MDRUMMER DOCUMENTATION

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INSTALLATION

MDrummer is 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. Due to its extensive size, it will be spread into multiple files - first there a ZIP file containing installers for all supported platforms, which you need to unzip. Then there are data files, which you need to download an place into the same folder as the installer application.

If you have multiple 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 all resources (styles for example) or may not even be able to start.

MDrummer contains a huge data library. You can install is into any directory including an external hard-drive, but you still need to install MDrummer in all computers you want to use it on.

Installation on Windows

MDrummer is available for VST and VST3 interfaces. The installer may install 32-bit and/or 64-bit versions of the plugin.

Note: Always use 32-bit plugins in 32-bit hosts, or 64-bit plugins in 64-bit hosts. 64-bit plugins can not 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 can become highly unstable.

You can customize the VST plugins path on your system. The installer will try to detect your path, however it is necessary for you to check it has chosen the correct path 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

Installation on Mac OS X

MDrummer is available for VST, VST3 and AU 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

Most major hosts such as Cubase or Logic should work without problems. In some other hosts the keyboard input may be partly dysfunctional. 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.

PERFORMANCE PRECAUTIONS

In order to maximize performance of your computer and minimizing 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 elevate CPU power, in which case you can assume your audio interface driver is malfunctioning.

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 extremely bad experiences with GPUs from ATI and despite the software is now probably bulletproof, it is recommended to use NVidia GPUs as there were not a single case of a problem with them.

If you experience problems with your GPU (crashing, blank/dysfunctional GUI), so that you cannot disable the GPU acceleration from the plugin 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 and 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 using a 64-bit host.

UPDATING

You can use "Home/Check for updates" feature in MDrummer. 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 can either use a new installer, which is huge, or use an update installer, which only modifies the existing installation. There may also be an online updater available and you can run it using "update" in the MDrummer's installation directory.

Note that major updates are always available ONLY using a new installer. If you install a new major update, you can install it directly into your current installation containing the previous version. The installer will replace factory data, but your own data will be kept intact. Alternatively you can install it into a different folder and copy your own data manually.

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** 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 the plugin will guide you a different way.

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.

MELDAPRODUCTION MDRUMMER

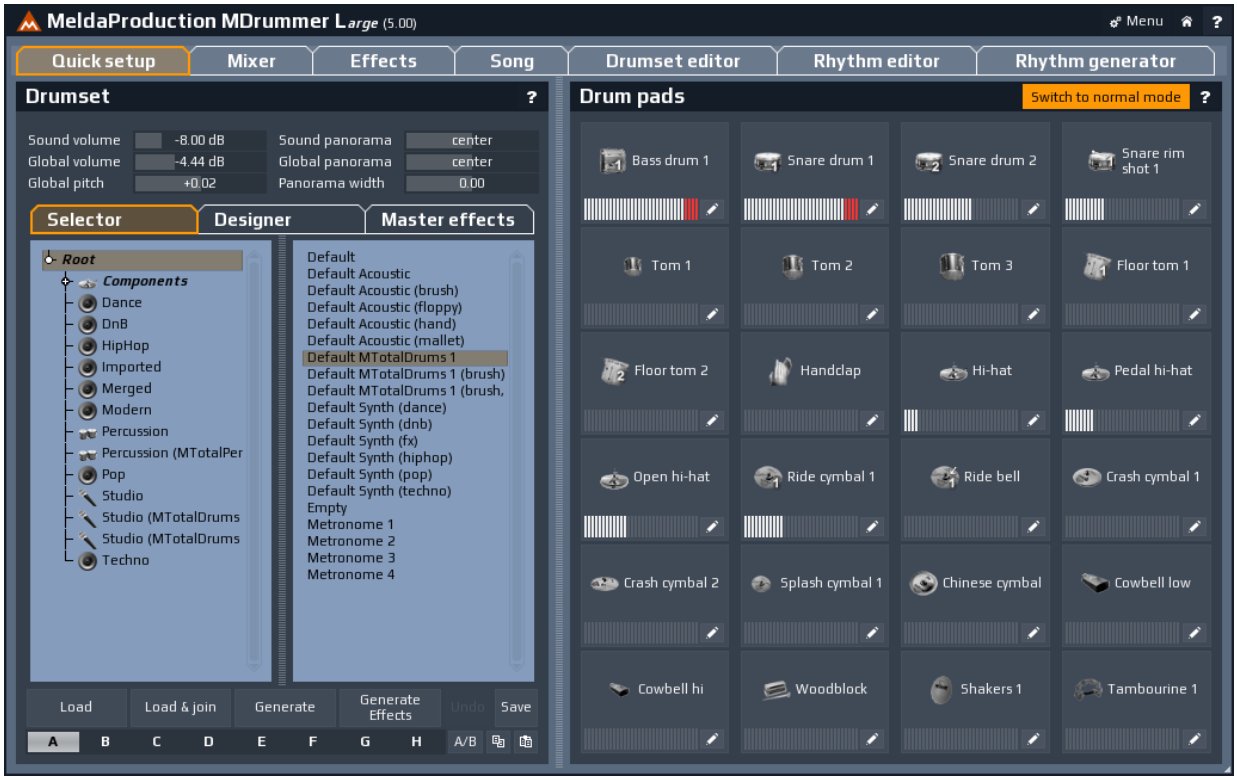
INTRODUCTION TO MDRUMMER

Following information should give you a good start for using MDrummer, your ultimate virtual drummer. First a few basic advices.

If you want MDrummer to play notes, use MIDI channel 10 or switch to drum pad mode.

GM MIDI defines channel 10 to be used for drums. MDrummer follows this rule. MIDI channels 1 to 9 are used to control MDrummer's rhythm system and channel 10 is used for normal MIDI notes.

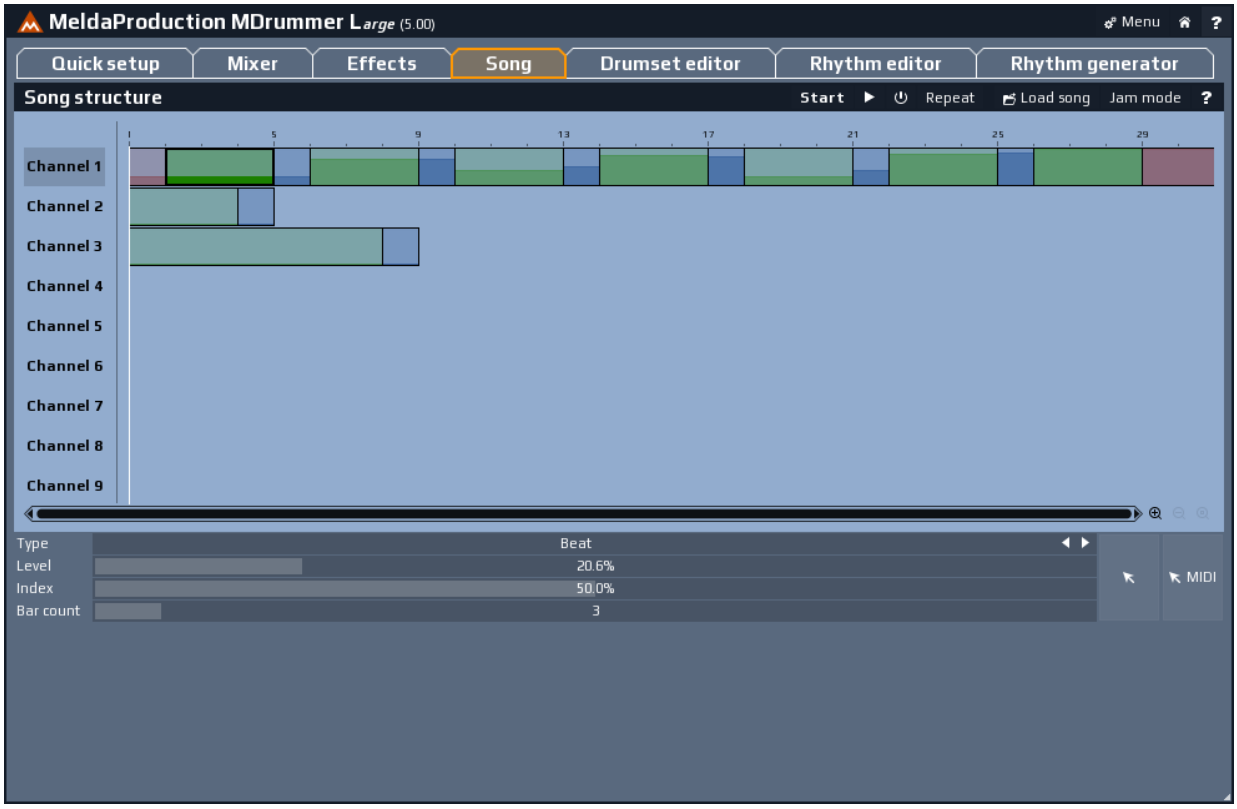
Alternatively you can switch MDrummer to so-called drum pad mode - click the "Switch to drum pad mode" button in the title of the rhythms panel on the main screen.



This way you disable the MIDI command method completely and all MIDI channels will be used for notes. You will still be able to use the virtual drummer using the integrated song sequencer (see Song tab).

To use MDrummer's rhythm engine you can use the MIDI command system or the integrated song sequencer.

Integrated sequencer is available in the "Song" tab. It is very simple to build a song this way even with multiple rhythms. It synchronizes with your host automatically.



MIDI command method is much more versatile. MIDI commands are nothing else than notes you send to MIDI channels 1-9, which MDrummer recognizes as commands such as 'Play intro!' or 'Play loud break!'. It is described later in the documentation and in the video tutorials.

Use the integrated help system using F1 and check out MDrummer tutorial videos.

MDrummer contains an advanced help system which can be triggered by clicking on any "?" button or using F1 with mouse cursor on particular control (you may need to hold shift/control or using ctrl+H if your host steals the F1 key).

You should also check the tutorial videos available on the web. Click Menu / Tutorials to get to open the page with video tutorials. It will take you only an hour or so and let you develop incredible drum tracks in no time.

There are multiple plugins and maybe a standalong application, which one should I use?

There are 3 plugin editions - **MDrummer1out**, **MDrummer16out** and **MDrummer**. You should use **MDrummer1out** if you want to mix everything in MDrummer and use just one single audio output for your host. If you want to use multiple outputs and route different drums to different outputs, so you can post-process them in your host, use **MDrummer16out**. Handling multiple outputs depends on your host, but all professional hosts have this feature. The 3rd plugin, **MDrummer**, is actually kind of obsolete. It can have different number of output channels depending on what you set up in **MDrummerConfig**, which is located in the MDrummer installation folder.

You may also have a standalone application installed, currently on Windows only. There is really no advantage of using this, but it may come handy if you don't have any plugin host at your disposal.

TUTORIAL: CREATING A DRUM TRACK WITH MDRUMMER

We are going to explain you how to create a drum-track for your song in a few minutes. This is probably the most important tutorial ever, so please take a good look at it. It explains the outstanding principles of MDrummer, which will save you lots of time.

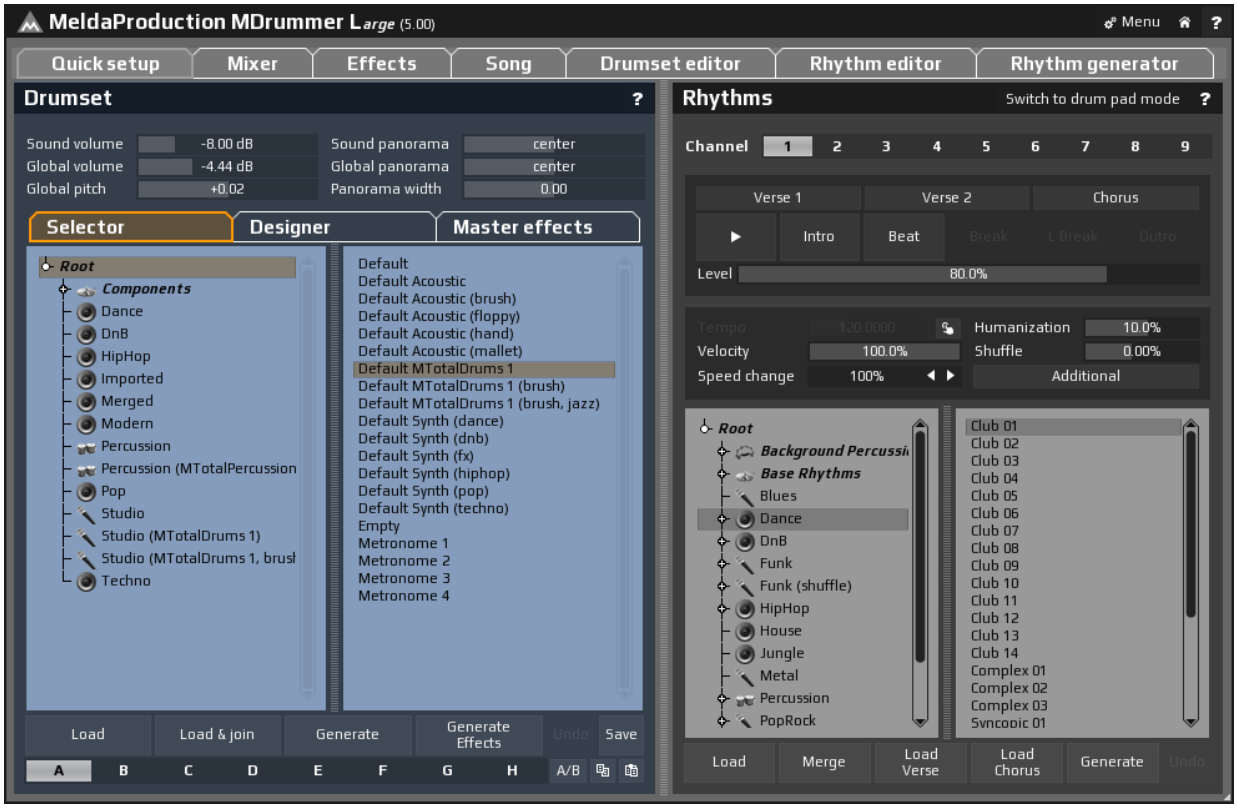
You might want to watch these video tutorials as well.

Step 1: Open MDrummer

Well this really depends on your host and probably you are the one, who knows the best how to do this ;).

Step 2: Setup a drumset

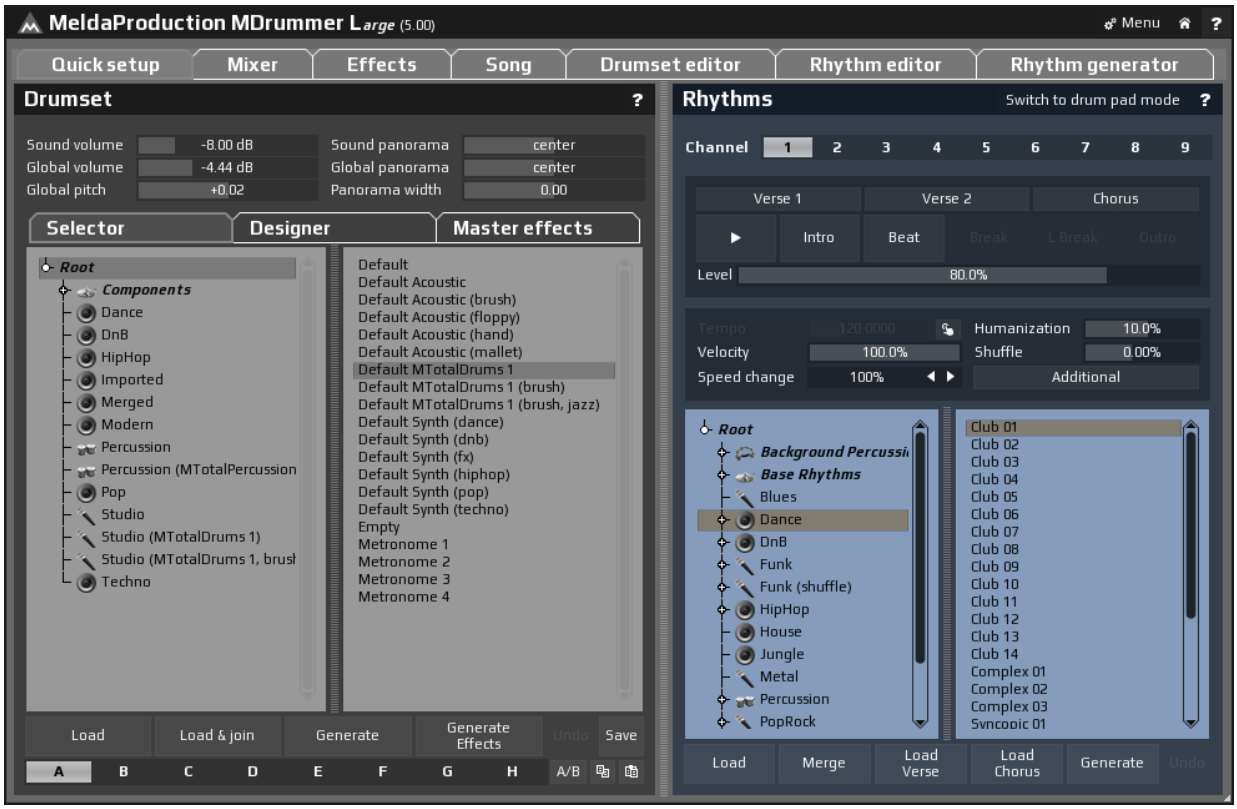
When MDrummer window appears, the module **Quick setup** is selected. In the left part called **Drumset** locate a drumset you want to load by double-clicking on the file (or you can use the **Load** button underneath). Then you can change the global sound parameters such as panorama, pitch etc., merge or generate the drumset and much more, but let's keep it simple for now.



Step 3: Setup a rhythm

Quick setup module handles everything again. In the right part called **Rhythms** locate a rhythm you want to load by double-clicking on the file (or you can use the **Load** button underneath). **Settings** panel defines additional rhythm properties such as tempo, shuffling or humanization. You should notice the **Additional** button, which contains some additional features, such as when should MDrummer replace snare drum hits by rimshot hits. Again there are many advanced possibilities for merging or generating the rhythm, but let's keep it simple.

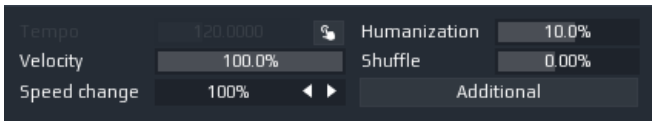
Note the **Channel** selector. MDrummer can handle up to 9 rhythms at once. The channel 1 is selected, so you have loaded the first rhythm, we call it rhythm channel 1. You can use multiple rhythm channels to make MDrummer play different rhythms in separate parts of your song, or even to play multiple rhythms at once. Why 9 rhythms? You will understand it very soon.



Controlling virtual drummer

Now let's listen to some MDrummer's performance. Use playback to control MDrummer "by hand". You can use it to command him to play a break etc. First enable playback by clicking on the **play button**. Now you should be able to hear a piece of music.

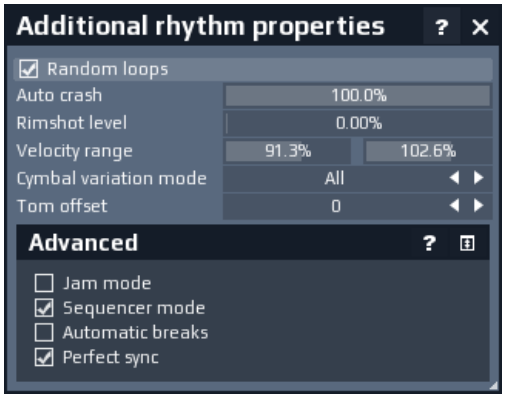
If there is no sound, check if you didn't load a percussion rhythm with normal drumset for example. Simply put, the drumset defines sound, rhythm defines what to play. But if the rhythm is designed for say bonga and there are no bonga in the drumset, then the output will be silent. You may say the drumset is the drummer and the rhythm is a conductor. If he tries to conduct a drummer, which is not there, well, nothing will happen.



Now try something a little bit more practical:

- First disable the playback using the **play button** again.
- Click the **Intro button** or the **Beat button** to make MDrummer play.
- Let MDrummer play for a while to hear what happens. Then if you want MDrummer to insert a break (fill), click the **Break button** or **L Break button** (long break). Note that such fill may appear after a few seconds, because breaks often do not start at the first bar quarter. This is how the real drummers play and MDrummer mimics that.
- You can change **Level** at any time. Higher level usually means higher complexity and loudness. The change is accomplished on next button click (intro, beat, break, l break or outro). Why? That is because immediate changes typically sound quite weird. Real drummers change level typically at the end of the bar, often accented by a break. And so does MDrummer.
- When you get tired, press the **Outro button** button. An outro is similar to a break, but it stops the playback afterwards.

Finally you might be interested in additional rhythm playback settings:



Step 4: Creating a drum track

Here comes the magic. Remember those cheap keyboards, which can play rhythmic support? When you press C key on the lowest octave, the machine starts to play e.g. pop-rock beat including drums and bass from C. Then you press F key, and it starts playing it from F. This is cool only to learn how to play keyboards, but we realized, that this approach can be very inspiring!

Each note is a command for MDrummer (and actually corresponds to a rhythm control button click). You just need to understand, what each key means. There is no numbering standard for octaves, so let's number them from -2, which is then the lowest octave. And so it is the first octave to control MDrummer. It is pretty simple:

- Notes in octave -2 mean "Play an intro and start a beat afterwards!"
- Notes in octave -1 mean "Play a beat!"
- Notes in octave 0 mean "Put there a break!"
- Notes in octave 1 mean "Put there a long break!"
- Notes in octave 2 mean "Put there an outro and finish!"
- Notes in octave 3 mean "Stop playback immediately!"

Finally there are 12 tones in each octave - higher tone means higher level. So let's take a few examples:

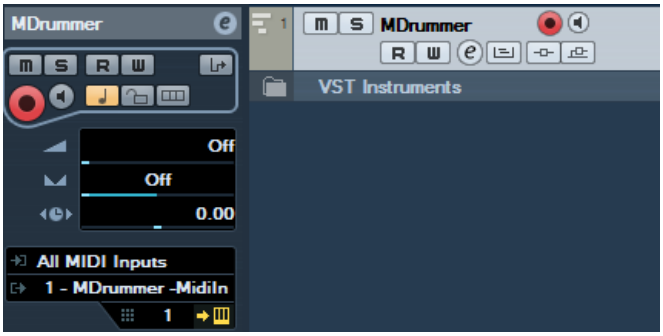
- C-2 means "Play a very quiet intro!" , because C means very quiet, octave -2 means intro.
- F#0 means "Put there a normally loud break!" , because F means kind of a normal complexity, octave 0 means break.
- B2 means "Put there a very powerful outro and finish!" , because B means very high level, octave 2 means outro, which always stops MDrummer afterwards.

Drum track example

Let's make a simple drum track, so you can see it in practice. Let it be a standard pop arrange based on 8 bar long sequences such as chorus and verse. We will demonstrate it on Steinberg Cubase, other hosts are similar and are used in our video tutorials.

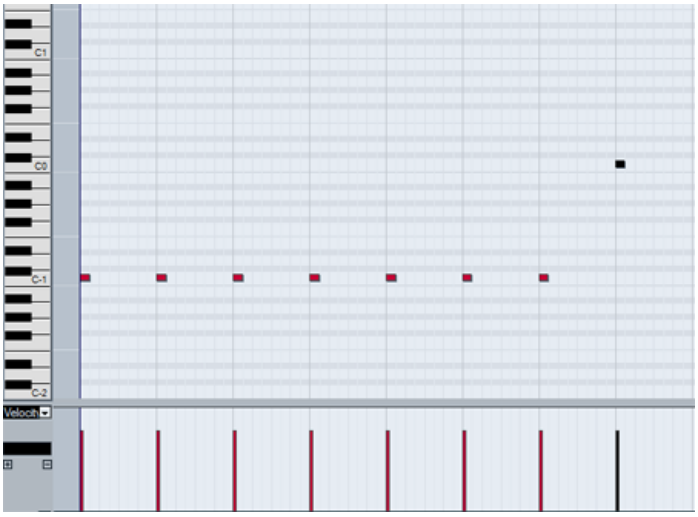
- **Create a MIDI track on channel 1.**

  Assign MDrummer as the output for it. The channel number equals to the **rhythm channel**. Since we will be using just rhythm 1, set the MIDI channel to 1.



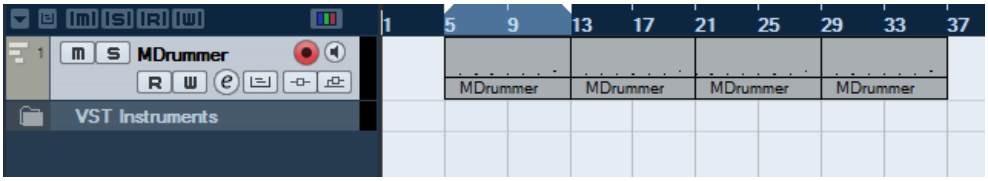
- **Create one part 8 bars long.**

  Put there 8 notes: 7 times C-1 ("Play a quiet beat!") and one C0 ("Put there a quiet break"). Each of them should be at the beginning of the bar, so the part should look like this:



- **Copy the part along entire song.**

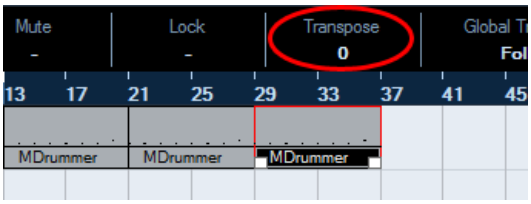
  As a result MDrummer will play the same sequence (containing 7 bars of beat and a break) again and again.



- **Define verses and choruses.**

  All MDrummer commands are currently on note "C", which means minimal complexity, hence a very silent verse. If you make any note "B", you'll get the exact opposite - maximum complexity, a very loud chorus for instance.

  You can transpose each note manually, but Cubase contains very elegant tool for that - part transposition. You just need to transpose every part up a certain number of semitones from 0 to 11. Obviously 0 makes no difference and means no transposition, hence minimum complexity. 11 means transposition from C to B, hence maximum complexity. Using transposition it is really simple to modify your rhythm track later.



You can use automated level instead of transposition. Why? Because there are only 12 semitones in each octave, therefore using transposition you can have only 12 levels. Using automation you can have millions of levels, which may be sometimes useful. In this case all commands must be at note "C" (minimal level) with no trasposition. MDrummer then takes maximum from command level and automated level. Note that the level is always updated only on a MIDI command.

Finishing your song

For now MDrummer was always using his brain to play something. When your song is complete, you will probably want him to play always the same thing. This generally involves all breaks, intros and outros.

First disable **random loops** in the advanced rhythm settings. Then choose each break by yourself by changing velocity of each note of the MIDI

commands. This might seem awkward, but it is actually simple and fast. You just need to change velocity of a few notes in the project. Which velocity value? It is hard to say, try and listen. And if you have a specific break in mind (from the **Rhythm editor**), then it's velocity is written in the title of the loop editor there.

Managing multiple rhythms in one song

MDrummer provides 9 rhythms, so you can control all of them of course. And you already know, that you can simply use MIDI channel 1 to control rhythm 1, MIDI channel 2 to control rhythm 2, etc. There are 2 main scenarios (which can combine):

- **2 or more rhythms are playing together** - for example, you have a drum rhythm, and you decided to add some shakers. You can add the shakers to the rhythm itself using rhythm merging. That would take you 2 mouse clicks, but when you'd decide to change the rhythm of the drums or shakers later, you would have to recreate the whole rhythm again. So you can have your drums in rhythm 1 and shakers in rhythm 2. Then you can change or edit each of them separately.
  It's like having 2 drummers behind one drumset, one is playing drums, the other is playing shakers. And then you can add conga for example...
  An additional advantage is that each instrument can have different arrangement. The drawback is that you need 2 MIDI tracks.
- **Switching between rhythms** - it's pretty common that different parts of the song have different rhythms. In most cases the single rhythm will do it all - simply using rhythm levels. But sometimes you want that special part of the song, where the drummer plays something completely different. So you use rhythm 1 for the normal rhythm and rhythm 2 for this special part. All you need to do is stop rhythm 1 and start rhythm 2 when you want to switch, and then maybe switch back later. And that's astonishingly simple - you just use "Stop" command for rhythm 1 and "Beat" command for rhythm 2. After all, you need 2 MIDI tracks anyway - one to control rhythm 1 and another to control rhythm 2.

Advantages of the MIDI command method

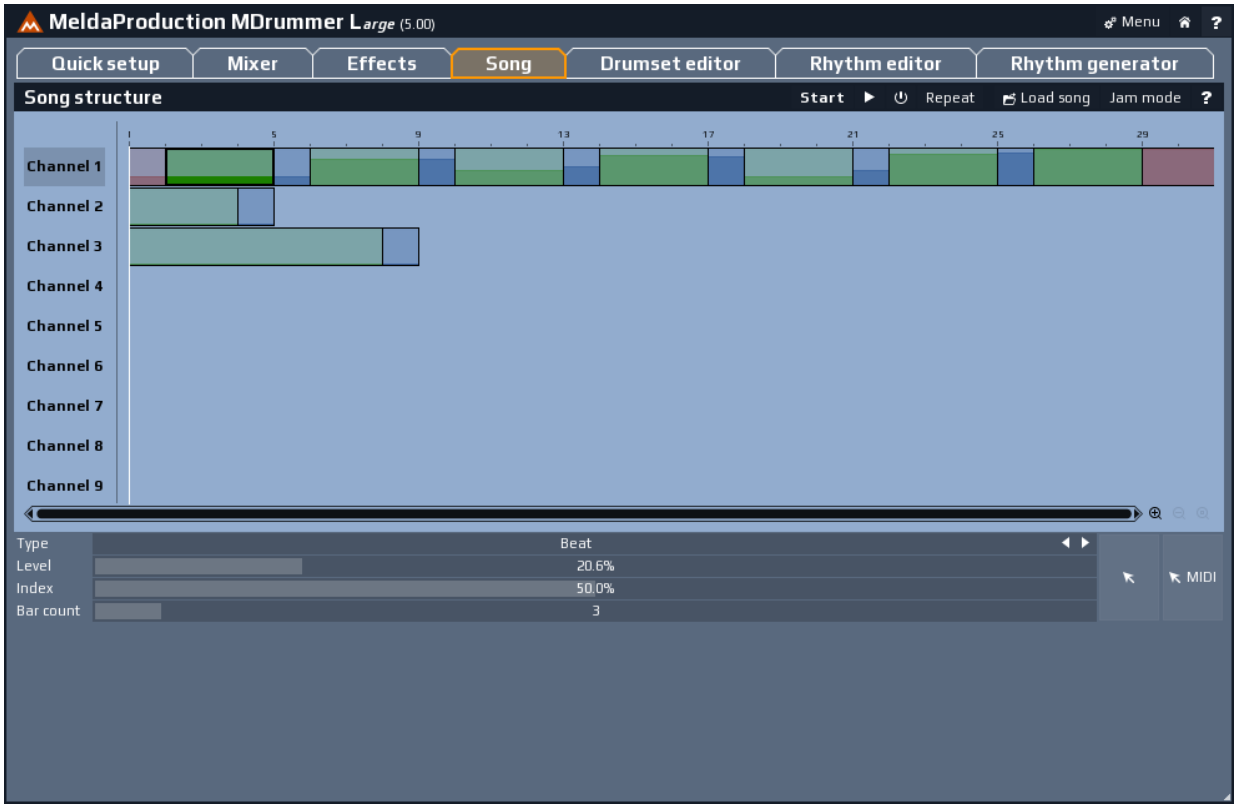
- No automation needed
- Very fast to use
- Simple drum-track (and structure) modification inside the host
- Maximal control over MDrummer
- Easy to create alternative tracks in one arrange
- Easily portable to another host

Disadvantages of the MIDI command method

- Need to "know how"
- Playback starts after a command is reached

Using integrated Song sequencer

You can use integrated sequencer instead of the MIDI command method to control MDrummer. It doesn't need much explanation. You just need to go to the **Song tab**, enable it using the button in the title and MDrummer will be driven by whatever you edit. The sequencer is also needed when you want to jam with MDrummer.



Advantages of the Song sequencer

- Simple
- Can be used for jamming

Disadvantages of the Song sequencer

- Clumsy
- Problematic modification
- Needs editing every time you change the arrange in your host

MDRUMMER STRUCTURE

We need to talk about how MDrummer actually works. But let's take it step by step.

Sound engine

The first part of MDrummer of the sound engine based on **MDS (MDrummer drum system)**. Sound engine is processing one drumset and you may say this is the "performer", the drummer who is actually producting sound.

A drumset is a set of drums, each of the drums has some general parameters (such as volume, panorama, pitch...), a set of velocity layers, that you can use to obtain different sounds from different velocities or even some more complicated effects, and each drum has its own effect pipeline.

Rhythm engine

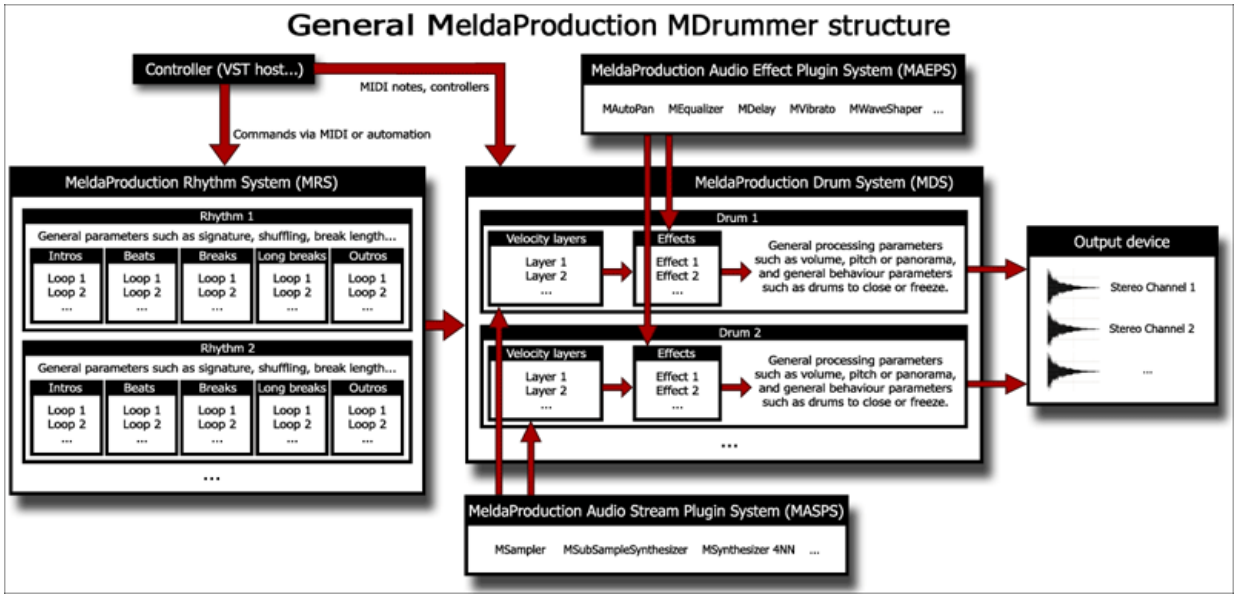
The second part of MDrummer is the rhythm system based on **MRS (MDrummer rhythm system)**, which is probably little more complicated, while you probably have not heard about anything like this yet. You might say that rhythm engine is the "conductor", someone who is saying the performer what to play.

A rhythm contains (besides general parameters such as signature) five loop types. Each loop type has its own purpose - beat (you can call it "groove") creates the feeling of the song, short break makes it less repetative by adding some extra phrase etc. We developed loop types to make the system more clear and apparent and our five loop types should cover all common needs.

Finally you have to understand how to control MDrummer as a virtual drummer. We already spoke about it above in the tutorial section, but let's get a little more technical inside. Each of the loop types contains 12 loop boxes. 12 is the number of semitones in an octave on piano keyboard, so this is obviously related to MIDI command method. Each loop box contains a set of loops. The idea is, that the first loop box (corresponding to note 'C') contains the most silent loops and conversely the last one (corresponding to note 'H' or 'B', depending on your habits) contains the loudest loops.

And what a loop is? Loop is a sequence of notes of some kind. And why we are putting them in loop boxes? Because we need MDrummer to be "smart". Just a single loop is just not enough in many cases. When you are programming a rhythm, you'll probably be fine with just one groove in a loop box, but when you get to breaks, you will probably want MDrummer to be able to play more then just one break. So you just put create more of them, as many as you wish.

