



SSL 18 User Guide



Introduction to SSL 18

26-in/28-out, high-performance USB audio interface

Introducing SSL 18, the head of state in Solid State Logic's celebrated line of USB audio interfaces. Building upon the success of SSL 2/2 MK II and SSL 12, SSL 18 raises expectations for 19" USB audio interfaces, with exemplary audio performance and a studio-session-ready feature set that caters for engineers and producers who demand the highest possible standards for their music. Its effortless integration with other professional equipment makes it the ultimate centrepiece for the serious project studio, whether you are recording, producing or mixing. SSL 18 doesn't need flashy gimmicks— just that rock-solid, world-class SSL sound that we all know and love.

Why Choose SSL 18?

Best-In-Class Audio Performance

Next generation 32-bit/192 kHz converters provide the platform for SSL 18's analogue design to shine, with unrivalled dynamic range performance of 120 dB across all microphone, line-level and instrument inputs – capture your sources like never before. Then, experience an incredible 125 dB dynamic range on the monitor and line outputs to hear your music with uncompromised fidelity. Need to work on headphones? No problem, with the unbeatable 120 dB dynamic range on offer from the dual-headphone outputs.

The Ultimate Studio Hub

SSL 18 is the only product in its category that is designed to properly integrate with professional outboard gear, thanks to the +24 dBu capable inputs and outputs. What's more, all analogue outputs are DC-coupled, making them ideal for sending control voltages to synthesisers. A host of digital audio connections means that SSL 18 is ready to expand your I/O count whenever you are, with an additional 16 channels via

ADAT and a further 2 via S/PDIF.

19” Rack Personal SSL Recording Studio

SSL 18 has all the flexibility you’d expect from an SSL equipped studio: a dedicated talkback input with the famous LMC (Listen Mic Compressor), alternative speaker switching, flexible headphone outputs that can be reconfigured to work with any set of headphones and the ability to re-purpose outputs 9 and 10 as analogue insert sends on inputs 1 and 2, perfect for tracking with analogue processing in-line.

SSL 18 Mixer Powered by SSL 360°

The SSL 18’s on-board low-latency mixer is controlled via SSL 360° – the place where you can dial in headphone mixes, adjust metering preferences, customise the front panel buttons and much more. Think of it as your virtual SSL console environment, perfect for managing busy sessions all from one place.

Engineered For Excellence

Designed by the same engineering team behind the esteemed range of analogue and digital mixing consoles, SSL’s rich heritage and know-how for multi-track audio is laced throughout the design. From the class-leading microphone preamps to the choice of industry-grade components like Alps® pots and Neutrik® connectors, SSL 18 delivers the kind of quality you’d expect from a world-class recording studio, directly to your own studio.

Features

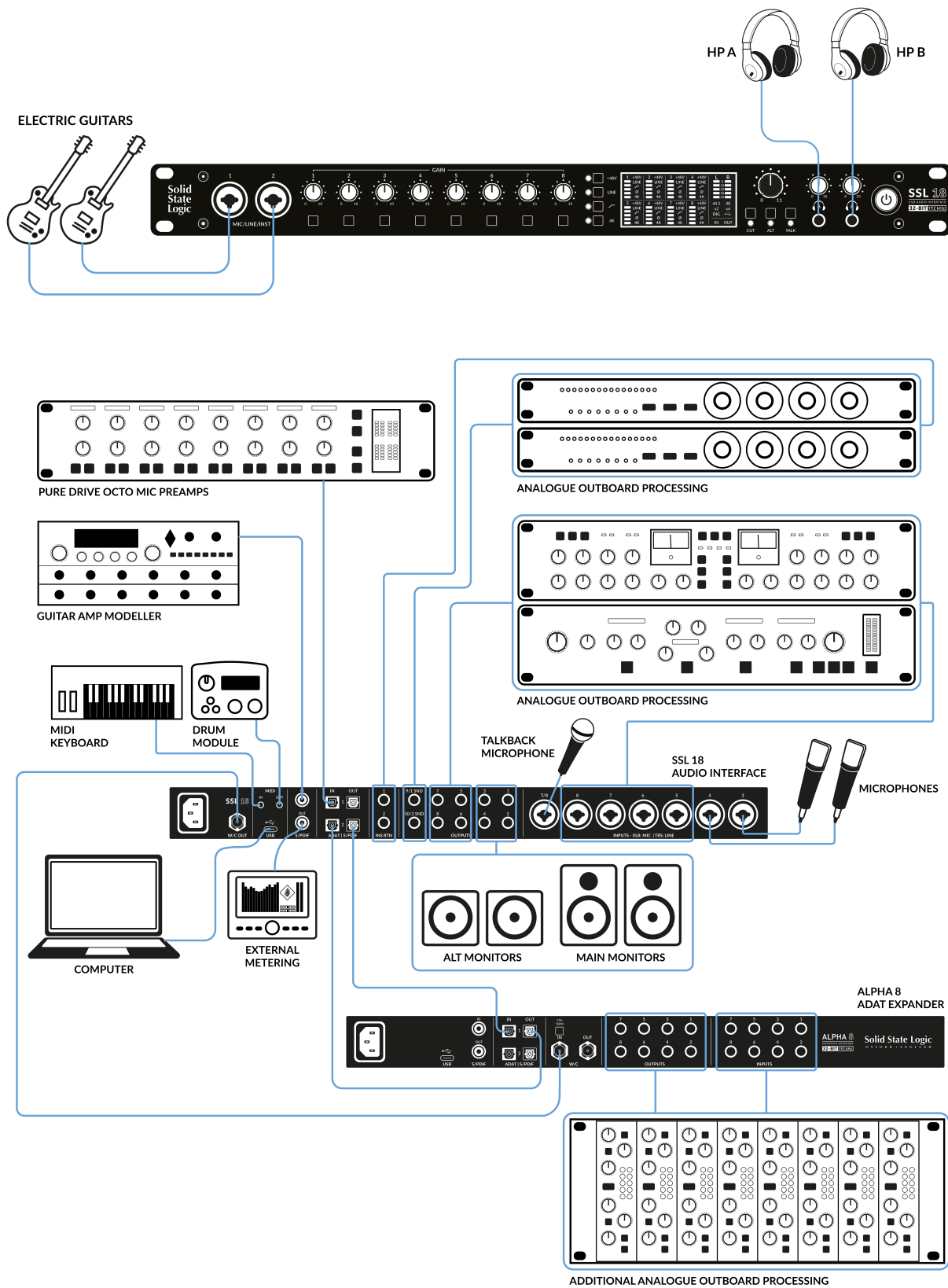
- 26-in/28-out USB audio interface for Mac and Windows.
- 8 x SSL-designed microphone/line-level inputs.
 - 4K analogue enhancement, Polarity Invert, High-Pass Filters and 48V Phantom Power per channel.
 - Line inputs bypass pre-amp – perfect for integrating external pre-amps. Configurable analogue insert points for inputs 1 and 2, great for tracking with analogue gear.
 - Inputs 1 and 2 switchable to instrument-level.
- 10 x DC-coupled, balanced line-outputs
 - Alternative speaker switching available for pairs 1&2 and 3&4.
 - +9 dBu/+24 dBu output level configuration options for pairs 1&2 and 3&4 to best match your monitors.
 - DC-coupled outputs are perfect for sending control voltages to synthesisers and modular rigs.

- 2 x independent, powerful headphone outputs with dedicated level controls
 - 3 mode options to suit different headphone impedances – Standard, High Sensitivity, High Impedance.
 - Create custom headphone mixes.
 - Re-purpose as line outputs.
- Dedicated Talkback input with Listen Mic Compressor (LMC).

Talkback input can also be used in LINE mode for creative processing of stems through the LMC when mixing.
- +24 dBu operating level for inputs and outputs - perfect for integrating professional outboard gear as hardware inserts.
- 16 channels of ADAT I/O at 44.1/48 kHz, 8 channels at 96 kHz.
- 2 channels of S/PDIF (coaxial or optical).
- MIDI I/O on 3.5 mm TRS jacks (Type A).
- Flexible clocking options - internal (clock signal available on Wordclock, ADAT or S/PDIF output), or clock from incoming ADAT or S/PDIF.
- Next-generation 32-bit/192 kHz converters.
- Class-leading audio performance in every area
 - Best-in-class low-noise microphone pre-amps with outstanding –130.5 dBu EIN and 67 dB gain range for working with any microphone.
 - Best-in-class 120 dB dynamic range across all inputs & headphone outputs.
 - Best-in-class 125 dB dynamic range on monitor and line outputs.
- SSL 18 Low-Latency Mixer powered by SSL 360°
 - Comprehensive management of all inputs and outputs onto the SSL 18 low-latency mixer.
 - Create and manage the control room monitor mix.
 - Create 4 custom monitor mixes with ease – HP A (stereo), HP B (stereo), LINE 3-4 (stereo or dual mono).
 - Flexible Mirror Routing system to route any input or aux master directly to an output - perfect for feeding personal monitoring systems, external metering and outboard FX.
 - Customise the monitoring section front panel buttons to suit your workflow
 - Defaults are CUT monitoring, ALT monitor switching and TALKBACK on/off
 - Save/Load SSL 18 Mixer profiles for various workflows – e.g. create tracking templates, mixing templates etc.
 - Custom Monitor Control Assignment - choose which of the 10 analogue outputs and/or the S/PDIF output are affected by the front panel monitor control - perfect for surround/immersive monitoring. Or, disable the monitor control entirely (360 v2 and above).
- Stereo Loopback with selectable loopback source.
- SSL Production Pack Software Bundle

Includes the SSL Production Pack Software Bundle - an exclusive collection of DAWs, Virtual Instruments and Plug-ins.

Connections Overview



Getting Started

Unpacking

The unit has been carefully packed and inside the box you will find the following items:

- SSL 18
- Safety Guide
- USB 'C' to 'C' USB Cable
- USB 'C' to 'A' adapter
- IEC Power Cable for your region

USB Cables & Power

Please connect the SSL 18 to your computer using the provided USB cable. The USB connector on the rear of SSL 18 is a 'C' type. The type of USB port you have available on your computer will determine if the USB C to A adapter is required. Newer computers may have 'C' ports, whereas older computers may have 'A'.

For best stability and performance, we recommend using the included USB cable & adapter if you need it. It should be possible to use a longer cable, however this does depend on the quality of the cable (cables with lower-quality conductors tend to drop more voltage over the cable length).

Registering Your SSL 18

Registering your SSL 18 USB Audio interface will grant you access to an array of exclusive software from us and other industry-leading software companies - we call this incredible bundle the 'SSL Production Pack'.

<http://www.solidstatelogic.com/get-started>



To register your product, head to www.solidstatelogic.com/get-started and follow the

on-screen instructions. During the registration process, you'll need to input the serial number of your unit. This can be found on the label on the base of your unit as displayed below.

XXX-XXXXXX-XXXXXXXXXXXXX
SERIAL NUMBER

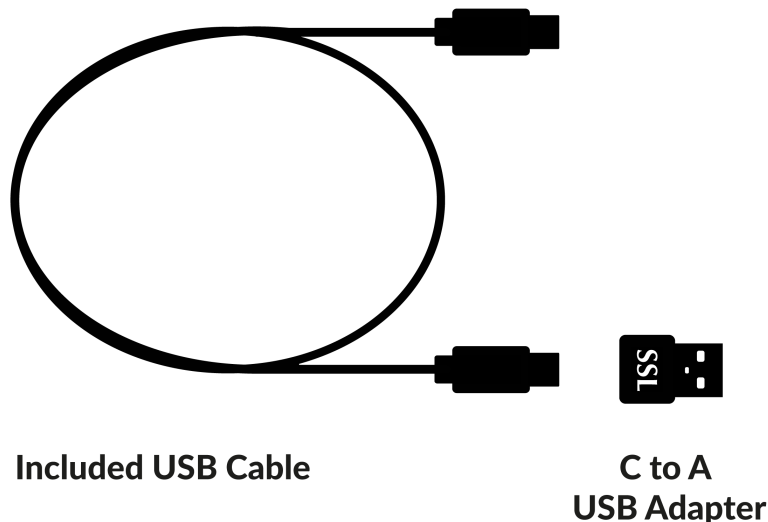
Please note: the serial number begins with the letters 'S18'

Once you have completed registration, all of your software content will be available in your logged-in user area. You can return to this area at any time by logging back into your SSL account at www.solidstatellogic.com/login should you wish to download the software another time.

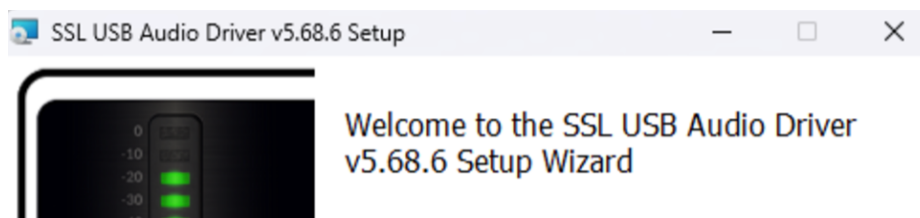
Quick-Start

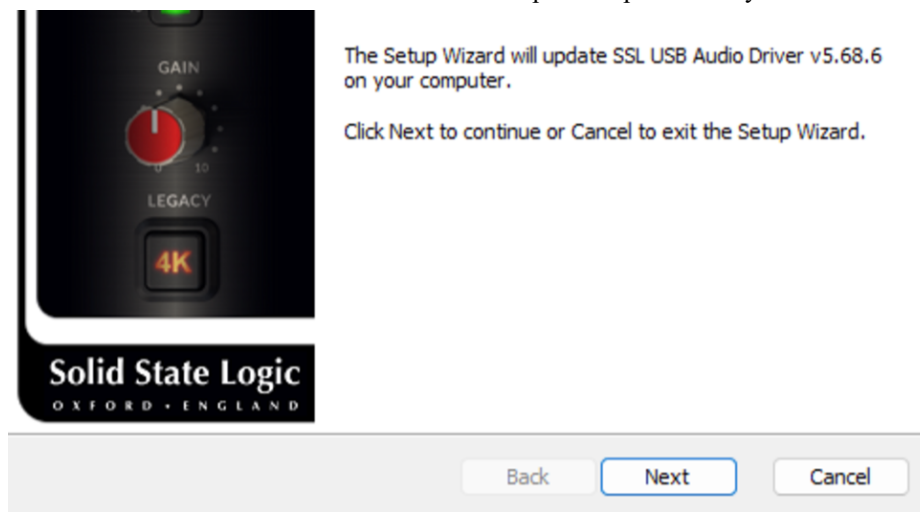
Driver Installation

1. Connect your SSL USB audio interface to your computer using the included USB cable.



2. (Windows) Download and install the SSL 18 USB ASIO/WDM Driver for your SSL 18.





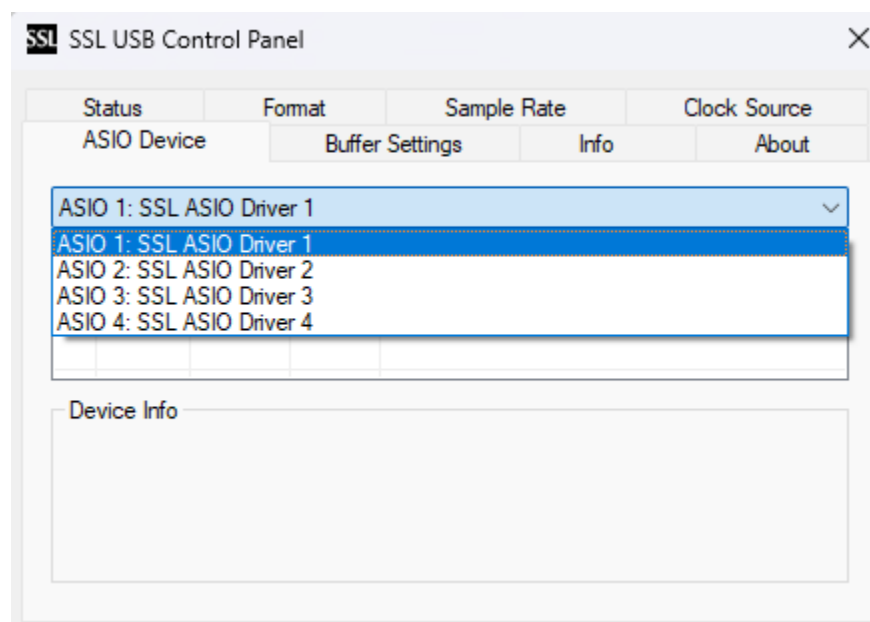
SSL USB Control Panel (Windows Only)

If you're working on Windows and have installed the USB Audio Driver required to make the unit operational, you will have noticed that as part of the installation the SSL USB Control Panel will be installed onto your computer.

This Control Panel will report details such as the Sample Rate and the Buffer Size your SSL 18 is running at. Please note that your DAW will take control of both the Sample Rate and Buffer Size when it is opened.

The SSL USB Control also allows access to Clock source settings which are optional between the internal clock, ADAT (Optical 1) or S/PDIF (Coaxial). Clock settings are also assignable within the 360 Mixer Page.

The Control Panel is also where you can assign your SSL 18 to an ASIO Device; allowing multiple ASIO applications working with multiple SSL USB devices to be used on a single system or in a multi client environment.



