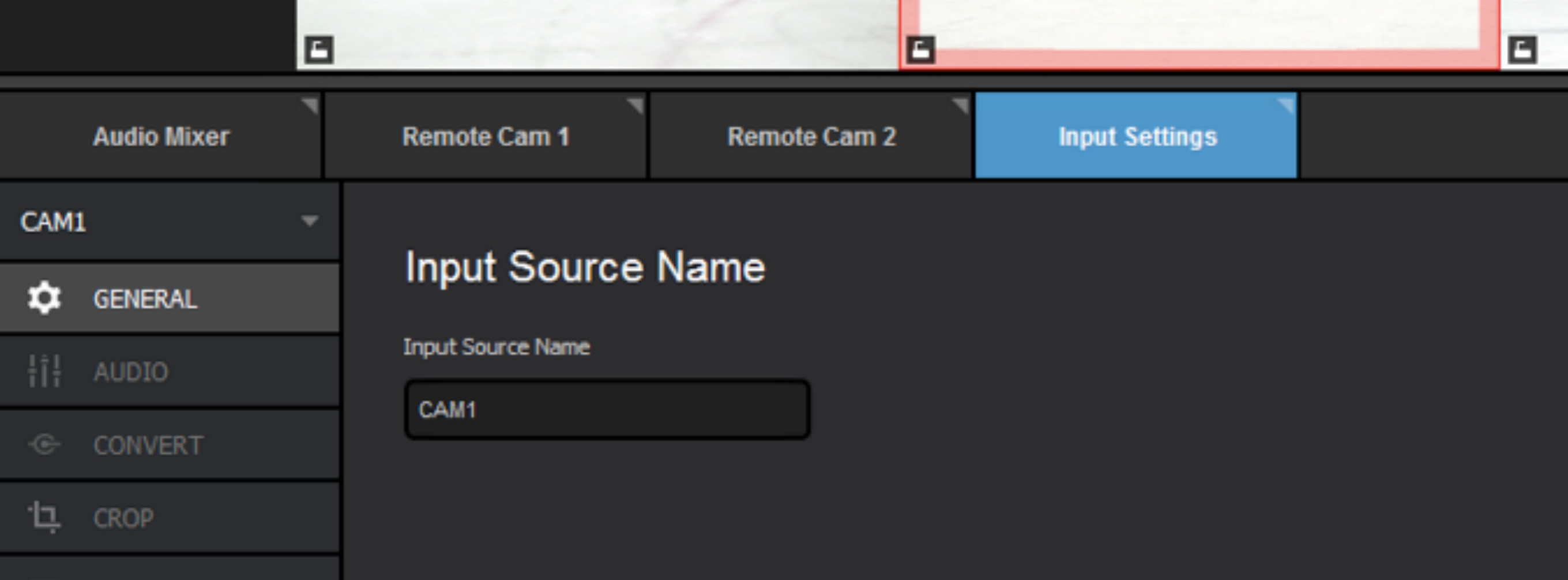
If you have a camera or other video source that cannot match your project format (e.g., webcam, laptop, etc.), you can find a workaround on the '**Input Settings**' tab.
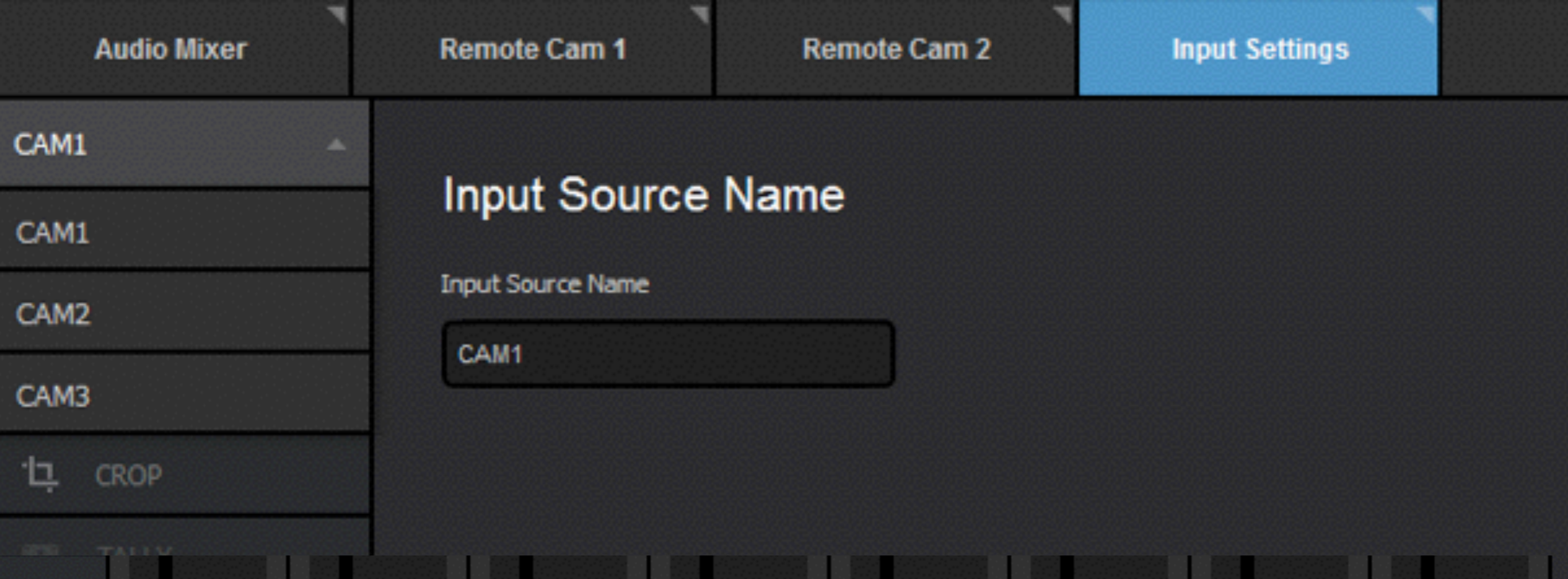
From the dropdown menu, select the source that you need to adjust, then navigate to the 'Convert' tab on the left.

CAM1

- ⚙ GENERAL
- ⦀ AUDIO
- ⟳ CONVERT
- ⌐ CROP
- ▭ TALLY
- ◷ DELAY
- CC CLOSED CAPTIONS

Converter

⟳ OFF

CAM1 Format

Auto (HD 720p 59.94) ▾

Project Format

HD 720p 59.94

Tip

For best video output quality please avoid using a converter. You can try changing your project format in the Settings > Project Format tab or change the format of the incoming source to match your project format.
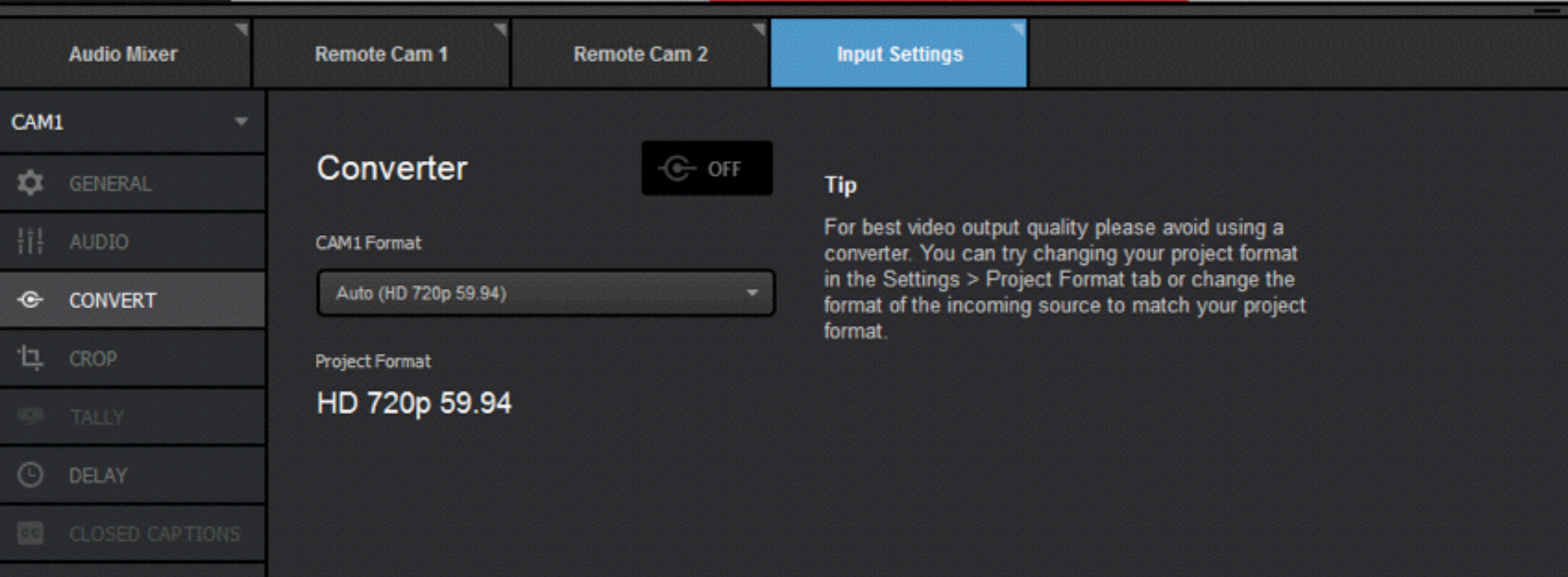
This is the **any-to-any converter**.
Use the dropdown menu to
select the format your video
source is outputting: the format
may be auto-detected.

livestream

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

Project Format

Inputs

Outputs

Audio In

Recording

Live Input Source License: Up to 25 devices
Live Video Output License: Up to 25 outputs
Multi-screen License: Yes
Media Players License: Up to 2 players
Remote Camera License: Up to 10 remote cameras
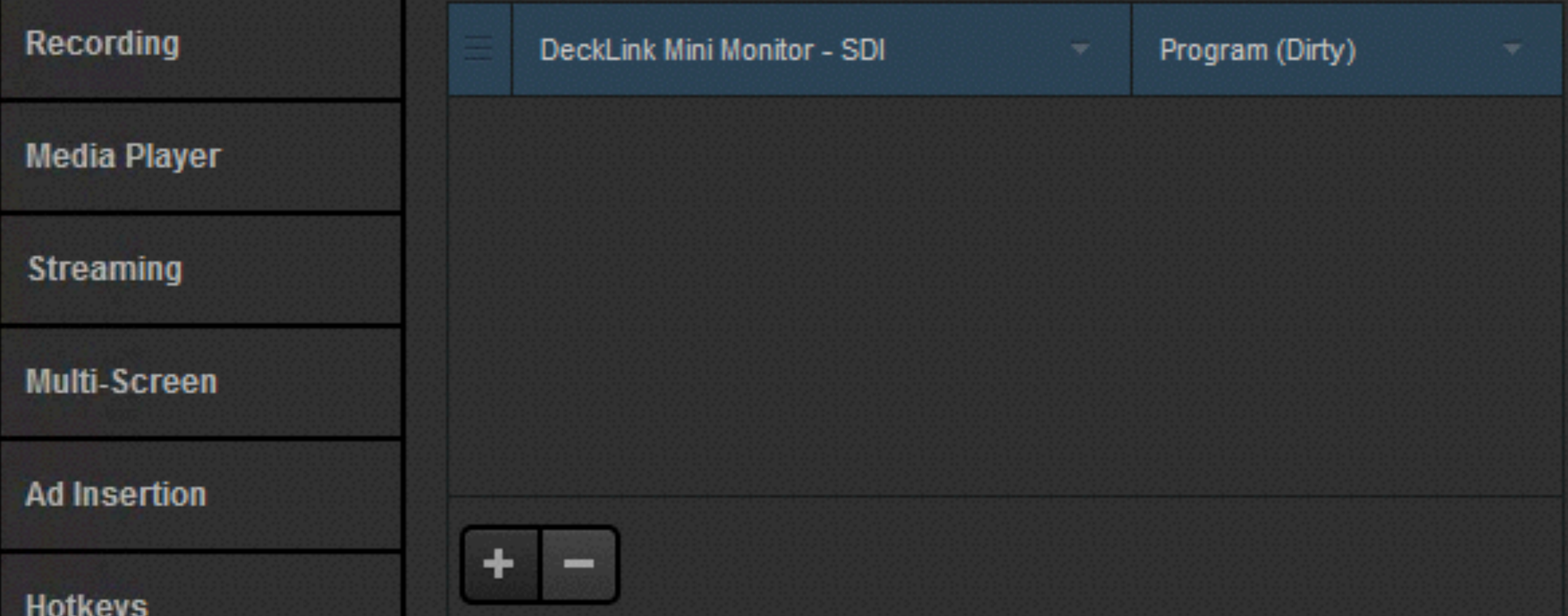Recording License: Up to 4 concurrent recordings
Streaming License for Original Livestream: Yes
Streaming License for New Livestream: Yes
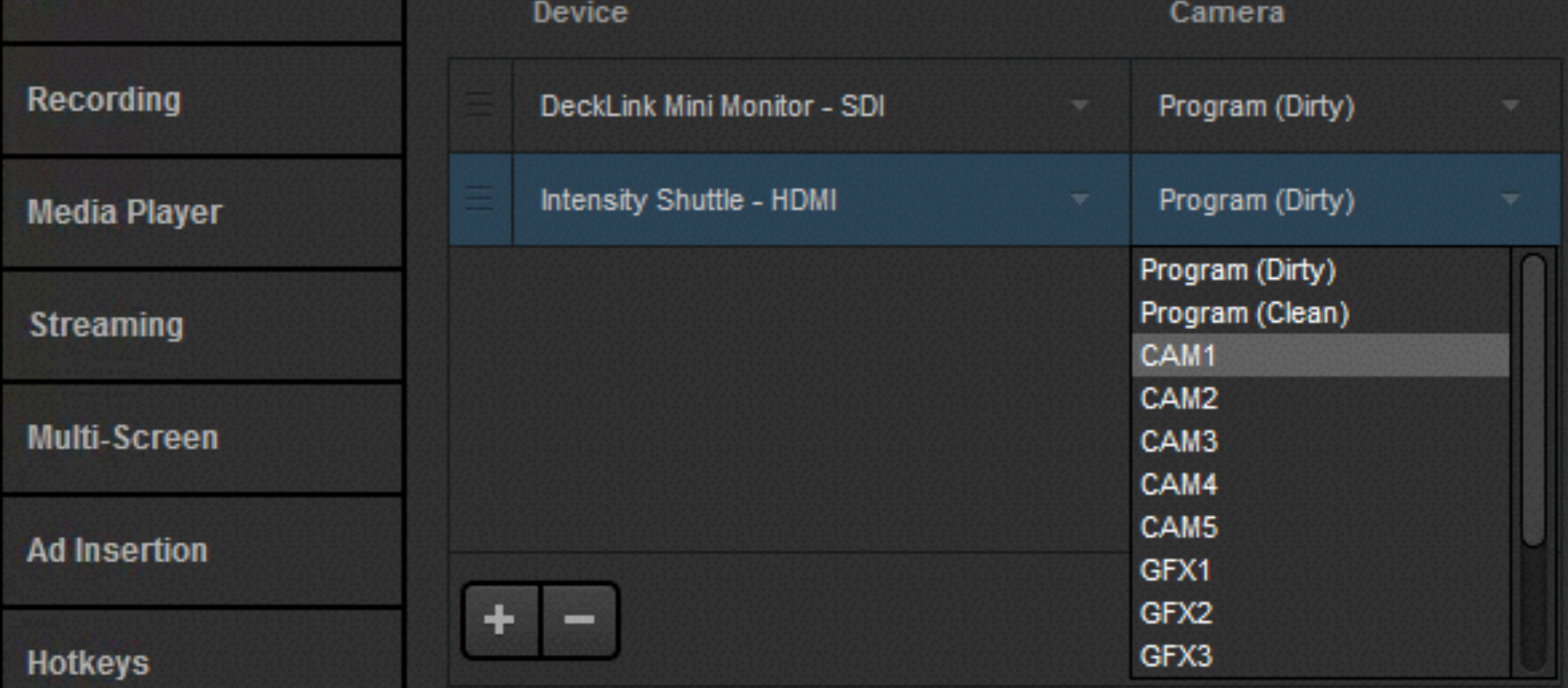Streaming License for Ustream: Yes

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.

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

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

Next, select which source will be output through each device. You can output your Program feed or any other input source (e.g., CAM1).
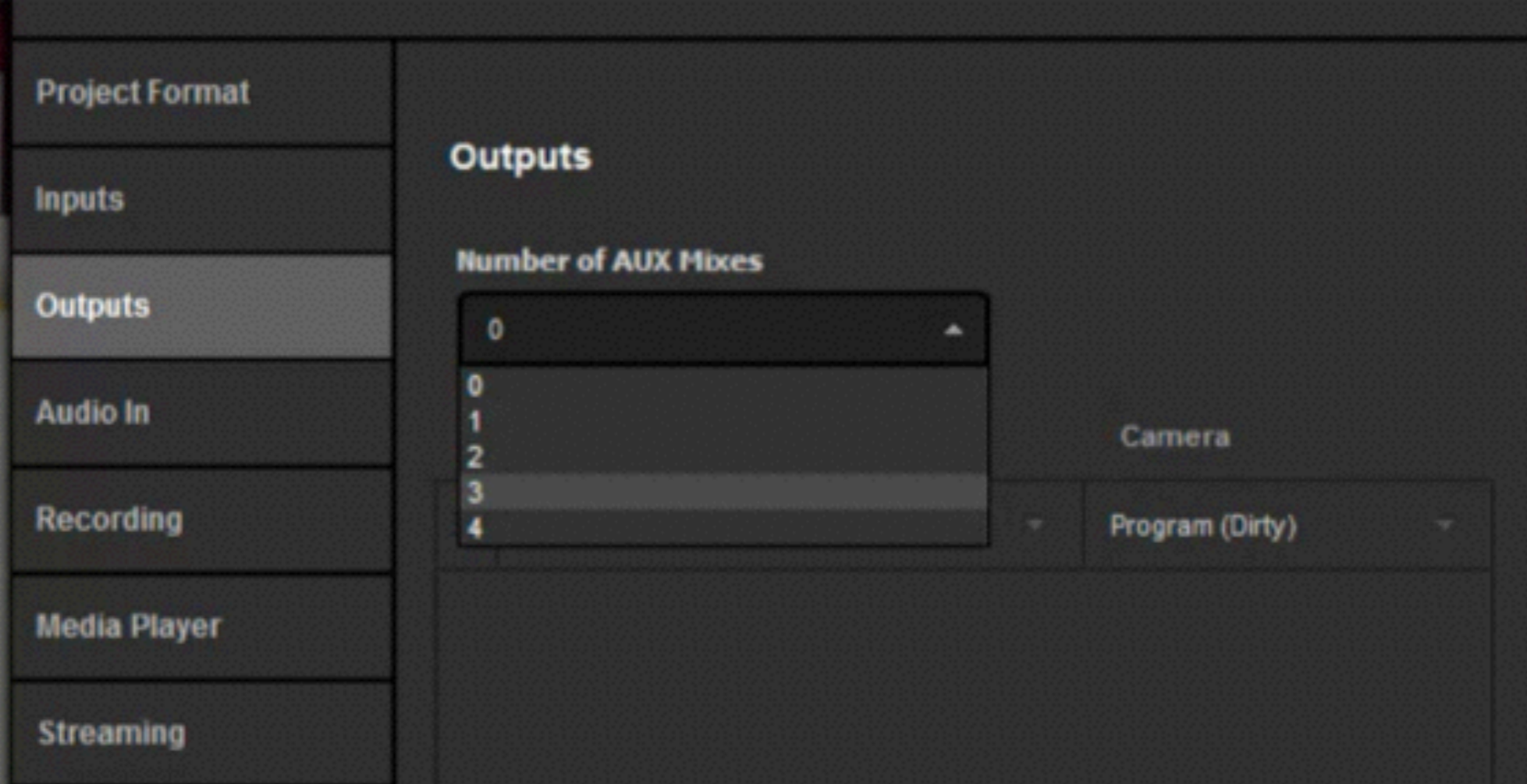
When you have finished setting your output(s), click 'Save.'

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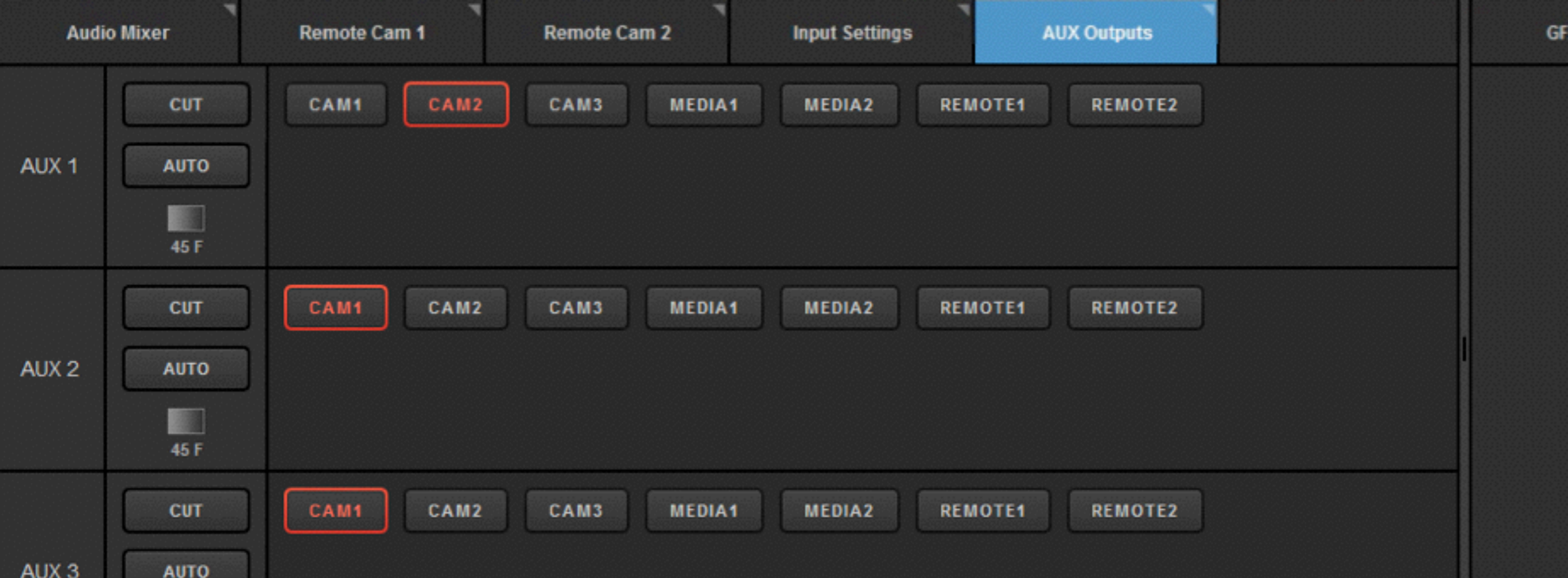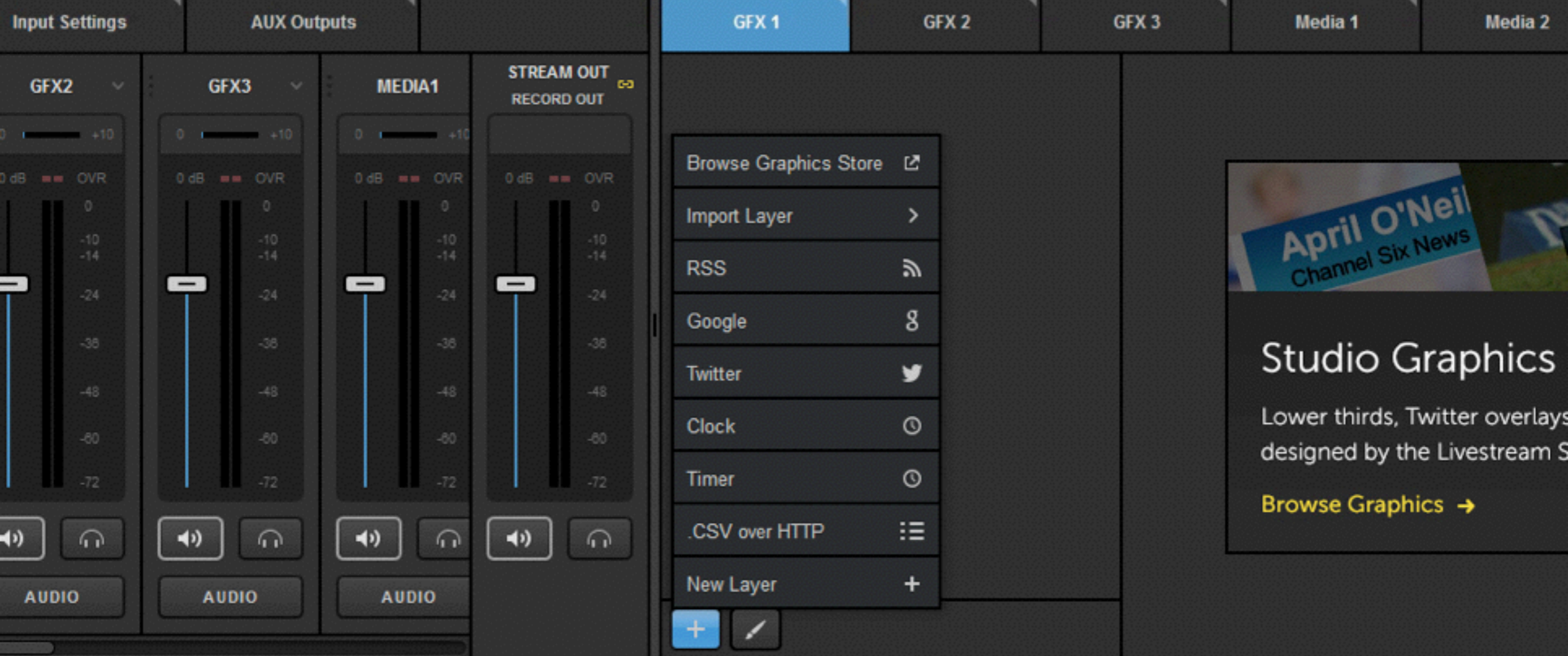
Setting auxiliary outputs

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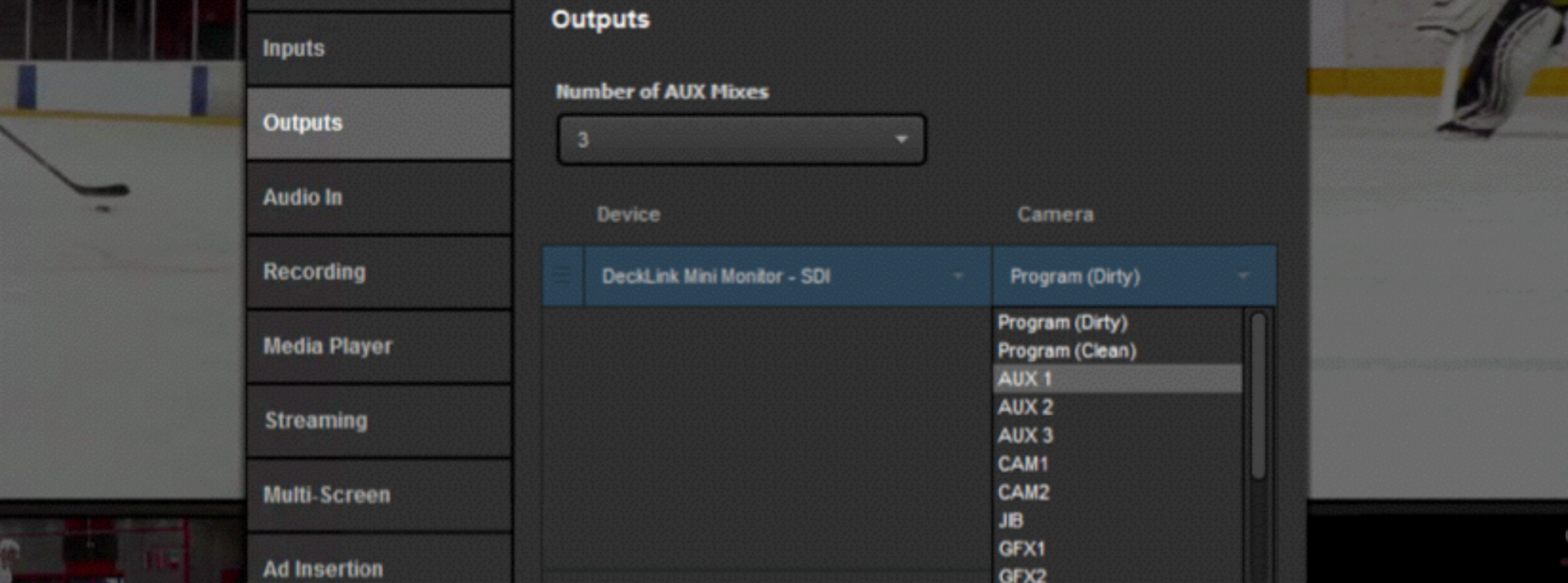
You can set any output to use an auxiliary source in the 'Outputs' menu if you intend to change the sources shown to your onsite viewers.

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
AUTO

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.

livestream

GFX2   GFX3   MEDIA1   STREAM OUT
RECORD OUT

Browse Graphics Store

Import Layer

RSS

Google

Twitter

Clock

Timer

.CSV over HTTP

New Layer

April O'Nei
Channel Six News

Studio Graphics

Lower thirds, Twitter overlays
designed by the Livestream S

Browse Graphics →

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

livestream
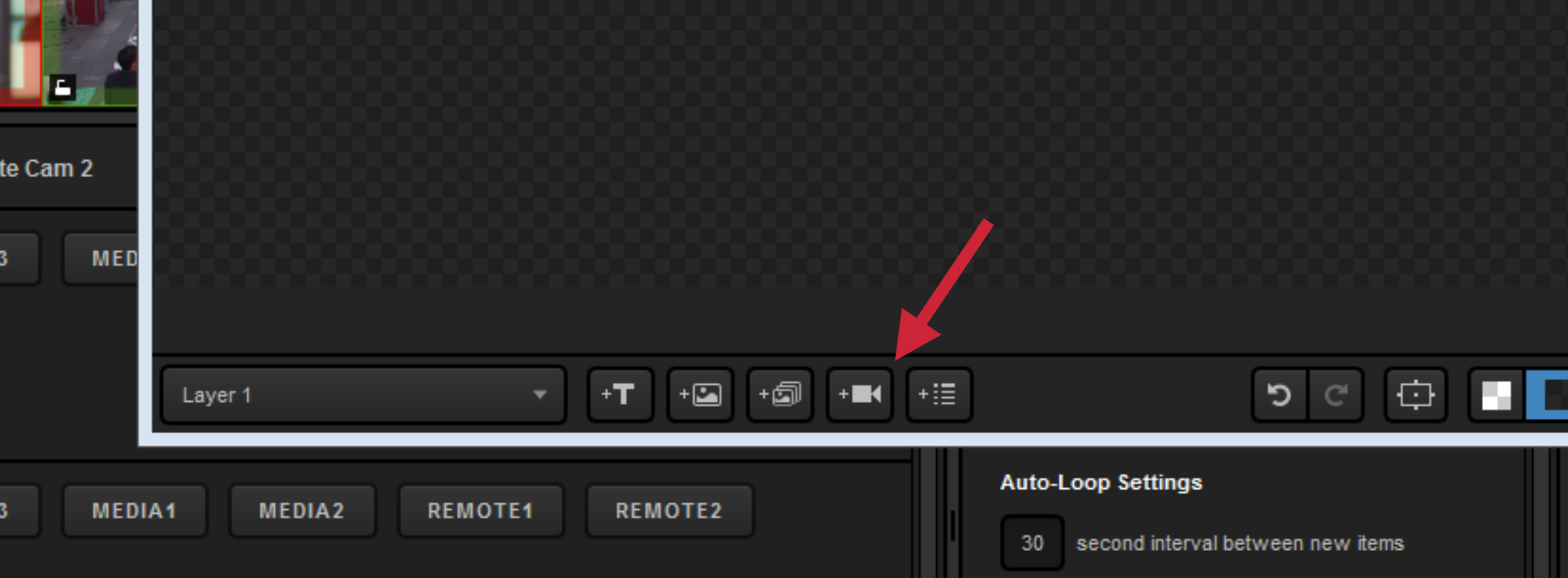
The GFX Designer will open. Click on the 'Video' button to bring a video source into your graphics layer.
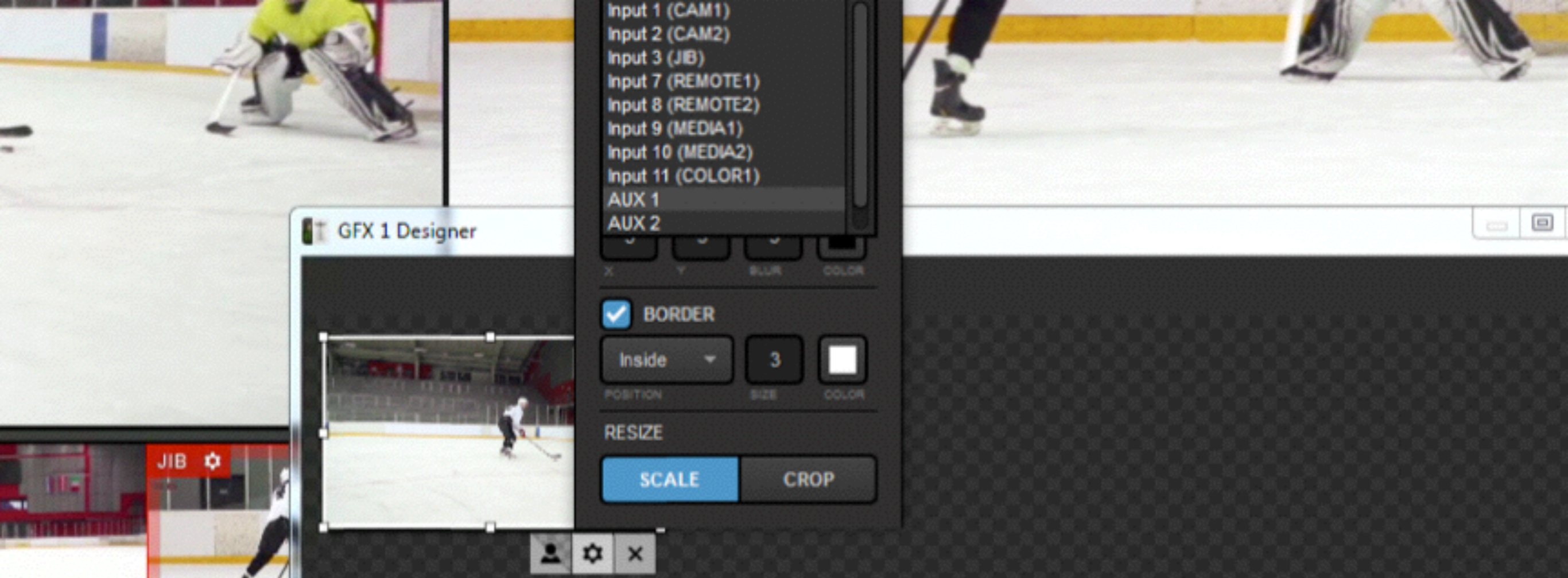
Click on the dropdown menu to change any settings, including your video source. Note that AUX sources are now among your options.

COLOR1

COLOR1

COLOR1

No data fields in this layer

+ COLUMN

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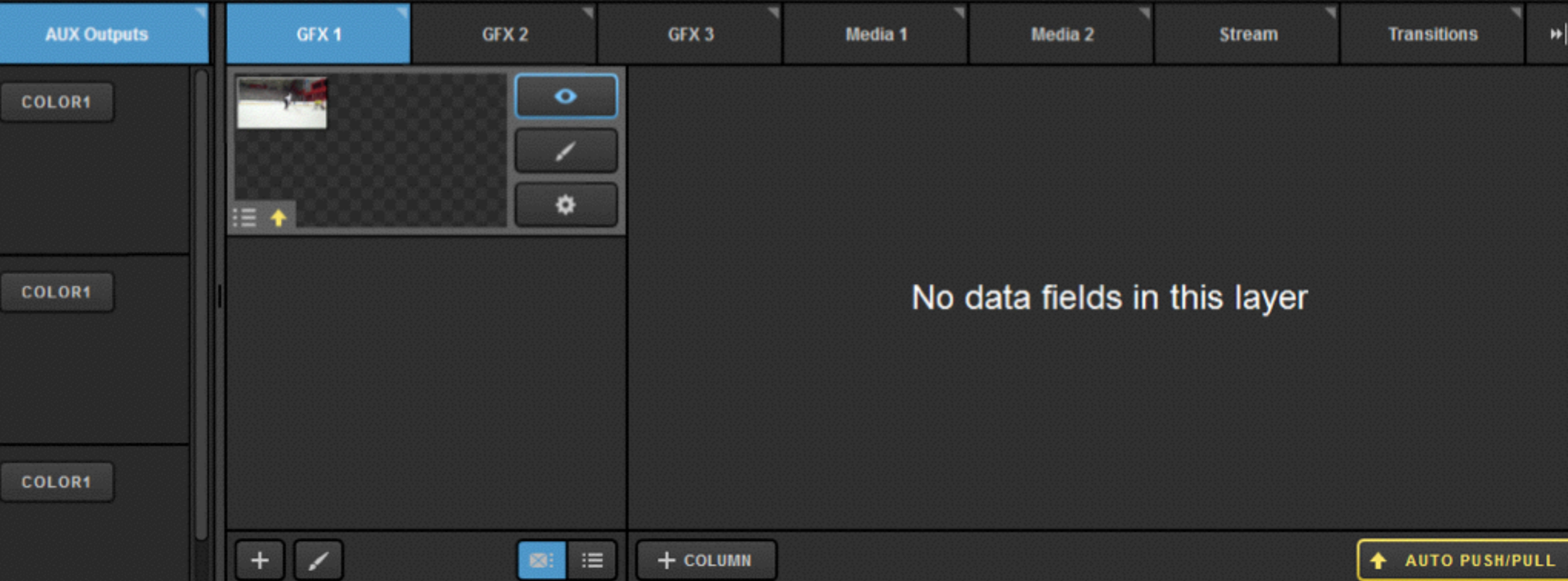
When you have finished setting your video source in the graphics layer, close out of the GFX Designer and make sure that layer is visible.

livestream
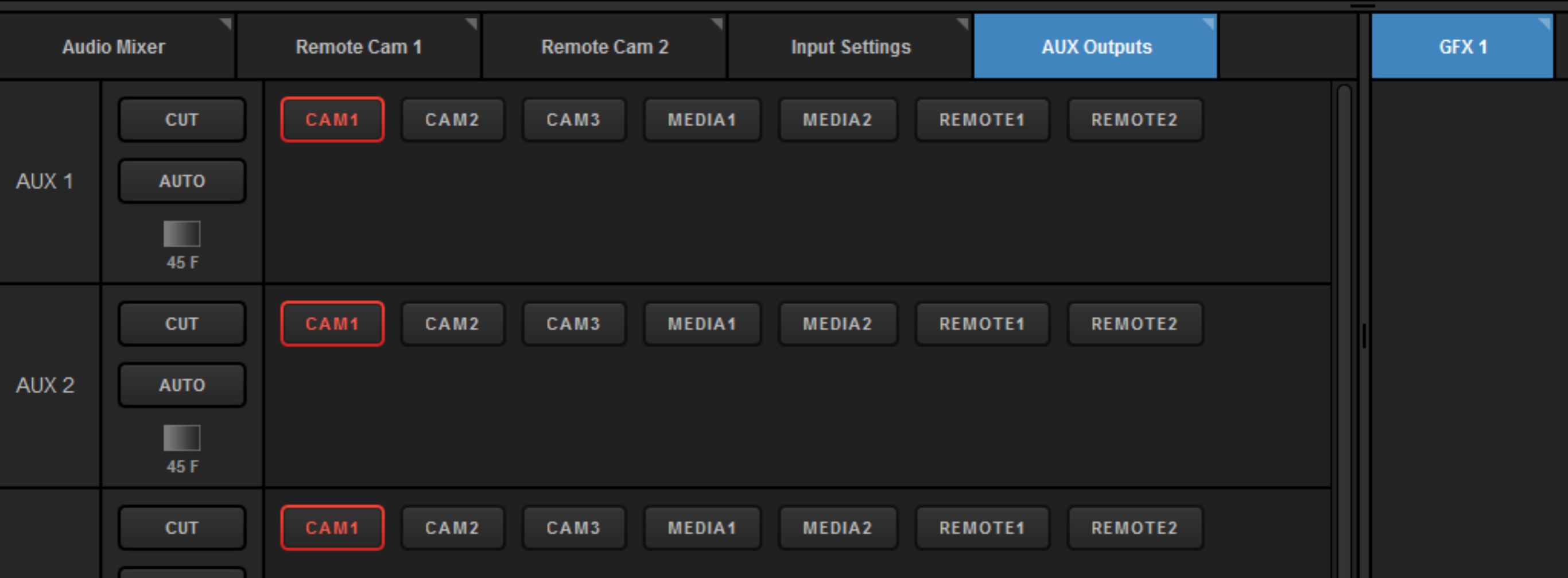
Navigate to the '**AUX Outputs**' tab of the AUX source you are using.
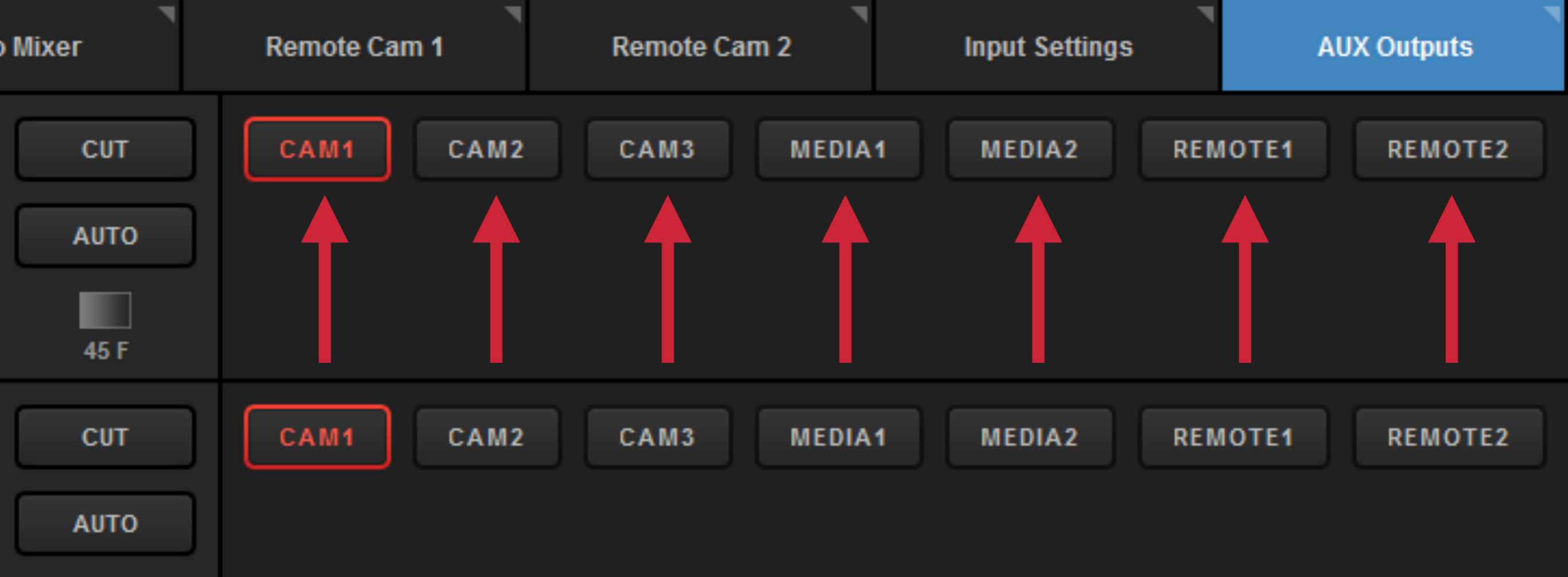
Here you can select which of your inputs you want to see in the AUX output. You can choose among camera inputs, media sources, and remote cameras.
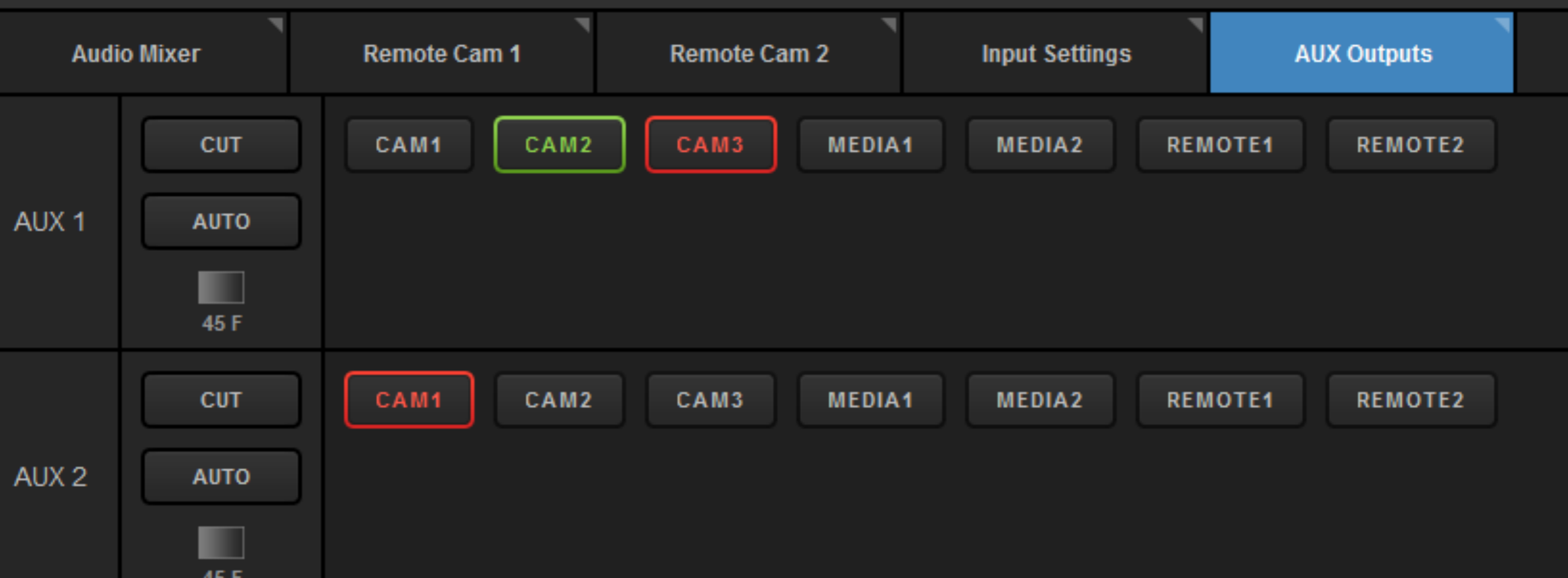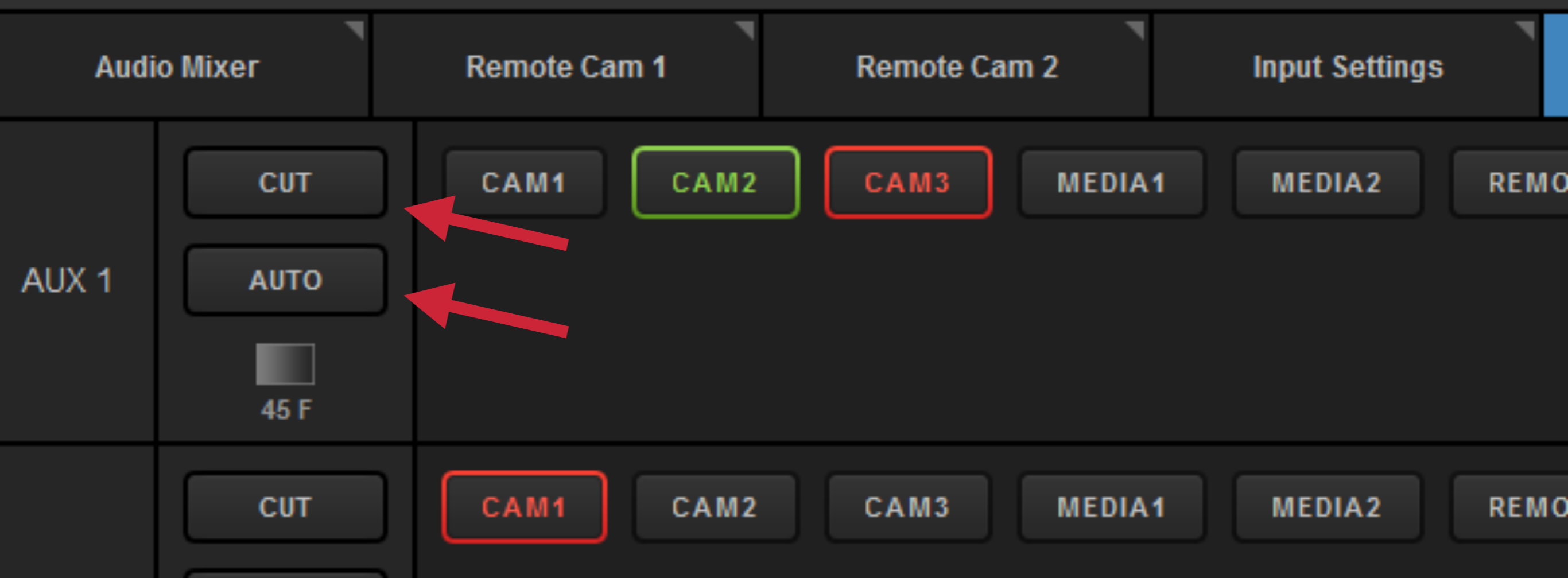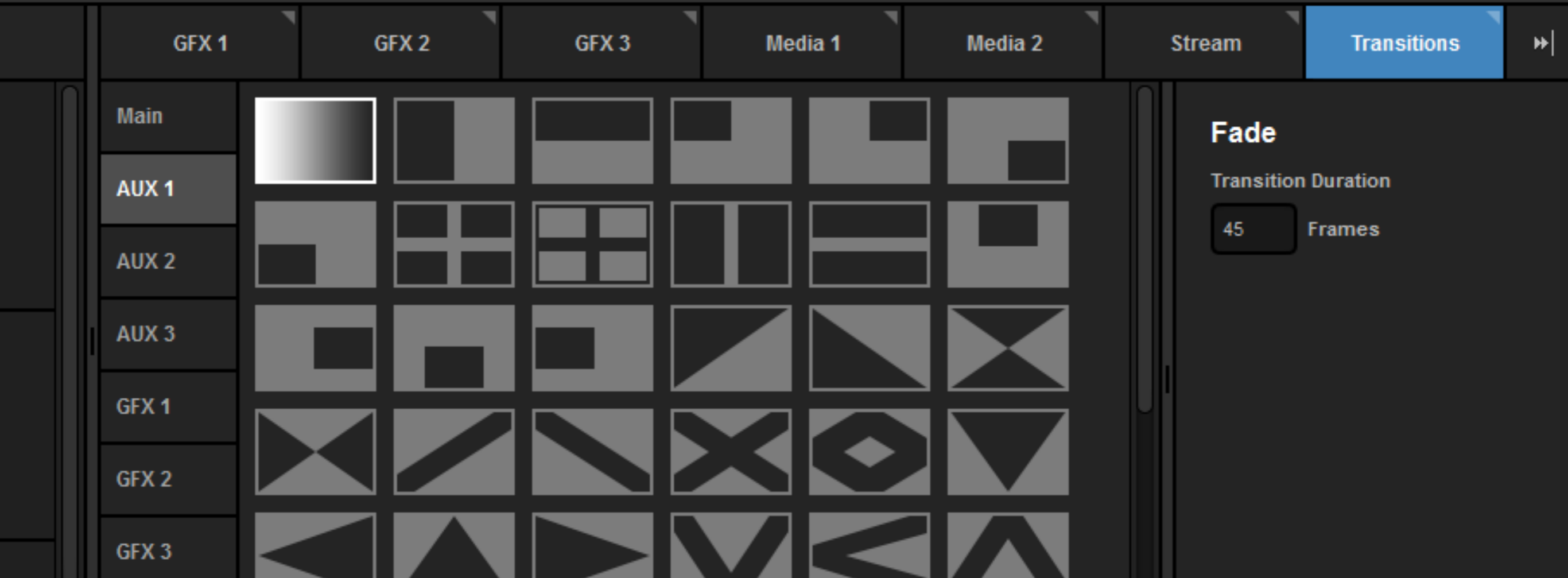
Push the graphics channel to Program to allow you and your viewers to see it.

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.

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.
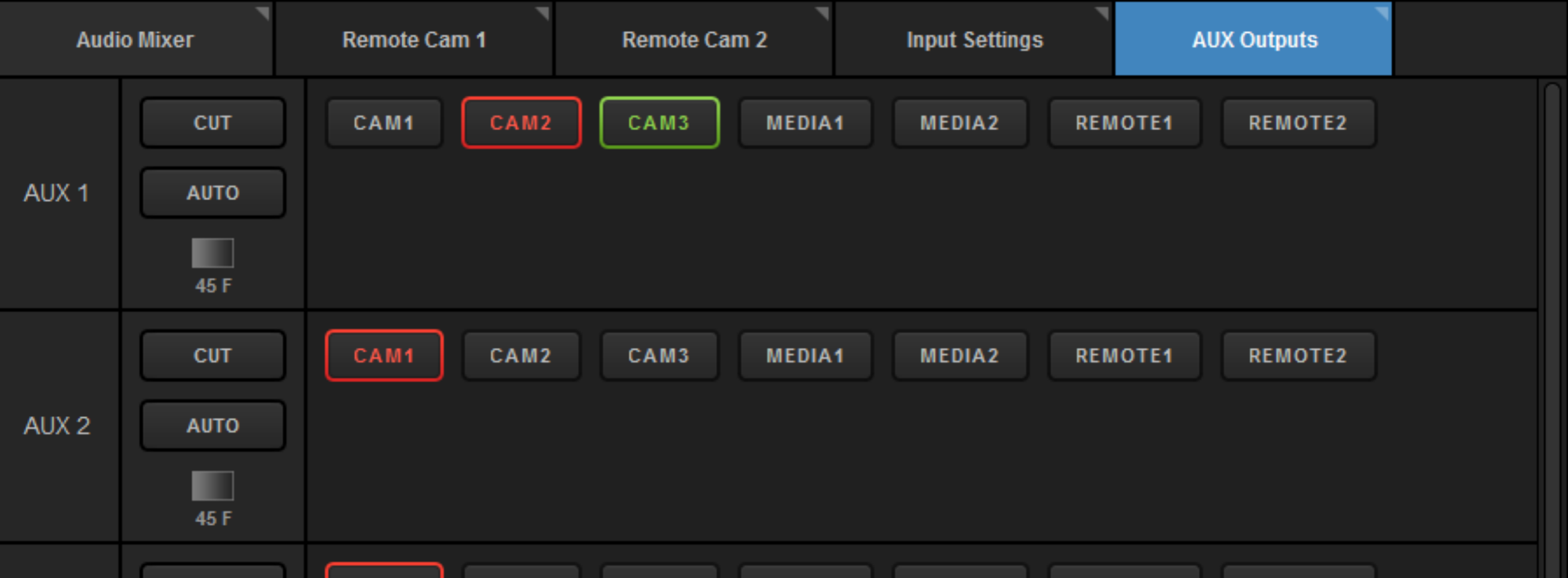
Click a transition control and the 'AUX Outputs' tab will indicate that the new source is being pushed through that auxiliary source by highlighting that source in red.
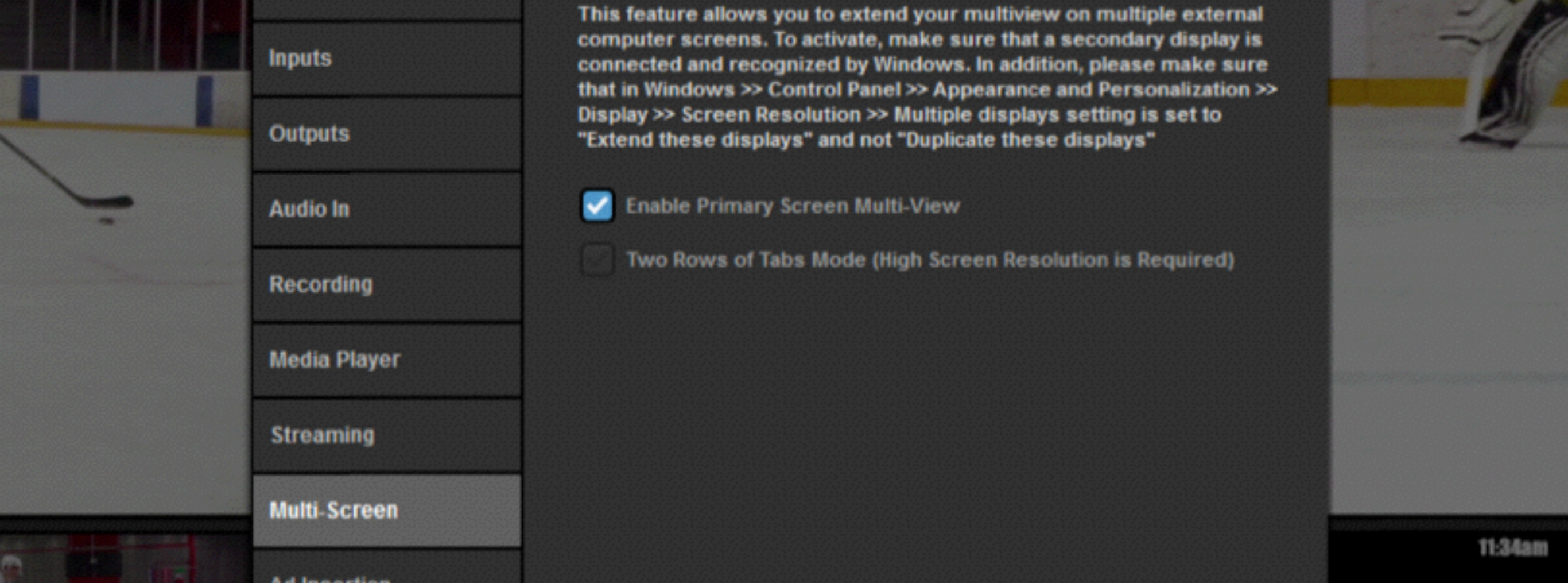
You will also see the change in
your graphics overlay in Preview
and Program.

Multi-view

User interface

livestream

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

This feature allows you to extend your multiview on multiple external computer screens. To activate, make sure that a secondary display is connected and recognized by Windows. In addition, please make sure that in Windows >> Control Panel >> Appearance and Personalization >> Display >> Screen Resolution >> Multiple displays setting is set to "Extend these displays" and not "Duplicate these displays"

- ☑ Enable Primary Screen Multi-View
- ☐ Two Rows of Tabs Mode (High Screen Resolution is Required)

Inputs

Outputs

Audio In

Recording

Media Player

Streaming

Multi-Screen

Ad Insertion

11:34am

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.

livestream

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.

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.
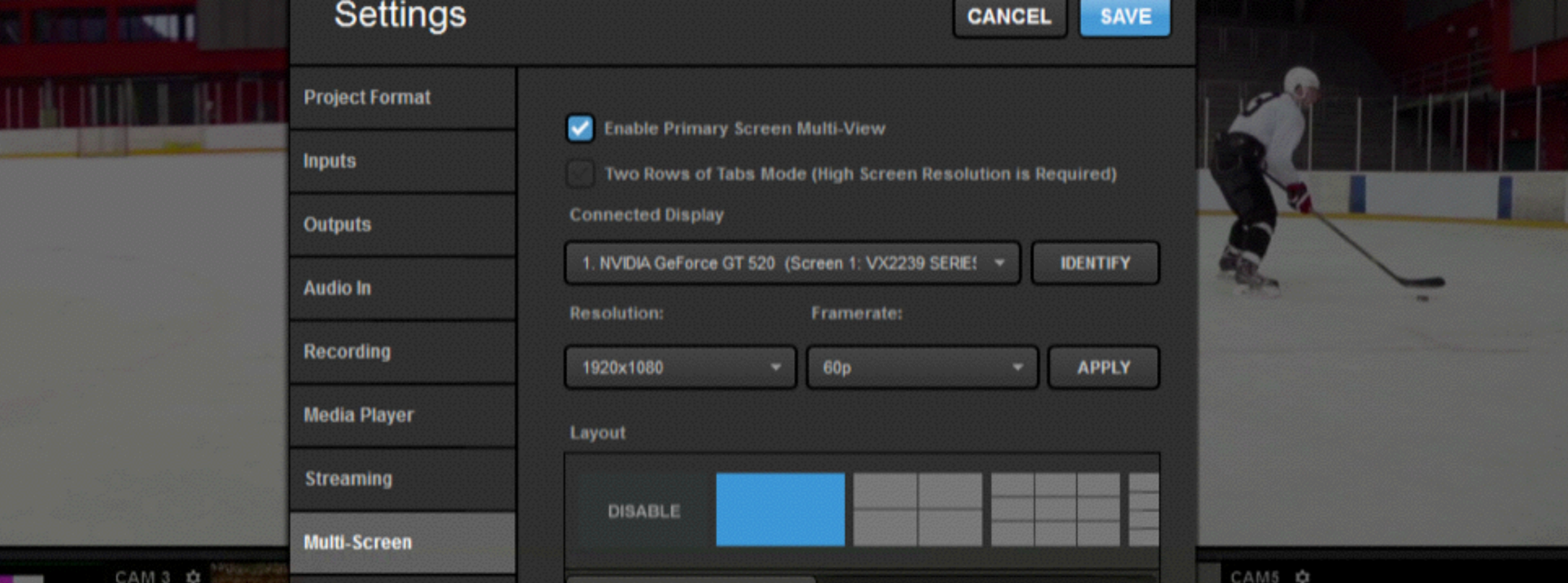
In Livestream Studio, go to settings and click on the 'Multi-Screen' tab. With the second monitor connected, you will notice it looks different from before.
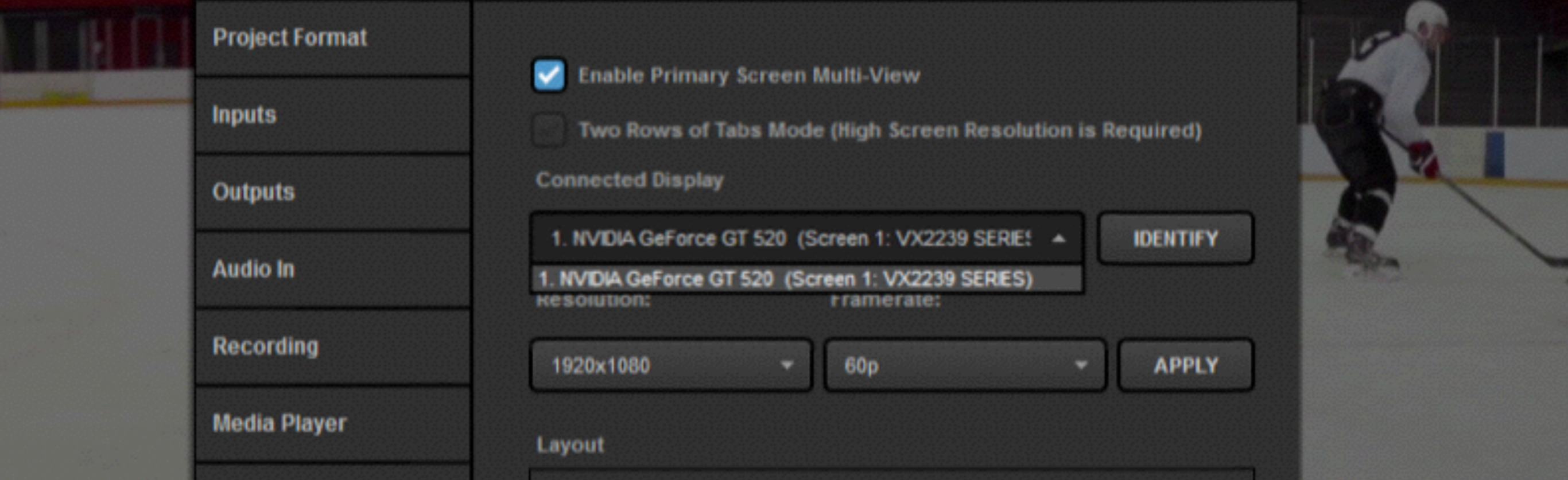
You should see your display listed
in the 'Connected Display'
dropdown menu. Select the
display and click 'Identify.'
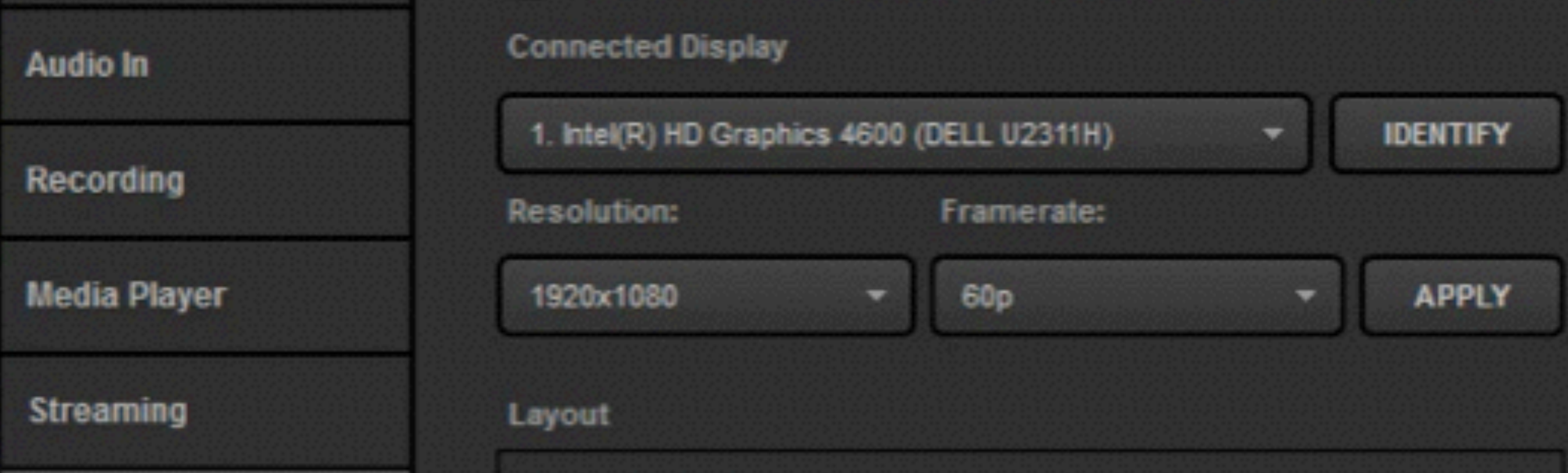
Select the resolution and frame
rate at which you want Livestream
Studio's multi-view to output.
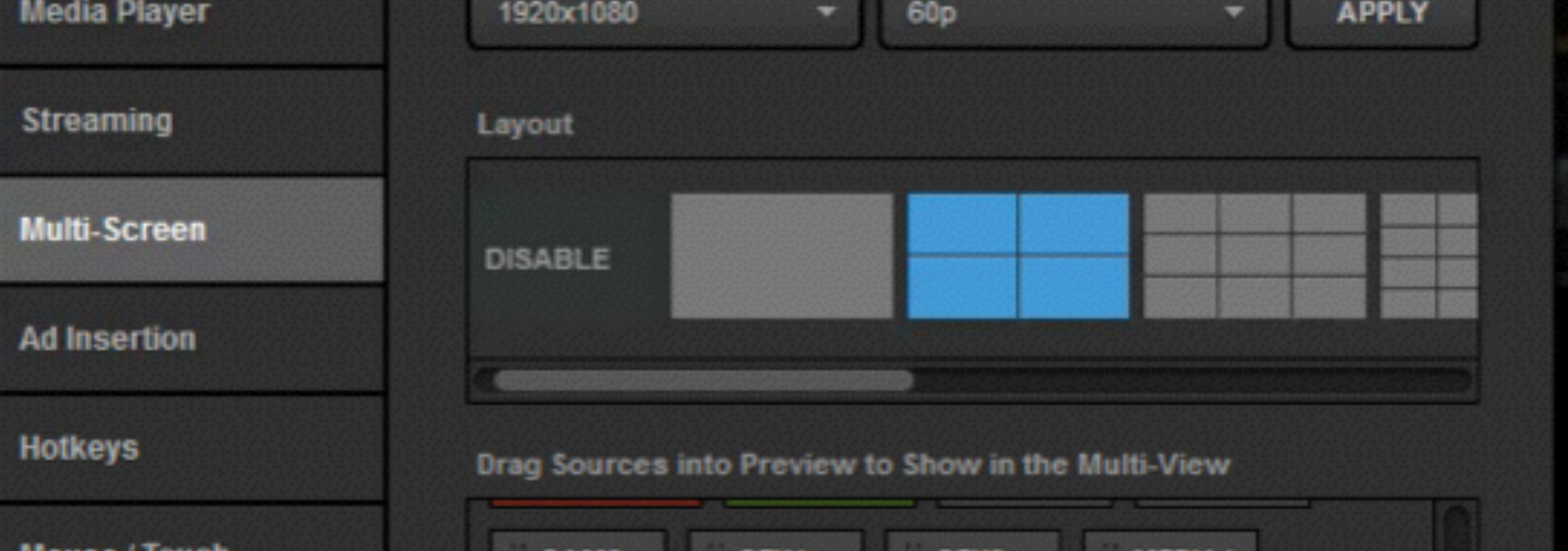
Next, determine which layout you want to use in your external display.
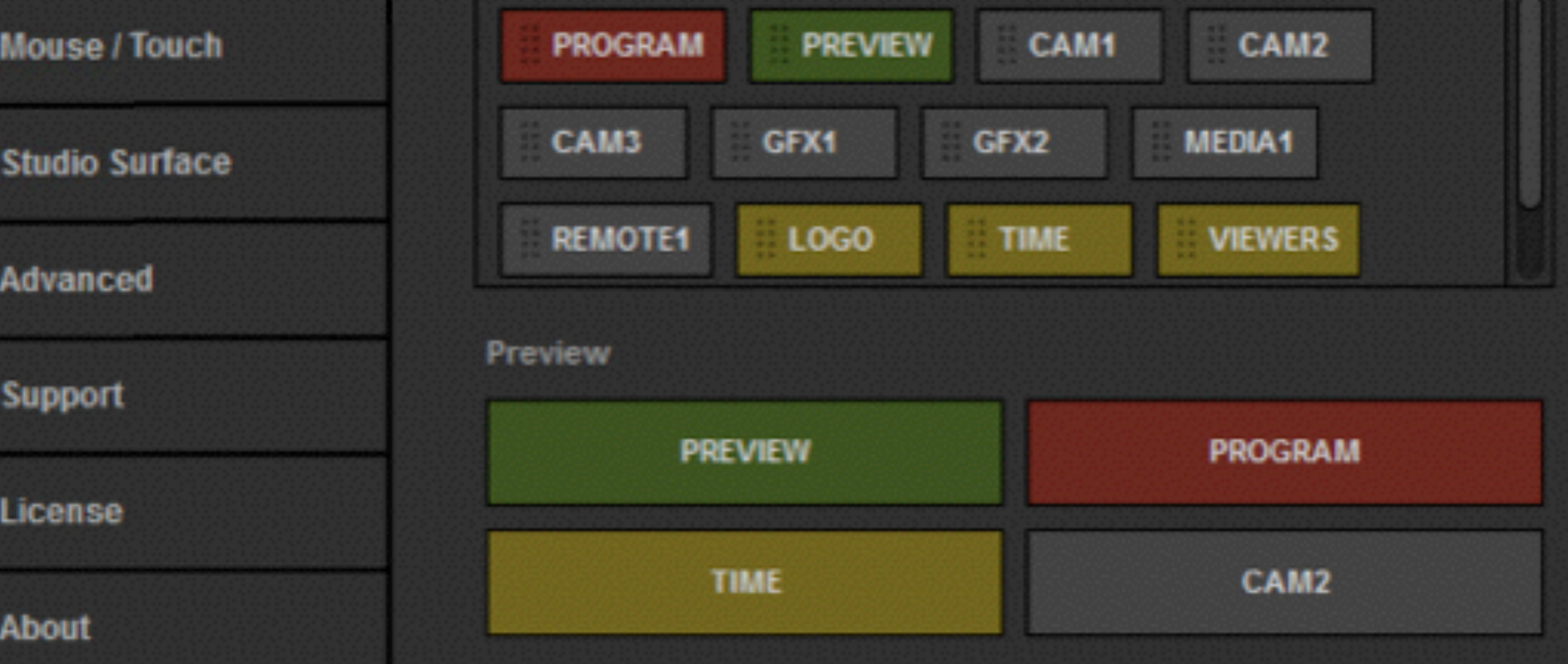
Below the layout selection, use your mouse to drag and drop each video source you want to see into the appropriate box below.

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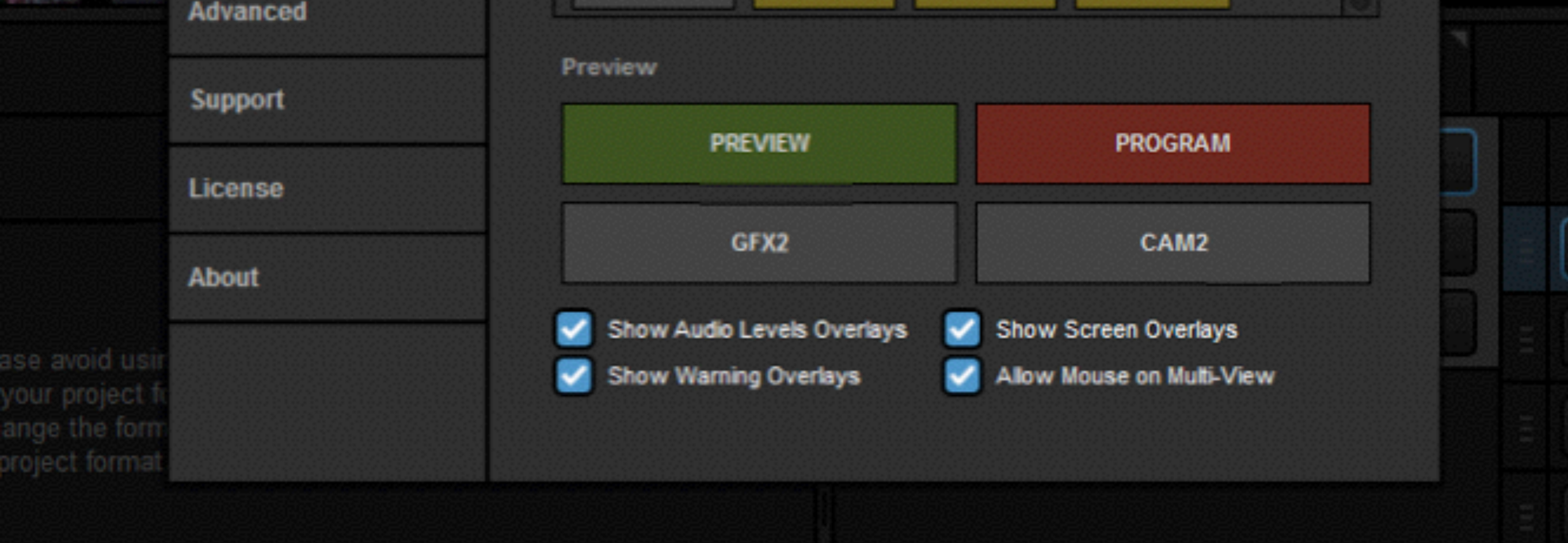
Underneath the multi-view preview, you will see options for showing or hiding specific overlays on the multi-view and for whether you want to allow your mouse onto that display.

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

Switching video sources

Mouse / Touch

livestream

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 multi-view.

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

livestream

Project Format

Inputs

Outputs

Audio In

Recording

Media Player

Streaming

Multi-Screen

Ad Insertion

Hotkeys

Mouse / Touch

Left click on multiview
- ● PREVIEW
- ○ Auto PROGRAM
- ○ Cut PROGRAM
- ○ Nothing

Right click on multiview
- ○ PREVIEW
- ○ Auto PROGRAM
- ● Cut PROGRAM
- ○ Nothing

Double click on Preview
- ● Auto PROGRAM
- ○ Cut PROGRAM
- ○ Nothing

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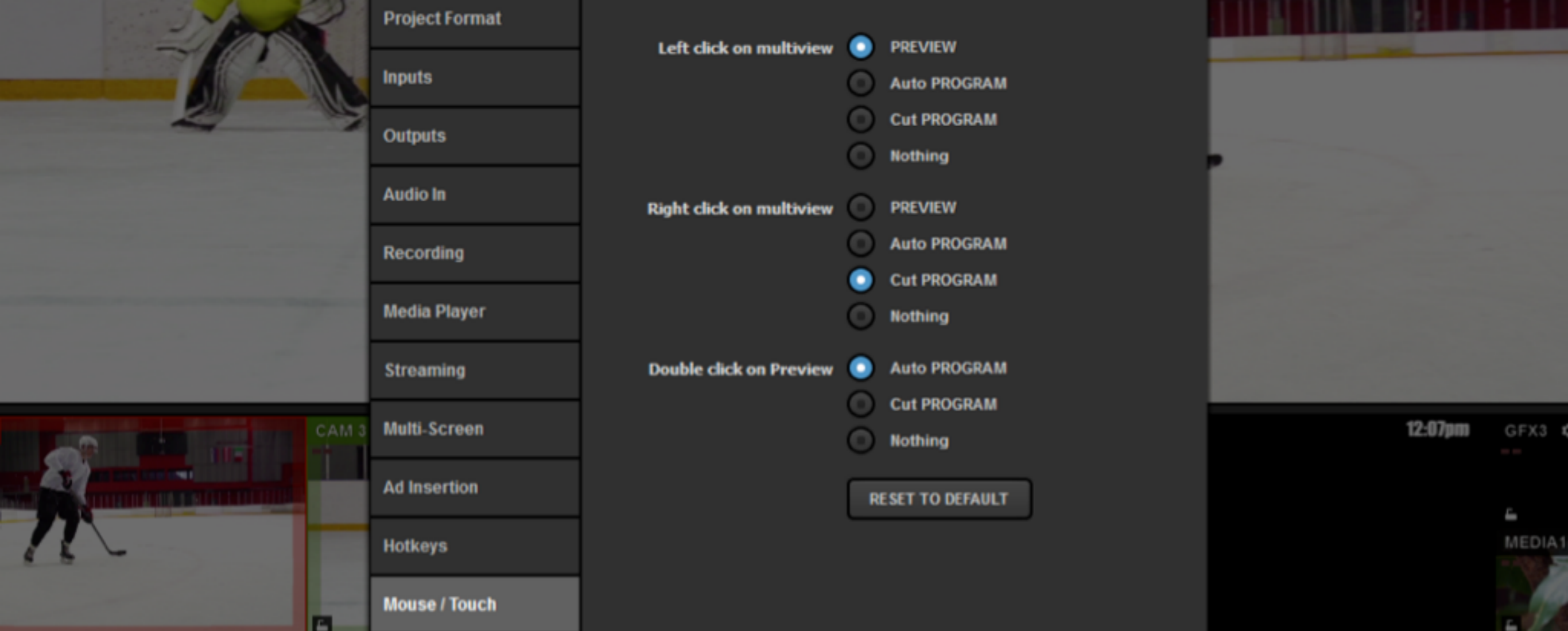
To adjust how sources are put into Preview and Program using your mouse, navigate to the '**Mouse / Touch**' tab in settings. Select the desired actions, then click 'Save.'

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.
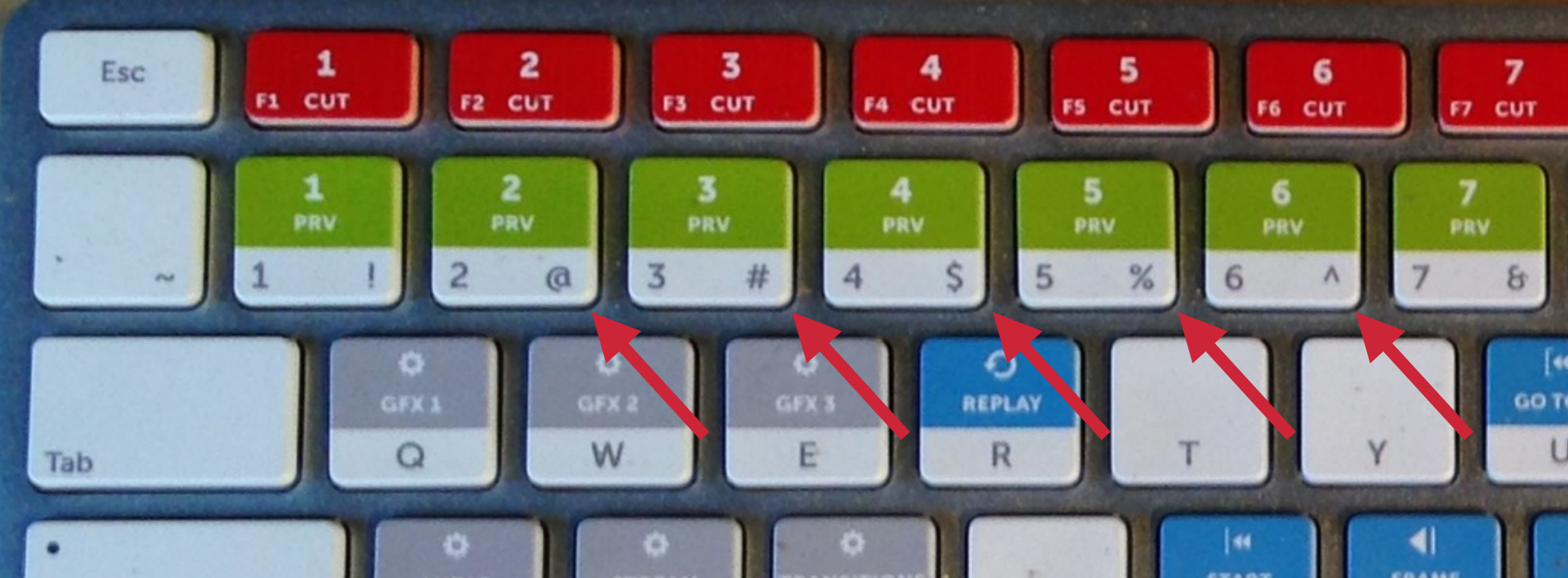
Pressing 2 puts the second source in Preview, 3 puts the third source in Preview, and so forth.
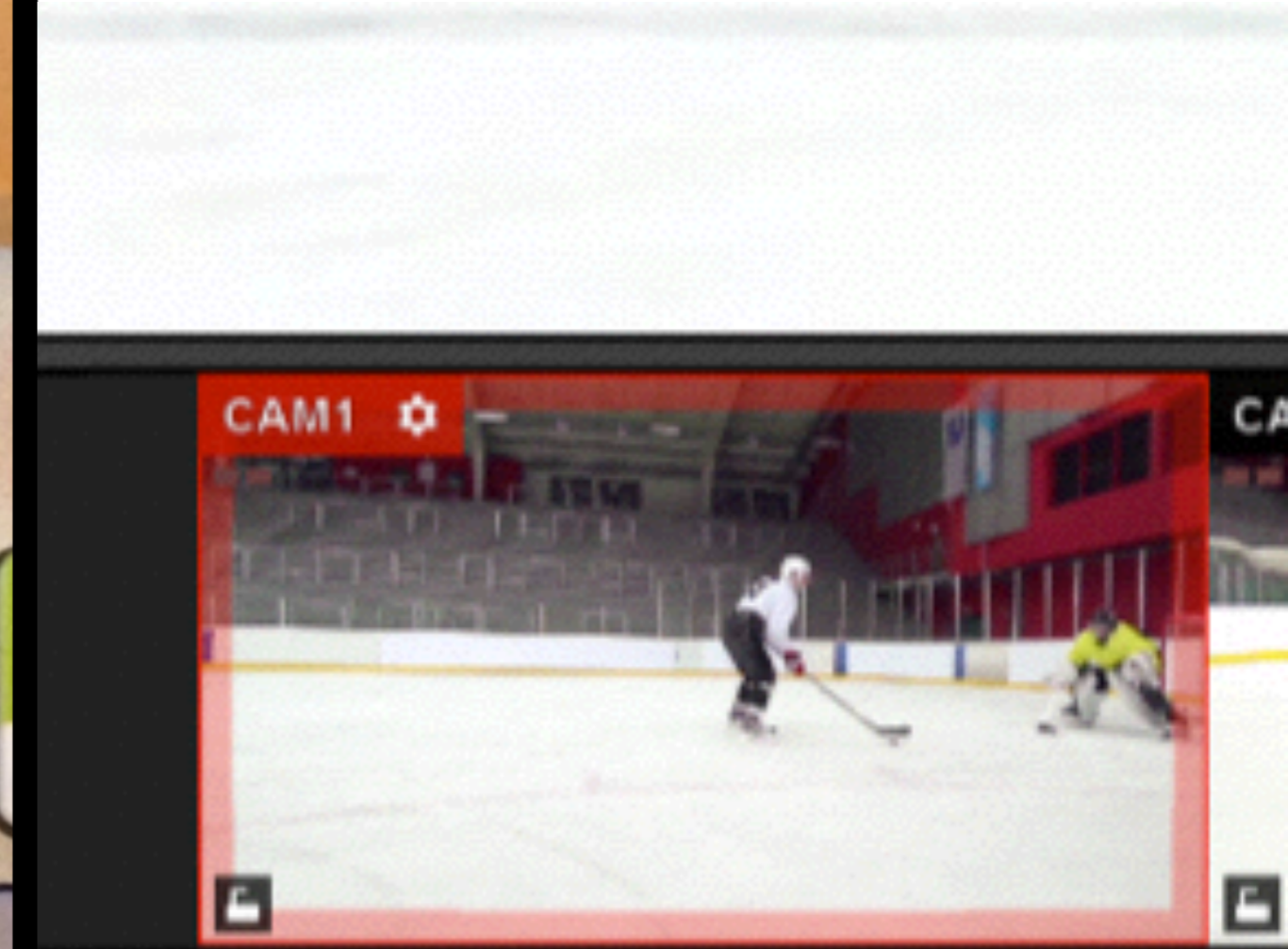
Similarly, to put your first input source directly into Program, press the F1 key on your keyboard.

F2 will put the second source into Program, F3 the third source, and so forth.
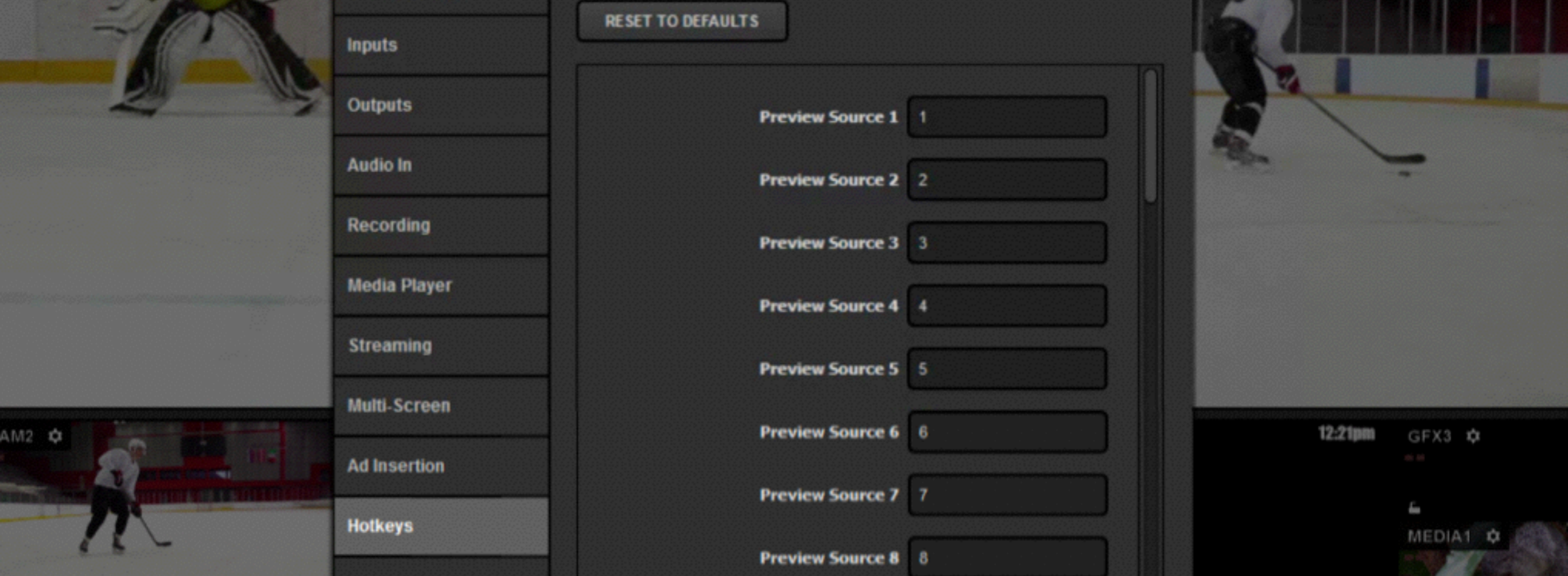
You can customize your keyboard controls by going to the 'Hot Keys' tab in Livestream Studio settings. Click 'Save' when done.

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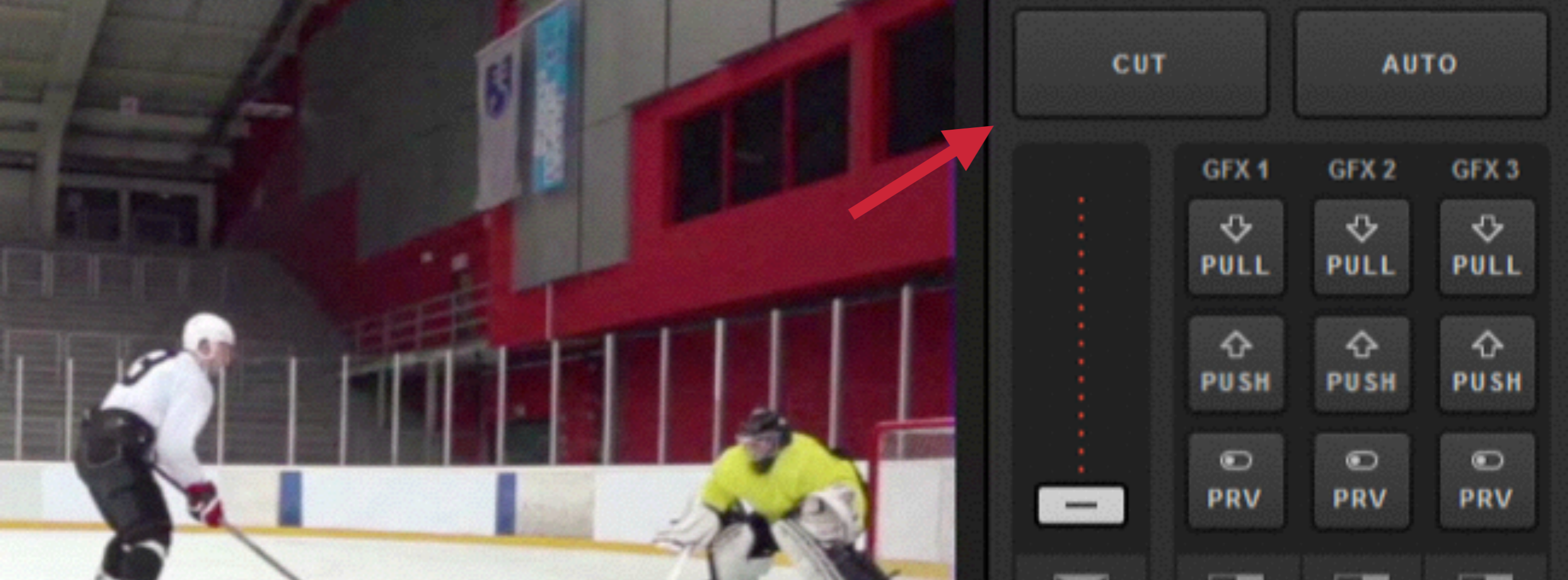
One transition is Cut, which switches Preview and Program immediately with no overlap occurring between them. Clicking the 'Cut' button activates this transition.

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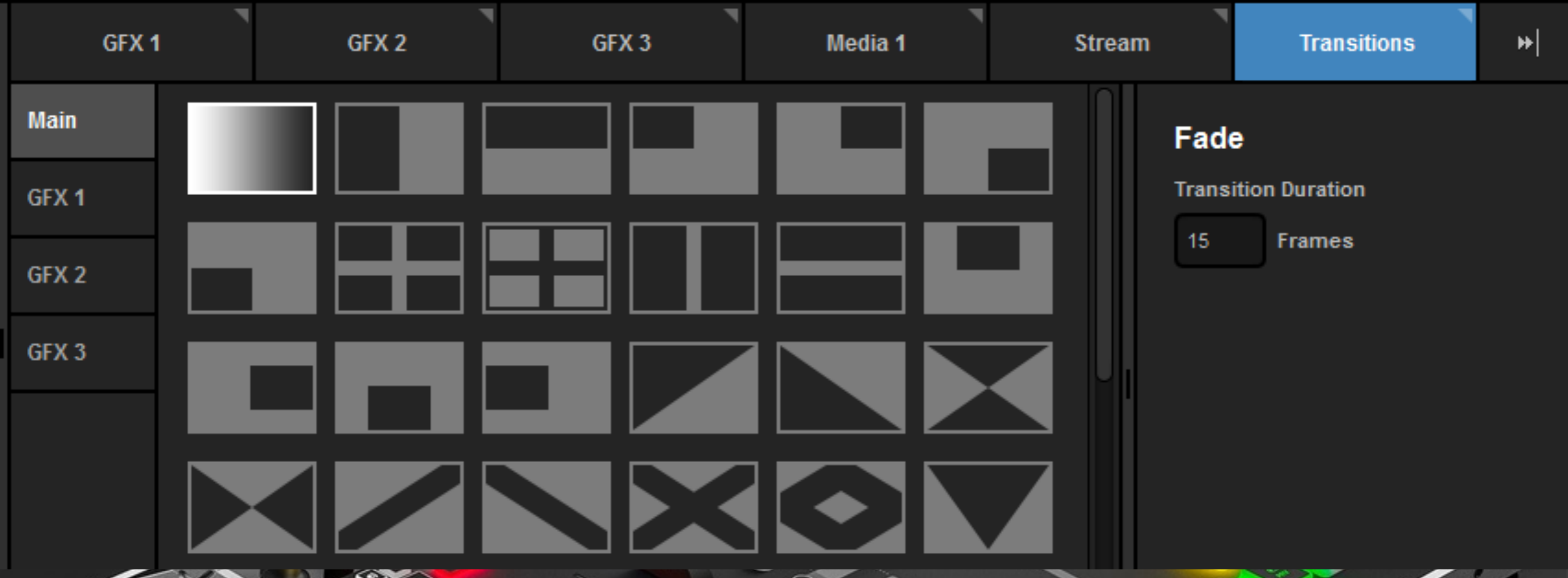
In Livestream Studio, you can configure fades and wipes under the 'Transitions' tab in the lower right corner.

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.
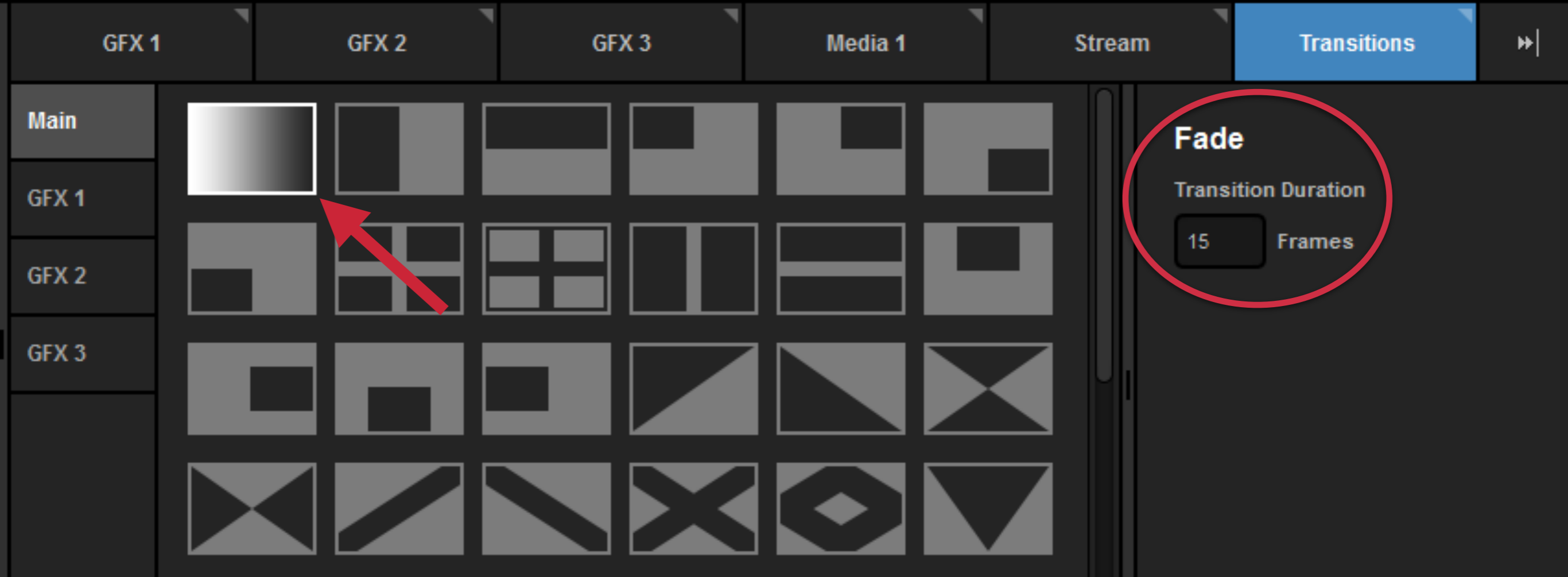
Fade is the first option in the menu, which is the dissolve transition. When you select it, you can set the amount of time you want an automatic transition between sources to last.
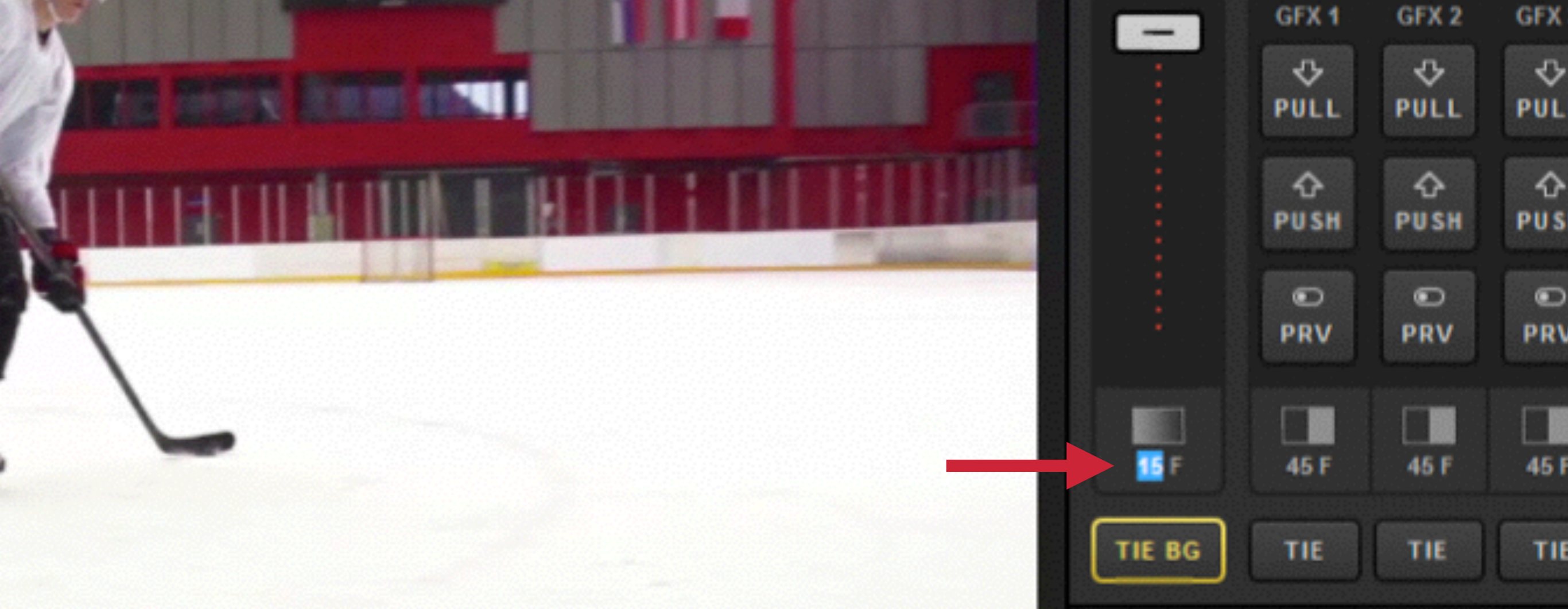
You can also double-click the duration time under the transition controls to change the speed of any automatic transition quickly.
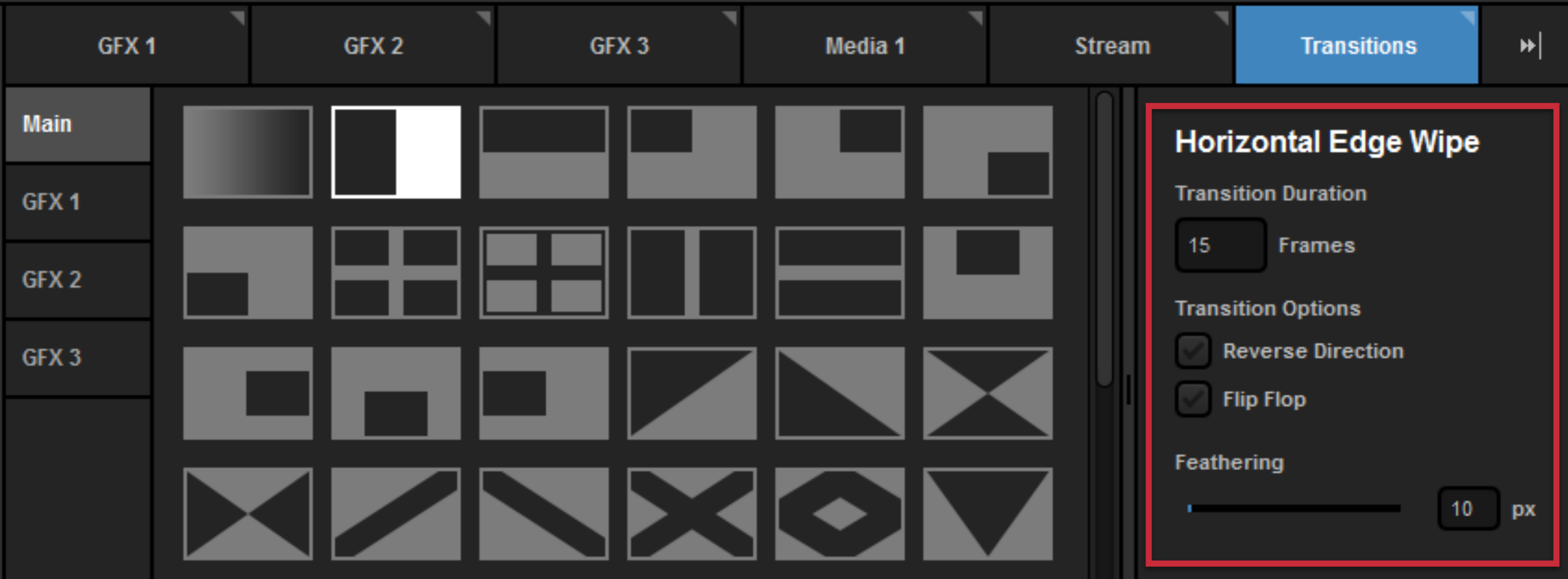
The rest of the options in this menu are different kinds of wipes. Selecting one will show additional settings on the right.
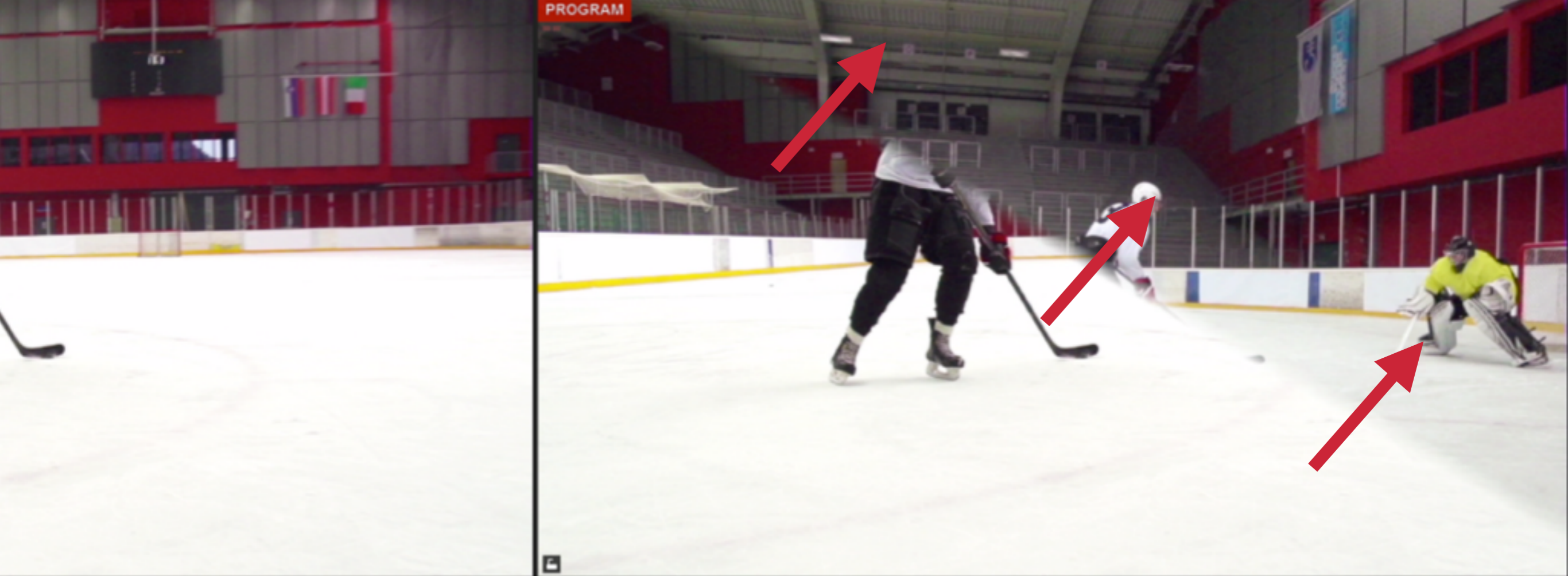
'Reverse Direction' will push the
wipe in the opposite direction that
it moves by default.

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

0 px

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.
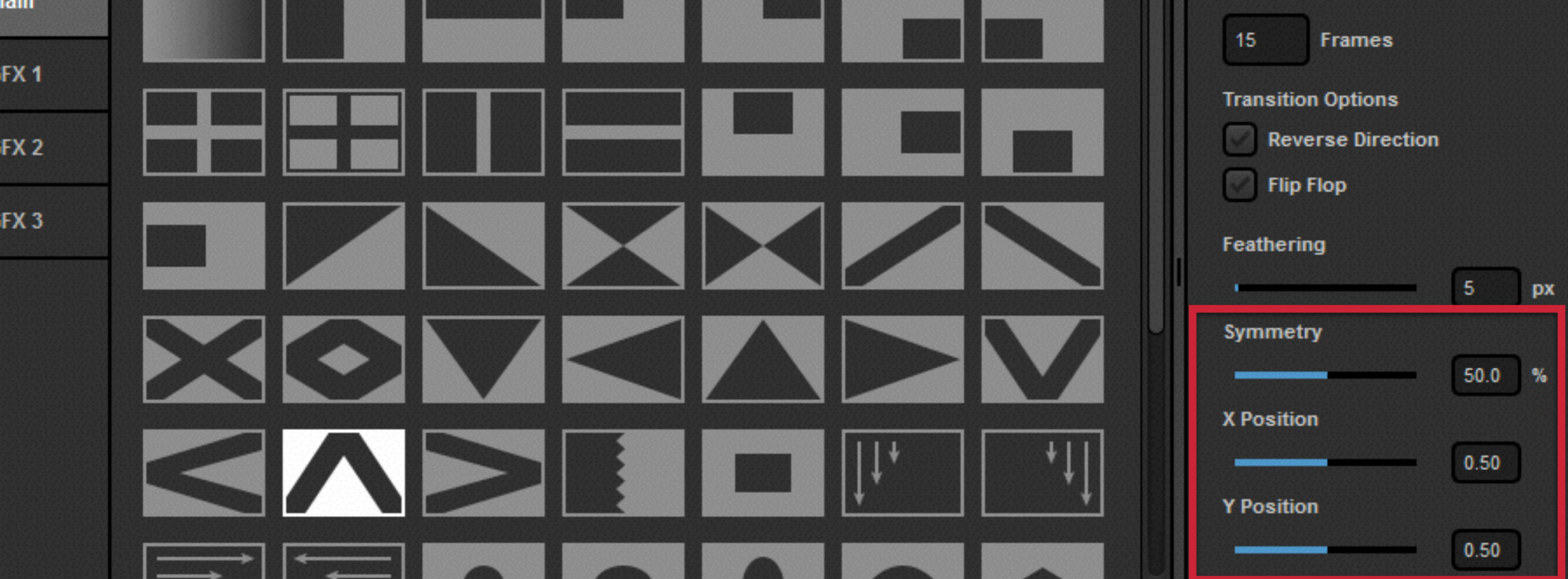
Some wipes also have options for adjusting their positions and appearance on the screen when they are used.
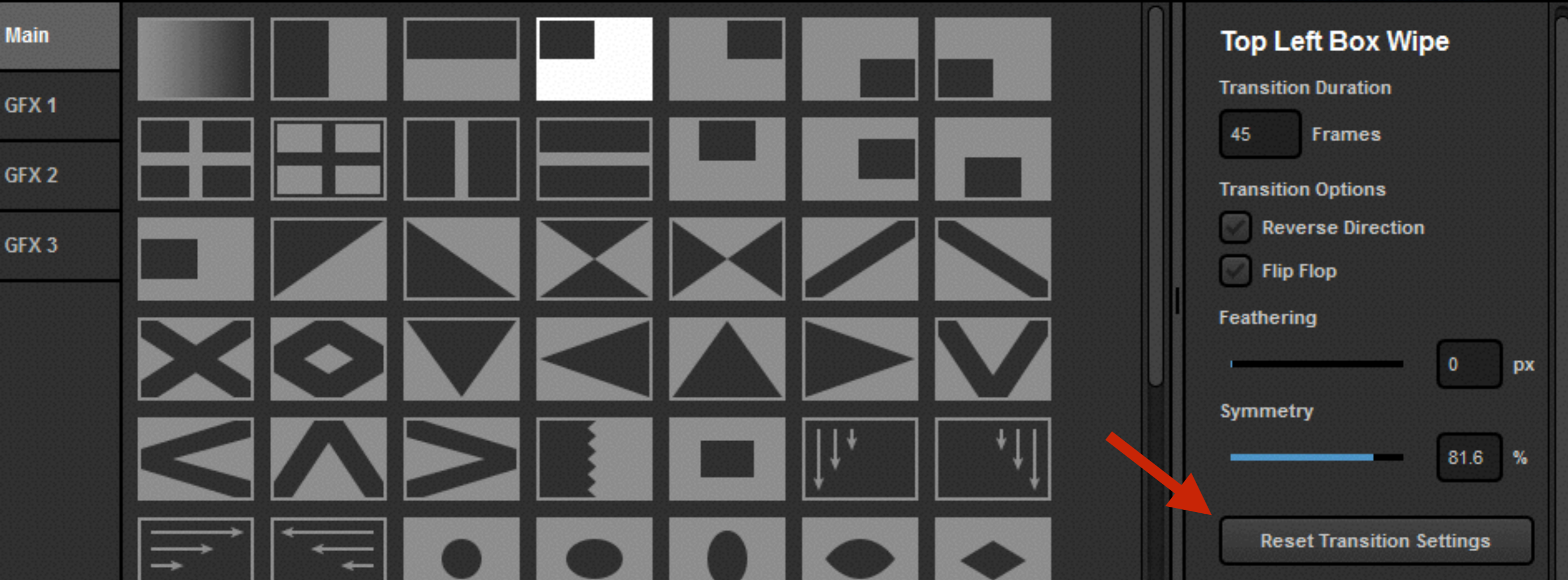
If you have adjusted your settings but want to start over, press 'Reset Transition Settings' to return that transition back to its default settings.

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.

livestream

Audio workflow

Configuring audio sources
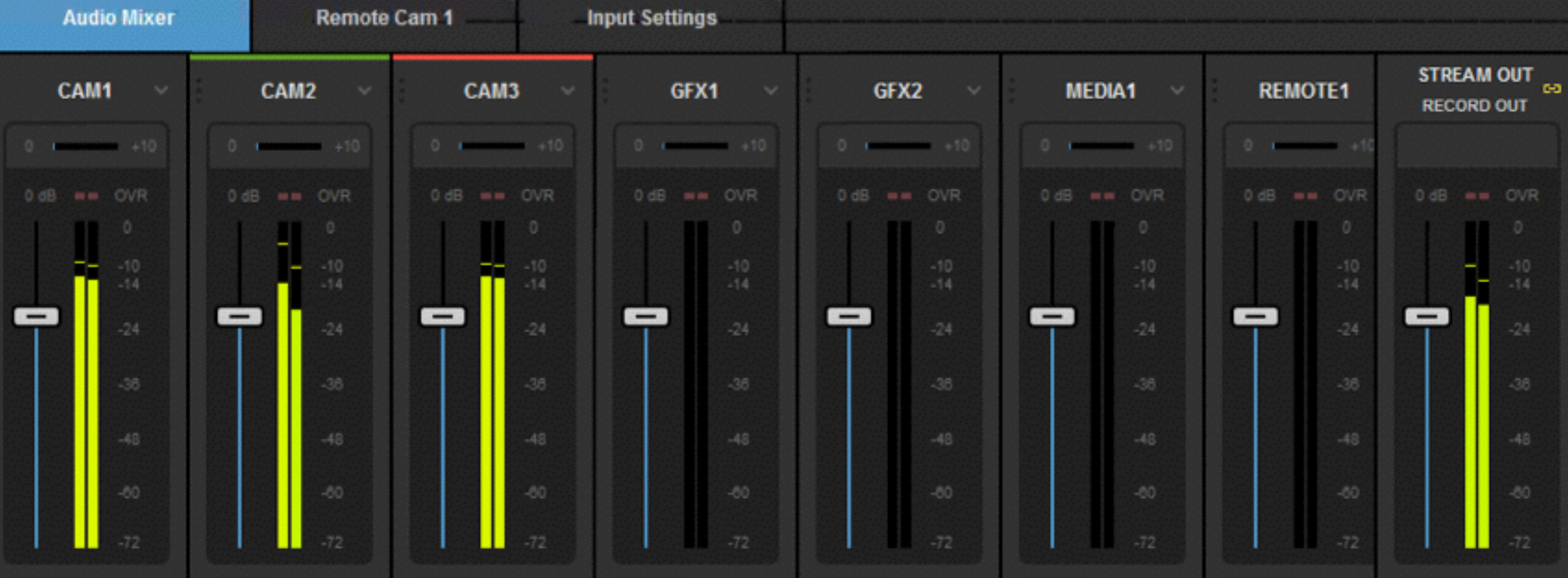
livestream

Livestream Studio's built-in audio mixer can be found in the lower left corner of the interface.
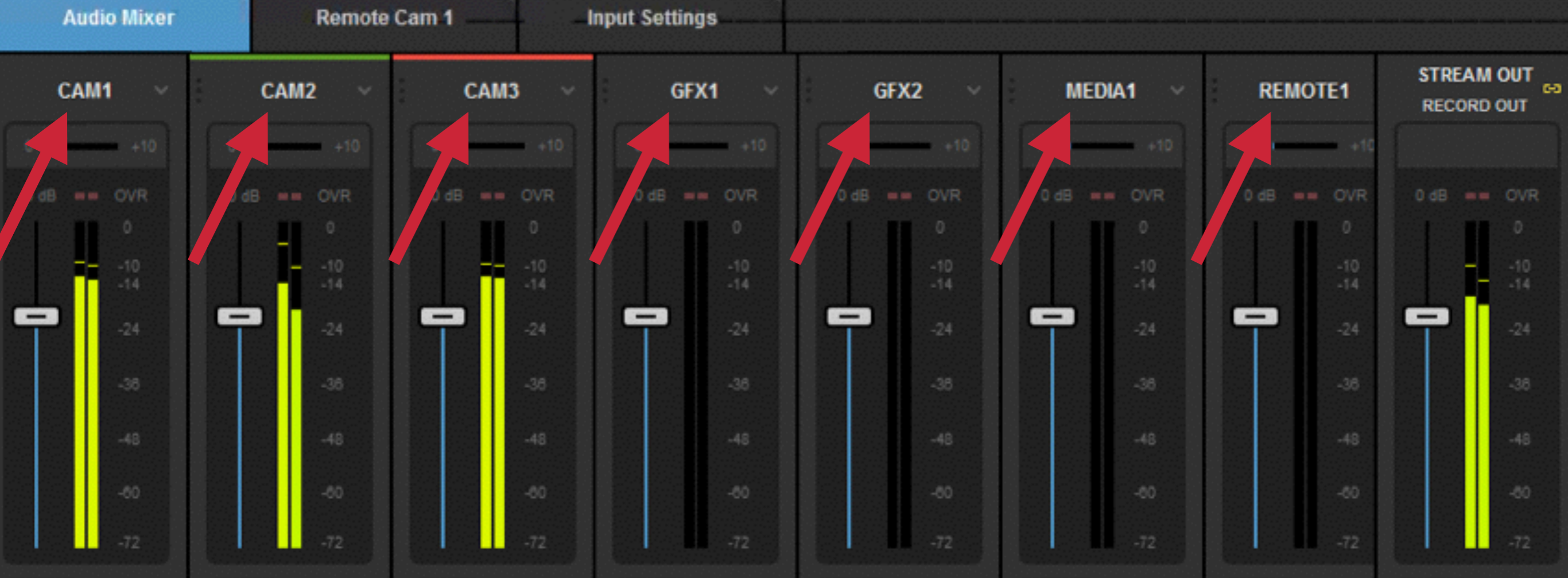
Each input source will have a corresponding audio source that you can monitor and adjust.

Settings		CANCEL	SAVE
Project Format			
Inputs	Name	Audio Source	Surface
Outputs			
Audio In			
Recording			
Media Player			
Streaming			
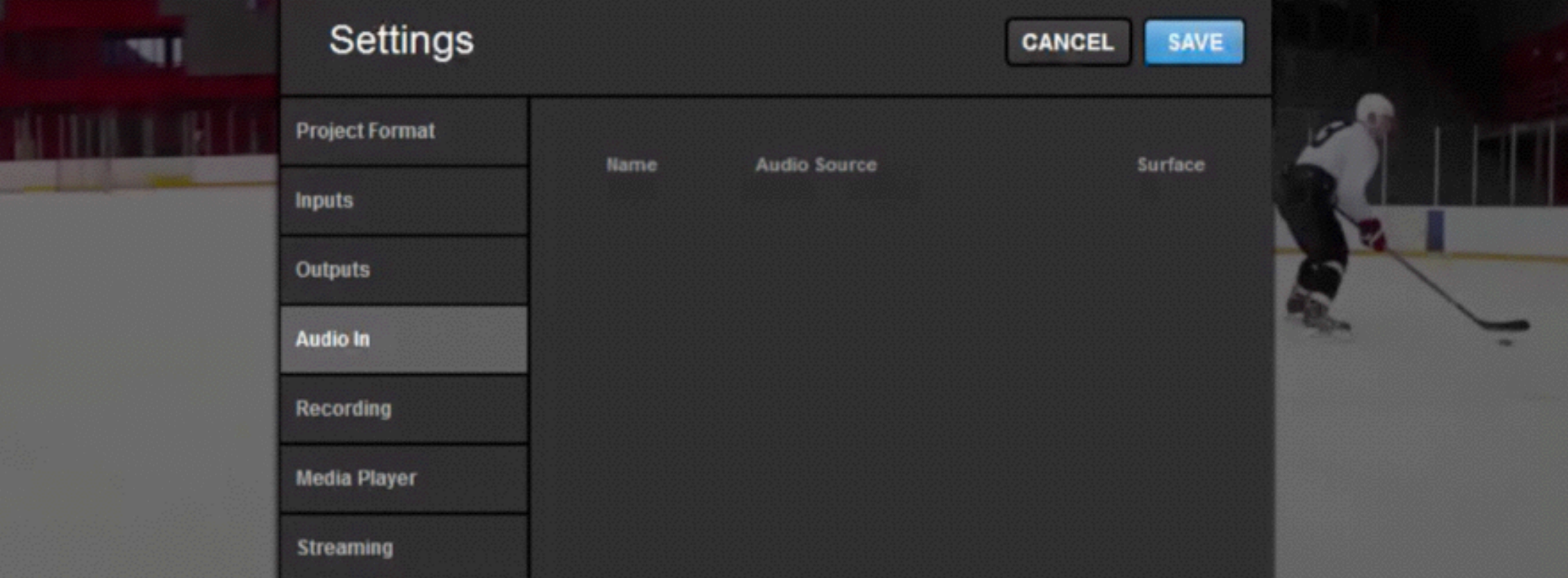
You may have a separate audio mixer or a microphone can connect to your system directly via USB or line-in. You use the '**Audio In**' tab in settings to control the audio.
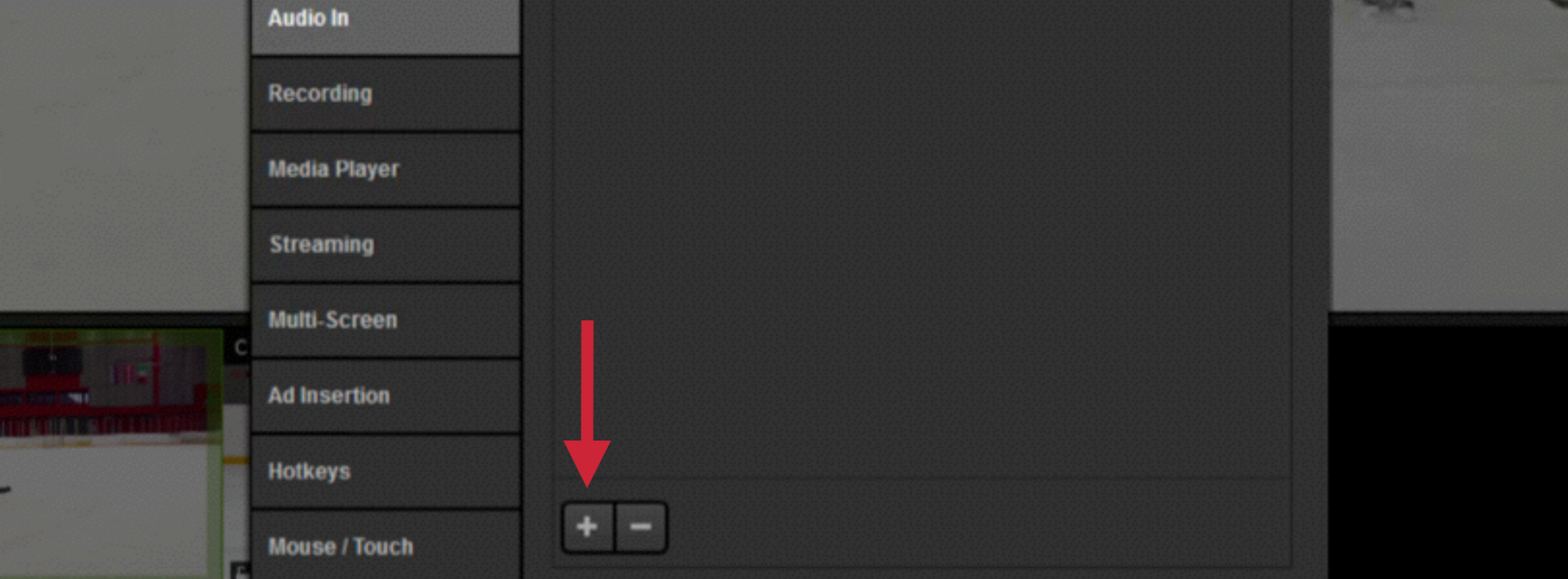
Press the '**+**' button at the bottom of the window to add an audio source.

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.
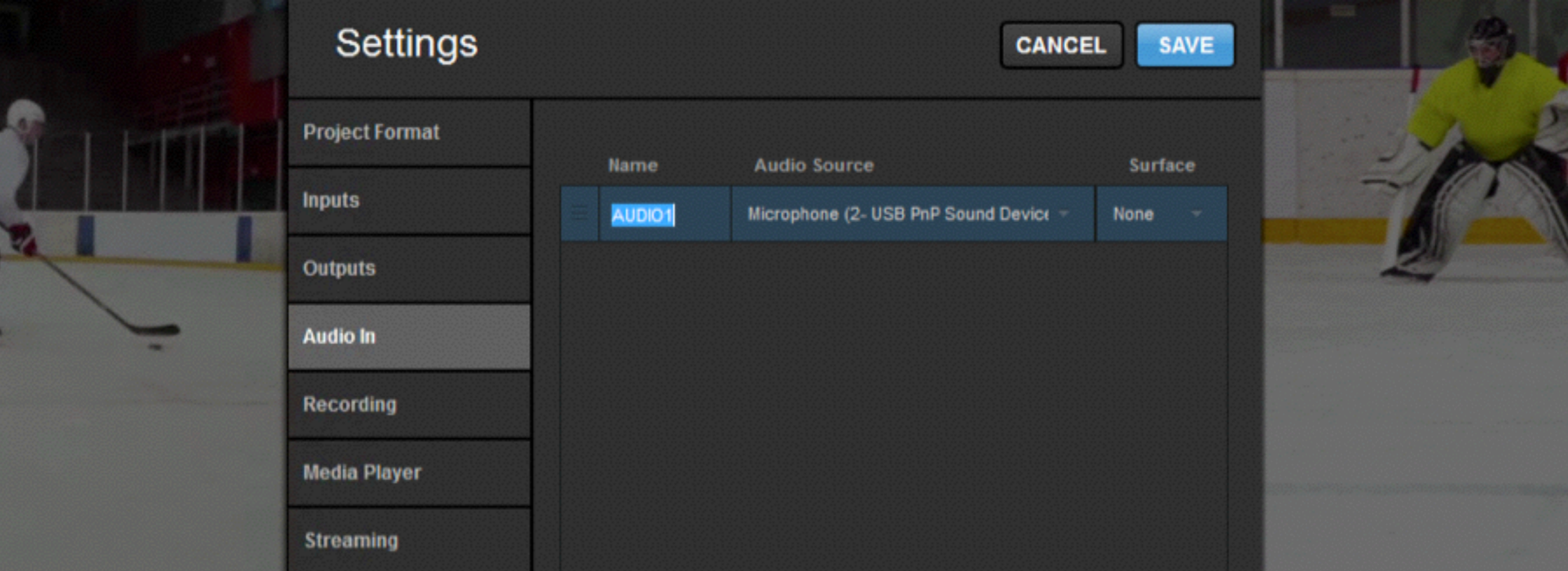
Livestream Studio will automatically label the source (e.g., 'AUDIO1'). Click on the name if you wish to change it.
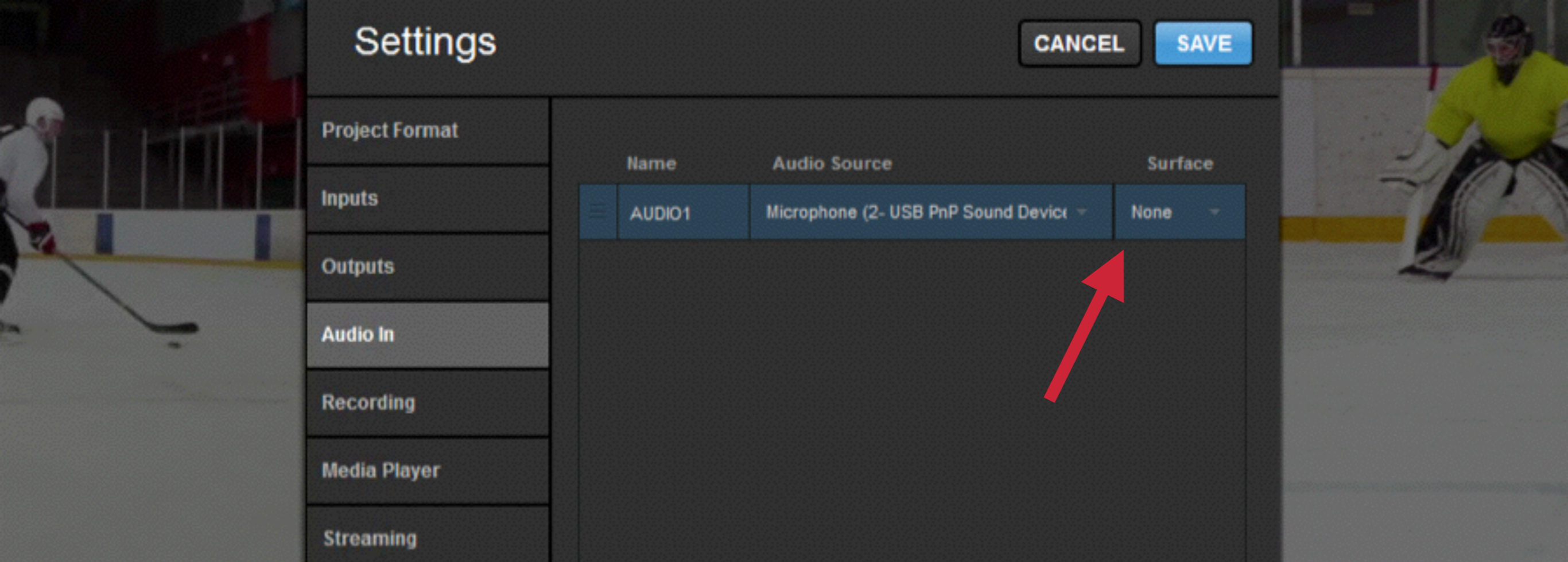
This source can also be assigned to a track on Studio Surface if you have one connected. Otherwise, 'None' will be the only option available.

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

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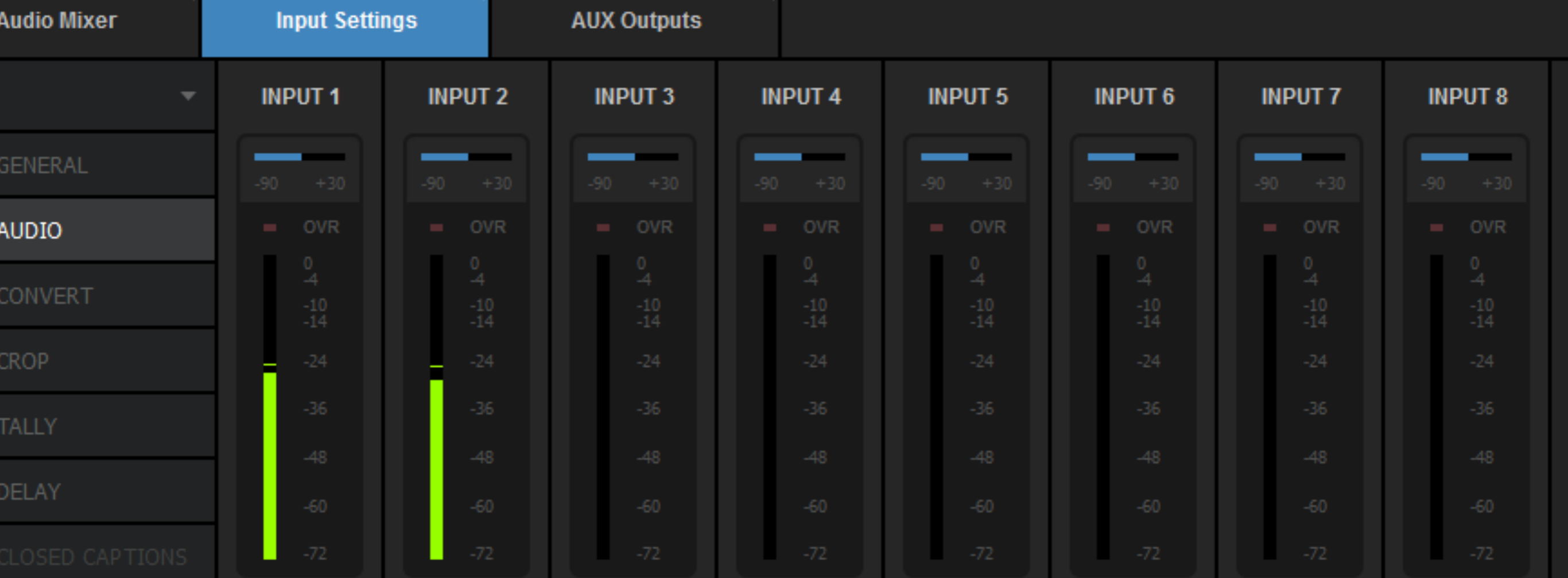
In the Audio section under the '**Input Settings**' tab, you can see all audio channels that are coming into your input source.

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 two channels per 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.
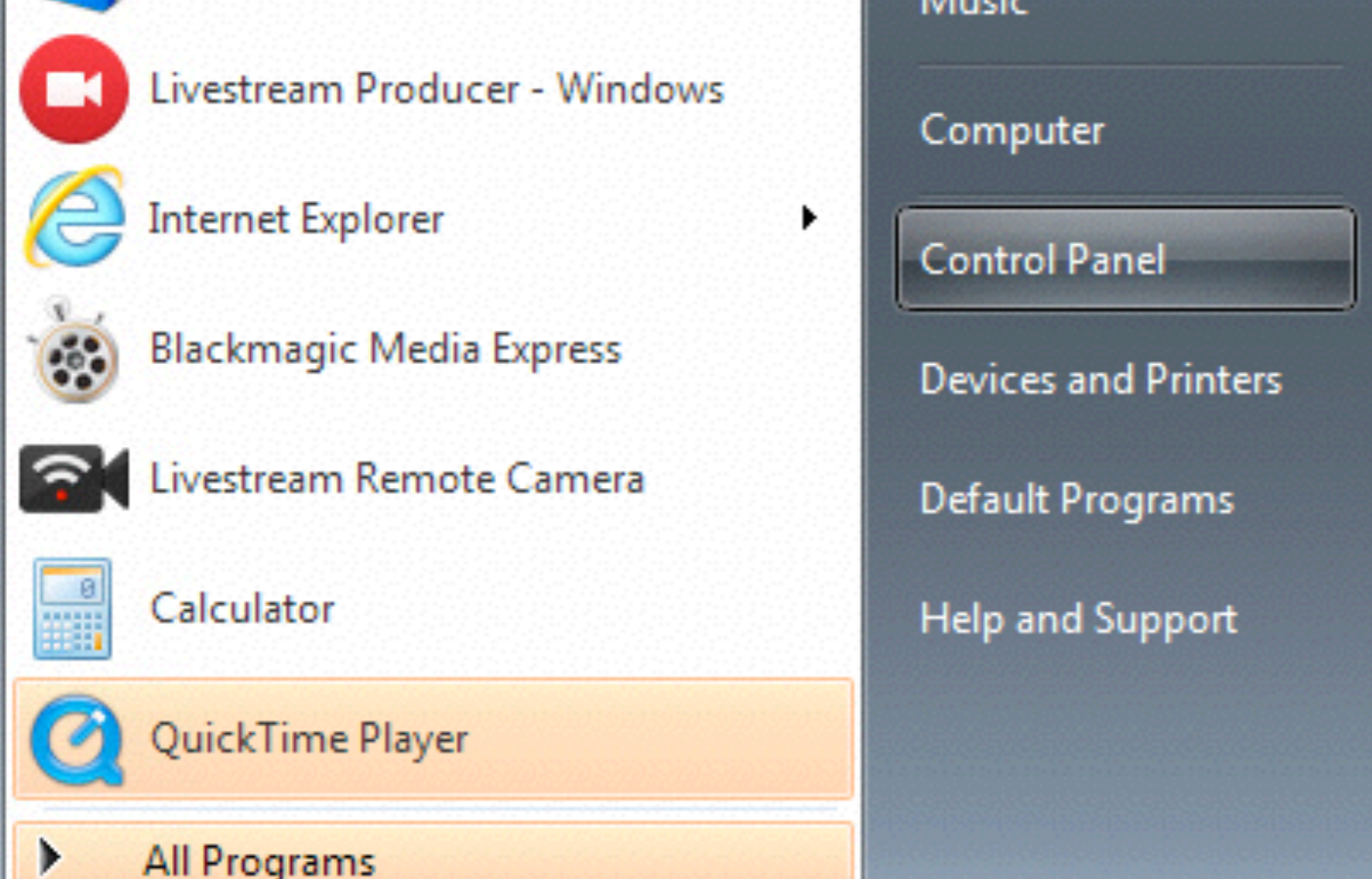
livestream

You may not hear any audio right away, even if you see audio levels. If so, go to your Windows Control Panel.
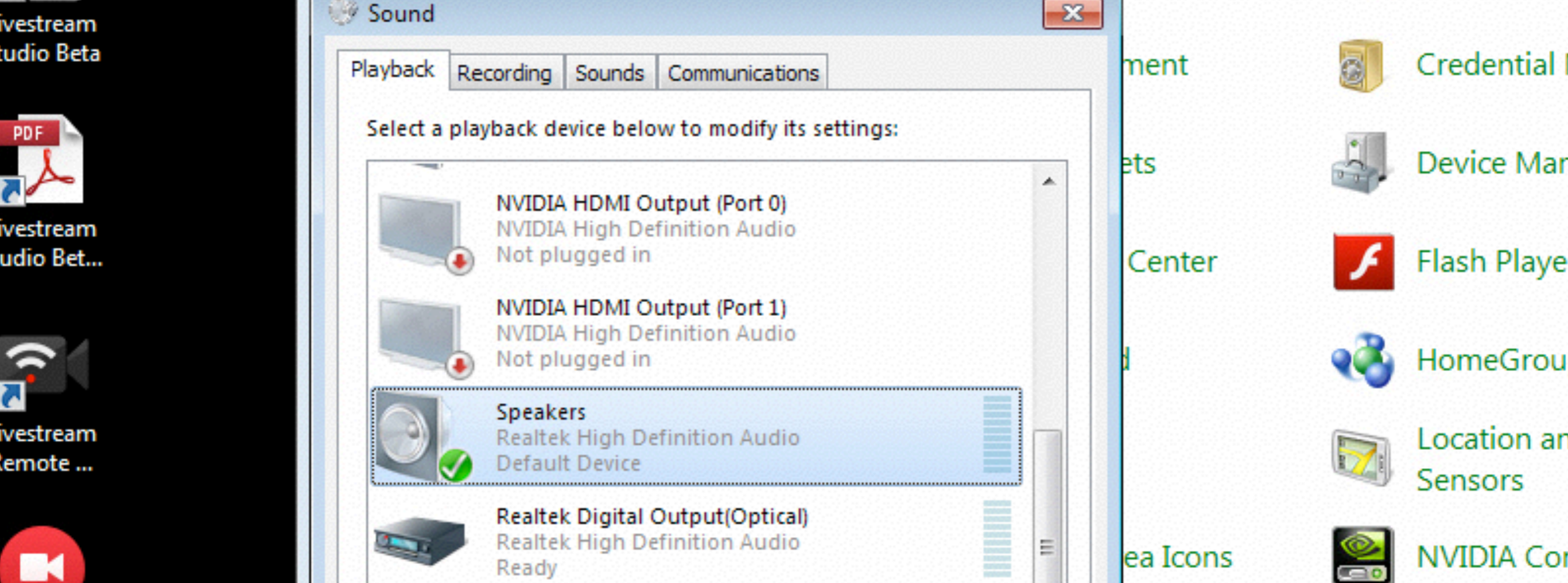
In Sound settings, look for 'Speakers - RealTek High Definition Audio.' Select that source, click 'Set as Default,' then click 'OK.'
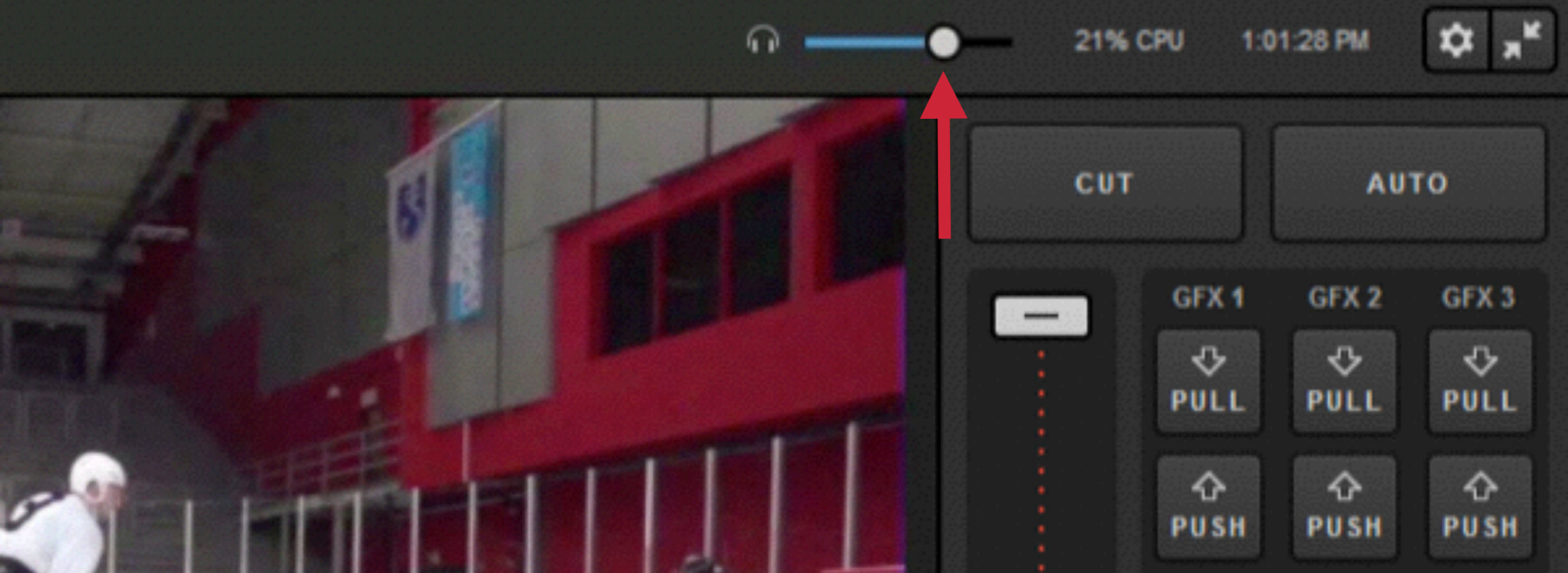
In Livestream Studio, check the headphone volume meter in the upper right and adjust the level to the desired volume.

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.

When switching sources, you may notice the 'Audio' buttons highlighted yellow as you make the transitions.
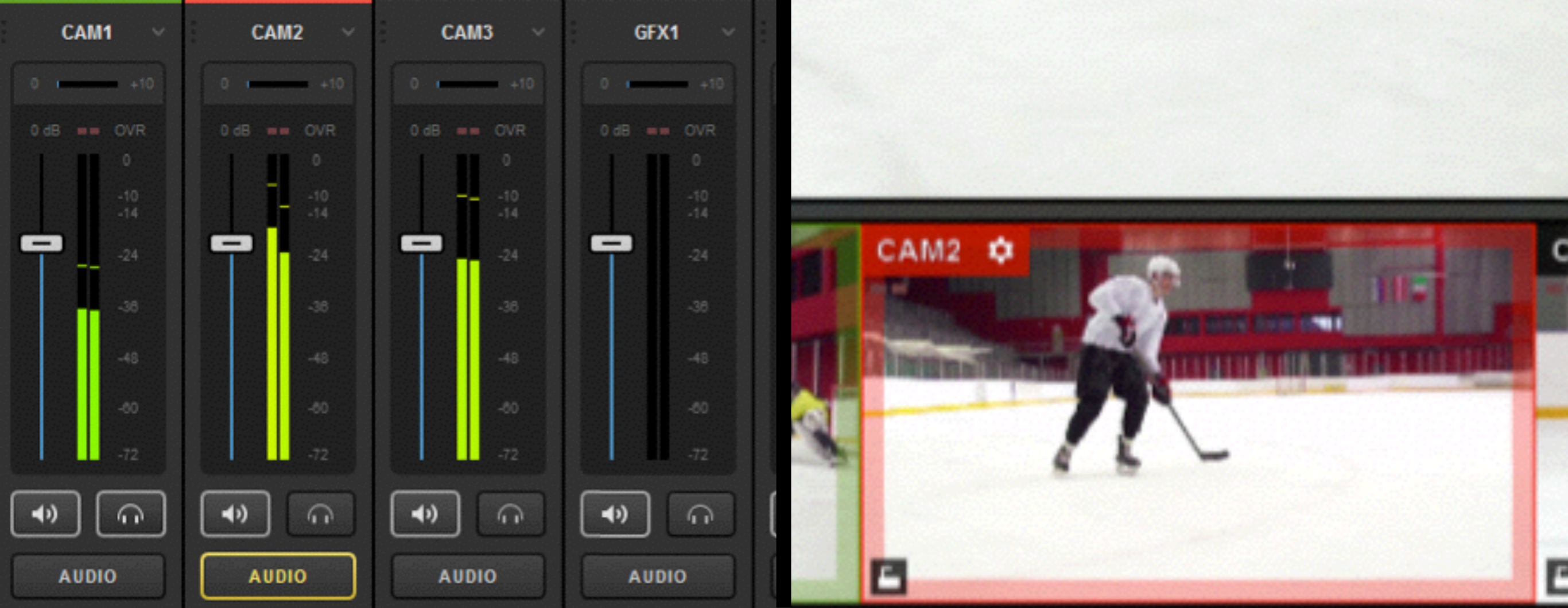
This indicates that the audio source is heard in Program because its corresponding video input is in Program. It is not heard when the video input is not in Program.

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.

livestream

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.

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.

livestream

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.

You can link multiple inputs to one audio source for smooth transitions.
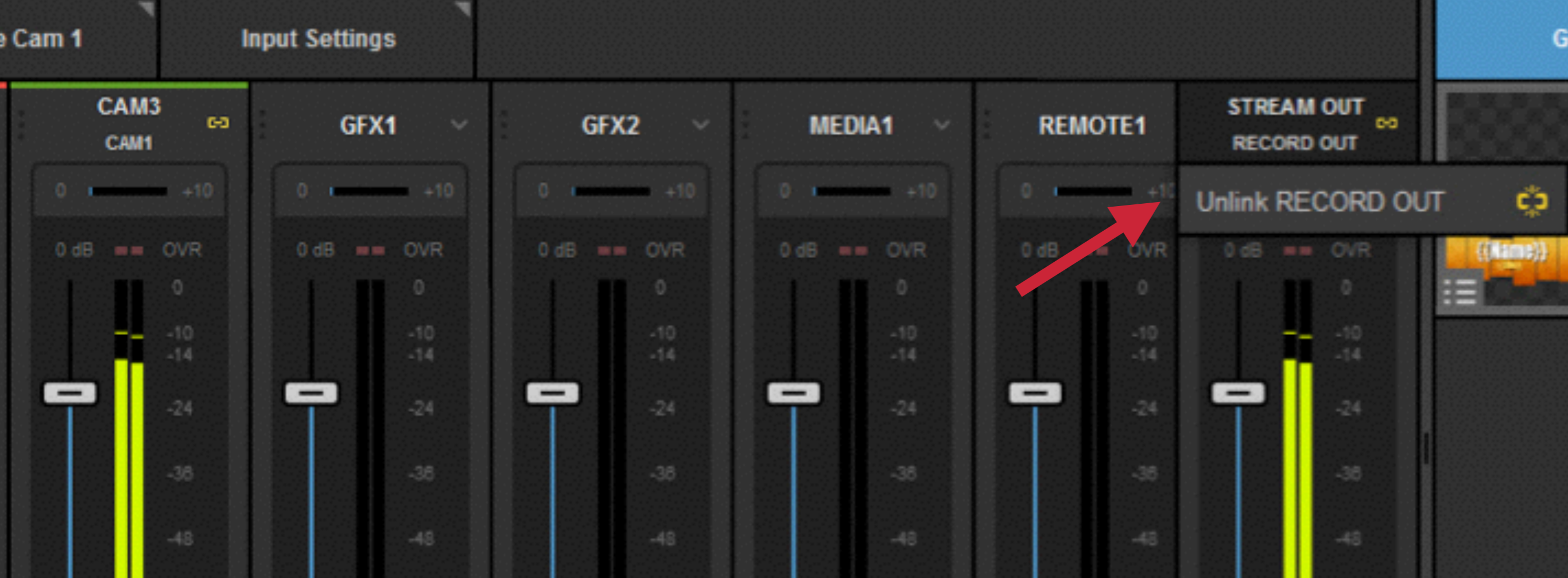
Most producers link 'Record Out' and 'Stream Out' together for consistent Program audio across all output sources. Those two sources cannot be linked to any other source.

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 over-modulating 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

livestream

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
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
Program Dirty - 2014.08.21 09.09.05	8/21/2014 9:09 AM	Video Clip
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

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

CANCEL   SAVE

Project Format

Video In / Out

Audio In

Recording

Default Record Location   BROWSE   C:\Users\User\Videos\

Note about ISO Recording:

This Livestream Studio license is limited to 4 simultaneous recordings. Enabling multiple ISO recording requires high performance hard drive. See our recommended options for internal and external drives

In settings, go to the '**Recording**' tab. Set the location where you want your recordings to be saved.
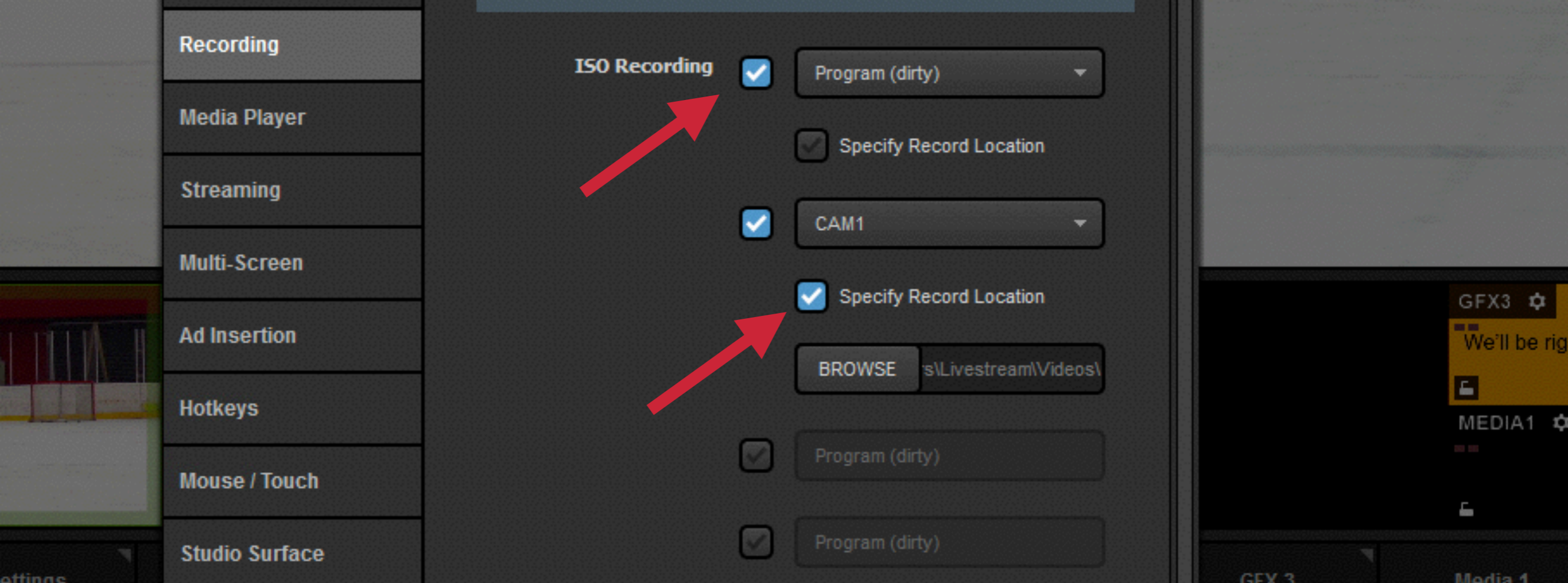
Set which source(s) you want to record and specify if you want to save the file in a particular location.

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.

Time of the Day (Clock)

Recording Bitrate   75 (Mbps)

Record to Media Bin   ☑ Media 1

☑ Media 2

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).

Next, navigate to the '**Advanced**' tab and scroll down to 'Split Recordings by Time Interval.' Here, there are three options for how long recordings will be saved.
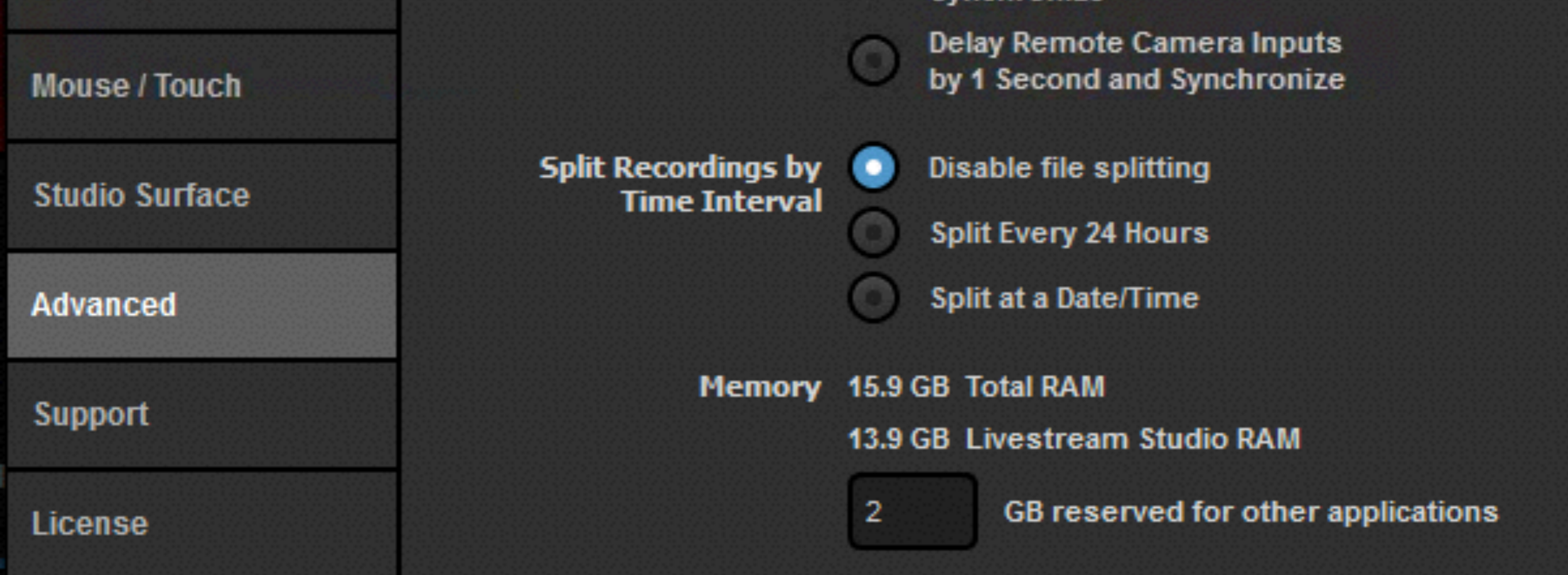
The first is 'Disable file splitting,' which means that all recordings produced by Livestream Studio will stay together as one file.

'Split Every 24 Hours' will create a
new recording file after recording
has been active for 24 hours.
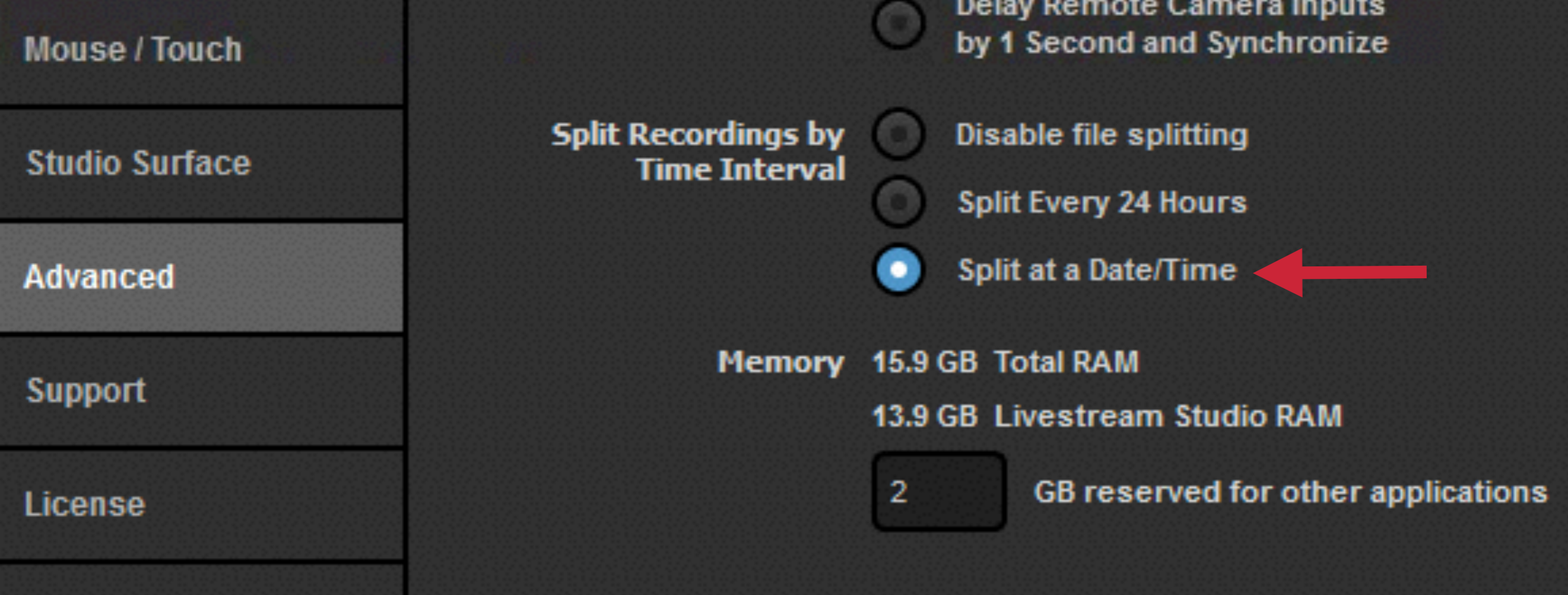
'Split at a Date/Time' will prompt Livestream Studio to restart the recording at midnight (your local time), regardless of what time the recording started.

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.