And don't worry, you won't probably be actually editing the rhythms, because MDrummer has a rhythm generator!



MDRUMMER DATA

MDrummer manages a huge library of samples, subsample libraries, loops, rhythms etc. To make it systematic and easily portable and to protect you from performing boring disk searches we decided to store all of the data inside one directory tree - certainly it is the MDrummer installation path - e.g. "C:/ProgramData/MeldaProduction" on Windows or "/Applications" on Mac OS X.

There is a set of subdirectories with lucid names such as "Samples". You can add your own files (e.g. samples) just by copying them into corresponding directory. But when it comes to samples, you can have them anywhere and just drag & drop or search for them in MDrummer.

When you want to move the whole MDrummer installation folder, you can do that, but it's possible you will have to let MDrummer search for it afterwards, or even run MDrummerConfig from the there if provided.

Drumset management

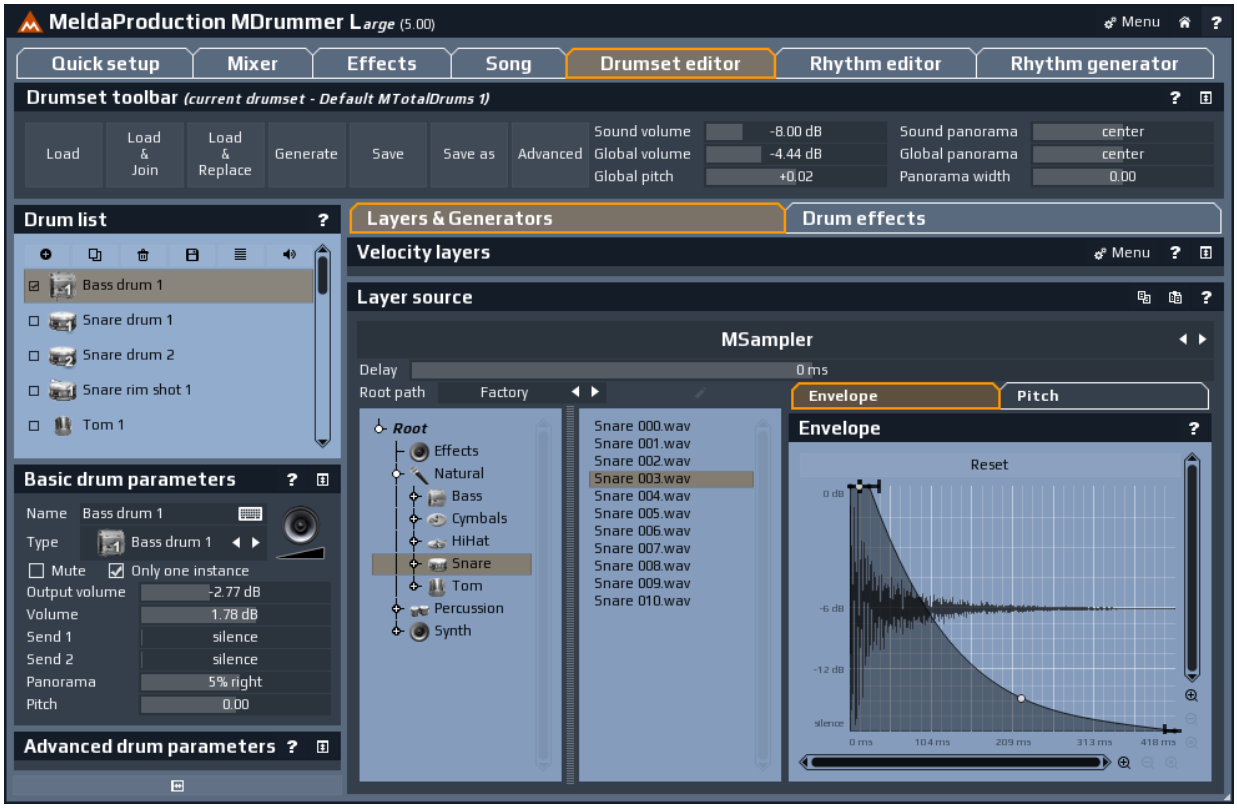
While you are probably familiar to basic management such as loading and merging drumsets as described in the **Tutorial**, you can step forward now. Everything concerning sound and drums is located in **Drumset editor** module. Let's talk about what a drumset is.

SOUND ENGINE

A drumset is a set of drums and you can just imagine a real drum instead of the virtual one. You can have as many drums as you need. To manage your drumset in detail, switch to the **Drumset editor**.

The **Drum list** contains all the drums in the drumset. And the buttons above you can use to manage the drums. If you don't know what certain button performs, just click the **?** button in the title.

You might have also noticed the check boxes near each drum. Let's explain it on an example. There are two drums - an open hi-hat and a closed hi-hat. You select the closed hi-hat and enable checkbox for the open one. Then any time the closed hi-hat is played, it stops open hi-hat. Same thing happens when a real drummer is playing. This is called *drum closing*. And you can close any drum with any other.



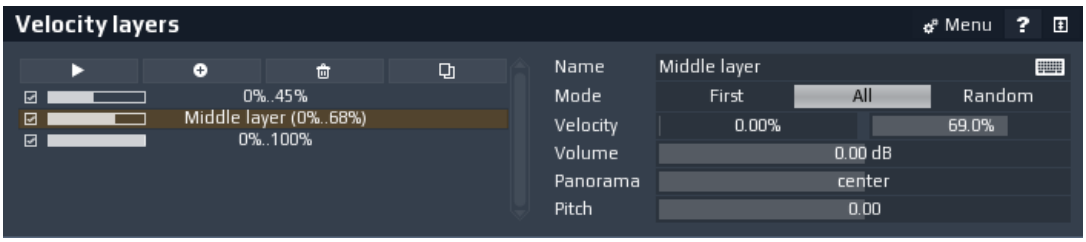
Drum parameters

Basic and advanced parameters have their own panels under the drum list. Advanced panel is initially close as these parameters are rarely needed. Most of the parameters are obvious, so let's talk about the important tricky ones only. Note that again all parameters will be described later and help is accessible directly from MDrummer.

Drum type is some kind of preset. When you change the drum type, name, channel and MIDI key associations are also changed to default values. We have implemented it, because adding drums is fairly common task and for example MIDI keys are quite time-consuming to setup. Moreover while we preserve MIDI standard, all drumsets will be compatible with each other and even with any other MIDI compatible source (such as your host). Unless you change the MIDI mappings manually of course.

Channel parameter is audio output channel to send the drum to. It can be very useful when working with MDrummer as virtual instrument plugin. By default MDrummer uses channels 1-4 depending on drum type. For example, channel 1 is used by drums, 2 by cymbals etc. This is very useful when mixing. Other channels are freely available with no chance of collision with another drum with default settings.

Sound sources and velocity layers



Real drums produce different sounds when hit softly and when loudly. Not only volume is concerned. MDrummer provides several sound source plugins - sampler, multisampler, synthesizers... A drum can contain multiple layers, each of them with a different sound source. You can then make

MDrummer play just one of them depending on velocity, or several of them on top of each other to make the sound fuller. And as usual, you can have any number of velocity layers in each drum. Use **Velocity layers panel** to manage the layers for the selected drum.

Layer source panel contains the sound source for the selected layer. On top of the panel is the source selector and below its' parameters. If you change sound source, its' parameters are discarded, of course.

Drum effects tab

Each drum has its own effect pipeline. You can use it to somehow modify the drum sound and postprocess it using compression and limiting for example. As usual you can have any number of effects in the pipeline. The panel contains list of used effects in the pipeline, list of available effects and of course parameters of the selected effect on the right.

When the sound is rendering, the layers with sound sources produce a single audio stream, which is then processed by this effect pipeline. After that it goes to the master effects section edited in the global **Effects** tab and sends.

Note that effect processing can cost lots of CPU power. You can reduce it using **freeze** switch, but read the documentation carefully before you do that. If you are using high latency effects, you should enable freezing anyway, but there aren't many of them.

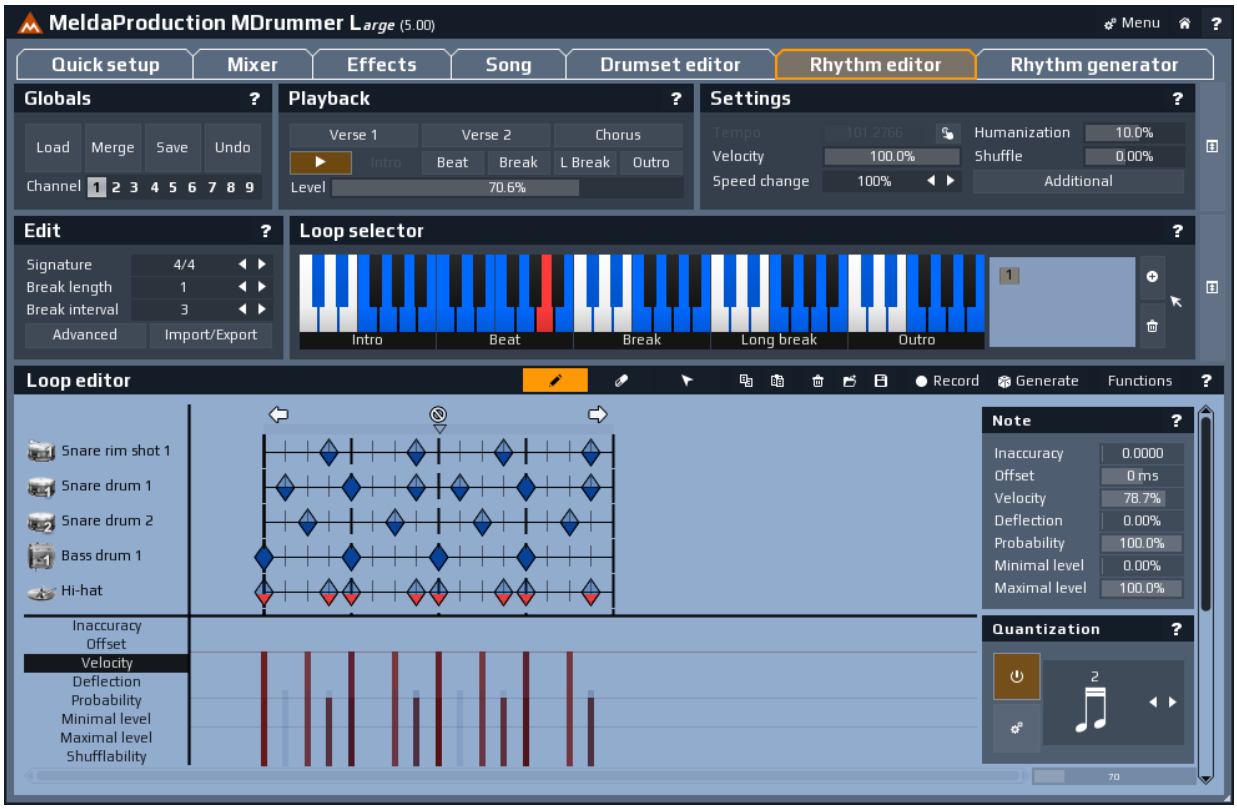
RHYTHM ENGINE

A rhythm is a set of loops. A loop is a sequence of notes. MDrummer uses following loop types:

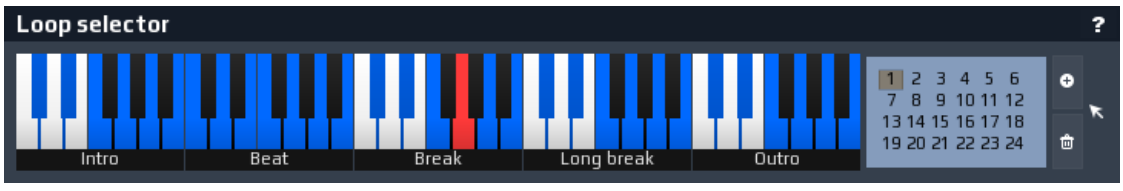
- **Intro** - played on the beginning to introduce the song.
- **Beat** - main groove being played over and over.
- **Short break** - sometimes called "fill". It is used to highlight transitions e.g. from verses to refrains, or simply to make the beat less repeated.
- **Long break** - "fill" twice as long as short break. Usage is the same.
- **Outro** - played at the end to finish the song.

This is enough force to cover standard drummer's capabilities. The truth is, that creation of all those loops could be too time-consuming, so we have developed a tool to generate the whole rhythm, the **Rhythm generator**, but we will get to it later.

You already know the **Globals panel**, **Playback panel** and **Settings panel** from the **Quick setup**, so let's get to the more advanced stuff.



Loop-box selector



Let's explore the the actual rhythm structure. You should be faimilar with the loop types. Each loop type contains 12 loop boxes, one for each key in the octave. And there can be any number of loops in each loop box. Each loop box represents one complexity level and while we wanted MDrummer to be able to have more loops per each level, we developed loop boxes. Note that levels are not limited to 12 values, the notes in each loop can react to level too, but 12 levels could be totally different.

The **piano keyboard** in the toolbox is the exact place where you select loop box to edit. Under each octave you can see the loop type the boxes represented by each key correspond to. Black/white keys are empty loop boxes, blue ones contain at least one loop and the red one indicates the selected box.

Next to the piano keyboard there is a **list of loops** in currently selected loop box. You can **add** or **delete** loops using buttons next to it. Note that even if you select an empty loop box using the piano keyboard, MDrummer automatically creates an empty loop for you. Then if you leave it empty, MDrummer removes it from the loop box as soon as you select another one. But you can have multiple loops in the box if you wish.

The selected loop is displayed below in the **Loop editor** and we'll get to that later.

Edit panel

There are a few global parameters you need to understand. **Signature** defines the number of quarter notes in ALL loops in the rhythm. If you change this value, all loops will be modified. Note that signatures other than x/4 are not supported, but it doesn't matter, because for example 6/8 is simply 3/4 and you can do the same thing with more or less any signature.

Break length controls length of any short breaks. The truth is, that if you change this value, nothing will happen. So what is this for? Just continue reading...

Break interval is used by the sequencer to determine, how often a break should be played if automatic breaks are enabled. This value means something like "how many sequences in length of break should happen between two breaks?". On this example you can see what are both of these parameters for:

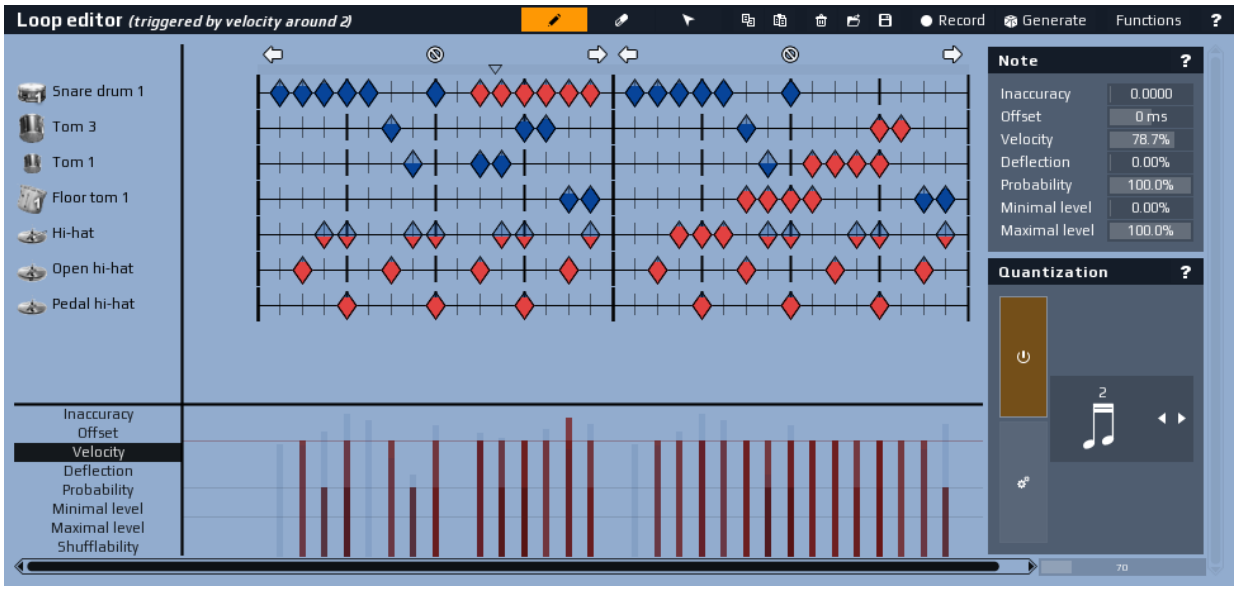
Consider a typical rhythm with breaks, where each of them is one bar long. If you set break interval to 2, then there must be 2 (break interval) multiplied by 1 (break length) bars of beat before MDrummer decides to play another break. So MDrummer will play 2 bars of beat and then a break, and repeats the same again. He may make an exception and a long break instead and assume, that long breaks are twice as long as breaks. So then he would play one bar of beat and continue with a long break.

Typically the break length is 1 and break interval 3, because the typical cycle takes 4 bars (3 beats plus one break). But what do you need this for if you are using MIDI command method to control MDrummer? Well, nothing really, this matters only if you let MDrummer unattended, so you don't give him any commands.

Advanced button and **Import/Export button** provide some additional features to edit the whole rhythm, import & export MIDI etc. and will be well documented later.

Loop editor

MDrummer has actually 2 loop editors, one in the **Rhythm editor** and another in **Rhythm generator**. As the name suggests, this editor is designed to edit a single loop. Let's go through each part of it.

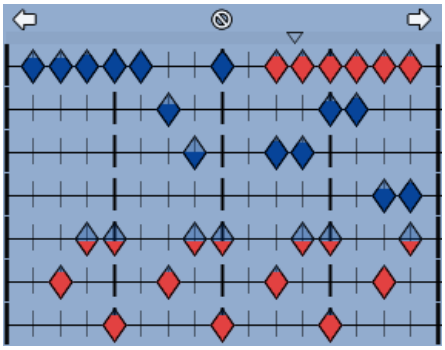


Track list

A loop contains a set of tracks. Each of them is associated to a drum type. That allows all loops to be fully compatible, not affected by any MIDI key assignment. The track list is located on the left of the loop editor. You can execute a **context menu** using right mouse button or double-click. There you can change track type, add/delete/save/load track, delete unused tracks, load track preset etc. Use drag & drop to **change the track order**.

Loop field

Each track can contain an unlimited number of notes, separated by bars. This is an image of one bar:



On the top of it you can see 3 icons. It allows you to **insert new bar to the left**, **delete this bar** and to **add new bar to the right**. Just click on corresponding icon. Hold ctrl to duplicate the original bar.

A small arrow below these icons marks current playback position. Click anywhere in its row to change actual playback position. You can also use middle mouse button anywhere in the loop editor.

Finally below the playback position rectangle there is the edit field containing the notes. Each note may look different to reflect some of its parameters:

	Default note.		Note with lower velocity.		Note with lower probability.		Selected note.

There are three types of vertical lines:

- Thick lines on the edges of bar are bar lines.
- Thick lines inside the bar are quarter note lines.
- Thin small lines are the quantization lines - if you insert notes, these are the positions you will be inserting them at.

And now you probably want to know how to add notes, modify them etc. There are 3 edit modes you can use. Basically the first one covers functionality of all of them, but if you are not used to use keys like "ctrl" or "shift" it may be difficult for you. Edit modes will be described later in more detail. But for now, in the default pencil mode you can simply add notes using left mouse button and delete them using right mouse button.

Note panel

Each note has a set of parameters and parameter field located at the bottom of the editor is designed to quickly modify them. But there is also a note panel on the right which contains all parameters of notes being created and in selection mode you can also use it to change parameters of selected notes. The note parameters will be described later in more detail.

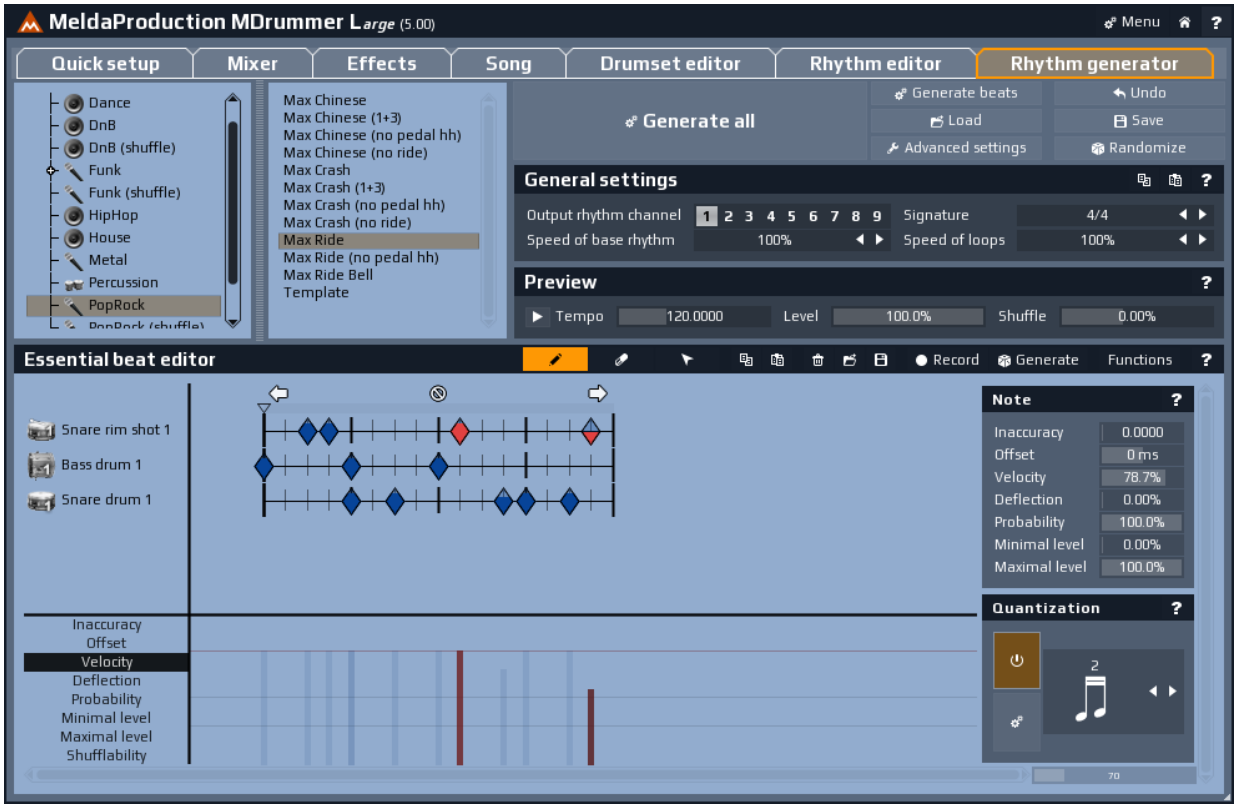
On the left side of the parameter field below the editor there is a parameter selector. Click on any parameter you want to modify and the vertical lines will start displaying the values for all notes in the loop. Then use your left mouse button to change the values for each note. Moreover you can use right mouse button to set the nearest default value highighlighted by one or more thin gray lines.

Quantization panel

Quantization panel controls current quantization mode. If quantization is enabled, any note you create or move will be quantized to the nearest suitable position. You can choose from several straight notes, triplets, tuplets etc. Just use the arrows or click on the note symbol. Underneath the quantization note selection there are buttons to enable quantization and quantize currently selected notes.

RHYTHM GENERATOR

Well, the is the final point, the crown jewl of MDrummer, which lets you create the whole rhythm using just one loop and a few settings.



The best start would probably be a simple tutorial. Just follow these steps, please:

- Switch to **Rhythm generator tab**.
- Use the **Load button** to load some predefined generator settings.
- Load a loop from **Beats** subdirectory using the **Essential beat editor**, or just edit some simple groove.
- Leave **Output rhythm channel** with 1, so the target rhythm will be generated to the channel 1.
- Click the **Generate all** button.
- Switch to **Rhythm editor** and check your new rhythm on channel 1.

How does it work

Let's start with the beat generating algorithm. You have loaded or edited an essential beat loop in the loop editor and probably have noticed, that it is fairly simple - typically just a bass drum and a snare drum track. That's why it is called an **essential beat**. The loop is usually a little bit special - many notes have defined minimal level parameter. This allows rhythm generator to create different beats for different levels just by removing unsuitable notes.

Then you have selected a base rhythm. **Base rhythm** is simply a rhythm containing percussive loops with hihat tracks, cymbal tracks..., but no snare or bass drums for example. MDrummer merges several loops generated from your essential beat and loops from the base rhythm.

Now let's see how MDrummer generates intros, breaks and outros. If you click the **Advanced settings button**, the window being displayed contains a set of panels, one for each loop type. There is a checkable tree of directories from the MDrummer's loop database. We have created thousands of loops for you. You only need to check, what loops to take. By default *Standard* directory is checked in each of the trees. This is the directory containing the most standard loops used in poprock and such common styles. But you can check something else to give MDrummer more potential to choose from. MDrummer chooses many of these loops and merges the base rhythm to them.

Rhythm generator can save so much of your time. We have designed it when we got to the point in the development, where we had to create some rhythms and we understood, that such dirty work would spend years without such a tool. And it is now available for you too. You only need to play with it and use it to improve your creativity!

Essential beat preview

Most of the time you'll be working with rhythm generator you will probably be editing essential beats. It is good to be able to listen to the resulting rhythm before you actually generate it. Moreover since rhythm generator modifies target beats according to levels of destination loop boxes, you should be able to listen to it in any level you want. And **Preview panel** offers you exactly these services.

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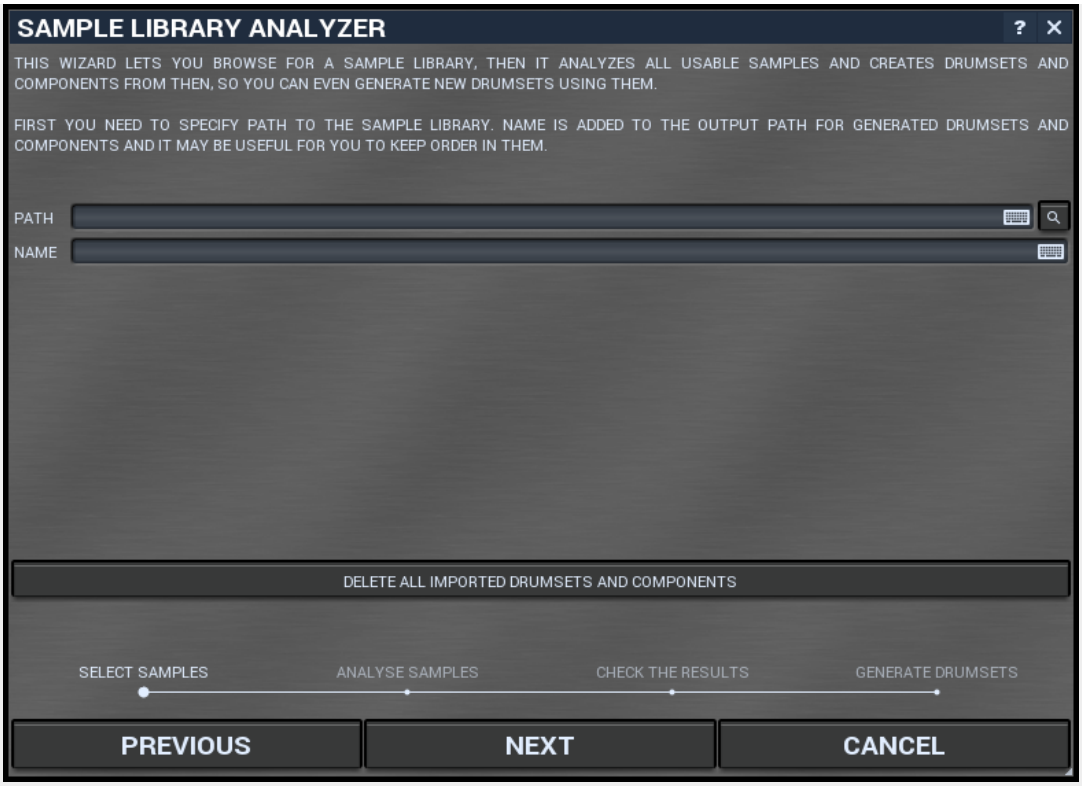
MENU **Menu button**

Menu button shows menu with advanced features, additional settings of MIDI filters, styles and more.

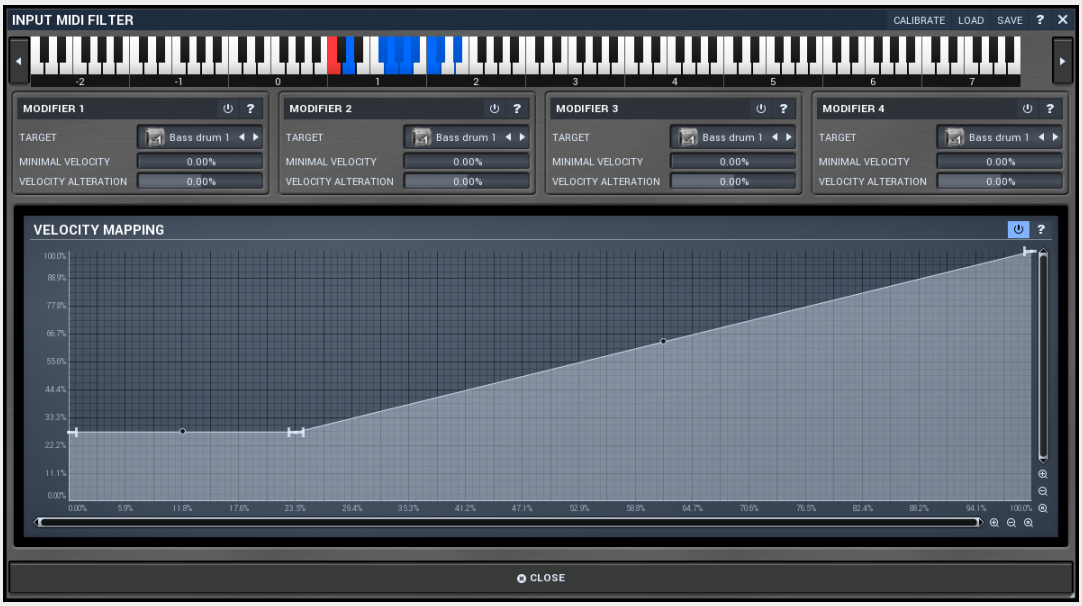
SAMPLE LIBRARY ANALYZER



Sample library analyzer is a unique feature, which lets MDrummer analyze a whole sample library and create components and drumsets using the samples, perfectly compatible other drumsets and rhythms. The sample analyzer is a wizard, which will guide you through the whole process, which should take just a couple seconds. MDrummer will analyze all the samples, determine their type, adjust volume, create components and drumsets from them and store them in **Imported** directory. If enabled, it can even process layered multisampled drums.

Important thing to note is that MDrummer uses file names to determine types of the samples. It is impossible to determine a drum type by audio analysis, because many drums just are too alike, in fact in many cases even a human isn't able to tell what kind of drum certain sample is. So the engine is searching for substrings in the file name, including path. For example, "bass" and "kick" are typical names for bass drum samples. MDrummer contains the most typical keywords by default, but you can edit them in the sample analysis page of the wizard.

INPUT MIDI FILTER



Input MIDI filter provides very efficient way to connect MDrummer to any MIDI source, e.g. electric drumset, keyboard or output of another plugin. It is possible to manipulate several settings for each of the 128 keys defined by MIDI standard.

CALIBRATE Calibrate button

Calibrate button toggles the calibration mode. When calibration is enabled, any incoming notes are used to approximate source dynamic range and velocity transformation is generated.
For example to calibrate an external electric drums, you enable the calibration mode and then hit each pad several times with velocities from the smallest to the biggest. Each time you hit a pad, the MIDI key is chosen and displayed, and its velocity transformation curve is adapted.

LOAD Load button

Load button loads the entire settings from a file.

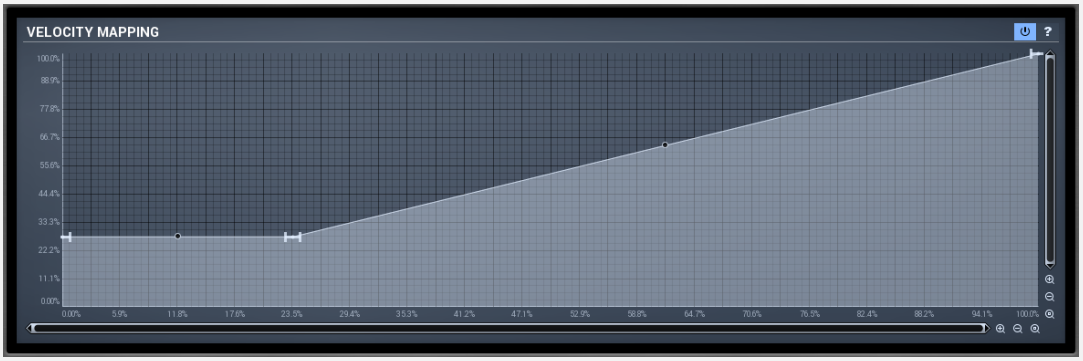
SAVE Save button

Save button stores the entire settings in a file.

Piano keyboard

Piano keyboard shows currently selected source MIDI key to edit.

Velocity mapping



Velocity mapping edits transformation from source velocities (X) into target velocity values (Y). You can also use calibration to set it automatically according to your input device characteristics.

Envelope graph

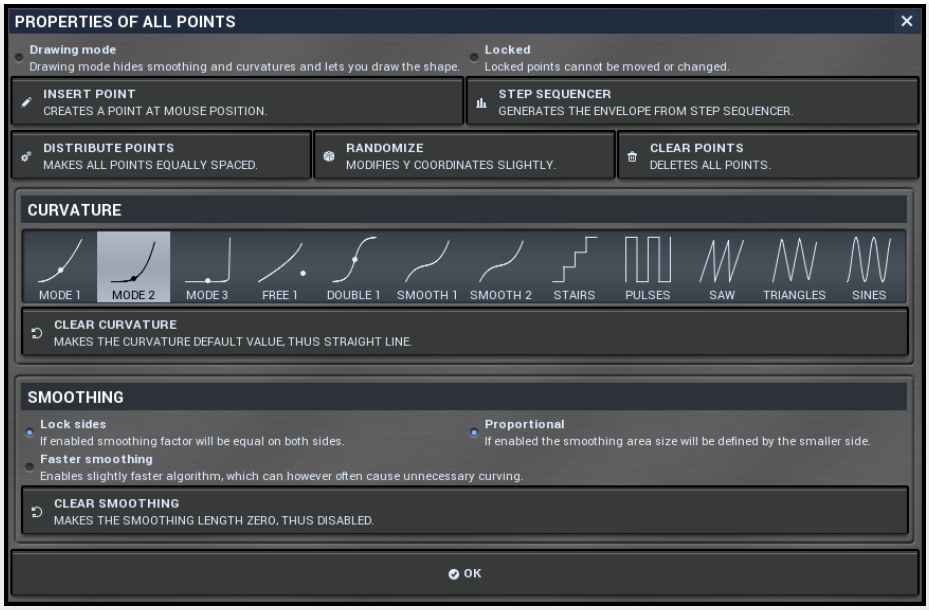
Envelope graph provides an extremely advanced way to edit any kind of shape you can imagine. An envelope has a potentially unlimited number of points, connected by several types of curves with adjustable curvature (dot in the middle) and surroundings of each point can also be automatically smoothed using the smoothness (horizontal pull rod). You can also literally draw the shape in drawing mode available via the main context menu.

- **Left mouse button** can be used to select points. If there is a *point*, you can move it (or the entire selection) by dragging it. If there is a *curvature circle*, you can setup tension by dragging it. If there is a *line*, you can drag both edge points of it. If there is a *smoothing controller*, you can drag its size. Hold **Shift** to drag more accurately. Hold **Ctrl** to create a new point and remove any points above or below.
- **Left mouse button double click** can be used to create a new point. If there is a *point*, it will be removed instead. If there is a *curvature circle*, zero tension will be set. If there is a *smoothing controller*, zero size will be set.
- **Right mouse button** shows a context menu relevant to object under the cursor or the entire selection. Hold **Ctrl** to create or remove any points above or below.
- **Middle mouse button** drag creates a new point and removes any points above or below. It is equal to holding Ctrl and dragging using left mouse button.
- **Mouse wheel** over a point modifies its smoothing controller. If no point is selected, the entire selection is modified.
- **Ctrl+A** selects all points. **Delete** deletes all selected points.

