X-Gate User Guide

Introduction

SSL X-Gate is a **comprehensive mixing tool** inspired by **classic analogue gate hardware** and **workflow** from SSL's Live and Broadcast consoles, as well as introducing **new creative capabilities** and an intuitive **left-to-right co-ordinated visualisation**.

Key Features

- Easy-to-use **THRESHOLD** and **RANGE** controls, visually aligned with **WAVEFORM GRAPH** and **GAIN REDUCTION METER** for coordinated control
- **ROLLING WAVEFORM VISUALISATION GRAPH** for setting the perfect threshold
- Hysteresis - split **OPEN** and **CLOSE THRESHOLD** behaviour
- **ATTACK, RELEASE** and **HOLD** time parameters gives detailed control over the shaping of the audio
- Tune the performance of the gate using the interactive **FILTER GRAPH** to apply **HIGH-** and **LOW-PASS FILTERS** the sidechain signal
- Use the **EXPANDER** mode and accompanying **KNEE** control for a more transparent option: make quiet signals quieter, and expand the dynamic range of the signal

- Simple discrete **LOOKAHEAD** options for minimising the latency when using a lookahead
- Transform the plug-in into a production ducker with a single click – use **DUCK** mode to invert the sidechain logic, attenuating the signal only when it exceeds the threshold i.e., to duck the music when you speak into your microphone
- Tailor the gate to best suit your source material using **PEAK/RMS DETECTION** options
- Tri-colour **TRAFFIC LIGHT CUES** give a clear indication on the momentary open/closed/hold state of the gate
- Use the **MID/SIDE** processing options to trigger the gate in creative ways or gate only the mono or stereo components on the signal
- **SIDECHAIN** and **GATE** audition modes for setting the perfect values

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

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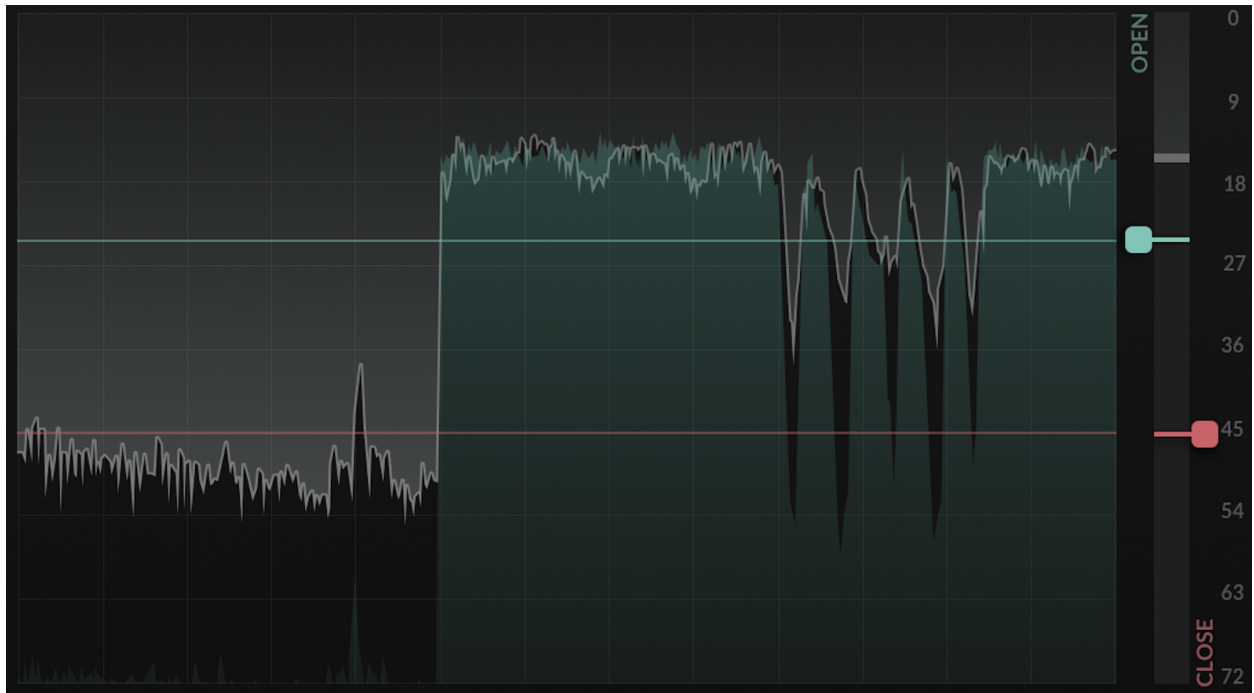
Setting Values
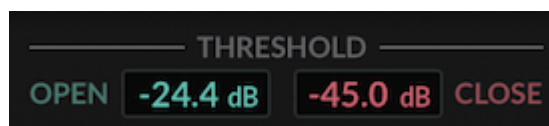
All numerical controls can be dragged to change the value, including all of the circular controls, numerical inputs and the flags/tabs.

