

SUPERIOR DRUMMER 3

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0. INTRODUCTION

Thank you for purchasing Superior Drummer 3, the complete drum production studio.

Superior Drummer 3 was designed from the ground up as the “be all end all” virtual instrument solution for drums. Its goal is to provide an unobtainable level of quality and control to both the professional producer and the hobbyist alike. In the simplest of definitions, Superior Drummer 3 is a virtual instrument that gives the user a fully malleable multi-track drum recording, and all of the tools necessary to program, mix, and produce this drum recording in any way imaginable.

Toontrack’s core value with respect to sound has always been realism. To achieve this goal the recording of the Superior Drummer 3 core library was captured in such detail that it allows the software engine to recreate a drum performance full of every nuance and subtle quality that makes it sound unmistakably human. This recording detail in combination with nearly 2 decades of software development provides the user with endless sound shaping options, and the most advanced drum production tool available.

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Effects powered by Overloud



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0.1 WHAT'S INCLUDED WITH THE PURCHASE OF SUPERIOR DRUMMER 3

The purchase of Superior Drummer 3, The Superior Drummer 3 Upgrade, or the Superior Drummer 3 Cross-grade includes the DOWNLOAD of the following:

- **The Superior Drummer 3 software** (i.e. the Stand alone version of the software and all of its various plugin formats for use in your DAW). This is the “technology engine” if you will. It is the tool that makes it possible to playback and manipulate the sound libraries, as well as mix, process, and convert audio to MIDI.
- **The Superior Drummer 3 core sound library.** These are the actual drum audio files, recorded by George Massenburg at Galaxy studios, Belgium. These proprietary format sounds are used by The Superior Drummer 3 software engine to playback infinitely customizable drum performances.
- **SD3 Electronic Library:** In addition to the acoustic sounds there is also a selection of electronic drum machine sounds, and acoustic / electronic percussion sounds provided as part of the core library. Its important to note that the Electronic sounds are found in the Search for Instrument section of Superior Drummer 3, as it is a part of the Superior Drummer 3 core library. Therefore it is not available as a seprate selection in the Library selection menu.
- **The Superior Drummer 3 core MIDI library.** This is a package of hundreds of MIDI files recorded by session drummer Norman Garschke on an electronic drum kit. Once installed it can be found on the grooves page. Because these files were performed by a human (like all Toontrack MIDI

packs) they are complete with all of the subtle timing and velocity nuances that make a performance undeniably human.

- **Superior Drummer 3 Factory Presets.** A wide selection of presets for many musical genres created by renowned engineers and producers. These include George Massenburg, Richard Devine, Bob Rock, Andy Sneap, Mark Lewis and so on.

0.2 WHAT'S NEW IN SUPERIOR DRUMMER 3

The Graphic below provides a feature comparison to Superior Drummer 2 and Superior Drummer 3. All features in Superior Drummer 3 are explained in this manual.



	SUPERIOR DRUMMER 2	SUPERIOR DRUMMER 3
Core library size	approx. 19 GB	approx. 235 GB
Drum set brands	1	6
Kit configurations	6	14
Ready for surround playback	—	✓
Audio to MIDI conversion (Tracker)	—	✓
Kicks	2	16
Snares	7	25
Cymbals	32	32
Electronic sounds	—	✓ (approx. 350)
Mixer effects	5	35
Instrument bleed	✓	✓
Internal mixer busses	16	16
Internal stereo outputs	16	16
Humanize functionality	✓	✓
New & advanced algorithm for realistic tuning of drum heads and cymbals	—	✓
Reverse sample playback	—	✓
Pitch envelope control	—	✓
Audio bounce in 16 and 24 bit	✓	✓
Percussion sounds	—	✓
Percussion MIDI grooves	—	✓
Future hit MIDI grooves	—	✓
Import your own samples	—	✓
MIDI grid editor	—	✓
Quantize MIDI grooves	—	✓
Edit Play Style	—	✓
Tap2Find	—	✓
Song Creator	—	✓
Song Track	—	✓
Tempo & time signature change on Song Track	—	✓
Multiple song track versions	—	✓
Scalable interface	—	✓
Detachable windows/tabs	—	✓
Macro controls	—	✓
MIDI learn	—	✓
Support for keyboard shortcuts	—	✓
Core MIDI library size	approx. 1,513 files	approx. 1,640 files
MIDI categorized in songparts	—	✓
Instrument search browser with filters	—	✓
MIDI search browser with filters	—	✓
Custom graphics for all drums	—	✓
Show webshop MIDI	—	✓
Customizable mixer layout	—	✓
Combine drums from all installed Toontrack sound libraries (SDX & EZX)	—	✓
Improved workflow for easily creating drum stacks	—	✓
Advanced e-drum features	—	✓
MIDI out	—	✓
Simplified microphone routing	—	✓

1. INSTALLATION

Superior Drummer 3 is a download only product. No physical media has been created for the software portion, and the 230 GB library is fully available for download via the Toontrack Product Manager.

The following sections will outline the process for installing Superior Drummer 3 and all of its included assets.

1.1 INSTALLING / AUTHORIZING FROM A DOWNLOAD

The following is a step by step guide for using the Toontrack product manager to download, install, authorize, and update both Superior Drummer 3 and its sound/MIDI library.

1. DOWNLOADING THE PRODUCT MANAGER

If you are already a Toontrack user and you have previously installed The Toontrack Product Manager you can skip this step.

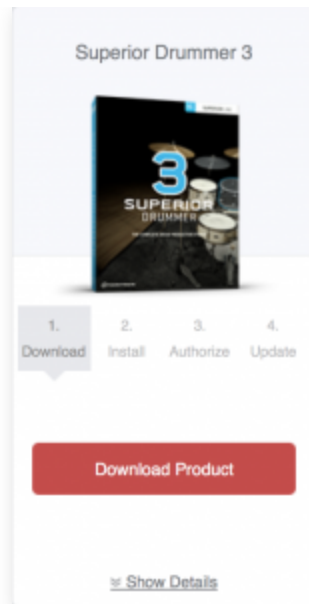
- Open this link in a web browser and click the Mac / PC button to download the Toontrack Product Manager. <https://www.toontrack.com/product-manager/>

- Once the Toontrack Product Manager has been downloaded run the installer for the Product Manager on your Mac or PC.
- Launch the Toontrack Product Manager application on your computer. Upon the first launch you will be prompted to login to your toontrack.com account, or create an account if you do not already have one.
- Once you have logged into your toontrack.com account via the Toontrack Product Manager, all of your registered products will appear. If Superior Drummer 3 does not appear it simply means that you need to register your purchased serial number (aka license) to your Toontrack account via the Product Manager. This is done by clicking the blue Register New Product button, and then entering the serial number.

The Toontrack Product Manager is a stand alone application that acts as a portal and download manager for your toontrack.com account. It allows you to access, download, install, authorize, and update all in one convenient location. Shown below is a video that explains how to use the Toontrack Product Manager.

2. DOWNLOADING AND INSTALLING THE SUPERIOR DRUMMER 3 SOFTWARE.

- Locate Superior Drummer 3 in the Product Manager, and click the red Download Product button. This is the software portion of the installation.



- Once the download of the file is complete, Click the Install Product button and the Product Manager will launch the Superior Drummer 3 installer. Please run through all pages of the installer until completed.
 - *The only reason to customize this installer would be if you want to install the VST plugin version of SD3 to a specific location on your computer for DAW compatibility (PC).*
- Once installed the Product Manager will prompt you to Authorize the Superior Drummer 3 software. Simply click the red Authorize button in the Product Manager.
- Finally, if there are updates available the Product Manager will prompt you to download the available updates, and once downloaded, install them.

Once the software is installed the next step will be to install the sound library, it's updates, and the Core MIDI library.

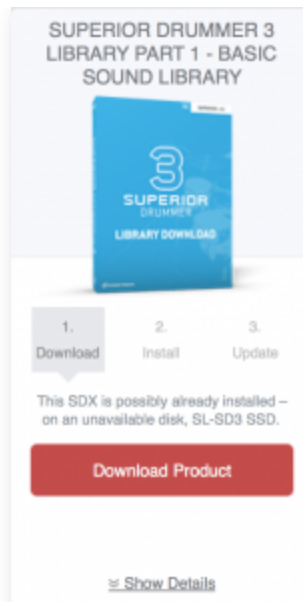
3. DOWNLOADING AND INSTALLING THE SUPERIOR DRUMMER 3 SOUND LIBRARY.

The Sound Library is divided into 5 parts. Not all parts need to be installed, but all installations must be completed in the order that they appear (i.e. You can choose to install downloads 1, Bleed, 2, 3, but *NOT* 1,3,5). The only exception to this rule is the Additional Bleed download, which can be installed at any time after Download 1.

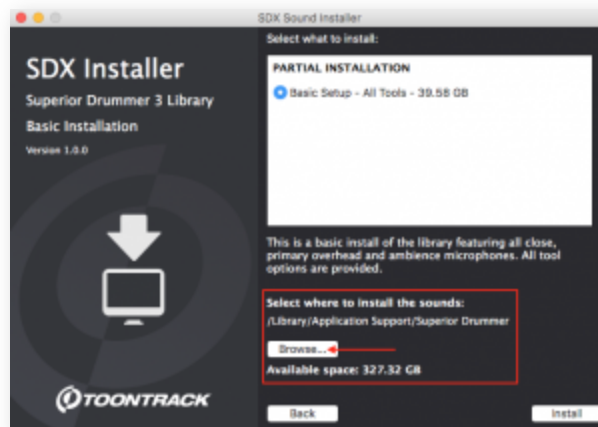
- **Download 1:** “Basic Sound Library” (All instruments, all tools and all articulations in close mics, OH Dyn and Amb Ribbon. Bleed in Snare Bottom (Kick and toms) , Approx. estimate 40gb)
- **Download 2:** “Room Mics 1” (The rest of the Room mics: OH Cond, Amb Near, Amb Mid).
- **Download 3:** “Room Mics 2 – Surround (5 ch)” (extra mics to achieve 5.0 surround, Front L/R, Center and Surround L/R)
- **Download 4:** “Room Mics 3 – Height Surround (6 ch)” (extra mics to achieve 11.0 surround, Front Height, Rear Height and Rear Height Wide)
- **Additional Bleed:** “Additional Bleed” (The rest of the bleed in the close mics). This installation can be performed at any time after Download 1. This allows you to install the Basic Sound Library with all Bleed and skip all other installers if desired.

INSTALL THE SUPERIOR DRUMMER 3 LIBRARY PART 1 - BASIC SOUND LIBRARY

- Locate the Superior Drummer 3 Library Part 1 - Basic Sound Library option in the Toontrack Product Manager.



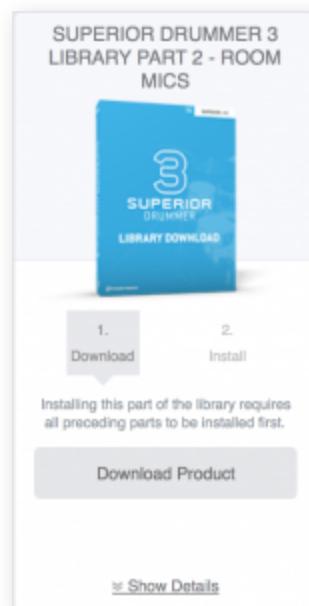
- Click the red Download Product button.
- Clicking this button will download the SD3 Library Part 1 - Basic Sound Library (approximately 40 GB). This installation is necessary no matter how many subsequent installations you plan on completing.
- Click the Install product button in the Product Manager once the download is complete, and run the installer to completion.
 - The Sound Library can be installed to an external hard drive by customizing the installer. This is done by clicking the Browse button in the Library Part 1 installer.



- The Basic Sound Library listing in the Product Manager will also contain 2 updates. Both updates MUST be completed. The Product Manager will automatically prompt you to download these updates with a Red Download Updates button. The updates include:
 - The Sound Library update.
 - The SD3 Core MIDI Pack.

INSTALL THE SUPERIOR DRUMMER 3 LIBRARY PART 2 - ROOM MICS

- Locate the Superior Drummer 3 Library Part 2 - Room Mics option in the Toontrack Product Manager.

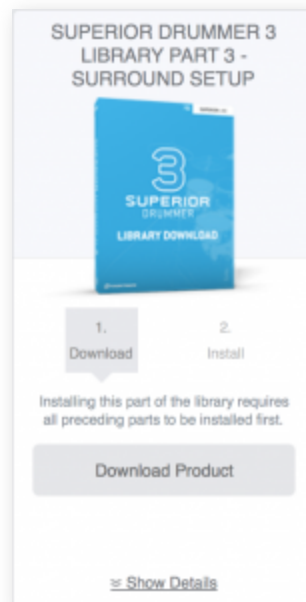


- Click the Download Product Button.
- Clicking this button will download the SD3 Library Part 2 - Room Mics (approximately 46 GB).
- Click the Install Product button in the Toontrack Product Manager once the download has finished, and run the installer to completion.

- It is not possible to install different portions of the library to different locations on your computer, therefore you will not be able to customize this installation or any subsequent SD3 Core Library installation.

INSTALL THE SUPERIOR DRUMMER 3 LIBRARY PART 3 - SURROUND SETUP

- Locate the Superior Drummer 3 Library Part 3 - Surround Setup option in the Toontrack Product Manager.

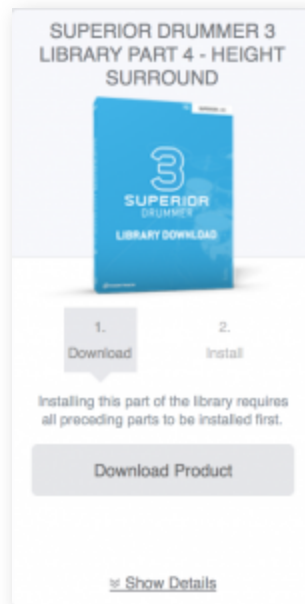


- Click the Download Product Button.
- Clicking this button will download the SD3 Library Part 3 - Surround Setup (approximately 42 GB).
- Click the Install Product button in the Toontrack Product Manager once the download has finished, and run the installer to completion.
 - It is not possible to install different portions of the library to different locations on your computer, therefore you will

not be able to customize this installation or any subsequent SD3 Core Library installation.

INSTALL THE SUPERIOR DRUMMER 3 LIBRARY PART 4 - HEIGHT SURROUND

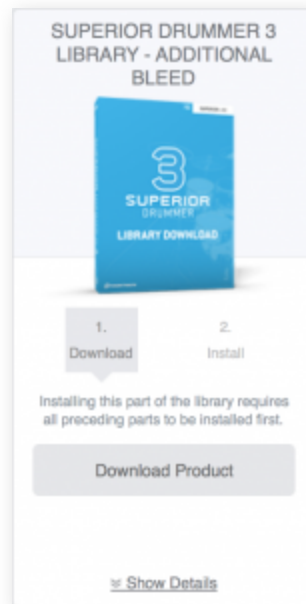
- Locate the Superior Drummer 3 Library Part 4 - Height Surround option in the Toontrack Product Manager.



- Click the Download Product Button.
- Clicking this button will download the SD3 Library Part 4 - Height Surround (approximately 52 GB).
- Click the Install Product button in the Toontrack Product Manager once the download has finished, and run the installer to completion.
 - It is not possible to install different portions of the library to different locations on your computer, therefore you will not be able to customize this installation or any subsequent SD3 Core Library installation.

INSTALL THE SUPERIOR DRUMMER 3 LIBRARY - ADDITIONAL BLEED

- As previously noted the Additional Bleed is an optional installation can be performed at any time after the Basic Sound Library Part 1. This installation provides the remainder of the bleed for every single microphone channel.
- Locate the Superior Drummer 3 Library - Additional Bleed option in the Toontrack Product Manager.



- Click the Download Product Button.
- Clicking this button will download the SD3 Library - Additional Bleed (approximately 54 GB).
- Click the Install Product button in the Product Manager once the download has finished, and run the installer to completion.
 - It is not possible to install different portions of the library to different locations on your computer, therefore you will not be able to customize this installation or any subsequent SD3 Core Library installation.

Your installation will now be complete.

1.2 LAUNCHING SUPERIOR DRUMMER 3 IN THE STAND ALONE APPLICATION

When Superior Drummer 3 is completely installed you will find a Superior Drummer 3 application in your list of applications or programs. On a Mac this will be in Applications/Toontrack/Superior Drummer 3, and on a PC it will be found as a short cut on your desktop, or in your list of programs. Double clicking the application icon will open Superior Drummer 3 stand alone.



The Stand Alone version of Superior Drummer 3 is used for live performance, drum programming, or editing. If you intend to use Superior Drummer 3 in a recorded song with other instruments, we recommend launching Superior Drummer 3 as a plugin in your supported host DAW (Digital Audio Workstation).

2. VIDEO OVERVIEW

The following is a series of videos for each of the tabs found in Superior Drummer 3. Please note, some of the names of features in the release version of the Superior Drummer 3 software are different than those in this video series, as it was created before the final release. The functions of these features however remains the same.

2.1 SUPERIOR DRUMMER 3 VIDEOS

THE DRUMS TAB

THE GROOVES TAB

THE MIXER TAB

THE TRACKER TAB

3. THE DRUMS TAB



The Drums tab is the starting point. It's where you will choose the sound library and individual instruments that you would like to use. Choosing a sound library is done by clicking the library selection menu at the top of the interface. If Superior Drummer 3 is your first Toontrack product it will be the only option in this list.

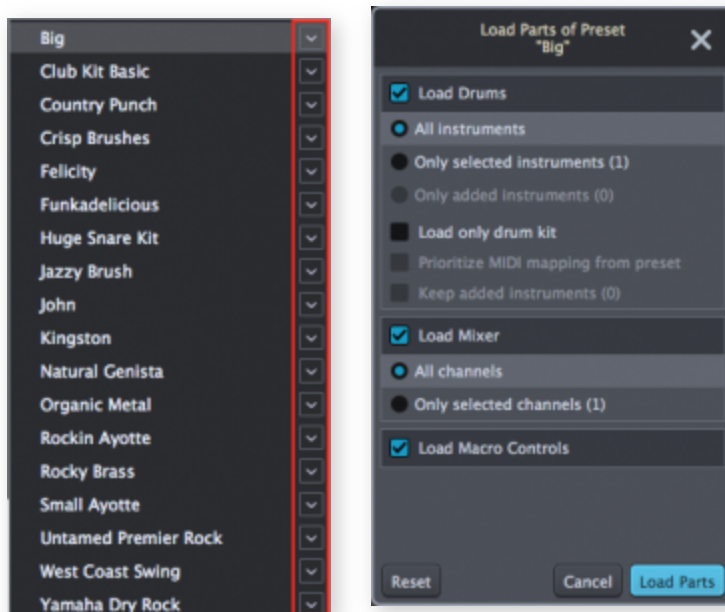
3.1 LIBRARY AND PRESET MENUS DRUMS AND MIXER PRESETS

The Superior Drummer 3 Core Library also includes a selection of Drums and Mixer Presets that can be chosen from the presets

menu to the right of the library menu. Superior Drummer 3's Drums and Mixer Presets offer a unique selection of drums that have been fully mixed and processed by a variety of producers to achieve a specific sonic goal. This includes any combination of level, panning, effect processing, and Property Box alterations that the producer desired to achieve the particular sound.

LOAD PARTS

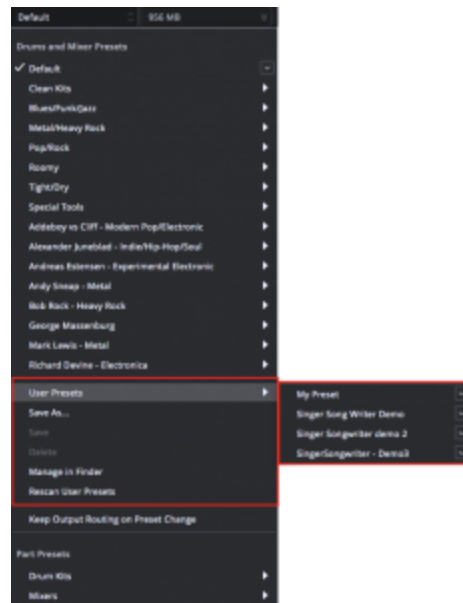
All factory presets found in the Presets Menu display a down facing arrow to the right of their name. Clicking this will open the Load Parts window. Load Parts allows you to choose specific aspects of a preset to load.



This is useful if for instance, you wanted to load the Drums from one preset and the Mixer Channels from another to create your own hybrid preset.

USER PRESETS

The Library Preset menu also provides the option to save a user preset, load a user preset, and manage your user presets in the Finder (MAC) or Explorer (PC). These Presets are the same as the Drums and Mixer Presets above, they have simply been customized and saved by the user. The reason for this is to



allow the user to load any desired sound preset without losing any work that has been completed on the Song Track or in the Tracker tab.

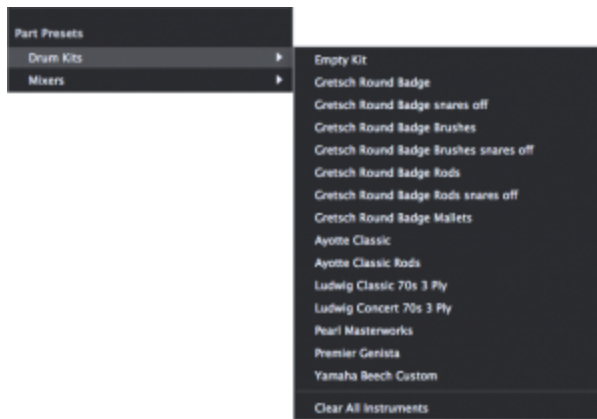
Saved User Presets contain all chosen instruments (including Added Instruments), Property Box alterations, Mixer channel settings/effect alterations, and Macro Control customizations. Once saved all user presets will be found in the User Presets sub menu.

All user presets can be managed in Finder (MAC) or Explorer (PC). This makes it possible to go directly to the location where these files are stored on your computer.

User Presets can be deleted by clicking the down facing arrow to the right of the preset name and selecting delete.

PART PRESETS

The Part Presets in the Presets Menu can be thought of as the inner layer of the wider scope Drum and Mixer Presets (i.e Part of the Drum and Mixer presets). Therefore it is possible to choose a Drum and Mixer Preset for its unique processing in the



mixer but then by selecting a Part Preset you can change the drum kit without affecting any other aspect of Superior Drummer 3 for example

the plugins and routing in the mixer. This is best explained with the example below.

For instance, imagine that you have loaded the Bob Rock Kit 1 Preset which uses the Yamaha Beech Custom Drum kit. However, you would like to hear this preset (and all of Bob Rock's unique processing) with the Premire Genista kit instead. To do this first load the Bob Rock Kit 1 preset, then again open the Presets Menu and load the Premire Genista Part Preset.

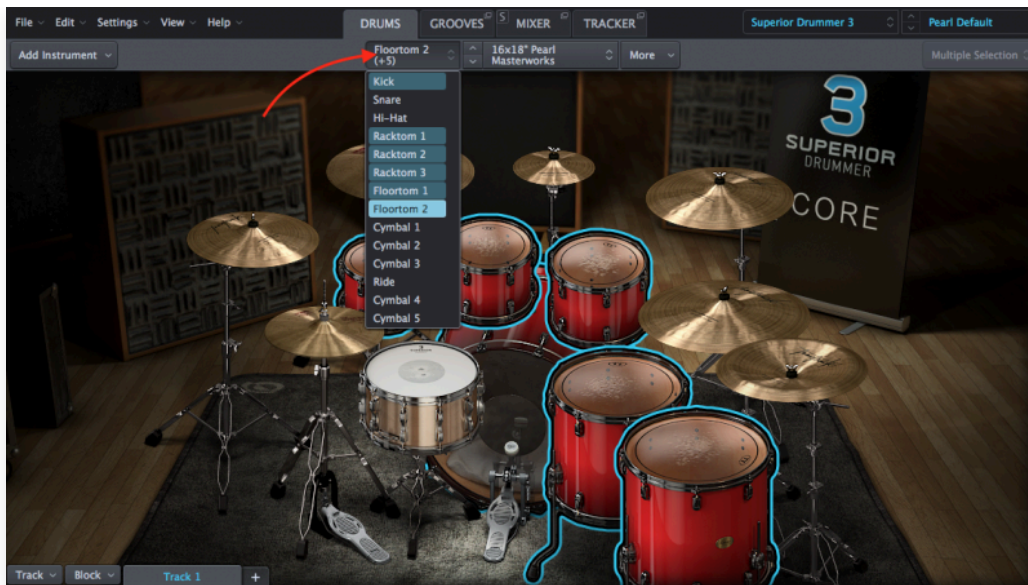
The Parts Preset Mixers selection was added to Superior Drummer 3 to maintain compatibility with early versions of Superior Drummer 2 and its Avatar library. Contrary to the screenshot, the Mixers menu is empty and not a visible option if you have the core library loaded, it only shows if you have loaded an older EZX or SDX that includes Mixer Part Presets.

3.2 THE DRUM KIT GRAPHIC INTERFACE



The drum kit graphic in Superior 3 is interactive. Clicking on any instrument in the kit will select it in blue. Holding down shift and clicking multiple instruments will allow for a multi-selection. This is important because the Property Boxes to the right of the interface will always correspond to the selected instrument or group of instruments.

Instruments can also be selected using the menu above the drum kit graphic on the grey Drums Tab header bar. Here its also possible to multi select instruments by either shift + clicking, or by command clicking (for non sequential selections).



If you would like to preview the sound of an instrument without selecting it, hold down Command + Options (Mac) and click the instrument (Control + Alt + Click for PC). Conversely, its possible to select an instrument without previewing its sound by holding down the Shift + Option while clicking (Shift + Alt + Click for PC).

INSTRUMENT SELECTION MENU

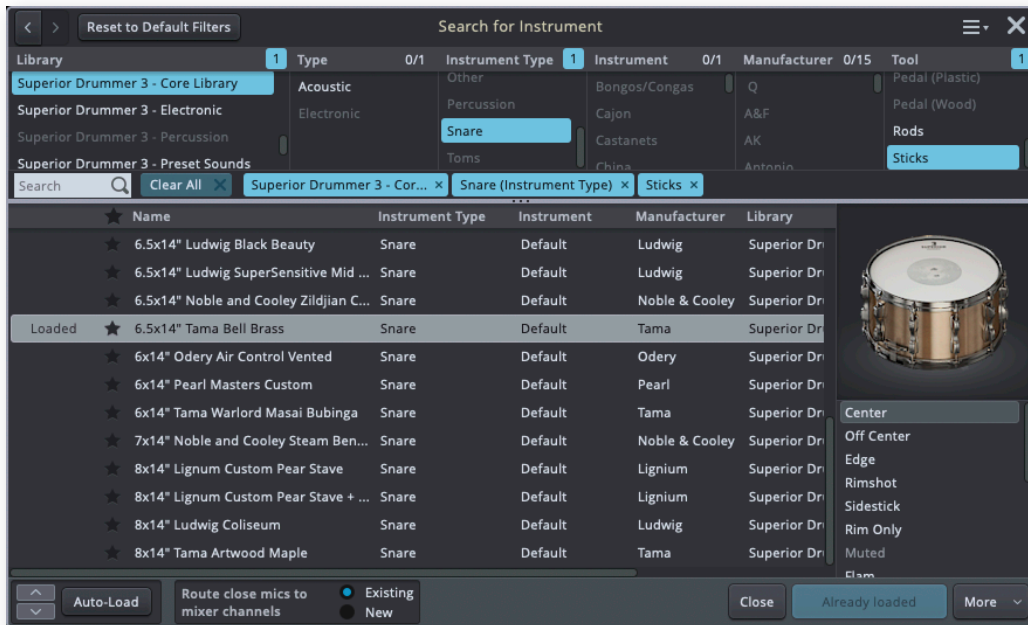
Right clicking on an instrument in the kit will open the Instrument Selection menu. This is the same menu found in the middle of the grey Drums Tab Header Bar (discussed in the next section).

This menu provides the option to load a different instrument in the selected position. The list of instruments in the menu include all of the default options from the loaded sound library. In the case of the picture above, the snare drum is selected and the long list of options are all of the snare drums that were recorded as part of the Superior Drummer 3 core sound library. These instruments are organized by the type of tool that was used to strike them and other options such as snare wires off.



Superior Drummer 3 also allows you to load any instrument from any one of your installed sound libraries to any position in the kit. This is accomplished with the Search for Instrument window. Search for Instrument is the first option at the top of the right click menu. The remaining options in this menu will be discussed later in this chapter (i.e. section 3.4).

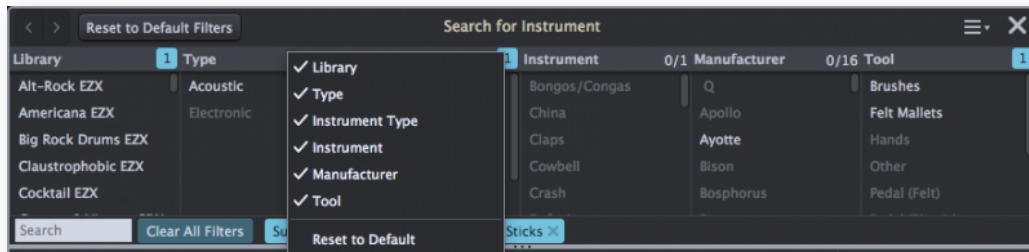
3.3 SEARCH FOR INSTRUMENT



The Search for Instrument window is accessed by right clicking on an instrument and selecting Search for Instrument. It can also be accessed from the instrument selection menu in the grey header bar of the drums page. This window is a quick and convenient way to browse for all instruments from any of your

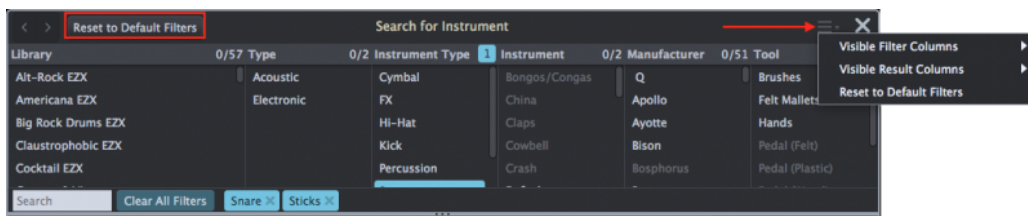
installed sound libraries. The top column offers a set of filters including Library, Type, Kit piece and so on. Selecting a filter refines your list of instrument choices in the results panel below.

Right clicking on a filter column header will provide the option to show or hide any or all filter columns. It's also possible to click, hold and drag a filter column to reposition its order.

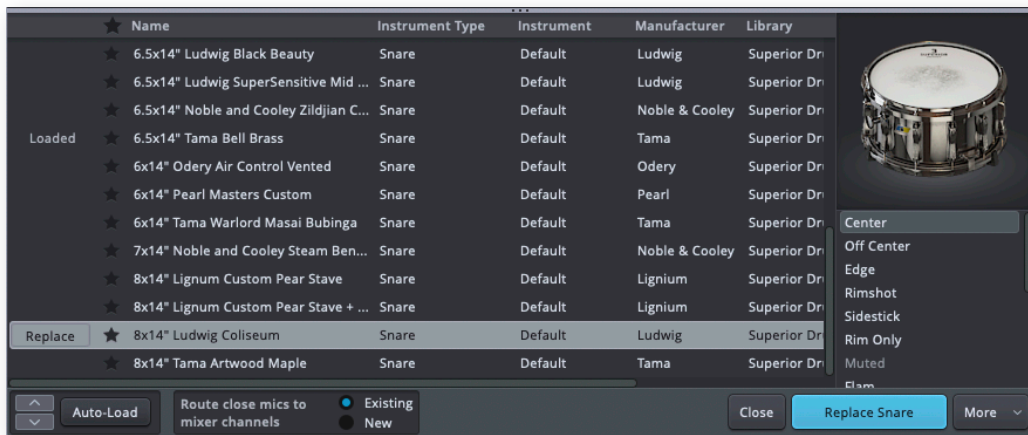


Right clicking a specific filter option allows you to exclude this filter from the results below. Active filters are displayed in the header above the search results, and they can be cleared by clicking the "X" to the right of their name.

The Menu to the top right of the Search For Instrument window allows you to choose the Filter columns and Result columns that are visible in the Filters / Results section. It is also possible to revert to the default view for the Filter columns without effecting the Results columns. The same Reset to Default Filters operation can be performed by clicking the dedicated button to the top left of the Search for Instrument window.



All of the filtered instrument results are displayed in the section below. Here, clicking on an instruments name will play a one shot. Clicking the replace button will swap the currently loaded instrument for the newly selected instrument.



★ Clicking the star icon adds the instrument to your list of favorites. The favorites list is displayed by clicking the star next to the Name header.

You can also click on the selected instrument graphic to the right of the window to trigger preview playback. Below the graphic are all of the articulations that are included for the instrument.

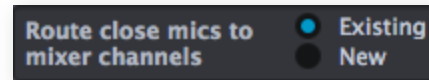
Clicking on their name selects the articulation that is triggered by the instrument graphic.

The menu option to the right of the articulation name (when hovered) provides the option to stack articulations from the new



instrument to the currently loaded instrument. Stacking is covered in the next section of this manual.

ROUTE CLOSE MICS TO MIXER CHANNELS



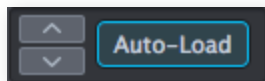
This option was

created specifically for using instruments that are not part of the loaded sound library. Due to the fact that all SDX's (Superior Drummer Expansion Libraries) were recorded by different engineers in different studios, they all have their own unique combination of microphones and positions. Even if there are some similarities between them, no 2 are exactly the same. For this reason it can become complicated when mixing and matching drums between 2 different libraries. To solve this issue we have added the Route Close Mics to Mixer Channels option. This gives you the choice to use existing channels in the mixer for the newly added instruments output, or to automatically create new User Microphone Channels in the mixer for each close microphone used on the new instrument. This is especially useful when adding additional drums to the kit or when stacking instruments.

For example, imagine that you want to change the kick drum in the SD3 Core Library to a kick drum from the separately purchased Progressive Foundry SDX. The Progressive Foundry SDX is unique in that it has 5 separate microphones placed on the Kick, but the SD3 Library uses the more traditional 3 mic

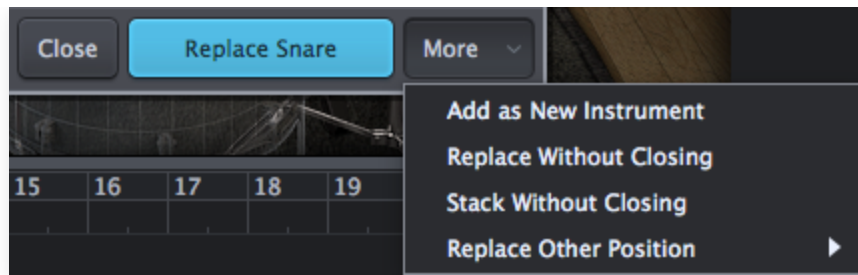
technique on the kick. In this case checking the "Existing" option in Route Close Mics to Mixer Channels would simply route all 5 Progressive Foundry Mics to the 3 kick Microphone Channels used in the SD3 Core Library. Clicking the "New" option would instead automatically create 5 new user Microphone Channels in the mixer that each correspond to a microphone used on the Progressive Foundry SDX kick drum. The new kick drum is then automatically routed to output through these channels.

LOADING OPTIONS



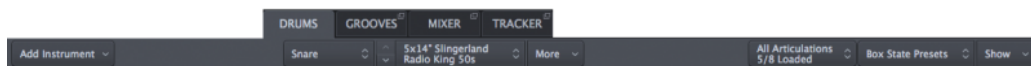
To the bottom left of the instrument search window is the Auto load option. When using the up and down arrows in Auto-Load it will load the next selected instrument in the list to the kit piece. Please note that Auto-Load only applies to the up and down arrows, instruments selected in the list with a mouse click will not be Auto-Loaded.

Finally, to the bottom right you can close the window, replace the selected instrument, and access the More menu. Here there are options to Add as New Instrument, Replace the selected drum without closing the Search for Instrument window, Stack Without Closing the window, and load the chosen instrument on a different position in the kit. All of these options are outlined in the next section of this chapter.



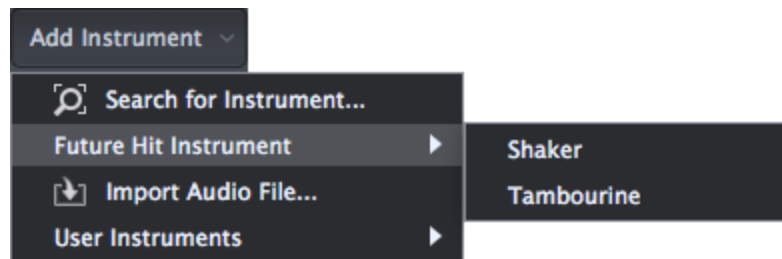
3.4 DRUMS TAB HEADER BAR

At the top of the Drums tab there is a grey header bar with a number of drop down menus. These are described below starting from left to right.



ADD INSTRUMENT

With this menu you can



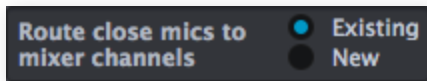
add additional drums to the kit that are intended to be triggered by their own MIDI note (previously known as X-Drums). This is an important distinction, as the add instrument function is not intended to be used to layer multiple instruments to trigger at the same time by the same note (layering drums is performed with "Stacking" in Superior Drummer 3). When the Add Instrument button is clicked you have the option to Search for Instrument, add a Future Hit Instrument, Import Audio File, or add any previously saved User Instruments.

Search for Instrument will open the Search for Instrument window and it applies to 99.9% of all Toontrack samples. Future Hit Instrument applies to an instrument that Toontrack has sampled in a special way because they produce sound before their accent. An example of this would be a shaker, maraca, or a shaken tambourine. This type of instrument is also known as an "indirectly struck idiophone" in musical terms. They have been delineated as such because MIDI programming for these instruments is different (i.e. it is performed in Edit Play Style). Finally, User Instruments are instruments that have been modified and saved by the user from the More Menu. For example, a drum Stack that you have created and modified via the Property Boxes could be saved from the More > User Instruments menu. This saved user instrument could then be added as an additional instrument with the User Instruments selection.

When an instrument is added, a graphic for that drum will appear in the lower left corner of the drum kit interface. Just like any other drum in the kit you can click on the graphic to trigger sound or right click this graphic to a host of options. The Added Instrument is also automatically mapped to its own MIDI note. Mapping for the note can be viewed / changed in the MIDI Mapping Property Box which will be discussed later in this chapter.

In the search for instrument window you can also choose how you would like the newly added instruments sound to be output in the Mixer. As discussed in chapter 3.3 Search for Instrument includes an option to route the newly added instruments output through the existing close microphone channels in the mixer, or

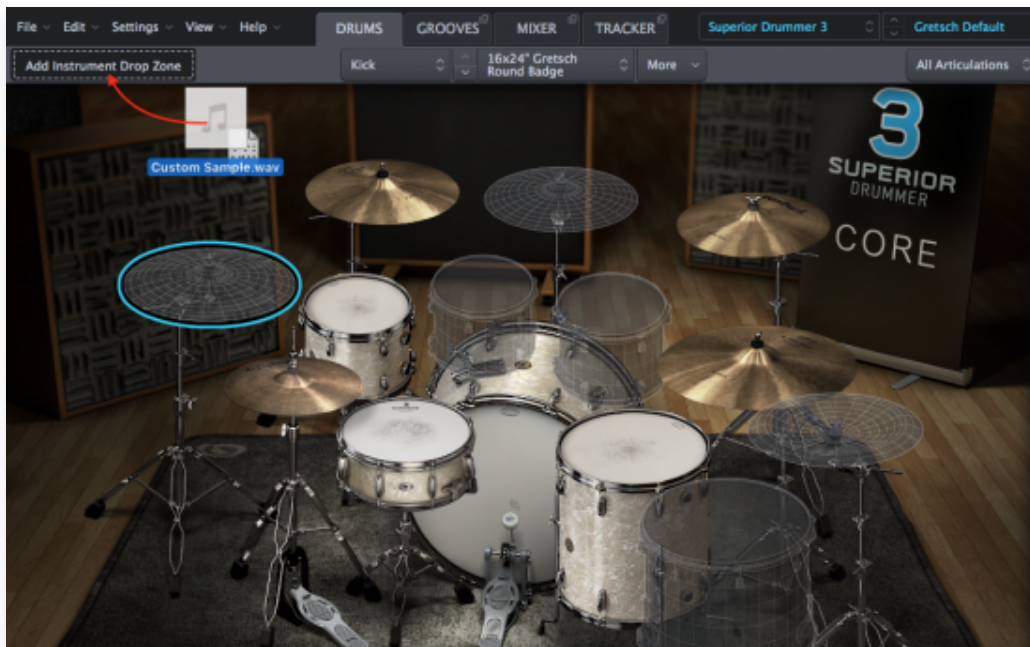
to automatically create new User Microphone Channels for the instrument.



This option was created specifically for using instruments that are not part of the loaded sound library. Due to the fact that all SDX's (Superior Drummer Expansion Libraries) were recorded by different engineers in different studios they all have their own unique combination of microphones and positions. Even if there are some similarities between them, no 2 are exactly the same. For this reason it can get complicated when mixing and matching drums between 2 different libraries. Thus we have added the Route Close Mics to Mixer Channels option.

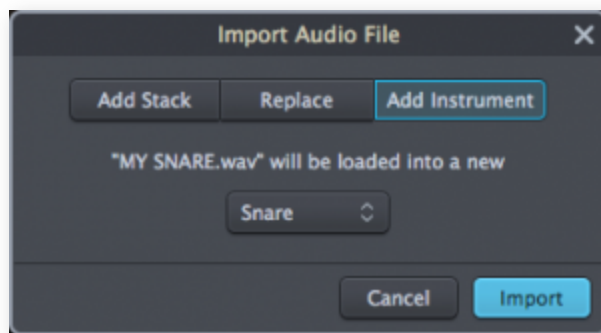
IMPORT AUDIO FILE

The Add Instrument button also allows you to import an audio file. This can also be accomplished by simply dragging and dropping a suitable audio file to the Add Instrument Drop Zone (shown when an audio file is dragged in the upper left corner of the interface). WAV, AIFF, MP3, FLAC, OGG, WMA, and AU Audio files can be imported as custom samples.



IMPORT AUDIO FILE WINDOW

When an audio file is imported the Import Audio File dialog appears and provides you with a few options.

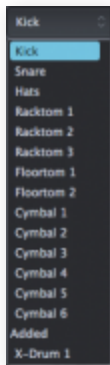


- **Add Instrument:** Adds the imported file as an additional instrument in the kit.
- **Replace:** Replaces the selected instrument in the kit with your audio file.
- **Add Stack:** Layers the imported audio file with the selected instrument in the kit (i.e. both samples trigger at the same time by the same MIDI note).

When Add Stack, or Replace is selected the menu below gives you the option to choose the instrument position that you would like to stack or replace with your audio file.

Audio files can also be dragged onto an instrument in the kit. In this case the default selected option in the Import Audio File window will be to replace the selected instrument.

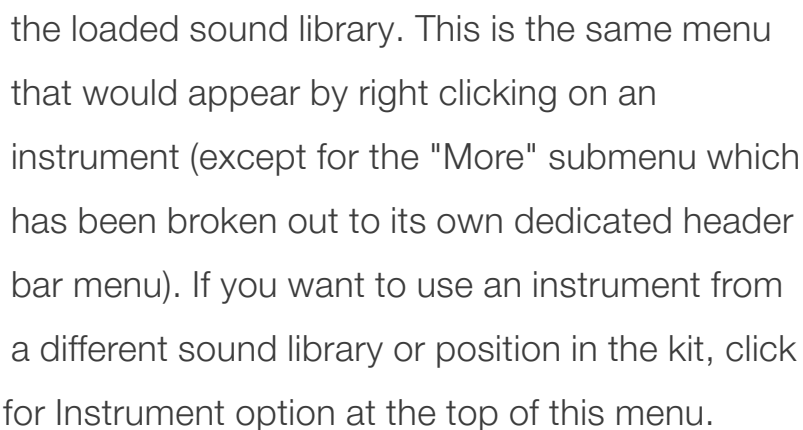
INSTRUMENT SELECTION MENU



This menu lists all of the instruments included in the loaded drum kit (including any added instruments). Any instrument that is chosen in this list will highlight blue in the drum kit graphic. Choosing an option from this menu is the same as clicking on an instrument in the drum kit graphic. Once an instrument is selected all property boxes to the right of interface will correspond to the selected instrument. In this menu multiple instruments can be selected in sequential order by Shift + clicking them, or in a custom manner by holding down Command (Mac) Control (PC) and clicking them.

INSTRUMENT POSITION MENU

This menu allows you to change the instrument currently loaded in the selected position. The list of instruments in this menu are composed of the default instruments for the selected position in

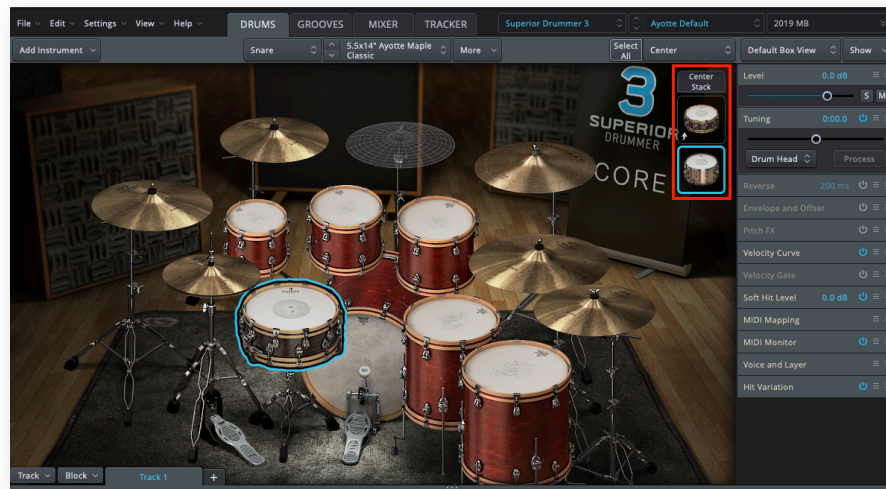


The More menu provides additional options for creating/altering kits, and customizing their settings as described below.

- **Stack:** Stacking is a new term in Superior Drummer 3, and it simply means that two sounds are triggered at the same time by the same MIDI note. Stacking is typically intended for sound design purposes. When you select Add To you are presented with a list of the available articulations for the selected instrument.
 - Stacking is performed on the articulation level therefore you must choose the articulation that will be used for the stack from the Add To menu. If creating a stack on the Kick Drum for example, it is advisable to verify the

articulation that you are using in your MIDI sequence, and make sure to create the Stack on the correct articulation (i.e. Open or Hit in the case of the Kick Drum for the Superior Drummer 3 core library).

- Under Add To, you have the option to replace members of the stack, remove the stack from the kit entirely or remove all stacks for the selected instrument.
- When a Stack is created it will appear in the upper right corner of the drum kit. Each member of the stack can be selected individually and adjusted by the Property Boxes.



- **Import Audio:** Superior Drummer 3 allows you to import your own custom samples in WAV, AIFF, MP3, FLAC, OGG, WMA, and AU formats. Audio files can either be imported with this menu option, or they can be dragged and dropped to the interface. When imported you are presented with Import Audio File dialog described above.
- **Route Instrument Microphones:** This workspace allows you to choose the channels in the mixer that sound will output when the instrument is triggered. Route Instrument

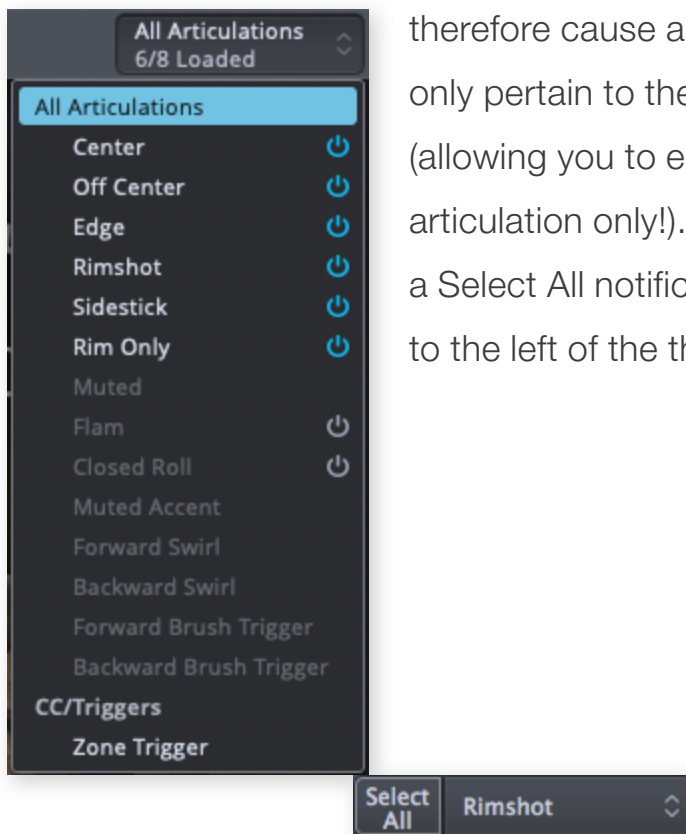
Microphones is covered in detail in chapter 9.4.1 as it is also accessed in the global View menu.

- **Show Preview pad:** The Preview pad is a interactive (clickable) display that corresponds to the currently selected instrument. It allows you to trigger the instrument at varying velocities on any tab of Superior Drummer 3. The Key command Control + Alt will display the preview pad for the selected instrument on any tab in Superior Drummer 3. Clicking the pin icon in the top right of the preview pad will stick the pad to the interface in that location on all tabs.
- **Remove Instrument:** This option unloads the selected instrument from the kit and therefore reduces RAM usage. It is wise to unload any unused instruments if RAM is on short supply.
- **User Instruments:** Here you can save instruments or stacks that you have created and recall them at a later time. This is useful if you have spent a lot of time building the perfect drum stack, and have changed parameters in the Property Boxes that you would like to easily load into a future kit or as an Added Instrument. If your saved User Instrument contains an imported audio file that has been moved on your computer or is missing, you will be prompted to browse for the file so that it can be re-imported.



ARTICULATION MENU

This menu shows all of the included articulations and CC triggers for the selected instrument. Articulations can be auditioned by clicking on them. Clicking on an articulation will also select it and



therefore cause all property boxes to only pertain to the selected articulation (allowing you to edit that specific articulation only!). This is indicated with a Select All notification in the interface to the left of the the Articulation list.

If you choose an articulation to audition be sure to click the Select All option at the top of the list if you would like to Property boxes to control every articulation for the instrument. If however you would like to alter a single articulation, select it from the list, and then make adjustments in the Property Boxes.

POWER BUTTONS

Each articulation in this menu has a dedicated power button. Power buttons that are active are shown in blue. This means that the multi sampled pool of audio files for this articulation are loaded into RAM. Deselecting the power button will unload the selected articulation from RAM.

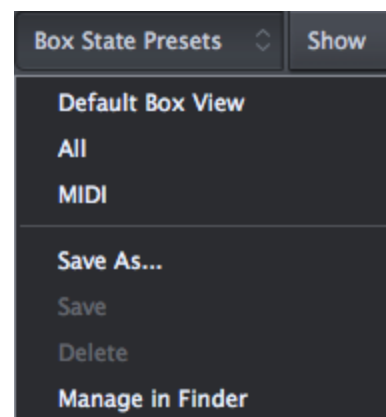
GREY ARTICULATIONS

Options shown in grey that are without a power button simply do not apply to the loaded instrument. For example, in the picture to the left you can see that Mute, Thump, Forward Swirl, and Backward Swirl are greyed out and do not have a power button. This is because the loaded drum was recorded with sticks, therefore these articulations were not recorded with the selected instrument. These specific articulations are for snare drums recorded with brushes.

If you would like to load a drum that was recorded with a different tool (such as brushes) simply select the snare drum in the main graphic, and from the Instrument Position menu choose one of the options under the Brushes category. Please note that not all drums were recorded with all tools.

BOX STATE PRESETS

This menu changes the view of the Property Box section below. Property Boxes are a selection of extremely powerful utilities for editing an instruments (or articulations) sound and MIDI options. However, because there are so many Property Boxes, its not always useful to view them all at once.



- **Default Box View:** Revert to the default displayed Property Boxes.
- **All:** This selection shows all Property Boxes

- **MIDI:** This selection shows only the Property Boxes that pertain to MIDI operations.
- **Save As:** This allows you to save a custom user configuration of property boxes after you have adjusted the shown boxes.
- **Save:** This updates changes to a saved user preset view.
- **Delete:** This will delete a user saved Property Box view.
- **Manage in Finder/Explorer:** This will open an operating system window showing all saved Box State Preset files.

SHOW

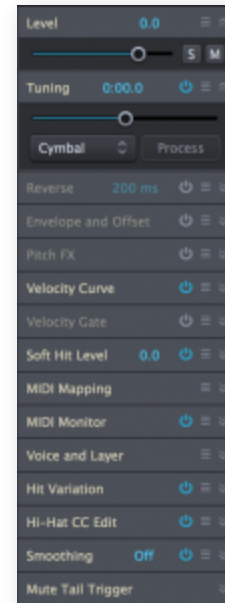
The Show menu displays a list of all of the available Property Boxes and allows you to choose which to display. Blue highlighted boxes are displayed in the Property Box section where as non-highlighted boxes are absent from view. Simply click on a title to show or hide it in the Property Box Section. If you create a unique view for your property boxes, it can be saved in the Box State Presets menu to the left.



3.5 PROPERTY BOXES

The Property Boxes to the right side of the Drums tab can be thought of as utilities for every instrument and articulation of the instrument.

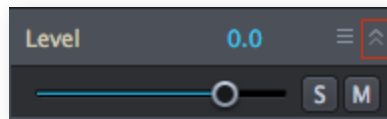
Property Boxes affect the sound of the instrument, the Superior Drummer 3 sound engine, and MIDI. It is very important to note that the Property Boxes can either effect the entire selected instrument and every articulation that it includes, or only the selected articulations. Multiple instruments in the kit can be selected by Shift + Clicking them and then property boxes will then apply to all selected instruments. Even further property boxes can be applied to Stacks of drums, or to specific members of the Stack.



For example, if you select the snare drum and then select the sidestick articulation from the Articulations list above, Superior Drummer 3 will notify you that you are only editing the selected articulation and all property boxes will therefore only control the selected Sidestick articulation. This is a very powerful sound design tool as it allows you to drastically affect the sound of any and all individual articulations as you see fit!

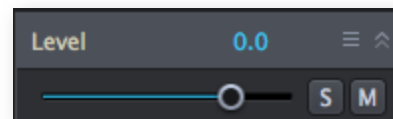
As discussed in the previous section all Property Boxes can be hidden from view from the show menu but they can also be expanded and collapsed with the arrows to the right of their name. If you would like to expand or collapse all boxes at one

time, hold down the Option key (Mac) Alt (PC), and click any expand arrow on a Property Box.



3.5.1 LEVEL

The Level Property box sets the volume for the selected instrument (or selected articulation). This level of customization would allow you to for example, alter the volume of the ride cymbal's bell articulation.



Its important to mention that the Level Property Box does not change the fader in the mixer for the selected instrument. It does however change the volume of the instrument in all Microphone Channels that it was recorded in.

Level can be roughly compared to the “recording level” (i.e. the level that the signal was tracked into the recording system). The solo and mute buttons in the Level Property Box can also apply to the entire selected instrument or to only the articulation if a specific articulation is chosen in the Articulation List.

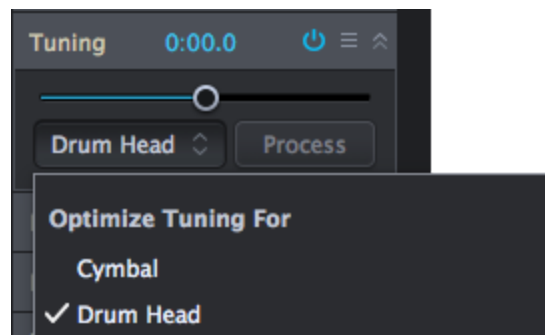
For example, if you selected the snare drum and lowered the Level slider by 3dB, the result would be a 3dB reduction in level of the snare drum in the Snare Top, Bottom, Overhead, and

Ambience channels in addition to any Bleed that has been enabled.

The following video shows the Level Property box in action.

3.5.2 TUNING

The Tuning Property box can change the pitch of the selected instrument or articulation up or down. For fine adjustment hold down the Shift key while dragging the slider.



The value is in the format octave:semitones.cent. So for example -1:5.5 will pitch the samples one octave, five and one-half semitones lower than the originals, since it is preceded with a minus sign.

There are two different algorithms for changing the pitch which can be selected in the drop down menu. These are Drum Head and Cymbal. These algorithms are specialized for their respective instruments so that they retain the most natural sound possible after processing. Once the pitch has been adjusted to the desired amount click the Process button to apply the algorithm and load a high definition version of the sound into RAM. Please note that in order to hear the true effect of the

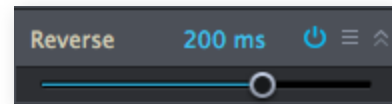
Drum Head Tuning algorithm you MUST Process the sound. Processing will take longer for instruments that have many articulations (such as a snare drum) than it will for instruments with fewer articulations (e.g. toms). An indication of the loading progress can be seen the top right corner of the interface.

Clicking the three line icon menu next to power button offers an option to reset the Tuning for the selected instrument.

The following video shows the Tuning Property Box in action.

3.5.3 REVERSE

The Reverse Property box allows you to reverse the audio of any instrument or articulation. The Time slider gives you ability to control the length of time for the reversed sound.

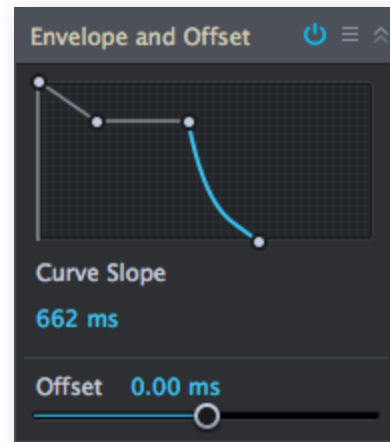


The video below shows the Reverse Property Box in action.

3.5.4 ENVELOPE AND OFFSET

The Envelope and Offset affects volume of an instrument over time. Specifically, it controls the attack, decay, sustain, hold, and release of any instrument to which it's applied. Each one of these

parameters are altered by clicking and dragging the anchor points. When an anchor point is selected you will see its parameters displayed below where it is possible to manually enter a numerical value with a double click.



Attack: The Attack is the first anchor point starting on the left. It affects the very beginning of the sample and is typically used to soften the sound.

Decay: The Decay is the drop in level from the initial attack point, to a Sustain volume, which defines the relative level the envelope should maintain (as much as possible) until it fades away completely. If the decay is set to 100% there is no alteration to the samples natural volume decay.

Hold: The Hold parameter specifies (as much as possible) how long the sustain volume should be maintained.

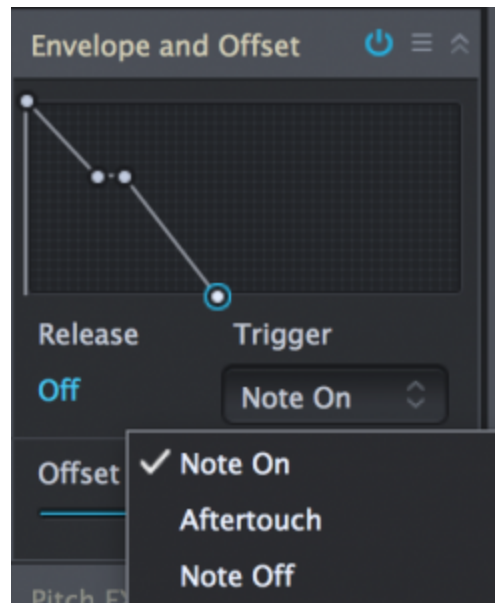
Release: The Release anchor point controls how quickly the sound will then fade from the sustain volume to digital silence.

Curve Slope: The Release Curve Slope can change the shape of the fade for the decaying sounds. Simply click on the decay line and drag it inward to create a slope (seen in the picture above).

Trigger: When the Release anchor point is selected a drop down menu appears that allows you to trigger the release anchor point in three ways, Note On, Aftertouch, and Note Off.

Note on triggers the Release as usual and allows the sample to release naturally.

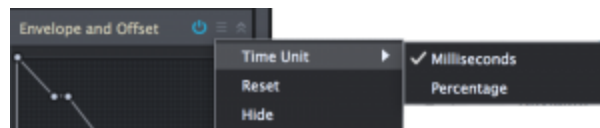
Aftertouch allows the user to determine the onset of the Release with aftertouch messages sent by your MIDI controller. Please note that not all MIDI controllers are capable of sending aftertouch.



Note off also allows the user to determine the onset of the Release by starting it when the MIDI note ends. Using this option, you can control the effect in real time by holding down (and then releasing at the desired time) a key on your keyboard to create cymbal chokes and snare rolls of varying length without the need for specialist equipment.

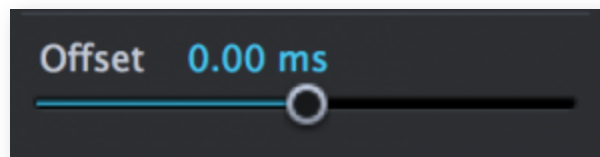
Envelope and Offset

Menu: Here the Time Unit for the Hold and



Release values can be set to either Milliseconds or Percentage. This not only changes how they are displayed but also how they function. Using the Percentage option setting the release anchor point to 50% would make all sounds half as long, which would be a different value in milliseconds for every sample. Using the Milliseconds option will simply change the value to the selected length in ms.

Offset: The Offset value is available to shift the overall envelope in time.



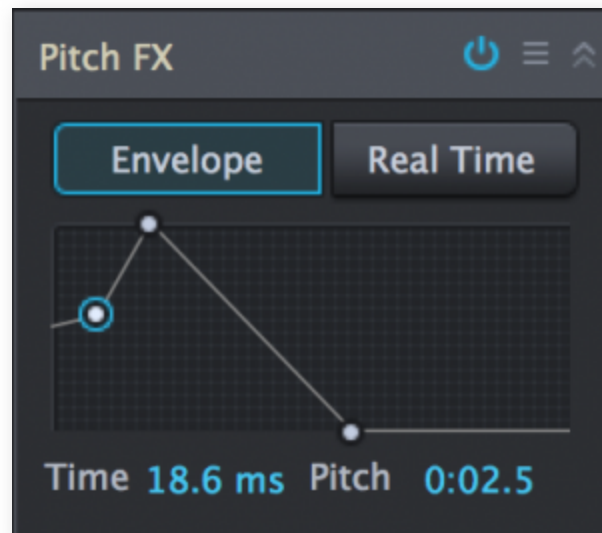
Positive values will delay the start of the samples trigger, and negative values will begin to chop off the start of the sample.

3.5.5 PITCH FX

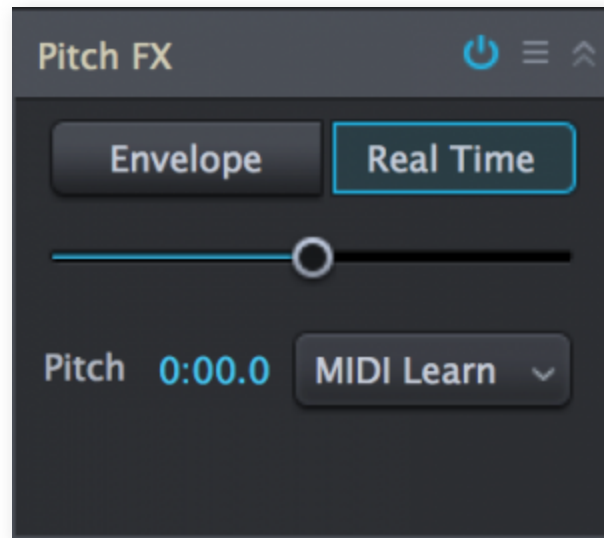
Pitch FX allows you to change the Pitch of the selected instrument or articulation over time, or in the traditional real time mode. Pitch FX differs from the Tuning Property Box because it changes the pitch

during the playback of a sample in real time, whereas the specialized algorithms in the Tuning Property Box must be processed to take effect.

Double clicking on the line creates breakpoints and right clicking allows their removal. Dragging a breakpoint up or down from center changes the instrument's pitch at that point in time higher or lower. Breakpoints can also be dragged left or right to alter the timing of the pitch change. The Pitch value and time value are displayed in blue below the graph for the selected breakpoint. Custom values can be input by double clicking on the blue numbers for either pitch or time.



Real Time mode allows the Pitch to be controlled live, as this Property Box was specifically designed for live or automated use. Therefore, when using Real Time mode it would be best to MIDI



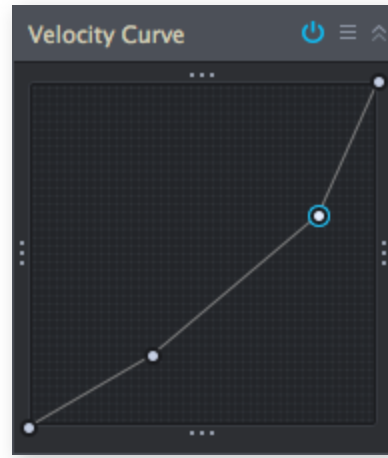
Learn the slider to a MIDI controller, or assign the slider to one of the Macros for automation / MIDI Learn purposes. Because its designed to be a Real Time effect the slider position in the Pitch FX Real Time mode is not saved and can not be set via a preset (much like the state of a sustain pedal for a piano virtual instrument is not saved). For this reason, the Tuning Property Box should be used instead if you desire to change the pitch of an instrument and save it as part of your preset.

The MIDI learn menu in the Real Time mode allows you assign a CC control sent by your physical MIDI controller to the Pitch FX slider, making it possible to change the slider by moving the knob on the physical MIDI controller. MIDI learn is also available for most other controls, sliders, faders and knobs in Superior Drummer by right clicking them.