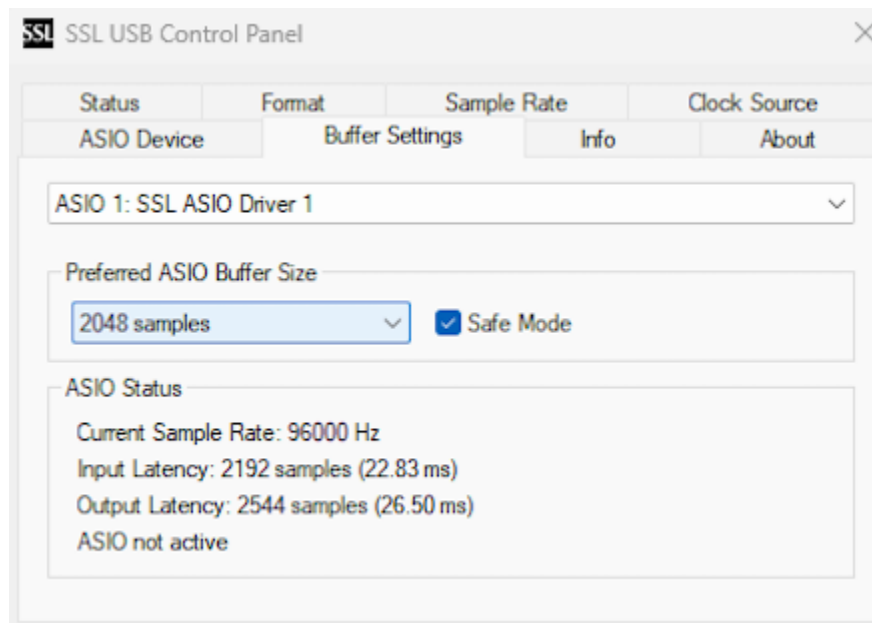
Please refer to this [article](#) for a detailed explanation of linking your interface to one of

the 4 ASIO driver slots to SSL 18.

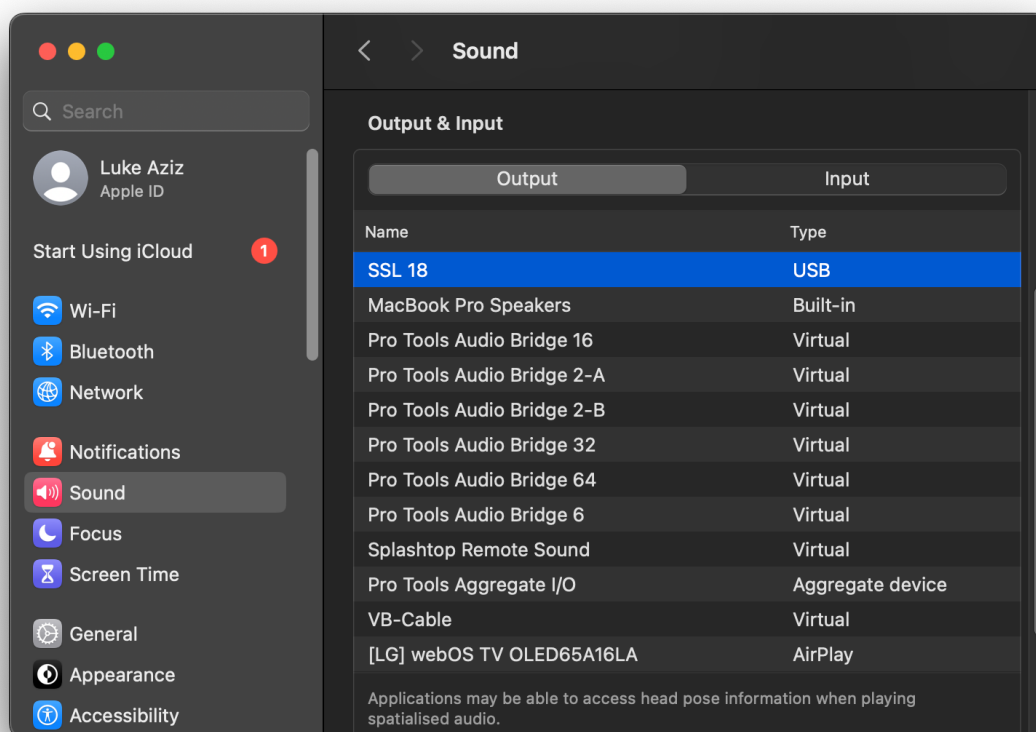
Safe Mode

Safe Mode can be controlled from the SSL USB Control panel using the tickbox on the 'Buffer Settings' tab. Safe mode defaults to ticked but can be unticked. Unticking Safe Mode will reduce the overall Output Latency of the device, which may be useful if you are looking to achieve the lowest possible round-trip latency in your recording.

However, unticking this box may cause unexpected audio clicks/pops if your system is under strain.

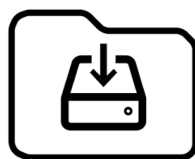


3. (Mac) Simply go to 'System Preferences' then 'Sound' and select 'SSL 18' as the input and output device (drivers are not required for operation on Mac).



Downloading SSL 360° Software

For full control of SSL 18 and its Low-Latency Mixer, you'll need to install SSL 360°. SSL 360° is the brain behind your SSL 18 Mixer and controls internal routing and monitoring configuration. Once you have connected your SSL 18 hardware to your computer as described on the previous page, please download SSL 360° from the SSL website.



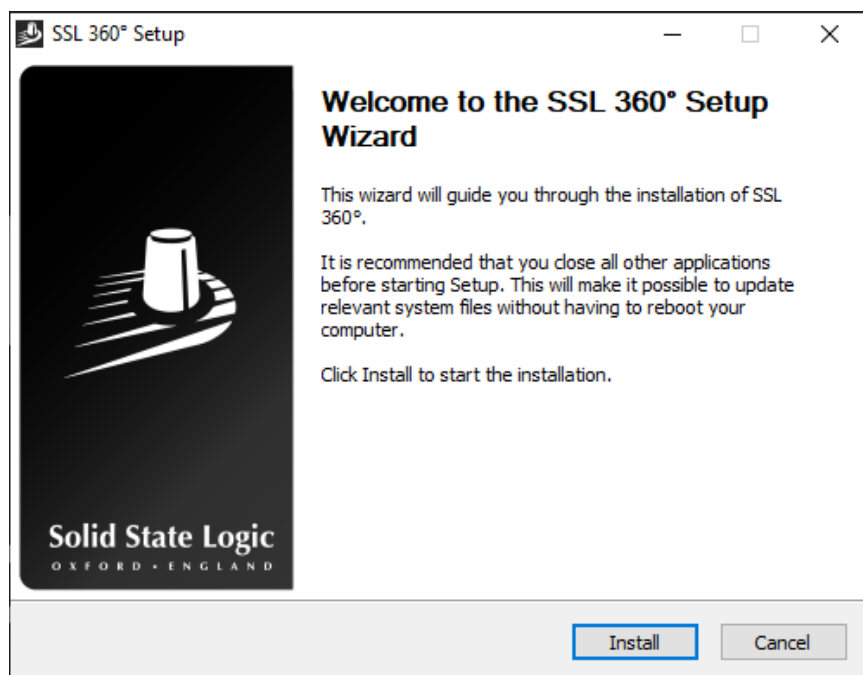
SSL 360°

<http://www.solidstatellogic.com/support/downloads>

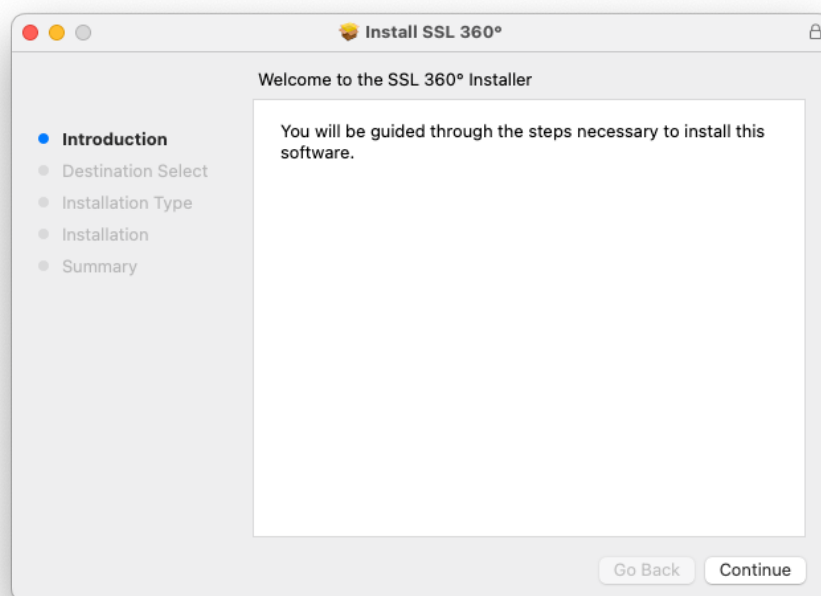


Download SSL 360 from SSL Download Manager application or directly from here.

Installing SSL 360° Software



1. Locate the downloaded SSL 360°.exe on your computer.
2. Double-click to run the SSL 360°.exe.
3. Proceed with the installation, following the on-screen instructions.



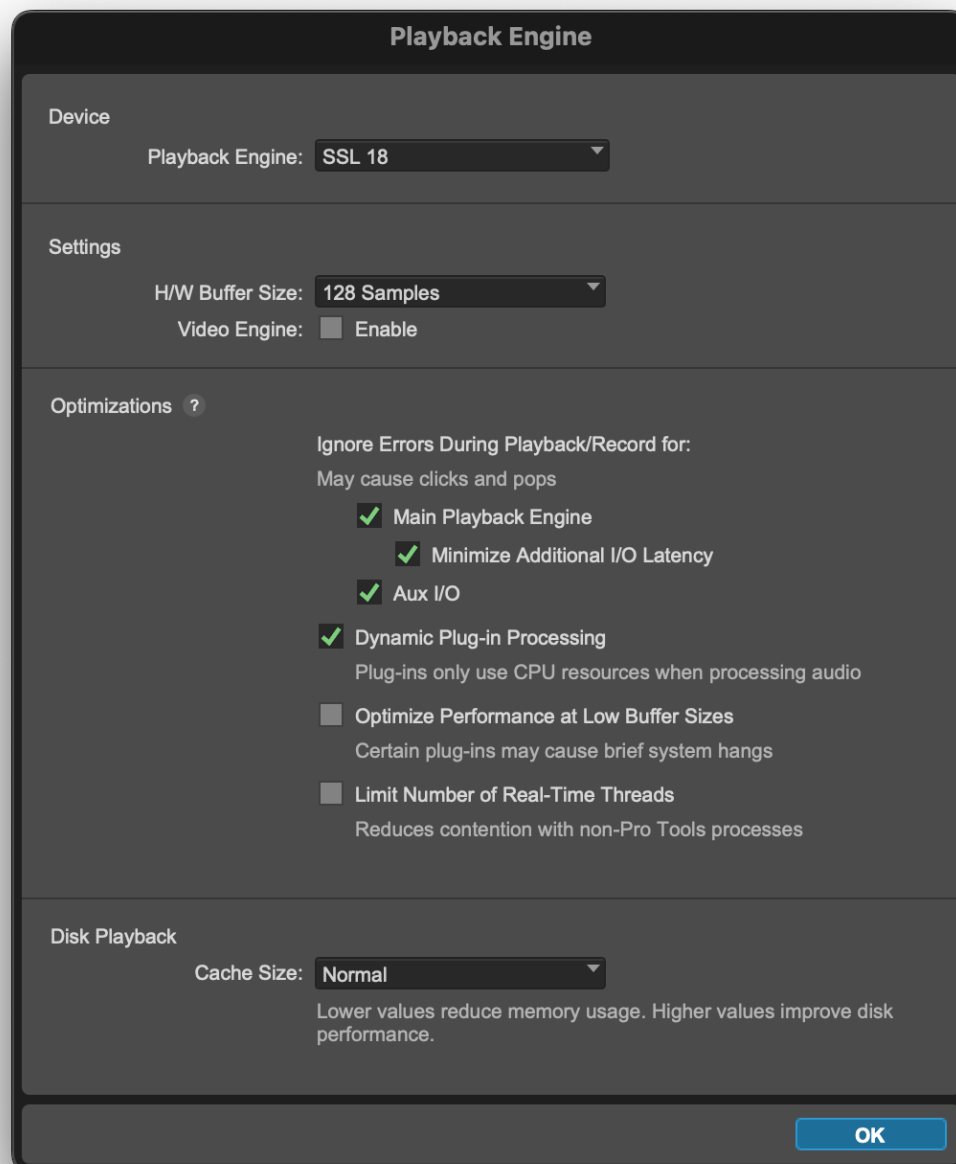
1. Locate the downloaded SSL 360°.dmg on your computer.

2. Double-click to open the .dmg
3. Double-click to run the SSL 360°.pkg
4. Proceed with the installation, following the on-screen instructions.

Selecting SSL 18 As Your DAW's Audio Device

If you have followed the Quick-Start / Installation section then you are ready to open up your favourite DAW and start creating. You can of course use any DAW that supports Core Audio on Mac or ASIO/WDM on Windows.

No matter which DAW you are using, you need to ensure that SSL 18 is selected as your audio device in the audio preferences/playback settings. Below is an example in Pro Tools. If you are unsure, please refer to your DAW's User Guide to see where these options can be found.



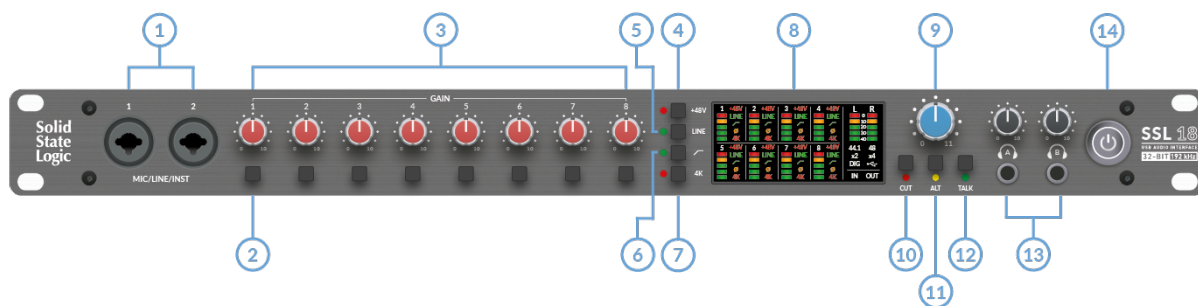
Pro Tools Example

Open up Pro Tools and go to the 'Setup' menu and choose 'Playback Engine...'. Make sure that SSL 18 is selected as the 'Playback Engine' and that 'Default Output' is Output 1-2 because these are the outputs that will be connected to your monitors.

Note: On Windows, ensure that 'Playback Engine' is set to 'SSL 18 ASIO' for the best possible performance.

SSL 18 Front Panel Controls

Input Channels



1. INPUTS 1 & 2

The pair of combo XLR/Jack inputs accept Mic level (XLR), Line-Level (TRS) or Instrument signals (TS). Mic/Line switching can be done from the front panel or via the SSL 18 Mixer software in SSL 360°. The Instrument input is switched in via the SSL 18 Mixer software only. When working with Channels 1 & 2 and when switched to Instrument Input, LINE will switch to Yellow to indicate it is operating in Instrument Mode fed from the front XLR/Jack inputs 1-2.

Instrument level mode allows Guitars & Basses to be recorded without the need for an external D.I.

Inputs 3-8 + Talkback are found on the rear panel.

2. CHANNEL SELECT

Allows you to select an analogue input channel (1-8). Once selected, you can toggle the following functions of the selected channel on/off using the buttons in the centre of the panel: **+48V**, **MIC/LINE**, **HIGH PASS FILTER**, **POLARITY INVERT** & **4K MODE**

3. GAIN

This control adjusts the pre-amp gain applied to your microphone, line-level or instrument signal. Adjust this control so that your source is lighting all 3 green LEDs

most of the time whilst you are singing/playing your instrument. This will give you a healthy recording level into the computer.

4. +48V

This switch enables/disables phantom power for the selected channel. When engaging/disengaging +48V, the LED blinks a couple of times and the audio is temporarily muted to avoid any unwanted audio clicks/pops. Phantom power is required when using Condenser microphones or certain active Ribbon mics. Dynamic or Passive Ribbon microphones do not require phantom power to operate, and in some cases can cause damage to the microphone. If in doubt, make sure +48V is off before plugging in any microphone and consult the manufacturers user manual to ensure correct operation.

Note: The function of the **+48V** button cannot be changed in SSL 360°.

5. LINE

This switch toggles the input of the selected channel between Mic and Line. Line-level sources (such as keyboards and synth modules) must be connected to the jack part of the input socket. The LINE input bypasses the pre-amp section. Use the **LINE** input to connect the output of an external pre-amp if required. When operating in LINE mode, the GAIN control provides up to 17.5 dB of clean gain as opposed to up to 67 dB when in **MIC** mode.

6. HIGH-PASS FILTER

This switch toggles the High Pass Filter of the selected channel on/off. This is ideal for removing unwanted low-end frequencies from an input signal and cleaning up unnecessary rumble. The filter is set at 75 Hz with a 18 dB/octave slope.

