
Zrythm Documentation

Versión 0.6.323

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Welcome to the Zrythm manual.

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1.1 Overview

Zrythm is a digital audio workstation designed to be featureful and easy to use. It has the following features.

Limitless automation Allows you to automate almost anything with automation events using straight lines, ramps and curves, or with CV signals from LFO and envelope plugins.

LV2 plugins Supports the free LV2 plugin format.

JACK support JACK aware, with support for JACK transport.

Chord assistance Has a chord pad for trying out chords in a scale and a chord track to help with chord progressions.

1.2 System Requirements

1.2.1 Minimum Requirements

Hardware

- x86_64, i686 or ARM processor

Software

- Unix-compatible OS
- GTK 3.22 or later
- A working JACK setup

1.2.2 Recommended

We recommend running a fairly modern machine with the following specs so you can take full advantage of Zrythm.

Hardware

- A fast processor
- Large enough monitor
- Audio interface
- MIDI keyboard

Software

- A JACK patchbay such as Carla or Catia

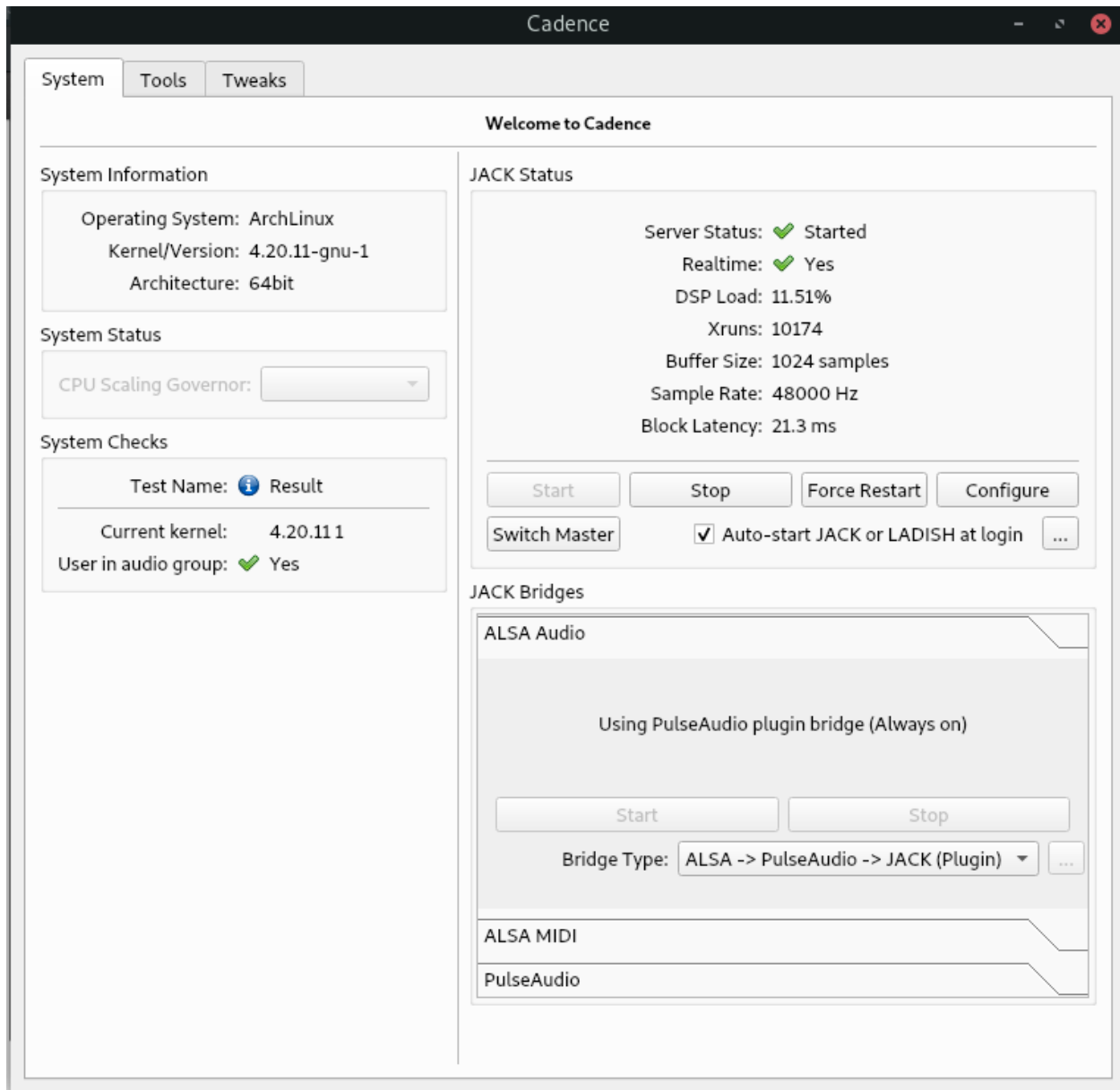
1.2.3 Audio Interface

An Audio Interface is recommended as it offers low latency and better quality (especially if recording audio).

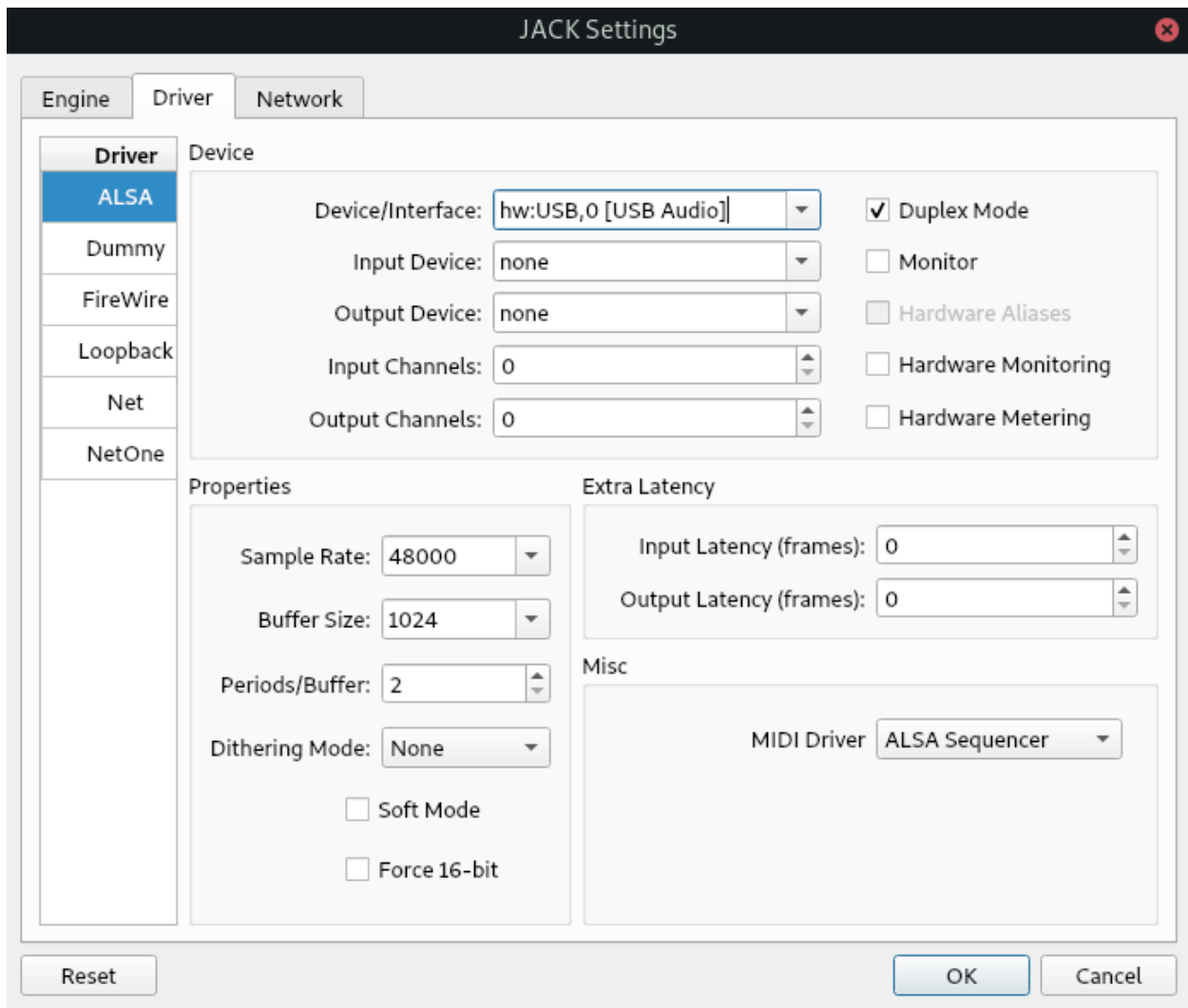
1.2.4 JACK

JACK needs to be set up and configured before running Zrythm. We recommend using [Cadence](#), as it makes the process very easy.

- Open Cadence



- Click Configure and select your Audio Interface



1.3 Installation

1.3.1 GNU/Linux

Official Builds

You can install the latest version of Zrythm for your distro [here](#)

This is the recommended way to install the latest version for most users.

Flatpak

Flatpak builds are coming soon.

AppImage

AppImage builds are coming soon.

Fedora

For Fedora users, ycollect maintains a Zrythm package in [copr](#)

LibraZik

Zrythm is available in [LibraZik 2](#) for testing.

AUR

For Arch GNU/Linux users, Zrythm is available in the AUR under [zrythm](#) and [zrythm-git](#).

Manual Installation

Zrythm uses the Meson build system, so the procedure to build and install is as follows:

```
meson build
ninja -C build
ninja -C build install
```

See the `meson.options` file for installation options.

1.3.2 FreeBSD

Thanks to Yuri, Zrythm is packaged for FreeBSD and the package can be found at [FreshPorts](#).

1.3.3 Windows

<http://www.upgradefromwindows.com>

1.3.4 MacOS

Install from source in the same way as for GNU/Linux. No support is offered.

1.4 Getting Plugins

Until Zrythm ships with its own bundled plugins, you must install some plugins like synthesizers and effects before you can make music.

Fortunately, there are many plugins to choose from. This guide will show you a few ways you can install plugins.

If you are on Debian/Ubuntu, we highly recommend checking out the [KXstudio repositories](#), since there are many plugins that can easily be installed via `apt`.

If you are on Arch GNU/Linux you're in luck, because you can just download the entire [pro-audio](#) or [lv2-plugins](#) groups, or you can hand-pick the plugins you want from there.

If you are not sure where to start, please read on.

1.4.1 Recommended Plugin Bundles

[DISTRHO Ports](#) provides a good variety of synths and a few effects that can get you started for music making right away.

[ZAM Plugins](#) is an effects pack that contains all the basic effects like Delay, Reverb, Compression, EQ, Saturation, etc.

[LSP](#) has a lot of useful effects.

[OpenAV](#) has some nice plugins worth checking out.

You might also want to check out [X42 Plugins](#), which has **A LOT** of MIDI effect and meter plugins.

1.4.2 Synths

[Helm](#) is an excellent subtractive synth that should be on everyone's toolbox.

[Dexed Dexed](#) is an FM synth that is closely modeled on the Yamaha DX7.

[ZynFusion](#), the alternative front-end to ZynAddSubFX is one of the most powerful synths in existence.

1.4.3 Percussion Generators

[GeonKick](#) is a great kick drum synthesizer that can also synthesize other types of percussion.

1.5 Additional Resources

1.5.1 IRC/Matrix

We offer support on IRC at [#zrythm](#) on Freenode. Matrix users can use [#zrythmdaw:matrix.org](#).

1.5.2 Issue Tracker

The issue tracker can be found on [Savannah](#).

1.5.3 Código Fuente

Zrythm's source code can be found on our [CGit instance](#) or in the mirror repository at [GNU Savannah](#).

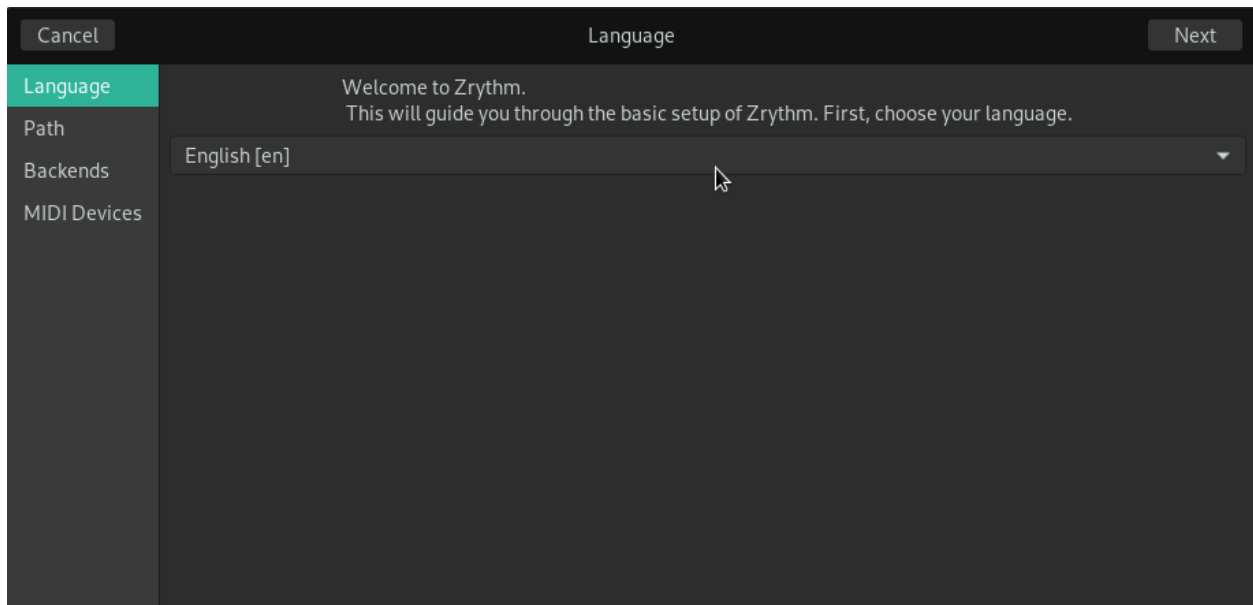
1.5.4 Older Versions

Older releases of Zrythm can be found on [Savannah downloads](#)

2.1 First Run Wizard

When you first run Zrythm, it will display a wizard that lets you configure the basic settings that Zrythm will use. These include MIDI devices, the default Zrythm path, interface language and audio/MIDI backends.