3.5.6 VELOCITY CURVE

Each Instrument, Articulation, or Stack can be controlled by the Velocity Curve Property Box. The Velocity Curve Property Box is

used to transform MIDI velocities to new values as determined by the curve that you create. The intended purpose of the Velocity Curve Property box is to customize Superior Drummer 3's response to its internal MIDI. If you want to tailor SD3's response to incoming MIDI from E-



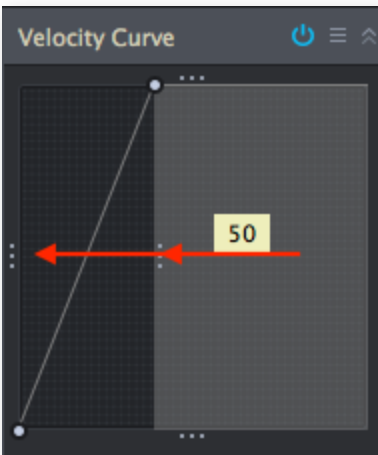
Drums or a MIDI controller the MIDI In/E-Drums Settings tab should be used instead. It can also be useful to create general Velocity Curve for your E-Drums in the MIDI In / E-Drums settings page that works for most Libraries / Presets, but then perform any additional tweaks needed for a different library / preset in the Velocity Curve Property box.

Breakpoints can be added to the curve by double clicking on the line. User added breakpoints can be removed by right clicking on them and selecting "Remove Node."

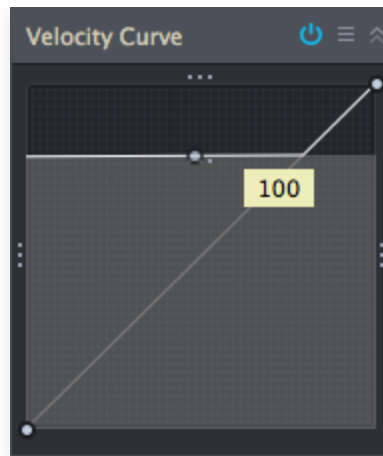
Output Velocity Limit: Each of the 4 sides of the Velocity Curve box has three dots that can be clicked and dragged inward. Changing these sets the Output Velocity Limit which will transform incoming velocities to new output velocity values. This is quite useful for live performance or for quickly tailoring an instruments response without editing MIDI. The following pictures provide examples for using the Output Velocity Limit.



Moving the Output Velocity Limit down sets the upper ceiling for output velocities of the selected instrument/articulation.

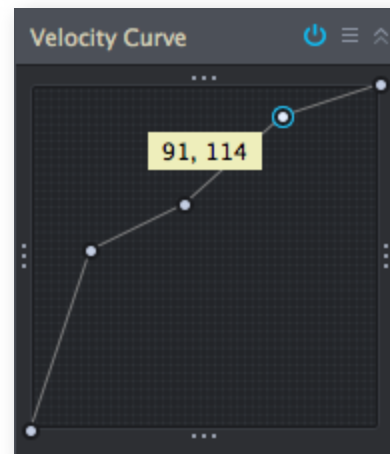


Moving the Limit from the right all the way to the left would result in a output of 127 for all incoming hits regardless of their incoming velocity.



Moving the Output Velocity Limit up from the bottom would cause all low velocity samples to be raised in velocity to the new threshold. This would be useful if you want to increase the global low velocity hits (in velocity, not just volume) for the selected instrument/articulation.

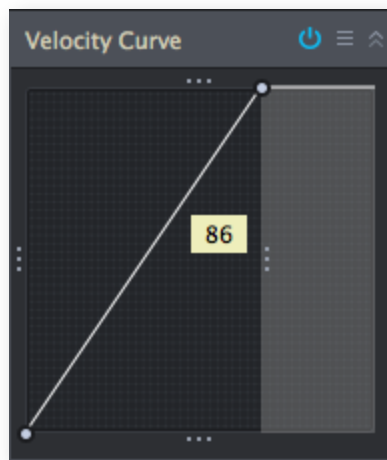
Breakpoints: Making breakpoints in the curve allows you to change the output velocity in a user customizable way. When a breakpoint is dragged the input velocity is shown along with the transformed output velocity. This tells you that when an input velocity is 91 (as shown in the picture to the right) the output velocity will be transformed to 114.



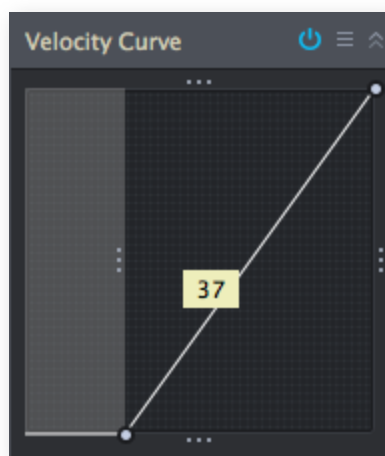
You may wonder what practical use these features have, so let's look at a few real-world cases when working with internal MIDI

files.

- The MIDI used is too low in velocity overall, or a single instruments MIDI is too low.
 - Here you could move the Output Velocity Limit (3 dots) to the Left to help in this scenario. Doing so would make softer MIDI velocities transform to harder velocities without needing to edit MIDI.



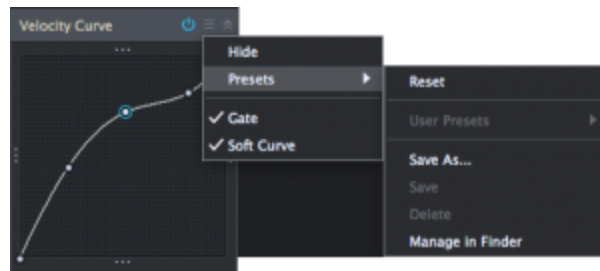
- Alternatively, if the lower velocity value that is triggered is far above what is considered normal (triggering the gradient hits with soft hits being skipped all together) moving the left Velocity Limit to the right would help in this instance.



These are mere examples for your consideration. Please remember that if your goal is to tailor Superior Drummer 3's response to your playing style / MIDI controller for live performance and recording, all customizations should be made in the MIDI in / E-Drums Settings tab. As stated above the Velocity Curve Property Box is designed to be used to customize Superior Drummer 3's response to the internal MIDI from the Grooves tab.

VELOCITY CURVE MENU:

Once you have created custom velocity curves, its possible to save them as presets in the



Velocity Curve menu. Once saved all Velocity Curve User Presets will be found in the User Presets submenu.

There are also 2 selections for Gate and Soft Curve.

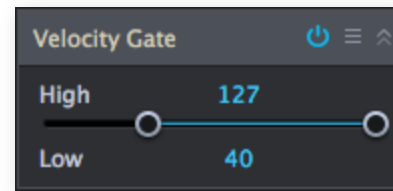
Gate: This works in combination with the Low Velocity Limit.

When Gate is checked incoming notes below the threshold will not trigger.

Soft Curve: This allows you to curve the Velocity transform for a non linear velocity response.

3.5.7 VELOCITY GATE

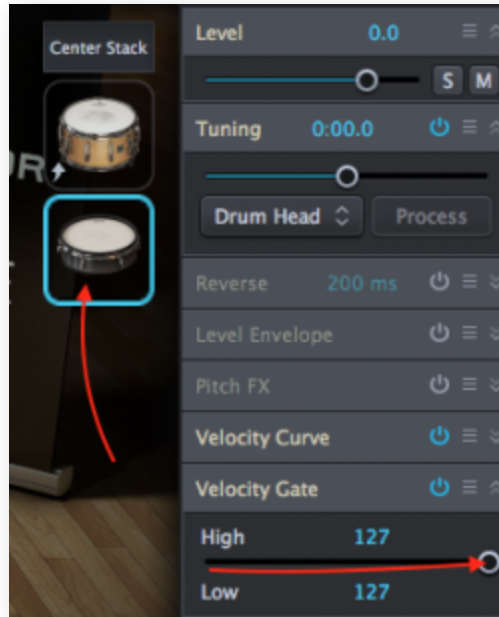
The Velocity Gate allows you to define the incoming velocity range that would trigger a hit for the selected drum. The two sliders allow you to set the minimum input velocity that will trigger the selected instrument or articulation, and the maximum input velocity that will trigger the selected instrument or articulation.



The difference between the Velocity Gate and the previously described Velocity Limit Control in Gate mode (in the Velocity Curve Property Box) is that the Velocity Gate works on all incoming velocities, while the Gate mode in the Velocity Curve Property box works on velocities after the transform (line/curve).

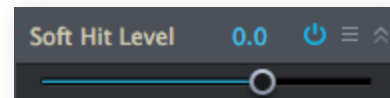
A practical example of how this Property Box could be used is with stacking. Imagine that you have imported a custom snare drum sample, but you would only like this snare drum sample to trigger on the hardest snare hits (i.e. velocity of 127). In this case you would select the custom sample member of the stack, turn on the Velocity Gate Property Box, and raise the low slider up to 127 (as seen in the picture on the right). Now, this custom sample would only trigger when a velocity of 127 for the snare

was input.



3.5.8 SOFT HIT LEVEL

Soft hit is a volume slider specifically for the softest samples available for the selected instrument or articulation. It allows you to increase or decrease the volume of soft hits. This could be used to control the volume of ghost notes on a snare drum. Some snare drums may produce louder ghost notes than others, using this control would allow you to raise or lower these ghost notes in volume if desired.

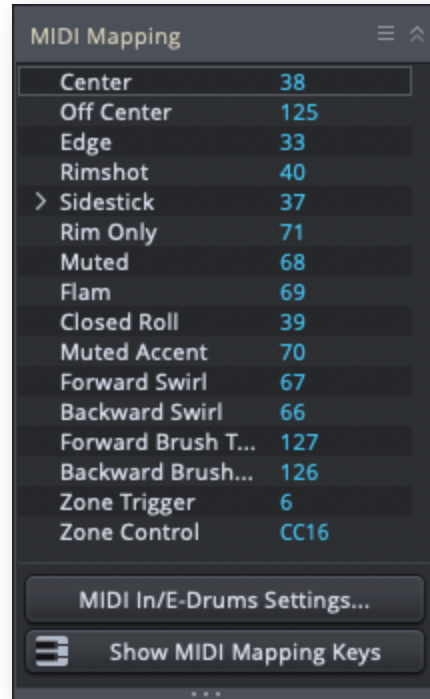


In a way the Soft Hit Level picks up where the Velocity Curve leaves off. If the softest hits in a MIDI sequence are too loud (even with a velocity of 1) it would be impossible to improve

this scenario with the Velocity Curve. However, the Soft Hit Level could lower them in volume quite significantly.

3.5.9 MIDI MAPPING

The MIDI Mapping Property Box displays the note mapping for all of the articulations of the selected instrument, or if you select a specific articulation from the Articulation List you will see only the mapping for this selection.



Why Use the MIDI Mapping

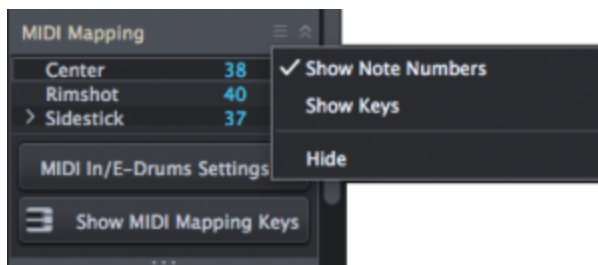
Property Box? Notes should be

remapped in the MIDI mapping property box when you want to affect the internal MIDI from Superior Drummer 3 (i.e. either MIDI from the Grooves Tab or the Song Track). However, if you want to re-map incoming MIDI from a MIDI controller, E-Drums, or MIDI sent from your DAW (while leaving the internal MIDI unaffected), it is best to use the MIDI In/E-Drums Settings page. Otherwise the internal MIDI from the Grooves page would also conform to the mapping changes and it will not playback correctly.

In the MIDI Mapping Property Box double clicking on any note number will allow you to input a new note number. If multiple notes are used for a single articulation you will see a right facing

arrow before the articulation name (as with the Sidestick in the picture to the right).

MIDI Mapping Menu: In the MIDI Mapping Property Box menu its possible to change the way that notes are displayed, either as Note Numbers or as Key Names. It should be mentioned that there are a few different conventions used throughout the pro audio community for Note Key Names, meaning middle C may not be located in the same octave in Superior Drummer 3 as it is in your DAW. In this case it is best to use note numbers as these will always be the same across all platforms.



MIDI Note Learn: Clicking on an articulation name will display a menu option to the right of the number. Here you can choose Add, or Learn. Add simply allows you to add an additional note of your choosing that will also trigger this articulation. Learn (in the MIDI Mapping Property Box) tells Superior Drummer to receive and re-map to the next incoming MIDI note from a MIDI controller. The learn function in the MIDI Mapping Property Box is a quick way to re-map notes on the Drums tab, however if you will need this same mapping configuration in the future, its recommended that you create a custom preset in the MIDI In/E-

Drums Settings page with the MIDI learn control found there instead.

MIDI In/E-Drums Settings: Clicking this takes you to the MIDI In/E-Drums Settings page. This is the same location as accessed from the Settings menu and is covered in detail in chapter 9.3.5. Click here if you would like to only change the MIDI Mapping for incoming MIDI from a controller or DAW while leaving the internal MIDI from the Grooves page alone.

Show MIDI Mapping Keys: This is a graphical

Level0.0 dB≡∨

Tuning0:00.0⏻≡∨

Reverse200 ms⏻≡∨

Envelope and Offset⏻≡∨

Pitch FX⏻≡∨

Velocity Curve⏻≡∨

Velocity Gate⏻≡∨

Soft Hit Level0.0 dB⏻≡∨

MIDI Mapping≡∧

Center38

Off Center125

Edge33

Rimshot40

> Sidestick37

Rim Only71

Muted68

Flam69

Closed Roll39

Muted Accent70

Forward Swirl67

Backward Swirl66

Forward Brush T...127

Backward Brush...126

Zone Trigger6

Zone ControlCC16

MIDI In/E-Drums Settings...

Hide MIDI Mapping Keys

MIDI Mapping Keys✕

50Cymbal 2: Mute Hit

49Cymbal 2: Crash

48Racktom 1: Center

47Racktom 2: Center

46Hi-Hat: Open Edge 2

45Racktom 3: Center

44Hi-Hat: Closed Pedal

43Floortom 1: Center

42Hi-Hat: Closed Tip

41Floortom 2: Center

40Snare: Rimshot

39Snare: Closed Roll

38Snare: Center

37Snare: Sidestick

36Kick: Open

35Kick: Hit

34Kick: Open

33Snare: Edge

32Cymbal 4: Bell Shank

31Cymbal 4: Bow Tip

30Ride: Bell Tip

29Ride: Bow Shank

28Cymbal 2: Bell Shank

27Cymbal 2: Bow Tip

26Hi-Hat: Open Edge 3

25Hi-Hat: Open Edge 2

24Hi-Hat: Open Edge 1

23Hi-Hat: Open Pedal

22Hi-Hat: Closed Edge

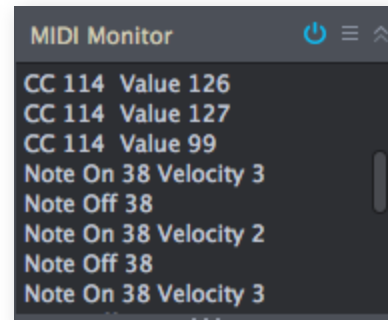
21Hi-Hat: Closed Pedal

representation of the note mapping for the loaded drum kit. Blue highlighted listings correspond to the selected instrument or articulation. All articulations can be dragged and dropped into new positions for remapping. Simply click and drag the cross arrow icon that appears when hovered to remap.

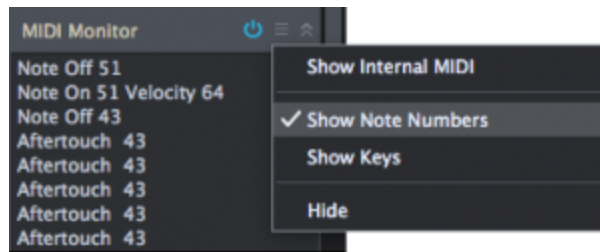
Specific mapping presets for various note mapping standards and brands of electronic drum kits are performed in the MIDI In/E-Drums Settings page accessed by clicking the button in the MIDI Mapping Property Box, or from the Settings menu.

3.5.10 MIDI MONITOR

The MIDI Monitor Property Box shows all incoming MIDI messages that Superior Drummer 3 receives. If you have a MIDI controller connected, MIDI monitor will display the note and CC information that it receives.

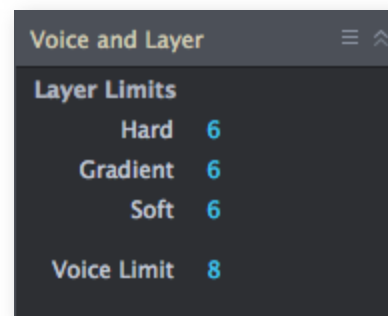


MIDI Monitor Menu: Here it is possible to Show internal MIDI (Grooves) by selecting the show internal MIDI option in the MIDI Monitor menu. MIDI Monitor can also display notes as either Numbers or as Keys (note names). It should be mentioned that there are a few different conventions used throughout the pro audio community for Note Key Names, meaning C3 may not be located in the same octave in Superior Drummer 3 as it is in your DAW. In this case it is best to use note numbers as these will always be the same across all platforms.



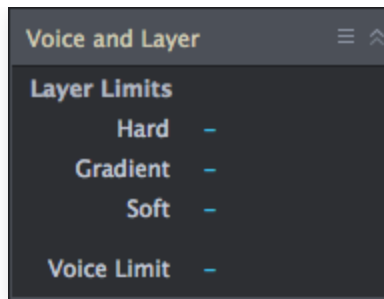
3.5.11 VOICE AND LAYER

The Voice and Layer Property Box gives you control to adjust the amount of samples that are available to the sound engine for playback.



Layer Limits: Higher values will use more RAM but resulting sequences will have more variance. Lower values will use less RAM but sequences will have less available samples to use for the selected drum or articulation.

Like all Property Boxes the voice and layer section corresponds to the selected instrument or articulation. So, if you want to make a global change to all instruments or a group of instruments simply Shift + Click to select multiple instruments, and then make the change in the voice and layer section. Using the voice and layer section on a per instrument / articulation basis allows you to make valuable RAM saving changes without sacrificing playback quality. A maximum value of 99 can be set for each value, or the control can be set to unlimited by lowering the value until the dash "-" appears as seen in the picture below.

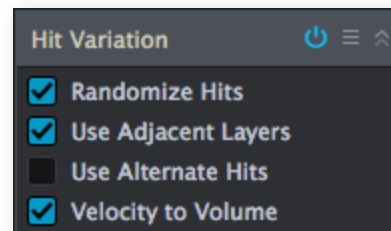


Voice Limit: To help relieve your system, especially if you intend to use numerous FX in the Mixer, Superior Drummer 3 allows you to optimize the voice count for each and every instrument present in the Drums Tab. Simply select any instrument or combination of combination of instruments and type in the desired value.

The number of voices for an instrument dictates how many concurrent samples of the same articulation are allowed to sustain until automatic muting of the lowest in volume occurs. High values require more CPU. An unlimited a Voice Limit can be achieved by lowering the value until the dash "-" appears.

3.5.12 HIT VARIATION

Previously known as "Humanize" the Hit Variation Property Box allows you to set the degree human characteristics that the Superior



Drummer 3 sound engine employs when choosing samples for playback. Turning off these options will remove the realistic feel that Superior Drummer 3 has while playing back a MIDI sequence.

Randomize Hits: The instruments hits are selected at random in the relevant velocity layer pool.

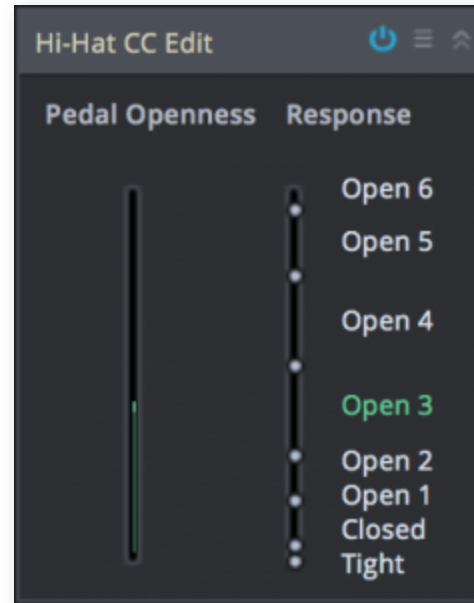
Use Adjacent Layers: Mid velocity gradient hits are chosen at random in a pool of samples that includes the adjacent velocity layers. This increases the size of the sample pool available for these hits. If a hit is pulled from a higher or lower velocity layer its volume is adjusted to be appropriate for the incoming velocity.

Use Alternate Hits: This option is only applicable to certain instruments where sampling right and left hand / foot was used to record the instrument. In the case of a double kick drum set up the articulation that is triggered by Superior Drummer may be part of the other (left or right) instrument (i.e. it may trigger the left kick even if the right kick MIDI note is received). Selecting this option will set Superior Drummer 3 to alternate between the left and right samples upon MIDI playback. If you want manual control, uncheck “Use Alternate Hits,” and use custom MIDI programming to trigger the desired articulation at the desired time.

Velocity to Volume: Samples are adjusted in volume in relation to the MIDI velocity. There are 127 possible MIDI velocities but there are not 127 velocity layers of sample pools in Superior Drummer 3. Therefore samples from the appropriate layer are adjusted in volume to match the corresponding volume. Velocity to Volume can also be applied to samples that you have imported thereby making them react to incoming velocity changes.

3.5.13 HI-HAT CC EDIT

The Hi-Hat CC Edit Property Box gives you control over how Superior Drummer 3's Hi-hat reacts to the incoming Continuous Controller messages (i.e. the CC messages sent from a physical E-Drum Hi-hat pedal or MIDI controller). Dragging the nodes up or down determines



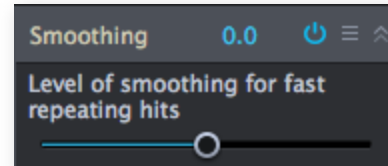
the point at which the corresponding articulation will start to sound based on the incoming CC04 level (0-127). 127 being the tightest closed Hi-Hat sound and 0 being the most open. The level meter to the left of the Property Box will display any incoming CC data. The corresponding Hi-Hat articulation to the CC value will be displayed in green to the right.

It should be noted that Toontrack MIDI packs do not currently use CC info for Hi-Hat openness (dedicated notes are used). Therefore, altering this Property Box while using Toontrack produced MIDI from the Grooves tab will do nothing. The Hi-Hat CC Edit Property box is therefore intended to be used with user recorded MIDI, or for making further preset specific alterations to the Hi-Hat response when using E-Drums. As always the MIDI In / E-drum Settings page should be used first to dial in a general response to your specific Hi-Hat and module, but you may find that further tweaks are needed when changing Libraries/Presets. In this case, rather than change the general E-

Drum Preset you have created in the Settings page, you can create preset specific tweaks in the Hi-Hat CC Edit property box.

3.5.14 SMOOTHING

Smoothing (previously known as Multiple Hits Emulation) ensures that the attack of the stick is appropriately blended in when repeatedly hitting a cymbal (as it is in real life when you strike a cymbal multiple times in a row).



Smoothing is not only a smart feature, it is also configurable and flexible, offering results you thought were impossible to achieve. Best of all, it can be used on any instrument or articulation, for creative moments, or the pesky snare buzz rolls you may have struggled with before.

Dragging the slider to the right will increase the amount of Smoothing that is present for the selected instrument. For drums its default position is off, and for Cymbals the default positions were determined by the sound designer as part of the build of the given sound library.

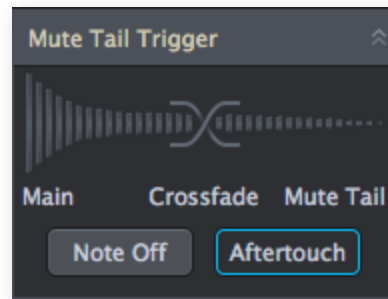
3.5.15 MUTE TAIL TRIGGER

The Mute Tail Trigger only applies to cymbals and it allows you to choose how the Mute Tail articulation is set off, either with a

Note Off Message, or After Touch.

The Mute Tail articulation is a sample of a cymbal grabbed by the drummer so that it stops ringing. Physically grabbing a cymbal sounds much

different than simply fading it out quickly, and for this reason Toontrack extensively samples this action when recording cymbals rather than attempting to synthesize its effect.



Choosing Aftertouch requires a capable module / cymbal pad that sends aftertouch (such as many E-Drum kit cymbals, or other pad controller). Choosing Note Off does not require such specialized equipment and it can be performed simply by hitting a key on a MIDI keyboard, holding down the key, and then releasing the key when you would like to trigger the Mute Tail.

3.6 DRUM / ARTICULATION SUBSTITUTION

Superior Drummer 3 includes a drum/articulation Substitution System, allowing it to play back MIDI sequences even if notes for the drums/articulations included in that MIDI sequence are not currently loaded in the Drums Tab. This intelligent system will automatically choose the next most appropriate loaded drum/articulation to play when it encounters a MIDI note that is mapped to an unloaded drum/articulation.

Consider the following example:

You have loaded the Gretsch kit, which contains 1 floor tom and 1 rack tom.

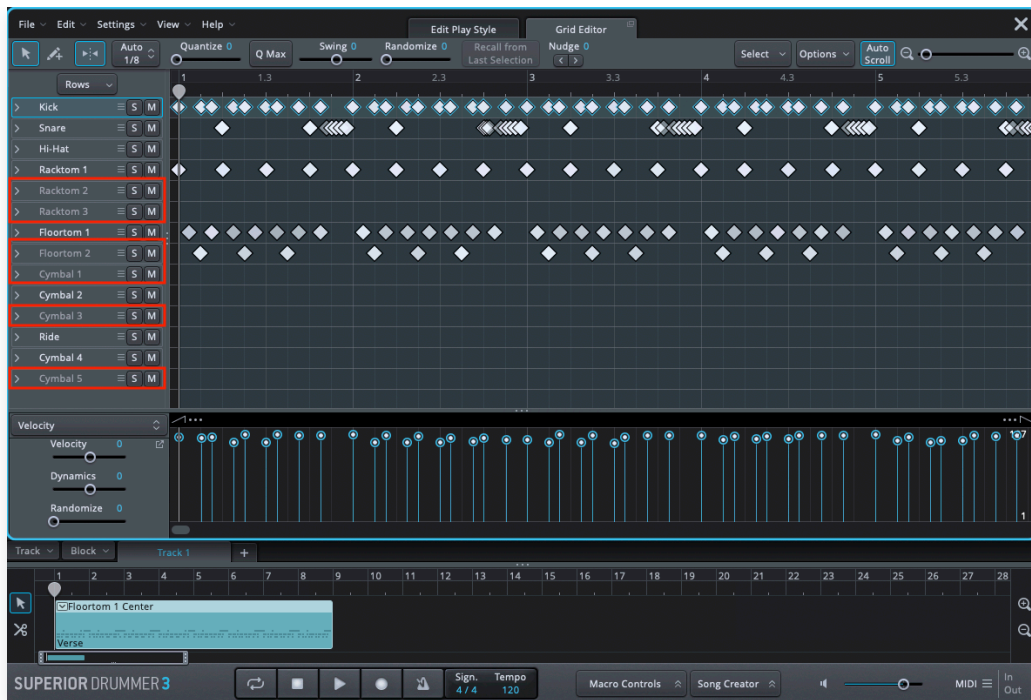


While the Groove is playing, you notice small orange "Not Loaded" icons on certain "*Transparent wire frame*" drum positions. However, while playing the Groove itself sounds complete.



This simply means that Superior Drummer 3 is substituting the MIDI note that would trigger the unloaded drum (tom 3 in the picture above) to the next most appropriate loaded drum (floor tom 1).

This can also be seen in the Grid Editor. Here the names of instruments that are not loaded appear dimmer than those of loaded instruments.



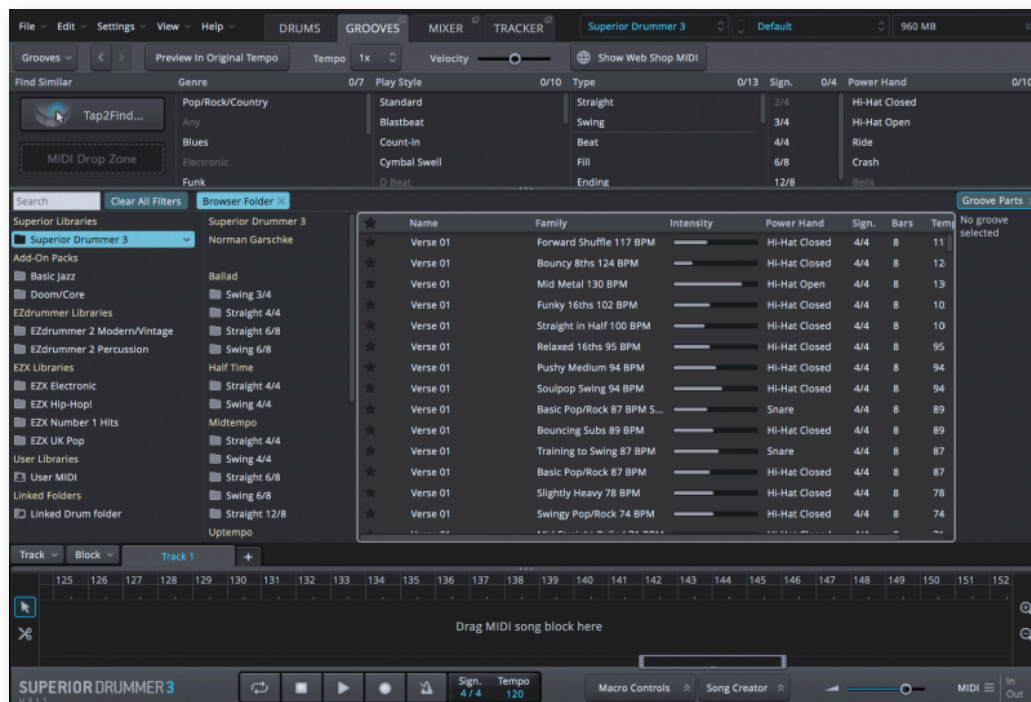
Finally, in Superior Drummer 3 it is possible to unload specific articulations for an instrument. If a MIDI sequence triggers an articulation for an instrument, the intelligent Substitution System will then choose the next most similar loaded articulation to play in its place. This is only indicated in the Articulation Menu.

In the picture below you can see that the MIDI sequence is triggering the Open Tip 1 articulation for the Hi-Hat. Because this articulation is not loaded (in order to save RAM) Superior Drummer 3 will intelligently substitute the Open Edge 1 articulation. The playing (substituted articulation) is indicated in the Articulations menu by a white highlight as seen in the picture below.



If you do not want Superior Drummer 3 to substitute alternative drums/articulations for your MIDI sequence you have 2 options: Either edit the MIDI sequence so that it only triggers instruments in the loaded kit, or load the drum/articulation that the MIDI sequence is attempting to trigger. In the Articulations list this is done by clicking its power button. For an instrument it is performed by right clicking on the instrument and selecting an instrument to load in that position.

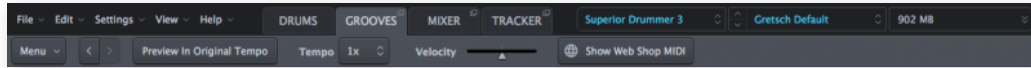
4 THE GROOVES TAB



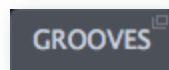
The Grooves Tab in Superior Drummer 3 is where you browse and audition your installed MIDI files. If Superior Drummer 3 is the only Toontrack product that you own, the Superior Drummer 3 Groove library will be the only collection available in the Grooves tab.

Superior Drummer 3 changes the Grooves tab from the previous version and EZdrummer 2 by combining both the traditional file browser and a selection of search filters into one location where they can work together to better filter your desired result. The following will be a description of the grooves page from left to right / top to bottom.

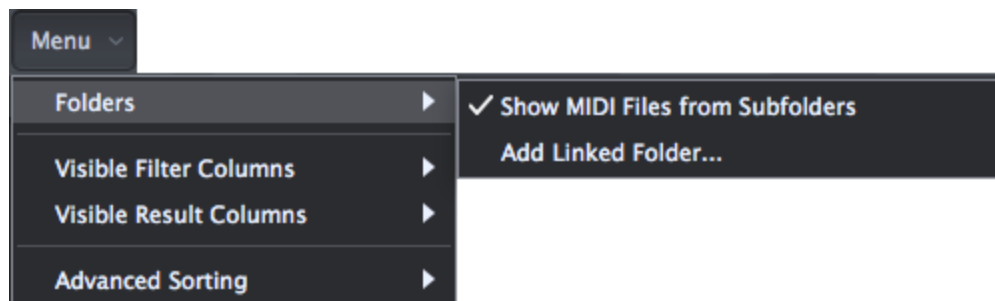
4.1 GROOVES TAB HEADER BAR



Starting on the actual tab itself, you will notice a small graphic with 2 overlapped rectangles. This is the icon for detaching a window. It can be found on the Grooves, Mixer, and Tracker tab as well as in the Macro properties window and the effects in the mixer. Clicking this breaks the window off from the main interface and allows you to position it (and in the case of the tabs) change its proportions however you desire.

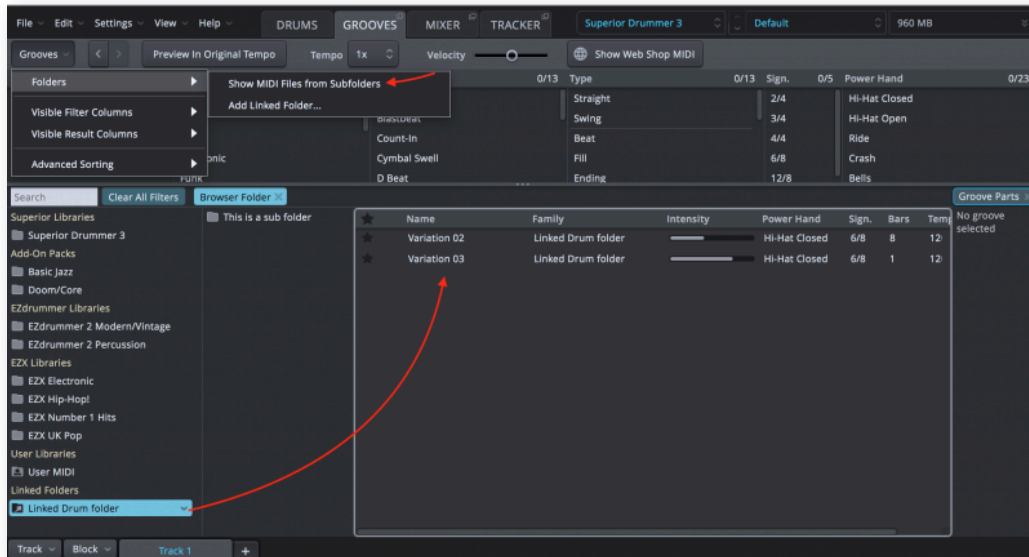


GROOVES MENU



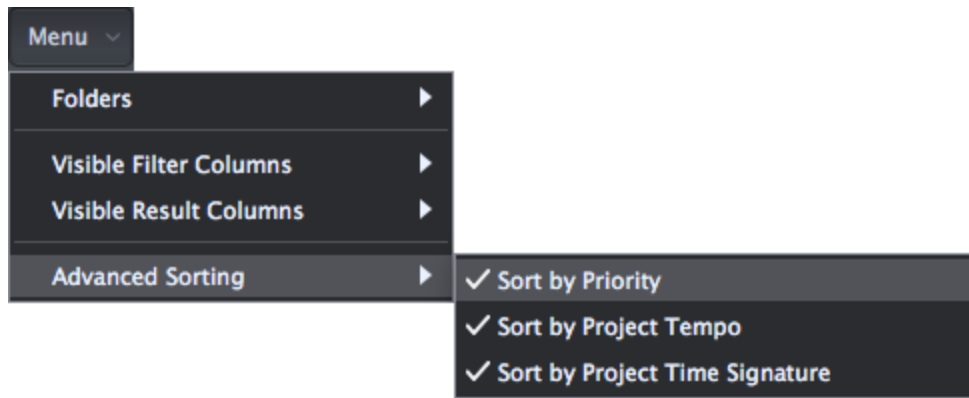
- **Show MIDI from Subfolders:** Show MIDI files from Subfolders only applies to user added linked folders, and sub-folders containing 3rd party MIDI files.
 - When you select show MIDI Files from Subfolders and then click on a user linked MIDI folder in the browser section, you will see all MIDI files in this folder, and all MIDI files in all subfolders in the results area. If this is unchecked, you will only see the MIDI files that are in the

root folder. You would then need to click on the subfolder in column 2 in order to see these MIDI files.



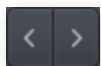
In this picture "Show MIDI Files from Subfolders" is turned off, therefore clicking on the user linked Drum MIDI folder only displays the MIDI files that are in the root of that folder and not the sub folder.. Alternatively, turning Show MIDI Files from Subfolders on would display all MIDI files from all subfolders of user added folders in the results area.

- **Add Linked Folder:** Here you can add a user created folder of drum MIDI to the Superior Drummer 3 browser. Clicking this option will open an operating system window that will allow you to browse for the folder. Again, the above option of show MIDI Files from Subfolders only applies to user linked folders.
- **Visible Columns:** Here you can show or hide the columns in the filter section and the results section.



- **Advanced Sorting:** Grooves in the results area will be sorted according to the selected options instead of numerical order.
 - Priority: Grooves are sorted in a way that Toontrack believes they will be useful, with simpler grooves at the start of the list and more esoteric grooves near the end.
 - Project Tempo: Displays grooves in the results area starting with the ones that match your SD3 projects tempo.
 - Project Time Signature: Displays grooves in the results area starting with the ones that match your SD3 projects time signature.

NAVIGATION BUTTONS



These maneuver through the folder browser below, retracing your steps just as the back and forward buttons do in a web browser.

PREVIEW IN ORIGINAL TEMPO

Preview In Original Tempo

Preview in Original Tempo will play back grooves in the browser in the tempo at which they were recorded, and not the tempo that is selected in the DAW or the Stand alone version of Superior Drummer 3.

TEMPO MODIFIERS

Tempo

1x



The Grooves tab lets you preview grooves in a variety of different tempo alterations. In the tempo drop-down menu, you can select between 1/2 tempo, normal 1x tempo, and 2x (double) tempo. Having this option in the Grooves tab allows you to preview all grooves at an alteration of the tempo before they are dragged to the Song Track or to your DAW application. If a change is made to the tempo of a MIDI groove, Superior Drummer 3 will display a blue active filter header below the search filters. This blue active filter provides the option to “Reset” the tempo and other changed parameters.



It is also possible to select 2/3x and 3/2x tempo. 2/3x slows the tempo of a groove by 1/3 so that a 4/4 groove could be used in a 6/8 time signature song. 3/2 speeds up the tempo by a factor of 1.5.

Tempo

2/3x



1/2x (Half Tempo)

1x (Default Tempo)

2x (Double Tempo)

✓ 2/3x (4/4 -> 6/8)

3/2x (6/8 -> 4/4)

It's important to mention that the 2/3x and 3/2x options simply slow down or speed up the chosen MIDI (i.e. they do not change

the performance).

A practical way to demonstrate how these alterations work is to slow down a 4/4 groove using the 2/3 option, then drag this groove to the song track, and engage the metronome. With the metronome on, you will hear how 6/8 can be counted over a 4/4 groove that has been slowed down appropriately.

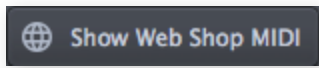
Any changes in tempo that are previewed in the Grooves tab are applied to the groove once it has been dragged and dropped to the Superior Drummer 3 Song Track or a MIDI track in your recording application. Note that changes in tempo do not effect the master version of the Superior Drummer 3 MIDI library, they only apply to the copied MIDI groove that has been dragged from the Grooves Tab.

VELOCITY



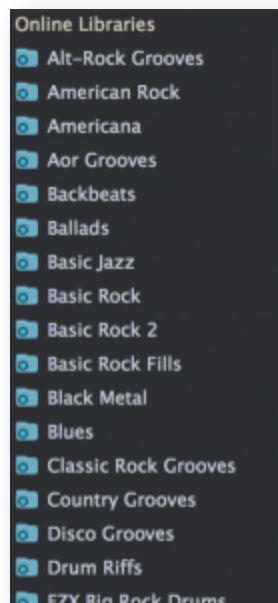
The Velocity Slider will raise or lower the global velocity of the selected groove. This increases or decreases the velocity for every single note in the groove by the same amount so that the performance remains in proportion.

SHOW WEB SHOP MIDI



Show web shop MIDI connects to toontrack.com and allows you to preview MIDI that you do not currently own from Toontrack's various selection of for purchase MIDI packs. An internet connection is

required to use this feature. Clicking this button will add a header in the file browser section of the Grooves page titled “Online Libraries.” Search filters that correspond to the online libraries will also be added to the filters section, and will display a blue dot to the left of their name.



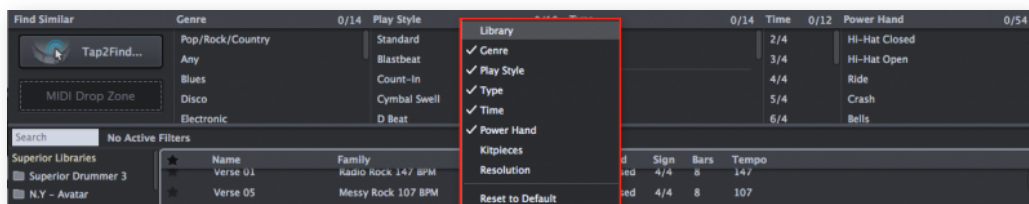
Finally all web shop MIDI grooves will have a web icon to the left of their name in the results section.

Its important to mention that web shop MIDI files can not be dragged to the Song Track or out of Superior Drummer 3. They are strictly for preview so that the user can make more informed purchasing decisions.

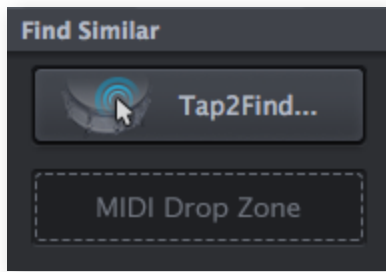
4.2 SEARCH FILTERS

Below the grey header bar are the Grooves tab Search Filters.

The Search Filters display a default set of useful filters, however right clicking near a Search Filter’s title will display a menu that allows you to add or remove Search Filters in the interface.



TAP2FIND



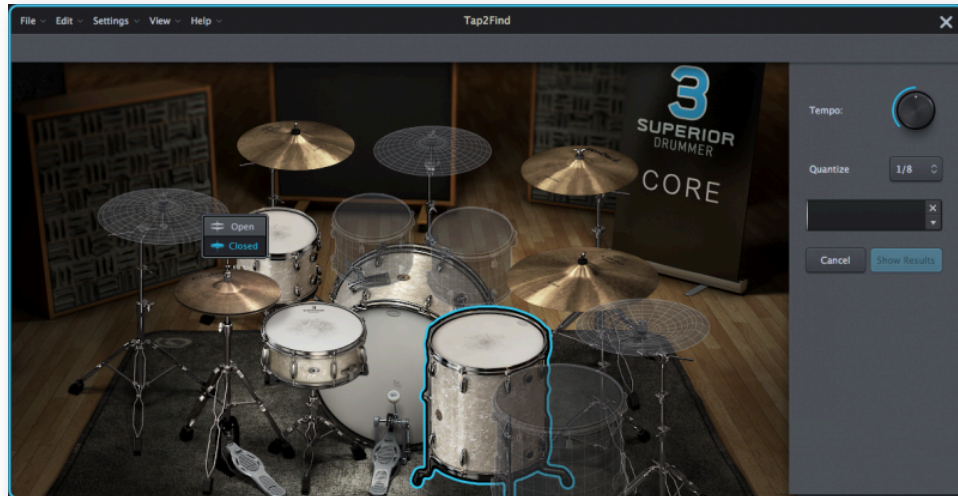
Starting to the left is the Tap2Find filter which allows you to find similar grooves based on a custom rhythm.

After clicking on the Tap2Find button you are able to tap in your desired rhythm directly into the interface, or by using a connected MIDI controller. Superior Drummer 3 will then automatically quantize your performance and display all the similar grooves in the MIDI library, taking a loose idea to a concrete selection of professionally played grooves in a matter of seconds.

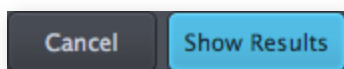
USING TAP2FIND

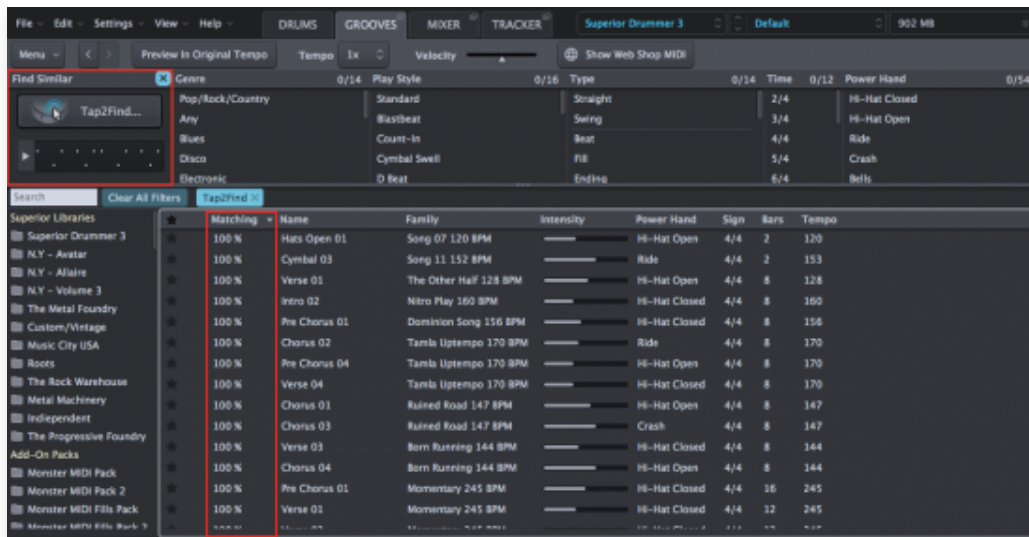
- If necessary, set a tempo and time signature in the transport controls. (Bottom of the Superior Drummer 3 interface)
- Click the Tap2Find button to open its window. Here the selected drum kit is shown together with a Tempo knob, a Quantize drop-down menu and a beat display. The metronome is on and a 2-bar record loop is active. By default, Quantize is engaged and set to 1/8-notes. This can be changed by making a different selection in the Quantize

menu.



- Tap the desired rhythm, either by clicking on the instruments or by using a MIDI controller. Everything you play will be added to the loop so you can record one drum at a time for each pass of the loop. If you make a mistake, you can either erase the whole recording by clicking the X button to the right of the beat display to restart, or you can erase any individual drum by using the drop down menu below the X.
- When you are done, click “Show Results”. The Tap2Find window will close and display the search results. The rhythm you just recorded is now shown in the MIDI drop zone. The results are sorted according to the closeness of the match. Clicking a result allows you to preview the groove.

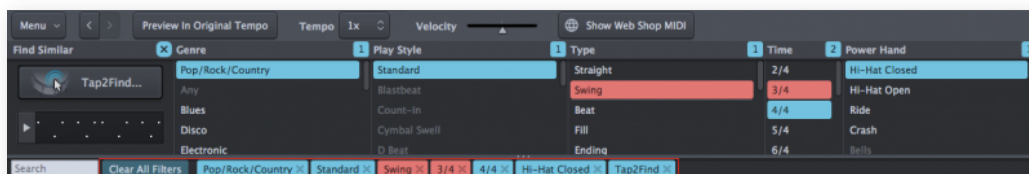




REFINING SEARCH FILTERS

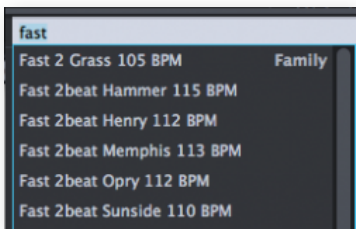
The remaining filters to the right of tap to find allow you to specify a number of search criteria to quickly find a suitable groove. Activating one or more filters will affect the search result in the lower half of the window (Results Area). Any number of filters can be selected in the various filter columns to refine your results. Its also possible to right click a filter and select exclude, which will ensure that no grooves related to this filter appear in the results below. Excluded filters appear in RED as seen in the picture below.

Below the filter columns all of the currently active filters are displayed. Clicking on an active filter will remove it from use.



TEXT SEARCH FILTER

The search field allows you to type in a search by key word (text search) or by a matching filter. If there are any matching file names or filters they will be

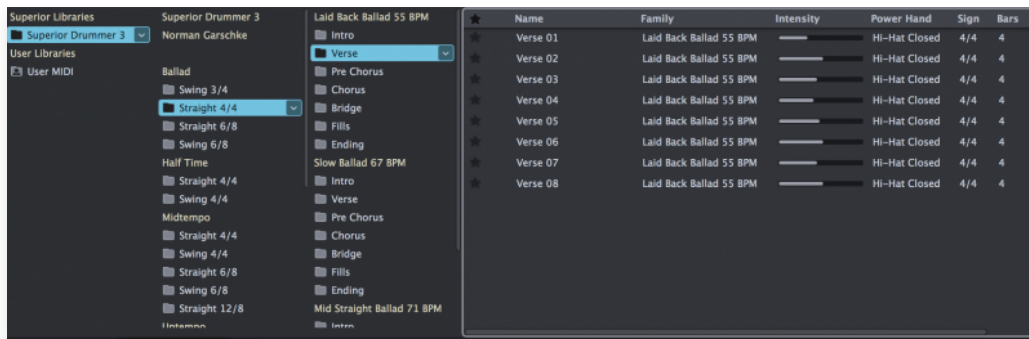


displayed below the search field. Typed in filters are activated by either hitting enter on the physical computer keyboard, or by clicking on one of the suggested filters in the list below. Search Field filters will also appear in the all active filters section once they have been entered (as pictured above).



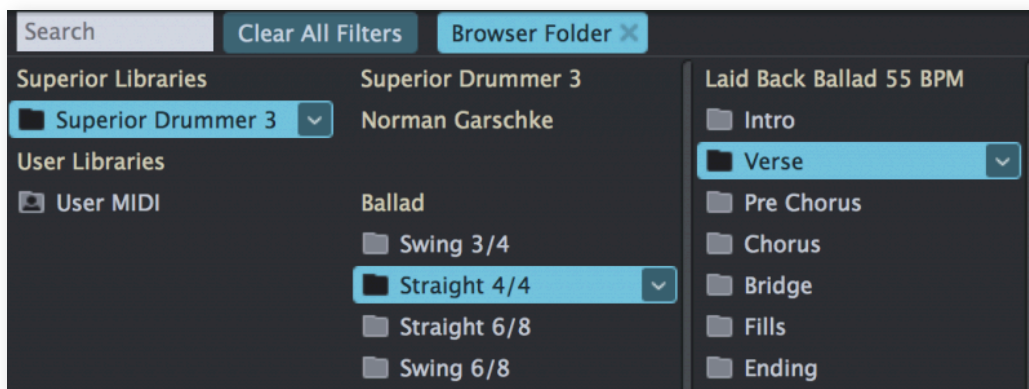
4.3 THE FOLDER BROWSER

To the left of the Grooves Tab is the Folder Browser. The Folder Browser is divided into columns where you can browse (from left to right) a MIDI Pack (Groove Library), a style/time Signature category, a groove folder (for the selected category), and lastly a play variation groove.



The new Folder Browser section in the Grooves page makes each folder in the browser also behave as a filter, just like the search filters above. For example clicking on a groove library folder will display all of the grooves that are included in that MIDI pack to the right in the results area. This is useful because it can be used with Tap2Find and the other search filters to better filter your results.

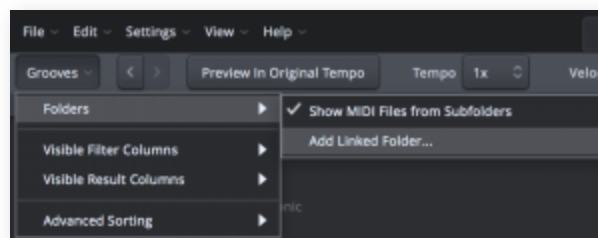
This means that you could tap a groove into Tap2Find, and then filter all of your results by a single or series of browser folders!



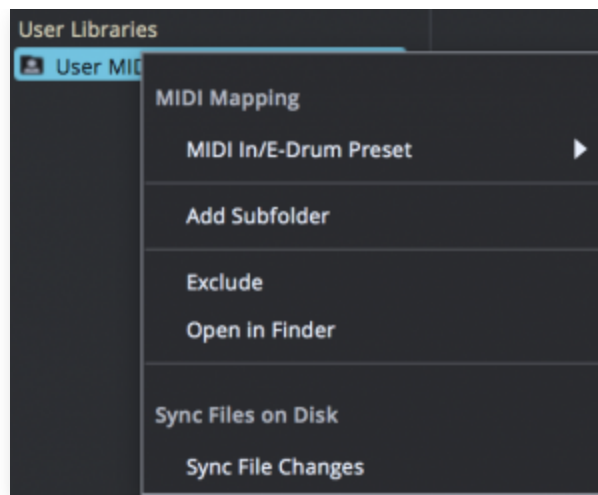
ADDING MIDI CONTENT AND THE USER MIDI FOLDER

MIDI can be added to Superior Drummer 3's Grooves tab in a few ways:

- Purchase/install additional Toontrack MIDI packs.
 - MIDI packs in all genres are available at Toontrack.com, or from the many Toontrack dealers world wide.
- Add a Linked folder of 3rd party MIDI files to the Folder Browser section of the Grooves tab.
 - Adding linked folders to the Folder Browser is done by clicking the Grooves Menu > Folders > Add Linked Folder. You will then navigate to the folder on your computer.



- Add MIDI files to the User MIDI Folder in the Folder Browser.
 - User MIDI files can be dragged onto the root or sub folders in the Folder Browser section to be added to the Grooves page. Alternatively you could click the arrow on the User MIDI folder and select Open in Finder (or Explorer, PC) and then add MIDI to this operating system window.
 - It is also possible to add sub folders to the User MIDI folder for better organization via the right click menu.



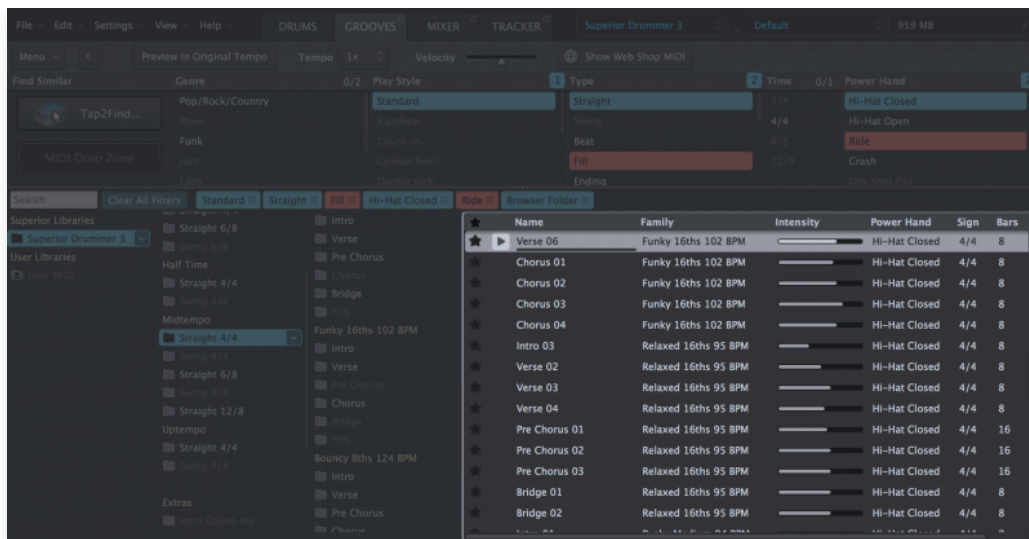
- MIDI In/E-Drum Preset: E-drum presets can be applied to MIDI files that exist in your user MIDI folder. Using these presets will conform the MIDI in the user MIDI Folder from the chosen mapping format to Superior Drummer 3's mapping format. This is useful if you have MIDI that is mapped in another format (BFD or Slate for instance) and would like to use that MIDI inside of SD3. To do this simply select the MIDI or MIDI folder and then choose its original mapping format (e.g. Roland, Yamaha, Slate...). This MIDI will then be transformed from the original mapping format to the SD3 mapping format for proper playback in SD3.
 - *Note: This feature is NOT used for exporting SD3 Mapped grooves to a different mapping format for use with a different Drum Virtual Instrument.*
- Exclude: This option will remove the User MIDI Folder from being used with any search filters such as Tap2Find.
- Open in Finder (Explorer): This will open an operating system window and automatically

navigate to the folder containing the MIDI files. This is useful if you would like to manage the MIDI files in your user MIDI folder with the operating system.

- Sync File Changes: This option will be available if you have added the user MIDI folder to the MIDI database. If selected it will update the database when new MIDI is added.
 - User MIDI libraries/folders are now scanned in the background to check if the folders are in sync. If a folder is not in sync, a orange dot will appear next to the menu button for that library, and in the menu the same orange dot is shown next to the “Sync File Changes” entry.

4.4 THE RESULTS SECTION

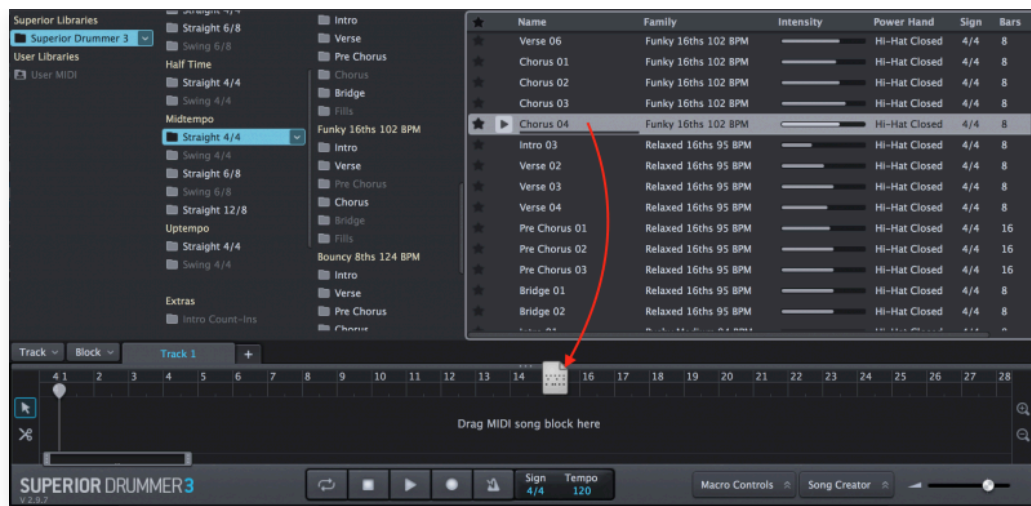
Once you have filtered down the type of groove that you are looking for you will see a selection of matching results in the results section.



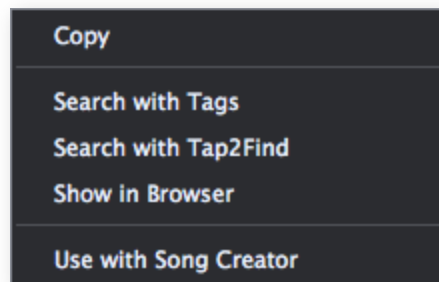
Clicking the play button on any hovered groove will engage loop playback of the groove. Double clicking the groove variation will trigger a one shot playback.



These are the individual grooves (MIDI files) that can be used as the building blocks of your drum sequence. These grooves can be dragged to the Song Track in Superior Drummer for sequencing, they can be dragged out of the Superior Drummer 3 interface to a location on your computer, or they can be dragged and dropped on a MIDI track in your DAW. When dragged to the internal Song Track at the bottom of Superior Drummer 3 they are referred to as Song Blocks.



Right clicking on a Groove in the results section provides a few additional options.



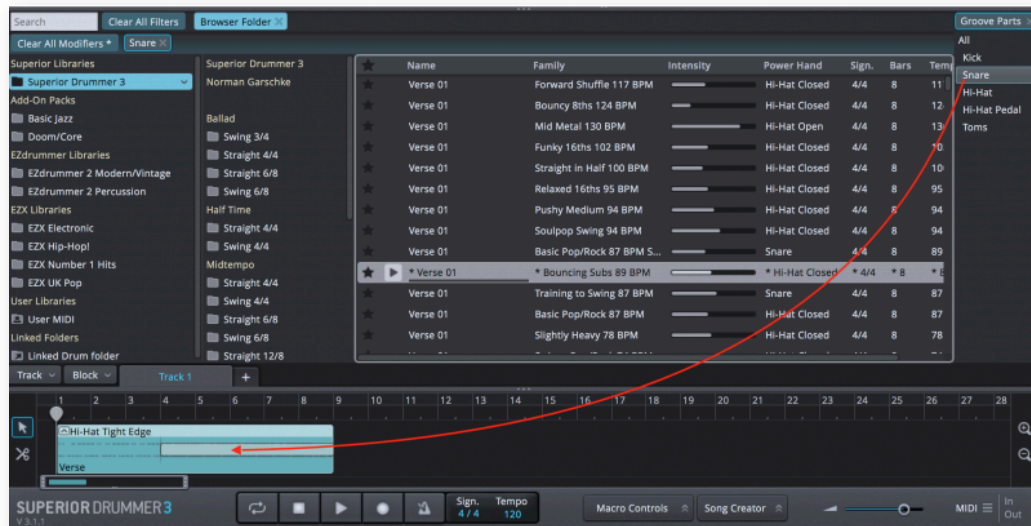
- **Copy:** You can copy the groove to paste at a later time.
- **Search with Tags:** Searching with tags makes it possible to use an individual groove as a group of search filters. Every single Toontrack groove is given a set of Tags that is stored in the Toontrack MIDI database. If you find a groove you like, and would like to find more similar grooves, Search With Tags is one good option.
- **Search with Tap2Find:** This selection is similar to Search With Tags, but this feature instead uses Tap2Find for the search criteria instead of the grooves associated tags.
- **Show in Browser:** This option will display the Browser folder path all the way to the final groove variation.

This is very useful if you would like to accompanying grooves from the same MIDI pack as the chosen Groove.

- **Use with Song Creator:** loads the groove into the song creator and automatically expands the song creator window. The song creator will be explained in detail in chapter 7 (The Song Track).

GROOVE PARTS

The Groove Parts Button located to the right of the results area allows the user to access MIDI for the individual drums used in the selected groove. Groove Parts can be dragged over existing grooves on the timeline to add this "Groove Part MIDI" to the existing Groove. This would allow you to for example use the Hi-Hat pattern from one Groove with a kick pattern from another. The possibilities are endless.



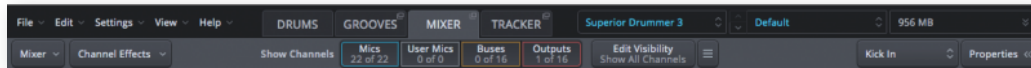
5. THE MIXER TAB



Superior Drummer has always been designed so that the user can control a multi-track drum recording, just as they would in real life, if they had set up the microphones and recorded the drums themselves. Therefore in the mixer you will see channels for each microphone that was used in the sample recording session, and you have full control over each of these channels. In fact, you have much more control in Superior Drummer 3 than you would if you simply recorded drums into your DAW.

5.1 MIXER TAB HEADER BAR

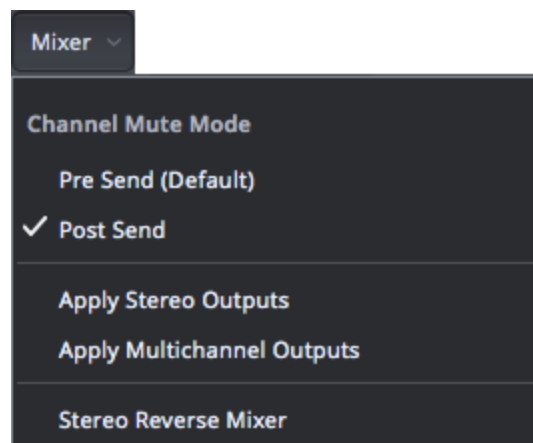
Just like the Grooves and Tracker Tab you will see the small overlapping rectangle icon in the top right of the actual Mixer tab graphic. Clicking this will detach the Mixer window so that you can resize it and position it where you desire.



5.1.1 THE MIXER MENU

MIXER MENU

The Mixer Menu provides useful options for altering the mixer globally.



- **Channel Mute Mode:** Here you can set the Mute to occur before any sends used on the channel or after the sends.
 - Please note: the output order of the send itself will effect how this option works (i.e. If the Channel Mute Mode is set to Post Send but the Send channel is set to Post Fader, all audio will be muted just as it would if the Channel Mute Mode was in Pre Send (Default)).



- To achieve the intended option for this control choose Post Send, and then make sure that the Send on your selected channel is either in Pre Effects or Pre Fader Mode. Then, when the selected channel is Muted, audio from the send will still be sent to the Bus channel and output as sound.

This option is best clarified with an example. Imagine that you have used a send on the Top Snare channel with the intention of sending it to a reverb bus (bus 1 in this example). While dialing in the reverb plugin, you would like to hear the drum mix with the reverb only without the Snare Top Mic Direct audio. In this instance you would select Post Send in the Mixer Channel Mute Mode, then select Pre Fader (or Pre Effects) in the Snare Top Send. Now, with these selections made, muting the Snare Top Channel would still allow signal to be sent to the Reverb bus, therefore you would hear the entire drum mix with reverb minus the close mic snare top channel.



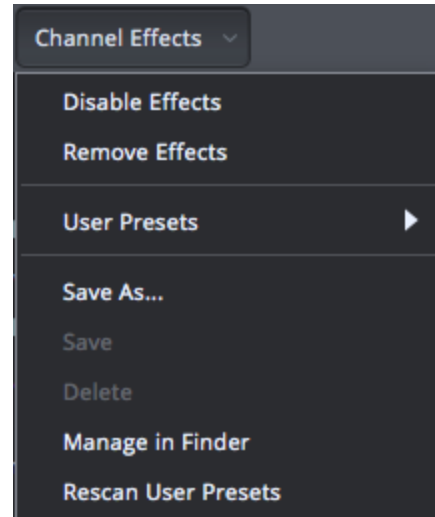
In this picture the Snare Top Channel is muted however, audio from its send is still being routed to bus 1 due to the Post Send option in the Mixer Menu.

