

MStereoProcessor



Overview

MStereoProcessor is an advanced multiband stereo analyzer and enhancer.

It is intended for use mostly in the final stages of recording to widen, shrink and excite stereo on separate bands, and also for looking at and listening to the stereo field and its mono compatibility, as well as for true centre placement.

MStereoProcessor is a mastering tool created to give maximum control over the existing stereo field. It can be used to enhance the width of the audio or a part of it, but does not generate the stereo signal itself. Please check MStereoSpread or MStereoGenerator for creating artificial stereo from thin or monophonic signals.

MStereoProcessor is designed to be as transparent as possible. With the default analog crossover selected it alters phase. When linear-phase or hybrid crossovers are used, the processing should be completely transparent, however these crossovers induce latency and can potentially cause pre-ringing, so it is advised to use them, only if an improvement can be heard.

The approach we recommend is to use a commercial recording for comparison. The width of the stereo field may be matched with your own for example. Checks on the different parts of the spectrum can also be performed by adjusting the band crossover positions and soloing / muting the individual bands. Often, most stereo width is located in the high-mid part of the spectrum. Typically bass frequencies should be kept fairly narrow or even monophonic, as the lowest frequencies can cause phasing issues, especially when played on large monitors capable of reproducing sub bass.

Presets

Presets

Presets button shows a window with all available presets. A preset can be loaded from the preset window by double-clicking on it, selecting via the buttons or by using your keyboard. You can also manage the directory structure, store new presets, replace existing ones etc. Presets are global, so a preset saved from one project, can easily be used in another. The arrow buttons next to the preset button can be used to switch between presets easily.

Holding **Ctrl** while pressing the button loads a random preset. There must be some presets for this feature to work of course.

Presets can be backed up by 3 different methods:

- Using "Backup" and "Restore" buttons in each preset window, which produces a single archive of all presets on the computer.
- Using "Export/Import" buttons, which export a single folder of presets for one plugin.
- By saving the actual preset files, which are found in the following directories (not recommended):

Windows: C:\Users\{username}\AppData\Roaming\MeldaProduction
Mac OS X: /Library/Application support/MeldaProduction

Files are named based on the name of the plugin like this: "{pluginname}.presets", so for example MAutopan.presets or MDynamics.presets. If the directory cannot be found on your computer for some reason, you can just search for the particular file.

Please note that prior to version 16 a different format was used and the naming was "{pluginname}presets.xml". *The plugin also supports an online preset exchange. If the computer is connected to the internet, the plugin connects to our server once a week, submits your presets and downloads new ones if available. This feature is manually maintained in order to remove generally unusable presets, so it may take some time before any submitted presets become available. This feature relies on each user so we strongly advise that any submitted presets be named and organised in the same way as the factory presets, otherwise they will be removed.*



Left arrow

Left arrow button loads the previous preset.



Right arrow

Right arrow button loads the next preset.



Randomize

Randomize button loads a random preset.



Panic

Panic button resets the plugin state. You can use it to force the plugin to report latency to the host again and to avoid any audio problems. For example, some plugins, having a look-ahead feature, report the size of the look-ahead delay as latency, but it is inconvenient to do that every time the look-ahead changes as it usually causes the playback to stop. After you tweak the latency to the correct value, just click this button to sync the track in time with the others, minimizing phasing artifacts caused by the look-ahead delay mixing with undelayed audio signals in your host. It may also be necessary to restart playback in your host.

Another example is if some malfunctioning plugin generates extremely high values for the input of this plugin. A potential filter may start generating very high values as well and as a result the playback will stop. You can just click this button to reset the plugin and the playback will start again.



Settings

Settings button shows a menu with additional settings of the plugin. Here is a brief description of the separate items.

Licence manager lets you activate/deactivate the plugins and manage subscriptions. While you can simply drag & drop a licence file onto the plugin, in some cases there may be a faster way. For instance, you can enter your user account name and password and the plugin will do all the activating for you.

