Revolution Mixer

Manual

THE BLACK LION AUDIO MIXER

What it does

The Black Lion Audio Mixer is a software mixer that gives you control of the levels and routing of digital audio passing through your Revolution interface, allowing you to send audio from your desired audio sources (Inputs) to their desired destinations (outputs.)

This grants you an incredible amount of creative routing freedom for tasks like:

- Live streaming a DAW session or DJ set where you need to send audio from both your microphone and your DAW to your streaming platform or OBS
- Sampling audio to your DAW from various websites by routing web browser audio to your DAW via Loopback
- Live streaming a song to your phone with a backing track that is playing on your computer - the backing track audio needs to be routed to your social media app along with your voice and instrument (Requires an interface with OTG connections like the Revolution 6x6)

Important to know: The Black Lion Audio Mixer operates completely in the digital realm. The physical gain and Monitor controls on your interface itself operate independently of levels set in the software mixer. Be sure your interface's monitoring control is set to Playback, rather than Input, to hear the audio routed by the software mixer.

The BLA Mixer operates in both Simple and Advanced modes. Choose the mode that best suits your use case and experience level. These modes are simply two different ways of controlling the same, single mixer, and can be switched between seamlessly without affecting your settings.

Simple Mode

A set of system controls is available on the left.

Mode: Choose Simple or Advanced.

Buffer size: The device block size of your interface, measured in samples. Adjust this if you're experiencing latency issues in your audio productions. Lower numbers will result in lower latency, higher numbers result in lower CPU usage.

Sample Rate: Choose the operating sample rate of the interface here. Be mindful of choosing the same sample rate as the projects you are working on. Options are: 44100, 48000, 88200, 96000,176400, or 192000 Hz.

Mixer Reset: Click this to restore the mixer to its default state.

BLA Logo: Click the logo to bring up the About panel to view detailed information about the mixer, including the version you are currently running.

The fader controls make up the right side of the mixer interface.

- **Playback** controls the output level being sent from your computer to your Revolution Interface's physical Outputs. Use this to adjust the overall output level to your speakers and headphones.
- **Recording** controls the input level of the interface's physical inputs being sent to the digital USB driver stream Recording Channels. These can include Mic/Line/Inst, OTG (Rev. 6x6), and SPDIF inputs. Use this to control the level of the signal going from your voice or instrument into your DAW.
- **Loopback** controls the level of the Playback channels sent into the corresponding Recording Outputs. For example, the Monitor L/R Playback channels will be sent to Mic/Inst/Line 1/2 Recording Outputs, enabling you to record any audio in your Playback channels such as desktop audio.
- **Monitor** controls the level of the physical hardware inputs being sent from the Revolution Interface to the Monitor Outs for direct monitoring with no latency. This includes Mic/Line/Inst, OTG, and SPDIF inputs.

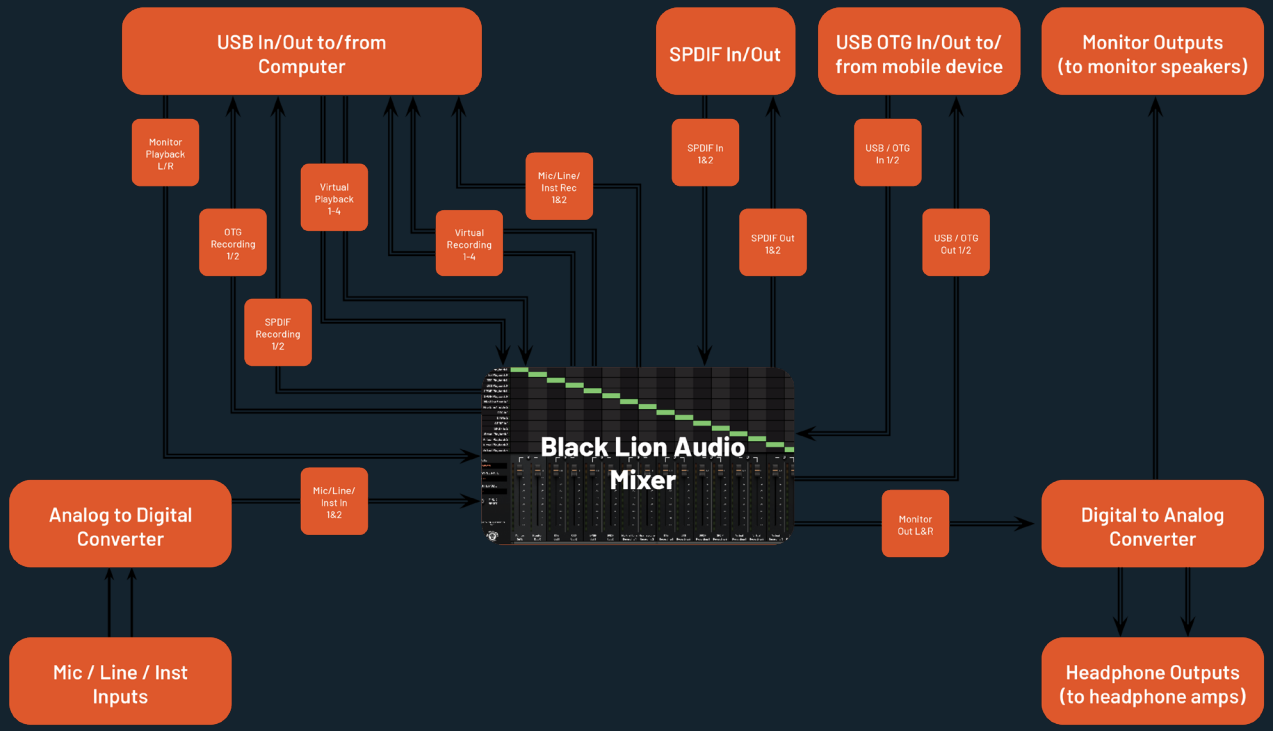
Simply click and drag any fader up or down to adjust its level. Alternatively, mouse over the desired fader and use the mousewheel.