2.1.1 Language Selection

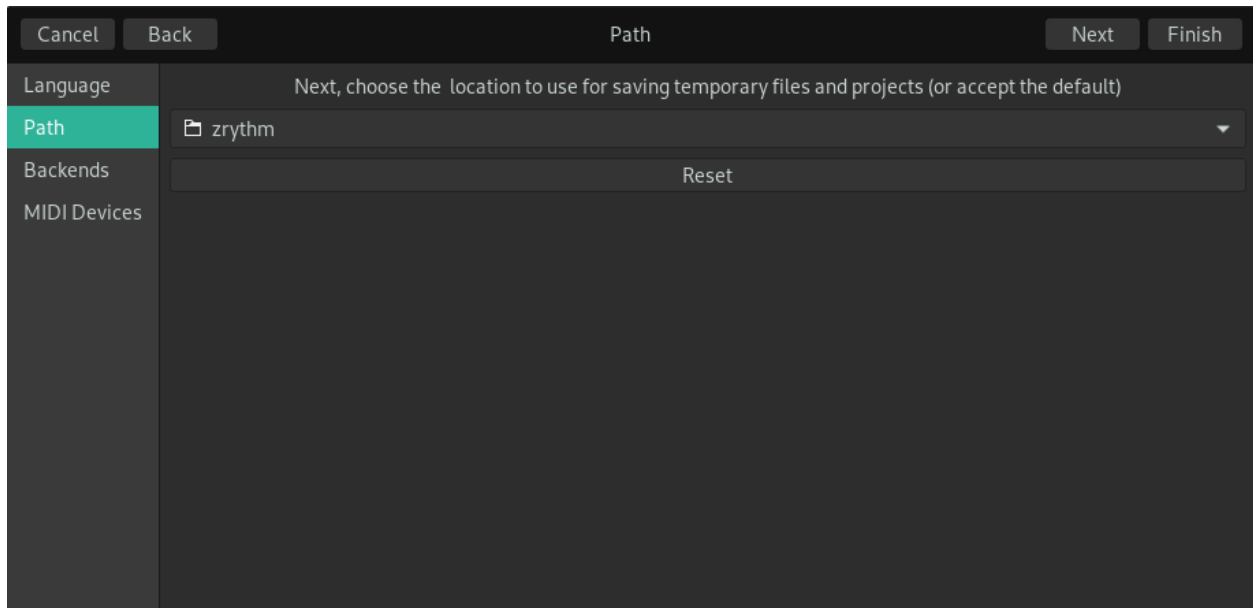


Zrythm lets you choose the language of the interface. The interface is already translated in multiple languages, so choose the language you are most comfortable in.

Nota: You must have a locale for the language you want to use enabled.

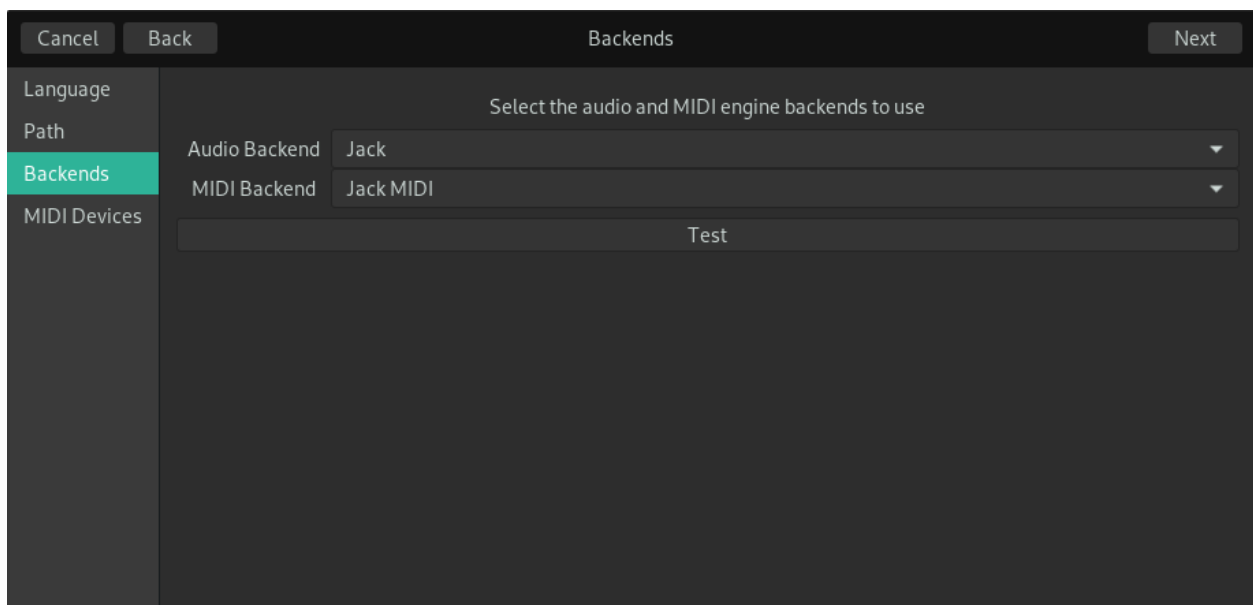
This is usually not a problem since you are probably already using the correct locale for your language. In case a locale cannot be found, you will see this message telling you the steps to enable it.

2.1.2 Path



This is the path where Zrythm will use to save projects, temporary files, exported audio, etc. The default is «zrythm» in the user's directory.

2.1.3 Audio/MIDI Backends

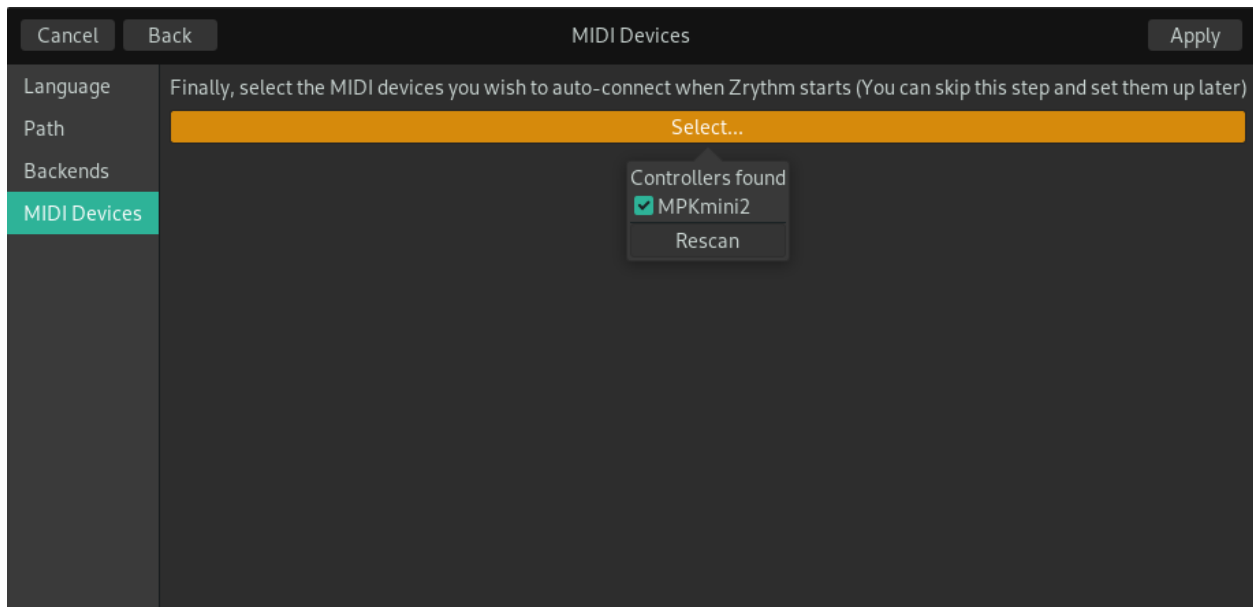


Zrythm supports multiple audio and MIDI backend engines. JACK is the recommended one for both, but it takes some time to set up if this is your first time using it. If you don't want to use JACK for some reason you can select other backends such as ALSA.

Click Test to try connecting to the backend to see if it is functional.

Nota: JACK MIDI requires a JACK server to be running, which means you probably want to use it with the JACK audio backend.

2.1.4 MIDI Devices



These are the discovered devices that will be auto-connected and ready to use every time you run Zrythm. Click «Rescan» to scan for devices again.

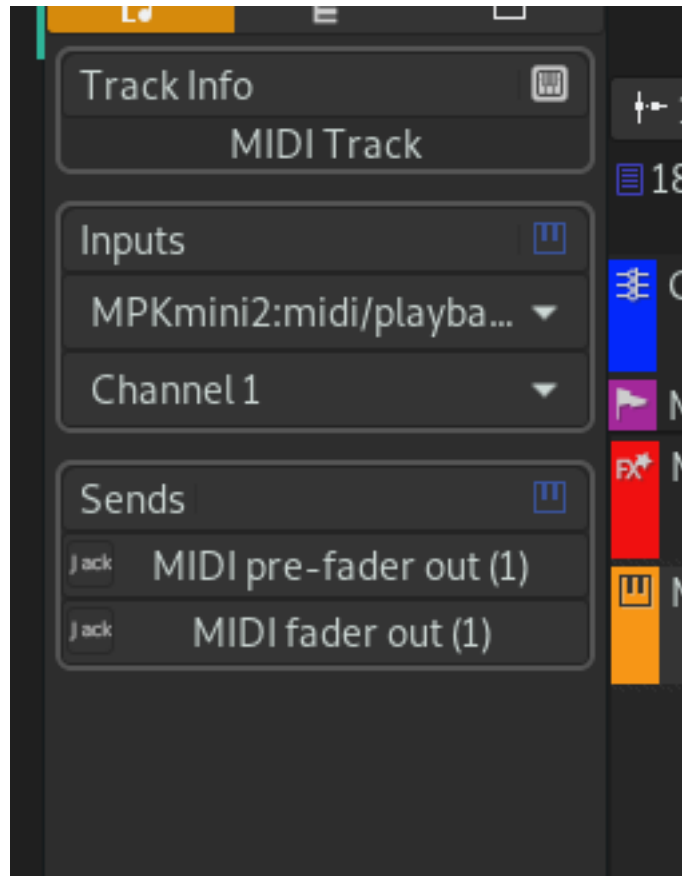
Truco: All of the settings mentioned here are also available in the preferences (Ctrl+Shift+P or File->Preferences), so don't worry if you selected the wrong settings.

2.2 Device Setup

2.2.1 Connecting MIDI and Audio Devices

On Linux machines, Zrythm works with both ALSA and JACK as available backends. Depending on the backend selected, the configuration differs.

Zrythm will auto-scan and allow you to connect to input devices for recording through the Track Inspector, as below, and in most cases you don't need to use any external tools or auto-connect mechanism.



2.2.2 Auto-Connecting Devices

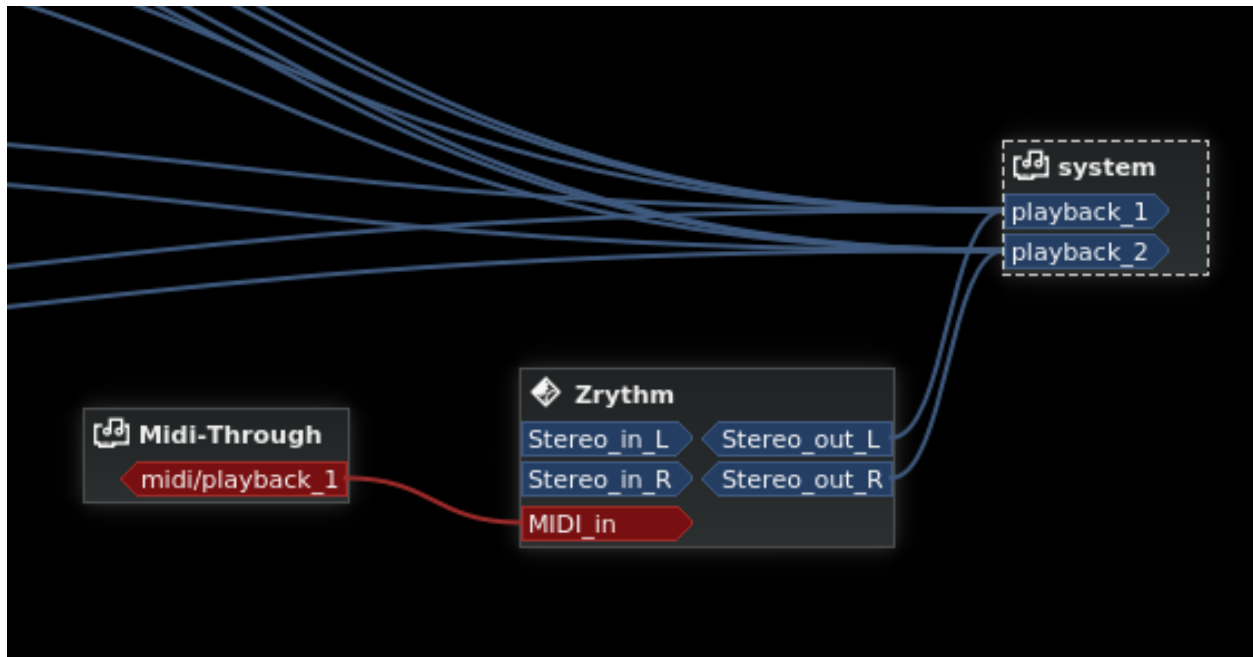
For other types of devices that are not linked to specific tracks, such as devices that send global MIDI messages and devices that control the transport, Zrythm has an option to select these devices to auto-connect to on launch.