Enable button

Enable button enables or disables the velocity transformation.

Envelope graph menu



Envelope graph menu provides additional features to edit the graph. Open it using right mouse button in the graph. Note that if you select some points in the graph, or click on a point for example, the menu will be different and will cover features related to the selected set of points only.

Modifier

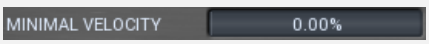
Modifier panel allows you to change output of the MIDI note to a different drum type for certain velocity range. This is useful e.g. when you want to play percussion with your electric drums.

Enable button

Enable button enables the modifier.

Target

Target defines what drum should the key be mapped to.



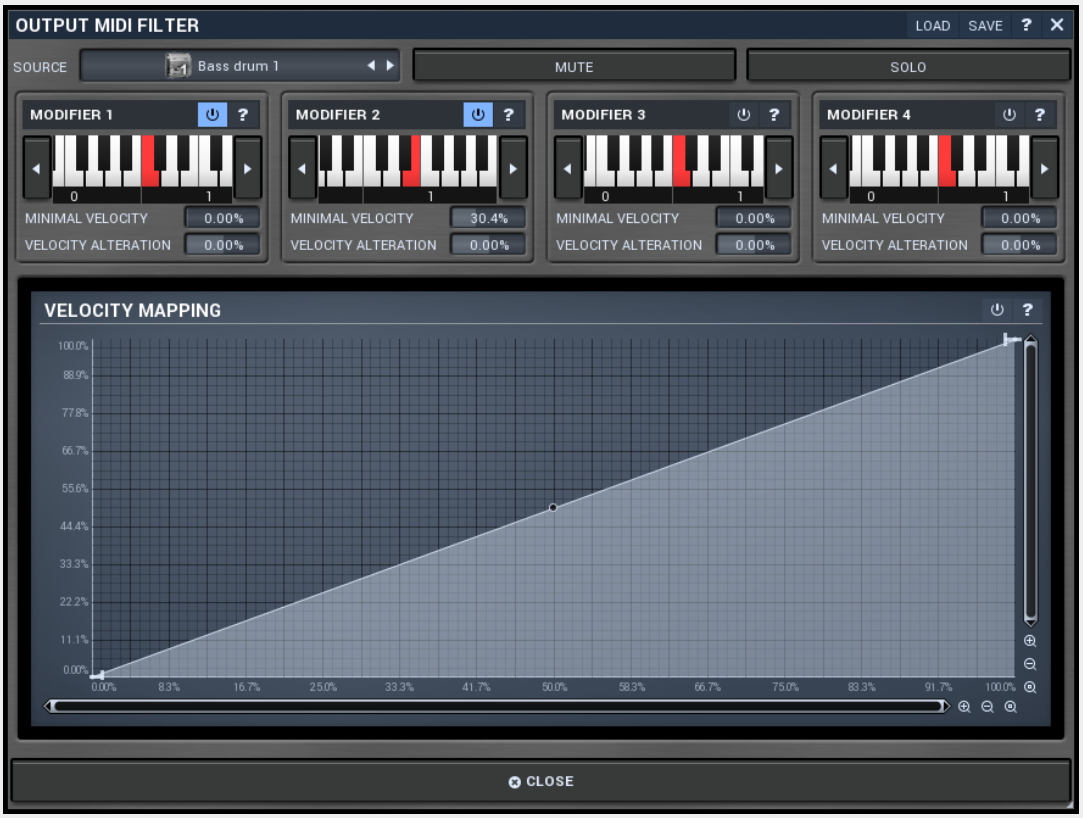
Minimal velocity

Minimal velocity defines threshold for the velocity of incoming notes. If a note has at least this velocity, it will be processed. Otherwise it won't. This is useful to make source notes redirected to different target drums.
For example, you may use an extrenal eletric drums with limited number of pads. So you may want to play multiple drums with just one pad, depending on the velocity. For example you may want to play a ride cymbal and let MDrummer play ride bell if you hit it hard enough, so that the velocity is high. Another example would be percussion, say conga - there are many different kinds of hits to conga, which may easily be controlled with just a single pad.

Velocity alteration

Velocity alteration defines how should the velocities be increased or decreased. This is mostly useful in combination with minimal velocity. For example, when playing percussion with just one pad, you may use say 3 modifiers to actually play 3 different kinds of hits, depending on the velocity. But velocity is affecting not only the target drum type, but also volume, so you may want to compensate for it using this parameter.

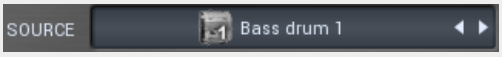
OUTPUT MIDI FILTER



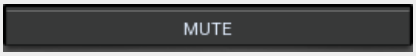
Output MIDI filter provides very efficient way to connect MDrummer to a different target, such as another plugin. It is possible to generate different MIDI notes by each of the drum types.

LOAD **Load button**
Load button loads the entire settings from a file.

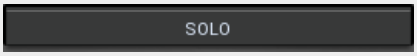
SAVE **Save button**
Save button stores the entire settings in a file.



Source
Source defines what drum is being edited.

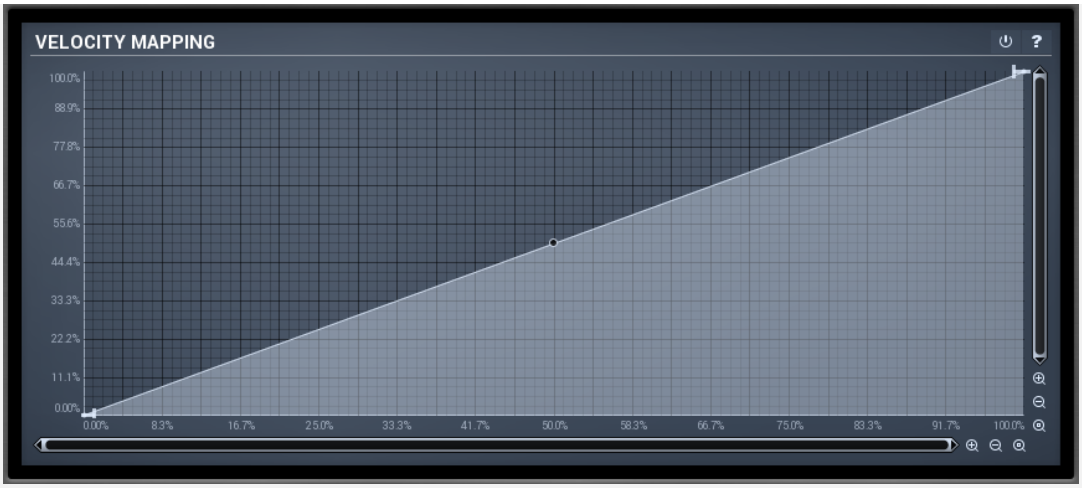


Mute button
Mute button stops generating MIDI notes for this drum type completely.



Solo
Solo stops generating MIDI notes for all drums except this one.

Velocity mapping



Velocity mapping edits transformation from source velocities (X) into target velocity values (Y) and can be used if the target device doesn't have velocity curve settings and the velocities just don't sound correct.

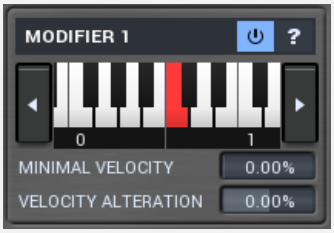
Envelope graph

Envelope graph provides an extremely advanced way to edit any kind of shape you can imagine. An envelope has a potentially unlimited number of points, connected by several types of curves with adjustable curvature (dot in the middle) and surroundings of each point can also be automatically smoothed using the smoothness (horizontal pull rod). You can also literally draw the shape in drawing mode available via the main context menu.

- **Left mouse button** can be used to select points. If there is a *point*, you can move it (or the entire selection) by dragging it. If there is a *curvature circle*, you can setup tension by dragging it. If there is a *line*, you can drag both edge points of it. If there is a *smoothing controller*, you can drag its size. Hold **Shift** to drag more accurately. Hold **Ctrl** to create a new point and remove any points above or below.
- **Left mouse button double click** can be used to create a new point. If there is a *point*, it will be removed instead. If there is a *curvature circle*, zero tension will be set. If there is a *smoothing controller*, zero size will be set.
- **Right mouse button** shows a context menu relevant to object under the cursor or the entire selection. Hold **Ctrl** to create or remove any points above or below.
- **Middle mouse button** drag creates a new point and removes any points above or below. It is equal to holding Ctrl and dragging using left mouse button.
- **Mouse wheel** over a point modifies its smoothing controller. If no point is selected, the entire selection is modified.
- **Ctrl+A** selects all points. **Delete** deletes all selected points.

button
This button enables or disables the velocity transformation.

Modifier



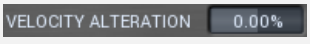
Modifier panel allows you to redirect the all notes of the drum-type in certain velocity range into another MIDI note than it is default. This is useful e.g. when you want to control another plugin by MDrummer.

Enable button
Enable button enables the modifier.

Piano keyboard
Piano keyboard shows currently selected source MIDI key to edit.

Minimal velocity

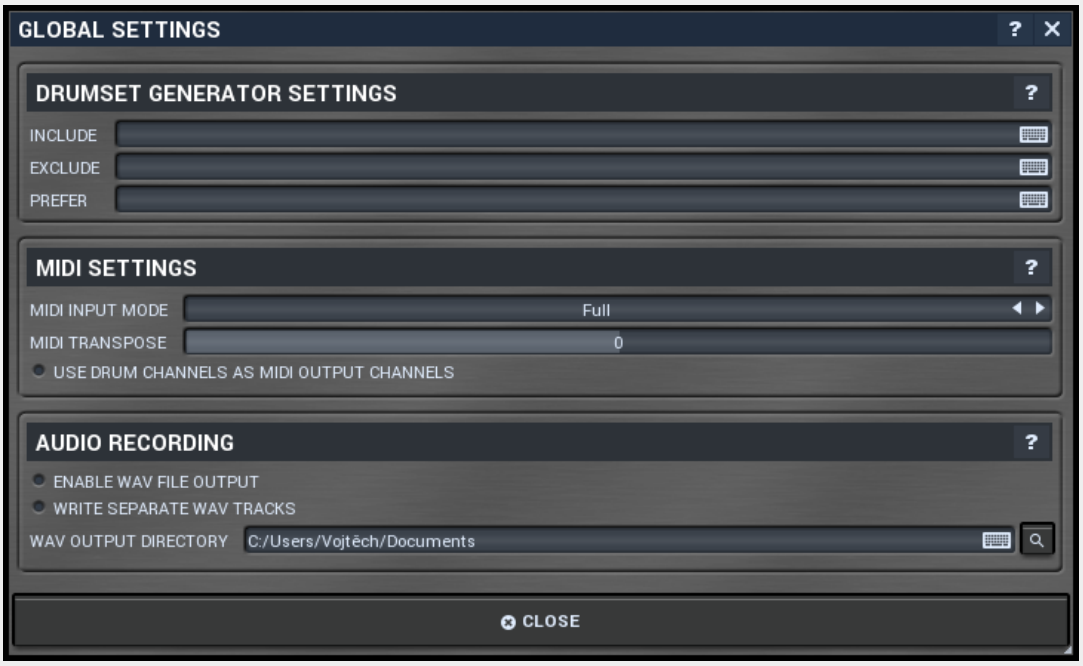
Minimal velocity defines threshold for the velocity of incoming notes. If the note has at least this velocity, it will be processed. Otherwise it won't. This is useful to make source notes redirected to different target MIDI keys.
For example, you may have a drum sampler, which uses multiple MIDI keys for snare drum, each for a different kind of stroke. So you can use the modifier to use part of the velocity range to produce a certain kind of stroke, and another part to produce different one. Say normal drum hit and rim shot.



Velocity alteration

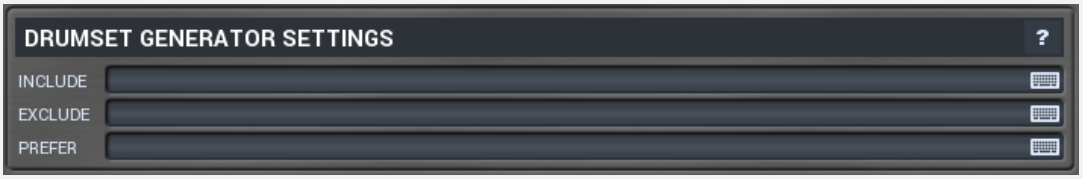
Velocity alteration defines how should the velocities be increased or decreased. This is mostly useful in combination with minimal velocity.

GLOBAL SETTINGS

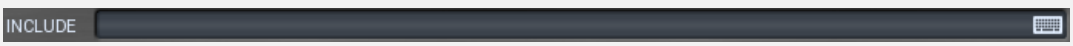


Global settings contains configuration for general MDrummer features, that are quite rare, so it is probable that you will need it very rarely.

Drumset generator settings



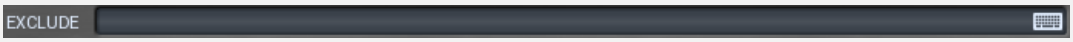
Drumset generator settings contain advanced options for the drumset generator spread allover MDrummer. Whenever you want a drumset or a component to be generated, this unit is executed and you can specify additional options to control it. The drumset generator is based on the huge library of components, so the main issue here is to select which components may or may not be used.
For example, for certain styles you may limit the selection to those components designed specifically for the style. Or if you want only acoustic drums and do not use any synthetic ones, then the filter is again what you are looking for.
Note that if you specify any filter, then only predefined components are used. Normally, without any filter, MDrummer may also choose to actually generate a component.



Prefer

Prefer may contain keywords, which the generator may used as a hint when choosing each component. In many cases using **Include** or **Exclude** would cause too strong condition, which may restrict the list of available components to just a few. This may not be desired, because MDrummer cannot be very creative afterwards and will start repeating the same components.
For example, specifying hiphop as include keyword may be quite radical, because despite there are for example hundreds of

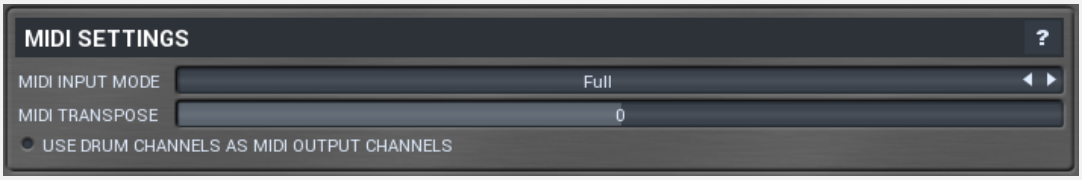
snare drums suitable for this style, only a few are actually marked hiphop, simply because they are suitable for several other styles as well. But specifying hiphop as preference will make MDrummer use these more often, but not limit his creative possibilities.



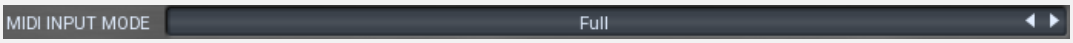
Exclude

Exclude may contain keywords, which must NOT be included in components used by drumset generator. You can specify multiple keywords by separating them using semicolon ";".*For example, "studio;mtotaldrums" will forbid any studio drums, because these have either studio or mtotaldrums keyword in their names.*

MIDI settings panel

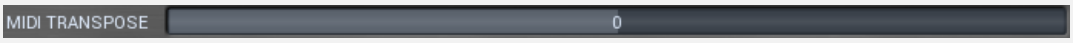


MIDI settings panel contains additional settings controlling MDrummer's behaviour for incoming MIDI events. The most important is probably the **MIDI input mode** you can use to override MDrummer's rhythm system. The **MIDI transpose** parameter can shift all incoming notes and is useful when you want to control MDrummer using a MIDI keyboard, which has just a few octaves and doesn't provide transposing.



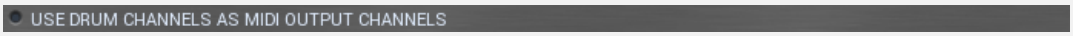
MIDI input mode

MIDI input mode defines how MDrummer reacts on incoming MIDI notes. By default mode **Full** makes MDrummer be driven by rhythm commands on channels 1-9 and you can trigger particular drums on channel 10 as usual. However you can make MDrummer play drums on every channel (**Notes only**), use only channel 10 and ignore the others (**Notes on channel 10 only**) or even completely disable the MIDI input (**Disabled**).



MIDI transpose

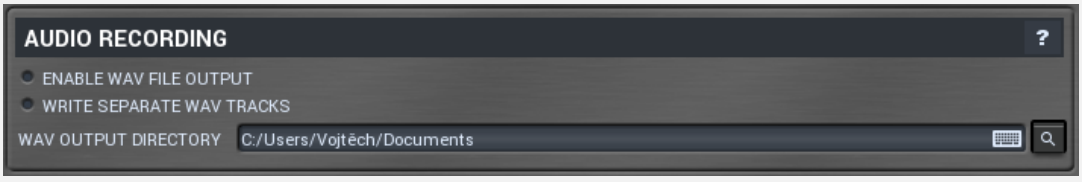
MIDI transpose moves all notes by specified offset up or down. It can be a lifesaver when you are controlling MDrummer using a small keyboard for example.



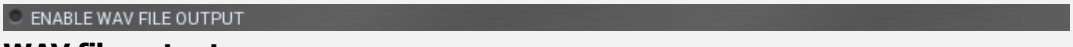
Use drum channels as MIDI output channels

Use drum channels as MIDI output channels makes MDrummer produce drum MIDI notes depending on the drum output channel. By default all notes are set to channel 10 as defined by MIDI. By enabling this option, channel of notes for particular drum will be defined by the channel of the drum, which you can configure in mixer and drumset editor.

Audio recording panel

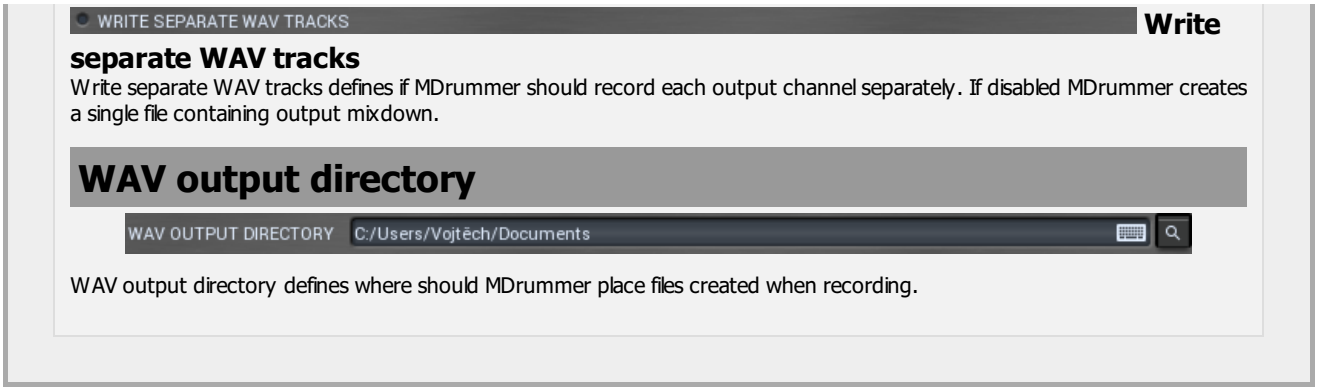


Audio recording panel contains settings for MDrummer audio output recording. When playing as standalone or in your host, MDrummer produces audio output, but it can store it as WAV files as well. This may come handy when jamming with a background audio for example.



Enable WAV file output

Enable WAV file output immediately starts recording MDrummer output by settings specified below. This feature is useful for example to record output of your practicing sessions.



Write separate WAV tracks

Write separate WAV tracks defines if MDrummer should record each output channel separately. If disabled MDrummer creates a single file containing output mixdown.

WAV output directory

WAV output directory defines where should MDrummer place files created when recording.

button

This 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.

Main MDrummer header

Main MDrummer header switches between the main MDrummer parts.
Use **Quick setup** to configure basic sound and rhythm properties. In most cases this will be the only module you will need.
Use **Mixer** to adjust volume, panorama, pitch, send and other features for drums.
Use **Effects** to setup master and send effects.
Use **Song** to edit the integrated song sequencer.
Use **Drumset editor** to edit the sound MDrummer generates.
Use **Rhythm editor** to edit the rhythms MDrummer plays.
Use **Rhythm generator** to generate your own rhythms.

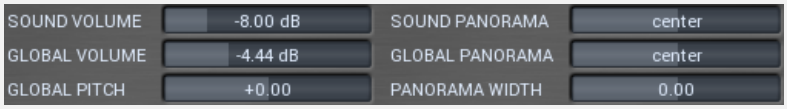
QUICK SETUP TAB

Quick setup tab is the initial tab, where you can configure the drumset and all rhythms quickly and easily. You can also generate both new drumsets and new rhythms, configure master effects from presets, control the rhythm playback etc. In most cases this first tab will be the only thing you need.

Drumset

Drumset panel provides the quickiest way to control and configure the drumset and the other global sound properties.
MDrummer contains a single drumset, which may have any number of drums based on unlimited number of sampled, multisampled or synthesized layers. Here you can quickly load, merge, generate and edit the whole drumset at once. You can also load, merge and generate effects for each drum and for master tracks.

Sound settings toolbar



Sound settings toolbar contains general functions to manage global sound properties.

Sound volume

Sound volume defines output volume for all output channels and is applied immediately as opposed to global volume. Sound volume is automated via standard MIDI messages.

Sound panorama

Sound panorama defines output panorama for all output channels and is applied immediately as opposed to global panorama. Sound panorama is automated via standard MIDI messages.

Global volume

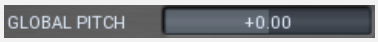
Global volume defines volume of new sounds. When a note is played, MDrummer takes actual global volume value and assigns it to that note. Therefore if you change global volume quickly, more than one event can play at the time and each of them can have different volume.

This produces more natural sound. However since it is applied before the effect pipeline, it might even change the sound character. This pays mostly for nonlinear effects such as compressor or limiter. On the other hand it theoretically simulates a drummer playing hard or soft.
This parameter can be automated.

Global panorama

Global panorama defines panorama of new sounds. When a note is played, MDrummer takes actual global panorama value and assigns it to that note. Therefore if you change global panorama quickly, more than one event can play at the time and each of them can have different panorama.

This produces more natural sound. However since it is applied before the effect pipeline, it might even change the sound character. This pays mostly for nonlinear effects such as compressor or limiter.
This parameter can be automated.



Global pitch

Global pitch defines output pitch of new sounds. When a note is played, MDrummer takes actual global pitch value and assigns it to that note. Therefore if you change global pitch quickly, more than one event can play at the time and each of them can have different pitch.
Note that this works even if some drums are frozen, in which case MDrummer needs to apply additional pitch change and while it can be CPU expensive, you should let it be zero for maximal performance. It is not significant for drums that are not frozen.
This parameter can be automated.

Panorama width

Panorama width affects actual panorama settings for all drums. If you increase this value above zero, panorama of all drums will be also increased. Thus increasing this value will make resulting sound somewhat spatial. But note that it can only modify panorama settings, it does not accomplish any kind of stereo expansion.
This parameter can be automated.

Drumset tabs

Drumset tabs lets you choose between the main modules for tweaking the drumset.

Drumset selector provides the easiest way to setup your drumset using the hundreds of predefined ones.

Drumset designer provides a simple and quick way to create your own drumsets from predefined components (drumsets stored in Components folder) or using the generator. When changing a component it applies load & replace function to remove original drums and replace them with new ones.

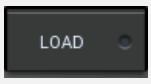
Master effects selector lets you quickly load or generate master effect settings containing several room simulations, compressors etc. Note that since these are loaded to all master channels, the CPU consumption will depend on number of output channels.

Drumset selector

Drumset selector provides the best way to load and combine predefined drumsets and generate new ones. The provided directory tree lets you explore all factory, custom, generated and imported drumsets. There are directories for different styles, each of them contain several drumsets, which you can load by double clicking on them or using the buttons below.

Imported directory is initially empty (or doesn't exist at all), but will contain all drumsets created using automatic sample import. This feature is available via main settings button and lets you import entire sample libraries, analyze them and create a perfectly compatible drumsets from them automatically.

Components directory doesn't contain full drumsets and rather just so-called components, hundreds of them actually. A component is a small drumset, which contains one more more drums. For example, a hihat component contains 3 drums - a closed hihat, an open hihat and a pedal hihat. These 3 drums are tuned together to have appropriate loudness and sound character, so that this combination makes sense and is called a component. Loading just a single component doesn't make much sense, but since you can load & join multiple drumsets, you can actually build your own drumsets from these components. There is however even easier way - the **Designer** tab, which lets you access the components directly. Nevertheless it is good to know the purpose of the Components directory, just in case you'd like to build your own components in the future.

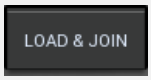


Load button

Load button loads the drumset from selected file. You can also double-click using your left mouse button on a drumset to do this.

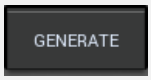
Auto-load

Auto-load makes MDrummer load the drumset whenever you change selection. When disabled, you need to double-click or use a button to load a drumset.



Load & join button

Load & join button loads the drumset from selected file and appends it to the current one. Using this feature you can combine several drumsets to produce a very full sounding drumset. If you won't be happy with the result, you can just use the **Undo** button to revert last load & join.



Generate button

Generate button creates the drumset from several files inside Components subdirectory or even using completely original generated components.
Hold **Ctrl** to keep the original drumset, hence joining the current drumset to a new generated one. This in fact behaves similarly to **Load &**

join, but it uses a generated drumset.
Hold **Shift** to let MDrummer generate 2 drumsets and merge them. This way you usually get fuller sound with even bigger variability at the expense of higher CPU cost. It performs the same action as clicking the button twice, holding **Ctrl** for the second time.

Generate Effects button

Generate Effects button loads random set of effects to all drums. Hold **Ctrl** to avoid removing the current settings, hence appending the new effects into the chain. Note that this feature creates lots of effects, so as result the CPU requirements may increase significantly. If you won't be happy with the result, you can just use the **Undo** button to revert last load & join.
Note that some of the original effects may be kept intact, because they have been present when the drum has been loaded and they are part of the sound character. For example, several bass drums are processed using a waveshaper, which gives them the typical rough character. Removing it would change the tone, it is kept in the queue and new effects are added after it. If you want to remove these effects, delete them manually or hold **Shift** when pressing the button.

Undo button

Undo button reverts last drumset change. This includes loading, merging, generating, changing effects etc. MDrummer remembers 16 previous steps.

Redo button

Redo button re-does the last drumset change, that has been undone. This includes loading, merging, generating, changing effects etc. MDrummer remembers 16 previous steps.

Save button

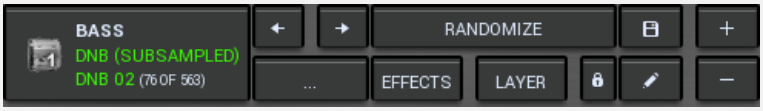
Save button saves current drumset.

Drumset designer

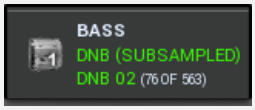
Drumset designer is a special tool, which lets you manage your drumset easily and effectively using so-called components.A component is a small drumset, which contains one more more drums. For example, a hihat component contains 3 drums - a closed hihat, an open hihat and a pedal hihat. These 3 drums are tuned together to have appropriate loudness and sound character, so that this combination makes sense and is called a component.
The drumset designer automatically analyzes the available components and lets you select each of them for your drumset, randomize them,

add random layers and effects etc.

Component item



Component item contains one component of the drumset. A component contains one more more drums. For example, a hihat component contains closed hihat, open hihat and pedal hihat. These 3 drums are tuned together to have appropriate loudness and sound character, so that this combination makes sense and is called a component. In the component panel you can choose a component, randomize them, add effect layers and more.



Drum button

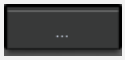
Drum button plays example hits of all drums in the component.

Left button

Left button selects the previous component, which replaces current one.

Right button

Right button selects the next component, which replaces current one.

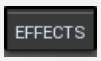


... button

... button lets you choose a component from the library.

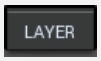
Randomize button

Randomize button selects a random component or generates a new one using randomizable synthesizers. It uses the same algorithm as drumset generator, but generates just the one component leaving the rest of the drumset intact. If you want to force using the generator instead of choosing predefined component, hold **Ctrl**.



Effects button

Effects button generates random effect settings for all of the drums in the component. Hold **Ctrl** to avoid removing the current settings, hence appending the new effects into the chain.
Note that some of the original effects may be kept intact, because they have been present when the drum has been loaded and they are part of the sound character. If you want to remove them, delete them manually or hold **Shift** when pressing the button.



Layer button

Layer button adds a random effect layer to each drum in the component. This includes various effects or even other drums. The effect layer is simply another drum of the same type loaded or generated from DrumsetLayers folder in the MDrummer installation directory. This feature is particularly useful for snare drums. You can even add multiple layers by pressing the button repeatedly. Use **Undo** to remove the previously added layer.

Lock button

Lock button locks the component disallowing randomization and other operations in the drumset designer from changing it.

Save button

Save button stores the component into a file. It is essentially the same thing as drumset, but contains only the relevant drums. The file is then used in the component list. This button is generally designed to be used to save good randomized components.

Plus button

Plus button increases volume of all drums in the component by 1dB. It does that using output volume to avoid changing the nature of effect. Adjusting level using this button is easier because the component may contain several drums, so adjusting volumes of all of them in mixer or

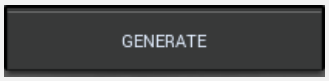
drumset editor may be quite clumsy.

Pencil button

Pencil button switches to the drumset generator and selects the first of the component drums.

Minus button

Minus button decreases volume of all drums in the component by 1dB. It does that using output volume to avoid changing the nature of effect. Adjusting level using this button is easier because the component may contain several drums, so adjusting volumes of all of them in mixer or drumset editor may be quite clumsy.



Generate button

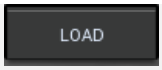
Generate button creates a drumset from several files inside Components subdirectory or even using completely original generated components. Hold **Ctrl** to keep the original drumset and join the new generated one. Hold **Shift** to let MDrummer generate 2 drumsets and merge them. This way you usually get fuller sound with even bigger variability at the expense of higher CPU cost.

Generate Effects button

Generate Effects button loads random set of effects to all drums. Hold **Ctrl** to avoid removing the current settings, hence appending the new effects into the chain. Note that this feature creates lots of effects, so as result the CPU requirements may increase significantly. If you won't be happy with the result, you can just use the **Undo** button to revert last load & join.
Note that some of the original effects may be kept intact, because they have been present when the drum has been loaded and they are part of the sound character. For example, several bass drums are processed using a waveshaper, which gives them the typical rough character. Removing it would change the tone, it is kept in the queue and new effects are added after it. If you want to remove these effects, delete them manually or hold **Shift** when pressing the button.

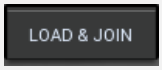
Master effects

Master effects lets you choose and randomize master effect pipeline. MDrummer generates the output by first processing each drum, mixing the results for corresponding output channels and processing these outputs using master effect pipeline. You can edit the effects manually in the main **Effects tab**, but here you can get some quick results.



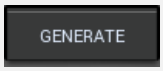
Load button

Load button loads a set of effects from a file and puts it into all master channels. This is often useful to completely change the sound character. Note that since this adds effects to all master channels, the CPU consumption may rise significantly when large number of output channels are used. In that case it is recommended to use the main **Effects** tab to control the effects directly for each output and send channel.



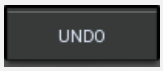
Load & join button

Load & join button loads a set of effects from a file and appends it to all master channels. Using this feature you can combine several effect settings to produce new original sound.



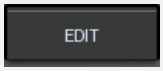
Generate button

Generate button loads a random set of effects and replaces the current master settings. This basically changes the global sound character completely. Hold **Ctrl** to avoid removing the current settings, hence appending the new effects into the chain. Hold **Shift** to generate different settings for each output channel.



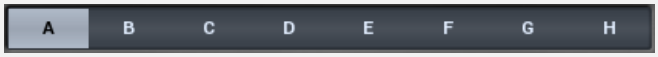
Undo button

Undo button reverts last load, load & join & generate operation in the effect pipeline.



Edit button

Edit button jumps to the **Effects** tab where you can edit the effects with all details for all output and send channels.



A-H presets

A-H presets let you keep several settings at once, so that you can experiment with different sounds without a need to store the settings somewhere. You can load different settings into each of the 8 slots, copy & paste settings from one to another, A/B then to choose the right one. Note that this cannot be automated nor switched using MIDI, because loading drumsets may be a very time consuming action.

A/B button

A/B button switches between this and previous A-H preset. To compare any 2 of the A-H presets, select one and then the other. This button will then start switching between these two. You can do the same thing by clicking on particular preset, but this makes it easier letting you close your eyes and listen.

Copy button

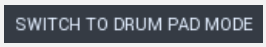
Copy button copies current drumset to clipboard.

Paste button

Paste button pastes drumset from clipboard into current preset.

Rhythms

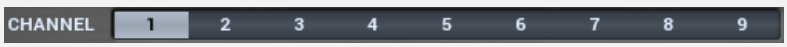
Rhythms panel provides the quickiest way to control and configure rhythms and the powerful virtual drummer kernel.
A rhythm is a set of loops and various settings, which MDrummer uses to simulate a real drummer. MDrummer can handle up to 9 rhythms at once, though in most cases you will probably need just a single one. Note that all of the rhythms will use the same drumset and sound settings.
Select the rhythm you want to manage using **channel** selector, then you can load, merge etc. using the **rhythm selector** and buttons underneath. **Playback** panel can then be used to control the playback realtime and **Settings** contains additional features such as tempo or humanization.
When controlling MDrummer from your host, use **MIDI commands** or **integrated song sequencer** in Song tab. MIDI command method is recommended for maximum versatility. Rhythm 1 is controlled by MIDI channel 1 etc. If you just want MDrummer to **play notes as a normal simple drum machine**, use MIDI channel 10 or switch into pad mode using **Switch to drum pad mode button**. Alternatively you can use Settings / Global setting / MIDI mode.



Switch to drum pad mode

Switch to drum pad mode button switches MDrummer into so-called pad mode (or back), commonly known as MPC. Pad mode basically simulates simple pad drum machines. Use it if you don't need the powerful rhythm system. In this mode the rhythm sequencer is hidden and MDrummer does not recognize MIDI commands as a virtual drummer, instead it interprets them as notes on all MIDI channels like any other drum machine. The rhythm system is still available in pad mode, however it cannot be controlled using MIDI commands and you need to use the integrated song sequencer in **Song tab**.

You can just click each drum pad to play particular drum. You can also drag & drop sample or multiple samples onto each pad and MDrummer will import them and automatically manage velocity layers.



Channel

Channel is used to select the rhythm currently being edited. There are 9 channels (hence 9 rhythms), this number corresponds to the MIDI channel when controlling MDrummer using the MIDI command method.

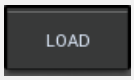
Rhythm selector

Rhythm selector contains the directory tree containing the hundreds of available rhythms. These are stored in directories by style. Note that many styles require certain tempo to sound properly. For example, drum'n'bass rhythms are designed for tempos around 160-200bpm, so if you play them in say 100bpm, they will most likely won't sound as drum'n'bass at all. Also note that you need to have a reasonable drumset loaded. For example, if you load a traditional drumset with drums and cymbals and then use a percussion rhythm, it is likely there won't be any output from MDrummer, because the traditional drumset doesn't contain any percussion!

Background percussion directory contains supportive rhythms featuring just shakers or tambourines for example. These are commonly use to enhance existing rhythms and the easiest way to get some shakers into any rhythm is simply to select one from this folder and use the **Merge** button.

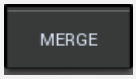
Base rhythms directory contains so-called base rhythms used by the **Rhythm generator**. You will rarely need to load them here, but it is good to know about the existence of these rhythms. More about the base rhythms in Rhythm generator section.

Templates directory contains so-called templates, or polymorphic rhythms. Whenever you load them, you get a different rhythm. You may say these are predefined rhythm generators without any settings and are exceptionally great for getting creative ideas.



Load button

Load button loads current rhythm from selected file. You can as well just double click on the file.

