

# MCompare



## Overview

MCompare is an extremely versatile tool for comparing your audio to external audio files or even to other stages of your processing. It provides a smooth transition between the input and whatever you want to compare it to, with automatic loudness and latency compensation, and extensive metering. Comparing your audio to finished recordings and to different stages of the processing is an essential part of both mixing and mastering, and even though you can do it in your host, MCompare is intended for this task, provides the quickest possible workflow and avoids potential confusion caused by different loudness or latency.

## Case 1 - Comparing your audio to finished commercial recordings

This is the most basic use that almost every successful mixing and mastering engineer carried out. In order to get the correct loudness, spectrum & spatial balance, level proportions between different tracks of the recording and other sonic qualities, it is essential to compare your mix/master to actual finished records. The evolution in mixing and mastering throughout many decades is huge and there's no idea worse than reinventing the wheel by starting from scratch. In most music styles a certain sound and/or sonic character is expected and providing it without extensive comparisons with commercial recordings is almost impossible (unless you are very lucky).

MCompare provide multiple slots for external files, called **File 1, File 2 etc.** You can load an audio file into each of these slots using the browse button. The plugin can load all important audio file formats (WAV, MP3, FLAC etc.) and resamples the audio to match your current project automatically. By clicking the particular File button you can then switch between the plugin input and the file. In the **audio file view** on top of the plugin you can see the whole waveform, use the green region to control loop points and double click anywhere to jump to that particular position.

## Mixing considerations

In the mixing stage we assume the overall spectrum balance, dynamics and loudness is not so important as it will be managed during the mastering. However it's pretty common to use some mild master compressor and limiter during mixing to be able to "anticipate" the resulting sound. In any event the most important thing is to avoid getting fooled by loudness differences. The plugin provides an **automatic loudness compensation (ALC)**, which may be a good starting point. You can either enable the ALC itself, which will compensate the

loudness on-the-fly, or use the **Set** button to let the engine configure the **Gain** parameter, in which case the loudness will approximately match at the moment you press the button, but you may need to use it again when you switch to a different part of the song for example.

We would recommend selecting a certain part of your audio recording, say a chorus, then selecting a sonically similar part of the file (using the loop area in the audio file view) and adjusting the loudness. From that moment onwards you can focus on the balance between tracks, spatial character, spectral collisions etc. without worrying about misjudgement caused by different loudness levels.

## Mastering considerations

During mastering it is not recommended to use ALC, because the overall loudness is one of the relevant factors and fluctuations should be avoided. We would therefore again recommend selecting a certain part of the master, selecting a sonically similar part of the file, and using the Set button to compensate for the loudness at the beginning. When the spectral and dynamic balance of your master is provisionally good enough, you should reset the gain parameter to 0dB by right-clicking on it, so that you can start focussing about the output loudness (controlled probably by the master limiter). Of course, you may still readjust the gain, but it is recommended doing that only slightly, because the comparison file serves as the loudness reference too of course. In any case we would advise setting the gain below 0dB, hence lowering the reference loudness, so that you avoid the typical over-processing and can ignore the "loudness war", which sucks life out of many modern recordings.

## Case 2 - Comparing your audio to a different stage of your mastering chain

Mastering typically contains just one set of processors in series, let's say compressor -> equalizer -> limiter. Besides comparing your master to some commercial recordings it is almost always a good thing to compare your processed master to the original mix, simply to ensure your processing made some improvement and didn't mess things up. There are 2 problems - mastering processors often induce latency, which makes the comparison rather problematic, and the overall loudness almost always changes during mastering, it's one of the purposes of the whole process after all. Sadly, this makes reasonable comparison almost impossible as it is extremely hard to focus on the sonic qualities without being fooled by the higher loudness of the master. MCompare provides with a solution to both problems.

First you need to setup a new mastering chain: MCompare A -> compressor -> equalizer -> limiter -> MCompare B. Instance A is called a **source generator**, or just source. It does literally nothing to your audio, but it sends it somewhere into the depths of your computer from where the other instance can get it. You simply insert MCompare and click the **Listening** button at the top and select, for example, Generate source 1. Then you can close the GUI, there's really nothing more you'll probably need. Instance B is called the **monitoring instance** as this is the one you will be using to listen and compare. And here you simply press **Source 1** button compare your mastered audio with the original mix.

After that it would be good to compensate for the latency, if needed. To do that you simply start playback and press the **Detect** button located next to the **Delay** parameter. It will do some processing for a few seconds and then the new delay value should be configured. If you feel like it's not working well, press the panic button '!' at the top of the plugin, restart playback and try again.

Finally it may be useful to adjust the loudness. The idea here is to increase the loudness of the source, so that you can focus on the actual sonic character. It is recommended to use the Set button; this works in exactly the same way as it does for the **File** buttons. You may also need to set the output gain in your mixer to some lower value for a time, because otherwise your master will be fine, but the source won't be protected by the mastering limiter, hence probably clipping. So you can, for example, set the **Volume** to -10dB and increase the volume knob in your audio interface accordingly. Then when comparing your master with your mix, just press the source button repeatedly. Then pushed, the source is playing and the output is likely to exceed 0dB. When the button is released your master is playing and the output will NOT exceed 0dB, since it is protected by the limiter.

Now since MCompare provides multiple source slots, you can actually monitor multiple stages of your mastering chain! In that case the chain could look for example like this: MCompare Generate source 1 -> compressor -> MCompare Generate source 2 -> equalizer -> MCompare Generate source 3 -> limiter -> MCompare B. And now you can monitor all stages of your mastering chain without being fooled by latency or loudness changes!

## Case 3 - Comparing your master in sync with an exported file

It is pretty common that you master a track, export it to say FLAC file and a week later you come back and want to try again, but of course you need to check if your new master is better or not. You can load the FLAC file into your host, but then you have the same typical trouble with A/Bing it there. Or you can load it to a MCompare File slot, but then it would be nice if you could keep it in sync with your master, so that the comparison is really effective.

Fortunately MCompare makes this very simple as well. Just enable the **Sync** button in the File slot. The plugin will then follow your host, so when you rewind in your host, the plugin will rewind as well. The last thing to do is to make both exactly in sync. To do that first use the **Start** parameter to make it approximately in sync. If your project starts in the beginning, then there's probably nothing to do really. And to get an exact synchronization, use the same approach as in Case 2 with sources - enable playback and press the **Detect** button. The plugin will work a few seconds and then compute the ideal delay.

# Case 4 - The ultimate mastering comparison method

Now let us take all the knowledge from above and create one ultimate method to compare your master to commercial recordings, original mix and even different versions of your master. Let's take it one by one. You should always use at least one commercial recording for comparison. You have multiple file slots (see Case 1) for that, use them. Next the original mix - that has been described in Case 2. Note that you could also use the mix as an audio file, but in that case the plugin couldn't synchronize the master with the mix, so the process wouldn't be very effective.

Now we get to the interesting part - at one point you could say that your master is pretty good but could be better. You'd like to try again something else. So you could export your current master, save the project as a new one and there use MCompare to compare your new master, which you are going to "try", with the exported master and use a File button for that. Well, yes, that could work, but it's a lot of work and again, these 2 masters would be out of sync, so the comparison wouldn't be effective.

So there's another solution - let's say you master in Cubase (or any other multitrack host for that matter). Instead of having the mastering chain on the master channel, as you would probably do, mainly because of its name :), you do everything in an audio track, just keep the main MCompare instance on the master track. Then when you are want to try another mastering chain, you simply duplicate the track, put another MCompare instance on the old one's end, let it generate a source and set the volume to silence, so that the track is processing, but instead of sending the output to your host's mix, it sends it to MCompare as a source and mutes it in the host. So it would look like this:

Track 1 = The first mastering chain: MCompare Generate source 1 (dry mix) -> mastering chain -> MCompare Generate source 2 (master 1), with Volume set to silence

Track 2 = The new mastering chain: mastering chain

Master track = MCompare monitoring instance

**So now you have dry mix in Source 1, first master in Source 2 and your new master you are working on now is the main MCompare instance input. And at this moment you are one click away from comparing your new master to your old master, dry mix, and all commercial recordings, all of them with loudness compensation, so you can be sure your ears are working the way they should.**

## 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:

A) Using "Backup" and "Restore" buttons in each preset window, which produces a single archive of all presets on the computer.

B) Using "Export/Import" buttons, which export a single folder of presets for one plugin.

C) 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.



#### Channel mode

Channel mode button shows the current processing channel mode, e.g. **Left+Right (L+R)** indicates the processing of left and right channels. This is the default mode for mono and stereo audio material and effectively processes the incoming signal as expected. However the plugin also provides additional modes, of which you may take advantage as described below. Mastering this feature will give you unbelievable options for controlling the stereo field.

Note that this is not relevant for mono audio tracks, because the host supplies only one input and output channel.

**Left (L) mode and Right (R) mode** allow the plugin to process just one channel, only the left or only the right. This feature has a number of simple uses. Equalizing only one channel allows you to fix spectral inconsistencies, when mids are lower in one channel for example. A kind of stereo expander can be produced by equalizing each side differently. Stereo expansion could also be produced by using a modulation effect, such as a vibrato or flanger, on one of these channels. Note however that the results would not be fully mono compatible.

Left and right channels can be processed separately with different settings, by creating two instances of the plugin in series, one set to 'L' mode and the other to 'R' mode. The instance in 'L' mode will not touch the right channel and vice versa. This approach is perfectly safe and is even advantageous, as both sides can be configured completely independently with both settings visible next to each other.

**Mid (M) mode** allows the plugin to process the so-called mid (or mono) signal. Any stereo signal can be transformed from left and right, to mid and side, and back again, with minimal CPU usage and no loss of audio quality. The mid channel contains the mono sum (or centre), which is the signal present in both left and right channels (in phase). The side channel contains the difference between the left and right channels, which is the "stereo" part. In 'M mode' the plugin performs the conversion into mid and side channels, processes mid, leaves side intact and converts the results back into the left and right channels expected by the host.

To understand what a mid signal is, consider using a simple gain feature, available in many plugins. Setting the plugin to M mode and decreasing gain, will actually lower or attenuate the mono content and the signal will appear "wider". There must be some stereo content present, this will not work for monophonic audio material placed in stereo tracks of course. Similarly amplifying the mono content by increasing the gain, will make the mono content dominant and the stereo image will become "narrower".

As well as a simple gain control there are various creative uses for this channel mode.

Using a **compressor** on the mid channel can widen the stereo image, because in louder parts the mid part gets attenuated and the stereo becomes more prominent. This is a good trick to make the listener focus on an instrument whenever it is louder, because a wider stereo image makes the listener feel that the origin of the sound is closer to, or even around them.

A **reverb** on the mid part makes the room appear thin and distant. It is a good way to make the track wide due to the existing stereo content, yet spacey and centered at the same time. Note that since this effect does not occur naturally, the result may sound artificial on its own, however it may help you fit a dominant track into a mix.

An **equalizer** gives many possibilities - for example, the removal of frequencies that are colliding with those on another track. By processing only the mid channel you can keep the problematic frequencies in the stereo channel. This way it is possible to actually fit both tracks into the same part of the spectrum - one occupying the mid (centre) part of the signal, physically appearing further away from the listener, the other occupying the side part of the signal, appearing closer to the listener.

Using various **modulation effects** can vary the mid signal, to make the stereo signal less correlated. This creates a wider stereo image and makes the audio appear closer to the listener.

**Side (S) mode** is complementary to M mode, and allows processing of only the side (stereo) part of the signal leaving the mid intact. The same techniques as described for M mode can also be applied here, giving the opposite results.

Using a **gain** control with positive gain will increase the width of the stereo image.

A **compressor** can attenuate the side part in louder sections making it more monophonic and centered, placing the origin a little further away and in front of the listener.

A **reverb** may extend the stereo width and provide some natural space without affecting the mid content. This creates an interesting side-effect - the reverb gets completely cancelled out when played on a monophonic device (on a mono radio for example). With stereo processing you have much more space to place different sounds in the mix. However when the audio is played on a monophonic system it becomes too crowded, because what was originally in two channels is now in just one and mono has a very limited capability for 2D placement. Therefore getting rid of the reverb in mono may be advantageous, because it frees some space for other instruments.

An **equalizer** can amplify some frequencies in the stereo content making them more apparent and since they psycho acoustically become closer to the listener, the listener will be focused on them. Conversely, frequencies can be removed to free space for other instruments in stereo.

A **saturation / exciter** may make the stereo richer and more appealing by creating higher harmonics without affecting the mid channel, which could otherwise become crowded.

**Modulation effects** can achieve the same results as in mid mode, but this will vary a lot depending on the effect and the audio material. It can be used in a wide variety of creative ways.

**Mid+Side (M+S)** lets the plugin process both mid and side channels together using the same settings. In many cases there is no difference to L+R mode, but there are exceptions.

A **reverb** applied in M+S mode will result in minimal changes to the width of the stereo field (unless it is true-stereo, in which case mid will affect side and vice versa), it can be used therefore, to add depth without altering the width.

A **compressor** in M+S mode can be a little harder to understand. It basically stabilizes the levels of the mid and side channels. When channel linking is disabled in the compressor, you can expect some variations in the sound field, because the compressor will attenuate the louder channel (usually the mid), changing the stereo width depending on the audio level. When channel linking is enabled, a compressor will usually react similarly to the L+R channel mode.

**Exciters or saturators** are both nonlinear processors, their outputs depend on the level of the input, so the dominant channel (usually mid) will be saturated more. This will usually make the stereo image slightly thinner and can be used as a creative effect.

**How to modify mid and side with different settings?** The answer is the same as for the L and R channels. Use two instances of the plugin one after another, one in M mode, the other in S mode. The instance in M mode will not change the side channel and vice versa.

**Left+Right(neg) (L+R-) mode** is the same as L+R mode, but the the right channel's phase will be inverted. This may come in handy if the L and R channels seem out of phase. When used on a normal track, it will force the channels out of phase. This may sound like an extreme stereo expansion, but is usually extremely fatiguing on the ears. It is also not mono compatible - on a mono device the track will probably become almost silent. Therefore be advised to use this only if the channels are actually out of phase or if you have some creative intent.

There are also 4 subsidiary modes: **Left & zero Right (L(R0))**, **Right & zero Left (R(L0))**, **Mid & zero Side (M(S0))** and **Side & zero**

**Mid (S(M0))**. Each of these processes one channel and silences the other.

**Surround mode** is not related to stereo processing but lets the plugin process up to 8 channels, depending on how many the host supplies. For VST2 plugins you have to first activate surround processing using the **Activate surround** item in the bottom. This is a global switch for all MeldaProduction plugins, which configures them to report 8in-8out capabilities to the host, on loading. It is disabled by default, because some hosts have trouble dealing with such plugins. After activation, restart your host to start using the surround capabilities of the plugins. Deactivation is done in the same way. Please note that all input and output busses will be multi-channel, that includes side-chain for example. For VST3/AU/AAX plugins the activation is not necessary.

First place the plugin on a surround track - a track that has more than 2 channels. Then select **Surround** from the plug-in's Channel Mode menu. The plugins will regard this mode as a natural extension of 2 channel processing. For example, a compressor will process each channel separately or measure the level by combining the levels of all of the inputs provided. Further surround processing properties, to enable/disable each channel or adjust its level, can be accessed via the **Surround settings** in the menu.

**Ambisonics mode** provides support for the modern 3D systems (mostly cinema and VR) with up to 64 channels (ambisonics 7th order). Support for this is still quite rare among the DAWs, so this needs to be activated in all DAWs using the **Activate ambisonics** item in the bottom. This is a global switch for all MeldaProduction plugins, which configures them to report 64in-64out capabilities to the host, on loading. After activation, restart your host to start using the ambisonics capabilities of the plugins. Deactivation is done in the same way. Please note that all input and output busses will be multi-channel, that includes side-chain for example.

First place the plugin on an ambisonics track, supported are all orders from 1st (4 channels) to 7th (64 channels). Then select **Ambisonics** from the plug-in's Channel Mode menu. Finally select the **Ambisonics settings** in the menu and configure the Ambisonics order and other settings if needed. The plugins will regard this mode as a natural extension of 2 channel processing. For example, a compressor will process each channel separately or measure the level by combining the levels of all of the inputs provided.



### Copy

Copy button copies the current settings to the system clipboard. Other presets, oversampling, channel mode and other global settings are not copied.

Hold **Ctrl** to save the settings as a file instead. That may be necessary for complex settings, which may be too long for system clipboard to handle. It may also be advantageous when you want to send the settings via email. You can load the settings by drag & dropping them to a plugin or holding **Ctrl** and clicking **Paste**.



### Paste

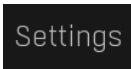
Paste button pastes settings from the system clipboard into the current preset. Hold **Ctrl** to load the settings from a file instead. Hold **Shift** to paste the settings to all of the A-H slots at once.



### 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.

Mid

### Mid

Mid button lets you audition the mid signal only, that is the mono part of the output. You can use it to check for potential phase cancellations and to get your ears adjusted to the actual center.

Side

### Side

Side button lets you audition the side signal only, that is the stereo part of the output.

Left

### Left

Left button lets you audition the left channel signal only.

Right

### Right

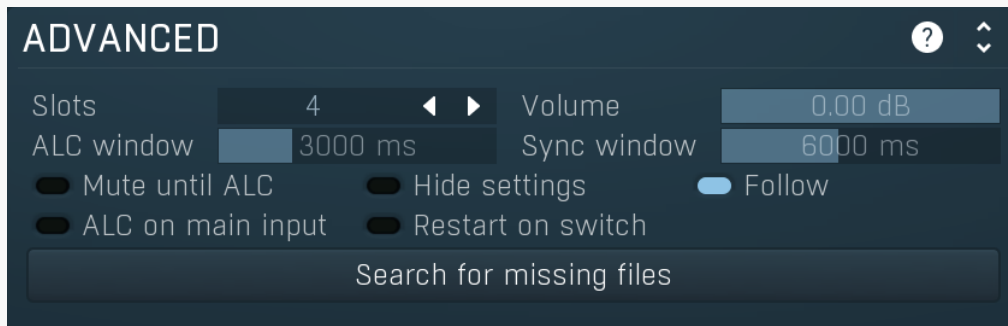
Right button lets you audition the right channel signal only.

Diff

### Diff

Diff button lets you audition the difference between the input signal and the comparison. Please note that this works properly if and only if there is no delay nor phase shift between the input and the comparison signals. Otherwise the result will be some undefined mixture of both signals. Therefore it is necessary to make all intervening processors linear-phase, this includes equalizers, crossovers etc. Broadband dynamics processors such as compressors or expanders should be fine unless some non-linear-phase filtering in part of the algorithm. Also note that when this is enabled, the latency detection is not functional. Please use this function ONLY if you are an expert and you know exactly what each processor you are using does.

## Advanced panel



Advanced panel contains more advanced settings.

Slots 4 Slots

Slots controls the number of visible slots.

Range: 1 to 16, default 4

Volume 0.00 dB Volume

Volume defines output volume. Use it to ensure the output won't clip. For example, if you compare your master to the dry mix, the master will most likely be much louder, so when you use ALC or just use the gain, the plugin will increase the gain of the dry mix and that will start peaking above 0dB. So you can simply set the volume to say -10dB as a precaution and adjust the volume on your audio interface/monitors to ensure nothing will be peaking and you can still use the loudness matching.

Range: silence to 0.00 dB, default 0.00 dB

ALC window 3000 ms ALC window

ALC window controls the length of the loudness calculation window. The longer it is, the slower the response to loudness changes, but it also avoids quick fluctuations, smoothing them out. Set it to a longer value if the playback seems fluttering, or contains unnatural level changes.

Range: 1000 ms to 30000 ms, default 3000 ms

Sync window 6000 ms Sync window

Sync window controls the length of the analysis window used to auto-sync the instance to another instance or to another file. The longer it is, the longer the analysis will take and the more resources it will need. It is also the maximum delay that the plugin will be able to auto-detect. If, for example, you suspect that the delay between the 2 sources is about 5 seconds, the sync window should be more than 5 seconds, ideally much more, e.g. 8 seconds.

Range: 1000 ms to 30000 ms, default 6000 ms

### Mute until ALC

Mute until ALC button silences the output until a loudness estimate becomes available. This is disabled by default and means, that until the plugin successfully estimates loudness of the input & comparison tracks, it simply doesn't change the level at all.

A problem arises if you try to compare your very silent audio to a very loud comparison audio, because the plugin cannot prevent the high loudness comparison until it knows that the audio actually is loud, which may take a few seconds depending on the **ALC window**. This option avoids the problem by completely muting the audio output until the level is available.

### Hide settings

Hide settings switch shows/hides the settings inside each File and Source button, which makes it easier to compare them without worrying about clicking on individual settings.