This is a TODO feature

2.2.3 JACK

When using the JACK audio and MIDI backend, Zrythm exposes ports to JACK, so devices can be attached there using a tool like Catia. Note that for MIDI, devices might need to be bridged to JACK using `a2jmidid`.

An example configuration looks like this (in Catia inside Cadence)



2.2.4 ALSA

A tool like Catia can be used to connect MIDI devices to Zrythm.

2.3 Preferences

2.3.1 Overview

Zrythm has a Preferences dialog containing all of the global settings that can be accessed by clicking the gear icon or by `Ctrl+Shift+P`.

The Preferences dialog is split into the following sections, which are explained in the next chapters:

- Audio
- GUI
- Backend

2.3.2 Audio Tab

2.4 Additional Settings

Zrythm stores all of its configuration using the GSettings mechanism, which comes with the `gsettings` command for changing settings from the command line, or the optional GUI tool `dconf-editor`.

Normally, you shouldn't need to access any of these settings as most of them are found inside Zrythm's UI, and it is not recommended to edit them as Zrythm validates some settings before it saves them, but in some cases you may want to change them manually for some reason.

2.4.1 Using gsettings

To see what settings are available and for info on how to use `gsettings` see `man gsettings`.

As an example, to change the audio backend you would do `gsettings set org.zrythm.Zrythm.preferences audio-backend "jack"`

You can use the range option to get a list of the available values:

```
gsettings range org.zrythm.Zrythmpreferences audio-backend
```

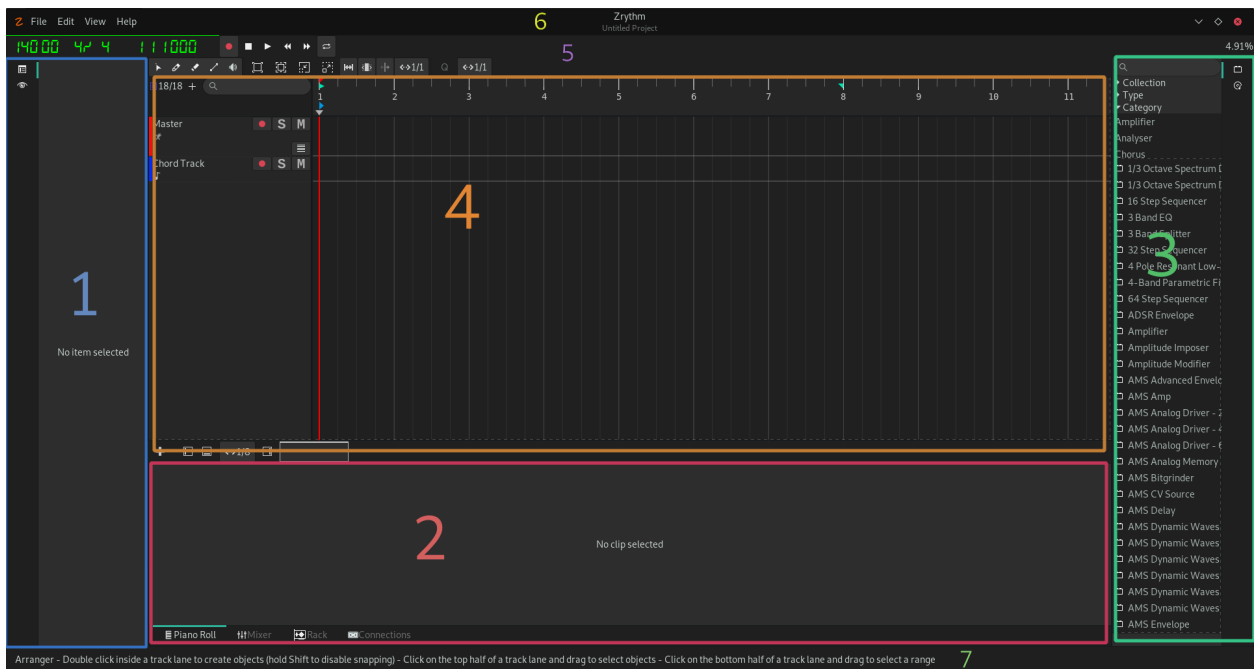
2.4.2 Using dconf-editor

Install and run `dconf-editor`, and navigate to `org.zrythm.Zrythm`. All the settings can be found there.

Zrythm's Interface

3.1 Zrythm Interface Overview

Zrythm's interface is split into various sub-modules:



Inspector Panel (1) The inspector panel contains the inspector, which is used to view and change parameters of the currently selected objects.

Editor Panel (2) The editor panel contains various views that are useful in composing and mixing, such as the Clip Editor and the Mixer.

Browser Panel (3) The browser panel contains the browser, and is used to find plugins and/or audio and MIDI files to drag and drop into the project.

Arranger Panel (4) This is where the action happens. The main panel mainly consists of the Timeline Arranger and the Project's Tracks on the left side.

Toolbar (5) There are two main toolbars containing global controls such as BPM and Transport.

Title Bar (6) The Title Bar contains menus with options for various operations.

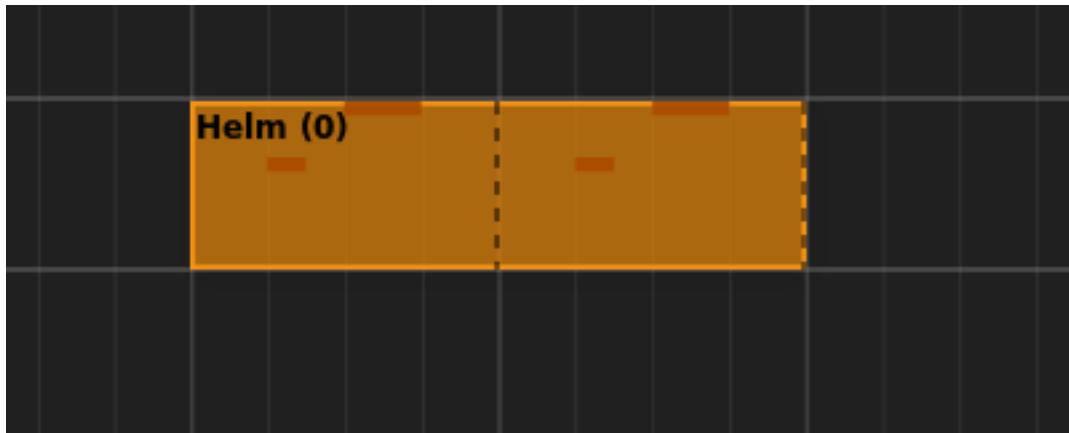
Status Bar (7) The Status Bar is a helpful bar in the bottom of the program that shows tips based on the currently hovered-over item.

3.2 Basic Concepts and Terminology

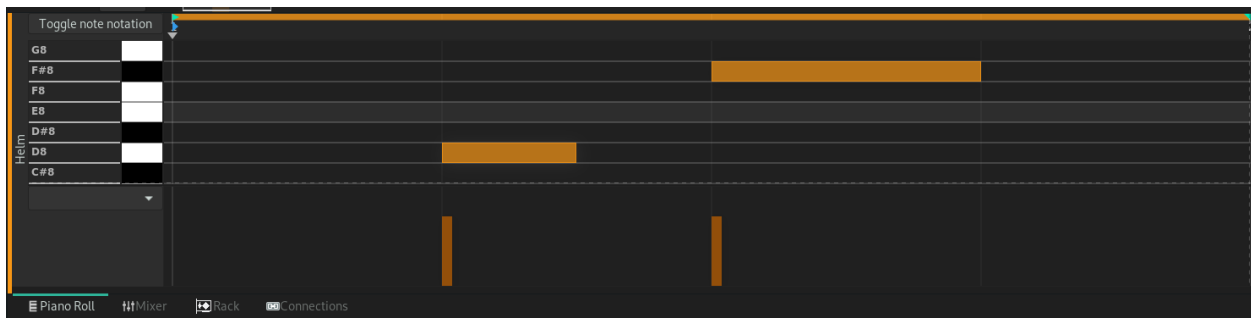
Here are a few terms you should be aware of when using Zrythm. They are explained further in their corresponding chapters.

3.2.1 Regions

A Region (Clip) is a container for MIDI Notes or audio. This is what a Region looks like in the arranger.

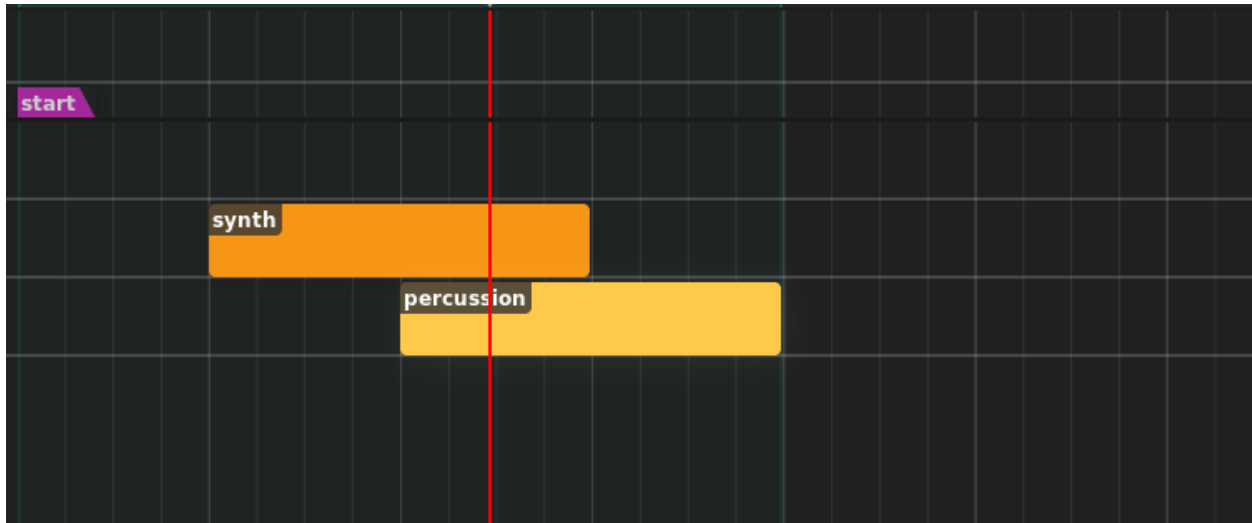


Regions are edited in the Editor Panel. In this case, the clip is looped.



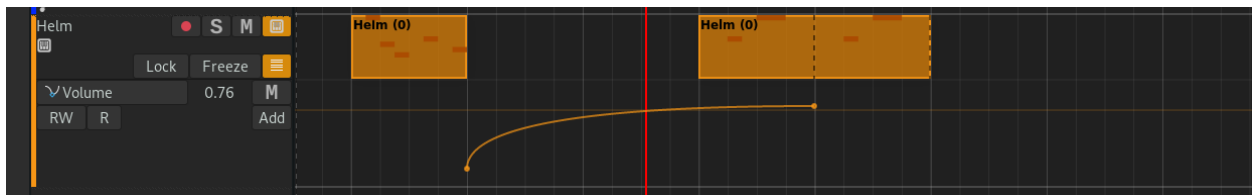
3.2.2 Timeline

The Timeline is where the song is arranged, also known as Arranger.



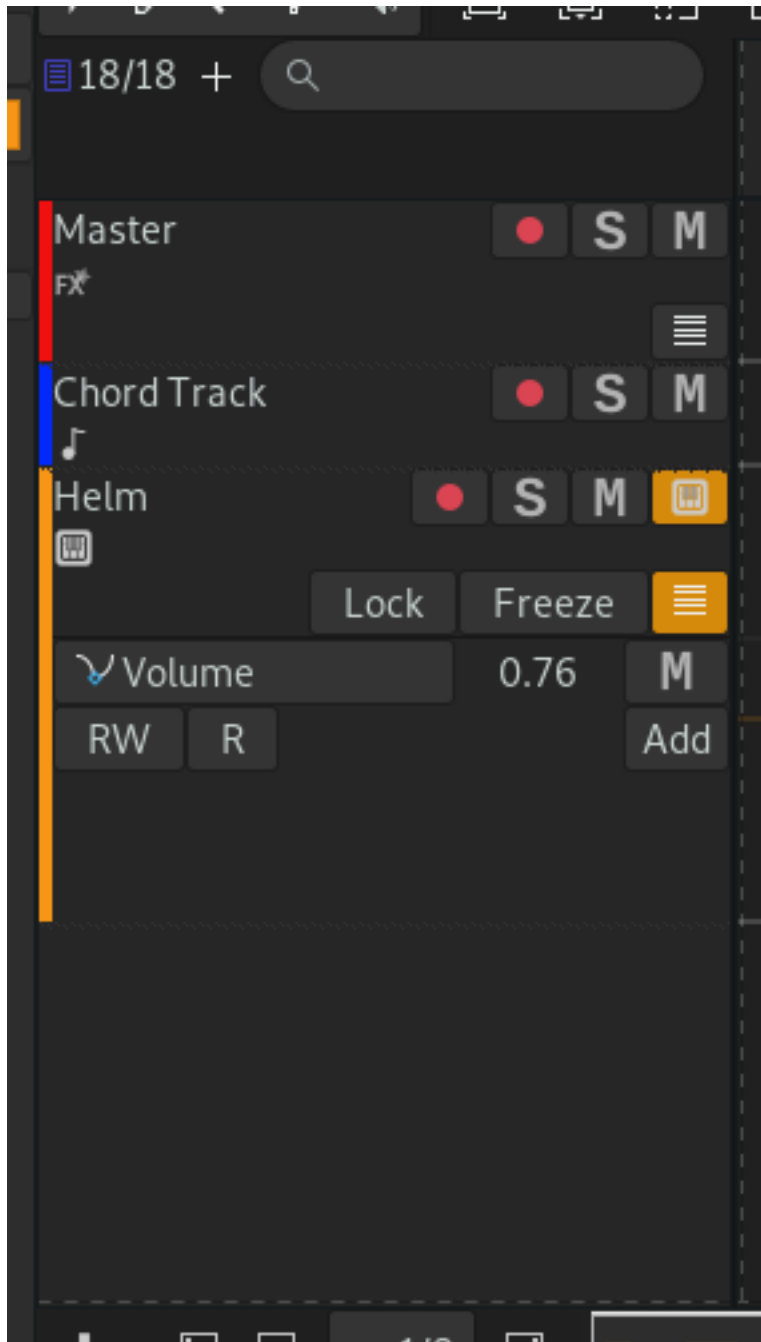
3.2.3 Track

A Track is a single slot in the Timeline containing various Regions and Automation. It may contain various lanes, such as Automation Lanes. There are some special tracks like the Chord Track and the Marker Track that contain chords and markers respectively.