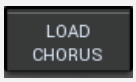


Merge button

Merge button loads current rhythm from selected file and merges it to current one. Typically you use it to add percussion (shakers, tambourine etc.) to your rhythms. Such percussion rhythms are located in *background percussion* directory. You can also use rhythms from the **templates** directory, in which case MDrummer actually uses the rhythm as a source for a simplified rhythm generator. Therefore merging such a rhythm produces a different result everytime you use it and it may take more time to process.

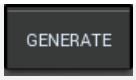
Load verse button

Load verse button loads rhythm from selected file, but replaces only verse part - everything for levels 0%-50%. This is useful when you want your rhythm to vary not only by the complexity and background, but you just want your drummer to play something else in verses than in choruses.
Hold **Ctrl** to merge the rhythm rather than replacing it. This is useful for example to add some background percussion such as shakers only to the softer parts.



Load chorus button

Load chorus button loads rhythm from selected file, but replaces only chorus part - everything for levels 50%-100%. This is useful when you want your rhythm to vary not only by the complexity and background, but you just want your drummer to play something else in verses than in choruses.
Hold **Ctrl** to merge the rhythm rather than replacing it. This is useful for example to add some background percussion such as shakers only to the louder parts.



Generate button

Generate button uses rhythm generator to create a completely random rhythm. It does that by loading a completely random rhythm generator settings and random essential beat (the groove) and then generates the resulting rhythm. This may serve as a huge source of inspiration.

Undo button

Undo button reverts previous change caused by loading/merging/generating the rhythm. MDrummer remembers 16 previous steps.

Redo button

Redo button re-does the last rhythm change, that has been undone. This includes loading/merging/generating the rhythm. MDrummer remembers 16 previous steps.

Playback panel

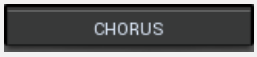
Playback panel provides rhythm playback control functions you use to command your virtual drummer.

Verse 1 button

Verse 1 button says *"Put there a break (fill) and change level to 25%!"*. The same behavior you can expect by changing the **Level** value and then pressing the **Break** button. Shortcut : 8

Verse 2 button

Verse 2 button says *"Put there a break (fill) and change level to 45%!"*. The same behavior you can expect by changing the **Level** value and then pressing the **Break** button. Shortcut : 9

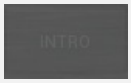


Chorus button

Chorus button says *"Put there a break (fill) and change level to 75%!"*. The same behavior you can expect by changing the **Level** value and then pressing the **Break** button. Shortcut : 0

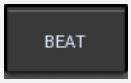
Play button

Play button enables or disables playback immediately. Shortcut : Space, P, F10



Intro button

Intro button says *"Play intro now !"*. Shortcut : 1



Beat button

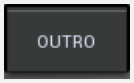
Beat button says *"Play beat now !"*. Shortcut : 2

Break button

Break button says *"Put there a break (fill) !"*. Note that the break may appear later, because breaks are often very short sequences at the end of the bar. Shortcut : 3

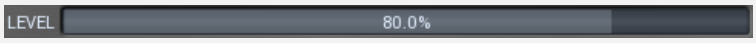
L Break button

L Break button says *"Put there a long break (fill) !"*. Long breaks are typically twice as long as short ones. Note that the break may appear later, because breaks are often very short sequences at the end of the bar. Shortcut : 4



Outro button

Outro button says *"Play outro !"*. After the outro is finished, virtual drummer stops the playback (if it is in **sequencer mode**). This command can be automated. Note that the outro may appear later, because outros are often very short sequences at the end of the first bar. Shortcut : 5



Level

Level defines loop level to switch to. Level mostly corresponds to complexity and loudness.
Note that this is NOT actual level. Actual level is changed when you press any of the command buttons. Why? Because it sounds fairly weird when you change level suddenly. Level change is typically introduced by a fill or it should appear at the beginning of the bar.
If you want to change level immediately, you can use **loop selector** piano.
Following shortcuts you can use to setup this value :

- 6 - Decrease level to switch to.
- 7 - Increase level to switch to.
- Ctrl+1, Ctrl+2, .., Ctrl+0 - Setup specific level to switch to.

Settings panel

Settings panel provides rhythm playback configuration you use to define behavior of your virtual drummer.

Tempo

Tempo defines current playback tempo. Note that MDrummer as virtual instrument plugin synchronizes with the host automatically.

Tap button

Tap button lets you easily set tempo by tapping it. Start pressing the button rhythmically. After the first press, the tempo starts changing. The more clicks you do, the better accuracy you get. If you want to start over, wait about 2 seconds first. Shortcut : B

Humanization

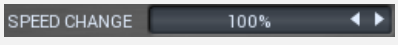
Humanization affects inaccuracy and deflection for all notes in the rhythm. Negative value causes MDrummer to be a better drummer, positive makes him to be more human.
This parameter can be automated.

Rhythm velocity

Rhythm velocity is useful e.g. if you are using multiple rhythms at once and you do not want all of them to be the same level. Note that all of the rhythms use the same drumset, so this the only a simple way to setup volume per rhythm.
This parameter can be automated.

Shuffle

Shuffle moves the notes from straight notes to shuffled (triplets) and conversely. It can give the rhythm a totally new feel.
This parameter can be automated.



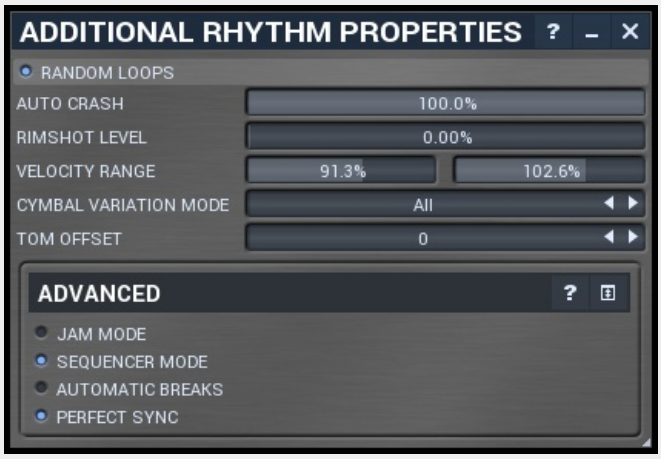
Speed change

Speed change allows you to make MDrummer play twice as fast, half as fast etc. It also applies to the virtual instrument plugin, while tempo does not.
This parameter can be automated.

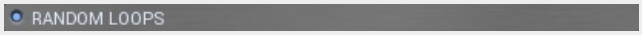
Additional button

Additional button shows a menu with additional rhythm playback settings.

Additional rhythm properties window

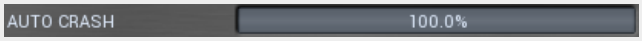


Additional rhythm properties window contains more advanced rhythm playback settings, which control MDrummer behaviour, synchronization to host, creating automatic cymbal hits etc.



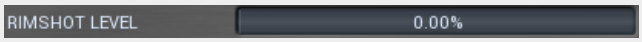
Random loops

Random loops lets MDrummer choose loops randomly, if there are more of them available. Typically you have many breaks in a loop box (see **loop selector**), hence this switch defines, how MDrummer chooses the break to play. You usually disable random loops when finalizing your song and you want to set each break that is suitable at particular moments of your song. In that case note velocity (or index parameter in song sequencer) defines the loop index. Note that this parameter is NOT automated. We decided so to protect you from making it accidentaly enabled.



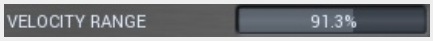
Auto crash

Auto crash makes MDrummer automatically play crash cymbal hits after a break, long break and intro the same way real drummers usually do. You may want to disable this for special rhythms such as latin rhythms, where the grooves start at fourth quarter note, or for percussions, where actually there is no crash cymbal at all. You may also give it a certain probability, which is useful for afro-latin rhythms, such as reggae.



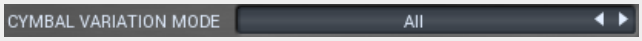
Rimshot level

Rimshot level controls below which velocity MDrummer automatically replaces snare drum notes with snare rimshots. Hence if you set this to 0%, you will disable this feature.



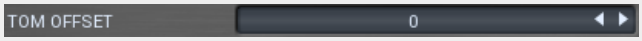
Velocity range

Velocity range controls how MDrummer modifies velocity of all notes depending on current level. This is similar to a drummer playing softly in silent parts. Using this range you specify how loud should MDrummer play in each level.



Cymbal variation mode

Cymbal variation mode controls if MDrummer may automatically replace cymbal hits by another cymbal hits. This makes resulting tracks less repetitive.

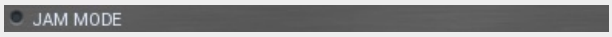


Tom offset

Tom offset defines if MDrummer should play higher/lower toms. For example in harder types of music lower toms are usually used, so you can set this parameter to -2 to let MDrummer play always 2 toms lower than expected.

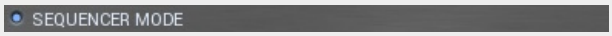
Advanced panel

Advanced panel contains more advanced and esoteric settings.



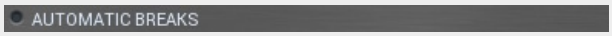
Jam mode

Jam mode enables the jam mode for this rhythm. A rhythm in jam mode does not receive MIDI commands as usuall. It listens to the incoming MIDI instead, assuming it is a piano or another harmonic instrument and plays with it. Note that changes are made on breaks only, since this is the way real drummers play.
When you enable jam mode in MDrummer plugin, you have 2 choices of how to tell MDrummer when to play and when not. First you can enable song structure. Or second, if song structure is disabled MDrummer still listens to MIDI commands, and you should play with him on channel 11 and higher. For example rhythm 1 is commanded by channel 1 as usual and you play with him on channel 11.



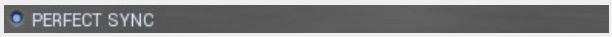
Sequencer mode

Sequencer mode is enabled by default. In this case MDrummer automatically switches from breaks and intros back to beats, stops playback after outro and possibly automatically plays breaks (fills). You may want to disable it e.g. if you want to edit breaks.



Automatic breaks

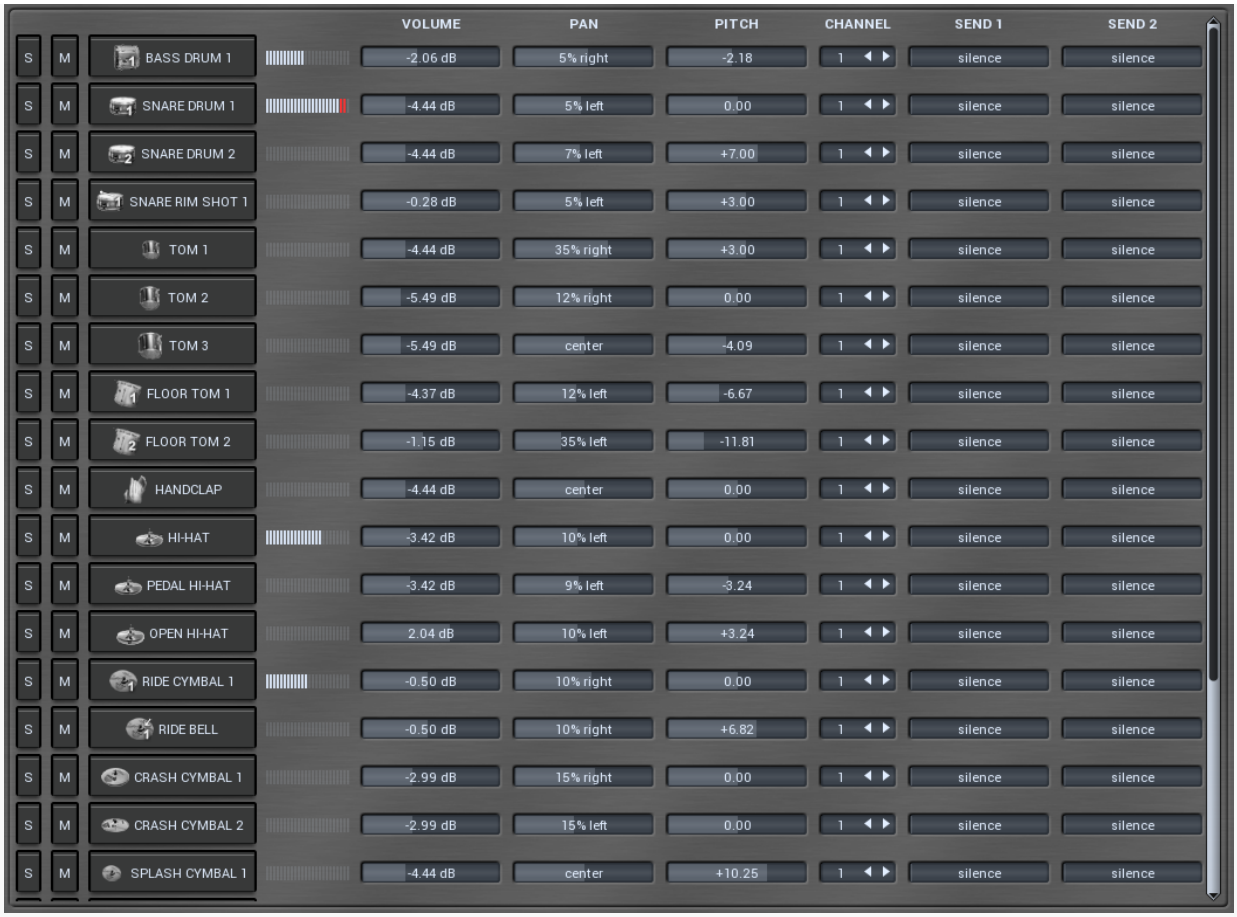
Automatic breaks lets MDrummer automatically play breaks or long breaks. Interval between them depends on break length and break interval settings. Works only in sequencer mode.
This parameter can be automated.



Perfect sync

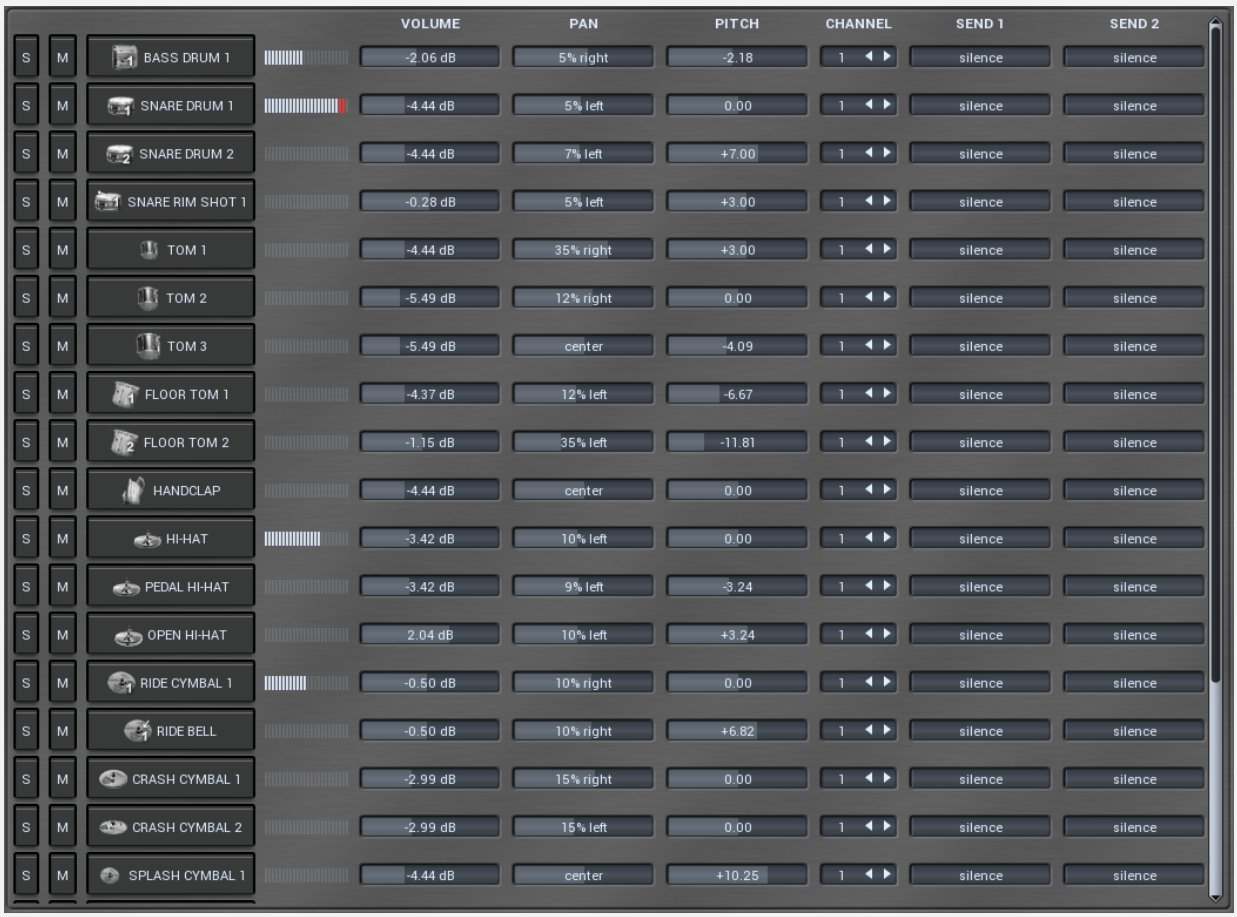
Perfect sync is available only inside MDrummer plugin and makes MDrummer always in perfect sync with the song. On the other hand MDrummer will be driven by the starting point of the song, so you may have problems with stop-times, different signatures etc.
You may try disabling this in some extreme cases, but that may cause desynchronization when host application sends invalid notes. This can happen for example when your computer is too slow or when you rewind and host tries to output notes that have actually already started.

MIXER TAB



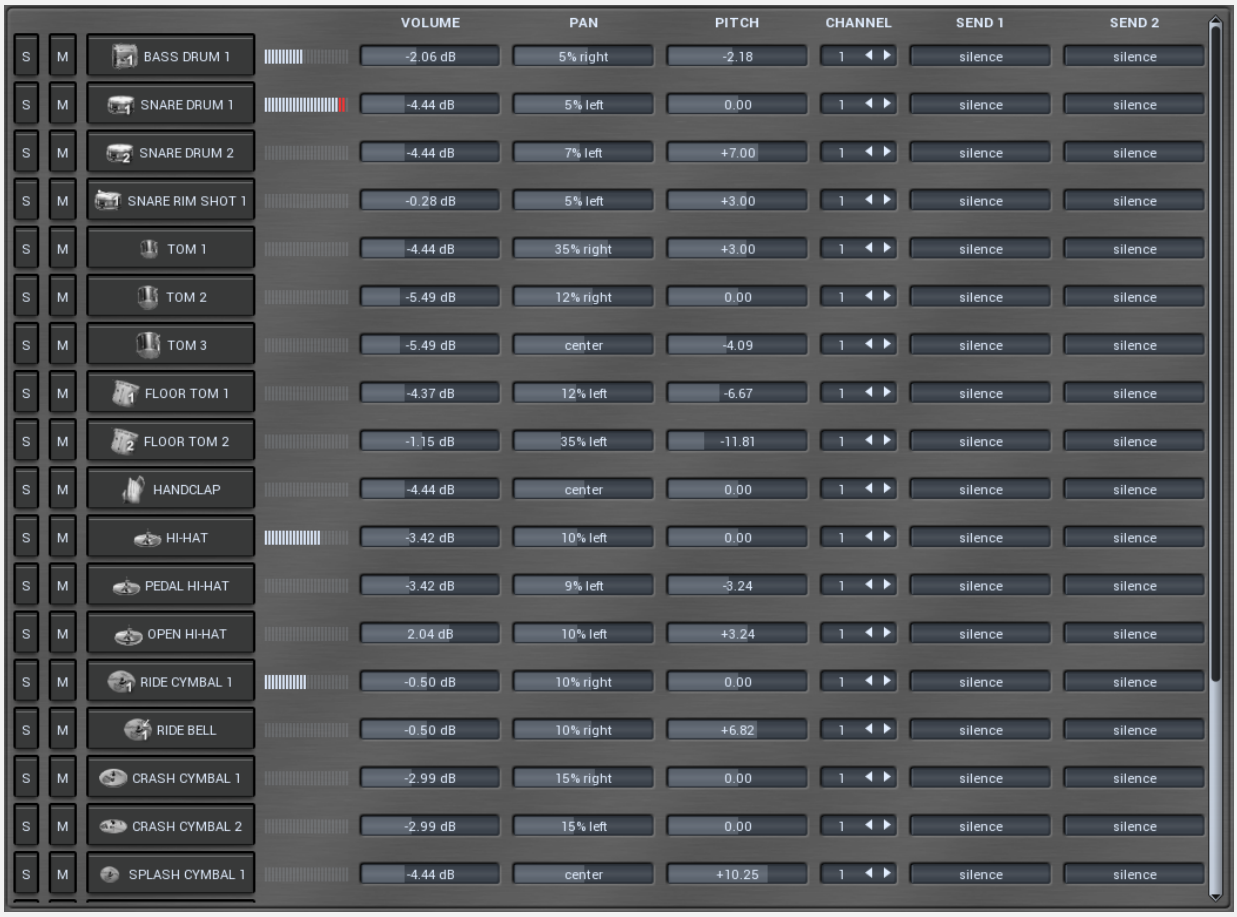
Mixer tab contains the master mixer, where you can easily adjust basic parameters of all drums - volume, panorama, pitch, output channel, sends etc. There are also master peak meters, which you can use to monitor levels of each output.

Mixer



Mixer lets you quickly edit basic drum parameters such as volume, panorama, pitch and output channel.

Mixer scroller



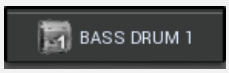
Mixer scroller displays all available drums and their settings. The view is scrollable as the number of drums is unlimited and may not fit the window.

Solo button

Solo button mutes/unmutes all the other drums.

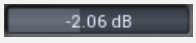
Mute button

Mute button mutes/unmutes the drum.



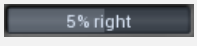
Drum pad

Drum pad triggers the drum sound the same way MIDI or the rhythm engine does. The further right you click, the higher velocity it will have.



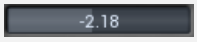
Output volume

Output volume defines volume of the drum sound applied after the effect pipeline.



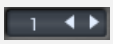
Panorama

Panorama defines panorama of the drum sound.



Pitch

Pitch defines pitch change of the drum sound.



Channel

Channel defines audio output channel to send this drum to. MDrummer standalone application does not use it, unless you are using a multichannel output device. It can be very useful when working with MDrummer as virtual instrument plugin though.
By default, channels 1-4 are automatically set according to drum type. Therefore channels 5-8 are freely available with no chance of collision

with another drum using standard settings. Note that in Drumet editor / Drumset toolbar / Advanced you can store these settings and control if MDrummer should preserve the mappings whenever you load a different drumset for example.

silence **Send**

Send controls amount of drum signal sent to the master send effect pipeline, which you can control in the **Effects** tab.

EFFECTS TAB

Effects tab contains the master effect settings. MDrummer has a dedicated effect pipeline for each of the output channels and for both sends. MDrummer contains about 30 high quality effects and you can have as many effects as you need in each pipeline.

There are 2 global send channels. These are usually used for reverbs. You put an reverb (with 100% dry/wet) to one of them and then use **Mixer** or **Drumset editor** to control amount of the send for each drum, thus how much reverb will be sent to it.

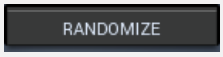
If you use 1out version of MDrummer, all drums and sends are mixed together into this single output. If you use a multichannel version of MDrummer, you can specify output channel for each drum, which defines, which master effect pipeline is used and hence which MDrummer output the drum will be generated to. The same pays for sends - each of the sends needs to be forwarded to one of the output channels after processing, but if you don't use sends, you can simply ignore their existence.

Effects

Effects lets you edit the global effect pipeline for output channels and sends.

Effects list

Effects list contains the list of effects in the pipeline. **Select an effect** to see its parameters on the right. **Check/uncheck an effect** to enable/bypass it. **Click and drag** an effect to move it, hence changing effect processing order.



Randomize button

Randomize button loads random effects into the pipeline. Hold **Ctrl** to avoid removing the current settings and rather appending the new effects into the chain.
Note that some of the original effects may be kept intact, because they have been present when the drum has been loaded and they are part of the sound character. If you want to remove them, delete them manually or hold **Shift** when pressing the button.

Delete button

Delete button deletes selected effect from the effect pipeline.

Load button

Load button loads the whole effect pipeline from a file.

Save button

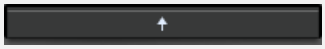
Save button saves the whole effect pipeline to a file.

Copy button

Copy button copies the whole effect pipeline to system clipboard.

Paste button

Paste button pastes the whole effect pipeline from system clipboard.



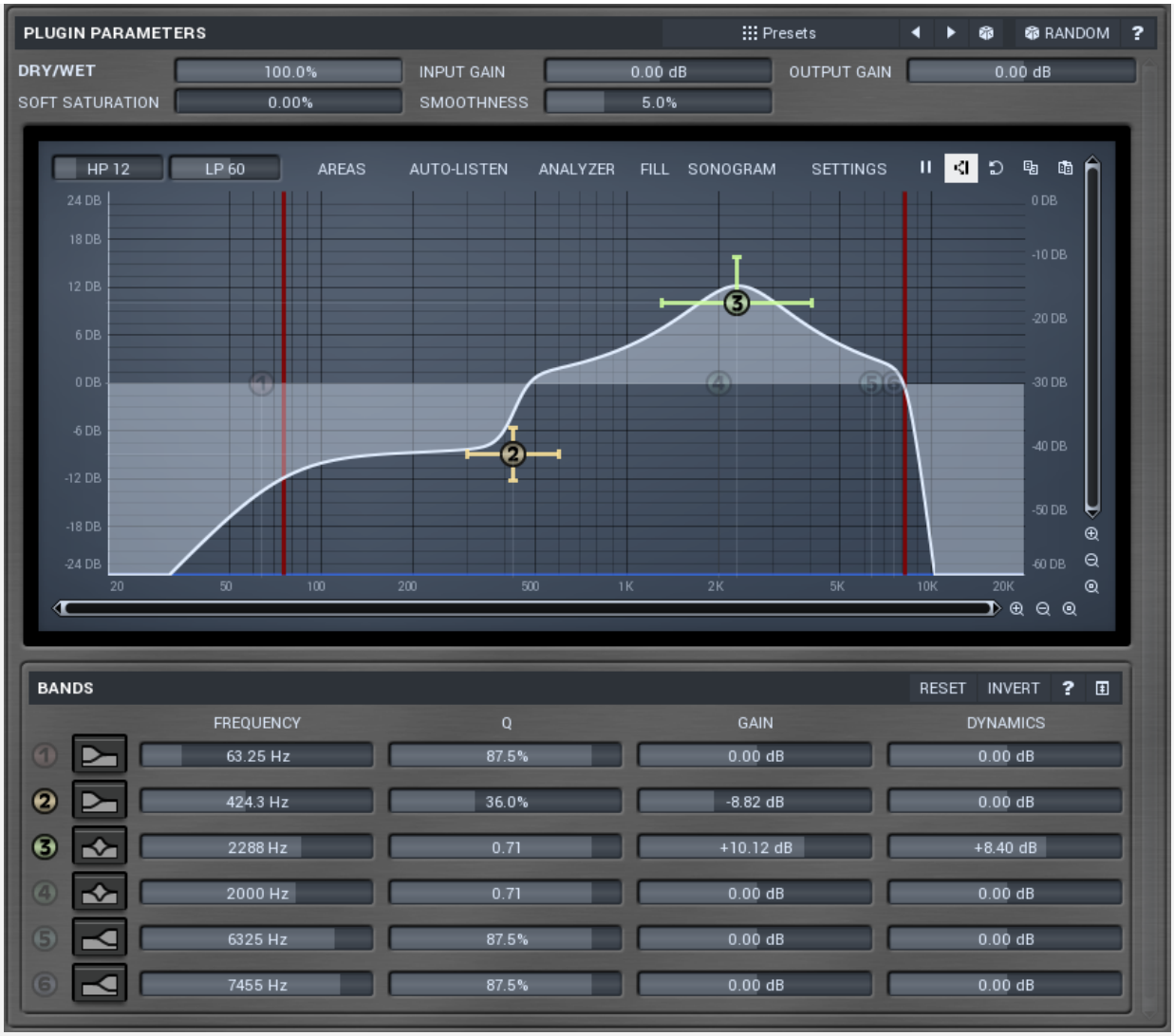
Add button

Add button adds selected effect from available effects list to the effect pipeline.

Available effects list

Available effects list contains the list of available audio effect plugins. These are all high-quality effects integrated in MDrummer. Most of them are available as separate plugins at www.meldaproduction.com as well. **Double click** using your left mouse button on one of them to add it to the effect pipeline of the drum. You can use also the arrow button.

Effect parameters



Effect parameters panel contains editor of the currently selected effect, if any.

Presets button

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

Left arrow button

Left arrow button loads previous preset.

Right arrow button

Right arrow button loads next preset.

Randomize button

Randomize button loads a random preset.

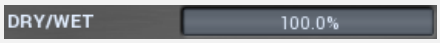
Randomize button

Randomize button generates random settings. Normal randomization works by selecting random values for all parameters, but rarely achieves satisfactory results. So our plugins employ a smart randomization engine, that learns which settings are suitable using existing presets and so is able to yield a very high success rate. There are some additional keyboard shortcuts you should be aware of.

Holding **Ctrl**, bypasses the randomization engine so parameters are only slightly modified rather than completely randomized. This is suitable to modify already interesting settings.

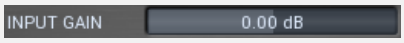
Holding **Alt**, will force the plugin to use full randomization, which sets random values for all reasonable automatable parameters. This can often result in "extreme" settings. Note that some parameters cannot be randomized this way. The smart randomization engine is used by default, if no keys are held. Smart randomization provides a more limited, but in most cases a better, set of results.

Hold **Shift** to undo the previous randomization.



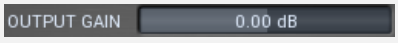
Dry/wet

Dry/wet defines ratio between dry and wet signals. 100% means fully processed, 0% means no processing at all. In normal mode only peak and shelf filters are affected correctly, other filters are left at 100% unless the ratio is set to 0%, in which case the equalizer is bypassed.
Range: 0.00% to 100.0%, default 100.0%



Input gain

Input gain defines input gain applied before the equalization. Therefore this affects all dynamics-based processes.
Range: -24.00 dB to +24.00 dB, default 0.00 dB



Output gain

Output gain defines output gain applied after the equalization. Note that the real output gain is affected by dry/wet parameter, as opposed to input gain, which is not, because it affects the resulting sound.
Range: -24.00 dB to +24.00 dB, default 0.00 dB

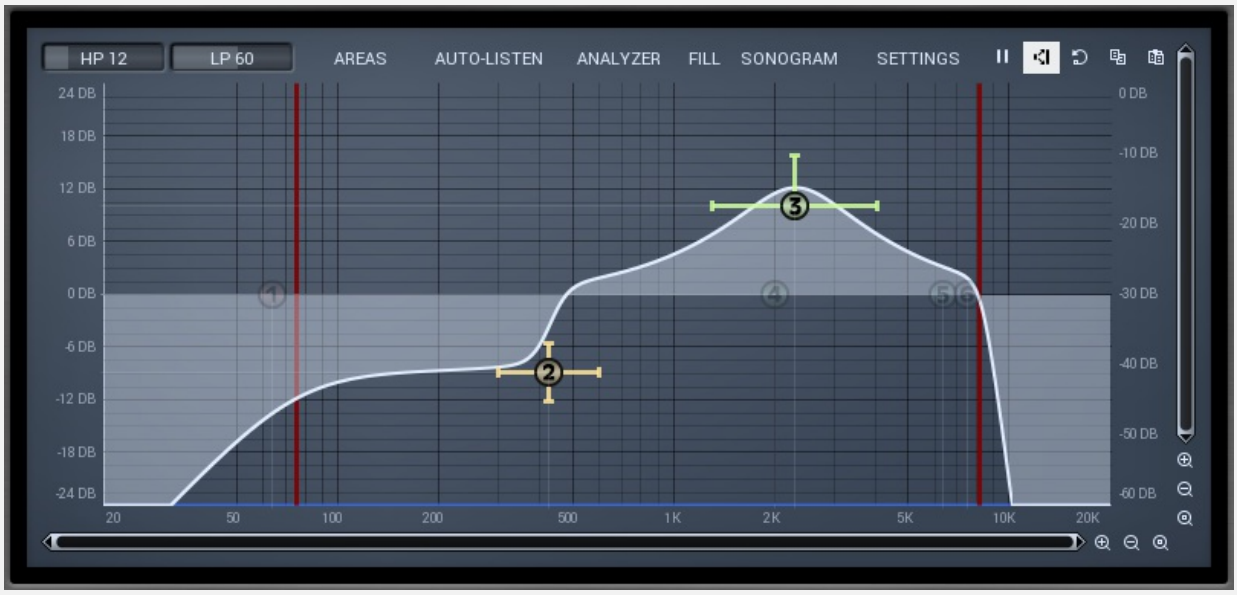
Soft saturation

Soft saturation defines amount of saturation simulating analog equalizers.
Range: 0.00% to 100.0%, default 0.00%

Smoothness

Smoothness makes the analyser smooth out the curve, so it contains less bumping. It approximates energy in each frequency and the resulting graph may be easier to understand. Also the smoothness affects the automatic equalization. Usually higher value provides more natural results, however you should verify using your ears.
Range: 0.00% to 20.0%, default 5.0%

Equalizer shape graph



Equalizer shape graph controls the frequency response. There are several bands available, each of them can be enabled/disabled, can be set to a different filter, can have different frequency, Q and other parameters. Double-click on a band point to enable or disable a band. Drag it to change its frequency and gain. Drag the horizontal nodes to change its Q. Hold **ctrl** key for fine tuning. Click using the right mouse button on it to open a window with additional settings.

The equalizer graph also contains 2 **red vertical lines** on the right and on the left. These are the high-pass and low-pass filters conveniently placed, so that you can perform this rather typical task quickly, efficiently and most of all using the highest quality filters available on the market. The high-pass filter also serves as a DC blocker. Slopes for both filters can be adjusted in the title of the equalizer panel.

Typically you want to remove the low frequencies (high-pass filter via the left line) from just about any audio material except for bass and bass drum. Even if the frequencies are not there and are not shown in sonogram or analyzer, you may still want to do that to let the eq remove any potential low frequency rumble and other instruments the track might contain. This is always a good practice to clear the resulting mix.

Areas button

Areas button displays settings of the visual areas, which are useful for better orientation in the frequency spectrum. These are customisable guidelines displayed in the equalizer editor and may contain different octaves or drums for example. Note that these areas are always only orientational, so your particular snare drum may not fit very well for example. In that case it is highly advantageous to use the sonogram or analyzer.

AUTO-LISTEN **Auto-listen button**

Auto-listen button enables the auto-listen feature, which temporarily changes the equalizer shape when dragging a band to let you show what the particular band is actually doing. For example, when dragging a peak filter, the equalizer disables other bands and changes this one to a band pass filter, so that you would listen to the frequencies the peak filter is modifying.

Also when this is enabled, you can click anywhere in the field and the equalizer will let you listen to the frequencies at that position using a band-pass filter. This is great for searching for problematic frequencies for example. Vertical position controls the band-width. You can also **hold shift** to get this feature if auto-listen is enabled.

ANALYZER **Analyzer button**

Analyzer button enables or disables the spectrum analyzer, which shows levels of individual frequencies. In most practical cases it is more convenient to use the sonogram, which shows the frequencies in time, but provides worse level resolution as the levels are differentiated by color. The spectrum analyzer also provides a microsonogram shown in the bottom of the panel, which uses the same color-based view as the sonogram.

FILL **Fill button**

Fill button enables or disables the full-sized analyzer micro-sonogram. This means that the micro-sonogram in the bottom will cover the whole analyzer view. Color differentiation is often easier to understand than the classical spectrum analyzer, so this might help you comprehend the spectrum of your audio material. Another option is to use the spectrum sonogram.

