macOS multi-channel audio levels in Isadora

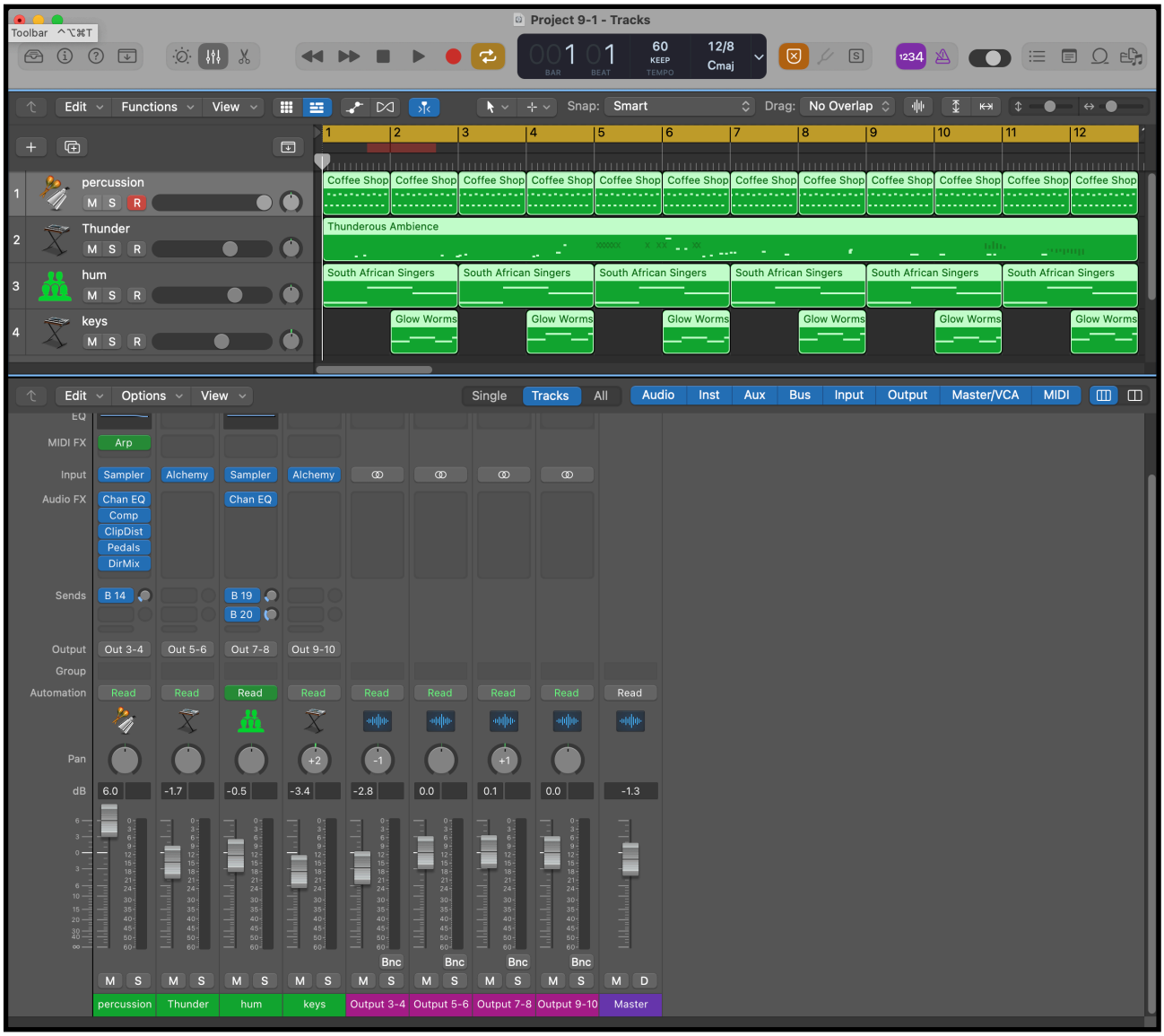
The following procedure will be very similar if you work with different audio software than what is described here…

MacBook Pro (16-inch, 2019)
macOS Monterey 12.3.1

The software used:
Logic Pro (10.7.4)
Loopback 2 (2.2.8)
Focusrite Control 3.7.2.1923 (Clarett8Pre)
Isadora 3.2.2. (intel)

The intent is to visualise independent audio channel levels in Isadora from audio channels sourced in Logic Pro (DAW).