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

Recording

Starting and stopping your recording

To begin your high resolution recording(s), press 'Record' at the top left of Livestream Studio.
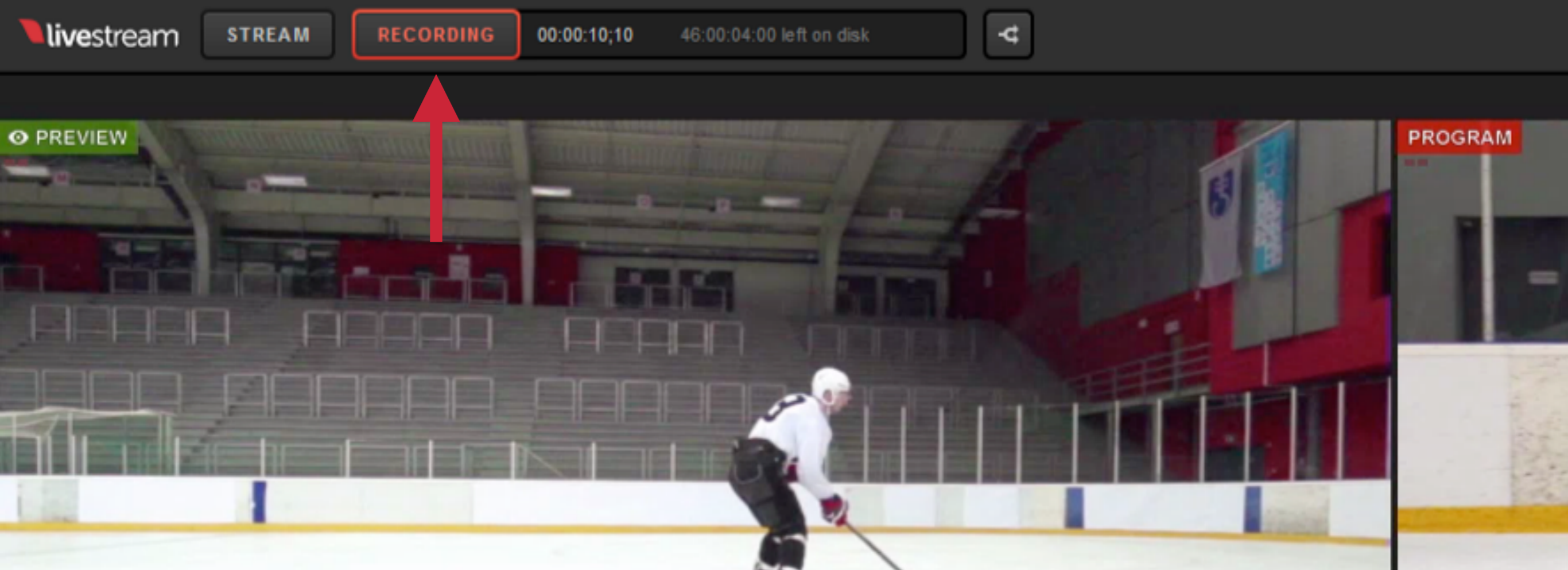
The 'Record' button will turn red and change to 'Recording.' You can also track your recording time and hard drive space.
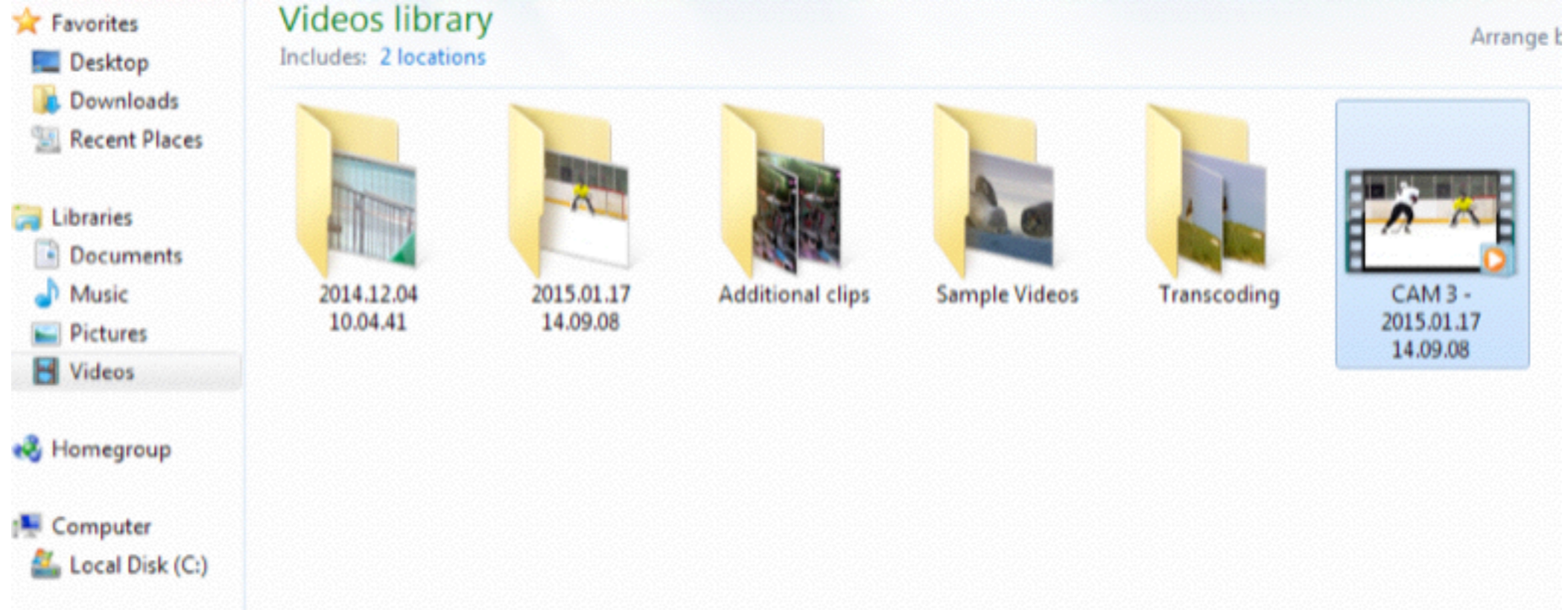
When you are ready to stop recording, press the 'Recording' button at the top of the interface. All recorded files will be located where you specified in the Recording settings.

Streaming

Using Livestream

The easiest way to stream from Livestream Studio is with the Livestream platform. To get started, go to livestream.com and click 'Log in.'
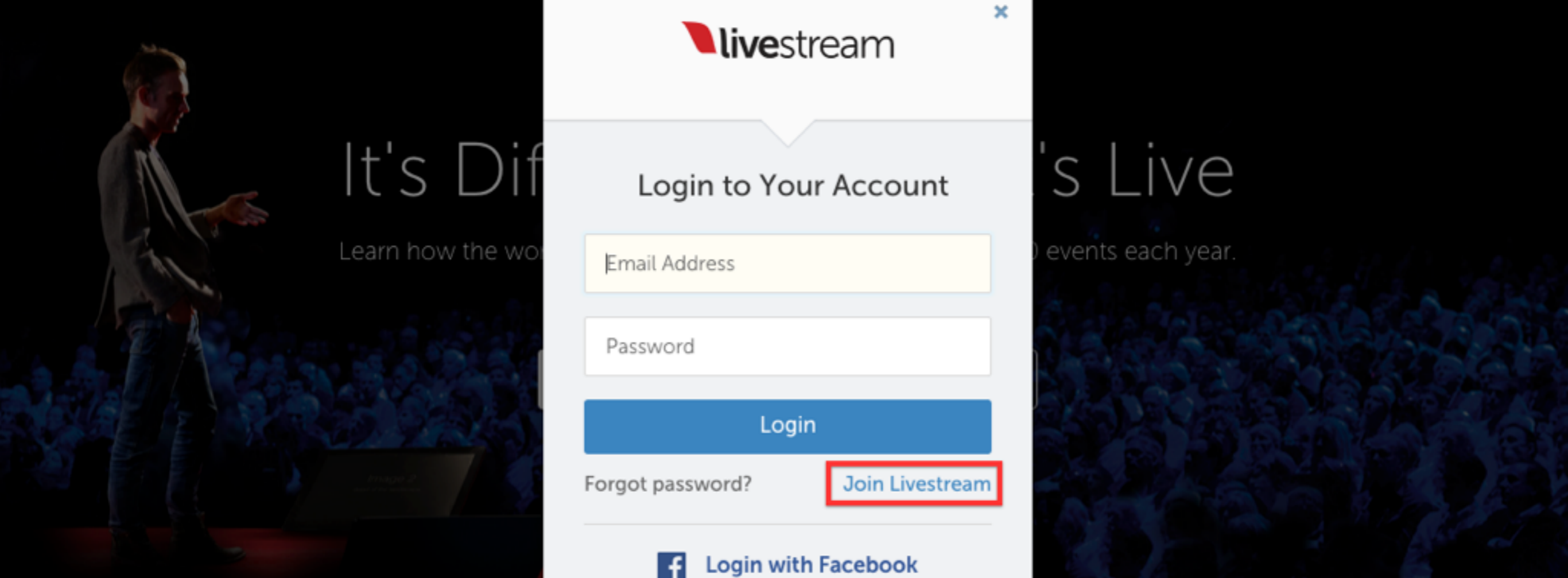
If you do not already have a Livestream account, click 'Join Livestream.'
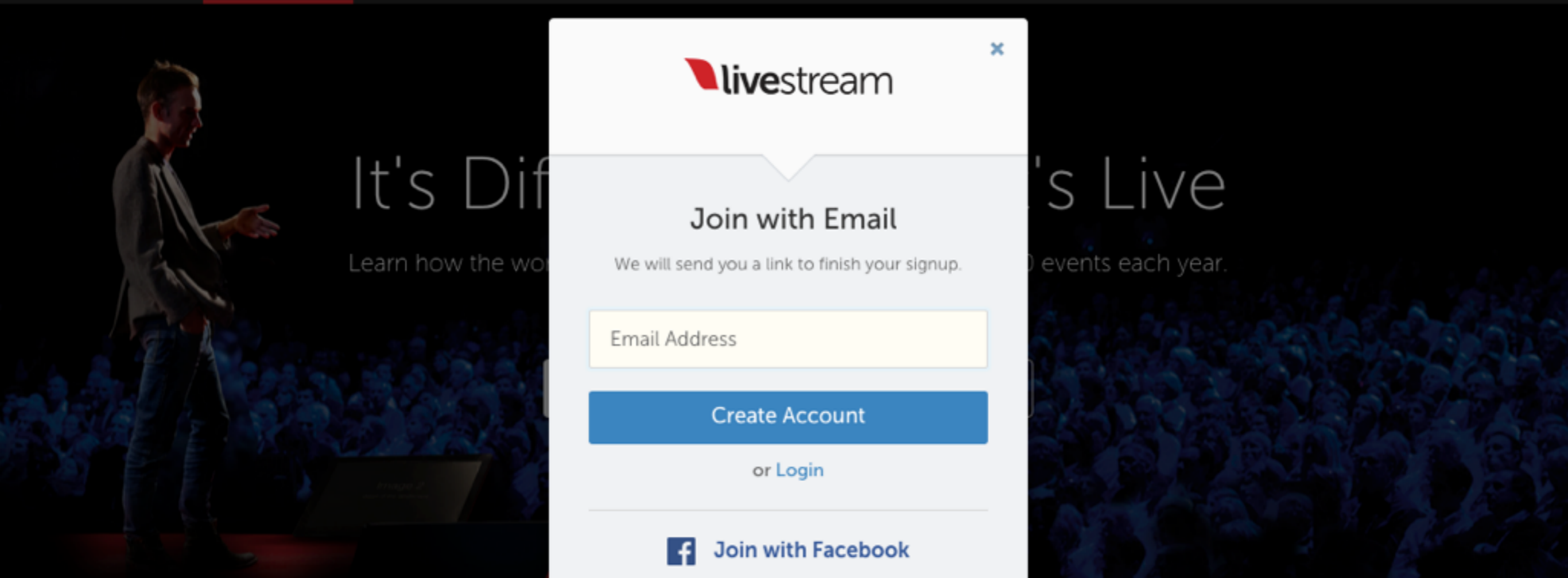
Type in your email address and click 'Create Account.' You can also join by connecting your Facebook account.
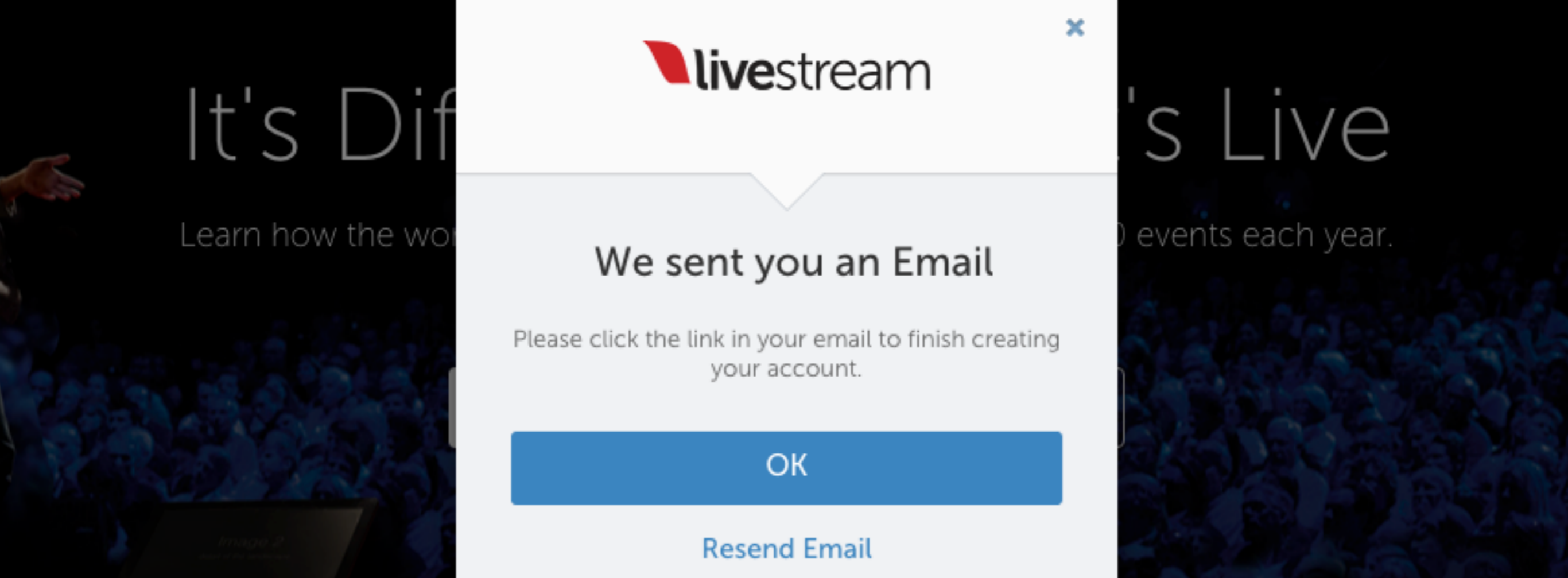
If you use an email address, you will be prompted to check your email.
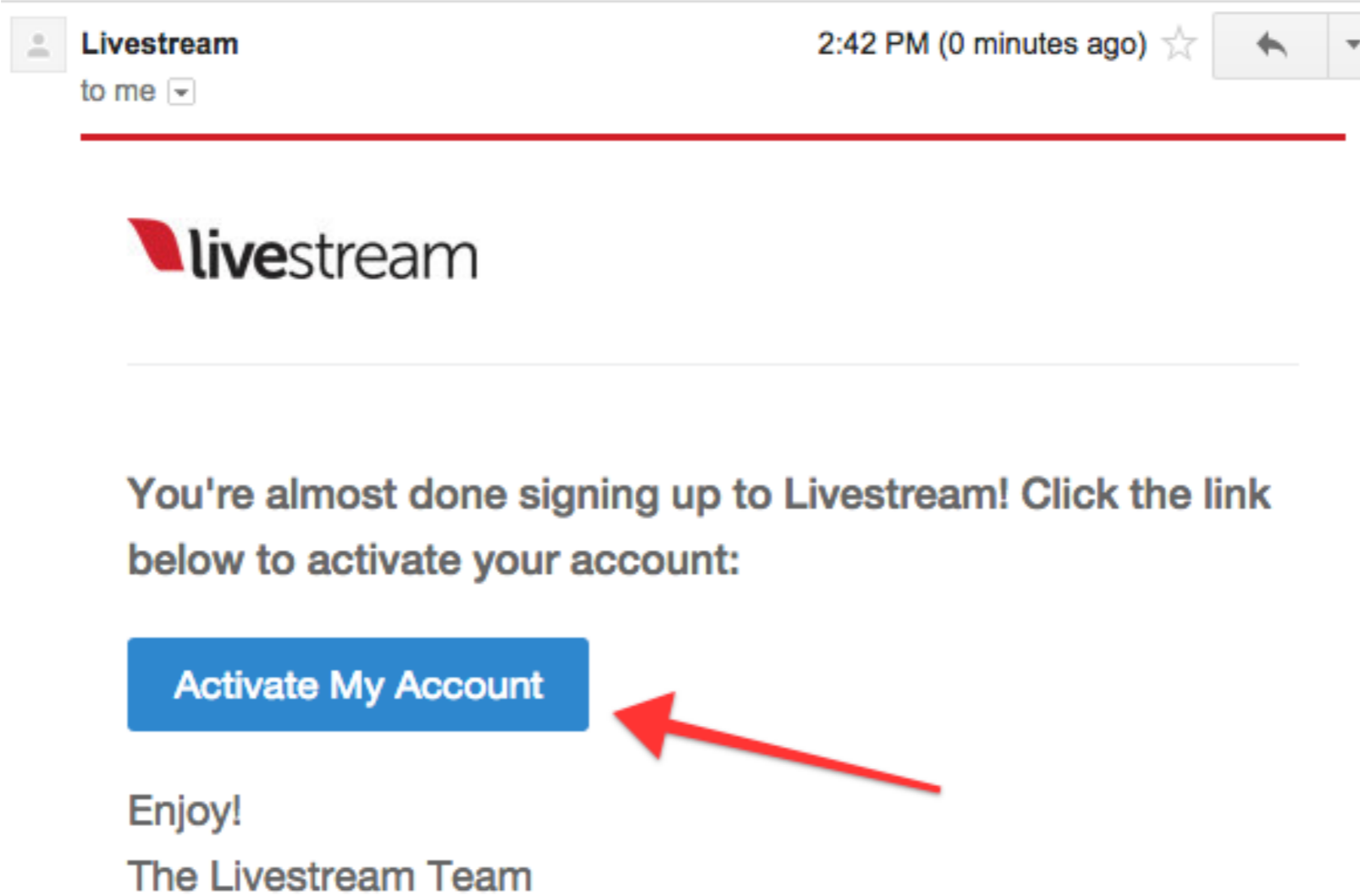
This is what the account creation email will look like. It comes from notifications@livestream.com.
Click the blue 'Activate My Account' button to continue.

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.

f Connect to Facebook

Skip

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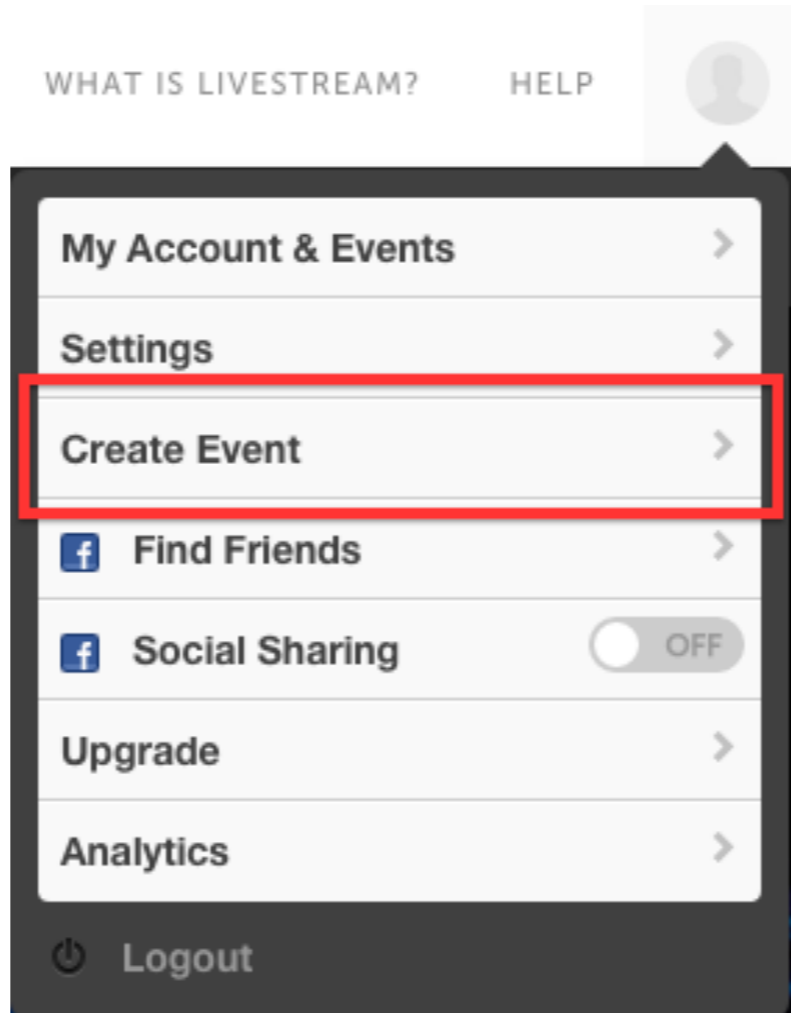
Now that your account is created, you need to create an event. Click the image placeholder in the upper right corner and select 'Create Event.'

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

Next, select your event category, type and language. This will make it easier for viewers to find your event.

The next step is to upload a
poster image for your event page
to help brand your event.

Event Created

Now you can go live to your audience or post text, photos, and videos to your event.

Ok, let's go

☐ Publish Now & Notify Followers

Add Description & Customize >

Your event has been created. You can now publish the event page and notify any Livestream followers. You may also continue making any changes.

In Livestream Studio, click on the 'Stream' tab. By default, Livestream will be the first provider option. Enter your account credentials and click 'Log In & Continue.'

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

Stream Quality

Mobile Quality (198kbps)

Mobile Quality (198kbps)
Normal Quality (446kbps)
Medium Quality (678kbps)
High Quality (1756kbps)
Medium + Mobile (876kbps)
High + Medium + Mobile (2632kbps)
HD + Medium + Mobile (3196kbps)
HD + High + Medium + Mobile (4952kbps)
HD+ + High + Medium + Mobile (6632kbps)
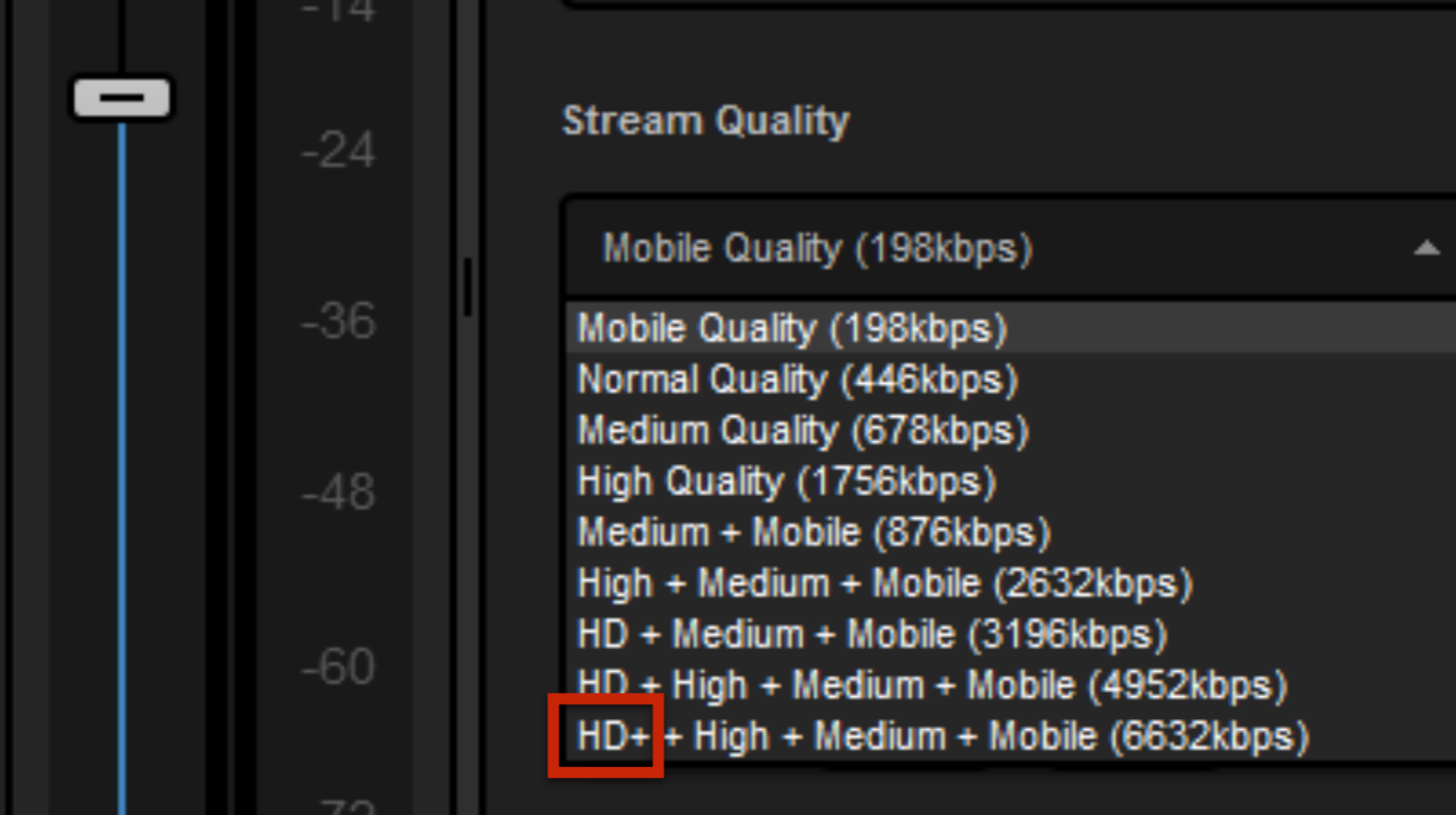
You will notice an additional quality available in the stream quality menu, **HD+ + High + Medium + Mobile**. The new 'HD+' quality streams 720p at 4 mbps, which helps reduce video pixelation in streams with more activity (e.g. sports).

On the bottom right 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.

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

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

Delivery Method

○ Bonding If Needed

○ Bonded Network

○ Standard

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

Delivery Method

◉ Bonding If Needed

○ Bonded Network

○ Standard
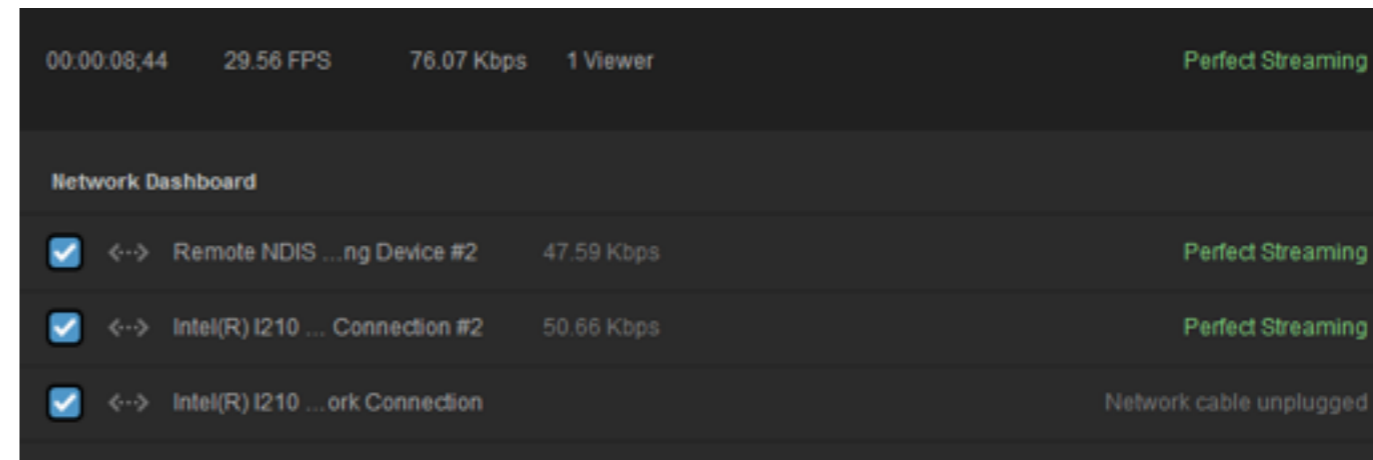
Livestream

☑ [use ▾] ‹··› Killer e2200 G...er (NDIS 6.30)   314.94 Kbps

☑ [standby ▾] ‹··› Remote NDIS ...aring Device   0.00 Kbps

'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.

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

'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.'

☑ Notify Followers

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   Network cable u

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

livestream

'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

Normal Quality (446kbps)

☑ Notify Followers

Hide Advanced Settings

Aspect Ratio

GO LIVE

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

livestream

Killer e2200 P...er (NDIS 6.20)   406.69 Kbps   Perfect Streaming

HUAWEI Mobil...Network Card   Network cable unplugged

Remote NDIS ...aring Device   0.00 Kbps   No internet connection

STREAMING
00:00:08:20

Perfect Streaming
29.86 FPS   288 Kb/s   2 Viewers

Penalty Shot
www.livestream.com/accounts/4509833/events/3744269

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.

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.
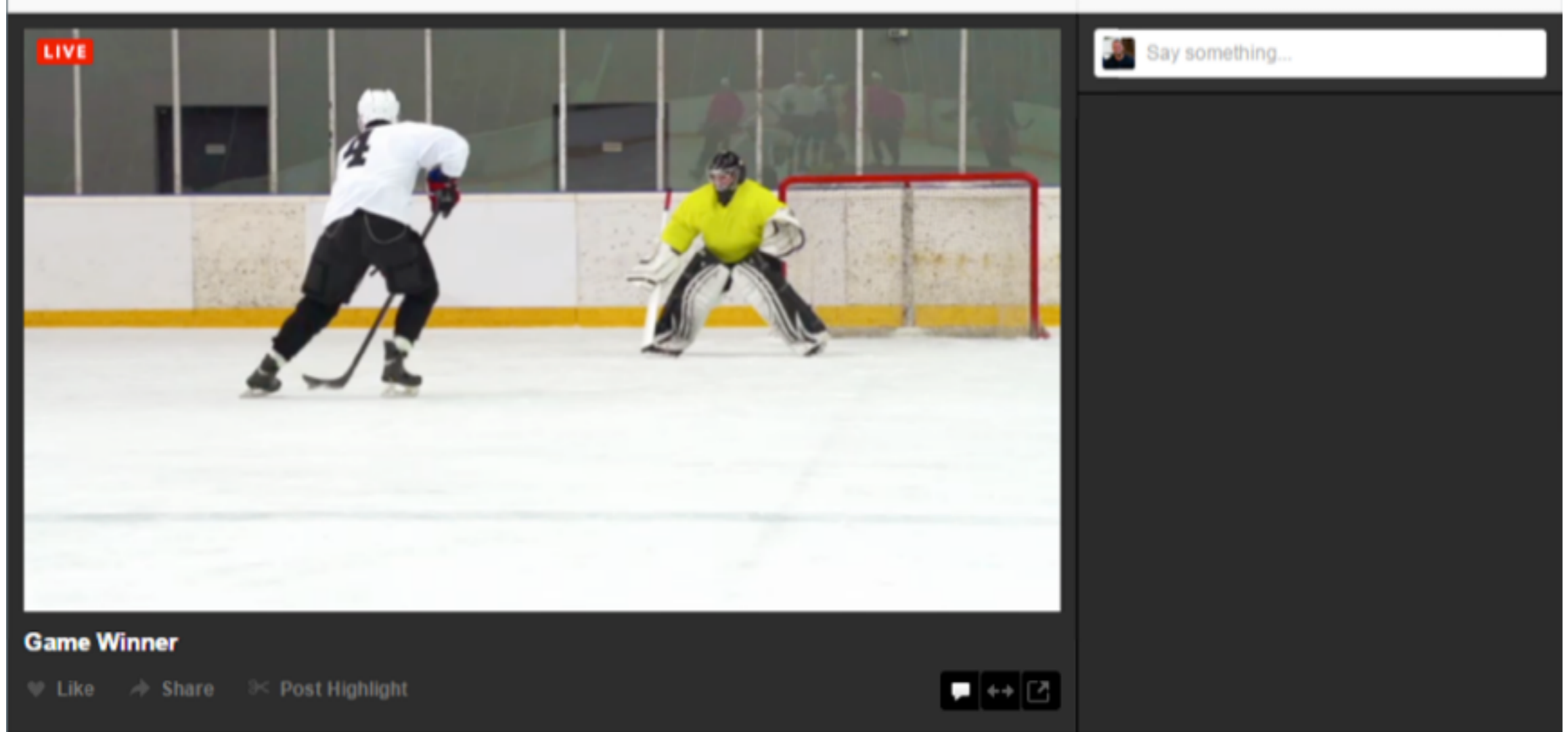
The live player will immediately appear at the top of your event page. It takes about 30 seconds for the stream to load.

livestream

| GFX 1 | GFX 2 | GFX 3 | Media 1 | Media 2 | Stream | Transitions | |

Livestream

Save Recording?

Do you want to post the recording of your broadcast to your event page? This will allow visitors on your event page to watch the broadcast at a later date.

[SAVE & POST]   [SAVE DRAFT]   [DELETE]

Log

12:32pm EST
Video broadcasting is starting... Establishing connection with server.

12:32pm EST
H.264 recording started.

Perfect Streaming – 12:32pm EST

12:34pm EST
H.264 recording stopped (2015.09.04 12.32.18@1756kbps.mp4).

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.

livestream

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

Stream Title

Enter a title for your stream...

Stream Quality

Medium Quality (678kbps)

☑ Notify Followers

Advanced Settings

GO LIVE

Change Provider   Log

Test Event ▾

www.livestream.com/accounts/4509833/emilytest2

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

livestream

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

Livestream   👤   ⇤ Change Provider   ▯ Log

Stream Title

| Enter a title for your stream... |

Stream Quality

| Normal Quality (446kbps) ▼ |

☑ Notify Followers

Hide Advanced Settings

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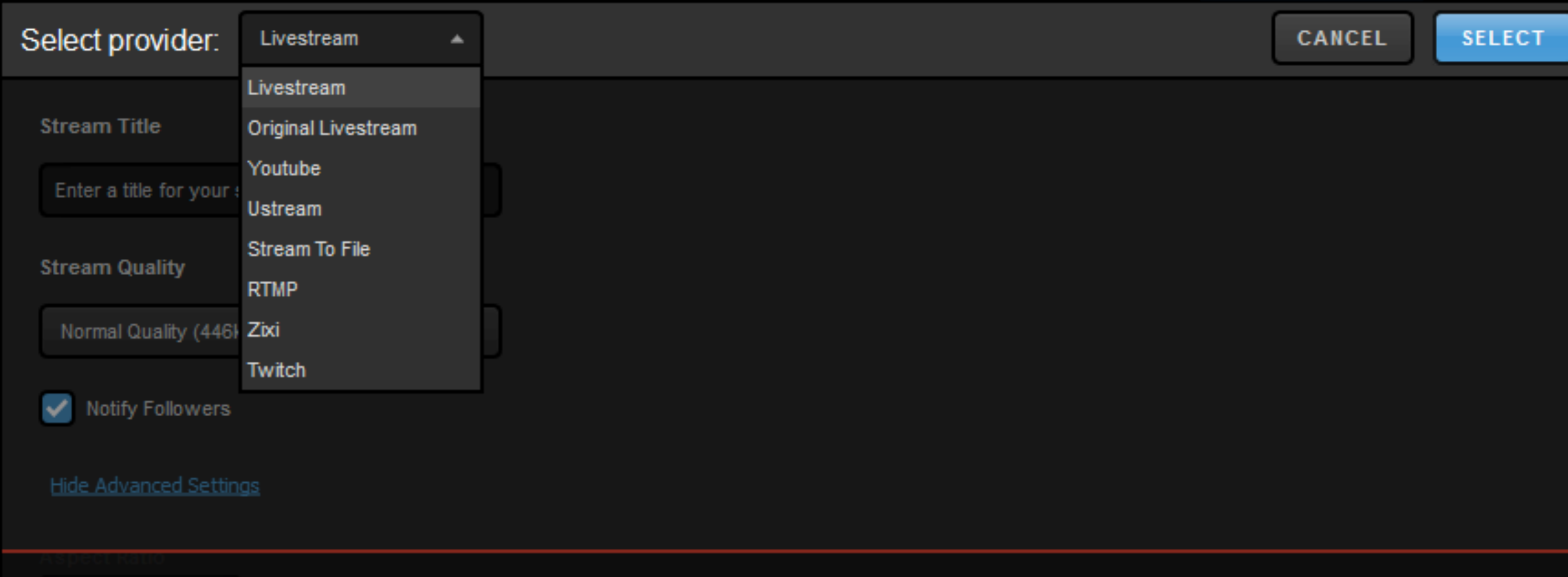
livestream

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

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

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

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

The streaming module in YouTube Live offers a very similar interface as the Livestream streaming module.
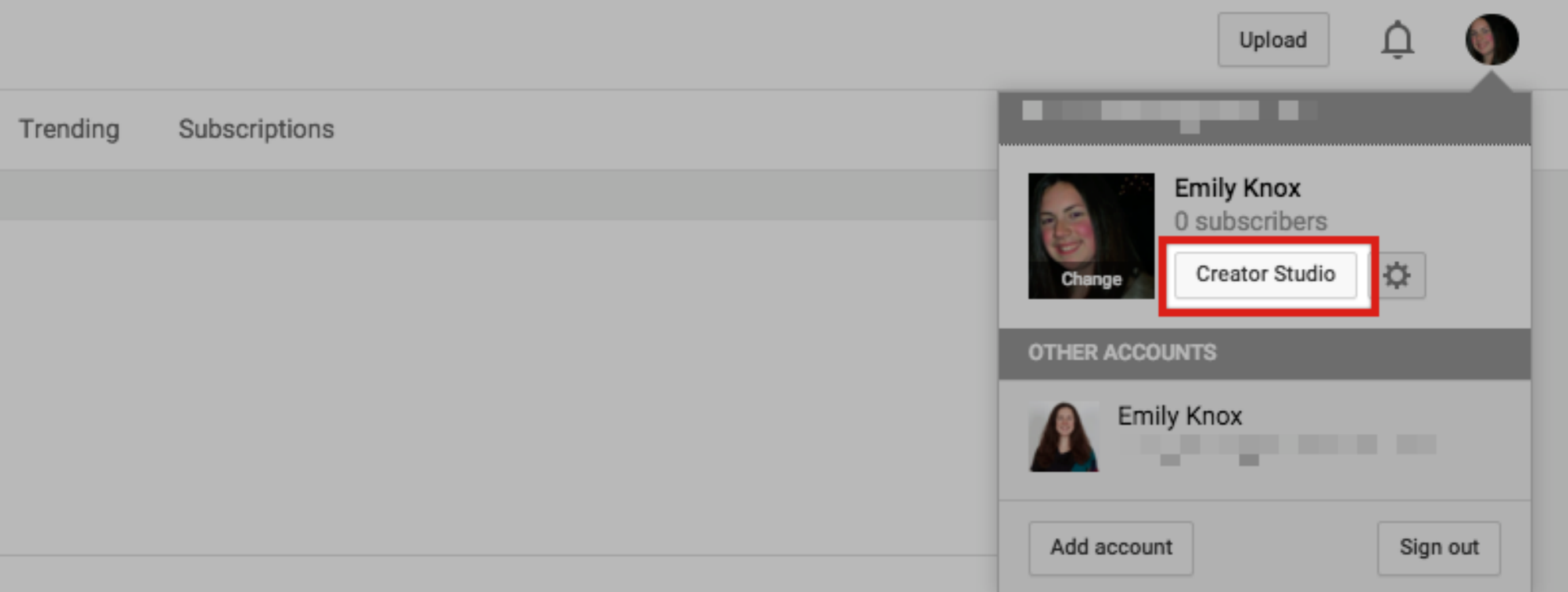
In a browser, go to your YouTube account and click on your profile image in the upper right corner to enter your Creator Studio.
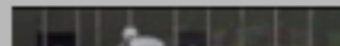
In the menu on the left, select 'Livestream Streaming.'
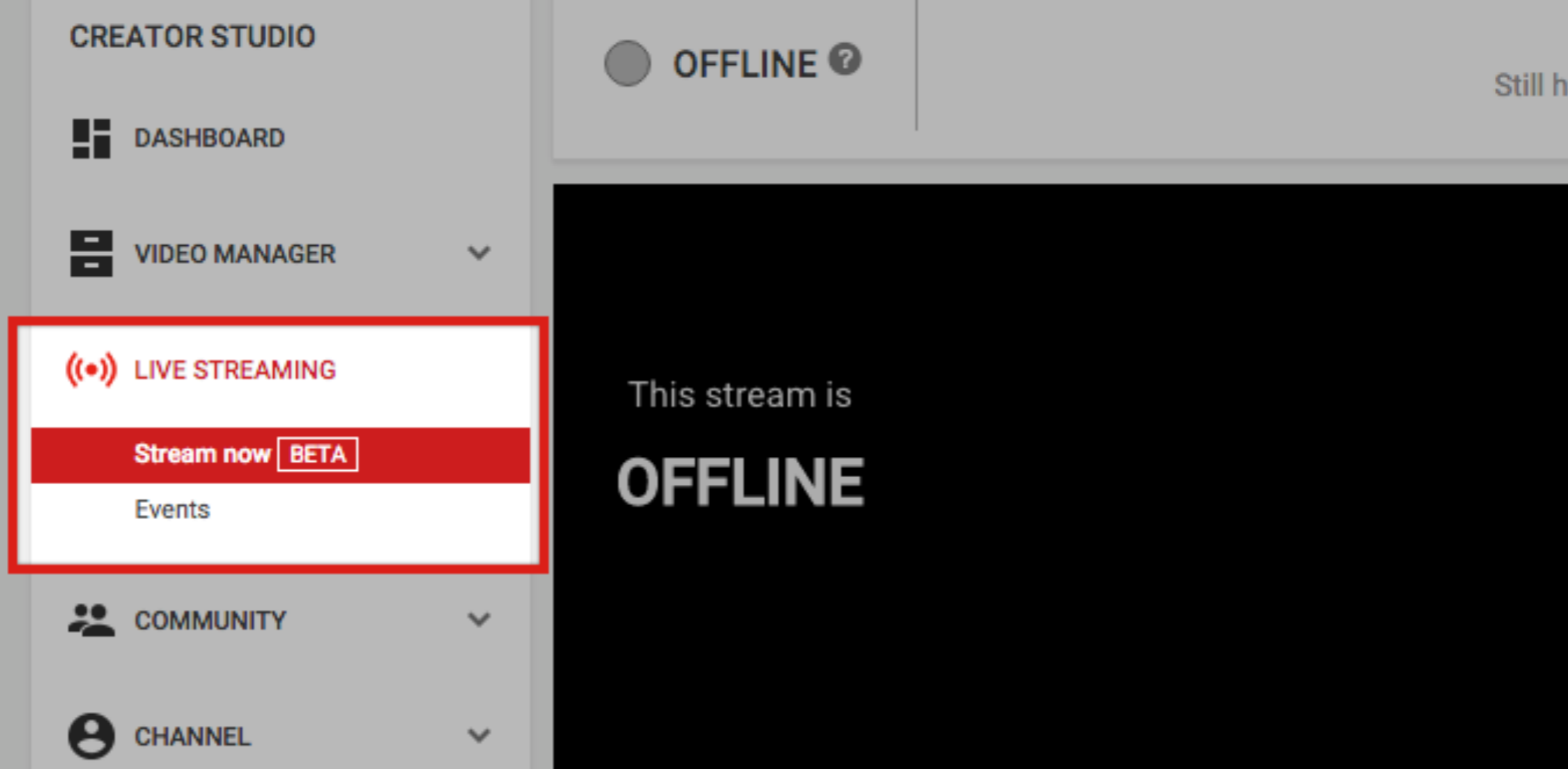
There will be two options:
'Stream Now (Beta)' and 'Events.'

This live stream is public. To create an unlisted or private stream, schedule an event.

Advanced settings

ENCODER SETUP

Server URL

rtmp://a.rtmp.youtube.com/live2

Stream name/key

•••••••••••••••••••••••••••• Reveal

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

DASHBOARD

VIDEO MANAGER ⌄

((•)) LIVE STREAMING

Stream now BETA

Events

COMMUNITY ⌄

CHANNEL ⌄

Events 0

☐ Actions ▾   View: Upcoming ▾

You don't have any upcoming events.
Schedule a new event.

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.

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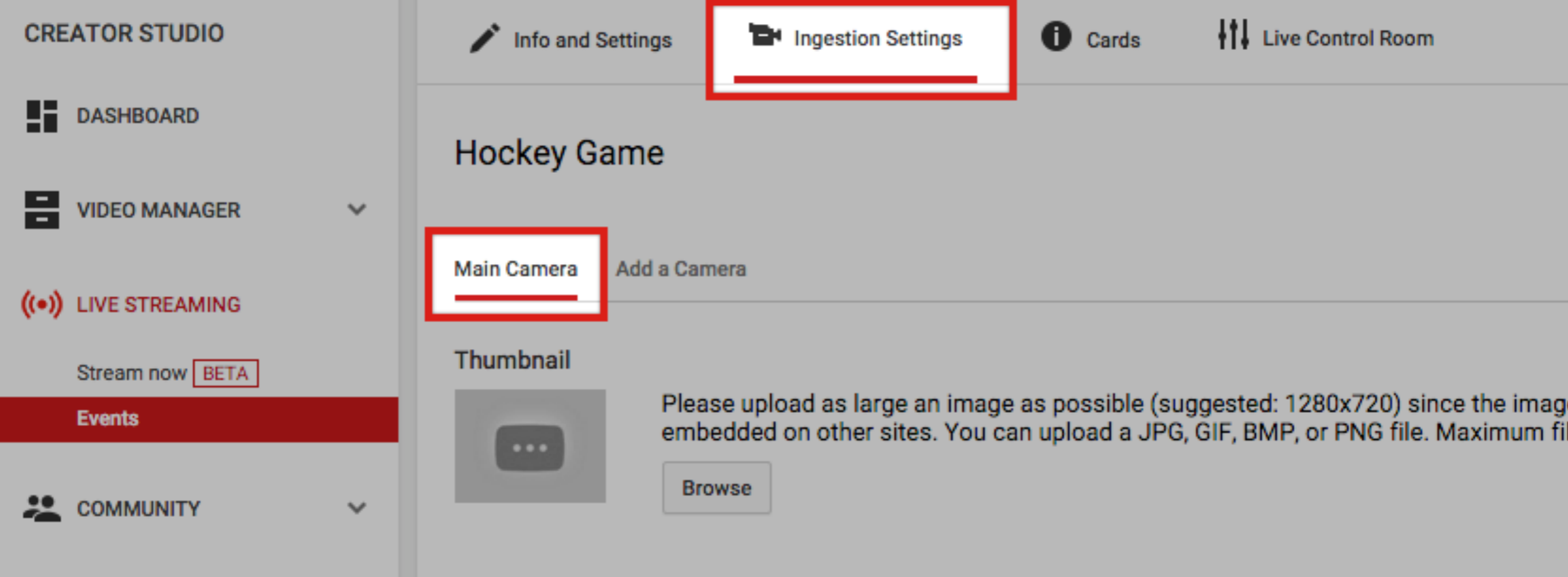
After creating or selecting your event, go to 'Ingestion Settings' and select 'Main Camera.'

Hockey Game

Cancel　Save changes

Main Camera　Add a Camera

Thumbnail

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

Choose maximum sustained bitrate of your encoder *
Select a range that corresponds to the maximum sustained output your encoder provides.

◉ Basic ingestion

Select a bitrate ▾

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.

livestream

Back in Livestream Studio, select your event (bottom right corner) and select the same quality you chose in the YouTube Live configuration.
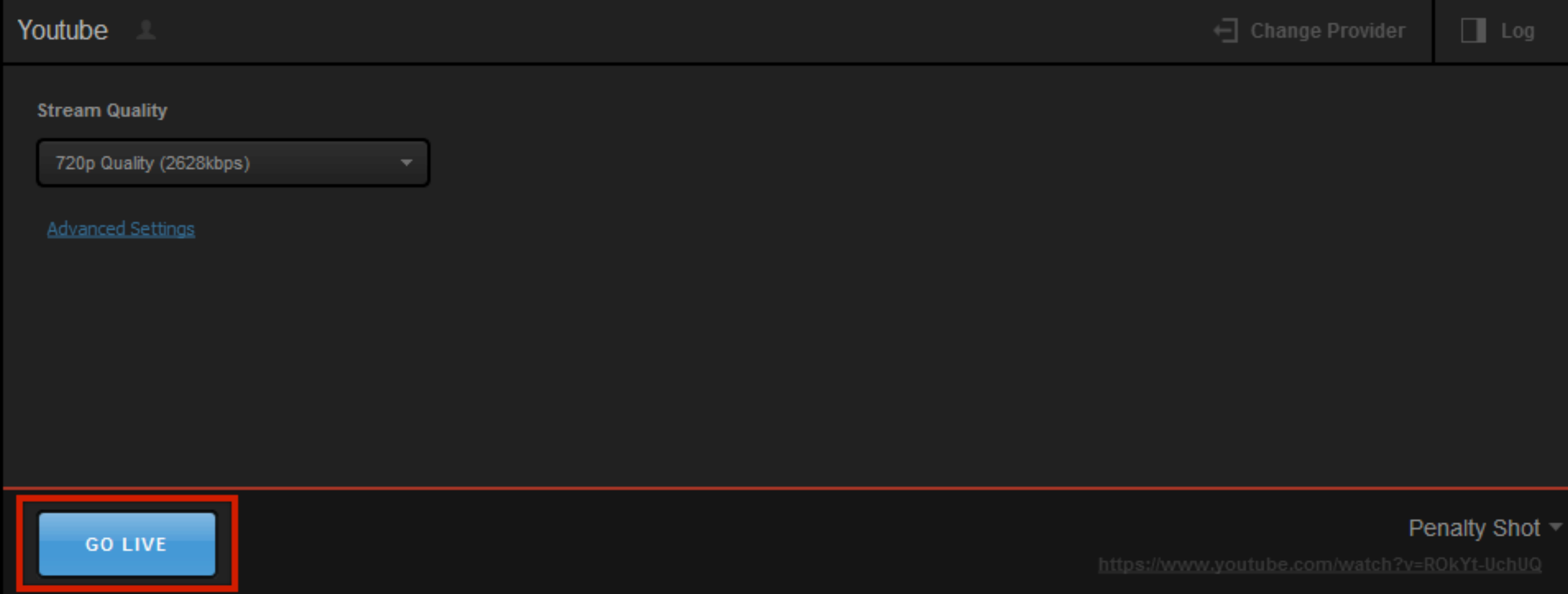
Press the 'Go Live' button to start sending the signal to YouTube. Note that per YouTube's workflow, it will not be live immediately.

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 Streaming**   Help
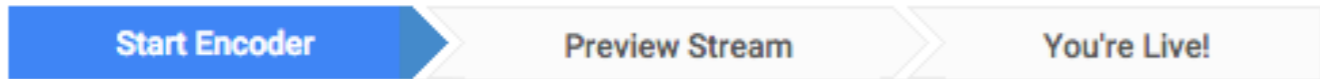
☐ Sync to preview player ❓

STREAM STATUS	February 23, 2016 at 11:15 AM (GMT-5)	AVERAGE LIVE VIEW DURATION	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.

The YouTube player will soon switch from the countdown clock to showing your stream from Livestream Studio.
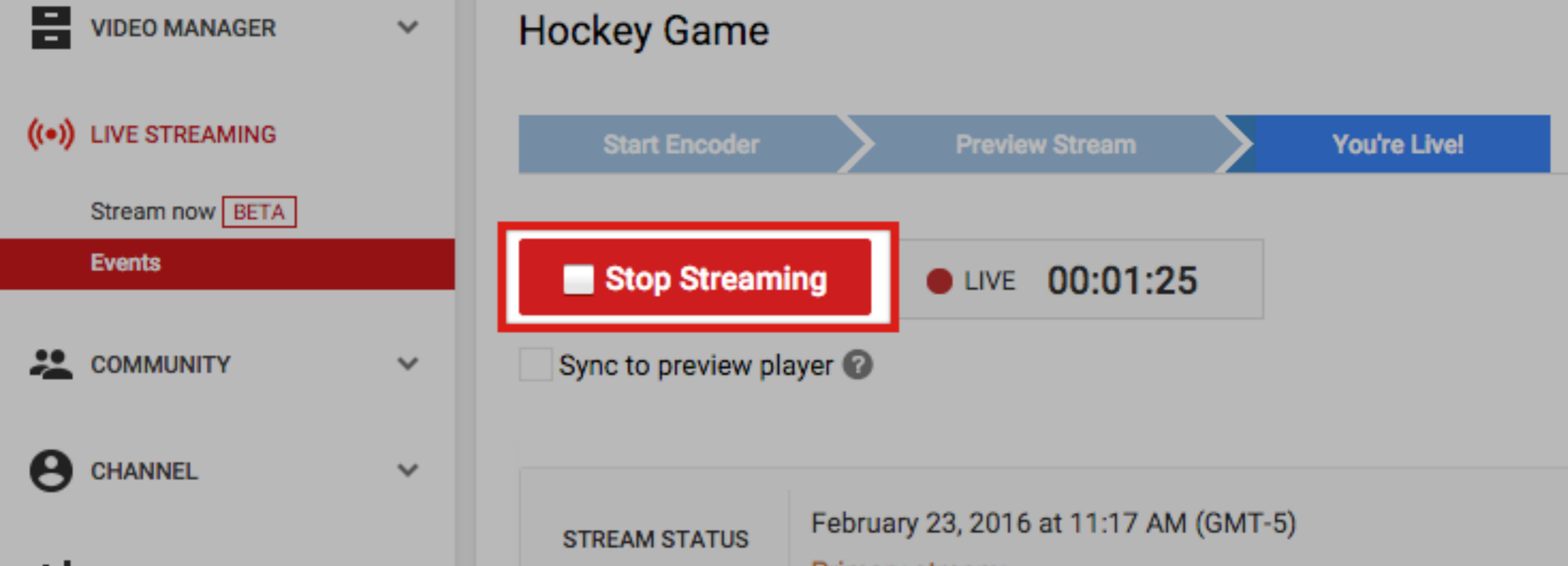
When you are ready to finish broadcasting your event, go back to your Live Control Room and click 'Stop Streaming.'

Intel(R) I210 ... Connection #2   2111.68 Kbps   Perfec

Intel(R) I210 ...ork Connection   Network cable

STREAMING
00:00:05:14

Perfect Streaming   Pen

29.62 FPS   2422 Kb/s   https://www.youtube.com/watch?v=ROk

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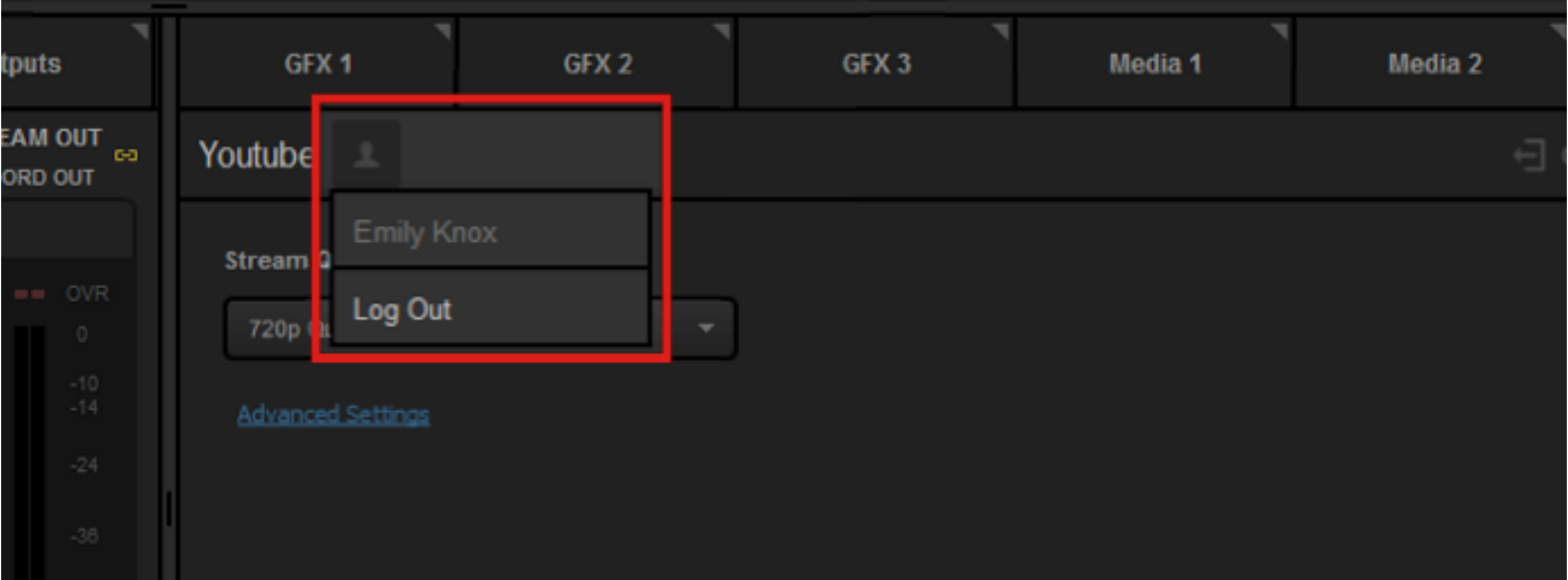
livestream

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

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

Twitch Change Provider   Log

Stream Quality

480p Quality (1128kbps)

Game Name

Enter the name of your game...

Stream Title

Penalty Shot

GO LIVE   http://www.twitch.tv/eeknox

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.

livestream

●	‹··›	Killer e2200 G...er (NDIS 6.30)	142.10 Kbps	Perfect Streaming
○	‹··›	Remote NDIS ...aring Device	0.00 Kbps	No internet connection
○	‹··›	Sierra Wirele...twork Adapter		Network cable unplugged

STREAMING
00:00:04:26

Perfect Streaming

29.80 FPS   266 Kb/s   0 Viewers

http://www.twitch.tv/eeknox

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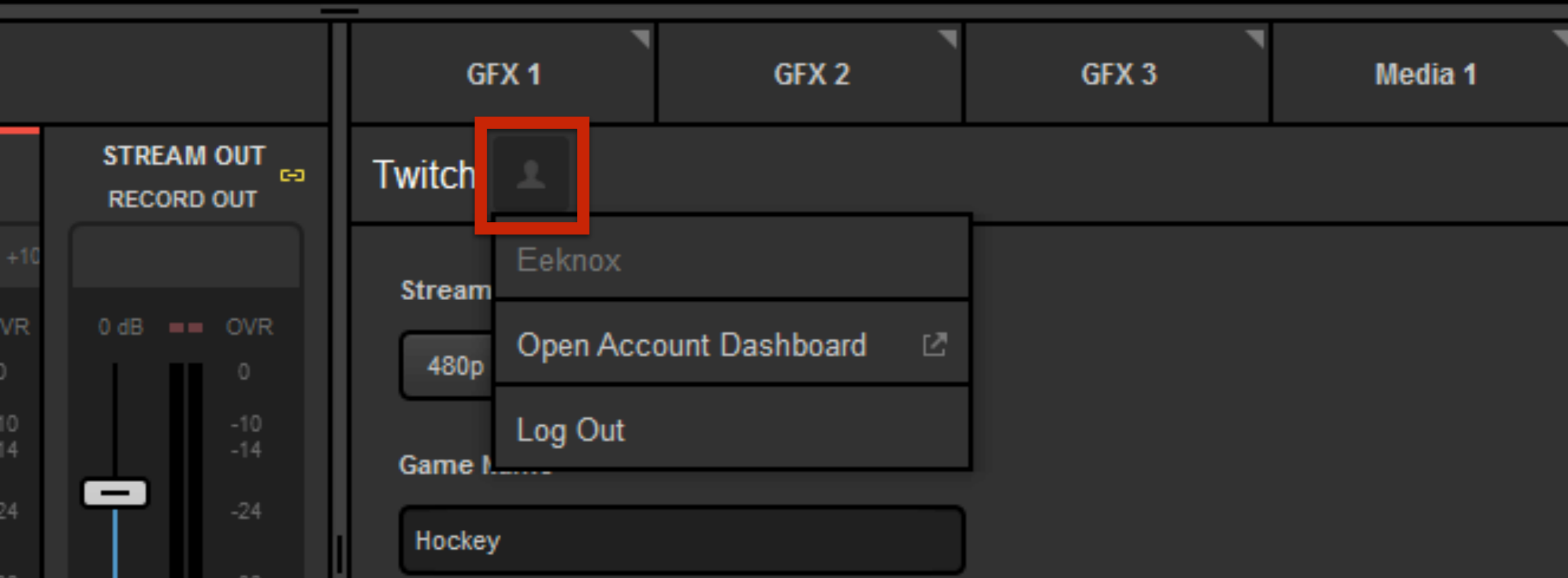
When you are not streaming, you can click the profile icon next to 'Twitch' to view your Twitch account dashboard or log out of your account from Livestream Studio.

| GFX 1 | GFX 2 | GFX 3 | Media 1 | Media 2 | Stream | Transitions |

Ustream

Change Provider

To stream to a Ustream account, use the instructions provided by Ustream for RTMP Encoders in conjunction with the Livestream Studio RTMP Server functionality.
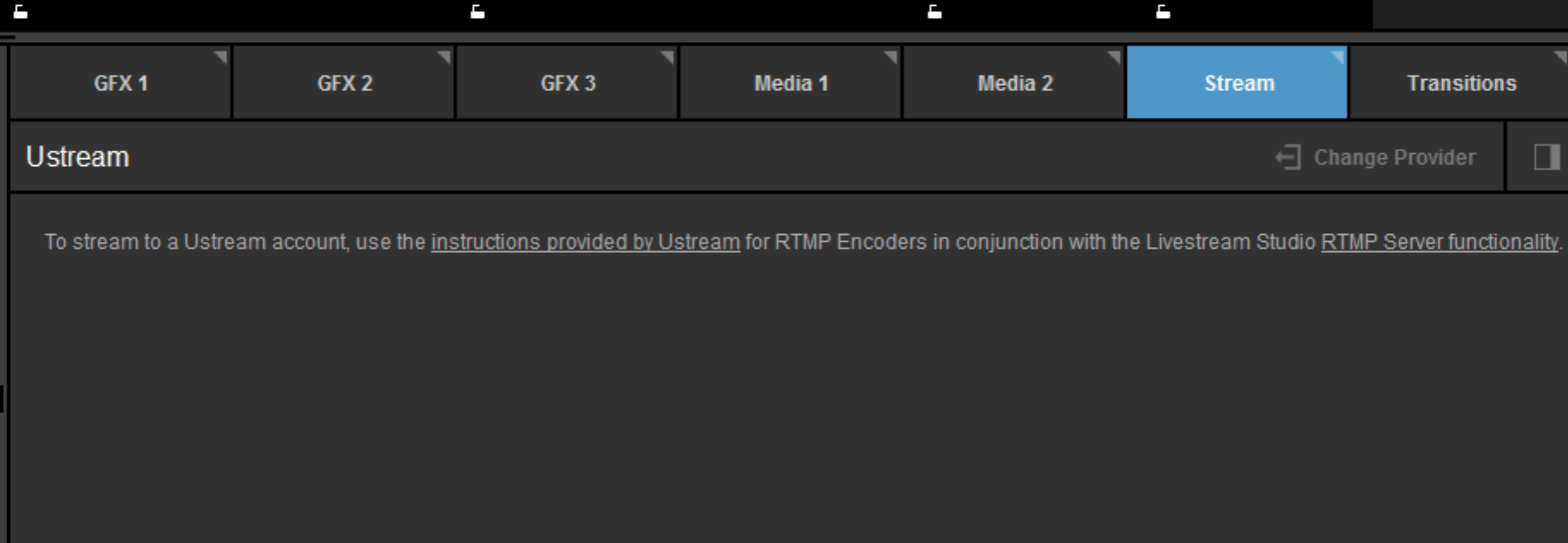
To stream to Ustream, follow the linked instructions from Ustream to access your account's RTMP URL.

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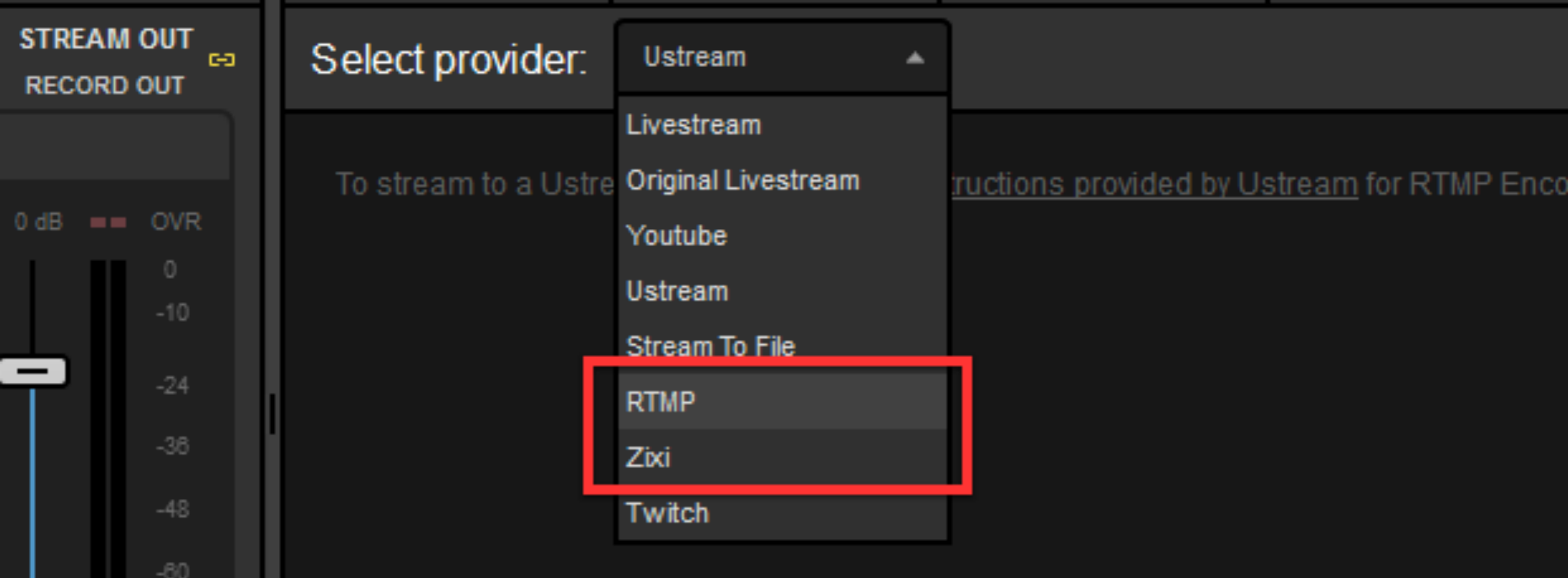
The next two streaming options are RTMP and Zixi, which have very similar interfaces.

RTMP

Quality

Delete ✕

Medium ▾ ⚙

Mobile ▾ ⚙

HD ▾ ⚙

Custom ▾ ⚙

Resolution: 1280 x 720 px | Bitrate: 2320 Kb/s

Stream Name

RTMP URL

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.

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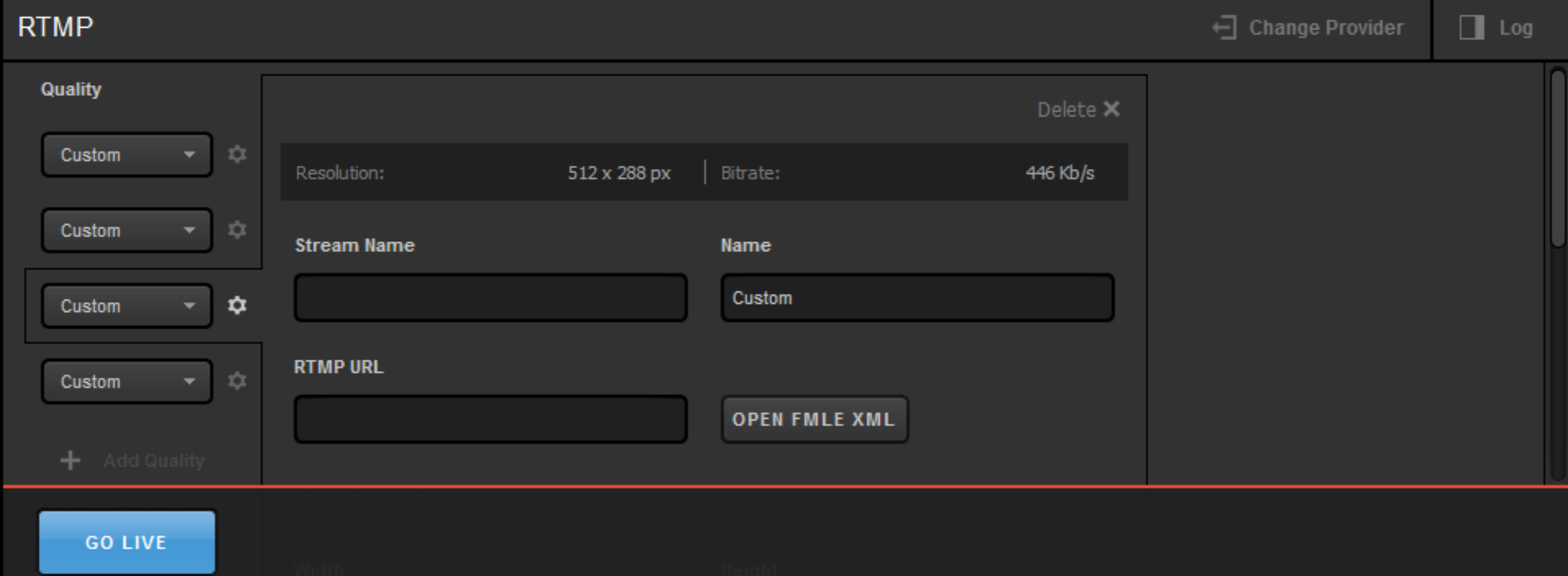
You can also create up to four custom bitrates for streaming to your RTMP or Zixi server. Click 'Add Quality' to do so.

Each custom setting will require you to set the resolution, video and audio bitrates, audio sample rate, and encoding profile.
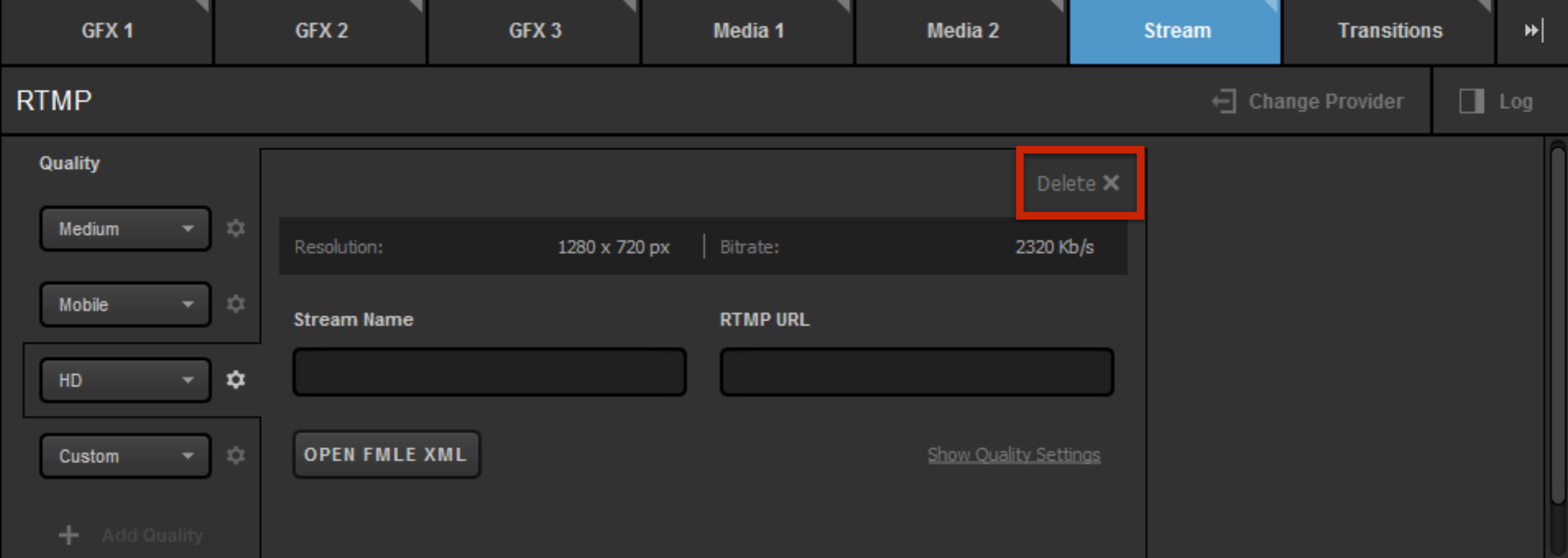
Any quality can be deleted from the module by clicking 'Delete' in the upper right corner.
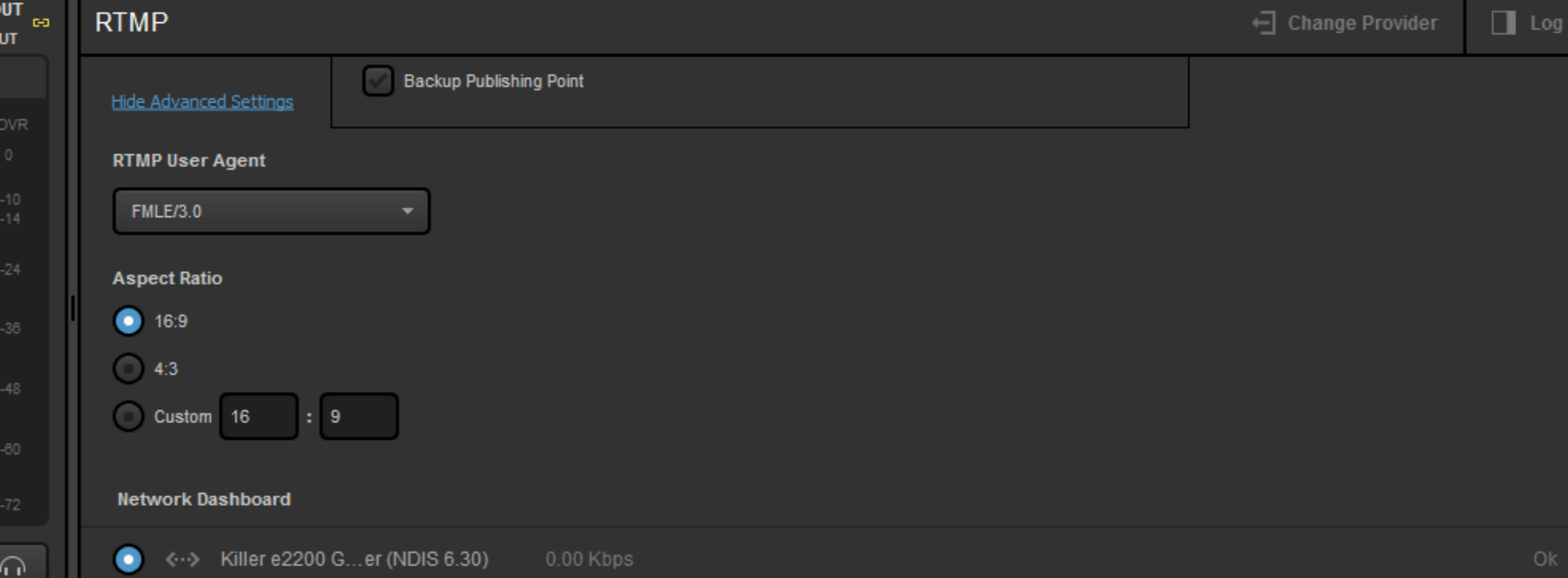
Further down in the module is where you can open 'Advanced Settings.' Here you can set your aspect ratio. For RTMP, you will need to select the user agent that your server supports.

STREAM OUT
RECORD OUT

Zixi   Change Provider   Log

0 dB   OVR

0

-10
-14

-24

-36

-48

-60

-72

FEC Overhead

30

FEC Packet Size

30

Latency

500

Delivery Method

○ Bonding if needed

○ Bonded networks

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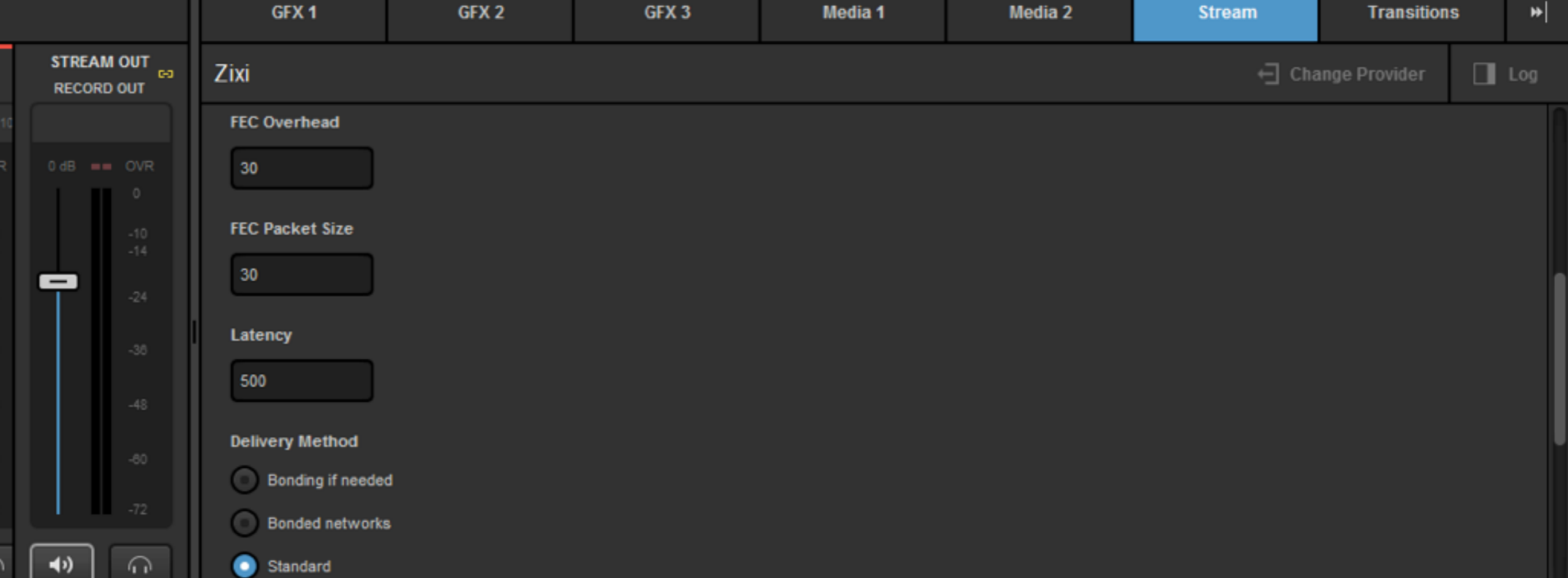
Zixi users will see the option
to set the FEC overhead, FEC
packet size and latency under
their 'Advanced Settings.'

Another option, 'Stream to File,' allows you to encode an .mp4 file to your hard drive without the need to stream live.
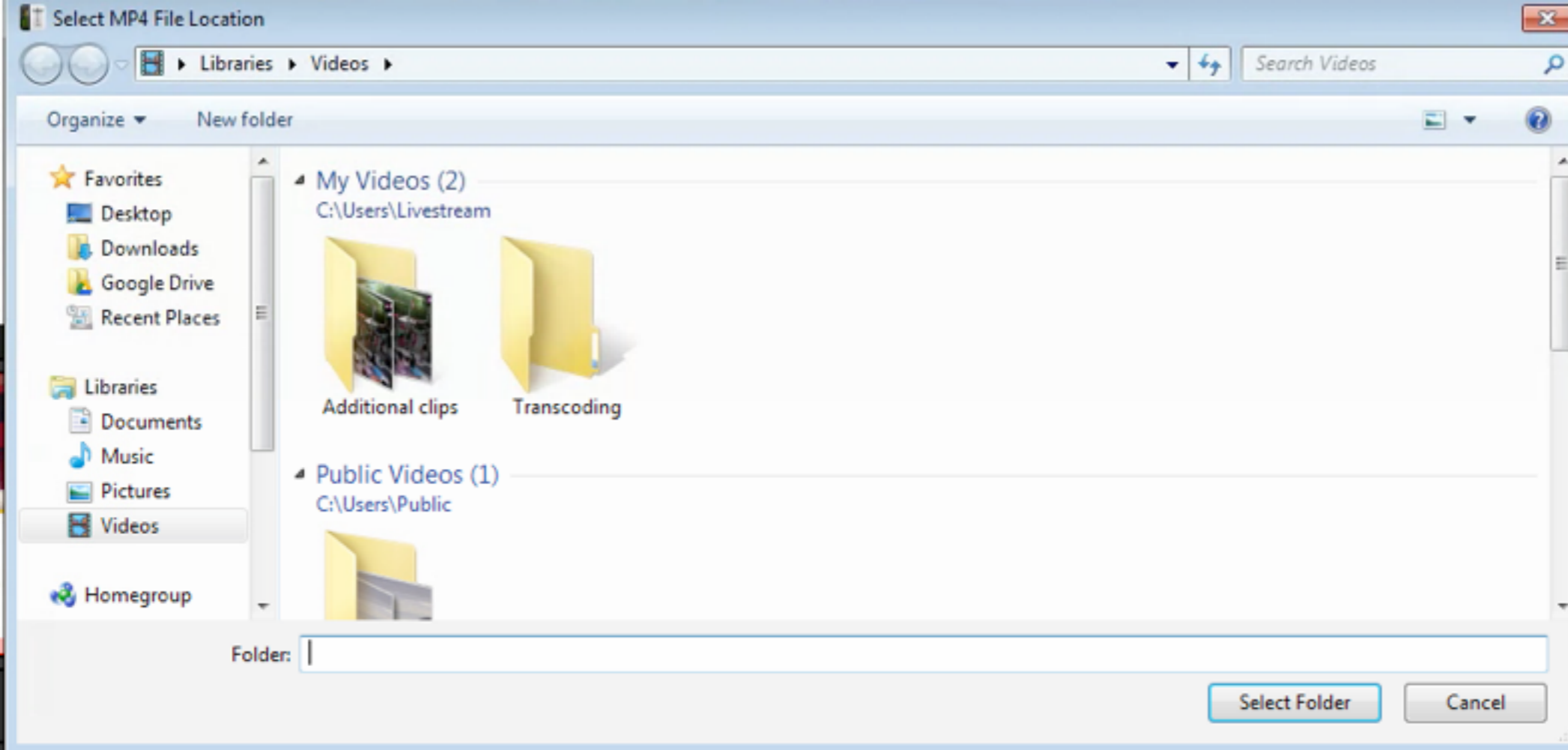
Click 'Browse' to select where the file will be saved. By default, the .mp4 file will save to your Videos folder.

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.

livestream

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

MP4 File Save Location

BROWSE   ers\Livestream HD31\Videos\

Stream Quality

High Quality (1756kbps)

Advanced Settings

ENCODING
00:00:10:20

Perfect Streaming

29.81 FPS   377 Kb/s

2015.10.05 07.06.59@1756kbps.mp4

C:/Users/Livestream HD31/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.

livestream

Media Playback

Configuring settings

00:00:00;00

00:00:00;00
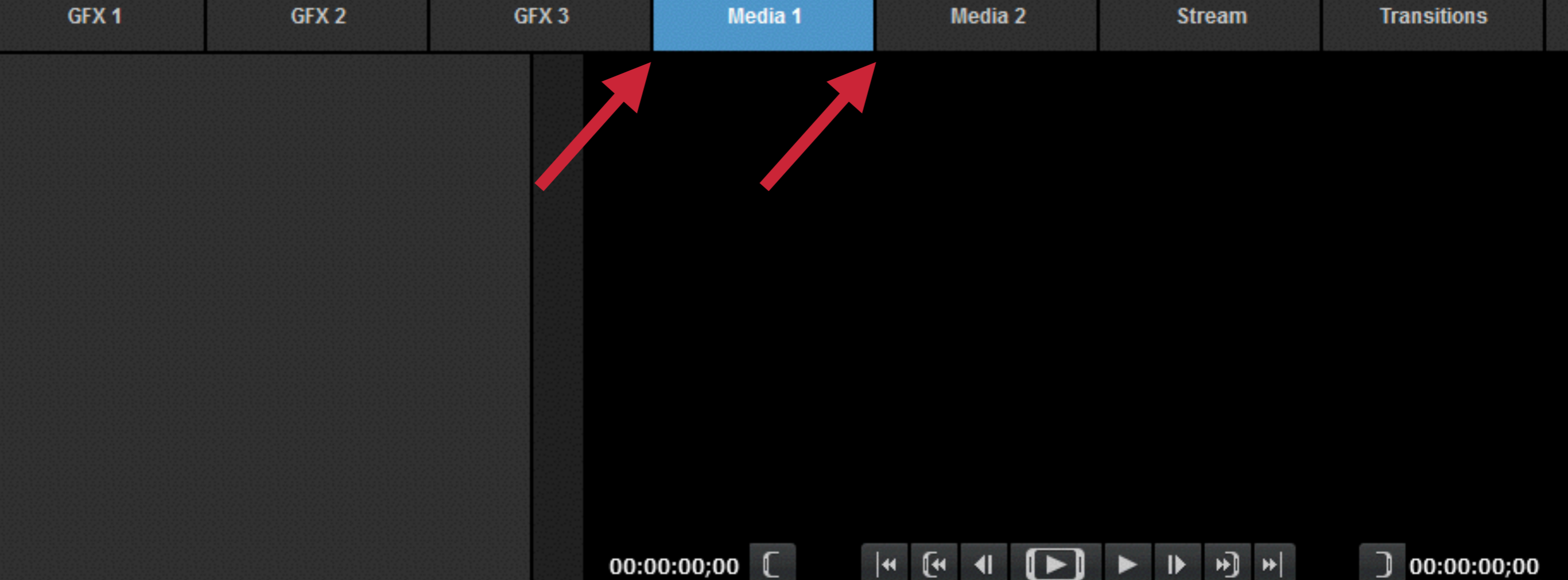
Livestream Studio includes up to two media bins that allow you to include pre-recorded videos in your production.
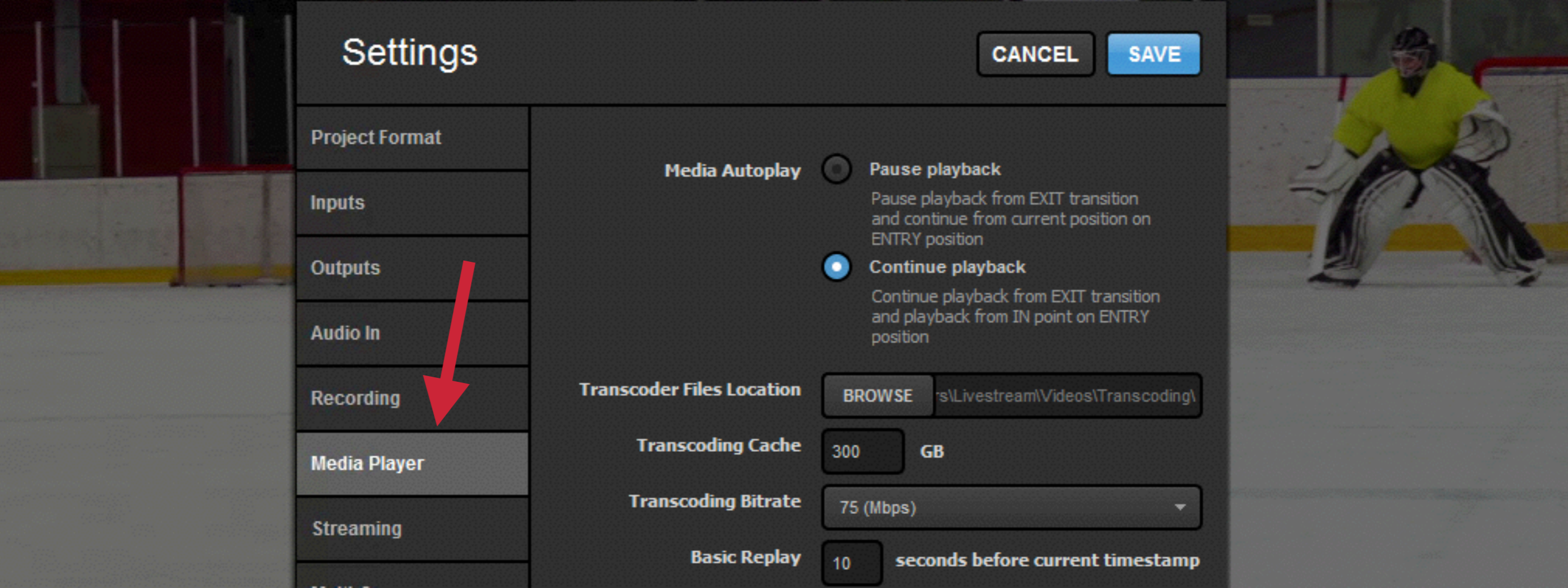
In settings, go to the '**Media Player**' tab to configure settings for your media bins.

Settings

CANCEL SAVE

Project Format

Inputs

Outputs

Audio In

Media Autoplay

○ **Pause playback**

Pause playback from EXIT transition and continue from current position on ENTRY position

● **Continue playback**

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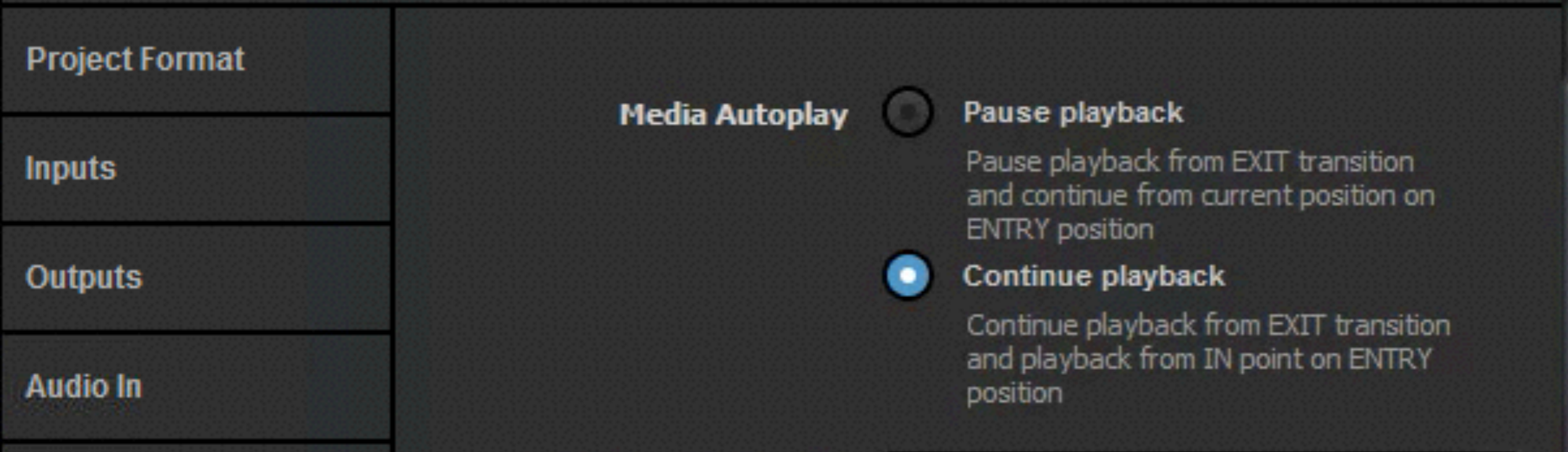
'Media Autoplay' allows you to choose if a video will either pause or continue playing when a media source is transitioned out of Program. It also determines whether the video will continuing playing from its current location ('Pause') or start from the beginning of the IN point ('Continue').

livestream
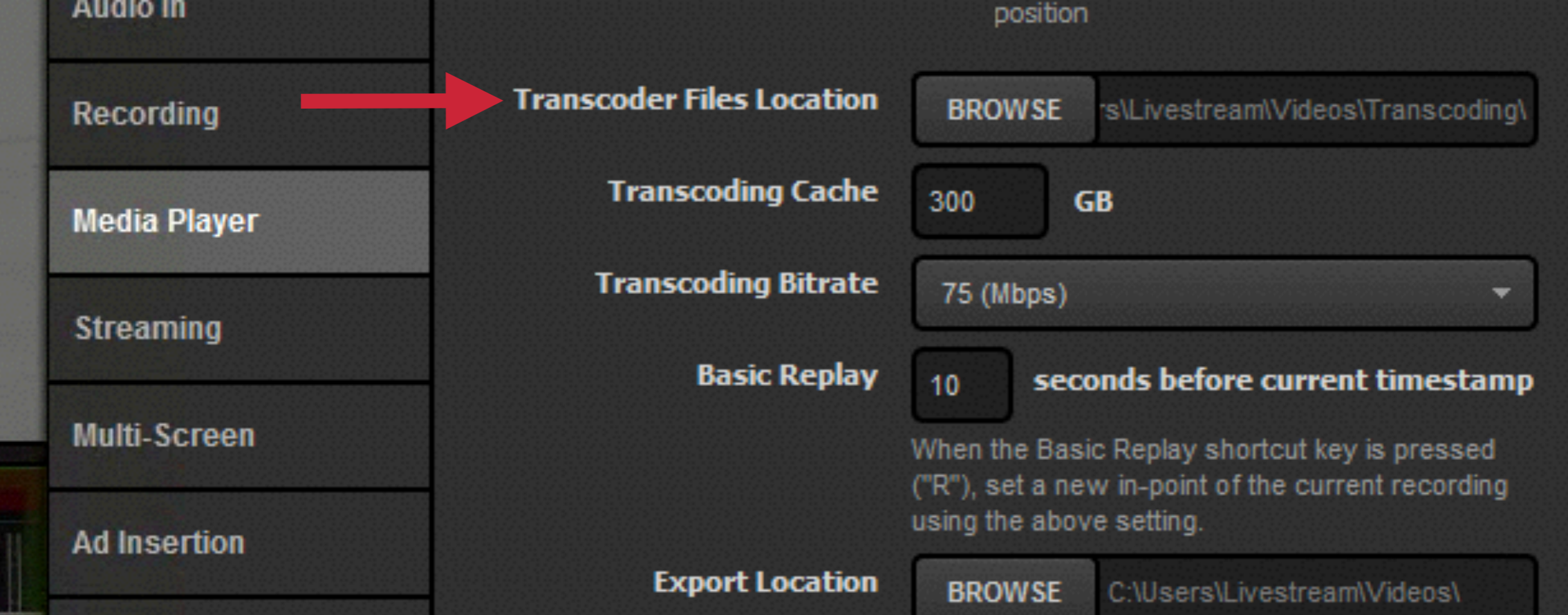
'Transcoder Files Location' is where any transcoded videos (i.e., videos you bring into your media bin) will be saved. You can bring those videos into a media bin again without transcoding.
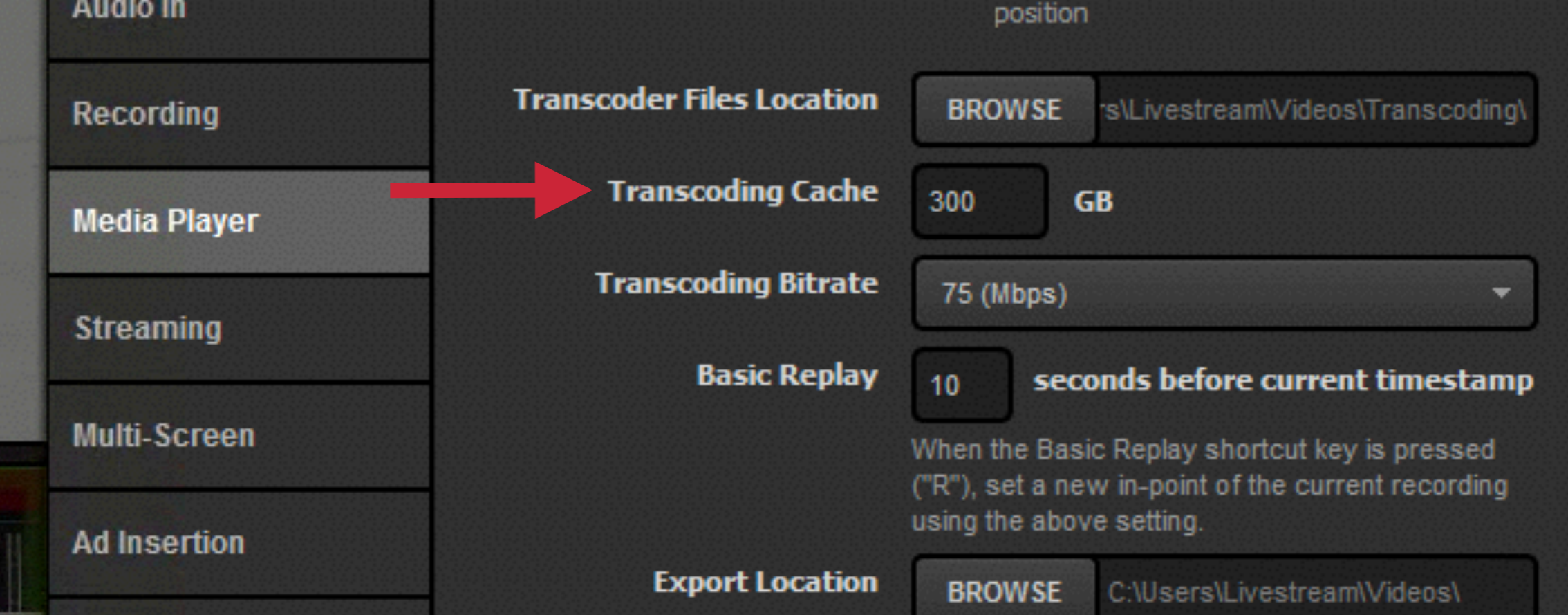
'Transcoding Cache' lets you control the amount of data stored in the transcoding folder before files are deleted.
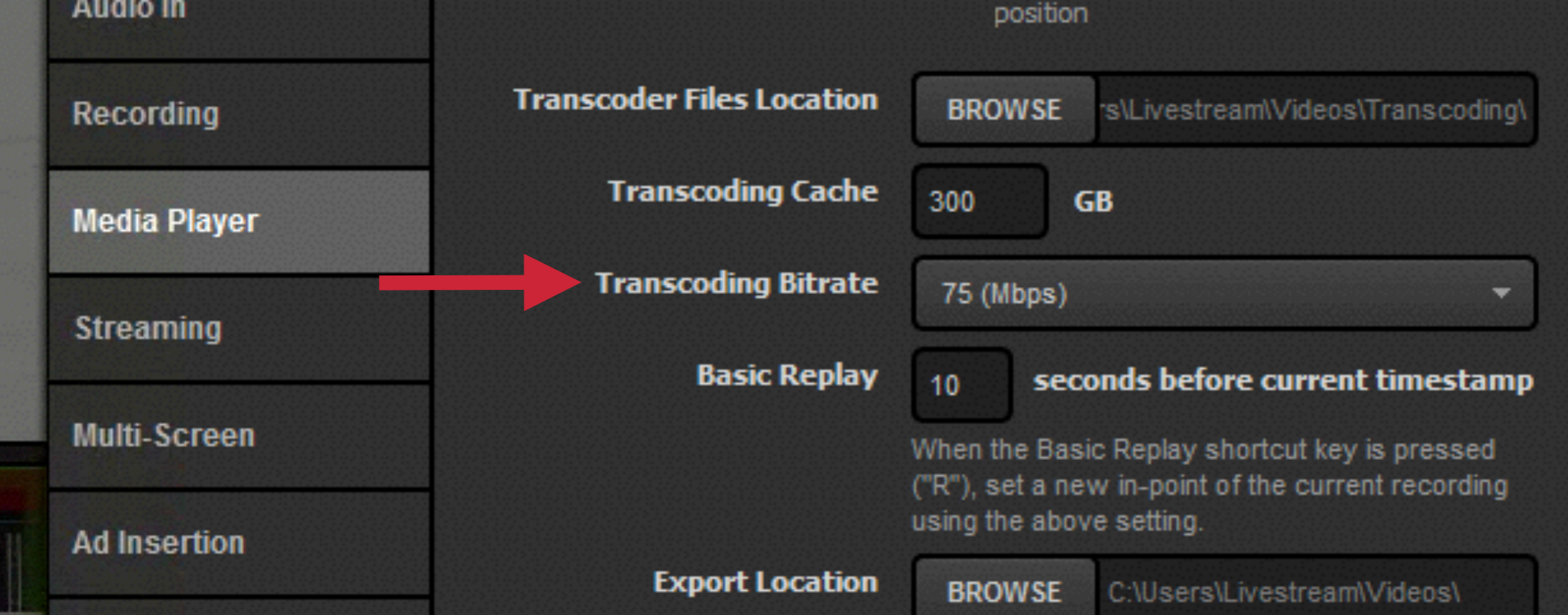
'Transcoding Bitrate' determines the bitrate to which the videos are transcoded. Higher bitrates will have higher resolution but also create larger files.
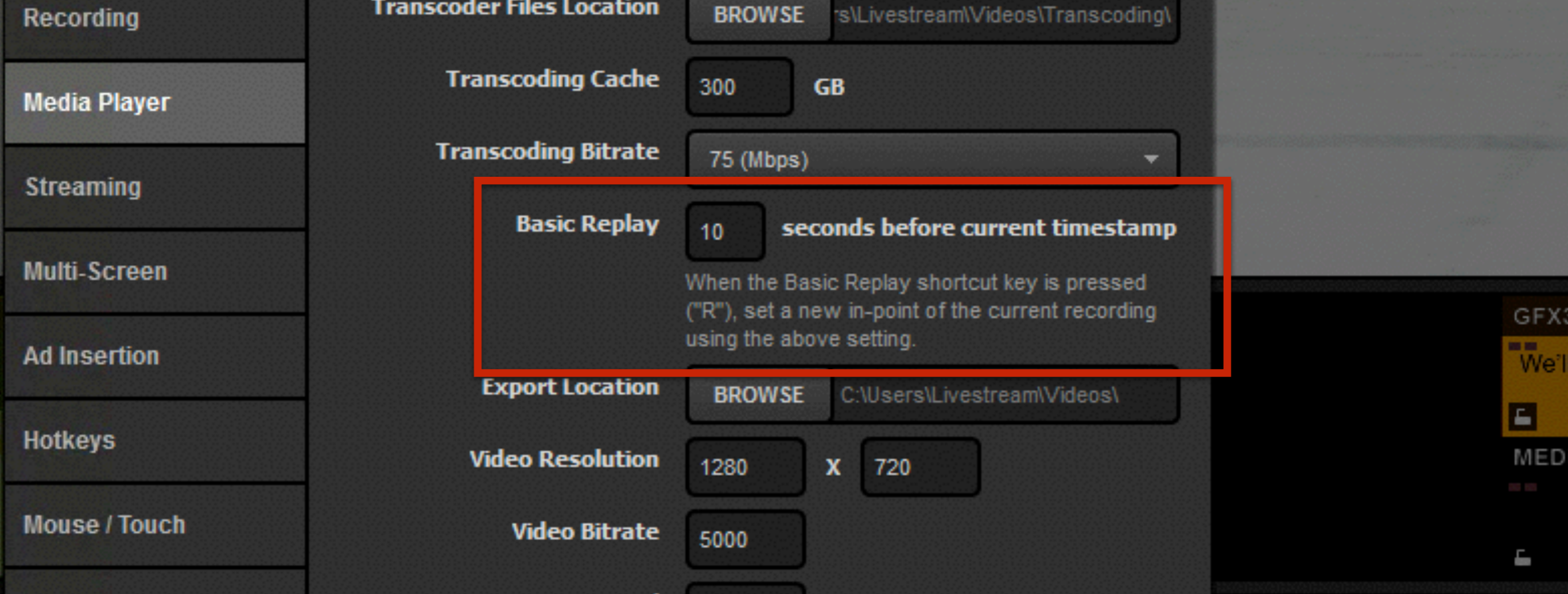
'Basic Replay' lets you tell Livestream Studio how far back from the current timestamp to set an In point. The Out point will be set to the current timestamp.
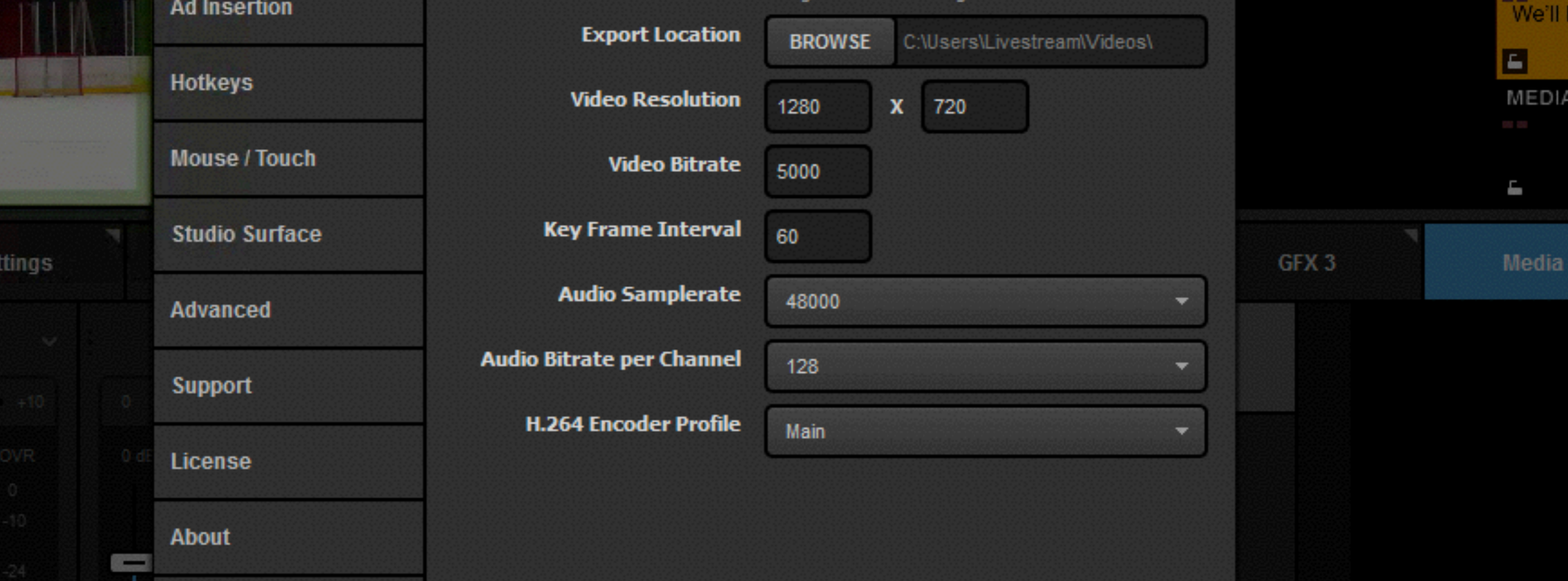
You can export videos or portions
of videos from your media bin.
You can choose their export
location and settings here.

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

Media Playback

Importing video clips
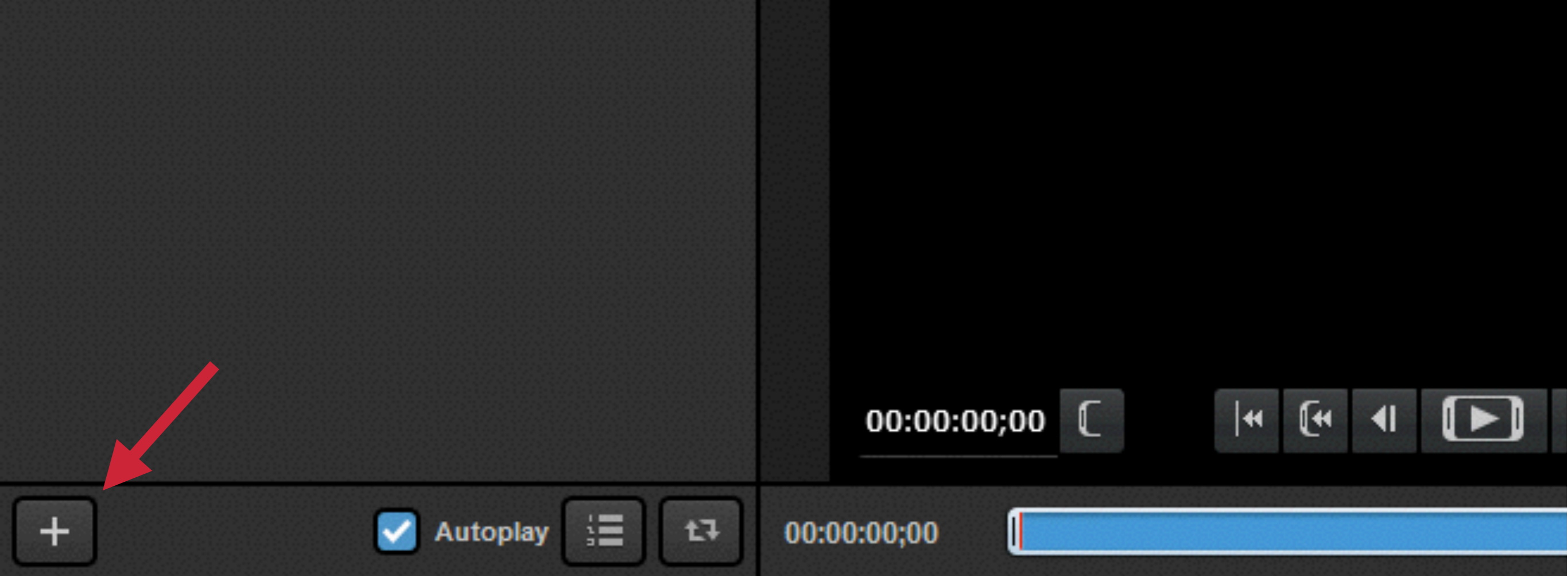
To add a video clip, press the '+' button in the bottom left of the media bin.
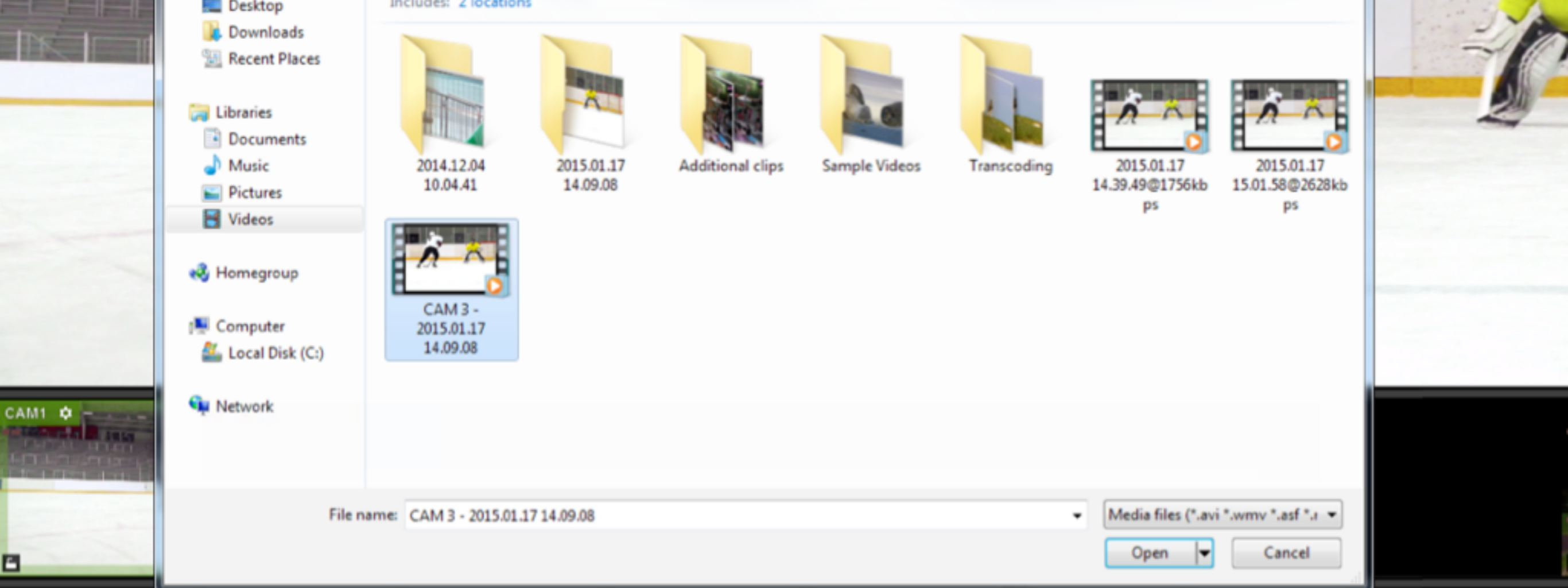
This will allow you to browse
your computer for the desired
video. When you find the video
you want to import, click 'Open.'

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

CAM 3 - 2015.01.17 1...
16.28%
Transcoding...
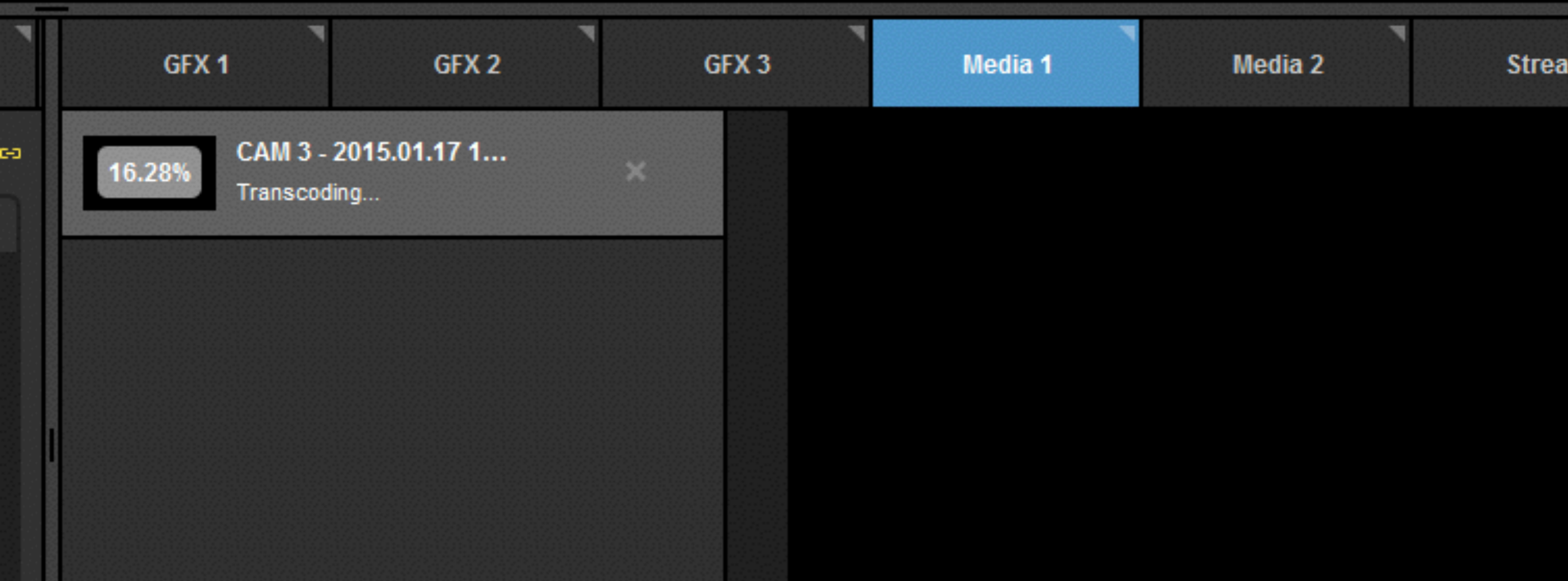
The video will begin transcoding
in the media bin. Keep in mind
that the longer the video is, the
longer it will take to transcode.
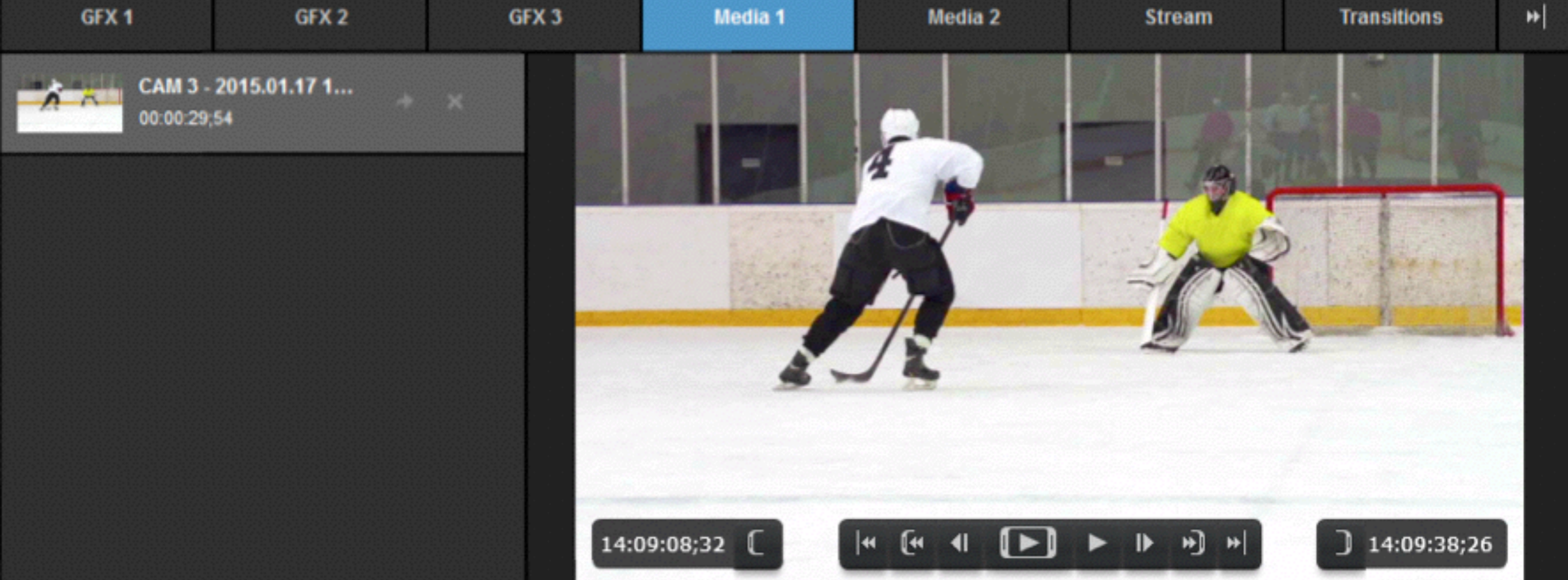
livestream

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

CAM 3 - 2015.01.17 1...
00:00:29;54

Program Dirty - 2015....
00:00:04;47

14:09:08;32

14:09:38;26
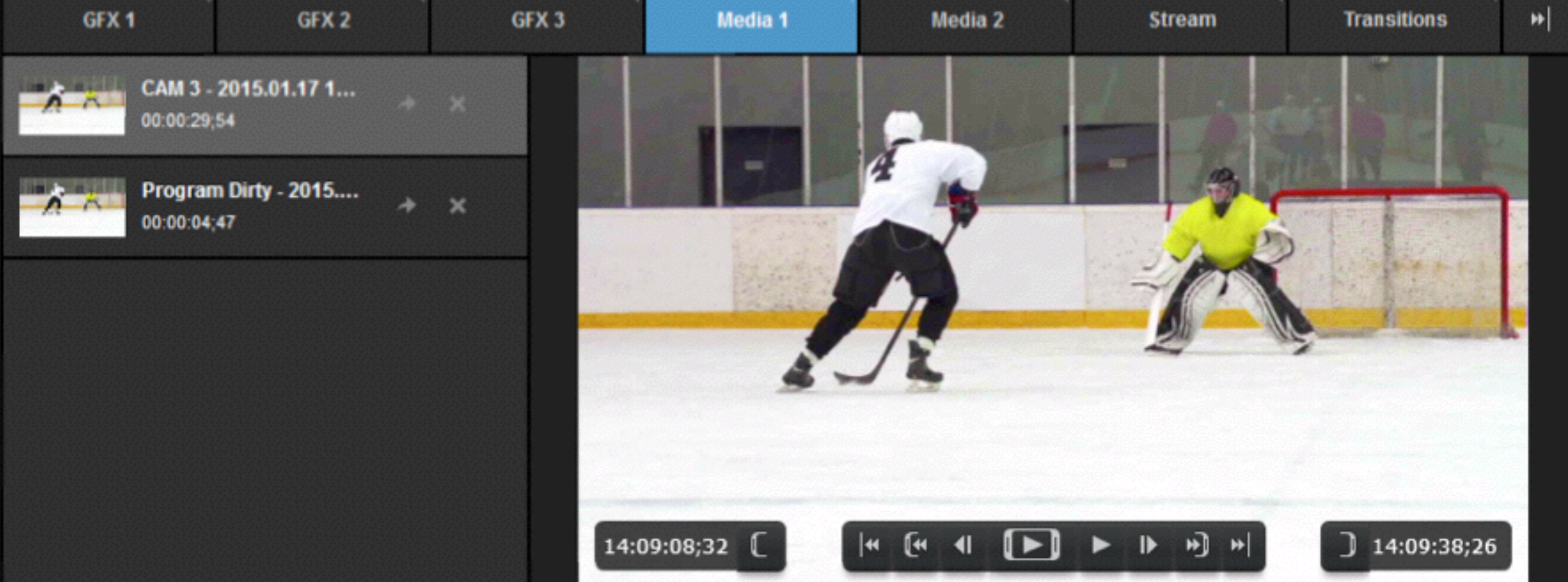
In addition to any clips you import, active recordings will also appear at the bottom of your media bin if you selected that option in settings. You can view them as they are recording.

livestream

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CAM 3 - 2015.01.17 1...
00:00:29;54

Program Dirty - 2015....
00:00:04;47

14:09:08;32   14:09:38;26

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.

livestream

Media Playback

Controls and options

livestream

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

CAM 3 - 2015.01.17 1...
00:00:29;54

14:09:08;32

14:09:38;26
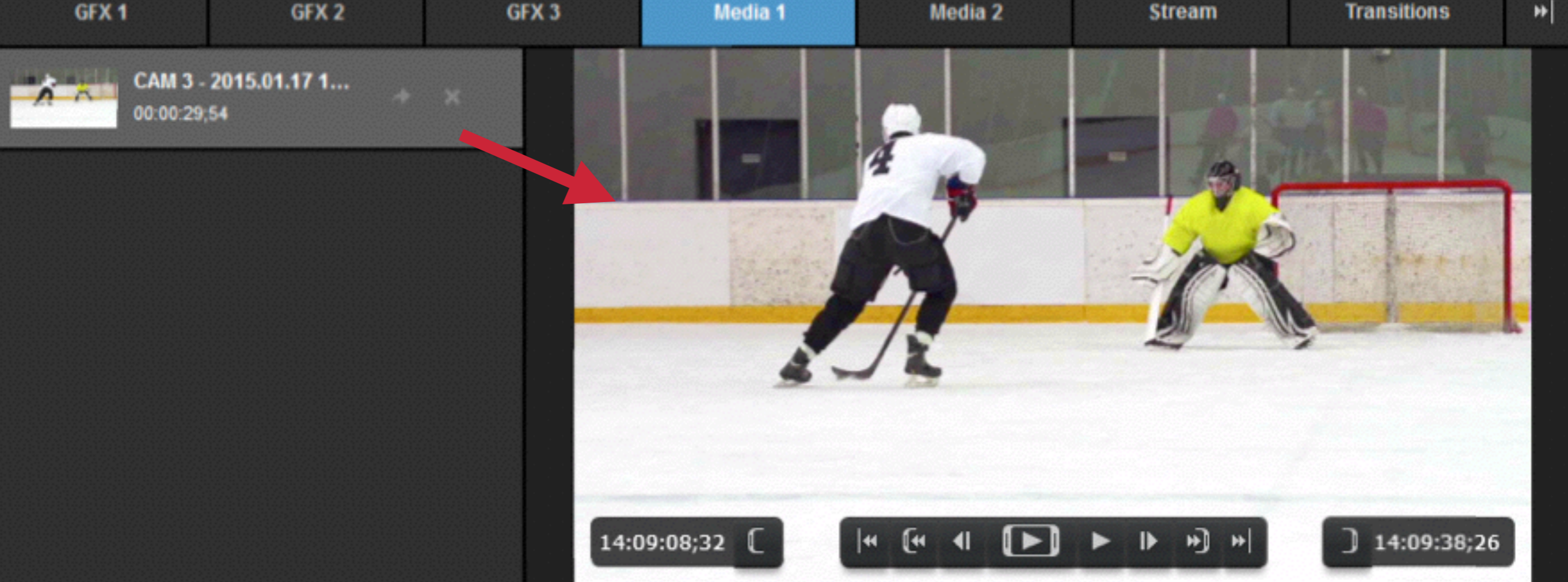
To queue a clip in your media bin, simply click on it with your mouse to highlight it. It will also appear in the player to the right.
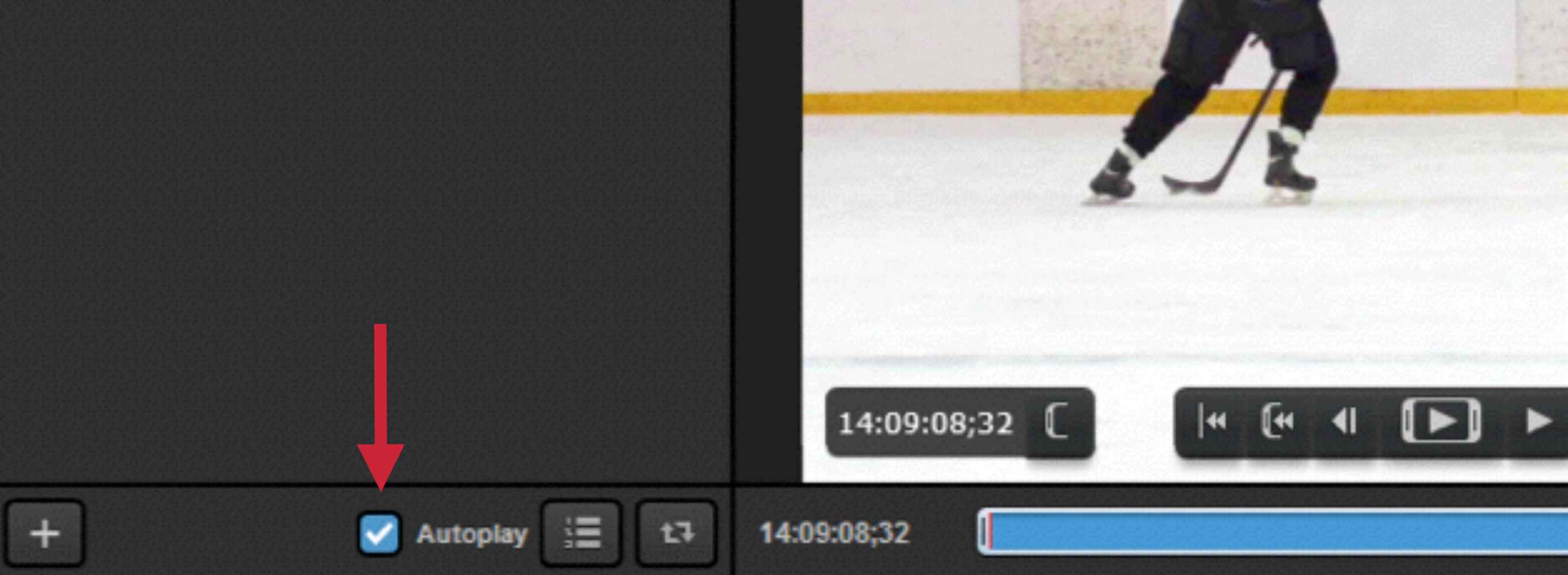
livestream

Checking 'Autoplay' will tell Livestream Studio to start playing the queued video when the media bin source is taken into Program.
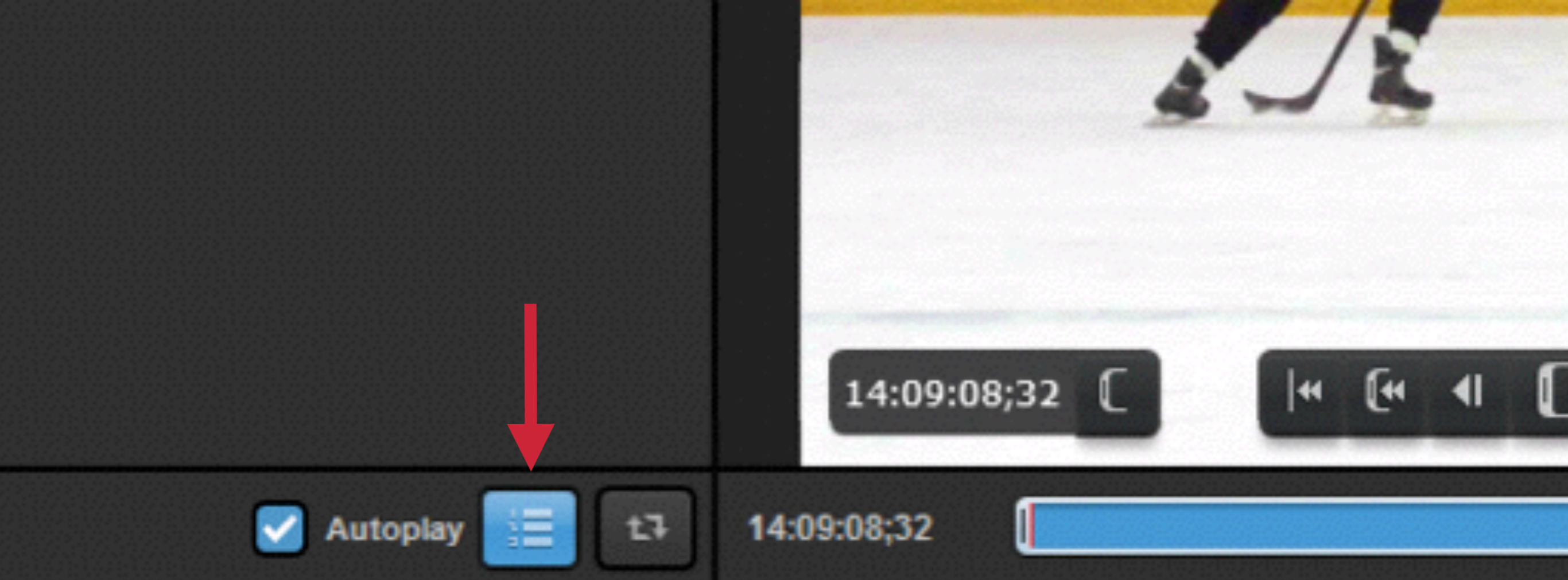
If you have multiple videos that you want to play back-to-back, select the 'play as list' button. When one video ends, the next one will start playing immediately.
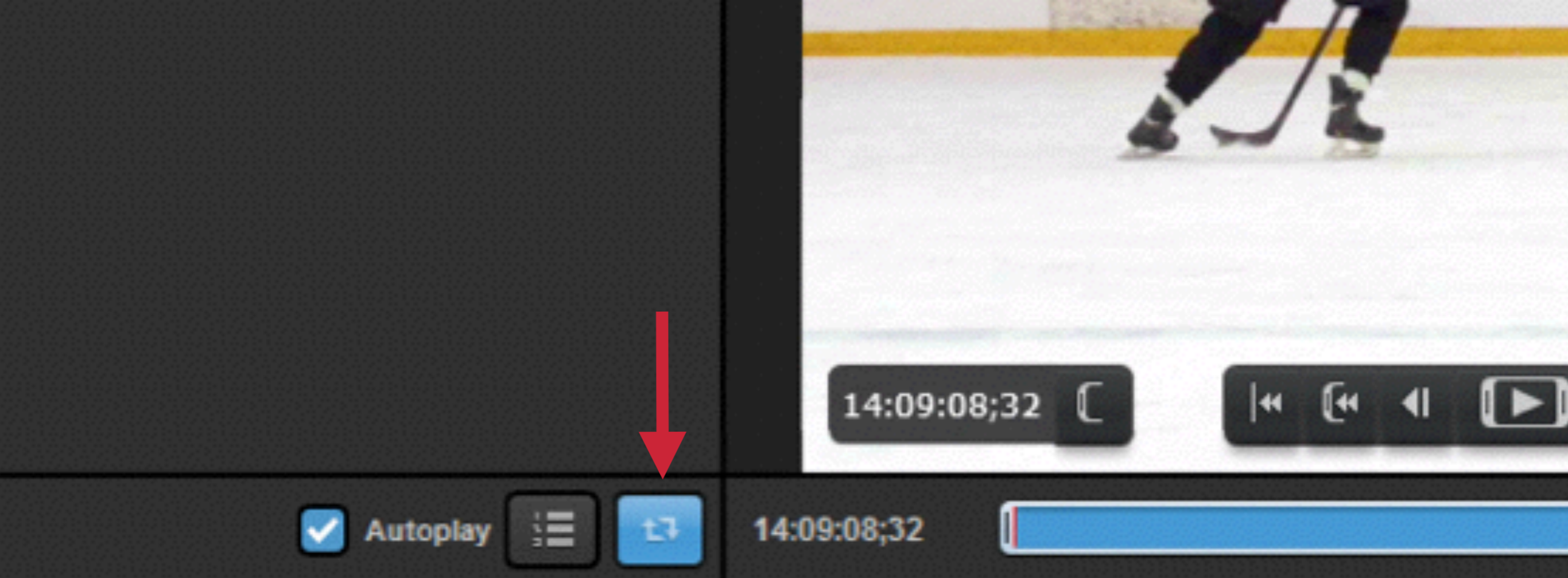
If you have one clip that you want to repeat, select the 'loop' button.
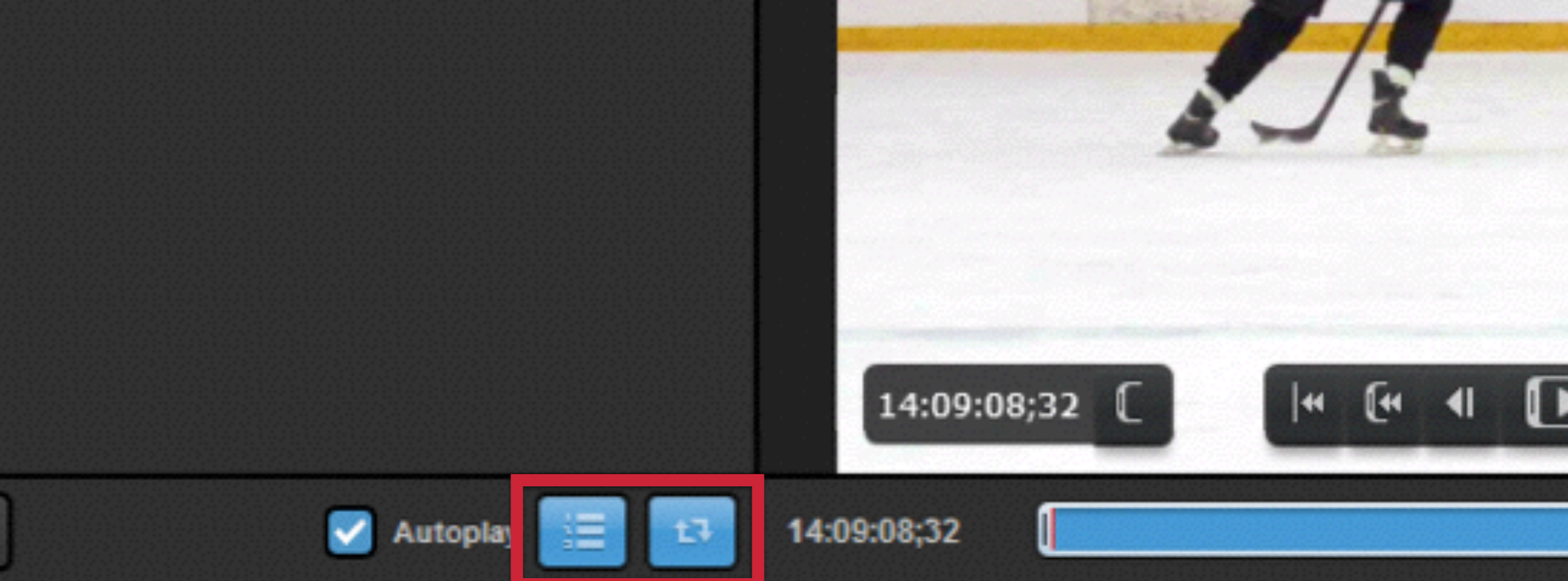
If you highlight both 'play as list' and 'loop,' the media bin will playback all videos in order and then loop back to the first clip when the last one has finished.

14:09:08;32   14:09:38;26

:08;32
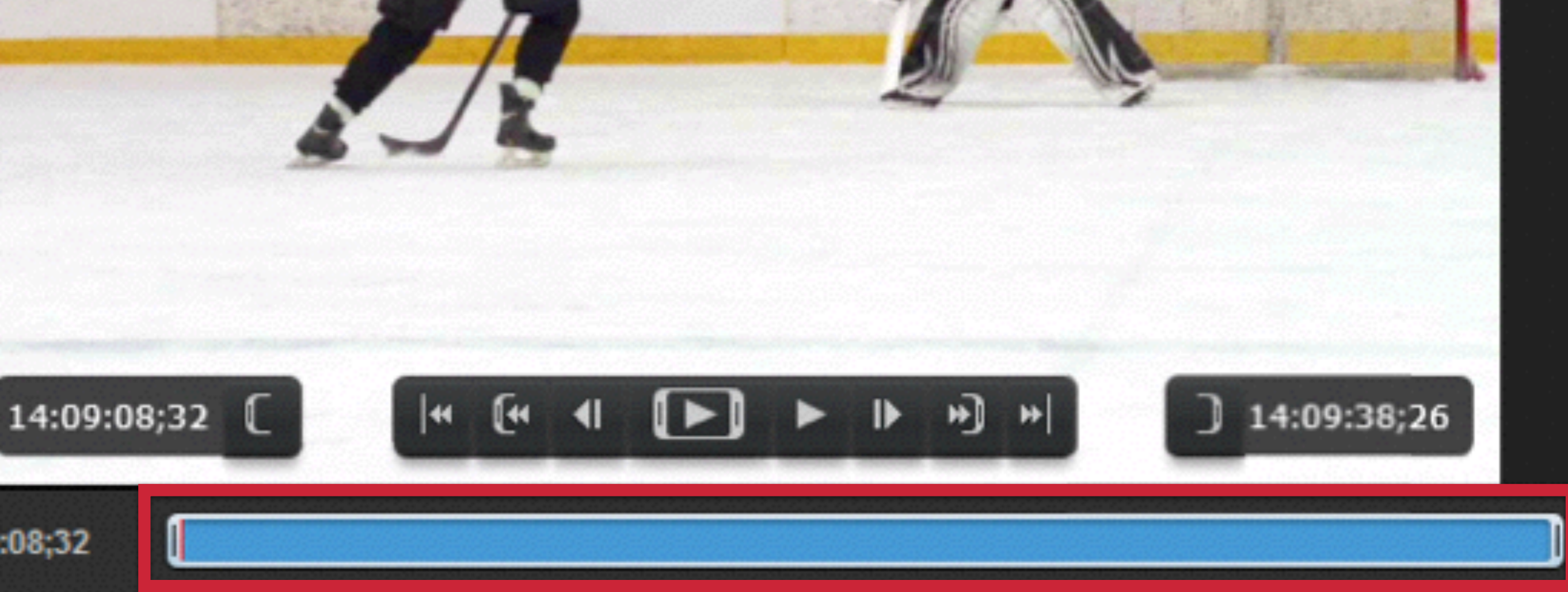
Under the player to the right is a blue timeline where you can track playback of your clip. Use your mouse to drag the red cursor to any point within the clip.

14:09:11;30 **[**

|◀◀ **[◀◀** **◀|** **[▶]** **▶** **I▶** **▶]** **▶▶|**

] 14:09:33;40

14:09:11;33
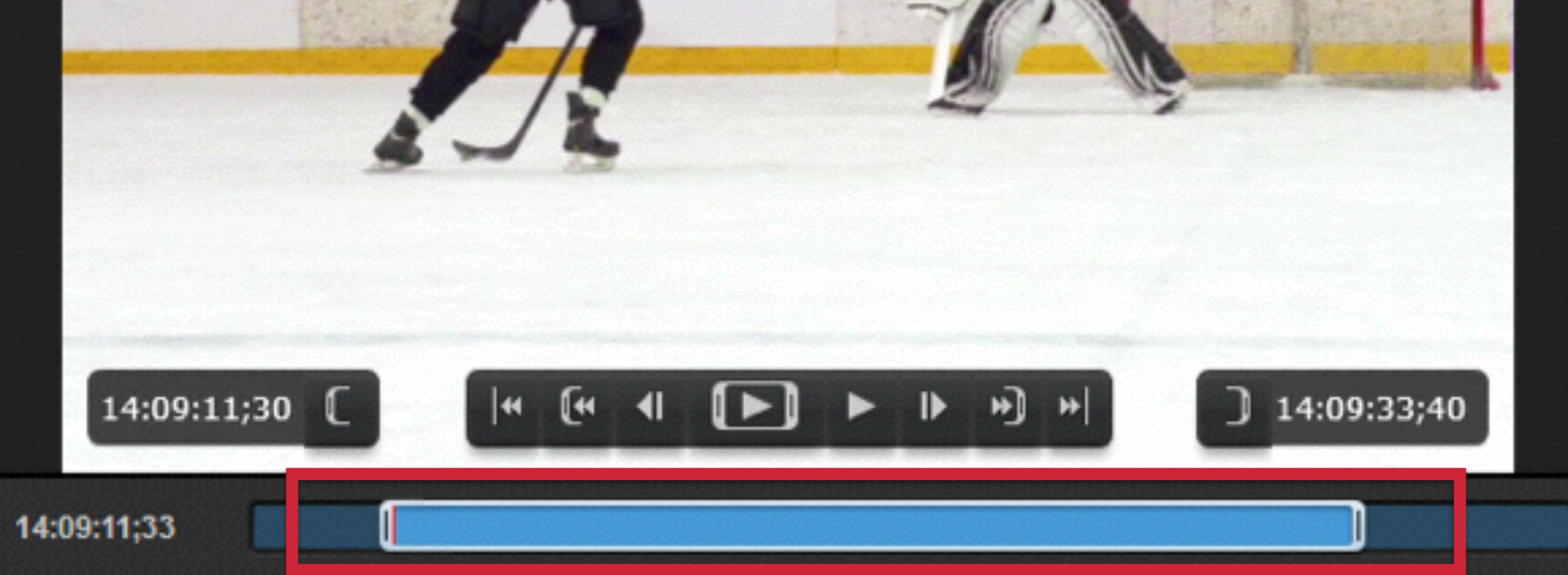
With your mouse, you can drag and drop both ends and set In and Out points if you want to playback only a portion of your clip.

14:09:11;29   14:09:33;40

14:09:11;29
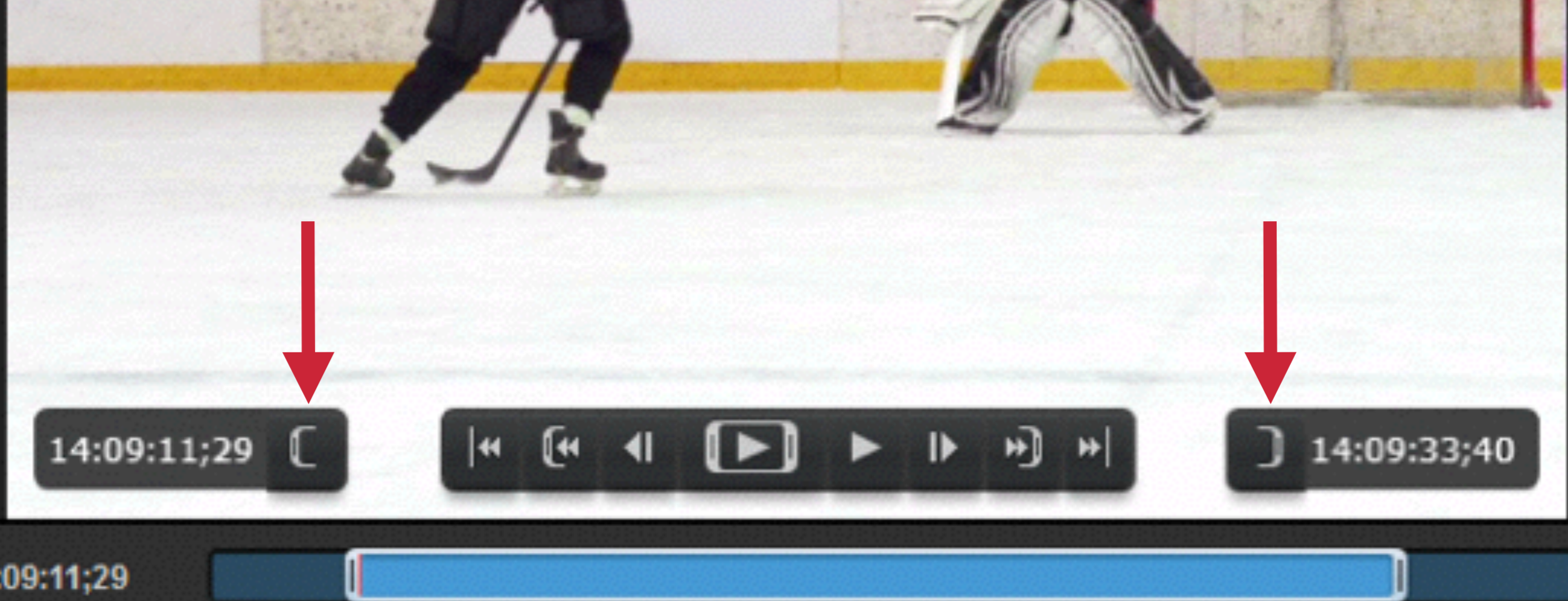
You can also set In and Out points by dragging the scrubber to the desired point and pressing the corresponding In or Out bracket button above the timeline.

14:09:11;29   14:09:33;40

14:09:11;29
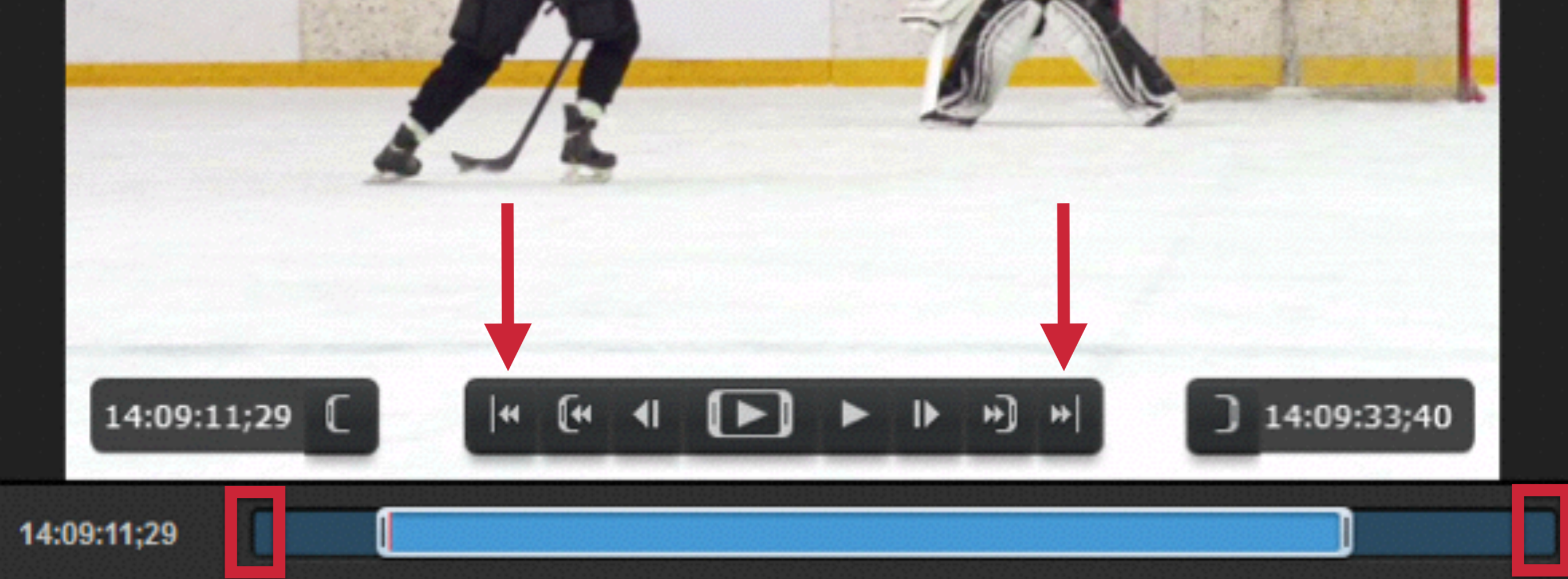
The first and last buttons jump
the clip to the beginning of the
full clip, regardless of whether
there are set In and Out points.
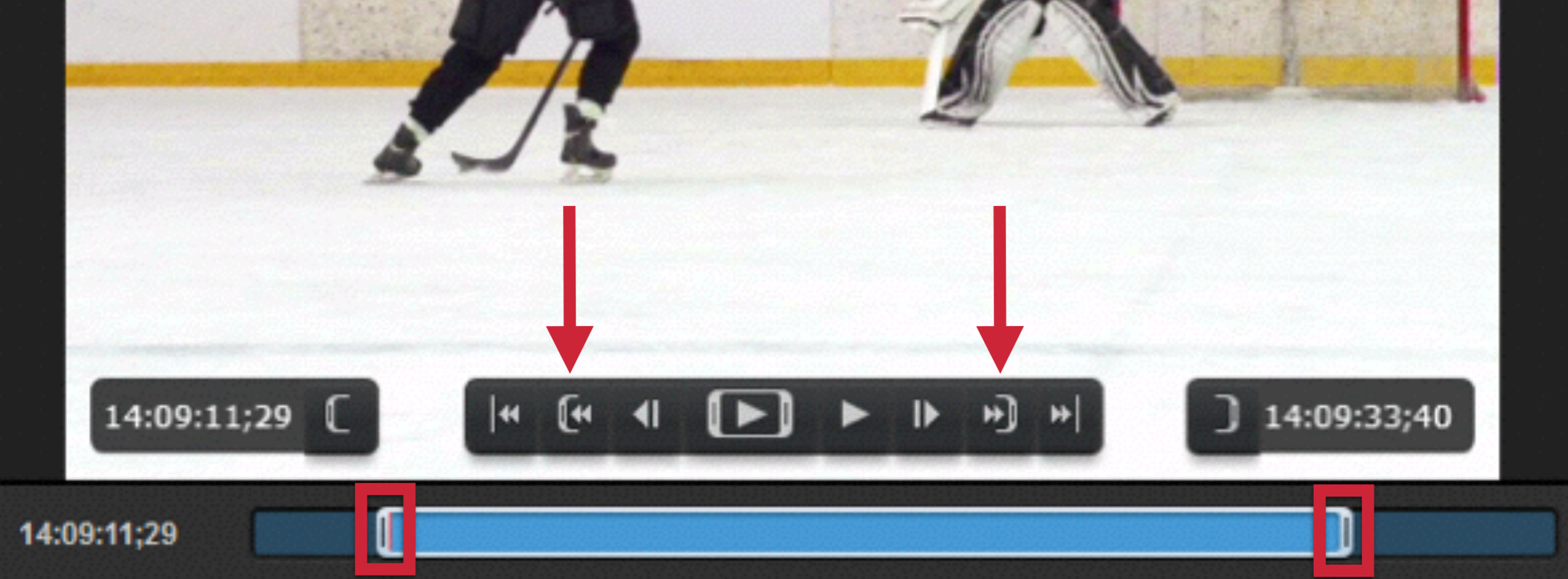
The next pair of controls in will jump to the beginning and end, respectively, of the clip's set In and Out points.
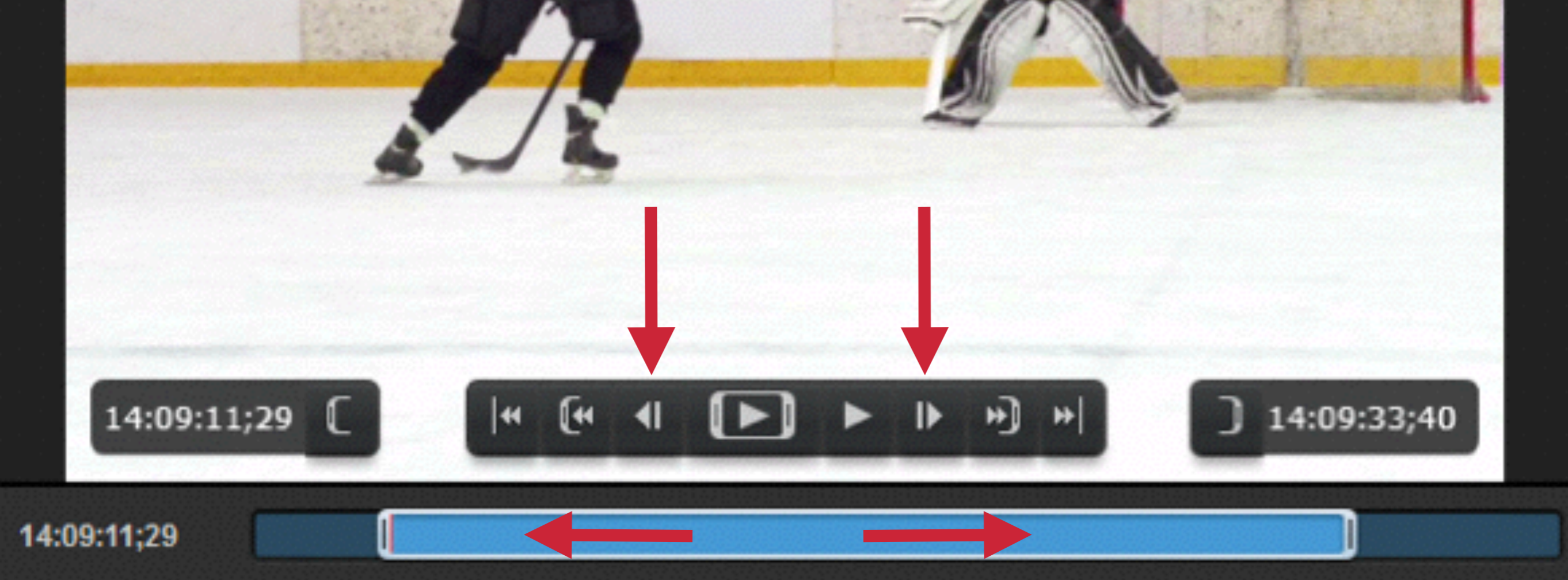
The next pair of controls can jog your clip forward and backward, respectively, frame by frame.