3.2.4 Tracklist

The Tracklist contains all of the Tracks in the project. It is split into the top (pinned) Tracklist and the bottom (main) Tracklist.



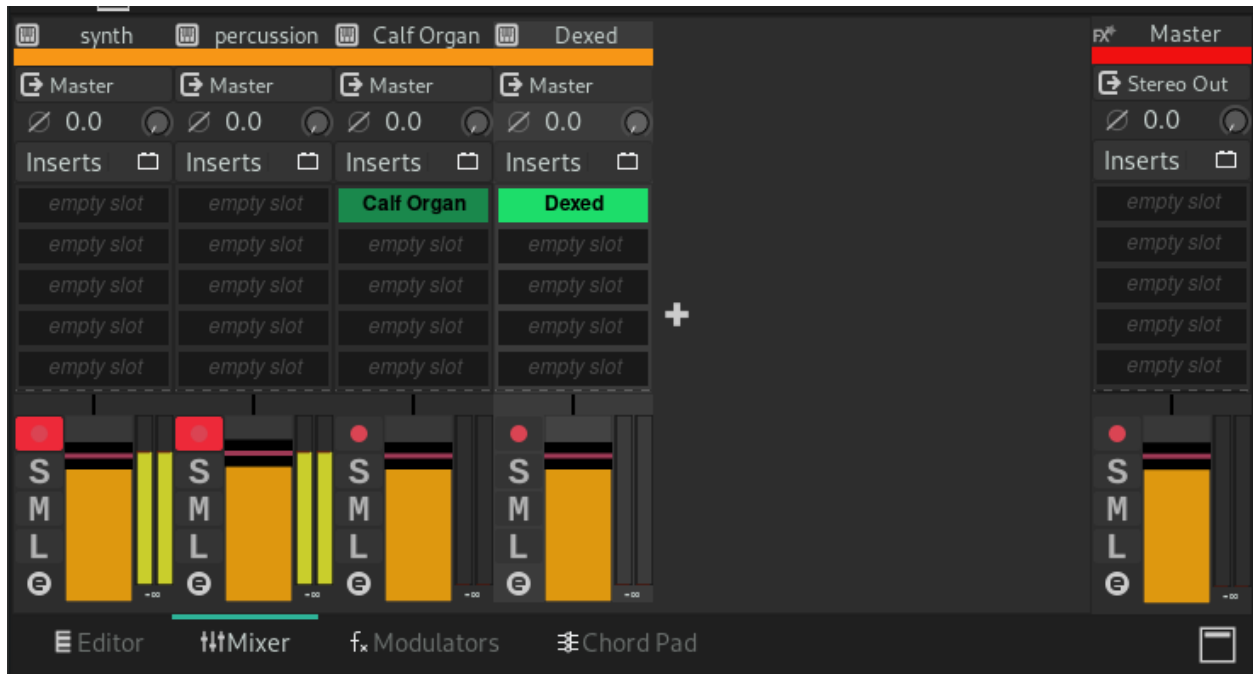
3.2.5 Channel

A Channel is a single slot in the Mixer. Most types of Tracks have a corresponding Channel.



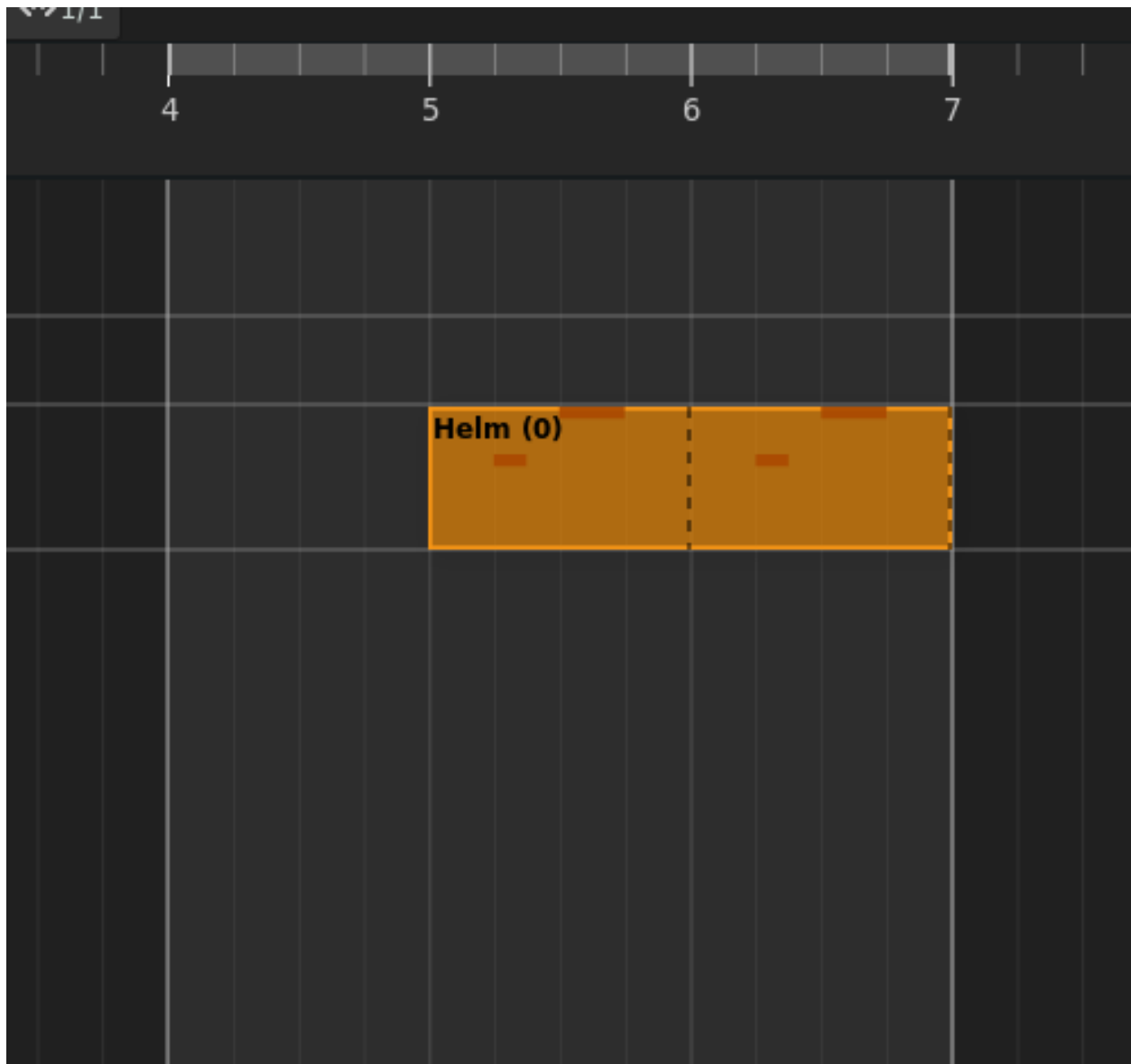
3.2.6 Mixer

The Mixer contains all of the Channels in the Project and is used to mix the audio signals from each Channel.



3.2.7 Range

A Range is a selection of time between two positions.



3.2.8 MIDI Note

MIDI Notes are used to trigger virtual (or hardware) instruments.

3.3 Global Menus

Zrythm has the following global menus at the top of its interface.



Zrythm icon Clicking this will show the About dialog

Home Contains various buttons and controls that are used often during editing and arranging

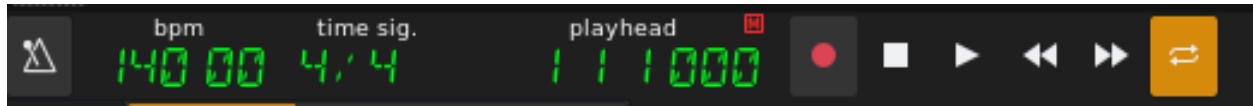
Project Various project-related actions such as saving, loading and exporting MIDI or audio

View Controls to change the appearance of Zrythm and its various areas, such as zooming

Help Links for reporting bugs, donating, chatting, etc.

3.4 Transport Bar

The transport bar contains controls for changing the behavior of playback. It includes the following items.



Metronome toggle Toggles the metronome on/off

BPM Song tempo (beats per minute)

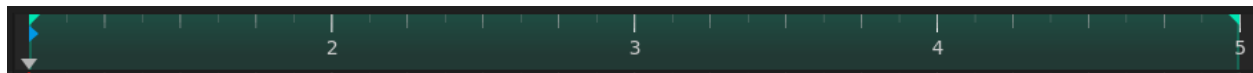
Playhead Current playhead position, in bars.beats.sixteenths.ticks

Transport buttons Controls for stopping, playback, recording, etc.

Truco: Widgets like the BPM meter can be changed by clicking and dragging, or by hovering over them with the cursor and scrolling

3.5 Ruler

A ruler is used to show the position of events in a given arranger, whether it is the timeline arranger or the piano roll or the sample editor.



The ruler will display more or less information depending on the current zoom level. It will also display the following markers/ indicators.

Cue point Displayed as a blue, right-pointing arrow.

Playhead position Shown as a grey, down-facing arrow.

Loop points Shown as 2 green arrows, and the area between them is shown in bright green if loop is enabled, or grey if disabled. Can be dragged to reposition.

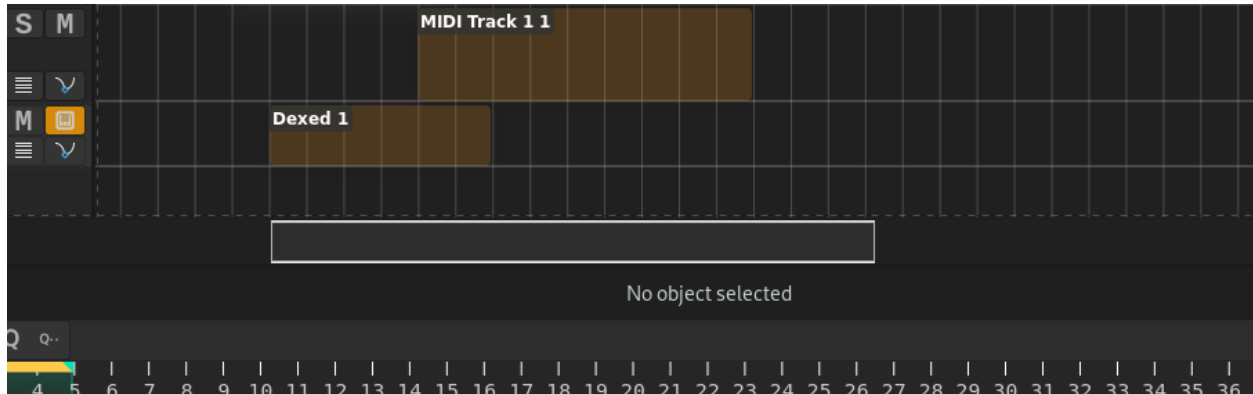
In the timeline arranger, these are the global loop points. In arrangers found in the editor, these are the region loop points.

Clicking and dragging on empty space in the ruler will allow you to reposition the playhead.

Truco: Hold Shift to disable snapping momentarily while moving things around

3.6 Timeline Minimap

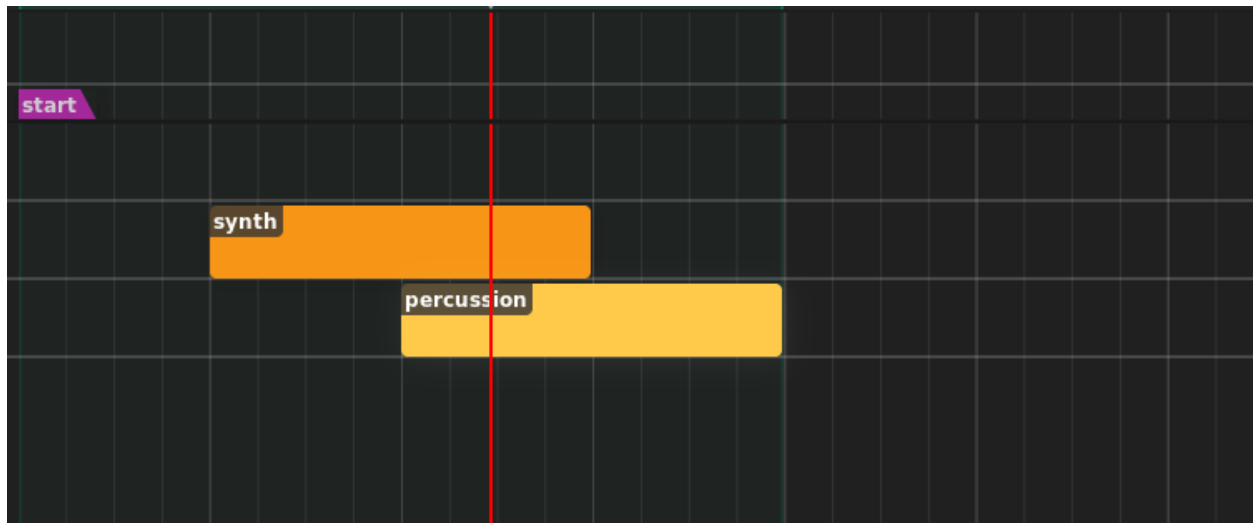
The timeline minimap is a little box that represents the current visible area of the timeline. It can be moved around and resized to change the visible area.



3.7 Tracklist

3.8 Timeline

The timeline is the main area where the song is composed. It generally consists of a collection of events - mostly regions - that are positioned against time. Some events will open separate windows for further editing when clicked.



