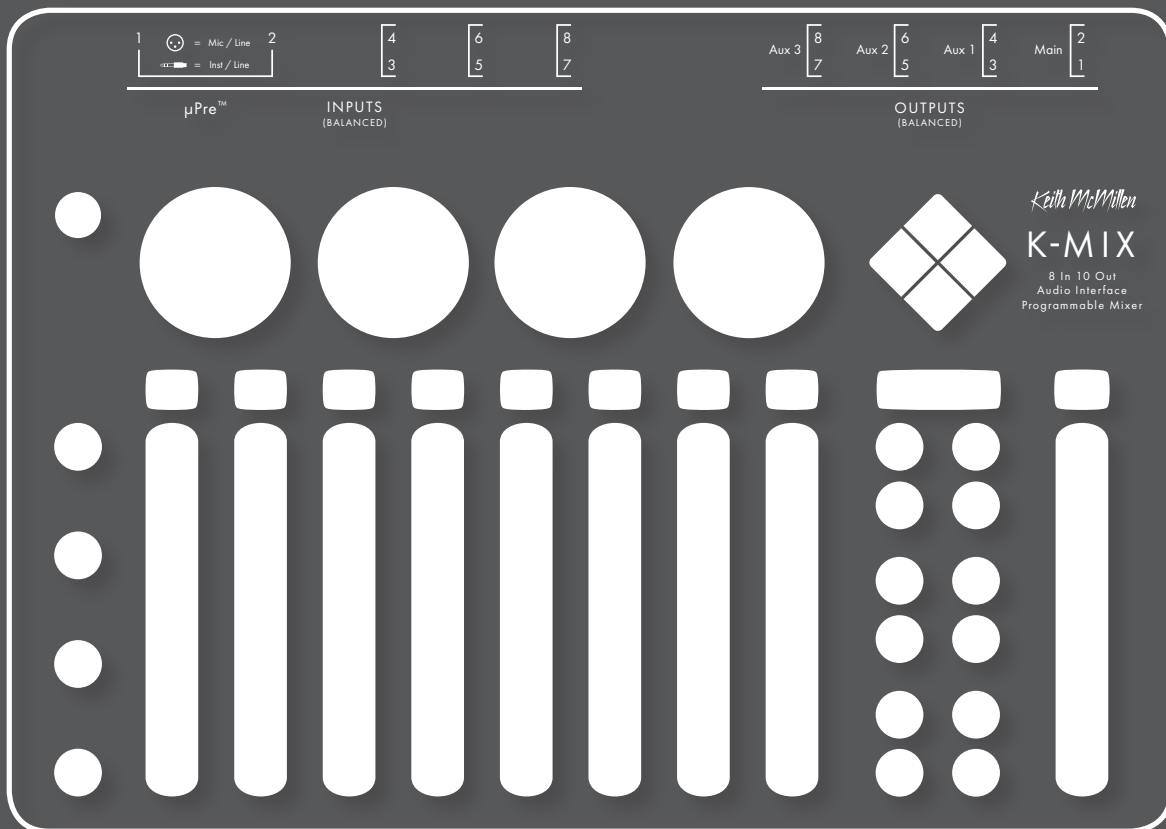


# Keith McMillen

## INSTRUMENTS



# K-Mix USER MANUAL

# K-MIX

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## WELCOME

Hello, and welcome to the world of K-Mix! Taking the time to read this document is a huge step toward becoming a true K-Mix wizard! Put on your robe and wizard hat, wield your staff, and replenish your mana reserves before proceeding further.

The purpose of this document is to provide a resource containing helpful information regarding the use of the K-Mix hardware and software. While this document is written for people of all levels, it does not attempt to explain basic, fundamental audio concepts or terminology, and it is assumed that you have at least basic experience working with audio equipment.

## QUESTIONS? FEEDBACK? CONTACT US!

Any questions or feedback that may come up regarding K-Mix or its software can be directed to us here:

- **Technical Support:** <http://www.keithmcmillen.com/support>
- **General Questions:** <http://www.keithmcmillen.com/contact-us>
- **User Forum:** <http://forum.keithmcmillen.com>

## WHERE TO DOWNLOAD EVERYTHING

All K-Mix software can be downloaded on the KMI website at [www.keithmcmillen.com/downloads](http://www.keithmcmillen.com/downloads)

# Before You Begin





## 1.1 WHAT'S IN THE K-MIX BOX?

### K-Mix

For mixing.

### MICRO-USB CABLE

For connecting K-Mix to a computer or tablet.

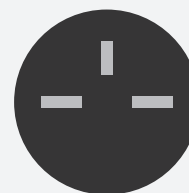
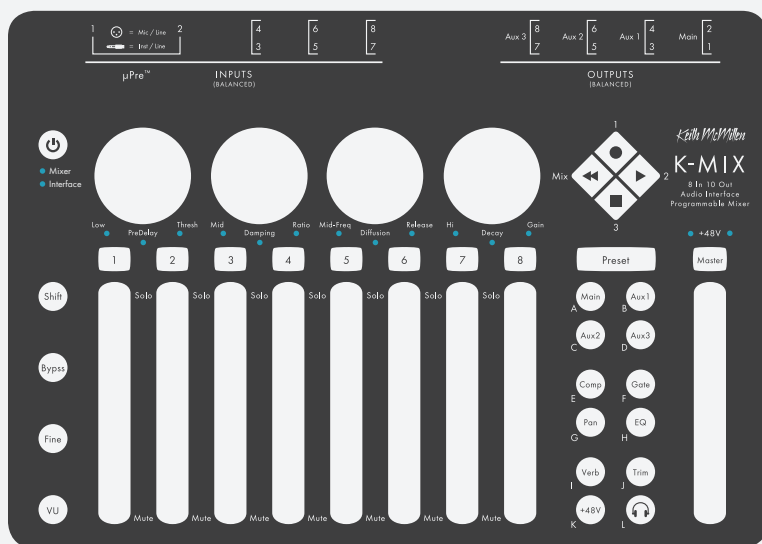
### MINI-USB CABLE

For connecting K-Mix to a USB power supply or KMI MIDI Expander.

### USB POWER SUPPLY + CONVERTER BLADES

+5V DC, 1.5A.

For powering your K-Mix. Also includes international converter blades.





## 1.2 WHAT'S IN THE MIDI EXPANDER PACKAGE?

### MIDI EXPANDER

For expanding.

### USB POWER SUPPLY + CONVERTER BLADES

+5V DC, 500 mA

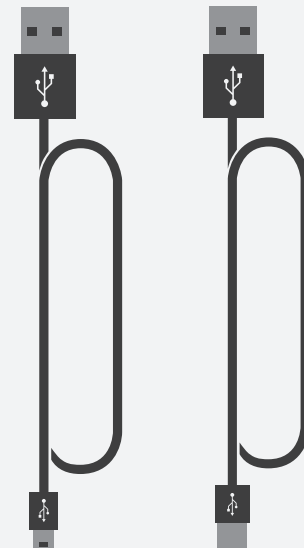
Includes power converter blades for non-United States AC sockets.

### USB CABLE

For connecting the Expander to the USB power supply.

### MINI-USB CABLE

For connecting a KMI device to the Expander.





## 1.3 – SYSTEM REQUIREMENTS

### 1.3.1 – HARDWARE

#### MAC OS

- Mac OS 10.6 (or greater)
- Intel Core 2 Duo (or greater)
- USB 2.0 (or greater) port

#### WINDOWS

- Windows 7, 8, & 10
- USB 2.0 (or greater) port

#### STANDALONE OPERATION

- K-Mix
- USB power supply (included with K-Mix)
- USB cable (included with K-Mix).

### 1.3.2 – SOFTWARE

#### MAC OS

- Mac OS 10.7 or later
- Intel Core 2 Duo (or greater)
- USB 2.0 (or greater) port
- 100 MB free hard disk space

#### WINDOWS

- Windows 7, 8, & 10
- 64 bit
- 2.5 GHz processor (or greater)
- 4 GB RAM (or greater)
- USB 2.0 (or greater) port
- 100 MB free hard disk space





## 1.4 – WINDOWS INSTALLATION INSTRUCTIONS

### WINDOWS DRIVER INSTALLATION

1. Download "K-MixUSBAudioDriver\_DriverSetup\_v1.1.0.zip" into your downloads folder.
2. Unzip this inside your downloads folder and find "K-MixUSBAudioDriver\_DriverSetup\_v1.0.0.exe" within.
3. Double-click this .exe to run the installer.
4. Follow installer instructions and click through to "Finish".
5. Plug in and turn on K-Mix
6. For Windows 10: click speaker icon bottom right corner and click the carat icon (^) on the right side of the screen.
7. For Windows 10 continued: select speakers (K-MixUSBAudioDriver) to select K-Mix as your system audio device.



Some audio applications may require that you reboot the computer once before they will fully engage with the K-Mix Audio Drivers.

### WINDOWS EDITOR INSTALLATION

1. Download "K-Mix\_Editor\_Win\_###.zip" into your downloads folder.
2. Select zip file and "Extract All" inside your downloads folder.
3. Open the extracted K-Mix Editor folder to find the folder that contains the K-Mix Editor.
4. Move the folder that contains the K-Mix Editor into your "Program Files" folder (not "Program Files (x86)").
5. You are now ready to open the K-Mix Editor and connect your K-Mix.



## 1.5 – MANUAL CONVENTIONS

Here are a few important notes on the formatting of this document:

- Links to external websites will appear in underlined, blue text – click on the text to open that web page in your computer's default web browser.
- Links to different sections of the manual will appear in **black, bold, underlined text** – click on the text to jump to that section of the manual.
- The terms "TRS cable" (tip, ring, sleeve) and "TS cable" (tip, sleeve) will appear in the manual – these are also commonly referred to as a "stereo cable" and "mono cable", respectively.
- Any measurement followed by double quotes (") denotes inches. Measurement values followed by a single quote (') denotes feet – e.g. 1/4" refers to one-quarter inch and 3' refers to three feet.
- References to buttons on the K-Mix hardware will appear as the button name (or symbol) enclosed in brackets – e.g. the [SHIFT] button and the [⏻] button.



Whenever this exclamation mark appears, very important information will appear in this text area.



Whenever this light bulb icon make an appearance, this text area will contain a helpful tip.

# Getting Started





This section covers information that will help you get started with the K-Mix. We will introduce the K-Mix hardware and the MIDI Expander hardware, discuss how to connect your K-Mix to the world, and go over basic operation of the mixer. More in-depth information is available in the [K-Mix Hardware](#) and [K-Mix Editor](#) sections.

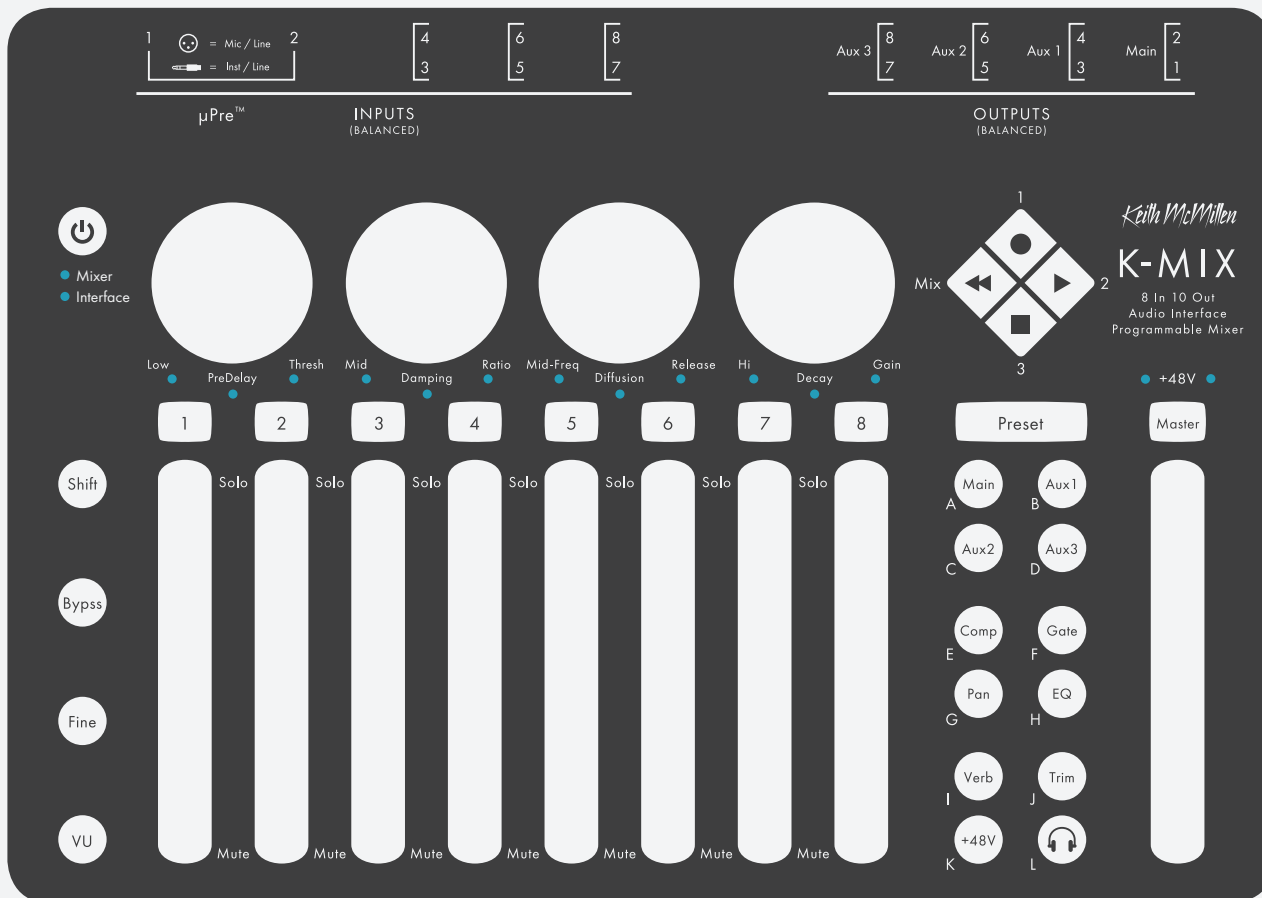


## 2.1 – K-MIX HARDWARE OVERVIEW

The K-Mix hardware!

### 2.1.1 – FRONT PANEL

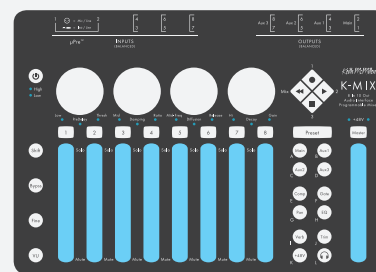
The front panel of K-Mix looks like this:



#### 2.1.1.1 – FADERS

The K-Mix faders are where the most important part of mixing occurs – level adjustment. Depending on the current mode K-Mix is in, the faders are in charge of controlling output levels, input trim levels, aux send levels, and reverb send levels.

Underneath faders 1-8 are 12 LEDs (6 green, 3 yellow, 3 red) that provide visual feedback. These can represent either the current fader position, or act as VU meters for audio passing through. The master fader (fader 9) is equipped with two columns of 12 LEDs for accurate representation of the stereo output levels.



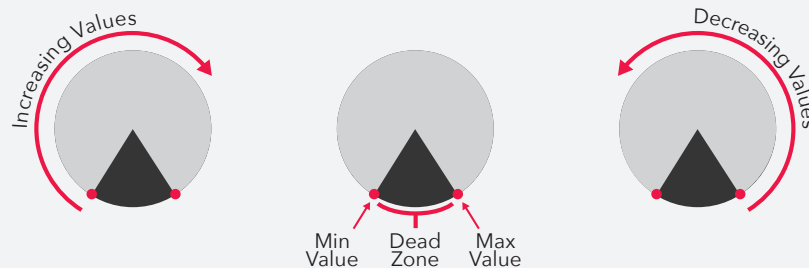
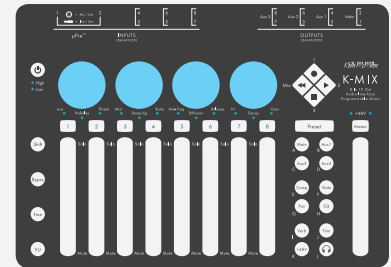


## 2.1.1.2 – ROTARIES

The K-Mix rotaries handle most of the parameter adjustments that aren't covered by the faders. These include EQ, compressor, gate, panning, and reverb adjustments.

The outer edge of each rotary, underneath the surface, is lined with 16 LEDs. These are used to display the current position of each rotary.

With the exception of **fine tuning** and **surround panning**, the rotaries behave like standard knobs; the minimum and maximum values are at approximately 7 o'clock and 5 o'clock, respectively. Move the rotary clockwise to increase values; move the rotary counterclockwise to decrease values.



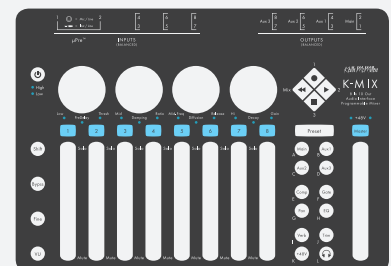
## 2.1.1.3 – ROTARY CONTROL INDICATOR LEDs

Three LEDs below each rotary are used to indicate what parameters they are currently controlling. These are labelled with parameters for the onboard EQ, Reverb, and Compressor/Gate.



## 2.1.1.4 – CHANNEL SELECT BUTTONS

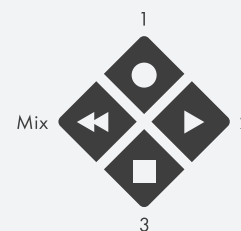
Nine channel select buttons, one above each fader, are used for a number of different functions. Their main function is to select the currently focused channel (or channels) for editing effects. Depending on the currently selected mode, the channel select buttons can also be used to bypass effects, display mute/solo status, set and display pre/post fader sends, turn phantom power on/off, or select the current headphone monitor point.





### 2.1.1.5 – DIAMOND PAD

The diamond buttons are used to select whether K-Mix is in the “Mix” bank, or one of three available MIDI banks (“1”, “2”, “3”); they can also be used to output MIDI notes and transport control messages.



### 2.1.1.6 – POWER BUTTON

The [⏻] is used to turn K-Mix on and off.



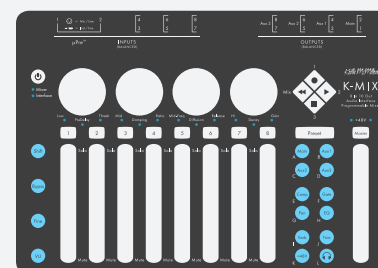
### 2.1.1.7 – MIXER/INTERFACE INDICATOR LEDs

Two LEDs below K-Mix’s [⏻] button show whether K-Mix is currently powered on or not. If on, these will be illuminated; if off, these will be off.

- Mixer
- Interface

### 2.1.1.8 – MODE BUTTONS

The mode buttons are used to switch the current “mode” your K-Mix is in. Each mode allows access to different audio-related parameters, such as EQ, Gate, Compressor, etc.



### 2.1.1.9 – PRESET BUTTON

Used to select which of the 12 onboard presets is currently loaded.



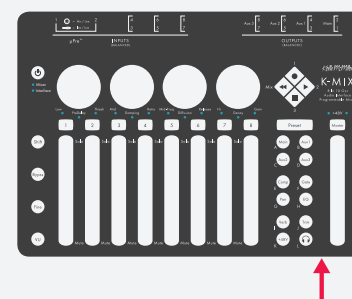
### 2.1.1.10 – PHANTOM POWER INDICATOR LEDs

Used to indicate the current phantom power states for channels 1 and 2.



### 2.1.1.11 – HEADPHONE OUTPUT JACK

At the very front of K-Mix is a 1/8” stereo headphone output jack. Plug in your headphones to monitor outputs and inputs. The headphone jack can also function as its own discrete stereo output bus, or be used as a low frequency crossover output when mixing in surround.





## 2.1.2 – BACK PANEL



### 2.1.2.1 – OUTPUTS

This is where all of the audio comes out!

Each of the eight outputs provides a balanced, mono audio signal via 1/4" jacks.

### 2.1.2.2 – INPUTS

This is where all of the audio signals you want to mix go in!

K-Mix offers eight balanced, mono inputs, and is capable of accepting both XLR (inputs 1 & 2 only) and 1/4" connectors.

#### XLR/TRS COMBO JACKS



Inputs 1 & 2 on K-Mix feature two XLR/TRS combo jacks. These allow for connecting microphones via XLR connectors or line level and instrument level signals via 1/4" TRS connectors.

#### 1/4" JACKS



Inputs 3-8 on K-Mix feature 1/4" TRS jacks. These allow for connecting balanced (or unbalanced) line level and phono level signals via 1/4" TRS connectors.





### 2.1.2.3 – “AUDIO” MICRO-USB PORT

The “Audio” micro-USB port is used for both powering K-Mix and connecting K-Mix to a computer or tablet.

When connected to a computer or tablet, K-Mix can act as an audio interface or a MIDI control surface, passing audio and MIDI between the two devices. The connected device will provide power to K-Mix.

K-Mix can also be powered from this port by connecting it to a USB power supply. When powered in this manner, K-Mix will operate as a standalone mixer.

## Audio



Tablets may not be able to provide enough power to K-Mix by themselves. You will likely need to power K-Mix externally via the “Control” mini-USB port and a USB power supply.

### 2.1.2.4 – “CONTROL” MINI-USB PORT

The “Control” mini-USB port is used for powering K-Mix with a USB power supply. It can also be used to connect K-Mix to a KMI MIDI Expander.

Connect this port to a USB power supply to use K-Mix as a standalone mixer, or to provide extra power should the need arise (using K-Mix with a tablet or computer that cannot provide enough power on its own).

Connect this port to a KMI MIDI Expander for bi-directional MIDI communication with external MIDI via 5-pin DIN cables.

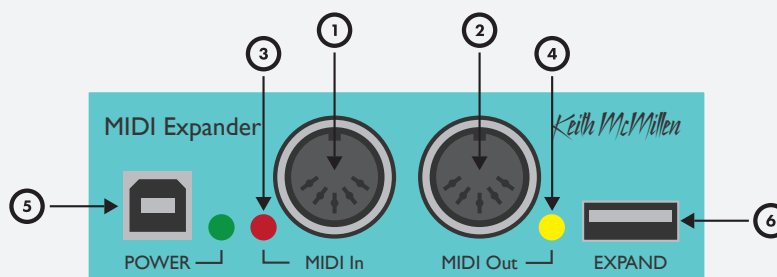
## Control





## 2.2 – MIDI EXPANDER OVERVIEW

The KMI MIDI Expander is an optional accessory that allows K-Mix (and other KMI products) to connect to external MIDI hardware via MIDI cables.



### (1) MIDI IN

MIDI input to the Expander. Incoming MIDI will be passed through the K-Mix and up the USB connection to a connected computer or tablet (if present) – similar to a MIDI interface. MIDI sent into the Expander's input can also be used to control the K-Mix Mix bank parameters, and change the currently selected preset.

### (2) MIDI OUT

MIDI output from the Expander. MIDI from the K-Mix (and a connected computer) can be sent out of this to external MIDI hardware.

### (3) INPUT LED INDICATOR

Flashes when MIDI is received at the MIDI In port.

### (4) OUTPUT LED INDICATOR

Flashes when MIDI is sent out of the MIDI Out port.

### (5) POWER PORT

Used to power the MIDI Expander and a connected K-Mix. Just plug a USB power supply (one is provided with the Expander package) into a power outlet, then connect the power supply to the POWER port on the Expander using a USB-A to B cable (also provided with the Expander).

### (6) EXPAND PORT

Used to connect the MIDI Expander to K-Mix. Just use a mini-USB cable to connect the K-Mix's CONTROL port to the MIDI Expander's EXPAND port.

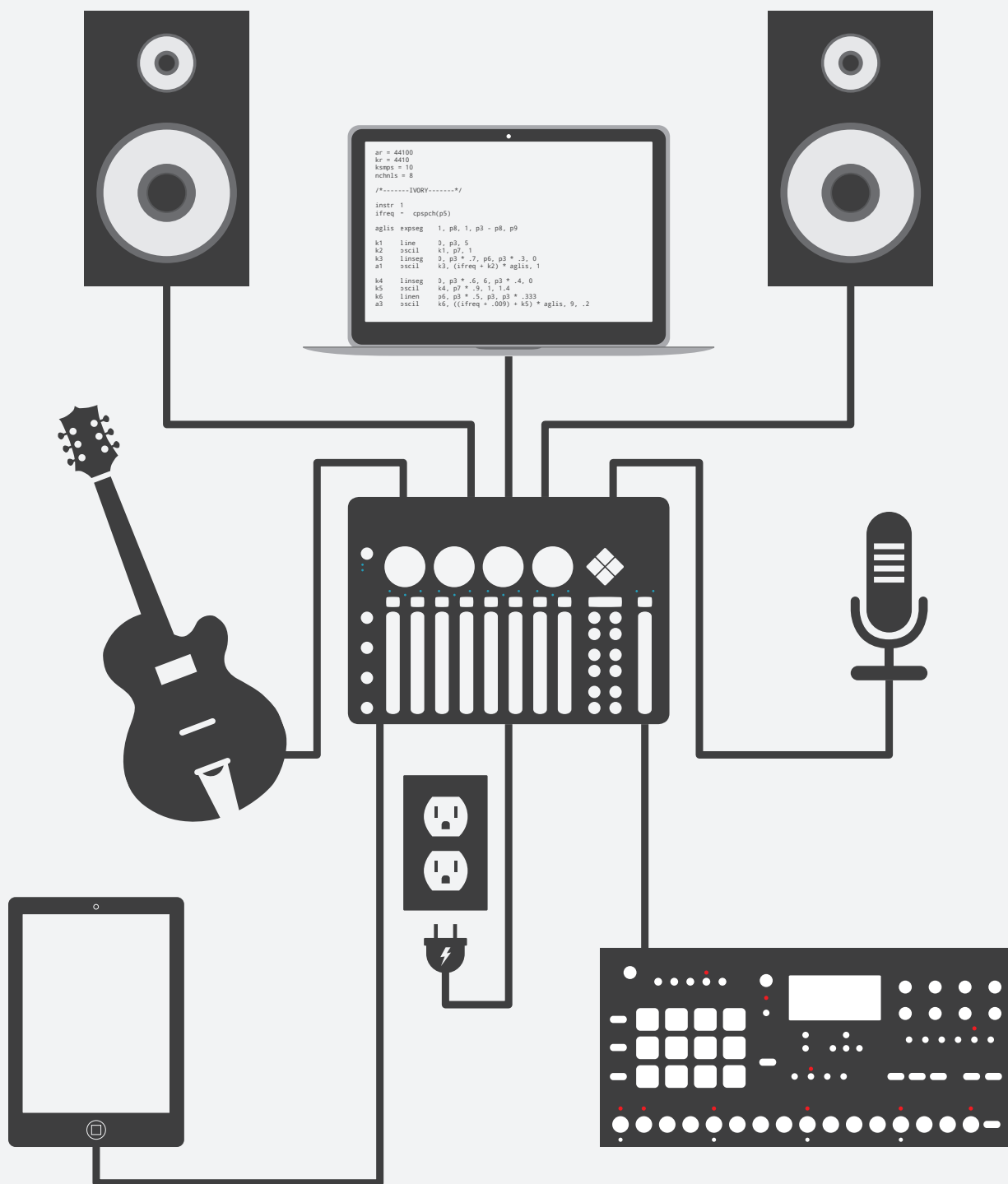


Only KMI products should be connected to the EXPAND port – other USB devices (including USB hubs) will not work.



## 2.3 – CONNECTING K-Mix...

This section covers how you can connect K-Mix to your audio world.





## 2.3.1 – TO POWER

K-Mix can be powered in one of two ways:

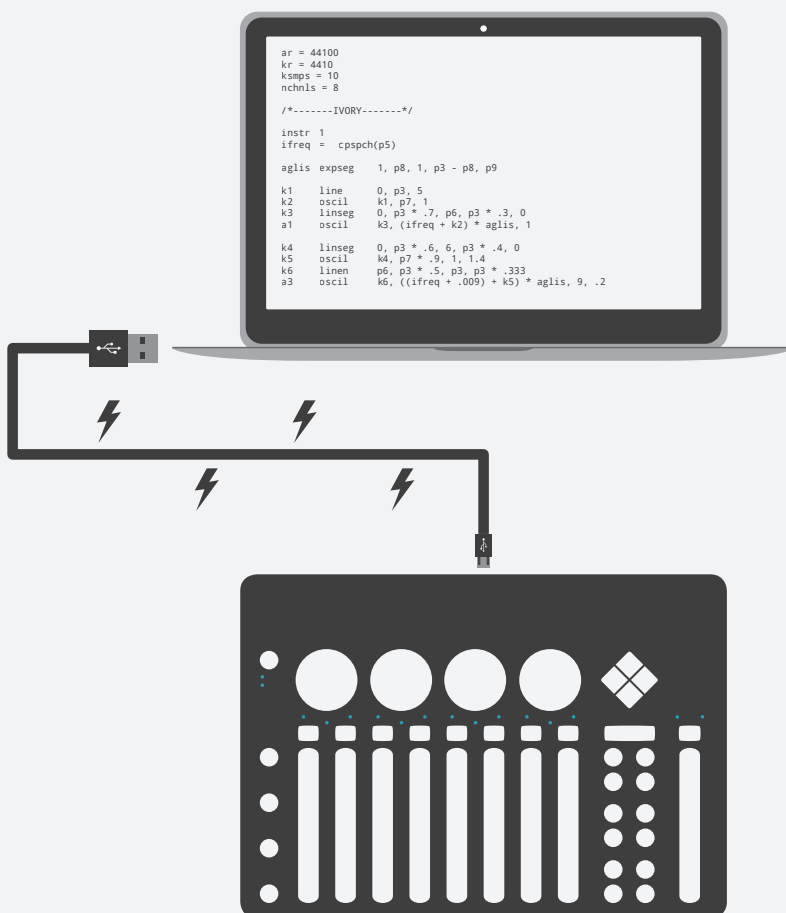
### BUS-POWERED VIA COMPUTER

The most convenient way to power K-Mix is via USB bus-power from a connected computer, tablet, or other USB host device.

1. Connect a micro-USB cable to K-Mix's AUDIO port on the back panel.
2. Connect the other end of the micro-USB cable to a powered USB port on a computer.
3. Turn on K-Mix by pressing the [⏻] button.



It is possible that some devices will not be capable of bus-powering K-Mix on their own. If this is the case then you will need to **power K-Mix externally** for K-Mix to fully operate.





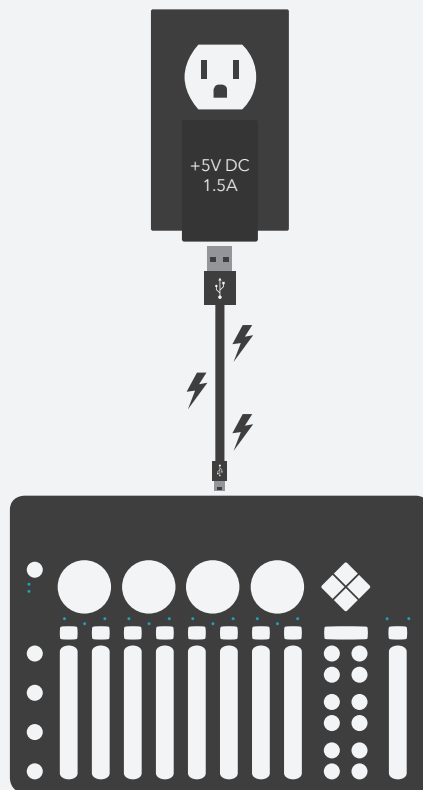
## STANDALONE POWER VIA USB POWER SUPPLY

It is also possible to power K-Mix from a standard AC power outlet using a 5V USB power supply (included with K-Mix). The power supply must be capable of putting out a minimum of 500mA of power to ensure K-Mix will work properly; the power supply that ships with K-Mix can output 1.5A.

1. Connect a mini-USB cable to K-Mix's CONTROL port on the back panel.
2. Connect the other end of the mini-USB cable to a USB power supply.
3. Plug the USB power supply into a power outlet.
4. Turn on K-Mix by pressing the [⏻] button.



It is also possible to perform the above steps using a micro-USB cable and the AUDIO port, instead of a mini-USB cable and the CONTROL port. Both methods are perfectly capable of powering K-Mix from a USB power supply.



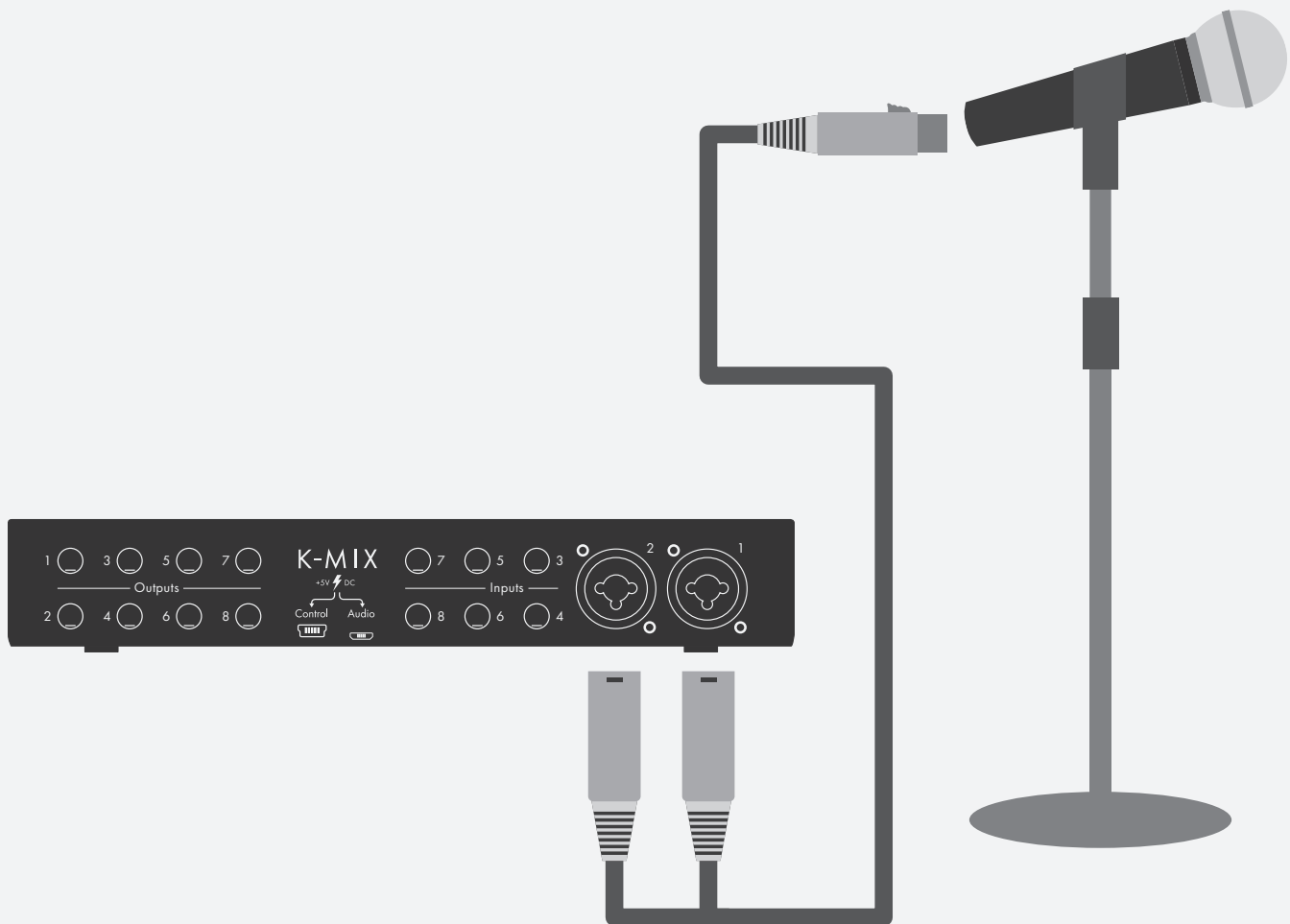
Due to the endlessly varying hardware specifications of Windows machines, we cannot guarantee that all Windows computers will provide enough power via USB to bus power K-Mix (though we have never encountered one that didn't).



## 2.3.2 – TO MICROPHONES

Microphones can be connected to inputs 1 and 2 on K-Mix with XLR cables.

1. Connect the female end of an XLR cable to the microphone.
2. Connect the other end of the XLR cable to input 1 or input 2 on K-Mix.