14:09:11;29   [⁣ |◀◀ (◀◀ ◀| ▶ ▶ |▶ ▶|) ▶|] 14:09:33;40

14:09:11;29
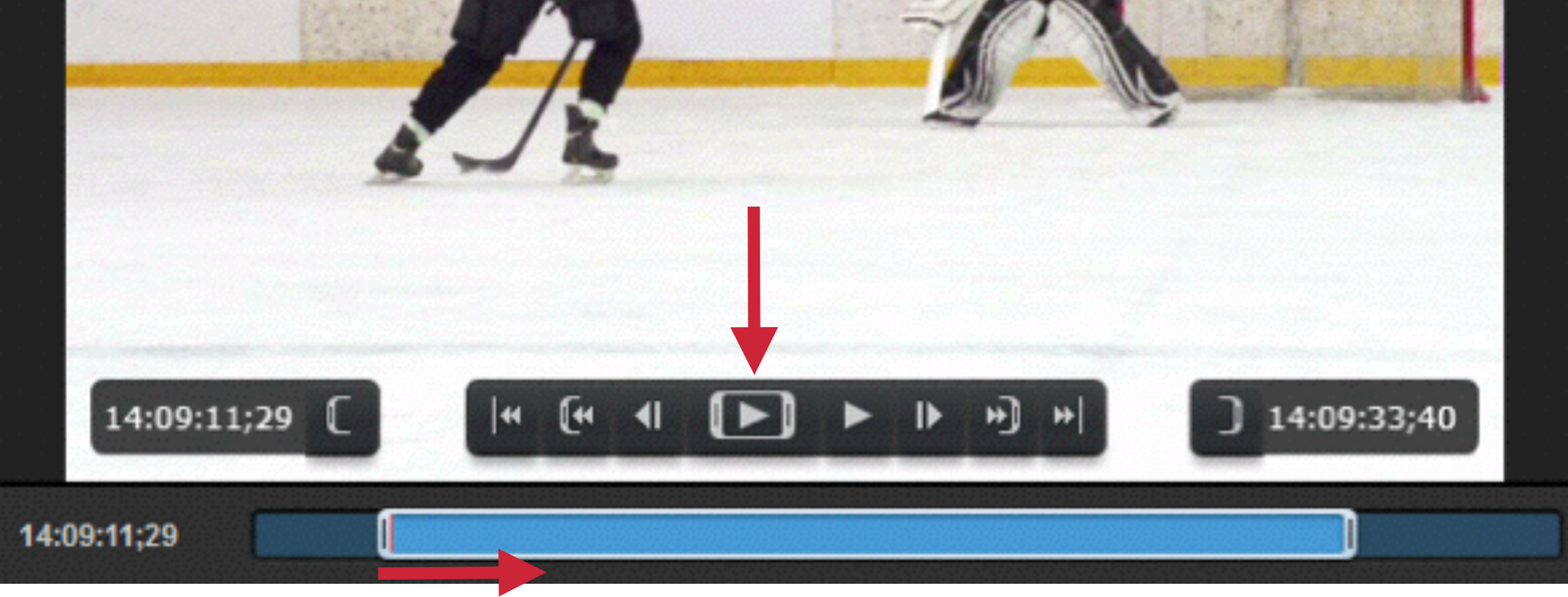
The play control surrounded by brackets will play the clip starting from the In point and finishing at the Out point.
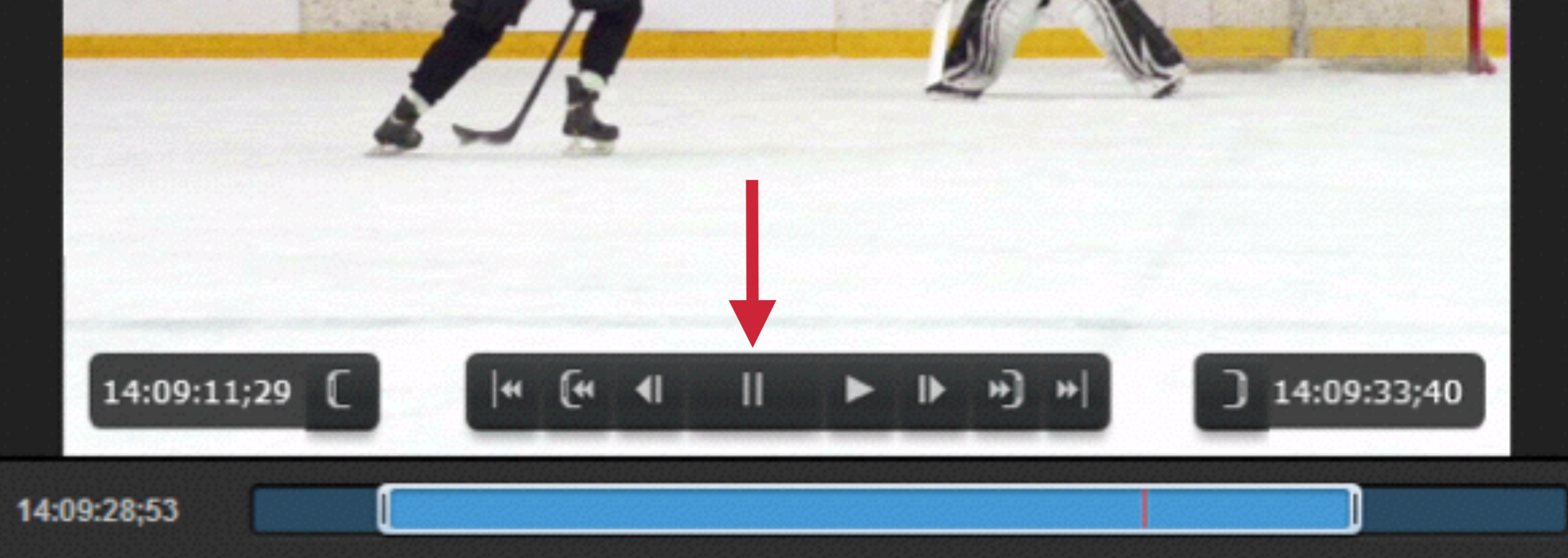
When clicked, this play button will turn into a pause button, allowing you to stop playback at any point.
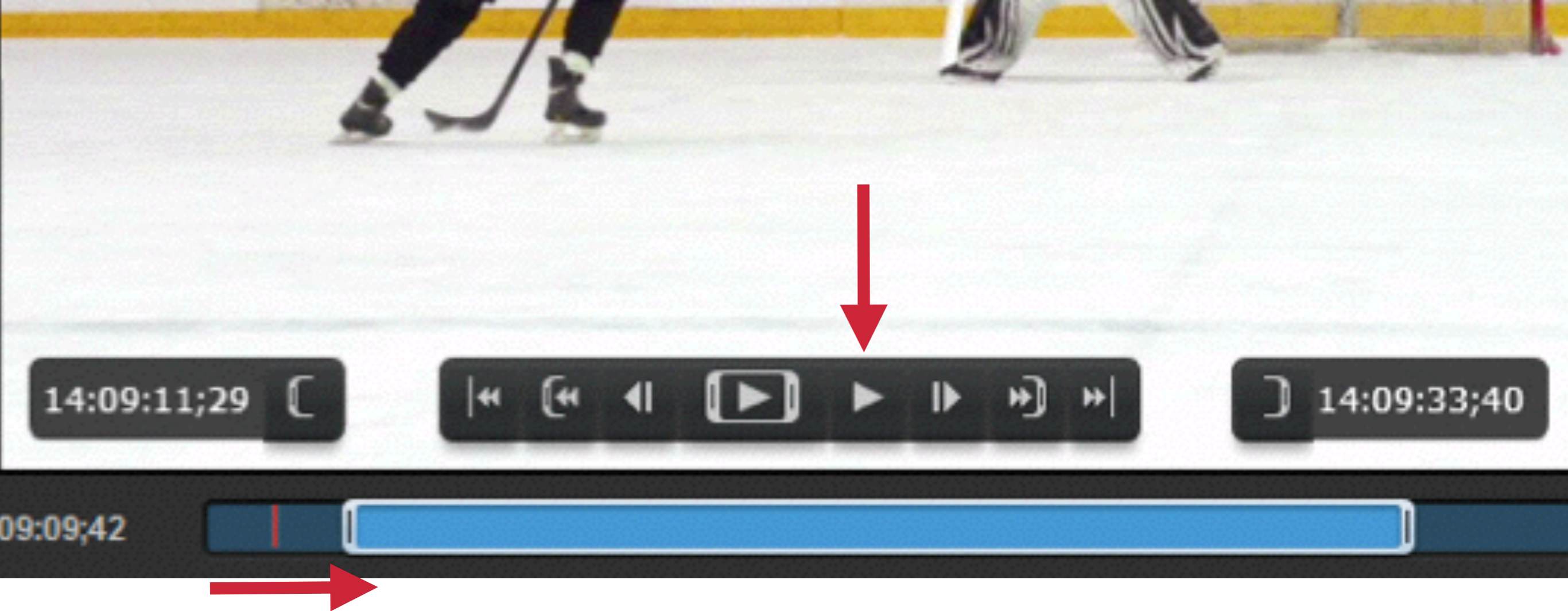
Next, you can play back the full video from wherever the scrubber is located by using this play control.

livestream
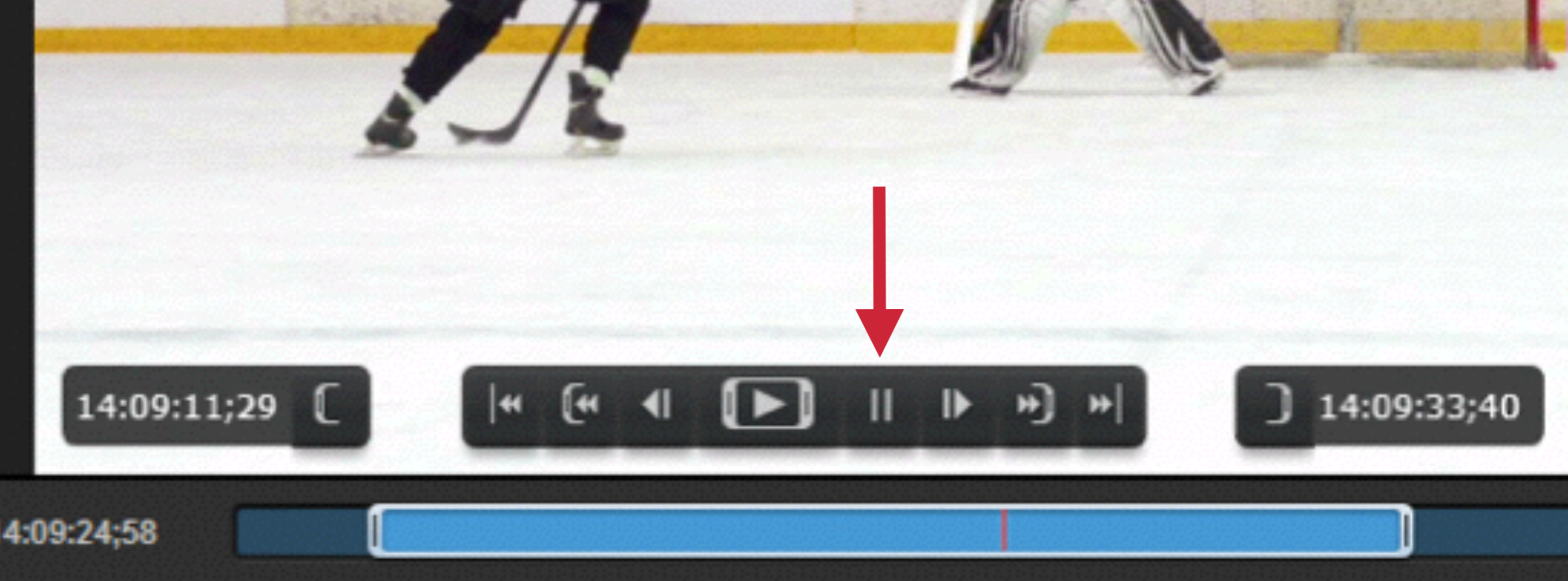
This play button also turns into a pause button when the clip is playing back.
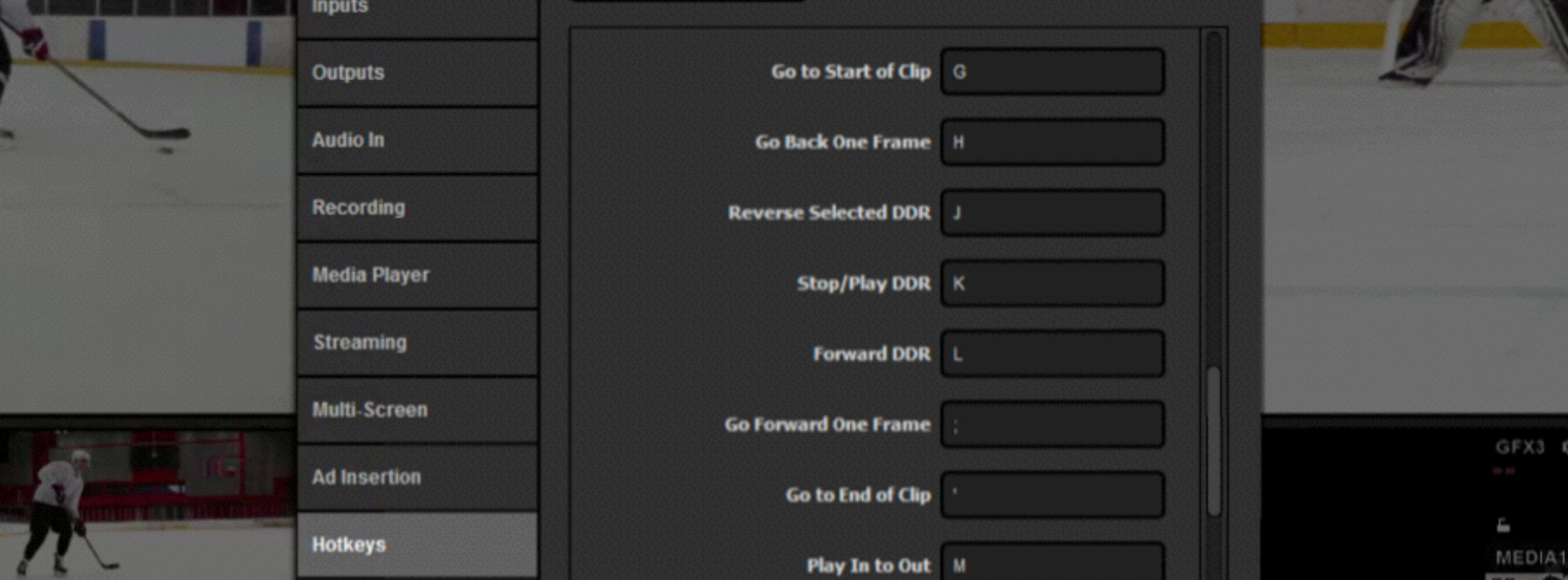
These controls all have hot keys assigned to them. Check your settings to see what they are by default or change them to your preference.
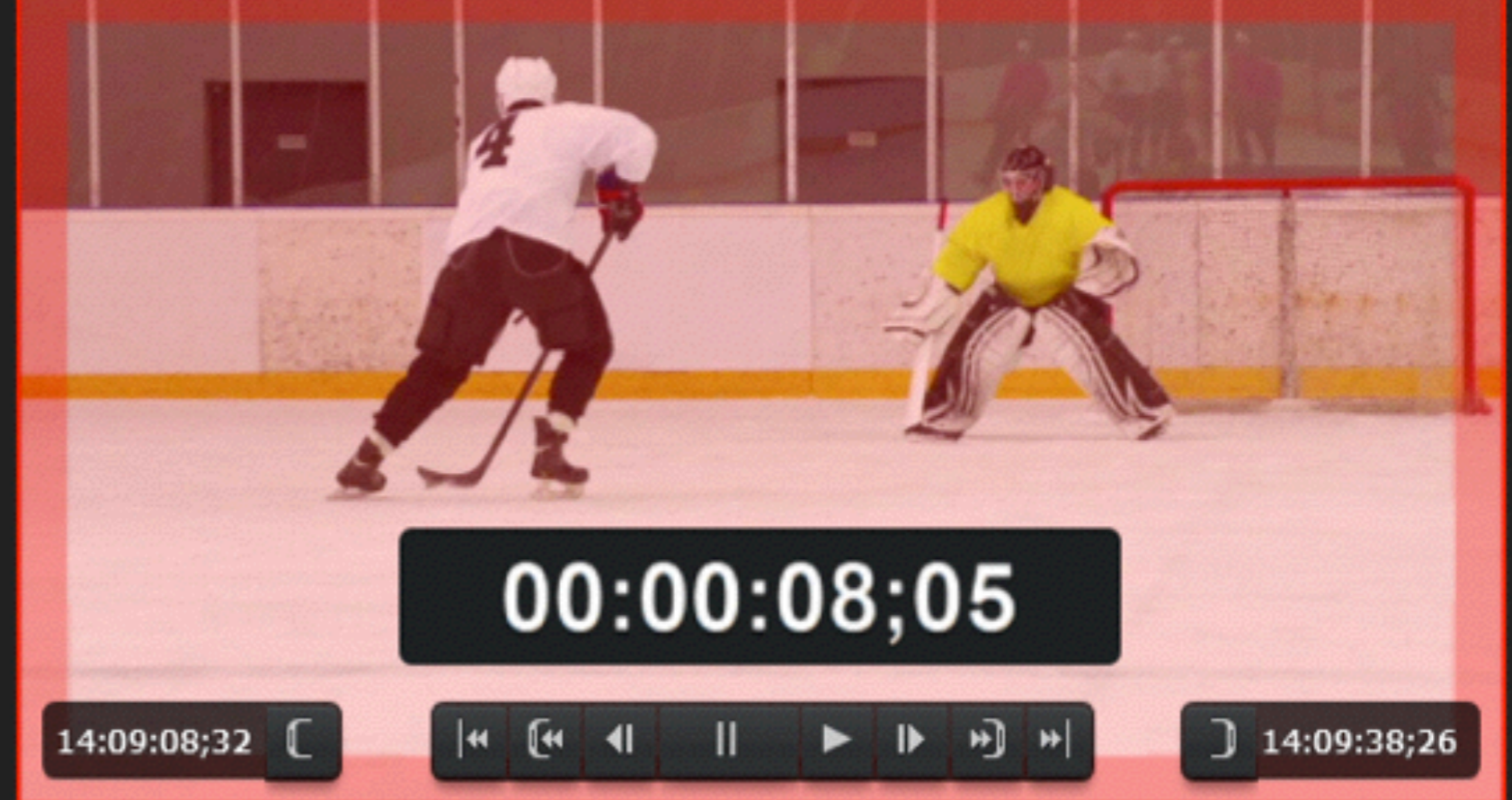
When playing back the last clip of a playlist or any clip that is not looping, Studio will give warning indicators as you are near the end of a clip. Yellow indicates 20 seconds or less are remaining.

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

livestream

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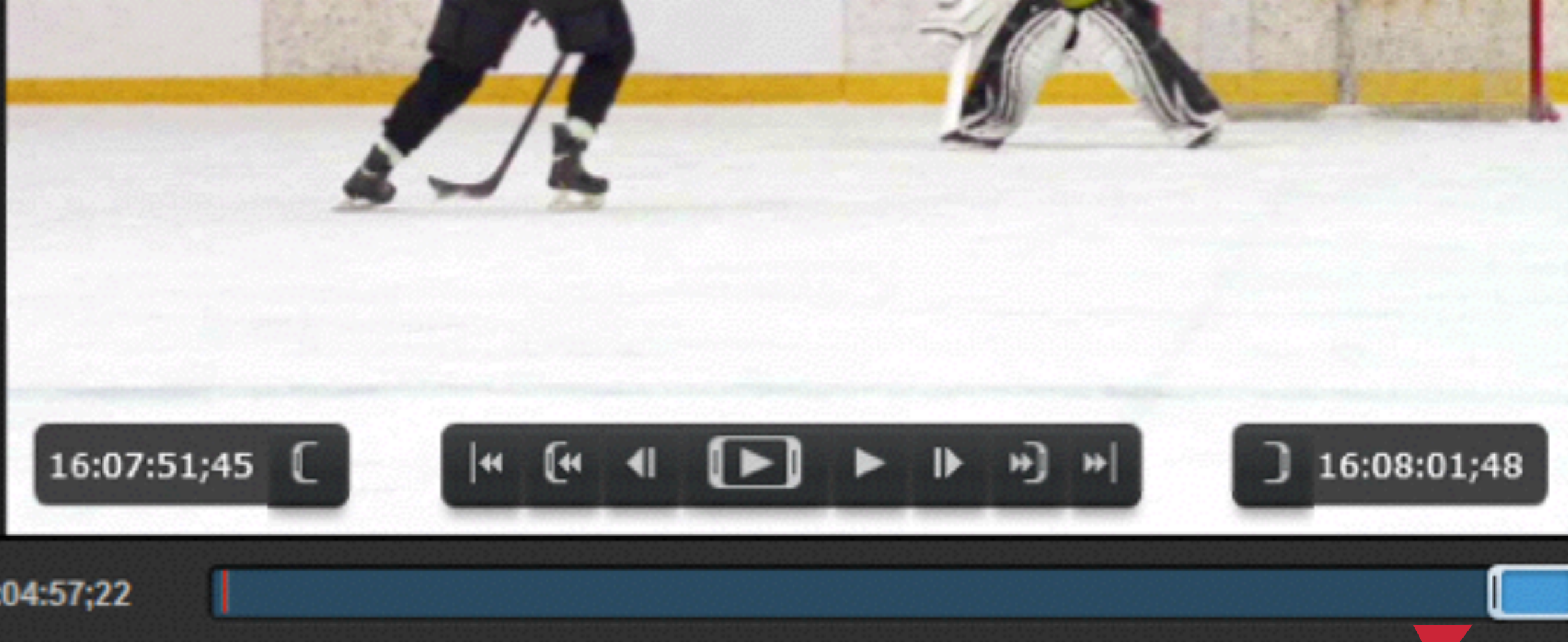
By default, pressing 'R' on the keyboard will set an In point for the previous 10 seconds, and an Out point for the current timestamp.

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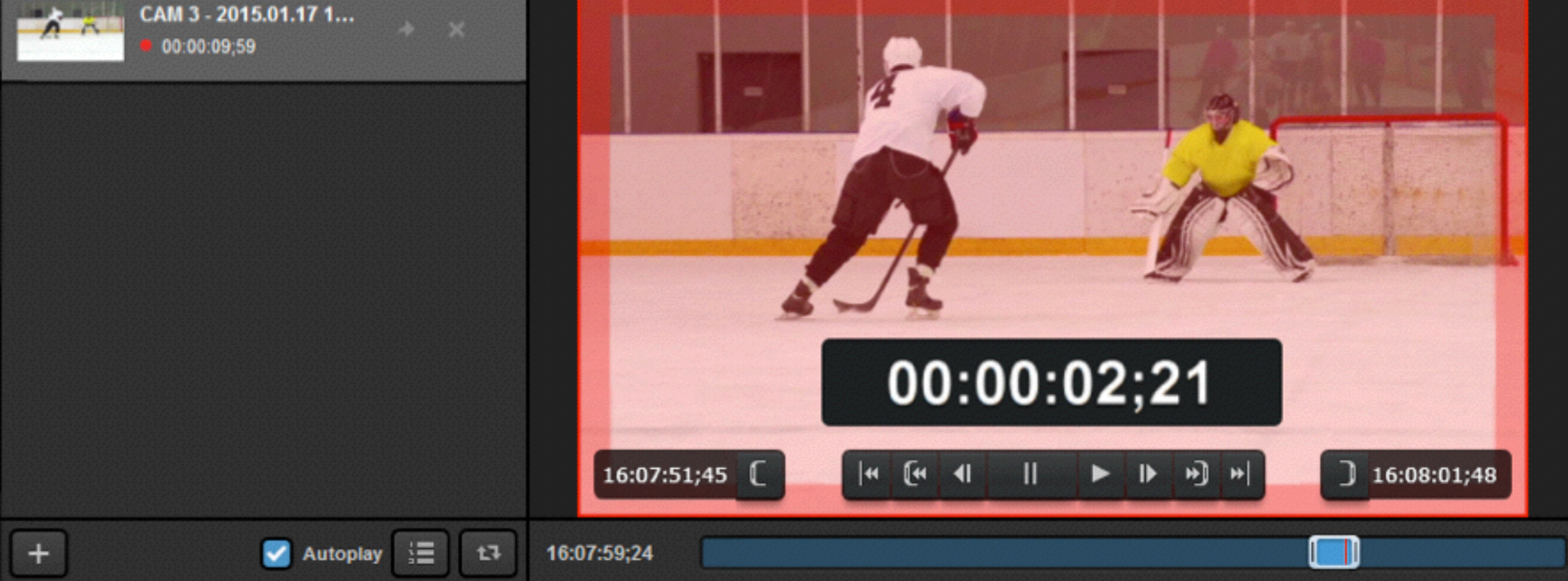
When you bring that media source into Program, it will start playing that 10 second segment and will give a countdown for how much time is left.
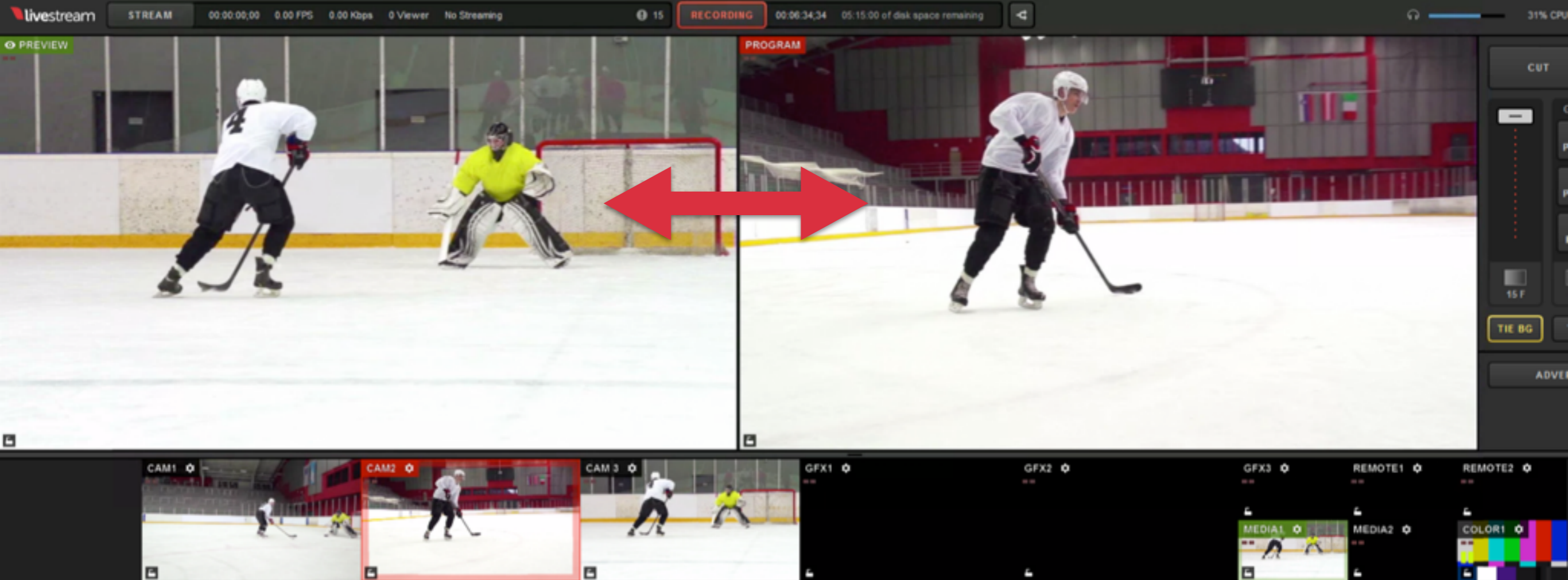
When the clip reaches its Out point, it will automatically switch to the Preview source, using the previous transition type you used (Cut or Auto).

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

Streaming

Multi-Screen

Ad Insertion

Hotkeys

Mouse / Touch

Transcoding Cache 300 GB

Transcoding Bitrate 75 (Mbps)

Basic Replay 10 seconds before current timestamp

When the Basic Replay shortcut key is pressed ("R"), set a new in-point of the current recording using the above setting.

Export Location BROWSE C:\Users\Livestream\Videos\

Video Resolution 1280 X 720
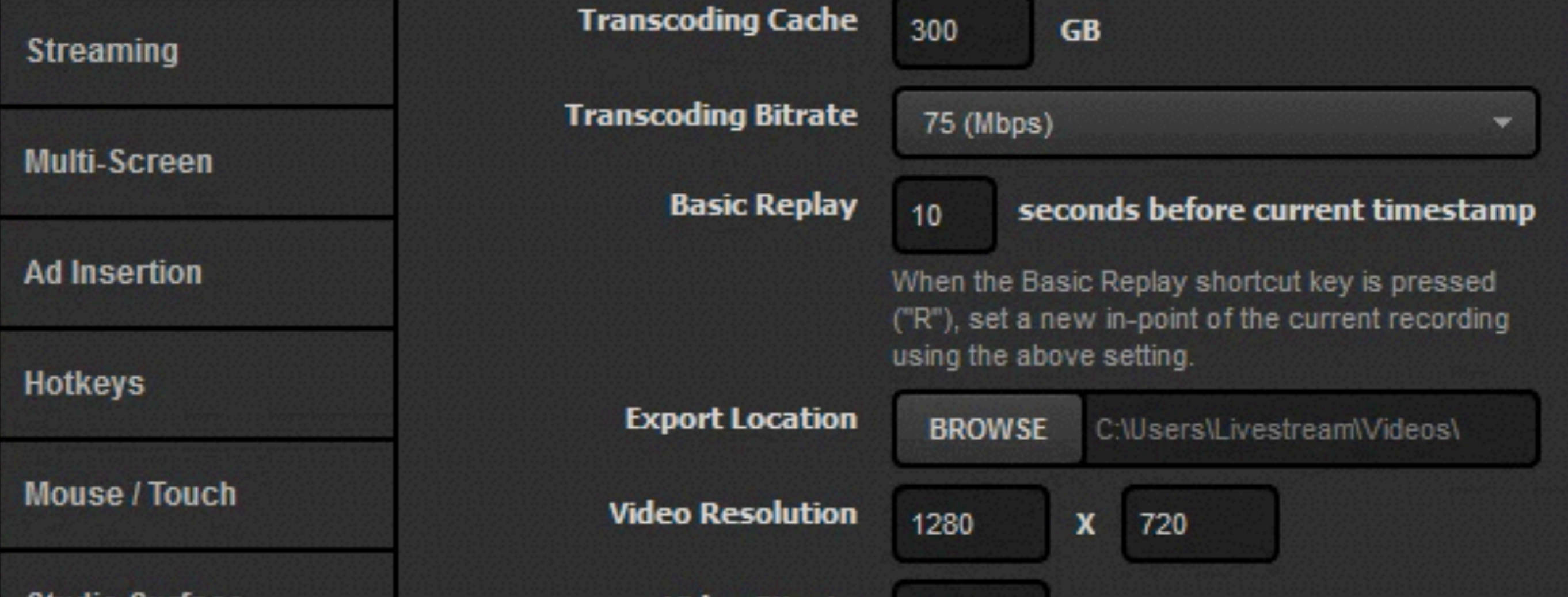
The default setting for the amount of time your replay covers can always be adjusted in under the 'Media Player' tab in settings.

livestream

Media Playback

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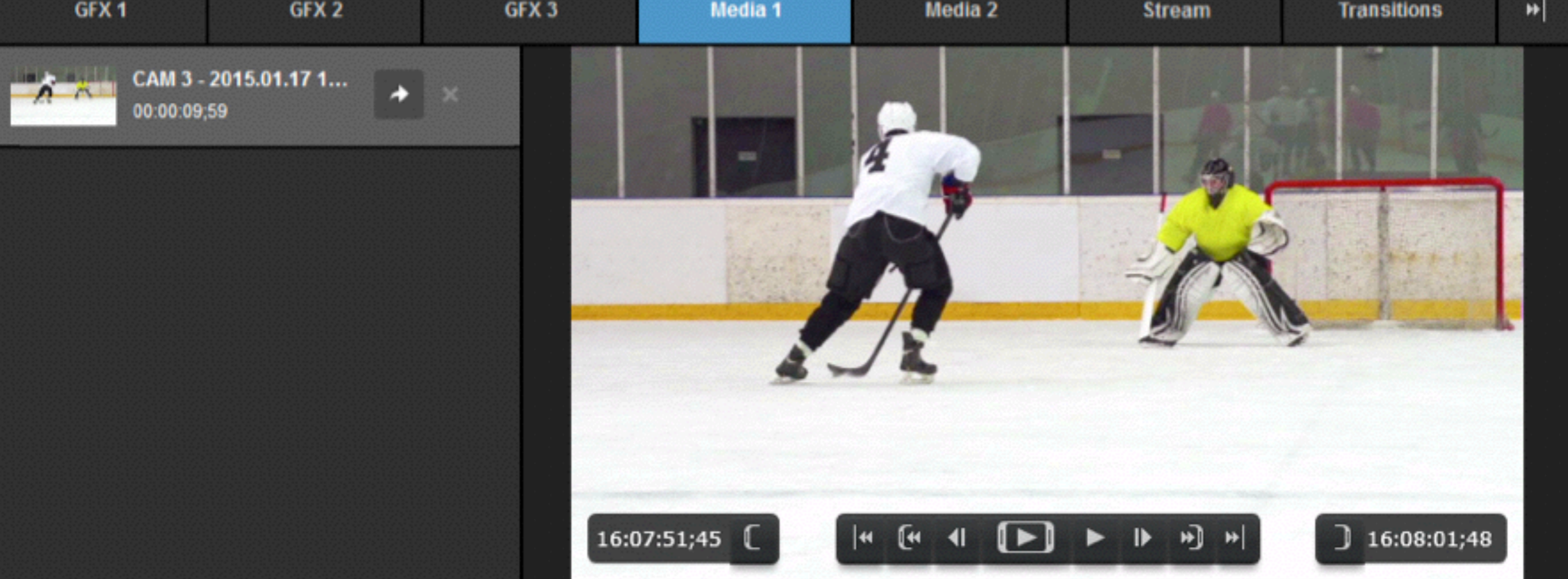
The media bin has an export tool that permits turning any part of your clips into its own H.264 .mp4 file on your system. First, select a video you want to export.

16:06:12;55

16:10:27;

16:10:27;07
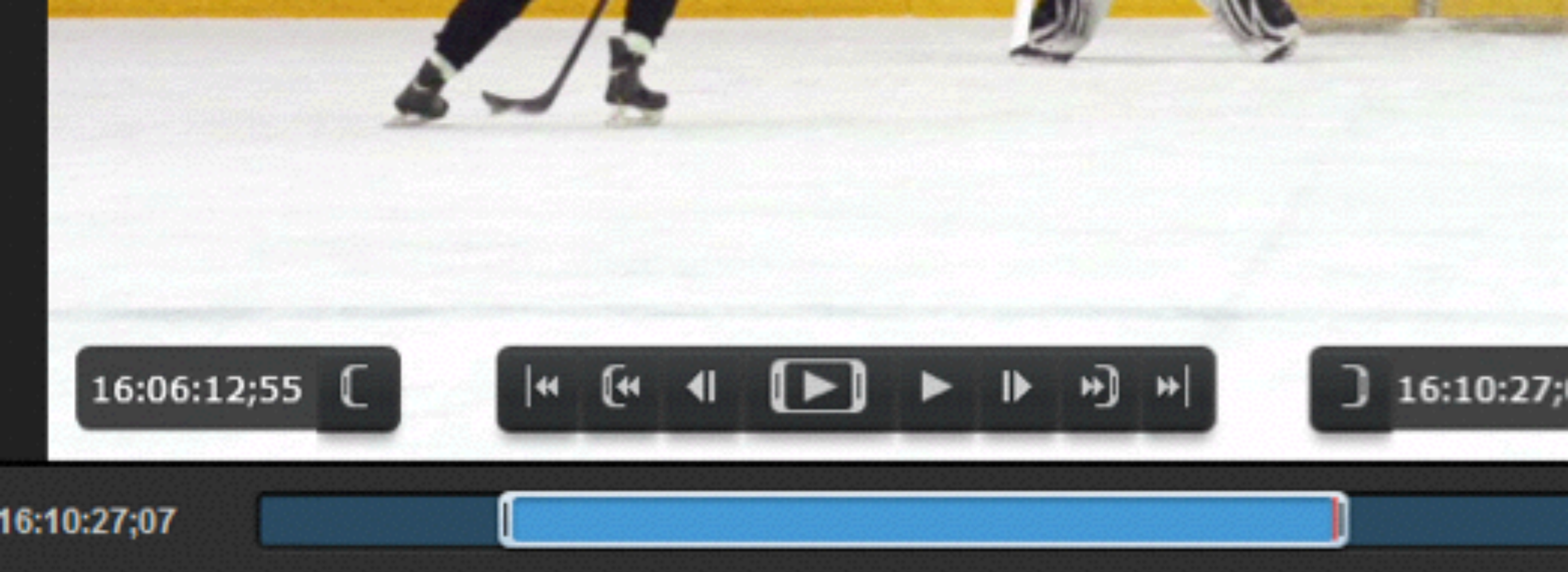
Set In and Out points for your
clip. If you want to export the full
video, make sure the brackets
enclose the entire timeline.

livestream

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

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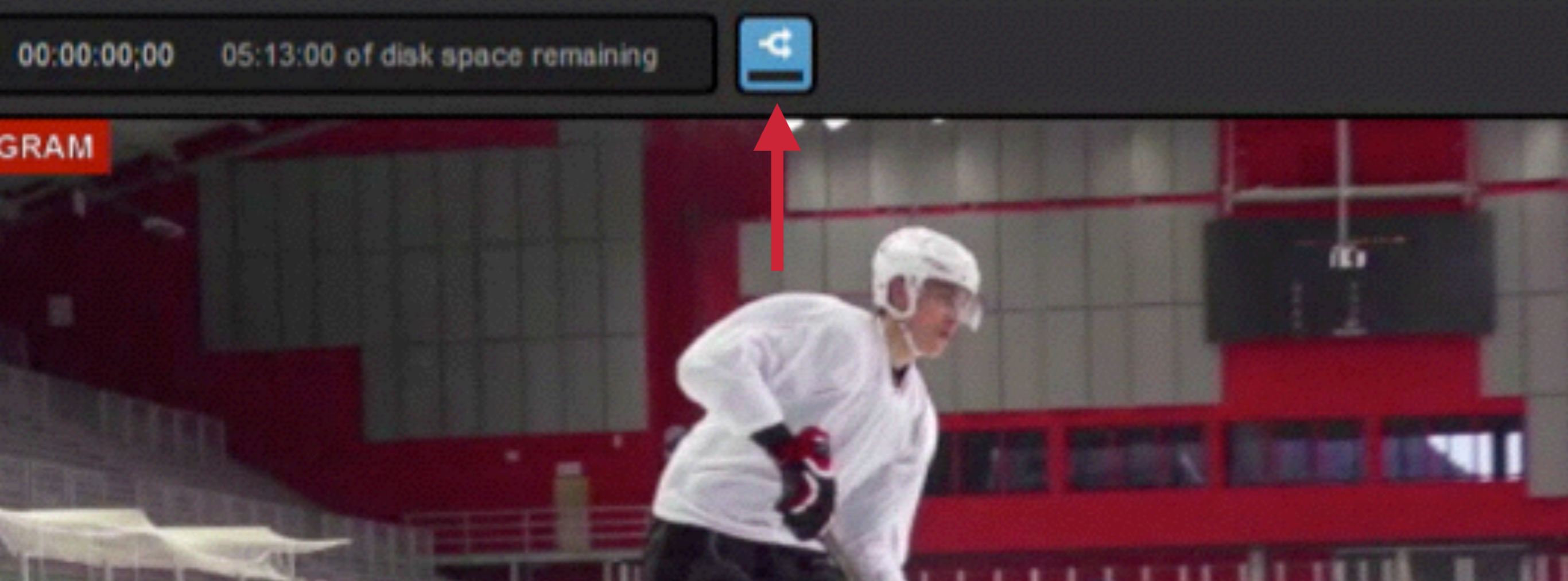
The double arrow button at the top of the interface turn blue and show a small progression bar as your clip is exporting.
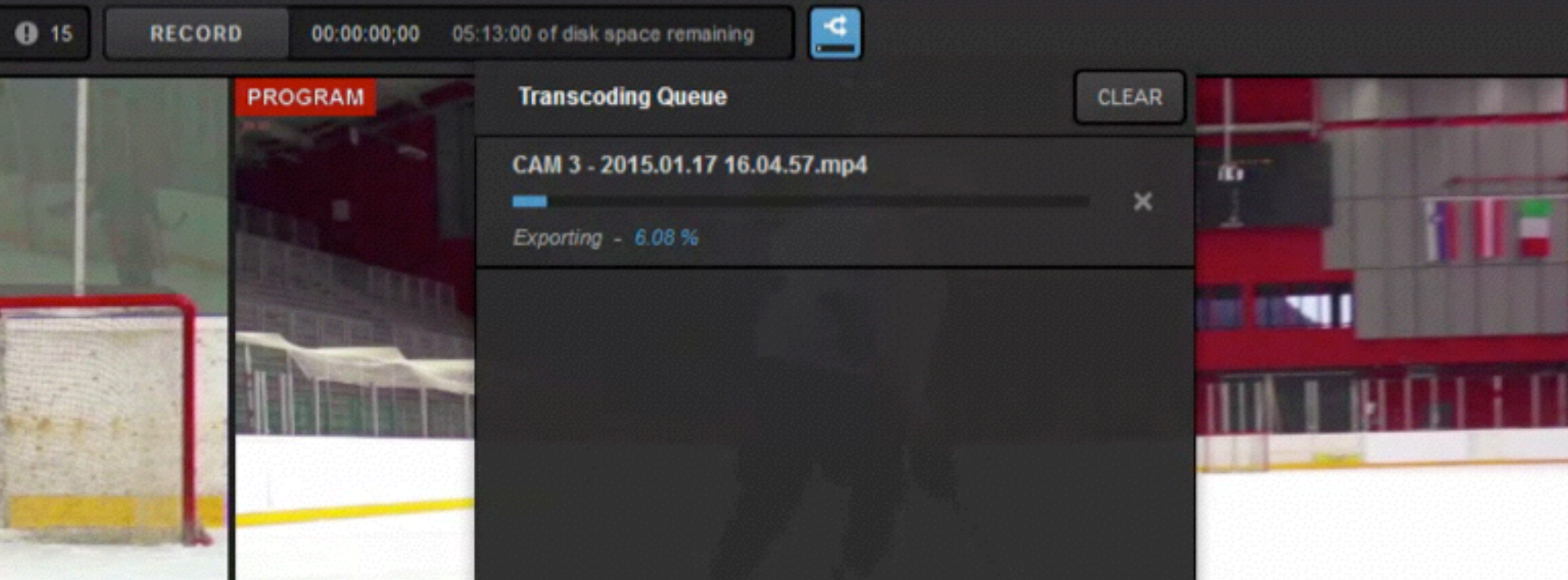
livestream

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

Studio Surface

Advanced

Support

License

About

MEDIA1	Media 1	Embedded	None
COLOR1	Colors/Bars 1	Embedded	None
REMOTE1	Remote Cam 1	Embedded	None
REMOTE2	Remote Cam 2	Embedded	None

+ −

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

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

help.livestream.com/customer/portal/articles/1263047-livestream-studio-remote-camera

Apps | Desk.com Agent -- | Service Status | Livestream Live Broa | Livestream Support | ShoreTel Sky | Login | Livestream Manage | Livestream Admin T | » | Other B

Support / Livestream Studio/ **Livestream Studio Remote Camer...**

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>.

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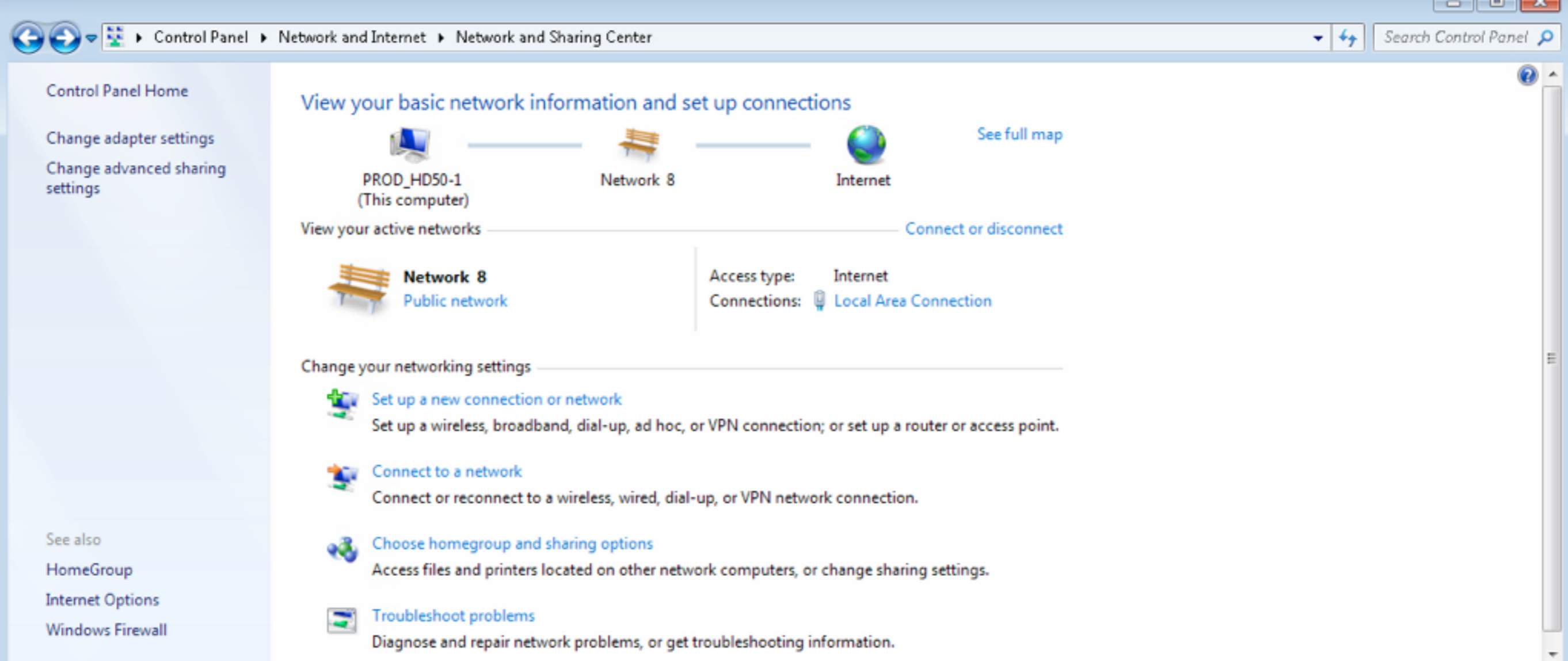
In order for the Windows remote camera to work, your remote computer must be connected to the same network as your Livestream Studio system.
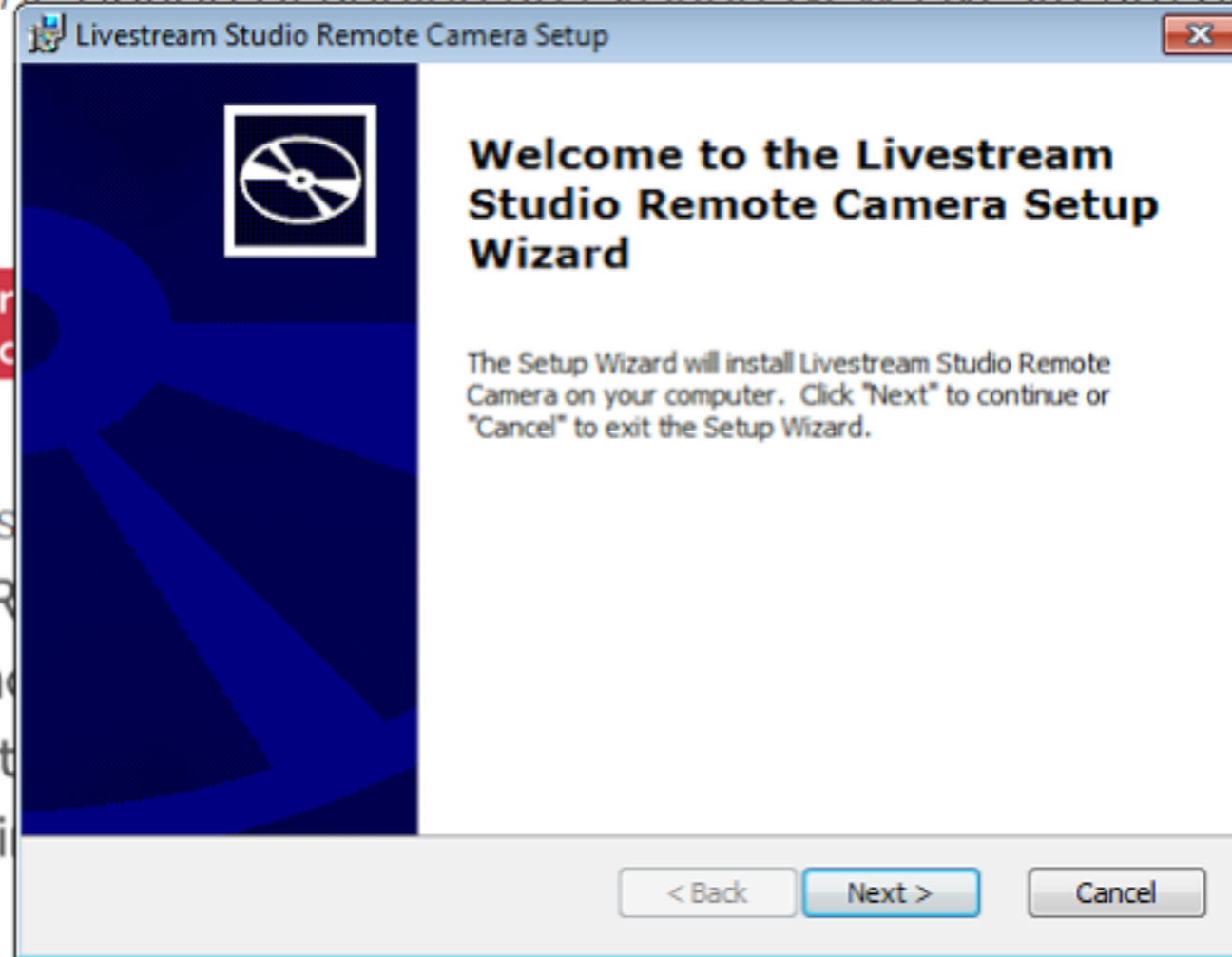
Open the downloaded file and follow the on-screen steps to run the installation wizard, then click 'Finish.'
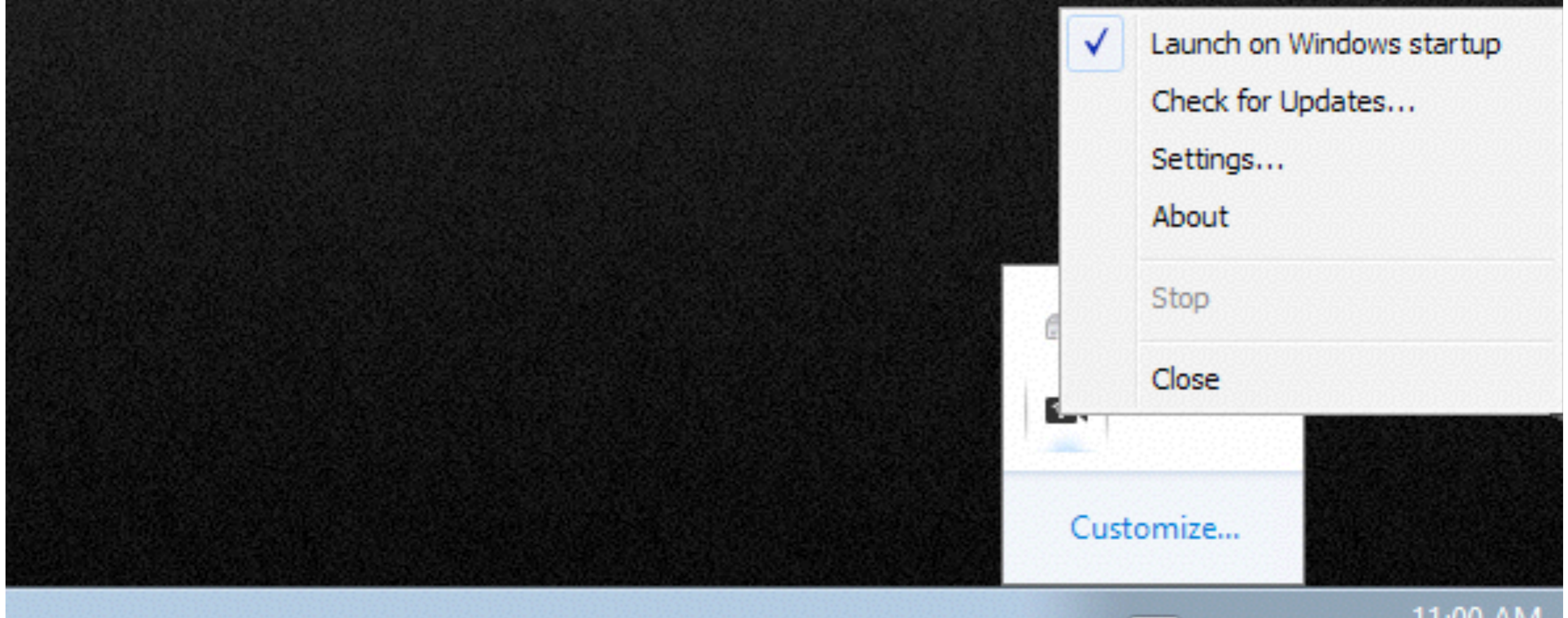
Remote Camera will launch in the background of your PC. Right-click on the icon in the bottom toolbar and click 'Settings.'

Livestream Remote Camera Settings [CANCEL] [SAVE]

Computer Name [Remote PC]

☑ Blackmagic - DeckLink SDI Quad [1]   [SHOW SETTINGS]

☑ Blackmagic - DeckLink SDI Quad [2]   [SHOW SETTINGS]

☑ Blackmagic - 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
- ◯ HD 1080p
- ◉ HD 720p
- ◯ 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.
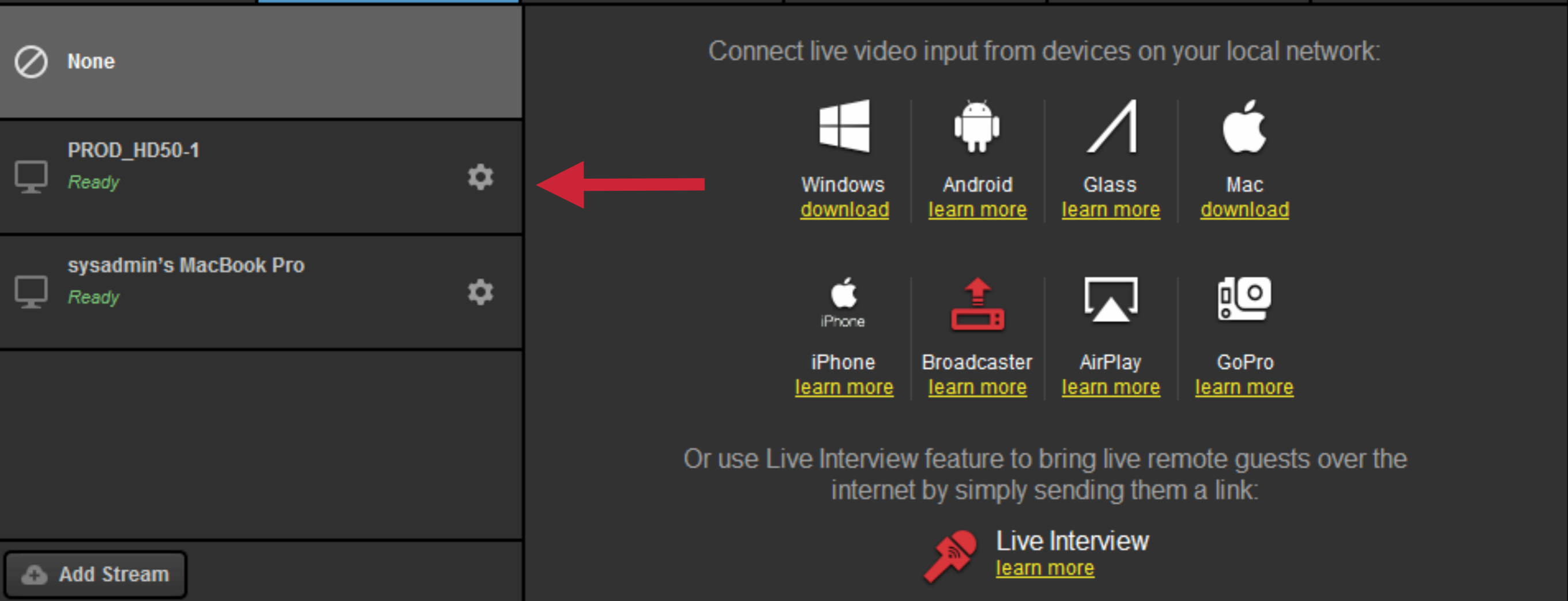
Back in Livestream Studio, under the Remote Cam tab, you should see your PC listed as a source, assuming that computer is on the same network.
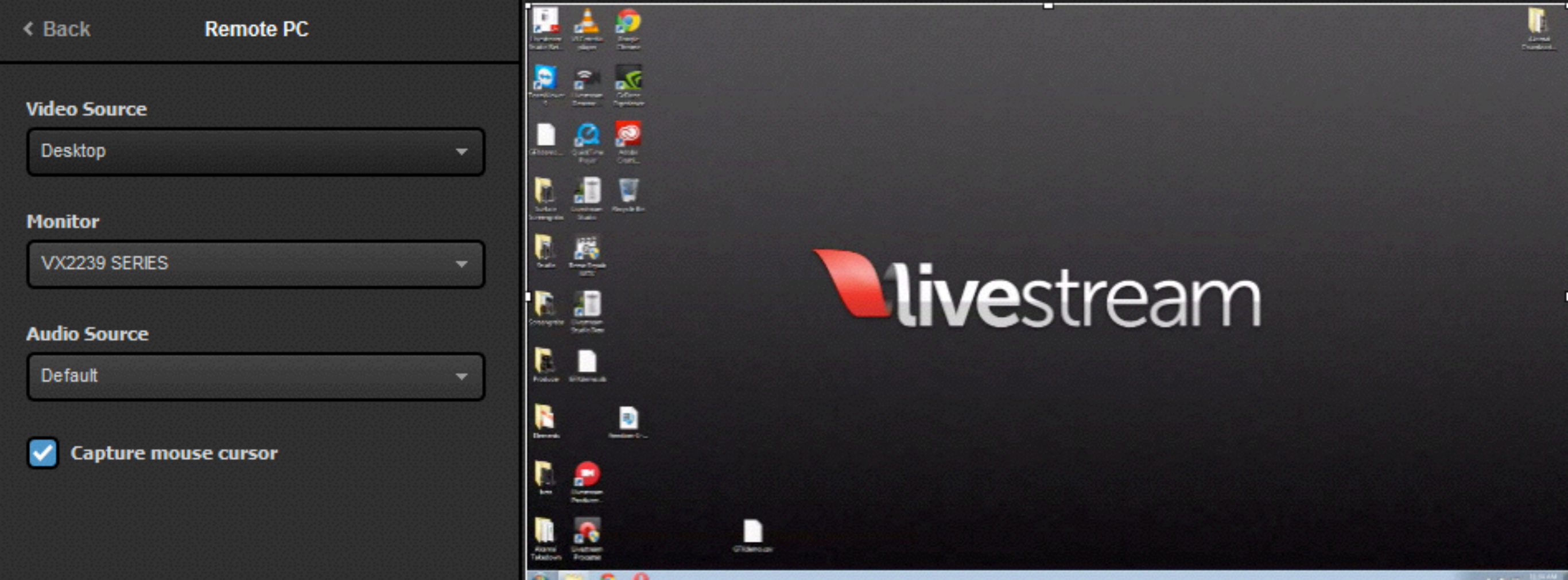
Click on the gearwheel to select the video source (if you have more than one such as desktop, webcam, etc.), audio source, and other settings depending on the source.
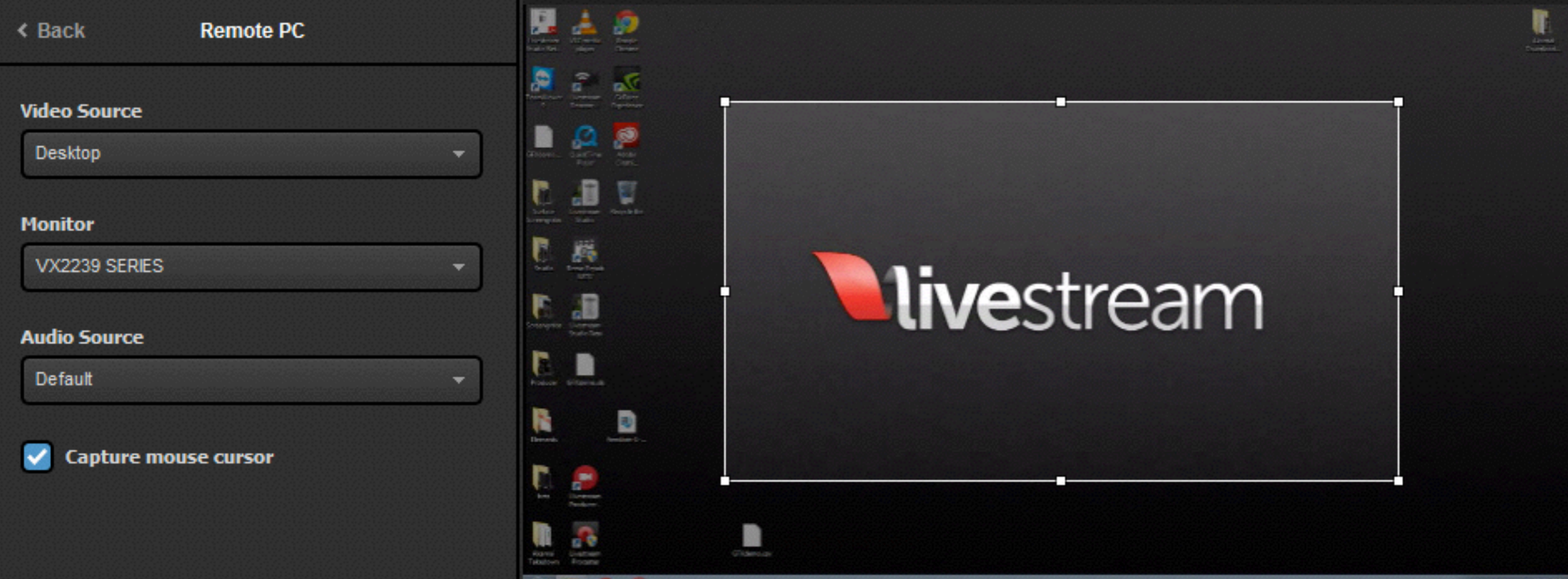
You can crop the source within a matching aspect ratio if you want to show only part of the image. Use your mouse to drag and drop the border in the module on the right side.

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

[Click here](#) 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.
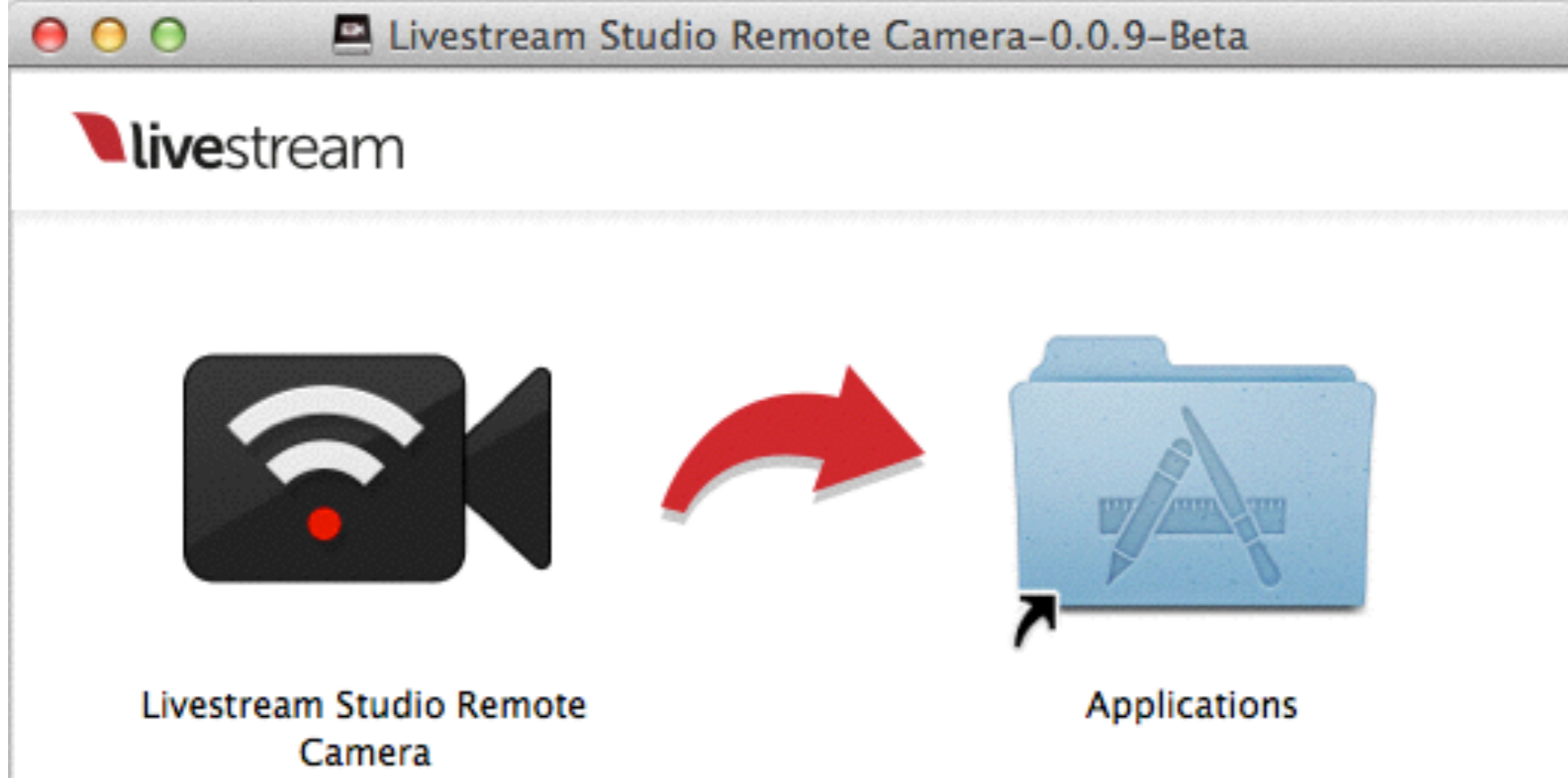
Drag the Livestream Studio
Remote Camera into the
Applications folder.
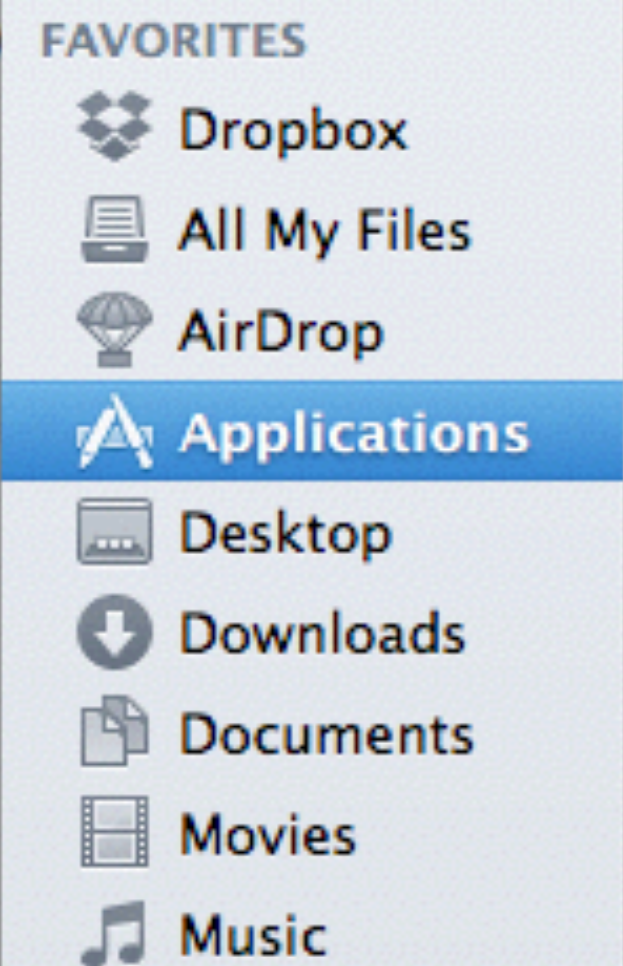
Go to the Applications folder and double-click the Livestream Studio Remote Camera to open the application.

Welcome to Livestream Studio Remote Camera

1. Launch Remote Camera by selecting its icon from the menu bar at the top of your screen.

2. Use **Livestream Studio** to pull your desktop, or any camera from this computer into your live production.

☑ Don't show this message again   OK

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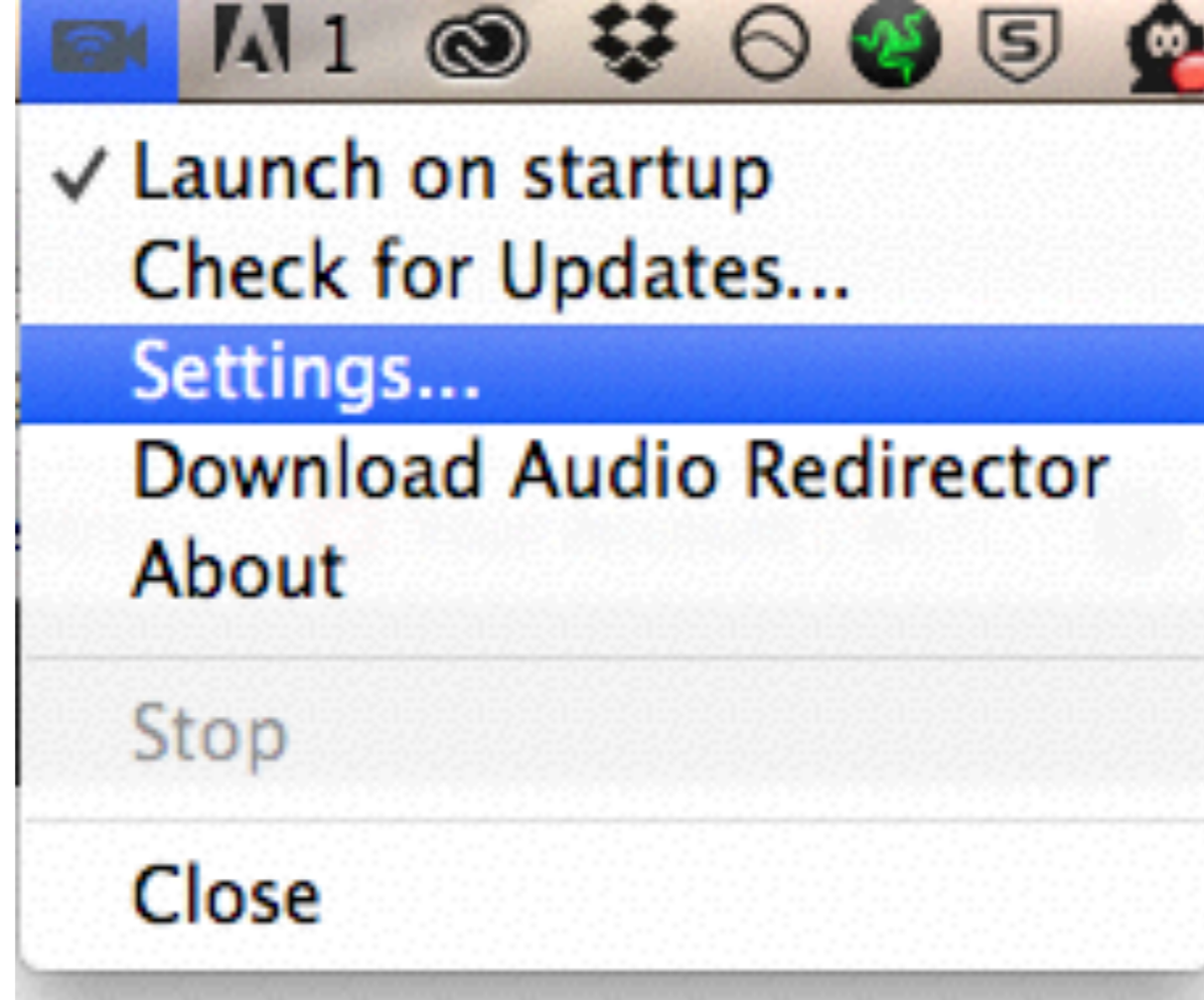
When the Remote Client is
running, you can click the icon
and click 'Settings' to make further
adjustments to your remote
camera source.

Livestream Studio Remote Camera Settings — CANCEL — SAVE

Computer Name: Emily's MacBook Pro

☑ Desktop - Color LCD

☑ Desktop - DELL 2405FPW

☑ Web Cam - FaceTime HD Camera (Built-in)

Encoder Quality
- ○ HD 1080p
- ● HD 720p
- ○ SD 480p

Encoder Framerate
- ● Half-speed FPS (30p)
- ○ Full-speed FPS
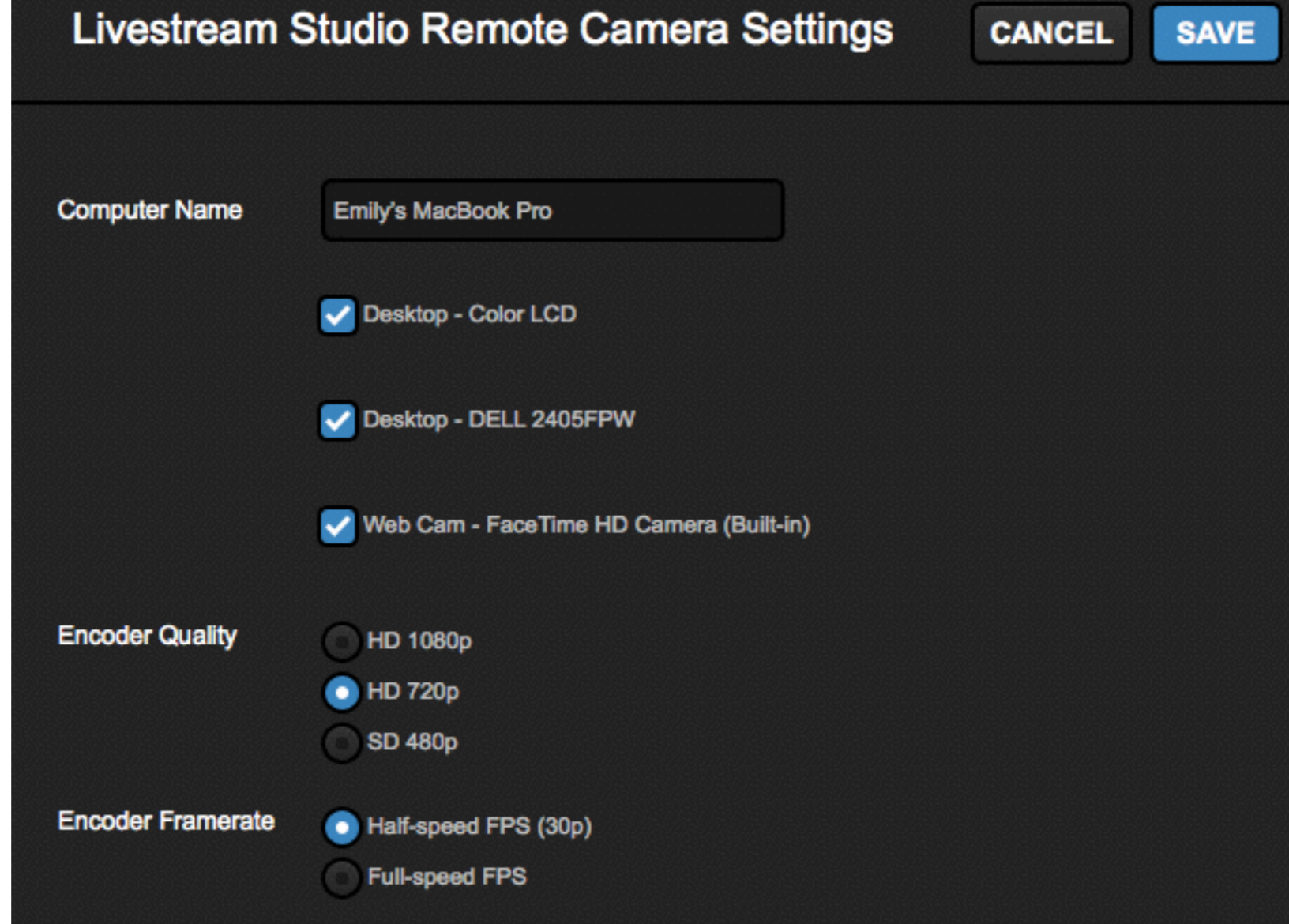
Here, you can change your computer's name (as it appears in Livestream Studio), what sources will be available, and the resolution and framerate the video signal will stream over your network to Livestream Studio.

≡	MEDIA1	Media 1	Embedded	None
≡	MEDIA2	Media 2	Embedded	None
≡	REMOTE1	Remote Cam 1	Embedded	None
≡	REMOTE2	Remote Cam 2	Embedded	None
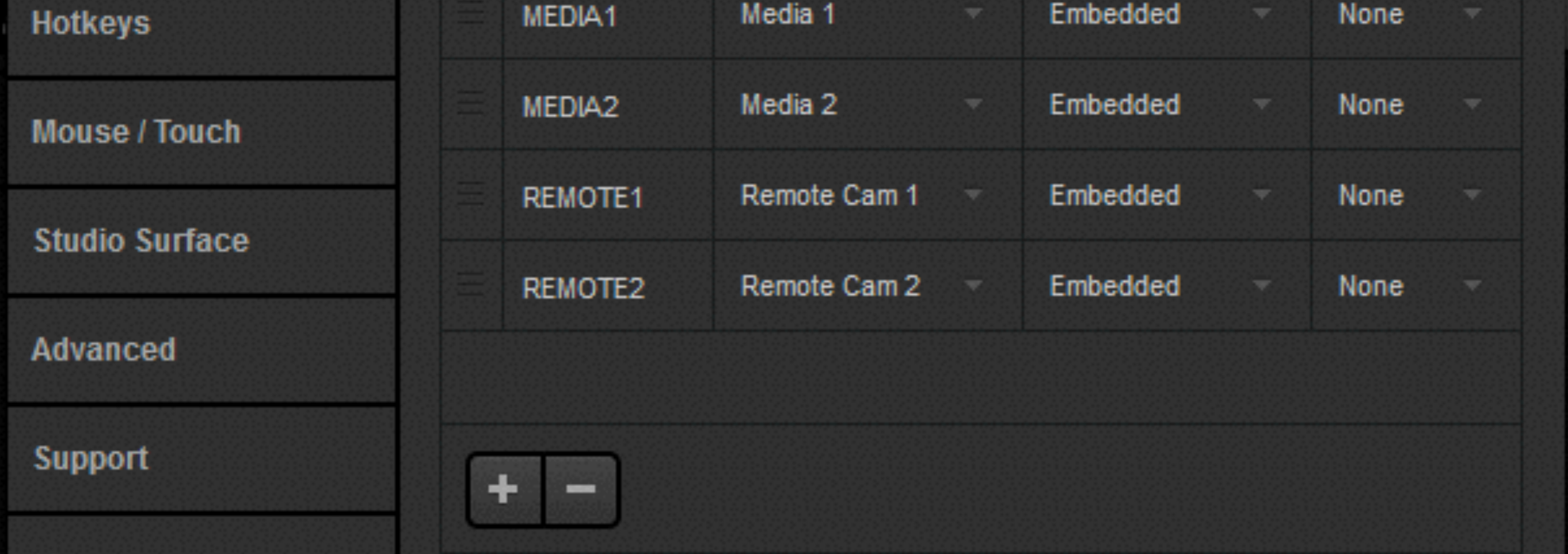
Once the application is installed and running on your Mac, be sure your Livestream Studio and Mac systems are connected to the same network. Then add a remote camera source in the 'Inputs' menu.

livestream

PRODHD500313
Ready

PROD_HD50-1
Remote Camera agent is already transmitting to another Studio

Broadcaster-Pro-01603
Remote Camera agent is already transmitting to another Studio

Emily's MacBook Pro
Ready

Add Stream

Windows
download

Android
learn more

Glass
learn more

Mac
download

iPhone
learn more

Broadcaster
learn more

AirPlay
learn more

GoPro
learn more

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

Live Interview
learn more

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

livestream

375
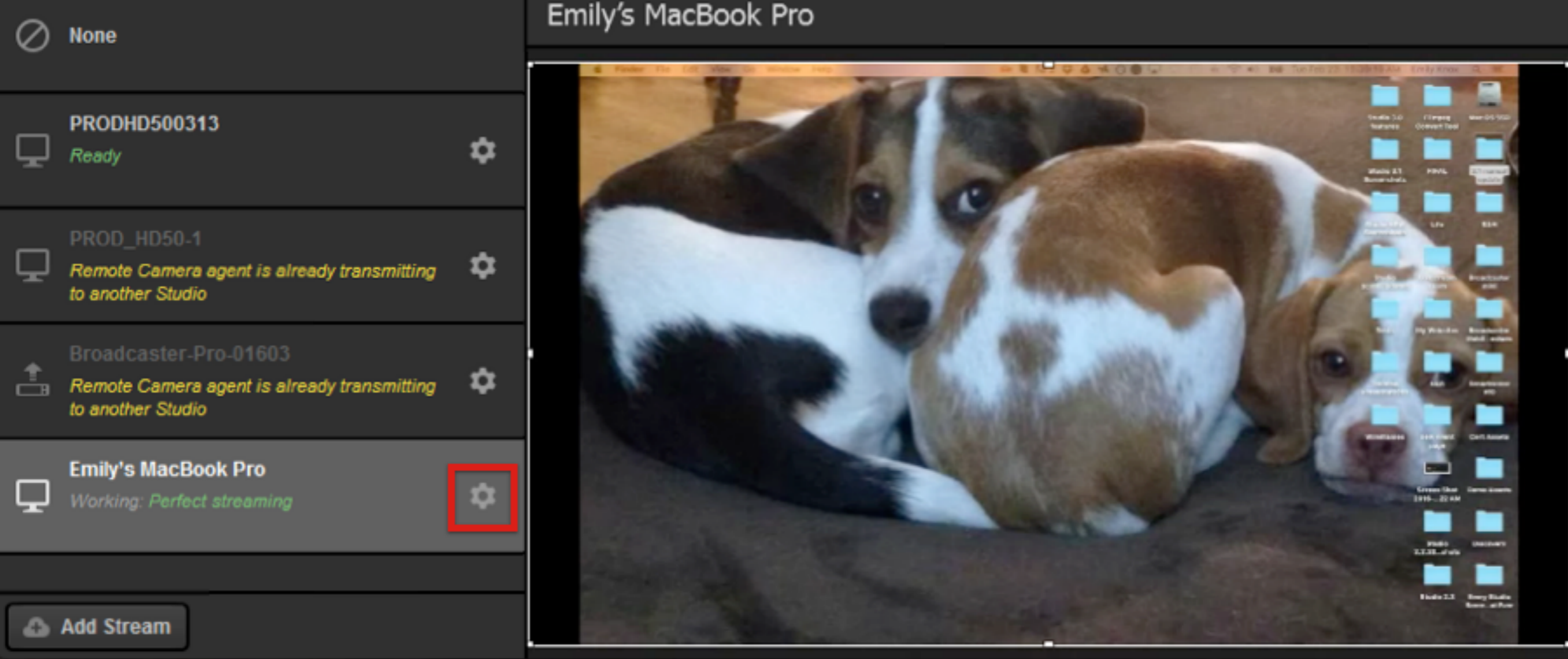
Your first video source will appear. Click the gearwheel in the selection menu to access more settings.
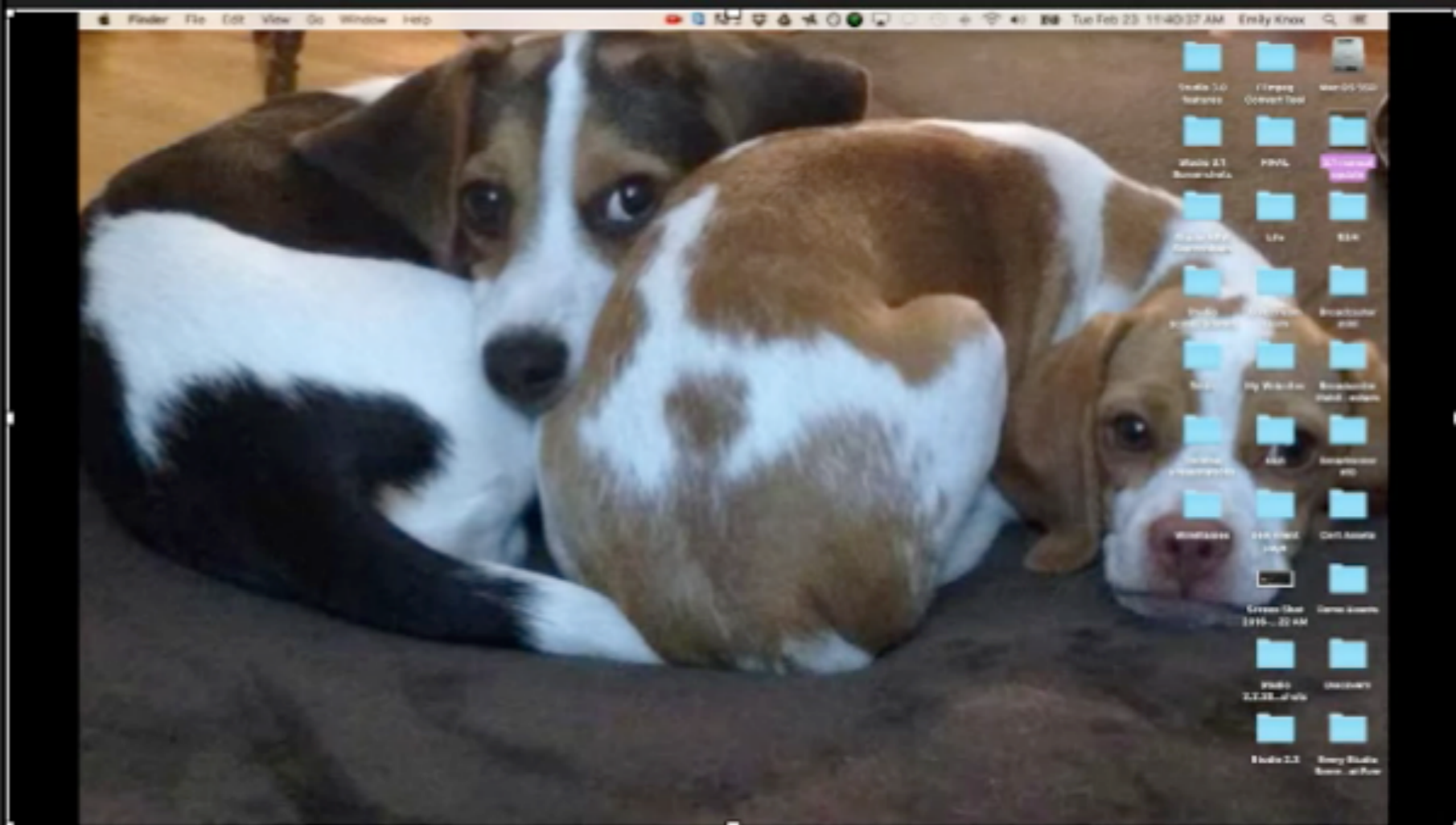
Here, you can change which video and audio sources are being shown from your Mac. If you select a desktop monitor, you can also choose to hide or show the mouse cursor.
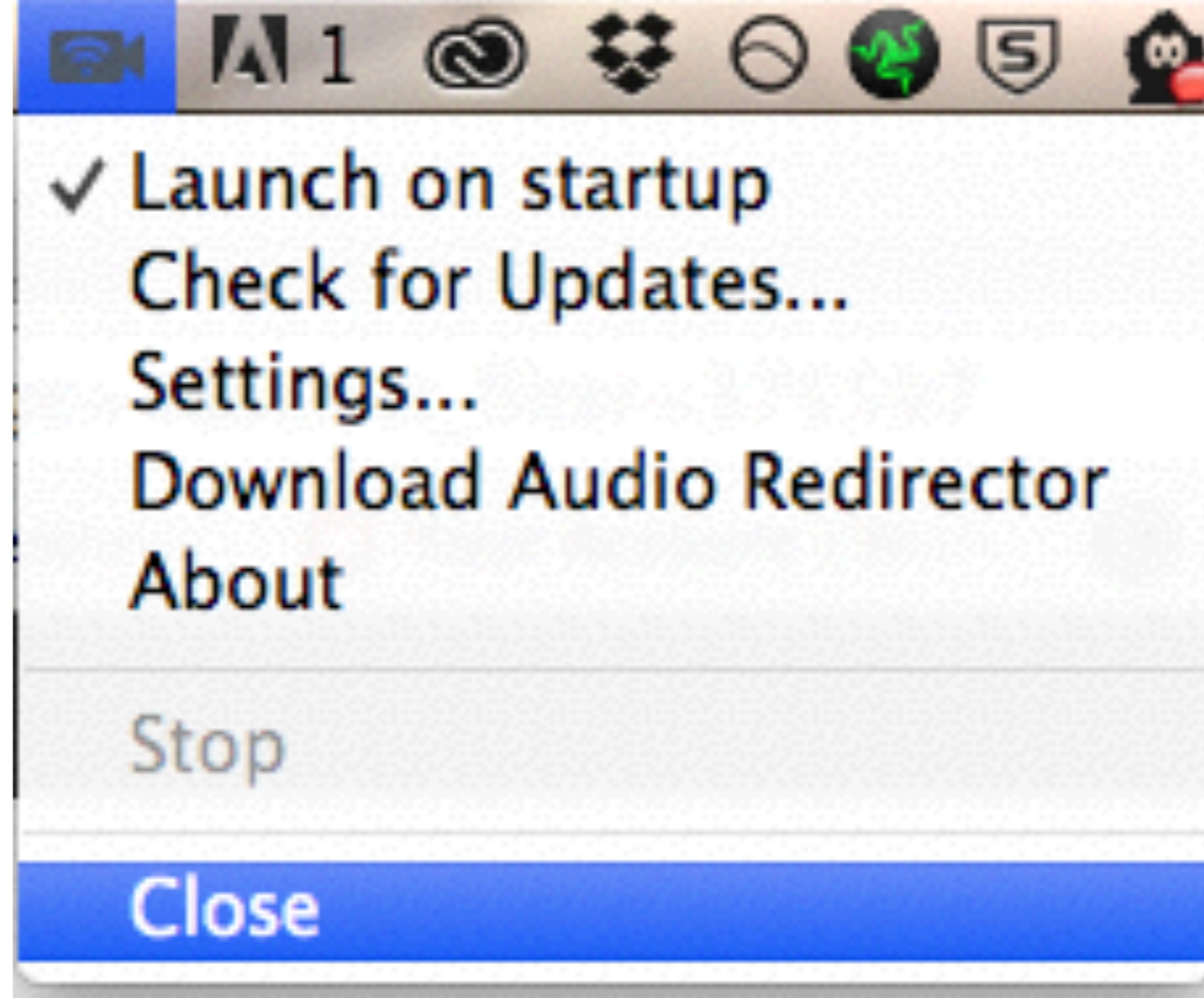
Please note the application will run in the background of your Mac system until you close it, which you can do by clicking the icon in the menu bar and selecting 'Close.'

Adding remote cameras

iOS devices
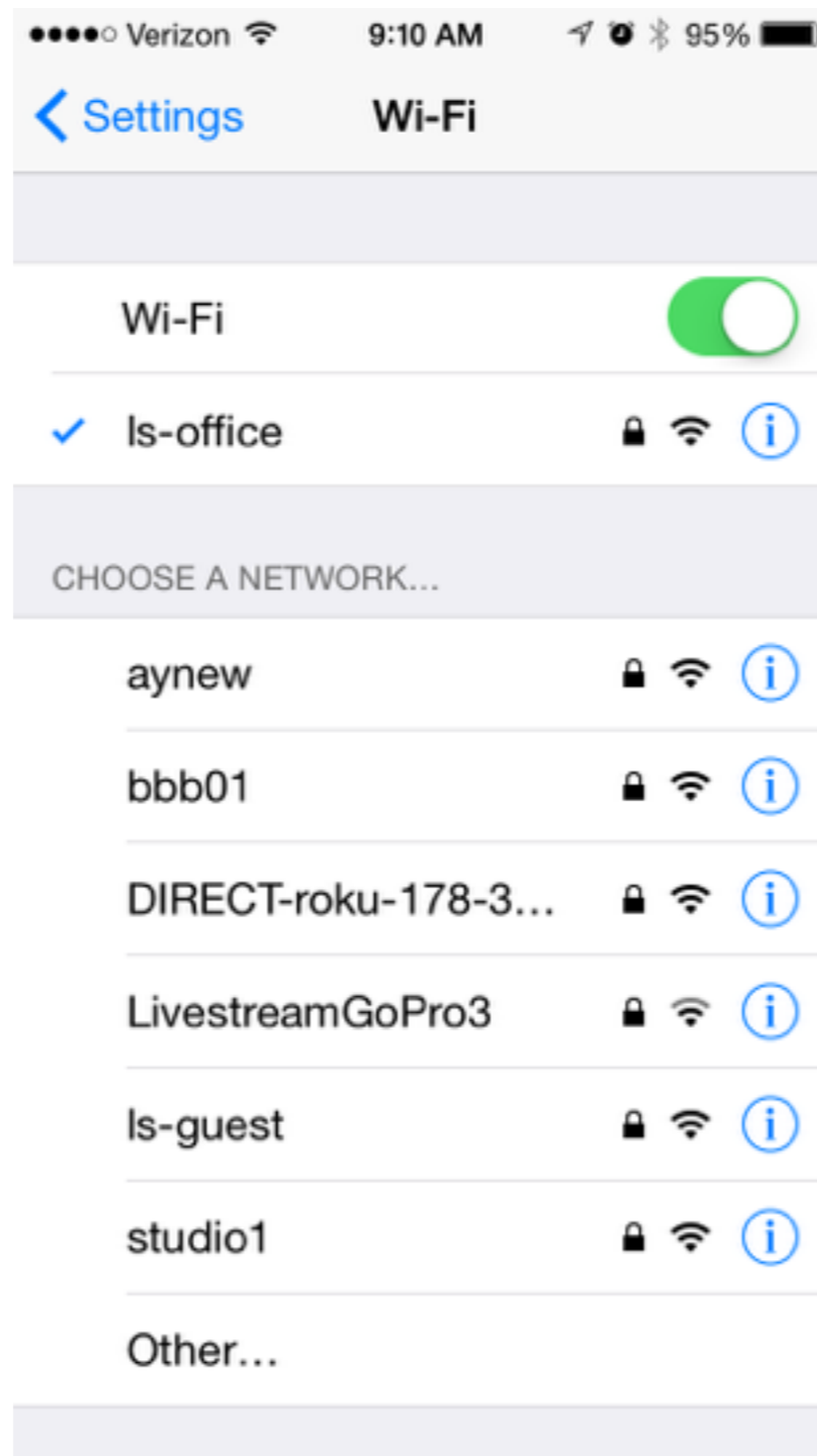
livestream

In order for the remote camera to work, the iOS device must be connected to the same network as your Livestream Studio system.
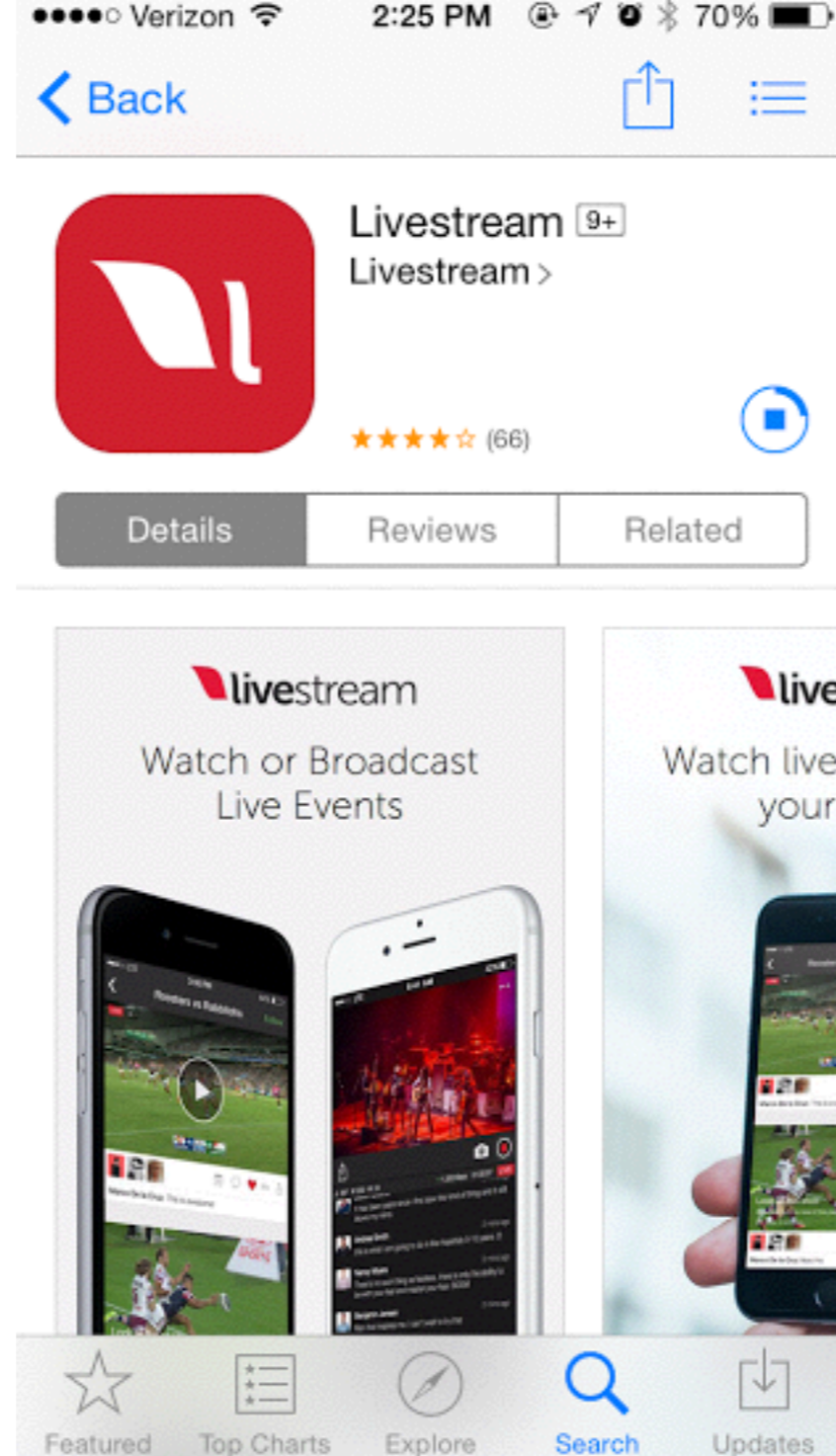
To use the camera from an iOS device, install the Livestream app from the App Store on your device.
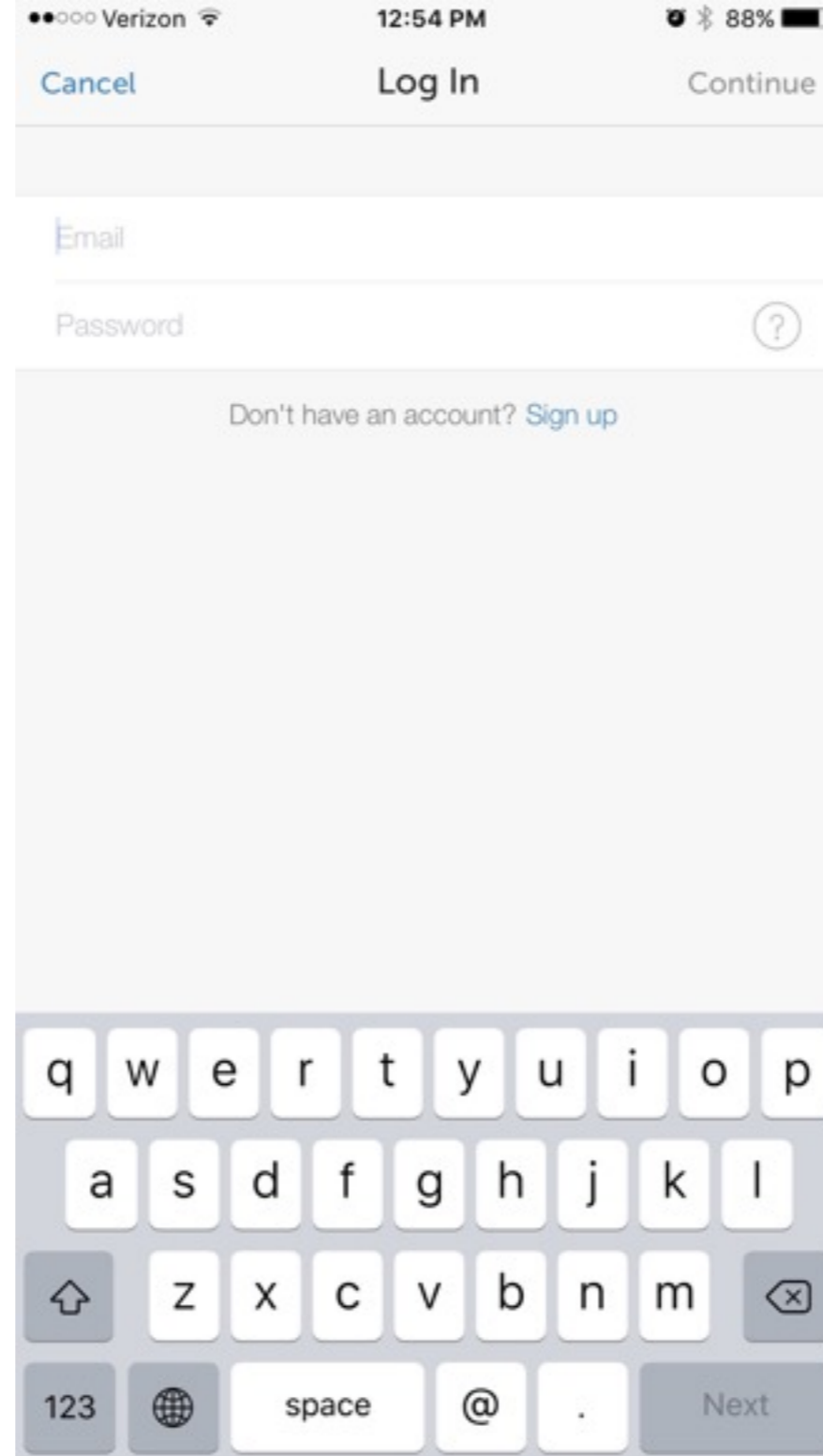
Launch the Livestream app and log in to your account.
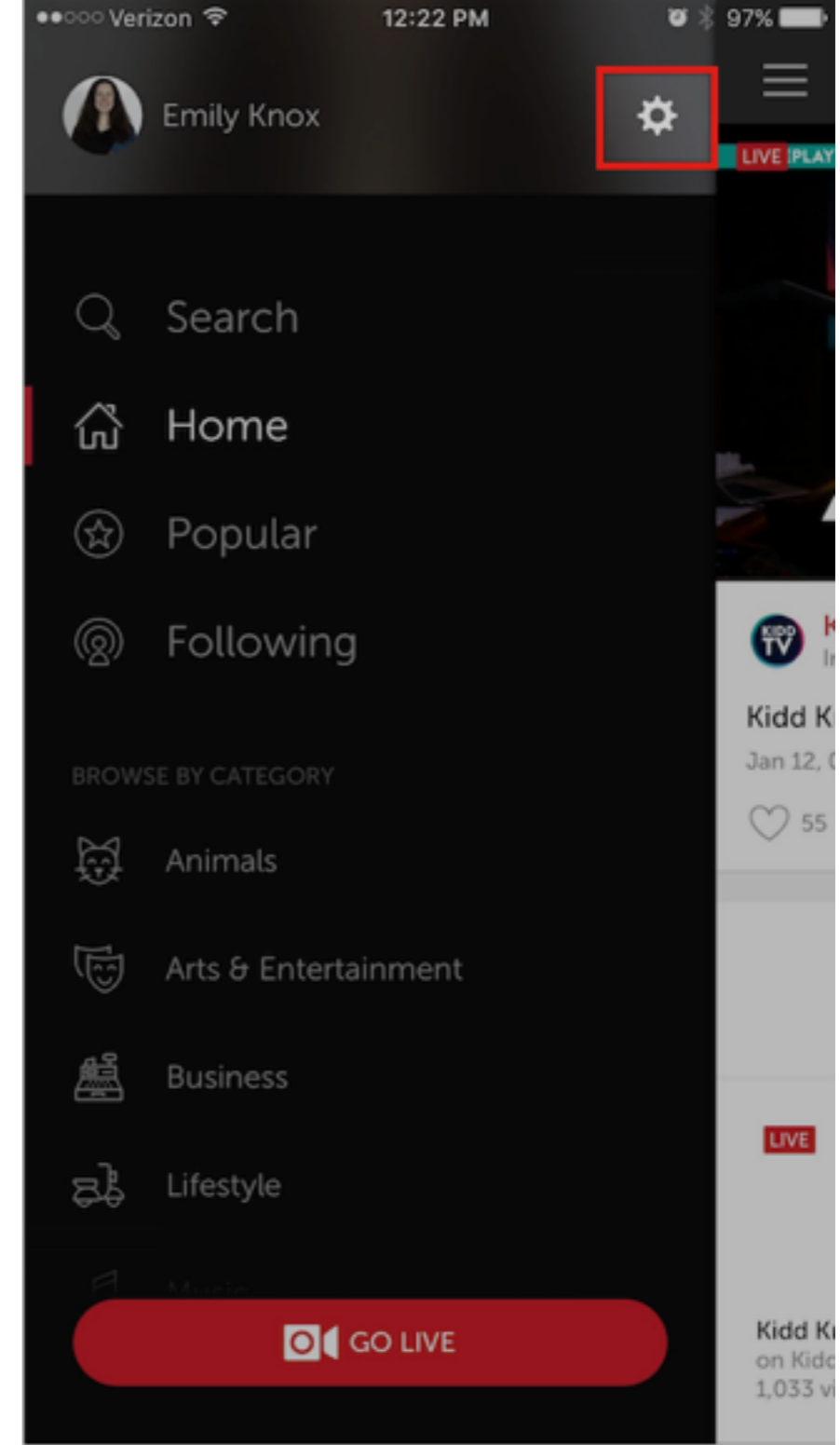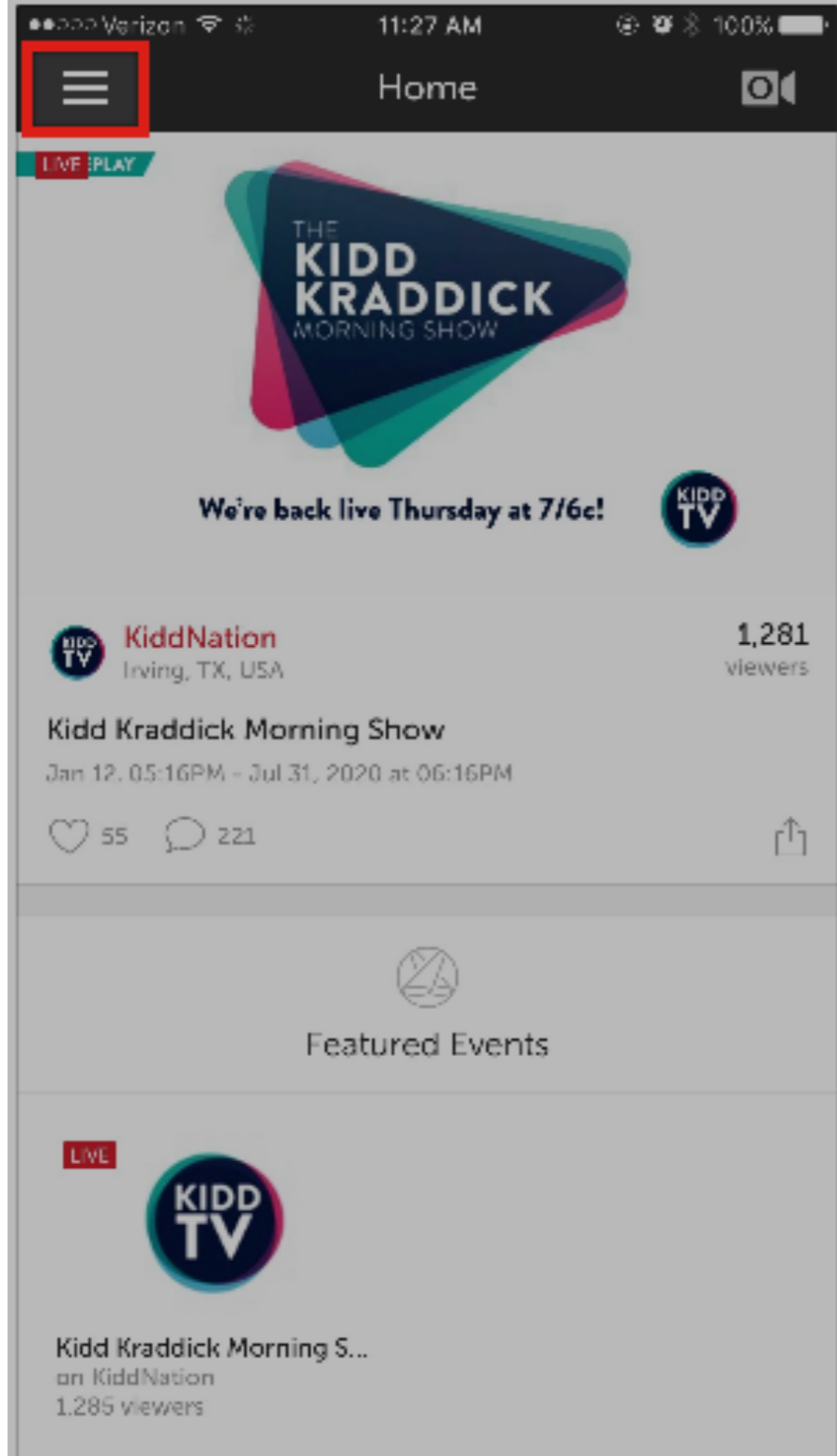
Tap the menu icon in the upper right corner, then tap the gearwheel.
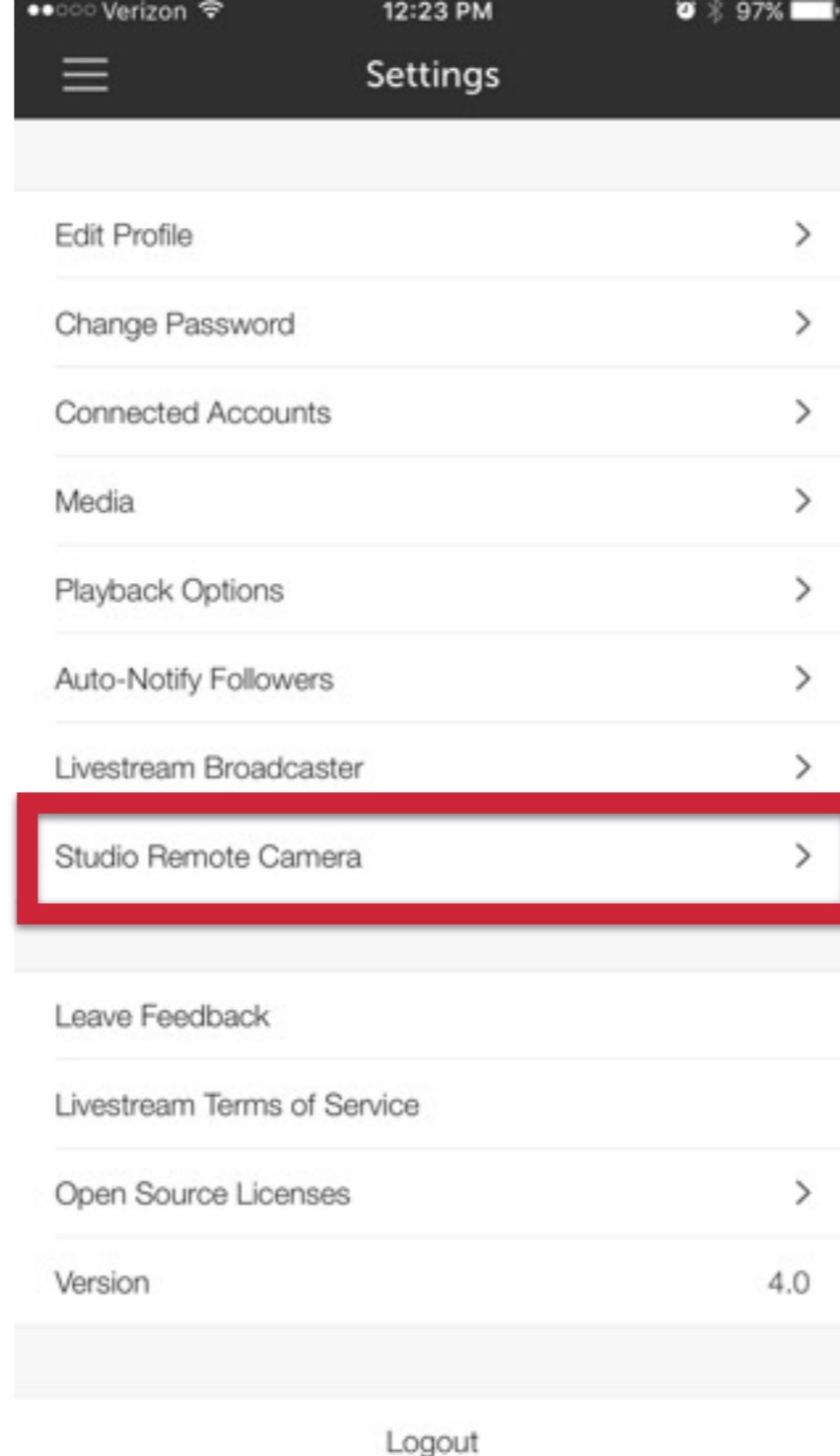
Tap the menu icon in the upper right corner, then tap the gearwheel.
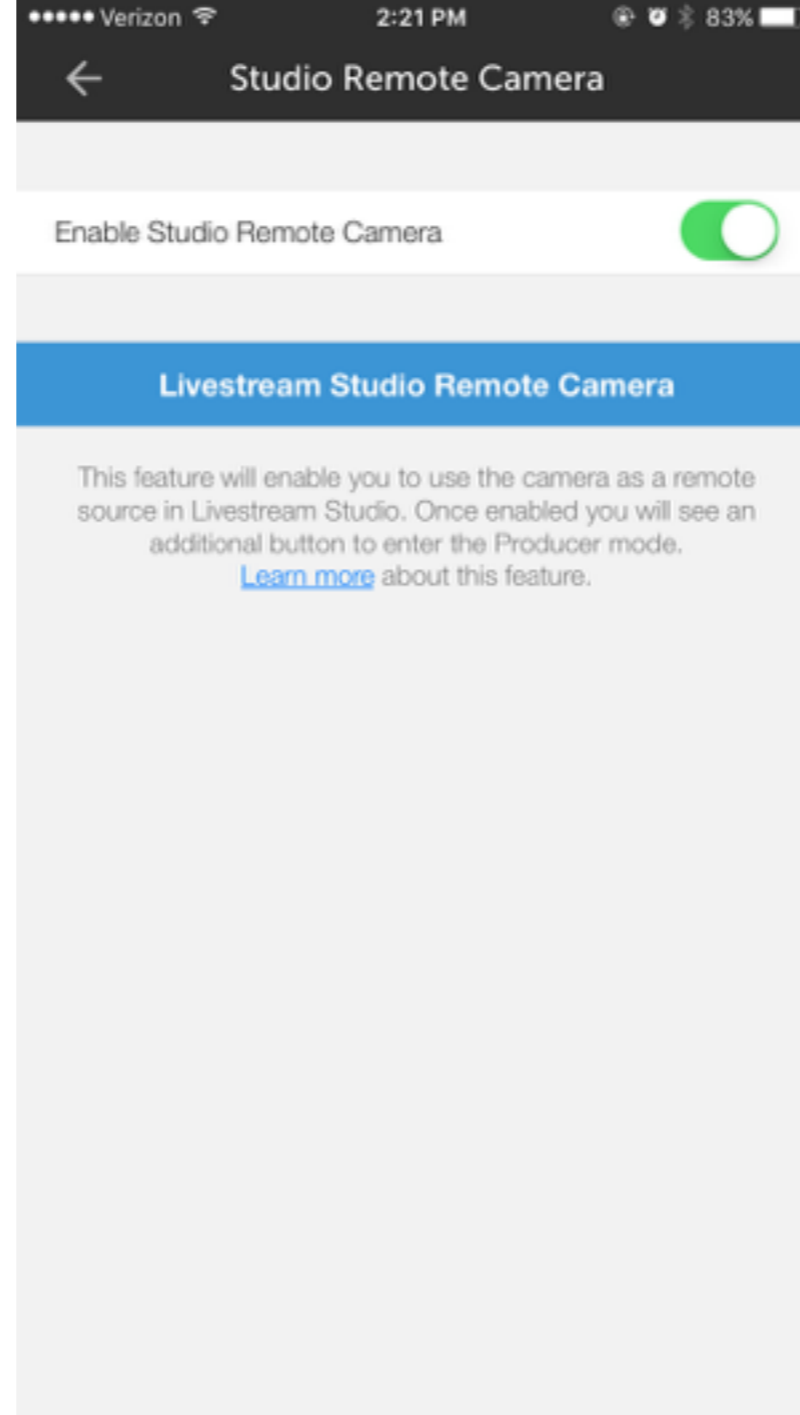
When 'Enable Studio Remote Camera' is enabled, a blue 'Livestream Studio Remote Camera' button will appear. Press it to open the camera.
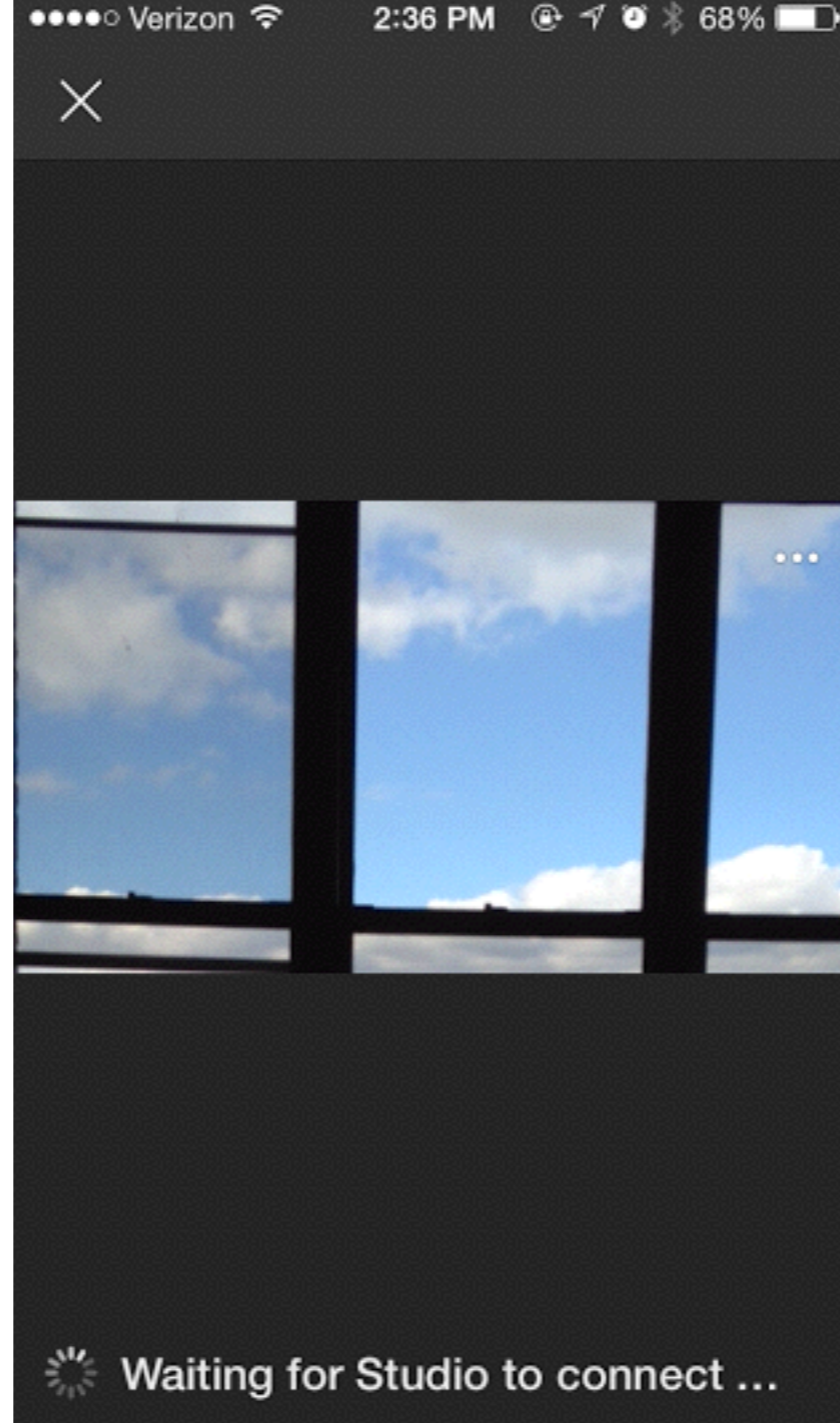
Your camera will open and the app will show
"Waiting for Studio to connect..."
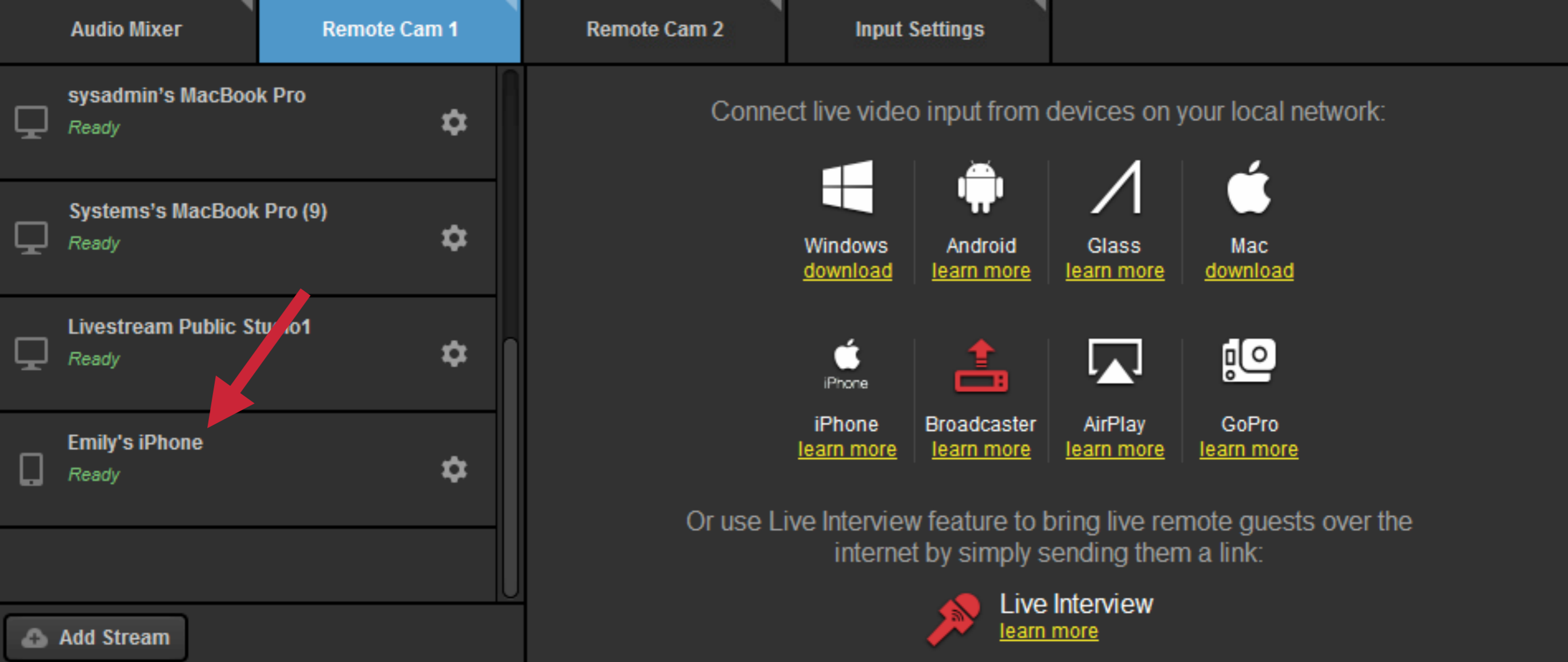
Look in the remote camera module in Livestream Studio. You should see your iOS device appear in the list of remote cameras. Click it to connect.
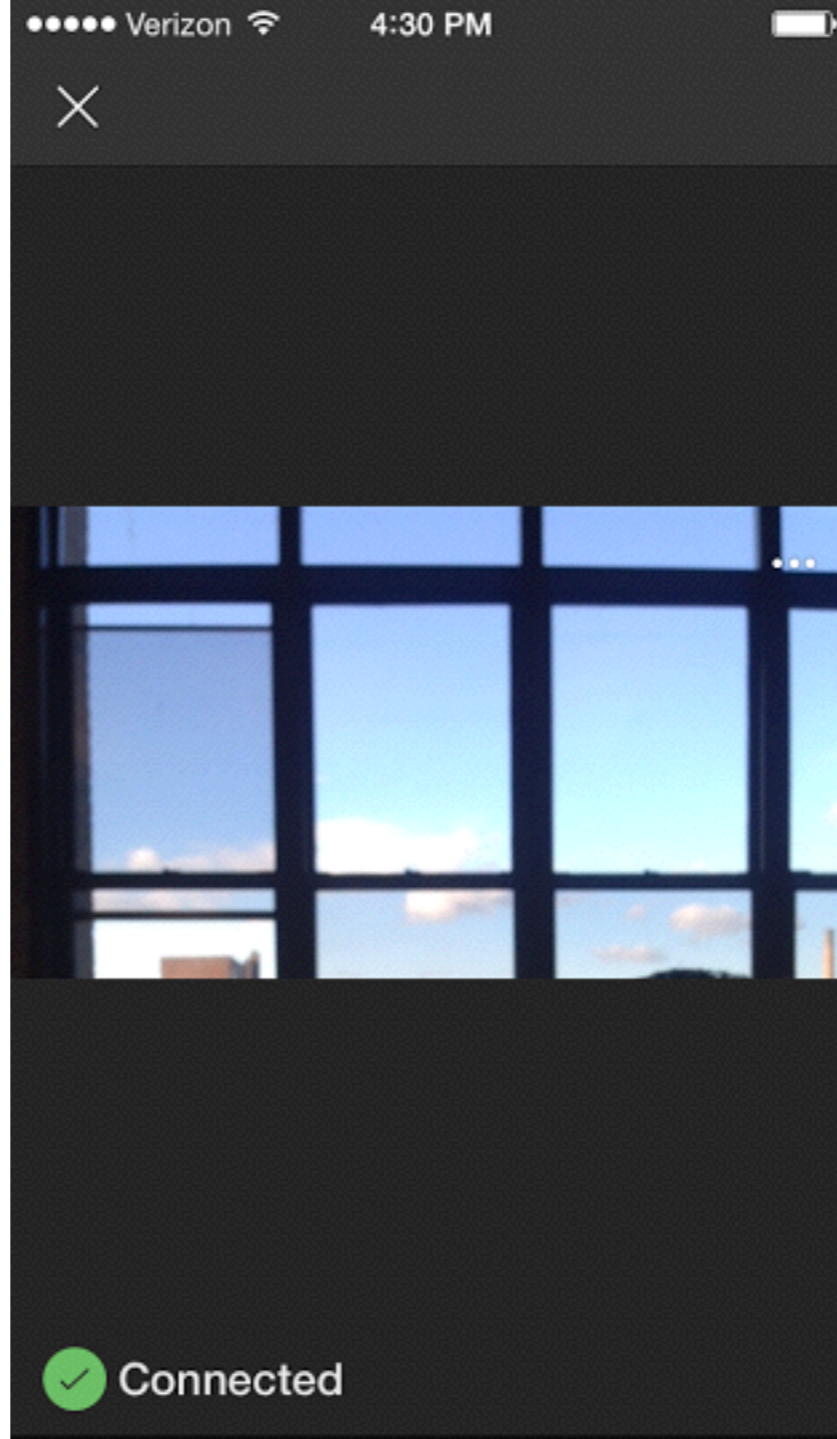
Your iOS device will indicate that Livestream Studio has connected.
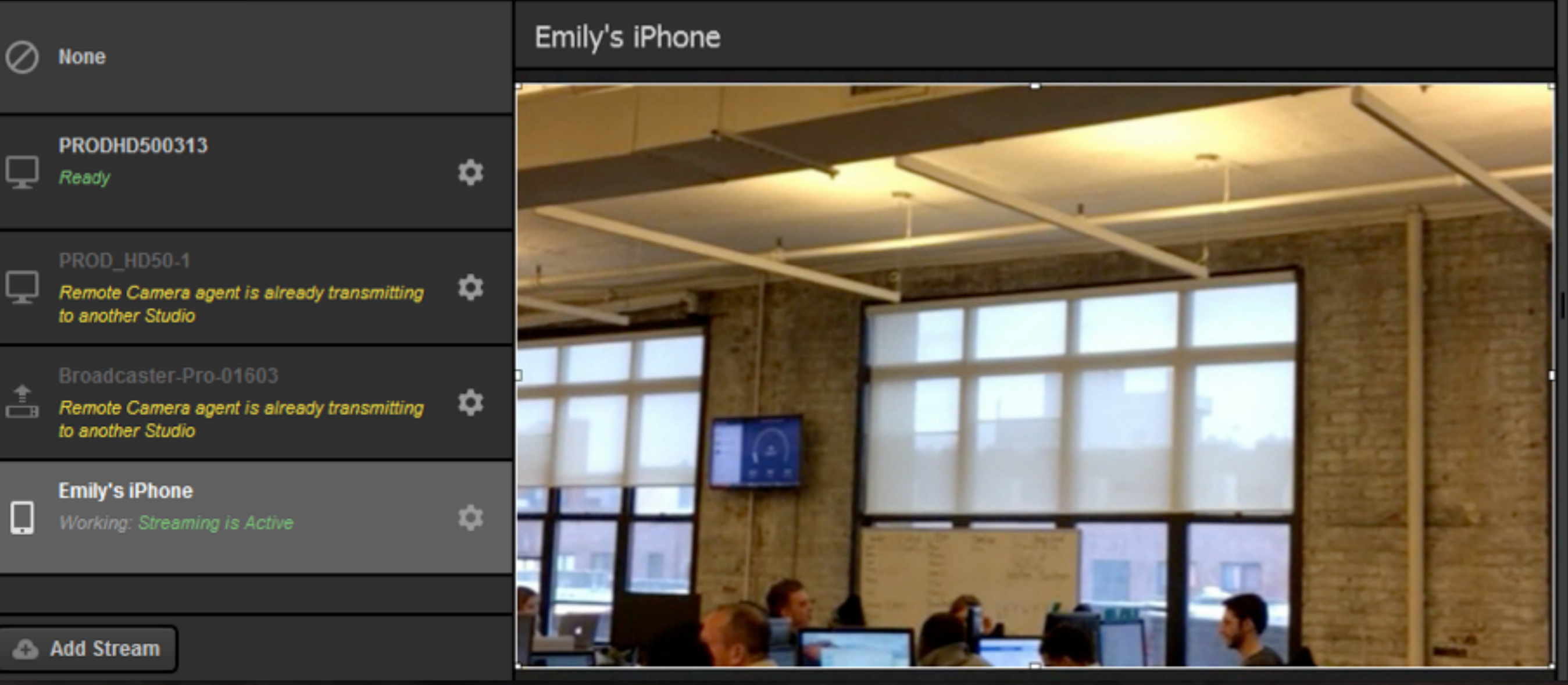
Your camera's image will also appear in Livestream Studio. Expected latency is one second or less.
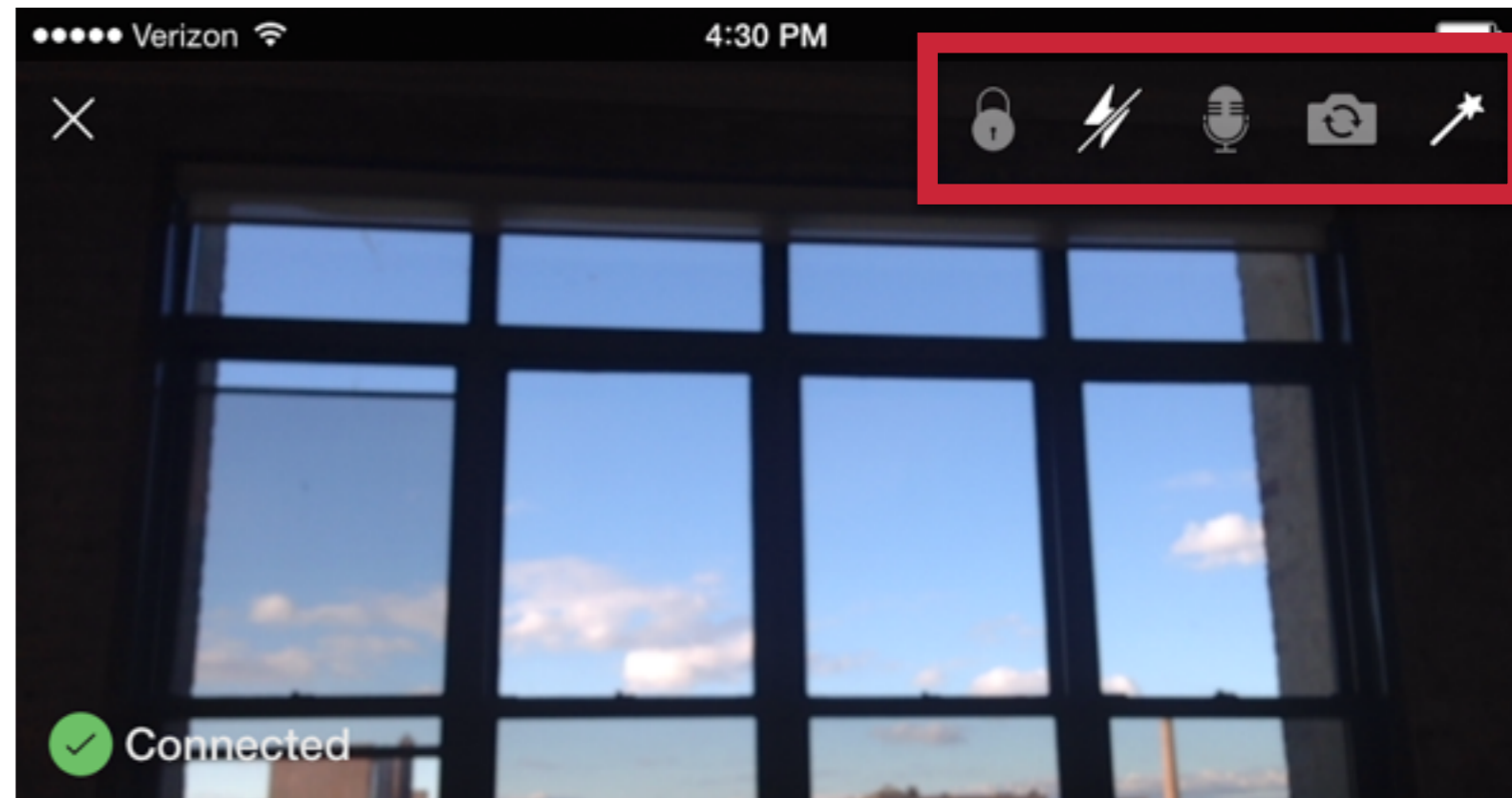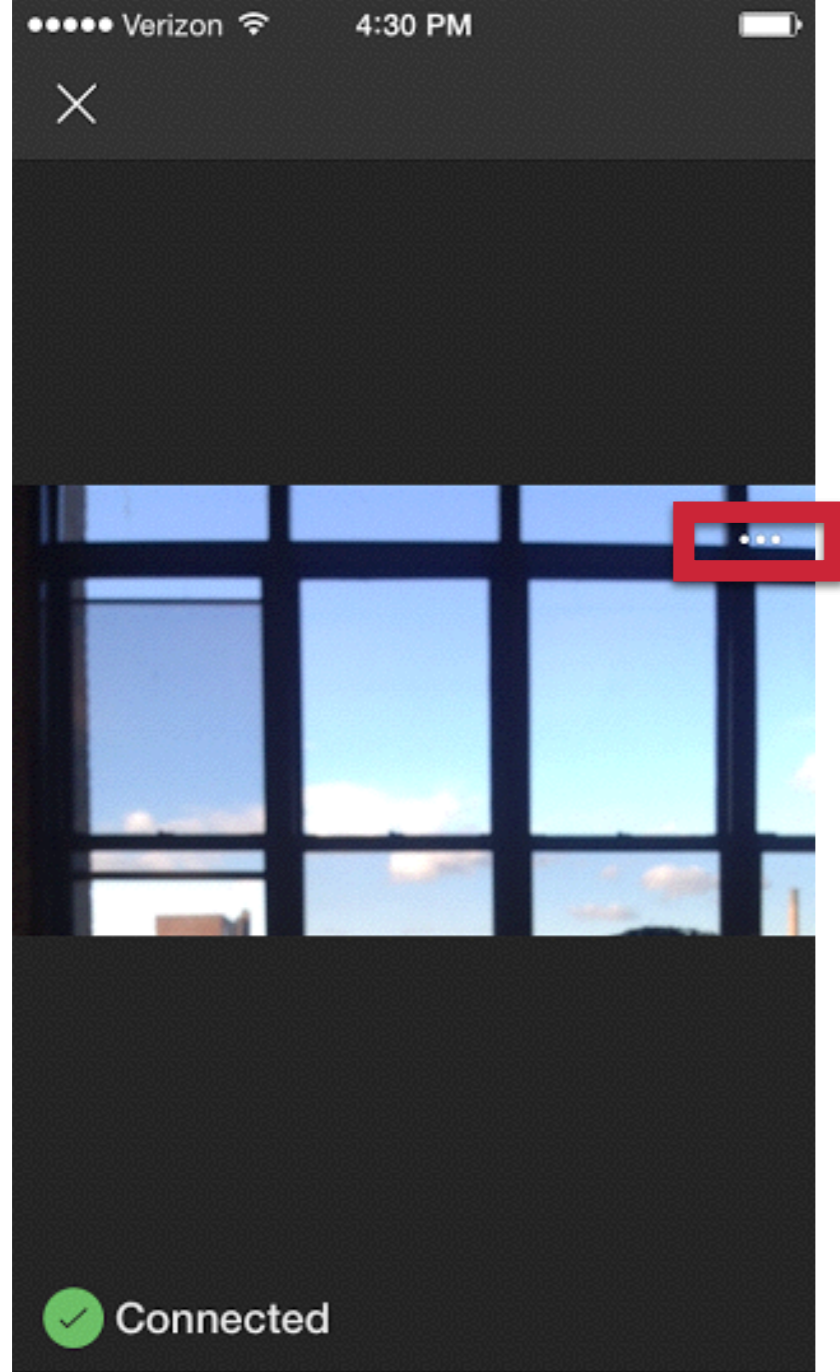
The iPhone app allows you to use the camera in either portrait or landscape mode. Both will give additional options in the upper right corner.

Adding remote cameras

Android devices
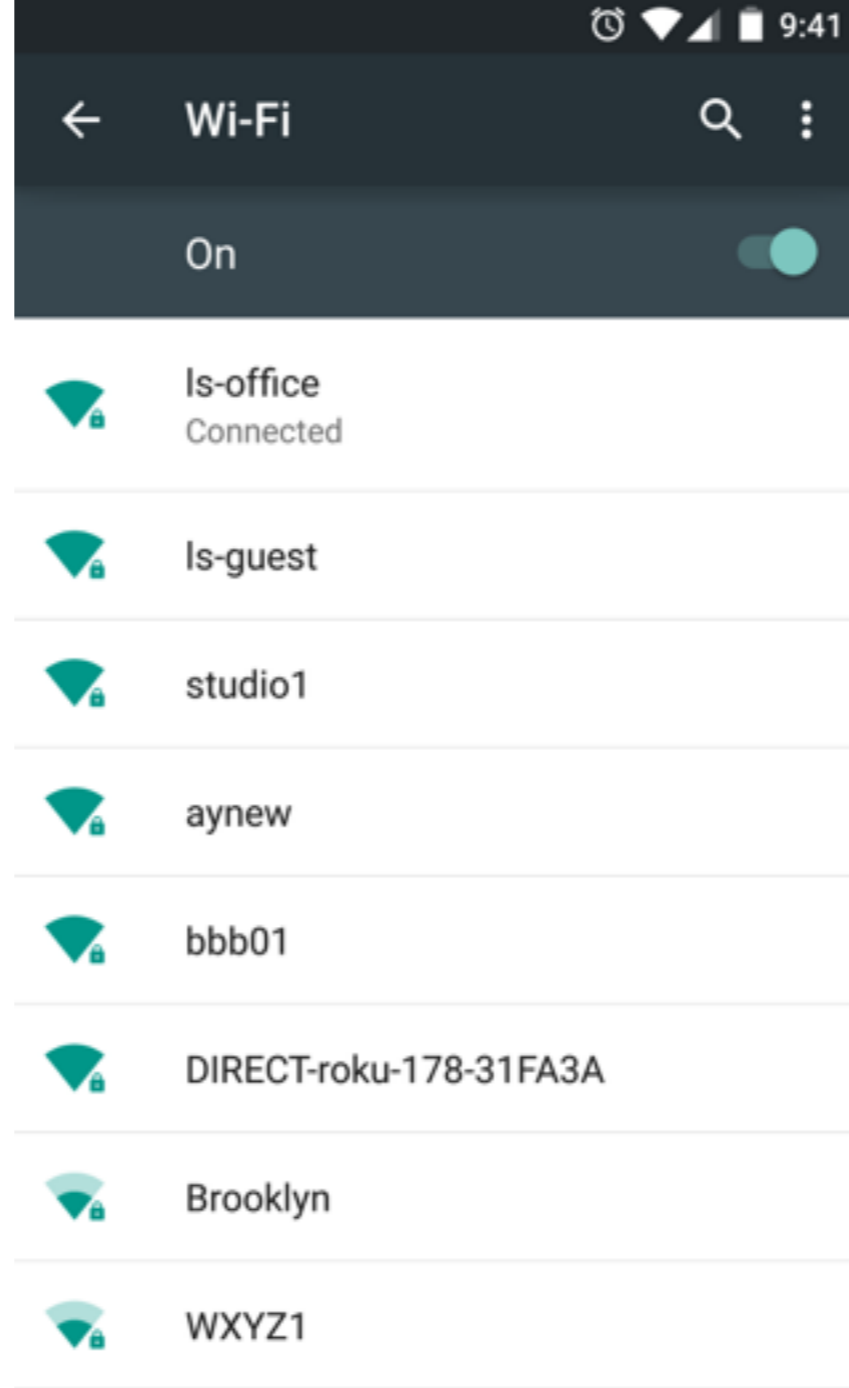
For remote camera to work in Livestream Studio, your Android device must be connected to the same network as your Livestream Studio system.
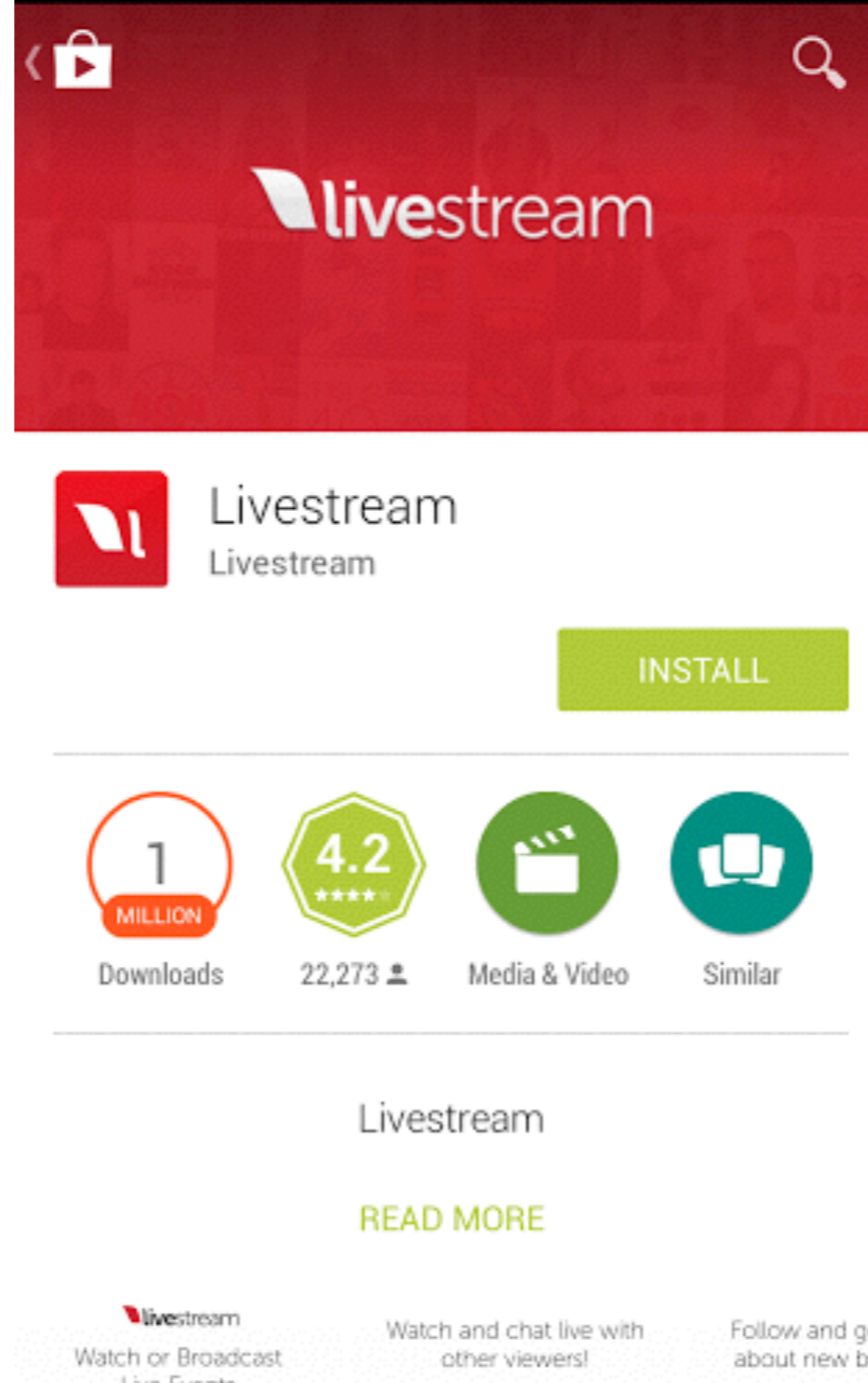
Using an Android device as a remote camera works very much like an iOS device. Download the Livestream app from Google Play.
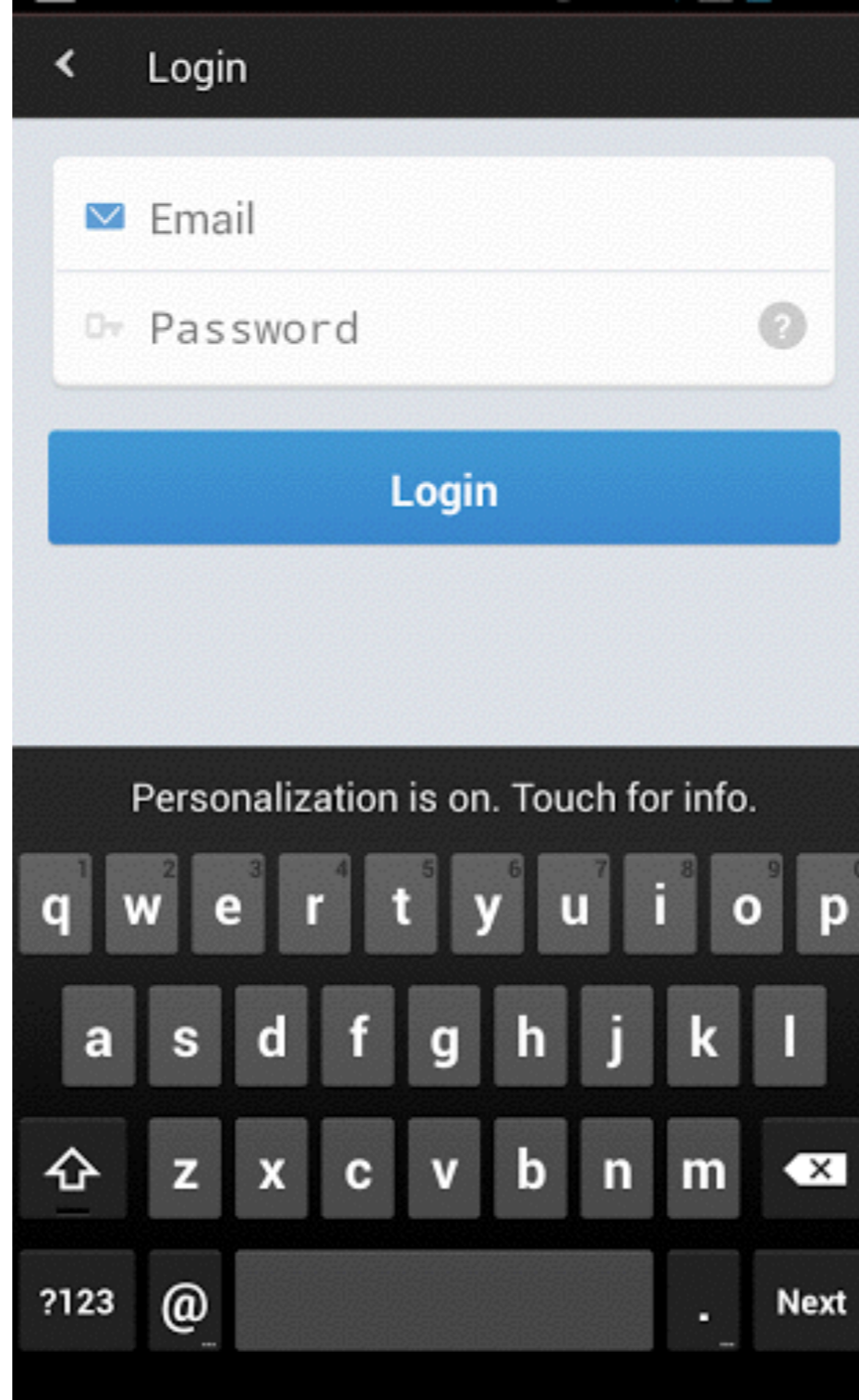
Launch the app and log in to your Livestream account.
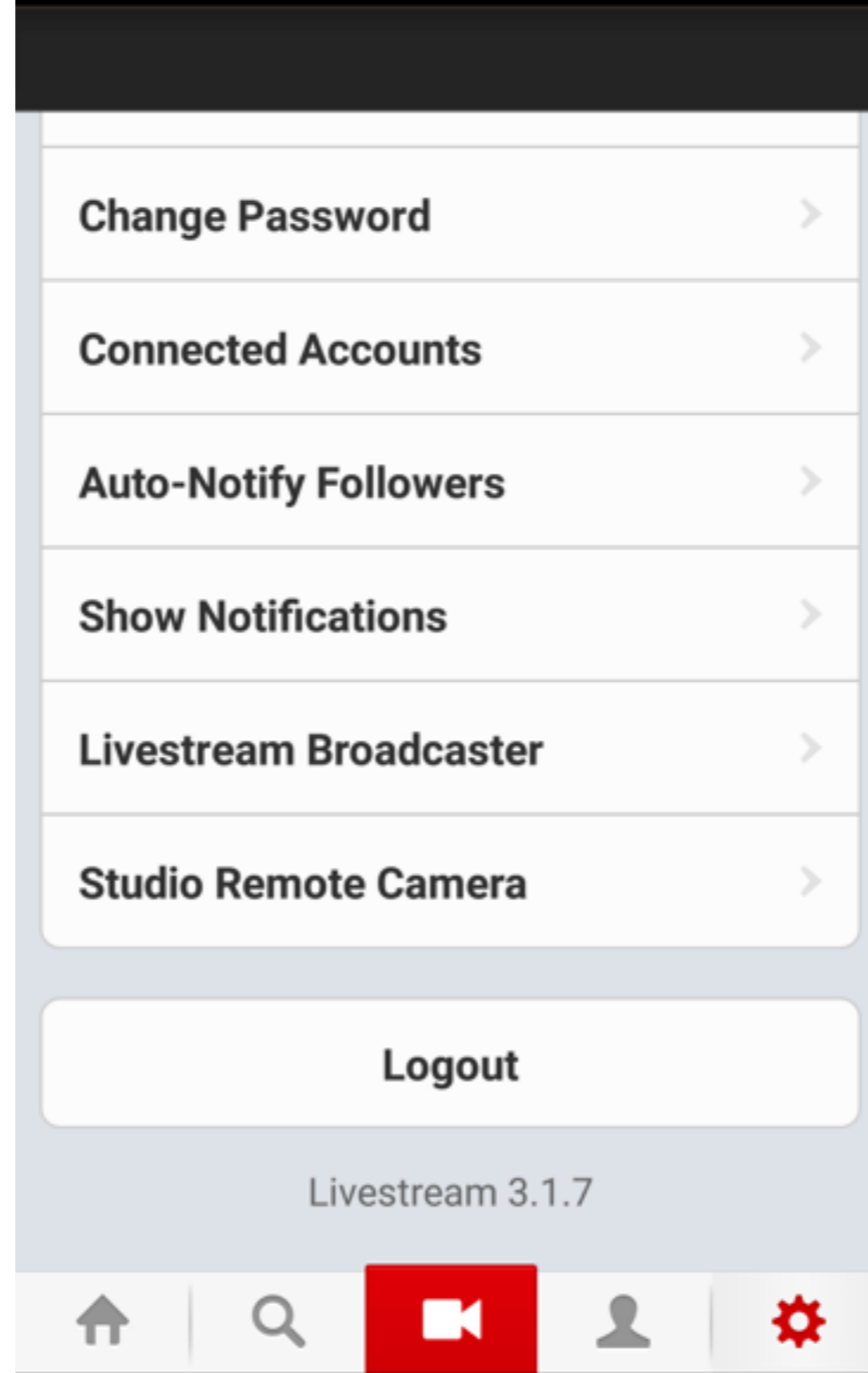
Press the gearwheel on the bottom right to access settings, then press Studio Remote Camera.
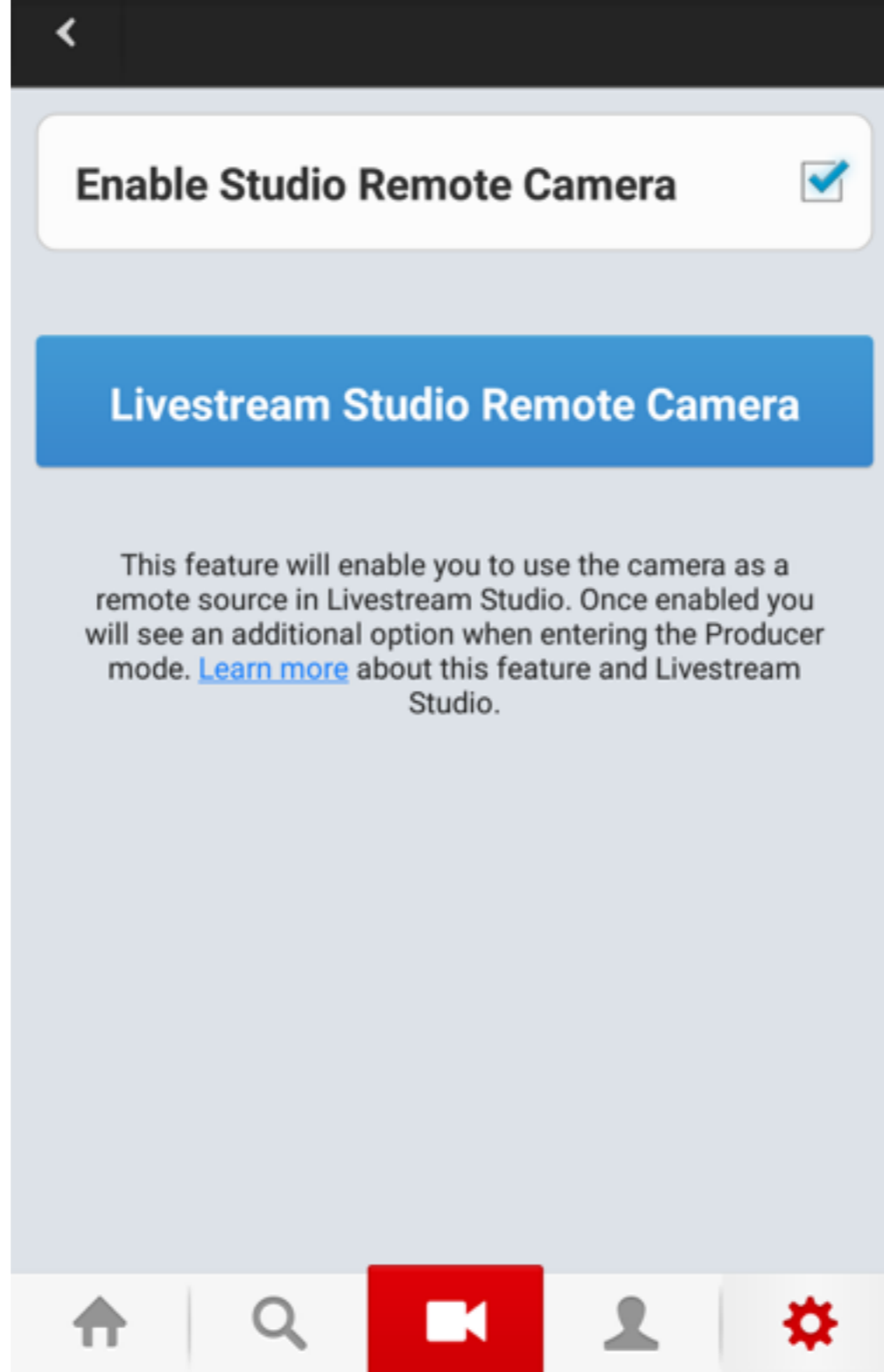
Check 'Enable Studio Remote Camera,' then click the blue 'Livestream Studio Remote Camera' button.
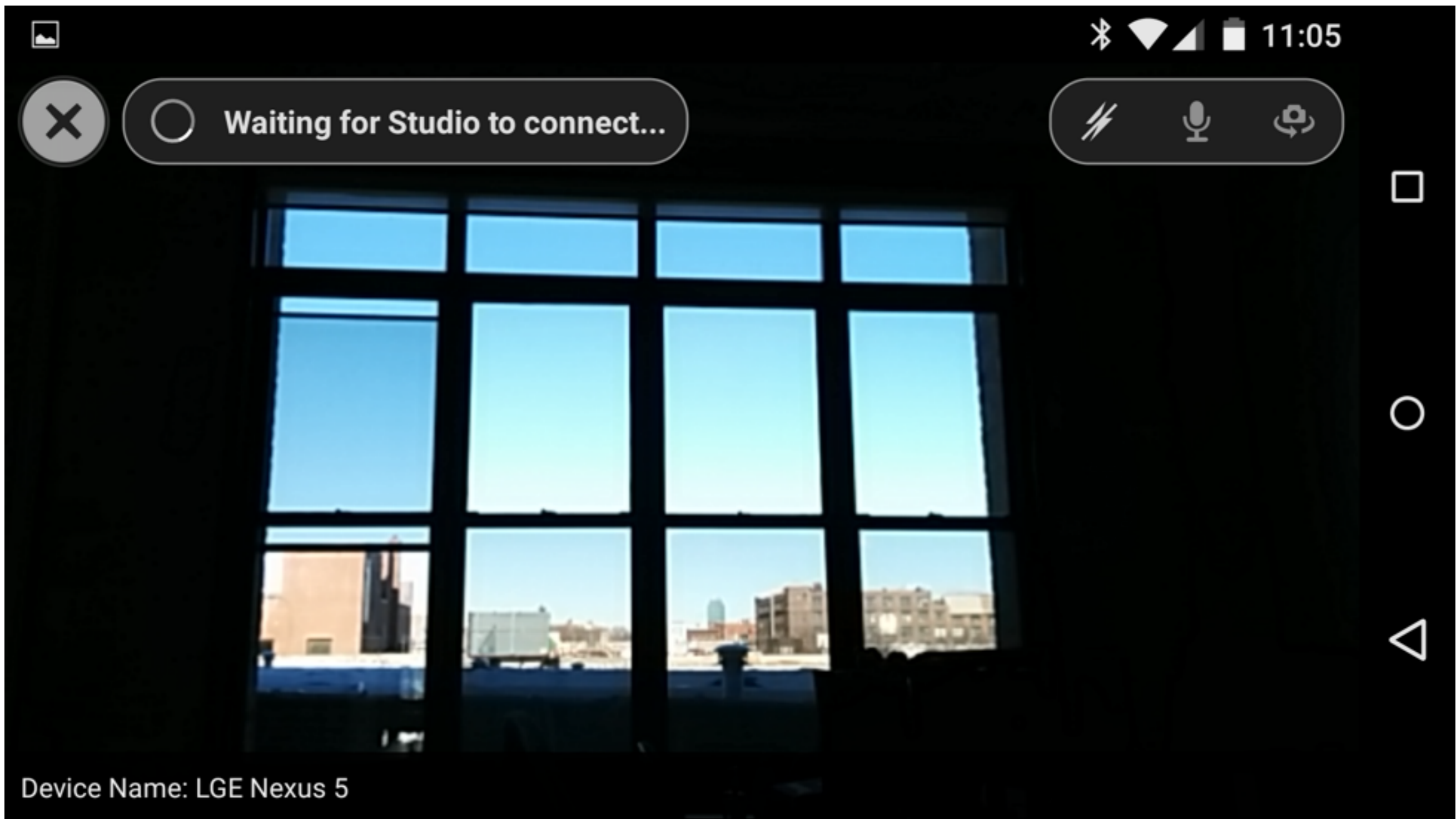
The camera will open and will show that it is attempting to connect to Livestream Studio.
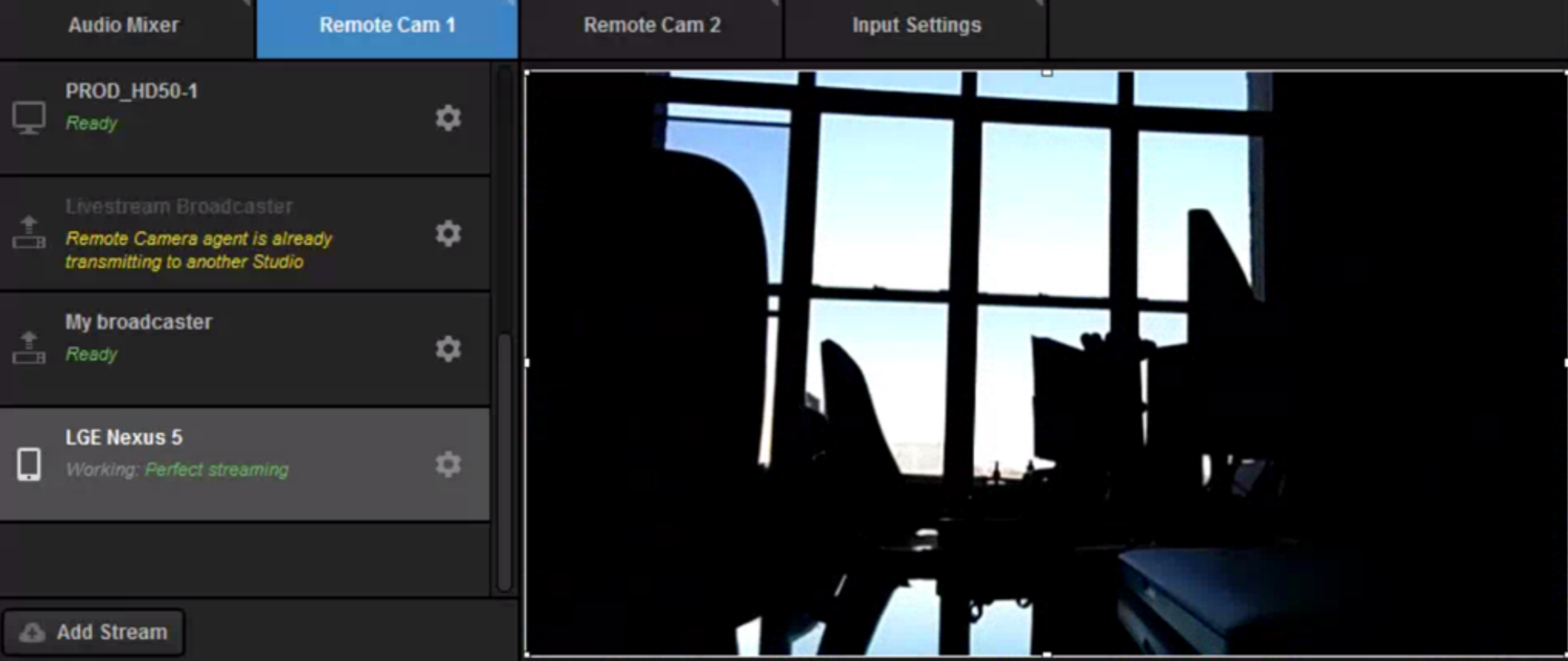
In Livestream Studio, your Android device should appear under the Remote Camera module. Click on it to activate.
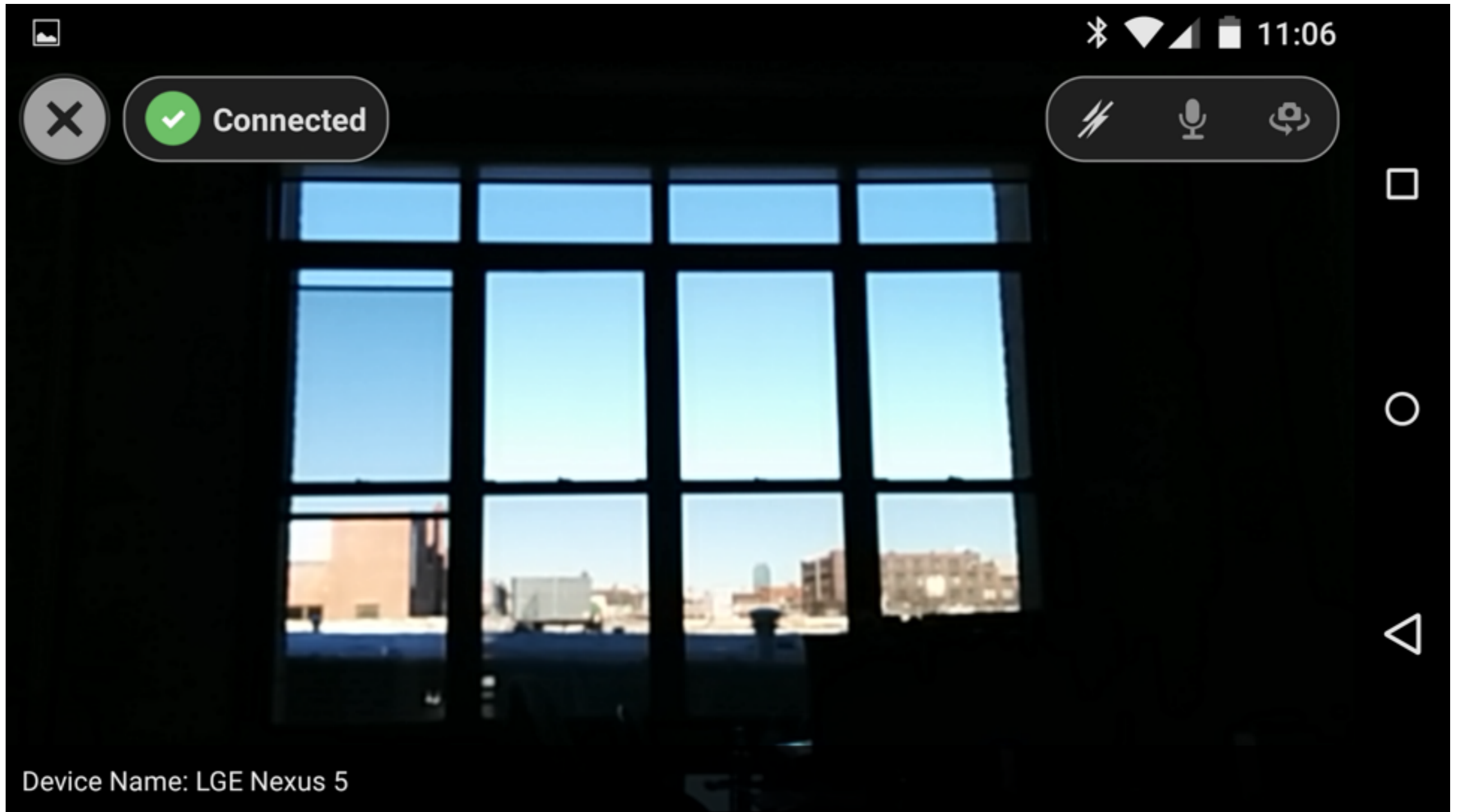
In addition to seeing the camera in Livestream Studio, the Livestream Android app will indicate that it has connected.