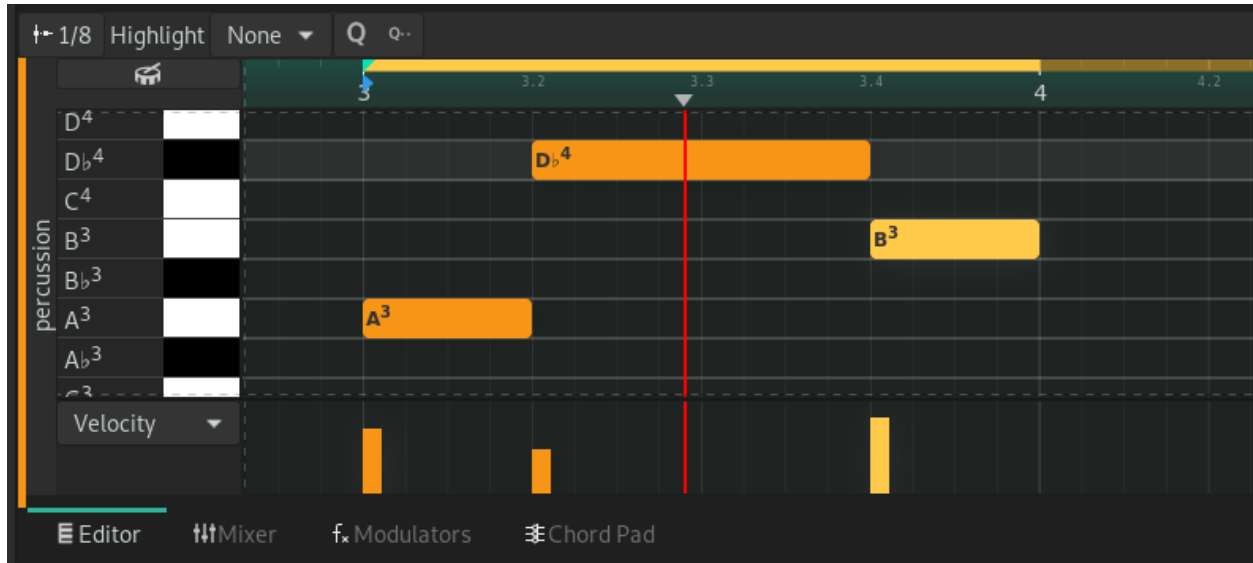
The Timeline is split into a top timeline that remains fixed on top, and a scrollable timeline below it. This way you can pin tracks you want to always be visible at the top.

3.9 Editors

Zrythm has various editors for editing the various events in the Timeline in detail. These editors appear in the Editor tab in the bottom panel.

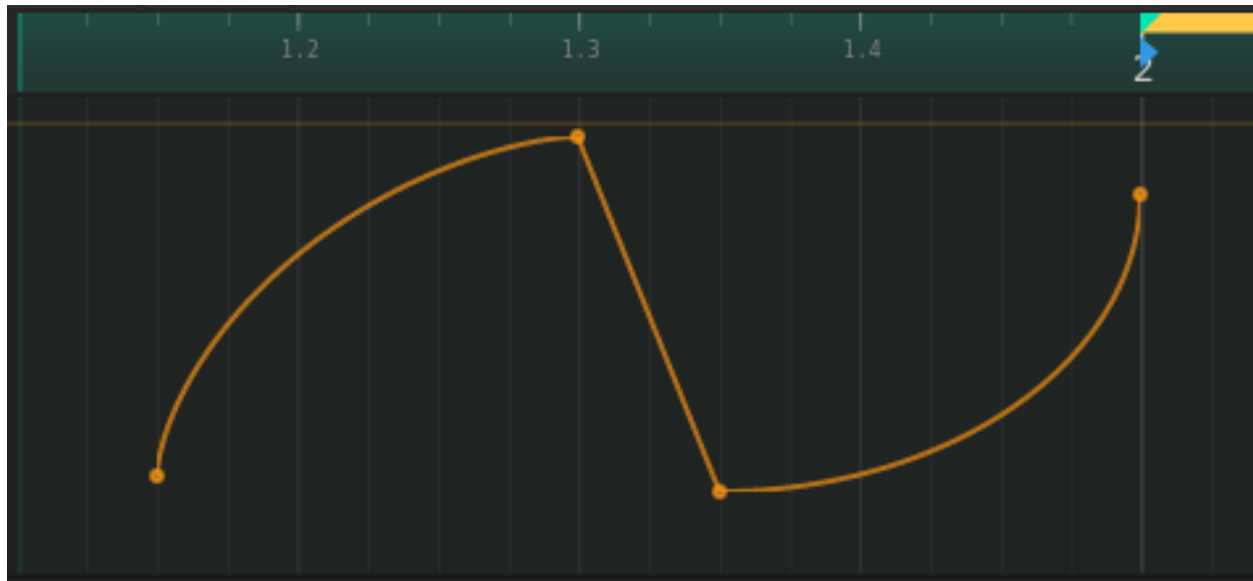
3.9.1 Piano Roll

The Piano Roll, or MIDI Arranger, is the most commonly used editor. It can be used to edit MIDI regions, which contain MIDI notes. When a MIDI Region is selected, the Editor tab will display the Piano Roll, allowing you to edit that region.



3.9.2 Automation Editor

In Zrythm, automation is also enclosed in regions (called Automation Regions). This allows automation to be repeated, much like MIDI Regions. The Automation Editor will appear in the Editor tab when an Automation Region is selected.



Nota: This is a work in progress

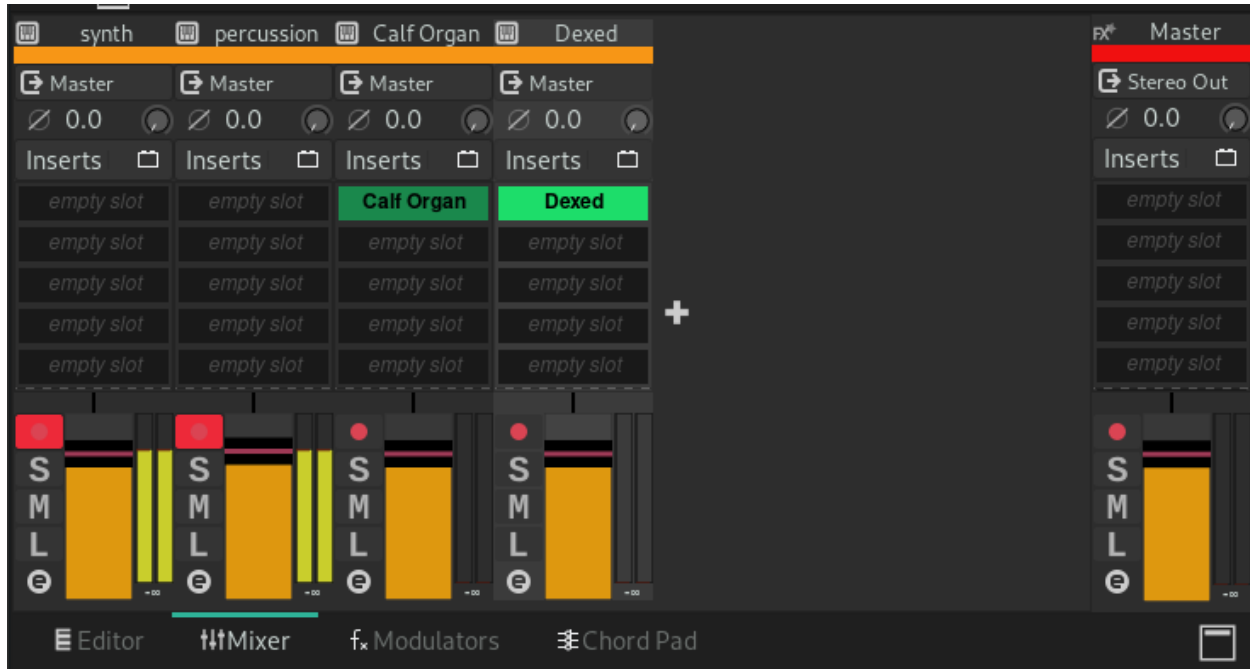
3.9.3 Chord Editor

The Chord Editor is used for editing Chord Regions.

WIP

3.10 Mixer

The Mixer tab contains the Mixer, where all the visible Channels in the project are shown.



3.11 Status Bar

The status bar contains information about the currently active audio backend.

Audio backend: JACK | MIDI backend: JACK | Audio buffer size: 512 frames | Sample rate: 192000 Hz

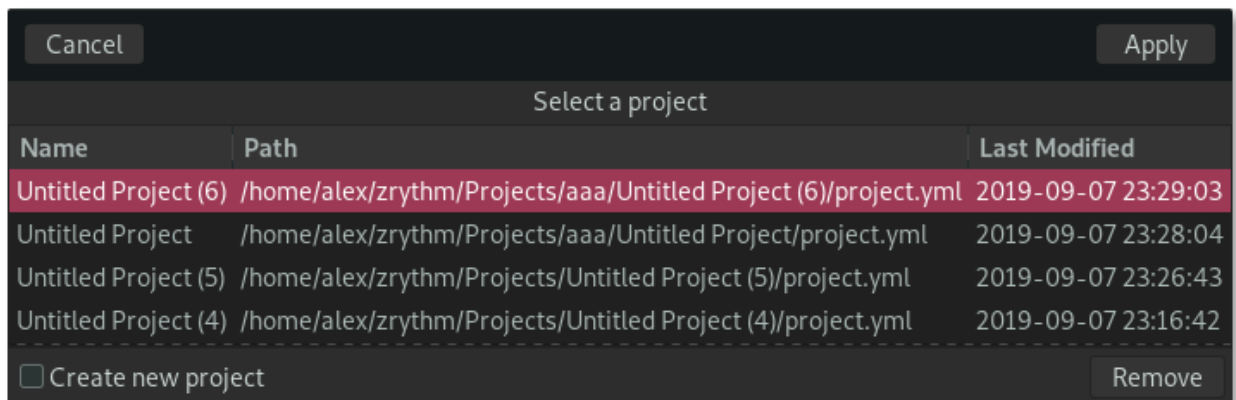
4.1 Project Info

In Zrythm, your work is saved inside a Project. Projects consist of a folder with a YAML file describing the Project and additional files used such as MIDI and audio files.

4.2 Saving & Loading

4.2.1 Loading Projects

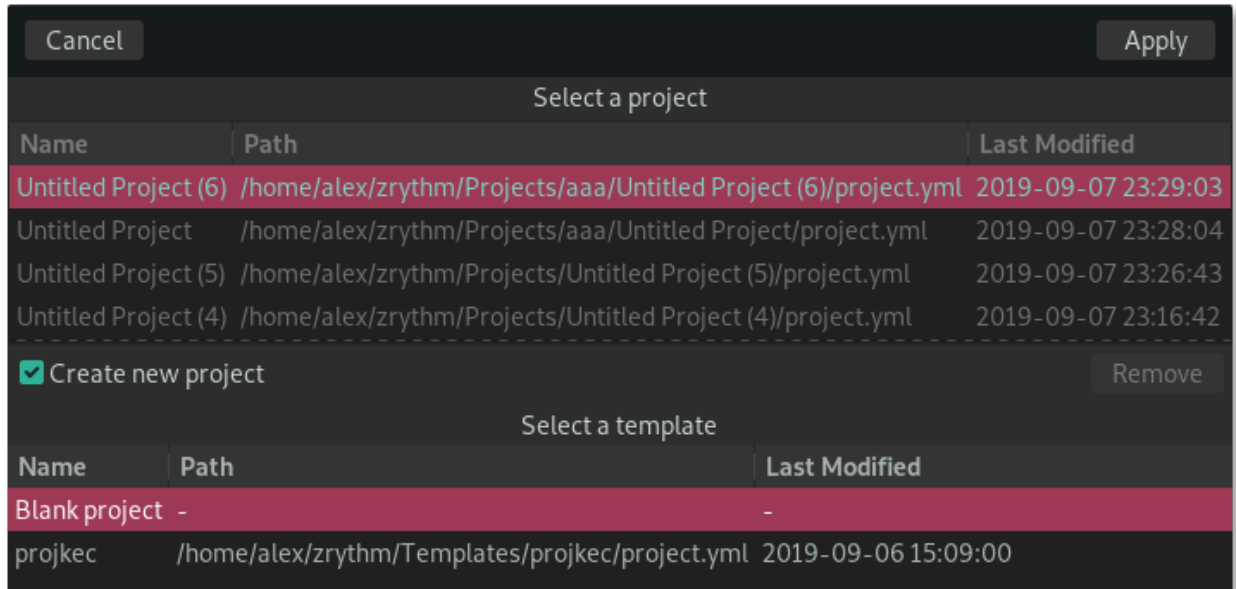
When Zrythm launches, it will ask you to select a project to load from a list of recent projects, or to create a new one.



When you select a project and click Apply, Zrythm will load that project.

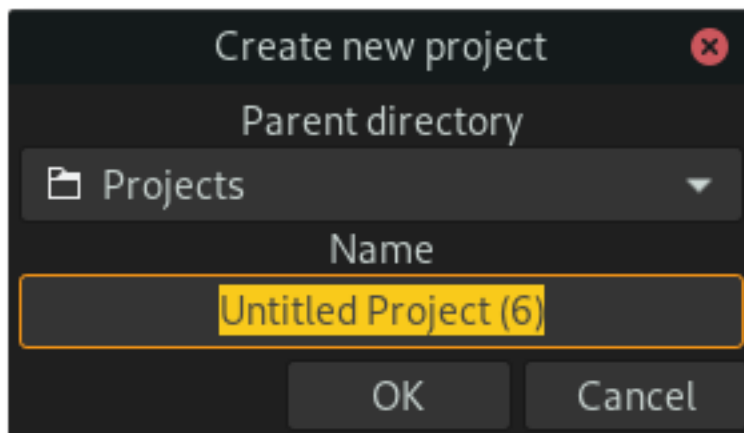
4.2.2 Creating Projects

In the menu above, if you select Create new project, Zrythm will ask you for a template to use for creating the new Project.