7. LEGACY 4K - ANALOGUE ENHANCEMENT

This switch toggles the 4K analogue enhancement processing on/off for the selected channel, allowing you to add some extra analogue 'magic' to your inputs when you need it. It injects a combination of high-frequency EQ-boost, together with some finely tuned harmonic distortion to help enhance sounds. We have found it to be particularly pleasant on sources such as vocals and acoustic guitar. This enhancement effect is created completely in the analogue domain and is inspired by the kind of extra character the legendary SL 4000 series console (often referred to as the '4K') could add to a recording. The 4K was renowned for its many qualities, including a distinctive 'forward', yet musical-sounding EQ, as well as its ability to impart a certain analogue 'mojo'. You will find that most sources become more exciting when the 4K switch is engaged!

Note: the **LINE**, **HIGH-PASS FILTER** & **4K** buttons can be re-assigned using 360°. e.g. You could change any of these default assignments to toggle the **POLARITY INVERT** function for the selected channel.

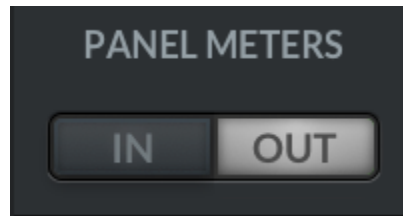
8. LED METERING

8x5 LED columns show the input or output level of analogue inputs 1-8. If set to input, it is good practice to aim for the '-20' mark (the third green meter point) when recording. Occasionally going into '-10' is fine. If your signal is hitting '0' (top red LED), that means it's clipping, so you'll need to lower the GAIN control or output from your instrument. Scale markings are in dBFS.

Dedicated meters for the Left and Right outputs (outputs 1-2) are located on the right-hand side.

Beneath the output meters, the LED Panel also displays information regarding the current operating sample rate, with 44.1 & 48 kHz rates followed by a x2 that will highlight in conjunction with 44.1 to denote 88.2 kHz & 48 & 2x for 96 kHz, and a 4x for 172.4 & 192 kHz.

Clock source information is displayed via LEDs with DIGI indicating external clocking via ADAT or S/PDIF and the USB LED icon indicating Internal clocking. IN or OUT LEDs indicate that the meters are showing the Input or Output signal, controllable via the SSL 18 360° Mixer page.



Monitor Controls

9. MONITOR LEVEL (Blue Control)

By default, the monitor level directly affects the level sent out of **OUTPUTS 1** (Left) and **2** (Right) to your monitors. Turn the knob clockwise to make the volume louder. Please note the monitor level goes to 11 because it's one louder...

Note that if ALT SPK mode is engaged, Monitors connected to **OUTPUTS 3 & 4** will also be controlled via the Monitor Level Control.

The firmware update included as part of SSL 360 v2 allows the monitor level control to affect any/all of SSL 18's 10 analogue outputs, as well as the S/PDIF output. Or, you can disable the monitor control entirely. This is configured in the SSL 18 settings menu under **MONITOR CONTROL ASSIGNMENT**.

10. CUT

This button mutes the Monitor Output signal.

11. ALT

Switches the Monitor Bus to an alternative set of monitor speakers that you have connected to **OUTPUTS 3&4**. To do this ALT SPK ENABLE must be active in SSL 360°.

11. TALK

This button engages the on-board Talkback mic input. The signal can be routed to any combination of Headphones A, Headphones B and Line 3-4 (providing Line 3-4 is not being used as ALT monitors) in the SSL 18 Mixer page of SSL 360°.

*Please Note: Interface buttons annotated as **10, 11 & 12** in the description are also user-assignable using SSL 360° but their default function is as indicated by the silk screening on the front panel: **CUT, ALT, TALK**. To re-assign the function of these buttons, go to SSL 360° and right-click on the buttons in the GUI - a list of assignable functions will appear.*

12. HEADPHONE OUTPUTS

HP A & B allow for two sets of headphones to be connected, both of which can be configured to allow independent mixes for artist and engineer. By default, both will follow control room monitor mix (so you can listen to music or your DAW). To make them independent mixes (fed from HP A and HP B busses), disable the **"Follow Mix 1-2"** button in SSL 360°.

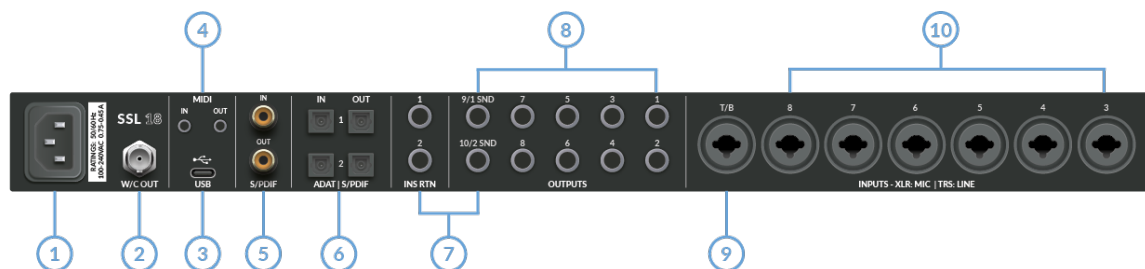
The master output levels are set by the **HP A** and **HP B** controls on the front panel.

SSL 360° allows you to configure the output power of **HP A** and **HP B** to best suit different headphone impedances. See the SSL 360° SSL 18 Mixer section for more information.

14. POWER

The power button toggles power on/off to the unit.

SSL 18 Rear Panel Controls



1. POWER

IEC Power Inlet.

2. WORD CLOCK OUT

Wordclock Out 75 Ohm BNC Connection.

3. USB

USB 'C' Type Connector - connect SSL 18 to your computer using the included USB cable.

4. MIDI IN & OUT

The MIDI (TRS Mini-Jack 'Type A' standard) IN & OUT allow the SSL 18 to be used as a MIDI interface. **MIDI IN** will receive MIDI signals from keyboards or controllers and **MIDI OUT** allows MIDI information to be sent out to trigger synths, drum machines or any MIDI-controllable equipment you have available.

Note: 'Type B' MIDI TRS Jacks will not work. 'Type A' must be used.

5. COAXIAL S/PDIF I/O

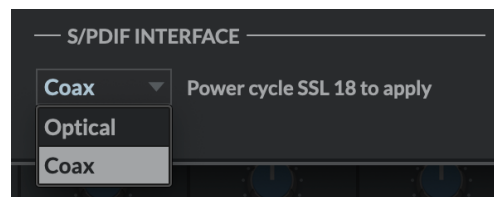
The S/PDIF digital audio input and output connections are via coaxial connectors and can operate at all sample rates up to and including 192 kHz.

6. OPTICAL ADAT | S/PDIF I/O

4 optical ports allow for up to 16 channels of additional digital audio inputs and outputs via ADAT at 44.1/48 kHz or 8 channels at 88.2/96 kHz. ADAT is not supported at 176.4/192 kHz.

Optical **IN 2** and **OUT 2** can be configured for S/PDIF I/O if your S/PDIF equipment only has optical connections and no coaxial input.

The 360° mixer allows you to switch S/PDIF connections between Coaxial & Optical connections under the settings tab. A power cycle is required to apply the changes.



7. INS RTN 1 & 2

The jack sockets labelled '**INS RTN 1 & 2**' are insert return paths for analogue inputs 1 & 2. Next to these are outputs labelled **9/1 SND** & **10/2 SND**.

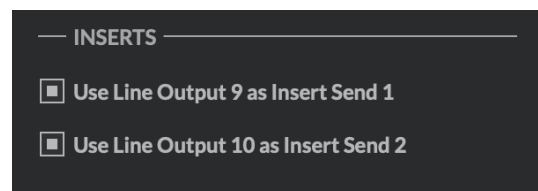
By default, these act as standard outputs 9 and 10 from SSL 18. However, in the SSL 360° SSL 18 Mixer Settings menu, you can re-purpose the outputs to be used as

inserts sends that are moved from the outputs, to be placed in the record path of analogue inputs 1 & 2. Once this is configured, you will see **INSERT** buttons in the SSL 18 Mixer page that you can engage/disengage. This feature allows you to track with external processing in the input path - like recording 'to tape' with analogue processing on inputs 1 and 2. When Channels 1 & 2 are arranged in Stereo, INSERTS 1 & 2 can be used as a stereo pair for sources such as Master Bus Processing or on Stereo sources like Drum Overheads or Keyboards.

In the Mixer page, the Insert buttons, available **ONLY** on channels 1 & 2, are seen here in the Fader Tray.

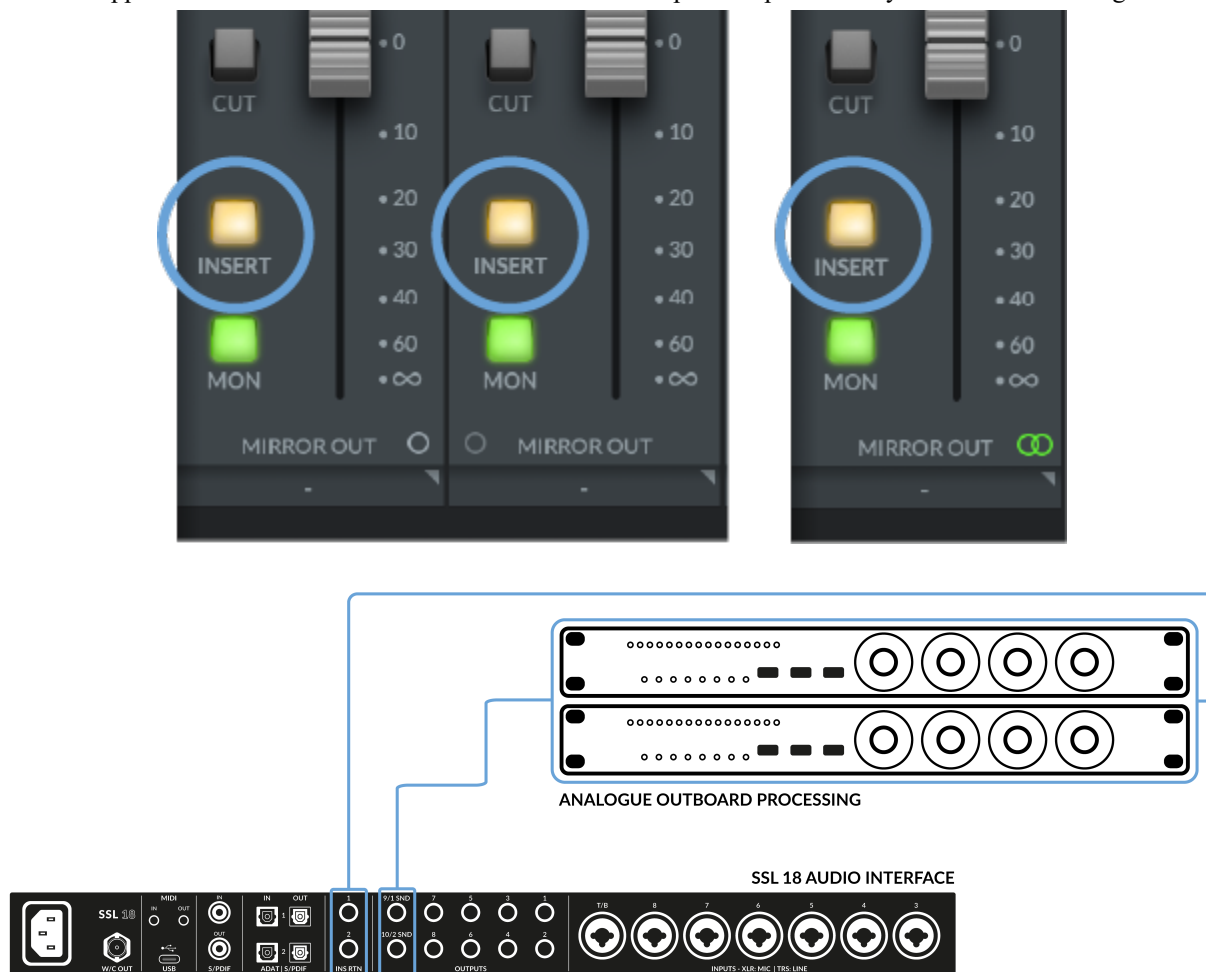


The Insert button will be greyed out until the INSERTS are configured in the settings menu and 'Use Line Output 9/10 as Insert Send 1/2' are both selected.



The Insert Buttons will now be available to select, illuminating yellow when active.





The diagram above shows the routing connections for the INSERTS on the back of the Interface.

8. 10 x BALANCED OUTPUTS 1/4" TRS Jack Output Sockets

Outputs 1 & 2 are primarily used for your main monitors and the physical volume is controlled by the Monitor Knob on the front of the Interface. Outputs 3 & 4 can be set up as a secondary **ALT** pair of monitors (switchable to be controlled by the Monitor Knob when the **ALT** button is engaged).

Output Pairs 1&2 and 3&4 can be switched between +24 dBu and +9 dBu via SSL 360°.

Outputs 5-10 are fixed at professional +24 dBu output operating levels.

All Outputs (including headphone outputs) are also DC-coupled and able to send +/-5v signal to allow CV control to Semi & Modular Synths, Eurorack and CV-enabled outboard FX. **Please Note:** More information is available in the CV Control via Ableton® Live CV Tools section in this User Guide.

A few things to be aware of when using the DC-coupled outputs:

When using output 1-2 for CV output, remember the Monitor Control Knob is still affecting the signal. Some experimentation on finding the best level for your connected

CV controlled synth/FX unit may be required.

Meters in the 360° Mixer are DC-coupled hence you can still expect them to work and show a DC signal.

9. T/B INPUT

The talkback input is a combo XLR / 1/4" Jack socket - Mic level input is via XLR and Line-Level input is via TRS.

This dedicated talkback input is provided with the Listen Mic Compressor (LMC) which is engaged/disengaged via SSL 360°.

The Talkback input has a built-in pre-amp with 3 fixed gain settings to choose from via the SSL 18 Mixer: 30/40/50 dB.

+48V can be engaged if your talkback microphone requires it.

Uniquely, the talkback input can be switched to **LINE** input mode (TRS jack connection), which is helpful if you want to use an external talkback mic pre-amp. Alternatively the LINE input mode may also be used for re-processing sterile stems to provide that classic 'smashed' compression effect.

10. INPUTS 3-8

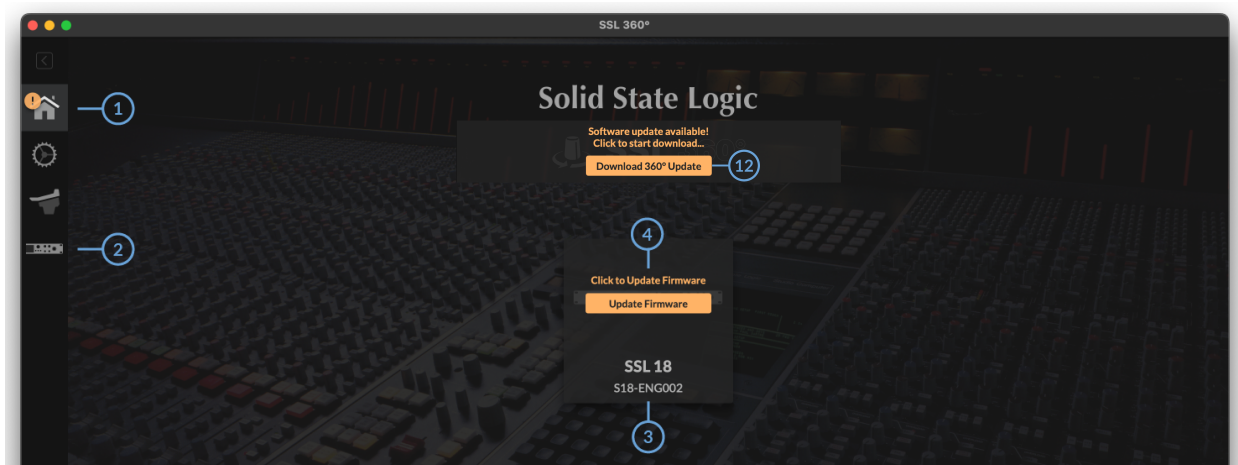
Inputs 3-8 are via combo XLR / 1/4" Jack sockets accepting Mic-level inputs on XLR and Line-level inputs on TRS.

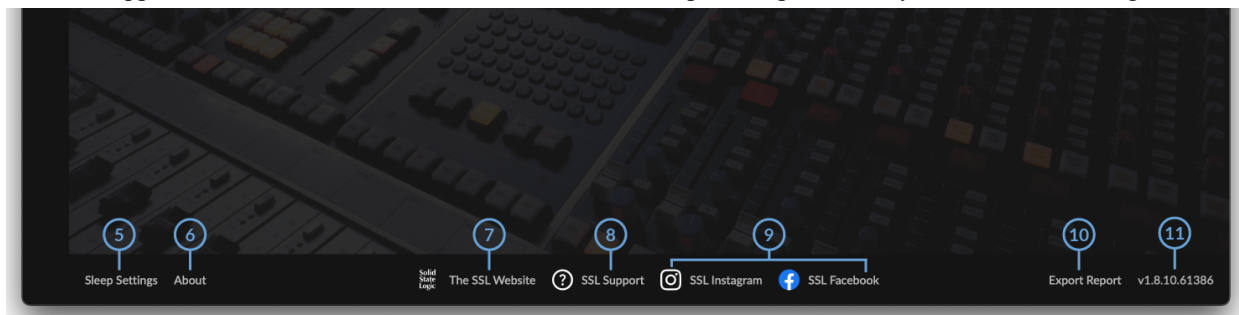
Mic/Line switching is available from the front panel (see **2. Channel Select** under **SSL 18 Front Panel Controls**) or via the SSL 18 Mixer software in SSL 360°.