- Apply Stereo or Multichannel Outputs:** The output selection provides the choice between a quick stereo and multi-channel output preset. Choosing stereo simply selects output 1/2 for every microphone channel, while choosing Multichannel loads a Multichannel output preset that groups microphone channels by instrument and buses each instrument category to the same output. It should be noted however that this is just a preset suggestion and all outputs for all channels can be set individually by the user in any way that you choose.
- Stereo Reverse Mixer:** This option will change all of the panning in the mixer for every channel to the opposite side. Channels panned in the center will remain in the center.

5.1.2 CHANNEL EFFECTS MENU

The second menu on the grey Mixer Tab header bar is the Channel Menu.

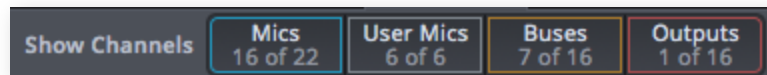
- **Disable Effects:** Bypass effects for the selected channel or channels. This menu option preforms the same function as the "Effects Enabled" button on each channel.
- **Remove Effects:** This option removes all of the insert effects for the selected channel.
- **User Presets:** Access user saved channel presets. Channel presets consist of a group of effects that you have personally selected and dialed in for a desired sound. Once saved as a User Preset this signal chain of effects can be recalled at any time in the future on any channel.
- **Save As:** This is the option to save a Channel Preset. Please first select the desired channel in the mixer that contains your custom signal chain, and then click Channel Menu > Save as.
- **Save:** Allows you to save changes to a existing saved user preset.
- **Delete:** This option will delete the selected user preset.
- **Manage in Finder (Explorer, PC):** Choosing this option will take you to the operating system folder location that the preset file is stored on your computer.
- **Rescan User Presets:** A useful option if you have manually added User Presets to your User Presets folder in your



operating system. Selecting this option will force SD3 to check this folder and update its list of contents.

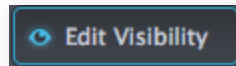
5.1.3 SHOW / HIDE MIXER CHANNELS

The Mics, User Mics, Buses, and Outputs buttons will show or hide these channels in the mixer. When the buttons are outlined in blue the channels will be visible in the main mixer section. When grey, the channels are hidden.



- **Mics:** This refers to every unique channel that was tracked as part of the recording session for the sound library. The numbers corresponds to the amount of channels that are shown in the mixer (i.e. have not been hidden by the loaded preset or the user) and the amount of total channels. If you hide a channel with Edit Visibility the first number will decrease.
- **User Mics:** This includes any channels that the user has added with Stacks, or Added X-Drums (i.e. they are not a default part of the loaded sound library).
- **Buses:** Refers to the yellow bus channels. Again, the number only refers to the buses that have not been hidden by the user.
- **Outputs:** Refers to the red output channels. As with the Buses and Mic channels the number only corresponds to the outs that have not been hidden by the user.

5.1.4 EDIT VISIBILITY



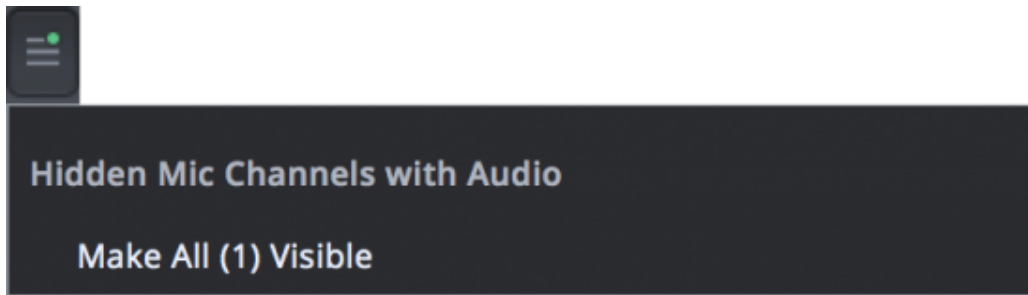
The Mixer in Superior Drummer 3 now allows any and all channels to be hidden on a user definable basis. Clicking the Edit Visibility button will display a Hide button for each channel. Clicking the Hide button will mark the channels that will be hidden once Edit Visibility has been closed.



To close Edit Visibility and hide all selected channels, simply click the Edit Visibility button again. Channels can be un-hidden at any time by opening Edit Visibility and de-selecting the hide button on the channel.

HIDDEN MIC CHANNELS WITH AUDIO

Moving to the right of the Edit Visibility button is a Menu that will display any Hidden Microphone Channels that will produce audio. This useful menu makes it easy to quickly see all hidden active Microphone Channels and un-hide them in one click. If an active Microphone Channel is hidden it will be indicated by a green dot on the menu icon.

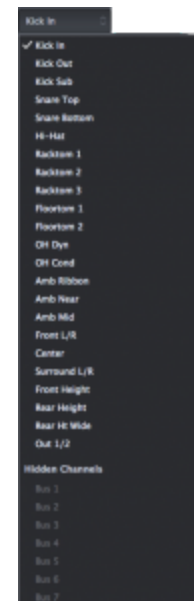


5.1.5 CHANNEL SELECTION MENU

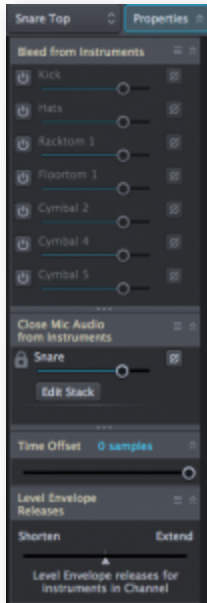
The Channel Selection Menu shows all available channels in the mixer, even channels that have been hidden with Edit Visibility. This includes any additional channels that you may have added with the Route Instrument Microphones window, all buses, and outputs.

Selecting a channel from this menu is the same as clicking on the channel name itself in the main portion of the mixer.

Any hidden channels will also appear in this section under Hidden Channels.



5.1.6 MIXER PROPERTIES



Mixer Properties is a set of utilities for the mixer that can be shown or hidden by clicking on its button. Much like the Property Boxes on the Drums tab, the Mixer Properties controls the selected channel or group of selected channels.

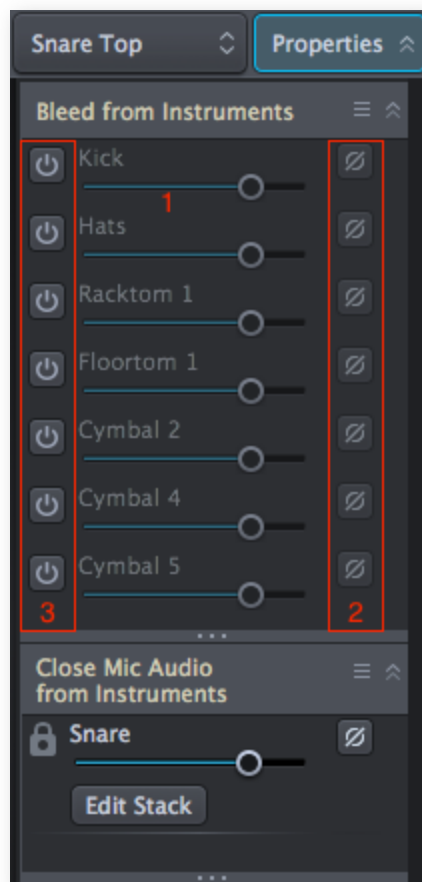
In the Mixer Properties there are a few controls, the first of which is the Bleed from Instruments.

The much desired ambience resulting from a drum “bleeding” into all microphones surrounding the kit is an essential part of the studio experience. This unmistakable and crucial ambience should not have to be sacrificed while programming drum tracks. For this reason great importance has been placed on the bleed from other microphones in all versions of Superior Drummer including the newly refined Bleed from Instruments controls found in Superior Drummer 3.

To use Bleed from Instruments, first select the channel that you want to manipulate, then show the Mixer Properties window. The instrument bleed is divided into 2 sections, Bleed from Instruments and Close Mic Audio from Instruments.

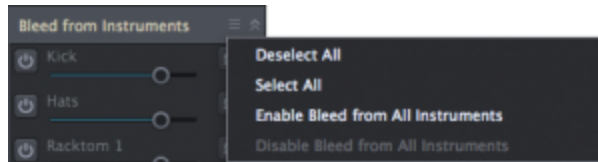
BLEED FROM INSTRUMENTS

These are the other instruments in the drum kit that are also picked up by the close mic on the selected microphone channel. Picture a close microphone on the snare drum of a full drum kit. This microphone will pick up sound from all of the other instruments in the kit when they are struck. This is called bleed, and in a real life recording of a drummer playing a kit the level of the bleed is impossible to adjust after the recording. In Superior Drummer 3 however, each instrument in the kit can be adjusted in every single microphone that was used. Its volume can be raised or lowered with the level sliders (#1 pictured below). Its polarity can be reversed with the polarity control (#2 Pictured below). Or it can be turned off entirely with the power button (#3 Pictured below).



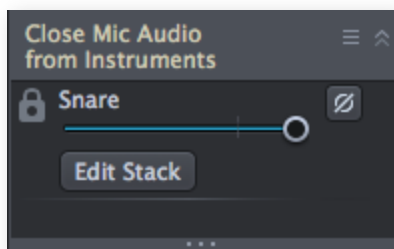
BLEED FROM INSTRUMENTS MENU:

This allows you to perform various options for all instruments



present in the selected channel(s). Here you can group select all bleed sliders, and enable / disable bleed for all instruments at once.

CLOSE MIC AUDIO FROM INSTRUMENTS



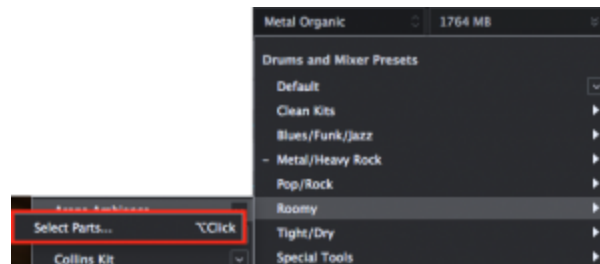
This refers to the specific instrument in which the selected microphone channel was primarily intended to capture. Close Mic Instruments

contain a level slider so that the volume of the instrument (as captured with the selected channels microphone) can be adjusted independently of the channel fader. The volume slider for both the bleed and close mic instruments will go down to $-\infty$ and up to +12. If the Close Mic Audio from Instruments channel contains a stacked instrument, an Edit Stack button will appear (as in the picture above, so that its possible to edit the gain and polarity of each member of the stack.

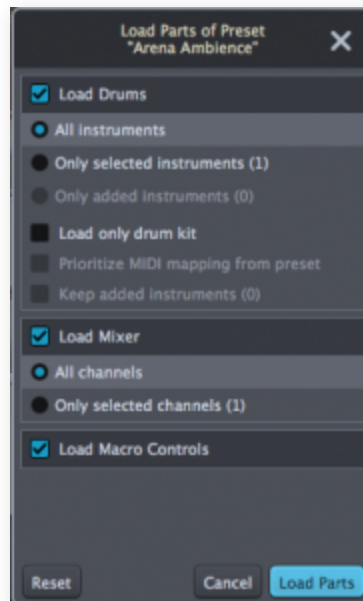
- Bleed Instruments and Close Mic Instruments can be group selected by holding down Shift and clicking on the near the level sliders for the instruments that you would like to control together.

Finally, it should be mentioned that although Bleed from Instruments and Close Mic Audio from Instruments sit in the Mixer Tab, they are actual part of the Drums, and not the Mixer. This distinction must be made because of the ability to Load

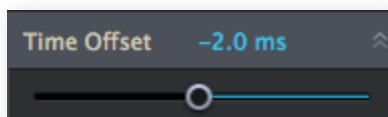
Parts of a preset from the Presets selection menu on the Drums Tab.



Therefore, if you choose to load Parts of a preset, and you would like the Bleed levels included in the loading of the "Part" you must select the Drums as one of the Parts that you load.



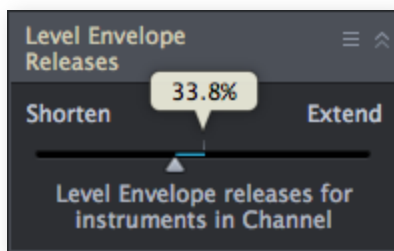
TIME OFFSET



The Time Offset provides the ability to shift the audio signal forward in time up to 10ms. This would be used for example, if you wanted to alter the phase alignment of overhead microphones in relation to the close microphones. It should be noted that using the Time

Offset on a close microphone will begin to chop off its initial transient as it removes time from the beginning of the sample. This is because the distance between the instrument and a close mic is small, therefore the time it takes sound to travel from the instrument to microphone is very very short. It can also be used to decrease room decay.

LEVEL ENVELOPE RELEASES



This was previously known as the Fade control in Superior Drummer 2. Sliding the control to the left, you can apply a linear fade that will affect all instruments played through the selected microphone channel. This effectively “shaves” off the tail of the samples. The overall effect will be a reduction in the residual noise that was introduced by allowing every instrument to ring in that microphone. It can also be used creatively to shorten the release time of an ambience channel and effectively create a sound similar to a gated reverb.

The Level Envelope Releases slider can also be moved to the right where it will instead add a number of milliseconds to the length of the sound. This will only work on sounds that have been altered using the Level Envelope Property Box on the Drums Tab. This is because its impossible to add time to a sample of a finite length unless it has already been shortened with the Level Envelope Property box. The typical application is to make a hard fade (created with the release control in the Level Envelope Property Box) sound more natural by allowing for

example, the Ambience microphones to ring a little longer (using the Level Envelope Releases slider to extend them). This would mimic a real room response much more accurately.

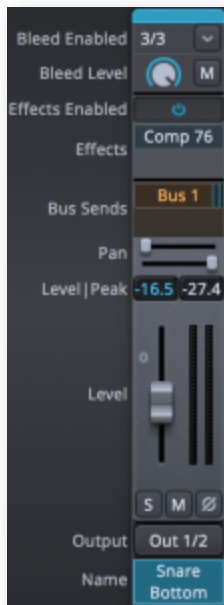
It is important to note that adjusting the Level Envelope Releases will only effect the selected channel and other microphones channels will remain unaffected. If you wish to affect the release/decay of a single instrument in all the microphone channels refer to the operation of the Level Envelope Property Box.

5.2 MIXER CHANNEL DESCRIPTION

Superior Drummer 3's Mixer Tab features 3 different types of channels: Microphone Channels, Buses, and Outputs.

MICROPHONE CHANNELS

Microphone Channels (indicated in Blue) are named as such because they are different than typical audio tracks in a DAW. This is because the microphone channels do not simply control the instruments level, but rather the sound of all the instruments in the microphones present in the room. Adjusting a Microphone Channel strip in the mixer will not only affect the direct signal from the drum but also any other instruments that have been activated in the Bleed from Instruments (in the Mixer Properties). The different sections in the Microphone Channel strip are as follows:



Bleed Enabled: This is a quick overview look of the settings in the Bleed from Instrument Mixer Property. Here you can see how many bleed channels are enabled, and with the down arrow button you can quickly enable, disable all bleed as well as show the Mixer Properties and the Route Instrument Microphones window (Route Instrument Microphones is detailed in chapter 9.4.1).

Bleed Level: This controls the overall level of the Microphone Channels Bleed. It is global for the selected channel(s), meaning that the level ratios that are present in the Bleed from Instruments Mixer Property will remain intact. The Mute button in the bleed section will mute all bleed instruments while leaving the close mic instruments alone.

Effects Enabled: Activate or deactivate all effects on the selected channel or channels.

Effects: Here you can load any of the over 30 all new sound processing plugins included in Superior Drummer 3. When an insert plugin is loaded a new slot will open up below. Each individual effect plugin will be described later in chapter 5.

Bus Sends: Here you can route any Microphone Channel to a bus channel. Clicking the down arrow in the bus section will provide a list of 16 stereo buses. When a bus is chosen, its channel will automatically appear if it was hidden in the selected preset. Bus sends can be Option (Alt) dragged from one channel to another to duplicate the send on the new channel.



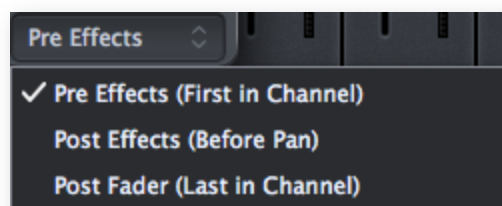
Assigning Bus Send opens a Bus Send Channel. Here you can turn on, or off, the direct / bleed signals independently which is very useful if you plan to heavily compress the Bus. You can also change the panning of the direct and bleed signals independently.

Next, the level controls allow you to adjust the level of the direct (Close Mic'ed Instrument) and the Bleed instruments independently.

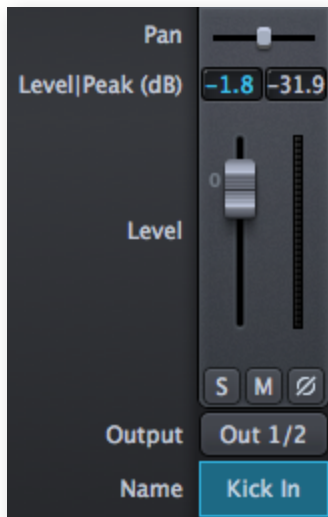
In between the 2 faders is the Link control. Engaging this control will ensure that both the Direct fader and the Bleed fader move together in unison.

Finally at the bottom of the send control are a series of options in a drop down menu. In this menu its possible to use the send Pre Effects, meaning signal is sent to the desired Bus before being processed by any inserted effects. Post Effects, which sends the signal to the bus after the effects but before the pan control.

Finally, Post Fader means that the signal is sent to the bus after all of the options in the Microphone channel including the level of the channels fader.



Pan Control: Moving back to where we left off on the Microphone Channel strip is the pan control. Here you can alter the spacial positioning from left to right of the desired channels.



Level / Peak and Fader: The level indicator shows the current value of the fader (blue) while the white number shows the highest level Peak. The white text shows the highest level sample peak that the channel has encountered during the current session. The Level Fader allows you to control the volume of the channel.

Solo/Mute/Polarity: Solo (Isolate), Mute (turn off audio), Polarity reverse (invert the waveforms of audio in the selected channel).

Output: Clicking in the output section opens a menu where you can choose from any one of the 16 stereo outputs or 16 stereo buses. Multiple outputs will be described below in the output section of this chapter.

Channel Name: At the very bottom of the channel strip is the Channel name. The name can be double clicked and changed to any name that you desire.

COPYING SENDS AND FX

Holding down the Option Key (Mac) or Alt Key (PC), then clicking and dragging an Effect or Bus Send to an new channel will copy the chosen effect or Bus Send to the new channel.



CLOSE MICROPHONE CHANNELS AND AMBIENCE MICROPHONE CHANNELS

Microphone Channels are delineated as close mics and ambience mics. Close mics refer to a microphone that was placed within a small distance from an instrument on the kit. While other instruments will “bleed” into this mic, a close mics primary purpose is to capture the sound of the instrument on which its placed. Ambience mics refer to any Microphone that was intended to capture the kit as a whole from a distance, where capturing the unique sound of the kit reverberating at different positions in the room is the primary goal.

The Ambience Microphone Channels for the core sound library of Superior Drummer 3 are located to the right of the Microphone channels starting with the Channel labeled AMB R88.

USER MICS



User Mics appear in grey and are channels that have been added to the mixer by the user. This can be done when stacking, adding instruments, or using other libraries when changing instruments in the kit. User Mics will not appear by default.

BUSES

Buses (indicated in yellow) are general purpose audio routing channels that allow a combination of signals to be routed and processed (if desired) together as a group. This bus can then be output to a final destination, which in the case of Superior Drummer 3 is one of its 16 stereo outputs.

Bus channels also have FX inserts for sound processing just like microphone channels.



Bus channels can also be sent to another bus using one of the Bus send slots (or outputs) for further grouping and routing options.

OUTPUTS

Finally, outputs (indicated in red) have fixed routing since they sit last in the audio path. Outputs directly interface with your host program, or in the case of Superior Drummer 3 stand alone, the physical outputs on your recording interface.

By default Superior Drummer 3 outputs into your DAW as any stereo instrument you may be familiar with. It can however, be launched as a multichannel instrument in most compatible DAW's so that further processing can be applied, therefore allowing you to use your entire arsenal of plugins within your DAW.



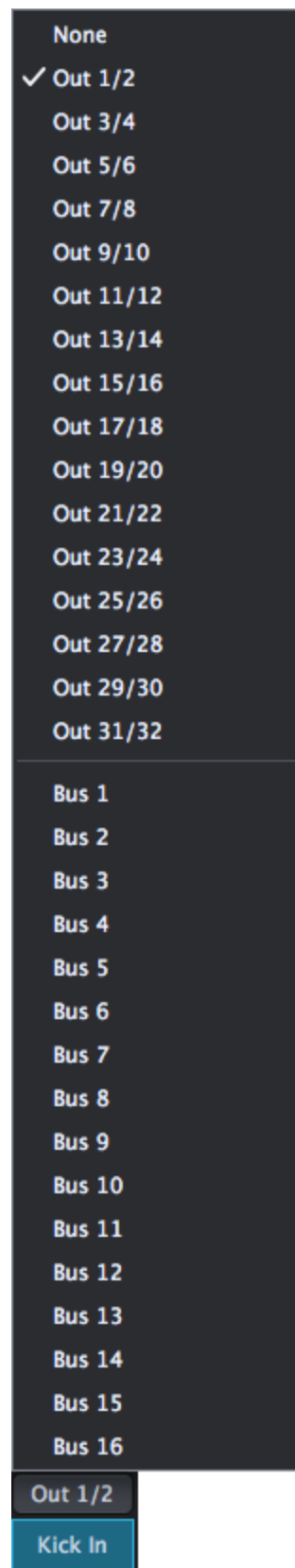
MULTIPLE OUTPUTS (MULTI-OUT)

Clicking the 'Output' selection at the bottom of the channel strip will reveal all possible outputs for this particular channel. Here it is possible to select different outputs for each

channels (or for groups of channels) and send them to individual tracks in your host DAW. This is a common practice because many users like to have access to all of the individual instruments in the drum kit, so that they can be processed with other plugins along side all other instruments that they have recorded in their DAW

As stated earlier in the chapter there is also a multi channel preset available in the Mixer menu. This preset will change the outputs of all channels with similar channels being grouped in a commonly used way.

Routing the outputs of Superior Drummer 3 to individual tracks in your DAW is handled differently in each one of Toontrack's

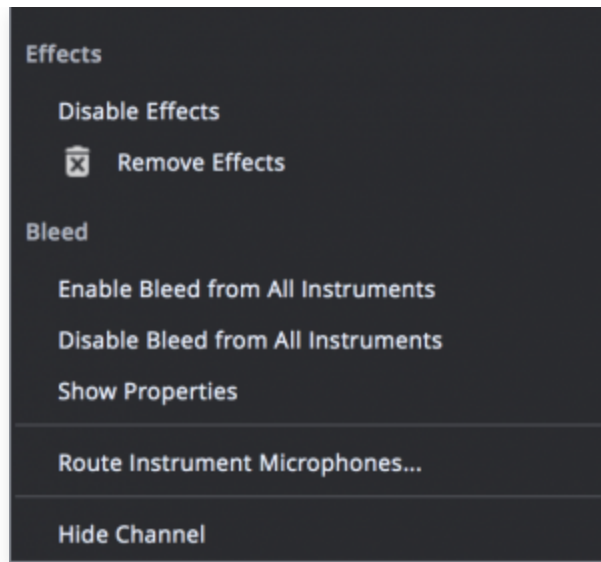


supported host DAW's. Please refer to the DAW's manual for more information about routing outputs from plugins.

CHANNEL RIGHT CLICK MENU:

Right clicking on any type of channel in the mixer will open a contextual menu which provides quick and useful options.

- **Disable Effects:** Bypasses all Effects in the selected channel.
- **Remove Effects:** Removes all effects for the selected channels.
- **Enable Bleed from all instruments:** Turn on all Bleeding instruments for the selected channel.
- **Disable Bleed:** Mute all Bleed instruments in the selected channel.
- **Show Properties:** Opens the Mixer Properties display.
- **Route Instrument Microphones:** Opens the Route Instrument Microphones window.
- **Hide Channel:** Removes the Channel from view. This is the same operation that can be preformed in Edit Visibility mode.



5.3 EFFECTS GUIDE

The following will provide a description of each effect included with Superior Drummer 3. Please note that it is beyond the scope of this manual to describe industry standard audio parameters, so effects will be described on a feature basis with clarifications wherever non standard options apply.

UNIVERSAL PLUGIN CONTROLS

All effects contain the following properties:

- Bypass control in the top left of the effect window.
- Preset menu: A selection of suggested parameters for different sonic goals.
- Detach window icon: for detaching the effect window from the Mixer Tab.

- Output Level Slider: for controlling the output gain of the effect.
- Effect menu: All effects are organized by category.
- Option (Alt) + Drag: All effects can be Option (Alt) + dragged to copy onto a new channel.
- Insert Multiple: Select multiple channels and insert an effect to insert that effect on all selected channels.

EQUALIZER

Toontrack's universal and surgical equalizer plugin offers great flexibility when shaping sounds.

- Double line click to add a node to the EQ curve.
- Each node can have its own filter shape selected below the spectral graph.
- Selected nodes can be turned off with the power button to the left of the filter shapes.
- Slope can be set for all filter shapes except bell filters (use Q control for bell filters).
- Gain, Frequency, and Q controls apply to the selected node.
- Nodes can be deleted with a Right click or by selecting them and clicking the trash icon.



EQ 84

Modeled from a famously smooth hardware EQ of the British variety.

- Low, mid, and high frequency selections are located in the top 1/3rd. All have power buttons and are continuously variable in frequency.
- Gain controls for each of the 3 variable bands are located in the middle.
- Low cut (aka high pass) and high cut (aka low pass) filters. Each of which is continuously variable and has its own power button.



CREATIVE FILTER

The Creative Filter can be described as a moving EQ filter, who's motion is synced to a source of modulation. In the creative filter a modulation source must be selected to create the moving effect, otherwise you are just engaging a static filter in the bottom "Filter" section.

Users familiar with analog synths will be right at home using the creative filter, but for those unfamiliar with this type equipment the following description will outline each control and its purpose starting at the top, from left to right.

- **Modulation**

Section: This is

where you choose the type of

modulation that will

control the cut off

frequency of the

selected filter. In other words, it's where you choose the style

in which the below filter will be moved.



- **Polarity:** Reverses the polarity of the modulation source.
- **Analogue:** Mimics the behavior of analog filters.
- **Source:** Here you will choose between a selection of different sources that will move the chosen filter in a specific way. It is important to mention that in order to hear the modulation you must set the Amount knob above 0%.
- **LFO:** Low Frequency Oscillator. An electronic signal ranging from .3Hz to 22.2Hz. In this case it's used to control the speed of the movement for the selected filter. Lower frequencies will move the filter slower, and higher frequencies will move the filter faster. Choosing LFO provides a choice of wave for the LFO, and a knob to change the speed of the LFO from .3Hz to 22.2Hz.
- **Envelope:** The envelope of a sound is broken into its level changes of ADSR (Attack, Decay, Sustain, and Release). The Envelope option generates level changes (ADSR) over time, and provides control of the release time of the envelope with the rotary knob below. This level is then applied to a destination, in this case the selected filter below.
- **Sequence:** A series of rhythmic movements for the filter. When sequence is selected a Sequence Speed control is

added in addition to a menu with several different rhythmic sequences.

- **Synced LFO:** This is the same as the LFO described above, but with the added ability to sync its speed to beat divisions of the tempo set in Superior Drummer 3, or in your host (if follow host is turned on).
- **Synced Sequence:** This is the Same as the Sequence option described above but with the ability to sync its speed to beat divisions of the tempo set in Superior Drummer 3, or in your host (if follow host is turned on).
- **Filter Section:** Here you can choose the type / shape of the filter that is modulated by the Modulation section.
- **Cutoff Frequency:** Defines the corner frequency where the filter ends with a low/high pass filter, or the center frequency of the band pass / stop filter.
- **Resonance:** The amount in dB in which the filter is boosted at the cutoff frequency.
- **Mode:** Here you can select the type of filter the you want to use. Low pass, high pass, and band pass are typical filters that are available in all EQ's, but band stop can be thought of as a notch filter that removes frequencies at the specified cutoff frequency.
- **Poles:** Control the steepness of the selected filter.

CLASSIC COMPRESSOR

A classic feedback style compressor with modern features.

- **Side Chain Input:** Here you can select a different source channel in Superior Drummer 3 to trigger gain reduction on

the channel that the compressor is inserted.

- **Gain Reduction**

Meter: to the right of the interface shows the amount in dB that the signal is being attenuated by the compressor.



- **Compressor Controls:** In addition to the standard Threshold, Ratio, Attack, Release, and Makeup gain controls, there is also a Side Chain High Pass Filter included.
- **Side Chain HPF:** This is an EQ high pass filter that essentially controls what the compressor “hears” and therefore how it reacts to incoming signal. The Side Chain HPF does not filter the overall output signal, it only filters the compressors side chain audio. Raising the HPF will filter out low frequencies (below a selected corner frequency) from the compressor’s side chain, allowing these low frequencies to pass through the compressor uncompressed.
- **Mix control:** Alter the wet / dry mix of the compressed signal (parallel compression) directly inside of the plugin.

COMPRESSOR / LIMITER

A different type of compressor for more aggressive compression effects.

- **Side Chain Input:** Here you can select a different source channel in Superior Drummer 3 to trigger gain reduction on

the channel that the compressor is inserted.

- **Graphical**

Display: Provides a graphical representation of the compression curve and threshold.



- **Gain Reduction Meter:** To the right of the interface. It shows the amount in dB that the signal is being attenuated by the compressor.
- **Compression Controls:** The standard compression controls, notably the ratio in the Compressor / Limiter ranges much higher than the Classic Compressor (1.5:1 to 13:1).
- **Auto-Makeup:** Selecting this option will apply automatic level of makeup gain based on the amount of compression that is occurring. It is also possible to de-select this option and add your own custom level of makeup gain.

COMP 76

A model of one of the most popular compressors ever created. Especially useful on drums.

- **Side Chain**

Input: Here you can select a different source channel in Superior Drummer 3



to trigger gain reduction on the channel that the compressor is inserted.

- **Input Gain:** Controls the amount of signal that enters the compression. High settings will increase the amount of compression.
- **Attack Time:** Labeled from 1 to 7. This does not mean 1 to 7 milliseconds, it simply corresponds to the 1 to 7 labeling on the original hardware unit. A value of 1 is the fastest attack setting possible, and a value of 7 is the slowest possible attack setting.
- **Ratio Buttons:** Classic Ratio's of the hardware with a dedicated button for "All Buttons in Mode."
- **Mix control:** alter the wet / dry mix of the compressed signal (parallel compression) directly inside of the plugin.
- **Release Time:** Again Labeled from 1 to 7 as based on the 1 to 7 labeling on the original hardware unit. Higher values are slower release times, lower numbers for faster times.

COMP 670

A software stereo and mid/side model of what is considered by many as the "holy grail" of compressors.

- **Stereo/Mid Side Compressor:** This compressor uses a mid side matrix to divide the audio signal into center audio and side audio. This is also known as sum and



difference, or in the case of the hardware 670 Lateral and Vertical. It can also operate in traditional stereo mode by selecting this at the top of the interface.

- **Lat Gain:** Adjust the gain of the Side channel. Increasing only the side channel will have the effect of widening the stereo image, while decreasing this gain will narrow the image.
- **Lat Threshold:** Adjust the level at which compression begins for the side channel.
- **Lat DC Threshold:** This parameter was located inside the chassis of the original hardware unit, and is commonly trimmed in order to adjust the knee of the compression curve. The default value of 5 for this control represents the factory calibration of the original unit.
- **Lat Time Constant:** Alter both the attack and release based on the time constants of the original hardware. Smaller numbers are faster where as larger numbers are slower.
- **Vert Controls:** Same as described above, but they control the Mid part of the audio. Boosting the gain on the Vert Gain will narrow the Stereo image, while reducing the gain will widen the stereo image.
- **Mix control:** alter the wet/dry mix of the compressed signal (parallel compression) directly inside of the plugin.
- **Gain Reduction Meters:** Lateral gain reduction is on the left and vertical gain reduction is on the right. Stereo is left and right.

MULTI BAND COMPRESSOR

A 4 band feedback style compressor (i.e. fixed threshold).

- **Gain:** Input level sent into the compressor.

- **Mix:** Control the wet/dry ratio.

- **Side Chain High Pass**

Filter: Dedicated

Side Chain HPF controls what the compressor “hears” and therefore how it reacts to incoming signal. The Side Chain HPF does not filter the overall output signal, it only filters the compressors side chain audio. Raising the HPF will filter out low frequencies (below a selected corner frequency) from the compressor’s side chain, allowing these low frequencies to pass through the compressor uncompressed.

- **Bands:** The Multi band compressor divides the audio signal into 4 parts, each of which can be compressed differently. In the bands section there are solo buttons for each band.
- **Crossover:** Controls the frequency point at which one band ends and the other begins.
- **Drive:** This controls the amount of gain input to the chosen band. Increasing the drive will boost the signal farther and farther above the fixed threshold and therefore result in greater amounts of compression. Below the drive control are the remainder of the standard compressor controls for each band.
- **Gain reduction meters:** The Gain reduction meters are shown behind the compressor controls in red, orange, green, and blue. The Gain reduction dB scale is displayed to the right of the compressor.



LIMITER PEDAL

A simple, 3 control limiter capable of aggressive compression.

- **Sensitivity:** Input sensitivity, or input gain.

- **Attack Time:** Controls how fast the limiter reacts to input signal.

- **Release Time:** Controls how fast the limiter recovers.



TRANSIENT

Dynamic processor that can increase or decrease the transient or sustain of an instrument.

- **Attack:** Increasing the attack will emphasize the initial transient of a

sound. Decreasing this will soften the attack of the sound.

- **Sustain:** Increasing the sustain control will raise the level of the decay. Decreasing this control will shorten the decay.



PUNCH EXCITER 180

Much like an Aural exciter, it will increase punch and brightness in the channel.

- **Compression:**
Increases the amount of effect.
- **Mix:** Controls the wet/dry signal ratio.



PUNCH EXCITER 361

Similar to the 180, it acts as an aural exciter but adds the famous vocal mod that was often performed on the original hardware unit.



- **Vocal Mod button:** Mimics a popular modification to the original hardware in which the low frequency processor was removed from the signal path. When engaged low frequencies will be diminished in the channel.
- **Compression:** Increases the amount of total effect.
- **Mix:** Controls the wet/dry signal ratio.

FREQUENCY GATE

A gate/expander with an added high and low pass filters in the side chain.

- **Threshold:** Sets the level at which the gate begins to cut off the signal.
- **Attack, Hold, and**



Release: Standard gate controls that allow you to dial in the speed of the gates response.

- **Expander Threshold:** Sets the level at which the the expander begins attenuate the signal. Both the expander threshold and the gate threshold can be used together if the expander threshold is set higher than the gate.
- **Ratio:** Controls the amount of attenuation of the signal below the expander threshold.
- **Trigger Frequency Filter:** A high and low pass filter in the gates side chain. This allows you to decide what the gate “hears” and therefore what does and does not trigger the gate/expander.

TAPE SIMULATOR

Simulates the desirable distortion characteristics of analog tape.

- **Noise:** Increases the tape noise.
- **Wow/Flutter:** Adds a unique type of distortion/modulation caused by the varying speed of analog tape machines.
- **Drive:** Increases the amount of the effect.

- **Bias:** Alters the high frequency content and distortion characteristics of the tape machine. Low levels will offer more distortion,



where as high levels will offer less distortion and coloration to the high frequency content.

- **Speed:** Mimics the effects of a tape machine running at fast or slow speeds which has an effect on high frequencies. Set the speed to a low value for reduced HF, and to a high value for a more pristine, subtle sound.

VALVE DISTORTION BOX

Model of a modern, high end, tube distortion unit commonly used in mixing and mastering.



- **Overdrive:** Increases the amount of the Distortion.
- **Low Pass filter:** Sets the corner frequency for the low pass filter. Either Off, 4 or 7 KHz.
- **Distortion Type:** Allows you to choose from the various types of distortion that were all individually modeled from the hardware unit. The first 3 distortion types (T and P1/2) are standard Triode and Pentode tube distortions. MD1-5 enable a mid frequency lift in the distortion at different frequencies respectively. These can be very useful for highlighting certain

frequency ranges of the Drums. As the number 1-5 goes up so does the lifted frequency. Finally OV1 and 2 are additional Pentode distortion types with different distortion curves. (i.e. they react differently to incoming level than P1 and 2). OV2 will actually sound fairly clean until the moment of distortion where a lot of harmonics are added.

- **Drive:** Controls the amount of distortion.
- **Bias:** The default of 3 is the cleanest setting. Turning the Bias down from 3 will result in more non linear distortion, and impart an edginess to the sound. Turning the bias up past 3 will eventually have a gated effect on the sound where only signal peaks are allowed through (Just like the hardware version). This is more drastic with the overdrive engaged and more aggressive distortion types.

DISTORTION

Model of the quintessential green distortion pedal.

- **Drive:** Increases the amount of input signal.
- **Tone:** Increases or decreases brightness.



FAT MUFF

Model of the Classic
Fuzz pedal

- **Drive:** Increases the amount of input signal.
- **Tone:** Increases or decreases brightness.



BIT CRUSHER

Create interesting lo-fi
effects.

- **Bits:** Set the bit depth of the audio on the channel. Lower bit depths will have more distortion.
- **Downsample:** Lowers the sample rate of audio.
- **Drive:** Increases the distortion.
- **Anti-Alias:** Engaging this control imparts an anti-alias filter that removes frequencies above the Nyquist frequency ($1/2$ the sample rate). Therefore removing the non musical distortion that is known as Aliasing. Its effect is most easily heard with the lowest downsample value.



PLATE REVERB

- **Reverb**

Time: Controls the length of the reverberation

- **Pre-Delay:** The amount of time between the direct sound and when

the reverb sound begins. This length can be set in milliseconds / seconds, or in note values with the selection to the right.

- **Size:** Sets the apparent size of the plate emulated by the algorithm. Should be set coherently with the Time parameter: you can emulate a large plate (higher values for Size) with a short reverberation time or with a longer time, but it's improbable to have a small plate with a long reverberation time, unless you are seeking for a more creative effect.
- **Shape:** Controls the overall ambience of the reverberation created. It specifically determines the contour of the reverberation envelope. With Shape all the way down, the reverberation builds explosively and decays very quickly. As Shape value is raised, the reverberation builds up more slowly.
- **Diffusion:** Controls the degree to which the initial echo density increases over the time.
- **Color:** Alters the tone of the reverb by attenuating high frequencies.



- **Dry / Wet:** Controls the ratio between dry signal and the reverb signal.

ROOM REVERB

- **Reverb**

Time: Controls the length of the reverberation.

- **Decay:** Shortens the decay of the sound. Very short decay sounds can have a gated effect.
- **Pre-Delay:** Amount of time between the direct sound and when the reverb sound begins.
- **Note/Clock icon:** Changes values to be displayed in notes or Seconds.
- **Diffusion:** Controls the degree to which the initial echo density increases over the time.
- **Size:** Sets the apparent size of the acoustic space being emulated by the algorithm. Values from minimum to half way up are typical when simulating the ambience of a recording studio.
- **Motion:** Sets the speed of modulation of the delay lines.
- **Depth:** Sets the amount of modulation of the delay lines in the reverb. Together with the Motion parameter it can be used to make the reverb tail sound more dynamic, unpredictable, rich and to remove any possible resonance or metallic ringing. Motion and Depth should be used carefully



with solo instruments like pianos, woodwinds or saxophones to avoid chorusing effects. They can be used more with aggressive settings on percussive tones, guitars and mixes.

- **Damping:** The Damping parameter controls the amount of attenuation To high frequencies and can be used to simulate different kinds of room absorption.
- **High:** Sets the frequency over which the reverberation is attenuated. High and Low parameters can be used to tweak the frequency response of a room.
- **Low:** Sets the frequency under which the reverberation is attenuated.
- **Dry / Wet:** Controls the ratio between dry signal and the reverb signal.

HALL REVERB

- **Reverb Time:** Controls the length of the reverberation.
- **Pre-Delay:** The amount of time between the direct sound and when the reverb sound begins. This length can be set in milliseconds / seconds, or in note values with the selection to the right.
- **Size:** Sets the apparent size of the hall emulated by the algorithm. Should be set coherently with the Time parameter: you can emulate a large hall (higher values for Size) with a short reverberation time (e.g. a cinema hall) or with a longer

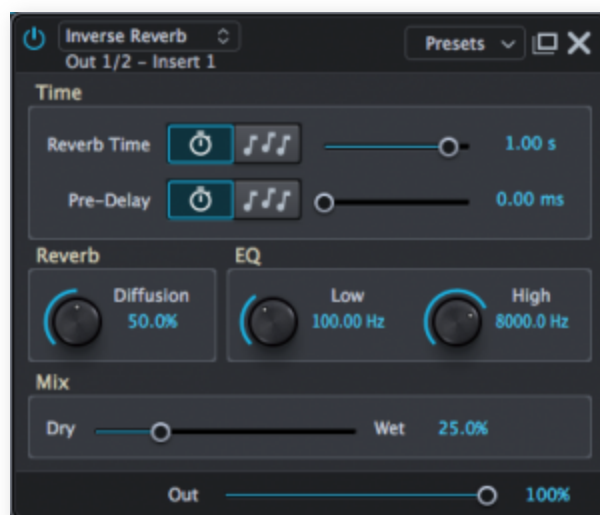


time (e.g. a church), but it's improbable to have a small hall with a long reverberation time, unless you are seeking for a more creative effect.

- **Shape:** It determines the contour of the reverberation envelope. With Shape all the way down, the reverberation builds explosively and decays very quickly. As Shape value is raised, the reverberation builds up more slowly and sustains for the time set by Spread.
- **Diffusion:** Controls the degree to which the initial echo density increases over the time.
- **High:** Attenuates high frequencies in the Reverb.
- **Dry / Wet:** Controls the ratio between dry signal and the reverb signal.

INVERSE REVERB

- **Reverb Time:** Sets the duration of the reverberation. This time, added to the Pre-delay time, is the time that elapses from the direct sound to the end of the reverberation.



- **Pre-Delay:** The amount of time between the direct sound and when the reverb sound begins. This length can be set in

milliseconds / seconds, or in note values with the selection to the right.

- **Diffusion:** Controls the degree to which the initial echo density increases over the time.
- **EQ:** Sets the frequency over which the reverberation is attenuated. Low and High parameters can be used to tweak the frequency response of the reverb.
- **Dry / Wet:** Controls the ratio between dry signal and the reverb signal.

SPRING REVERB

- **Reverb Time:**
Controls the length of the reverberation.
- **Pre-Delay:** The amount of time between the direct sound and when the reverb sound begins.
- **Bright:** Controls the amount of high frequency content in the wet signal.
- **Tension:** Altering this control mimics tensioning a physical spring in a spring reverb unit. This has the effect of changing the dominant resonant frequency in the wet signal.
- **Dry / Wet:** Controls the ratio between dry signal and the reverb signal.



1981 CLASSIC REVERB

Model of a famous reverb unit from the 80's



- **Dry / Wet:** Controls the ratio between dry signal and the reverb signal with 2 separate knobs.
- **Decay:** Shortens or lengthens the decay of the sound. Very short decay sounds can have a gated effect.
- **Pre-Delay:** The amount of time between the direct sound and when the reverb sound begins.
- **High:** Controls the amount of High Frequency in the signal.

TAPE DELAY

Modeled after the famous tape delay machine from “outer space.”



- **Repeat:** Increases the number of times that the delay repeats.
- **Time:** Determines the length of time between the original signal and each delay. This can be set in seconds, or note values of the selected tempo in Superior Drummer 3.
- **Spread:** Alters the rhythmic character of the delayed signal and spreads the delays in the stereo field.
- **Distortion:** Adds subtle tape distortion to the delayed sound.
- **Wow/Flutter:** Adds a unique type of distortion/modulation caused by the varying speed of analog tape machines.

- **Stereo Reverse:** Changes the panning of the stereo signal to the opposite.
- **Reverse Mode:** Reverses the audio of the delayed signal
- **Wet/dry Mix:** Controls the ratio between dry signal and the reverb signal.

FILTER DELAY

A digital delay with a modulated filter. Much like the LFO on the creative filter plugin.



- **Repeat:** Controls how long the repeats of the delay last in time. Higher values will create longer delays.
- **Time:** Determines the length of time between the original signal and each delay. This can be set in seconds, or note values of the selected tempo in Superior Drummer 3.
- **Filter Speed:** Determines the speed of the modulation source.
- **Center:** Determines the center frequency of the filter that is being modulated.
- **Depth:** Controls how much the filter moves around the center frequency. Higher values will result in more intense filtering.

1981 CLASSIC ECHO

Delay from the famous 80's reverb and delay processor.

- **Dry:** Volume of the dry signal.
- **Wet:** Volume of the delayed signal.
- **Reverse:** Reverses the audio of the delayed signal
- **Bass:** Increases low frequencies for the delay.
- **Treble:** Increases high frequencies for the delay.
- **Left/Right Sync:** Sync's delay to Superior 3's tempo
- **Delay Left/Right:** Choose the amount of time between delays. When sync tempo is on, this is displayed in note values.
- **Repeat Left/Right:** Increases the quantity of the delayed signals.



PHASER

Phaser based on the classic orange phaser pedal.

- **Speed:** Controls the speed of the modulation.
- **Resonance:** Controls the

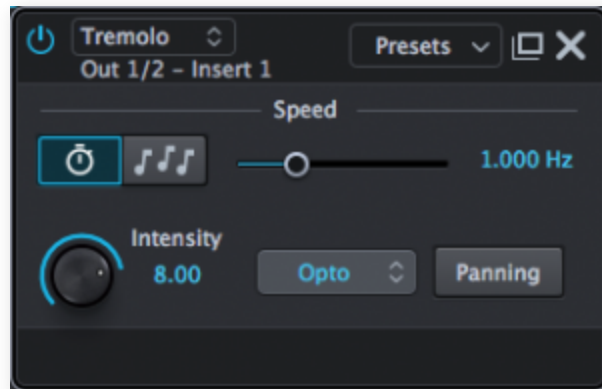


steepness of the modulated filter. Higher values have a more pronounced effect.

- **Level:** Controls the volume of the phased signal.

TREMOLO

- **Speed:** Controls how fast the volume is raised and lowered. Can be adjusted in Hz, or by note divisions of the selected tempo.
- **Intensity:** Controls the depth of the volume changes.
- **Type:** Opto, VCA, or Sine, which determine how the tremolo performs its action.
- **Panning:** Mono effect, or a stereo panning effect switch.



AUTO WAH

- **Mode:** Select either high pass, band pass, or low pass.
- **Filter:** Selects the center/corner frequency for the selected filter.
- **Polarity:** Inverts the polarity of the wave form.
- **Depth:** Controls the intensity of the effect.
- **Speed:** Determines the speed of the filters movement.

- **Sensitivity:** Adjusts the tone of the effect.
- **Release:** Changes the speed of the filter. Lower values will result in faster movement.



STRING MACHINE CHORUS

Effect modeled after the chorus from a popular string based synth from the 70s.

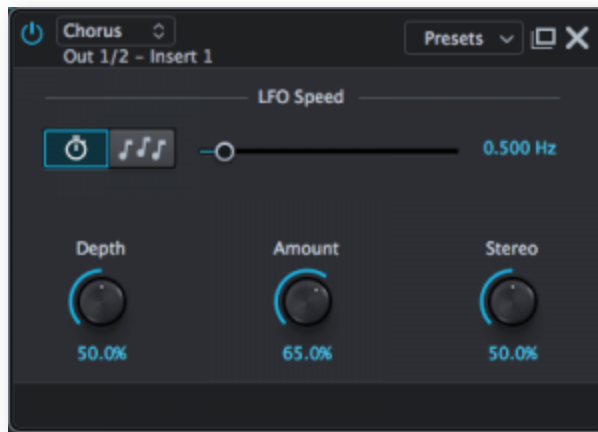
- **Depth:** Controls the intensity of the chorus effect
- **Mix:** Controls the ratio between the wet and dry signal.



CHORUS

- **LFO Speed:** Controls the speed of the effect.

- **Depth:** Controls the intensity of the effect.
- **Amount:** Increases the level of the chorused signal.
- **Stereo:** Controls the stereo width of the effect.



VIBRATO

- **Sync:** Vibrato syncs with Superior 3's tempo.
- **LFO Speed:** Controls the speed of the Vibrato.
- **Depth:** Controls the intensity of the Vibrato.



FLANGER

- **LFO Rate:** Controls the speed of the Flanger.
- **Range:** Controls the width of the frequency movement.

- **Color:** Changes the character of the flanger effect. Lower settings will be more subtle where as higher settings will be more drastic.



- **Intensity:** Controls wet/dry level of the Flanger signal.

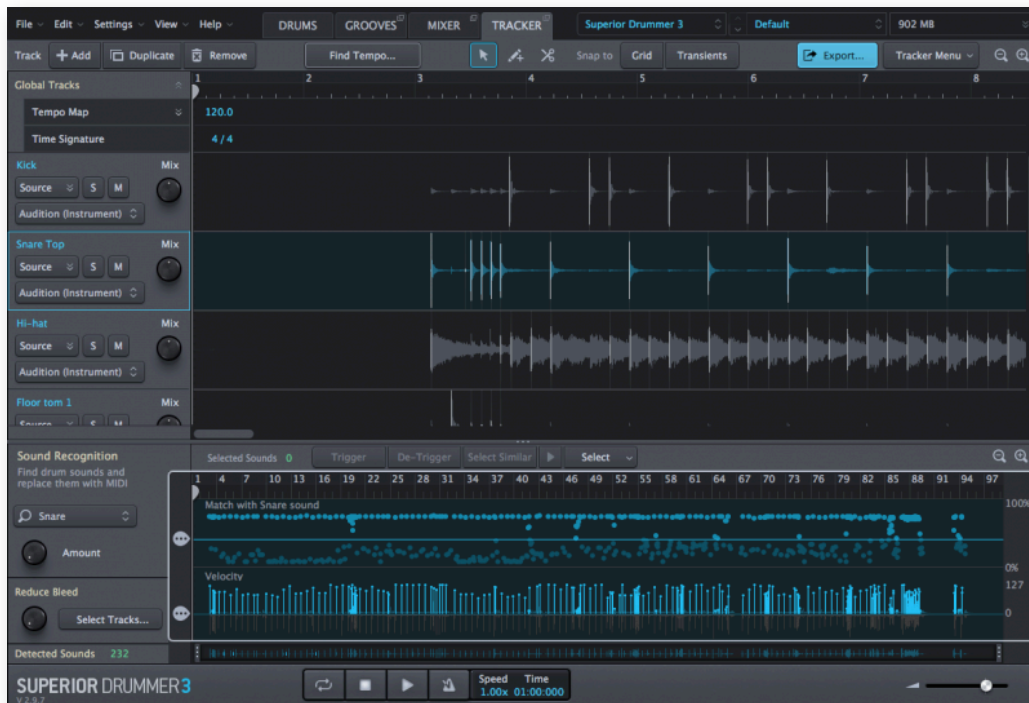
DIMENSION T CHORUS

Model of an extremely popular hardware chorus unit.



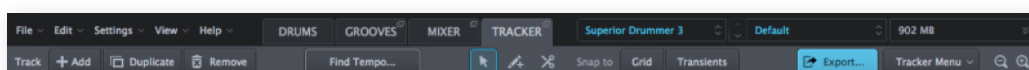
- **Buttons:** The 4 buttons can be engaged in any combination to create different chorus effects.

6. THE TRACKER TAB



Tracker is designed to take pre recorded, multi-track drum audio files and convert them to MIDI that will trigger Superior Drummer 3's samples. Put more simply, Tracker is a way to replace drums you've recorded with Superior Drummer 3's sounds. Tracker is designed to work with multi track drum audio files. It is not designed to work with melodic audio files containing instruments other than drums, or full mixes.

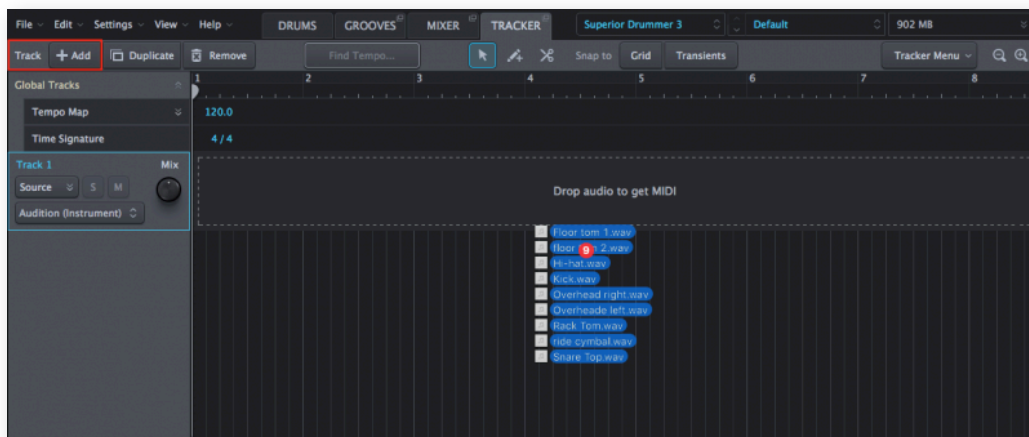
6.1 TRACKER HEADER BAR



The top header bar of the Tracker tab is where you can access useful tools for adding and editing tracks. As with the other tabs in Superior Drummer 3, the Tracker tab can be broken off to its own window by clicking the concentric rectangle icon located on the upper right corner of the tab itself.

6.1.1 IMPORTING DRUM AUDIO FILES

Tracker can accept Wav, AIFF, MP3, FLAC, OGG, WMA, and AU audio files. Importing files is accomplished by either dragging the supported file types into the center area of the interface, or by clicking the Add button. Tracker is an offline Audio to MIDI conversion tool. This means that even if Tracker is used as a plugin inside of a host DAW the drum files still need to be imported into Tracker.



Drum audio files can be dragged into Tracker, or you can use the Add button to browse for files.

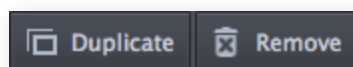
Once files are added to Tracker, it will go to work identifying each instrument that is contained in the audio file (i.e. Kick, Snare,

Toms, High hats, Ride, and Cymbals) and start creating trigger points for each hit that it detects for these instruments.

To find its hits and assign them to the correct instrument, Tracker analyzes 512 individual frequency bands for any audio file that is imported. It also examines how the magnitude of these individual frequencies develop over time. Tracker then uses information based on the 1.2 million drum files analyzed from its supervised machine learning to determine the predominant instrument in the audio file and find all hits.

DUPLICATE AND REMOVE BUTTONS:

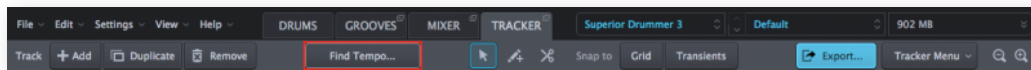
- **Duplicate:** Duplicate makes a copy of the selected track or tracks. When tracks are selected they are highlighted in blue. Duplicating tracks is useful for tracking multiple instruments from a single audio file (such as an overhead).
- **Remove:** Deletes the selected track or tracks.



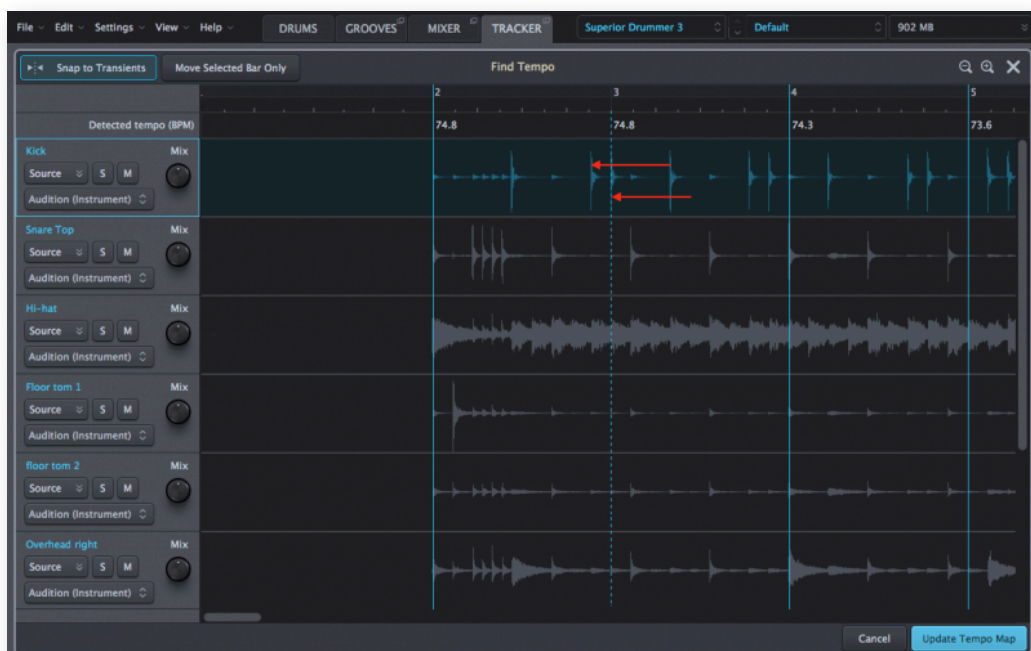
6.1.2 FIND TEMPO

Find Tempo provides a set of tools that allows tracker to analyze and track the tempo of an imported audio file. When using Find Tempo it is most helpful to import both a Kick and a Snare track so that tracker can more easily find the first beat of a bar.

When the Find Tempo button is clicked the find tempo interface is opened.



The Find Tempo interface shows the wave forms of your imported audio and a series of vertical blue lines that represent the bar markers. In order to find an accurate tempo simply move the bar markers to the first beat of the any bar of drum audio as seen in the picture below.



When you drag one of the blue bar markers to a beat in your audio track, all other blue bar markers will adjust to attempt to find the first beat of all subsequent bars in the audio. Typically only 2 or 3 adjustments to the vertical bar markers need to be made in order for the tempo of the entire song to be mapped. However, if your song has widely varying tempos or multiple time signatures you will most likely need to make adjustments throughout the course of the audio files. Further, if the first beat of

your drum audio is skipped (syncopations for example) adjustments throughout the entire course of the audios files may be required. After using find tempo it can be helpful to listen to your drum audio with the metronome engaged.

MOVE SELECTED BAR ONLY:

Selecting this option will not cause subsequent bars to be moved. This allows you to move one single bar marker to a specific position.

Once you have made your bar marker adjustments it's useful to listen to the audio files with Superior Drummer 3's metronome turned on. The metronome icon is located at the very bottom of the Superior Drummer 3 interface.

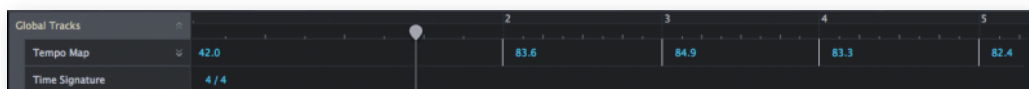


In the Transport you can also change the playback speed of the audio files. Clicking on the speed control allows you to make playback faster or slower than real time, which is helpful for verifying triggers.

Once you are happy with the tempo track

Update Tempo Map

click the blue Update Tempo Map button in the bottom right corner of the Find Tempo window. The tempo markers will then be displayed in the global Tempo Map track near the top of the screen.



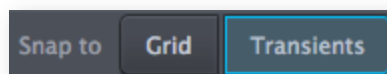
6.1.3 CURSOR TOOLS

The cursor Tools found on the Tracker Tab Header bar allow you to select notes (arrow), Add notes (pencil +), and segment regions in the audio files (scissors). All 3 of these tools can be used in the wave form view or the Sound Recognition section.



6.1.4 SNAP TO GRID / TRANSIENTS

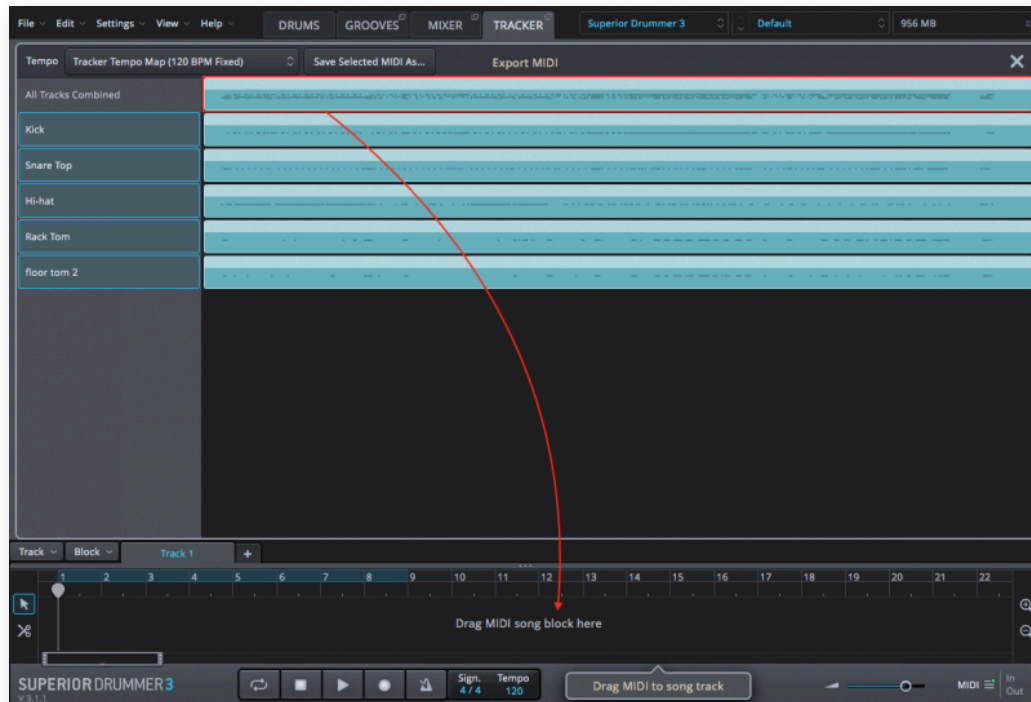
It's possible for new Trigger Points that are added with the Pencil Tool to either snap to the tempo Grid or to the Transient of the wave form. Most of the time Transients would be the best option, however you may want to snap Trigger Points to the Grid if your audio is already quantized or will be quantized at a later time.



6.1.5 EXPORT

This is where you have the choice to export your final MIDI sequence. MIDI can be exported as a single MIDI file that contains all instruments, or as individual files for each instrument. The easiest way to accomplish this is to simply drag

the “All Tracks Combined” option to the song track in Superior Drummer 3. It is also possible to drag MIDI for the individual instruments to the Song Track as well.



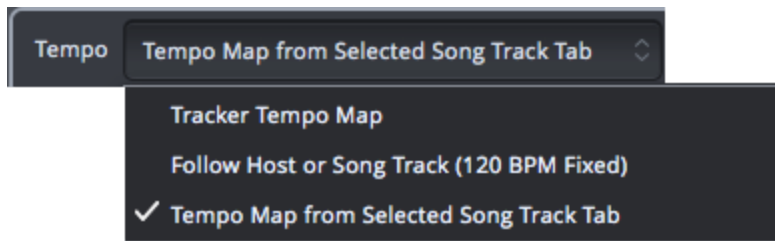
Alternatively, clicking the “Save Selection As” option allows you to choose a location on your computer to save the exported MIDI file. The "Save Selection As" command will (as the name implies) save the selection therefore, if you wish to save each instrument's MIDI track, and then choose the Save Selection As command. Repeat this step for all remaining instrument MIDI files that you wish to export individually.



TEMPO MENU

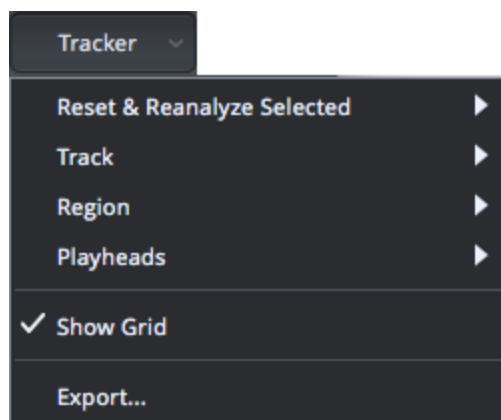
The Tempo menu found in the Export MIDI window of Tracker provides the option to conform the tempo in the exported MIDI file a few possible tempo sources.

- Tracker Tempo Map: This will conform your exported MIDI file to the Tempo Map that has been created inside of the Tracker Tab. This Tracker Tempo Map is previously described in this chapter and it can be found in the Global Tracks section of Tracker.
- Follow Host or Song Track (BPM Fixed): This selection conforms the exported MIDI file to the FIXED tempo that is set for Superior Drummer 3 Song Track, or the tempo that is set in your host DAW (for instances when SD3 is launched as a plugin inside of your host DAW). This option will always result in a fixed tempo for the entire MIDI file.
- Tempo Map from Selected Song Track Tab: As described in the Song Track Chapter, each individual Song Track Tab can have its own unique Tempo Map. Therefore Tracker allows the use of the currently selected Song Track Tab as a source for the Tempo Map that will be included in the exported MIDI file.



6.1.6 TRACKER MENU

This menu provides global options for altering Trackers operation.



- **Track:** Menu options for controlling the selected tracks as a whole. *(Sub-menus described below)*.
 - The Add command will allow you to import a new audio file.
 - Duplicate creates a copy of the selected track.
 - Remove deletes the selected track(s).
 - Global Mute and Solo controls the status of these buttons for all tracks in the project.
- **Region:** The Region menu contains useful options for manipulating individual regions in Tracker (i.e. sections of tracks). *(Sub-menus described below)*.

- Copy and Paste Settings. Using these menu options it is possible to copy all of the Tracker settings (such as the Amount, Velocity Threshold, and Sound Recognition Match Threshold) and then apply them to another region with the Paste command.
- Loop creates a playback loop for the selected region.
- Merge heals regions that have been segmented with the Scissor tool.
- **Playheads:** Controls the global function of both playheads. *(Sub-menus described below).*
 - Synchronize conforms both the top Waveform view timeline and the bottom Trigger Point timeline to the same zoom level and play head position so that they move together in unison.
 - Move to Beginning will move both playheads to the start of the tracks.
- **Show Grid:** Unchecking this option removes the visible grid lines from Tracker's interface.
- **Export:** Opens the Export window outlined in the previous section.

