Solid State Logic
OXFORD • ENGLAND

Guitarstrip User Guide

Introduction

SSL Guitarstrip is your new go-to processor for electric, acoustic and bass guitars. Providing 4 carefully tailored guitar processing modules, Guitarstrip is packed with useful tools for crafting the perfect guitar tone at both the pre-mix and mixing stages.

Key Features

- 4 carefully tailored guitar processing modules
- All-in-one processor for electric, acoustic and bass guitars
- Quickly dial in compression, EQ and tube amp drive
- Packed with useful tools for mixing

- Drive module
  - Classic tube amp emulation for adding saturation and taming harshness
  - Two classic guitar amp models included – GUITAR AMP and BASS AMP
  - Dial in DRIVE to emulate overdriving tube amplifier
  - DRIVE is automatically gain-compensated – introduce harmonic content without effecting the level of your signal
  - Use the BOOST, PUNCH, EDGE and SHAPE controls to sculpt the tone of the drive
  - Enhance upper harmonic content and attack, or reduce for a silky-smooth high-end
  - Wet/dry MIX control
- Phase Correction module
  - Simple and intuitive processor for correcting phase issues
  - Fix phase issues between your guitar amp recording and pedalboard DI
  - Quickly switch between two phase correction routing modes
  - Use SIDECHAIN mode to phase correct and align your track with reference to an externallysidechained signal
  - Use LEFT CHAN or RIGHT CHAN modes to phase correct and align only the left/right component of a stereo signal
  - CORRELATION METER indicates the phase difference between your signals
  - Use the sample-accurate DELAY and PHASE INVERT controls to make broad improvements to phasing issues
  - Use the ALLPASS filter with unity gain to make frequency-dependent phase corrections
- Compressor module
  - 5 carefully designed compressor presets, for a wide range of guitar source material – from electric lead to acoustic strumming
  - AUTO-GAIN introduces an automatic make-up gain
  - Instantaneous GAIN REDUCTION meter
  - COMPRESSOR MIX control lets you dial in parallel compression
  - 24 dB/8ve HIGH-PASS FILTER at the input, for carving out unwanted low-frequencies and mud
- EQ module
  - Simplified 3-band channel EQ for tone-shaping
  - Asymmetrical LOW GAIN control cut-off increases as you boost, and decreases as you attenuate
  - Quickly dial back the MID GAIN to tame unpleasant frequencies in the midrange
  - Use the PRE/POST control to move the EQ to the input
  - EQ AUTO LISTEN automatically auditions an EQ band in-place when a related parameter is changed
- ECO mode for reduced CPU use
- Built-in help – simply click the '?' and mouseover the GUI to find out more
- Cross-platform preset management
- Undo/redo

Supported Platforms and Hosts

When we release an SSL plug-in, we test it on all Windows and macOS operating systems that aren't End-of-Life (EOL) at the time of release.

The versions listed below are the latest on which we have officially tested the the product.

It is possible for our products to work on platforms outside of this list. However, if your host, host version or operating system is not listed here, we recommend you demo the product before purchase to confirm that it works correctly.

Unless specified otherwise, our plug-ins do not yet have native support M1 machines running macOS. It is possible to run the Intel macOS builds of our plug-ins inside of Rosetta 2 in the majority of hosts. We are currently working to develop and test Universal Binaries for all of our plug-ins.

macOS M1/ARM Support

X-Gate is provided as a universal binary for macOS and features native M1 support.

Operating Systems

macOS	Monterey (12), Big Sur (11), Catalina (10.15)
Windows	11, 10

Hosts

- Logic Pro 10
- Pro Tools 2020
- Ableton Live 10
- Studio One 5
- Cubase 11

Demo/Trial

To demo this plug-in, you can simply download it from the product page and run it up in your host - the software will guide you through the rest of the process.

1. Download and install the plug-in.
2. Open your DAW/host.
3. Insert the plug-in to commence activation (sometimes this will happen when the plug-in is scanned on startup, depending on your DAW/host).
4. When you see 'Activation is required', click 'Try'.
5. Log into your iLok account and click 'Next'.
6. Select a location to activate the license to, and click 'Next'.