Video Source

Back 640x360

Audio Source

Default

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.

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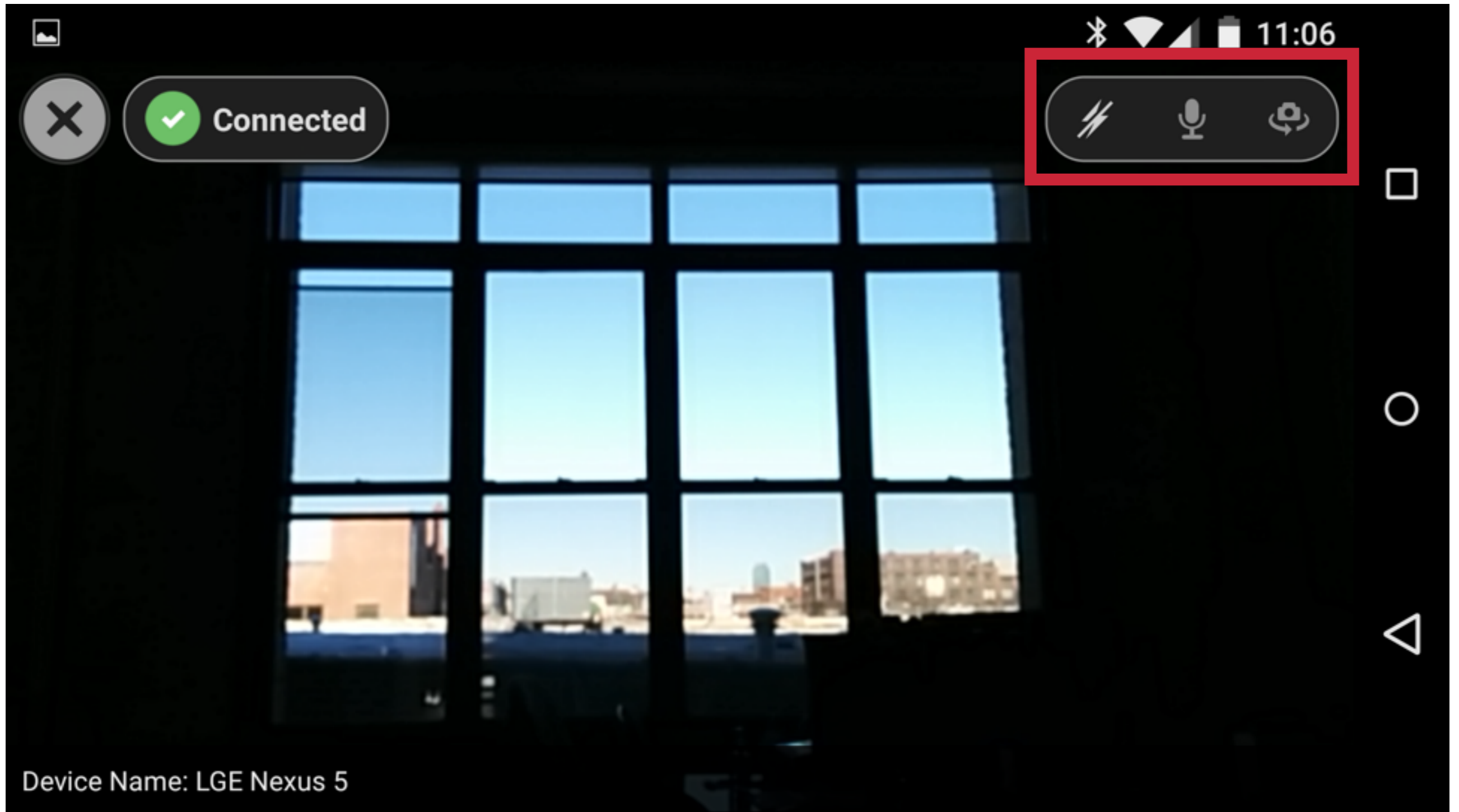
The upper right corner of the Android screen allows you to turn on your flash, mute your microphone, or switch the device's cameras.

Adding remote cameras

Google Glass
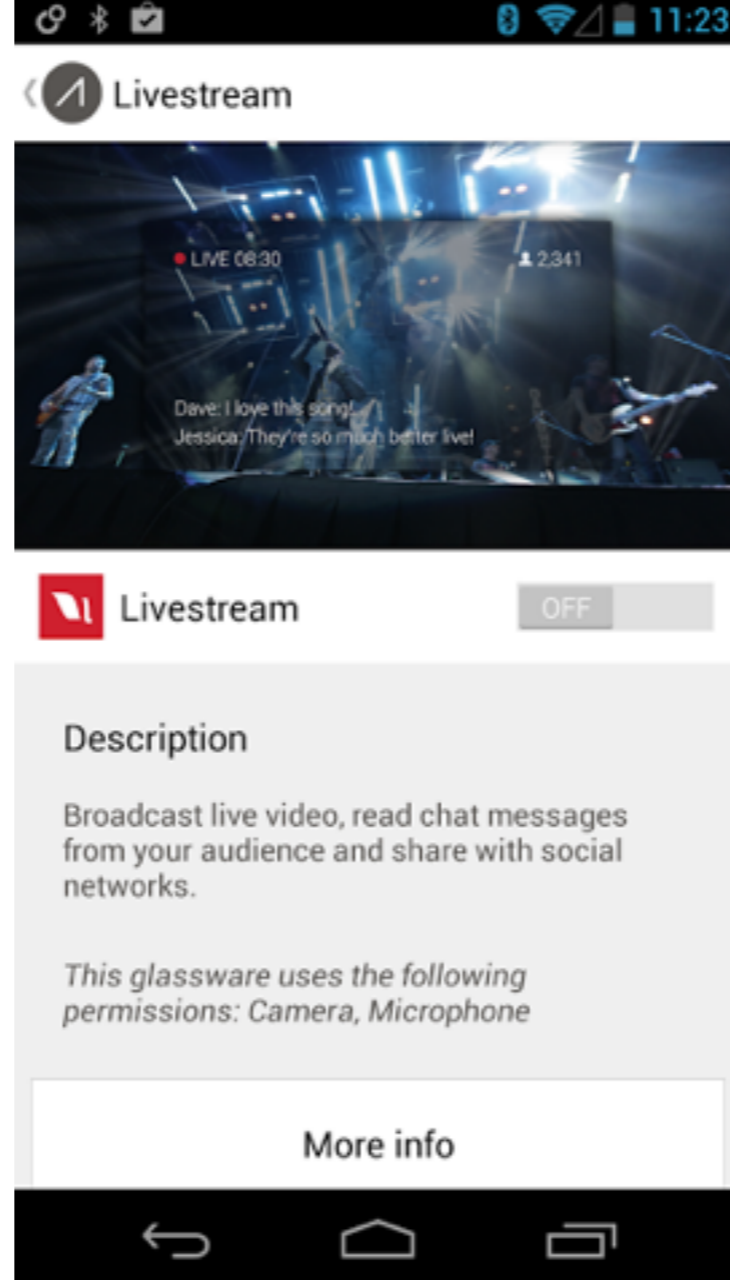
To use a Google Glass as a remote camera, go to Google Glassware in the Glass mobile app or www.google.com/myglass to ithe Livestream app on Google Glass.
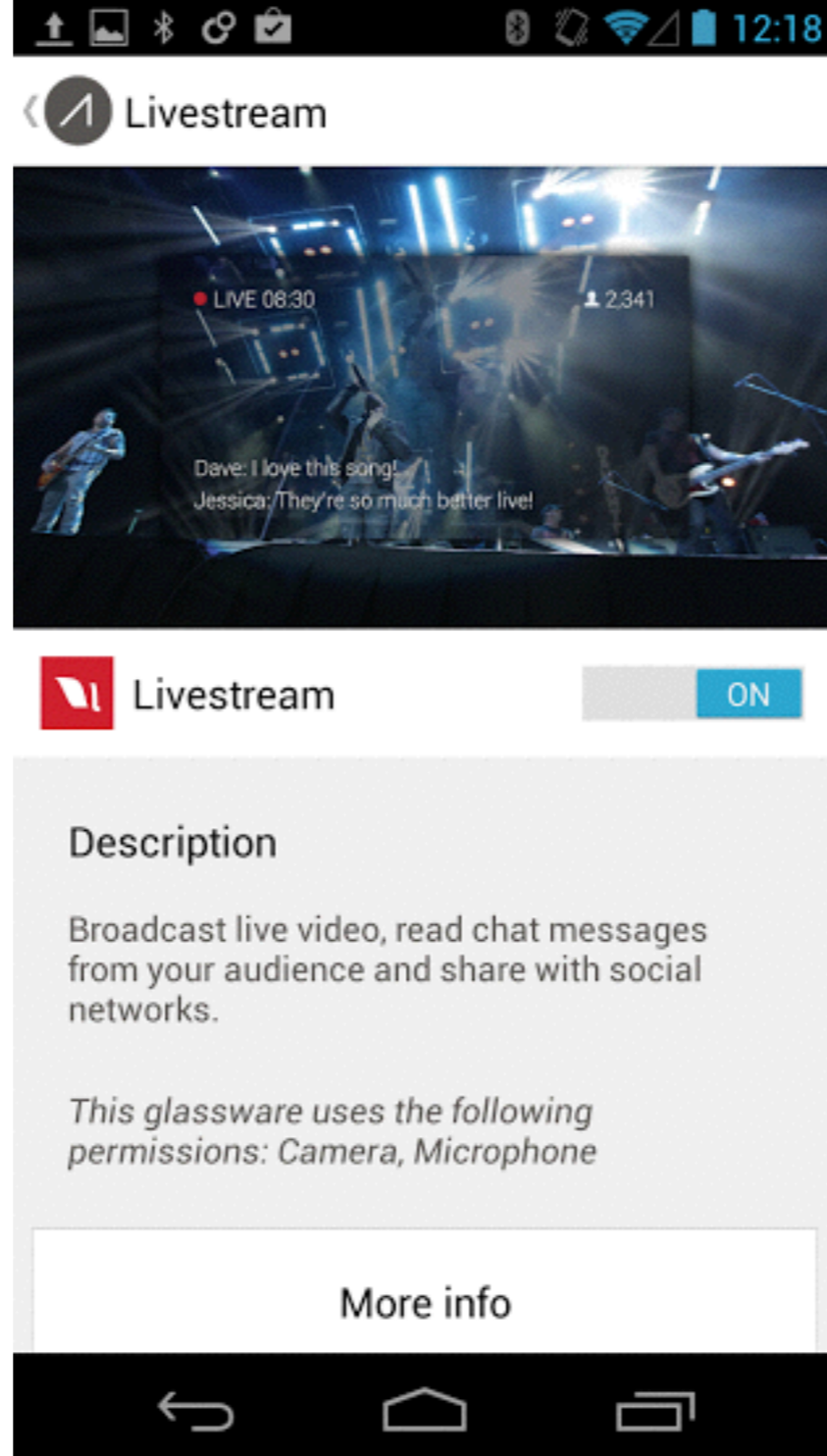
Toggle the switch to 'On' to install the Livestream Glassware.
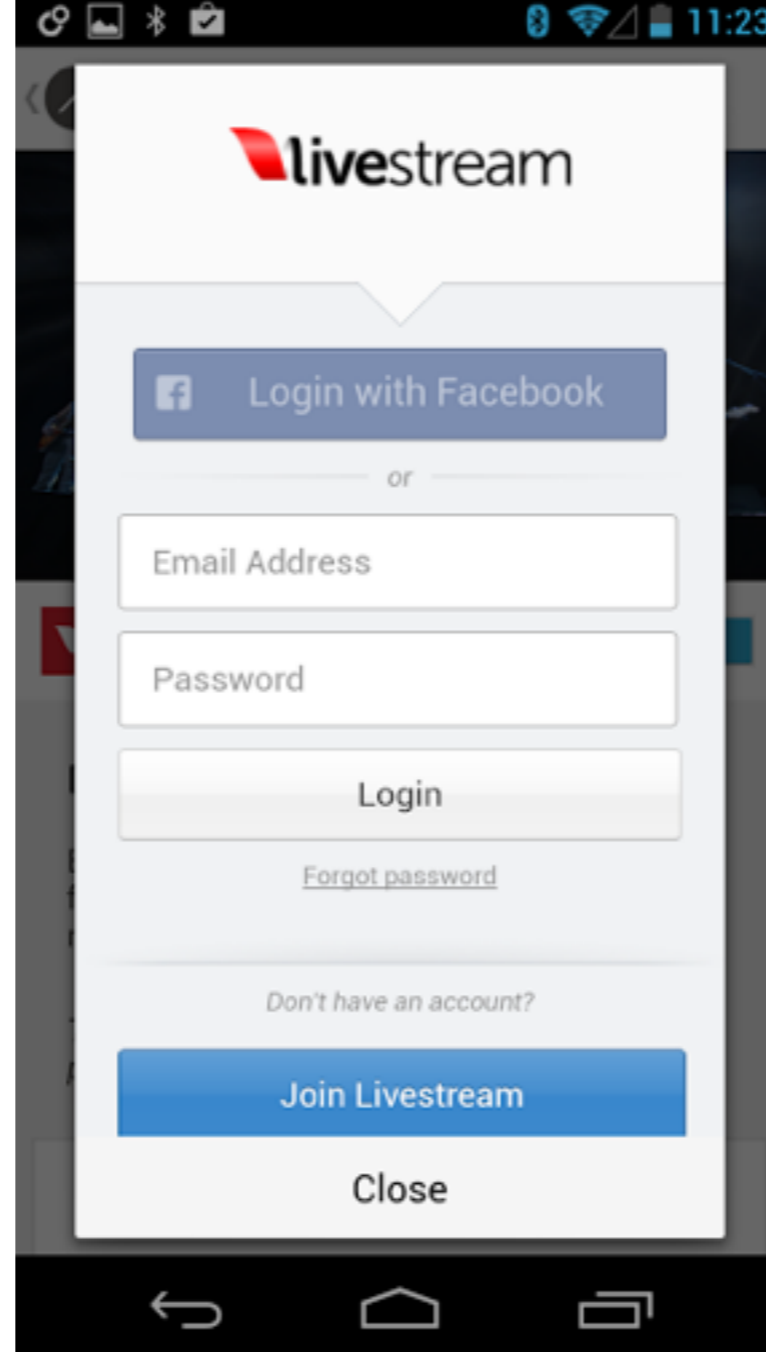
You will then be prompted to log in to your Livestream account. This allows Google Glass to recognize your events.

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.
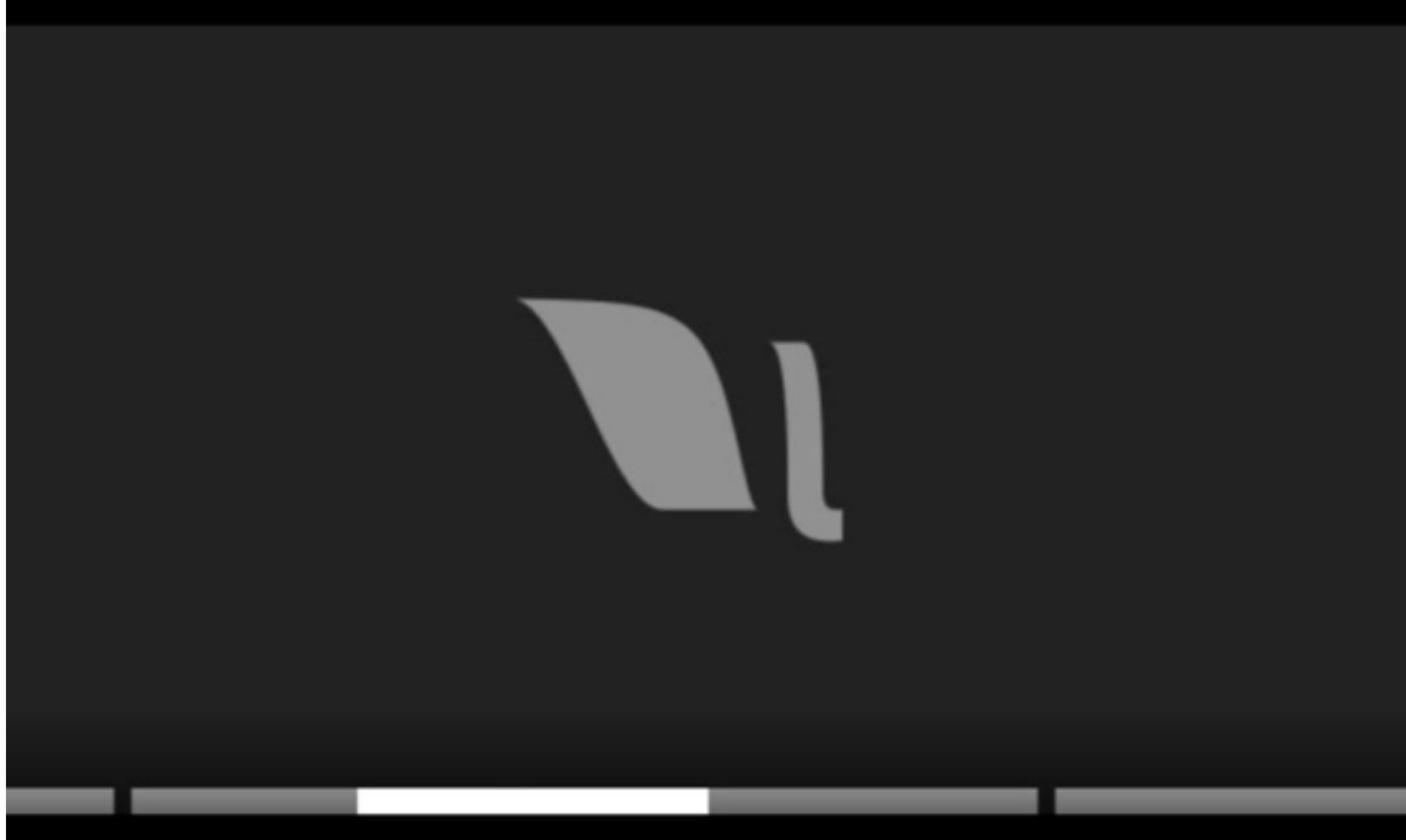
If left untouched, the app will start streaming to your most recent event. Tap the Glass before the load bar finishes to be brought to the event selection menu.
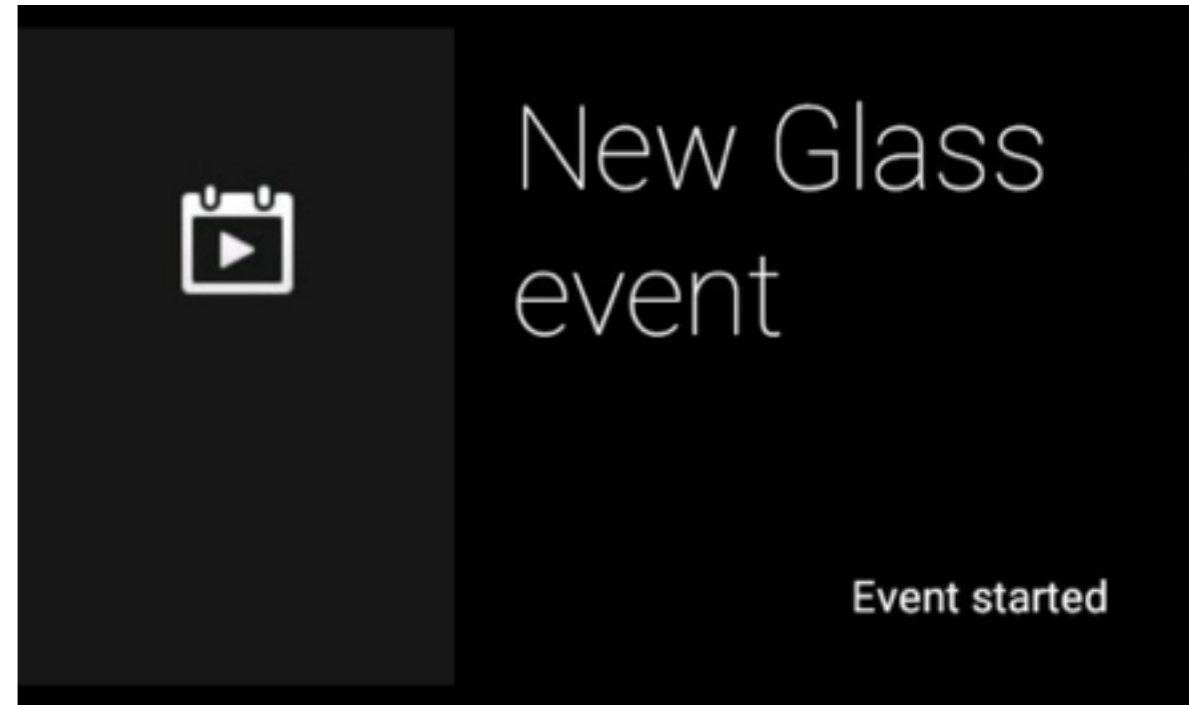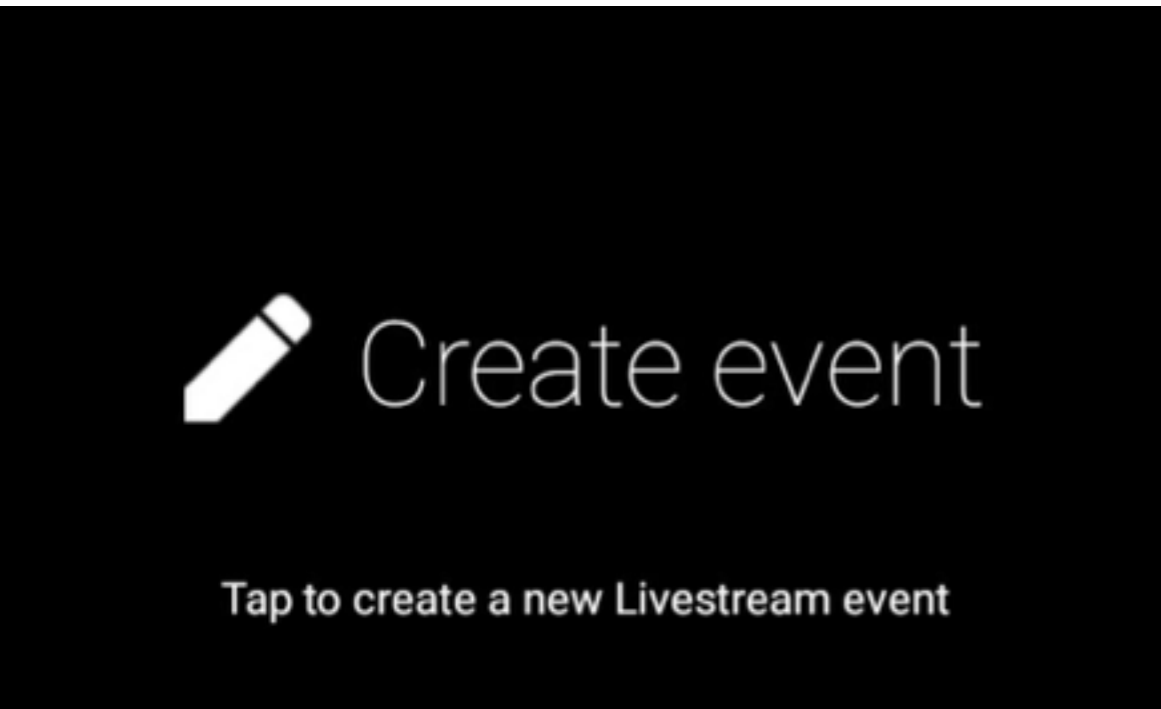
Swipe left and right to select your events or select 'Create event' to make a new event from Glass.

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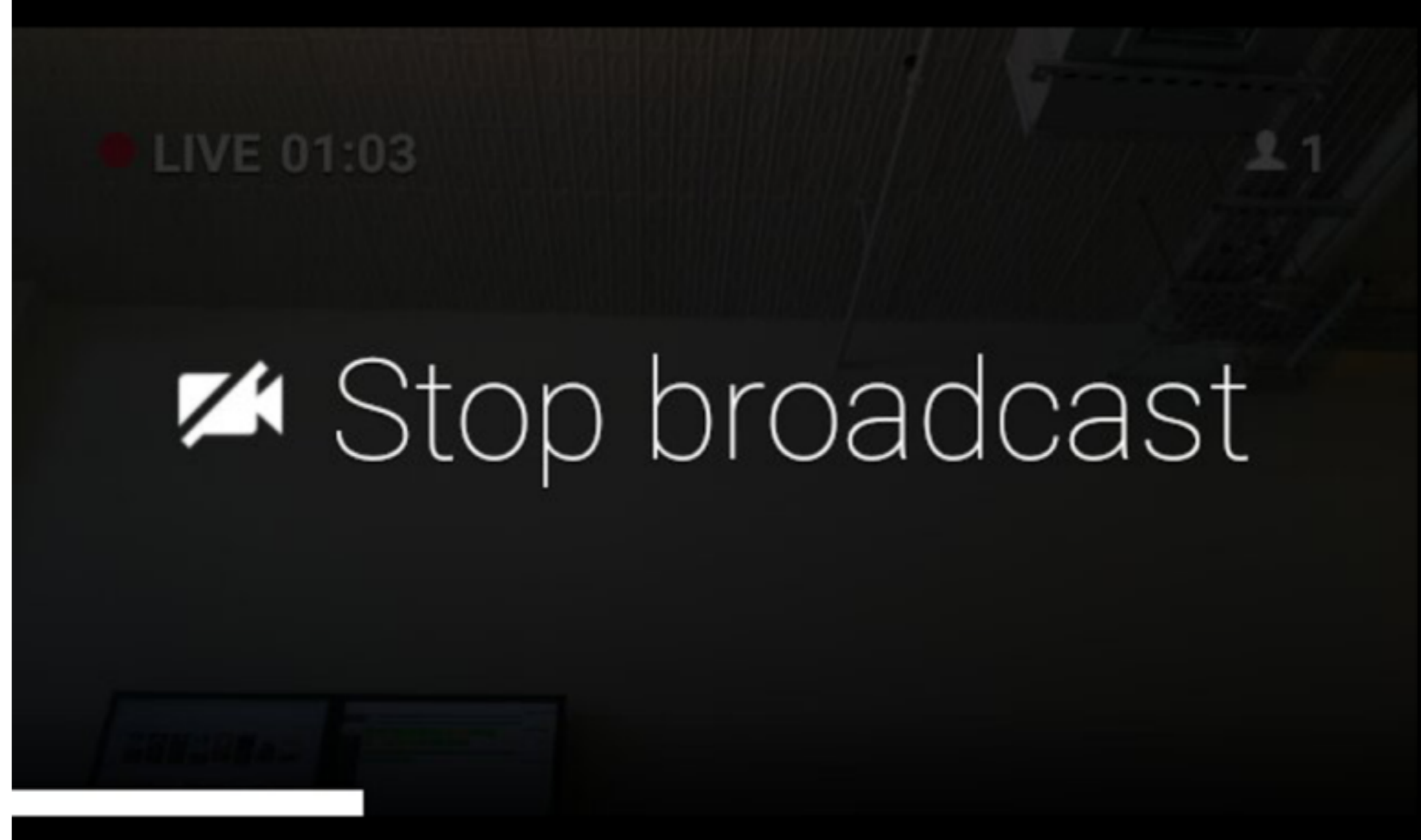
When you are live, tap the Glass to be brought to additional options (the first being 'Stop Broadcast').

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

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.
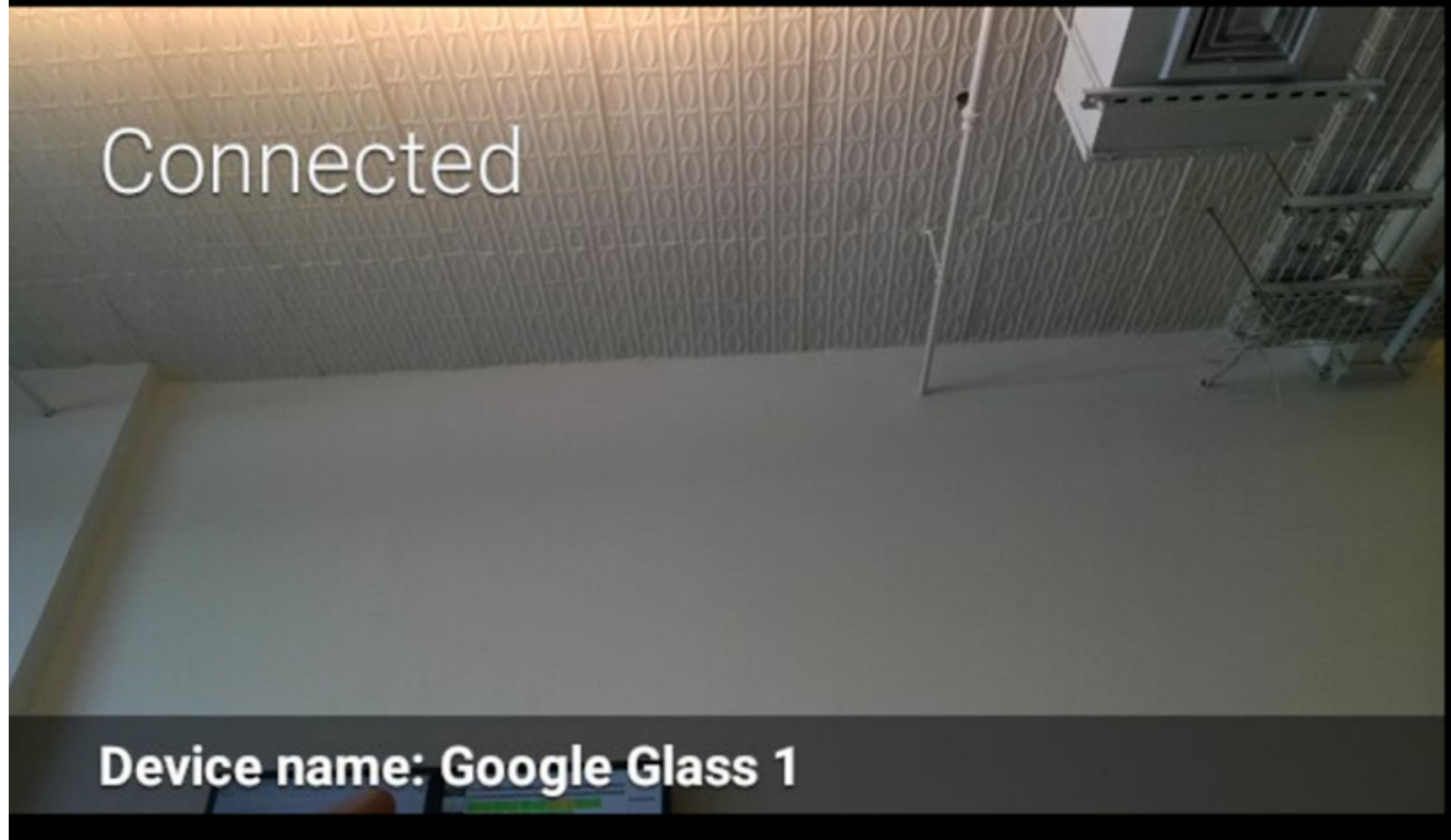
Glass will wait for a Livestream Studio on the same network to connect and indicate when it has connected.
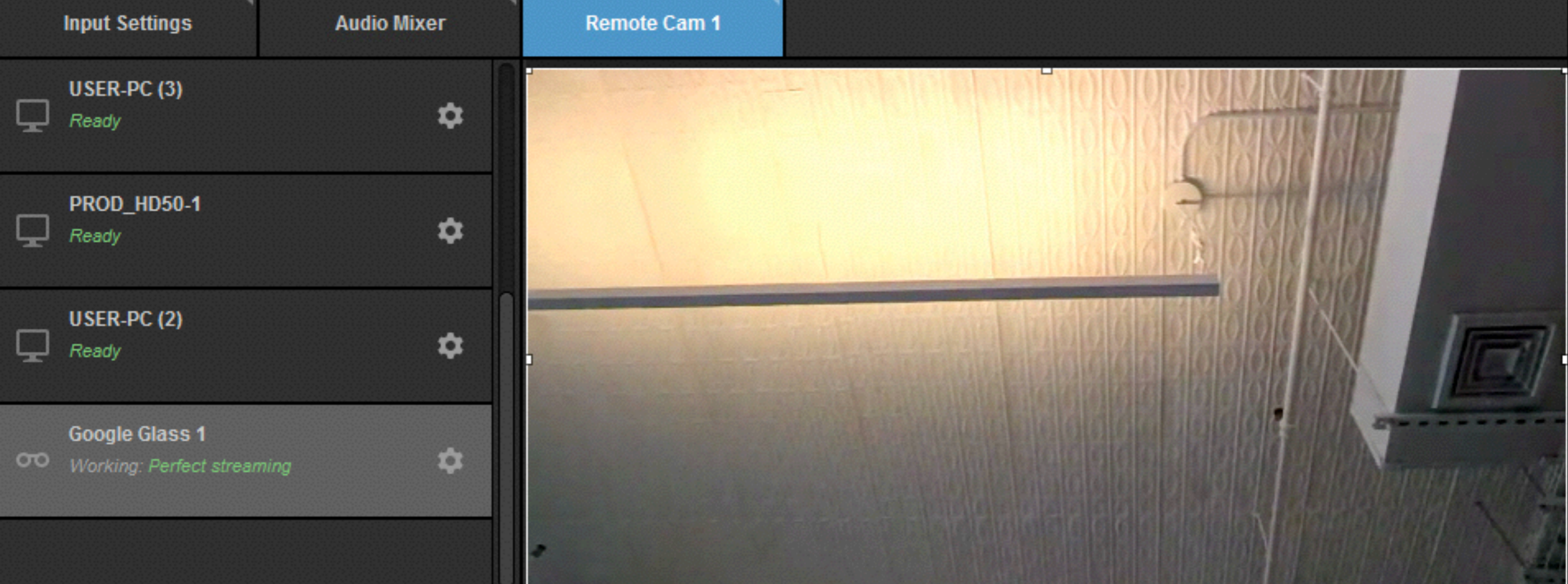
Once connected to Livestream
Studio, Glass will appear as a
remote camera source. Click on
it to activate it in the module.
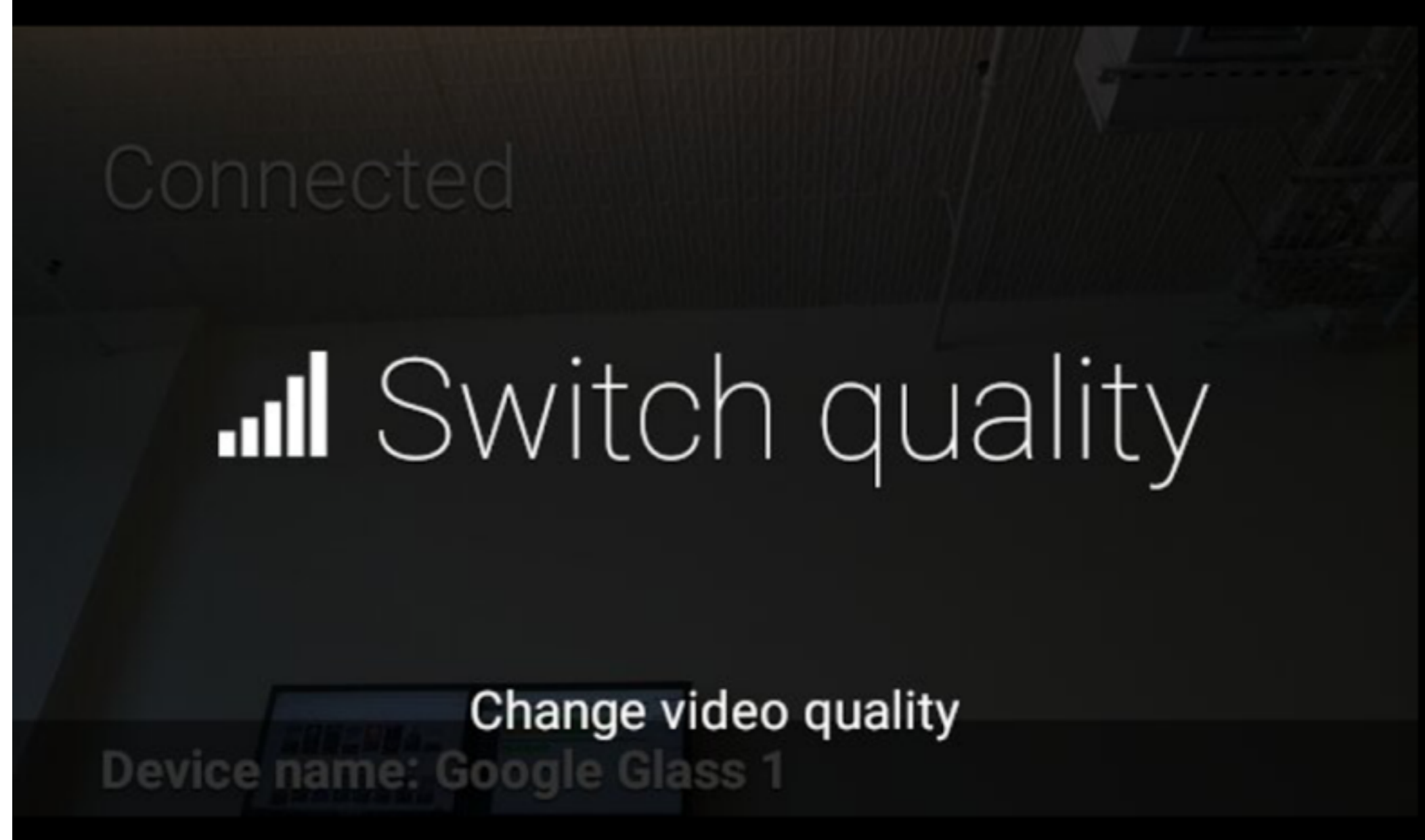
If you tap on the side of the Glass, the first option you will see is 'Switch Quality,' allowing you to adjust the video quality sent to Livestream Studio.
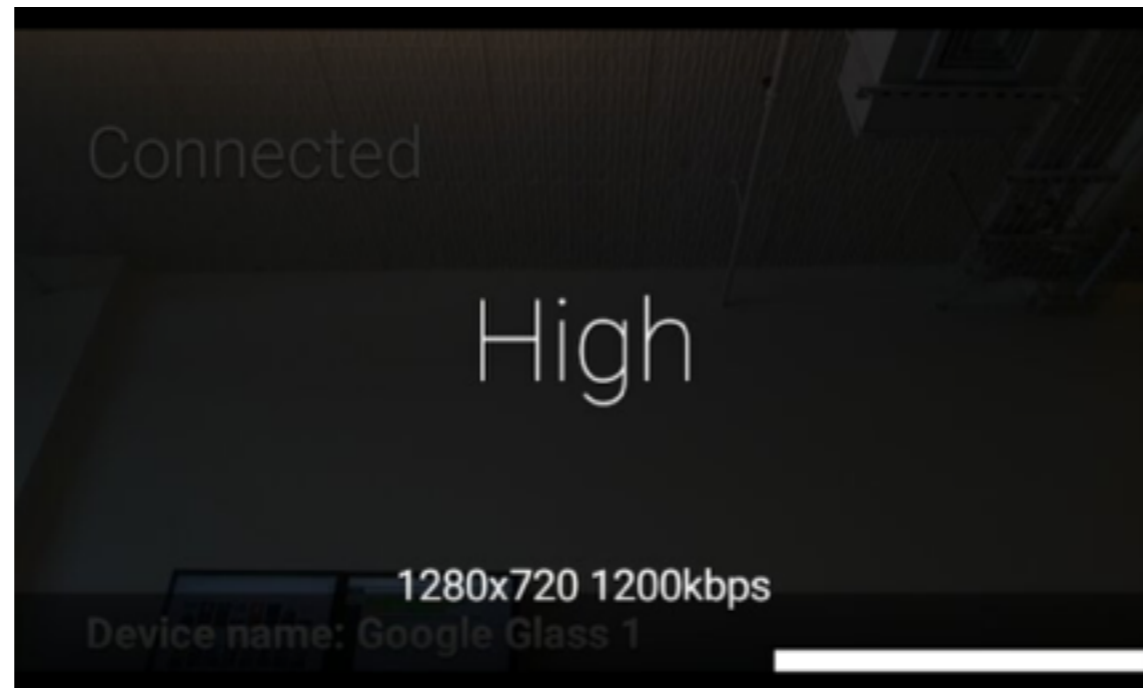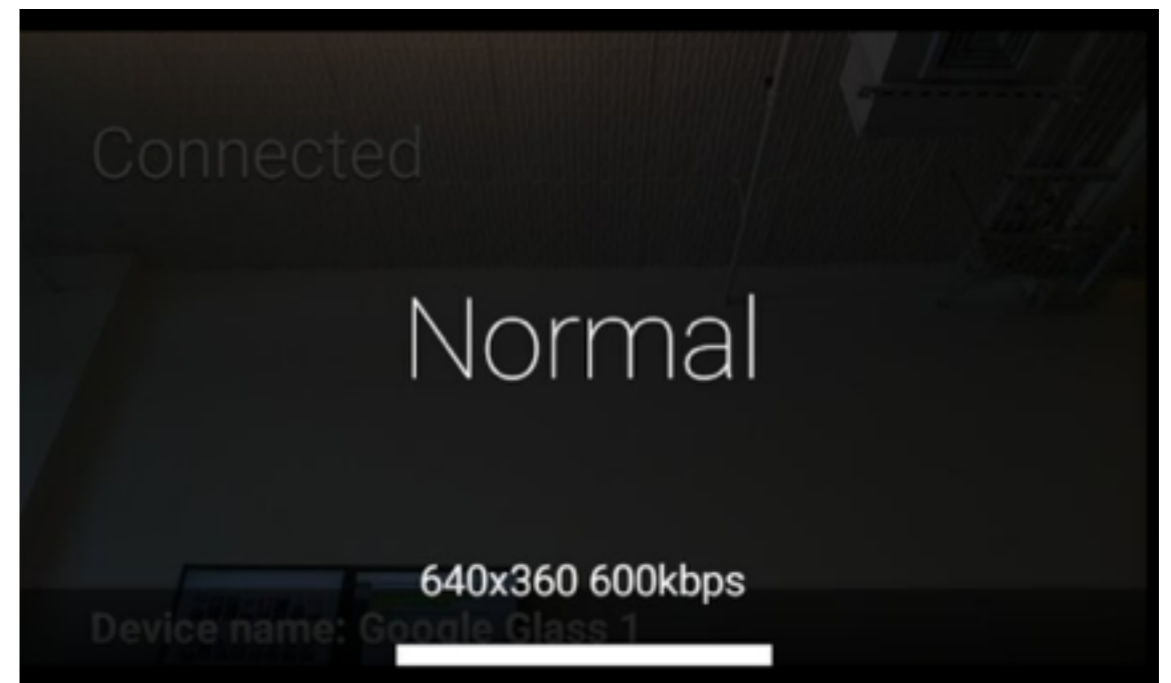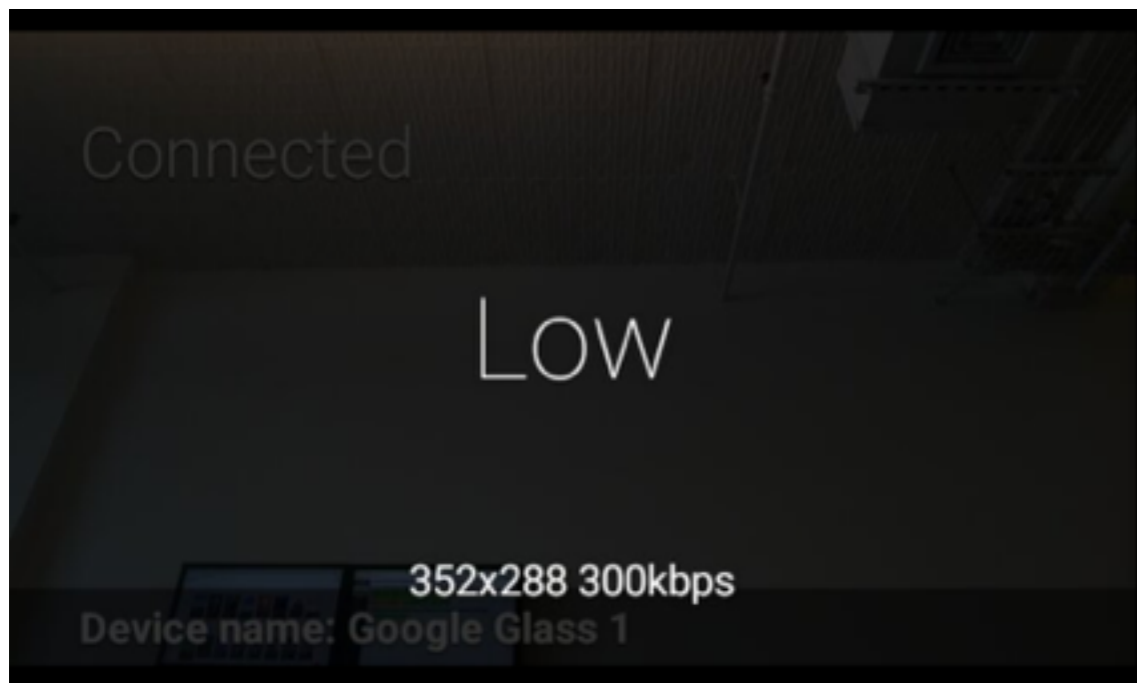
Tapping that option will give you
three options: low, normal, and high.
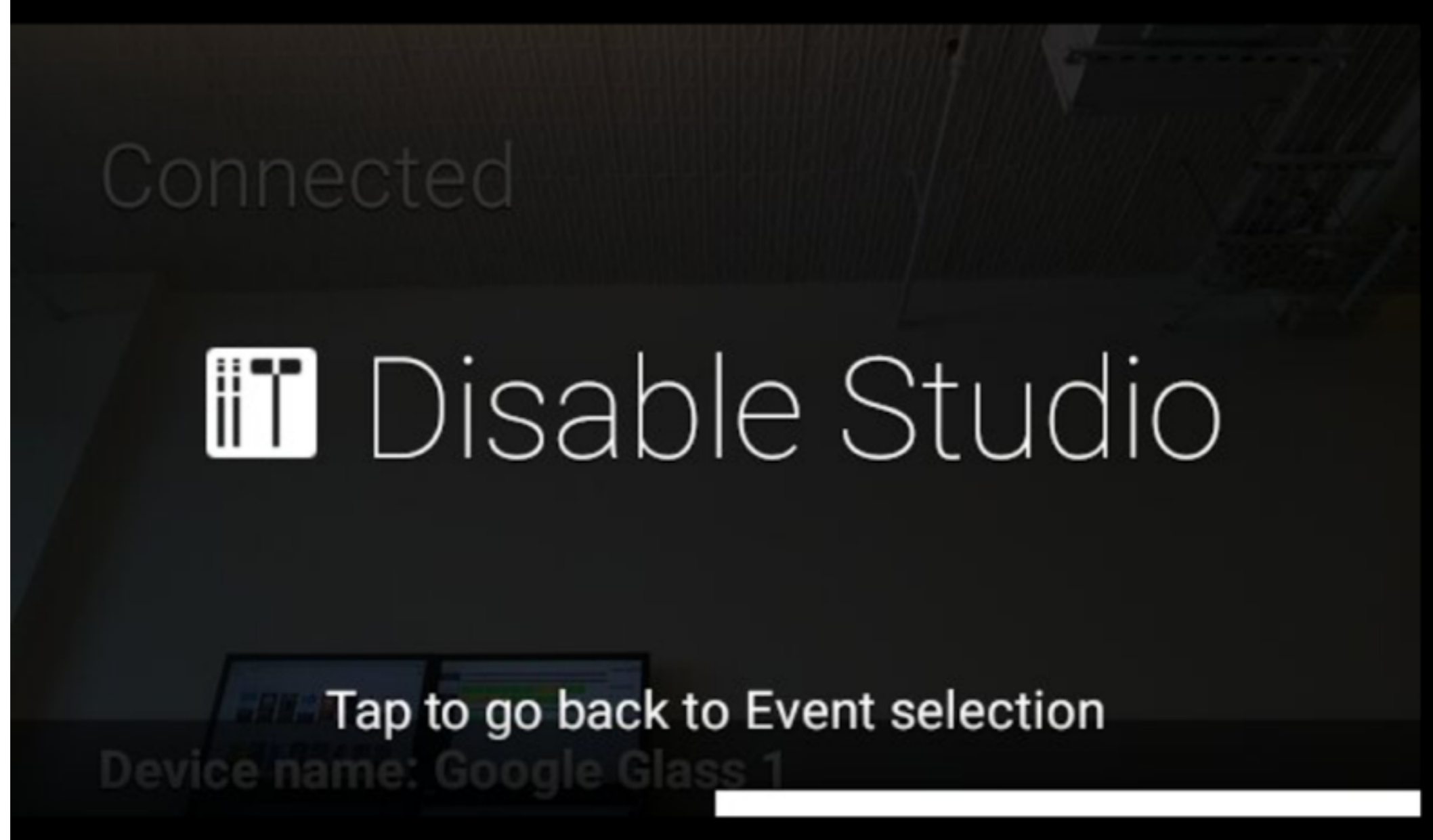
If you swipe to the right from 'Switch Quality,' you will see 'Disable Studio,' allowing you to remove the Glass from Studio and stream to events again.

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.
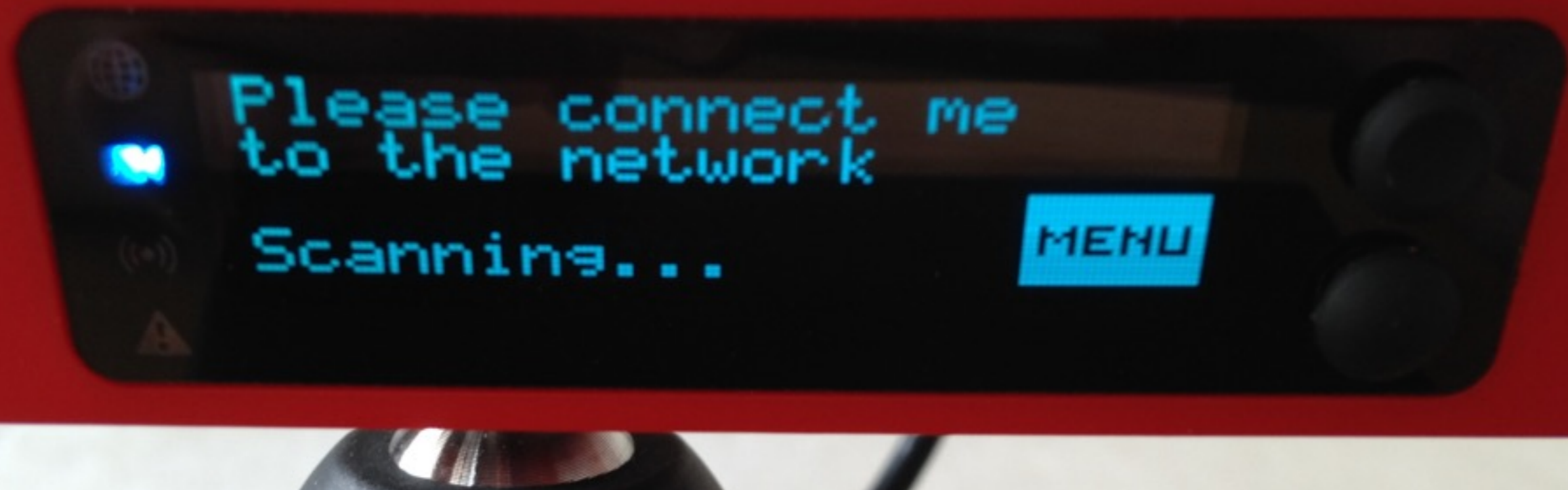
When Livestream Broadcaster attempts to connect, press the joystick on the bottom to access the menu.
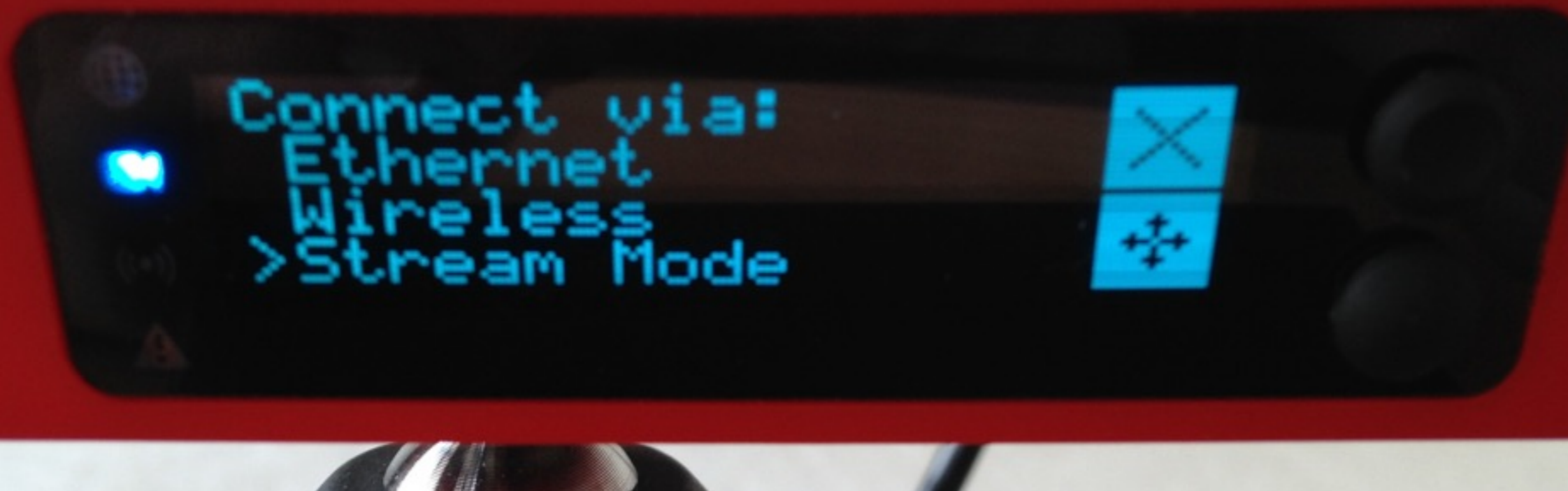
Use the joystick to toggle down
to 'Stream Mode,' then press it in
to access that menu.
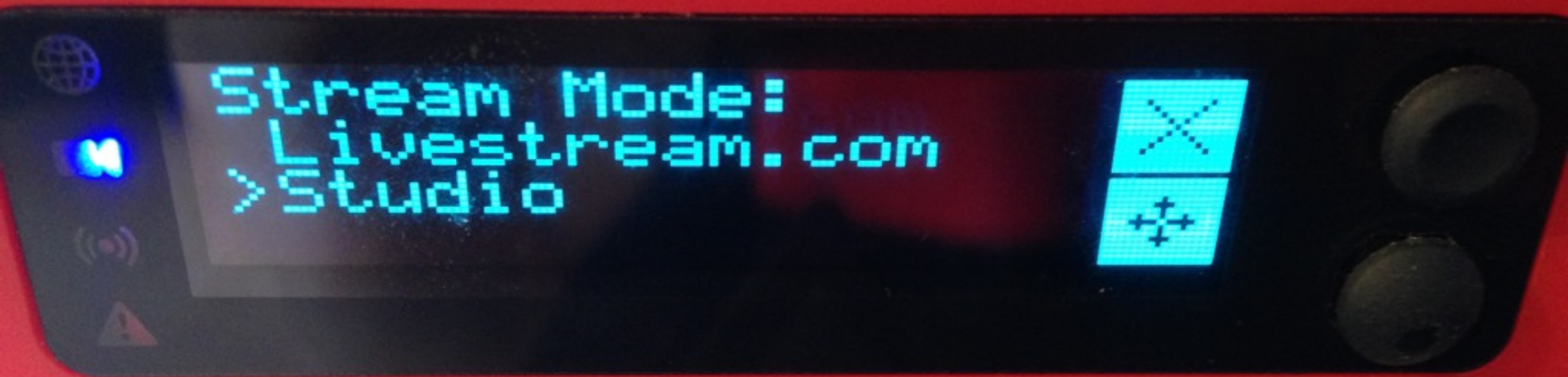
Under this menu, toggle to Studio, then press the joystick in to select it.

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.
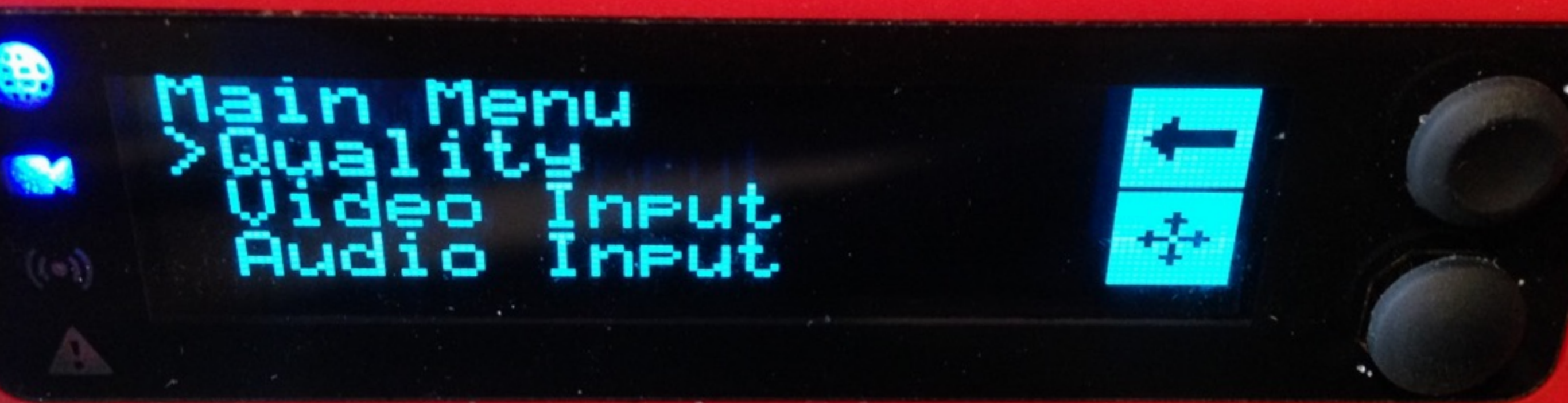
livestream

Push the bottom joystick to get to the main menu in Livestream Broadcaster. Use the joystick to toggle between the different options and settings.
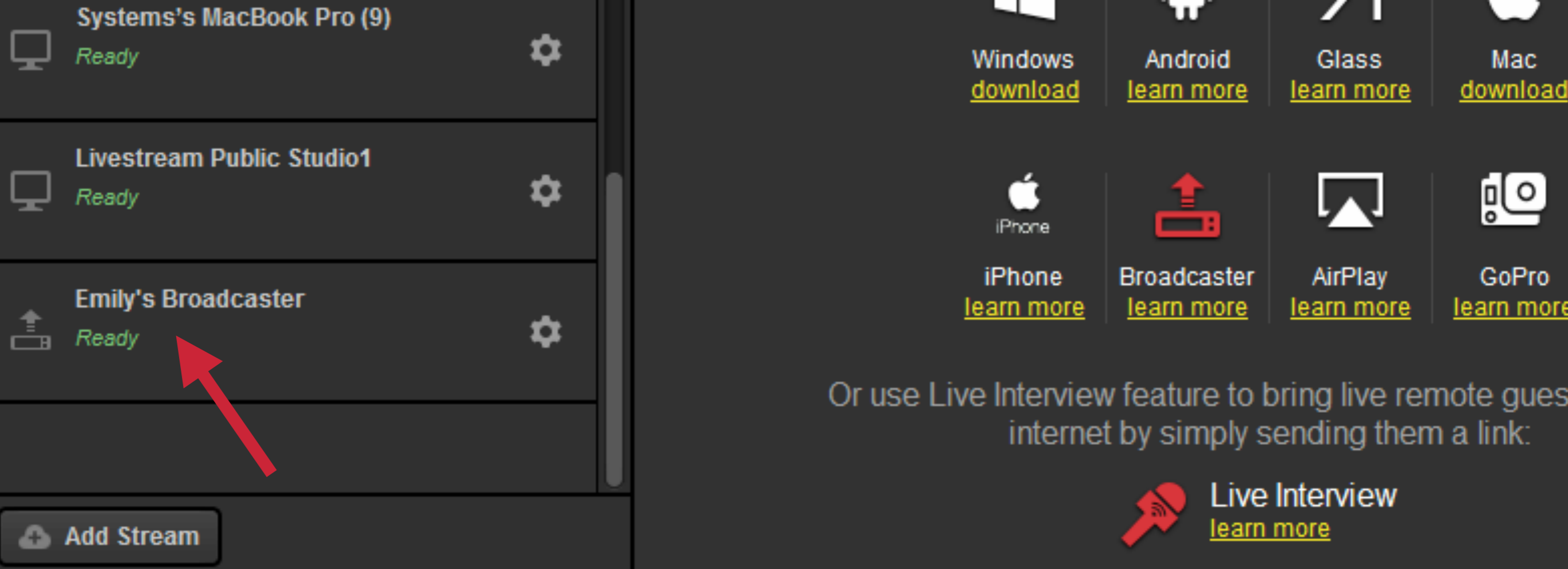
In Livestream Studio, the remote camera should appear in the module. Click on it to see the video signal.
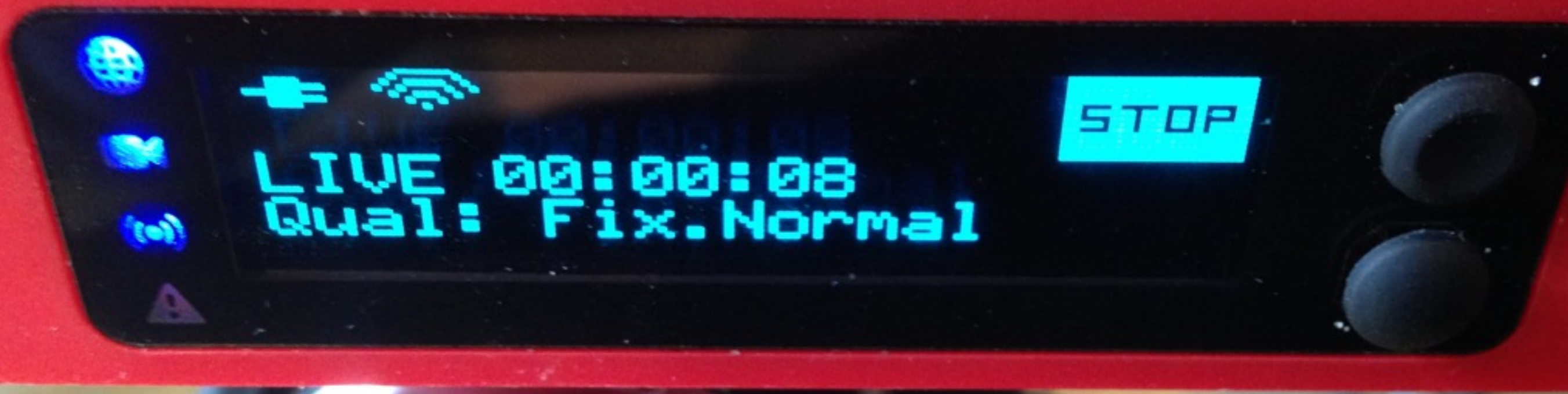
Livestream Broadcaster will
indicate that it has started
streaming at the selected quality.

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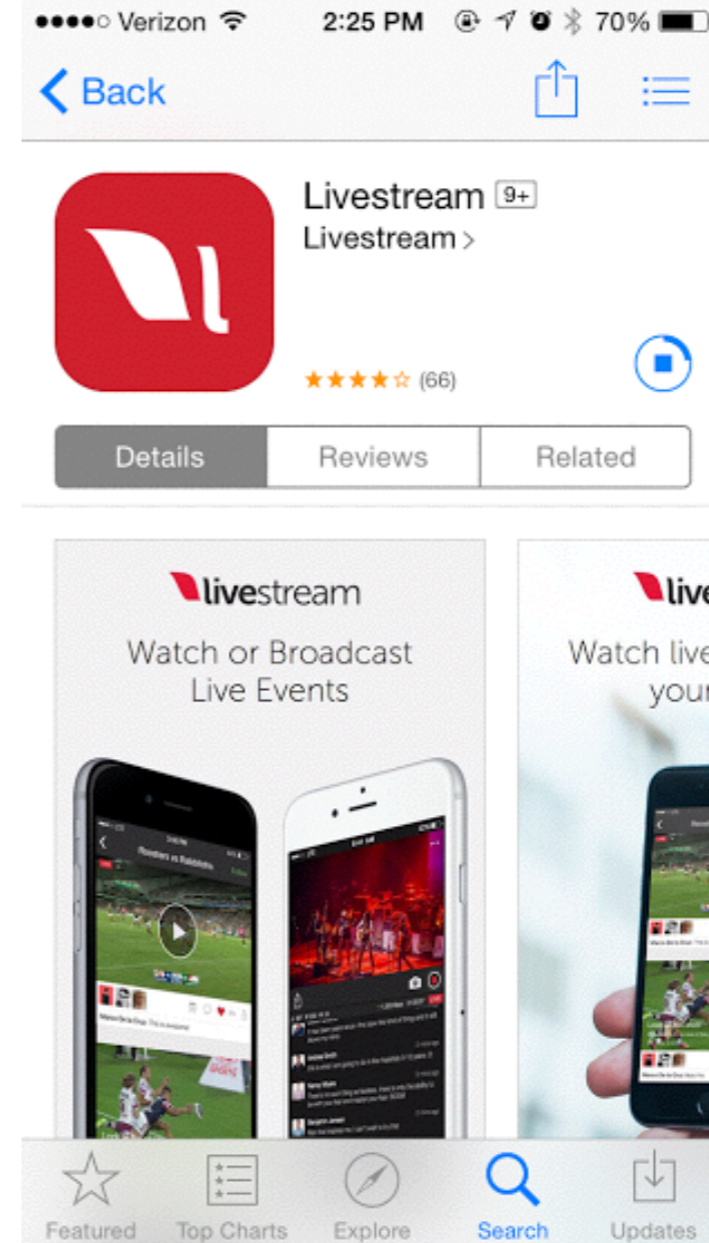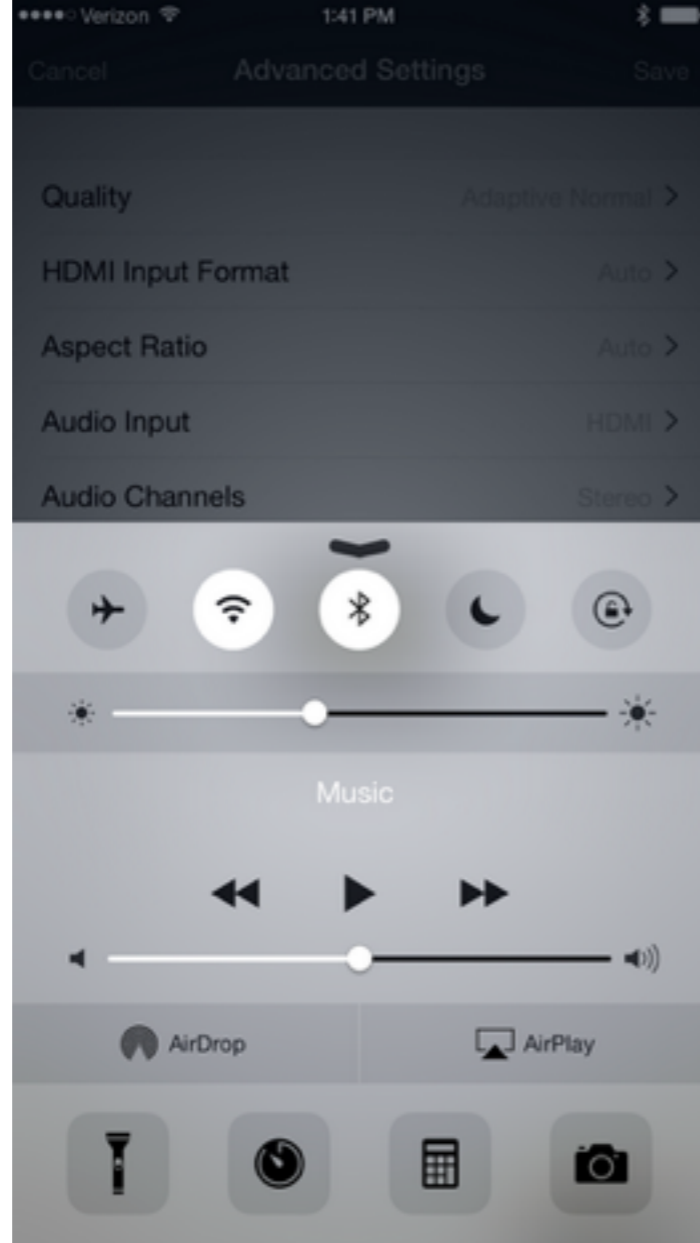
If you are using a Broadcaster mini, the connecting process is slightly different. First, activate WiFi and Bluetooth on your mobile device, and that the Livestream mobile app is installed.

Go into your device's WiFi settings and connect to your desired network (i.e., the network your Studio system is connected to).
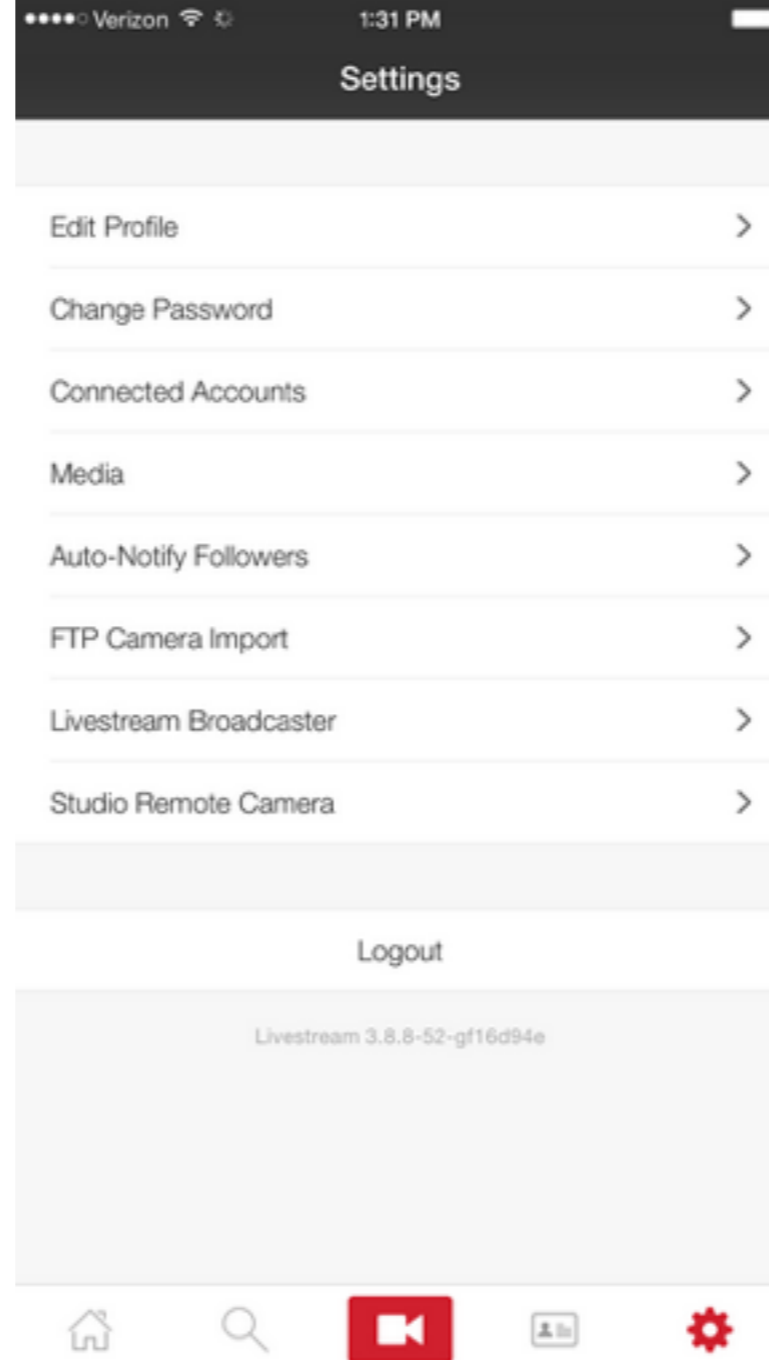
Go into the Livestream app and select the gear wheel on the bottom right to access your settings. From here, select the 'Livestream Broadcaster' option.
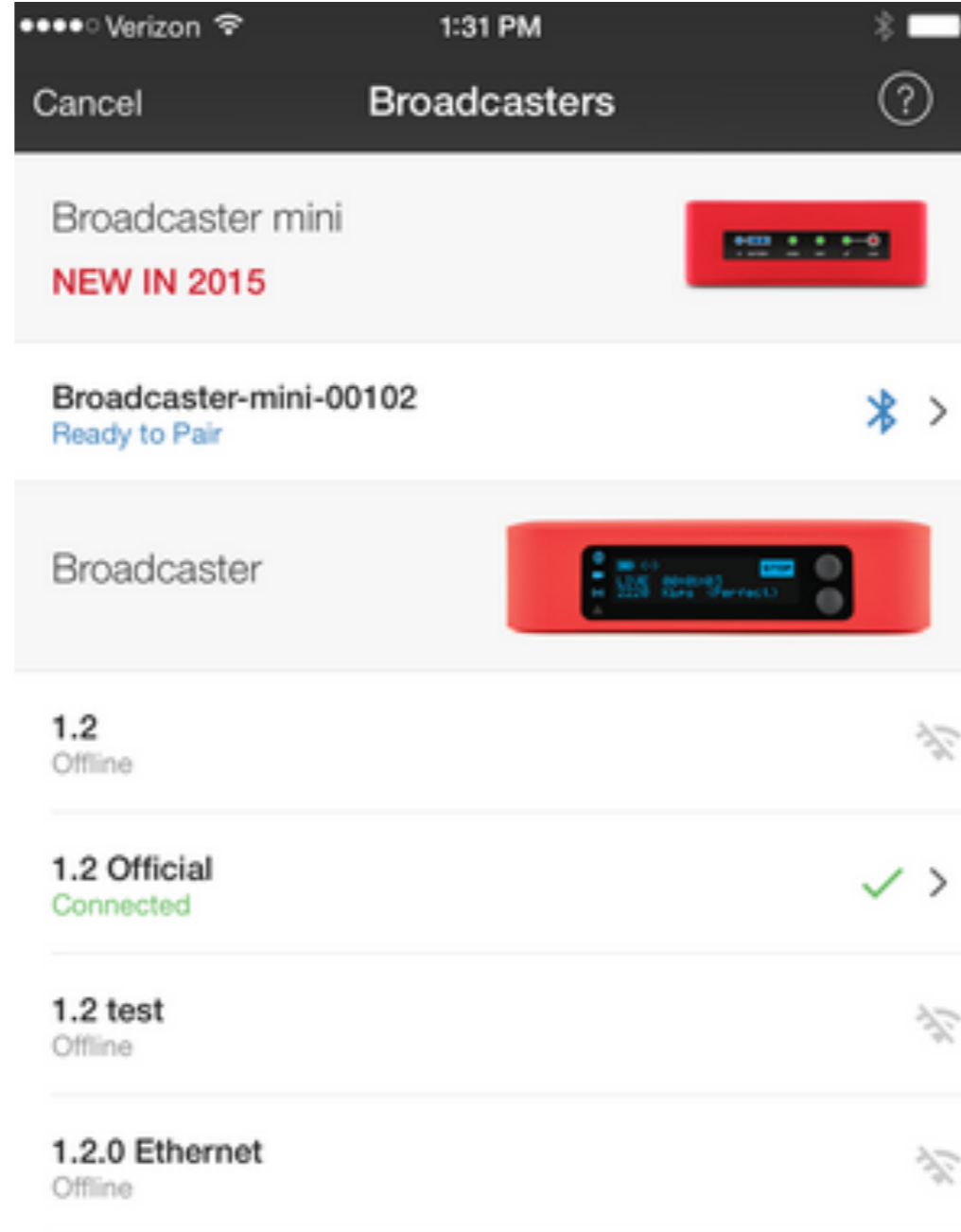
Your Broadcaster mini will appear as 'Ready to Pair.'
Click it to begin the pairing process.
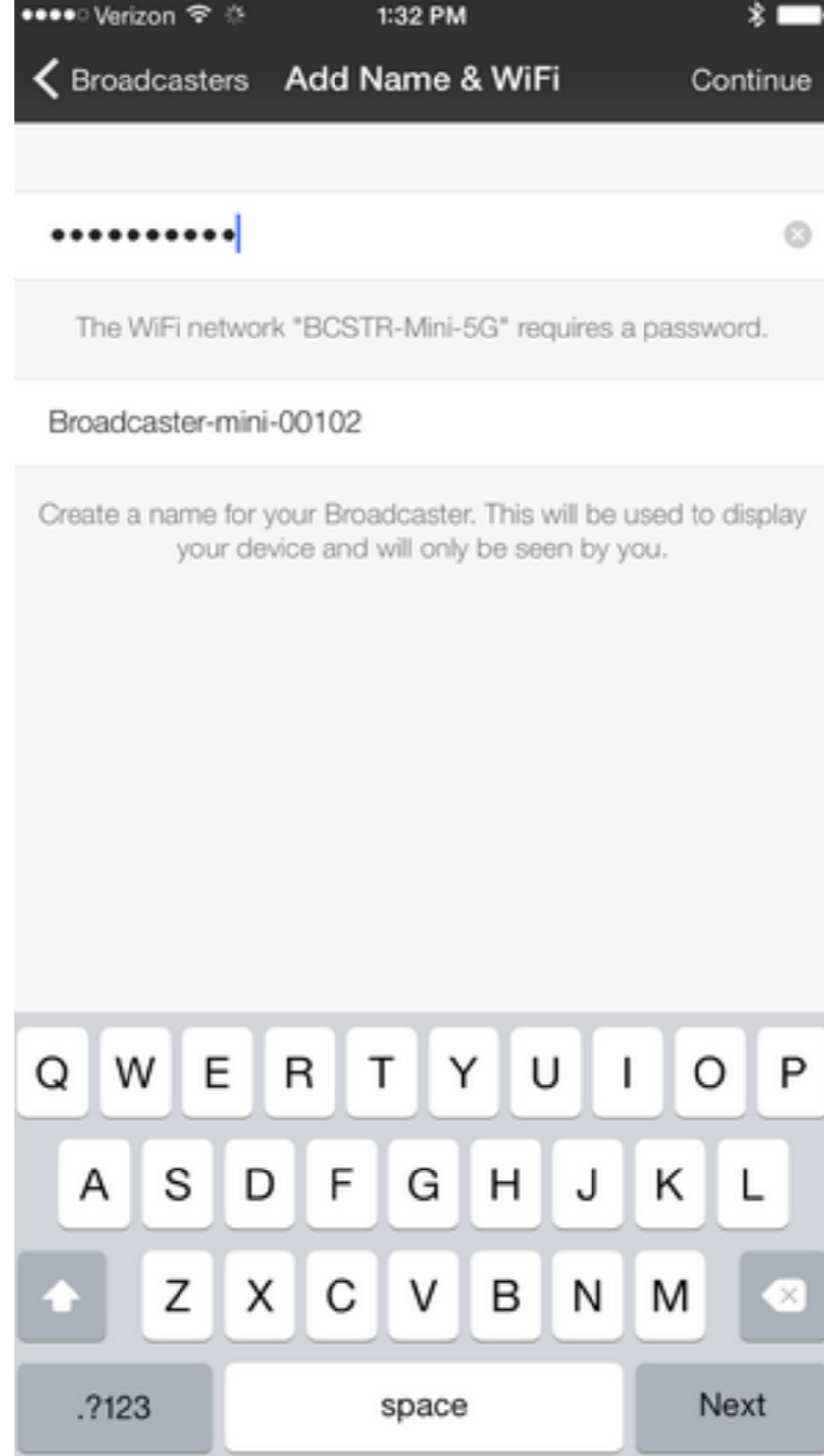
If you are on a secure network, you will be prompted to enter the password.
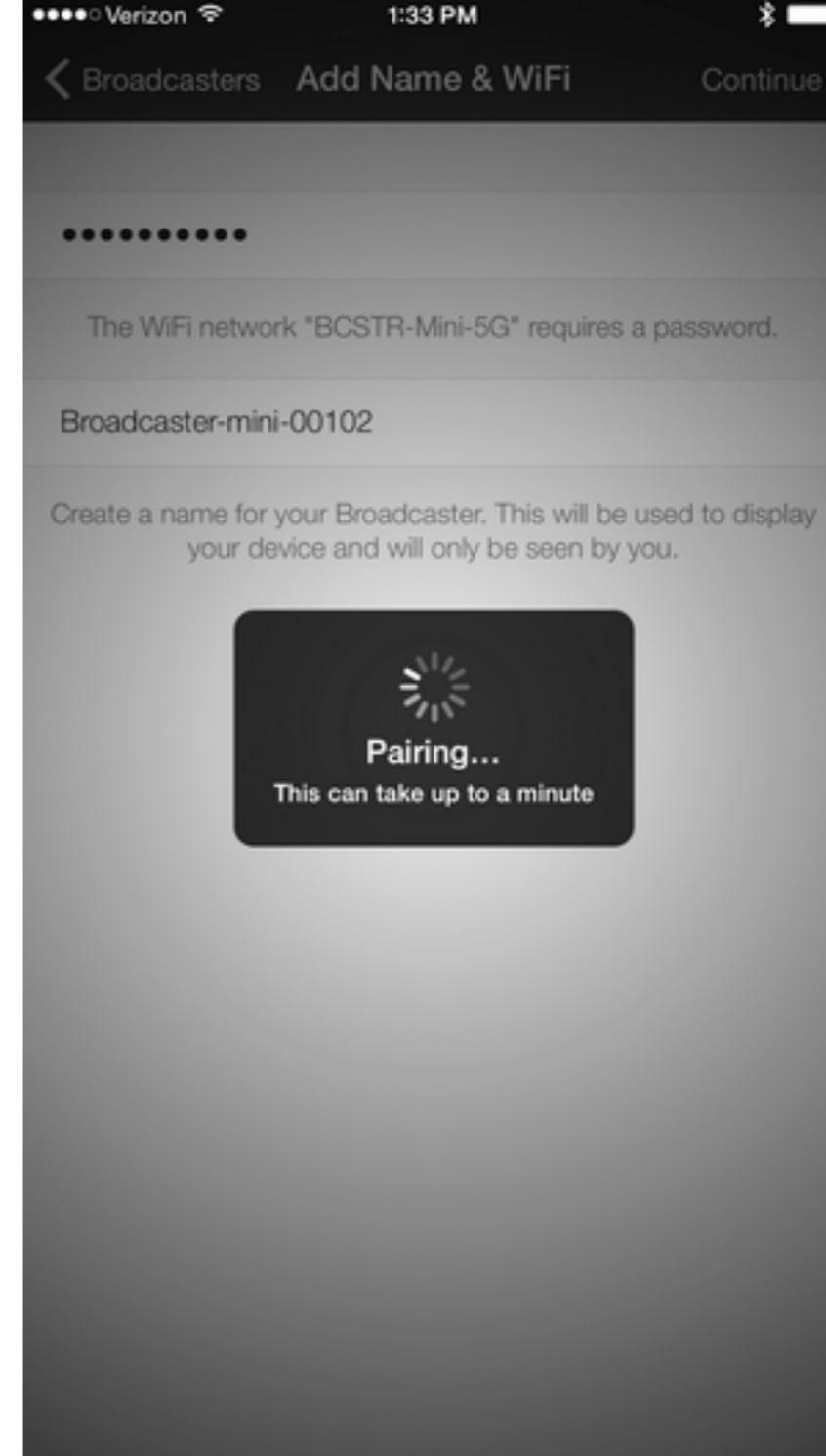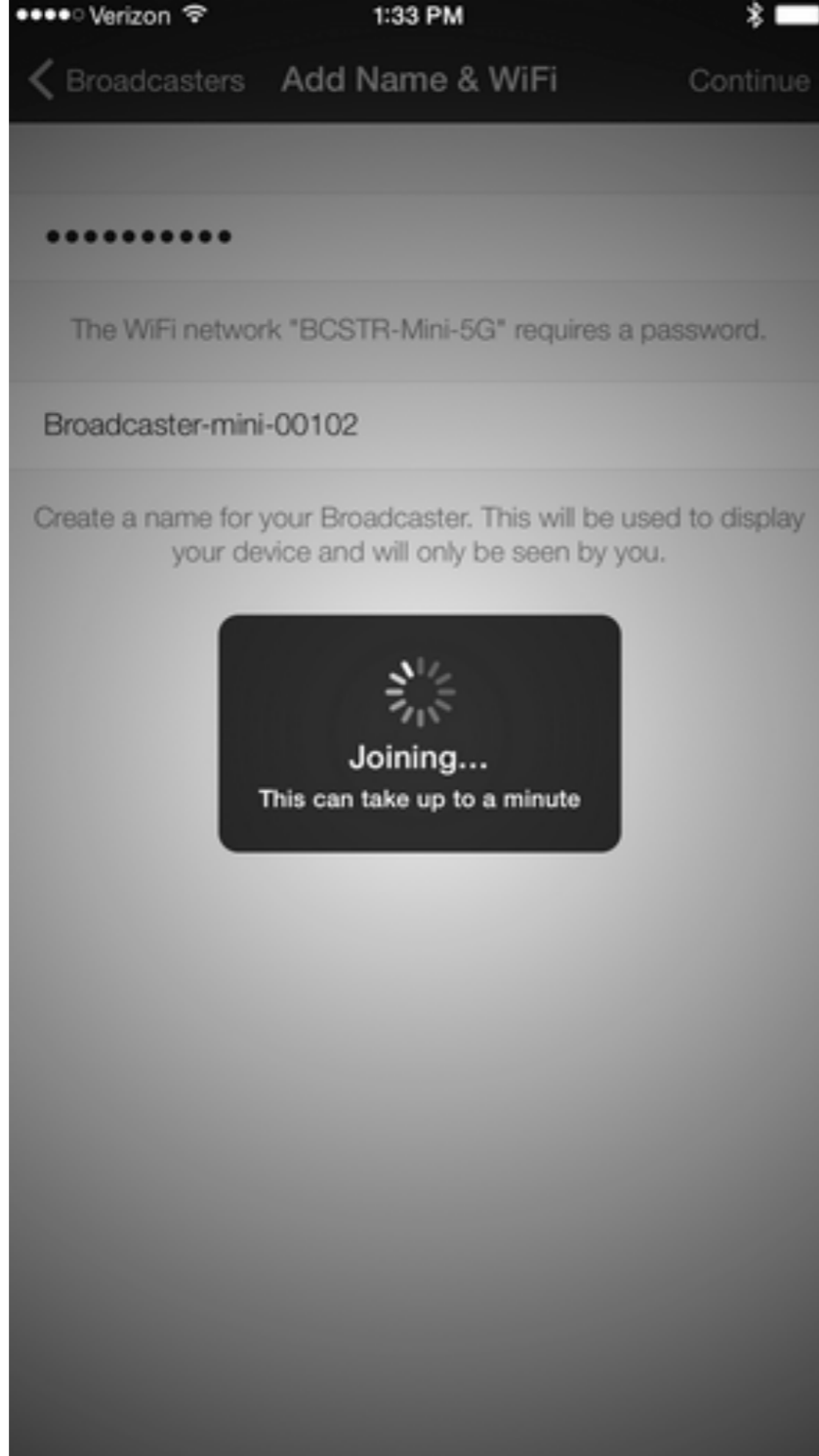
The Broadcaster mini will take about a minute to connect and pair to your account.
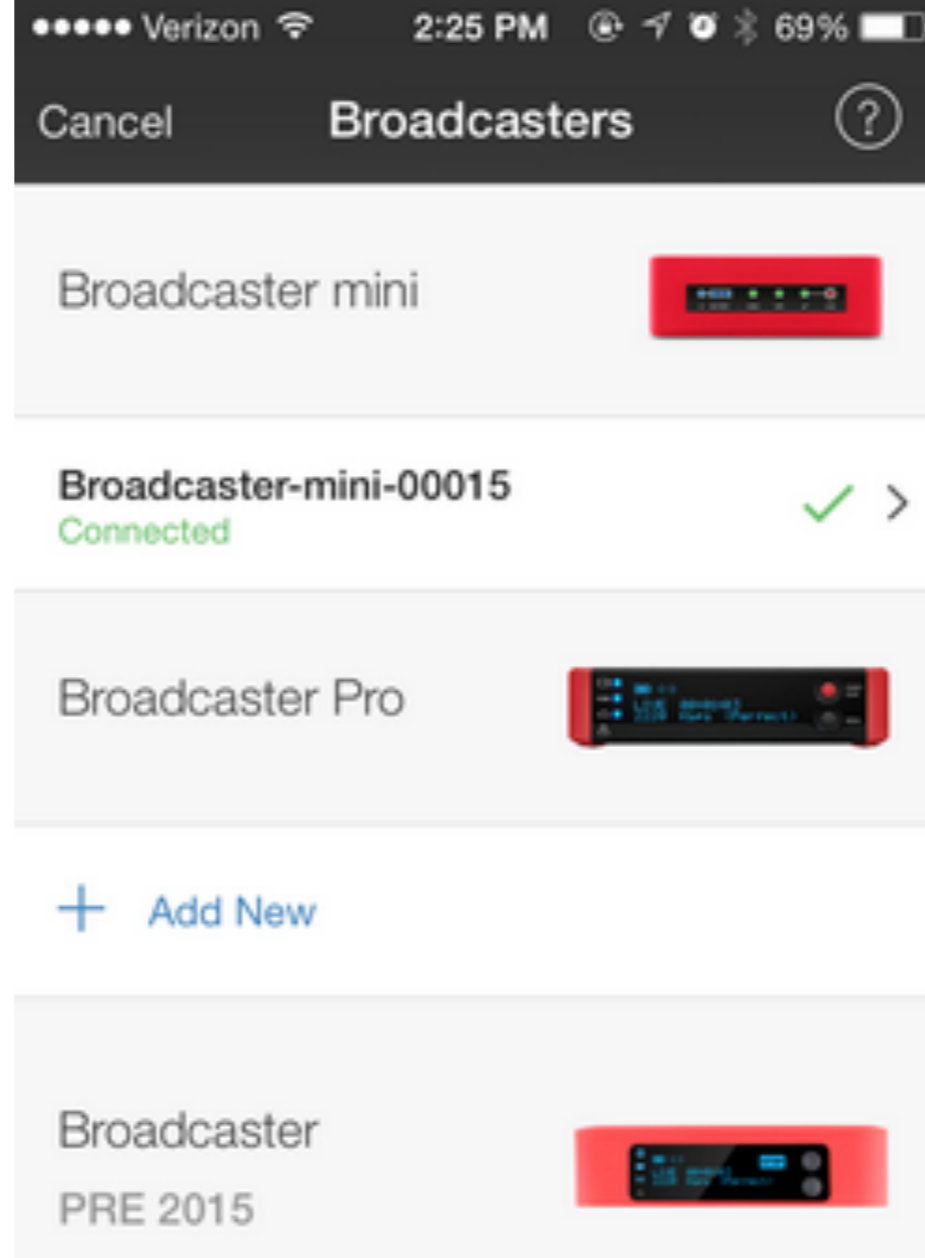
Once it has paired, select your Broadcaster mini from the Broadcasters menu.

It will open the camera view finder. Click on the gearwheel in the top right corner to access settings.
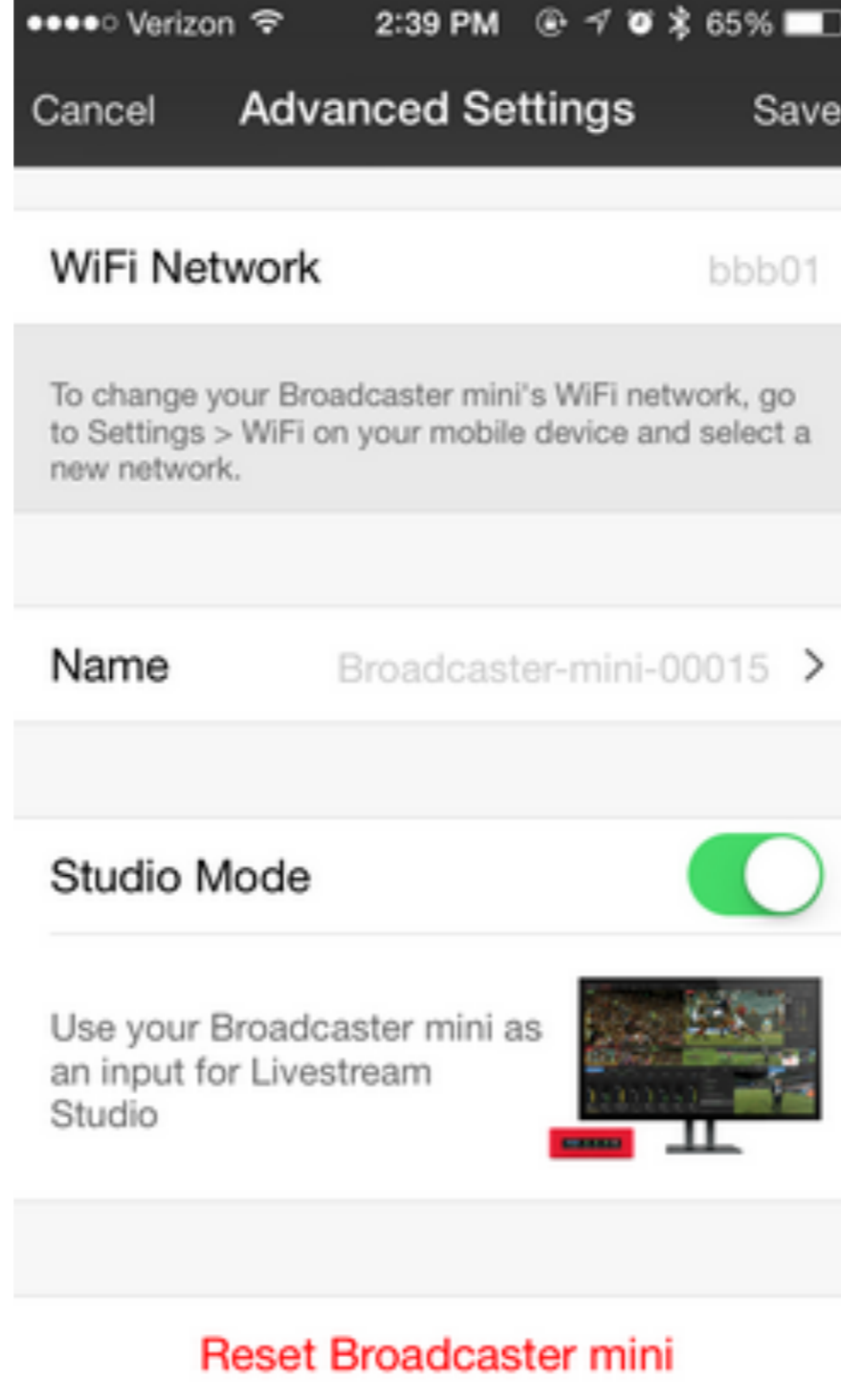
Scroll down and you will see Studio Mode. Toggle the switch on (green) to enable Studio Mode. Then click 'Save' in the upper right corner.
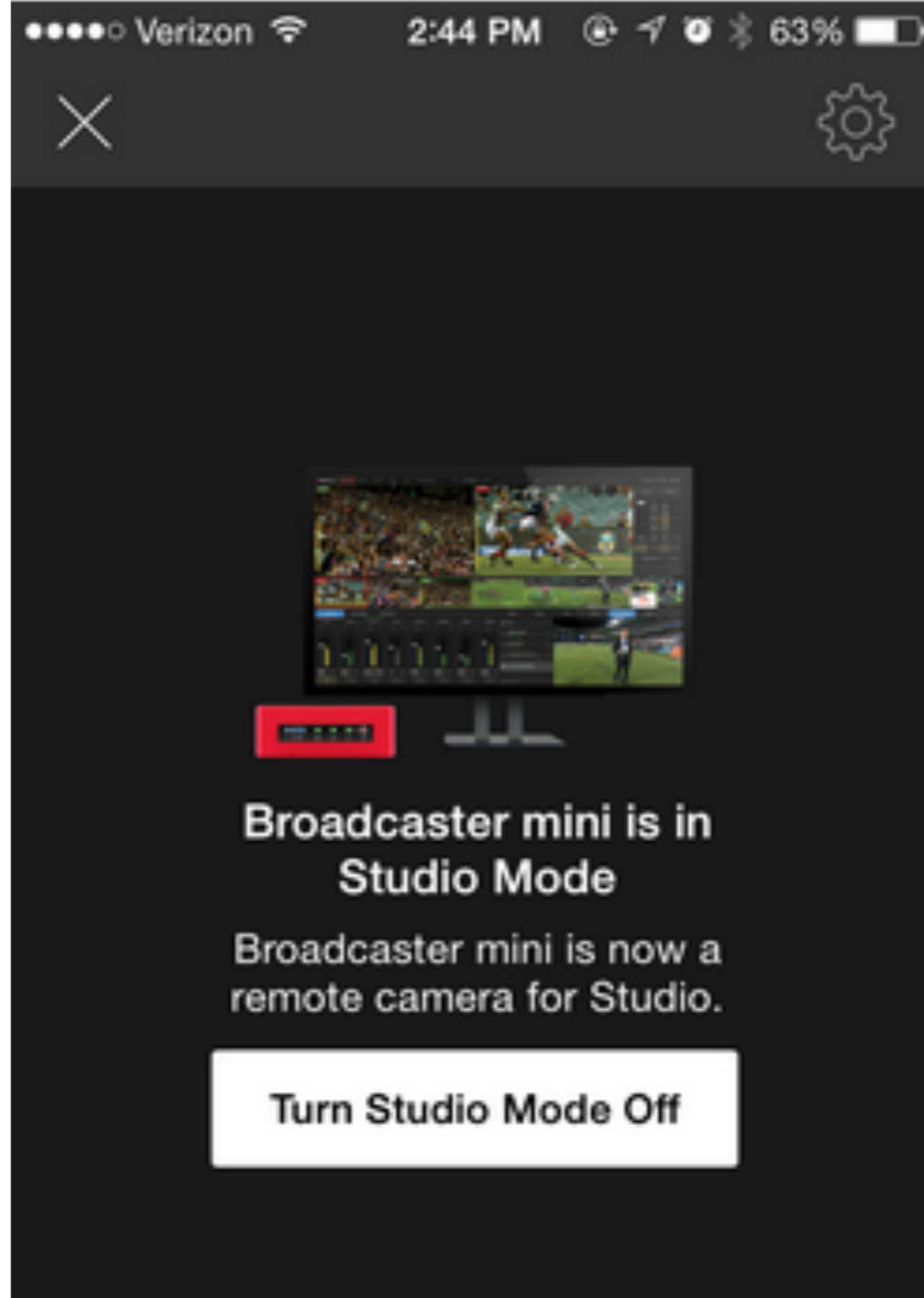
The mobile app will indicate that your Broadcaster mini is in Studio mode.
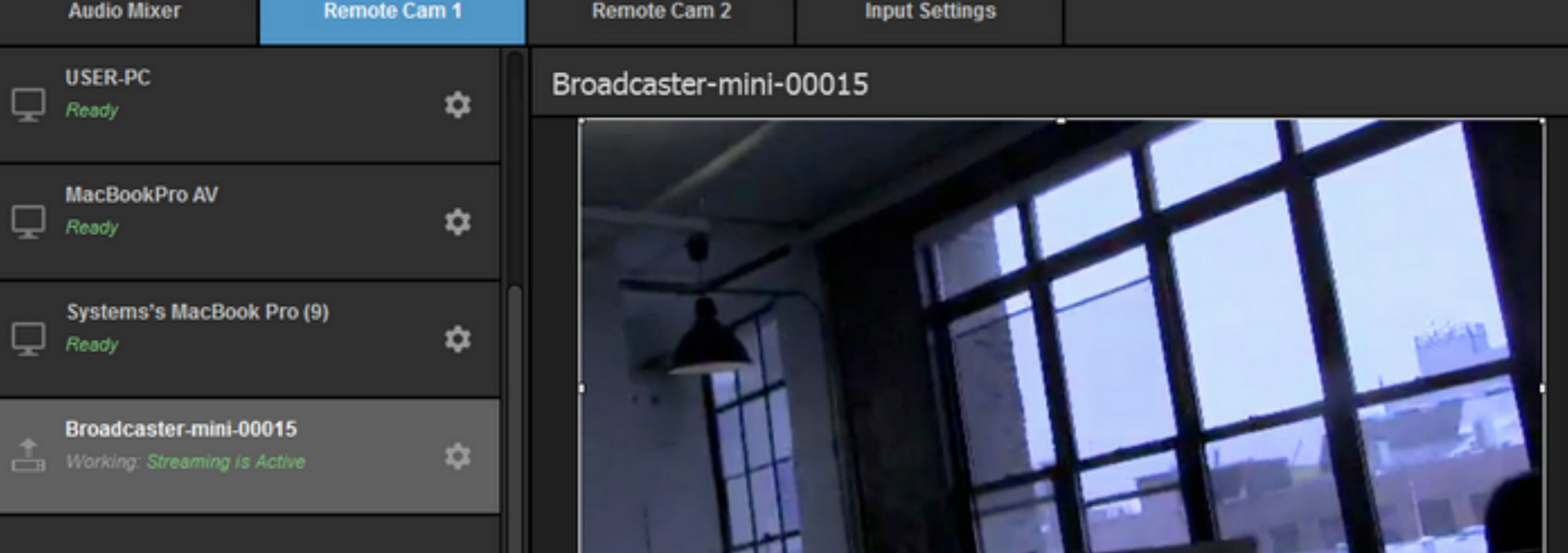
In Livestream Studio, your Broadcaster mini will appear in the list of remote cameras. Click on it to preview your camera source.
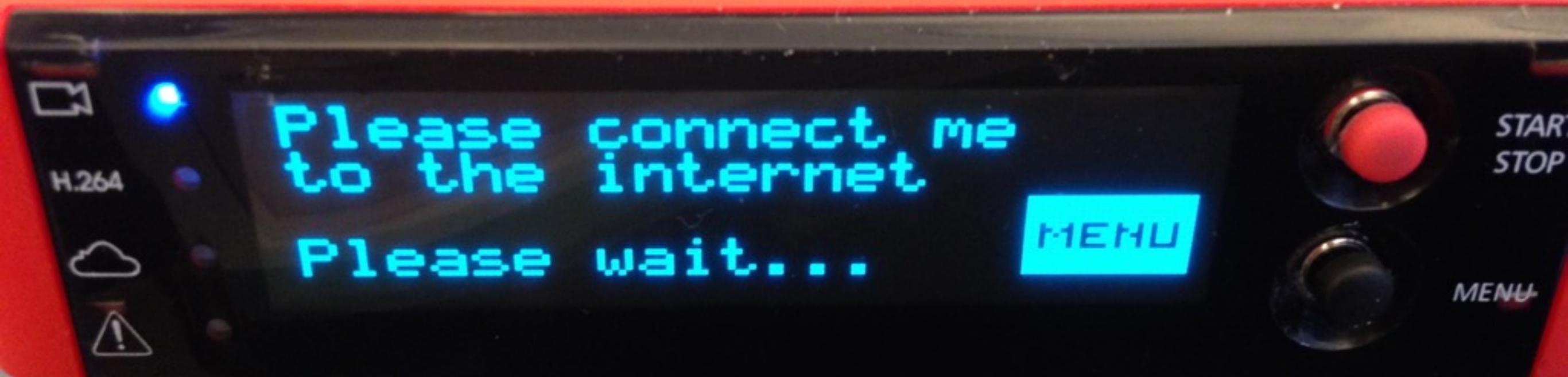
To bring a Broadcaster Pro into Livestream Studio, power on the device and use the bottom Menu joystick to connect it to the same network that your Livestream Studio system is connected to.

After connecting it, push in the joystick to enter the menu and select 'Stream Mode.'
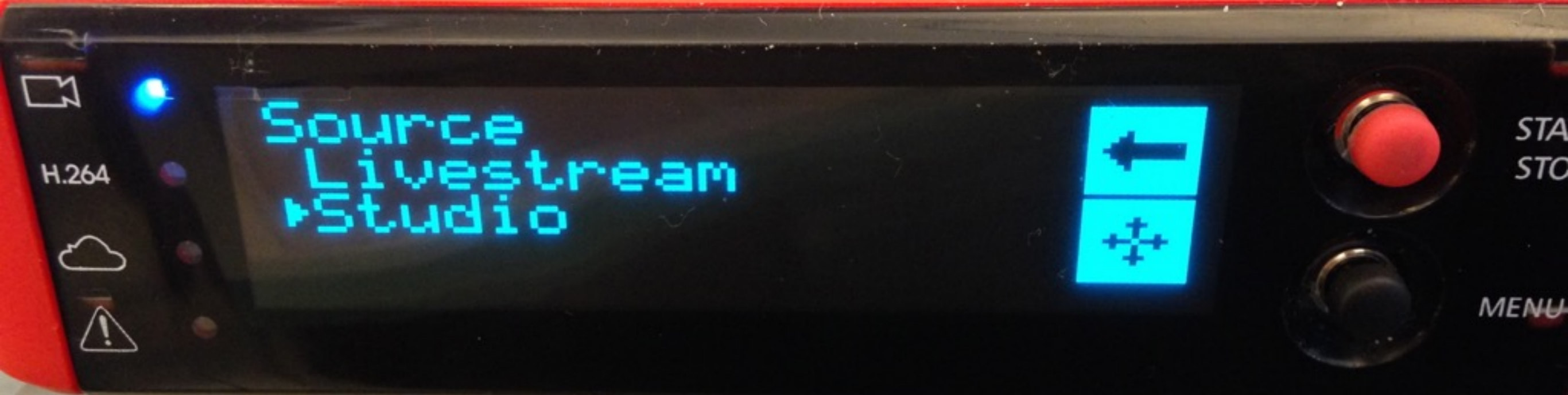
Toggle the joystick to 'Studio.'
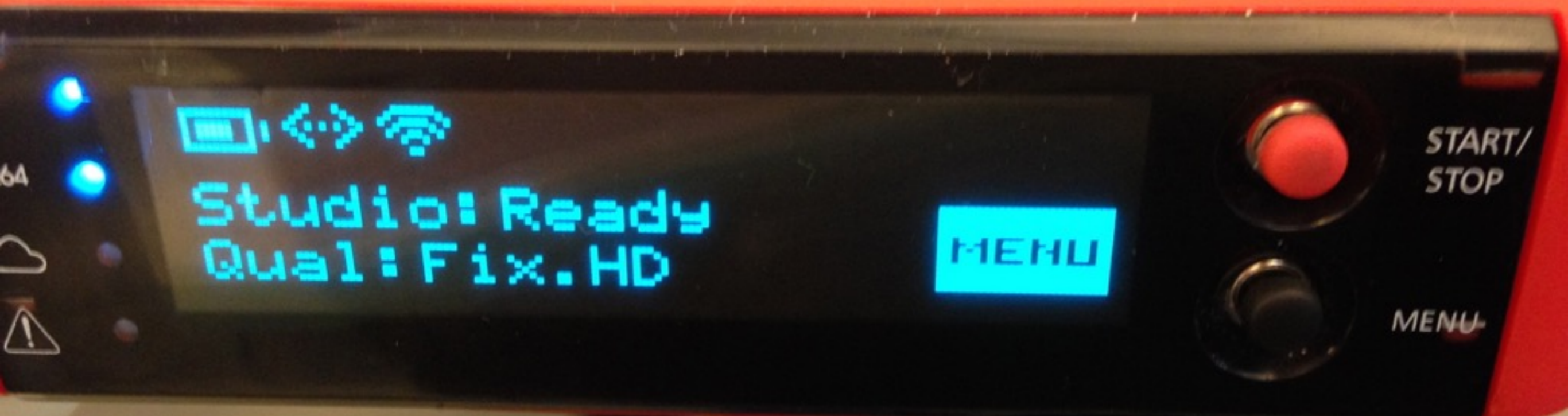
The Broadcaster Pro will indicate that it is connected and ready to send its signal to Livestream Studio.
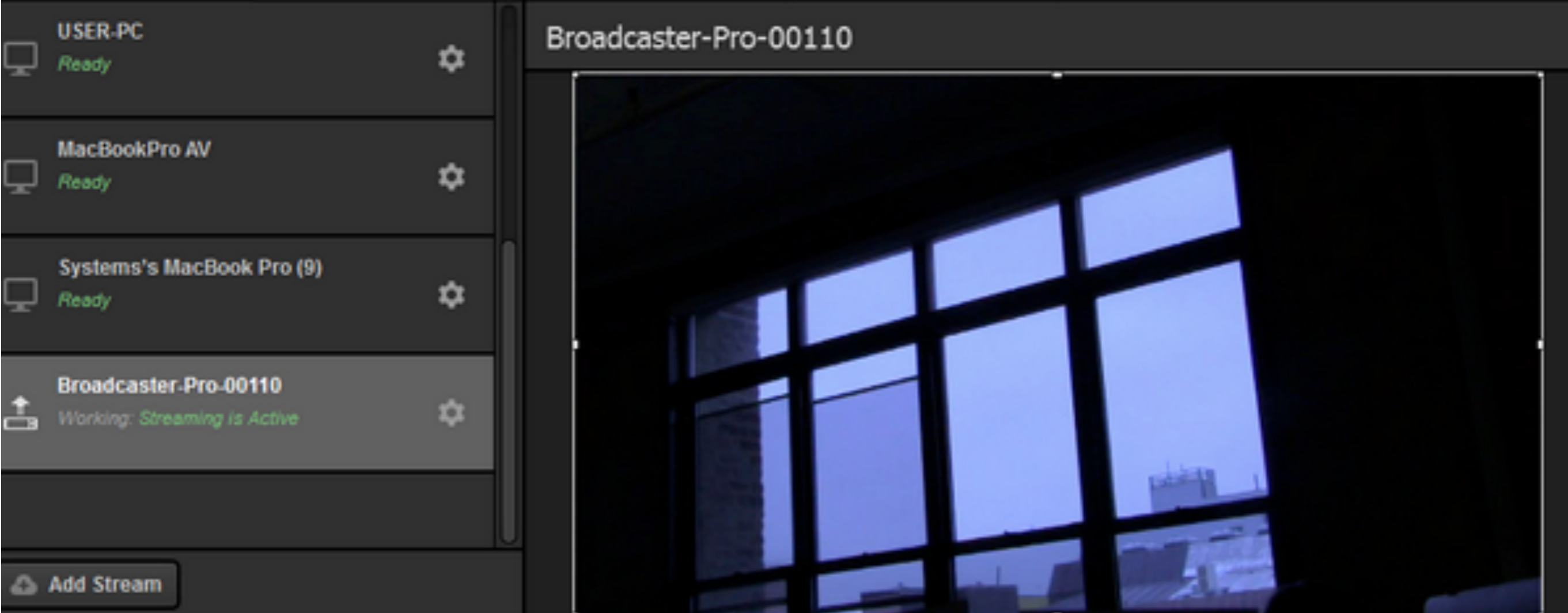
In Livestream Studio, you will see your Broadcaster Pro appears as a source under the Remote Camera module. Click on it to preview it.

Adding remote cameras

GoPro cameras

livestream

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).

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.

Check your system's network
settings to ensure that Wi-Fi
is enabled and connected to
your GoPro camera.
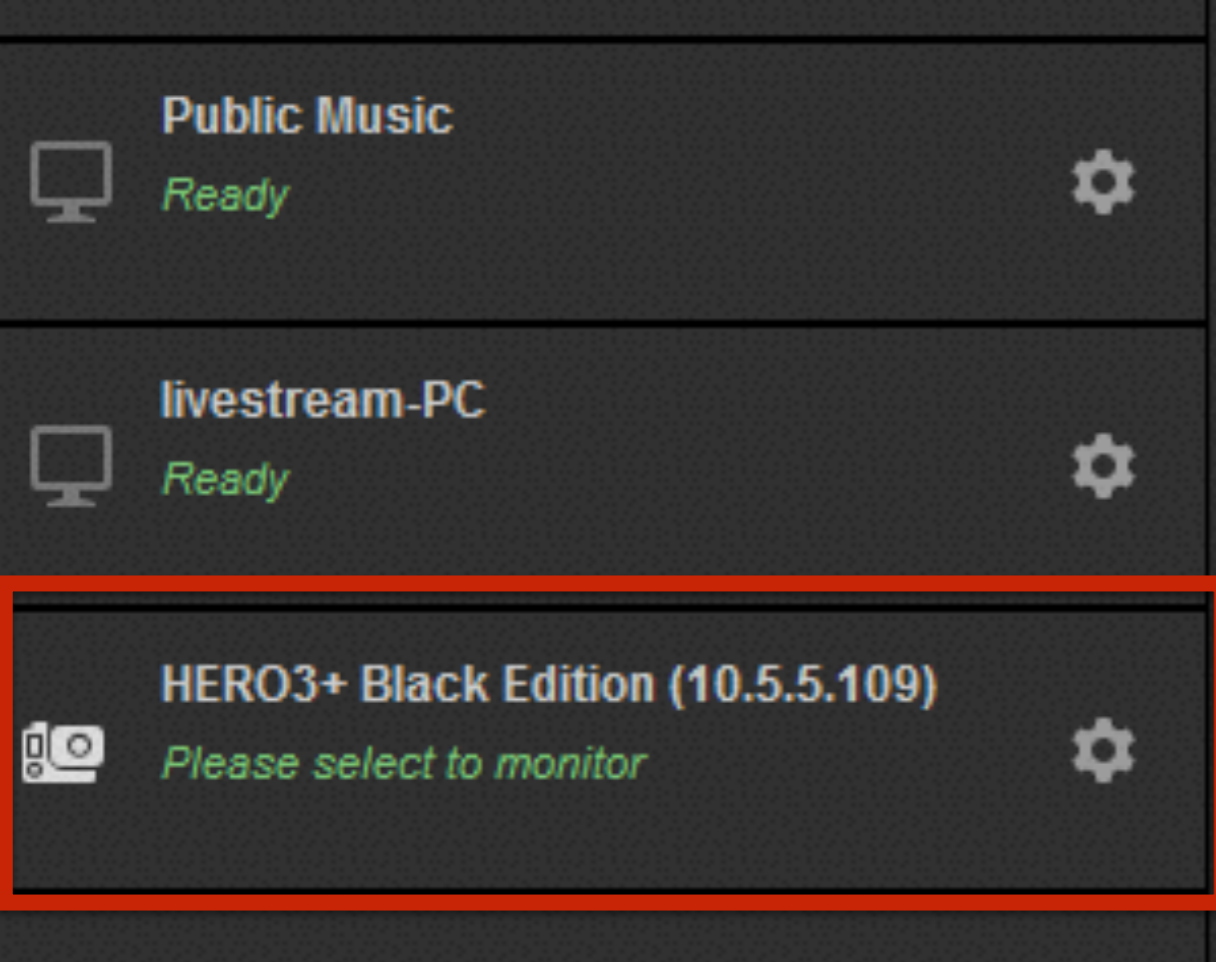
Once your system recognizes the GoPro's Wi-Fi, the GoPro will appear as a source in your remote camera modules.

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

Adding remote cameras

Live interview

livestream

RTMP Stream

Zixi Stream

Use

Apple Airplay Receiver

Live Interview
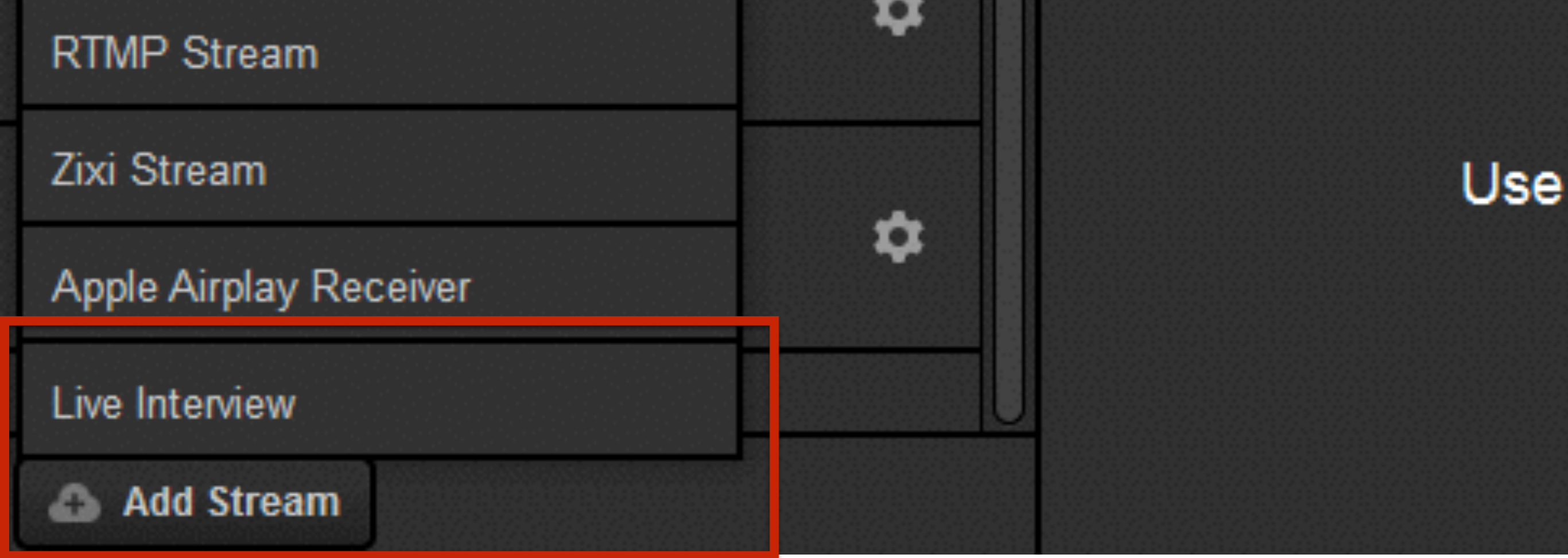
☁ Add Stream

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

livestream

Status

Waiting for guest(s) to connect...

Live Interview Link

| https://interview.livestream.com/interview/? | **COPY** |

Moderator Link

| https://interview.livestream.com/interview/r | **COPY** |

Remove from list

Send "Live Interview" link to guests.

You will be connected once they join the 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.

livestream

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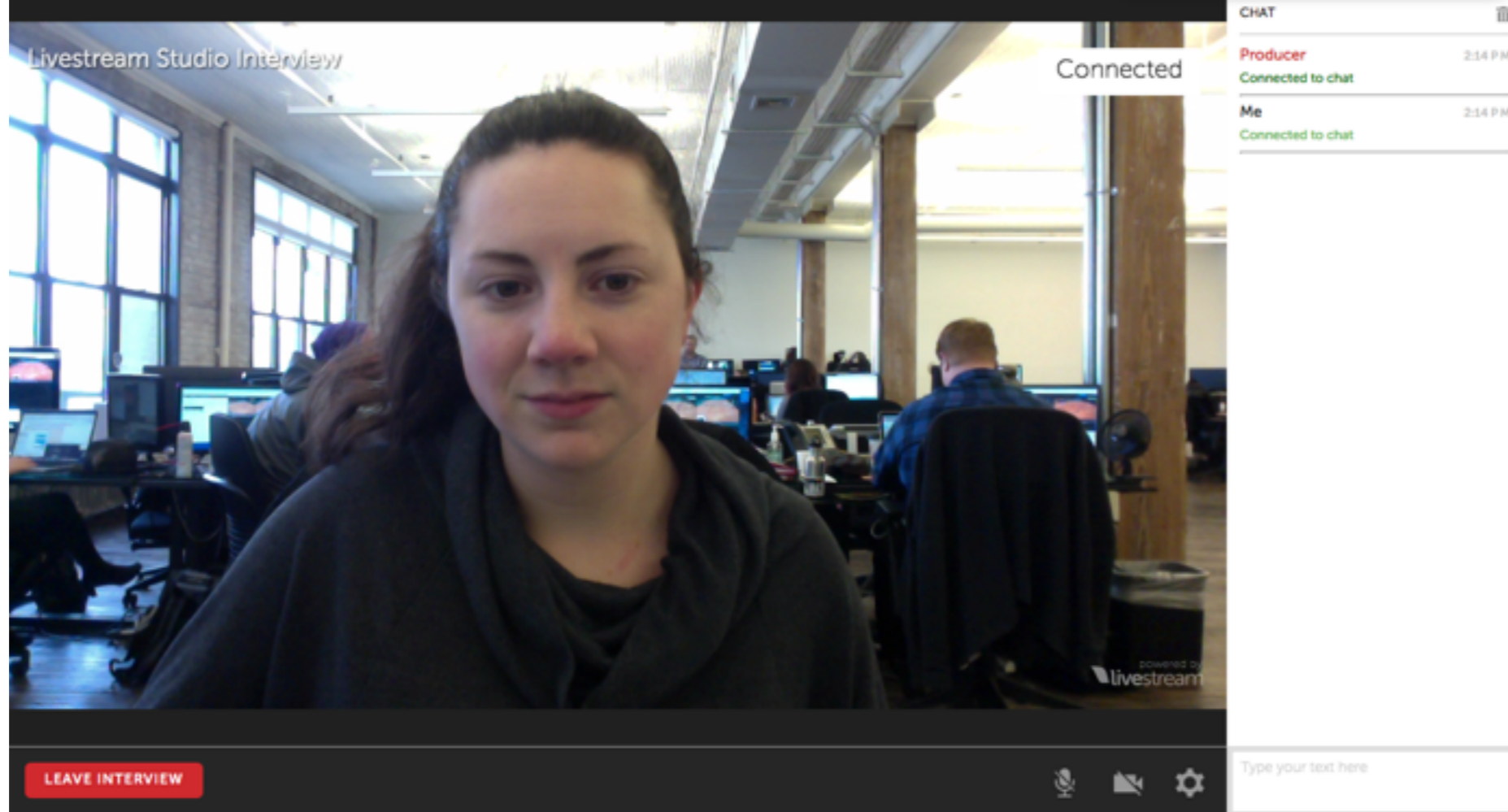
The guest will continue to see the camera feed, but will also see that a connection has been established and that an internal chat can be accessed.

Live Interview

Select guest (1) ▾

Chat 🗑

Status
Please, select guest from the list

⚠ No interviewees selected

Please select guest from the list.

Emily   4:12 PM
Connected to chat

Emily   4:12 PM
Connected to chat

Live Interview Link

https://interview.livestream.com/interview/?   COPY

Moderator Link

https://interview.livestream.com/interview/r   COPY

Type your text here

Remove from list

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

livestream

‹ Back

Live Interview

Select guest (1) ▲

☐ Chat 🗑

Status
Please, select guest from the list

⚠ No interviewees selected

None

Emily

Emily 4:12 PM
Connected to chat

Live Interview Link

Please select guest from the list.

Emily 4:12 PM
Connected to chat

https://interview.livestream.com/interview/? | **COPY**

YOU 4:12 PM
Hello

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.

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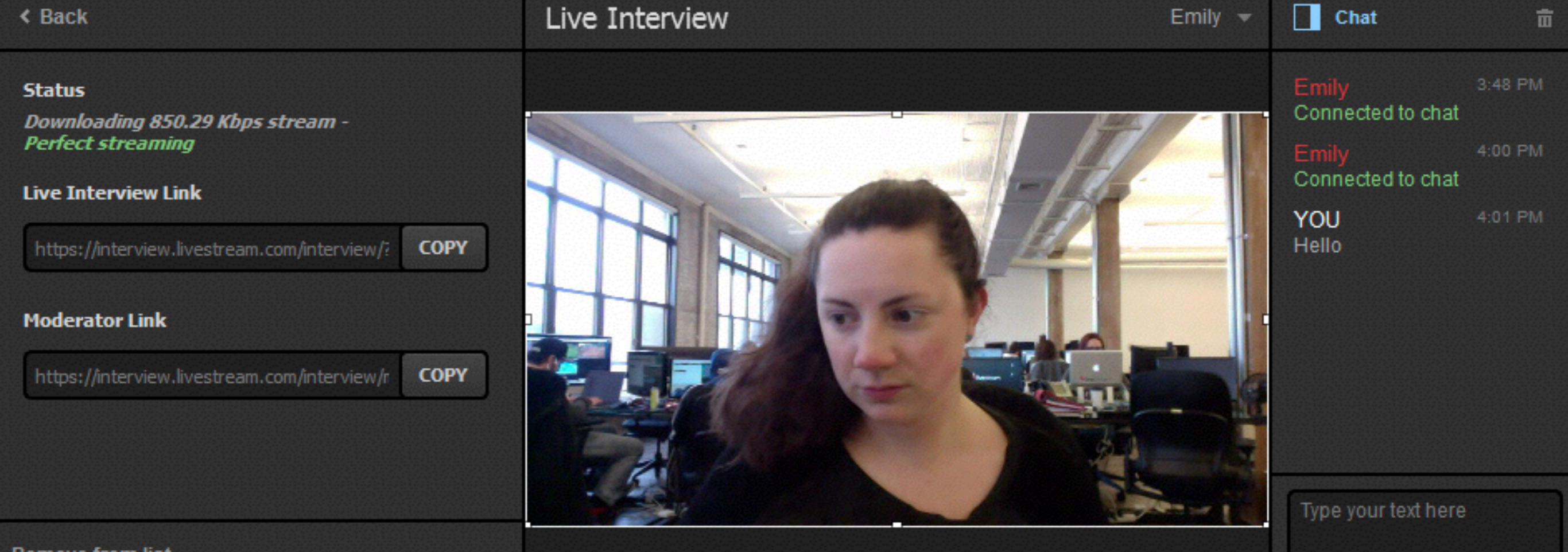
After clicking the name, you can use the guest's camera as a remote camera source, which you can switch to whenever you are ready.

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.

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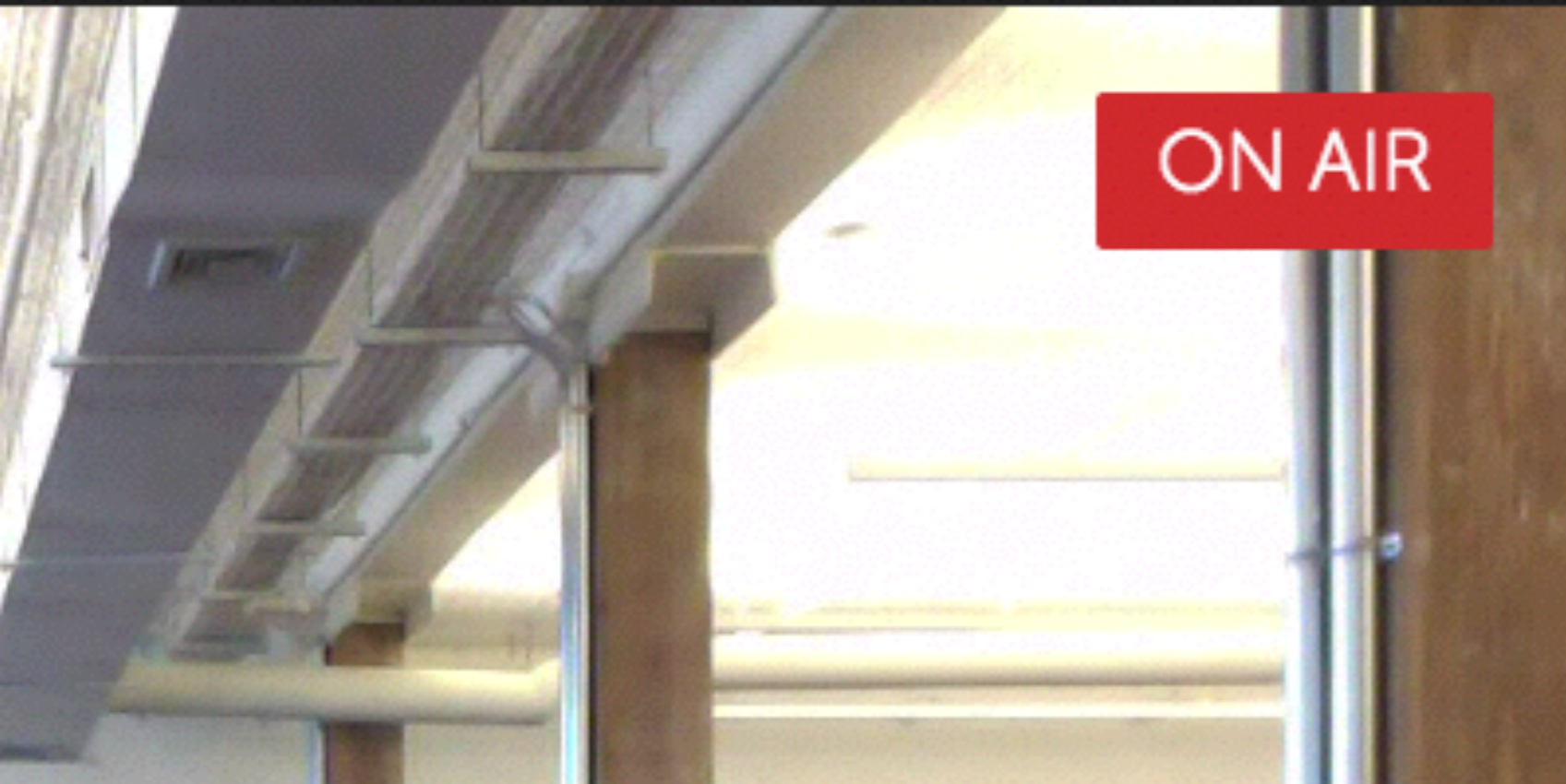
When the guest's camera is switched into Program, the guest will see a red 'On Air' notification in the upper right corner.

Note: The guest will hear all other Program audio but by default, will not hear guest audio.
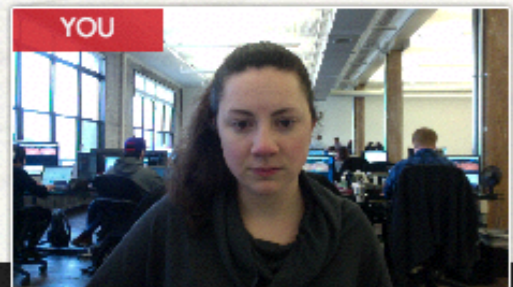
The guest has controls at the bottom of the screen that allow the guest to mute his/her microphone or stop the guest video from sending. The gearwheel will allow the guest to change video and audio sources.
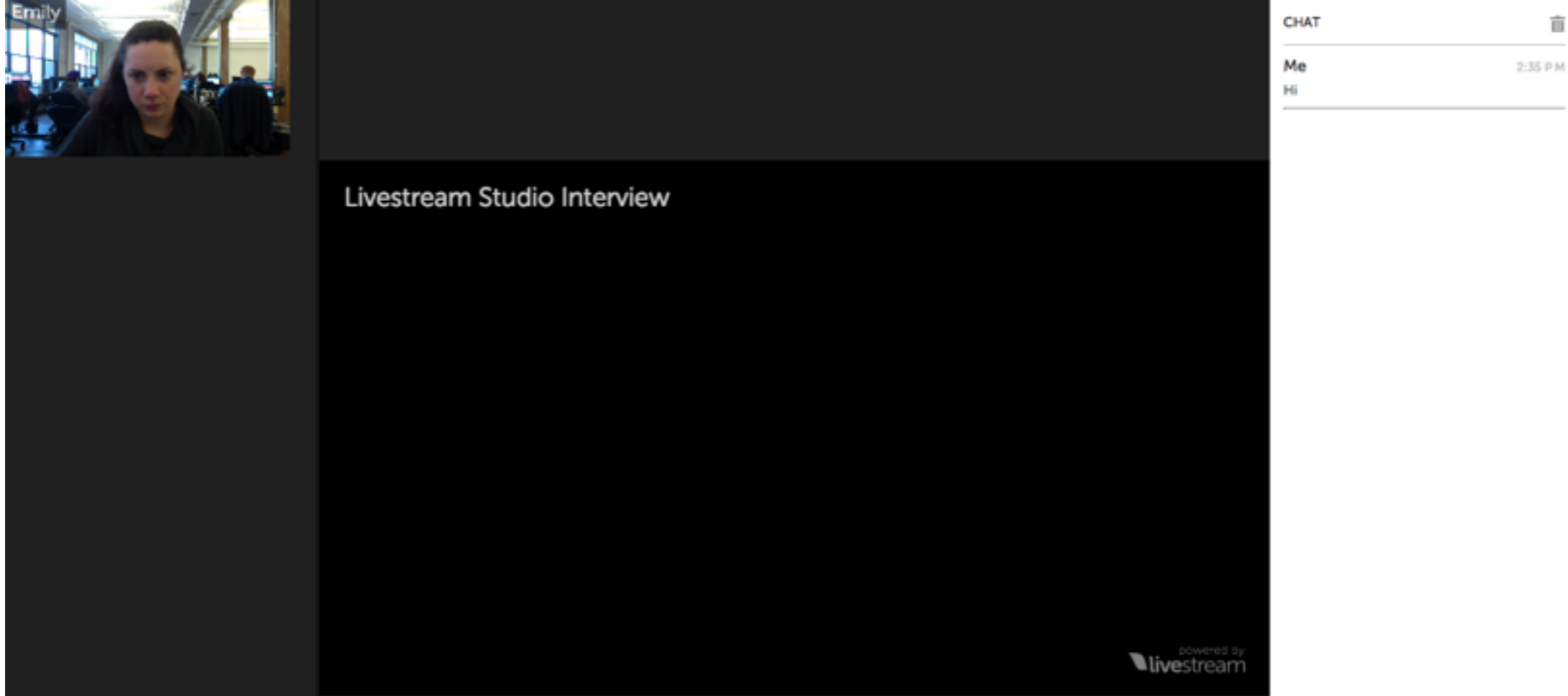
The moderator URL can be given to someone who can choose between different guests' sources. The moderator's camera will not be shown, but the moderator will be able to hear audio from all connected interviewees.
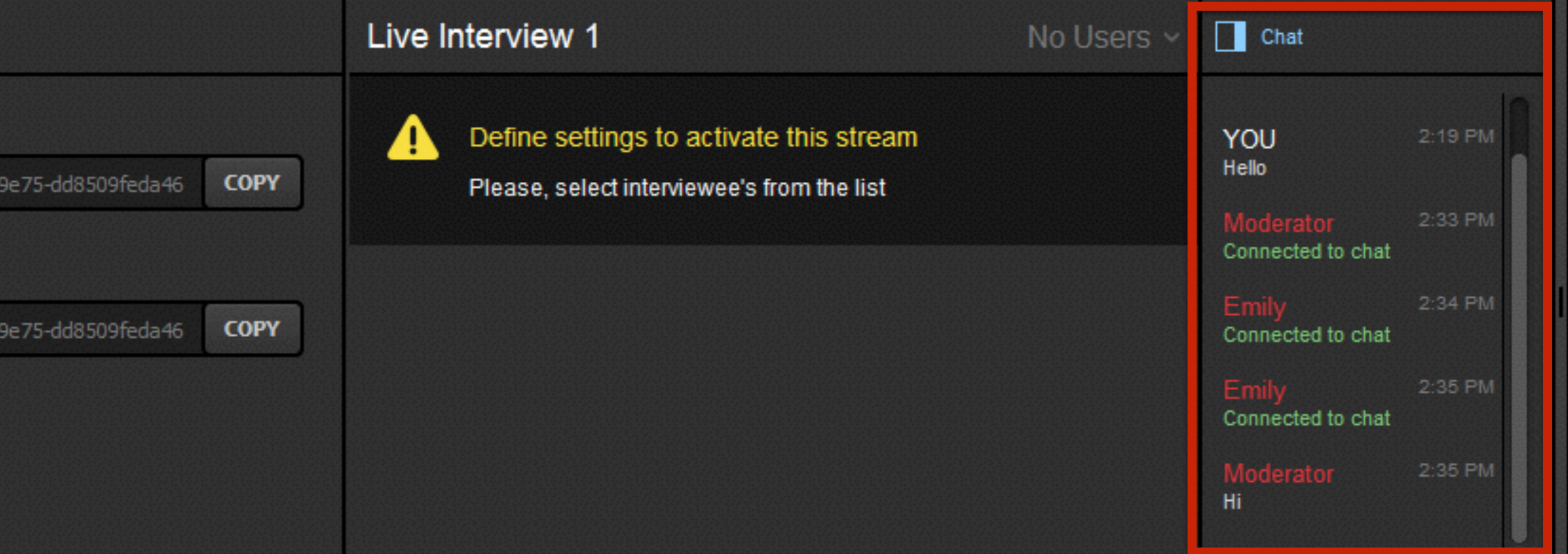
The moderator is also connected to the chat to communicate with all guests and the producer.
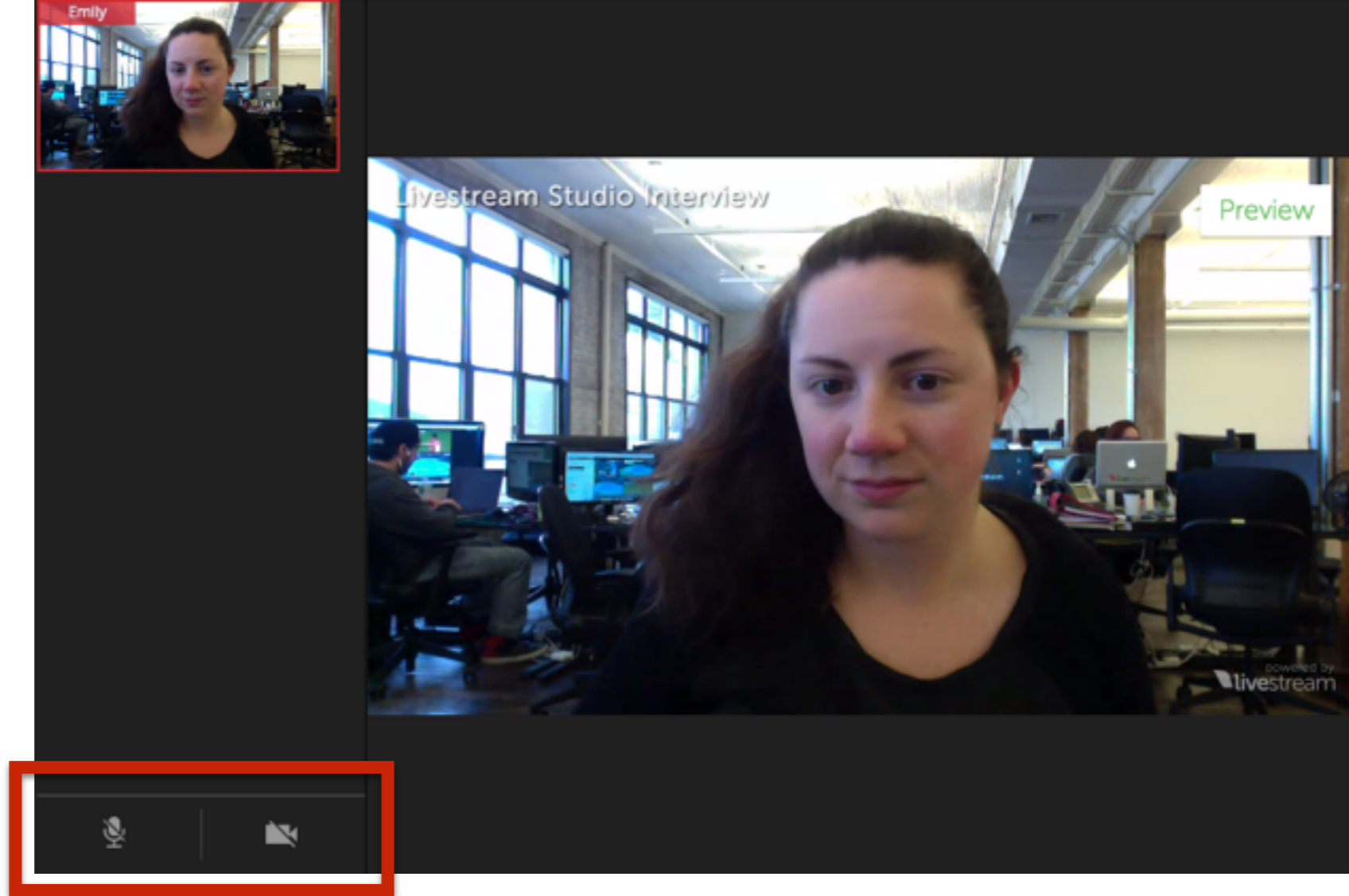
The moderator can also mute and pause selected guests' camera sources by using the controls on the bottom left of the screen.

Adding remote cameras

Apple Airplay Receiver

Event from new.livestream.com

RTMP Stream

Zixi Stream

Apple Airplay Receiver

Live Interview

☁ Add Stream

Use other devices as wirel

LEARN MO

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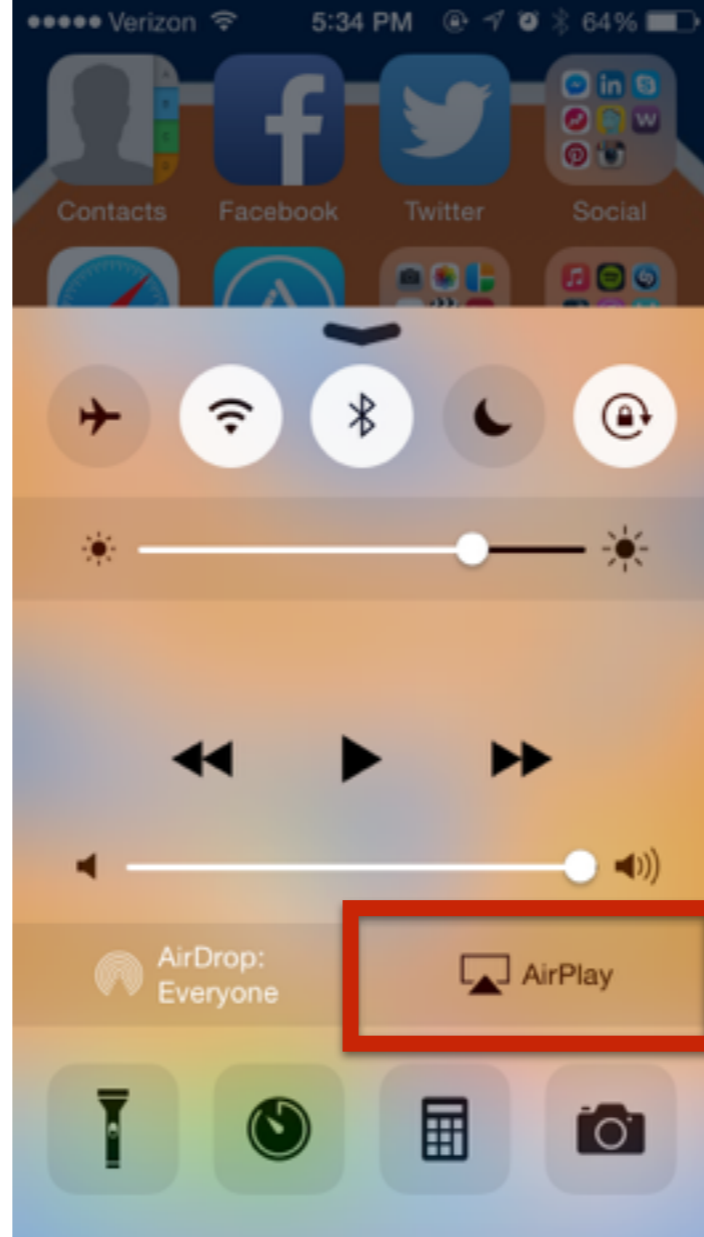
Livestream Studio will prompt you to turn
on AirPlay on your iOS device. On an
iPhone, this can be done by swiping up
from the bottom of the screen.

With AirPlay Mirroring you can send everything on your iPhone's display to an Apple TV, wirelessly.

When you press the AirPlay icon, a menu will appear on your iPhone prompting you to select a source.
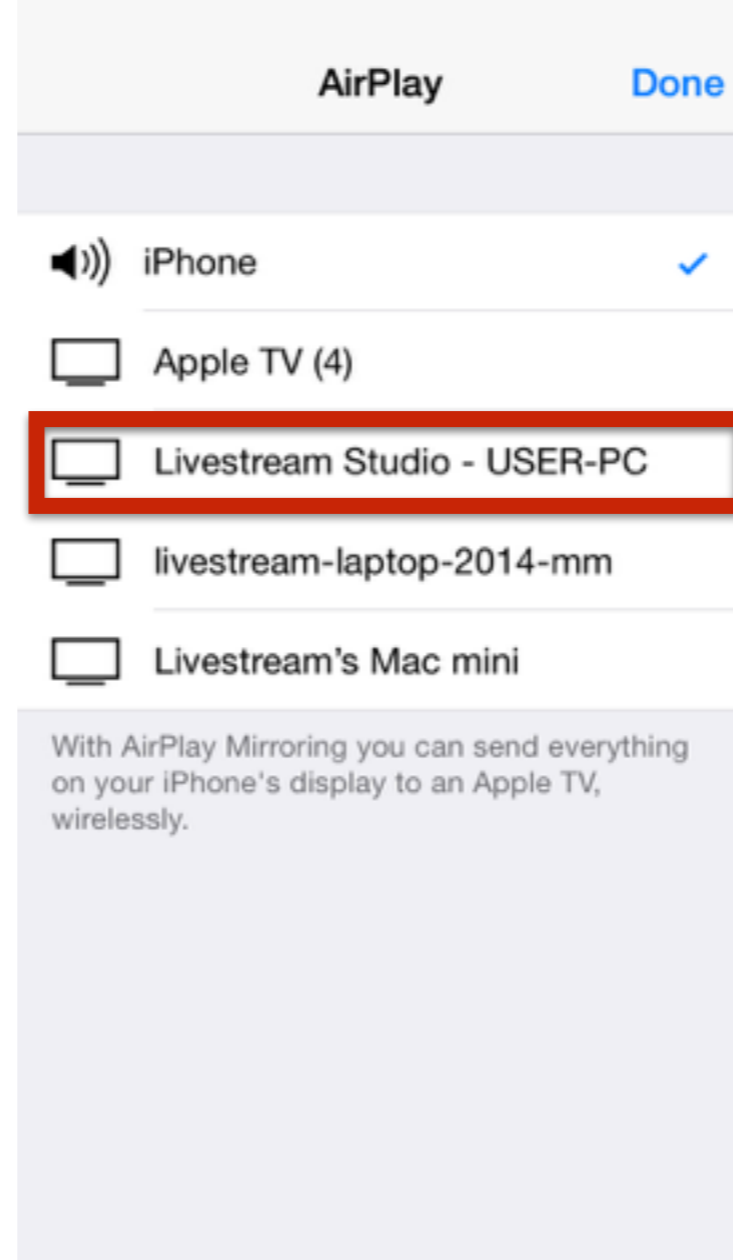
Livestream Studio will indicate
your system's name; select that
from the menu.

When you select it, enable mirroring.

Status

Downloading 227.32 Kbps stream -
Perfect streaming

Name

Livestream Studio - USER-PC

Remove from list

AirPlay   Done

🔊 iPhone

▢ Apple TV (2)

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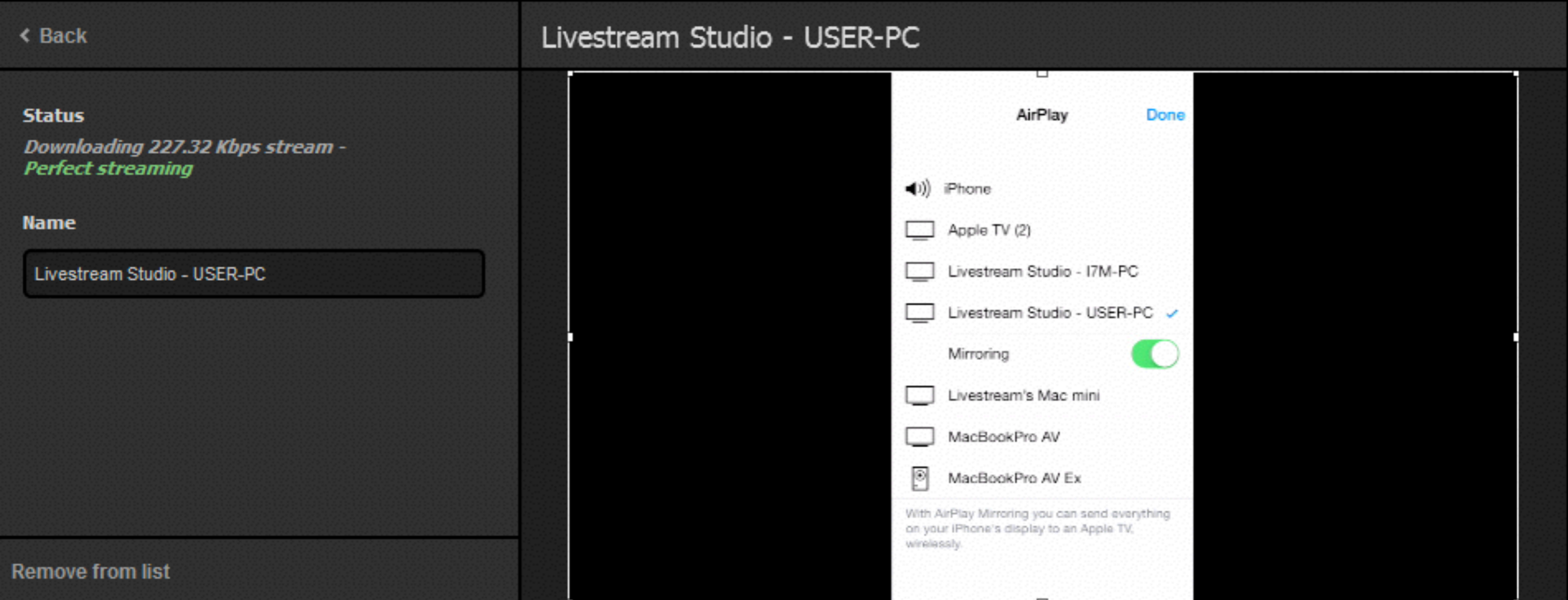
After a few seconds, your device's
screen will appear as a remote camera
source, which you can then switch
into Livestream Studio as desired.

livestream

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.'

Clicking this will give you three options. Start with 'Event from new.livestream.com.'

Email Address

Password

Login ☑ Remember Me

Setup your Livestream account in settings

Remove from list

You will see an option to log in. You should use a different Livestream account from one you may be using to stream from Livestream Studio.

livestream

Status

Auto event mode - No live event now - polling for new live event

Select Event

Auto ▾

When "auto" is selected Livestream Studio will select the most recently live event.

Bitrate Selection

◉ **Highest**

Livestream Studio will automaticaly download the highest bitrate quality this event is streaming.

◉ **Closest to**   0   **Kbps**

Once you are logged in, Livestream Studio will start polling for any live events on your account. You can also select a specific event to take a stream from.

Bitrate Selection

⦿ **Highest**

Livestream Studio will automaticaly download the highest bitrate quality this event is streaming.

◉ **Closest to** [0] **Kbps**

Livestream Studio will detect the bitrate his event is streaming and download the bitrate closest to the number you type in the field above.

You also have the option to have Livestream Studio take in the highest bitrate possible or as close to a specific bitrate as possible.

Status
Downloading 133.09 Kbps stream -
Perfect streaming

Select Event

Auto (Skyline) ▾

When "auto" is selected Livestream Studio
will select the most recently live event.

Bitrate Selection

🔘 **Highest**

Livestream Studio will automaticaly
download the highest bitrate quality
this event is streaming.

⭕ **Closest to** [0] **Kbps**

When you go live on that
Livestream account from a separate
encoder, the stream will appear in
the module; you should expect a
delay of about ten seconds.

livestream

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

RTMP Player 1

Status
Please, enter a RTMP stream URL

Stream Url

Name

RTMP Player 1

Remove from list

⚠ Define Stream URL to activate this stream.

Fill in the Stream URL text box in settings.

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

livestream

Status

Downloading 111.32 Kbps stream -
Perfect streaming

Stream Url

rtmp://cp86438.live.edgefcs.net/live/livestream6_2
74@41365

Name

Remove from list

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

Studio Graphics Store

Lower thirds, Twitter overlays, scoreboards, and countdowns designed by the Livestream Studio community!

Browse Graphics →
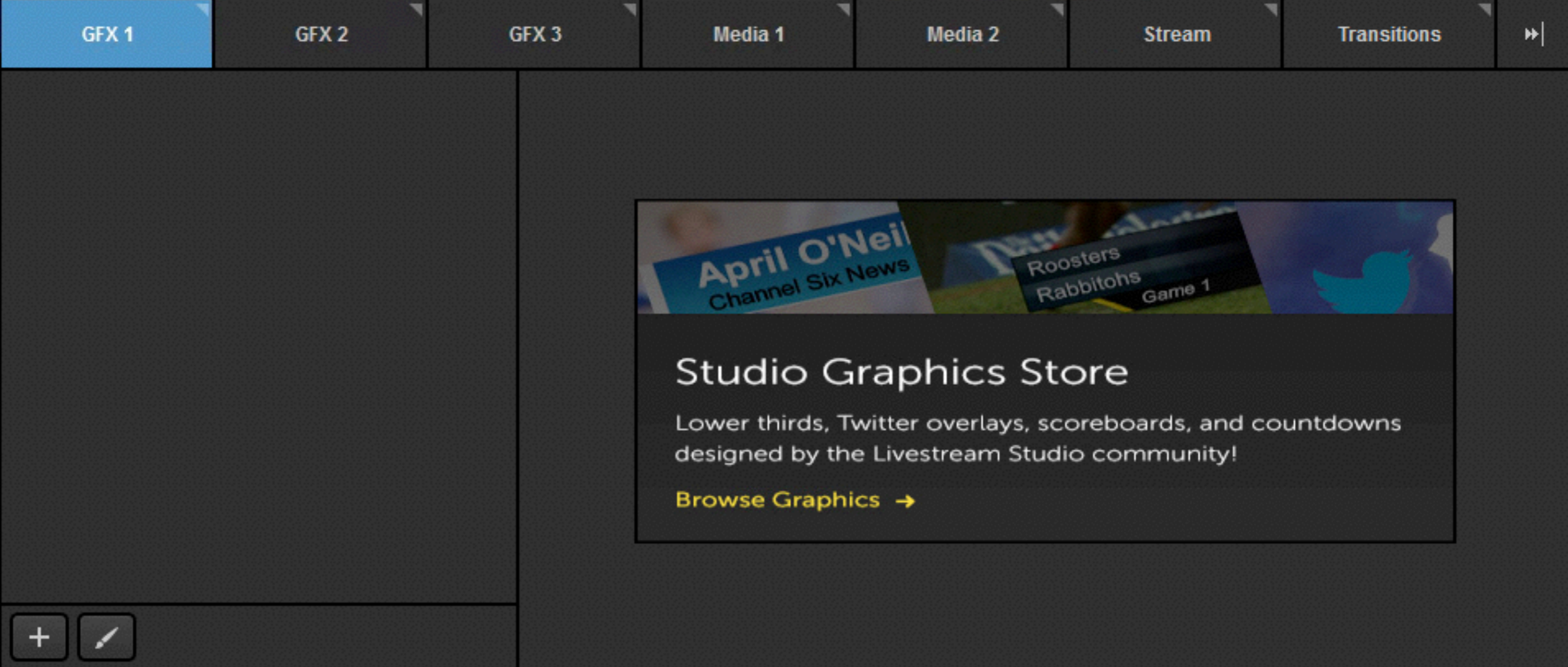
Livestream Studio gives you the option to use three graphics overlay channels, all of which can include multiple layers of static or data-driven graphics.
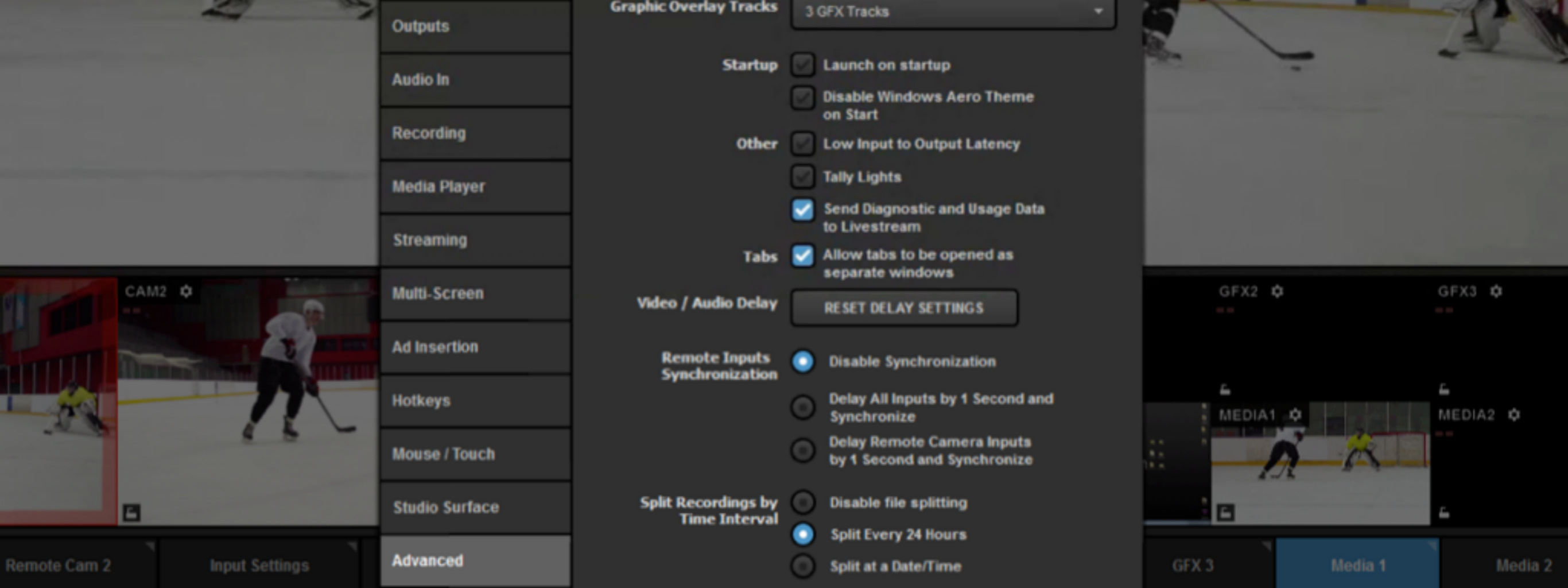
To ensure you have the desired number of graphics overlay channels available, go to your settings and navigate to the Advanced tab.
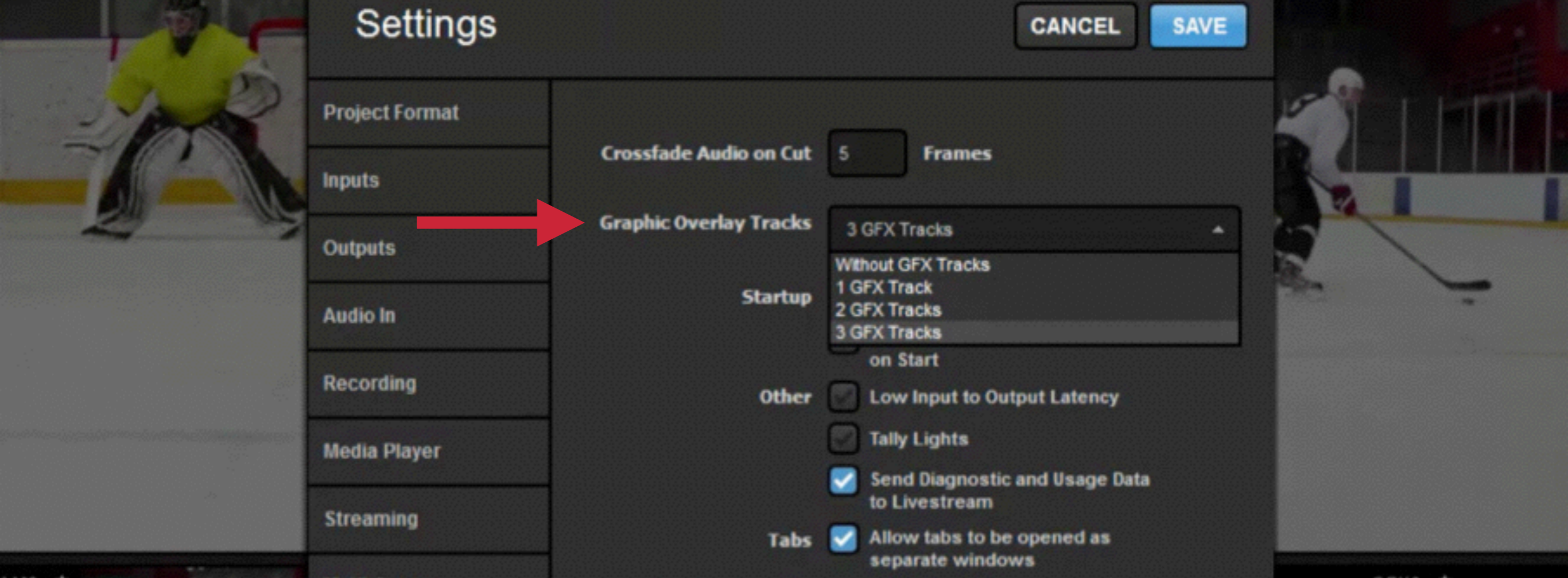
The second option is 'Graphic Overlay Tracks.' This is where you select the number of GFX tabs you want available to you in the Livestream Studio interface.