There are 4 groups of settings, each section has its own detailed help information: **GUI & Style** enables you to pick the GUI style for the plug-in and the main colours used for the background, the title bars of the windows and panels, the text and graphs area and the highlighting (used for enabled buttons, sliders, knobs etc).

Advanced settings configures several processing options for the plug-in.

Global system settings contains some settings for all MeldaProduction plugins. Once you change any of them, restart your DAW if needed, and it will affect all MeldaProduction plugins.

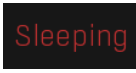
Dry/Wet affects determines, for Multiband plug-ins, which multiband parameters are affected by the Global dry/wet control.

Smart interpolation adjusts the interpolation algorithm used when changing parameter values; the higher the setting the higher the audio quality and the lower the chance of zippering noise, but more CPU will be used.



WWW

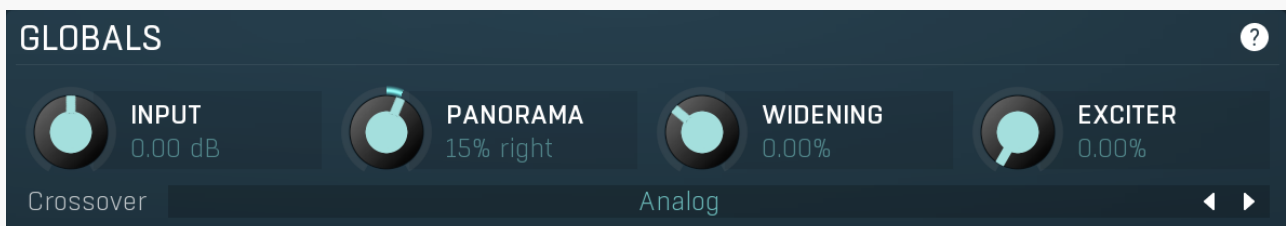
WWW button shows a menu with additional information about the plugin. You can check for updates, get easy access to support, MeldaProduction web page, video tutorials, Facebook/Twitter/YouTube channels and more.




Sleep indicator

Sleep indicator informs whether the plugin is currently active or in sleep mode. The plugin can automatically switch itself off to save CPU, when there is no input signal and the plugin knows it cannot produce any signal on its own and it generally makes sense. You can disable this in Settings / **Intelligent sleep on silence** both for individual instances and globally for all plugins on the system.

Globals panel



Globals panel contains general processing properties affecting all the audio.

 **INPUT**
0.00 dB

Input gain

Input gain defines the global gain applied on the input signal.

Range: -24.00 dB to +24.00 dB, default 0.00 dB

 **PANORAMA**
15% right

Panorama

Panorama defines the panorama applied to the input.

Range: 100% left to 100% right, default center

 **WIDENING**
0.00%

Widening

Widening defines the broad-band stereo field widening depth. The algorithm is fully mono-compatible as it only extends the existing stereo field and no new signal is added. This parameter should only be used to control the existing stereo field.

Widening converts the audio into its mid (mono) and side channels, leaving the mid intact and applying a gain to the side channel, then converts the signal back to left and right channels. As a result the stereo image becomes wider (for widening above 0%) or narrower (for widening below 0%). This method of widening the stereo image may initially sound pleasing, however it can quickly become fatiguing on the ear and often sounds unnatural, especially for larger amounts of widening. Use this parameter to control the existing stereo field and as a special effect. Use it to increase width only with caution.

Range: Mono to 200.0%, default 0.00%

 **EXCITER**
0.00%

Exciter

Exciter defines the power of the global exciter, which processes the band signal through a tube-like saturator that can enhance the global clarity and add some upper harmonics.


Range: 0.00% to 100.0%, default 0.00%

Crossover Analog ◀ ▶

Crossover

Crossover defines the type of the filter used to separate bands. **Analog** is a minimum phase crossover, fast and usually provides natural results, however changes the phase differently for each frequency, which may not be suitable for some audio materials. **Linear-phase** crossover takes more CPU and is very steep, thus provides better band separation, which however may not always be that good. It induces latency too, however its phase shift is equal for all frequencies. You can imagine that it only delays the signal, it does not change anything unless the processor is set to do that. **Hybrid crossover** is something in-between. It is linear-phase, but it's not as steep and slow as a linear-phase crossover.