Advanced Mode

Advanced mode launches a matrix mixer that allows you to control routing to and from various sources and destinations in the BLA Mixer. Any Input can be sent to any Output, allowing for powerful routing solutions!

In the BLA Mixer, Inputs are represented by rows, labeled on the top left, and Outputs are represented by columns, labeled on the bottom. The cells where these Inputs and Outputs intersect are used to control the send levels from an Input to an Output.

Here's a look at the routing of a Revolution 6x6 as an example. The Black Lion Audio Mixer node in the center is where all of your mixing will take place.



Inputs

The rows on the top half of the mixer are representative of inputs to your Revolution Interface, including the hardware preamps, USB channels from your computer, etc. These are named on the far left and include the three types of inputs described below.

Physical inputs are Inputs with a physical jack/connection on the interface. They can include:

- Mic/Line/Inst In 1&2
- OTG In 1&2 (Revolution 6x6 only)
- SPDIF In 1&2

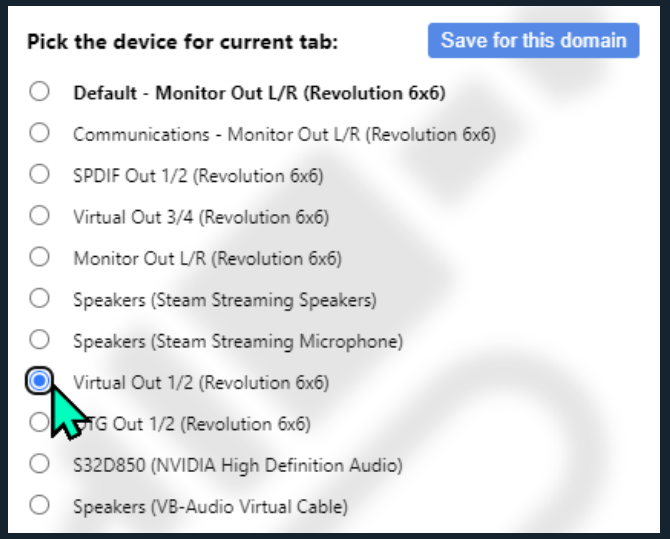
Playback channels are digital Inputs that feed into the mixer from your computer and are typically sent to the corresponding hardware outputs. They can include:

- Monitor Playback L&R
- OTG Playback L&R (Revolution 6x6 only)
- SDIF Playback L&R

Virtual Inputs are additional digital Inputs for software audio sources like DAW applications, web browsers, etc. They can include:

- Virtual Playback 1-4

Note that you will need to assign the audio output of the desired applications to a Virtual Output in their respective application settings to route audio to Virtual Playback channels. Here's an example for choosing the Virtual Out 1|2 using a Chrome browser extension.



Outputs

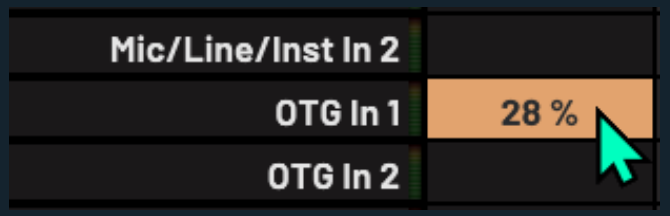
The faders at the bottom are representative of outputs from your Revolution interface, including the Monitor (Main) Outs, SPDIF outs, Virtual Recording, etc. These are named at the bottom.

