EZBASS

THIS MANUAL APPLIES TO VERSION 1.0.0 OF EZBASS.

0. INTRODUCTION

Thank you for purchasing EZbass. From here on out, adding bass to your songs will be easier, more creative and fun than ever before.

EZbass was designed with the same ease of use in mind as its EZ Line siblings. The EZ concept has been clear since day one: to give you, the songwriter, not only products that make your music sound great, but also the tools you need in order to create music. Creativity is the hallmark at the front and center of the EZ Line design. In essence, the goal with EZbass is to give you your own personal bass player at your beck and call in your computer, 24/7.

In addition to a wealth of songwriting features, EZbass also includes two fundamentally different bass sound libraries, a comprehensive MIDI library, meticulously engineered presets, advanced audio to MIDI conversion and much, much more.

Happy songwriting!

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Effects powered by Overloud

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0.1 WHAT'S INCLUDED WITH THE PURCHASE OF EZBASS

The purchase of EZbass includes the download of the following:

- **The EZbass software** (i.e. the standalone 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 EZbass core sound library**. This includes two separate bass sample libraries, one ’Modern’ and one ‘Vintage,’ each featuring one unique bass guitar.

- **The EZbass core MIDI Library**. This is an extensive collection of MIDI files that show up in the 'Grooves' browser of EZbass.
- **EZbass factory presets**. This includes a dedicated selection of presets for both core sound libraries.
- **Toontrack Audio Sender**. This DAW plugin allows you to send audio into EZbass from an audio track. It is a separate download available from the Toontrack Product Manager.

1. INSTALLATION

EZbass is a download only product and is available for download via the Toontrack Product Manager.

1.1 INSTALLING WITH THE TOONTRACK PRODUCT MANAGER

The following is a step by step guide for using the Toontrack product manager to download, install, authorize, and update EZbass and its sound and MIDI libraries.

DOWNLOADING THE PRODUCT MANAGER

Notice

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

The Toontrack Product Manager is a standalone 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.

1. 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/
2. Once the Toontrack Product Manager has been downloaded run the installer for the Product Manager on your Mac or PC.
3. 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.

4. Once you have logged into your toontrack.com account via the Toontrack Product Manager, all of your registered products will appear.
    - If EZbass 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.

DOWNLOADING AND INSTALLING THE EZBASS SOFTWARE

1. Locate EZbass in the Product Manager, and click the red Download Product button.
2. Once the download of the file is complete, Click the Install Product button and the Product Manager will launch the EZbass 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 EZbass to a specific location on your computer for DAW compatibility (PC), or if your system drive has limited available storage.*

3. Once installed the Product Manager will prompt you to Authorize the EZbass software. Simply click the red Authorize button in the Product Manager.
4. Finally, if there are updates available the Product Manager will prompt you to download the available updates, and once downloaded, install them.

1.2 LAUNCHING THE EZBASS STANDALONE APPLICATION

When EZbass is completely installed you will find the EZbass application in your list of applications or programs:

- On a Mac the application will be found in /Applications/Toontrack, and
- On a PC the application is located in the Toontrack folder in the start menu. It is also found as a shortcut on your desktop.

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

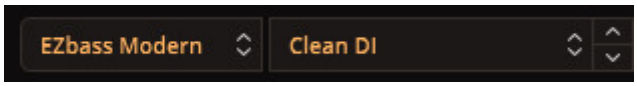
2. GETTING STARTED

3. THE BASS TAB



The Bass tab is the starting point of your project. It's where you preview your sound libraries and do all initial tone adjustments.

LIBRARY AND PRESET MENUS



Choosing a sound library is done by clicking the library selection menu in the main navigation bar.

Once you have selected the sound library that you want to use, the preset menu is populated with different presets made specifically for that sound library.

The presets are divided between finger and pick. Besides the actual sound of the bass being different between them, there are also subtle changes in the behavior of both the instrument and application interface depending on which you choose.

3.1 THE BASS VIEW



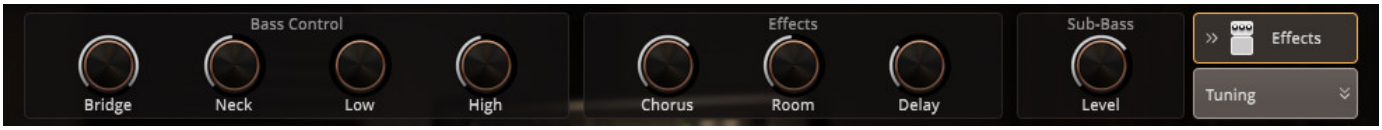
The Bass View consists of three elements: The interactive bass, Bass tone and effects controls, and the Tuning controls. Depending on the chosen library, the graphical representation of the bass changes and the effects controls are all selected based on the target sound of the currently loaded preset.



Clicking the fretboard produces the sound associated with that string and fret. When playing the bass from a MIDI keyboard or groove, the notes played are indicated on the fretboard based on where on the neck they were recorded.

User input, whether clicking with your mouse or using a MIDI keyboard, is displayed above the bass. The top row indicates the played note or chord, and the second row displays the active articulation. To learn more about articulations, see the "Learning the Instrument" or 6.2.3 Articulations chapters of the manual.

3.2 TONE AND EFFECTS CONTROLS



In the top right of the Bass view is the Effects button. Clicking expands the tone and effects controls for the selected preset. The controls are grouped depending on function, but there are two static groups with every bass: Bass Control and Sub-Bass.

You can assign these controls to MIDI CC and automate them from your DAW or the Grid Editor. Se chapter 6 for more information about automation.

BASS CONTROL

Controlling the knobs of the loaded instrument is done within this effects group. The number of controls depends on the loaded bass, but most basses have at least three.

Bridge

Controls the volume of the pickup closest to the bridge.

Neck

Controls the volume of the pickup closest to the neck.

Bass/Mid/Treble

Controls the tone of the bass. Sometimes there are multiple controls, sometimes there's a single Tone knob, and sometimes the knobs are separate for the Neck and Bridge pickups.

The actual controls are described in the respective sound library product pages. The Bass and Sub-Bass controls are not always present in every preset.

SUB-BASS

The sub-bass knob adds and controls the levels of two sine tones to each note in order to strengthen the fundamental pitch. The first tone has the same pitch as the played notes and the second is one octave above.

The sub bass can add both fullness and definition to a bass line, but finding a good balance is not always easy, and turning the knob up too much can make the tone difficult to manage.

EFFECTS PROCESSING

Beyond these basic controls, many presets have additional effects in the signal chain. These are the types of effects you find on pedal boards and effects units in a regular bass player's arsenal: compressors, equalizers, delays, reverbs and many modulation effects. Selected parameters that can improve or reshape the sound of a preset are added as effects knobs and have a tooltip describing the effect or parameter they control.

3.3 TUNING

EZbass instruments are recorded with equal temperament, the same as a perfectly tuned keyboard. This makes for an excellent match with synthesizers and other digital instruments, but to the experienced listener may sound off or even out of tune.

In order to give more control we offer a few different tunings to better align with different situations:

Perfect (default)

The recorded, equal temperament tuning, excellent for use with digital instruments and synthesizers.

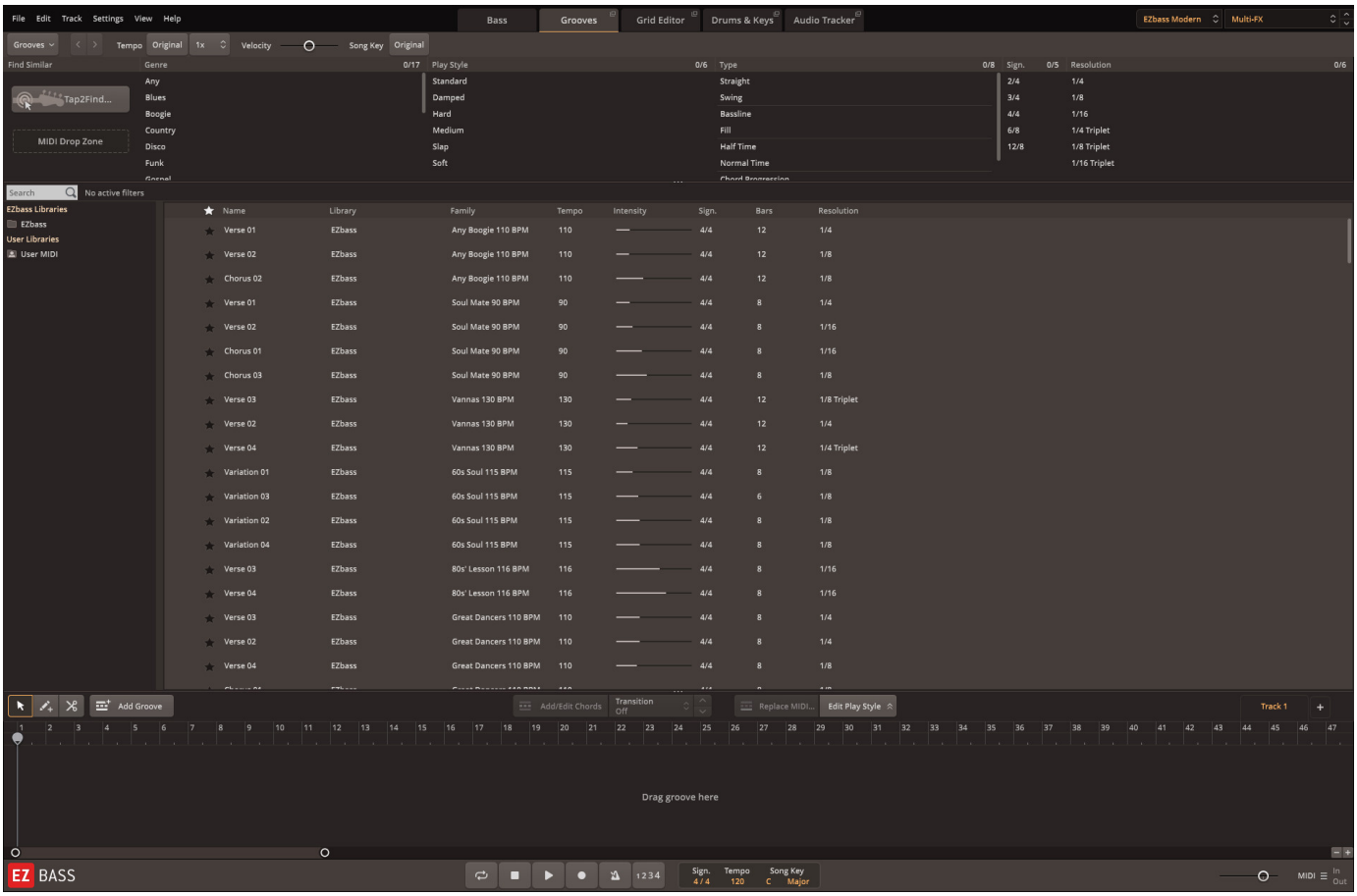
Bass

An open string tuning that corresponds to what you would get by tuning each open string with a chromatic tuner.

Piano

This tuning is an alternative equal temperament with "stretched" upper and lower octaves. This tuning matches more closely with the tuning of acoustic pianos.

4. THE GROOVES TAB



The Grooves tab in EZbass is where you browse and audition your installed MIDI files, as well as build your songs. If you own additional bass MIDI packs, they will automatically be added the next time you start EZbass after installing them.

The Grooves tab is divided into four sections: The header bar, the Tap2Find box and search filters, the library browser, and the search results.

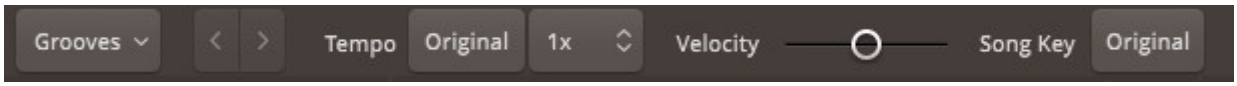
GROOVE COMPONENTS

A groove is put together by three parts: Song Part Type, Chords and the MIDI itself. These are clearly represented within the Song Track, where they have one row each.

On the file system, the Song Part Type and Chords are stored within a midbasstrackinfo file together with some information about the MIDI file, such as how the MIDI should be controlled and transposed. The MIDI is stored as a regular MIDI file and they both share the same name.

