Introduction to MDrummer

Thank you for purchasing MDrummer, the most advanced drum machine on the market. As such it may not be as quick to understand than conventional simple virtual instruments. But learning it will speed up your music creation tremendously. Following information should give you a good start for using MDrummer.
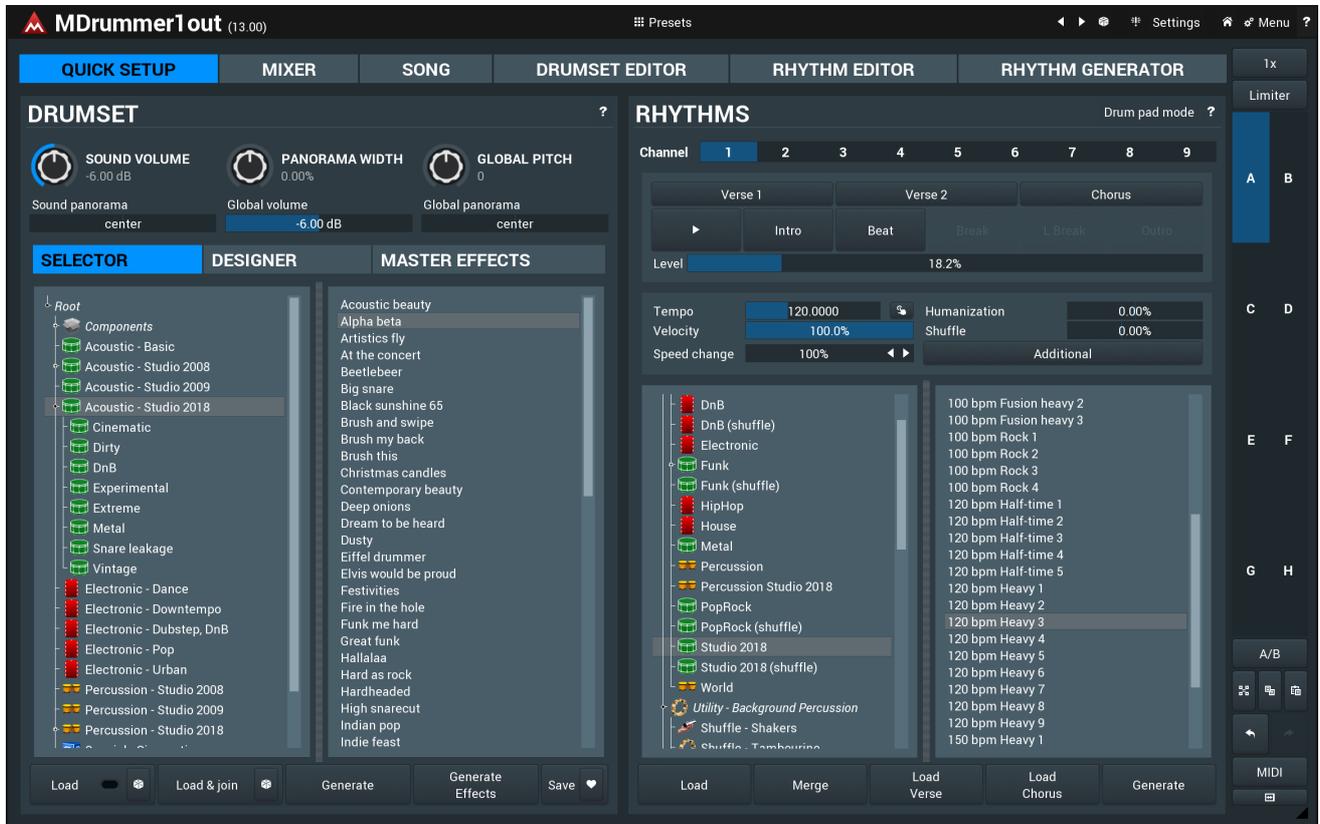
If you want MDrummer to play notes, use MIDI channel 10 or switch to drum pad mode.

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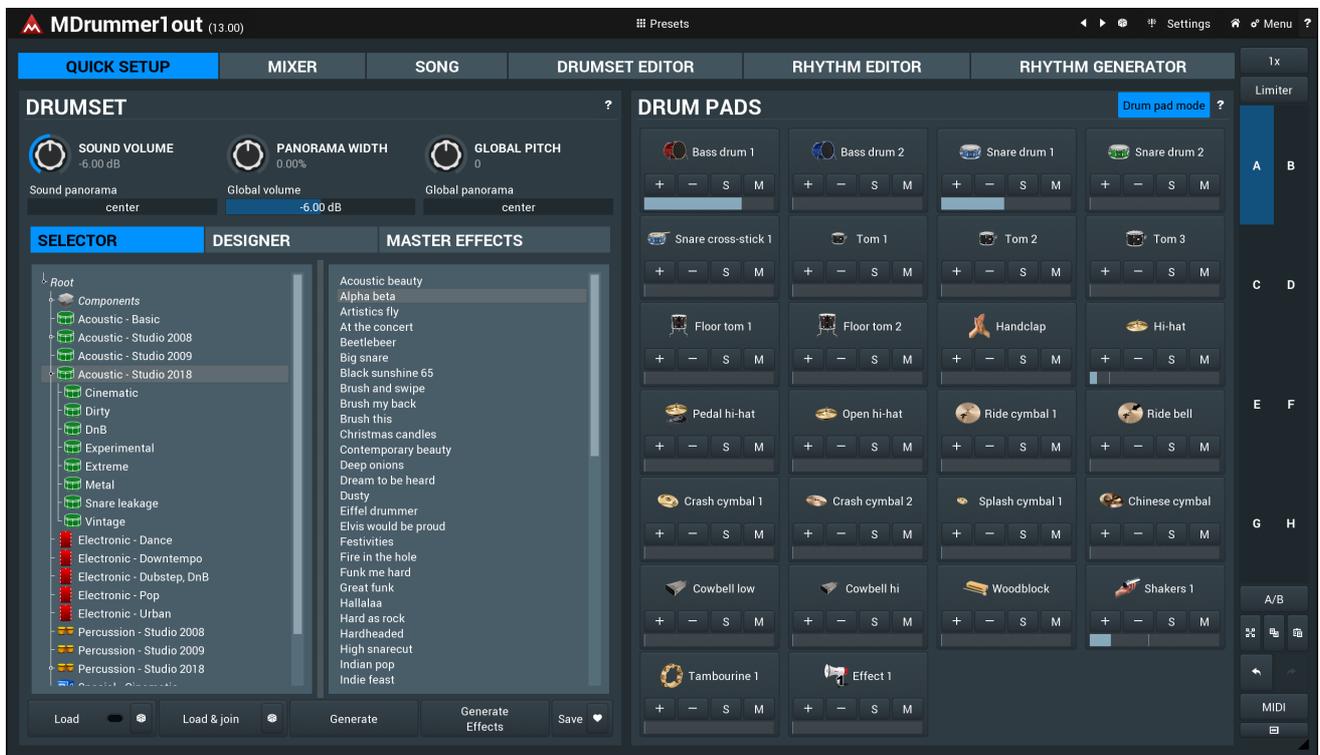
To use MDrummer's rhythm engine you can use the MIDI command system or the integrated song sequencer.

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. The disadvantage is that whenever you change the arrangement in your host, you need to edit the song tab as well, so that they both match each other.

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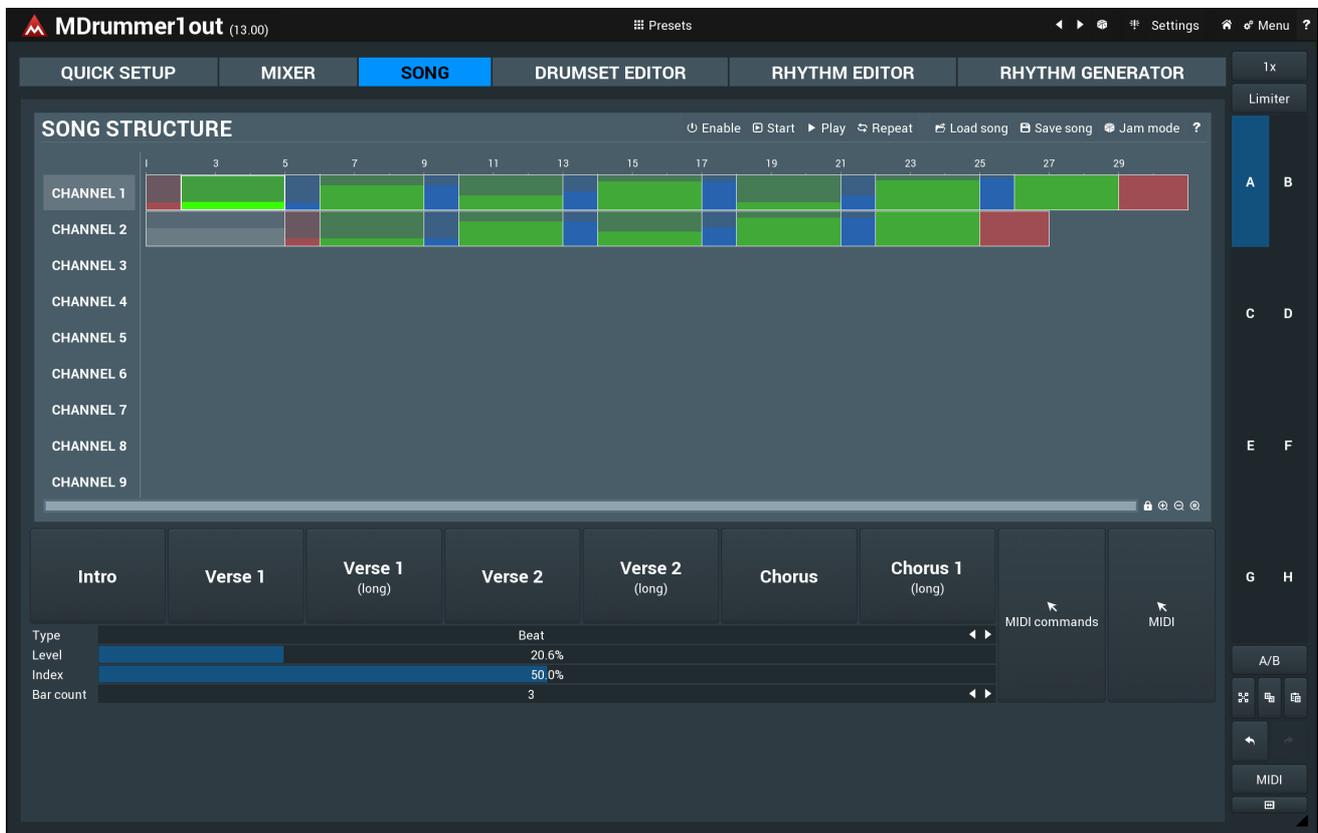
Use the integrated help system using F1 and check out MDrummer tutorial videos.