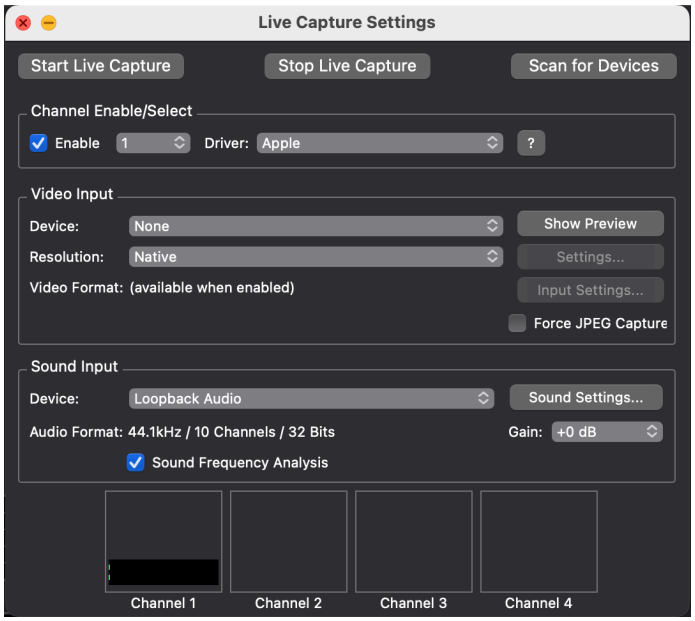
1. **The example starts with four stereo channels in Logic Pro (this will be interpreted as eight channels in the audio track). Select Loopback (or another multi-channel virtual audio option installed on your computer) as the audio output device in Logic Pro preferences.**



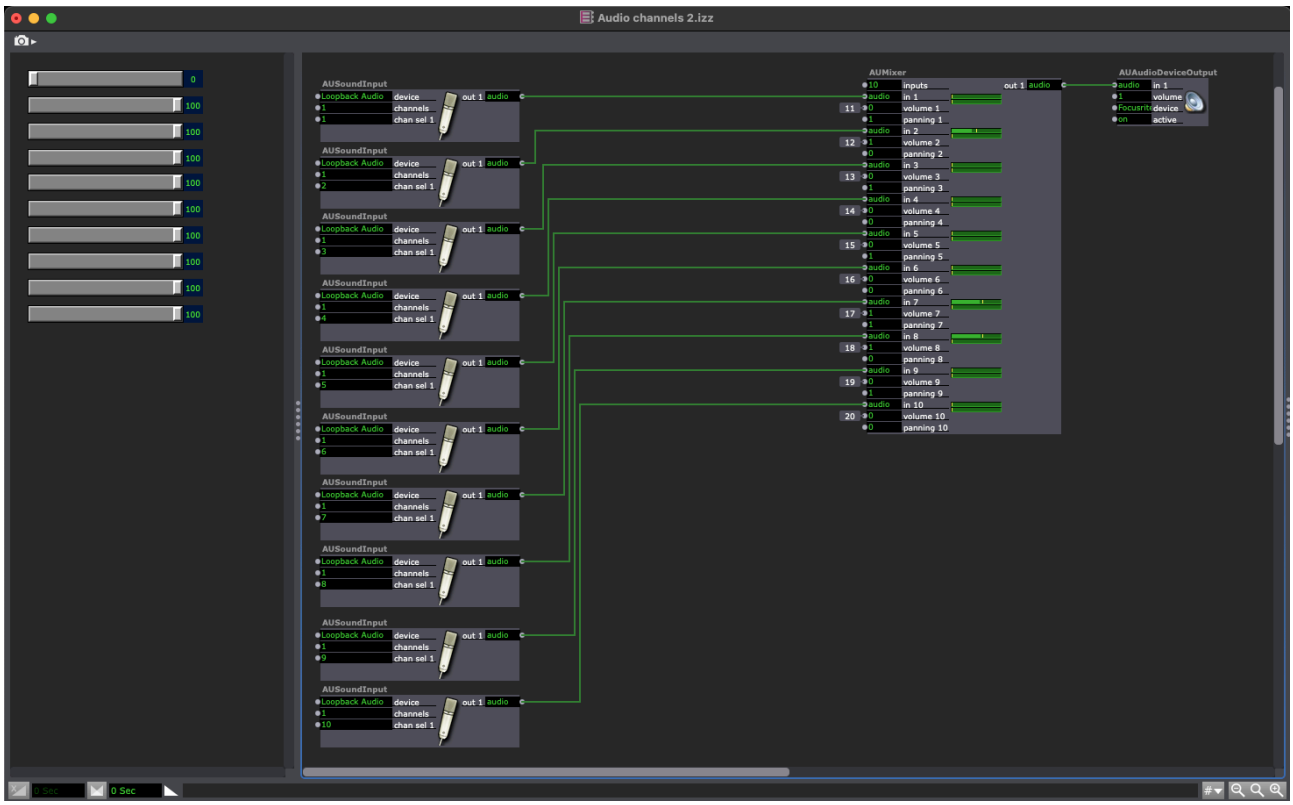
2. Next, set up Loopback audio routing software to accommodate multichannel audio.