Installation and Download

You can download installers for a plug-in from the website's Download page, or by visiting a plug-in product page via the Web Store.

All SSL plug-ins are supplied in VST, VST3, AU (macOS only) and AAX (Pro Tools) formats.

The installers provided (macOS Intel .dmg and Windows .exe) copy the plug-in binaries to the common VST, VST3, AU and AAX directories. After this, the host DAW should recognise the plug-in automatically in most cases.

Simply run the installer and you should be good to go. You can find more information about how to authorise your plug-ins below.
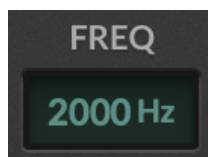
Licensing

Visit the online plug-ins FAQ for guidance in authorising your SSL plug-in.

Setting Values

All numerical controls can be dragged to change the value, including all of the circular controls, numerical inputs and the flags/tabs.

Hover over a control and use the mouse wheel to increase/decrease its value.

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Hover over a control and use the mouse wheel to increase/decrease its value.

Double-click any of the numerical controls to directly type in a value.

FINE control (hold ⌘/ALT)

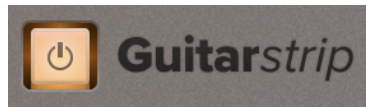Hold ⌘/ALT while dragging a control to enter 'FINE' control mode.

I/O

Bypass
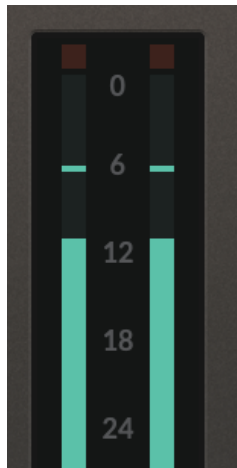

The BYPASS button at the top right of the plug-in window allows the user to bypass all plug-in processing. In some supported DAWs, this bypass is linked to the DAW bypass.

Input and output meters

The INPUT METER shows the instantaneous value of the INPUT signal. The OUTPUT METER shows the instantaneous value of the OUTPUT signal. The thin line indicates the peak value. Clipping is indicated at the top of the meter. When clipping has occurred, click the meter to clear it.
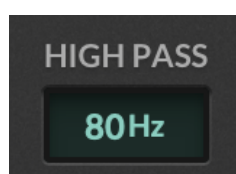
Input and output gain

The INPUT GAIN and OUTPUT gain controls allows you to trim the of incoming and outgoing signal to the plug-in by +/- 24 dB.
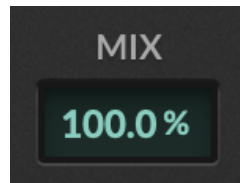
HIGH-PASS

There is a HIGH-PASS filter at the input to Guitarstrip, with a24 dB/8ve roll-off. Use this to remove low frequencies from the signal before further processing (just like you would in a channel strip).

MIX

The MIX control sets the overall blend between the 'wet' effected signal and the original 'dry' input signal. The MIX control does not include the processors in the Phase Correction module.

Signal flow

When EQ PRE-POST is switched out (EQ is 'pre'):

High-Pass > (Phase Correction > EQ > Compressor > Drive)

When EQ PRE-POST is switched in (EQ is 'post'):

High-Pass > (Phase Correction > Compressor > Drive > EQ)

Phase Correction module

The Phase Correction module is used to quickly identify phase issues between multiple recordings - for example, between your guitar amp recording and pedalboard DI - and correct them using the DELAY, PHASE INVERT and ALL-PASS tools.

Identifying phase issues

Use the MONO LISTEN button in the Phase Correction module to mix the input of Guitarstrip to mono. This is useful when trying to identify phase issues when utilising a stereo instance of Guitarstrip - if there are phase issues between the left and right channels, then you will be able to hear the channels cancelling each other out.

