



Studio Surface User Manual

For use with Livestream Studio™ version 2.1.42 and higher

Published on January 23, 2015. For the most recent manual version, visit new.livestream.com/mysurface



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Studio Surface is a USB Control
Accessory for Livestream Studio
Live Production Switchers

Connecting your Studio Surface to Livestream Studio

(Works with any hardware or software edition of
Livestream Studio)

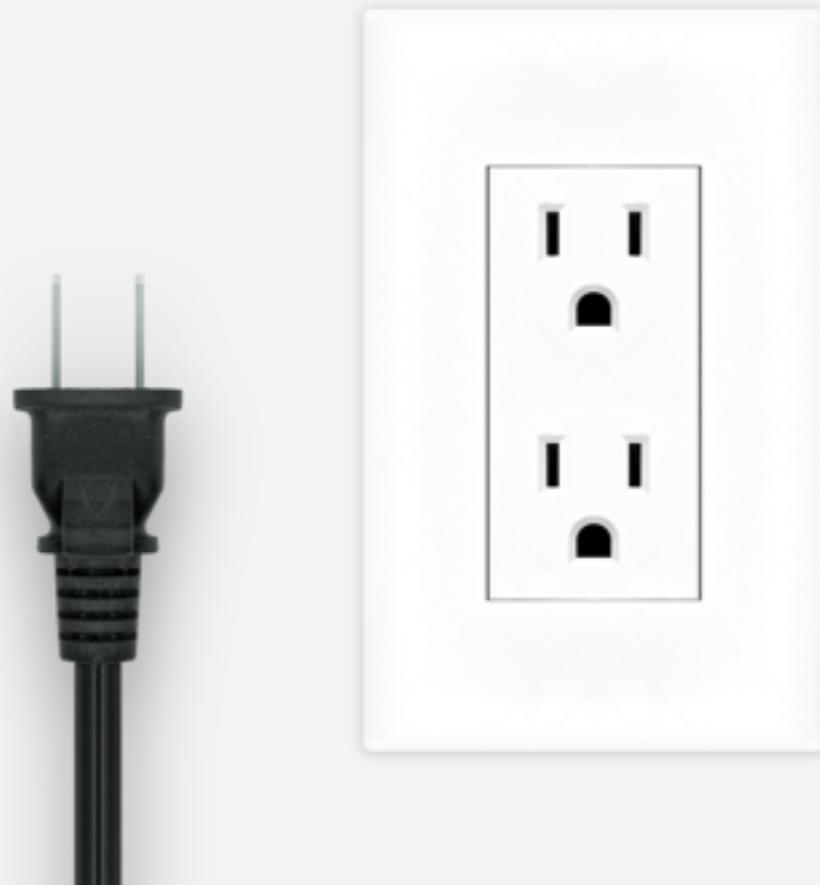


In the box, you'll find a power adapter and USB cable.



Connect the power adapter to your Studio Surface.

Note: the red dot should face downwards.



Connect the other end to an A/C power outlet.

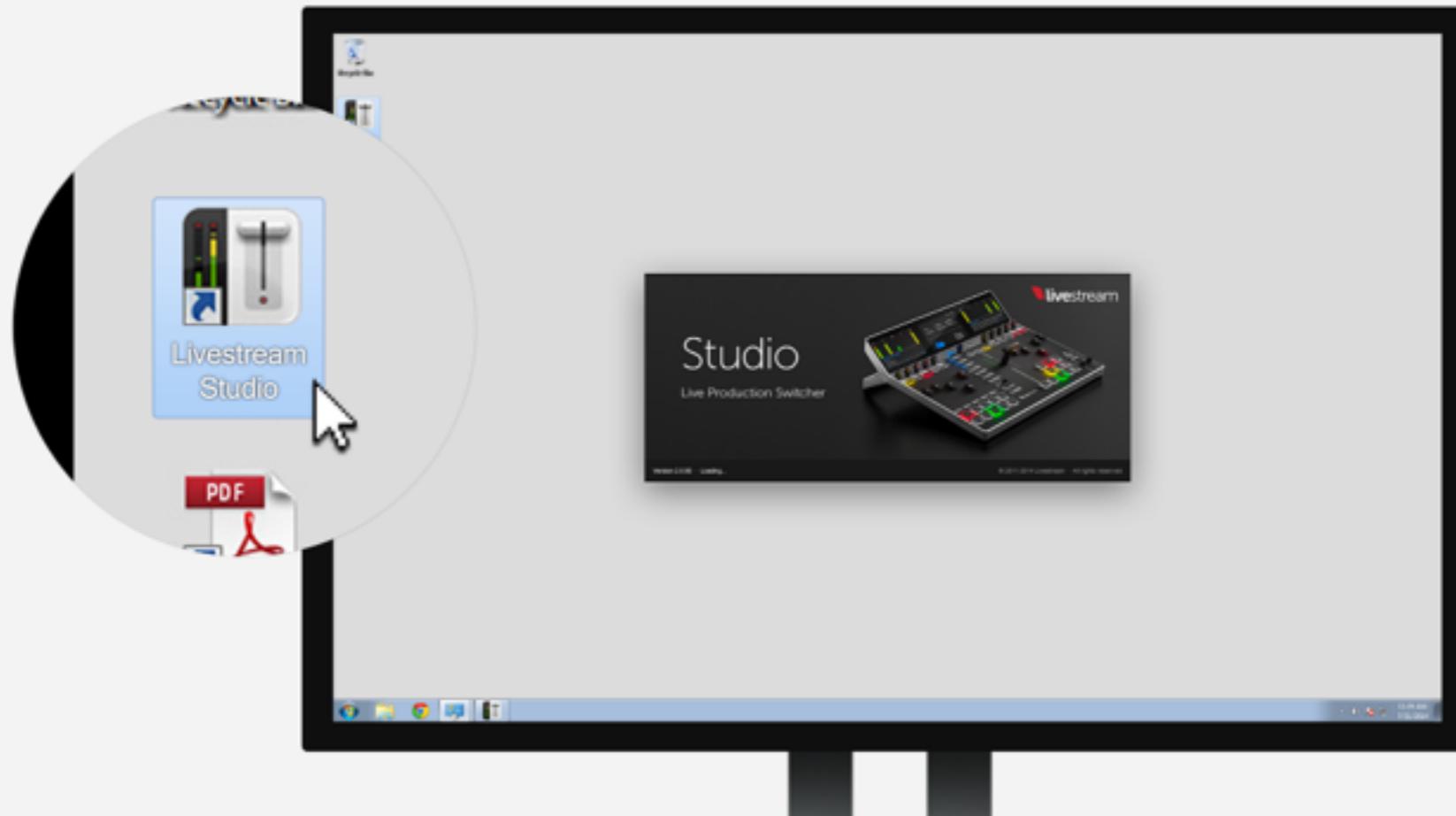
Note: This power adapter will work with different voltages (100-240v.).



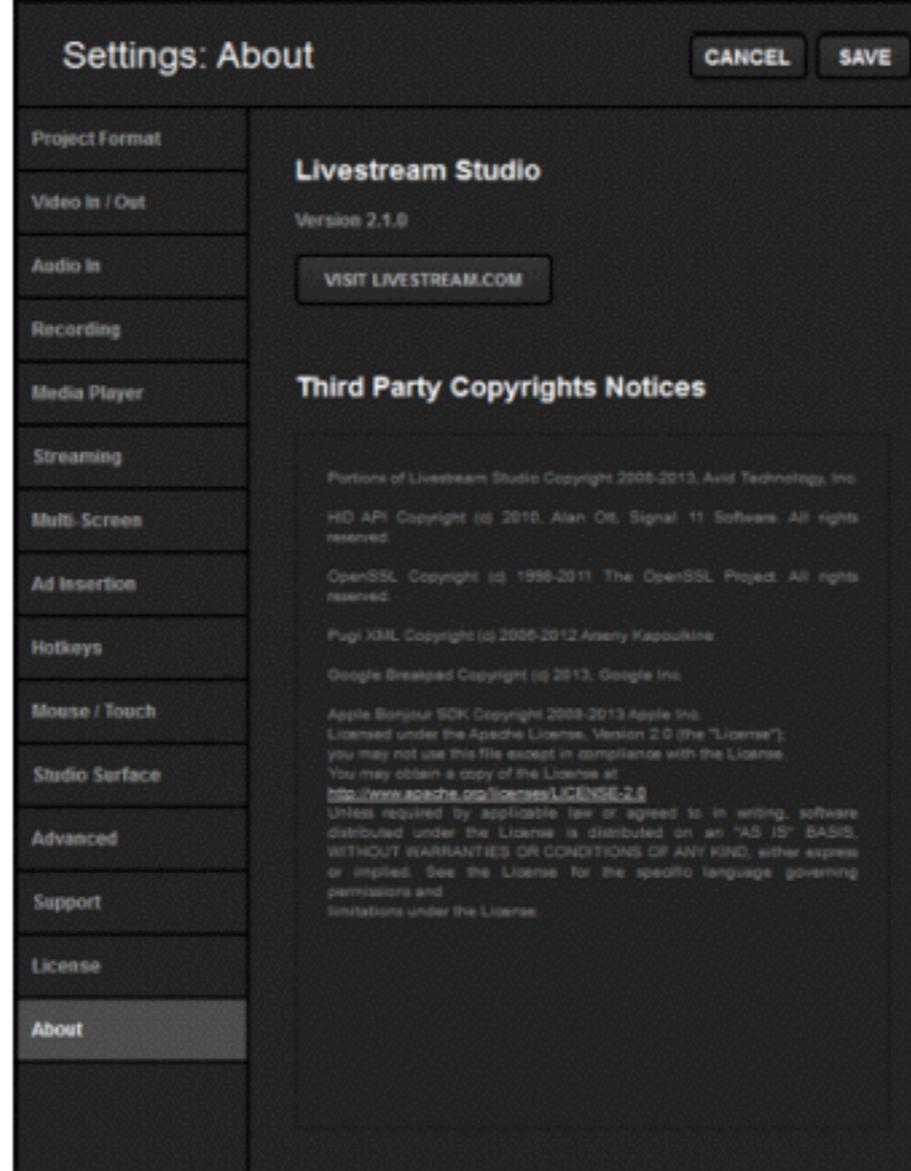
When your Studio Surface is powered, the screens will illuminate.



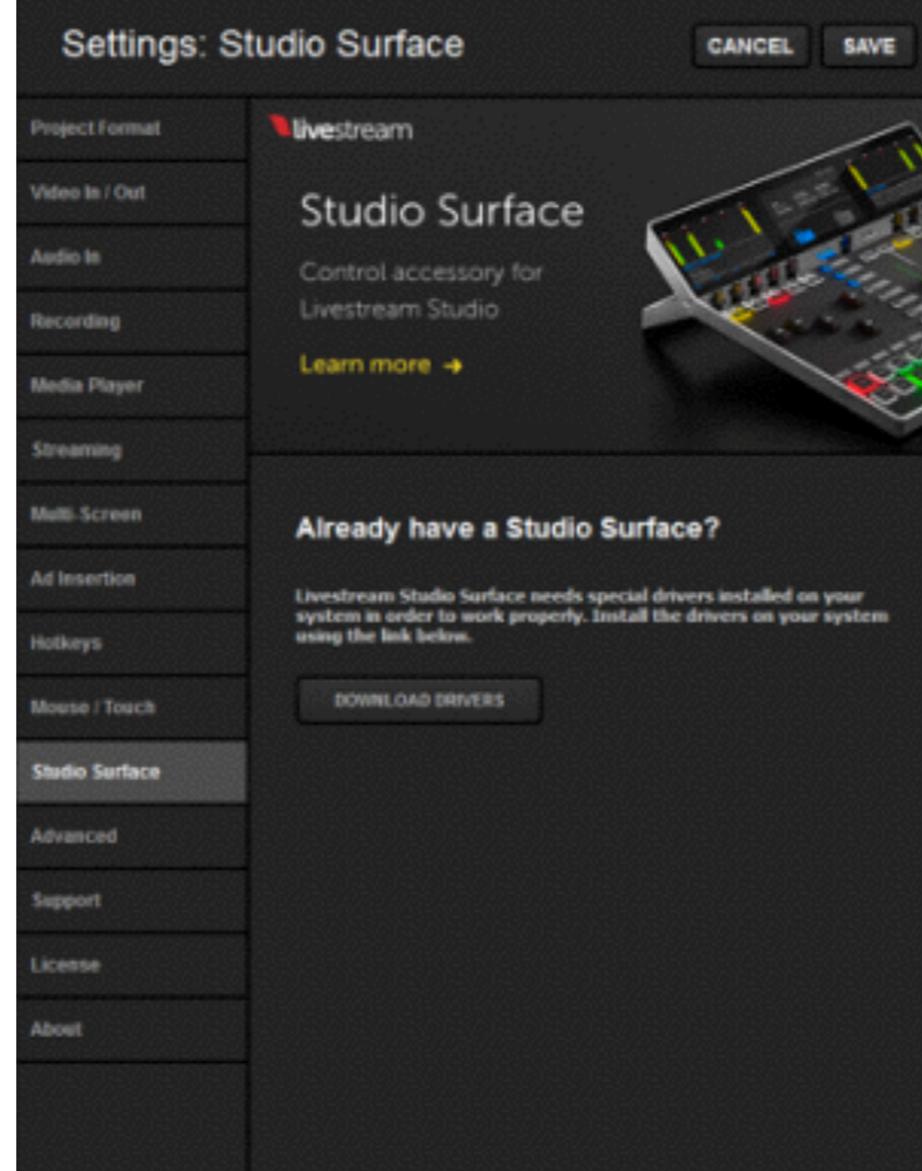
Connect the USB cable to
your Studio Surface.



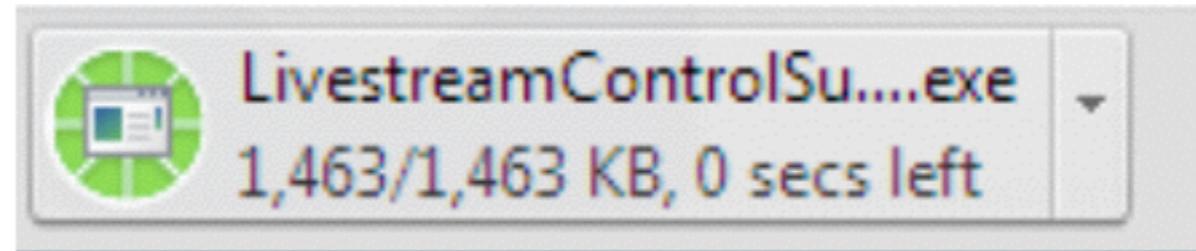
Launch Livestream Studio software on your PC.



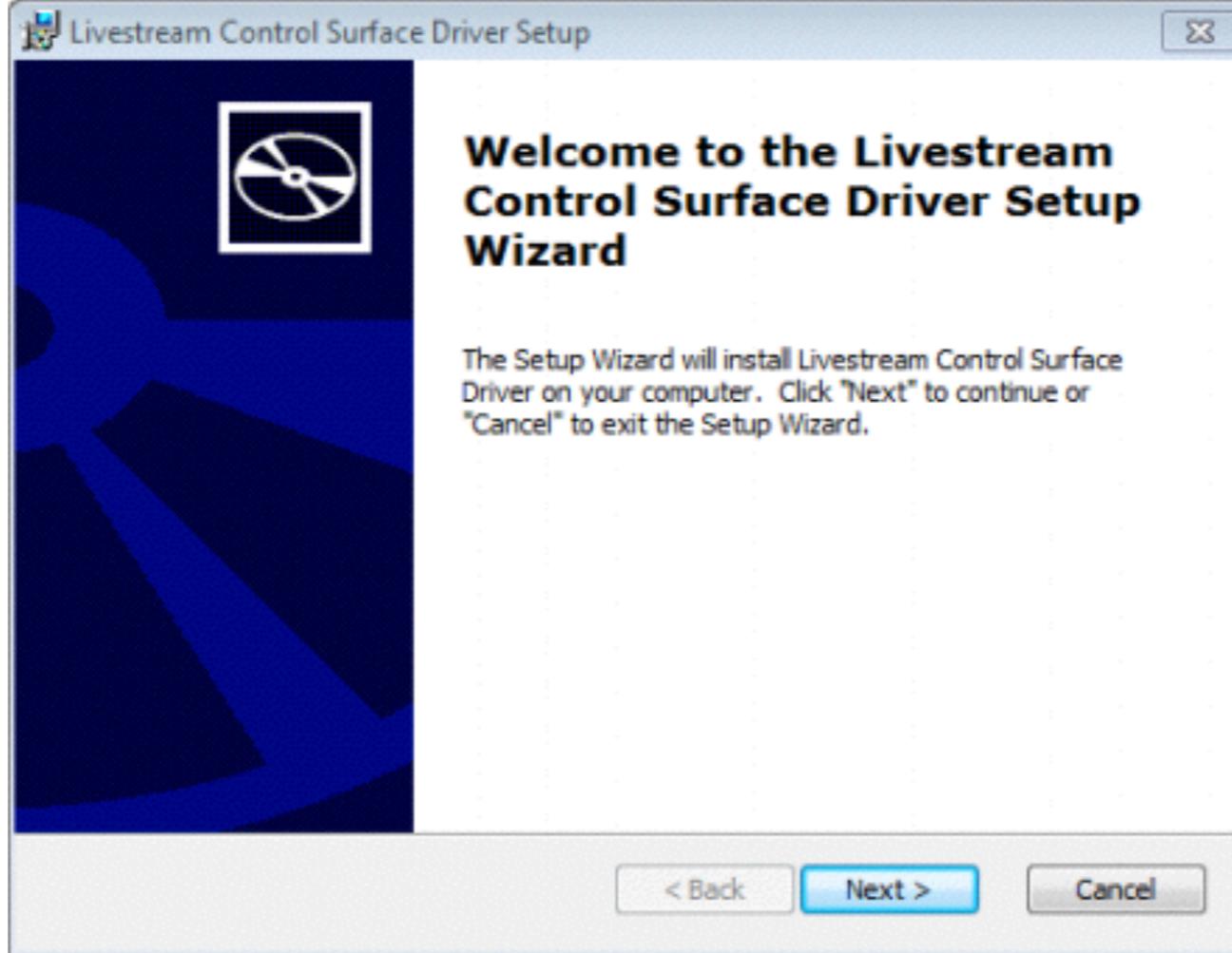
Open Livestream Studio settings.
In the 'About' tab, check that you
are running Livestream Studio
version 2.1 or above.



In 'Settings,' go to the 'Studio Surface' tab and click 'Download Drivers.'

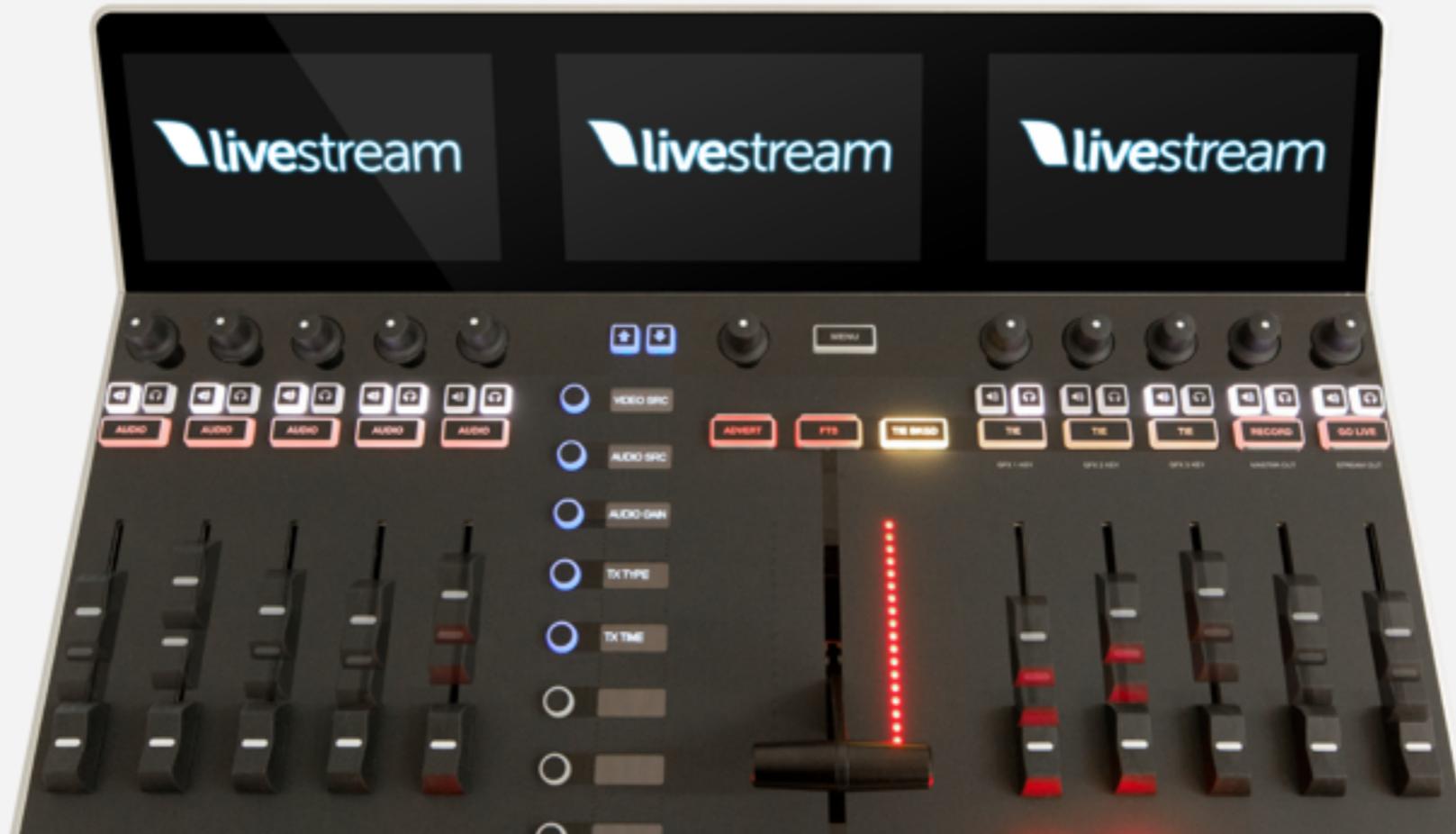


Click the downloaded .exe file that appears in the browser to start installing the drivers.



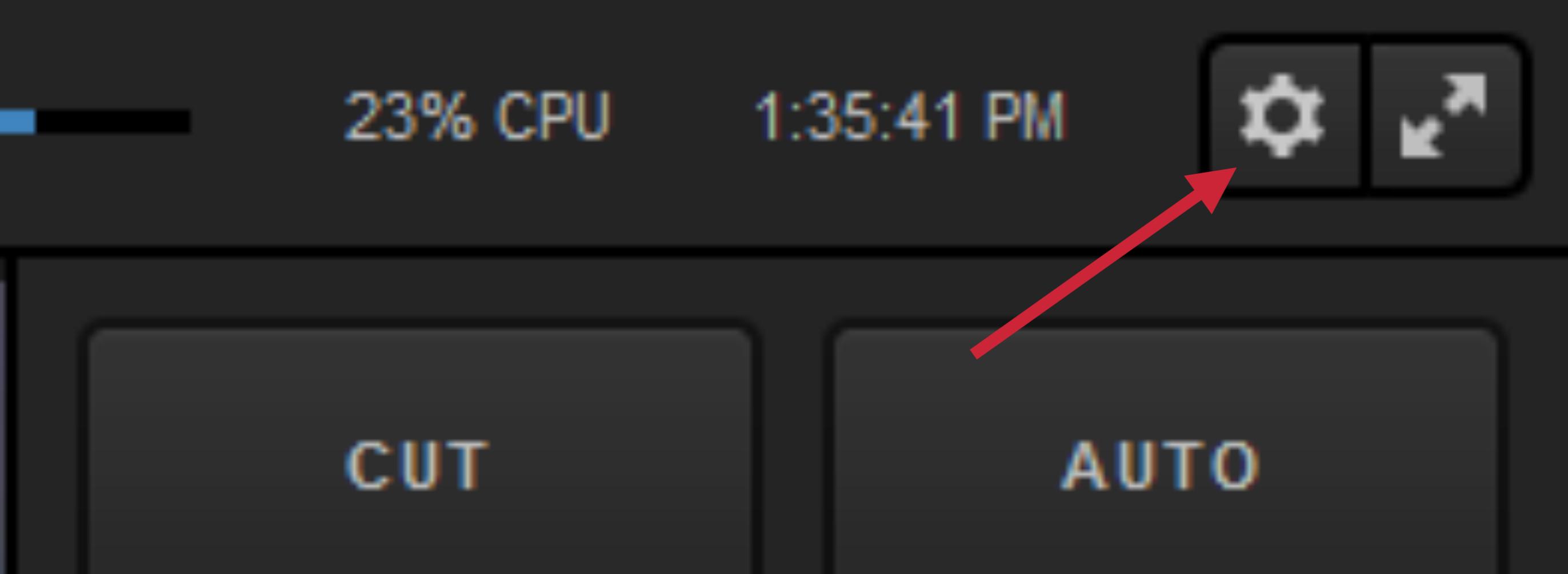
Follow the steps in the installation wizard to install the Studio Surface drivers.

Once complete, you may need to restart the Livestream Studio software or reboot the computer.



When Studio Surface starts up, it will calibrate the audio faders. Don't be startled!

Setup Livestream Studio for use with Studio Surface



Click the gear icon in the upper right hand corner of Livestream Studio to access your settings.

Settings: Project Format

CANCEL

SAVE

Project Format	
Video In / Out	Project Video Format HD 720p 59.94
Audio In	Project Audio Format 48kHz Stereo
Recording	Multi-View Deinterlacing All Frames

Navigate to the 'Video In / Out' tab in the Settings window.

Video In / Out

Audio In

Recording

Media Player

Streaming

Output

DeckLink Mini Monitor [1] SDI

Inputs

Name	Video Source	Audio Source	Surface
CAM1	DeckLink Mini	Embedded	None
CAM2	DeckLink Mini	Embedded	None



You can assign input sources to Studio Surface tracks in the 'Surface' column.

Note: By default, the assignment for all sources will be 'None.'

Inputs				
	Name	Video Source	Audio Source	Surface
	CAM1	DeckLink Mini	Embedded	Core Mo
	CAM2	DeckLink Mini	None	
			Core Module 1 - Track 1	
			Core Module 1 - Track 2	
	CAM3	DeckLink Mini	Core Module 1 - Track 3	
			Core Module 1 - Track 4	
	CAM4	DeckLink Mini	Core Module 1 - Track 5	

You will see 'Core Module 1 - Track 1' for the first track, and so on. This is abbreviated to 'C1-T1,' etc.

Note: If you also have a Surface Track Module, you'll see 15 more tracks beginning with 'C2.'

	Name	Video Source	Audio Source	Surface
☰	CAM1	DeckLink Mini Re ▼	Embedded ▼	C1 - T1 ▼
☰	CAM2	DeckLink Mini Re ▼	Embedded ▼	C1 - T2 ▼
☰	CAM3	DeckLink Mini Re ▼	Embedded ▼	C1 - T3 ▼
☰	GFX1	GFX 1 ▼	Disabled ▼	None ▼



Assign the input sources you want to control using Studio Surface, then click 'Save.'



Studio Surface will label each track accordingly.

That's it! You're ready to start using your Studio Surface.

Components of Studio Surface



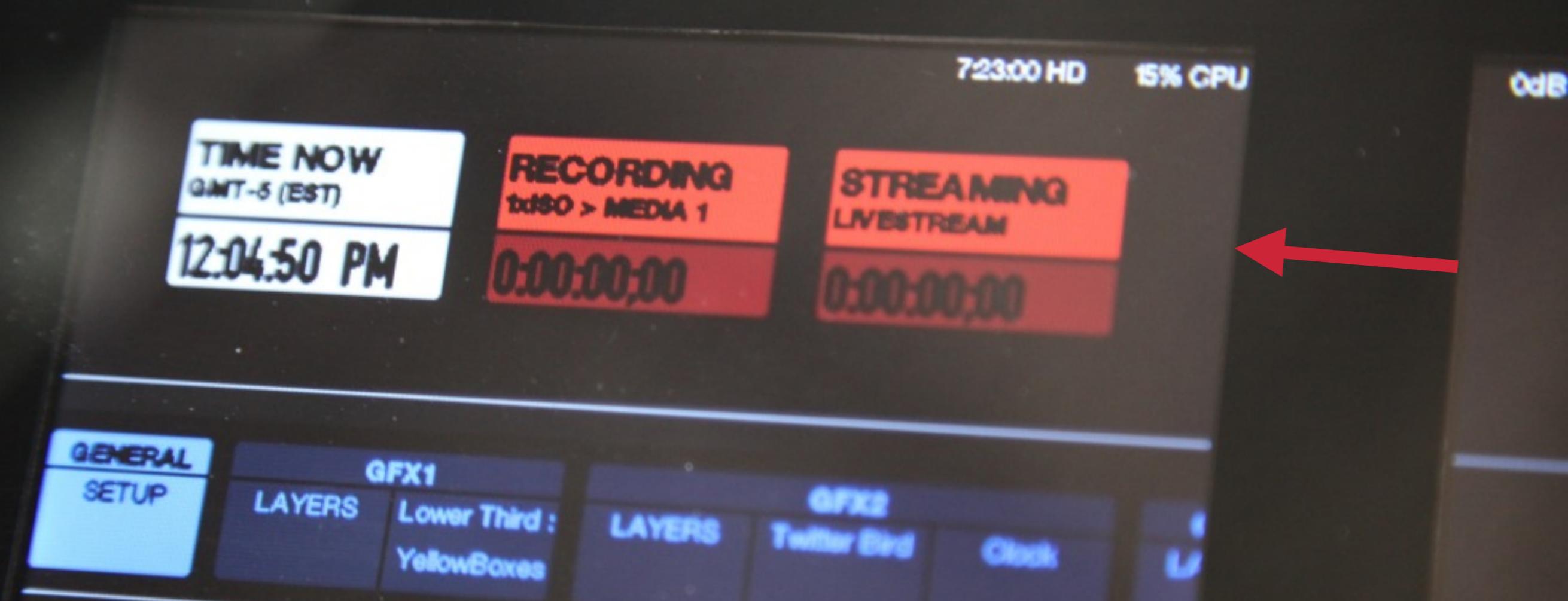
Now that the Studio Surface is connected to Livestream Studio, it's best practice to familiarize yourself with the layout and features.



The upper left monitor displays the audio levels from the 5 input sources your Studio Surface tracks are assigned to.



Underneath the left monitor, you will find audio controls for each track. This lets you listen to and adjust individual audio levels, as well as mute sources.



In the top center of Studio Surface, a monitor shows the time of day, as well as your record and stream duration times.



