

CABAL 8

PRODUCT MANUAL



Content

Introduction -----	3
Engine -----	3
Help -----	4
Overview -----	4
Interface -----	5
Main -----	6
Additional Main -----	10
Mixer -----	11
EQ Window -----	12
Options -----	14
Credits -----	17

Introduction

For one and a half years of continuous creation of this instrument, we have implemented many features that allow you to use the guitar flexibly as never before. CABAL 8 is convenient for writing extremely detailed MIDI parts, as well as for quick sketches in real-time.

CABAL 8 creates a clean DI guitar signal which you can re-amp/process with whatever plugins. Our guitar is suitable for work in various genres. Don't limit yourself with only hard music genres.

Our team developed the engine from scratch that allows you to use CABAL 8 with surprising simplicity, without having to study it in detail. However, to use all the features of the library to the full, we advise you to familiarize yourself with the information on how the instrument works.

Engine

CABAL 8 has a vast number of unique algorithms and a wide range of different options for flexible customization, which allows you to fine-tune how exactly the incoming MIDI messages will be processed. Many of these options will be reviewed in detail later.

In our engine, there are different possibilities, significantly accelerating the work and help you to get outstanding results. For example:

- Possibility to disable certain strings from the instrument. CABAL 8 will automatically reallocate the load to the remaining strings, if possible.
- Option to tune each of the strings. That allows you to customize the instrument to any desired guitar tuning.
- The unique algorithm of portamento slide. You can control all aspects of portamento: speed, starting and ending positions, what noises will be present.
- Possibility of accurate equalization. We can equalize the whole instrument or even a specific articulation of a separately selected string.
- Keyswitch Mode, in which you can flexibly adjust the string selection for each note.

- Possibility to configure articulations routing map, sending them to certain buses. For example, you can send two articulations on the same bus, and then apply the same processing in your DAW to both articulations.

Many other features that be discussed below.

After receiving a MIDI message, CABAL 8 performs a vast number of optimized algorithms in order to get the most realistic performance.

Help

On each tab of the CABAL 8 interface, there is an additional HELP reference. We can activate it by clicking on the button in the upper right corner (1).



Overview

CABAL 8 engine uses the following MIDI automations:

1. Modwheel (MIDI CC1) triggers vibrato and controls its frequency and amplitude.
2. Pitchbend controls portamento slide from one fret to another, which consists of the slide, scrape and fret noises. The slide is limited to 12 semitones. You can independently control the start position, end position, and speed of the slide. The slider on the Main tab controls the portamento range. The volume of all the noises can be adjusted on the Options tab.

Articulations list:

1. Sustain: Standard single note, picked up or down.
2. Palm Mute: Standard long played palm mute.
3. Short Palm Mute: Short unmuted palm mute.
4. Harmonics: Standard flageolets.
5. X-Note: Short muted notes.
6. FX Sustain: FX articulations play on 3 and 4 frets using 6, 7, and 8 strings.
7. FX Palm Mute.
8. Tapping: Guitar playing method. In CABAL 8, it is similar to hammer-on legato transitions and pull-off technique. Tapping can be activated with Sustain articulation when one note overlaps another.

Interface

All engine controls are divided into three tabs:

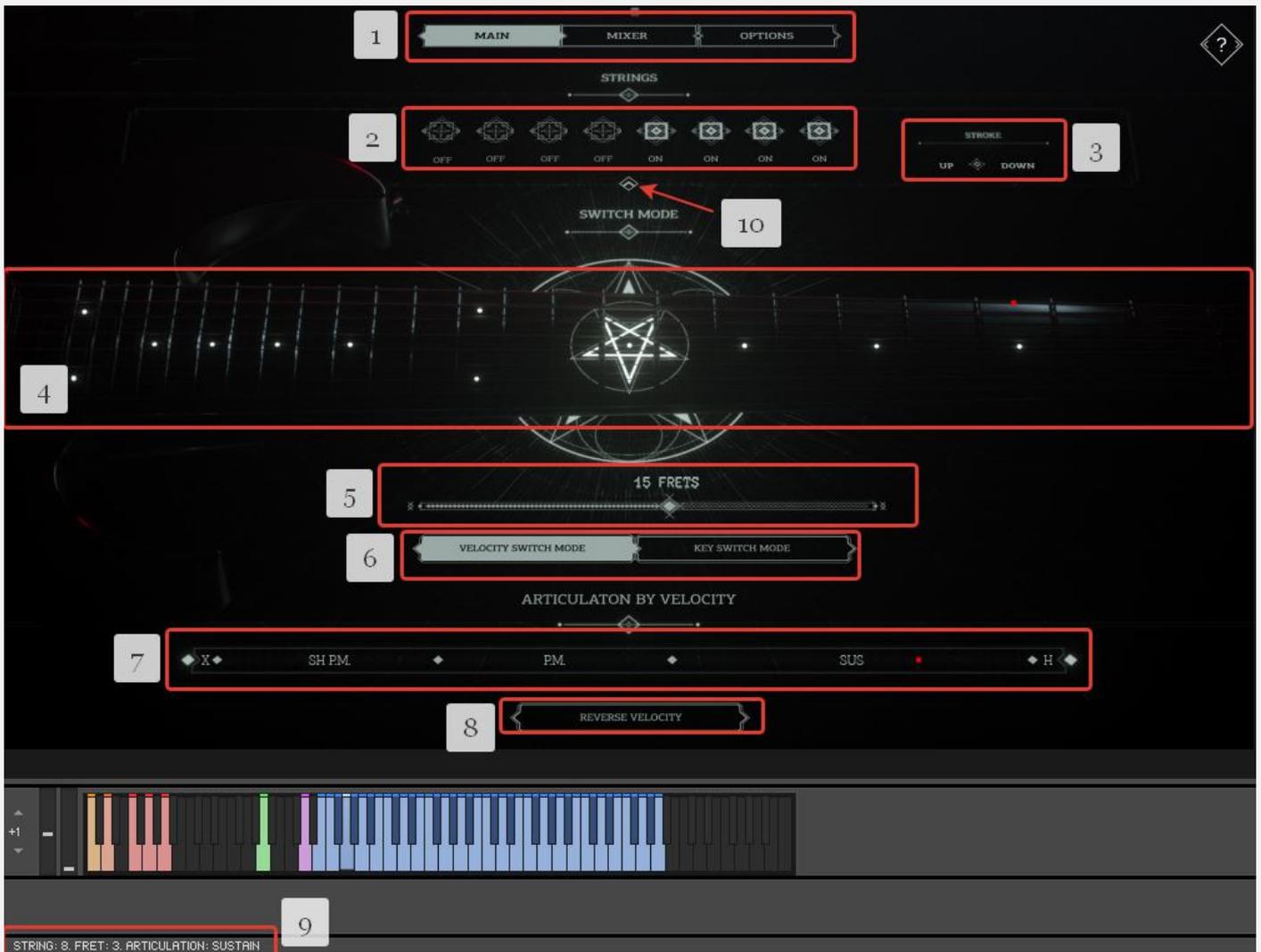
1. Main
2. Mixer
3. Options

The Main tab contains the main controls of CABAL8, which are most often used in work.

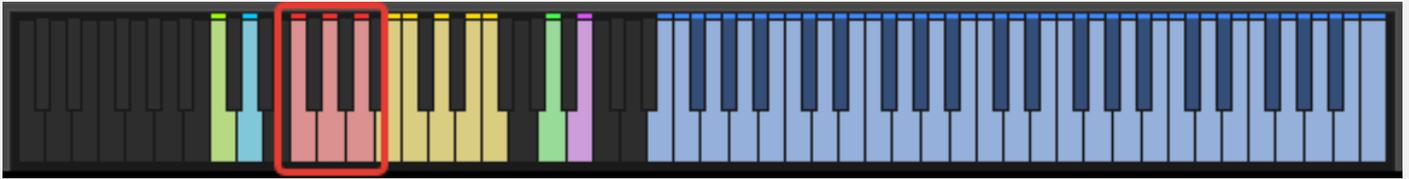
The Mixer tab contains controls for building the balance between strings and/or articulations. Also, you can save / load presets in this tab, set the instrument in default settings. From the Mixer tab, you can activate the equalization window by first selecting which strings and which articulations you are going to edit.