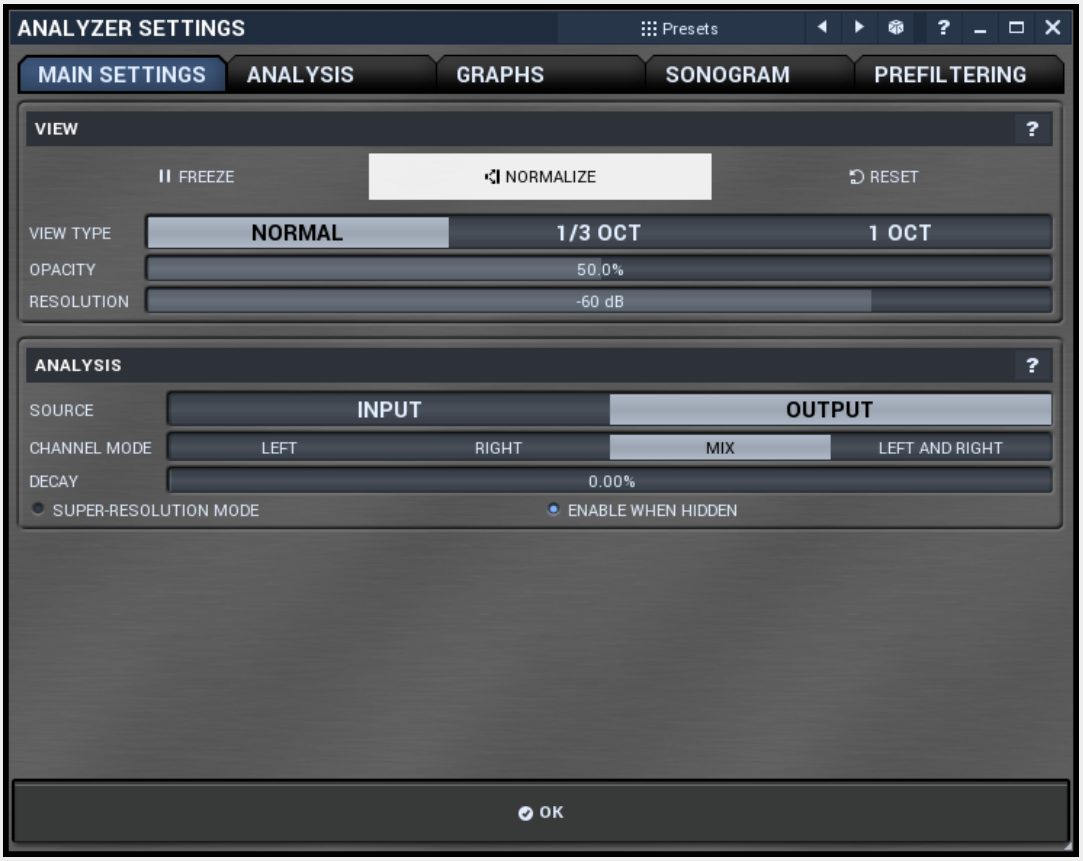
SONOGRAM **Sonogram button**

Sonogram button enables or disables the spectrum sonogram, which shows levels of individual frequencies in time. Levels are differentiated by color, so the accuracy is worse than when using spectrum analyzer. However the time axis improves the orientation in the spectrum a lot for typical audio signals. This makes the spectrum analyzer more of a scientific tool.

SETTINGS **Settings button**

Settings button shows the settings of the spectrum analyzer and the spectrum sonogram.

Analyzer settings



Presets **Presets button**

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

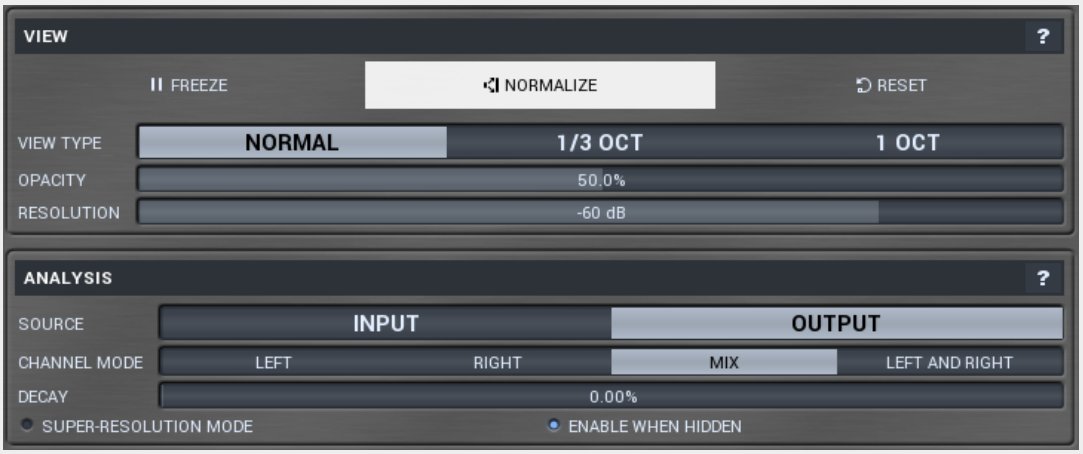
Left arrow button
Left arrow button loads previous preset.

Right arrow button
Right arrow button loads next preset.

Randomize button
Randomize button loads a random preset.

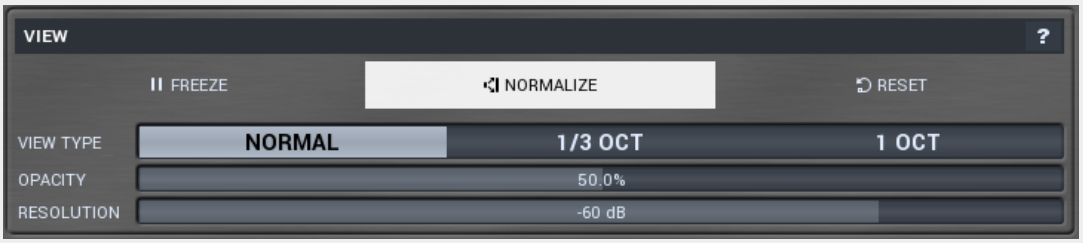
Tab selector
Tab selector switches between subsections.

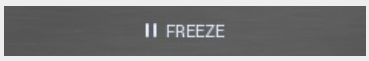
Main settings panel



Main settings panel contains the most useful settings controlling the analyzer behaviour and view.

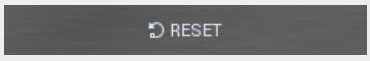
View



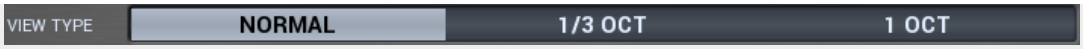


Freeze button
Freeze button stops processing temporarily.

Normalize button
Normalize button enables or disables the normalization, which makes the loudest frequency reach 0dB. This is very useful for comparing frequency levels, however it hides the overall level.
When comparing 2 spectrums you are usually interested mainly in the frequency level differences. In most cases both audio materials will have different overall levels, which would mean one of the graphs would be "lower" that the other making the comparison quite hard. Normalize fixes this and makes the most prominent frequencies of the spectrum touch the top of the analyzer (or have the most highlighted color in case of sonogram).

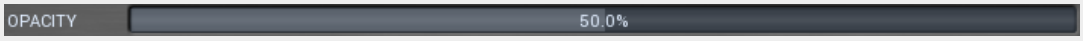


button
This button resets analyzer state. This is particularly useful when analyzing infinite average and maximum.



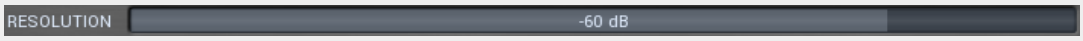
View type

View type controls the way the spectrum is displayed. By default a smooth curve is presented. This view provides the best resolution and detail, but other modes (1/3 octave, 1 octave) may be easier to read.



Opacity

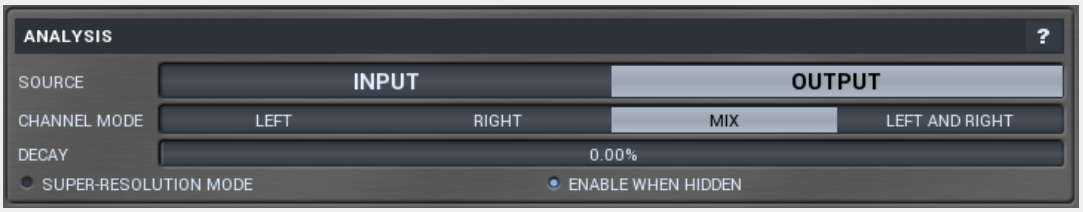
Opacity controls opacity of all analyzer graphs.

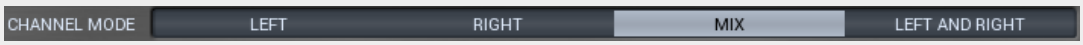


Resolution

Resolution defines vertical range on the display. Human auditory system has a resolution of about 90dB and the relevant range is usually less than 60dB. However you may want to use a higher resolution to check for technical problems - aliasing, distortion etc.

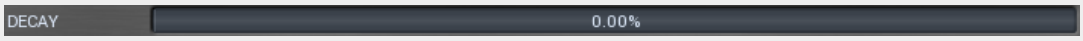
Analysis





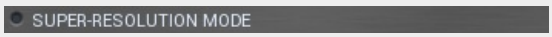
Channel mode

Channel mode defines which channels should be analyzed. By default all channels are merged into a mono sum, which is then analyzed. However you may want to analyze separate channels or display left and right channel at once.



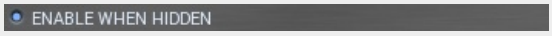
Decay

Decay controls the speed the magnitudes return to the minimum value, the silence. It is an alternative to averaging, which affects both the speed the frequencies gain and lose their magnitudes. With 0% the magnitude goes to minimum immediately. With 100% it stays the same forever, so it makes it basically computes the maximum.



Super-resolution mode

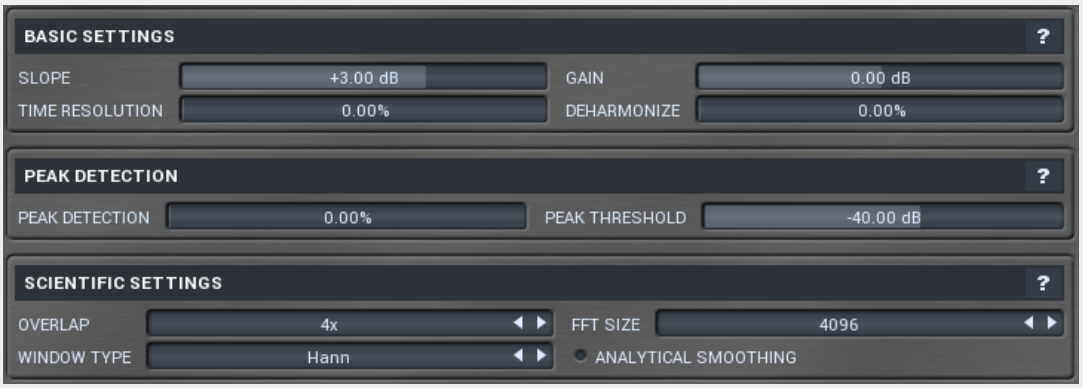
Super-resolution mode activates a special processing algorithm, which provides high resolution even in low frequency spectrum. Using standard FFT algorithms you can increase FFT size to get better bass resolution, but this also slows down the response. Super-resolution mode performs complicated processing, which keeps quick response in high frequencies as they are naturally quicker, but also highly enhances bass spectrum resolution. It requires additional CPU power.



Enable when hidden

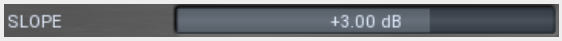
Enable when hidden causes the engine to process even when GUI is hidden. Otherwise the sonogram is stopped, therefore will not be immediately available when the GUI is shown again.

Analysis panel



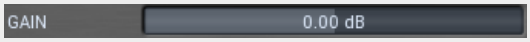
Analysis panel contains more advanced settings controlling the scientific parameters of the audio analysis.

Basic settings



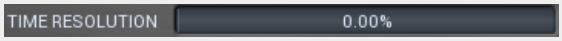
Slope

Slope makes the analyser increase magnitude of higher frequencies, since they are typically lower in energy. 3dB per octave is a typical value, which makes pink noise horizontal as pink noise contains equal energy in each octave. Therefore if you set slope to 3dB, the response would be the same for the FFT and 1/3 octave graphs.



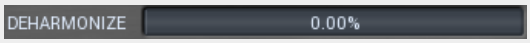
Gain

Gain makes all frequencies change magnitude by specified amount. This has no meaning when normalization is enabled.



Time resolution

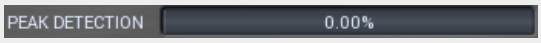
Time resolution improves time resolution, but lowers spectral resolution. This is typically useful for more scientific analyses, where the signal is moving quickly and you need to follow its movements quickly. This is often advantageous for sonograms with very high FFT sizes.



Deharmonize

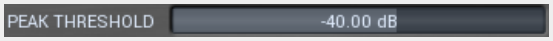
Deharmonize tries to remove harmonics in the content and leave only fundamentals. This may help you find the dominant frequencies in the signal.

Peak detection



Peak detection

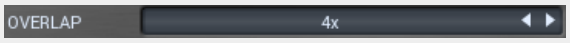
Peak detection tries to remove skirts of separate sinusoids letting you view the frequencies contained in your audio material. This may be handy when performing more scientific analyses.



Peak threshold

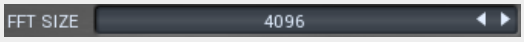
Peak threshold defines the level of a peak below the maximum used for peak detection. You can use this to control which peaks get through and get rid of small insignificant ones.

Scientific settings



Overlapping

Overlapping makes the analyser perform multiple FFT processing on the same data which results in better precision at the cost of higher CPU impact. With higher overlapping the response also speeds up.



FFT size

FFT size defines FFT processing block size. It basically controls the resolution. However for higher resolution in bass content it is recommended to use super-resolution mode instead as it keeps the quick response in higher frequencies.

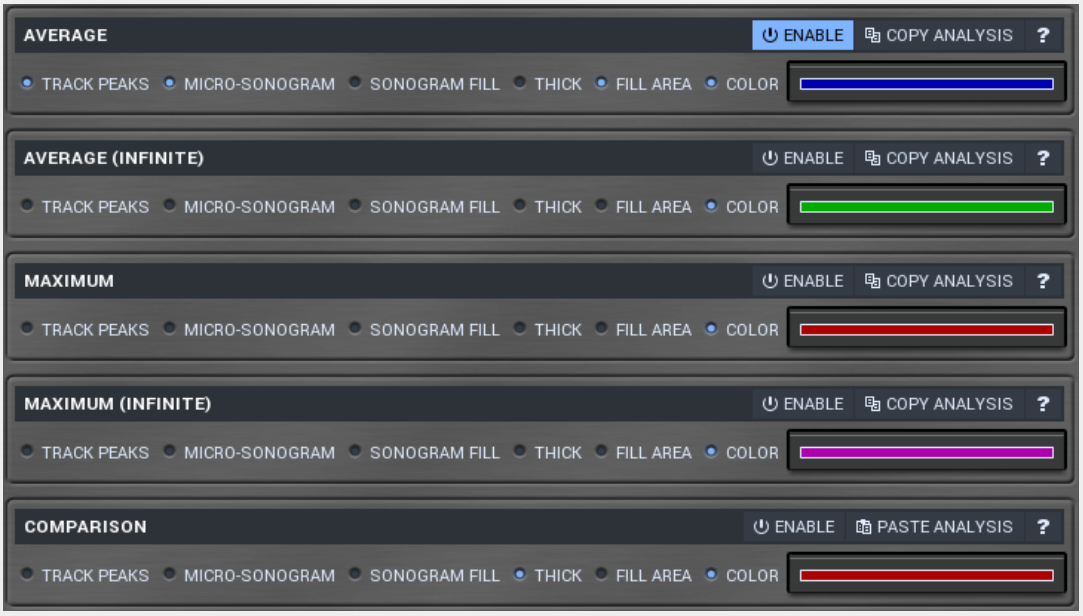
Window type

Window type defines type of the window used to preprocess source samples. This has several consequences in the frequency response, but it is a little scientific parameter. If you do not have specific requirements you can just leave this default.

ANALYTICAL SMOOTHING **Analytical smoothing mode**

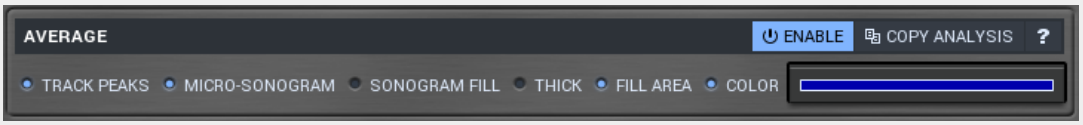
Analytical smoothing mode activates a more complicated smoothing algorithm, which provides more accurate results, however it may require much more CPU power. Unlike normal smoothing this method doesn't change proportions of frequencies with higher magnitudes. It is useful mostly for technical analysis and for most musical signals it is often better to use the default smoothing method.

Graphs panel



Graphs panel contains visual settings for the different graphs you can show in the analyzer.

Average



COPY ANALYSIS **Copy analysis button**

Copy analysis button copies current state of the analysis into a clipboard so you can paste it into another analyzer for comparison.

TRACK PEAKS **Track peaks**

Track peaks enables detection of frequencies with highest magnitudes. Displayed are those frequencies, which are at most 20dB lower than the maximum, and there may be at most 8 of them. Note that this feature requires additional CPU power.

MICRO-SONOGRAM **Sonogram**

Sonogram displays a small single-state sonogram in the bottom of the graph. This may help you compare relevant frequencies, because it is usually easier to compare colors than graph values.

SONOGRAM FILL **Fill**

Fill makes the sonogram enabled by **Show sonogram** fill the whole area.

THICK **Thick**

Thick makes the analysis graph use a thick line.

FILL AREA **Fill area**

Fill area makes the analysis graph filled. Note that this takes additional CPU power.

COLOR **Color**

Color changes color of the graph to the one editable next to it.

Average (infinite)

COPY ANALYSIS Copy analysis button

Copy analysis button copies current state of the analysis into a clipboard so you can paste it into another analyzer for comparison.

Maximum

COPY ANALYSIS Copy analysis button

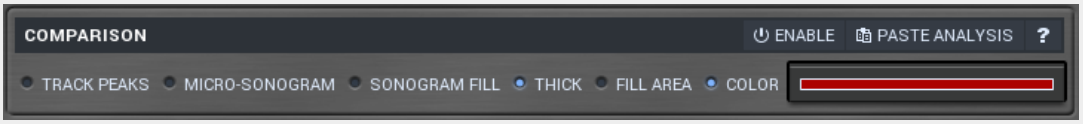
Copy analysis button copies current state of the analysis into a clipboard so you can paste it into another analyzer for comparison.

Maximum (infinite)

COPY ANALYSIS Copy analysis button

Copy analysis button copies current state of the analysis into a clipboard so you can paste it into another analyzer for comparison.

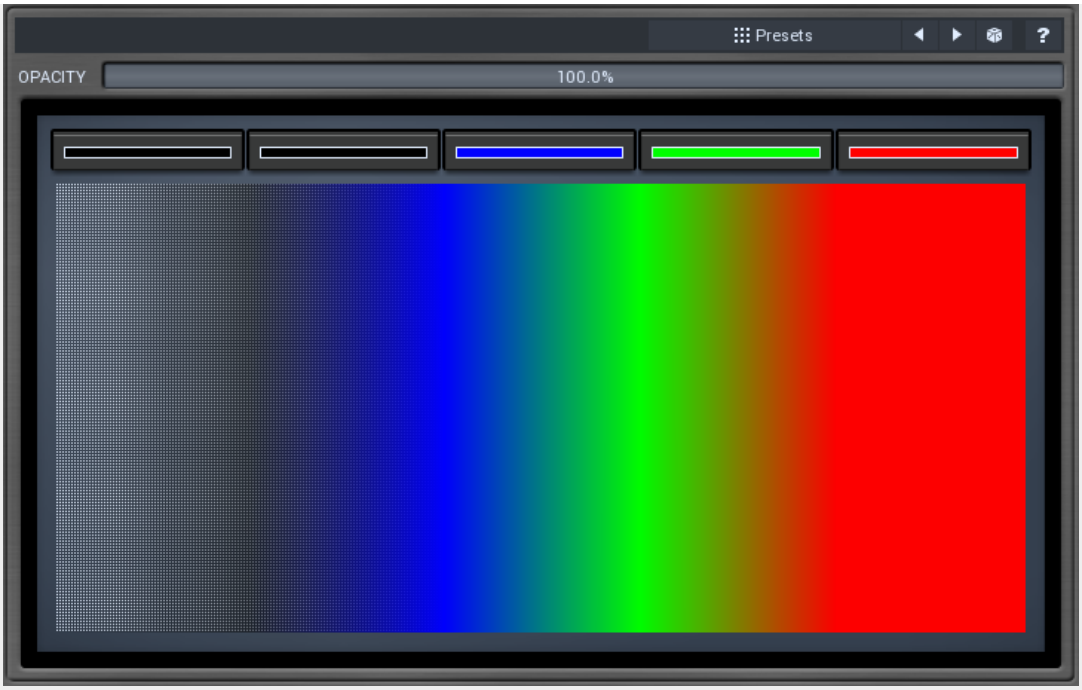
Comparison



PASTE ANALYSIS Paste analysis button

Paste analysis button pastes analysis from the system clipboard and displays it as this comparison. This way you can compare your analysis to any other analysis from MeldaProduction plugins.

Sonogram panel



Sonogram panel contains visual settings of the sonogram, mainly the sonogram colors. A sonogram uses a set of colors. When the particular frequency's level is minimum, the first color is used. When it is maximum, the last color is used. Otherwise it interpolates colors in between.

Presets button

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

Left arrow button

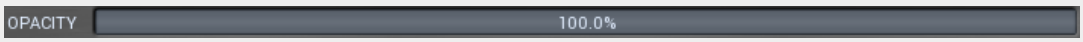
Left arrow button loads previous preset.

Right arrow button

Right arrow button loads next preset.

Randomize button

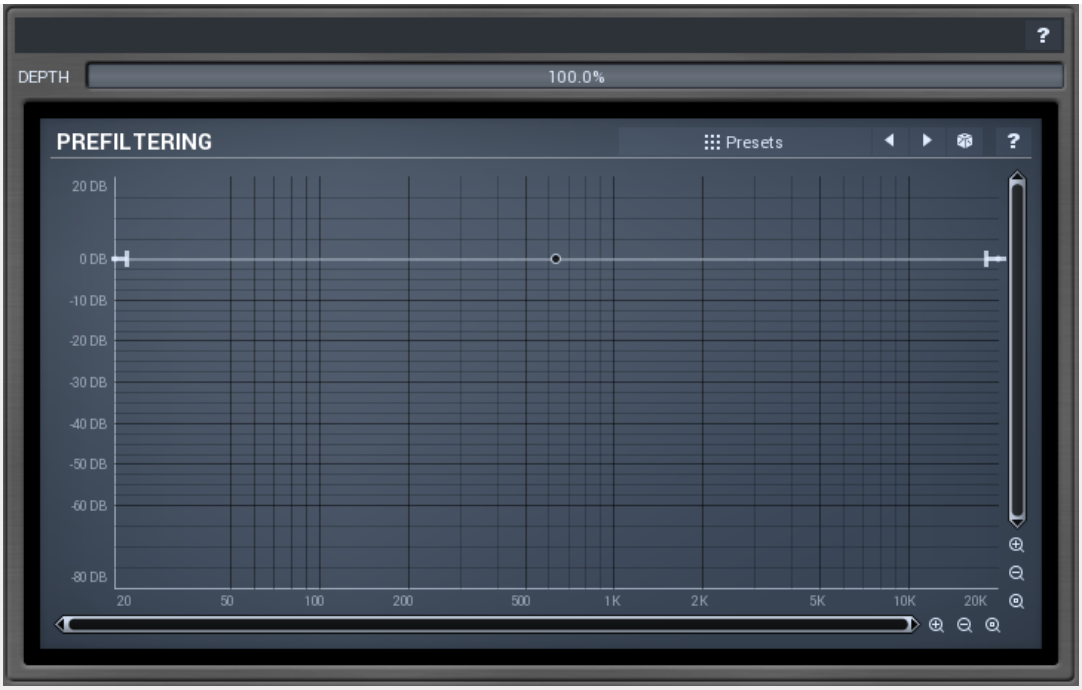
Randomize button loads a random preset.



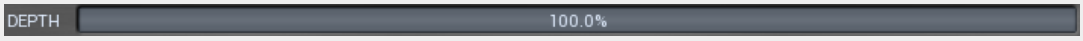
Opacity

Opacity controls opacity of the sonogram.

Prefiltering panel



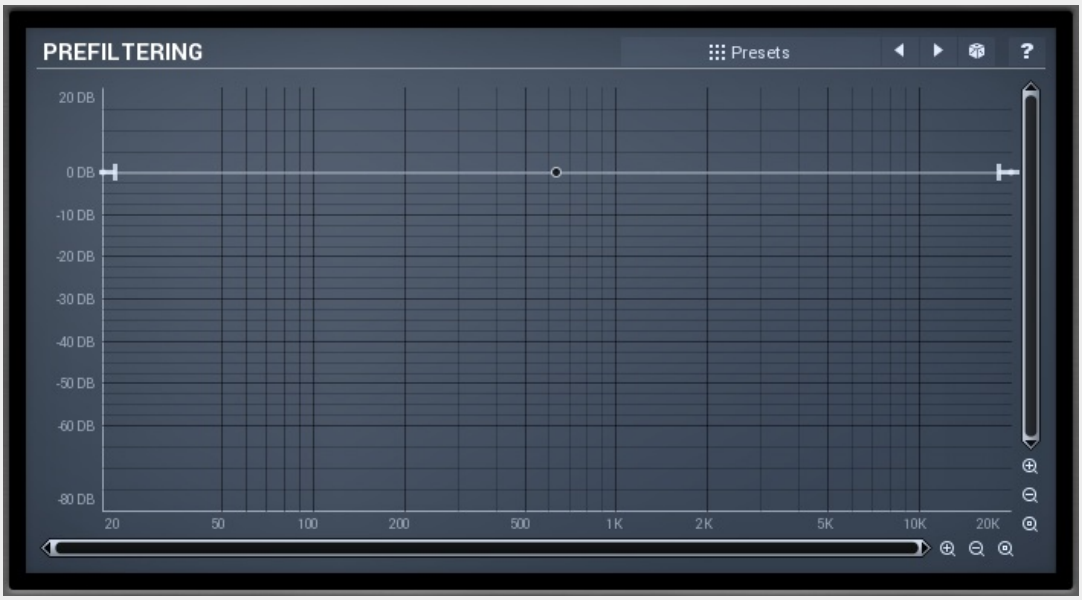
Prefiltering panel provides the optional prefiltering, which means that level of each frequency is either increased or decreased. Normally the analyzer shows scientific levels of each frequency.However you can for example use the predefined loudness curves, which makes the analyzer show how the human auditory system responds to the frequencies, so it in fact provides more accurate analysis taking into account, that human hearing is more complicated than the mathematical model.



Depth

Depth controls the amount of prefiltering. 100% makes the analyzer follow the prefiltering graph precisely, 0% essentially disables this feature.

Prefiltering



Envelope graph

Envelope graph provides an extremely advanced way to edit any kind of shape you can imagine. An envelope has a potentially unlimited number of points, connected by several types of curves with adjustable curvature (dot in the middle) and surroundings of each point can also be automatically smoothed using the smoothness (horizontal pull rod). You can also literally draw the shape in drawing mode available via the main context menu.

- **Left mouse button** can be used to select points. If there is a *point*, you can move it (or the entire selection) by dragging it. If there is a *curvature circle*, you can setup tension by dragging it. If there is a *line*, you can drag both edge points of it. If there is a *smoothing controller*, you can drag its size. Hold **Shift** to drag more accurately. Hold **Ctrl** to create a new point and remove any points above or below.
- **Left mouse button double click** can be used to create a new point. If there is a *point*, it will be removed instead. If there is a *curvature circle*, zero tension will be set. If there is a *smoothing controller*, zero size will be set.

- **Right mouse button** shows a context menu relevant to object under the cursor or the entire selection. Hold **Ctrl** to create or remove any points above or below.
- **Middle mouse button** drag creates a new point and removes any points above or below. It is equal to holding Ctrl and dragging using left mouse button.
- **Mouse wheel** over a point modifies its smoothing controller. If no point is selected, the entire selection is modified.
- **Ctrl+A** selects all points. **Delete** deletes all selected points.

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

Left arrow button
Left arrow button loads previous preset.

Right arrow button
Right arrow button loads next preset.

Randomize button
Randomize button loads a random preset.

button
This button stops the analyzer temporarily.

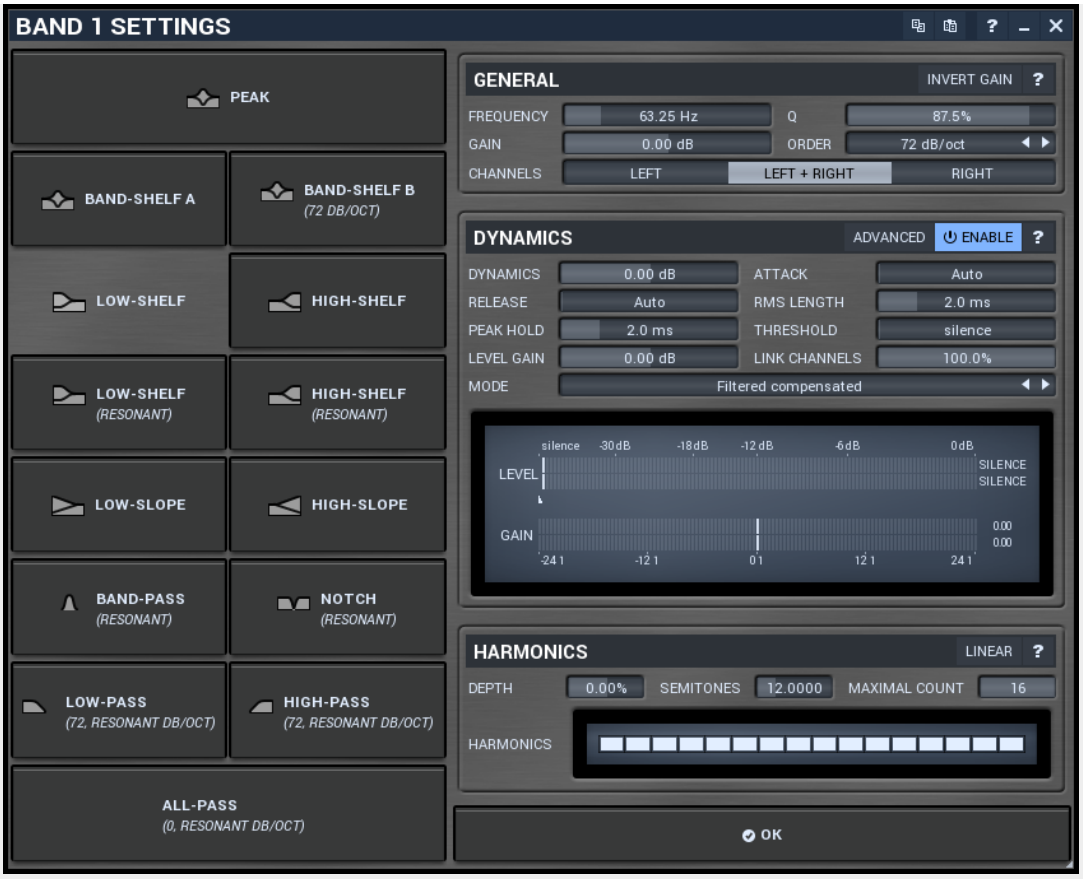
Normalize button
Normalize button enables or disables the normalization, which makes the loudest frequency reach 0dB. This is very useful for comparing frequency levels, however it hides the overall level.
When comparing 2 spectrums you are usually interested mainly in the frequency level differences. In most cases both audio materials will have different overall levels, which would mean one of the graphs would be "lower" that the other making the comparison quite hard. Normalize fixes this and makes the most prominent frequencies of the spectrum touch the top of the analyzer (or have the most highlighted color in case of sonogram).

Reset button
Reset button resets analyzer graphs. This is particularly useful when analyzing infinite average and maximum.

button
This button copies current analysis to clipboard. Then you can use the paste button to show the analysis in any of analyzer instanced.

button
This button pastes analysis from the system clipboard and displays it in the graph.

Band settings window



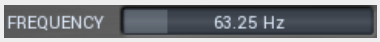
Band settings window contains settings for the particular band and can be displayed by right-clicking on a band or from a band list (if provided). On the left side you can see list of available filters, click on one to select it. On the right side, additional options and features are available.

General panel

General panel contains standard filter settings such as frequency or Q. Most of these values are available directly from the band graph, but it may be necessary to use these controls for more accurate or textual access.

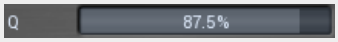
Invert gain

Invert gain inverts the gain of the band, e.g. makes -6dB from +6dB.



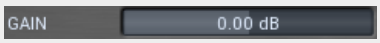
Frequency

Frequency defines band central frequency, which has different meaning depending of filter type.



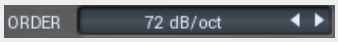
Q

Q defines bandwidth. Note that Q is an engineering term and the higher it is, the lower the bandwidth. Therefore our implementation is trying to be more user-friendly, and by increasing the value (thus to the right), the bandwidth is increased as well. The editor still displays the Q value correctly.



Gain

Gain defines how the particular frequencies are amplified or attenuated. This parameter is used only by peak and shelf filters.



Order

Order can potentially duplicate some of the filters creating steeper ones. By default, the order is 12 dB/oct using 2-pole filters. By specifying 24 dB/oct the plugin uses 4-pole filters instead etc.

Channels

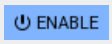
Channels controls which channels the band processes. If the input is stereo (left and right channels), then you can make a band process only left, only right, or both channels. Similarly when the plugin is set to M/S channel mode, you can choose between mid, side or both channels. You cannot process left with one band and side with the other, because these are working in different encodings. However you can easily place 2 instances of the plugin, one in L/R mode and the other in M/S.

Dynamics panel

Dynamics panel contains settings of the dynamics processing which control how the filter behaves depending on input signal. Normal filters are static, meaning they don't change any features depending on the input signal. If you enable dynamic properties, by making the **dynamic gain** nonzero, the filter will start listening to input signal. This requires more CPU of course, as such a band is essentially and extremely complex generalized compressor, but the used algorithms are as efficient as it is technically possible.
A dynamic band varies the gain according to input level. It can listen to the whole spectrum or just part of it. By default it is driven by the part spectrum, which it modifies itself, so when you have a high shelf, it is essentially listening to high part of the spectrum. You can do many things with such a dynamic processor, but essentially it can work as a compressor or expander. There are many more advanced ideas you can do with it and the full power hasn't really been explored yet.

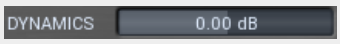
Advanced button

Advanced button displays additional settings for this band. These contain some more esoteric features, such as a dynamic transformation shape.



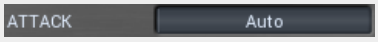
button

This button enables the dynamic processing. You can use it to switch between enabled and disabled dynamic processing to check the differences.



Dynamics

Dynamics defines the maximum gain of the filter caused by the input signal. For example, if you set -24dB and the input signal contained in the band will be very strong, the band will be set to additional -24dB. This would work similarly to a compressor in that band.



Attack

Attack defines the attack time, thus how quickly level detector increases the measured input level. The shorter the attack time, the faster the response is. When the input peak level is higher than current level measured by the detector, the detector get into the attack mode, in which the level is increasing depending on the input signal. The higher the input signal is, the faster the level rises. And also the shorter the attack time, the faster the level rises.

There must be a reasonable balance between attack and **release** times. If the attack is too long compared to release, the detector would tend to keep the level low, because release would cause the level to fall too quickly. Hence in most cases you may expect the attack time to be shorter than the release time.

To understand the working of a level detector, it is best to cover the typical cases:

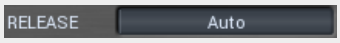
*In a **compressor** the attack time controls how quickly can the level get above the threshold and the processor can start compressing. As a result a very short attack time will compress even beginning transient of a snare drum for example, hence it would remove the punch. A very long attack on the other hand will avoid even reaching the threshold, so the compressor may not do anything.*

*In a **limiter** the attack becomes a very sensitive control defining how much is the signal limited and how much saturated/clipped. If the attack is very low, the limiter catches most peaks itself and reduces them. That provides lower distortion, but can cause pumping. On the other hand higher attack (even above 1ms) may let most peaks through the*

limiter to the clipper or saturator, which causes more distortion of the initial transient, but less pumping.