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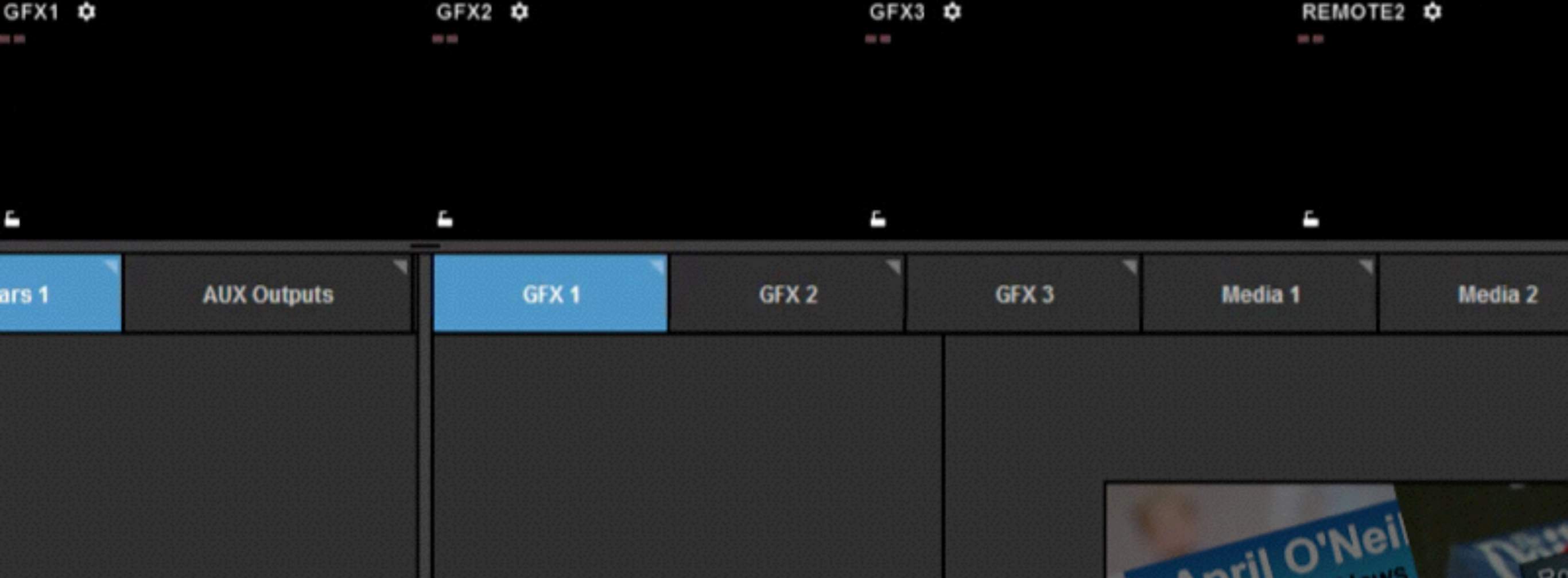
After saving your settings, you will
see the desired number of GFX
channels and any GFX channels
added to your multi-view.

Adding graphics overlays

Adding and designing a new layer

livestream

Studio Graphics Store

Lower thirds, Twitter overlays, scoreboards, and countdowns designed by the Livestream Studio community!

Browse Graphics →
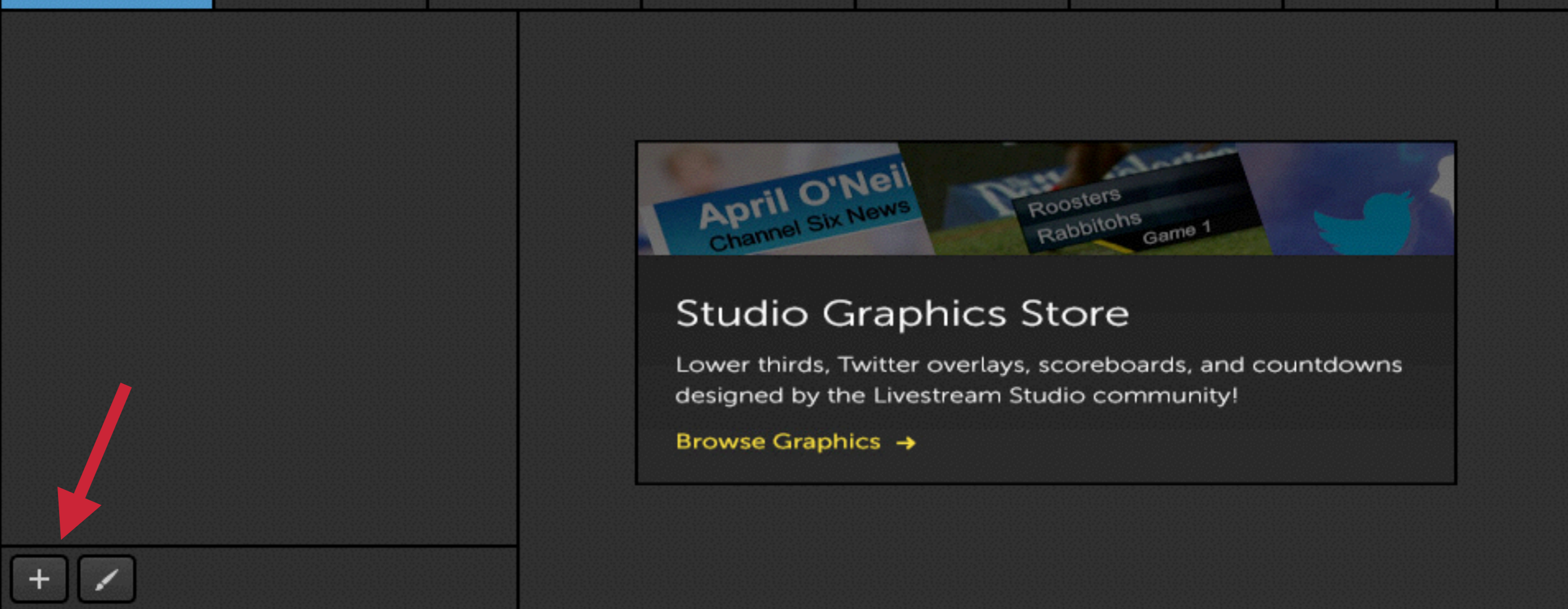
The first step in adding graphics overlays to the GFX channel is adding a layer. Press the '+' button to get started.
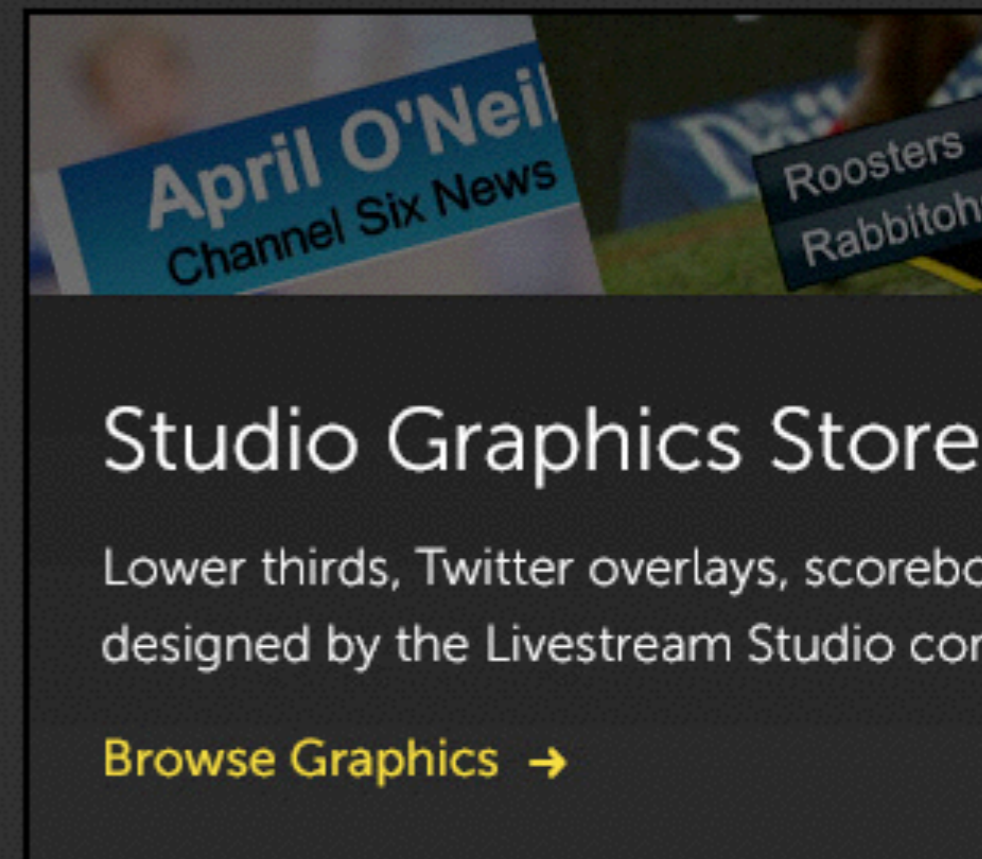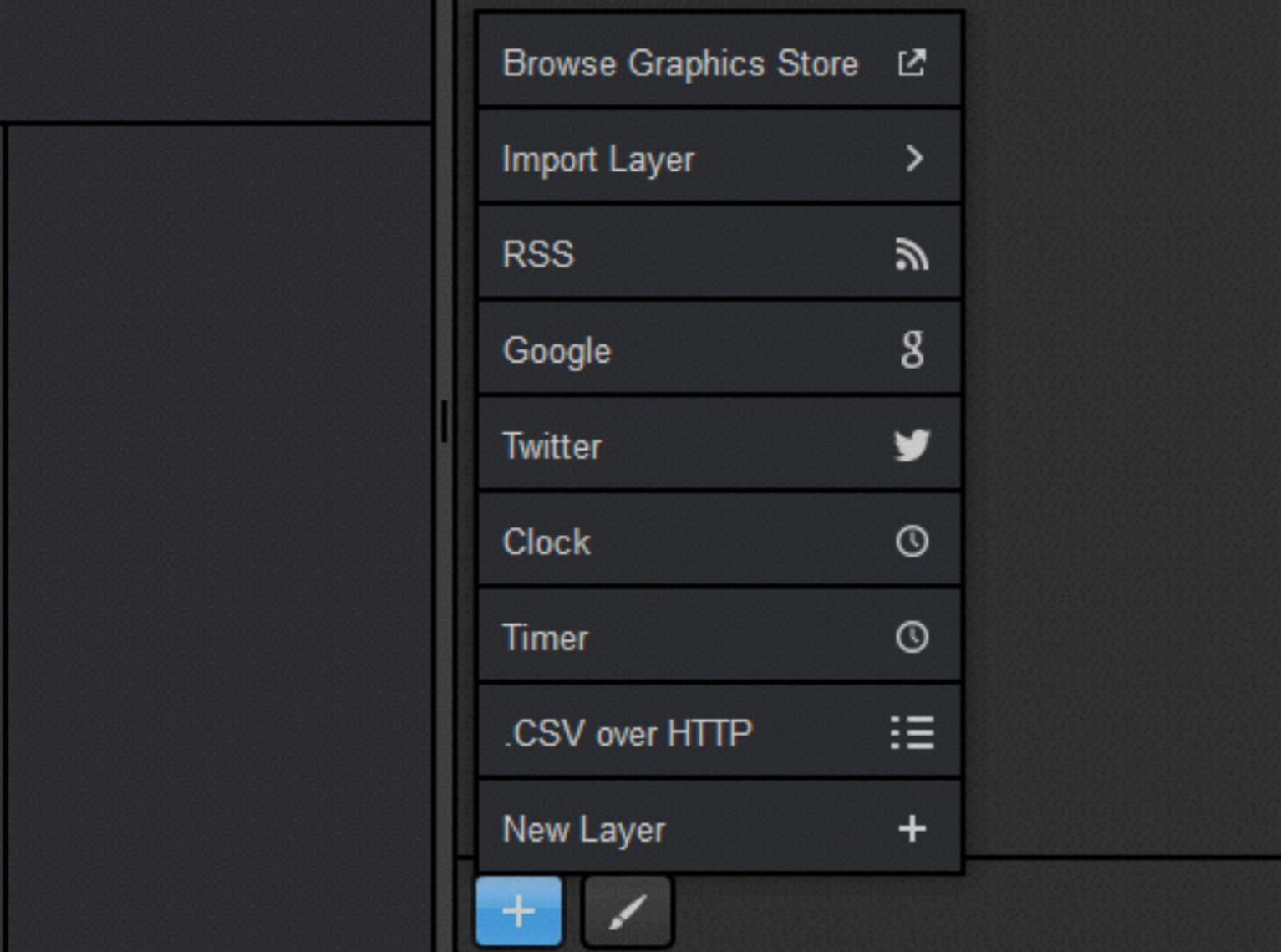
Many options will pop up. To get
started, select 'New Layer' at the
bottom of the list.

No data fields in this layer

+ COLUMN

⬆ AUTO PUSH/PULL

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

livestream
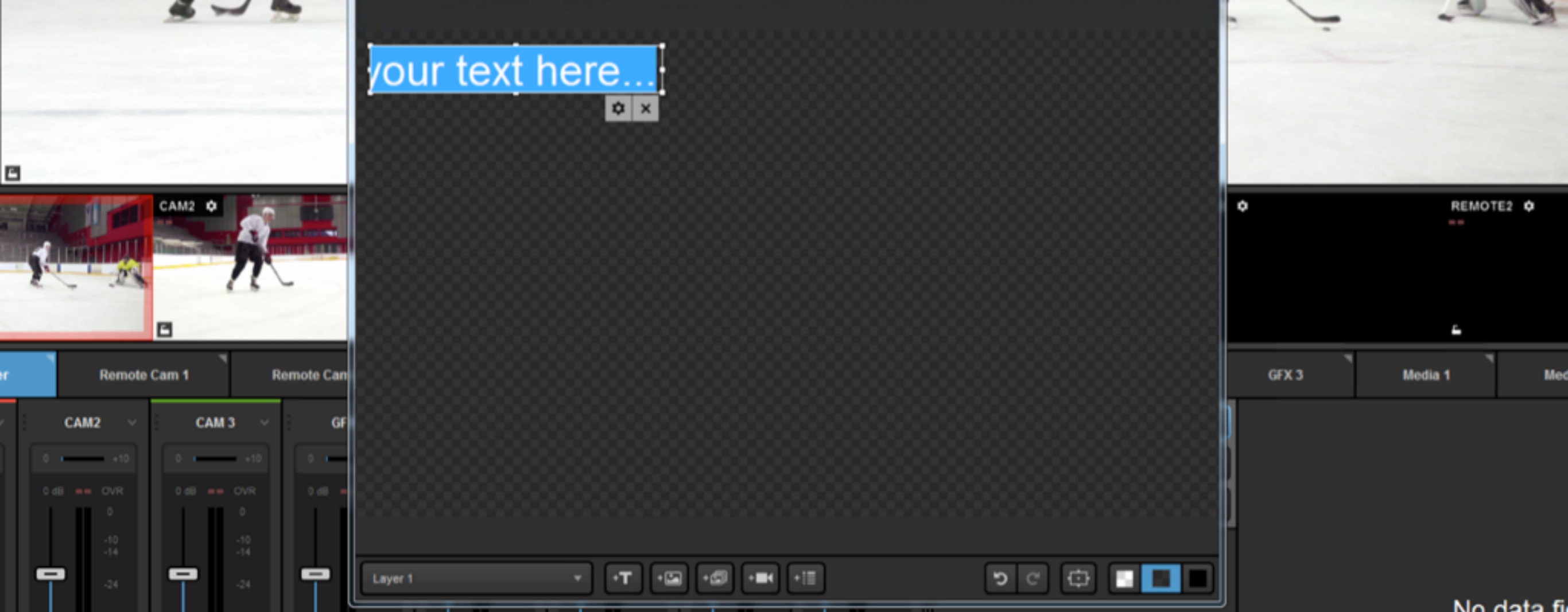
Clicking the '+T' button will add
static text to your graphics layer.
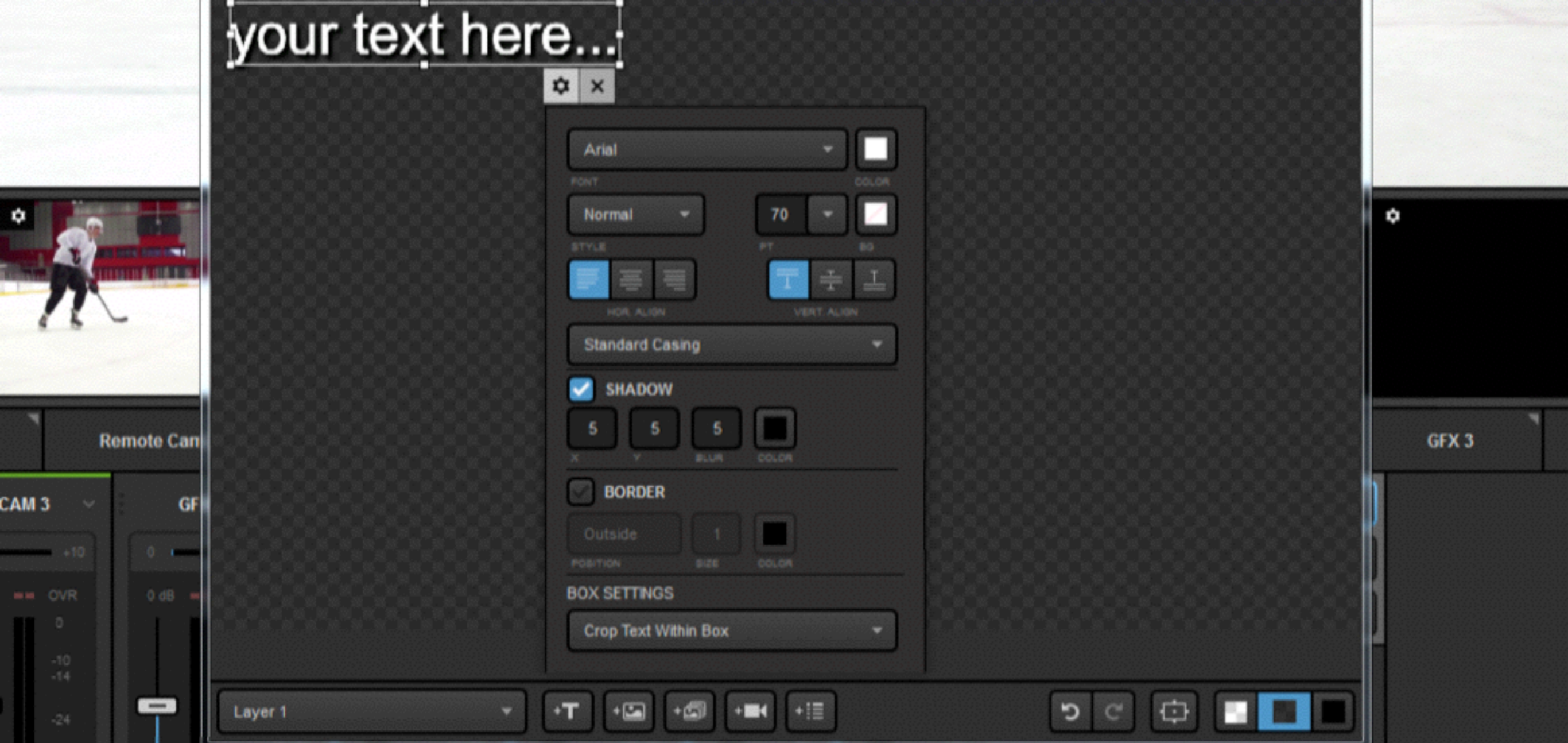
Click the attached gearwheel button for editing options (font, size, color, etc.)
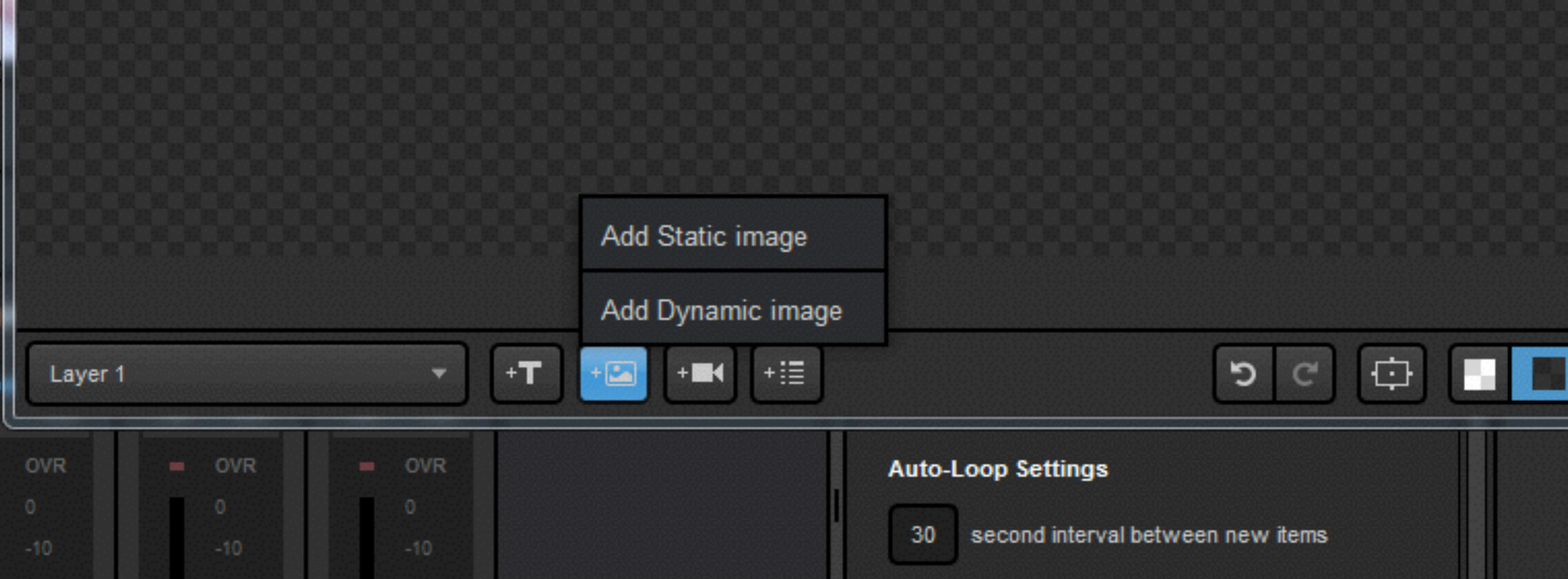
The next button allows you to add either a static or dynamic image to your graphics layer.
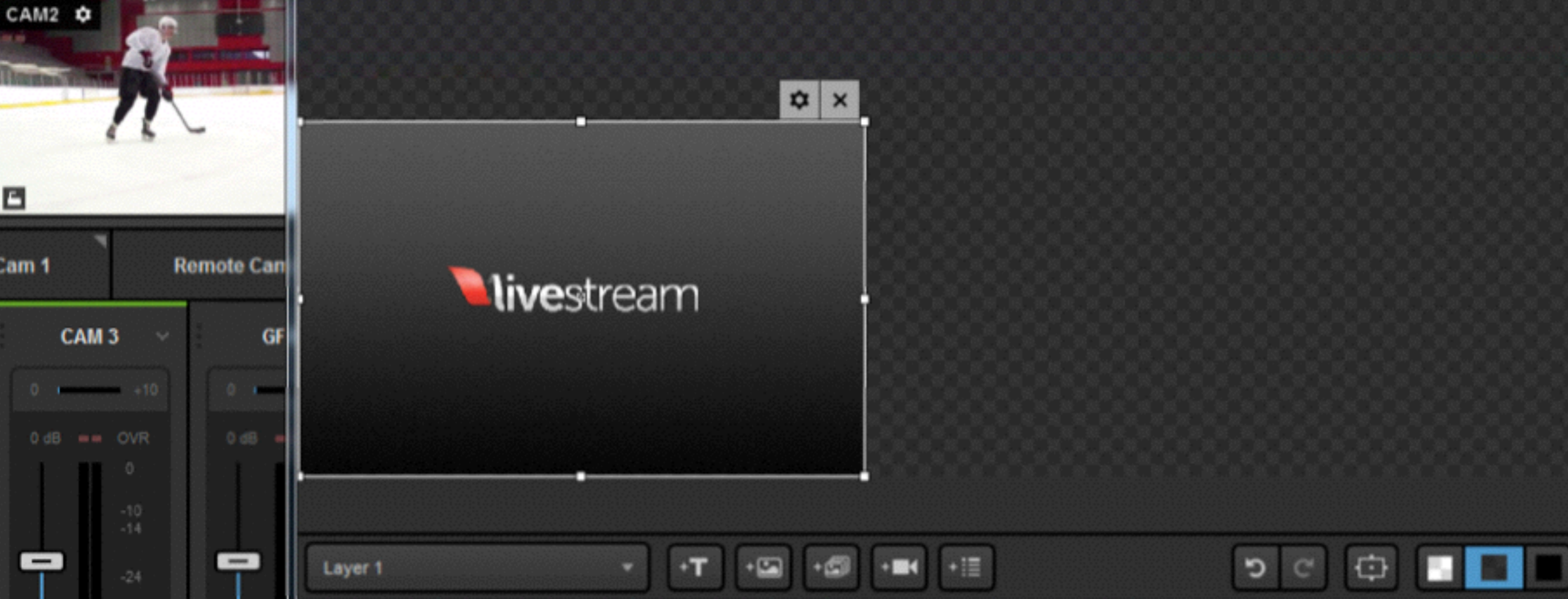
A static image is any image file you can import, which will always be visible when that graphics layer is also visible. The image will not change.
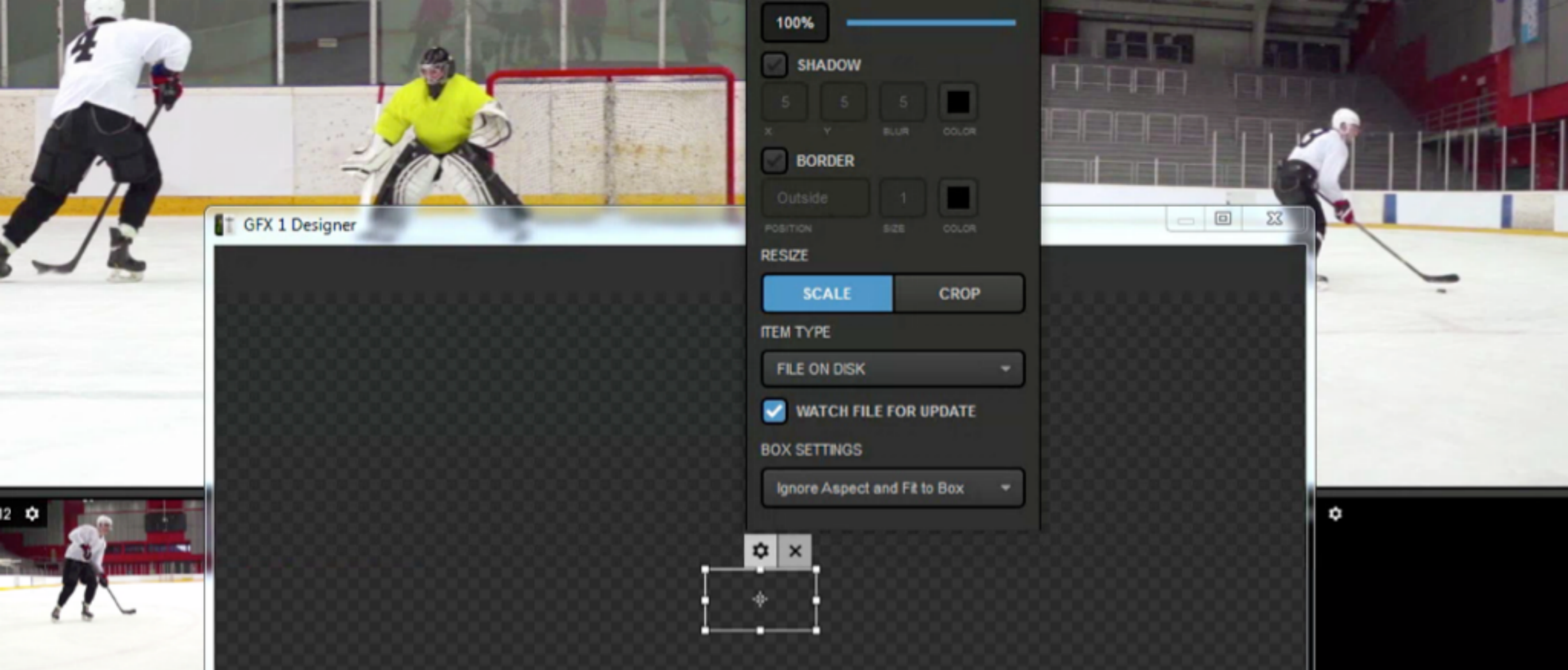
A dynamic image will change if the hosted file is also changed. In the designer, you choose the file where it is located and its dimensions.
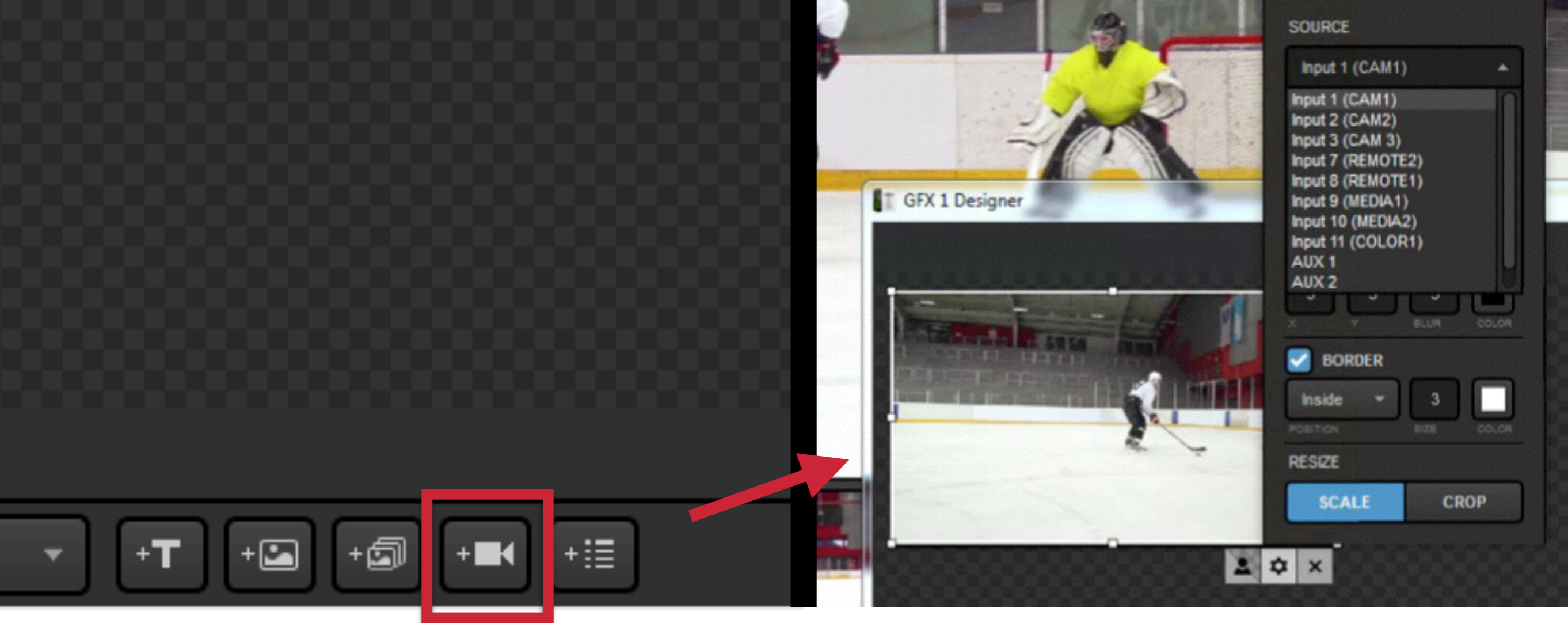
The next option you can add is a video source. Clicking this will allow you to choose which video source you want to include in your graphics channel, place it, size it, etc.
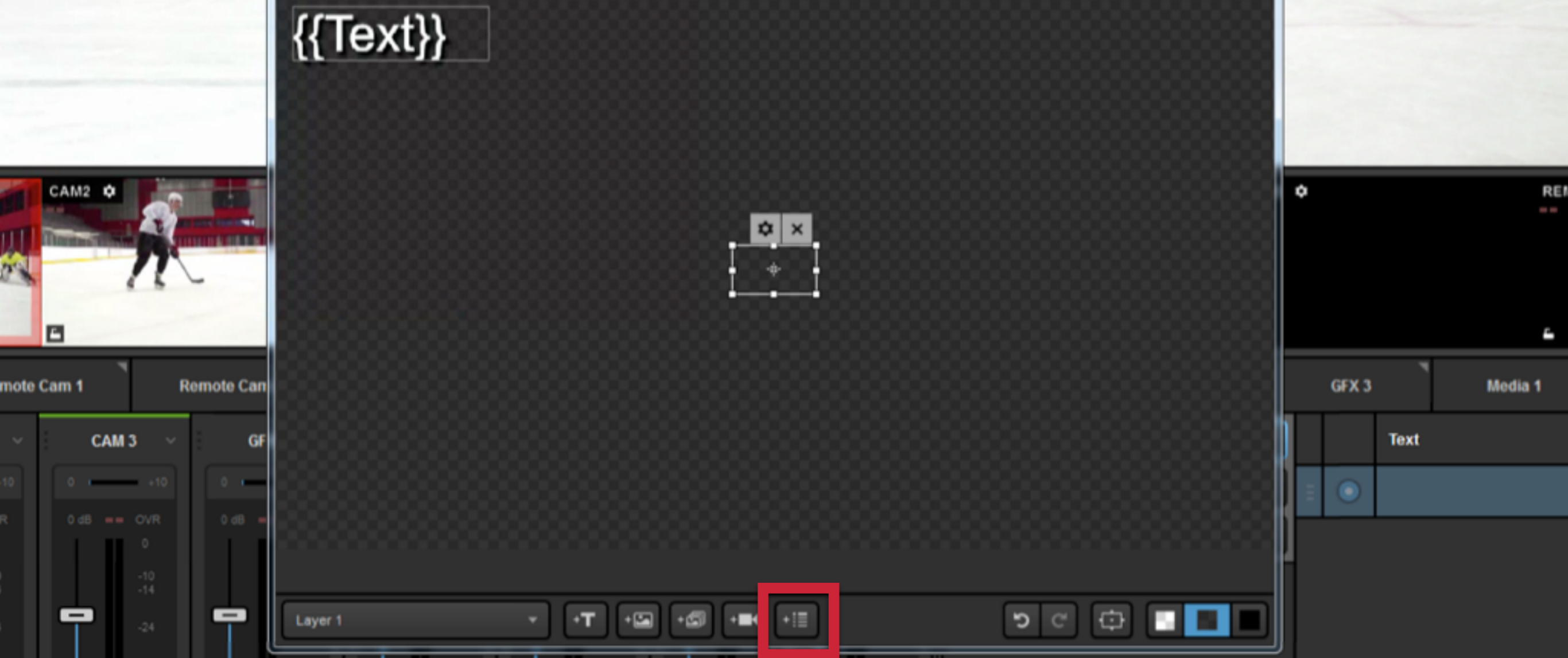
The following button allows you to add text or image data fields. Here is where you set where assets will be, their sizes, font colors, etc. The content of those fields is added in a later step.
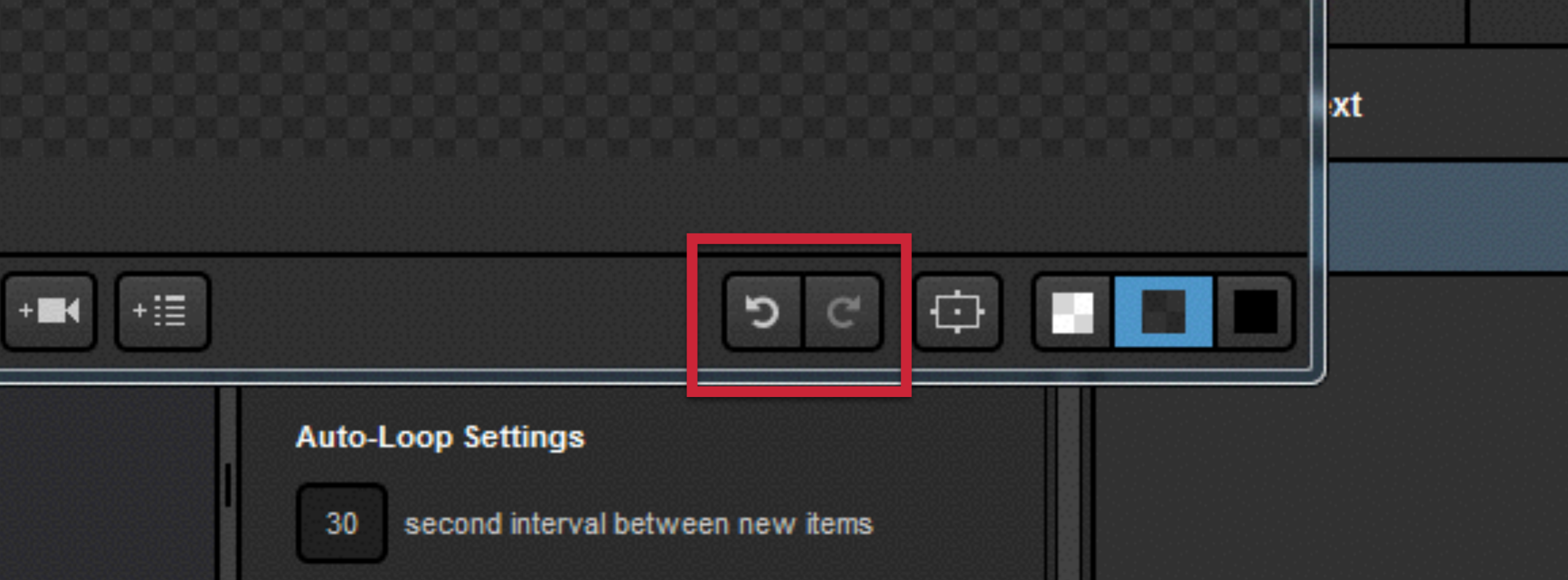
Further to the right, the two
arrow buttons are for 'Undo' and
'Redo.'
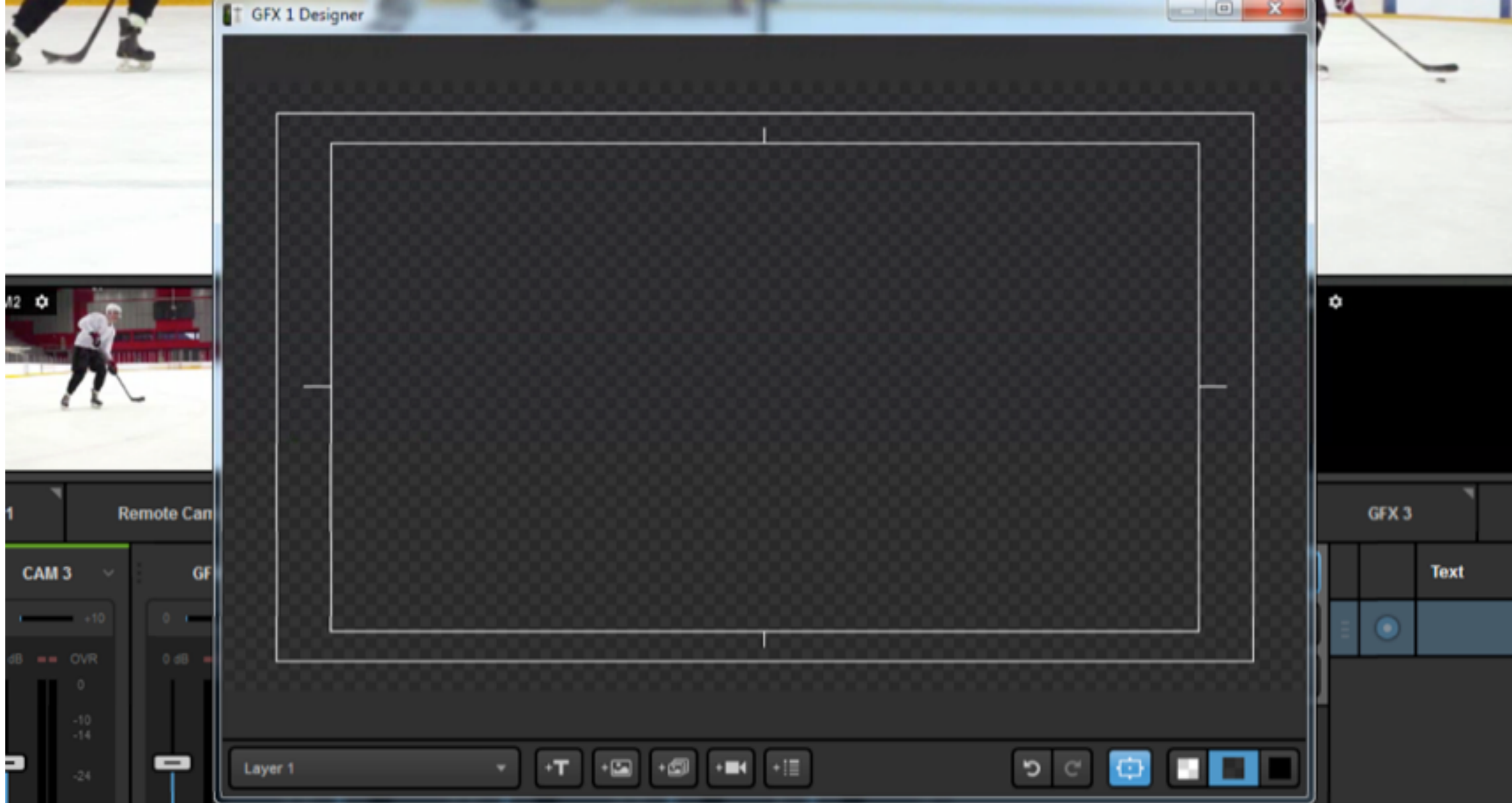
The next button will provide you with a box identifying the title safe (inner box) and action safe (outer box) areas. This lets you know that your graphics will not be cut off the screen.
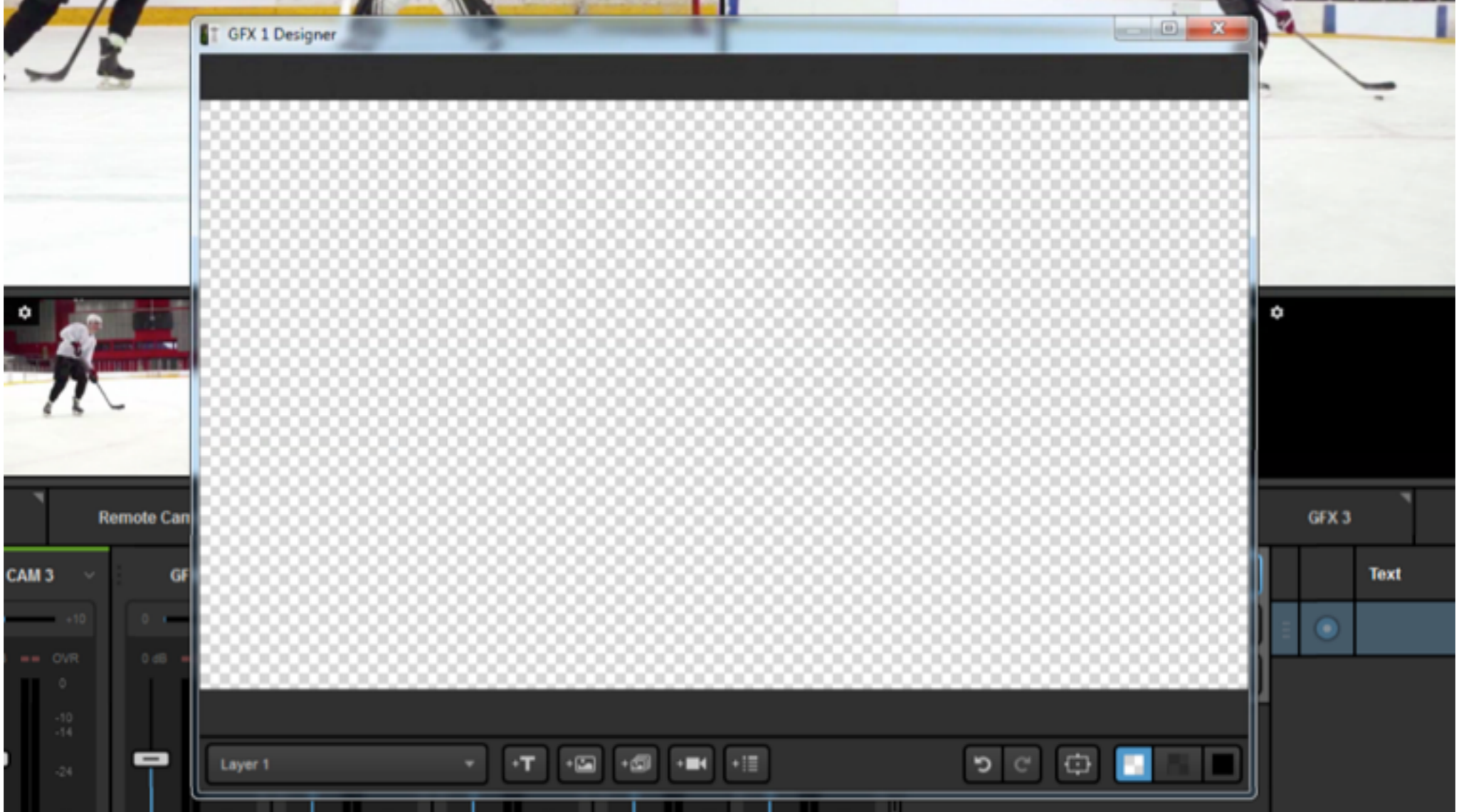
The next three buttons allow you to change how the GFX Designer displays transparency. This has no impact on the appearance of your graphics overlays.

Once you have your graphic designed, you may decide you want to switch where some of your data fields are located.
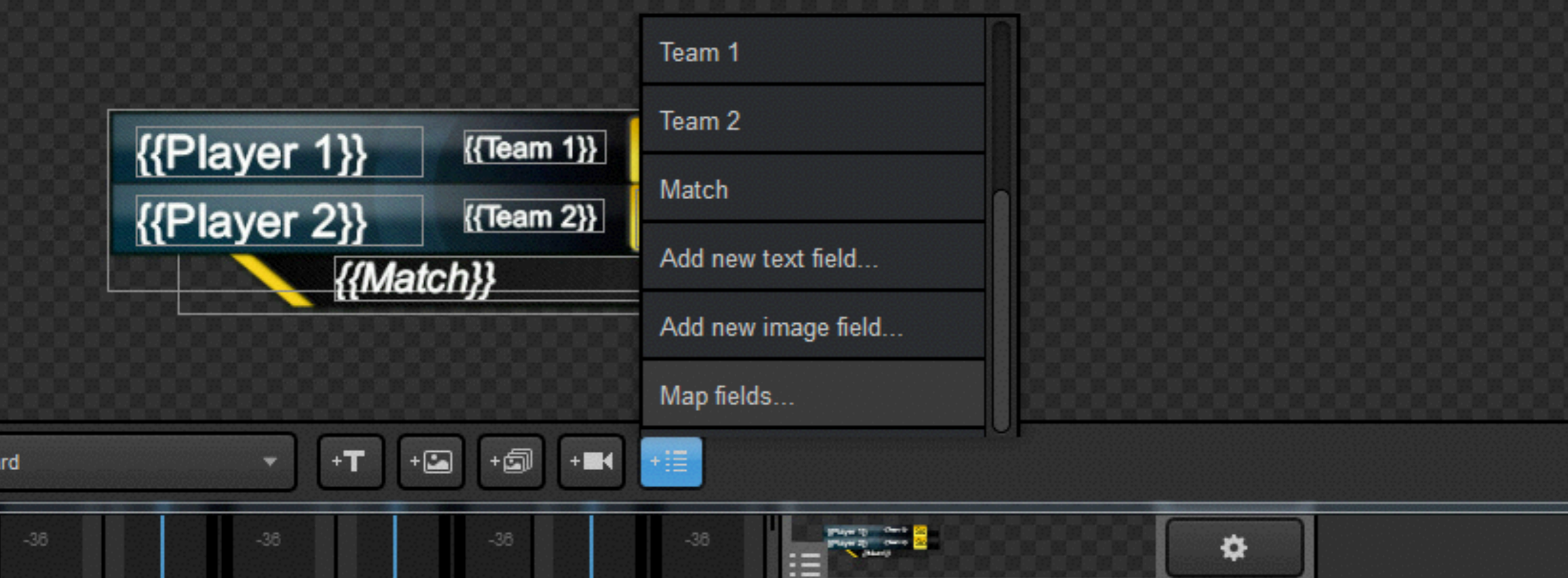
To do this, click on the list icon in the GFX Designer. You will notice an option to 'Map fields...'
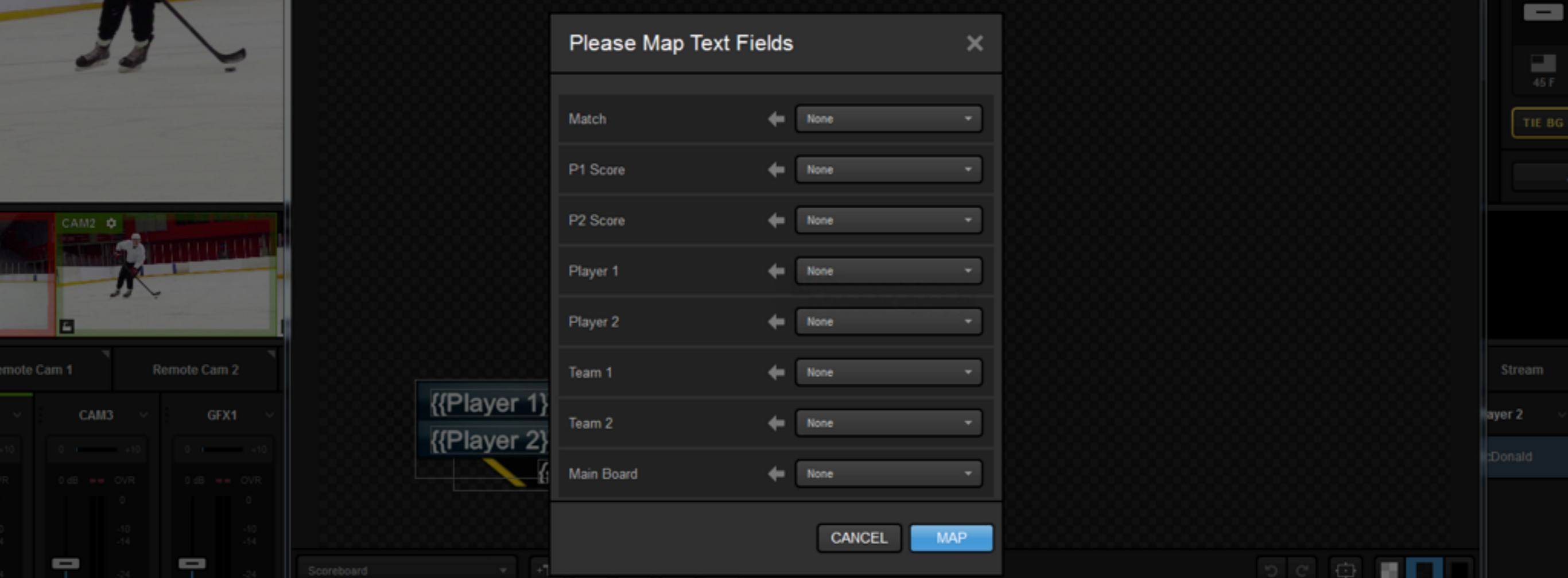
This window will pop up, allowing you to move data from one field to another field.

Note: Text fields can only be mapped to text fields; image fields can only be mapped to image fields.
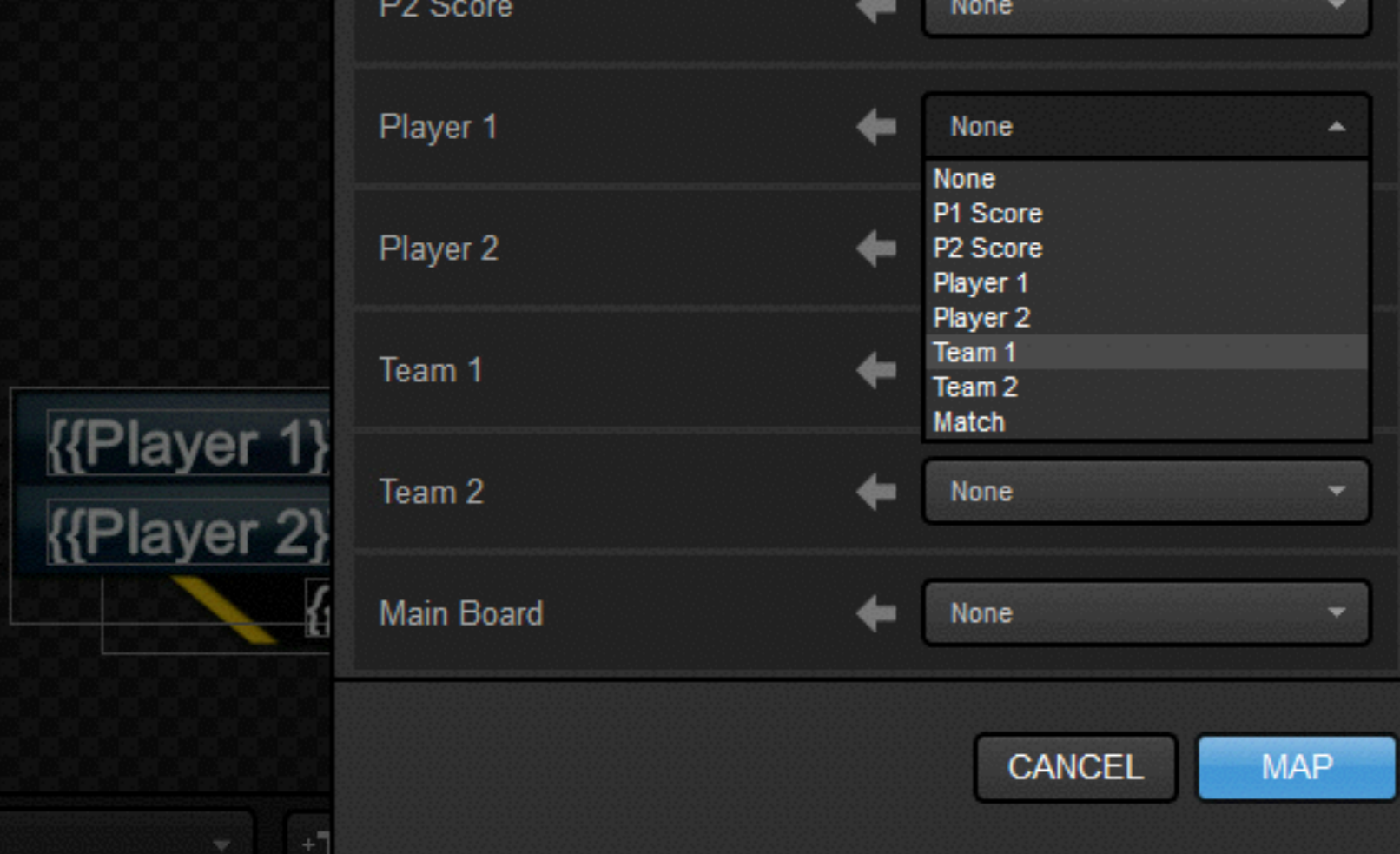
Use the dropdown menus to select where fields should be mapped to. When you are done, click the 'MAP' button.

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.
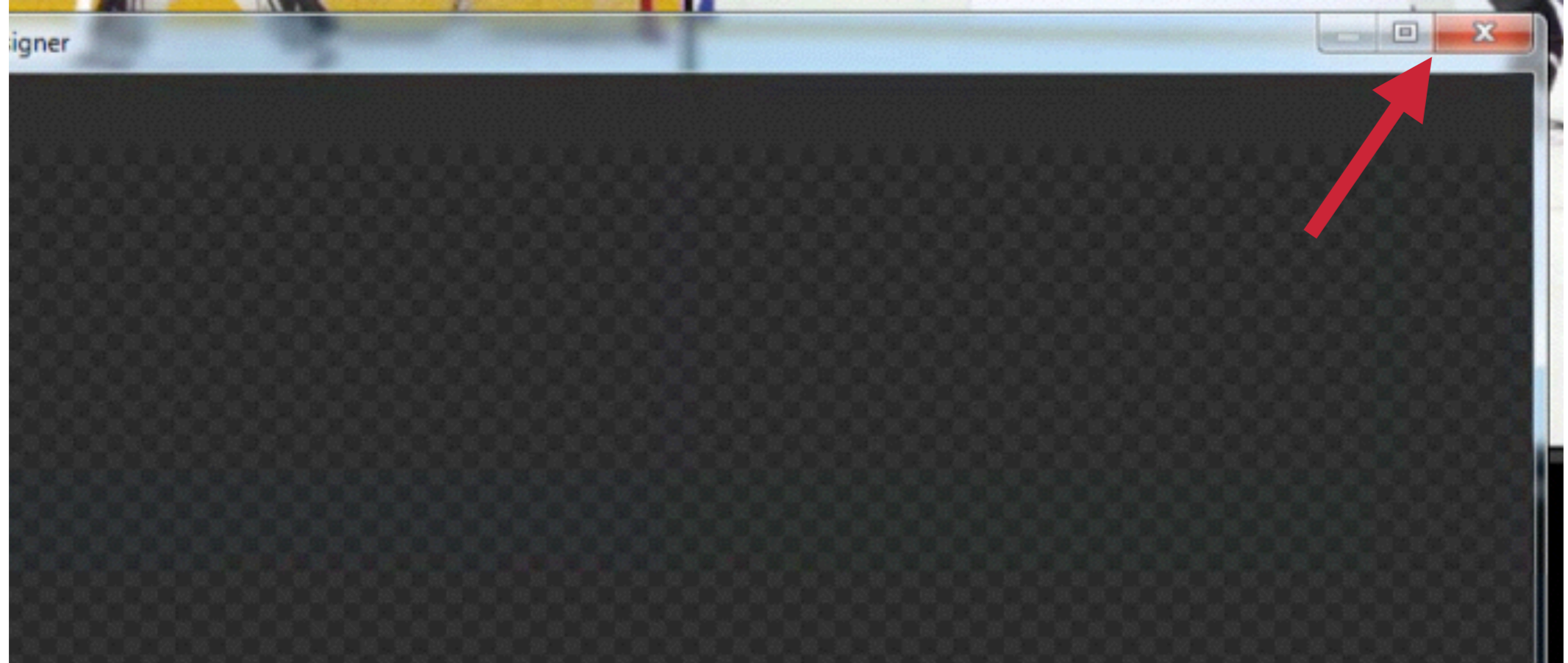
When you are done designing your graphics overlay, close out of the designer by clicking the 'X' button in the upper right corner.
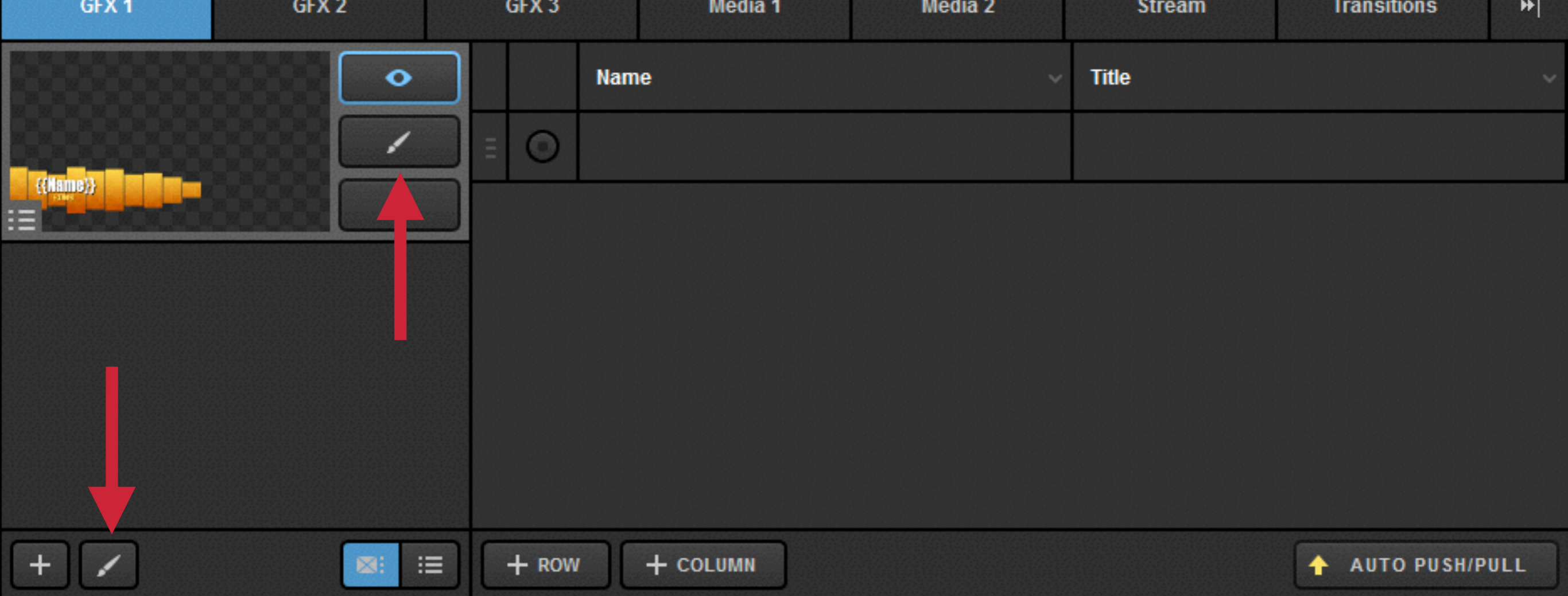
You can re-enter the designer by clicking on any paintbrush button in the graphics overlay module.
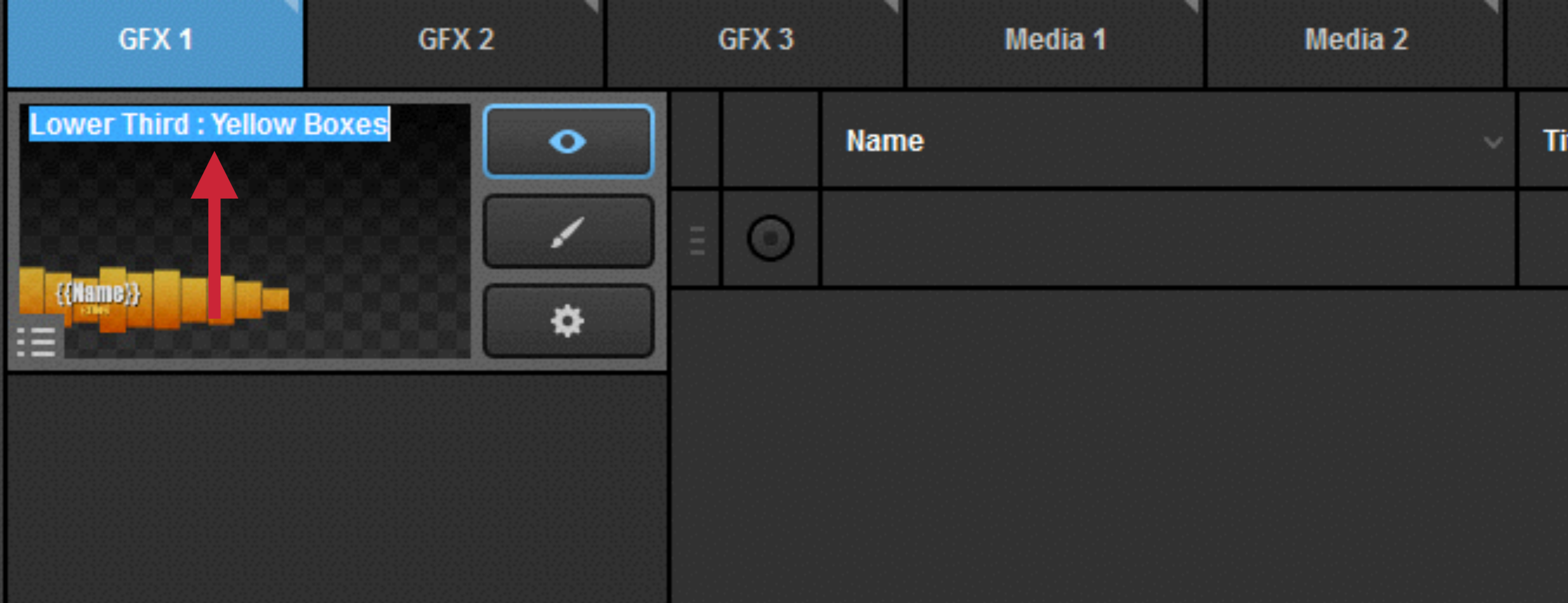
If you hover your mouse over your GFX layer, you will notice a name appear at the top of the image. Double-click the text to rename this GFX layer.

livestream

Name

Title

+ ROW   + COLUMN

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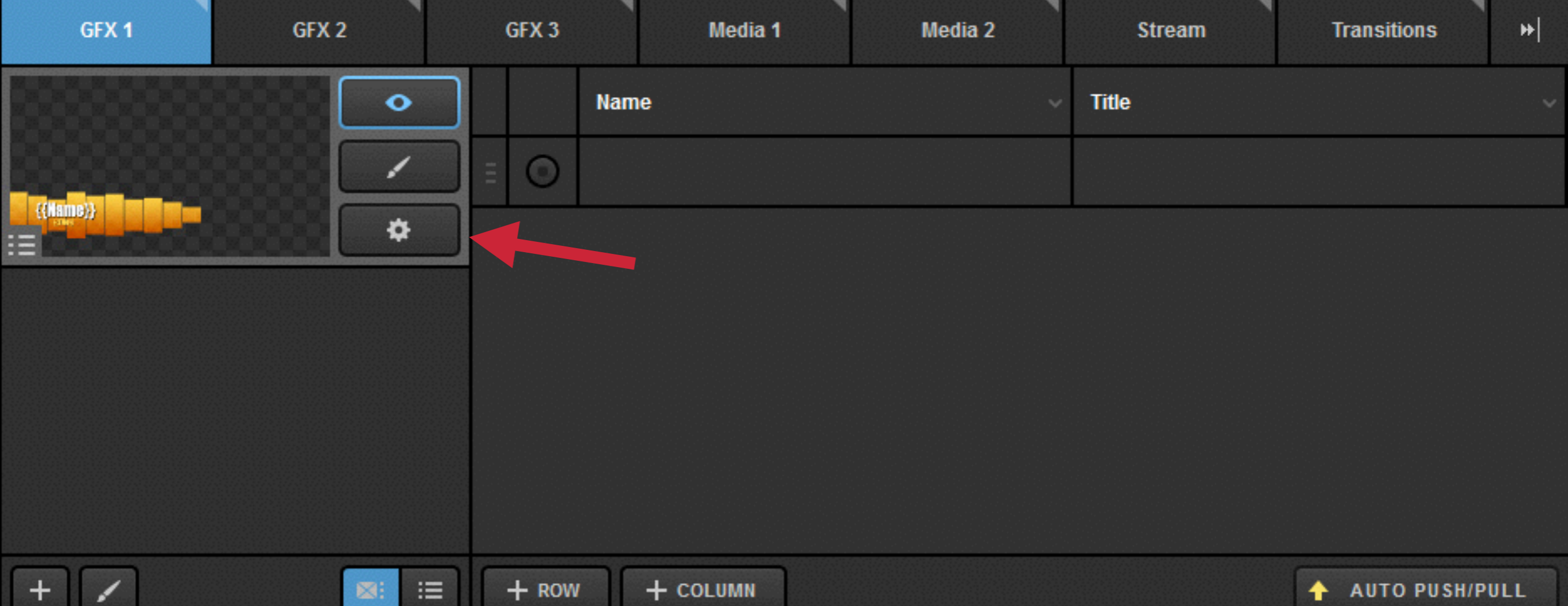
You can adjust other settings for that graphics layer by clicking the gear wheel button. The settings shown will change based on the type of graphics overlay being used.

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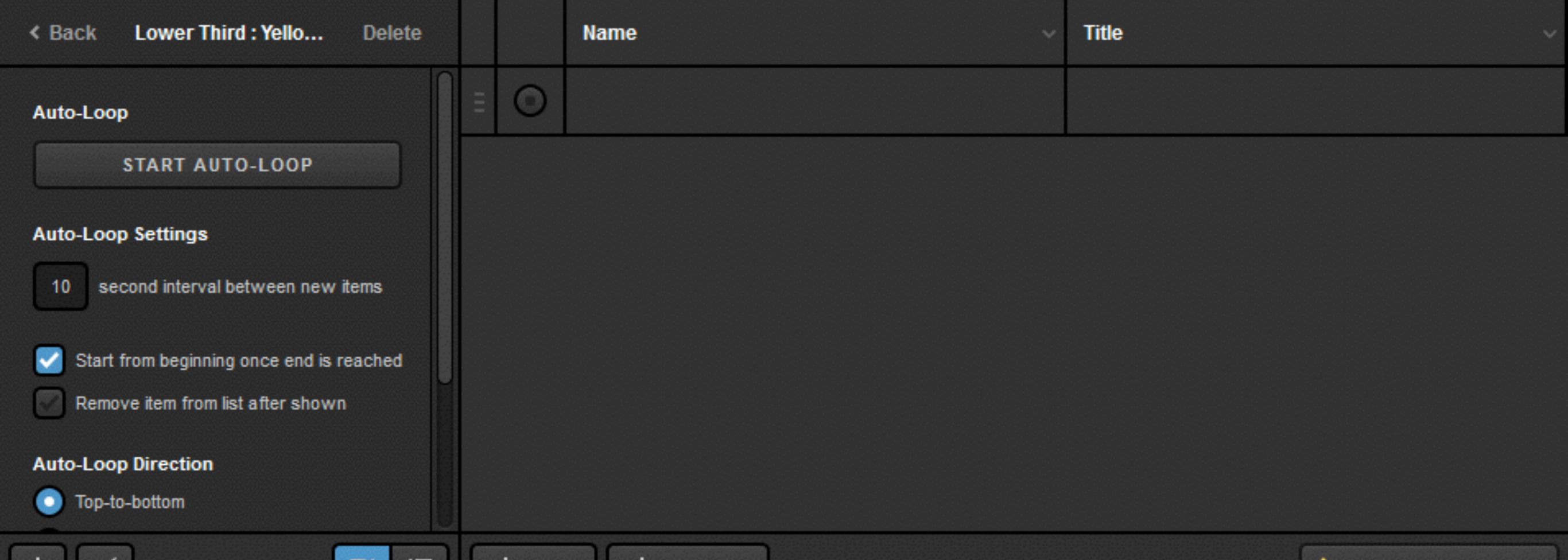
Most GFX layer settings will be related
to your data fields. If you added a text
or image field, a column for each
should have been created to the
right, which you can rename.

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

Add Text Type Column

Add Image Type Column

＋   ✎   ✉   ☰   ＋ ROW   ＋ COLUMN   ⬆ AUTO PUSH/PULL
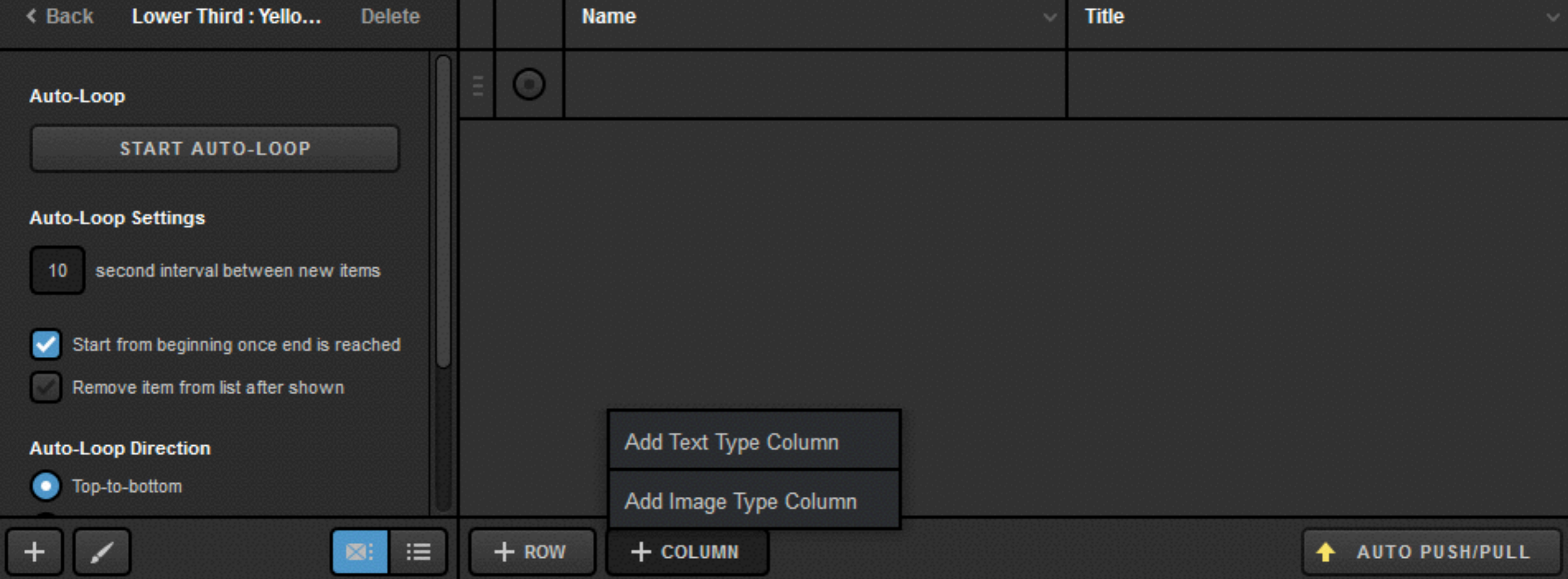
You can also add a column by clicking '+ COLUMN' underneath where the data populates and add that asset in the GFX Designer.

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

○ Bottom-to-top

Name	Title
Tom Iannaco	Producer Support

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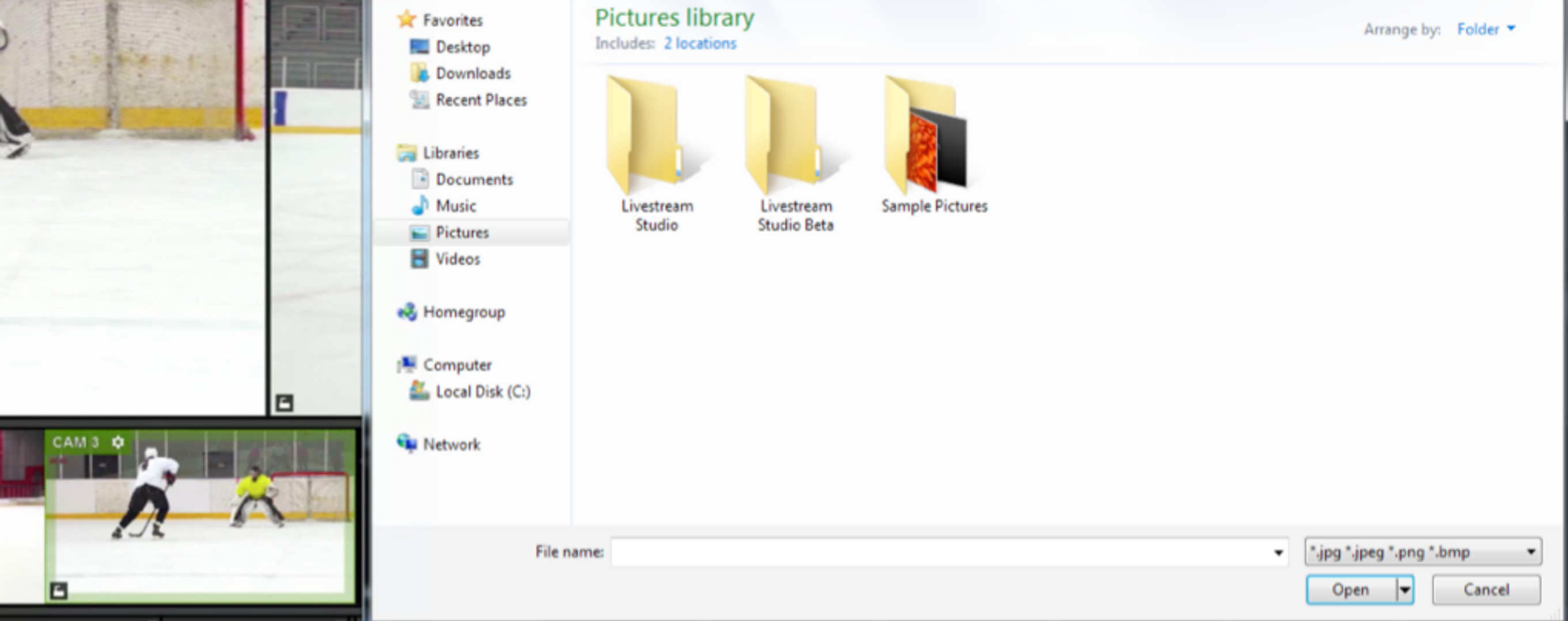
Double-clicking an image field
will allow you to browse your
computer for an image to put in
that image field.

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.

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

Fill in the data cells with the information you want to use for those text or image fields.
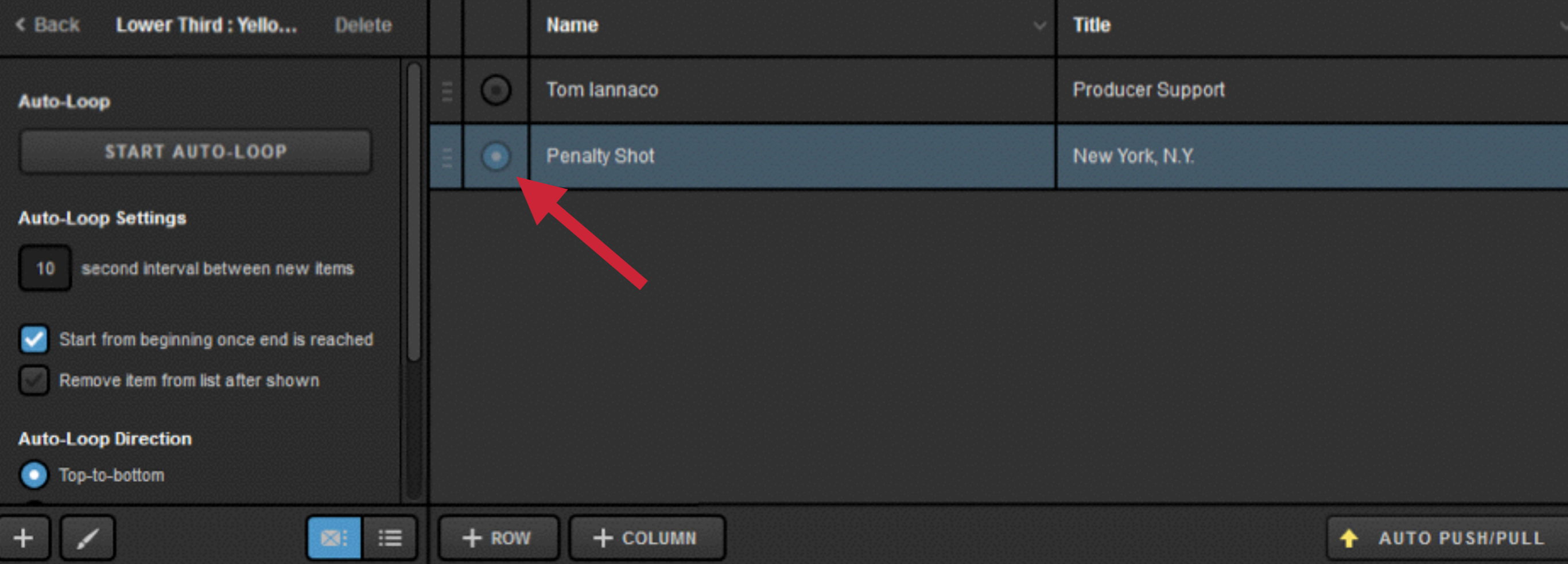
Click the corresponding radio button to make that row of data visible in your graphics layer.

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

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

livestream

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.
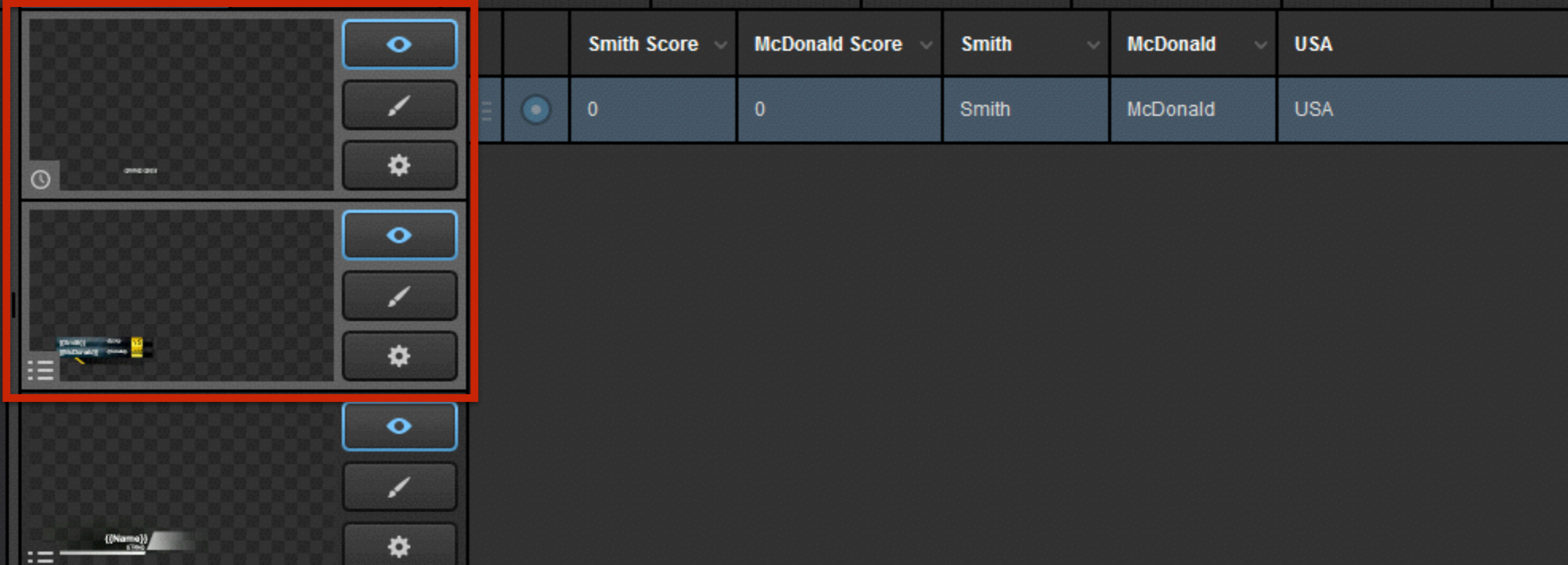
Hold down the Shift or CTRL keys on your keyboard and select which layers you want to group together by clicking them.
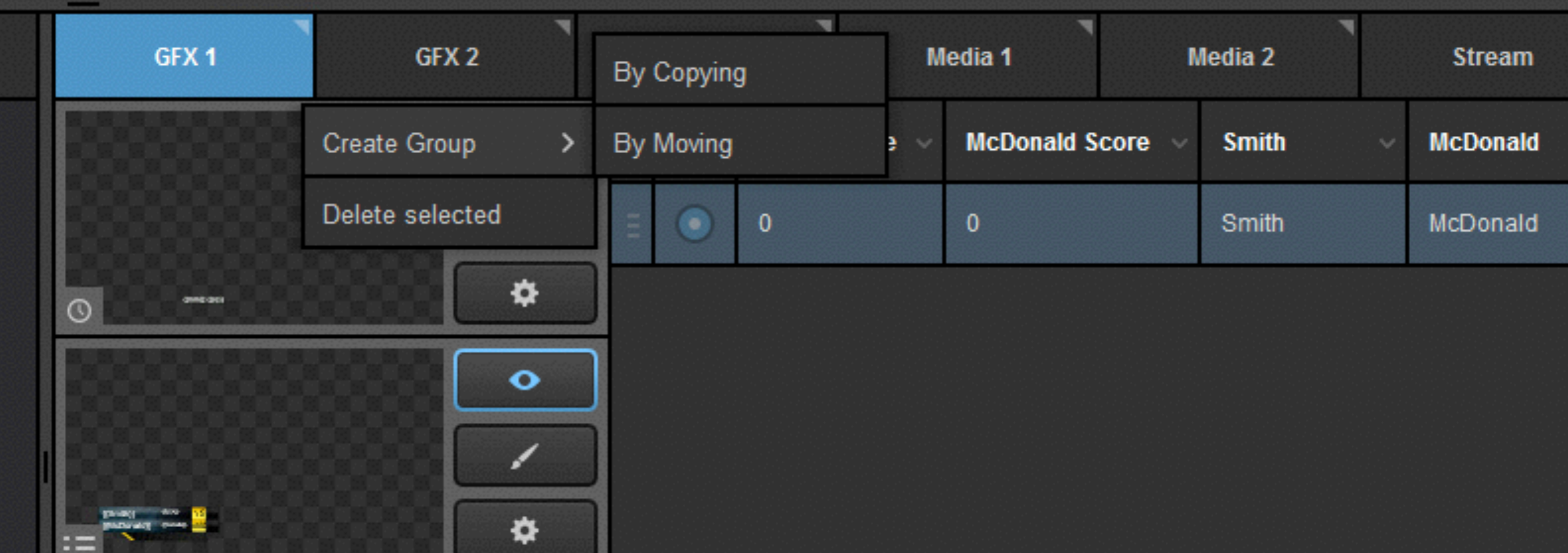
Once you have selected up to three layers, right click on your mouse. You will see the option to create a group, followed by 'By Copying' and 'By Moving.'
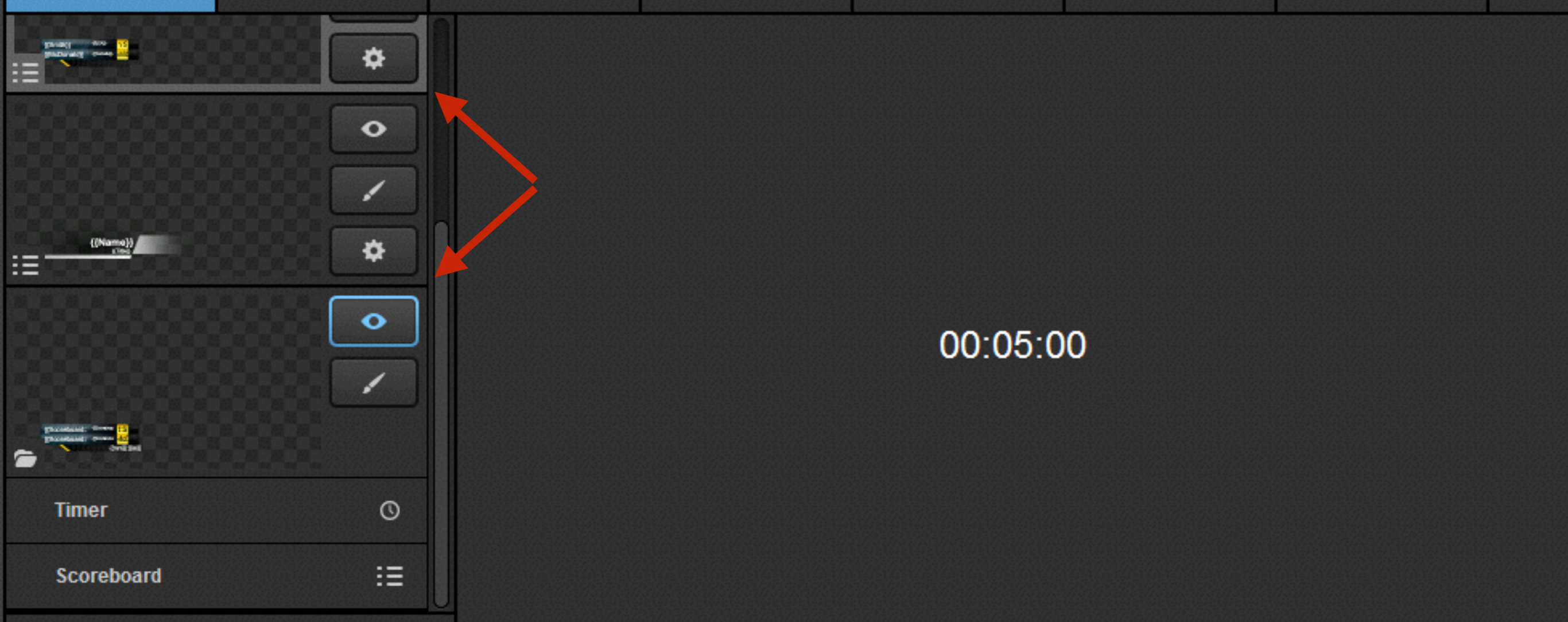
'By Copying' will make a copy of all selected layers in that graphics channel, in addition to the individual layers. This allows you to use those layers separately as well as in a group.

		Smith Score	McDonald S...	Smith	McDonald	USA	
	⦿	0	0	Smith	McDonald	USA	

{{Name}}

Timer

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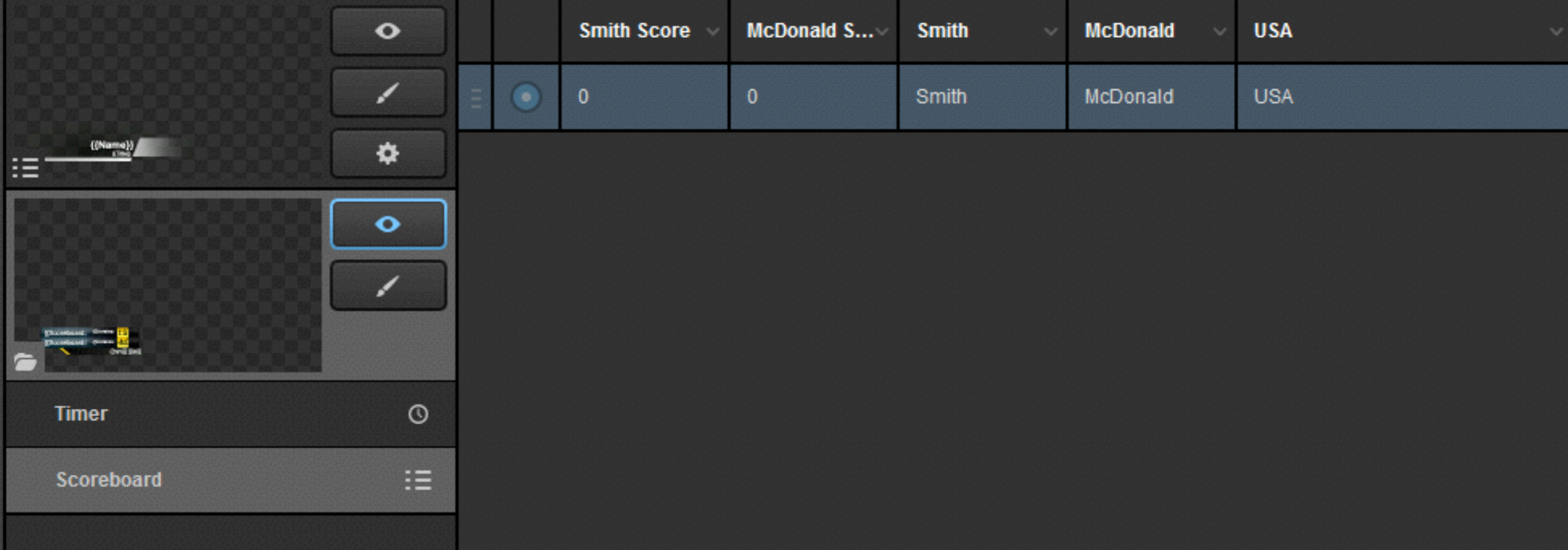
'By Moving' will merge the two layers into a group without making a copy. This is ideal when you only intend to use those graphics simultaneously, thus reducing clutter within the graphics overlay channel.

livestream

Lower Third : White Gradient	☰			Smith Score ⌄	McDonald S...⌄	Smith ⌄
📁 Group 1	👁	⦙⦙	⦿	0	0	Smith
Timer	🕐					
Scoreboard	☰					
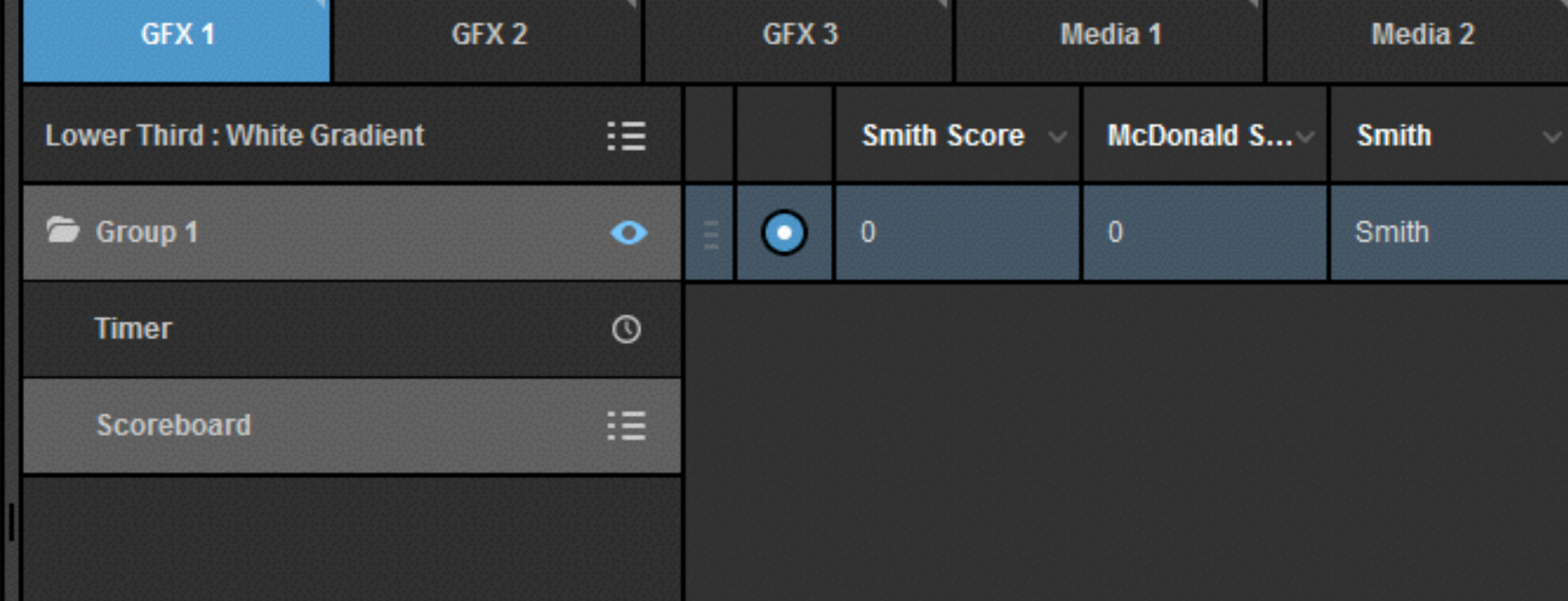
If you prefer to use the list view mode in the graphics overlay channels, you can depict where groups are by the folder icon next to the group name.

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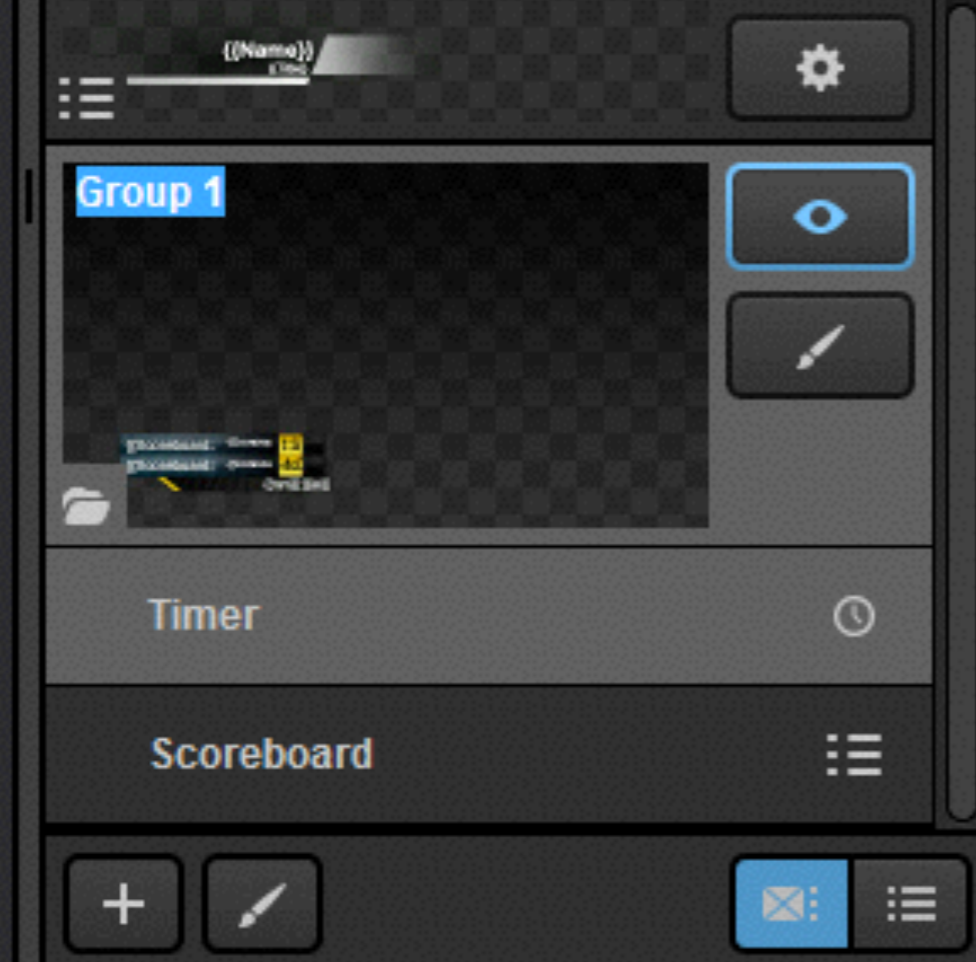
You can rename the group by double-clicking it.

The paintbrush button will take you to the designer where both layers are combined, allowing you to make any needed appearance changes.
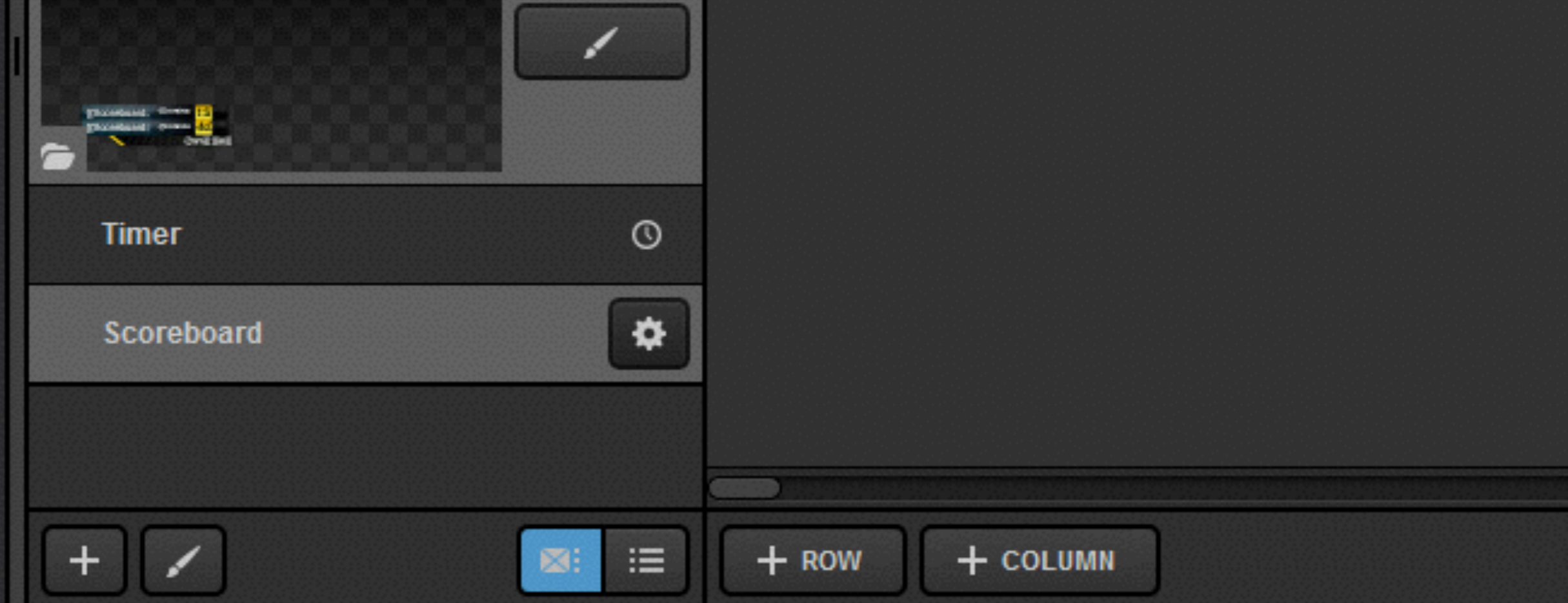
Below the group is a list of each layer within the group. You can still configure the individual settings for each layer below by clicking the appropriate gearwheel.
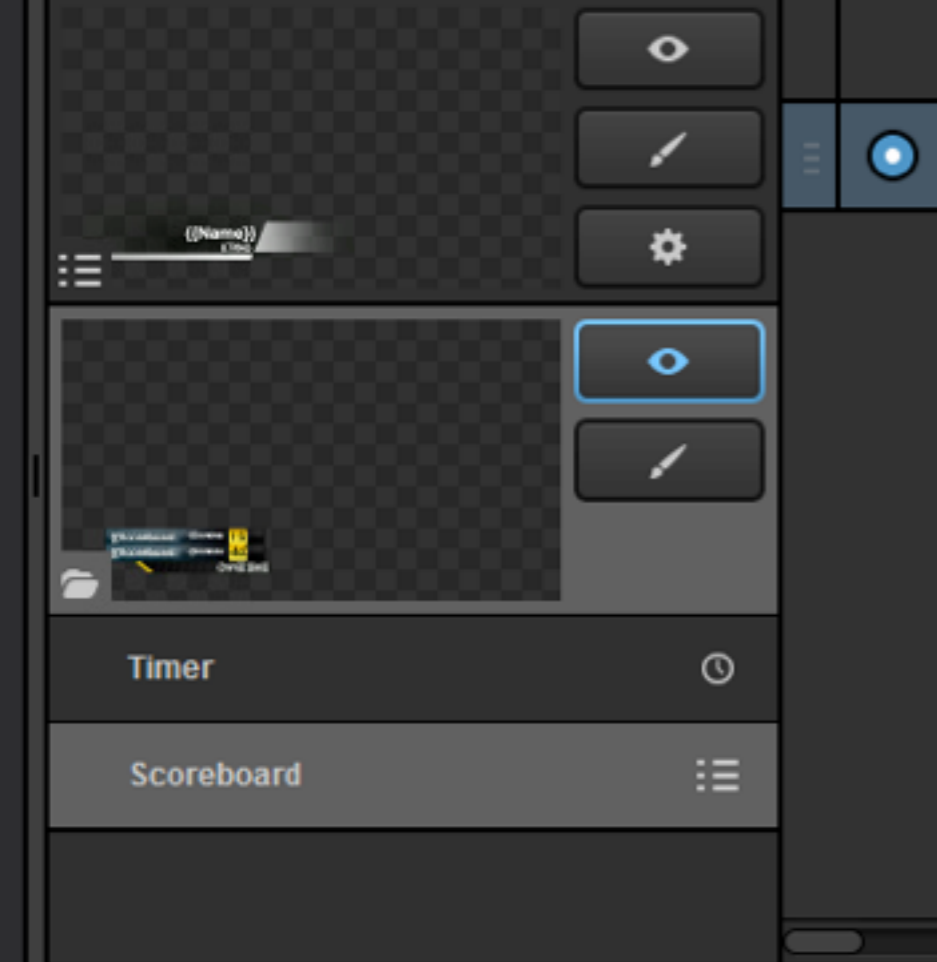
Using groups will allow you to reduce the number of layers that need to be made visible by the user within one graphics channel. Making the group visible will make all included layers visible.

Adding graphics overlays

Exporting and importing layer templates

![livestream logo]

Lower Third : Yellow Boxes

{{Name}}

Name		Title
Tom Iannaco		Producer Support
Penalty Shot		New York, N.Y.
Amanda Vicari		Event Co-Founder
Ed Yealu		Event Co-Founder
Kristin McCue		Co-Host

Duplicate

Copy / Move...

Export to...

Convert

Delete

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...'

INPUT 7   INPUT 8

livestream
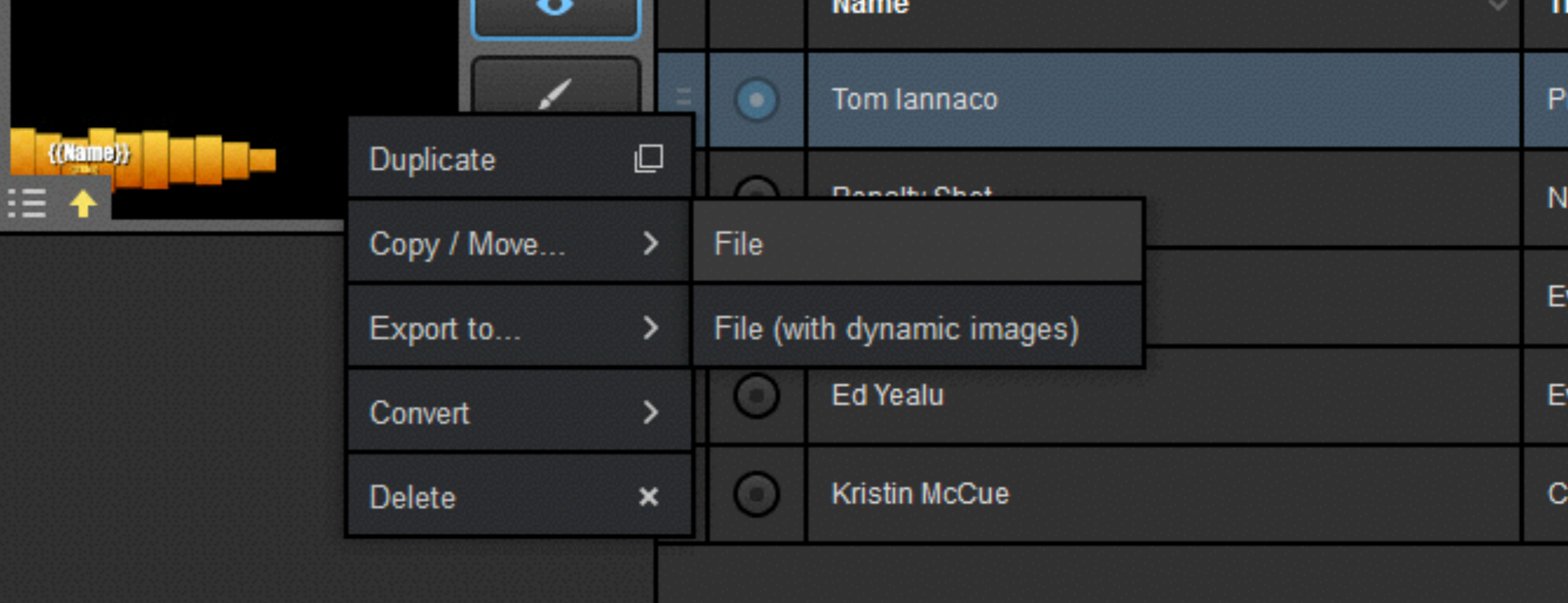
Select 'File' or 'File (with dynamic images).' The latter should be selected if you have image fields or dynamic images in your designed graphics layer that you want to be saved within the exported file.
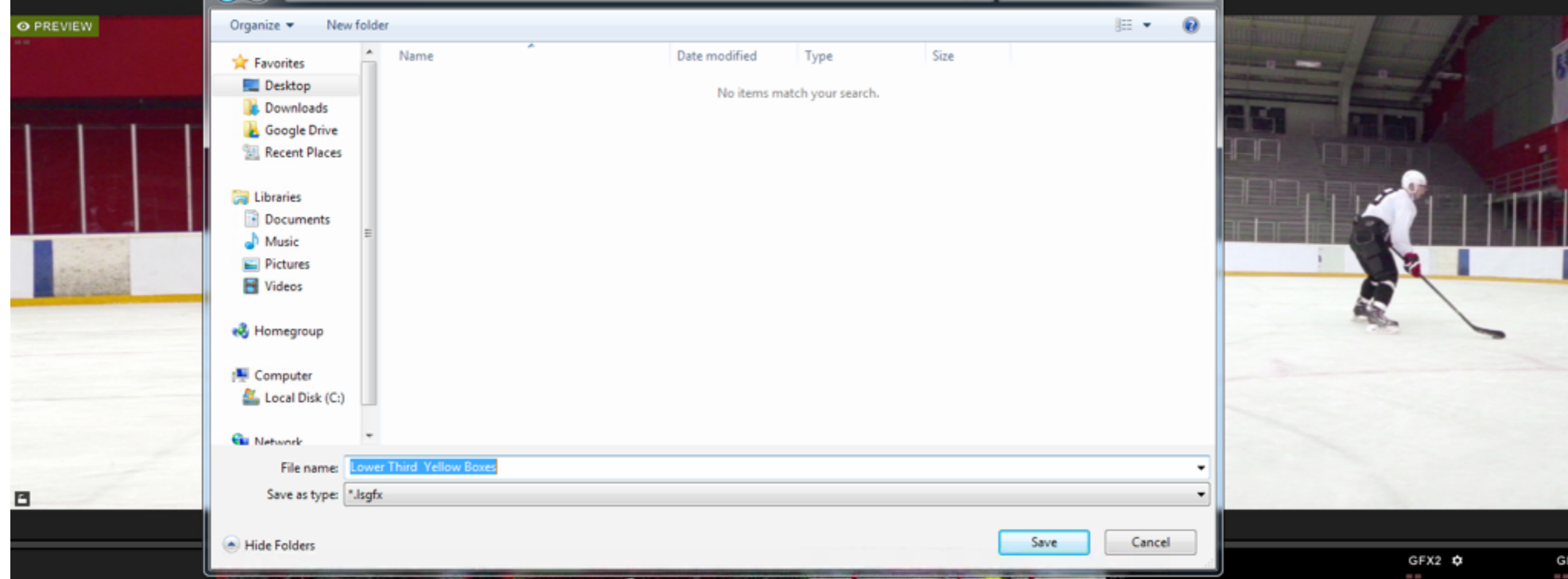
Your system's browse window will open, where you can choose where to save your graphics template and name it.
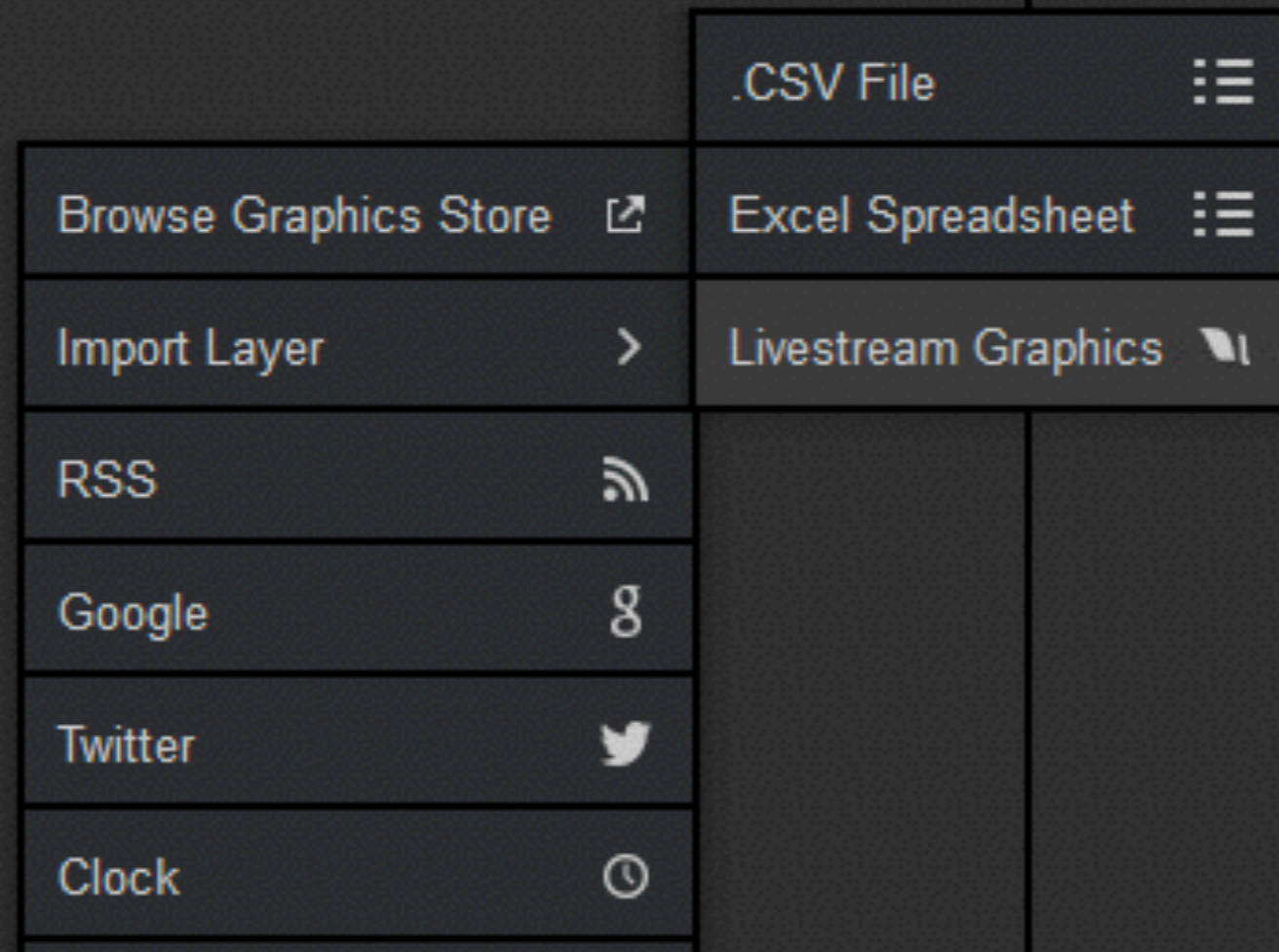
Once that is done, you can import your .lsgfx file by clicking the '+' button, then selecting 'Import Layer,' followed by 'Livestream Graphics.'
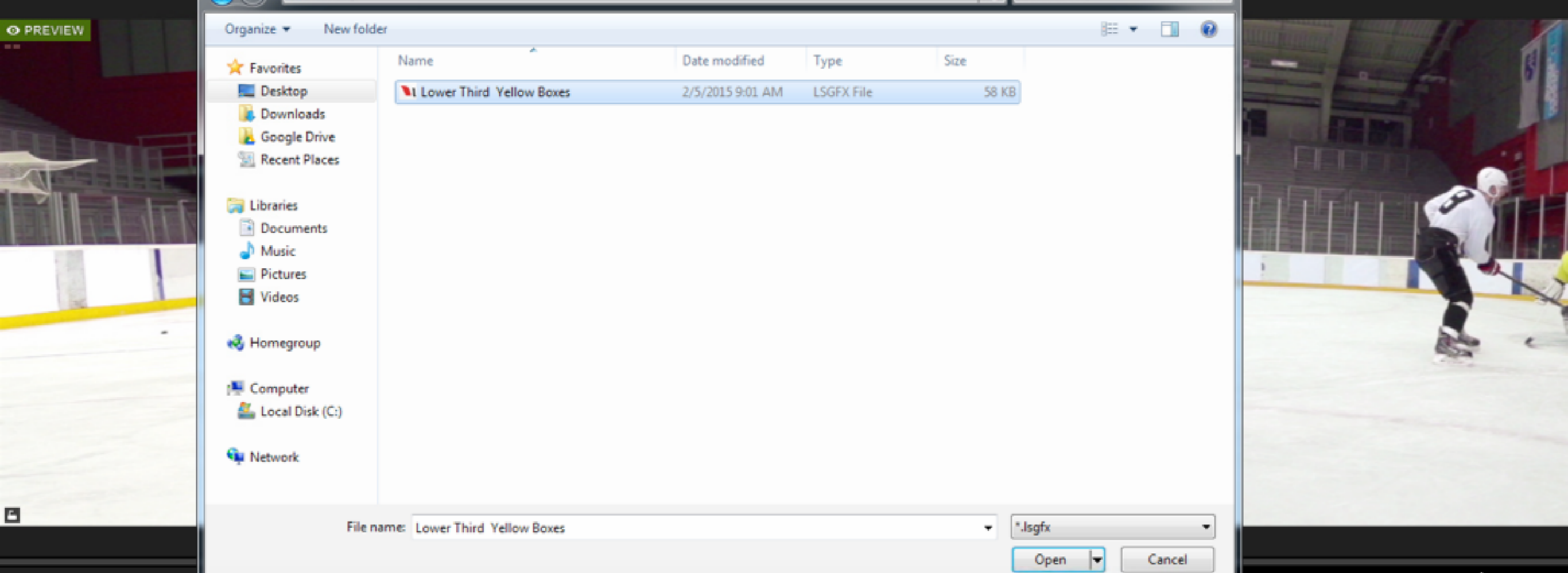
Your system's browse window
will appear, where you can find
your saved .lsgfx file. Select it
and click 'Open.'

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
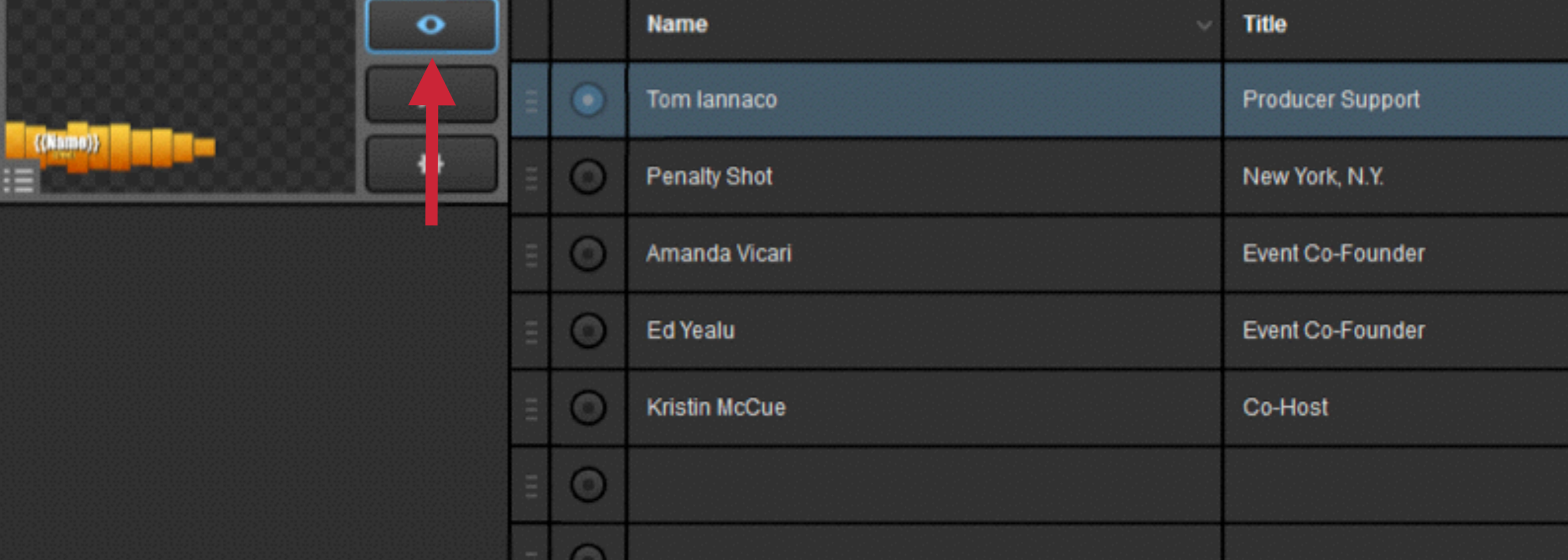
Now that your graphic is designed and configured, you can start adding it to your production. First, make sure your layer is visible by clicking the eyeball icon. It should be highlighted blue.
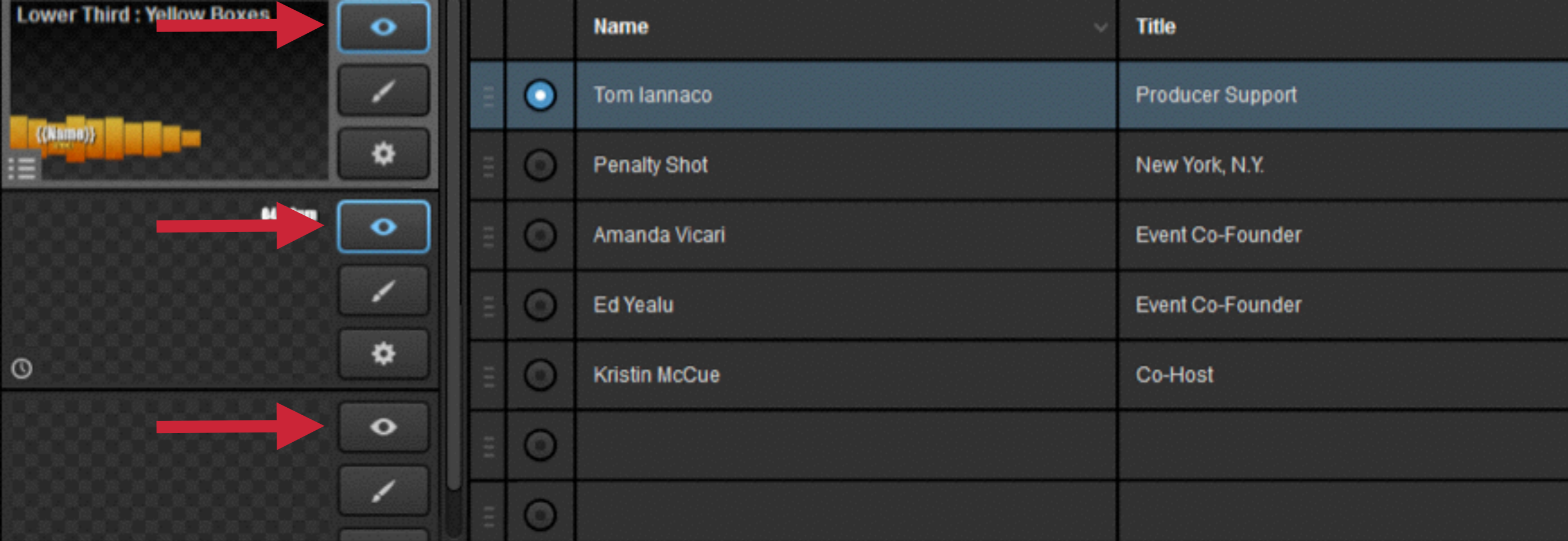
If you have multiple layers in your graphics overlay channel, highlight the eye icon of any layer that you want to be visible; more than one layer can be visible at a time.
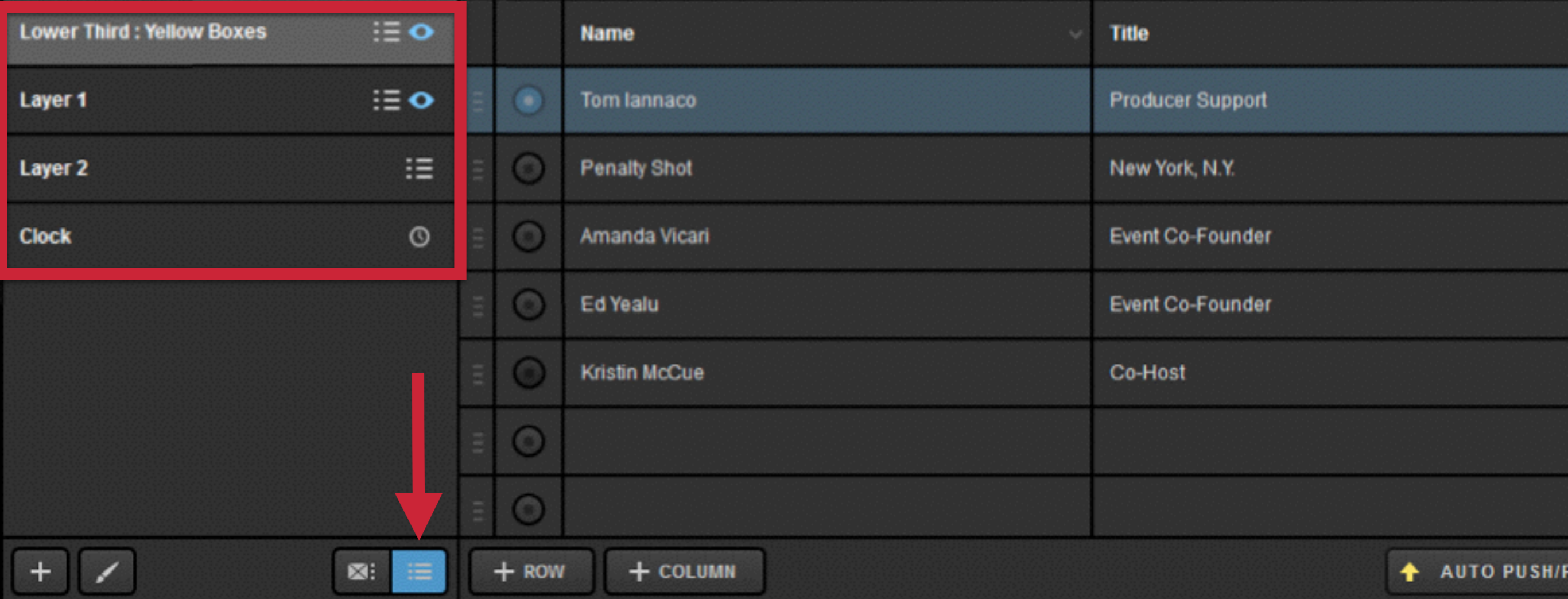
Please note that if you have multiple layers in one module, you can click the display buttons on the bottom to show your layers in list mode to manage them more easily.

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.
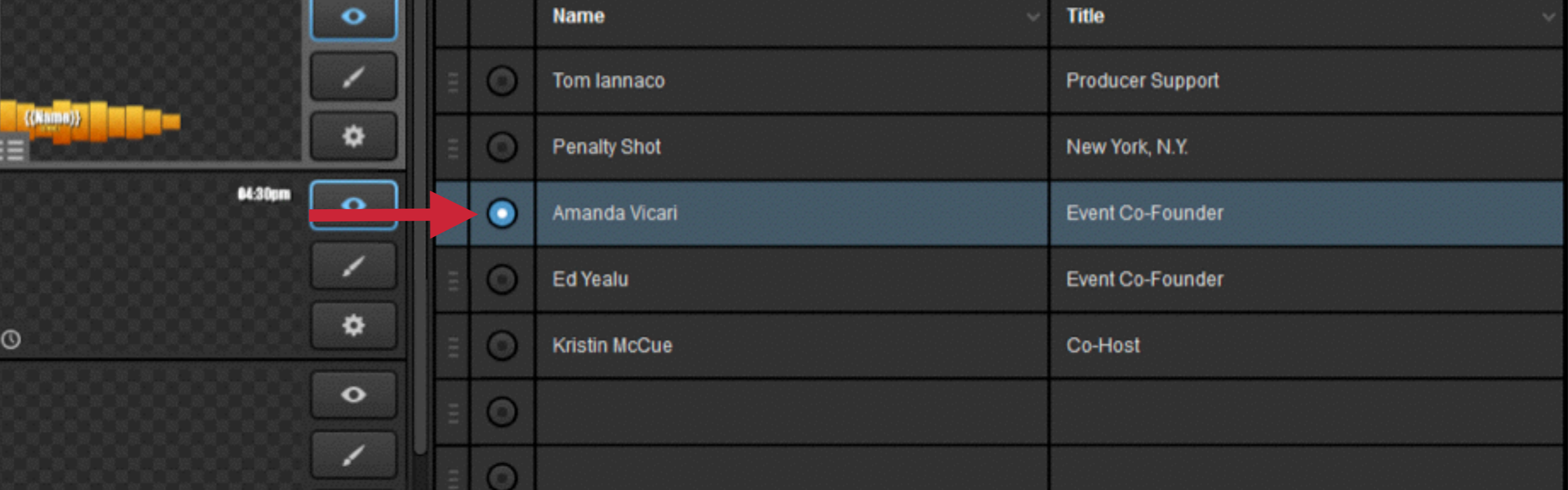
Now try making a change to your graphics overlay channel, such as changing a layer's visibility or selecting a different row of data in a currently visible layer.
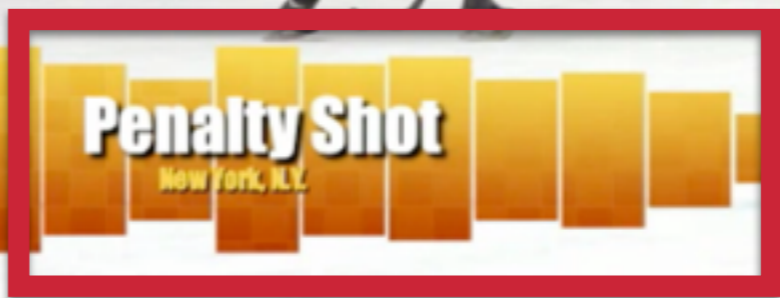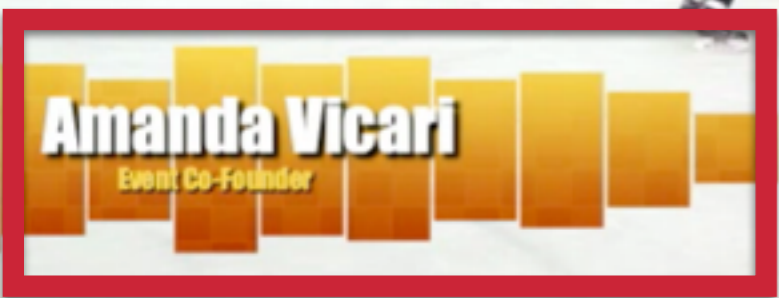
You will notice the change is visible in Preview but is not yet seen in Program.
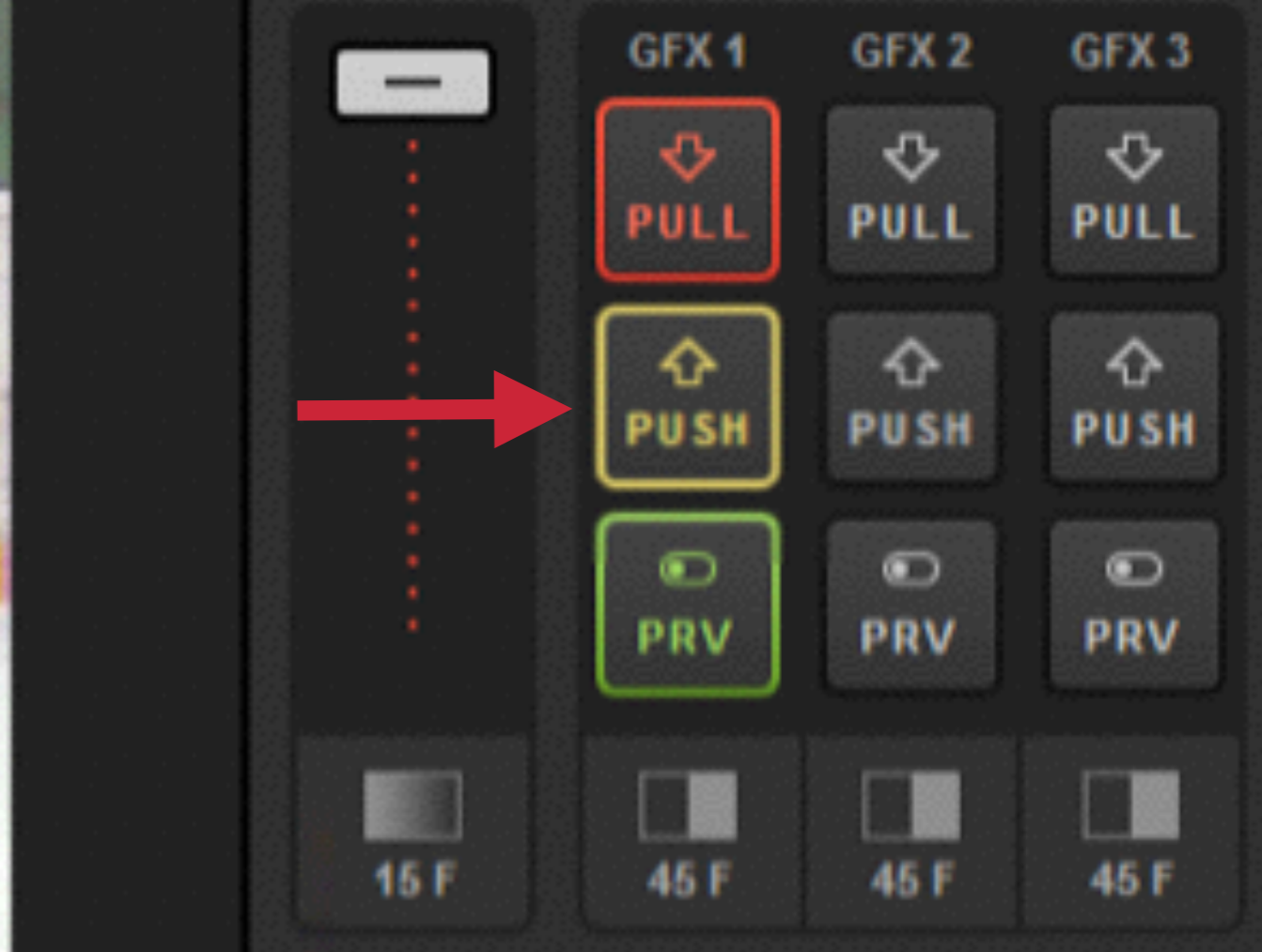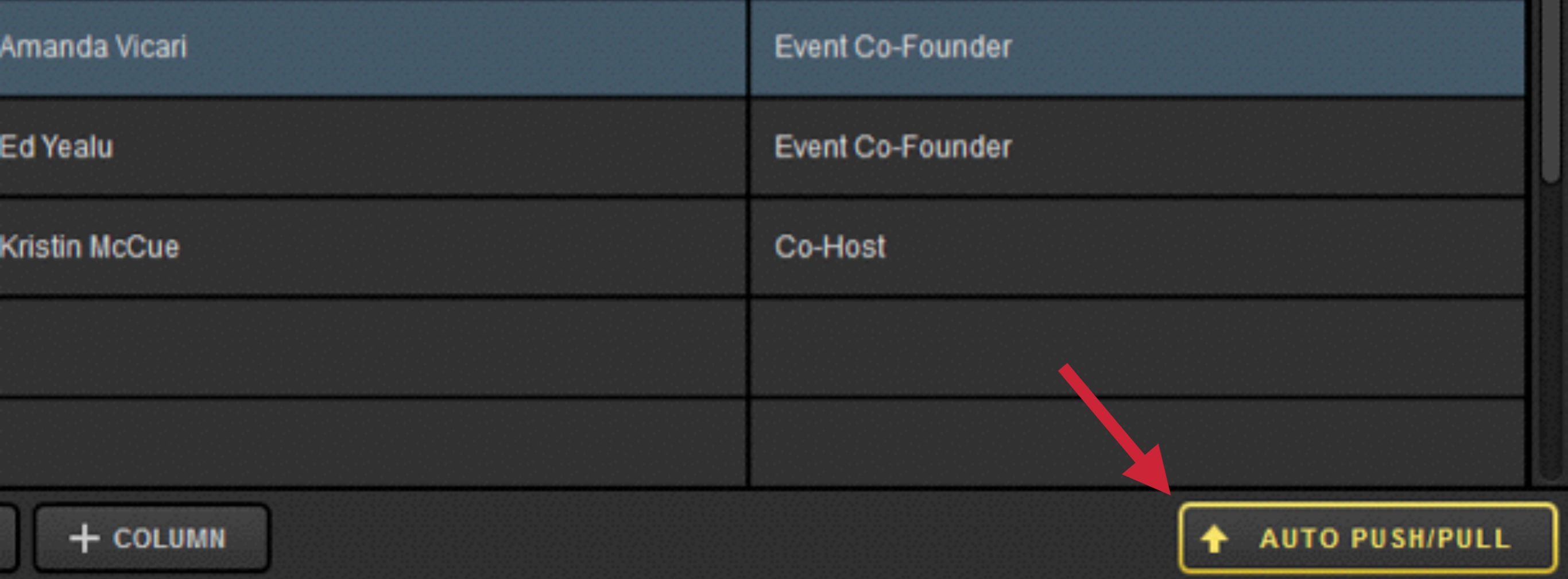
The 'PUSH' button has also started flashing again. This means that Livestream Studio has detected a change in that GFX channel and is ready to change it in Program. Click it when you are ready to show the change to viewers.

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.
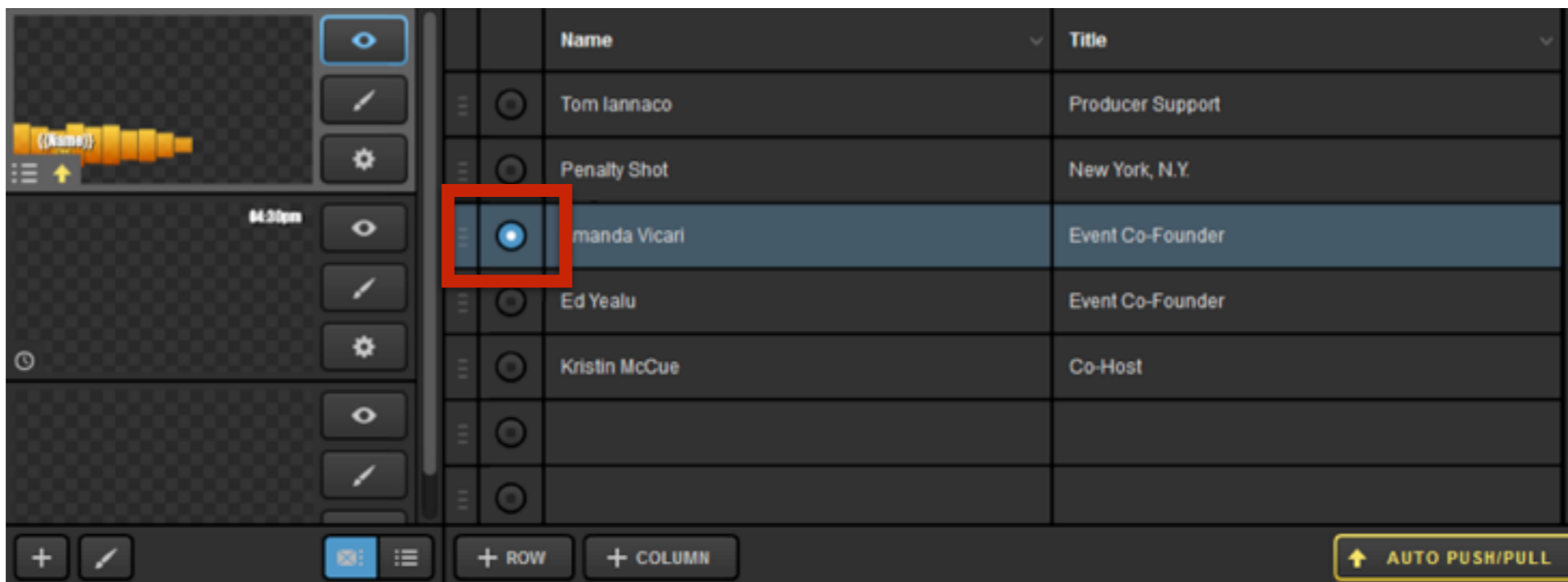
To remove a visible graphics overlay quickly while 'AUTO PUSH/PULL' is enabled, simply click on the highlighted radio button of the visible row.
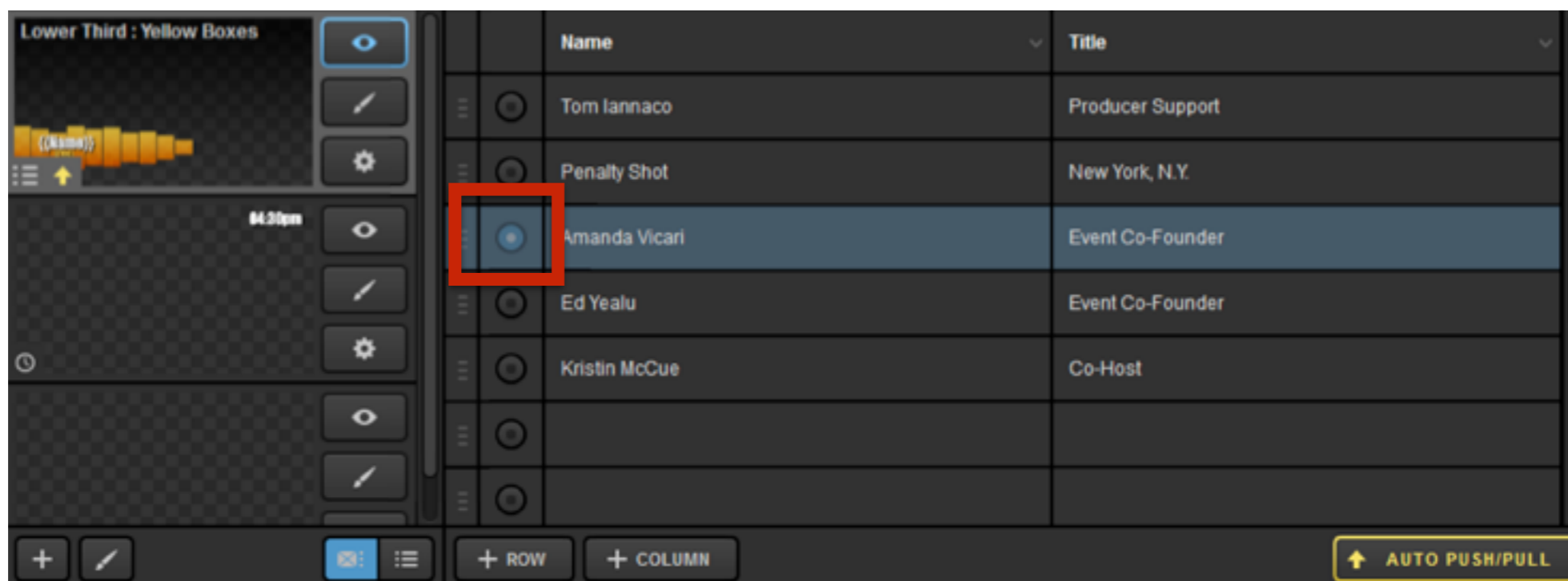
Now the graphic has been removed from Program and the radio button has faded in the graphics module to indicate this.

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.

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You should no longer see your graphics overlay in either Preview or Program.

Adding graphics overlays

Importing a layer: Livestream Graphics
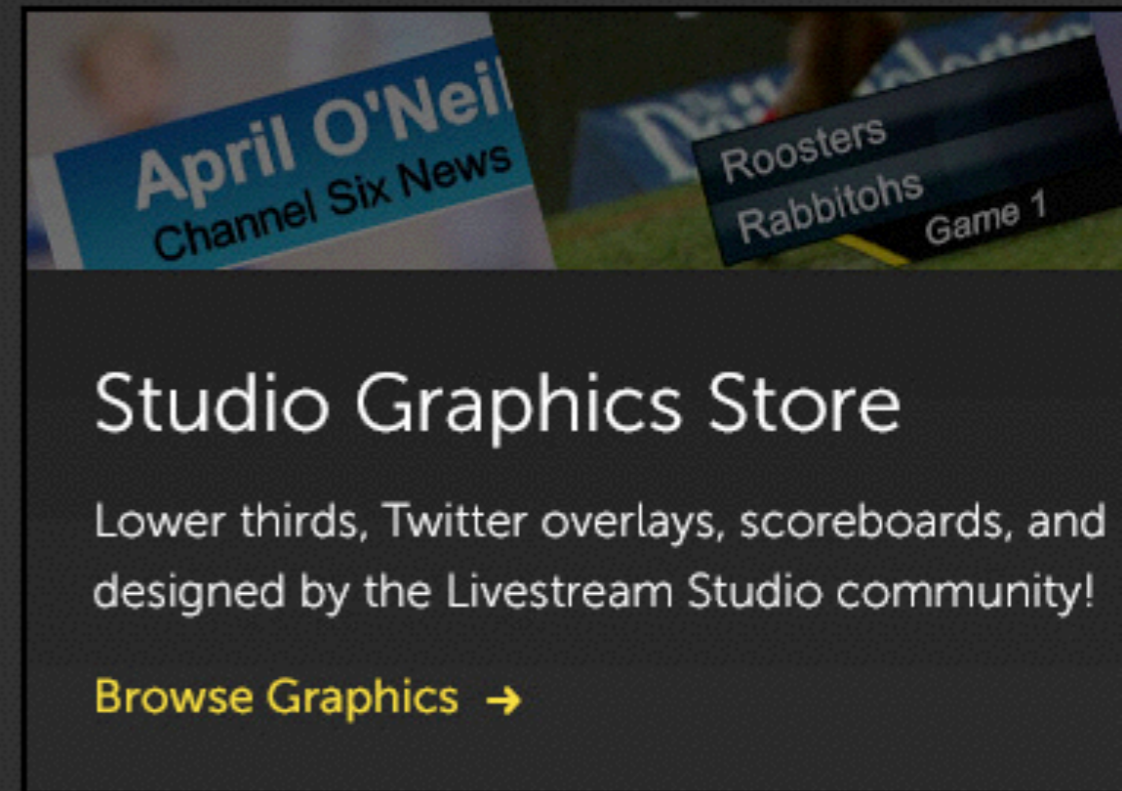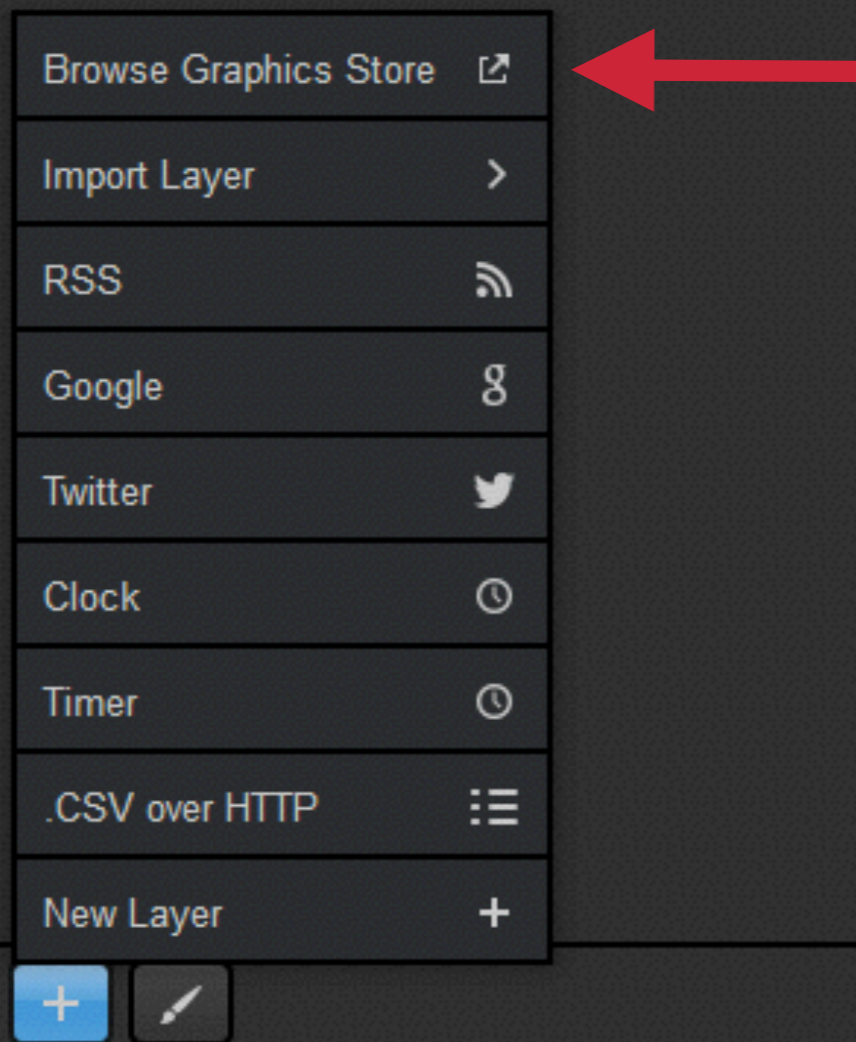
livestream

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

Twitter: Box
Free · Twitter

Lower Third: Yellow Boxes
Free · Lower Third

Scoreboard: Basic
Free · Sport Scoring
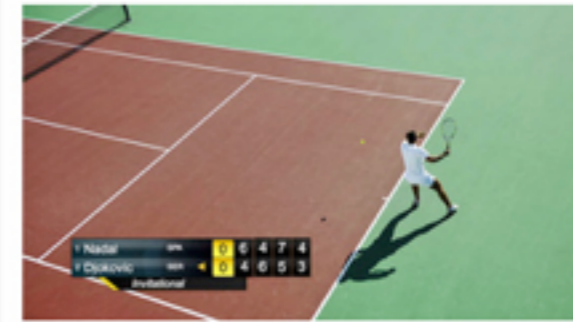
Scoreboard: Tennis
Free · Sport Scoring

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.
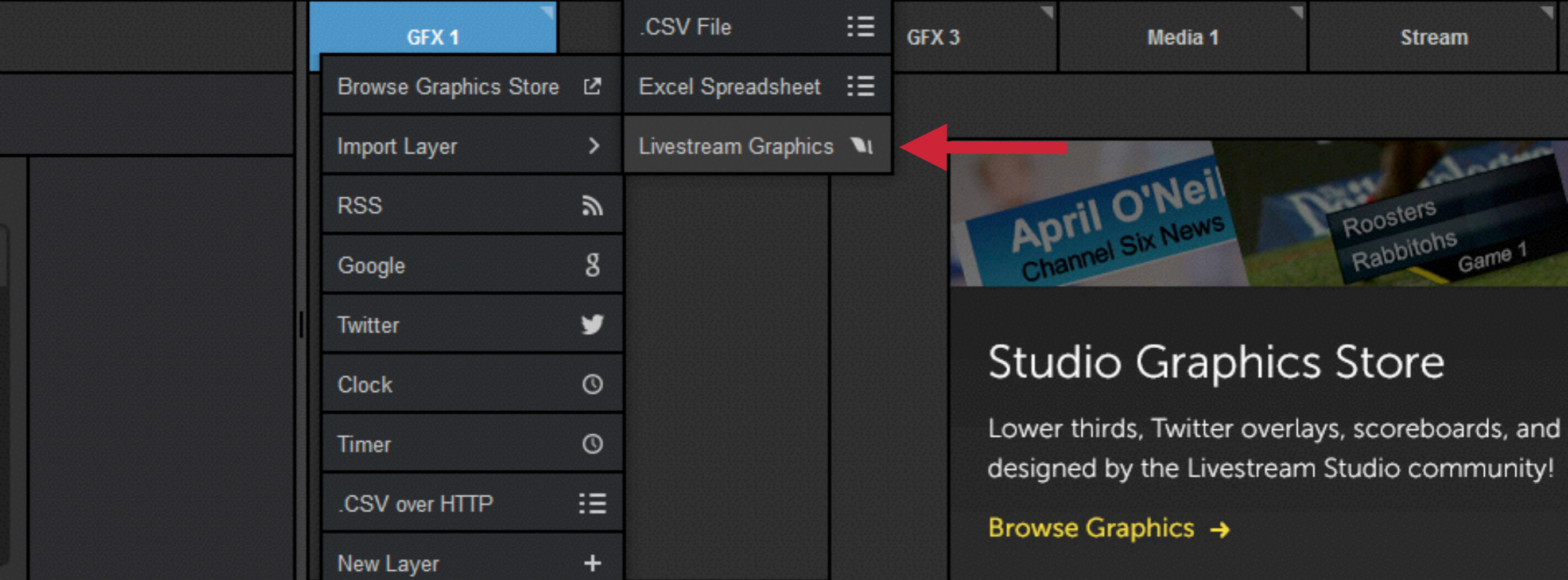
An .lsgfx file will be downloaded onto your hard drive. To use the graphic in Livestream Studio, click the '+' button in the graphics overlay channel, then click Import Layer > Livestream Graphics.
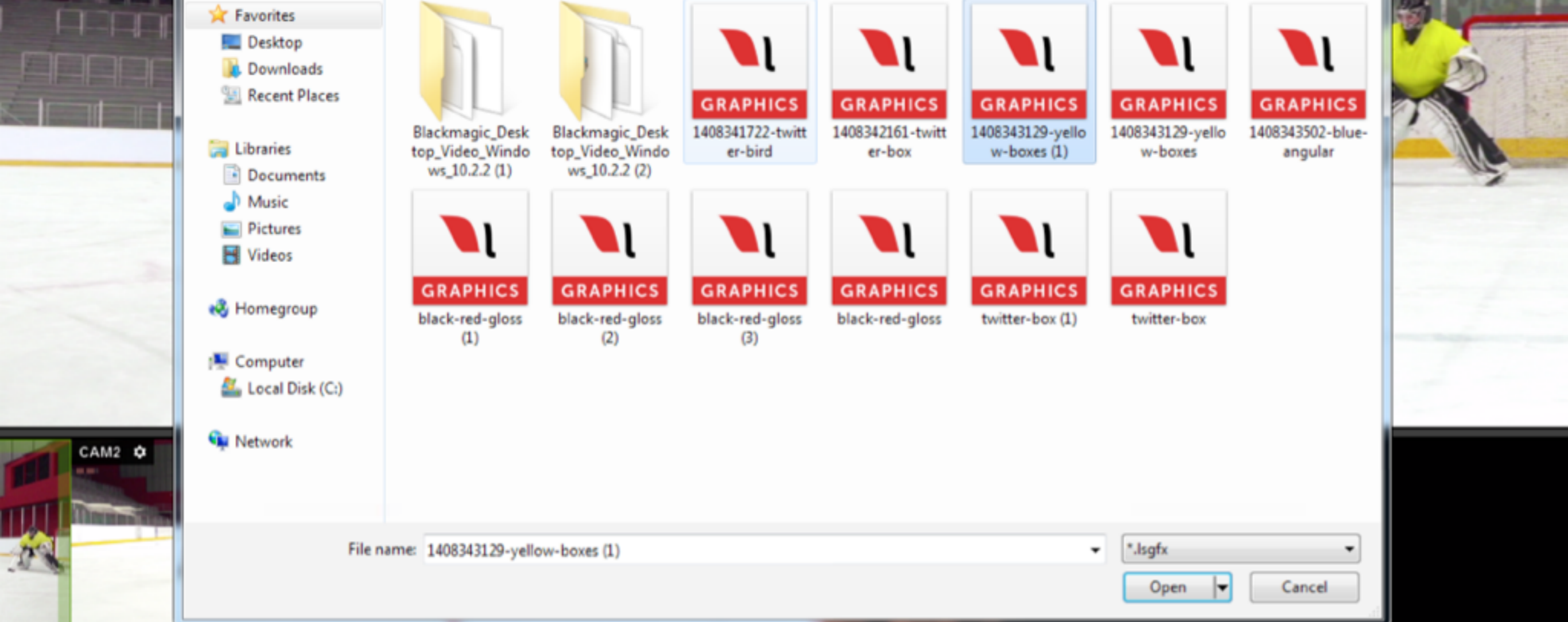
Browse your computer for the .lsgfx
file you just downloaded (this is
typically found in the 'Downloads'
folder on PC's). When you find the
file, click 'Open.'