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

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

Flags/tabs

The **OPEN** and **CLOSE THRESHOLD** parameters can be set by dragging the flags on the graph. Click and drag between the thresholds to move both thresholds at once.

Click and drag in the area above the upper threshold to move only the upper threshold. Click and drag in the area below the lower threshold to move only the lower threshold.
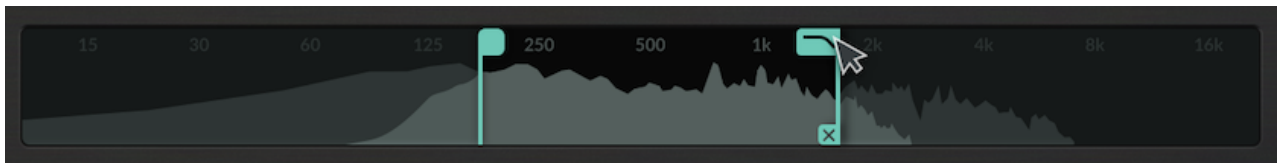
You can also change the filter cutoffs by dragging the handles directly on the filter graph.

FINE control (hold ⌘/ALT)

Hold ⌘/ALT while dragging a control to enter 'FINE' control mode. This causes all interactions with numerical input to have finer control - including the increment/decrement buttons!
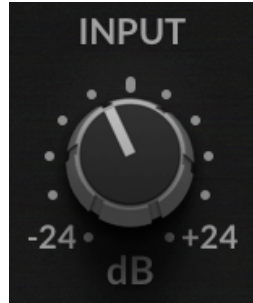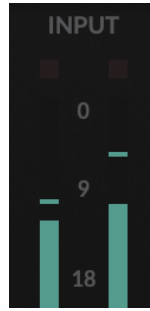
I/O

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.
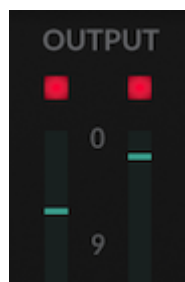
Input gain

The **INPUT Meter** shows the instantaneous value of the **INPUT** signal.

If the signal is very loud or is clipping, this is indicated by a red segment at the top of the metering.

The **INPUT GAIN** control to the bottom left of the plug-in window allows the adjustment of incoming signal to X-Gate to allow the desired control of the signal against the **GATE THRESHOLD** & allows adjustment to +/- 24 dB.

Output gain

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The **OUTPUT METER** shows the instantaneous value of the **OUTPUT** signal.

If the signal is very loud or is clipping, this is indicated by a red segment at the top of the metering.

The **OUTPUT GAIN** control to the bottom left of the plug-in window allows the adjustment and trimming the output signal from the plug-in up to +/- 24 dB.

MIX

The **MIX** Knob sets the blend between the 'Wet' effected signal post **GATE** Processing and the Original 'Dry' Input Signal. This is an easy way to 'dial back' the overall effect of the plug-in. One effective technique is to apply some severe gating, then reduce the MIX a bit to make it feel more natural.