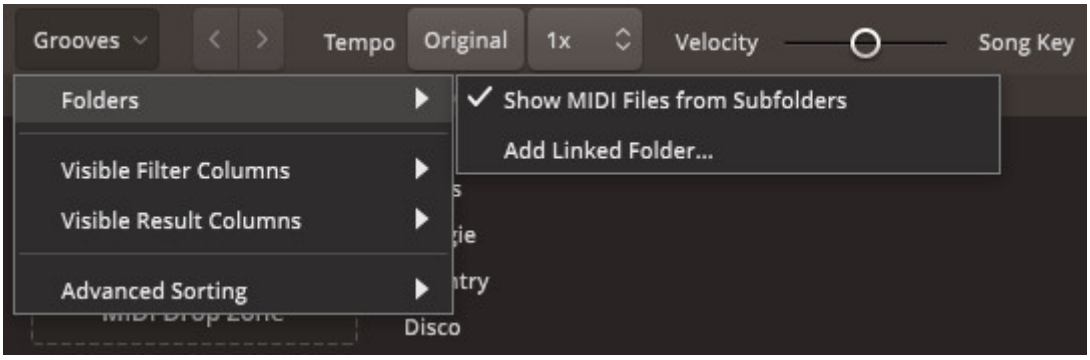
To learn more about the Song Part and Chords, see chapter 5.

4.1 THE GROOVES HEADER BAR



The Grooves header bar affects the behavior and presentation of the MIDI grooves. Starting at the left:

THE GROOVES MENU



This menu controls the different view options. You can also add your own MIDI grooves from this menu.

- Folders
  - **Show MIDI Files from Subfolders**:
  - **Add Linked Folder...**: If you have a folder with custom MIDI grooves, you can add it into your library with this menu option. Your custom MIDI folders are displayed under the User Libraries header of the browser.
- **Visible Filter Columns**: This menu lets you control which columns should be visible in the search filters.

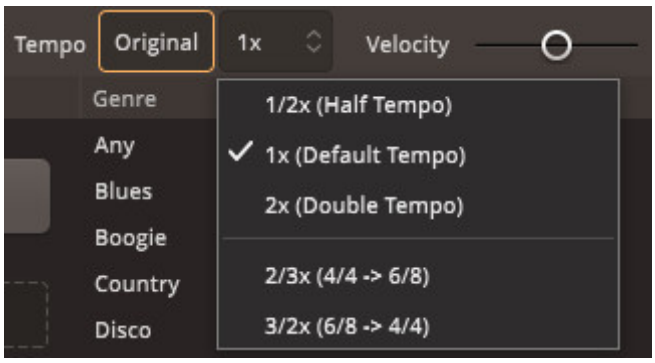
- **Visible Results Columns**: This menu lets you control which columns should be visible in the search results section.

NAVIGATION BUTTONS



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

TEMPO



This section let's you preview grooves in their recorded tempos, and adjust the rhythmic feel of the groove.

If Original Tempo is active and you drag a groove into an empty Song Track, the tempo of the project will be adjusted to match the groove. If you run EZbass in a DAW, the tempo is always locked to the host.

It's important to mention that the Tempo Modifiers only affect the tempo of a groove and does not edit any actual performance. Adjusting the tempo with the rhythmic feel button stretches the groove appropriately. For instance, a four beat groove at 2x Tempo would only be two beats long in the Song Track.



Any active tempo modifiers show up in a separate bar below the search field. If any modifier is active, the selected groove in the search results will have an asterisk (*) next to it to indicate it is being modified.

Finally, modifying tempo does not alter the original MIDI grooves in the browser. It does affect the grooves you add to the Song Track, but those are always separate copies that you can alter however you want without affecting the original grooves.

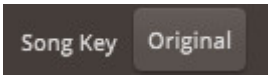
VELOCITY



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.

As before, any changes you make in velocity only affects copies you make by either dragging the groove into the Song Track, or the User MIDI folder.

SONG KEY

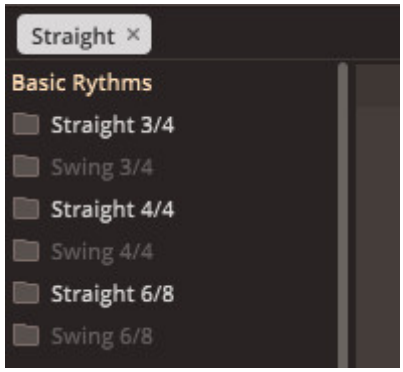


Activating the Original button alters the groove to match the recording rather than project key signature. Adding a groove to the Song Track will keep its original chords and melody, rather than transposing the project key.

4.2 SEARCH FILTERS



Below the grey header bar are the Grooves tab Search Filters. These are used to narrow down the grooves shown in the search results below. You can apply these whenever you want in your selection process.



Ctrl- or Command-clicking allows you to select multiple filters within a single column.

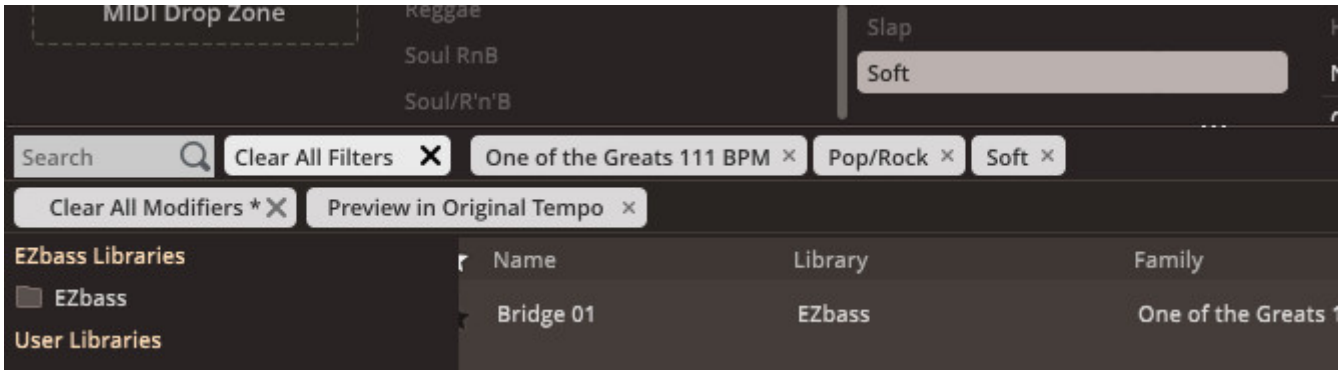
Once a filter is active, grooves that don't match the selected tags are removed from the search results, and folders that do not contain any matches are grayed out.



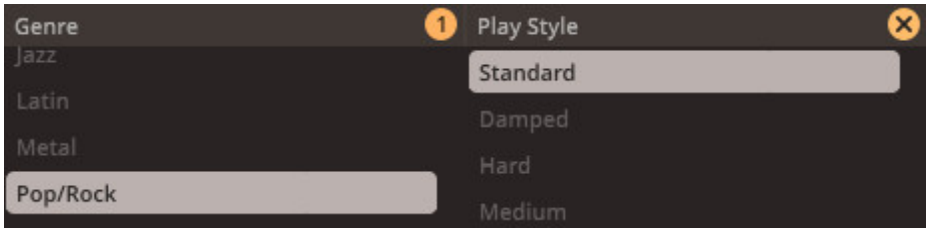
There is a single context menu item in the search filters, which you can find by right clicking a filter tag. Selecting "Exclude" will match all grooves that *do not* have the excluded tag. Excluded tags are easily identified by their red highlight color.

The Search Filters display a default set of useful filters, but if you prefer not to see a particular type, right clicking near a Search Filter's title will display a menu where you can add or remove Search Filters in the interface. This same menu is available in the Grooves Menu.

CLEARING FILTERS



All applied filters and modifiers are shown in the middle of the area, next to the search field. The first row contains all search filters, and in the second row are all the applied modifiers. The first button on each row is always a "clear all" button, which will remove all active filters or modifiers.



A special case are the search filters, which can each be cleared by clicking the yellow counter which pops up whenever you click one of its items.

4.2.1 GROOVE TAGS

The search filters categorize what we call tags. In addition to this function, or helping you pick the correct groove in the search results, you can also search for them in the search field.

The current tags are:



Genre

Which genre the groove was recorded for. A groove can contain multiple Genre tags; many grooves also work with genres other than its genre tags.

Play Style

Technical information on the play style of the groove. A groove can contain multiple Play Style tags.

Type

This tag could be considered a kind of meta tag with main categories of subtags. It contains a combination of different rhythm and feel terms, as well as information on the content in terms of melody, fills and chord progressions. A groove can contain multiple Type tags.

Sign.

Time signature. The recorded time signature. For 3/4 and 4/4 beats these can be converted into off-beats of the other with the tempo controls in the header bar.

Resolution

This tag describes the grid resolution in the clip, i.e. the minimum resolution required to have a grid to snap all notes to. Note that since the grooves are recorded and not programmed, the notes will not be exactly on the grid.

In addition, the search results show the following tags:



Favorite (★)

If you have added a star to a groove, it can be filtered in the search results by clicking the star next to the Name tag.

Name

The name of the groove.

Library

Which product the groove belongs to. If you only own EZbass, the two libraries will be EZbass and User MIDI (once you have saved a user MIDI groove).

Family

The category or song the groove belongs to. This is either the name of the song, or it describes the general category of the groove. In the EZbass Core MIDI, there's a single "Standard" category, containing what we consider bass standards.

Tempo

The recorded tempo of the song. This gives you an indication how much the groove will be sped up or slowed down when you add it to your song. The Tempo controls in the header bar allows you to adjust the speed of the groove as you drag it onto the Song Track.

Intensity

This is a calculated value based on the tempo, length and number of notes in the groove. A higher value indicates a more busy groove.

Bars

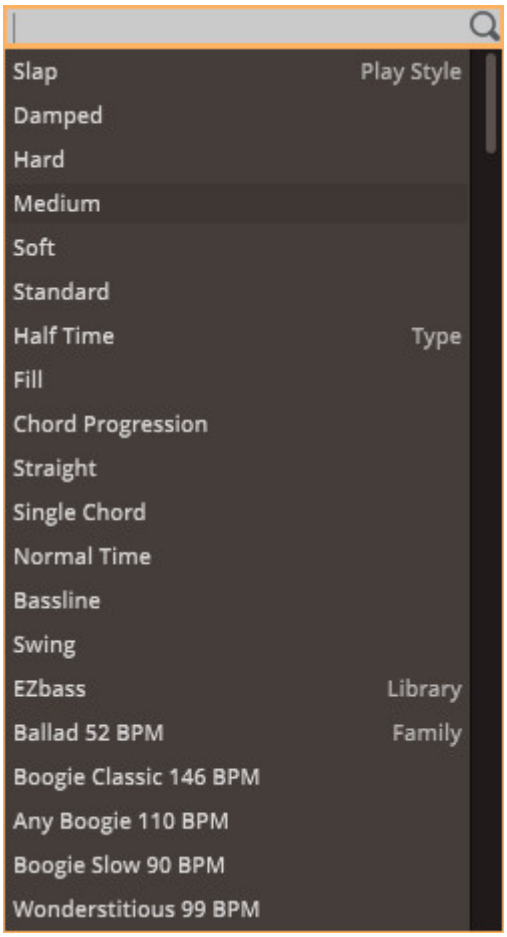
The length of the groove in bars (measures)

4.2.2 THE SEARCH FIELD



The search field is a powerful tool if you know what you're looking for. Beyond searching for file names, you can search by tags, such as time signature and resolution. Selecting a result from the search adds it to the active filters to the right of the search field.

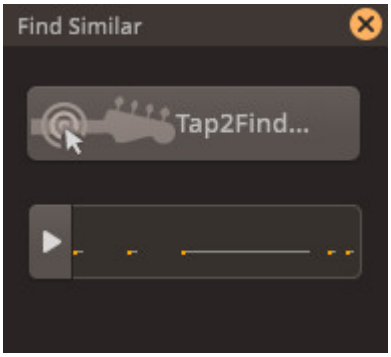
See the image on the right side for some inspiration on what you can search for.