The Options tab contains additional options that will be detailed below.

Main



1. Buttons to navigate between the three primary tabs of the tool.
2. On/off strings. The order of the strings is from the first to the eighth. Pay attention, these controllers do not unload strings from memory. These options allow you to “remove the strings from the guitar”, after which CABAL 8 will shift all the work to the active strings, if possible.
3. Stroke mode. These controllers allow you to choose one of three stroke modes: down, up, down-up (up-down). Please note, these settings for convenience are duplicated by red keyswitches.



Left key – up. Right – down. Centered with velocity <61 is up-down. Centered with velocity >60 is down-up.

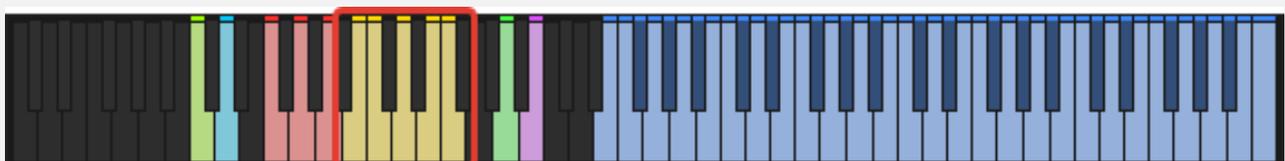
4. The fretboard. Shows what notes are being played on which strings and frets. Note that all text information about the note being played is located in the area (9): string, fret, articulation.
5. The type and number of controllers in this area varies depending on which mode is selected in (6).
 - a. If Velocity Switch Mode is selected, then we can work with slider, changing the maximum range of frets, which can be reached by the virtual player. If the fret of the note you are playing is greater than slider value, then CABAL 8 will, if possible, give preference to other strings that fall within the selected range.



- b. If the Key Switch Mode is selected, 5 buttons appear in the area (5), which is responsible for the currently active articulation.



Please note that in this mode these 5 buttons are duplicated by five keyswitches.

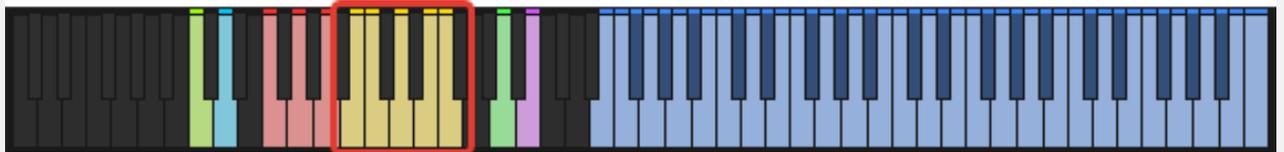


6. CABAL 8 can play in two modes: Velocity Switch Mode and Key Switch Mode.

a. In the first mode, the played string is selected automatically, from the highest (8) to the lowest (1). The articulation of the note being played is determined by velocity. Accepting a MIDI note, CABAL 8 finds the thickest enabled string on which to play it. If the found string does not fall into the selected Fret Range (5), then the slider goes down to the strings below. The engine is faced with the task of finding the next turned on string satisfying condition (5), which is not currently playing. We conceived Velocity Switch Mode for quick work with a guitar.

Let's give an example. Suppose you hit a note, and the slider determines that the thickest string on which it can play it is the seventh. Let fret be - 20. However, Fret Range is, for example, 19. Then CABAL 8 will go down to the sixth string. But, for example, it is disabled. Then the engine goes down to the fifth string. And, if this string is on and is not playing at the moment, then CABAL 8 uses it.

b. In Key Switch Mode you determine the string on which the note will be played with velocity. Articulation is selected using options (5) and/or five keyswitches.