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 our website. 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, which one should I use?

There are 3 plugin editions - MDrummer1out, MDrummer16out and MDrummer (without postfix). 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 last one, MDrummer, is provided for backwards compatibility reasons only and is exactly the same as MDrummer16out.

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 ;). Some basic tips about handling plugins in various hosts are at the end of this documentation.

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.
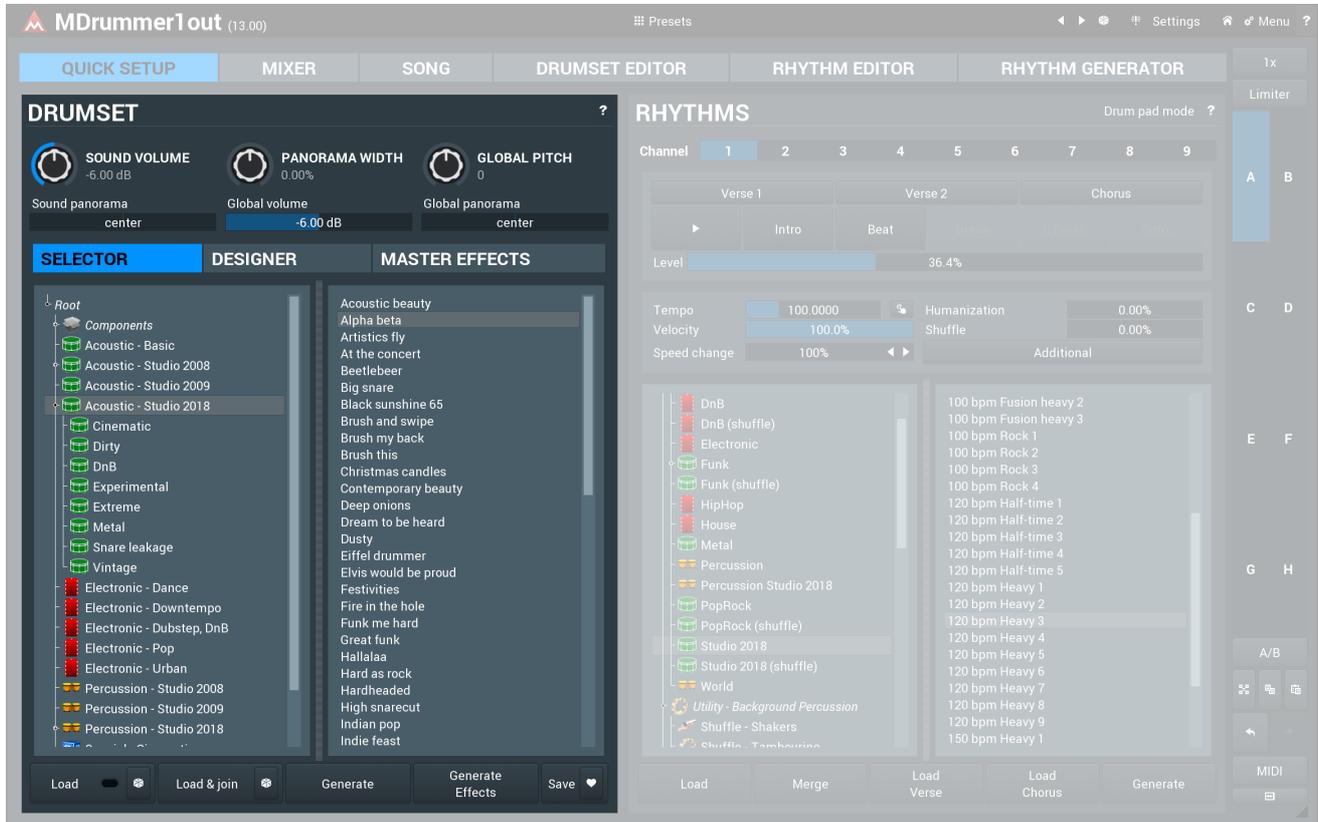
Step 3: Setup a rhythm

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.
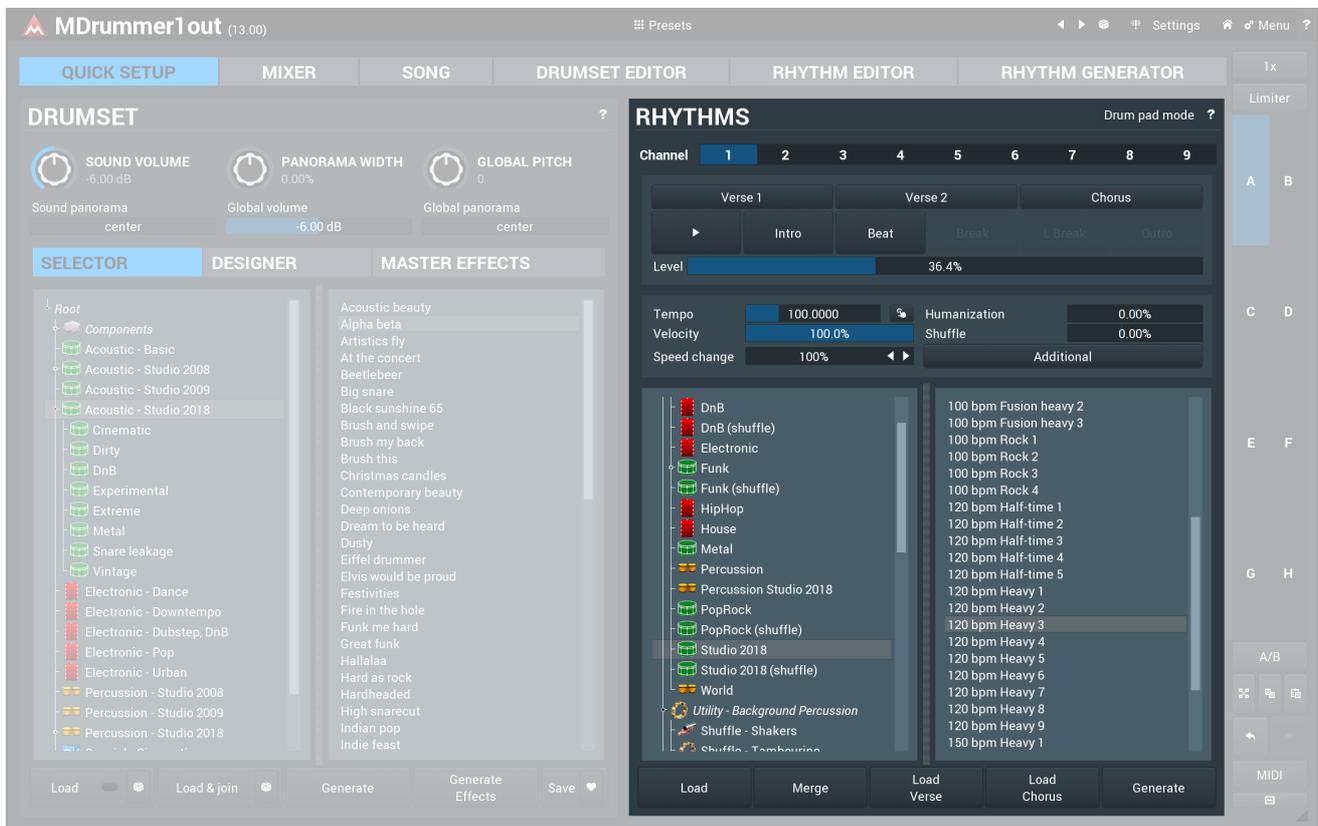
Controlling virtual drummer