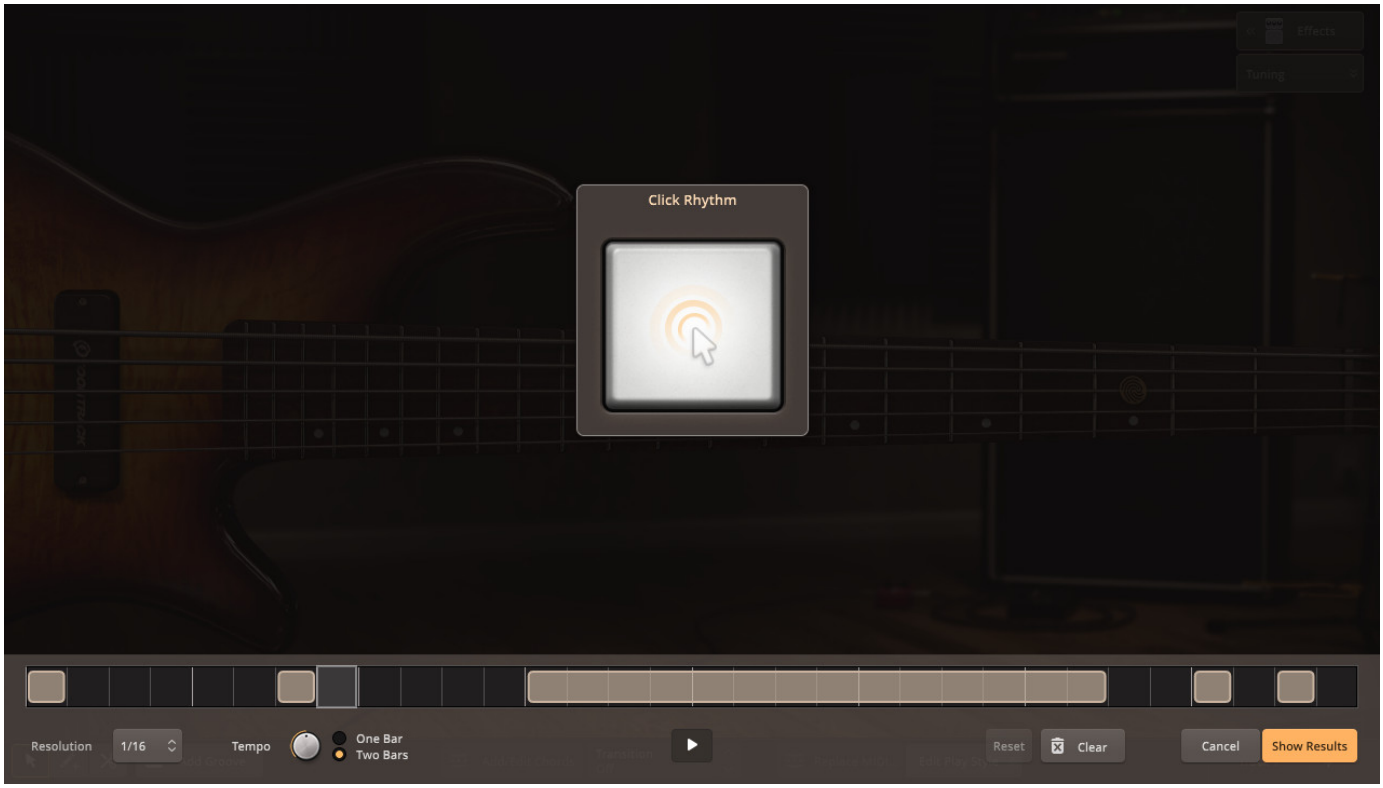
4.2.3 TAP2FIND

The Tap2Find filter allows you to search and match a rhythm in your MIDI library.

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



THE TAP2FIND VIEW



The parts of the Tap2Find window are as follows:

Tap Rhythm

The Click Rhythm button lets you tap the rhythm you wish to match.

Grid

This grid will display the rhythm you have tapped in, but you can also pen the rhythm straight into the grid.

Resolution

This menu changes the resolution of the grid and controls quantizing as well as what notes you can pen. It does not affect the resolution of the search results.

Tempo

To make tapping the rhythm easier, you can slow down or speed up the tempo of the Tap2Find metronome with this control.

Grid length

The One Bar/Two Bar selector changes the length of the grid. It does not affect the length of the search results.

Play

This button is enabled by default and runs the metronome and Tap Rhythm. If you disable this the metronome stops and you can only pen into the grid, not tap your rhythm.

Clear

Pressing Clear empties the grid for you.

Cancel

Closes the window without applying your Tap2Find filter (leaving any existing filter in place)

Show Results

Closes the window and applied you Tap2Find filter in the search results. This replaces any existing Tap2Find filter.

USING TAP2FIND

The tempo and time signature of the Tap2Find window are based on your currently selected Song Track. Changing the tempo or time signature in the transport controls will also affect Tap2Find. The current key signature affects the search results, so tapping in a rhythm to a 3/4 time signature will restrict the search results to only show 3/4 grooves.



Tapping in your rhythm can be the fastest way to find the right groove. Following the metronome, when you tap the grid is automatically filled based on the grid resolution. Holding the button down makes the note span over multiple squares.

When tapping rhythm the grid has a smart overdubbing behavior that replaces notes if they start in the same square on the grid, or cut the existing note short if they're overlapping. This means you can refine your rhythm over multiple passes without having to stop to remove unwanted notes.

Instead of tapping the rhythm, you can pen it directly into the grid. There are three behaviors here:

- Clicking a single square inserts one note.
- Clicking any note clears it from the grid.
- Clicking and dragging lets you insert longer notes. Overlapped notes are deleted.

Once you are satisfied with your rhythm and click Show Results, you will be presented with the grooves that most closely match your rhythm. In chapter 4.4 The Results Section you will learn how to read the results.

4.3 THE MIDI LIBRARY BROWSER

Beyond searching and filtering grooves based on tags, you can also straight browse the different MIDI packs you have installed. This is useful if you know what you're looking for, or if you have a set of grooves you want to spice up by changing to a different variation.

Browsing your grooves is as simple as navigating Finder or Explorer. Simply click the folder you want to see the contents of, and the search results are updated with all underlying grooves matching your other filters.

IMPORTANT NOTE

All folders in the Library Browser correspond to a folder in your filesystem. Adding a file to a folder in EZbass also adds that file within your selected folder on your disk. Removing any files from your disk makes them unavailable to EZbass. Any changes on disk will not be visible in EZbass without a file sync, or until you restart EZbass.

WARNING

Moving files to or from the Toontrack provided libraries will cause issues within EZbass! If you must work in your file manager, only modify files within your User MIDI folder!

Right clicking any folder in the browser opens a menu with the following options:

Exclude

Selecting this option removes (filters out) the folder and any subfolders from the search results.

Open in Finder/Explorer

This opens the corresponding folder in Finder or Explorer.

Beyond these two options, the User MIDI folder has the following:

Add Subfolder

Adds a new folder under the selected folder

Sync File Changes

Tells EZbass to look through your User MIDI folder for changes and update the database accordingly.

Rename

Subfolders only. This allows you to rename a User MIDI subfolder from within EZbass.

Delete

Subfolders only. This removes the selected folder and any files and folders it contains. *Deleting this way completely removes the files from your computer*; they are not put into your trash bin. A confirmation dialog is shown when deleting, so you are aware of the extents of the action.

USER LIBRARIES

Any grooves you modify or create from scratch can easily be saved into your User MIDI. To save a groove within EZbass, simply drag it into the User MIDI folder in the Library Browser.

You can choose to save an entire groove, or only its MIDI and chord track. Within the search results, MIDI is always saved as a full groove. From the Song Track, if the entire groove is selected, the entire groove will be saved when you drag it into the User MIDI folder. If you select only the MIDI, only the MIDI track and the chord track will be saved. This is a subtle difference, so we recommend always saving the entire groove.

Any MIDI in your User MIDI library is added to search results, but only with automatically generated tags. There are a two tags you can control yourself: Name and Family. Name is simply the name of the MIDI file. Family is the name of the containing folder, excluding subfolders. This gives you a measure of control over the structure of your User MIDI.

User MIDI can be found when using the search field, when tapping in a beat with Tap2Find, or from the Groove Tags that have been assigned to them. To see all available search terms, simply select the search field, insert a character and remove it with backspace.

4.4 THE RESULTS SECTION

The search results is a straightforward section of the Grooves tab. It is simply a list of the different grooves that match your selected filters, or every groove in your library if there are no active filters.

In the search results, you have the following options:

- **Preview a groove** by clicking the play icon at the far left on each row,
- **Favorite a groove** by clicking the star (★) next to the play button,
- **Sort grooves by tag** by clicking the name of the tag in the header row at the top of the list,
- **Filter favorite grooves** by clicking the star icon in the header row,
- **Add a groove to your User MIDI** by dragging it to the User MIDI folder in the library browser,
- **Add a groove to the Song Track** by dragging it to the Song Track.

There are more options for using grooves available from the Song Track. See chapter 5 for everything about the Song Track, or chapter 2 for a workflow example.

Finally, there is a context menu available in the far right of the selected groove, or by right clicking a groove:

Copy

Copies the selected groove for use in the Song Track

Find Similar Grooves

Applies a Tap2Find filter of the selected groove

Select Containing Folder

Applies a library browser filter of the folder the groove sits in.

User MIDI has a few extra items in the context menu:

Rename File

Change the file name (and therefor the Name tag) of the selected groove

Delete File...

Removes the groove completely from your User MIDI. The file is also completely removed from your disk and not put in the trash bin.

5. THE SONG TRACK

The Song Track is where your songwriting magic happens. In here you build your song from start to finish, change chords, add transitions and otherwise turn the grooves you've selected into a your personal song. The grooves you drag into the Song Track are put into a Song Block, which consists of a Song Part, one or more Chords and the groove MIDI. All of these parts are free for you to modify to your liking.

Since it is an integral part of EZbass, the Song Track is a part of the global user interface and is present in every view. This is because whichever tab you're working in, the results of that work will almost always end up in the Song Track.

The Song Track also has its own global menu, the Track menu. In here you find view options for the Song Track, as well as common functions, such as opening the time and key signature tracks, as well as importing and exporting MIDI. The main functions of this menu are available from the Song Track and are discussed in this chapter, and the menu is described in its entirety in chapter 8.

Instead of a "global" project setting, you can have multiple tracks within a project, each with its own tempo, key and time signature. You can separate the tracks into entire songs, or have them indicate different parts of a song with multiple key signatures. If you do it the former way, tempo and time signature within your song can still be changed from the Song Track in the Time Signature and Tempo tracks. Key signature is set globally for each track, however.

5.1 THE SONG TRACK VIEW

The Song Track is composed of three areas: its very own header bar, the Song Track and the Global Transport.

You can resize the song track to an extent, and it can be minimized to give you more space when working in the different tabs. To resize the Song Track, simply grab the handle in the top middle of it and drag up or down. Drag far down to minimize the song track.

In its minimized state, you can still see the different song parts and you can also move the playhead by dragging or clicking.

5.2 THE TRANSPORT BAR

The Transport bar contains the Song Track transport controls, the track settings, as well as audio out and MIDI in and out monitors.

TRANSPORT CONTROLS

Follow Host

This button is displayed when you load EZbass as a plugin inside your DAW. When this button is active, the transport follows your host. This means anything in your Song Track will play at an appropriate position whenever you activate playback in your host. It also locks the Song Track tempo to whatever is set in your DAW.

Toggle Loop

Activates or deactivates looping between the loop start and end markers. To set loop markers, simply click and drag on the bar numbers in the timeline. If there are no loop points set, activating the loop defaults selects the entire track. Looping can also be toggled by clicking the loop area once it has been set.

Stop

Stops playback. If pressed when track is not playing, it jumps between last playhead position and loop start (or the first bar if no loop markers are set).

Start

Toggles playback. Starts playback if playback is paused, and stops playback if playing.

Toggle Record

Activate MIDI record mode. Enables recording MIDI straight into the Song Track. Recording is Record by pressing Start.

Toggle Metronome

Activate to hear the metronome during playback. The metronome can be configured from the Metronome Settings page.

Toggle Count-in

Activate count-in when MIDI record mode is active.

IMPORTANT NOTE ABOUT FOLLOW HOST

EZbass supports changing meters in the timeline. Many DAW softwares do as well, but these changes are not relayed to their plugins. If you activate Follow Host in a project with multiple time signatures, while playback will be perfectly synced in time, you may need to update the Time Signature Track to match that of your daw if you run into issues lining up beats.

TRACK SETTINGS

The Song Track settings are set per track. Changing tracks will automatically update these values.

TIME SIGNATURE

The first track setting is the time signature. Only even subdivisions are available, but you can select the number of beats in a bar freely. When you drag a groove (or any MIDI file) into an empty Song Track, the Song Track time signature is automatically set to the value of the groove. In a future update, EZbass may support writing to the time signature track when importing MIDI.

IMPORTANT

Changing the time signature does not modify or affect Song Blocks or Grooves in any way. A 4/4 groove is not converted or cropped to fit in a 3/4 track, and especially odd meters will need to be manually adapted. See also 4.1 The Grooves Header Bar.

Time signature can also be changed within a track, in which case this setting is active until the first change in the Time Signature Track. The Time Signature Track is described in the next section of this chapter.

TEMPO

Setting tempo is more straightforward than time signature. Simply click and tap or select your desired tempo. You can also double-click the tempo to input a value directly. Since tempo does not affect quantization (although lowering tempo can cause faster grooves to sound out of rhythm), this slider does not have any averse effects on the song structure itself.