### Follow

Follow button makes the plugin enable playback only if the host has enabled playback, which is the default. You may however disable this in which case you can use MCompare as a simple audio file player, for live performances for example.

### ALC on main input

ALC on main input switch changes the way in which automatic loudness compensation works. When this is disabled (the default), the main input is not affected at all and the loudness of any comparison file or source is matched to the main input. This is ideal for most cases, however in some special scenarios you may activate this switch, which makes the loudness of the main input be matched to the comparison instead, hence it works the other way around.

It may be useful when examining some processing chains for instance: MCompare send -> EQ -> MCompare. This lets you test whether the EQ is doing something actually beneficial and ALC helps you avoid any loudness trickery. By default it ensures that the send signal (that is, before the EQ) loudness is matched to the main input (after the EQ). However this means that you won't be listening to the exact original signal. This switch lets you compare the true original signal with the loudness matched version.

Please note that this feature works properly only for Sources, not for Files; in the latter case the file loudness (being the signal to which the main input is matched) is updated only when the file is actually being played.

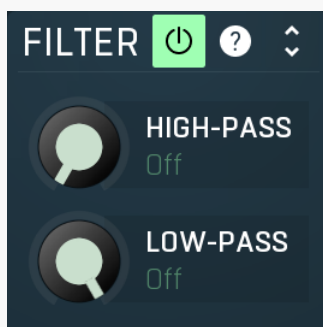
### Restart on

Restart on switch enables a retrigger mode - if sync for the File you are using is not activated, then every time you switch to this file its playback position will be reset to the left locator. That way you can audition a specific portion of the file in detail.

## Search for missing files

Search for missing files lets you quickly remap all the missing files, if any. It lets you select the root folder and then tries to find every missing file inside it or any subfolder of any level. It is useful if you move your audio files somewhere and don't want to remap all manually.

## Filter panel



Filter panel contains the HP & LP filters which may be used to compare a specific part of the spectrum.

### HIGH-PASS Off

High-pass defines the high-pass filter cut-off frequency which may be used to compare a specific part of the spectrum.  
Range: Off to 20.0 kHz, default Off



LOW-PASS  
Off

### Low-pass

Low-pass defines the low-pass filter cut-off frequency which may be used to compare a specific part of the spectrum.

Range: 20.00 Hz to Off, default Off

COMPARE

BLIND TEST

GENERATE SOURCE

Main

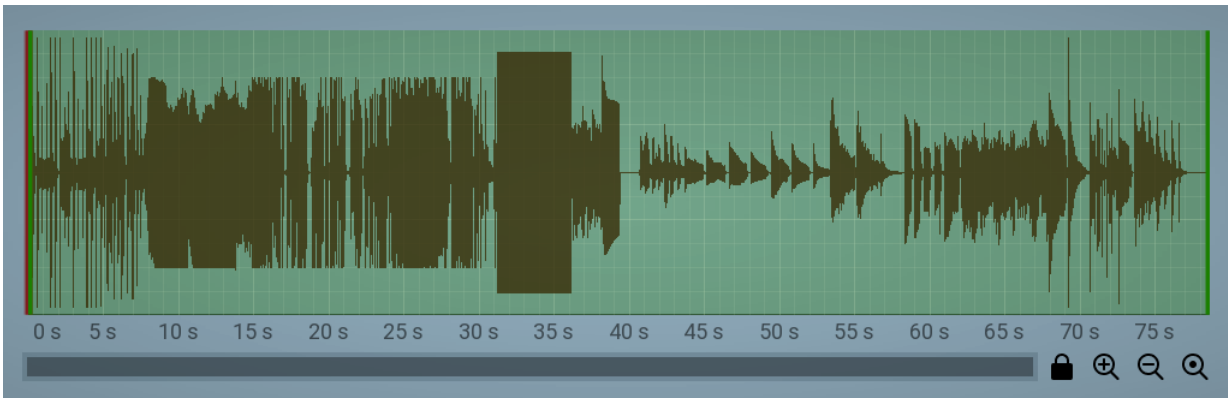
### tabset

Main tabset lets you choose between 3 main functionalities of the plugin.

**Compare** is the default tab which lets you compare your audio material with others.

**Blind test** also lets you compare, but it initially shuffles all files and sources randomly and selects a random one. Then you can click on different numbers to compare the audio without actually knowing which is which. When you find the best, switch back to the Compare tab to see which it is. Please note that then no files nor sources might be selected, in which case it means you chose the audio input as the best.

**Generate source** tab is the utility tab which makes the plugin merely a sender. Such an MCompare instance doesn't process the sound in any way and it only sends the incoming audio to the main instance that you will be working with.



Audio file

### view

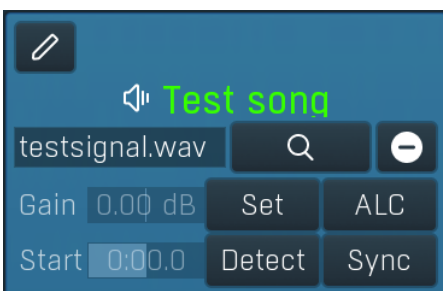
Audio file view displays the selected file waveform. The view is disabled if you don't have a file selected or there's nothing loaded into the file slot. Green range controls the current loop points. You can drag the limits to specify the loop region. Red line shows the current playback position. **Double-click** or **right-click** anywhere in the graph to jump to that position. As with all graph controls you can use mouse-wheel and the bottom scrollbar & zoomer to zoom and move the view.

When sync for the file is enabled, loop points won't make sense anymore, so instead a single line, which helps you setting up the **Start**, is displayed. Despite in most cases the sync feature will be used to compare different versions of the same track, hence Start won't be useful at all, it may be handy when comparing different tracks, especially with modern dance music with fixed tempo. The graph is displayed only when the playback stops, since it depends on the actual position in the host.



### Collapse

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



### File

File button enables playback from this particular slot into which you can load any supported audio file. When you press this button, the plugin quickly crossfades from whatever is playing now to playback of this file and the button becomes 'pushed', hence selected. When you press it again, the plugin crossfades back to the plugin input. This way you can simply A/B between the plugin input and any external audio file.



## **Rename**

Rename button lets you rename the button. Please note that the button may need to readjust its size to make the name fit, so it's suggested to keep the names short unless you have a high resolution screen at your disposal.

## **Gain**

Gain controls the gain applied to this slot, which you can use to match the input audio level. If the input loudness is different from the loudness of the file being played, you may get fooled by your own ears thinking that the louder one 'sounds better', among other problems. If the loudness is approximately the same however, it is much easier to focus on the sonic qualities only. For that you can use this gain parameter, **ALC**, or both. If ALC is enabled, you can still use gain parameter to adjust the level after the ALC.

## **Set**

Set button sets the **Gain** parameter automatically so that the current slot loudness matches the input loudness. The plugin continually measures loudness of the input and the selected slot, so that it can make both have approximately the same loudness either on-the-fly using **ALC**, or using Gain.

## **ALC**

ALC button activates or deactivates the automatic loudness compensation. If the input loudness is different from the loudness of the file being played, you may get fooled by your own ears thinking that the louder one 'sounds better', among other problems. If the loudness is approximately the same however, it is much easier to focus on the sonic qualities only. For that you can use this **Gain** parameter, ALC, or both. The advantage of ALC is that it adjusts the loudness continually. The disadvantage is that it changes over time, obviously. You may also experience temporary glitches - for example, if the slot contains silence and then a quick high level signal, the detector will first measure very low loudness and matches it using high gain, but then it won't react quickly enough for the high level signal, so the temporarily you may experience a short loud burst. For this reason the ALC's gain is limited to -24dB to +24dB. AGC also starts working after about 3 seconds, when the loudness detector has enough information.

## **Start**

Start lets you shift the input file in time so that you can synchronize it with the input. This can be useful if the file is a different version of the same project.

## **Detect**

Detect button lets you automatically detect the delay between the file and the input of this plugin and set the **Delay** parameter automatically. To do that, first enable playback and then press this button. A progress window will be displayed for a few seconds recording both the plugin input and the source. When finished the progress window disappears and the delay is changed to match the difference between the file and the input, if possible. Please note that this feature can detect only very small periods, up to say 2 seconds. So first you need to set the delay manually to match the file with the input approximately and use this feature to get sample accurate value, hence perfect synchronization.

## **Sync**

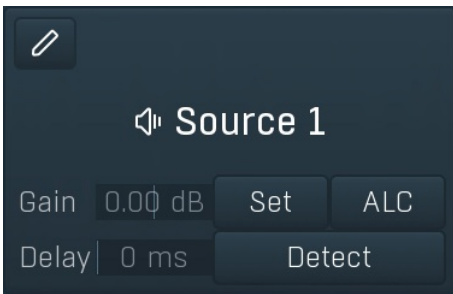
Sync button switches the file slot to synchronized mode. If this is disabled, the plugin's file slot is playing the file between the loop points, the position in the project is not relevant. If this is disabled however, then the file is synchronizing with the project position. This is useful if you want to compare the input with a file containing say a different master of the same recording. The input is technically the same as the file, just processed differently, and you want to compare them. So you enable sync, set the **Delay** to synchronize them approximately and press the **Detect** button to get them perfectly synchronized.

## **Input file path**

Input file path lets you select the input file. Use the browse button on the right. It is an input field, but it is read only, it is provided just in case you need to copy the file name to clipboard for example.

## **Collapse**

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



### Source

Source button enables playback from this particular slot to which you can send the signal from any other instance of the plugin. When you press this button, the plugin quickly crossfades from whatever is playing now to this source and the button becomes 'pushed', hence selected. When you press it again, the plugin crossfades back to the plugin input. This way you can simply A/B between the plugin input and any stage of your mix. It is especially useful during mastering to compare the processed signal with a bypassed version. Although you can often use bypass on the individual plugins doing the processing, MCompare provides instant smooth comparison and can compensate for the latency and loudness difference caused by the plugins.



### Rename

Rename button lets you rename the button. Please note that the button may need to readjust its size to make the name fit, so it's suggested to keep the names short unless you have a high resolution screen at your disposal.

Gain 0.00 dB

### Gain

Gain controls the gain applied to this slot, which you can use to match the input audio level. If the input loudness is different from the loudness of the file being played, you may get fooled by your own ears thinking that the louder one 'sounds better', among other problems. If the loudness is approximately the same however, it is much easier to focus on the sonic qualities only. For that you can use this gain parameter, **ALC**, or both. If ALC is enabled, you can still use gain parameter to adjust the level after the ALC.

Set

### Set

Set button sets the **Gain** parameter automatically so that the current slot loudness matches the input loudness. The plugin continually measures loudness of the input and the selected slot, so that it can make both have approximately the same loudness either on-the-fly using **ALC**, or using Gain.

ALC

### ALC

ALC button activates or deactivates the automatic loudness compensation. If the input loudness is different than loudness of the file being played, you may get fooled by your own ears thinking that the louder one 'sounds better', among other problems. If the loudness is approximately the same however, it is much easier to focus on the sonic qualities only. For that you can use this **Gain** parameter, ALC, or both. The advantage of ALC is that it adjusts the loudness continually. The disadvantage is that it changes over time, obviously. To prevent accidental short bursts, the ALC's gain is limited to -24dB to +24dB. AGC also starts working after about 3 seconds, when the loudness detector has enough information.

Delay 0 ms

### Delay

Delay lets you compensate for the potential latency between the source and the actual plugin input. For example, if you use one instance of MCompare to generate source 1, followed by a linear-phase equalizer (which always has latency) and finally the main MCompare instance for monitoring, the input to this instance will be delayed because of the equalizer's latency. You can still A/B, but the input just won't match the source, so comparison will not be so simple. This delay lets you shift the source in time, so that you can match the latency of the equalizer. Use the **Detect** button to let the plugin calculate the latency automatically.

Detect

### Detect

Detect button lets you automatically detect the delay between the source and the input of this plugin and set the **Delay** parameter automatically. To do that, first enable playback, then press this button. A progress window will be displayed for a few seconds recording both the plugin input and the source. When finished the progress window disappears and the delay is changed to match the latency, if possible. If you feel something is not correct, it is possible that the host confused the plugin by mismatched processing, in which case just press the **Panic (!) button** and try again.



### Collapse

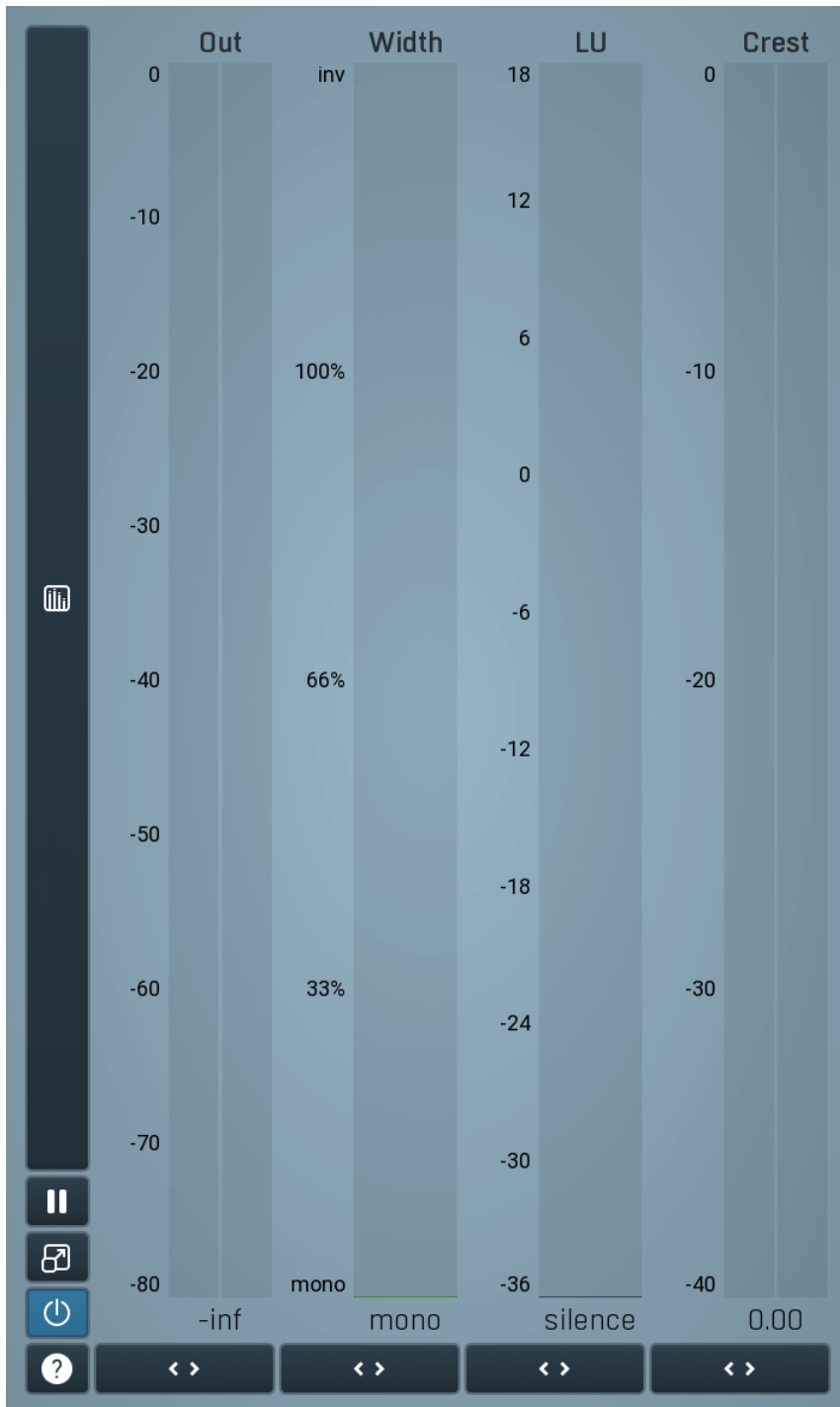
Collapse button minimizes or enlarges the panel to release space for other editors.

Listening

Mute

## output

Mute output switch lets you mute the output from this plugin, while sending the input as source to the main instance. This is often useful when comparing different tracks, e.g. different masters placed on different tracks, where each MCompare instance is sending the audio to the main instance you are using to compare the masters.



### 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.

**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.

**LU meter** shows the output loudness in EBU-18 scale. The loudness metering follows the ITU-R BS.1770-3 and EBU 3341 specifications. The metering units used are LU (Loudness Units) with 0 LU defined as -23 LUFS (LU Full Scale) and you should consider the LU values to be relative - using them to compare the loudness values between different signals. If the difference in loudness between 2 signals is 10 LU, it is approximately 10 dB as well.

Please note that you should still use your ears to judge loudness properly as there is still no accurate model of human loudness perception and every measurement is only an approximation. Loudness perception is also individual.

If you right click on the meter, additional settings will be displayed. Maximum value displays the maximum since the analysis started, rather than the recent maximum. Loudness pre-filtering uses EBU standard filters to simulate human perception. However, you may want to disable this to get more technical measurements.

There are 3 types of loudness measurements, all following the EBU specifications.

**Momentary loudness** uses an RMS sliding analysis window of 400 milliseconds; therefore it shows quick fluctuations in loudness.

**Short-term loudness** works in the same way, but uses a window of 3 seconds, therefore it provides more stable loudness measurements.

**Integrated loudness** shows the overall loudness, hence it is affected by the whole track from the beginning of the playback until you reset it by clicking on the value field. The host may reset it too; it depends on your host.

Please note that the **Integrated loudness** is NOT the same as an averaged loudness, as it ignores quiet passages. Imagine a track which is generally quiet but has a few loud sections. The averaged loudness will be less than the Integrated loudness. Its calculation uses gating to ignore those quiet passages (levels less than 10 LU less than the current ungated level) of the track. Essentially, **Integrated loudness** is a measure of the loudest sections of the track.

**Crest meter** shows the output crest factor (calculated as RMS divided by peak level), which essentially indicates how extreme the peaks are in the output waveform. The lower the value is, the more peaks there are in the output, the more dynamic it is. If the value reaches 0dB, then the output is over-compressed and flattened and you should consider going easier on the compressor and limiter.

The range from 0dB to -6dB is red and you should prevent your master output from remaining in this range as that would mean it is extremely over-processed. The green range from -6dB to -10dB is the range most that recordings are in, usually jumping below the -10dB.

Please note that others calculate the crest factor as the peak level of the waveform divided by the RMS value of the waveform, and the higher the value, the more peaks there are in the output, the more dynamic it is.



### **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.



### **Collapse**

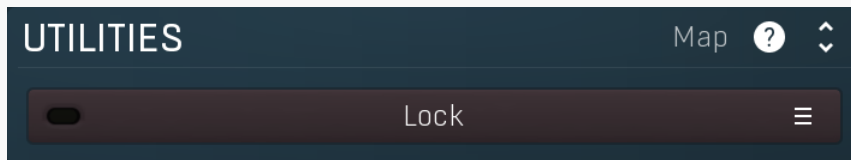
Collapse button minimizes or enlarges the panel to release space for other editors.



### **Collapse**

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

# Utilities



## Map

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



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.