Bass



BASS Bypass M S ?

WIDENING -51.6%

DELAY 4.0 ms

DELAY WIDTH 0.00%

EXCITER 0.00%

Panorama center

Bass contains processing properties for particular frequency range.

Bypass

Bypass switch lets you bypass any processing done for the band.

M

M button mutes or unmutes the band.

S S

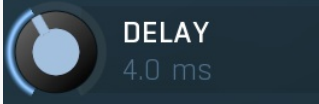
S button solos or unsolos the band.



Widening

Widening defines the stereo field widening depth. The algorithm is fully mono-compatible, it only extends the existing stereo field, no new signal is added.

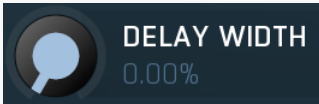
Range: Mono to 200.0%, default 0.00%



Delay

Delay determines the delay time for the secondary widening algorithm. Please note that it may generate comb filtering effects similar to flanging or chorus.

Range: 0 ms to 10 ms, default 4.0 ms



Delay width

Delay width defines the delayed stereo field widening depth. The algorithm is fully mono-compatible, it only extends the existing stereo field and no new signal is added. Please note that it may generate comb filtering effects similar to flanging or chorus.

Range: 0.00% to 100.0%, default 0.00%



Exciter

Exciter defines the power of the band exciter, which processes the band signal through a tube-like saturator that can enhance the band clarity and add some upper harmonics.

Range: 0.00% to 100.0%, default 0.00%



Panorama

Panorama defines the panorama adjustment for the band, after the band processing.

Range: 100% left to 100% right, default center

Low-mid



Low-mid contains processing properties for particular frequency range.

Bypass

Bypass switch lets you bypass any processing done for the band.

M M

M button mutes or unmutes the band.

S S

S button solos or unsolos the band.



WIDENING

0.00%

Widening

Widening defines the stereo field widening depth. The algorithm is fully mono-compatible, it only extends the existing stereo field, no new signal is added.

Range: Mono to 200.0%, default 0.00%



DELAY

4.0 ms

Delay

Delay determines the delay time for the secondary widening algorithm. Please note that it may generate comb filtering effects similar to flanging or chorus.

Range: 0 ms to 10 ms, default 4.0 ms



DELAY WIDTH

0.00%

Delay width

Delay width defines the delayed stereo field widening depth. The algorithm is fully mono-compatible, it only extends the existing stereo field and no new signal is added. Please note that it may generate comb filtering effects similar to flanging or chorus.

Range: 0.00% to 100.0%, default 0.00%



EXCITER

0.00%

Exciter

Exciter defines the power of the band exciter, which processes the band signal through a tube-like saturator that can enhance the band clarity and add some upper harmonics.

Range: 0.00% to 100.0%, default 0.00%

Panorama

center

Panorama

Panorama defines the panorama adjustment for the band, after the band processing.

Range: 100% left to 100% right, default center

High-mid

The screenshot shows a control panel for the 'HIGH-MID' band. At the top right are buttons for 'Bypass', 'M', 'S', and a help icon. Below these are four knobs: 'WIDENING' at 0.00%, 'DELAY' at 4.0 ms, 'DELAY WIDTH' at 100.0%, and 'EXCITER' at 0.00%. At the bottom is a 'Panorama' slider set to 'center'.

High-mid contains processing properties for particular frequency range.

Bypass

Bypass

Bypass switch lets you bypass any processing done for the band.

M

M

M button mutes or unmutes the band.

S

S

S button solos or unsolos the band.



WIDENING

0.00%

Widening

Widening defines the stereo field widening depth. The algorithm is fully mono-compatible, it only extends the existing stereo field, no new signal is added.

Range: Mono to 200.0%, default 0.00%



Delay

Delay determines the delay time for the secondary widening algorithm. Please note that it may generate comb filtering effects similar to flanging or chorus.