Add as many output channels as required in Loopback (here, five stereo pairs are added to create ten audio channels). Once the required number of output channels are introduced into Loopback, go back into the DAW and assign outputs in the channel strips. In this example, Loopback is used as a pass-thru for a series of stereo channels. Note that the Monitor (Focusrite Thunderbolt) is turned off. This is because, in this example, the audio will be sent to the Focusrite device through Isadora as the sound output - so the output needs to be turned off in Loopback or removed from the Monitors column.

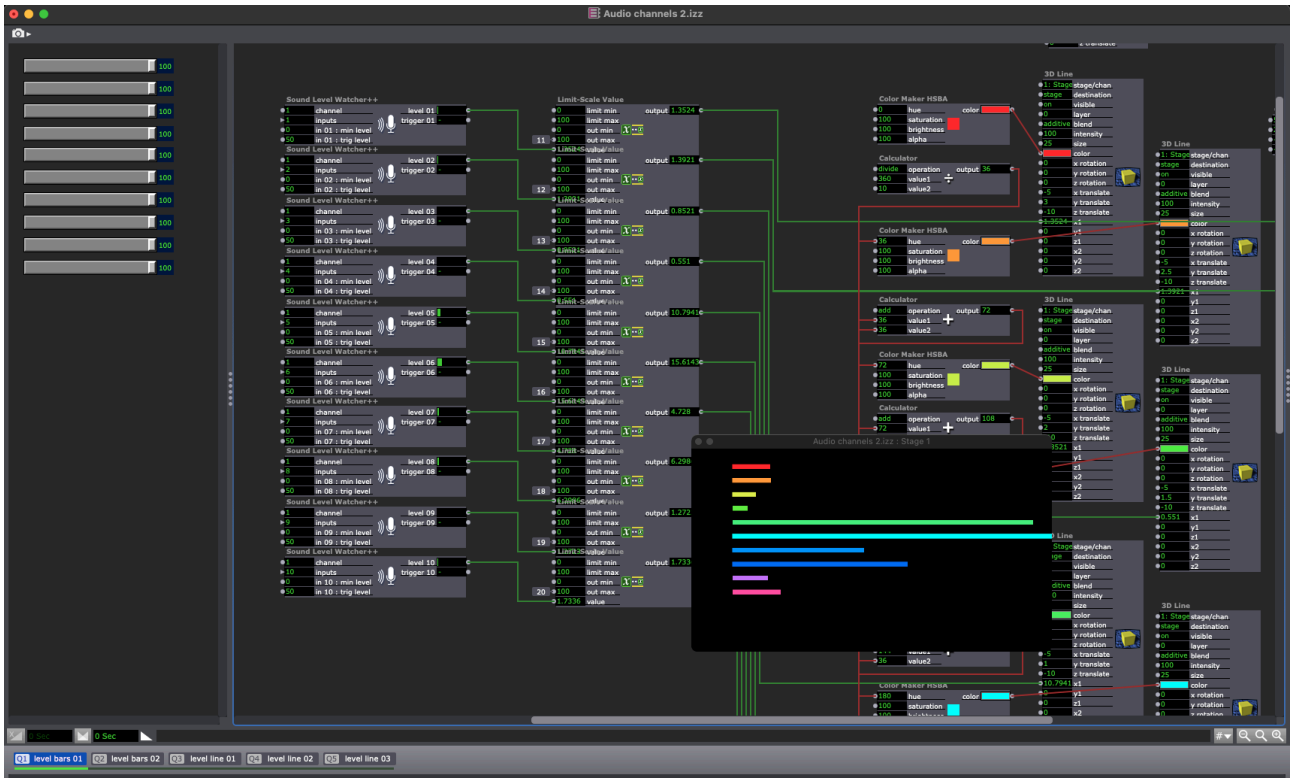
3. Live Capture settings in Isadora are set to receive Loopback Audio as the Sound Input device. Note that the audio format is described in the Sound Input section of the panel.