Like with the time signature, tempo has its own track in the timeline. If you add tempo changes in that track, this value is active until the first change in the Tempo Track. In a future update, EZbass may support writing tempo changes into the tempo track when importing MIDI. The Tempo Track is described in the next section of this chapter.

SONG KEY

The key signature of a song is the foundation of every ensemble. If you have more than one melodic instrument in your song, it is important that they all play in the same key (or at least close enough..!). Importantly for EZbass, the song key not only tells *you* what notes to play, but EZbass applies the key to almost every single action it takes when working with grooves. While there are settings that affect this behavior here and there, setting the Song Key should be the first thing you do in a project.

To set the Song Key, simply click the left field and select the desired key, then choose whether the song is in a major scale, or its minor parallel. In case you wish to change song key without transposing the grooves currently in the Song Track, select the new key from the "No Transpose" sub menu instead. This is the way you change song key when using Follow Host within a DAW.

INPUT AND OUTPUT MONITORS

At the bottom right is the Master Volume monitor and fader. If you have dialed in your bass controls to perfection and just want to alter the output levels, this is the place to do it. Ctrl/Cmd-click to reset it to unity.

Next to the Master Volume is the MIDI In/Out monitor. These indicators flash green whenever EZbass receives (In) or sends (Out) a MIDI message. MIDI out is disabled by default and is activated in the General Settings page. You can access the relevant settings pages for MIDI by clicking the hamburger menu.

WINDOW RESIZE HANDLE

While the EZbass windows should be resizable from any edge of the window, in case your host does not provide a resizable frame, click and drag to resize the EZbass window. There are also preset sizes available in the View global menu, which is described in chapter 8.

5.3 THE SONG TRACK HEADER BAR

The header bar for the Song Track is always visible and contains the tools you will use if you build your song from scratch, or when editing your song once its structure is in place. All the options in the header bar work on the Song Track, and the Song Part Types, Chords and MIDI within the track.

On the far left side are the different cursor tools used on the track, as well as the Add Groove button. Holding Alt/Cmd+alt is a useful way of quickly changing tools. The Pointer and Pencil tools turn into the Split tool when Alt/Cmd+alt is held, while the Split tool turns into the Pointer tool. Only the Pointer and Pencil tool can resize blocks in the timeline.

Pointer Tool

Also called the selection tool, in this mode you can select and move blocks. Clicking and dragging an empty spot in the Song Track lets you make an area selection.

Pencil Tool

This tool is strictly for inserting and removing blocks in the different tracks. It only inserts blocks in a single track at a time and only within a single bar. To insert longer blocks, simply hold the mouse button down and drag to the side, and you can make them as long as you like. To remove a block, double click it. The pencil tool always snaps to the current grid resolution, so if you want to insert blocks shorter than a bar, simply zoom in first.

Split Tool

Also called the slicing tool. In this mode the cursor splits blocks already on the timeline. To split and entire Song Block right away, hold Ctrl or Cmd when splitting.

Add Groove

This button inserts a full four bar song block at the first free slot in the timeline *after the current playhead position*. If the slot is smaller than four bars, the inserted groove is shortened to fit the free area.

SONG TRACK SELECTION

On the far right side of the header bar is the track selector, which contains the "Add Song Track" button, as well as a tab for every song track. If you have many tracks, a drop down menu will appear with all the tracks. The Song Track tabs have a context menu of their own:

Remove Song Track

This option removes the selected Song Track. The action is reversible with Undo.

Rename

If you want to rename a Song Track for easier identification you can double click the tab or select this option and enter a new name for the track.

Duplicate Song Track

This option let's you copy the entire selected track into a new track.

PLAY STYLE BUTTONS

At the center of the header bar are the buttons that will make your bass line fit in your song. These are all described more in detail later in this chapter.

> The buttons in this section apply to the MIDI, but are based on their selection, so be sure to check what you have selected before using the buttons.

Add/Edit Chords

This opens the chord wheel on the selected block(s). The chord you set from this wheel applies to all selected chord blocks. Selecting song blocks or MIDI blocks applies the chord change only to the first chord block associated with that range, so ensure that all chord blocks you want to edit are selected. If there are no chord blocks, or there are gaps in the selection, new chord blocks are added with values depending on the MIDI they are related to after creation. The chords are automatically sliced if you have multiple blocks selected.

Transition

This sub menu lets you apply automatic transitions between chords. You can easily preview the transitions by looping a section and using the up and down arrows next to the button to step through all the transitions.

Replace Midi...

This option lets you replace the contents of a MIDI block and is described in detail later in this chapter.

Edit Play Style

This button opens the Edit Play Style Bar, which has its own section in this chapter.

5.4 THE TIMELINE

The Song Track itself is the same timeline you would find in a DAW. It has a playhead which moves as you play, a row at the top showing bar numbers and vertical lines that indicate bar lines and you can zoom in and out to get a better view. Above the timeline is a header bar with various functions for working with the timeline and the grooves in it; since EZbass offers a specialized workflow, it offers a few features than a DAW can't. Some of these may be familiar from the other Toontrack products, while others are new and a few have been altered to better work with this product.

THE PARTS OF THE TIMELINE

The timeline is split into three rows used to visualize and work with grooves with a global header for the active track. The header contains the bar numbers, any time signature markers, any loop markers, and the playhead. To move the playhead, simply click anywhere to the left or right of the playhead, or click and drag.

At the bottom of the Song Track is a horizontal scollbar. To scroll, simply drag it to the left or right, or hold shift while scrolling on your mousewheel. It also works if you have a mouse with horizontal scrolling. To zoom the timeline in and out there are two buttons in the bottom right, but the more easy way is to drag the round handles at the end of the scrollbar, or holding control while scrolling the mouse wheel.

The **loop markers** are set by clicking and dragging on the bar numbers. The left end of the white bar that appears is the loop start marker, and the right end is the loop end marker. During playback, whenever the playhead reaches the loop end marker it jumps back to the loop start marker and continues playing. Clicking the bar deactivates the loop, the same as pressing the loop toggle in the transport.

The header also has a context menu that is shown when right clicking anywhere on it:

Show Straight/Triplets

Sets the resolution of the bar subdivisions. Straight automatically divides the bars into half/quarter/eighth notes etc, while triplets does the same, but for triplets.

Edit Time Signature...

Opens the Time Signature Track described below.

Edit Tempo...

Opens the Tempo Track described below.

Set Track Length

Opens a dialog which let's you specify how long the track is. When exporting the Song Track, anything outside of this range is cut.

The timeline has three different views for the five different tracks it contains. The song timeline contains the Song Part Track, the Chord Track and the MIDI Track, while the other two contain the Tempo track and Time Signature Track.

THE SONG TRACK

This track of three display all the information about the grooves in the timeline. The Song Part Track is used for organizing your track, the Chord Track helps you arrange the harmonies of it, and the MIDI Track contains the actual playing MIDI blocks. They all share the same basic actions and context menu.

The one important thing to keep in mind when working with this track is context. Depending on whether you have selected the entire part or a single or multiple chords or MIDI blocks, you will manipulate different parts as you work with them. To see the context you're currently working on, simply find the thick orange outline.

The context menu in the Song Track has different menu items depending on your selection. These items will be described in the separate track sections below, although it is important to keep in mind that they describe what track is affected when activated, and not the selection criteria. For instance, the "Add Song Part..." while under the Song Part header, is only available when selecting chord or MIDI blocks. The common context menu items in the Song Track are:

Copy

Copies the currently selected block(s) and stores the selection in the clipboard.

Cut

Removes the currently selected block(s) and stores the selection in the clipboard.

Paste at Playhead

Pastes the block(s) in the clipboard at the current position of the playhead. The clipboard is tied to the song track, so copying something else not part of the Song Track (such as individual notes in the grid editor or text from outside of EZbass) does not empty the clipboard.

Remove

Removes the currently selected block(s).

Merge

This menu option becomes available when you have more than one block selected in a single track. Selecting it merges the two blocks into a single block. Having multiple blocks selected over multiple tracks merges the blocks only within each track.

Set Loop Area

Sets the loop start and end markers to the first and last bar of the current selection.

Select All

Selects all blocks in the current Song Track (parts, chords &emdash; everything).

Edit Playstyle...

Opens the Edit Playstyle Bar above the timeline.

THE SONG PART TRACK

This track helps you organize your song into coherent parts. Whenever you add or drag a groove into the song track, the entire groove is always inserted as a single song block of a single song part type. The default part type is "Verse", although the groove may contain a more appropriate type.

If you want to add blocks without a type use the Pencil Tool. You can expand or shrink a Song Part by dragging either edge, where overlapping parts are replaced with the one you're modifying. Double clicking the Song Part track displays the Edit Playstyle bar.

If you minimize the Song Track, the only indication you have of where you are in your song is the song part colors, so make sure to take the time to give form to your song.

The context menu options that affect the Song Part are:

Add Song Part at Selected Block(s)

This menu option becomes available when you have one or more MIDI or Chord blocks selected. If there is no Song Part above the block one is added. If there is, it instead slices the Song Part and inserts a new Song Part above the selected blocks. Unlike Merge, this does not bridge any gaps, so unless all the selected blocks are adjacent, individual Song Parts are created.

Remove Song Part Only

When you have one or more Song Blocks selected, you may choose to only remove the Song Part from them. Use this option to achieve that result.

Song Part Type

This expandable menu allows you to change the Part Type of the selected Song Block(s). Simply expand the menu and choose the type that you want.

THE CHORD TRACK

The chord track is integral to making your song yours. While the groove library contains many variations to common bass lines and you have the grid editor for total control, the fastest way to work with a groove is in the Song Track and the chord is the first step in that process.

To add Chord Blocks, use the pencil tool. To change the duration of a chord block, either hold and drag when painting with the pencil, or grab an existing chord block on either edge and drag, which replaces any overlapping chord blocks. Double clicking a chord block opens the chord wheel, which is discussed later in this chapter.

The single context menu option that affects the chord track is **Chord/MIDI Mismatch (*)**, which is enabled when EZbass notices certain tones in a MIDI block belonging more closely to another chord, which happens most commonly when using the Grid Editor. This option allows you to let EZbass change to a more appropriate chord based on the contents of the MIDI block, or ignore it completely in case the tones are intentional.

THE MIDI TRACK

The MIDI track contains MIDI blocks, which ultimately is what EZbass plays from the Song Track. The blocks are displayed with a visual representation of their contents and can be dragged and dropped straight from the Grooves tab into the song track, or made from scratch with the various tools available. Working with MIDI is discussed later in this chapter and the next chapter, so we'll keep this section brief.

The context menu options affecting MIDI blocks are as follows. They are all available when one or more MIDI blocks are selected.

Mute

This option silences the selected MIDI blocks. A muted MIDI block is grayed out and has a speaker icon with a cross in front on the left edge of the block.

Quantize

This sub menu allows you to tighten up the MIDI. Simply select the note value you wish to quantize the selected blocks to, and they will be arranged into a grid with that resolution.

Find

This sub menu has two options. The **Find Similar Grooves** applies a Tap2Find search filter in the Grooves Tab. If you have a groove from the Grooves Tab selected, the **Show In Browser** option applies a browser filter on the containing folder, which is useful if you like a groove, but would like to listen to variations of it.

Add Chords to Chord Track

If the Chord Track is empty above the selected MIDI block, this option makes EZbass insert appropriate chords based on the contents of the MIDI block.

Auto-Adjust Chord Transitions

Enabled by default, this option sets the behavior of EZbass with regards to transitions when editing chord blocks. When enabled, EZbass tries to be smart with transitions and make them more human-like leading into the next chord. When disabled, the relations between chords are not considered when transposing MIDI on a chord change.

THE TIME SIGNATURE TRACK

This track lets you control the meter of you Song Track beyond the initial setting. To open the Time Signature Track, simply right click the bar numbers on the timeline, or open the Track global menu and select "Edit Time Signature...". To close the track, simply do the same as before, or click the cross that appears in the far right hand side of the track when it is opened..

The Time Signature Track is straightforward: the selected block is highlighted in a lighter shade of gray and you can select multiple time signature blocks by holding Shift or Ctrl and clicking the blocks you wish to select. Shift selects a span, while Ctrl expands the selection with single blocks. The blocks can be resized by dragging at the edge of each block next to the time signature.

The time signature in each block is set in the same way as the global song track time signature. Clicking the number on the right side opens a list with subdivisions, while you're free to set the left hand number between 1 and 32. The first block in the Song Track corresponds with the global time signature, so changing that block also changes the time signature set in the transport bar.