Open and Close Thresholds

At the core of the gate processor are two thresholds: **OPEN** and **CLOSE**. The uppermost threshold is displayed on the left, and the lower threshold is displayed on the right.
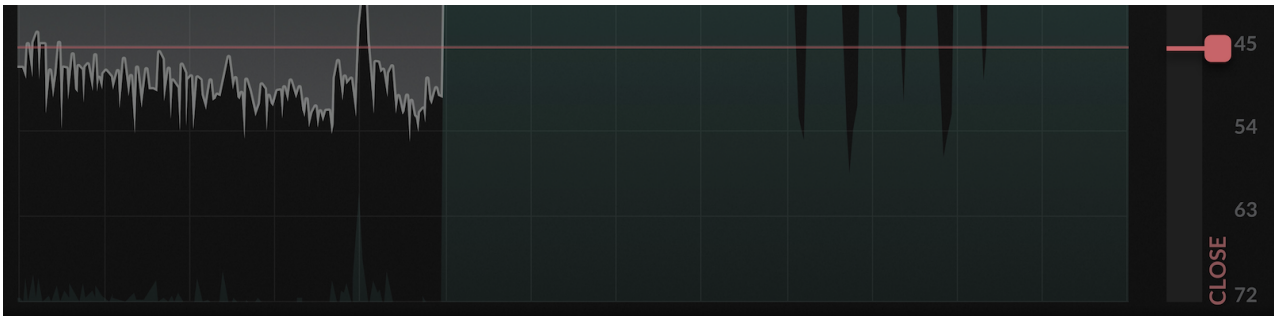
Open Threshold
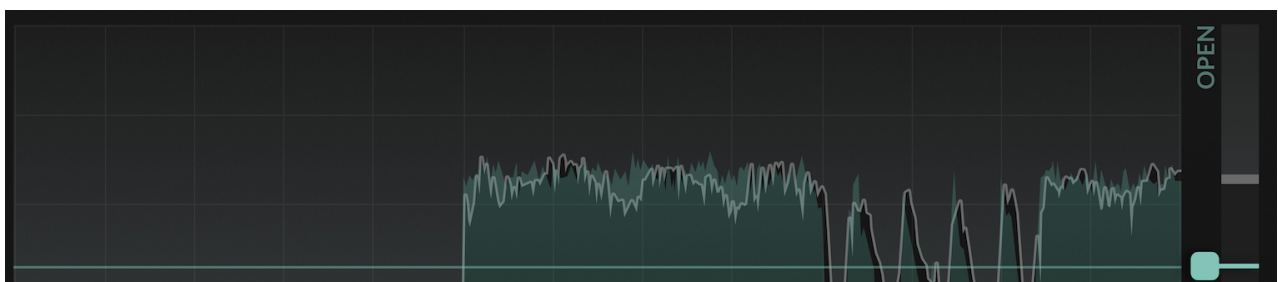
The **OPEN (UPPER) THRESHOLD** sets the signal level above which the **GATE OPENS**, when the gate is closed.

* *When in **DUCK MODE**, the **UPPER THRESHOLD** becomes the **CLOSE** threshold this sets the level above which the gate closes.*

Close Threshold

The **CLOSE (LOWER) THRESHOLD** sets the signal beneath which the **GATE CLOSES**, when the gate is open.

** When in **DUCK MODE**, the **LOWER THRESHOLD** becomes the **OPEN** threshold, and sets the level below which the gate opens.*

What is hysteresis?