		Name		Title	
	◉	Your name	⌄	Your title	⌄
	◉	Another Name		Another title	
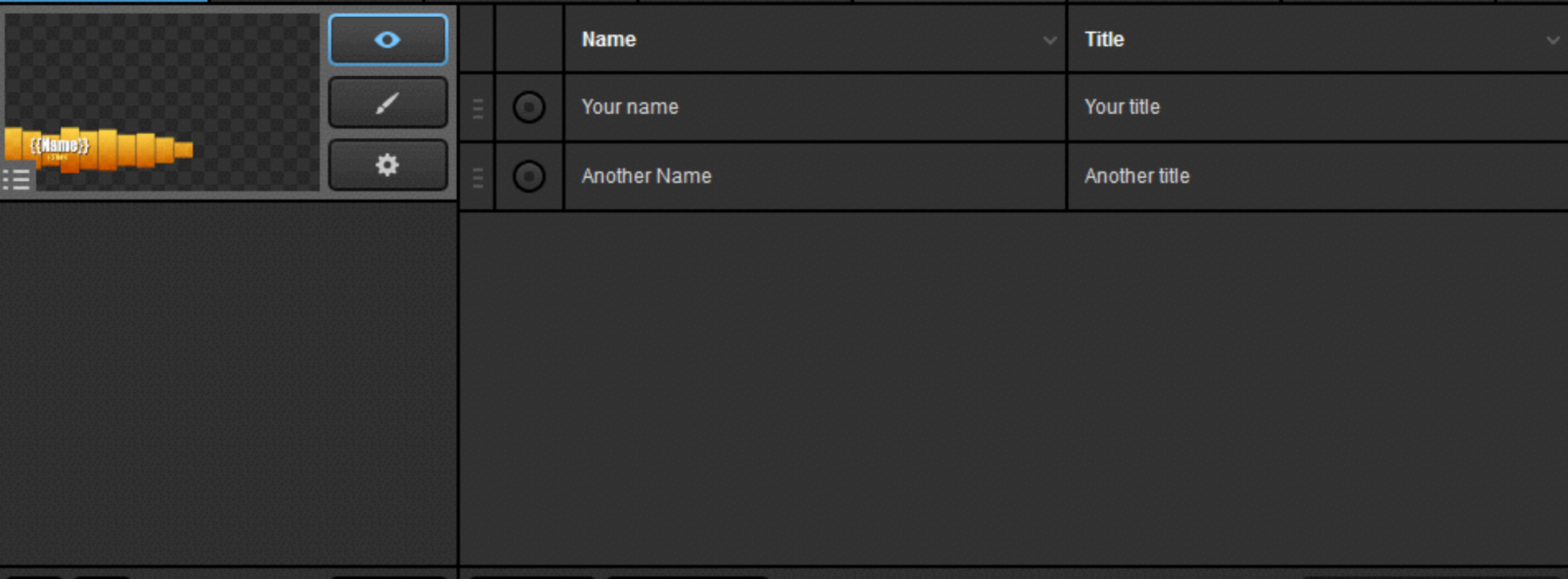
The layer will appear in your
graphics overlay channel. Click
the gear wheel to enter its
settings.
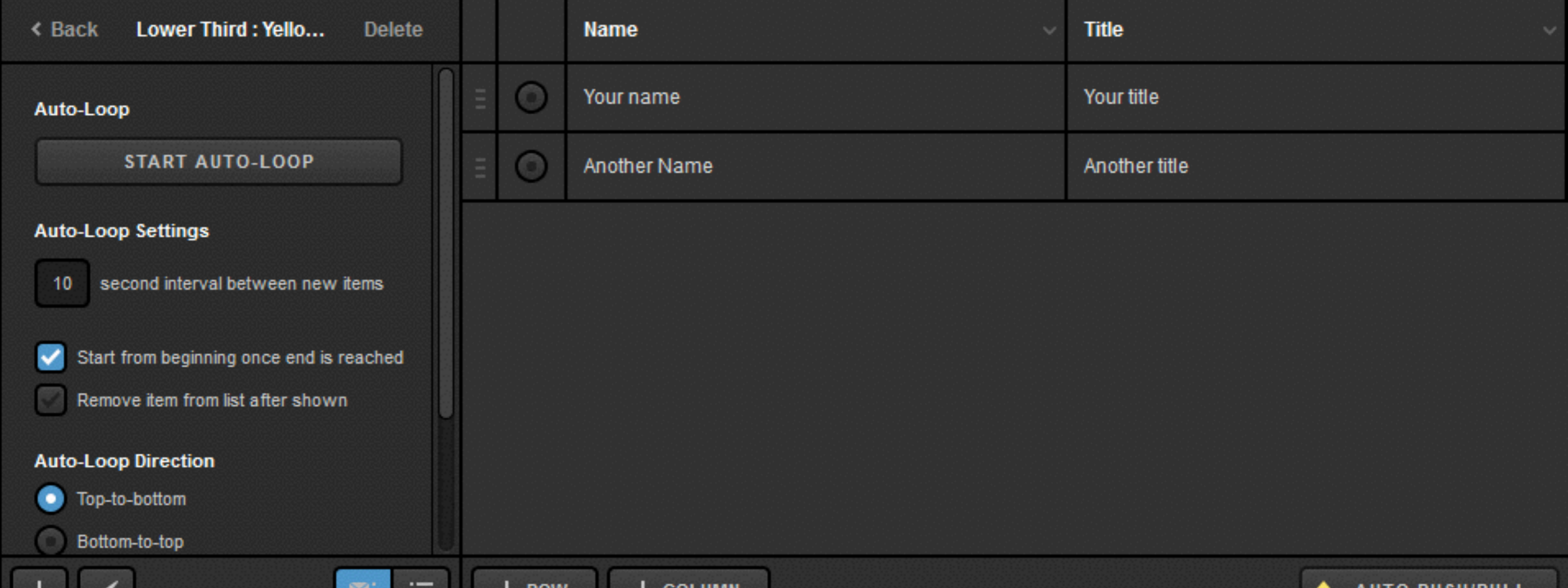
For lower third graphics, there are two text type columns and two rows included by default.

If you open the GFX Designer, you will see clearly which text fields the two columns correspond to and can adjust them as necessary.

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

Rather than manually inputting your data in Livestream Studio, you can import all your data from an Excel (.xlsx) spreadsheet.

Edit   Font   Alignment   Number   Format

Fill   Calibri (Body)   12   A▴ A▾   abc ▾   Wrap Text ▾   General   Normal

Paste   Clear ▾   B   I   U   A ▾   A ▾   Merge ▾   %   ❜   .0 .00   Conditional Formatting   Bad

C17   ✕ ✓   fx

	A	B	C
1	Name	Title	[img] Photo
2	Tom Iannaco	Producer Support	http://img.new.livestream.com/events/000000000039
3	Penalty Shot	New York, N.Y.	http://img.new.livestream.com/events/000000000039
4	Amanda Vicari	Event Co-Founder	http://img.new.livestream.com/events/000000000039
5	Ed Yealu	Event Co-Founder	http://img.new.livestream.com/events/000000000039
6	Kristin McCue	Co-Host	http://img.new.livestream.com/events/000000000039
7			
8			
9			

If you want to include images, make a column with the URLs where the images are hosted.

livestream
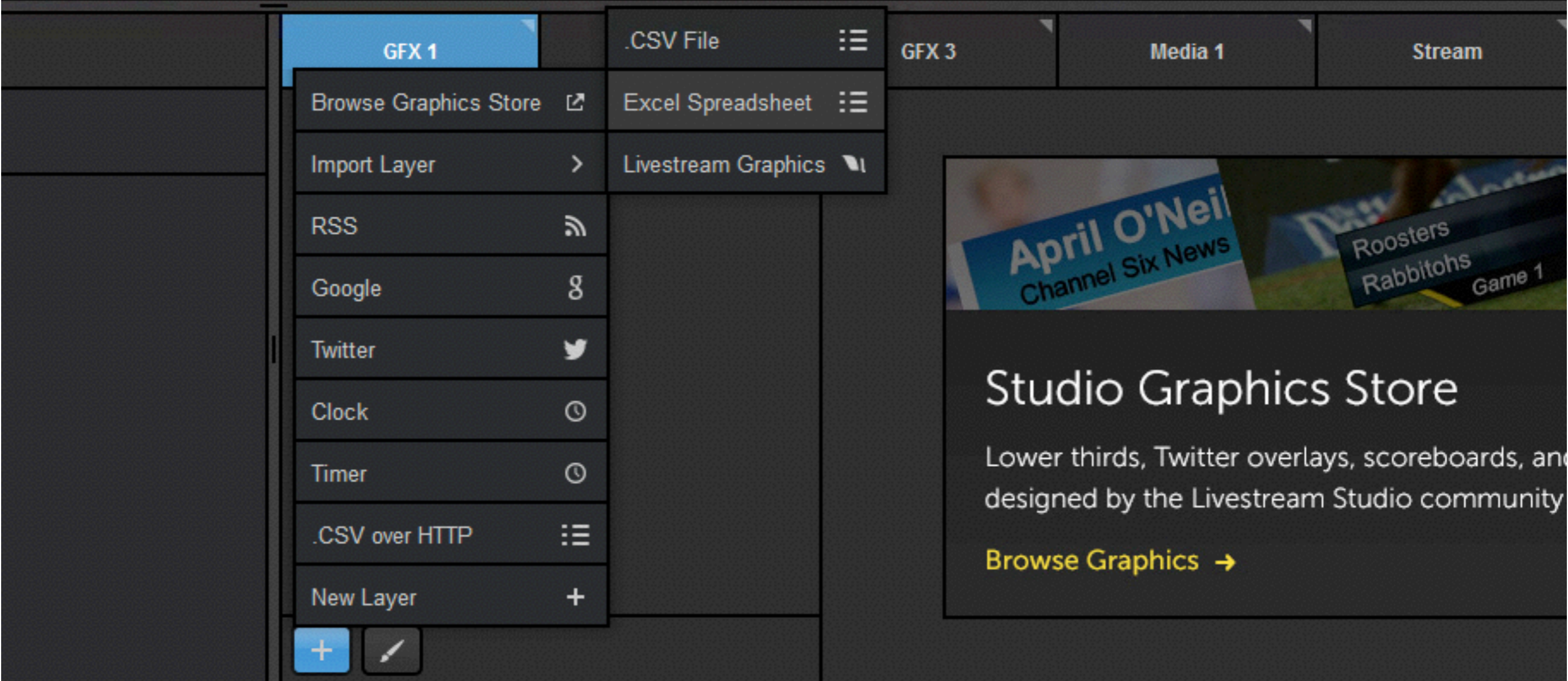
To get started, click the '+' button, then navigate to 'Import Layer.' Select 'Excel Spreadsheet.'
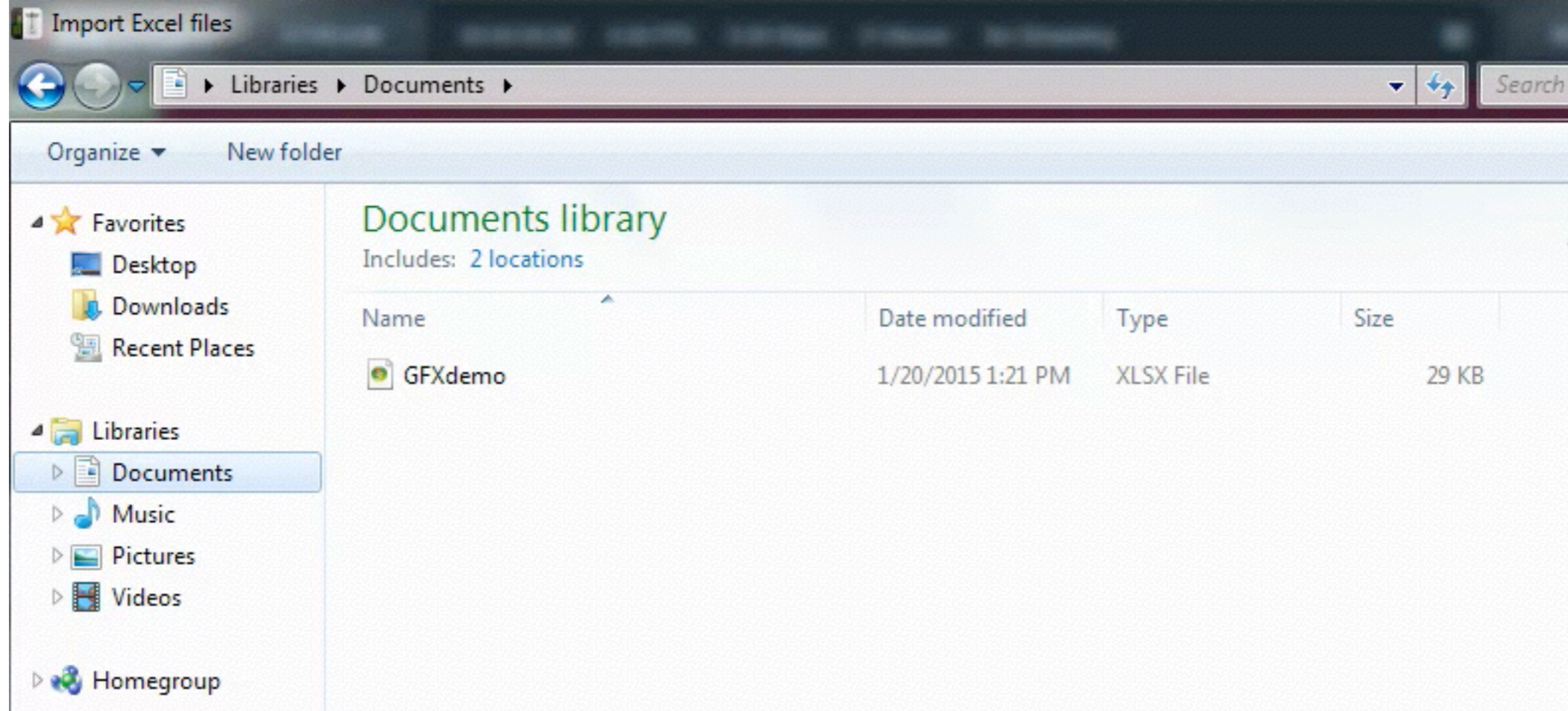
The browse window will appear, allowing you to select your .xlsx file and import it.

	Column 1	Column 2	Column 3
Name		Title	[img] Photo
Tom Iannaco		Producer Support	http://img.new.livestream.com/ev...
Penalty Shot		New York, N.Y.	http://img.new.livestream.com/ev...
Amanda Vicari		Event Co-Founder	http://img.new.livestream.com/ev...
Ed Yealu		Event Co-Founder	http://img.new.livestream.com/ev...
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.
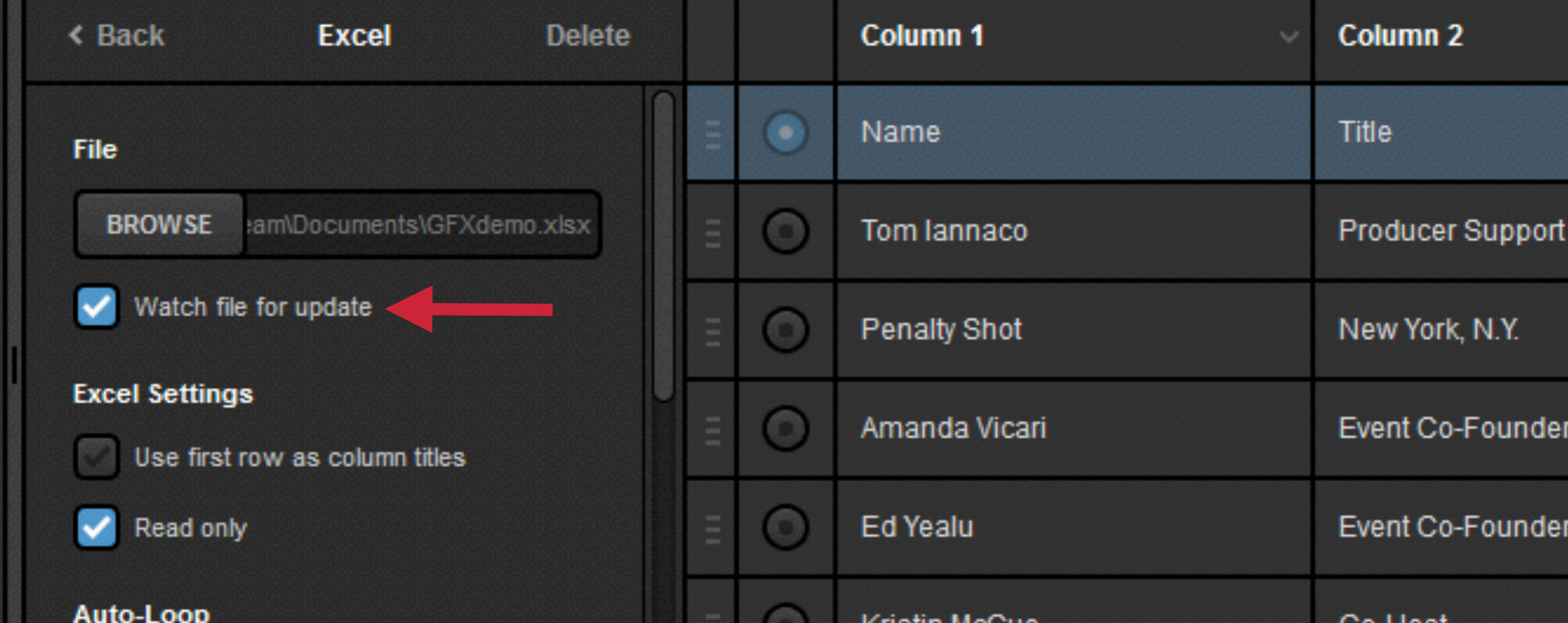
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Checking 'Watch file for update' will prompt Livestream Studio to make any changes to the data that are made in the original .xlsx file on your hard drive.

Name	▼	Title	▼	[img] Photo
Tom Iannaco		Producer Support		http://img.new.livestream.com/
Penalty Shot		New York, N.Y.		http://img.new.livestream.com/
Amanda Vicari		Event Co-Founder		http://img.new.livestream.com
Ed Yealu		Event Co-Founder		http://img.new.livestream.com
Kristin McCue		Co-Host		http://img.new.livestream.com

File

BROWSE :am\Documents\GFXdemo.xlsx

☑ Watch file for update

Excel Settings

☑ Use first row as column titles

☑ Read only

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.

Click on the name of any column to change the data type that is in the column (text or image).

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.

Scroll down to find your Auto-Loop settings, including interval between rows, direction, and starting point.
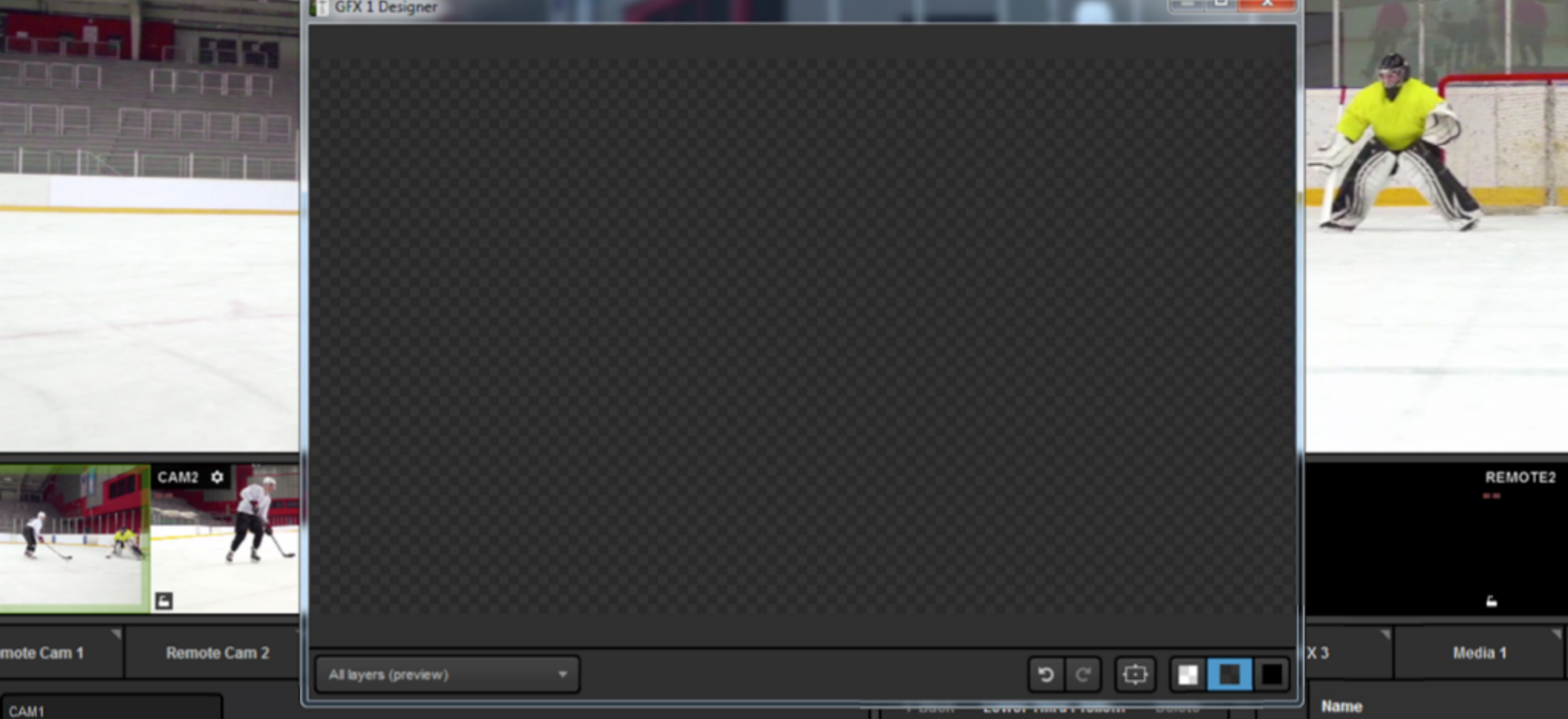
Next, click on the paintbrush icon at
the bottom of the graphics module
to enter the GFX Designer.
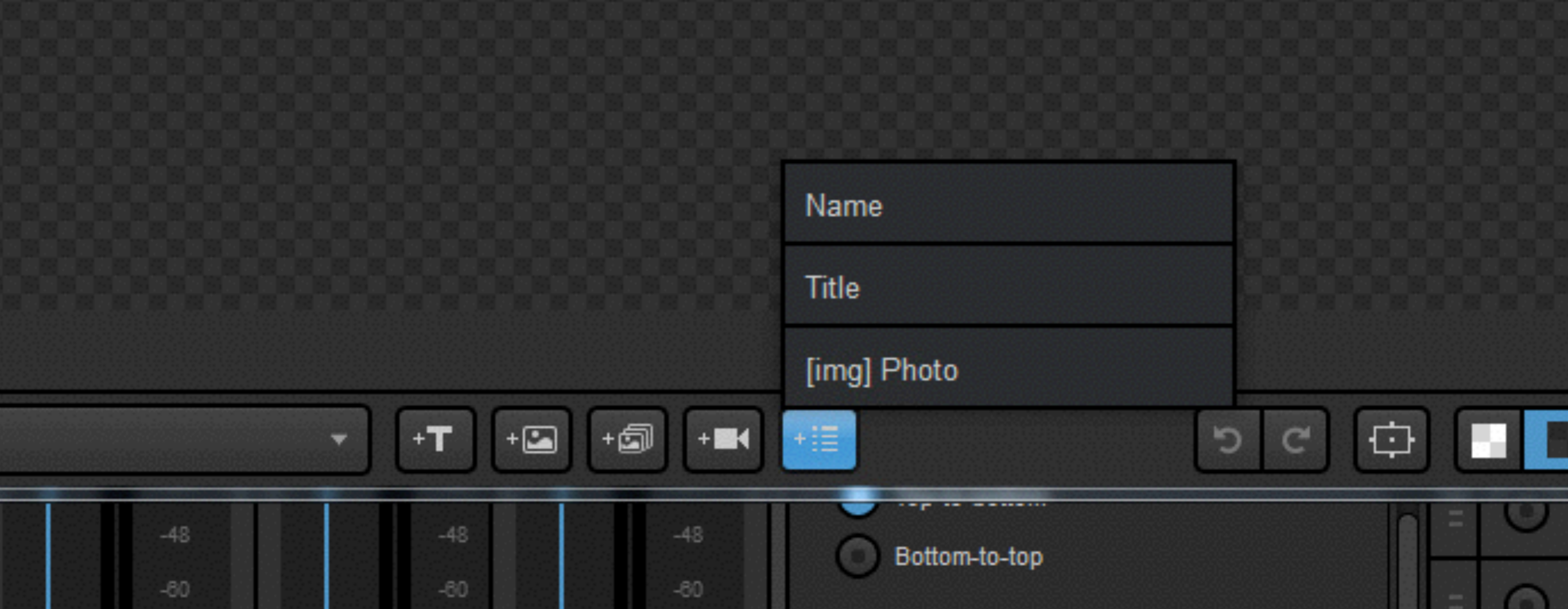
Select 'Excel' in the dropdown menu and click the list icon to insert your text and image fields into the designer.

From here, you can drag and drop each field to wherever you want it to be displayed.
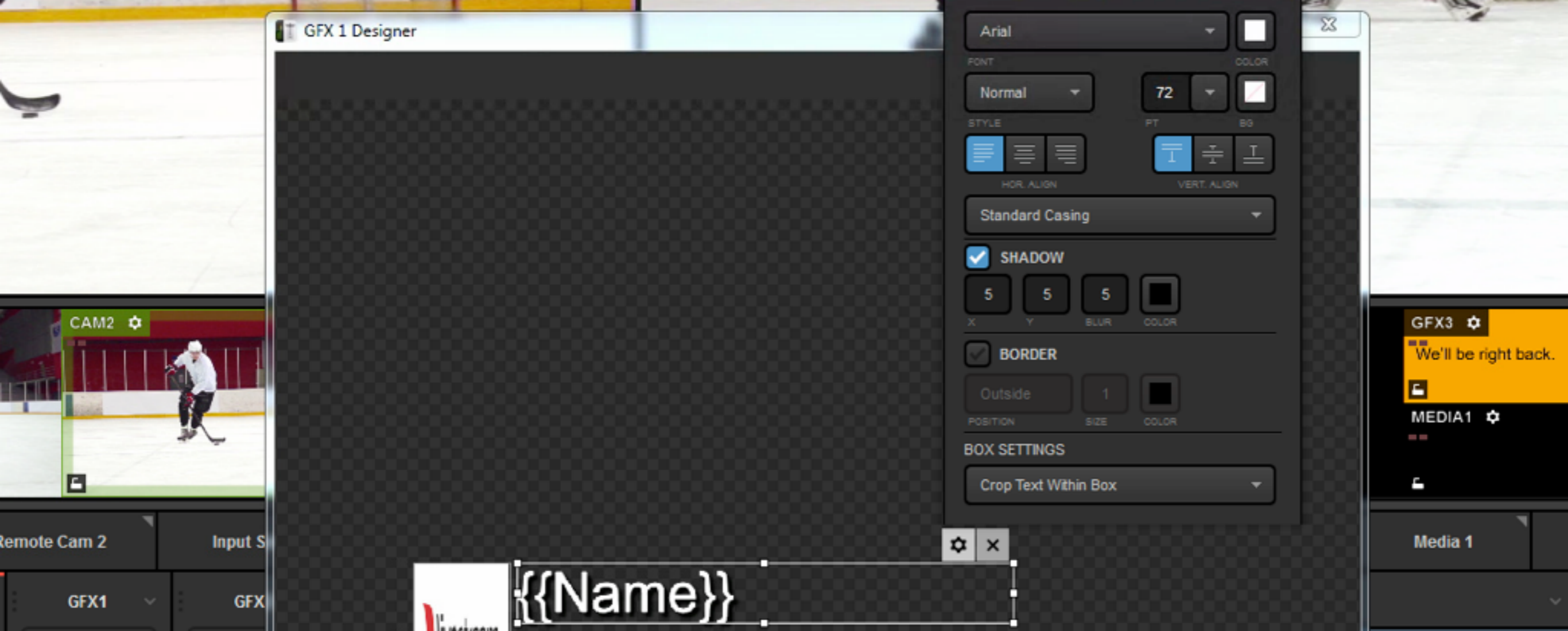
Click the gearwheel icon on each
field to choose font, size, color,
opacity, etc.
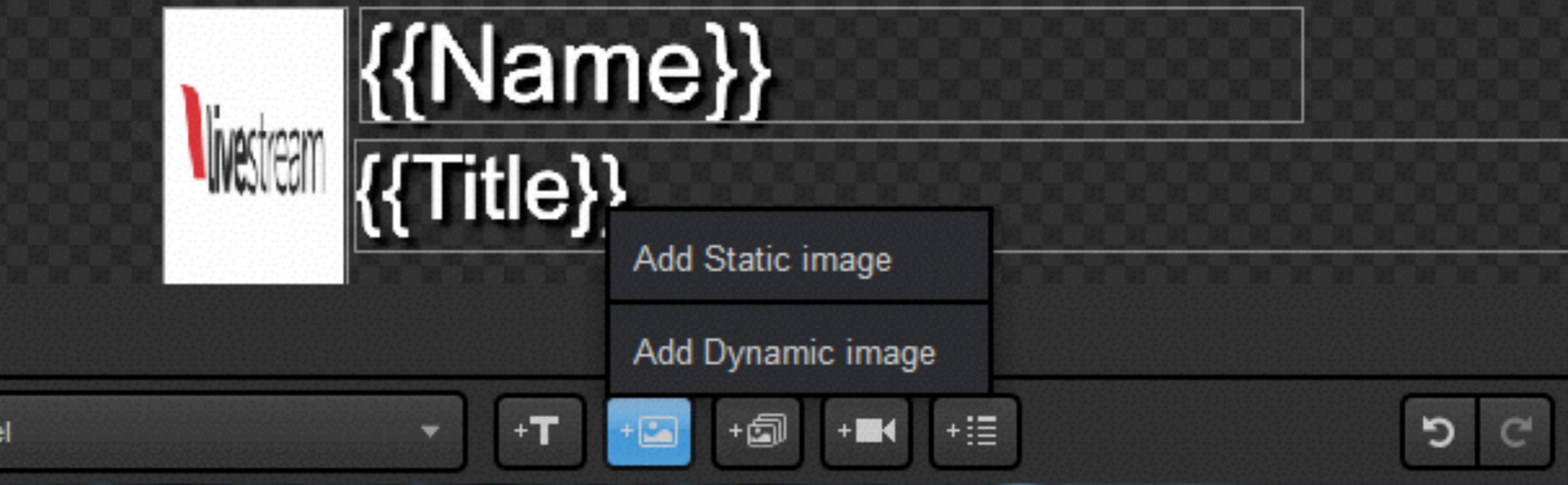
Feel free to add any additional elements to your graphics overlay using the other icons at the bottom of the designer.
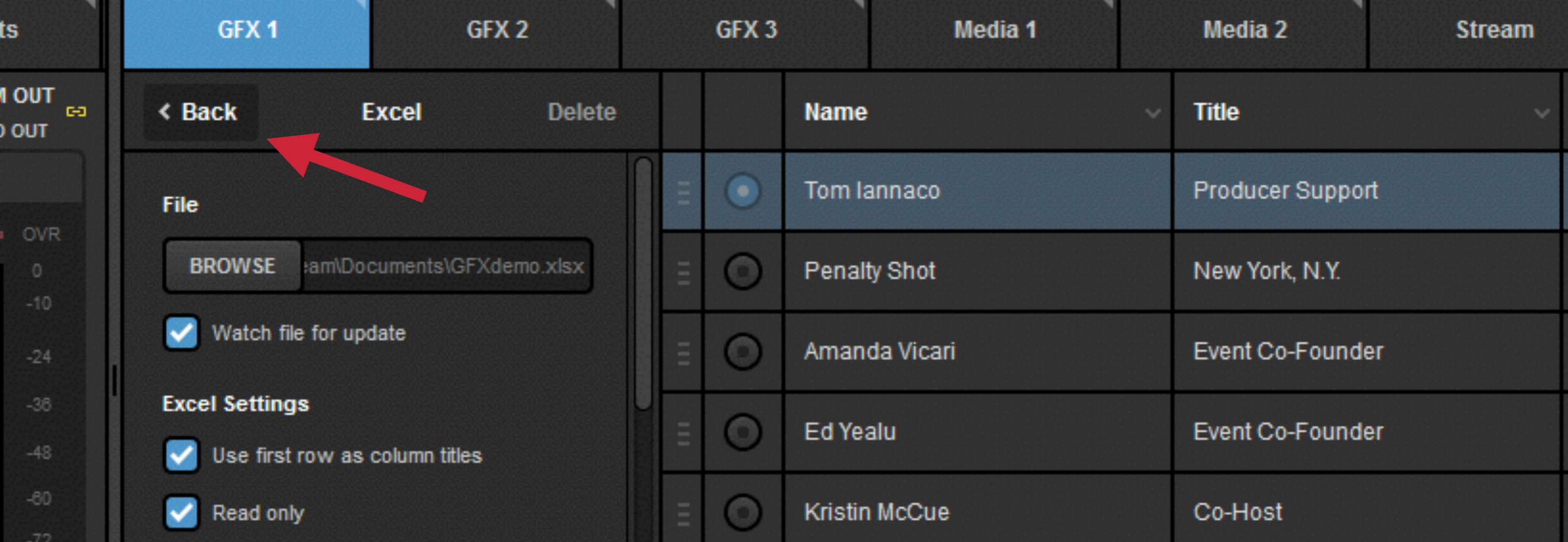
Close out of the GFX Designer when you have finished. To use the graphic, click 'Back' to view the layer module.

	Name	Title	[img] Photo
⦿	Tom Iannaco	Producer Support	
⦿	Penalty Shot	New York, N.Y.	
⦿	Amanda Vicari	Event Co-Founder	
⦿	Ed Yealu	Event Co-Founder	
⦿	Kristin McCue	Co-Host	

Make sure the eye icon
corresponding to that layer is
highlighted blue, meaning that it
is visible.

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You can then click the associated 'PRV,' 'PUSH,' and 'PULL' buttons to utilize that graphics overlay.

You can also use an .xlsx file as a Livestream Studio Certified Data Source (LSCDS). Click here 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
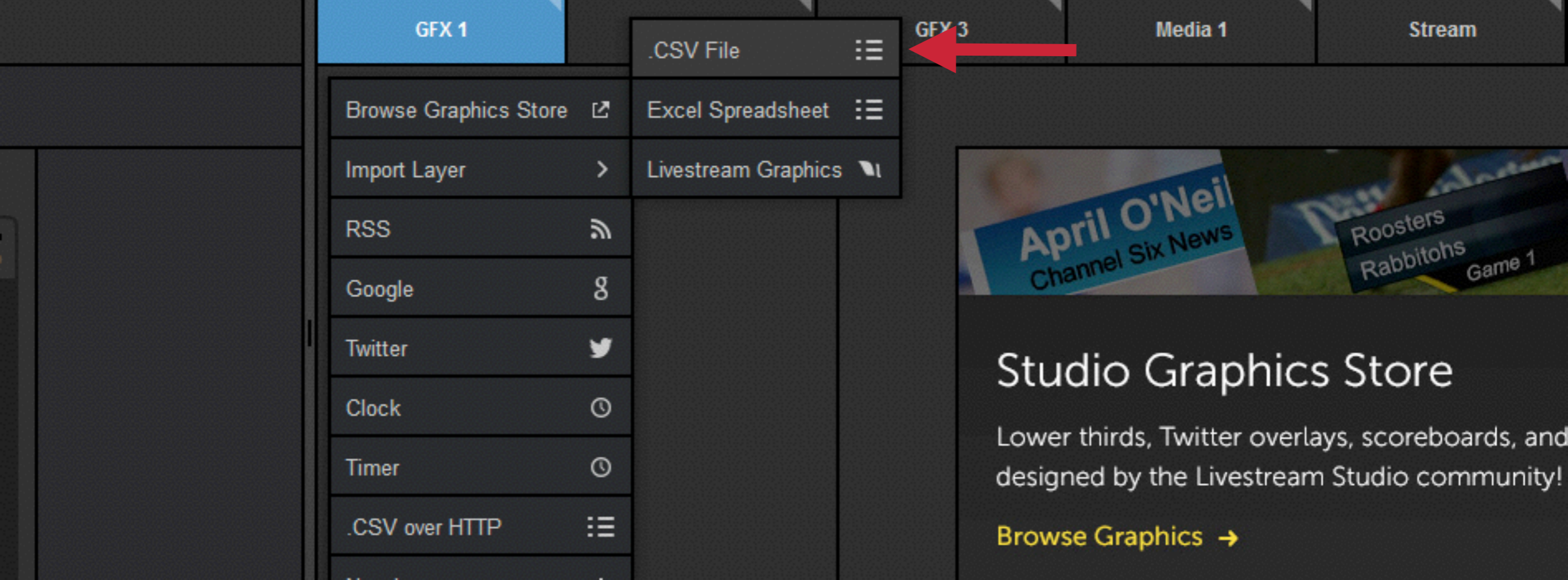
Using a .CSV file as a data source for Livestream Studio is very similar to bringing in an Excel document. From 'Import Layer,' select '.CSV File.'

Browse your computer for the desired .CSV file, then open it.

The data from your .CSV file will appear on the right side of the module. Click the gearwheel to enter its settings.

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.

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.

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.

To see images in this GFX layer,
the .CSV file must include URLs
where the images are hosted.

In order to see the images, click on the column's title to change it from a Text Column to an Image Column.

Changing that column to an
image field will allow Livestream
Studio to reference the URLs
and see the images.

< Back   CSV   Delete

		Name	Title	[img] Phot
	⦿	Tom Iannaco	Producer Support	
	○	Penalty Shot	New York, N.Y.	
	○	Amanda Vicari	Event Co-Founder	
	○	Ed Yealu	Event Co-Founder	
	○	Kristin McCue	Co-Host	

Separators

Comma

Character Encoding

Auto

Auto-Loop

START AUTO-LOOP

Further down in the settings, you can adjust the separators in the document as well as the character encoding (which is typically detected automatically).

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Scroll down further to find your Auto-Loop settings, including interval between rows, direction, and starting point.
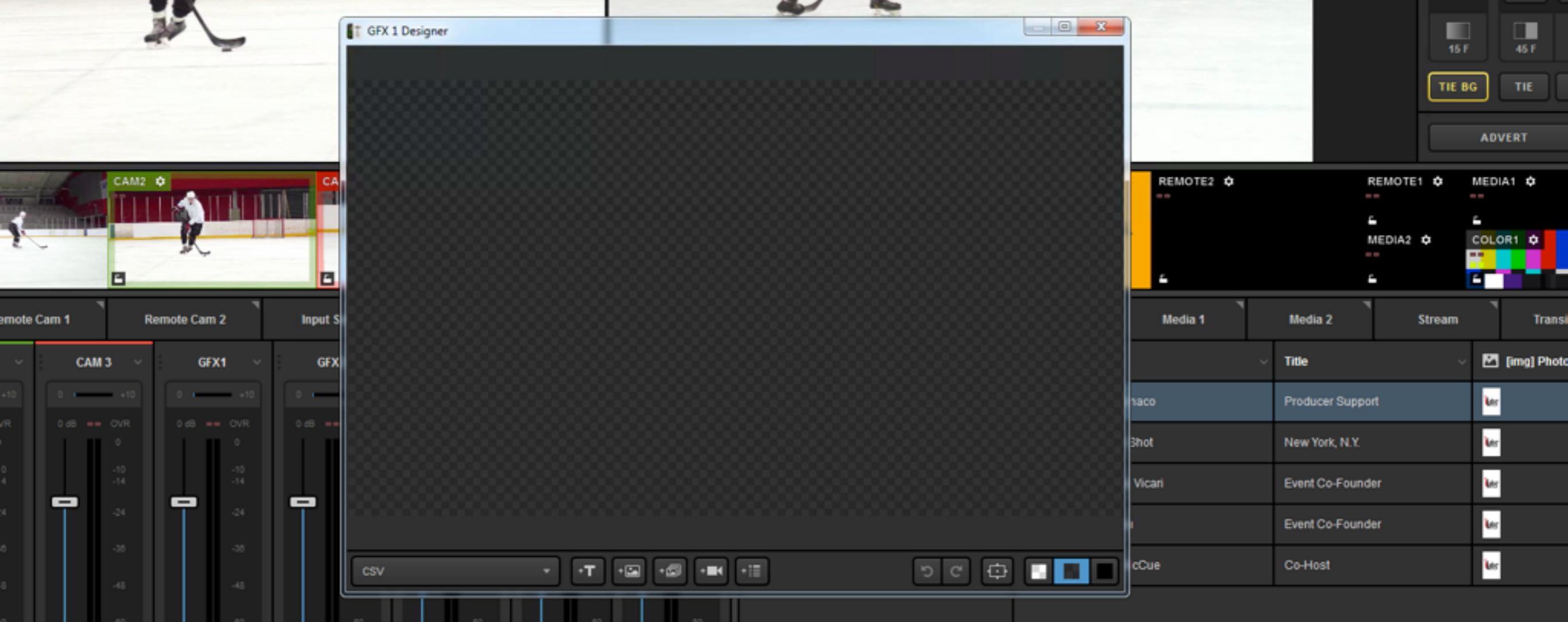
Next, click on the paintbrush icon
to enter the GFX Designer.
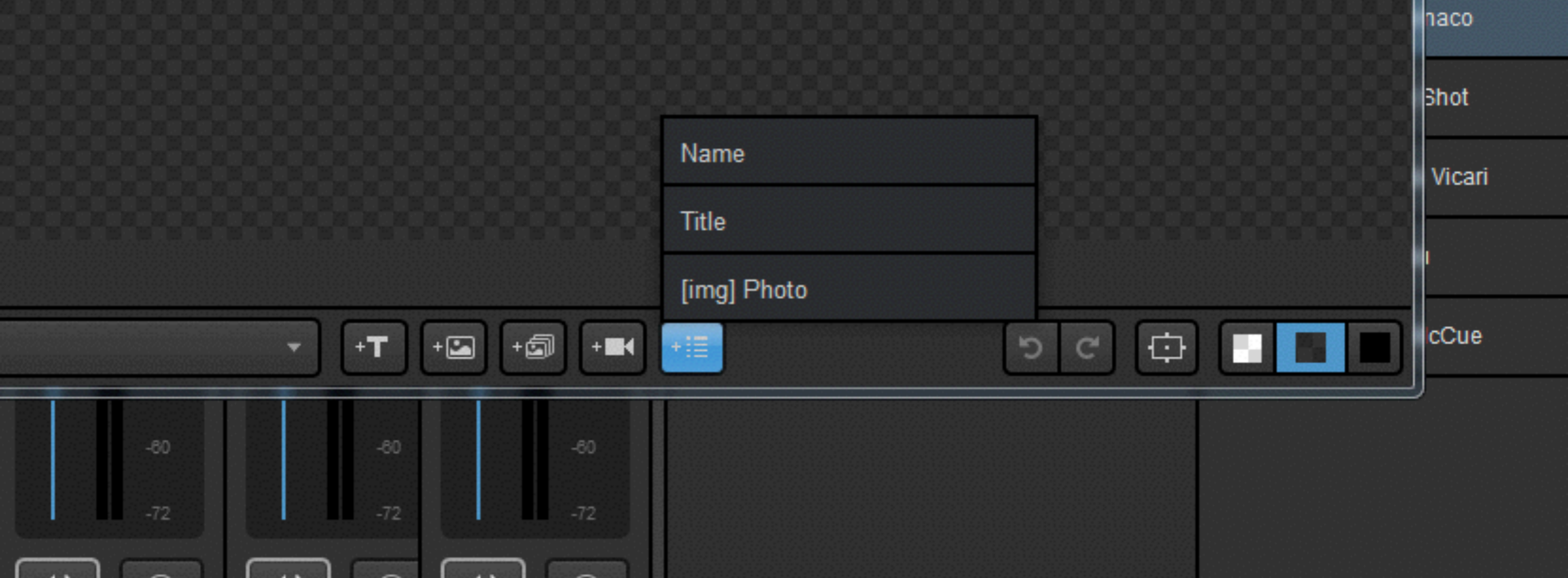
Select '.CSV' in the dropdown menu, then click the list icon to insert your columns.
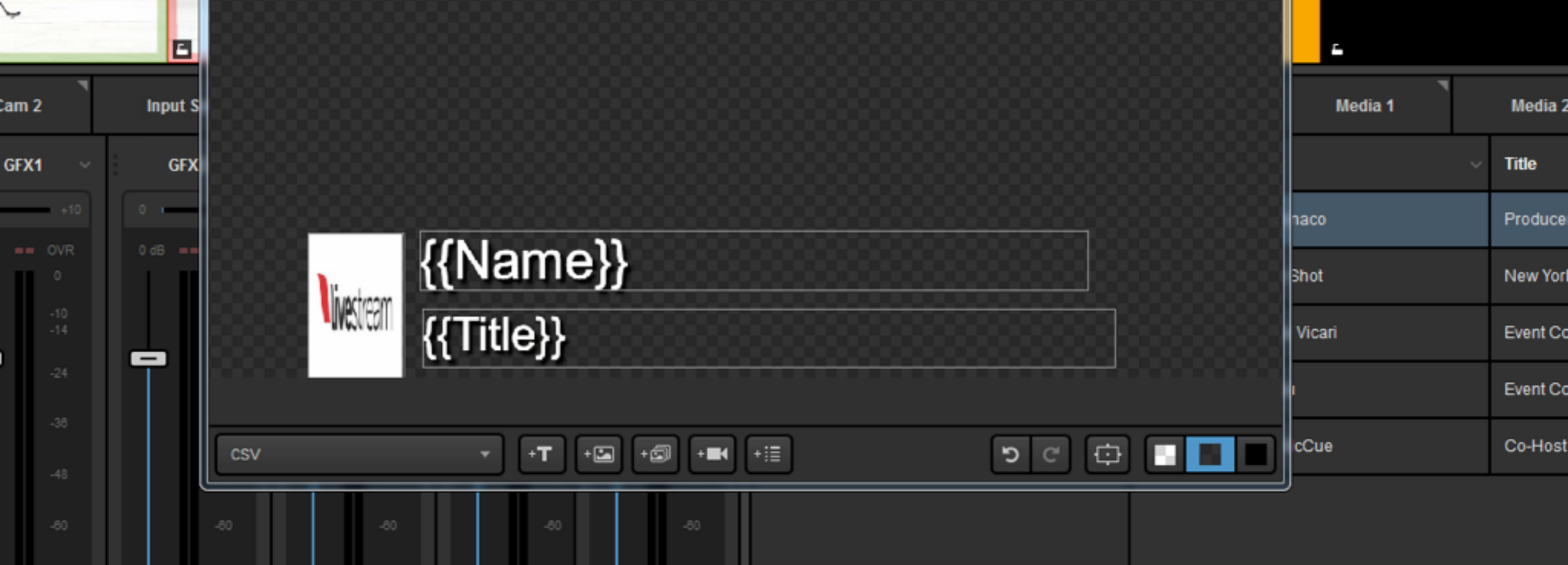
From here, you can drag and drop each field to wherever you want it to be displayed.

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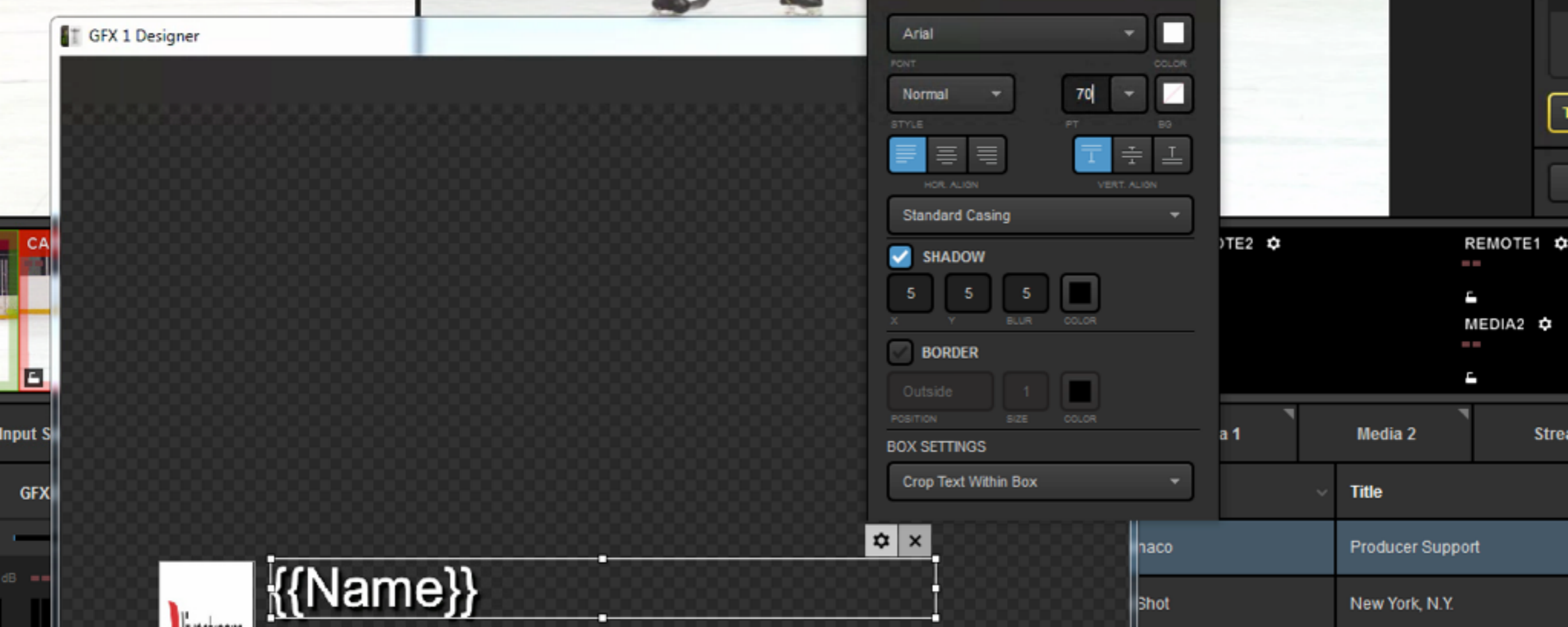
Click the gearwheel icon to choose font, size, color, etc. for each data field.
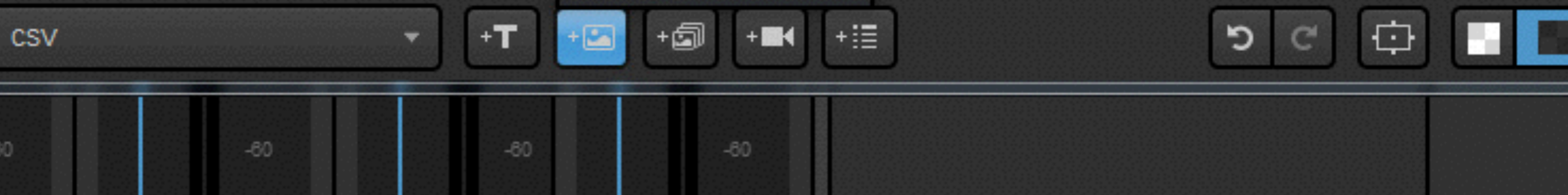
Feel free to add any additional elements to your graphics overlay using the other icons at the bottom of the GFX Designer.
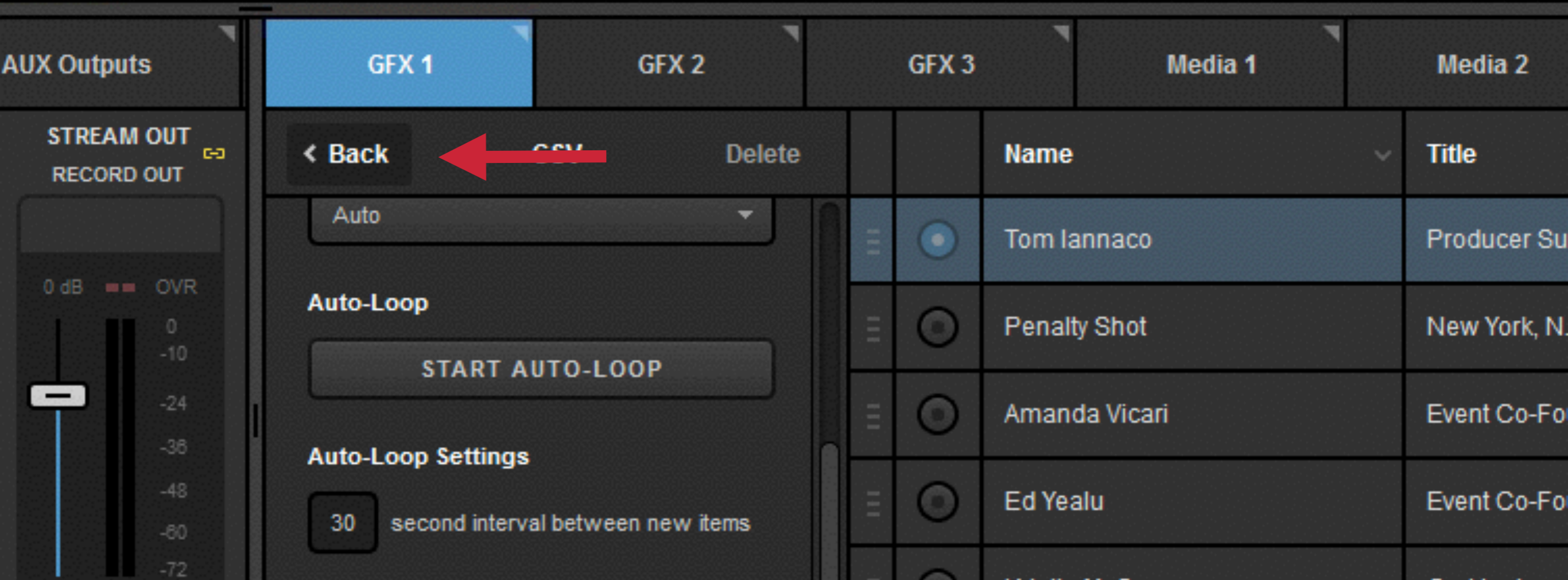
Close out of the GFX Designer when you have finished designing your graphic. To use that graphic, click 'Back' to view the layer module.

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.

Adding graphics overlays

RSS feeds

livestream
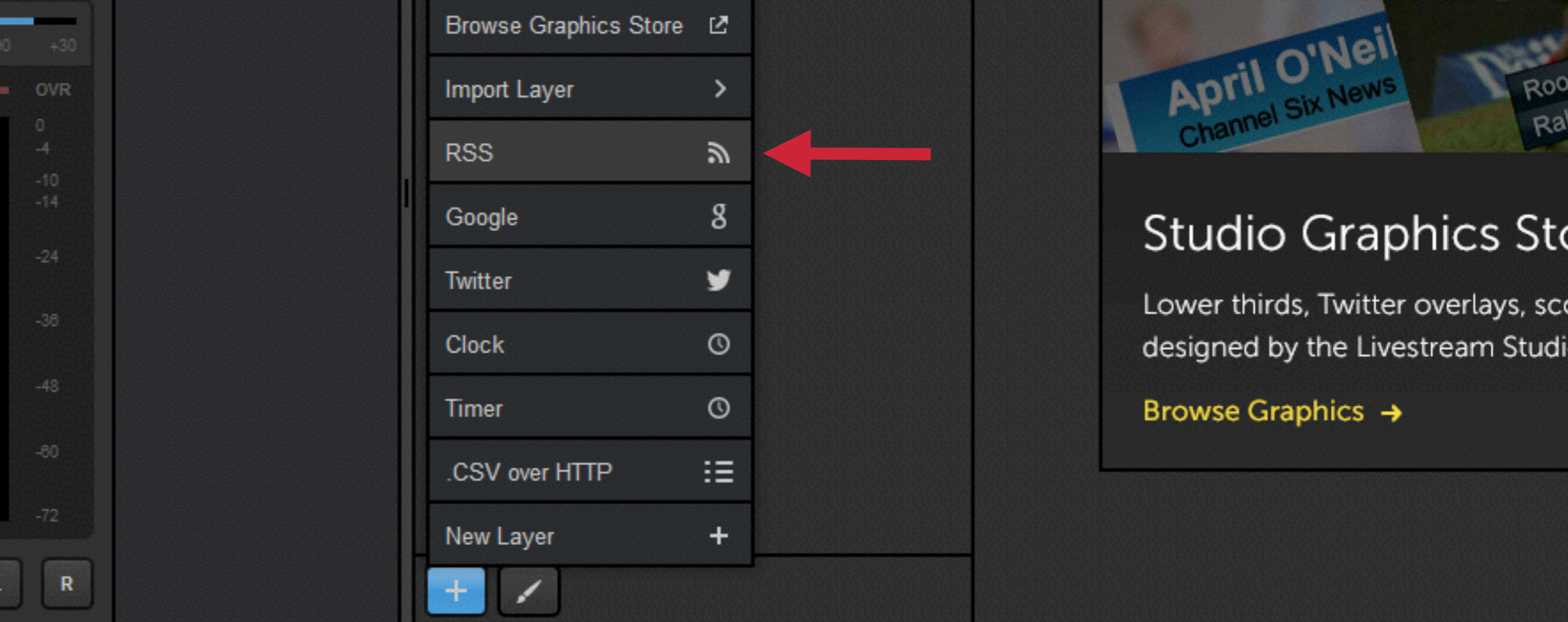
If you want to include an RSS feed in your production, select 'RSS' from the graphics menu.

No data fields in this layer
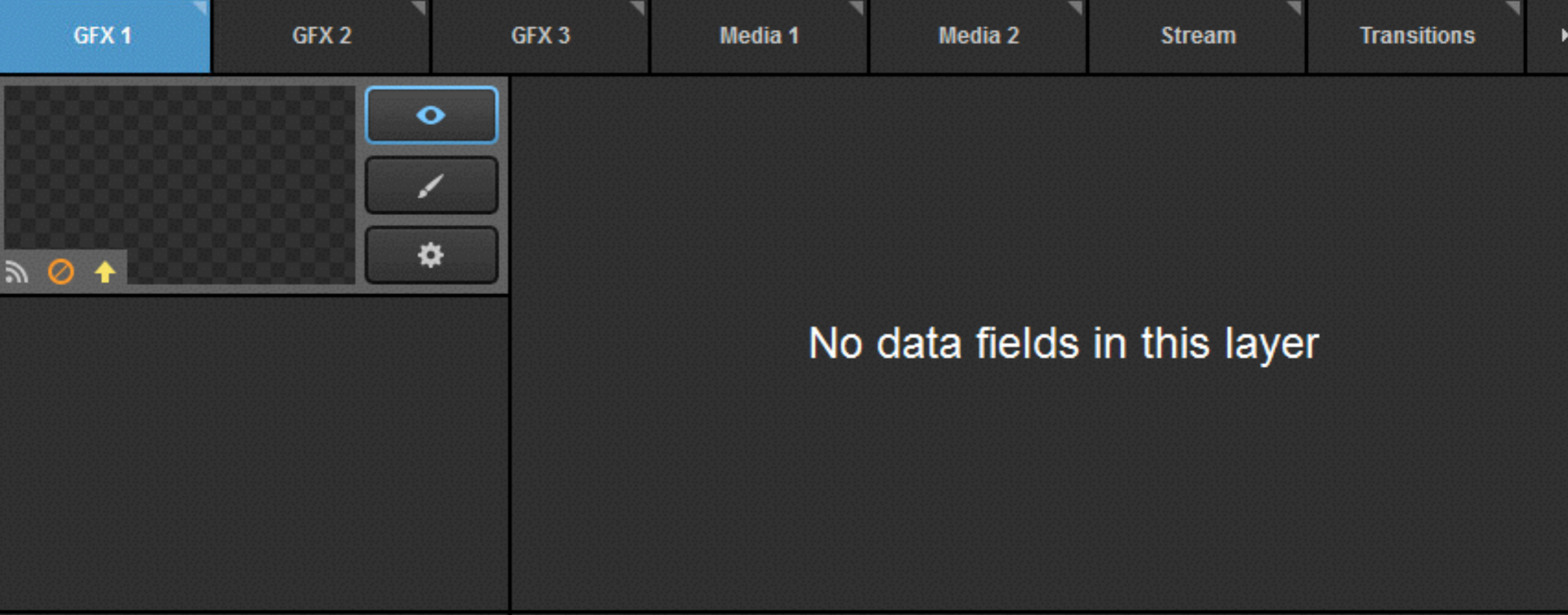
The RSS layer will appear in the graphics overlay channel. Click the gear wheel to enter its settings.
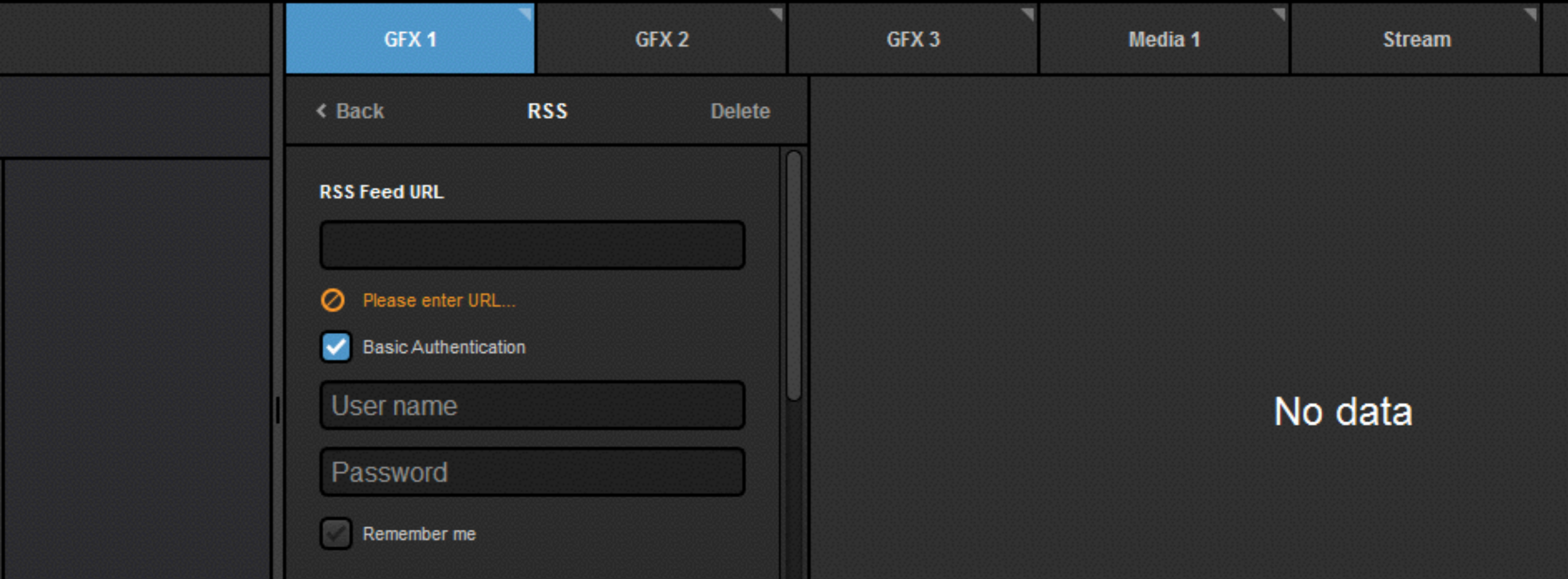
If access to your RSS feed
requires authentication, check
'Basic Authentication' and enter
your credentials.

When you enter the RSS URL, the data should populate on the right and give you access to further settings.
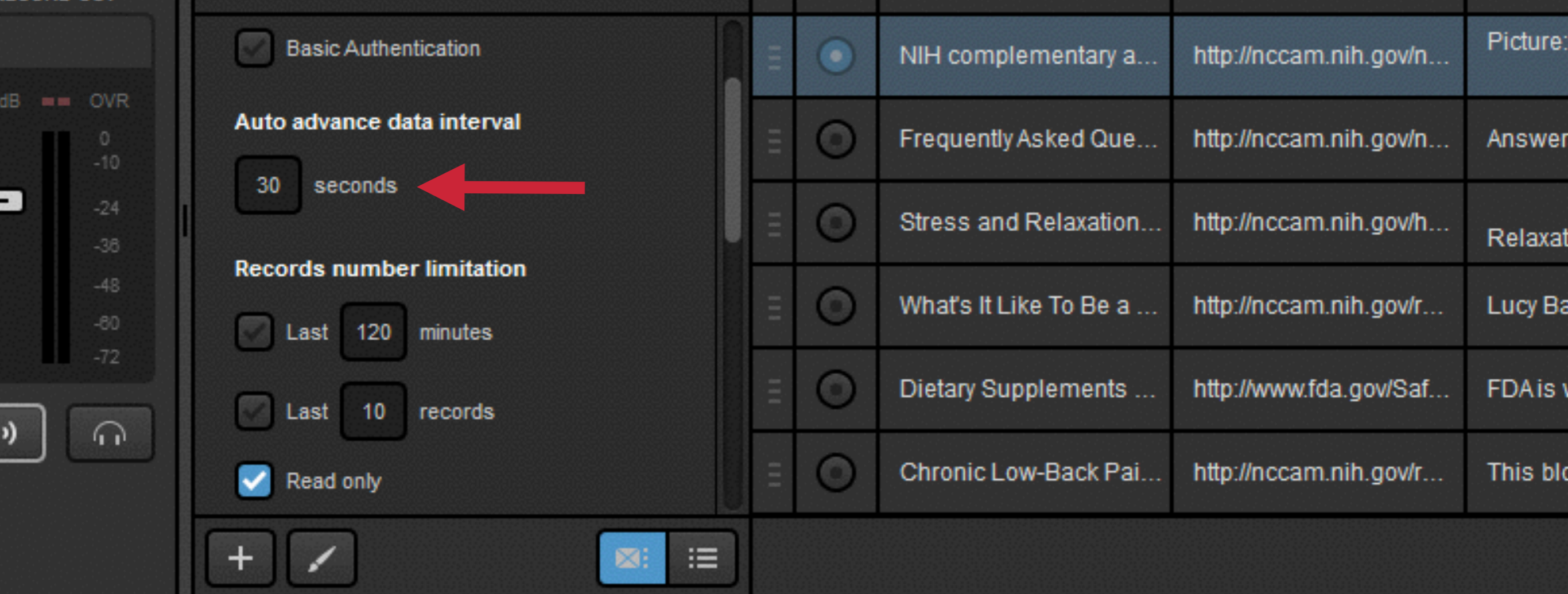
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Set the time interval in seconds that you want Livestream Studio to look for new information from your RSS feed under 'Auto advance data interval.'
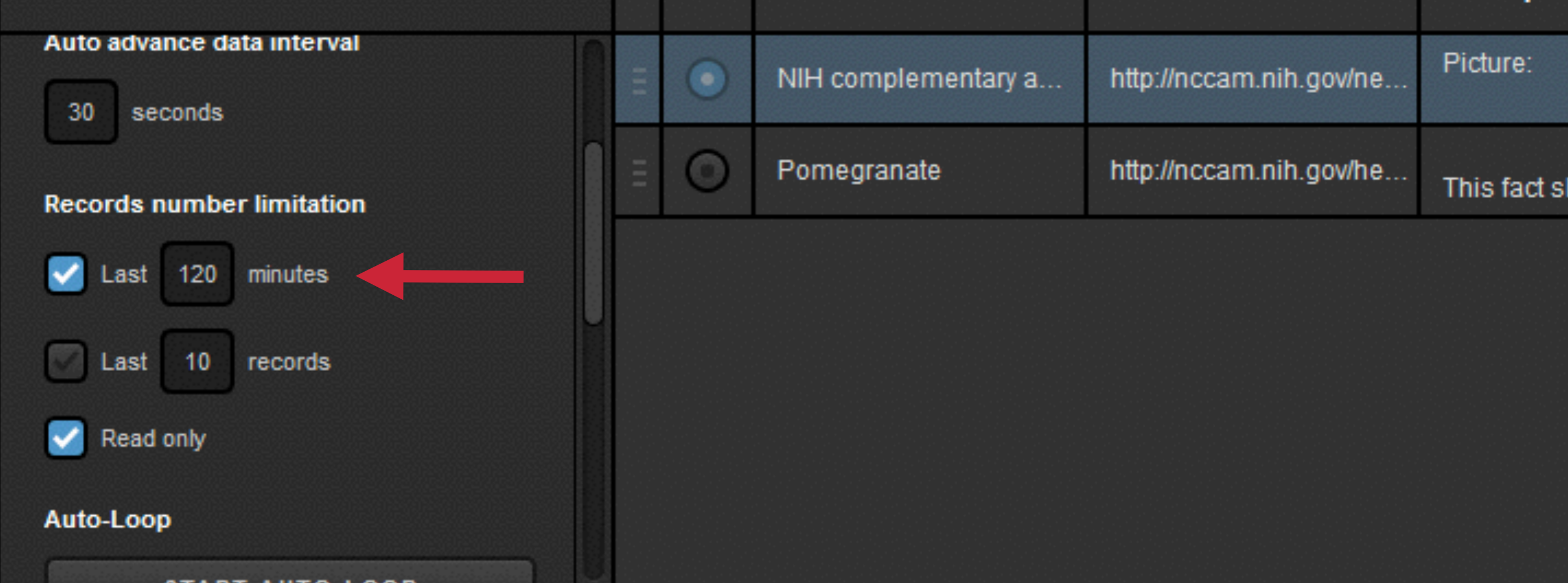
To control the number of posts from your RSS feed, you can choose to only include posts within a recent time frame.

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.
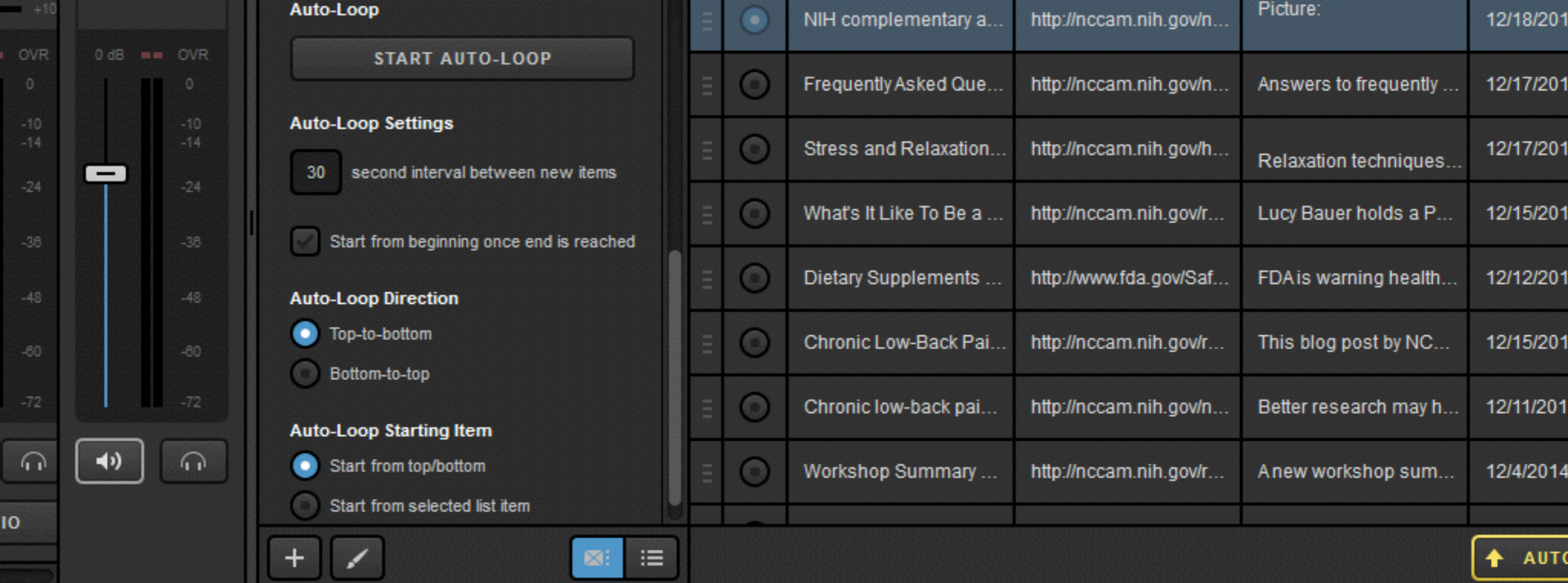
At the bottom of the settings are the Auto-Loop options for this graphics layer.
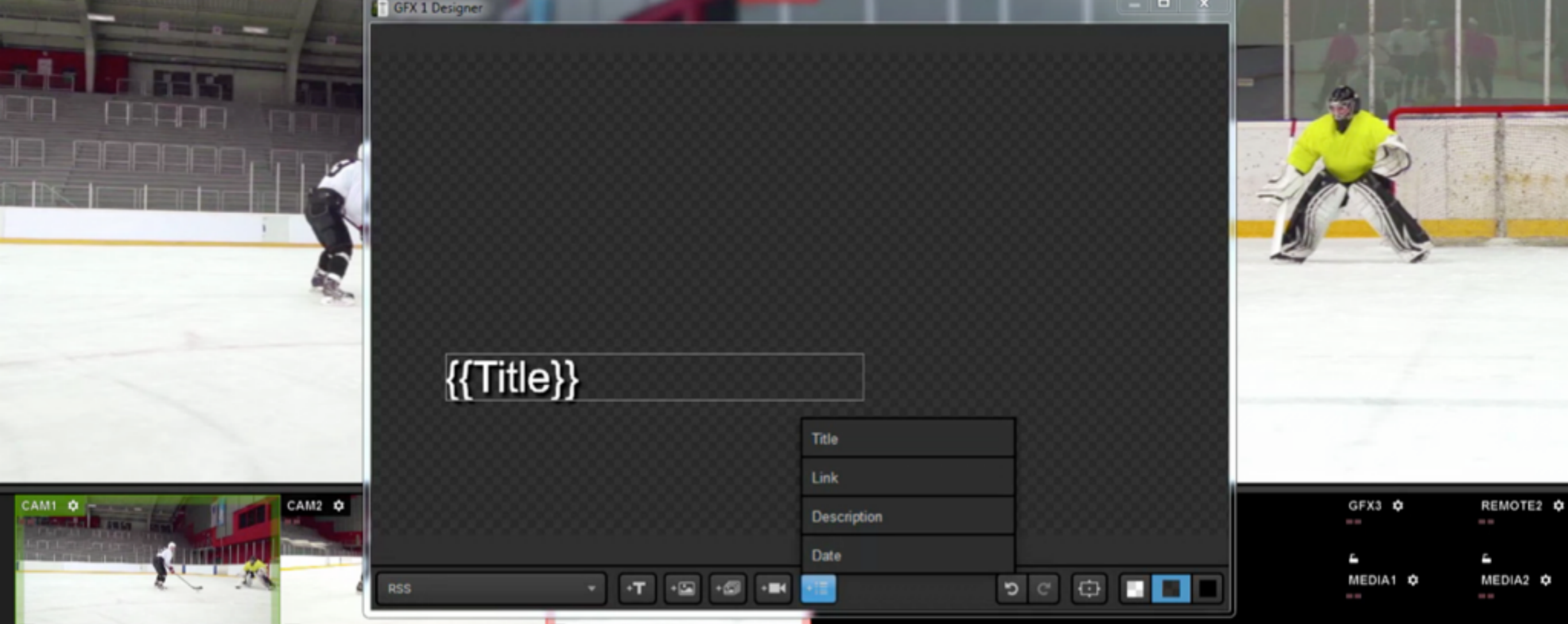
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Next, enter the GFX Designer, and select 'RSS' from the dropdown. Click the list icon to select your data fields.
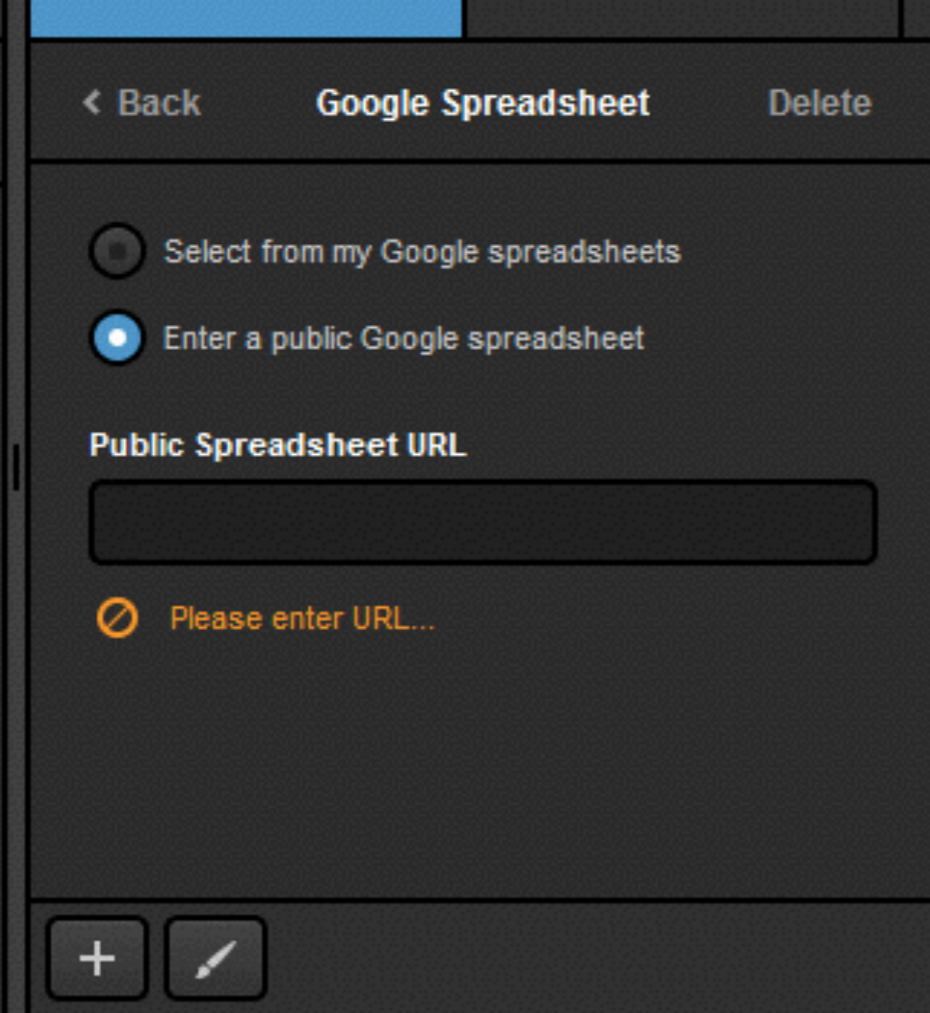
Close out of the GFX Designer and return to the layers module to make the layer visible. You can now include content from the RSS feed into your production via the graphics overlay controls.
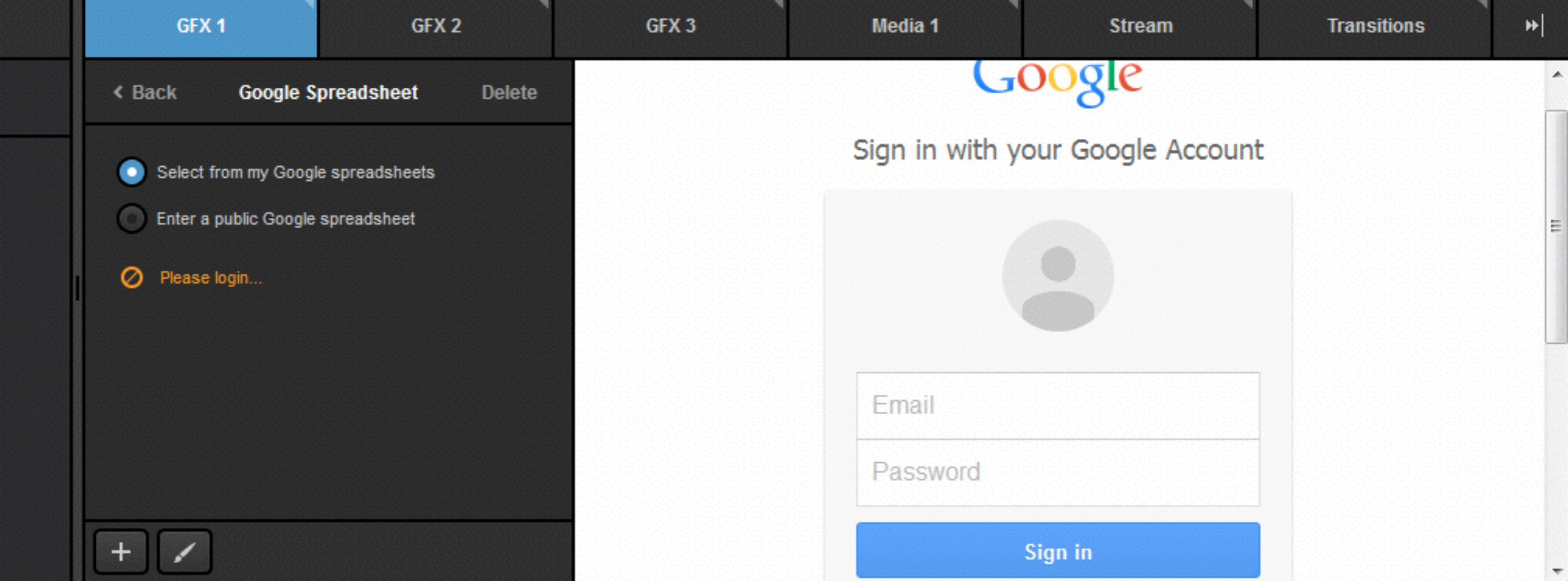
Adding graphics overlays

Google
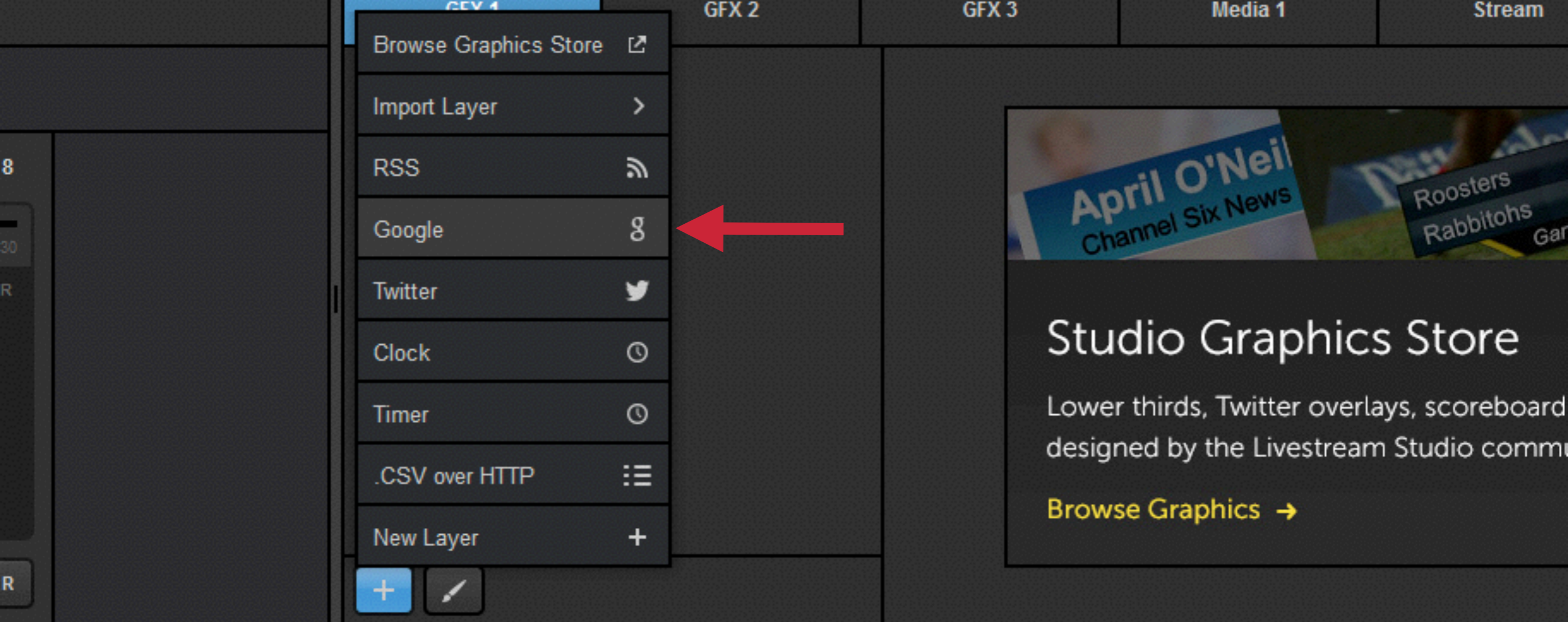
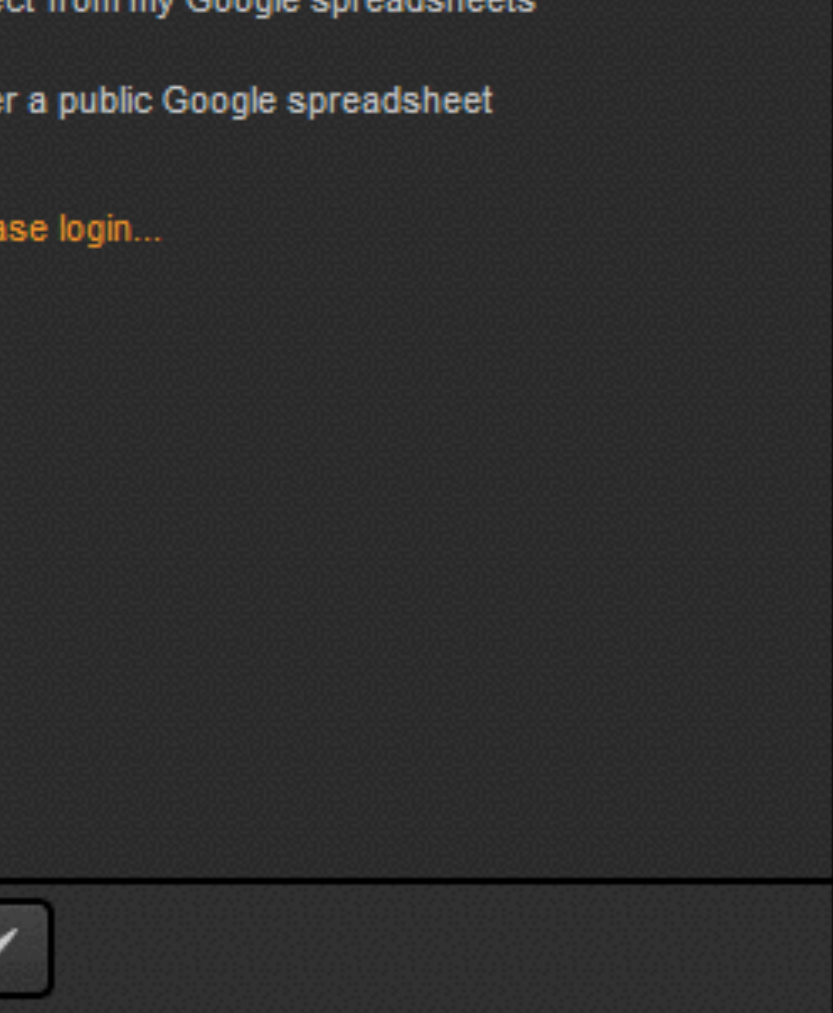To integrate information from a Google spreadsheet, select 'Google' from the graphics menu.

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.

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.

The Google module will ask permission to view and manage your spreadsheets. Click 'Accept.'

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.

Once you select your spreadsheet,
click the 'Back' button to access
settings for this layer.

You can always use a different spreadsheet in your Google Drive by clicking the 'Change' button.

To turn your first row into column titles, check 'Use first row as column titles.'

Click on any column title to change the type of data included in that field (text or image).

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.

Scroll down further in the settings to configure your Auto-Loop preferences.
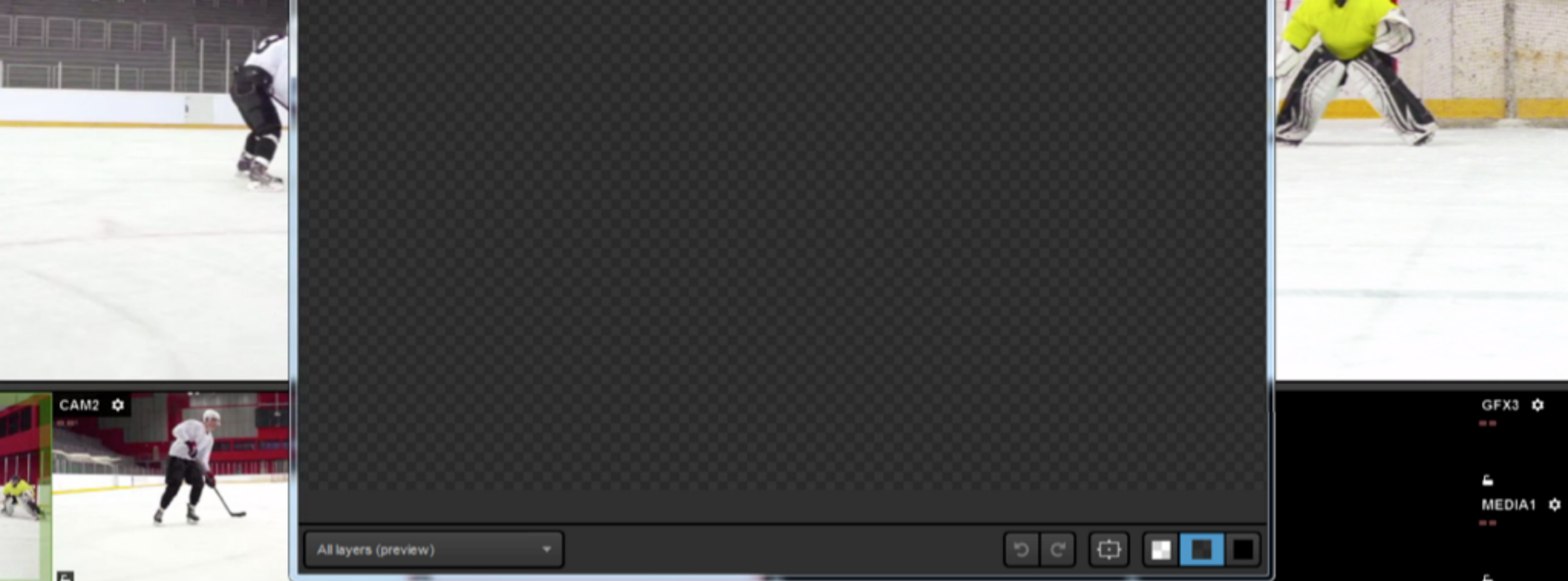
The next step is to start designing your graphic. Click on the paintbrush button to enter the GFX Designer.
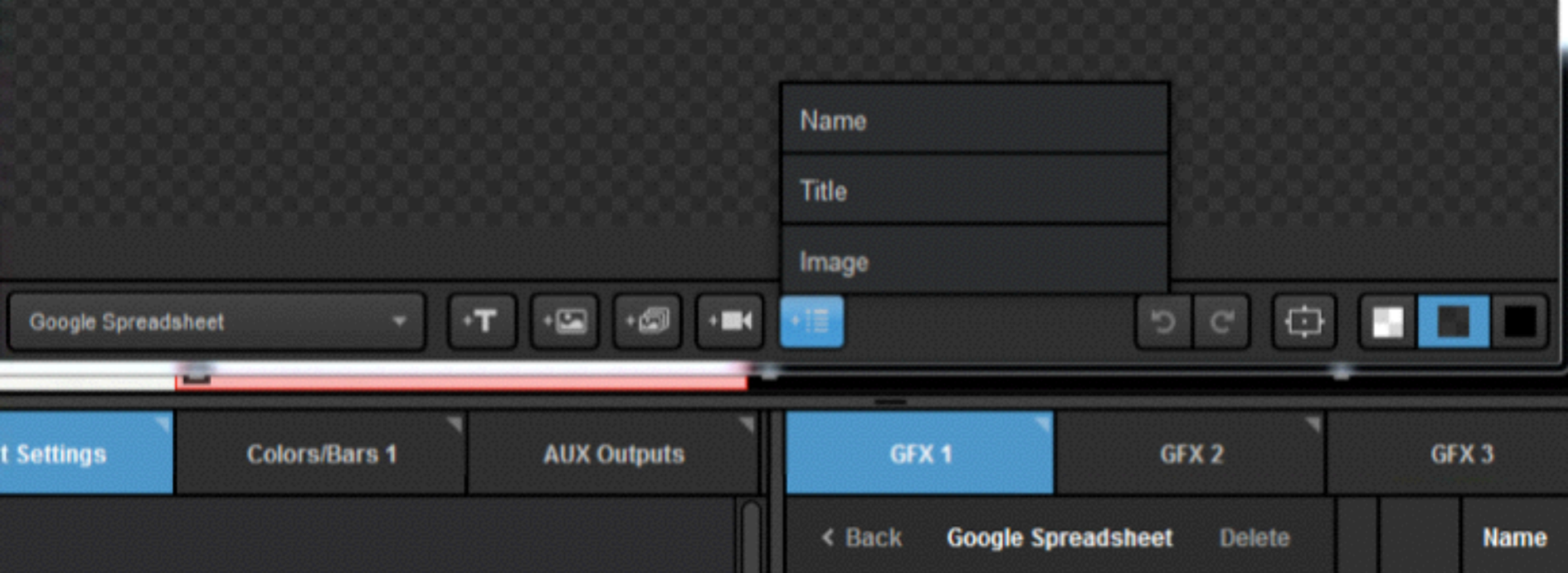
In the Google Spreadsheet layer, click on the list icon to see your columns. Click on one to insert it into the GFX Designer.
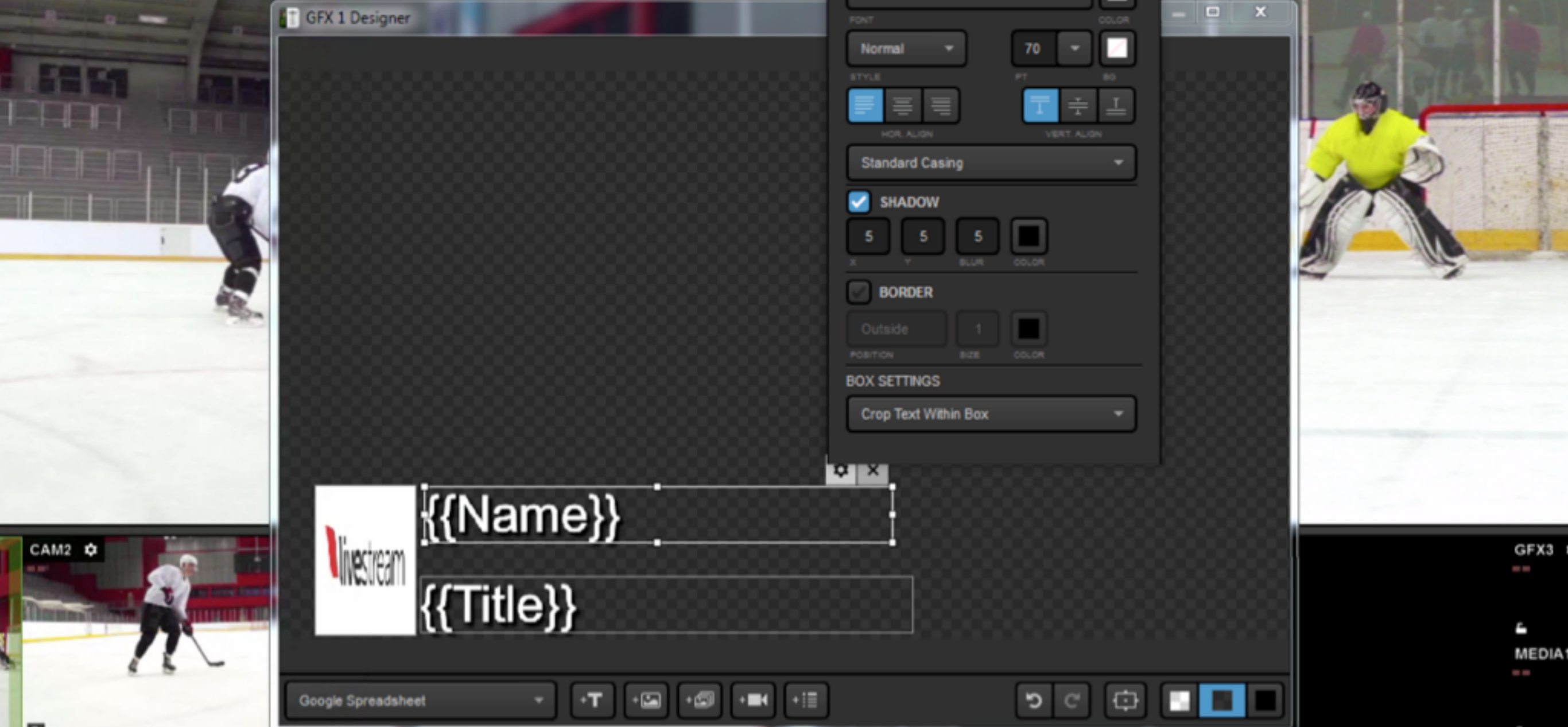
Click on the gearwheel button to access more options for your font, colors, etc.
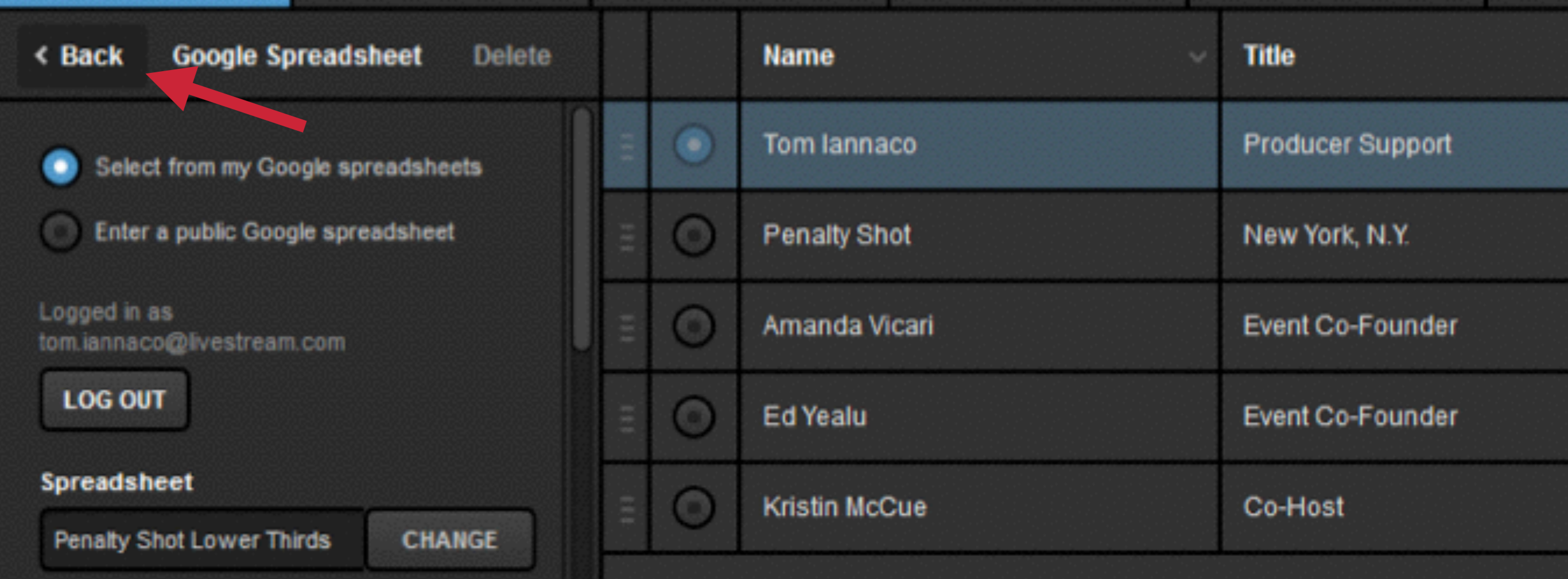
Close out of the GFX Designer when you have finished. In the graphics overlay channel, click 'Back' in the upper right corner to return to the layer module.
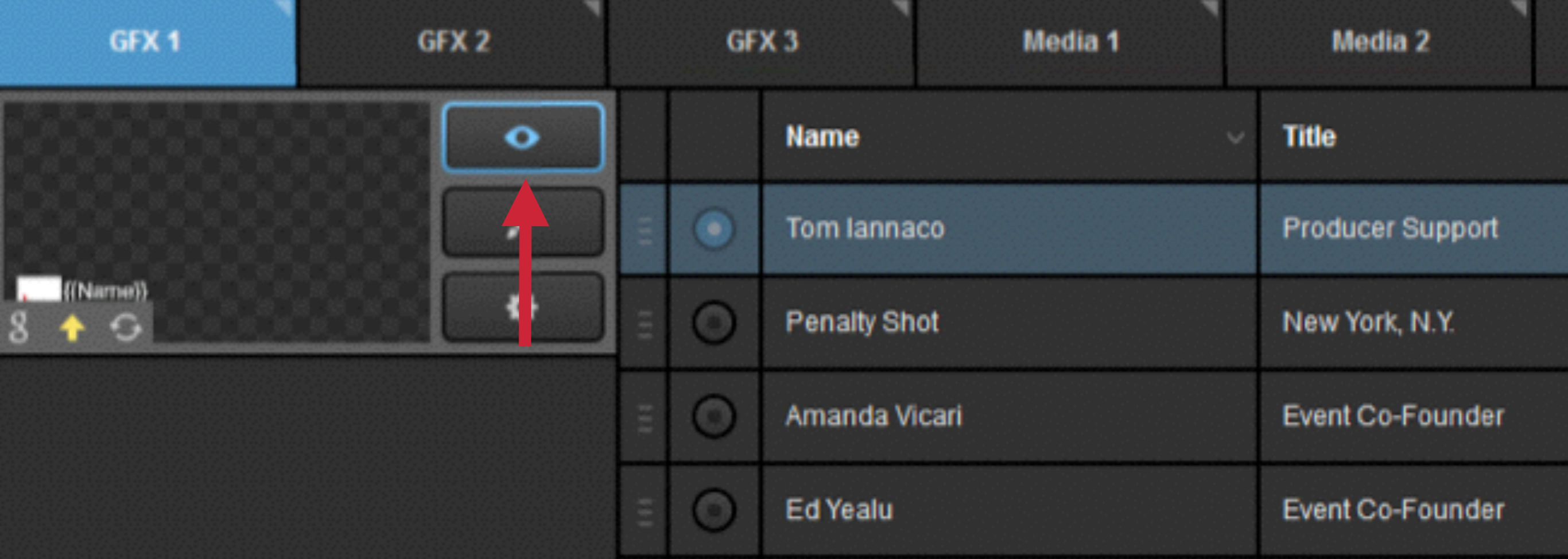
Make sure the Google spreadsheet layer is visible by selecting the eye icon. This will allow you to include information from your spreadsheet as a graphics overlay in Livestream Studio.

Livestream Studio Certified Datasource Sample By Studiolivestream   ☆☆☆☆☆   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 here.

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 <= 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.

Now you can start adding data to your sheet. You should have 'PROGRAM' in cell A1.

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.
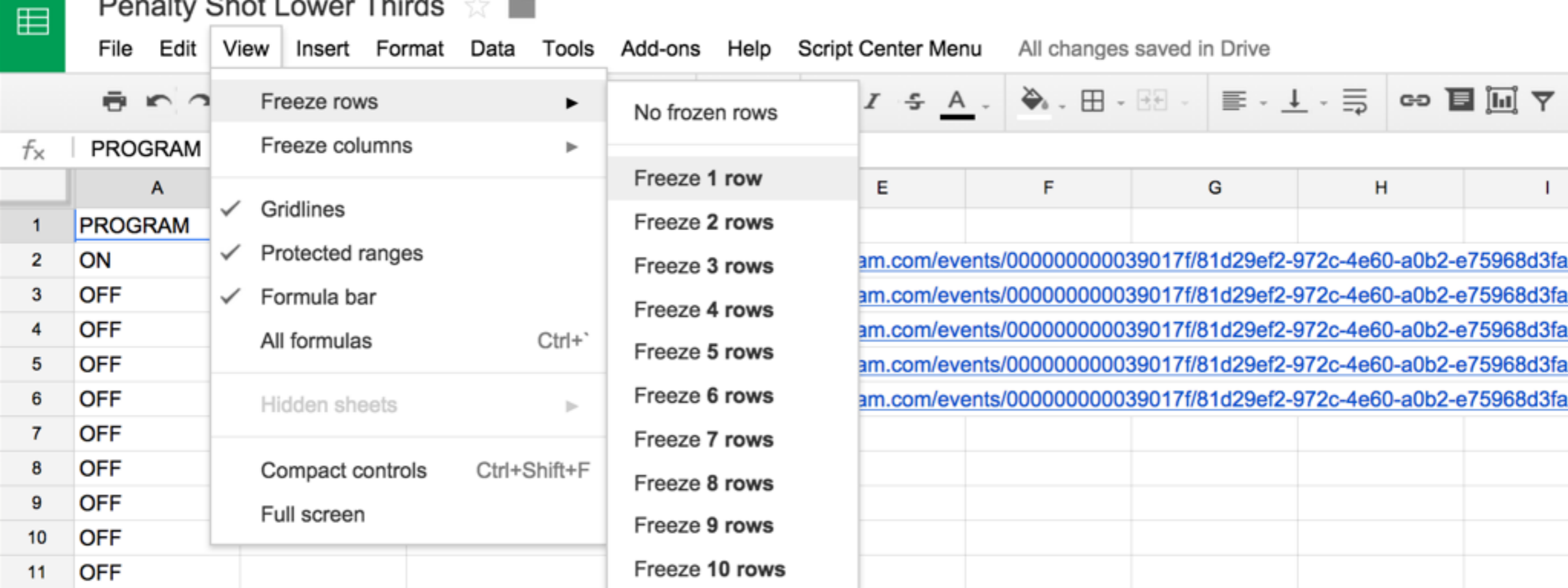
In the 'View' menu, select 'Freeze rows' > 'Freeze 1 row,' and 'Freeze columns' > 'Freeze 1 column.' This will indicate column titles and row visibility in Livestream Studio.

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.
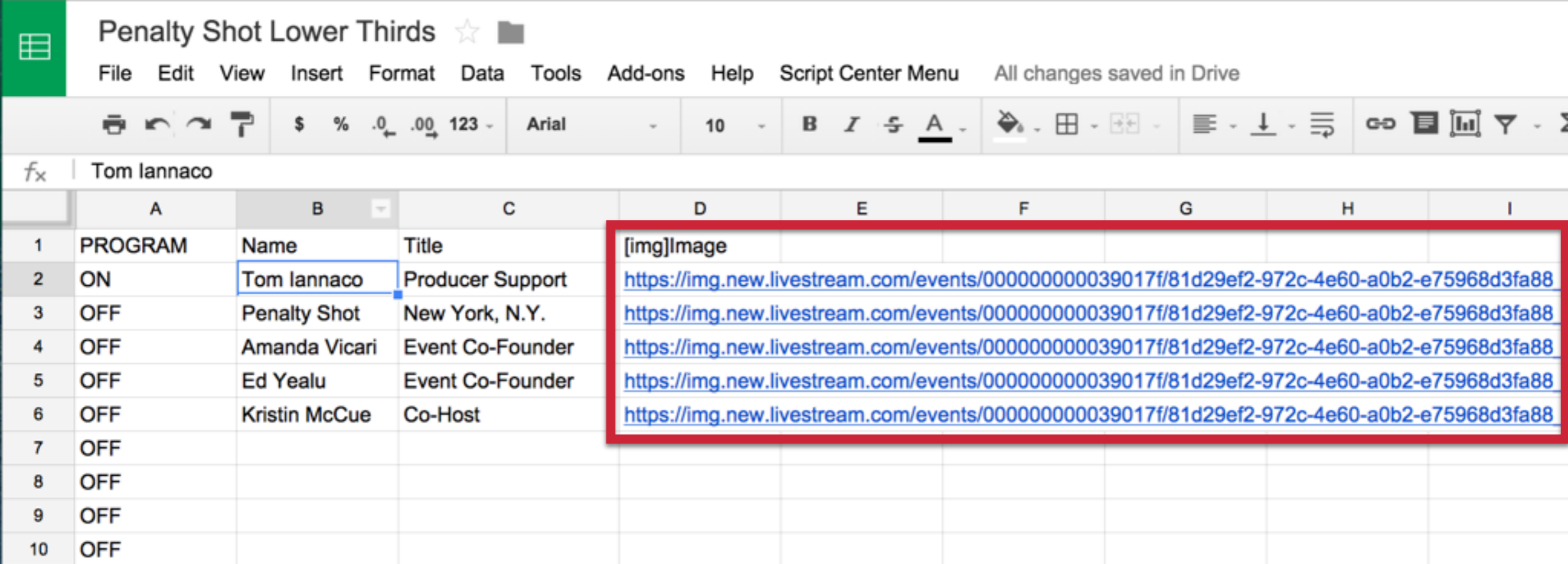
Enter the URLs of the images in the column that you want Livestream Studio to reference.

In the 'Data' menu, click 'Validation' and enter the parameters shown above.

Highlight all of column A. Then, under 'Format,' click 'Conditional Formatting' and add the above rules.

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.
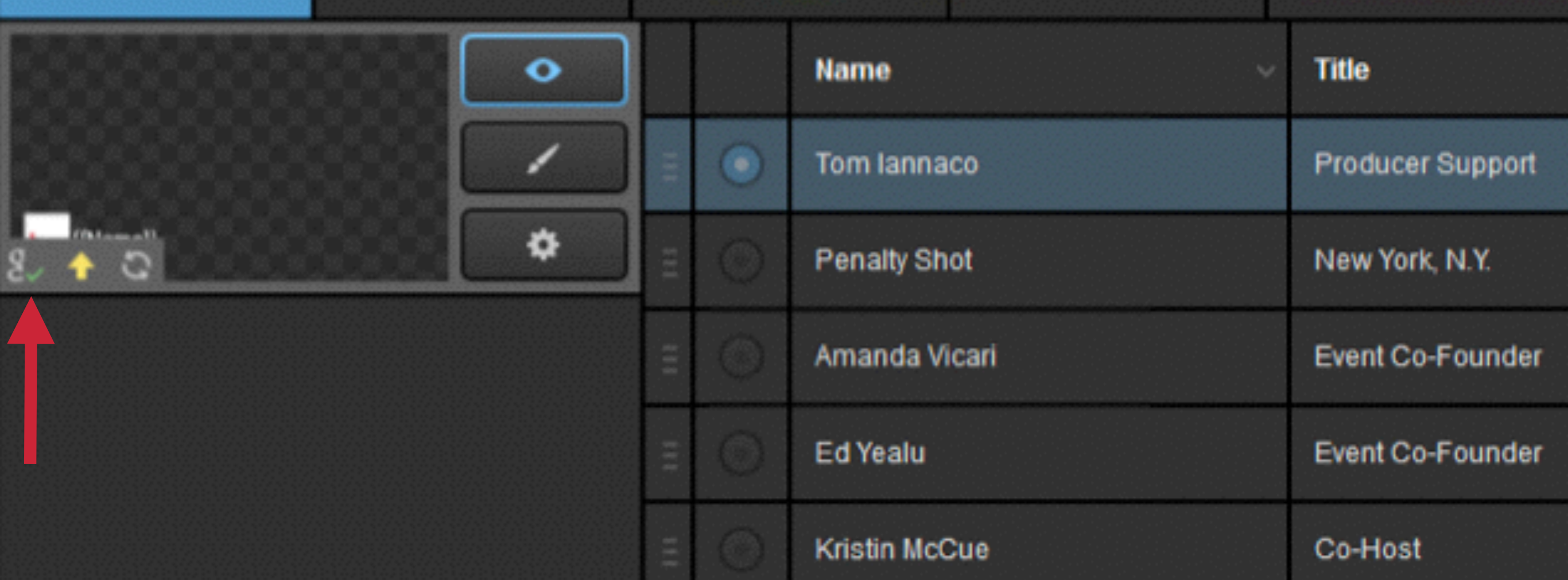
You should notice a small green checkmark appear in the layer thumbnail, indicating that it is a Livestream Studio Certified Data Source.

Now if someone has your Google document open in a browser, they can change any 'OFF' field to 'ON.'

The 'ON' will turn red and the change will be reflected in the graphics module in Livestream Studio.

Adding graphics overlays

Twitter

Lower Third: Black / Red Gloss
Free · Lower Third

Twitter: Bird
Free · Twitter

Twitter: Box
Free · 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.
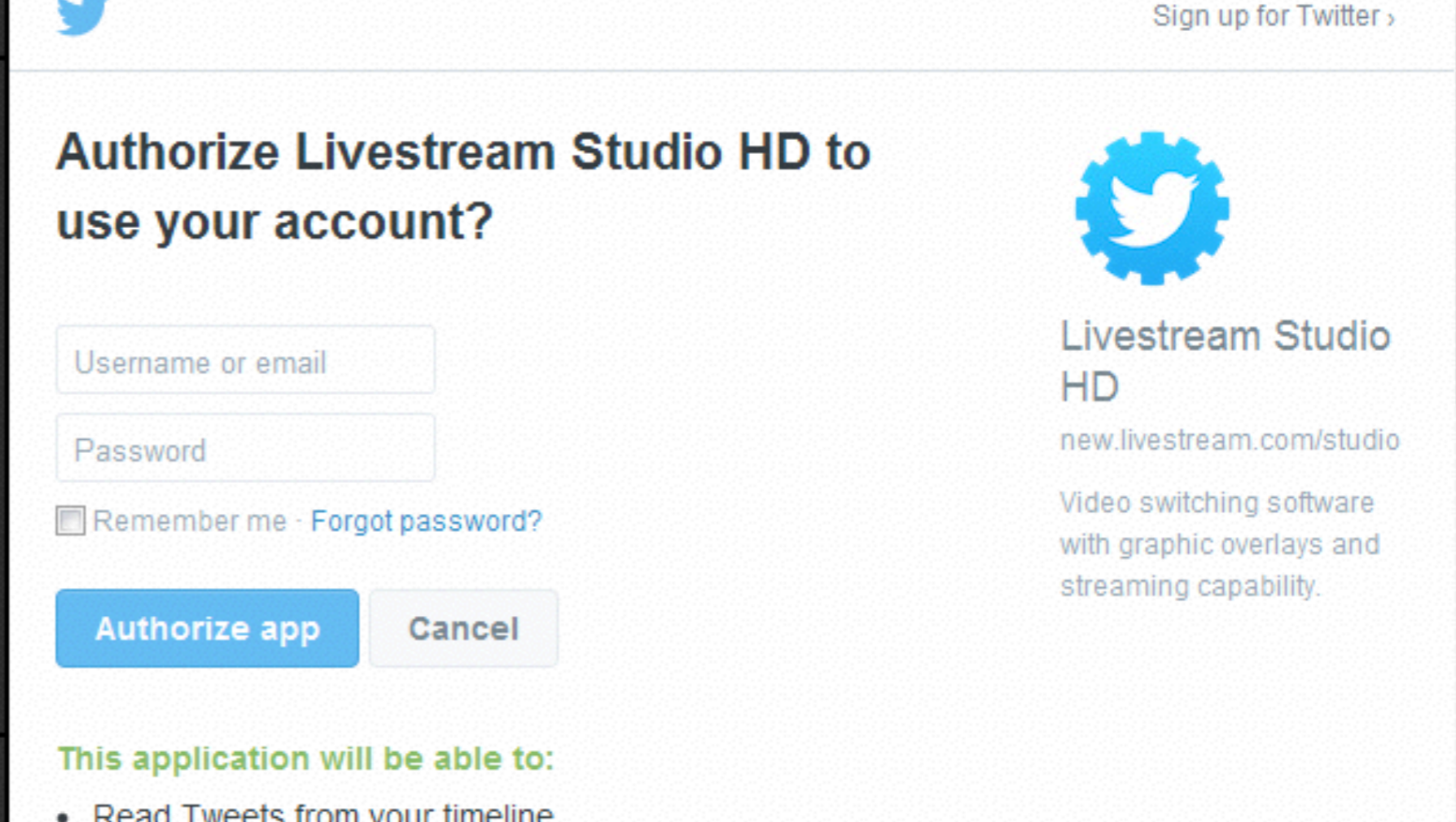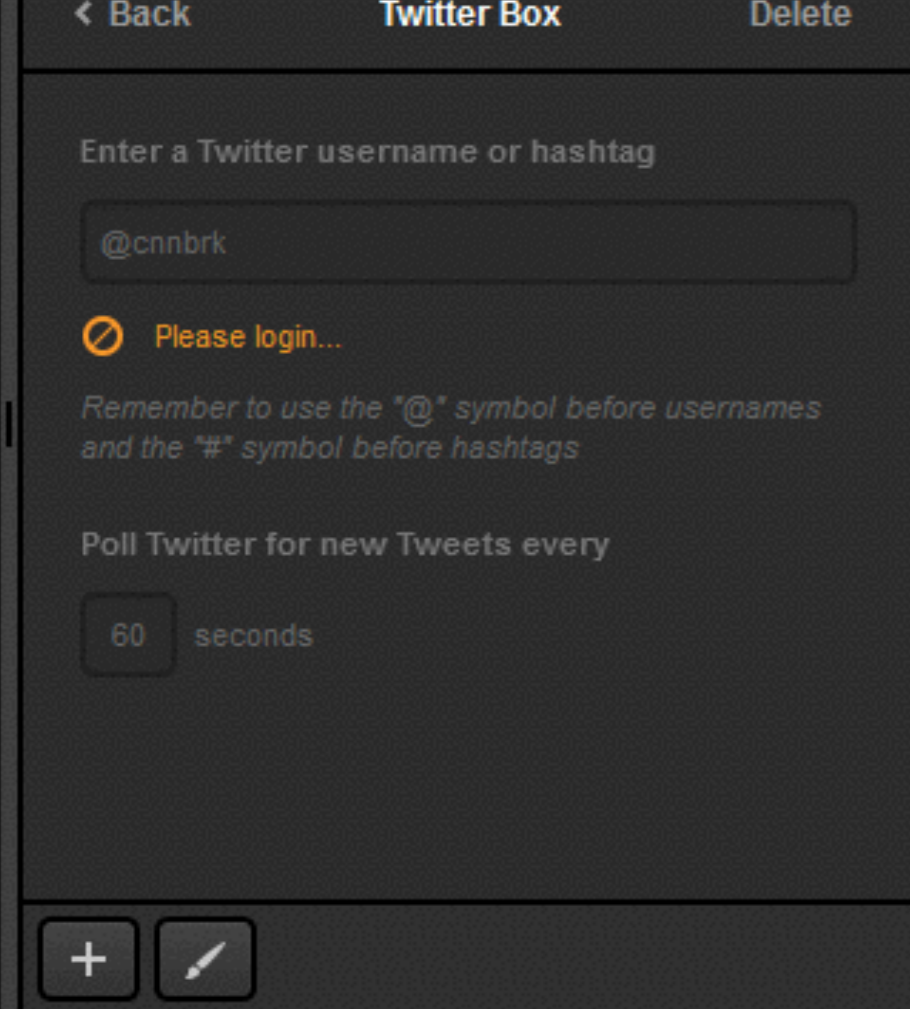
When you import the Livestream Graphic, you will be prompted to log in to a Twitter account. This is simply to authorize the Twitter application in Livestream Studio.

The layer module will open with a default account. Click the gearwheel to enter the graphic's settings.

< Back   **Twitter Box**   **Delete**

Enter a Twitter username or hashtag

@livestream

Remember to use the "@" symbol before usernames and the "#" symbol before hashtags

Logged in as eeknox

LOG OUT

Poll Twitter for new Tweets every

60   seconds

Records number limitation

No data
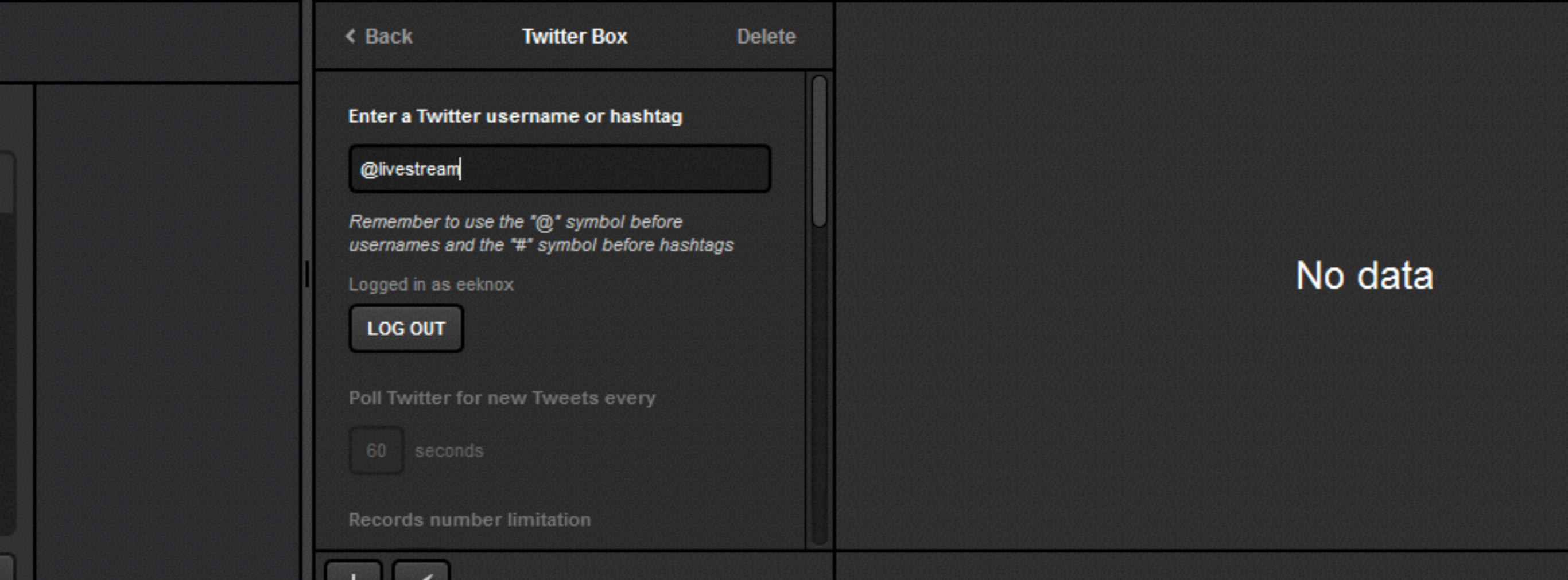
Select a username or hashtag to poll. Keep in mind that you must include "#" in the front of hashtags and "@" in front of usernames. When you have typed in the desired asset, press Enter.

‹ Back	Twitter Box	Delete		🖼 ⌄	Name ⌄	Username ⌄	Tweet ⌄	TimeStamp ⌄
Poll Twitter for new Tweets every			◉	◣	Livestream	Livestream	RT @brucierosch: …	12/22/2014 11:32:0…
60 seconds			◉	◣	Livestream	Livestream	Our holiday "Bundle…	12/19/2014 4:35:08 …
Records number limitation			◉	◣	Livestream	Livestream	LIVE from @WTEN:…	12/19/2014 2:17:51 …
Last 12 records			◉	◣	Livestream	Livestream	RT @theJeffAdams…	12/19/2014 12:11:3…
◉ No Time Limitation			◉	◣	Livestream	Livestream	RT @evelinechang:…	12/19/2014 10:11:5…
○ Last 120 minutes			◉	◣	Livestream	Livestream	@open_source_ s…	12/19/2014 10:06:1…
☑ Read only								

+   ✎   ✉   ☰   ⬆ AUTO PUSH/PULL

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.

❚livestream

You can select how often Livestream Studio should look for new tweets. Newer tweets appear at the top of the module.
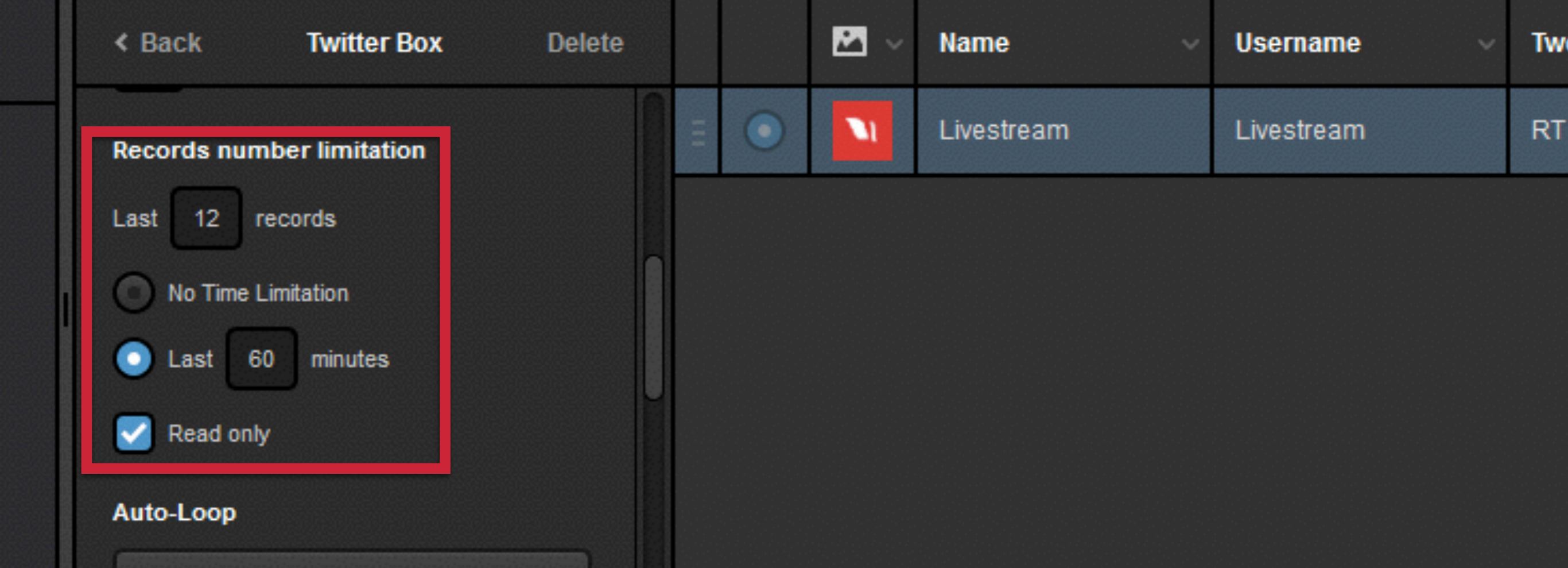
You can also tell Livestream Studio how many tweets to look for within a certain time frame. Select 'Read Only' if you do not want to edit the tweets.

Scroll down in the settings to configure any desired Auto-Loop options.
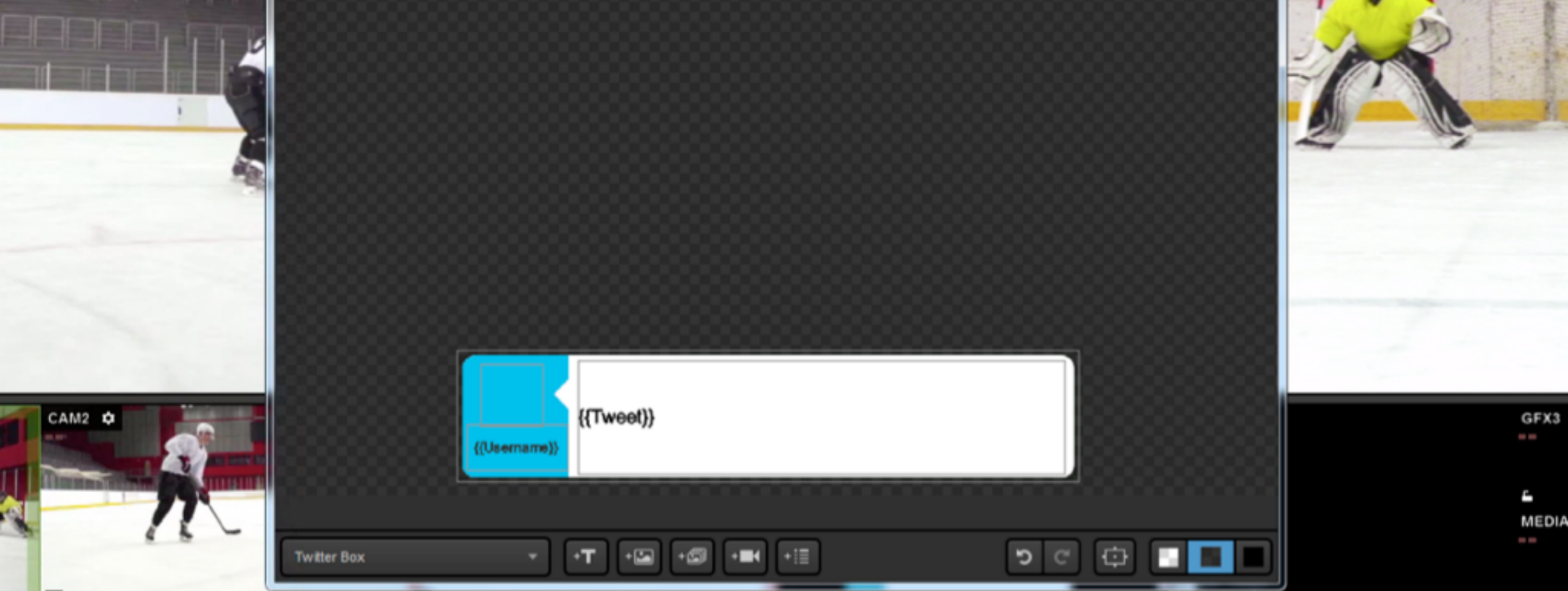
You can adjust the placement,
font, size, and color of any of the
data fields in the GFX Designer.
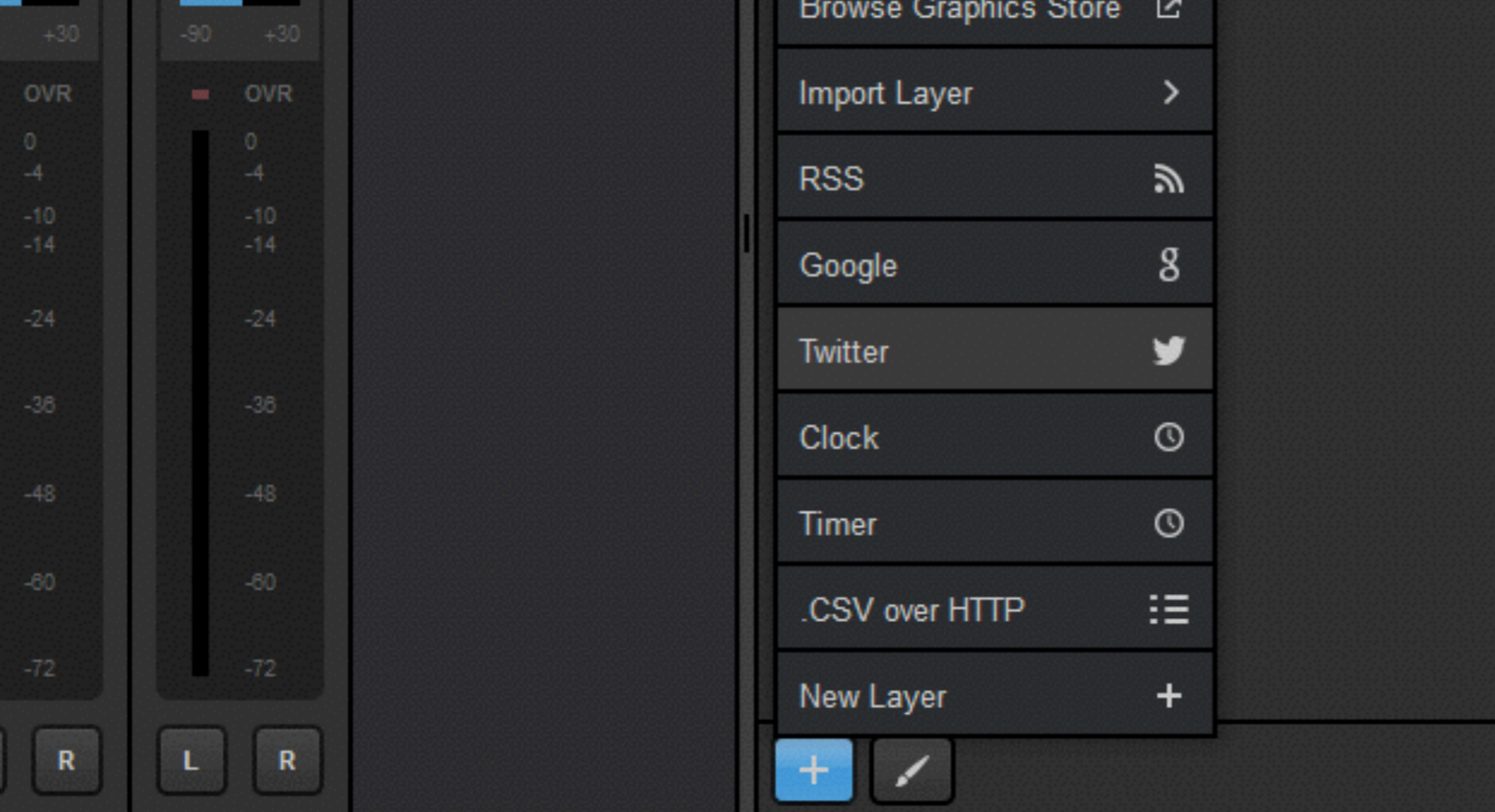
If you do not wish to use a
Livestream Graphics template,
you can also create your own by
selecting 'Twitter' from the
graphics menu.
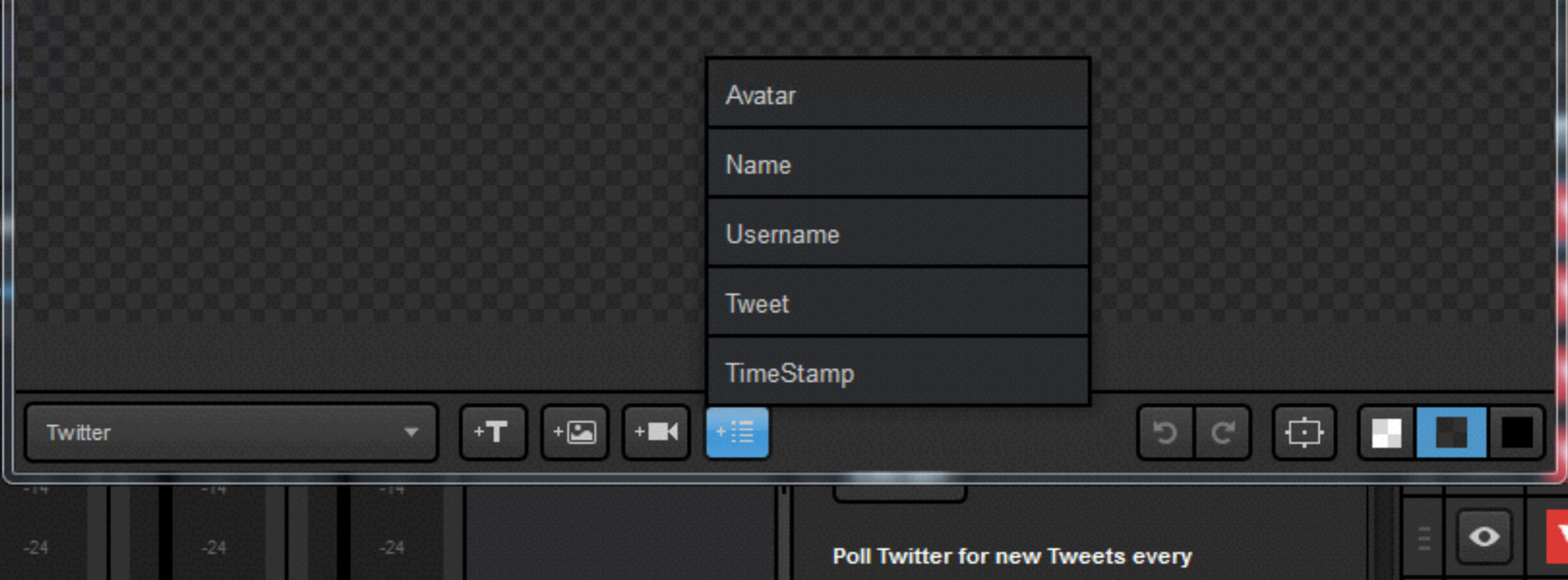
Follow the login steps as you did before, then open the GFX Designer. Click on the list button in the Twitter layer, and you can add any data field from Twitter such as the tweet, username, avatar, etc.

Adding graphics overlays

Clock
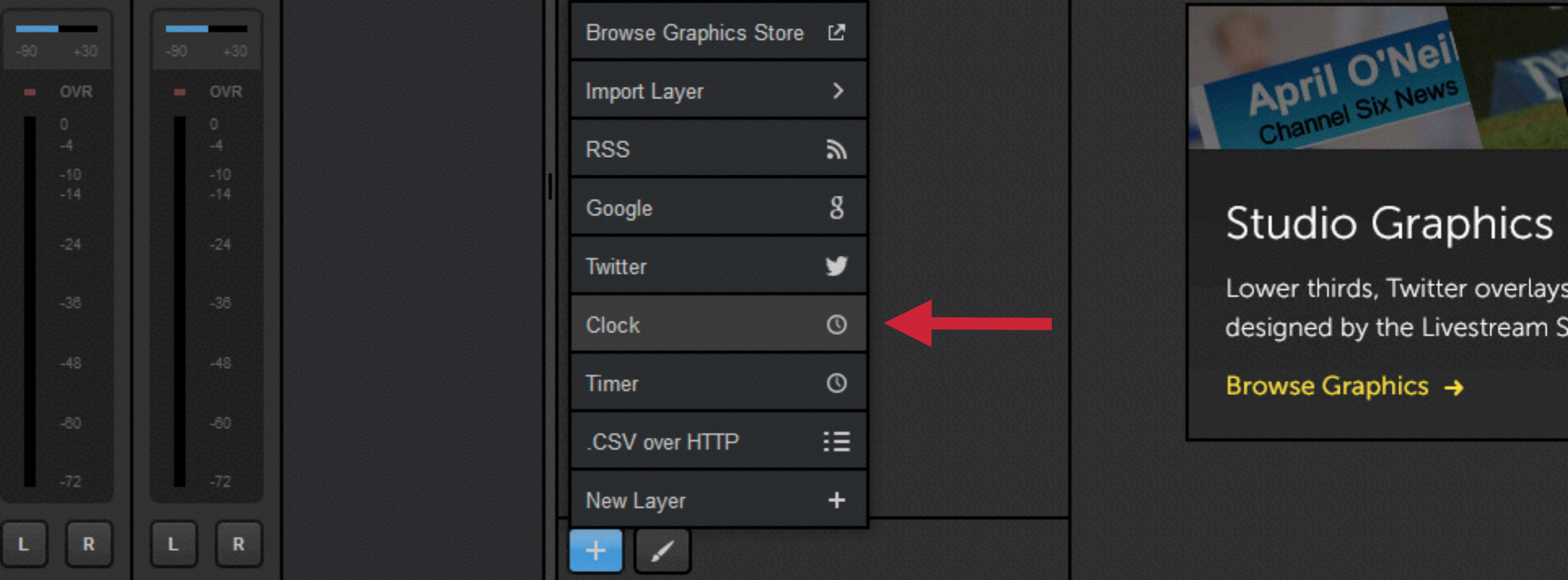
You may want to overlay a time-of-day clock into your production. This can be done by selecting the 'Clock' option in the graphics overlay channel.
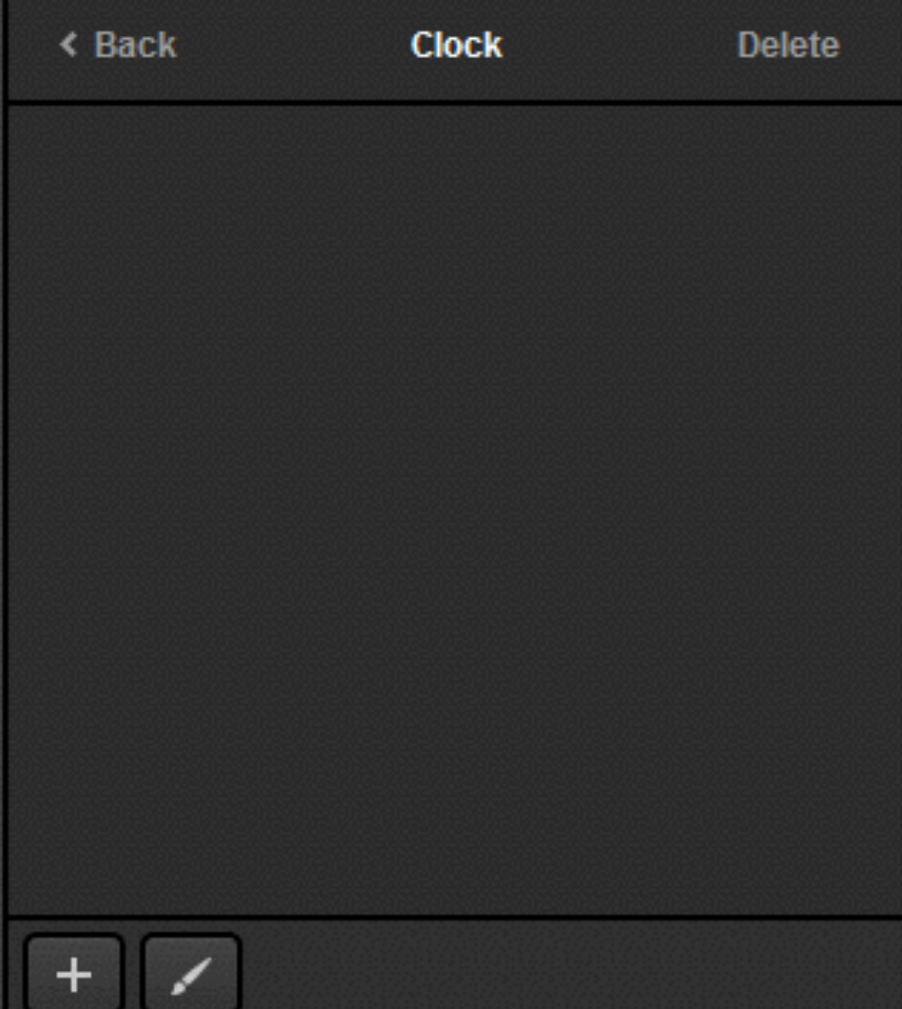
15:34:38

+ ✎

This will add a clock layer to the graphics channel. Click on the paintbrush icon to open the GFX Designer for that layer.

livestream

{{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 April, 9:08

{{Day}}, {{Dx}} of {{Month}}, {{HH}}:{{mm}} {{TZ}} = Monday, 3rd of April, 21:08 FL

Presets >

Time >

Frame >

Date >

Media 1

Clock

+T +🖼 +🎥 +☰

↺ ↻ ⊡ ■ ■ ■
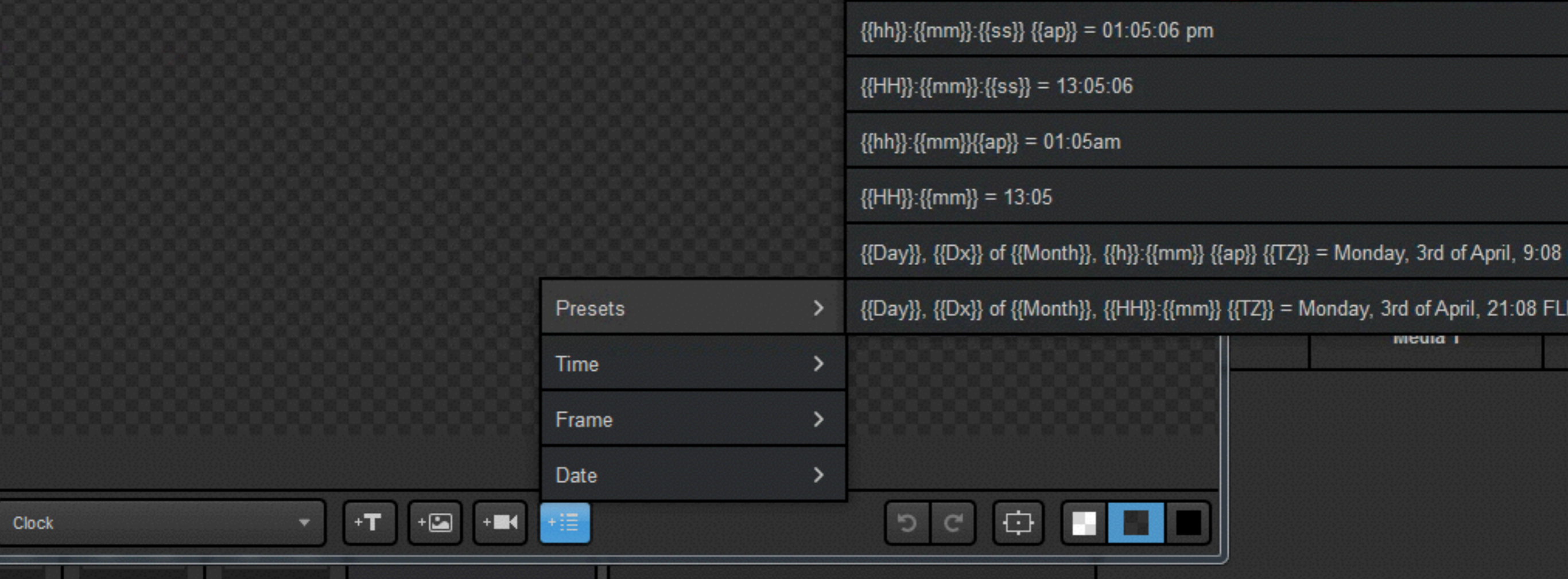
Click on the list icon for options of time fields to add. Consider checking the presets first to save the time needed to add individual fields.

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.

‹ Back   **Clock**   Delete

15:38:05

\+ ✎
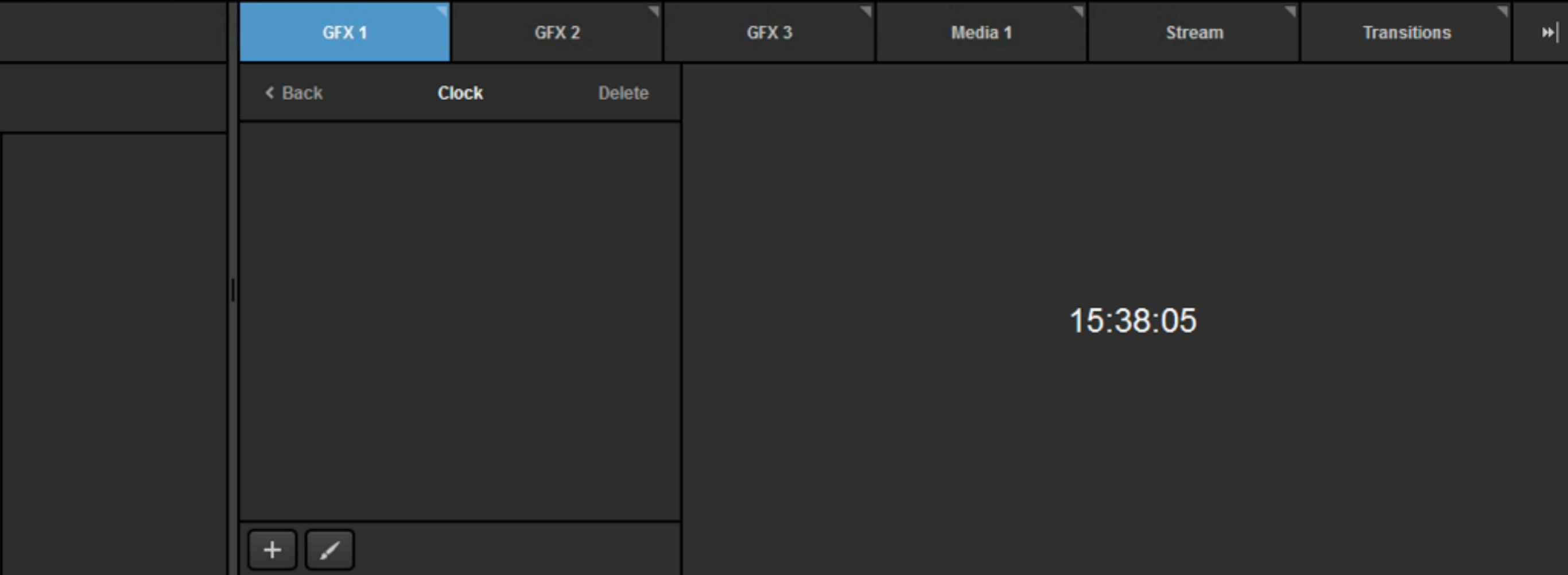
There are no additional settings for the clock layer other than deleting it. Click 'Back' to return to the layer module.
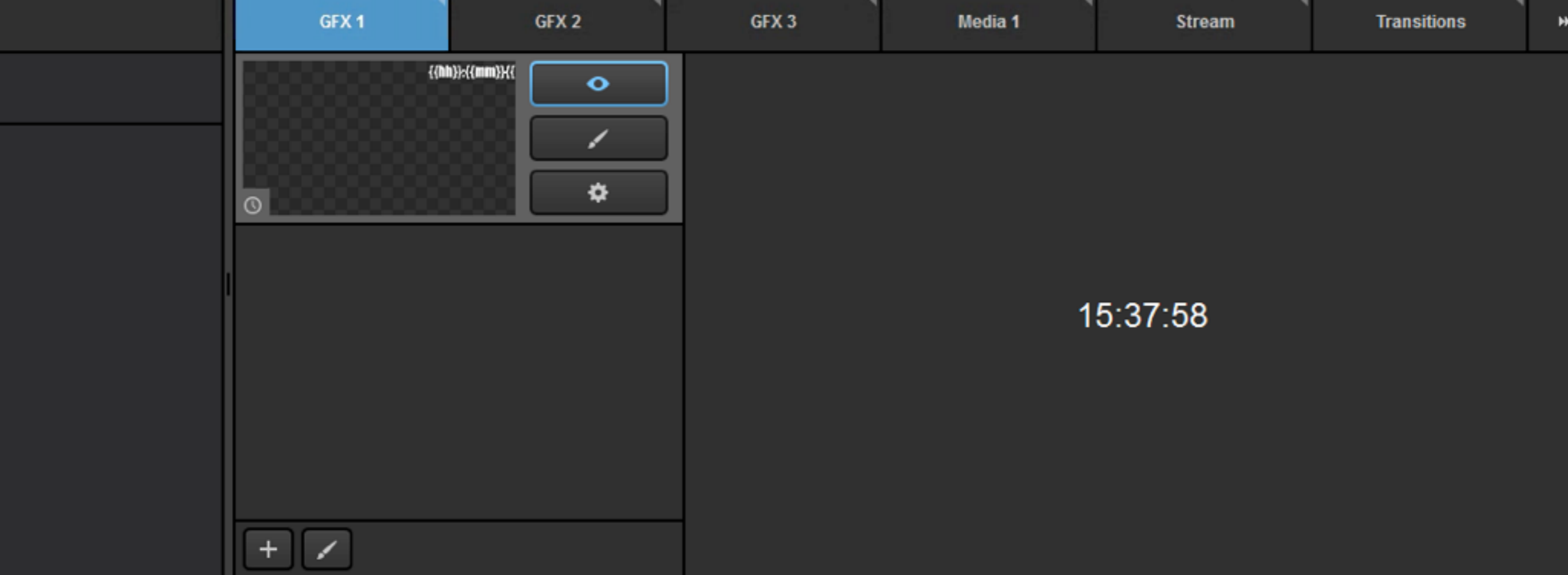
Click the eye icon to ensure the clock layer is visible when you want to include it in your production.

Adding graphics overlays

Timer

INPUT 7

INPUT 8

-90 +30

-90 +30

OVR

OVR

0

0

-10

-10

-24

-24

-36

-36

-48

-48

-60

-60

-72

-72

L   R

L   R

Import Layer >

RSS

Google

Twitter

Clock

Timer

.CSV over HTTP

New Layer +

April O'Neil
Channel Six News

Studio Graph

Lower thirds, Twitter o
designed by the Livestr

Browse Graphics →
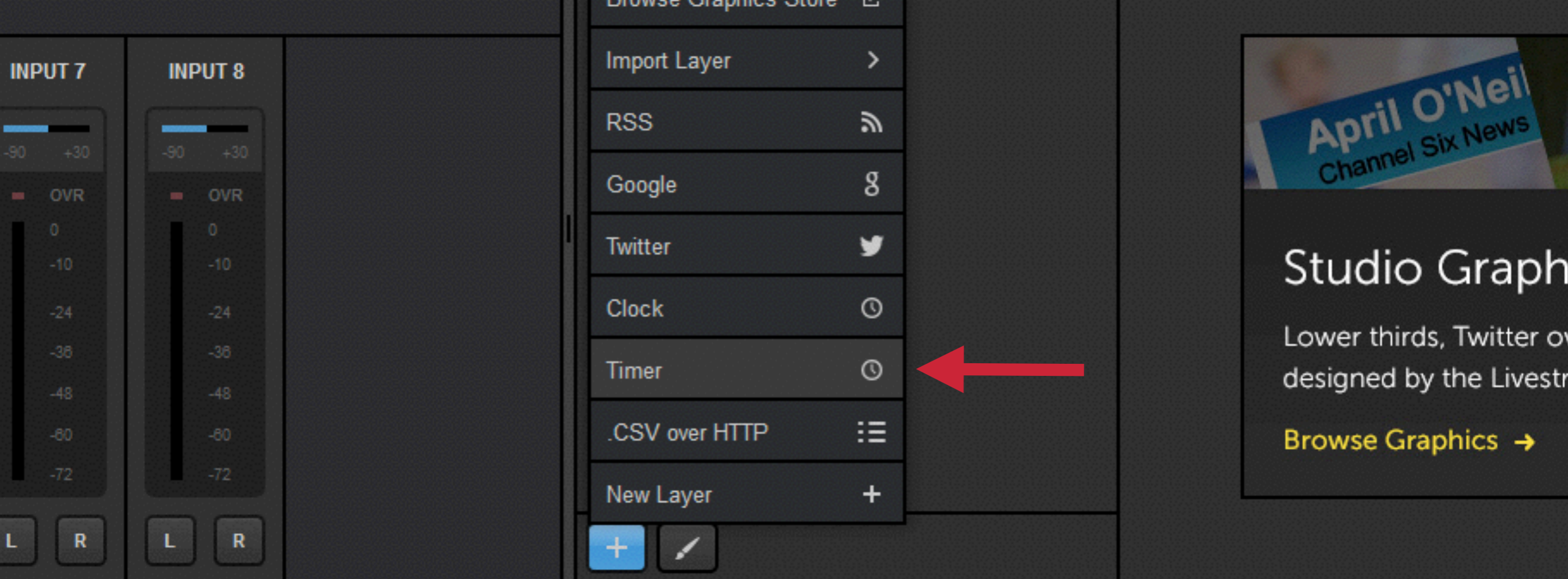
To integrate a countdown or timer overlay into your production, select 'Timer' in the graphics overlay channel.

livestream
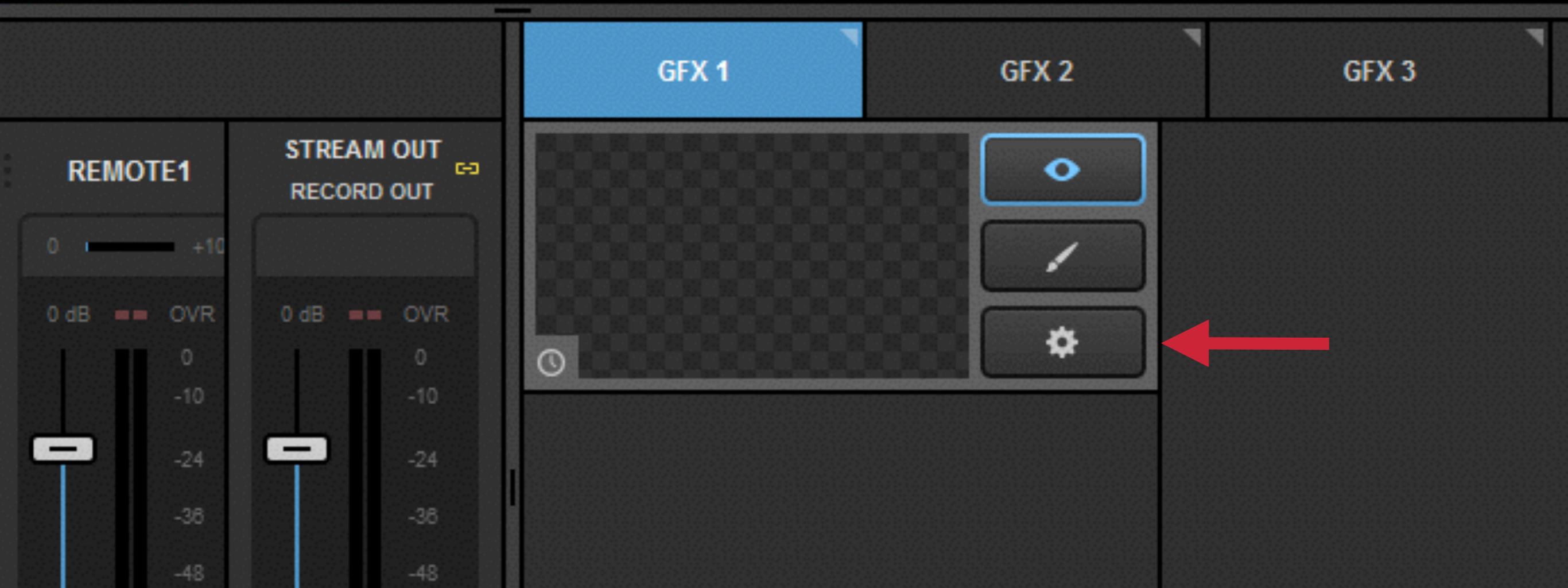
Click the gear wheel icon to enter
that layer's settings.