Truco: A blank template is available, but you can create your own templates by copying a project folder to the `Templates` directory in the Zrythm installation path.

Once a template (or blank) is selected and you click Apply, Zrythm will ask you for a parent directory to save the Project in and a title for the Project.



Once you accept, the new Project will be set up and you will be ready to go.

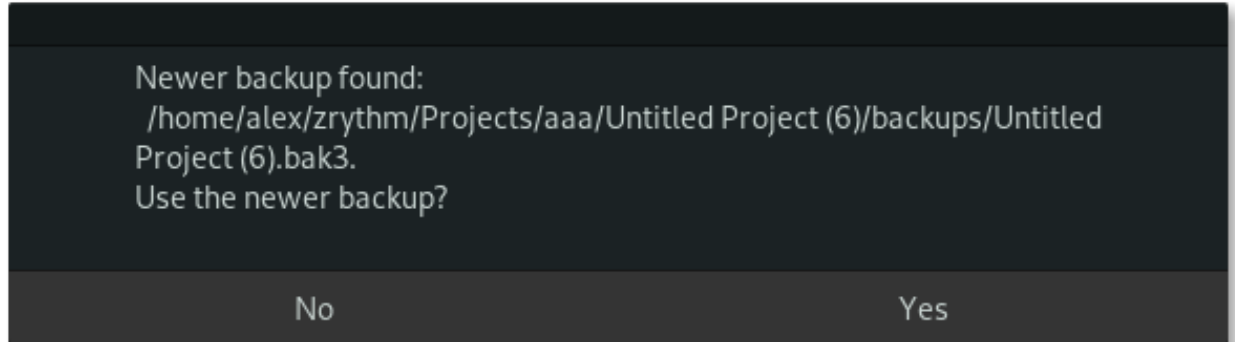
4.2.3 Saving Projects

Saving works as you would expect: Save As... will save the Project in a new location and Save will save the Project in the previous location.

Nota: When saving projects, Zrythm expects you to give it a directory

4.2.4 Automatic Backups

Zrythm has an option to auto-save the current project as a back-up. When launching Zrythm and selecting to load your project, Zrythm will let you know if there are newer back-ups of that project and ask you if you want to load them instead.



The auto-save interval can be changed (or disabled) in the preferences window.

Truco: The backups are saved in the project's directory, under `backups`

4.3 Project Management and Compatibility

For at least the time being, Zrythm follows a rolling release model and project file structure is subject to change at each new release. No compatibility will be maintained between version changes in order to give more time to feature development and fixes.

It may be possible to open projects from previous versions if there was no change in the project file structure, but this is not guaranteed, so if you would like to open a project made using a previous version please install that version of Zrythm.

Consejo: Each project file will contain the version of Zrythm it was made with and a date

5.1 Overview

Zrythm allows you to drag-n-drop LV2 plugins and various files from the browsers on the right panel. This section will explain the various supported plugin and file types and their browsers.

5.2 Plugins

5.2.1 Plugin Types

There are three types of Plugins in Zrythm.

Instruments Instruments are Plugins that are used to generate sound, such as synths or pianos.

Effects Effects are Plugins that change the audio signal passed to them. Examples are Reverb, Chorus and Flanger.

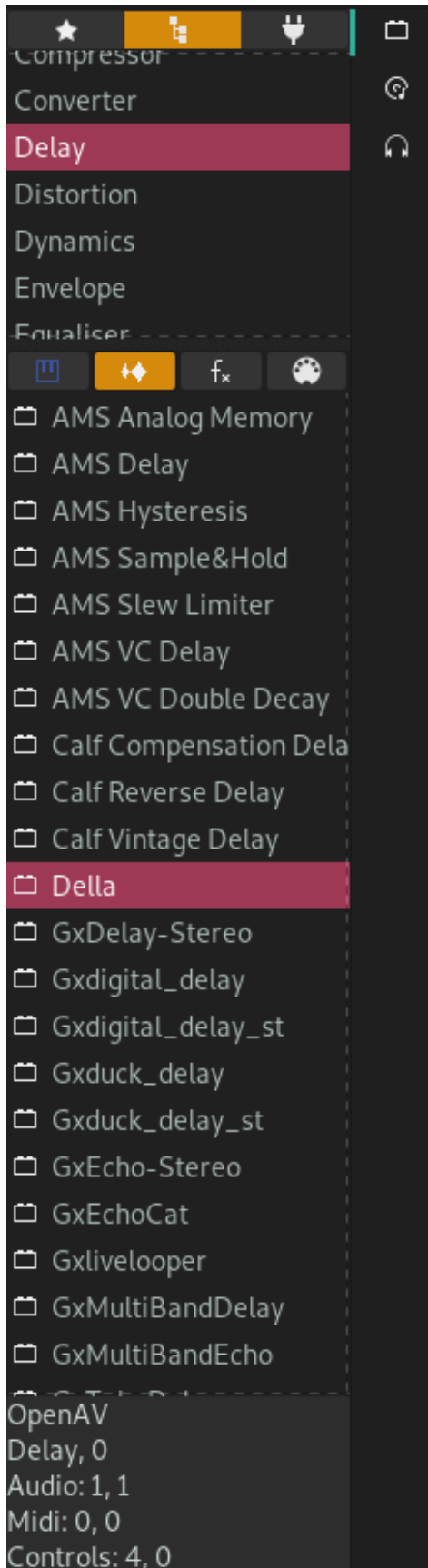
Modulators Modulators are used to modulate the parameters of other Plugins. These include LFOs and envelopes.

Supported Formats

Zrythm supports LV2 Plugins at the moment.

5.2.2 Plugin Browser

The Plugin Browser makes it easy to browse and filter Plugins installed on your computer.



Filters Tab

The filters tab at the top allows you to select how to filter the Plugins. There are 3 tabs:

Collection This tab contains your collections. You can create collections such as «MySynths» and filter by the selected collections.

Category Filter Plugins by category based on the plugin metadata, such as «Delay», «Distortion», etc.

Protocol Allows you to filter plugins based their protocol (LV2 or VST). Not operational at the moment.

Filter Buttons

Additionally to the above, you can filter plugins based on their type. The following types exist:

Instrument These plugins will create an instrument track when added to the project.

Effects These plugins can be dragged into the insert slots of existing channels in the mixer or can be instantiated to create new bus tracks.

Modulators These plugins output CV signals and can be used to modulate other plugin or track parameters.

MIDI Effects These plugins modify incoming MIDI signals and can be used in the MIDI signal chain of an Instrument or MIDI track (coming soon).

Instantiating Plugins

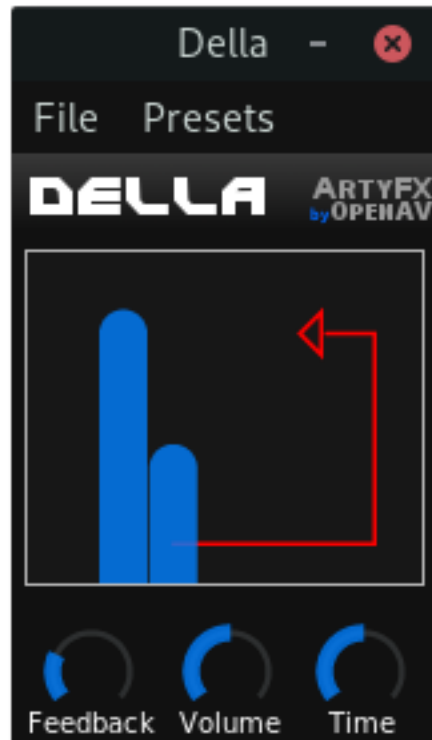
There are a couple of ways to instantiate plugins:

Drag-n-Drop Drag and drop the selected plugin into empty space in the Tracklist or into empty space in the Mixer to create a new track using that plugin. If the plugin is a modulator, you can drop it into the Modulators Tab.

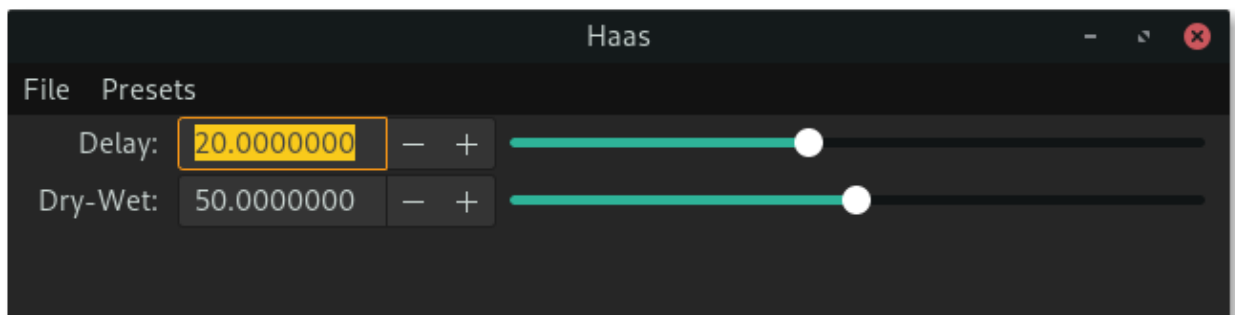
Double Click/Enter Double click on the plugin or select it and press the return key on your keyboard to create a new track using that plugin.

5.2.3 Plugin Window

When Plugin UIs are opened, a window such as the following will be displayed, if the plugin ships with its own UI.

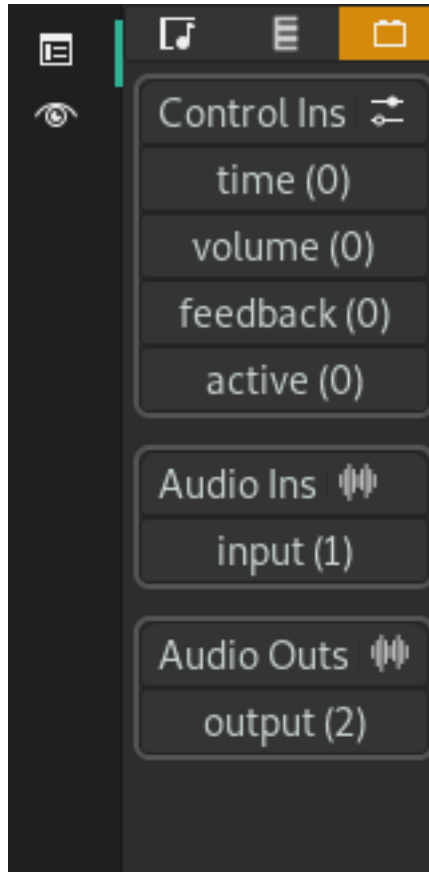


If the plugin does not ship with its own UI, the following generic UI will be generated for it.



5.2.4 Inspector Page

When a Plugin is selected in the Mixer, its page will appear in the Inspector as follows.



This page will display information about the Plugin and allow you to route inputs and outputs to each port of the Plugin, for example to route an LFO output to a Filter Plugin's filter cutoff parameter.

5.2.5 Ports

Plugins expose Ports that are used internally to route MIDI and audio signals to/from and externally for automation.

A Port can only be an Input Port or an Output Port and can have one of the following types.

Audio Ports of this type receive or send raw audio signals. Usually, Effect Plugins will have at least two of these as inputs for Left and Right, and at least two as outputs.

Event Event Ports are mainly used for routing MIDI signals. Instrument Plugins will have at least one Event Port.

Control Control Ports are Plugin parameters that are usually shown inside the Plugin's UI. These can be automated in automation lanes.

CV CV Ports are continuous signals that can be fed into or emitted from Plugins, and are mainly used by the Modulators. Each Modulator will have at least one CV output Port which can be routed to Plugin Control Ports for automation.

Usually, only Ports of the same type can be connected, with the exception of CV ports. CV output Ports may be routed to both CV input Ports and Control input Ports.

Output Ports may only be routed to Input Ports and vice versa.

Nota: Channels also have their own Ports, for example for the Fader, Pan, and Enabled (On/Off).

5.3 Audio & MIDI Files

5.3.1 Overview

Zrythm can import MIDI and audio files into the project. The files can be imported by dragging and dropping from your computer or from the File Browser into a track.

Supported Audio Formats

Zrythm supports OGG, FLAC, WAV and MP3.

5.3.2 File Browser

The File Browser makes it easy to navigate through files on your computer or through your custom collections.

Filtering

TODO

Collections

TODO

Importing Files

Files are imported by either double clicking them in the browser or dragging and dropping them into a track.

6.1 Overview

Tracks are the main building blocks of projects. Tracks appear in the Tracklists (one pinned at the top and one non-pinned) and contain various information such as regions and automation points.

Most types of Tracks have a Channel that appears in the mixer. Each Track has its own page in the Inspector section, which is shown when selecting a Track.

There are various kinds of Tracks suited for different purposes, explained in the following sections.

6.2 Track Types

Zrythm has the following types of Tracks, and they are explained further in their own sections.

MIDI Track A Track that contains regions holding MIDI notes. It also has automation lanes for automating its components.

Input: MIDI, Output: MIDI

Can record: Yes

Instrument Track Similar to a MIDI track, except that an Instrument Track is bound to an instrument plugin.

Input: MIDI, Output: Audio

Can record: Yes

Audio Track A Track containing audio regions, cross-fades, fades and automation.

Input: Audio, Output: Audio

Can record: Yes

Bus Track (Audio) A Track corresponding to a mixer bus. Bus tracks only contain automation

Input: Audio, Output: Audio

Can record: No

Bus Track (MIDI) Similar to an audio Bus Track, except that it handles MIDI instead of audio.

Input: MIDI, Output: MIDI

Can record: No

Group Track (Audio) A Group Track is used to route signals from multiple Tracks into one Track (or «group» them). It behaves like a Bus Track with the exception that other Tracks can route their output signal directly into Group Track. *Input: Audio, Output: Audio*

Can record: No

Group Track (MIDI) Similar to an audio Group Track, except that it handles MIDI instead of audio.

Input: MIDI, Output: MIDI

Can record: No

Master Track The Master track is a special type of Bus Track that controls the master fader and contains additional automation options.

