

PLASMA

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1. Welcome to Plasma

Plasma is a cutting-edge processor designed to help add energy and polish to masters, and help elements cut through the mix. Plasma is driven by a new algorithm we call Flux Saturation, which adaptively saturates different areas of the frequency spectrum to balance the sound towards one of many available tuning profiles.

Flux Saturation separates the sound into many spectral bins. The level of sound in each bin determines whether that frequency bin is boosted or not. Boosted spectral bins are passed through a tube saturation circuit that can be overdriven. As a result, Plasma applies harmonic enhancement where it's needed without adding too much saturation, or distorting the rest of the signal.

This document describes all features in detail, starting with the [overview](#).

Document conventions

In this document the following formatting is used to highlight useful information:

<i>Italics</i>	Indicates paths to locations on your hard disk or other storage devices.
Bold	Highlights important names, concepts, and software interface elements.
[Brackets]	References keys on the computer keyboard.
▶	Denotes a single step instruction.
→	Denotes the expected result when following instructions.

The following three icons denote special types of information:



The **light bulb** icon indicates a useful tip, suggestion, or interesting fact.



The **information** icon highlights essential information in a given context.



The **warning** icon alerts you of potential risks and serious issues.

2. Overview

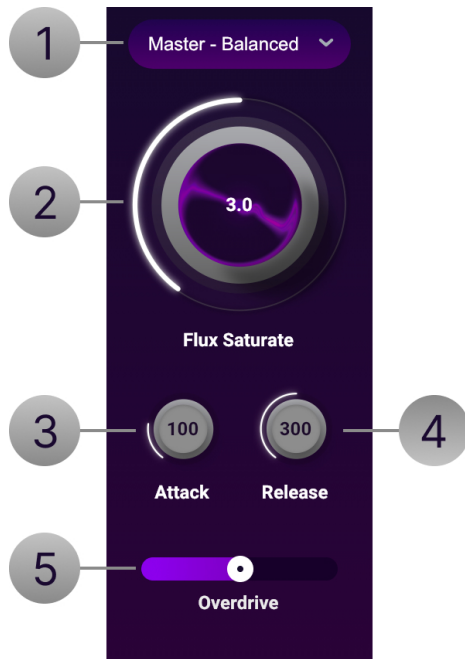
The Plasma interface consists of the main controls on the left side, and the Display section on the right side. The header at the top gives you access to presets and global functions.



- 1. Header:** Contains global controls including the Preset selector. For more information, refer to [Header](#).
- 2. Main control section:** Lets you set the Tuning Profile, adjust the overall amount of processing, and fine-tune key parameters. For more information, refer to [Main control section](#).
- 3. Display section:** Lets you configure the Channel Processing mode, monitor your processing, and set its frequency range. For more information, refer to [Display section](#).

3. Main control section

The main controls on the left side of the interface let you set the Tuning Profile, adjust the overall amount of processing, and fine-tune controls related to the processing's response times and the tube saturation.



1. **Tuning Profile:** This dropdown list contains various tuning profiles that will determine how Flux Saturation affects the incoming signal. These tunings essentially inform the spectral algorithm so it knows which frequencies should be boosted. There are four different styles of master-bus tuning: Balanced, Bright, Warm, and Scooped. There are also many tuning profiles for mix elements.
2. **Flux Saturate:** This is the main control that adjusts the overall amount of processing that Plasma will apply.
 - The first half of the knob's range applies subtle changes appropriate for mastering. The second half radically changes the tone of the signal, which is useful for mixing, parallel processing, or exaggerating the processing to hear what it's doing.
 - The unit of this control is roughly in decibels. This means that when you apply X dB of Flux Saturate, the processor will only ever boost a frequency by X dB. However, the saturation processing is non-linear and dependent on the gain of the input signal, so this is only an approximation.
3. **Attack:** Controls how quickly the spectral processor adapts to the incoming signal in milliseconds. Similar to the role it plays in compressors, the attack control will affect the transient response. Fast attack times mean that the Flux Saturate will quickly adapt and tonally shape transients, while slow attack times will cause the processor to not react as much to transients.
4. **Release:** Controls how quickly the spectral processor will return to baseline in milliseconds. Long release times will cause the boosts applied by Flux Saturation to linger. Fast release times will return to baseline quickly, but very fast release times will begin to cause artifacts that are characteristic of spectral processors. It can sound watery, almost like lossy data compression.