Range: 0 ms to 10 ms, default 4.0 ms



Delay width

Delay width defines the delayed stereo field widening depth. The algorithm is fully mono-compatible, it only extends the existing stereo field and no new signal is added. Please note that it may generate comb filtering effects similar to flanging or chorus.

Range: 0.00% to 100.0%, default 0.00%



Exciter

Exciter defines the power of the band exciter, which processes the band signal through a tube-like saturator that can enhance the band clarity and add some upper harmonics.

Range: 0.00% to 100.0%, default 0.00%

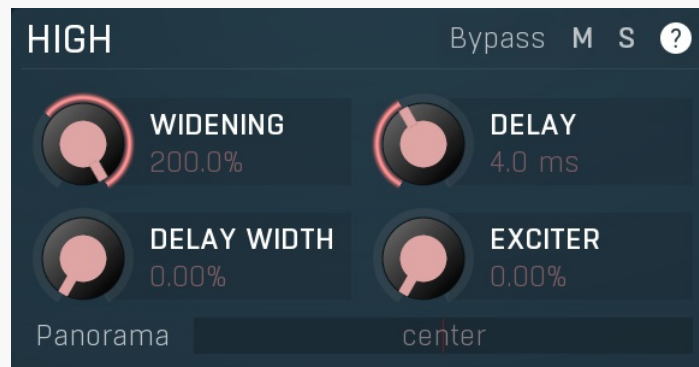


Panorama

Panorama defines the panorama adjustment for the band, after the band processing.

Range: 100% left to 100% right, default center

High



High contains processing properties for particular frequency range.

Bypass

Bypass

Bypass switch lets you bypass any processing done for the band.

M M

M button mutes or unmutes the band.

S S

S button solos or unsolos the band.



Widening

Widening defines the stereo field widening depth. The algorithm is fully mono-compatible, it only extends the existing stereo field, no new signal is added.

Range: Mono to 200.0%, default 0.00%

DELAY
4.0 ms

Delay

Delay determines the delay time for the secondary widening algorithm. Please note that it may generate comb filtering effects similar to flanging or chorus.

Range: 0 ms to 10 ms, default 4.0 ms

DELAY WIDTH
0.00%

Delay width

Delay width defines the delayed stereo field widening depth. The algorithm is fully mono-compatible, it only extends the existing stereo field and no new signal is added. Please note that it may generate comb filtering effects similar to flanging or chorus.

Range: 0.00% to 100.0%, default 0.00%

EXCITER
0.00%

Exciter

Exciter defines the power of the band exciter, which processes the band signal through a tube-like saturator that can enhance the band clarity and add some upper harmonics.

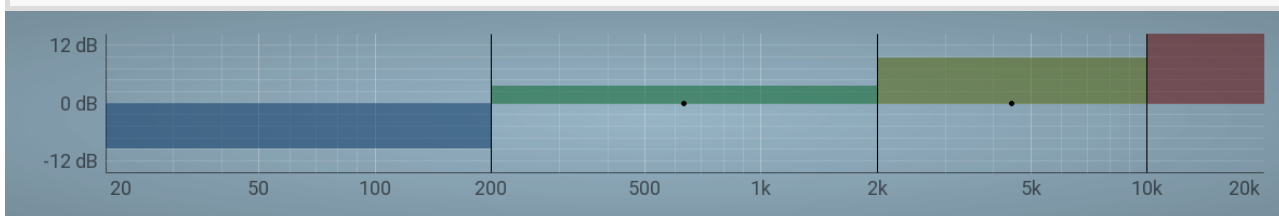
Range: 0.00% to 100.0%, default 0.00%

Panorama center

Panorama

Panorama defines the panorama adjustment for the band, after the band processing.