The difference between the **OPEN** & **CLOSE THRESHOLDS** is referred to as hysteresis. SSL console gates typically include a built-in hysteresis, which is carefully designed to prevent the gate from quickly flipping on and off.
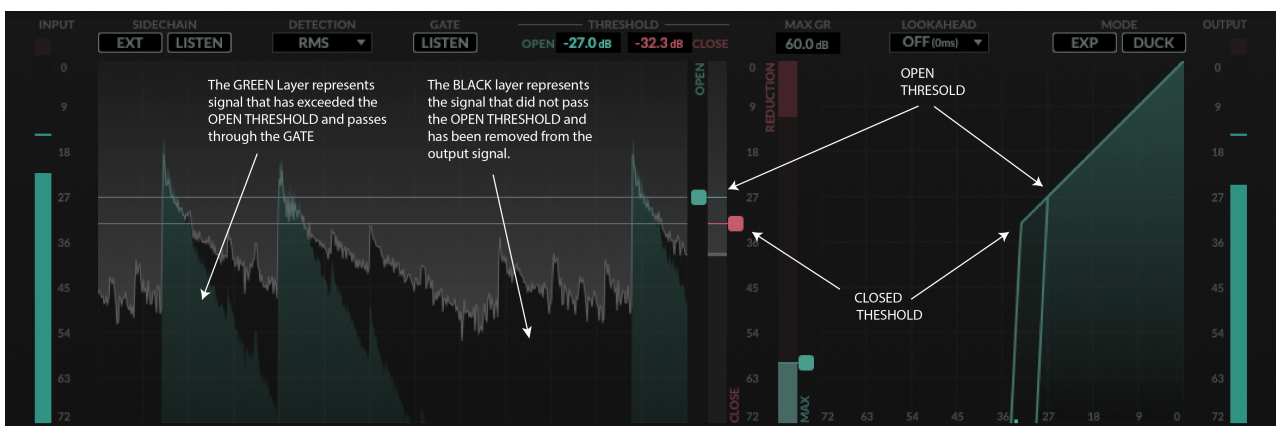
In X-Gate, you can visualise and set the hysteresis by setting the **OPEN & CLOSE THRESHOLDS** to different values.

Max Gain Reduction

The **MAX GR** (GAIN REDUCTION) level represents the maximum dB value between the **OPEN** & **CLOSED** Gated & undated signals.

The All-in-One Visualiser

The **WAVEFORM GRAPH** (above, left) allows **X-GATE** to visually represent key parameters in an all-in-one display. In combination with the **I/O Graph** (right) it is deeply revealing in how the gate processes the incoming signal.

Waveform Graph

To the right of the **INPUT METER**, the incoming signal is represented as dB / time, allowing the user to see peaks in the waveform and identify the ideal position for for the **OPEN** & **CLOSE THRESHOLDS** against the incoming signal.

## Setting the Open and Close Threshold
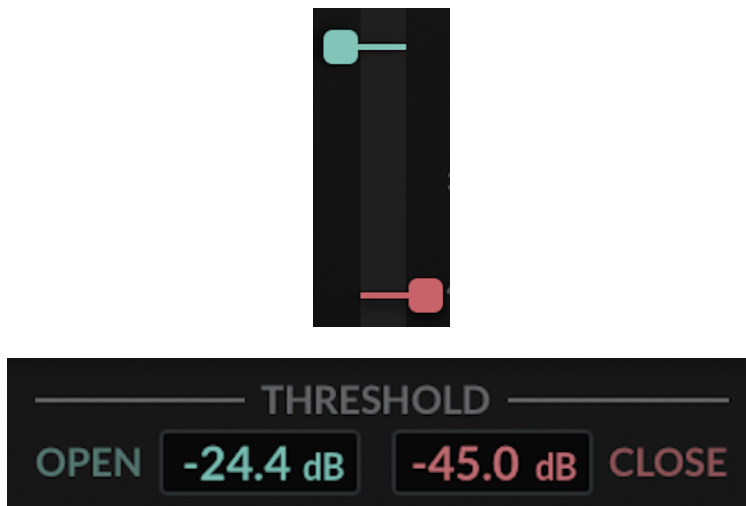
In addition to setting the **OPEN THRESHOLD & CLOSED THRESHOLD** parameters using the numerical inputs, you can interact with them directly on the graph. The flags marked in green & red can be dragged up and down to set their values against the waveform.