*In a **gate** the situation is similar to a compressor - attack time controls how quickly can the level get above the threshold where the gate opens. In this case you will usually need very low attack times, so that the gate reacts quickly enough. The inevitable distortion can then be avoided using look-ahead and hold parameters.*

In a modulator, the detector is driving other parameters or a filter for example and the situation really depends on the target. If you want the detector to react quickly on the input level rising, use shorter attack times. if you want it to slowly follow flow of the input signal, use longer attack and release times.



Release

Release defines the release time, thus how quickly level detector decreases the measured input level. The shorter the release time, the faster the response is. When the input peak level is higher than current level measured by the detector, the detector get into the attack mode, in which the level is increasing depending on the input signal. The higher the input signal is, the faster the level rises. And also the shorter the attack time, the faster the level rises.

There must be a reasonable balance between **attack** and release times. If the attack is too long compared to release, the detector would tend to keep the level low, because release would cause the level to fall too quickly. Hence in most cases you may expect the attack time to be shorter than the release time.

To understand the working of a level detector, it is best to cover the typical cases:

*In a **compressor** the release time controls how quickly can the level fall below the threshold and the compression stops. As a result a very short release time makes the compressor stop quickly leaving the sustain of a snare drum for example intact. A very long release other hand keeps the compression working longer, hence it is useful to stabilize the levels.*

*In a **limiter** the release time keeps the level above the limiter threshold causing the gain reduction. Having a very long release time in this case doesn't make sense as the limiter would be working continously and the effect would be more or less the same as simply decreasing the input gain manually. However too short release time lets the limiter stop too quickly, which usually causes distortion. Hence release time is used to avoid distortion at the expense of decreasing output level.*

*In a **gate** the situation is similar to a compressor - release time controls how quickly can the level fall below the threshold where the gate closes. Since ear response better to the attack and sustain is masked by the initial transient, having longer release time in a gate is a perfectly acceptable option. The release time will basically control how much of the sound's sustain will pass.*

In a modulator, the detector is driving other parameters or a filter for example and the situation really depends on the target. If you want the detector to react quickly on the input level falling, use shorter release time.

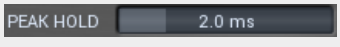
RMS length

RMS length smoothes out the input, so the level detector gets already preprocessed signal without so many fluctuations. With minimum value this becomes a so-called "peak detector", otherwise it is an "RMS detector".

When you look at a typical waveform in any editor, you can see that the signal changing a lot and contains various transient bursts and separate peaks. This is especially noticeable for rhythmical signals, such as drums. Trying to think how a typical attack/release detector works with such a wild signal may be complex, at least. RMS essentially takes surrounding samples and averages them in a way. The result is much smoother signal with less individual peaks and short noise bursts.

RMS length controls how many samples are averaged. It stabilizes the levels, but it also causes slower response. As such it is great for mastering, when you want to lower the dynamic range in a very soft way without any instabilities. However it is not really desired for processing drums for example, where the transient bursts may actually be individual drum hits, hence it is usually recommended to use peak detectors for percussive instruments.

Note that the RMS detector has 2 modes - a simplified approximation is used by default, and a true RMS is processor can be enabled from the advanced settings (if provided). Both respond differently, none of them is better than the other, they are simply different.



Peak hold

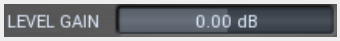
Peak hold defines the time that signal level detector holds its maximum. You can imagine that when an attack stage ends, before the release stage starts, there can be an additional peak hold stage and the level is not falling yet. This is true only when **true peak** mode is enabled (check advanced detector settings if available).

It is often used in **gates** to avoid the level falling below the threshold too quickly, while having short release times. If you want the gate to close quickly, you need a short release time. But in that case the ending may be too abrupt and even cause some distortion. So you use the peak hold to delay the release stage.

It is also used along with **look-ahead** to avoid distortion in **limiters and compressors**. If you need a very short attack, the attack stage may be too quick and cause distortions. In limiters this attack is often 0ms, in which case it becomes a clipper. Setting look-ahead and peak hold to the same value will make the detector move ahead in time, so it can react to attack stages before they actually occur and yet hold the levels for the actual signal to come.

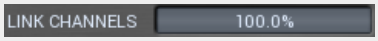
Threshold

Threshold controls minimum level at which the dynamic gain actually starts working.



Level gain

Level gain controls gain applied on the detector, which can be used for example when the input level is too low, so that dynamic processing becomes negligible.



Link channels

Link channels controls how much the signal level for each channel is controlled by the other channels. With 0% the link is disabled and each channel is not affected by other channels at all. This is suitable to ballance stereo channels, for example. With 100% the link is enabled and all channels are controlled by levels of all channels equally, therefore the processor will apply the same amount of processing on all channels. This is default in most cases as it preserves levels between channels for example.

Mode

Mode controls the way the band reacts on input signal. It has no meaning if the dynamic gain is 0dB.
Filtered compensated mode is default and it means that the source for measuring input level is filtered signal with additional compensation. For example, when using a low-shelf filter, the signal is low-passed with a filter with the same settings as the low-shelf, therefore the low-shelf filter is affected by the signal the low-shelf is actually amplifying or attenuating. Since low-passed signal with cut-off at 100Hz has usually much lower level than the one filtered with cut-off at 10kHz, additional compensation is performed to diminish these differences.
Filtered mode is similar, but the compensation is not performed. This may be advantageous for audio materials not containing the full spectrum, e.g. bass line, where the compensation may make things complicated.
Entire spectrum mode is the simplest - it simply takes the input signal without any further processing. This may be useful for example to attenuate selected frequencies when the input level gets too high.

meters

Threshold

Threshold controls minimum level at which the dynamic gain actually starts working.

Harmonics panel

Harmonics panel contains parameters of harmonics - cloned bands created at defined higher frequencies. This is often useful to remove natural noises, which usually bring some harmonics with them etc.

Linear button

Linear button enables the linear harmonics spacing. When the band frequency is say 100Hz, then in the default logarithmic mode the harmonics are 200Hz, 400Hz, 800Hz etc. This is suitable, because the filters themselves are logarithmic, however harmonics generated by physical instruments are not spaced this way, but rather 200Hz, 300Hz, 400Hz, 500Hz etc. In linear mode the harmonics work this way, but note that then there is only a limited set of harmonics and Q is modified to approximate a reasonable behaviour, which is not always possible.

Depth

Depth defines gain of the created harmonics. With maximum depth, all harmonics will have the same gain as the original band. Lower value makes higher harmonics have lower gain. Negative depth may even make one have positive and the other negative gain and is particulary useful for creative effects.

Semitones

Semitones defines frequency of the harmonics. For example if the band is at 100Hz and number of semitones is 12 (default), then the first harmonic will be at 200Hz (12 semitones higher), second at 400Hz etc., thus logarithmically spaced harmonics. When linearily spaced harmonics are enabled, this merely changes the ratio between them. In this mode, 100Hz is followed by 200Hz, 300Hz, 400Hz, 500Hz etc.

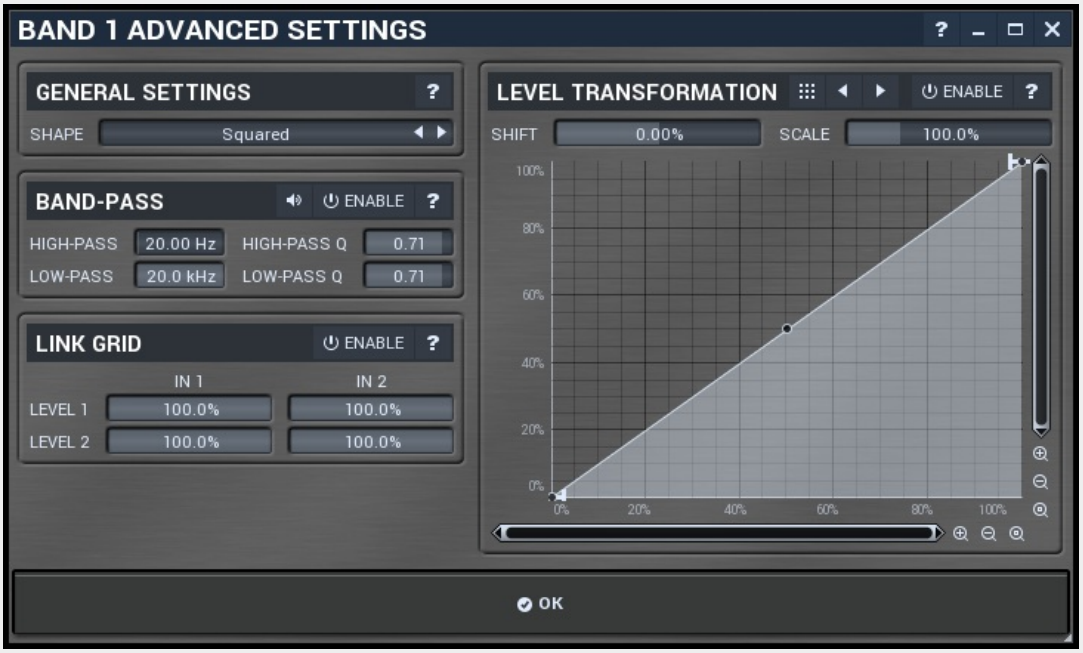
Maximal count

Maximal count defines maximum number of harmonics created.

Harmonics grid

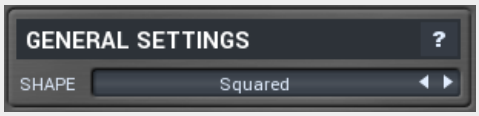
Harmonics grid is useful to manually turn on/off particular harmonics.

Band advanced settings

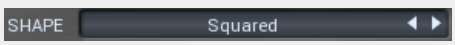


Band advanced settings contains additional settings for the band. These contain some more esoteric features, such as a dynamic transformation shape. It can be displayed by clicking right mouse button on a band while holding **ctrl**, from the basic band settings window, or from the band list if provided.

General settings panel



General settings panel contains additional parameters, which are too scientific to be available from the main band settings.



Shape

Shape affects the processing shape. The plug-in features special non-linear transfer shapes which affect the way the level is interpreted. **Logarithmic** mode is the most physical one, increase from -90dB to -80dB and from say -10dB to 0dB produces the same difference in the output dynamic gain. However from the nature of it is tends to generate high gains and usually a threshold is needed to set. **Linear** mode on the other hand tends to stay near minimum gains and usually is the most aggressive. **Squared** mode is a compromise between these two. Comparing the three modes, Linear mode requires the least amount of CPU power and Logarithmic requires the most.

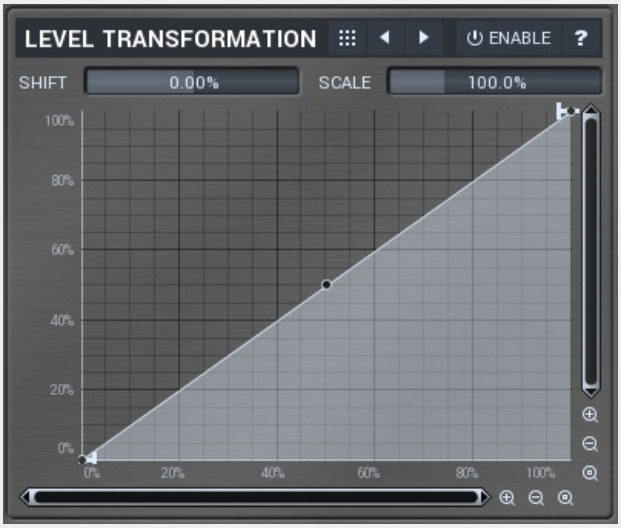
Band-pass panel

Band-pass panel contains parameters of the band pass, which you can use to additionally process the signal used measure level of the band. For example, you may want a band at high frequencies react to bass content by placing the band anywhere on the high frequencies and set the low-pass at say 200Hz.

button
This button enables tha band-pass monitoring and hence could be useful to tweak the band pass.

ENABLE button
This button enables the band-pass module. It is off by default to save CPU resources.

Level transformation



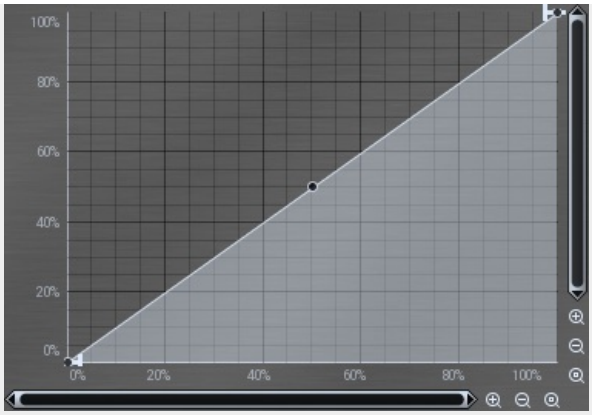
Level transformation graph lets you transform the dynamic gain according to input level. X axis contains the input level, Y axis controls the output level, which is then used to set the dynamic gain.

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

Left arrow button
Left arrow button loads previous preset.

Right arrow button
Right arrow button loads next preset.

ENABLE Enable button
Enable button enables the level transformation module. It is off by default to save CPU resources.



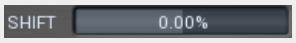
Graph editor

Graph editor lets you edit the envelope graph.

Envelope graph

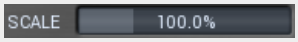
Envelope graph provides an extremely advanced way to edit any kind of shape you can imagine. An envelope has a potentially unlimited number of points, connected by several types of curves with adjustable curvature (dot in the middle) and surroundings of each point can also be automatically smoothed using the smoothness (horizontal pull rod). You can also literally draw the shape in drawing mode available via the main context menu.

- **Left mouse button** can be used to select points. If there is a *point*, you can move it (or the entire selection) by dragging it. If there is a *curvature circle*, you can setup tension by dragging it. If there is a *line*, you can drag both edge points of it. If there is a *smoothing controller*, you can drag its size. Hold **Shift** to drag more accurately. Hold **Ctrl** to create a new point and remove any points above or below.
- **Left mouse button double click** can be used to create a new point. If there is a *point*, it will be removed instead. If there is a *curvature circle*, zero tension will be set. If there is a *smoothing controller*, zero size will be set.
- **Right mouse button** shows a context menu relevant to object under the cursor or the entire selection. Hold **Ctrl** to create or remove any points above or below.
- **Middle mouse button** drag creates a new point and removes any points above or below. It is equal to holding Ctrl and dragging using left mouse button.
- **Mouse wheel** over a point modifies its smoothing controller. If no point is selected, the entire selection is modified.
- **Ctrl+A** selects all points. **Delete** deletes all selected points.



Shift

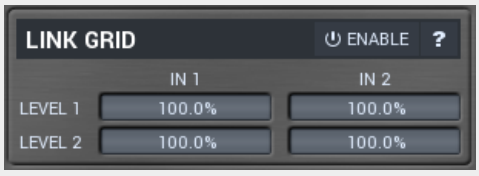
Shift lets you virtually shift the whole graph vertically. This basically shifts the dynamic gain.



Scale

Scale lets you virtually scale the whole graph vertically. This basically scales the dynamic gain.

Link grid panel



Link grid panel controls linking between channels, thus how input level in each channel controls level in other channels. By default the way channels affect processing in other channels depends solely on the **link** parameter. Here you can however setup more complicated relation. For example, you can make left channel list to right channel only and vice verse. Horizontal axis contains input channels, vertical axis contains output levels. hence each row basically contains mix factors for all inputs.

Enable button

Enable button enables the link-grid module. It is off by default to save CPU resources.

Bands panel

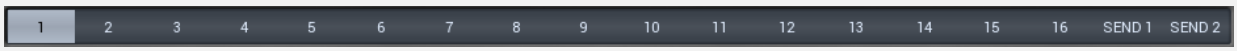
Bands panel contains the list of available bands along with their basic parameters. You can use it to enable/disable a band, change the parameters and show the settings window if you don't like editing the bands from the equalizer panel or if you need to set some values by text. The panel is collapsed by default, because it takes lots of space.

RESET Reset button

Reset button restores the original equalizer settings.

INVERT Invert button

Invert button inverts gains of all bands.



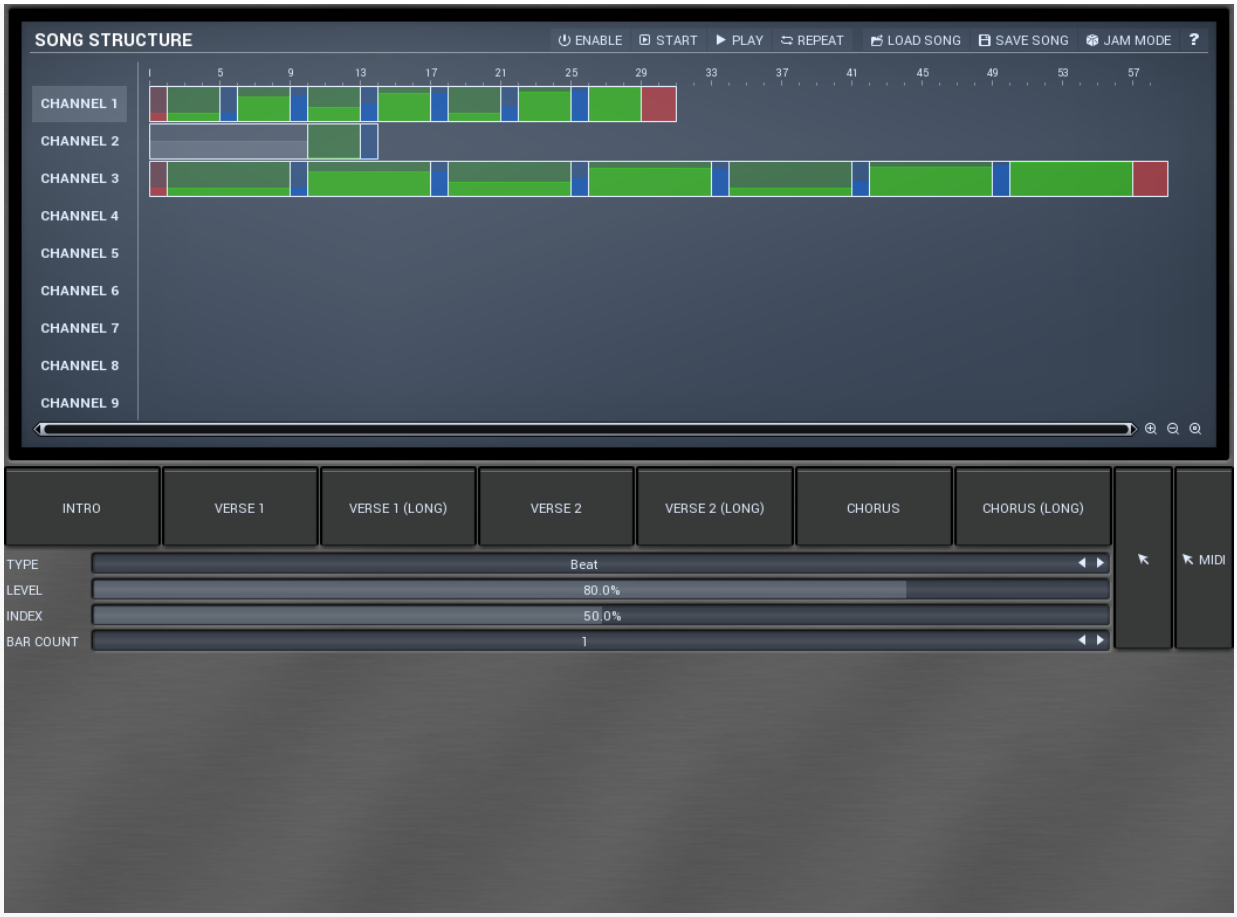
Pipeline selector

Pipeline selector lets you choose, which effect pipeline you want to edit. There is an effect pipeline for all output channels and all sends.

Global enable button

Global enable button enables or disables all global effect pipelines.

SONG TAB



Song tab contains the integrated song sequencer. It is provided as complementary to the MIDI command method. Song sequencer is easier to use, but far less versatile. However it provides features to actually convert the arrangement into MIDI commands, so you can actually edit your arrangement here, then drag & drop the MIDI command file into your host and stop using the sequencer afterwards.
It also lets you create actual MIDI performance - no commands, but true drum MIDI file - this may come handy, if you want to edit the drum performance manually afterwards.
Finally, if you want to use MDrummer for jamming, the song sequencer is the way to go.

Song structure panel

Song structure panel presents an alternative way to MIDI commands. You can create a predefined song structure containing verses, refrains etc. and MDrummer will follow them. This is the easiest way, however MIDI command system is much more flexible. Note that when you start using song structures, you should not use MIDI commands anymore, since it would collide with the song structure system.

Song structure editor shows all rhythm channel structures, so you can easily create your song layout. Then you can use the load & save buttons to store it with all other MDrummer settings, so when you load it next time, MDrummer will be in the same state as before. This is very powerful tool for realtime performances.

Moreover you can use the song structures to edit just a single rhythm structure and then render it as MIDI commands or even the notes themselves using the arrow buttons in the bottom.

ENABLE Enable button

Enable button toggles the song structure mode. When it is enabled you should not use MIDI commands, since they will be in conflict. However

you can use jam-mode.

START Start button
Start button starts song playback from the beginning of the song.

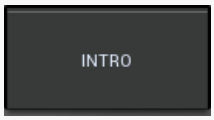
PLAY Play button
Play button starts or stops the playback.

REPEAT Repeat button
Repeat button makes MDrummer repeat the song at the end of it. This is especially useful for jamming, where the typical arrange contains just a single section repeated allover again and adjusting your playing input.

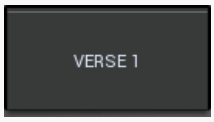
LOAD SONG Load song button
Load song button loads the entire song and MDrummer settings. This is very useful for realtime performances - you select your drumsets, rhythms, song structures and other settings, and store them using the **Save song button**. Then you can load all of it using the load button.

SAVE SONG Save song button
Save song button saves the entire song with all MDrummer settings. This is very useful for realtime performances - you select your drumsets, rhythms, song structures and other settings, and store them this way. Then you can load all of it using the **Load song button**.

JAM MODE Jam mode button
Jam mode button makes enables or disables jam mode for all rhythms. When enabled, MDrummer listens to the input MIDI data and makes the decisions about rhythm level on its own. It still follows the arrange, but whether you are going to a refrain or verse is detected automatically for example. Take your time to learn to be able to control MDrummer by your playing well enough.

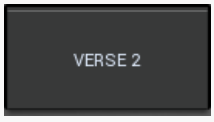


Intro button
Intro button adds an intro to the selected rhythm channel track.



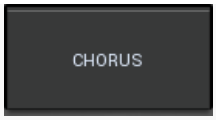
Verse 1 button
Verse 1 button adds an verse to the selected rhythm channel track.

Verse 1 (long) button
Verse 1 (long) button adds a long verse to the selected rhythm channel track.



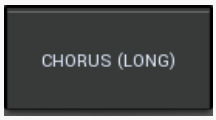
Verse 2 button
Verse 2 button adds an verse to the selected rhythm channel track.

Verse 2 (long) button
Verse 2 (long) button adds a long verse to the selected rhythm channel track.



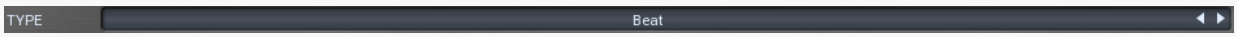
Chorus button

Chorus button adds a chorus to the selected rhythm channel track.



Chorus button

Chorus button adds a chorus to the selected rhythm channel track.



Type

Type defines loop type to play in the song part.

Level

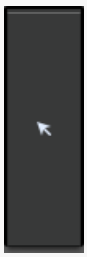
Level defines loop level to play in the song part. It is relevant only if jam mode is disabled.

Index

Index defines index of the loop if there are more of them available. It is used the same way as velocity in the MIDI command method. First you have to disable random loops in the Rhythm settings. MDrummer will then select loops according to this index, which also means that if you leave defaults, MDrummer will play the same loop all-over again.

Bar count

Bar count defines number of bars the part should have. It is however available for some types only, since for example breaks must always be 1 bar long.



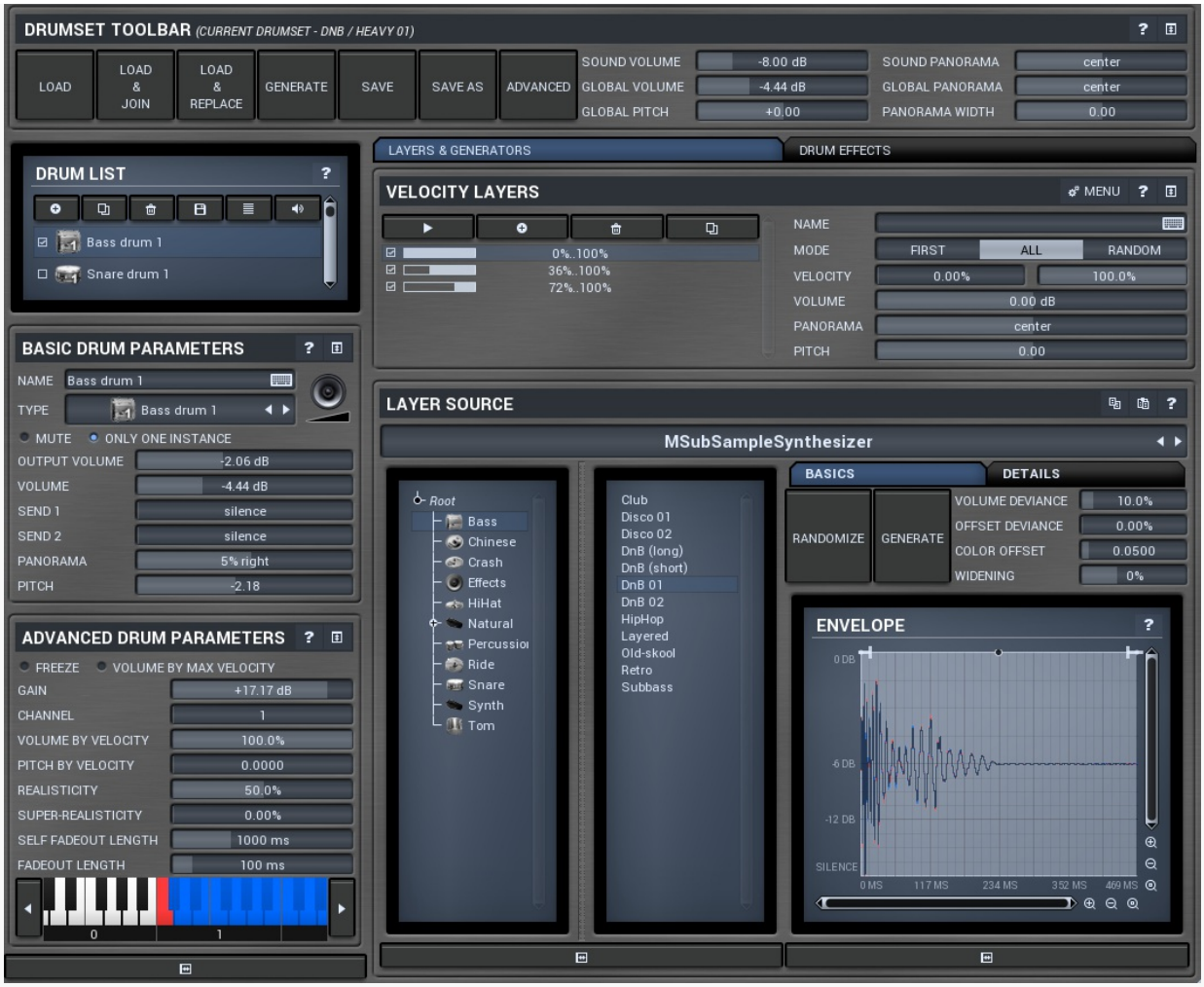
Arrow drag & drop button

Arrow drag & drop button converts the song structure into a MIDI command file, which you can drag & drop to your host (or somewhere else).

MIDI arrow drag & drop button

MIDI arrow drag & drop button renders the entire song into a MIDI file, which you can drag & drop to your host (or somewhere else).

DRUMSET EDITOR TAB



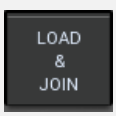
Drumset editor tab provides an extremely versatile drumset editor, where you can edit every aspect of the MDrummer's powerful sound generator engine. You can edit each of the unlimited number of drums in your drumset, from basic settings such as volume or panorama to the drum sources (generators) in each of the unlimited number of layers and per-drum effect pipeline with unlimited number of effects.

Drumset toolbar

Drumset toolbar contains general functions to manage current drumset and global sound properties.

Load

Load button loads a drumset from a file. Shortcut : F3



Load & Join

Load & Join button loads a drumset from a file and appends it to the current one. Using this feature you can combine several drumsets to produce a very full sound. Shortcut : F4

Load & Replace

Load & Replace button loads drumset from a file and appends it to the current one and removes any existing drums of the same type as those in the drumset being loaded. Using this feature you can easily replace drumset components. Shortcut : F6

Generate button

Generate button creates a drumset from several files inside Components subdirectory or even using completely original generated components. Hold **Ctrl** to keep the original drumset and join the new generated one. Hold **Shift** to let MDrummer generate 2 drumsets and merge them. This way you usually get fuller sound with even bigger variability at the expense of higher CPU cost. Shortcut : F5

Save

Save button saves the drumset to its file (defined by name). Shortcut : F2

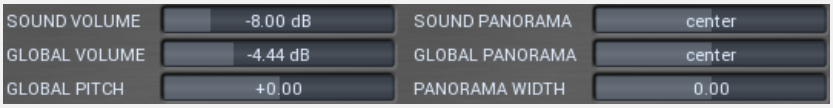
Save as

Save as button saves the drumset to another file.

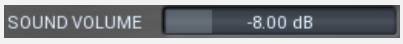
Advanced

Advanced button provides additional features such as import of NI Battery kits, drumset archivation and storing output channel mapping.

Sound settings toolbar

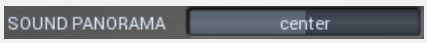


Sound settings toolbar contains general functions to manage global sound properties.



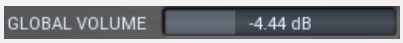
Sound volume

Sound volume defines output volume for all output channels and is applied immediately as opposed to global volume. Sound volume is automated via standard MIDI messages.



Sound panorama

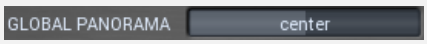
Sound panorama defines output panorama for all output channels and is applied immediately as opposed to global panorama. Sound panorama is automated via standard MIDI messages.



Global volume

Global volume defines volume of new sounds. When a note is played, MDrummer takes actual global volume value and assigns it to that note. Therefore if you change global volume quickly, more than one event can play at the time and each of them can have different volume.

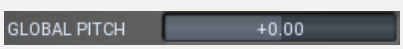
This produces more natural sound. However since it is applied before the effect pipeline, it might even change the sound character. This pays mostly for nonlinear effects such as compressor or limiter. On the other hand it theoretically simulates a drummer playing hard or soft.
This parameter can be automated.



Global panorama

Global panorama defines panorama of new sounds. When a note is played, MDrummer takes actual global panorama value and assigns it to that note. Therefore if you change global panorama quickly, more than one event can play at the time and each of them can have different panorama.

This produces more natural sound. However since it is applied before the effect pipeline, it might even change the sound character. This pays mostly for nonlinear effects such as compressor or limiter.
This parameter can be automated.



Global pitch

Global pitch defines output pitch of new sounds. When a note is played, MDrummer takes actual global pitch value and assigns it to that note. Therefore if you change global pitch quickly, more than one event can play at the time and each of them can have different pitch.
Note that this works even if some drums are frozen, in which case MDrummer needs to apply additional pitch change and while it can be CPU

expensive, you should let it be zero for maximal performance. It is not significant for drums that are not frozen.
This parameter can be automated.

Panorama width

Panorama width affects actual panorama settings for all drums. If you increase this value above zero, panorama of all drums will be also increased. Thus increasing this value will make resulting sound somewhat spatial. But note that it can only modify panorama settings, it does not accomplish any kind of stereo expansion.
This parameter can be automated.

Drum list

Drum list contains list of drums in the drumset. Toolbar on the top provides functions such as loading a drum from a file. Moreover you can move drum order by click and dragging a drum, the order doesn't change the resulting audio at all.Parameters of selected drum you can setup in editors located below and on the right.

Drag & drop samples from your file explorer into the drum list and MDrummer will import these samples and manage velocity layers for selected drum.

Each drum list item has a **checkbox** next to it. The checks change depending on the selected drum and control which drums are "closed" by it. This is mostly useful for hi-hats, where closed hi-hat stops open hi-hat from playback. In this case you should select closed hi-hat and check open hi-hat, which will ensure that every hihat hit will close open hihat sound if preset, hence it will simulate closing the hihat.

Add button

Add button creates new drum and lets you choose its type. Shortcut : Insert

Duplicate button

Duplicate button duplicates selected drum. Shortcut : D

Delete button

Delete button deletes selected drum. Shortcut : Delete

Save button

Save button saves selected drum to a file. Shortcut : Ctrl+F2

List button

List button toggles report/overview drum list mode. Overview mode is more compact so it is suitable for large drumsets.

Solo button

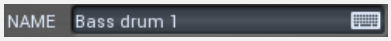
Solo button soloes the drum, hence it mutes/unmutes all drums except the selected one. Shortcut : S

Basic drum parameters

Basic drum parameters panel contains basic parameters of the selected drum -appearance, sound and behavior. Actual drum sound is generated by drum layers, which you can edit on the right side. Each drum also has an effect pipeline editable on the right side as well.

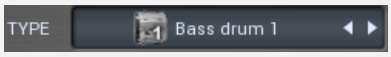
Drum pad button

Drum pad button triggers the drum sound the same way MIDI or the rhythm engine does. The further right you click, the higher velocity it will have. Shortcut : A



Name

Name of selected drum. It is only informational, basically you can leave it with original value corresponding to actual drum type.



Drum type

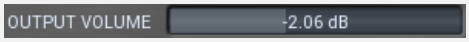
Drum type serves as a shortcut for some settings common to some specific types of drums. You just need to change drum type and MDrummer configures all basic settings, such as name, MIDI keys and image of the drum. It also serves to maximize compatibility in MDrummer's rhythm engine. Internally MDrummer doesn't use MIDI at all as this archaic format is very limited. It identifies the drums using their type instead, which ensures that every drumset and rhythm is compatible with each other. Of course, rhythms designed for congas won't be compatible with classic drumsets containing bass and snare drums for example.

Muted

Muted drum does not generate any sound. Shortcut : M

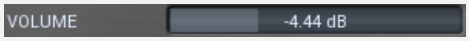
Only one instance

Only one instance trigger can solve problems with long sounds. Normally a drum is polyphonic, but if you enable this trigger, it becomes monophonic. This means that when you hit the drum, it sounds and when you hit it again, the first hit quickly fades out.
Using this trigger you can prevent stacking up too many of long sounds (e.g. ride cymbals), that may normally howl down all other drums and even exceed 0dB.



Output volume

Output volume defines volume of the drum sound applied after the effect pipeline.

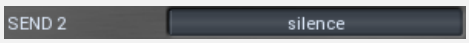


Volume

Volume defines volume of the drum sound. It is applied before the effect pipeline so it can actually change the sound character.

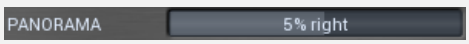
Send 1

Send 1 defines amount of signal sent to send 1 effect pipeline.



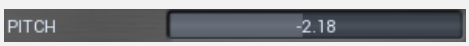
Send 2

Send 2 defines amount of signal sent to send 2 effect pipeline.



Panorama

Panorama defines panorama of the drum sound.



Pitch

Pitch defines pitch change of the drum sound.

Advanced drum parameters

Advanced drum parameters panel contains additional parameters of selected drum -behavior, routing, MIDI settings etc.

Freezing capability

Freezing capability can heavily decrease CPU usage of audio processing by precomputing entire drum sound, even with effects.
Freezing prerenders only one drum sound for each velocity layer, of course. This can have impact on the sound, while some drum source plug-ins may be velocity dependent and some effect plugins (e.g. waveshaper) do take care about velicity and time too. On the other hand freezing sound modification is often not so audible and may even be useful.
Moreover you should enable freezing capability in case of high latency effects. MDrummer can compensate latency only to some extent that depends on audio card settings. If you enable freezing, MDrummer will disrupt all latency problems.
Enable the trigger to switch on freezing capability.

volume by max velocity

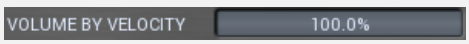
If volume by max velocity option is enabled (which is default), volume of a sound will be determined by difference of velocity from maximal velocity for the layer.
For example if you have a velocity layer with range 0%-50% and MDrummer receives a note with velocity 50%, the note will be played with maximal volume as opposed to half volume with this option disabled.
Let's have for example natural multisampled drums. You first record your drums with different velocities and accomplish no gain modification (such as normalization). Then you just need to setup the velocity ranges correctly. You can leave layer volumes, because they would be in fact already configured in the volumes of the samples themselves.