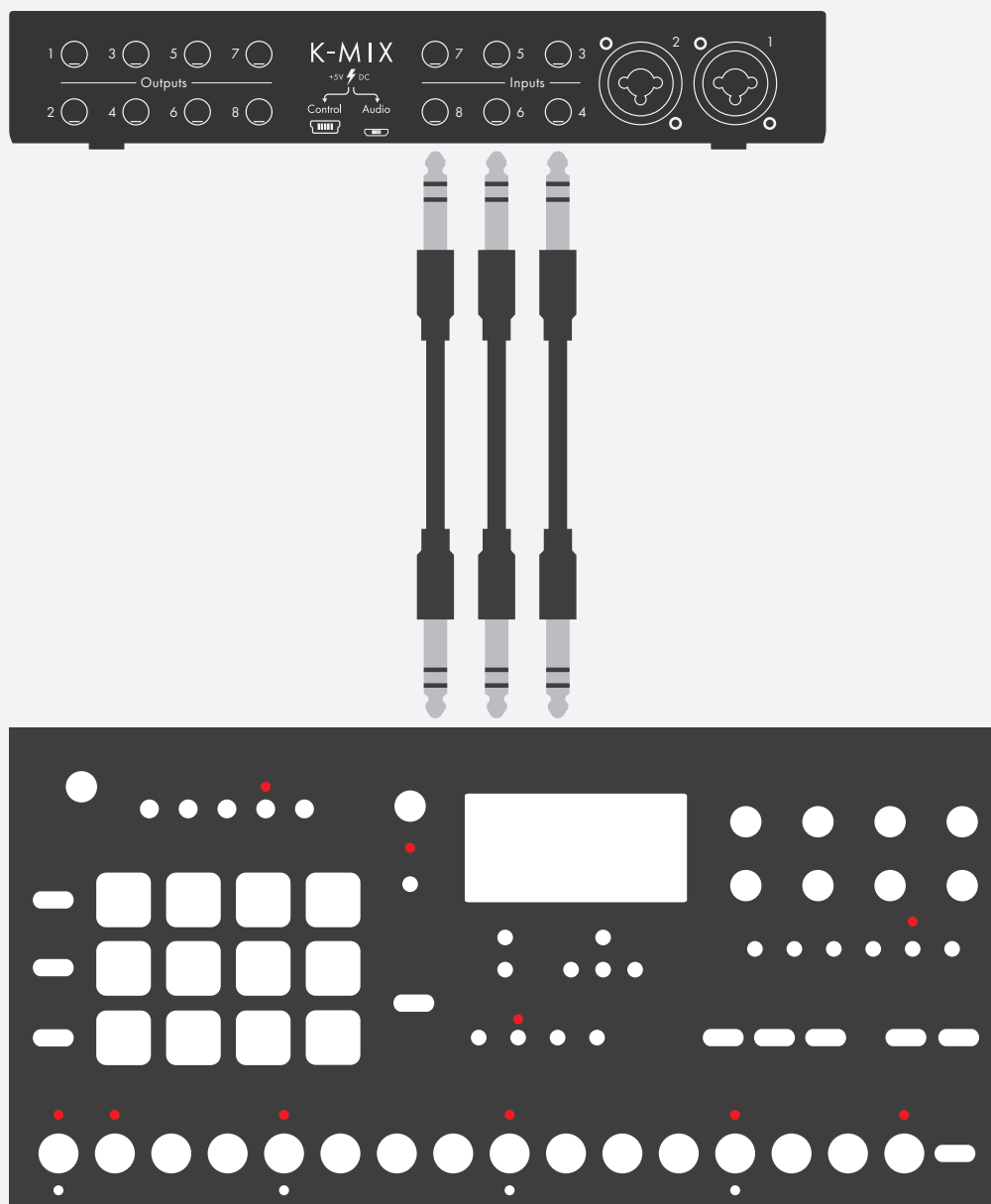




## 2.3.3 – TO LINE LEVEL INSTRUMENTS

Line level instruments can be connected to any of K-Mix's inputs.

1. Connect a 1/4" TS/TRS cable to your instrument.
2. Connect the other end of the cable to any of K-Mix's eight inputs.

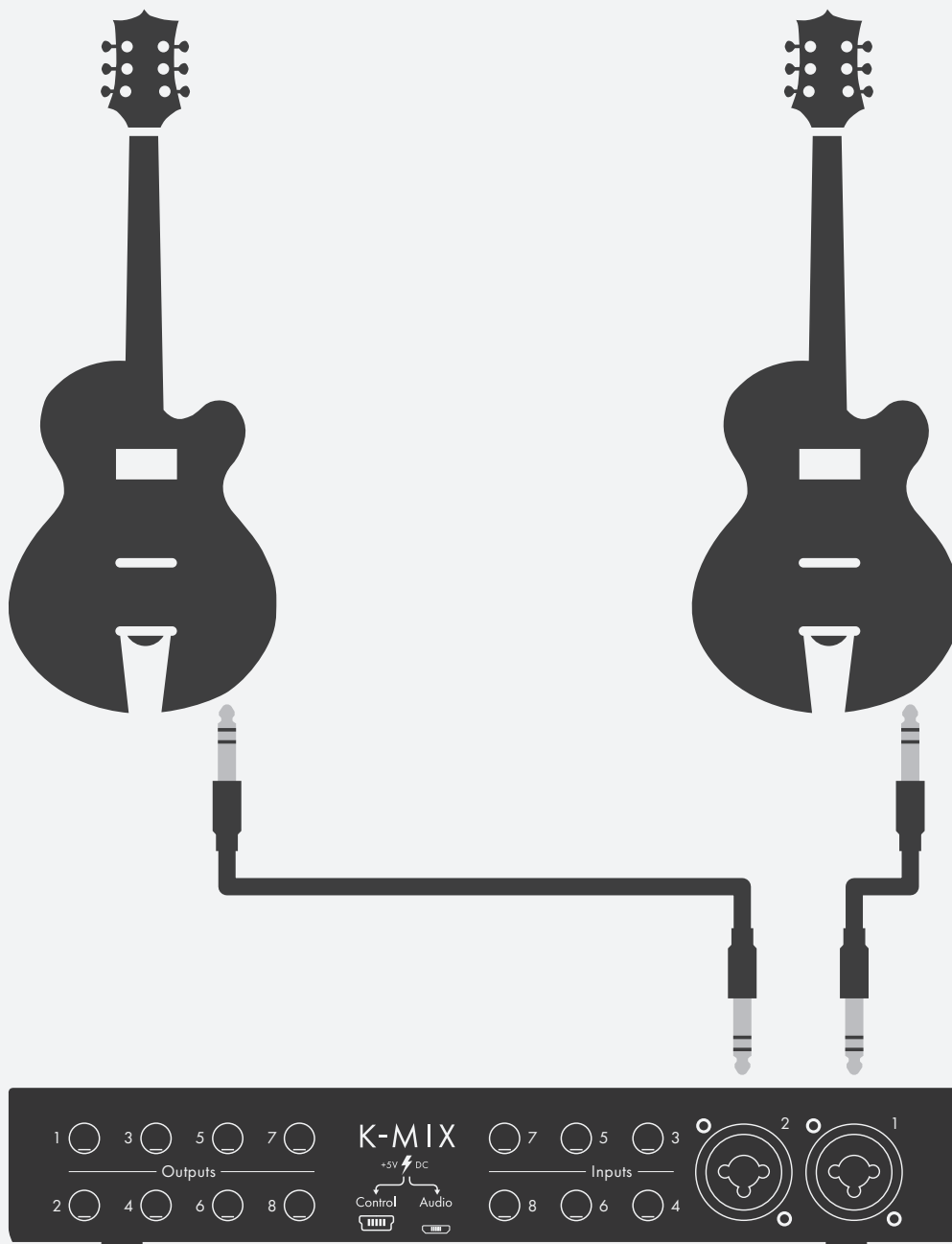




## 2.3.4 – TO INSTRUMENT LEVEL INSTRUMENTS

Hi-Z instrument level signals can be connected to inputs 1 and 2 on K-Mix with 1/4" TS/TRS cables.

1. Connect a 1/4" TS/TRS cable to your instrument.
2. Connect the other end of the cable to input 1 or input 2 on K-Mix.







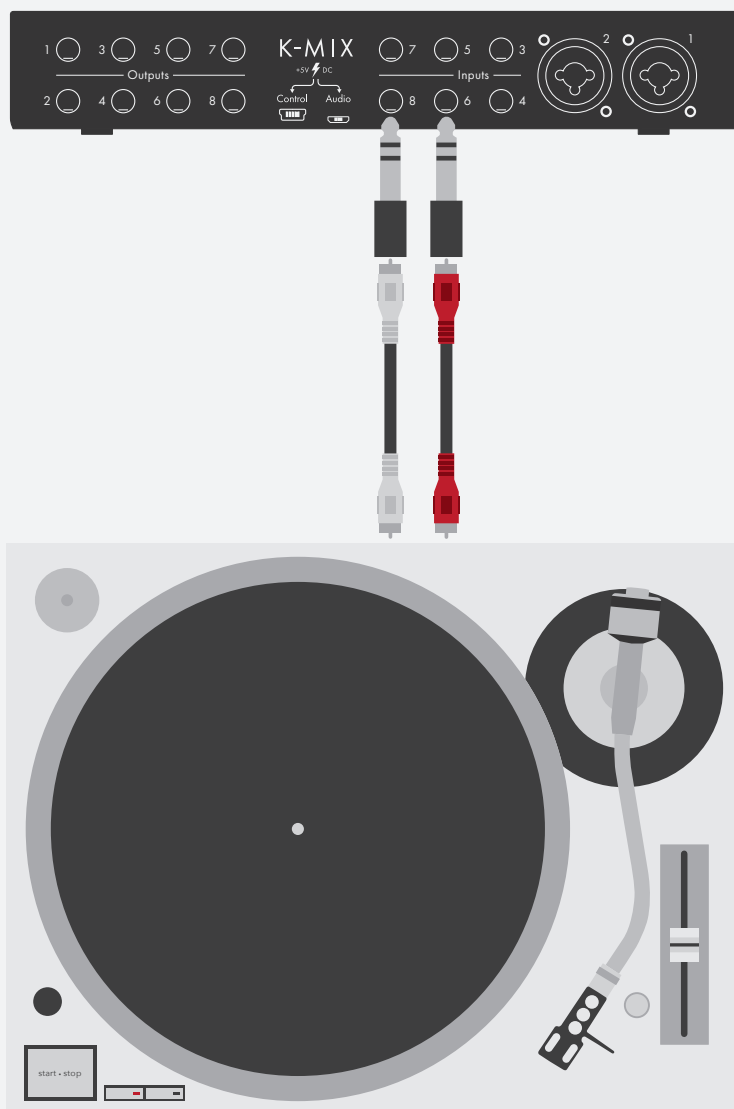
## 2.3.5 – TO PHONO LEVEL DEVICES

Phono level signals can be connected to inputs 3-8 on K-Mix. Phono level devices, like turntables, typically have RCA connectors; it is likely you will need RCA to 1/4" TS adapters or and RCA to 1/4" TS cable in order to connect to K-Mix. The following instructions are written as though this is the case.

1. Connect an RCA cable to your phono level device.
2. Connect the other end of the RCA cable to an RCA to 1/4" TS adapter.
3. Connect the 1/4" TS end to K-Mix input 3-8.



There are internal line/phono switches on K-Mix inputs 3-8 that must manually be set to **"Phono" using the K-Mix Editor**. By default these switches are set to "Line".

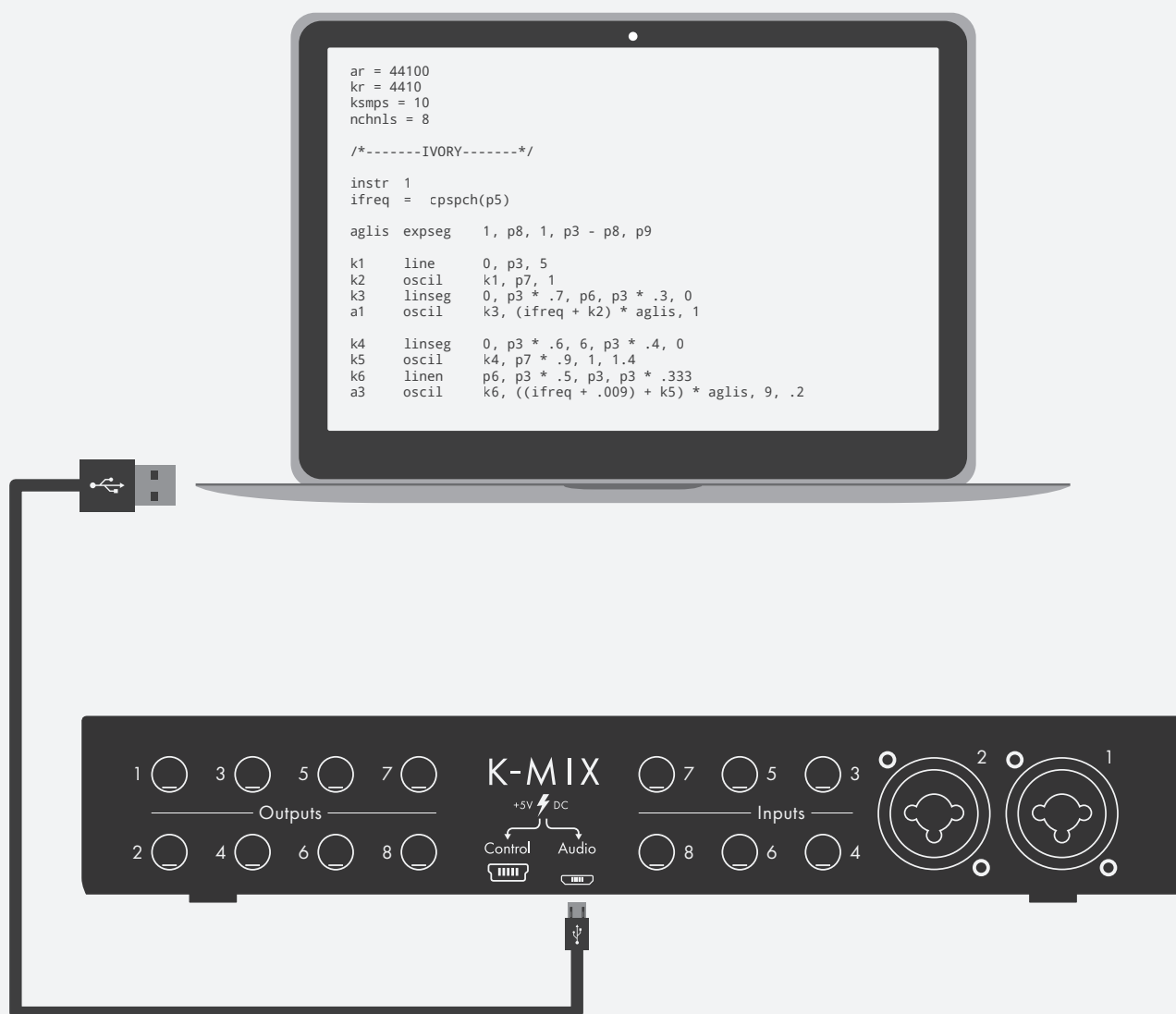




## 2.3.6 – TO A COMPUTER

K-Mix can be connected to a computer with a micro-USB cable, allowing for audio to pass back and forth between the two devices.

1. Connect a micro-USB cable to K-Mix's AUDIO port on the back panel.
2. Connect the other end of the micro-USB cable to a powered USB port on a computer.





## 2.3.7 – TO AN iPad

K-Mix can be connected to an iPad with the help of the *Apple Lightning to USB Camera Adapter* (for iPads with Lightning connectors) or the *Apple iPad Camera Connection Kit* (for older iPads with 30-pin connectors).

Apple does not allow iPads to provide as much power as a standard USB port does, so your K-Mix will also need an external power source to function properly; this can come in the form of a USB power supply or a powered USB hub.



K-Mix may take longer to initialize when connected to an iPad. This can occur during initial connection or when opening and closing audio/MIDI applications. K-Mix might be unresponsive or experience audio dropouts briefly during initialization as a result.

### WITH USB POWER SUPPLY

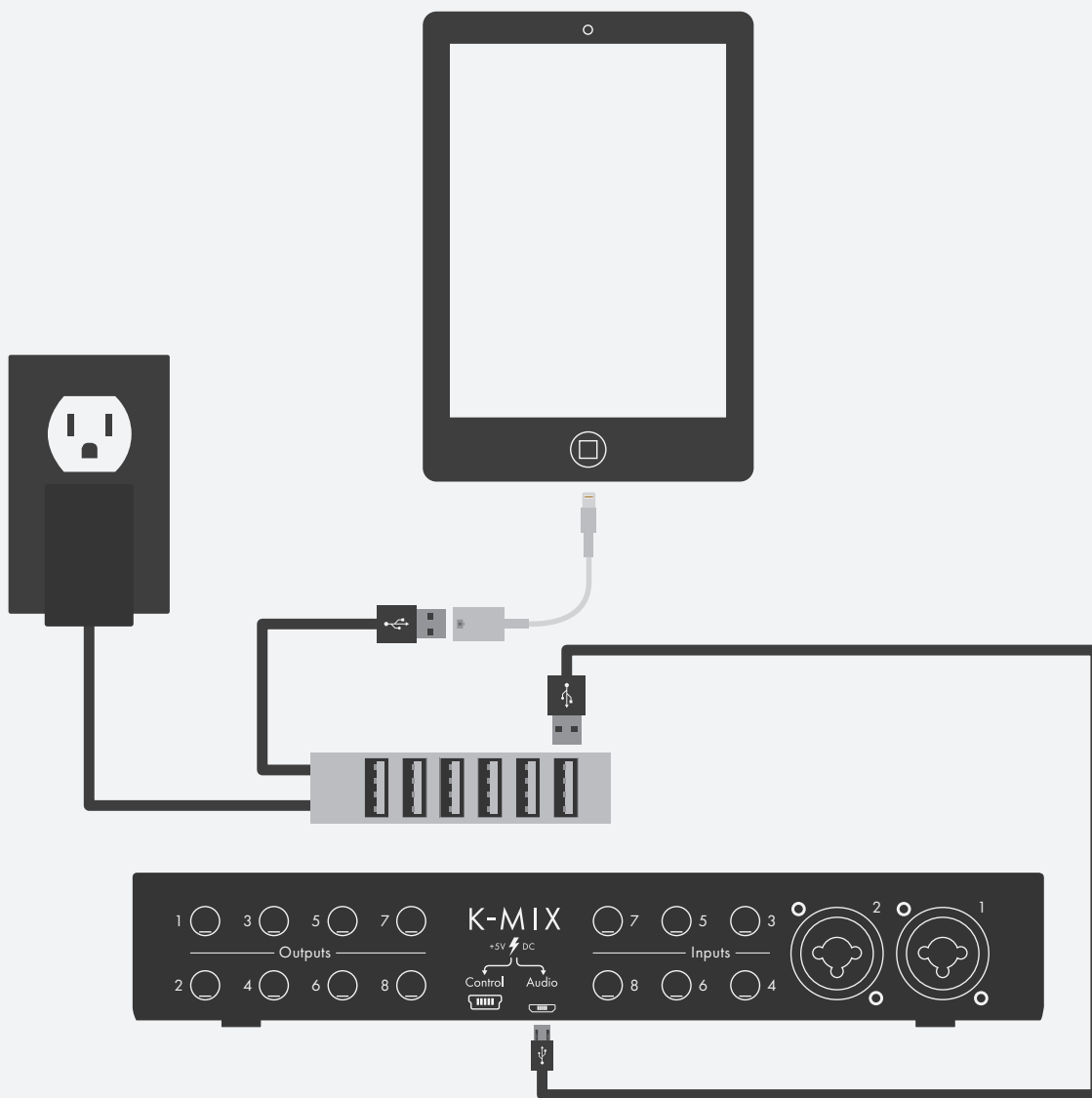
1. Power the K-Mix externally with the included USB power supply ([instructions here](#)).
2. Connect the *Lightning to USB Camera Adapter* to your iPad.
3. Connect K-Mix's AUDIO port to the *Lightning to USB Camera Adapter* using a micro-USB cable.





## WITH POWERED USB HUB

1. Connect the *Lightning to USB Camera Adapter* to your iPad.
2. Connect the powered USB hub to a power outlet.
3. Connect the powered USB hub to the *Lightning to USB Camera Adapter* via USB.
4. Connect the K-Mix's AUDIO port to the USB hub using a micro-USB cable.



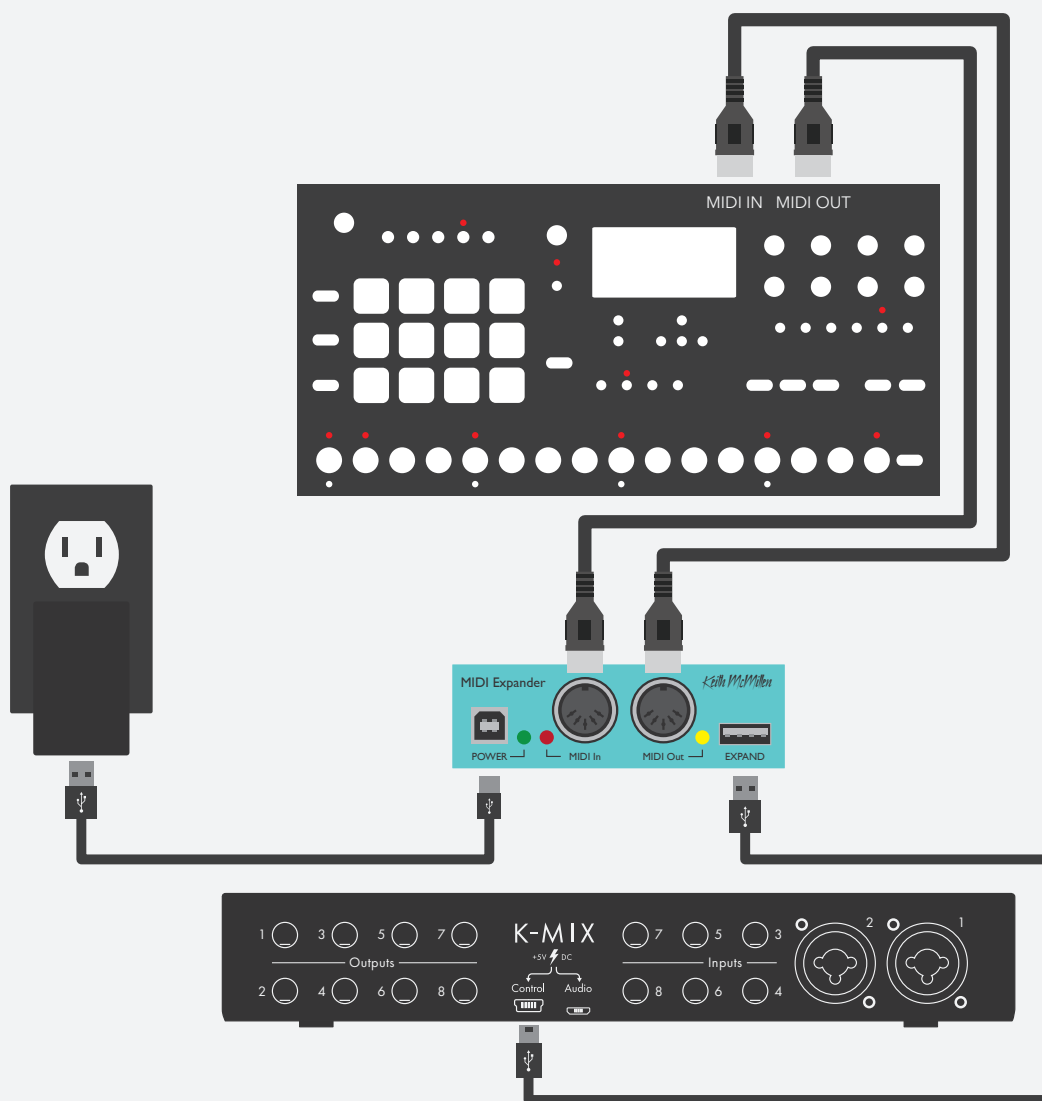


## 2.3.8 – TO MIDI HARDWARE

K-Mix can send MIDI to and receive MIDI from external MIDI hardware devices using the optional KMI MIDI Expander (not included with K-Mix).

To connect K-Mix to MIDI gear, simply:

1. Connect K-Mix's CONTROL port to the Expander's EXPAND port using a mini-USB cable.
2. Connect the Expander's MIDI IN jack to the MIDI OUT jack on the MIDI hardware device.
3. Connect the Expander's MIDI OUT jack to the MIDI IN jack on the MIDI hardware device.
4. If power for your K-Mix is needed, connect the Expander's POWER port to a USB power supply, then plug the power supply into a wall outlet. The Expander will provide power to K-Mix over the USB connection.

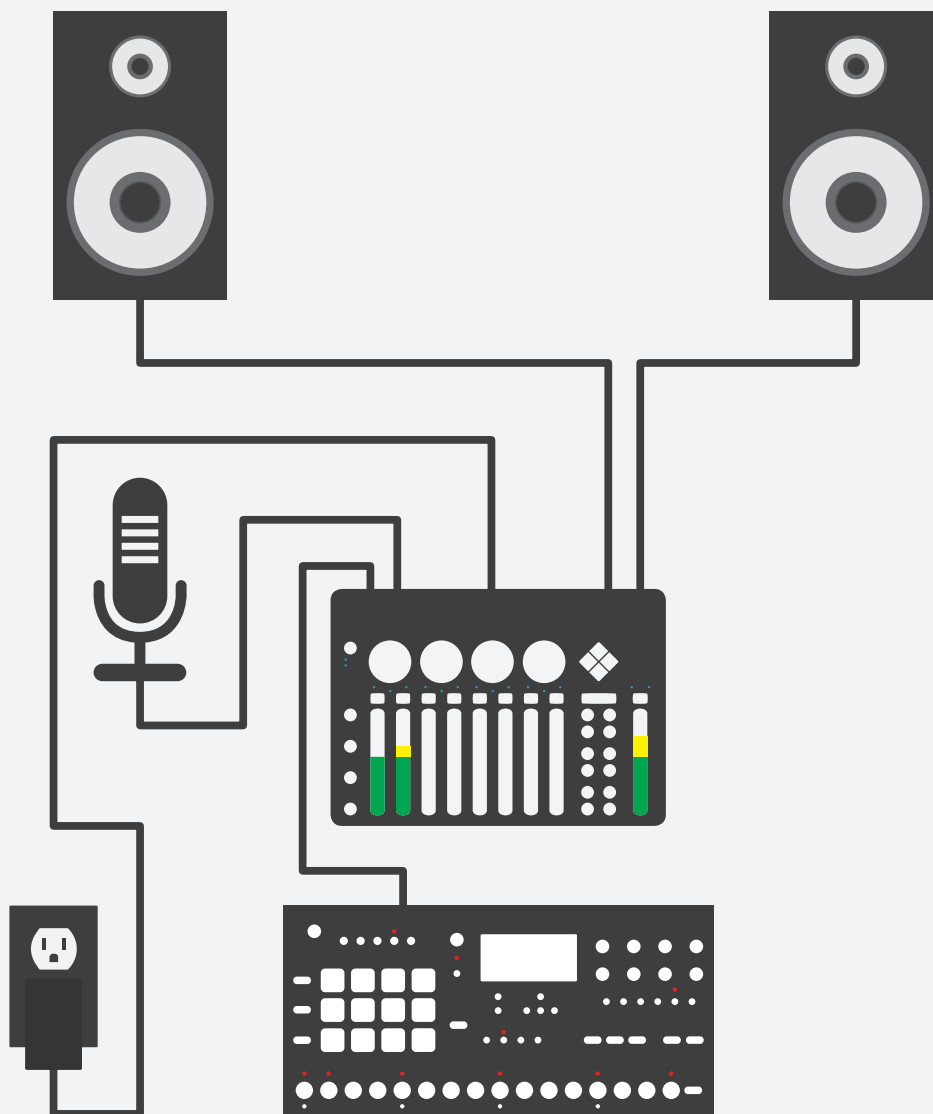




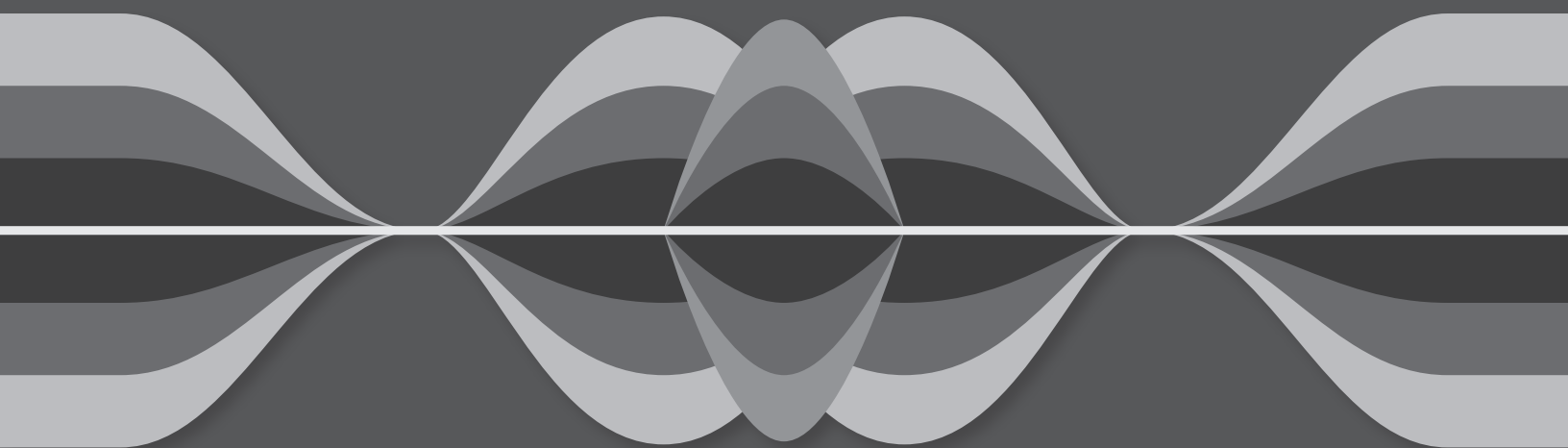
## 2.4 – MIXING AUDIO

If you want to start mixing as quickly as possible, take your K-Mix out of its box and do the following:

1. Power up K-Mix.
2. Connect your gear to K-Mix's inputs.
3. Connect your speakers to K-Mix's main outputs (outputs 1 & 2).
4. Enter "Main" mode by pressing K-Mix's [MAIN] mode button.
5. Turn up the master fader.
6. Adjust faders 1-8 to taste.



# Features Overview





This section is a general overview of the deep feature set offered by K-Mix – what they are, what they do, and what can be adjusted. It does not discuss *how* these features are controlled, it merely provides a brief introduction. The exact manner in which these features are accessed/adjusted via the K-Mix hardware and the K-Mix Editor will be discussed in the two subsequent sections: [K-Mix Hardware](#) and [K-Mix Editor](#).

## 3.1 – STANDALONE MIXING

K-Mix can function as a traditional standalone mixer; no computer necessary. Power K-Mix [via a USB power supply](#) and you're good to go. Audio coming into the inputs can leverage K-Mix's [onboard DSP effects](#) and flexible [output routing](#), allowing you to mix your gear wherever there's access to power.

## 3.2 – USB AUDIO INTERFACE

In addition to being a standalone mixer, K-Mix can also act as an 8-input, 10-output USB [bus-powered](#) audio interface.

- Audio coming into the mixer can be sent up USB to a connected computer for recording or further processing.
- Audio from a connected computer can be sent directly out of K-Mix's outputs or through K-Mix's channel strip effects.
- [USB pre/post switches](#) allow for flexible routing of USB audio into and out of K-Mix.

## 3.3 – MIDI I/O

In addition to functioning as both a mixer and audio interface, K-Mix speaks MIDI. K-Mix allows for bi-directional MIDI communication with USB host devices (computer, tablet), and with external MIDI hardware (via the optional KMI MIDI Expander). K-Mix is fully capable of both outputting MIDI to control other devices/software, and receiving MIDI for control of its own parameters.

- K-Mix features three [MIDI banks](#); each fader, rotary, and button can be set to output completely different MIDI messages for each bank.
- When connected to a computer, MIDI can be sent from the computer to K-Mix for [controlling nearly all of K-Mix's audio parameters](#); this allows for fully automating your K-Mix!
- When using K-Mix with the optional KMI MIDI Expander, MIDI coming into the Expander can also be used to [control K-Mix's audio parameters](#), allowing you to control K-Mix from external MIDI hardware.

K-Mix's MIDI capabilities allow for very powerful, highly customizable interactions. More in-depth information about using K-Mix and MIDI together can be found in section [4.3 - MIDI & K-Mix](#).





## 3.4 – FLEXIBLE INPUTS

K-Mix is ready to accept a wide variety of audio signals. Microphone, line, instrument, and phono level signals will pose no problem.

### 3.4.1 – MICROPHONE INPUT

Inputs 1 and 2 on K-Mix are XLR/TRS combo jacks, allowing for microphones to be connected via XLR connectors, and Hi-Z instrument / line level devices to be connected via 1/4" TRS connectors.

#### 3.4.1.1 – PHANTOM POWER

K-Mix provides full phantom power functionality for inputs 1 and 2.

- Phantom power can be enabled/disabled individually for input channels 1 and 2, directly from the **K-Mix hardware** or via the **K-Mix Editor**.
- Phantom power voltage levels can be set to either +48V (default) or +12V.

#### 3.4.1.2 – PRE MIC PRES

Inputs 1 and 2 on K-Mix are packed with KMI's own ultra low-noise  $\mu$ Pre™ ("micro pre") microphone preamps. These preamps provide high-efficiency and extremely accurate gain.

### 3.4.2 – LINE LEVEL INPUT

Line level audio signals can be inserted into any of K-Mix's 8 input channels via 1/4" TRS/TS cables.



When plugging a line level signal into inputs 1 and 2, the signal will run through K-Mix's  $\mu$ Pre™ preamps; it is possible the signal will run a little "hot". If this is the case then it is recommended you adjust the trim levels to reduce the amount of signal coming into K-Mix.

### 3.4.3 – INSTRUMENT LEVEL INPUT

Hi-Z ("high impedance") instrument level audio signals can be used with inputs 1 and 2 on K-Mix. Plug in and you're good to go.

### 3.4.4 – PHONO LEVEL INPUT

In addition to line level signals, K-Mix inputs 3-8 are capable of receiving phono level audio signals.

- Inputs 3-8 each have their own line/phono switch that is **accessible from the K-Mix Editor**. By default these are set to "Line".
- In order to properly accept a phono level signal, the line/phono switch must be switched to "Phono" for each channel you would like to use with a phono level signal.



## 3.5 – ROBUST OUTPUTS

You need outputs? K-Mix has them.

K-Mix comes equipped with 10 outputs – 8 balanced 1/4" TRS outputs and one stereo headphone output. Outputs are grouped into stereo output "busses" or "bus pairs" – the main output bus, three aux output bus pairs, and the headphone output bus.

### 3.5.1 – MAIN OUTPUTS

Outputs 1 and 2 are K-Mix's "main outputs", or "main output bus". This is the default stereo pair that audio will go out of when mixing.

- The main output bus has its own set of DSP effects, including an EQ, compressor, and noise gate.
- The reverb send effect gets mixed into the main outputs when reverb is enabled. The reverb returns post-DSP effects; the reverb signal will not be affected at all.

### 3.5.2 – AUX OUTPUTS

Outputs 3-8 are K-Mix's "auxiliary outputs", or "aux outs". These six outputs are split into three stereo pairs, Aux 1, Aux 2, and Aux 3.

- **Aux 1** = outputs 3-4
- **Aux 2** = outputs 5-6
- **Aux 3** = outputs 7-8

Audio can be freely routed out any of these outputs using the aux send levels and aux panning.

- Unlike the main output bus, the auxiliary outputs do not have any DSP effects.
- The reverb send effect is not mixed in to the aux outputs.

### SEND LEVELS

Each of K-Mix's eight input channels have adjustable aux send level controls for each aux output pair. These can be adjusted directly from the [K-Mix hardware](#) or via the [K-Mix Editor](#).

### PRE/POST FADER SENDS

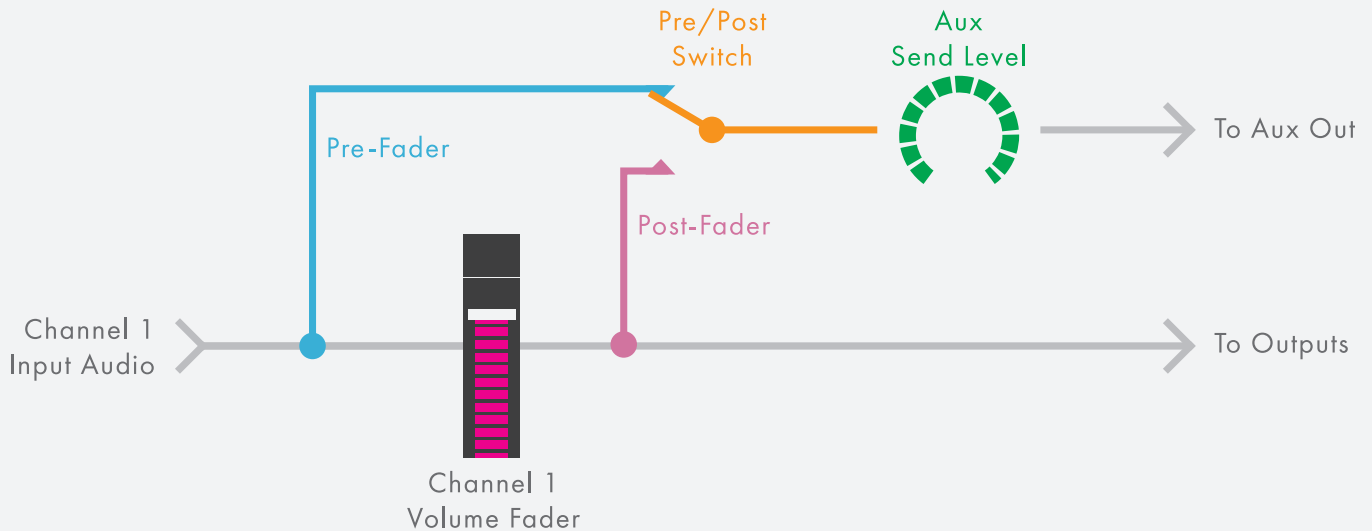
Each aux send level fader/control for each aux output pair can be set to operate either "pre" or "post" fader.

- When set to "Pre", the currently selected channel's main volume fader will have no effect on the level going to the aux; the send level fader will be the only level control.
- When set to "Post", the currently selected channel's main volume fader *will* have an effect on the audio going to the aux. *Both* the send level fader and the channel's main volume fader are in control of the audio going to the aux. If the send level fader is all the way up, but the volume fader for the selected channel is all the way down (or muted), no audio will be sent to the auxes.

Aux pre/post switches can be adjusted directly from the [K-Mix hardware](#) or via the [K-Mix Editor](#).



Below is a diagram illustrating the signal flow of pre-fader and post-fader sends:



## AUX PANNING

Each aux send level is accompanied by an aux panning parameter. The aux panning parameter sets the left/right panning of the signal going to the selected aux output bus pair.

- Audio can be sent out just a single output by panning to the extreme left or right. Full left will go solely out the odd-numbered output (output 3 for Aux 1, output 5 for Aux 2, output 7 for Aux 3); full right will go solely out the even-numbered output (output 4 for Aux 1, output 6 for Aux 2, output 8 for Aux 3).
- Centering the pan parameter will send the channel's audio signal equally to both outputs of the aux pair.