## 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.

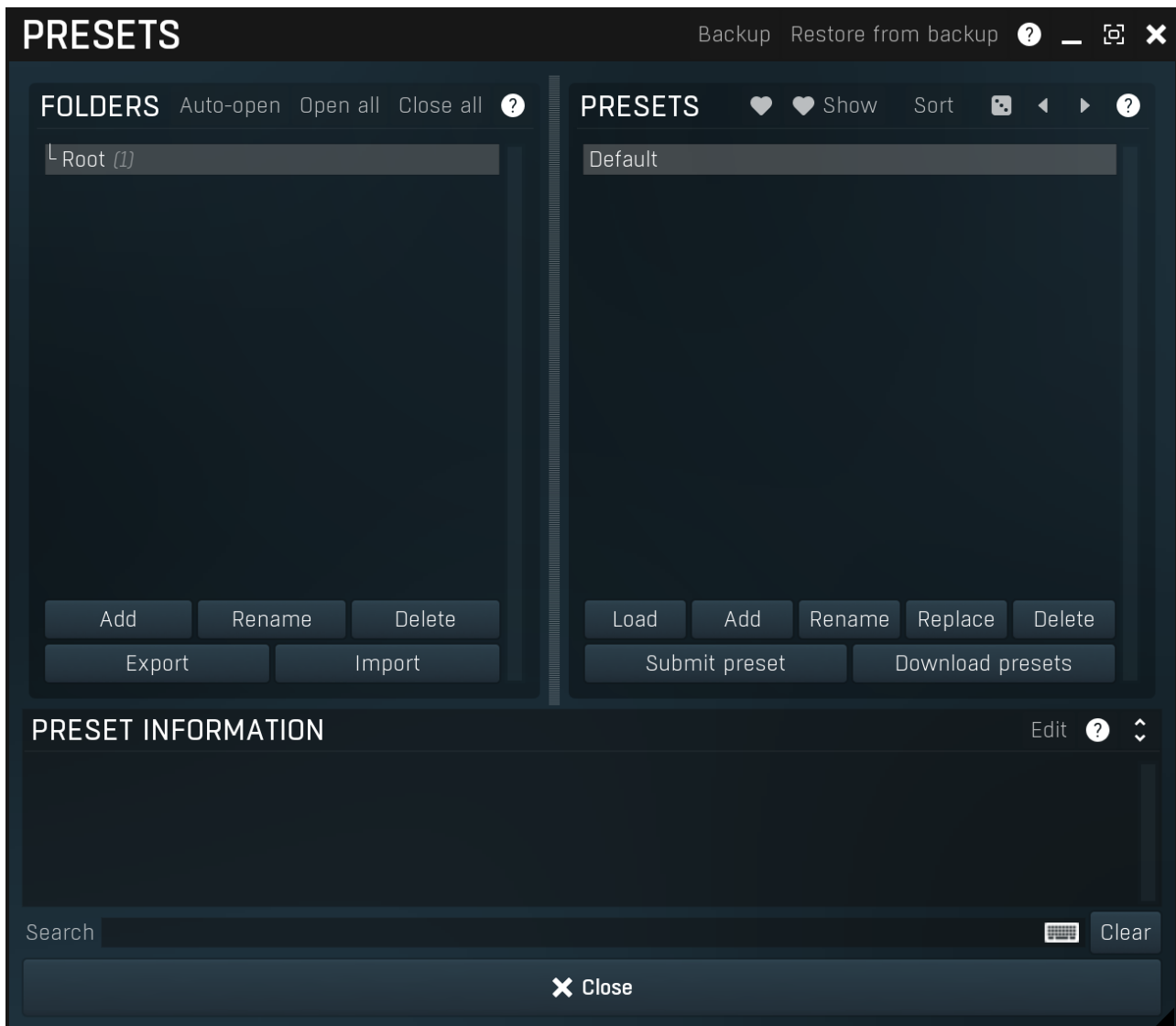
*For example, to associate a frequency slider and make a multiparameter control it from 100Hz to 1KHz, just enable the smart learn mode, click the slider then move it from 100Hz to 1KHz (you can also edit the range later in the Multiparameter window too). Then disable the learning mode by clicking on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



## Collapse

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

# Preset selector



Preset management window provides management for your presets.

**Backup**

## Backup

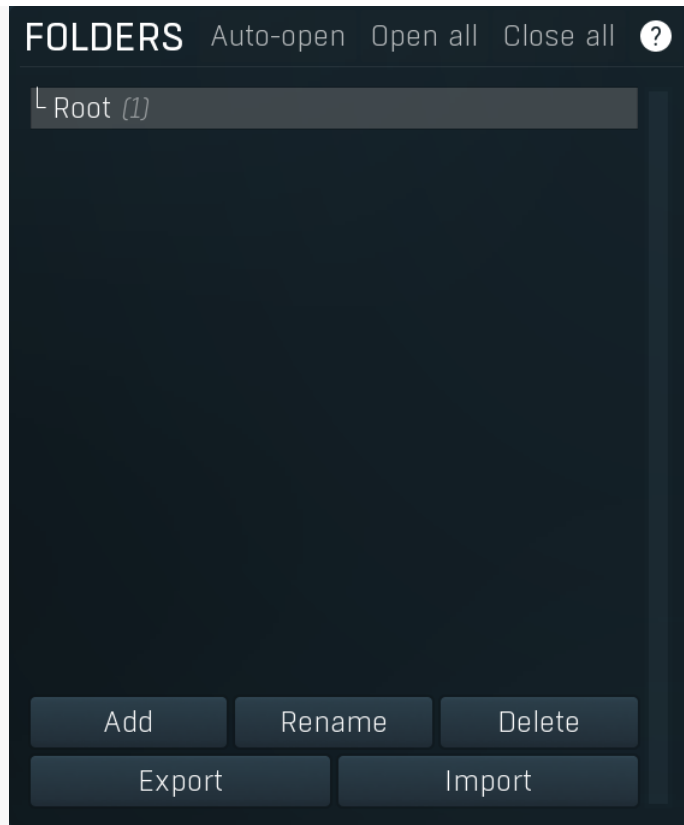
Backup button lets you backup presets for all MeldaProduction software into a single file, so you can transfer it to a different machine and restore the presets there for example.

**Restore from backup**

## Restore from backup

Restore from backup button lets you restore presets for all MeldaProduction software from a single file created by the **Backup** button.

## Folders tree



Folders tree lets you organize your presets into any number of folders. Use the buttons at the bottom of the window to create, rename or delete sub-folders. Note that these are not actual files & folders on disk, but are records in the preset database.

Auto-open

### Auto-open

Auto-open switch makes the tree automatically open selected items, so that all sub-folders are visible, whenever you select one. This makes it easier to browse through large structures containing many folders. The switch also makes the browser show all presets available in the selected folder including all sub-folders (except when you select the root folder).

Open all

### Open all

Open all button expands the whole tree, so you can see all of the folders. This may be handy when editing large preset structures.

Close all

### Close all

Close all button collapses the whole tree except for the root folder. This may be handy when editing large preset structures.

Add

### Add

Add button creates a new folder in the tree

Rename

### Rename

Rename button lets you rename the selected folder.

Delete

### Delete

Delete button deletes the folder including all the presets and subfolders in it.

Export

### Export

Export button lets you export the selected folder including all presets and sub-folders into a file, which you can then transfer to any computer. Or just use as a back-up.

Import

### Import

Import button lets you import a file containing presets and sub-folders and add it to the selected folder. The importer will ask you whether to destroy the original contents, so that the new presets replace previous ones, or to keep both.



# Presets list

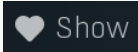


Presets list contains all presets available in the selected folder. **Double-click** on a preset or use **Load** button to load a preset. Use the buttons at the bottom of the list to perform additional changes. Please note that these are not actual files & folders on disk, but are records in the preset database.



## Favourite

Favourite button toggles the 'favourite' indicator for the selected preset.



## Show

Show button shows only the favourite presets and hides the others.



## Sort

Sort button shows the presets sorted alphabetically.



## Random

Random button selects and loads a random preset from the current folder. This way you can quickly browse the presets in the folder in a completely random order.



## Previous

Previous button selects and loads the previous preset from the current folder.



## Next

Next button selects and loads the next preset from the current folder.

Submit preset

## Submit preset

Submit preset button submits the selected preset to the online exchange servers and retrieves all the presets currently in the database. This feature serves as an online database of presets available for all the user community. Please do not submit garbage presets.

Download presets

## Download presets

Download presets button retrieves all the presets currently in the database. This feature serves as an online database of presets available for all the user community. Please consider participating by submitting your presets as well.

Load

## Load

Load button loads the specified preset. Please note that you can do the same thing by double-clicking the preset itself or pressing the Enter key.

Add

### Add

Add button creates a new preset using the current settings.

Rename

### Rename

Rename button lets you rename the selected preset.

Replace

### Replace

Replace button replaces the selected preset by one with current settings.

Delete

### Delete

Delete button deletes the selected preset.

Search



Search

Search filters the list of available presets to those containing the keywords in name or information.

Clear

### Clear

Clear button deletes all text in the search field.

PRESET INFORMATION

Edit

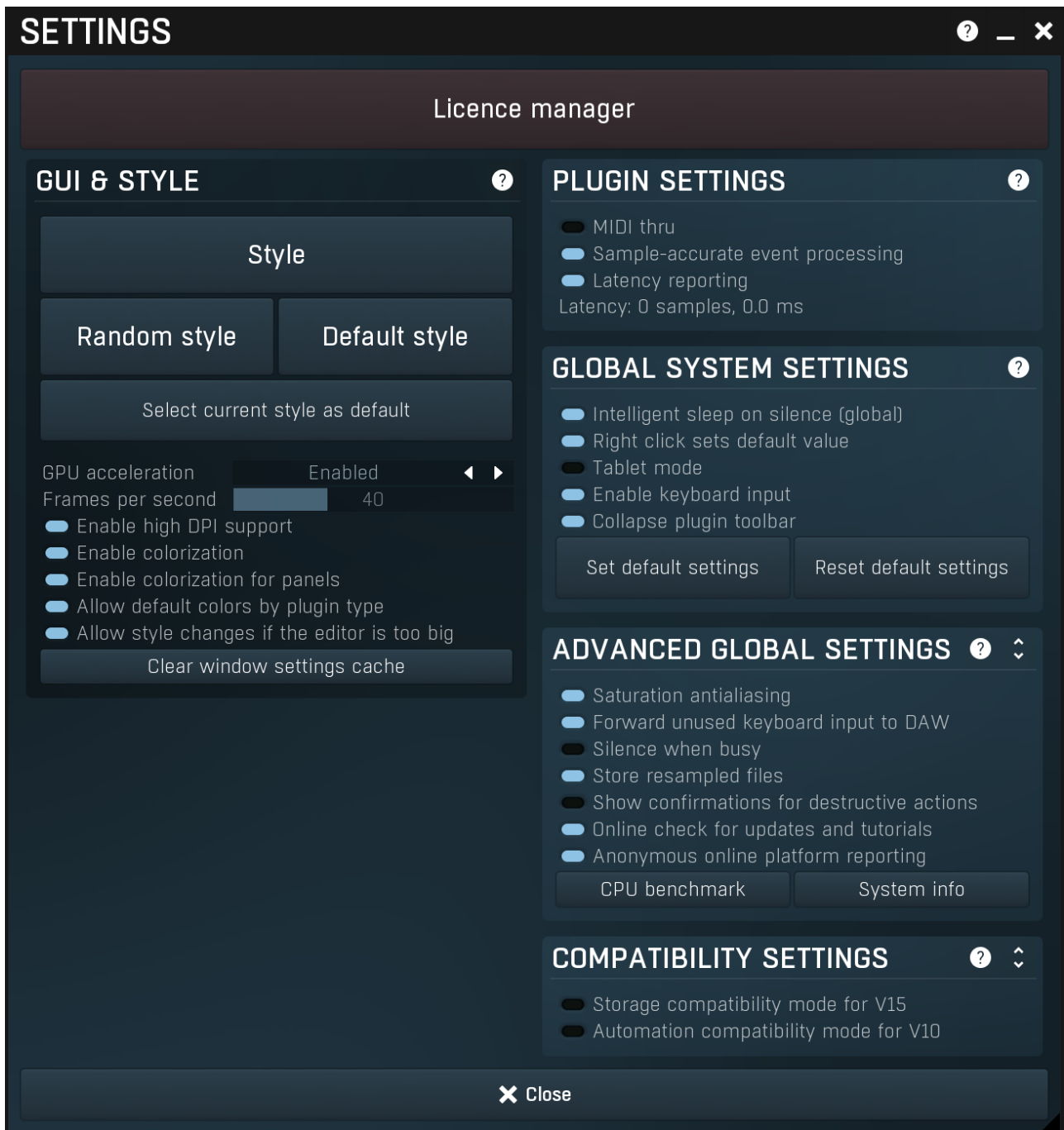


Preset

### information

Preset information field contains optional information about the preset, which you can edit when creating or renaming the preset.

# Plugin settings



Plugin settings window offers more advanced settings and is available via the Settings button.

## Licence panel

Licence manager

Licence panel lets you manage licences on this computer.

Licence manager

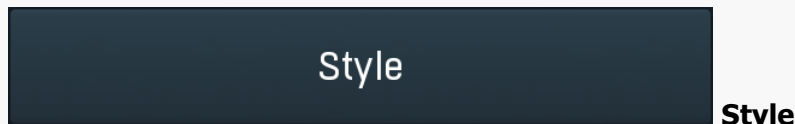
**Activate**

Activate button lets you activate your licence for the plugin on this computer.

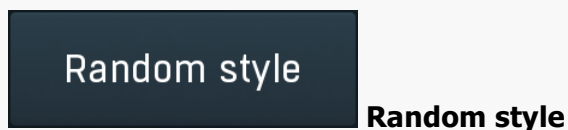
## GUI & Style panel



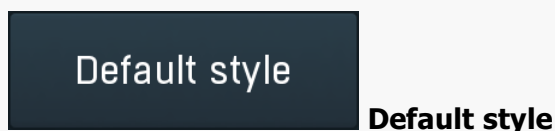
GUI & Style panel lets you configure the plugin's style (and potentially styles of other plugins) and other GUI properties.



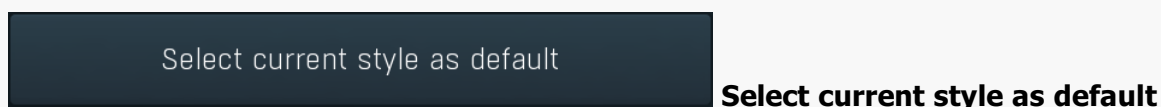
Style button lets you change the style for this particular plugin.



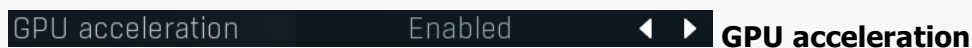
Random style button selects a random style with random editor mode.



Default style button reverts to the default style and default size of the GUI. Hold the Ctrl key while clicking to revert all MeldaProduction software products, not just the current plugin.



Select current style as default button stores the current style as the default for all MeldaProduction software. This is used for the other plugins that are currently using the default style; that is, those plugins for which you have NOT selected a specific style. Please note that if you have already selected a specific style for a particular plugin, then it won't be changed until you use the Default style button.



GPU acceleration controls how much the GPU is used for visual rendering to save CPU power.

**Enabled mode** provides maximum speed and lets the GPU perform as many drawing operations as possible.

**Compatibility mode** uses the GPU for drawing, but doesn't use modern technologies for maximum performance. Use it if you experience occasional problems with drawing, the usual case for older ATI graphics cards. With Pro Tools on OSX this mode is always used instead of Enabled mode due to compatibility problems with this host.

**Disabled mode** disables GPU acceleration completely, drawing is then performed by the CPU. Use only if you experience technical difficulties.

A known problem may occur when using multiple displays with multiple graphical interfaces. When moving the plugin window from one display to another, it may stop displaying correctly until you move it back to the original display.

Frames per second  **Frames per second**

Frames per second controls the refresh rate of the visual engine. The higher the number is the smoother everything is, but the more CPU it requires. You might want to lower this value if your computer is running out of CPU power.

**Enable high DPI support** **Enable high DPI / retina support**

Enable high DPI / retina support enables the plugin to use the high resolution on high DPI (Windows) and retina (OSX) devices. It is enabled by default and detected automatically, if the host allows it. If you run into any problems, you can disable it using this option. It may be desired if you use multiple displays where only some of them feature the high resolution making the image on the low resolution ones look ugly.

If you disable this option, on Windows the high DPI device detection will be ignored and the plugin will probably appear very small. You can manually compensate for it by using a bigger style. On OSX disabling this option will disable the high DPI rendering, resulting in the classic blurry look of non-compliant applications. Changes take effect after you restart the host.

**Enable colorization** **Enable colorization**

Enable colorization enables the plugin to change the colors of certain elements overriding your style settings. Plugins use that to highlight different parts of the graphics interface for easier workflow. You may want to disable it if you just feel it's not for you. This particular option is relevant only for controls - knobs, sliders, checkboxes etc.

**Enable colorization for panels** **Enable colorization for panels**

Enable colorization for panels enables the plugin to change the colors of certain elements overriding your style settings. Plugins use that to highlight different parts of the graphics interface for easier workflow. You may want to disable it if you just feel it's not for you. This particular option is relevant only for containers - panels, graphs etc.

**Allow default colors by plugin type** **Allow default colors by plugin type**

Allow default colors by plugin type is on by default and makes the plugin select its default colors depending on the type of the Plugin. Hence for instance equalizer will always be green. This is done by selecting one of the first 8 color presets for the current style, so the actual colors depend on selected style and its presets. You may want to disable this if you for example want all plugins to look the same including the style and colors. It is necessary to restart your host for a change to this option to take effect.

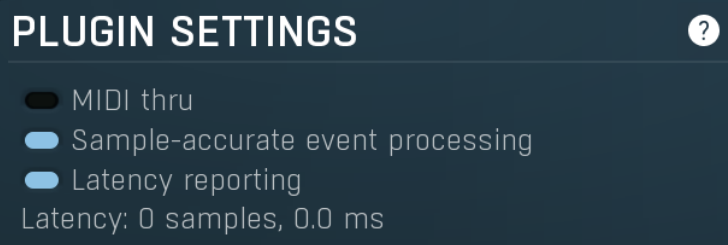
**Allow style changes if the editor is too big** **Allow style changes if the editor is too big**

Allow style changes if the editor is too big is on by default and makes the plugin change its style, editor mode and other settings if it finds out it is too big to fit the current screen resolution.

Clear window settings cache **Clear window settings cache**

Clear window settings cache button deletes stored states of all popup windows on all MeldaProduction software. The window settings mostly contain positions and sizes, but in some cases also the data inside the popup windows. You can use this feature if something goes wrong, a window doesn't appear at all, problems like that. While this shouldn't happen and it's generally better to contract our support, this button provides a potential quick fix.

## Plugin settings panel



Plugin settings panel contains settings that control the behaviour of this plugin instance. These are properties that rarely need to be changed, so they have been moved here.

**MIDI thru** **MIDI thru**

MIDI thru makes the plugin pass all input MIDI through to its MIDI output. That is often advantageous in DAWs such as Reaper, which naturally pass MIDI from one plugin to the next.

**Sample-accurate event processing** **Sample-accurate event processing**

Sample-accurate event processing makes the plugin schedule every event such as MIDI or automation to their accurate locations with

sample accuracy, if the host allows it.

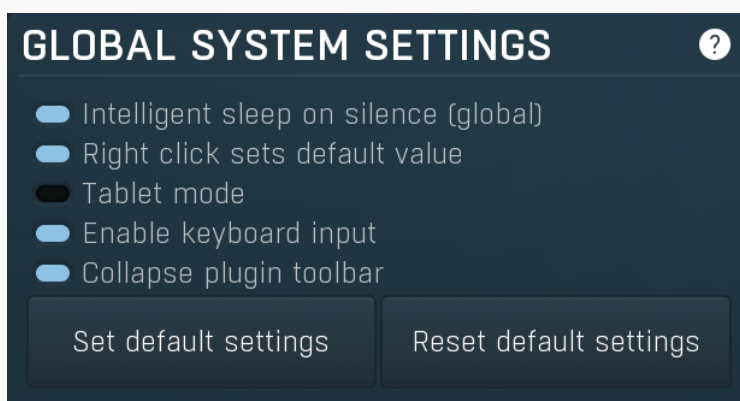
For example, if the block size in your host's audio settings is 1024 samples, this means the plugin is probably processing blocks of 1024 samples, in 44100 Hz sampling rate it is about 23ms. If this setting is disabled, any change in automation, MIDI, modulation etc. may then be granularized to 23ms (once per block), which means that you will not be able to recognize events that occur say 10ms apart from each other. When this setting is enabled however, the plugin divides processing blocks to sub-blocks and processes the events at their correct positions. This may, of course, require more CPU power.

Latency reporting

### Latency reporting

Latency reporting makes the plugin report latency to the DAW, if any. Normally this is enabled, but in certain live situations you may want to disable this, so that the DAW stops compensating the latency on other tracks. It has no effect if the plugin is placed on master track.

## Global system settings panel



Global system settings panel contains settings which are applied to all plugins on this computer.

Intelligent sleep on silence (global)

### Intelligent sleep on silence (global)

Intelligent sleep on silence (global) is a global switch, which disables the **Auto disable on silence** feature in all plugins on the system. It is provided "just in case" something goes wrong.

Right click sets default value

### Right click sets default value

Right click sets default value makes the engine set default value to a parameter when you right click on it. By default, a menu is displayed instead, with an option to set the default value, but potentially with more features. When this is disabled, you can still set a default value by holding ctrl/cmd when right clicking the control.

Tablet mode

### Tablet mode

Tablet mode enables better support for tablets at the expense of the mouse. Enable this if you are using a tablet to control the plugins and it is behaving incorrectly.

Enable keyboard input

### Enable keyboard input

Enable keyboard input enables the keyboard input for the main plugin window. You may want to disable if the plugin intercepts spacebar key (often used by the host for playback enable/disable and your host doesn't allow for the problem itself).

Collapse plugin toolbar

### Collapse plugin toolbar

Collapse plugin toolbar makes all plugins collapse the plugin toolbar containing more advanced features such as channel modes, A-H presets, oversampling, safety limiter etc. It is enabled by default to make the user interfaces cleaner and easier to grasp for beginners.