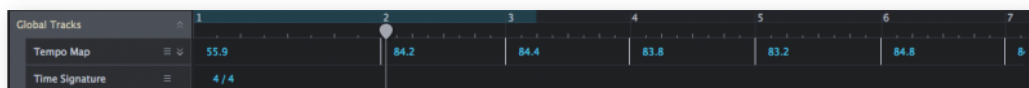
6.2 GLOBAL TRACKS

Global Tracks contain the Tempo Map and Time Signature track. They can be hidden by clicking anywhere near the “Global Tracks” heading.

Change Tempo: Tempo Changes can be made by double clicking on any tempo number in the track and inputting a new

value.

Change/Add Time Signature: Time Signature changes can also be made by double clicking on a time signature and inputting a new value. Double clicking on empty space in the Time Signature track will create a new time signature change.



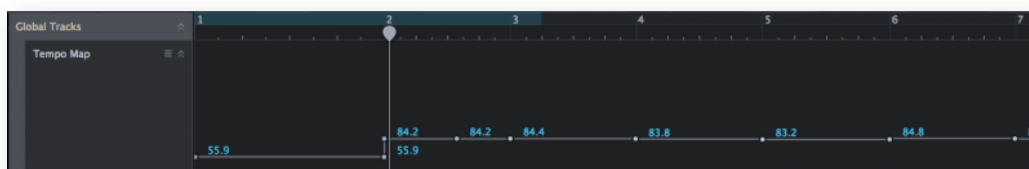
TEMPO MAP RIGHT CLICK CONTEXTUAL MENU

Right clicking in the Tempo Map will open a contextual menu. Here

Find Tempo...

Expand Tempo Editor

you can open the Find Tempo window, or Expand the Tempo Editor, which will enlarge the Tempo Map graphic so that fine changes can be made. The Tempo Map can also be expanded with the two down facing arrows to the left of the interface.



Breakpoints in the expanded Tempo Map can be added with a double click, or dragged up or down to alter the tempo. Tempo values can be double clicked for inputting new values.

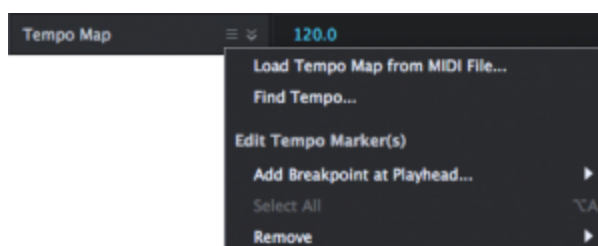
TEMPO MENU

- **Load Tempo Map**

from MIDI file: This

gives the user the

ability to import a MIDI file that contains tempo information.

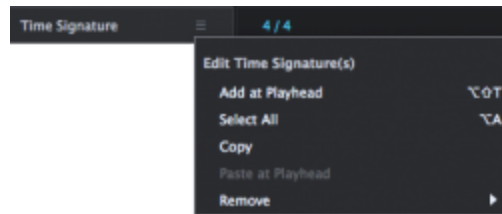


You can then use this as a tempo map for your Tracker project.

- **Find Tempo:** This is a menu option for opening the previously discussed Find Tempo window.
- **Add Breakpoint at Playhead:** Here you can increase, decrease, or keep the tempo at the location of the playhead. Keep Tempo will simply create an additional breakpoint of the same tempo at the playhead.
- **Select All:** This will select all breakpoints in the Tempo Map. This is useful if you plan to adjust all breakpoints globally.
- **Remove:** Here you have the choice to remove only the selected breakpoints or all breakpoints.

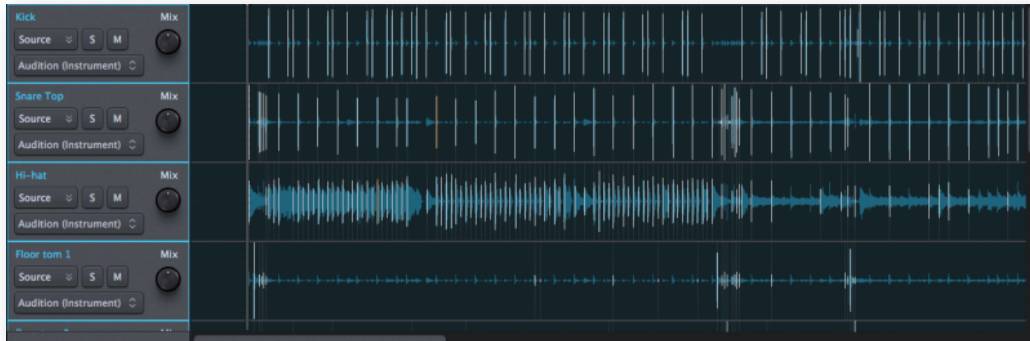
TIME SIGNATURE MENU

- **Add at Playhead:** This will create a Time Signature change at the current location of the playhead.
- **Select All:** All Time signatures are selected.
- **Copy / Paste:** Copy selected time signature(s) and paste them at a different point in the timeline.
- **Remove:** Here you can choose to remove all time signatures or only the user selected time signatures. Time signatures can be multi selected by pressing shift + clicking.



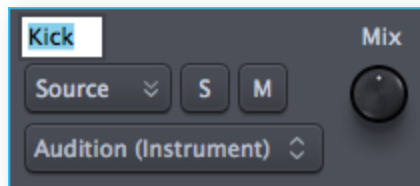
6.3 THE TRACK WORKSPACE

The Track workspace of the Tracker interface makes up the middle portion and it is where you can see all of the imported tracks in your project.



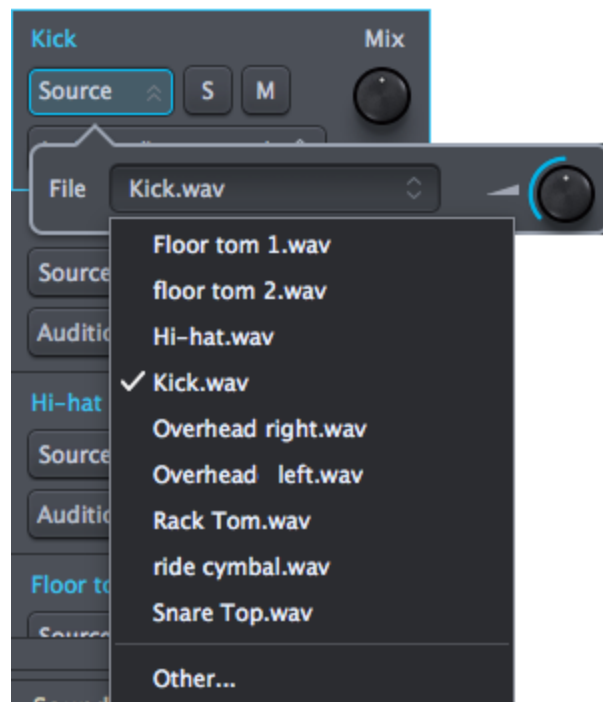
NAMING

At the far left of the Track Workspace you will see the name of the audio file. In this case I have named my audio files, Kick, Snare Top, Hi-hat... Double clicking on the blue name text will allow you to rename the track.



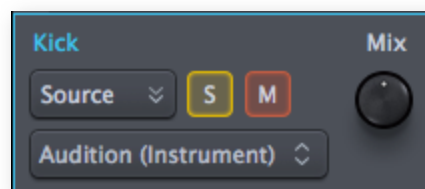
SOURCE

Clicking on the Source button provides the option to choose the source audio file for that track. The options presented in this list will be composed of all of your audio files that you have imported (i.e. they will not match the picture below). There is also a gain control in the source menu to increase or decrease the volume of the imported audio file.



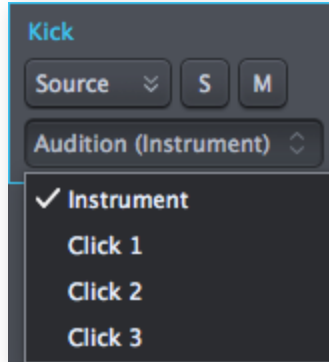
SOLO/MUTE

Next to the Source button are Solo and Mute buttons and a Mix knob. Solo, Mute and Mix work with one track at a time or all selected tracks. The Mix controls the balance between the Source audio file and Superior Drummer 3's output. Moving this knob all the way to the left will result in 100% source audio and all the way to the right will result in 100% Superior Drummer 3's audio.



AUDITION MENU

This menu allows you to choose what sound is generated by the software when a trigger point is encountered. Here you have the option to choose Instrument (i.e. Superior Drummer 3's loaded instrument), or choose from a selection of Clicks.



Sometimes when verifying trigger points it can be useful to hear a sharp click sound that does not blend in with the source audio. For this reason we have included multiple options.

WAVE FORM VIEW

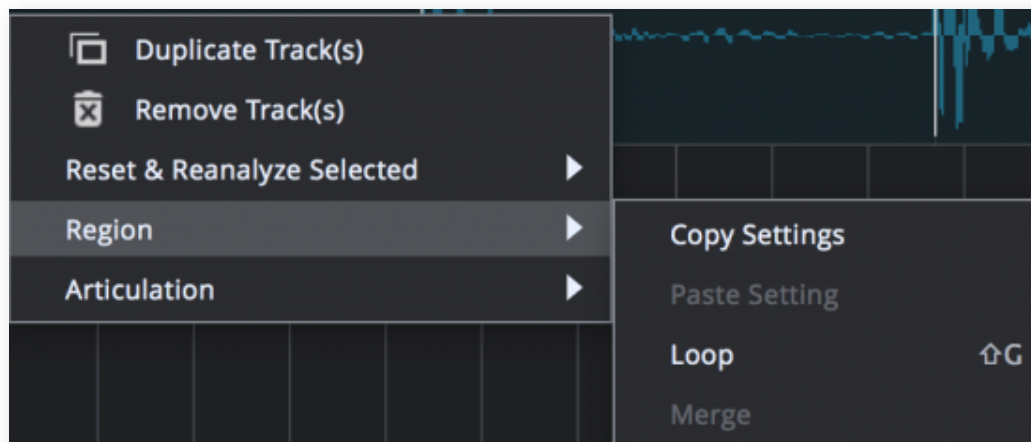
This displays the wave form of the imported audio file and also shows trigger points represented as vertical white lines. A trigger point can be selected by clicking on the vertical white line. Selected trigger points will be displayed in orange both in the Track workspace and the Trigger point workspace below.



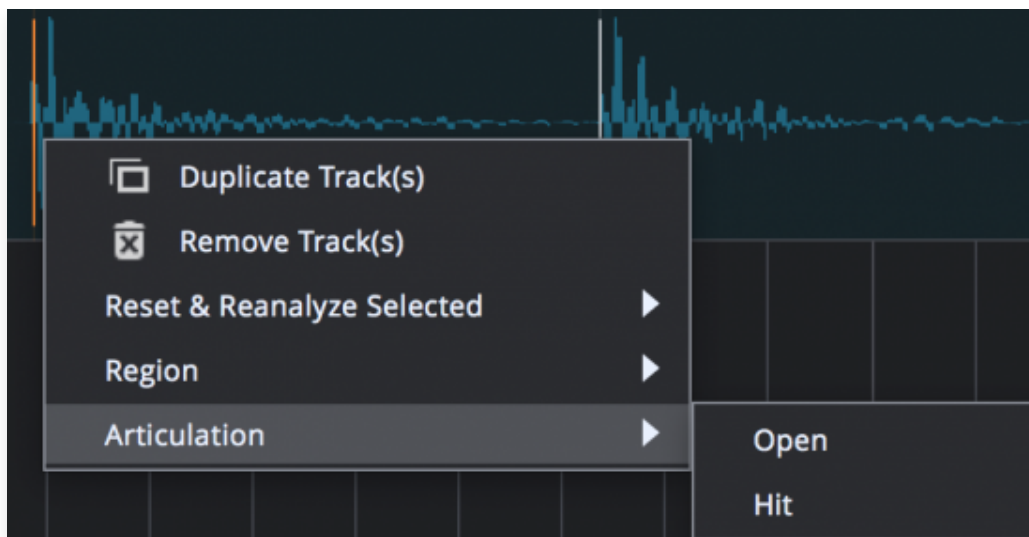
Trigger points are represented as vertical lines overlaid on the waveform.

Right clicking on the wave form will open a contextual menu where you can Duplicate and Remove tracks in addition to Resetting & Reanalyzing the selected track or region.

The Region sub-menu allows you to quickly copy and paste settings between regions. This is useful for example if you have cut a track into several regions for the purposes of using different settings on different regions of the track. For example, the snare drum may be hit gently in the verse of a song, but in the chorus its hit much harder. Therefore you could cut the wave form into regions and create different Tracker settings for the verse and chorus region. With the copy and paste commands you could quickly copy your verse Tracker settings to all other verses in the song.

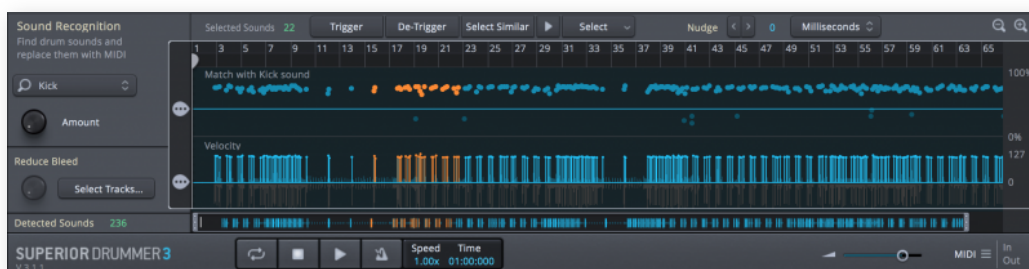


If a Trigger Point is selected the Articulation sub-menu will become active, which allows you to select the desired articulation for that specific Trigger point. In the picture below a kick drum Trigger Point was selected thus, the available articulations in SD3 are Hit and Open.



6.4 TRIGGER POINT WORKSPACE

Below the Track Workspace is the bottom half of the interface which includes the Sound Recognition section and the Trigger Point Workspace. This is where most of the work refining Trackers trigger points will occur, and it always corresponds to the last selected track. Every single track or region in your project can utilize different settings for each of the trigger refining controls.

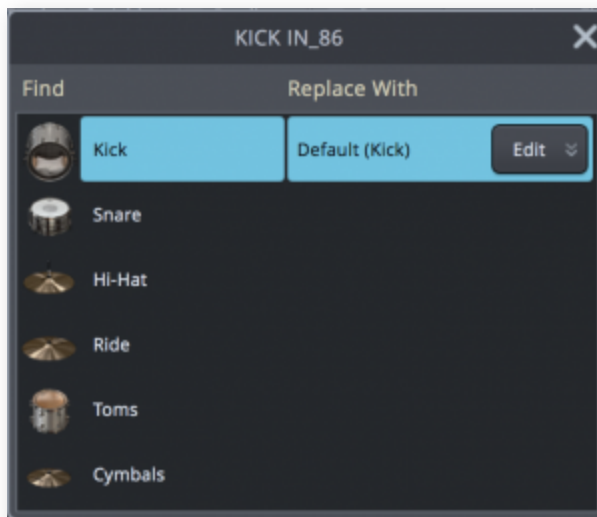


6.4.1 SOUND RECOGNITION

In the Sound Recognition section it is possible to change the Target sound for the selected track.



FIND (TARGET SOUND SELECTION)



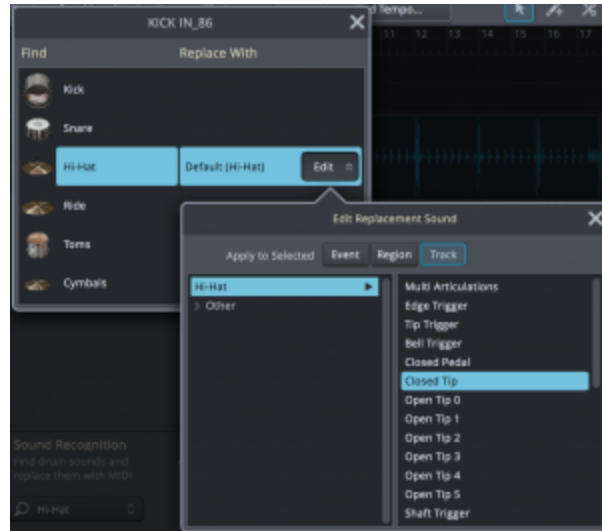
Tracker is capable of recognizing the 6 classifications of instruments found in a drum kit which include kick, snare, hi-hat, ride cymbal, toms, and all other types of cymbals.

When a file is imported

into Tracker it will automatically recognize the predominant close mic'ed instrument in the audio file. However if Tracker gets this wrong, you can change its Target sound in the Sound Recognition menu by selecting another instrument. Upon changing its Target Sound you will notice that all of the Trigger Points change, as Tracker is now using a new set of criteria for finding hits.

REPLACE WITH (TRIGGERED ARTICULATION)

Clicking the Edit button opens the Edit Replacement Sound menu. Superior Drummer 3 has many different articulations (or ways of striking an instrument) for its various instruments, therefore we give the user the ability to choose the articulation that they would like to use for the triggered instrument.

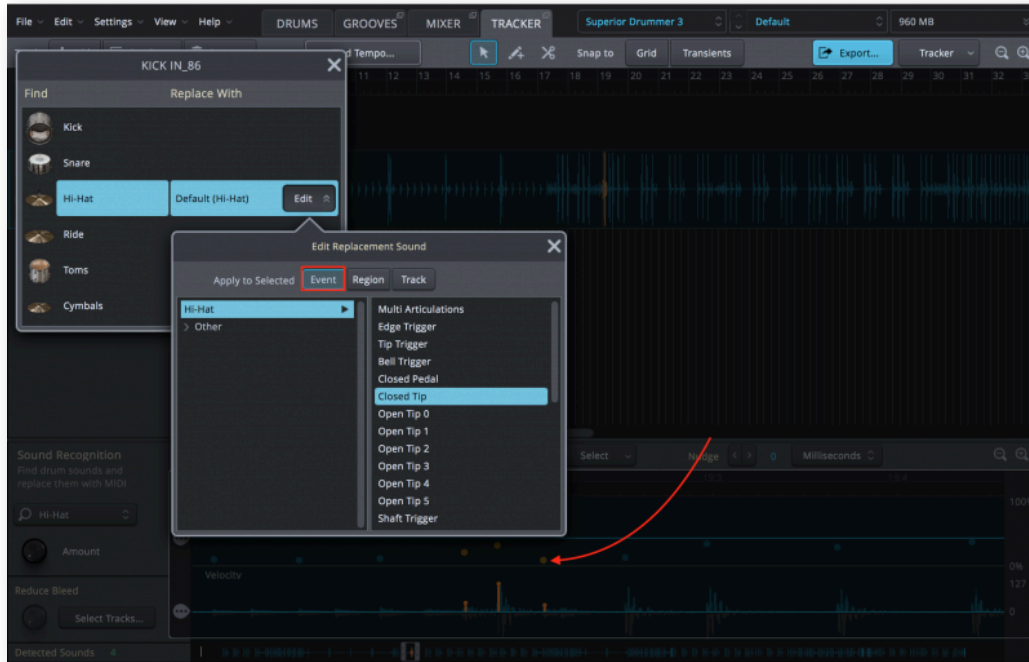


This menu shows all of the available recorded articulations for the selected instrument. Please note that the articulations in this menu will differ depending on the loaded sound library/instrument.

HI-HAT MULTI ARTICULATIONS

It is extremely common for a drummer to vary the articulations that are performed on a hi-hat throughout the course of a track. Making a change in this menu will affect all trigger points in the track globally (by default). Alternatively selecting the Event or Region options in the Edit Replacement Sound window allows

you to change either the specific selected Events (notes) or the selected Region.



In this picture 3 Trigger Points are selected, and the goal is to change only these 3 Trigger Points to a different articulation. To accomplish this goal the Event option is selected and an alternative articulation can then be chosen.

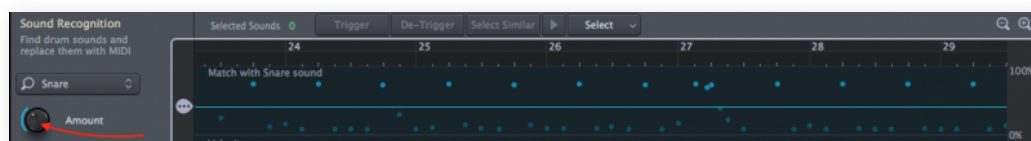
STEREO AUDIO TRACKS

Sound Recognition also makes it possible to find instruments in audio files that were not necessarily intended to capture the desired instrument. For example, its possible to find trigger points for a snare drum (including ghost notes) in an overhead audio file. In this case you would select the Overhead audio file in the Track Workspace, and then change its sound recognition instrument to Snare.

Users should be warned that while the above scenario is possible with a good overhead recording (performed by an articulate drummer), Tracker is intended to be used with multi tracked close mics, therefore your results may vary.

6.4.2 AMOUNT

The Amount knob is used to find more Trigger Points. This is done by simply increasing the control. The Amount knob does this by looking at power changes from one timeframe to the next on 512 independent frequency bands. The Amount knob also controls the minimum distance allowed between two hits. All of these settings are controlled automatically when you change the Target Instrument, as the target instrument serves as the basic preset.

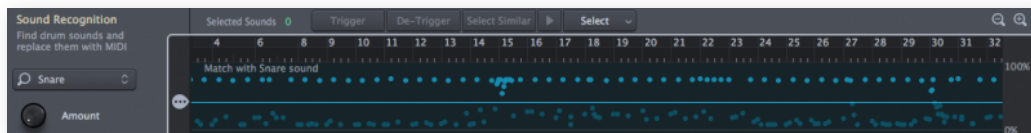


The default setting for the Amount control is 0. However this does not mean that its finding 0% of the hits, it simply means that this is the starting baseline for the preset, and it is enough for most files. The Amount control in Tracker should only be increased when you believe that Tracker has not found enough hits, either because they are too close together in time, or because you would like Tracker to loosen its restrictions on what matches a particular sound. When you increase the Amount knob for a particular track you will notice that more and more trigger points appear.

Tip! If you notice Tracker is creating unintended flams on a track, reduce its Amount knob until they disappear.

6.4.3 SOUND RECOGNITION MATCH THRESHOLD

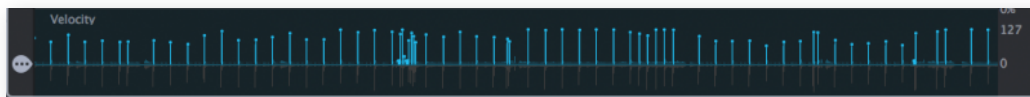
The Sound Recognition Match Threshold is the horizontal blue line that runs through all of the Trigger Points. Trigger Points are represented by bright and dark blue dots. Bright blue dots indicate an active trigger and dark blue indicate an inactive trigger.



This threshold line represents the percentage in which the trigger point matches Trackers machine learned idea of what an specific instrument sounds like. Moving the threshold all the way to the bottom instructs Tracker to require a 0% sound match to its machine learned database, and therefore all trigger points shown as blue dots will become MIDI notes that are sent to Superior Drummer 3. Moving the threshold all the way up to the top instructs Tracker to require a 100% match to its machine learned database and it will most likely result in very few trigger points created. The sweet spot should be found by the user, but it usually lies somewhere in the middle (which is also the default setting for this control).

6.4.4 VELOCITY THRESHOLD

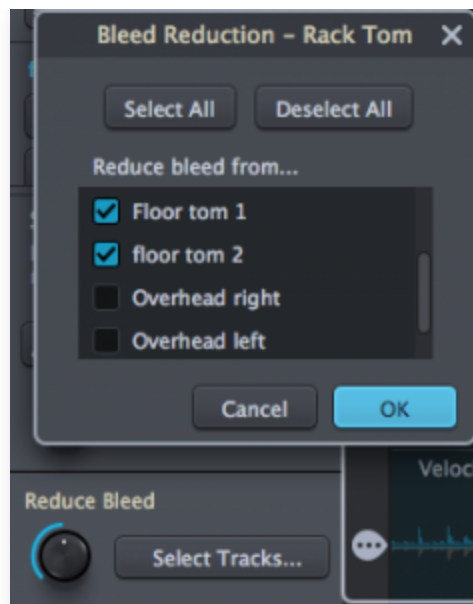
In addition to deciding how closely a sound matches Trackers machine learned data base, it is also possible to use the detected velocity of a sound to decide whether it is triggered or not with the Velocity Threshold.



The velocity threshold works just like the Sound Recognition Match Threshold in that it has a slider that the user can adjust to determine the minimum required velocity for a trigger. The Velocity threshold's default position is always 0, therefore you can raise the velocity threshold to filter out low level false triggers.

6.4.5 REDUCE BLEED

In the bottom left corner is the Reduce Bleed section. Reduce Bleed works by comparing trigger points in the selected track, to trigger points in other user definable tracks, in order to avoid double triggering across multiple tracks that bleed into each other.



In this picture Rack Tom 1 is selected in the Track Workspace. Floor tom 1 and 2 have then been chosen as potential sources of bleed for Rack Tom 1. Raising the Reduce Bleed knob will filter out more (false) bleed triggers in the Rack tom 1 as the knob is increased.

When using the Reduce bleed function, select a track in the Track Workspace, that you suspect has false triggers due to similar instrument bleed (i.e. toms often have this problem). Then, in the Reduce Bleed section, click the Select Tracks button. This is where you can select the tracks that bleed into the track that you are attempting to refine. So, if attempting to refine the Trigger Points for a Rack Tom, select all *other* toms in this menu.

The Reduce Bleed knob sets the threshold required to de-trigger a Trigger Point.

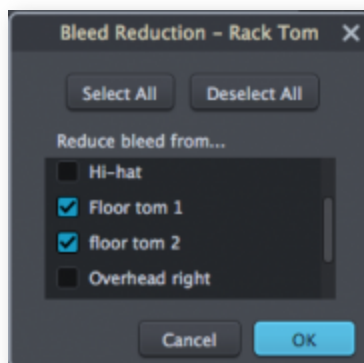
Essentially Reduce Bleed instructs Tracker to compare volume levels between a user selection of tracks. If Tracker finds a hit in track 1, but that same hit is present and louder (by the set threshold of the reduce bleed knob) in track 2, Tracker will determine that the softer track 1 hit is bleed, and it will be de-triggered.

REDUCE BLEED TUTORIAL

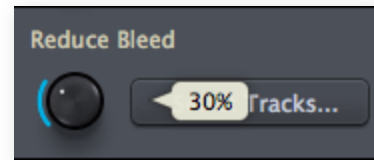
- 3 Tom Tracks have been imported into Tracker.
- While refining Trigger Points on rack tom 1, I suspect that floor tom 1 and 2 are bleeding into the rack tom 1 and creating false Trigger Points.
- I select rack tom 1 in the Track Workspace, as it is the primary track that I am attempting to refine.



- I then go to Reduce Bleed and click Select Tracks. Here I select the tracks that I suspect are bleeding into Tom 1 (i.e. floor tom 1 and 2).

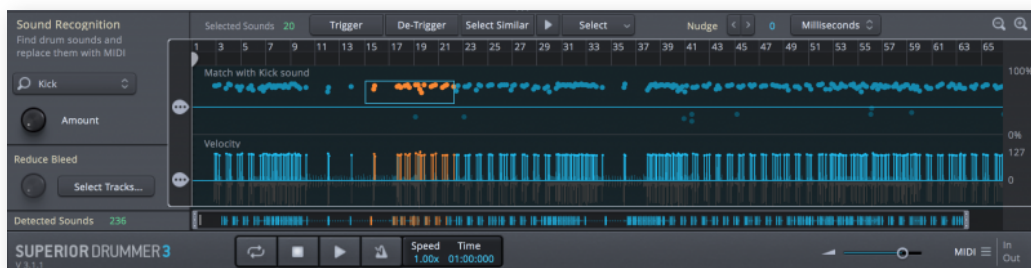


- Raise the Reduce Bleed Threshold knob until the false triggers go away.
 - The Reduce Bleed Threshold corresponds to a percentage.
 - When raising the Reduce bleed knob you are instructing Tracker to ignore any trigger points in the chosen rack tom 1 track when trigger points from the selected Reduce Bleed tracks are louder by the set percentage of the Reduce Bleed knob.
- Repeat this process for the other toms if necessary.



6.5 INDIVIDUAL NOTE EDITING TECHNIQUES

Once the aforementioned *broad strokes* are completed more surgical note by note refinements can be made if they are necessary for the trickiest of audio files. Individual Trigger Points can be edited to Trigger, or be De-Triggered by selecting them and using the selection of tools at the top of the Trigger Point Workspace. Trigger Points can be selected individually or in groups by clicking and dragging the mouse to lasso multiple Trigger Points.



TRIGGER AND DE-TRIGGER

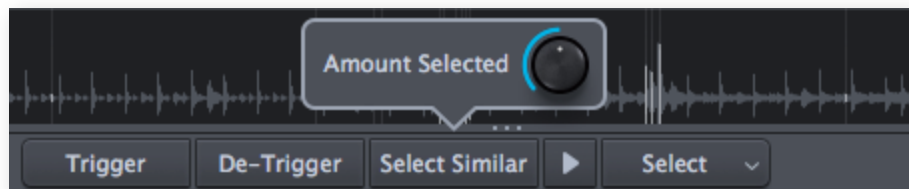
When a Trigger Point is selected it's highlighted in orange, and the buttons above the Trigger Point Workspace become active. With selected Trigger Points you have the option to Trigger which applies to dark blue trigger points that are not currently active), De-Trigger (applies to bright blue trigger points that are active).



SELECT SIMILAR

Select Similar will select other Trigger Points that are closely related to the originally selected Trigger Point. This is useful if you find a false trigger in bright blue, and you would like Tracker to locate all other Trigger Points that are similar to this sound, so that they can all be de-triggered with a single click.

When you use the Select Similar feature you are prompted to choose an amount for the range of tolerance (pictured below). This determines how many other triggers are selected based on how closely related they are to the original selection. Low values will result in less similar selections where as high values will result in many.

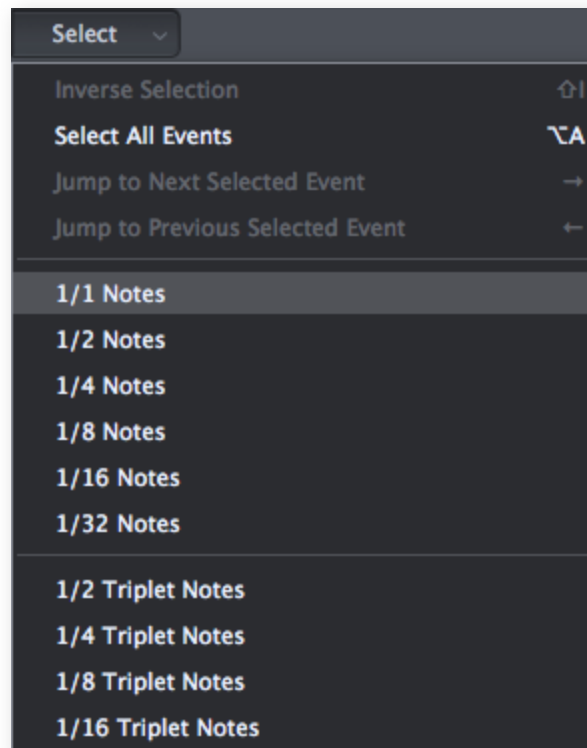


PREVIEW

 The Preview button located to the right of Select Similar allows you to preview individual trigger points. This is a very useful tool for manually verifying trigger points. Simply select a trigger point and then click the preview button (or press the “P” key).

SELECT MENU

As you may expect from its name the select menu is used for selecting Trigger Points, but its various options let you do this very intelligently. The following will be a description of all Select options and their typical uses.



- **Inverse Selection:** This option is used after a manual selection of Trigger Points has been performed. Its function is to de-select the currently selected Trigger Points, and instead select all other Trigger Points in the track.

- One reason this feature could be used, is if you have used the select 1/4 notes option (also found in this menu) to select all quarter note Trigger Points for your kick drum. You have done this because you know that your kick drum is playing quarter notes in the audio file. You could then use the Inverse Selection option to select all other Trigger Points that are not 1/4 notes and de-trigger them with a single click.
- **Select All Events:** This will select all Trigger Points for the selected track.
- **Jump to Next Selected Event:** Tracker will move from the selected to the next Trigger Point in the file.
- **Jump to Previous Selected Event:** Tracker will move from the selected to the previous Trigger Point in the file.
- **Note Selection Options:** This is an extremely useful set of tools that allow you to select Trigger Points based on their note divisions.
 - *An important note: In order for this feature to work you must have previously used the Find Tempo feature to tempo map your audio files. If Tracker does not know the tempo it can not accurately find the various note divisions. Alternatively, manually entering the tempo in the Global Tempo Track or importing a tempo map from another MIDI file (Tempo Map Menu) would also allow the use of the Note Selection options.*
 - Note Selection options could be used together with the Inverse Selection option in order to select all Triggers Points that are NOT the desired note value so that they can be de-triggered. Please see the previous example in the Inverse Selection description.

- o Another reason that you might use the note selection options would be to alter the articulation of a certain note value. For example, say that you have found all triggers for a closed hi-hat that is playing 1/8th notes, but you would like the 1/4 notes in this sequence to be a slightly different closed hi-hat articulation. In this case you would do the following: Select the high hat track.

1. Click the Select menu > 1/4 notes

2. Click Hi-hat

in the
sound
recognition
menu

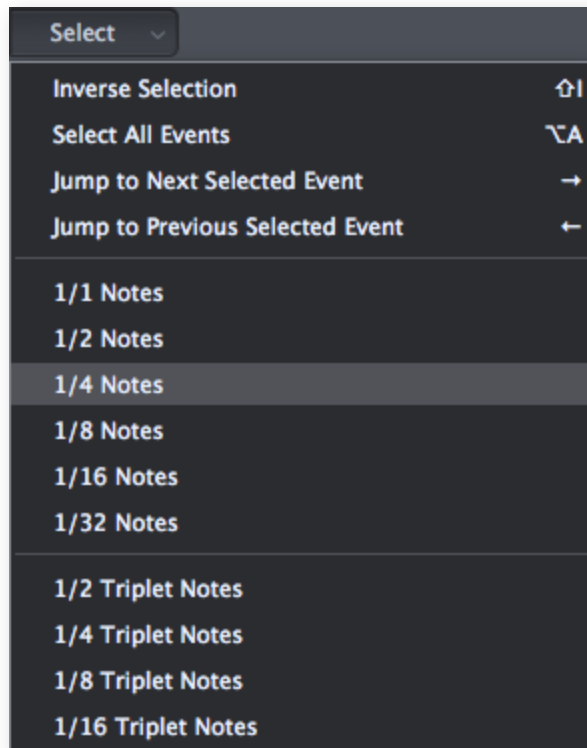
3. Click Edit,
to change
the
articulation.

4. Select a
different
articulation

(e.g. Tight Tip)

5. Click Apply to Selected Notes Only

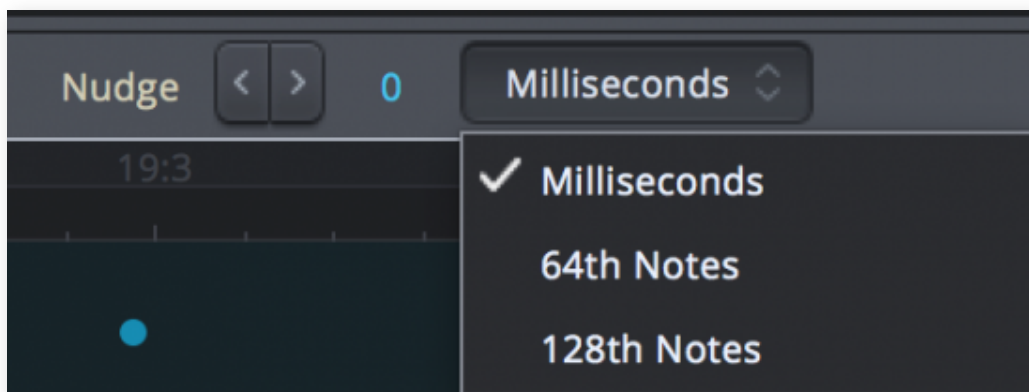
6. Finally click OK.





NUDGE

Selected Trigger points can be moved by set values by using the Nudge buttons. The value of the Nudge is set with the menu to the right.



6.6 SUGGESTED TRACKER WORKFLOW

We encourage users to work with Tracker in any way that is comfortable for them. However over the course of development

we have come up with a general workflow that can help when you are new to the software.

1. Import your audio into Tracker. If all drums that you want to *track* have been close mic'ed, only the close mics will be useful (i.e. don't attempt to use room mics unless you have no other option).
2. Use the Find Tempo feature to create a Tempo Map of your audio. This will save the Tempo in the MIDI file that you create and allow you to use the options in the Select menu when its time to refine your Trigger Points. Alternatively you could import a Tempo Map from a MIDI file if you are confident that your audio recording of drums are well synced.
3. Listen to your tracks with a setting on the Mix knob that allows you to hear any false triggers (i.e. a good balance between the SD3 output and the Audio file).
4. If Tracker has not found enough Hits, increase the Amount knob.
5. Use the Sound Recognition Threshold and the Velocity Threshold to start refining your Trigger Points.
6. Use Reduce Bleed to refine Trigger Points of instruments that bleed into each other.
7. Edit notes individually if needed. By the time you have used the tools described above you will likely have very few if any individual notes to edit.
8. Export your MIDI.

6.7 USING TRACKER IN A HOST DAW

When using Tracker within a project or session of your DAW (i.e. Pro Tools, Logic, Cubase, Reaper...) you will first need to consolidate and export your drum audio files so that they can be imported into Tracker. Importing files is discussed in chapter 6.1.1.

We recommend that you consolidate all drum audio files starting at the beginning of the session/project to the end of the longest file. This way you will have one single region per audio track, and they will all perfectly align when loaded into tracker. It might also be a good idea to save these files to an appropriately named folder along side your DAW project/session.

Importing files into Tracker is necessary because:

- Accuracy: It allows for higher accuracy of detection due to the fact that Tracker does not need to make decisions instantly.
- Quality: With imported files The artificial intelligence engine can more accurately compare your files to its database.
- Speed: Once imported the analyzation of the files goes much faster than it would otherwise.

6.8 TIPS FOR GETTING THE MOST FROM YOUR AUDIO FILES

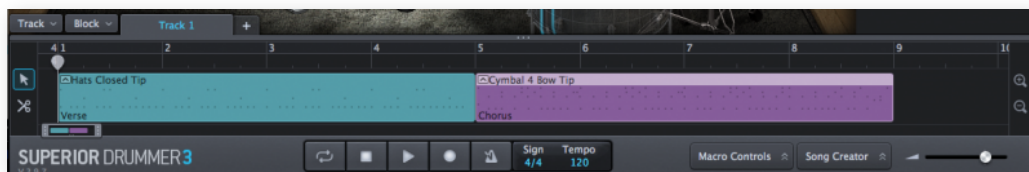
For the best possible results with Tracker we recommend that your audio files conform to the following criteria as closely as

possible.

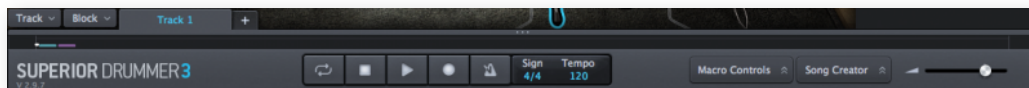
- Audio files must be Wav, Aiff, MP3, OGG, FLAC, WMF, or AU.
- Only audio from close microphones should be used, this includes overheads. Audio from distant microphones is not useful if you also have a close mics for each instrument, therefore it should not be imported.
- If you have used multiple close mics on a single instrument (such as snare top and bottom mics) only one should be imported. Choose whichever has a clearer representation of the instrument.
- When recording use a close microphone for every instrument that you intend to replace with Tracker (this includes cymbals). Of course, this is not always possible, and it is the reason that great care was put in to the development of all of the different sound recognition algorithms.
- Its best to import completely unprocessed sounds into Tracker. Audio files that are heavily compressed or contain artificial reverb can impede your results.
- Audio Files should contain drum sounds only. Tracker is not designed to work with full mixes that contain other instruments.

7. THE SONG TRACK

The Song Track is your canvas. It's where you will drag grooves from the Grooves Tab in order to sequence and edit your drum track. Grooves that are dragged to the Song Track are referred to as Song Blocks in Superior Drummer 3.



The Song Track is a global function present on the Drums, Grooves, and Mixer tab in addition to the export option of the Tracker Tab. Screen space is a valuable asset when working with software as complex as Superior Drummer 3, and for this reason we have made it possible to increase or decrease the size of the song track by hovering the mouse on its uppermost outline. When doing this the mouse cursor will change to a double arrow and you can drag the song track to be larger or smaller, or collapse it to the minimum size. This can also be accomplished by using the option in the View Menu.

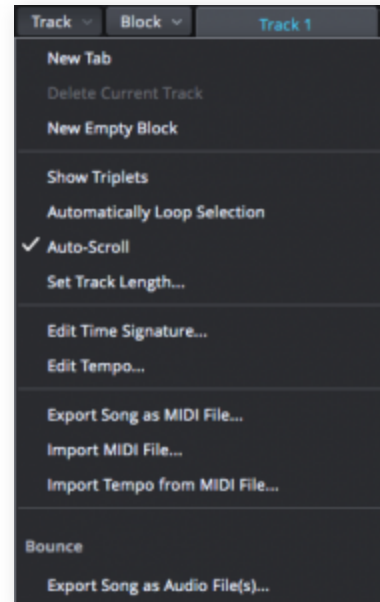


The Song track can be reset to its default size in the Global view menu in the upper left of the interface. The View menu will be discussed in detail in chapter 9.

7.1 THE TRACK MENU

The Track Menu found in the top left of the Song track provides useful options for manipulating the song track as a whole and the grooves that it contains.

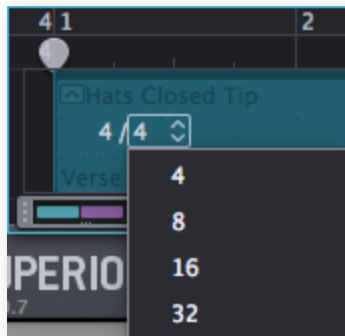
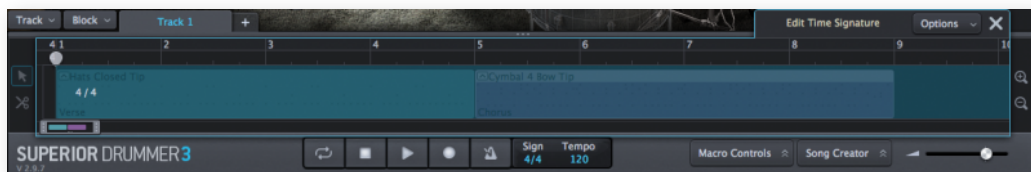
- **New Tab:** One of the enhancements to the song track in Superior Drummer 3 is the ability to have multiple song tracks in a single instance of the plugin. Clicking new tab will add an additional tab / song track that is completely independent of any other song track and can be fully customized.
- **Delete Current Track:** This will remove the currently selected Song Track / tab.
- **New Empty Block:** This will add an empty song block to the song track at the position of the playback head. This is useful for using with Edit Play Style or the Grid Editor to create your own custom grooves.
- **Show Triplets:** Selecting this will change the grid of the timeline so that you can move blocks in triplet increments.
- **Automatically Loop Selected:** The selected Song block or group of blocks will determine the loop area for the transport. If you select a new block, the loop area will change around the new selection.
- **Auto-Scroll:** Timeline scrolling will follow playhead.



- **Set Track Length:** Here its possible to choose the total length in bars for the song track.

EDIT TIME SIGNATURE

Its now possible to edit the Time Signature of the Song Track. To view the time signature editor click the Edit Time Signature option in the Track menu. A translucent blue overlay will then appear over the timeline. Double click anywhere on the timeline to add a time signature change. Changes are indicated by a vertical white line and time signature display.



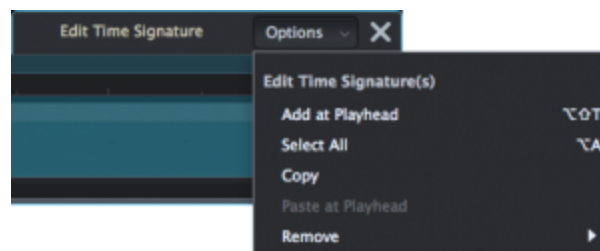
The first number of the time signature (notes per measure) can be changed by double clicking and entering a new value. Clicking on the second number however gives you 4 choices in a menu. Select the desired value and your time

signature change is complete.

It is important to mention that changing the time signature of the Song Track only effects the Song Track itself. It will NOT change the time signature of the Grooves that are present on the Song Track.

EDIT TIME SIGNATURE OPTIONS

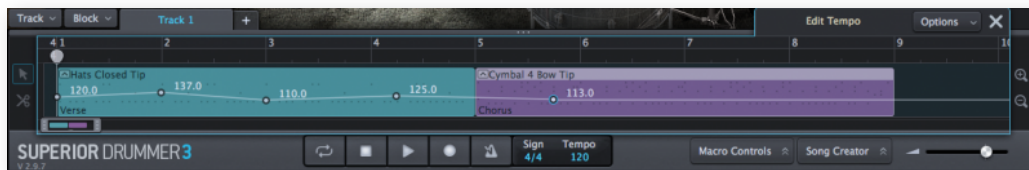
When using the Edit Time Signature view a menu will appear to the right of the Song Track with additional options.



- **Add at Playhead:** This will add a time signature change at the point in the Song Track where the playhead is currently located.
- **Select All:** This selects all time signature changes and is typically used so that you can remove them.
- **Copy:** This copies the selected time signature change so that it can be pasted at a later time.
- **Paste At Playhead:** Copied time signatures will be pasted at the location of the Playhead.
- **Remove:** A sub menu opens that contains options to Remove All or only the Selected time signatures. A time signature change can be selected by clicking anywhere within its boundaries (Shift+click to select multiple). The selected time signature area will turn darker blue. Choosing remove selected time signature will delete it (but not the grooves) from the timeline.

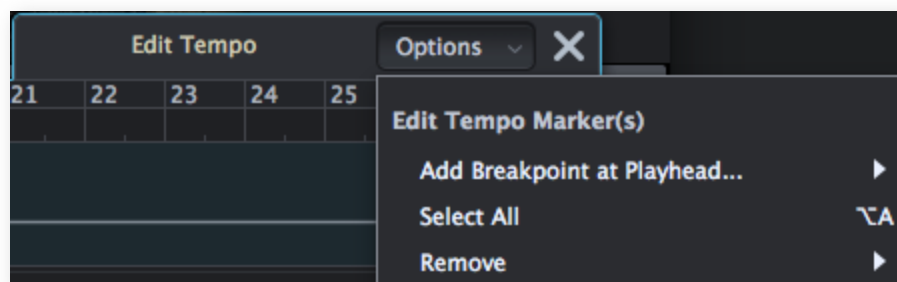
EDIT TEMPO

This option will display the Tempo Editor Overlay. Here its possible to double click on the line within the Editor Overlay to create a new break point. These break points can be dragged up or down to increase or decrease the tempo at that point of the track.



Tempo changes can be immediate or transition over time. If you would like to make an immediate tempo change you can drag a Tempo Break Point over or under an existing Tempo Break point, or you can use the command in the options menu to the right.

Edit Tempo options: Here you have a few quick menu options for common tempo manipulations.

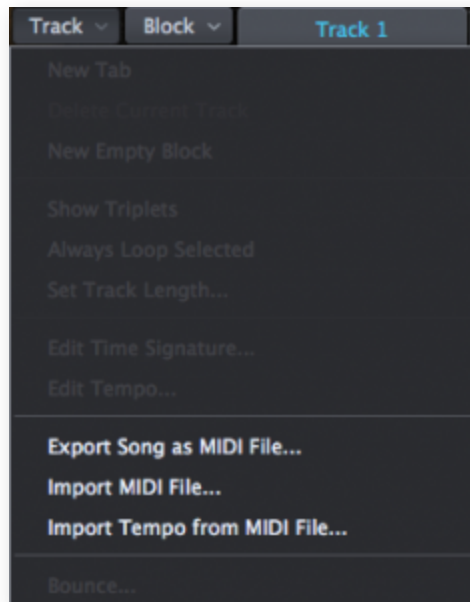


- **Add Breakpoint at Playhead:** This allows you to raise, lower or keep the tempo at a specific point on the timeline. Two breakpoints are created so that one can be raised or lowered. With Keep Tempo a single breakpoint is created.
- **Select All:** This will select all breakpoints in the Tempo Editor.

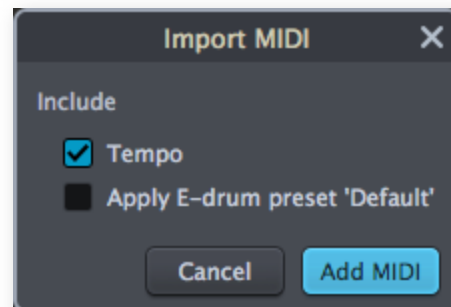
- **Remove:** The sub menu provides a choice to Remove All breakpoints, or only the Selected breakpoints.

IMPORT / EXPORT

The Track menu provides options to both import and export MIDI.



- **Export Song as MIDI File:** This will open up an operating system window that prompts you to choose a location for saving the MIDI file. The MIDI file that is saved will correspond to the selected Song track (if multiple have been created).
- **Import MIDI file:** This allows you to bring a 3rd party MIDI file into the Song track of Superior Drummer 3. MIDI can also be imported by simply dragging a MIDI file into the Song Track (SD3 Stand Alone). When a MIDI file is imported a dialog box will appear with the option to import the Tempo information contained in

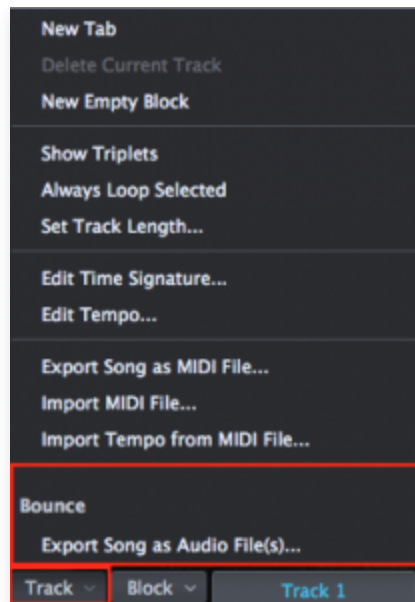


the MIDI file (instead of using the currently set tempo in SD3), and to apply the currently selected MIDI In / E-Drum Preset to the MIDI file. Choosing to apply the currently selected MIDI In / E-Drum preset would force the imported MIDI file to conform its note mapping to the currently selected MIDI In / E-Drum Preset.

- **Import Tempo from MIDI File:** Just as tempo's can be imported for use with Tracker, Tempo data can be used for the song track in Superior Drummer 3. This is very useful if you have created a tempo map in your DAW and would like to use it with Superior Drummer 3.

BOUNCE

The Bounce option in the Track menu is used for converting your completed MIDI sequence on the Song Track into a single, or multiple audio files. Due to the high number of samples involved, playing back all the sonic subtleties Superior Drummer 3 has to offer in real-time can be quite demanding on resources. For this reason we offer the offline Bounce option which due to the large amount of features is outlined in its own dedicated section of this manual (i.e. the next section, 7.1.1)



7.1.1 BOUNCE

The Bounce option allows you to choose the channels on an individual basis that you would like to be rendered as an individual audio files. Bleed options and all ambience channel options can be set independently in the Bounce window. This means that regardless of your current "Bleed from Instrument" settings in the mixer, you can enable all bleed or bounce all ambience channels in the bounce section independently. This provides access to all instruments bleeding into all microphones, representing the full extended pool of samples. The resulting audio files can then be imported into your DAW, and the Superior Drummer 3 plugin can be removed or disabled to save your systems resources.

Bounce is typically the last stage of working with Superior Drummer 3. For this reason we recommend that you familiarize

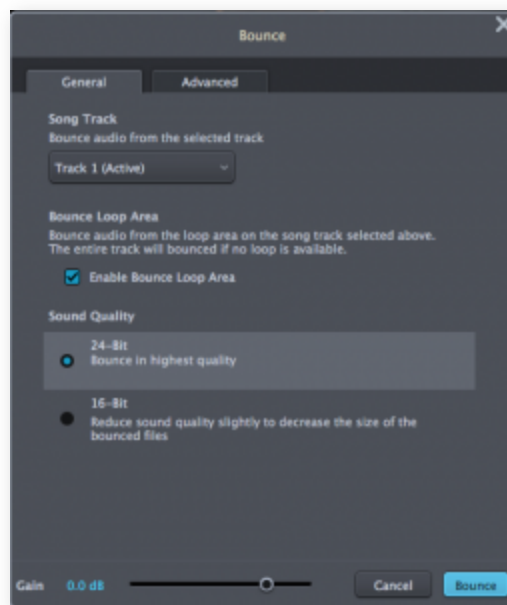
yourself with the rest of the song track functions before attempting to bounce audio.

USING BOUNCE WITH GROOVES ON THE SONG TRACK:

Once you have completed a sequence on the Song Track and you would like to convert the MIDI into audio, select the Bounce option from the Track menu.

When Bounce is selected a window will open with various options presented on 2 different tabs.

THE GENERAL TAB:

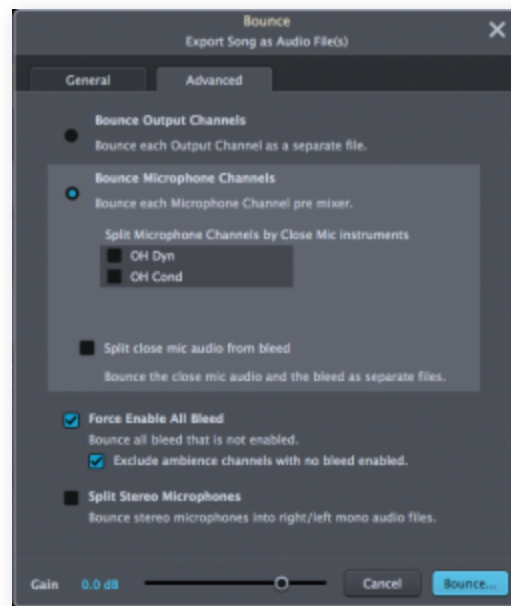


- **Song Track:** Here you can choose the specific song track that you would like to convert to audio.
- **Bounce Loop Area:** Checking this option will only bounce the area that has been chosen for looping. If your goal is to

bounce the entire track this option should be left unchecked.

- **Sound Quality:** Choose the desired bit depth for your sound files.
- **Gain:** This setting defaults to unity gain. If however you would like to add or reduce the gain of your bounced audio files you can accomplish that with this slider. You may wish to do this if you realize that your bounced audio files are too high or low in gain once imported into your host DAW.

THE ADVANCED TAB:



Bounce Output Channels: Choosing the Bounce Output Channels option will result in a single stereo audio file for each output pair that you have used in the mixer. For example, if you have only used the default out 1/2 then you will end up with a single stereo track that contains all drum sounds. If however you have routed channels in the mixer to multiple outputs this will result in a stereo audio file for each output pair that you have used.

Bounce Microphone Channels: Choosing this option will bounce an individual audio file for each microphone channel before any effects, panning, or level adjustments in the mixer. Typically this is chosen for an unprocessed version of the audio files from Superior Drummer 3 that will be mixed in a separate host DAW.

Split Microphone Channels by Close Mic Instruments:

Under the bounce channels option there is a sub option that provides the ability to break out individual instruments contained in stereo channels to their own dedicated stereo audio file. For Superior Drummer 3's core library the options presented here are for the 2 pairs of Overhead Microphones. (Options will vary from library to library).

Choosing these options will result in a single stereo audio file for each loaded cymbal in your kit. If you would like all cymbals to be contained within one stereo audio file leave these options unchecked.

Split Close Mic Audio from Bleed: Selecting this option will result in the primary instrument for the channel to be bounced to its own audio file with no bleed. All of the bleed that is present in this channel will be bounced to its own separate channel. For example, The kick drum audio from the Kick In channel will be bounced to its own audio file. All of the bleed that is present in the Kick In channel will be bounced to its own separate single audio file. Choosing this option gives the user the freedom to adjust bleed levels once the resulting audio files are imported into your host DAW.

Force Enable All Bleed: Checking this will bounce all bleed in every channel for the bounced audio files regardless of the bleed

settings in the mixer. To save system resources bleed is often turned off during real time playback. With this option you can again turn it all on for your bounced audio files. Further there is a sub option that allows you to exclude Ambience channels where you did not specifically enable bleed.

Split Stereo Microphones: Selecting this option will result in an individual left and right Mono audio file created for each Stereo channel in the mixer.

Cancel: Closes the window and stops the bounce.

Bounce: Once you have chosen all of the desired options click the blue Bounce button to bounce the audio files. Upon doing so a operating system window will open and you will be able to choose the location for which the audio files will be saved.

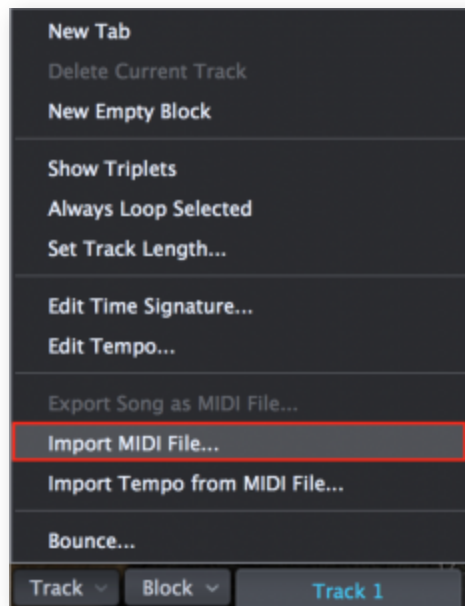
The actual bouncing of the audio files happens faster than real time, but it must be completed for every single audio file that it creates. So while the process is quick, if you have selected to bounce all channels separately it will still take a few moments. The bar in the Bounce display will inform you of its progress. Once completed click OK, and your audio files will be in the location that you chose to save them.

USING BOUNCE WITH EXTERNAL MIDI (DAW)

IMPORT MIDI METHOD:

If the MIDI sequence that you would like to Bounce is located in your host DAW, you will need to import it into the Song Track of Superior Drummer 3 using the Track menu's "Import MIDI file"

option. Importing a MIDI file will also import its tempo information which will result in the bounced audio files automatically conforming to tempo and any tempo changes that you may have set in your DAW. Once the file is imported de-select the Follow Host button in Superior Drummer 3's transport as the tempo and tempo changes for the Bounce will now be derived from the imported file.



RECORD MIDI METHOD:

Alternatively you can use the Record function of the Song Track to record the MIDI into the Song Track. When using the Record function however it is still necessary to Import the Tempo From a MIDI file that contains tempo changes, and then de-select the follow host option in Superior Drummer 3 (as you will now be using the tempo map from the MIDI file). Failure to do so will result in audio files that do not line up with the tempo changes in your DAW.

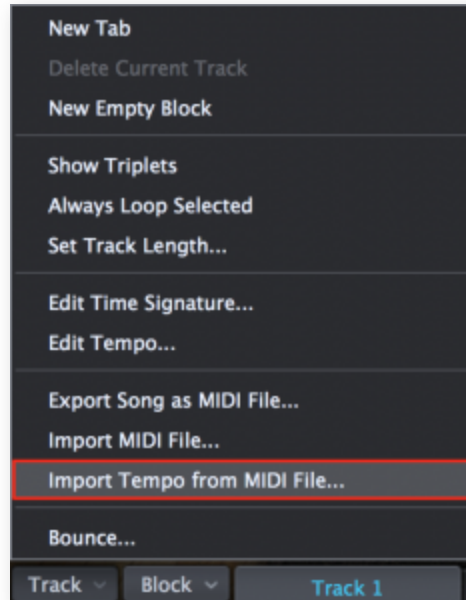
The procedure for recording MIDI that contains tempo changes into Superior Drummer 3's Song Track and bouncing this MIDI to audio is as follows:

1. Route the MIDI in your DAW to the Superior Drummer 3 plugin.
2. Click the Record button in the Transport of Superior Drummer 3 and make sure that Follow Host is engaged.



3. Press play in in your DAW.
4. MIDI will then record into the Song Track of Superior Drummer 3.
5. Export the MIDI file from your DAW (this will be used for the Tempo Map)

6. Use the Import Tempo from MIDI file option in the Track menu to import the Tempo Map and navigate to your exported MIDI file. Again, this is ONLY necessary if your MIDI file contains tempo changes.

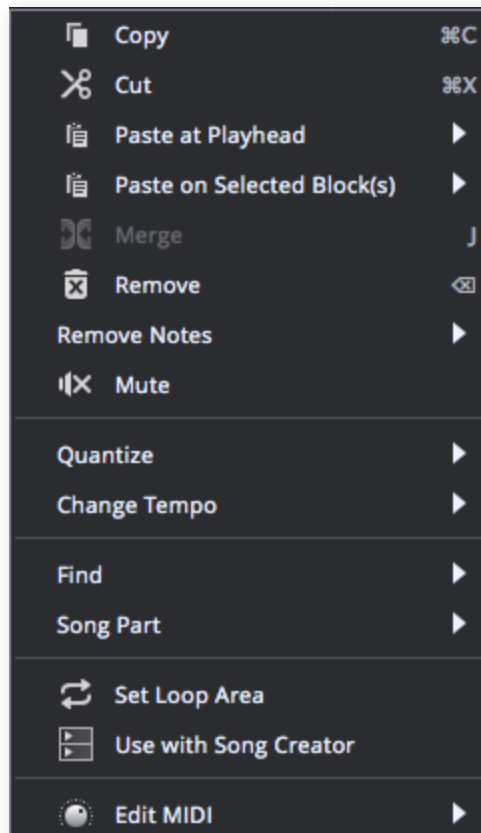


7. Turn off Follow host in Superior Drummer 3, as Superior will now need to follow the tempo from the Imported Tempo from MIDI file.
8. Open the Track menu, select the Bounce option, and follow the guidelines outlined above in the Bounce description.

7.2 THE BLOCK MENU

The Block menu (i.e. Song Block) is accessed in the top left of the song track or by right clicking any song block on the Song Track. It contains all of the possible options for altering a single song block or multiple selected song blocks on the timeline. Please note that these changes only affect Song Blocks that are

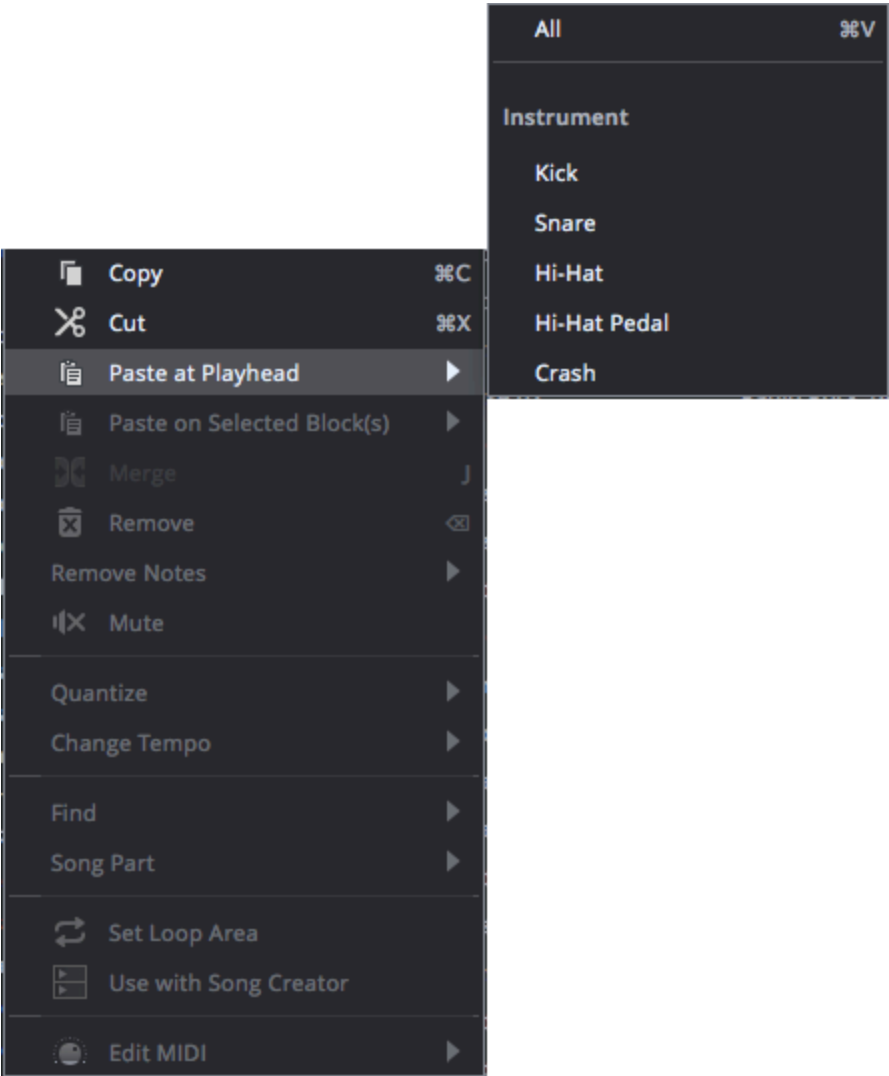
on the Song Track, they do NOT affect the master version of the MIDI file in the Grooves page.