Aux panning can be adjusted directly from the [K-Mix hardware](#) or the [K-Mix Editor](#).

### 3.5.3 – HEADPHONE OUTPUT

K-Mix has a 1/8" stereo headphone output jack at the very front of the hardware. The headphone output can be used for a number of purposes.

- Monitor any of the four stereo output bus pairs (Mains, Aux 1, Aux 2, Aux 3).
- Monitor any of K-Mix's input channels (pre-fader).
- Act as its own **discrete stereo output bus**, outputs 9-10.
- Act as a **low frequency crossover** output when mixing in surround.

Headphone output behavior can be adjusted directly from the [K-Mix hardware](#) or the [K-Mix Editor](#).



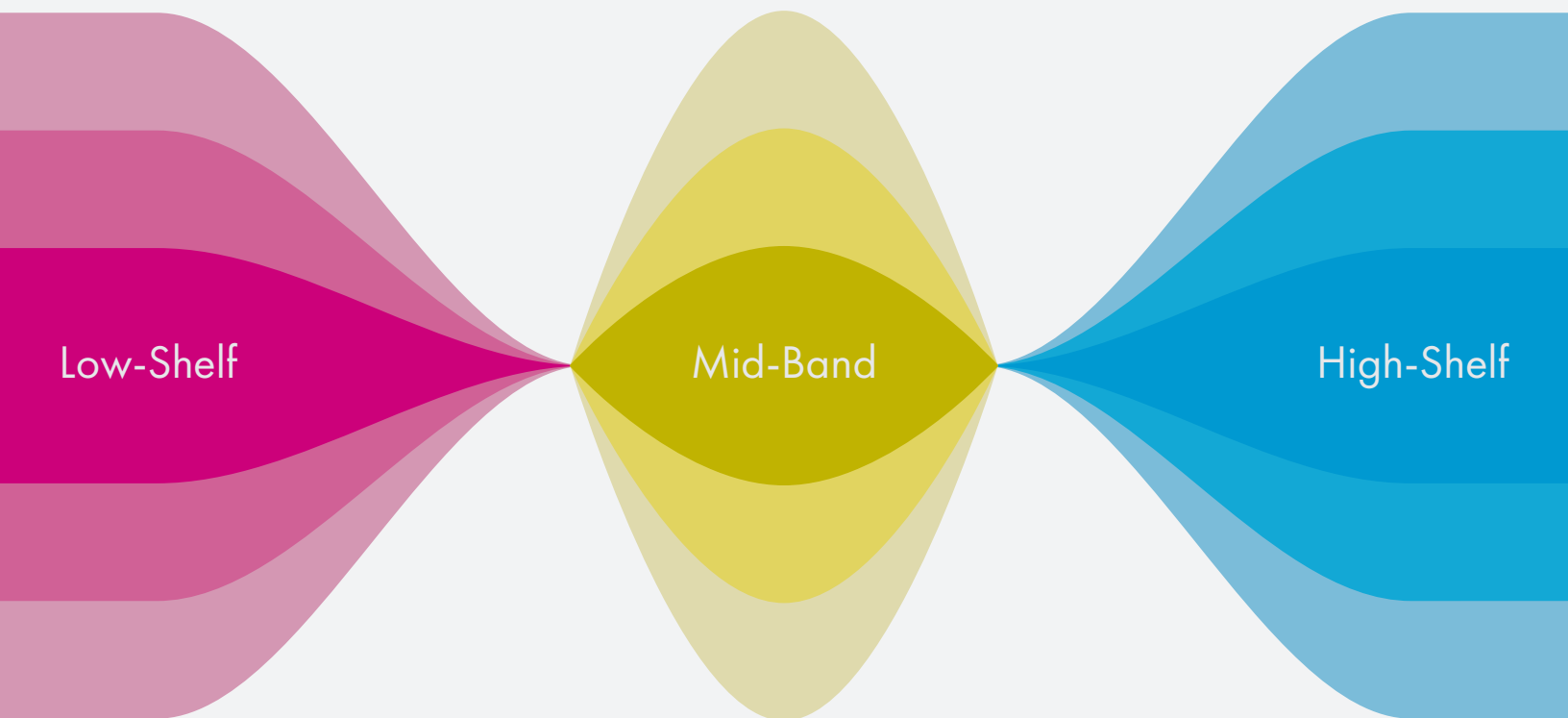
## 3.6 – ONBOARD DSP

K-Mix is equipped with powerful DSP directly onboard – no computer necessary!

### 3.6.1 – EQ

Each of the 8 input channels and the main output bus have their own 3-band, semi-parametric EQ available (low-shelf, mid-band, high-shelf) – similar to a standard channel strip EQ on most mixing consoles. This is extremely useful for sculpting your mix: making sure sounds don't step on one another, removing troublesome frequencies, or emphasizing certain parts of your sounds.

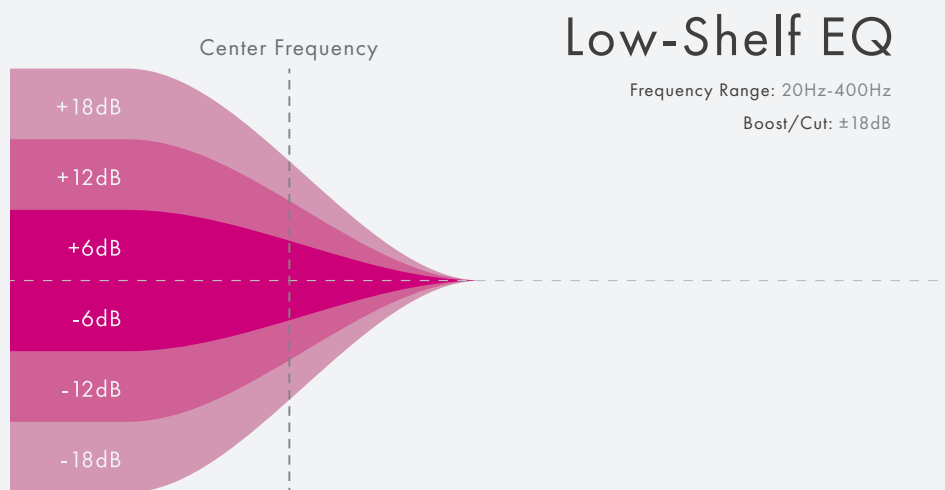
All EQ parameters can be controlled via the [mixer hardware](#) or the [editor](#).





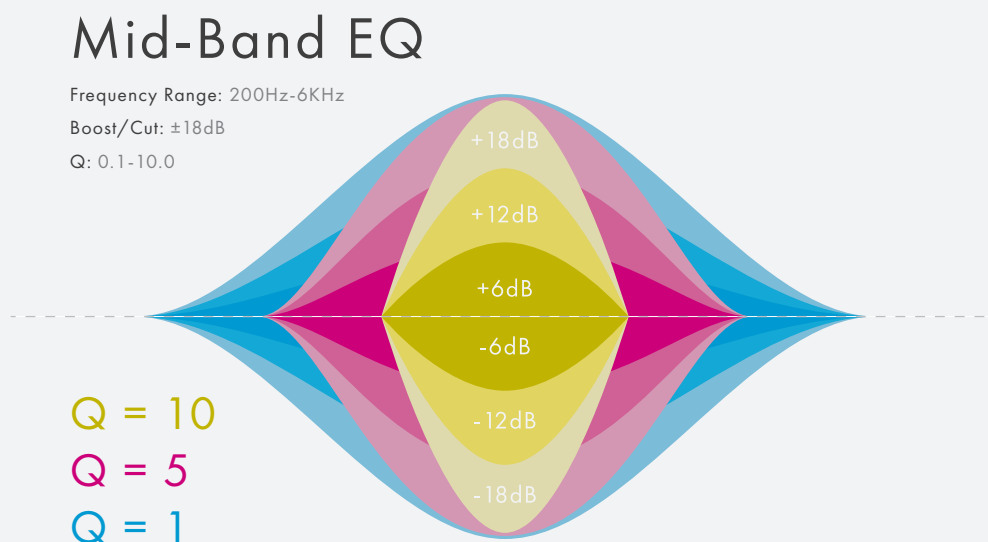
### 3.6.1.1 – LOW-SHELF

The EQ's lower band is a sweepable, dual-pole, low-shelving filter with control over frequency and boost/cut.



### 3.6.1.2 – MID-BAND

The middle band is fully parametric, with control over frequency, boost/cut, and bandwidth (Q).



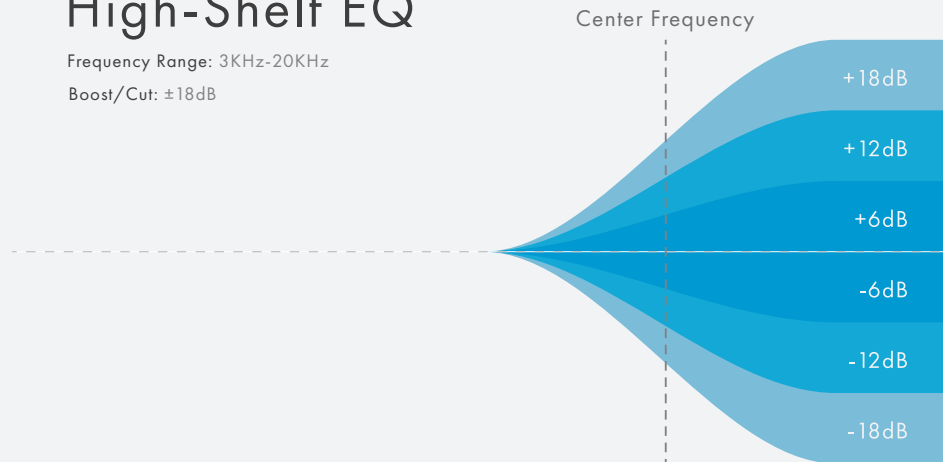


### 3.6.1.3 – HIGH-SHELF

The high band is a sweepable, dual-pole, high-shelving filter with control over frequency and boost/cut.

#### High-Shelf EQ

Frequency Range: 3KHz-20KHz  
Boost/Cut:  $\pm 18\text{dB}$



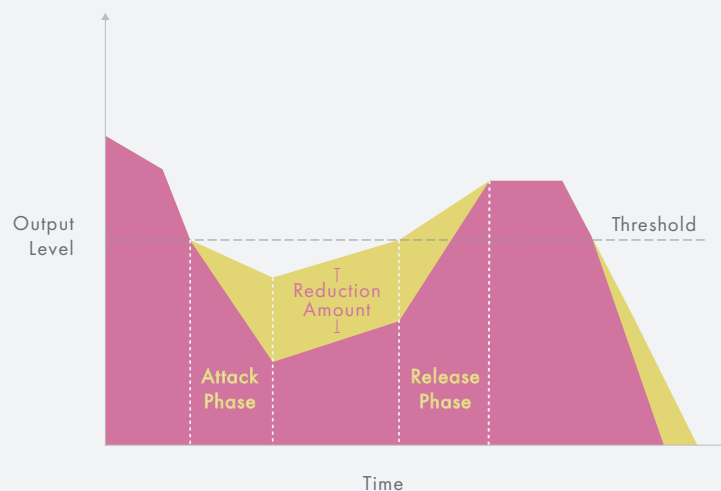
### 3.6.2 – NOISE GATE

Each of the 8 input channels and the main output bus have their own noise gate with full control over threshold, gain reduction amount, attack time, and release time. Useful for getting rid of unwanted noise in quiet sections or making your drum tracks tighter.

All gate parameters can be controlled via the [mixer hardware](#) or the [editor](#).

#### Gate

Threshold:  $-\infty - 0\text{dB}$   
Attack: 0.01ms - 5000ms  
Release: 0.01ms - 5000ms  
Gain Reduction:  $-\infty - 0\text{dB}$





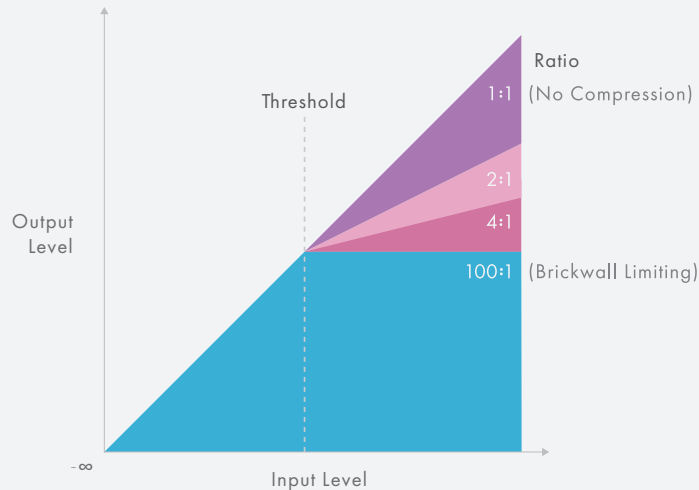
### 3.6.3 – COMPRESSOR

Each of the 8 input channels and main output but have their own compressor with full control over threshold, makeup gain amount, compression ratio, attack time, and release time. Useful for evening out vocal performances, getting more sustain out of instruments, or creatively “slamming” your audio.

All compressor parameters can be controlled via the [mixer hardware](#) or the [editor](#).

#### Compressor

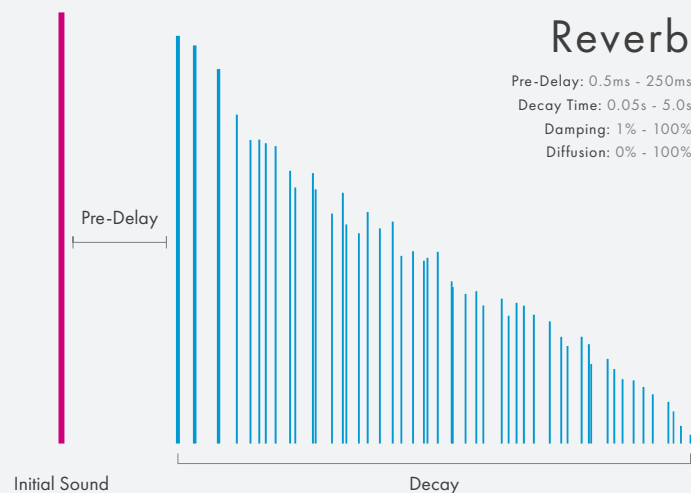
Threshold: -inf - 0dB  
Ratio: 1 - 10  
Attack: 0.01ms - 1000ms  
Release: 0.01ms - 1000ms  
Makeup Gain: 0dB - +24dB



### 3.6.4 – REVERB

K-Mix also offers a global reverb effect send. Each of the 8 input channels can be sent into the reverb at different levels using the available reverb sends. Reverb sends can be made to send pre-fader or post-fader.

All reverb parameters can be controlled via the [mixer hardware](#) or the [editor](#).





### 3.6.5 – “RUMBLE” FILTER

Each of the 8 input channels has an optional high-pass filter at the beginning of the DSP chain. This is intended to be used as a “rumble filter”, removing microphone handling noise or the “thump” that may occur when bumping a turntable.

The rumble filters can only be controlled from the [K-Mix Editor](#).

## 3.7 – STEREO PANNING

K-Mix allows you to individually set each channel’s left/right panning for each of the four output bus pairs (Main, Aux 1, Aux 2, Aux 3).

All stereo panning parameters can be adjusted directly from the [K-Mix hardware](#) or the [K-Mix Editor](#).

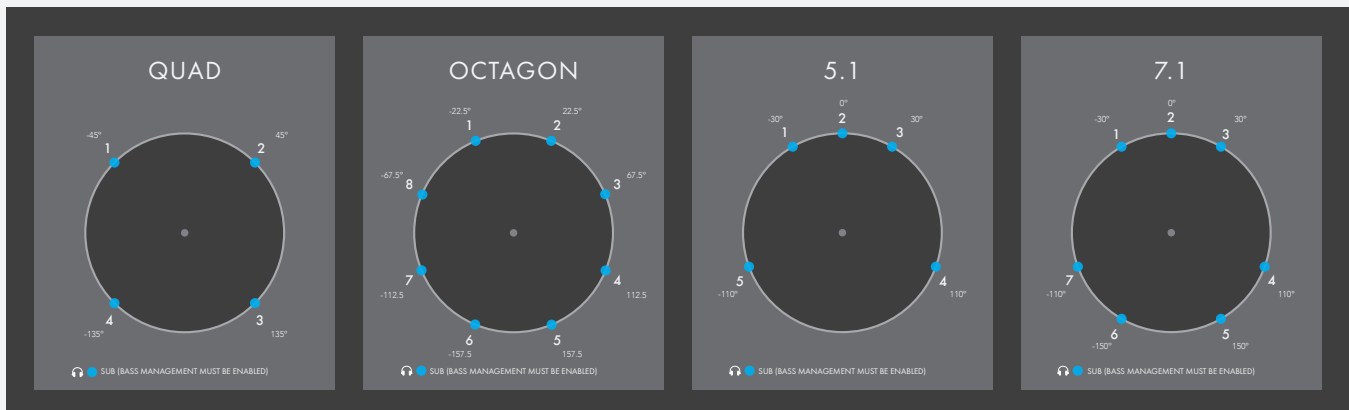
## 3.8 – SURROUND PANNING

In addition to stereo panning, K-Mix is able to leverage its multiple outputs and rotary controls to spatialize audio in multiple surround sound formats.

### 3.8.1 – MULTIPLE SPEAKER LAYOUTS

K-Mix’s surround panning is able to work with a number of standard speaker configurations. Quad, 5.1, 7.1, and Octophonic.

The speakers are laid out as follows:



All surround formats begin with speaker 1 at the front-left position and increment clockwise. This may run contrary to established 5.1 and 7.1 film standards, but it makes plugging output channels into the appropriate speakers much easier.

The surround speaker layout parameter may only be adjusted from the [K-Mix Editor](#).

### 3.8.2 – AMBISONICS

K-Mix utilizes [Ambisonics](#) panning algorithms to ensure a high quality soundstage when working in a surround sound environment.





### 3.8.3 – BASS MANAGEMENT

K-Mix also offers an optional low frequency crossover when working in surround.

- When enabled, all low frequency content will be routed out the headphone jack; higher frequency content will go out outputs 1-8 as normal.
- When disabled, all audio will be routed out outputs 1-8 as normal.

## 3.9 – PRESETS

With the many adjustable parameters and options offered with K-Mix, it can certainly be useful to store your favorite settings somewhere and be able to recall them. Need to store multiple mixes for a show? Want to have different mixer settings for your bedroom and your practice space? Are you in multiple groups that require completely different mixes? That is where presets come into play!

### 3.9.1 – ONBOARD PRESETS

The K-Mix hardware can store up to 12 editable presets on the board. These presets can be saved, recalled, and deleted directly from the board itself.

### 3.9.2 – PRESET LIBRARY & MANAGEMENT

In addition to the onboard presets, the K-Mix Editor includes much more in-depth preset management.

Its **Preset Library** can store up to 999 presets (though, only 12 can be on the K-Mix hardware at a time); it can save, recall, revert, delete, reorder, rename, copy, paste, import, and export presets.

The editor's **Preset Setlist** allows you to select which presets will be loaded onto your K-Mix, and the order they will appear in.

### 3.9.3 – TWO-WAY SYNCING

The K-Mix hardware and the K-Mix Editor can send presets back and forth between each other. Do you want to save some changes made to a mix while away from the computer? Want to share your mixer settings with a friend but don't have your computer with you? These things are possible with K-Mix.

When a K-Mix is connected to a computer running the K-Mix Editor, the editor can either **Send** any preset (in the editor) to any preset slot on the K-Mix hardware, overwriting its previous contents, or **Receive** any preset from the K-Mix hardware, copying its settings to the editor (either by overwriting an existing preset, or saving an entirely new preset).

## 3.10 – FINE-TUNING PARAMETERS

K-Mix parameters can be tuned with precision via the hardware or editor.

**Fine Tuning** mode on the K-Mix hardware allows you to “zoom in” on a fader or rotary control, providing a much higher degree of resolution than is present under “normal” operation.

The K-Mix Editor allows you to type in exact parameter values, giving you the highest amount of control possible. Want your mid-band EQ's center frequency to be at exactly 947Hz? Do you need your compressor's threshold to be at exactly -7.28dB? The editor allows you to dial in everything to your liking.



## 3.11 – STEREO PAIRS

K-Mix's 8 channel inputs can be "paired" (or "linked"); when one parameter is adjusted, the other parameter in the pair follows along. Channels 1 and 2, 3 and 4, 5 and 6, and/or 7 and 8 can be paired. Stereo pairing can be controlled directly from the [K-Mix hardware](#) or via the [K-Mix Editor](#).

- Upon enabling a stereo pair, the settings for the lower channel in the pair will be copied into the next channel. For example, if enabling stereo for channels 1 and 2, channel 1 will immediately send its settings into channel 2.
- When a stereo pair is enabled, all parameters in that pair will follow each other if any of them are adjusted (including phantom power, line/phono, and USB pre/post settings).
- Panning parameters will be mirrored; meaning when you adjust the pan of one paired channel, the other channel will show the opposite setting. For example, if channel 1 and 2 are paired, setting the main pan for channel 1 to be panned hard left will cause the main pan setting for channel 2 to be panned hard right.
- When surround is enabled, paired channel panning isn't mirrored. The channels can still be set to separate rotaries for customized surround panning as usual.

## 3.12 – VU METERING

Using the LEDs underneath each fader's surface, K-Mix is able to display VU meters for a number of different points in the mixer signal flow.

Different mixer "modes" will show you different VU meter readings. Trim mode shows pre-fader, pre-DSP levels; Mains mode shows post-DSP, post-fader levels; Reverb mode shows post-reverb send levels; the Aux modes show post-aux send levels.

VU metering can be enabled/disabled directly from the [K-Mix hardware](#).



When VU is enabled, clipping indicators are shown only in Trim mode. This is displayed by the top LED staying lit for one second after the input signal clips.

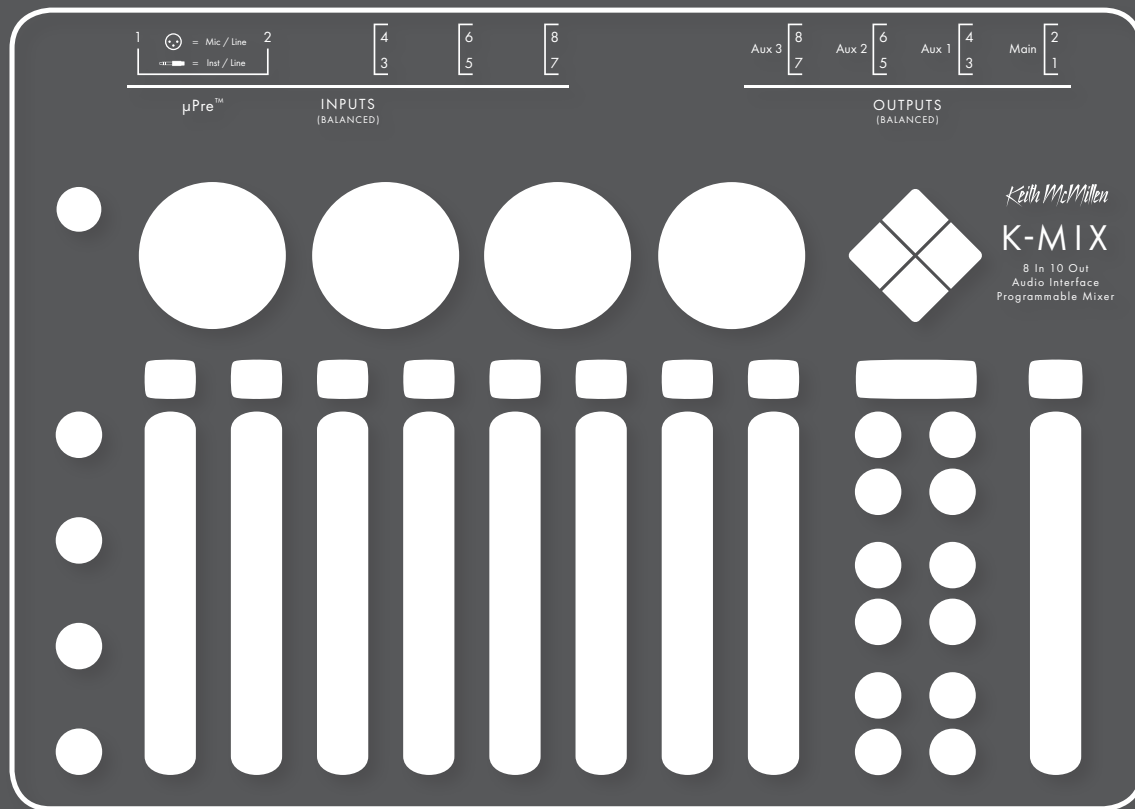
## 3.13 – K-MIX EDITOR INTEGRATION

The K-Mix hardware is tightly integrated with the freely available K-Mix Editor software application (available [here](#)). The K-Mix Editor allows you to edit all mixer parameters in real time (plus a few that aren't available directly from the mixer itself) and manage your preset library.

Bi-directional communication between the editor and mixer provides synchronous feedback – changes made in the editor will be reflected immediately on the mixer; changes made on the mixer itself will be reflected immediately in the editor.

All info regarding the operation of the K-Mix Editor can be found in the [K-Mix Editor](#) section.

# K-Mix Hardware

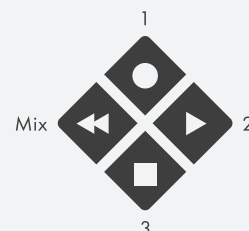




This section covers everything related to the K-Mix hardware itself. If you're looking to learn how the K-Mix hardware can be used to adjust all of the available parameters, look no further. This section also contains other general hardware-specific information.

## 4.1 – DIAMOND PAD

K-Mix's diamond pad is a multi-purpose control divided into four buttons. It is used for switching between K-Mix's Mix and MIDI banks, and can also be used for sending transport control messages.



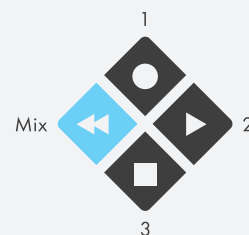
### 4.1.1 – CHANGING BANKS

Changing banks on K-Mix is easy, just press and hold the [SHIFT] button and press one of the four diamond buttons.

- To enter the Mix bank, press and hold [SHIFT] then press the diamond button marked "Mix" (left diamond button).
- To enter one of the MIDI banks, press and hold [SHIFT] then press one of the diamond buttons marked "1", "2", or "3" (up, right, or down diamond buttons).

### 4.1.2 – MIX BANK

K-Mix's "Mix bank" is where all of the audio-related functions happen; all of the mixing, effect adjustments, and routing is done here. Section 4.2 -K-Mix Modes & Mode Buttons [link] details all of the functionality of K-Mix's Mix bank.

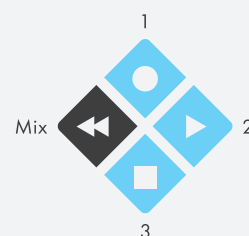


### 4.1.3 – MIDI BANKS

K-Mix has three "MIDI banks". Each of these banks allow K-Mix's faders, rotaries, and buttons to output MIDI messages for controlling MIDI-capable hardware and software.

When in any of the MIDI banks, the diamond pad buttons will output MIDI notes when pressed. The specific MIDI notes can be set in the K-Mix Editor's [MIDI Tab](#).

For more information about K-Mix and MIDI functionality, please see section [4.3 – MIDI & K-Mix](#).



### 4.1.4 – TRANSPORT CONTROL MESSAGES

When in K-Mix's Mix bank, the diamond pad buttons will output MCU (Mackie Control Universal) transport control messages.

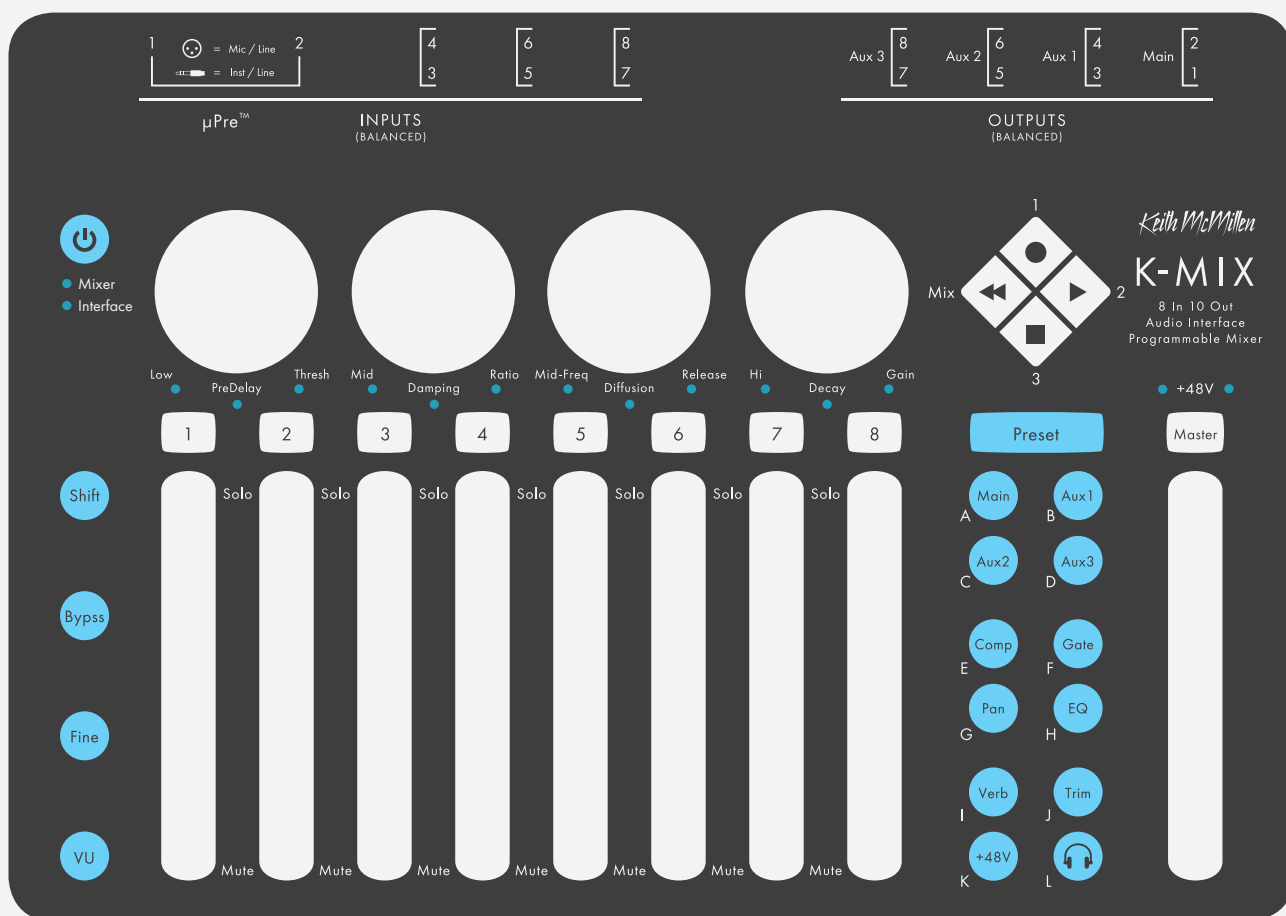
- The diamond pad buttons are labelled with the corresponding transport control message they output when pressed.
- ► = Play, ■ = Stop, ◀◀ = Rewind, and ● = Record,.
- K-Mix will only output these transport messages when in the [Mix bank](#); it will output standard MIDI notes when in any of the three [MIDI banks](#).



## 4.2 – K-MIX MODES & MODE BUTTONS

K-Mix's mode buttons are arguably the most important part of operating the K-Mix hardware; they allow you to traverse the vast array of editable features from K-Mix's compact interface. Mastering the mode buttons is the first step toward K-Mix mastery!

This section details the various K-Mix modes and mode buttons – what they do and how you can control the various options for each mode. If you would like more information about the features themselves (like “what kind of EQ does K-Mix offer?”), please refer to the [Features Overview](#) section.





## 4.2.1 – POWER

The [⏻] button is used to turn K-Mix on and off.



### 4.2.1.1 – TURNING K-MIX ON

To turn K-Mix on, connect K-Mix to a USB power supply or powered USB port on a computer/tablet/phone/etc., then press the [⏻] button. It will take a few seconds for your K-Mix to completely power on.

### 4.2.1.2 – TURNING K-MIX OFF

To turn K-Mix off, press and hold the [⏻] button for 3 seconds. Once 3 seconds have elapsed, K-Mix will begin powering down.

- When K-Mix is powered down in this manner, the current state of the mixer will be stored in its internal memory. The next time you power up your K-Mix it will be in the exact same state as when you turned it off.

## 4.2.2 – SHIFT

The [SHIFT] button is used to access extra functionality directly on the K-Mix hardware.

These extra functions are defined in each of the individual mode button sections – e.g. the [SHIFT] behavior for EQ mode is in the [EQ section](#).





## 4.2.3 – BYPASS

The [BYPS] button is used to turn effects on and off. This can be done on a per channel basis, or an effect can be bypassed globally (all instances of an effect).

Bypassing only has an effect on the compressor, gate, EQ, and reverb functionality. Nothing else has the ability to be bypassed.



This button can also reset parameters to their original state and set faders to exactly 0dB.

### 4.2.3.1 – BYPASS EFFECTS ON INDIVIDUAL CHANNELS

To bypass an effect on an individual channel:

1. Enter the mode for the effect you want to bypass. For example, enter EQ mode if you want to bypass the EQ on a specific channel.
2. Press and hold the [BYPS] button.
3. The channel select button LEDs will now display the current bypass state for each channel. Green = effect on (not bypassed), Red = effect off (bypassed).
4. While [BYPS] is still held down, press a channel select button to toggle that channel's bypass state.
5. Release [BYPS] to exit Bypass Mode. All LEDs will return to their normal state (for the mode you are currently in).



Reverb is a global effect send, it is not per channel, so all channel select buttons are linked when bypassing in Reverb mode. They will either be all green (reverb enabled), or all red (reverb bypassed). Any channel select button may be used to toggle the bypass state of the reverb.

### 4.2.3.2 – BYPASS EFFECTS ON ALL CHANNELS SIMULTANEOUSLY

To bypass an effect on all channels at the same time:

1. Press and hold the [BYPS] button. It does not matter what mode the mixer is currently in.
2. The [COMP], [GATE], [EQ], and [VERB] buttons light up. If any channel has the effect enabled, the button will light up bright. If no track has the effect enabled, the button will be dim.
3. While [BYPS] is still held down, press the [COMP], [GATE], [EQ], or [VERB] button to toggle the bypass state of all channels simultaneously.



If the channels have a mixture of bypassed and non-bypassed states for an effect, the first press will *bypass* the effect on every channel.



### 4.2.3.3 – RESET FUNCTIONALITY

The [BYP] button can be used to reset parameters to their default states and/or set the faders to exactly 0dB. To do this, press and hold the [BYP] button, then simply press anywhere on the sensor of the parameter you want to reset. For example, in reverb mode you can hold the [BYP] button and then press rotary 4 to reset the reverb decay back to its default value (1000 ms). The faders will be reset to 0dB instead of default values.

### 4.2.3.4 – [SHIFT] FUNCTIONALITY

The [SHIFT] button does not have any direct effect on bypassing. It does, however, have an indirect effect; it allows for resetting the extra parameters that are normally accessed via the [SHIFT] button, like the Low Frequency in EQ Mode.

#### EXAMPLE USE

Here is an example of using [SHIFT] to reset the attack time of a compressor.

1. Enter EQ Mode by pressing the [EQ] button.
2. Press and hold the [SHIFT] button. Rotary 2 will go dark (it doesn't control anything while [SHIFT] is held).
3. Move rotary 1 clockwise or counterclockwise to adjust the EQ's low frequency setting.
4. Press and hold the [BYP] button to enter bypass/reset mode.
5. Press rotary 1 to reset the EQ's low frequency setting to its default position.
6. Release the [SHIFT] button and the [BYP] button.

Also note that you are able to do steps 2 and 4 in the reverse order. You can press and hold [BYP] first to go into bypass/reset mode, then press [SHIFT] to access low frequency.





## 4.2.4 – FINE

The [FINE] button is used to turn fine-tuning on and off, allowing for extra precision when adjusting parameters. This essentially “zooms in” on the current rotary and fader positions.

Fine

### 4.2.4.1 – FINE-TUNING THE FADERS

To fine-tune a fader parameter, do the following:

1. Press and release the [FINE] button to toggle Fine-Tuning Mode on. The fader LEDs will instantly move to the center of the fader; this represents the original “coarse” value.
2. Move the fader *up* from center to *increase* the parameter’s value with extra precision.
3. Move the fader *down* from center to *decrease* the parameter’s value with extra precision.
4. Press the [FINE] button to exit fine-tuning mode. The fader LEDs will go back to their normal appearance.
5. If you need to go further than the range offered by fine-tuning mode, you can repeat steps 1-4 again to reset the center point to the new value.



Depending on the mode your K-Mix is currently in, some faders may not be controlling a mixer function. If this is the case, fine-tuning will not work for those faders and their LEDs will be off.

### 4.2.4.2 – FINE-TUNING THE ROTARIES

To fine-tune a rotary parameter, do the following:

1. Press the [FINE] button to toggle fine-tuning mode on. The rotary LEDs will instantly move to the 12 o’clock position – this represents the original “coarse” value.
2. Move the rotary *clockwise* to *increase* the parameter’s value with extra precision.
3. Move the rotary *counterclockwise* to *decrease* the parameter’s value with extra precision.
4. Press the [FINE] button to exit fine-tuning mode. The rotary LEDs will go back to their normal appearance.

It is important to note that when fine-tuning the rotaries they act as “endless encoders” – you can keep moving them around and around in the same direction as much as you want. This is unlike their normal behavior, which is restricted to movement between the 7 o’clock and 5 o’clock position, similar to a traditional knob.



Depending on the mode your K-Mix is currently in, some rotaries may not be controlling a mixer function. If this is the case, fine-tuning will not work for those rotaries and their LEDs will be off.



### 4.2.4.3 – [SHIFT] FUNCTIONALITY

The [SHIFT] button does not have any direct effect on fine-tuning. It does, however, have an indirect effect; it allows for fine-tuning the extra functions that are normally accessed via the [SHIFT] button, like the attack time in Compressor Mode.