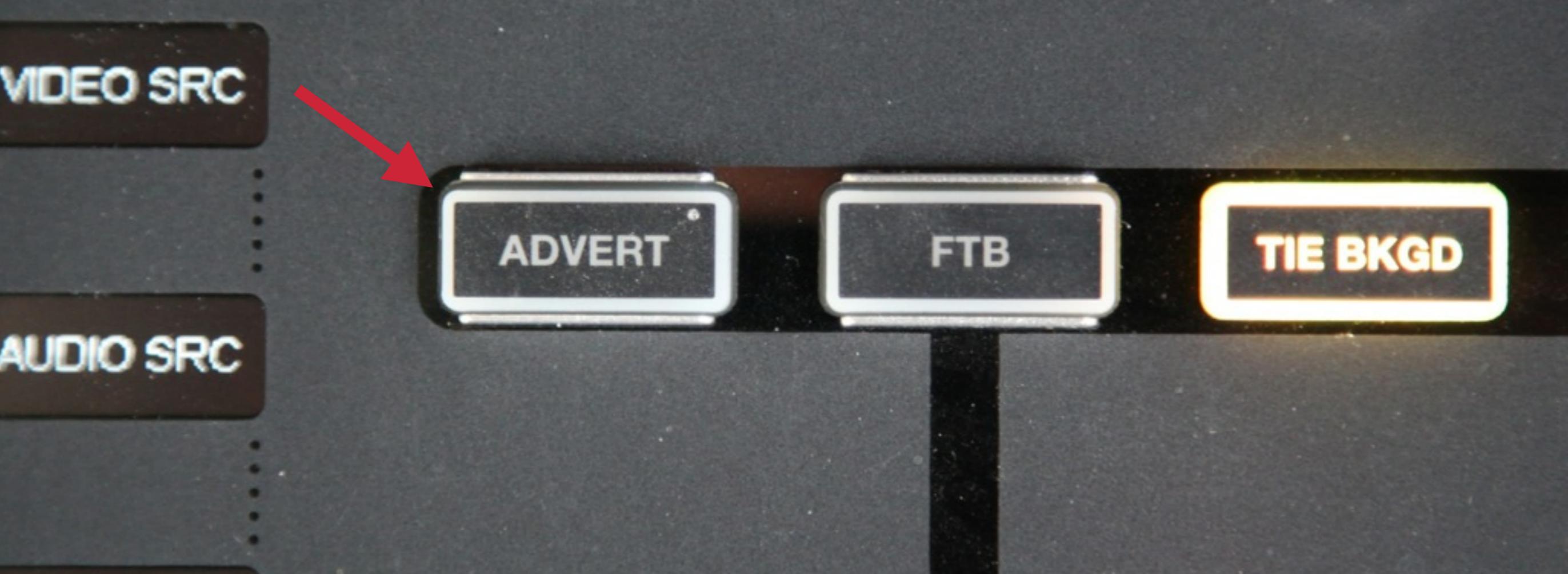
The middle monitor also contains **menus**, which allow you to change your sources and control graphics overlays, media bins, and remote camera sources.



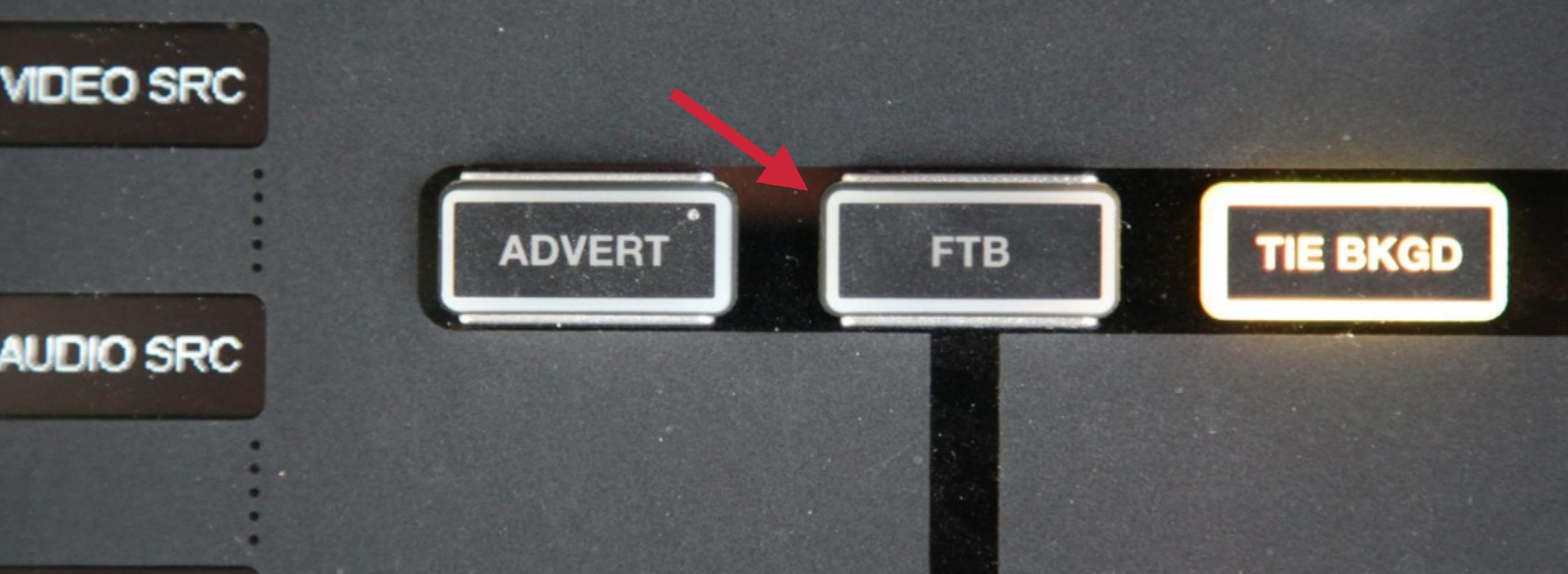
The controls for these menus include the knob below the monitor and the **menu buttons** running down the center of the Studio Surface.



In front of the center monitor are buttons labeled '**Advert**' and '**FTB.**'



If you are a Livestream Enterprise customer, pressing '**Advert**' allows you to insert an advertisement from a connected Google DFP account during a Livestream broadcast.



'**FTB**' stands for 'Fade to Black.'
This is a standard broadcast term used for when you want your Program feed to dissolve fully to black with no audio.



The upper right monitor shows audio levels for the graphics overlays, Program record, and Program stream.



Under the right monitor are controls that adjust the audio levels for the corresponding graphics overlays, Program record, and Program stream.



The '**Record**' and '**Go Live**' buttons allow you to start a Livestream Studio recording and/or stream, respectively, from Studio Surface.



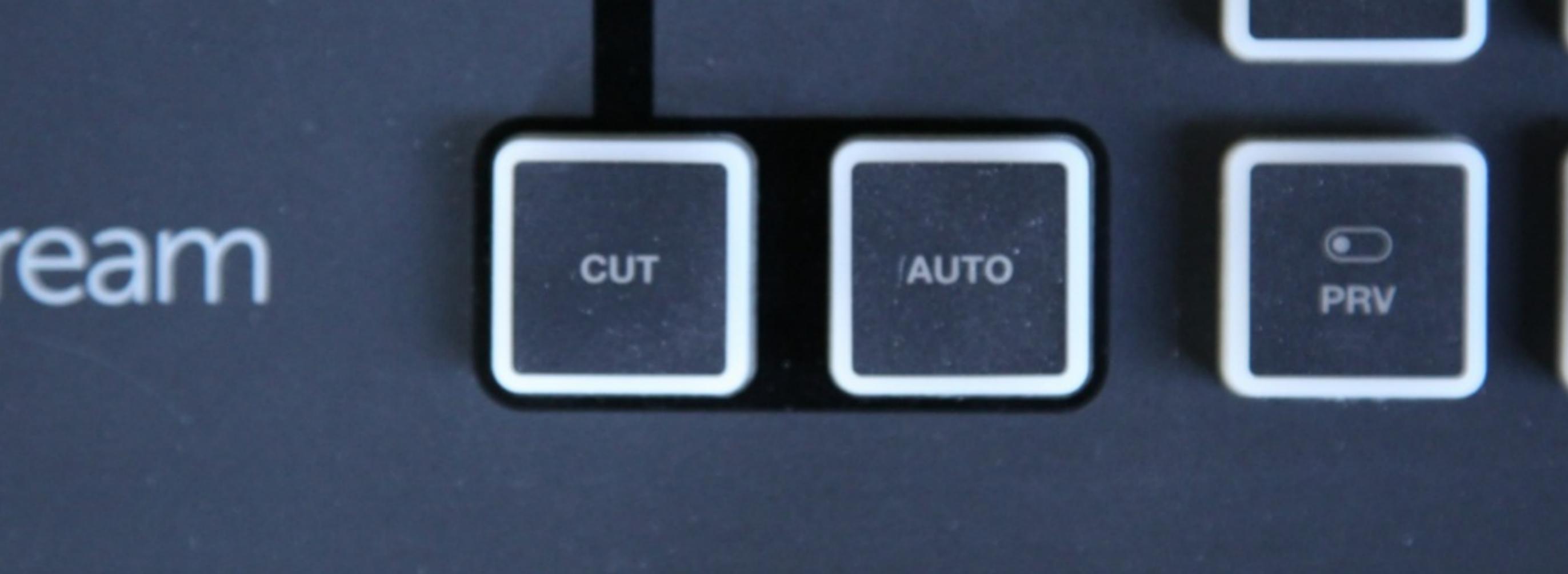
The bottom right corner has headphone jacks that allow you to listen to your audio sources and adjust the headphone volume.



The '**Share**' and '**Live Mix**' buttons in the same corner will have functionality in a future release.



Just to the left of the headphone jacks are the '**PRV**,' '**PUSH**,' and '**PULL**' controls for your 3 graphics overlay channels.



Left of the graphics overlay controls are the '**Cut**' and '**Auto**' buttons. These transition between your Preview source and Program source in Livestream Studio.

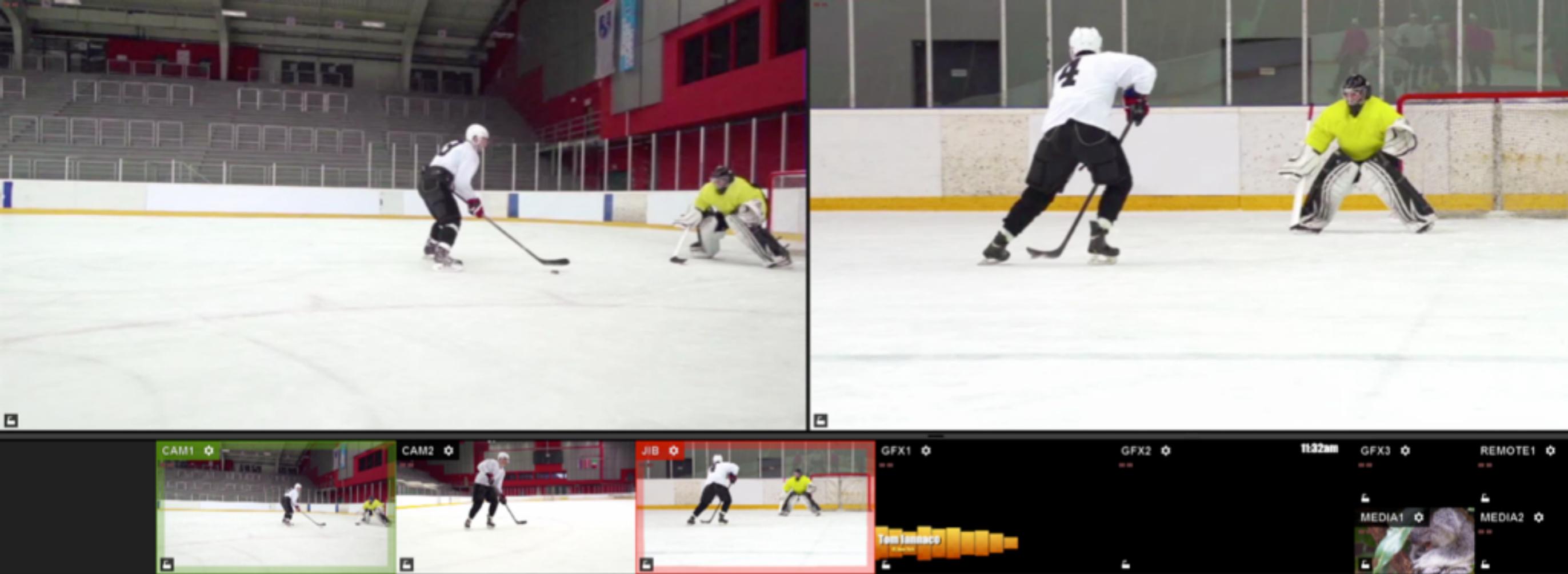


Above the '**Cut**' and '**Auto**' buttons is the **T Bar**, which allows you to do a manual transition between Preview and Program in Livestream Studio.



The bottom left corner has the Preview (**PRV**) and Program (**PGM**) controls for 5 assigned input sources.

Switching video sources



Livestream Studio includes a **multi-view**, which allows you to see all of your video sources and graphics overlays on your display.



The top of Livestream Studio's multi-view interface includes two larger monitors, **Preview** and **Program**.



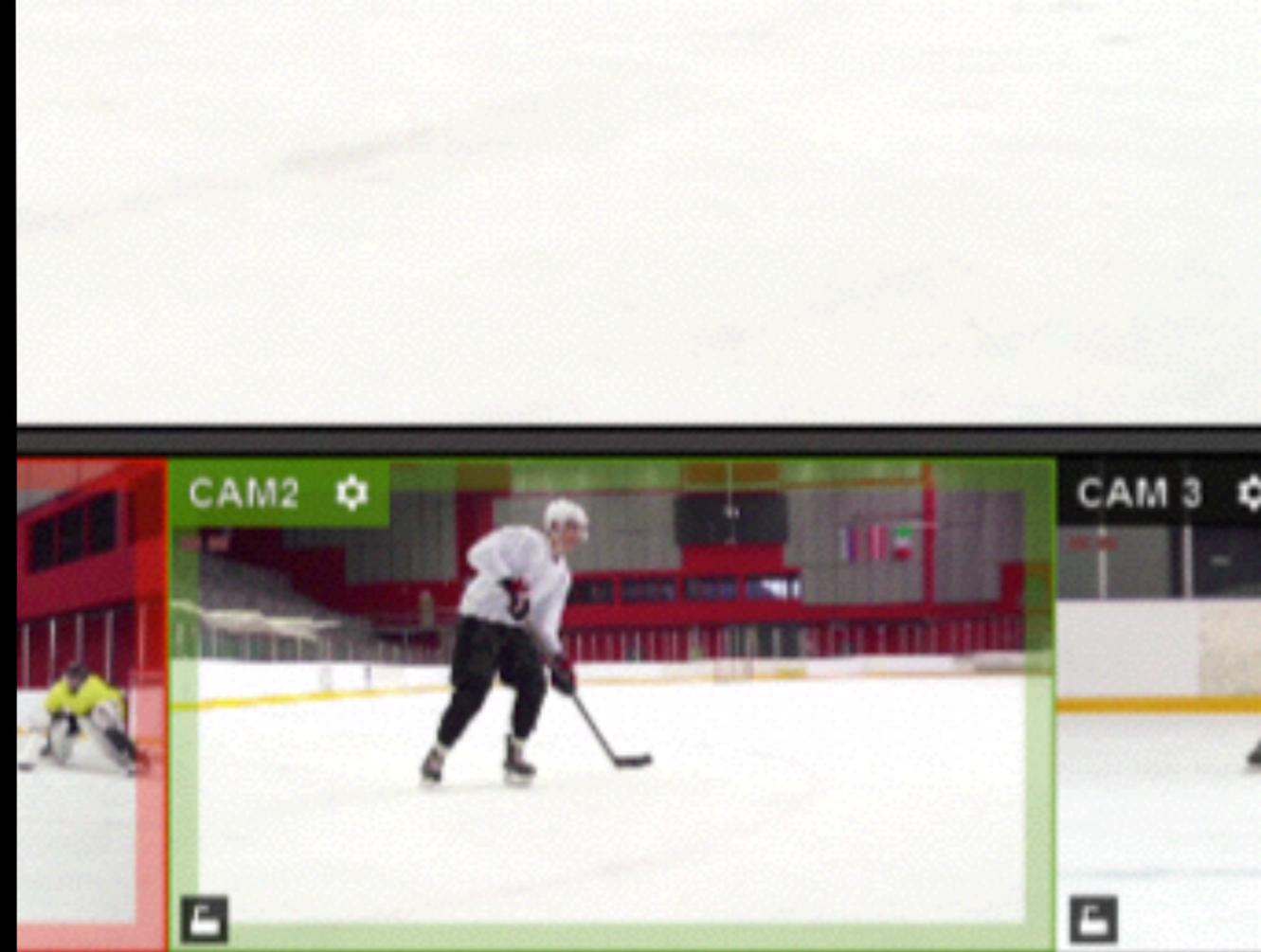
Preview is meant to allow you to easily review your video or graphics overlays prior to inserting that source into Program.



Program is the video and/or graphics overlays that are currently being output to your recording and/or stream, which your viewers can see.



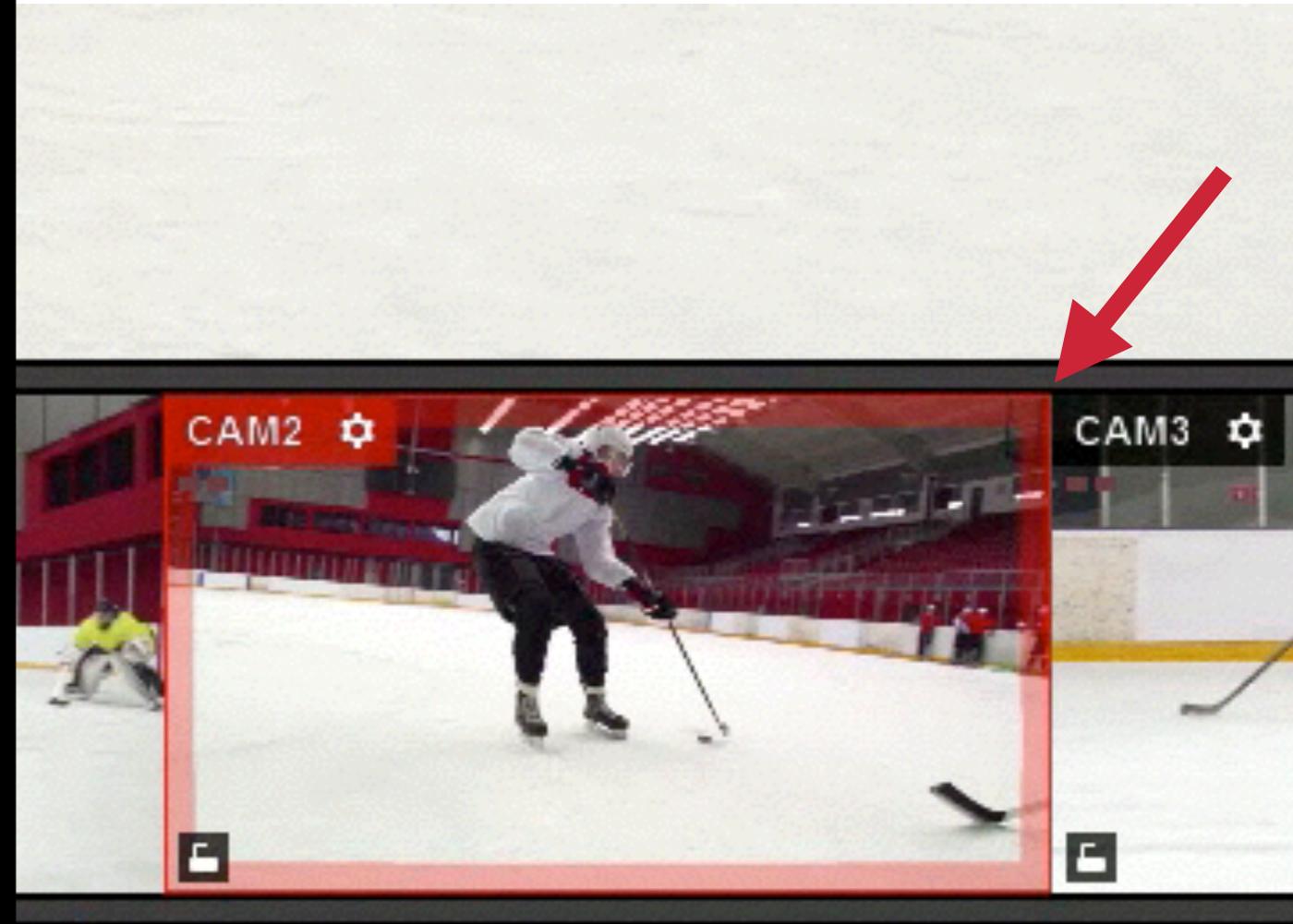
To put a source into Preview, press the green '**PRV**' on the track that corresponds to that input source.



When any source is in Preview, the '**PRV**' button will light up green, and the source will have a green border surrounding it in Livestream Studio's interface.



You can also directly put a source into Program without previewing it. To do so, press the '**PGM**' button that corresponds to it.



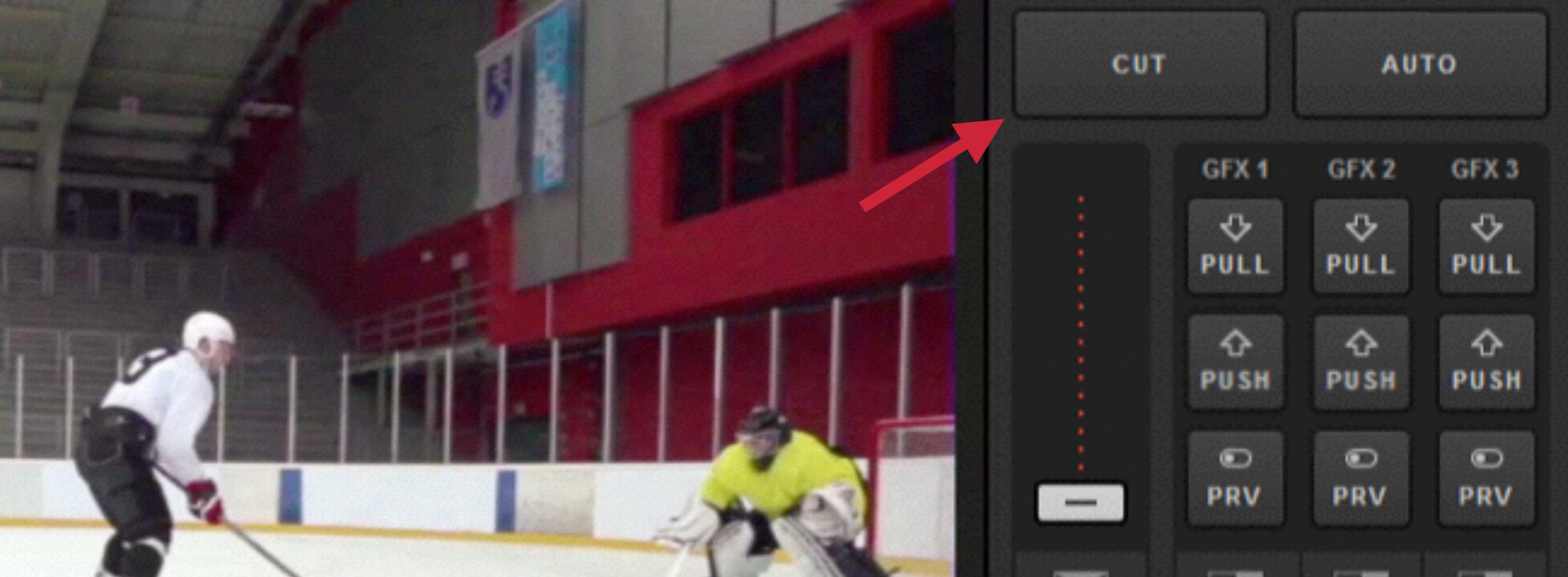
When a source is in Program, that **'PGM'** button will illuminate red, and there will be a red border surrounding it in Livestream Studio.



A typical multi-camera production involves putting a source into Preview and then switching it with the source in Program using a transition control.



One transition type is **cut**, which switches Preview & Program with no overlap between the sources. To do this transition, press the '**Cut**' button.



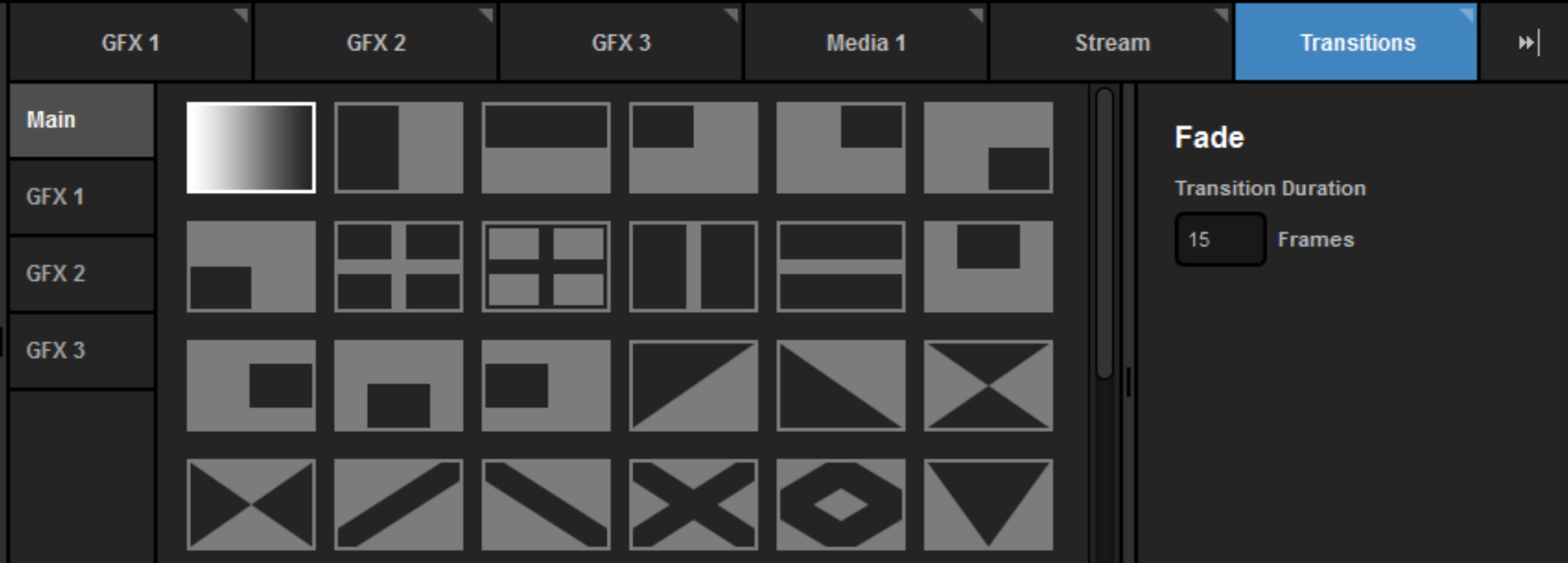
The '**Cut**' button on the Studio Surface corresponds with the '**Cut**' button in the upper right corner of Livestream Studio.



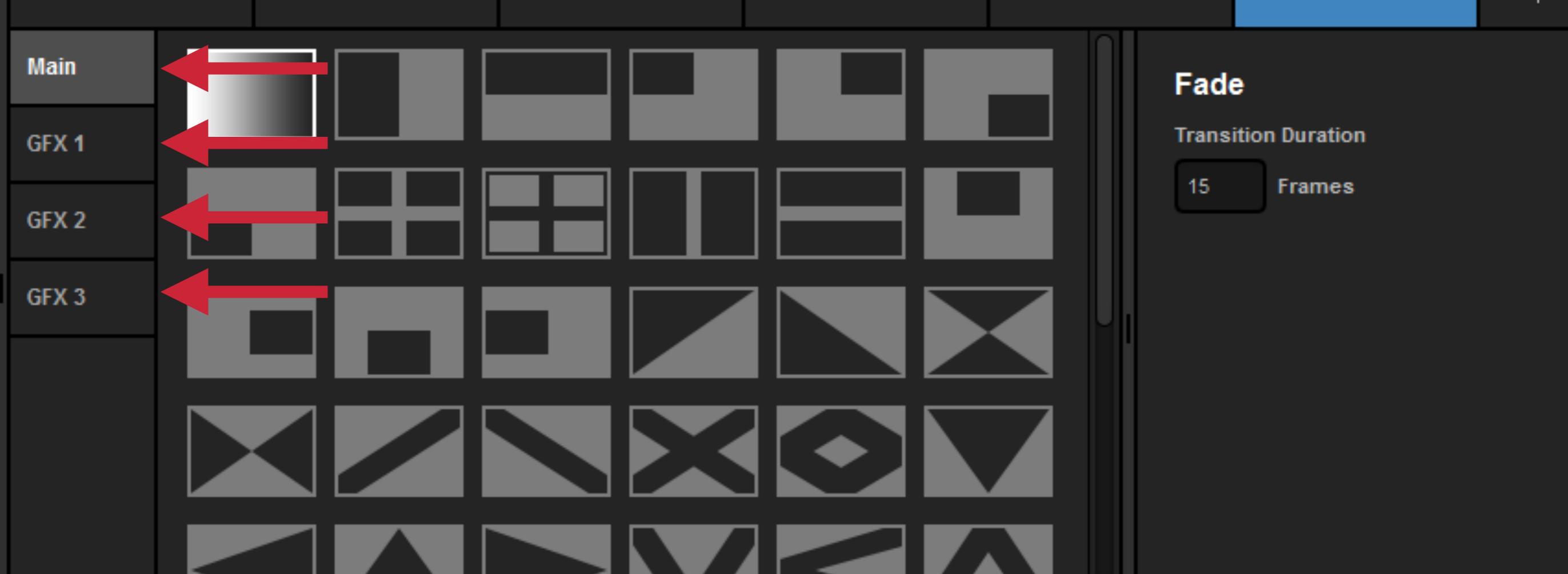
Another commonly used transition is Dissolve, which is an overlapping dissolve between the Preview and Program sources.



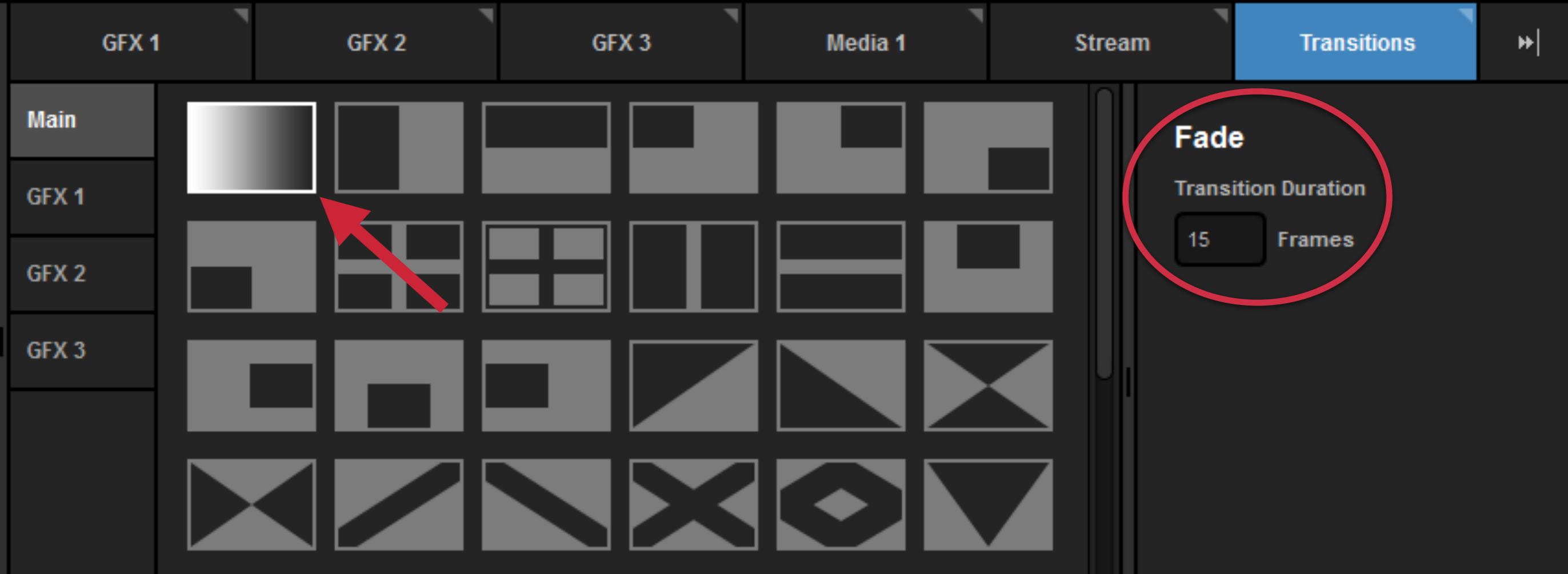
A **wipe** is an animated transition where the Preview source overlays the Program source.