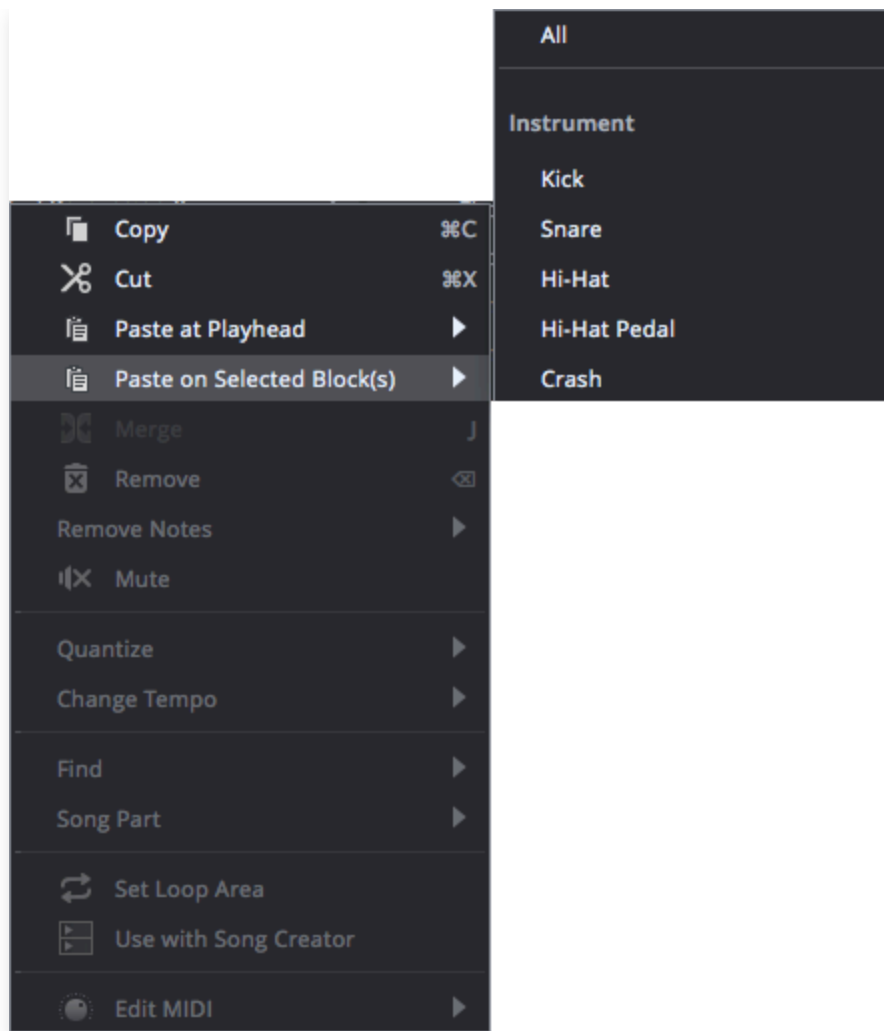


Copy Cut and Paste: These are familiar software options for duplicating song blocks or copy and pasting elements of Song Blocks to other blocks. With the paste options it is possible to paste only specific kit pieces of one MIDI file to an empty block or over an existing block (at the playhead or at the start of the selected Song Block(s). When a MIDI file is copied the user can paste any instruments MIDI (kit piece) from the selected Song Block to any other Song Block on the Song Track as seen in the picture below. Additionally, if your copied MIDI file includes CC data (such as pedal openness or snare positional sensing) this CC data can be copied and pasted onto another block.

This is a useful feature if you wish to make hybrid MIDI files from a collection of different grooves. For example, you could copy a

Hi-Hat pattern from one groove in the browser, and then paste it onto other Song Blocks that you have on the Song Track.





Merge: Merge will join multiple selected blocks together into 1 single block.

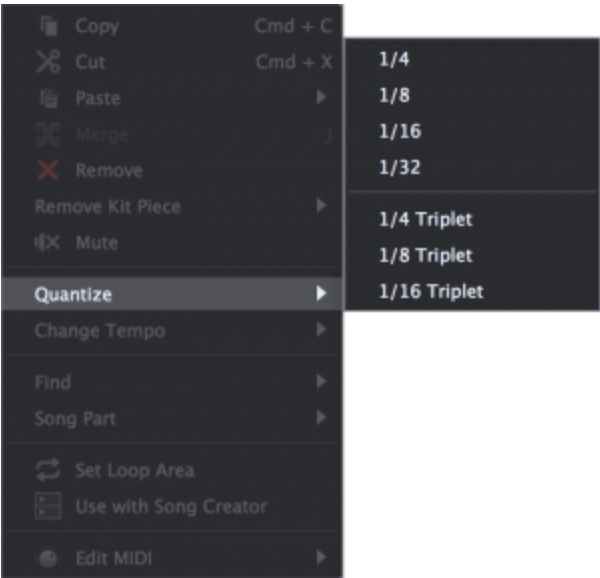
Remove: Deletes the selected block or blocks.

Remove Notes: This option displays the kit pieces that are present in the selected Song Block, and provides the ability to remove them on an individual basis from the Song Block.

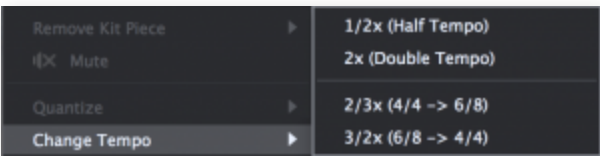
Mute: This will stop the selected MIDI files from producing sound. This can be useful when dragging MIDI to your DAW, but

you would like to keep a silent copy of that MIDI on the song track. Unchecking Follow Host would accomplish the same goal.

Quantize: The MIDI present in the selected block can be Quantized to the grid at the selected value. Quantize moves individual notes so that they are perfectly aligned to the tempo grid.



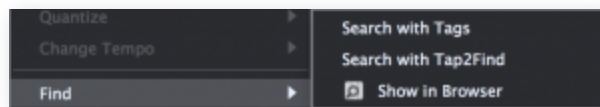
Change Tempo: Here you can alter the tempo of the selected Song Bock(s) with selections of 1/2 tempo, and 2x (double) tempo. It is also possible to select 2/3x and 3/2x tempo. 2/3x slows the tempo of a groove by a factor of 1/3 so that a 4/4 groove could be used in a 6/8 time signature song. 3/2 speeds up the tempo by a factor of 1.5, so that a 6/8 Groove could be used in 4/4).



It's important to mention that the 2/3x and 3/2x options simply slow down, or speed up the chosen MIDI (i.e. they do not change the performance).

A practical way to demonstrate how these alterations work is to slow down a 4/4 using the 2/3 option, then engage the metronome. With the metronome playing back you will hear how 6/8 can be counted over a 4/4 groove that has been slowed down appropriately. Note that changes in tempo do not effect the master version of the MIDI library, they only apply to the copied MIDI groove on the Song Track.

Find: The Find function allows you to locate Song Blocks (located on the Song Track) in the Grooves page.



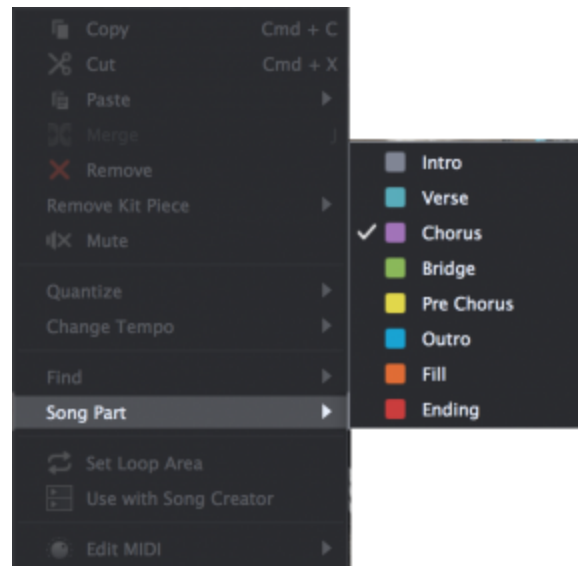
Search with Tags: This option will use tags from the metadata of the MIDI file to find it in your browser.

Search with Tap2Find: This option will import the MIDI file into Tap2Find so that you can search for other grooves that are similar.

Show in Browser: This will show you where the groove is located in the browser section of the Grooves page. Please note that this option will only work if you own the MIDI pack from which the song block originated.

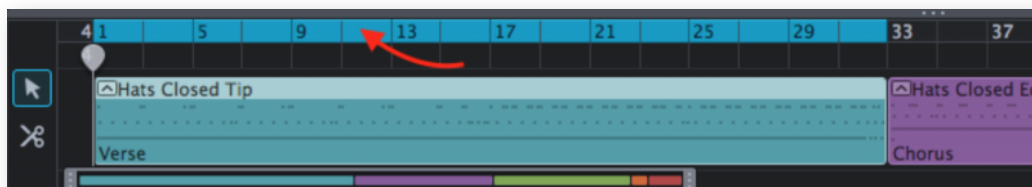
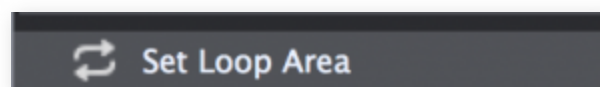
Song Part: The Song Part menu option allows you to change the color / classification of Song Blocks on the Song Track.

Simply select a Song Block and then choose a new color in this menu.



Set Loop Area: This engages the loop in the Song Track.

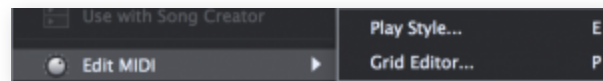
Clicking this option is the same as clicking the Loop button in the transport. Once the loop has been engaged you will notice a blue bar above the Song Blocks. This blue bar can be dragged out to any length or moved on the timeline.



Use with Song Creator: This option will copy the selected Song Block on the Song Track to the Song Creator. The Song Creator will be covered in detail later in this chapter (section 7.6).

Edit MIDI: This allows you to open the selected groove and edit its MIDI in 2 different ways. Either with Edit Play Style, or in the

Grid Editor. This option provides many detailed possibilities, therefore it will be covered next in its own dedicated chapter (7.3).



7.3 EDIT MIDI (EDIT PLAY STYLE AND THE GRID EDITOR)

Edit Play Style and the Grid Editor are 2 different ways to Edit MIDI inside of Superior Drummer 3. Edit Play Style first debuted as a popular feature in EZDrummer 2, and it is now included in Superior Drummer 3. The Grid Editor Takes Edit Play Style a step further by giving the user complete control over every single note and velocity while also presenting a selection of very useful MIDI editing tools.

7.3.1 EDIT PLAY STYLE

Edit Play Style is a powerful feature that can be used to modify how individual instruments in grooves added to the Song Track play back. Any single instrument or the whole kit can be affected by Edit Play Style.



USING THIS FEATURE YOU CAN:

- Control the number and intensity of hits in real time.
- Change the velocity.
- Add percussion.
- Change the leading instrument (Power Hand)
- Change the articulation for any instrument.
- Quantize individual or all instruments.

Edit Play Style is primarily intended to be applied to single blocks to create variation, but it is entirely possible to use Edit Play Style for several selected blocks. This is done either by selecting them in the Song Track after you opened Edit Play Style or by using the arrow. When the Edit Play Style window is open, recording into the song track is not possible.

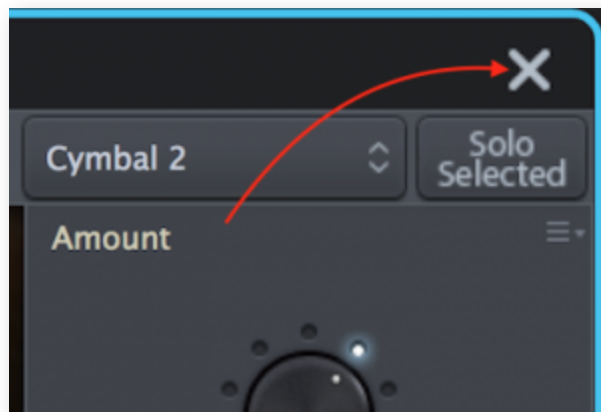
OPENING:

Edit Play Style and the Grid Editor can be accessed in the following ways:

- Double clicking on a Song Block in the Song Track
- Right clicking on a song block and selecting Edit MIDI.
- From the Block Menu by selecting Edit MIDI.
- Selecting a Song block and pressing the “P” or “E” keys for either Edit Play Style or the Grid Editor.
- Clicking the small arrow in the upper left of any Song block.

CLOSING:

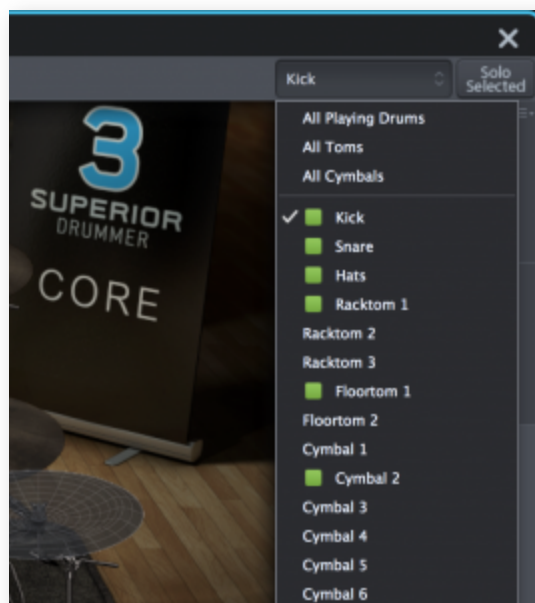
Edit Play Style is closed by clicking the X in the Top Right of the window, or by clicking the small arrow on the currently selected Song Block.



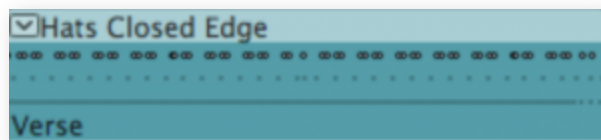
SELECTING INSTRUMENTS:

As with Song Track operations most functions affect only what is currently selected.

When you open the Edit Play Style window, all instruments used in the selected block(s) are by default highlighted with a blue outline. Instruments not used are greyed out. Clicking an instrument will select it and deselect all others. You can also click the “Select Instrument” button in the top right of the window to open a menu where all instruments are listed and the instruments used in the groove are marked with a green square. Select one or choose one of the grouped options “All Playing Drums”, “All Toms” or “All Crashes.”



In the Song Block, notes belonging to the selected instrument(s) are also highlighted for better visual feedback of your actions to the individual notes (or hits).



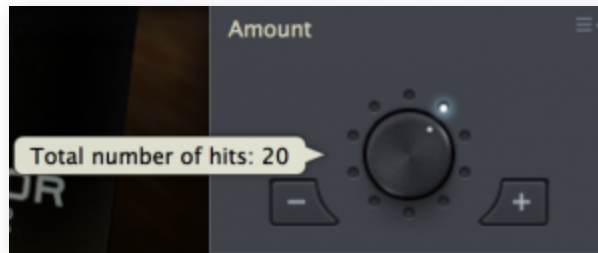
UNDO/REDO:

Any action performed using Edit Play Style can be undone/redone using the Undo/Redo key command (Alt+Z) or

by clicking the Global Edit menu and selecting Undo/Redo.

AMOUNT (ADD/REMOVE HITS):

Edit Play Style allows you to dynamically increase or decrease the number of hits played in a groove for all or individual instruments. This feature utilizes a smart algorithm that calculates the probabilities of where a real drummer would add or remove hits in a groove. In other words, it does not arbitrarily add or subtract hits but uses information gathered from tens of thousands of real drum performances to change the groove while keeping a natural feel.



As the knob is increased or decreased the total number of hits for the selected instrument will be displayed.

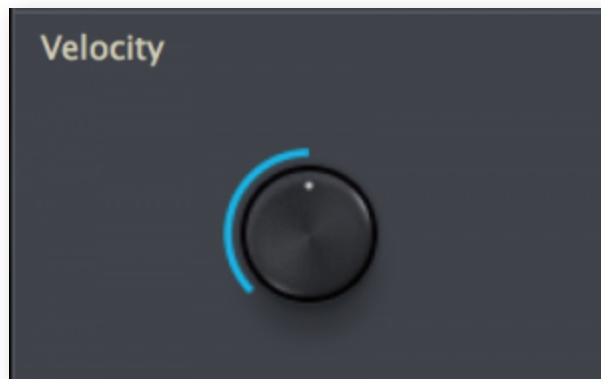
USING ADD / REMOVE HITS:

1. Select the instrument for which you wish to change the number of hits. Note that you can also use this feature to add hits for instruments not used in the original groove (i.e. greyed out instruments).
2. Start song playback so you can hear the results directly. If you want to listen to only the selected instrument(s), click the Solo Selected button.
3. Use the Amount knob to either remove hits (turn counter-clockwise) or add hits (turn clockwise).

4. To reset the Amount to its original value, use the drop-down menu to the right of the Amount knob. (You can also press Cmd (Mac)/Ctrl (Win) and click on the knob to reset.

ADJUSTING VELOCITY:

Here its possible to change the velocity levels for notes belonging to the selected instrument in a groove.



1. Select the instrument for which you wish to adjust the velocity.
2. Start playback to hear the results.
3. Use the Velocity knob to raise or lower the velocity values for the notes played. The relative balance between velocity values in the groove will be retained.

ADDING PERCUSSION:

If you have previously added any additional percussion instruments (i.e. Future Hit instruments) on the Drums Tab, you will also see them in edit play style. MIDI for these additional percussion instruments can also be automatically generated in Edit play style by doing the following:

1. Select the Future Hit instrument in the Edit Play Style window.
2. Start playback to hear the results.
3. Increase the amount knob. The more the knob is turned for a future hit percussion instrument the more intense the performance will become.

CUT MIDI:

This will remove all notes from one or several selected instruments and move them to the clipboard.

1. Select the instrument(s) you wish to cut MIDI from.
2. Right-click a selected instrument and select Cut MIDI from the context menu.



COPYING/PASTING MIDI TO OTHER INSTRUMENTS:

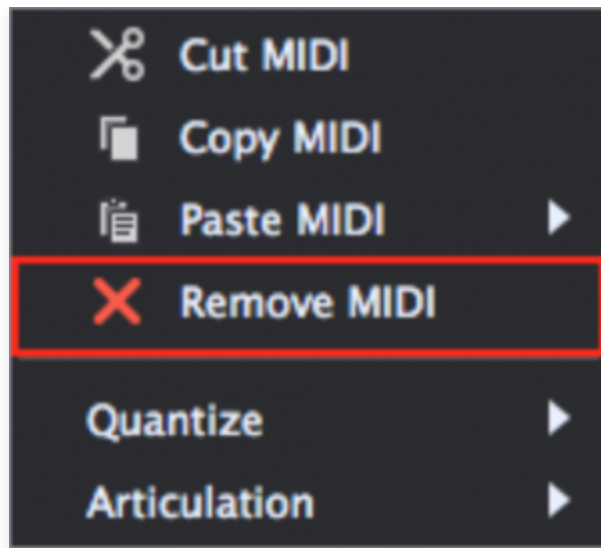
You can copy notes from a selected instrument (or from several instruments) and paste them onto another instrument using Edit Play Style:

1. Select the instrument and right-click it to open the context menu.
2. Select Copy MIDI from the menu to copy the notes to the clipboard.
3. Right-click on another instrument in the kit and from the Paste submenu, select the instrument you copied. The instrument you paste notes to can be any kit instrument, even one that was not used in the original block. Any notes previously played by the instrument you paste to will be replaced by the copied notes.

If you use this method to copy and paste within the same Song Block, it will result in two instruments playing the same notes which might not be desired. In that case instead use “Cut MIDI” from the context menu in step 2.

REMOVE MIDI:

This command can be used to remove all notes played by one or several instruments. “Remove MIDI” will not place anything in the clipboard but will reduce the number of hits to zero. You can later use the Amount knob to restore the removed hits.



1. Select the instrument(s) you wish to remove MIDI from.
2. Right click a selected instrument and select Remove MIDI from the context menu.

QUANTIZE:

You can quantize notes played by individual instruments using Edit Play Style.



1. Select the instrument(s) you wish to quantize.
2. Right click to open the context menu, and then select a value from the Quantize submenu.

ARTICULATION:

Edit Play Style allows you to set what articulation any kit instrument plays.



1. For the Opening Hit and Power Hand the articulation selection is available directly from a menu opened by clicking the handle.
2. For other instruments it is set from the context menu. This only works when a single instrument is selected.
3. Open the menu and select a different articulation.

POWER HAND:

All grooves have a “Power Hand” instrument assigned, and Song Blocks on the Song Track are also automatically named after the instruments Power Hand. The Power Hand defines the leading instrument of the groove. In most cases this will be a hi-hat or a ride cymbal.

It is possible to change the Power Hand instrument for the selected Song Block to any other kit instrument by simply dragging the Power Hand flag to any other instrument in the kit.



Drag the Power Hand flag to any other instrument in the kit to instantly transpose the MIDI from the original instrument to the new instrument.

- Any MIDI notes that the original Power Hand instrument played will now be played by the new instrument.
- If the new Power Hand instrument was already playing notes in the Song Block, these will be merged with the notes played by the original Power Hand instrument.
- The articulation of the new Power Hand Instrument can be altered by clicking on the down arrow of the Power Hand flag.



OPENING HIT:

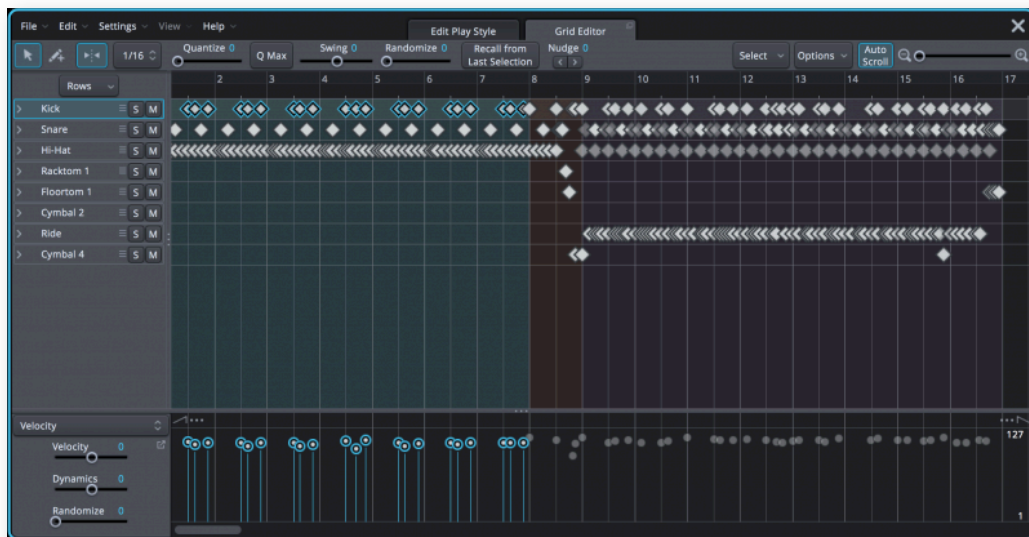
The Opening Hit adds a single hit to the beginning of the Song Block. Just like the Power Hand, the Opening Hit can be moved

to any instrument in the drum kit by dragging the handle. You can activate or deactivate it by clicking the On/Off button.



7.3.2 THE GRID EDITOR

The Grid Editor offers note level MIDI editing for altering existing Song Blocks or creating new Grooves from scratch.



OPENING

The Grid Editor can be accessed in the following ways:

- Double clicking on a Song Block in the Song Track
- Right clicking on a song block and selecting Edit MIDI.

- From the Block Menu by selecting Edit MIDI.
- Selecting a Song block and pressing the “P” or “E” keys for either Edit Play Style or the Grid Editor.
- Clicking the small arrow in the upper left of any Song block.
- Clicking the Grid Editor Tab at the top of Edit Play style.

CLOSING

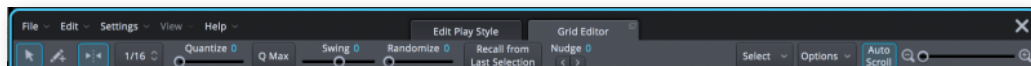
The Grid Editor is closed by clicking the X in the Top Right of the Window, or by clicking the small arrow on the currently selected Song Block.



The Grid Editor can also be detached by clicking the overlapping rectangle icon at the top right of the Grid Editor Tab.

GRID EDITOR HEADER

Useful tools for adding/altering MIDI notes in the Grid Editor. These tools are explained from left to right.



CURSOR TOOLS

- The Pointer tool allows you to select a note or group of notes by lassoing them.
- The Pencil tool allows you to add notes to the Song block. Clicking and dragging the Pencil tool will allow you to draw in multiple notes at intervals according to the set Snap Value.

- To avoid the need to constantly switch between tools
The arrow tool can be instantly changed to the Pencil tool by pressing Command + Option (Mac) on your keyboard (Alt+Control PC).

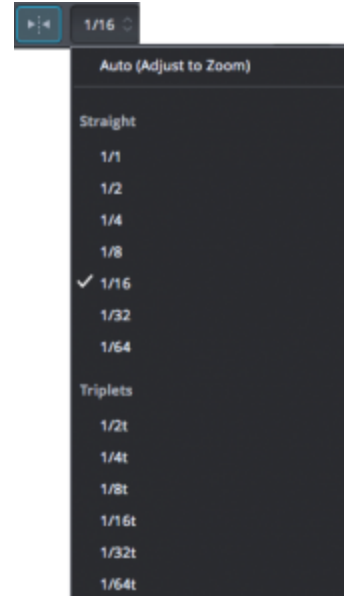


SNAP AND RESOLUTION MENU

When engaged the Snap option will cause all notes to conform to the grid. The visible grid is based upon the zoom level (i.e. the more zoomed in you are, the more grid lines available). Opening the Resolution menu will allow you to choose the note division for the snapping of notes. When moved, notes will snap to this determined value

regardless of the grid lines that are displayed. There is also an Auto option. This forces the note to snap to the very next grid line that is displayed, and thus determined by the zoom level.

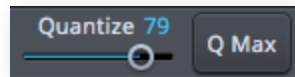
The single Resolution menu is used by the Snap, Quantize, Swing, Randomize, and Nudge features.



QUANTIZE PERCENTAGE AND MAX

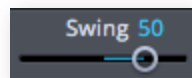
The Quantize Percentage slider will move all selected notes to the nearest grid line by the selected percentage. The Quantize

value is also determined by the selected Resolution menu value. Therefore, if you would like to quantize a Hi-Hat to 1/16th notes, simply select all Hi-Hat notes, choose 1/16th from the Resolution menu and then move the slider to 100% (or click the Max button). The Max button sets the Quantize percentage to 100%



SWING

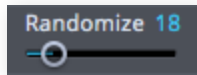
In a swing rhythm the beat is divided unequally such that the subdivisions of notes alternate between long and short durations. Therefore increasing or decreasing the Swing Slider will move the selected notes into a swing pattern either forward in time (positive Swing value) or back in time (negative Swing value). The Swing slider is closely tied to the Resolution menu, meaning that the correct Resolution (corresponding to your selected notes) must be selected in the Resolution menu in order for the swing to work properly. Selecting a resolution value shorter than that of the selected notes will cause the Swing Slider to have no effect.



For example, lets say that you have selected a series of 1/8 notes for the Ride cymbal. In order to create a typical 1/8th note swing pattern on the Ride cymbal (where every other note is moved forward in time by approximately 2/3rds) it will be

*necessary to choose 1/8th notes from the Resolution menu.
Then adjust the swing slider to 100.*

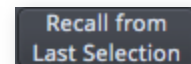
RANDOMIZE TIMING SLIDER



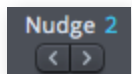
The Randomize Timing Slider will change the timing of the selected notes in a un-uniform way to achieve random timing. This can be especially useful when sequencing your own MIDI from scratch in the Grid Editor for a looser feel.

RECALL FROM LAST SELECTION

Quantize, Swing, and Randomize values will be Recalled from their last user changed selection.



NUDGE

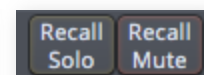
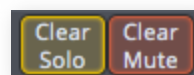


Nudge will move the selected notes by the set amount. The Nudge unit is set in the Grid Editor Options menu.

Option + Left / Right arrow (Mac) Alt + Left / Right arrow (PC)

CLEAR/RECALL SOLO AND MUTE

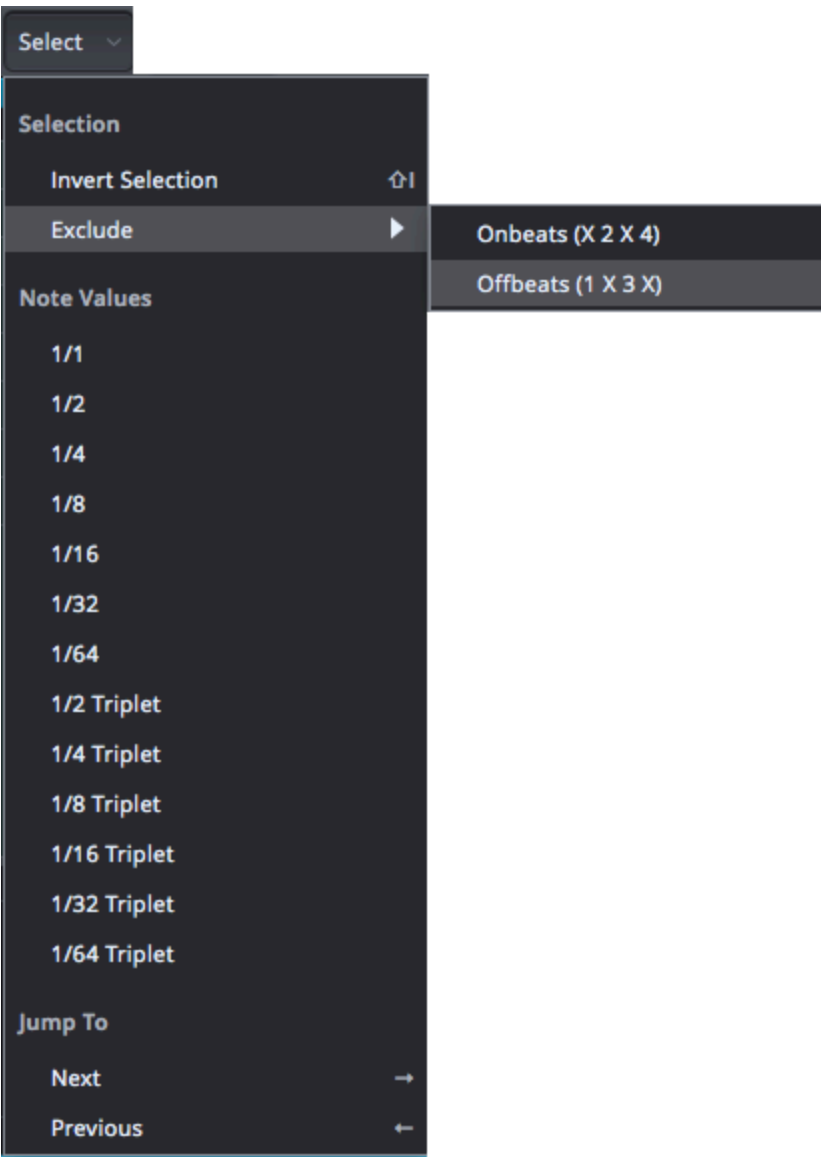
If a note lane (or multiple lanes) in the Grid Editor has been Soloed or



Muted a global option will appear to clear all Soloed or Muted lanes. If the solo or mute function has been cleared a "Recall Solo or Mute" button will appear. This will recall the user selected Solo or Muted channels.

SELECT MENU

The Select Menu provides useful options for selecting groups of notes by note division so that they can be moved or altered together as a group.



- **Invert Selection:** (Shift + I) This option will choose the opposite notes of those that are currently selected. For example, if you chose to select all 1/4th notes in a 1/8th note sequence, the selected notes will fall directly on the 1,2,3, and 4. If you were to invert this selection, the selected notes would fall on the "and" in-between the 1,2,3, and 4.
- **Exclude:** Exclude can further refine a selection by removing Onbeats or Offbeats from the group of selected fourth-notes.
- **Note Values:** The Note Values are the list of possible selection options. In order to use these selection options, click on the Note Lane (to select all notes in that lane), or lasso select a group of notes that you want to refine with the pointer tool. Then by choosing one of the Note Values in the Select menu SD3 will refine your selection so that it only includes the notes that fall on the desired note divisions. This can type of selection can be preformed for multiple note lanes at a time by shift clicking them to add them to the selection.
- **Jump To:** (Left and Right arrow keys) This option will select either the Next note or the Previous note. Jump To selects one note at a time, so if a group of notes are currently selected and the Jump To keyboard short-cut is preformed it will select the Next or Previous single note to the selected sequence.

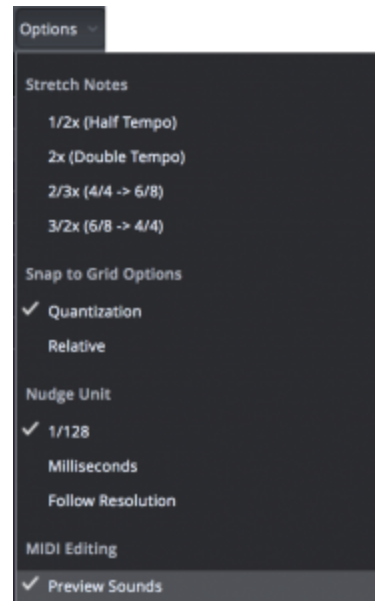
A practical example of how this would be used would be to select all of the 1/4th notes in a 1/8th note Hi-Hat pattern, and then reduce their velocity as a group, or drag this custom selection of notes to a different articulation of the Hi-Hat.

OPTIONS MENU

- **Stretch Notes:** Various options for changing the timing of notes such as 1/2 tempo and 2x tempo. It is also possible to select 2/3x and 3/2x tempo. 2/3x slows the tempo of a groove by 1/3 so that a 4/4 groove could be used in a 6/8 time signature song. 3/2 speeds up the tempo by a factor of 1.5.

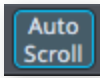
It's important to mention that the 2/3x and 3/2x options simply slow down or speed up the chosen MIDI by stretching them out over time or condensing them (i.e. they do not change the performance).

- **Snap to Grid Options:** Here you can choose for notes to snap to the selected Quantization level or the Relative Grid. Relative Grid uses the relative distance between notes regardless of if they sit on grid lines or not. For example, if you recorded MIDI yourself that is very slightly off of the grid and you want to adjust the timing moved notes would snap to a distance of the Quantization value rather than the grid itself. This keeps the original timing and feel intact.
- **Nudge Unit:** These options control the behavior of the Nudge control. Here you can select 1/128th note, Milliseconds, or Follow Resolution, which will use the resolution setting in the Resolution menu.
- **Preview Sounds:** This allows the user to turn off the sound preview of the articulation when clicking on a note. This is



handy while editing when you do not want to hear sounds while adding or moving notes.

AUTO SCROLL



Auto Scroll will cause the Grid Editor note display to scroll along with the playhead as it plays back your sequence. If Auto Scroll is disabled the Note workspace will remain in a static position.

ZOOM LEVEL

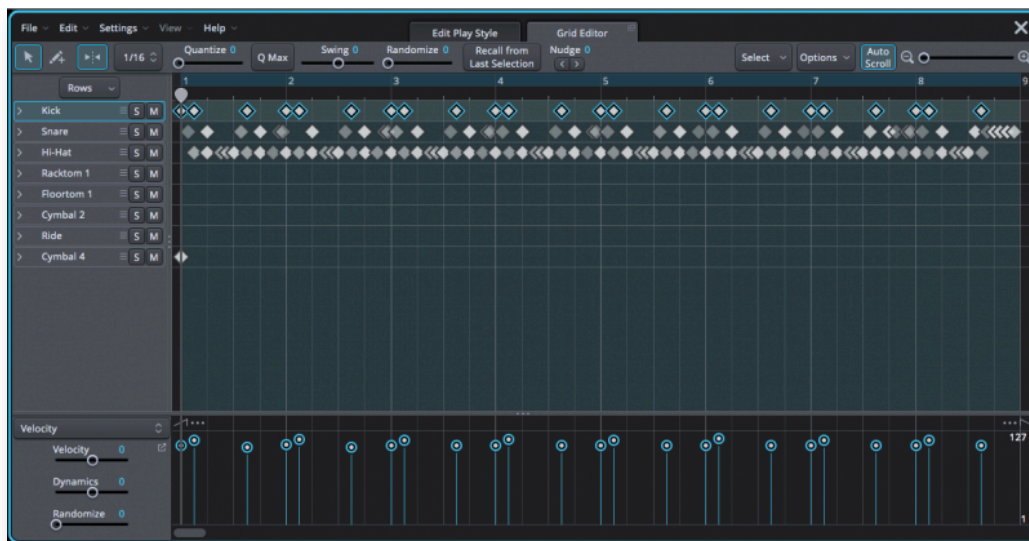
Moving this control from left to right will increase the zoom level in the note



workspace. This can also be accomplished by holding down the Option/Alt key and using the scroll wheel on a mouse.

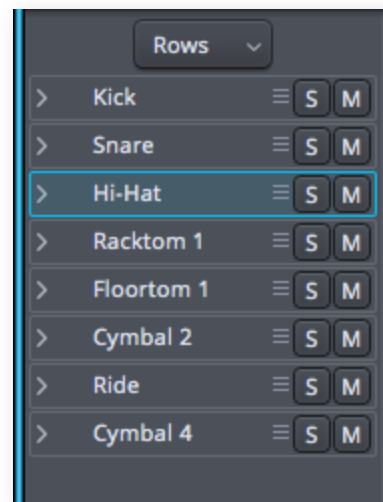
THE MIDI NOTE WORKSPACE

This is the main area of the Grid Editor, and its where you will add, remove, and change the timing of notes. MIDI notes in Superior Drummer 3's Grid Editor are represented as grey diamonds. Velocity is represented in the brightness of the diamond, meaning that the more bright a MIDI note appears in the interface the higher its velocity.

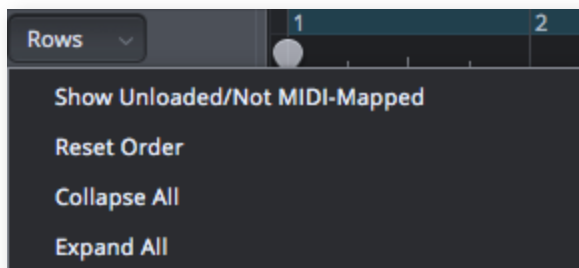


NOTE ROWS

To the left of the MIDI note workspace are the Note Rows for every loaded instrument in your kit. If you add any additional drums to the kit (on the Drums Tab) they will be represented here so that their MIDI can also be edited. Clicking on a Note Row for an instrument will select all MIDI notes for that instrument in the selected Song Block or Blocks.



The Rows Menu allows for the following options:



- **Show Unloaded/Not MIDI-Mapped:** By default the Grid Editor only displays Note Rows for instruments / articulations that are loaded on the Drums Tab. If however you would like to view all of the possible instruments (even those that are not loaded and will therefore not produce sound) you can choose this option.
- **Reset Order:** Reset Order will re-order any user changed Note Rows to the default SD3 order.
- **Collapse All:** Choosing the Collapse All option will cause all note rows to collapse their Articulation Note Rows. These can be thought of as sub rows to the main instrument.
- **Expand All:** Expand all will expand all articulation note rows for all instruments.

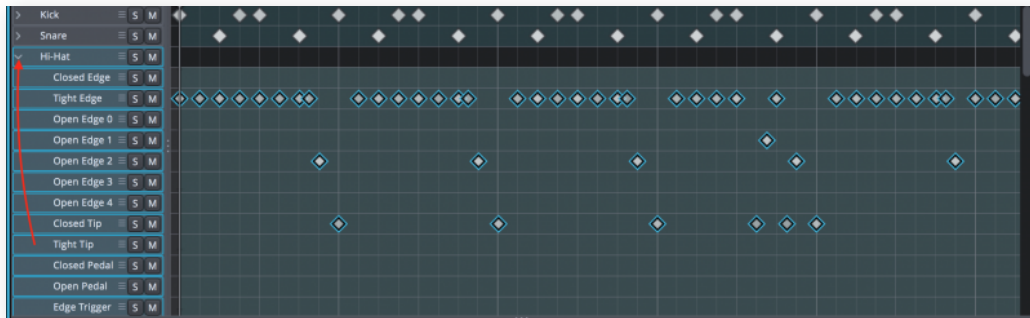
Each Note Row contains the following:

- **Expandable / Collapsible Arrow:** This arrow will display Note Rows for all of the included articulations of the instrument. Once expanded MIDI can be edited or added on these sub Note Rows.
- **Menu:** The Note Row menu contains the option to "Show Note Length." When creating drum MIDI note length is *not always* important because most instruments don't need or respond to note off messages. However, there are some circumstances where it is desirable to control the note length in the case that your selected instrument reacts to note off messages. For example, if you have set up the Mute Tail cymbal articulation or Level Envelope releases in the Property box to respond to note off messages. (more on this in chapter 3.5.4)

- **Solo and Mute:** These options allow you to quickly solo or mute the selected Note Row MIDI can be heard or muted on an instrument by instrument basis.

ACCESSING ARTICULATION NOTE ROWS

Instruments that contain multiple articulations of also contain an arrow. Clicking on this arrow will display all of the available articulations for that instrument below as sub Rows.



NOT MIDI MAPPED

If an articulation is not mapped to a dedicated note it can be shown here in the Grid Editor so that you do not accidentally assign notes to that articulations. While most of MIDI notes are mapped, some are not mapped by default to make room for the more important notes (as there are only 128 available). If you find an articulation that you would like to use but it is not currently mapped to a note you can change this with the MIDI mapping property box on the Drums Tab. (Chapter 3.5). Remember that the "Show Unloaded/Not MIDI Mapped" option is de-selected by default in the Rows menu mentioned above. Therefore if you would like to see these not MIDI mapped notes you must first select the "Show Unloaded / Not MIDI Mapped" option.

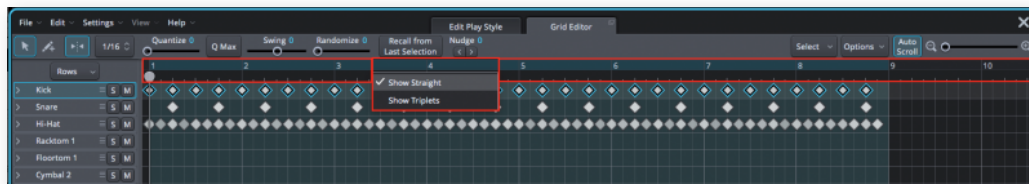


SELECTING NOTES

- Individual notes can be selected by clicking on them.
- Multiple notes can be selected by clicking outside of a note and dragging a lasso over the desired notes.
- Clicking a Note Lane will select all notes in the Song Block for that instrument.
- Option click and drag to copy notes (Mac). Alt + Click + Drag (PC)

THE TIME BAR

Right clicking anywhere on the Time Bar will provide the option to show Straight or Triplet Grid Lines.



VELOCITY POINTS

Each MIDI note also has a corresponding velocity point that can be dragged up or down to increase or decrease that notes velocity either by dragging the velocity point itself or by using the Velocity Slider to the left.



DYNAMICS

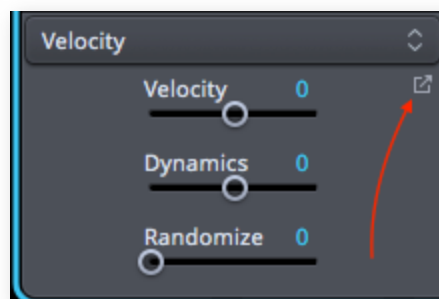
To the left, underneath the Velocity Slider is the Dynamics Slider. The Dynamics Slider is intended to be used with multiple selected MIDI notes that have differing velocities. When multiple notes are selected with differing velocities the Dynamics slider will increase the distance between the highest and lowest velocities.

RANDOMIZE VELOCITY

The Randomize Velocity Slider will do just that, randomize velocities. It's incredibly useful if you have created a MIDI sequence yourself and would like to adjust the velocities of the sequence to achieve a more human variance. Like the Dynamics Slider, Randomize Velocities only works with a multi note selection.

DETACH

Clicking the detach icon to the right of the sliders allows for the 3 Sliders to be detached, so that they can be adjusted while other editing is being preformed in the Velocity area.



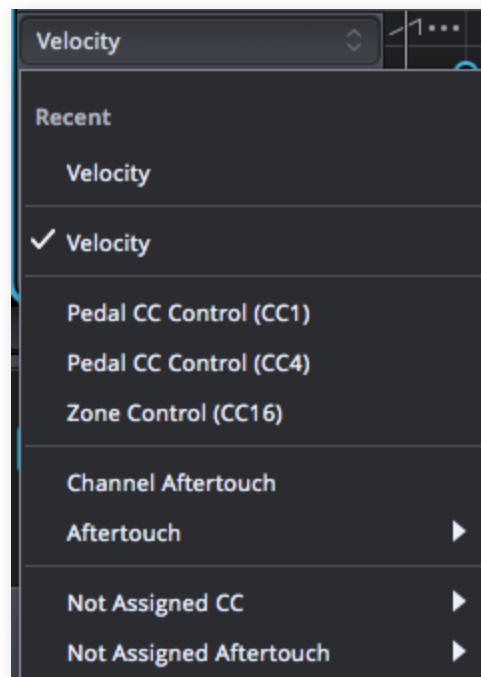


MIDI SLOPE

Perfect crescendos or decrescendos can be created in seconds with the MIDI slope tools. When a group of notes are selected you can use the MIDI slope control to increase or decrease velocities over time.

ADVANCED VIEW DROP DOWN MENU

The bottom area of the MIDI Note Workspace contains a menu that allows you to access advanced parameters for further MIDI editing. By default this menu selection is set to Velocity as this will be the most commonly used.



- **Recent:** Displays a list of recently selected options in this menu. This is useful if you have custom assigned CC values or have used Aftertouch and would like to quickly navigate back to these parameters.

- **Velocity:** Choosing Velocity from this menu will change the display to the right of the menu to the default velocity view where note velocities can be adjusted.
- **Pedal CC and Zone Controls:** Choosing any of these CC options will display the Continuous Controller Data for the chosen value. When selected, CC data can be drawn in or edited using the global cursor tools at the top left of the Grid Editor. In MIDI terms, a continuous controller (CC) is a MIDI message capable of transmitting a range of values (0-127). The MIDI Spec makes 128 different continuous controllers available for each MIDI channel. The most commonly used CC values for Superior Drummer 3 are contained already assigned and displayed here by default. All other CC values can be found under the Not assigned menu option.
 - Enable Curve: Clicking the Enable Curve allows you to draw in or edit an existing CC Curve. Alternatively the curve could be bypassed by de-selecting the Enable Curve button.



- **Choke All (Channel Aftertouch):** Aftertouch can be selected here for controlling all aftertouch on an entire MIDI channel. To edit Aftertouch manually, draw in (with the pencil tool) an aftertouch box some point in time after the instrument hit. When the playhead reaches the point of the aftertouch box the choke for that note will begin. A new aftertouch box needs to be drawn after each note. Remember that many cymbals have a choke articulation that can be added as a MIDI note to the Grid Editor to also choke the instrument.

- **Not Assigned CC and Aftertouch:** A list of all unused CC and Aftertouch values.

Its important to mention that CC data will not appear with Toontrack's Grooves. All Toontrack grooves use dedicated articulations translated from the original recorded CC data. This is done for compatibility and ease of editing. CC data would only be present from MIDI that you have recorded yourself with electronic drum kit or other MIDI controller.

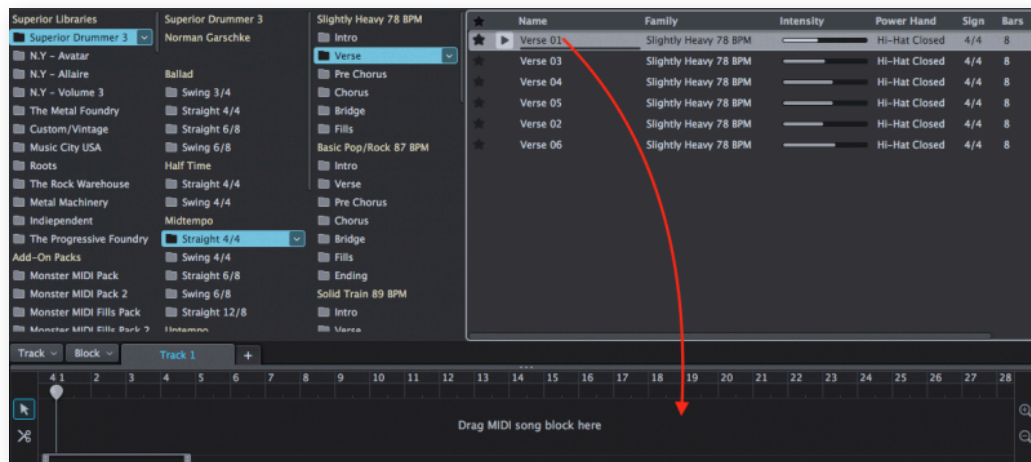
AUTOMATION

In Superior Drummer 3 CC data can be used for more than typical e-drum controls. Nearly all parameters (knobs or sliders) inside of Superior Drummer 3 can be assigned to a CC value therefore they can be automated! To assign a parameter inside of Superior Drummer 3 to a CC value simply right click the desired control and choose a CC value from the CC submenu.

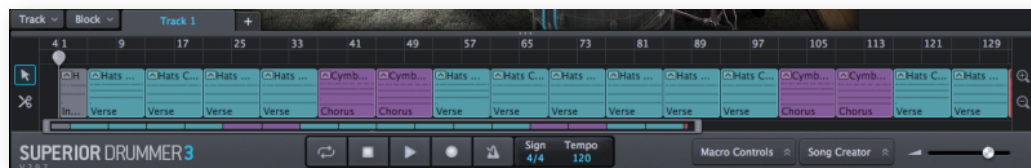
Once a parameter has been assigned to a CC value, the CC editor is where you would edit its automation. Clicking on drop down menu will display any currently assigned CC values below the preset CC values. Simply select the CC value that you want to edit and then use the pointer tools to create breakpoints.

7.4 EDITING SONG BLOCKS ON THE TIMELINE

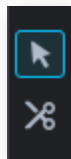
Individual song blocks can be arranged in any order that you desire on the Song Track. Song Blocks are added to the Song Track by dragging them from the grooves page (Chapter 4).



Once on the song track These grooves can be moved, cut, copied, pasted, or re-organized however you see fit.



SONG TRACK CURSOR TOOLS:



The 2 cursor tools to the left of the Song Track allow you to cut and move song blocks. The Arrow tool will be the most commonly used, and it allows you to select an move song blocks. Further if you move to the edge of a Song Block with the arrow tool selected, the cursor will change do a double arrow that allows you to shorten or extend any Song Block on the Song Track.

The Scissor tool allows you to cut/segment Song Blocks on the Song Track.

ZOOMING:



Zooming can be accomplished by clicking the magnifying glass icons to the far right of the Song Track. It can also be done by holding down the Option/Alt key and using the mouse wheel.

7.5 SONG CREATOR

The Song Creator allows you to create a complete drum track based on a chosen source file (Groove) with just a few mouse clicks.

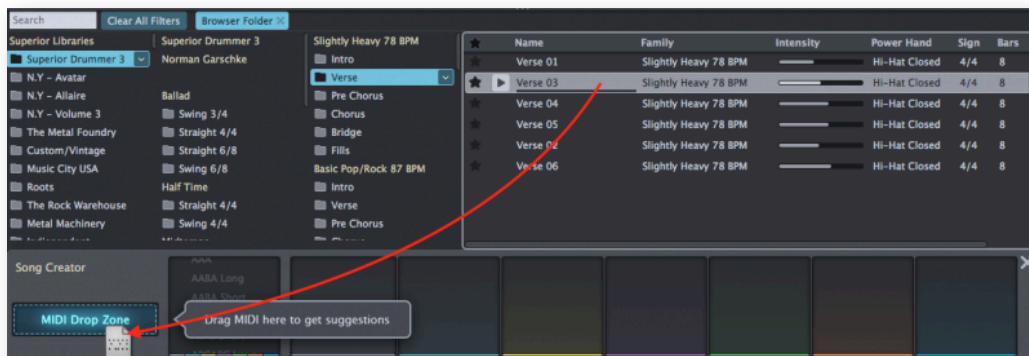
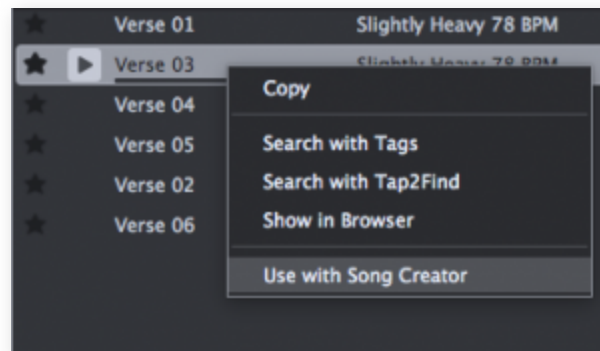
SHOWING/HIDING:

To open the Song Creator window, click the Song Creator button below the Song Track. The Song Creator window opens as an extension of the Song Track. To hide the Song Creator click the “X” in the upper right corner, or again click the Song Creator button.

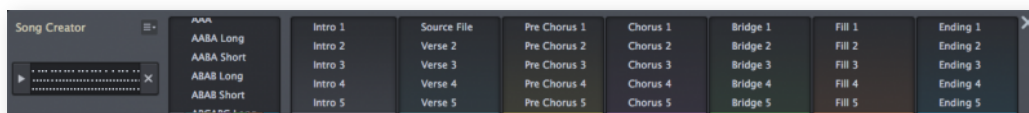


CHOOSING A SOURCE MIDI FILE:

The Song Creator works by analyzing a given groove (or source MIDI) and based on that groove it instantly presents multiple variations categorized into song parts. To specify which groove is used as the source MIDI, you can drag it to the MIDI drop zone from the Song Track, or Grooves tab. It is also possible to right-click any MIDI file and choose “Use with Song Creator.”



Once you have specified a source file you will be presented with groove variations divided into columns sorted by song part (Intro, Verse, Chorus etc.), all based on the originally selected groove. The source file itself will appear in the section of its original classification from the Grooves Tab.

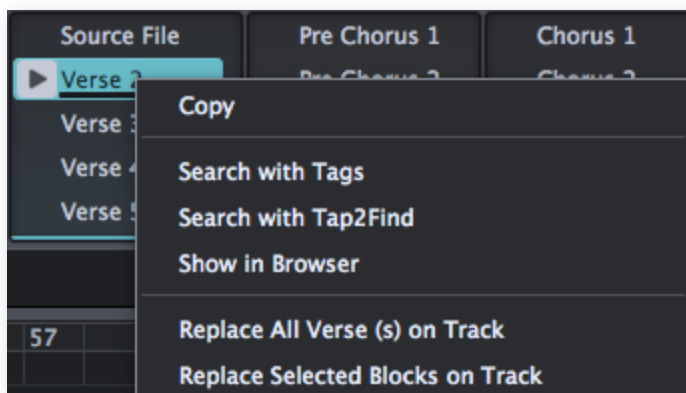


You can audition any groove by selecting it in the Song Creator. If it's suitable, drag it to the Song Track. Using this method you

can quickly build up a complete drum track.

SONG CREATOR CONTEXTUAL MENU (RIGHT CLICK SONG PART):

Right clicking on any of the Grooves in the Song Creator will bring up a contextual menu with a few useful options.



- **Copy:** This copies the Groove so that it can be pasted at a later time.
- **Search with Tags:** This option will use tags from the

metadata of the MIDI file to find it in your browser.

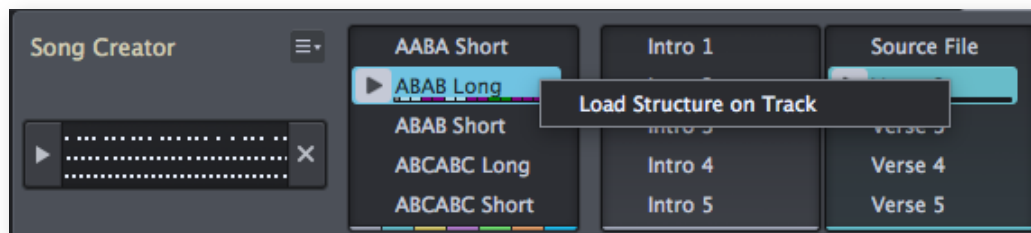
- **Search with Tap2Find:** This option will import the MIDI file into Tap2Find so that you can search for other grooves that are similar.
- **Show in Browser:** This will show you where the groove is located in the browser section of the Grooves page. Please note that this option will only work if you own the MIDI pack from which the song block originated.
- **Replace All “...” on Track:** This will swap all existing grooves of the same song part with the new selection on the Song Track.
- **Replace Selected Blocks on Track:** This requires that grooves are selected on the Song Track. The selected blocks will then be replaced with the newly chosen groove in the Song Creator.

USING SONG STRUCTURES:

Instead of dragging groove by groove from the Song Creator columns to the Song Track, you can complete an entire drum track even quicker by using Song Structures.

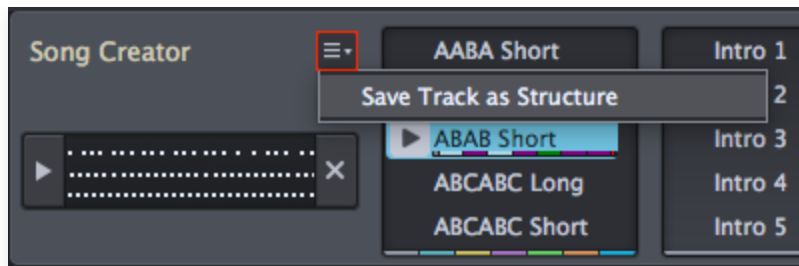
Several pre-made Song Structures are available from the list on the left in the Song Creator window. These are based on commonly used song structures where A, B and C represent verse, chorus and bridge, respectively. Additional song elements such as intro, ending and pre chorus may also be part of a structure.

You can load a Song Structure to the Song Track by using the right click context menu or by simply dragging it onto the Song Track.

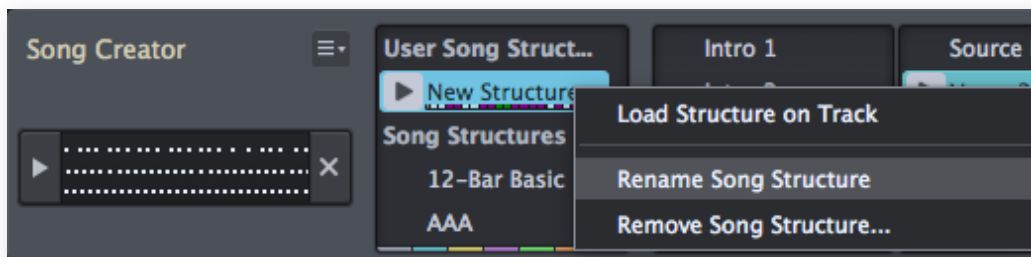


SAVING USER SONG STRUCTURES:

If you have built a complete drum track, for example by dragging grooves from the Song Creator columns to the Song Track, you can save its structure as a User Song Structure in the Song Creator menu. Note that no MIDI is saved by this function, only the order and lengths of the song elements. The structure can then be used with any Source MIDI file to create new songs.



User saved Song Structures can be loaded, renamed, or removed by right clicking them.



7.6 THE TRANSPORT

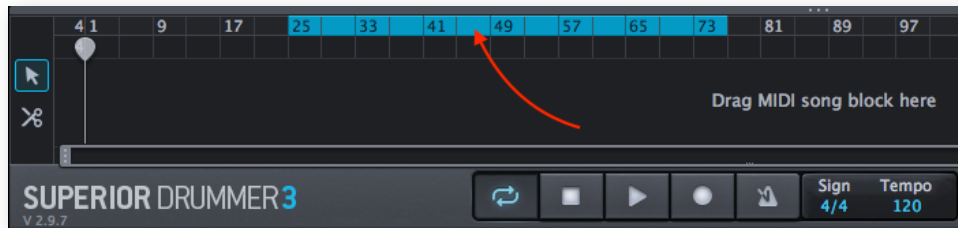
The Transport, located at the bottom of Superior Drummer 3 controls the Song Track and the master tempo of grooves in the Grooves Tab. The following will provide a description of each control.



- **Follow Host:** This is only available when Superior Drummer 3 is used as a plug-in in a host application (DAW). When activated, the Superior Drummer 3 transport will follow the hosts transport/tempo. If you copy (or drag and drop) the contents of the Song Track to a track in your host program,

Follow Host should be deactivated. Otherwise, each note would be triggered twice, once by the host application and again by Superior Drummer 3's Song Track.

- **Loop:** This Turns on the loop area for the Song Track. The loop area can be set by changing the duration of the blue loop area above the song track.



- **Stop:** This stops the playback of the Song Track.
- **Play:** This starts playback on the Song Track.
- **Record:** This function allows you to record any incoming, or internal MIDI to the song track. This includes MIDI from a connected MIDI controller or incoming MIDI from a DAW.
 - The Song Track follows the MIDI merge functionality meaning that new incoming MIDI can be recorded over existing MIDI. This makes it easy to record one single instrument at a time.
 - All recorded MIDI can also be quantized by right clicking the recorded groove and selecting Quantize.
 - Both Edit Play Style and the Grid Editor can be utilized with user recorded MIDI.
- **Metronome On/Off:** This turns on the metronome. The metronome will follow the changing time signatures if time signatures changes have been added.
- **Time Signature:** Clicking on the time signature will allow you to select a different time signature for the song track. If time signature changes have been made, the newly selected time

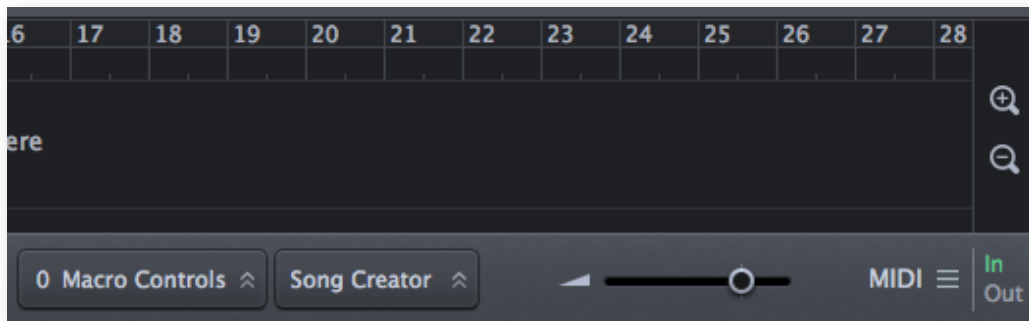
signature will effect the time signature region that the play head is currently inside.

- Right clicking on the time signature in the transport provides the option to show the previously discussed Time Signature editor.
- **Tempo:** This sets the tempo for the song Track. Double clicking on the number will allow you to input a specific value. Right clicking on the tempo number will bring up the tap tempo icon, which allows you to click a tempo in with your mouse.



7.7 MIDI IN / OUT MENU AND INDICATOR

In the bottom right corner of the Superior Drummer interface is the MIDI Menu, and In/Out Status.

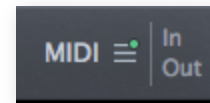


Incoming or outgoing notes will illuminate the "In" or "Out" status indicators in the bottom corner. Please note that MIDI Output is ONLY possible when Superior Drummer 3 is used from inside of

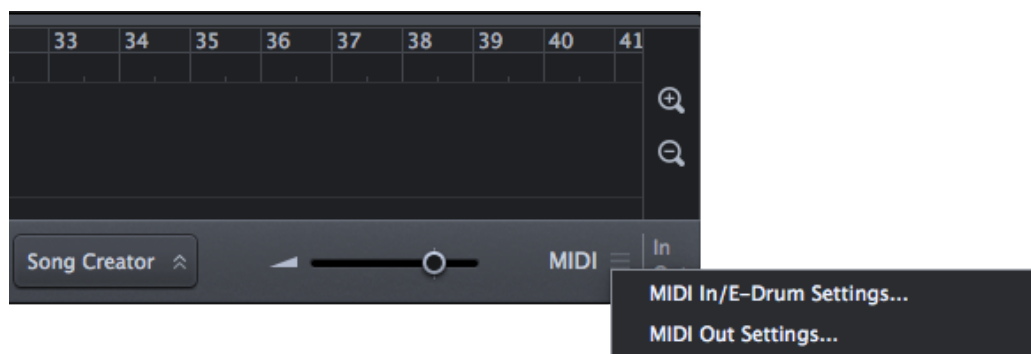
a host DAW. MIDI In is possible with Standalone or DAW operation.

MIDI MENU

Clicking the three line icon will open a menu that provides quick links to the MIDI In / E-Drum



Settings, or the MIDI Out settings option. MIDI In / E-Drum Settings is described in chapter 9.3.5, and MIDI Out is described in 9.3.1. If a MIDI In/E-Drums Preset is selected it will be indicated by a green dot on the menu icon.



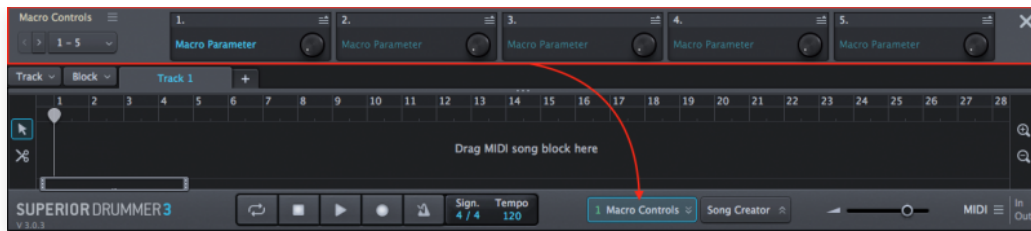
8. MACRO CONTROLS

Macro Controls are accessed by clicking the button in the bottom right of the interface. The Macros provide a way to control multiple parameters in Superior Drummer 3, that you specifically choose, with a single knob. Nearly anything in Superior 3 that has a slider, fader, or a knob can be assigned to a macro. This includes nearly all controls in the Property Boxes, Effects in the mixer, channel faders, pan sliders, bleed level controls in the mixer... and more! Macro's also allow for automation in your DAW, meaning that now any control in Superior Drummer 3 that can be assigned to a Macro can also be automated with your host DAW.

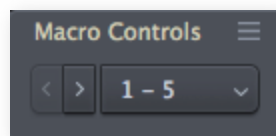
8.1 SHOW & HIDE

Show: To view the Macro Controls click the macro button at the bottom right of the interface as seen below.

Hide: To hide, either click the x in the top right of the Macro window, or again click the Macro Controls Button at the bottom of the interface.



There are 100 Macros included in Superior Drummer 3. These can be shown in banks of 5 with the show button to the left of the Macro interface. Presets that include a Macro will automatically open the Macro Controls upon selection of the preset. The number of used Macro's will also be displayed to the left of the Macro Controls button (this can be changed in Settings). A shortcut to the Macro Settings option is available in the three line menu icon shown below.