- 5. Overdrive:** This amplifies the spectrally boosted signal through the tube saturation algorithm. Since the tube saturation is non-linear, meaning it reacts differently depending on the level of the input signal, this control can be thought of as gain-staging into the saturation. Low amounts of Overdrive will typically result in a mostly-clean, lightly-saturated signal. As you increase Overdrive, the signal will be saturated more intensely. At high levels of Overdrive, saturation will transition into audible distortion and the signal will start to sound "fuzzy" and transients will be "blown-out."

4. Display section

The Display section lets you configure the Channel Processing mode, monitor your processing using the Difference meter, and set its frequency range using the Action Region handles.



1. **Power Button:** Activates or deactivates processing in the associated channel.
2. **Solo:** Isolates the output of the associated channel.
3. **Mid/Transient:** Selects the **Mid** or **Transient** channel depending on the selected Channel Processing mode. This button is not available in Stereo mode.

4. **Channel Processing mode:** Sets the channel configuration that Plasma uses to apply its processing.
- **Stereo:** Equivalent processing is applied to the left and right channels.
 - **Mid/Side:** Applies Mid/Side encoding to the signal coming into Plasma, allowing you to process the Mid and Side channels independently. One set of parameters applies processing to the encoded Mid channel and the second set of parameters applies processing to the encoded Side channel. The signal is decoded to a stereo signal at the output.
 - **Transient/Sustain:** Analyzes the signal coming into Plasma to isolate transients and separate them from the sustained portion of the signal. The Transient and Sustain can then be processed separately. One set of parameters applies processing to the Transient channel and the second set of parameters applies processing to the Sustain channel. The two signals are mixed back together at the output. If no processing is applied, the Transient and Sustain will mix back together to form the exact same signal.

i Note that both Mid/Side and Transient/Sustain mode require Plasma to be instantiated in stereo. They will not work as expected when the plugin is instantiated in mono.

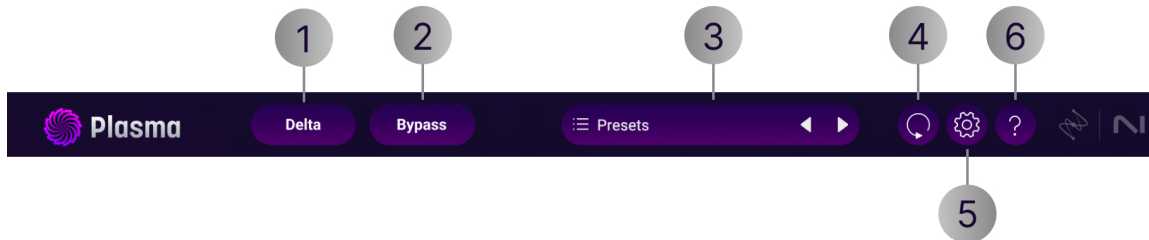
5. **Side/Sustain:** Selects the **Side** or **Sustain** channel depending on the selected Channel Processing mode. This button is not available in Stereo mode.
6. **Action Region handles:** Define the upper and lower frequency boundaries of the Flux Saturation processing. When a spectral bin is outside of the handles, it is deactivated and will no longer apply boost.

i In cases where intense amounts of Flux Saturation with high Overdrive are applied, it is possible to see activity on the difference meter at very low frequencies. This will occur even if the lower Action Region Handle has been raised. This is due to very slight waveform asymmetry resulting from the even harmonics from the tube saturation.

7. **Difference meter:** Displays the tonal changes that the Flux Saturation processing is applying. This is similar to an EQ where frequency is measured from left to right and gain is up and down. Different from an EQ, Flux Saturate will adapt its spectral contour over time.

5. Header

The Header gives you access to presets, global functions, and the Options window.



1. **Delta:** Monitors the difference between the input and output signals. This enables you to hear exactly what the plugin is adding to your audio signal.
2. **Bypass:** Deactivates the processing of the plugin, letting you to hear the unaffected input signal.
3. **Preset selector:** Shows the name of the current preset. Clicking the name opens the drop-down menu that lets you browse and manage presets. By clicking on the left and right arrows you can load the previous or next preset in the list, respectively. For more information, refer to [Presets](#).
4. **Reset:** Returns Plasma to its default settings.
5. **Options:** Opens the Options window that shows the software version and gives access to options including tooltips and usage data, as well as your license. For more information, refer to [Options](#).
6. **Help (?):** Opens the Plasma online manual in your web browser.