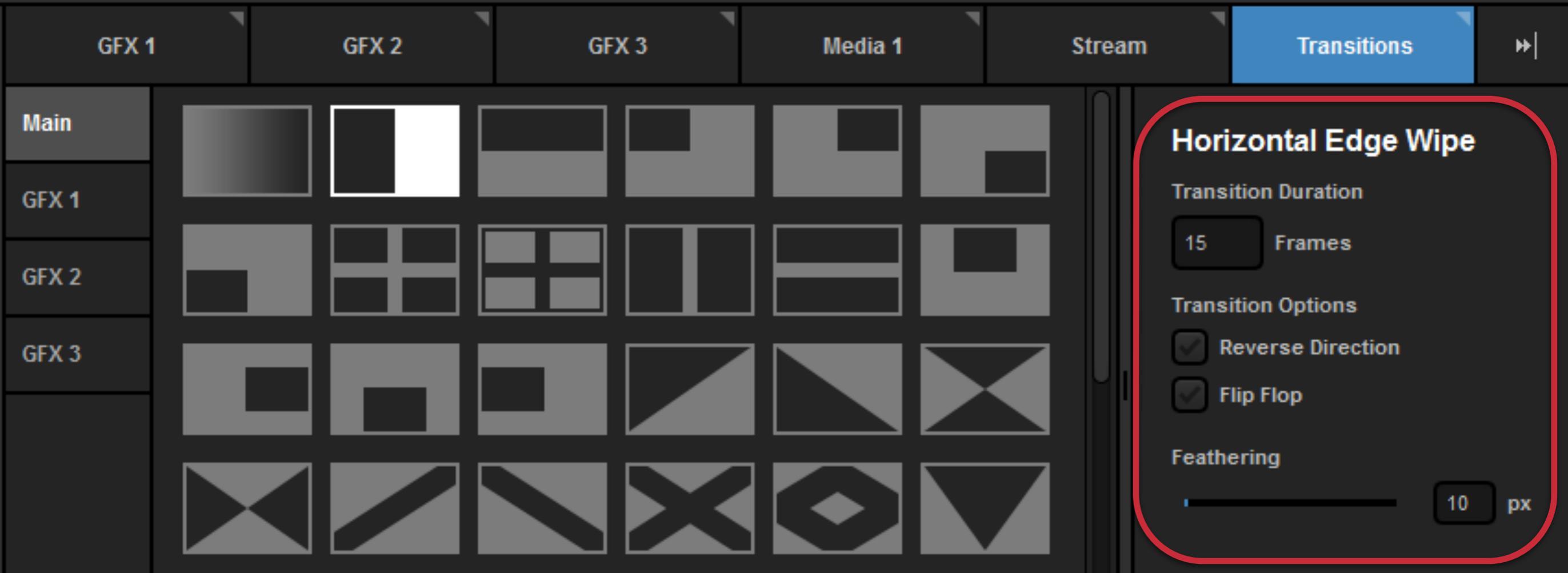
In Livestream Studio, either fade or various wipes can be set under the Transitions tab in the lower right corner of the interface.



Choose from the left what you want to set a transition type for. (Main refers to anything coming from Preview.)



Fade is the first option in the Transitions menu. On the right, you can set how long (in frames) you want an automatic transition to last.

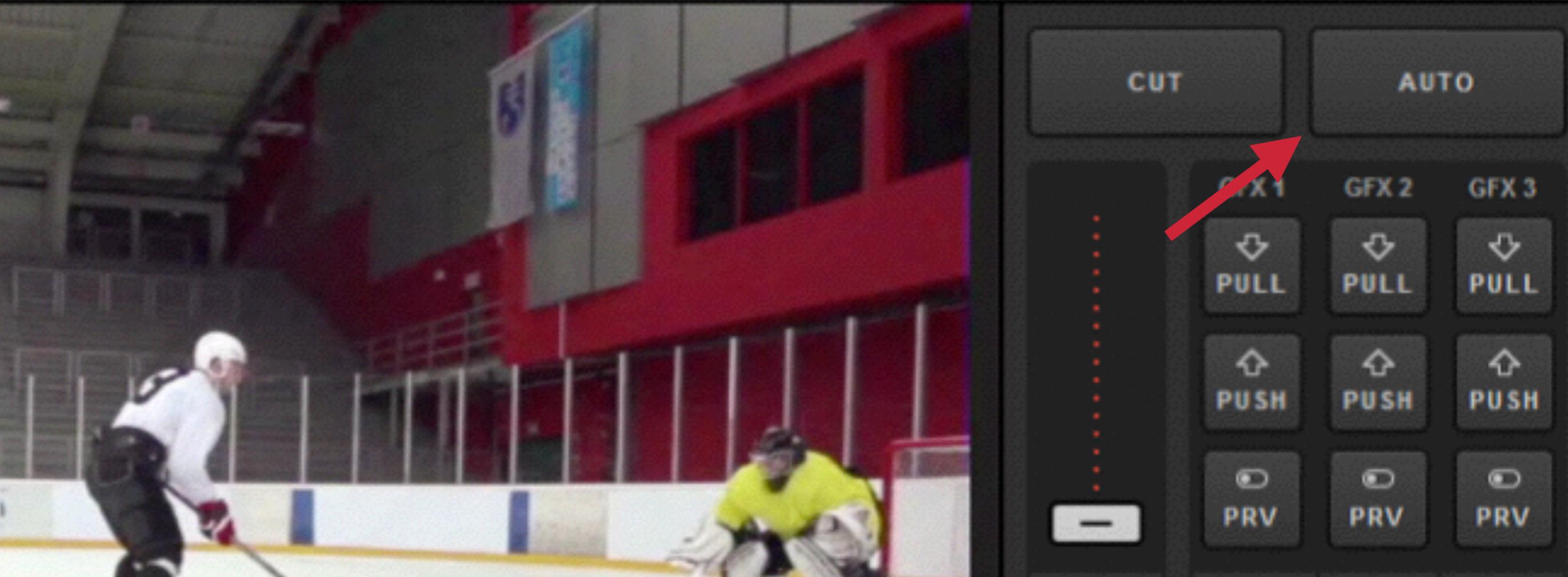


The rest of the options in this menu are different kinds of wipes. Selecting one of these will show further settings on the right, such as the wipe's speed and direction.

vestream



One way to activate the fade or wipe transition is by pressing the '**Auto**' button, which will perform the switch at the speed you set under the Transitions menu.



This corresponds with the **'Auto'** button in the upper right corner of Livestream Studio.



Another way to use that transition is to manually switch your sources using the **T Bar** on the Studio Surface. This allows you to control the transition's speed.

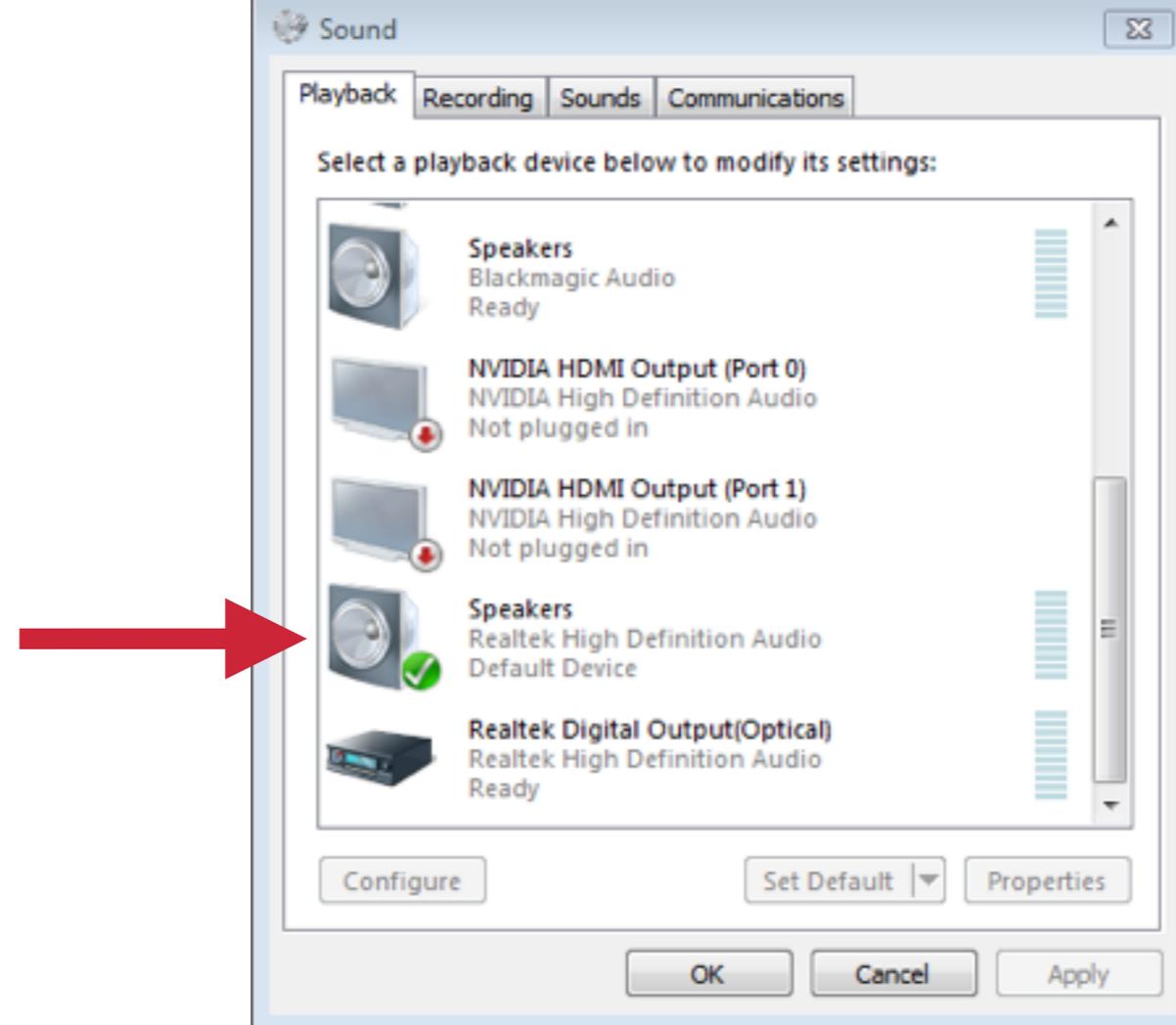


This switch corresponds with the virtual **T Bar** in the upper right corner of Livestream Studio.

Basic mixing of audio sources



First, to be able to hear your audio sources, plug headphones into either of the two **jacks** on the lower right corner of Studio Surface.



If you do not hear audio coming from Livestream Studio in your headphones, check that your Windows sound settings are set to 'RealTek High Definition Audio.'



Audio will come to your headphones when the corresponding **headphone** button for that source is lit.



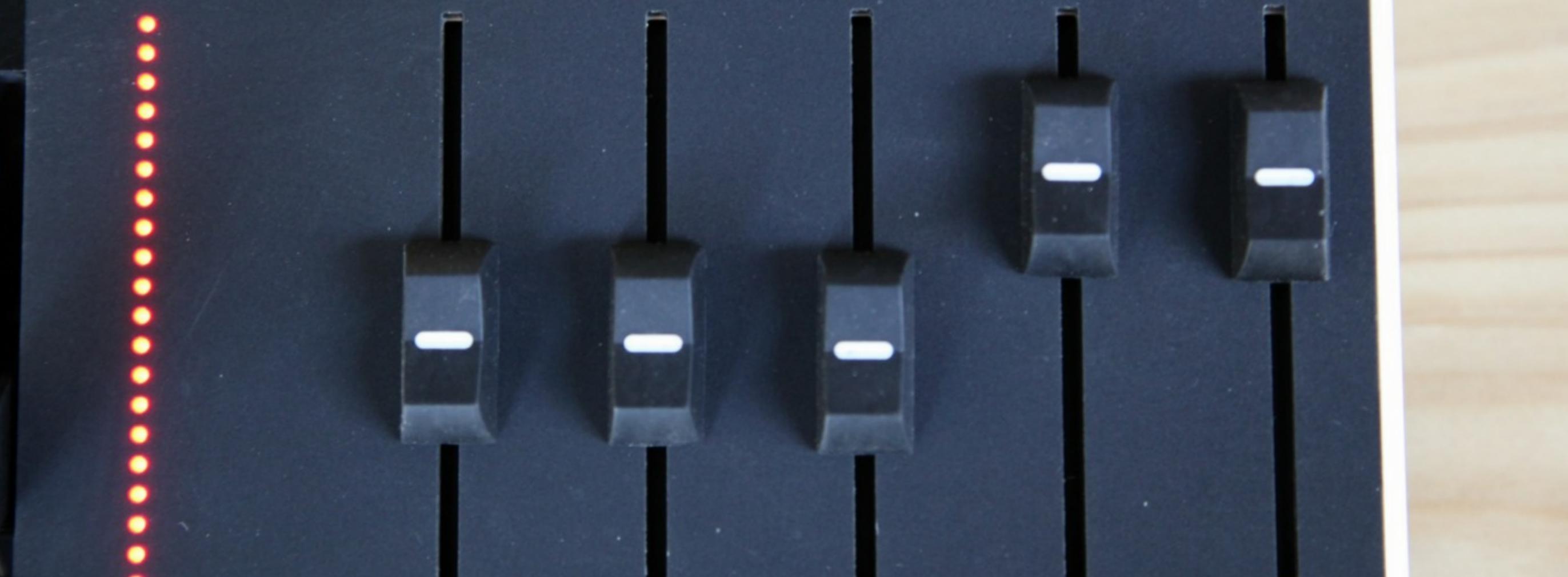
You can use these buttons to isolate each audio source before going live and adjust their levels as needed.



You will know which source(s) are being heard in the headphones by which **headphone** buttons are lit (in this case, only track 3). Press a lit **headphone** button to stop monitoring that source.



To monitor only Program audio, disable headphone monitoring on your sources and enable Program record/stream headphone monitoring with their **headphone** buttons.



When monitoring audio, use the corresponding **faders** to adjust the levels for any track, including Program output.



When switching between your video sources, you may notice different audio controls on the left lighting up and turning off during transitions.



By default, audio coming from any video source will only be heard when that source is in Program. The corresponding '**Audio**' button will light up yellow to indicate this.



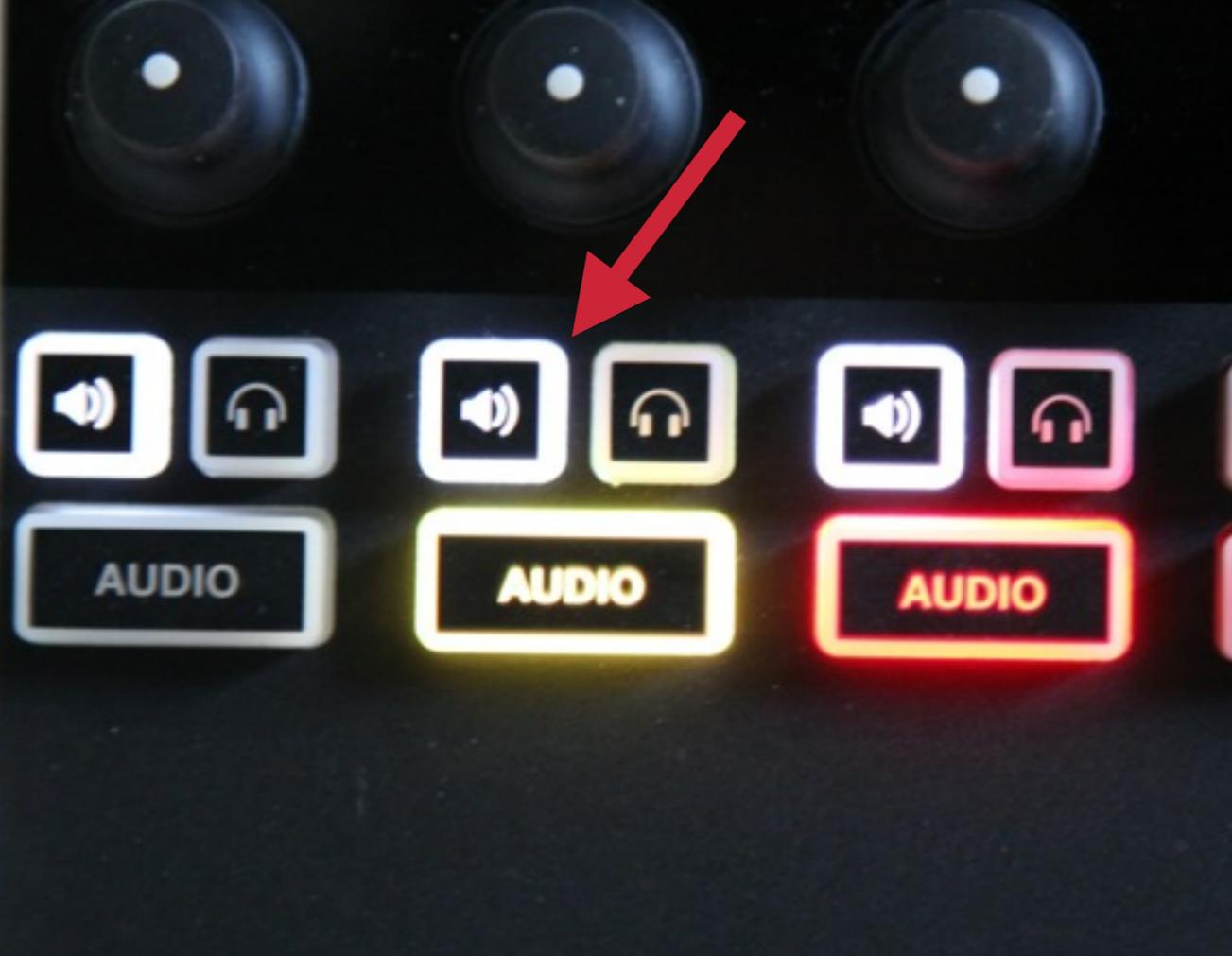
You may have an audio source that you want outputting at all times. If this is the case, press the '**Audio**' button that corresponds with that track.



This will lock the audio on Program, and the button will light up red to indicate this. You will now hear this source's audio in Program, even when switching to other sources.



Other audio sources will continue to follow their video source into and out of Program as normal.



If there is an audio source that you do not want to hear at any point, press the corresponding **speaker** button. This will mute the source.

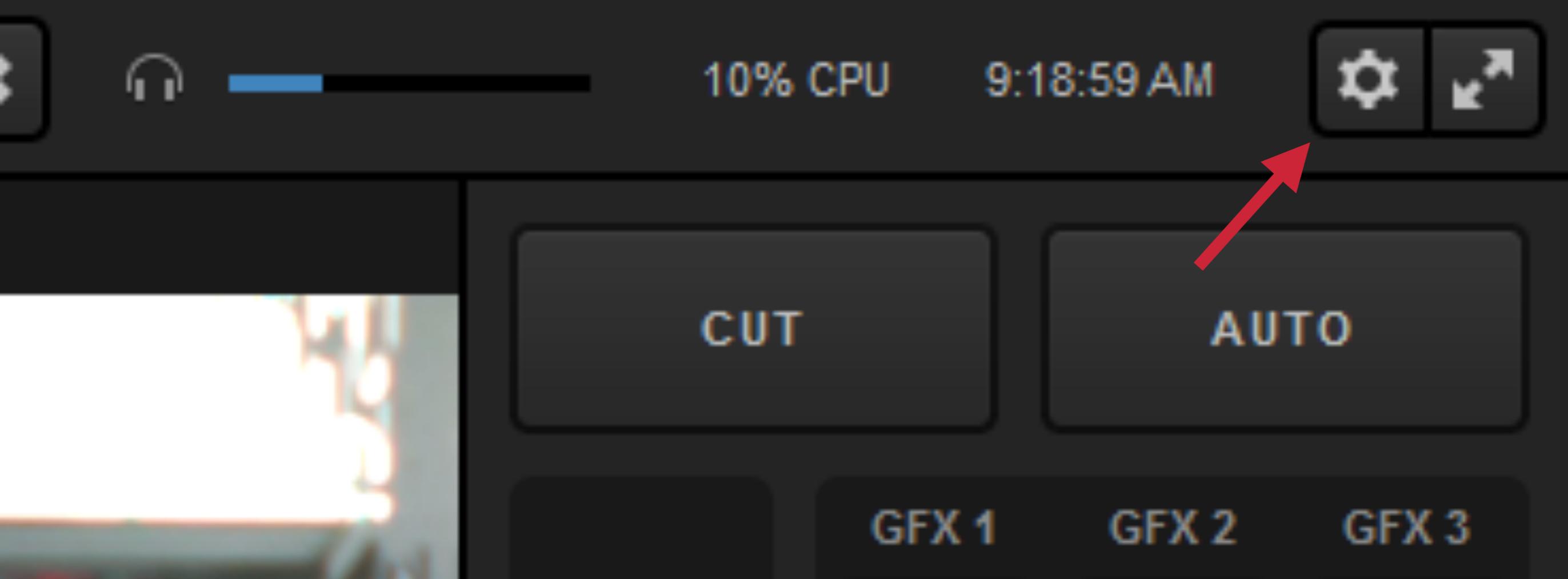


You will know when an audio source is muted by seeing its levels fade from green to gray in the monitor above it.



Muted audio sources can be reactivated by pressing the same corresponding **speaker** button. Non-muted audio sources will have lit up speaker buttons.

Outputting Livestream Studio Program to a source



Many producers output their Program to a monitor or projection system for on-site viewers. This is configured in Livestream Studio settings.

Project Format

CANCEL

SAVE

Project Video Format

HD 720p 59.94

Project Audio Format

48kHz Stereo

It's best practice to use a 720p video format across all cameras for lowest output latency.

Software updates frequently include decreasing this delay.

Settings

CANCEL

SAVE

Project Format

Inputs

Outputs

Audio In

Recording

Media Player

Live Input Source License: Up to 6 devices

Live Video Output License: Up to 4 outputs

Multi-screen License: Yes

Media Players License: Up to 2 players

Remote Camera License: Up to 2 remote cameras

Recording License: Up to 4 concurrent recordings

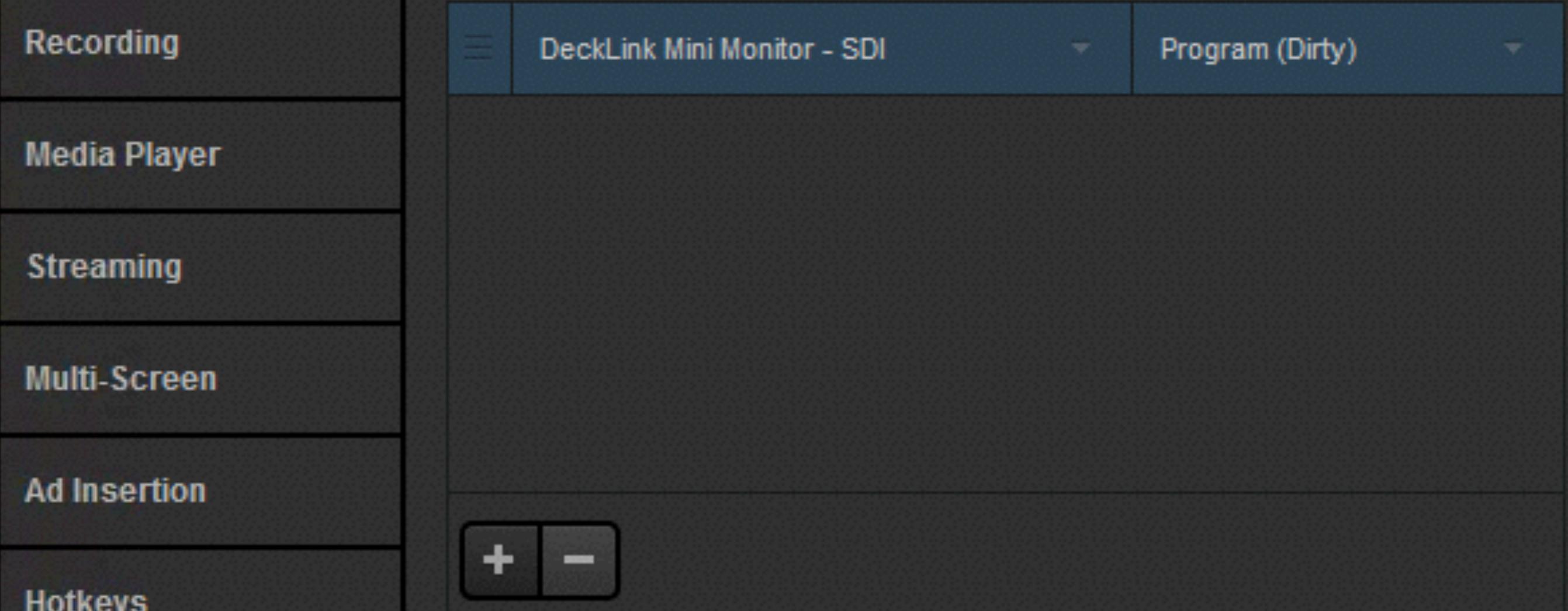
Streaming License for Original Livestream: Yes

Streaming License for New Livestream: Yes

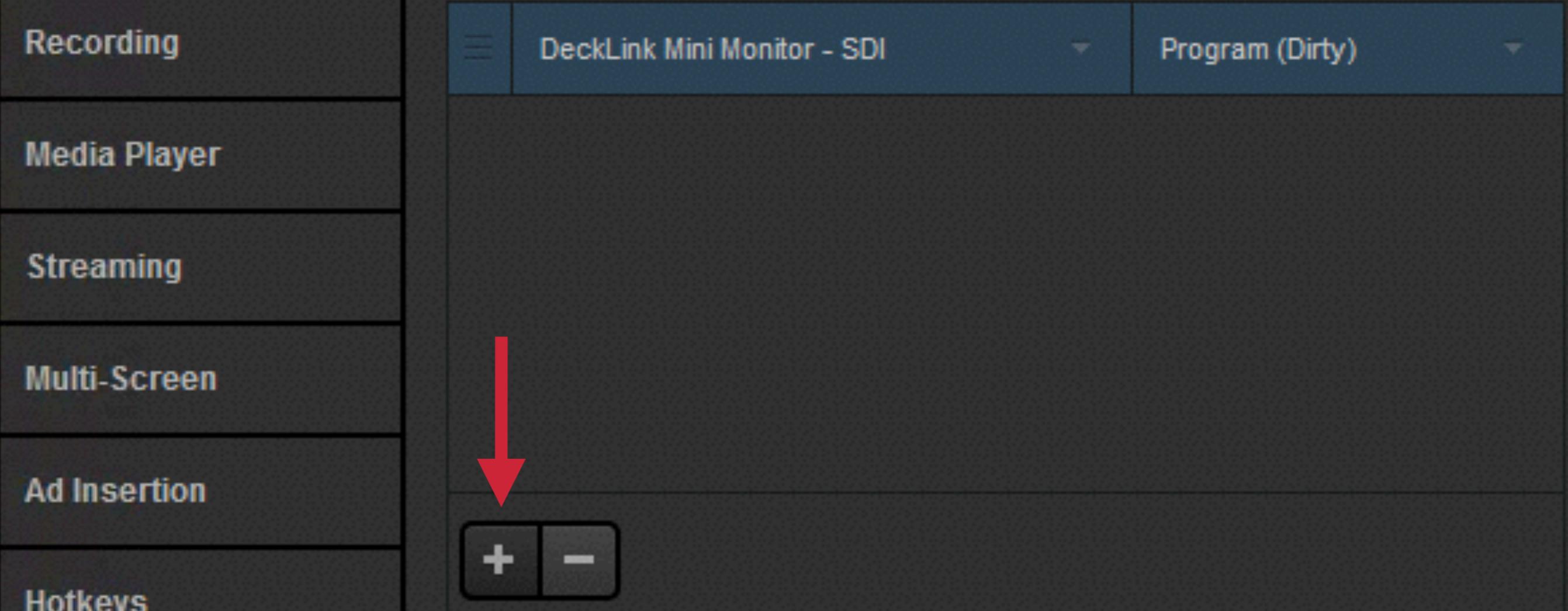
Streaming License for Ustream: Yes



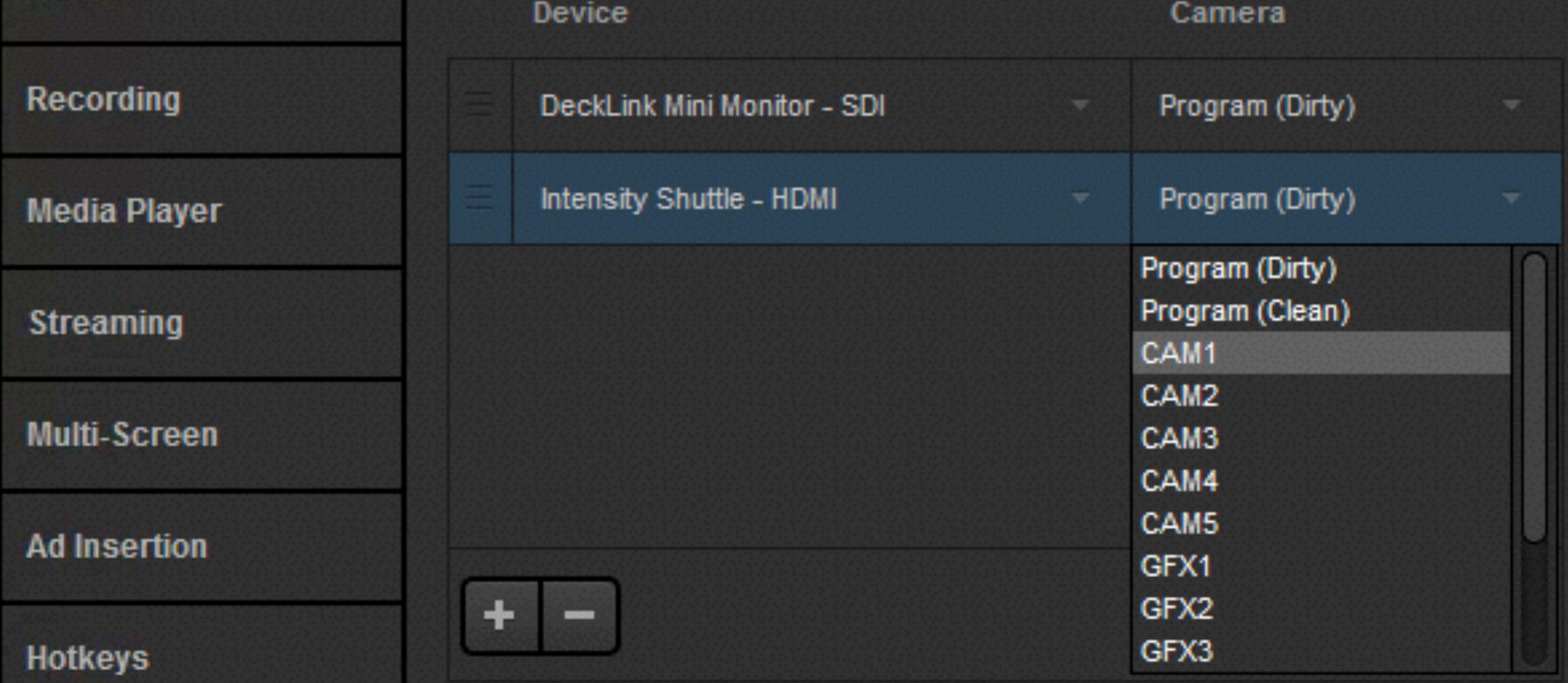
As of Livestream Studio version 2.2.150, users can now send up to four outputs via Blackmagic Design capture cards.



Navigate to the '**Outputs**' tab 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).



Connect the selected cable to the BlackMagic output card.



Run the cable to your output source and connect it to the proper input port.

Settings

CANCEL

SAVE

Project Format

Inputs

Outputs

Audio In

Outputs

Number of AUX Mixes

0

Device

Camera

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



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

Recording

 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 4 high-resolution recordings, saved as Motion JPEG .AVI files with uncompressed audio.