The context menu for the time signature track is different from the others. These are the options available when you right click a block in the time signature track:

Add

Adds a new time signature block starting on the bar you opened the context menu from, and continuing until the end or the next block.

Select All

Selects all blocks in the track.

Copy

Copies the selected block(s) and places them in the clipboard.

Paste

Pastes the blocks currently in the clipboard on the bar you opened the context menu from.

Remove

Removes the selected blocks from the track. The blocks are replaced by the preceding time signature, which may cause subsequent blocks to misalign, so use carefully.

The Time Signature Track has a single lane in the timeline, but its own header bar with two buttons. The **Add Time Signature Change** inserts a new time signature at the current position of the playhead. The second button is a menu with the following options:

Cut

Removes the selected block(s) and places them in the clipboard. The block is replaced by the preceding time signature, which may cause subsequent blocks to misalign, so use carefully.

Copy

Copies the selected block(s) and places them in the clipboard.

Paste

Pastes the blocks currently in the clipboard at the playhead.

Remove

Removes the selected block(s) from the song track. The block is replaced by the preceding time signature, which may cause subsequent blocks to misalign, so use carefully.

Select All

Selects all blocks in the track.

THE TEMPO TRACK

This track lets you control the tempo of you Song Track beyond the initial setting. To open the Tempo Track, right click the bar numbers on the timeline, or open the Track global menu and select "Edit Tempo". To close the track, simply do the same as before, or click the cross that appears in the far right hand side of the track when it is opened.

The Tempo Track timeline is an envelope that spans the entire track. The initial value of the track, the value of the first node, corresponds with the global setting for the Song Track. To select a node, or marker, simply click it. To modify its value, grab it and drag up

or down or use the functions available in the tempo track header bar. You can select multiple nodes by holding Shift or Ctrl while clicking individual nodes, or by holding and dragging over an area.

One feature that is handy and important, is that when you're moving a node around, only the selected nodes are affected. This means you can't drag a node beyond another, which prevents unwanted modification of the tempo track. Selected nodes are always in their position relative to each other, so you won't end up in a situation where two nodes are "squished" together because another node is stopping their movement.

The context menu for the Tempo Track contains three items:

Add

Adds a node *on the line* at the position you right-clicked in the timeline.

Select All

Selects all nodes on the track.

Remove

Removes all selected nodes from the track.

The header bar for the tempo track contains the following buttons:

Increase

Inserts two nodes at the playhead position, one at the current tempo, and one 30 BPM higher.

Decrease

Inserts two nodes at the playhead position, one at the current tempo, and one 30 BPM lower.

Add Node

Inserts a single node with the current tempo at the playhead position.

Edit

This submenu contains options for copying and pasting nodes, as well as removing them.

5.5 THE EDIT PLAY STYLE BAR

Pressing the "Edit Play Style" button in the song track header bar opens this menu, which gives you access to a few of the functions from the Grid Editor without having to actually use the grid editor. These controls affect the MIDI block(s) associated with your currently selected block(s).

> As with other aspects of EZbass, context is important. These controls are available within the Grid Editor as well, but *they are not interchangeable!* The Edit Play Style controls affect the blocks in the song track. The controls within the grid editor tab affect your selection within the grid editor.

Another important difference between the controls in the Grid Editor and those of the Edit Play Style bar is that the grid editor sets the values of the MIDI, while Edit Play Style "merely" translates them per Chord Block. This means that if you at a later point want to roll back changes to more closely match the original, you won't have to start from scratch. The grid editor gives you all the controls, but that comes at a potential cost, too.

The controls of the Edit Playstyle Bar are:

Octave

This control transposes all notes in the selected block(s) up or down one octave, as long as at least one note can be transposed without overlapping. Notes that fall outside the playable range are not transposed.

Velocity

To change how hard each note is played, increase or decrease this value. At 127, all notes regardless how soft they were hit before, will be as hard as the bass can bare. At -127 even the hardest playing not is transformed into barely gracing the strings.

Amount

This control adds or removes notes based on typical rhythmic patterns. Rhythm is very subjective, so if you don't get the result you want with this control, consider using the Replace MIDI function. The grid editor is also available, of course, as is the Audio Tracker.

Damping

The Damping MIDI control is directly translated into palm muting in EZbass, but can also provide other effects, such as old strings. Increasing this value applies a harder damping effect. For percussive muting either combine this control with Length and Velocity, or simply use the Loud Mute articulation.

Length

Length controls the ringing of notes within the selected block. Reducing the length makes each note ring shorter, until at -100% every note is very short, or staccatissimo. At 100% every note rings either until the next note is played, or up to five quarter notes. If you need a note to ring longer than that or want overlapping tones, you can open the Grid Editor and adjust the note lengths manually in there.

6. THE GRID EDITOR TAB

While the edit playstyle feature of EZdrummer easily can get the user right to an interesting groove, or the Song Track of EZkeys works wonders with single articulation instruments, the bass as a pitched instrument with many articulations has a need of both. At the same time, in order to achieve our vision, we needed functionality that isn't offered by most DAWs, or is prone to error.

The Grid Editor is an advanced feature of EZbass. It gives you complete control of harmony, melody and articulation that has to this point been restricted to the Superior line of Toontrack products. We say this is an advanced feature, because you should have a clear view of what you want to accomplish when using it; it's easy getting stuck in the Grid Editor, both with regards to time spent, but also missing out on the functionality EZbass offers to save you that time.

Keep in mind...

As incredible as EZbass is as a pure instrument, it is intended as a songwriting tool. Songwriting can start out in the details, but is more productive when making broad strokes that flow well together and gradually choosing finer and finer tools.

The Grid Editor should be the final stage in your songwriting process. You may dip into it a few times in order to make the ebb and flow of the song draw the listener in, but when push comes to shove, what makes your song interesting can be achieved faster in the Song Track, Drums & Keys tab, or the Audio Tracker.

The Grid Editor View is split into three parts: a header bar, a piano roll with a header offering many of the same features as the song track header, and a MIDI CC editor with its own header bar. They each have a separate subchapter below.

In the piano roll, or grid editor as we call it, is where you modify how the notes you're hearing are played. This is done through articulations, which basically represent left and right hand technique. Articulations are grouped by color and easy to spot in the grid, and

they're the main reason to visit the grid editor early in the song writing process - harmonics, slides, embellishments and slap bass are all edited only from within this tab.

6.1 THE GRID EDITOR HEADER BAR

The header bar for the grid editor is a busy area with many different types of options. Like the Song Track, it has cursor tools, and options to affect the behavior of the MIDI blocks, but expanded, and at a much deeper level. This chapter will go through each option from left to right, but keep in mind that this is an advanced function of EZbass and every option has been implemented for a reason, which we will try to clarify as we describe them.

CURSOR TOOLS

The cursor tools in the Grid Editor are the same as those you find in the Song Track. Their function are the same, but their behaviors are a bit different, so we'll go through them again. Remember that you can easily shift between them by holding Alt/Cmd+alt. The only difference in behavior there is that the Pencil tool turns into the Pointer tool, rather than the Split tool.

Pointer Tool

The selection tool is used for selecting and moving blocks in the piano roll and MIDI controls editor. It can also select an area if you click and drag from an empty position. To move notes or nodes simply make a selection, click and hold one of the notes/nodes and drag. Multiple notes/nodes will always keep their relation to each other and are not "squished" when one note/node cannot be moved further, instead further movement is stopped.

Pencil Tool

The Pencil tool is used to insert notes into the piano roll and nodes into the MIDI controls editor. To insert a note, simply click in the piano roll. Inserting a node into a MIDI envelope

is the same, although some of the envelopes (such as pitch) requires you to first make a selection in the piano roll. Double clicking has no special function with this tool, instead notes are removed with a single click, and MIDI nodes are removed with the Pointer tool. If you want to select and/or move a single note, make a long click on it.

Split Tool

The split tool works the same as in the Song Track, although it has no function in the MIDI controls editor.

ARTICULATION CONTROLS

These options are the main reason for opening the Grid Editor early in the song creation process and they control how the left and right hands play on a regular bass. The articulations are all described in Chapter 2, and programming them are described later in this chapter.

The buttons for controlling articulations all act upon a selection, so if you have nothing selected they do nothing. They are:

Transient Articulations

This button opens up a menu from which you select which articulation should be applied to the selection. If nothing is selected, it instead decides what articulation will be drawn with the Pencil tool. Having multiple articulations selected is indicated by "Multiple Articulations", while the releasing note of a legato note or slide is indicated within parentheses.

Legato

This option is automatically applied when drawing two notes with an overlap in time and an interval of one step or less. Notes must overlap to activate this articulation, and the hammer on or pull off will occur at the start of the second note. The leading notes' full length is displayed in the background and can be adjusted normally.

Slide

There are many ways to make sliding sounds and they're all in this menu. Grace notes are the simplest slide to insert in EZbass and are not different from the transient

articulations. The other slides however, have a slightly special behavior, since they link two or more notes in the grid. This behavior is described later in this chapter, but it is important to be aware that slides are special and it is better to create a new slide, than trying to arrange existing notes into one.

TIMING CONTROLS

The second reason you may want to open the grid editor early on is to make sweeping adjustments to the timing of your MIDI. This is mainly done with the Quantize and Timing controls, while disabling Snap to Grid is a useful feature when working with extremely detailed performance. There are many options for changing the behavior of the timing controls in the Options menu described at the end of this section.

There are four buttons related to the timing controls:

Snap to Grid

This option enables or disables note snapping to the nearest point in the grid. With snapping disabled you have more control over the exact length of the notes, which can be useful when giving your song its final polish.

Snap resolution

By default notes in the grid editor will snap to whatever resolution the grid is currently displaying. If you want another resolution for snapping, this is where you do it. Typically you will use this function when programming triplets in an otherwise straight song.

Quantize

This slider makes your selection conform more closely to the grid. At 100 percent all selected notes are completely locked into the current grid resolution. To increase the sensitivity of the slider hold Shift while adjusting. By default EZbass tries to avoid overlapping notes, so you may find that the movement of the notes looks a bit weird at certain snap/grid resolutions.

Timing

In direct opposition of the previous controls, the Timing box lets you make a performance more human-like by adjusting the rhythmic feel of your selection. Dynamic feel controls

are adjusted in the MIDI controls described later in this chapter.

Good to know...

Sometimes you find that all notes you insert into the grid are legato. This is usually because the default note length has been set without snapping enabled.

To remove the legato notes, simply select the erroneous notes and click the Legato button to remove the articulation. If you don't want the notes to overlap, select "Remove Overlaps" from the Note menu instead. This will automatically remove the legato, since the notes no longer overlap.

When you draw the next note, make sure its end snaps to the grid before you insert any more notes.

THE SELECT DROP-DOWN MENU

This button has a useful selection of options for making selections within a MIDI block (or selection of blocks). It is not used for selecting nodes within the MIDI controls editor, only notes.

All

Selects all notes in the current MIDI block(s).

Invert Selection

Selects all notes in the block(s) that were excluded from the previous selection.

By Resolution

This sub menu lets you make a selection of all the notes longer than the selected note value.

By Type

Selects all notes of a particular articulation. Note that slides and legato select both the note leading the articulation and the releasing note(s).

Exclude

With a current selection, allows you to exclude either on beat notes or off beat notes based on their position in the grid, i.e. selecting the off beat 8th notes option would remove from the selection all notes starting on the off beat of an 8th note rhythm (the "and" in 1-and-2-and-3-and-4-and).

Jump to Next/Previous

These controls simply make a selection of the single note right after or before the last note of the current selection. If you have no selection, the first note of the current block is selected.

THE NOTE DROP-DOWN MENU

This button opens a menu containing the rest of the options for modifying notes in the grid editor. Many of the actions affect different controls in the MIDI controls editor, but the actions are based on a selection of notes and not nodes in the MIDI controls editor. A small detail that is good to keep in mind.

Since this is a big one, we'll do it in stages.

EDIT ACTIONS

This part of the menu contains the usual controls for managing entire notes at a time. As with the Song Track, the clipboard is contextual to the Grid Editor tab.

Copy

Copies the current selection into the clipboard, including any MIDI automation applied to it

Cut

Removes the current selection and places it in the clipboard together with any MIDI automation applied.

Paste

Pastes the contents into the grid at the position of the playhead.

Remove

Removes the selection from the grid. Remember this applies to the selected notes. Selected nodes in the MIDI controls editor are only removed if they are bound to the notes that are removed by this action.

Then there are two more options for copying and pasting only the timing settings associated with the current selection. Note that you can only copy these while the selection they have been applied to is active. When you de-select the notes values are set and timing controls are reset, so make sure you copy these settings first if you intend to use them in another selection.