Input: Audio, Output: Audio

Can record: No

Chord Track A Chord Track is a special kind of Track that contains chords and scales and is a great tool for assisting with chord progressions.

Input: MIDI, Output: MIDI

Can record: No

Marker Track A Marker Track is a special kind of Track that contains song markers - either custom or pre-defined ones like the song start and end markers.

Input: None, Output: None

Can record: No

6.3 MIDI Track

A MIDI track contains MIDI regions and its purpose is for routing MIDI signals to other instruments (including external instruments and hardware).

6.3.1 Inputs

6.4 Instrument Track

The Instrument Track is used for synths and other instruments. The first plugin in the strip of the Instrument Track's channel must be an instrument plugin. This is done automatically when Instrument Tracks are created from instrument plugins.

6.4.1 Track View

TODO

6.5 Audio Track

An Audio Track contains audio regions and can be used for recording and playing audio, or for sample playback.

6.5.1 Inputs

6.6 Bus Track (MIDI)

6.7 Bus Track (Audio)

6.8 Group Track (MIDI)

6.9 Group Track (Audio)

6.10 Master Track

6.11 Chord Track

The Chord Track contains chord and scale objects that are used to specify when the song is using a particular chord or scale.

For more information, see the section *Chords and Scales*.

6.12 Marker Track

6.13 Creating Tracks

6.13.1 Blank Tracks

To add an empty track, right click on empty space in the Tracklist and select the type of track you want to add.

6.13.2 Creating Tracks From Plugins

Plugins can be clicked and dragged from the Plugin Browser and dropped into empty space in the Tracklist or Mixer to instantiate them. If the plugin is an Instrument plugin, an Instrument Track will be created. If the plugin is an effect, a Bus Track will be created.

6.13.3 Creating Audio Tracks From Audio Files

Likewise, to create an Audio Track from an audio file (WAV, FLAC, etc.), you can drag an audio file from the File Browser into empty space in the Tracklist or Mixer. This will create an Audio Track containing a single Audio Clip at the current Playhead position.

6.13.4 Creating Tracks by Duplicating

Most Tracks can be duplicated by right clicking inside the Track and selecting Duplicate.

6.14 Track Operations

6.14.1 Moving Tracks

Tracks can be moved by clicking and dragging inside empty space in the Track, and dropping it at another location. The drop locations will be highlighted as you move the Track.

6.14.2 Deleting Tracks

Tracks can be deleted by right-clicking them and selecting Delete.

Truco: All Track operations are undoable.

6.15 Track Context Menu

TODO

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Chords and Scales

TODO

8.1 Overview

Editing refers to any work done in the arrangers: the Timeline and the Piano Roll.

The Timeline is the arranger shown in the top part of the screen by default, and the Piano Roll is brought up by clicking on the Editor tab on the bottom of the screen or by double-clicking a region.

8.2 Common Operations

8.2.1 Tools

Toolbox

The Toolbox contains the following Tools that are used to trigger modes for specific operations.

Selection Tool The Selection Tool is the smartest Tool and while its main functionality is to select and move objects, it can also create or edit objects in various ways.

Edit Tool Also known as the Pencil Tool, this Tool is used to create objects by single-clicking and dragging. In the drum view of the Piano Roll, it can be used to quickly generate multiple hits.

Erase Tool The Erase Tool is used to delete all objects that are selected by it.

Each tool can be selected by simply pressing its corresponding button from 1 to 5 on the keyboard. Each Mode triggered by each tool is further described below.

Select Mode

To select objects in Select Mode, click and drag to create a selection rectangle.

To create objects in Select Mode, double click and drag within a track or lane.

To move selected objects, click on one of them and hold while moving your cursor. If the object is not selected, it will become selected.

To copy-move (duplicate and move) objects, click and drag like when moving, while holding the Ctrl button on the keyboard.

To split/cut objects in parts, hold Ctrl while clicking somewhere inside the object to cut at that position.

Edit Mode

TODO

8.2.2 Quantization

TODO

8.2.3 Snapping and Grid Options

TODO

8.2.4 Operations on the Current Selection

Looping

Clicking the Loop Selection button or pressing Ctrl + L will place the loop points around the currently selected objects.

8.2.5 Other Operations

Zrythm also has the usual undo/redo/copy/paste functionalities which are found in the Home view of the main toolbar at the top of Zrythm. They can be triggered using shortcuts as well as through context menus and behave as you would expect.

8.3 Timeline Editing

8.3.1 Overview

TODO

8.3.2 Selection Info Bar

8.3.3 Toolbar

TODO

8.3.4 Ruler

TODO

8.3.5 Arranger

TODO

8.4 Piano Roll Editing

8.4.1 Overview

TODO

8.4.2 Selection Info Bar

8.4.3 Toolbar

TODO

8.4.4 Ruler

TODO

8.4.5 Arranger

TODO

8.4.6 Highlighting

Zrythm can highlight notes in the Piano Roll based on the current Chord or Scale.

TODO

8.4.7 Drum View

The Piano Roll can be switched to Drum View which is suitable for editing drums.

TODO

9.1 Channels

9.1.1 Channel Overview

9.1.2 Plugin Strip

9.1.3 Controls

9.1.4 Fader

9.1.5 Meters

9.2 Meters

Meters display the current RMS peaks at the end of the channel's processing.

9.3 Routing

9.3.1 Routing Overview

9.3.2 Ports

9.3.3 Buses

9.3.4 Insert Effects

9.3.5 Send Effects

9.4 Groups

9.5 Sidechaining

9.6 Panning

Channels can be panned Left to Right by dragging the Pan slider. Zrythm supports Linear Pan, Square Root Pan and Sine Law Pan, with a Pan Law of -6dB, -3dB, or 0dB.

These settings are configurable through the Preferences window. The default is Sine Law with -3dB. If you don't understand what these mean, it's best to leave them to their default values.

10.1 Overview

Here is a list of terms and definitions that will be useful in the following sections.

10.1.1 Playhead

The Playhead is the current position in the song.

10.1.2 Position

Zrythm uses the following format for positions:

```
bar.beat.sixteenth-note.tick
```

Each sixteenth note is fixed to have 240 ticks.

10.2 BPM and Time Signatures

10.2.1 BPM

The BPM can be set to between 40 and 360 by clicking and dragging the BPM widget. Clicking and dragging on the integer counterpart will change the integer (e.g., from 140.24 to 141.24) and clicking and dragging on the decimal counterpart will change the decimal value (e.g., from 140.24 to 140.25).

10.2.2 Time Signature

The Time Signature is split into the following

Beats per Bar This is the top number that indicates the number of Beats that should be in a Bar. It can be set from 1 to 16.

Beat Unit This is the bottom number that indicates the beat unit to be used. It can be set to 2, 4, 8 or 16.

10.3 Transport Controls

Playback is mainly controlled by the following Transport Controls, found in the main toolbar.

Record Arms the project for recording.

Play If stopped, the song will start playing. If already playing, the Playhead will move to the Cue point.

Stop Pauses playback. If clicked twice, goes back to the Cue point.

Backward Moves the Playhead backward by the size of 1 snap point.

Forward Moves the Playhead forward by the size of 1 snap point.

Loop If enabled, the Playhead will move back to the Loop Start point when it reaches the Loop End point.

10.3.1 Metronome

TODO

10.4 Loop Points and Markers

10.4.1 Loop Points

TODO

10.4.2 Cue Point

The Cue Point is where the Playhead will move to when Play is clicked while playing or when Stop is clicked while paused.

10.4.3 Song Start Marker

The Song Start marker signifies the position in the Timeline where the Song will start. This is mainly used for exporting the mixdown into audio.

10.4.4 Song End Marker

The Song End marker signifies the position in the Timeline where the Song will end. Likewise, it is mainly used for exporting the mixdown into audio.

10.4.5 Custom Markers

Custom Markers can be specified in the Marker Track. TODO

10.5 Arming for Recording

TODO

10.6 Recording MIDI

TODO

10.7 Recording Audio

TODO

10.8 Recording Automation

TODO

11.1 Automation Lanes

Tracks which have automatable controls, such as Fader, Pan and parameters of Plugins they contain will have an option to show their Automation Lanes.

You can choose which parameter you want to automate in each Automation Lane.

11.1.1 Types of Automatable Parameters

Zrythm will draw the automation differently depending on the type of the parameter being automated. The following types of parameters exist.

Float Parameters with a Float type can have a value of any decimal within their given range and are the most common ones. Zrythm will draw editable curves for these types of parameters.

Step Step parameters have values that can only be changed in increments. Zrythm will draw ladders for these types of parameters.

Boolean These types of parameters only have two values: On or Off. Zrythm will draw a big square for these.

11.1.2 Automation Points

TODO

11.1.3 Editing Curves

TODO

12.1 Modulators Tab

Zrythm has a Modulators tab in the bottom panel that can hold any number of Modulators. Modulators are associated with Tracks, so each Track will have its own list of Modulators.

12.2 Adding Modulators

Modulators are Plugins that have at least one CV output port.

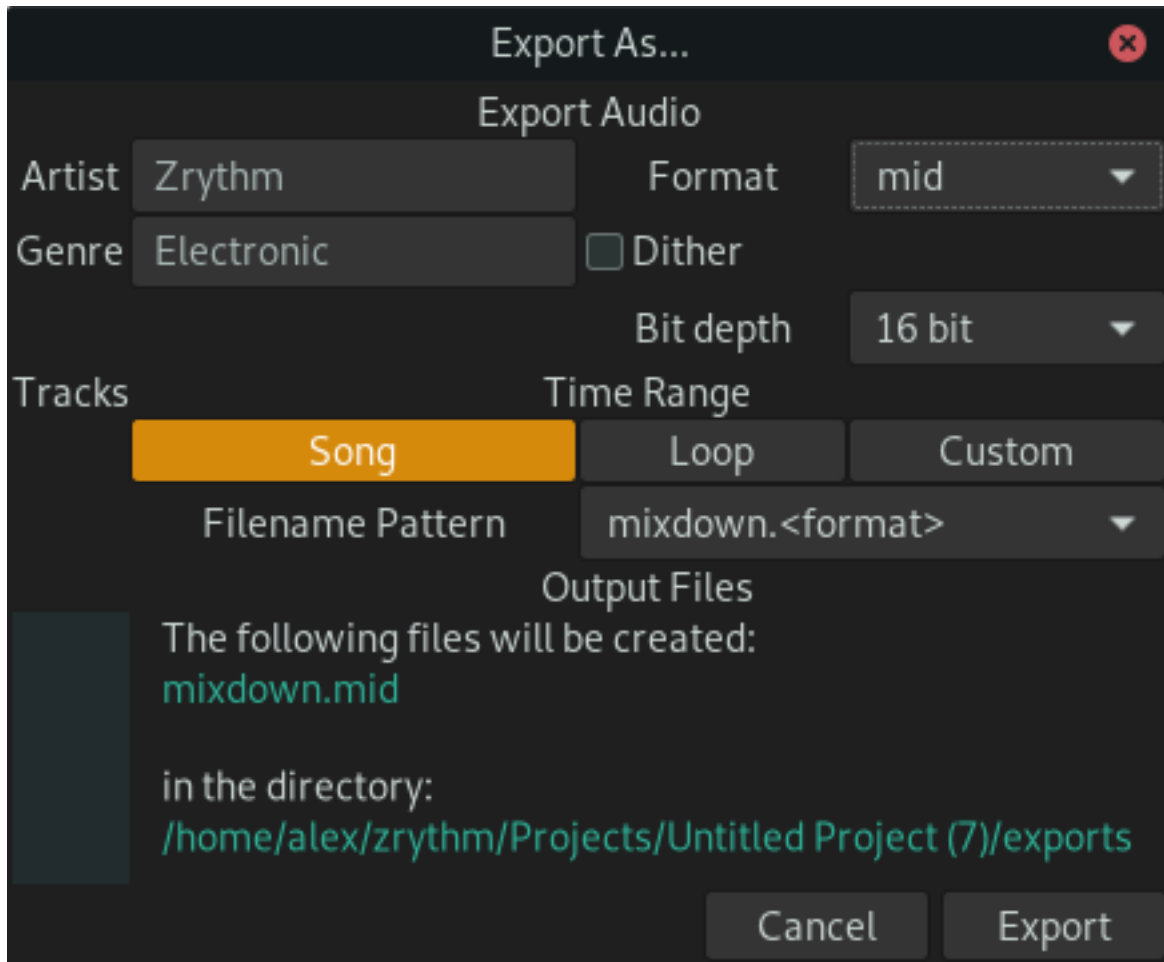
TODO

12.3 Routing Modulators

TODO

13.1 Overview

The Export dialog below is used to export the project or part of the project into audio or MIDI files.



13.1.1 Fields

Artist and Genre

These will be included as metadata to the exported file if the format supports it. The title used will be the project title.

Format

The format to export to. Currently, the following formats are supported

- FLAC - .FLAC
- OGG (Vorbis) - .ogg
- WAV - .wav
- MP3 - .mp3
- MIDI - .mid

Dither

TODO

Bit Depth

This is the bit depth that will be used when exporting audio. The higher the bit depth the larger the file will be, but it will have better quality.

Time Range

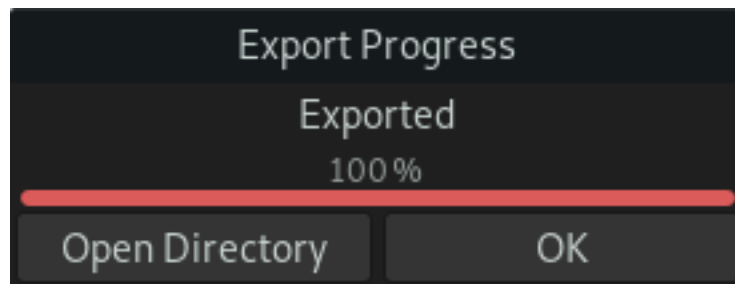
The time range to export. You can choose to export the whole song (defined by the start/end markers), the current loop range or a custom time range.

Filename Pattern

The pattern to use as the name of the file.

13.1.2 Open Exported Directory

Once export is completed, a dialog will appear with an option to open the directory the file was saved in using your default file browser program.