The decibel scale is matched across all meters and graphs for an intuitive, left-to-right visualisation of what the gate is doing.
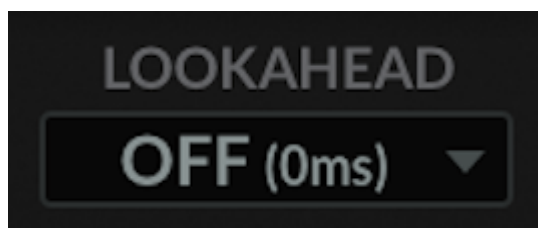
I/O Graph
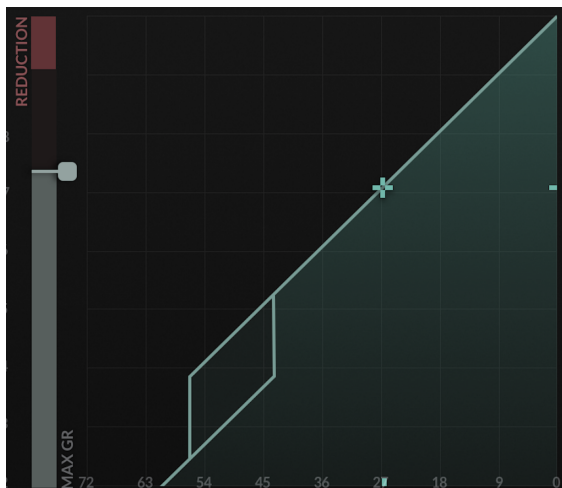
A traditional representation of a dynamic processor response is presented to the right of the **WAVEFORM GRAPH**. The **I/O GRAPH** shows the input signal against the expected output signal. This is especially useful for visualising **EXP** and **DUCK** modes.
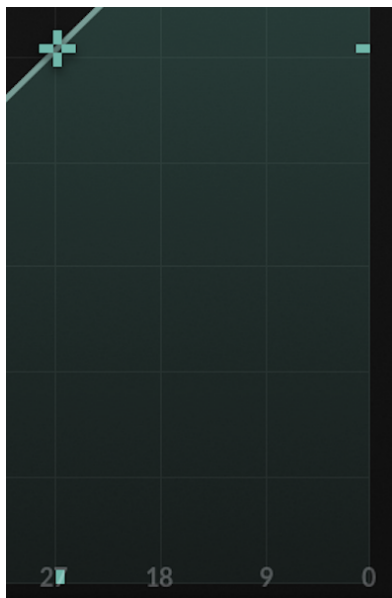
An average of the instantaneous value of the signal is indicated by a cross on the I/O GRAPH.

Lookahead

The **LOOKAHEAD** control introduces a delay to the signal, allowing the processor more time to react to the incoming signal. In practice, this means that gate can respond more quickly and accurately to changes in the incoming signal, but with the caveat of introducing latency.

Rather than a continuous lookahead, we present several static options. This allows X-Gate to introduce the minimal amount of latency for each lookahead options, rather than having to introduce the maximum delay (15ms) for smaller lookahead values.

The **LOOKAHEAD** can be changes from **OFF** all the way to **MAX** (15ms).

The introduced delay is automatically reported by the plug-in to your DAW, to allow for automatic delay compensation.

Traffic Lights System

Inspired by classic hardware gates, and visualisation established throughout SSL's Live and Broadcast console range, X-Gate utilises an intuitive **Traffic Light System** for quick visual feedback about the gate's current status.
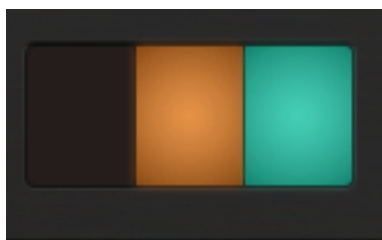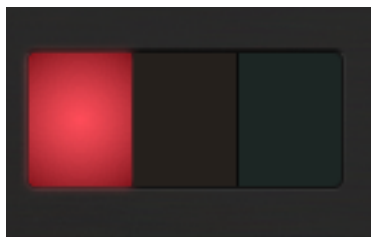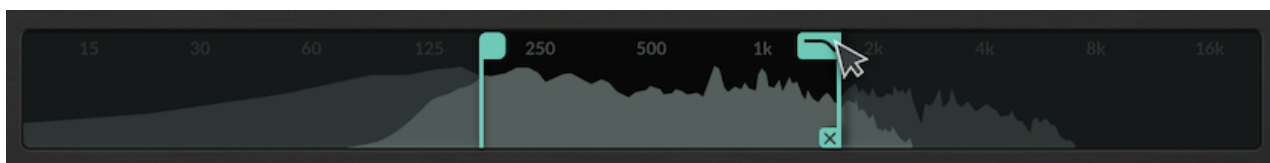


- Closed = Red
- Hold = Amber
- Open = Green/Amber

Sidechaining

X-Gate features a flexible **SIDECHAIN** circuit that lets you sculpt incoming signals to tailor the gate trigger for specific & creative purposes.