SSL 360°

Overview & Home Page

SSL 18 is configured via the SSL 18 page in SSL 360°. SSL 360° is a cross-platform Mac and Windows application that also manages other SSL 360° enabled products.





The Home Screen

1. Menu Toolbar

This toolbar allows you to navigate through the various pages of SSL 360°.

2. SSL 18 Mixer

This tab opens the SSL 18 Interface Mixer; allowing for management of the following functions for the SSL 18 interface in your system:

- Routing
- Input channel and playback management
- Monitor controls and settings

More information on the SSL 18 360° Mixer is detailed in the next chapter.

3. Connected Units

This area shows if you have SSL 360° hardware (SSL 18, SSL 12, UF8, UF1 & UC1) connected to your computer, along with its serial number. Please allow 10-15 seconds for units to be discovered once they are plugged in.

4. Firmware Updates Area

If a firmware update becomes available for your SSL 18 unit, then an Update Firmware button will appear below each unit. Click on the button to start the firmware update process, being sure to not disconnect the power or USB cable whilst it is in progress.

5. Sleep Settings (applies only to UF8, UF1 and UC1, not SSL 18)

Clicking this will open a pop-up window that allows you to determine the length of time before your connected 360° control surfaces go into Sleep mode.

6. About

Clicking this will open a pop-up window detailing software licensing relating to SSL 360°.

7. SSL Website

Clicking this link will take you directly to the Solid State Logic website.

8. SSL Support

Clicking this link will take you directly to the Solid State Logic Support website.

9. SSL Socials

The bar at the bottom provides quick links to the SSL Socials keeping you up to date on the latest news, product tutorials and updates about SSL users.

10. Export Report

Should you encounter any issues with your SSL 18 or SSL 360° software, you may be asked by a support agent to use the EXPORT REPORT feature. This feature generates a text file containing the essential information about your computer system and SSL 18, alongside technical log files relating to SSL 360° activity, which may help to diagnose any issues. When you click EXPORT REPORT, you'll be asked to choose a destination on your computer to export the generated .zip file to, which you can then forward onto a support agent.

11. Software Version Number

This area displays the version number of SSL 360° that is running on your computer. Click on the number itself to visit the SSL 360° Release Notes article on the SSL Support site

12. Download 360° Update

When a software update becomes available, the **Download 360° Update** button will appear. Click this to download and update your SSL 360° software.

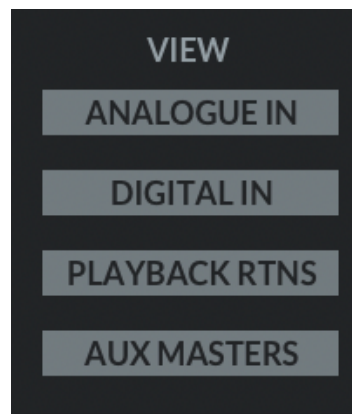
SSL 18 Mixer Page



The SSL 18 Low-Latency Mixer, powered by SSL 360°, allows you to take full control of your sessions:

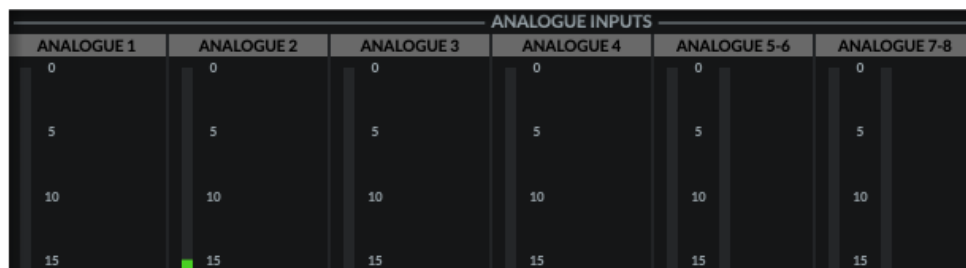
- Comprehensive management of all inputs and outputs onto the SSL 18 low-latency mixer
- Create and manage the control room monitor mix
- Create 4 custom monitor mixes with ease – HP A (stereo), HP B (stereo), LINE 3-4 (stereo or dual mono)
- Flexible Mirror Routing system to route any input or aux master directly to an output – perfect for feeding personal monitoring systems, external metering and outboard FX
- Customise the monitoring section front panel buttons to suit your workflow
Defaults are CUT monitoring, ALT monitor switching and TALKBACK on/off
- Save/Load SSL 18 Mixer profiles for various workflows – e.g. create tracking templates, mixing templates etc
- Custom Monitor Control Assignment - choose which of the 10 analogue outputs and/or the S/PDIF output are affected by the front panel monitor control - perfect for surround/immersive monitoring (360 v2 and above).

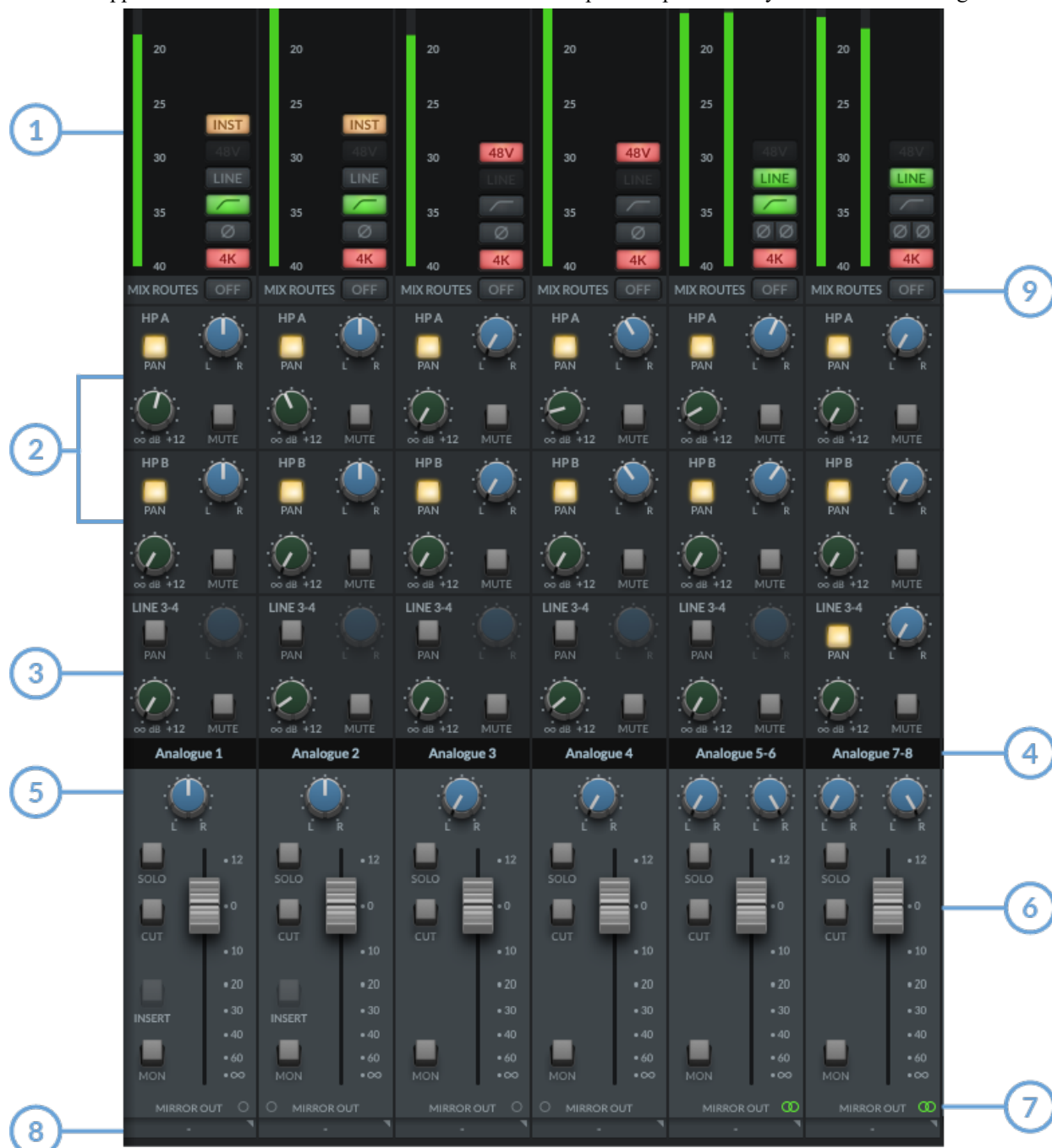
View



Within the mixer, use the **VIEW** buttons on the right-hand side to hide/show different input channel types: Analogue Inputs, Digital Inputs, Playback Returns and the Aux Masters.

Analogue Inputs





1. Meters

The meters indicate the incoming signal level to the channel. A red segment at the top of the meter indicates clipping. Click on the meter to clear the clip indication.

The **+48V**, **LINE**, **HIGH-PASS FILTER**, **POLARITY INVERT** & **4K** functions can be controlled from either the hardware or SSL 18 software mixer.

The INST function (available on Channels 1 & 2) engages the Hi-Z input for recording instruments such as bass guitar. This function is controlled only in the software mixer.

2. Headphone Sends

This is where you can create independent mixes for **HP A**, **HP B** and **LINE 3-4 Outputs**.

- The Green Knob controls the set level for each Aux Bus (HP A, HP B & LINE 3-4).
- The **MUTE** button mutes the send and illuminates red when activated.
- The Pan control allows you to determine the pan position for that send. The **PAN** button must be engaged for the pan to have effect.
- If **PAN** is not engaged, then the send follows the main Monitor bus Pan control in the fader section.

Tips: Shift + Mouse Click sets a send to 0 dB.

Alt + Mouse Click (Mac) or Option+Click (Windows) sets a send to Off.

3. LINE 3-4 Sends

Similar to the headphone sends, the LINE 3-4 sends allow the signal to be routed to Outputs 3-4. When the output channel is stereo linked, a single set of controls for Pan, Level and Mute are presented.

When the output channel is split into dual-mono, independent level controls appear, one for Output 3 and one for Output 4. To split into dual-mono, the link button at the bottom of the LINE 3-4 aux master must be disengaged (see image below).





4. Scribble Strips

These are the text boxes on each channel which by default identify the input/output type and number. These text boxes are editable, allowing each channel in the 360° mixer to be renamed by the user.

To rename the Scribble Strip on the channel, simply double-click on the text box and type your preferred name.

5. Pan

The Pan control determines the position of the signal in the Monitor Bus stereo image.

6. Fader Tray Section

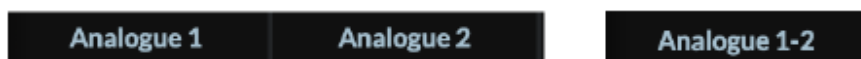
The Fader tray section of the mixer allows control of the signal going out to the **Monitor Bus** & consists of the following parameters.

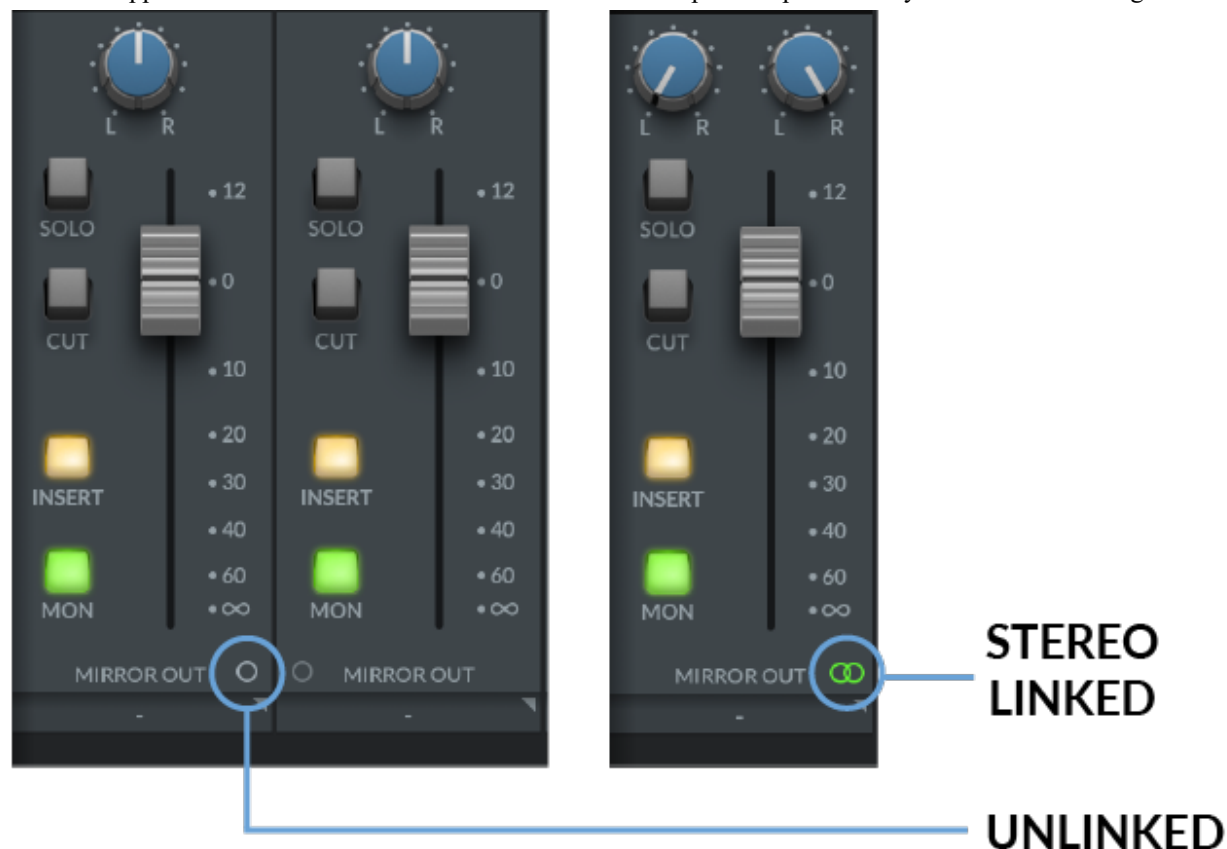
- **PAN** as previously described.
- **SOLO** button, soloing the channel in the Monitor Bus. This illuminates yellow when activated.
- **CUT** button cuts the signal. All post fader sends, the monitor bus and mirror routes are affected. Only pre-fader and record sends to the DAW are unaffected. The button illuminates red when activated.
- **INSERT** button allows the insertion of analogue outboard equipment into the record path for inputs 1 and 2. To do this, Outputs 9 and 10 must be re-configured as insert sends via the SSL 18 settings menu. Note that if the **INSERT** button is greyed out this indicates that outputs 9 and 10 have not been configured as insert sends.
- **MON** button routes the signal onto the **Monitor Bus** (Outputs 1-2).
- The **Fader** controls the level being sent to the **Monitor Bus**, with a range from +12 dB to -Infinity dB

Tip: Shift + Mouse Click sets the fader to 0 dB. Alt + Mouse Click also sets the fader to 0 dB.

7. Stereo Link

Clicking on either 'O' of either of two odd-even paired channels links the pair as stereo and converts the graphic to a single fader for a stereo channel. When activated this 'O' will change to a green linked symbol as shown below:





Note: These controls affect only the playback of the signal via the **Monitor Bus**, they won't affect the signals recorded into your DAW.

8. Mirror Out

Mirror out routes allow you to route any physical input, aux master bus or monitor bus, directly to a physical output.

Click in the **MIRROR OUT** dropdown box at the bottom of the channel and a pop-out list of physical outputs appears. You can then choose which physical output you would like to route that particular input to.

The mirror routing system can be very useful for the following tasks:

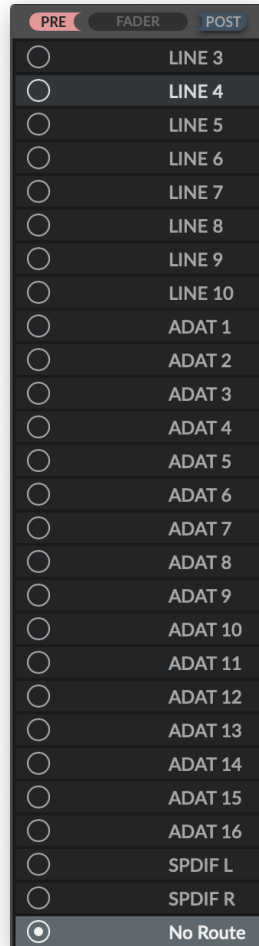
- Configuring SSL 18 as a straight-forward analogue to digital converter
e.g. You could route each analogue input to an ADAT output if using SSL 18 as a 'mic pre expander'.
- Feeding a personal monitor system
- Feeding external hardware metering units
- Feeding external hardware FX processors such as reverbs

An output configured as a mirror output will replace the output from the DAW, e.g. If you are using ADAT output 1 in a mirror route, any signal you attempt to route out of ADAT output 1 in the DAW will not work until you remove ADAT output 1 from use as a

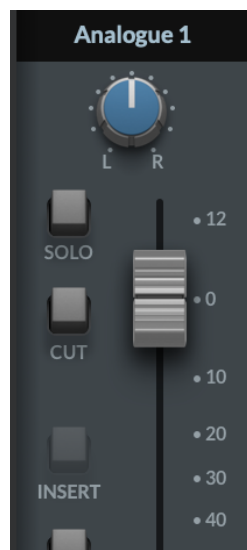
mirror route - select 'No Route' to remove your mirror route.