Set default settings

### Set default settings

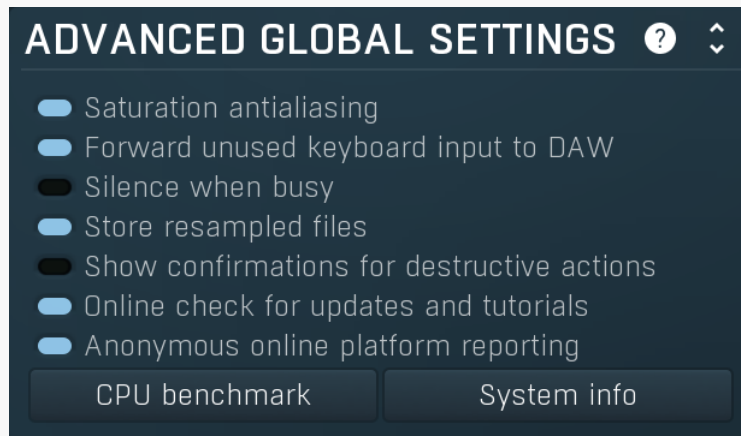
Set default settings button stores the current plugin settings as the defaults, so that when you open a new instance of the plugin, these settings will be loaded automatically.

Reset default settings

### Reset default settings

Reset default settings button removes the defaults that you set using **Set default settings** button, so that when you open a new instance of the plugin, the factory defaults will be loaded.

# Advanced global settings panel



Advanced global settings panel contains advanced settings which are applied to all plugins on this computer.

## Saturation antialiasing

### Saturation antialiasing

Saturation antialiasing enables a global support for antialiasing in saturation algorithms available in many of the plugins. These require additional CPU processing, however significantly reduce aliasing artifacts without a need for oversampling.

## Forward unused keyboard input to DAW

### Forward unused keyboard input to DAW

Forward unused keyboard input to DAW makes the plugin forward unused keyboard events to the DAW from its popups. If this is disabled, pressing say spacebar commonly used to start/stop playback won't work if a popup window is active. Enabling this makes this work and it is optional just in case your DAW does something unexpected.

## Silence when busy

### Silence when busy

Silence when busy makes all plugins silence the output when something time consuming is being performed in background and the plugin needs to wait for it. For instance, in modular plugins such as MXXX, adding a module requires lots of changes in the entire engine, so it is performed in background and while the plugin is inconsistent state, it is temporarily bypassed. Sometimes however, when performing live, bypassing makes the dry signal go through and that may not be wanted. So you can enable this option, and the plugin will silence the output instead.

## Store resampled files

### Store resampled files

Store resampled files allows the plugins create audio files for sampling rates being used if they differ from the original file sampling rate. It is used only by a few plugins, but it can improve the loading performance a lot at the cost of some additional storage on the hard drive. Disable this option if you are short on free space.

## Show confirmations for destructive actions

### Show confirmations for destructive actions

Show confirmations for destructive actions makes the plugin display a confirmation window whenever you are going to change the plugin settings irreversibly when using a feature, for example: when resetting your settings.

## Online check for updates and tutorials

### Online check for updates and tutorials

Online check for updates and tutorials lets the plugin ask about once a week if there is a new version or tutorial available so you can be easily kept up to date.

## Anonymous online platform reporting

### Anonymous online platform reporting

Anonymous online platform reporting helps us maximize compatibility with your operating system and host. If enabled, our plugins will send information about the system and host that you are using. We can use this information to find out which plugins and platforms are used the most and maximize testing and support there. Platform reporting is completely anonymous and requires only minimal internet connection time (a few kB once a week).

CPU benchmark

### CPU benchmark

CPU benchmark button calculates the performance of the plugin with the current settings.

System info

### System info

System info button displays some technical information about the build and the machine.

# Compatibility settings panel

## COMPATIBILITY SETTINGS



- Storage compatibility mode for V15
- Automation compatibility mode for V10

Compatibility settings panel contains advanced settings you rarely need unless you run into some problems when using multiple versions or old projects.

### Storage compatibility mode for V15

#### **Storage compatibility mode for V15**

Storage compatibility mode for V15 reverts to the older and much slower storage system used by version 15 and older. Use this if you want to open your projects or presets on older version of MeldaProduction plugins.

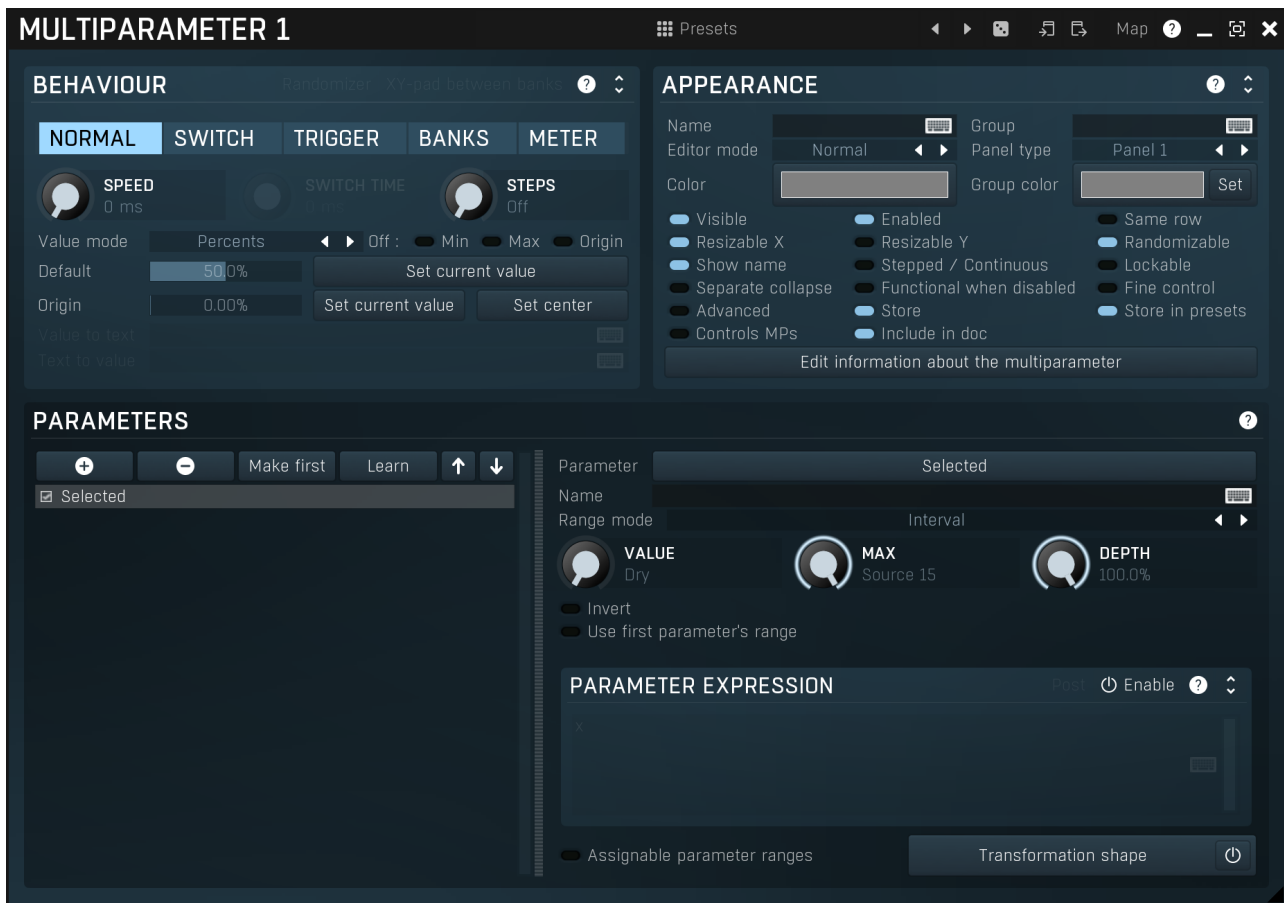
### Automation compatibility mode for V10

#### **Automation compatibility mode for V10**

Automation compatibility mode for V10 reverts the set of automation parameters back to version 10 and earlier. Use this if you need the plugins to work with projects, which contain automation, made using version 10 or older. In version 11 the list of automatable parameters have been highly simplified and reorganized and multiparameters are provided for the vast number of hidden parameters. This should speed up loading, improve workflow with the plugins and improve compatibility with various hosts.



# MultiParameter editor



MultiParameter is a powerful structure, which can speed up your workflow significantly and even perform automatic tasks, often useful when performing in real-time for example. Essentially a multiparameter is a controller which controls other parameters, in fact, an unlimited number of them. Each parameter has limits and potentially a transformation curve for more advanced processing. By manually moving the multiparameter (or automating/modulating it) you can control all of the associated parameters at once.

*This is just the beginning, but it is worth demonstrating how it could be used. We will show it on a vibrato effect. MVibratoMB (and partly MVibrato) is very good at simulating rotary speakers. A rotary speaker traditionally contains a speed switch, or in our case we will think of it as a speed knob - a control that alters the spin speed of the rotary. This would normally be the **Rate** parameter of the vibrato. However, when the rate is increased, the vibrato starts changing the pitch too much, sounding a little too "honky-tonk". We can compensate for this by lowering the **Depth** parameter. As it is not very convenient to control 2 parameters at once, we use a multiparameter to control both parameters with appropriate ranges (ascending for the **Rate** and descending for the **Depth**).*

Besides this basic usage, multiparameters can also work as triggers and switches. Set a multiparameter's mode to **Trigger** or **Switch** and it stops being a slider and becomes a button. When you click the button, the multiparameter starts moving on its own - over the dialled-in switch time it will increase its value (and also the values of any associated parameters) to a maximum and, in the case of trigger mode, then decrease it back to a minimum. In switch mode clicking the button again, the multiparameter decreases back to the minimum value. To make the multiparameter into a simple switch, we can set the switch time to minimum, but in this case we want to extend the functionality in our rotary example.

*As mentioned, rotary speakers often have a speed switch. Once switched on, the speed starts increasing until it reaches the "fast" setting, and when switched off, the speed starts decreasing to the original "slow" rate. All we need to do to replicate this functionality is to set the multiparameter's mode to 'switch'.*

*A real rotary actually has 2 speakers, one for low frequencies and the other for the higher ones. As you might expect, these do not have the same spin rate nor do they speed up or slow down equally either. Here is where we can start showing the true potential of multiparameters.*

*To simulate this, we have to use two bands of MVibratoMB, the first one will simulate the lower reproducer, and the second will be the higher. We use the first multiparameter to control the first band's rate in the same way as described in the example above. Similarly, we use the second multiparameter to control the second band's rate. Now we have 2 switches and can make each band speed-up or slow-down separately, but we want just one switch for both bands. To do this, we use a third multiparameter to control the first and second multiparameters, in switch mode again but with a 0ms switch time. Pressing the button of the 3rd multiparameter instantly activates the other 2 multiparameters, they both start speeding-up, over a different time period as we requested. Pressing the button again, releases it which also instantly releases the first 2 multiparameters and they start slowing down. Just like the real thing.*

Now that we have shown you what is possible with multiparameters, it is worth mentioning that they are used extensively for building devices on the easy screens of most Melda plugins. Every multiparameter given a name in the **Information** panel will be shown on the Easy screen (if the plugin has one). Check our online video tutorials to get more information about **multiparameters and building**

## devices.

It is also worth mentioning that you can access the multiparameter settings directly from easy screen by holding Ctrl+Alt and clicking on the target control. It may simplify building devices. Note that this may not work for some editor modes such as meters or bar graphs.

 Presets

### Presets

Presets button displays a window where you can load and manage available presets. Hold **Ctrl** when clicking to load a random preset instead.



### 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.



### Copy

Copy button copies the settings onto the system clipboard.



### Paste

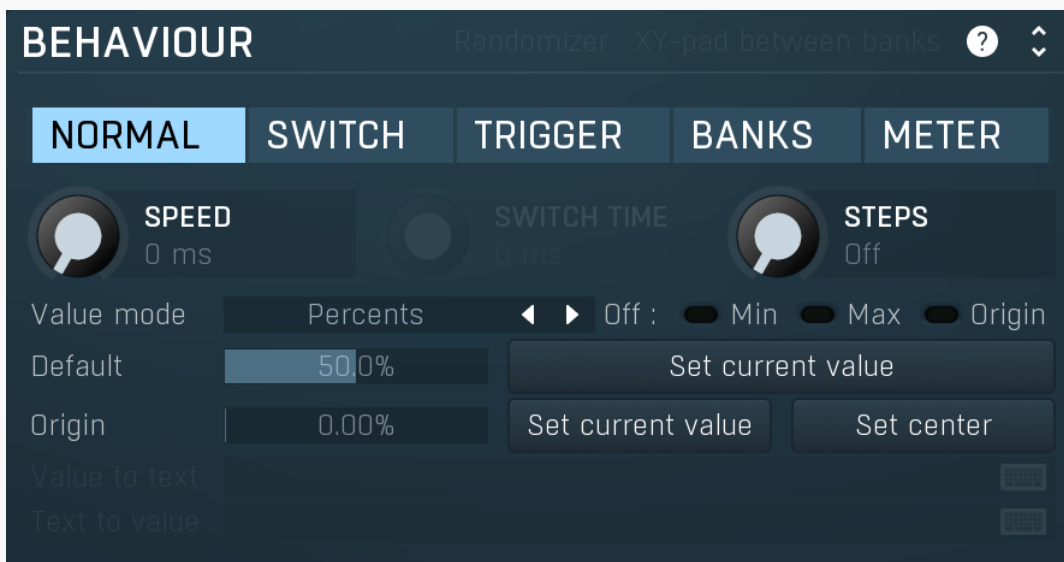
Paste button loads the settings from the system clipboard.



### Map

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

## Behaviour



Randomizer

### Randomizer

Randomizer switch is available only for **Trigger** mode and it makes the multiparameter produce random values for each associated parameters. This is useful to implement some sort of randomization feature, which covers a set of parameters. You usually want to set the **Switch time** to 0, so that the randomization is instant, but longer values may be useful for some creative effects.

XY-pad between banks

### XY-pad between banks

XY-pad between banks switch is available only for Banks mode and it lets you create XY pads, that would interpolate between 3 or more banks that you specify. With 4 banks the engine creates a classic XY pad, where the 1st bank belongs to the left top corner, 2nd to the right top, 3rd to left bottom and 4th to the right bottom. With more banks the engine creates a circular pad with vertices associated to

individual banks.

Please note that in order for this to work, the multiparameter actually needs 2 multiparameters (X and Y values), hence must NOT be the last one and it occupies the next multiparameter as well. It is recommended to name the next multiparameter and associate it to some parameters, ideally the same ones, just to make sure the engine won't remove it. But in fact only the first multiparameter will actually be working.

**NORMAL**

**SWITCH**

**TRIGGER**

**BANKS**

**METER**

**Mode**

Mode controls the behaviour of the multiparameter.

**Normal** mode makes the multiparameter work like any other control.

**Switch** mode hides the slider and shows a button instead. The button has 2 states. By pushing the button, the multiparameter value starts rising from 0% to 100% over a specified time interval. By pushing it again the value starts falling back to 0%. You could do the same thing having the multiparameter in normal mode and moving the slider from left to right and then back, but mode this performs that automatically and maintains a constant time period.

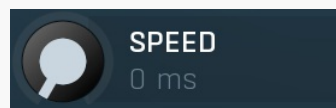
**Trigger** mode is similar to switch mode, but the button has only a single state and when you push it, the value automatically goes from 0% to 100% and then back without any need to push the button again.

**Banks** mode is very different. A multiparameter in banks mode keeps several states (called banks) for all of the parameters, much like A-H presets, but only with a limited set of parameters. The multiparameter then morphs between the banks or can be set to switch directly between them (no interpolated values). This is a marvellous way to control many parameters with complex settings by using a single multiparameter.

Let's explain the banks mode in more detail. Say you switch a multiparameter to banks mode, learn a few parameters and set the number of banks to 4. Then bank 1 contains a value for all of the parameters. Similarly bank 2 contains a different value for each of them. And so on. If you set the multiparameter slider to 0%, the associated parameters will be set to values in bank 1. If you set the slider to 100%, bank 4 will be used. If you set the slider to 33.3%, bank 2 will be used. And what if you select 50%? Then it will be halfway between bank 2 and bank 3.

You can have many banks, you can edit each of them, generate random settings etc. So let's say you want to create some complex movement. You use a multiparameter in banks mode, select a reasonable number of banks. You can edit each of them, but it is easier to use the randomization button to generate random settings for each of them. Then every time you move the multiparameter, all of the associated parameters will move, somewhere between the banks. You can then use a modulator or automation to slowly adjust the multiparameter.

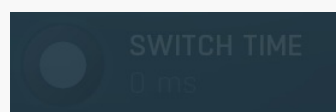
**Meter** mode makes the multiparameter work as a meter. Instead of controlling other parameters it starts following the value of them. You can then use that to implement a simple meter on the easy screen (if the plugin has one).



### Speed

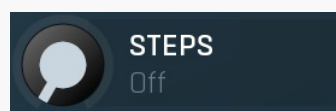
Speed controls the interpolation time. When it is zero and you change the multiparameter value, the associated parameters are adjusted immediately. If this is non-zero however, the actual parameters won't change immediately but will interpolate over time. The speed value is actually the time needed to go from minimum to maximum or vice versa. So if this is 1 second and the current value is say 0% and you click 100%, it will take 1 second for the multiparameter to get there.

This feature is provided mainly because changing some parameter via MIDI or mouse may cause unnecessary zipper noise or inaccuracies due to low MIDI precision. Using the interpolation you can somewhat slow everything down, so that the artifacts become negligible. It can also be used creatively. The default value has been experimentally tested to avoid all artifacts for most parameters.



### Switch time

Switch time defines the time needed to switch from the minimum value to the maximum one, or conversely. It is used only in **switch** and **trigger** modes.



### Steps

Steps lets you create an arbitrary number of equi-distant steps for the multiparameter values. While this technically limits the possibilities of the multiparameter by limiting the number of accessible values, it is sometimes easier to choose from a predefined number of options than from the full range. If you want to use different ranges between the steps, use the Banks mode with Interpolate values disabled.

Percents



### Value mode

Value mode defines the units displayed on the multiparameter.

**Percents** mode lets the multiparameter display percentages between 0% to 100%.

**Percents (-100% to 100%)** displays percentages between -100% to 100%.

**By first parameter** mode uses the current value of the first parameter that is controlled by the multiparameter. For example, if you want to control a plugin gain, but also in addition to the changed gain control other parameters, you may still want to call the multiparameter "gain" and the units should be decibels as usual, not percentages which do not make much sense for such a multiparameter.

**By bank name** displays the name of the nearest bank. In some controls, such as switchers, it is possible to display the set of the values as a menu. The menu is created automatically and it even creates groups for better clarity, based on the prefix of the bank names. You can use ' # ' (hashtag surrounded by spaces) to define the groups manually like this: "group # name". For example, you can name one bank "Main group # First bank" and another "Main group # Second bank", and these will be displayed in a single group in the menu. If you are going to use this method, make sure the ' # ' sequence is present in each bank's name.

**By bank name interpolated** considers name of all banks numbers. It then interpolates between them and displays the result as a number.

**By bank name interpolated log** is similar, but interpolates the values in logarithmic domain. considers name of all banks numbers. It's useful for units, which are naturally logarithmic, such as frequency.

**By bank number** shows the index of the nearest bank.

**Expression** lets you formulate the value -> text and back using mathematical expressions and can be used for some more complex MPs or if you need some custom units.

Default 50.0% Default

Default controls the default value of the multiparameter. You can edit it directly or just set the MP into its reasonable default and click the **Set current value**. Most GUI components created for the multiparameter respond to right-click by setting the default value in the same way that other parameters do. It is essential for user experience when building your own devices.

Set current value Set current value

Set current value stores the current value as the default one for the multiparameter.

Origin 0.00% Origin

Origin informs the GUI engine of the origin of the value. For instance, a default value for panorama is in the center and it is logical that visual elements controlling panorama should somehow highlight the center position. If, for example, you are using a value button to edit the panorama, by default it displays the current value using a bar starting from the left side (being the origin defined as minimum) towards the actual value, but here it is better to display the bar from the center towards the current value, whether it is on the left or right of the center. Therefore the center should be the origin.

Set current value Set current value

Set current value stores the current value as the origin for the multiparameter.

Set center Set center

Set center sets the center (50%) as the origin for the multiparameter. This is often the case for parameters such as gain and panorama, so it deserves a dedicated button. It is supported only for knobs.