S/C Filters and Visualisation Graph

The **S/C Visualisation Graph** (above), displays the frequency range on the **SIDECHAIN** signal. In order to focus the **SIDECHAIN** to a limited frequency band, **X-Gate** allows the option to engage the **LF** & **HF** bands of the **SF FILTER**, then set the frequency of each band by either dialing in the settings on the **LF** & **HF CUT** knobs (as shown below), or by dragging the flags to the desired position within the **Visualisation Graph** itself.
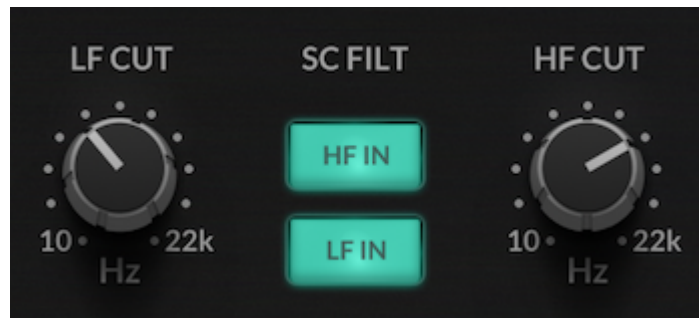
Mid-side processing

For **Stereo Sources**, we can also alter the **SIDECHAIN** signal using the **SC M/S** Knob, altering the incoming detection from focusing on **MID** only content, through to only **SIDE** content from the stereo source. In it's centre position (as shown) the **SIDECHAIN** signal remains untouched.

External Sidechain and Sidechain Listen

X-Gate includes the option to **SIDECHAIN** the gate form an external sound input. To activate this, simply set up your DAW's internal plug-in routing system to select the source signal, then activate the **EXT** Button to engage this signal as the Gate Trigger.

The **SIDECHAIN LISTEN** Button focuses the Plug-In's audio output to the **SIDECHAIN** signal; either externally, or the source material with the **LF** & **HF CUT** applied if activated.

Ballistics and Shaping
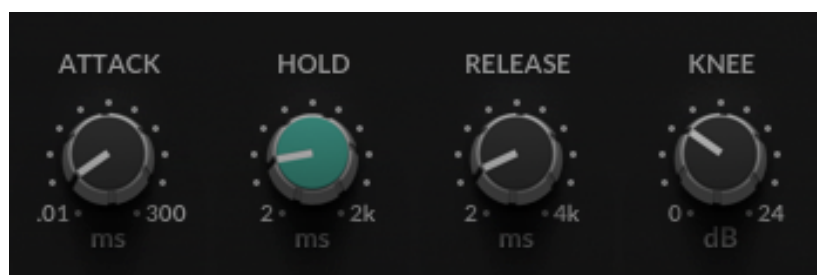
ATTACK

The **ATTACK** Knob adjusted the rate the gate initiates opening to allow signal though once passed the **Threshold** after being triggered.

HOLD

The **HOLD** Knob adjusts the time in milliseconds that the **GATE** is held open following the signal passing back below the **OPEN THRESHOLD** with the rate being between 2ms to 2000ms (2 seconds)

RELEASE

The **RELEASE** Knob adjusts the decay time in milliseconds of the **GATE** closing when the signal has passed below **CLOSE THRESHOLD.** The rate being between 2ms to 4000ms (4 Seconds)

KNEE

The **KNEE** Parameter is only available in **EXP** (Expander) mode, & adjusts the ratio of **GATE KNEE** to allow for a more natural volume roll off beneath the **CLOSE THRESHOLD** by smoothing the transition between open & closed states.