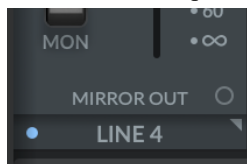
For analogue and digital input channels at 44.1/48 kHz sample rates, each mirror route can be configured as pre or post fader. At 88.2 kHz and above, all mirror routes are pre fader.

Mirror out routes made from aux or monitor busses are always post fader.



Please note - each output configured as a mirror route can only be used once. You cannot route multiple inputs to the same mirror output.





9. MIX ROUTES OFF

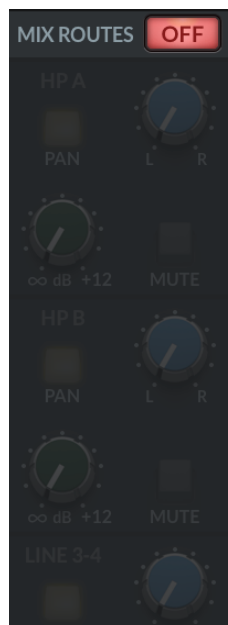
Engaging the **MIX ROUTE OFF** button will prevent the signal from a particular channel from entering the SSL 18 Mixer altogether, and therefore prevent it being routed to the monitor or aux busses.

For Input channels - the signal will still be sent into the DAW regardless of **MIX ROUTES OFF** being engaged.

For Playback Return channels 1-2 & 3-4 - enabling **MIX ROUTES OFF** will prevent any audio sent from the DAW or audio playback software on 'Outs 1-2' and 'Outs 3-4' from reaching physical Outputs 1-2 and 3-4. This is because playback streams 1-2 and 3-4 always pass through the SSL 18 Mixer at their final stage before reaching the physical outputs.

For Playback Return channels 7-8 & 9-10 - enabling **MIX ROUTES OFF** will prevent audio sent from the DAW or audio playback software from entering the SSL 18 Mixer, but audio from 'Outs 7-8' and 'Outs 9-10' will still be sent out of the physical Outputs 7-8 and 9-10. This is desirable if using these outputs for hardware inserts.

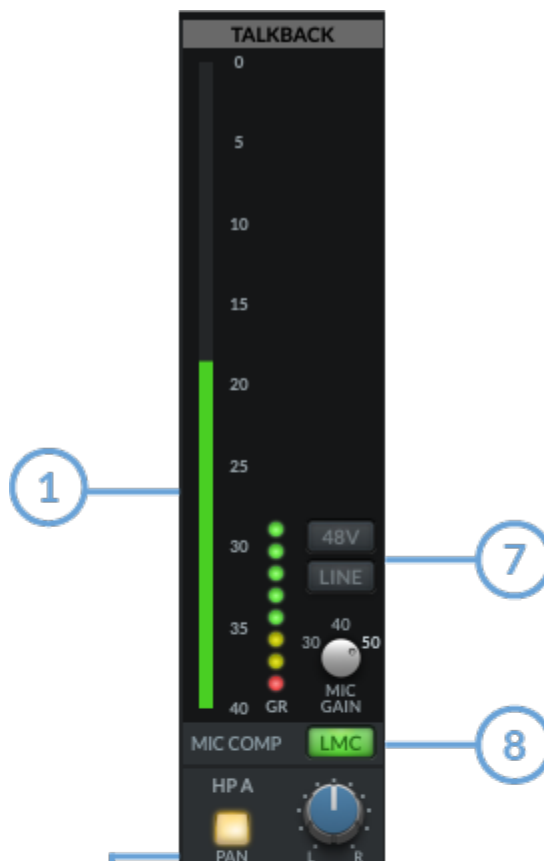
An example of when it is useful to use **MIX ROUTES OFF**: You want to use Analogue Inputs and Outputs 7-8 to connect some analogue outboard equipment and use this as hardware inserts in your DAW. You would activate **MIX ROUTES OFF** for *both* Playback Returns 7-8 and Analogue Inputs 7-8. This would ensure your signals to and from the piece of outboard are only fed directly, with no possibility of forgetting to disengage the **MON** button on Inputs 7-8 (which would cause a doubling of the signal) or accidentally sending the return (input) signals to other places with the SSL 18 Mixer aux sends.





Talkback

SSL 18 features a built in Talkback Input Channel in the 360° SSL 18 Mixer, allowing communication directly to the Headphone mixes and a feed into the DAW for creative recording/mixing purposes.





1. Meters

The meters indicate the incoming signal level to the channel. A red segment at the top of the meter indicates clipping. Click on the meter to clear the clip indication. The circular meters indicate the amount of compression being applied by the **LMC**.

2. Headphone Sends

This is where you can route talkback directly to **HP A**, **HP B** and **Line 3-4 Outputs**.

- The Green Knob controls the set level for each Mix Bus (HP A, HP B & LINE OUT 3-4)
- The **MUTE** button mutes the send and illuminates red when activated.
- The Pan control allows you to determine the pan position for that send. The **PAN** button must first be engaged.

Tips: *Shift + Mouse Click* sets a send to 0 dB.

Alt + Mouse Click (Mac) or Option+Click (Windows) sets a send to Off.

3. LINE 3-4 Sends

Similar to the headphone sends, the LINE 3-4 sends allow the Talkback signal to be routed to Outputs 3-4. When the output channel is stereo linked, a single set of controls for Pan, Level and Mute are available.

When the output channel is split into dual-mono, independent level controls appear, one for Output 3 and one for Output 4

4. Scribble Strips

This text box is editable, allowing the Talkback Channel to be renamed by the user by simply double-clicking on the text box and typing your preferred name.

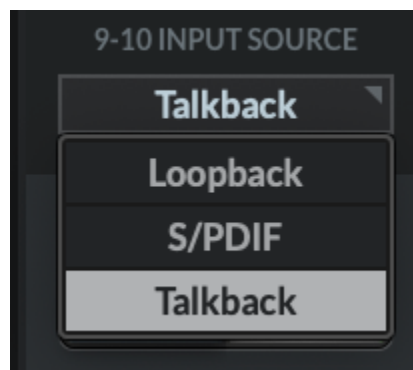
5. Fader

The red capped fader sets the master output level of the TALKBACK signal. The fader ranges from +12 dB & -Infinity dB.

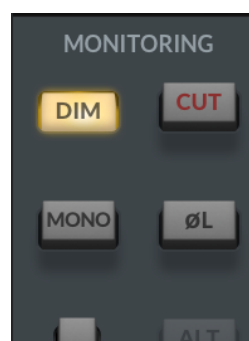
6. Talkback Engage Button

When illuminated green, the built-in TALKBACK mic will send the signal to the routed aux buss(es) (HP A, HP B & LINE 3-4). This can be controlled by physically engaging the **TALK** button on the SSL 18 Interface (if assigned), or via the SSL 360° **TALK** software button itself.

If '9-10 INPUT SOURCE' is set to 'Talkback', the talkback input is always sent to the DAW, regardless of whether the **TALK** button is engaged.



When **TALK** is engaged, the monitors will automatically dim to the level set in the Monitoring section as shown below.





7. GAIN, +48V & LINE

This allows **+48V** Phantom Power to be switched in to power the Talkback Mic, or switch to **LINE** Input for a pre-amplified Talkback Mic signal. 3 fixed Mic Gain settings are available - 30/40/50 dB.

8. LMC

The Listen Mic Compressor can be engaged on the Talkback Input Signal. This classic analogue compressor circuit was originally used in the SL 4000 B console for communication purposes, to help hear what the musicians in the live room had to say before/after recording takes. When used on the talkback input, LMC can be helpful to ensure the producer sat on the sofa at the back of the room can be heard when the engineer is talking back to the artist who's recording. However, the 'heavily compressed' sound also works great for creative uses e.g. connect a microphone set up in the live room as a 'smashed drum kit' room microphone, or, switch the talkback input to **LINE** mode (TRS jack input), and re-process sterile DAW stems through the LMC circuit.

Digital Inputs

Up to 16 channels of ADAT Inputs and Outputs can be addressed by SSL 18, with the ADAT inputs showing up in the SSL 18 Mixer. 2 channels of S/PDIF I/O are also available, with the S/PDIF inputs shown on their own input channels in the SSL 18 Mixer.

Note that the Digital Inputs are not provided with gain controls (gains should be set on the external device).

Routing to the Monitor Bus, HP A, HP B & LINE 3-4 is identical to the workflow of the Analogue Input Channels.

ADAT I/O at 44.1/48 kHz - 16 channels via the optical ports.

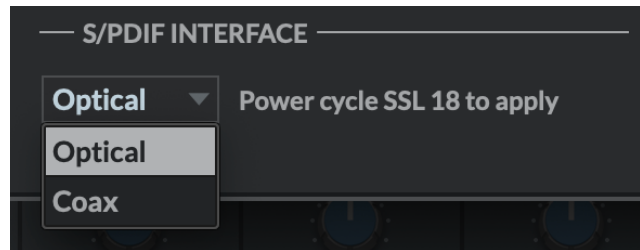
ADAT I/O at 88.2/96 kHz - 8 channels via the optical ports.

ADAT I/O at 176.4/192 kHz is not supported.

S/PDIF I/O at 44.1/48/88.2/96 kHz - 2 channels via optical port 2.

S/PDIF I/O at all sample rates - 2 channels via coaxial connections.

To use S/PDIF on **Optical**, you must select 'optical' in the SSL 18 settings menu

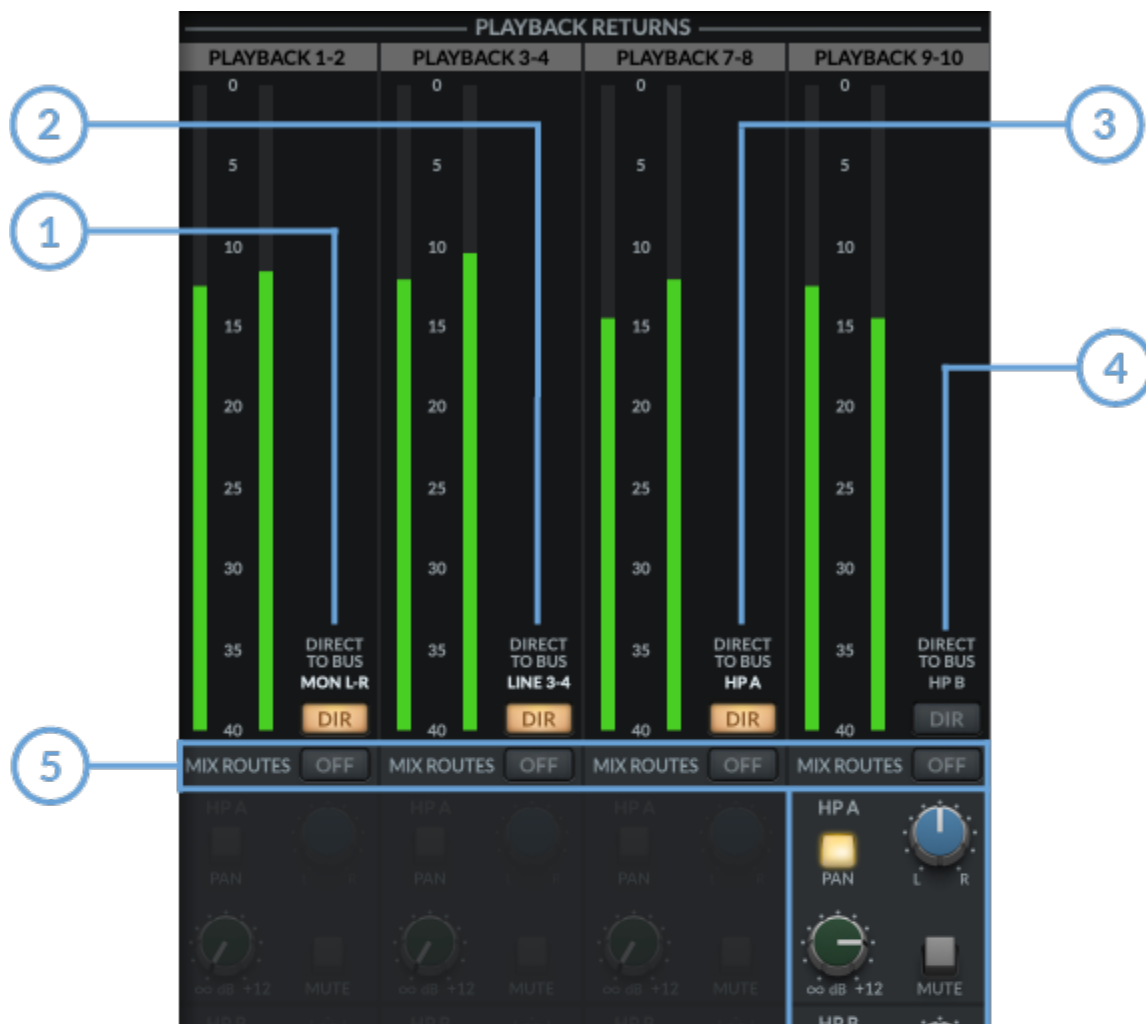


Playback Returns

The 4x Stereo **Playback Return** channels allow separate stereo signals to be sent out of your DAW or other programs with assignable audio outputs, into the SSL 18 Mixer as inputs.

Please note DAW Outputs 5-6 do not enter the SSL 18 Mixer, but can still be used as hardware outputs for external processing chains, routing to them directly from your DAW or software program.

At the top of the channel next to the meters, the '**DIR**' (Direct To Bus) button allows each stereo Playback Return to bypass the main section of SSL 18 Mixer's Routing Matrix and instead the signal is sent directly to the corresponding Aux/Bus Master.





In the above diagram, Playback 9-10 is highlighted in Blue to distinguish the difference between engaged & disengaged Direct Buttons.

1. DIRECT TO BUS: MON L-R (Playback Returns 1-2)

Engaging the **DIR** button will send DAW Mon L/R outputs directly to the SSL 18 Monitor Bus (OUT 1-2), bypassing the Routing Matrix.

Enabling **MIX ROUTES OFF** will prevent any audio sent from the DAW or audio playback software on 'Outs 1-2' from reaching physical Outputs 1-2. This is because playback stream 1-2 always passes through the SSL 18 Mixer at the final stage before reaching the physical outputs.

2. DIRECT TO BUS: LINE 3-4 (Playback Returns 3-4)

Engaging the **DIR** button will send DAW 3-4 outputs directly to the SSL 18 Line 3-4 Aux Master (OUT 3-4), bypassing the Routing Matrix.

Enabling **MIX ROUTES OFF** will prevent any audio sent from the DAW or audio playback software on 'Outs 3-4' from reaching physical Outputs 3-4. This is because playback stream 3-4 always passes through the SSL 18 Mixer at the final stage before reaching the physical outputs.

3. DIRECT TO BUS: HP A (Playback Returns 7-8)

Engaging the **DIR** button will send DAW 7-8 outputs directly to the SSL 18 Headphone A Aux Master (OUT 7-8), bypassing the Routing Matrix.

Enabling **MIX ROUTES OFF** will prevent audio sent from the DAW on Outputs 7-8 from entering the SSL 18 Mixer. Physical outputs 7-8 will be unaffected and still receive signal sent from the DAW on Outputs 7-8. This is desirable if using these outputs for hardware inserts.

4. DIRECT TO BUS: HP B (Playback Returns 9-10)

On Playback 9-10, engaging the **DIR** button will send DAW 9-10 outputs directly to the SSL 18 Headphone B Aux Master (OUT 9-10), bypassing the Routing Matrix.

Enabling **MIX ROUTES OFF** will prevent audio sent from the DAW on Outputs 9-10 from entering the SSL 18 Mixer. Physical outputs 9-10 will be unaffected and still receive signal sent from the DAW on Outputs 9-10. This is desirable if using these outputs for hardware inserts.

5. MIX ROUTES OFF

When MIX ROUTES is set to OFF, the Input signal is removed from the SSL18 Mixer and will be greyed out and no signal will route to the HP A, HPB, LINE 3&4 or Monitor Outputs 1-2. This does not affect the DAW Input signal. This is useful when the Input signal is also routed to the DAW output signal feeding the Headphones or Monitor Bus, therefore efficiently removing the doubling of signals without altering the Aux routing for a quick A/B comparison of takes.





6. ROUTING MATRIX

When the **DIRECT** Button is disengaged, the signals can be routed to the HP A, HP B & LINE 3-4 bus from the SSL 18 Mixer. As with the **Input Channels**, sends to the aux busses are controlled via the **HP A, HP B & LINE 3-4** Send Level Knobs, with Pan, and muting buttons also accessible.

7. SCRIBBLE STRIP

This text box identifies the Playback Return Channel and is named as displayed by default. The text box is editable, allowing it to be renamed by the user.

8. FADER TRAY SECTION

The fader controls the level sent to the Monitor Bus for each Playback Return Channel (providing **DIRECT** is disengaged and **MIX ROUTES OFF** is not engaged), as well as providing **SOLO, CUT & PAN** functionality. **MON** button routes the signal onto the **Monitor Bus** (Outputs 1-2).

These Outputs can also be set to Mono or Stereo Linked, as indicated by the green infinity symbol when operating in stereo mode, or split out for individual level or CV output in Mono Mode, as show in the diagram below:



Below is a visual illustration of **DIRECT MODE**. For simplicity, the illustration shows all Playback Returns with DIRECT Enabled (left-hand side) and all Playback Returns with **DIRECT** Disabled (right-hand side). Of course, you have the ability to toggle the **DIRECT** mode on/off for each Stereo Playback Return Channel.