Value to text

Value to text is available only with Expression **Value mode** and lets you enter a text featuring mathematical expressions to produce the units. This can be used for more complex multiparameters. The text itself is just another text, but it can contain substrings of this structure:

**{expression}**

or

**{expression;decimals}**

where expression is the actual mathematical expression and decimals is the number of decimal places in the resulting value. Here is the list of variables available for each expression:

**x** = the multiparameter value in 0..1

**sr** = current sampling rate

Functions and features of the expressions are available below. Now let's see a few examples:

*Test: {x}* - produces "Test: 0.12" (with MP value 0.1234)

*{x} ({x\*100;0}%)* - produces "0.12 (12%)" (with MP value 0.1234)

*{ffrom01(x);1} Hz* - produces say "215.56 Hz" ("20.0 Hz" for MP value 0 and "20000.0 Hz" for MP value 1)

*{toddb(sqr(x));4} dB* - produces "-12.0412 dB" for 0.5. "sqr" is used to mimic the transformation used in pretty much every Volume parameter in MeldaProduction plugins.

Expression evaluator uses traditional C/C++ style formatting, which is natural for most people. It provides arithmetics, logical and conditional operators. Following terms are supported:

Constants: **pi, e, sqrt2, ln2**

Arithmetic operators:

**-a** inverts the sign, e.g. "-x" produces +2 for x=-2

**a+b** = addition

**a-b** = subtraction

**a\*b** = multiplication

**a/b** = division

**a%b** = modulo, remainder after division

**a^b** = power, e.g. "2^3" produces 2\*2\*2 = 8

Arithmetic functions:

**min(a,b)** = minimum of both values

**max(a,b)** = maximum of both values  
**limit(a,min,max)** = a limited into the interval min..max  
**to01(a,min,max)** = converts "a" as min..max to 0..1  
**from01(a,min,max)** = converts "a" as 0..1 to min..max  
**tom11(a,min,max)** = converts "a" as min..max to -1..1  
**fromm11(a,min,max)** = converts "a" as -1..1 to min..max

Basic mathematic functions: **abs(x)** = absolute value, e.g. abs(-3) = 3 **sqr(x)** =  $x*x$  **sqrt(x)** = square root **exp(x)** = natural exponential  $e^x$  **ln(x)** = natural logarithm **log10(x)** = logarithm with base 10 **log(x, base)** = logarithm with specified base **inv(x)** =  $1/x$  **sgn(x)** = sign of x, -1 or 0 or +1 depending on  $x*x$  **round(x)** = rounding to the nearest value **floor(x)** = rounding to the nearest lower value, e.g. floor(-2.3) = -3 **ceil(x)** = rounding to the nearest higher value, e.g. ceil(-2.3) = -2 **rand(x)** = random value from 0 to x

Functions for specific units:

**f01(a)** = converts "a" as frequency from 20...20000 into log scale 0..1  
**ffrom01(a)** = converts "a" as 0..1 (log scale) to frequency from 20...20000  
**todb(a)** = converts "a" as multiplier to dB value by calculating "20\*log10(a)"  
**fromdb(a)** = converts "a" as dB value to multiplier by calculating "10^(a/20)"

Trigonometric functions: **sin(x)**, **asin(x)**, **cos(x)**, **acos(x)**, **tan(x)**, **atan(x)**, **sinh(x)**, **cosh(x)**, **tanh(x)**

Logical operators:

**a==b** = comparison producing 1 if "a" and "b" are equal, 0 otherwise  
**a!=b** = comparison producing 1 if "a" and "b" are NOT equal, 0 otherwise  
**a<b** = comparison producing 1 if "a" is lower than "b", 0 otherwise  
**a<=b** = comparison producing 1 if "a" is lower or equal to "b", 0 otherwise  
**a>b** = comparison producing 1 if "a" is greater than "b", 0 otherwise  
**a>=b** = comparison producing 1 if "a" is greater or equal to "b", 0 otherwise  
**!a** = logical negation, 0 produces 1, 0 otherwise  
**a&&b** = logical AND, produces 1 if both "a" and "b" are nonzero  
**a | b** = logical OR, produces 1 if any of "a" and "b" are nonzero  
**a^b** = logical XOR, produces 1 if "a" and "b" are logically different  
**a ? b : c** = if a is nonzero, then the result is b, otherwise it is c}}

## Text to value

Text to value is available only with Expression **Value mode** and lets you convert a number user enters as a text input into the multiparameter value in 0..1. This can be used for more complex multiparameters. Unlike **Value to text** here you need to enter a single expression, no need for any other text. If the resulting value exceeds the 0..1 interval, it is automatically limited. Here is the list of variables available for the expression:

**x** = the value the user entered  
**sr** = current sampling rate

Functions and features of the expressions are available below. Now let's see a few examples:

*x* - sets MP to 0.1234 if the user entered "0.1234"  
*x/100* - sets MP to 0.1234 if the user entered "12.34" (or "12.34%" for example)  
*f01(x)* - sets MP to the proper frequency in log scale, e.g. 20 is translated to 0, 20000 to 1  
*fromdb(sqrt(x))* - sets MP to 0.5 if the user entered "-12.0412" (or "-12.0412 dB" for example). "sqrt" is used to mimic the transformation used in pretty much every Volume parameter in MeldaProduction plugins.

Expression evaluator uses traditional C/C++ style formatting, which is natural for most people. It provides arithmetics, logical and conditional operators. Following terms are supported:

Constants: **pi**, **e**, **sqrt2**, **ln2**

Arithmetic operators:

**-a** inverts the sign, e.g. "-x" produces +2 for x=-2  
**a+b** = addition  
**a-b** = subtraction  
**a\*b** = multiplication  
**a/b** = division  
**a%b** = modulo, remainder after division  
**a^b** = power, e.g. "2^3" produces  $2*2*2 = 8$

Arithmetic functions:

**min(a,b)** = minimum of both values  
**max(a,b)** = maximum of both values  
**limit(a,min,max)** = a limited into the interval min..max  
**to01(a,min,max)** = converts "a" as min..max to 0..1  
**from01(a,min,max)** = converts "a" as 0..1 to min..max  
**tom11(a,min,max)** = converts "a" as min..max to -1..1  
**fromm11(a,min,max)** = converts "a" as -1..1 to min..max

Basic mathematic functions: **abs(x)** = absolute value, e.g. abs(-3) = 3 **sqr(x)** =  $x*x$  **sqrt(x)** = square root **exp(x)** = natural exponential  $e^x$  **ln(x)** = natural logarithm **log10(x)** = logarithm with base 10 **log(x, base)** = logarithm with specified base **inv(x)** =  $1/x$  **sgn(x)** = sign of x, -1 or 0 or +1 depending on  $x*x$  **round(x)** = rounding to the nearest value **floor(x)** = rounding to the nearest lower value, e.g. floor(-2.3) = -3 **ceil(x)** = rounding to the nearest higher value, e.g. ceil(-2.3) = -2 **rand(x)** = random value from 0 to

Functions for specific units:

**f01(a)** = converts "a" as frequency from 20...20000 into log scale 0..1

**ffrom01(a)** = converts "a" as 0..1 (log scale) to frequency from 20...20000

**todb(a)** = converts "a" as multiplier to dB value by calculating "20\*log10(a)"

**fromdb(a)** = converts "a" as dB value to multiplier by calculating "10^(a/20)"

Trigonometric functions: **sin(x)**, **asin(x)**, **cos(x)**, **acos(x)**, **tan(x)**, **atan(x)**, **sinh(x)**, **cosh(x)**, **tanh(x)**

Logical operators:

**a==b** = comparison producing 1 if "a" and "b" are equal, 0 otherwise

**a!=b** = comparison producing 1 if "a" and "b" are NOT equal, 0 otherwise

**a<b** = comparison producing 1 if "a" is lower than "b", 0 otherwise

**a<=b** = comparison producing 1 if "a" is lower or equal to "b", 0 otherwise

**a>b** = comparison producing 1 if "a" is greater than "b", 0 otherwise

**a>=b** = comparison producing 1 if "a" is greater or equal to "b", 0 otherwise

**!a** = logical negation, 0 produces 1, 0 otherwise

**a&&b** = logical AND, produces 1 if both "a" and "b" are nonzero

**a|b** = logical OR, produces 1 if any of "a" and "b" are nonzero

**a^^b** = logical XOR, produces 1 if "a" and "b" are logically different

**a ? b : c** = if a is nonzero, then the result is b, otherwise it is c}}

## Appearance

Name



### Name

Name specifies the name of the multiparameter, which is shown on the multiparameter button. The name is also used for devices - the multiparameter serves as a parameter for the device (on the Easy screen). If no name is specified or if the first character is an \*, then the parameter is hidden. This is useful if you need some internal multiparameters which you don't want to show on the Easy screen for some reason.

Group



### Group

Group can be used to put some multiparameters into the same group, which results in them being placed in the same panel on the Easy screen (the device editor). Additionally you can actually place the groups into tabs by setting group to "tabname#groupname". The name of the tab needs to be there only for the first parameter of the new group. This makes it possible to build a complex devices with dozens of parameters.

Editor mode

Normal



### Editor mode

Editor mode controls the way the multiparameter are to be displayed on the Easy screen.

**Normal** is the default mode and is represented by a small knob or button.

**Big** mode is similar, but uses a big knob or big button.

**Button** mode displays a value button, which is usually more compact than knobs.

**Check-boxes** makes the multiparameter displayed as a set of checkboxes (also called radio buttons). It is relevant only in **Banks** mode.

**Check-boxes horiz & below** is similar but displays the checkboxes in a single row, hence horizontally. Below mark makes the label underneath the actual checkbox.

**Switcher and Selectors** are useful for selecting a number of discrete values and similarly to check-boxes these are working only in

**Banks** mode.

**Title button** places the control into the title bar of the panel to which it belongs.

**Title enable button** places the control into the title bar of the panel to which it belongs and makes it a standard enable button (which also makes all controls within the panel unavailable if it is itself disabled).

**XY pad** creates a 2 dimensional XY pad control, that edits this multiparameter in the X axis and the next multiparameter in the Y axis. There are multiple versions of this control, all of them differ only by size.

**Spacer** is a helper mode for device design, which doesn't display anything and only keeps empty space.

**Meter** creates a simple meter instead. You will probably want to set the multiparameter to Meter mode as well or attach it to a modulator. Meters don't really control anything and their purpose is purely to get a visual feedback. The meters can be horizontal or vertical and they can be up or down. Up is the usual choice useful for peak meters for example. Down is useful for gain reduction meters.

**Bars start/end** mode creates an editor, similar to step sequencer editor, where each parameter has its own bar. The **Bars start** starts the editor and all multiparameters are then added to it until a multiparameter with **Bars end** mode is found or until there are no remaining multiparameters. Note that this kind of editor doesn't show units and may have several other limitations.

**Order** is a very specific editor for Order modules available in modular systems such as MXXX. It lets you provide an processing order editor on the easy screen. To use it, attach the MP to Order parameter of the Order module and edit the MP information field, so that it contains all the items to be ordered, separated by ';'. The number of items must match the number of items in the Order module, otherwise the order won't work properly. You can also include colors for each item separated by # (hexa or one of the predefined set: Dynamics, Distortion, Modulation, Stereo, Spectral, Synthesis, Instrument, MDrummer, Reverb, Delay, EQ, Filter, Saturation, Limit, Time, Pitch, FX) and enable MP indices.

Example of the info: Compressor#Dynamics;EQ#EQ;Limiter#007F7F;Something

Panel type  Panel type

Panel type defines the type of panel in which multiple controls of the same group are placed. These differ only in their graphics display.

Color  Color

Color defines colorization for the element on the Easy screen (if the plugin has one). The feature is disabled if the Alpha value of the color is 0. Using this feature often increases memory consumption of the plugin, so make sure you use it only if necessary and try to use as low a number of different colors as possible. It is recommended to use only the snapshot colors to make sure the same colors are used in most cases, reducing the memory consumption. It is also highly recommended to use colors with a value (lightness) of 128 (the middle value), which makes sure that the lightness of the elements won't be changed. This works best for most styles. Please note that the style may be configured to simply ignore this color, so there may be no change at all. If you use this feature, make sure that you test it with all styles.

For the sake of workflow the colors have predefined meanings. It's highly recommended to follow this standard:

Orange - dynamics  
Green - equalization, filtering  
Brown/yellow - reverb, delay  
Blue - modulation  
Red - limiting, saturation, distortion  
Cyan/yellow - stereo  
Purple/pink - time, pitch, unison...  
Grey - utilities, tools

Group color  Set Group color

Group color defines colorization for the group panel on the Easy screen (if the plugin has one) and is ignored for all multiparameters except for the first one in a group. The feature is disabled if the Alpha value of the color is 0. Using this feature often increases memory consumption of the plugin, so make sure you use it only if necessary and try to use as low number of different colors as possible. It is recommended to use only the snapshot colors to make sure the same colors are used in most cases, reducing the memory consumption. It is also highly recommended to use colors with a value (lightness) of 128 (the middle value), which makes sure that the lightness of the elements won't be changed. This works best for most styles. Please note that the style may be configured to simply ignore this color, so there may be no change at all. If you use this feature, make sure you test it with all styles.

For the sake of workflow the colors have predefined meanings. It's highly recommended to follow this standard:

Orange - dynamics  
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Blue - modulation  
Red - limiting, saturation, distortion  
Cyan/yellow - stereo  
Purple/pink - time, pitch, unison...  
Grey - utilities, tools

Set  Set

Set button sets the color and group color for all multiparameters in the same group. It is pretty sensible to do that as all controls should look similar within each group. This can also be done by editing each parameter, but this way is easier.

Visible Visible

Visible checkbox controls if the parameter is visible on the Easy screen (if the plugin has one). Its effect is similar to the '\*' prefix in the parameter name, but the multiparameter's name is also available to the plug-in host. This is useful when you wish to automate that multiparameter from the host but not show it on the Easy screen. This parameter can also be attached to another multiparameter for

example in order to change the GUI somehow.

### Enabled **Enabled**

Enabled switch enables/disables the multiparameter. If disabled, it is grayed on the easy screen.

### Same row **Same row**

Same row checkbox defines if the parameter should be displayed next to the previous one on the Easy screen. Otherwise it will be placed on the next row. This setting serves as a hint and the plugin may ignore it, if it is impossible to do.

### Resizable X **Resizable X**

Resizable X switch lets you specify if the panel could be resized. It is on by default to make sure everything gets resized, however when using multiple panels next to each other, it may be advantageous to disable resizing of some of them to save space. Otherwise each panel's size is proportional to number of controls it contains, which could make some of the panels larger than actually necessary.

### Resizable Y **Resizable Y**

Resizable Y switch lets you specify if the panel could be resized vertically. It is off by default to make sure everything has the minimum size it requires, but for aesthetic reasons you may want to make all groups on the same row the same size even if the controls inside them are not.

### Randomizable **Randomizable**

Randomizable option defines if the multiparameter can be randomized on the easy screen. You may want to disable this for input/output gain for example.

### Show name **Show name**

Show name option lets you show or hide the name of the multiparameter for some editor modes. The option has no effect for several editor modes.

### Stepped / Continuous **Stepped / Continuous**

Stepped / Continuous option tells the engine that the multiparameter can be in 2 modes, stepped or continuous. If so, it is assumed that you either used **Banks mode** or **Steps** to produce some sort of predefined set of values for the stepped mode. By enabling this option you allow the engine to convert the multiparameter to continuous mode by either ignoring the steps or interpolating the bank values. It can be used when designing devices.

### Lockable **Lockable**

Lockable option creates a lock button next to the parameter on the Easy screen, allowing the user to browse through presets without this parameter changing. Please note that this feature is available only for some editor modes.

When the parameter is first locked on the Easy screen it is added to the set of lockable parameters (which are listed in the Global Lock window).

### Separate collapse **Separate collapse**

Separate collapse checkbox makes the panel collapsible separately on the Easy screen. By default it is disabled and that makes the engine find all panels on the same row and collapse all of them or none of them.

### Functional when disabled **Functional when disabled**

Functional when disabled switch makes the multiparameter work even when disabled. This may be useful in some complex scenarios, where you need to make the MP control the target parameters and only use the **Enabled** flag to grey out the controls on the easy screen.

### Fine control **Fine control**

Fine control switch makes the multiparameter editor steps extra small, which is useful, when you need very high precision. This is often handy when using banks mode with many banks interpolating.

### Advanced **Advanced**

Advanced switch makes the multiparameter 'advanced', disabled by default. If such an multiparameter exists, the engine also creates a button to show/hide all advanced multiparameters. In effect this lets you create a simple GUI with optional advanced controls.

### Store **Store**

Store makes the multiparameter stored. Relevant when creating devices. In some rare cases you may want to disable this, e.g. if the value is a meter or somehow it just doesn't need to be save at all.

### Store in presets **Store in presets**

Store in presets makes the multiparameter stored in presets. Relevant when creating devices. In some cases you may want to store the value, but ignore it when browsing presets. For instance, input gain may be ignored if the user is supposed to set the gain to some predefined value and then browse the presets without changing that gain.

### Controls MPs **Controls MPs**

Controls MPs informs the engine that this MP is controlling other multiparameters. As such it shouldn't be 'invoked' unless it is explicitly touched by the user. This is relevant for example when it is used in a device with a device presets - loading a device preset invokes all relevant MPs, so that the state of the device is remembered properly, but invoking this one would actually make things incorrect.

### Include in doc **Include in doc**



Include in doc makes the multiparameter's help included in the documentation / panel help. You may want to disable this if there are multiple 'identical' controls with the exact same help info, for all of them except for one.

Edit information about the multiparameter

Edit information

## about the multiparameter

Edit information about the multiparameter lets you edit the information displayed as help for the multiparameter control on the easy screen. It can use a simplified HTML format, but in practice only following tags are likely to be useful:

**<name>** = name of the control, the info should begin with that.

**<reference>** = reference to another control.

**<value>** = specific value the control can have.

**<b>** = bold text

**<i>** = italic text

**<cred>** = red

**<cgreen>** = green

**<cblue>** = blue

For example: `<name>Gain</name> controls the output level. It can be used in conjunction with <reference>Volume</reference>. When set to <value>silence</value>, it won't do anything and consume no CPU power.`

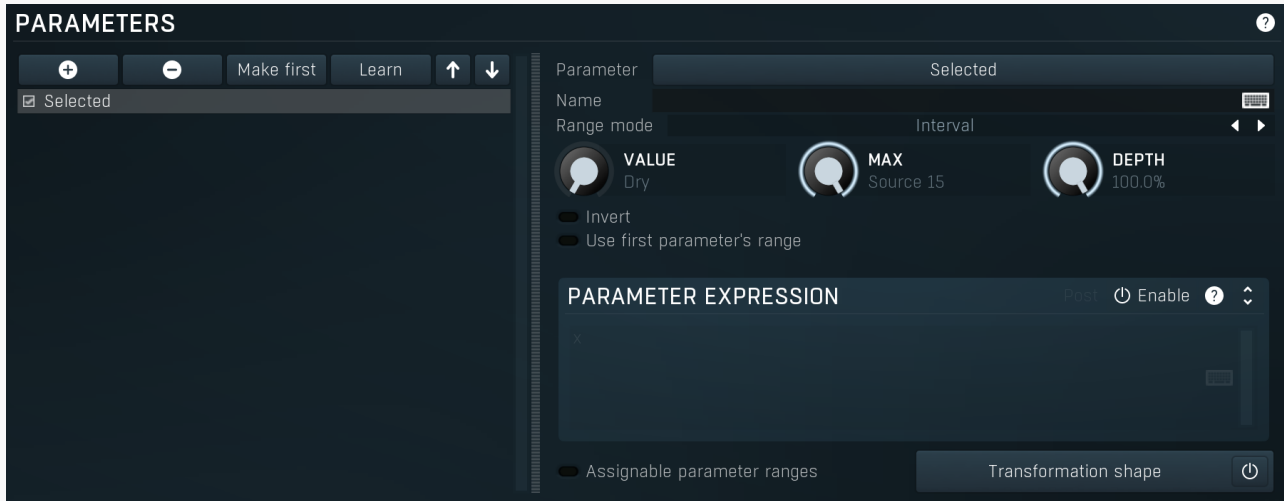
When **Order** control is used, the first line of the information can contain additional info of ";" separated individual items in the following format:

`name{#hexcolor}{*index of the enable MP}` where {} denotes an optional item.

For example: `Reverb;EQ#7F0000;Flanger#007F00*3`

In this example, the order is probably used to control order of effects. When the order MP value is set to 0, Reverb is the first, with no specific color and no MP to enable/disable it. Flanger is next, the color is red, but no enable either. Finally Flanger is the third, it is green and MP3 is used to enable/disable it.

## Parameters panel



Parameters panel configures how the multiparameter assigns values to the target parameters.