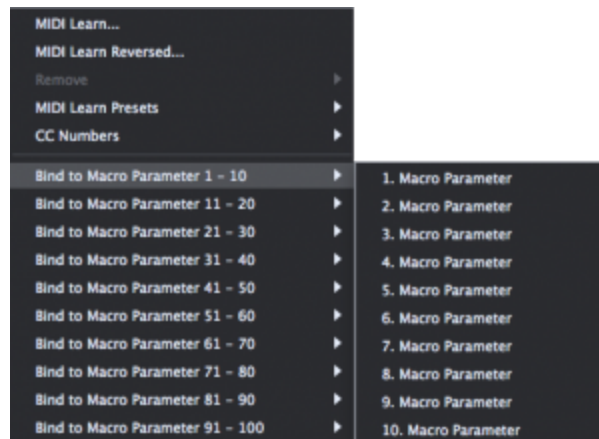


8.2 BINDING CONTROLS TO A MACRO

Almost all of the controls in Superior Drummer can be bound to the macros. This includes controls in the property boxes, the transport, effect controls, Mixer faders, bleed levels... and so on. Again, binding controls to a Macro allows you to manipulate multiple controls at one time with a single knob. This Macro knob can also be automated in your host DAW.

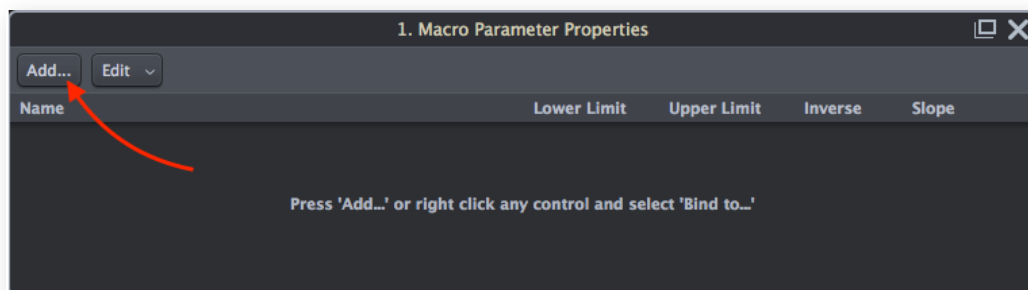
There are 2 ways to bind a control to a Macro.

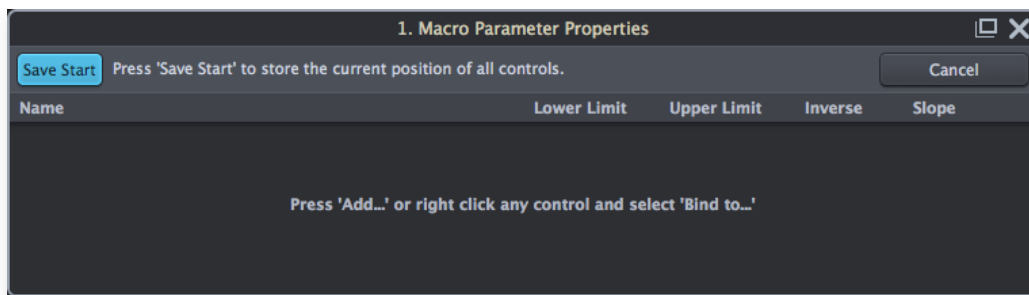
- Right click the control and click bind to macro, then choose a specific macro.



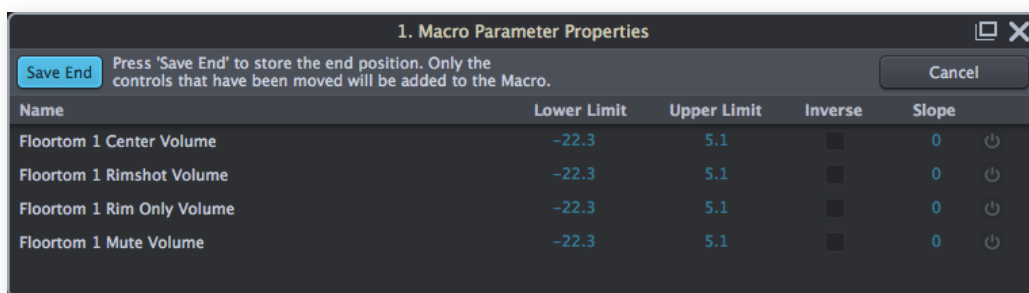
Select the specific macro knob # that you would like to bind.

- Open the Macro properties and click Add. Then move the control(s) that you want to bind to the Macro to the position that you believe should be its starting value. Next click, Save Start and move the the control(s) to the position that you believe should be the ending value and click Save End.

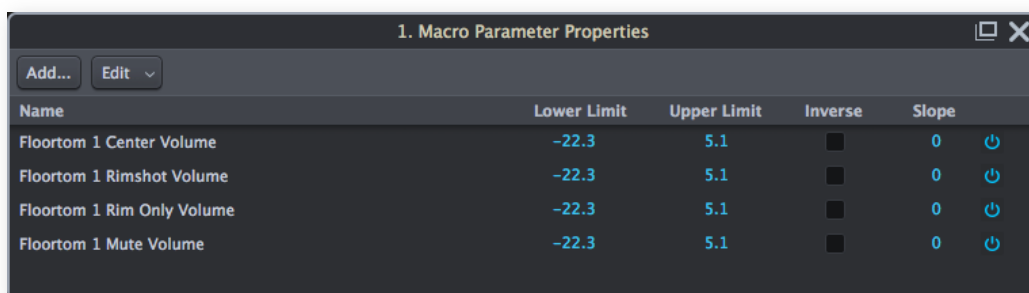




- Next click, Save Start and move the the control(s) to the position that you believe should be the ending value and click Save End.



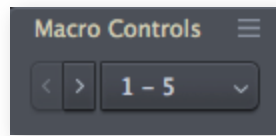
- All moved controls will now be bound to the macro with the limits that you set.



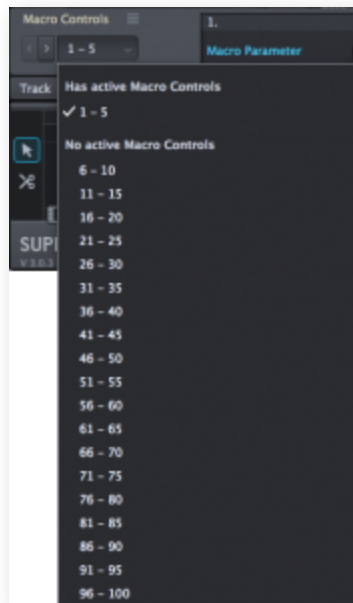
8.3 THE MACRO INTERFACE

Starting in the Top Left of the Macro window is the Show selection. There are 100 total macro's and this area allows you to

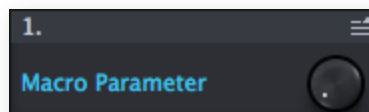
show them 5 at a time. The menu icon provides a quick link to the Macro Settings.



Active Macros are displayed at the top of the list.

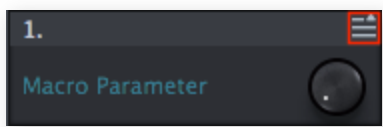


Macro Parameter: Each Macro has a Macro Parameter knob. This knob globally controls every single aspect that was bound to the macro, either by increasing or decreasing its effect. It is also the parameter that can be automated in your DAW. Active Macros are displayed with bright blue text.



Clicking on the Name "Macro Parameter" will allow you to rename the Macro to anything that you choose.

Macro Parameter properties: The small menu in each macro opens the Macro Parameter Properties window. This is where you can view all of the members of the macro, edit their range, or add additional members to the macro with the Add / Record method (described above). The Macro Parameter Properties window can also be detached for easier viewing by clicking the overlapping rectangle icon.



Clicking this button will open the Macro Parameter Properties window shown below.

1. Macro Parameter Properties					
Add... Edit					
Name	Lower Limit	Upper Limit	Inverse	Slope	
Snare Center Reverse Time	0.00 ms	2000 ms	☐	0	
Snare Rimshot Reverse Time	0.00 ms	2000 ms	☐	0	
Snare Sidestick Reverse Time	0.00 ms	2000 ms	☐	0	
Snare Rim Only Reverse Time	0.00 ms	2000 ms	☐	0	
Snare Mid Center Reverse Time	0.00 ms	2000 ms	☐	0	

In this picture the slider in the Reverse Property box has been bound to the snare drum for all articulations of the instrument.

When a control in Superior Drummer 3 is bound to a macro, opening the properties will display the bound controls name/articulation, along with its lower limit, upper limit, inverse, and slope options.

Name: Displays the Name of the control that is bound to the macro along with its articulation.

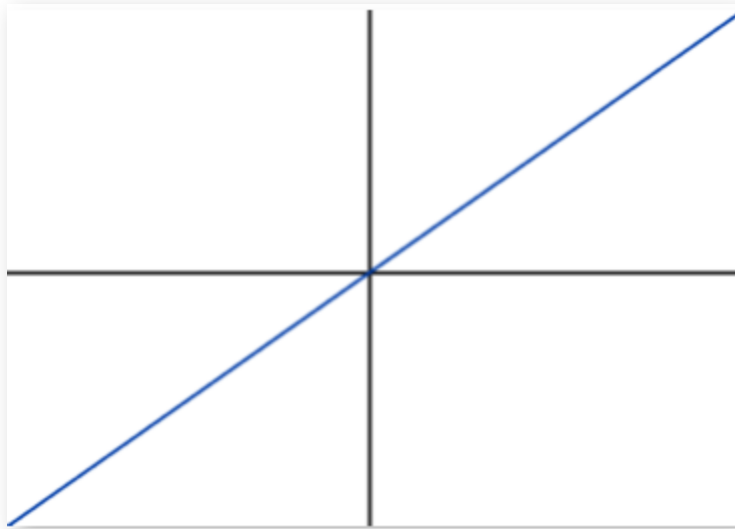
Lower Limit: The lowest point to which a setting of 0% on the macro knob will lower the bound control.

Upper Limit: The highest point to which a setting of 100% on the Macro knob will raise the bound control.

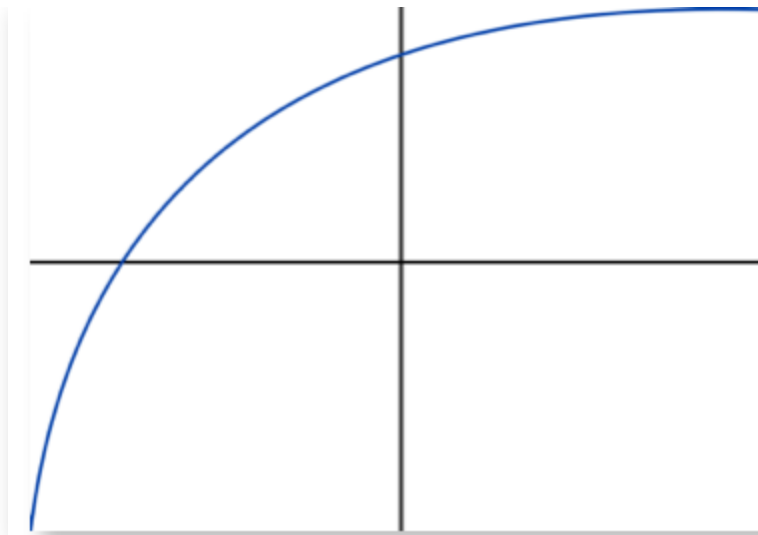
Inverse: Clicking this will swap the Upper and Lower limits.

Slope: A variable control that changes the rate at which turning the macro knob will transition the bound member of the macro from its lower limit to its higher limit.

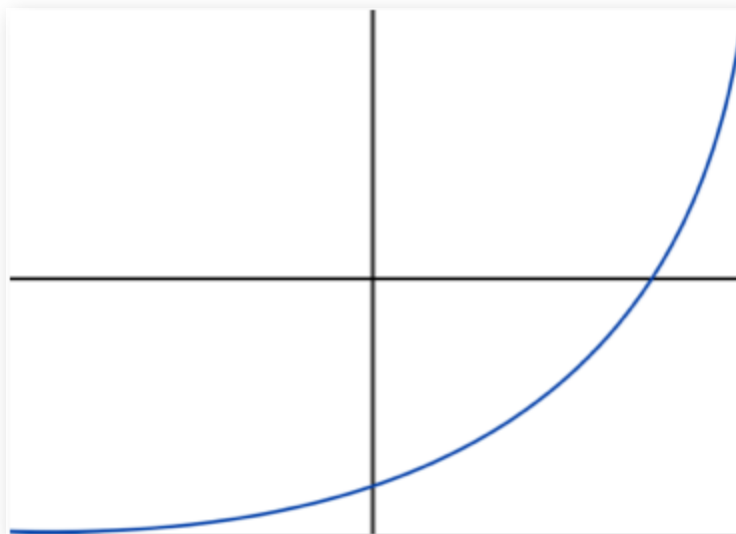
The slope control can be moved from -100 to 100.



This picture shows a graphical representation for a slope of 1, where a change on the Macro Knob results in an equal change on the bound control.



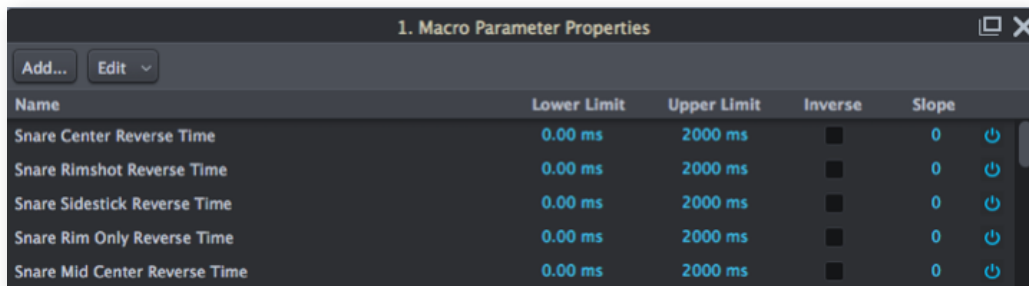
This picture shows a graphical representation for a slope of -100. Here small changes in the macro knob result in large changes at first, but then much smaller changes near the end of the knobs range.



This last picture shows a graphical representation for a slope of +100. Here large changes in the macro knob result in small changes at first, but then much larger changes near the end of the knobs range.

8.3.1 BINDING PROPERTY BOX CONTROLS TO MACROS

It's important to mention that if you select an instrument on the Drums Tab and then bind controls from the Property Boxes to a macro all articulations for that instrument will be bound to the macro. In the picture below the snare has been selected and the Reverse Time control in the reverse Property Box has been bound to Macro 1. As you can see all articulations for the snare appear in the list because the instrument was selected as a whole (i.e. All Articulations)



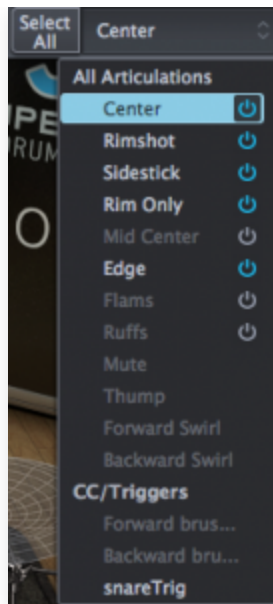
Name	Lower Limit	Upper Limit	Inverse	Slope	
Snare Center Reverse Time	0.00 ms	2000 ms	☐	0	⏻
Snare Rimshot Reverse Time	0.00 ms	2000 ms	☐	0	⏻
Snare Sidestick Reverse Time	0.00 ms	2000 ms	☐	0	⏻
Snare Rim Only Reverse Time	0.00 ms	2000 ms	☐	0	⏻
Snare Mid Center Reverse Time	0.00 ms	2000 ms	☐	0	⏻

If instead you would only like to bind a single articulation to a macro that effects a property box you must do the following:

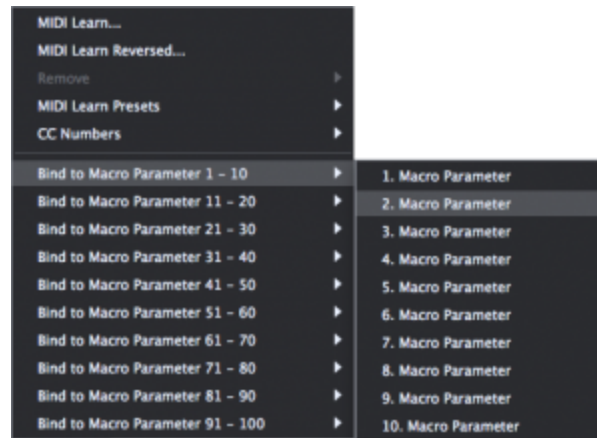
1. Select the instrument.



2. Select the articulation from the articulations menu (Drums Tab).



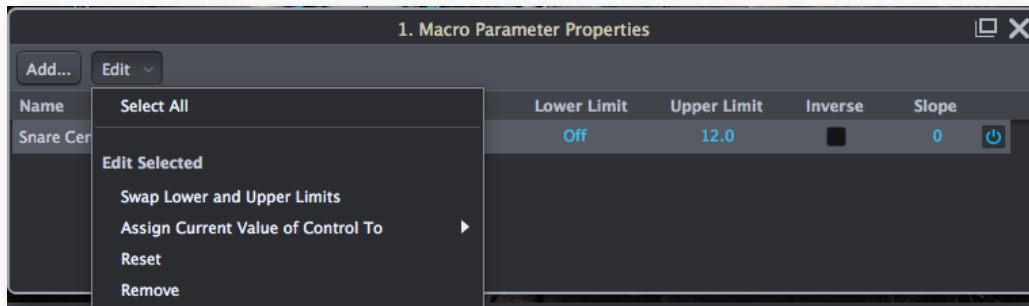
3. Right click the property box control and bind it to the macro of your choice.



***Please note that the above only applies to binding selected instruments to Macros that control Property Box attributes. When binding other controls to macros (outside of the property boxes) selecting an articulation is unnecessary.

8.4 EDITING MACRO PARAMETER PROPERTIES

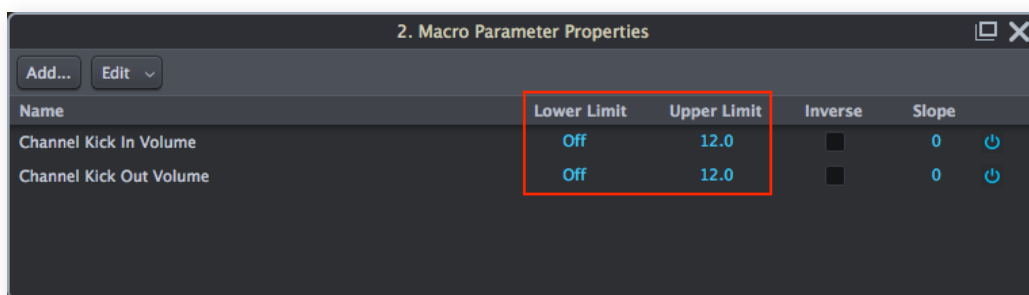
Edit Menu: The Edit menu found in Macro Parameter Properties, provides a host of useful options for altering a macro.



- **Select All:** This option will select all members of the macro.
- **Swap Lower and Upper Limits:** This option switches the lower and the upper limit which will reverse the behavior of the macro.
- **Assign Current Value of Control to Upper or Lower Limit:** This option allows you to define an operating range for the macro. Please see the next section "Assign an Operating Range" for a detailed description.
- **Reset:** This will reset all selected values to their default.
- **Remove:** This will remove the selected member from the macro. If you would like to remove all members first click Select All, then click Remove.

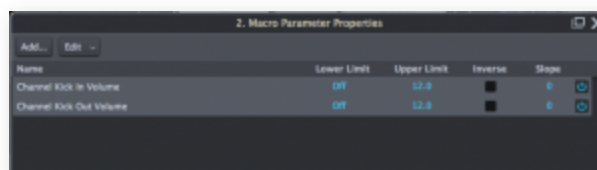
8.4.1 ASSIGN THE OPERATING RANGE FOR A MACRO

As soon as a control is bound to a Macro you will notice that moving the Macro knob also makes the bound controls knob move. The default range for this movement is the minimum setting for the bound control to its maximum setting. If however you would like to change the range in which the bound control can move this is possible inside the Macro Parameter Properties window with the lower and upper limits.



The following will describe how to assign a custom operating range for a control that is bound to a Macro:

1. Add a control to a Macro. In this example I have added the Kick In, and Kick Out faders in the Mixer Tab to Macro 2.
2. Select the desired member of the macro. In this case both members of the macro are desired so I have shift clicked on them both to select them in gray.



3. Move the Control that is bound to the macro to the minimum desired value. Then click Edit > Assign current value to > Lower Limit. In the picture below you can see that the 2 kick

drum faders have been lowered and Edit > Assign Current Value of Control To > Lower Limit has been selected.



4. Repeat this step for the upper limit by raising the bound control to the highest amount desired and then setting its upper limit in the Macro Parameter Properties.

8.5 AUTOMATION

Macro Controls are the only parameters in Superior Drummer 3 that can be automated by your host DAW. However, due to the fact that almost all controls in Superior Drummer 3 can be bound to a Macro, it also means that these controls can be automated through the use of a Macro. This has the added benefit of allowing the user to easily organize the parameters that they would like to automate, instead of scrolling through the endless list total parameters in your DAW's automation window.

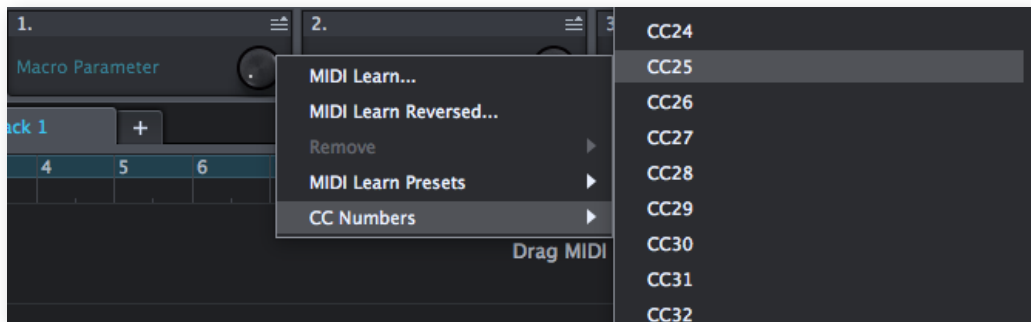
Creating DAW automation is completed differently in each one of Toontrack's supported host DAW's, but the first step is to bind the desired parameter to a Macro. Then in your DAW, navigate to the automation window and choose the desired Macro from Superior Drummer 3. If you have renamed the Macro in the

Superior Drummer 3 interface it will appear with it's custom name.

Further instructions on automation for your specific DAW can be found in your DAW's manual.

INTERNAL AUTOMATION:

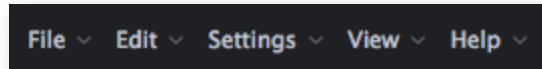
Macro's (like all other controls that can be assigned to a CC value) can be automated directly inside of Superior Drummer 3 via Continuous Controller messages. To assign a Macro to a CC value simply right click the Macro Knob and then choose a CC value from the sub menu.



The process of editing CC value Automation is outlined in chapter 7.3.2 The Grid Editor, as editing CC values is accomplished in the Grid Editor.

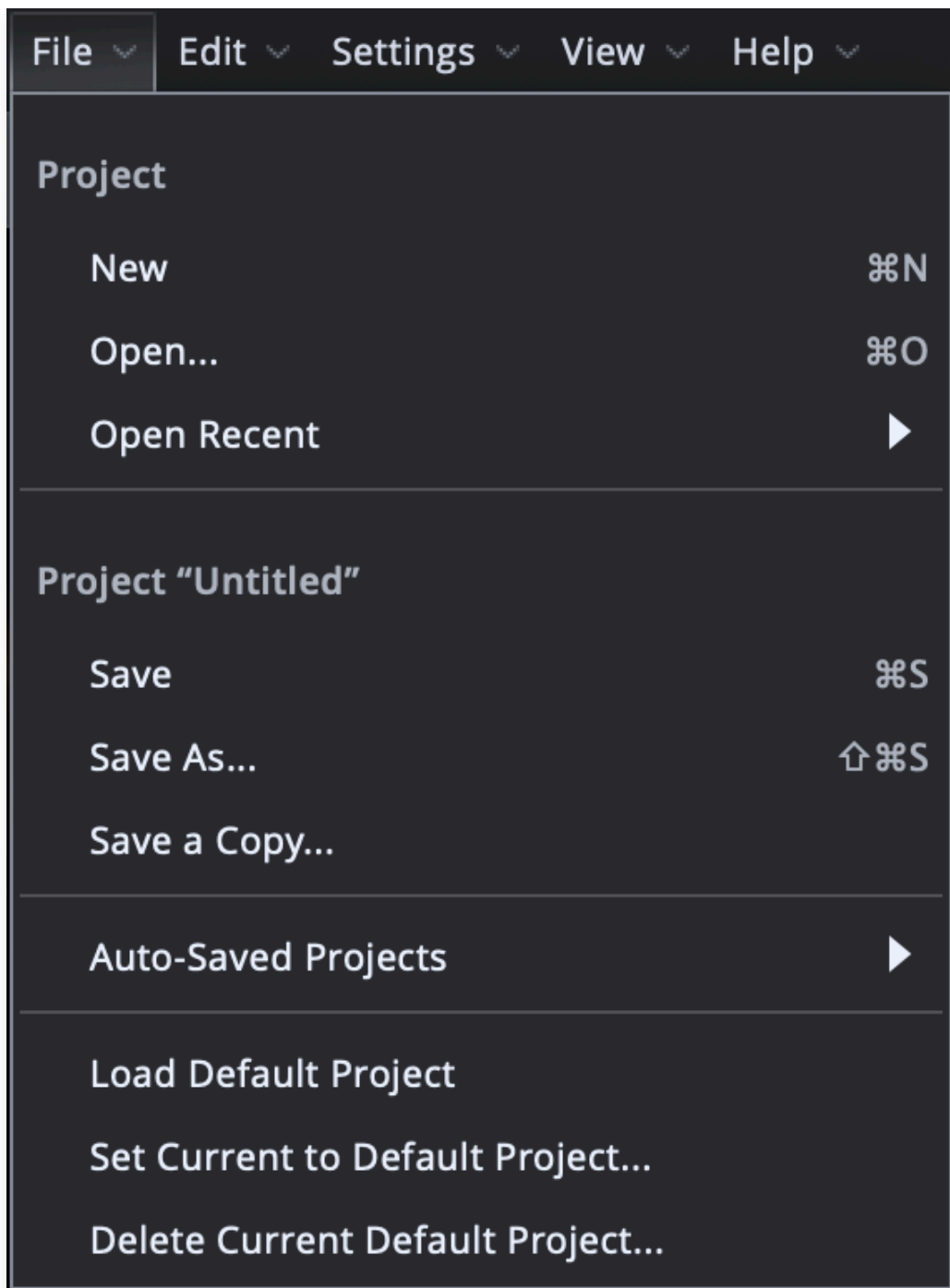
9. GLOBAL MENUS

The Global menus in the top left of the Superior Drummer 3 interface are available in all tabs, and offer control over various features within the software as a whole.



9.1 THE FILE MENU

The File menu offers options related to projects.



- **New:** This option will create a new Superior Drummer 3 project that uses the same sound library that you currently have loaded. Projects can be saved and opened even when Superior Drummer 3 is launched in a host DAW.
- **Open Project:** Choosing this will allow you to open a previously saved project.

- **Open Recent:** This option shows a list of recently opened projects for quick access.
- **Save Project:** Save the current state of Superior Drummer 3 to the existing project file.
- **Save As:** Save the current state of Superior Drummer 3 in a new Superior 3 project file.
- **Save a Copy:** This will duplicate the current project and save the duplicate in your chosen location.
- **Auto-Saved Projects:** This sub-menu contains your auto-saved projects with a distinction between auto-saves saved in the current host and in other hosts.
- **Load Default Project:** This will load the project that was saved by selecting Set Current to Default Project.
- **Set Current to Default Project:** This option sets the current state of Superior Drummer 3 as the default when a new project is created, or Superior Drummer 3 is opened. This includes the drums that are chosen, mixer levels, etc.
- **Delete Current Default Project:** Clear the default project so that the original factory default project is used when launching Superior Drummer 3.

SUPERIOR DRUMMER 3 PROJECT FILES

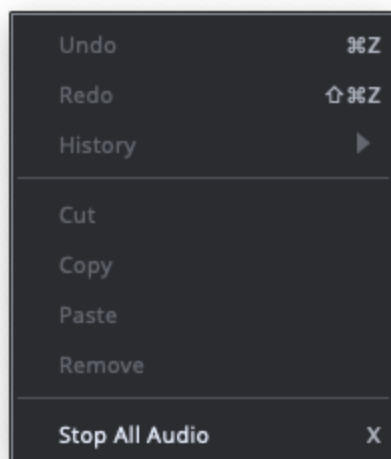
Projects saved from the file menu include essentially everything that you see in all of Superior Drummer 3's tabs. This includes items that an SD3 Preset (loaded from the Presets selection menu) would not. Saved in an SD3 Project are the following:

- Drums selected / Bleed Levels
- Property Box States
- Macro Controls
- Song Track

- Groove Tab filters
- Selected grooves
- Edit Play Style State
- Grid editor adjustments
- Mixer Tab (including all effect settings and levels).
- Mixer Visibility
- Tracker Files
- All Tracker Settings
- Global settings and window sizes/scale
- 16-bit state
- Cache mode
- Master Volume
- Bounce Volume
- MIDI learn

9.2 THE EDIT MENU

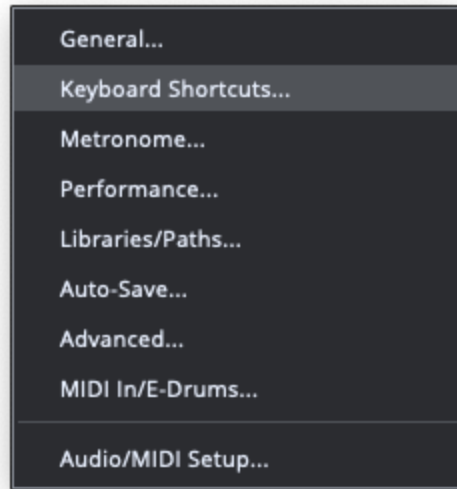
The Edit menu contains useful options for editing song blocks on the song track.



- **Undo:** Reverses the last action performed.
- **Redo:** Undoes the last undo.
- **History:** Lets you go back to an earlier stage of your editing.
- **Cut:** Removes the Song Block from its current location and copies it to the clipboard.
- **Copy:** Creates a duplicate of the song block in the clipboard for pasting at a later time.
- **Paste:** Adds the cut or copied Song block to the location of the play head in the song track.
- **Remove:** Deletes the selected song block from the Song Track.
- **Stop all audio:** Stops all playing audio in Superior Drummer 3 from any tab.

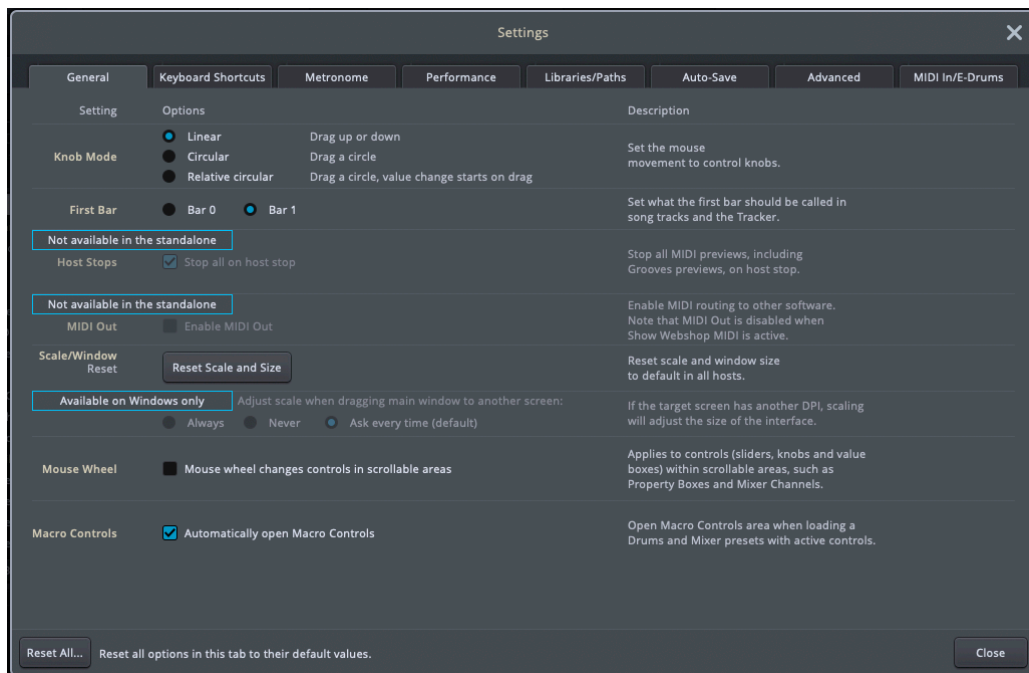
9.3 SETTINGS

The Settings menu is divided into sub-categories that correspond to specific areas of operation for Superior Drummer. Clicking any one of these options will bring you to the specific tab of the settings window that you've chosen. The following will offer an in depth description of each tab in the Settings window.



9.3.1 GENERAL SETTINGS TAB

As the name implies, the General Tab of the settings window offers general workflow options for Superior Drummer 3.



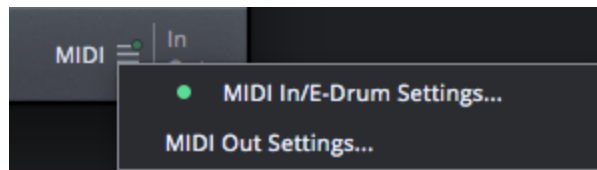
Knob Mode: Provides the option to control how all knobs in Superior Drummer 3 operate.

First Bar: This controls both the Song Track, and the Tracker Tab. Here you have the choice to start at bar 1 or 0 (for compatibility with hosts that use bar 0).

Host Stops: Checking this option will stop all MIDI playback in Superior Drummer 3 when the host stops. This only applies to Superior Drummer 3 when it is launched as a plugin in your host DAW therefore, it is not available in the Superior 3 stand alone application (as seen in the picture above).

MIDI Out: Checking this option allows MIDI to be sent from Superior Drummer 3 to other software that is also launched in your host DAW. This option is intended to be used inside of a host DAW with multiple software instruments launched, therefore is not available in standalone. It is useful if you would like to send MIDI from Superior Drummer 3 to other virtual instruments launched in your DAW. Additional routing will be required inside of your DAW in order to complete the process.

A MIDI Out Menu and signal indicator is also present in the bottom right corner of the Superior Drummer 3 interface. Here you can choose to view the MIDI In / E-Drums settings page (described in chapter 9.3.5) or open the MIDI out settings (described above).



Scale and Window: Clicking the reset button here will reset the size and scaling for all versions of the Superior Drummer 3 plugin in all of your available hosts. Additionally a few clearly described Windows only options are available.

Mouse Wheel: This gives you the option to allow your mouse wheel to change values within Superior Drummer 3. When un-selected the mouse wheel will not have any affect on the SD3 controls.

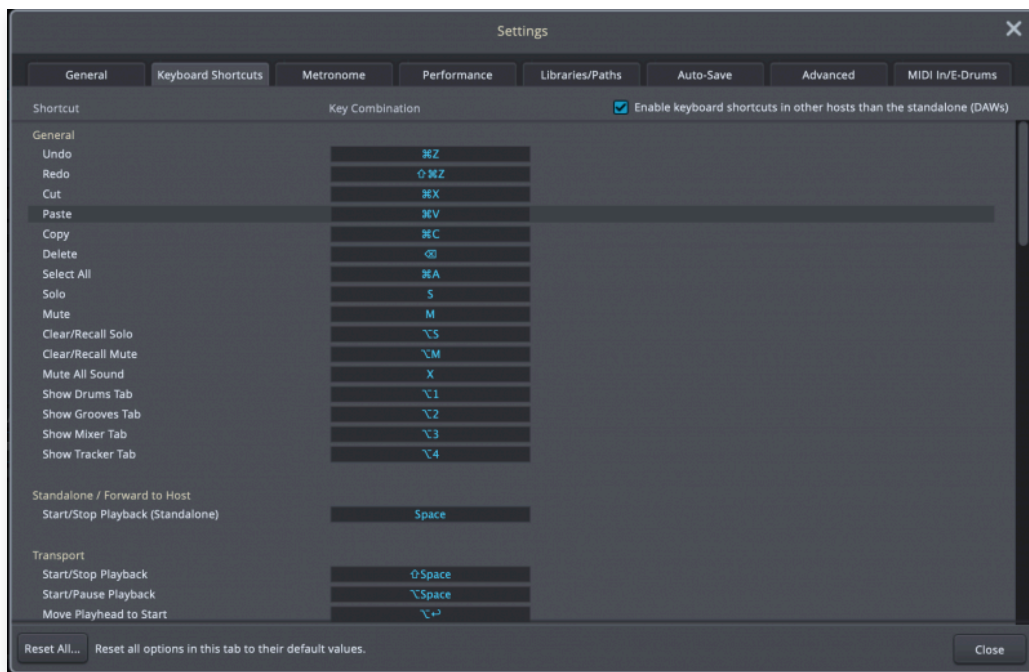
Macro Controls: Selecting this option will automatically open the Macro controls upon loading a preset that uses them.

Reset All: This will change all settings back to their default.

9.3.2 KEYBOARD SHORTCUTS

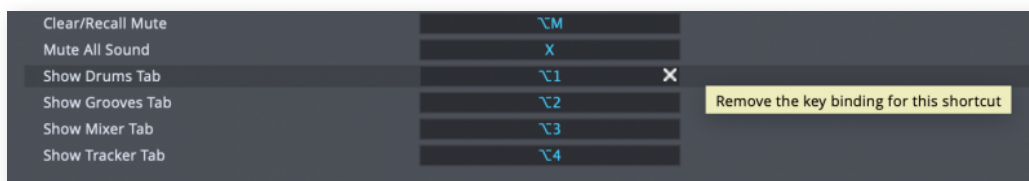
The Keyboard Shortcuts tab provides a customizable guide to all of the available shortcuts in Superior Drummer 3.

By default key commands are enabled in all hosts that can use Superior Drummer 3 as a plugin (DAW's). However there may be instances where Superior Drummer 3's keyboard shortcuts duplicate those in the host. In this case you can either disable keyboard shortcuts in SD3 by unchecking the box pictured below, or create your own custom keyboard shortcuts that do not interfere with the host.



Editing Keyboard Shortcuts:

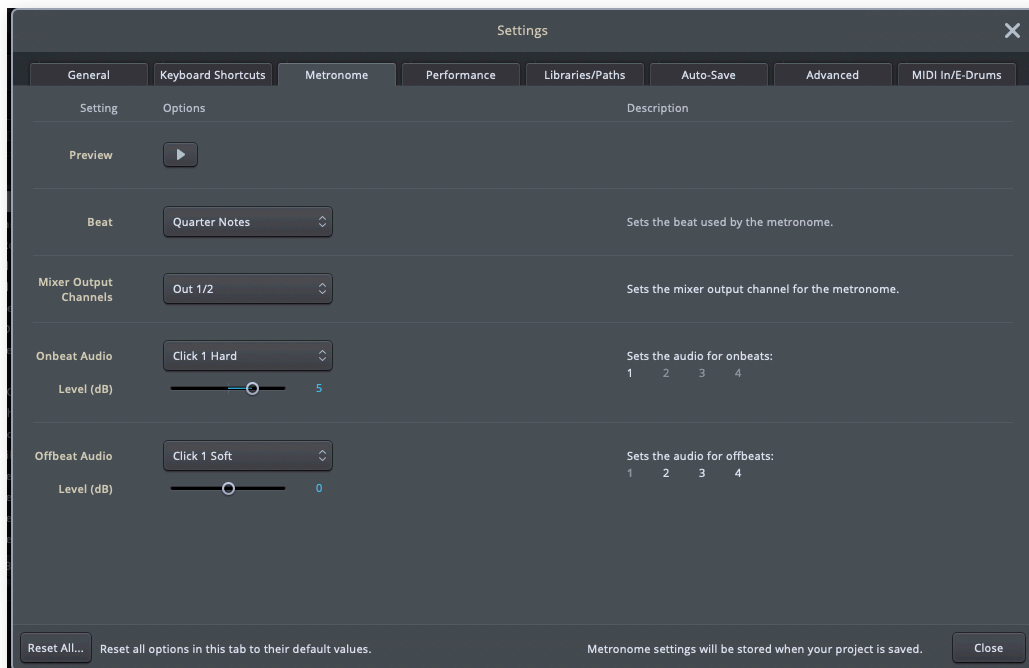
- Remove Shortcut:** Hovering over a keyboard shortcut will reveal an X in the right corner of the shortcut. Click the X to remove the shortcut from Superior Drummer 3. This could be done if you simply want to remove a shortcut that interferes with your host, or one that you do not want to accidentally trigger.



- Change Shortcut:** Clicking on a shortcut will prompt you to type in a custom key combination that will then be used for the desired action.
- Reset all:** Use this option to change all keyboard shortcuts back to their factory default settings.

9.3.3 METRONOME SETTINGS

The Metronome Settings page provides useful options for controlling the behavior of the metronome. The Metronome on and off button is located in the Transport at the bottom of Superior Drummer 3.



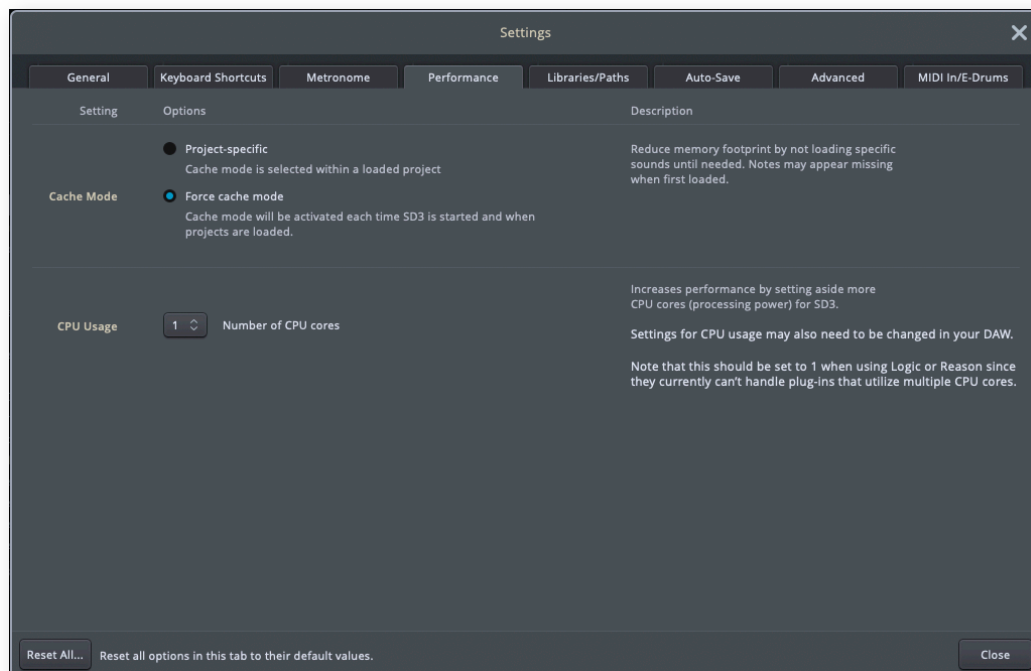
- **Preview:** Allows the user to check the sound and level of the Metronome.
- **Beat:** Provides options for the beat used by the Metronome. *Its often useful to set to 1/8th or 1/16th notes when slow tempos are used.*
- **Mixer Output Channels:** This allows the user to decide the output channel for the Metronome. Very useful when SD3 is used with multiple outputs sent to a DAW. In this case you could route the Metronome to its own dedicated output in SD3 and then bring it in on an input of your DAW (for access and level directly on a DAW fader).

- **Onbeat and Offbeat Audio:** Sets the sound and level for the beats of the metronome. There are many different sounding clicks available in the drop down menu so that users can find the one that they like the best.

Like the General Tab all Metronome settings can be reset to their default values with the Reset All button.

9.3.4 SETTINGS WINDOW PERFORMANCE TAB

The Performance Tab contains options for reducing the RAM footprint of Superior Drummer 3 thereby making it use less of your systems resources.



Cache Mode: This setting provides options to control how Superior Drummer 3 uses Cached Mode. Either on a project by

project basis at the users discretion, or every time that Superior Drummer 3 is launched. Cached mode can be manually engaged in the Memory Details menu (Chapter 12).

Description of Cached Mode: A very effective way to reduce the Superior Drummer 3's memory footprint to the minimum (for any pre-programmed sequence) is the memory Caching feature. When engaged, only samples requested by the programmed MIDI sequence (either in the Song Track, or on a MIDI track in your host) will be loaded into memory. For this to be effective you must have a completed MIDI sequence on the song track or in your host. If no MIDI is sent to Superior Drummer 3, no samples will be requested, and therefore no samples will be loaded into RAM.

However, there is a side effect that should be noted. Caching introduces a delay in playback the very first time that a sound is requested (but only the first time). This will manifest itself as a temporary stuttering which will continue until samples are fully loaded into RAM. This inconvenience is a small price to pay when RAM is at a premium.

CPU Usage: This drop down menu allows you to delineate a number of CPU cores for Superior Drummer 3. Using more cores will increase Superior Drummer 3's performance to an extent. If you run a single instance of SD3 in its standalone application you can set the number of Cores to any number of cores that your computer has available. In this case you set the value and you experience the performance result.

If you run SD3 in a host DAW (and other plug-ins are also used) it's possible that your DAW will be multi-core aware too

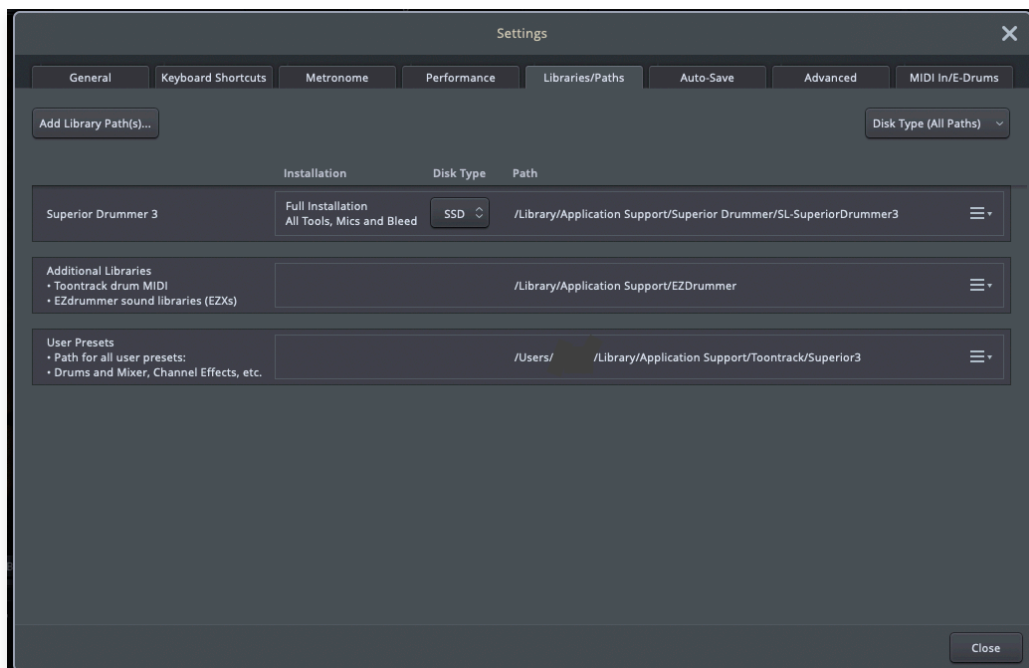
and run the plugins in parallel (one core each). If all those plugins use multiple cores themselves you *may* end up with considerably reduced CPU performance.

For Superior Drummer 3 using 2 cores generates nearly a 2X speed improvement, however the returns are diminishing (e.g. using 4 cores will not create a 4X boost). For these reasons this setting (when SD3 is used as a plugin) requires some experimentation as each user will need to decide for themselves which setting delivers the best performance.

In general CPU cores only need to be increased if you experience glitches because the CPU can not keep up. These can often times manifest themselves as audible clicks, pops and distortions. It is common to experience these types of glitches with very low buffer settings and in this instance it would be a good idea to raise the amount of CPU cores dedicated to SD3.

9.3.5 LIBRARIES/PATHS SETTINGS TAB

The Libraries Settings Tab is where you can alter, and set the installation path to your various installed Superior Drummer Sound Libraries (SDX's).



Add Library Path(s)...: This allows you to set the path to an installed Superior Drummer Sound library (SDX) in Superior Drummer 3, so that it appears in the Library Selection menu. This should NOT be used for setting paths to EZX libraries (EZdrummer Sound Libraries). Simply click this button and navigate to the SL-*(library name)* folder.

This option should only be used if you are attempting to link a previously existing installation of a Superior Drummer Sound library (SDX) to Superior Drummer 3 so that it appears in the library selection menu.

The following are examples of common situations in which you might use this feature:

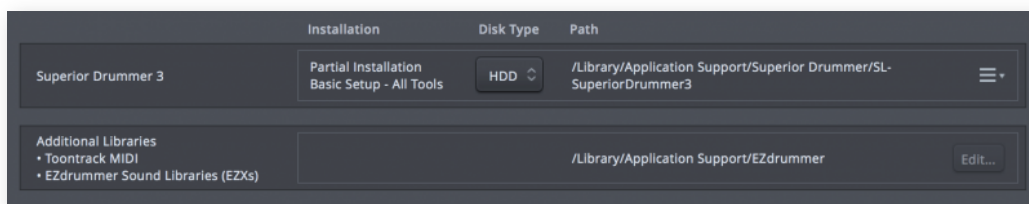
- You have purchased the Superior Drummer 3 hard drive option (where the sound library is pre-installed on a hard drive).
 - In this case, you would connect the hard drive containing the sound library(s), launch Superior

Drummer, and use the Browse for Library Path feature to link the sound library to the Superior Drummer 3 software.

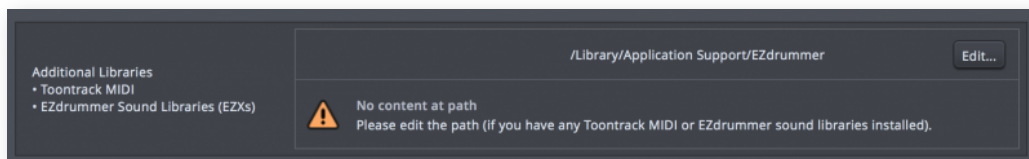
- You have installed Superior Drummer 3 on a new computer where no previous version of Superior Drummer has ever been installed. You would then like to link previous installations of your installed SDX libraries on an external hard drive to Superior Drummer 3.
 - In this case, you would ensure that the hard drive containing these libraries is connected and then use the Browse for Library Path feature to link the sound libraries to the Superior Drummer 3 software one by one.

An important note: If you are installing Superior Drummer 3 on a computer that contains EZdrummer 2 or Superior Drummer 2, there are no actions necessary for these existing sound libraries to appear in Superior Drummer 3. They will automatically appear as available libraries in the Library selection menu.

Library Paths: In the main area of this window, you will see all of the installed/linked library paths for your version of Superior Drummer 3. If Superior Drummer 3 is the only product that you own, you will only see its core library and the Additional Libraries Content Path in this area (EZdrummer Libraries and MIDI).

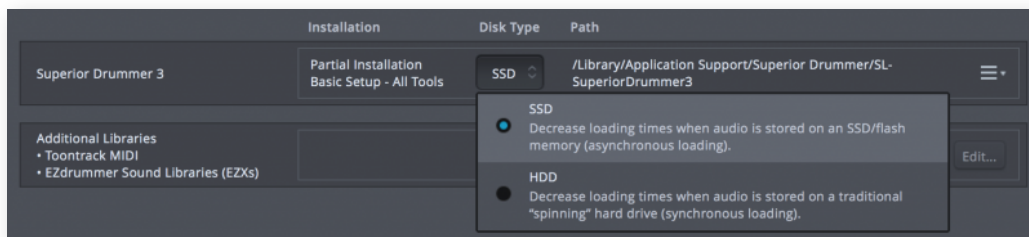


Additional Libraries: This shows the path to the EZDrummer sound libraries and the installed Drum MIDI for both EZdrummer and Superior Drummer. By default, the Edit path button will be greyed out and inactive. However, if Superior Drummer 3 can not find the libraries or MIDI files in its set path, SD3 will warn you that no content can be found, and it will prompt you to Edit the path to the content. To do this, simply click the now active Edit button and navigate to the location of this content.



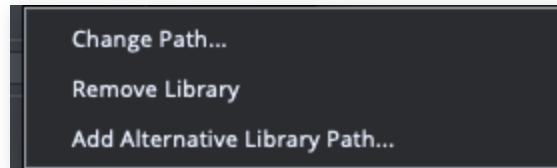
Installation: Provides information about the type of user selected installation. All SDX libraries provide size options when installing and the choices that you made at the time of installation will be displayed here.

Disk Type: This is a user selectable menu that allows you to provide Superior Drummer 3 with information about the type of hard drive on which the library is installed. Either a standard spinning HDD or a Solid State Drive SSD. Selecting the correct option for your installation drive will optimize loading times.



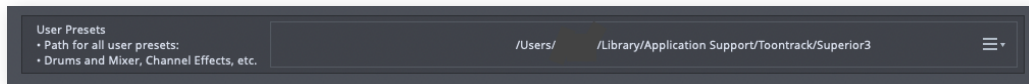
Path: This shows the operating systems path to the folder that contains the sound library.

Menu: Clicking the menu to the right of each library listing will provide you with options for that specific library path.



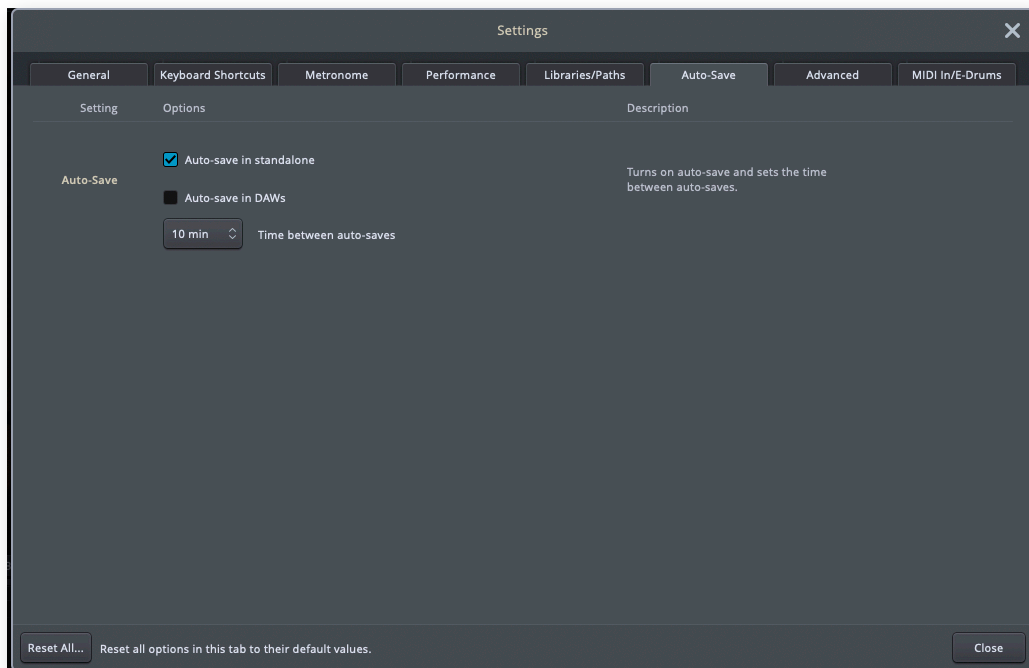
- **Change Path:** Opens an operating system window and allows you to navigate to a new path for the sound library.
- **Remove Library:** Clicking this option will remove the link to the selected library from Superior Drummer 3 so that it will not appear in the Library Selection menu. It will *NOT* delete the library files themselves, only the saved path to the files.
- **Add Alternative Library Path:** This allows you to set up a secondary path for the desired sound library. This should only be used if you have 2 separate installations of the sound library in 2 different locations.
 - For example, this option would be used if the full sound library is installed on a large external drive, but a smaller version of the sound library is installed on the computers internal drive. In this example the primary path would link to the full installation on the external drive, and the Alternative path would link to the small installation on the internal drive. Setting up your paths in this way would ensure that Superior was always able to load a version of the library even if your external drive was not connected.

User Presets: Defines the path to your saved custom drum presets as well as any mixer or channel effect settings you have created.



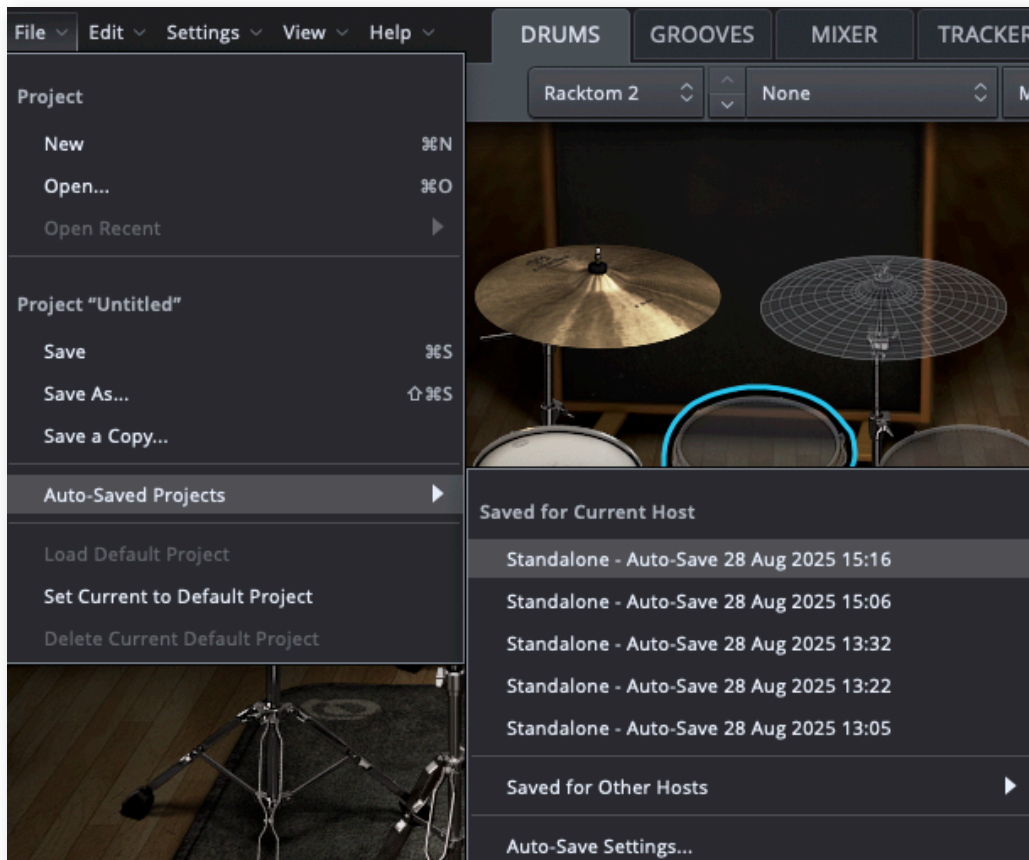
9.3.6 AUTO-SAVE SETTINGS

In the Auto-Save Settings Tab you are presented with options to control the Auto-Save behavior. And Auto-Save SD3 projects in host other than stand alone.



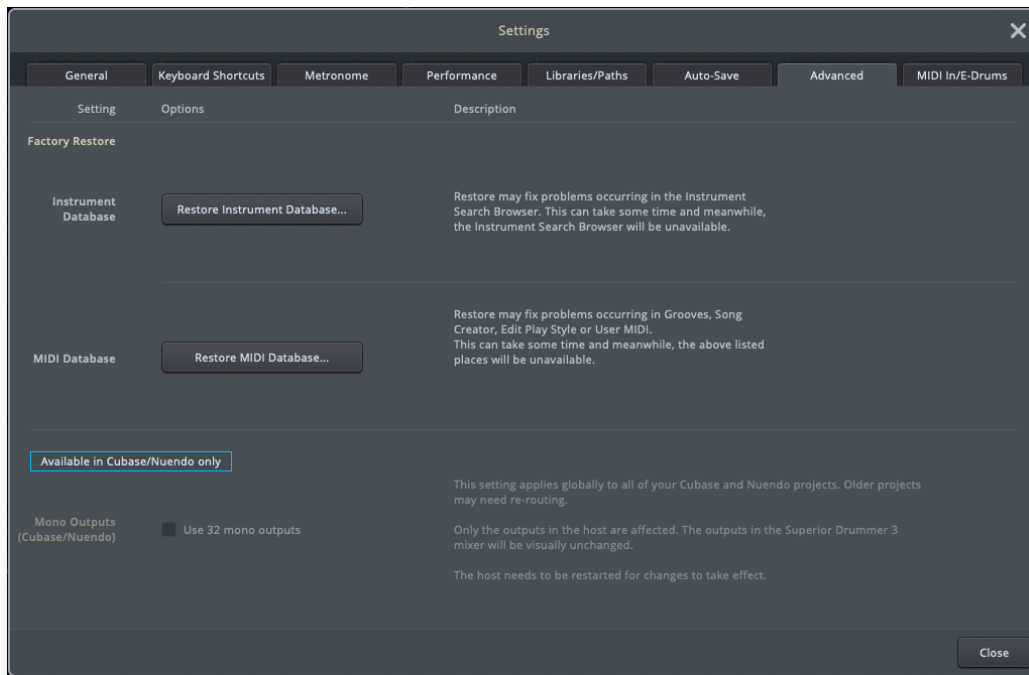
Time durations for the Auto-Save are set with the drop down menu, and like all other Settings Tabs, Auto-Save options can be reset with the "Reset All" button.

Auto-Saved projects can be accessed from the global File menu in the Auto-Save sub menu.



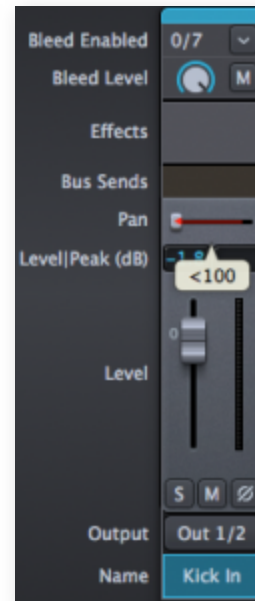
9.3.7 ADVANCED SETTINGS TAB

The Advanced tab provides options for resetting the databases of the instrument browser and MIDI browser. The database options should only be used if you encounter a problem with the Search Instrument window or the Search functions in the Grooves Tab.



Additionally a Mono all Outputs option has been created specifically for use within Cubase projects. Clicking this option will allow you to access individual mono outputs (1-32) instead of 16 stereo outputs.

In order for mono channels inside of the Superior Drummer 3 mixer (such as the Kick In channel) to be output to a single mono output in Cubase, they must be panned hard left or right. For instance, If you would like to output the "Kick In" channel to mono input 1 in Cubase the correct procedure would be to pan the "Kick In" channel 100% left, then select Output 1/2 in the Superior Drummer 3 mixer (as only stereo outs are available in this menu). This would result in the "Kick In" channel only being output to channel 1. Finally you would then set up the appropriate Cubase channel to recognize Superior Drummer 3's output 1 as its source. *(Please*

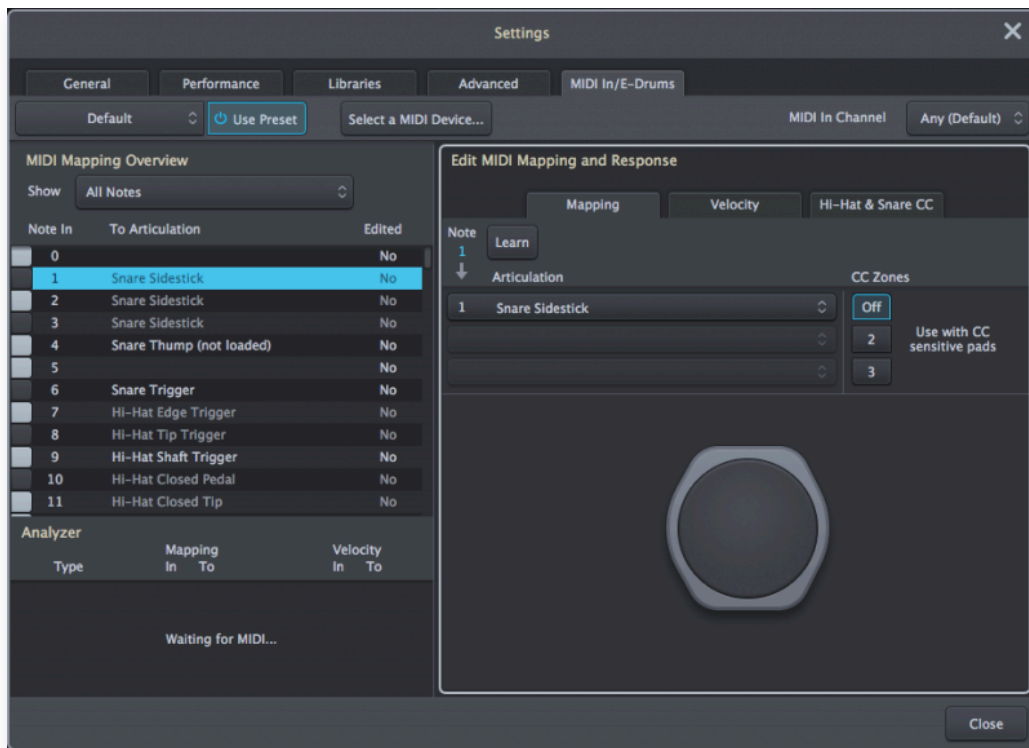


see the Cubase manual for more information on using multi output plugins).