Count Type

- ● Countdown to
- ○ Countdown from
- ○ Timer

Countdown To

- ☑ Use start time of streaming event

November ▼	8 ▼
03 ▼	41 ▼	PM ▼

23:59:52
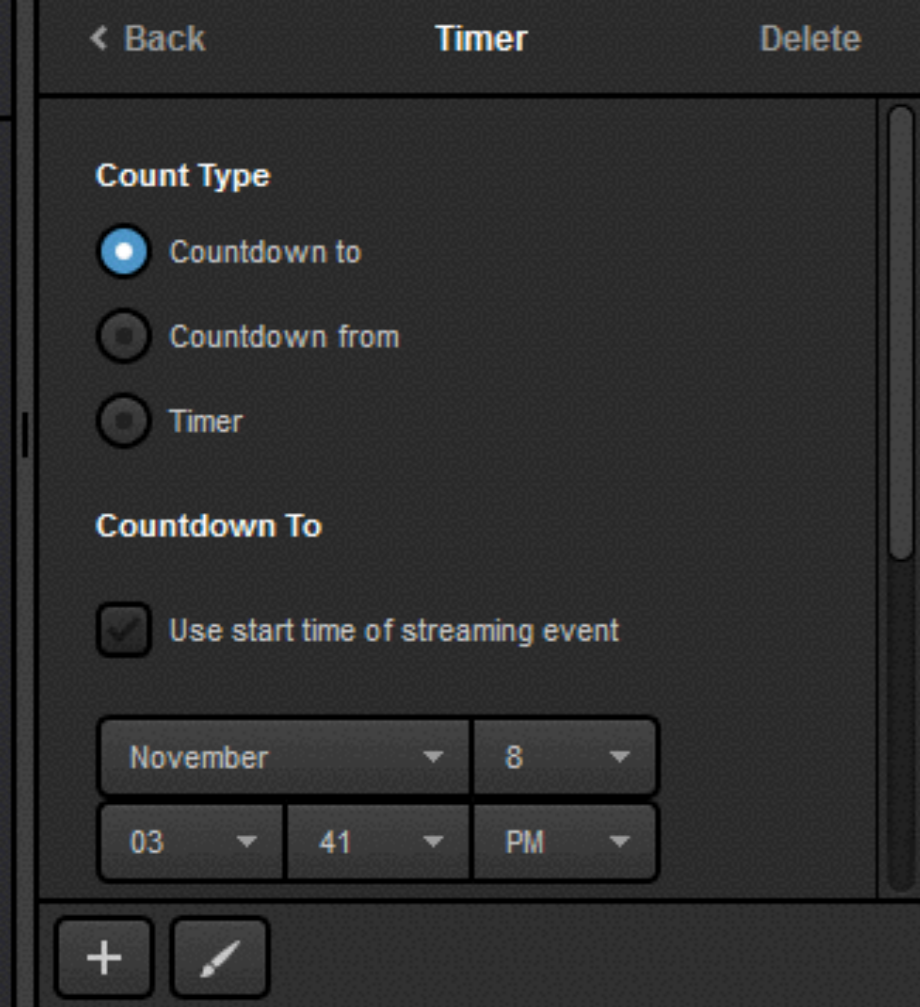
The settings for that layer will appear on the left side, with the reflected timer displaying on the right.

livestream
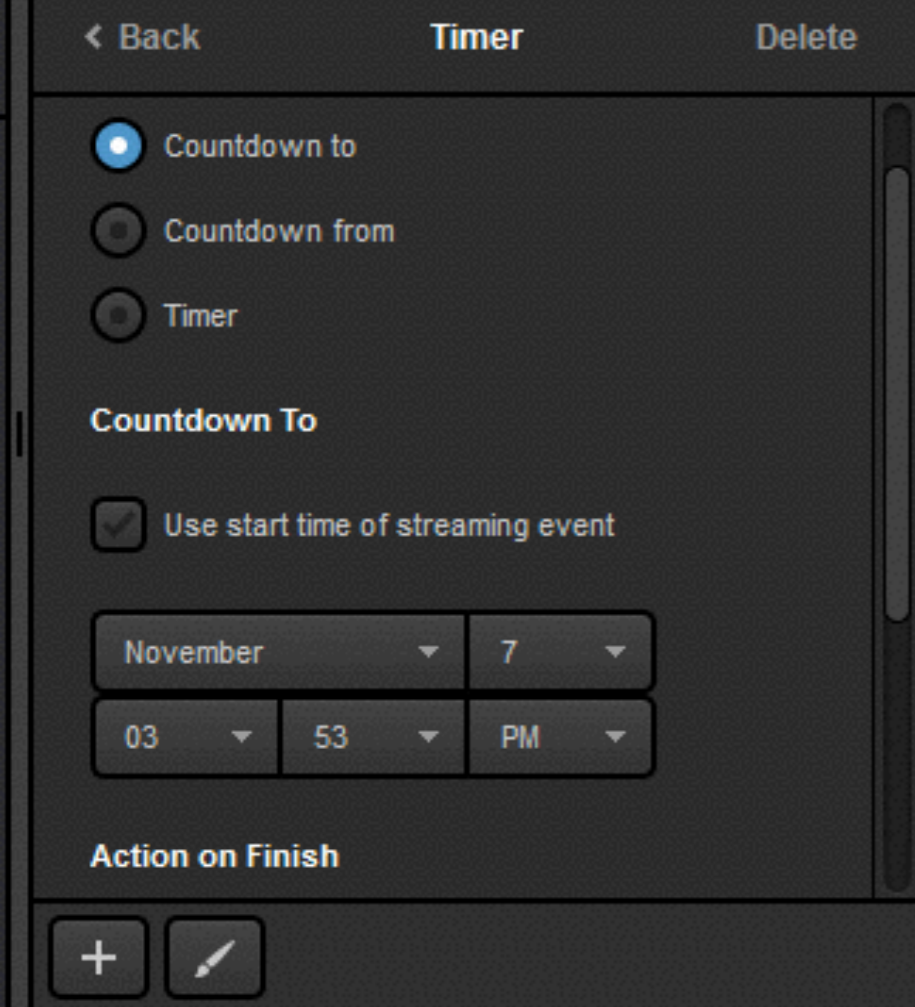
'Countdown to' allows you to set a specific time and date for when the countdown should end. The countdown will update on the right side.
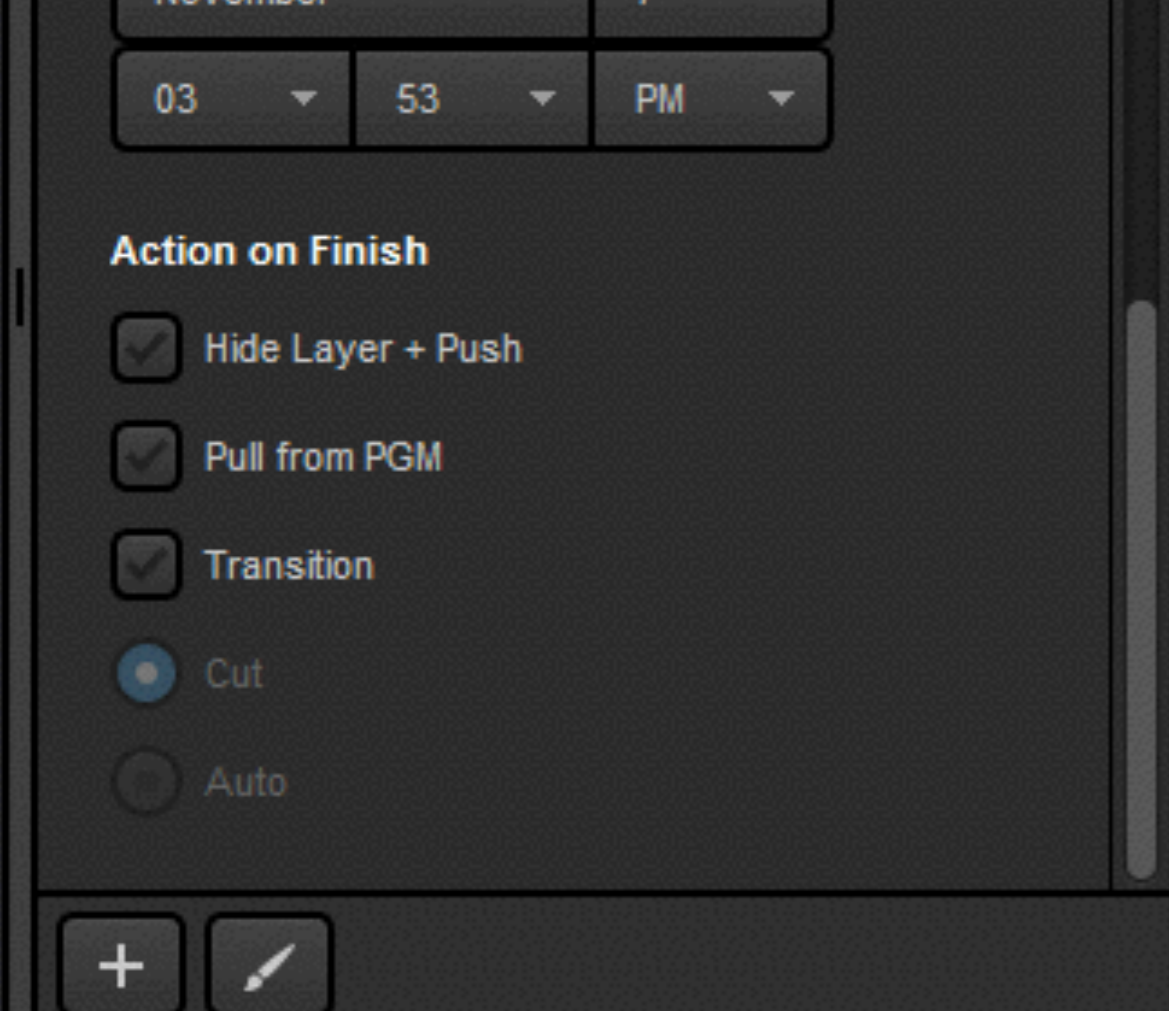
Below the time/date setting are options for what the graphics overlay should do when the countdown completes.
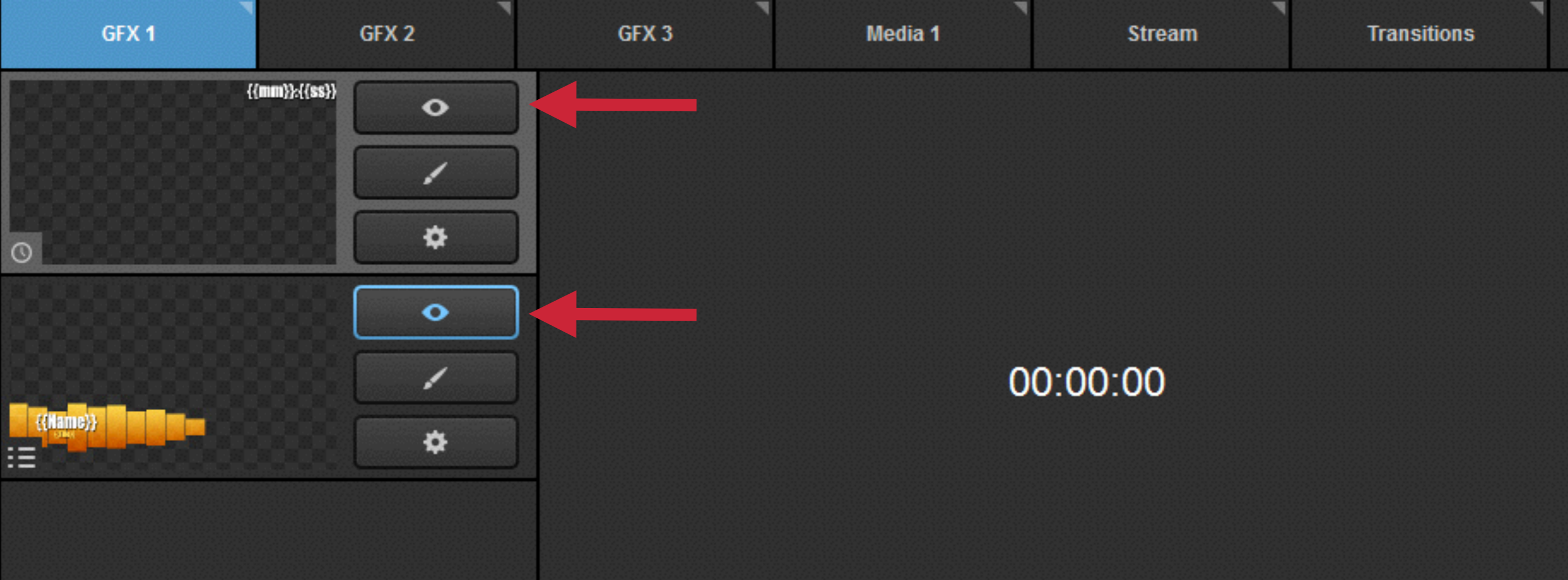
'Hide Layer + Push' will keep GFX 1 in Program, but remove the timer GFX layer from being visible. Other layers in GFX 1 will remain in Program.

'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.

00:00:00

Leaving all options unchecked will keep the completed countdown graphic in Program.
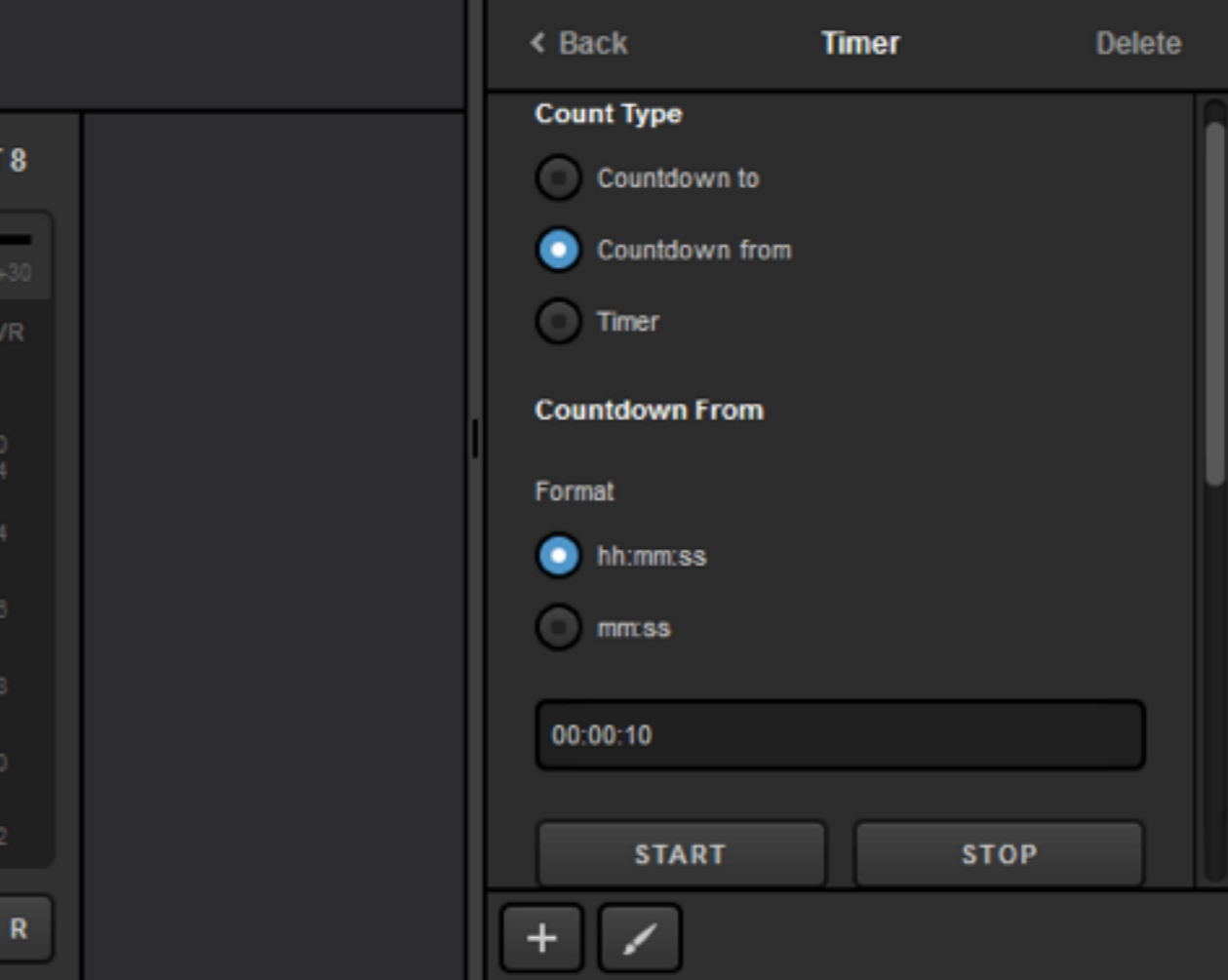
The next option is 'Countdown from,' where you set the time that the countdown will start.
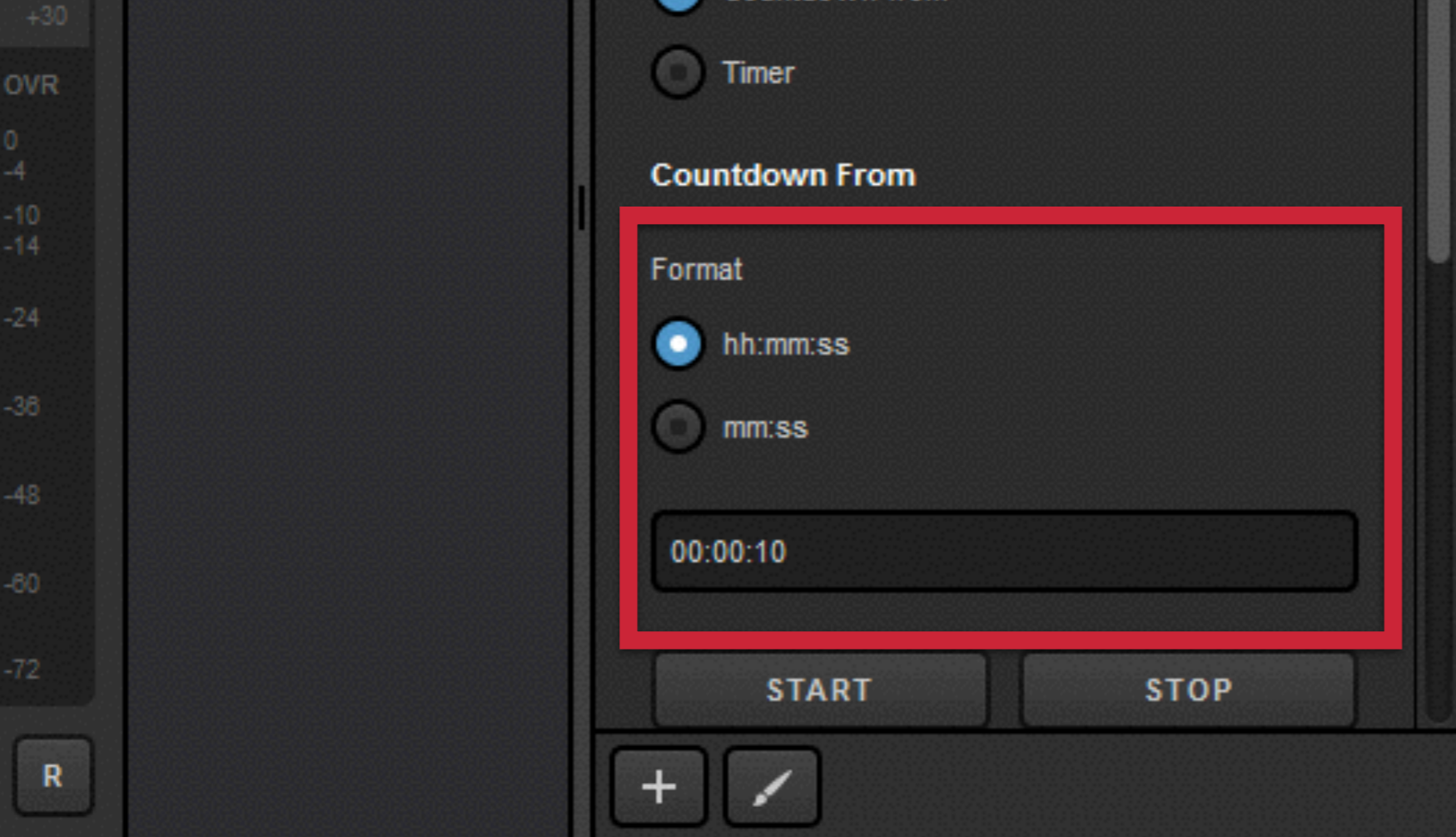
The format of this countdown can either be hours:minutes:seconds, or minutes:seconds.
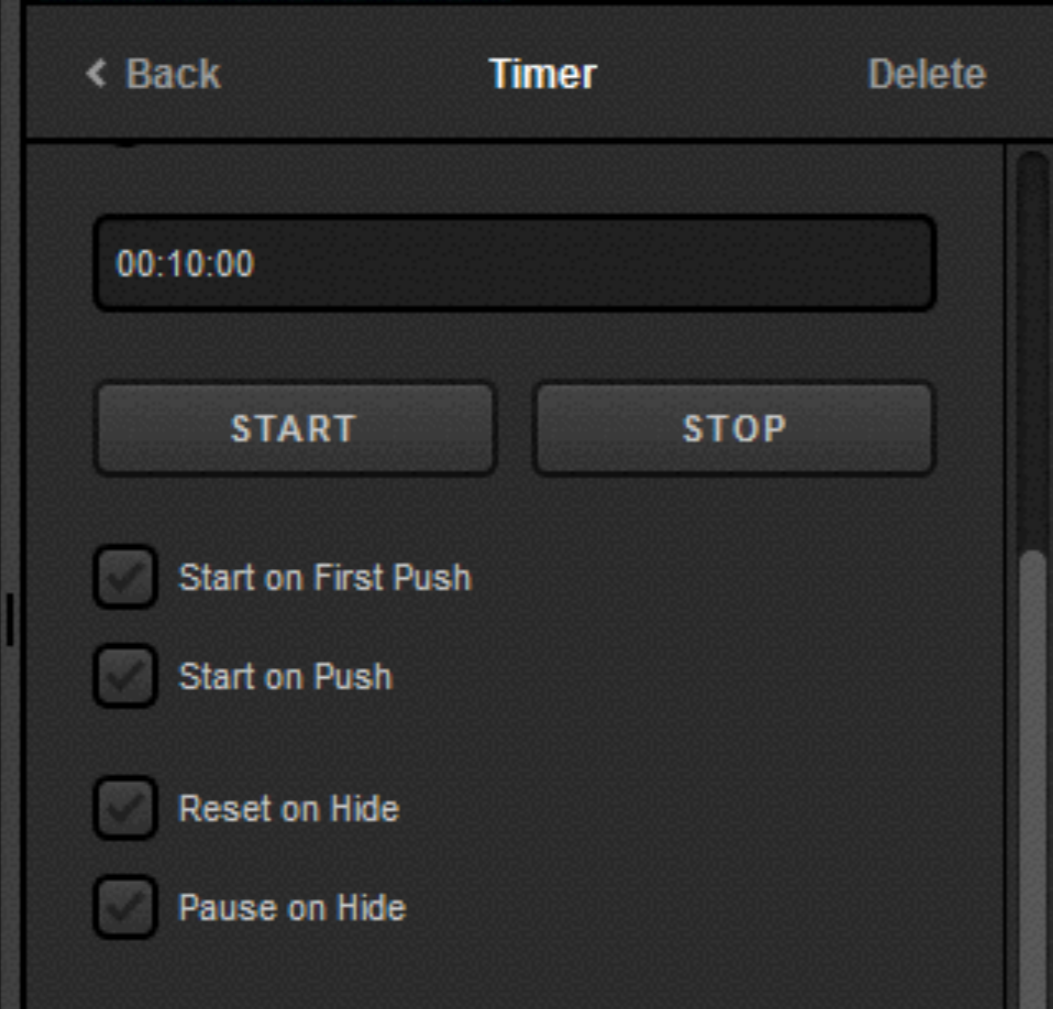
Type in the time you want to count down from. Clicking 'Start' will begin the countdown manually.
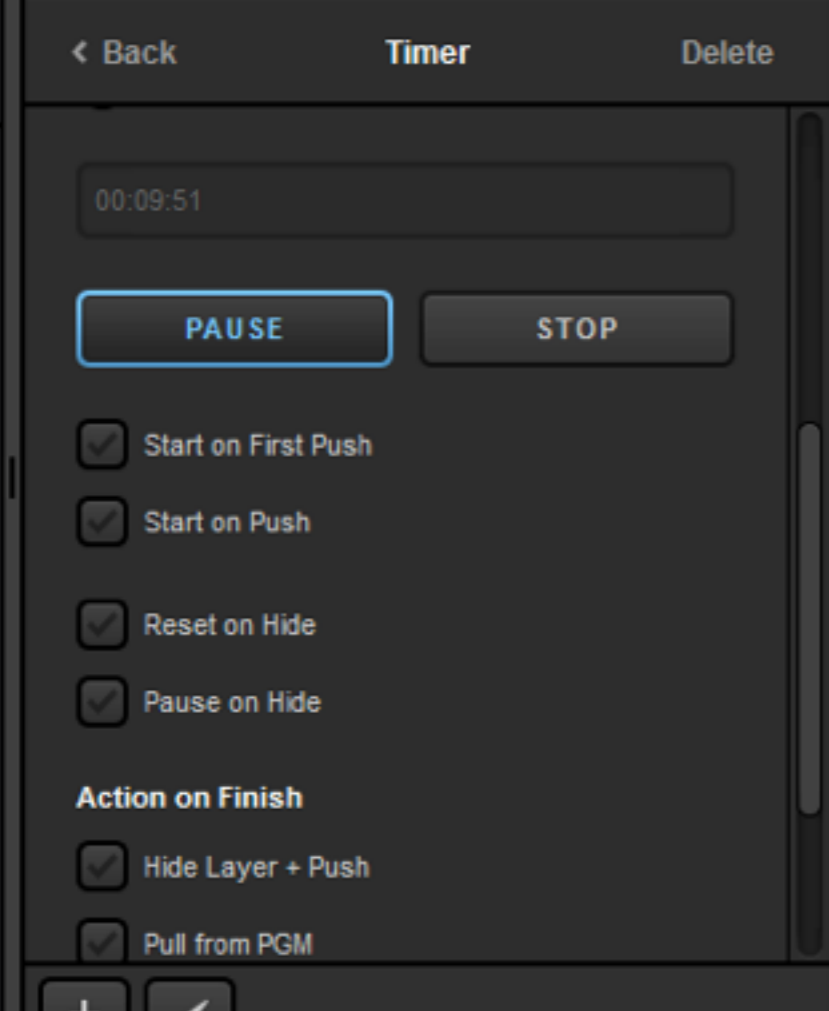
Click 'Pause' if you want the countdown to stop but stay at the current time, allowing you to resume from that point.
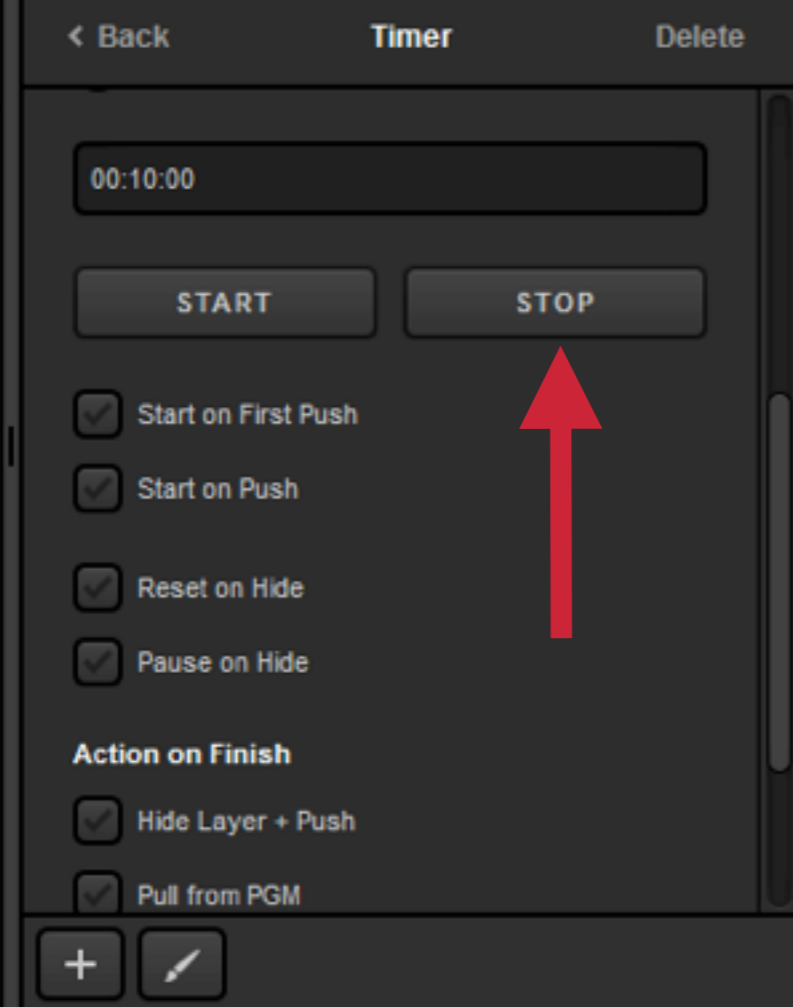
Clicking 'Stop' will both stop
the countdown and reset it
to the beginning.
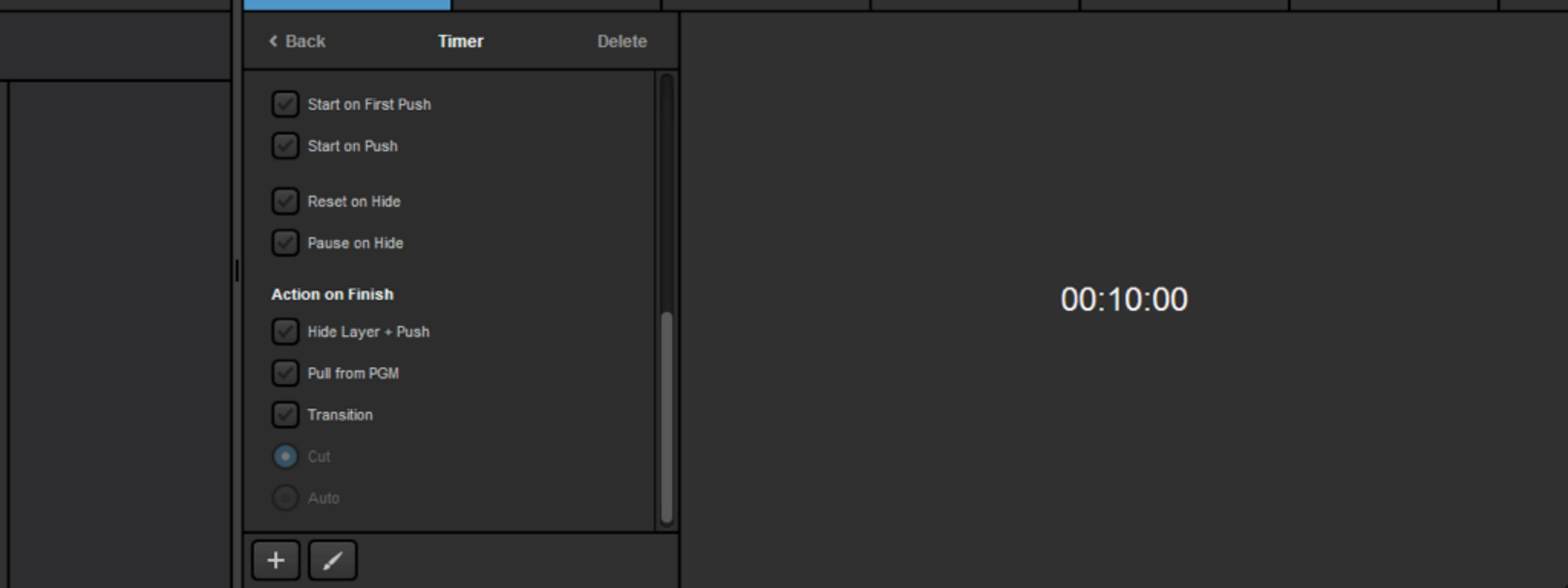
Below the Start and Stop options, there are options for what the clock should do when pushed, pulled, or finished.
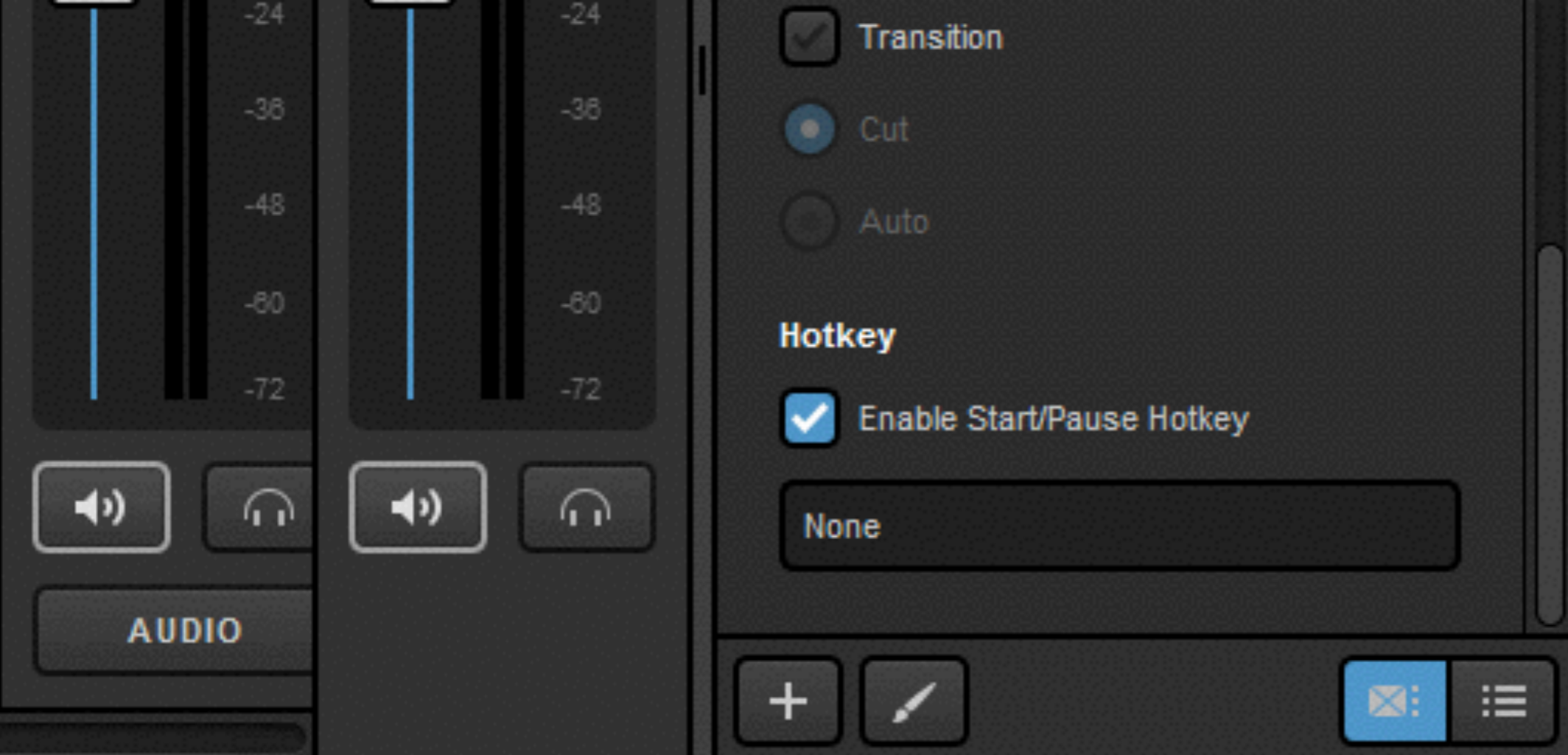
Scroll down further in the layer settings to find the hotkey option.
Click the checkbox to enable it.
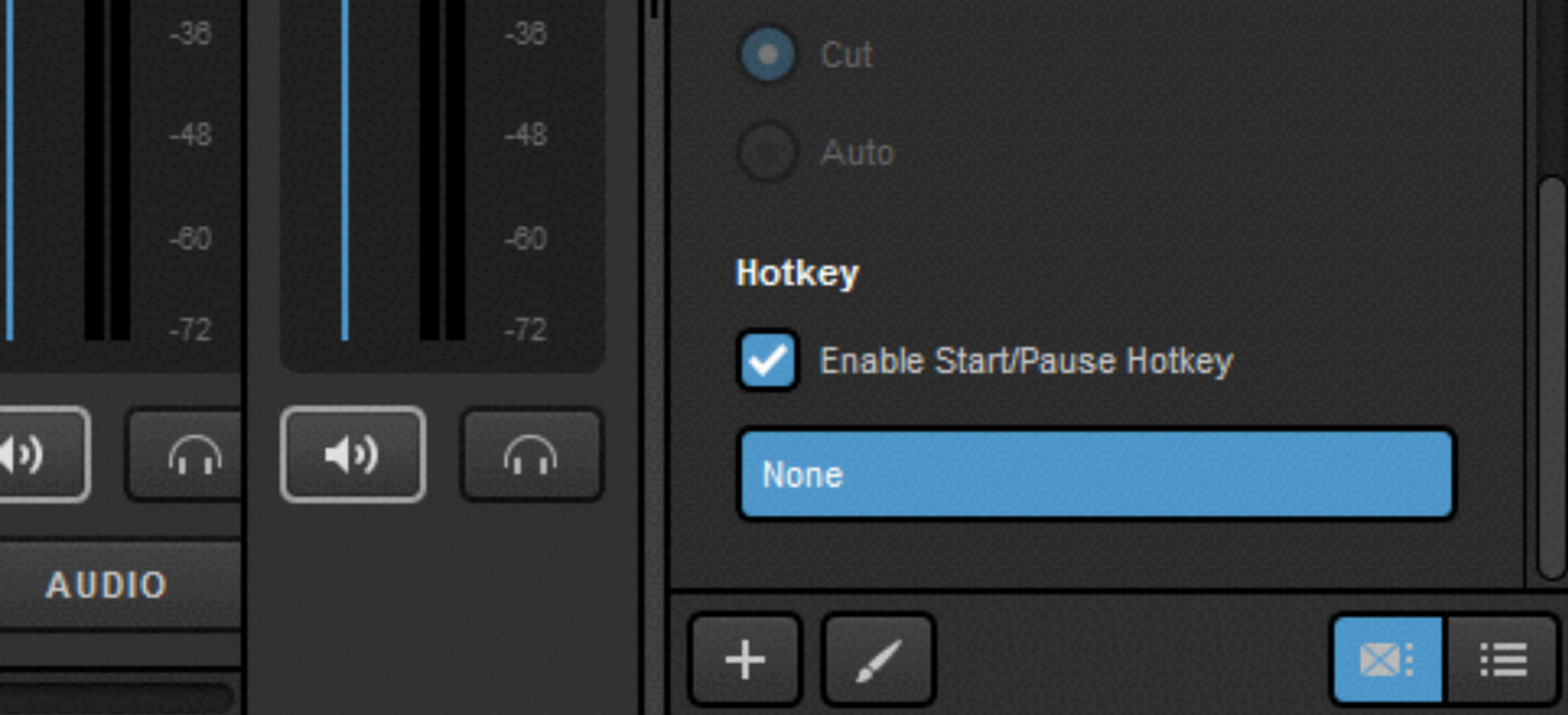
Click on the box that reads 'None.'
This will highlight it blue.
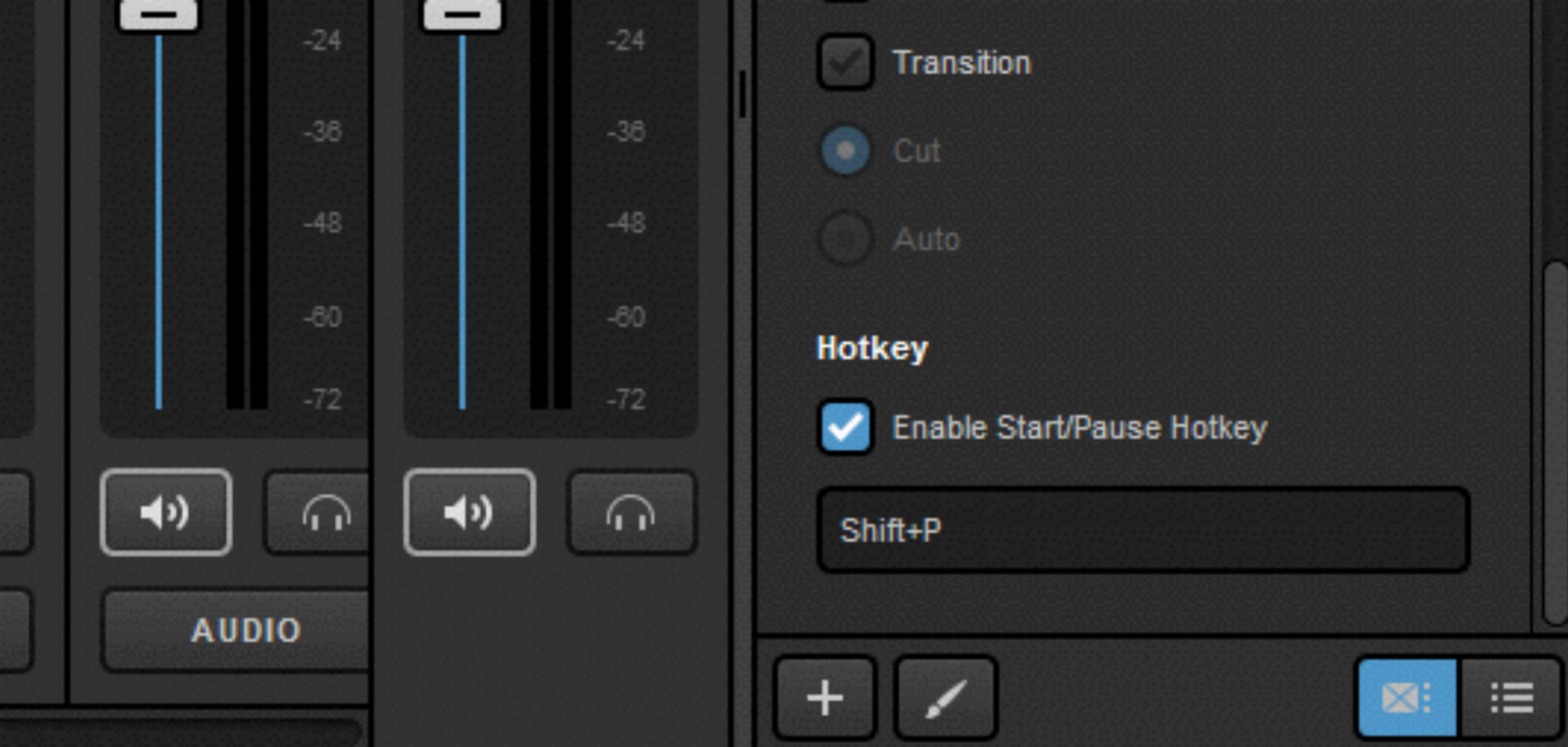
Once it is blue, use the buttons on your keyboard to create a hotkey (e.g., Shift+P)

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.

Instead of pressing the buttons in
the GFX module, you can use your
keyboard to quickly and easily
pause and continue your clock.
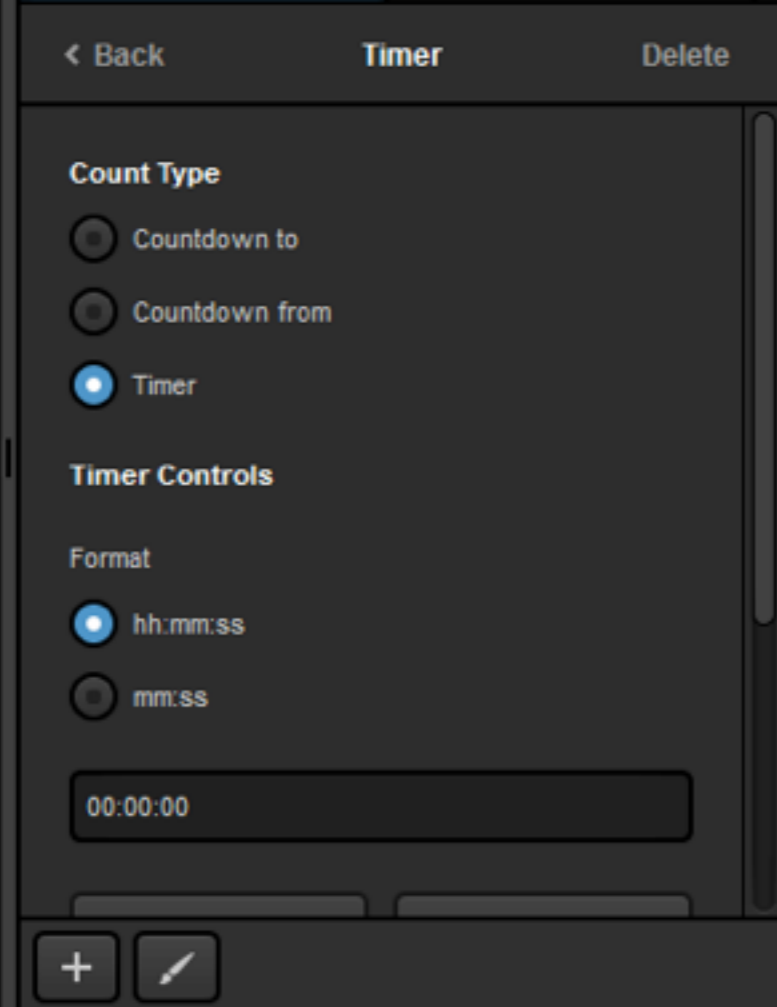
The last option for this layer is 'Timer,' which gives you a clock that counts up from zero.
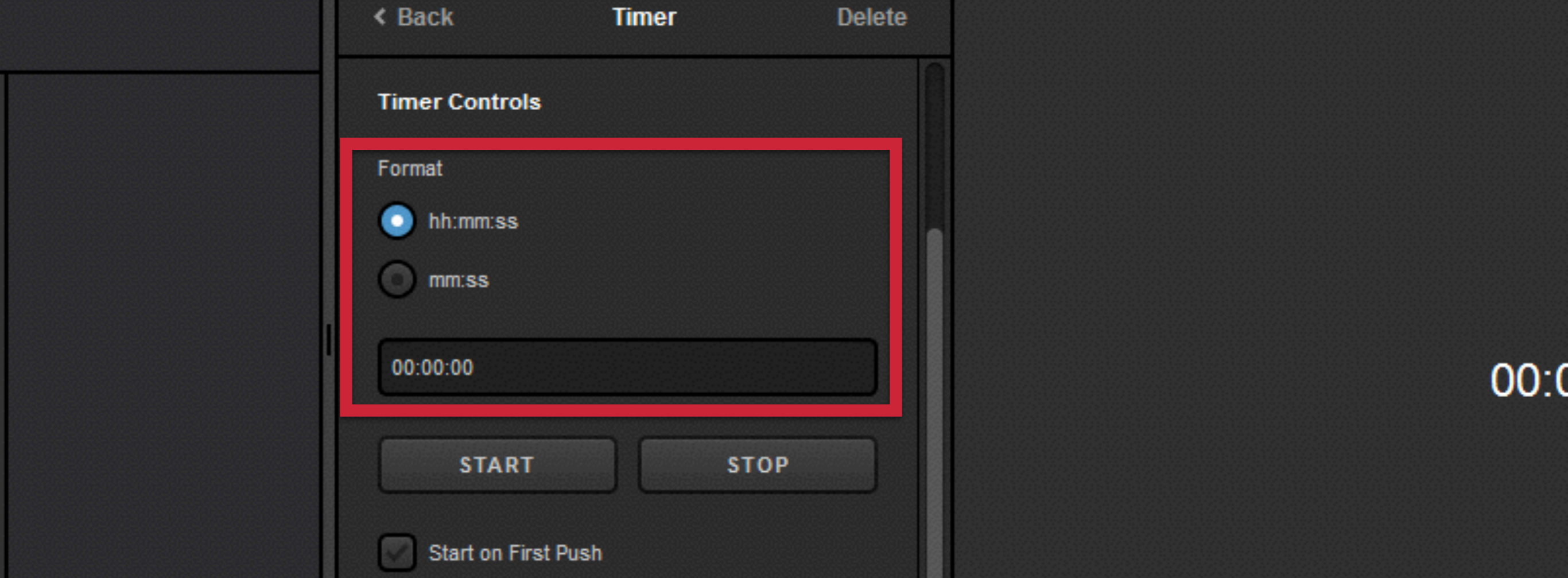
As with the 'Countdown from' option, you can set the format and start and stop the timer.
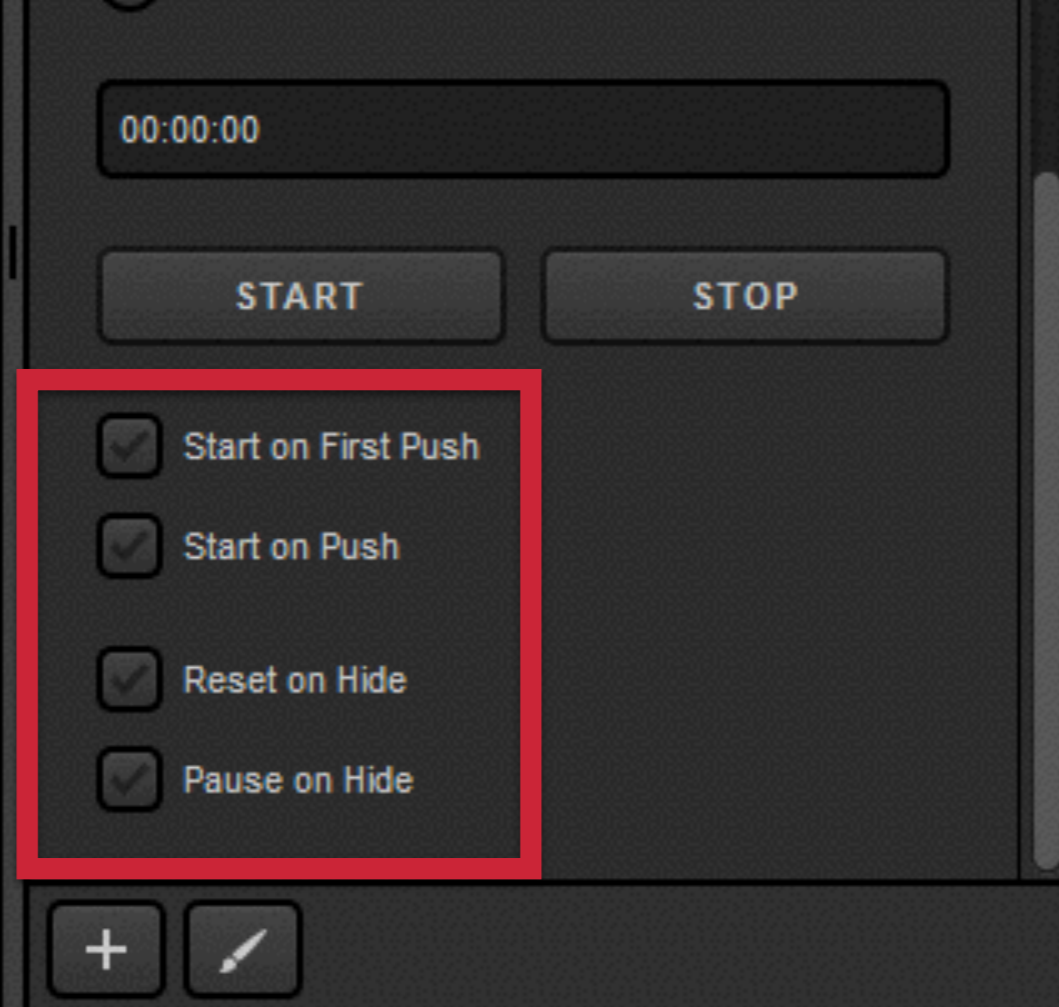
Below these controls are the actions the graphic will take when first pushed to and pulled from Program.
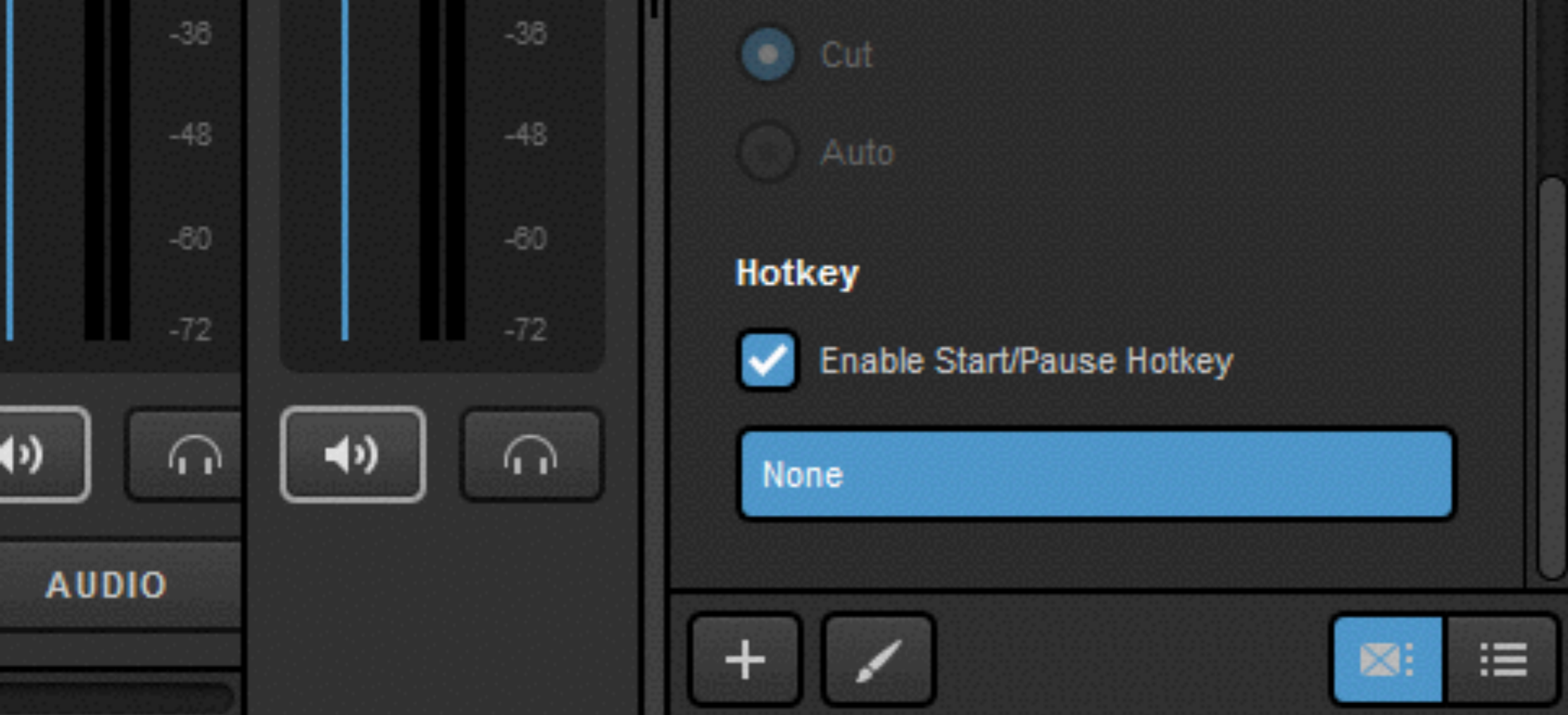
The Timer also includes the
ability to add a hotkey
command for pausing and
resuming.

With any of the three options, be sure to click the paintbrush icon to enter the GFX Designer.
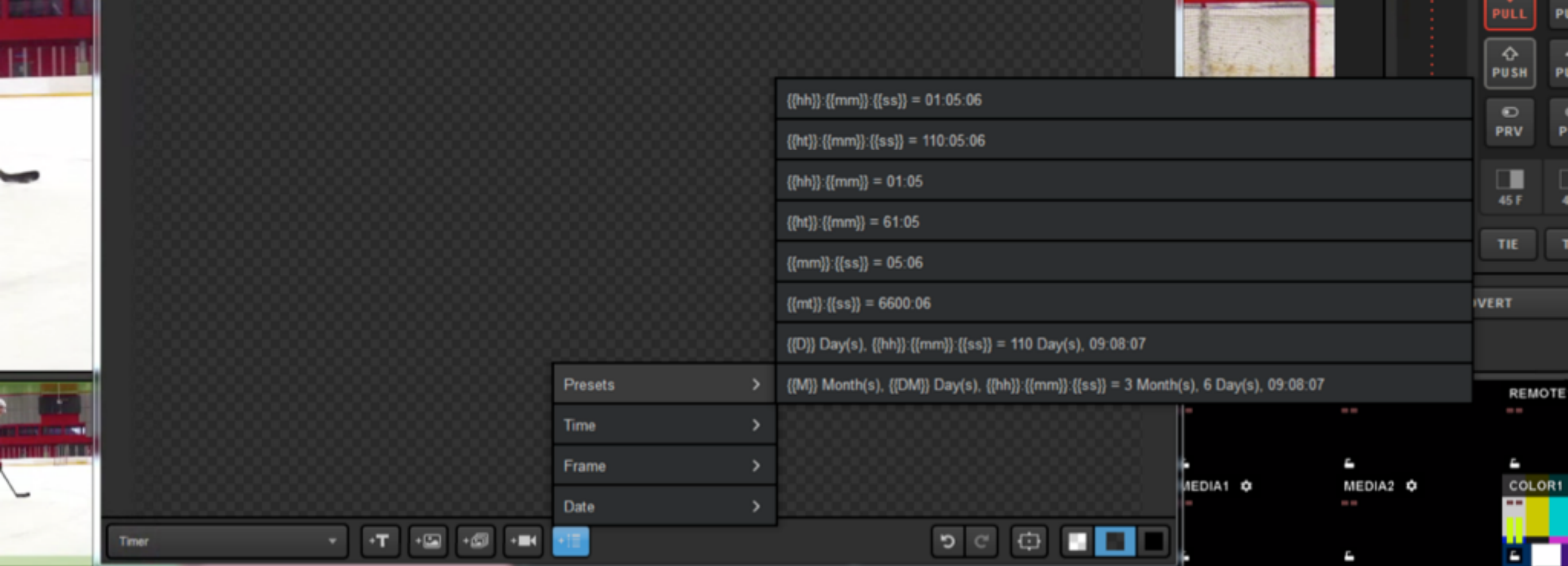
In the Timer layer, click on the list icon to add time fields.
Check the presets first, as this may save time in designing the graphic.
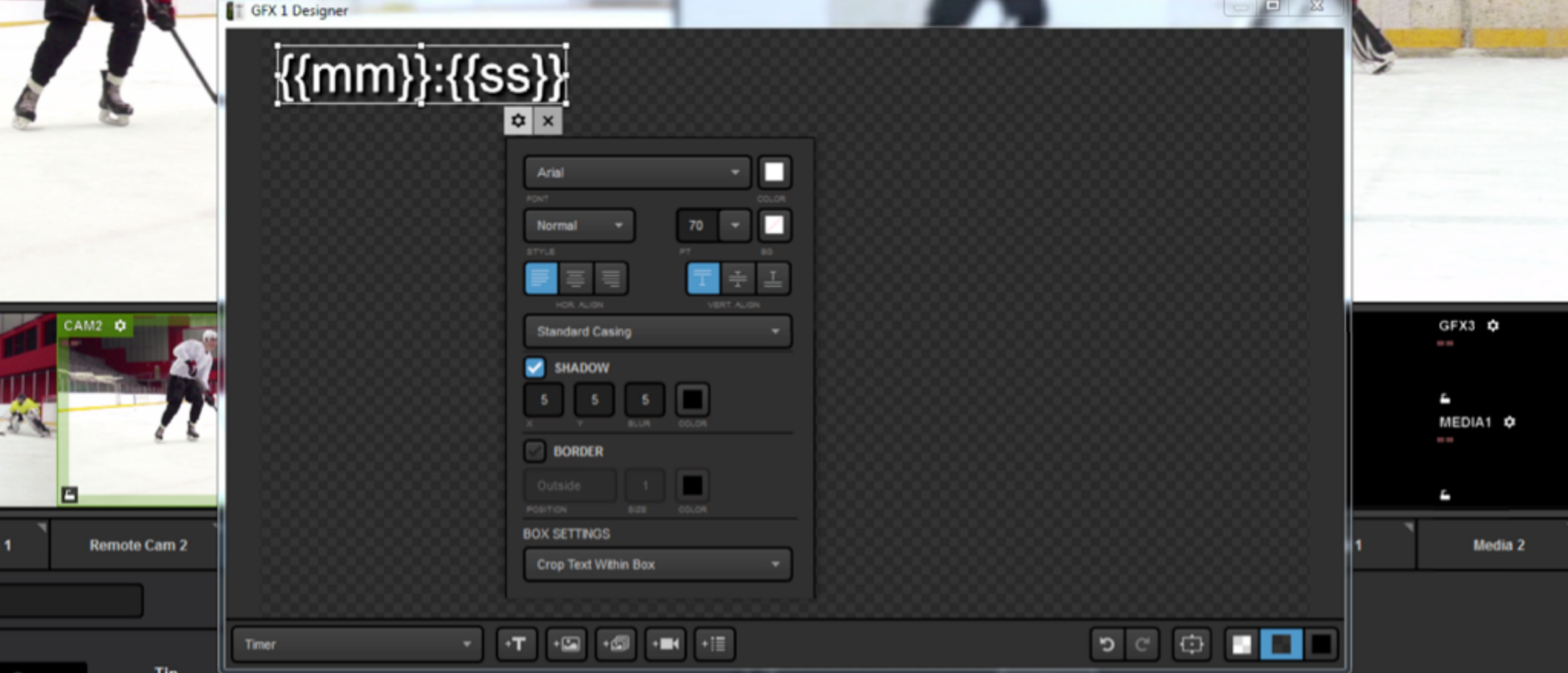
Click the gearwheel to customize how the clock looks.
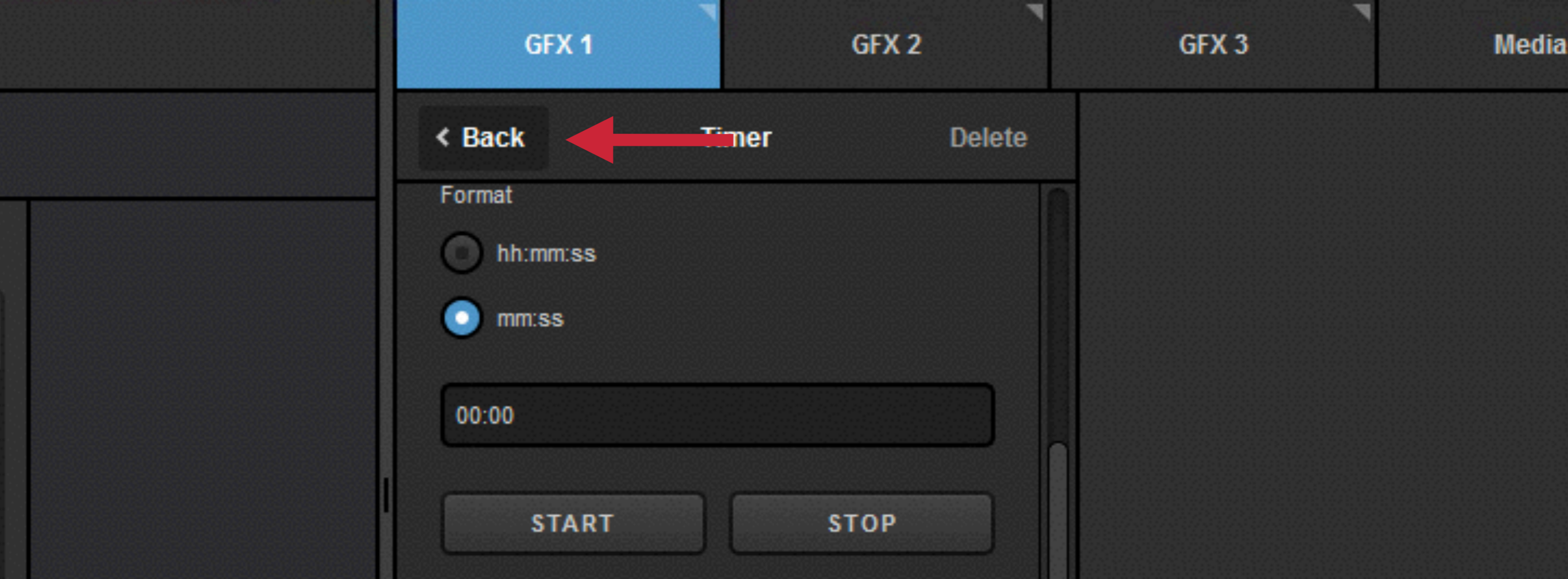
When finished, close out of the GFX Designer, then click 'Back' in the graphics layer settings.
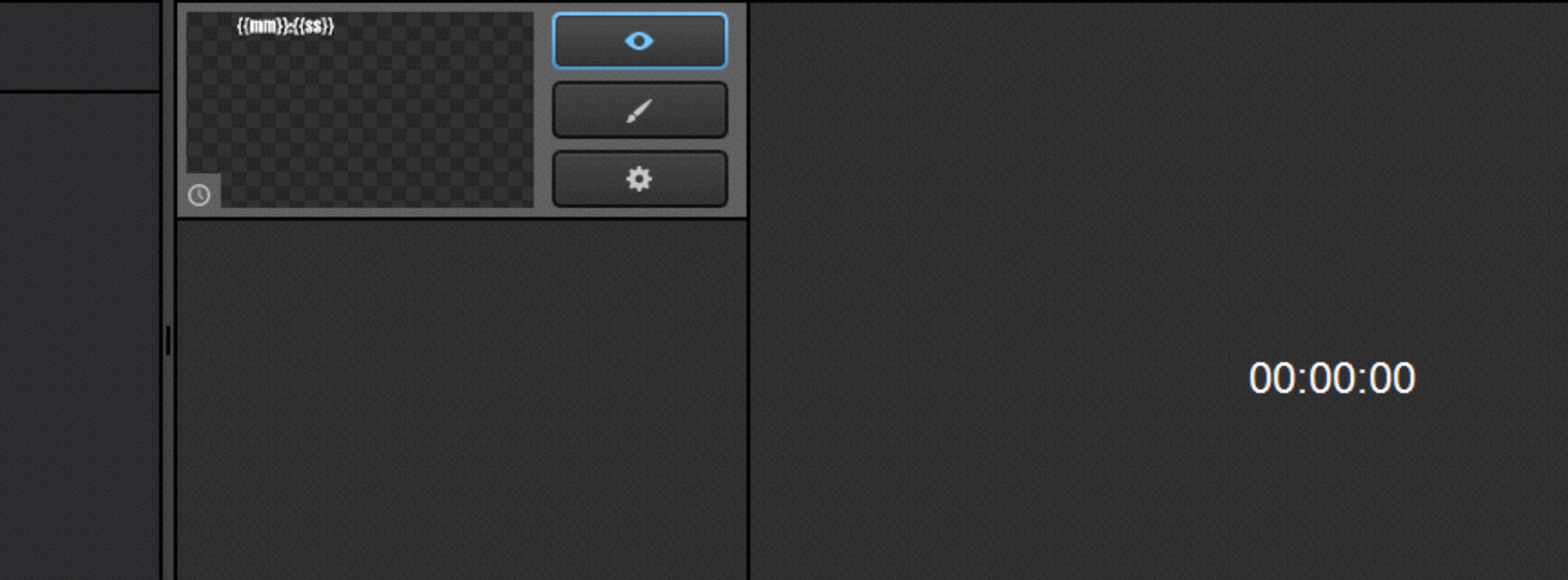
Your timer graphic can now
be made visible and pushed
to Program when desired.

livestream

Adding graphics overlays

.CSV over HTTP
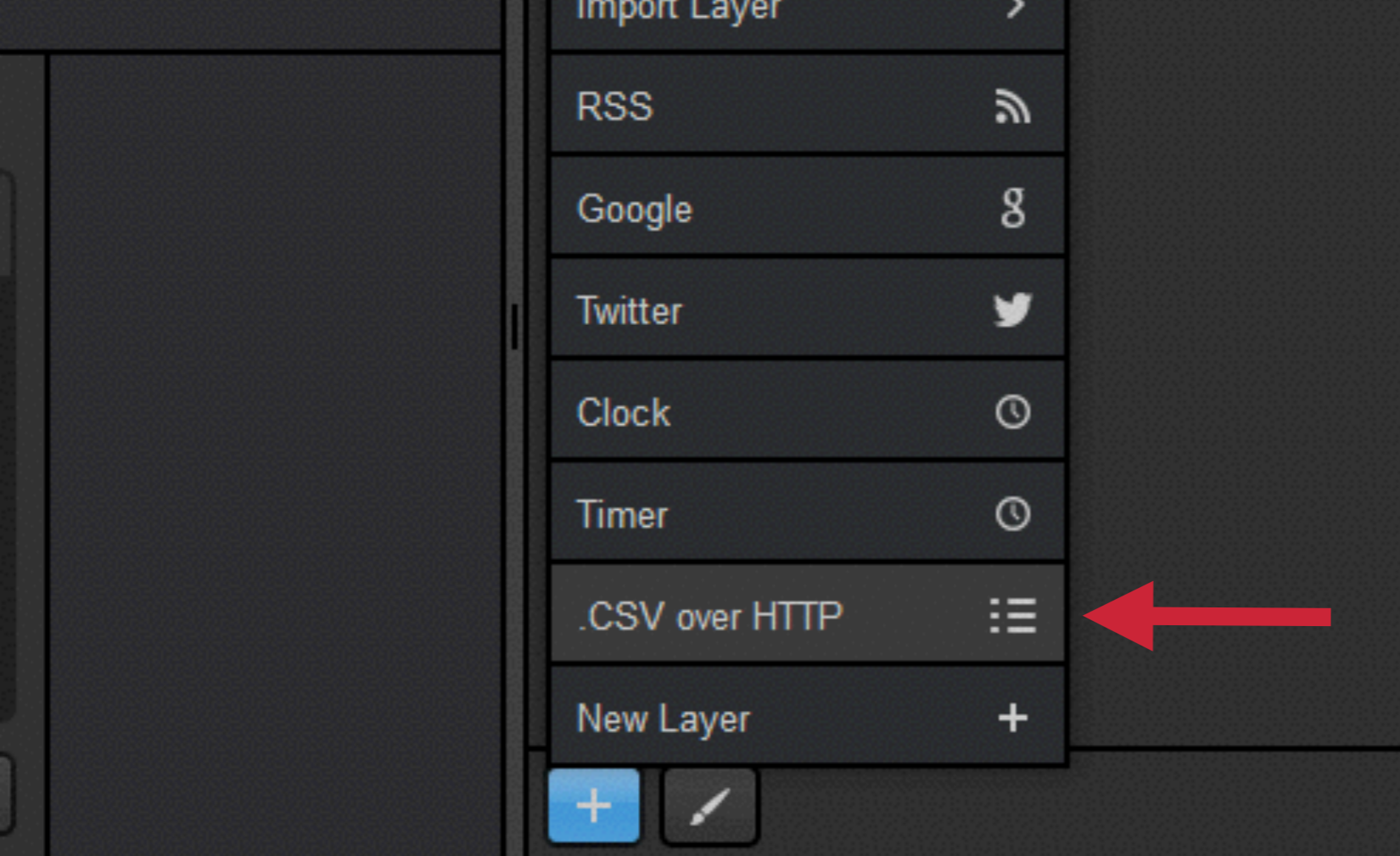
If you are hosting a .CSV file on a web server, you can use the data in Livestream studio by selecting '.CSV over HTTP.'

< Back   CSV   Delete

URL

⊘ Please enter URL...

☑ Basic Authentication

User name

Password

☐ Remember me

+ ✎

No data
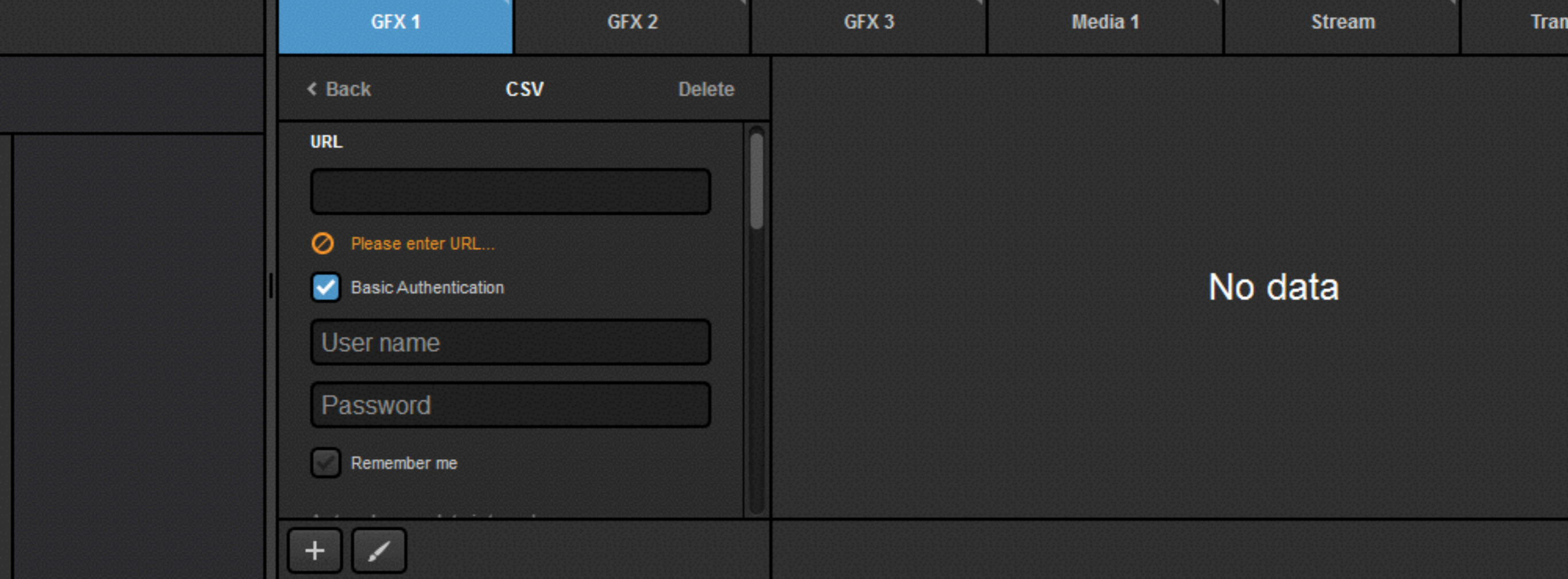
If your file requires authentication in order access it, check 'Basic Authentication' and enter your credentials.
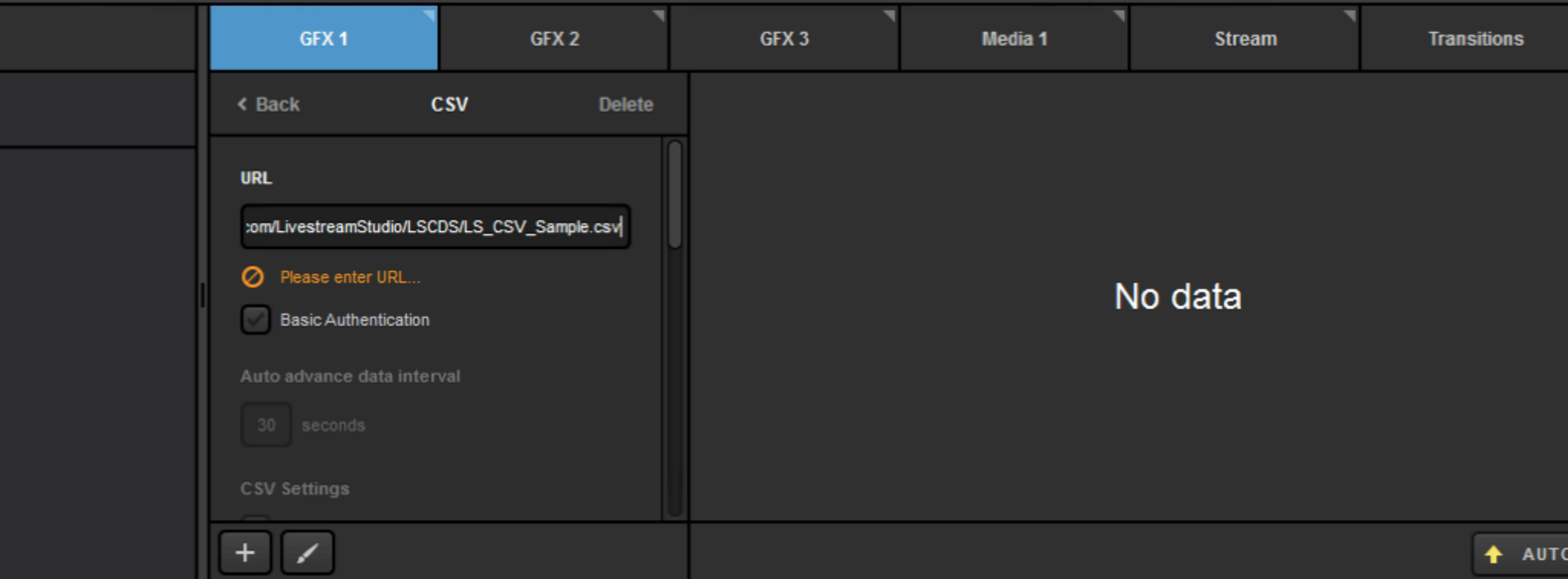
livestream

In the settings, input the URL where the .CSV file is located, then press 'Enter' on your keyboard.
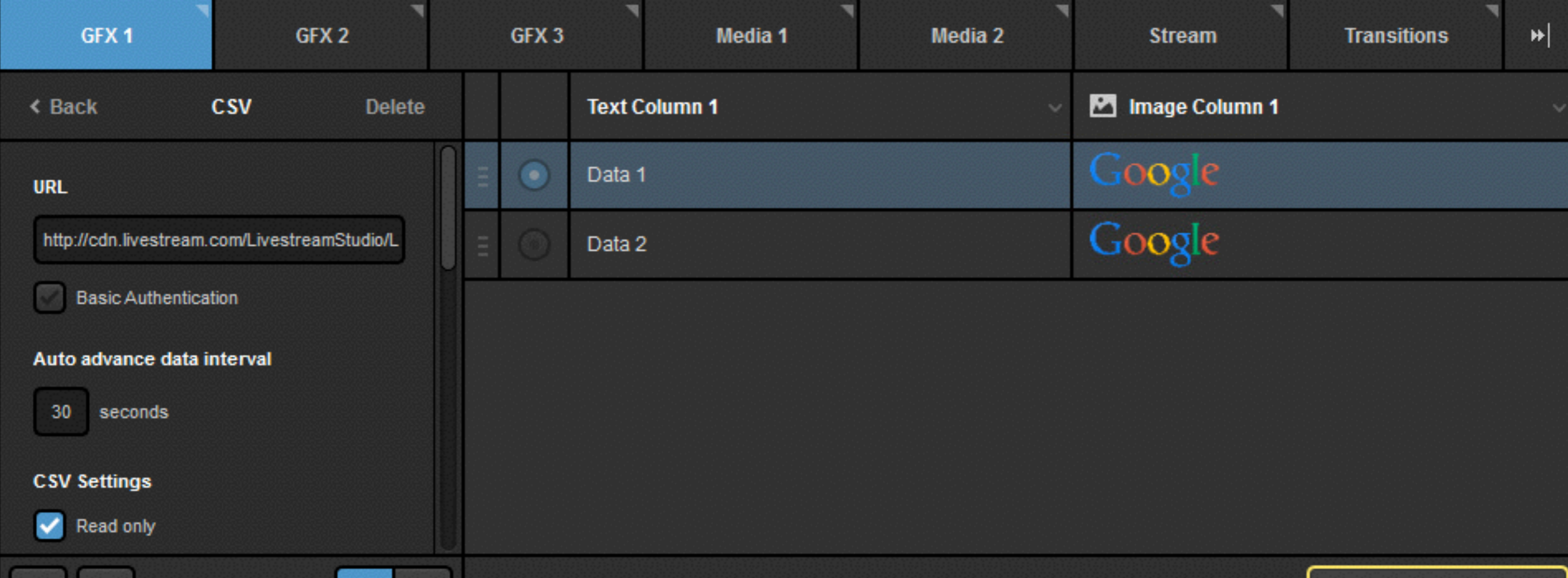
Your data will populate on the
right with further settings
becoming available on the left.
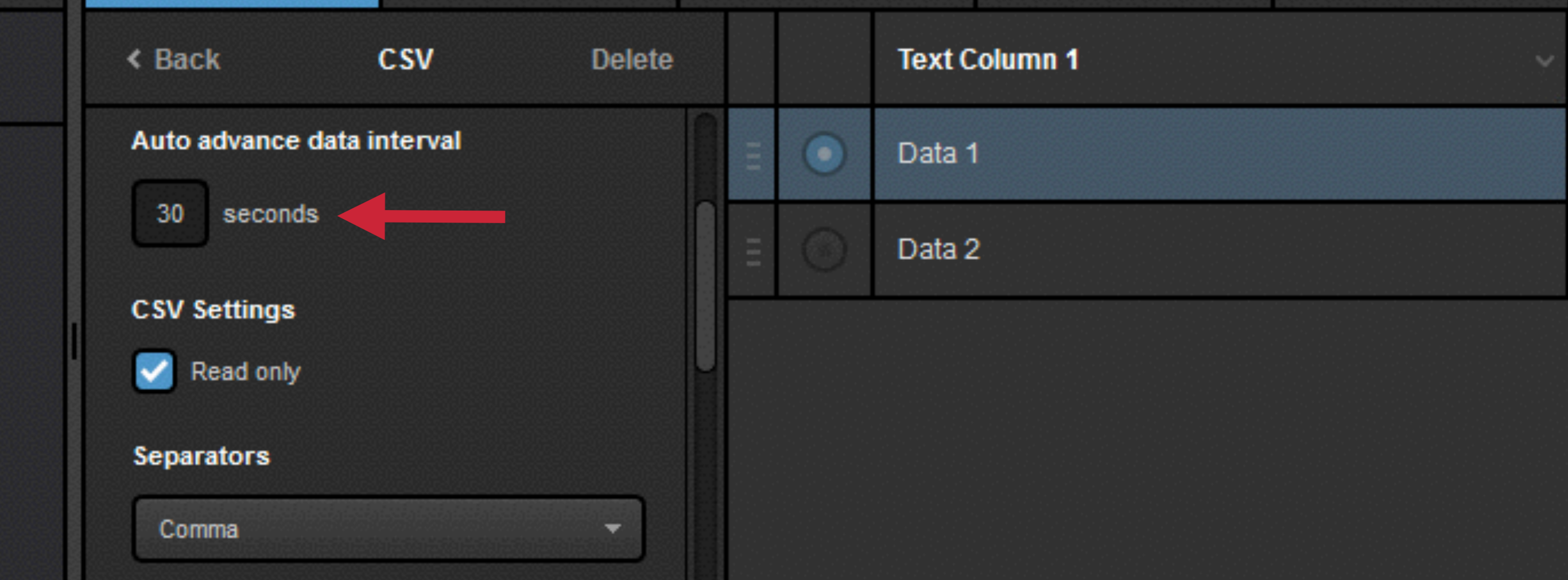
Set the amount of time in seconds that Livestream Studio should refresh and look for new data in your .CSV under 'Auto advance data interval.'
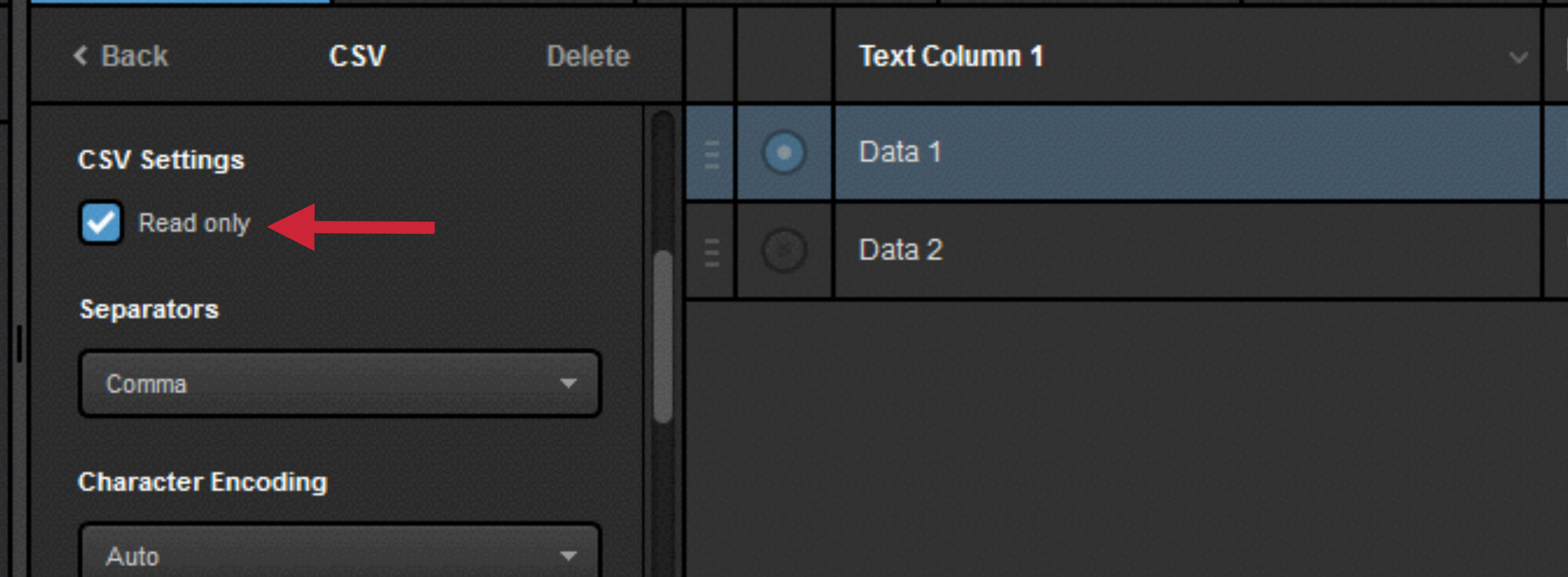
If you want to make changes to your .CSV via Livestream Studio, uncheck 'Read only.' Otherwise, leave it checked.
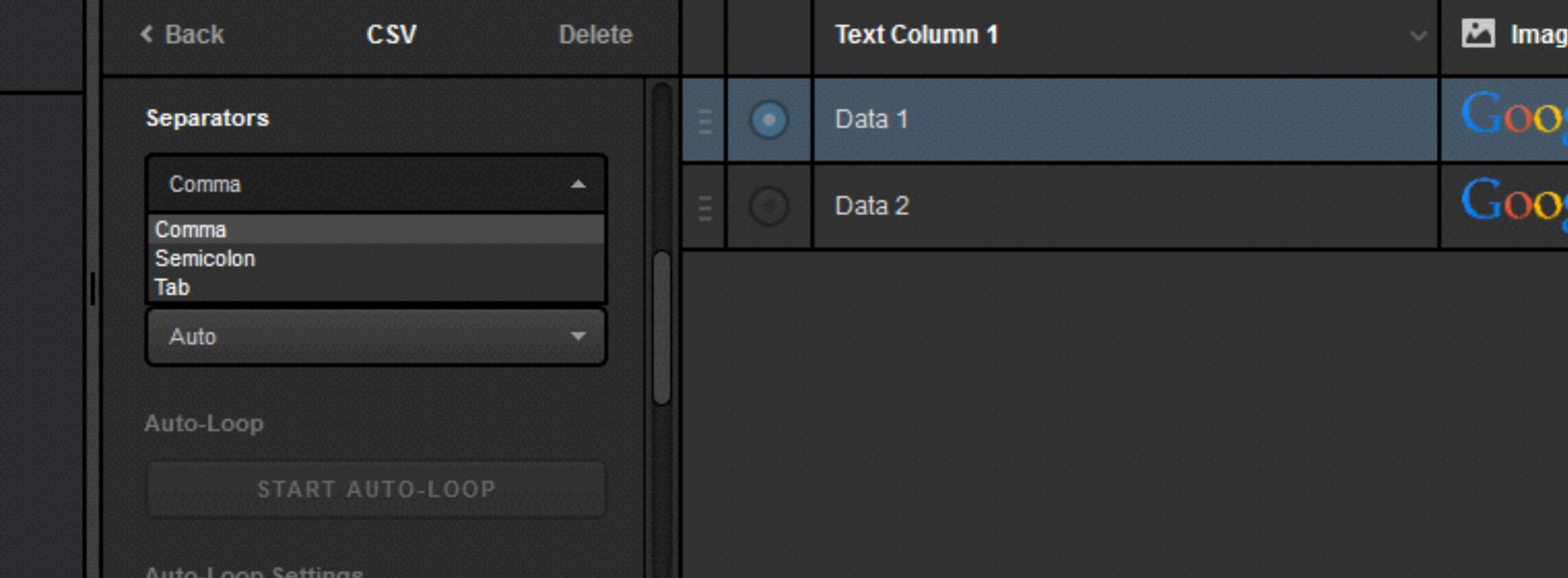
Scroll down to tell Livestream Studio what your column separators are and the types of characters being used (typically auto-detected).

At the bottom are your Auto-Loop settings if you want Livestream Studio to rotate through your .CSV data.
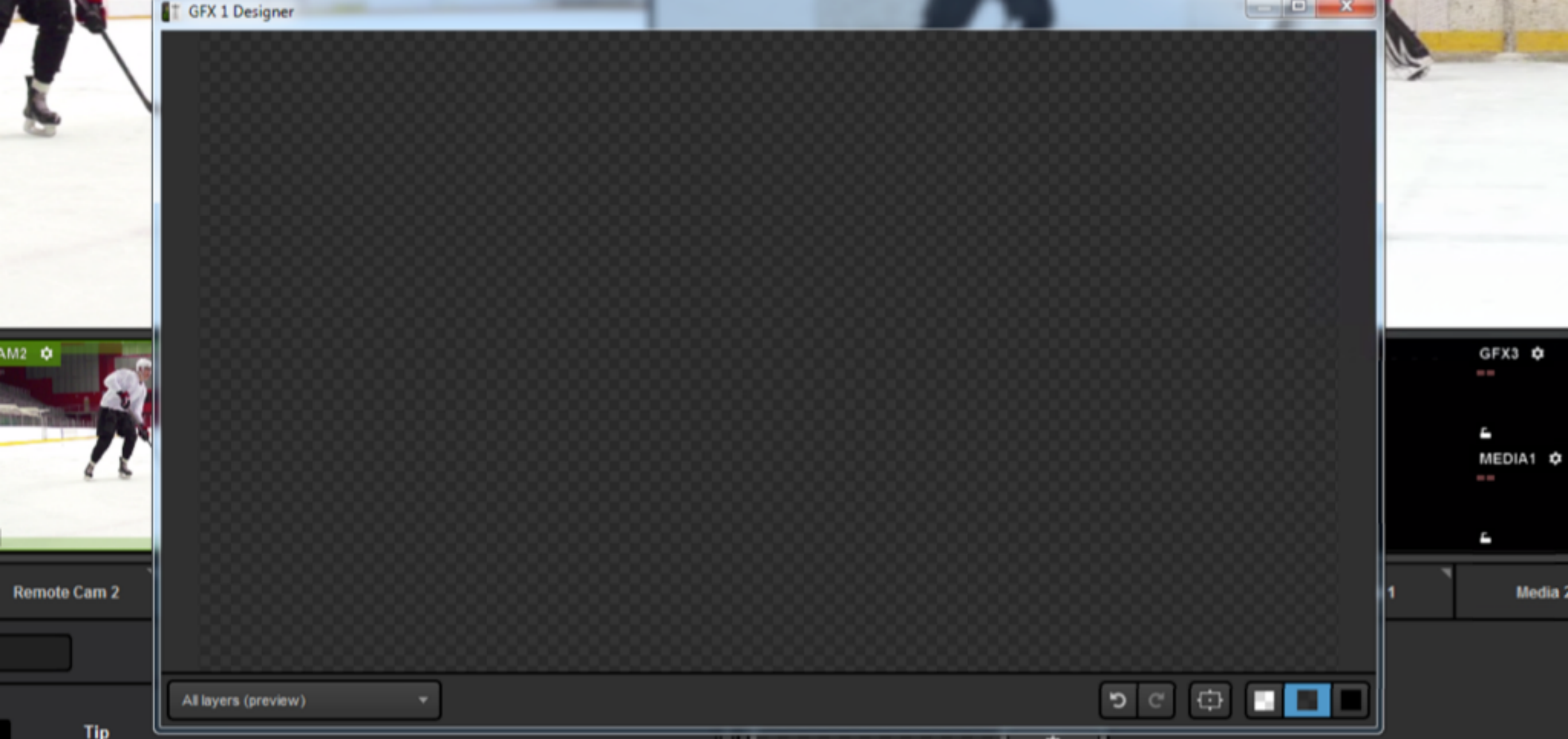
To design the graphic, click the paint brush icon to enter the GFX Designer.
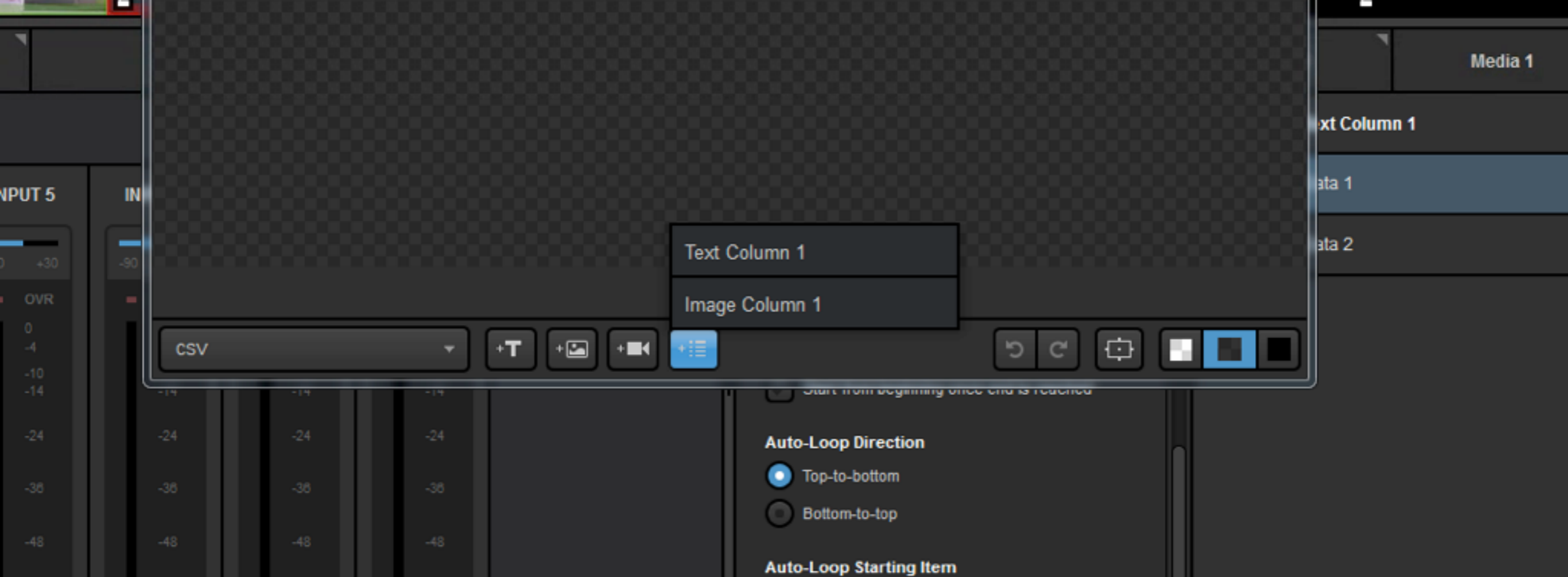
Select the 'CSV' layer from the dropdown and design your graphic as desired.
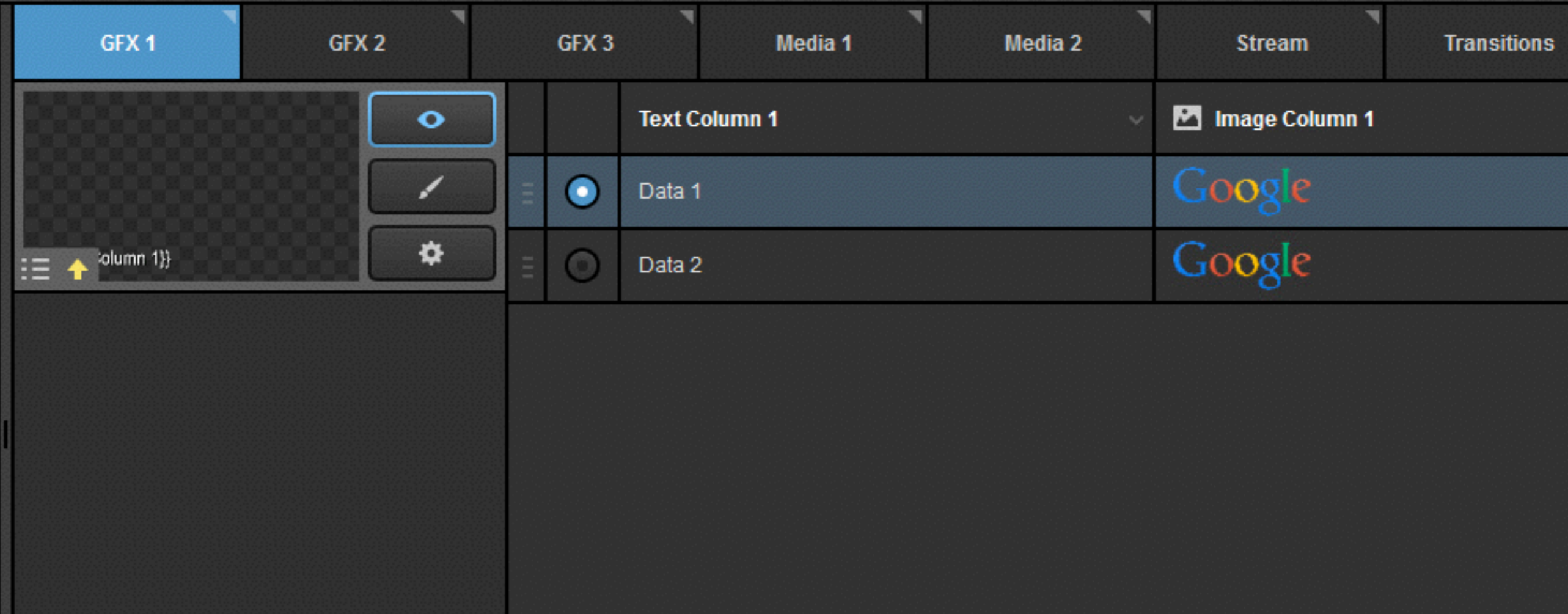
You can now make it visible and control it using 'PRV,' 'PUSH,' and 'PULL' as desired.

Adding graphics overlays

Animated graphics
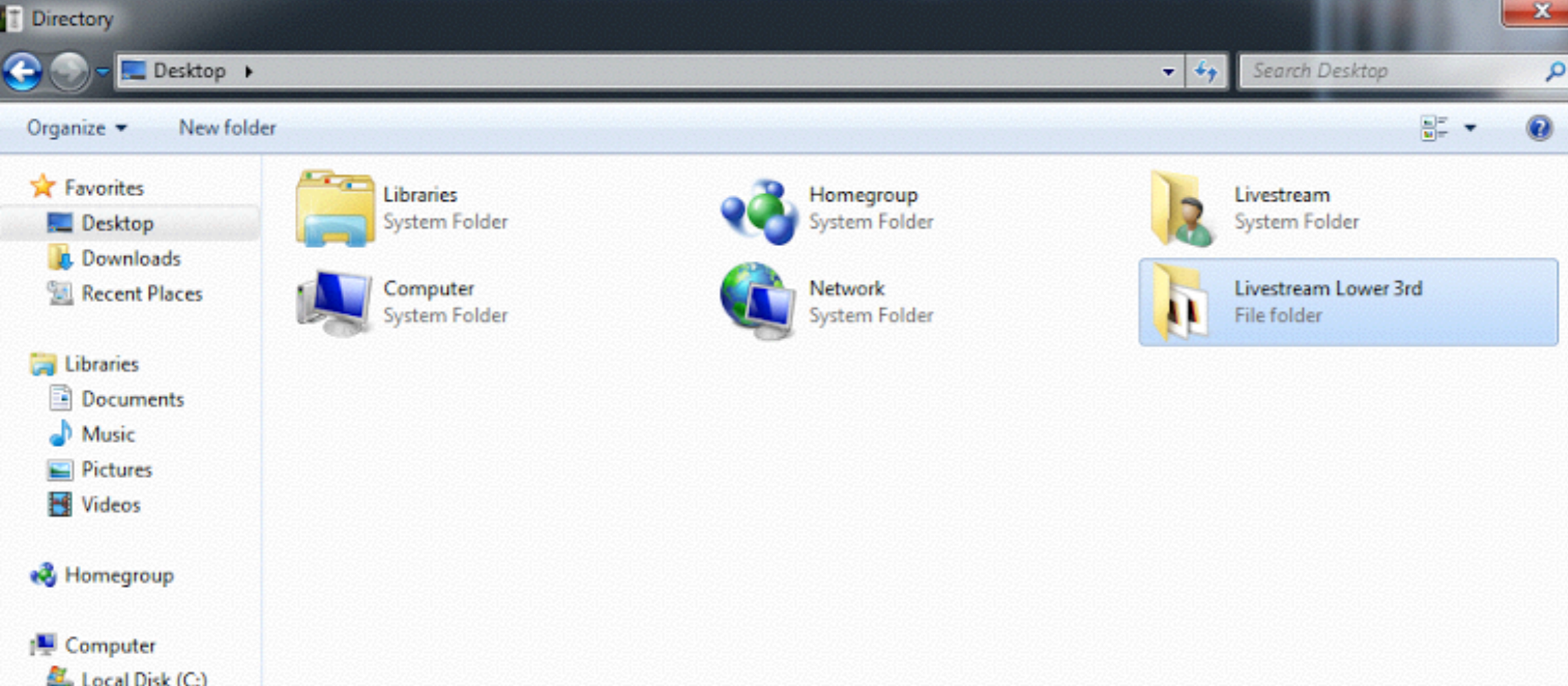
livestream

Livestream Studio will accept a folder of images that it will loop through. To keep your images' backgrounds transparent, .PNG files are recommended.
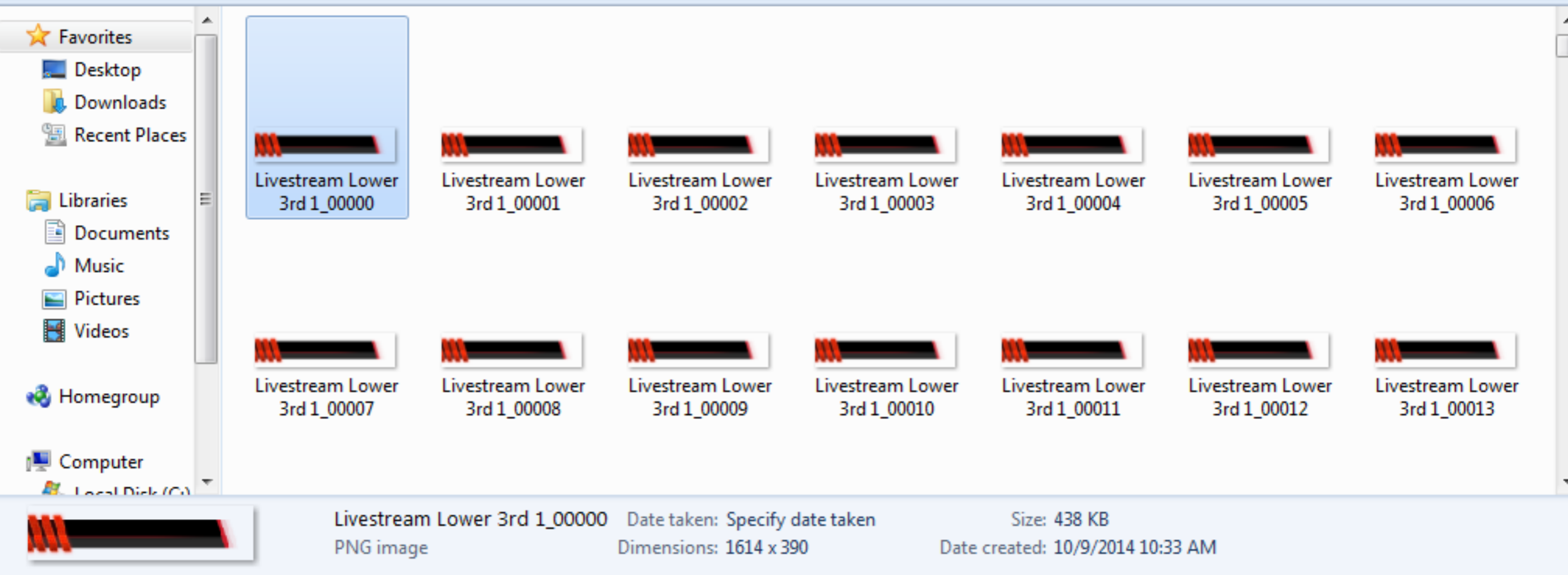
This feature is best for lower-third graphics and corner bugs. Larger animated graphics, such as backdrops, should come in through a media bin.
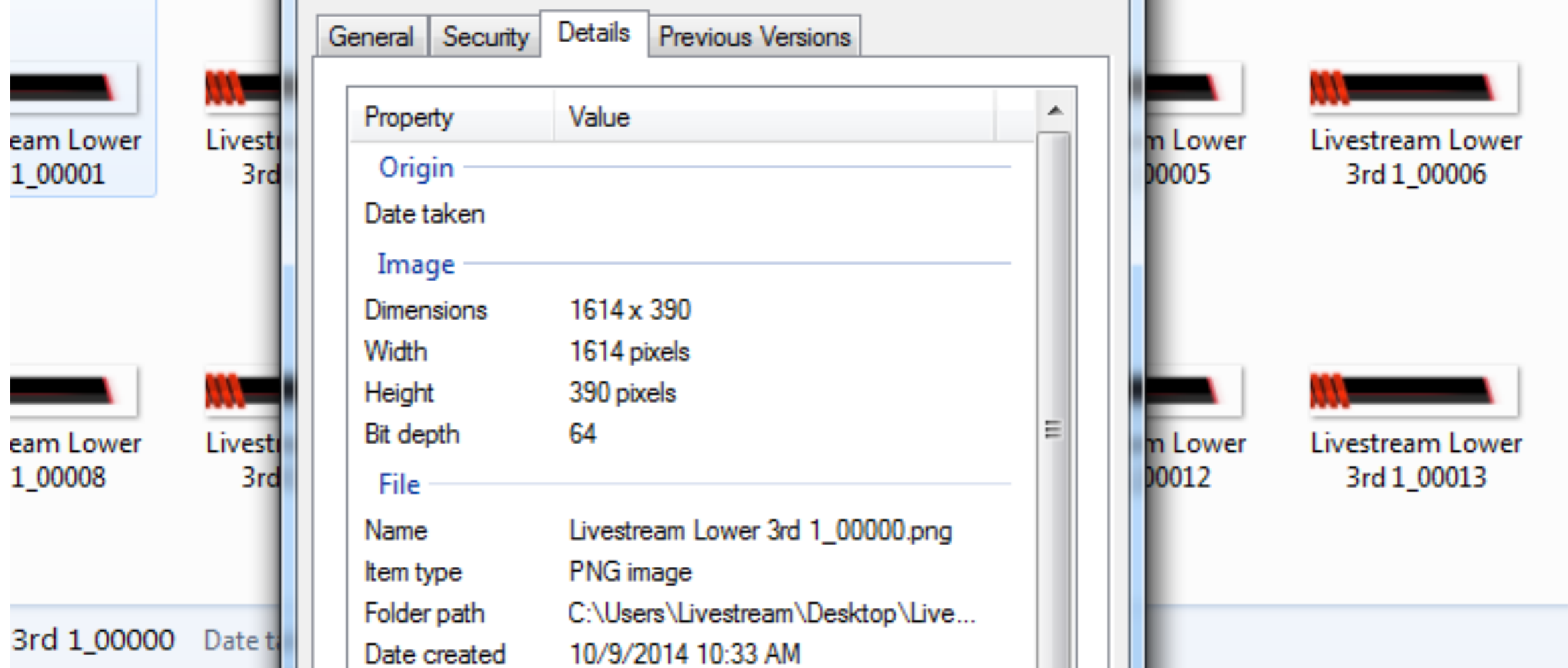
Your .PNG files must be less than 1.5 million pixels. To determine a .PNG file's pixels, view that file's properties and multiply the height by the width. For this graphic, which has subtle animations, 1614 x 390 = 629,460 pixels.
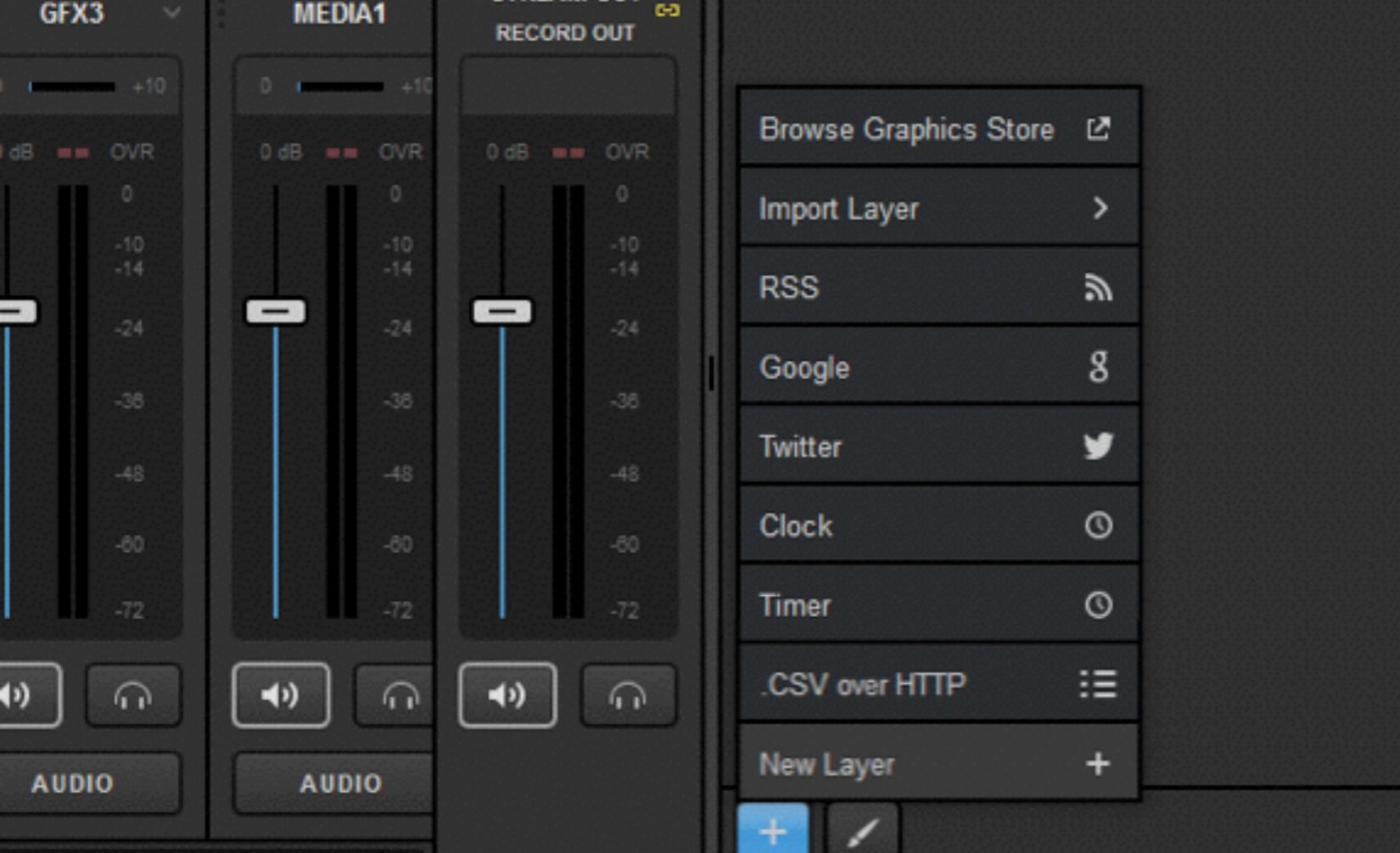
To add an animated graphic, go to a graphics overlay channel and add a new layer.
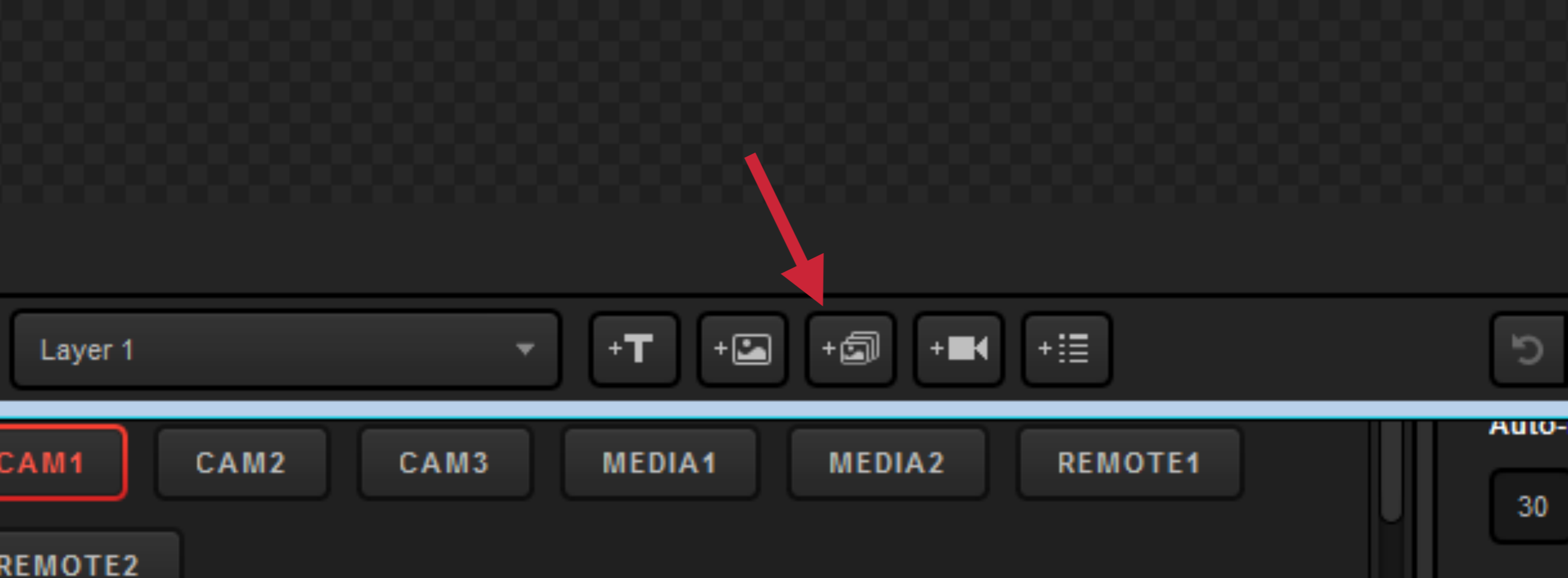
In the GFX Designer, there is a button in the module to search for a series of images. Click on this button to browse your computer.
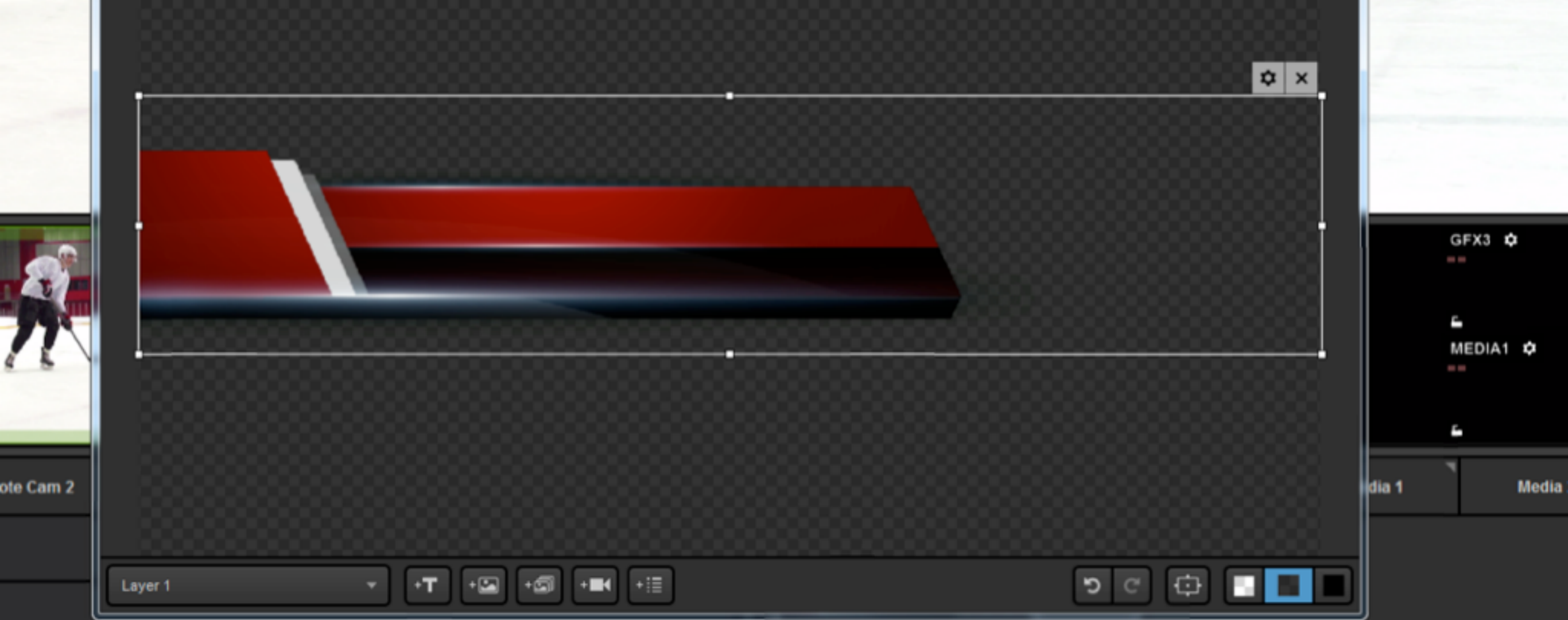
Open the folder that has your .PNG files
and choose the first file inside that folder.
All images in that folder that match your
selected file's resolution will then import
as a sequence into Livestream Studio.
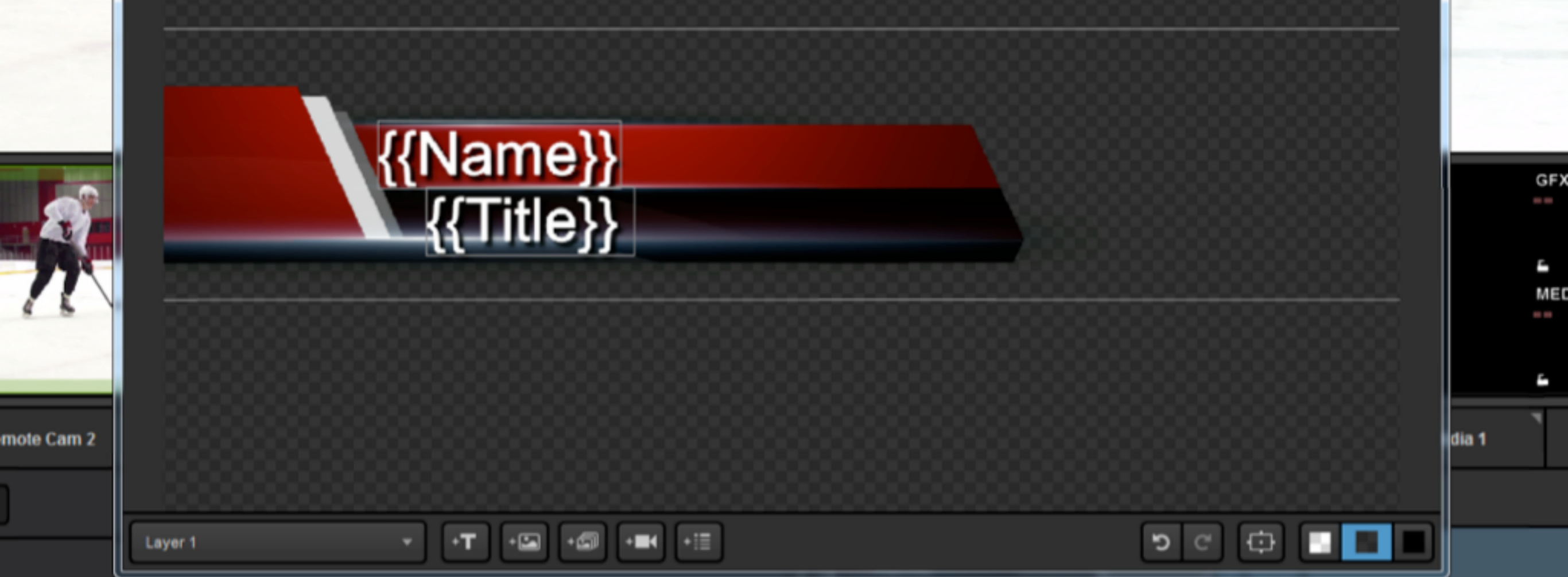
From there, designing the graphic follows the same procedure as designing still graphics (adding data fields, etc.).

Text	Text 1
Tom Iannaco	Producer Support
Penalty Shot	New York, N.Y.
Amanda Vicari	Event Co-Founder
Ed Yealu	Event Co-Founder
Kristin McCue	Co-Host

Layer 1

+ ROW   + COLUMN   AUTO PUSH/PULL
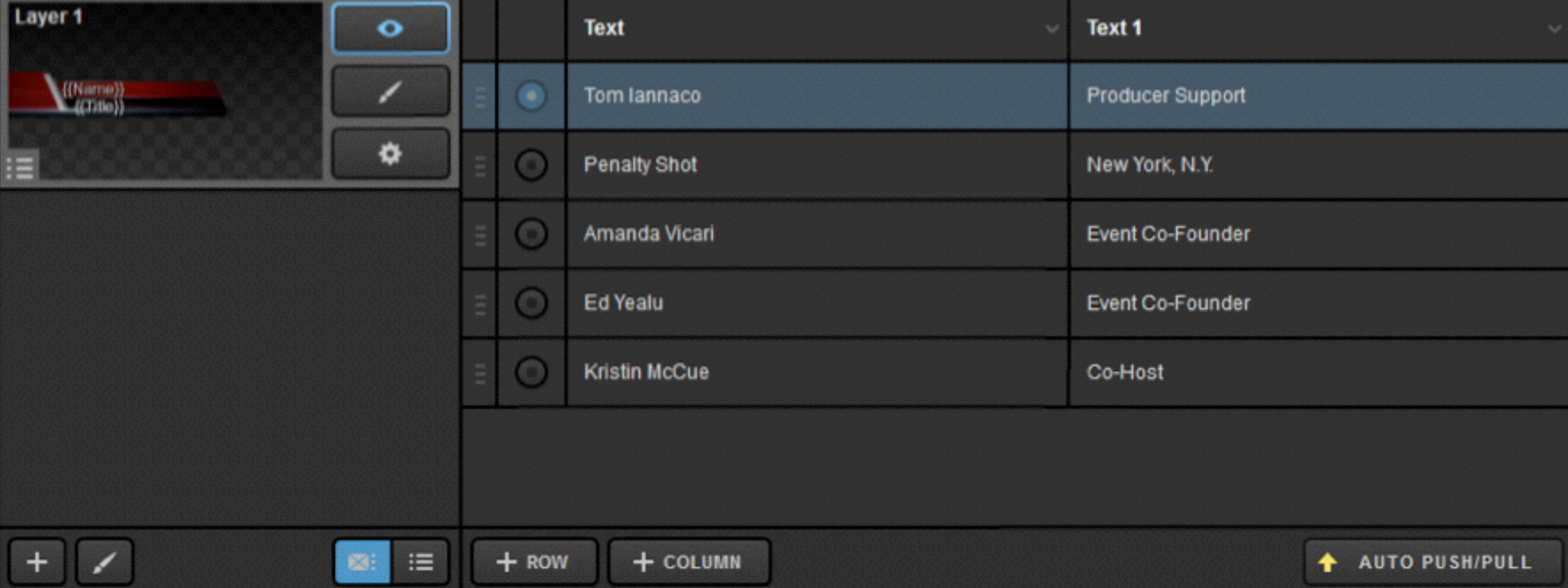
All other functions of the graphics overlay, including adding data, changing settings, and pushing and pulling the layer are the same as other graphics.
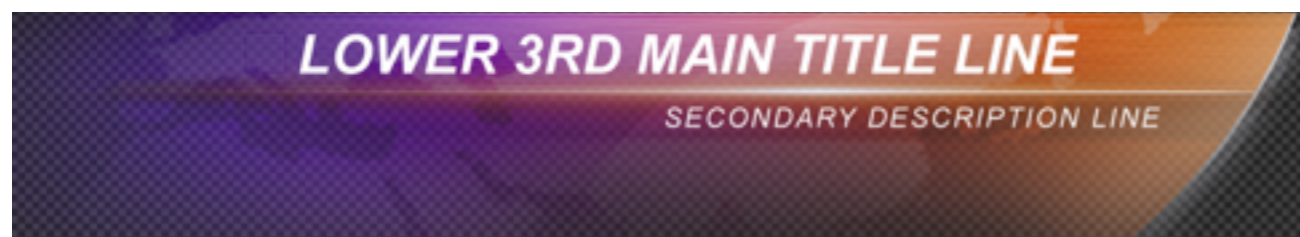
livestream

All the templates above are available for free in the Livestream Graphics Store. Click on the images here to download the .lsgfx files.

Select Folder for Animated Image Sequence

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.

BROWSE   C:\Users\Livestream HD50\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.'

MainTitle　　　SubTitle

LOWER 3RD MAIN TITLE LINE　　　SECONDARY DESCRIPTION LINE

+ ROW　　　+ COLUMN

AUTO PUSH/PULL
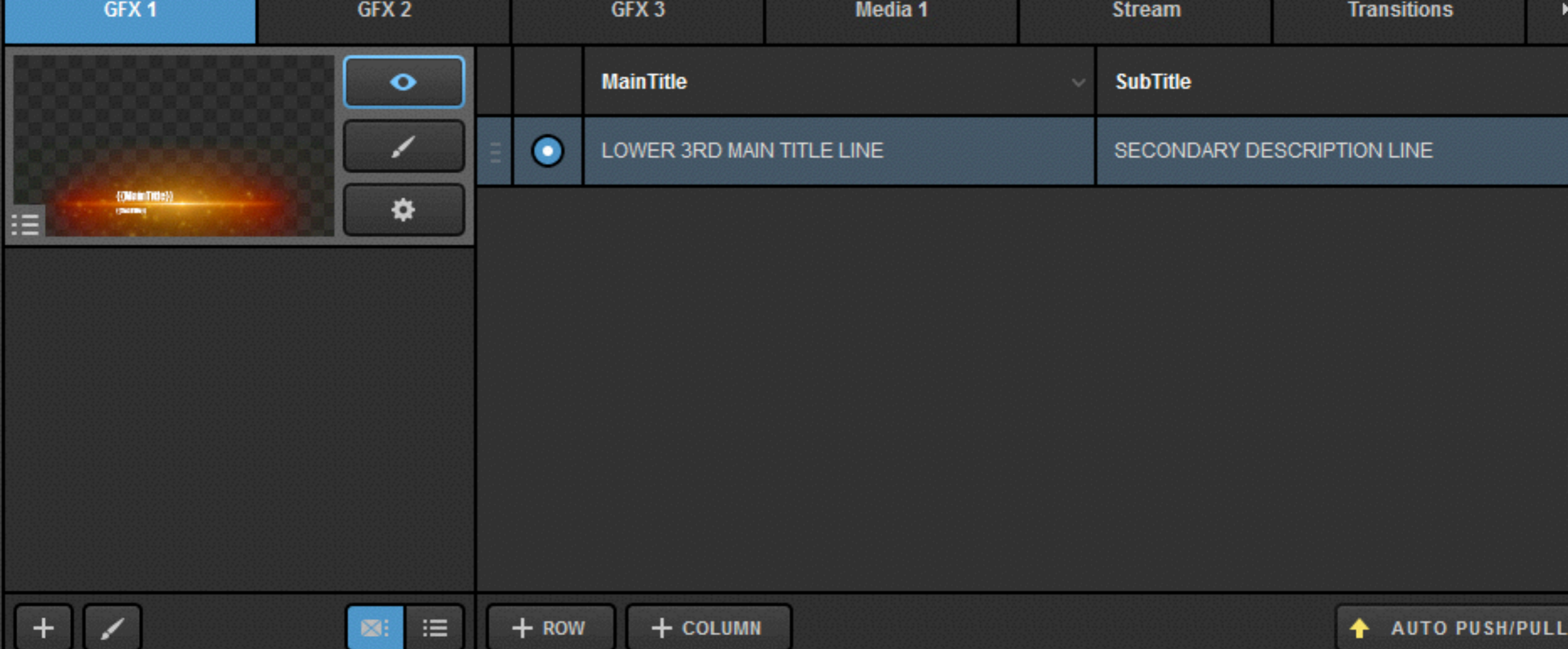
The .lsgfx file will load in
Livestream Studio and you can edit
it in the same fashion as with any
any other graphic.

Chroma key
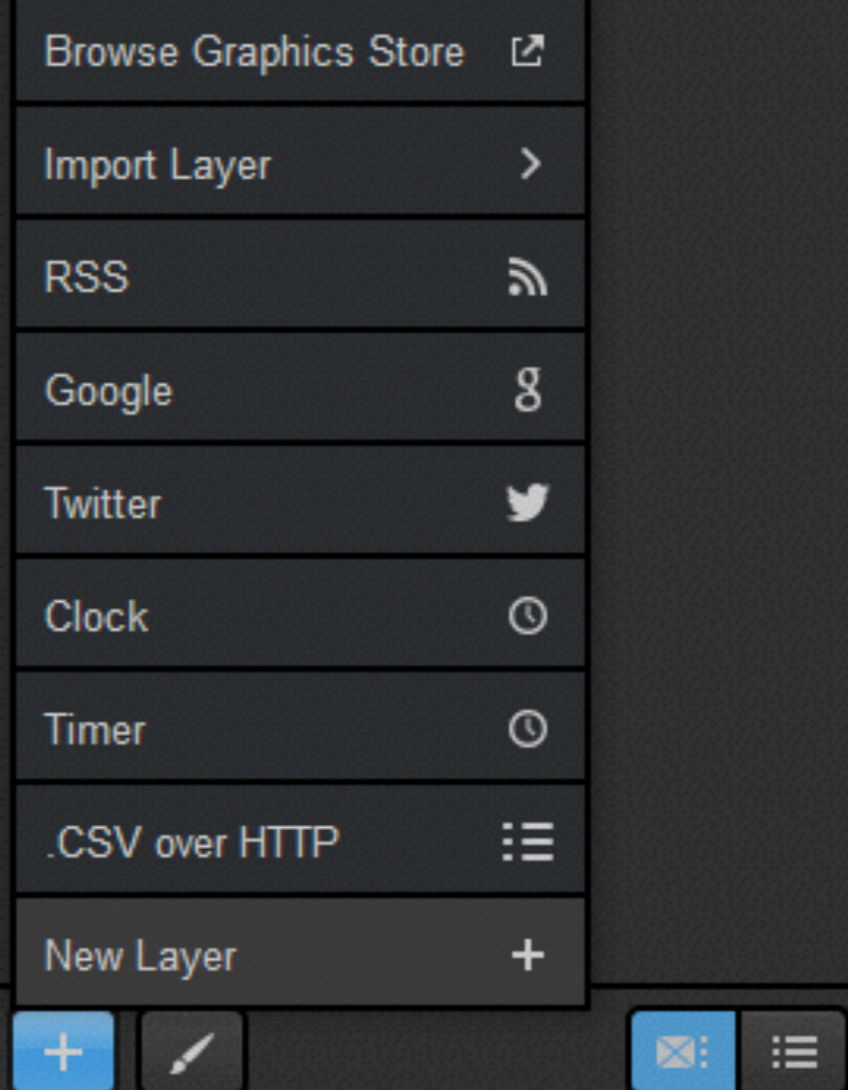
livestream

Livestream Studio has the ability to key out colors through the graphics module. Start by adding a new layer to any graphics overlay channel.

livestream
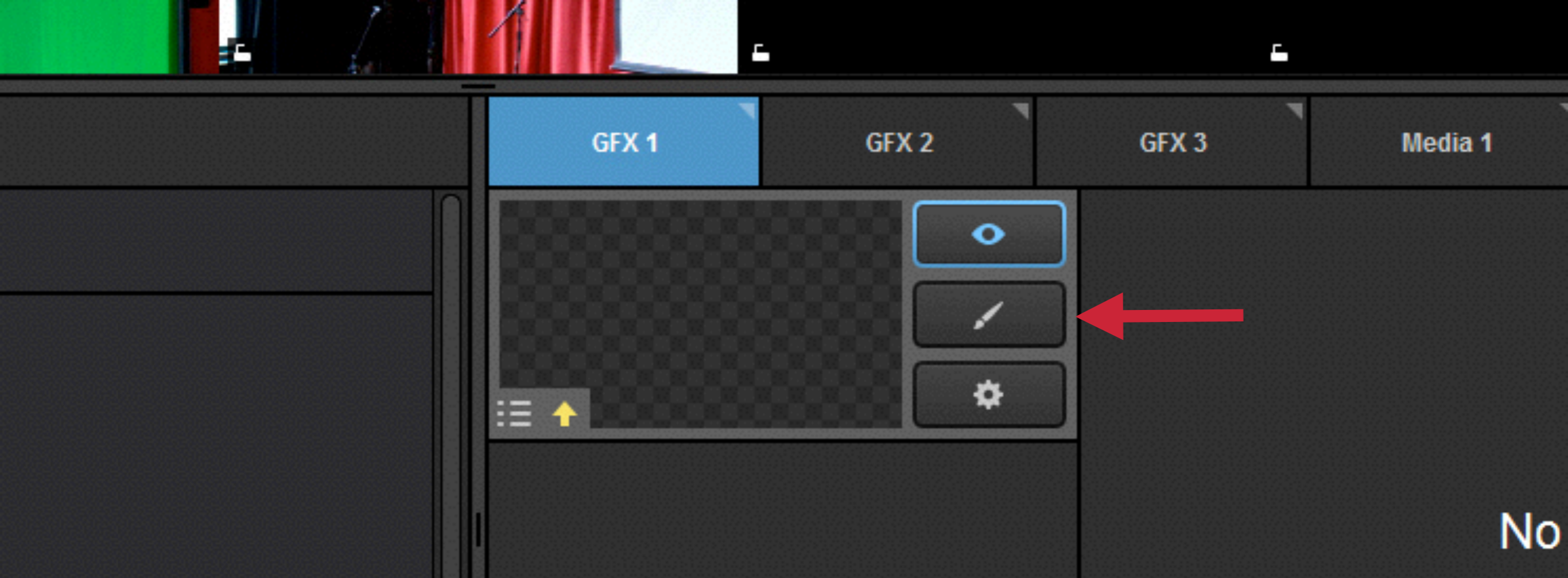
Click the paintbrush icon to enter
the GFX Designer.
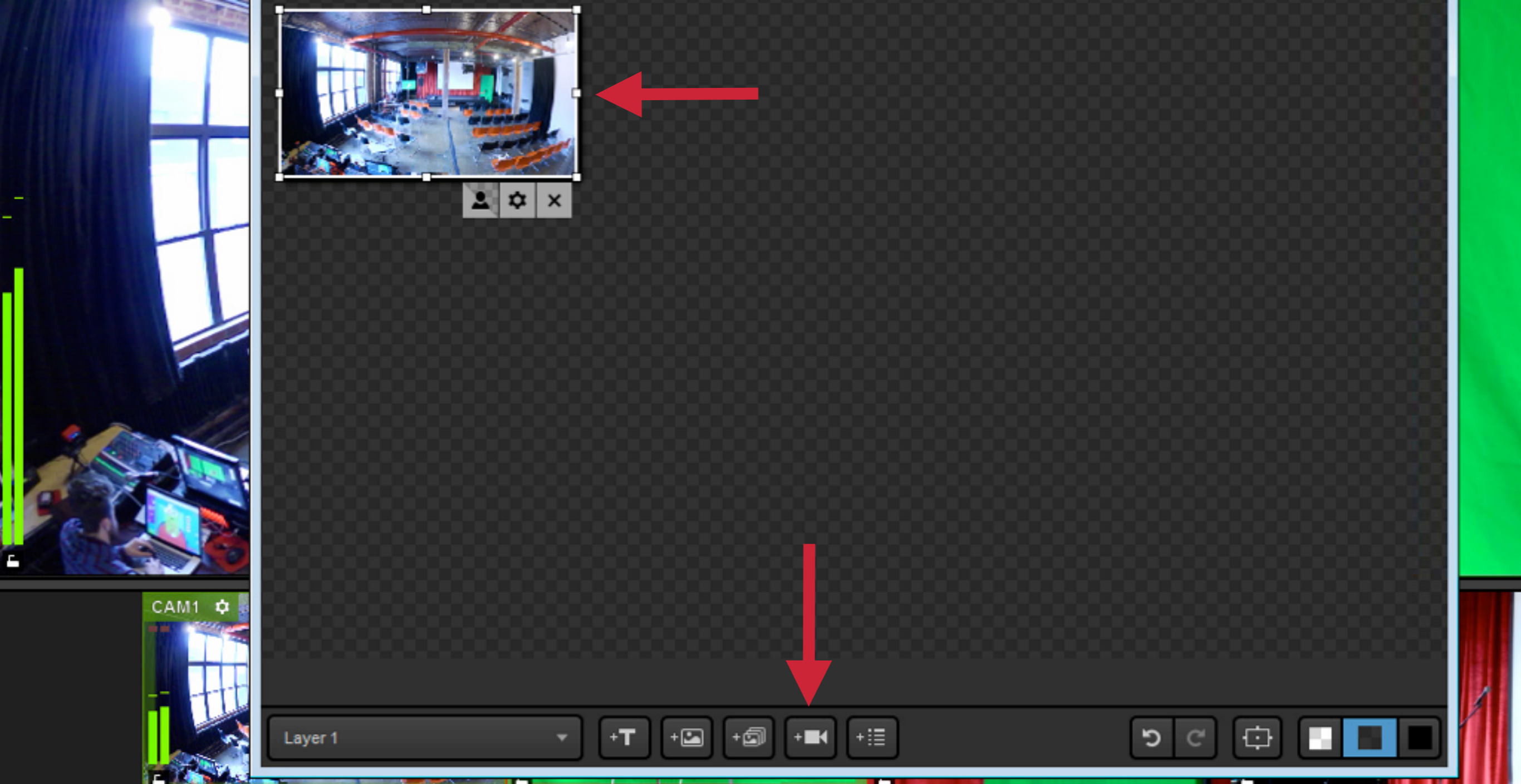
Next, click on the camera icon to add an input source to your graphics layer.
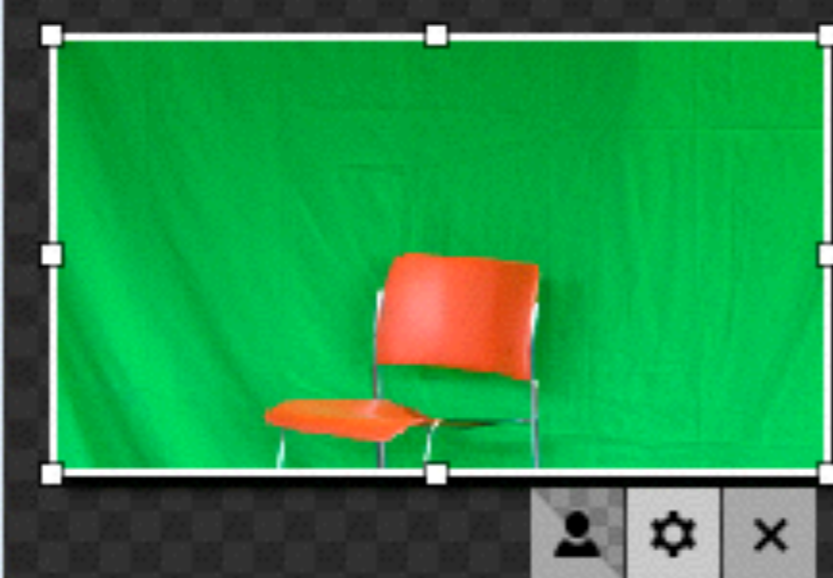
Click the gearwheel to select
which input source you want to
use for chroma key.

You can adjust how your input source looks inside the GFX Designer as necessary.
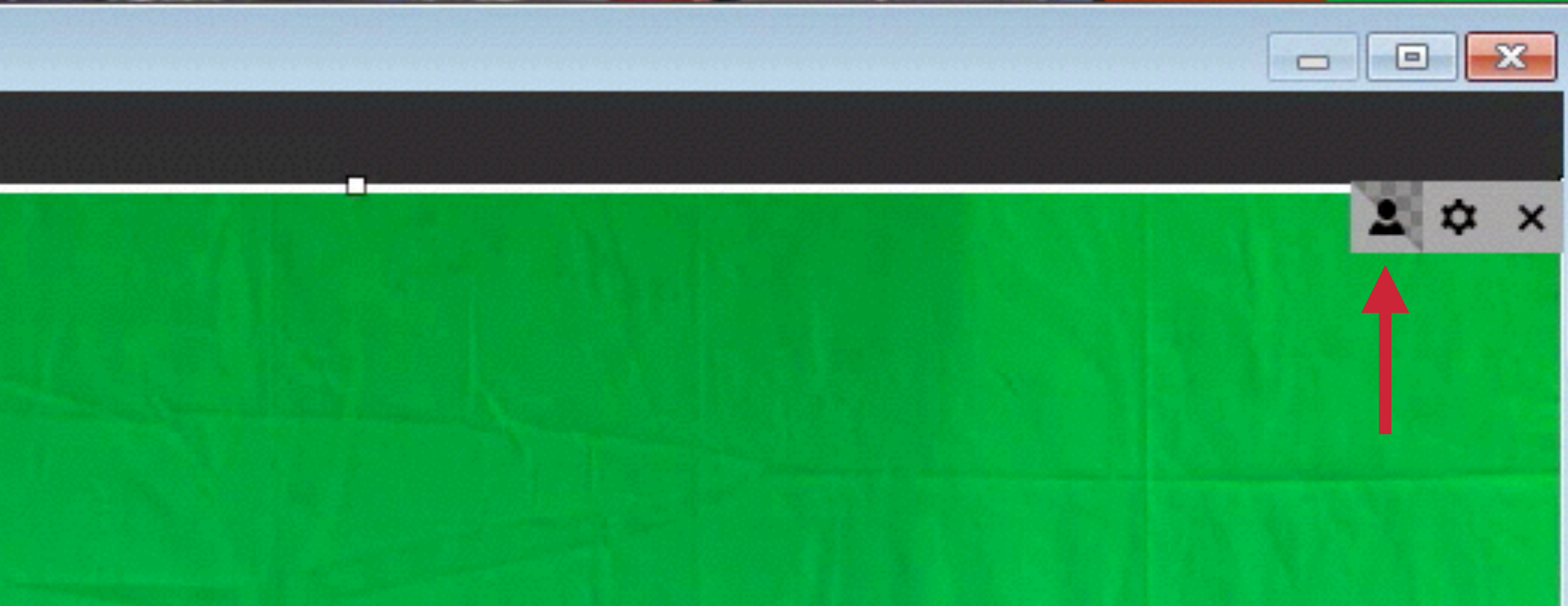
Click the person icon to turn on chroma key.

Livestream Studio will automatically detect the most prominent color (green in this example) and key it out once chroma key is turned on.
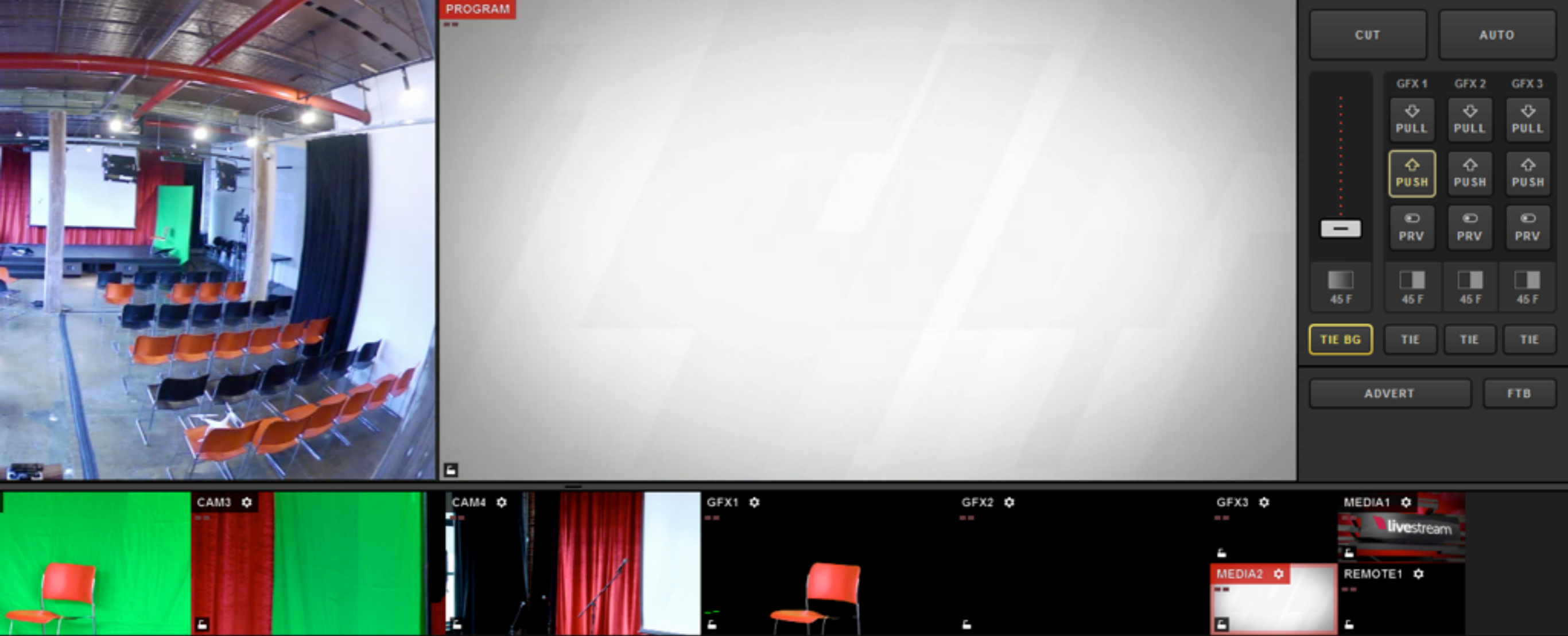
Next, close out of the GFX Designer and put either a camera, media source, or graphics source into Program from your multi-view. The example above has a white background video from Media 2.

Now push your graphics overlay layer into Program by clicking the 'PUSH' button.
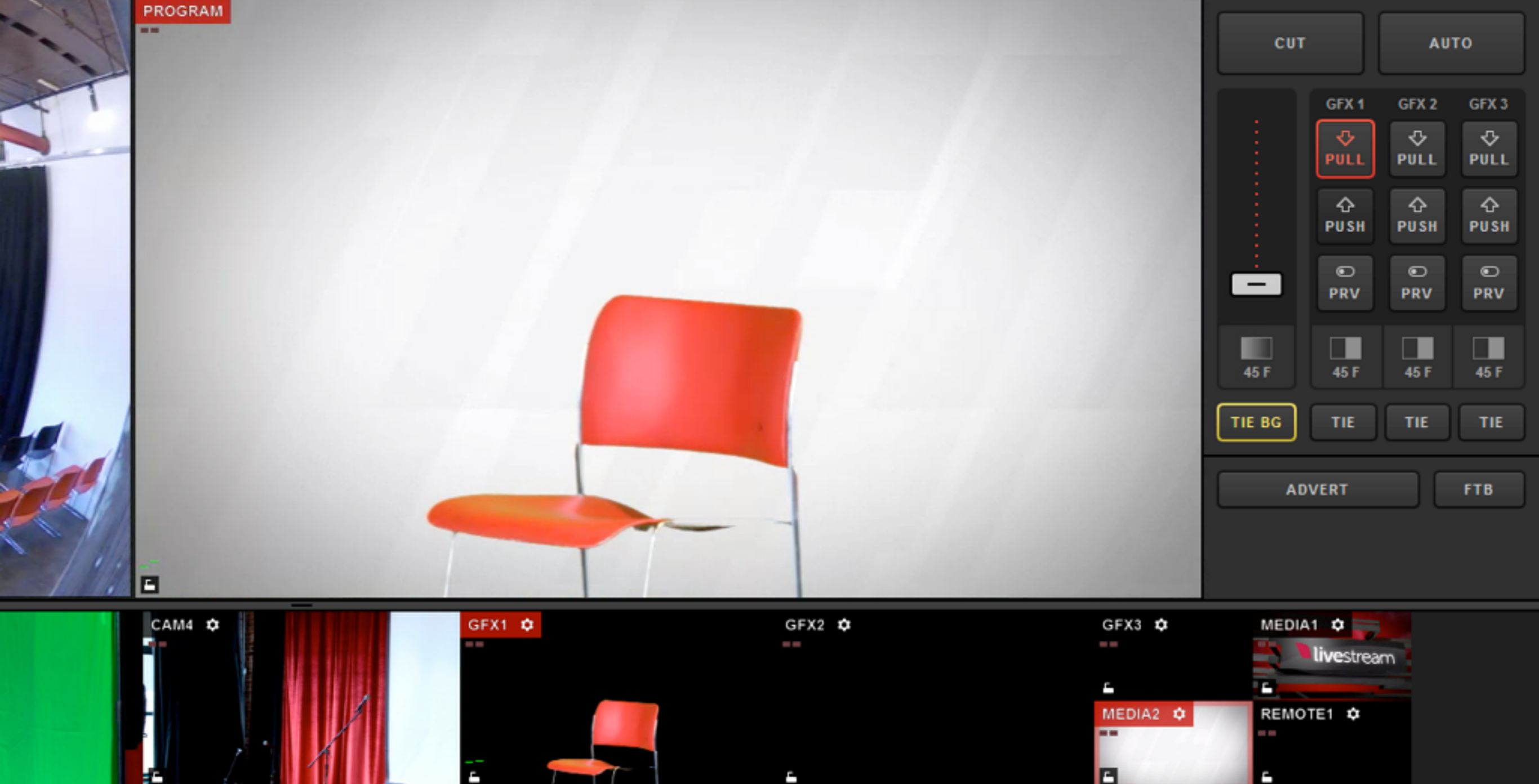
You should now see your chroma keyed input source overlaying your Program source.
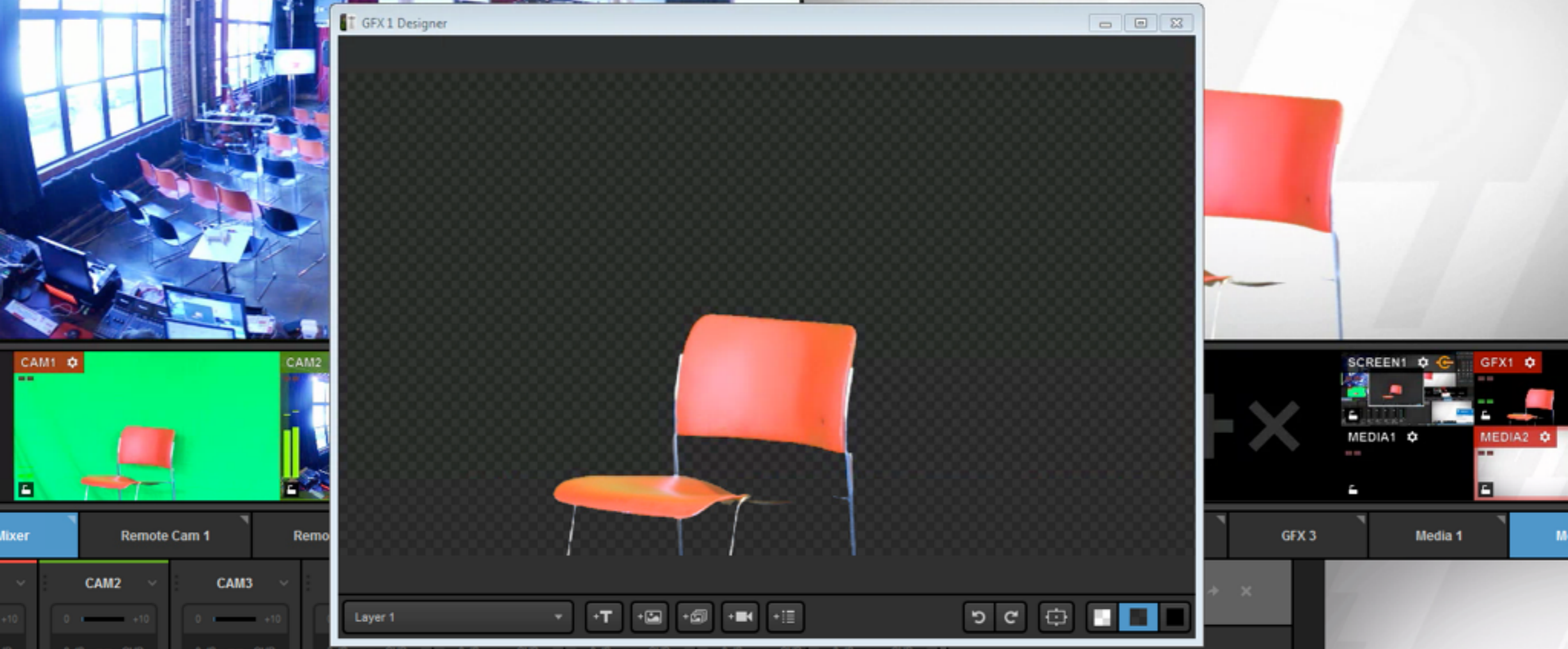
To make further adjustments to your chroma key graphic, go back to the GFX Designer.
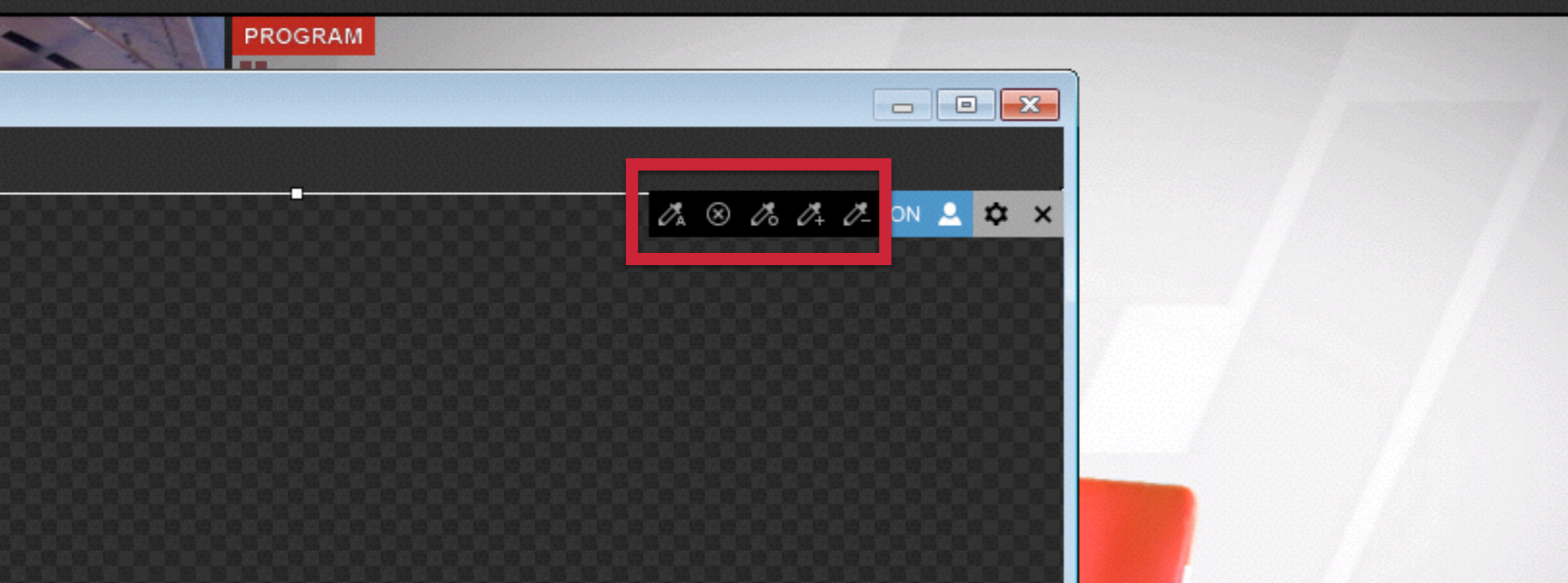
When you select your input source in the graphics overlay while chroma key is turned on, you will see other options in the upper right corner.
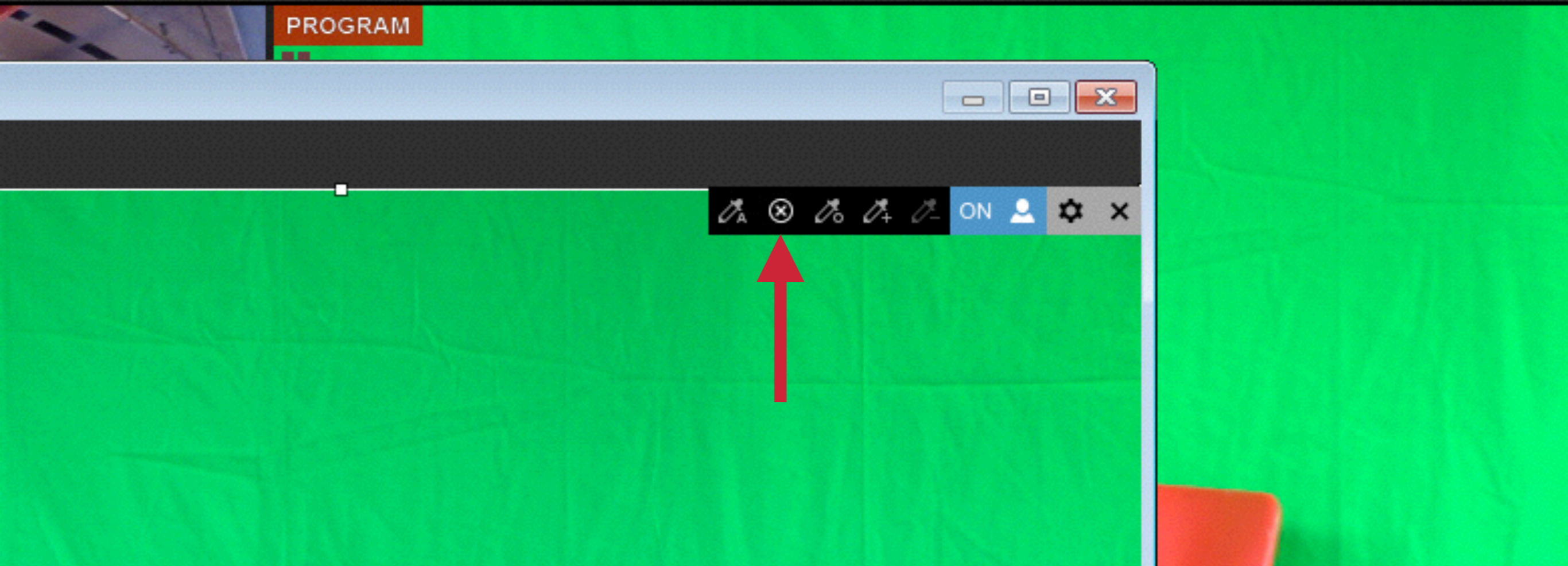
To erase all chroma keying on your input source, click the 'X' icon. Note that the green background has returned to the picture.
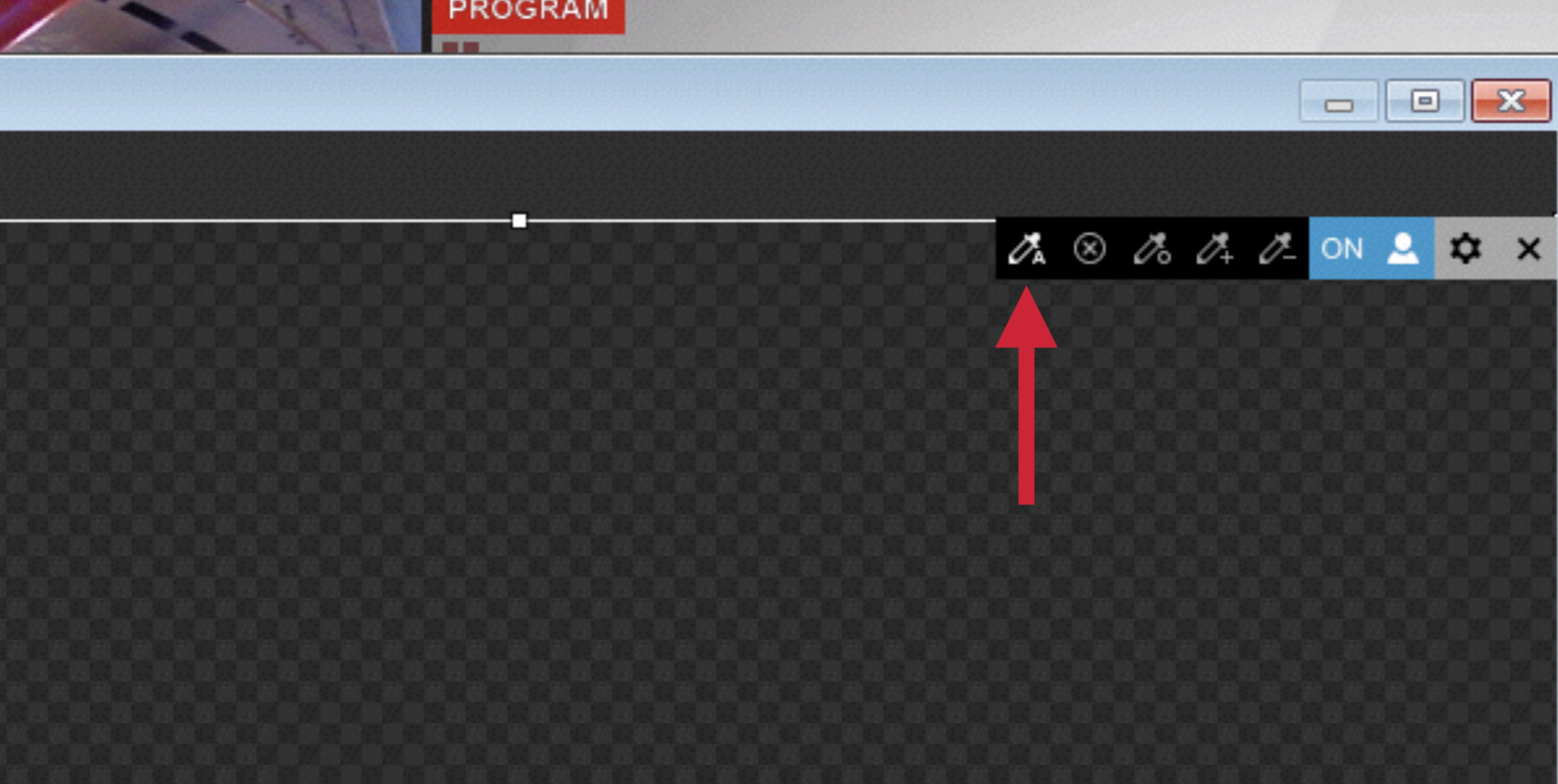
To apply automatic chroma keying (i.e., key out the most prominent color), click the icon of the eyedropper with an A.
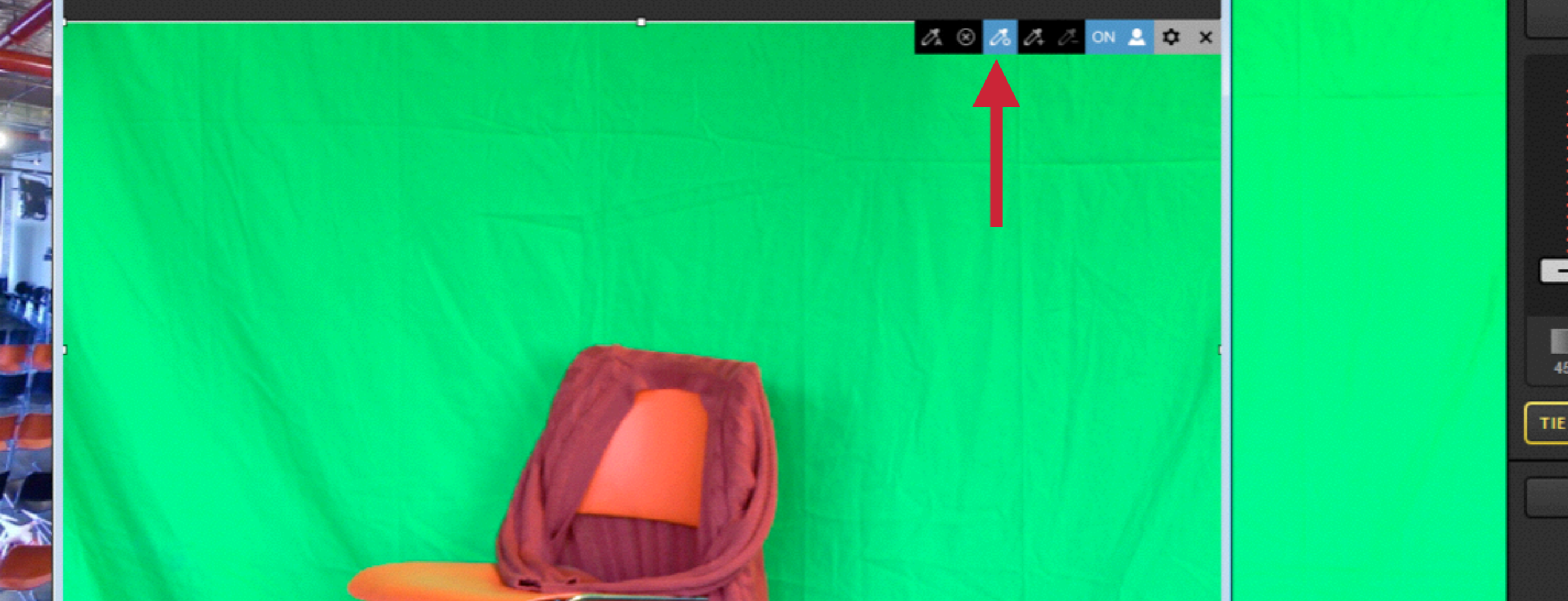
The eyedropper-circle icon will allow you to do rough keying by hand. Select this option, then hover your mouse to the area you want to key (e.g. the back of the chair).
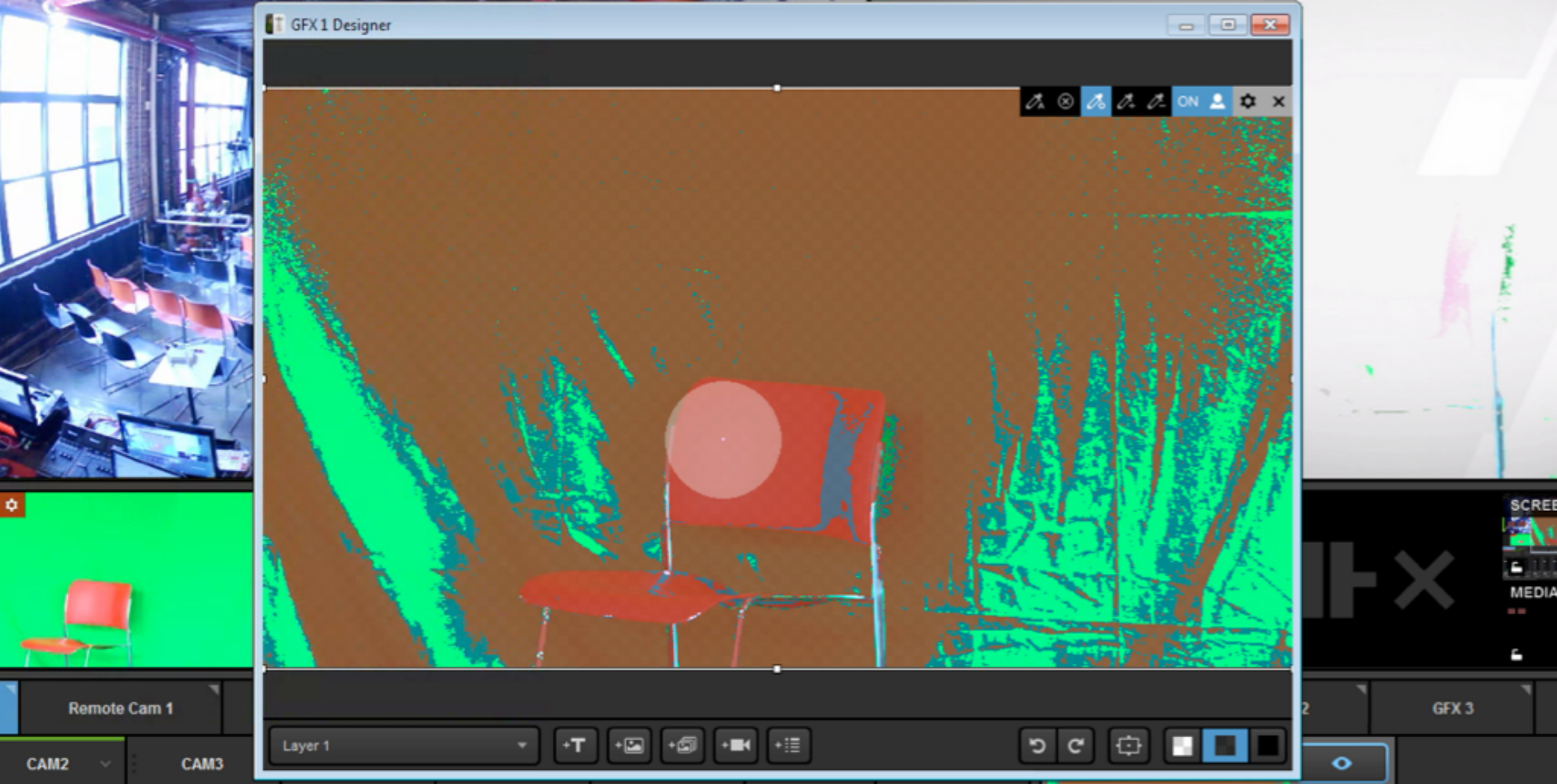
Click and drag your mouse to start real-time keying.
You can increase or decrease the keying color range,
which will be indicated by a circle around the area.
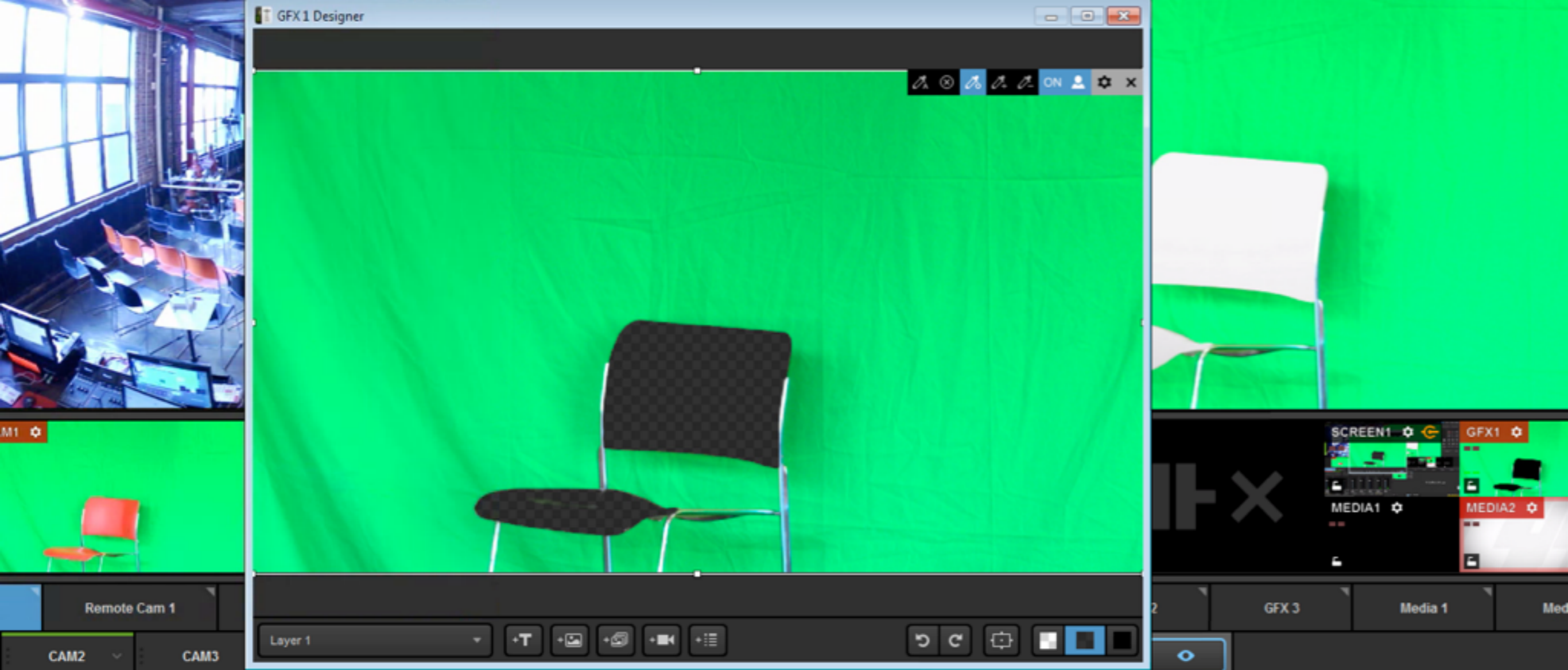
The end result should be similar to the image above, where the colors within the range that was selected are now on the chroma key palette and thus not visible.
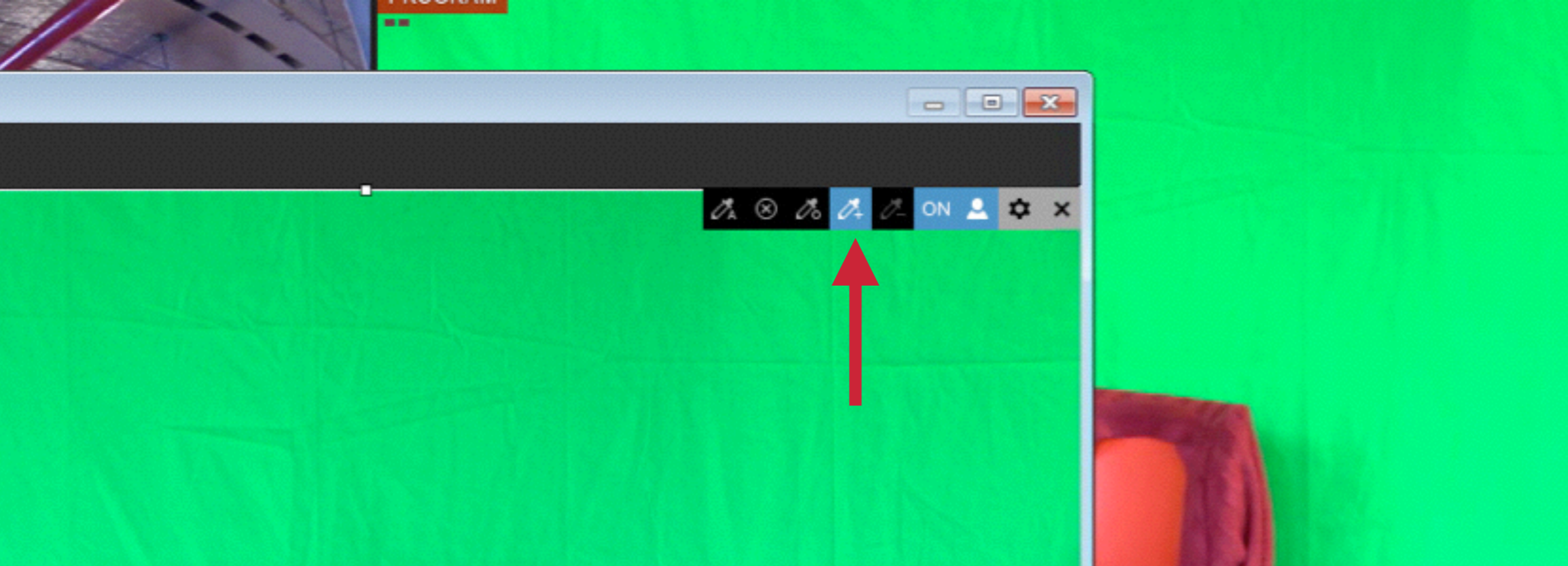
The eyedropper with a plus sign either initializes the chroma key or adds color hues to the chroma key palette. This is helpful if there are shadows in your background that did not key out fully.
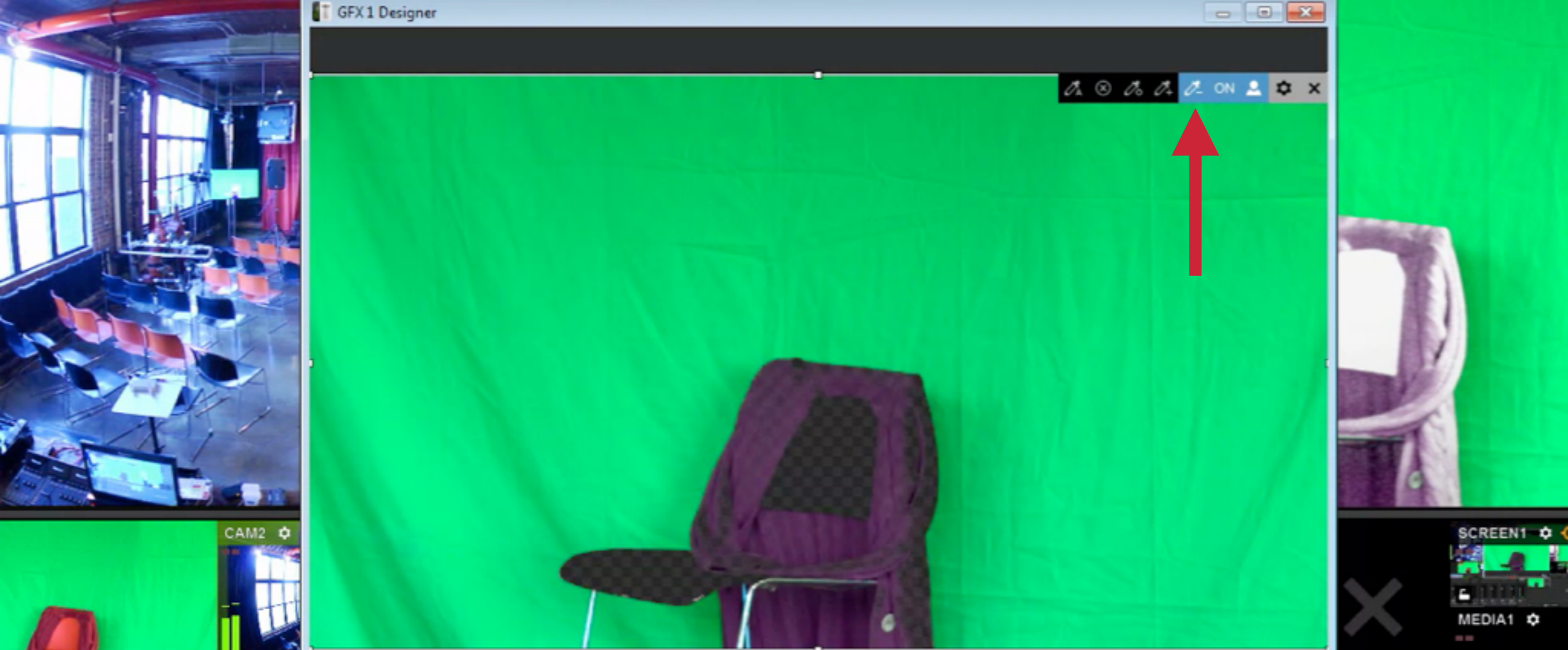
The eyedropper with a minus sign will exclude colors from your chroma key palette. This is helpful if a color on your set is similar to the color you keyed out and is faded. In this example, the orange chair is keyed out and the red sweater is also largely keyed out.