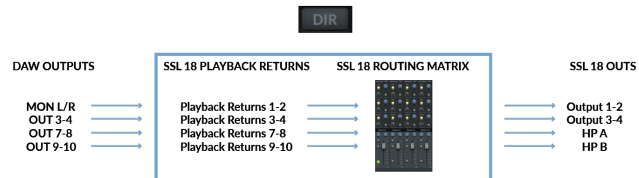
DIRECT MODE ENABLED (ALL CHANNELS)



DAW OUTPUTS



DIRECT MODE OFF (ALL CHANNELS)



DAW OUTPUTS

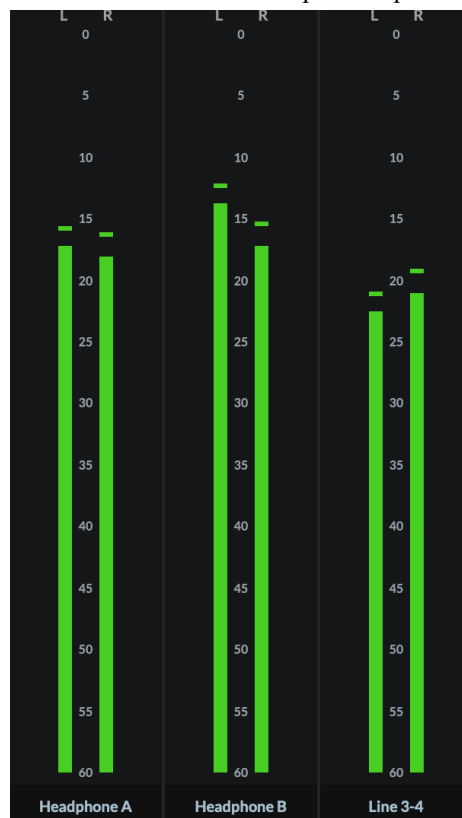


Aux Masters

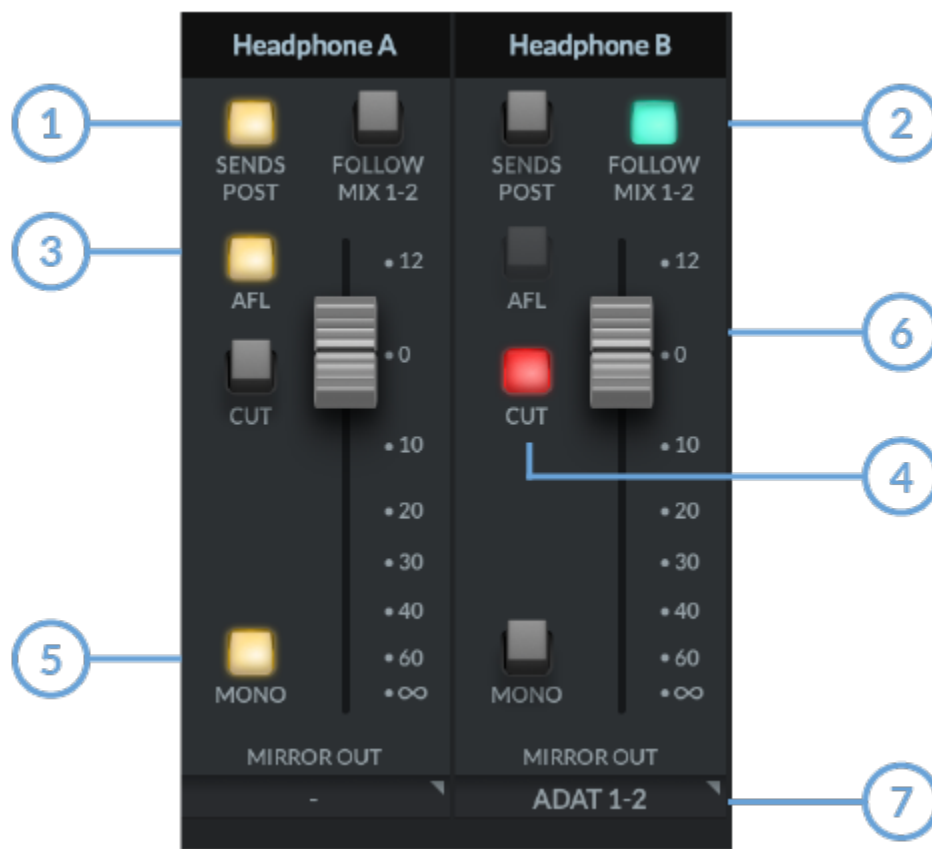
The Aux Masters section of the Mixer View consists of Headphones A, Headphones B & Line Out 3-4 Aux Master Outputs.

Headphone Outputs

Each Headphone Output consists of a large Signal Metering section with a resolution from 0 dB down to -60 dB.



Below are details of the Fader section with the following parameters:



1. SENDS POST

When selected, send levels to the aux busses from the channels will be **Post Fader** level.

2. FOLLOW MIX 1-2

When selected the aux master is replaced and the output follows the Monitor Bus mix, providing an easy way to send what you are listening to on the Monitor Bus (through your monitor speakers) to the Headphones.

3. AFL

Short for '*After Fade Listen*' allows the user to monitor the Aux Mix on the Main Outputs; ideal for quickly listening to the Artist's headphone mix.

4. CUT

Mutes the signal output of the HP Aux channel

5. MONO

Switches the output to Mono, summing both L&R signals together.

6. FADER

Sets the master level for the HP Bus. Remember this is pre-physical gain control on the SSL 18 front panel.

7. MIRROR OUT

Allows you to route an aux master bus output directly to a physical output.

Clicking in the **MIRROR OUT** dropdown box at the bottom of the channel causes a pop-out list to appear. From this list you can choose the physical output you would like to route to.

The mirror routing system on the aux masters can be very useful for the following tasks such as

- Feeding external hardware metering units
- Feeding external hardware FX processors such as reverbs

An output configured as a mirror output will replace the output from the DAW, e.g. If you are using ADAT output 1 in a mirror route, any signal you attempt to route out of ADAT output 1 in the DAW will not work until you remove ADAT output 1 from use as a mirror route - select 'No Route' to remove your mirror route.

Mirror out routes made from aux or monitor busses are always post fader.

Line Output 3-4 Master

The Line 3-4 aux master has all the same parameter controls as the Headphones aux masters, but with the addition of the Channel link/unlink button at the very bottom of the fader section.



When linked, the button glows green and represents Stereo Operation



Unlinked

When unlinked, this will configure Line 3 & 4 as independent mono busses.



Left: Sends when Line 3-4 is linked , Right: Sends when Line 3-4 are unlinked.

When unlinked all input channels in the SSL 18 mixer will change their **Line 3&4** sends to individual levels & mutes. If already set as a send to 3&4, the levels already set when in stereo mode will be maintained in mono mode for each channel.

Within the SSL 18 Mixer, the signal sent to each Headphone Mix can be derived from any **Input Channel** or **Playback Return** or can mirror the main output mix by implementing the '**Follow Mix 1-2**' button on the HP Channel in the Mixer.

Master Out

This is the MONITOR BUS feeding your monitors via **OUTPUTS 1-2 (OUTPUTS 3-4 if ALT speaker is enabled)**.

The MASTER FADER level will control the output volume signal, pre the physical Monitor Level Control on the SSL 18 Interface.

Mirror Out

Allows you to route the monitor bus output directly to a physical output of your choice.

Clicking in the **MIRROR OUT** dropdown box at the bottom of the channel causes a pop-out list to appear. From this list you can choose the physical output you would like to route to.

The mirror routing system on the monitor bus can be very useful for the following tasks such as

- Feeding external hardware metering units

- Duplicating the main mix feed to send to a separate monitoring/recording system.

An output configured as a mirror output will replace the output from the DAW, e.g. If you are using ADAT output 1 in a mirror route, any signal you attempt to route out of ADAT output 1 in the DAW will not work until you remove ADAT output 1 from use as a mirror route - select 'No Route' to remove your mirror route.

Mirror out routes made from aux or monitor busses are always post fader.

Monitoring

This section of the Mixer describes control of the comprehensive range of monitoring features provided by the SSL 18.



This section of the Mixer describes control of the comprehensive range of monitoring features provided by the SSL 18.

1. DIM

The **DIM** button will engage level attenuation set by the DIM LEVEL control (7)

2. CUT

Cuts the output to the monitors.

3. MONO

This will sum the Left & Right channel signals of the **Master Out** together and provide a MONO output signal to the Main Outputs.

4. POLARITY INVERT

This will invert the left side signal, allowing assessment of the phase relationship between the left & right signal.

5. ALT SPEAKER ENABLE

This function allows you to connect a second set of monitors to Line Outputs 3-4. When **ALT SPK** is enabled, by default, the **MONITOR LEVEL** will also affect the output signal level to Outputs 3&4 when **ALT** is engaged. This functionality can be altered using the **MONITOR CONTROL ASSIGNMENT** options in the SSL 18 Settings menu.

6. ALT

With **ALT SPK ENABLE (5)** engaged, engaging the **ALT** button will transfer the **MASTER BUS** signal to **Outputs 3&4**.

7. DIM LEVEL

The **DIM LEVEL** control adjusts the level of attenuation provided when the **DIM (1)** button is engaged. This allows up to -60 dB of attenuation when turned fully counter-clockwise.

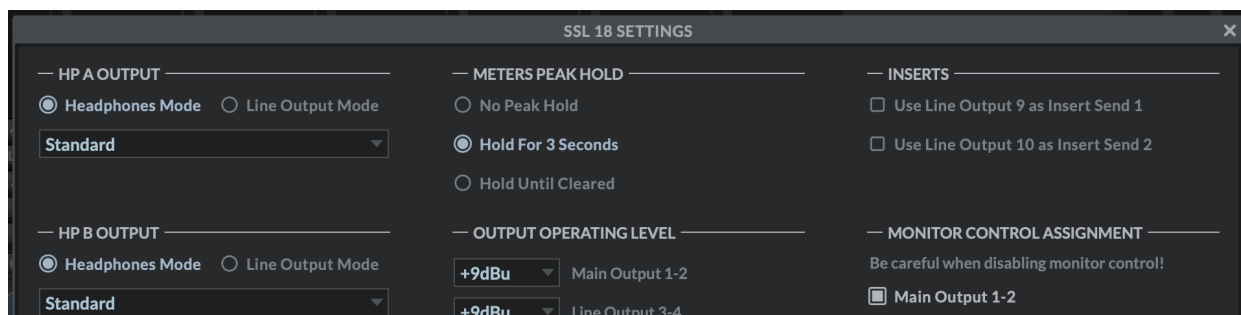
8. ALT SPEAKER TRIM

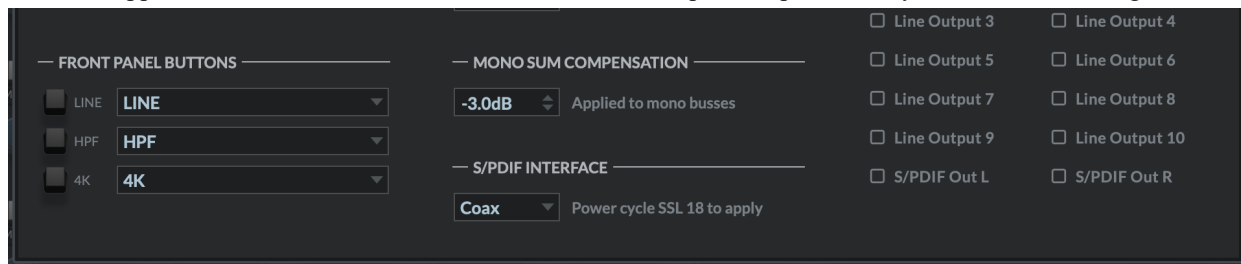
The **ALT SPKR TRIM** knob allows gain adjustment to offset the output level sent to the **ALT** monitors connected to **Outputs 3&4**. This allows the levels to be adjusted between the Main Monitors and the Alt Monitors so the **Monitor Control** level doesn't need to be changed when performing accurate A/B comparisons between two different sets of speakers.

Settings



In the bottom-left column of the SSL 18 Mixer or directly above the Monitoring Section on the right, you can access the Settings panel, which contains configuration options for the SSL 18.





HEADPHONE A & B OUTPUT MODES

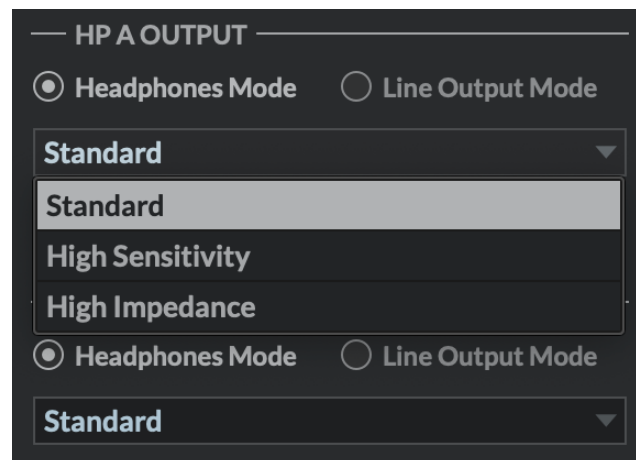
The HP outputs can operate in one of 2 modes:

- Headphones Mode
- Line Output Mode

Headphones Mode Options:

When operating in Headphones Mode, you can choose between 3 different options:

- **Standard** - The default setting suitable for a wide range of headphones.
- **High Sensitivity** - This is most applicable for use with certain In-Ear Monitors (IEMs) or headphones that have especially high sensitivity (expressed in dB/mW). Typically, headphones that specify their performance at 100 dB/mW or higher.
- **High Impedance** - This setting is ideal for High Impedance headphones which require greater voltage drive to produce the expected output level. Typically, headphones with an impedance of 250 Ohms or greater will benefit from this setting.



Beware: Always make sure *BEFORE* you switch your headphone output to High Impedance, to turn the front panel level control down to avoid accidentally overloading your headphones if you are unsure of what sensitivity they are.

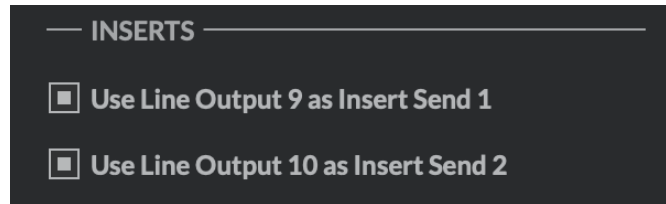
Line Output Mode Options:

HP A and **HP B** can be switched into Line Output Mode. This allows you to use them as mono line outputs, instead of headphone outputs.

Note: If the **FOLLOW MIX 1-2** button is not engaged, then HP A is fed from DAW Outputs 7-8 and HP B is fed from DAW Outputs 9-10.

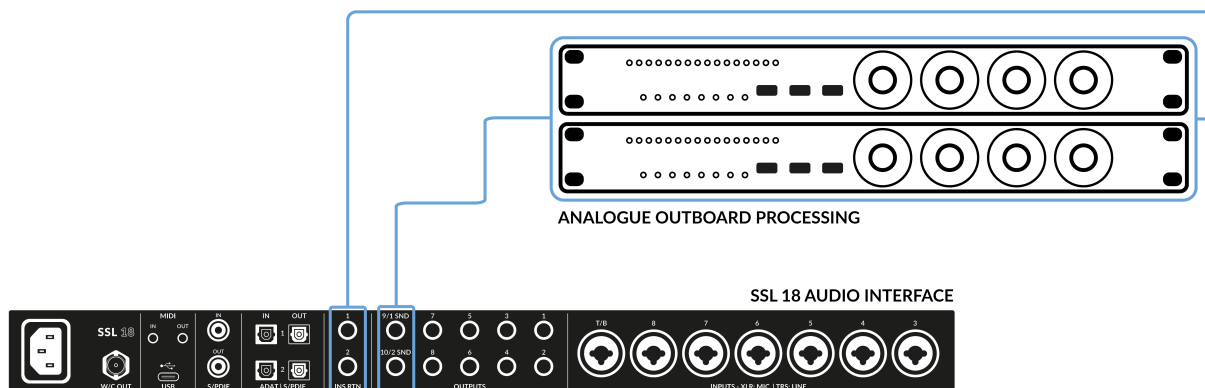
By default these outputs are balanced. The outputs may be configured as unbalanced by clicking the **Unbalanced** box.

Inserts



'**Use Line Output 9 as Insert Send 1**' - re-purposes the physical output labelled '**9/1 SND**' from it's normal operation (Output 9) and moves it to the input stage of Analogue Input 1, for use as an insert send. Used in conjunction with the **INS RTN 1** physical input, this allow you to insert analogue hardware into the record path for input 1, great for tracking with and committing analogue compression 'to tape'.

'**Use Line Output 10 as Insert Send 2**' - re-purposes the physical output labelled '**10/2 SND**' from it's normal operation (Output 10) and moves it to the input stage of Analogue Input 2, for use as an insert send. Used in conjunction with the **INS RTN 2** physical input, this allow you to insert analogue hardware into the record path for input 2, great for tracking with and committing analogue compression 'to tape'.



Note: if Analogue Inputs 1-2 are stereo linked, both options will be toggled together upon your mouse click.