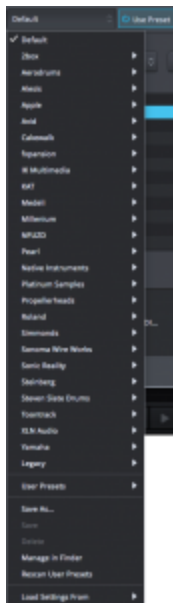
9.3.8 MIDI IN/E-DRUMS SETTINGS

The MIDI In/E-Drums settings page marks a significant improvement in the realm of MIDI input control and makes it possible to comprehensively manipulate any incoming MIDI from any source.

The MIDI In / E-Drums settings page should be used when you want to manipulate incoming MIDI (i.e. not the internal MIDI from the Grooves tab). Incoming MIDI applies to any MIDI sent to Superior Drummer 3 from a connected MIDI controller, or MIDI sent from your host DAW to Superior Drummer 3 when it is launched as a plug-in inside of your DAW.



USE PRESET (E-DRUM PRESETS)



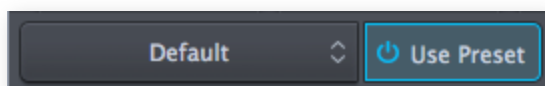
The MIDI settings page is where you will find the ever expanding list of E-Drum and MIDI controller presets. Additionally its where you can create your own mapping preset for any MIDI controller that you own. MIDI Mapping presets must be used any time that you would like alter Superior Drummer 3's MIDI mapping manually, or via the Learn button.

If you own one of the listed brands of E-Drum Kits select if from this menu. These presets offer a one click solution to get you up and running with a various selection of E-Drum kits and MIDI controllers.

If you have a MIDI controller that is not on the list, simply use the default preset and make changes as needed with the tools described later in this section.

E-DRUM PRESETS

To use an E-Drum preset first engage the preset section by clicking Use Preset button, then select a specific preset from the menu. E-Drum presets include MIDI transformations from the specific brand of E-drum mapping to the Superior Drummer 3 map. They will also automatically conform the Mute tail Trigger property box on the Drums page to accept aftertouch messages for cymbal chokes.

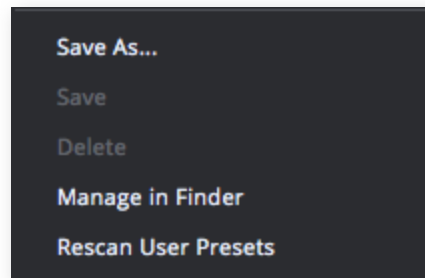


CREATING YOUR OWN MIDI MAPPING PRESET

Any change in Superior Drummer 3's MIDI mapping Settings page must be performed from within a preset. When a preset is altered it can be saved as a new user preset while the original preset file remains intact. To create you own preset choose the Default preset (or any other preset that gets you close to your desired result) and then make any mapping or response changes that are desired (described later in this chapter).

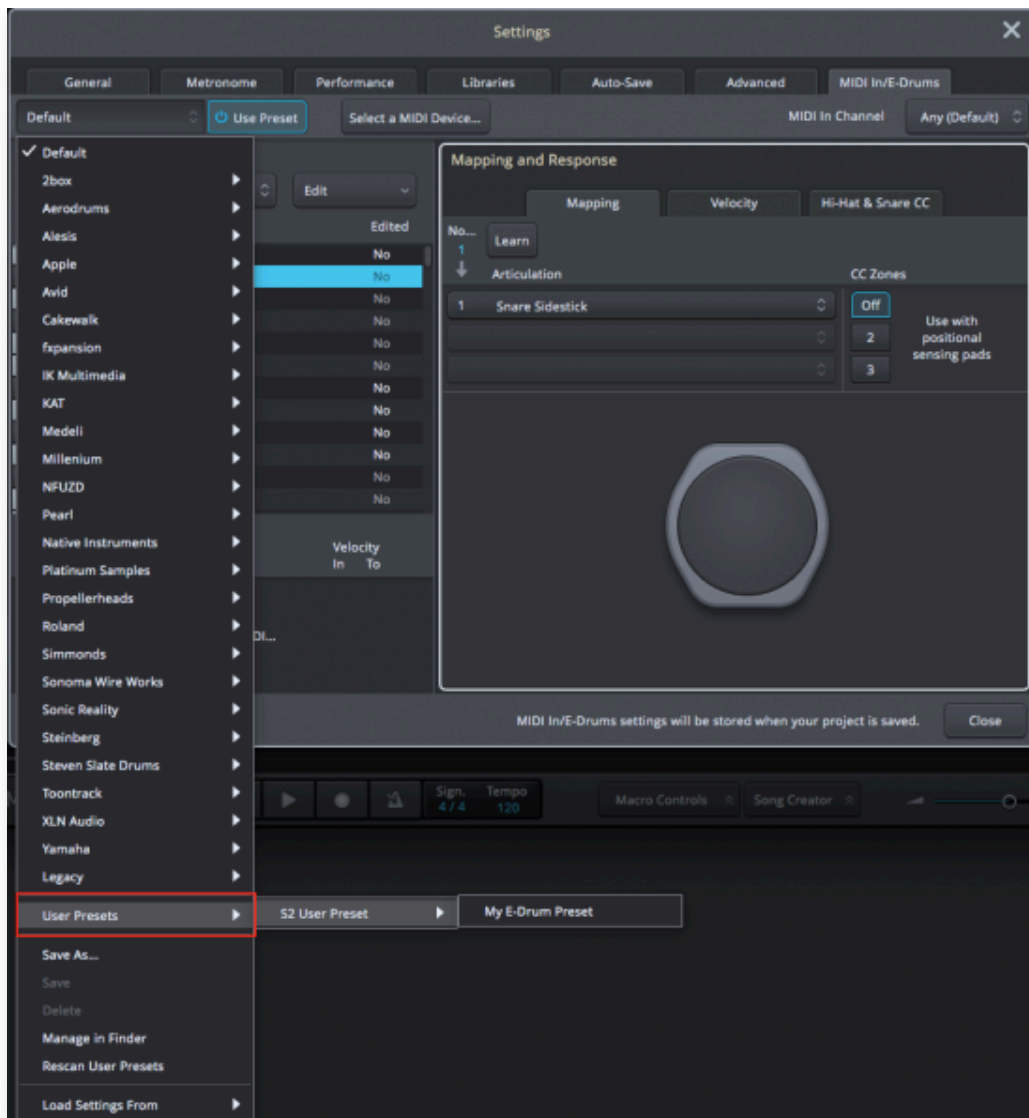
SAVING CUSTOM PRESETS

Once the desired alterations to the preset have been made click **Save As...** to save your mapping preset for later use. User presets saved from the MIDI In / E-Drums Settings preset menu will save all changes made in this window, but noting outside of the MIDI In / E-Drums Settings page. This allows a user to load their MIDI In / E-Drums Preset independently of the loaded sound library. Clicking **Manage in Finder / Explorer** will navigate to these files in an operating system window. Additionally the User Presets folder can be Rescanned so that they are recognized by SD3 if you have manually added presets to this folder in your operating system.



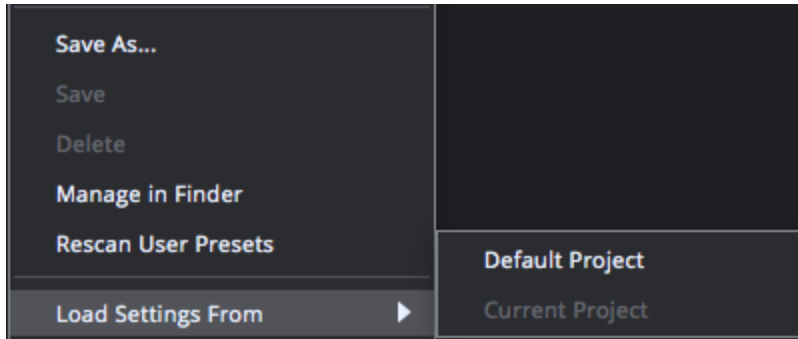
LOADING USER PRESETS

User presets can be recalled at any time by clicking on the preset menu and selecting User presets > (choose the desired preset) as seen in the picture below. If your presets were created in Superior Drummer 2, there will be a sub menu available that displays all S2 user presets.



LOAD SETTINGS FROM

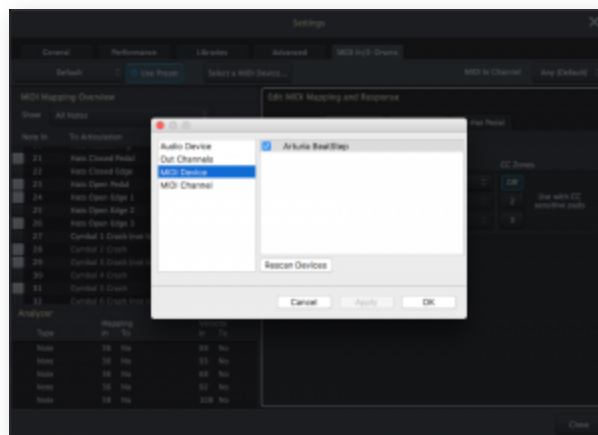
MIDI In / E-Drum Presets are saved in saved SD3 Project files, therefore it is necessary to provide a menu option that allows a user to load the saved MIDI In / E-Drum preset included in the SD3 Project file, or load the default MIDI In / E-Drum preset. Clicking Current Project will load the MIDI In / E-Drum preset from the currently loaded project, whereas clicking Default Project will load the default MIDI In / E-Drum state, where you can then choose the desired preset to load. *(Note: the option to choose Current Project will only be available if you have loaded a saved SD3 Project file).*



SELECTING A MIDI DEVICE

You can choose the desired MIDI device in the MIDI In / E-Drums Settings tab by clicking the Select a MIDI Device button. Once clicked a window will appear that displays all connected MIDI controllers. If you do not see your device in the list please double check that it is plugged in and powered on. Once correctly connected click rescan devices.

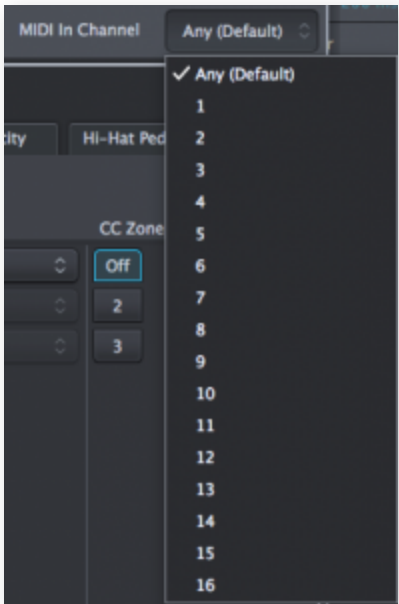
To select a MIDI controller click the box to the left of its name and finally click OK.



MIDI IN CHANNEL

The menu to the top right of the MIDI In Settings page allows you to select a specific MIDI channel for Superior Drummer 3. By

default this menu is set to “Any.” However if needed a specific channel can be specified.



MIDI MAPPING OVERVIEW

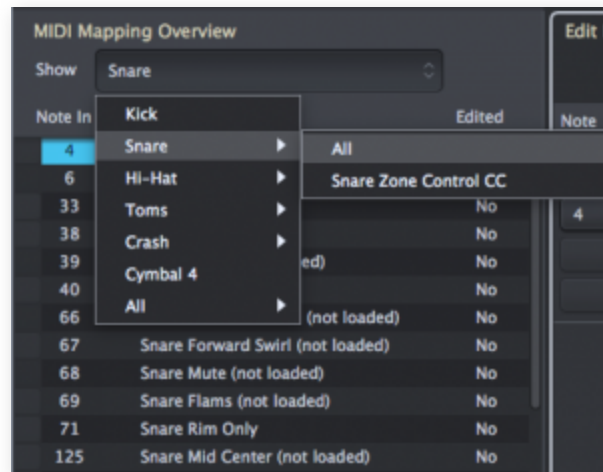
The MIDI Mapping Overview displays a comprehensive view of the mapping for each articulation in the loaded kit, and displays if the mapping for an articulation (note) has been adjusted. Clicking on an articulation or note number will play back the appropriate sound.

A screenshot of the 'MIDI Mapping Overview' window. It features a 'Show' dropdown menu set to 'All Notes'. Below is a table with three columns: 'Note In', 'To Articulation', and 'Edited'. The table lists 12 rows of data, with the row for Note 36 ('Kick Open') highlighted in blue. The 'Edited' column for all rows shows 'No'.

Note In	To Articulation	Edited
31	Cymbal 5 Crash	No
32	Cymbal 6 Crash (not loaded)	No
33	Snare Edge	No
34	Kick Open	No
35	Kick Hit	No
36	Kick Open	No
37	Snare Sidestick	No
38	Snare Center	No
39	Snare Ruffs (not loaded)	No
40	Snare Rimshot	No
41	Floortom 2 Center (not loaded)	No
42	Hats Closed Tip	No

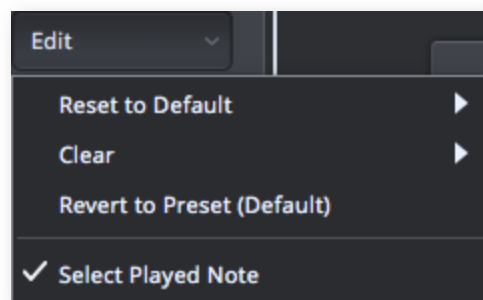
SHOW

In the MIDI Mapping Overview, the Show menu makes it possible to display/sort only the notes (or CC values) mapped to the instrument (or instrument class) of your choice. This makes it easy to see all of the articulations for a given instrument and where they are mapped.



EDIT

The Edit menu in the MIDI Mapping Overview allows you to Reset or Clear all notes, selected notes, or toggle the Select Played Note setting.



- **Reset to Default:** This will reset All notes (or the selected notes) to the default mapping regardless of the preset that is selected.
- **Clear:** This will Clear all notes (or the selected notes) from the currently selected Mapping preset so that these notes do not trigger a sound.

- **Revert to Preset (Default):** This will change the mapping from the currently loaded preset to the Default preset.
- **Select Played Note:** This setting will select any note that is played on your connected MIDI controller.

ANALYZER

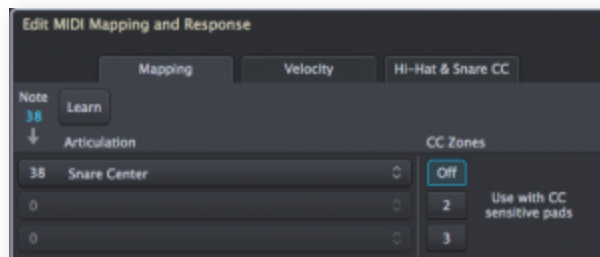
The Analyzer is an advanced MIDI monitor. It shows the type of MIDI message, incoming note, note adjusted note, incoming velocity, and the adjusted velocity. This is useful for seeing exactly what notes are being sent to Superior Drummer 3 and understanding how a preset is transforming incoming MIDI to conform it to Superior Drummer 3. With this information you could make better decisions on how to customize the preset for your E-Drums. Further, clicking on a MIDI event in the analyzer will select in the MIDI Mapping Overview above, and in the Edit MIDI Mapping and Response section to the right. This makes it quick and easy to re-map a note.

Analyzer					
Type	Mapping		Velocity		
	In	Adjusted	In	Adjusted	
Note	36	No	70	No	
Note	37	No	87	No	
Note	38	No	9	No	

EDIT MIDI MAPPING AND RESPONSE

The right side of the MIDI In/E-Drums Settings tab is dedicated to editing the MIDI mapping (even for positional sensing pads), the velocity transform, and the CC response. This section can

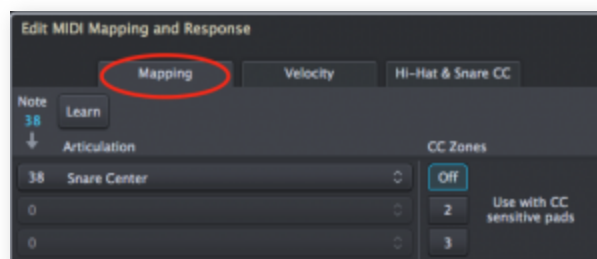
also optimize Superior Drummer 3 to your playing style / controllers response, ensuring that the appropriate velocity sample is triggered for the hardness or softness of your hit.



Its important to mention that Superior Drummer 3's MIDI transformation tools are only one side of the equation. Knowing and understanding the options available on your MIDI controller are equally important as any of the controls described here. The sensitivity of the physical pads for example, has a great effect on the output MIDI velocity. Sensitivity should be dialed in as much as possible for your playing style and pads before altering velocity controls in Superior Drummer 3.

EDIT MIDI MAPPING AND RESPONSE, MAPPING TAB

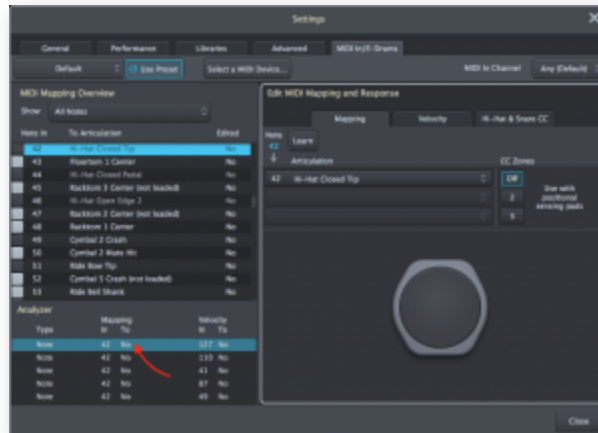
Here it is possible to transform the incoming MIDI note to a different note without making any changes on your physical MIDI module. A preset must be selected before you can re-map in the Mapping and Response section. If in doubt use the "Default" preset. The following will provide a description.



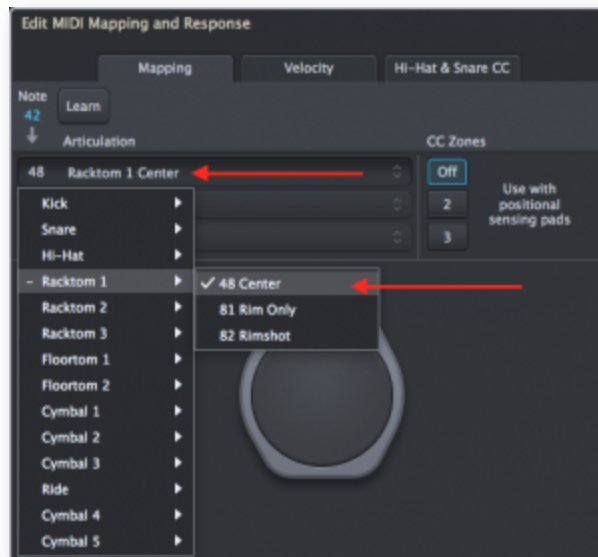
REMAPPING USING THE ANALYZER

To create your own custom mapping transformation preset please follow these steps.

1. Strike the physical MIDI pad and click on the incoming note that is displayed in the Analyzer.



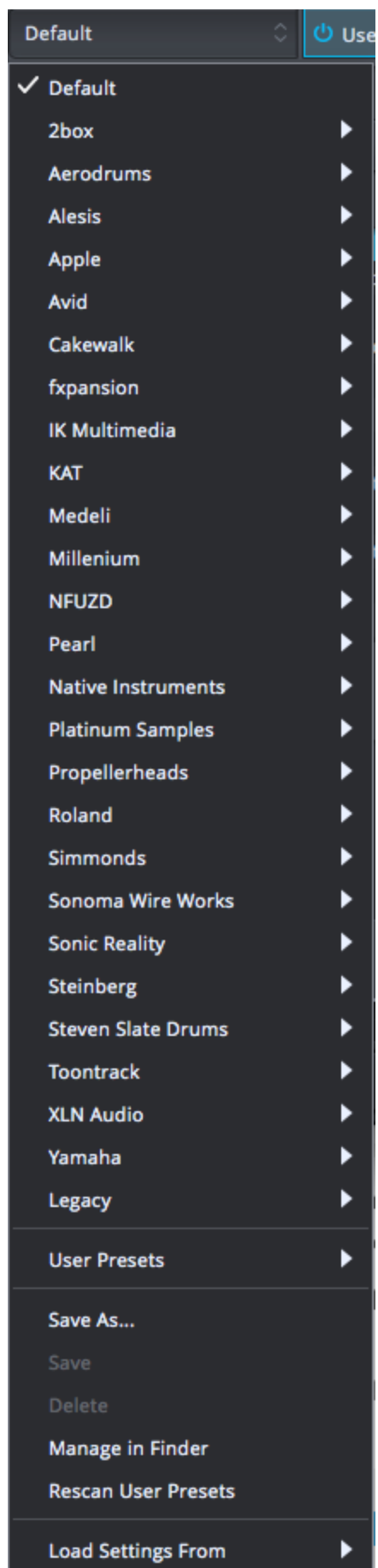
2. Open the Articulation Menu, and choose the desired articulation that you would like this MIDI note to trigger.



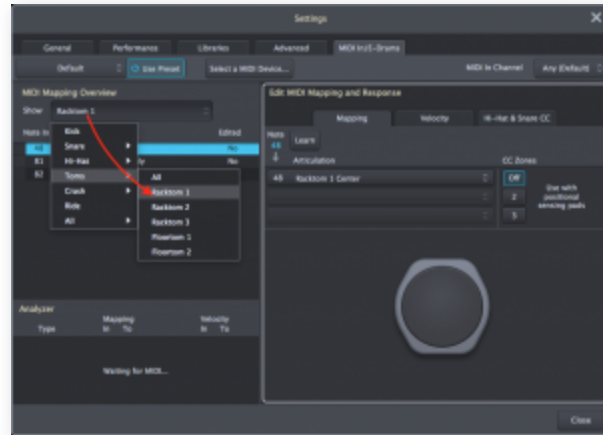
3. The note will now be remapped. Repeat for any additional Articulations that need to be re-mapped.

REMAPPING USING MIDI LEARN

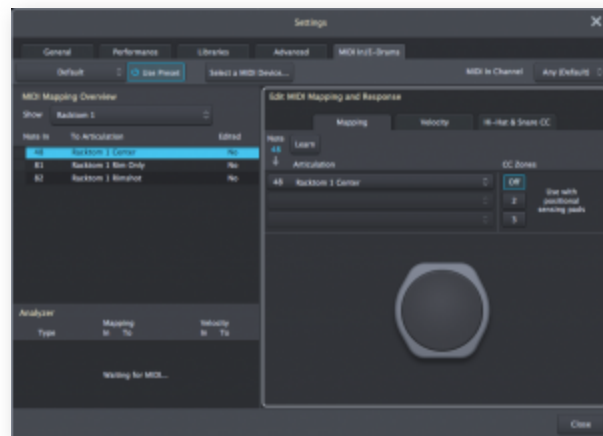
Go to Settings > MIDI In/E-Drums tab, and select the correct preset that corresponds to *your* E-Drum module. This alone should solve any issues that you have. However if your brand is not represented in the list, or the default preset does not work (possibly because the MIDI mapping was changed in the module) proceed to the next step.



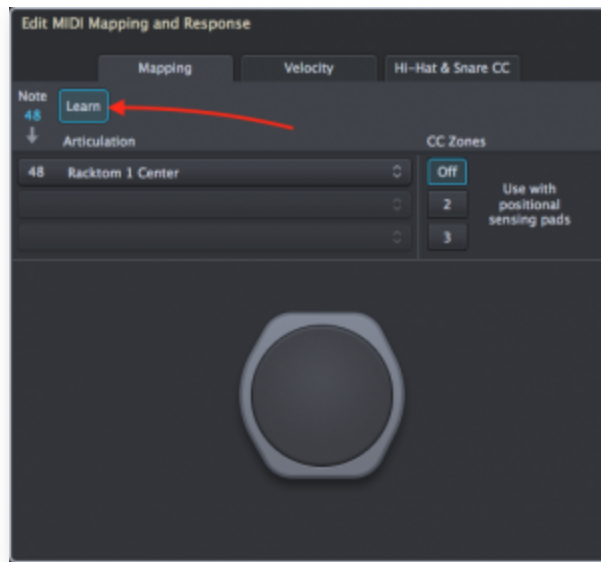
Choose a preset that gets you *close* to the desired result. Then use the Show menu in the MIDI Mapping overview section to filter the articulations for the instrument that you want to trigger. In the example below its the Rack Tom 1.



Select the articulation that you want to trigger in the list of the MIDI Mapping Overview section. This articulation will then also be selected in the articulations menu in the Edit MIDI Mapping and Response section.



Click the Learn button in the Edit MIDI Mapping and Response section.

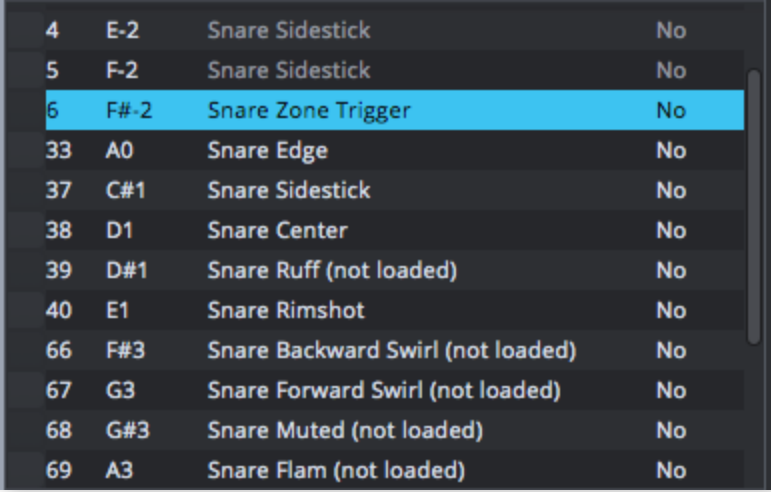


Hit your trigger pad. Your trigger pad will send a different note, but the learn function will assign the desired sound to this incoming note. Repeat for any additional pads that need fixing.

TRIGGER ARTICULATIONS

Trigger Articulations are groups of sounds (Articulations) for an instrument tied to a single MIDI note. Trigger Articulations are assigned automatically for all E-Drum presets that apply. These Trigger Articulations can play many different sounds based on the CC information that is received along with the MIDI note. An example would be the Hi-Hat Edge Trigger. In this instance an incoming MIDI note 7 (default for Hi-Hat Edge Trigger) would trigger an open Hi-Hat sample, but the CC04 data received along side of the note would tell Superior Drummer 3 which of the 6 levels of openness it's to play back. Therefore, Trigger articulations are only to be used with pads and modules capable of positional sensing (i.e. ones that send CC data). Superior Drummer 3 also allows the user to set up their own Multi Zone

Triggers from scratch with the CC Zones described below.



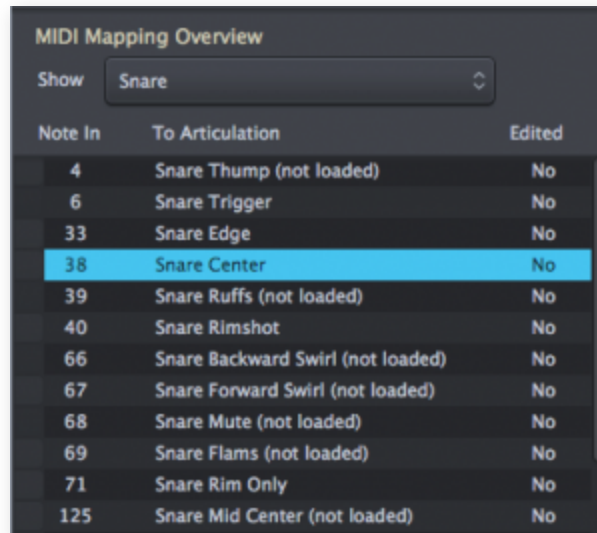
4	E-2	Snare Sidestick	No
5	F-2	Snare Sidestick	No
6	F#-2	Snare Zone Trigger	No
33	A0	Snare Edge	No
37	C#1	Snare Sidestick	No
38	D1	Snare Center	No
39	D#1	Snare Ruff (not loaded)	No
40	E1	Snare Rimshot	No
66	F#3	Snare Backward Swirl (not loaded)	No
67	G3	Snare Forward Swirl (not loaded)	No
68	G#3	Snare Muted (not loaded)	No
69	A3	Snare Flam (not loaded)	No

CC ZONES

To the right of the Mapping tab are the CC Zone controls. At a basic level E-drum modules will send different notes through MIDI when you hit the pad. Alongside the notes the MIDI module will also (in most cases) generate Continuous Controller information (aka 'CC') with the purpose to indicate the position of the controller more precisely. If your module or pad do NOT support positional sensing you will not be able to use the CC Zone controls. If however you have a snare pad for example, that supports positional sensing for 2 or 3 zones you will be able to use the following feature.

1. First select the note number in the MIDI mapping overview section that corresponds to your positional sensing pad. In this case the Snare Center note 38

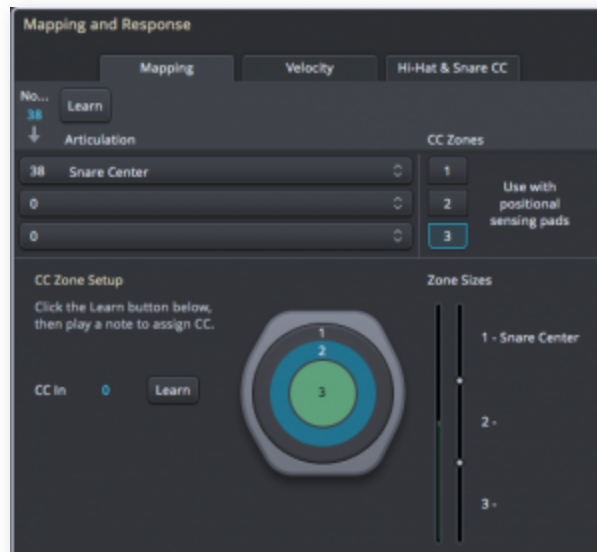
is selected.



The screenshot shows the 'MIDI Mapping Overview' window. At the top, there is a 'Show' dropdown menu set to 'Snare'. Below it is a table with three columns: 'Note In', 'To Articulation', and 'Edited'. The table lists various snare articulations, with 'Snare Center' (Note In 38) highlighted in blue.

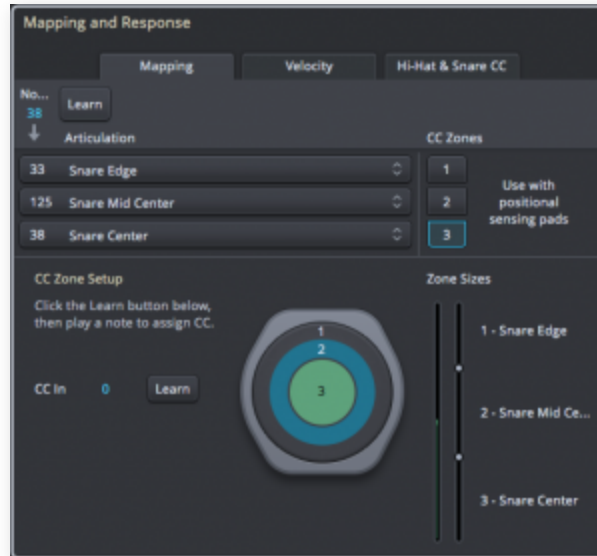
Note In	To Articulation	Edited
4	Snare Thump (not loaded)	No
6	Snare Trigger	No
33	Snare Edge	No
38	Snare Center	No
39	Snare Ruffs (not loaded)	No
40	Snare Rimshot	No
66	Snare Backward Swirl (not loaded)	No
67	Snare Forward Swirl (not loaded)	No
68	Snare Mute (not loaded)	No
69	Snare Flams (not loaded)	No
71	Snare Rim Only	No
125	Snare Mid Center (not loaded)	No

2. Then select the number of zones that you would like to use with your CC sensitive drum pad. It would be wise to confirm the total possible number of zones that your snare can support before choosing this option.

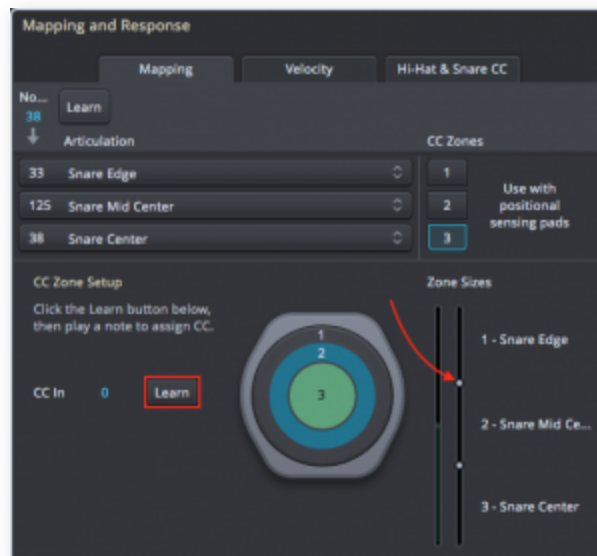


3. Finally open the menus for each zone and choose a new articulation for the zone. The preview pad below allows you to audition each of the zones. *Note*

Zone 3 is the center.



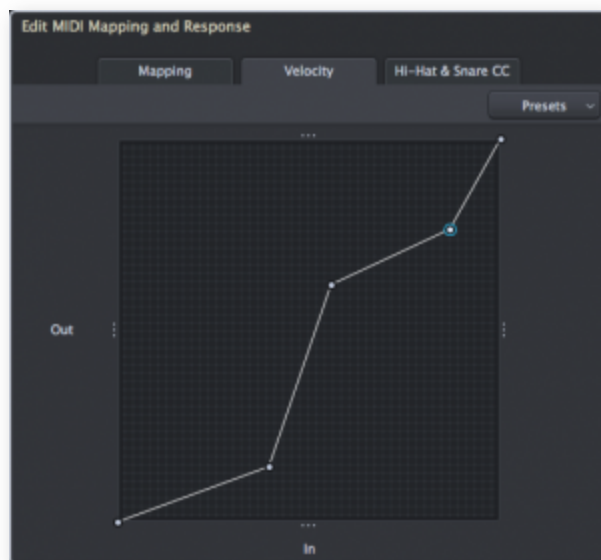
4. The CC learn button will learn the incoming CC value used for positional sensing.



5. You can then determine the point at which the zones begin by adjusting the sliders to the right. The Meter to the left of the points will display the incoming CC value.

EDIT MIDI MAPPING AND RESPONSE, VELOCITY TAB

The velocity tab in the Edit MIDI Mapping and Response section allows you to transform the incoming velocity value to a new value that will trigger sounds in Superior Drummer 3. This feature would be used if you notice that the transition from soft hits to hard hits is not smooth enough, fast enough, or slow enough for your module and playing style. Again it should be mentioned that the first step to dialing in a good velocity response with Superior is to properly adjust the pad sensitivity on your MIDI module for your playing style. After this is done, creating a custom velocity curve will make the response perfect!

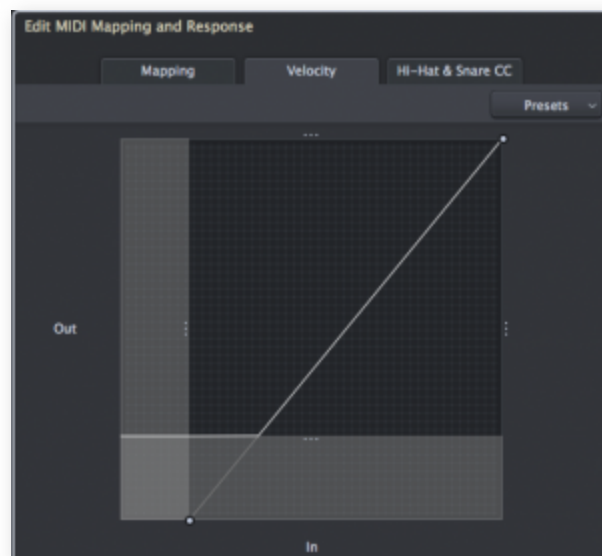


To Create a Velocity curve first select the desired articulation in the MIDI Mapping Overview Section. Each articulation (note) can have its own custom velocity curve.

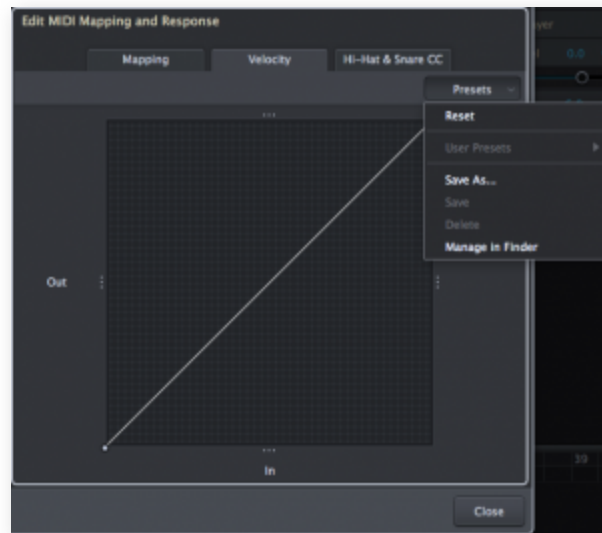
MIDI Mapping Overview			
Show		Snare	
Note In	To Articulation	Edited	
4	Snare Thump (not loaded)	No	
6	Snare Trigger	No	
33	Snare Edge	No	
38	Snare Center	No	
39	Snare Ruffs (not loaded)	No	
40	Snare Rimshot	No	
66	Snare Backward Swirl (not loaded)	No	
67	Snare Forward Swirl (not loaded)	No	
68	Snare Mute (not loaded)	No	
69	Snare Flams (not loaded)	No	
71	Snare Rim Only	No	
125	Snare Mid Center	No	

Then double click on the velocity line in the graph to create a breakpoint and drag it to create a curve. When clicked a breakpoint will show you the incoming velocity number and its transformed outgoing velocity.

The three dot icons at the borders of the Velocity Curve graph can also be dragged inwards to create hard limits at user definable points.

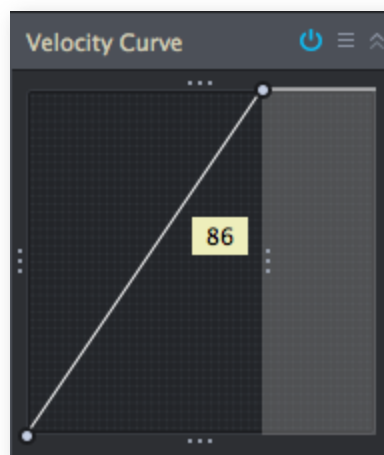


Here you can save your newly created Velocity Curve. All saved presets will be found in the User presets submenu.

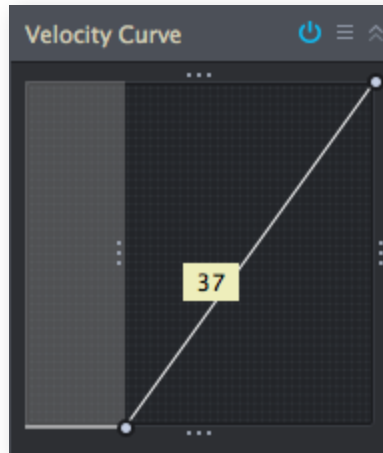


You may wonder what practical use these features have, so let's look at a few real-world cases which are relatively common in live applications involving electronic drums.

- Your drum pad may not be sensitive enough.
 - No matter how hard you hit your pad, the velocity in MIDI is very low. Moving the Output Velocity Limit (3 dots) to the Left would help in this scenario.



- Alternatively, if the lower velocity value that is triggered is far above what is considered normal (triggering the gradient hits with soft hits being skipped all together) moving the left Velocity Limit to the right would help in this instance.



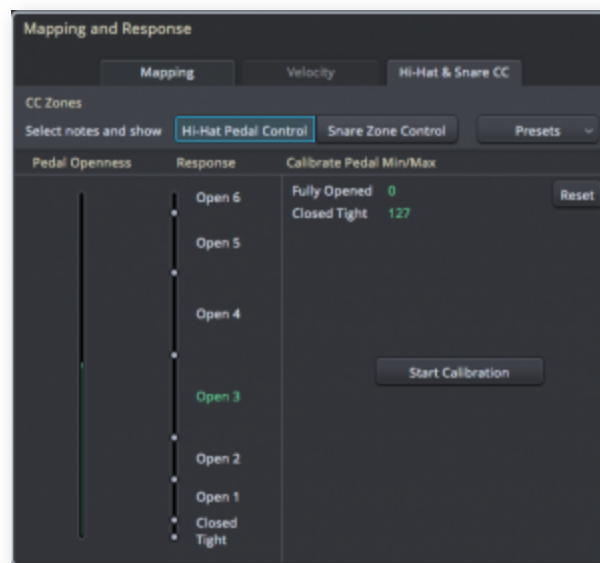
These are mere examples for your consideration. Please remember that if your goal is to tailor Superior Drummer 3's response to your playing style / MIDI controller for live performance and recording, all customizations should be made in the MIDI in / E-Drums Settings tab. As stated above the Velocity Curve Property Box is designed to be used to customize Superior Drummer 3's response to the internal MIDI from the Grooves tab.

HI-HAT & SNARE CC TAB

The Hi-Hat Pedal tab allows you to control the CC values that trigger the various closed to open articulations for the Hi-Hat. Hi-Hat Pedal Tab: The Hi-Hat Pedal tab allows you to control the CC values that trigger the various closed to open articulations for the Hi-Hat. This tab works in the same way as the same as the

Hi-Hat CC Edit Property Box on the Drums page. Its included on the mapping page so that it can be edited and saved as a Mapping preset independent of the Superior Drummer 3 project file.

When the tab is first selected you will be prompted to select the Notes Mapped to the Hi-Hat Pedal or Snare Drum Zone Control. Clicking this button will open the CC Editor. Clicking this button will automatically select the notes mapped to the Hi-Hat Pedal.

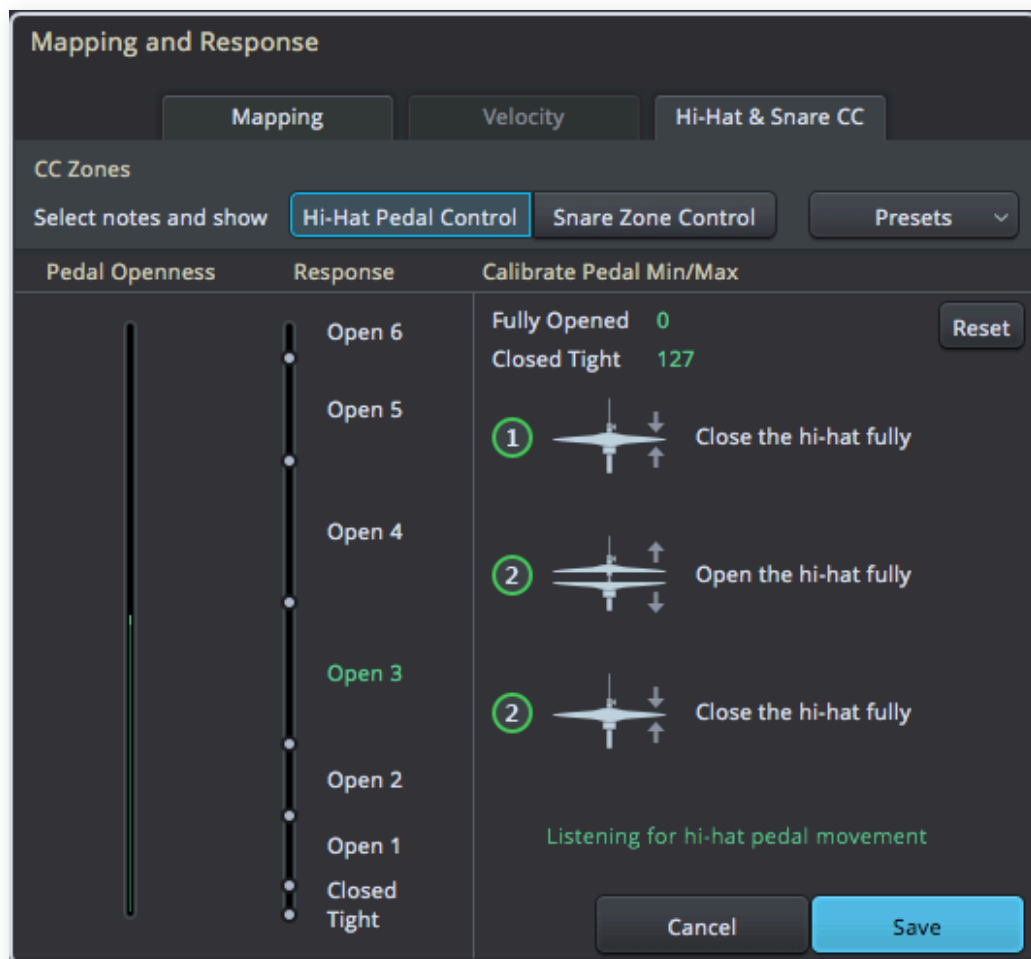


To the left of this section you will see the Pedal Openness Meter and the slider points. By moving the slider points you can set the CC value that triggers the various articulations for the high hat. The points can be moved manually or you can use the selection of presets. The Pedal Openness meter will display in real time the CC value that it receives from your pedal. Therefore, as the physical pedal is fully opened you will see the meter move up, and as it's closed the meter will move down.

HI-HAT PEDAL CALIBRATION MODE:

Selecting the Hi-Hat Calibration Mode provides a step by step process for calibrating the response of your E-drum Hi-Hat

pedal. Before using the Calibration Mode ensure that your Hi-Hat pedal is connected and that the appropriate E-Drum preset is selected. By following these 3 steps the Calibration Mode will analyze the incoming CC values from your Hi-Hat and automatically adjust the triggering of the various Hi-Hat articulations in a range that is acceptable for your Hi-Hat controller.



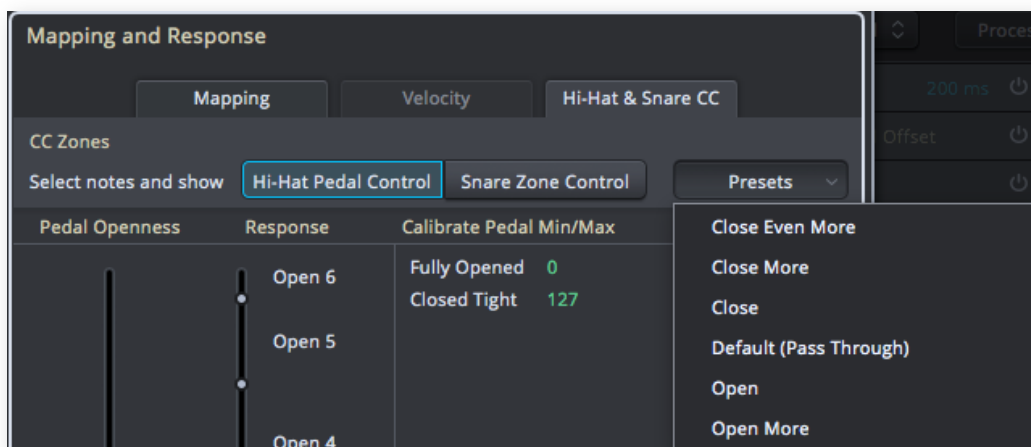
Its important to mention that some MIDI modules / E-Drum controllers do not send the full range of CC values from 0 to 127. This would manifest itself as Superior Drummer 3 never being able to trigger the tightest closed Hi-Hat samples. If you suspect

that you may be experiencing this issue use the Hi-Hat Calibration Mode to allow SD3 to assign the correct articulations to the CC range of your Hi-Hat and controller.

Some E-Drum modules only allow for a maximum value of 90 which by default would not trigger tightly closed Hi-Hats. The solution would be to use the Hi-Hat Calibration Mode, or alternatively the "Close Even More" preset in the Hi-Hat Presets menu. Finally you could also adjust the slider points manually by moving the slider points for the Hi-Hat Pedal Control up so that the Tight articulation is at 90 (or the max value of your module CC04 data) and then move all subsequent anchor points up in a evenly distributed manner.

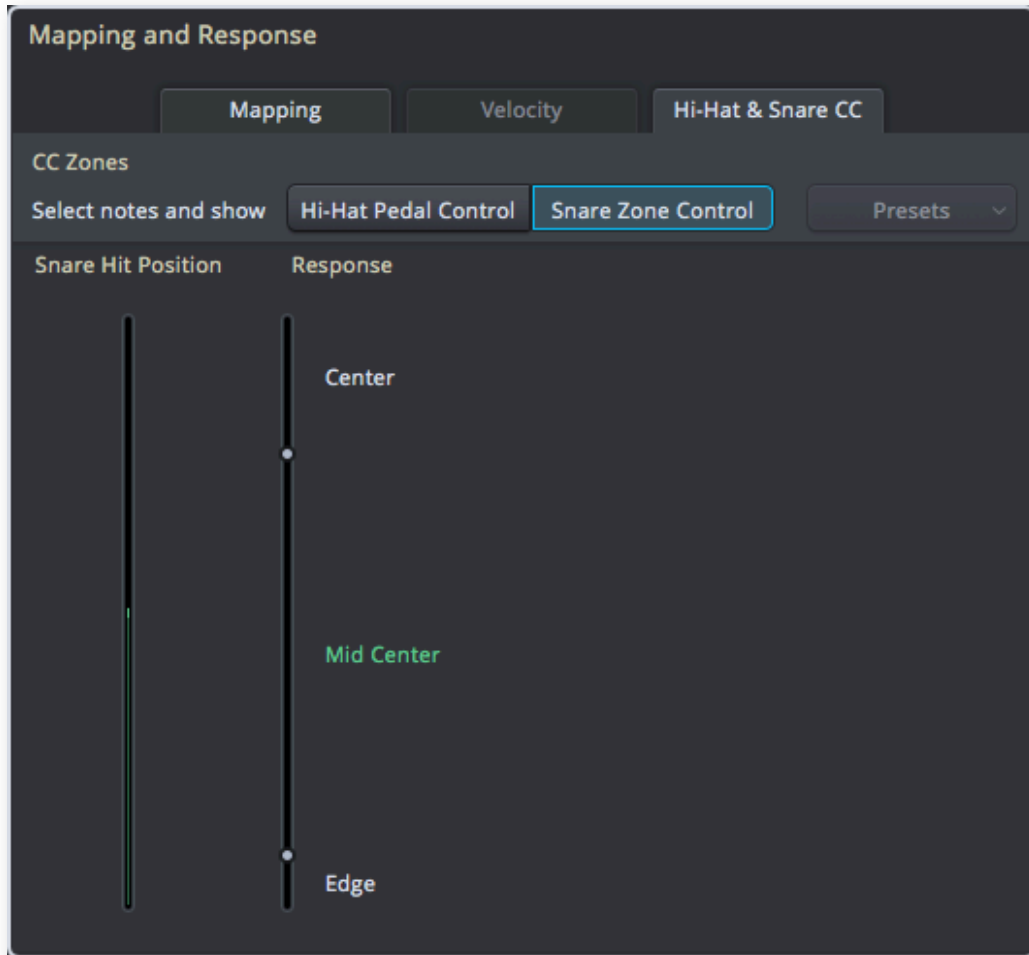
HIGH HAT CC CURVE PRESETS

Presets for CC curves can be found in the presets menu. The presets are named after how they adjust the slider points to achieve more open or more closed articulations on the hi-hat.



SNARE ZONE CONTROL

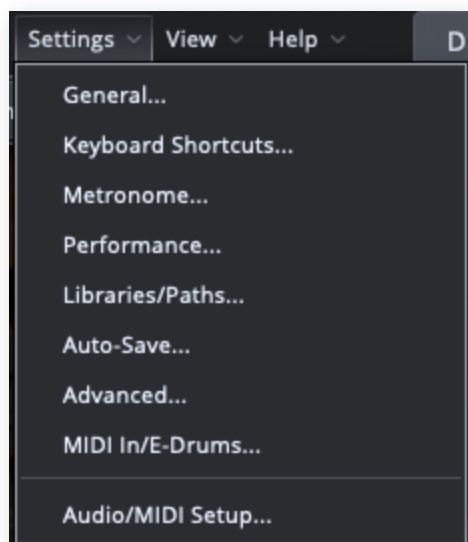
Dragging these sliders sets the value in CC at which one articulation ends and the next begins. This gives you full control over your multi zone electronic snare, a luxury not often provided!



9.3.9 AUDIO/MIDI SET UP (STAND ALONE)

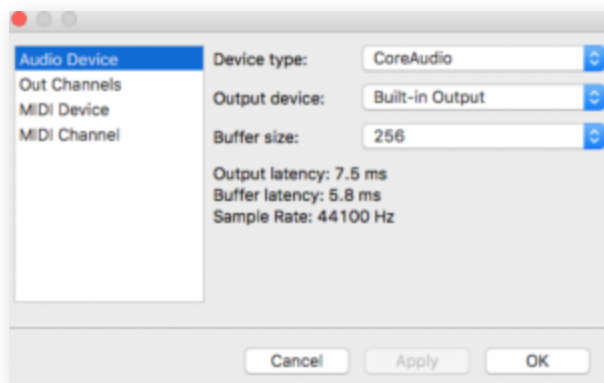
The Audio/MIDI Setup dialog can be opened from the Settings menu of the Superior Drummer 3 when launched in its

standalone application.



AUDIO DEVICE

On the Audio Device panel, select the proper device type and output device from the drop-down menus. Windows users will also have access to the ASIO Control Panel to select the buffer size.



If you are not using an ASIO device, you can select the buffer size in the drop-down menu below the device selection menu. Generally, the lower the buffer size, the lower the latency. However, a low buffer size also puts more demand on your computer. If set too low you may experience audio stutters,

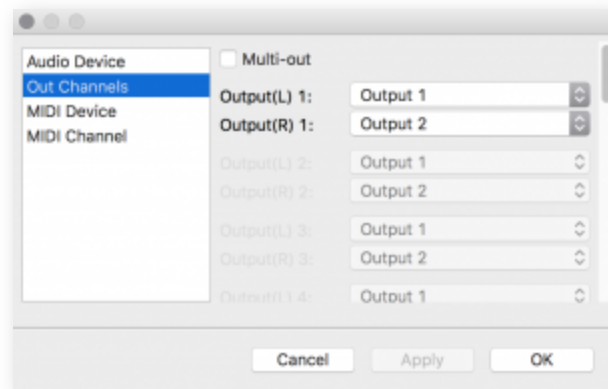
glitches, or distortion. In such a case simply increase the buffer size.

Note that only professional ASIO (Windows) and Core Audio (Mac) audio interfaces will guarantee optimal performance for low latency real-time triggering.

OUT CHANNELS

In the Out Channels section its possible to choose the physical hardware outputs for your audio interface when working in Superior Drummer 3 Stand alone.

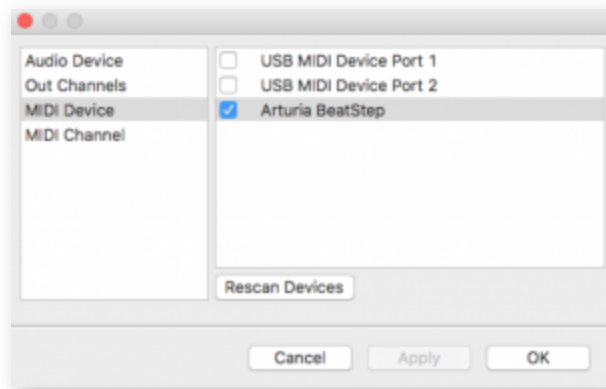
Ticking Multi-out enables Superior Drummer 3 to send its audio out to any number of assigned hardware outs that you may have available on your interface.



SELECT MIDI DEVICE

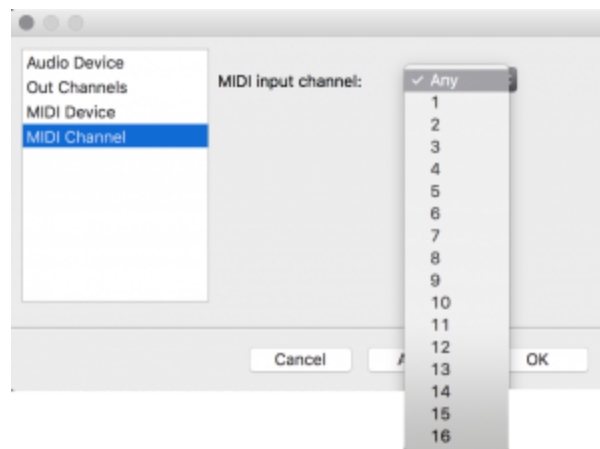
The MIDI Device panel is used to select from the available connected MIDI interface(s). If several ports/devices are available, tick the appropriate port to activate it. If no devices are available in this window, ensure that your device is connected and then click Rescan devices. Its important to note that many

MIDI devices require software drivers to be installed in order to work.



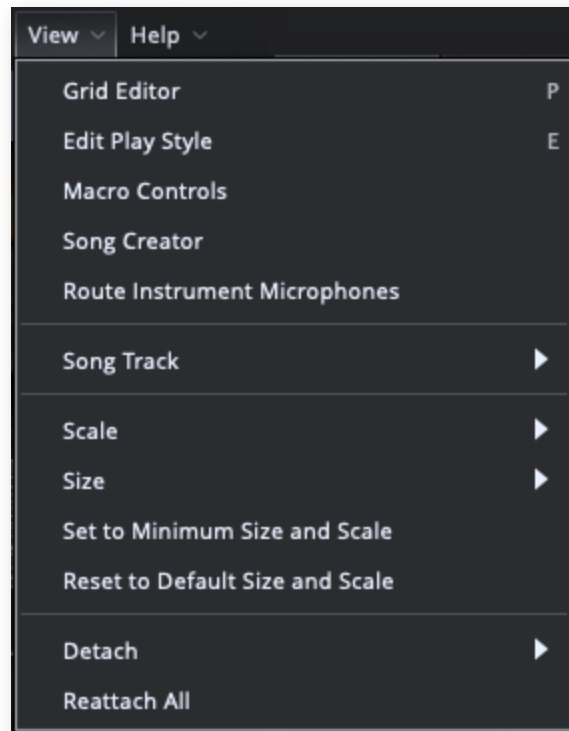
MIDI CHANNEL

In the MIDI Channel you can designate a specific channel for Superior Drummer 3 to receive MIDI messages. If you do not need to set up a specific channel is wise to leave this set to the default "Any" channel.



9.4 VIEW MENU

The view menu provides menu options for showing, hiding, or changing the layout of Superior Drummer 3.

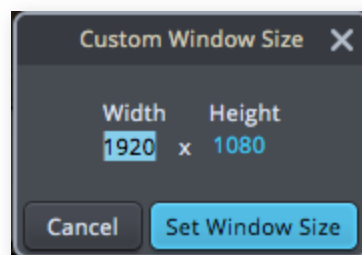
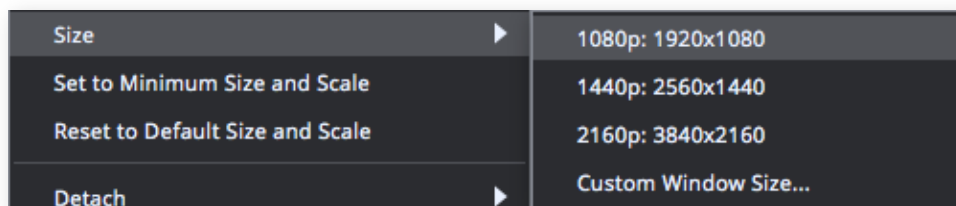


- **Grid Editor:** This takes you to the Grid Editor.
- **Edit Play Style:** If you have a MIDI block selected, this will take you to the Edit Play Style window.
- **Macro Controls, Song Creator, and Route Instrument microphones:** These menu options show or hide the selected feature. Route Instrument Microphones pertains to the routing of added instruments with the Add Instrument button (X-Drums), and how they are output in the loaded libraries mixer. A Route Instrument Microphone description and Tutorial will follow in the very next section (9.4.1).
- **Song Creator:** Show or hide the Song Creator. This is the same option as the button at the bottom of the interface.
- **Route Instrument Microphones:** This option opens the Route instrument Microphones window which allows you to

alter the channel routing of instruments in the Drums Tab.

This feature will be described in detail later in this chapter.

- **Song Track:** Here a sub menu will open that provides options to change the size of the Song Track.
- **Scale:** These options change the total size of the Superior Drummer 3 interface. Its extremely useful if you have a very small laptop screen and need to make the entire interface smaller, or if you have a large screens and would like to see a larger scaled interface.
- **Size:** Here you can choose one of the preset sizes for the Superior Drummer 3 window, or create a custom window size. *Note: when creating videos with Superior Drummer 3 the 1080p option is very convenient!*



- **Set to Minimum Size and Scale:** Choosing this option will change the size and scale of the SD3 window to the smallest possible option.
- **Reset to Default Size and Scale:** Changes both the scale, size, and proportions of the window back to the default.
- **Detach:** A dedicated menu option for detaching the tabs in Superior Drummer 3.

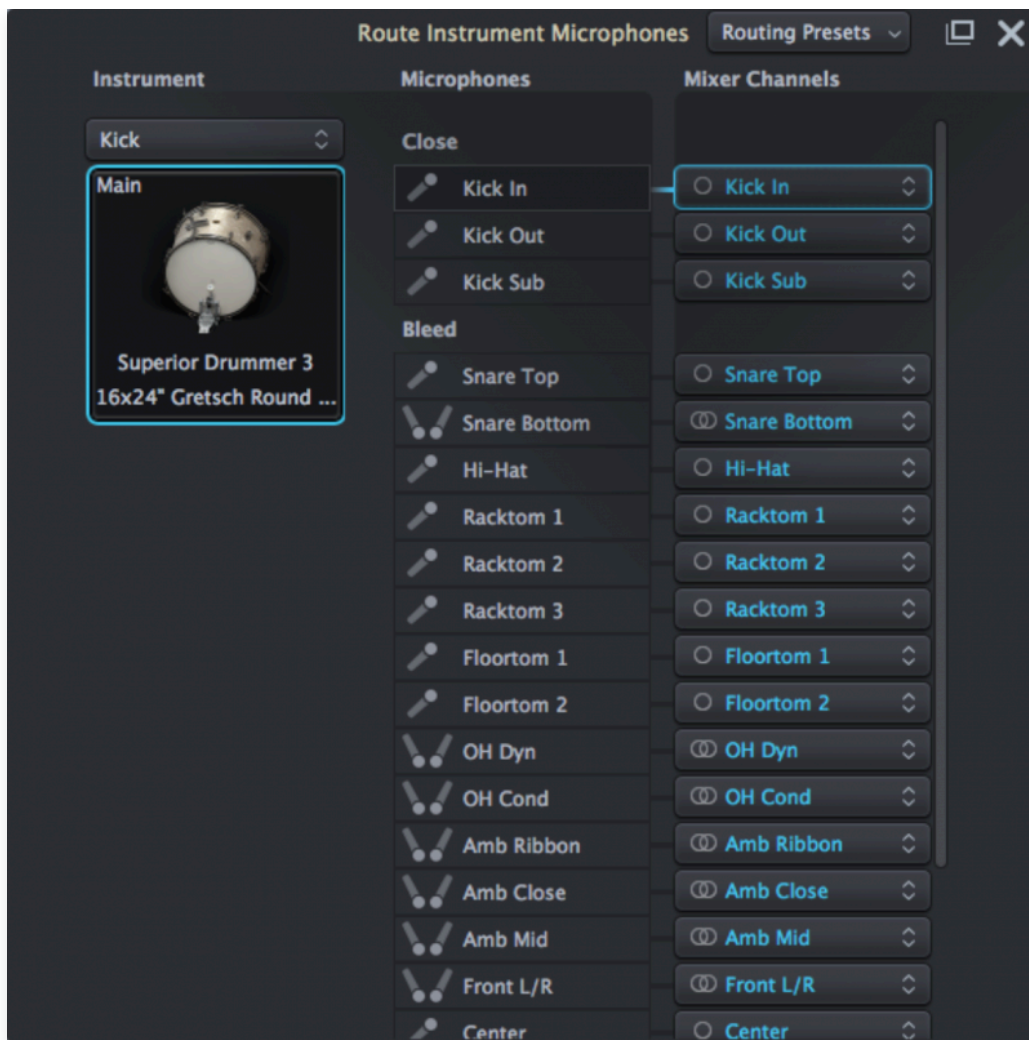
- **Reattach All:** All detached tabs will be reattached to the single interface window.

9.4.1 ROUTE INSTRUMENT MICROPHONES

The Route Instrument Microphones window allows you to choose the channels in the mixer to which the audio from the selected instrument will be routed.

The workflow for using Route Instrument Microphones is evident by its 3 columns.

1. First choose the instrument that you want to route in column 1 (either to a new mixer channel or to existing mixer channels).
2. Decide which microphones for the selected instrument that are important to output in the mixer in column 2 (i.e. Kick In, Snare Top, Overhead...)
3. Click the drop down menu in Column 3 for each microphone in column 2 for which you would like to change the routing. You can route these microphones to existing channels, create new channels, or select none for no output.



There are 2 main reasons for opening and using the Microphone Assignment window in Superior Drummer 3.

1. Added Instruments or Stacked drums. You have added an instrument to the kit with the Add Instrument button (or stacked a drum) and you want to route its unique selection of microphones to channels in the currently loaded mixer, or create new channels for the microphones that captured this instrument.
2. Isolating instruments from stereo channels. Doing this would allow you to create a new dedicated channel for an instrument who's microphone(s) were positioned to capture multiple instruments at once. For example, you could create

a dedicated channel for the ride cymbal independent of the overhead channel.

ROUTE INSTRUMENT MICROPHONES TUTORIAL

The following will provide a step by step guide for using the Route Instrument Microphone window.