Settings: Recording

CANCEL SAVE

Project Format

Video In / Out

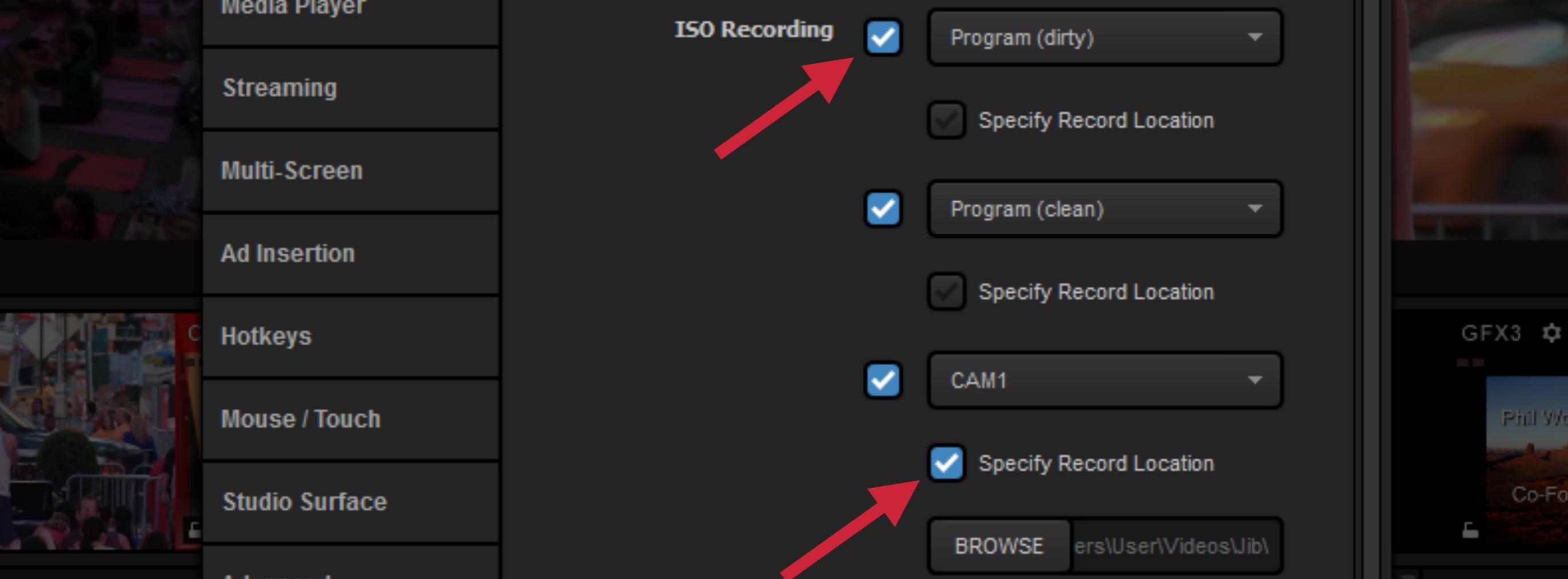
Audio In

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 you want your recordings to be saved to by default.



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.

Timecode



Relative to Start



Time of the Day (Clock)

Recording Bitrate

75 (Mbps)



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.

Recording Bitrate

75 (Mbps) ▼

Record to Media Bin

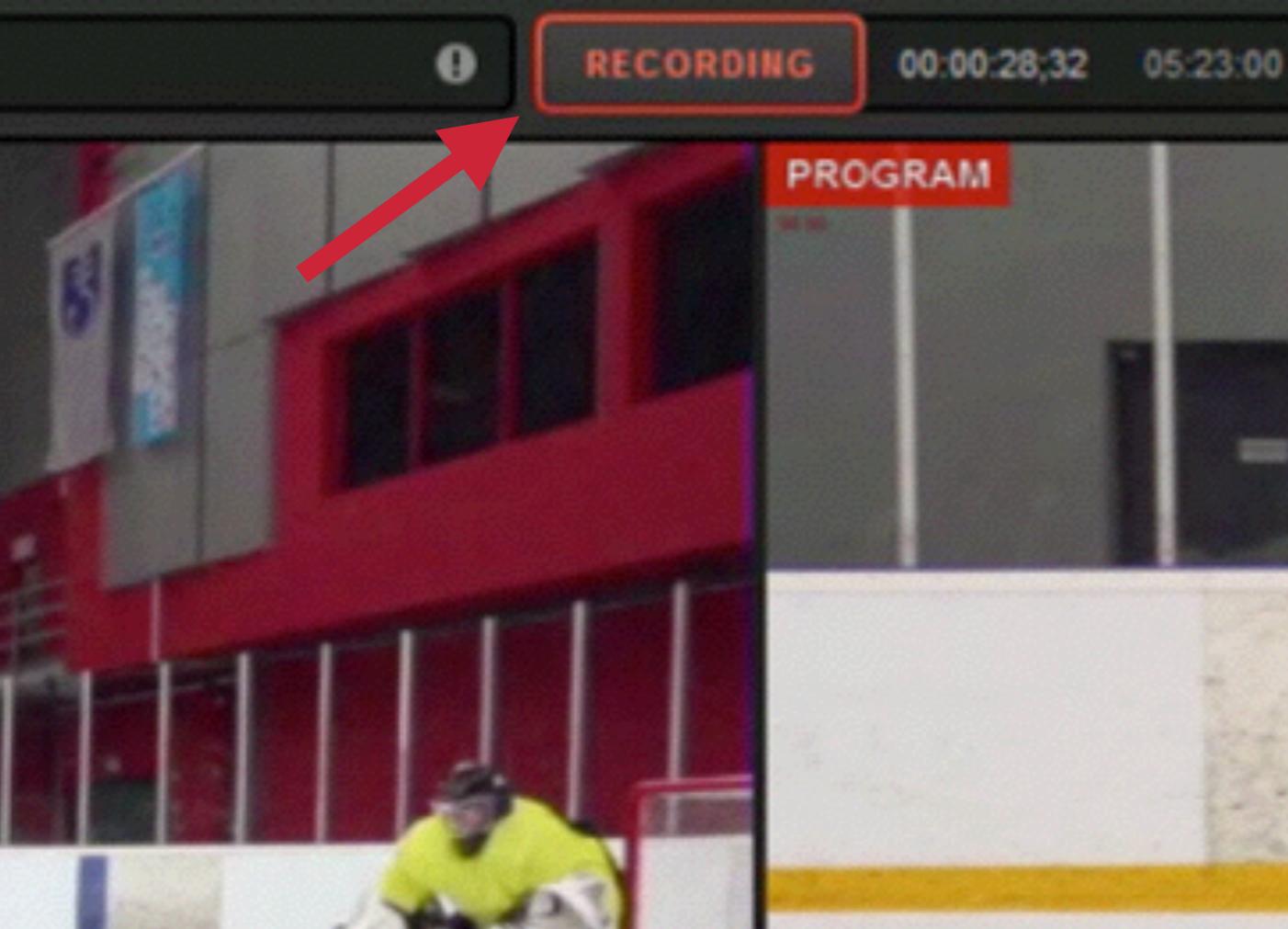
Media 1

Media 2

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



Save your settings, then press 'Record' either at the top of Livestream Studio or in the upper right corner of Studio Surface.



These 'Record' buttons will light up red when a recording is active.



Press 'Record' again to stop the recording. All recording files will be located wherever you specified in Livestream Studio settings.

Streaming

WHAT IS LIVESTREAM?

HELP

LOG IN

SIGN UP



The easiest way to stream from Livestream Studio is with the Livestream platform. To get started, go to new.livestream.com and click 'Sign up.'

Join with Email

We will send you a link to finish your signup.

Email Address

Create Account

Clicking 'Join with email' will open this window. Type in your email address and click 'Create Account.'

We've sent you an Email

To finish your account, please find the email we sent you and follow the link.

OK

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

Hi there,

You're almost done signing up to Livestream! Click the link below to create your account:

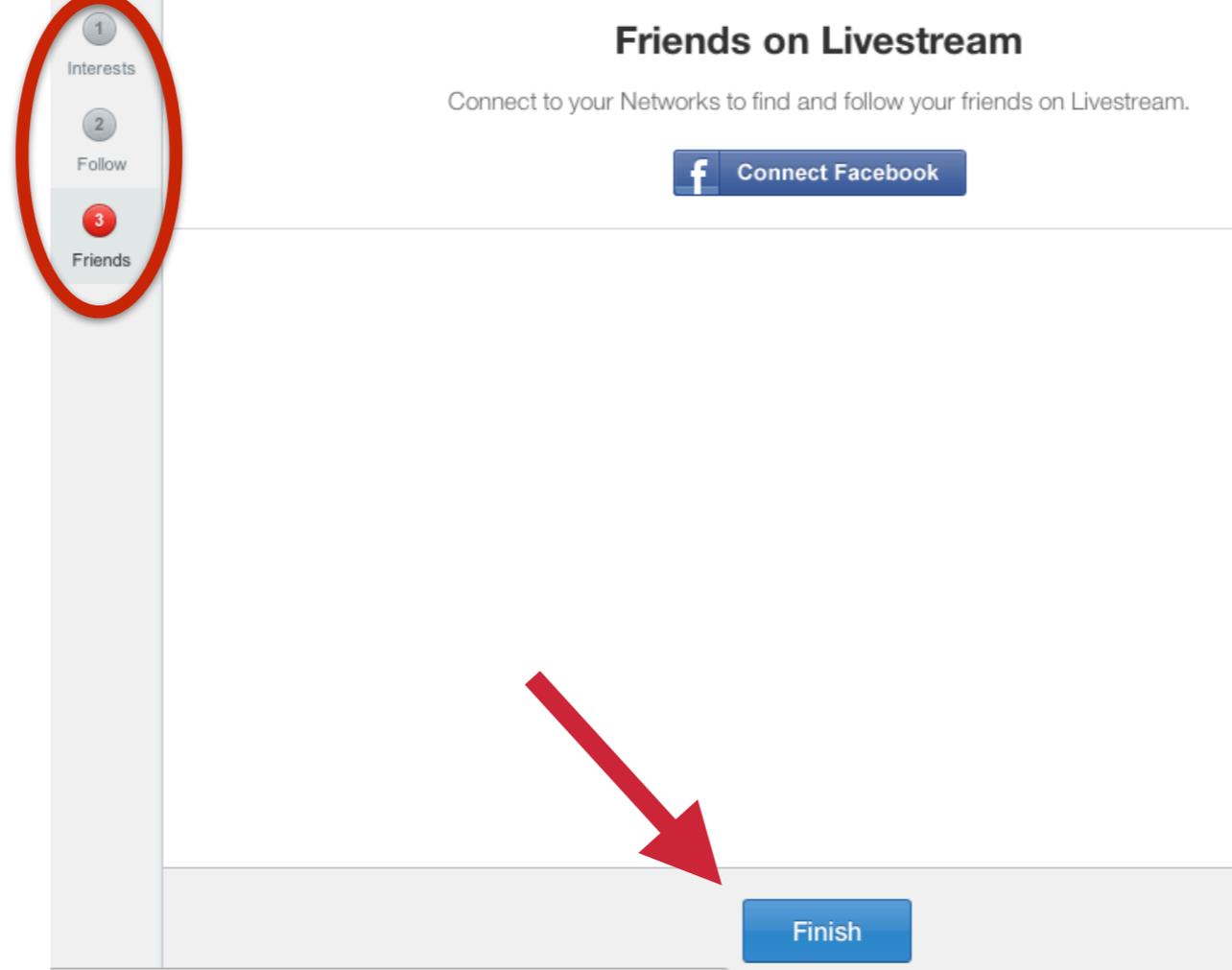
Create Account

This is what the account creation email will look like. It comes from notifications@livestream.com.

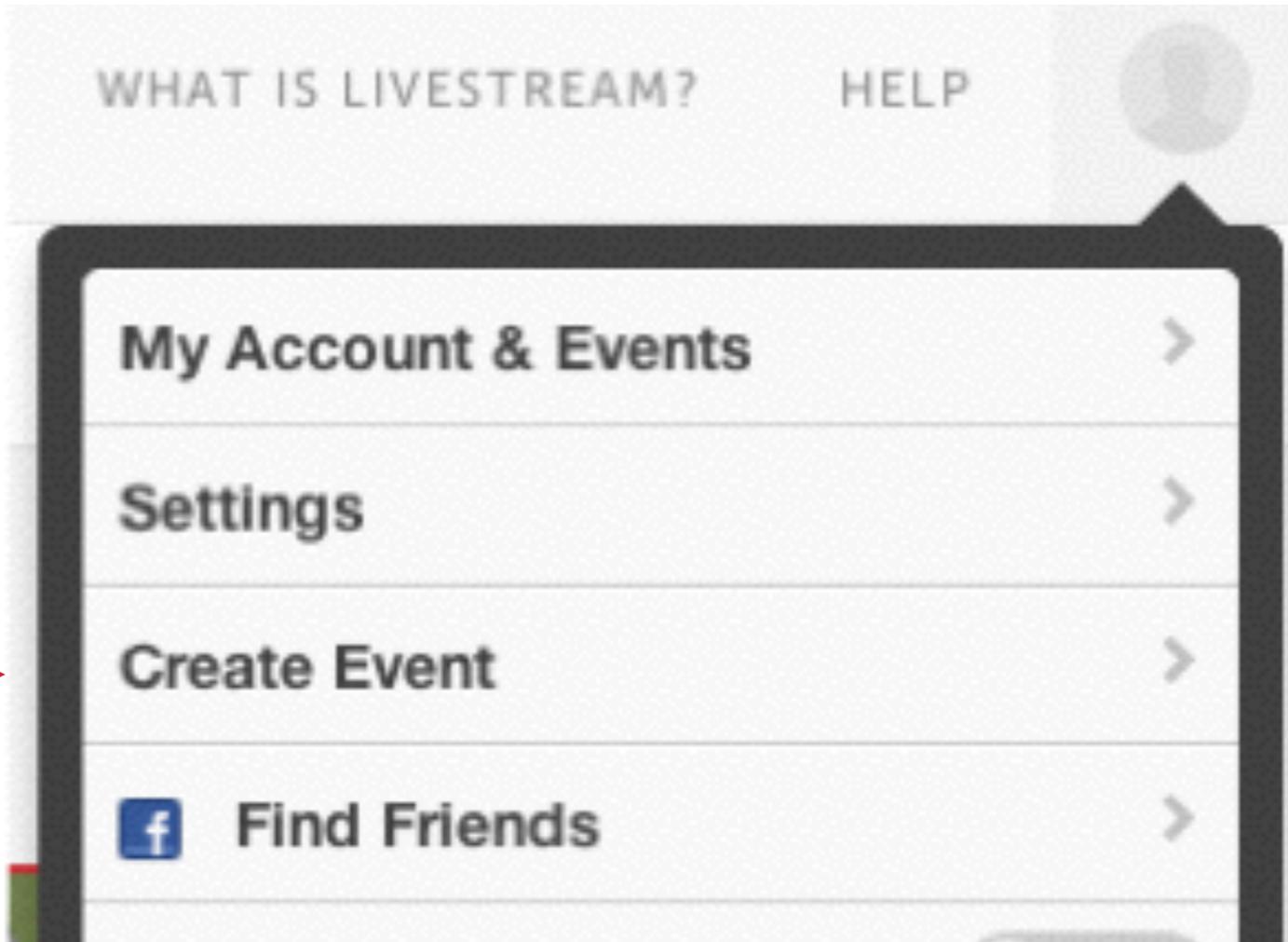
Click the blue 'Create Account' button to continue.

Create Your Account

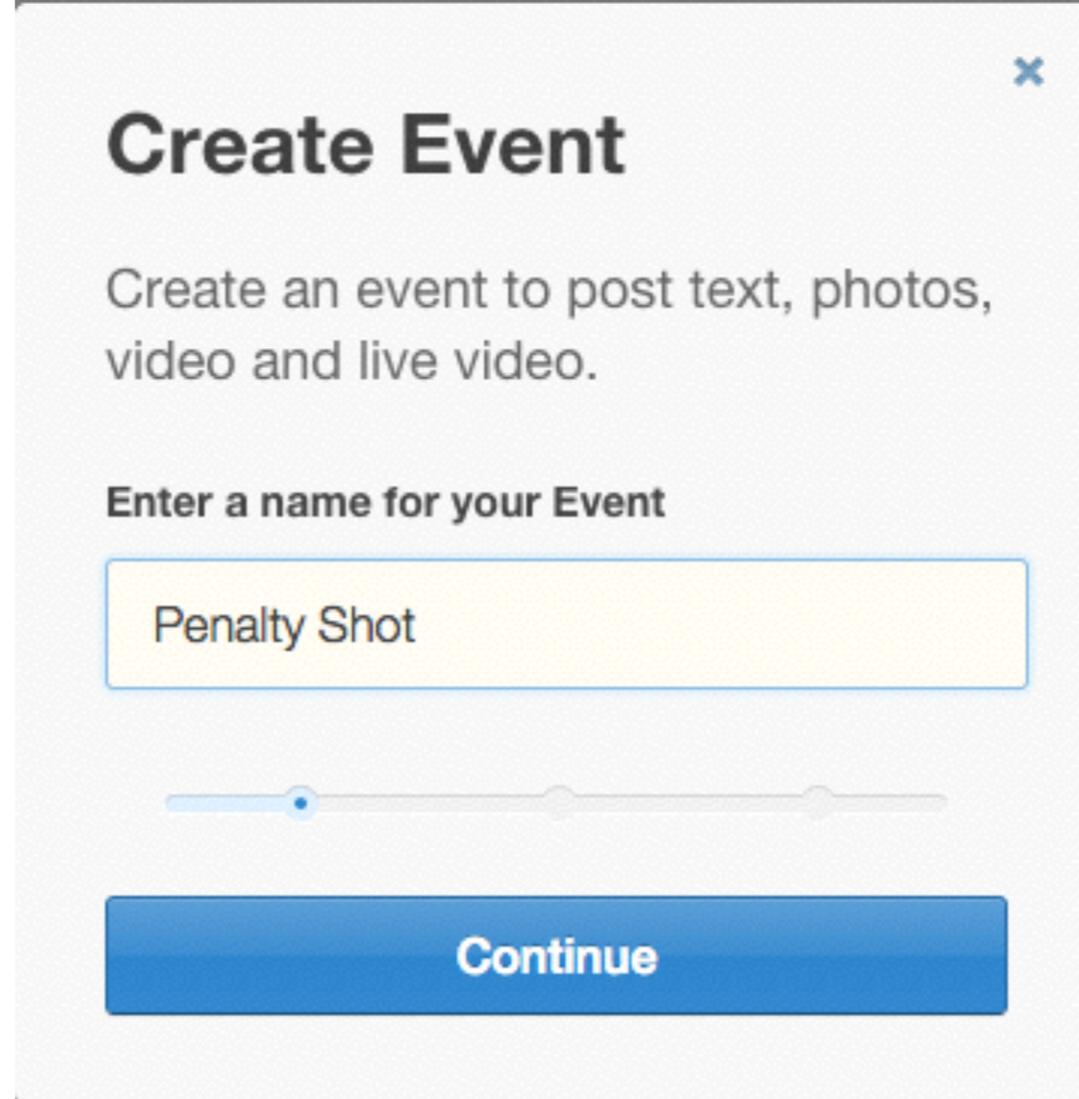
Type in your name and create a password for your account. Then click 'Create Account.'



You will be directed to a series of 3 optional steps to get started with Livestream. Click 'Finish' on the final page to get to your account.



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



A small window will pop up prompting you to give your event a name. Type in a name, then click 'Continue.'

When is it?

Let your followers know when to tune in.

Start Time

All times in EDT

End Time

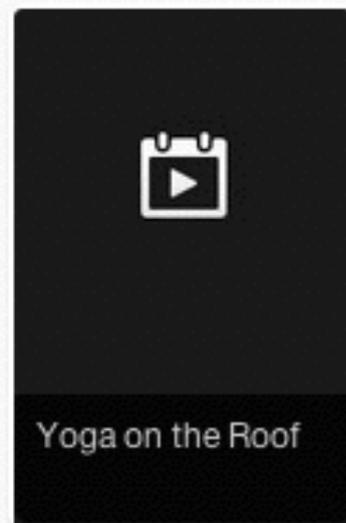
All times in EDT



Continue

Next, set a start and end time for your event. Keep in mind this is a guideline for your viewers, not necessarily a limitation for when you may stream.

Add a poster to help promote your event.

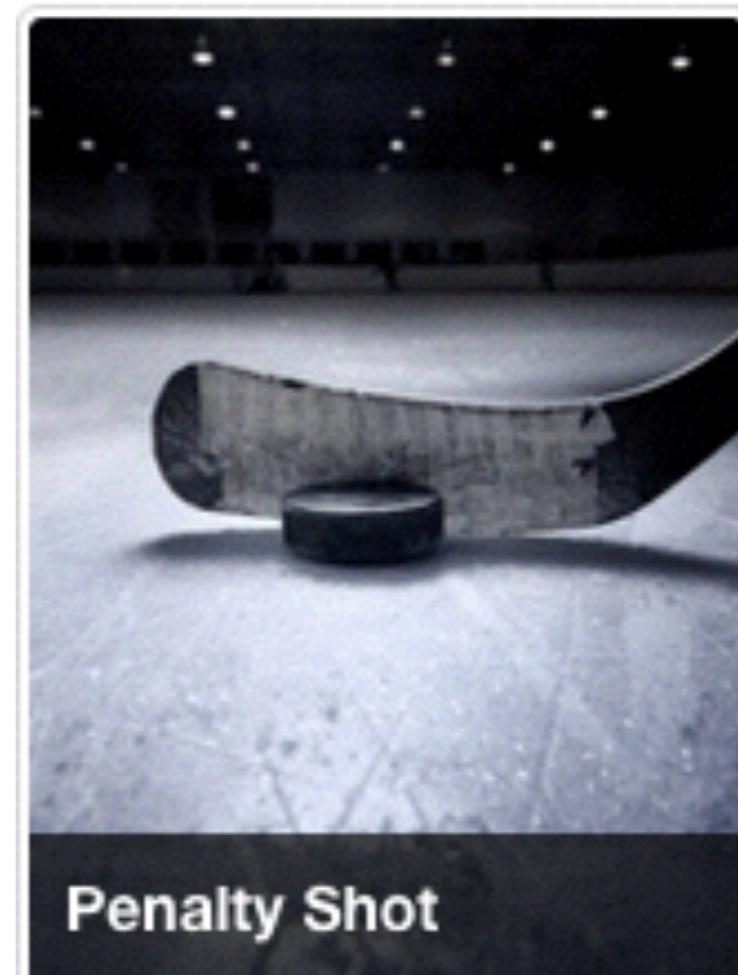


Upload an Image

JPG, GIF, PNG.
Max size: 10MB



Continue



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

Event Created!

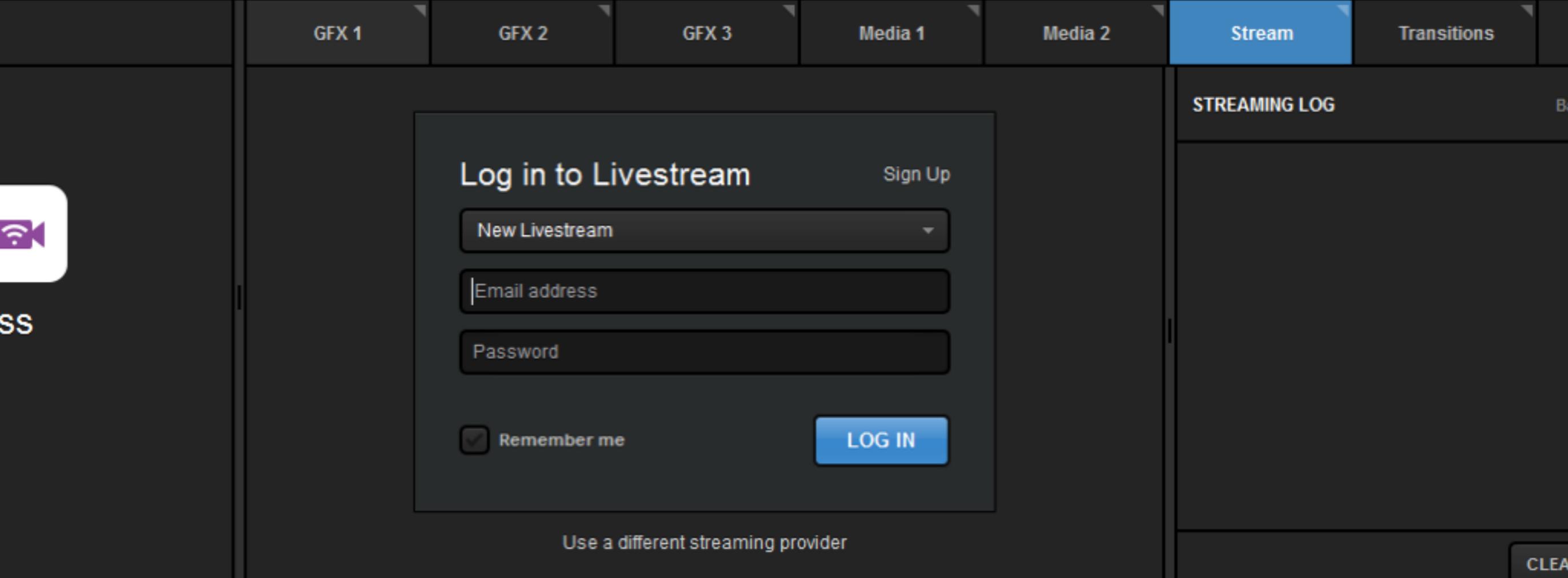
You can now post text, photos, videos and live videos to your event.



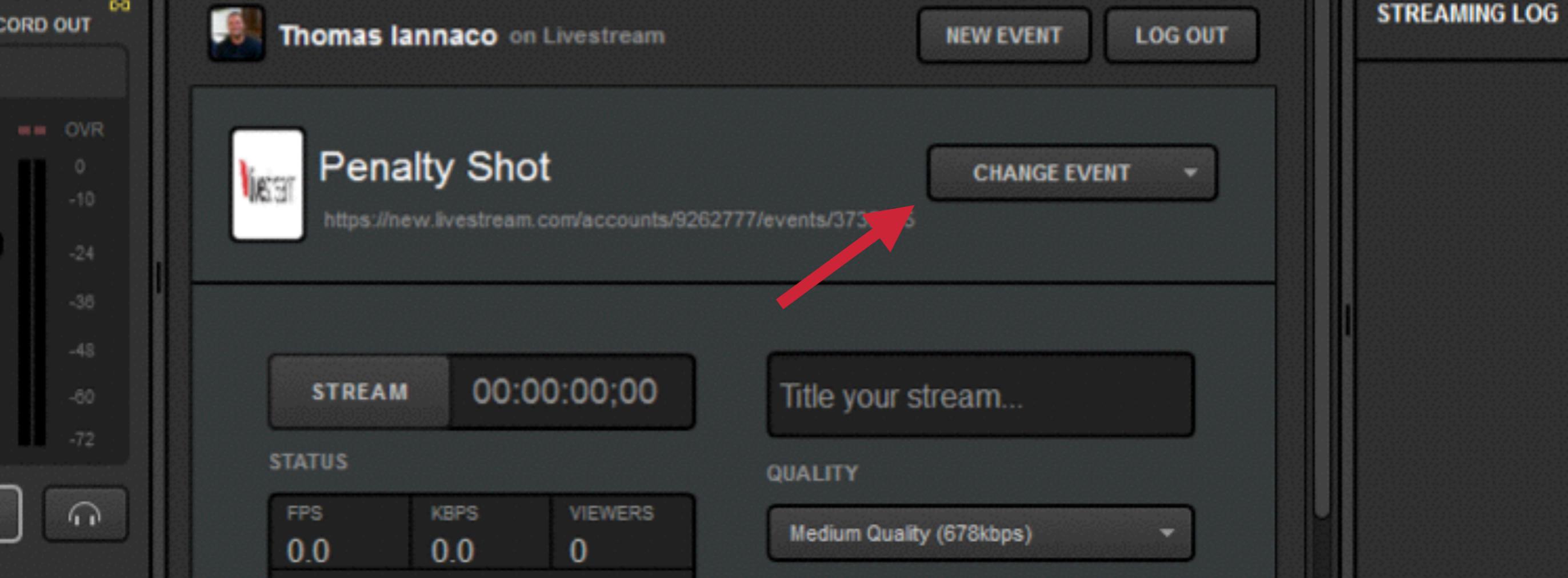
Ok, let's go

Notify Followers & Publish Now

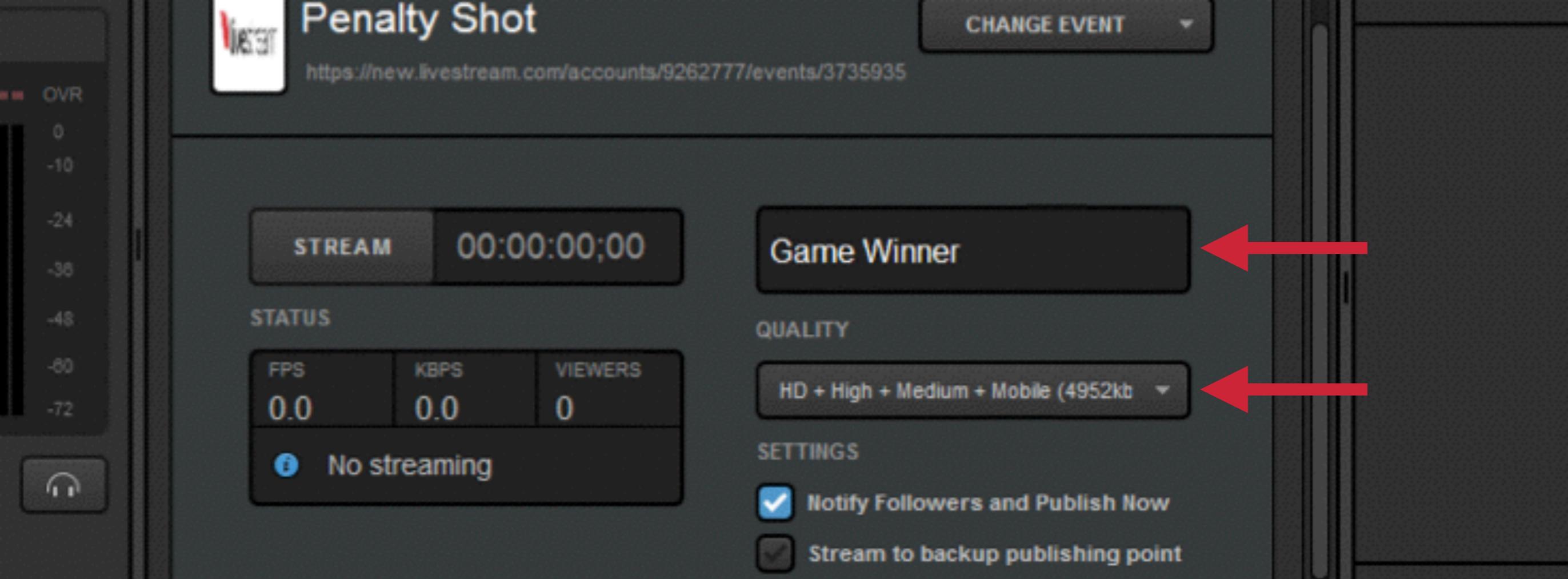
Your event has been created. You can now publish the event page and notify any Livestream followers. You may also continue making any changes.