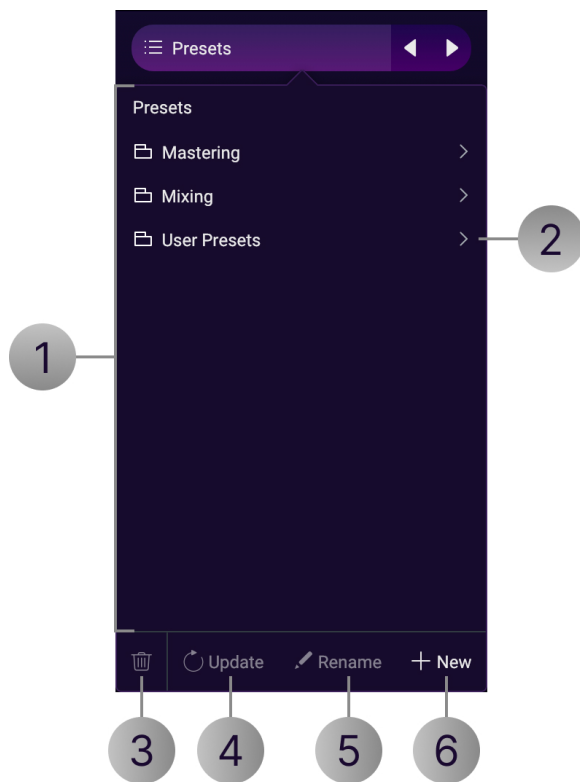
Presets

The Preset selector lets you browse and manage presets.

- To open the Preset selector, click the preset name in the Header.



The Preset selector consists of the following elements and controls:



1. **Preset list:** Shows all presets, sorted by category. Clicking a category shows the presets in this category. Clicking a preset loads all of its settings.
2. **User Presets:** Shows all user presets. User presets are saved in the following user preset folders.
 - macOS: */Users/<user name>/Documents/iZotope/Plasma/Presets*
 - Windows: *User\<user name>\Documents\iZotope\Plasma\Presets*
3. **Delete:** Deletes the selected user preset. If a factory preset is selected, this function is not available and grayed out.
4. **Update:** Saves any changes you have made to the selected user preset. If a factory preset is selected, or the preset's settings have not been changed, this function is not available and grayed out.
5. **Rename:** Renames the selected user preset. If a factory preset is selected, this function is not available and grayed out.
6. **New:** Saves a new user preset in the user preset folder.

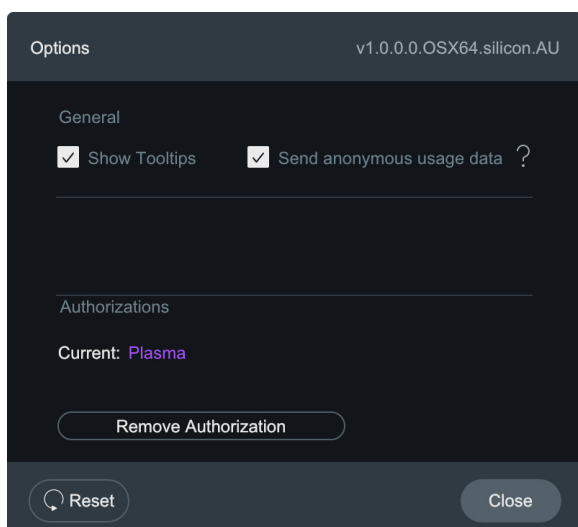
Options

The Options window lets you check the plugin's software version and gives you access to options including tooltips and usage data, as well as your license.

- ▶ To open the Options window, click the Options button (cog wheel icon) in the Header.



The following options are available:



- **General:**
 - **Show tooltips:** Activates or deactivates the tooltips in the user interface. When activated, hovering over a control shows a brief description of its functionality.
 - **Send anonymous usage data:** Activates or deactivates anonymous usage data tracking. When activated, this information helps us improve the software.
 - **View Manual:** Opens the Plasma online manual in your web browser.
- **License:**
 - **Current:** Shows the current license status of the plugin.
 - **Remove Authorization:** Removes the current product authorization, letting you authorize the plugin using another serial number.