#### EXAMPLE USE

Here is an example of using [SHIFT] to fine-tune the attack time of a compressor.

1. Enter Compressor Mode by pressing the [COMP] button.
2. Press the [FINE] button to enter fine-tuning mode.
3. Press and hold the [SHIFT] button. Rotaries 1, 2, and 4 will go dark (they don't control anything while [SHIFT] is held). Rotary 3 will stay lit up.
4. Move rotary 3 clockwise or counterclockwise to adjust the compressor's attack time with extra precision.
5. When done adjusting the attack time, release the [SHIFT] button.
6. Press the [FINE] button to exit fine-tuning mode.

Also note that you are able to do steps 2 and 3 in the reverse order. You can press and hold [SHIFT] first to access the attack time, then press [FINE] to fine-tune. Fine-tuning can be engaged and disengaged while [SHIFT] is held down.

## 4.2.5 – VU

The [VU] button is used to toggle the fader LEDs between displaying VU meters and their actual fader location.



### 4.2.5.1 – ENABLING & DISABLING VU METERS

To enable or disable VU metering:

1. Press the [VU] button to toggle the VU meters on/off.
2. The [VU] button will light up bright when VU metering is enabled, and will be dim when VU metering is disabled.
3. When enabled, the fader LEDs will display VU meters – when disabled, the fader LEDs will display fader position.

VU meters will only display when K-Mix is in a mode where the faders control volume levels. Modes like +48V Mode will not display VU meters (faders do not control levels in this mode), and Phones Mode will only show a VU meter on the master fader (representing the headphone output level).

### 4.2.5.2 – ADJUSTING FADERS WHILE VU IS ENABLED

Faders can still be adjusted when VU meters are being displayed:

- Pressing a fader while VU meters are enabled will make the fader momentarily switch over to displaying the current fader position.



- Once the fader is released, the fader will go back to displaying the VU meter after a brief delay.

#### 4.2.5.3 – VU METER SIGNAL TAP POINTS

There are multiple VU metering points on K-Mix that can be accessed. The displayed metering point is dependent on what mode K-Mix is currently in. Each meter point on K-Mix and its location in the mixer signal flow can be seen in the [K-Mix Signal Flow Diagram](#).

#### 4.2.5.4 – VU BEHAVIOR IN THE VARIOUS K-MIX MODES

Below is a list of what signals the K-Mix faders are representing when in the various modes and VU metering is enabled.

##### MAINS/COMP/GATE/EQ/PAN MODE VU

When in Mains, Compressor, Gate, EQ, or Pan modes, enabling VU meters will display the following:

- **Faders 1-8:** Input channels 1-8 levels, post-fader
- **Master fader:** Main output bus (outputs 1+2) levels, post-output fader

##### AUX 1–3 MODES VU

When in the aux modes, enabling VU meters will display the following:

- **Faders 1-8:** Input channels 1-8 aux send levels, post-send fader
- **Master fader:** Aux output bus levels, post-output fader (Aux 1 = outputs 3 + 4; Aux 2 = outputs 5 + 6; Aux 3 = outputs 7 + 8)

##### TRIMS MODE VU

When in Trims mode, enabling VU meters will display the following:

- **Faders 1-8:** Input channel trim levels, post-trim, pre-DSP, pre-fader
- **Master fader:** N/A – no VU metering

##### REVERB MODE VU

When in Reverb mode, enabling VU meters will display the following:

- **Faders 1-8:** Input channels 1-8 reverb send levels, post-reverb send
- **Master fader:** Reverb output level, post-reverb level fader

##### HEADPHONES VU

When in Phones mode, enabling VU meters will display the following:

- **Faders 1-8:** N/A – no VU metering
- **Master fader:** Phones output level, post-output fader



## 4.2.6 – PRESET

The [PRESET] button is used to enter and exit “Preset Selection Mode”. This mode handles selecting, saving, and resetting K-Mix presets.



### 4.2.6.1 – SELECTING A PRESET

Selecting a preset will load that preset’s settings on K-Mix, overwriting the current state of the mixer.

To select a preset on K-Mix:

1. Press and release the [PRESET] button. The [PRESET] button and the currently selected preset’s button will light up bright. You are now in Preset Selection Mode.
2. Press one of the 12 mode buttons labelled A-L to select that preset. The button will blink a few times to indicate a selection has been made.
3. That is all. The preset’s contents will be loaded immediately and you will automatically be taken out of Preset Selection Mode – K-Mix will return to whatever mode you were in prior to selecting a preset.

If, after entering Preset Selection Mode, you decide you do not want to change presets, pressing the [PRESET] button again will exit Preset Selection Mode and return you to the mode you were in previously.

Some special behaviors occur when selecting a preset from the mixer hardware while connected to the K-Mix Editor. These are detailed in the [Preset Library](#) section.

### 4.2.6.2 – SAVING A PRESET

Presets can be saved directly from the K-Mix hardware. Saving a preset will overwrite one of the 12 available preset slots with the current state of K-Mix’s parameters.

To save a preset on K-Mix:

1. Press and release the [PRESET] button. The [PRESET] button and the currently selected preset’s button will light up bright. You are now in Preset Selection Mode.
2. Press and hold the [SHIFT] button. All of the 12 mode buttons labelled A-L will light up bright.
3. While [SHIFT] is still held down, press one of the lit up mode buttons (labelled A-L) to save to its associated preset slot. The selected button will blink to show that the save has been performed.
4. If desired, you can continue saving K-Mix’s current settings to other preset slots by holding down the [SHIFT] button and pressing other mode buttons.
5. Once you are done saving presets, release the [SHIFT] button.
6. Exit Preset Selection Mode by pressing the [PRESET] button, which will return you to the currently selected preset, or press one of the 12 mode buttons labelled A-L to select and load that preset (and automatically exit Preset Selection Mode).

When saving a preset, only “per preset” parameters are stored in the preset. “Global” parameters are not stored as part of the presets. For more information on “global” vs. “per preset” parameters, please see section [5.1.1.10 – “Global” Parameters vs. “Per Preset” Parameters](#).



### 4.2.6.3 – RESETTING A PRESET

Presets can be reset directly from the K-Mix hardware. Resetting a preset will overwrite one of the 12 available preset slots with K-Mix's default, "normalised" preset.

To reset a preset on K-Mix:

1. Press and release the [PRESET] button. The [PRESET] button and the currently selected preset's button will light up bright. You are now in Preset Selection Mode.
2. Press and hold the [BYPASS] button.
3. While [BYPASS] is still held down, press one of the 12 mode buttons labelled A-L. The button will blink four times. The selected preset is immediately overwritten with K-Mix's default, normalised preset.
4. That is all. If desired, you may repeat steps 2 & 3 to reset additional preset slots.

### 4.2.6.4 – RESETTING GLOBAL PARAMETERS

Like presets, all **global parameters** can be reset directly from the K-Mix hardware. Resetting the global parameters will return every global parameter to its default state.

To reset global parameters on K-Mix:

1. Press and release the [PRESET] button. The [PRESET] button and the currently selected preset's button will light up bright. You are now in Preset Selection Mode.
2. Press and hold the [BYPASS] button.
3. While [BYPASS] is still held down, press the [PRESET] button. The button will blink while all global parameters are returned to their default state.
4. You're done! You did it!



## 4.2.7 – MAIN

The [MAIN] button on K-Mix is used to enter “Mains Mode”, where you can set the audio levels going to the main outputs, outputs 1 & 2.

This is the default mode of K-Mix; when powered on for the first time it will be in this mode. Plug in, turn up the faders, and sound will be going out the mains.

Main

### 4.2.7.1 – WHAT DO THE CONTROLS DO?

#### FADER BEHAVIOR

In Mains Mode, faders 1-8 are used to control the amount of signal being passed to the main output bus for input channels 1-8. The master fader is used to control the overall output level of outputs 1 & 2.

Move a fader up to increase the signal level; move it down to decrease the signal level.

The faders can also be used for muting and soloing channels using the {SHIFT} button.

#### ROTARY BEHAVIOR

In Mains Mode, the rotary controls are used to show which channels have stereo pairing enabled. Two red LEDs will light (one at 9 o'clock and one at 3 o'clock) to indicate that the two channels below are paired. No LEDs will be lit if the channels are not paired.

#### CHANNEL SELECT BUTTON BEHAVIOR

In Mains Mode, the channel select buttons are used to represent the current mute/solo state of each channel. They do not respond to touch in this mode, they are merely for visual feedback. Each channel select button can be in one of four states:

- **Green** = Normal (no mute, no solo)
- **Red** = Muted
- **Yellow** = Soloed
- **Blinking Yellow** = Both muted *and* soloed



The output channels cannot be soloed, so the “Master” channel select button can only be green or red.

### 4.2.7.2 – ADJUSTING AUDIO LEVELS

Adjusting audio levels is simple – just move the faders up or down.

- Moving a fader up increases the level.
- Moving a fader down decreases the level.

Faders 1-8 adjust the amount of signal getting sent to the main outputs (outputs 1 & 2). The master fader adjusts the final output level of the mains.



### 4.2.7.3 – MUTING CHANNELS

Muting audio channels is achieved with use of the [SHIFT] button.

1. Press and hold the [SHIFT] button.
2. Tap the bottom of a fader to mute that channel's audio.
3. Tap the bottom of that fader again to unmute that channel's audio.

#### VISUAL FEEDBACK

- When a channel is muted its channel select button will turn red and the fader LEDs will turn off to show that it is currently muted.
- When a channel is not muted its channel select button will be green and its fader will return to normal brightness levels.

### 4.2.7.4 – SOLOING CHANNELS

Soloing channels is very similar to muting channels; it is achieved using the [SHIFT] button.

1. Press and hold the [SHIFT] button.
2. Tap the top of a fader to solo that channel.
3. Tap the top of that fader again to unsolo that channel.

Multiple channels may be soloed simultaneously, just tap the top of multiple faders while holding down the [SHIFT] button to add them to the soloed group.

When a channel is soloed, that will be the only audio going through to the outputs. Non-soloed tracks will effectively be muted. To get all audio behaving normally, just unsolo any channels that currently have solo enabled; once there are no channels currently soloed, audio will pass through as normal.



Only input channels may be soloed; output channels do not have this functionality. Trying to solo the "Master" fader will not do anything.

#### VISUAL FEEDBACK

- When a channel is soloed its channel select button will turn yellow to show that it is currently soloed.
- The fader LEDs of all currently unsoloed channels will dim to help show that they are not currently being heard.
- Once there are no longer any soloed channels, all faders will return to normal brightness levels.

### 4.2.7.5 – MUTE + SOLO SIMULTANEOUSLY

It is possible for a channel to be muted and soloed simultaneously.

1. Press and hold the [SHIFT] button.
2. Tap the bottom of a fader to mute a channel.



3. Tap the top of the same fader to solo the channel.
4. Steps 2 and 3 can also be done in reverse order.

### VISUAL FEEDBACK

When a channel is both muted and soloed, the channel select button will blink yellow.

## 4.2.7.6 – STEREO PAIRING

K-Mix channels 1 and 2, 3 and 4, 5 and 6, and/or 7 and 8 can be paired into stereo channels. Once paired, their parameters sync up and follow each other if any of them are adjusted. To enable stereo pairing for one of the pairs:

1. Press and hold the [SHIFT] button.
2. Press anywhere on a rotary above the two channels you wish to pair (rotary 1 for channels 1 and 2, rotary 2 for channels 3 and 4, etc.).

## 4.2.7.7 – [SHIFT] FUNCTIONALITY

When in Mains Mode, the [SHIFT] button is used for muting and soloing audio channels and for enabling or disabling stereo pairs.

- Hold down the [SHIFT] button and tap the bottom of a fader to mute the selected channel.
- Hold down the [SHIFT] button and tap the top of a fader to solo the selected channel.
- Hold down the [SHIFT] button and tap a rotary to pair the two channels directly below the rotary.





## 4.2.8 – Aux 1

The [AUX1] button is used to enter “Aux 1 Mode”; here you can adjust audio send levels to the first pair of auxiliary outputs, outputs 3 & 4.

Aux 1

### 4.2.8.1 – WHAT DO THE CONTROLS DO?

#### FADER BEHAVIOR

In Aux 1 Mode, faders 1-8 are used to control the amount of signal being passed to the Aux 1 output bus (outputs 3 & 4) for input channels 1-8. The master fader is used to control the overall output level of outputs 3 & 4

- Move a fader up to increase that channel's send level.
- Move a fader down to decrease that channel's send level.
- The “Master” fader can also be used for muting the aux output bus using the [SHIFT] button.

#### ROTARY BEHAVIOR

In Aux 1 Mode, the rotary controls are used to show which channels have stereo pairing enabled. Two red LEDs will light (one at 9 o'clock and one at 3 o'clock) to indicate that the two channels below are paired. No LEDs will be lit if the channels are not paired.

#### CHANNEL SELECT BUTTON BEHAVIOR

In Aux 1 Mode, the channel select buttons are used for adjusting the pre/post state of the aux send for each individual channel.

- Press and hold a channel select button for 1 second to toggle between pre and post.

### 4.2.8.2 – ADJUSTING SEND LEVELS

Adjusting the aux send levels is as easy as moving the faders up or down.

- Moving a fader up increases the send level of the selected channel.
- Moving a fader down decreases the send level of the selected channel.
- Faders 1-8 adjust the amount of signal being sent from the input channels to the aux 1 outputs (outputs 3 & 4).
- The “Master” fader adjusts the final output level of the aux 1 outputs.

### 4.2.8.3 – PRE/POST SENDS

The aux sends for input channels 1-8 can each be set to function as a pre-fader send or a post-fader send. The channel select buttons are used for changing and displaying their current state.

- Press and hold a channel select button for 1 second to toggle between pre and post; the channel select button's LED will change color when successfully toggled.
- **Green LED** = Post-fader



- **Red LED** = Pre-fader

By default all aux sends will be set to post-fader.

#### 4.2.8.4 – MUTING IN AUX MODES

It is not possible to mute the aux send level of an input channel (faders 1-8), but it is possible to mute the aux output (“Master” fader). To mute the aux output, do the following:

1. Press and hold the [SHIFT] button. The channel select button above the “Master” fader will display the current mute state of the aux output; red = muted, green = unmuted. All other channel select buttons will turn off.
2. With [SHIFT] still depressed, press the bottom of the master fader to toggle the mute state of the aux output. The fader LEDs will turn off when muted and return to normal brightness when unmuted.
3. Release the [SHIFT] button to go back to normal Aux 1 Mode behavior.

#### 4.2.8.5 – SOLOING IN AUX MODES

Soloing of auxiliary sends is not supported; soloing is completely disabled when holding [SHIFT] in any of the Aux modes.

#### 4.2.8.6 – [SHIFT] FUNCTIONALITY

The [SHIFT] button is used for muting the aux output fader (“Master” fader). This behavior is defined above in section **4.2.8.4 - Muting in Aux Modes**. It is also used for enabling and disabling stereo pairs.

- Hold down the [SHIFT] button and tap a rotary to pair the two channels directly below the rotary.

### 4.2.9 – Aux2

The [AUX2] button is used to enter Aux 2 Mode; here you can adjust audio send levels to the second pair of auxiliary outputs, outputs 5 & 6.

This mode behaves exactly the same as **Aux 1 Mode**, the only difference is that it is dealing with the Aux 2 output bus, output channels 5 & 6 (as opposed to outputs 3 & 4).

Aux2

### 4.2.10 – Aux3

The [AUX3] button is used to enter Aux 3 Mode; here you can adjust audio send levels to the second pair of auxiliary outputs, outputs 7 & 8.

This mode behaves exactly the same as **Aux 1 Mode**, the only difference is that it is dealing with the Aux 3 output bus, output channels 7 & 8 (as opposed to outputs 3 & 4).

Aux3



## 4.2.11 – COMP

The [COMP] button is used to enter K-Mix's "Compressor Mode" – here you can adjust the compressor settings for each of the eight input channels and the main output bus.



### 4.2.11.1 – WHAT DO THE CONTROLS DO?

#### FADER BEHAVIOR

In Compressor Mode, the K-Mix faders continue to function as though they are in **Mains Mode**. Faders 1-8 control the level of input channels 1-8 and the master fader controls the level of the main output bus (outputs 1 & 2).

#### ROTARY BEHAVIOR

When in Compressor Mode, the four rotaries are used to adjust compressor settings for the currently selected channel (or channels).

- Rotary 1 = Threshold
- Rotary 2 = Compression Ratio
- Rotary 3 = Release Time
- Rotary 4 = Makeup Gain

It is also possible to hold down the [SHIFT] button to access more compressor parameters. When holding down [SHIFT] the rotaries will adjust the following parameters:

- Rotary 1 = off
- Rotary 2 = off
- Rotary 3 = Attack Time
- Rotary 4 = off

Rotaries act like traditional knobs; the minimum value is at 7 o'clock and the maximum value is at 5 o'clock. Move the rotary clockwise to increase the current parameter's value; move the rotary counterclockwise to decrease.

#### CHANNEL SELECT BUTTON BEHAVIOR

The channel select buttons are used to select the compressor that is currently being edited by the rotary controls.

- Each input channel and the main output bus has its own compressor, so any of the channel select buttons may be used.

The LED color of each channel select button is used to display the currently selected compressor (or compressors).

- **Green** = currently selected
- **Red** = not selected

When selected, the rotaries will update to display the selected channel's compressor settings.



### 4.2.11.2 – EDITING COMPRESSOR SETTINGS

To edit a channel's compressor settings, do the following:

1. Press the [COMP] button to go into Compressor Mode.
2. Press one of the channel select buttons to select a channel to edit. The currently selected channel will light up green – all others red. The rotary LEDs will immediately snap to the selected channel's compressor settings.
3. Adjust any of the four rotaries to adjust the compressor's settings. You may also press and hold the [SHIFT] button to access more compressor parameters on the rotaries.

### 4.2.11.3 – [SHIFT] FUNCTIONALITY

When in Compressor Mode, the [SHIFT] button is used to access the Attack parameter via the rotaries. When [SHIFT] is held down, the rotary in charge of the Release parameter (rotary 3) changes to Attack – the other three rotaries no longer function.

#### EXAMPLE USE

1. Press the [COMP] button to go into Compressor Mode.
2. Select a channel by pressing its channel select button.
3. Press and hold the [SHIFT] button. The Release rotary (rotary 3) will now display the current Attack setting – the other three rotaries will turn off.
4. While [SHIFT] is still held down, adjust the Attack rotary to change the attack time of the compressor.
5. Release the [SHIFT] button to go back to normal rotary behavior.



Since the faders function the same as they do in Mains Mode, [SHIFT] can also be used to solo and mute channels via the faders.

## 4.2.12 – GATE

The [GATE] button is used to enter K-Mix's "Gate Mode" – here you can adjust the noise gate settings for each of the eight input channels and the main output bus.

Gate

### 4.2.12.1 – WHAT DO THE CONTROLS DO?

#### FADER BEHAVIOR

In Gate Mode, the K-Mix faders continue to function as though they are in Mains Mode [link to section]. Faders 1-8 control the level of input channels 1-8 and the master fader controls the level of the main output bus (outputs 1 & 2).



## ROTARY BEHAVIOR

When in Gate Mode, the four rotaries are used to adjust gate settings for the currently selected channel (or channels).

- Rotary 1 = Threshold
- Rotary 2 = Attack Time
- Rotary 3 = Release Time
- Rotary 4 = Gain Reduction

Rotaries act like traditional knobs; the minimum value is at 7 o'clock and the maximum value is at 5 o'clock. Move the rotary clockwise to increase the current parameter's value; move the rotary counterclockwise to decrease.

## CHANNEL SELECT BUTTON BEHAVIOR

The channel select buttons are used to select the gate that is currently being edited by the rotary controls.

- Each input channel and the main output bus has its own gate, so any of the channel select buttons may be used.

The LED color of the channel select buttons is used to display the currently selected gate (or gates).

- Green = currently selected
- Red = not selected

When selected, the rotaries will update to display the selected channel's compressor settings.

### 4.2.12.2 – EDITING GATE SETTINGS

To edit a channel's gate settings do the following:

1. Press the [GATE] button to go into Gate Mode.
2. Press one of the channel select buttons to select a channel to edit. The currently selected channel will light up green – all others are red. The rotary LEDs will immediately snap to the selected channel's gate settings.
3. Adjust any of the four rotaries to adjust the gate settings.

### 4.2.12.3 – [SHIFT] FUNCTIONALITY

In Gate Mode, the [SHIFT] button is only used for muting and soloing channels via the faders, just like in Mains Mode. There are no extra parameters to access via the rotaries.



## 4.2.13 – PAN (STEREO)

The [PAN] button is used to enter both of K-Mix's "Pan Modes" – here you can adjust the stereo (left/right) panning settings for each of the eight input channels; it is also possible to pan audio in surround sound.

Pan

The [PAN] button is different from other K-Mix mode buttons as it can be used to access two separate modes, Stereo Panning Mode and Surround Panning Mode. Both of these panning methods are accessed via the [PAN] button.

By default, pressing the [PAN] button on your K-Mix will enter Stereo Panning Mode. This mode allows you to set each channel's left/right panning for each of the four output bus pairs (Main, Aux 1, Aux 2, Aux 3). Surround Panning Mode must be manually enabled via the [SHIFT] + [PAN] button combination.

This section will focus exclusively on Stereo Panning Mode. Surround Panning Mode behaviors will be documented in the next section, [4.2.14 – Pan \(Surround\)](#).

### 4.2.13.1 – WHAT DO THE CONTROLS DO?

#### FADER BEHAVIOR

When in Stereo Panning Mode, the faders continue to function as though they are in **Mains Mode**. Faders 1-8 control the level of input channels 1-8 and the master fader controls the level of the main output bus (outputs 1 & 2).

The process of **muting** and **soloiing** channels remains the same as well.

#### ROTARY BEHAVIOR

The four rotaries are used to adjust the panning settings for the currently selected channel (or channels). When a channel is selected, the rotary LEDs will immediately display the selected channel's current pan settings.

By default, the rotaries are set to adjust the following parameters:

- Rotary 1 = Main Output Panning
- Rotary 2 = Aux 1 Panning
- Rotary 3 = Aux 2 Panning
- Rotary 4 = Aux 3 Panning

Rotaries act like traditional knobs; the minimum value is at 7 o'clock and the maximum value is at 5 o'clock. Setting the rotary to 12 o'clock is the center panning point; the audio will appear equally in both output bus channels. Move the rotary clockwise to pan the audio more to the right; move the rotary counterclockwise to pan the audio more to the left.

When panned to one of the extremes, audio will only be coming out of a single output channel. This allows for sending audio to individual outputs channels.

#### CHANNEL SELECT BEHAVIOR

The channel select buttons are used to select the channel that is currently being edited by the rotary controls.



- Each input channel has its own pan settings, so channel select buttons 1-8 may be used.
- The master channel select button is not used in Stereo Panning Mode; an output bus cannot be panned.

The LED color of the channel select buttons is used to display the currently selected channel (or channels).

- Green = currently selected
- Red = not selected

When selected, the rotaries will update to display the selected channel's pan settings.

### 4.2.13.2 – ADJUSTING PAN SETTINGS

To edit a channel's pan settings, do the following:

1. Press the [PAN] button to enter the current Pan Mode.
2. If surround panning was previously enabled, press and hold the [SHIFT] button and press the [PAN] button. This will switch your K-Mix back to Stereo Panning Mode. This step can be skipped if you are already in Stereo Panning Mode.
3. Press one of the channel select buttons to select a channel to edit. The currently selected channel will light up green – all others are red. The rotary LEDs will immediately snap to the selected channel's pan settings.
4. Adjust any of the four rotaries to adjust the pan settings. Rotary 1 controls the panning for the main output bus, rotaries 2-4 control the panning for aux output bus pairs 1-3, respectively.

### 4.2.13.3 – [SHIFT] FUNCTIONALITY

The [SHIFT] button is used to enable/disable Surround Panning Mode.



Since the faders function the same as they do in Mains Mode, [SHIFT] can also be used to solo and mute channels via the faders.



## 4.2.14 – PAN (SURROUND)

In addition to stereo panning, K-Mix is able to leverage its outputs and rotary controls to spatialize audio in multiple surround sound formats.

Surround Panning Mode does not have its own mode button associated with it. Instead, it is enabled and disabled by holding down the [SHIFT] button and pressing the [PAN] button.

Enabling surround effectively changes the way Pan Mode functions, from a more traditional stereo panning paradigm, to a surround sound panning paradigm.



### 4.2.14.1 – ENABLING & DISABLING SURROUND PANNING

To enable and disable Surround Panning Mode, do the following:

1. Press the [PAN] button to enter Stereo Panning Mode.
2. Press and hold the [SHIFT] button.
3. While [SHIFT] is still held down, press the [PAN] button. Your K-Mix will now be in Surround Panning Mode.
4. Repeat steps 2 & 3 to disable Surround Panning Mode. This will return your K-Mix to Stereo Panning Mode.

Once surround is enabled, you are free to leave Pan Mode (to, say, EQ Mode) with no disruption to the current stereo/surround panning state; surround panning will still be enabled. When you press the [PAN] button to return to Pan Mode, your K-Mix will still be operating in Surround Panning Mode. You will only be able to go back to stereo panning by disabling surround with the steps listed above.

#### VISUAL FEEDBACK

It is definitely important to be able to visually tell whether or not surround panning is enabled or not. As such, there are a couple visual cues that will let you know when surround is enabled.

- The [SHIFT] button will stay lit up when surround is enabled and you are in Pan Mode. The LED will turn off, however, if you leave Pan Mode for another mode.
- The LEDs of all three of the Aux mode buttons (Aux1, Aux2, and Aux3) will turn off when surround panning is enabled. This is because all outputs levels (except the headphone output) are linked to the main output bus level when using surround, so Aux modes are disabled.

### 4.2.14.2 – WHAT DO THE CONTROLS DO?

It is important to note that there are some differences in the way the K-Mix controls behave when panning in surround versus panning in stereo.

#### FADER BEHAVIOR

When in Surround Panning Mode, the faders largely continue to function as though they do in **Mains Mode**.

- Faders 1-8 continue to control the level of input channels 1-8.
- A notable difference is that the master fader now controls the level of *all* output bus pairs (Main,





Aux 1, Aux 2, Aux 3) simultaneously, not just the main outputs. This is to ensure even output levels when in Surround Panning Mode.

## ROTARY BEHAVIOR

When panning in surround, the rotaries act as four surround panners. These are where you move the audio around in space.

- Input channels can be assigned to one of the four rotaries ([via the K-Mix Editor](#)); the audio from the assigned channels will follow the rotary's position in the surround field.
- Unlike other modes, in Surround Panning Mode the entire surface area of the rotaries can be used; from the center to the edges in all 360° – there is no “dead zone” at the bottom of the rotaries. This allows for precise placement of audio in whatever surround speaker array you are using.

The rotary panners are essentially a top-down view of the surround field. The center of the rotary represent the center of the speaker array.

- Center = center of speakers
- 0° (12 o'clock) = front
- 90° (3 o'clock) = right
- 180° (6 o'clock) = back
- 270° (9 o'clock) = left

The further you move from the center of the rotaries, the more “distant” (quieter) the audio will appear in the speakers; the closer you move to the center of the rotaries, the “closer” (louder) the audio will appear.

## CHANNEL SELECT BUTTON BEHAVIOR

The channel select buttons are not used for any special functionality when in Surround Panning Mode.

### 4.2.14.3 – [SHIFT] FUNCTIONALITY

The [SHIFT] button is used to enable/disable Surround Panning Mode via the [SHIFT] + [PAN] button combination.



Since the faders function the same as they do in Mains Mode, [SHIFT] can also be used to solo and mute channels via the faders.

### 4.2.14.4 – OUTPUT CHANNEL BEHAVIOR

K-Mix's output channels behave differently when Surround Panning Mode is enabled. When panning in stereo, the four stereo output bus pairs (Main, Aux 1, Aux 2, Aux 3) are completely independent, but when surround is enabled all of the output channels work together to provide audio for surround sound setups.



- All three of the Aux modes are completely disabled when panning in surround; the aux channel levels instead link to the Mains level to ensure even output levels across all channels.
- Input channel aux sends are ignored when Surround Panning Mode is enabled.
- The effects (compressor, gate, EQ) on the main output bus (outputs 1 & 2) are automatically bypassed when surround is enabled. They will return to their original state when you return to stereo panning.
- If you are using a **surround format** that does not utilize all eight output channels (Quad, 5.1, or 7.1), the leftover outputs will be unused.

#### 4.2.14.5 – BASS MANAGEMENT CROSSOVER

K-Mix provides an optional low frequency crossover when using Surround Panning Mode, called “Bass Management”. When bass management is enabled, all low frequency audio content will be routed out the headphone jack; higher frequency content will go out outputs 1-8 as normal. When disabled, all audio, regardless of frequency, will be routed out outputs 1-8.

- When both Surround Panning Mode and Bass Management are enabled, the headphone output can no longer be used for monitoring input and output channels; it is solely dedicated to the low frequency content.



Bass Management’s on/off state and crossover frequency may only be altered via the K-Mix Editor. It cannot be accessed via the K-Mix hardware.

#### 4.2.14.6 – EDITOR-ONLY PARAMETERS

Surround Panning Mode has a number of parameters that may only be changed from the K-Mix Editor software and are inaccessible from the K-Mix hardware.

The following parameters are editor-only:

- Speaker Layout
- Bass Management On/Off
- Bass Management Crossover Frequency
- Surround Panner Assignment



#### 4.2.14.7 – SURROUND PARAMETERS ARE GLOBAL, NOT PER PRESET

One important thing to note when using Surround Panning Mode is that all of its parameters are “global” parameters. This means they are not stored on a per-preset basis; they will instead remain the same when changing K-Mix presets.

This is to prevent potentially “odd” behavior when changing presets. If surround parameters were stored with each preset, that could result in the headphone output suddenly becoming a subwoofer feed, different rotaries controlling different input channels, and surround speaker layouts unexpectedly changing. These are likely to be undesirable behaviors, so surround parameters are global.

#### 4.2.14.8 – FUNCTIONAL DIFFERENCES BETWEEN STEREO & SURROUND

As detailed in this section, **Pan (Surround)**, and the previous section, **Pan (Stereo)**, there are some significant differences between Stereo Panning Mode and Surround Panning Mode. It is important to know these if you will be occasionally switching between the two modes.

Here is a brief summary of the functional differences between stereo panning and surround panning with K-Mix:

- All output bus levels are linked in surround; they can be set individually in stereo.
- Stereo parameters are saved on a per preset basis; surround parameters are global.
- Rotaries function as traditional knobs in stereo; in surround their entire surface area can be used.
- Channel select buttons do nothing when panning in surround; they are used to select the channel currently being edited when in stereo.
- The headphone output can be used for bass management in surround.
- Aux modes and Reverb mode are disabled when surround is enabled.
- All effects on the main output bus (compressor, gate, EQ) are bypassed when surround is enabled.

### 4.2.15 – EQ

The [EQ] button is used to enter K-Mix’s “EQ Mode” – here you can adjust the equalizer settings for each of the eight input channels and the main output bus.

EQ

#### 4.2.15.1 – WHAT DO THE CONTROLS DO?

##### FADER BEHAVIOR

In EQ Mode, the K-Mix faders continue to function as though they are in **Mains Mode**. Faders 1–8 control the level of input channels 1–8 and the master fader controls the level of the main output bus (outputs 1 & 2).

##### ROTARY BEHAVIOR

The four rotaries are used to adjust equalization settings for the currently selected channel (or channels). By default the rotaries are set to adjust the following parameters:

- Rotary 1 = Low Boost/Cut



- Rotary 2 = Mid Boost/Cut
- Rotary 3 = Mid Frequency
- Rotary 4 = High Boost/Cut

It is also possible to hold down the [SHIFT] button to access more EQ parameters. When holding down [SHIFT] the rotaries will adjust the following parameters:

- Rotary 1 = Low Frequency
- Rotary 2 = off
- Rotary 3 = Mid Q (Bandwidth)
- Rotary 4 = High Frequency

Rotaries act like traditional knobs; the minimum value is at 7 o'clock and the maximum value is at 5 o'clock. Move the rotary clockwise to increase the current parameter's value; move the rotary counterclockwise to decrease.

## CHANNEL SELECT BUTTON BEHAVIOR

The channel select buttons are used to select the EQ that is currently being edited by the rotary controls.

- Each input channel and the main output bus has its own EQ, so any of the channel select buttons may be used.

The LED color of the channel select buttons is used to display the currently selected EQ (or EQs).

- Green = currently selected
- Red = not selected

When selected, the rotaries will update to display the selected channel's EQ settings.

### 4.2.15.2 – ADJUSTING EQ SETTINGS

To edit a channel's EQ settings, do the following:

1. Press the [EQ] button to go into EQ mode.
2. Press one of the channel select buttons to select a channel to edit. The currently selected channel will light up green – all others are red. The rotary LEDs will immediately snap to the selected channel's EQ settings.
3. Adjust any of the four rotaries to adjust the EQ settings.

### 4.2.15.3 – [SHIFT] FUNCTIONALITY

When in EQ Mode, the [SHIFT] button is used to access the extra parameters from the rotaries – Low Frequency, High Frequency, and Mid Q (Bandwidth).

When [SHIFT] is held down, rotary 1 controls Low Frequency, rotary 3 controls Mid Q, and rotary 4 controls High Frequency. Rotary 2 has no [SHIFT] functionality.



### EXAMPLE USE

1. Press the [EQ] button to go into EQ Mode.
2. Select a channel by pressing its channel select button.
3. Press and hold the [SHIFT] button.
4. While [SHIFT] is still held down, adjust rotary 1, 3, or 4 to alter the Low Frequency, Mid Q, or High Frequency parameters.
5. Release the [SHIFT] button to go back to normal rotary behavior.



Since the faders function the same as they do in Mains Mode, [SHIFT] can also be used to solo and mute channels via the faders.

## 4.2.16 – VERB

The [VERB] button is used to enter K-Mix's "Reverb Mode" – here you can adjust the reverb settings for K-Mix's global reverb send.

Verb

### 4.2.16.1 – WHAT DO THE CONTROLS DO?

#### FADER BEHAVIOR

In Reverb Mode, faders 1-8 are used to control the reverb "send level", the amount of signal being passed into the global reverb effect for input channels 1-8. The master fader is used to control the overall level of the reverb that is mixed in to the main output bus, outputs 1 & 2.

- Move a fader up to increase the reverb send level for that channel.
- Move a fader down to decrease the reverb send level for that channel.

#### ROTARY BEHAVIOR

The four rotaries are used to adjust the global reverb's settings.

- Rotary 1 = PreDelay
- Rotary 2 = Damping
- Rotary 3 = Diffusion
- Rotary 4 = Decay

Rotaries act like traditional knobs; the minimum value is at 7 o'clock and the maximum value is at 5 o'clock.

- Move the rotary clockwise to increase the current parameter's value.
- Move the rotary counterclockwise to decrease the current parameter's value.



## CHANNEL SELECT BUTTON BEHAVIOR

The channel select buttons are used for adjusting the pre/post state of the reverb sends.

- Press and hold any of the channel select buttons for 1 second to toggle between pre-fader and post-fader.

The channel select button LEDs are used to represent the current state of the sends.

- Green = Post-fader
- Red = Pre-fader

## 4.2.16.2 – ADJUSTING REVERB SETTINGS

To adjust the reverb settings, do the following:

1. Press the [VERB] button to go into Reverb Mode.
2. Adjust any of the four rotaries to alter the reverb's settings. The Rotary Control Indicator LEDs just below the rotaries will light up to indicate what parameter each rotary is controlling.

## 4.2.16.3 – ADJUSTING REVERB SEND LEVELS

To adjust the reverb send levels, do the following:

1. Press the [VERB] button to go into Reverb Mode.
2. Move faders 1-8 up to increase the amount of signal going to the reverb.
3. Move faders 1-8 down to decrease the amount of signal going to the reverb.

## 4.2.16.4 – PRE/POST SEND SWITCHING

To adjust whether the reverb sends are pre-fader or post-fader, do the following:

1. Press the [VERB] button to go into Reverb Mode.
2. Press and hold any of the channel select buttons for 1 second to toggle between pre-fader sends and post-fader sends. The channel select button LEDs will be green when set to post-fader, and will be red when set to pre-fader.

## 4.2.16.5 – [SHIFT] FUNCTIONALITY

The [SHIFT] button does not perform any reverb-related functions when in Reverb Mode. Pressing and holding the [SHIFT] button does display the current mute/solo state of the input channels, but they cannot be altered from this mode.

## 4.2.16.6 – NO REVERB WHEN SURROUND PANNING IS ENABLED

When Surround Panning Mode is enabled, the reverb will no longer pass to the main output bus (outputs 1 & 2). Reverb mode is also completely disabled when surround is enabled; you will not be able to access it via the [VERB] button.



## 4.2.17 – TRIM

The [TRIM] button is used to enter K-Mix's "Trim Mode" – here you can adjust the input trim levels for input channels 1-8.

Trim

### 4.2.17.1 – WHAT DO THE CONTROLS DO?

#### FADER BEHAVIOR

In Trim Mode, faders 1-8 are used to control the amount of trim (or "gain") to apply to input signals.

- Move a fader up to increase the trim level for that channel.
- Move a fader down to decrease the trim level for that channel.

The master fader is not used in Trim Mode; it will not respond to touch and its LEDs will be off.

#### ROTARY BEHAVIOR

The rotaries are not used in Trims Mode; they will not respond to touch and their LEDs will be off.

#### CHANNEL SELECT BUTTON BEHAVIOR

The channel select buttons are not used in Trims Mode; they will not respond to touch and their LEDs will be off.

### 4.2.17.2 – ADJUSTING TRIM LEVELS

To adjust the input trim levels, do the following:

1. Press the [TRIM] button to enter Trim Mode.
2. Adjust faders 1-8 to set the trim level for each of the 8 input channels. Moving a fader up increases the trim level, moving it down decreases the trim level.

Also note that input channels 1-2 have different trim ranges than input channels 3-8. The ranges are as follows:

- Ch. 1-2 Trim Range: 0dB to +60dB
- Ch. 3-8 Trim Range: -20dB to +40dB


### 4.2.17.3 – [SHIFT] FUNCTIONALITY

The [SHIFT] button does not perform any special functions when in Trim Mode.