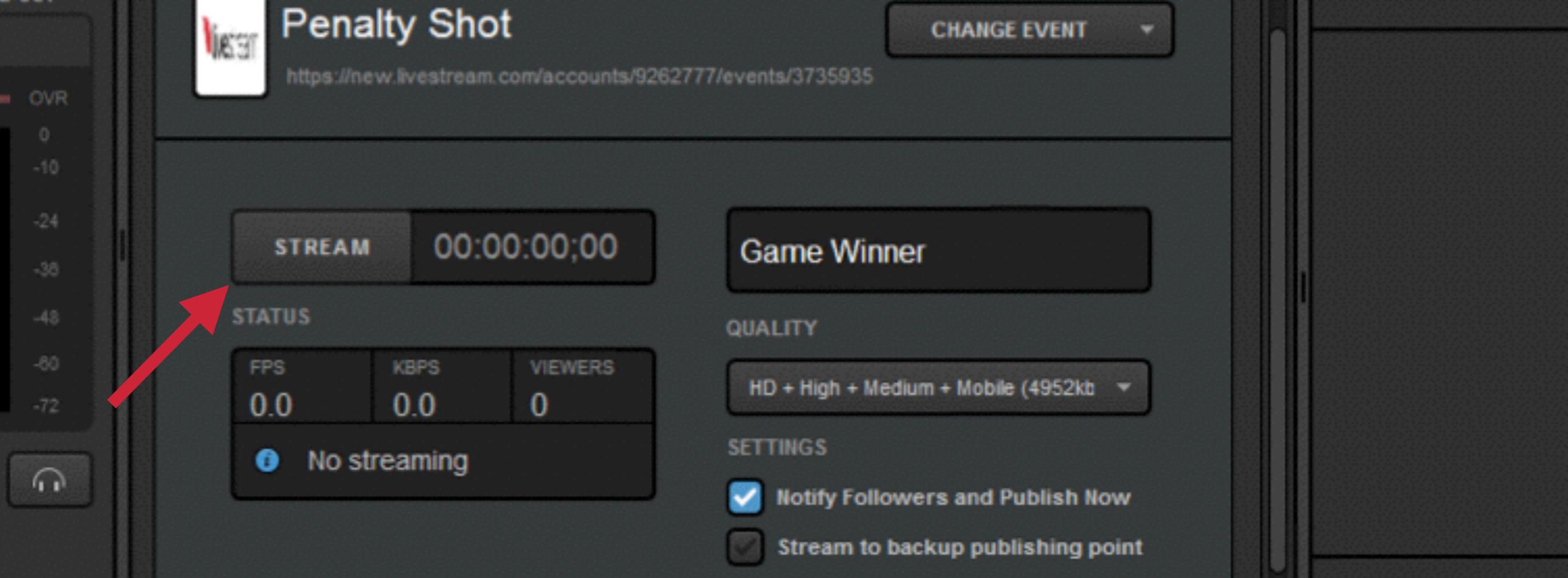
In Livestream Studio, click on the Stream tab, select 'New Livestream' from the dropdown menu, and login to your account with your email and password.



Once logged in, you should see your account and event name. Click on the 'Change Event' dropdown menu to choose any other event on your account.



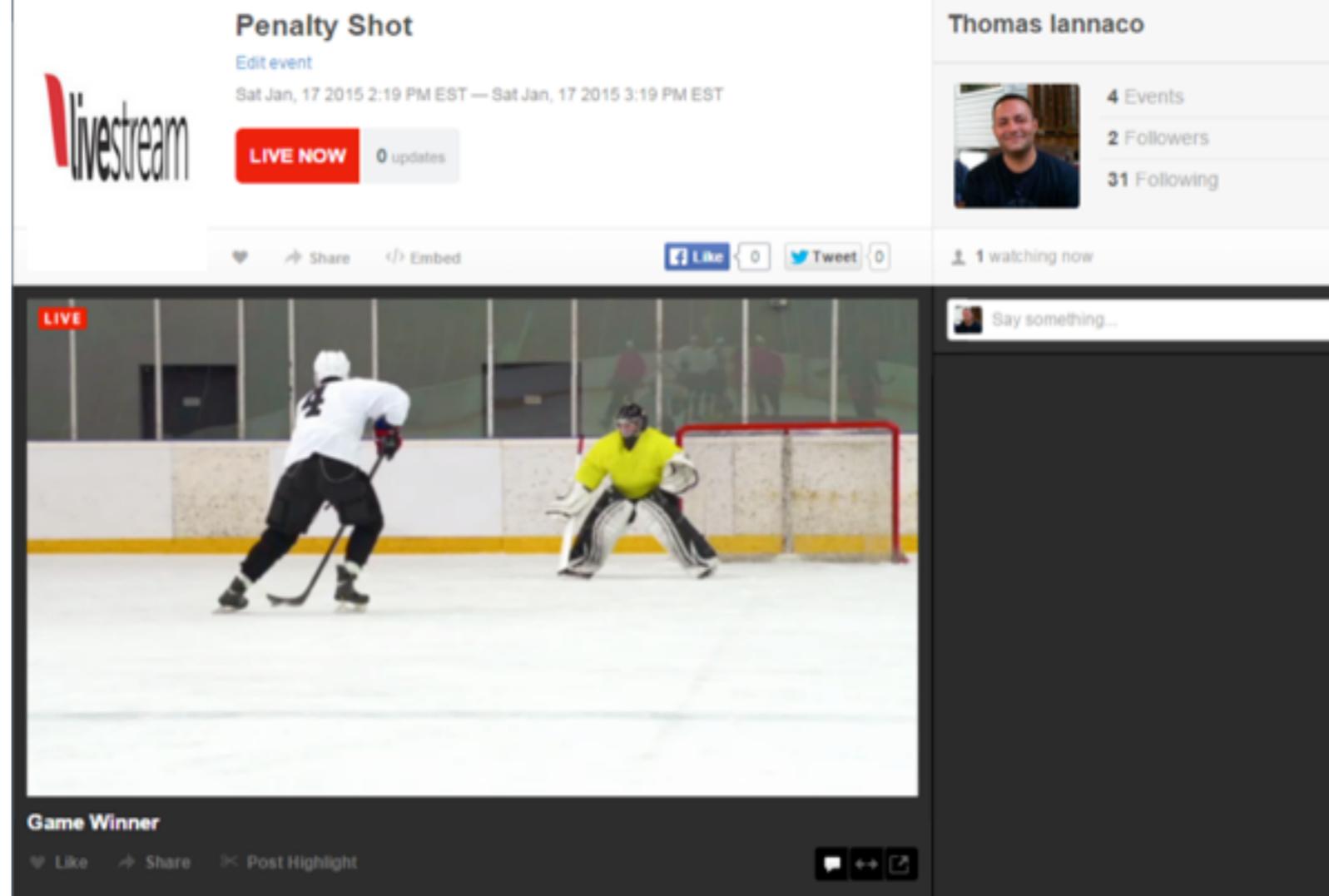
Name the stream and select the desired streaming quality. The quality you choose should be based on the strength of your CPU as well as your network's upload speed.



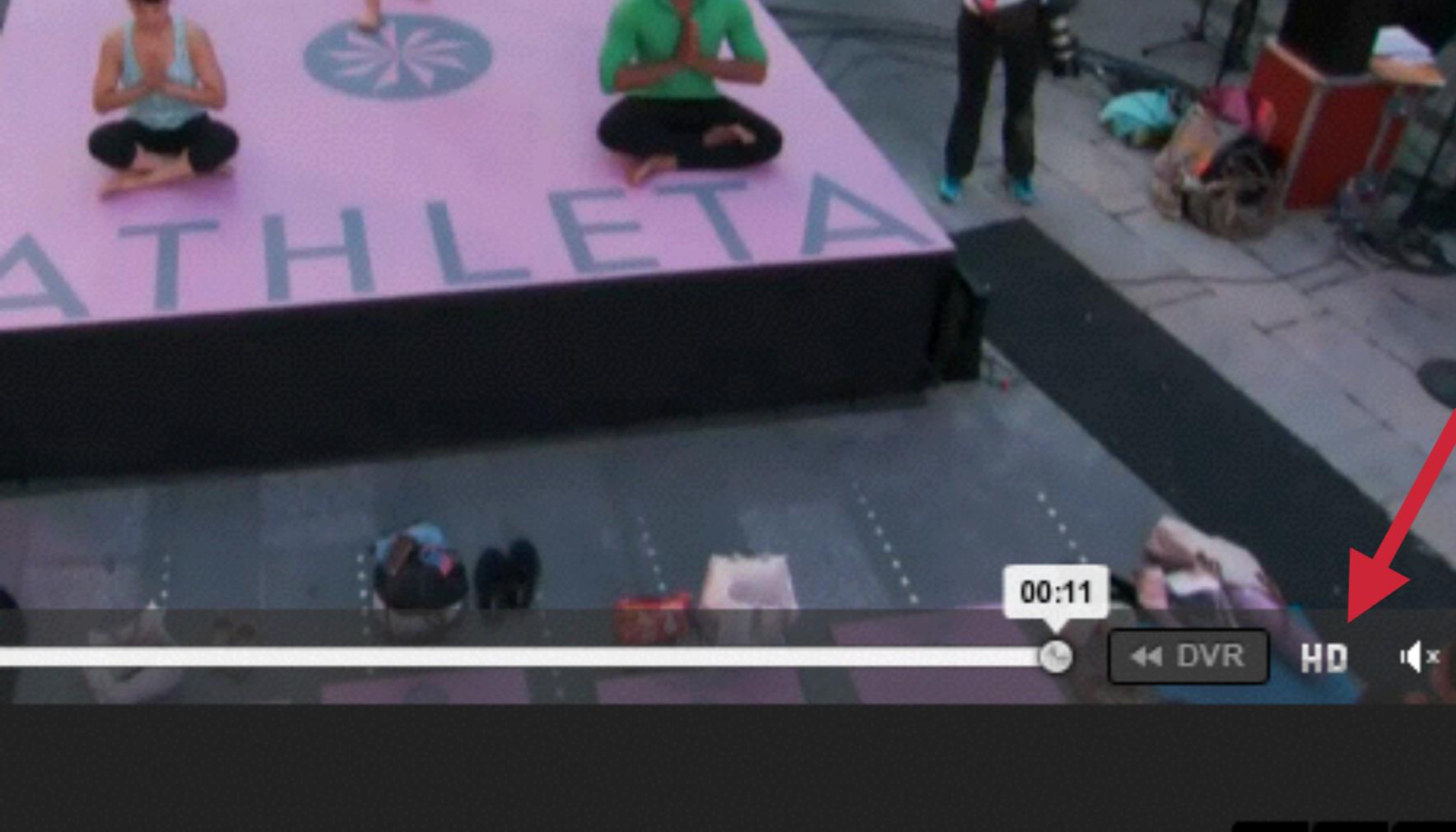
When you are ready to go live, one option is to click 'Stream' in Livestream Studio.



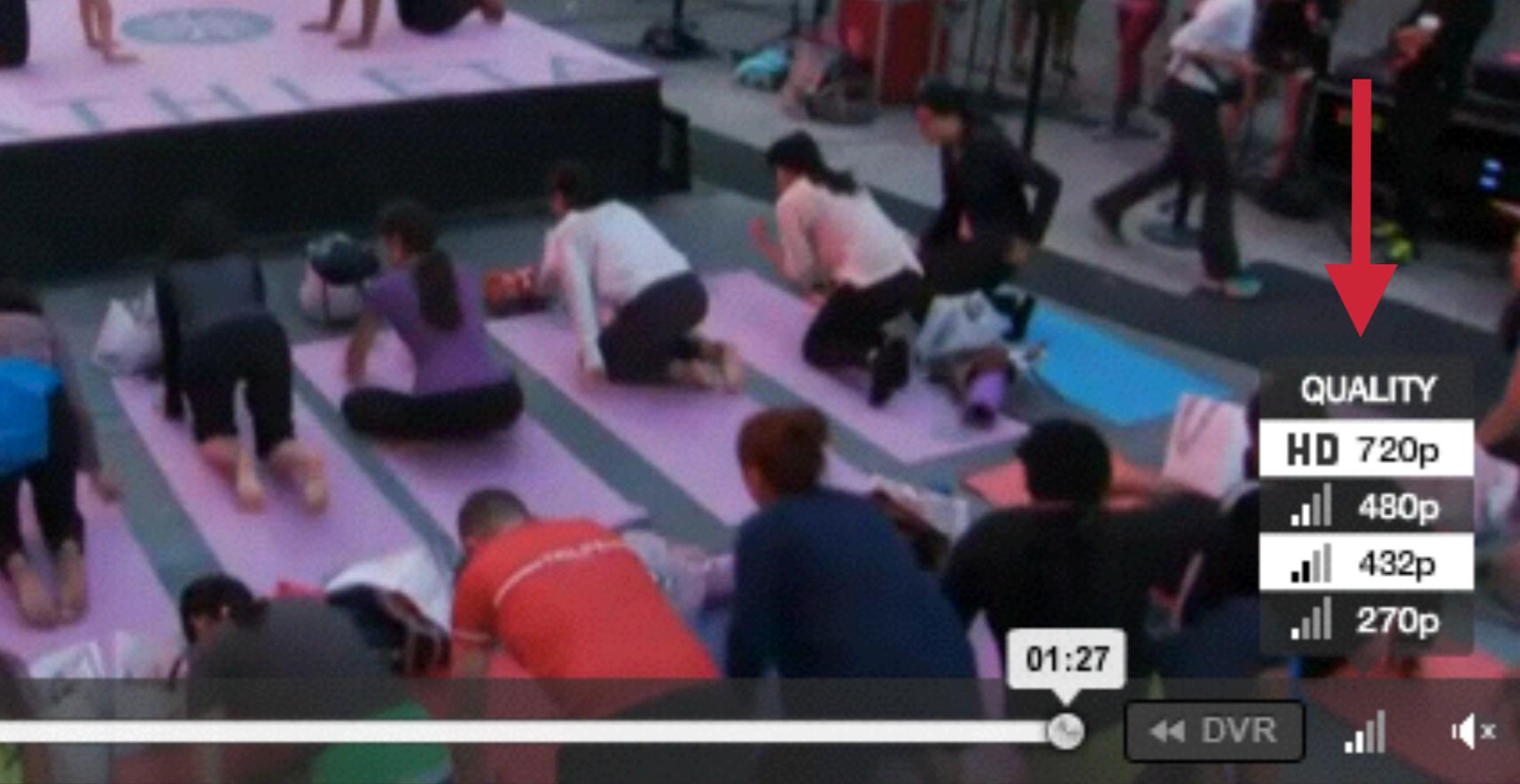
You can also start your stream from Studio Surface by pressing the 'Go Live' button in the upper right hand corner.



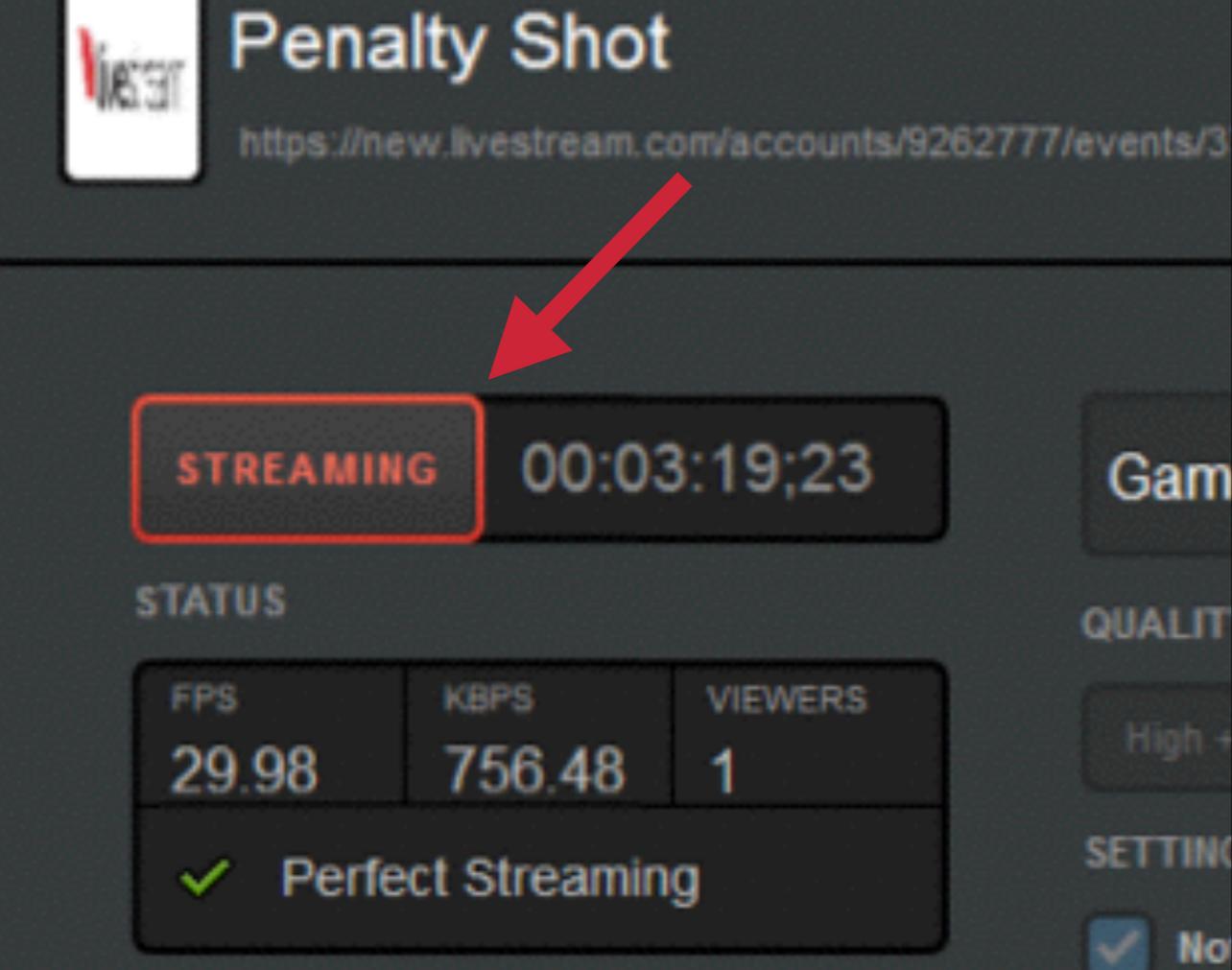
The live player will immediately appear at the top of your event page. It takes about 30 seconds for it to load.



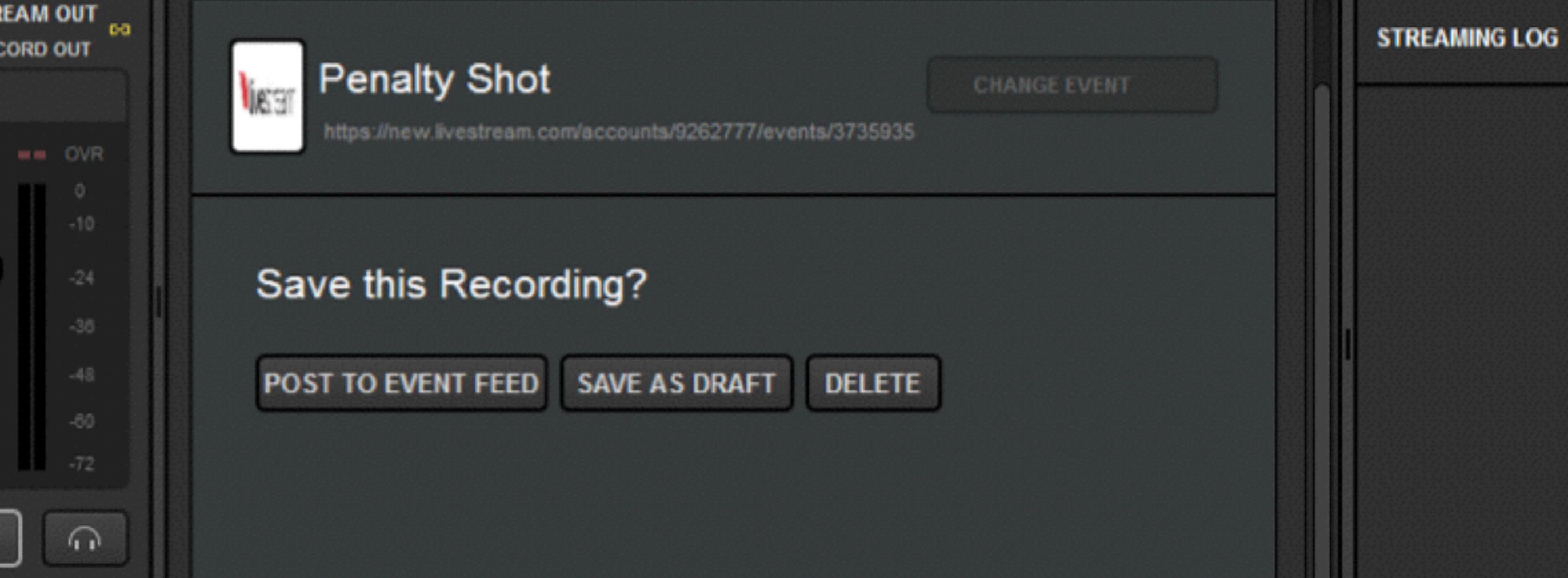
When you send a multi-bitrate stream, the Livestream adaptive player will automatically select the optimal viewing quality based on the viewer's download speed.



Any viewer can also manually select a viewing quality. If they have sufficient download speed, the player will switch to the selected quality.



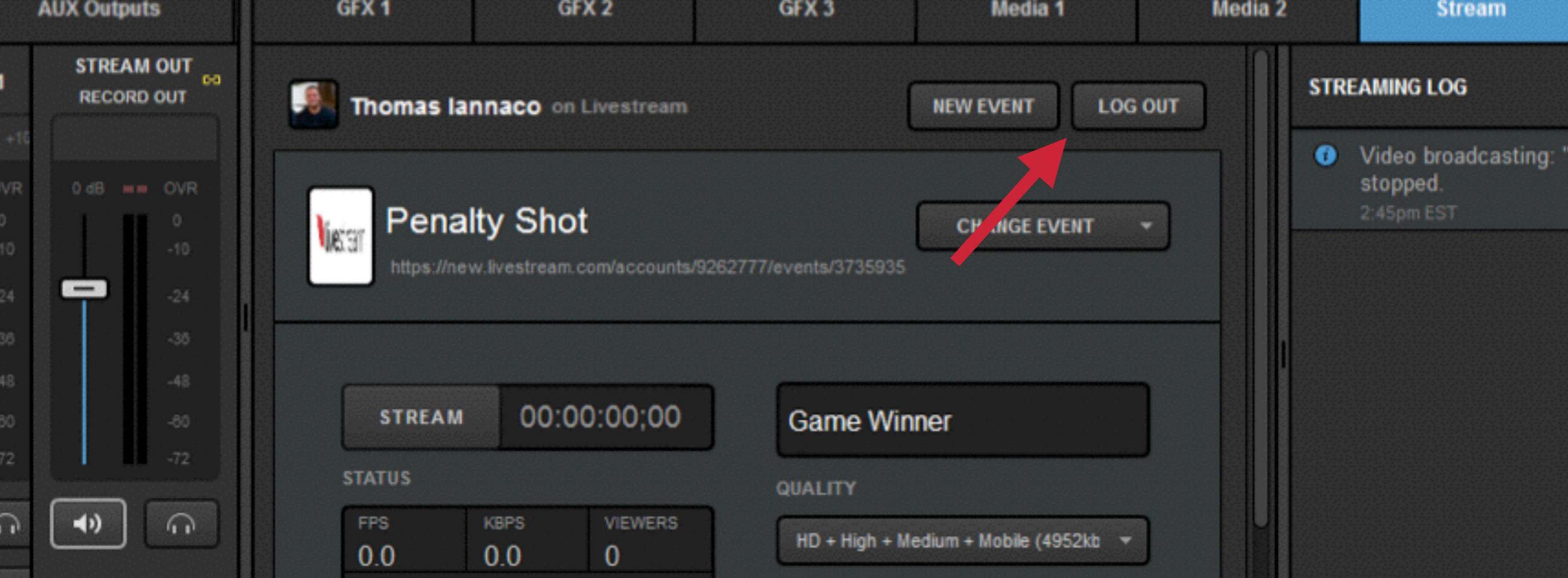
When you are ready to stop broadcasting, you can press either 'Streaming' in Livestream Studio or 'Go Live' on Studio Surface to end the stream.



Livestream Studio will prompt you to post the video to your event feed, save as a draft, or delete it.

The screenshot shows a Livestream event page titled "Penalty Shot". The event is scheduled for Saturday, January 17, 2015, from 2:19 PM EST to 3:19 PM EST. It has 1 update and is marked as "Event Started". The page features a video player showing a hockey penalty shot in progress, with a player in a white jersey about to shoot and a goalie in a yellow jersey ready to block. The video is titled "Game Winner" and has 2 views. The user "Thomas Iannaco" is the creator of the post. The right sidebar shows the user's profile with 4 events, 2 followers, and 31 following. The bottom of the page shows 1 post and 1 video in the feed.

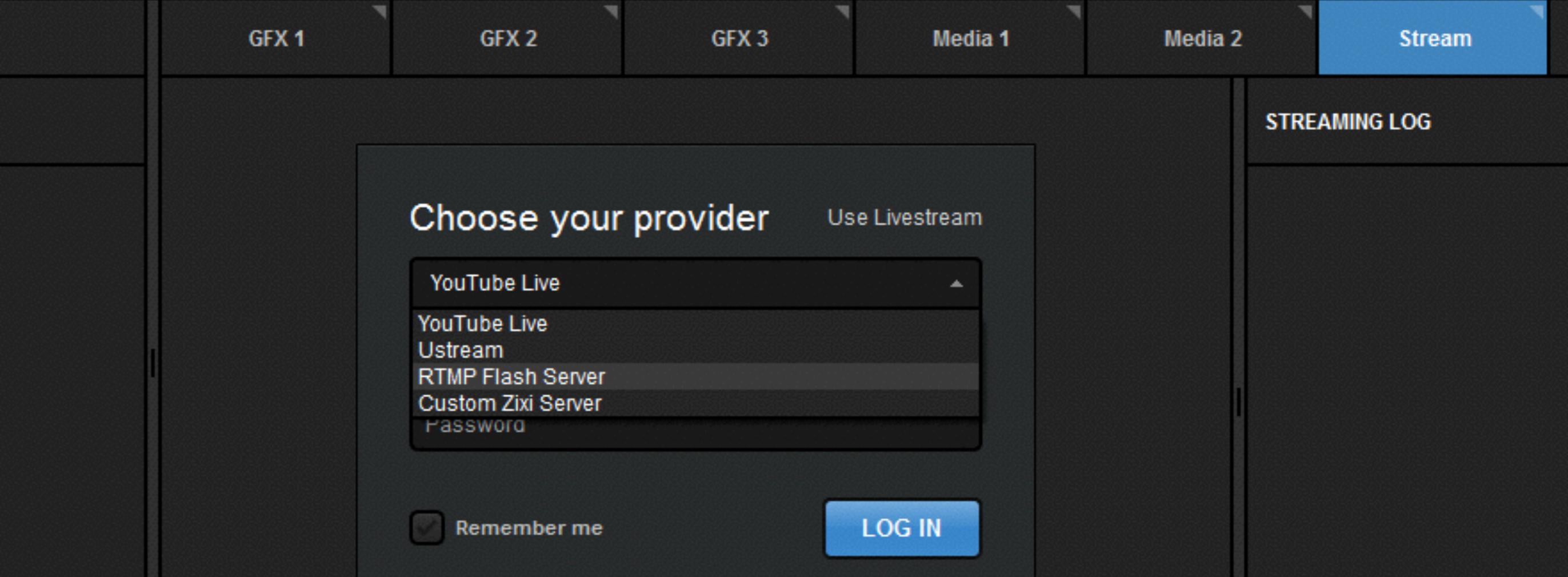
Selecting 'Post to event feed' will make the video on-demand clip available for immediate playback for any viewers who missed the live event.



Livestream Studio gives you the option to stream to other providers. Click 'Log out' to get to these options.

The screenshot shows the Livestream interface with a central login dialog box. The dialog box is titled "Log in to Livestream" and includes a "Sign Up" link. It features a dropdown menu currently set to "New Livestream", followed by input fields for "Email address" and "Password". There is a "Remember me" checkbox which is checked, and a blue "LOG IN" button. A red arrow points from the "Remember me" checkbox area down to the text "Use a different streaming provider" located below the dialog box. The background interface includes tabs for "GFX 1", "GFX 2", "GFX 3", "Media 1", "Media 2", "Stream" (which is active), and "Transitions". On the right, a "STREAMING LOG" panel shows several entries: "H.264 recording started (2014.09.09.56.56@2320kbps.mp4) 9:56am EST", "Perfect Streaming 9:56am EST", "H.264 recording stopped (2014.09.09.56.56@2320kbps.mp4) 9:59am EST", and "Video broadcasting: 'Solstice in Times Square' successfully stopped 10:00am EST". A "SAVE LOG" button is visible at the bottom right of the log panel.

Under the Livestream dropdown menu, click on the 'Use a different streaming provider' link.



Here is where you will see the dropdown menu showing other streaming options besides Livestream.

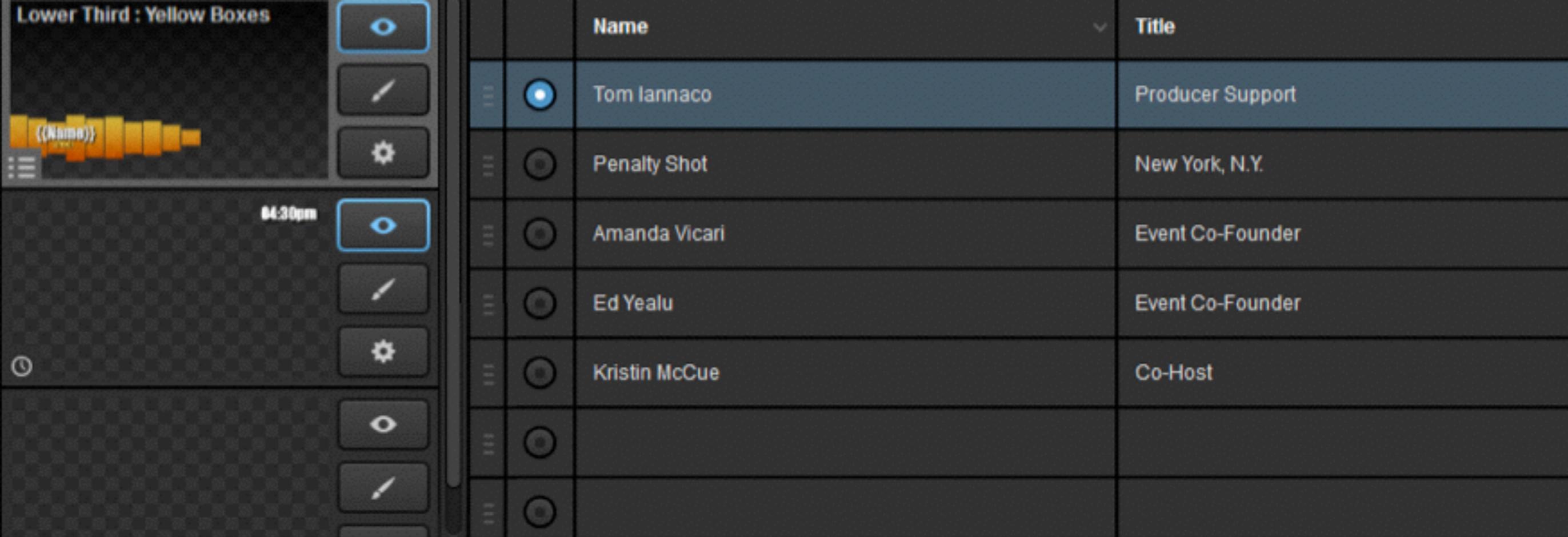
Using graphics overlays



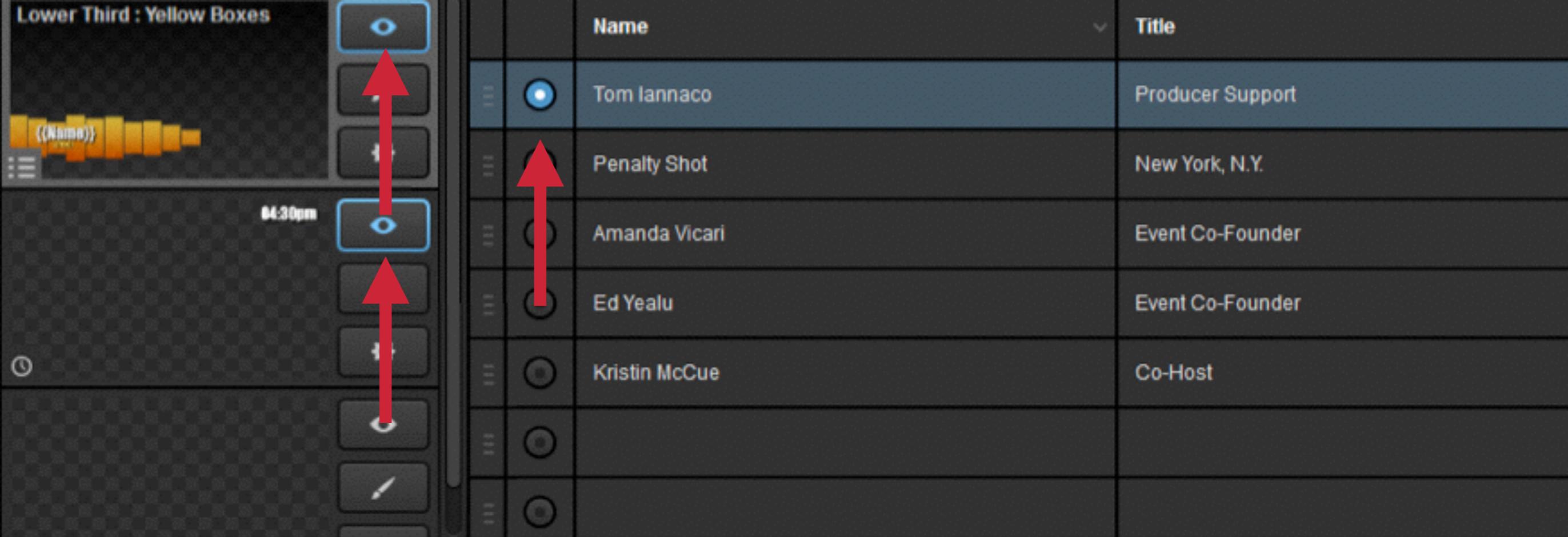
Livestream Studio includes three graphics overlay channels, as indicated by the controls in the bottom right corner of Studio Surface.