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.
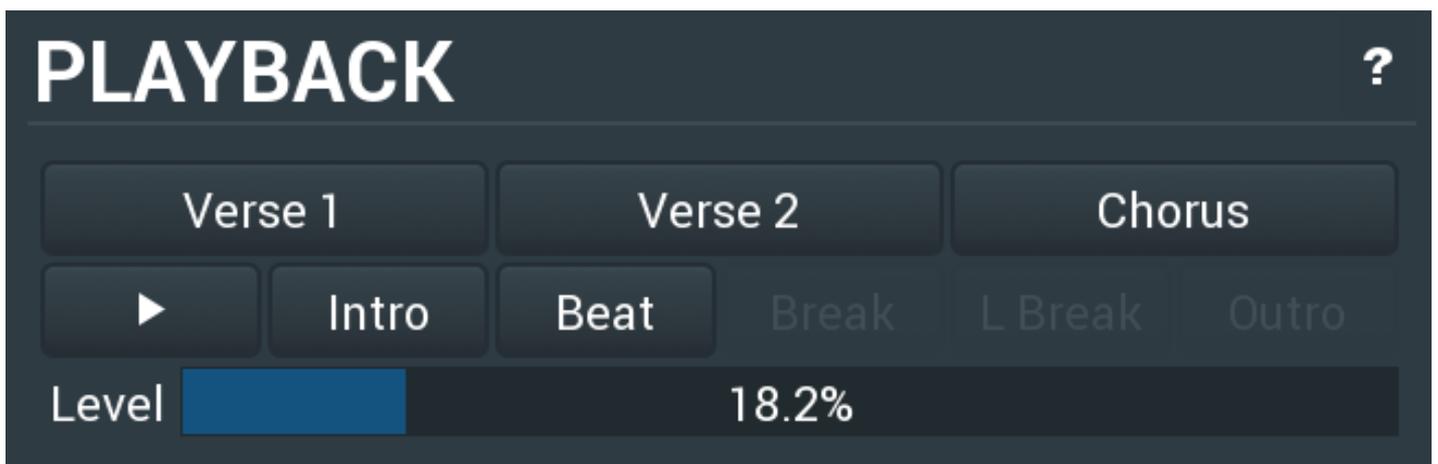
Now try something a little bit more practical:

- 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, 1 break or outro). Why? That is because immediate changes typically sound quite weird. Real drummers change level 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.

NOTE: The MIDI command method is an extremely advanced system, which requires perfect cooperation from the DAW. Mainly the timing needs to be just perfect. Unfortunately some hosts contain various bugs in that matter, which usually end up with a command "not being followed". In other words a command is sent and nothing happens, particularly when changing beat level without using a break, which is not typical for acoustic music, but pretty common for electronic music. In this case simply try moving the command that "doesn't do anything" a tiny bit earlier, just a millisecond is enough.

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 -1 as defined by MIDI, which is then the lowest octave. And so it is the first octave to control MDrummer. It is pretty simple:

- Notes in octave -1 mean "Play an intro and start a beat afterwards!"
- Notes in octave 0 mean "Play a beat!"
- Notes in octave 1 mean "Put there a break!"
- Notes in octave 2 mean "Put there a long break!"
- Notes in octave 3 mean "Put there an outro and finish!"
- Notes in octave 4 mean "Stop playback immediately!"