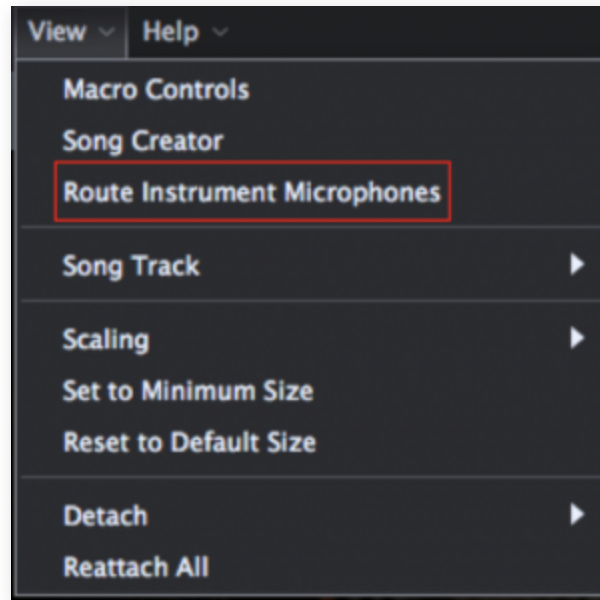
EXAMPLE 1

In this example I have the Pearl Masterworks kit loaded from the Superior Drummer 3 core sound library, and I want to add an additional kick drum to the kit. I've added the 20" Pearl Masterworks kick as an X-Drum, and now its time to route its microphones in the mixer.

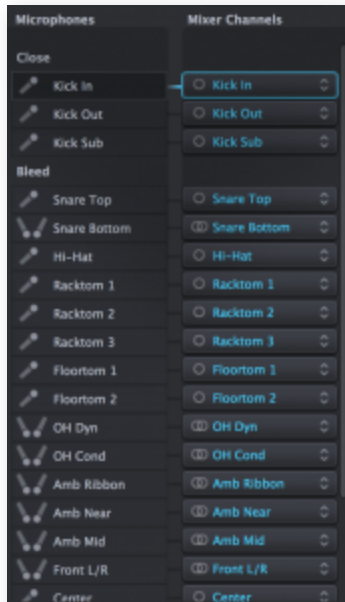
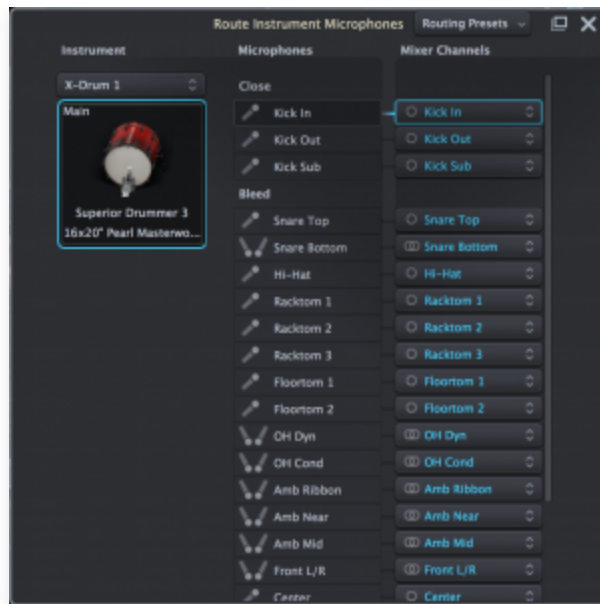


From the View Menu at the top of the interface access Route Instrument Microphones. (This can also be accessed by right clicking on the X-Drum in the drums page and selecting More >

Route Instrument Microphones.)



Select the desired instrument. Route Instrument Microphones is divided into 3 columns. In the first column select the instrument that you want to route to a channel in the currently loaded sound libraries mixer. The second column shows you all of the microphones that were used to record the selected instrument. Finally, the 3rd column shows you all of the available channels in the currently loaded sound libraries mixer. In this instance since we are concerned with the newly added kick (X-Drum) we will select X-Drum 1 from the instrument selection menu.

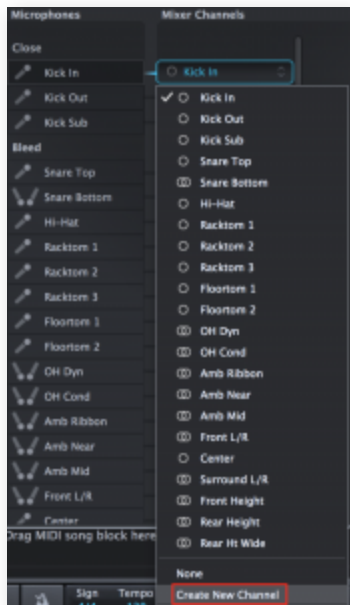


Route the X-Drum's Microphones. As stated above, the 2nd column shows all of the microphones that were used to record the selected instrument. Close microphones are at the top of the list (as they are the main capture microphones for the instrument) and "Bleed" microphones are listed below. These are the other microphones that were present and armed for the recording, but are not

considered the main capture microphones for the selected instrument. This is also commonly referred to as "Leakage."

If the X-Drum is from the same sound library as the currently loaded sound library (as in this example) the Microphone column and the Mixer Channel column will match perfectly.

Here you can either decide to leave the X-Drum's audio routed to the existing default channels (i.e. the Kick Drum In, Kick Drum Out, and Kick Drum Sub) or you could create new channels for one, or all of these close microphones.



To create a new channel, select the mixer channel menu in column 3 for the desired microphone and choose “Create new channel” in the drop down menu.

Selecting “Create New Channel” will add an additional channel to the Superior Drummer 3 Mixer (all the way



to the right of the blue microphone channels). Audio for the selected instrument from the chosen microphone will now be routed to only this channel.

This new channel will be named X (for X-Drum), and then after the first microphone that you have chosen to route. Names of channels can be changed by double clicking on their text and inputting a new name.

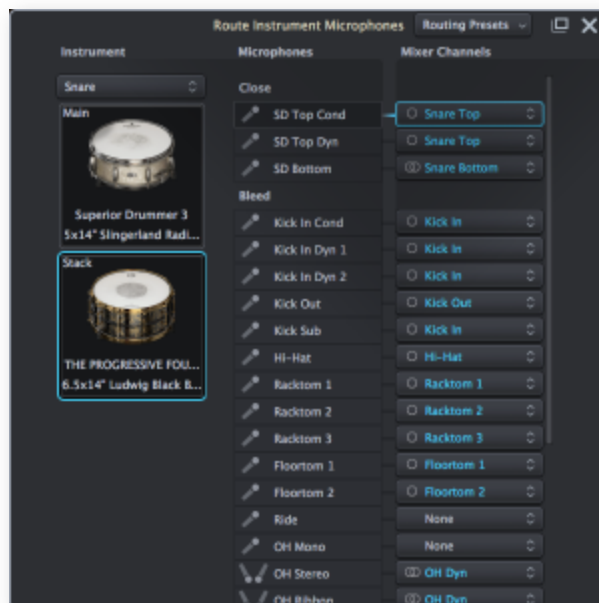
How you continue routing the remaining microphones from column 2 is completely up to you. You could make new channels for each and every microphone in column 2 that you believe is important for the selected instrument. Or you could route all of these important microphones to the newly created single X-Drum mixer channel by clicking on their menu in column 3 and selecting the newly created X-Drum channel. Or you could simply allow the additional mics from the second column to be Auto Routed to existing matching mixer channels (in the 3rd column) with Superior Drummer 3’s Auto assign feature. Finally,

you could decide that the selected microphone should not come out of any channel at all and select none in column 3.

ROUTE INSTRUMENT MICROPHONES USING INSTRUMENTS FROM OTHER LIBRARIES.

If the newly created X-Drum or Stacked drum is from a sound library that is different from the currently loaded sound library, the microphones in column 2 will not exactly match the mixer channels in column 3. This is due to the fact that all sound libraries are recorded at different studios, by different engineers, with different musical aesthetics in mind. Therefore, their choice of microphones and placement will differ. In this case Superior Drummer 3 will still attempt to automatically route the X-Drum's microphones to the most appropriate mixer channels in column 3. This is where it is extremely useful to have full manual control over the routing of the microphones from column 2 to the mixer channels in column 3.

EXAMPLE 2



Consider the following example with a stacked snare drum. When you select a stacked instrument in the instrument menu, all members of the stack will appear. You can then customize the

The picture shows the snare drum selected in column 1 of the Route Instrument Microphones window. An additional snare drum was Stacked on the existing snare in the kit, therefore both the original snare and the stacked snare appear below so that they can be routed independently.

Route Instrument
Microphones for each
member of the stack
individually.

The Microphone

column will always correspond to the selected member of the stack. In the picture to the left the selected instrument is a snare drum from the Progressive Foundry SDX (a separately purchased expansion sound library). Three close microphones were used to record this instrument as well as other mics on the drum kit which are referred to as bleed mics.

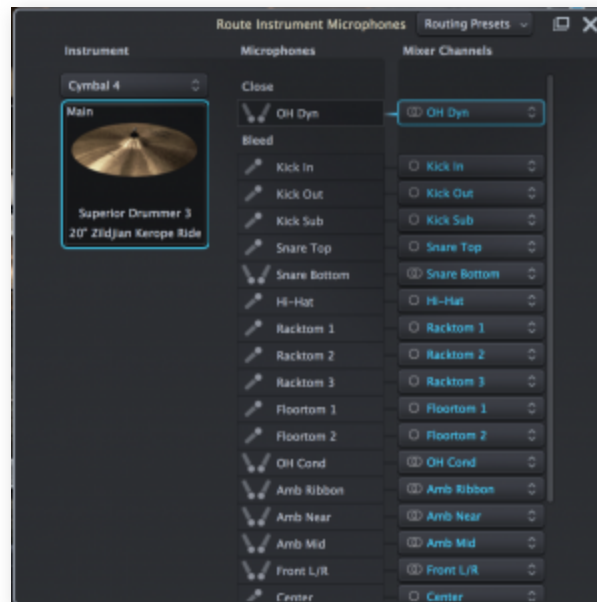
Here, Superior Drummer 3 has auto assigned the SD-Top Cond mic and the SD Top Dyn mic to the closely matching Snare Top Mixer channel in the Superior 3 core library's mixer. Its also assigned the SD Bottom mic to the matching snare bottom mixer channel in the Superior 3 core library's mixer. At this point you could decide to leave the routing as it is, and allow the audio from the stacked Progressive Foundry SDX snare drum to come out of the same channels as the Superior Drummer 3 core library snare drum. Or, you could choose to change the routing and create new channels for the stacked snare drum as previously described.

EXAMPLE 3

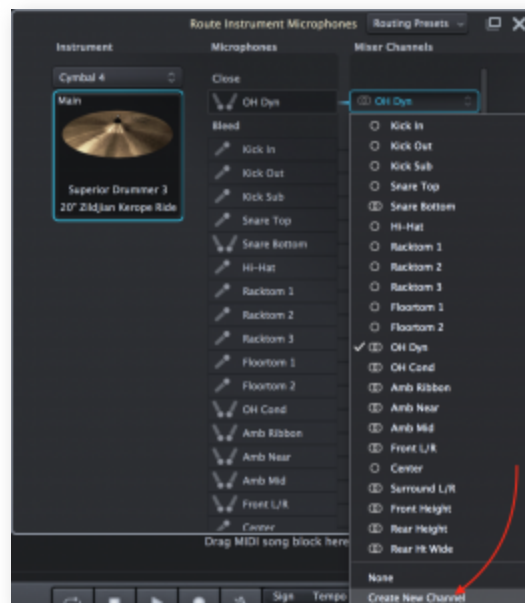
Route Instrument Microphones can also be used for isolating an instrument from a stereo channel, such as the ride cymbal from the overheads. To complete this task please follow these steps.

1. Open Route Instrument Microphones.

2. Select the cymbal 4 in column 1 for the ride cymbal position.

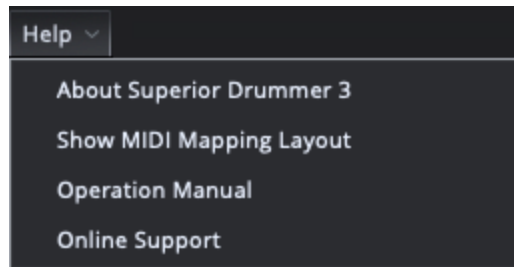


3. The ride cymbal's dedicated close microphone is the overhead channel. Therefore, select the OH Dyn menu in column 3 and choose Create New Channel. A new channel will now be created for the ride cymbal and the OH Dyn (overhead) channel will no longer output the ride cymbal's audio.



9.5 HELP MENU

The Help menu provides valuable information about Superior Drummer 3 and all installed sound libraries.



- **About Superior Drummer 3:** This selection will display information about all of the installed Toontrack sound and MIDI libraries on your computer. There is a convenient "Copy Text" button so that you can easily copy and paste this information. This information would be used if you ever needed to contact support and information about your installed libraries was needed.
- **Show MIDI Mapping Layout:** This opens the MIDI mapping layout that can help you find the note number or key that is mapped and will trigger certain instruments and articulations in Superior Drummer 3.
- **Operation Manual:** An instant link to the web version of the Superior Drummer 3 manual.
- **Online Support:** An instant link to the support section of Toontrack.com, where you can browse the support forum or contact Toontrack support via email.

10. E-DRUM MAPPING

The content in this chapter will be slightly redundant from the information in chapter 9.3.5, but it is designed to centralize note mapping information that you will need in order to make your E-drums work properly with Superior Drummer 3. We therefore recommend that you familiarize yourself with the MIDI In/E-Drums chapter (9.3.5) first so that the full feature set is understood before setting up your E-Drums.

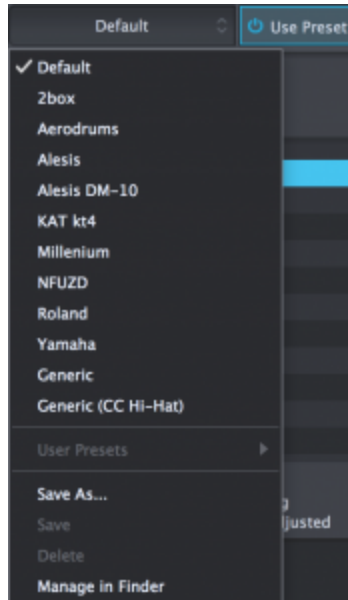
10.1 PAD ASSIGNMENTS (NOTE REMAPPING)

If you experience discrepancies between the sounds your module triggers, and the ones that you expect to be triggered, we recommend playing a simple pattern on your electronic drum kit and make a note of all the elements that do not produce the sound you expect, or do not trigger any sound. If the notes assigned by default to an instrument do not match the settings of your module, proceed as follows:

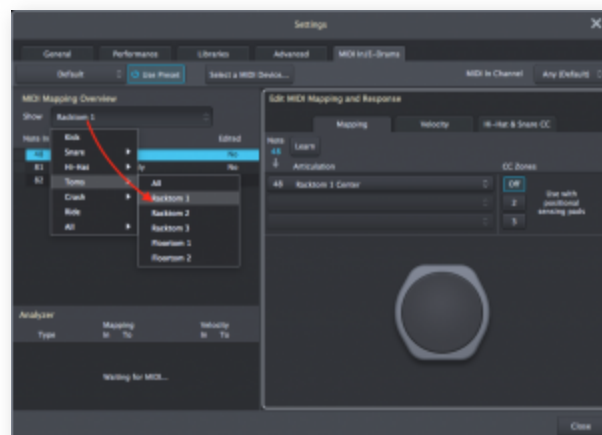
REMAPPING USING MIDI LEARN

Go to Settings > MIDI In/E-Drums tab, and select the correct preset that corresponds to *your* E-Drum module. This alone

should solve any issues that you have. However if your brand is not represented in the list choose the default preset. If the default preset does not work (possibly because the MIDI mapping was changed in the module) proceed to the next step.

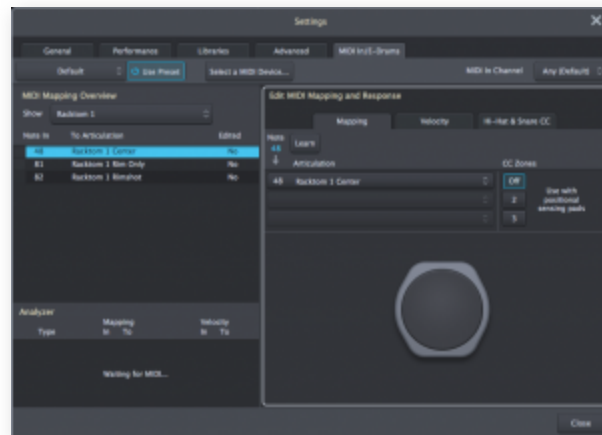


Use the Show menu in the MIDI Mapping overview section to filter the articulations for the instrument that you want to trigger. In the example below the Rack Tom 1 has been chosen.

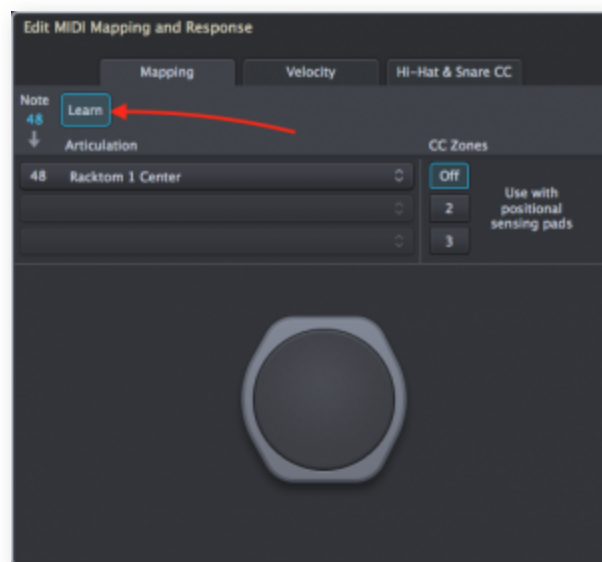


Select the articulation that you want to trigger in the list of the MIDI Mapping Overview section. This articulation will then

also be selected in the articulations menu in the Edit MIDI Mapping and Response section.



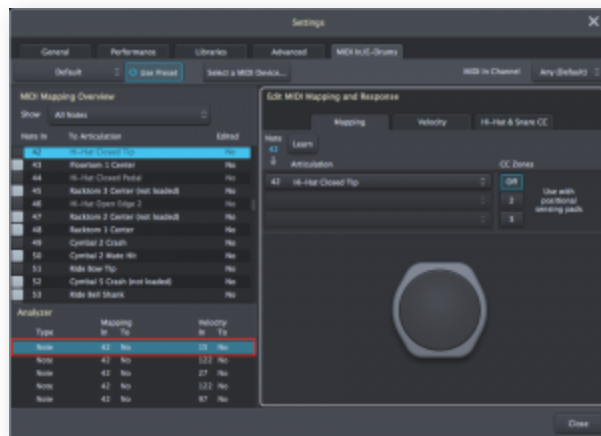
Click the Learn button in the Edit MIDI Mapping and Response section.



Hit your trigger pad. Your trigger pad will send a different note, but the learn function will assign the desired sound to this incoming note. Repeat for any additional pads that need fixing.

REMAPPING USING THE ANALYZER

Another way to remap Superior Drummer 3 to your MIDI controller would be to hit the pad that you wish to remap, then click the topmost item in the Analyzer.



Next then select the articulation to be triggered in the articulation menu of Edit MIDI Mapping and Response.



The pad will now be remapped.

****Note if you wish to remap your hi-hat, the Articulation to associate with your trigger pad should be 'HatsTrig' (or 'HatsTipTrig'), and not the discrete levels of Open. See the next section for additional details.*

10.2 HI-HAT MAPPING

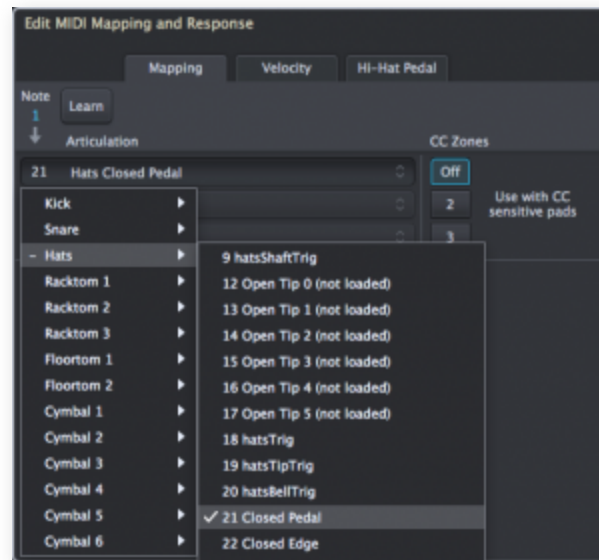
By using the appropriate E-Drum preset for your brand of MIDI controller you should not need to re-map the Hi-Hats. However if your module MIDI mapping does not match the default Hats mapping, you will need to configure it as per the procedure outlined below. The only difference compared to assigning a different type of trigger, as described in the previous section, is that there are several articulations that must be set properly for the set up for the hats to be complete and appropriate: Closed Pedal, Hats Tip Trig, Hats Edge Trigger (optionally Hats Bell Trigger) and finally Hi-Hat Pedal CC Control must be set to receive CC info from your module.

The Closed Pedal value must match the note sent by your module when you play a “foot chick”. The HatsTrig values must match the notes (and ALL the notes) sent by your module when you hit your hi-hat pad. The HatsCtrl value must match the MIDI Continuous Controller type that your module sends when your hi-hat controller position changes (CC04 and CC01 are assigned by default which should be adequate for most users).

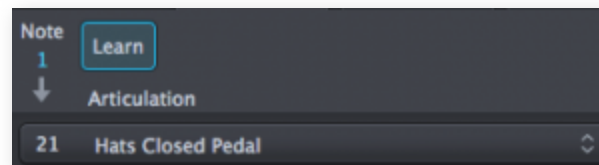
In addition, if your trigger pad is capable of sending distinct note events to differentiate your playing on the edge and bow of the trigger (dual zone pad with appropriate module and cabling), you may also wish to split the notes sent by the module when you hit to pad to react accurately to the zone being played.

Associating the Closed Pedal Articulation

1. In the Edit MIDI and Response section select the "Closed Pedal" articulation.



2. Engage the 'Learn' button



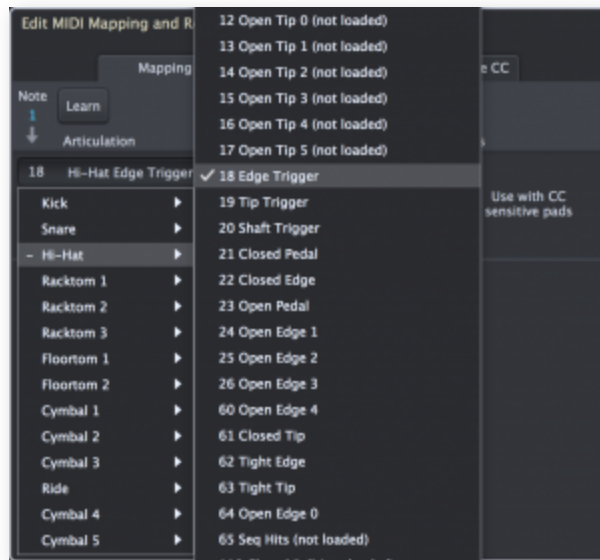
3. Generate a "foot chick" (move your foot controller from the up position to the floor)

ASSOCIATING THE EDGE TRIGGER ARTICULATION

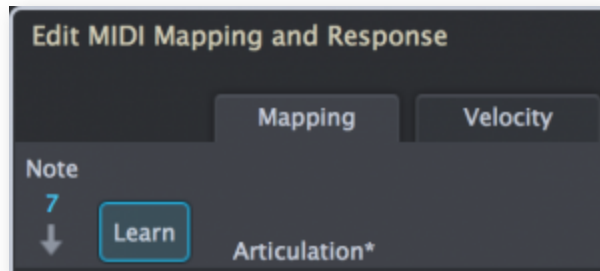
It should be noted that the Hats Trig Articulation will only work with modules that are capable of sending Continuous Controller (CC) data. If your module does not send CC data please skip this step.

1. Select the "Edge Trigger" Articulation from the Edit Mapping and Response section of the MIDI In/E-Drums settings tab. (ensure that the "Articulation in Loaded

Library" is selected in the bottom of the MIDI In/E-Drums Settings tab)



2. Engage the 'Learn' button.



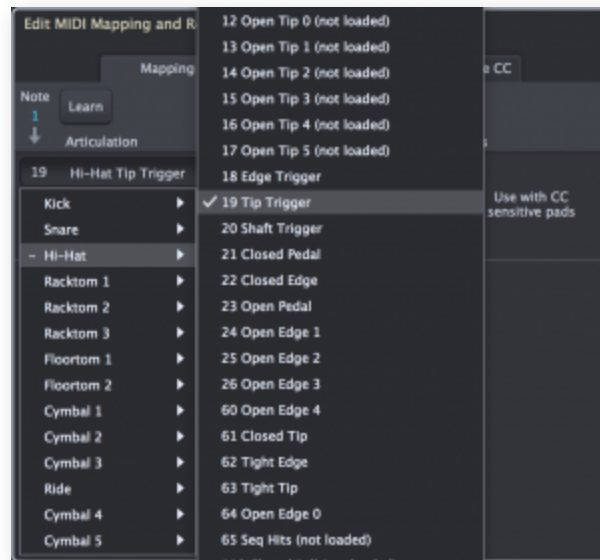
3. Hit your pad on the edge.

Repeat for each controller position in which the module sends a different note as you hit the pad.

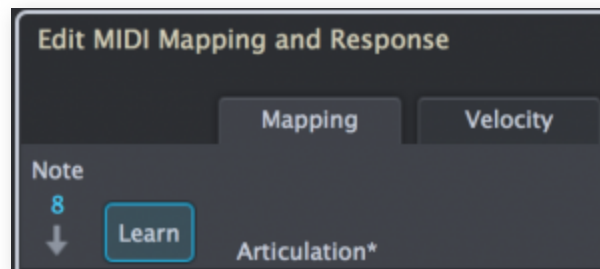
*Once again **if** your module sends different notes when the hi-hat pad is hit, for example 1 note when the controller is in the closed position and 7 additional notes for various degree of openness, you **MUST** assign ALL those notes to 'HatsTrig'.*

ASSOCIATING THE HATS TIP TRIGGER ARTICULATION

1. Select "Hi-hat Tip Trigger" Articulation from the Edit MIDI Mapping and Response section.



2. Engage the 'Learn' button



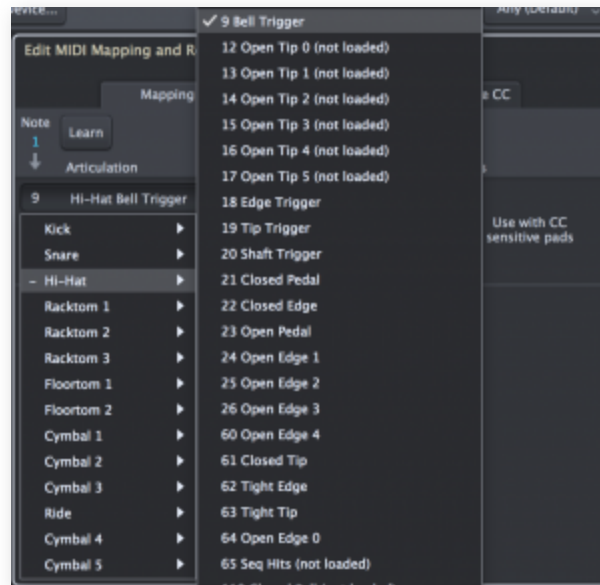
3. Hit your pad with the tip of your drumstick in the bow area of the pad.

Repeat for each controller position in which the module sends a different note as you hit the pad.

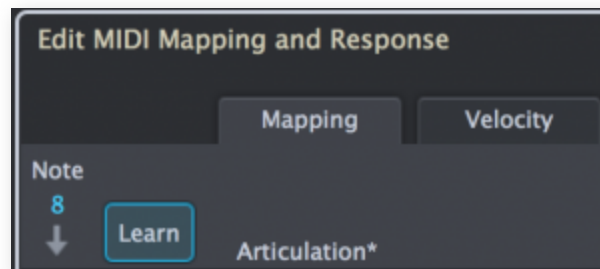
Once again if your module sends several notes when you hit the pad on the same spot depending on the position of your hi-hat controller, you must assign all of these notes.

ASSOCIATING THE HATS BELL TRIGGER ARTICULATION

1. Select "Hi-hat Bell Trigger" Articulation from the Edit MIDI Mapping and Response section.



2. Engage the 'Learn' button

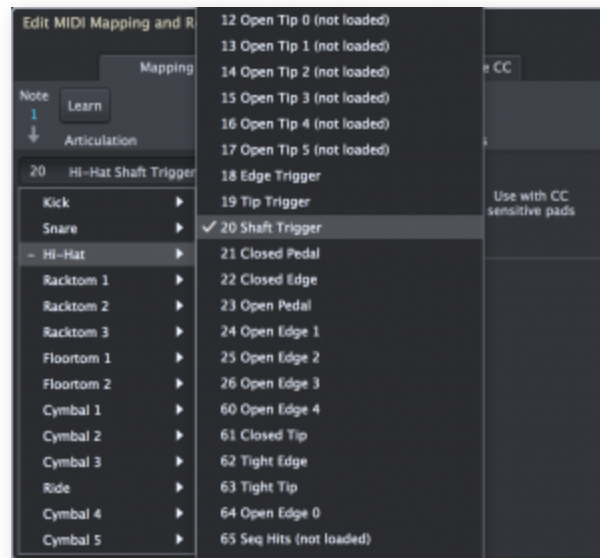


3. Hit the Bell area of the Hi-hat pad.

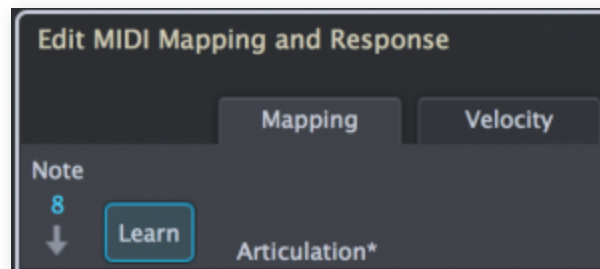
ASSOCIATING THE HATS SHAFT TRIGGER ARTICULATION (BRUSHES ONLY)

The Hi-Hat Shaft articulation only applies when you have loaded a kit that was sampled with brushes, as this is a brush articulation only.

1. Select "Hi-hat Shaft Trigger" Articulation from the Edit MIDI Mapping and Response section.



2. Engage the 'Learn' button



3. Hit the shoulder area of the Hi-hat pad.

10.3 HI-HAT PEDAL CORRECTION

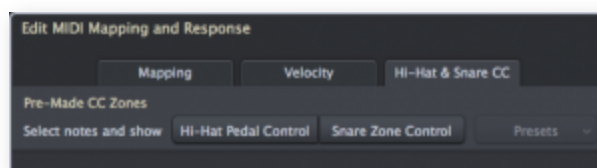
The Continuous Controller data sent by your E-drum module is a succession of values comprised between 0 and 127, where 0 corresponds to fully open, and the maximum value of 127 to fully closed (in fact, more than closed: a controller should ideally

require a certain amount of physical pressure to reach this value). Let us repeat, a high value is when your foot has pressed down the pedal and a low value when your foot is in the air.

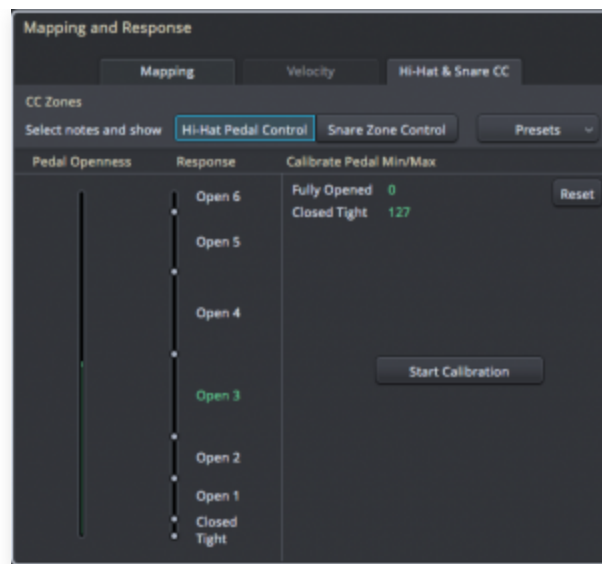
If you notice that the transition from open to closed articulations is not smooth enough it is recommended that you try the presets in the Hi-Hat Pedal Tab of the Edit MIDI Mapping and Response section, or use the calibration mode. When playing a complete exclusion of tight or open articulations could occur if your Hi-hat pedal/module does not output the full range of CC from 0 to 127 (this is the case with some Roland modules). In this instance using the Close Even More preset, or the Calibration mode would resolve the issue.

Hi-Hat Pedal Tab: The Hi-Hat Pedal tab allows you to control the CC values that trigger the various closed to open articulations for the Hi-Hat. This tab works in the same way as the same as the Hi-Hat CC Edit Property Box on the Drums page. Its included on the Mapping and Response page so that it can be edited and saved as a MIDI Mapping preset that is independent of the Superior Drummer 3 project file.

When the tab is first selected you will be prompted to select the Notes Mapped to the Hi-Hat Pedal or Snare Drum Zone Control. Clicking this button will open the CC Editor. Clicking this button will automatically select the notes mapped to the Hi-Hat Pedal.



Click the Select Hi-Hat Pedal Control or Snare Zone Control button to automatically select notes mapped to the Hi-Hat or Snare Zones.

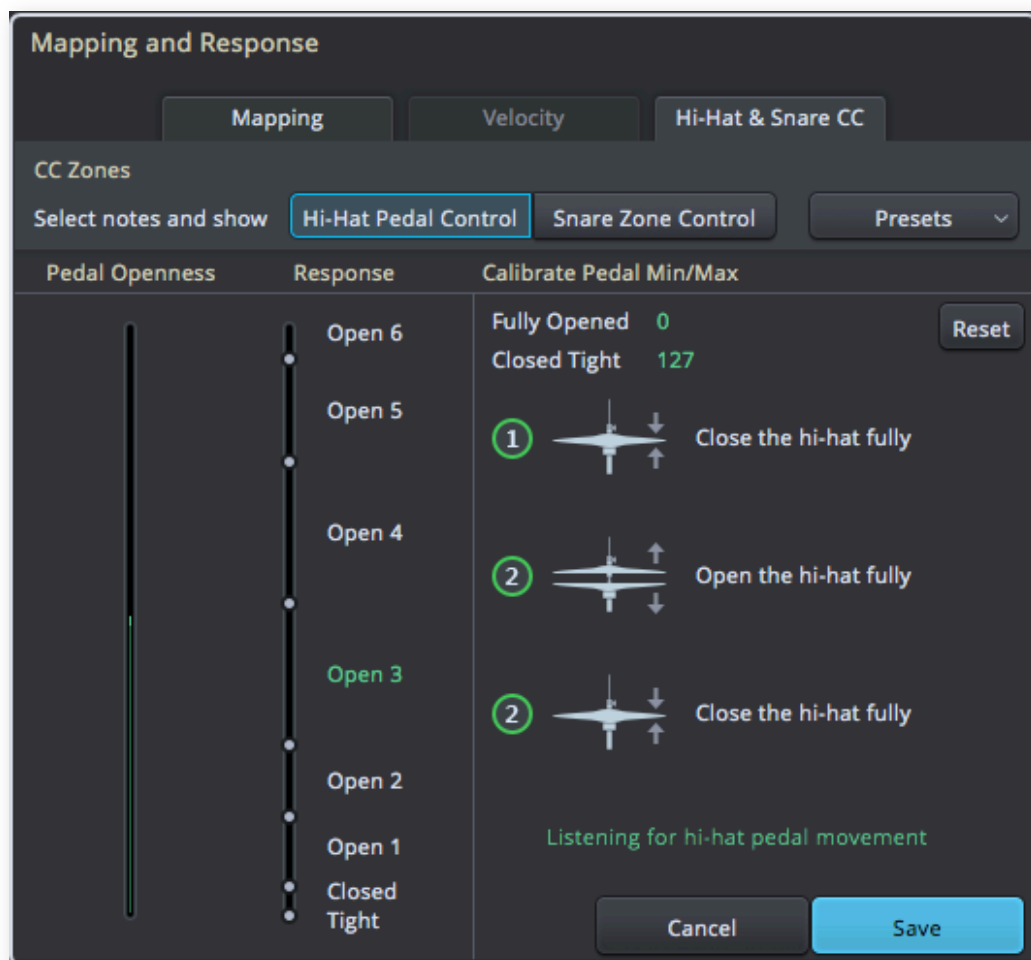


To the left of this section you will see the Pedal Openness Meter and the slider points. By moving the slider points you can set the CC value that triggers the various articulations for the high hat. The points can be moved manually or you can use the selection of presets. The Pedal Openness meter will display in real time the CC value that it receives from your pedal. Therefore, as the physical pedal is fully opened you will see the meter move up, and as it's closed the meter will move down.

HI-HAT PEDAL CALIBRATION MODE:

Selecting the Hi-Hat Calibration Mode provides a step by step process for calibrating the response of your E-drum Hi-Hat pedal. Before using the Calibration Mode ensure that your Hi-Hat pedal is connected and that the appropriate E-Drum preset is selected. By following these 3 steps the Calibration Mode will analyze the incoming CC values from your Hi-Hat and automatically adjust the triggering of the various Hi-Hat articulations in a range that is acceptable for your Hi-Hat

controller.



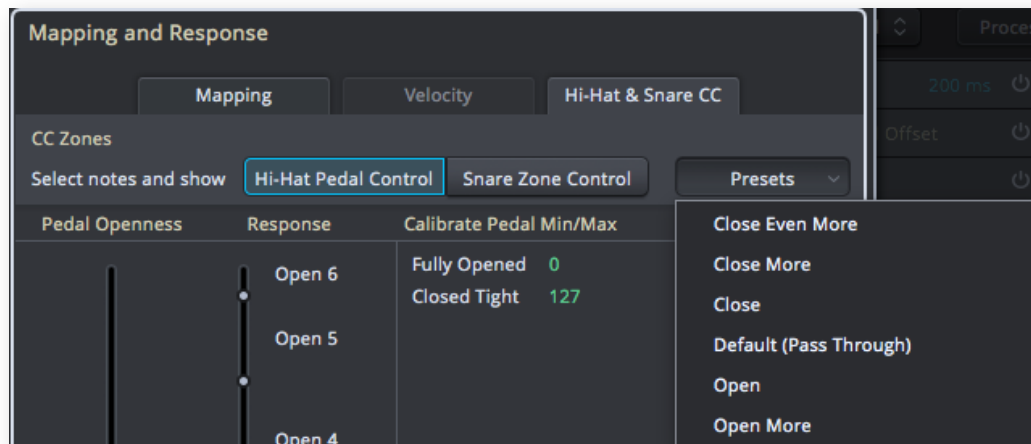
Its important to mention that some MIDI modules / E-Drum controllers do not send the full range of CC values from 0 to 127. This would manifest itself as Superior Drummer 3 never being able to trigger the tightest closed Hi-Hat samples. If you suspect that you may be experiencing this issue use the Hi-Hat Calibration Mode to allow SD3 to assign the correct articulations to the CC range of your Hi-Hat and controller.

Some E-Drum modules only allow for a maximum value of 90 which by default would not trigger tightly closed Hi-Hats. The solution would be to use the Hi-Hat Calibration Mode, or

alternatively the "Close Even More" preset in the Hi-Hat Presets menu. Finally you could also adjust the slider points manually by moving the slider points for the Hi-Hat Pedal Control up so that the Tight articulation is at 90 (or the max value of your module CC04 data) and then move all subsequent anchor points up in a evenly distributed manner.

HIGH HAT CC CURVE PRESETS

Presets for CC curves can be found in the presets menu. The presets are named after how they adjust the slider points to achieve more open or more closed articulations on the hi-hat.



10.4 POSITIONAL SENSING

Positional sensing is addressed through Continuous Controller data, typically CC16. It is automatically enabled through the use of the 'E-Drum' preset mentioned at the beginning of this chapter and in chapter 9.3.5. However, in addition to dedicated Trigger Articulations new in Superior Drummer 3 is the ability to create your own Continuous Controller Zones which gives you the power to assign any sound you want to any zone of your multi zoned drum pad!

TRIGGER ARTICULATIONS

Trigger Articulations are groups of sounds (Articulations) for an instrument tied to a single MIDI note. Trigger Articulations are assigned automatically for all E-Drum presets that apply. These Trigger Articulations can play many different sounds based on the CC information that is received along with the MIDI note. An example would be the Hi-Hat Edge Trigger. In this instance an incoming MIDI note 7 (default for Hi-Hat Edge Trigger) would trigger an open Hi-Hat sample, but the CC04 data received along side of the note would tell Superior Drummer 3 which of the 6 levels of openness it's to play back. Therefore, Trigger articulations are only to be used with pads and modules capable of positional sensing (i.e. ones that send CC data). Superior Drummer 3 also allows the user to set up their own Multi Zone Triggers from scratch with the CC Zones described below.

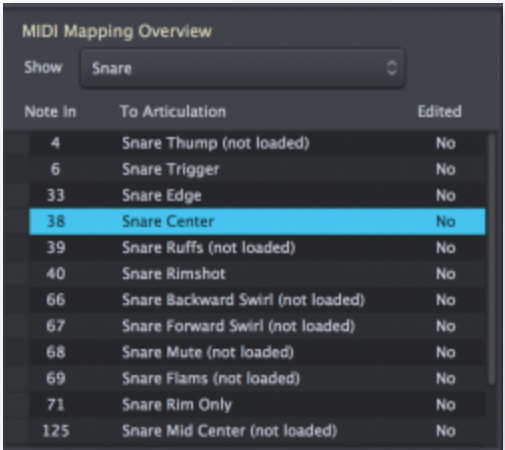
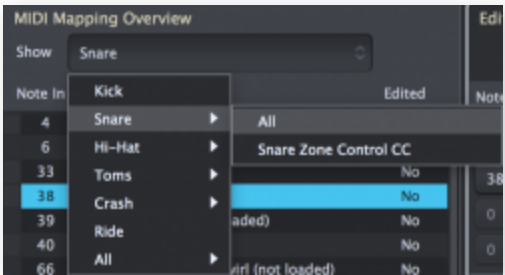
CC ZONES

In the Edit MIDI Mapping and Response section on the Mapping tab are the CC Zone controls. At a basic level E-drum modules

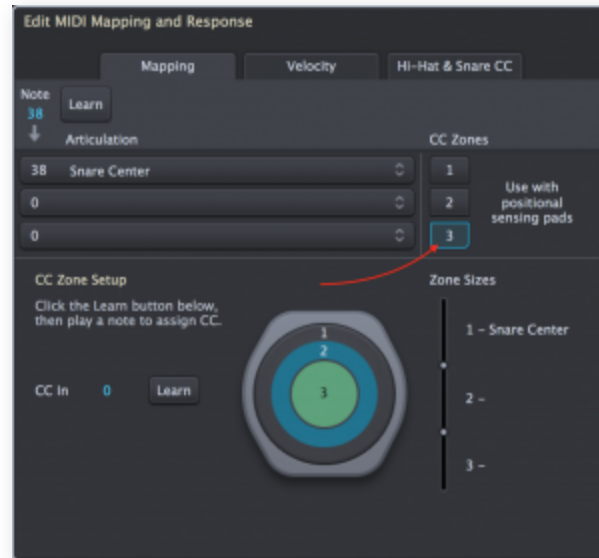
will send different notes through MIDI when you hit the pad. Alongside the notes the MIDI module will also (in most cases) generate Continuous Controller information aka ‘CC’ with the purpose to indicate the position of the controller more precisely. If your module or pad does NOT support positional sensing you will not be able to use the CC Zone controls. If however you have a snare pad (for example) that supports positional sensing for 2 or 3 zones you will be able to use the following feature.

The following example will outline the process for setting multiple zones on a Snare pad.

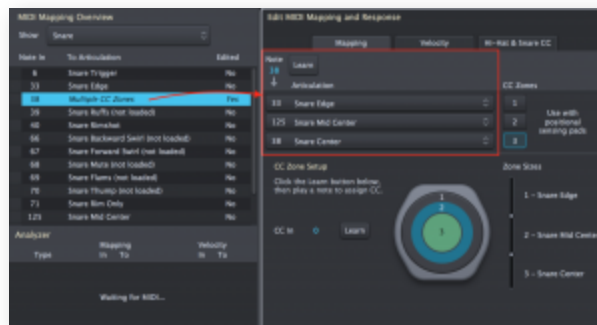
- 1. First select the main Snare note/ articulation in the MIDI Mapping Overview section that you want to trigger multiple zones. In the case of the snare drum this will most likely be note #38 Snare Center.



2. Then select the number of zones that you would like to use with your CC sensitive drum pad in the Edit MIDI Mapping and Response section. It would be wise to confirm the total number of possible zones that your snare can support before choosing this option.



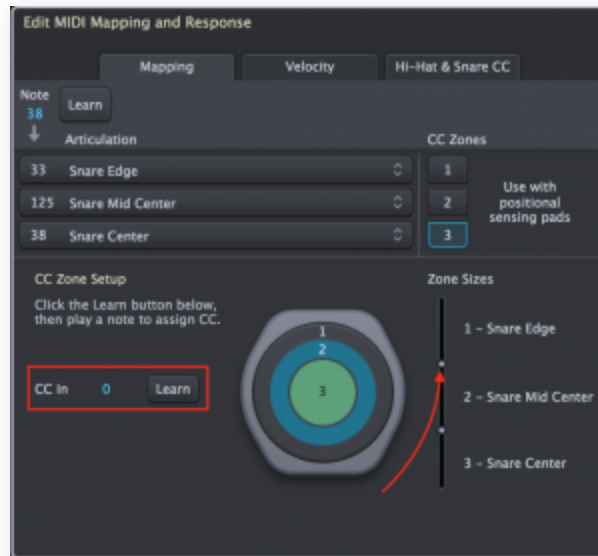
3. Finally open the selection menus for each zone and choose a new articulation for the zone.



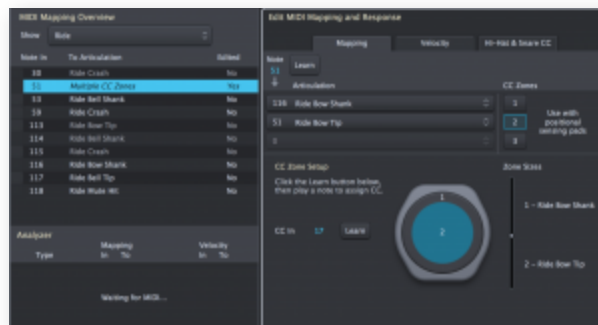
This picture attempts to show how the left half of the screen is connected to the right. Notice when multiple CC zones are added to a note, the note name changes to "Multiple CC Zones" in the MIDI Mapping Overview section.

4. You can then adjust the point at which the zones begin and end by adjusting the sliders. The CC learn button will

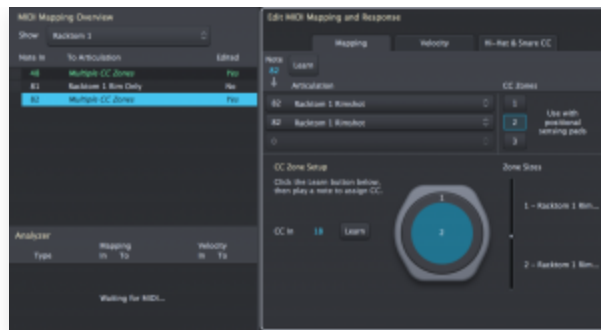
learn the incoming CC # used for positional sensing when your drum pad is hit. Simply click the button and then strike your drum pad.



This feature can also be used for much more than Snare pads! In this next example we have created 2 zones for the Ride. The ride bow tip and ride bow shank to are mapped different areas of the ride cymbal using CC 17.



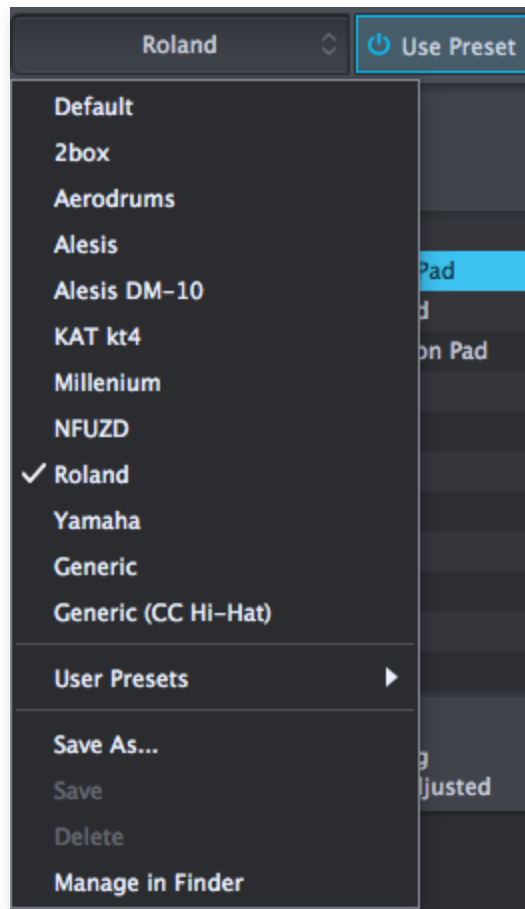
Finally, here is an example where either the rack tom 1 rim only, or rack tom 1 rimshot is triggered depending on whether the rim is hit on its own, or its hit together with the head on CC 18.



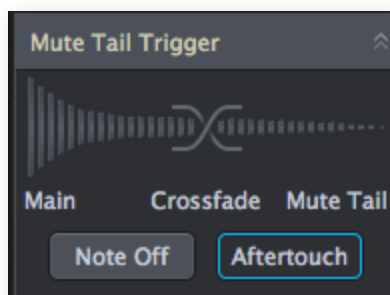
10.5 CYMBAL CHOKES

Cymbal chokes will automatically be engaged by selecting an E-Drum preset from the MIDI In/E-Drums settings page. Setting up Superior Drummer 3 to work with cymbal chokes however is only half of the battle. You must also ensure that your module is sending the necessary Aftertouch messages, and that these aftertouch messages are **NOT** filtered out by your host DAW (as is quite commonly the case).

First select an E-Drum preset. To engage the preset click the Use Preset button, then select a specific preset from the menu. E-Drum presets include MIDI transformations from the specific brand of E-drum mapping to the Superior Drummer 3 map. They will also automatically conform the Mute tail Trigger property box on the Drums page to accept aftertouch messages for cymbal chokes.



If after selecting a preset you still do not hear Cymbal chokes we recommend that you go to the Drums Tab and check the status of the Mute Tail Trigger Property box. To do this open the drums tab, select the desired cymbal and then open the Mute Tail Trigger Property box (**it may be hidden from view. Select "All" in the Box State Presets Menu to show all boxes).



The Mute Tail Trigger Property Box has 2 states; Note Off, and Aftertouch. Most E-drum modules use Aftertouch messages for the purposes of choking however, some use Note Off. Therefore,

if you are experiencing issues with choking cymbals, we recommend that you refer to your E-Drum operation manual and verify what type of messages are used for choking cymbals, or if cymbal chokes are even possible at all with your specific module/cymbals.

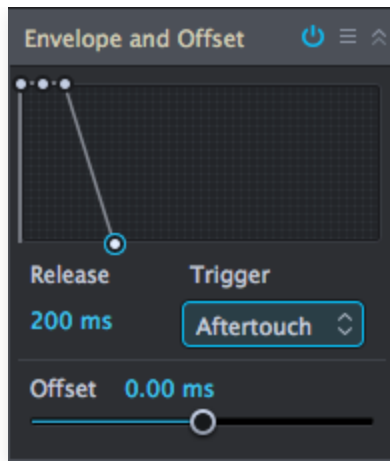
If you still are not able to hear a cymbal choke and you are sure that your module/cymbals use Aftertouch, it is time to investigate if the aftertouch messages are being filtered out by your host DAW. In this case we recommend a test using the stand alone Superior Drummer 3 application instead of launching Superior Drummer 3 as a plugin in your host. Launching Superior 3 in stand alone will remove the possibility of filtered aftertouch messages and help you narrow down the issue.

Finally, check your E-Drum manual to ensure that aftertouch messages are not disabled in someway, or again that aftertouch is possible with your specific module and pads.

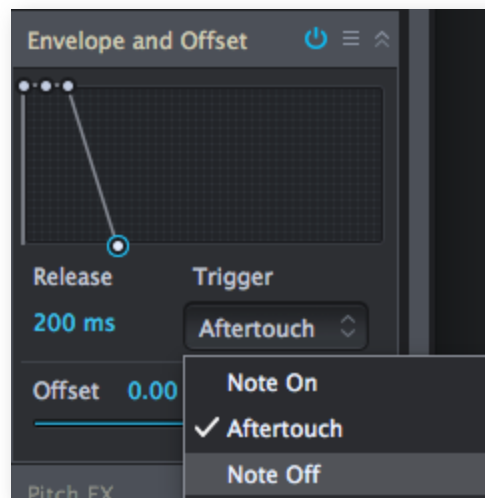
CYMBAL CHOKES WITH THE RELEASE ANCHOR POINT IN THE ENVELOPE AND OFFSET PROPERTY BOX

Early Superior Drummer expansion libraries (SDX's) did not include the "Mute Tail" Articulation that is currently used for Cymbal chokes. Choking cymbals with these libraries is accomplished with the Release anchor point in the Envelope Property Box. The process described below is set up by default for all libraries to which it applies. Please note that this does **not** apply to the Superior Drummer 3 core library.

When a cymbal is selected in one of these libraries the Release Anchor Point is automatically set up to respond to Aftertouch messages.

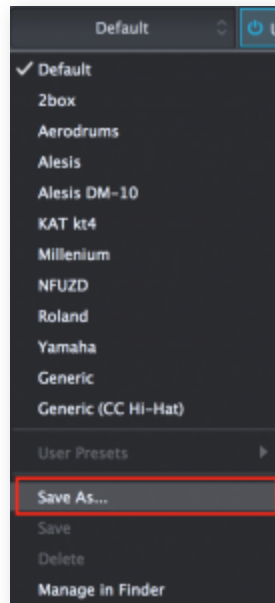


This can be changed to Note Off, or Note On in the Trigger menu. Just like with the Mute Tail Property Box you have the option to choose the desired trigger for the Release anchor point. Therefore when SD3 Receives a Note Off, or Aftertouch message, it will then trigger the shortened release, emulating the sound of a cymbal choke.



10.6 SAVING YOUR MIDI IN / E-DRUM PRESET

Once you have customized the MIDI In / E-Drums settings page it will be useful to save your customizations for future access. This action is performed in the Preset Menu by clicking Save As:

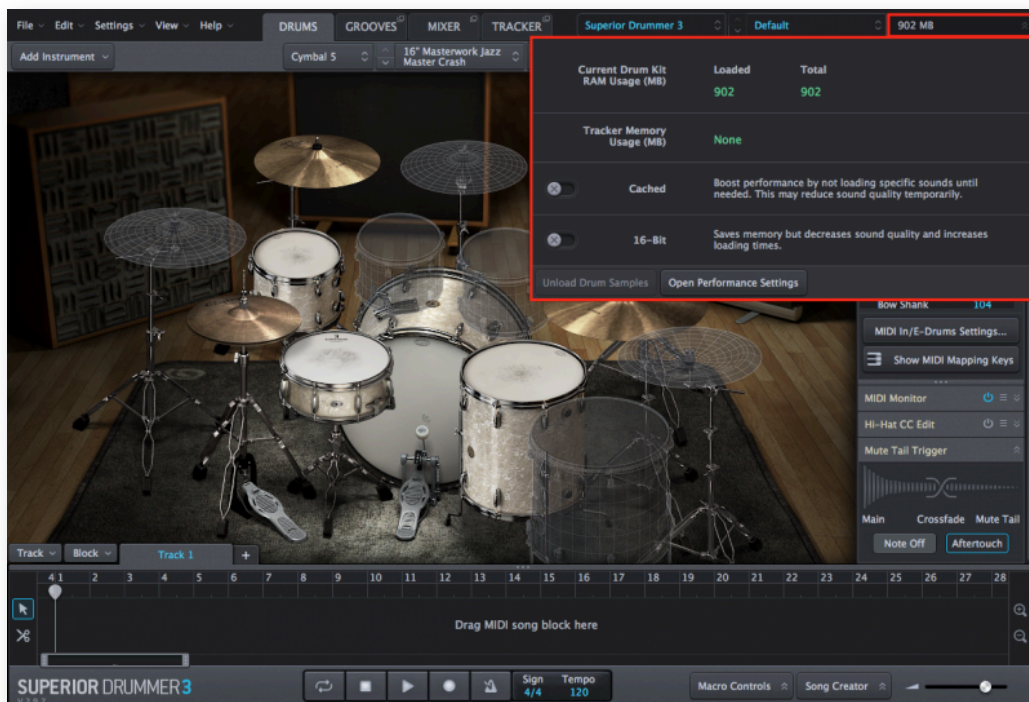


User presets saved from the MIDI In / E-Drums Settings preset menu will save all changes made in this Settings Tab, but noting outside of the MIDI In / E-Drums Settings page. This allows a user to load their MIDI In / E-Drums Preset independently of the loaded sound library. Therefore it is possible to load any Drum and Mixer preset from any one of your installed sound libraries and maintain all MIDI Input customizations by loading your saved MIDI In / E-Drums User Preset.

11. MEMORY DETAILS MENU (RESOURCE MANAGEMENT)

The Memory Details menu found in the upper right corner of the Superior Drummer 3 interface, provides information about the memory usage of Superior Drummer 3, and offers a few options to maximize resources.

Here you can view the current Drum Kit RAM usage, Tracker's Memory Usage, engage Cached Mode, or engage 16 bit mode.



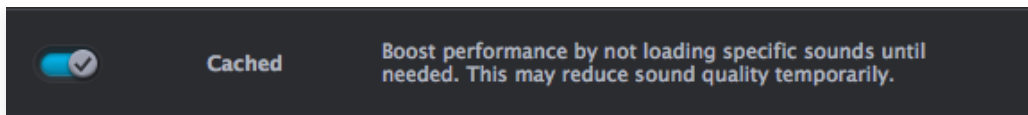
11.1 CACHED MODE

The numbers in the Current Drum Kit RAM Usage, "Loaded" category indicate how much memory is required by the combination of all the instruments present in the project. The TOTAL, is the amount of available memory required for your selection to sit in RAM.

Current Drum Kit RAM Usage (MB)	Loaded	Total
	902	902

It is important to understand that this figure does not include your sequencer's own memory requirements, nor does it reflect the usage of other virtual instruments used in your DAW. However, a very effective way to keep the sampler memory footprint to the minimum for any given pre-programmed sequence is the memory caching feature. In a nutshell, when engaged, only samples requested by the MIDI sequence will be read from disk and loaded in memory. Click 'Cached' to start loading samples on demand. For this reason your MIDI sequence should be finished before using Cached mode.

There is a side effect that should be noted however: caching introduces a delay in playback the very first time a sound is requested. This will manifest itself as a temporary stuttering which will continue until samples are loaded in RAM. This inconvenience is a small price to pay however when RAM is at a premium.



When Cached mode is activated it will automatically unload any instruments that have been loaded into RAM, samples will then not be loaded until they are requested by the MIDI sequence. If necessary you can unload all cached samples, bringing the total RAM usage back to 0MB by clicking the "Unload Drum Samples" button. This button will only become active when Cached Mode is used.

Unload Drum Samples

ADDITIONAL RAM CONSIDERATIONS

It is usual to consider that approximately 300Mb is necessary for a modern operating system and a typical virtual instrument host to operate comfortably underneath Superior Drummer 3. This is called the system headroom. The more you eat into that vital allocation, the more likely you are to starve your system and possibly hard crash your computer, placing a strain on all electronic components. Please preserve system headroom at all times as not doing so may cause clicks and distortion in audio playback, irremediable loss of data, and possibly physical damage to your computer.

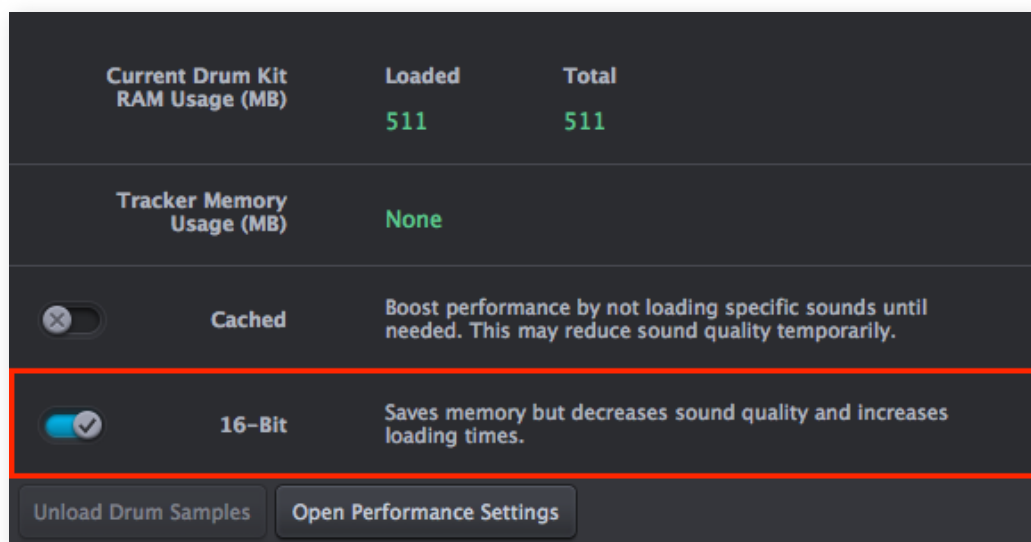
As implied above, there is an obvious relationship between kit composition and memory requirement: the bigger the kit, the more samples will be necessary for playback. The best advice we can give you to reduce memory requirements is therefore to

assign only as many instruments as is necessary. X-Drums are obvious candidates for this type of optimization (i.e. do not use more than needed).

It is wise to reduce the number of instruments of a specific type if you find yourself only using a few of them. Ask yourself if you really need those 6 crash cymbals all at once: maybe you find yourself only using 3 of them after all and perhaps you only hit the third a single time in the course of a song.

11.2 SIXTEEN BIT MODE

Another way to reduce the amount of RAM used is to engage 16 bit mode in the Memory Details menu.

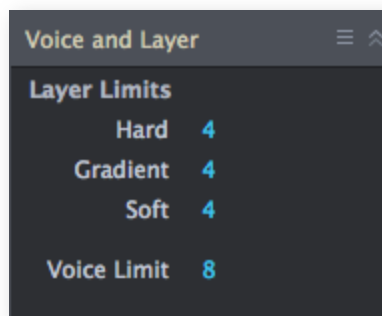


Turning on 16-Bit will reduce the samples quality to 16 bit. This is a very useful option especially while writing music. It can then be easily switched off, and samples will go back to their 24 bit quality.

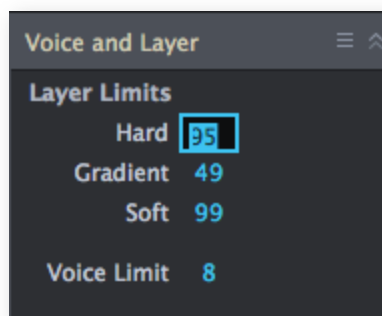
11.3 VOICE AND LAYER LIMITS

LAYER LIMITS:

Yet Another way to reduce the RAM usage for the loaded kit is to lower the values in the Voice and Layer Property Box found on the Drums Tab.



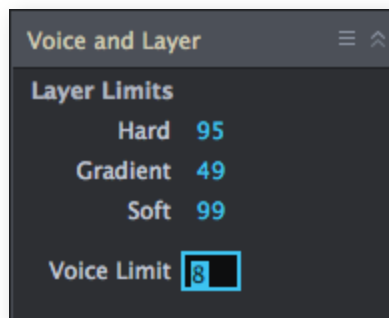
The Voice and Layer limits always apply to the selected instrument, so if you would like to reduce the layer limits for all instruments in the kit at once please select them all with a shift + click, and then lower the values. Values can be lowered either by clicking on a number and dragging the mouse down, or by double clicking and entering a new value (up to a max of 99).



CPU CONSIDERATIONS, VOICE LIMIT:

The voice limit does not effect RAM, but it will have an effect on CPU usage.

To help relieve your system, especially if you intend to use numerous FX in the Mixer, Superior Drummer 3 allows you to optimize the voice count for each and every instrument present in the Drums Tab. Simply select any instrument or combination of combination of instruments and type in the desired value.



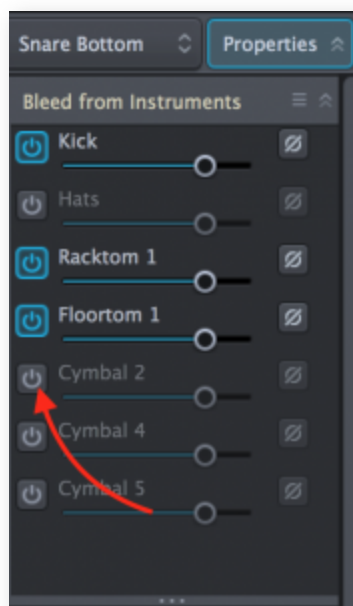
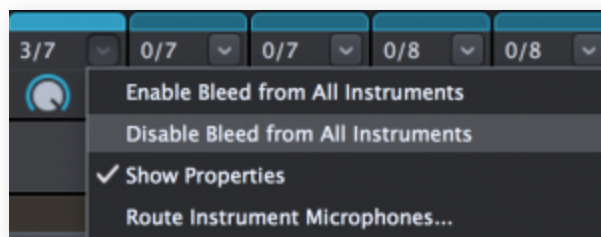
The number of voices for an instrument dictates how many concurrent samples of the same articulation are allowed to ring until automatic muting of the lowest in volume occurs. High values require more CPU.

11.4 MICROPHONE BLEED'S IMPACT ON RESOURCES

The Bleed From Instruments section found in the Mixer Properties has a impact on your system's resources. Each time an instrument is 'heard' through an additional microphone, more samples are being utilized. Each 'voice' creates additional demands on your computer's RAM and CPU, so additional bleed can negatively affect these resources, if left totally unmanaged.

Many modern computers however have more than enough memory and CPU to handle bleed from multiple, if not all channels. So, the real lesson here is to simply be aware of how much memory Superior Drummer is using and how much total memory you have in your machine. Distortions (such as clicks and pops, and dropouts in the audio) can be a symptom of low available RAM.

If both RAM and CPU power are at a premium, it is recommended that you disable any bleed that is not essential to the drum sound. Please keep in mind that you can always bounce your finished drum track to audio with all bleed at a later time.



The Superior Drummer 3 design is registered by Toontrack Music AB, RCD No.: 004171270-0001 – RCD No.: 004171270-0012.