Range: 100% left to 100% right, default center



Band

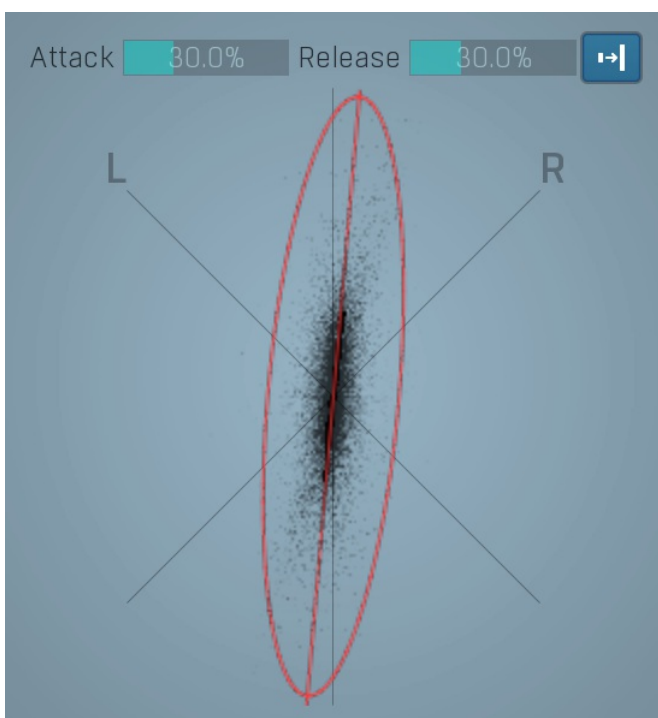
editor

Band editor shows the available bands, the cross-over frequencies delimiting them and the input gains. Use the left mouse button to change cross-overs and input gains.

Default Mid Side

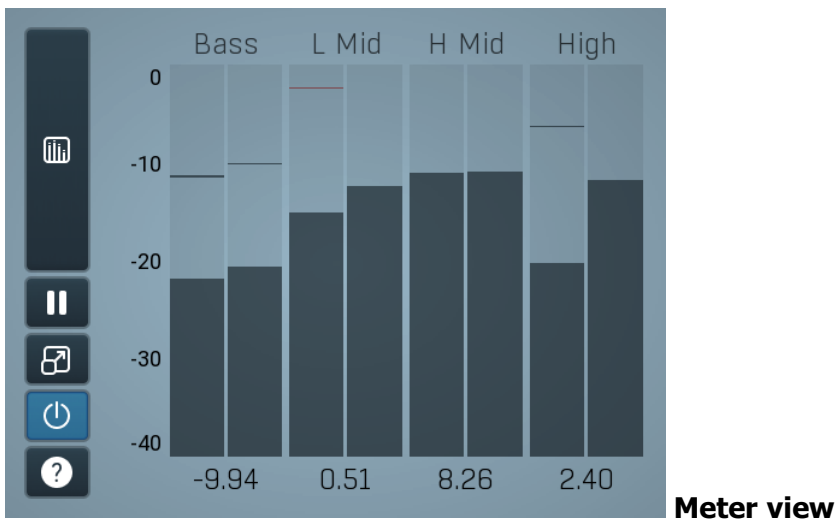
Output mode

Output mode lets you check that your recording is mono-compatible and also provides a closer look into the stereo field.



Phase scope

Phase scope shows the current phase distribution. An ideal recording is represented by a "not too thick but not too thin" vertical ellipse. But, trust your ears.



Meter view displays the levels of each of the 4 bands.



Time graph

Time graph button switches between the metering view and the time-graphs. The metering view provides an immediate view of the current values including a text representation. The time-graphs provide the same information over a period of time. Since different time-graphs often need different units, only the most important units are provided.



Pause

Pause button pauses the processing.