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

- C-1 means "Play a very quiet intro!", because C means very quiet, octave -1 means intro.
- F1 means "Put there a normally loud break!", because F means kind of a normal complexity, octave 1 means break.
- B3 means "Put there a very powerful outro and finish!", because B means very high level, octave 3 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.
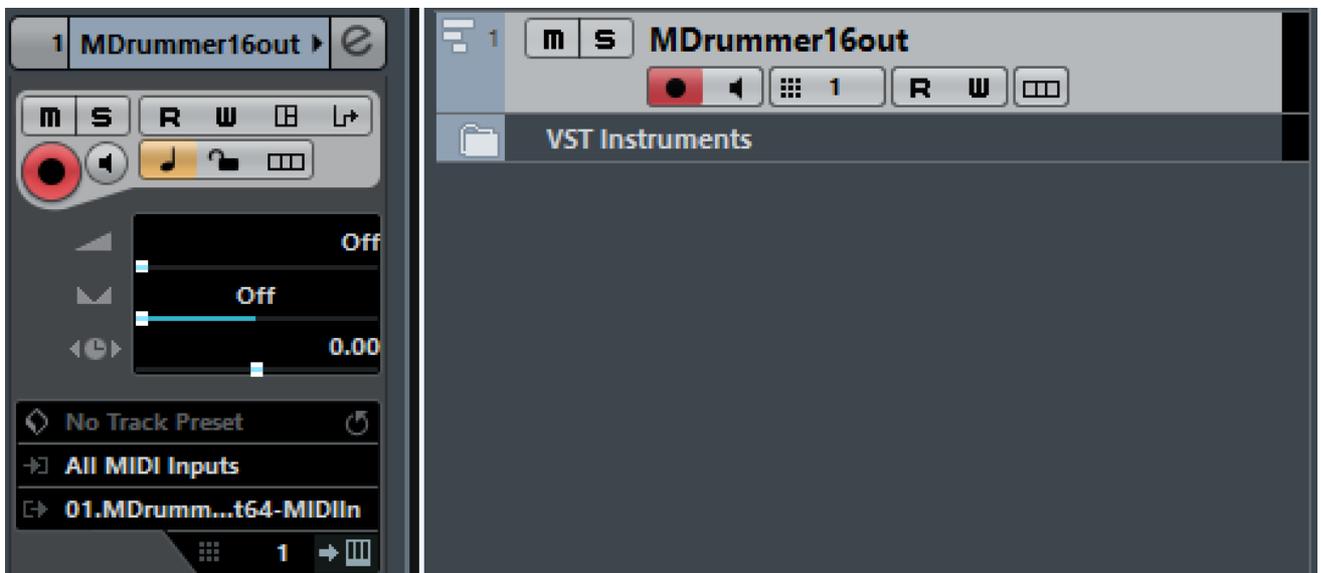
- **Create one part 8 bars long.**
  Put there 8 notes: 7 times C0 ("Play a quiet beat!") and one C1 ("Put there a quiet break").
  Each of them should be at the beginning of the bar, so the part should look like this:
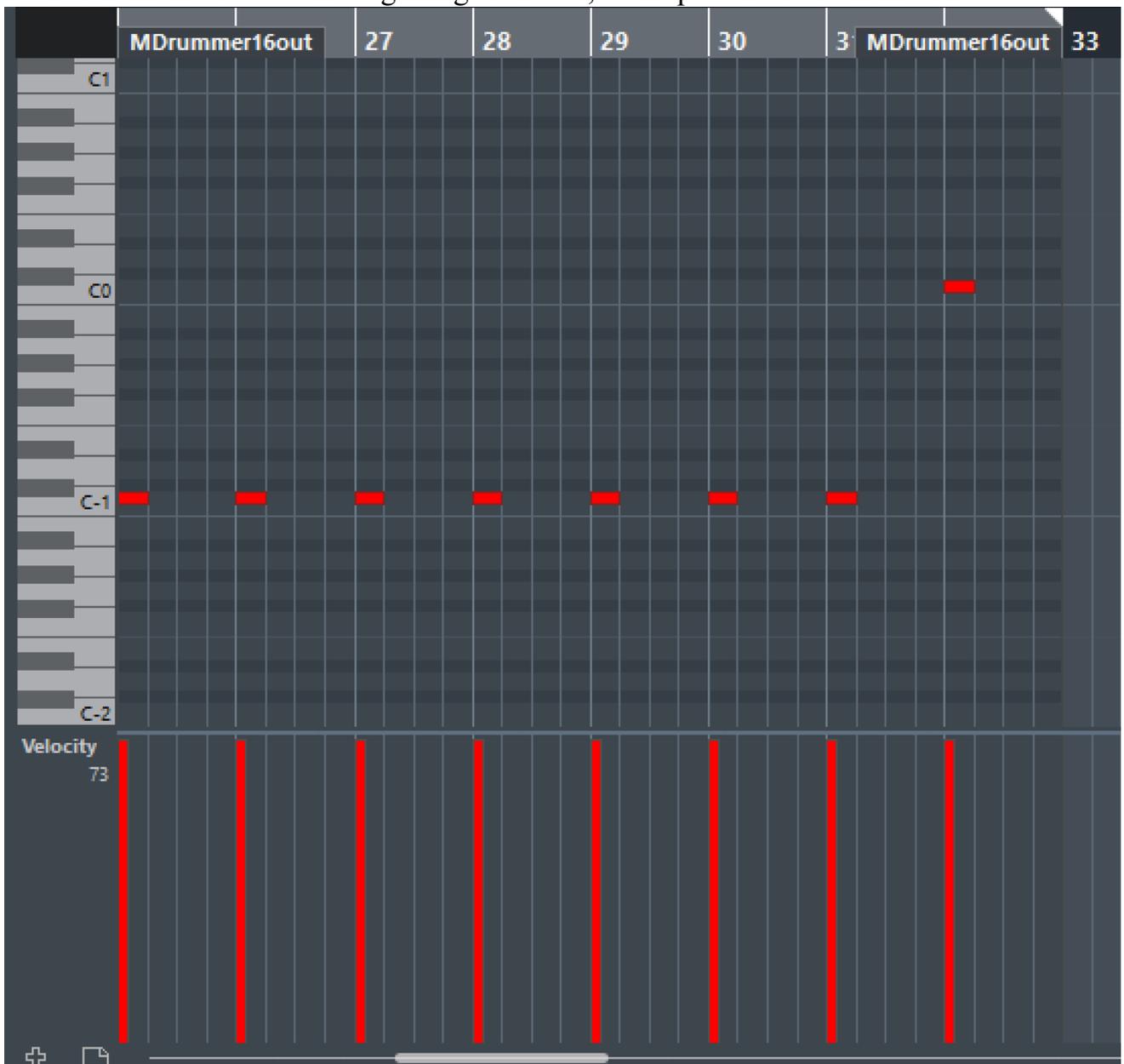
- **Copy the part along entire song.**
  As a result MDrummer will play the same sequence (containing 7 bars of beat and a break)
  again and again.
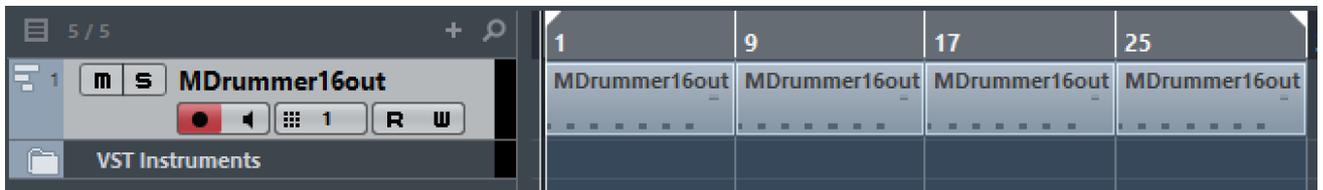
- **Define verses and choruses.**
  All MDrummer commands are currently on note "C", which means minimal complexity, hence a very silent verse. If you make any note "B", you'll get the exact opposite - maximum complexity, a very loud chorus for instance.
  You can transpose each note manually, but Cubase 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.
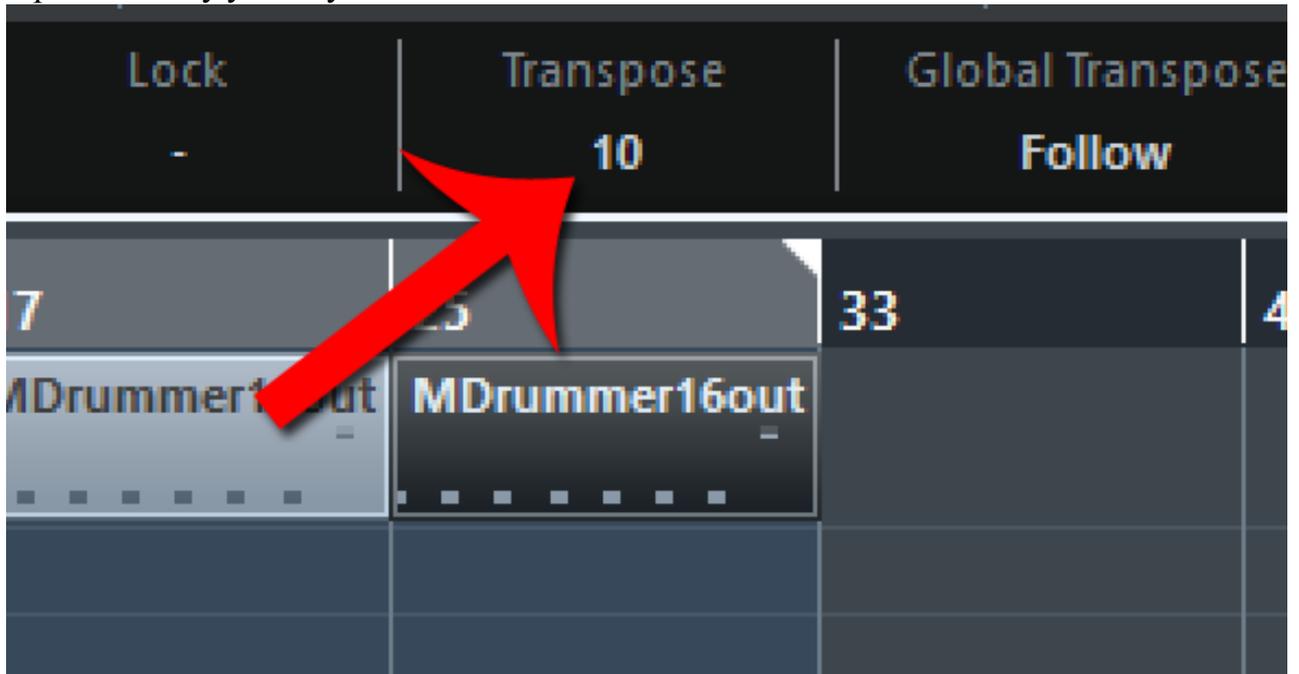
You can use automated level instead of transposition. Why? Because there are only 12 semitones in each octave, therefore using transposition you can have only 12 levels. Using automation you can have millions of levels, which may be sometimes useful. In this case all commands must be at note "C" (minimal 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.
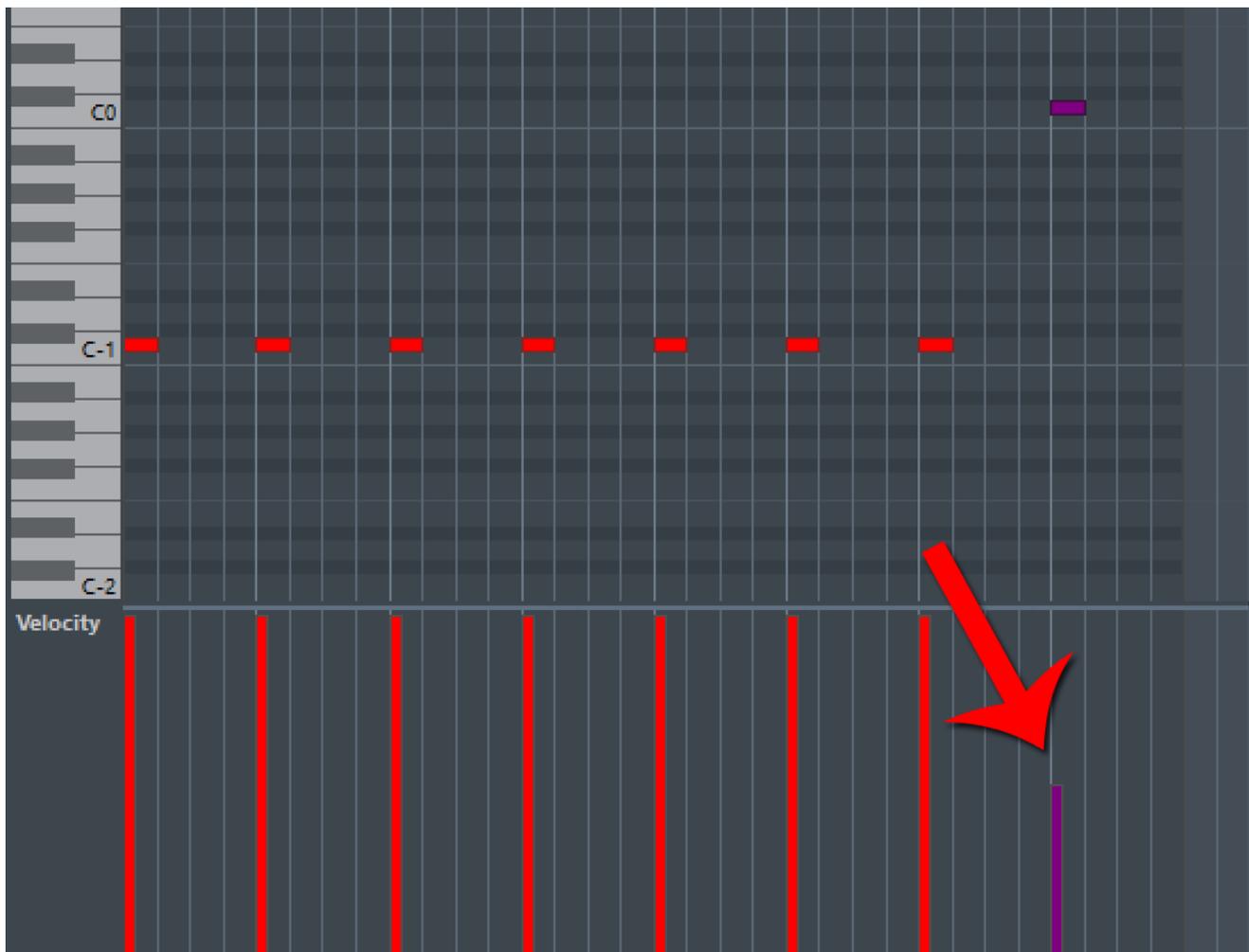
Managing multiple rhythms in one song