## 4.2.18 – +48V

The [+48V] button is used to adjust K-Mix's phantom power settings.

Similar to the [BYPASS] button, the [+48V] button must be held down while performing any adjustments.

+48V



## 4.2.18.1 – WHAT DO THE CONTROLS DO?

### FADER BEHAVIOR

The faders are not used when the [+48V] button is held down; they will not respond to touch and their LEDs will be off.

### ROTARY BEHAVIOR

The rotaries are not used when the [+48V] button is held down; they will not respond to touch and their LEDs will be off.

### CHANNEL SELECT BUTTON BEHAVIOR

While the [+48V] button is held down, channel select buttons 1 and 2 are used to toggle phantom power on/off for their respective input channels. The channel select button's LED is used to represent the current phantom power state.

- Green = Phantom power on
- Red = Phantom power off

The master channel select button is used to toggle between +15V and +48V phantom power voltage levels. The channel select button's LED is used to represent the current voltage level being provided by phantom power.

- Green = +48V
- Red = +15V

## 4.2.18.2 – TURNING PHANTOM POWER ON/OFF

To turn phantom power on/off, do the following:

1. Press and hold the [+48V] button.
2. Press channel select button 1 to toggle the phantom power state for channel 1. The LED will turn green if phantom power is on, or red if phantom power is off.
3. Press channel select button 2 to toggle the phantom power state for channel 2.
4. Release the [+48V] button to return to the mode you were previously in.



When phantom power is turned on it will take a few seconds to fully ramp up to the proper voltage level. The +48V LEDs above the master fader will blink while this is happening.

### VISUAL FEEDBACK

In addition to the channel select button LEDs, there are also two blue LEDs above the master channel select button. These show the current on/off state of phantom power for input channels 1 and 2.





### 4.2.18.3 – SWITCHING PHANTOM POWER VOLTAGE LEVEL

To switch the phantom power voltage level between +48V and +15V, do the following:

1. Press and hold the [+48V] button.
2. Press the master channel select button to toggle between +48V and +15V. The LED will turn green for +48V or red for +15V.
3. Release the [+48V] button to return to the mode you were previously in.

### 4.2.18.4 – PHANTOM POWER IS GLOBAL, NOT PER PRESET

The phantom power parameters (on/off state and voltage level) are global parameters. This means they are not stored on a per preset basis; they will instead remain the same when changing K-Mix presets.

Phantom power parameters are global to prevent situations where changing presets alters phantom power states, which could lead to problems with microphone performance (or even potentially damage some microphones). If using a condenser microphone that requires phantom power, you likely wouldn't want phantom to suddenly turn off if you changed a preset, leading to a significant drop in signal level (or even completely cutting out).

### 4.2.18.5 – PHANTOM POWER DEFAULT STATE

When K-Mix is powered on, phantom power will always be off. You must manually turn phantom power on each time K-Mix is turned on.

## 4.2.19 – PHONES

The [P] button is used to enter "Phones Mode" – here you can adjust the headphone output level and the headphone monitoring point.



### 4.2.19.1 – WHAT DO THE CONTROLS DO?

#### FADER BEHAVIOR

In Phones Mode, the master fader is used to adjust the final output level of the stereo headphone output on K-Mix.

- Move the fader up to increase the output level.
- Move the fader down to decrease the output level.

Faders 1–8 are not used in Phones Mode; they will not respond to touch and their LEDs will be off.

#### ROTARY BEHAVIOR

The rotaries are not used in Phones Mode; they will not respond to touch and their LEDs will be off.

#### CHANNEL SELECT BUTTON BEHAVIOR

Channel select buttons 1–8 are used to select one of the eight input channels as the monitor point for the headphone output.



- Press any channel select button, 1-8, to monitor that channel's input signal, pre-fader and post-DSP.

The master channel select button is used to make the headphone output act as its own discrete output, effectively adding an extra two outputs to K-Mix.

### [MAIN], [AUX1], [AUX2], [AUX3] BEHAVIOR

In Phones Mode, the [MAIN], [AUX1], [AUX2], and [AUX3] mode buttons are used to select one of the four stereo output bus pairs as the monitor point for the headphone output.

- Press the [MAIN] button to monitor the main output bus, the [AUX1] button to monitor the Aux 1 output bus, etc.

## 4.2.19.2 – ADJUSTING THE HEADPHONE OUTPUT LEVEL

Adjusting the overall level of the headphone output is simple:

1. Enter Phones Mode by pressing the [P] button.
2. Move the master fader up to increase the output level; move the fader down to decrease the output level.
3. That's it! Press the [P] button again to exit Phones Mode and return to the mode you were previously in.

## 4.2.19.3 – CHANGING THE HEADPHONE MONITORING POINT

You can set the headphone output to monitor any of the eight input channels or any of the four stereo output bus pairs.

### MONITORING AN INPUT CHANNEL

When monitoring an input channel, the signal will be tapped post-DSP (EQ, Comp, Gate) and pre-fader.

To monitor one of the eight input channels via the headphone output, do the following:

1. Enter Phones Mode by pressing the [P] button.
2. Press one of the channel select buttons 1-8 to monitor its respective input channel; its LED will turn green. 1 will monitor input channel 1, 2 will monitor input channel 2, etc.

### MONITORING AN OUTPUT BUS

When monitoring an output bus (Mains, Aux 1, Aux 2, Aux 3), the signal will be tapped toward the very end of the signal chain, just before the output faders.

To monitor one of the four stereo output bus pairs via the headphone output, do the following:

1. Enter Phones Mode by pressing the [P] button.
2. Press either the [MAIN], [AUX1], [AUX2], or [AUX3] mode buttons to monitor its respective output bus; the selected mode button's LED will light up blue. The headphone output is now monitoring the selected output bus.



#### 4.2.19.4 – HEADPHONE OUTPUT AS A DISCRETE OUTPUT BUS

It is possible to set the headphone output to act as its own discrete output, effectively adding another two outputs to K-Mix (the headphone output is stereo). It should be noted that these outputs can only be addressed by a connected computer; it is not possible to route any of the input channels to these extra output channels.

To set up the headphone output to act as a discrete output bus, do the following:

1. Enter Phones Mode by pressing the [🎧] button.
2. Press the master channel select button; its LED will turn green. The headphone output is now acting as a discrete output bus, outputs 9-10.

#### 4.2.19.5 – EXITING PHONES MODE

Since the [MAIN], [AUX1], [AUX2], and [AUX3] mode buttons are used to select the output bus pairs as headphone monitoring points, they cannot be used to exit Phones Mode.

- To exit Phones Mode, simply tap the [🎧] button; you will be returned to whatever mode you were in before entering Phones Mode.
- Alternatively, you can press the [COMP], [GATE], [EQ], [PAN], [VERB], or [TRIM] mode buttons to directly to their respective mode.

### 4.3 – MIDI & K-Mix

In addition to functioning as both a mixer and audio interface, K-Mix speaks MIDI. K-Mix allows for bi-directional MIDI communication with USB host devices (computer, tablet), and with external MIDI hardware (via the optional KMI MIDI Expander). K-Mix is fully capable of both outputting MIDI to control other devices/software, and receiving MIDI for control of its own parameters.

This section details what you need to know for successful MIDI communication with K-Mix.

#### 4.3.1 – MIDI PORTS

When a K-Mix is connected to a computer, three virtual MIDI “ports” (or “busses”) are created – Port 1: K-Mix Audio Control, Port 2: K-Mix Expander, and Port 3: K-Mix Control Surface. They are the “portal” to communicating with the connected K-Mix via MIDI; they allow for bi-directional MIDI communication between the computer and the K-Mix (and MIDI Expander if one is connected), and should appear in any MIDI-capable application.

Understanding what each port is for and how they work is crucial for mastering MIDI communication with K-Mix.

The functionality of each port will be discussed in the following sections; here is a quick summary of what they are for:

- **K-Mix Audio Control** = MIDI control of Mix bank and audio functions
- **K-Mix Expander** = MIDI Expander In/Out
- **K-Mix Control Surface** = MIDI banks In/Out



### 4.3.1.1 – PORT 1: K-MIX AUDIO CONTROL

The K-Mix Audio Control port is used for controlling K-Mix's Mix bank parameters via MIDI.

- Sending MIDI to this port from a connected computer will allow you to control things like channel EQ settings, Compressor settings, fader levels, panning, etc. This allows you to automate your K-Mix from a DAW or other MIDI-capable software.



K-Mix does not report back its Mix bank parameters via MIDI over the K-Mix Audio Control port; it can only receive over this port.

### 4.3.1.2 – PORT 2: K-MIX EXPANDER

The K-Mix Expander port is used exclusively for receiving MIDI from and sending MIDI to a connected MIDI Expander.

- Any MIDI sent from an external device to the Expander's MIDI In jack will enter the computer via this port.
- Any MIDI sent from the computer to this port will be sent out of the Expander's MIDI Out jack.

### 4.3.1.3 – PORT 3: K-MIX CONTROL SURFACE

The K-Mix Control Surface port is used for receiving MIDI from and sending MIDI to K-Mix's MIDI banks. This is the port that audio applications should listen to in order to receive MIDI coming directly from K-Mix.

- Any MIDI sent to this port from a connected computer will allow you to control the faders, rotaries, and buttons in K-Mix's MIDI banks.
- Manipulating faders, rotaries, and buttons within any of K-Mix's MIDI banks will send MIDI from K-Mix to a connected computer over this port.

## 4.3.2 – SENDING MIDI FROM K-MIX

K-Mix is able to output standard, class-compliant MIDI messages over USB and over 5-pin DIN via the optional MIDI Expander.

### 4.3.2.1 – MIDI BANKS

K-Mix offers three MIDI "banks"; each fader, rotary, and button can be set to output completely different MIDI messages for each bank. You can change the current bank by using K-Mix's diamond pad.

#### FADERS

K-Mix's faders behave like traditional sliders on MIDI controllers when in the MIDI banks.

- Each fader outputs its current location as a MIDI CC message.
- The specific CC each fader outputs is set in the K-Mix Editor's MIDI Tab.



- CC values are ranged from 0 (minimum) to 127 (maximum). 0 is at the bottom of the fader; 127 is at the top of the fader.
- The fader LEDs display the current value/location of the fader.

## ROTARIES

K-Mix's rotaries behave like traditional knobs when in the MIDI banks.

- Each rotary outputs its current location as a MIDI CC message.
- The specific CC each rotary outputs is set in the **K-Mix Editor's MIDI Tab**.
- CC values are ranged from 0 (minimum) to 127 (maximum).
- 0 (minimum) = approximately 7 o'clock; 127 (maximum) = approximately 5 o'clock. There is a "dead zone" at the bottom of the rotary (6 o'clock position).
- Move the rotary clockwise to increase its value; move the rotary counterclockwise to decrease its value.
- The rotary LEDs display the current value/location of the fader.

## BUTTONS

K-Mix's buttons can behave in two different ways when in MIDI banks; they can act as momentary switches or toggle switches.

- Buttons always output MIDI notes.
- The specific MIDI note each button outputs, and whether the button is a momentary switch or toggle switch, is set in the **K-Mix Editor's MIDI Tab**.
- When set to "momentary", the button will output a MIDI note with a velocity of 127 when pressed, then output a MIDI note with a velocity of 0 when released.
- When set to "toggle", the button will output a MIDI note with a velocity of 127 the first time the button is pressed (toggled on), then output a MIDI note with a velocity of 0 the next time it is pressed (toggled off).
- The button's LED will light up when pressed (or toggled on), and will turn off when released (or toggled off).



## DIAMOND PAD

K-Mix's diamond pad behaves in the same manner as the buttons do when in MIDI banks; each of the four buttons can act as momentary switches or toggle switches.

- Each of the four diamond pad buttons can output MIDI notes.
- The specific MIDI note each button outputs, and whether the buttons are momentary or toggle switches, is set in the [K-Mix Editor's MIDI Tab](#).
- When set to "momentary", the buttons will output a MIDI note with a velocity of 127 when pressed, then output a MIDI note with a velocity of 0 when released.
- When set to "toggle", the buttons will output a MIDI note with a velocity of 127 the first time the button is pressed (toggled on), then output a MIDI note with a velocity of 0 the next time it is pressed (toggled off).
- The button's LED will light up red when pressed (or toggled on), and will return to green when released (or toggled off).

### 4.3.2.2 – DIAMOND PAD IN MIX BANK

K-Mix is able to output a few special MIDI messages when in the [Mix bank](#). Whenever K-Mix is in the Mix bank, the diamond pad buttons will output MCU (Mackie Control Universal) transport control messages.

- The diamond pad buttons are labelled with the corresponding transport control message they output when pressed.
- ► = Play, ■ = Stop, ◀◀ = Rewind, and ● = Record,.
- K-Mix will only output these transport messages when in the [Mix bank](#); it will output standard MIDI notes when in any of the three [MIDI banks](#).

### 4.3.2.3 – MIDI EXPANDER OUTPUT

If a MIDI Expander is connected to K-Mix, all MIDI output by K-Mix will be sent out of the MIDI Expander's MIDI Out jack (in addition to sending to [Port 3: K-Mix Control Surface](#)).

MIDI can also be sent directly out the Expander's MIDI Out jack from a connected computer/tablet by sending MIDI to [Port 2: K-Mix Expander](#).



### 4.3.3 – EXTERNAL MIDI CONTROL OF MIX BANK

The Mix bank parameters on K-Mix are controlled by sending specific MIDI messages to the K-Mix Audio Control port. MIDI sent to the K-Mix Expander or K-Mix Control Surface ports will not do anything related to the Mix bank.



When automating K-Mix parameters, MIDI data response can get backlogged if too many messages occur simultaneously.

With the exceptions of channel soloing, stereo pairing, and Aux Pre/Post switches, nearly all K-Mix parameters that can be controlled from the hardware can be controlled via MIDI messages sent to K-Mix.

Standard MIDI messages are ranged from 0-127; since K-Mix's Mix bank parameters come in a variety of ranges, incoming MIDI messages will be scaled to the appropriate range for each mixer parameter.

- **Fader Parameters** = 0-127 (minimum to maximum)
- **Rotary Parameters** = 0-127 (minimum to maximum)
- **Switch/Button Parameters** = 0 (off); 1-127 (on)



External MIDI messages for controlling K-Mix will ignore Pass Thru if it is enabled.

#### 4.3.3.1 – MIDI CHANNELS

Since there are more than 128 editable parameters on K-Mix, the MIDI messages to control them have been spread out across different MIDI channels.

- **MIDI Channel 1** = Input Channel 1 Settings
- **MIDI Channel 2** = Input Channel 2 Settings
- **MIDI Channel 3** = Input Channel 3 Settings
- **MIDI Channel 4** = Input Channel 4 Settings
- **MIDI Channel 5** = Input Channel 5 Settings
- **MIDI Channel 6** = Input Channel 6 Settings
- **MIDI Channel 7** = Input Channel 7 Settings
- **MIDI Channel 8** = Input Channel 8 Settings
- **MIDI Channel 9** = Main Output Settings
- **MIDI Channel 10** = Misc. Settings (Reverb, Surround, Auxes)



### 4.3.3.2 – INPUT CHANNEL PARAMETERS

All input channel parameters are controllable via MIDI, the exceptions being Stereo Pairs, Solo, and Aux Pre/Post switches.

As stated in the previous section, **4.3.3.1 – MIDI Channel**, each input channel's MIDI controllable parameters are separated by MIDI channel; sending messages on MIDI channel 1 will control input channel 1, MIDI channel 2 will control input channel 2, and so on. This is nice because the CC number for each parameter (such as EQ High Frequency) can remain the same, just change the MIDI channel.

The following list details the parameters that may be controlled, and the MIDI CCs that are used to control them.



External MIDI messages for controlling Mains panning, Aux 1-3 panning, and Aux 1-3 send levels will be ignored when surround panning is enabled; these parameters are not accessible when using surround.

- Fader/Volume Level = CC 1
- Mute = CC 2
- EQ Bypass = CC 3
- EQ High Boost/Cut Level = CC 4
- EQ High Frequency = CC 5
- EQ Mid Boost/Cut Level = CC 6
- EQ Mid Frequency = CC 7
- EQ Mid Q = CC 8
- EQ Low Boost/Cut Level = CC 9
- EQ Low Frequency = CC 10
- Gate Bypass = CC 11
- Gate Threshold = CC 12
- Gate Attack Time = CC 13
- Gate Release Time = CC 14
- Gate Gain Reduction = CC 15
- Compressor Bypass = CC 16
- Compressor Threshold = CC 17
- Compressor Attack Time = CC 18
- Compressor Release Time = CC 19
- Compressor Ratio = CC 20
- Compressor Makeup Gain = CC 21
- Left/Right Panning (to Mains) = CC 22
- Aux 1 Send Level = CC 23
- Aux 1 Panning = CC 24
- Aux 2 Send Level = CC 25
- Aux 2 Panning = CC 26
- Aux 3 Send Level = CC 27
- Aux 3 Panning = CC 28
- Input Trim = CC 29





### 4.3.3.3 – MAIN OUTPUT BUS PARAMETERS

The main output bus parameters can be controlled via external MIDI in the same way as the input channels; the only difference is there is no panning, aux send levels, or input trim levels (since these do not exist on the mains bus).

All main output parameters are controlled via MIDI CC messages sent on MIDI channel 9.

The following list details the parameters that may be controlled and the MIDI CCs that are used to control them.



External MIDI messages for controlling the main output bus' EQ, Gate, and Compressor parameters will be ignored when surround panning is enabled; these parameters are not accessible when using surround – the effects are bypassed.

- Fader/Volume Level = CC 1
- Mute = CC 2
- EQ Bypass = CC 3
- EQ High Boost/Cut Level = CC 4
- EQ High Frequency = CC 5
- EQ Mid Boost/Cut Level = CC 6
- EQ Mid Frequency = CC 7
- EQ Mid Q = CC 8
- EQ Low Boost/Cut Level = CC 9
- EQ Low Frequency = CC 10
- Gate Bypass = CC 11
- Gate Threshold = CC 12
- Gate Attack Time = CC 13
- Gate Release Time = CC 14
- Gate Gain Reduction = CC 15
- Compressor Bypass = CC 16
- Compressor Threshold = CC 17
- Compressor Attack Time = CC 18
- Compressor Release Time = CC 19
- Compressor Ratio = CC 20
- Compressor Makeup Gain = CC 21



### 4.3.3.4 – MISC. PARAMETERS (REVERB/SURROUND/AUXES)

All other K-Mix parameters that do not fall under the input channels or main output bus are controlled via MIDI CC messages sent on MIDI channel 10.

The following list details the parameters that may be controlled and the MIDI CCs that are used to control them.



External MIDI messages for controlling Aux 1-3 output levels and mutes will be ignored when surround panning is enabled; these parameters are not accessible when using surround.

External MIDI messages for controlling Surround parameters will be ignored when stereo panning is enabled; these parameters are only accessible when using surround.

- Reverb Channel Send Levels 1-8 = CCs 1-8
- Reverb PreDelay = CC 9
- Reverb Decay Time = CC 10
- Reverb Damping = CC 11
- Reverb Diffusion = CC 12
- Reverb Level = CC 13
- Reverb Bypass = CC 14
- Surround Panner 1 Angle = CC 15
- Surround Panner 1 Radius = CC 16
- Surround Panner 2 Angle = CC 17
- Surround Panner 2 Radius = CC 18
- Surround Panner 3 Angle = CC 19
- Surround Panner 3 Radius = CC 20
- Surround Panner 4 Angle = CC 21
- Surround Panner 4 Radius = CC 22
- Aux 1 Fader/Output Level = CC 23
- Aux 1 Mute = CC 24
- Aux 2 Fader/Output Level = CC 25
- Aux 2 Mute = CC 26
- Aux 3 Fader/Output Level = CC 27
- Aux 3 Mute = CC 28



### 4.3.3.5 – CHANGING PRESETS WITH PROGRAM CHANGE MESSAGES

Program change messages sent to the **K-Mix Audio Control port** can be used to change the currently loaded K-Mix preset.

- Program change 1-12 will load presets 1-12 (A-L), respectively.
- Program change messages can be on any MIDI channel, they just need to be sent to the **K-Mix Audio Control port**.

### 4.3.3.6 – MIDI CONTROL WHEN NOT IN MIX BANK

It is entirely possible to control K-Mix's Mix bank parameters via external MIDI messages when you are not currently in the Mix bank (if you're in MIDI bank 2, for example). There will be no visual indication that parameters have changed, but they will update in the background and you will immediately hear the change reflected in audio output (assuming the change was an audible one).

## 4.3.4 – EXTERNAL MIDI CONTROL OF MIDI BANKS

The MIDI bank parameters on K-Mix are controlled by sending MIDI messages to the **K-Mix Control Surface port**. MIDI sent to the **K-Mix Audio Control** or **K-Mix Expander ports** will not do anything related to the MIDI banks.

For each MIDI bank, K-Mix allows for control of:

- Fader position
- Rotary position
- Button state (when set to "Momentary")

The specific MIDI CCs and MIDI notes for controlling these parameters will mirror whatever CCs/notes and channel each fader, rotary, or button is set to output; these are set in the **K-Mix Editor's MIDI Tab**. If, for example, a fader was set to send its position out on CC 24, MIDI channel 5, then sending a CC 24 message on MIDI channel 5 to the K-Mix Control Surface port will control that fader.

### 4.3.4.1 – CONTROLLING FADERS

Faders in any of K-Mix's three MIDI banks are capable of being controlled via incoming MIDI CC messages. The exact number and MIDI channel for controlling each fader mirrors whatever the fader is set to output; this is set in the **K-Mix Editor's MIDI Tab**.

- MIDI CC values are ranged from 0-127; when receiving this, 0-127 will be scaled across the entire fader range.
- 0 = bottom of the fader; 127 = top of the fader. Just like how the faders output MIDI.
- The fader LEDs will automatically update and follow any incoming CC messages.



#### 4.3.4.2 – CONTROLLING ROTARIES

Like the faders, all rotaries in K-Mix's three MIDI banks are capable of being controlled via incoming MIDI CC messages. The exact CC number and MIDI channel for controlling each rotary mirrors whatever the rotary is set to output; this is set in the **K-Mix Editor's MIDI Tab**.

- MIDI CC values are ranged from 0-127; when receiving this, 0-127 will be scaled across the rotary.
- 0 (minimum value) = approximately 7 o'clock; 127 (maximum value) = approximately 5 o'clock. Just like how the rotaries output MIDI.
- The rotary LEDs will automatically update and follow any incoming CC messages.

#### 4.3.4.3 – CONTROLLING BUTTONS

All mode buttons, channel select buttons, and the diamond pad buttons can be controlled via incoming MIDI messages. Unlike the faders and rotaries, which respond to MIDI CC messages, the buttons respond to MIDI note messages. The exact note number and MIDI channel for controlling each button mirrors whatever note and channel the button is set to output; this is set in the **K-Mix Editor's MIDI Tab**.

- Buttons may only be controlled via MIDI if they are set to act as a momentary switch (set in the K-Mix Editor). They cannot be controlled if set to act as a toggle switch.
- The MIDI note's velocity value is used to determine the on/off state of the button's LED. 0 = off; 1-127 = on.
- A physical press of the button will trigger the LED state to turn off, thus overtaking the last message that was sent to change the state of the momentary button. A physical press will always take priority over the control messages.

#### 4.3.4.4 – MIDI CONTROL WHEN NOT IN A MIDI BANK

All MIDI bank parameters may be controlled via external MIDI regardless of the bank K-Mix is currently in. If you are in the Mix bank, all three MIDI banks may be controlled via external MIDI messages; there will be no visual indication that something has changed, but upon returning to the MIDI banks you will see that the faders, rotaries, or buttons have updated.



## 4.3.5 – MIDI INPUT VIA MIDI EXPANDER

It is possible to control K-Mix's Mix bank parameters via a connected MIDI Expander. Any MIDI sent from an external MIDI device into the Expander's MIDI IN jack will be used to control K-Mix. It is not possible, however, to control the MIDI bank parameters from the MIDI Expander.



The **Expander Control** setting must be enabled from the K-Mix Editor in order to control K-Mix from the MIDI Expander.

### 4.3.5.1 – CHANGING PRESETS

Program change messages sent to the MIDI Expander's MIDI IN jack can be used to change the currently loaded preset.

- Program change 1-12 will load presets 1-12 (A-L), respectively.
- Program change messages *must* be sent on MIDI channel 16; program changes on any other channel will be ignored by K-Mix.

### 4.3.5.2 – CONTROLLING THE MIX BANK

There is full control of the Mix bank parameters via input to the MIDI Expander. The specific messages used to control the Mix bank are exactly the same as the messages used when controlling K-Mix from a computer; these messages are detailed in section **4.3.3 – External MIDI Control Of Mix Bank**.

### 4.3.5.3 – CONTROLLING THE MIDI BANKS

Control of K-Mix's MIDI banks via the MIDI Expander is not supported. You may only control **K-Mix's Mix bank** parameters from messages sent to the MIDI Expander's MIDI IN jack.

# K-Mix Editor



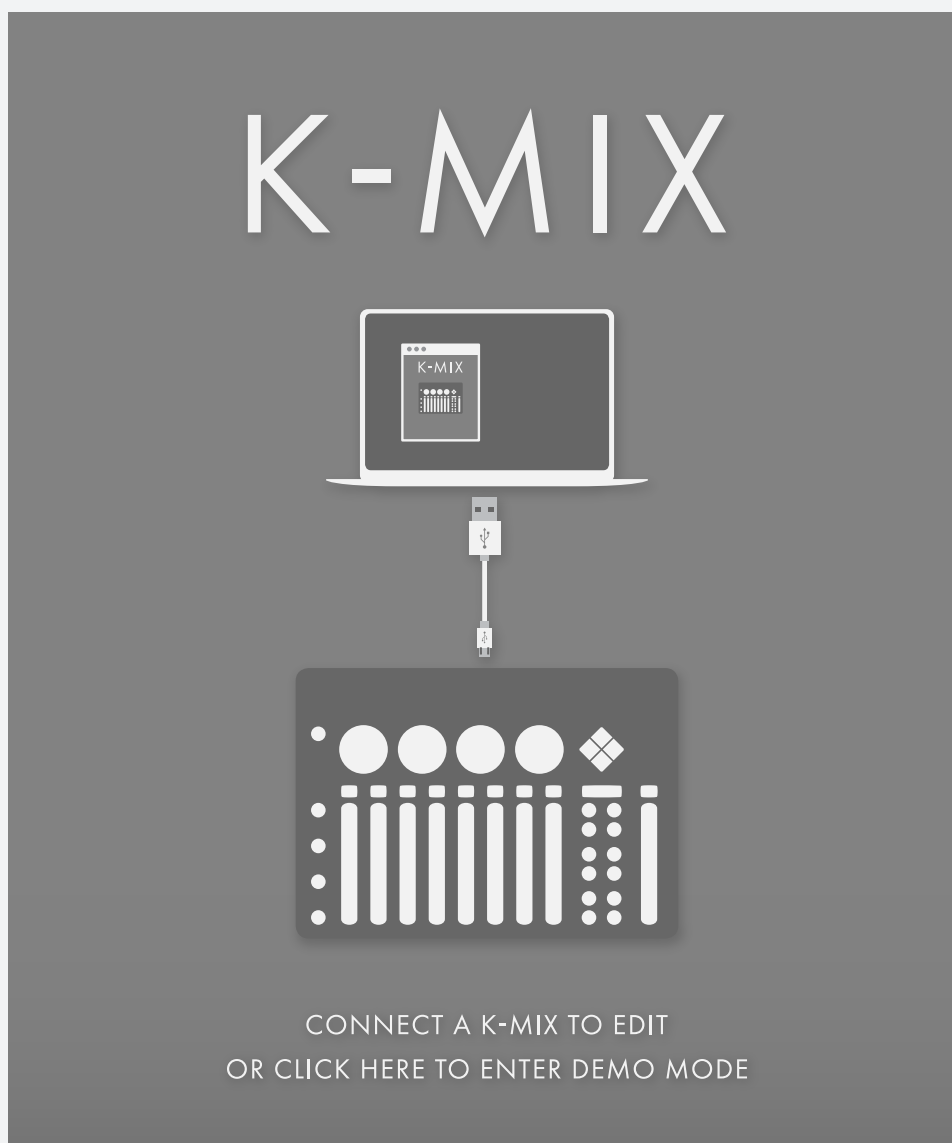


This section covers the use and behaviors of the K-Mix Editor. The K-Mix Editor allows you to edit all mixer parameters in real time (including a few that aren't available directly from the mixer itself) and manage your preset library.

Bi-directional communication between the editor and mixer provides synchronous feedback – changes made in the editor will be reflected immediately on the mixer; changes made on the mixer itself will be reflected immediately in the editor.

Unlike the mixer hardware, any parameter can be changed at any time via the editor, regardless of what mode the mixer is in. If the mixer hardware is in Gate mode, the editor can still make changes to the EQs, levels, sends, reverb, etc.

Please note that if a K-Mix is not connected, the screen pictured below will appear, prompting you to either connect a K-Mix, or enter demo mode before making the controls accessible. Saving is disabled in demo mode, however, you can still import and export presets.





## 5.1 – MAIN WINDOW

The K-Mix Editor's main window is where almost all editing activity occurs.





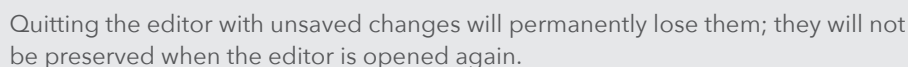


#### 5.1.1.1 – PRESET LIBRARY

Presets in this library do not have to be loaded on the mixer itself; the library is more so a “pool” of presets to choose from. Up to 999 presets may be stored in the editor’s Preset Library; you are free to load up to 12 of them on the mixer itself.

## BEHAVIORS

- Clicking a preset in the Preset Library loads its parameters into the editor (the changes are also immediately reflected on the mixer itself).
- The currently loaded preset will be highlighted **magenta**.
- If a preset has been modified, but not yet saved, its name will be italicized and the SAVE button will light up **magenta**.
- Leaving a modified, but unsaved, preset does not lose those modifications. Coming back to the modified preset remembers all changes. You can either choose to save the changes (via the SAVE or SAVE AS buttons), revert the preset back to its previously saved state (via the REVERT button), or delete the preset entirely (via the DELETE button).



## REORDERING PRESETS

Presets may be reordered in the library by simply dragging a preset name up or down. Click and hold down the mouse button on a preset, move the preset up or down, and release the mouse to place it there.

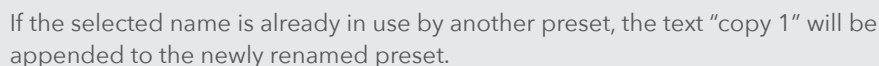
The order in which presets are arranged in the Preset Library is the order they will be displayed in the **setlist drop-down menus**.

The exception to this is the CONNECTION SYNC preset, which cannot be moved.

## RENAMING PRESETS

Presets may be renamed by double-clicking the preset name in the Preset Library. After double-clicking a preset, a dialog box will appear, prompting you to enter a new name for the preset.

The exception to this is the CONNECTION SYNC preset, which cannot be renamed.





## CONNECTION SYNC PRESET

CONNECTION SYNC is a preset that cannot be modified, reordered, or deleted, and is always at the top of the preset list. It is used to store K-Mix's current state when the mixer is initially connected to the K-Mix Editor. It is also used when you change presets from the board while connected to the editor.

This exists so you don't lose any unsaved changes you may have made on the mixer before connecting to the editor.

### SYNC ON CONNECT BEHAVIOR

Upon opening the K-Mix Editor with a K-Mix connected to the computer, the editor syncs up with the mixer's current settings.

1. Connect K-Mix to computer via USB.
2. Open the K-Mix Editor.
3. The editor syncs up all global parameters with the mixer. The editor automatically updates to whatever the mixer's global parameters are currently set to.
4. The editor reads the mixer's current per preset parameter states and stores them into the CONNECTION SYNC preset.
5. To save this as a preset (in the editor), click the SAVE AS button while the CONNECTION SYNC preset is selected.
6. Give the new preset a name and you're done!

### CHANGING PRESETS ON K-MIX WHILE CONNECTED TO EDITOR BEHAVIOR

If a preset change is initiated from the K-Mix hardware while connected to the K-Mix Editor, the editor will sync those changes using the CONNECTION SYNC preset.

1. Connect K-Mix to computer via USB.
2. Open the K-Mix Editor.
3. The editor reads the mixer's current parameter states and stores them into the CONNECTION SYNC preset.
4. Press the [PRESET] button on the K-Mix hardware.
5. Select one of the 12 presets.
6. The mixer loads the selected preset's settings.
7. The editor automatically switches over to the CONNECTION SYNC preset.
8. The CONNECTION SYNC preset is updated with the newly selected preset's settings.

### 5.1.1.2 – SAVE BUTTON

The SAVE button is, oddly enough, used to save any changes made to the currently selected preset.

When a change has been made to the preset, the SAVE button lights up **magenta**

SAVE



to indicate that changes have been made.

### 5.1.1.3 – SAVE AS BUTTON

The SAVE AS button is used to save the currently selected preset settings to a new preset slot.

A dark gray rectangular button with the text "SAVE AS" in white, uppercase letters.

When clicked, a dialog box will appear, prompting you to enter a name for the new preset.

- This can be cancelled by clicking the CANCEL button.
- You can type in a name and click the SAVE AS button to go ahead with the new preset creation.
- If you type a preset name that already exists, the editor will automatically add "copy 1" to the end of the preset name. This is to avoid any duplicate preset name issues that could arise.
- The preset can be renamed in the Preset Library if you so choose.

After a new preset has been saved, the editor immediately switches to the newly saved preset and reverts the old preset to its previously saved state.

### 5.1.1.4 – REVERT BUTTON

The REVERT button is used to revert any unsaved changes made to the currently selected preset.

A dark gray rectangular button with the text "REVERT" in white, uppercase letters.

If you've made some changes to a preset that you don't like and want your preset to go back to its original state, just click the REVERT button – the last saved state of the current preset is reloaded.

After reverting, the **magenta** SAVE indicator will turn off (as there are no longer any modifications made to the saved state).

### 5.1.1.5 – DELETE BUTTON

The DELETE button is used to delete the currently selected preset from the Preset Library.

A dark gray rectangular button with the text "DELETE" in white, uppercase letters.

When the DELETE button is clicked, a dialog box will appear asking you to confirm that you would like to delete the preset.

- You can cancel the deletion by clicking "NO. Cancel."
- You can go ahead with the deletion by clicking "YES. Delete."

After deleting a preset, it disappears from the Preset Library. The [CONNECTION SYNC] preset is then automatically selected and loaded.



Deleting a preset CANNOT be undone. Please be careful to not delete presets you want to keep – they cannot be recovered.



### 5.1.1.6 – SEND ALL BUTTON

The SEND ALL button is used to send all presets in the Setlist down to the mixer. This is essentially a less cumbersome way of clicking every individual **SEND button**.



### 5.1.1.7 – RECEIVE ALL BUTTON

The RECEIVE ALL button is used to copy all presets currently stored on the connected K-Mix hardware into the editor. Similar to the SEND ALL button, the RECEIVE ALL button is a less cumbersome way of clicking every individual **RECEIVE button**.



### 5.1.1.8 – SETLIST

This section is where you can select which presets will be loaded onto your K-Mix, and the order they will appear in. It is extremely important to become familiar with the Setlist if you intend to use your K-Mix's preset storage capabilities.

#### SLOTS A–L

These 12 slots hold the presets that will go onto your K-Mix when synced.

- Slots A-L correspond to presets A-L on the mixer hardware. If you place a preset named "Drums" on slot C and send it to the mixer, the "Drums" preset will be loaded anytime preset C is recalled from the mixer.
- Each slot has a drop-down menu that lets you select which preset to load in the selected slot. Simply click the drop-down menu and select a preset to load it into that slot. The drop-down menu will have a list of all presets currently in the Preset Library.
- A preset may *not* be loaded in multiple setlist slots (unless it is the special DEFAULT option). If you would like multiple preset slots to have the same settings it is recommended you create multiple copies of that preset (via the SAVE AS button). Another alternative is to just use a single preset and not use K-Mix's preset capabilities.

A	Tomo Berheim	⬇	SEND	RECEIVE
B	Dave's Myth	⬇	SEND	RECEIVE
C	Slumper	⬇	SEND	RECEIVE
D	CV Hum	⬇	SEND	RECEIVE
E	Slammer	⬇	SEND	RECEIVE
F	[OFF]	⬇	SEND	RECEIVE
G	[OFF]	⬇	SEND	RECEIVE
H	[OFF]	⬇	SEND	RECEIVE
I	[OFF]	⬇	SEND	RECEIVE
J	[OFF]	⬇	SEND	RECEIVE
K	[OFF]	⬇	SEND	RECEIVE
L	[OFF]	⬇	SEND	RECEIVE



Simply selecting a preset in a Setlist slot does not automatically place them onto your connected K-Mix. Presets *must* be sent to the mixer by using either the SEND button or the SEND ALL button.

There are two special options available in the Setlist drop-down menus:

#### [OFF]

[OFF] is one of two special options available in the Setlist drop-down menus.

- When a Setlist slot is set to [OFF], that slot will no longer participate in editor-to-mixer and mixer-to-editor syncing. It will skip that slot when the SEND ALL button is clicked, and the editor will skip that slot when syncing presets.



- Setting a slot to [OFF] will not delete any preset that may have already been present in the selected slot on the K-Mix hardware. It will remain there unaltered; it is solely the sending/receiving/syncing that will have been disabled.

## [DEFAULT]

[DEFAULT] is the second of two special options available in the setlist drop-down menus.

- Selecting [DEFAULT] sets that preset slot to K-Mix's default preset (a blank or "normalised" preset). When sending a [DEFAULT] preset, the editor will send down a blank, default preset to that slot. When receiving/syncing, it will always use the "**Save Into New Preset**" behavior.

## SEND BUTTON

Each slot in the Setlist has its own SEND button. The SEND buttons are for sending just a single preset down to the connected K-Mix, one at a time.