Routing audio using the matrix mixer

The intersections (cells) of the rows and columns indicate the percentage values of the Inputs (horizontal rows) being sent to the Outputs (vertical columns.)

Clicking and dragging vertically on a cell will set the send level in percentage.

- At 100%, the cell will turn green.
- At 0%, the cell will turn dark.



Alternatively, double-click a cell to enter a percentage value using your keyboard.

Additional features exclusive to Advanced Mode

- Click the channel link icon to link the levels of two output channels together to operate them from a single fader. Useful for stereo signals that occupy two channels.
- With the cursor held over the matrix mixer (top half) of the interface, hold shift and use the mousewheel to scroll the interface left and right.
- Mouseover any cell to get a pop-up tooltip of the input source and output destination.

Resizing the Mixer

In both Simple and Advanced Modes, click and drag the bottom right corner of the mixer to resize it to whatever works best for you. Clicking and dragging the mixer from the right or left vertical edge of the window allows you to customize the width of the mixer window to expose or hide fader channels depending on your needs.

In Advanced Mode, you may also customize the sizing of the fader area by clicking and vertically dragging the horizontal divider between the mixer matrix and the lower fader area to hide or reveal the appropriate amount of the matrix for your needs.

Signal routing examples

Sending DAW audio and talkback mic to Discord for a remote session

- Send your DAW's Master Out to Revolution 6x6 Virtual Out 1/2.
- Select Revolution 6x6 Virtual In 1/2 as your audio input source in Discord or other remote communication software.
- Be sure to disable any noise suppression or automatic gain control settings in Discord, as this can alter your audio.
- In the BLA Mixer's Advanced Mode, send audio from Virtual Playback 1/2 to your Monitor Out L/R output channels so you can hear the audio you are sending to Discord.
- Send audio from your talkback mic to Discord by sending signal from Mic/Inst/Line 1 to both of the Virtual Recording 1 and 2 channels, so that the signal comes through both of your recipients' speakers.
- Add some of your own talkback mic to your own monitor if you'd like to hear yourself by sending signal from Mic/Inst/Line 1 to both Monitor Out L/R channels.

Live streaming a digital DJ set from your DAW

- Connect your mic to Mic/Line/Inst 1 and set your level.
- In the Mixer, send Mic/Line/Inst 1 to Virtual Recording 1/2.
- Set your DJ software's Master Output to Virtual Out 1/2.
- In the Mixer, Virtual Playback 1/2 are routed to Virtual Recording 1/2 by default.

In your streaming software, create an audio source and set it to Virtual In 1/2 to capture both your DJ software and microphone audio. Adjust the levels using the faders to set an appropriate mix of your mic and DJ software output.

Sampling audio from your browser

- In your browser, set its audio output to Virtual Out 1/2. Chrome has some plug-ins that allow for this on a per-tab basis.
- In your DAW, create a stereo channel and set its inputs to Virtual In 1/2. Arm the channel.
- Switch back to your browser and play the audio you want to sample while dutifully respecting copyright law.
- Switch back to your DAW and start recording.

Recording or streaming a song to your phone with a backing track that is playing on your computer (Revolution 6x6 only)

- Connect your mic or instrument to Channel 1 of the interface.
- Connect your phone to the OTG port.
- In your computer's audio settings, select OTG Out 1/2 as the output source for your computer's desktop audio and play your backing track. This audio will now be sent to your mobile device via the OTG connection
- In the BLA mixer's Advanced Mode, use the Matrix Mixer to route audio from your Mic/Line/Inst 1 source to both OTG Out 1/2 channels.

To hear the backing track and your performance through your own monitors, send signal from Mic/Line/Inst 1 to both Monitor L/R outputs and do the same for the OTG Playback channels 1/2. Adjust the values of both of these sources until you have a mix that sounds good to you. Apply the same to the sources being sent to the OTG Output, as this is the mix your audience will hear.

Live streaming a guitar performance from your phone (Revolution 6x6 only)

Let's say you wanted to livestream a guitar performance from your phone, with your guitar connected to Input 1 and your phone connected via the USB OTG connection.

- Connect your interface to power.
- Connect your guitar to the Inst 1 Input of your interface and set your level using the gain knob.
- Connect your phone to the USB OTG connection on your interface.

In the Mixer, click on the intersection of Mic/Line/Inst 1 and OTG Out 1 and drag vertically to set the signal level sent to OTG Out 1. Repeat for OTG Out 2. Set them to match. This will ensure your guitar signal is sent to both the Left (1) and Right (2) channels of the OTG Outputs and your performance won't render in just one of your listener's ears. (Note: some streaming platforms support stereo audio, and some sum to mono… but this is the best way to be safe.)