

#### **How to Livestream Events Q&A**

# Q1 – Why should I use an audio interface when the ATEM Mini Pro already has 2 mic inputs?

An audio interface is not required when live-streaming with an ATEM Mini. However, there are a few reasons that using an audio interface can help you improve your audio environment.

First, since the two mic inputs of an ATEM Mini are STEREO, you may have problems connecting a mono microphone. In that case, you will need to have a split ('Y') cable and connect your microphone to either connector, and then set the mic input in the ATEM Mini software to 'Split Audio Into Separate Mono Channels'.

Also, the ATEM Mini does not have audio outputs, which you will need if you want to connect headphones and/or monitor speakers to check the audio signals being sent to your stream. And since ATEM Mini does not support +48V phantom power, you will need to have an external power supply if you want to use a condenser microphone.

Therefore, using an audio interface would help to improve your overall audio environment for your live stream.

# Q2 – What causes the delay between the console audio and the cameras? And how can we fix it?

The delay that occurs between the console audio signal and the cameras can be caused when there are different latencies between each device (i.e. camera and audio interface). In order to solve this problem, check the latency of each device and see if it is possible to adjust the latency (ms) from the mixing console or a software like OBS.

Remember -- it is impossible to fix the delay when the program is already online. So make sure to check and adjust the latency during rehearsal, before you go live.



#### Q3 – Which Yamaha console works best for live-streaming?

All of our mixers work well and can be used for livestreaming – which mixer is best just depends on the size of the application you want to use it for. For solo online game streaming or podcasting, an AG series mixer is usually ideal. For small-sized music applications, an MG/MGP series would be more appropriate. For larger venues, choosing a CL, QL, or TF digital mixing console will provide you with more channels, I/O routing, and access to significantly more effects and EQs. For the largest venues and live-music events, our flagship RIVAGE PM Series consoles which can handle up to 288 channels. From solo live chatting at home to large-scaled professional events, we offer a variety of mixing consoles that also work seamlessly with our power amplifiers, speakers, and more. You can find out more on our website and/or by talking to your local dealer or retail store for details.

### Q4 – Is there a way to test for LUFS (Loudness Units Full Scale) for live-stream? How can I do it?

Generally, streaming platforms deliver music at around -12LUFS to -16LUFS integrated. We suggest mastering your audio level at around -14 LUFS integrated, as it best fits the loudness normalization settings of the majority of streaming services. Please note that other measurements like the true peak value and other metrics should be considered as well, but -14 LUFS would be the best mastering level when considering loudness.

In order to measure the loudness, we suggest using a plug-in like "Loudness Penalty". It's an AAX (for Pro Tools), AU and VST plugin that checks LUFS for your music on different streaming platforms like YouTube and Spotify. It will help to prevent your mixes from being "turned down" by these platforms.