- Whatever preset is selected in the Setlist slot's drop-down menu will be sent down to the mixer, overwriting whatever preset was in that slot on the K-Mix hardware.
- To use, just click the SEND button and the selected slot's preset will be sent to the board.



A Setlist slot's SEND button is only available if a preset is selected for that slot. If a slot is set to [OFF], its SEND button will be greyed out and inaccessible.

## EXAMPLE USE

1. Click the SEND button on slot B.
2. Whatever preset is currently in slot B's drop-down menu will be sent down to the mixer, overwriting whatever was in the mixer's B preset slot.

## RECEIVE BUTTON

In addition to the SEND button, each slot in the Setlist has its own RECEIVE button. The RECEIVE buttons perform the reverse behavior of the SEND buttons – they read a preset from the mixer and place it in the editor.

When a RECEIVE button is clicked, the editor presents you with a choice between saving to a new preset, or copying into the corresponding Setlist preset.



A Setlist slot's RECEIVE button is only available if a preset is selected for that slot. If a slot is set to [OFF], its RECEIVE button will be greyed out and inaccessible.

## SAVE INTO NEW PRESET

The "Save Into New Preset" option does just that – saves the mixer preset as a new preset in the Preset Library. It is very similar to "Save As" behavior.



- You must enter a name for the preset before the save happens.
- Once saved, the new preset is added to the Preset Library and the corresponding Setlist slot is switched over to the new preset.

### COPY INTO SLOT [A–L]

The “Copy Into Slot [A–L]” option is more like a normal “Save” behavior.

- When this is selected, the preset settings from the mixer will be loaded into whatever preset is currently in the corresponding setlist slot (in the editor). You can then choose to Save, Save As, or Revert these settings in the editor.

### REMEMBER DECISION

When receiving a preset, there is an option to “Remember Decision”.

- Checking this option will always perform the same receiving behavior every time without the need to go through the pop-up dialog.
- This decision can be reset in the Preferences window using the **“Reset Receive Preset Behavior”** button.



If a slot is set to [DEFAULT], the editor will always receive the preset as a new preset (“Receive As”).

### EXAMPLE USE

#### SAVE INTO NEW PRESET

1. Click the RECEIVE button on slot C.
2. A pop-up dialog appears asking if you want to “Save Into New Preset” or “Copy Into Slot [A–L]”.
3. Check the “Save Into New Preset” option.
4. Enter a preset name in the provided text box.
5. Click the RECEIVE button to initiate the preset receiving process.
6. The new preset (with all the settings from the mixer’s slot C preset) is added to the bottom of the Preset Library and becomes the currently active/selected preset.
7. Setlist slot C’s drop-down menu now switches over to the newly saved/received preset.

#### COPY INTO SLOT [A–L]

1. Click the RECEIVE button on slot D.
2. A pop-up dialog appears, asking if you want to “Save Into New Preset” or “Copy Into Slot [A–L]”.
3. Check the “Copy Into Slot [A–L]” option.



4. Click the RECEIVE button to initiate the preset receiving process.
5. All of the settings from the mixer's slot D preset are copied to the preset in the editor's slot D drop-down menu.
6. Setlist slot D's preset (in the editor) now becomes the currently active/selected preset.
7. The SAVE button lights up **magenta** (because unsaved changes have now been made to the preset).
8. To keep these changes, click the SAVE button. To abandon these changes, click the REVERT button.

### 5.1.1.9 – SHOW/HIDE PRESETS TOGGLE

This button is used to toggle between showing and hiding the presets section.

- If the presets section is visible, click this button to hide it.
- If the presets section is not visible, click this button to show it.
- Your preference will be remembered across sessions (e.g. if you hide the presets, the editor will load with the presets hidden the next time it is opened).
- By default, the presets section will be hidden.





### 5.1.1.10 – “GLOBAL” PARAMETERS VS. “PER PRESET” PARAMETERS

It is important to note that there are two different types of K-Mix parameters: “global” parameters and “per preset” parameters.

#### PRE PRESET PARAMETERS

As the name suggests, “per preset” parameters are stored on a per preset basis.

- Per preset parameters can differ between presets.
- When changing presets, all per preset parameters will update with the values stored in the newly selected preset.
- When saving a preset, all per preset parameters are stored. Presets may be saved directly from the K-Mix hardware or via the K-Mix Editor.

#### GLOBAL PARAMETERS

Unlike per preset parameters, global parameters are *not* stored on a per preset basis.

- Global parameters include all parameters in the Surround tab, MIDI tab, USB tab, and Preferences sections of the editor.
- Global parameters are not stored inside presets.
- When changing presets, global parameters will not update; they will remain the same.
- The only way to save global parameters directly from the K-Mix hardware is to manually power down K-Mix by holding down the [⏻] button for three seconds. Global parameters are stored in memory when K-Mix is powered down in this manner.
- Global parameters may be manually saved/stored on K-Mix by using the K-Mix Editor. Clicking any of the “Save Globals” buttons in the editor will immediately save and store all global parameters on the K-Mix hardware. “Save Globals” buttons can be found in the Surround tab, MIDI tab, USB tab, and Preferences window.
- Global parameters may be reset to their default state in two ways: directly from the K-Mix hardware, or via the Edit menu in the K-Mix Editor.

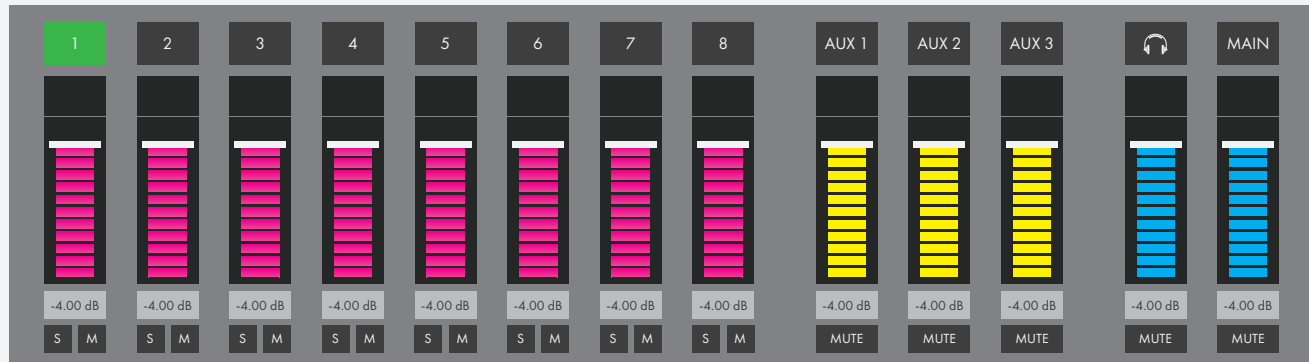




## 5.1.2 – FADER SECTION

The Fader Section of the editor houses all of the basic level-related functions of the mixer. This is where fader levels are adjusted, tracks are soloed or muted, and where channels are selected for more in-depth editing.

This section is visible at all times so you can always see what your levels are set to.



You can see the fader section is laid out like a traditional mixing environment. Each of the 8 input channels and each of the 5 output pairs (mains, aux 1-3, phones) have their own fader, channel select, and mute button. A solo button is also available on each of the input channels; soloing the outputs is not supported.

### 5.1.2.1 – FADERS

The faders are used to control the level of its associated input or output channel. Move a fader up to increase the volume; move a fader down to decrease the volume.

**TIP:** Hold down the Command key on your computer keyboard when clicking a fader to automatically bring it to unity gain (0dB).

#### INPUT CHANNEL FADERS

Each of the 8 input channels has its own fader.

- **Range:**  $-\infty$  – +6dB
- Input channel faders are magenta.
- Input channel faders control the amount/level of audio that gets passed from the inputs to the outputs.

#### AUX OUTPUT FADERS

Each of the 3 aux output pairs has its own fader.

- **Range:**  $-\infty$  – 0dB
- Aux output faders are yellow.
- Aux output faders control the final output level of the associated output channels.





## PHONES OUTPUT FADER

The stereo headphone output has its own fader.

- **Range:**  $-\infty$  – +6dB
- The headphone output fader is [blue](#).
- The headphone output fader controls the final output level of the headphone output.

## MAIN OUTPUT FADER

The main output stereo pair has its own fader.

- **Range:**  $-\infty$  – 0dB
- The main output fader is [blue](#).
- The main output fader controls the final output level of the main output channels (outputs 1 & 2).

### 5.1.2.2 – DECIBEL NUMBER BOXES

The number boxes show the exact numerical value the faders are set to in dB (decibels).

-4.00 dB

- **Range:**  $-\infty$ dB – +6dB
- You can manually type in a level for the associated fader with these. Just click anywhere in the number box and start typing.
- The fader will jump to whatever value is entered (assuming it is in the correct range).
- Any out of range values will be clipped to either the minimum or maximum value (depending on if the entered value is lower than the minimum or higher than the maximum).

### 5.1.2.3 – CHANNEL SELECT BUTTONS

The channel select buttons above each fader are used to select the currently focused channel. They're also used to identify what input channel or output bus the associated fader is in charge of.

1

- Each input channel and output bus has its own channel select button.
- When a channel is selected, the editor displays that channel's channel strip settings in the **main tab area** (just above the fader section). This happens even if you are not currently viewing the Channel Strip Tab.

## EDIT MULTIPLE

- Holding down the Shift key on your computer keyboard while clicking a channel select button allows you to edit the Channel Strip settings of multiple channels at the same time.
- This can only be done with the eight input channels. Edit Multiple is not available for the Aux, Phones, or Mains channels.



### 5.1.2.4 – SOLO BUTTONS

The solo buttons are used to “solo” a channel.

- Click a solo button to engage; click it again to disengage.
- An engaged solo button will light up with a **yellow** background; a disengaged solo will appear with a black background.
- When solo is engaged on a channel, only sound from the soloed channel will be audible; any non-soloed channels will effectively be muted.
- It is possible to solo multiple channels at the same time. Just engage as many solos as desired by clicking the solo buttons on the channels you want to hear. You can even engage all of them at the same time! Though, the result would be the same as not having any solos engaged...

S

#### EXCLUSIVE SOLO

It is possible to perform an “exclusive solo” by holding down the Shift key on your computer keyboard when clicking a solo button.

This will make it so only the Shift-clicked channel is soloed; any other channels that were already soloed are automatically unsoloed when this happens.

**TIP:** This is also a useful way to disengage multiple solos with a single click. Simply Shift-click an engaged solo button and all active solo buttons will disengage.

### 5.1.2.5 – MUTE BUTTONS

The mute buttons are used to “mute” the various mixer channels.

- Click a mute button to engage the mute; click it again to disengage.
- An engaged mute button will light up with a **magenta** background; a disengaged mute will appear with a black background.
- When mute is engaged on a channel, that channel’s audio will stop sounding. A muted input channel will not pass its audio along to the outputs; a muted output pair will not send audio out to your speakers (or other external gear).

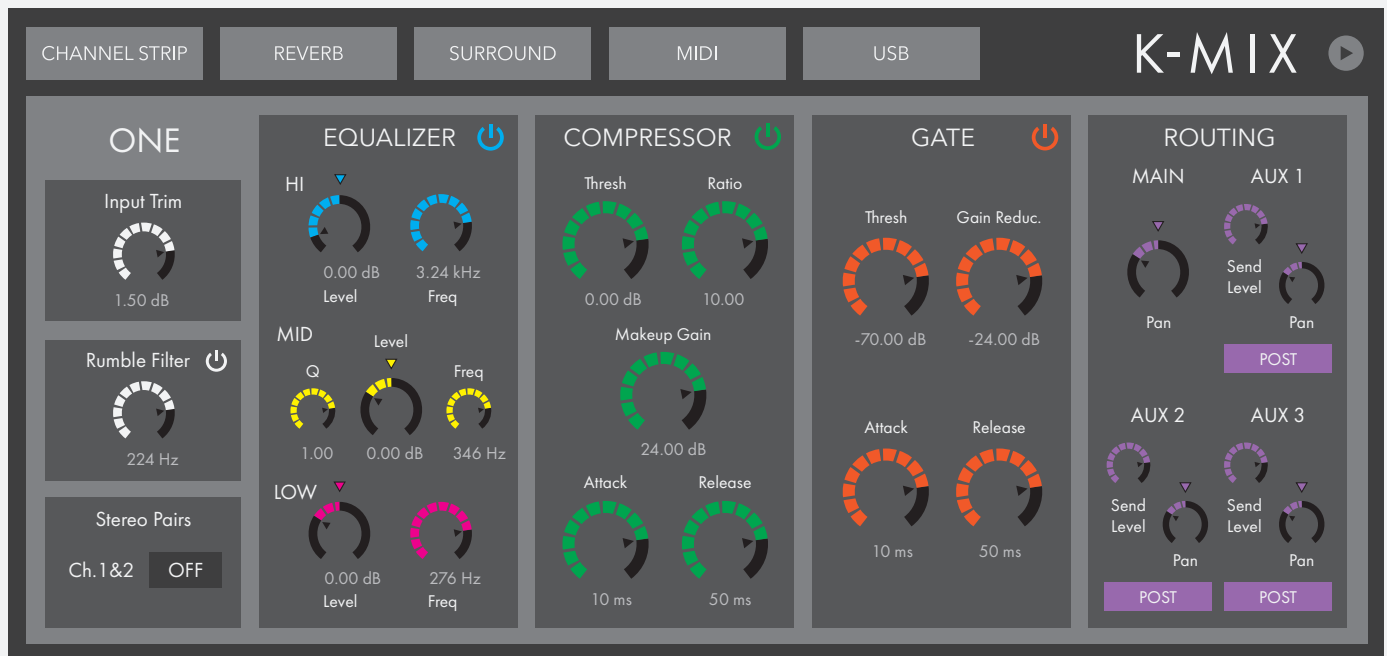
M

It is possible to both mute and solo a channel at the same time. Doing this will likely cause all sound to completely stop, so please be aware when wielding the power of solos and mutes simultaneously. Always check your mutes and solos when you’re not getting any audio out of your K-Mix (or, really, any audio equipment).



### 5.1.3 – MAIN TAB AREA

The main tab area is where the more advanced mixing features of K-Mix are located. It is home to all available Channel Strip, Reverb, Surround, MIDI, and USB options. These tabs will be discussed in the next section of the manual, [5.2 – Tabs](#).





## 5.2 – TABS

CHANNEL STRIP

REVERB

SURROUND

MIDI

USB

The top of the K-Mix Editor window houses the tab switching buttons. There are five available tabs: **Channel Strip**, **Reverb**, **Surround**, **MIDI**, and **USB**. Clicking one of these will display related parameters in the **main tab area**.

### 5.2.1 – CHANNEL STRIP TAB

The Channel Strip tab houses all of the trims, DSP, and routing options available for each input and output channel, just like on a traditional mixing console.

CHANNEL STRIP

There are four types of channel strips:

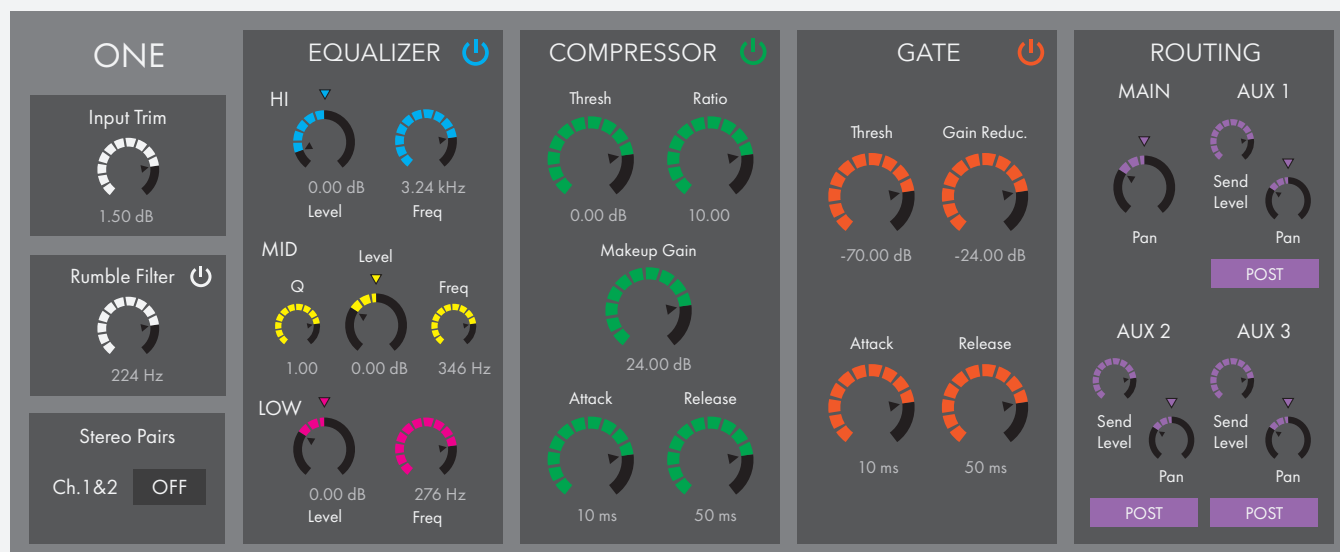
- Input channel strips
- Aux channel strips
- Phones channel strip
- Mains channel strip

Each type of channel strip contains different available options.

#### 5.2.1.1 – INPUT CHANNEL STRIP (1–8)

Each of the 8 input channels have their own channel strip with identical options. Each input channel strip has its own Input Trim, Rumble Filter, Stereo Pair switch, EQ, Gate, Compressor, and Routing Sections.

To access one of the Input Channel Strips, simply click one of the channel select buttons above faders 1–8 (in the editor). The editor will automatically display the appropriate channel strip in the main tab area.

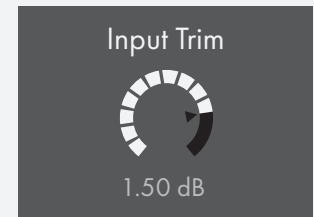




## INPUT TRIM

The input trim knob controls the input trim level of the currently selected channel.

- Turn clockwise to increase the value; turn counterclockwise to decrease the value.
- A specific value may be entered into the accompanying number box as an alternative way of setting the trim level.



Channels 1-2 have a different range than channels 3-8:

- **Range (Channels 1-2):** 0dB - +60dB
- **Range (Channels 3-8):** -20dB - +40dB

## RUMBLE FILTER

K-Mix's rumble filter is an adjustable high-pass filter intended for filtering out low frequency rumbles and handling noise that may occur when using microphones as input.

### BYPASS BUTTON

Toggles the input rumble filter for the currently selected channel on or off.

- The button will light up white when enabled (rumble filter on).
- The button will go dark when disabled (rumble filter off).
- By default, the rumble filter will be off.



This is an editor-only parameter. It may not be adjusted from the mixer.

## RUMBLE FILTER FREQUENCY

Controls the center frequency of the input rumble filter.

- Turn clockwise to increase the frequency; turn counterclockwise to decrease the frequency.
- A specific value may be entered into the accompanying number box as an alternative way of setting the frequency.
- **Range:** 40Hz - 400Hz



This is an editor-only parameter. It may not be adjusted from the mixer.

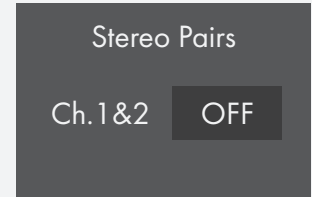


## STEREO PAIRS

K-Mix channels 1 and 2, 3 and 4, 5 and 6, and/or 7 and 8 can be **paired into stereo channels**. Once paired, their parameters sync up and follow each other if any of them are adjusted.

### EXAMPLE USE

1. Bring up channel 1's channel strip by clicking its channel select button (in the editor).
2. Click the "Stereo Pairs" button; the button will turn white and the text will change to "Paired". The parameters for channel 1 will copy into channel 2.
3. Adjust the fader level of channel 1 or channel 2, either by clicking and dragging the fader in the editor, or by adjusting the fader level on the K-Mix hardware.
4. Channels 1 and 2 will now move together and follow any subsequent changes to settings in either channel.



## EQUALIZER SECTION

The Equalizer section of the channel strip is home to the EQ parameters. Each of the 8 input channels (and the main output bus) have their own 3-band, semi-parametric EQ available.

### BYPASS BUTTON

The bypass button enables or disables the EQ on the currently selected channel.

- Clicking the button will toggle the state of the bypass.
- The button will light up **blue** when enabled (EQ on).
- The button will go dark when disabled (EQ bypassed).

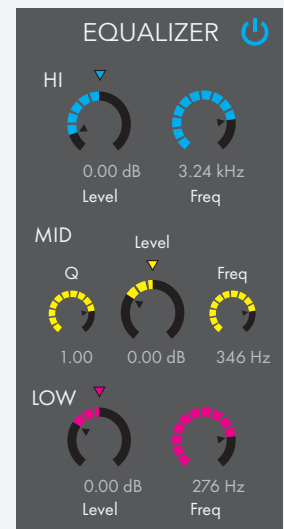
### Low

The EQ's lower band is a sweepable, dual-pole, low-shelving filter.

### FREQUENCY KNOB & NUMBER BOX

The low frequency knob controls the center frequency of the low-shelf filter.

- Turn clockwise to increase the frequency; turn counterclockwise to decrease the frequency.
- A specific value may be entered into the accompanying number box as an alternative way of setting the frequency.
- **Range:** 20Hz – 400Hz





### CUT/BOOST KNOB & NUMBER BOX

The cut/boost knob controls the amount of cut or boost the low-shelf filter will apply.

- Turn clockwise to increase (boost); turn counterclockwise to decrease (cut).
- A specific value may be entered into the accompanying number box as an alternative way of setting the cut/boost level.
- **Range:**  $\pm 18\text{dB}$

## MID

The EQ's middle band is a fully parametric bandpass filter, sporting controls for frequency, gain, and Q (bandwidth).

### FREQUENCY KNOB & NUMBER BOX

The mid frequency knob controls the center frequency of the mid-band EQ.

- Turn clockwise to increase the frequency; turn counterclockwise to decrease the frequency.
- A specific value may be entered into the accompanying number box as an alternative way of setting the frequency.
- **Range:** 200Hz – 6kHz

### CUT/BOOST KNOB & NUMBER BOX

The cut/boost knob controls the amount of cut or boost the mid-band EQ will apply.

- Turn clockwise to increase (boost); turn counterclockwise to decrease (cut).
- A specific value may be entered into the accompanying number box as an alternative way of setting the cut/boost level.
- **Range:**  $\pm 18\text{dB}$

### Q KNOB & NUMBER BOX

The Q knob controls the amount of Q (or "bandwidth") for the mid-bandpass filter.

- Turn clockwise to increase (narrower bandwidth); turn counterclockwise to decrease (wider bandwidth).
- A specific value may be entered into the accompanying number box as an alternative way of settings the Q.
- **Range:** 0.1 – 10

## HI

The EQ's higher band is a sweepable, dual-pole, high-shelving filter.

### FREQUENCY KNOB & NUMBER BOX

The high frequency knob controls the center frequency of the high-shelf filter.





- Turn clockwise to increase the frequency; turn counterclockwise to decrease the frequency.
- A specific value may be entered into the accompanying number box as an alternative way of setting the frequency.
- **Range:** 3kHz – 20kHz

### CUT/BOOST KNOB & NUMBER BOX

The cut/boost knob controls the amount of cut or boost the high-shelf filter will apply.

- Turn clockwise to increase (boost); turn counterclockwise to decrease (cut).
- A specific value may be entered into the accompanying number box as an alternative way of setting the cut/boost level.
- **Range:**  $\pm 18\text{dB}$

## COMPRESSOR SECTION

The Compressor section of the channel strip is home to the compressor parameters. Each of the 8 input channels (and the main output bus) have their own downward compressor available for taming those out of control peaks.

### BYPASS BUTTON

The bypass button enables or disables the compressor.

- Clicking the button will toggle the state of the bypass.
- The button will light up **green** when enabled (compressor on).
- The button will go dark when disabled (compressor bypassed).

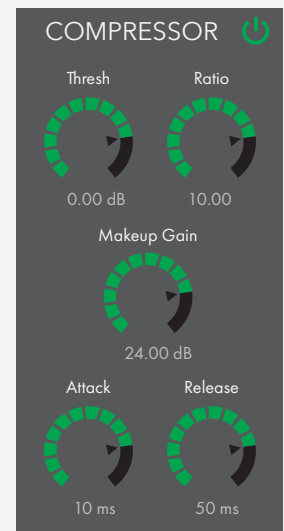
### THRESHOLD KNOB & NUMBER BOX

The threshold knob controls the volume level at which the compressor will engage.

- Turn clockwise to increase (higher threshold); turn counterclockwise to decrease (lower threshold).
- A specific value may be entered into the accompanying number box as an alternative way of setting the threshold.
- **Range:**  $-70\text{dB} - +10\text{dB}$
- When the effect is enabled, any audio *above* the threshold will cause the compressor to engage. Audio below the threshold will pass through unaltered.

### MAKEUP GAIN KNOB & NUMBER BOX

The makeup gain knob controls the amount of makeup gain applied to the output of the compressor. This allows you to increase the overall level of the signal after it has been compressed; it “makes up” for the gain reduction.





- Turn the knob clockwise to increase (more makeup gain); turn counterclockwise to decrease (less makeup gain).
- A specific value may be entered into the accompanying number box as an alternative way of setting the makeup gain.
- **Range:** 0dB - +24dB

### RATIO KNOB & NUMBER BOX

The ratio knob controls the amount the compressor will compress (reduce volume) the audio when engaged.

- Turn clockwise to increase (higher ratio); turn counterclockwise to decrease (lower ratio).
- A specific value may be entered into the accompanying number box as an alternative way of setting the compression ratio.
- **Range:** 0.0 - 10.0

As an example, if the ratio is set to 3.0, any audio above the threshold will be reduced by one-third (level / 3.0).

### ATTACK KNOB & NUMBER BOX

The attack knob controls the attack time of the compressor – the amount of time it takes to reach full compression once the input signal goes above the threshold.

- Turn clockwise to increase (longer attack); turn counterclockwise to decrease (shorter attack).
- A specific value may be entered into the accompanying number box as an alternative way of setting the attack time.
- **Range:** 1ms - 5000ms

### RELEASE KNOB & NUMBER BOX

The release knob controls the release time of the compressor – the amount of time it takes to return to zero gain reduction once the input signal drops below the threshold.

- Turn clockwise to increase (longer release); turn counterclockwise to decrease (shorter release).
- A specific value may be entered into the accompanying number box as an alternative way of setting the release time.
- **Range:** 1ms - 5000ms



## GATE SECTION

The Gate section of the channel strip is home to the noise gate parameters. Each of the 8 input channels (and the main output bus) have their own noise gate available for shaping your sounds.

### BYPASS BUTTON

The bypass button enables or disables the gate.

- Clicking the button will toggle the state of the bypass.
- The button will light up **orange** when enabled (gate on).
- The button will go dark when disabled (gate bypassed).

### THRESHOLD KNOB & NUMBER BOX

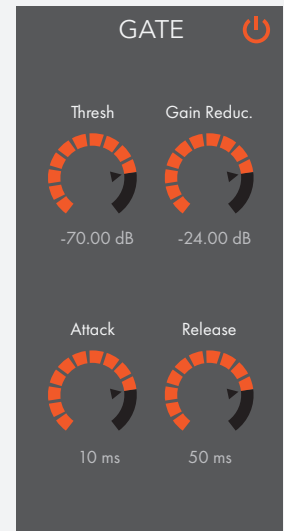
The threshold knob controls the volume level at which the gate will engage.

- Turn clockwise to increase (higher threshold); turn counterclockwise to decrease (lower threshold).
- A specific value may be entered into the accompanying number box as an alternative way of setting the threshold.
- **Range:** -70dB – +10dB
- When the effect is enabled, any audio *below* the threshold will cause the gate to engage.

### GAIN REDUCTION KNOB & NUMBER BOX

The gain reduction knob controls how much the gate will reduce the audio when the effect is engaged.

- Turn clockwise to increase (more gain reduction); turn counterclockwise to decrease (less gain reduction).
- A specific value may be entered into the accompanying number box as an alternative way of setting the threshold.
- **Range:** -70dB – 0dB





## ATTACK KNOB & NUMBER BOX

The attack knob controls the attack time of the gate – the amount of time it takes to reach full gain reduction once the input signal goes below the threshold.

- Turn clockwise to increase (longer attack); turn counterclockwise to decrease (shorter attack).
- A specific value may be entered into the accompanying number box as an alternative way of setting the attack time.
- **Range:** 1ms – 5000ms

## RELEASE KNOB & NUMBER BOX

The release knob controls the release time of the gate – the amount of time it takes to go back to zero gain reduction once the input signal goes above the threshold.

- Turn clockwise to increase (longer release); turn counterclockwise to decrease (shorter release).
- A specific value may be entered into the accompanying number box as an alternative way of setting the attack time.
- **Range:** 1ms – 5000ms

## ROUTING SECTION

The Routing section of the channel strip is where panning and sending audio to the aux outputs are handled.

### MAINS

The mains (outputs 1 & 2) only have a single parameter in the routing section – panning.

### PAN KNOB

The mains pan knob sets the left/right panning of the signal going to the main outputs.

- Full left (counterclockwise) sends to just output 1 (output 2 is silent).
- Full right (clockwise) sends to just output 2 (output 1 is silent).
- A centered pan knob will send the channel's signal to both outputs 1 and 2 equally.





## AUXES

In addition to panning, each of the aux output pairs (3-4, 5-6, 7-8) have two other parameters – send level and pre/post.

### PAN KNOB

The aux pan knobs set the left/right panning of the signal going to the aux output pairs.

- Full left (counterclockwise) sends to just the odd-numbered output – output 3 for aux 1, output 5 for aux 2, and output 7 for aux 3.
- Full right (clockwise) sends to just the even-numbered output – output 4 for aux 1, output 6 for aux 2, and output 8 for aux 3.
- A centered pan knob will send the channel's signal to both outputs of the aux pair equally.

### SEND LEVEL FADER

The aux send level faders control the amount of signal being sent to the aux output channels.

- Raise a fader to increase the signal being sent to the aux output; lower the fader to decrease the signal being sent to the aux output.
- Each of the three aux output pairs has its own send level fader. Remember, each aux is a stereo pair: aux 1 = outputs 3-4; aux 2 = outputs 5-6; aux 3 = outputs 7-8.

### PRE/POST SWITCH

The aux pre/post switches set whether audio is going to the aux outputs pre-fader or post-fader. The audio is either tapped before or after the input channel's volume fader.

- When set to "Pre", the currently selected channel's **volume fader** will have no effect on the level going to the aux; the send level fader will be the only level control.
- When set to "Post", the currently selected channel's **volume fader** will have an effect on the audio going to the aux. *Both* the send level fader and the input channel's volume fader are in control of audio going to the aux. If the send level fader is all the way up, but the volume fader for the selected channel is all the way down (or muted), no audio will be sent to the auxes.



Regardless of how the pre/post switch is set, the audio will always be post-DSP effects (EQ, gate, compressor). Please refer to the [K-Mix Signal Flow Diagram](#) to see exactly where the audio is tapped.

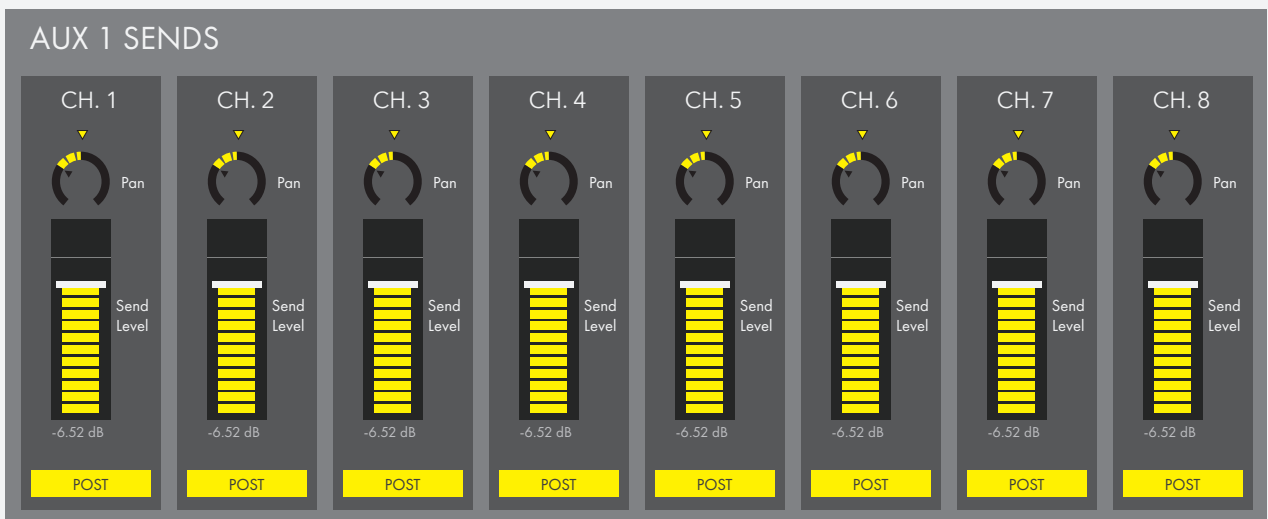


### 5.2.1.2 – AUX OUTPUT CHANNEL STRIP

The Aux Output Channel Strips are where parameters related to the aux output busses are located. The panning, send level, and pre/post switch for each input channel is available in the aux channel strips.

These parameters are also available in the routing section of the [Input Channel Strips](#), but the aux channel strips allow you to see the settings for all eight input channels simultaneously.

To access one of the Aux Output Channel Strips, simply click one of the channel select buttons above the [Aux Output Faders](#) (in the editor). The editor will automatically display the appropriate channel strip in the main tab area.



#### PAN KNOBS

The aux pan knobs set the left/right panning of the signal going to the selected aux output bus.

- Full left (counterclockwise) sends to just the odd-numbered output – output 3 for aux 1, output 5 for aux 2, and output 7 for aux 3.
- Full right (clockwise) sends to just the even-numbered output – output 4 for aux 1, output 6 for aux 2, and output 8 for aux 3.
- A centered pan knob will send the channel's signal to both outputs of the aux pair equally.

#### SEND LEVEL FADERS

The aux send level faders control the amount of signal being sent to the selected aux output channels.

- Raise a fader to increase the signal being sent to the aux output; lower the fader to decrease the signal being sent to the aux output.



## PRE/POST SWITCHES

The aux pre/post switches set whether audio is going to the aux outputs pre-fader or post-fader. The audio is either tapped before or after the input channel's volume fader.

- When set to "Pre", the currently selected channel's **volume fader** will have no effect on the level going to the aux; the send level fader will be the only level control.
- When set to "Post", the currently selected channel's **volume fader** will have an effect on the audio going to the aux. *Both* the send level fader and the input channel's volume fader are in control of audio going to the aux. If the send level fader is all the way up, but the volume fader for the selected channel is all the way down (or muted), no audio will be sent to the auxes.

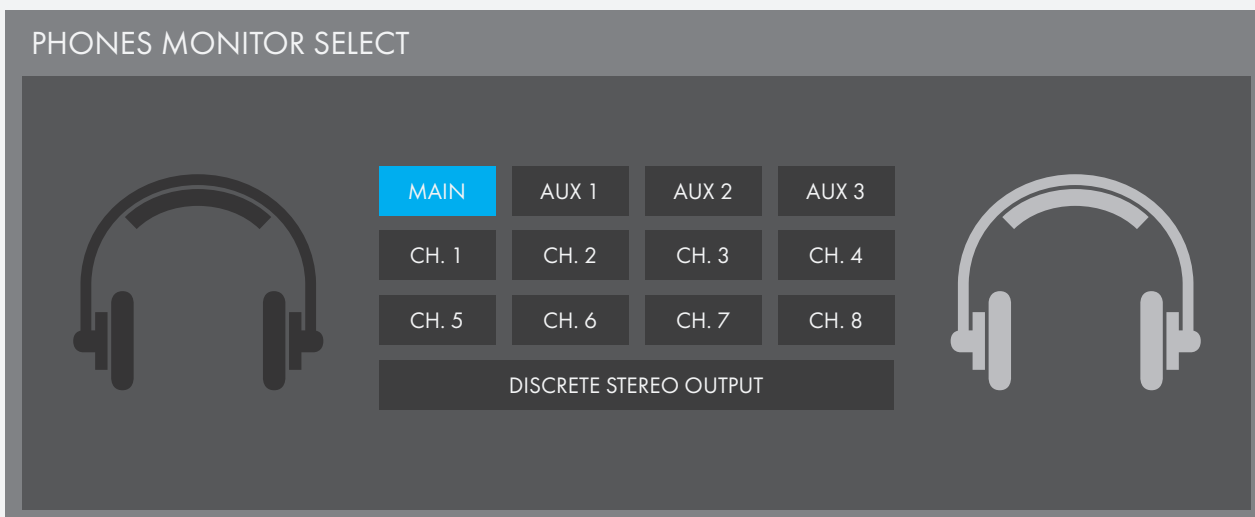


Regardless of how the pre/post switch is set, the audio will always be post-DSP effects (EQ, gate, compressor). Please refer to the [K-Mix Signal Flow Diagram](#) to see exactly where the audio is tapped.

### 5.2.1.3 – PHONES CHANNEL STRIP

The Phones Channel Strip is where the headphone output monitoring point is set.

To access the Phones Channel Strip, simply click the channel select button above the **Phones Output Fader**. The editor will automatically display the appropriate channel strip in the main tab area.



## PHONES OUTPUT ASSIGNMENT

These switches allow you to set your K-Mix's headphone output to monitor any of the four stereo output busses, any of the eight input channels, or have it act as a discrete stereo output.

- **Main** = Monitoring outputs 1 & 2
- **Aux 1** = Monitoring outputs 3 & 4
- **Aux 2** = Monitoring outputs 5 & 6



- **Aux 3** = Monitoring outputs 7 & 8
- **Ch. 1-8** = Monitoring input channels 1-8
- **Discrete Stereo Output** = Act as its own output bus (outputs 9 & 10)

Click one of the buttons to change the headphones monitoring point.