After using the eyedropper minus tool on the red sweater, you can now see the sweater; orange is still on the chroma key palette.

livestream
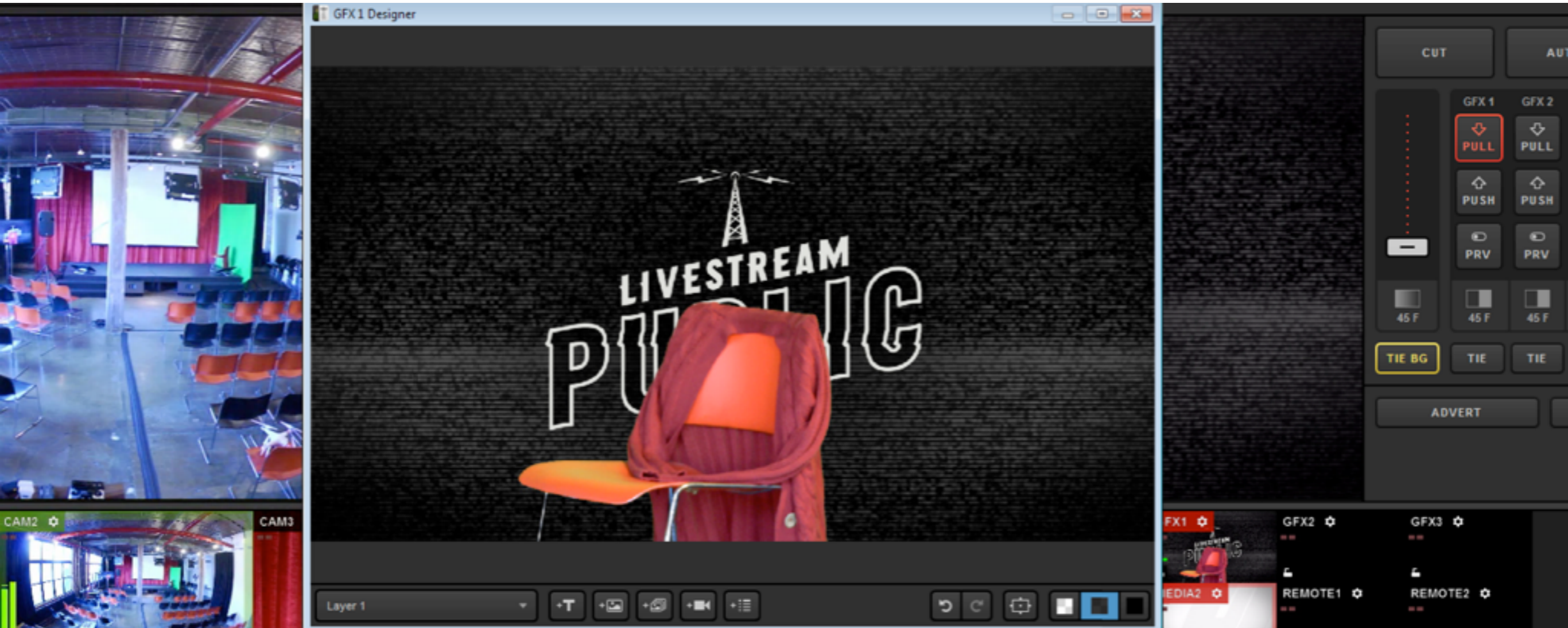
Please note that other graphics or images in the same graphics layer will be visible. Use caution with this type of workflow, as it will increase your CPU usage.

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.

livestream

Your Preview and Program monitors should look similar to this, with a GFX channel in Preview. Use a transition control to switch the sources.
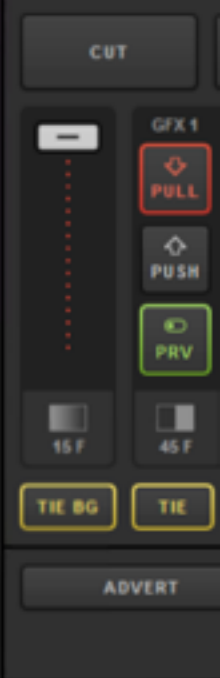
Now your video sources have switched and your graphics overlay has been pushed to Program.

livestream

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 lower-third 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
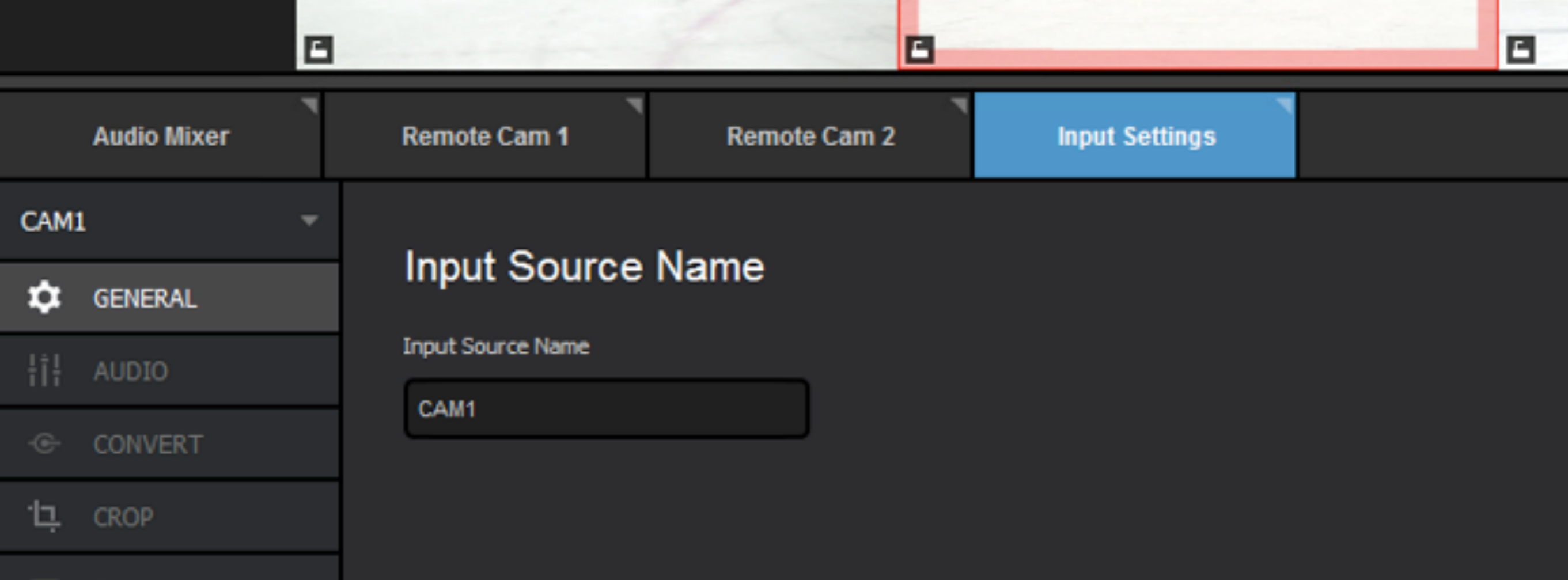
You may notice a discrepancy in synchronization between direct camera inputs and remote cameras. Livestream Studio has a few workarounds. Start in the 'Input Settings' tab.
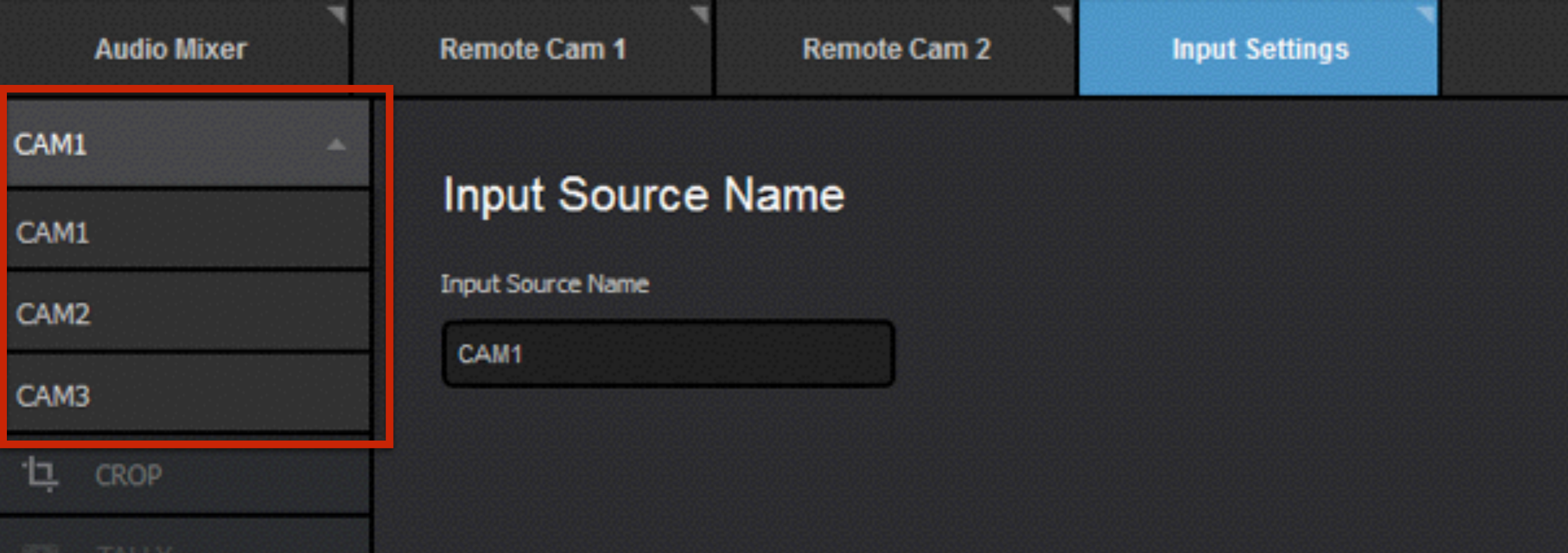
On the left side, select the camera source you want to adjust.
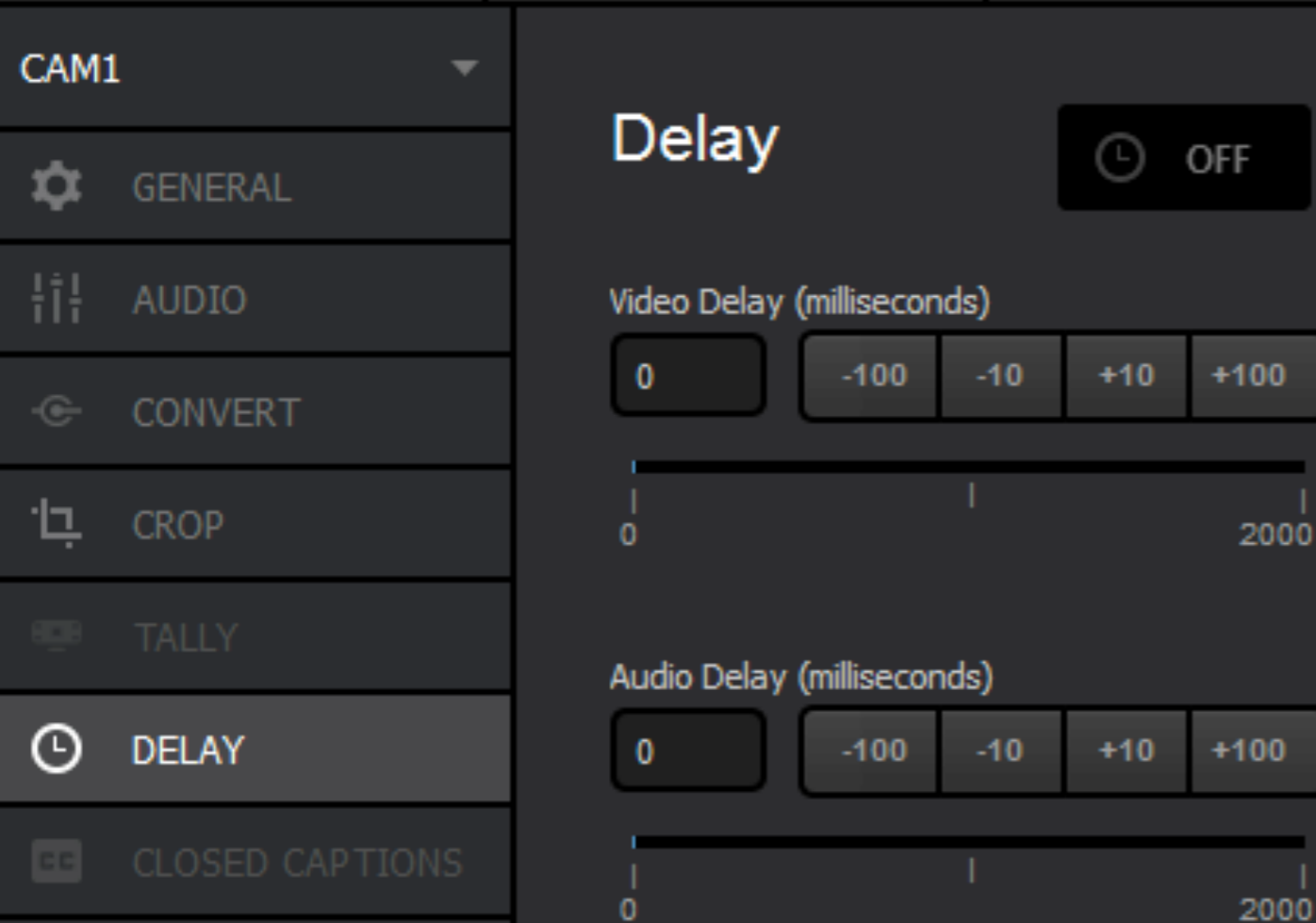
Navigate to the '**Delay**' tab towards the bottom left side.
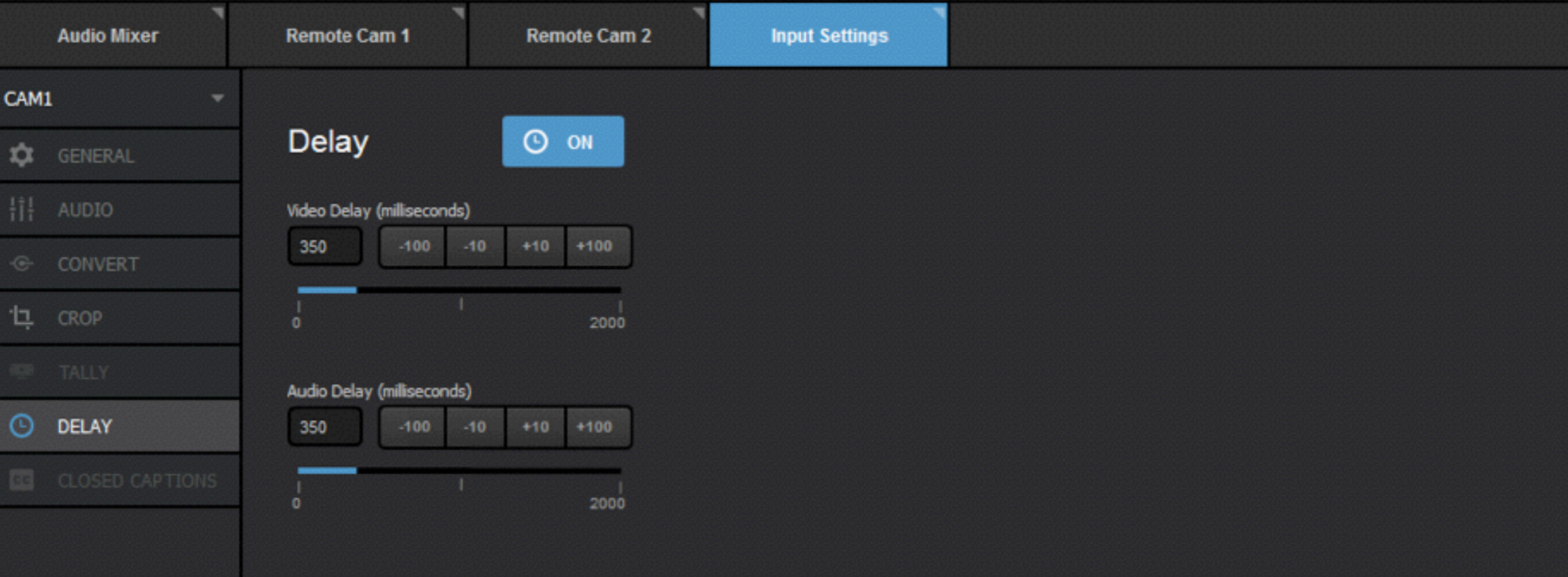
You can delay any individual input's video and audio by up to two seconds to help keep your sources in sync. This can also resolve audio/video sync issues.
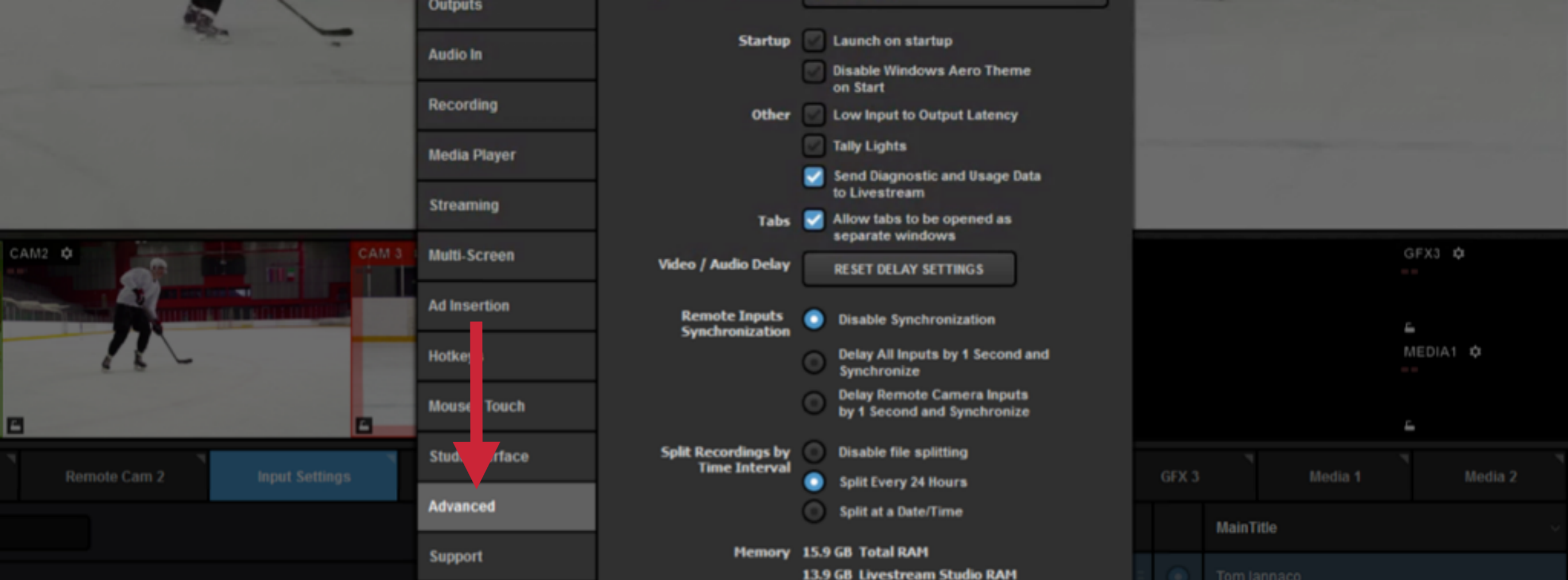
Alternatively, go to settings and navigate to the '**Advanced**' tab.
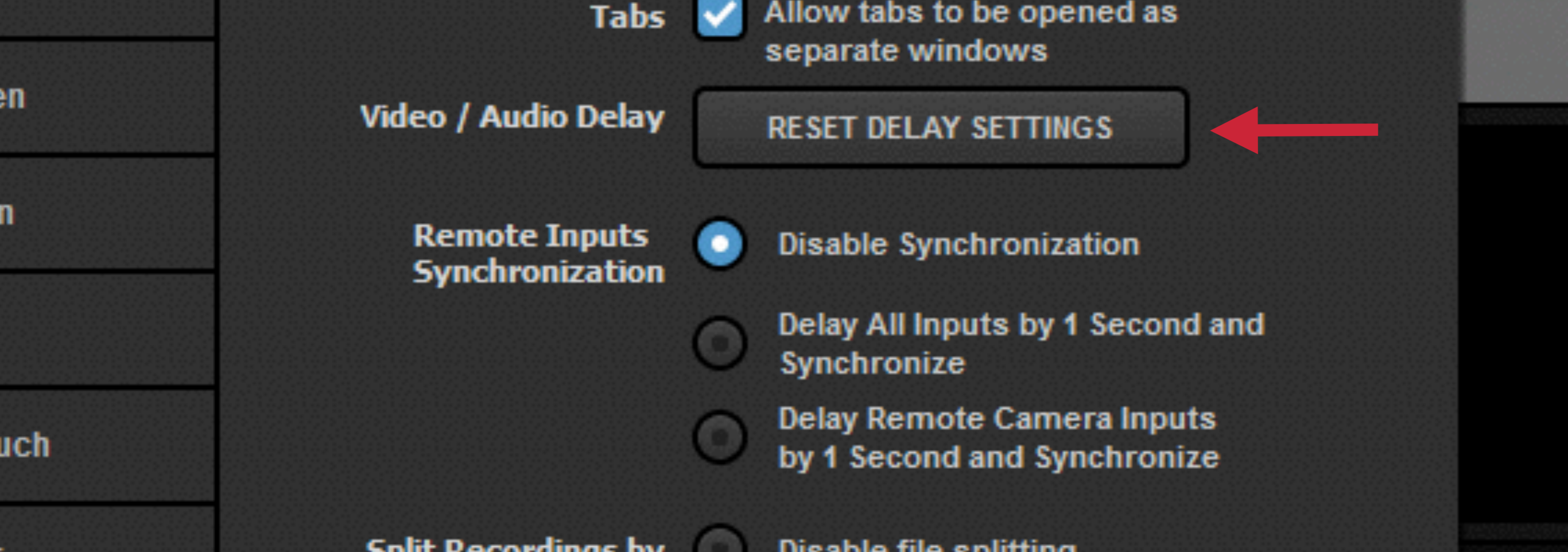
Towards the bottom of this menu,
you can click on 'Reset Delay Settings'
to set any manual adjustments made
back the default setting of zero
seconds for all sources.
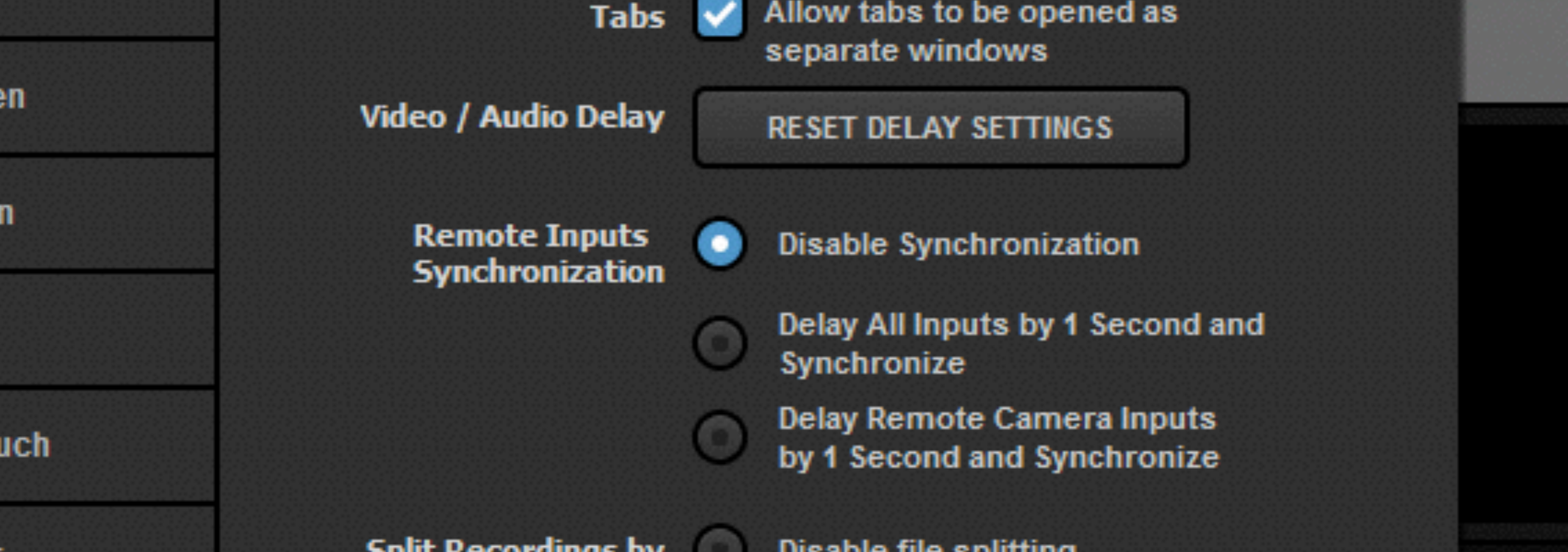
You can disable any synchronization if you do not notice any discrepancy between your inputs.
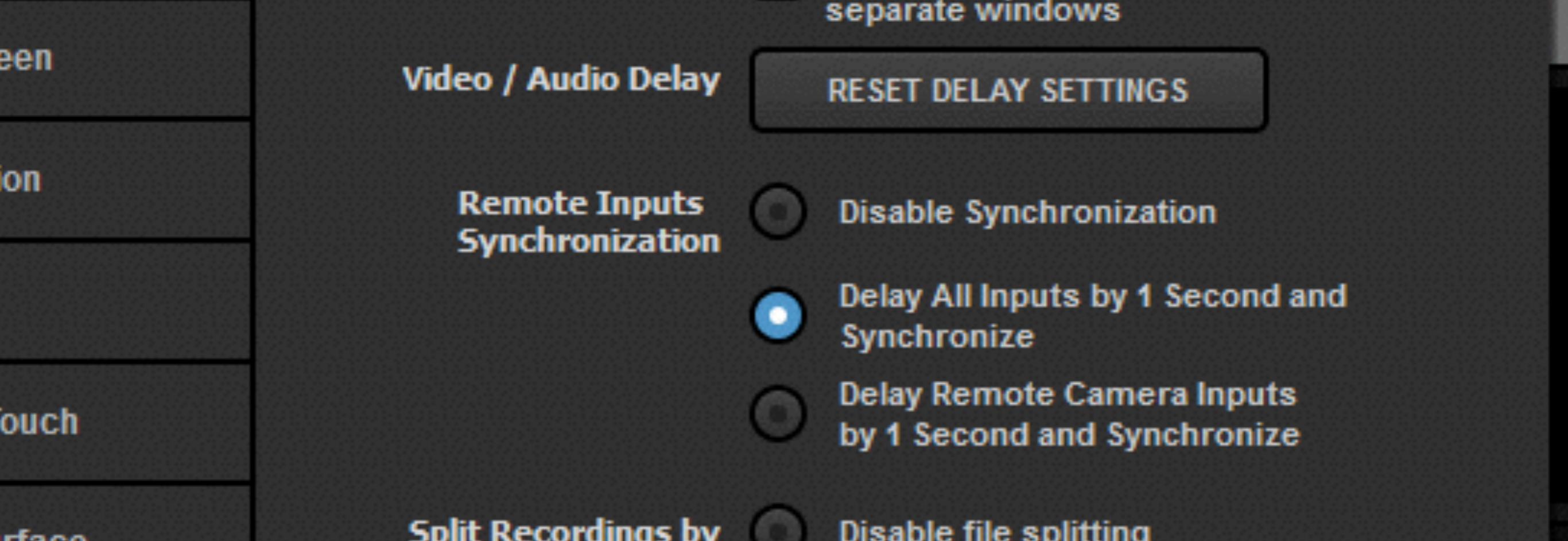
You can also delay either all inputs, or just remote inputs, by one second. This will allow Livestream Studio to sync those sources together.

Triggering mid-roll advertisements

livestream

Livestream Platform Plans

Give your audience the live experience they deserve. At one flat rate.

TRY A FREE ACCOUNT

Questions? Call us at **1 877 977 8732** or internationally at **+1 646 490 1679**

Basic	Premium	Enterprise	Custom
		MOST POPULAR	starting at
$ 42 /mo	$ 199 /mo	$ 799 /mo	$ 1,199 /mo
Billed Annually or $99 month-to-month	Billed Annually or $399 month-to-month	Billed Annually or $2,399 month-to-month	Customize your Enterprise Plan with exclusive benefits
SIGN UP NOW	SIGN UP NOW	SIGN UP NOW	CONTACT SALES
For anyone just getting started with live video.	For local organizations and small communities.	For businesses focused on control, privacy and monetization.	A completely customizable end-to-end solution.
Ad Free	Tracking & Analytics	Password Protection	Cloud Transcoding & RTMP Input
Live Chat with Moderation	Live Embedding	White Labeling & Branding Control	Lead Capture/Secure Login Portal
Event and VOD Archive	Phone Based Customer Support	50,000 Additional Views with Livestream Booster*	Access to Livestream's Professional & Production Services
		*Requires Annual Subscription	
	REQUEST PREMIUM DEMO	REQUEST ENTERPRISE DEMO	

This feature is only available for those who also have a Livestream Enterprise account, which includes integration with Google DoubleClick for Publishers.

livestream

You will need an account on Google DFP. Go to http://www.google.com/ doubleclick/publishers/welcome to set up and configure your content.

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 help center.
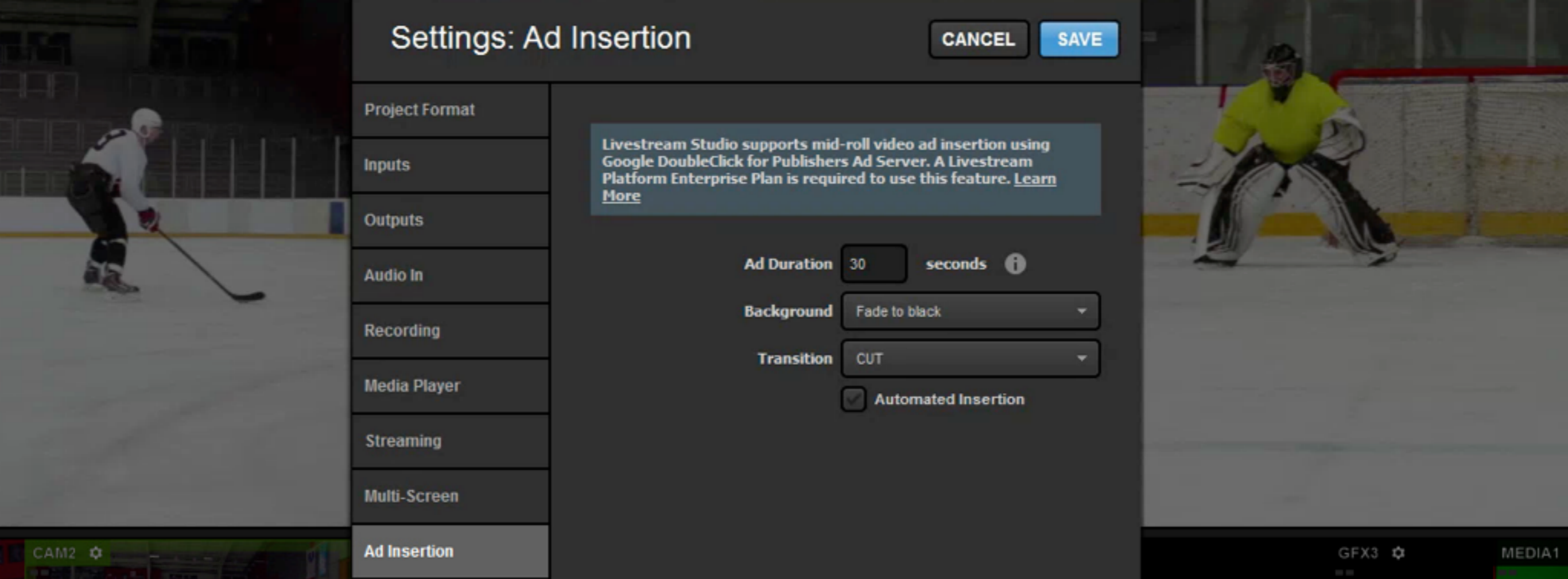
Back in Livestream Studio, go to
the '**Ad Insertion**' tab in settings.

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

uts

tputs

dio In

cording

edia Player

Ad Duration   30   seconds   ⓘ

Background   Fade to black   ▼

Transition   CUT   ▼

☑ Automated Insertion

'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.

livestream
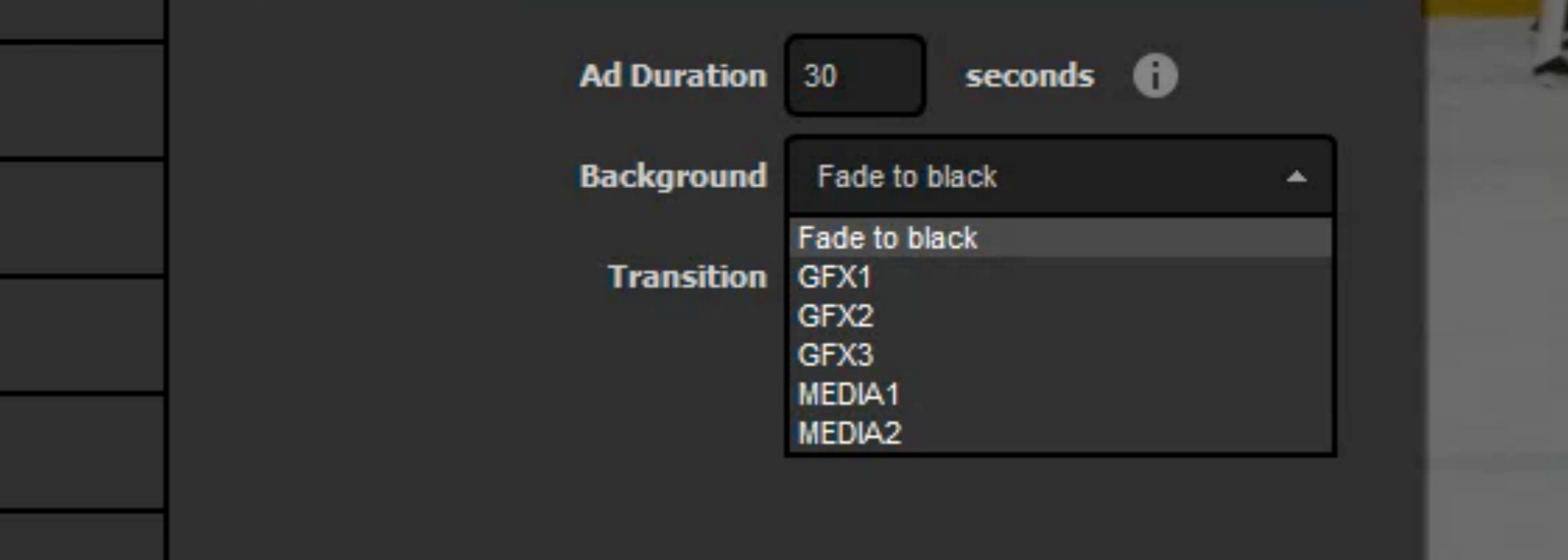
You can set a background to see in Program during your ad insertion. This is helpful if an ad's length is shorter than your set ad duration time and you want to display a slate or image during the extra time.

Ad Duration 30 seconds ⓘ

Background Fade to black ▼

Transition CUT ▲

CUT
AUTO

Choose if you want the ad to transition in using a cut or the automatic transition you have set for your main mix.

| Transition | CUT ▾ |

☑ **Automated Insertion**

Period between ads [600] seconds ⓘ

Number of ads per break [1] ⓘ

☑ Start with advert

☑ Start insertion with streaming

ea Player

reaming

lti-Screen

l Insertion

otkeys
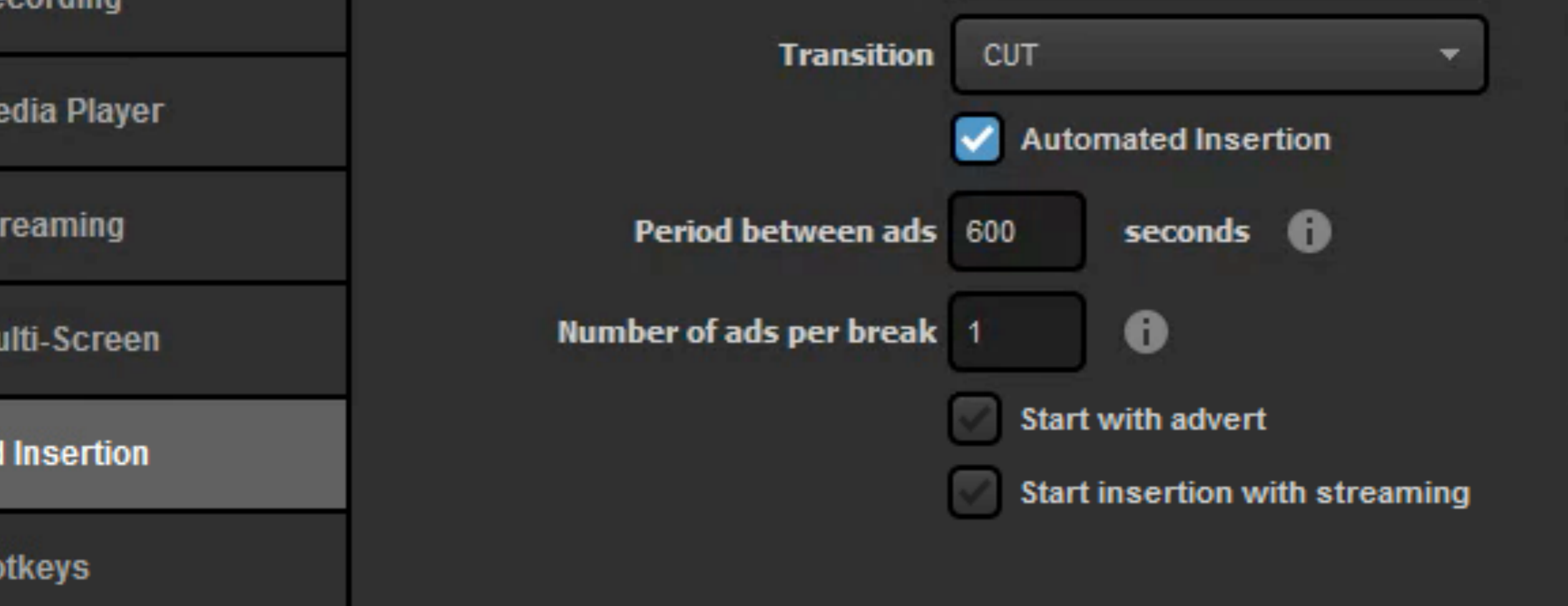
If your production requires having ads at specific intervals, you can check 'Automated Insertion' to bring advertisements in without manually triggering them.

livestream
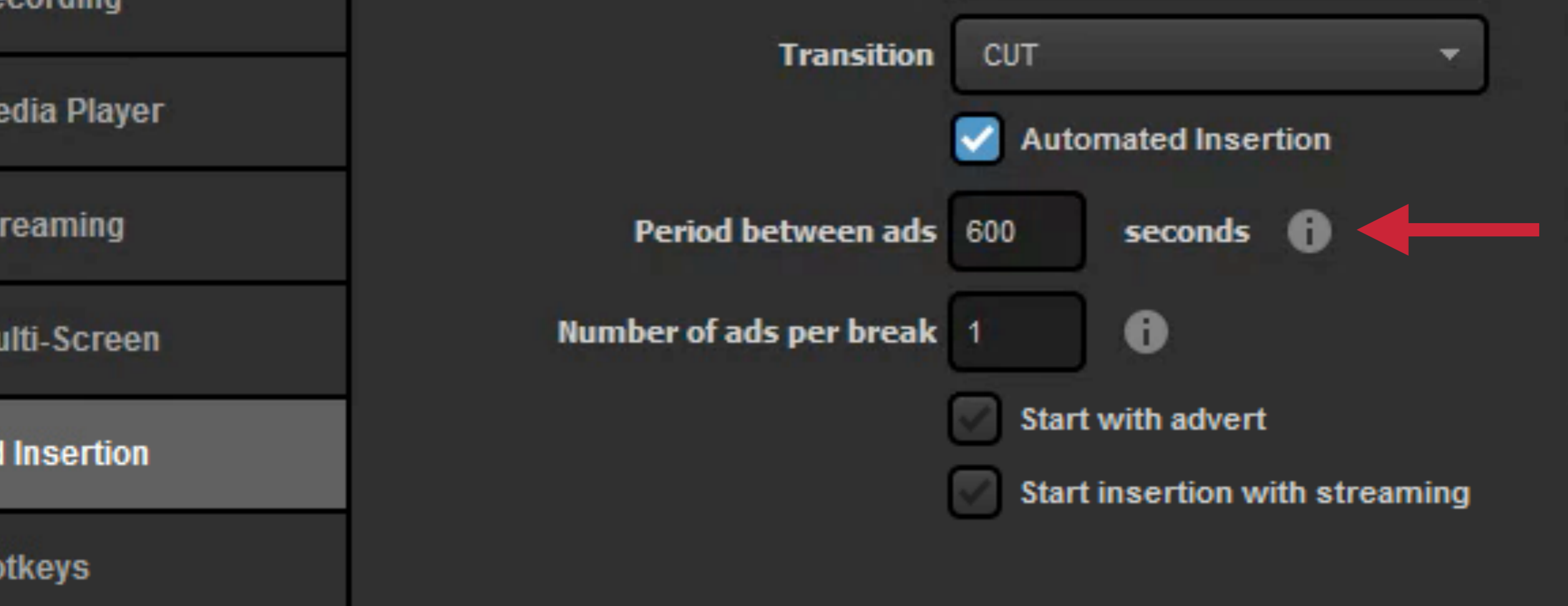
Set how long in seconds you want to have between your advertising segments.
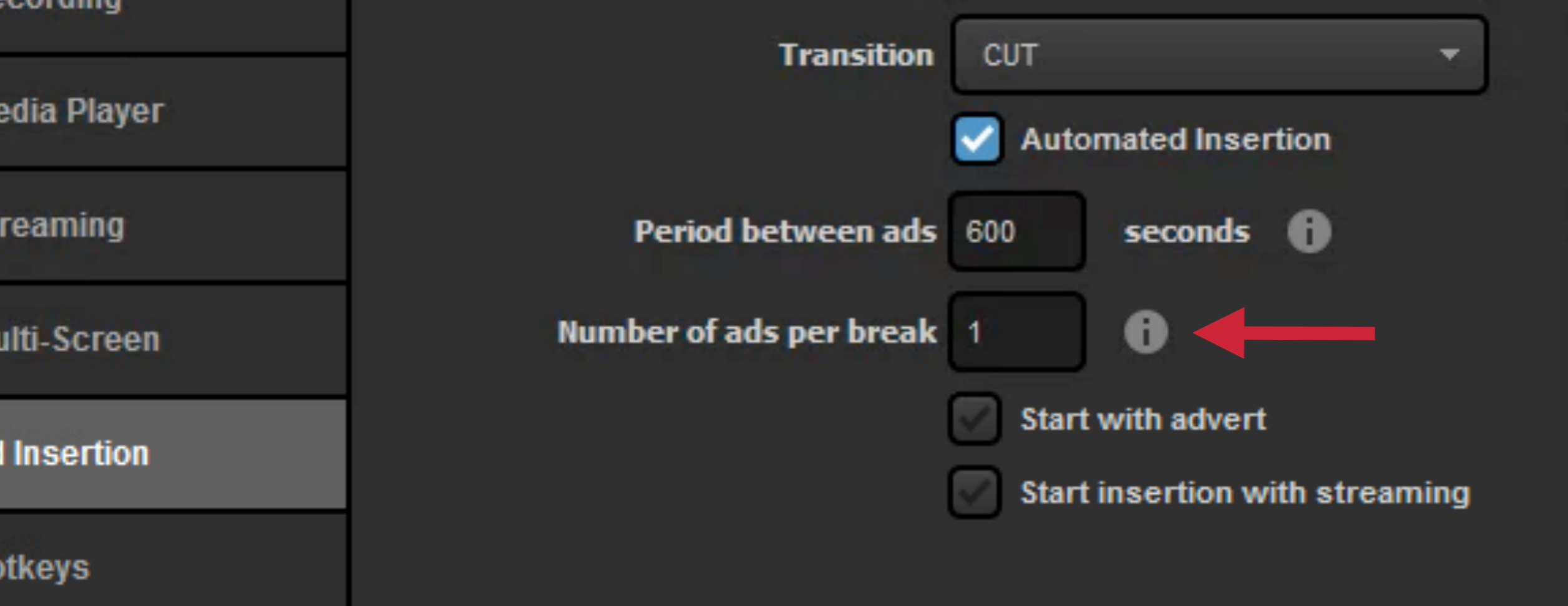
You can roll your ad segments more than once. Here, set how many times you want ads to roll before returning to your production.

Recording

Media Player

Streaming

Multi-Screen

Ad Insertion ⚙

Hotkeys

Mouse / Touch

Background   Fade to black ▾

Transition   CUT ▾

☑ Automated Insertion

Period between ads   600   seconds ⓘ

Number of ads per break   1   ⓘ

☑ Start with advert

☑ Start insertion with streaming

GFX3 ⚙

REMOTE

'Start with advert' means the segment will begin with the advertisement rolling rather than whatever is being shown in your background.

livestream

'Start insertion with streaming' will show viewers your advertisement first when your broadcast begins, rather than starting with your content.

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.

PROGRAM: Advertisement. GFX3 is locked until end.

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.)

livestream

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.

livestream

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.

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.

livestream

For Livestream Studio, it is recommended to purchase a tally light system available from metaSETZ (http://www.metasetz.com).

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.
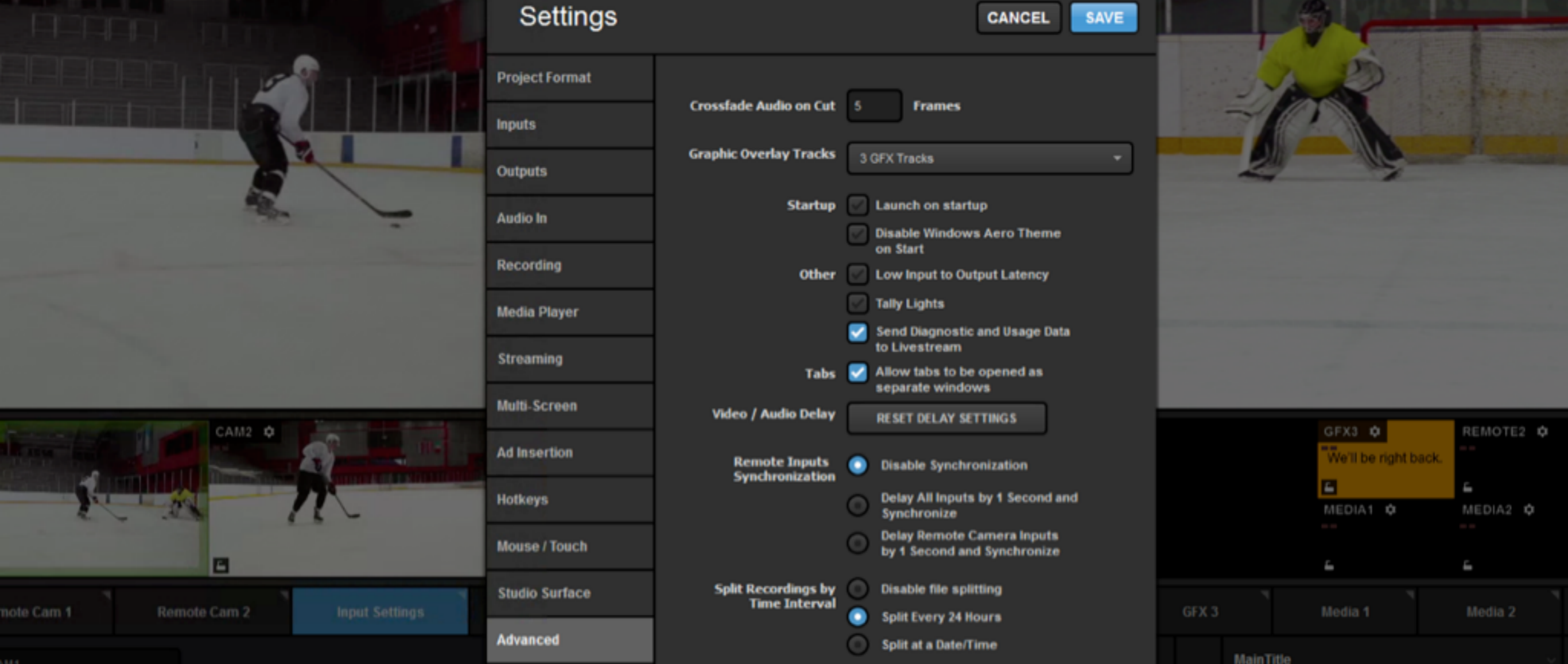
Next, open Livestream Studio
and go to the '**Advanced**' tab
in settings.
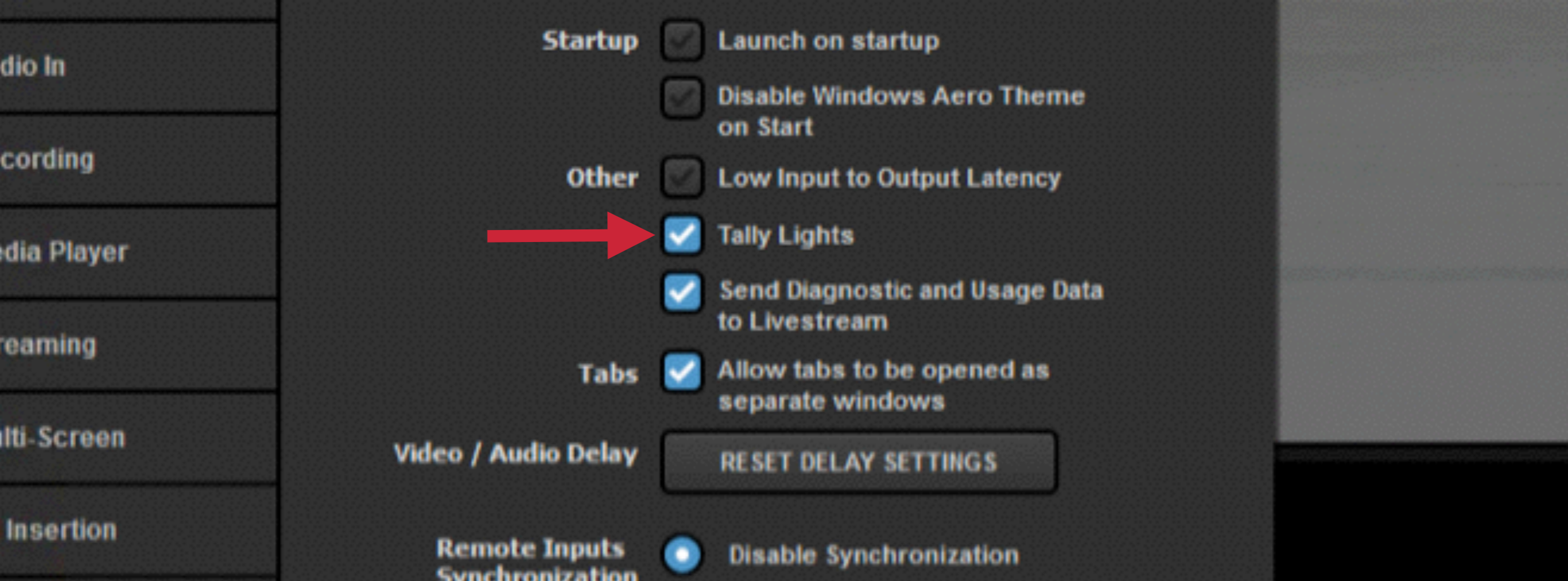
Make sure that 'Tally Lights' is
checked, then click 'Save.'

CAM1

CAM1

CAM2

CAM3

CROP

Input Source Name

Input Source Name

CAM1
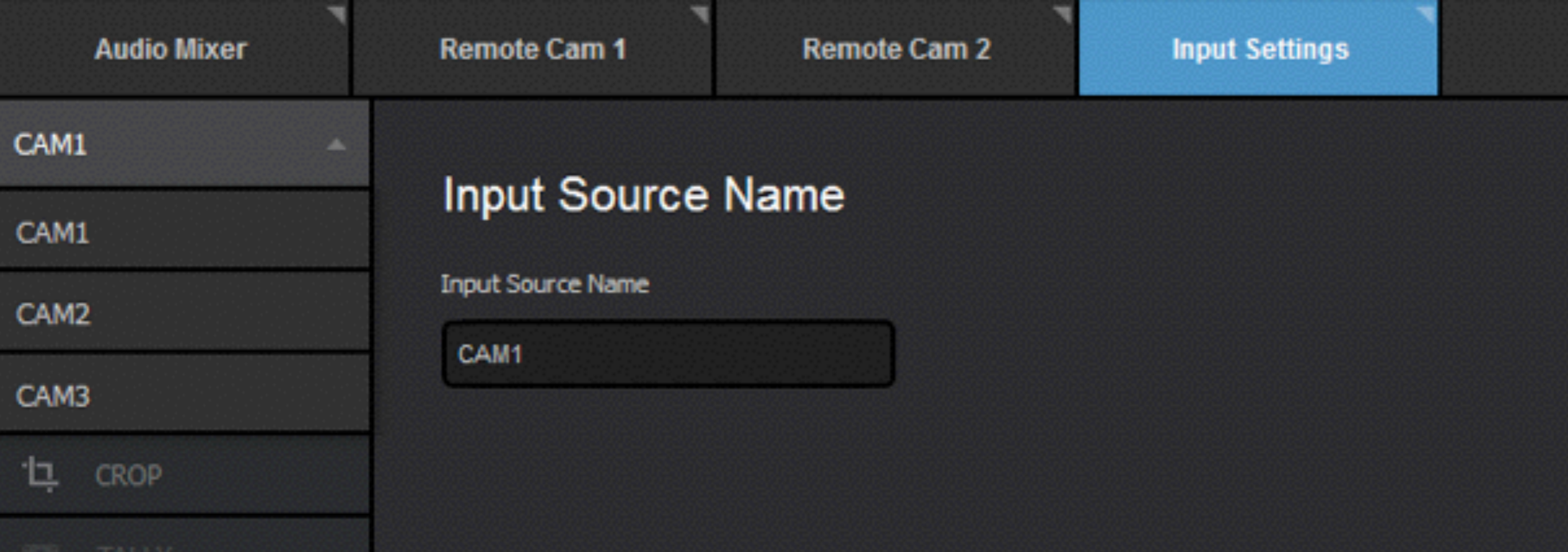
Select the '**Input Settings**' tab in the lower right corner, then choose a camera source from the dropdown menu for which to set a tally light.

livestream

Tally Light

Select Tally Output

None ▲

None
Digital Arts TLC6 - Line 1
Digital Arts TLC6 - Line 2
Digital Arts TLC6 - Line 3
Digital Arts TLC6 - Line 4
Digital Arts TLC6 - Line 5
Digital Arts TLC6 - Line 6
Digital Arts TLC6 - Line 7
Digital Arts TLC6 - Line 8

Tip

For more details about supported Tally devices, please, read Livestream knowledge base article

CAM1 ▾

- GENERAL
- AUDIO
- CONVERT
- CROP
- TALLY
- DELAY
- CLOSED CAPTIONS

Click 'Tally' on the left side, and select an available tally port to assign to that camera. Repeat this step for each camera source.

As you switch between sources, you should now notice the tally lights turn on when the corresponding camera is in Program.

Closed captioning
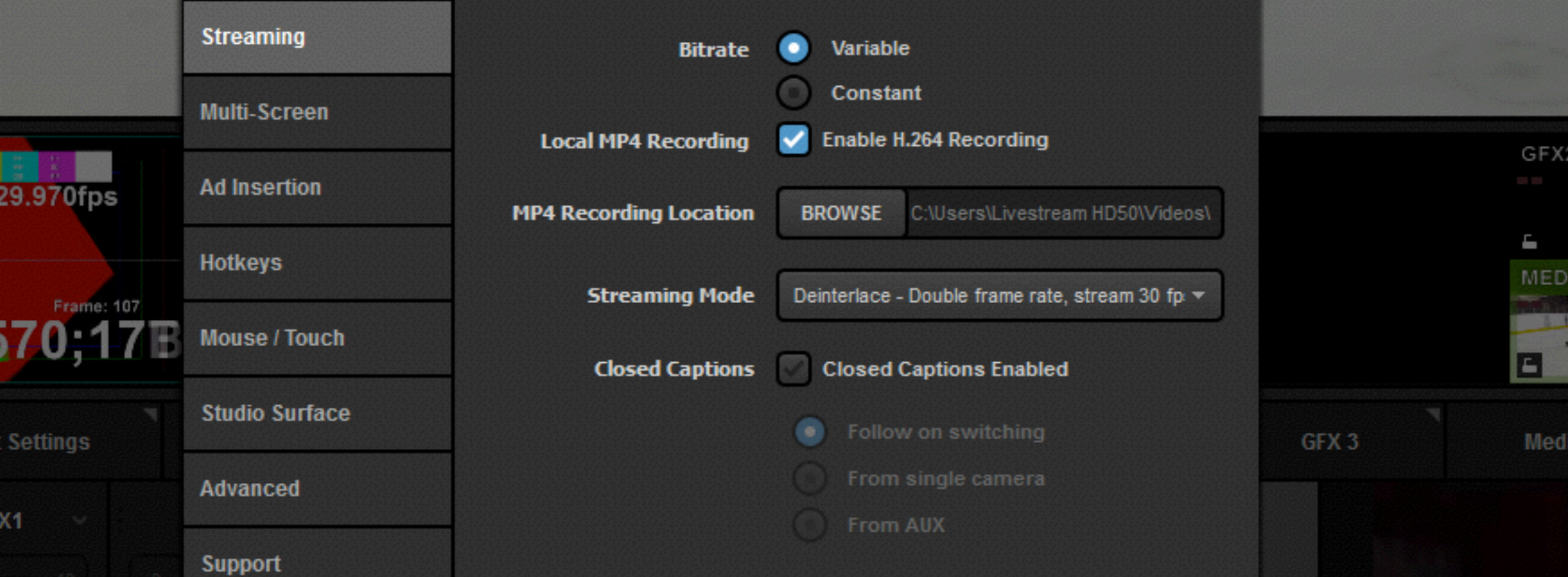
livestream

To enable closed captions forwarding to Livestream, go to settings and enter the 'Streaming' menu. At the bottom you will see 'Closed Captions.'
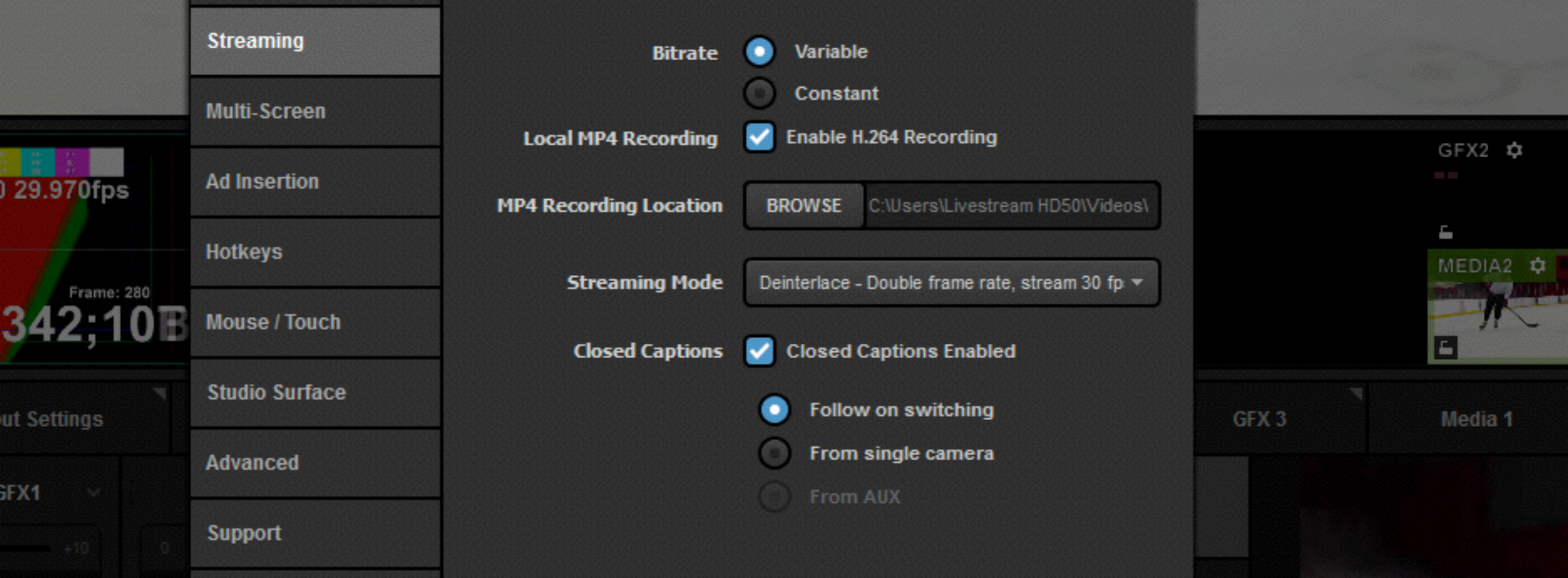
Check 'Closed Captions Enabled'
to allow closed captioning data
to be received.

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').

CAM3 ▲

CAM1

CAM2

CAM3

CAM4

📷 TALLY

🕐 DELAY

CC CLOSED CAPTIONS

Closed Captions

☑ Enabled

ℹ️ Show Tips
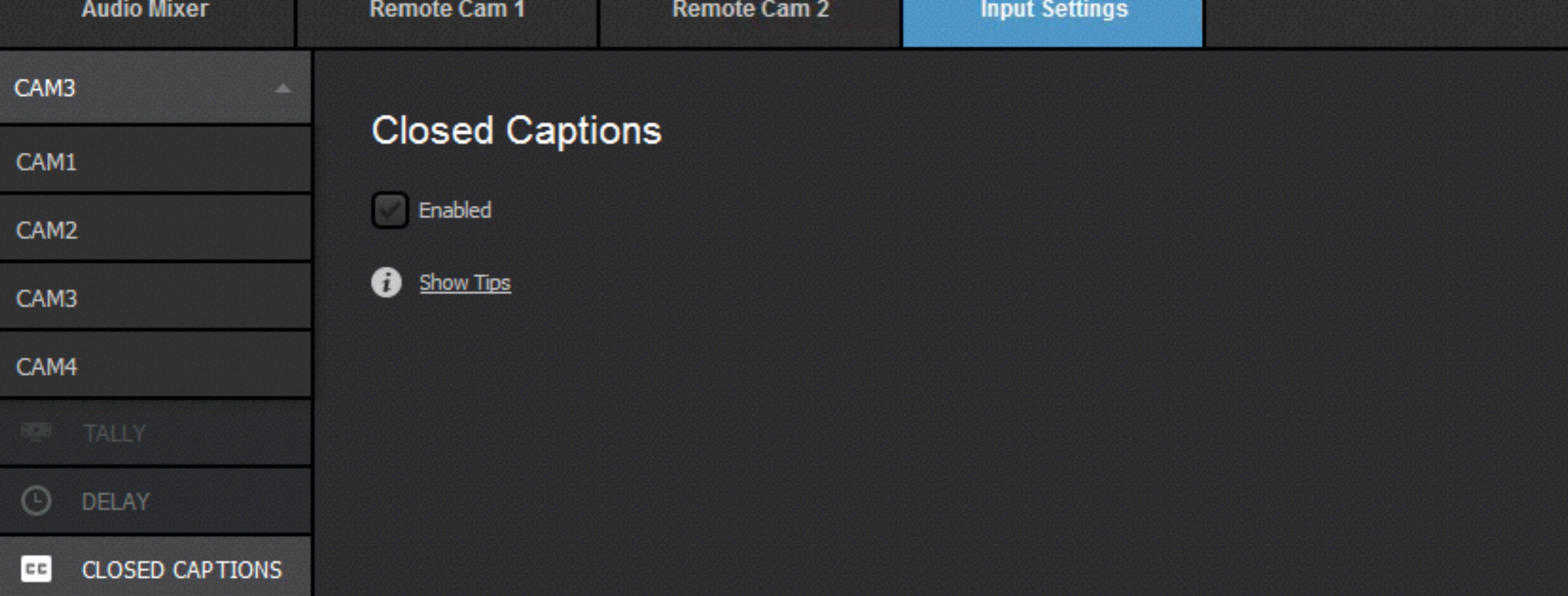
Save your settings, then return to the '**Input Settings**' tab. Select the camera source(s) with the closed captioning data embedded, then click 'Closed Captions.'

livestream

Closed Captions

☑ Enabled

Closed Captions Channel

Off ▲
Off
DTVCC service 1 (English)
DTVCC service 2

GENERAL

AUDIO

CONVERT

CROP

TALLY

DELAY
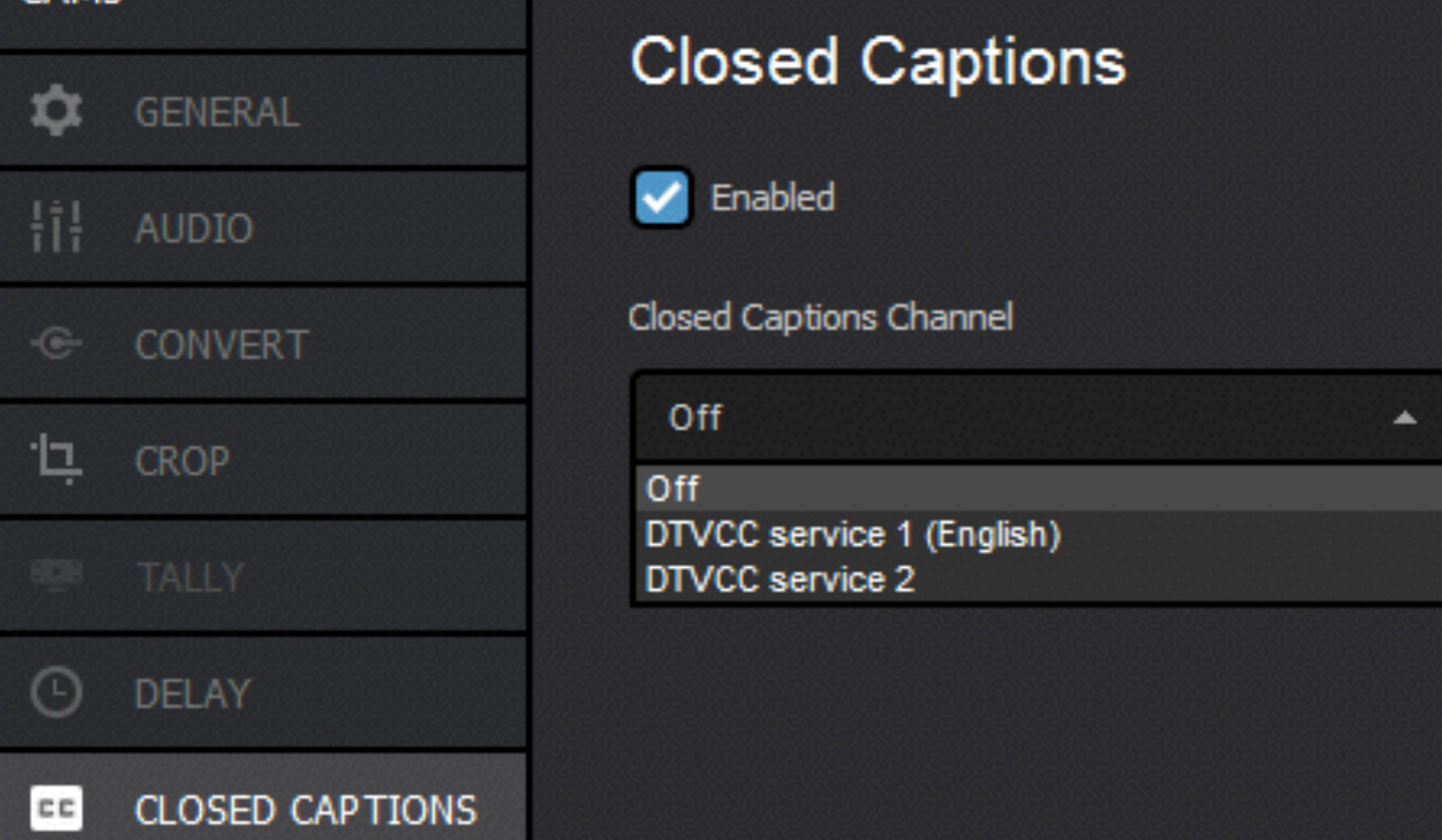
CLOSED CAPTIONS

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.

Advanced streaming options

livestream
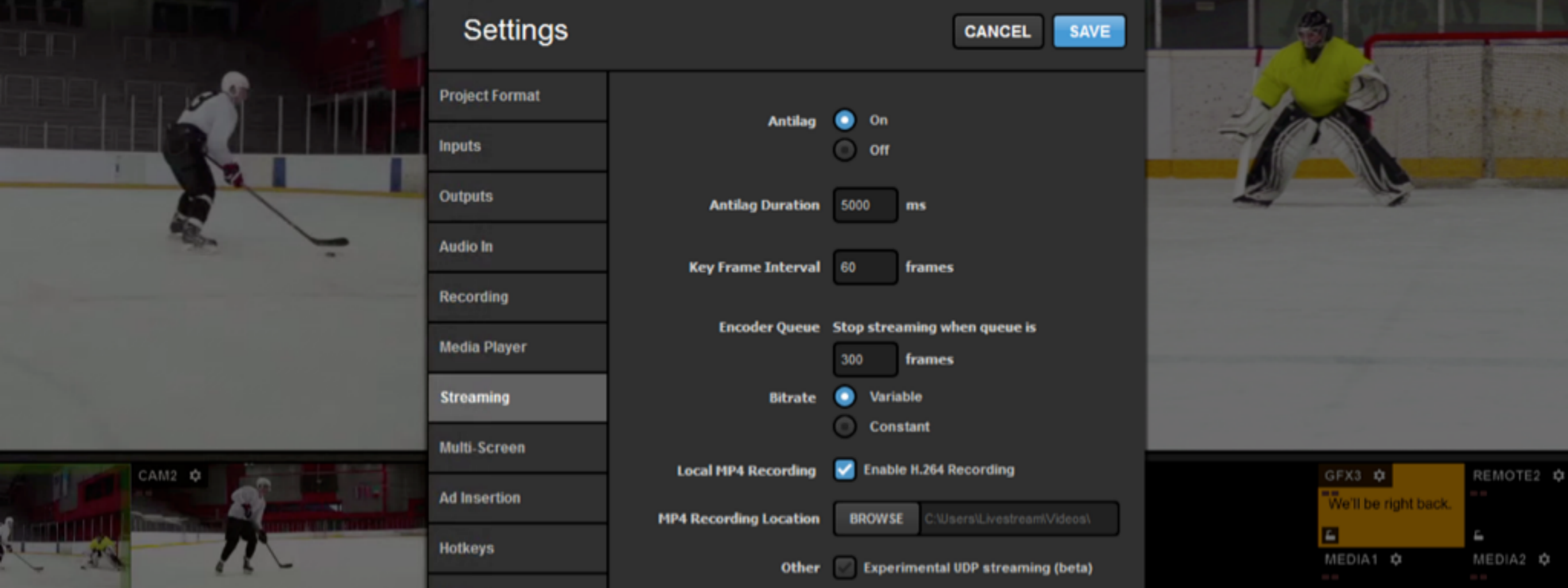
Go to the '**Streaming**' tab in settings to change specific configurations for your stream.

Settings

CANCEL   SAVE

Project Format	Antilag ● On
Inputs	○ Off
Outputs	Antilag Duration 5000 ms
Audio In	
Recording	Key Frame Interval 60 frames

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.

Settings

Project Format

Inputs

Outputs

Audio In

Recording

Antilag ◯ On
        ⦿ Off

Antilag Duration [5000] ms

Key Frame Interval [60] frames

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.

livestream

Inputs

Outputs

Audio In

Recording

Media Player

Antilag ● On
○ Off

Antilag Duration 5000 ms

Key Frame Interval 2 seconds

Encoder Queue Stop streaming when queue is
300 frames

'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.
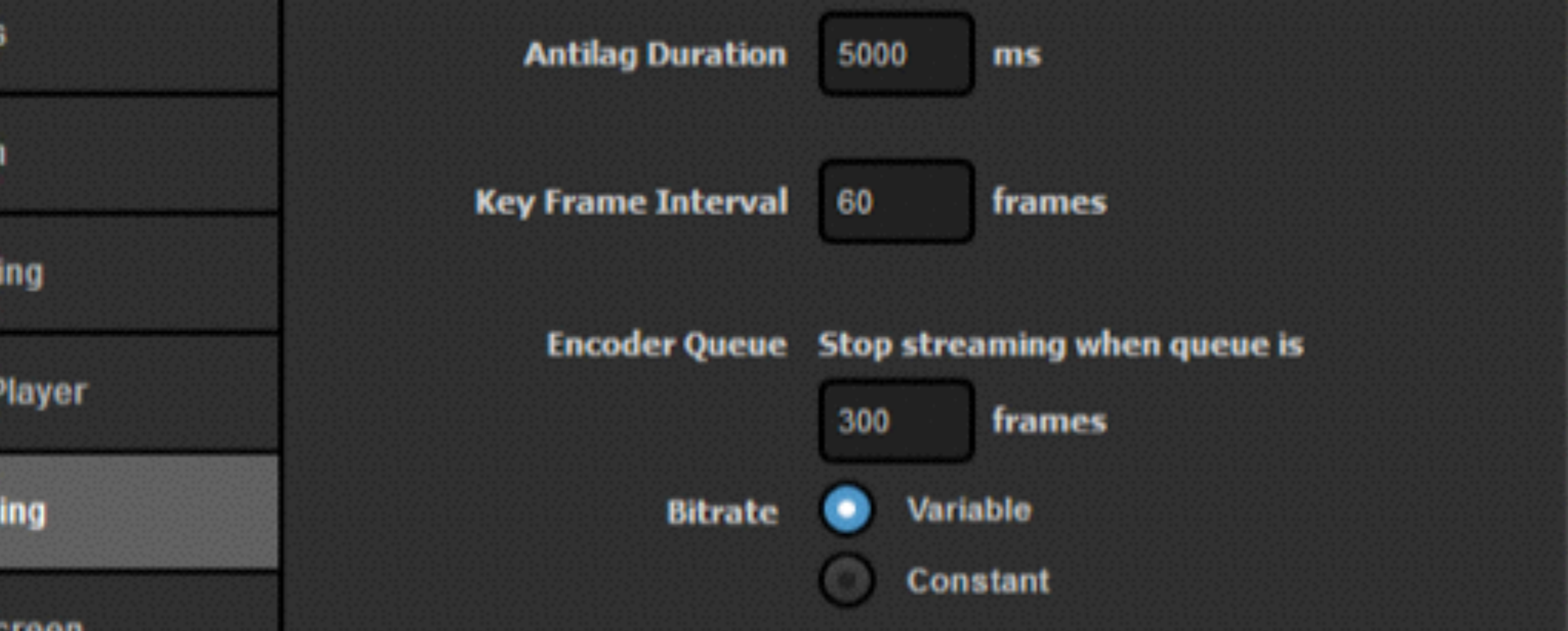
The encoder queue is the number of frames that Livestream Studio will allow to build up prior to a stream terminating due to bandwidth or CPU issues.
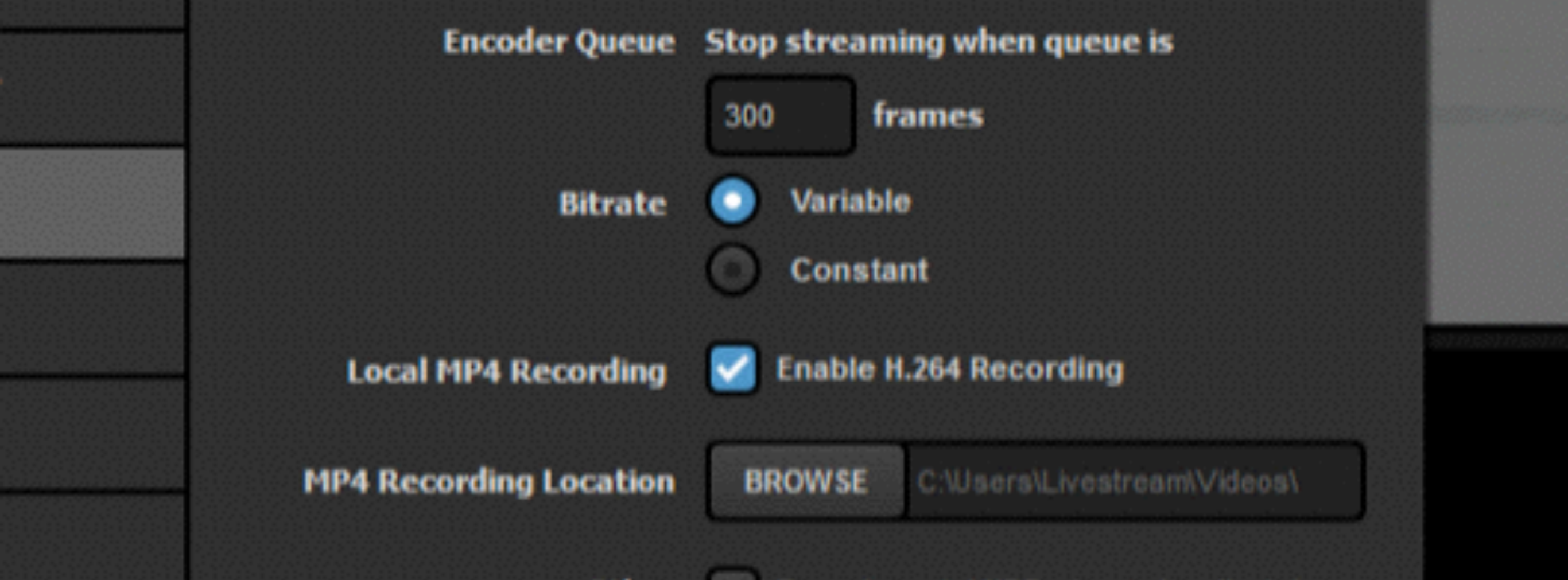
'Variable' bitrate will change the outgoing bitrate based on the movement in the video. Static images will send at a lower bitrate; high movement will increase the bitrate.
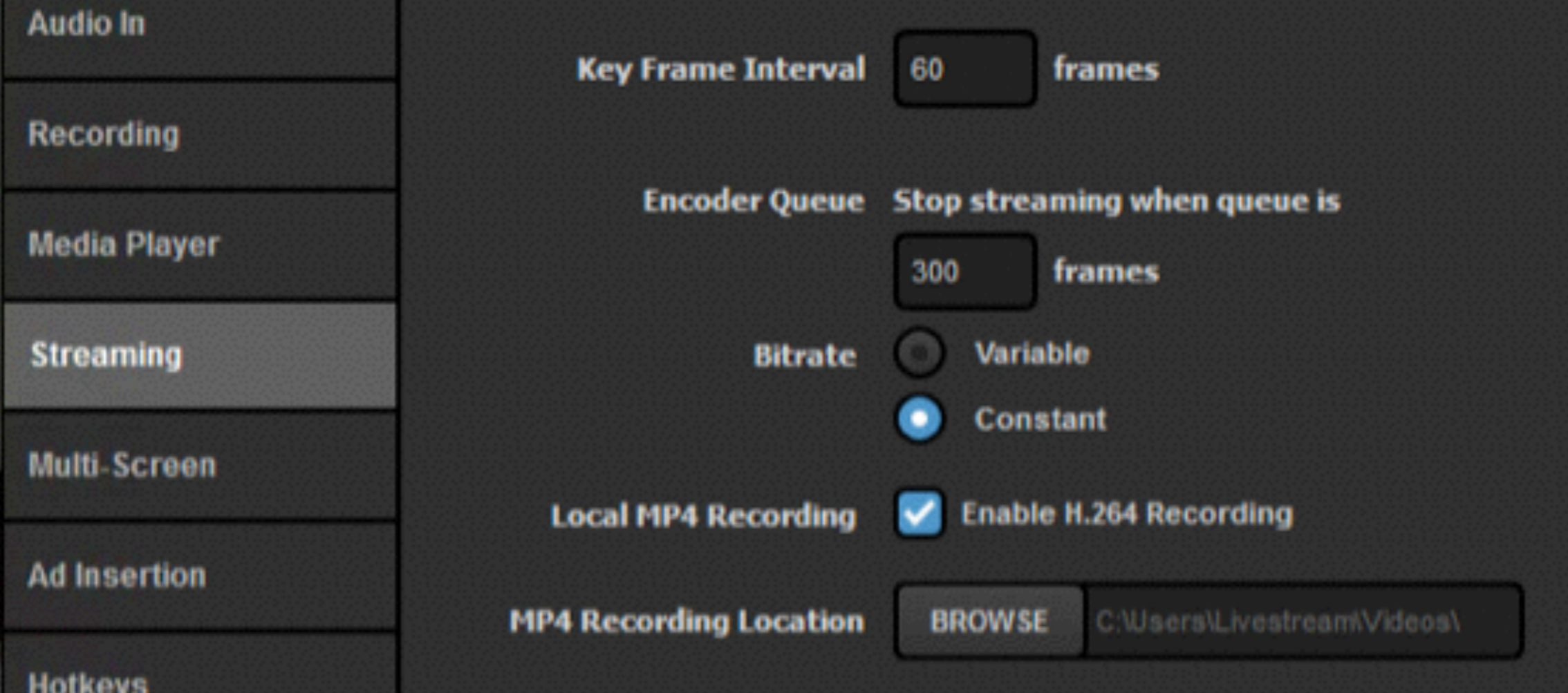
'Constant' bitrate will maintain the outgoing bitrate regardless of the amount of movement in the video.
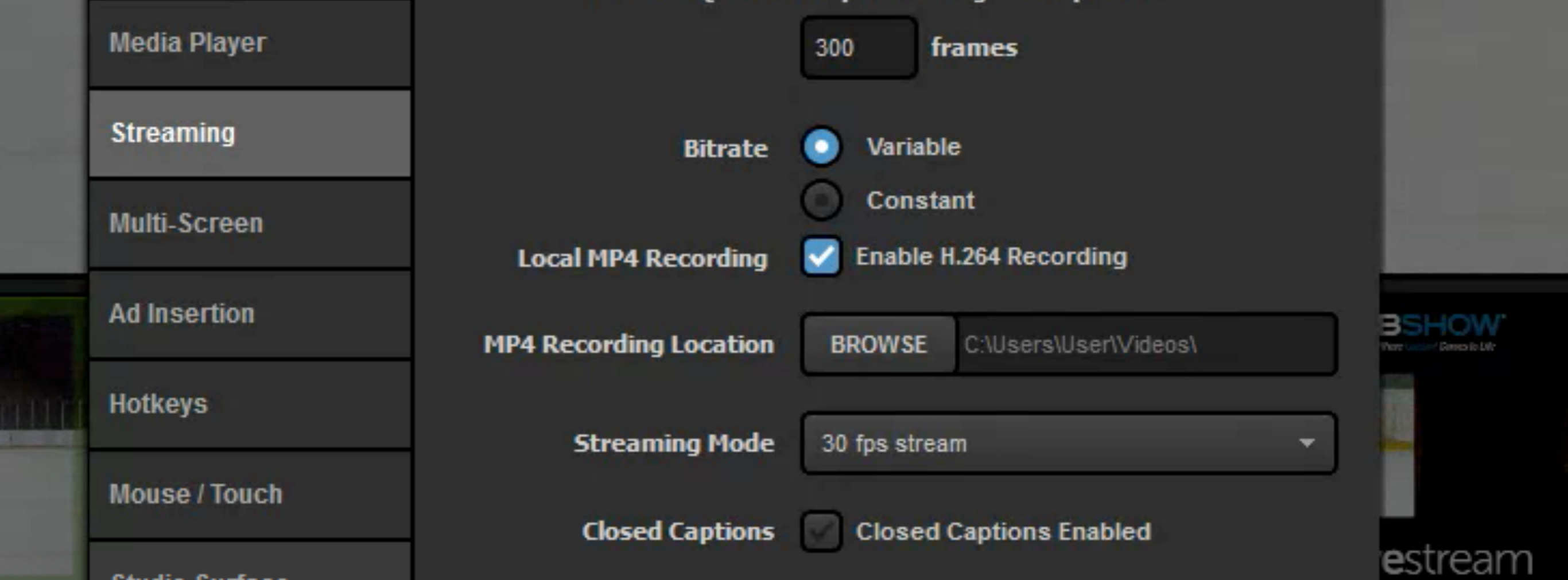
It is strongly recommended to keep 'Enable H.264 Recording' checked to ensure you have a backup .mp4 file of your stream saved on your hard drive.
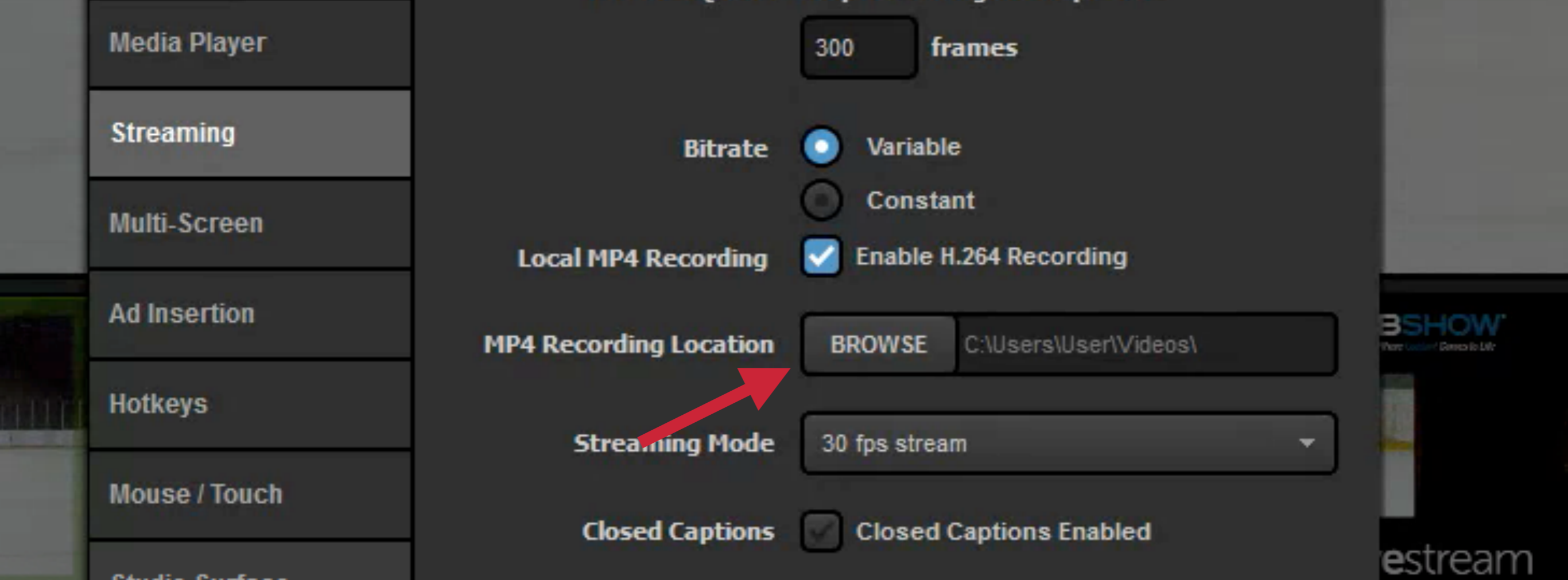
You can change the location where this .mp4 recording is saved. By default, it will go to your PC's 'Videos' folder.
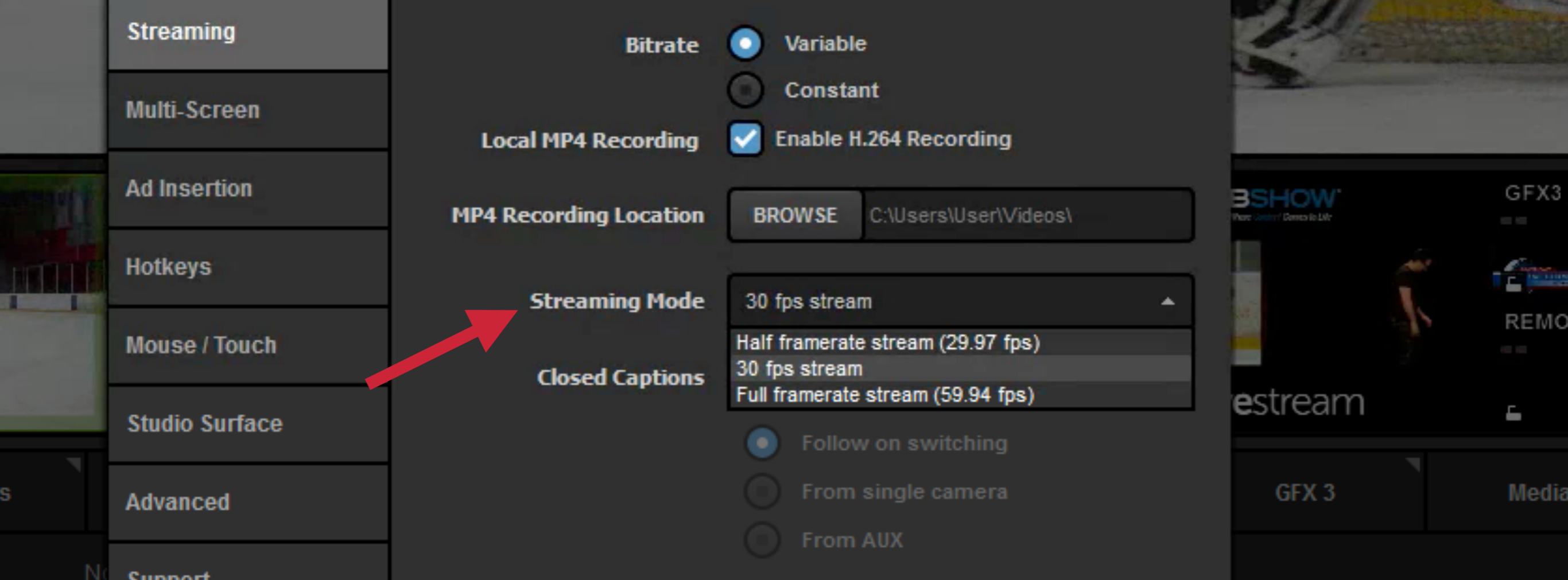
'Streaming Mode' allows you to choose the outgoing framerate. The higher the bitrate you choose, the more CPU usage will increase.

Project saving and loading
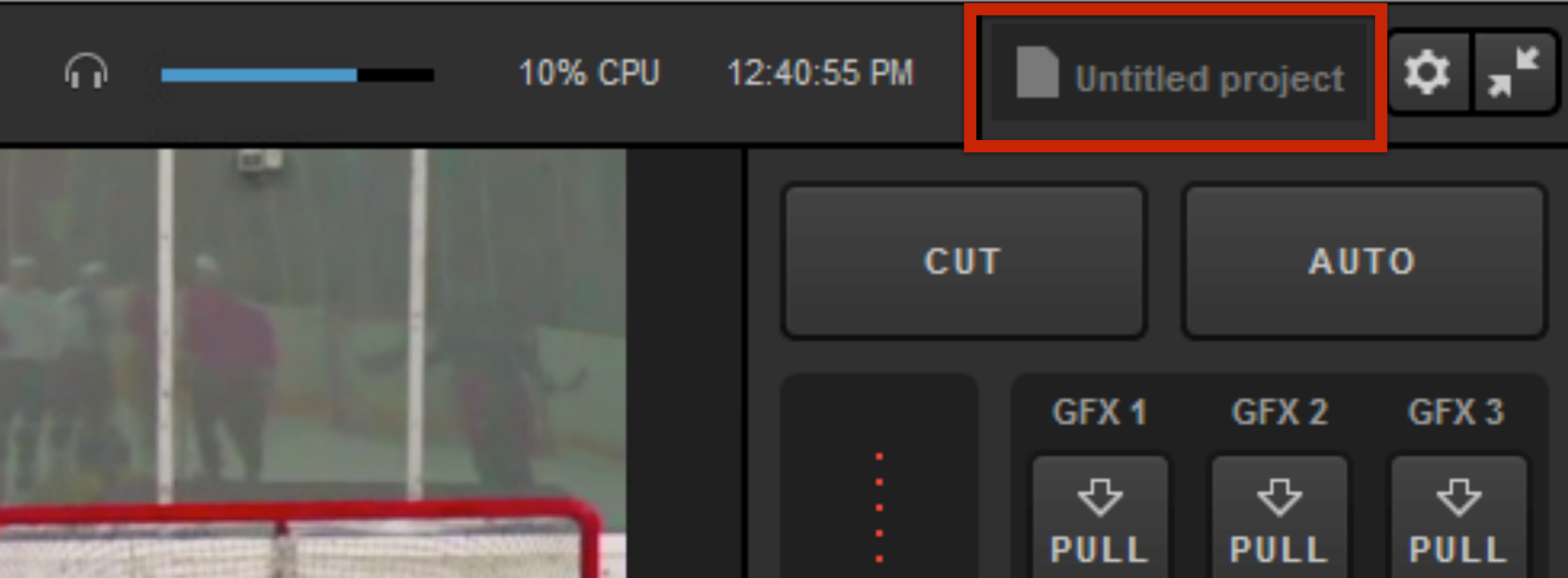
livestream

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.
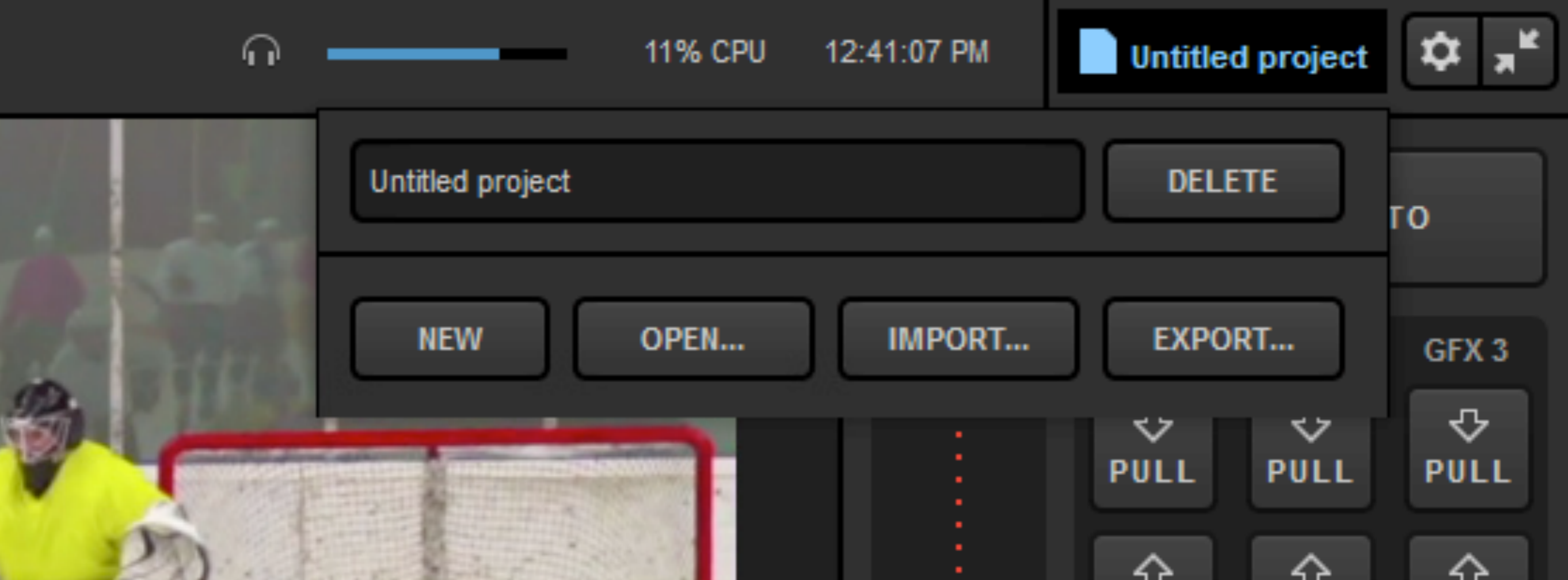
When you open Livestream Studio, by default you will be working on your previous project (or 'Untitled Project' if it is your first time opening Studio). Click on the title in the upper right corner to see more options.
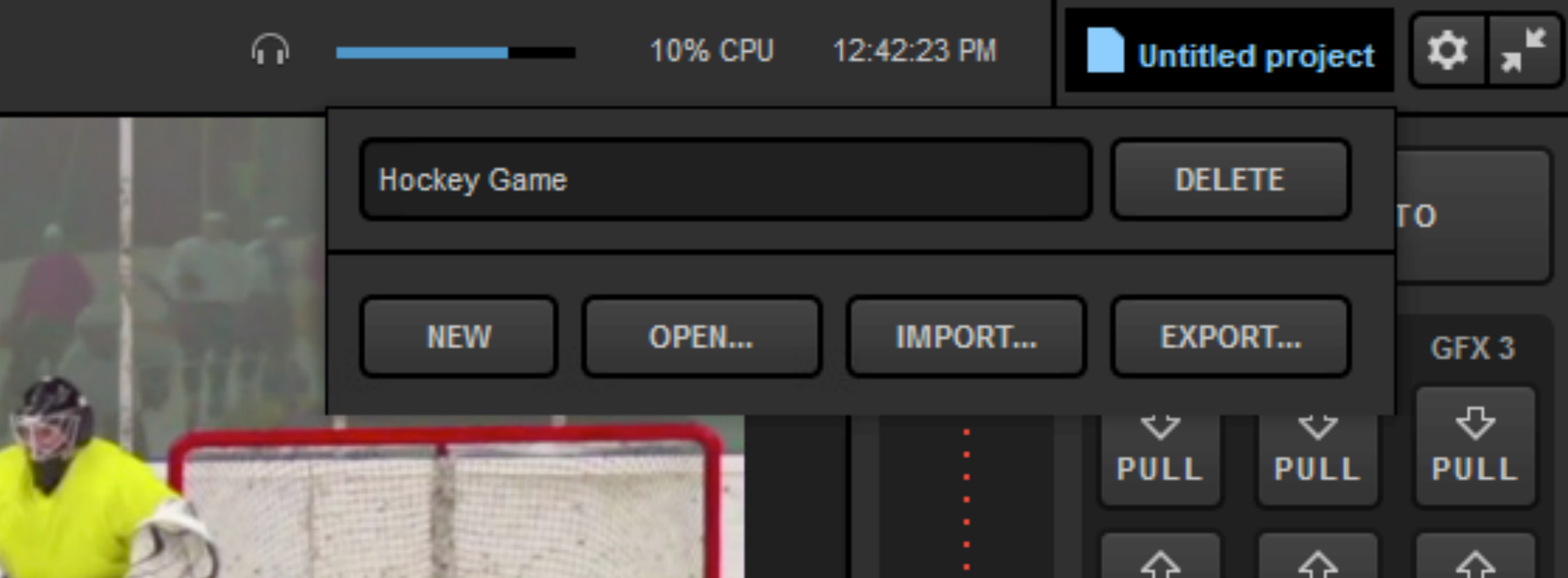
To rename your project, simply
type the name into the text box.
When you click out of the window,
the project will automatically be
renamed.
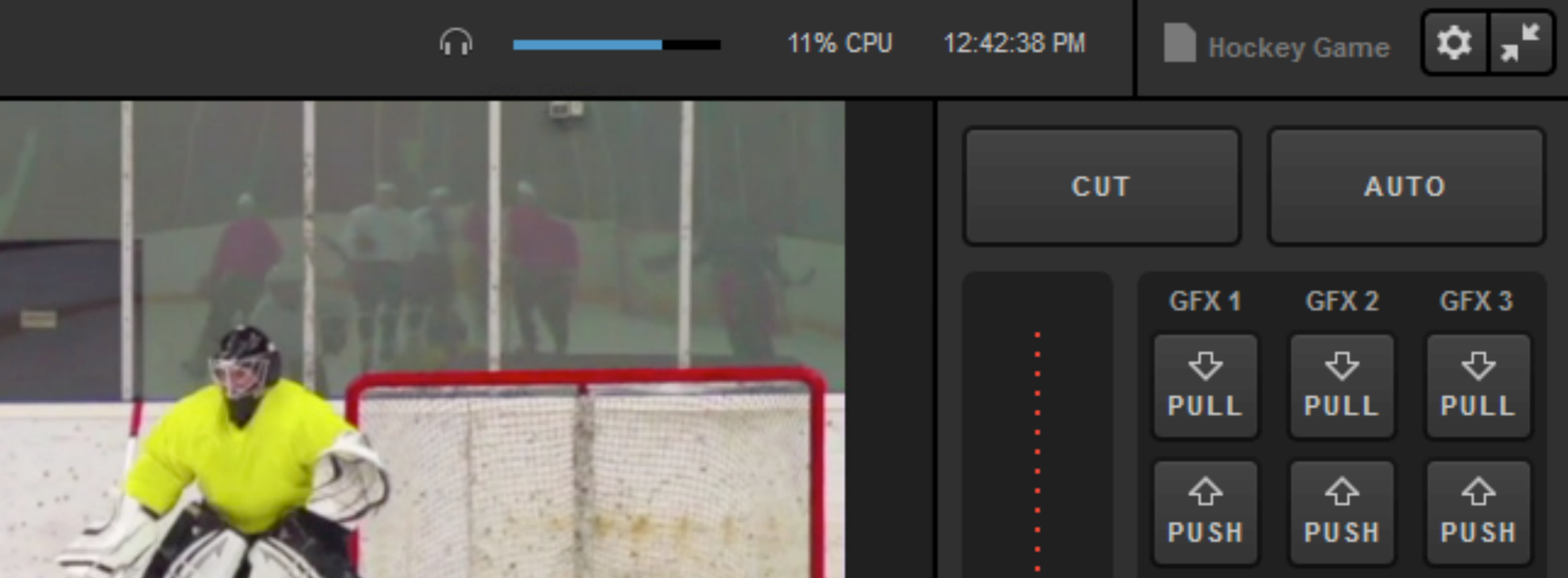
Now your project is renamed. As you configure it (e.g. add graphics templates, import media clips, arrange inputs, etc.), it will save automatically. This occurs regardless of the project being renamed, but now you can identify it.
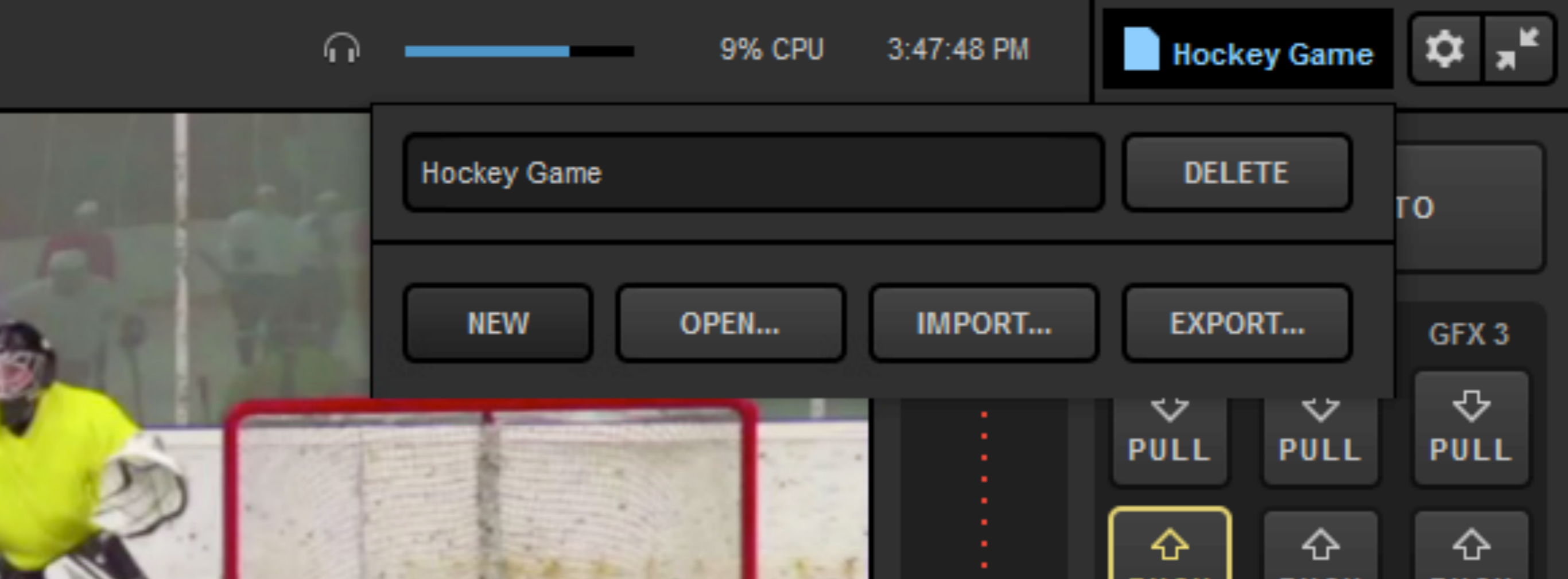
You can create a new project at any time by clicking on your project title and selecting 'New.'

Loading...

| | Input Settings | | | | | | GFX 1 | GFX 2 | GFX 3 | Media 1 |

DIA2 ⌄   GFX1 ⌄   GFX2 ⌄   REMOTE1   STREAM OUT / RECORD OUT   Stream To File

Aspect Ratio

◉ 16:9
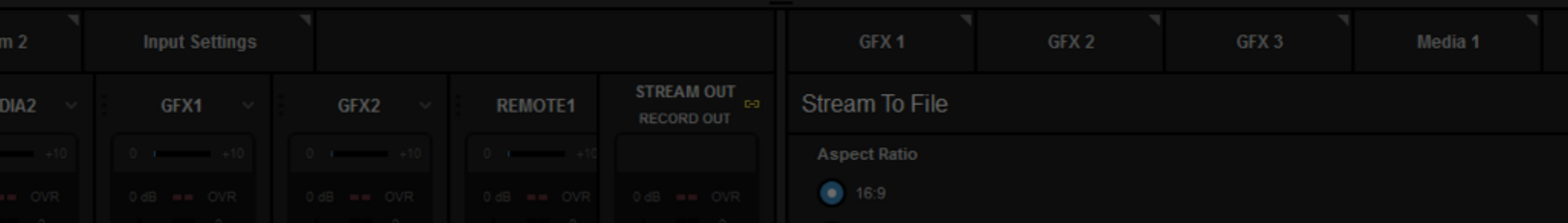
A new untitled project will open with default configurations. As mentioned above, you can rename the new project by clicking on the title.

livestream
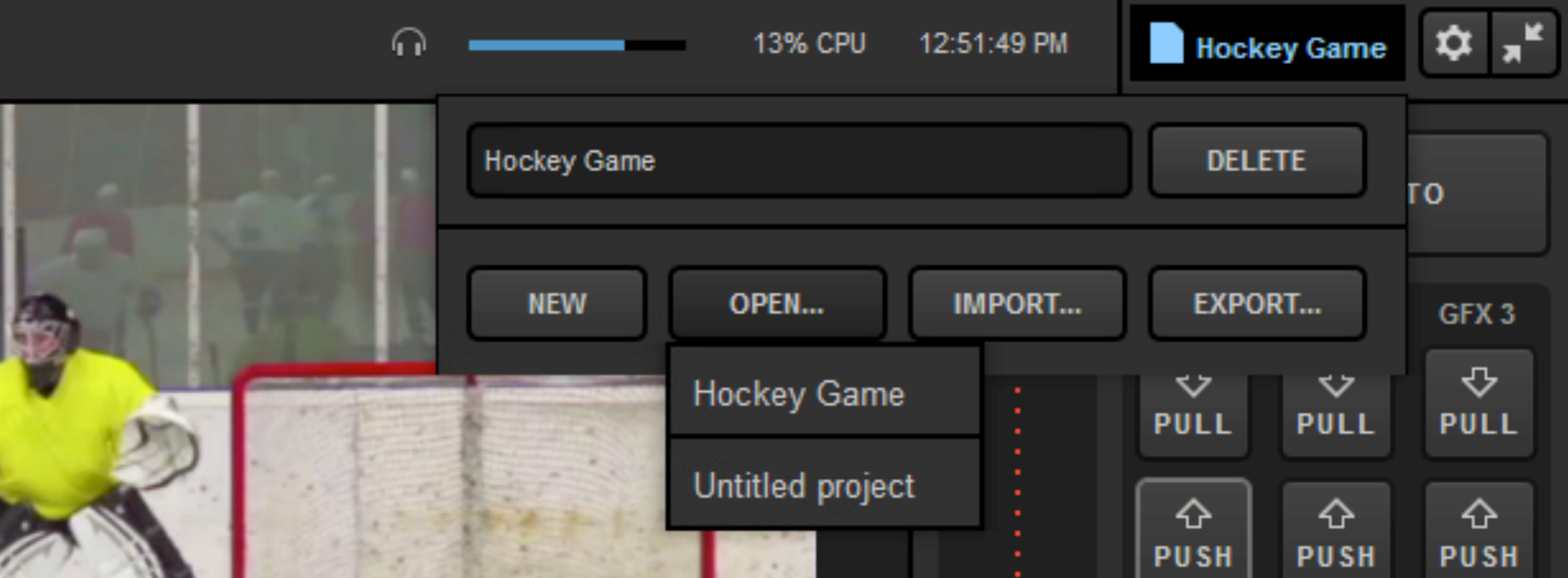
To go back to working on a previously saved project, click on the project title and click 'Open.' A dropdown list of your projects will appear. Click the project that you want to work on.
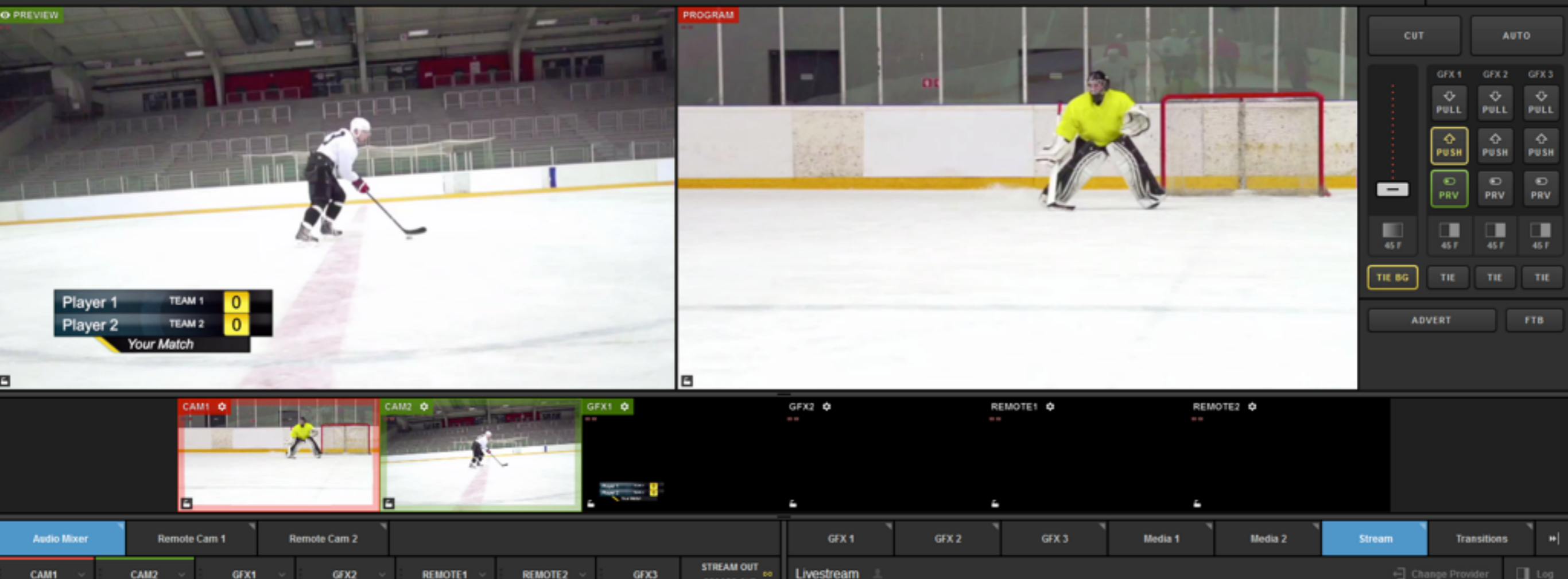
The selected project will then open as it last appeared in Livestream Studio.
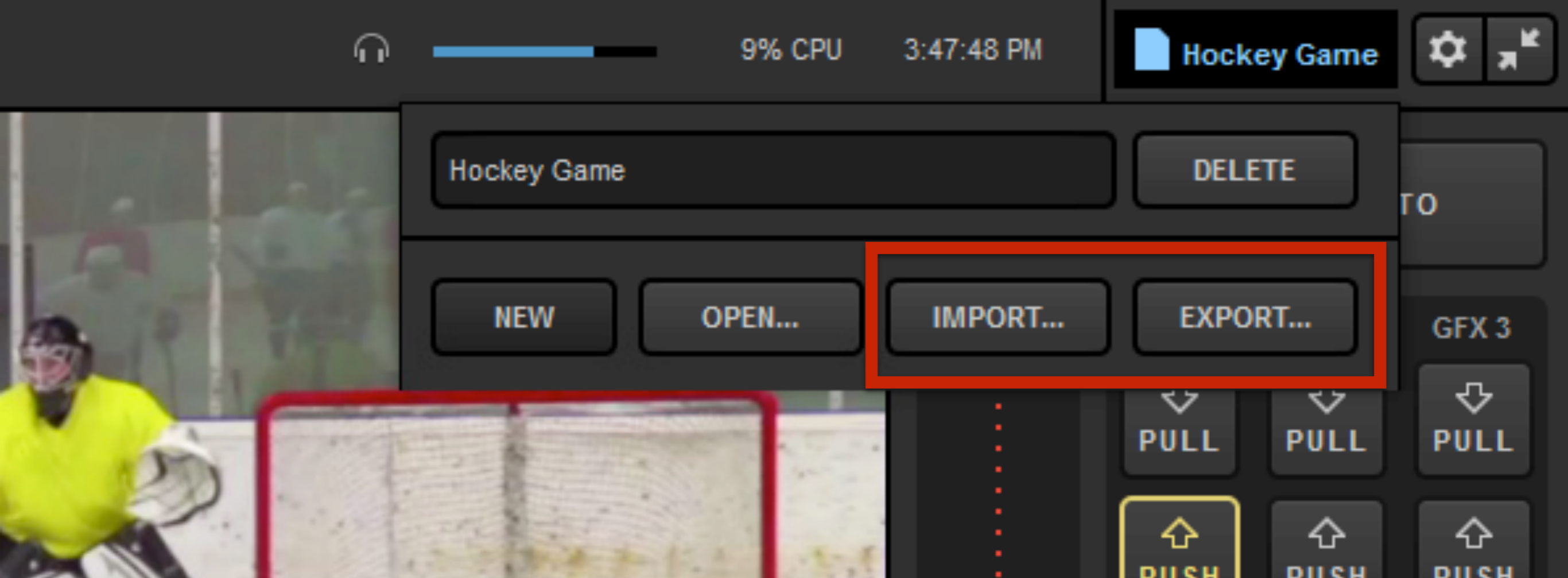
We added an Import/Export feature if you want to save your project as a file. When your Studio project is configured the way you like it, click the project title, then 'Export.'
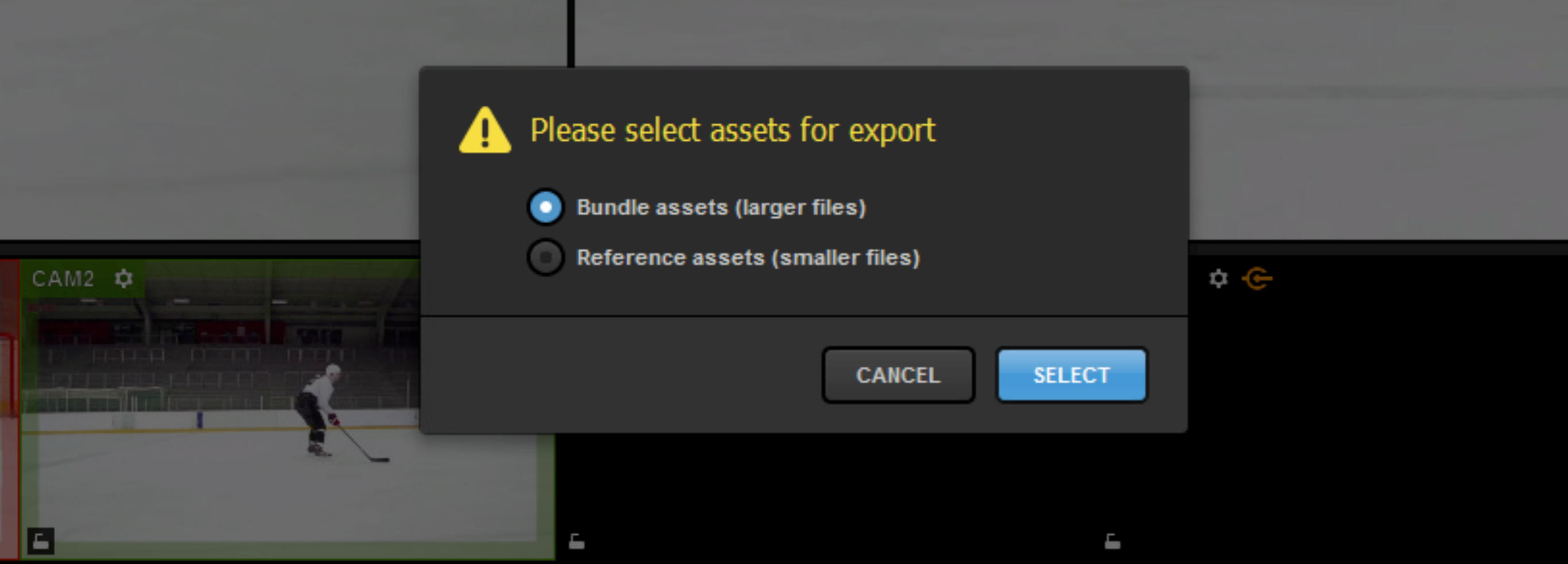
You will have the option to bundle or reference assets. Bundle is ideal if you need to move the file to a different hard drive or system, but creates a larger file. Reference is a smaller file, but will not move any associated assets (media clips, etc.) After selecting your preferred option, click 'Select.'
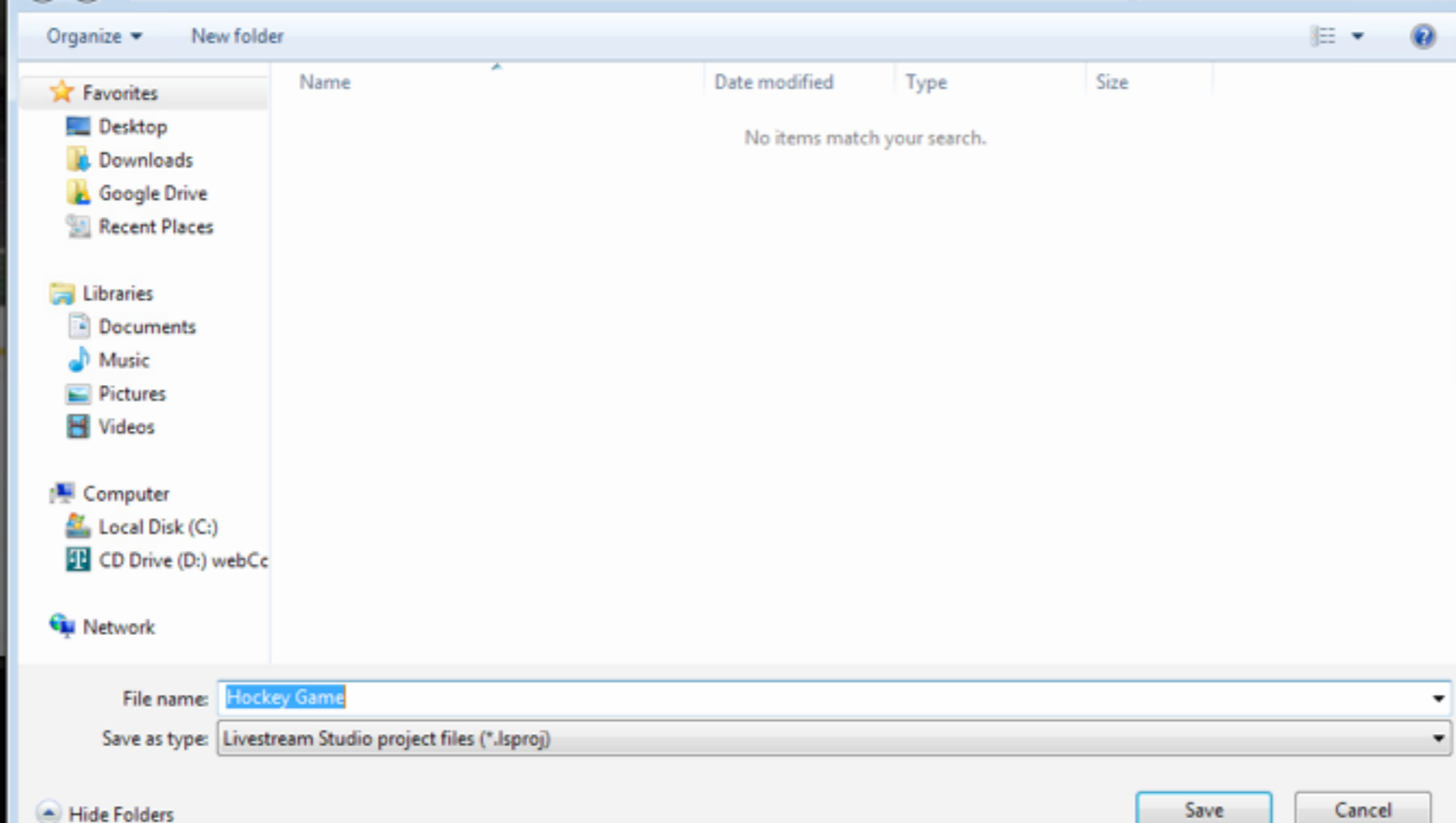
Choose where on your system you want to save the Livestream Project file (.lsproj). By default, Windows will open a newly created 'Livestream Studio Export Projects' folder under 'My Documents,' but you can save the file anywhere you want. Then, click 'Save.'

Confirm Save As

⚠️ Hockey Game.lsproj already exists.
Do you want to replace it?

[Yes] [**No**]

[Save] [Cancel]
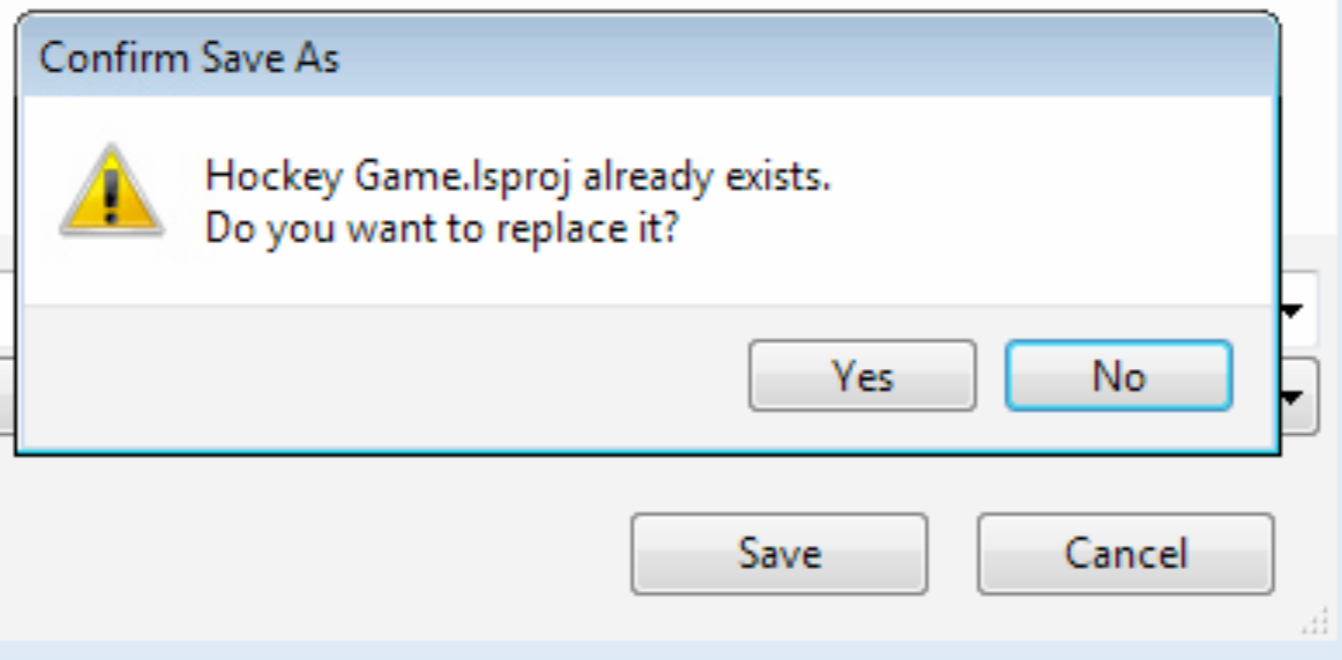
Windows will warn if you already have an .lsproj of the same name and give you the option of replacing it. If you click 'No,' you will have the option to rename it in Windows.
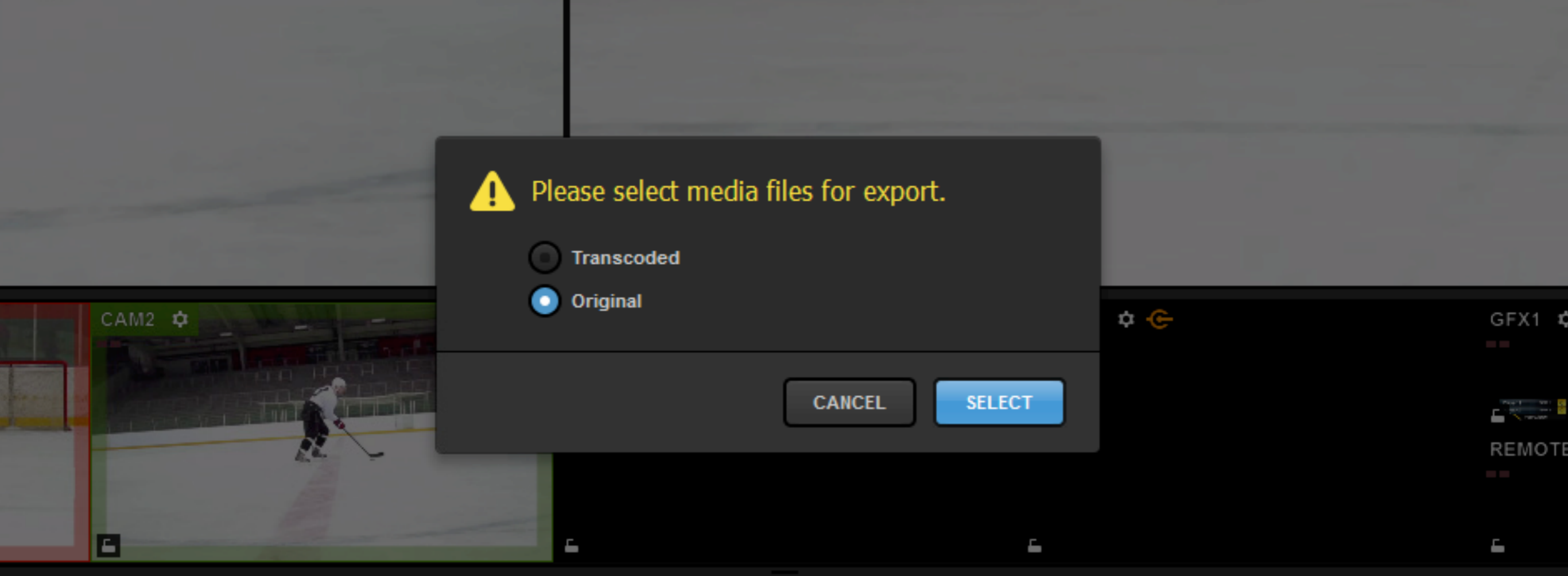
If you imported media files into your media bin, you will be asked whether to save the original video files or their transcoded versions (i.e., the files created after they were brought into Studio).
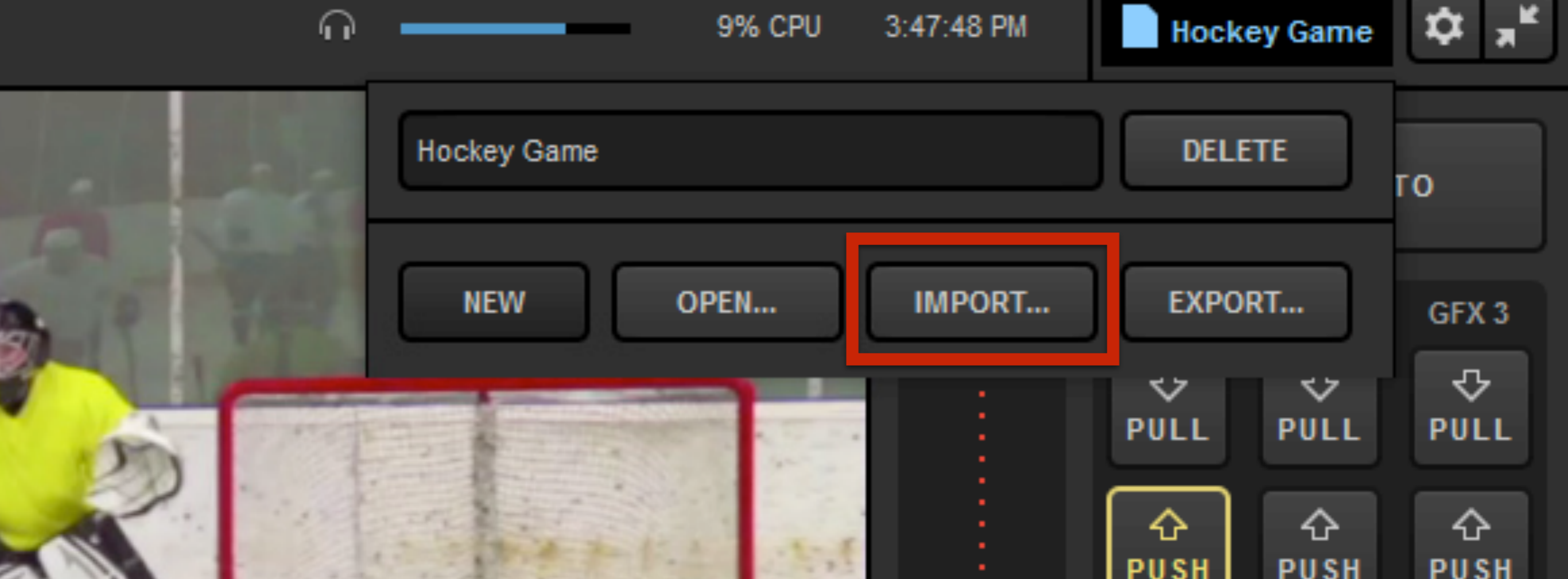
When you are ready to use that particular project file, you can click on the project title and then on 'Import.'
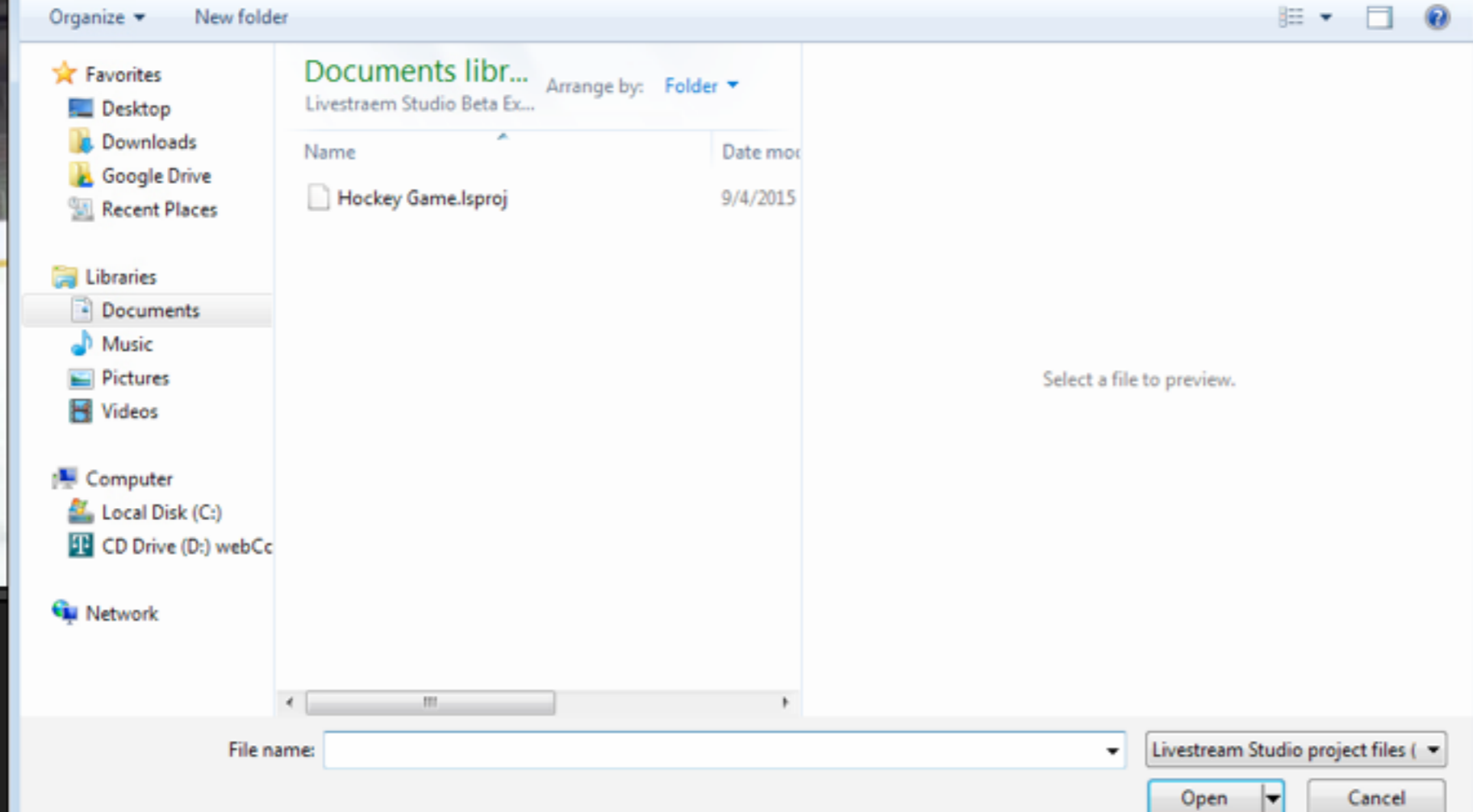
Find your .lsproj file in Windows, select it, and click 'Open.'
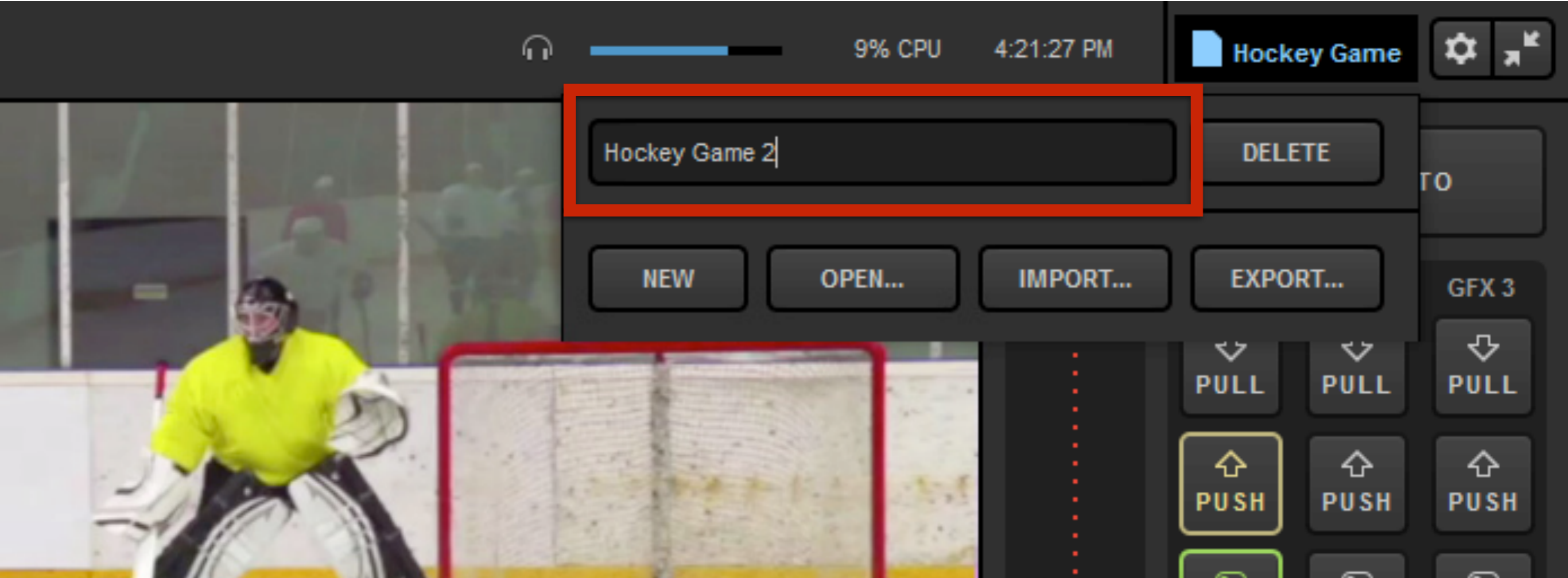
This will create a new project in Livestream Studio with the proper configurations set. You can rename this by clicking the project title if desired.
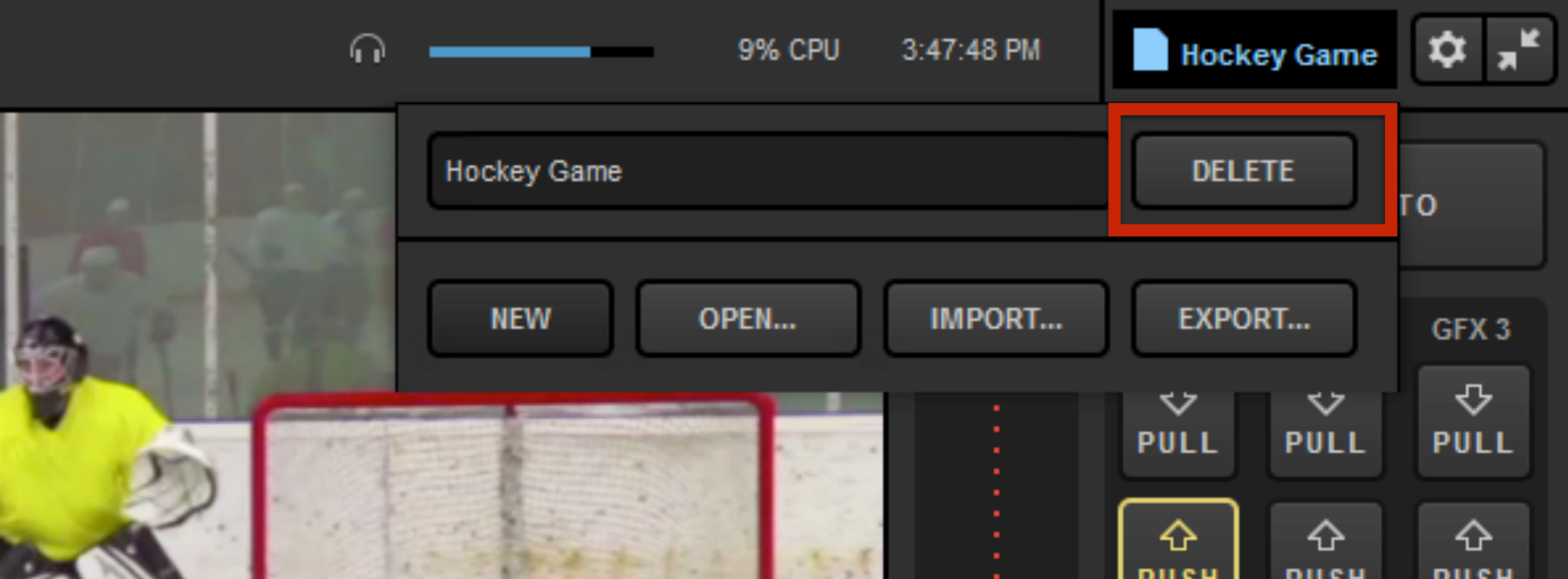
If you no longer intend to use the project you are working on, you can click the project title and then 'Delete.' This will not delete an exported file, but you will no longer be able to select it from the 'Open' menu.

Locating software and support information

Settings: License

CANCEL   SAVE

Project Format	
Inputs	Live Input Source License: Up to 25 devices
	Live Video Output License: Up to 25 outputs
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.
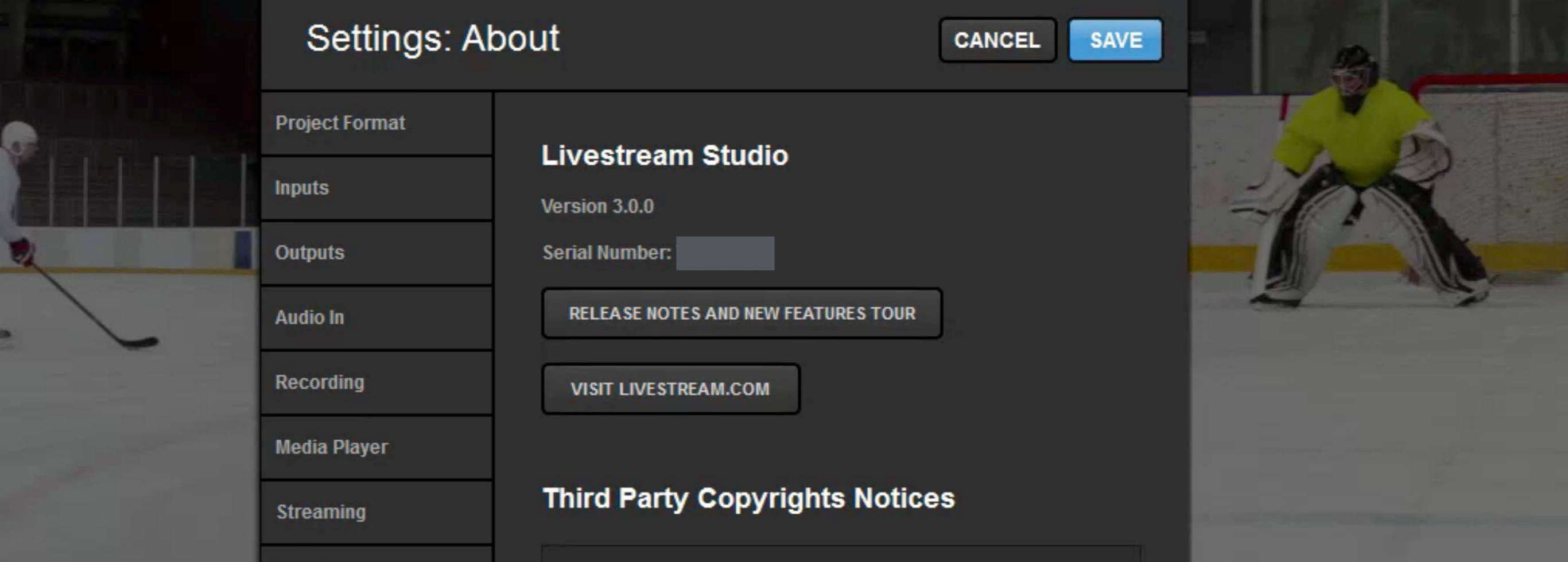
livestream

To find out what version of Livestream Studio you are running on your system, navigate to the 'About' tab.

Settings: Support

CANCEL SAVE

Project Format

Inputs

Outputs

Audio In

Recording

Media Player

Streaming

Multi-Screen

Support PIN:

Support is available 7 days a week 9:30am to 8:30pm EST. For US support, call +1 (877) 977-8732 extension #2. For international call +1 (646) 490-1679 extension #2. When prompted, enter your support PIN.

HELP CENTER

REPORT PROBLEM

VISIT LIVESTREAM.COM

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

- Blackmagic DeckLink Quad

- 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)

Thunderbolt devices

- Blackmagic UltraStudio Mini Recorder (capture only)

- Blackmagic UltraStudio Mini Monitor (playback only)

- Blackmagic UltraStudio 3D

- Blackmagic UltraStudio 4K

- 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

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 Video Decoder	H.264 Video Encoder	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