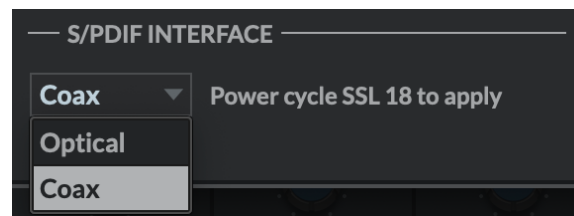
When enabled, an **INSERT** button will become available on Analogue channels 1/2 in the SSL 18 Mixer as highlighted in blue below:





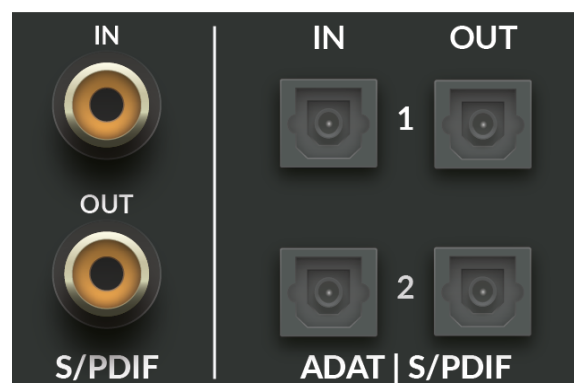
Tip: Alternatively, **INSERT RTN 1 & 2** inputs can be used as way of injecting a line-level signal directly into the A/D.

S/PDIF Interface



The drop down menu will allow you to select the S/PDIF Interface input between Optical & Coax connection (available on the rear of the SSL 18). Power cycle the SSL 18 to apply any changes.

If choosing 'Optical', optical **IN** and **OUT** ports '2' should be connected to your S/PDIF device.



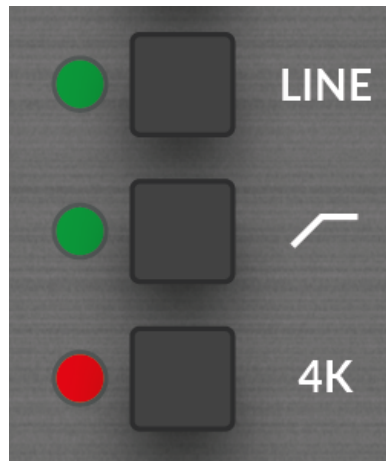
Meters Peak Hold

Determines how long the peak hold segment of the SSL 18 Soft Mixer meters hold for.

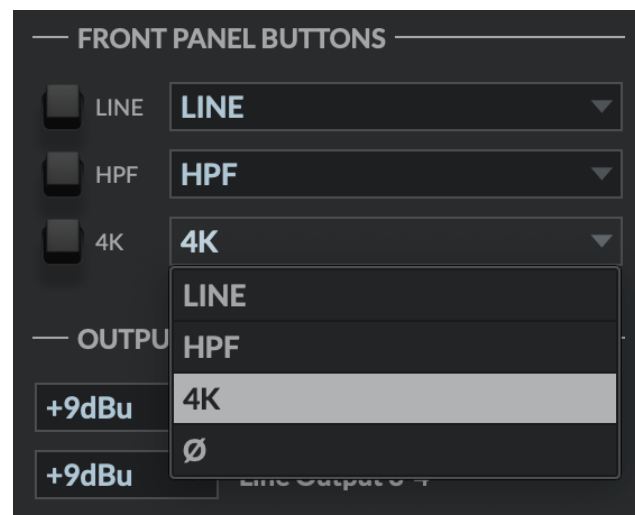
- No Peak Hold
- Hold for 3 Seconds
- Hold Until Cleared

Front Panel Buttons

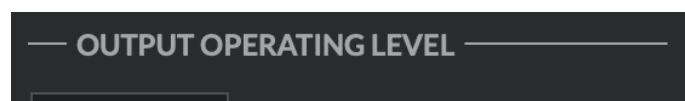
SSL 18 features customisable options for the channel functions for the three buttons labelled **LINE**, **HPF** & **4K** on the SSL 18 front panel.

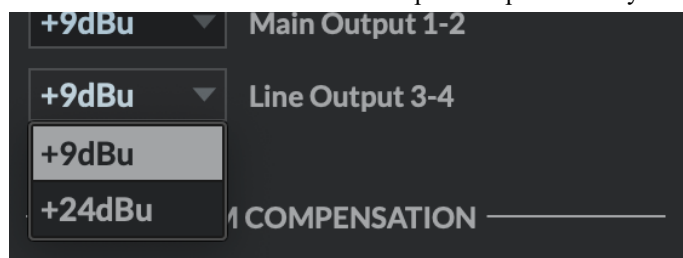


In the Settings menu, each button can be reassigned to an alternative function, choosing between **LINE**, **HPF**, **4K** & **POLARITY INVERT**, as depicted in the image below:



Output Operating Level





The operating level for Main Outputs 1-2 and Line Outputs 3-4 can be switched between +9 dBu & +24 dBu for correct gain staging for different monitor operating levels or outboard effects processors.

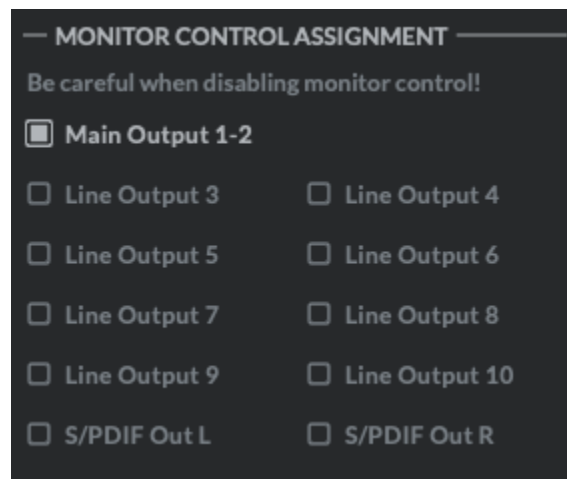
Outputs 5-10 are fixed at +24 dBu professional operating level, perfect for integrating professional studio outboard equipment.

Mono Sum Compensation

Determines the compensation level for Mono summed busses, adjustable between -3.0 dB & -6.0 dB

Monitor Control Assignment

Requires SSL 360 v2 firmware or above



Custom Monitor Control Assignment allows you to choose which of the 10 analogue outputs are affected by the monitor control – perfect for surround/immersive monitoring. It also allows the monitor control to affect the S/PDIF output.

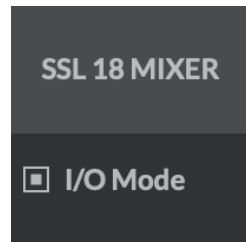
Warning! Unticking any output from being monitor knob control may result in full-scale audio being sent to your speakers, with the potential to damage them and your hearing.

Important Note regarding Alt Speaker Mode: When using **Alt Speaker Mode** (for a second set of stereo monitors), Line Outputs 3-4 are ticked by default, so that the monitor control continues to affect the level sent to the second set of monitors when **ALT** is engaged. It is possible to un-tick them, but be aware that could result in full-scale audio being sent out of outputs 3 and 4, with the potential to damage your

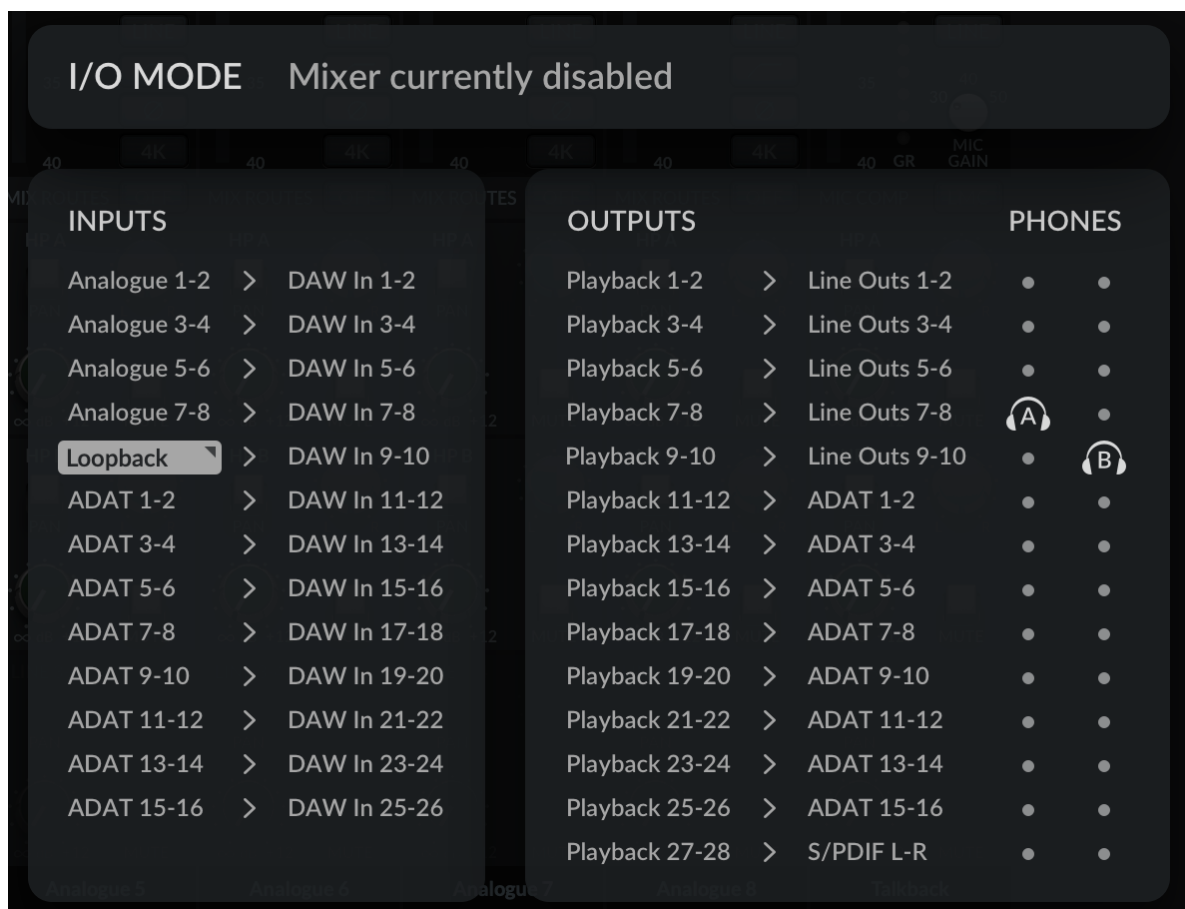
alternative monitors and your hearing!

I/O Mode

I/O Mode bypasses the SSL 18 Mixer's routing matrix and fixes the routing as shown in the I/O Mode table below. Your SSL 18 is put into this mode by engaging the tickbox in the upper-left corner of the SSL 18 Mixer.



Note that you still have the ability to choose the Input Source for Inputs 9-10 (choosing between Loopback, S/PDIF or Talkback). You can also freely choose which output pair feeds Headphones A and B by clicking on the desired circle (see image below)

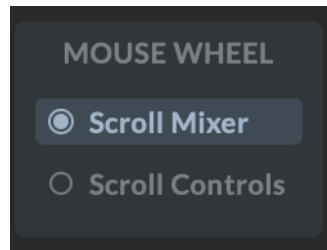


I/O Mode can be used for different purposes:

- To simplify the operation of the unit when you do not need the full flexibility that the SSL 18 Mixer offers.
- It allows SSL 18's outputs to operate at 176.4 or 192 kHz, instead of down-sampling them.

- *When **I/O Mode** is not engaged (SSL 18 Mixer is active) and you are operating at sample rates of 176.4 or 192 kHz, SSL 18's outputs are automatically down-sampled to 88.2 or 96 kHz in order to preserve the full mixing capability of the mixer. Other audio interfaces typically limit mixer capability in the same scenario. So if you want end-to-end 176.4 or 192 kHz performance, then I/O Mode is a useful option.*

Mouse Wheel



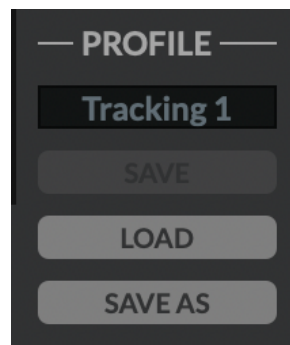
Determines if your mouse wheel scrolls the SSL 18 Mixer up/down/left/right (Scroll Mixer)

or

Whether the mouse wheel affects the SSL 18 Mixer controls and faders.

Tip: Leave it in 'Scroll Mixer' and hold the CTRL key on your computer keyboard to temporarily activate the ability for the mouse wheel to scroll controls and faders, without having to change modes.

Profile



You can Save and Load your own customised profiles for the SSL 18 Mixer. To Save a Profile, simply press **SAVE AS** and name your new Profile which is then saved in the SSL 18 folder for easy recall.

To load an existing profile, press the **LOAD** button, which will then open a window to view all the saved profiles. Press '**Open**' to select the profile.

The default storage location for both Mac & Windows OS's is shown below, although profiles can be saved & stored from any location.

- **Mac** – Mac HD\Users\%userprofile%\Documents\SSL\SSL360\SSL18
- **Windows** – %userprofile% \Documents\SSL\SSL360\SSL18

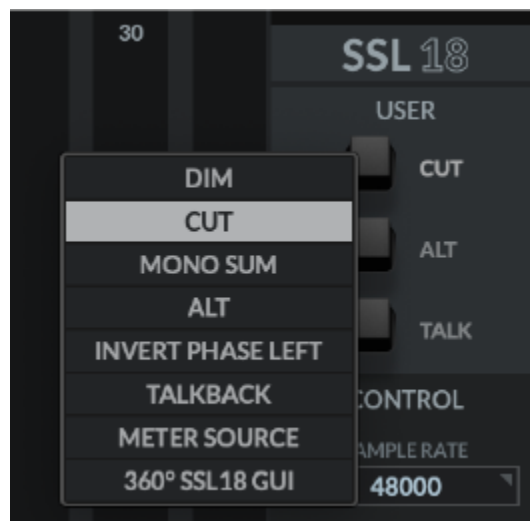
Click the **DEFAULT** button, to return the SSL 18 Mixer to its factory-shipped, default state.



USER Buttons

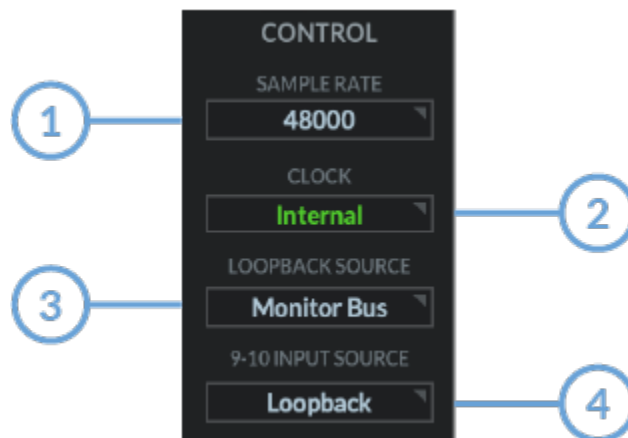
By default, the User buttons are assigned to match the printing on the SSL 18 Interface front panel - **CUT**, **ALT** & **TALK**, however they can be re-assigned with a right-mouse click (see image below).

Assignments are chosen via a drop-down menu and options are as follows: **DIM**, **CUT**, **MONO SUM**, **ALT**, **INVERT PHASE LEFT**, **TALKBACK ON/OFF**, **METER SOURCE** & **360° SSL18 GUI**



Control

The Control section is used to configure key settings to enable your Interface to work within your DAW.



1. SAMPLE RATE

The drop-down menu allows the user to select the internal Sample Rate that the SSL 18 Interface will operate at. The selection allows for 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz & 192 kHz. Note, that when any DAW is opened, SSL 18 will follow the DAW's sample rate setting. Alternatively, the sample rate can be set from AudioMIDI setup on Mac or the SSL USB control panel application on Windows.

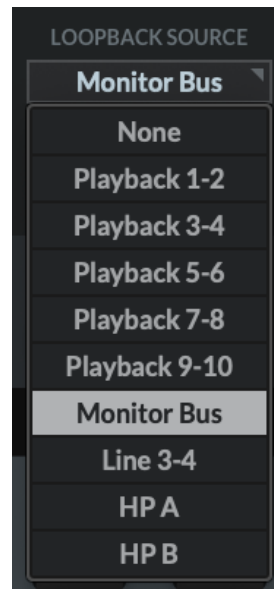
2. CLOCK

The Clock source menu allows you to determine your preferred clock source: **INTERNAL**, **ADAT** or **S/PDIF**.

Note: when choosing to clock from an external ADAT or S/PDIF device, you cannot change the sample rate from the **SAMPLE RATE** box. You must change the sample rate on the external device.

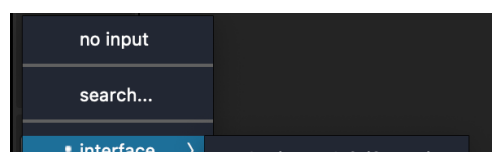
3. LOOPBACK SOURCE

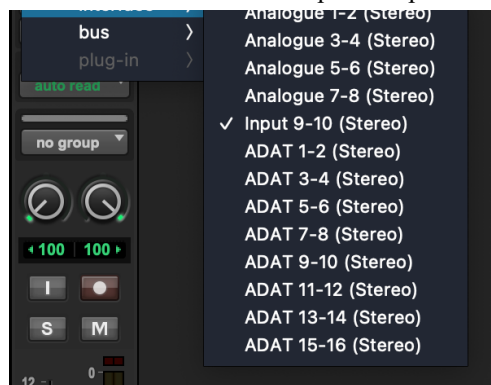
This option allows you to record USB audio back into your DAW, perfect for streaming and content creation which can be particularly useful for recording audio from software applications such as YouTube.