### Add

Add button adds a parameter to the list of controlled parameters. Alternatively you can use the learn feature available by right-clicking the multiparameter button.



### Delete

Delete button deletes the selected parameter from the list of controlled parameters.

Make first

### Make first

Make first button moves the selected parameter to the first item in the list. This is useful for sake of the **By first parameter** value mode, which makes the multiparameter show the units of the first parameter in the list. Please note that if you have some other multiparameter, modulator or another subsystem access the ranges of individual parameters, this function will reorder them, so these connections will no longer be correct.

Learn

## Learn

Learn button starts or stops the learning. Click it, then move some parameters in the plugin, then click it again. Learning can also be accessed from the global multiparameter menu.



## Up

Up button moves the selected parameter up one item, if possible. This may be useful when keeping things organized, but please note that if you have some other multiparameter, modulator or another subsystem access the ranges of individual parameters, this function will reorder them, so these connections will no longer be correct.



## Down

Down button moves the selected parameter down one item, if possible. This may be useful when keeping things organized, but please note that if you have some other multiparameter, modulator or another subsystem access the ranges of individual parameters, this function will reorder them, so these connections will no longer be correct.

Parameter

Selected

## Parameter

Parameter defines the target parameter which is being modulated. The set contains all automatable parameters.

Name



## Name

Name lets you name the parameter somehow and may be helpful in situations, where there are many parameters being edited without obvious meanings.

Assignable parameter ranges

## Assignable parameter ranges

Assignable parameter ranges allows you to assign parameter ranges of several first parameters to other subsystems such as multiparameters or modulators. By default it is disabled, which removes all the relevant parameters to save valuable resources. This feature is available only if automation compatibility mode for V10 is disabled.

Transformation shape



## Transformation shape

Transformation shape button displays the graph editor, which lets you tweak the shape of the curve used to control the selected parameter. The X axis shows the original values, the Y axis defines the results. Please note that this takes some CPU, therefore you have to enable it using the enable button in the title bar.

Range mode

Interval



## Range

### mode

Range mode defines how the parameter range is selected. While sometimes it is better to specify minimum and maximum, other times it is better to use a nominal center and depth (% of full scale). This control allows you to define which one it will be.

**Up and down** mode makes the values go above and below the selected **Value**, which is considered the center. The interval is made smaller if necessary.

**Full range mode** is similar, except the range is symmetrically constrained, so the selected **Value** may not be the center anymore.

**Up/down only modes** goes from the selected value up/down only.

Let's compare these 4 modes. Taking a value of -12dB value, with a depth of 75% and a scale of +/- 24dB. The nominal range is therefore = +/-24 dB \* 75% = 36dB. With values of 0%, 50% and 100% the outputs are:

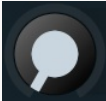
Up and down: -24, -12, 0 (range constrained to 12 dB either side)

Full range: -24, -6, 12 (range limited to minimum, but not constrained)

Up only: -12, 6, 24 (range not constrained = +/-24 dB \* 75% = 36dB)

Down only: -12, -18, -24 (range limited to minimum)

**Interval mode** is the most simple one and goes from **Value** to **Maximal value**.

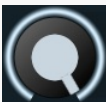


VALUE

Dry

## Value

Value defines the center of the target parameter's range or the minimum if the **Range mode** is set to **Interval**.



MAX

Source 15

## Maximal value

Maximal value defines the upper limit of the target parameter's range. It is available only if the **Range mode** is set to **Interval**. This value can be lower than **Value**. 0% is always mapped to reference>Value and 100% to reference>Maximal value.



DEPTH  
100.0%

## Depth

Depth defines size of the target parameter's range. It is used only if the **Range mode** is not set to **Interval**.

Invert

**Invert**

Invert checkbox inverts the target parameter's range, so that minimum becomes maximum and vice versa.

Use first parameter's range

**Use first**

### parameter's range

Use first parameter's range makes the parameter display use the same range as the first parameter in the list. This is often useful if want to control the range in some way and apply the range to multiple parameters.

## Parameter expression

PARAMETER EXPRESSION

Post  Enable ?

x

Post

Parameter expression panel lets you provide an algebraic expression for computing the final parameter value. Here are several predefined variables you can use in your expressions (# denotes a positive integer number):

**x** contains the current multiparameter value (in **Meter mode** it contains the parameter value);

**p#** contains the current value of the parameter number # in the **parameter list** (e.g. "p2+p3" computes the sum of values of parameters 2 and 3 in the **parameter list**);

**mp#** contains the current value of the multiparameter number #.

For example, an expression "(x+p2+mp5)/3.0" calculates the average of the values of the current multiparameter, parameter number 2 in the **parameter list**, and the multiparameter with index 5.

**Post**

Post button toggles whether the transform and min/max range are applied to the value x before evaluating the expression (Postprocessing mode, button on), or to the result of evaluating the expression (Preprocessing mode, button off, default).

## Cyclic mode

### Cyclic mode

Cyclic mode switches the multiparameter into so-called cyclic mode. If you have say 4 banks, called A, B, C and D, and gradually increase the multiparameter value, it starts with A, then interpolates to B, then to C and finally to D. But after that you cannot interpolate back to A, because D is the last one, the maximum value. In cyclic mode the multiparameter behaves as if there were a clone of A at the end, hence after D is reached, the multiparameter interpolates back to A and creates a full circle A->B->C->D->A. This is handy for example if you use a saw wave modulator to drive the multiparameter and want to repeat the sequence of the banks.

## Interpolate values

### Interpolate values

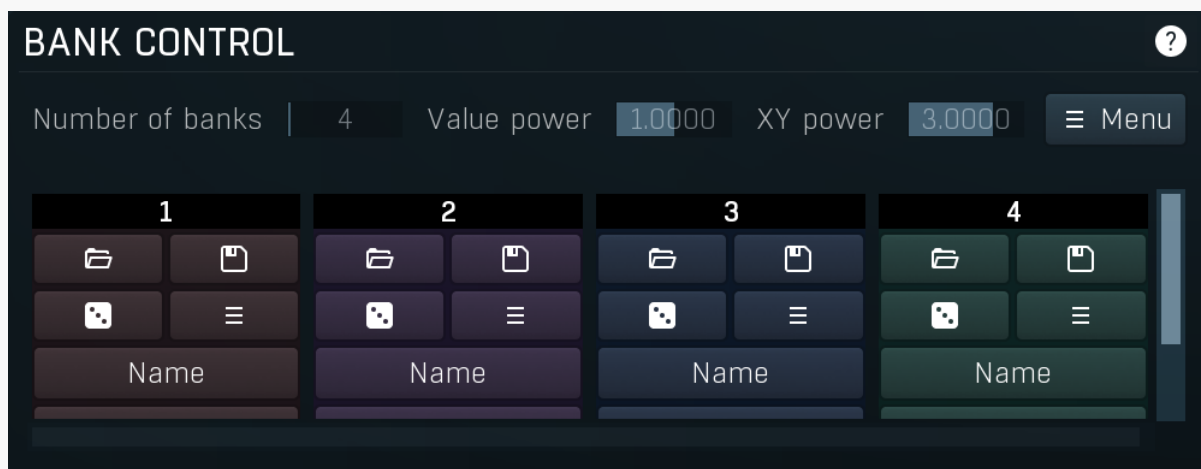
Interpolate values controls if the parameter value is to be interpolated between the bank values or if it will take the value from the nearest bank. For example, when bank A contains the value 0% for the parameter and bank B contains 100% and you set the multiparameter to 30%, then when interpolation is enabled, 30% is selected for that parameter, when the interpolation is disabled, the nearest value, 0%, is selected. If you want the parameter to step from one bank value to another then disable interpolate values.

## Set interpolate to all parameters

### Set interpolate to all parameters buttons

Set interpolate to all parameters buttons sets the interpolate values setting for all parameters controlled by that multiparameter.

## Bank control panel



Bank control panel is available only in **Banks mode** and contains tools to define the banks between which the multiparameter is interpolating. The multiparameter stores parameter values for each bank. Here you can load and save these values. Each bank has 5 buttons and a value for each controlled parameter. Click the **load button** to load the bank values into the plug-in. If you want to change say bank 3, you first click its **load button**, change whatever you need and resave the settings. By clicking the **save button** you overwrite the bank's settings from those currently set in the plug-in. A typical approach to define the multiparameter's behaviour is to set the number of banks, then go to the plugin editor, set all associated parameters to the values you would like to have in bank 1 and click the save button for bank 1, then modify the parameters to whatever you want in bank 2 and click the save button for bank 2, etc. You can also use the **Random button** to generate random values using the smart-randomization engine for each of the banks. And the **menu button** enables you to re-order the banks

For each bank, the values for each parameter are shown and can be changed as desired.

## Number of banks | 4

### Number of banks

Number of banks controls the number of settings that the multiparameter stores for all parameters. By changing the multiparameter value all associated parameters are then modified according to these settings. Please note that when you change the number of banks, the multiparameter will behave differently, because the multiparameter's range from 0% to 100% will now be distributed between a different number of presets. If you had automated the multiparameter value in your host for example you will almost certainly need to edit / rewrite the automation envelope.

## Value power | 1.0000

### Value power

Value power lets you post-process values for each bank by specific power function. This either leads to higher values for low powers, or lower values for high powers. The same thing can be implemented using transforms, but this is much easier considering the potential number of parameters you may have there. It is especially useful for circular XY pads. Use trial-and-error approach to set this up to your liking.

## XY power | 3.0000

### XY power

XY power is used only if **XY-pad between banks** is enabled and controls how the engine produces values for individual parameters. The higher the number is, the more will the engine separate them. Use trial-and-error approach to set this up to your liking.

## ≡ Menu

### Menu

Menu button provides some additional features for processing the entire set of banks.

**Sort banks (up)** reorders the banks so that the values of the selected parameter are in increasing order.

**Sort banks (down)** reorders the banks so that the values of the selected parameter are in decreasing order.

**Reverse** reverses the order of banks, so that the first bank contains values of the previously last one and so on.

**Interpolate** lets you change the number of banks, but keeps the values as they are now by calculating values of parameter for all banks. It is usually useful when you want to provide 'banks in between current banks', without manually calculating the new values.

**Auto-gain** (if available) temporarily enables AGC and automatically sets up the main plugin gain to each bank so that all banks provide similar output loudness. To use it, ensure that the main gain parameter is attached to the multiparameter, start playback of your sound material and press this button. It will take several seconds to complete depending on the number of the banks.

**Set names by values** sets the names for each bank to the values of the selected parameter. It may be handy when replicating existing parameters for example.



### Load

Load button loads the bank settings by setting all associated parameters to the values in the particular bank.



### Save

Save button saves the current values of all associated parameters into the particular bank. So you can edit all those parameters in the plugin then click the save button to store them in the bank.



### Randomize

Randomize button loads random settings to the bank using the smart randomization engine. Only parameters associated with the multiparameter are randomized.

Generally, randomization in plug-ins works by selecting random values for all parameters, but rarely achieves satisfactory results, as the more parameters that change the more likely one will cause an unwanted effect. Our plugins employ a smart randomization engine that learns which settings are suitable for randomization (using the existing presets) and so is much more likely to create successful changes.

In addition, there are some mouse modifiers that assist this process. The smart randomization engine is used by default if no modifier keys are held.

Holding **Ctrl** while clicking the button constrains the randomization engine so that parameters are only modified slightly rather than completely randomized. This is suitable to create small variations of existing interesting settings.

Holding **Alt** while clicking the button will force the engine to use full randomization, which sets random values for all reasonable automatable parameters. This can often result in "extreme" settings. Please note that some parameters cannot be randomized this way.

Hold **Shift** while clicking the button to undo the previous randomization.



### Menu

Menu button provides some additional options related to the bank.



### Name

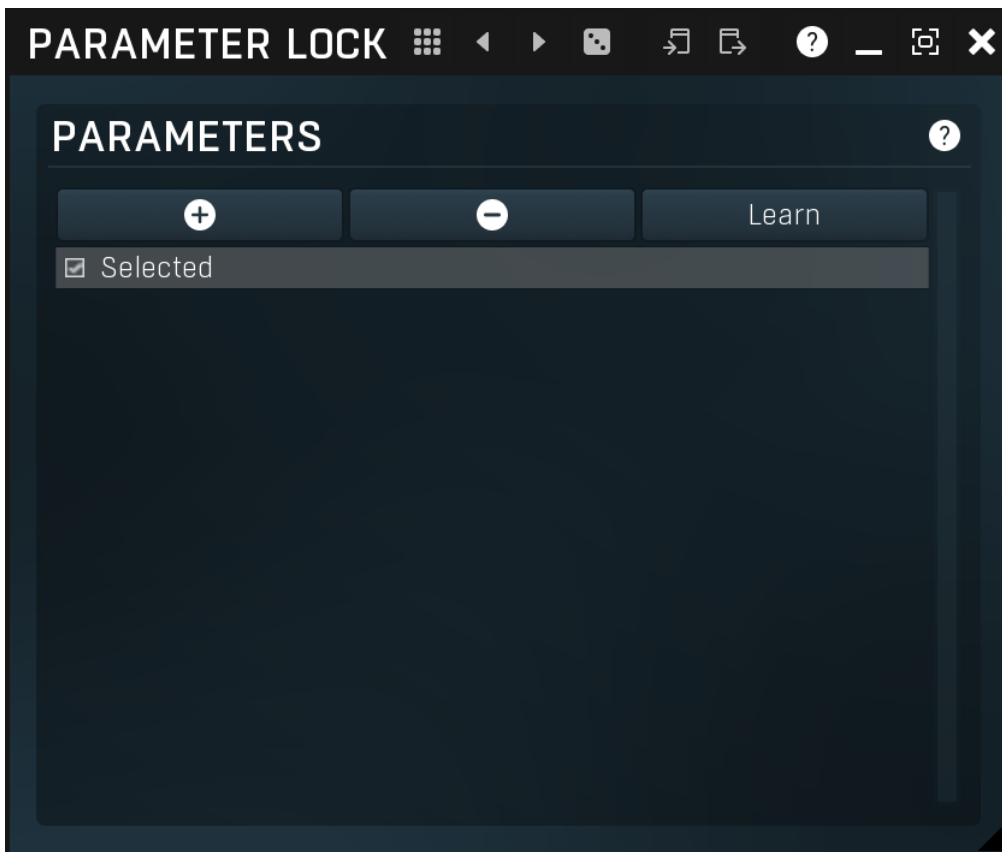
Name button lets you rename the bank.



### Name check

Name check button lets you rename the bank. This is a secondary name used for controls such as checkboxes and selectors if defined.

# Parameter lock editor



Lock provides a simple way to keep some parameters unchanged when using randomization or browsing presets. You can still change these locked parameters by adjusting the control directly. You simply use the learn feature (right click) in the same way you would with modulators or multiparameters, and touch every parameter you want to keep locked. You can also select them directly in the Parameter Lock window where you can also save them as presets, copy & paste etc. Learning mode is ended by clicking the button again. Please note that this list is not saved with global plugin presets for obvious reasons. The parameters can be locked or unlocked directly in the list or by clicking the lock button associated with the parameter on the Easy screen.



### Presets

Presets button displays a window where you can load and manage available presets. Hold **Ctrl** when clicking to load a random preset instead.



### 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.



### Copy

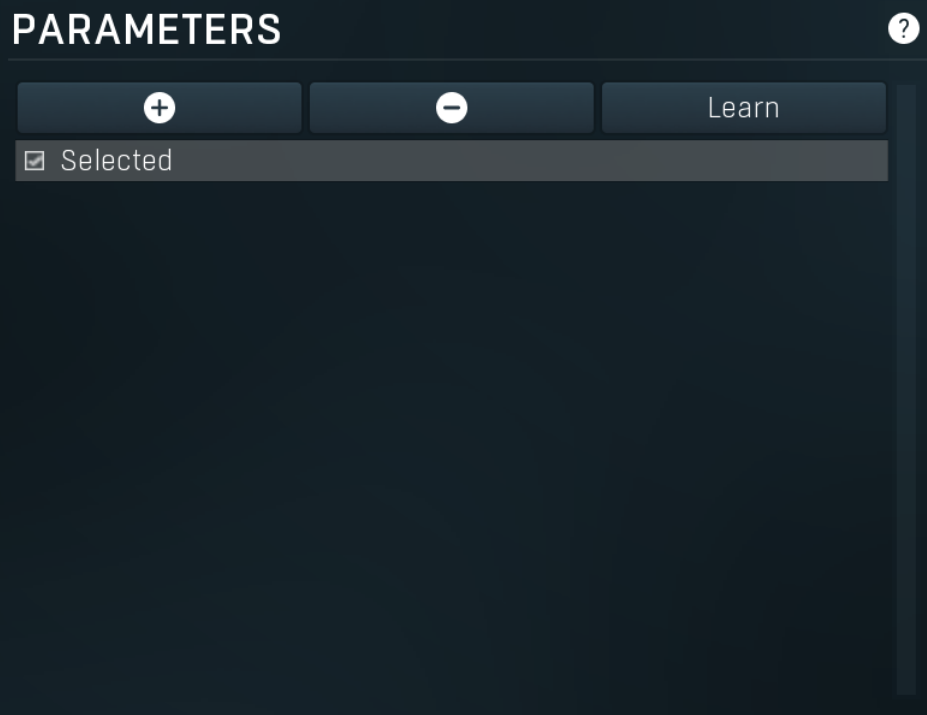
Copy button copies the settings onto the system clipboard.



### Paste

Paste button loads the settings from the system clipboard.

## Parameters panel



Parameters panel configures the list of the parameters which are locked.



### **Add**

Add button adds a parameter to the list of locked parameters. Alternatively you can use the learn feature available by right-clicking the paramlock button for example.



### **Delete**

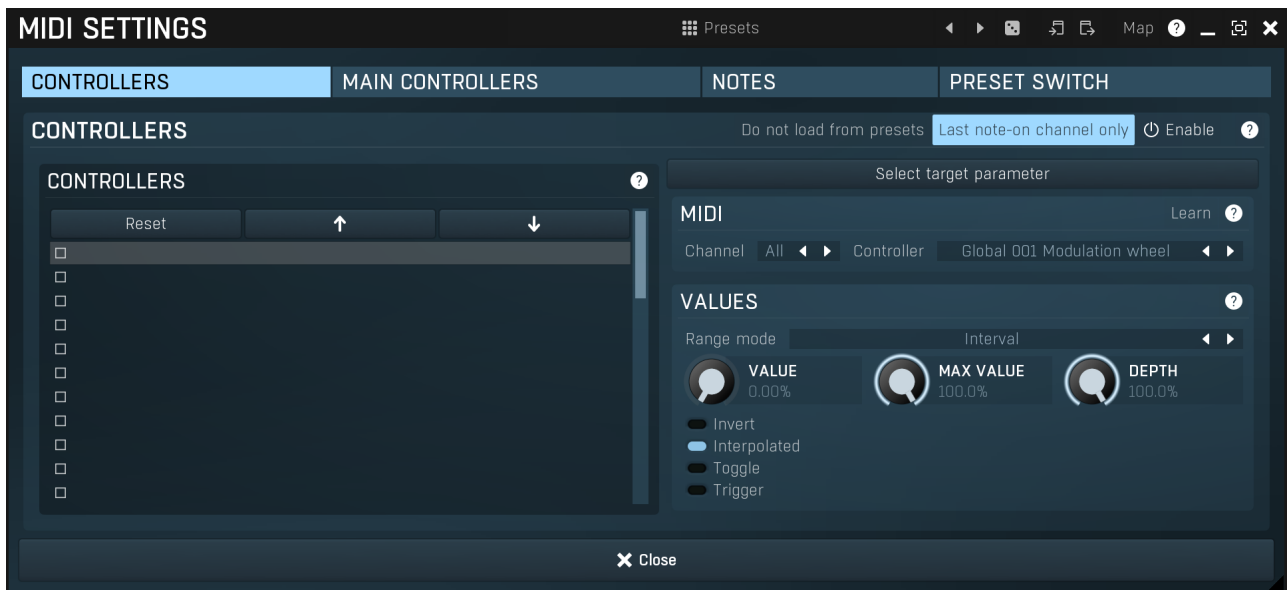
Delete button deletes the selected parameter from the list of controlled parameters.



### **Learn**

Learn button starts or stops the learning. Click it, then move some parameters in the plugin, then click it again. Learning can also be accessed from the global parameter lock menu.

# MIDI editor



MIDI settings window lets you configure, how the plugin reacts to various MIDI messages. You can use MIDI controllers or MIDI notes and you can also configure a controller to switch between presets, which is especially useful for realtime performances.

 Presets

## Presets

Presets button displays a window where you can load and manage available presets. Hold **Ctrl** when clicking to load a random preset instead.