These are the same controls you see in the upper right corner of the Livestream Studio interface.



Each graphics overlay channel can include multiple layers (left) with data-driven templates (right), allowing for the same layer to be used for different information.



Any layer or data template that is highlighted blue will be visible when you put that graphics overlay channel into Preview or Program.



When you are ready to preview your graphic, press the corresponding '**PRV**' button on that track.



The '**PRV**' button will light up green, and the '**PUSH**' button will begin flashing yellow in both Studio Surface and Livestream Studio.



As a result, any visible layer in that graphics overlay channel is now seen in the Preview monitor.



When you are ready to transition the visible layer(s) from that graphics overlay into Program, press the flashing **PUSH** button.



The graphics overlay will push into Program using the transition that you set for it. In this case, the transition is a slow diagonal wipe.



Now the graphic that was in Preview has been pushed to Program. The '**PULL**' button in Livestream Studio is highlighted red to indicate this.



The '**PULL**' button lighting up red on Studio Surface also denotes that the graphics overlay channel is being displayed in Program.



If you change something with that graphics channel, such as showing a different layer or different data, the change first shows in Preview, but is not yet pushed to Program.



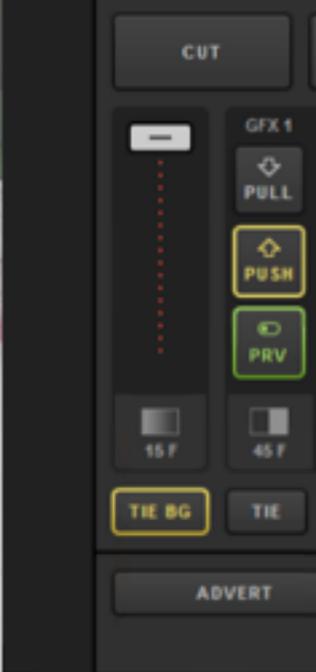
When that change has been made to your active graphics channel, the '**PUSH**' button will begin blinking again. Press it to transition the change into Program.



Your graphics overlay in Program is now updated with the new data and/or layers.



When you no longer want your graphics overlay in Program, press the corresponding red **'PULL'** button.



You should now see that your graphic is no longer in Program, but is still available in Preview.



When you no longer need your graphic in Preview, press that graphics overlay's corresponding '**PRV**' button to remove it.



You should now see no more graphics in Preview or Program, and your graphics overlay controls are no longer lit.

Tie functionality



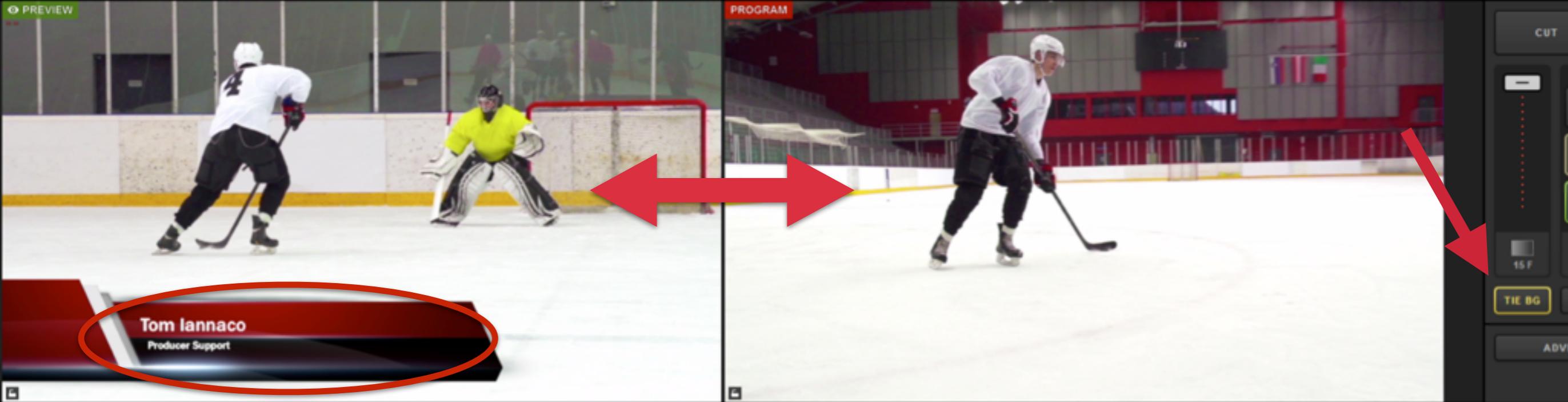
You may need to switch a video source and a graphics overlay simultaneously. This is where the **'TIE BKGD'** and **'TIE'** buttons come in.



These buttons correspond with the '**TIE BG**' and '**TIE**' buttons in Livestream Studio. At least one must be selected at all times.



If only '**TIE BKGD**' is lit, 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.



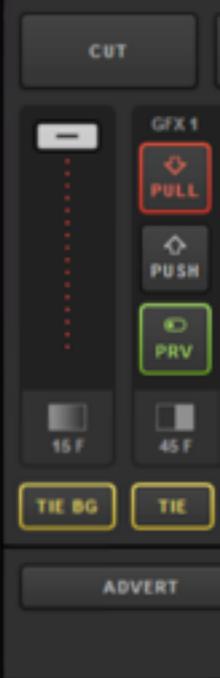
To both switch the video source and bring in a graphics overlay at the same time, select '**TIE BKGD**' and the corresponding **TIE** button for your graphic.



Press the '**PRV**' button for the graphics overlay channel that is tied to your video source.



Your Preview and Program monitors should look similar to this, with a GFX channel in Preview. Use a transition control to switch the sources.



Now your video sources have switched, and your graphics overlay has been pushed to Program.



If only the GFX 1 and GFX 2 **'TIE'** buttons are lit and both sources are in Preview, then both overlays will switch into Program when transitioning. The video will not change.



In this example, GFX 1 has a 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.

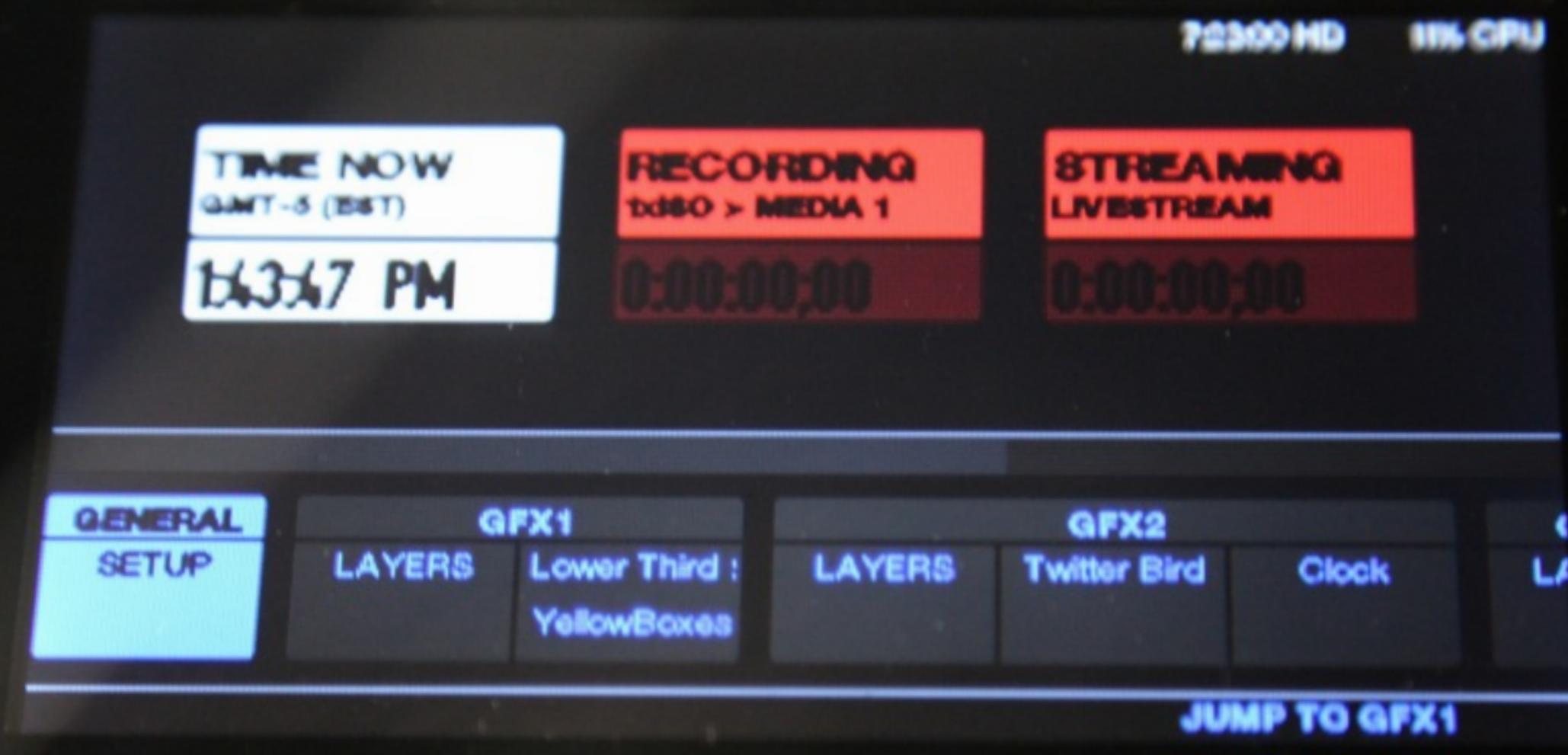


Your monitors should look similar to this now, with Preview showing a different video source and no graphic. Use a transition control to switch the sources.



Now your video sources have changed, and your graphics overlay is no longer in Program.

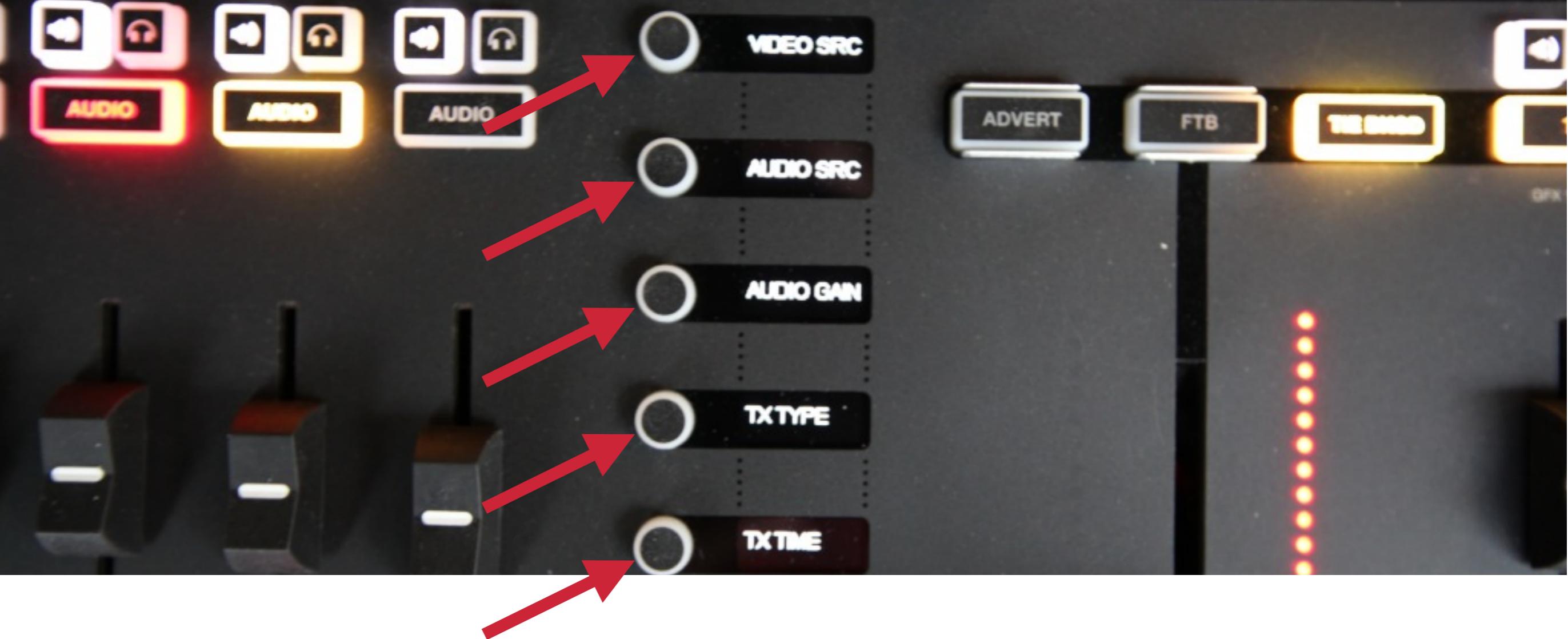
Menu overview



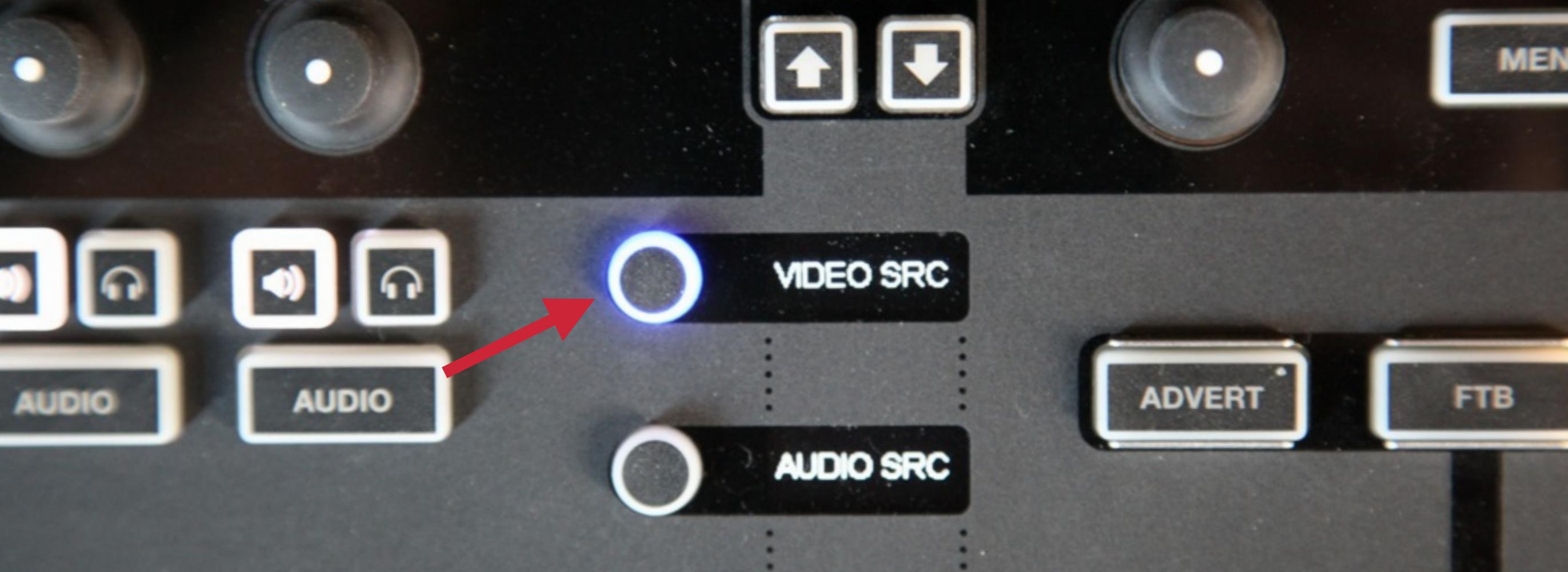
The **menus** on the middle display give you further control of your Livestream Studio production via Studio Surface.



You can navigate to each menu using the black knob in front of the monitor. Start with the **General Setup** menu.



The **menu buttons** running down the middle of the Studio Surface will display your options.



First, select the '**VIDEO SRC**' option by pressing the corresponding button. The button will light up, indicating that this menu is active.



On the left monitor, you should notice that the names of your 5 input sources appear on the bottom of the screen.



You can change any of these input sources' track assignments directly from Studio Surface. Press down the knob corresponding to the source you want to change.



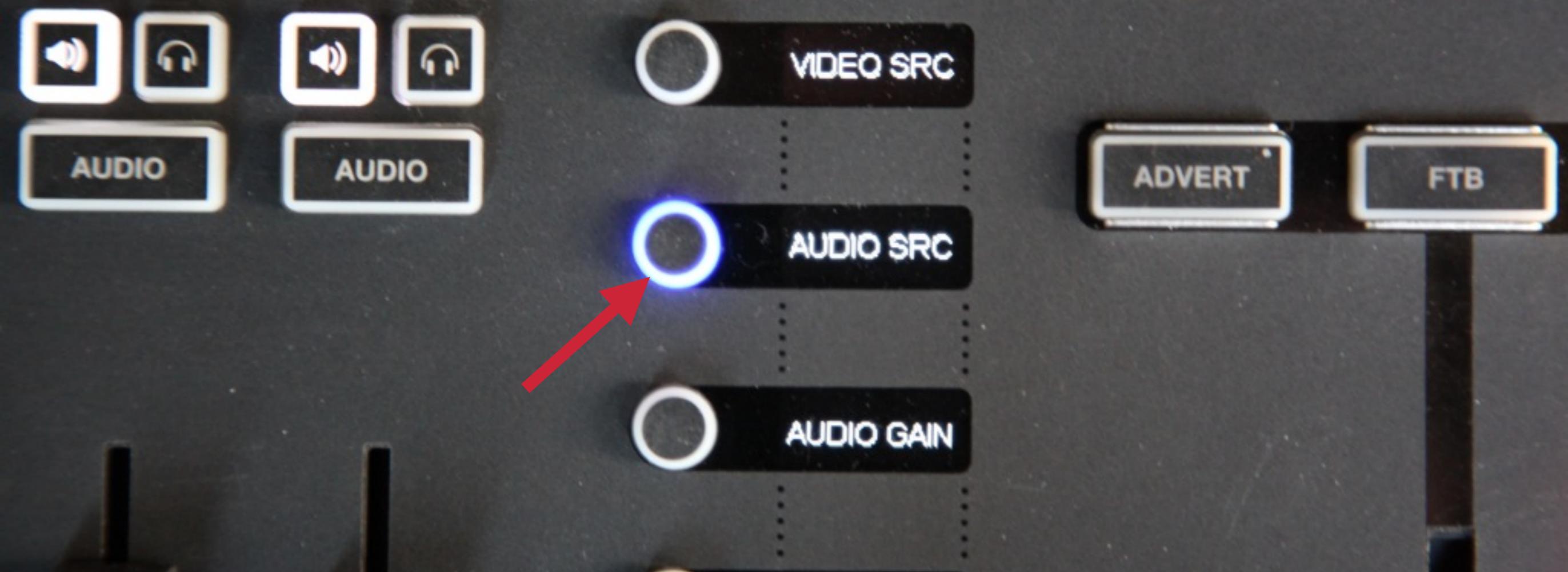
A **video source menu** will pop up on the screen. Turn the corresponding knob to select the source to which you want to assign that track.



When the desired input is selected, press in the knob again to set it.



The track label will immediately change to the source you selected. You can perform this action with any of your five tracks.



The next General Setup option is '**AUDIO SRC**,' which is also selected by pressing the corresponding button.



Once again, your video sources are showing on the left monitor. This time, you can link audio from one video source to another video source.



Press the knob to select the video source whose audio you want to change.



An **audio source menu** will pop up, prompting you to select a video source's audio. Turn the knob to select which audio source you want to link to that video source.



Press in the knob once you have selected the source to set the audio linking.



When either source is in Program, both audio control buttons will light up, indicating that both sources have the same audio.



You will know which audio source is being used by checking the track assignment labels, which tell you where audio is coming from for a linked source.



You can revert audio linking by going back to the audio source menu for that video source and scrolling up to the default setting of using its own audio.



The next General Setup menu option is '**AUDIO GAIN.**'



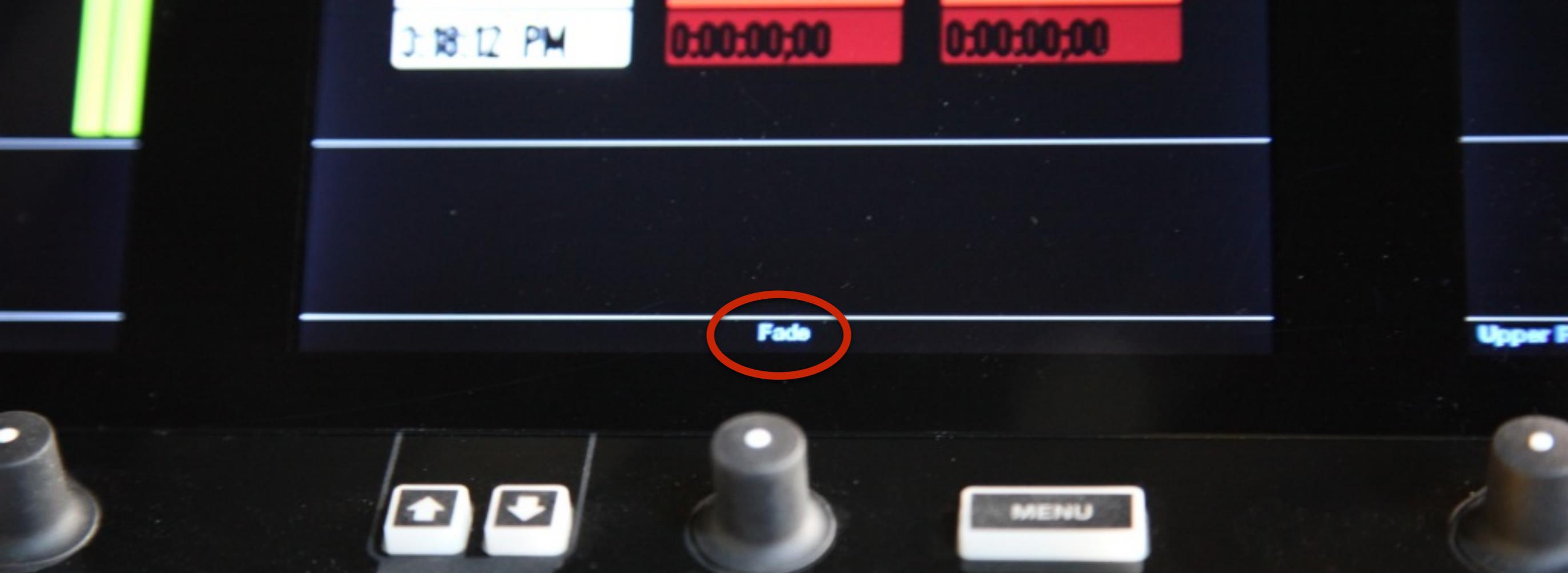
There may be an audio source that you need to adjust the gain on. Turn the knob corresponding to that track to adjust this.



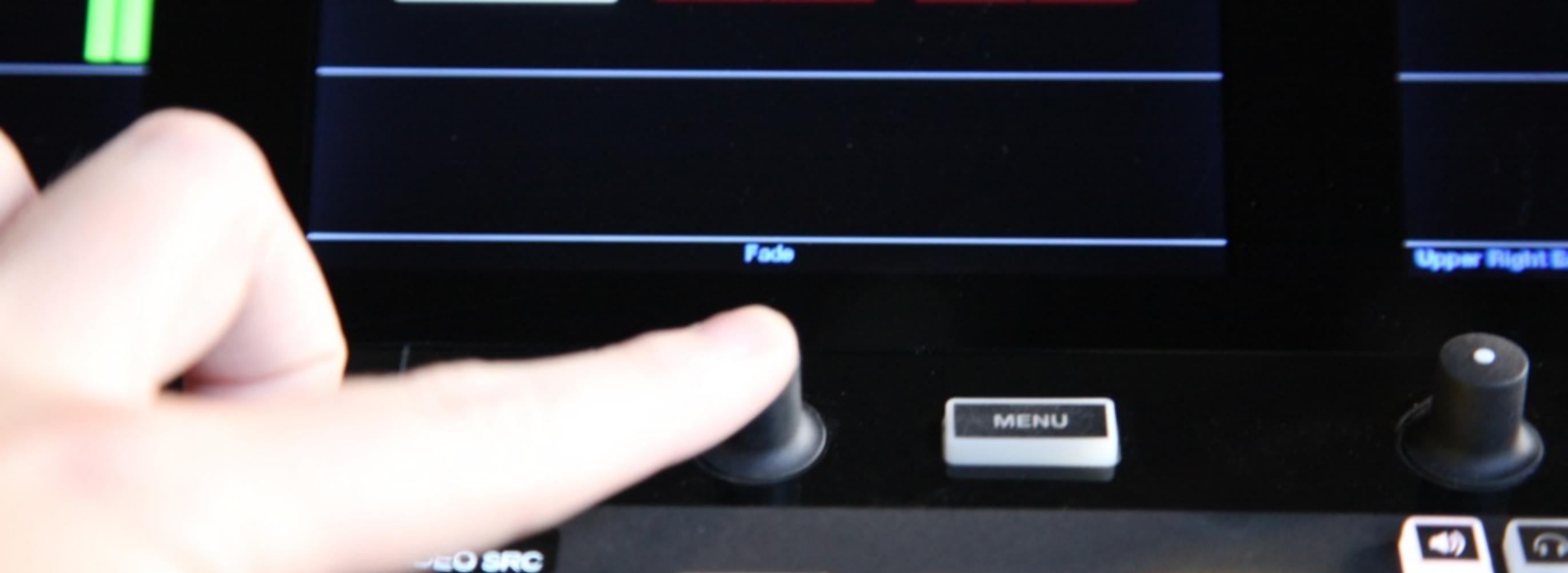
A **gain meter** will immediately appear as you adjust the audio source's gain level. Press down the knob when you have reached the desired level.



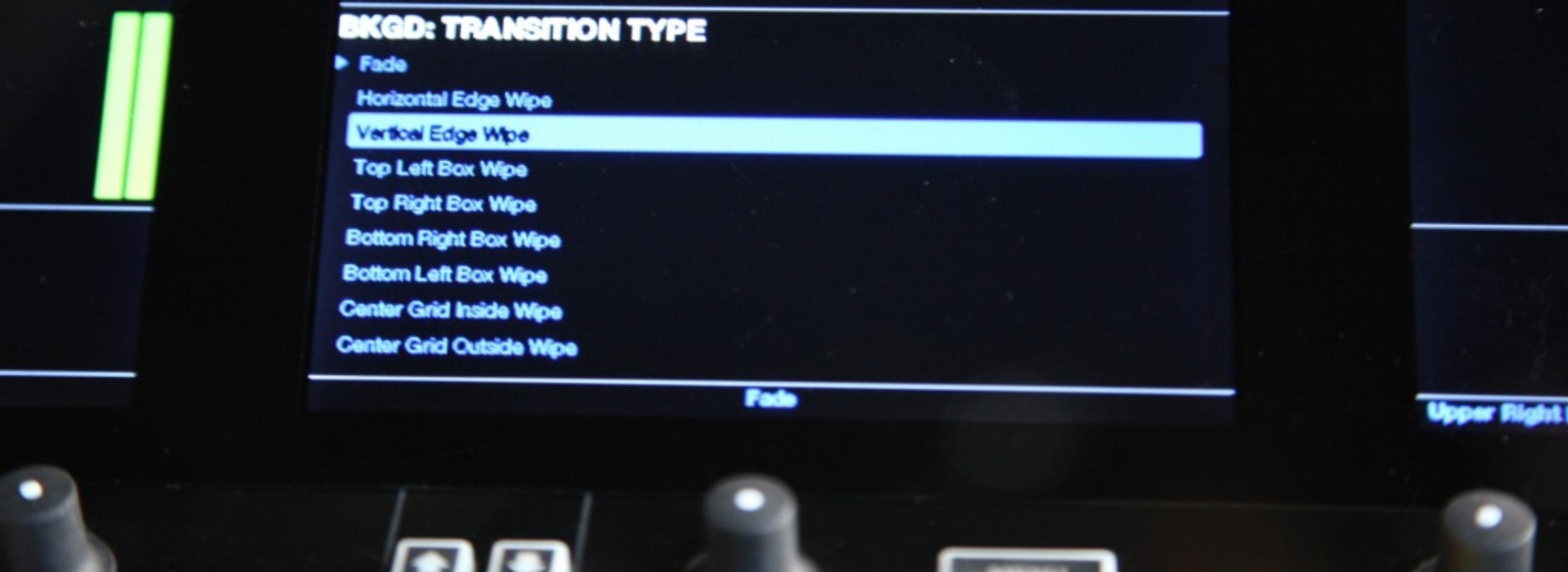
The fourth General Setup menu option is '**TX TYPE**,' which is an abbreviation for Transition Type.



You should notice in the bottom of the middle monitor, there is a name of a type of transition above the control knob.



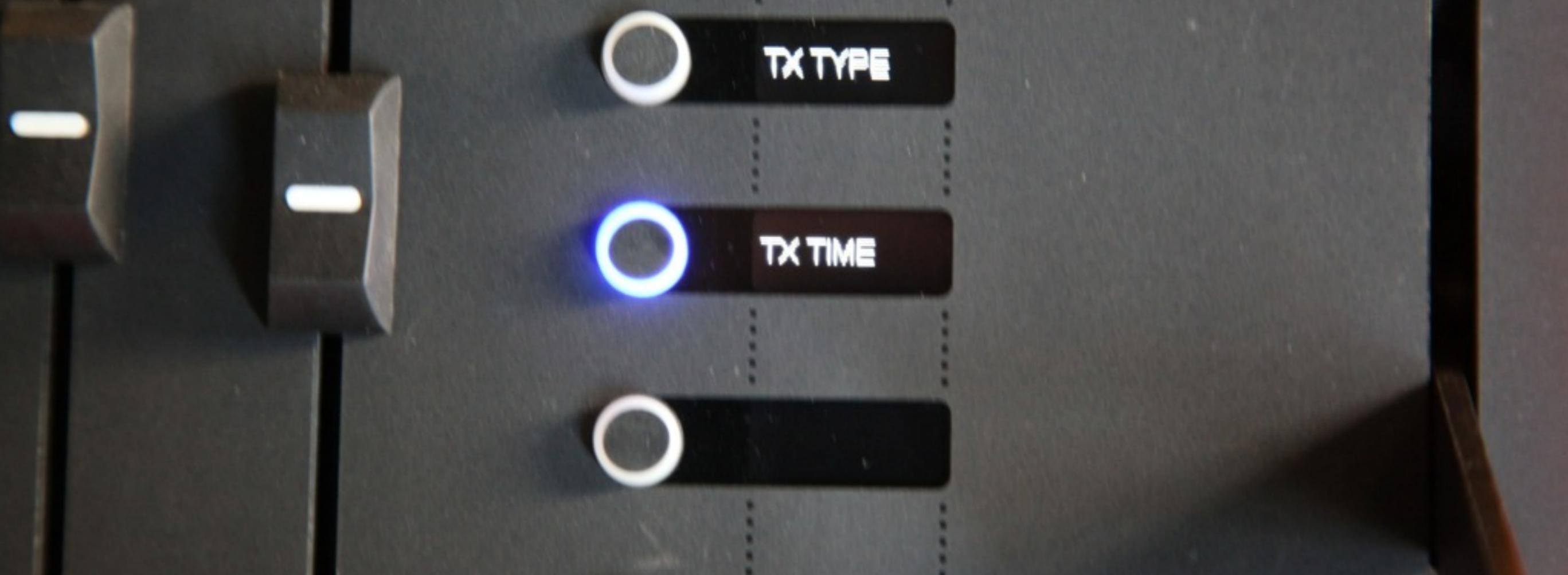
Press down the knob to bring up the **transition menu**.