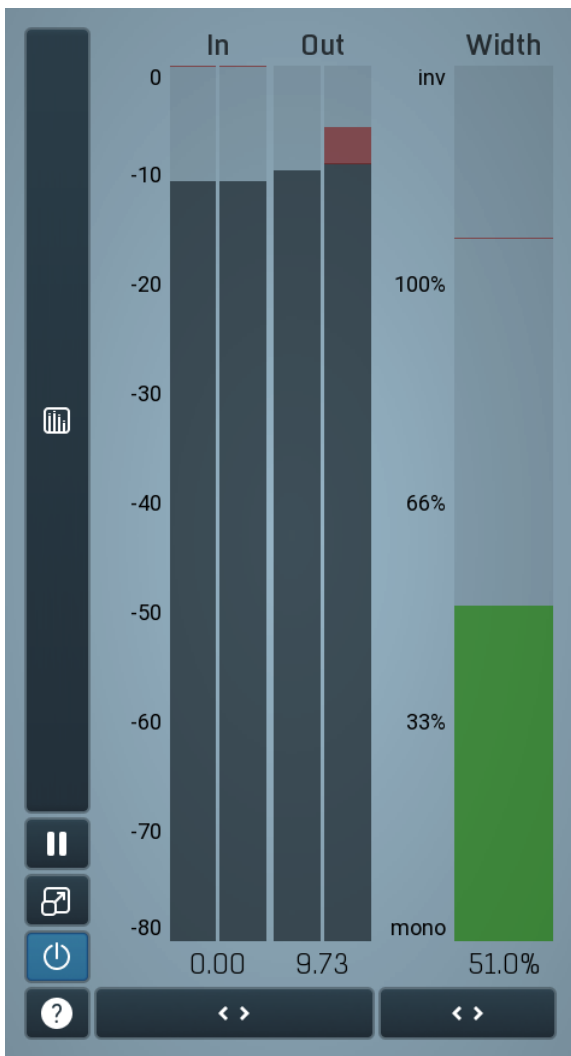
Popup

Popup button shows a pop-up window and moves the whole metering / time-graph system into it. This is especially useful in cases where you cannot enlarge the meters within the main window or such a task is too complicated. The pop-up window can be arbitrarily resized. In metering mode it is useful for easier reading from a distance for example. In time-graph mode it is useful for getting higher accuracy and a longer time perspective.



Enable

Enable button enables or disables the metering system. You can disable it to save system resources.



Global meter view

Global meter view provides a powerful metering system. If you do not see it in the plug-in, click the **Meters** or **Meters & Utilities** button to the right of the main controls. The display can work as either a classical level indicator or, in time graph mode, show one or more values in time. Use the first button to the left of the display to switch between the 2 modes and to control additional settings, including pause, disable and pop up the display into a floating window. The meter always shows the actual channels being processed, thus in M/S mode, it shows mid and side channels.

In the classical level indicators mode each of the meters also shows the recent maximum value. Click on any one of these values boxes to reset them all.

In meter indicates the total input level. The input meter shows the audio level before any specific processing (except potential oversampling and other pre-processing). It is always recommended to keep the input level under 0dB. You may need to adjust the previous processing plugins, track levels or gain stages to ensure that it is achieved.

As the levels approach 0dB, that part of the meters is displayed with **red** bars. And recent peak levels are indicated by single bars.

Out meter indicates the total output level. The output meter is the last item in the processing chain (except potential downsampling and other post-processing). It is always recommended to keep the output under 0dB.

As the levels approach 0dB, that part of the meters is displayed with **red** bars. And recent peak levels are indicated by single bars.

Width meter shows the stereo width at the output stage. This meter requires at least 2 channels and therefore does not work in mono mode. Stereo width meter basically shows the difference between the mid and side channels.

When the value is **0%**, the output is monophonic. From 0% to 66% there is a green range, where most audio materials should remain.

From 66% to 100% the audio is very stereophonic and the phase coherence may start causing problems. This range is colored blue. You may still want to use this range for wide materials, such as background pads. It is pretty common for mastered tracks to lie on the edge of green and blue zones.

Above 100% the side signal exceeds the mid signal, therefore it is too monophonic or the signal is out of phase. This is marked using red color. In this case you should consider rotating the phase of the left or right channels or lowering the side signal, otherwise the audio will be highly mono-incompatible and can cause fatigue even when played back in stereo.

For most audio sources the width is fluctuating quickly, so the meter shows a 400ms average. It also shows the temporary maximum above it as a single coloured bar.