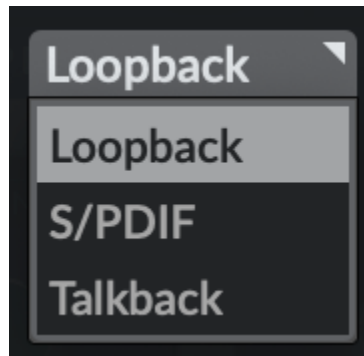
To set this up, first ensure **9-10 INPUT SOURCE** is set to '**Loopback**'

Then, select the **LOOPBACK SOURCE** channel you wish to record from the drop-down menu (for example Playback 1-2 to record the output of a media player), then in your DAW, select the input channel as **Input 9-10** as shown below and record the audio as you would with any other input channel. Be sure to mute the recording channel in your DAW to avoid creating a feedback loop!





9-10 Input Source



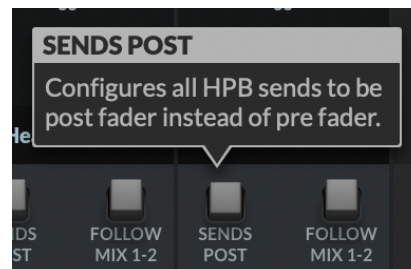
This option allows you to select the Input source for DAW inputs 9-10 between Loopback, S/PDIF & Talkback.

This can be set up for creative purposes such as using the Talkback Listen Mic Compressor (LMC) for creative recording use such as Drum Room Mics.

Contextual Help



The Contextual Help, once activated by clicking the ? button (as shown above) adds a text bar to the tooltip with a brief explanation of the parameter's function. The below image demonstrates this with an explanation text box when hovering the mouse over the **SENDS POST** on the HP B Channel.



Solo Clear



For channels in SOLO or AFL mode the Solo Clear button illuminates yellow. Pressing the Solo Clear button quickly clears any active solo's in the SSL 18 Mixer.

SSL 18 DC-Coupled Outputs

All Outputs on the SSL 18 are **DC-coupled** (1-10 and Headphone A and Headphone B) and able to send +/-5v signal to allow CV control to Semi & Modular Synths, Eurorack and CV-enabled outboard FX.

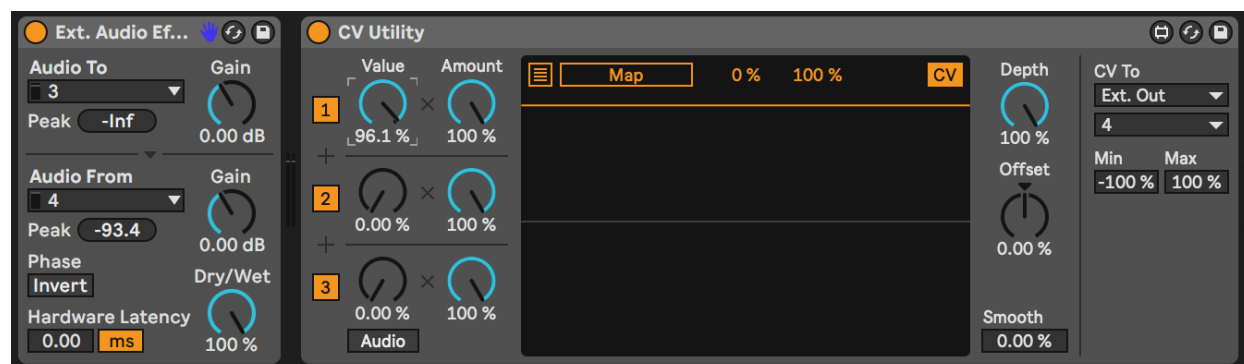
What is CV?

CV is an abbreviation of "**C**ontrol **V**oltage"; an analogue method of controlling synthesizers, drum machines and other similar equipment.

What are CV Tools?

CV Tools is a free pack of CV-enabled instruments, synchronisation tools, and modulation utilities that enable users to seamlessly integrate Ableton Live with various devices in the Eurorack format or Modular Synthesisers & Analog effects units.

Setting Up Ableton Live CV Tools



- Open your Ableton Live session
- First set up a new Audio Track that you'll use to send out the CV Signal.
- Then insert onto the Audio track a CV Utilities Plug-In from the packs menu.
- Once the CV Utility Plug-In is Open, set the CV **To** your designated Output. In this example we've set this to Output 4 from the SSL 18.
- Set up a second Audio track with the input signal from the Effect/Instrument and record arm to monitor the input back into Ableton Live.
- Now using the CV Value knob on the CV Control channel, you can automate the CV signal sent out of Ableton to your External Instrument/FX unit. This can then be mapped to a MIDI controller to control in realtime, or record the Automation into your session.

- Now you can record the audio back into your Ableton Session, or other DAW you may be using to record your Audio back onto your system.
- Please note that multiple CV Utility plugs can be set up when using the SSL 18 as EVERY PHYSICAL OUTPUT is able to send DC signal for CV Control.

Requirements for CV Tools

- Live 10 Suite (version 10.1 or later)
- Live 10 Standard + Max for Live (version 10.1 or later)
- A DC-coupled audio interface (for CV hardware integration) such as the SSL 18
- Some understanding of Ableton Live Packs
- Some understanding of how to use CV-enabled hardware with Live

SSL 18 CV Tips

When using DC-coupled outputs there are a few things to keep in mind:

- When using Outputs 1-10 for CV Control, if you are using mono jack cables (TS to TS) to connect to your CV-controlled equipment, it is recommended to apply a -10 dB level trim (which can be done in the DAW). We've found that this results in a more reliable calibration process with Ableton's CV Tools (achieving 1V/oct).
- Alternatively, when using Outputs 1-10 for CV Control, you can use 'Insert cables' (TRS to 2 x TS jacks), with the TRS connected to the SSL 18 output(s), and the Send jack cable plugged into the CV-controlled synth/FX unit. In this scenario a -10 dB level trim may not be required.
- When using Outputs 7-8 and 9-10 for CV Control (HP A and HP B), be careful to first unplug any attached headphones from the front panel outputs.
 - *When using these outputs with CV control, we found that using High Impedance Headphones Mode or Line Output Mode with unbalanced ticked generally provided the most reliable results.*
 - *Remember Headphone level knobs are still affecting the signal and some experimentation may be required to find the optimal level required for your connected equipment.*

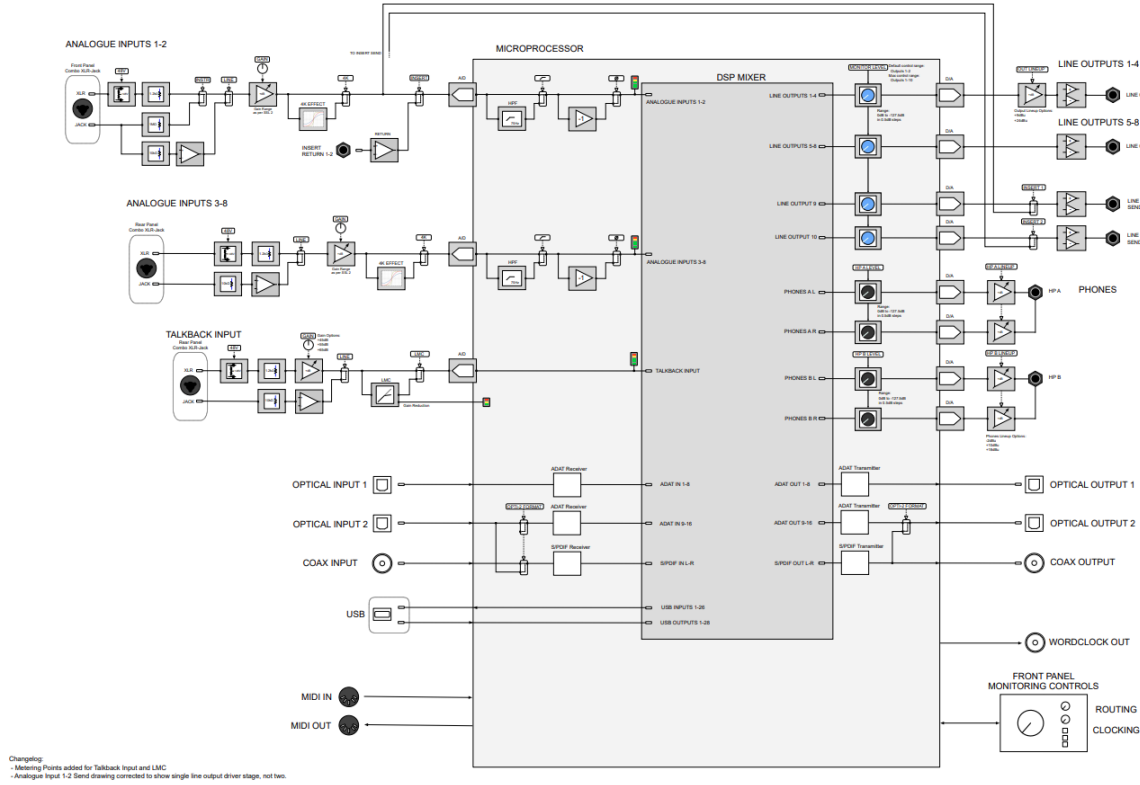
Best Practices & Safety - CV

- **NEVER** send **CV** directly to your speakers (direct voltage can cause damage to your speakers).
- The **CV** Instrument device is only capable of calibrating oscillators that use bipolar voltage (+/-5V) for 1V/oct. tuning. However, some digital oscillator modules exclusively use unipolar signals (+5V or above) for tuning. As a result, CV Tools will be incompatible with these modules. If you are unsure whether this applies to the modules in your system, please consult the user manual for the device.

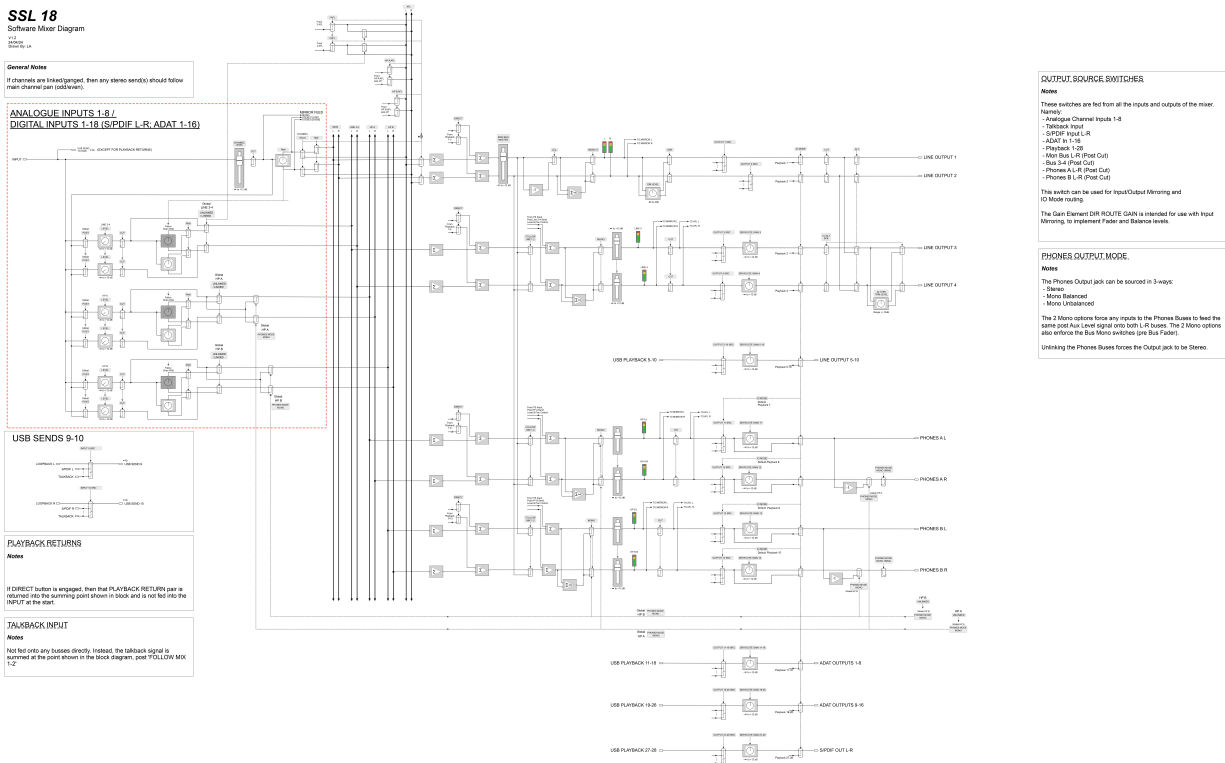
- Remember - Eurorack signals are up to 5x louder than line-level audio! Before connecting your modular system to a digital audio interface, be sure to reduce the signal down to line-level using a dedicated output module.

Signal Flow

SSL 18 Hardware Block diagram



SSL 18 Software Mixer Block Diagram



KEY:
Repeated for each input channel

Specifications

Unless specified otherwise, default test configurations are as follows:

1. Sample Rate: 48kHz, Bandwidth: 20 Hz to 20 kHz
2. Measurement device output impedance: 40 Ω (20 Ω unbalanced)
3. Measurement device input impedance: 200 k Ω (100 k Ω unbalanced)
4. Unless otherwise quoted all figures have a tolerance of ± 0.5 dB or 5%

Microphone Inputs

Max input level	15 dBu
Gain range	67 dB
Frequency Response 20 Hz - 20 kHz	+/-0.06 dB
Dynamic range (A-weighted)	120 dB typical
THD+N (-8dBFS input level)	-100 dB/0.001%
EIN (A-weighted)	130.5 dBu
Input Impedance	1.2 k Ω

Line Inputs

Max input level	24.1 dBu
Gain range	26 dB
Frequency Response 20 Hz - 20 kHz	+/-0.05 dB
Dynamic range (A-weighted)	120 dB typical
THD+N (-8dBFS input level)	-106 dB/0.0005%
Input Impedance	15 k Ω

Instrument Inputs

Max input level (min gain, balanced)	15 dBu
Gain range	67 dB
Frequency Response 20 Hz - 20 kHz	+/-0.05 dB
Dynamic range (min gain, A-wt)	120 dB typical
THD+N (min gain, -8dBFS input level)	-100 dB / 0.001%

Input Impedance	1 M Ω
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Talkback Input

Max input level (XLR)	-10 dBu
Max input level (TRS)	24.5 dBu
Gain (XLR)	30, 40, 50
Frequency response (XLR)	+/- 0.04 dB
Frequency response (TRS Line)	+/- 0.03 dB
Dynamic range (min gain, A-weighted)	110 dB
Dynamic range (TRS Line, A-weighted)	112 dB
THD+N (XLR, -1dBFS input level)	0.007%
THD+N (TRS, -1dBFS input level)	0.001%
Input Impedance (XLR)	1.2 k Ω
Input Impedance (TRS Line)	19 k Ω

Line Outputs (1-4)

Max Output Level (High level, Balanced)	24.1 dBu
Max Output Level (Low level, Balanced)	9 dBu
Frequency Response (both Output Levels)	+/-0.05 dB
Dynamic range (High level, A-weighted)	125 dB
Dynamic range (Low level, A-weighted)	122 dB
THD+N (-10dBFS output level)	-104 dB/0.0006%
Output Impedance	150 Ω

Line Outputs (5-10)

Max Output Level (High level, Balanced)	24.1 dBu
Frequency Response (both Output Levels)	+/-0.05 dB
Dynamic range (High level, A-weighted)	125 dB
THD+N (-10dBFS output level)	-104 dB/0.0006%

Output Impedance	150 Ω
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Insert Send Path

Frequency Response (both Output Levels)	+/-0.05 dB
Noise Level (Analogue noise, 20Hz-20k, A-wt)	-96 dB
THD+N (at 20dBu)	0.0007%

Insert Return Path

Max Input Level (Balanced)	24 dBu
Frequency Response	+/-0.05 dB
Dynamic range (A-weighted)	120 dB
THD+N (at 20dBu)	-0.0004%
Input Impedance	10 k Ω

Headphones

Output Level	0dBu, 10dBu, 18dBu
Frequency Response	+/-0.07 dB
Dynamic range (A-wt)	120 dB
THD+N (at 20dBu)	-100 dB/-0.001%
Output Impedance	<1 Ω

Power

Power Consumption	< 30 Watts
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Weights and Dimensions

Dimensions

Width: 482.6 mm / 19 inches

Height: 43.6 mm / 1.7 inches

Depth: including front panel controls and rear panel connectors: 294 mm / 11.6 inches

Depth: excluding front panel controls and rear panel connectors: 257.8 mm / 10.1 inches

Unboxed Weight

3.76 kg / 8.29 lbs

Boxed Dimensions

Width: 630 mm / 24.8 inches

Height: 100 mm / 3.9 inches

Depth: 360 mm / 14.2 inches

Boxed Weight

5.78 kg / 12.74 lbs

Troubleshooting

Frequently Asked Questions and additional support contacts can be found via the URL: Solid State Logic Support

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