Turn the knob to select between the different transition options. This will be the transition for your main mix when pressing '**Auto**' or using the **T Bar**.



On the right monitor, you will have the option to select different transitions for your three graphics overlay channels. Press and turn the corresponding knobs to do this.



The final General Setup menu option is '**TX TIME**,' which is Transition Time.



Where you just set your transition types, you should now see a frame number (e.g., 64 F) above the corresponding knobs.



Turn and press the knob to determine how many frames you want an automatic transition to utilize (i.e., pressing '**Auto**' to switch Preview and Program).



Just as with transition type, the main mix and the three graphics overlay channels can have independently set transition times. (**Cut** cannot have a set time.)



You can return to the main **General Setup** menu display by pressing the currently activated setup menu's **menu button**.



The next set of menus is for your three **graphics overlay channels**. Turn the knob to access your graphics options.



Within each graphics overlay menu (such as GFX2), you should see a '**LAYERS**' menu, as well as an option for each individual layer.



Selecting '**LAYERS**' will show the layers created within that graphics channel on the **menu buttons**. (The two **pagination buttons** above will allow you to scroll to further layers.)



The buttons that are lit up indicate which layers in that GFX channel are visible when in Preview or Program. Pressing the respective button will turn visibility on or off.



Beyond the **LAYERS** option, you can use the knob to select a specific layer in that graphics overlay channel.



After selecting a layer, the **menu buttons** will display the rows of data available in that layer, such as a manually built row, data from a spreadsheet, or tweets.



If this graphics layer is in Program and you want to change which row of data is showing, press the button corresponding to that row.



The layers menu and the ability to change data are available for all 3 graphics overlay channels. Use the knob to scroll to the other channels.



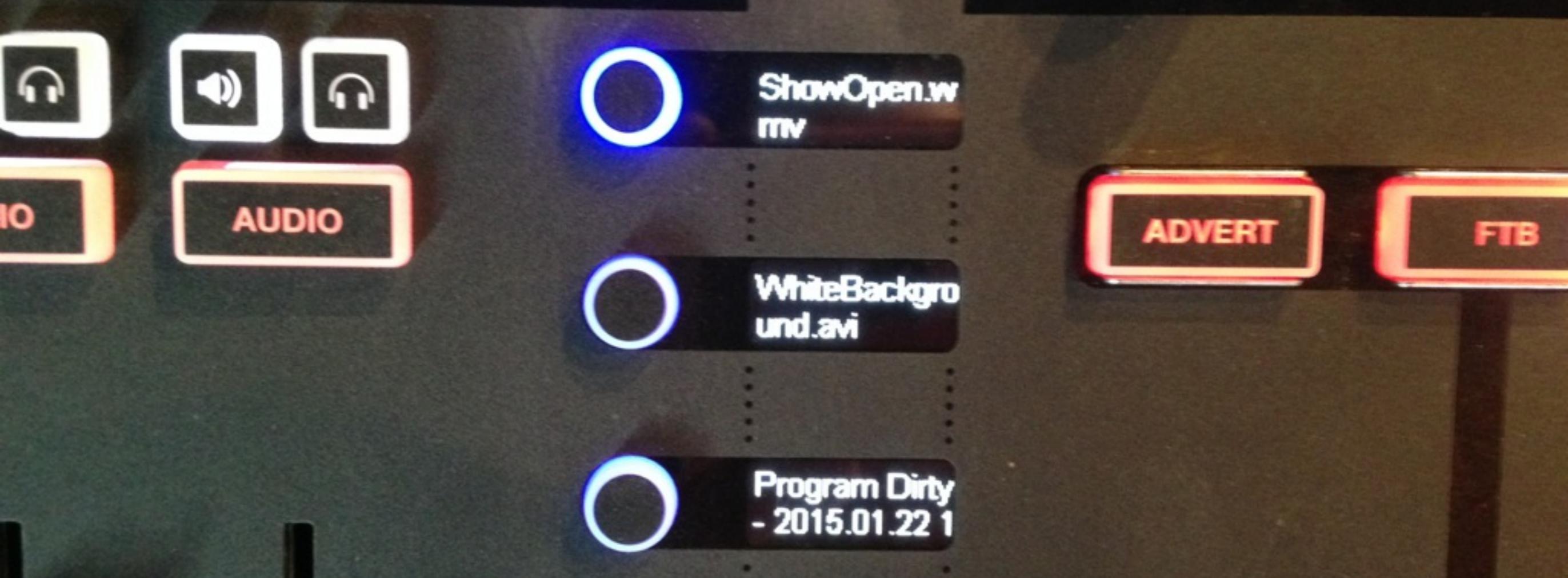
Continue scrolling to the right through the menus, and you will come across your **media bin(s)**.



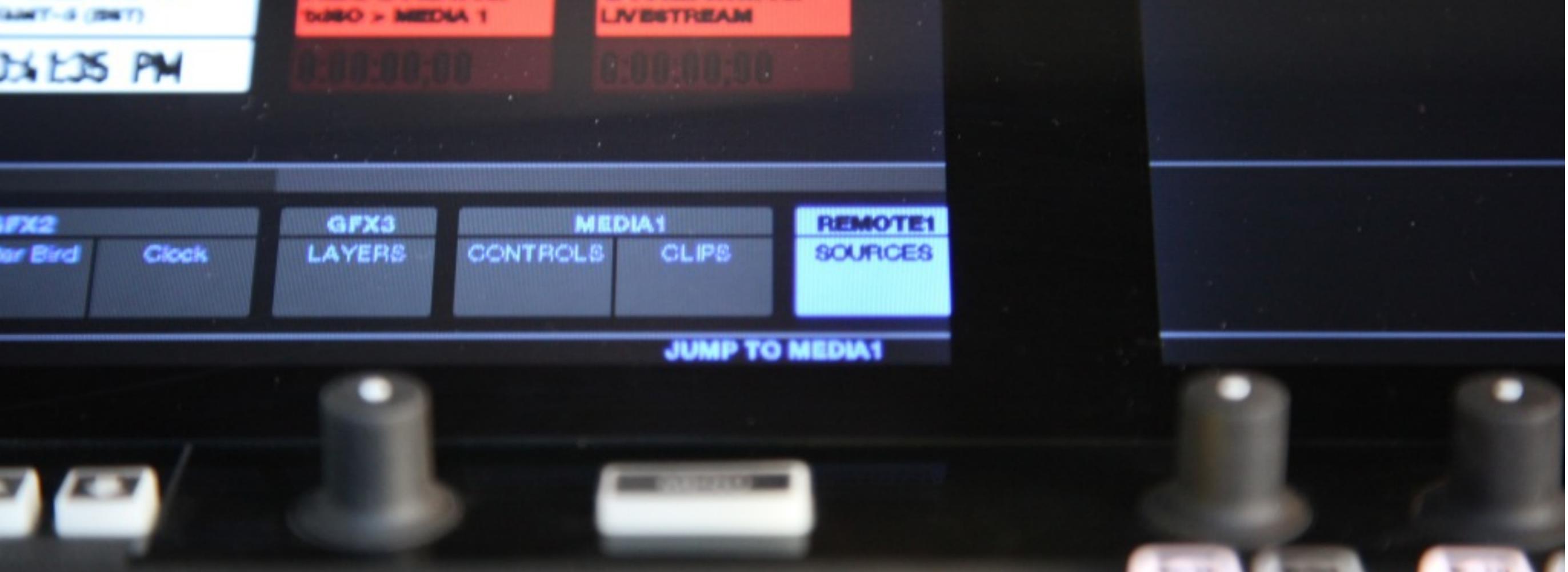
Within each media bin option, you can select between **'Controls'** or **'Clips.'**



Selecting '**Controls**' will show the different controls for playing back clips in that media bin (play, pause, loop, etc.)



Selecting '**Clips**' will list all the videos in that bin under each **menu button**. Select a clip to queue in your bin by pressing the corresponding button.



The next set of menus allows you to select your **remote cameras**.



When selecting from either remote camera module, the **menu buttons** will display each remote source that is available to you in Livestream Studio.

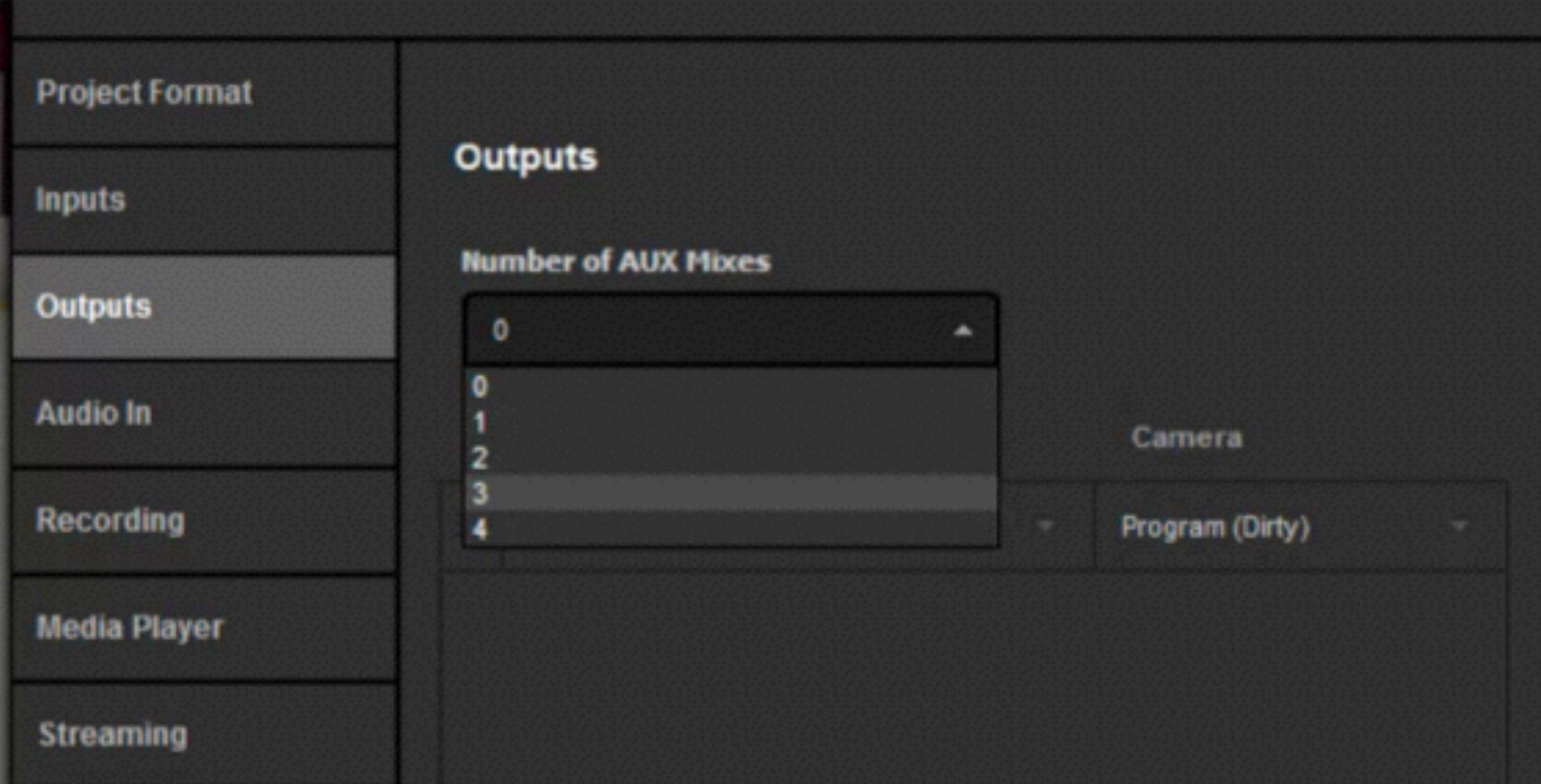


Press the button next to the remote camera source you want to use in order to activate it and see it in your multi-view.

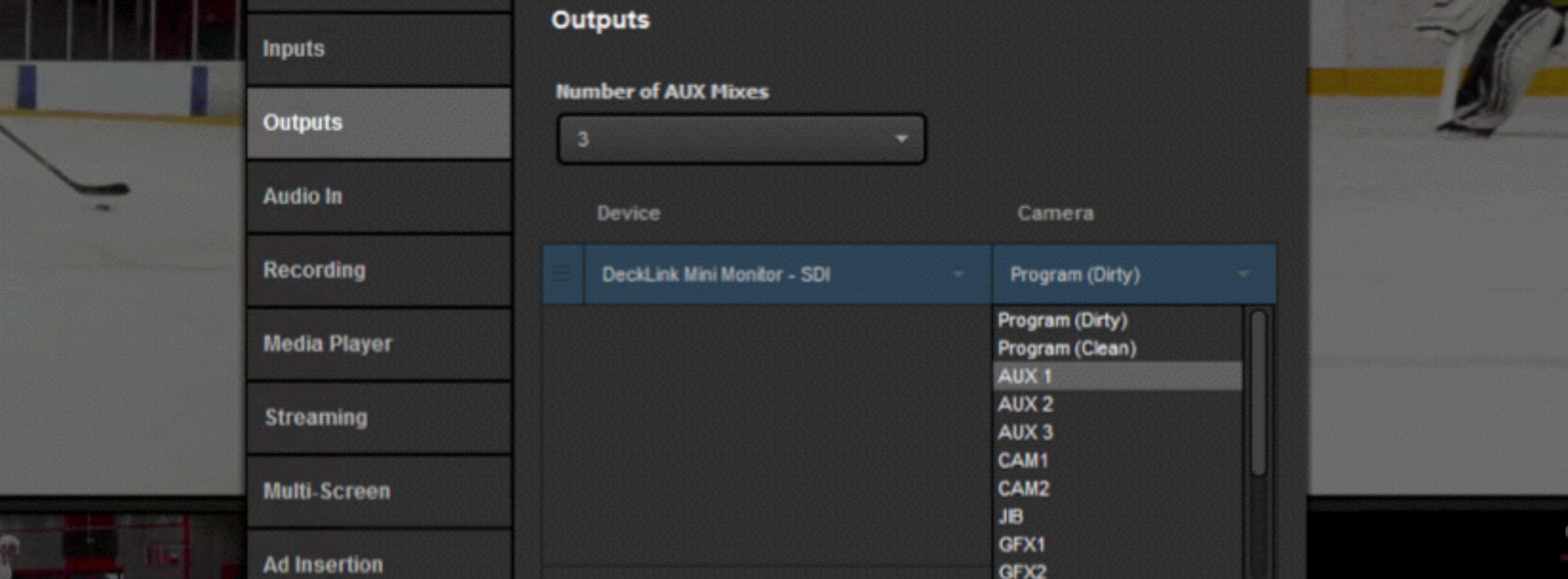


The final set of menus allows you to hot-change your **auxiliary outputs.**

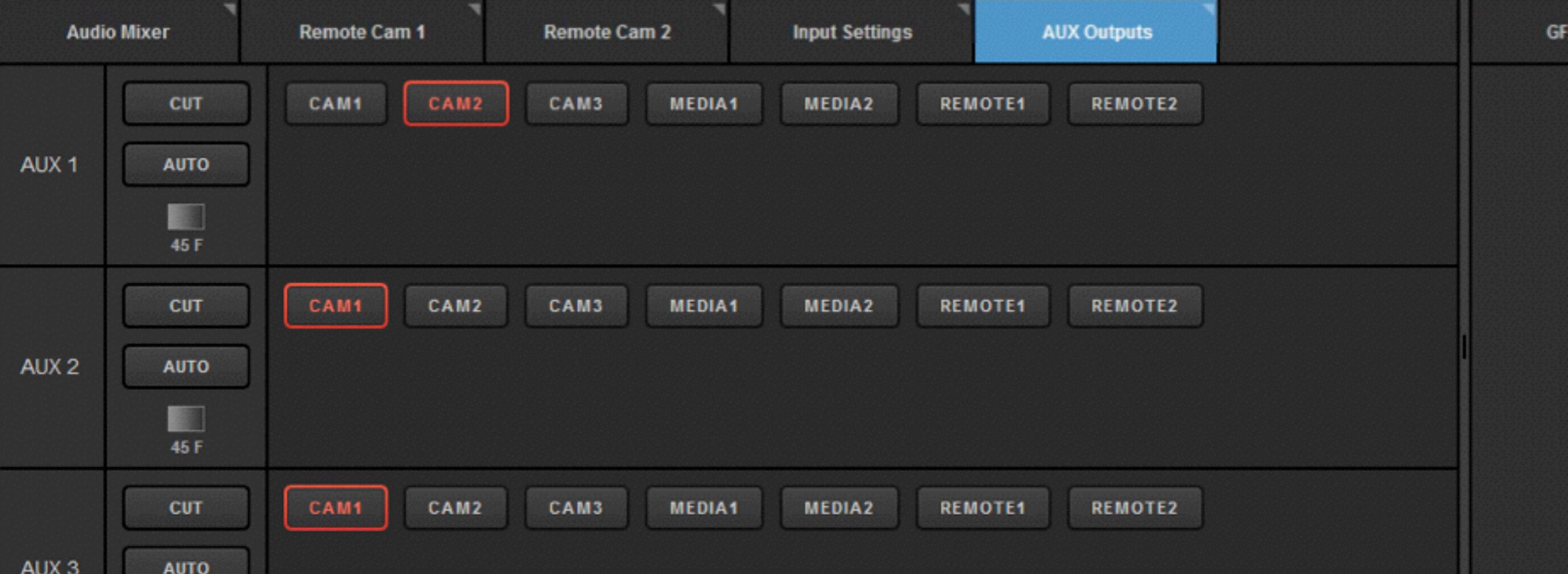
Note: This feature is available as of Livestream Studio version 2.2.150.



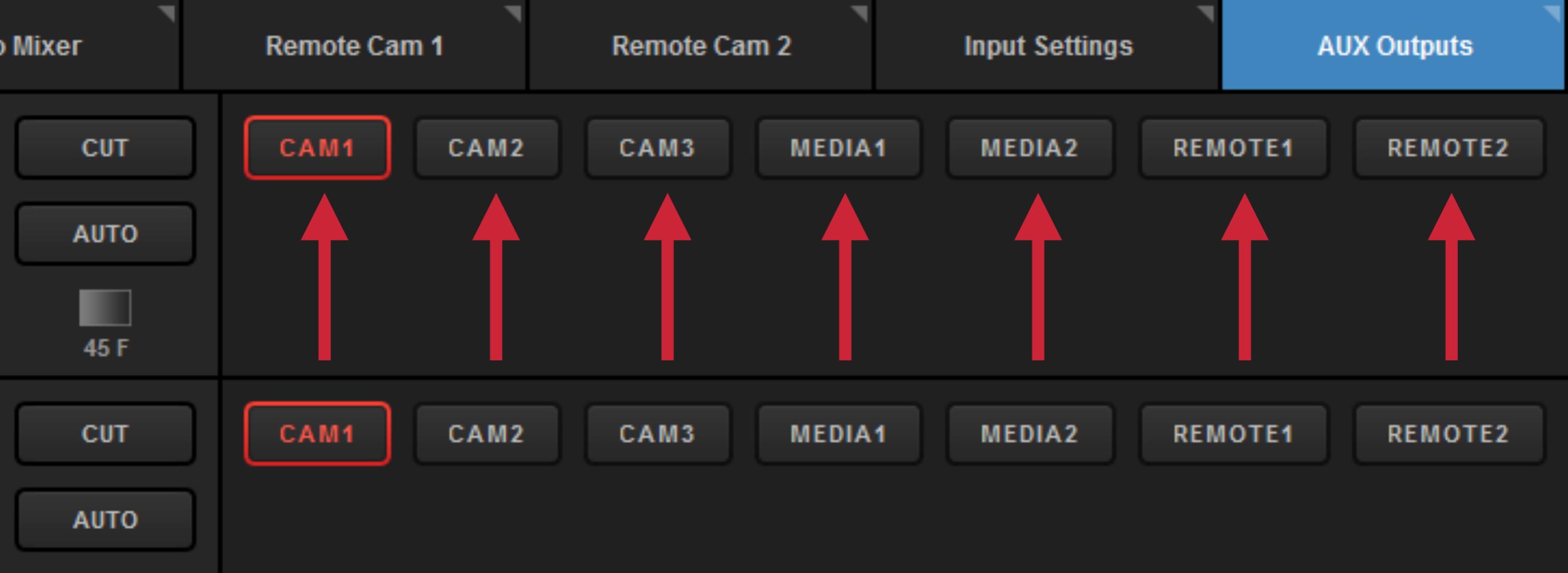
Under the 'Outputs' tab is the ability to choose to have up to four auxiliary output mixes. This will be handy for changing picture-in-picture and output sources.



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



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



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



Navigating to an auxiliary menu on Studio Surface will show the same camera sources, media sources and remote cameras in the menu buttons.



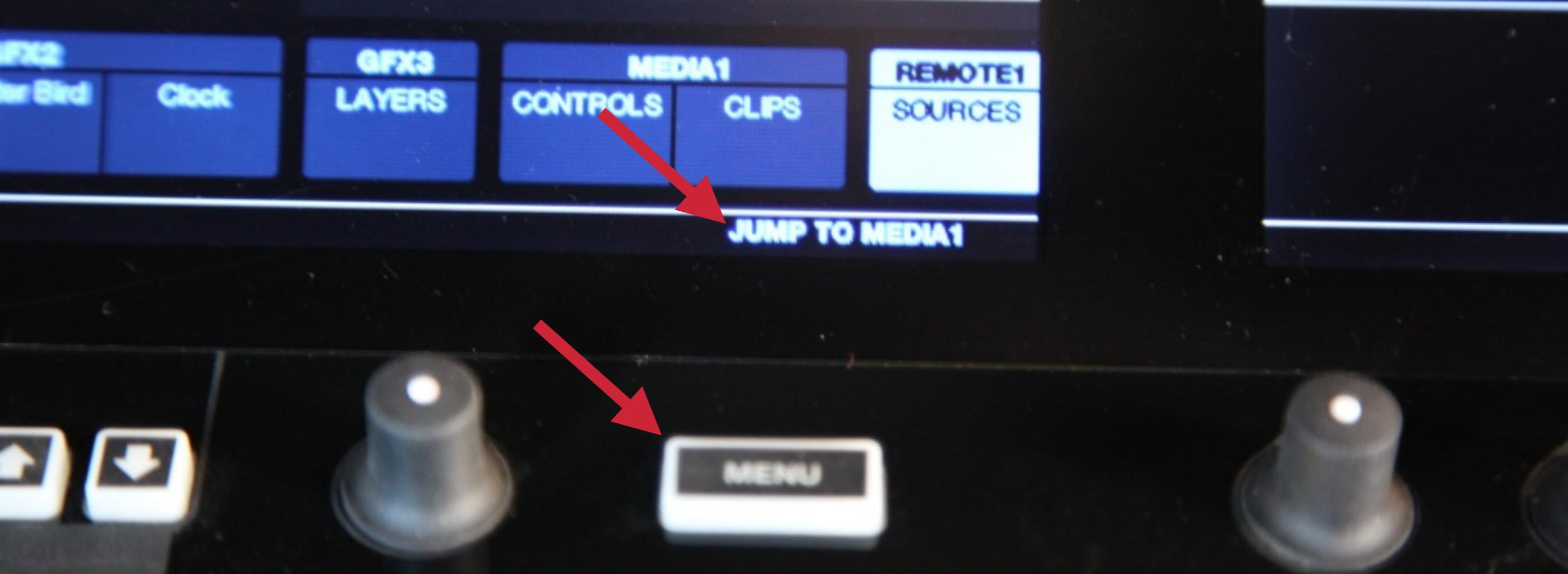
Press any of these buttons to hot change the source that is being used for that AUX. The change will immediately be shown in any graphic or output using that AUX.



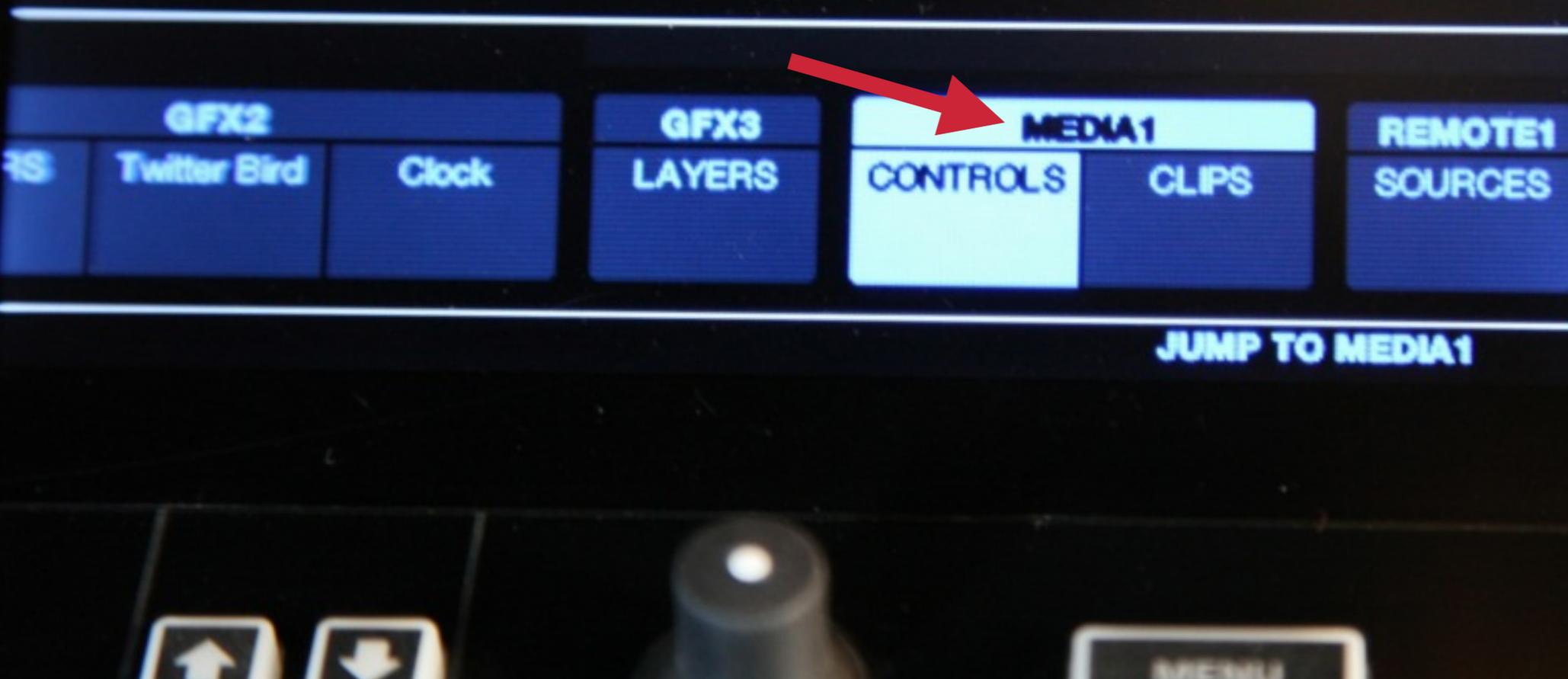
The **Menu** button gives you quick access to any desired menu based on your previous action on Studio Surface.



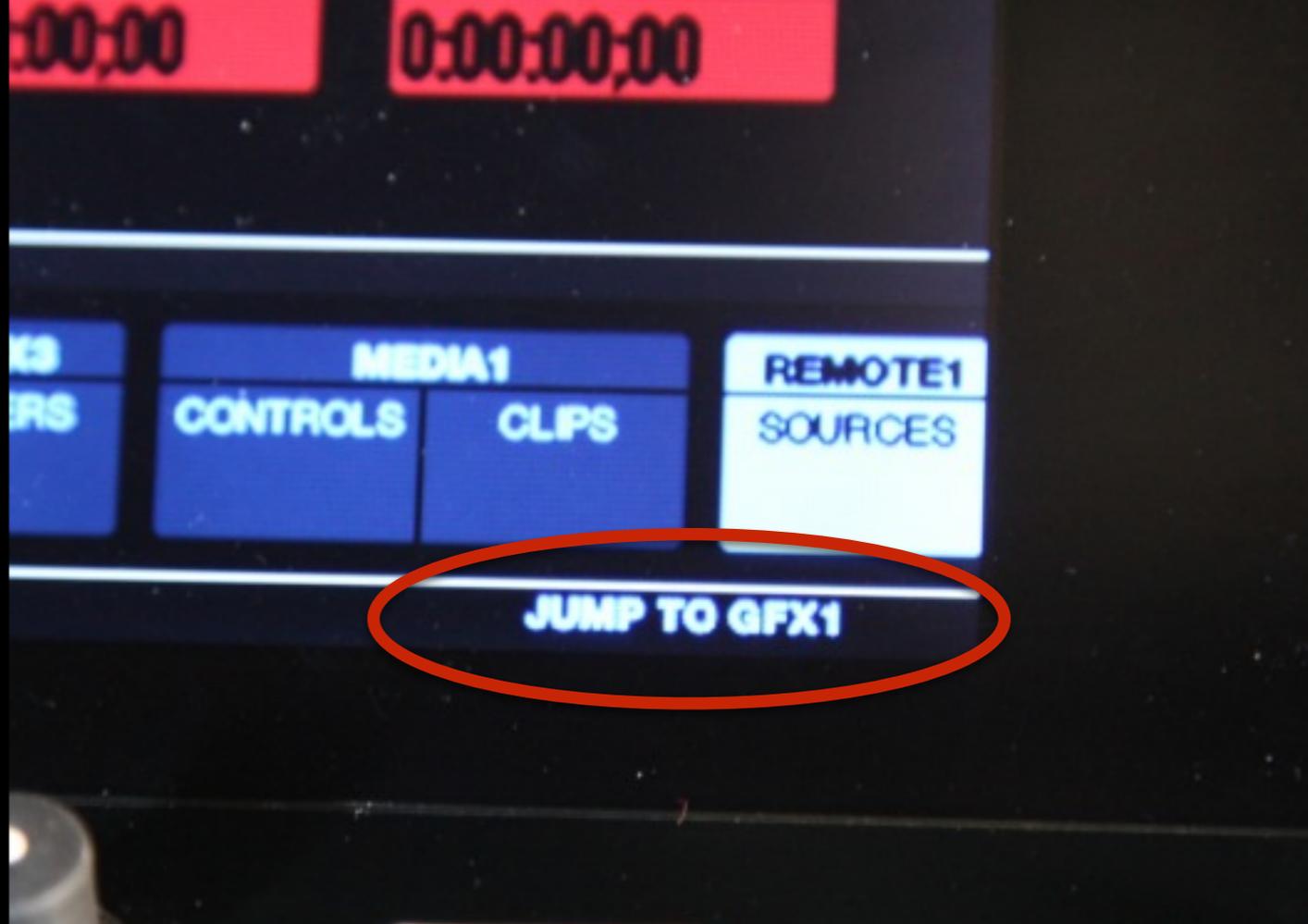
For example, press the **PRV** button corresponding to Media 1.



The middle monitor will prompt you to '**Jump to Media1.**' Press the **Menu** button to do so.