Correlation Meter
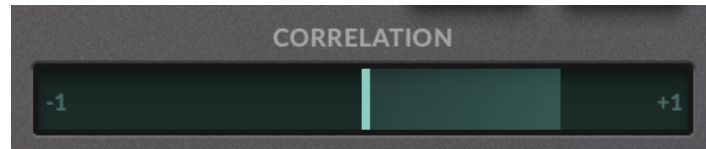
The Correlation Meter indicates the instantaneous cross-correlation between the input to the plug-in, and the reference signal set using ALIGN TO. The cross-correlation is an indicator of how 'in-phase' two signals are.

- A value of -1 (left) means the two signals are fully out-of-phase.
- A value of 0 (center) means there is no correlation between the two signals.
- A value of +1 (right) means the two signals are completely in-phase.

If the two signals are fully out of phase (-1) then when summed to mono, they will cancel each other out.

Setting the Phase Correlation mode

The ALIGN TO mode determines the reference signal that is used to calculate the correlation that is displayed on the Correlation Meter, and also where the DELAY, PHASE INVERT and ALL-PASS phase correctional tools are are applied.

- If you have two separate tracks in your DAW, select ALIGN TO = SIDECHAIN. This is because you want to phase correct the current signal with respect to some input to the sidechain. Then use you DAW to route another track to the sidechain input to the plug-in.
- If you have a stereo track where the left and right legs of the signal are out-of-phase, select ALIGN TO = LEFT CHAN or ALIGN TO = RIGHT CHAN. This is because you want to phase correct a single leg of the stereo signal with respect to the other.

SIDECHAIN mode

When in SIDECHAIN mode, the phase correctional tools are applied to the entire signal.

LEFT CHAN and RIGHT CHAN modes

- When ALIGN TO = LEFT CHAN, phase correction is applied to the right leg of the signal.
- When ALIGN TO = RIGHT CHAN is selected, phase correction is applied to the left leg of the signal.

For example, if you select ALIGN TO = LEFT CHAN and set a DELAY of 10 ms, then a delay of 10 ms will be applied to the right channel only.

PHASE CORRECTION IN

The PHASE CORRECTION IN control toggles the entire Phase Correction section in or out of the processing path. You can also individually toggle the DELAY and ALL-PASS modules within this (see below).

DELAY and PHASE INVERT

You can make broad phase correction changes using the DELAY and PHASE INVERT controls.

The PHASE INVERT (ϕ) can often be a quick solution when two signals are completely out-of-phase. However, it should be considered the 'nuclear' option, and can lead to comb filtering in some cases.

Use the DELAY IN button to toggle the delay in/out, and increase/decrease the delay using the +/- buttons. The outer +/- buttons change the value by 10 samples, and the inner button change the value by one sample. Adjust these and observe the Phase Correlation meter - aiming to increase correlation towards +1.

ALL-PASS filter

The ALL-PASS filter is used to fix trickier phase issues - especially those that occur when combining recordings from multiple sources.

What is an all-pass filter?

The concept of an all-pass filter is that unlike typical filters used to boost or cut the gain of particular frequencies, it only changes the phase relationship across the frequencies of the signal.

When should I use an all-pass filter?

Whenever a signal is passed through an amplifiers, loudspeakers, mic - or any time that sound has propagated through a medium such as air - then the phase response is rarely flat. What this means, is that different frequencies of the signal will be delayed by a different amount. For example, the higher frequencies may arrive sooner than lower frequencies.

In this case, applying a DELAY across all frequencies, or using the PHASE INVERT, will likely fix phase issues at some frequencies, and not others. This is where the ALL-PASS filter comes in.

How do I use it?

Once your signals are approximately aligned (you can use the DELAY section to do this, or manually adjust them in your DAW) then switch in the ALL-PASS filter. It has been set to a starting point, but often you will need to adjust the frequency and Q factor depending on the recording.

As you adjust the related parameters, the Phase Correlation meter will increase towards +1 to indicate that you are mitigating phase issues.

Related parameters

The ALL-PASS IN control toggles the all-pass filter in and out and the ALL-PASS ORDER can be switched between 1st and 2nd order. You can also set the center frequency using the ALL-PASS FREQUENCY control and the steepness of the phase response using the Q factor when using a 2nd order all-pass.