### 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.



### Copy

Copy button copies the settings onto the system clipboard.



### Paste

Paste button loads the settings from the system clipboard.



### Map

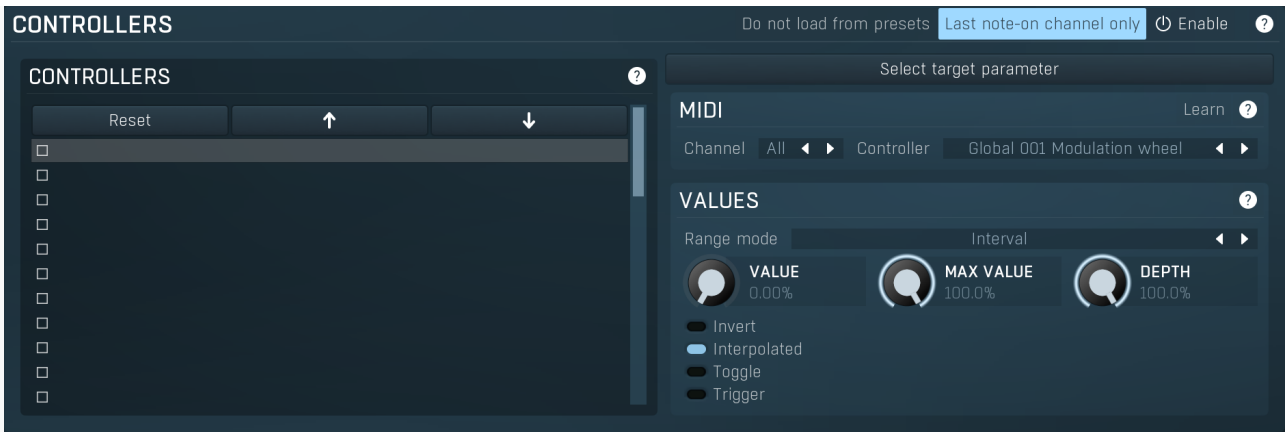
Map button displays all current mappings of modulators, multiparameters and MIDI (whichever subsystems the plugin provides).

**CONTROLLERS** MAIN CONTROLLERS NOTES PRESET SWITCH **Tab selector**

Tab selector switches between subsections.

## Controllers panel





Controllers panel contains settings of MIDI controllers.

Do not load from presets

### Do not load from presets

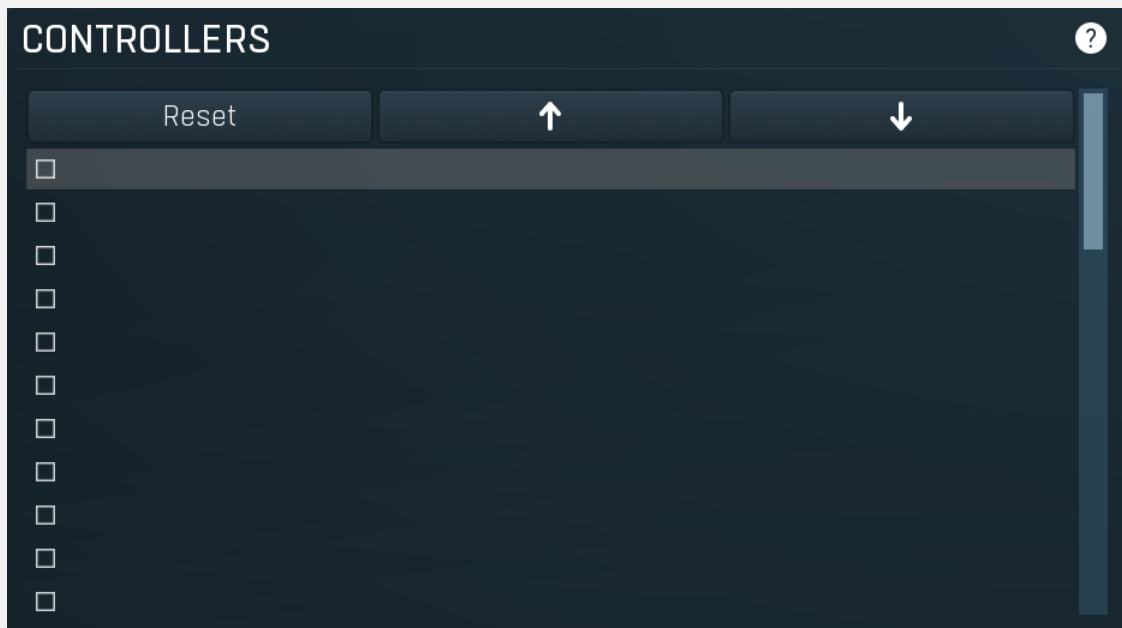
Do not load from presets button disables loading the controllers from presets. This may be handy if you have configured specific MIDI controllers with target parameters and you want to browse the presets without the need to configure them every time. Please note that some presets may rely on specific controllers though. For example, if a preset requires a velocity controller to provide velocity-dependent response, this option will avoid loading it, so the preset won't be complete, until you reconfigure it.

Last note-on channel only

### Last note-on channel only

Last note-on channel only button makes the engine more suitable for voice-per-channel devices. These devices are able to send different controllers for each note you press, which however means that these could collide. This option makes the engine pass only the controllers that are related to the last note you pressed. For classic keyboards it is not relevant as you will usually use a single MIDI channel to transmit both the controllers and notes. Some more modern keyboard controllers will allow you to select one MIDI channel for the notes and a different one (or the same one) for the controllers.

## Controllers



Reset

### Reset

Reset button resets the selected controller to undefined state.



### Up

Up button moves the selected controller up one item, if possible. This may be useful when keeping things organized, but please note that if you have some multiparameter, modulator or another subsystem access the ranges of individual controllers, this function will reorder them, so these connections will no longer be correct.



### Down

Down button moves the selected controller down one item, if possible. This may be useful when keeping things organized, but please note that if you have some multiparameter, modulator or another subsystem access the ranges of individual controllers, this

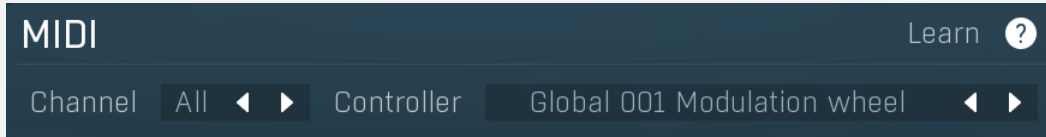
function will reorder them, so these connections will no longer be correct.

Select target parameter

**ParameterIndex**

ParameterIndex button lets you choose the parameter being controlled. The set contains all automatable parameters.

## MIDI



### Learn **Learn**

Learn enables or disables MIDI learn. When enabled, the plugin listens to both the MIDI CC messages from the controllers that you touch and the target parameters that you touch and associates the last-touched of each with the selected slot. You can perform several mappings by selecting another slot, adjusting a hardware controller. Then adjusting a target parameter, and repeating those steps for each mapping desired.

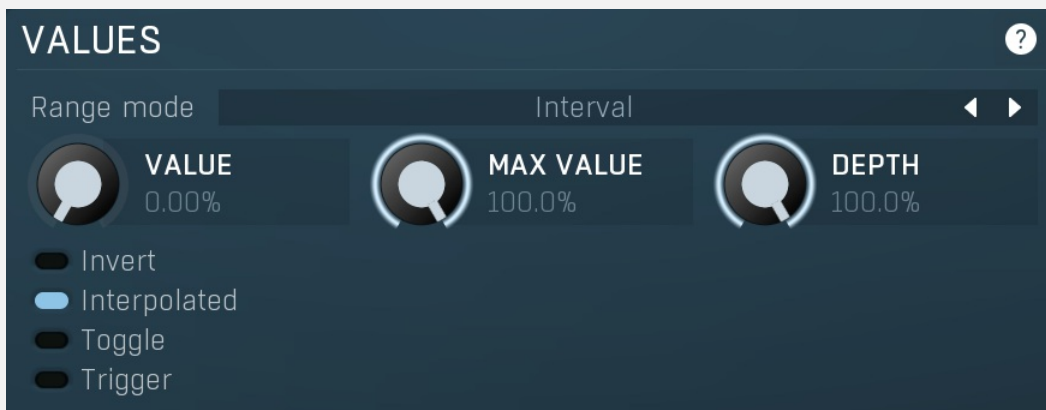
### Channel **Channel**

Channel defines the controller MIDI channel.

### Controller **Controller**

Controller defines the source controller.

## Values



### Range mode **Range mode**

Range mode defines how the parameter range is selected. While sometimes it is better to specify minimum and maximum, other times it is better to use a nominal center and depth (% of full scale). This control allows you to define which one it will be.

**Up and down** mode makes the values go above and below the selected **Value**, which is considered the center. The interval is made smaller if necessary.

**Full range mode** is similar, except the range is symmetrically constrained, so the selected **Value** may not be the center anymore.

**Up/down only modes** goes from the selected value up/down only.

Let's compare these 4 modes. Taking a value of -12dB value, with a depth of 75% and a scale of +/- 24dB. The nominal range is therefore = +/-24 dB \* 75% = 36dB. With values of 0%, 50% and 100% the outputs are:

Up and down: -24, -12, 0 (range constrained to 12 dB either side)  
Full range: -24, -6, 12 (range limited to minimum, but not constrained)  
Up only: -12, 6, 24 (range not constrained = +/-24 dB \* 75% = 36dB)  
Down only: -12, -18, -24 (range limited to minimum)

**Interval mode** is the most simple one and goes from **Value** to **Maximal value**.



VALUE  
0.00%

### Value

Value defines the center of the target parameter's range or the minimum if the **Range mode** is set to **Interval**.



MAX VALUE  
100.0%

### Maximal value

Maximal value defines the upper limit of the target parameter's range. It is available only if the **Range mode** is set to **Interval**. This value can be lower than **Value**. 0% is always mapped to reference>Value and 100% to reference>Maximal value.



DEPTH  
100.0%

### Depth

Depth defines size of the target parameter's range. It is used only if the **Range mode** is not set to **Interval**.



### Invert

Invert checkbox inverts the controller shape, so the minimum becomes the maximum etc.



### Interpolated

Interpolated makes the controller value interpolated over the time using the smart interpolation. This approach ensures there won't be abrupt changes, which could lead to clicks and pops. However sometimes you may want to apply these changes immediately - for example when changing ADSR based on the note velocity, in which case this parameter should be disabled.



### Toggle

Toggle mode makes the controller switch between the maximum and minimum of the target parameter whenever triggered. By default triggering it means going from values below 50% to above 50%. By enabling **Trigger** you can make it perform the trigger everytime the value is changed.



### Trigger

Trigger mode makes the controller automatically produce maximum and the minimum right after it. It can be handy with some buggy MIDI controllers providing buttons, which however do not send value 0, and only repeat value 127. Trigger makes it behave like the minimum was actually sent by the MIDI controller a little bit after the original message.

## Main controllers panel



Main controllers panel lets you define the set of main MIDI controllers on your MIDI device. These are not stored with the presets, so using them lets you easily switch between MIDI controllers, create presets that will work for users of other MIDI controllers etc. Using the Main controllers is no different than using the standard MIDI controllers, but the extra 'layer' can make things simple when using multiple controllers and also in general situations where your MIDI device has several controllers with quite 'random' numbers.



### Presets

Presets button displays a window where you can load and manage available presets. Hold **Ctrl** when clicking to load a random preset instead.



### 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.

Global 001 Modulation wheel



## Controller

Controller defines the MIDI controller associated to this Main controller.

Learn

## Learn

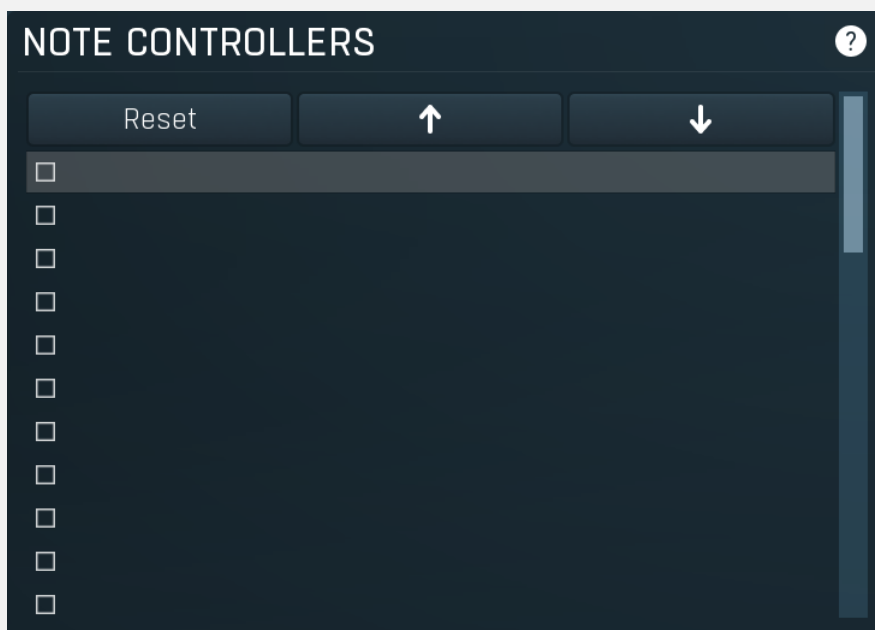
Learn enables or disables MIDI learn. When enabled, the plugin listens to the controllers you touch and associates them to the main controller.

# Notes panel



Notes panel contains settings of MIDI note controllers, if you want to control parameters using MIDI keys.

# Note controllers



Reset

## Reset

Reset button resets the selected controller to undefined state.



## Up

Up button moves the selected controller up one item, if possible. This may be useful when keeping things organized, but please note that if you have some multiparameter, modulator or another subsystem access the ranges of individual controllers, this function will reorder them, so these connections will no longer be correct.



## Down

Down button moves the selected controller down one item, if possible. This may be useful when keeping things organized, but please note that if you have some multiparameter, modulator or another subsystem access the ranges of individual controllers, this function will reorder them, so these connections will no longer be correct.

Select target parameter

## Learn

Learn enables or disables MIDI learn. When enabled, the plugin listens to both the notes you touch and the parameters you touch and associates them with the selected slot.

## MIDI

### Channel

Channel defines the controller MIDI channel.

### Note

Note defines the controller's target MIDI note. It is used only in On/off and Switch modes, which you can set using **Mode** parameter (in the **Values** panel).

### Note min

Note min controls the lowest note to be used by a controller in Linear or Logarithmic mode. The minimum value of the target parameter will then be associated to this note.

If both Note min and Note max parameters are default, the plugin takes the actual frequency of each note, and transforms it into the range 20Hz to 20kHz, which is the range used by all equalizers and filters, so that you can literally play a parameter on a MIDI keyboard. If you change either of these 2 parameters however, the plugin takes the range of notes as the requested interval. This is useful for example if you have a small MIDI keyboard used for soloing and you want increase some parameter the higher you play. In the default mode it would be difficult, since the range of frequencies is much bigger than the range of your MIDI keyboard. Set the **Note min** and **Note max** to C0 and B0 respectively, the **Mode** to **Logarithmic** and select a suitable target parameter (*Dry/Wet is fine*). Send MIDI notes in the specified range to the plugin and you will see the target parameter increase (by 9.09% (= 100 / (12-1)) for a 100% range).

### Note max

Functional outside note range makes the note controller work even if the note isn't in the specified range, clamping the value to the minimum or maximum.

## Values

### Mode

Mode controls how the controller works.

**Key** takes the note index and transforms it into 0..1, which is the output of any controller. This mode is useful for scale switches for example - if you want to use MIDI keys to change values linearly.

**Key (in octave)** is similar but it has only 12 values - one per each key and it doesn't matter which octave you press it in.

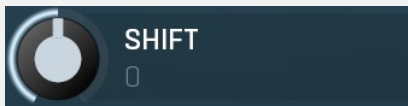
**Linear** converts the notes into frequencies and then transform them into the linear scale from 20Hz to 20kHz.

**Logarithmic** converts the notes into the frequencies and then into the logarithmic scale from  $\log(20)$  to  $\log(20000)$ . A typical use case is when you want to control an equalizer band using a MIDI keyboard. Since EQ frequencies work in logarithmic scale, this mode makes both things compatible and the EQ frequency will be set to the note frequency.

**On/off** modes react only to single notes and can be used for triggers. When the Note On is received the parameter is changed to its **Max value** and when the Note Off is received the parameter is changed to its **Min value**. So this mode can also be used to change between any 2 parameter values.

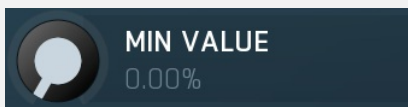
**Switch** modes are similar, but only recognize when a note is pressed. The Note Offs are ignored. Note Ons select the **Max value** and **Min value** alternately. In all octaves mode it doesn't matter which octave is used. For example, this is useful when you want to use any note C to switch something on and off.

**Velocity** modes do not actually follow the note number being pressed, but it's velocity instead. While you can do the same thing with normal MIDI controllers using the special Velocity controllers, this one allows you to select only some notes to follow.



### Shift

Shift lets you shift the original note up or down by the specified number of semitones.



### Min value

Min value defines the minimum value for the target parameter.



### Max value

Max value defines the maximum value for the target parameter.

Enable MIDI program change

**Enable**

## MIDI program change

Enable MIDI program change enables processing program change MIDI message.

## Preset previous/next trigger panel

PRESET PREVIOUS/NEXT TRIGGER

Learn  Enable ?

Channel  
Controller

All  
Global 000 Bank select

Preset previous/next trigger panel lets you select a MIDI controller, which will switch presets. It provides the same action as clicking the arrows next to the main preset button. When the controller value gets below 33%, the previous preset is loaded. When the controller value gets above 66%, the next preset is loaded.

Learn **Learn**

Learn enables or disables MIDI learn.

Channel All

### Channel

Channel defines the controller MIDI channel.

Controller Global 000 Bank select

### Controller

Controller defines the source controller.

## Simulate program change via controller panel

## SIMULATE PROGRAM CHANGE VIA CONTROLLER

Learn  Enable ?

Channel All  
Controller Global 000 Bank select  
Number of values 128

Simulate program change via controller panel lets you select a MIDI controller, that will work as program change, for convenience. You can use it then to switch between A-H presets or presets via panel below.

Learn

### Learn

Learn enables or disables MIDI learn.

Channel All

### Channel

Channel defines the controller MIDI channel.

Controller Global 000 Bank select

### Controller

Controller defines the source controller.

Number of values 128

### Number of values

Number of values defines the number of programs to switch between. By default Program change MIDI standard offers 128 programs. However it may be too many and could be hard to actually control with the specific controller. Hence you can lower the number of actual programs.

## Program change in presets panel

### PROGRAM CHANGE IN PRESETS

Enable ?

Folder PROGRAMS  
Channel All

Program change in presets panel enables the MIDI program change processing. If disabled, the plugin follows Program Change messages by changing the A-H presets. The obvious disadvantage is that this way there are just 8 presets. By enabling this feature the plugin stops selecting A-H presets and rather loads different presets from the specified preset folder, including all sub-folders. The default folder is called "Programs". To use it, you simply need to create a preset folder called Programs and put the presets into it. Note that the order matters of course. And you can change the folder name at any time, so you can have several sets of selectable presets.

Folder PROGRAMS

### Folder

Folder defines the preset folder from which the presets for program-change MIDI messages are taken.

Channel All

### Channel

Channel defines the program change MIDI channel.

# Used controls

Here we discuss the general properties of all application controls. As a most important rule you should note, that you can always use any question mark button or F1 (or Ctrl+F1 or Ctrl+H) key with the mouse cursor over a specified control to get detailed information about what it does and how to use it.

## Value button



Value button is an alternative to the knobs and its main advantage is that it is very small. In some cases the button simply serves as a clickable item and a menu is shown when clicked. However the mouse wheel and other controls still do work.

- **Click and drag using the left mouse button** to change the value.
- **Right mouse button** shows a menu with additional options. Hold **ctrl/cmd** to select the default value.
- **Mouse wheel, arrow keys** and vertical drag using **middle mouse button** or using **left mouse button while holding Ctrl** modifies the value more precisely.
- **Home key** configures the minimal possible value, conversely **end key** setups the maximal one.
- **Esc or Backspace keys** restore the original value when either one is pressed during dragging.
- **Shift + left mouse button** or **double-click using left mouse button** lets you edit the value as text. You can use the virtual keyboard or type on your computer keyboard. In some cases this shows a menu with all possible values instead.
- **Alt + press then release** measures the time between the press and the release and applies it as time/frequency tap. Usable only for certain values of course.