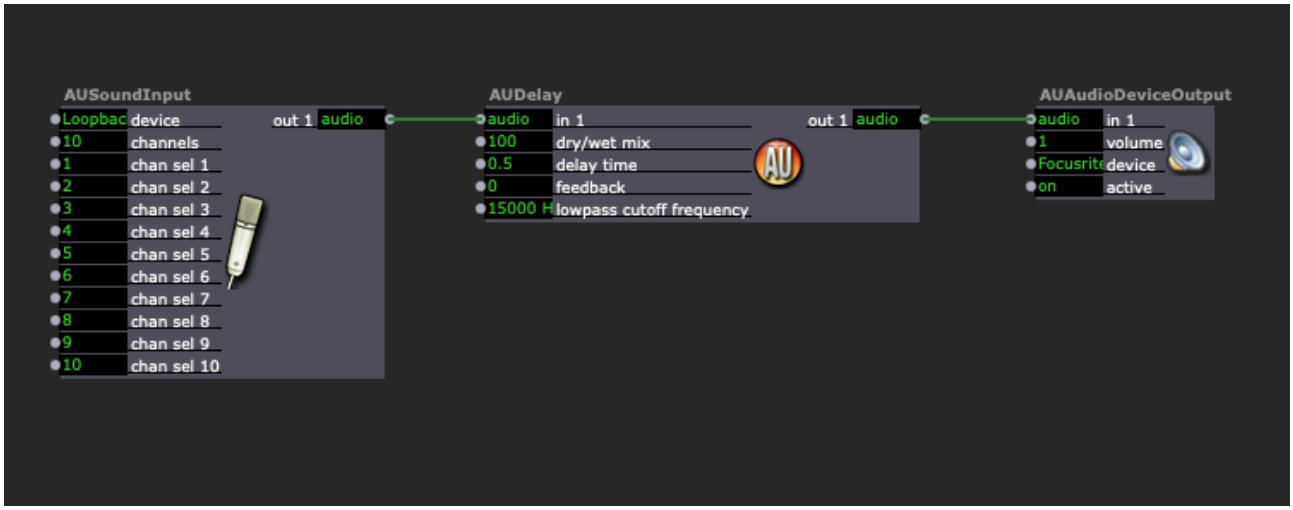
In the Isadora Scene Editor window, access AUSoundInput and AUAudioDeviceOutput to configure the audio pass-thru and output to the audio interface (in this case, the Focusrite device). In this example, the AUMixer plug-in is used to facilitate a slider volume control for each channel.



In a neighbouring section of the scene patch, the Isadora Sound Level Watcher++ provides parameters to access the level of each of the sound channels individually. In this example, the levels for each channel are passed to a 3D Line actor to form bars demonstrating a visual representation of the sounds.



The multi-channel formation of the audio is retained in Isadora, and your sound device can be configured to create a mix of the channels as an output track. In this example, ten channels are being captured by Isadora and passed through an AUDelay filter and then to an AUAudioDeviceOutput.



The output audio hardware is configured to mix down a stereo track for output to the physical left and right speakers. This example is Focusrite Control software for the ClarettPre8 device.