Gain

Gain defines additional volume of the drum sound. It is applied before the effect pipeline so it can actually change the sound character. It does exactly the same thing as **volume**, but it has different range and is often suitable for samples with low loudness for example. Despite you can do the same thing using effect plugins, this way is much easier and faster.

Channel

Channel defines audio output channel to send this drum to. MDrummer standalone application does not use it, unless you are using a multichannel output device. It can be very useful when working with MDrummer as virtual instrument plugin though.
By default, channels 1-4 are automatically set according to drum type. Therefore channels 5-8 are freely available with no chance of collision with another drum using standard settings. Note that in Drumet editor / Drumset toolbar / Advanced you can store these settings and control if MDrummer should preserve the mappings whenever you load a different drumset for example.



Volume by velocity

Volume by velocity defines how much velocity affects volume of the drum sound.Normally you would leave this 100%.

Pitch by velocity

Pitch by velocity defines how much velocity affects pitch of the drum sound.Normally you would leave this zero, but it can provide some interesting effects or it can even help increasing the realisticity.

Realisticity

Realisticity defines how much should MDrummer modify sound parameters to prevent chain-gun effect, which is very common when one drum is hit many times.

Super-realisticity

Super-realisticity provides an amazing chain-gun effect protection introduced in MDrummer 4. This algorithm usually provides great results, but also consumes significant CPU resources, therefore it is disabled by default.

Self fadeout length

Self fadeout length of the drum sound defines the time a drum sound becomes silent after it has been "closed" by itself, which can protect it from stacking up (see **only one instance**) and in those cases fade out time is defined by this parameter.

Fade out length

Fade out length of the drum sound is the time a drum sound becomes silent after it has been "closed" by another drum. Drum can be closed by another one to simulate for example hi-hats (see **drum list**) and in those cases fade out length is defined exactly by this parameter.

MIDI piano keyboard

In MIDI piano keyboard you can setup MIDI keys associated with the drum. It is useful only when feeding MDrummer with MIDI, hence this controls MDrummer's MIDI input. MDrummer's rhythm system uses drum types rather than MIDI keys to offer maximal compatibility, therefore this option doesn't make a difference. Note that MDrummer configures MIDI keys automatically depending on actual drum type to free you from complicated configuration and make resulting drumsets maximally compatible.

Click on a piano key to enable/disable the association with this drum. Each key can have following colors :

- Black/white - the key is not assigned to any drum.
- Red - the key is assigned to this drum.
- Blue - the key is assigned to another drum.

Collapse button

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

Tab selector

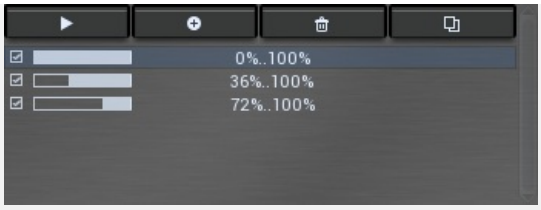
Tab selector switches between subsections.

Velocity layers

Velocity layers panel lets you setup velocity layers for this drum. MDrummer processes notes for the drum by playing sound of one or more layers. Each velocity layer has a separate sound source which you can configure below. Drum effect pipeline is shared for all layers of the drum.

Menu button

Menu button shows a menu with additional features.

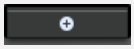


List of velocity layers

List of velocity layers contains names and ranges of all layers of this drum. Use the top toolbar to manage them. Use drum source editor below to edit the drum source for the selected layer.

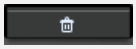
Play button

Play button plays sound of selected layer with maximum velocity. Shortcut : A



Add button

Add button adds a velocity layer.



Delete button

Delete button deletes selected velocity layer.

Duplicate button

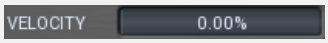
Duplicate button duplicates selected velocity layer.

Name

Name defines name of selected velocity layer. It is only informational, basically you can leave it empty.

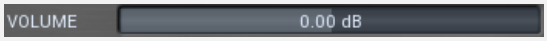
Mode

Mode defines which layers should MDrummer play. Each layer can have a different velocity range and only those matching the input note velocity will be used. But there may be more of them, so this mode controls the MDrummer's behaviour.
First mode makes MDrummer play the first available velocity layer to play particular note.
All mode makes MDrummer play all available velocity layers. You can use it to make more full sound using multiple sound sources.
Random mode makes MDrummer play a random available layer. This is mostly like an enhanced round-robin and is mostly used to create studio drumsets containing alternate hits - sounds with the same velocity layer but a little bit different sound to prevent machine gun effect.



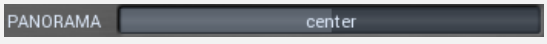
Velocity

Velocity controls the velocity range for this layer.
*For example if you want to have two layers, you may setup one of them to process velocities from range 0% to 50%, and another one from 50% to 100%. When using **First** mode, it is even more simple - the second layer can be from 0% to 100%, because MDrummer knows that the first one should process velocities up to 50%.*



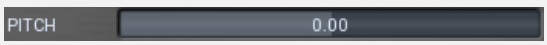
Volume

Volume defines layer sound volume independent on the drum volume which you can use to balance layers. Note that **velocity** can affect volume too.



Panorama

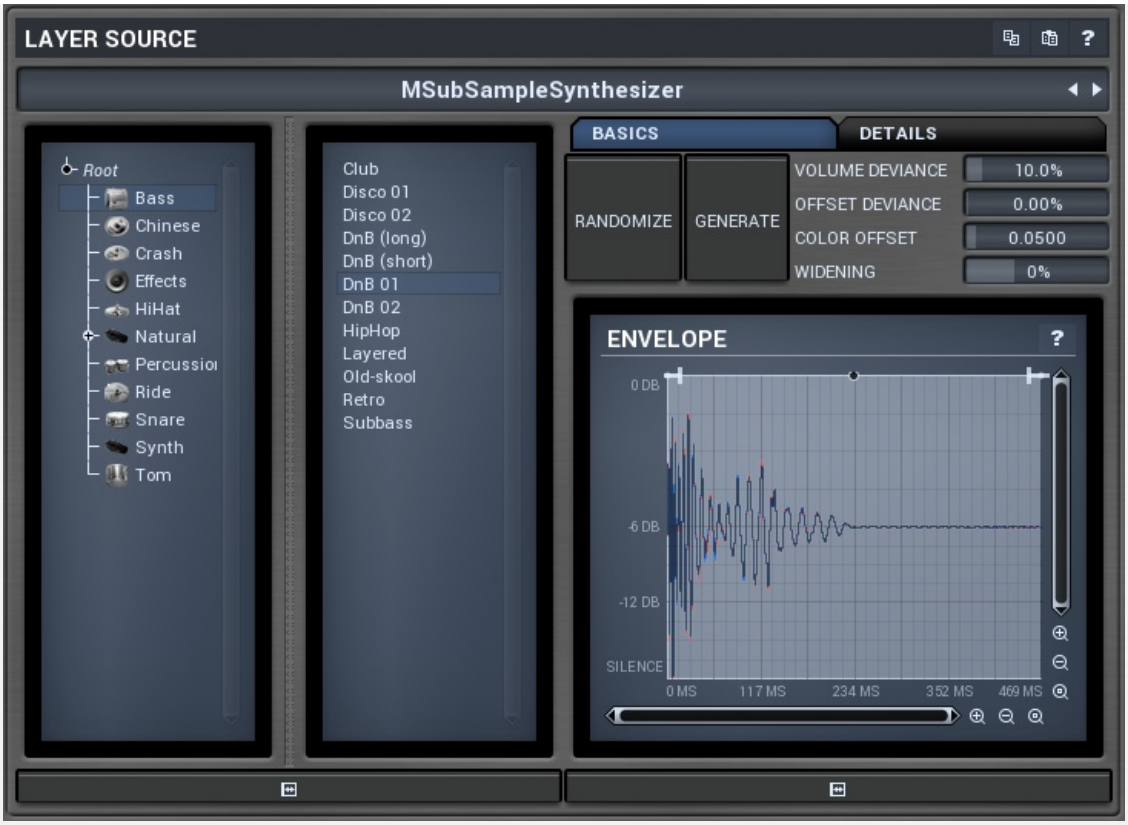
Panorama defines layer sound panorama independent on the drum panorama which you can use to balance layers.



Pitch

Pitch defines layer sound pitch change independent on the drum pitch which you can use to balance layers.

Layer source



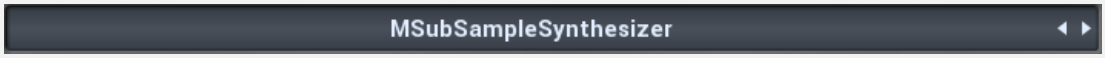
Layer source panel allows you to setup drum sound source plugin and its parameters for selected layer.

Copy button

Copy button copies selected velocity layer to system clipboard.

Paste button

Paste button pastes selected velocity layer settings from system clipboard.



Source plugin selector

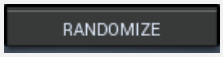
Source plugin selector contains list of installed sound source plugins. Current one is highlighted. Click on another one to change the sound source for current layer of this drum. Click using right mouse button to get context menu containing all of the plugins.

Drum effects

Drum effects panel allows you to setup effect pipeline for selected drum.

Effects list

Effects list contains the list of effects in the pipeline. **Select an effect** to see its parameters on the right. **Check/uncheck an effect** to enable/bypass it. **Click and drag** an effect to move it, hence changing effect processing order.



Randomize button

Randomize button loads random effects into the pipeline. Hold **Ctrl** to avoid removing the current settings and rather appending the new effects into the chain.
Note that some of the original effects may be kept intact, because they have been present when the drum has been loaded and they are part of the sound character. If you want to remove them, delete them manually or hold **Shift** when pressing the button.

Delete button

Delete button deletes selected effect from the effect pipeline.

Load button

Load button loads the whole effect pipeline from a file.

Save button

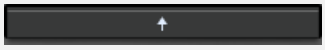
Save button saves the whole effect pipeline to a file.

Copy button

Copy button copies the whole effect pipeline to system clipboard.

Paste button

Paste button pastes the whole effect pipeline from system clipboard.



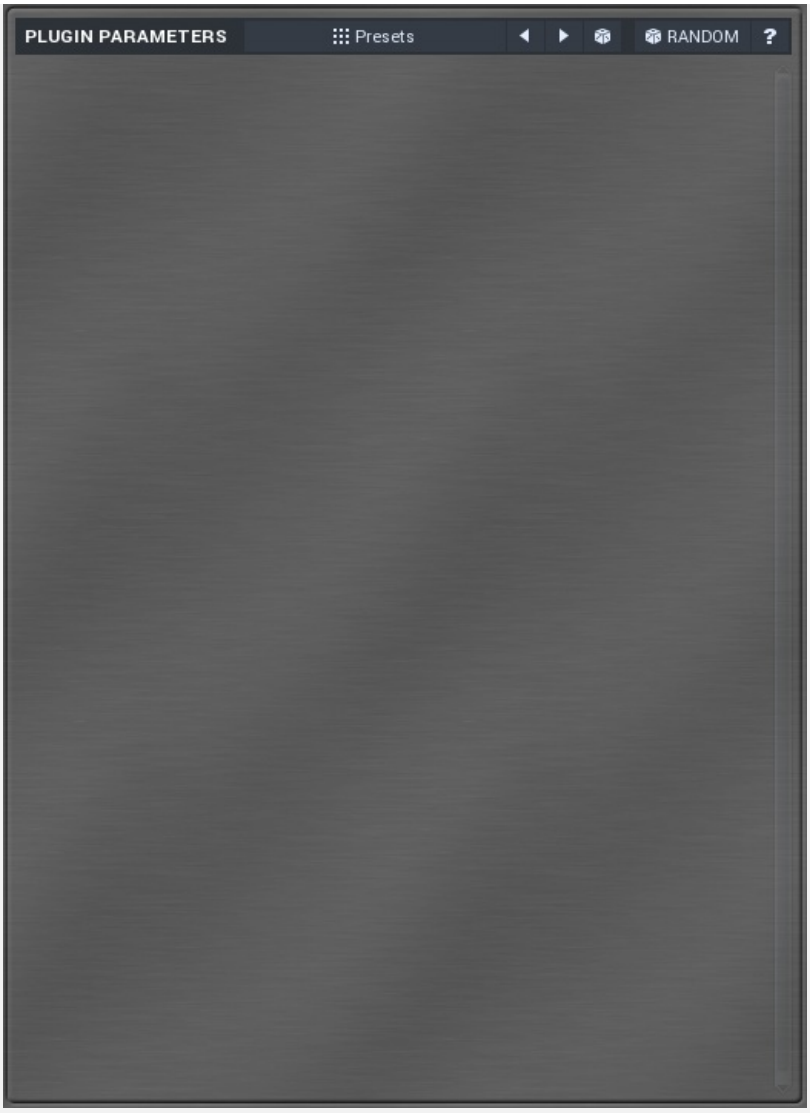
Add button

Add button adds selected effect from available effects list to the effect pipeline.

Available effects list

Available effects list contains the list of available audio effect plugins. These are all high-quality effects integrated in MDrummer. Most of them are available as separate plugins at www.meldaproduction.com as well. **Double click** using your left mouse button on one of them to add it to the effect pipeline of the drum. You can use also the arrow button.

Effect parameters



Effect parameters panel contains editor of the currently selected effect, if any.

Presets button

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

Left arrow button

Left arrow button loads previous preset.

Right arrow button

Right arrow button loads next preset.

Randomize button

Randomize button loads a random preset.

Randomize button

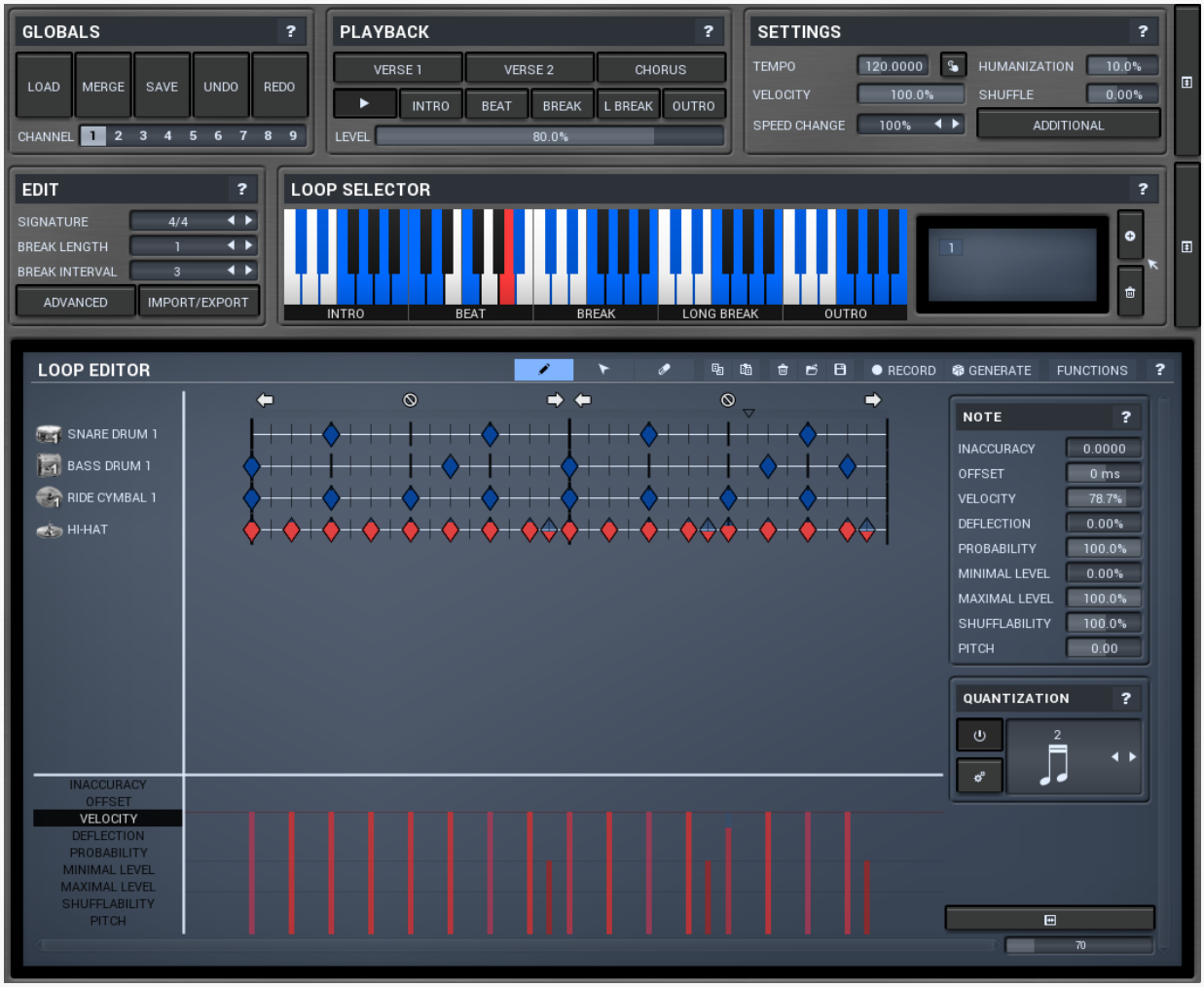
Randomize button generates random settings. Normal randomization works by selecting random values for all parameters, but rarely achieves satisfactory results. So our plugins employ a smart randomization engine, that learns which settings are suitable using existing presets and so is able to yield a very high success rate. There are some additional keyboard shortcuts you should be aware of.

Holding **Ctrl**, bypasses the randomization engine so parameters are only slightly modified rather than completely randomized. This is suitable to modify already interesting settings.

Holding **Alt**, will force the plugin to use full randomization, which sets random values for all reasonable automatable parameters. This can often result in "extreme" settings. Note that some parameters cannot be randomized this way. The smart randomization engine is used by default, if no keys are held. Smart randomization provides a more limited, but in most cases a better, set of results.

Hold **Shift** to undo the previous randomization.

RHYTHM EDITOR TAB



Rhythm editor tab provides an extremely versatile rhythm editor, where you can edit every aspect of the MDrummer's powerful rhythm engine.

Globals panel

Globals panel provides general rhythm functions for loading, saving and configuring current rhythm channel.

Load

Load button loads a rhythm from a file. Shortcut : F3

Merge

Merge button loads a rhythm from a file and merges it with the current one. Typically you use it to add percussion (shakers, tambourine etc.) to your rhythms. Such percussion rhythms are located in **background percussion** directory. Shortcut : F4

Save

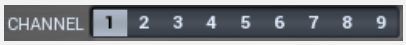
Save button saves the rhythm to a file. Shortcut : F2

Undo button

Undo button reverts previous change caused by loading/merging/generating rhythm.

Redo button

Redo button re-does the previous undone change caused by loading/merging/generating rhythm.



Channel

Channel defines which one of the 9 rhythms is being edited. This number corresponds to the MIDI channel if you are using MDrummer virtual instrument plugin.

Playback panel

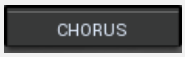
Playback panel provides rhythm playback control functions you use to command your virtual drummer.

Verse 1 button

Verse 1 button says *"Put there a break (fill) and change level to 25%!"*. The same behavior you can expect by changing the **Level** value and then pressing the **Break** button. Shortcut : 8

Verse 2 button

Verse 2 button says *"Put there a break (fill) and change level to 45%!"*. The same behavior you can expect by changing the **Level** value and then pressing the **Break** button. Shortcut : 9



Chorus button

Chorus button says *"Put there a break (fill) and change level to 75%!"*. The same behavior you can expect by changing the **Level** value and then pressing the **Break** button. Shortcut : 0

Play button

Play button enables or disables playback immediately. Shortcut : Space, P, F10

Intro button

Intro button says *"Play intro now !"*. Shortcut : 1

Beat button

Beat button says *"Play beat now !"*. Shortcut : 2

Break button

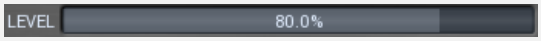
Break button says *"Put there a break (fill) !"*. Note that the break may appear later, because breaks are often very short sequences at the end of the bar. Shortcut : 3

L Break button

L Break button says *"Put there a long break (fill) !"*. Long breaks are typically twice as long as short ones. Note that the break may appear later, because breaks are often very short sequences at the end of the bar. Shortcut : 4

Outro button

Outro button says *"Play outro !"*. After the outro is finished, virtual drummer stops the playback (if it is in **sequencer mode**). This command can be automated. Note that the outro may appear later, because outros are often very short sequences at the end of the first bar. Shortcut : 5



Level

Level defines loop level to switch to. Level mostly corresponds to complexity and loudness.
Note that this is NOT actual level. Actual level is changed when you press any of the command buttons. Why? Because it sounds fairly weird when you change level suddenly. Level change is typically introduced by a fill or it should appear at the beginning of the bar.
If you want to change level immediately, you can use **loop selector** piano.
Following shortcuts you can use to setup this value :

- 6 - Decrease level to switch to.
- 7 - Increase level to switch to.
- Ctrl+1, Ctrl+2, .., Ctrl+0 - Setup specific level to switch to.

Settings panel

Settings panel provides rhythm playback configuration you use to define behavior of your virtual drummer.

Tempo

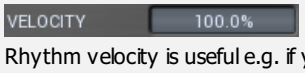
Tempo defines current playback tempo. Note that MDrummer as virtual instrument plugin synchronizes with the host automatically.

Tap button

Tap button lets you easily set tempo by tapping it. Start pressing the button rhythmically. After the first press, the tempo starts changing. The more clicks you do, the better accuracy you get. If you want to start over, wait about 2 seconds first. Shortcut : B

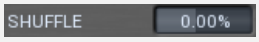
Humanization

Humanization affects inaccuracy and deflection for all notes in the rhythm. Negative value causes MDrummer to be a better drummer, positive makes him to be more human.
This parameter can be automated.



Rhythm velocity

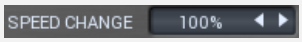
Rhythm velocity is useful e.g. if you are using multiple rhythms at once and you do not want all of them to be the same level. Note that all of the rhythms use the same drumset, so this the only a simple way to setup volume per rhythm.
This parameter can be automated.



Shuffle

Shuffle moves the notes from straight notes to shuffled (triplets) and conversely. It can give the rhythm a totally new feel.

This parameter can be automated.



Speed change

Speed change allows you to make MDrummer play twice as fast, half as fast etc. It also applies to the virtual instrument plugin, while tempo does not.
This parameter can be automated.

Additional button

Additional button shows a menu with additional rhythm playback settings.

Collapse button

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

Edit panel

Edit panel provides current rhythm configuration.

Signature

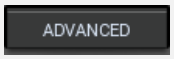
Signature defines current rhythm signature. If you change this, all of the loops in the rhythm will be modified to fit the new signature by moving, removing or adding notes. Note that changing signature from 4/4 to 6/4, may produce a different rhythm than changing 4/4 to 5/4 and then to 6/4. Only quarter signatures (x/4) are supported, but note that 6/8 is the same thing as 3/4 for example.

Break length

Break length defines number of bars in all of the breaks. MDrummer uses it to determine interval between two automatically started breaks. Hence if you have different break lengths, MDrummer will not play them correctly. In most cases this is just one bar.

Break interval

Break interval parameter means "How many sequences in length of break should happen between two breaks.".
Let's take an example: Consider standard breaks with length one bar. If you set break interval to 2, then there must be 2 (interval) multiplied by 1 (length) bars of beat before MDrummer decides to play another break. So MDrummer will play 2 bars of beat and then he put there a break, and repeats the same again.
He may make an exception and put there a long break. Long breaks should be twice as long as breaks, so then he will play one bar of beat and play a long break.
Value 3 is very typical, because the cycle takes 4 bars (3 beats plus one break).
This parameter can be automated.



Advanced button

Advanced button shows a menu with additional rhythm edit functions.
Normalize fixes any errors in the loop, for example it removes doubles and removes empty loops.
Clear destroys all loops in the rhythm, good for a 'fresh start'.
Generate from template lets you generate the whole new rhythm using a rhythm template. It can be a great source of inspiration if you don't want to use the "big" rhythm generator.
Double/half tempo feel changes the tempo of all tracks except for background percussion - hihats, cymbals, shakers etc. Therefore this basically changes tempo of drums only keeping the fullness defined by hihats and cymbals intact.
Double/half speed changes the tempo of all tracks, no exceptions.

Double/half pattern speed is the exact opposite of double/half tempo feel. It changes tempo of the background percussion tracks only. This keeps the beat defined by bass and snare drums for example.
Double/half beat speed changes the tempo of all beat loops, it keeps the breaks, intros and other loops intact.
Double/half loop speed is the exact opposite, it changes the tempo all of loops except for beats.
Copy beats to breaks copies beat loops into break and long break loops. This is useful when designing base rhythms for rhythm generator.
Clear breaks deletes all break and long break loops. This is useful when designing base rhythms for rhythm generator.
Change type of one track changes a track type in all loops into a different one.
Change type of all tracks merges all tracks in all loops into a single track and lets you choose its type. It is useful when designing background percussion rhythms.

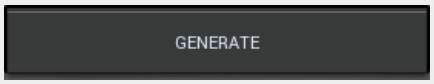
Generate rhythm from template

Template

Template selector contains list of available templates. These are ordinary rhythms, except each loop box contains more than single loop. See **Generate** button help for more info.

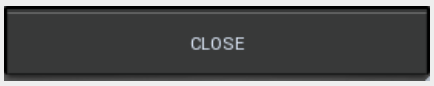
Generate template button

Generate template button creates a template simply by merging multiple rhythms. When you press this button, a window for selecting rhythms is displayed. Select multiple of them and store the result as a template. You can then use this template in the generator.



Generate button

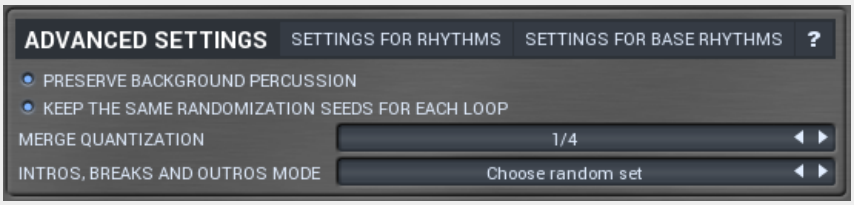
Generate button generates a new rhythm using the selected template. It loads the template, which is nothing else than a rhythm with multiple loops in each box. Then it mingles all loops in each box and produces one resulting loop. This feature is especially useful for creating base rhythms for rhythm generator. In electronic music the background (hihats and rides for example) are usually switching between several patterns, and this feature can easily produce these sequences.



Close button

Close button closes the window.

Advanced settings

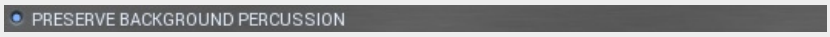


Settings for rhythms button

Settings for rhythms button sets default settings for generating normal rhythms.

Settings for base rhythms button

Settings for base rhythms button sets default settings for generating base rhythms used by rhythm generator.



Preserve background percussion

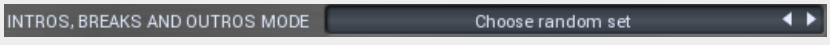
Preserve background percussion is useful when using full rhythm templates because it variates the groove, but keeps the background percussion, such as hihat, intact. On the other hand for more creative results and e.g. breakbeat rhythms, this could be disabled. This setting however makes no sense when generating base rhythms, because these essentially contain only background percussion, so the generator would do nothing.

Keep the same randomization seeds for each loop

Keep the same randomization seeds for each loop makes each loop generated with the same randomization seed, hence resulting in same randomization results. This is usually desired when processing full rhythms, because since original rhythms contained similar groove between multiple levels, it will be preserved. On the other hand, if you disable it, then every level can contain different groove, which may be creatively abused, especially for styles such as breakbeat.

Merge quantization

Merge quantization defines to how long intervals are the loops cut. The shorter the intervals are, the more different combinations can be generated, but the less natural the results may be.



Intros, breaks and outros mode

Intros, breaks and outros mode controls the way the intros, breaks, long breaks and outros are generated.
Choose random set simply chooses random set of available loops, therefore the resulting loops are exactly the same as original ones. You can use this for example to generate new rhythm from existing ones. First you need to generate template using the button in the templates panel title. Then generate new rhythm using that template and this first mode.
Mingle mode takes all loops in each loopbox and mingles them into one the same way beats are processed. It is especially

useful to generate base rhythms for example.
Mingle many mode generates many loops of the same type the same way mingle mode works. It is useful for example to generate complicated break beat rhythms.

Import/Export button

Import/Export button shows a menu with additional rhythm edit functions, most of them are providing several import & export features.
Load track to all loops (of current type) lets you choose a track pattern and drum type and adds that track to all loops in the rhythm (or just those of the current type). This is an alternative to merging a background percussion rhythm and is useful, because preparing a track file is very simple unlike preparing background percussion rhythms.
Smart MIDI import lets you analyze a MIDI track, quantize and fix various timing and velocity problems and generate and save loops from it. It is handy when preparing loop collections.
Batch MIDI import lets you import a whole MIDI loop collection.
Load/Save multiple loops can load/save a whole directory of loops.

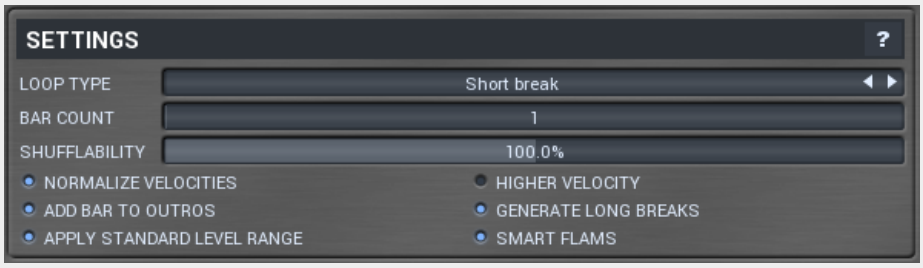
Smart MIDI import

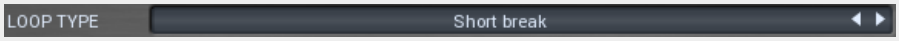
Smart MIDI import is the most advanced way to import MID files used for whole tracks. It loads a MIDI file, cuts it into separate loops of length you specify,calibrates velocities, detects flams and other properties, quantizes the loops using 2 cooperating quantizers and puts the loops into appropriate loop-boxes.
It is mostly used to generate loop collections from recorded tracks. For example you let a drummer play many rock breaks in a row, record it as MIDI and use this function to process the entire track generating the loops from it applying all necessary processing automatically.

Path

Path contains current path. Write a different one and press enter to get into it.

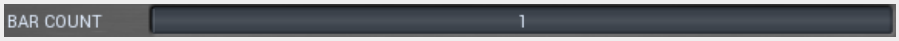
Settings





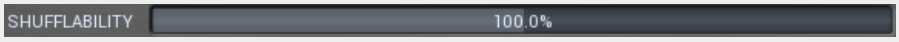
Loop type

Loop type defines loop type to create.



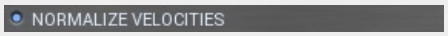
Bar count

Bar count defines number of bars per loop.



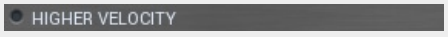
Shufflability

Shufflability defines shufflability parameters for each note. Generally you leave it 100%, but for some specific rhythms (e.g. afro breaks) you may want to change the value, since these are somehow shuffled already.



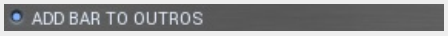
Normalize velocities

Normalize velocities makes MDrummer detect range of velocities in the MIDI file and spread it into predefined velocity range.



Higher velocity

Higher velocity is closely related to **Normalize velocities** and makes MDrummer generate higher velocities present in louder styles such as metal.



Add bar to outros

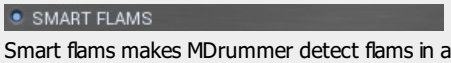
Add bar to outros makes MDrummer add a bar containing a crash cymbal and bass drum hit in it at the end of all loops. This way you can import several break loops and convert them into outros.

Generate long breaks

Generate long breaks is used for long breaks only and makes MDrummer "mingle" existing loops to generate additional ones from them.

Apply standard level range

Apply standard level range defines how loops are placed into loopboxes. If disabled, MDrummer spreads all of the loops into loopboxes according to total level range detected from the loops. If this is enabled, MDrummer uses standard range we approximated as common for most styles.

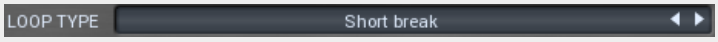


Smart flams

Smart flams makes MDrummer detect flams in advance to quantization. As a result notes with offset defined are created ensuring the flams are played perfectly in any tempo.

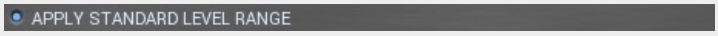
Batch MIDI import

Batch MIDI import lets you import all MID files from a directory and all subdirectories and put them into loop-boxes of specified type or into another directory using MDrummer loop format. It also automatically detects loop levels.



Loop type

Loop type defines loop type to create.

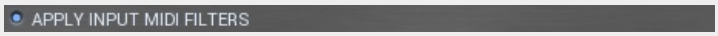


Apply standard level range

Apply standard level range defines how loops are placed into loopboxes. If disabled, MDrummer spreads all of the loops into loopboxes according to total level range detected from the loops. If this is enabled, MDrummer uses standard range we approximated as typical for most styles.

Just import and keep the names

Just import and keep the names makes MDrummer import the loops and store them in requested target directory without detecting levels or renaming them.

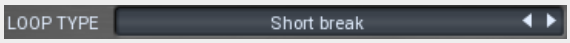


Apply input MIDI filters

Apply input MIDI filters makes MDrummer use current MIDI input filters when processing the loops. This way you can adjust velocity curve, change target drums if the loops are not general MIDI compatible etc.

Load multiple loops

Load multiple loops lets you load all loops from a directory into loop-boxes of specified type. It also automatically detects loop levels. It can be used for example to load all loops previously stored by using **save multiple loops** function.

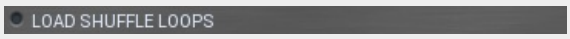


Loop type

Loop type defines loop type to create.

Apply standard level range

Apply standard level range defines how loops are placed into loopboxes. If disabled, MDrummer spreads all of the loops into loopboxes according to total level range detected from the loops. If this is enabled, MDrummer uses standard range we approximated as typical for most styles.

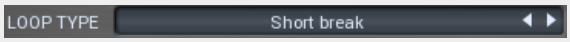


Load shuffle loops

Load shuffle loops makes MDrummer load only shuffle loops (as opposed to straight).

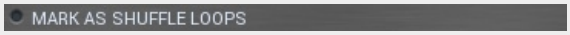
Save multiple loops

Save multiple loops lets you save all loops of specified type to a target directory. This way you can easily save your loop collection you have edited or imported. It also marks loop levels, so the result is applicable in rhythm generator.



Loop type

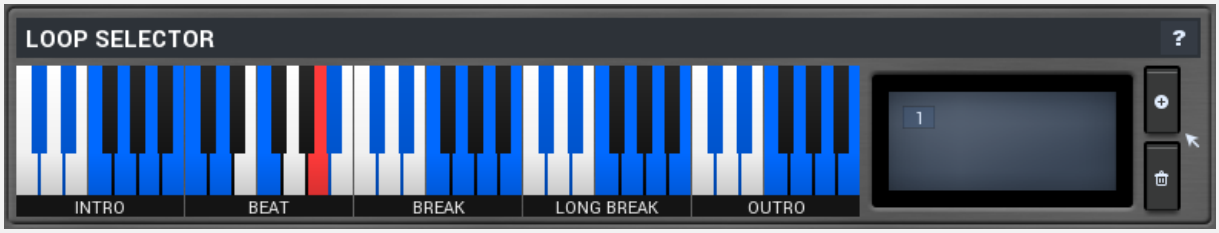
Loop type defines loop type to store.