Detection
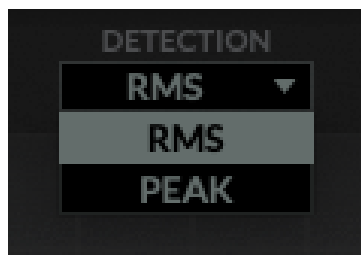
X-GATE's Gate detection can be switched between **RMS** or **PEAK** to best suit the Gate input or EXT signal. The **Detection** button is located under the **Traffic Light Display** & features a drop down menu allowing the selection of the appropriate setting.
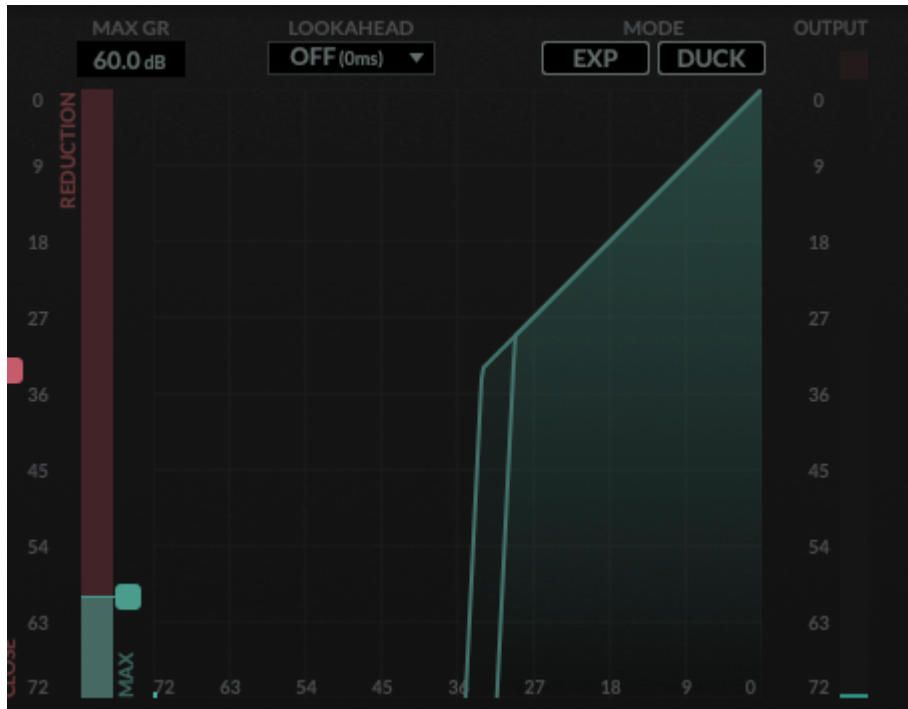
Gate, Expander and Duck Modes

X-GATE features three different operational modes, each allowing for alternative controls to tailor the Gate for different purposes.

In X-Gate's default state, alternatively known as **GATE MODE**, the two buttons below **MODE** will be black to show their disengaged state (as below).
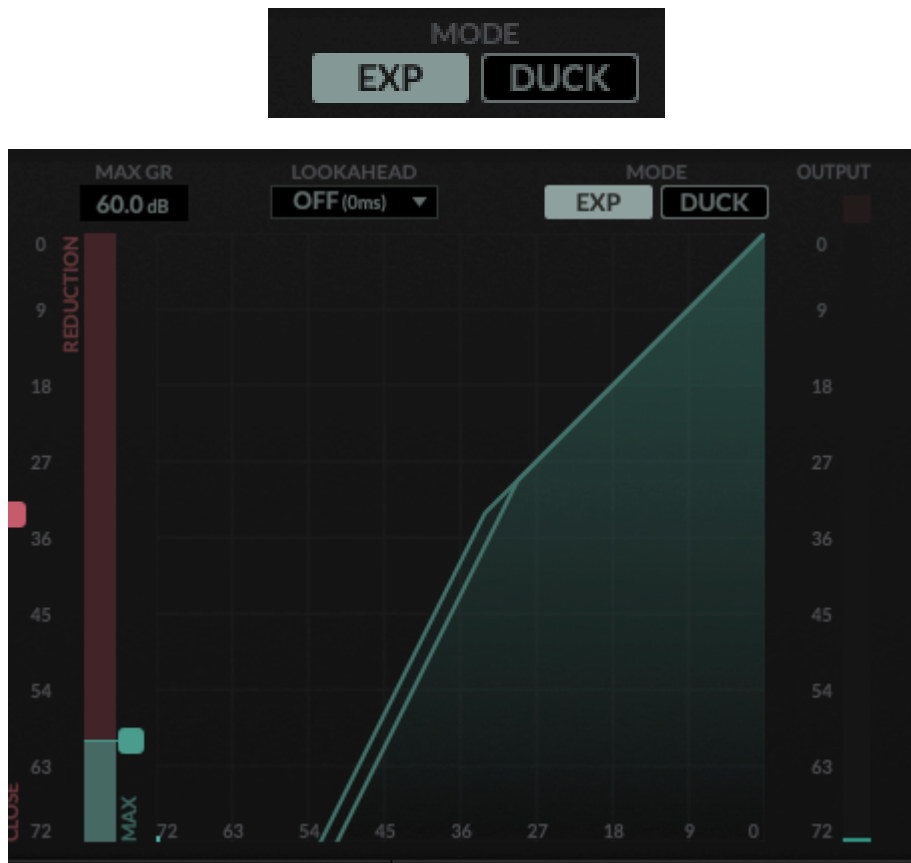