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.
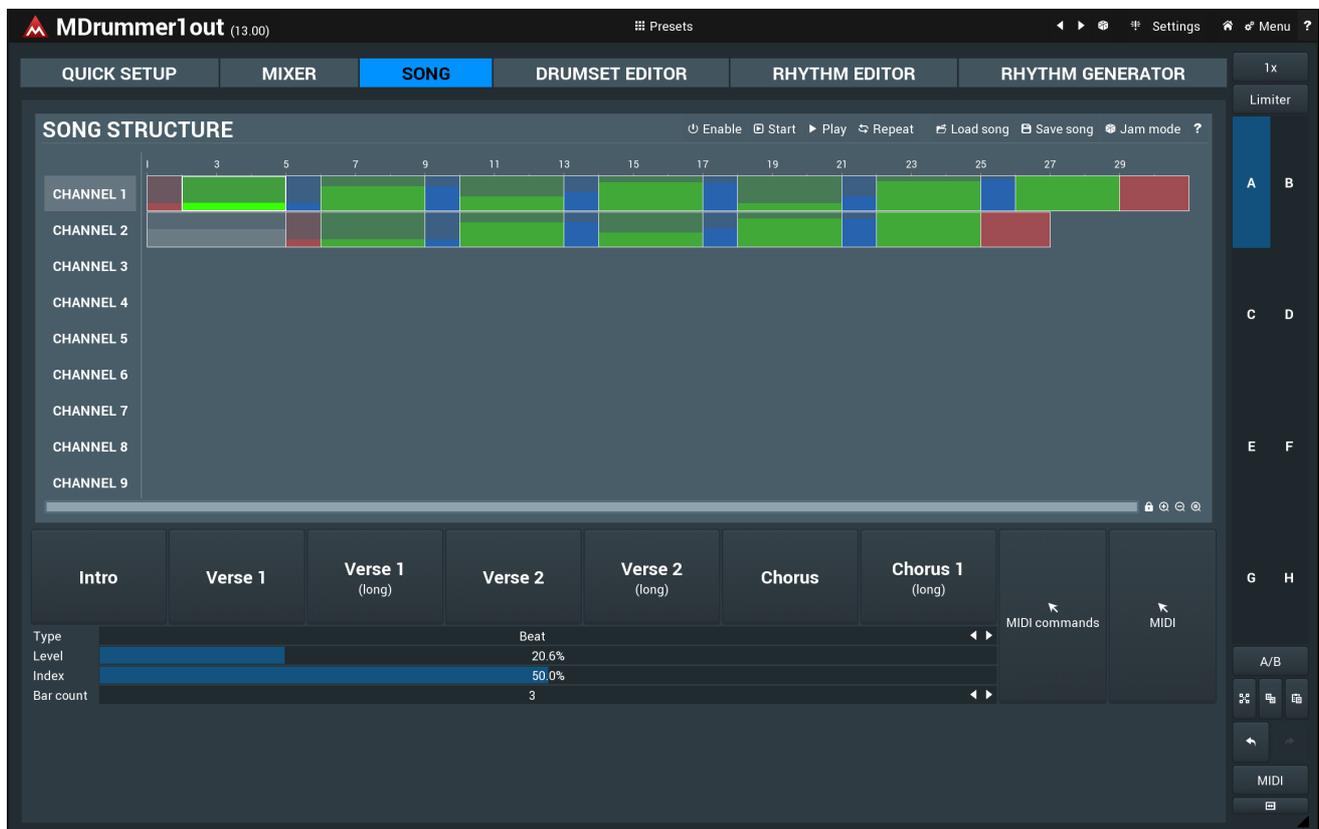
Advantages of the Song sequencer

- 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

Mixing and effecting in MDrummer

You can get the final sound directly from MDrummer. First it comes equipped with a fully featured mixer on the **Mixer** tab, where you can control volumes, panoramas, pitch, send levels, effects etc. for all drums, sends, special channels and output channels. Special channels are overheads and rooms. These have been added to simulate the classic workflow used for acoustic drums and is used only with some of the packs.

The Mixer is pretty self explanatory and contains all the classic features plus something more. Each channel contains an effect pipeline, in which you can put as many effects as you need and dozens are available, from compressors to equalizers, reverbs, delays, stereo generators etc. Pretty much the entire huge Melda arsenal.

More advanced features on the Quick setup

Before we get to how MDrummer actually works and some deeper level stuff, there are yet some more cool features on the main Quick setup page we should definitely mention. Eventually you may well be able to stay on the main page the whole time, leaving the advanced stuff intact.

Drumset designer

On the main page you can load, merge and randomize drumsets, which on its own is a brutal creative arsenal. But what if you have *nearly* perfect drumset. Perhaps a different bass drum? Easy. Just check the Drumset designer tab. There you can choose from hundreds of bass drums, snare drums, hihats... You can also randomize them, randomize their effects, add some layers to them...

How does it work? Switch back to the Selector and check the **Components** folder. There it is, thousands of microscopic drumsets containing individual drums or small sets of them (toms for instance). Why do you need to know? You don't. But perhaps in the future you'll dig deeper and start making your own components.

Adding background percussion to rhythms

Sometimes the rhythms could use a little shakers or tambourines for instance. And there's quite a few ways to do that. First one, the easiest one is using the predefined background percussion rhythms. Just select one and Merge it.

Rhythm templates

There is a special kind of rhythm, which sounds different everytime you load it. So in a way it's like clicking Generate button to create an entirely new rhythm, or using the Rhythm generator itself, but it's a bit easier, just a double click away.
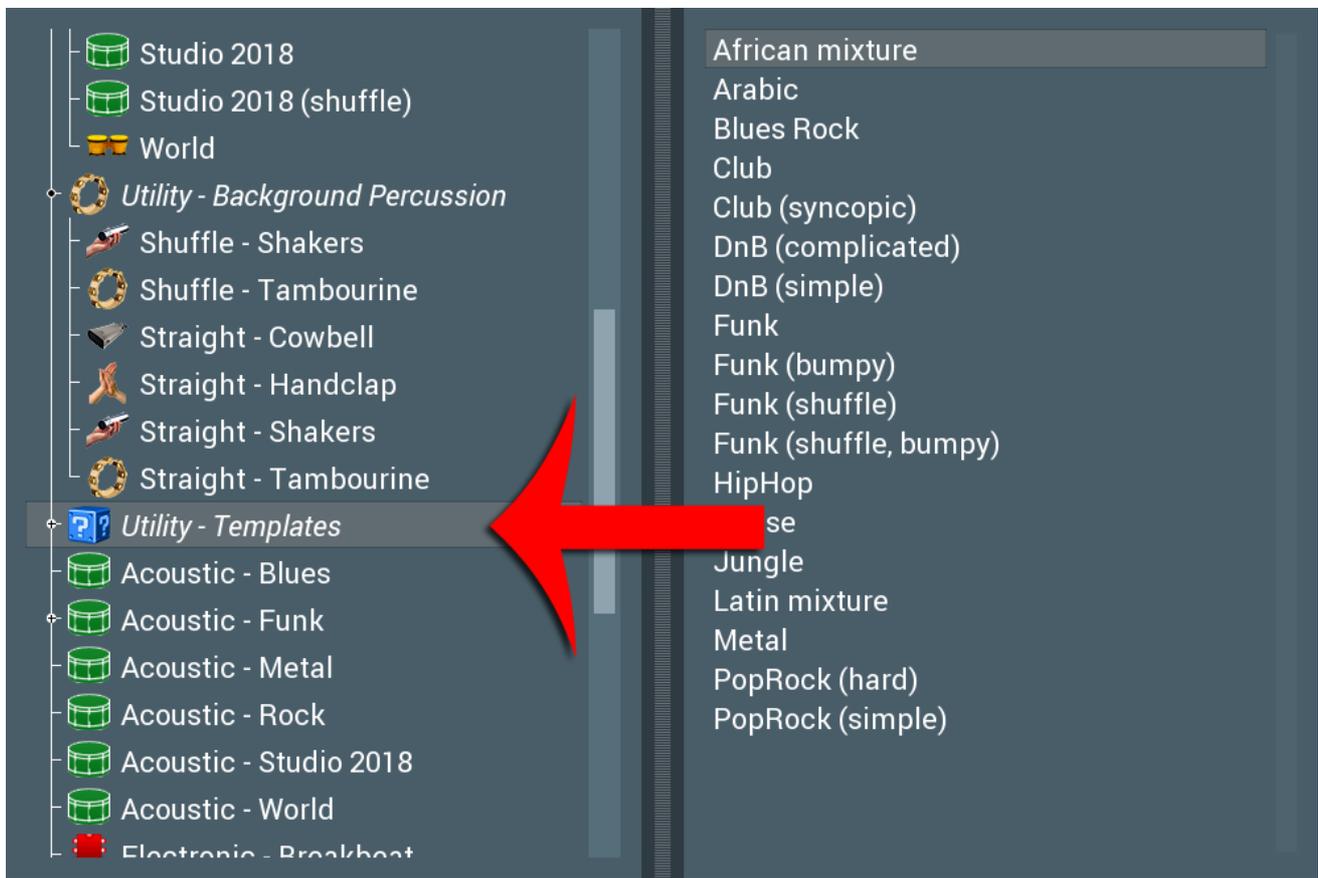
MIDI filters

Connecting MDrummer to an external electric drums is super-easy. Just connect it and run Menu / MIDI input filter. It will automatically calibrate each pad, so that the controller feels more comfortable than you could imagine before.

On the other hand when you want to use MDrummer's rhythm system, but connect it to another drum machine, which should be generating the sound, there are MIDI output filters. These are powerful enough to make it work with any other instrument.

Sample library import

There's a solid chance that you already have thousands of drum samples on your hard drive. Normally you'd have to use them manually. MDrummer can easily analyze the whole collection of yours and create drumsets and components from them automatically. And these will be compatible with other drumsets and components, so the integration will be quick and seamless. Just run the Menu / Analyze and import sample library.

MDrummer structure

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

General MeldaProduction MDrummer structure

Controller (VST host...)

MIDI notes, controllers

MeldaProduction Audio Effect Plugin System (MAEPS)

MAutoPan   MEqualizer   MDelay   MVibrato   MWaveShaper   ...

Commands via MIDI or automation

MeldaProduction Rhythm System (MRS)

Rhythm 1
General parameters such as signature, shuffling, break length...

Intros	Beats	Breaks	Long breaks	Outros
Loop 1 Loop 2 ...	Loop 1 Loop 2 ...	Loop 1 Loop 2 ...	Loop 1 Loop 2 ...	Loop 1 Loop 2 ...

Rhythm 2
General parameters such as signature, shuffling, break length...

Intros	Beats	Breaks	Long breaks	Outros
Loop 1 Loop 2 ...	Loop 1 Loop 2 ...	Loop 1 Loop 2 ...	Loop 1 Loop 2 ...	Loop 1 Loop 2 ...

...

MeldaProduction Drum System (MDS)

Drum 1

Velocity layers
Layer 1
Layer 2
...

