

Livestreaming Your Event

Livestreaming Setup & Equipment

In order to livestream an event, you will need the following infrastructure:

1. High-speed internet with ability to upload (Example: running a speed test (<https://www.speedtest.net/>) will show your download and upload speed. Livestreaming requires a constant high-speed upload > 5mb/s; for best performance you should have 10mb/s or greater.)
 - a. **Note:** you may need to work with your facility or internet service provider to verify that they will allow you to stream. Some ISPs will throttle your upload speed unless they are aware of what you are doing.
2. An encoding tool that takes video input and converts it to the format required for your livestream service. (Example: The ATEM Mini Pro will take four video inputs and encode them to Google, Facebook and Twitch.)
3. A streaming service (example, Google, Facebook or Twitch) setup to accept your stream. Google's YouTube allows you to setup a YouTube channel and stream to it without cost (you may have to accept that advertisements will be displayed during your stream.)

Once you have verified step 1, and you have purchased/setup an encoding tool, you are ready to setup your Livestream channel. Check to see if your organization already has a streaming service setup. YouTube is a great platform for live streaming.

This YouTube tutorial contains great information to get you started:

<https://www.youtube.com/howyoutubeworks/product-features/live/#overview>.

If you have purchased an encoder such as the ATEM Mini Pro, you will want to follow the information for "Encoder Streaming" as stated in the tutorial.

Basic Steps

Note: You should follow the above tutorial, but below are the basic steps for streaming to YouTube with an ATEM Mini Pro:

1. Create a new YouTube channel: <https://support.google.com/youtube/answer/1646861?hl=en>
 - a. **Note:** You will have to wait 24 hours before you can livestream to your new channel
 - b. Read **ALL** information/details to ensure that you comply with Google's policies.
2. Generate an API Streaming Key within your YouTube channel (generate this **ONE** time and remember this key – you will need to enter this key in your encoder streaming tool.)
3. Download the encoder software to interact with the device (e.g., ATEM Mini Pro has software on the BlackMagic website under support. This software will ensure that the firmware on the device is up to date and will allow you to configure the box to always return to the same state on startup.) The software will communicate with your device via IP address or USB-A to USB-C cable (not included).
 - a. The ATEM Mini Pro has numerous settings allowing you to fully control your stream content with both video and audio. For swim meets, one great option is to position a camera to get the widest angle of the entire pool possible. Integrating two cameras (one positioned toward the scoreboard) or scoreboard software will allow you to integrate the scoreboard as a Picture-In-Picture window so viewers are able to see places and times along with the race.
4. Within the BlackMagic ATEM Software Control application, you will find three tabs in the upper right-hand corner. One of the tabs is marked as "Output". This is where you enter your streaming key and set YouTube as your streaming provider.
5. Once you have set the stream key and selected YouTube you can simply press the "On Air" button on the ATEM MiniPro. This should remain as a solid red light which means you are streaming. If the light blinks, there is an

error connecting to YouTube. Check your settings on your YouTube channel (you may have to click “Go Live” within your channel to start the stream the first time).

6. Once you are happy with your streaming content go back to the BlackMagic ATEM Software Control application and under the File dropdown you will find “Save Startup Settings”. This will allow you to return to this exact configuration every time you turn on the ATEM MiniPro. The advantage of this is that you no longer need to use the BlackMagic ATEM Software Control application because the stream will always show the same and simply clicking “On Air” will connect to YouTube with your streaming key and you are live!
7. Finally, when you are done with your event, be sure to turn off the stream (Press “Off” under the “On Air” button on the ATEM Mini Pro). Be sure to logon to your YouTube channel and wait for YouTube to show you that your stream has ended. This will allow YouTube to start processing your video for archive and available for viewers to watch for as long as you keep your video on your channel.

Happy Streaming!