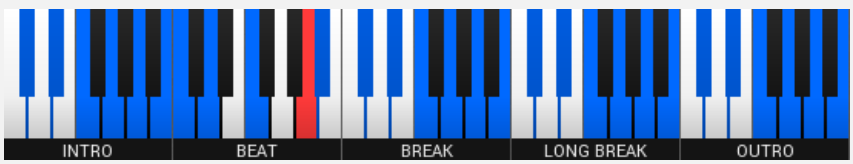
Mark as shuffle loops

Mark as shuffle loops makes MDrummer mark all loops as shuffle (as opposed to straight). This convention is required for rhythm generator.

Loop selector panel



Loop selector panel allows you to select current loop box and loop inside it. Such loop is then being edited in the loop editor and is also used for playback. Note that MDrummer changes the selected loop during playback.



Loop type piano

Loop type piano you can use to select current loop box. A loop box is some kind of container for several loops. When MDrummer needs to play a loop of certain type, it selects one from the loop box (either randomly, or you can specify the loop index directly). This makes MDrummer very versatile and non-repetitive. Current one is shown in orange. Empty loop boxes are black or white, nonempty are yellow. If you click on an empty loop box, a new loop is automatically created.

Loop index list

Loop index list contains all loops inside selected **loop box**. You can have as many loops as you need in each loop box.

Drag & drop button

Drag & drop button exports current loop into a MIDI file and lets you drag & drop it somewhere.

Add button

Add button creates new loop in current loop box and selects it.

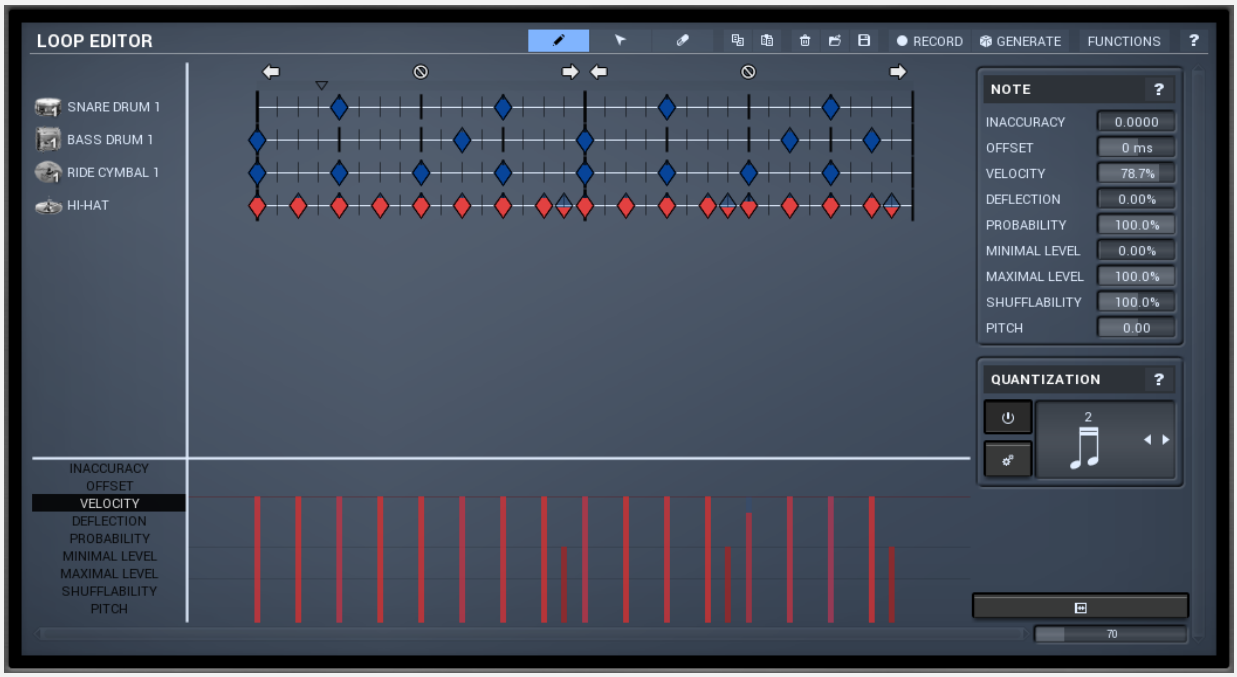
Delete button

Delete button deletes current loop from current loop box.

Collapse button

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

Loop editor



Loop editor is a very advanced editor of a single loop. A loop contains several tracks with attached drum type, which makes all loops perfectly compatible with each other. You can manage set of tracks using left mouse double-click or right mouse button in the left side of the editor.

Each loop can contain unlimited number of notes, displayed on the right to the list of tracks. There are 3 note editing modes - pencil, eraser and selector. Generally you can use just pencil mode if you are ok with keyboard shortcuts. See the mode buttons for more information about

the shortcuts(on the right).

Above the note field you can see the line with current position and bar limits. Click into the position field to rewind. Alternatively you can use your middle mouse button anywhere in the editor. Each bar contains 3 buttons. **Left arrow** adds another bar to the left. If you hold ctrl, notes from current bar will also be duplicated. **Right arrow** does exactly the same thing, but adds the bar to the right. Finally **Delete icon** deletes current bar.

On the right of the note field you can see additional parameters of notes being created and quantization settings. Parameters of the notes in the loop are available below the editor. If you select multiple notes, only parameters of notes in the selection are modified. Note that you can use right mouse button to set nearest default values for some parameters such as velocity.

 Pencil button

Pencil button switches to **pen** loop editor edit mode.
In this mode you can insert notes using **left mouse button** click and move. You can also delete notes using **right mouse button** click and move.If you **hold Ctrl**, it will behave like **selection mode** - you can select notes using left mouse click and drag. Selection enlargement using **Shift** works too.
Therefore pen mode can handle all of the work, but you may use 3 different modes, if you wish. Shortcut : A

 Selector button

Selector button switches to **selection** loop editor edit mode.
In this mode you can select notes using **left mouse button** click and move. If you **hold Shift** during release, selected notes will extend previous selection. If you **hold Shift and click just one note**, its selection state will be toggled.You can move selected notes (even across tracks) using **drag & drop** with one of them. Shortcut : D

 Eraser button

Eraser button switches to **eraser** loop editor edit mode.
In this mode you can delete notes using **left mouse button** click and move. If you erase selected note, the entire selection is destroyed. You can also insert notes using **right mouse button** click and move.If you **hold Ctrl**, it will behave like **selection mode** - you can select notes using left mouse click and drag. Selection enlargement using **Shift** works too.
Therefore eraser mode can handle all of the work, but you may use use 3 different modes, if you wish so. Shortcut : S

 Copy button

Copy button copies selected notes to system clipboard. Shortcut : Ctrl+C

 Paste button

Paste button pastes notes from system clipboard. First of them will appear at actual playback position, which you can set by clicking on the locator bar above the loop tracks or using your middle mouse button. Shortcut : Ctrl+V

 Delete button

Delete button clears the loop by deleting all notes and all bars except one.

 Load button

Load button loads a loop from a file. Shortcut : Ctrl+F3

 Save button

Save button saves the loop to a file. Shortcut : Ctrl+F2

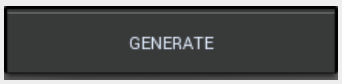
Record button

Record button enables or disables recording mode in which you can simply play notes using your MIDI device and MDrummer records them into the loop.

Generate button

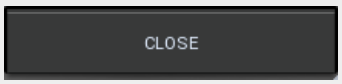
Generate button lets you generate a new loop from other loops. It is especially useful for creating new original grooves.

Generate loop from template



Generate button

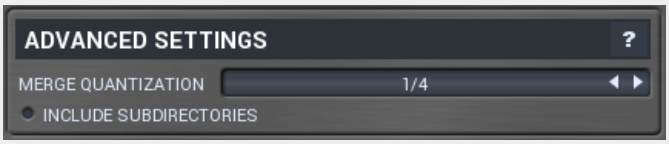
Generate button generates a new loops using the loops from selected directory.

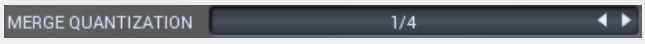


Close button

Close button closes the window.

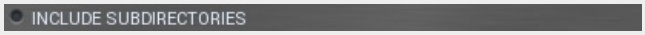
Advanced settings





Merge quantization

Merge quantization defines to how long intervals are the loops cut. The shorter the intervals are, the more different combinations can be generated, but the less natural the results may be.



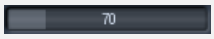
Include subdirectories

Include subdirectories makes MDrummer use loops from selected directory as well as any subdirectories inside it. This provides more inspiration, but may not be desired sometimes and make take longer to process.

Functions button

Functions button shows a menu with additional loop functions.
Double/half speed speeds up or slows down the loop. Note that since the loop has to follow rhythm's signature, it may be necessary to copy notes or add bars to the loop.
Import/export MIDI generates or analyzes a MIDI file. Note that many of the features (such as note deviance or probability) cannot be converted to MIDI format, because these are not defined in MIDI standard.

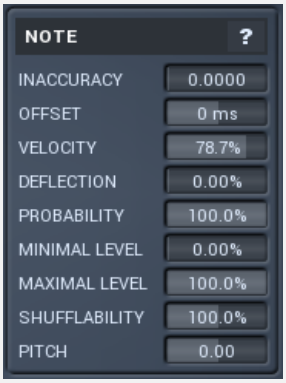
Export WAV renders the whole loop using current drumset into a wave file.
Record replace switch enables or disables replacing when recording. By default this is enabled, which means that when you are recording the loop using your MIDI device, the new contents replace the previous ones. This can be disabled if you want to add new notes instead.



Zoomer

Zoomer lets you zoom horizontally into the loop editor.

Note panel



Note panel provides configuration of note parameters which are used when creating new notes. Also in **selection mode** whenever you change any of the parameters, the changes are applied to all selected notes.

Note inaccuracy

Note inaccuracy defines "skill" of the virtual drummer. Higher value of makes virtual drummer to be more inaccurate.

Note offset

Note offset causes the note to be played earlier or later. Unlike note position this value is time-based, which means that it is not affected by tempo. That makes it ideal for flams, modern raw beats and similar effects.

Note velocity

Note velocity basically defines note loudness. Using velocity layers and some other settings however you can make MDrummer play different sounds depending on the velocity. You can switch between 3 predefined velocity values using shortcut "Z".

Note deflection

Note deflection defines inaccuracy of velocity. Higher value causes velocity to be randomly changed. This is a kind of humanization.

Note probability

Note probability defines chance the note will be played. Lower value causes higher chance to omit the note.

Note minimal level

Note minimal level defines minimal **loop level** the note will be played in. Using this parameter you can make the loop vary according to actual loop level (and for example rhythm with just one loop). This is especially useful for essential beats in **Rhythm generator**.

Note maximal level

Note maximal level defines maximal **loop level** the note will be played in. You rarely use this one, while it means, that if the loop level gets higher, some notes won't be played. Rhythm generator is also affected by this parameter.

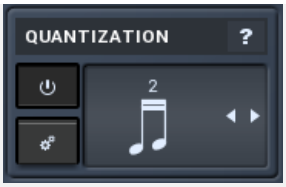
Shufflability

Shufflability controls how much shuffle affects the note position.

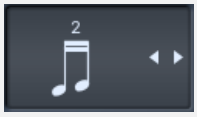
Note pitch

Note pitch controls additional pitch shift for this note.

Quantization panel



Quantization panel provides configuration of quantization state which helps you managing new and even existing note positions.



Quantization factor

Quantization factor defines current quantization state that defines the behavior of the loop editor. You can use following shortcuts to setup this factor :

- F - quarter notes (divided by current tuplet factor)
- G - eight notes (divided by current tuplet factor)
- H - sixteenth notes (divided by current tuplet factor)
- J - 32 notes (divided by current tuplet factor)

Enable button

Enable button enables the quantization. If it is not pushed, quantization is disabled, so you can put and erase notes anywhere. Shortcut : Q

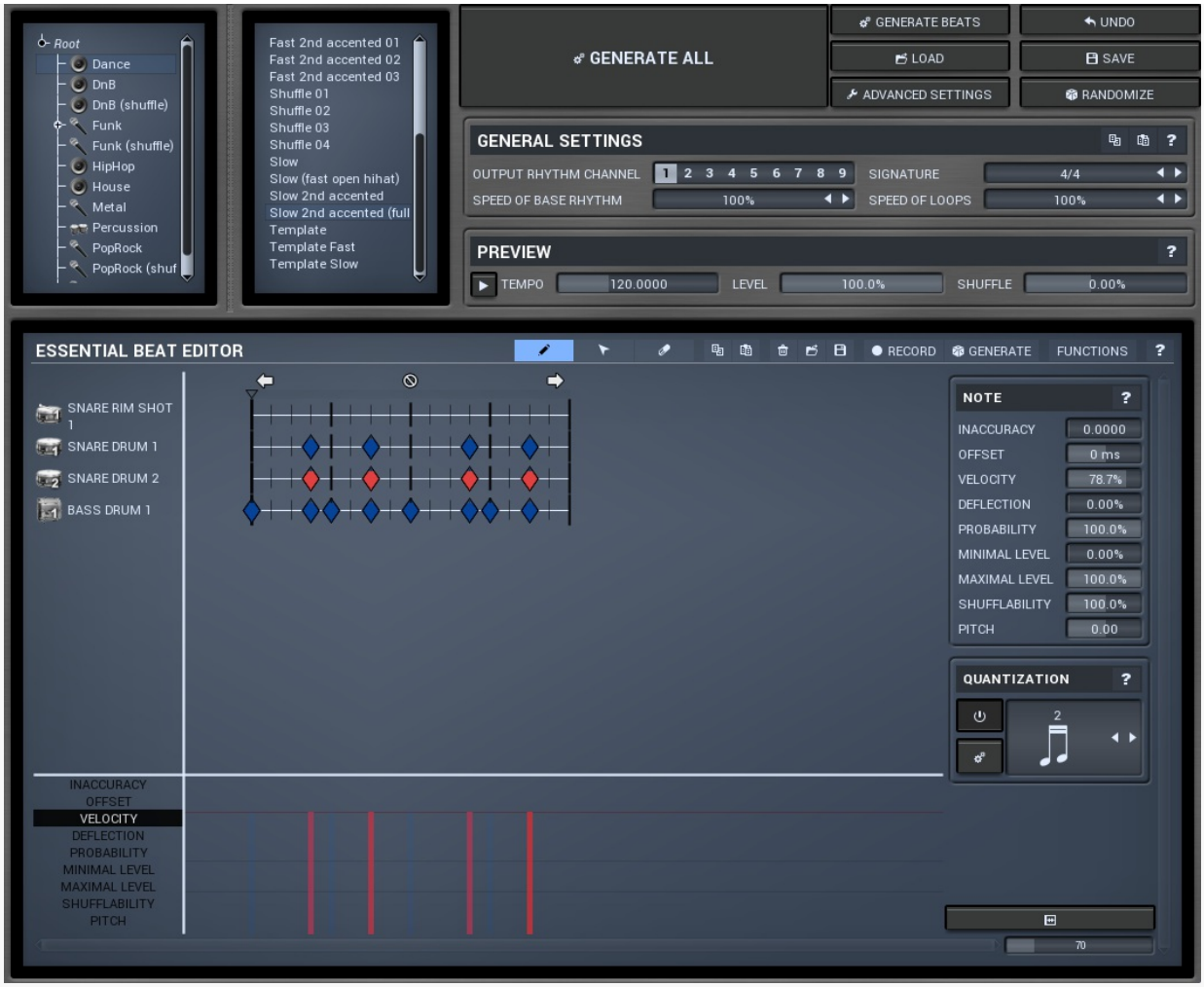
Requantize button

Requantize button quantizes selected notes or all of them if nothing is selected.

Collapse button

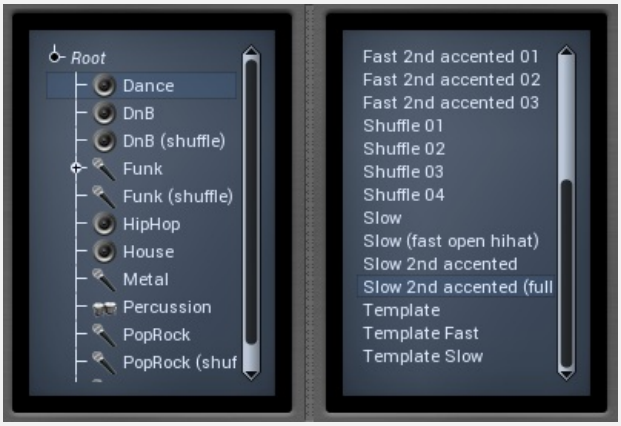
Collapse button minimizes or enlarges the panel to save space for other editors.

RHYTHM GENERATOR TAB



Rhythm generator tab contains the unique rhythm generator, which lets you create powerful rhythms from just a single groove. Most settings of the rhythm generator are initially hidden, but you can control every aspect of this marvelous feature here.

Base rhythms



Base rhythms file selector contains available base rhythms you want to use to generate resulting rhythm. A base rhythm is a normal rhythm that contains typically only background percussion, e.g. hihats and cymbals. This rhythm is then merged with your essential beat and several loops you can configure in advanced settings to form the resulting rhythm.

One special case is base rhythm template, which is recognized simply by having Template in name. These templates then result in different base rhythm everytime you select them or double-click on them, so you can use them to create completely different rhythms. Note that the settings are preserved, so that when you save it, next time you use the rhythm generator, it will produce the same base rhythm. The base rhythm is generated again only when you reselect it or double-click on it.

Generate all button

Generate all button generates the output rhythm with channel **Output rhythm channel**. It sets the rhythm properties, generates the beats and all other loops.

Generate beats button

Generate beats button generates only the beats into the target rhythm. It leaves all other loops unaffected. Usually you may use the **Generate all** button to generate the whole rhythm and then tweak the essential beat without changing any other settings. In that case it would be pointless to generate everything again, so you can use this button to render the beats only.

Undo button

Undo button reverts previous change caused by loading/merging/generating rhythm. You can use it for example, if you accidentaly press a generate button.

Load button

Load button loads rhythm generator settings from a file. This includes base rhythm, advanced settings and basically everything except the essential loop. Therefore this feature generally configures a music style.

Save button

Save button saves rhythm generator settings to a file. This includes base rhythm, advanced settings and basically everything except the essential loop. Therefore this feature generally saves a music style.

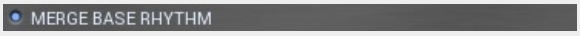
Advanced settings button

Advanced settings button shows additional rhythm generator settings. In most cases you just need to use the **Load** button, but sometimes you may want to select which loops will be used to generate the rhythm, their preprocessing, number of them etc.

Advanced settings

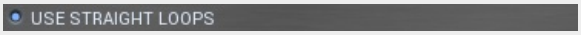
General settings panel

General settings panel contains additional settings that apply to the rhythm as whole and mainly to generated beats.



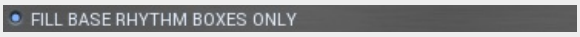
Merge base rhythm

Merge base rhythm makes MDrummer use the base rhythm to generate target loops. You will probably leave this on.



Use straight loops

Use straight loops makes MDrummer use straight loops when generating breaks, intros and outros. If you are creating a shuffled rhythm, you will probably turn this off and enable **use shuffled loops**.

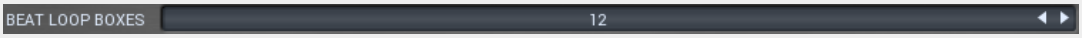


Fill base rhythm boxes only

Fill base rhythm boxes only makes MDrummer ignore **Beat loop boxes** and then the generated rhythm will contain beats in exactly same loop boxes as the base rhythm. This means that generated rhythm somehow extends loops existing in base rhythm, but no more beat loops would be added.

Use shuffled loops

Use shuffled loops makes MDrummer use shuffled loops when generating breaks, intros and outros. If you are creating straight rhythm, you will probably turn this off and enable **use straight loops**.



Beat loop boxes

Beat loop boxes defines how many beats should be generated. It is relevant only when **Fill base rhythm boxes only** is disabled.

Intro panel

Intro panel provides configuration of generator parameters for intro loops.

Process button

Process button generates loops of this type. Other loop types are not affected.

Merge base rhythm

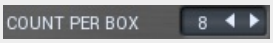
Merge base rhythm makes the generator use the base rhythm to generate target loops. Loops from the base rhythm will be used for background in the target loops. You will probably leave this on.

Prevent hi-hat collision

Prevent hi-hat collision ensures that there are will be no colliding tracks if both base rhythm and loops being merged contain hihat track. Since most of the acoustic drum base rhythms contain hihats in non-beat loopboxes, it would create an unnatural effects if the loops contain them too. However this rarely matters in electronic music.

Random cut-off

Random cut-off makes MDrummer shorten loops from directories you check below, so target rhythm will be even more original.

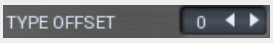


Count per box

Count per box defines how many loops should be generated into each loop box. Higher value causes Drummer to "learn more", but resulting rhythm will be larger and therefore occupy larger amount of memory and disk space.

Number of boxes

Number of boxes defines how many loop-boxes (keys) in Loop box selector will be used for loops. Each of them will contain **Count per box** loops. Higher value causes Drummer to "learn more", but resulting rhythm will be larger and therefore occupy larger amount of memory and disk space.



Type offset

Type offset is a very specific features, which shifts drum types of all tracks by certain amount. This may come handy with percussion. For example you may have a set of conga breaks. But then you decide to use bonga instead. One way would be manually change all tracks, but this would be incredibly exhaustive. So you can check the drum type selection and you would find out that Bonga Hi is 2 items after Conga Hi, so to remap all congas to bongas, you have to specify offset -2. Obviously this will remap all of the tracks, not just congas, so in most cases this features may not be suitable.

Directory tree

Directory tree lets you specify (check), which sub-trees you want to take loops from. MDrummer then retrieves a list of all loops inside those directories and chooses suitable random ones to generate target loops. The more directories you check, the more free will MDrummer be and resulting rhythm can be more sophisticated, but you should be careful, because for example metal loops are not very suitable for pop rhythms.

Randomize button

Randomize button generates random settings by loading a random essential beat, random settings and selecting random base rhythm. This serves as a great source of inspiration since it combines backgrounds and grooves that are often not related to each other.

General settings panel

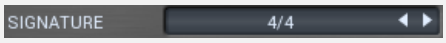
General settings panel provides general generator settings.

Copy button

Copy button copies current settings to clipboard.

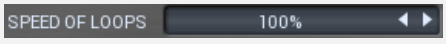
Paste button
Paste button loads settings from clipboard. It is useful for example when you want to copy the same settings into another rhythm channel.

Channel
Channel defines which one of the 9 rhythms will be replaced with generated one. Each channel also has separate settings, so when you come up with some rhythm generator settings in say channel 2, MDrummer will store it with your project, so you can modify it later but keep other rhythms intact.



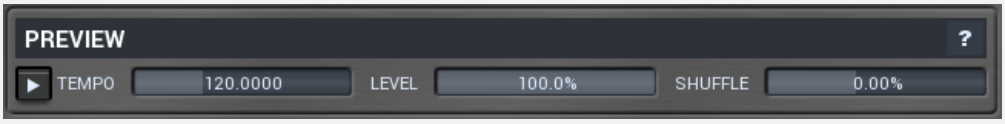
Signature
Signature defines target rhythm signature and also immediately changes signature of essential beat edited below. Note that MDrummer automatically converts generated nonbeat loops and even base rhythm, because they are typically saved in 4/4 signature. All you need is to prepare a good essential beat and MDrummer will convert everything that needs conversion.

Speed of base rhythm
Speed of base rhythm you use to control speed of the base rhythm. Sometimes you may want to create a rhythm with slower or faster background. In these cases you can either modify the base rhythm or this parameter, which is obviously easier.



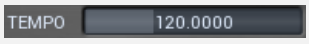
Speed of loops
Speed of loops you use to control speed of the resulting rhythm. Sometimes you may want to create a rhythm with unusual loops, e.g. breaks. This often happens when you try to create rhythms with slow base (typically bass & snare). Original loops may be very unsuitable in these cases, so you can compensate it using this parameter.
If you for example select 50%, all intros, breaks, long breaks and outros will become half as fast, but the length will remain. Note that if you generate the rhythm and then use half speed function, the result will be similar, but the loops will be twice as long and that could cause some problems with plugin rhythm tracks.

Preview panel

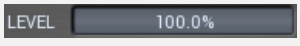


Preview panel you use to control playback of your essential beat. Only the essential beat will be played (you cannot play breaks that haven't been generated yet for example), but you can use it to audition the essential beat and it's combination with the selected base rhythm. None of the settings affects the resulting rhythm.

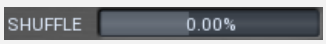
Play button
Play button enables or disables playback of your essential beat.



Tempo
Tempo defines essential beat playback tempo.

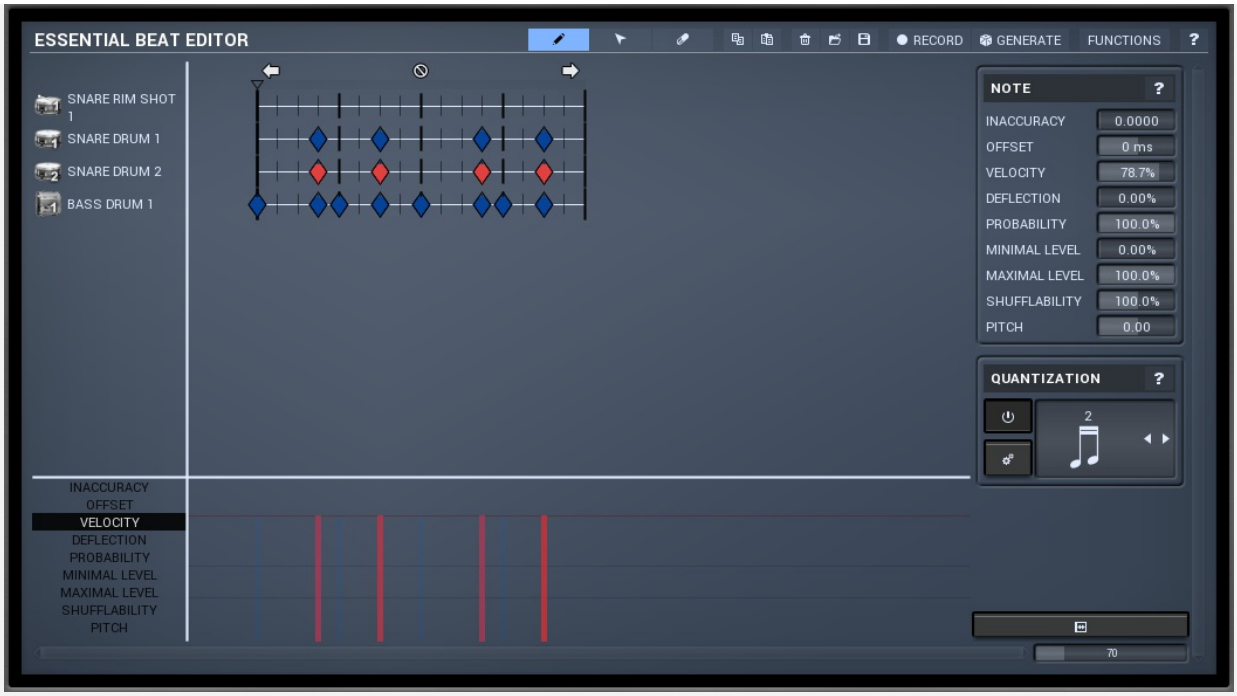


Level
Level defines current loop level playback setup. You use this to preview resulting rhythm played in a certain loop level. You can imagine that essential beat is a small rhythm with just one loop. Here you setup loop level and while there are no other loops, MDrummer needs to play this one, but level setting may cause some notes not to be played (see note parameters), which makes resulting rhythm more versatile. It also affects the background contained in the base rhythm.



Shuffle
Shuffle lets you move notes from straight notes to shuffled (triplets) and conversely. It can give the rhythm a totally new feel.

Loop editor



Loop editor should be used to edit your essential beat. Essential beats typically contain only major rhythmic instruments such as a bass and a snare drum, while the rest is contained in the base rhythm. Do not forget to setup minimal and maximal levels for notes you want to include only in some of the target beats.

USED CONTROLS

Here we will 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 mouse cursor at a specified control to get detailed information about what it does and how to use it.

Zoomer

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

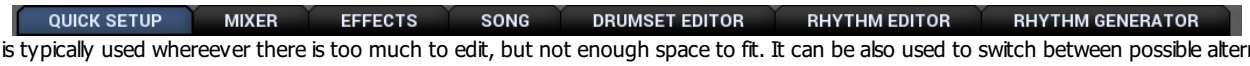
- **Plus (+) button** zooms-in.
- **Minus (-) button** zooms-out.
- **Slash (/) button** zooms to default ratio, which typically means full zoom-out.

Piano

Piano provides easy way to mark a set of keys for some purpose.

- **Left mouse button** marks or unmarks particular key.
- **Mouse-wheel** or **border buttons** scroll the piano if it cannot fit.

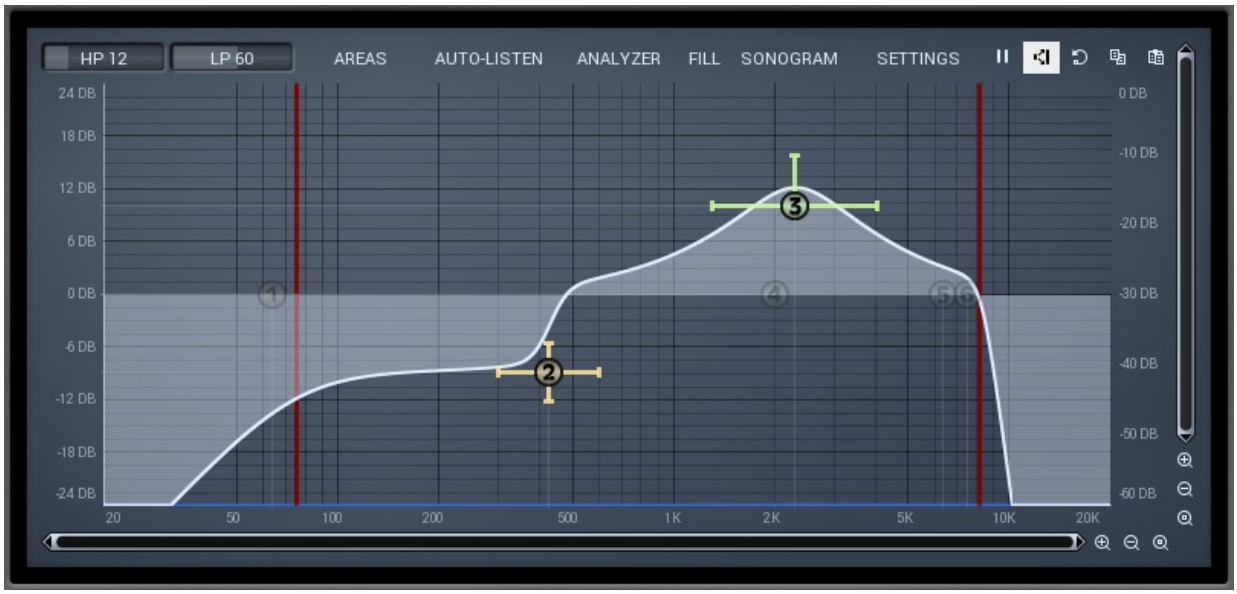
Tab-set



Tab-set is typically used whereever there is too much to edit, but not enough space to fit. 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 popup window. This comes handy when you want to have multiple tabs visible at the same time.
- **Left and right arrows** select neighboring tab.
- Click on one of the buttons on the border to scroll in the control and show currently invisible tabs.

Graph editor



Graph editor will show and edit one or more graphs.

- **Zoomers** below and on the right control zoom and position of the view.
- **Mouse wheel** zooms in or out. Alternatively you can zoom in using **Alt + right button double click** and out using **Alt + left button double click**. You can also use keyboard **numbers 0 to 9** to quickly set zoom level.
- **Drag a rectangle using the left mouse button while holding Alt** zooms into the selected rectangle if possible.
- **Drag using the left mouse button while holding Alt and Ctrl** to scroll the view. This is not possible when zoomed all the way out.

Edit

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

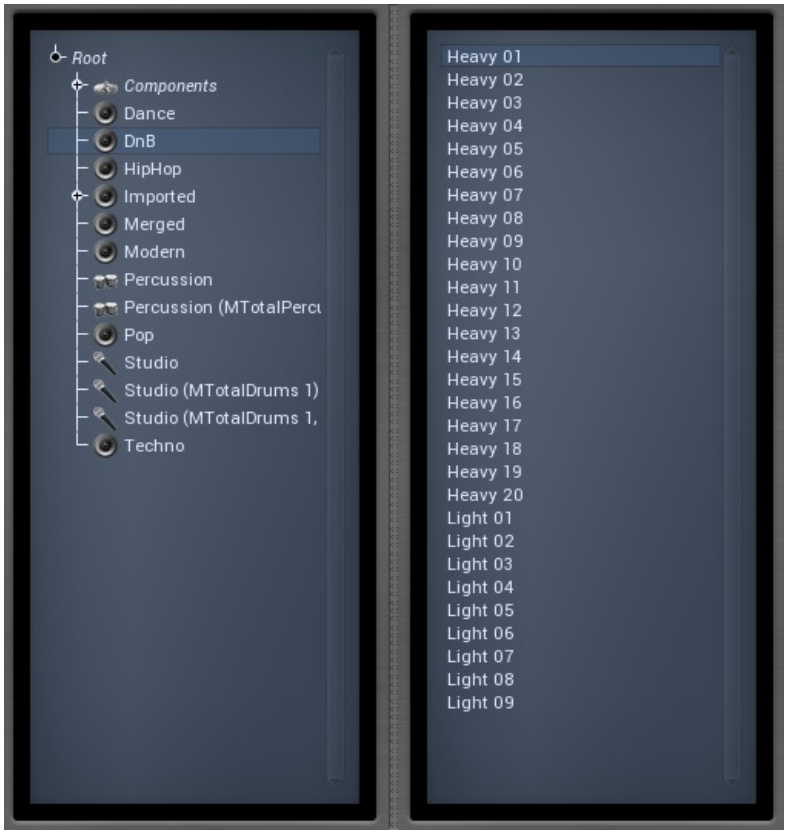
- **Shift+arrows/home/end** modifies selection.
- **Ctrl+C** copies selected text to clipboard.
- **Ctrl+V** pastes text from clipboard replacing selected text or inserting it into current cursor position.
- **Ctrl+A** selects the whole text.
- **Ctrl+Tab** inserts a tabulator character. This combination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

Switcher

Switcher is an alternative to tracker or knob controls, but it has only 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.
- **Up** and **down** arrow keys, **buttons** in the control and **mouse-wheel** increase or decrease the value.

File selector



File selector contains a directory tree you use to move across the file system. In many cases the range is limited to a subtree to maintain better organisation. Next to the tree you can see list of files present in selected directory. There is a splitter between both of them you can use to change size of both of the lists.

Listbox

- **Left mouse button** selects an item. If you click on a check-box, the item will be checked/unchecked.
- **Mouse-wheel** scrolls the view.
- **Arrow keys**, **page-up** and **page-down** move the selection.
- **Space** checks or unchecks selected item(s).
- **Home** key selects the first item, **End** selects the last one.

Tree-control

- **Left mouse button** selects an item. If you click on a check-box, the item will be checked/unchecked.
- **Mouse-wheel**, **up** and **down** arrow keys, **page-up** and **page-down** move the selection.
- **Enter** opens/closes selected item.

- **Space** checks or unchecks selected item.
- **Home** key selects the topmost item, **End** selects the last one.

Value button

Value button is an alternative to the tracker 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 mouse wheel and other controls still do work.

- **Click/drag using left mouse button** to change the value.
- **Right mouse button** selects 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 accurately.
- **Home key** configures minimal possible value, conversely **end key** setups a maximal one.
- **Esc or Backspace keys** restore the original value when hit during dragging.
- **Shift + left mouse button** or **double-click using left mouse button** lets you edit the value as text. In some cases this shows a menu with all possible values instead.

Multi-selection listbox

- **Left mouse button** selects an item. If you click on a check-box, the item will be checked/unchecked.
- **Left mouse button drag** changes the order of items by moving selected item(s).
- **Mouse-wheel** scrolls the view.
- **Arrow keys**, **page-up** and **page-down** move the selection.
- **Space** checks or unchecks selected item(s).
- **Home** key selects the first item, **End** selects the last one.
- **Click with Ctrl** switches items selection state.
- **Click with Shift** selects all items from the clicked one to the selected one.

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 active presets 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.