Effects
Effect 1
Effect 2
...

General processing parameters such as volume, pitch or panorama, and general behaviour parameters such as drums to close or freeze.

Drum 2

Velocity layers
Layer 1
Layer 2
...

Effects
Effect 1
Effect 2
...

General processing parameters such as volume, pitch or panorama, and general behaviour parameters such as drums to close or freeze.

...

Output device

Stereo Channel 1
Stereo Channel 2
...

MeldaProduction Audio Stream Plugin System (MASPS)

MSampler   MSubSampleSynthesizer   MSynthesizer 4NN   ...

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 producing 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 repetitive 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 library

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 a single directory tree. Until version 12 customers had to download the entire collection and extract it somewhere. Since version 12, which contains a redesigned data library, you can download the only the data you actually need from MDrummer data download page MDrummer will ask for the data to install, or you can use Menu / Install pack. Where you install it is entirely up to you. We'd recommend putting it onto an SSD drive as that may speed up your workflow tremendously. The important thing is that all of the MDrummer data need to be present in this single installation path.

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 data folder, you can do that, but it's possible you will have to let MDrummer search for it afterwards.

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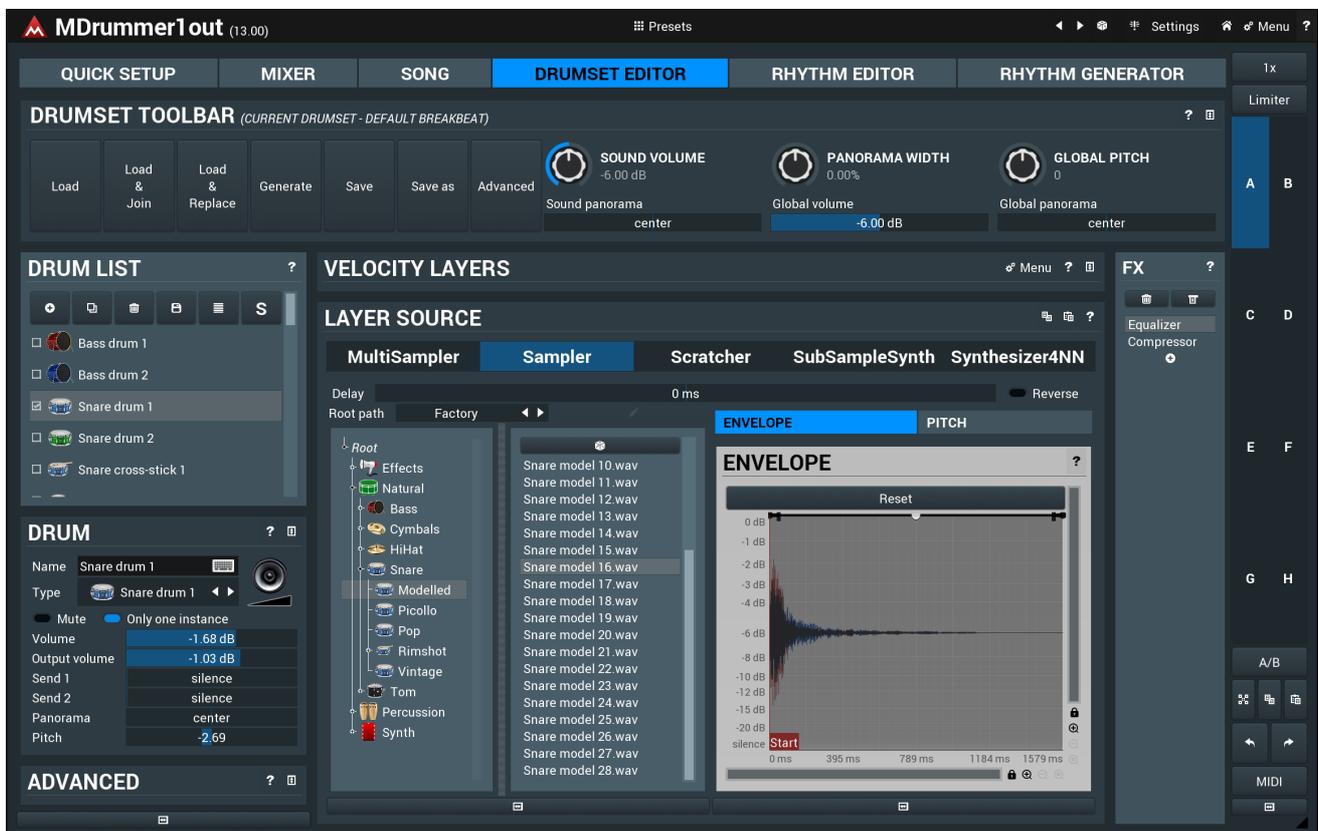
A drumset is a set of drums and you can just imagine a real drum instead of the virtual one. You can have as many drums as you need. To manage your drumset in detail, switch to the **Drumset editor**.

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 hihat. 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 defines the 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. Note however that the channels are actually used only for the 16out version of MDrummer, since it makes no sense for 1out version.

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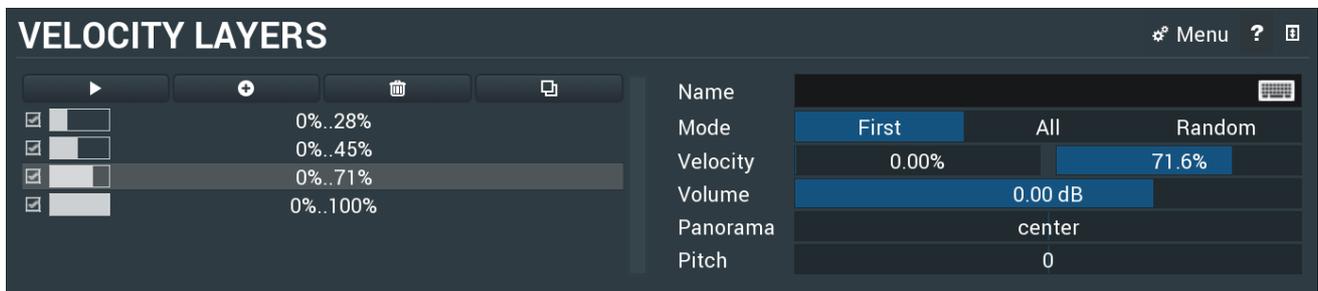
Layer source panel contains the sound source for the selected layer. On top of the panel is the source selector and below its' parameters. If you change sound source, its' parameters are discarded, of course.
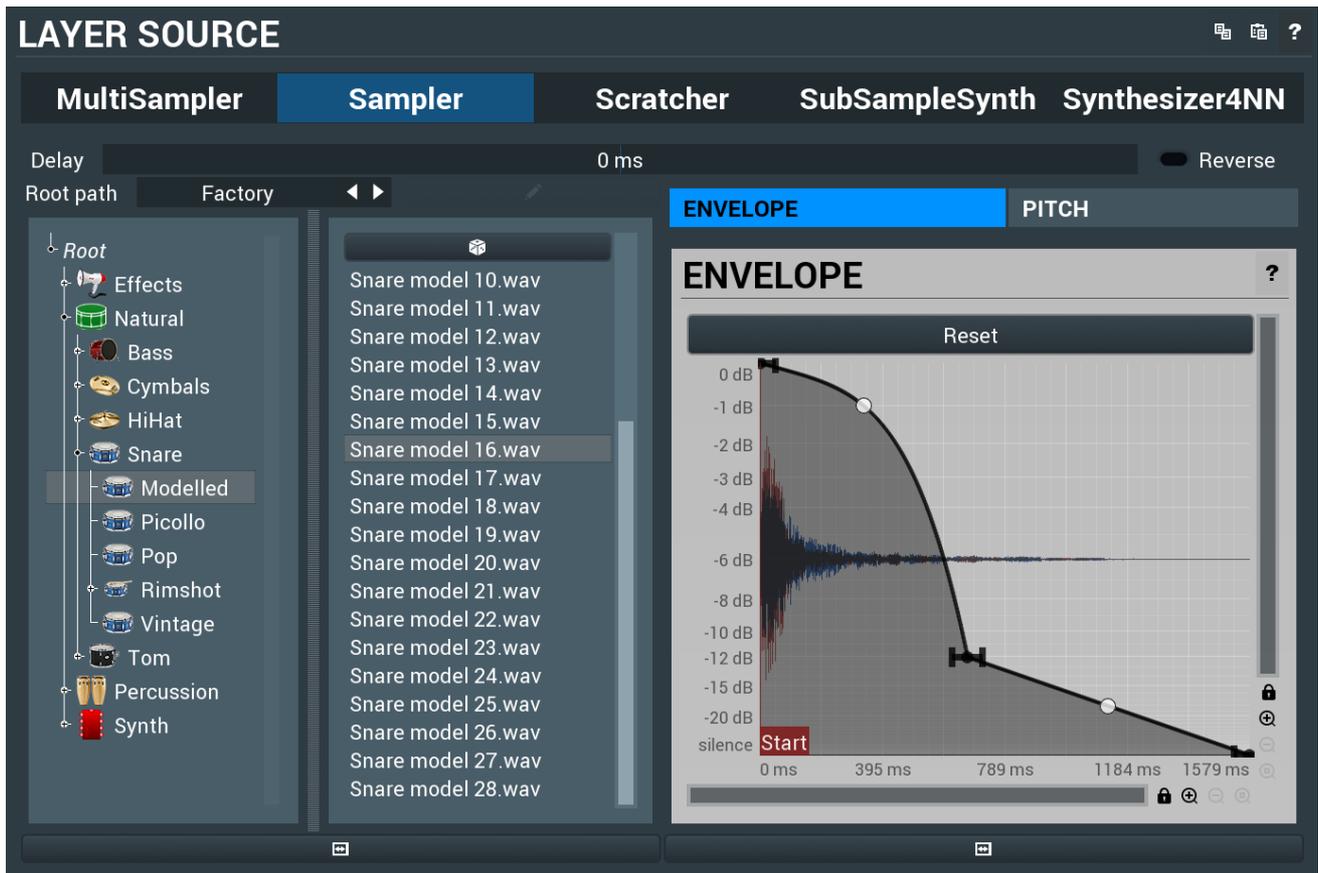
Drum effects