EQ module

The EQ module provides a simplified 3-band channel EQ for easy tone-shaping, plus a low-pass filter for taming high-frequency content.

EQ IN

The EQ IN control toggles the entire EQ section in or out of the processing path.

LOW GAIN

The LF LOW GAIN controls a broad (Q = 0.5) low-frequency shelf filter, and can apply a gain of -/+ 12 dB. The cut-off increases as you boost (up to 600 Hz), and decreases as you attenuate (down to 300 Hz).

MID FREQUENCY and GAIN

The MID FREQUENCY sets the center frequency of the mid band, and the MID GAIN can apply a gain of -/+ 12 dB. This control defaults to 1 kHz, and can be very useful for cutting unpleasant mid frequencies.

HIGH GAIN

The HIGH GAIN control is a shelf filter with a cut-off frequency of 5 kHz and can apply a gain of -/+ 12 dB. Use this to increase or dull the 'presence' of your guitar signal.
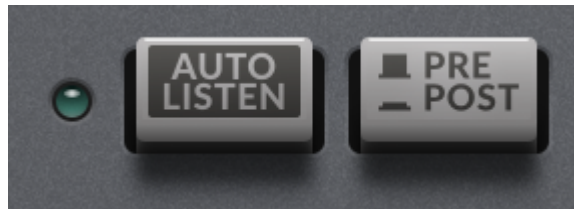
LOW-PASS FILTER

A 24 dB/8ve low-pass filter is provided, for cutting out unwanted high frequencies in your guitar signal. Frequencies above 8-10 kHz are often unwanted in guitar recordings, so dial this in to give your mix space.

EQ AUTO LISTEN

When EQ AUTO LISTEN is switched in, then EQ bands are automatically auditioned in place when you change a related parameter so that you can hear what you are cutting, boosting or removing from the signal.

EQ PRE-POST

Moves the EQ from the output to the input. Note that the HIGH-PASS FILTER is not part of this section, and always applies at the input.

Compressor module

The compressor module contains 5 carefully designed compressor presets that can be applied to a wide range of guitar source material. Use this to add punch to your guitars, or tame signal levels.

COMPRESSOR IN

The COMPRESSOR IN control toggles the entire compressor section in or out of the processing path.

COMPRESSOR MODE

The compressor includes 5 compressor presets, designed for everything from electric lead to acoustic strumming. Turn on BUILT-IN HELP (?) and mouse over to read more about the intended uses for these different modes when inside the plug-in.

The COMPRESSOR MODE describes the speed and intensity of the compressor, and changes the ratio, attack and release under-the hood. The knee is fixed at 8 dB.

Faster settings will compress more gently, but the fast response times will tame transients but keep the dynamics intact. These settings are ideal for adding a bit of polish, and taming/leveling out guitar buses that contain multiple sources.

Slower settings will compress more heavily and create sustain, but let through transients such as picking or plucking sounds. These tend to be good settings for bass and acoustic guitar.

COMPRESSOR THRESHOLD

The COMPRESSOR THRESHOLD sets the threshold above which the signal will begin to be compressed. Dial this down from 0 dBFS until you get the desired amount of compression - the instantaneous gain reduction is indicated on the Gain Reduction meter (see below).

Gain Reduction meter

The instantaneous gain reduction applied by the Compressor module is indicated below the COMPRESSOR MODE.The greater the gain reduction, the more intense the compression being applied. For a subtler effect, keep an eye on the Gain Reduction meter and keep it gentle.

COMPRESSOR AUTO GAIN

When COMPRESSOR AUTO GAIN is switched in, and automatic make-up gain is applied after compression. To calculate a static make-up gain, you need the threshold, ratio and must also make an assumption about the average incoming level. This make-up gain assumes an operating level of approximately -18 dBFS.

COMPRESSOR MIX

The COMPRESSOR MIX control blends between the original (dry) and wet (compressed) signals. Use this for parallel compression, or to dial back the intensity of the compression while leaving the THRESHOLD control intact.

Drive module

The Drive module includes two classic tube amp emulations - guitar amp and bass amp - for adding saturation and taming hardness.