## Edit



Edit control provides a standard way to specify any kind of text or numeric string. It can have a limited length or a limited set of allowed characters.

- **Shift+arrows/Home/End** modifies selection.
- **Ctrl+C** copies the selected text to the system clipboard.
- **Ctrl+V** pastes text from the system clipboard replacing the selected text or inserting it at the current cursor position.
- **Ctrl+A** selects the whole text.
- **Ctrl+Tab** inserts a tabulation character. This combination is provided because the Tab key alone moves the keyboard focus to the next control.

## Switcher



Switcher is an alternative to a tracker or knob control, but it has a limited set of values.

- **Left mouse button** shows a menu with list of all possible values. This function might be unavailable in certain cases when the number of possible values is too high.
- **Right mouse button** shows a menu with additional options. Hold **ctrl/cmd** to select the default value.
- **Up** and **Down** arrow keys, **buttons** in the control and **mouse-wheel** increase or decrease the value.

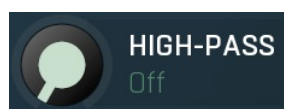
## Zoomer



Zoomer provides a simple way to zoom and move in an enlargeable view.

- **Plus button** zooms-in.
- **Minus button** zooms-out.
- **Zoom default button** zooms to the default ratio, which typically means full zoom-out.
- **Lock button** locks the zoom ratio.

## Knob

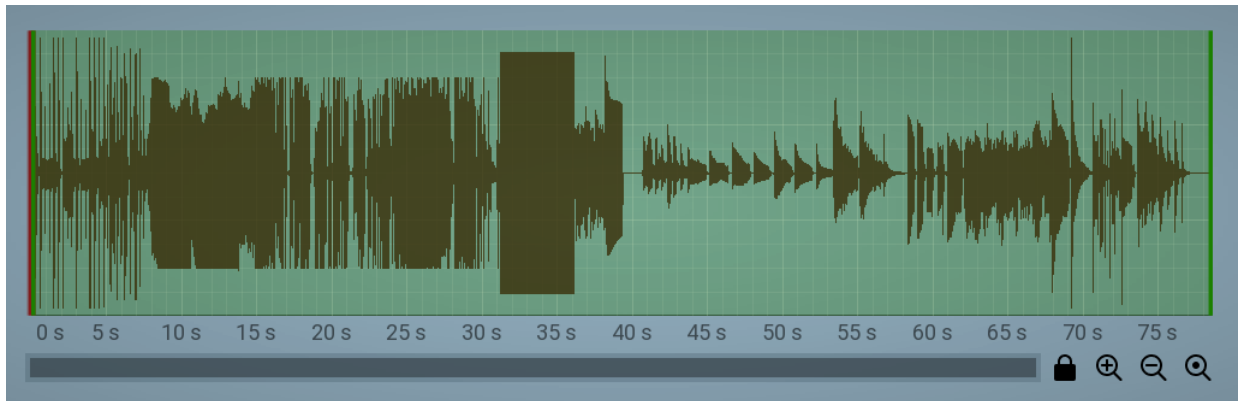




Knob simulates physical knobs used to edit various values.

- **Click and drag using the left mouse button** to change the value.
- **Right mouse button** shows a menu with additional options. Hold **ctrl/cmd** to select the default value.
- **Mouse wheel, arrow keys** and vertical drag using **middle mouse button** or using **left mouse button while holding Ctrl** modifies the value more precisely.
- **Home key** configures the minimal possible value, conversely **end key** setups the maximal one.
- **Esc or Backspace keys** restore the original value when either one is pressed during dragging.
- **Shift + left mouse button** or **double-click using left mouse button** lets you edit the value as text. You can use the virtual keyboard or type on your computer keyboard. In some cases this shows a menu with all possible values instead.
- **Alt + press then release** measures the time between the press and the release and applies it as time/frequency tap. Usable only for certain values of course.

## Graph editor



Graph editor will show and edit one or more graphs.

- **Zoomers** below and on the right control the zoom amount and position of the view.

## Tab-set

COMPARE

BLIND TEST

GENERATE SOURCE

Tab-set is typically used wherever there is too much to edit, but not enough space to display it all. It can be also used to switch between possible alternatives.

- **Left mouse button** selects a tab.
- **Ctrl + Left mouse button or Right mouse button** displays the whole tab in a pop-up window (this is not used for all sets of tabs). This comes handy when you want to have multiple tabs visible at the same time.
- **Left and Right arrows** select the neighbouring tab.
- Click on one of the buttons on the border to scroll the control and show tabs that are currently invisible.

# Installation, activation, introduction to audio plugins

## Installation

All MeldaProduction plugins are currently available for Windows and Mac OS X operating systems, both 32-bit and 64-bit versions. You can download all software directly from our website. Since the installation procedures for the two operating systems are quite different, we will cover each one separately.

The download files for the effects include all the effects plug-ins and MPowerSynth. During the installation process you can select which plug-ins or bundles to install. If you have not licensed all of the plugins in a bundle then you just need to activate each plugin separately.

If you have multiple user accounts on your computer, always install the software under your own account! If you install it under one account and run it under a different one, it may not have access to all the resources (presets for example) or may not even be able to start.

## Installation on Windows

All plugins are available for VST, VST3 and AAX interfaces. The installer automatically installs both the 32-bit and 64-bit versions of the plugins.

**Note: Always use 32-bit plugins in 32-bit hosts, or 64-bit plugins in 64-bit hosts. 64-bit plugins cannot work in 32-bit hosts even if the operating system is 64-bit. Conversely, never use 32-bit plugins in 64-bit hosts. Otherwise they would have to be 'bridged' and, in some hosts, can become highly unstable.**

You can select the destination VST plugins paths on your system. The installer will try to detect your path, however you should check that the correct path has been selected and change it if necessary. In all cases it is highly recommended to use the current standard paths to avoid any installation issues:

32-bit Windows:

C:\Program files\VstPlugins

64-bit Windows:

C:\Program files (x86)\VstPlugins *(for 32-bit plugins)*

C:\Program files\VstPlugins *(for 64-bit plugins)*

If your host provides both VST and VST3 interfaces, VST3 is usually preferable. If a plugin cannot be opened in your host, ensure the plugin file exists in your VST plugin path and that if your host is 32-bit, the plugin is also 32-bit, and vice versa. If you experience any issues, contact our support via [info@meldaproduction.com](mailto:info@meldaproduction.com)

## Installation on Mac OS X

All plugins are available for VST, VST3, AU and AAX interfaces. Installers create both 32-bit and 64-bit versions of the plugins.

If your host provides multiple plugin interface options, VST3 is usually preferable. If you experience any issues, contact our support via [info@meldaproduction.com](mailto:info@meldaproduction.com)

Most major hosts such as Cubase or Logic should work without problems. In some other hosts the keyboard input may be partly non-functional. In that case you need to use the virtual keyboard available for every text input field. You may also experience various minor graphical glitches, especially during resizing plugin windows. This unfortunately cannot be avoided since it is caused by disorder in Mac OS X.

## Uninstallation on Windows

The Uninstaller is available from the Start menu and Control panel, in the same way as for other applications. If you don't have any of these for any reason, go to Program files / MeldaProduction / MAudioPlugins and run setup.exe.

## Uninstallation on OSX

The Uninstaller is available from Applications / MeldaProduction / MAudioPlugins / setup.app.

## Deleting all data, presets etc.

Even if you uninstall the plugins, some data will be left behind - because of potential crossdependencies or because these are your presets, settings, configurations etc. If you want to wipe out everything, please manually delete following folders:

Windows:

C:\ProgramData\MeldaProduction

C:\Users\{username}\AppData\Roaming\MeldaProduction

OSX:

Macintosh HD/Library/Application support/MeldaProduction/  
HOME/Library/Application support/MeldaProduction

## Performance precautions

In order to maximize performance of your computer and minimize CPU usage it is necessary to follow a few precautions. The most important thing is to keep your buffer sizes (latency) as high as possible. There is generally no reason to use latency under 256 samples for 44kHz sampling rates (hence 512 for 96kHz etc.). Increasing buffer sizes (hence also latency) highly decreases required CPU power. In rare cases increasing buffer sizes may actually increase CPU power, in which case you can assume your audio interface driver is malfunctioning.

You should also consider using only necessary features. Usually the most CPU demanding features are oversampling and modulation of certain parameters. You can reduce modulation CPU usage at the cost of lower audio quality in Settings/Settings/Modulator protection.

## Troubleshooting

The plugins are generally very stable, there are known problems however.

### GPU compatibility

The software uses hardware acceleration to move some of the processing (mainly GUI related) from your CPU (processor) to your GPU (graphics processing unit). It is highly recommended to use a new GPU, as it will provide higher performance improvements, and update your GPU drivers. Older GPUs are slower and may not even provide required features, so the software will have to perform all calculations in the main CPU. We also have had extremely bad experiences with GPUs from ATI and despite the fact that software is now probably bulletproof, it is recommended to use NVidia GPUs as there has not been a single case of a problem with them.

If you experience problems with your GPU (crashing, blank/dysfunctional GUI), and that you cannot disable the GPU acceleration from the plugin's Settings window itself, download this file:

<http://www.meldaproduction.com/download/GPU.zip>

And place the GPU.xml included in the zip into

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

### Memory limits of 32-bit platform

Most hosts are now 64-bit ready, however some of them are not or users willingly choose 32-bit edition, because the required plugins are not 64-bit ready yet. All our software is 64-bit ready. Please note that you must NOT use the 64-bit plugins in 32-bit hosts, even if you have a bridge. If you are stuck with a 32-bit host for any reason, note that there is a memory limit (about 1.5 GB), which you may not exceed. This can happen if you load too many samples or different plugins for example. In that case the host may crash. There is no other solution than to use a 64-bit host.

## Updating

You can use "Home/Check for updates" feature in any of the plugins. This will check online if there is a newer version available and open the download page if necessary.

To install a newer (or even older) version you simply need to download the newest installer and use it. There is no need to uninstall the previous version, the installer will do that if necessary. You also do not need to worry about your presets when using the installer. Of course, frequent backup of your work is recommended as usual.

## Using touch-screen displays

Touch screen displays are supported on Windows 8 and newer and the GUI has been tweaked to provide a good workflow. Up to 16 connections/fingers/inputs are supported. Any input device such as touch-screens, mouse, tablets are supported. These are the main gestures used by the plugins:

- Tap = left click
- Double tap = double click
- Tap & hold and quickly tap next to it with another finger = right click. Tap & hold is a classic right-click gesture, however that doesn't provide a good workflow, so came up with this method, which is much faster and does not collide with functionality of some elements.

# Purchasing and activation

You can purchase the plugin from our website or any reseller, however purchasing directly from our website is always the quickest and simplest option. The software is available online only, purchasing is automatic, easy and instant. After the purchase you will immediately receive a keyfile via email. If you do not receive an e-mail within a few minutes after your purchase, firstly check your spam folder and if the email is not present there, contact our support team using [info@meldaproduction.com](mailto:info@meldaproduction.com) so we can send you the licence again.

To activate the software simply **drag & drop the licence file onto the plugin**. Unfortunately some hosts (especially on Mac OS X) either do not allow drag & drop, or make it just too clumsy, so you can use Home/Activate in any of the plugins and follow the instructions. For more information about activation please check the [online video tutorial](#).

You are allowed to use the software on all your machines, but only you are allowed to operate the software. The licences are "to-person" as defined in the licence terms, therefore you can use the software on all your computers, but you are the only person allowed to operate them. MeldaProduction can provide a specialized licence for facilities such as schools with different licence terms.

# Quick start with your host

In most cases your host will be able to recognize the plugin and be able to open it the same way as it opens other plugins. If it doesn't, ensure you did installation properly as described above and let your host rescan the plugins.

## Cubase

Click on an empty slot (in mixer or in track inserts for example) and a menu with available plugins will be displayed. VST2 version is located in MeldaProduction subfolder. However VST3 version is recommended and is located in the correct folder along with Cubase's factory plugins. For example, dynamic processors are available from the "Dynamics" subfolder.

To route an audio to the plugin's **side-chain** (if it has one), you need to use the VST3 version. Enable the side-chain using the arrow button in the Cubase's plugin window title. Then you can route any set of tracks into the plugin's side-chain either by selecting the plugin as the track output or using sends.

To route **MIDI** to the plugin, simply create a new MIDI track and select the plugin as its output.

## Logic

Choose an empty insert slot on one of your audio tracks (or instrument tracks for example) and select the plugin from the popup menu. You will find it in the Audio Units / MeldaProduction folder.

To route an audio to the plugin's **side-chain** (if it has one), a side-chain source should be available in the top of the plugin's window, so simply select the source track you want to send to the plugin's side-chain.

To route **MIDI** to the plugin, you need to create a new Instrument track, click on the instrument slot and select the plugin from AU MIDI-controlled Effects / MeldaProduction. The plugin will receive MIDI from that track. Then route the audio you want to process with the plugin to this track.

## Studio One

Find the plugin in the Effects list and drag & drop it onto the track you would like to insert the plugin to.

To route an audio track to the plugin's **side-chain** (if it has one), first enable the side-chain using the "Side-chain" button in the Studio One's plugin window title. Then you can route any set of tracks into the plugin's side-chain from the mixer.

To route **MIDI** to the plugin, simply create a new MIDI track and select the plugin as its output.

## Digital performer

In the Mixing Board, find an empty slot in the track you would like to insert the plugin to. Click on the field and select the plugin from the effects list.

To route an audio track to the plugin's **side-chain** (if it has one), choose the track you want to send using Side-chain menu, which appears at the top of the DP's plugin window.

To route **MIDI** to the plugin, simply create a new MIDI track in the Track view and select the plugin as its output.

## Reaper

Click on an empty slot in the mixer and a window with available plugins will be displayed. Select the plugin you want to open by double clicking on it or using Ok button.

*It is highly recommended to select all MeldaProduction plugins in the plugin window the first time you open it, click using your right mouse button and enable "Save minimal undo states". This will disable the problematic Undo feature, which could cause glitches whenever you change certain parameters.*

To route an audio track to the plugin's **side-chain** (if it has one), click on I/O button of the side-chain source track in the mixer. Routing window will appear, there you click "Add new send" and select the track the plugin is on. In the created send slot select the channels (after the "=>" mark) for the send, in stereo configuration 3/4 for example. Note that this way the whole track receives the side-chain signal and all plugins with it. It is possible to send it to a single plugin only, but it is more complicated, please check the Reaper's documentation about that.

To route **MIDI** to the plugin, create a new MIDI track and do the same thing as with side-chain, except you don't need to change output channels.

## Live

In Session view, select the track you would like to insert the plugin to. At the left top of Ableton Live's interface, click on the Plug-in Device Browser icon (third icon from the top). From the plug-ins list choose the plugin (from MeldaProduction folder), double click on it or drag & drop it into the track.

The X/Y grid usually doesn't provide any parameters of the plugin. This is because the plugins have too many of them, so you have to select them manually. Check Live's documentation for more information.

To route an audio to the plugin's **side-chain** (if it has one), select the track you want to send to the side-chain and in the 'Audio To' menu, choose the audio track that has the plugin on it. Then in the box just below that select the plugin from the menu.

NOTE: Live does NOT support any interface correctly, it doesn't use the reported buses properly, hence it doesn't work with surround capable plugins. Therefore you need to use VST version, which reports only stereo capabilities by default.

To route **MIDI** to the plugin, create a new MIDI track and in the 'MIDI to' menu, choose the audio track that has the plugin on it. Note that in Live only the first plug-in on any track can receive MIDI.

## ProTools

In the mixer click an empty slot to insert the plugin to and select the plugin from the tree. The plugin may be present multiple times, once for each channel configuration (mono->stereo etc.). As of now ProTools do not arrange them in the subfolders, which is a workflow dealbreaker, but we cannot do anything about it. The huge empty space on top of each plugin window, which occupies so much of the precious display area, is part of ProTools and every plugin window and again we cannot do anything about it. In some cases you may experience CPU overload messages, in which case please contact Avid for support. Note that ProTools 10 and newer is supported. RTAS compatibility for PT9 and older will never be added.

To route an audio to the plugin's **side-chain** (if it has one), open the plugin, click on the *No key input* button in the plugin title and select the bus you want the audio taken from. You might need to remember the bus number, unless your ProTools version supports bus renaming. ProTools doesn't support stereo (or surround) side-chains at all.

To route **MIDI** to the plugin, create a new MIDI track and in the mixer click the output field for that track and select the plugin, which should already be in the menu.

## FL Studio

First make sure plugins are scanned, either a full scan through the Plugin Manager or an automatic fast scan when you open the Plugin Database section of the browser in FL. The scanned plugins will show up in the Plugin Database > Installed section of the FL browser. The Effects and Generators sections in the Plugin Database will show all "favorite" plugins. These can be checked and unchecked in the Plugin Manager or added in some other ways. These favorites also show up in the Add menu, the menu for the "+" button in the channel rack, when you right click an existing channel button to replace or insert, in the plugin slot menu in the mixer and in the plugin picker (F8). The menus with favorite plugins also have a "More" choice that will show all scanned plugins. The full explanation is in our help file, on the page [Installing Plugins](#).

To route an audio to the plugin's **side-chain**, first set up the mixer: make sure the track you want to receive audio from is sent to the track the plugin as a sidechain ([help](#)). Then set up the plugin wrapper: choose the desired input on the **Processing tab** of the wrapper options.

To route **MIDI notes** to the plugin, first configure the sender: choose a MIDI port for the input device in the MIDI settings (for a hardware device), or an output port in the **wrapper options** (for a VST plugin that produces MIDI). For the receiving plugin, set the input port in the wrapper options to the same value you chose in step 1.

To route **MIDI controllers**, the procedure is different. The usual method in FL is to link CC messages to plugin parameters ([help file](#)). VST plugins will also have 128 CC parameters published (through the wrapper) that can be linked this way. Those will send the specified CC MIDI message to the plugin, instead of changing a published parameter.

## GUI styles, editor modes and colors

MeldaProduction plugins provide a state of the art styling engine, which lets you change the appearance to your liking. The first time you run the plugins a style wizard will appear and let you choose the style and other settings. It may not be available in ProTools and other problematic hosts.

By default each plugin has a certain color scheme, which differs based on what kind of plugin is that. Also, sections of some plugins are colorized differently, again, based on what kind of section is that (this can be disabled in global settings). Despite you can change the colors anyhow you want, it is advantageous to keep the defaults as these are standardized and have predefined meaning, so just by looking at a plugin's color you can immediately say what kind of plugin and section is that. Same rules apply when designing devices for easy screens. This is the current set of colors:

Dynamics = orange

Equalization, filtering = green  
Reverb, delay = brown/yellow  
Modulation = blue  
Distortion, limiting = red  
Stereo = cyan/yellow  
Time, pitch, unison... = purple/pink  
Tools = grey

Special colors:

Synchronization = grey  
Detection = blue/green  
Side-chain = green  
Effects = red  
Advanced stuff = grey



**MELDA** production  
*The only limit is your imagination*

## About MeldaProduction

The best sound on the market, incredible workflow and versatility beyond your imagination. We create the deepest and the most powerful audio plugins with unbelievable sound and tons of unique features you cannot find anywhere else.

## Innovative Thinking

At MeldaProduction, we make the most advanced tools for music production and audio processing. We get inspired by the whole range of tools from the ancient analog gear to the newest digital creations, but we always push forward. We've always felt the audio industry is extremely conservative, still relying on the prehistoric equipment making the job unnecessarily slow and complicated. That's why we invent new technologies, which make audio processing easier, faster, better sounding and more creative.

## Sound Matters

In the world full of audiophiles you just need superb audio quality. And that's why we spend so much time perfecting audio algorithms until they sound unbeatable. Everything from dynamic filters to spectral dynamic processing. Our technologies just sound perfect.

## Inspiring User Interface

Modern user interfaces must not only be easy and quick to use, but also versatile and the whole visual appearance should inspire you. MeldaProduction plugins provide the most advanced GUI engine on the market. It is still the first and only GUI engine, which is freely resizable and stylable. Our plugins can look as an ancient vintage gear, if you are working on old-school rock music. Or as super-modern

futuristic devices if you are working on modern electronic music.

## Easy to Use, Yet Versatile

The only limit is your imagination. Our plugins are with absolutely no doubt the most powerful and versatile tools on the market. Yet we managed to make the plugins easy to use via the devices and smart randomization system. But when you are ready, you are one click away from the endless potential the plugins provide.

## Never-Ending Improvements

Most companies create a plugin, sell it and abandon it. We improve our plugins, add features, optimize... until there is nothing left to improve and there are no more ideas. Unfortunately that hasn't happened yet :). And the best thing is that the updates are free-for-life!

*MeldaProduction was founded in 2009 by Vojtech Meluzin and is based in Prague, Czech Republic.*

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