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 drumset effects pipeline is also available from the mixer, but for convenience it is present in the drumset editor as well.
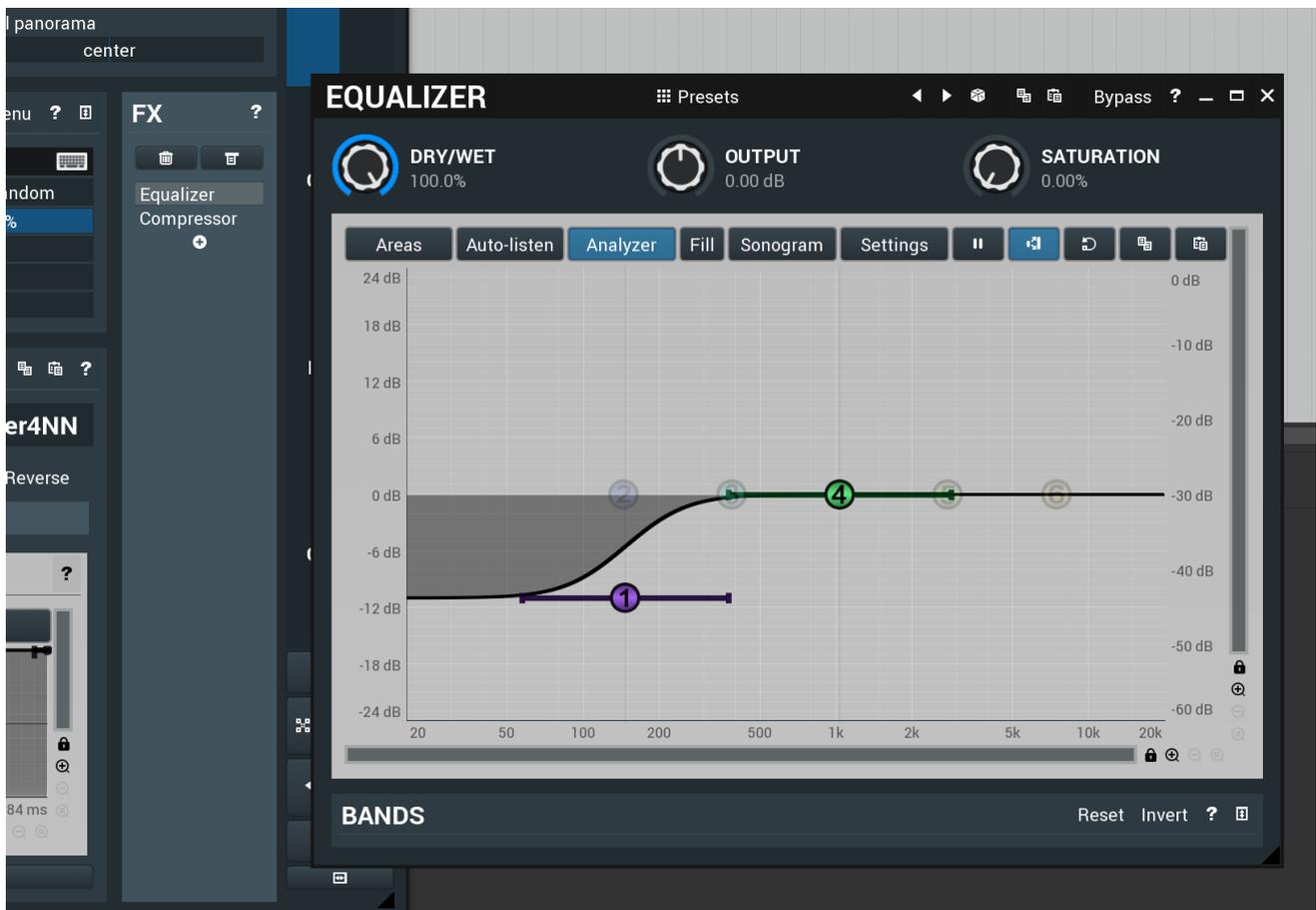
When the sound is rendering, the layers with sound sources produce a single audio stream, which is then processed by this effect pipeline. The output then goes to the output channels with their own effect pipelines, plus you may send the drum to Send channels.

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.
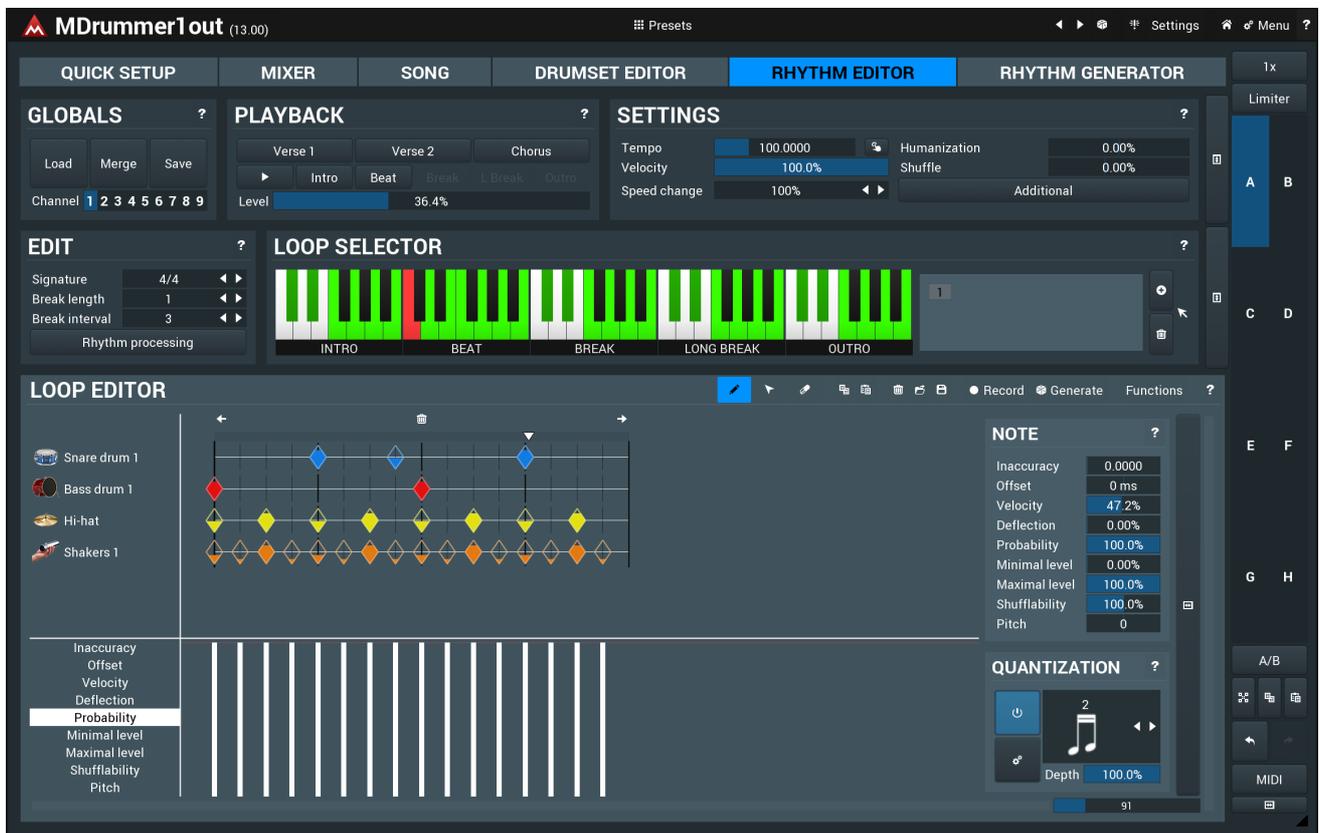
Loop-box selector

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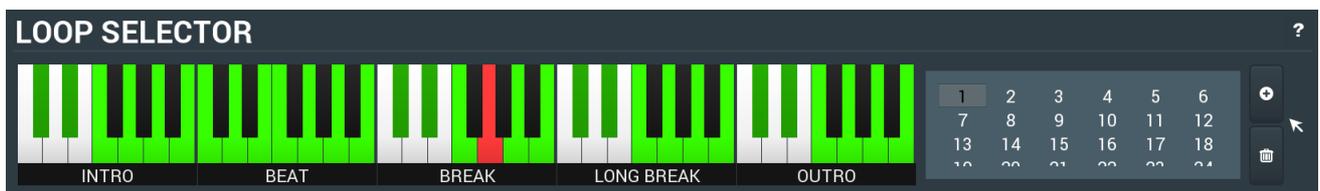
The **piano keyboard** in the toolbox is the exact place where you select loop box to edit. Under each octave you can see the loop type the boxes represented by each key correspond to. Black/white keys are empty loop boxes, blue ones contain at least one loop and the red one indicates the selected box.