DRIVE IN

The DRIVE IN control toggles the entire Drive section in or out of the processing path.

DRIVE MODEL

Guitarstrip comes with two classic guitar amp models - GUITAR AMP and BASS AMP - each of which emulate classic analogue driver pedals.

GUITAR AMP mode

When in GUITAR AMP mode, you have access to the following controls:

- GUITAR PRE-AMP: adjusts the input gain to the guitar pre-amp emulation module.
- GUITAR DRIVE: controls the amount of amp distortion, emulating overdrive a tube input stage. Automatically gain-compensated, so you can introduce harmonics without destructively effecting your levels.
- GUITAR BOOST: increase of decrease the amount of distortion in the low frequencies.
- GUITAR PUNCH: increase of decrease the amount of distortion in the mid frequencies.
- GUITAR EDGE: increase the amount of distortion in the high frequencies.

BASS AMP mode

When in BASS AMP mode, you have access to the following controls:

- BASS DRIVE: controls the amount of amp distortion, emulating overdrive a tube input stage. Automatically gain-compensated, so you can introduce harmonics without destructively effecting your levels.
- BASS PUNCH: adjusts the mid-upper harmonic content to add 'bite' to your signal.
- BASS SHAPE: blends in a fixed EQ curve specifically tuned for bass guitar signals.

DRIVE MIX

Blends between the unprocessed (pre-drive) and processed (post-drive) signals. Use this to dial back the affect of the Drive module - reducing trashy distortion to more subtle saturation.

Presets

All of our plug-ins ship with carefully designed presets to aid your workflow.

Factory presets are included in the plug-in installation, installed in the following locations:

macOS:/Library/Application Support/Solid State Logic/PlugIns/Presets/[Plug-in Name]

Windows:C:\ProgramData\Solid State Logic\PlugIns\Presets\[Plug-in Name]

Switching between presets can be achieved by clicking the left/right arrows in the preset management section of the plug-in GUI, and by clicking on the preset name which will open the preset management display.

The Preset Management menu reflects the folder structure of the preset folder.

Revert Changes and Delete

Revert Changes discards any changes to the current preset.

Delete removes the current preset from the filesystem. Factory and Producer presets cannot be deleted from the plug-in GUI, although they can be manually deleted using the filesystem (Windows Explorer or Finder).
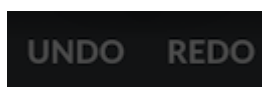
A/B and Copy

A/B allows you to toggle quickly between two presets. This is useful for comparing between two parameter settings.

COPY X TO Y is used to copy presets between A/B.

UNDO/REDO

SSL plug-ins come with a built-in UNDO/REDO stack, in case your DAW doesn't handle this.**UNDO**undoes the current action in the history stack.**REDO**re-does the next action in the history stack.

ECO MODE

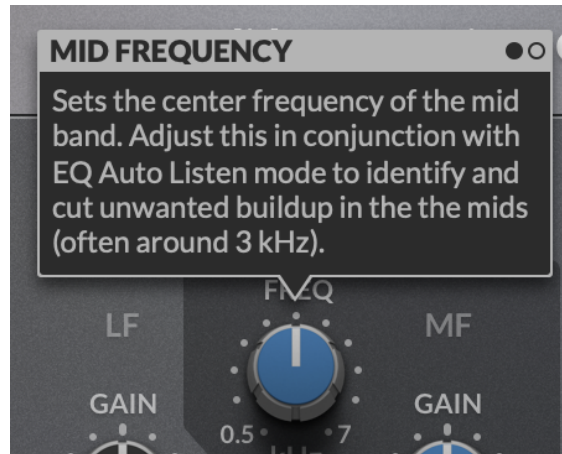Click the ECO button to drop the plug-in into a reduced CPU processing mode. Under-the-hood, this effects processing such as oversampling.

Built-in Help

This plug-in features built-in contextual help. To turn this feature on, click the '?' in the bottom right-hand corner. Mouse over elements of the GUI to see some information about the feature.

Click the tooltip to cycle through the pages.