The middle monitor will jump to the Media 1 menu, giving you quick access to those controls.



This functionality also works when pressing a control for a remote camera on one of your 5 tracks or any graphics overlay control.

Assigning graphics overlay layers



On the right monitor, you can set access to menus for each of your graphics overlay channels.



One type of assignment you can set is for viewing all the layers within that graphics channel. First, select the layers menu within that channel.



Above the graphics track, you should see '**SET**' blinking. Press in the corresponding knob to set that menu.



'**SET**' will now change to '**LAYERS.**' Press in the knob again to see your layers.



Turning the knob will show the names of all the layers within that graphics overlay channel.



The **white dots** indicate a layer that will be visible when that graphics overlay channel is in Preview or pushed to Program.



When a layer is selected, press in the knob to switch the layer's visibility. More than one layer can be visible at a time.



Whenever you activate a graphics layer menu to show in the right monitor, that graphics overlay channel's tab will also open in Livestream Studio for easy access.

Changing data from a
graphics overlay layer

Name	Username	Tweet	Time Stamp
Livestream	Livestream	RT @brucierosch: ...	12/22/2014 11:32:0...
Livestream	Livestream	Our holiday "Bundle...	12/19/2014 4:35:08 ...
Livestream	Livestream	LIVE from @WTEN:...	12/19/2014 2:17:51 ...
Livestream	Livestream	RT @theJeffAdams...	12/19/2014 12:11:3...
Livestream	Livestream	RT @evelinechang:...	12/19/2014 10:11:5...
Livestream	Livestream	@open_source_s...	12/19/2014 10:06:1...

Instead of selecting layers, you can set one layer's data to be shown and set in that monitor. This may be helpful if you have an extensive amount of data.



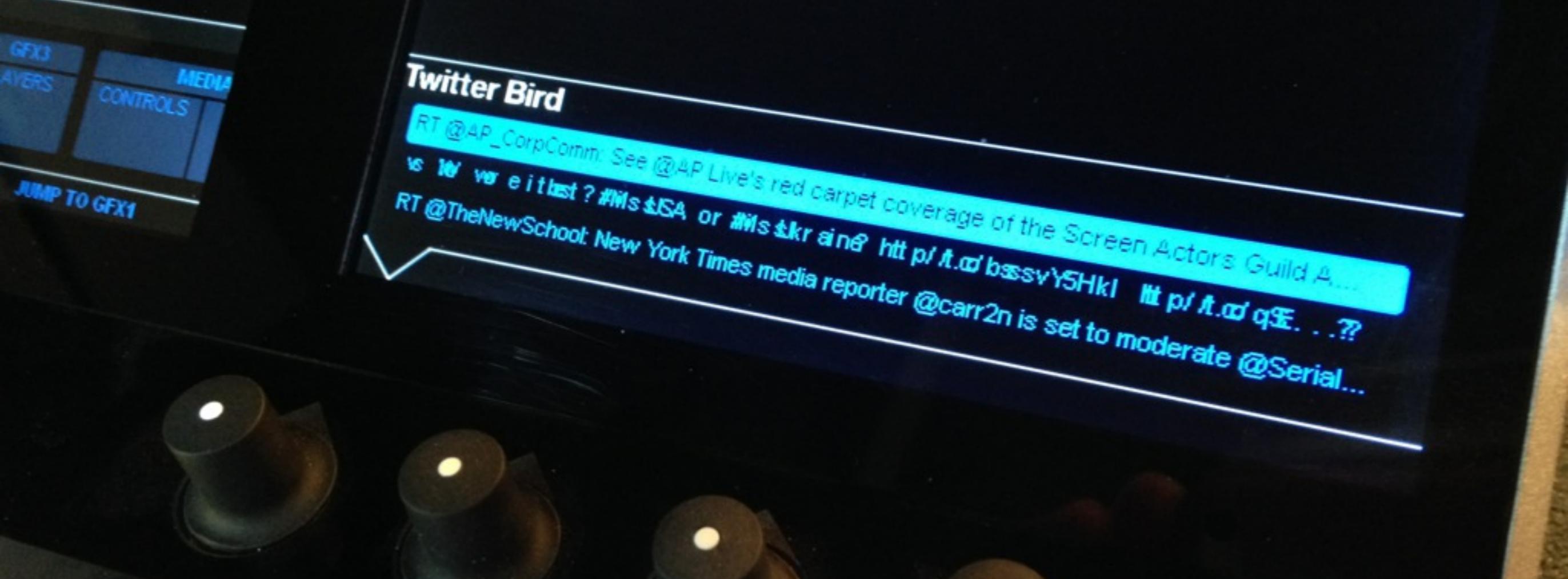
Select a graphics layer on the menu as you did previously and press in the **knob**.



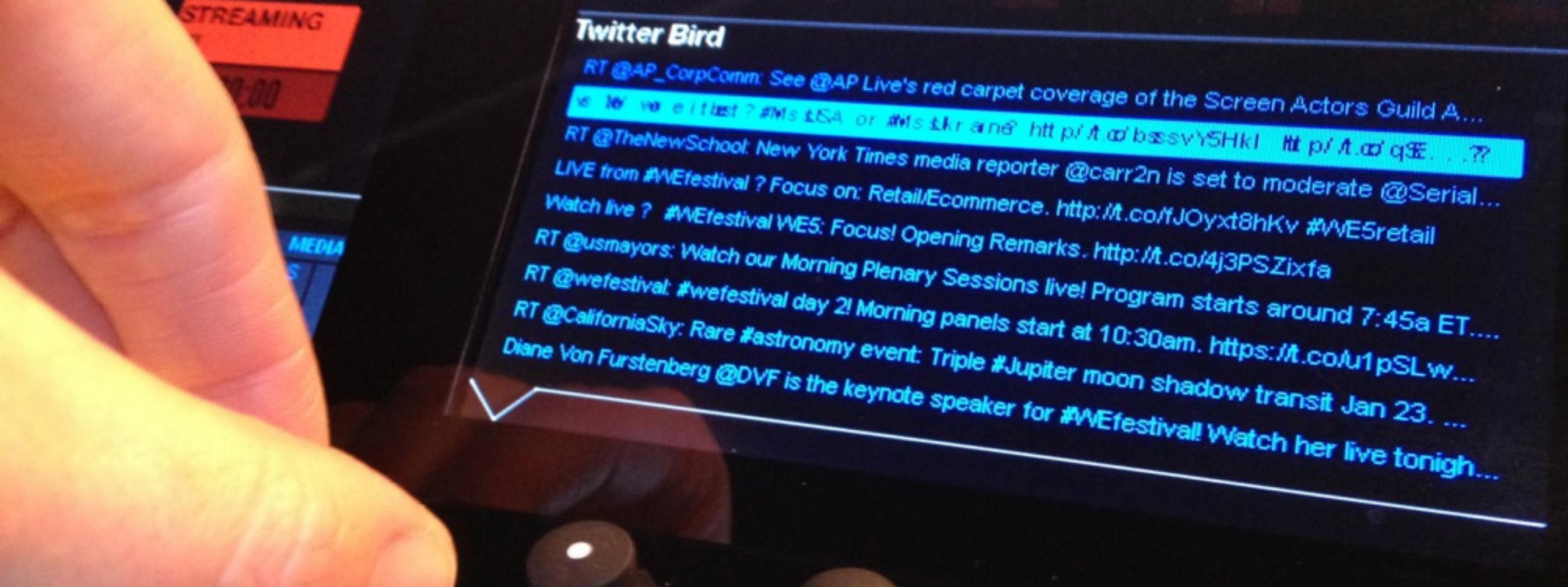
'**SET**' will blink again on the bottom of the right monitor.



Press in the knob, and it will change to the **name of your layer.**



Press the knob again to see all the rows of data that are populated in that layer. The currently visible layer will have an arrow to its left.



Turn the knob to select a different row of data. Press it in to select that row.

The screenshot shows the Livestream Studio interface. On the left, the 'Twitter Box' settings panel is visible, including options for polling frequency (60 seconds), records number limitation (12 records), and a 'Read only' checkbox. The main area displays a table of tweets with columns for Name, Username, Tweet, and Time Stamp. The table contains six rows of tweets, all from 'Livestream'.

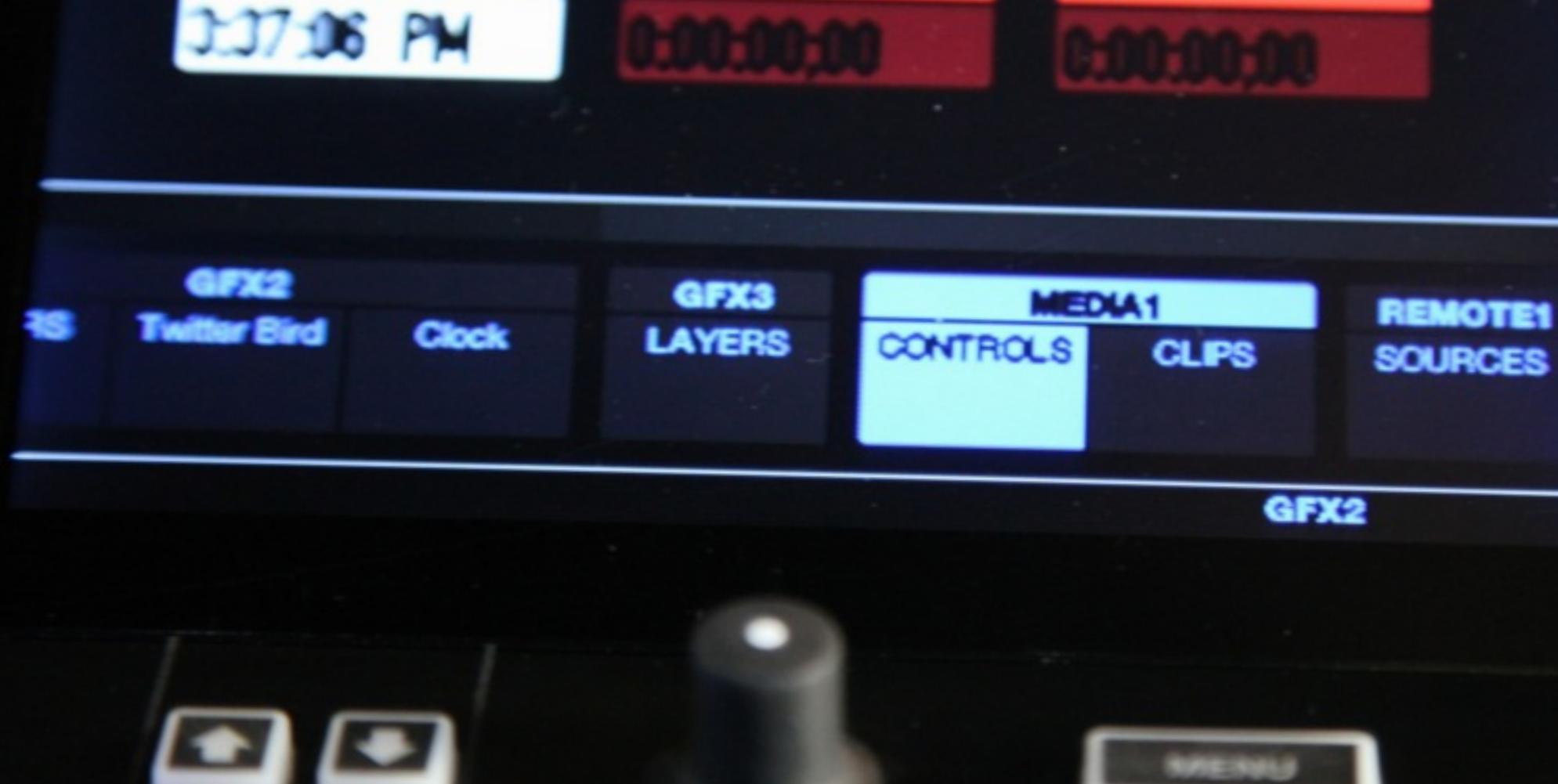
	Name	Username	Tweet	Time Stamp
...	Livestream	Livestream	RT @brucierosch: ...	12/22/2014 11:32:0...
...	Livestream	Livestream	Our holiday "Bundle...	12/19/2014 4:35:08 ...
...	Livestream	Livestream	LIVE from @WTEN:...	12/19/2014 2:17:51 ...
...	Livestream	Livestream	RT @theJeffAdams...	12/19/2014 12:11:3...
...	Livestream	Livestream	RT @evelinechang:...	12/19/2014 10:11:5...
...	Livestream	Livestream	@open_source_s...	12/19/2014 10:06:1...

Just as with setting layers from a graphics overlay channel, selecting data from that channel will bring the graphics overlay tab to the front in Livestream Studio.

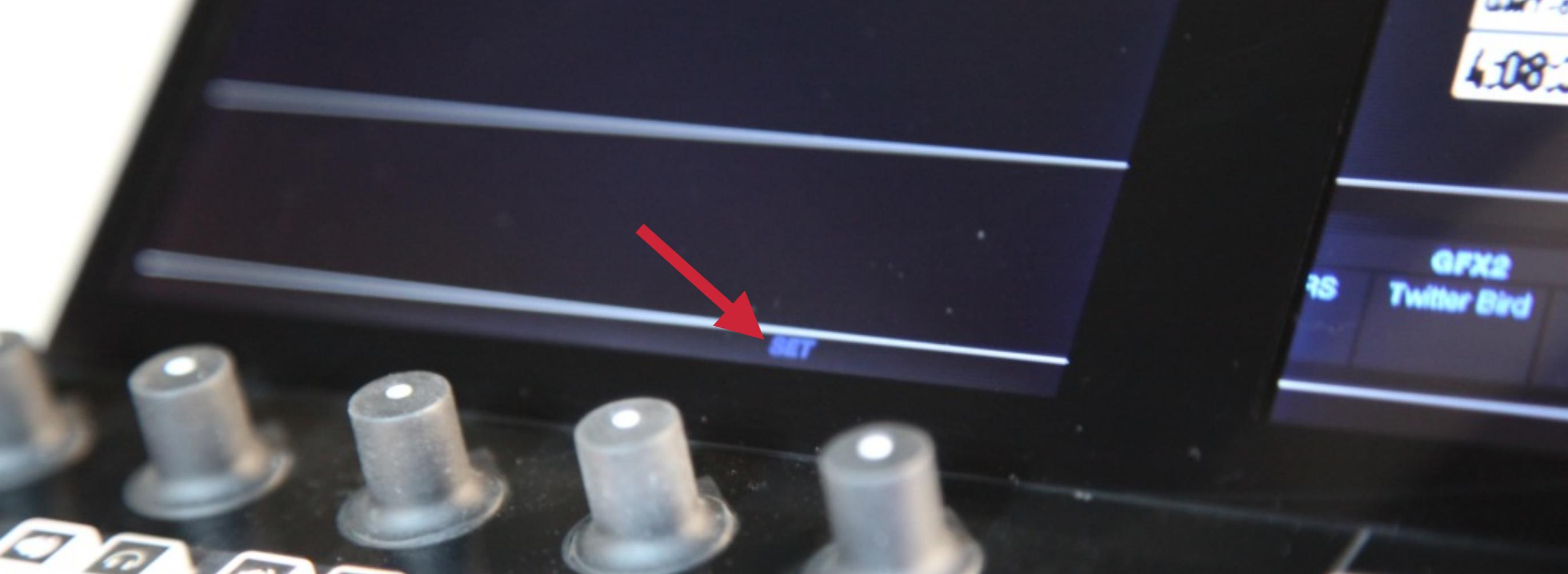
Controlling and selecting media content



To use this feature, make sure a media bin is assigned to one of your 5 tracks.



You can set start and end points for your media clips in Studio Surface. To do so, first select '**Controls**' from the Media menu.



'**SET**' will start blinking in the corresponding track that Media is assigned to. Press in the knob to set the controls.



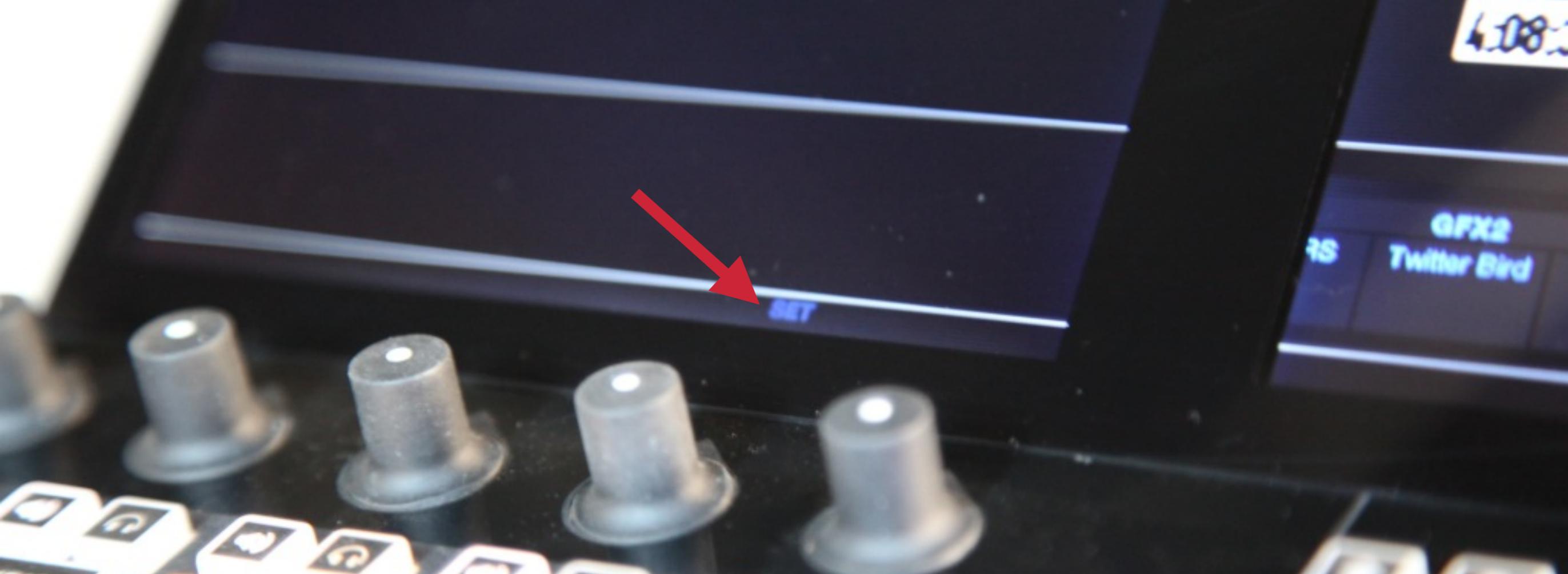
'**SET**' will change to say '**SET FRAME.**' Press in the knob again to see the control on the monitor.



Turn and press the knob to set an 'In' and/or an 'Out' point for the queued up video clip in your media bin.



Instead of having a control menu, you can choose to see a list of your video clips. To do this, select '**Clips**' from the menu as you normally would.



You should notice '**SET**' flashing again in line with the same corresponding track.



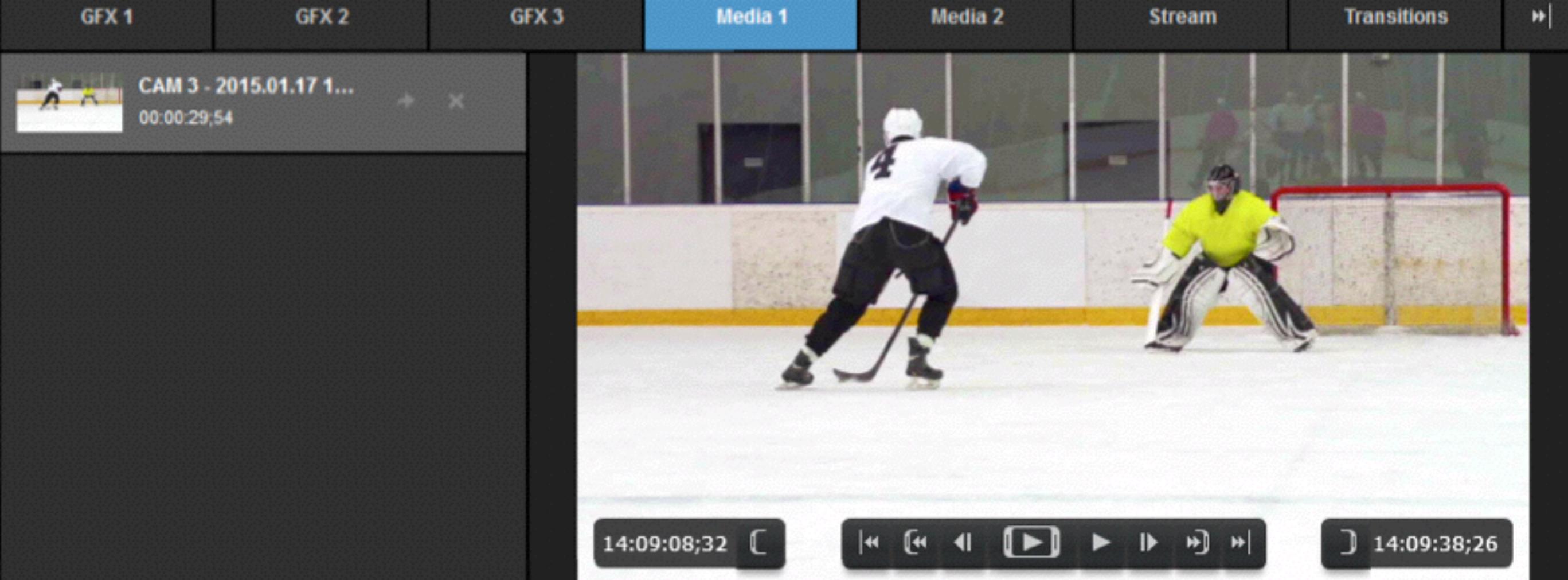
Press in the corresponding knob. This should change '**SET**' to say '**CLIPS.**'



Press in the knob again and you should see the list of all the clips that have been loaded into that media bin.



The arrow on the left indicates which clip is currently queued up. Turn and press in the knob to select a different clip.

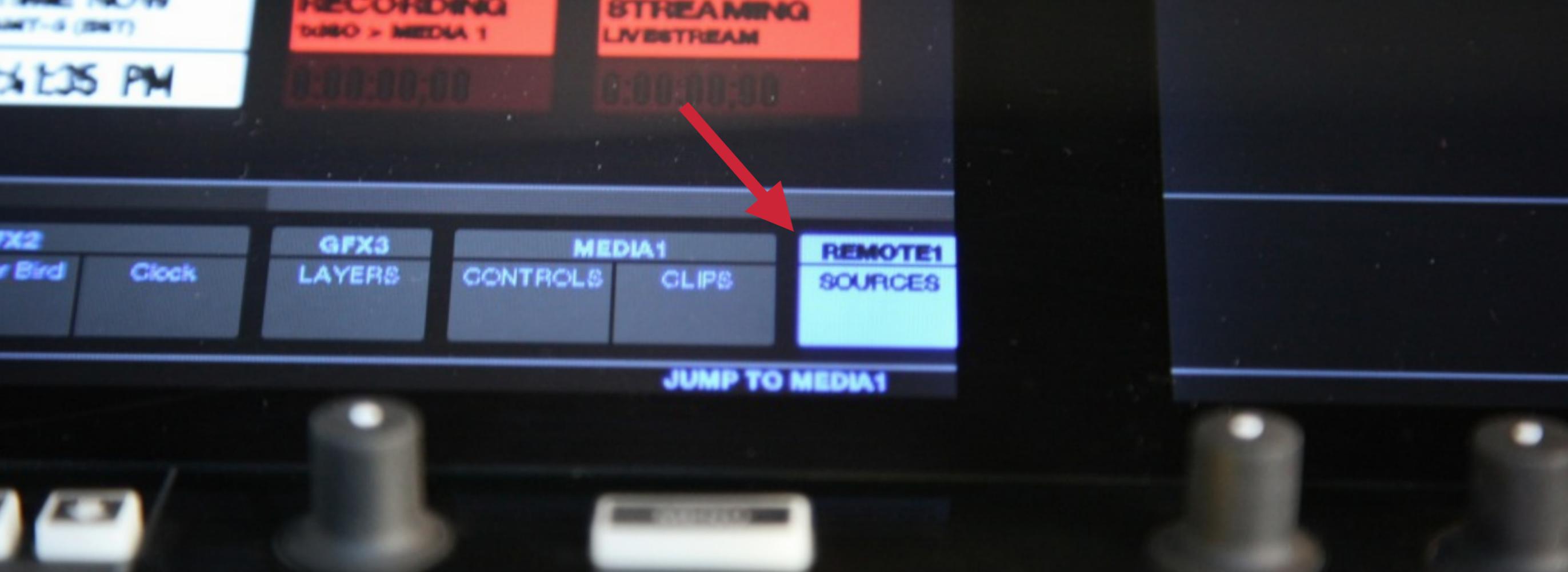


Just as when setting graphics menus, the media bin tab will show in Livestream Studio when setting a media menu or viewing it in the left monitor.

Selecting remote camera sources



The remote camera has a workflow similar to that of the media bin(s). A remote camera source will need to be assigned to a track in order to use this feature.



Select the remote camera menu as you would normally.



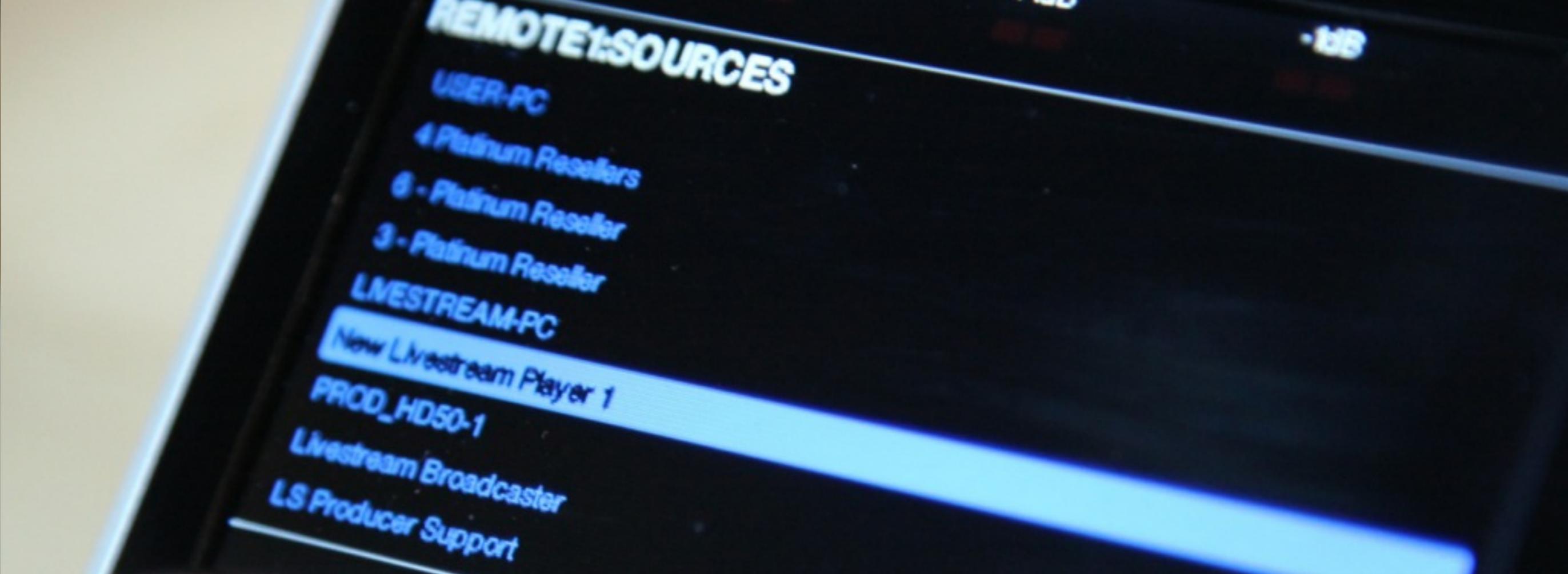
The track that the camera is assigned to should start blinking '**SET**' at the bottom of the monitor. Press in the corresponding knob.



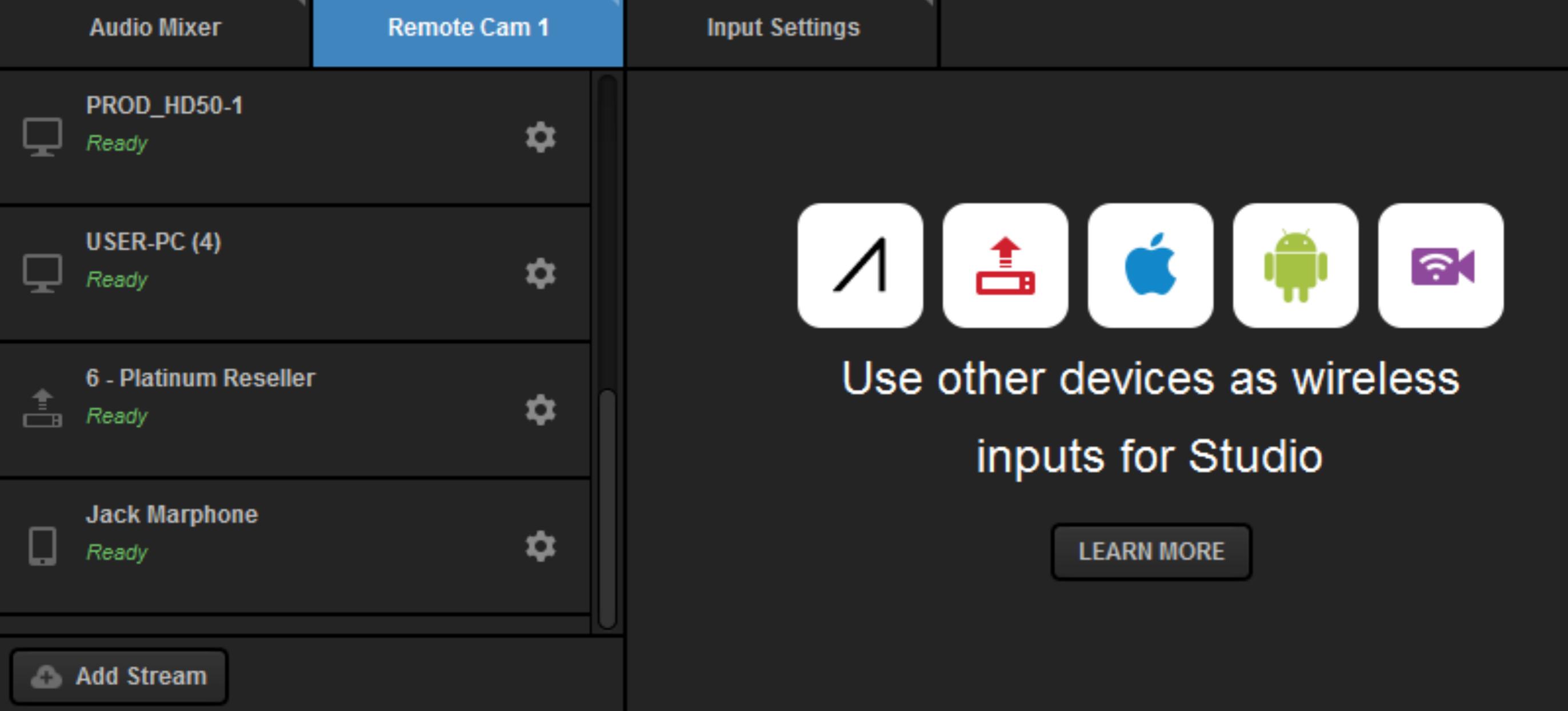
'**SET**' will change to say
'**SOURCES.**' Press the knob to
pull up the menu.



The left arrow indicates which source is currently being seen in the remote camera module.



Turning and pressing in the knob will allow you to set which available remote source will be used.



The option to do this in Livestream Studio will be easily accessible when you access this menu as well.

Settings: Support

CANCEL

SAVE

Project Format

Video In / Out

Audio In

Recording

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

Questions or issues? Go to Livestream Studio settings and click on the Support tab for Livestream Support contact information.