If you right click on the meter, you can enable/disable loudness pre-filtering, which uses EBU standard filters to simulate human perception. This may be useful to get a more realistic idea about stereo width. However, since humans perceive the bass spectrum as lower than the treble, this may hide phase problems in that bass spectrum.



Time graph

Time graph button switches between the metering view and the time-graphs. The metering view provides an immediate view of the current values including a text representation. The time-graphs provide the same information over a period of time. Since different time-graphs often need different units, only the most important units are provided.



Pause

Pause button pauses the processing.



Popup

Popup button shows a pop-up window and moves the whole metering / time-graph system into it. This is especially useful in cases where you cannot enlarge the meters within the main window or such a task is too complicated. The pop-up window can be arbitrarily resized. In metering mode it is useful for easier reading from a distance for example. In time-graph mode it is useful for getting higher accuracy and a longer time perspective.



Enable

Enable button enables or disables the metering system. You can disable it to save system resources.



Collapse

Collapse button minimizes or enlarges the panel to release space for other editors.



Collapse

Collapse button minimizes or enlarges the panel to release space for other editors.

Utilities

UTILITIES

Map ? ↕

Lock

Map

Map

Map button displays all current mappings of modulators, multiparameters and MIDI (whichever subsystems the plugin provides).

Lock

Lock

Lock button displays the settings of the global parameter lock. Click on it using your left mouse button to open the Global Parameter

Lock window, listing all those parameters that are currently able to be locked. Click on it using your right mouse button or use the **menu button** to display the menu with learning capabilities - **Learn** activates the learning mode, **Clear & Learn** deletes all currently-lockable parameters and then activates the learning mode. After that, every parameter you touch will be added to the lock. Learning mode is ended by clicking the button again. The On/Off button built into the Lock button enables or disables the active locks.



Collapse

Collapse button minimizes or enlarges the panel to release space for other editors.

1 :

50.0%



Multiparameter

Multiparameter button displays settings of the multiparameter. The multiparameter value can be adjusted by dragging it or by pressing Shift and clicking it to enter a new value from the virtual keyboard or from your computer keyboard.

Click on the button using your left mouse button to open the **Multiparameter** window where all the details of the multiparameter can be set. Click on it using your right mouse button or click on the **menu button** to the right to display an additional menu with learning capabilities - as described below.



Menu

Menu button shows the **smart learn** menu. You can also use the right mouse button anywhere on the multiparameter button.

Learn attaches any parameters, including ranges. Click this, then move any parameters through the ranges that you want and click the multiparameter button again to finish. While learning is active, "REC" is displayed on the multiparameter button and learning mode is ended by clicking the button again.

Clear & Learn clears any parameters currently in the list then attaches any parameters, including ranges. Click this, then move any parameters through the ranges that you want and click the multiparameter button again to finish. While learning is active, "REC" is displayed on the multiparameter button and learning mode is ended by clicking the button again.

Reset resets all multiparameter settings to defaults.

Quick Learn clears any parameters currently in the list, attaches one parameter, including its range and assigns its name to the multiparameter. Click this, then move one parameter through the range that you want.

Attach MIDI Controller opens the MIDI Settings window, selects a unused parameter and activates MIDI learn. Click this then move the MIDI controller that you want to assign.

Reorder to ... lets you change the order of the multiparameters. This can be useful when creating active-presets. Please note that this feature can cause problems when one multiparameter controls other multiparameters, as these associations will not be preserved and they will need to be rebuilt.

In learning mode the multiparameter does not operate but rather records your actions. You can still adjust every automatable parameter and use it normally. When you change a parameter, the plugin associates that parameter with the multiparameter and also records the range of values that you set.

For example, to associate a frequency slider and make a multiparameter control it from 100Hz to 1KHz, just enable the smart learn mode, click the slider then move it from 100Hz to 1KHz (you can also edit the range later in the Multiparameter window too). Then disable the learning mode by clicking on the button.



Collapse

Collapse button minimizes or enlarges the panel to release space for other editors.