UNCATEGORIZED OPTIONS

Mute

Mutes all the notes in the current selection. The notes are dimmed to show that they have been muted.

Merge

If you have a selection of notes with the same pitch, you can choose to merge them into a single note with this option. Any gaps between the notes will be closed and the articulation of the new note will be the same as the leftmost note in the selection.

Transpose

This submenu lets you transpose the selection by a semitone or octave up or down. When transposing semitones the intervals are always preserved. For octave transposing, all notes in the selection that can be transposed are transposed, the rest are left unmodified. This means that at the extremes, the relationship between notes can be changed when transposing octaves.

ADDITIONAL TIMING CONTROLS

These controls are offered in addition to the timing controls visible on the header bar, specifically targeting note length.

Remove Overlaps and Silence

This option removes all overlap between the selected notes and also closes any gaps between them.

Remove Overlaps

This option removes all overlap between the selected notes, but does not close any gaps between them..

Stretch

This sub menu contains options for lengthening or shortening the notes in your current selection. Note values are multiplied by the selected option and notes are allowed to overlap from this action.

Set Note Length

This option lets you set the length of the selected notes to the values in its submenu. Overlapping is allowed.

PITCH BEND CONTROLS

This is where things are getting interesting. Pitch bend is contextual in EZbass, meaning you can pitch bend individual notes, or apply a global pitch bend (pitch wheel).

In the grid editor the distinction is simple: global pitch bend is used for live performance and programming pitch bending is always on a per note basis. When recording with the pitch wheel on a MIDI keyboard, the messages are either recorded as the are, or translated into so called polyphonic pressure, depending on whether the pitch envelope is mono- or polyphonic. In order to give you full control of the pitch envelopes, polyphonic sections are always translated into polyphonic pressure, which gives EZbass individual pitch control. Pitch wheel is easily programmable in your DAW, while polyphonic pitch control is best kept within EZbass.

Semitone

This sub menu let's you apply a slow, medium, or fast semitone pitch bend to the selected notes.

Whole Tone

This sub menu let's you apply a slow, medium, or fast whole tone pitch bend to the selected notes.

Remove Pitch Bend

This option removes all individual pitch automation (poly pressure) from the selected notes.

Edit Pitch Curve

This option opens the Pitch envelope in the MIDI controls editor if it is not open already.

VIBRATO CONTROLS

Vibrato, unlike pitch bend, is a single global control. It is locked to MIDI CC 1, which corresponds to the modulation wheel on a MIDI keyboard.

The options for adding vibrato are either to pen the vibrato straight into the envelope, or use the options below for a note-by-note application.

> ***Good to know...***
>
> Because vibrato is a global control applying to all ringing notes, it may be wiser to use pitch automation as a substitute for vibrato in harmonies. Since the "vibrato" would then be individual, it may provide a more human-sounding vibrato. In fact, because of its uniformity, longer vibratos may benefit from also having pitch automation applied, since it introduces irregularities you would normally hear in a human-played vibrato.

Entire Note

This submenu lets you apply a small, medium or wide vibrato from each selected note's start to end (i.e. where there is one or more notes in the selection, there is vibrato).

Delayed Start

Same as above, but the vibrato is applied with a quarter note delay into each note, meaning it does nothing for notes with a value of one quarter or shorter.

Remove Vibrato

This option removes all automation from the vibrato envelope in the selected range.

Edit Vibrato Curve

Open the vibrato envelope in the MIDI controls editor with this option.

THE OPTIONS DROP-DOWN MENU

At the far right of the Grid Editor Header Bar is an Options menu containing a few useful settings. The **Auto scroll** option makes the grid editor scroll with the playhead as it moves during playback if enabled. With the **Preview Sounds** option enabled every note you click on with the Pointer tool will ring.

Beyond those two, the options are mainly related to the timing controls. The **Nudge Unit** option lets you select which resolution the Nudge option of the Timing Controls will follow. By default nudging moves notes by 1/128th of a beat, but you can also set it to nudge a millisecond at a time, or move the notes based on the current Snap resolution.

The Snap to Grid sub menu contains the following options:

Enable Snap to Grid

The same as the button out on the header bar. Enables or disables Snap to Grid. The following options are dependent on this option being enabled.

Smart Snap

With this option enabled Snap to Grid follows the option below, except when it finds an adjacent note, in which case it instead snaps to that note. This is enabled by default and should only be disabled with good cause.

Absolute/Relative Snap

These two options decide how notes are moved in relation to the grid. With Absolute Snap enabled, the first action when moving a note is to align it to the grid. After that, both work the same, by moving notes based on the resolution set in the Timing Controls out on the header bar.

Good to know...

Remove Overlap is a useful feature when moving notes in busy sections of a song. It lets you focus on the rhythm, and with a single click solve all overlaps, rather than having to adjust every single note overlapping as a result of snapping to a new position in the grid.

6.2 THE GRID EDITOR

The Grid Editor is looking to take the roll of the piano roll in your DAW. The reason is simple: EZbass is a specialized tool, while your DAW must be broad enough to work with any instrument you load into it. While EZbass will play back MIDI from your DAW's piano roll just fine, depending on your requirements programming MIDI can be a daunting task without the tools offered within EZbass.

The EZbass Grid Editor consists of a header and the piano roll, or grid. Th header row has bar lines and numbers, time signature markers, loop markers and a playhead, as well as a chord track. These all correspond directly to the Song Track and the playhead in the grid editor will always be at the same bar number as the playhead in the song track (even if the track resolution/zoom may be different).

Since there is a correspondence between the song track and the Grid Editor header, two Song Track actions are available from the Grid Editor: Setting and toggling loop markers, and changing the chords of existing chord blocks in the song track. These actions are performed in the same way as you would on the song track. A behavior that you may find handy sometimes, is that when you select a chord in the header of the grid editor, it is also selected in the song track.

The grid editor always works in the context of a MIDI block, or a selection of MIDI blocks. These are separated with a black line in the grid, and the background of the active block is highlighted in the grid, as well as the block being highlighted on the Song Track. This means that in most cases when you work in the grid editor, you can also safely assume that you are working in the same context in the Song Track.

6.2.1 THE PIANO ROLL

The Grid Editor tab is named after its piano roll, which we've called the grid editor to this point, since that was its function in Superior Drummer 3. With EZbass we keep the name for coherency, since there are many similarities between the products.

The piano roll is straightforward, is a common interface for composing music based on MIDI and is used in many examples within this manual, so we will skip the basics and instead focus on the features that sets EZbass piano roll apart and makes it a better alternative for programming EZbass MIDI.

> If you prefer to program in your DAW, you'll get the results you want 99% of the time. We designed EZbass to be usable as a live instrument, and so naturally the basic functions that matter most are accessible also within your DAW.

The most important reason for using the grid editor is that EZbass offers many features that are not easily translatable to MIDI, and therefore complicated to program without assistance. The EZbass piano roll takes care of that programming for you in a way that would make no sense to expect from a DAW. *But..!* Even once your EZbass MIDI is perfectly programmed, the reality is that not all DAWs support the MIDI specification fully, or may filter out certain messages by design. To ensure that EZbass plays back your song correctly anywhere, the easiest way is simply to keep the MIDI within EZbass.

Beyond that of course, we have designed the user experience of programming all these features more manageable for you, the user. Instead of looking up MIDI CC envelopes or scrolling to the bottom of the piano roll to see what keyswitches are currently active, every note displays what you need to know how it behaves. The data is still there, but it's presented in a way that makes it easier to stay focused on being creative.

Even disregarding the functionality of the song track and its dynamic controls, the EZbass grid editor offers many features that lower the threshold for programming your own MIDI.

WORKING WITH THE GRID EDITOR

Entering and modifying MIDI in the grid editor is no different from most DAWs. At the far left is a representation of where the programmable notes would sit on a piano, and pressing the piano keys lets you preview the sound you can expect when that note is played in the grid.

In the grid itself you enter, modify and arrange the notes you want EZbass to play when playback is enabled. This is done in the same fashion as the Song Track, but instead of three tracks and entering whole blocks, you now have 40-something keys and are entering notes.

Notes are represented by blocks of different appearance depending on how they are played. Every articulation has a special graphic or color associated with it and they are all described in the following section. The two indicators that are important to note at this point are articulations that are controlled not from the grid editor, but the MIDI controls editor. Those are velocity and pitch.

Note Velocity

The velocity of a note describes how intensely or hard it should be played. It is a basic part of every MIDI note, but it is difficult to edit in the piano roll, so it is usually displayed within a special track of the MIDI controls section of the editor. We still try to visualize it in the grid editor, where a brighter block has a higher velocity than a dimmer block.

Note Pitch

Pitch bend information within EZbass is recorded as MIDI poly pressure, which is another basic message that is always associated with a specific note. Because it is rarely supported in MIDI keyboards and controllers and programming it is even more complicated than programming velocities, some DAWs simply do not display this information. In EZbass pitch bend is displayed within each note as a green line. If you see this line in a note, its pitch will vary accordingly.

More information about velocity and pitch is found later in this chapter.

6.2.2 WORKING WITH THE PIANO ROLL

This is a short section.

Everything you have learned from the sound track can be applied here; you can add notes with the pencil tool, slice them with the splitting tool and move them around with the pen tool.

Scaling or zooming the piano roll is done either by dragging the round handles at the edge of the scroll bar or clicking the plus and minus buttons at the far end of the scroll bar. Note that you can also scale the grid editor vertically, which may be useful to you.

The important part to bring up is the context menu, which is basically a combination of different functions from the header bar:

Select all Notes

This button performs the same action as the "All" option in the Select menu.

Copy, Cut, Paste and Remove

These four options perform the same actions as their counterparts in the Note menu. Even paste has the same behavior and inserts at the playhead, rather than the position you opened the context menu from.

Mute

Same as the option with the same name in the Note menu.

Remove Overlaps (and Silence)

These two options are the same as the options in the Note menu.

Articulations and Recent Articulations

The Articulations sub menu is an alternative view of the articulation menu in the header bar. The main difference is that grace notes are in this list. The recent articulations list contains the latest five articulations selected from either of those two menus (including grace notes).

Slide

This option inserts a basic slide, the same as pressing the slide button in the header bar or the first option in the slide drop down right next to it.

Hammer On/Pull Off

This option converts the selected note(s) into hammer on and pull offs at any overlapping positions, same as the button in the header bar.

6.2.3 ARTICULATIONS

The main difference between the EZbass grid editor and your DAW is the way you program different articulations and how they are presented to you. This section brings up the articulations, how they are visualized, and a little bit about how they work in the background.

Some articulations are not Key Switches, but rather CC messages. These are described in the next section of this chapter. These are vibrato and palm muting (damping). Pitch bending and velocity are described briefly earlier in this chapter and more in-depth in the next section.

If you play around on the keyboard, you may notice key switches that are beyond the range described in the Key Switch Layout. These are mostly used in a strict fashion by EZbass and are not easily programmable, or were deemed less important than the twelve main key switches available in the layout. Expert MIDI programmers are free to study how they work, but many are practically impossible to get right by human hand within the piano roll of a DAW.

BASIC ARTICULATIONS

The basic articulations are straight forward to explain and should be clear without a deeper description.

Auto-Alternate Picking/Fingers

This means no specific articulation. EZbass simply trods along and plays every note alternating between middle finger and index finger, or down and up strokes with a pick. Note length and note velocity/intensity are still important for dynamics, but there is no special technique involved. This articulation is simply displayed as a standard grey anonymous block.

Middle Finger/Down Stroke

This articulation tells EZbass to only play with the middle finger, or only make down strokes with the pick. This articulation is drawn with a horizontal stroke at the top of the note, indicating that it is used most often on the on beat.

Index Finger/Up Stroke

This articulation tells EZbass to only play with the middle finger, or only make down strokes with the pick. This articulation is drawn with a horizontal stroke at the top of the note, indicating that it is used most often on the off beat.

EMBELLISHING ARTICULATIONS

These articulations are most often used to make a groove stand out by providing contrasts to rhythm and melody, but they can and have been used as the main articulation of a performance.

Ghost Note

The ghost note sound is produced when playing a short/quick note on a muted string. It is widely used in many genres of music. Ghost notes are displayed with a small magenta block right at the start of the note, and the rest of the note is dimmed to indicate there is no ringing sound. The length of the block does not matter.

Harmonic

Harmonics are produced by limiting how the strings are allowed to vibrate. The sound produced is different from its fretted equivalent, which can provide the contrast needed, especially in quieter parts. Harmonic notes are displayed as fully pink blocks.

Percussive Right Hand

Also called loud mute, this articulation produces a loud percussive sound by "resting" the right hand forcefully on the strings. Loud mutes are displayed with a yellow block right at the start of the note, and the rest of the note is dimmed to indicate there is no ringing sound. As with ghost notes, the length of the block does not matter since the sound does not ring.