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

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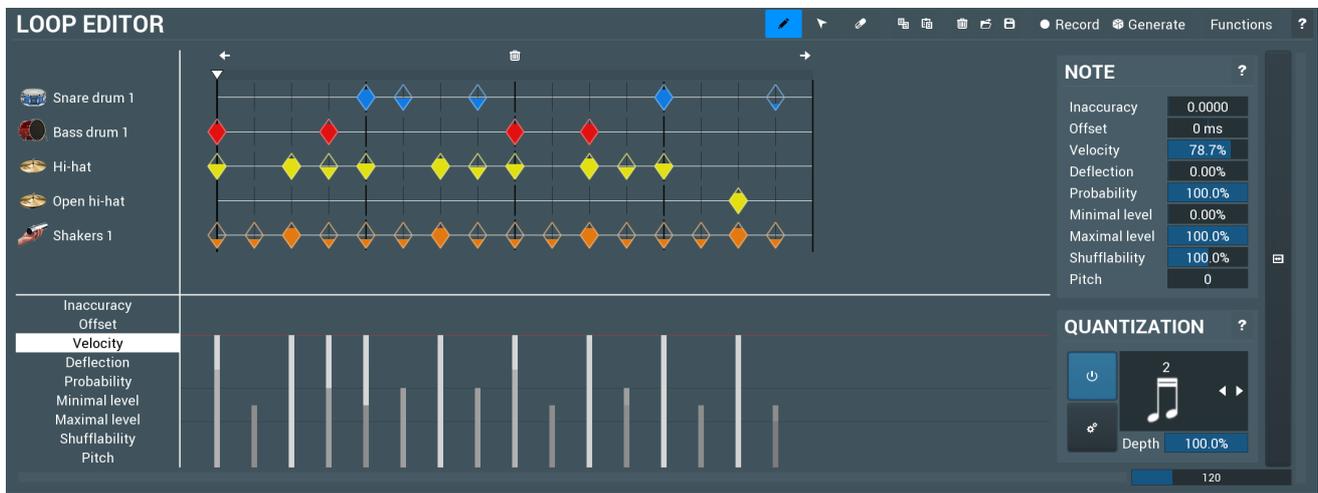
MDrummer has actually 2 loop editors, one in the **Rhythm editor** and another in **Rhythm generator**. As the name suggests, this editor is designed to edit a single loop. Let's go through each part of it.

Track list
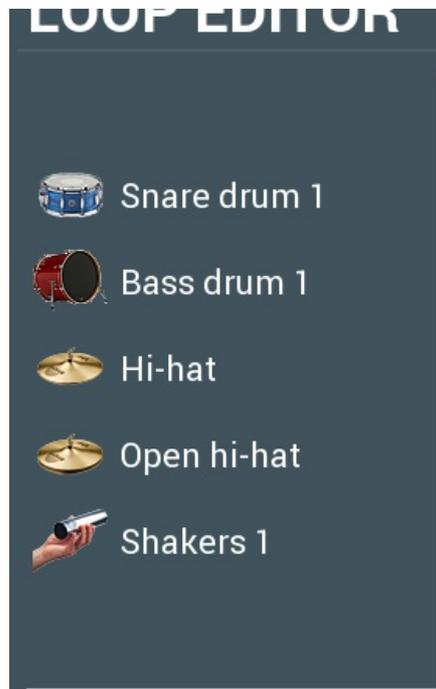
A loop contains a set of tracks. Each of them is associated to a drum type. That allows all loops to be fully compatible, not affected by any MIDI key assignment. The track list is located on the left of the loop editor. You can execute a **context menu** using right mouse button or double-click. There 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:
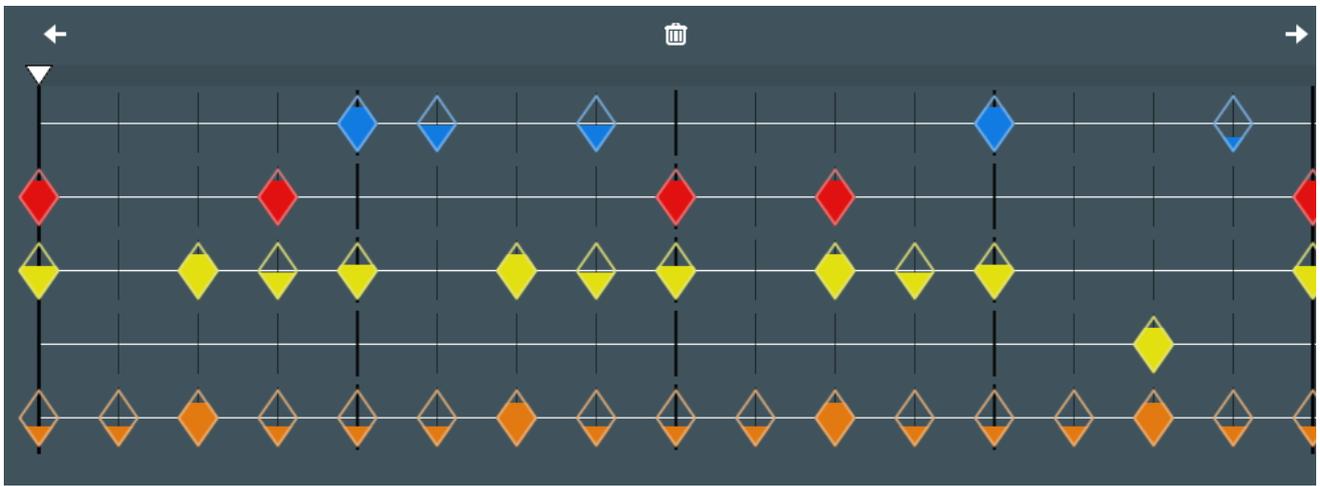
On the top of it you can see 3 icons. It allows you to **insert new bar to the left**, **delete this bar** and to **add new bar to the right**. Just click on corresponding icon. Hold ctrl to duplicate the original bar.

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

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 highlighted 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 jewel of MDrummer, which lets you create the whole rhythm using just one loop and a few settings.
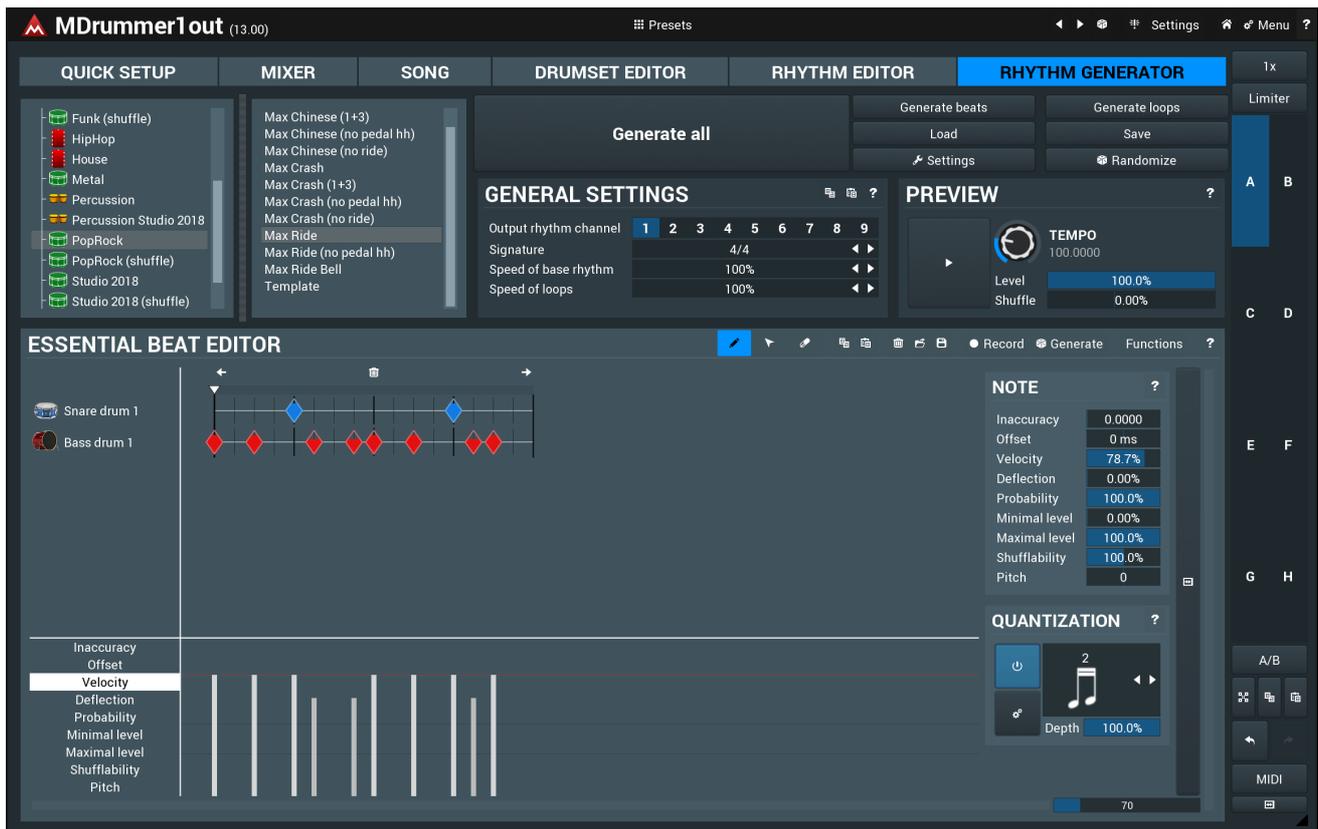
The best start would probably be a simple tutorial. Just follow these steps, please:

- 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 resulting 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!

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.