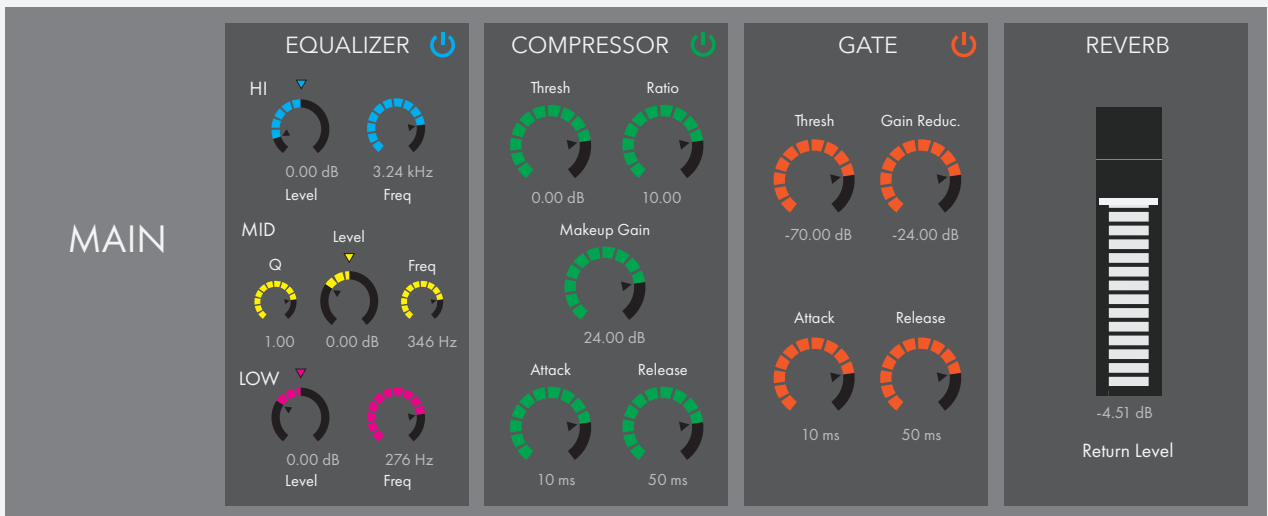


Only one option may be selected at a time. It is not possible to select multiple monitoring points simultaneously.

### 5.2.1.4 – MAIN OUTPUT CHANNEL STRIP

The main output bus (outputs 1 & 2) has its own channel strip. The effects in this channel strip are applied to the entire stereo mix going to the main outputs.

With a few exceptions, the main output bus channel strip is nearly identical to the channel strips of the 8 input channels.



As you may be able to see, there are a few differences from the input channel strips.

1. There is no Input Trim, Rumble Filter, or Stereo Pairs.
2. There is no Routing section.
3. There is an additional Reverb Level section.

Apart from those differences, the main output channel strip behaves the same as the input channel strips.





## REVERB LEVEL SECTION

The Reverb Level section houses a single parameter. You guessed it! It's Reverb Level.

### REVERB LEVEL & NUMBER BOX

Sets the overall level of the reverb to be sent out K-Mix's main outputs. The reverb gets mixed back into the mains at the end of the signal chain, just before the main output bus' fader and mute.

- **Range:** -∞dB - +6dB



The Reverb Level parameter can also be adjusted from the **Reverb tab**. Both controls are linked and will always be set to the same value, regardless of where it is adjusted.

## 5.2.2 – REVERB TAB

The reverb tab houses all of the parameters related to K-Mix's onboard global reverb effect. This global reverb can be mixed into the main output bus (channels 1 & 2). Each of the eight input channels can be sent into the reverb at different levels using the reverb sends.

REVERB



K-Mix's reverb effect can only be mixed into output channels 1 & 2. It cannot be sent out any of the other outputs.

**REVERB**

**CHANNEL SEND LEVELS**

1

-3.00 dB

2

-3.00 dB

3

-3.00 dB

4

-3.00 dB

5

-3.00 dB

6

-3.00 dB

7

-3.00 dB

8

-3.00 dB

POST-FADER

**REVERB PARAMETERS**

725 ms

PreDelay

1400 ms

Decay Time

70%

Damping

70%

Diffusion

**REVERB LEVEL**

-4.51 dB

Return Level



### 5.2.2.1 – BYPASS BUTTON

The bypass button enables or disables the reverb effect.

- Clicking the button will toggle the state of the bypass.
- The button will light up **green** when enabled (reverb on).
- The button will go dark when disabled (reverb bypassed).

### 5.2.2.2 – CHANNEL SEND LEVELS

Sets the amount of signal to send into the reverb. Each input channel has its own send level.

#### SEND LEVEL KNOBS & NUMBER BOXES

Sets the reverb send levels for each of the eight input channels.

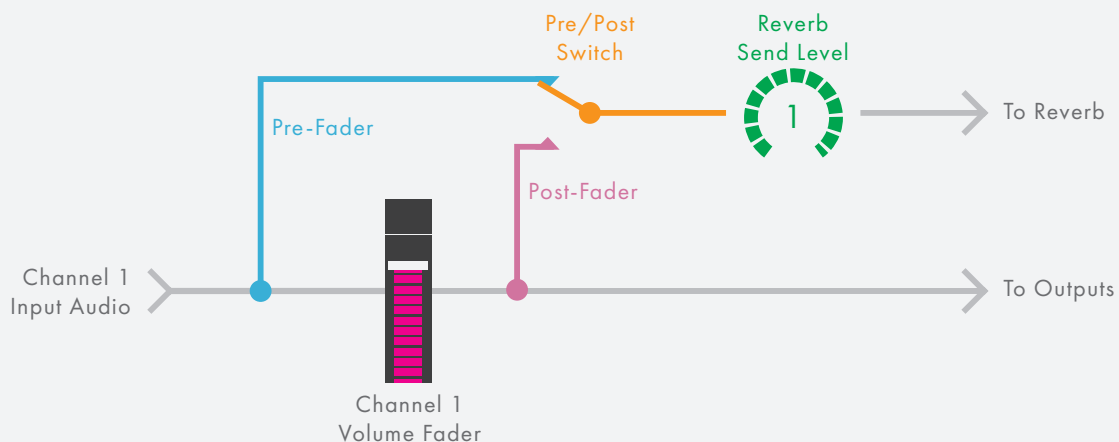
- Turn clockwise to increase the send level (more signal going to the reverb); turn counterclockwise to decrease the send level (less signal going to the reverb).
- A specific value may be entered into the accompanying number boxes as an alternative way of setting the reverb send levels.
- **Range:** -70dB - +6dB

#### PRE/POST FADER SWITCH

Sets whether the reverb sends are pre-fader or post-fader.

- When set to “Post”, both the channel’s volume fader *and* the reverb send level affect the amount of signal sent to the reverb; the signal is tapped after the fader.
- When set to “Pre”, only the reverb send level affects the amount of signal sent to the reverb; the signal is tapped before the fader so it has no effect.
- The pre/post switch is a global switch; it acts on all eight channels simultaneously. It is not possible to set pre/post on a per-channel basis.

Below is a diagram illustrating the pre/post switch on channel 1 (currently set to “Pre”):





### 5.2.2.3 – REVERB PARAMETERS

This section of the Reverb tab is home to all of the settable options for the reverb effect itself.

#### PREDELAY

Adjusts the amount of time between the dry audio and the initial reverb reflections.

- Lower values result in more instantaneous reflections.
- Higher values result in an audible delay before the reverb begins.
- **Range:** 0.5ms – 250ms

#### DECAY TIME

Adjusts the length of the reverb tail.

- Lower values create a short reverb decay.
- Higher values create a longer reverb decay.
- **Range:** 50ms – 2000ms

#### DAMPING

Adjusts how quickly the reverb rolls off the high-frequency content.

- Less damping results in the high frequencies fading at the same rate as the low frequencies.
- High damping results in the high frequencies quickly dropping off while the low frequencies continue to sound.
- **Range:** 1% – 100%

#### DIFFUSION

Simulates adjusting the complexity of the reverb's reflections.

- Less diffusion is like being in a room with flat walls; the reflections will be rather uniform and spaced evenly.
- High diffusion is like being in a room with a very complex wall surface; the reflections will be less uniform and spaced unevenly.
- **Range:** 1% – 100%



### 5.2.2.4 – REVERB LEVEL

The Reverb Level section of the Reverb tab houses a single parameter, the overall reverb level.

#### REVERB LEVEL FADER & NUMBER BOX

Sets the overall level of the reverb to be sent out the main outputs (outputs 1 & 2).

- The reverb gets mixed back into the mains at the end of the signal chain, just before the main output bus fader and mute.
- **Range:**  $-\infty$ dB – +6dB



The Reverb Level parameter can also be adjusted from the [mains channel strip](#).

### 5.2.3 – SURROUND TAB

The Surround tab holds all of the surround panning-related parameters.

SURROUND

SURROUND

SPEAKER LAYOUT: Quad

BASS MANAGEMENT: OFF 40 Hz

SAVE GLOBALS

Four circular panning controls are shown, each with four blue dots at the corners labeled 1, 2, 3, and 4. A pink dot indicates the current panning position.

Below each circle is a 2x4 grid of channel buttons:

CH. 1	CH. 2	CH. 3	CH. 4
CH. 5	CH. 6	CH. 7	CH. 8



### 5.2.3.1 – SURROUND ON/OFF SWITCH

Enables or disables surround panning.

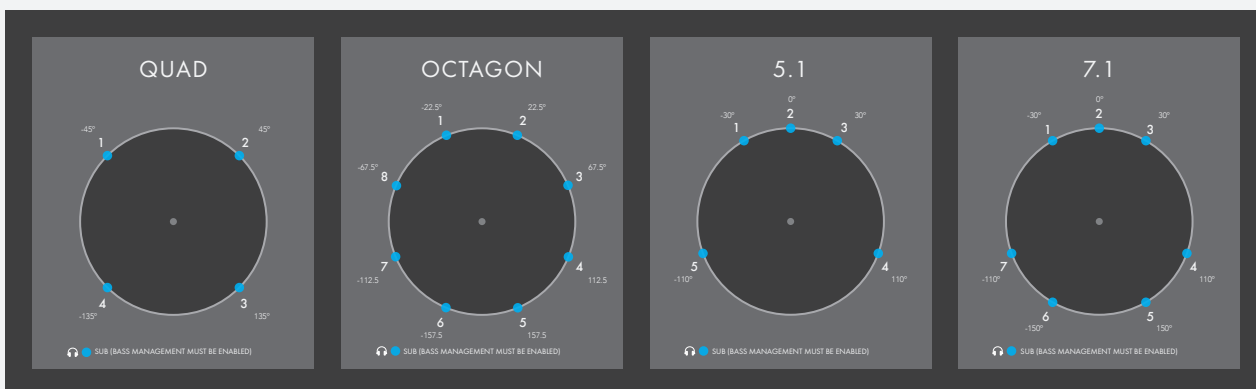
- Click to toggle the on/off state.
- When surround panning is enabled, the switch will light up **magenta**.
- When surround panning is disabled, the switch will be dark.



When surround panning is enabled, the Aux sends, Aux panning, and Aux faders no longer function as normal. Aux outputs are used exclusively for surround output channels, even if the current surround format does not use all outputs (e.g. the “Quad” surround format).

### 5.2.3.2 – SPEAKER LAYOUT SELECTOR Quad

Selects the surround speaker format that will be used to output audio when surround panning is enabled. The surround modes offered are as follows:



- All surround formats begin with speaker 1 at the front-left position and increment clockwise. This may run contrary to established 5.1 and 7.1 film standards, but it makes plugging output channels into the appropriate speakers much easier.



This is an editor-only parameter. It may not be adjusted from the mixer.

### 5.2.3.3 – BASS MANAGEMENT OFF 40 Hz

The Bass Management section of the Surround tab contains options for configuring the optional low frequency crossover when surround panning is enabled.

- When bass management is enabled (and surround panning), all low frequency content (audio below the crossover frequency) will be routed out the headphone jack; higher frequency content (audio above the crossover frequency) will go out outputs 1-8 as normal.



- When disabled, all audio will be routed out outputs 1-8 as normal.

It is important to note that when both surround panning and bass management are enabled, the headphone output can no longer be used for monitoring input and output channels; it is solely dedicated to the low frequency content.

The settable options are as follows:

### ON/OFF SWITCH

The on/off switch enables or disables K-Mix's bass management when surround panning is enabled.

- ON = Bass management is enabled
- OFF = Bass management is disabled

### CROSSOVER FREQUENCY

Sets the center frequency of the crossover.

- Audio below the crossover frequency will be routed out the headphone jack.
- Audio above the crossover frequency will be routed out outputs 1-8 as normal.
- **Range:** 40Hz - 160Hz

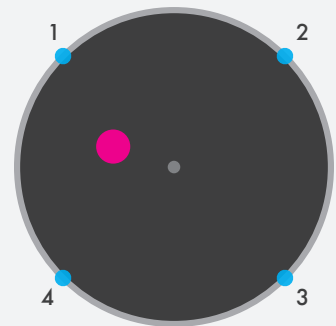


These are editor-only parameters. They may not be adjusted from the mixer.

## 5.2.3.4 – SURROUND PANNERS

The surround panners are used to spatialize/move sounds between speakers in the selected surround sound format.

- The blue dots along the edge of the panners represent the speaker placement of the selected surround format. Each speaker is labelled with a number representing the K-Mix output channel that speaker's audio signal will be sent out on.
- The four panners mirror the behavior of K-Mix's four rotary encoders when in surround panning mode.
- Clicking a surround panner while holding down the COMMAND key will instantly reset the panner to center.



## 5.2.3.5 – SURROUND PANNER ASSIGNMENT BUTTONS

Used to assign the input channels to one of the four rotaries.

- Once an input channel is assigned, the associated surround panner (and rotary on the K-Mix hardware) will be used to pan that channel's audio in the surround field.
- It is not possible to have a channel unassigned.

CH. 1	CH. 2	CH. 3	CH. 4
CH. 5	CH. 6	CH. 7	CH. 8



- An input channel may only be assigned to a single rotary at a time. They cannot be assigned to multiple panners simultaneously.
- When a channel is assigned to a panner, its button will be white.
- When a channel is not assigned to a panner, its button will be black.



This is an editor-only parameter. It may not be adjusted from the mixer.

### 5.2.3.6 – SAVE GLOBALS BUTTON

SAVE GLOBALS

Used to save the current state of all global settings to the K-Mix hardware's internal memory.

Any changes made in the editor to "global" parameters (parameters that are not stored on a per preset basis) will be immediately reflected and heard on the connected mixer, but they will not be stored in its internal memory. If power is lost and the K-Mix is turned on again, all changes will be lost; it will boot up with its last saved state. When you have found settings you would like to keep, it is wise to use the Save Globals button to make sure your global settings are not forgotten.

The other method to make sure your global settings are remembered between power cycles is to power down your K-Mix by holding down the [U] for three seconds. Powering down in this manner will ensure all global settings are saved to your K-Mix's internal memory; simply unplugging your K-Mix from its power source will not do this. More information about global parameters can be found in section **5.1.1.10 – "Global" Parameters vs. "Per Preset" parameters.**



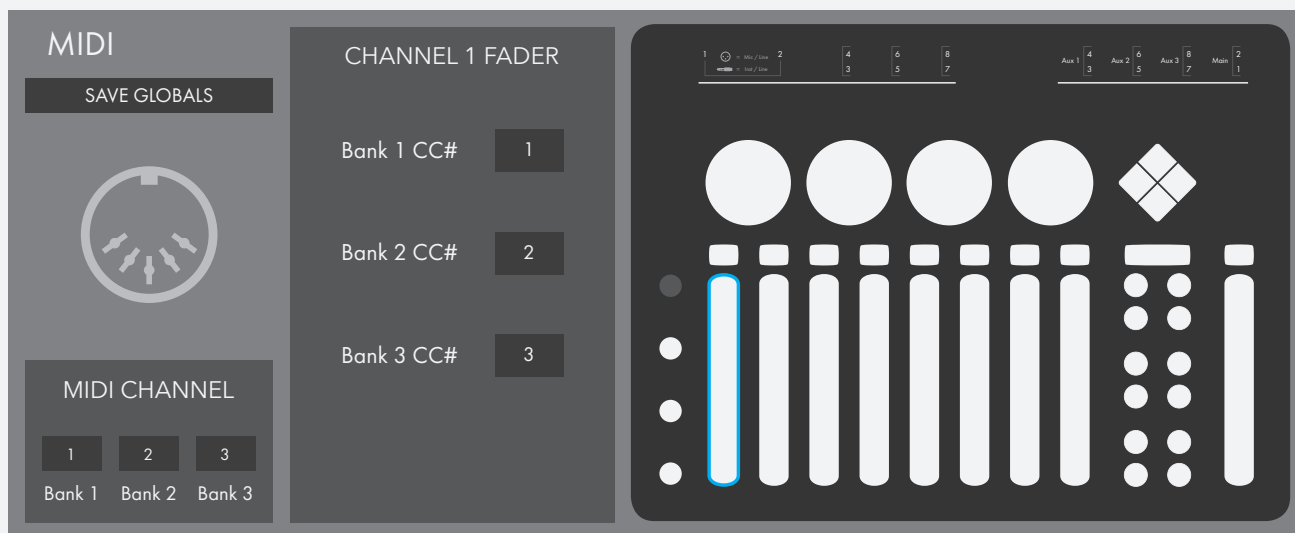
## 5.2.4 – MIDI TAB

This is where all of K-Mix's MIDI-related options are located.

- All MIDI parameters are global parameters; they are not settable on a preset by preset basis.



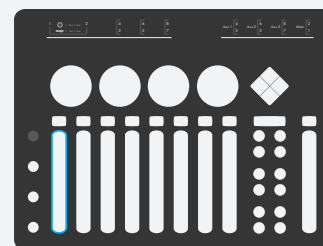
All MIDI options are editor-only parameters. They may not be adjusted from the mixer.



### 5.2.4.1 – SENSOR SELECTOR

Used to select a K-Mix fader, button, or rotary to edit.

- Click on the desired sensor and the editable MIDI parameters will pop up just to the left of the K-Mix image in the [MIDI Parameters Section](#).







## 5.2.4.2 – MIDI PARAMETERS SECTION

Displays and sets the editable MIDI parameters for the currently selected fader/button/rotary.

- Each sensor can be set to output a different MIDI message for each of the three available MIDI banks.
- Duplicate MIDI messages are not allowed. Sensors may not be set with the same CC/Note and MIDI channel.

### FADERS

Each of the K-Mix faders can output a CC message when in one of the three available MIDI banks.

- The faders can be set to output any MIDI CC from 0-127.

#### BANK 1 CC#

Sets the CC number the currently selected fader will send when in bank 1.

#### BANK 2 CC#

Sets the CC number the currently selected fader will send when in bank 2.

#### BANK 3 CC#

Sets the CC number the currently selected fader will send when in bank 3.

CHANNEL 1 FADER

Bank 1 CC#	1
Bank 2 CC#	2
Bank 3 CC#	3

### BUTTONS

Each button (except the Power and Shift buttons) can output a MIDI note message when in one of the three available MIDI banks.

- By default, the buttons will behave like a “momentary” button; when the button is pressed it sends a note on message, when the button is released it sends a note off message.
- Buttons can also be set to toggle. The first press will turn the note on, the second press will turn the note off.
- Each button can be set to output any MIDI note from 0-127.

#### BANK 1 NOTE#

Sets the note number the currently selected button will send when in bank 1.

#### BANK 2 NOTE#

Sets the note number the currently selected button will send when in bank 2.

#### BANK 3 NOTE#

Sets the note number the currently selected button will send when in bank 3.

BUTTON 1

Bank 1 Note#	1
Bank 2 Note#	2
Bank 3 Note#	3

MOMENTARY



### TOGGLE/MOMENTARY SWITCH

Sets whether the currently selected button behaves as a momentary or toggle button.

### ROTARIES

Each of the K-Mix rotaries can output a CC message when in one of the three available MIDI banks.

- The rotaries can be set to output any MIDI CC from 0-127.

#### BANK 1 CC#

Sets the CC number the currently selected rotary will send when in bank 1.

#### BANK 2 CC#

Sets the CC number the currently selected rotary will send when in bank 2.

#### BANK 3 CC#

Sets the CC number the currently selected rotary will send when in bank 3.

ROTARY 1	
Bank 1 CC#	1
Bank 2 CC#	2
Bank 3 CC#	3

### 5.2.4.3 – MIDI CHANNEL SECTION

Used to set the MIDI channel for each of the three MIDI banks.

- The MIDI channel settings are global for all faders/buttons/rotaries. For example, when bank 1 is set to channel 3, all sensors will output MIDI messages on channel 3 when in bank 1. It is not possible to set a different MIDI channel for individual sensors.
- Banks cannot be set to the same MIDI channel; they must always be set to different MIDI channels.

MIDI CHANNEL		
1	2	3
Bank 1	Bank 2	Bank 3

### 5.2.4.4 – SAVE GLOBALS BUTTON

SAVE GLOBALS

Used to save the current state of all global settings to the K-Mix hardware's internal memory.

Any changes made in the editor to "global" parameters (parameters that are not stored on a per preset basis) will be immediately reflected and heard on the connected mixer, but they will not be stored in its internal memory. If power is lost and the K-Mix is turned on again, all changes will be lost; it will boot up with its last saved state. When you have found settings you would like to keep, it is wise to use the Save Globals button to make sure your global settings are not forgotten.

The other method to make sure your global settings are remembered between power cycles is to power down your K-Mix by holding down the [⏻] for three seconds. Powering down in this manner will ensure all global settings are saved to your K-Mix's internal memory; simply unplugging your K-Mix from its power source will not do this. More information about global parameters can be found in section [5.1.1.10 – "Global" Parameters vs. "Per Preset" parameters](#).



## 5.2.5 – USB TAB

This tab is where all of K-Mix's USB-related options are housed.



All USB options are editor-only parameters. They may not be adjusted from the mixer.

### USB ROUTING

SAVE GLOBALS

#### USB INPUT

(Mixer Audio to Computer)

CH. 1	CH. 2	CH. 3	CH. 4	CH. 5	CH. 6	CH. 7	CH. 8
PRE	PRE	PRE	PRE	PRE	PRE	PRE	PRE

#### USB OUTPUT

(Computer Audio to Mixer)

CH. 1	CH. 2	CH. 3	CH. 4	CH. 5	CH. 6	CH. 7	CH. 8
POST	POST	POST	POST	POST	POST	POST	POST

### 5.2.5.1 – USB PRE/POST SWITCHES

The USB pre/post switches are used to set where in the K-Mix signal path audio coming from and going to a connected computer will be sent to and sent from.

- USB input (mixer to computer) and USB output (computer to mixer) can be set separately.
- Each of K-Mix's eight channels can be set individually for both USB input and USB output.
- By default the pre/post switches will be set so that K-Mix's USB I/O acts as a traditional audio interface. Audio plugged into K-Mix's inputs will go up USB to a connected computer. Audio from a connected computer will go directly out K-Mix's outputs.

#### USB INPUT (MIXER AUDIO TO COMPUTER)

Input channels 1-8 each have their own "USB Input" pre/post switch. The input pre/post switch sets where in the signal path the audio from K-Mix gets tapped and sent up USB to a connected computer.

- Pre = Beginning of the signal path, directly after the ADC and just before the DSP effects. Useful for recording live inputs on the connected computer.
- Post = Toward the end of the signal path, just before the final fader and mute on the output busses. For the main output bus (outputs 1 & 2) this is also post-DSP and post-reverb return. Useful for recording your output mix on the connected computer.
- By default, these switches are set to "Pre".



The exact audio tap points can be found in the [K-Mix Signal Flow Diagram](#).

## USB OUTPUT (COMPUTER AUDIO TO MIXER)

Input channels 1-8 each have their own “USB Output” pre/post switch. The output pre/post switch sets where audio going out to the mixer (from a USB connected computer) gets inserted into the K-Mix’s signal path.

- Pre = Beginning of the signal path, just before the DSP effects. This allows you to send computer audio through K-Mix’s channel strip effects.
- Post = Toward the end of the signal path, just before the final fader and mute on the output busses. This allows you to mix live inputs with computer audio before sending out to speakers.



When set to “Post”, it is possible to combine audio coming into the mixer from the analog inputs and from a computer (via USB) on the same output channel. The analog input audio and USB audio will sum together just before the output bus fader and mute.



When set to “Pre”, that channel’s analog input on the K-Mix hardware will be disabled. The live input and the computer audio will *not* sum together and go through the channel strip effects. Only the computer audio will be heard. K-Mix’s analog inputs will effectively be disabled on any channel set to “Pre”.

### 5.2.5.2 – SAVE GLOBALS BUTTON

SAVE GLOBALS

Used to save the current state of all global settings to the K-Mix hardware’s internal memory.

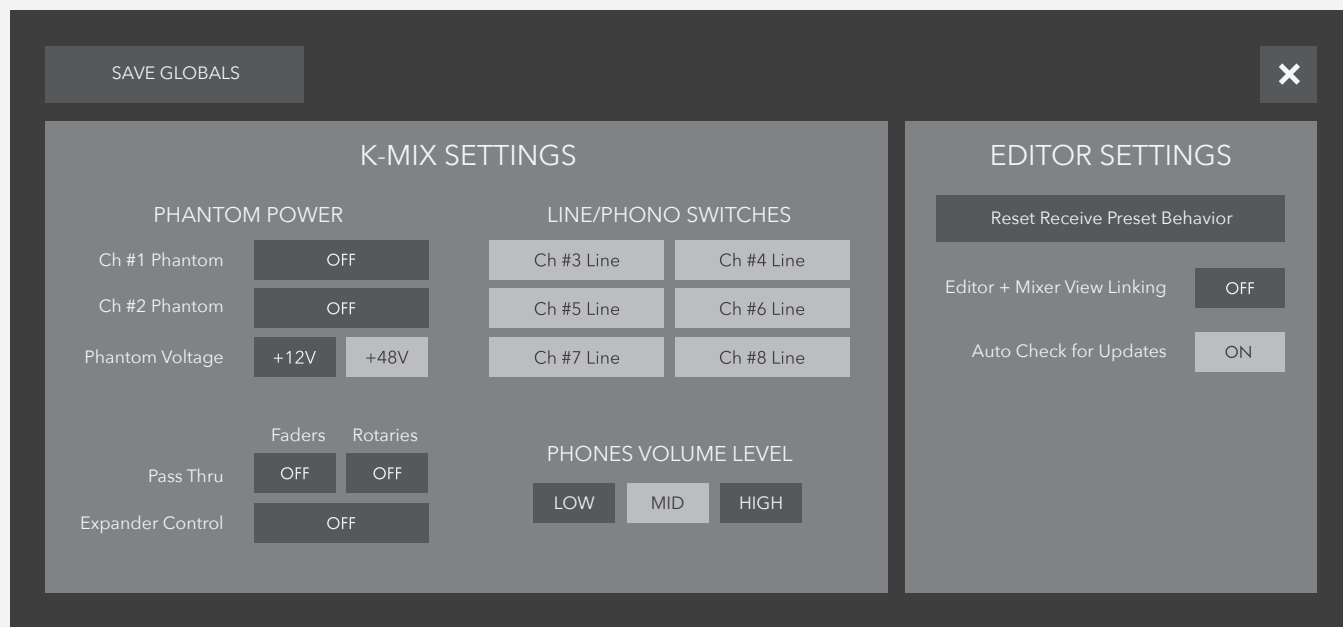
Any changes made in the editor to “global” parameters (parameters that are not stored on a per preset basis) will be immediately reflected and heard on the connected mixer, but they will not be stored in its internal memory. If power is lost and the K-Mix is turned on again, all changes will be lost; it will boot up with its last saved state. When you have found settings you would like to keep, it is wise to use the Save Globals button to make sure your global settings are not forgotten.

The other method to make sure your global settings are remembered between power cycles is to power down your K-Mix by holding down the [⏻] for three seconds. Powering down in this manner will ensure all global settings are saved to your K-Mix’s internal memory; simply unplugging your K-Mix from its power source will not do this. More information about global parameters can be found in section

**5.1.1.10 – “Global” Parameters vs. “Per Preset” parameters.**



## 5.3 – PREFERENCES



The K-Mix Editor's Preferences window contains lesser used options pertaining to the behavior of K-Mix's audio, the K-Mix hardware, and the K-Mix Editor.

The Preferences window can be accessed by clicking on "K-Mix Editor" in the menu bar and selecting "Preferences", or via the [⌘,] keyboard shortcut.

### 5.3.1 – K-MIX SETTINGS

The K-Mix section of the Preferences window contains options related the K-Mix device. Modifications to these are all saved on the K-Mix for use whether connected to the Editor or not.

#### 5.3.1.1 – CH #1 & 2 PHANTOM

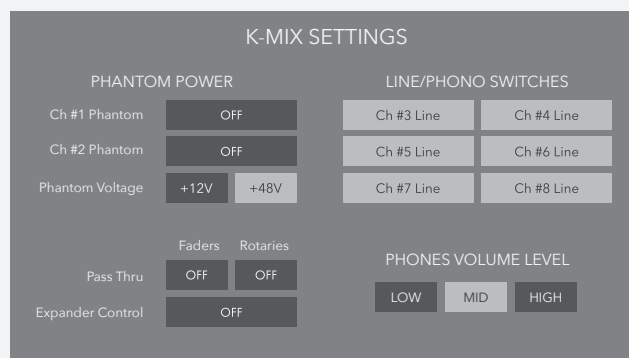
Enables or disables phantom power for channel 1 or 2's microphone input. There are two available options for each channel:

- OFF = Phantom power is off
- ON = Phantom power is on

#### 5.3.1.2 – PHANTOM VOLTAGE

Sets whether the phantom power provided on channels 1 and 2 is operating at +12V or +48V.

- +12V = Phantom power is providing +12V when enabled
- +48V = Phantom power is providing +48V when enabled



### 5.3.1.3 – CHANNELS 3–8 LINE/PHONO SWITCHES

Sets whether channels 3–8 are expecting line level or phono level signals. Each channel has its own switch with two possible states:

- Line = Input channel is expecting line level signals
- Phono = Input channel is expecting phono level signals

Typically “Phono” will only be used when plugging turntables directly into K-Mix. Most other equipment will operate at line level.

### 5.3.1.4 – PASS THRU

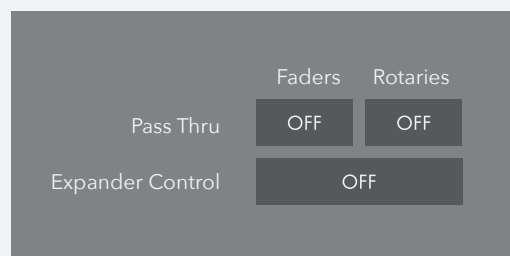
Two switches that enable/disable “Pass Thru” for the faders and/or rotaries.

With the lack of traditional knobs or faders, K-Mix allows you to make discontinuous jumps; if you want to jump from 11 to 127 you don’t have to move the faders through every value in-between. This can be very useful in some situations, but could be less than desirable for some people.

Pass Thru is meant to solve this. When both are enabled, faders and rotaries will not move until your finger “passes through” the current value. This will prevent any discontinuous jumps that may occur otherwise. You can enable pass thru for faders and rotaries separately if you prefer.

Other software/hardware may sometimes refer to this functionality as fader “takeover”.

- ON = Pass Thru is enabled.
- OFF = Pass Thru is disabled.
- By default, Pass Thru is disabled.



### 5.3.1.5 – EXPANDER CONTROL

The “Expander Control” switch will enable/disable the ability to control K-Mix via the MIDI Expander (sold separately). It is advisable to keep this setting disabled unless you are using a MIDI Expander to control K-Mix. More information about controlling K-Mix using a MIDI Expander can be found in section [4.3.5 - MIDI Input via MIDI Expander](#).

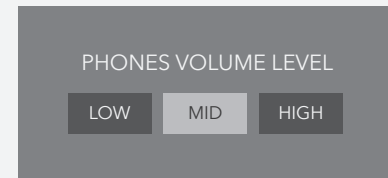


Channels 3-8 Line/Phono Switches, Pass Thru, and Expander Control are editor-only parameters. They may not be adjusted from the mixer.



### 5.3.1.6 – PHONES VOLUME LEVEL

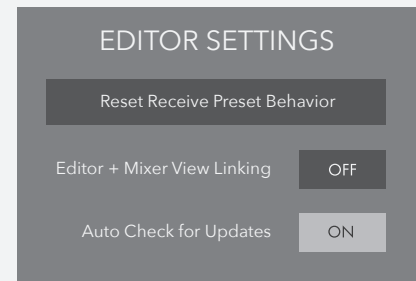
The Phones Volume Level can be set to “LOW”, “MID”, or “HIGH”. This allows you to customize the volume level outputting to your headphones. If your headphones are very loud even when the headphone fader is set low, you will likely prefer to set the Phones Volume Level to “LOW”.



This is an editor-only parameter. It may not be adjusted from the mixer.

## 5.3.2 – EDITOR SETTINGS

The Editor Settings section of the Preferences window contains options related to the behavior of the K-Mix Editor. Modifications to these will not affect the behavior of the K-Mix when not connected to the Editor.



### 5.3.2.1 – RESET RECEIVE PRESET BEHAVIOR

If you checked the option to “Remember Decision” in the pop-up dialog when receiving a preset from K-Mix, clicking this button will reset that. The next time you receive a preset from K-Mix you will again be presented with the pop-up dialog.

### 5.3.2.2 – EDITOR + MIXER VIEW LINKING

An on/off switch that enables or disables “view linking” between the editor and a connected K-Mix.

- When enabled, the editor and mixer will follow each other; changing modes on the mixer will change the view displayed in the editor and vice versa. For example, pressing the [VERB] button on K-Mix to enter Reverb mode will cause the editor to automatically switch over to the Reverb tab.
- When disabled, the editor and mixer views will stay separate; the editor view and the mixer mode are independent from one another.
- By default, View Linking is disabled. One of the big advantages to using the mixer hardware and editor software together is that you can adjust any parameter in the editor at any time, regardless of what mode the mixer is currently in.



Due to the fact that some features are displayed differently between the editor software and the mixer hardware, direct 1:1 view linking is not 100% possible.



### 5.3.2.3 – AUTO CHECK FOR UPDATES

An on/off switch that enables or disables automatic editor update checking.

- When enabled, the K-Mix Editor will automatically check if there is an available update every time the editor is opened. If a newer editor is available a popup dialog will appear notifying you of the available update.
- When disabled, the K-Mix Editor will not automatically check for available updates. You must manually check for an update by using the **Check For Updates** option in the editor's **Help** menu.
- By default, automatic update checking will be enabled.

### 5.3.3 – SAVE GLOBALS BUTTON

SAVE GLOBALS

Used to save the current state of all global settings to the K-Mix hardware's internal memory.

Any changes made in the editor to "global" parameters (parameters that are not stored on a per preset basis) will be immediately reflected and heard on the connected mixer, but they will not be stored in its internal memory. If power is lost and the K-Mix is turned on again, all changes will be lost; it will boot up with its last saved state. When you have found settings you would like to keep, it is wise to use the Save Globals button to make sure your global settings are not forgotten.

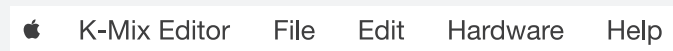
The other method to make sure your global settings are remembered between power cycles is to power down your K-Mix by holding down the [⏻] for three seconds. Powering down in this manner will ensure all global settings are saved to your K-Mix's internal memory; simply unplugging your K-Mix from its power source will not do this. More information about global parameters can be found in section **5.1.1.10 – "Global" Parameters vs. "Per Preset" parameters.**





## 5.4 – MENU BAR OPTIONS

These are options/actions available via the menu bar at the top of the screen.



### 5.4.1 – K-MIX EDITOR

The K-Mix Editor menu has the following options:

#### 5.4.1.1 – ABOUT K-MIX EDITOR

Displays an About screen for the K-Mix and K-Mix Editor.

##### EXPECTED FW

Displays the firmware version that is included in the editor.

If the firmware on a connected K-Mix does not match the Expected FW version, the editor will prompt you to update the firmware on your K-Mix.

K-Mix Editor	
About K-Board Editor	
Preferences...	⌘,
Services	▶
Hide K-Mix Editor	⌘H
Hide Others	⇧⌘H
Show All	
Quit K-Mix Editor	⌘Q



While it may be possible to use a K-Mix loaded with a different firmware version than is expected by the editor, it is not recommended. While we make the best effort to preserve backwards-compatibility, some updates may potentially break backwards-compatibility with older firmware versions, leading to odd behavior.

##### FOUND FW

Displays the firmware version that is currently on the connected K-Mix.

##### EDITOR VERSION

Displays the current version number of the K-Mix Editor.

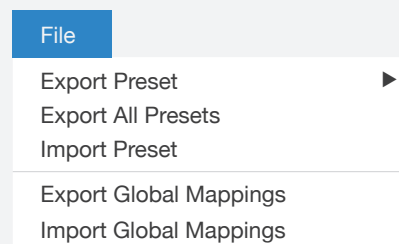
### 5.4.1.2 – PREFERENCES

Selecting the Preferences option opens the [Preferences window](#).



## 5.4.2 – FILE

The File menu contains the following options:



### 5.4.2.1 – EXPORT PRESET

Allows for exporting the currently selected preset as a file.

- Each preset in the Preset List will be available in the Export Preset submenu.
- Select any preset in the list to export it as a file.
- The preset is saved with the “.kmixpreset” file extension.

### 5.4.2.2 – EXPORT ALL PRESETS

Exports all presets in the Preset Library as K-Mix preset files.

- Every preset in the Preset Library (including the [CONNECTION SYNC] preset) will be exported as a separate file in the selected directory.
- Each preset’s name will determine the exported file’s name. If a preset is named “My Preset”, the exported file will be named “My Preset.kmixpreset”.
- Each preset is saved with the “.kmixpreset” file extension.

### 5.4.2.3 – IMPORT PRESET

Allows for importing a .kmixpreset file into the Preset Library.

- After selecting a file, the preset will be saved at the bottom of the **Preset Library**.
- The newly imported preset will be named after the imported file’s name. If the file was saved as “theatre.kmixpreset”, it will be imported with the name “theatre”.
- After import, the preset will become the currently selected preset.

### 5.4.2.4 – EXPORT GLOBAL MAPPINGS

Exports the current global mappings as a file.