Tapping

Tapping can be effectively used to make ringing notes interesting, but is equally interesting as a "picking" technique in grooves. It is performed by pressing a finger of the right hand onto a fret, producing a legato sound. Legato is displayed as a regular block that at lower velocities have a yellow line in the middle.

SLAP ARTICULATIONS

Slapping is a percussive bass technique which more than any other articulation showcase the bass as a versatile instrument demanding more than a simple piano roll to do justice. Not all libraries have slap articulations, and although the articulations are grouped, they complement rather than replace the other articulations.

If you want to program slap bass, make sure to study the slap grooves included in the core library for inspiration.

Slap/Pop

This articulation is performed by either slapping the thumb onto the string to make it produce a percussive sound, or by pulling the string up and producing the sound when the string slaps against the fretboard. It is indicated with a bright orange block.

Ghost Slap

The ghost slap is a harsh ghost note sound produced by slapping the strings hard while muting them. It is displayed the same as the ghost note, but with an orange block, rather than a purple one.

Percussive Left Hand

This sound is produced by slapping and muting with the left hand on the fretboard, rather than the right hand. It is displayed the same way as the loud mute, but with an orange

block instead of a yellow one.

HAMMER ON/PULL OFF

Interchangeably called legato or slurs, this is an articulation played without the right hand, or only very softly with the right hand. This articulation can be combined with many other articulations in different ways.

In its basic form, legato simply connects two note so that the first note changes into the second seamlessly. It does this by looking backwards, so the note you select is transformed into a legato note, while the note it "latches" onto keeps its original articulation. This creates interesting possiblities with harmonics, or combining legato with percussive articulations to get a slap like sound, but the main purpose is of course to allow you write basslines that are played the same way as a real bassist would.

This brings us to our first truly advanced articulation: polyphonic legato. Polyphonic legato is an articulation, or rather combination of articulations, which in real life is simple and used all the time, but is very difficult to translate into MIDI, and practically impossible to program in a piano roll.

Entering this articulation in EZbass is simple, however. Just apply legato as you would otherwise. If there are other ringing notes, EZbass will make sure that only the selected notes are affected by the legato.

Any type of legato is shown with a curved edge indicating the direction of the legato and role of the note. A curve on the bottom right edge leading into another note indicates hammer on, or ascending legato, while a curve at the top right edge indicates a pull off, or descending legato.

Curves on the left side of a note indicate that the note is a continuing or releasing a legato, shown as "(Hammer On/Pull Off)" in the articulation menu. A curve at the top left indicates a hammer on, or that the legato is ascending, while a curve at the bottom left indicates a pull off, or descending legato.

SLIDE ARTICULATIONS

The EZbass slide implementation is also an advanced articulation really only feasible within EZbass, even though they're less complex than legato.

Entering slides into the grid editor is most easily done by selecting a single note and choosing a slide from the Slide menu or context menu. This inserts a new note into the grid which is tied to the original note with a line. Once that is in place, simply align the notes as you like and everything is good to go.

The different types of slides are:

Slide

The slide articulation picks the first note, slides towards the second and picks the target note on its start position. Note the round corner on the leading note.

Smooth Slide (Legato)

The legato slide is the same as the last one, but the second note is not picked, leading to a softer sound that still rings when it reaches the target note. Here you can see the round corner on both the leading and releasing (target) notes. The intensity of the target note is strongly affected by the intensity of the leading note.

Slide In

Entering this articulation inserts a short and quiet note leading into the selected note. This is a smooth slide and since the leading note is the inserted one, you may need to adjust the velocity of that note to get the proper intensity on the releasing note.

Slide Out

Same as a Smooth Slide, except the target note is short and quiet, causing the leading note to fade out nicely.

Short Slide Up/Down (Grace Notes)

A grace note is a short note leading into another note. In EZbass these articulations are treated differently than slides and are more limited, with the interval between the notes being fixed. They're also easier to move around, thanks to being diplayed as a single block. Grace Notes are displayed with the same rounded border as legato notes, but with an additional darker diagonal "cut" to indicate the grace note. As they are displayed as a single note, there is no "sliding line" leading to or from grace notes.

6.3 ENVELOPES AND AUTOMATION

A staple of MIDI editing is automation. This is the controlled adjustment of different parameters over the course of a track. These parameters are displayed as lines with nodes in them, called envelopes. For simplicity, we also call the tracks containing the envelopes by the same name (although they are referred to as curves within EZbass). The MIDI envelopes are located and accessed from within the grid editor tab in what we call the MIDI values editor, or MIDI controls editor.

While MIDI envelopes are typically for MIDI Control Change messages, most DAWs and also EZbass have incorporated the Velocity and Polyphonic Pressure editors into the MIDI controls editor. These are in a separate section of the envelopes menu and are called Velocity and Pitch, and they behave slightly differently from the regular envelopes (in fact, the velocity track can't really be called an envelope at all!).

The MIDI controls editor has a small header bar containing two items: A minimize/show button, and the envelope menu. The **Minimize/Show** button let's you minimize and expand the MIDI controls editor. You can also do this by grabbing the handle at the top center of the editor and dragging up or down. You can increase the editor window height beyond its initial height this way, which is useful for detailed editing.

The **Envelopes Menu** is divided into four sections: recent envelopes, where the most recently used envelopes are listed, Velocity and Pitch tracks, where you can edit notes velocities and pitch bends, Assigned MIDI envelopes, which is a list of all envelopes that have been bound to a controllable parameter, and finally a sub menu containing a list of all free and unassigned MIDI control changes. Any envelopes that have automation applied are highlighted in the menu.

The scale of the MIDI controls editor is locked to the grid editor and they both share the same scroll bar.

RESERVED MIDI CONTROL CHANGE MESSAGES

EZbass has four reserved CC messages common among most samplers and synthesizers. These are easily identifiable in the Envelopes menu since all envelopes bound to unreserved controls messages have the CC numbers in parentheses. These are:

Modulation (CC 1)

This envelope controls vibrato. This is the message typically sent from the modulation wheel on a MIDI keyboard.

Sustain (CC 64)

Used to let notes ring. This is an on/off switch and is typically the first pedal input on a MIDI keyboard. 0-63 means off and 64-127 means that the pedal is held down.

Soft/Damping (CC 67)

On a regular keyboard this control is an on/off switch applying a fixed effect on notes played when it is held. While EZbass works with such a pedal, it listens to the full range, not just on or off. Using an expression pedal or assigning CC 67 to a fader or dial allows you to apply damping better to your liking.

6.3.1 THE VELOCITY AND PITCH TRACKS

These two tracks are not regular MIDI CC envelopes, but rather tracks containing the Velocity and Polyphone Pressure information tied to each note in the piano roll. Instead of a single envelope in each track, they are both unique and behave differently from each other. They also have different options in the header bar.

THE VELOCITY TRACK

The velocity track contains the velocity information associated with every note in the grid. These are represented as vertical bars with the actual velocity value as a node at the top of each bar.

The Pointer and Pencil tools behave differently in this track, where the pointer tool is used for selecting and modifying groups of notes, while the Pencil tool is used to directly enter new values for any nodes it crosses while drawing. Moving a selection of nodes in this track does not preserve their positions, and nodes are "squished" together at the top and bottom. If you release the selection their relations are forgotten and selecting and adjusting them again uses the new values as their relation.

Overlapping notes in the grid are displayed on top of each other in the velocity track. If you are unsure that you are modifying the correct node, you can select nodes by selecting their corresponding notes in the grid. After that, you can grab any one of the selected nodes in the velocity track and adjust the selection to your liking.

The header bar of the Velocity Track contains the following options for controlling the notes in the grid editor:

Velocity

This slider changes the velocity of the selected notes by the same amount.

Dynamics

This slider proportionately draws or pushes the selected notes towards or away from the average velocity between them. At the extreme left all notes are set to the average velocity, while at the extreme left all notes above the average are pushed to maximum velocity and vice versa.

Randomize

This slider uses a random element distribute the velocities of the selected notes. Higher values tend to push the notes further apart and toward the extremes.

Slope

These handy buttons fixes the first or last notes in the grid and proportionately increases or decreases the velocities of the other selected notes based on distance to the fixed notes.

THE PITCH TRACK

Unlike the velocity track which lists every note in the grid, the pitch track only shows values related to the currently selected notes. If no selection is made no information is displayed and the track is disabled. With that said, the pitch track does display an envelope, rather than individual nodes, and is edited in the same way as the other envelopes described later in this section.

The one thing to keep in mind when inserting or modifying pitch nodes, is that the middle of the envelope is the unmodified note pitch. Above the line means the pitch is sharp, while dipping a node below the line will make the pitch flat.

Good to know...

The Pitch track can also be used to emulate vibrato if you think the vibrato envelope has too regular intervals.

6.3.2 EDITING ENVELOPES

A MIDI envelope is displayed as a line from the start of a track to the end. To modify an envelope you add nodes with different values which in turn changes the parameter the envelope is assigned to. While you can modify the envelope without assigning it to a parameter, it naturally does nothing.

Now that we have passed the Velocity and Pitch tracks, it is useful to know that MIDI envelopes are global, meaning they are not tied to a specific note. They are part of the MIDI blocks, but will persist even if you remove any notes. By the same token, removing nodes from an envelope will not remove any notes.

Modifying envelopes is straightforward. Use the pencil tool to enter new nodes into the envelope, and the pointer tool to select and move them. To reduce the number of nodes, either draw more regular lines, or select unnecessary nodes with the pointer tool and

remove them from the context menu. From the context menu you can also find the Cut, Copy, Paste and Remove options as well as a Select All option which simple selects all nodes in the current envelope. You can select multiple nodes by holding Shift or Ctrl while clicking individual nodes, or by holding and dragging over an area.

When you move a selection of nodes around, only the nodes in your selection are affected. This means you can't drag a node beyond another; each node is locked between the nodes before and after it. A selection of nodes are always in their position relative to each other, so you won't end up in a situation where two nodes are "squished" together because another node is stopping their movement.

6.3.3 ASSIGNING MIDI CONTROLS

EZbass supports assigning parameters for automation with MIDI control change messages. This is useful in the stand alone host, but necessary when used as a plugin if you want to control any parameters from your DAW.

All assignable parameters display the MIDI CC context menu when right clicked. By default, CC 1, 64 and 67 are bound to vibrato, sustain and damping respectively, although they can be overwritten if you assign them to another parameter. To enable them an overwritten control again, simply remove any other assignment from its associated control.

The assignable parameters are:

- Master Volume,
- The transport controls Play, Record, Stop and Toggle Loop,
- All bass and effects controls in the Bass Tab.

As you assign these to a parameter, they will be listed in the Envelopes menu in the grid editor ready to be automated. As mentioned above, if you run EZbass as a plugin, only the default parameters can be controlled from your DAW without manually assigning them to a control.

Good to know...

Bass and effects controls are assigned per knob rather than the parameter each knob controls. As such, any assignments to the bass and effects controls are carried over between presets.

The MIDI CC context menu contains the following options:

MIDI Learn...

This options puts EZbass into standby waiting for you to send a message from the control you want to assign the selected parameter to. Click anywhere on the screen to cancel MIDI Learn.

MIDI Learn Reversed...

The same as MIDI Learn, but all values are translated into the opposite end, so that a value change of 0-10 from the controller is translated as 127 to 116 in the envelope and so on.

Remove

This sub menu lists all assigned parameters and lets you unassign them. If there are no parameters assigned to any control, the option is disabled.

MIDI Learn Presets

Once you have assigned parameters to MIDI controls to your liking, you can save them as a MIDI Learn Preset. To save a preset simply select Save or Save As…, while Delete removes the currently loaded MIDI Learn Preset. Saved presets are located in the User Presets sub-sub menu.

Bind to CC

This sub menu contains all assigned and unassigned controls for manual assignment. Simply select the control you want to assign the parameter to.

WARNING

As of EZbass 1.0.2 MIDI control assignments only persist if you save them within a project and are not carried over between libraries. MIDI Learn Presets are cleared when you exit EZbass, so make sure to save your work into a project or even better, save a default preset with your MIDI controls already assigned whenever you start a new project.

7. THE DRUMS & KEYS TAB

The Drums & Keys tab is design to generate bass lines from drum MIDI as well as piano MIDI. Supported MIDI is EZdrummer and General Midi drums, as well as EZkeys MIDI. Other MIDI files load as well, but the analysis of those files are heavily dependent on the harmonic content of the file and how chords are played. Either way, it's a great way of generating bass lines from other instrument arrangements.

A friendly reminder...