Gate Mode

GATE MODE's visualisation plane on the Left of the Plug-In shows the **OPEN THRESHOLD** in line with the **WAVEFORM GRAPH** and the steep fixed **CUT OFF** when the signal decreases below the **CLOSED THRESHOLD**, with the **MAX REDUCTION** Meter to the Left to determine how far the dB value falls below the **OPEN THRESHOLD**

Expander Mode

To activate **EXP MODE**, first you must click on the **EXP** Button which will turn green when engaged.

In **EXP MODE** the **FIXED CUT OFF** is less drastic to allow a more natural gated sound. Again the **OPEN & CLOSED THRESHOLD** Level is aligned with the **WAVEFORM GRAPH,** but now the user can modify the **KNEE** to further control the output signal to retain a more natural character.

Duck Mode

To activate **DUCK MODE**, first you must click on the **DUCK** Button which will turn green when engaged.

In **DUCK MODE** the Gate's **SIDECHAIN** operation logic is inverted, attenuating the incoming signal when the **SIDECHAIN INPUT** Signal Exceeds the threshold.

Again the **OPEN & CLOSED THRESHOLD** Level is aligned with the **WAVEFORM GRAPH,** but now the **CLOSED & OPEN** Thresholds are also inverted.

Mid-side processing
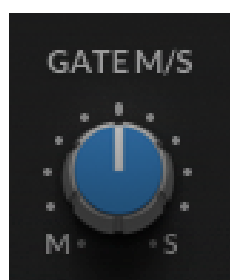
The **GATE M/S** Knob alters the balance between processing the **MID** Signal or **SIDE** Signal of the **INPUT.**

Gate Listen

The **GATE LISTEN** when engaged, switches the audio output of the plug-in to audition the signal **NOT** passing though the gate. eg. the **REMOVED** portion of the original signal. This is useful to gauge if any part of the signal is being cut too extraneously.
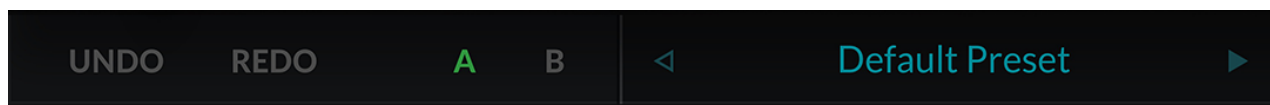
Presets

X-Gate ships with several plug-ins to aid your workflow, including several carefully designed presets for different common gating applications such as presets to resolve Snare Mic & Vocal Bleed as well as more creative uses such as the '*Gentle Mastering Expander'* to revive dynamics in a heavily compressed Mix.

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.

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.
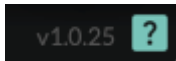
Click the tooltip to cycle through the pages.