- The global settings are saved with the “.kmixglobalmap” file extension.
- “Global mappings” include all parameters in the Surround, MIDI, and USB tabs, as well as all options in the Preferences window.



It is important to export your globals if you are concerned about potentially losing them. When a K-Mix makes a connection with the editor, the editor reads the globals from the attached K-Mix, then overwrites the editor globals. So, if you plug in a friend’s K-Mix to your computer and open the editor, you will automatically receive their global mappings. This behavior is explained further in the **Sync On Connect Behavior** section.



### 5.4.2.5 – IMPORT GLOBAL MAPPINGS

Imports a .kmixglobalmap file to the editor.

- After selecting a file, the editor's current MIDI, Surround, USB, and Preferences settings will be replaced by the settings specified in the .kmixglobalmap file.
- Importing global mappings while a K-Mix is connected to the editor will also update the MIDI, Surround, USB, and Preferences settings on the mixer itself. They will not be stored/saved on the mixer, they will just be updated; you must manually save them to the mixer by either clicking a **Save Globals button**, or by powering your K-Mix down by holding the [⏻] button for three seconds.

## 5.4.3 – EDIT

The Edit menu contains the following options:

### 5.4.3.1 – COPY PRESET

Copies the current preset settings to the clipboard.

This only affects parameters that are stored per preset. It does not affect global parameters, such as the MIDI, Surround, and USB settings.

### 5.4.3.2 – PASTE PRESET

Pastes a copied preset into the currently selected preset.

- After pasting, the preset will not be saved. This allows you to revert the changes if you change your mind or happened to paste by accident. You must explicitly click the **SAVE** button for the changes to be made permanent.

This only affects parameters that are stored per preset. It does not affect global parameters, such as the MIDI, Surround, and USB settings.

### 5.4.3.3 – PASTE PRESET TO NEW

Pastes a copied preset into a brand new preset.

- This is essentially the same thing as the **Save As** function, but without the need to enter a preset name.
- The newly created preset will have the same name as the original copied preset with "copy1" appended to the name.

This only affects parameters that are stored per preset. It does not affect global parameters, such as the MIDI, Surround, and USB settings.

### 5.4.3.4 – COPY CHANNEL

Copies the channel strip settings of the currently selected channel. This can be used to paste the same settings to other channels.

- All channel strip settings are copied, as well as that channel's reverb send level.

Edit	
Copy Preset	⇧⌘C
Paste Preset	⇧⌘V
Paste Preset To New	
Copy Channel	⌘C
Paste Channel	⌘V
Auto Populate Setlist	
Reset Preset To Default	
Reset Globals To Default	
Start Dictation	
Emoji & Symbols	⌘ Space



- When multiple channels are selected simultaneously, the Copy Channel function will copy whatever the last selected channel was (the one displayed in the Channel Strip view).
- Input trims are *not* included when copying/pasting channel strip settings. This is due to the differing trim ranges between channels 1-2 and channels 3-8.



Auxes, Phones, and Mains cannot be copied or pasted.

### 5.4.3.5 – PASTE CHANNEL

Pastes copied channel strip settings to the currently selected channel or channels.

- If multiple channels are selected when pasting, all selected channels will receive the pasted settings.



Auxes, Phones, and Mains cannot be copied or pasted.

### 5.4.3.6 – AUTO-POPULATE SETLIST

Automatically populates the setlist with presets from the Preset Library.

- When selected, setlist slots A-L will be automatically filled with the first 12 presets in the Preset Library.

### 5.4.3.7 – RESET PRESET TO DEFAULT

Resets the currently selected preset by reverting all parameters to default states. Pans are centered, faders are turned down, etc.

This only affects parameters that are stored per preset. It does not affect global parameters, such as the MIDI, Surround, and USB settings.

### 5.4.3.8 – RESET GLOBALS TO DEFAULT

Resets all global parameters to their default values.



## 5.4.4 – HARDWARE

The Hardware menu contains the following options:

Hardware

Force Firmware Update

### 5.4.4.1 – FORCE FIRMWARE UPDATE

This option allows for manually initiating a firmware update for the connected K-Mix.

Once selected, you will be asked to confirm that you would indeed like to update the firmware on your K-Mix.

- Select “OK” to proceed with the firmware update. The process will automatically commence.
- Select “Cancel” to cancel the firmware update.

## 5.4.5 – HELP

The Help menu contains the following options:

Help

Documentation...

Hide Tool Tips

Check For Updates...

### 5.4.5.1 – DOCUMENTATION

Opens the K-Mix manual in your computer’s default PDF reader.

### 5.4.5.2 – SHOW/HIDE TOOL TIPS

Toggles between showing and hiding the tool tip pop-ups when hovering over a control.

Tool tips provide quick, easy access to information regarding K-Mix editor controls. Want a brief description of what a specific control does without having to dive through this manual? Turn tool tips on and hover your mouse over the control in question.

### 5.4.5.3 – CHECK FOR UPDATES

Manually checks to see if there is a newer version of the K-Mix Editor available. An internet connection is required for this to function properly.



## 5.5 – FIRMWARE UPDATING

Each version of the K-Mix Editor is compatible with a specific version of K-Mix firmware. Occasionally, new features in a K-Mix Editor update will require a firmware update to your K-Mix before the two can properly function together.



If the firmware on your K-Mix is not compatible with the K-Mix Editor currently in use, you will need to update the firmware before you can use the editor. The main editor interface will not display until a K-Mix with compatible firmware is connected.

There are two ways a firmware update can be initiated via the K-Mix Editor – automatically, or manually.

### 5.5.1 – AUTOMATIC FIRMWARE UPDATE

The automatic firmware update process will be the most common method of getting new firmware onto your K-Mix. The process is as follows:

1. Upon opening the editor and connecting a K-Mix, the K-Mix Editor checks to see if the connected K-Mix's firmware is compatible.
2. If the firmware is compatible with the editor, nothing else is required and the main editor window is displayed. If the firmware is *not* compatible with the editor, it will prompt you to update your K-Mix's firmware. Click the "UPDATE" button to continue with the firmware update process. Click "CANCEL" to cancel the firmware update.
3. A progress bar appears showing how far the editor is into the firmware update process. It may take a few seconds for the progress bar to begin moving – this is to be expected while the update is initializing.
4. Once the firmware has been transferred to the connected K-Mix, it will automatically restart.
5. After the K-Mix has powered back on the editor will open to the main window as normal.

### 5.5.2 – MANUAL FIRMWARE UPDATE

In addition to the automatic firmware update process, you can also manually initiate a firmware update. It is unlikely this feature will ever be needed, but in the rare event that it is needed, it will be there waiting.

The manual firmware update is initiated via the **Force Firmware Update** option in the K-Mix Editor's **Hardware** menu. Please see section **5.4.4.1 - Force Firmware Update** for more information.

# Appendix





## 6.1 – K-Mix TECHNICAL SPECIFICATIONS

### AUDIO

INPUT CHANNELS	<ul style="list-style-type: none"> <li>• 8 Balanced Inputs</li> <li>• Signals up to +28dBu</li> </ul>
OUTPUT CHANNELS	<ul style="list-style-type: none"> <li>• 10 Outputs (8 balanced)</li> </ul>
BIT DEPTH	<ul style="list-style-type: none"> <li>• 24-bit AKM Converters</li> <li>• 110dB dynamic range</li> </ul>
SAMPLE RATE	<ul style="list-style-type: none"> <li>• 44.1kHz, 48kHz, 88.2kHz, 96kHz</li> </ul>
INTERNAL LATENCY	<ul style="list-style-type: none"> <li>• ~2.5ms @ 96kHz</li> <li>• ~2.75ms @ 88.2kHz</li> <li>• ~5ms @ 48kHz</li> <li>• ~5.5ms @ 44.1kHz</li> </ul>

### CONNECTIONS

ANALOG INPUTS	<ul style="list-style-type: none"> <li>• 2 XLR/TRS combo jacks:             <ul style="list-style-type: none"> <li>» XLR Mic/Line Inputs (balanced)</li> <li>» Hi-Z Inst/Line 1/4" TRS Inputs (balanced)</li> </ul> </li> <li>• 6 1/4" TRS Connectors (line/phono, balanced)</li> </ul>
ANALOG OUTPUTS	<ul style="list-style-type: none"> <li>• 8 1/4" TRS Connectors (balanced)</li> <li>• 1 stereo 3.5mm TRS headphone output</li> <li>• &lt; 50 Ohms output impedance</li> <li>• +2.6dBV max output level</li> </ul>
DIGITAL	<ul style="list-style-type: none"> <li>• 1 Micro-USB (Audio I/O, MIDI I/O, Power)</li> <li>• 1 Mini-USB (Power, Expander MIDI)</li> </ul>

### CONTROL

FADERS	<ul style="list-style-type: none"> <li>• 8 channel faders (75mm)</li> <li>• 12 LED indicators per channel fader</li> <li>• 1 master fader with 24 LEDs</li> <li>• MIDI position CC output on all faders</li> </ul>
ROTARIES	<ul style="list-style-type: none"> <li>• 4 rotary controls (360°)</li> <li>• 16 LEDs per rotary</li> <li>• MIDI position CC output on all rotaries</li> </ul>
BUTTONS	<ul style="list-style-type: none"> <li>• 9 Channel Select Buttons</li> <li>• 4 Bank Select Buttons</li> <li>• 17 Function Buttons</li> <li>• MIDI note output on all buttons</li> </ul>

### MIC PREAMPS

NUMBER	<ul style="list-style-type: none"> <li>• 2 µPre™ mic pres</li> </ul>
PHANTOM POWER	<ul style="list-style-type: none"> <li>• +48V or +12V phantom power</li> </ul>
GAIN	<ul style="list-style-type: none"> <li>• +60db additional gain</li> </ul>
THD + NOISE	<ul style="list-style-type: none"> <li>• -105.12 dBu @ 0dB gain, 20Hz–20kHz (unweighted)</li> <li>• -116.49 dBu @ 0dB gain, 20Hz–20kHz (A weighted)</li> </ul>
EIN	<ul style="list-style-type: none"> <li>• -127.0 dBu, 150ohms @ 20Hz–20kHz, max gain (unweighted)</li> </ul>
FREQUENCY RESPONSE	<ul style="list-style-type: none"> <li>• ± 0.03dB @ 20Hz–20kHz (44.1kHz, unweighted)</li> <li>• ± 0.15dB @ 20Hz–40kHz (96kHz, unweighted)</li> </ul>

### PROCESSING

EQUALIZATION	<ul style="list-style-type: none"> <li>• 3-band semi-parametric EQ</li> <li>• ±18dB cut/boost</li> </ul>
COMPRESSOR	<ul style="list-style-type: none"> <li>• Compressor/Limiter on each channel</li> <li>• Adjustable threshold, attack, release, and makeup gain</li> </ul>
GATE	<ul style="list-style-type: none"> <li>• Noise gate on each channel</li> <li>• Adjustable threshold, attack, release, and gain reduction</li> </ul>
REVERB	<ul style="list-style-type: none"> <li>• Master reverb with individual sends per channel</li> </ul>
SURROUND	<ul style="list-style-type: none"> <li>• Quadraphonic, 5.1, 7.1, and Octophonic surround output</li> <li>• Each channel assignable to one of four surround panners</li> <li>• Optional bass management crossover</li> </ul>





## 6.2 – SIGNAL FLOW BLOCK DIAGRAM

The K-Mix signal flow block diagram is too large to properly fit on a standard sized page. As such, the signal flow diagram is provided as a separate PDF document.

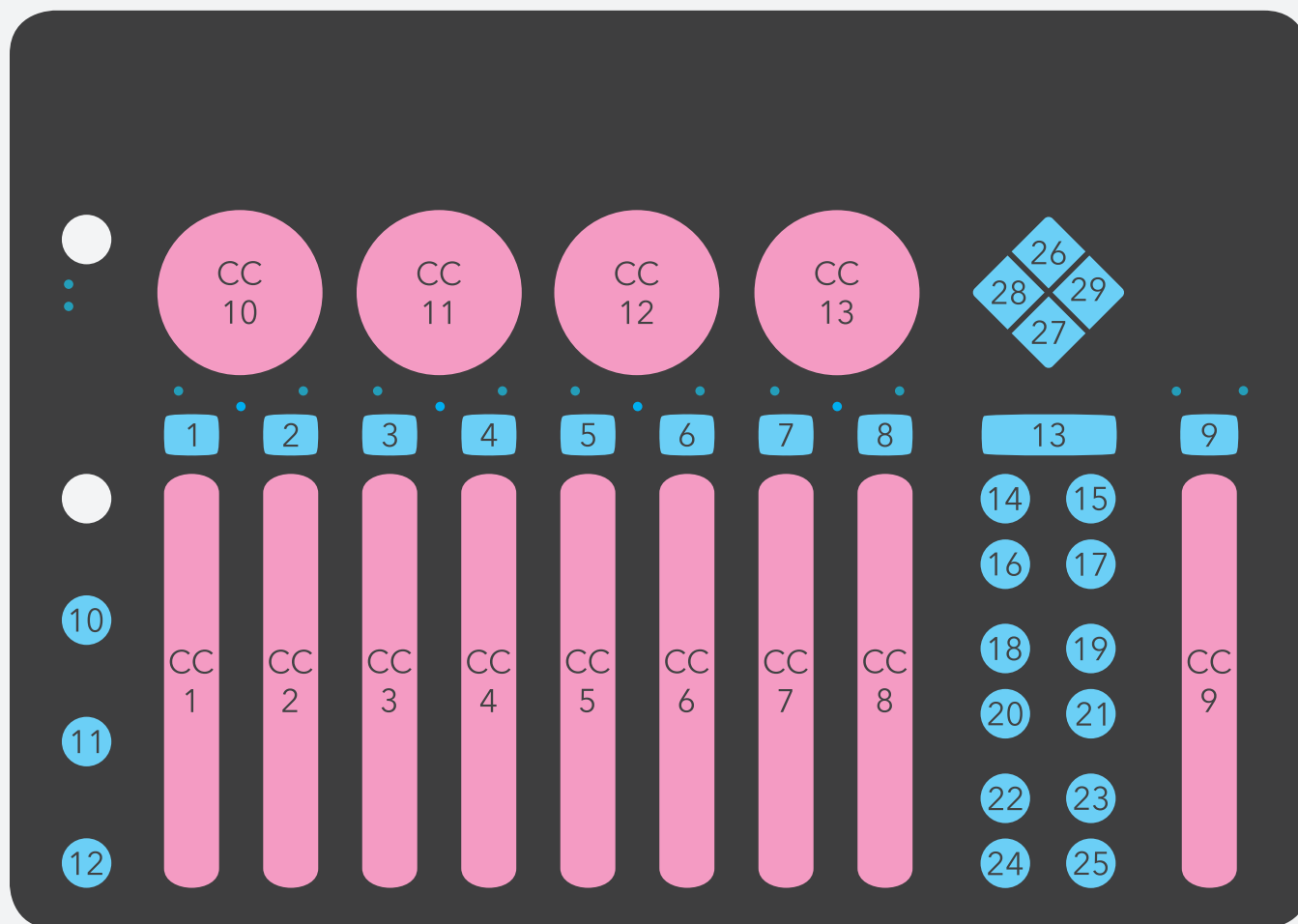
The PDF is included in the K-Mix Editor package and can also be downloaded directly from the KMI website at this link here: <http://www.keithmcmillen.com/downloads/>



## 6.3 – DEFAULT MIDI OUTPUT VALUES

Below is a diagram detailing the exact MIDI messages K-Mix is set to output by default. It is a very simple mapping, all faders and rotaries (**pink** in the image below) output a CC message, while all buttons (**blue** in the image below) output a MIDI note. Each MIDI bank is set up with the same CC and note messages, but each is set to transmit on a different MIDI channel.

- MIDI Bank 1 = MIDI Channel 1
- MIDI Bank 2 = MIDI Channel 2
- MIDI Bank 3 = MIDI Channel 3



The [SHIFT] and [⏻] buttons *cannot* output MIDI messages.



## 6.4 – MIDI NOTE NAMING REFERENCE

MIDI notes are represented by numbers between 0-127, while music notes are lettered A through G# (in traditional Western notation) – there must be a way to convert between the two. There are actually multiple standards for naming MIDI note numbers, which can make things tricky.

KMI follows the C3 = 60 standard for naming/numbering notes. If it seems as though your notes are an octave off, this is likely due to the software/hardware you're using K-Mix with follows the C4 = 60 naming scheme; this will cause the note name to be off by an octave (though the note number will be the same).

Below is a chart that can help with converting note numbers to note names and vice versa.

Octave	Note Names / Numbers (C3=60)											
	C	C#	D	D#	E	F	F#	G	G#	A	A#	B
-2	0	1	2	3	4	5	6	7	8	9	10	11
-1	12	13	14	15	16	17	18	19	20	21	22	23
0	24	25	26	27	28	29	30	31	32	33	34	35
1	36	37	38	39	40	41	42	43	44	45	46	47
2	48	49	50	51	52	53	54	55	56	57	58	59
3	60	61	62	63	64	65	66	67	68	69	70	71
4	72	73	74	75	76	77	78	79	80	81	82	83
5	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107
7	108	109	110	111	112	113	114	115	116	117	118	119
8	120	121	122	123	124	125	126	127	—	—	—	—



## 6.5 – WINDOWS USB AUDIO CONTROL PANEL

The Windows K-Mix USB Audio Control Panel can be accessed by navigating to “Program Files/Keith McMillen Instruments/K-MixUSBAudioDriver” and running the executable file K-Mix\_USBAudio\_ControlPanel.exe. In the Control Panel under the Settings tab you can adjust the Sample Rate, USB Streaming Mode, and ASIO Buffer Size for the K-Mix Audio Driver.

### THE INS AND OUTS OF AUDIO DRIVERS

Audio samples coming from an audio device to your computer must first go on a small journey before they can be processed by your audio software. They must pass through at least two holding buffers along the way, first the USB Buffer as data is pulled in from the device, and second the ASIO Buffer where it is made available to your audio software. Conversely on the way out from your computer, audio samples are first placed into the ASIO buffer after which they can travel again to the USB Buffer and then finally scamper back into the arms of the audio device where they will be converted and allowed to ascend to their next spiritual plain of existence as analog signals.

The time that the samples spend in these buffers allows your computer some flexibility in how frequently it has to process audio while still being able to maintain a continuous and unbroken flow of samples in from and out to the device.

This added flexibility for the CPU gives us the concept of Digital Audio Latency, or how long it takes samples to travel through the system. Latency is determined by the combination of these three settings - Sample Rate, USB Buffer Size, and ASIO Buffer Size. It increases proportionally with the size of the buffers, and decreases proportionally with the sample rate.

### USING THE CONTROL PANEL

In the K-Mix Audio Driver, the USB Buffer size can be adjusted by changing the USB Streaming Mode. “Minimum Latency” gives the smallest USB Buffer size, while “Extra Safe” gives the largest. Each combination of Sample Rate and USB Streaming Mode supports a different range of ASIO Buffer sizes. Keeping the ASIO Buffer setting at “Auto” will generally pick the best option for each Sample Rate and Mode. If you do experiment with different ASIO Buffer sizes, keep in mind that it is possible to set the ASIO Buffer Size lower than the Streaming Mode supports and in this case you will see a warning at the bottom of the control panel and you will likely hear distortion in your audio stream.

### TWO CAUSES OF DISTORTION FROM LOW ASIO BUFFER SIZES

There are two possible causes of distortion from low ASIO Buffer settings. The first, as mentioned above, is from an ASIO Buffer setting that is lower than this combination of Streaming Mode and Sample Rate allows. See below for a partial list of lowest ASIO Buffer settings per Mode:

Mode	Sample Rate	Smallest Possible ASIO Buffer
Minimum Latency	44,100	64 samples
Minimum Latency	48,000	64 samples
Minimum Latency	88,200	128 samples
Minimum Latency	96,000	128 samples
Low Latency	44,100	128 samples



Mode	Sample Rate	Smallest Possible ASIO Buffer
Low Latency	48,000	128 samples
Low Latency	88,200	256 samples
Low Latency	96,000	256 samples

If the ASIO buffer is set below this threshold, you will hear distortion. Selecting “Auto” for the ASIO Buffer Size will generally automatically select a buffer size just slightly above the minimum for each Mode/Rate combination.

The second cause of distortion from low ASIO Buffer settings is running out of CPU time. In the event that your ASIO Buffer size is above the limit for your Mode/Rate but you still hear periodic distortion, it is possible that your CPU is not fast enough to keep up with the audio at that rate. This is especially the case when you have a lot of processing going on at the same time. This is called Buffer Underrun (or Buffer Underflow) and happens because your computer can’t fill up the buffers fast enough to keep up with the data-rate. In this case either increase your ASIO Buffer size or switch to a safer USB Streaming Mode.

## WHICH MODE IS BEST? (NOTES ON USB BUFFER SIZE IN MAC vs PC)

If you are a Mac user, you may be wondering why there is no USB Buffer Size setting in your Audio Midi Setup panel and what USB Buffer size you are actually using. The Class Compliant Audio Driver for Mac that is provided by Apple does not break this feature out, however we were able to verify with latency tests done while varying the Audio Buffer size (the Mac equivalent of the ASIO Buffer) that the USB Buffer size on the Mac behaves very similarly to the “Minimum Latency” USB Buffer size on the PC.

In light of this, we believe that most modern processors will work perfectly well with a USB Streaming Mode of “Minimum Latency” and the ASIO Buffer adjusted to suit your needs. This mode should be the most similar to the way the Class Compliant Audio Driver works in MacOS.

Below is an abridged set of measurements that we made comparing various settings and latency on Mac vs PC. While you can see that the Mac driver allows for slightly lower Audio Buffer sizes and therefore potentially lower latency, in practice we’ve found those settings to be prone to frequent buffer underrun distortion in normal use, so the K-Mix user experience on the PC should in fact be quite similar to the user experience on the Mac.

K-Mix Driver Settings			mS	mS	mS
Sample Rate	USB Streaming Mode	ASIO Buffer	USB Buffer Time	ASIO Buffer Time	One Way Latency
96,000	Minimum	Auto	3.4	1.5	4.9
96,000	Minimum	128	3.4	1.3	4.7
96,000	Minimum	256	3.4	2.7	6.1
96,000	Minimum	512	3.4	5.3	8.7
96,000	Minimum	1024	3.4	10.7	14.1
96,000	Minimum	2048	3.4	21.3	24.7
96,000	Low	Auto	4.3	3.0	7.3
96,000	Low	256	4.3	2.7	7.0
96,000	Low	512	4.3	5.3	9.6



K-Mix Driver Settings			mS	mS	mS
Sample Rate	USB Streaming Mode	ASIO Buffer	USB Buffer Time	ASIO Buffer Time	One Way Latency
96,000	Low	1024	4.3	10.7	15.0
96,000	Low	2048	4.3	21.3	25.6
96,000	Standard	Auto	6.3	6.0	12.3
96,000	Standard	512	6.3	5.3	11.6
96,000	Standard	1024	6.3	10.7	17.0
96,000	Standard	2048	6.3	21.3	27.6

Mac OS Driver Settings			mS	mS	mS
Sample Rate	USB Streaming Mode	ASIO Buffer	USB Buffer Time	ASIO Buffer Time	One Way Latency
96,000	n/a	32	3.4	0.3	3.7
96,000	n/a	64	3.4	0.7	4.1
96,000	n/a	128	3.4	1.3	4.8
96,000	n/a	256	3.4	2.7	6.0
96,000	n/a	512	3.4	5.3	8.7
96,000	n/a	1024	3.4	10.7	14.5
96,000	n/a	2048	3.4	21.4	25.0

# Troubleshooting





## 7.1 – AN IMPORTANT NOTE ABOUT USB CABLES

We always recommend using the USB cables that shipped with your K-Mix. These cables were created to ensure they meet the specs required for proper K-Mix operation. Sadly, not all USB cables are created equal.

**If you are having troubles powering your K-Mix or connecting to a computer, please make sure you are using the USB cables that came with your K-Mix.**

We fully understand that it seems like using different USB cables shouldn't matter, but it really can have a drastic effect on operation, not just with K-Mix, but with all USB devices. We often encounter devices that appear to not be functioning properly; very often the only thing needed is to swap out the USB cable for another one.

## 7.2 – USB HUBS

It seems that available USB ports are a precious commodity these days. If you are affected by this USB port scarcity issue, USB hubs are a great solution. There is just one important thing to remember when purchasing and using a USB hub – there are unpowered hubs and powered hubs.

**If you're going to be plugging your K-Mix into a USB hub, it should always be a powered hub.**

What's the difference, you ask? The amount of power that will be available to your USB devices that are connected to the hub.

A USB port is able to provide a specific amount of power on its own. USB 2.0 ports can typically provide up to 500mA of current (according to USB specifications; many can actually provide more than this); USB 3.0 ports can provide up to 900mA (though, again, many can provide more than this).

An unpowered hub can only draw power from the USB port it is plugged into. Plugging multiple devices into the hub will split up the available power between each device. While this may be fine for devices that don't require much power (mice, most keyboards, etc.), it can cause problems for devices that require more power (K-Mix, external hard drives, etc.). It's quite likely that an unpowered hub will lead to connectivity issues with your K-Mix, or cause your K-Mix to not even fully power up.

A powered hub uses an external power supply to provide each USB port on the hub with the same amount of power as a port on your computer; power is not divided amongst the connected devices. Yes, you will have to plug in another power supply to the wall, but you will ensure proper power to your connected devices. This will make your K-Mix (and other devices) very happy.

## 7.3 – MAC MINI PHANTOM POWER & CONNECTIVITY ISSUES

During our testing of K-Mix we have occasionally encountered some minor connectivity issues involving phantom power when connected to late-2014 Mac Mini computers.

### THE ISSUE

When connected to a machine that exhibits this issue, enabling +48V phantom power on your K-Mix will cause K-Mix's audio/MIDI ports to briefly disconnect. It does quickly reconnect, but that disconnect can lead to some issues.

If you're using the K-Mix Editor when this happens it will quickly return to the "Connect A K-Mix To Edit" splash screen; you will be returned to the main editing window once the connection has been reestablished.





If you're using K-Mix's audio interface capabilities to send audio to/from a computer, all audio travelling over USB will stop while the disconnect occurs. The audio device will briefly disappear from your DAW or other audio software, which could cause issues; you may have to restart your DAW to get things back in working order.

It's possible that there may be other computers that exhibit this issue, but we have only encountered it when using Mac Minis.

## POTENTIAL SOLUTIONS

If this issue affects you, there are a couple of potential solutions:

- Try a powered USB hub, preferably a USB 3.0 hub. This generally eliminates the issue completely.
- Try a different USB port on your computer. In our tests we have noticed that the connection drop will occur on certain USB ports, but moving K-Mix to another port makes the problem disappear. There are a number of reports of this behavior with other USB devices from other Mac Mini owners.
- If your microphone can get by with +12V phantom power, try using +12V on your K-Mix. The smaller power requirements for +12V (as opposed to +48V) don't put as much strain on the Mac Mini's USB port while power is ramping up, causing the connection issue to disappear. You can switch your K-Mix's phantom power voltage from the mixer itself or the K-Mix Editor.

## 7.4 – RENAMING THE K-MIX DEVICE NAME IN AUDIO MIDI SETUP

The Audio MIDI Setup application on Mac OS X allows you to rename MIDI devices, a cool feature that can help distinguish between multiple copies of the same device.

While it is a cool feature, it is not recommended that you rename your K-Mix if you want to use it in conjunction with the K-Mix Editor.

Renaming K-Mix in the MIDI Studio section of Audio MIDI Setup will make it impossible for a connection to be established between K-Mix and the K-Mix Editor. The editor looks for a device named "K-Mix" to establish a connection; if K-Mix has been renamed, a connection can't happen.

If, however, you do not plan on using the K-Mix Editor, feel free to name your K-Mix whatever you like!

## 7.5 – K-MIX NOT RECOGNIZED IN AUDIO MIDI SETUP

If your computer is running Mavericks or Yosemite (Mac OS 10.9 or 10.10) it is possible your K-Mix will not be recognized by the computer and make a proper connection. This is due to a bug in the operating system that typically appears when using a class-compliant USB audio/MIDI device (like K-Mix). When this bug appears it can lead to connectivity issues with the K-Mix Editor and other audio software.

Luckily, there is a fix for this issue.

To get your K-Mix recognized by the operating system:

1. Open Audio MIDI Setup (located in the Applications/Utilities folder).
2. View the MIDI devices window by clicking **Window** in the menu bar at the top of the screen and selecting **Show MIDI Window** (this may be named "Show MIDI Studio" depending on the operating system). A window with all recognized MIDI devices will appear.
3. Click the **Configuration** drop-down menu and select **New Configuration**.



4. Name your new configuration when prompted. The name does not have to be anything specific.
5. Click **OK**. Any devices that were connected but not listed should now appear.

## 7.6 – K-MIX APPEARING AS “USB MIDI DEVICE”

K-Mix will show up as “USB MIDI Device” when connected to some computers running Mac OS 10.9 (Mavericks). It’s possible this also happen on other versions of Mac OS, but so far we have only experienced this issue with 10.9 systems.

When K-Mix shows up as “USB MIDI Device” it will be unable to make a connection to the K-Mix Editor.

If you are experiencing this issue, please follow the steps in the previous troubleshooting issue: [\*\*7.5 – K-Mix Not Recognized In Audio/MIDI Setup\*\*](#). Creating a new MIDI configuration in Audio MIDI Setup seems to get K-Mix appearing with the correct name.

## 7.7 – FIRMWARE UPDATING ERRORS

Occasionally when updating firmware, an error may occur. When this happens the firmware update will stop and a dialog showing an error message will appear. The most effective way to prevent errors during firmware updating is to make sure there are no other audio or MIDI applications running before attempting to update. After quitting audio and MIDI applications, power cycle K-Mix and restart the editor.

If you continue encountering errors and are unable to update your firmware, locate the “fwLog.txt” file within the package contents of the editor application. Copy the file and paste it somewhere outside the package contents and send it to us as an attachment through the [support form](#) on our website. Describe your problem and mention that you have attempted to update without any audio applications open. This file is reset every time the editor opens so be sure to copy it right after experiencing the error. Follow these steps to locate the “fwLog.txt” file:

1. Right click on the K-Mix Editor application and select “Show Package Contents”.
2. Go into the “Contents/Resources” directories to find the “fwLog.txt” file.

## 7.8 – NO AUDIO WHEN PLUGGED INTO A COMPUTER

When K-Mix is plugged into a computer via the “Audio” micro USB port, the computer’s sound volume control effects the volume of K-Mix’s output. If you are not able to get audio out of K-Mix, double check that your computer’s speakers are not muted and make sure to raise the computer’s volume to full to ensure that K-Mix has full volume control.

## 7.9 – WINDOWS K-MIX USB AUDIO DRIVER INSTALLATION ERROR

If the following error occurs when installing the K-Mix USB Audio Driver on Windows 7, “Windows requires a digitally signed driver...”, it is because Windows 7 is not compatible with the type of code signature that we use. The code signatures compatible with Windows 7 are now deprecated. Fortunately, Microsoft has released a hotfix that adds support for our certificates on Windows 7. The hotfix (KB3033929) can be found here:

<https://support.microsoft.com/en-us/kb/3033929>

Please install the hotfix and try installing the drivers again.

# F.A.Q.





## DO I NEED A COMPUTER TO USE K-MIX?

No, K-Mix can function as a completely standalone mixer. All EQs, compressors, noise gates, reverb, etc. live on the board. Just power up K-Mix via a USB power supply and you're good to go!

Please note that while most parameters can be accessed directly from the K-Mix hardware, there are some parameters that can only be accessed via the K-Mix Editor software, which does require connection to a computer to function. Though, once you have edited these parameters via the editor they can be saved on the K-Mix itself, enabling you to use your changes standalone, away from the computer.

Editor-only parameters are as follows:

- Rumble Filter On/Off
- Rumble Filter Frequency
- Surround Speaker Layout selection
- Bass Management On/Off
- Bass Management Crossover Frequency
- Surround Panner assignments
- USB Pre/Post settings
- MIDI CC/Note assignments
- Input Channels 3-8 Line/Phono Switches
- Pass Thru On/Offs
- Expander Control
- Phones Output Gain
- Editor + Mixer View Linking On/Off

## WILL K-MIX REMEMBER MY PREVIOUS SETTINGS THE NEXT TIME I TURN IT ON?

Yes, it is possible for K-Mix to remember your previous settings the next time it is turned on, even if you did not save any of the changes made.

- In order for K-Mix to power up in the exact same state as it was powered down, you *must* manually power down your K-Mix by pressing and holding the [⏻] button for three seconds. When powered down this way K-Mix stores its current settings internally and automatically recalls them the next time it is powered on.
- Simply disconnecting K-Mix from its power source will *not* store the current settings for later; any unsaved changes will be forgotten when K-Mix is next powered on.

## CAN I PLUG TURNTABLES DIRECTLY INTO MY K-MIX?

Yes. Inputs 3-8 are capable of accepting phono level signals (in addition to line level signals).

You will likely need to adjust the line/phono switches and set them to "Phono" (this can only be done via the



K-Mix Editor); by default they are set to Line. Once the inputs you want to plug turntables into have been set to accept phono level signals simply plug in your turntables and turn up the K-Mix faders.

Also note that a majority of turntables have RCA audio connectors, so it is quite likely you will need RCA-to-TRS (1/4") adapters to properly get audio flowing into your K-Mix.

## HOW DO I GET THE HEADPHONE OUTPUT TO ACT AS ITS OWN SEPARATE STEREO OUTPUT?

K-Mix's headphone output can indeed function as a discrete stereo output. This can be done from either the K-Mix hardware or the K-Mix Editor.

### K-MIX HARDWARE

To set the headphone out to act as a discrete stereo output via the K-Mix hardware, do the following:

1. Power up K-Mix.
2. Press the [P] button to enter Phones Mode.
3. Press the Master channel select button.
4. That's it! The headphone out is now acting as a discrete stereo output.

### K-MIX EDITOR

To set the headphone out to act as a discrete stereo output via the K-Mix Editor, do the following:

1. Connect your K-Mix to your computer and power it up.
2. Open the K-Mix Editor.
3. In the fader section (of the editor), click the headphone channel select button. The phones channel strip will be displayed in the main tab area (just above the fader section).
4. In the phones channel strip view, click the "Discrete Stereo Output" button.
5. That's it! The headphone out is now acting as a discrete stereo output.

Once the headphone output is set to act as a discrete output, the extra outputs can be accessed via a computer by sending audio out to K-Mix outputs 9 & 10. It is important to note that *only* audio coming from a computer can be sent directly to the extra headphone output channels; audio going into K-Mix's analog inputs cannot be sent directly to these output channels.



## CAN I COMBINE MULTIPLE K-MIX INTO A SINGLE AGGREGATE DEVICE?

Yes, on Mac OS X it is fairly simple to create an aggregate audio device, combining the inputs and outputs from multiple audio interfaces into a single, addressable audio device.

There are two parts to this process:

### CONNECTING K-MIX

The first part of the process is hooking up your K-Mix to your computer and powering them up.

1. Connect the **Audio** USB port on K-Mix #1 to an available USB port on your computer using a micro-USB cable. I recommend using the cable that shipped with your K-Mix as it was created to ensure it meets the specs required for proper K-Mix operation. Sadly, not all USB cables are created equal.
2. Power up K-Mix #1 by pressing its power button.
3. Repeat steps 1 and 2 for K-Mix #2 (and any others if you're using more than two).

**NOTE:** If you're using more K-Mix than there are available USB ports, please use a powered USB hub; an unpowered hub will not be able to provide enough power to your K-Mix.

### SETTING UP THE AGGREGATE DEVICE

The next step is to create and set up the aggregate device.

1. Open the Audio MIDI Setup application located in your Utilities folder (/Applications/Utilities). A quick way to get to the Utilities folder is to open a **Finder** window, open the **Go** menu up top, and select **Utilities**.
2. Once Audio MIDI Setup is open, click the Add (+) button on the bottom-left corner in the Audio Devices window and select "Create Aggregate Device".
3. A new aggregate device appears in the list of audio devices on the left side of the window. By default it is given the very original name of "Aggregate Device". You can rename the device by double-clicking it.
4. Make sure the aggregate device is currently selected on the left side of the window. If it isn't, click it.
5. Add your K-Mix to the aggregate device by checking the "Use" checkbox for each K-Mix. The order in which you check the boxes determines the order of inputs and outputs. The first checked K-Mix corresponds to inputs 1-8 and outputs 1-10, the second checked K-Mix corresponds to inputs 9-16 and outputs 11-20, etc.
6. Check the Drift Correction checkbox for any K-Mix that are not designated master clock; this is to ensure all devices in the aggregate device will remain in sync and do not drift apart from one another. There is an image of a clock next to the current master clock device on the left side of the window. There is an image of a sine wave next to any device with Drift Correction enabled.
7. You're done! Your aggregate device is now ready to be put to use in your audio software of choice.

# Safety Precautions





## MEDICAL DEVICES

K-Mix may emit electromagnetic fields. These electromagnetic fields may interfere with pacemakers or other medical devices. If you wear a pacemaker, maintain at least 6 inches (approximately 15cm) of separation between your pacemaker and K-Mix. If you suspect K-Mix is interfering with your pacemaker or any other medical device, stop using K-Mix and consult your physician for information specific to your medical device.

## MEDICAL CONDITIONS

If you have any medical condition that you believe could be affected by K-Mix (for example, seizures, blackouts, eyestrain, or headaches), consult with your physician prior to using K-Mix.

## EXPLOSIVE ATMOSPHERES

Do not use K-Mix in any area with a potentially explosive atmosphere, such as a fueling area, or in areas where the air contains chemicals or particles (such as grain, dust, or metal powders). Obey all signs and instructions.

## REPETITIVE MOTION

When you perform repetitive activities (such as adjusting the K-Mix faders), you may experience occasional discomfort in your hands, arms, wrists, shoulders, neck, or other parts of your body. If you experience discomfort, stop using K-Mix and consult a physician.

## HIGH-CONSEQUENCE ACTIVITIES

K-Mix is not intended for use where the failure of the device could lead to death, personal injury, or severe environmental damage.

## CHOKING HAZARD

Some K-Mix accessories may present a choking hazard to small children. Keep these accessories away from small children.