If you already have a bass part programmed and want to import it into EZbass, there's no need to use the Drums & Keys tab. Simply start a new project, set the song key and drop the MIDI file into the Song Track. From there you can either jump straight into the Grid Editor to add articulations, or use the features of the Song Track to speed up your creation process.

7.1 THE DRUMS & KEYS START VIEW

When you open the Drums & Keys Tab you are greeted with a simple screen containing a drag and drop box and a single drop-down menu. To get started, simply drag the MIDI you want to generate a bass line from into the EZbass window and you will instantly be greeted with the card view described in the next section.

If you cannot drag and drop MIDI into the window for some reason, you can open the Select MIDI file menu and "Open..." from there and browsing to and selecting your MIDI manually. If you want to return to a MIDI file previously imported into the current project, all files analyzed in the current project are listed in this menu, as well as any other files imported during the current session.

The Toontrack Family of products has supported drag and drop for a long time now. EZbass is no exception and you can drag and drop MIDI straight into EZbass from both EZdrummer and Superior Drummer, but most excitingly with the release of EZkeys 1.3.0, chord information is carried over from EZkeys into EZbass taking the guesswork out of the analysis carried out when reading the MIDI files.

7.2 THE MIDI CARDS VIEWS

Once you have imported the MIDI into EZbass it will rapidly be analyzed and you will be taken to the card view. This view consists of a simple header bar and an area with a selection of cards that EZbass has generated MIDI for.

The header bar has three buttons: New, The Keyboard Cards View, and the Drum Cards View. When you reach this point, the new button isn't really need anymore, unless it's the fastest way to reach files you previously imported or you must use the Open... dialogue; the drag and drop import functionality works from within both card views. There is also a fourth button in the menu described later in this section.

Depending on the results from the analysis you are either presented with the Key Cards View, or the Drums View. The latter is the default view if the analysis found little or conflicting harmonic content, so that you can at least import most rhythmic elements of the MIDI file into the song track.

CARD CONTENTS

Each card, regardless of the view, contains the same items: a preview button, a visualization of the generated MIDI, a drop-down menu with four options and an illustration of how the MIDI was generated. As with most parts of EZbass, hovering either item displays a tooltip.

Each card can be dragged straight onto the song track, merged with existing blocks in the song track, or used to find grooves in the grooves tab. To access the options for the latter open the drop-down menu, which contains the following items:

Show Similar Grooves

This option analyses the selected card's MIDI and applies search filters that EZbass thinks are appropriate for the card. Unless the MIDI is extremely typical, this option will often lead to... interesting search results, so keep your mind open for whatever is presented to you.

Search with Tap2Find

This puts the card's MIDI into the Tap2Find search filter, which generally results in more pleasing search results.

Export to Current Song Track

This option works the same a dragging and dropping the card onto the song track, except the MIDI is inserted at the playhead. Any existing blocks are overwritten by the inserted block

Replace MIDI in Selection on Song Track

This option opens the "Replace MIDI..." view described at the end of this chapter.

THE PIANO CARD VIEW

In this view you are currently presented with two cards. These are:

Left Hand

This card contains MIDI generated from any bass lines in the imported EZkeys MIDI.

Rhythm and Chords

This card contains MIDI generated from the chords and melody of the imported EZkeys MIDI.

THE DRUMS CARD VIEW

This view is purely for rhythmic content, and is for that reason especially useful early in the song writing process, before the chord progressions have been cemented. The cards in this view are self explanatory based on their title and tooltip:

Kick to Alternating Strokes

Regular notes are inserted anywhere the kick drum is played in the imported MIDI file.

Kick and Snare to Alternating Strokes

Regular notes are inserted anywhere the kick or snare drums are played in the imported MIDI file.

Kick to Alternating Strokes and Snare to Mute

Regular notes are inserted anywhere the kick drum is played, and a loud mute is inserted wherever the snare drum is played in the imported MIDI file.

Power Hand to Alternating Strokes

Regular notes are inserted based on the detected power hand in the imported MIDI file.

Since the notes of a rhythm card will all be the same, it is useful to be aware of the conversion options described in the following section.

USING THE REPLACE MIDI FUNCTION

As with Grooves, you can replace MIDI in a block from the Drums & Keys tab. When making a selection of blocks in the Song Track and clicking the "Replace MIDI..." button, you are by default taken to the Grooves Tab, but if you have imported MIDI and are in either of the card views, you will instead have the option of replacing the MIDI with the contents of your imported file. This functions the same as replacing MIDI from the grooves tab, with some extra options before committing to the changes.

> Remember that you can jump between the grooves tab and the drums & keys tabs in the upper right corner of the windows when replacing MIDI.

The conversion options for replacing MIDI are available as a fourth button in the header bar and are as follows:

Follow Drums and Chords

Keeps the rhythm of the card, but adjusts the pitch of the notes to match the chords on the song track.

Keeps the current pitches of the bass line on the song track but adjusts the rhythm to match the drums

Combine Rhythms, Follow Chords

Merges the rhythm played in the card and with the rhythm of the selected block on the song track. Adjusts the pitch of all notes in the block to match the chord blocks.

8. THE AUDIO TRACKER TAB

This chapter is currently being edited and will be published soon.

9. THE GLOBAL MENUS

9.1 THE FILE MENU

This menu could also be called the Project menu. In here are all the actions available for loading and saving projects, as well as restoring autosaves and setting the default project to load on a new session.

The items in this menu are:

New

This option opens a new empty project without loading the default preset. If there are unsaved changes in the current project a confirmation dialog is first displayed.

Open Project...

This option lets you navigate to and open a previously saved project. If there are unsaved changes in the current project a confirmation dialog is first displayed.

Open Recent

This expandable menu displays a list of the last projects you loaded into EZbass. If there are unsaved changes in the current project when loading a project, a confirmation dialog is first displayed.

Save Project

If you are working in an existing project this simply updates the save file with your most recent changes. If you are saving a new project for the first time, it instead functions the same as the Save As... option described next.

Save As...

This option opens a save file dialog which lets you specify a project name and location for storing the preset. EZbass also begins editing the new save file, rather than staying in the old.

Save a Copy...

This function works the same as Save As… but instead of switching over to the new save file, EZbass continues working in the one it saved a copy of
This expandable menu contains auto saves from this session, as well as any preserved auto saves from other hosts. At the bottom is a link to the Auto-Save settings page.

Load Default Project

This discards the current project and replaces it with the default project after closing the confirmation dialog that opens up when selecting the option.

Set Current to Default Project

Saves the currently loaded project state into the default project. If a default project is already set a confirmation dialog is displayed where you can confirm your decision.

Delete Current Default Project

If you have a default project set, this option will delete that preset and restore the factory default preset after confirming the deletion in the confirmation dialog that appears.

Exit (Standalone Only)

This option exits the EZbass standalone host. If you have unsaved changes, a confirmation is displayed before closing the application.

9.2 THE GLOBAL EDIT MENU

This menu may be called a global edit menu, but it is every bit as dedicated to the Song Track as the track menu is. All the options in this menu are available from the Song Track timeline context menu, except for these three, which truly are global.

Undo

Moves backwards in the project history, until the first recorded action modifying the project this session. The history is cleared when ending the session and closing down EZbass.

Redo

Moves forward in the project history, until the latest action modifying the project. The history is cleared when ending the session and closing down EZbass.

Stop All Audio

This option stops playback and any ringing notes. It is also available next to the master volume in the transport bar.

9.3 THE TRACK MENU

The Track Menu gathers many of the features from the song track into a single menu. There are a additional options in this menu that are not already described in chapter 5, but all will be listed with reference to their song track counterpart.

The duplicate options are:

New Track

This option corresponds to the Add New Song Track button on the far right of the song track header bar.

Duplicate Current Track

This option corresponds to the Duplicate Song Track option in the song track tabs context menu (opened by right-clicking a song track tab).

Delete Current Song Track

This option corresponds to the Remove Song Track option in the song track tabs context menu.

Show Triplets

Enabling this option corresponds to the ShowTriplets option in the song track header context menu. Disabling it corresponds to the Show Straight option in the same menu.

Select All

This option corresponds to the option with the same name in the song track timeline context menu and selects all blocks in the current song track.

Set Track Length...

This option corresponds to the option with the same name in the song track header context menu and opens the track length dialogue.

Edit Time Signature...

This option corresponds to the option with the same name in the song track header context menu and opens time signature track in the song track timeline.

Edit Tempo...

This option corresponds to the option with the same name in the song track header context menu and opens the tempo track in the song track timeline.

The unique options in the track menu are:

Restrict Recording to Loop Area

This option decides where notes are allowed to be recorded. With the the option enabled, and the the loop toggle active, all notes entered outside of the loop markers are discared. Disabling this option or the loop toggle allows recording of notes anywhere on the song track.

Always Loop Selected

With this option enabled, the loop markers move with your current selection in the song track. The loop toggle must be enabled for the option to work.

Auto-Scroll

With this option enabled the timeline automatically scrolls as the playhead moves during playback. This option is separate from the option with the same name in the grid editor options menu, which only affects the behavior of the grid editor timeline.

Chord Selector

This expandable menu has a single option, Preview on Select Chord. This option is enabled by default and plays back the first MIDI block in the selection after transposing it

to a new chord in the chord wheel. Disable it if you do not need to hear a preview of the new melody.

Finally there are options for importing and exporting MIDI in this menu, if drag and drop does not work for you:

Export Song as MIDI File...

This option lets you export your currently active song track as a single MIDI file. Song parts and chord changes are not exported with the MIDI. In order to keep those, either select all blocks in the Song Track and add them to your User MIDI, or save the entire session as an EZbass project.

Import MIDI File...

This option display a file open dialog which lets you open a MIDI tracks and import them into the song track at the playhead position.

Import Tempo from MIDI File...

This option display a file open dialog which lets you open a MIDI track, but only import the tempo information it contains into the tempo track.

Import Chords from EZkeys Project...

This option displays a file open dialog which lets you load EZkeys Projects in order to import the chords contained within the project song track.

9.4 THE SETTINGS MENU

All the options in this menu opens the different tabs in the Settings window. There is an addition option available in the standalone host, **Audio/MIDI Setup**, which you can use to modify your audio input and output settings, as well as setup any MIDI devices you want to use within EZbass.

The tabs in the settings window have descriptions available for each option they contain, although it is worthwhile reading up on them before digging too deep, since many of them are good to keep in the back of your mind when using EZbass.

Common for all but the Advanced tab is the Reset All button, which restores all settings within that tab to the default values assigned when you last installed or updated EZbass.

9.5 THE VIEW MENU

From the View menu you can adjust the visibility of EZbass, and layout to an extent. At release, only the song track can be adjusted, so it is primarily about visibility. The options of the View menu are as follows:

Song Track

This expandable menu lets you set the visibility of the song track into preset positions. All these options are available by grabbing the handle at the top center of the song track.

Scale

Selecting an option from this expandable menu changes how the EZbass interface is drawn. Choosing a value under 100% makes everything in the window appear smaller, while values over 100% makes all elements of the window bigger. This is a useful option on high resolution and laptop displays.

Size

This expandable menu lets you set the size of the EZbass window to the exact size specified in each option. This does not include window border boxes, only the size of EZbass itself.

Set to Minimum Size and Scale

Scales and resizes EZbass to take up as little space as possible on the screen.

Reset to Default Size and Scale

This option sets the scale and size of EZbass appropriately for your display.

Reattach All Windows

If you have detached any of the tabs into separate windows, this will force them to reattach to the main window.

9.6 THE HELP MENU

The Help Menu contains useful information about your EZbass installation, as well as links to support resources.

The options in the help menu are as follows:

About EZbass

This option opens the About EZbass dialog, which contains important information about the software. You may want to open this dialog to ensure that you have the latest version of EZbass, or that you have all your libraries installed and up to date. To copy the installation information for use outside of EZbass, you can click the "Copy Text" button.

About Sound Libraries

This expandable menu shows which libraries are currently installed and any additional resources that have been provided with the libraries.

Key Switch Layout

This option opens a printable diagram illustrating the key switches that are usable within you DAW and when playin live.

Operation Manual

This option links to the very manual you a reading right now. Remember that you can print or export the manual as a pdf document for offline reading from the sidebar.

Online Support

This option takes you to the Toontrack FAQs, from which you can reach out to support from the contact forms provided in every support article.

Show Plug-In Path

Sometimes knowing where plugins are located on the computer can be handy. This option opens a message box containing the path to the currently loaded EZbass plugin. The standalone host uses the VST version of EZbass.

The EZbass design is registered by Toontrack Music AB, RCD no.: 007846894-0001 – 007846894-0022 and 007847215-0001 – 007847215-0022.