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Publishing

TODO funkwhale

15.1 Writing Code

Please see the [Contribution Guide](#) and check out the [Developer Docs](#).

15.2 Designing

If you want to help improve the appearance Zrythm itself and its website, forum, manual, etc., please come join the [chat](#).

Zrythm itself is fully CSS-themable, and the overall UI structure can easily be edited in Glade without touching any code.

15.3 Testing

You can fetch the latest master branch from <https://git.zrythm.org/cgit/zrythm/snapshot/zrythm-master.tar.gz> and start testing the latest features. You can report any bugs, ideas and impressions by creating an issue on [Savannah](#).

If you are on Arch Linux or derivatives such as Parabola, the latest master branch can be installed via the `zrythm-git` package in AUR.

See the `README.md` file in the distribution for installation instructions.

15.4 Translating

Zrythm is available for translation at Hosted Weblate. Visit the [Zrythm project page](#) to start translating.

The Zrythm translation project contains the following components:

Zrythm The actual Zrythm program

website The Zrythm website (<https://www.zrythm.org>)

Manual - * Sections of this manual

Click on the project you wish to work on, and then select a language in the screen that follows. For more information on using Weblate, please see the [official documentation](#) of Weblate.

15.5 Editing Documentation

This documentation can be edited via <https://git.zrythm.org/zrythm/zrythm-docs>

15.6 Donating

Donations are vital to keep the project running smoothly. If you can afford to do so please consider becoming a patron or supporting us below.

PayPal PayPal recurring or non-recurring donation.

Liberapay LiberaPay is a recurring donations platform for funding developers and creators, ran by a French non-profit.

Bitcoin Anonymous cryptocurrency donation. Please use: bc1qjfyu2ruyfwv3r6u4hf2nvdh900djep2dlk746j

16.1 Translators

French

- Nicolas Faure
- Olivier Humbert

German

- Silvério Santos
- Wauï

Norwegian Bokmal

- Allan Nordhøy

Polish

- WaldiS

Portuguese

- Silvério Santos

Italian

- Swann Martinet

17.1 Shortcut Keys

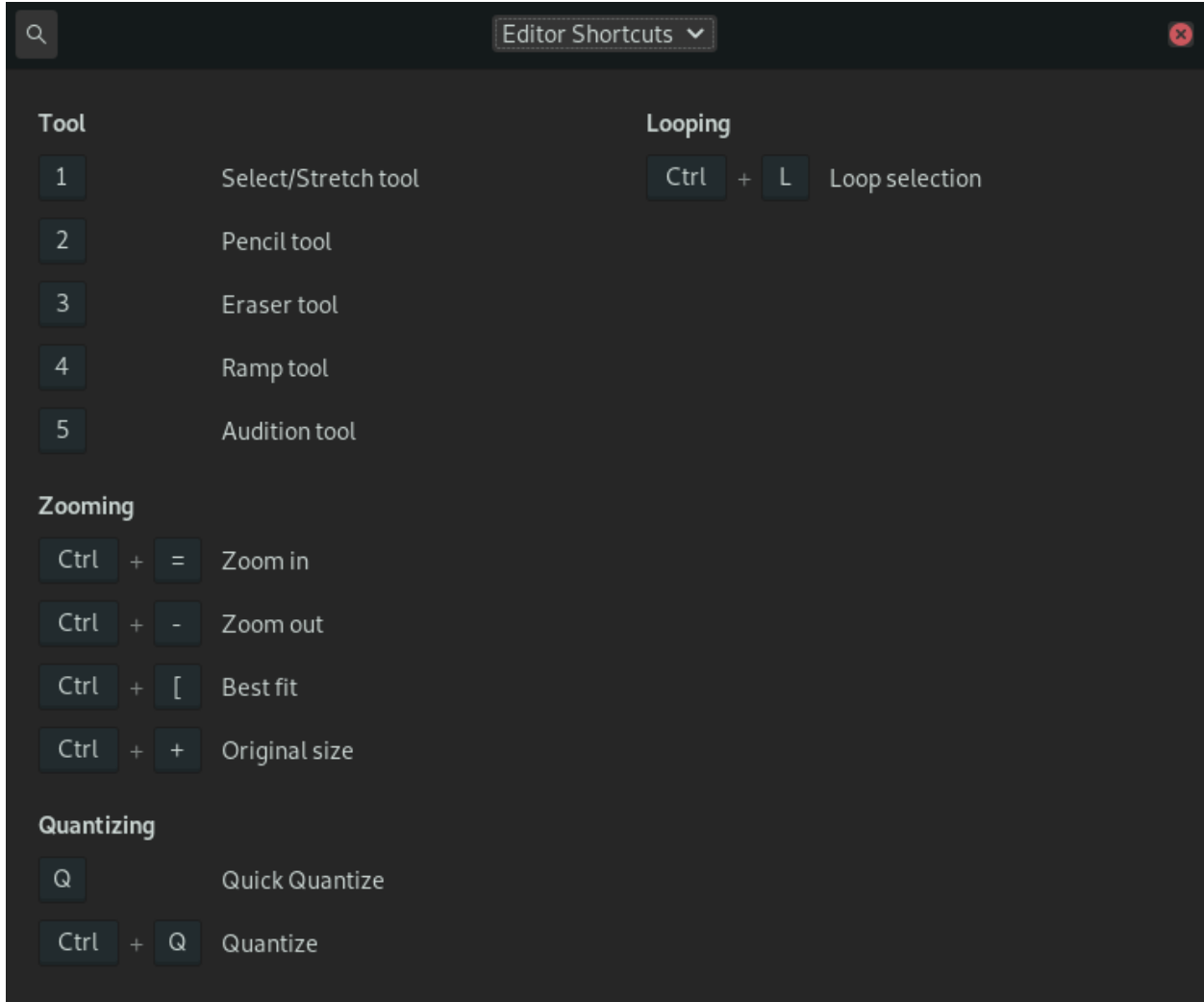
17.1.1 Global Shortcuts



The screenshot shows the 'Global Shortcuts' dialog box in Zrythm. The dialog has a search bar at the top left and a title bar with a search icon, a dropdown menu set to 'Global Shortcuts', and a close button. The shortcuts are organized into several categories:

- General**
 - Shift + Ctrl + P: Preferences
 - Shift + Ctrl + ?: Keyboard Shortcuts
 - F11: Toggle Fullscreen
 - Alt + F4: Quit
- Panels**
 - Shift + Ctrl + 4: Toggle left panel
 - Shift + Ctrl + 6: Toggle right panel
 - Shift + Ctrl + 2: Toggle bottom panel
- Project**
 - Ctrl + N: Create new project
 - Ctrl + O: Open a project
 - Ctrl + S: Save the project
- Copy and Paste**
 - Ctrl + C: Copy selection to clipboard
 - Ctrl + X: Cut selection to clipboard
 - Ctrl + V: Paste from clipboard
- Undo and Redo**
 - Ctrl + Z: Undo previous command
 - Shift + Ctrl + Z: Redo previous command
- Selections**
 - Ctrl + A: Select all
 - Ctrl + Backslash: Unselect all

17.1.2 Editor Shortcuts



17.2 Menu Actions

17.3 Files and Directories

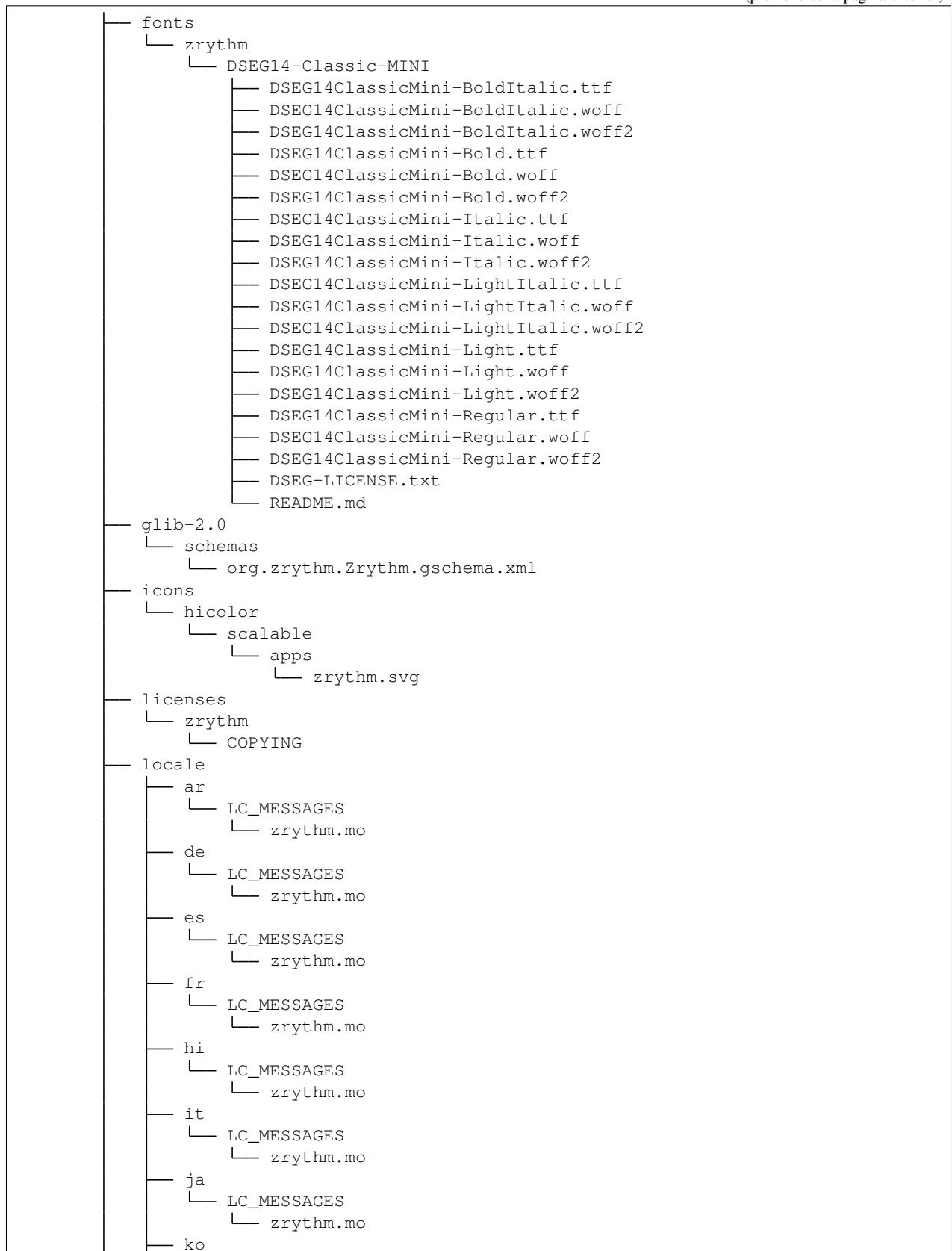
17.3.1 Installed Files

When Zrythm is installed, it installs the following files by default:

```

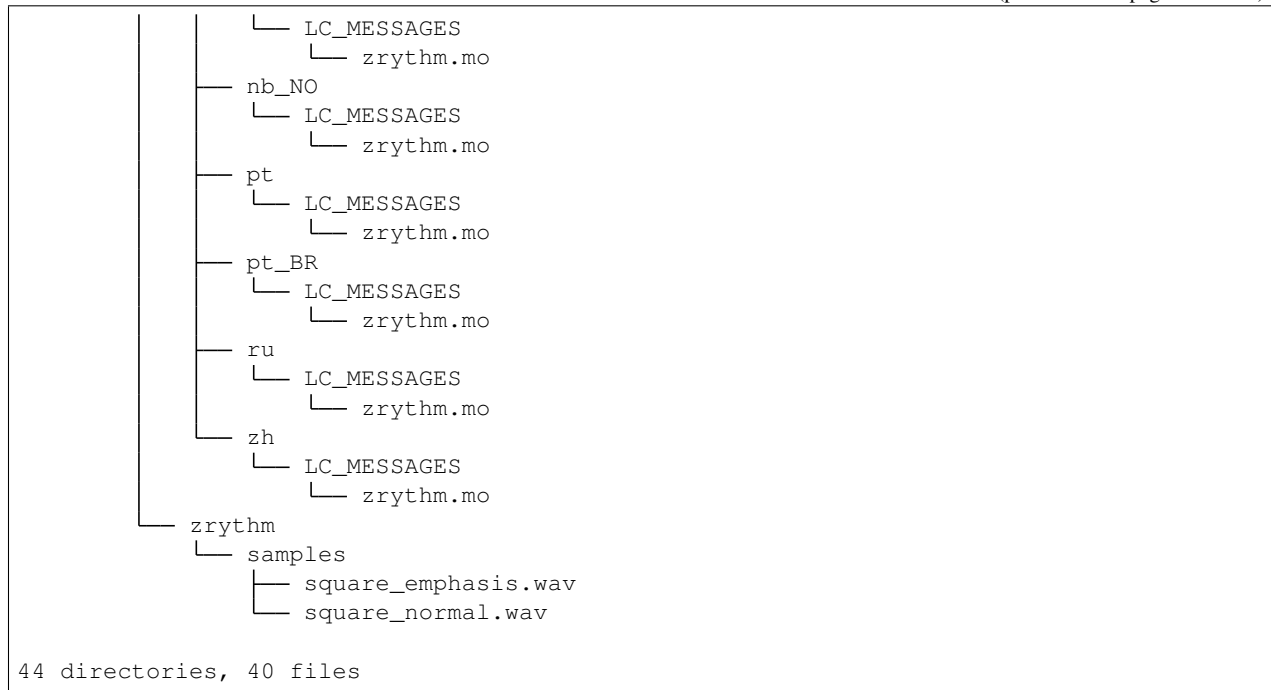
/
├── usr
│   ├── bin
│   │   └── zrythm
│   └── share
│       ├── applications
│       │   └── zrythm.desktop
  
```

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17.3.2 Project Files

When Zrythm is launched for the first time, it will also ask you to select a folder for saving your projects and other project-related files.

By default, this will be `~/zrythm`

17.4 Troubleshooting

TODO

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