7. In this area, you can control the separation of velocity into several regions. These areas are separated by boundaries that you can control. Important! The dynamics and volume of the notes are distributed from one border to another, as shown in the image below. The minimum volume is located at the left edge, the maximum - at the right.

a. In Velocity Switch Mod, articulation is controlled with velocity. To set all borders by default, click on any of them with the ALT or CTRL key held down.



b. In Key Switch Mod, velocity controls the string being played. When you turn on / off strings, the velocity region is

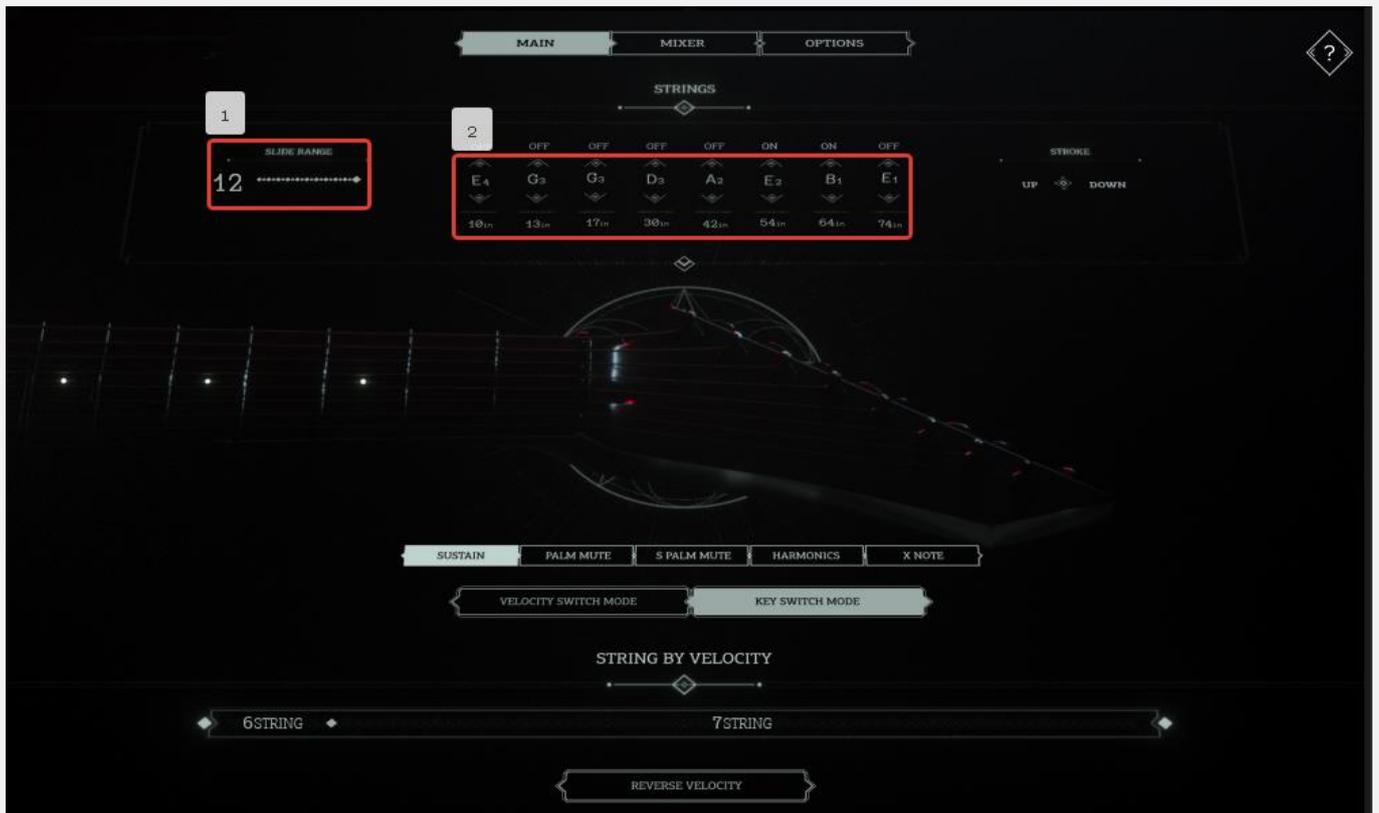
distributed between the enabled strings. In order to evenly distribute the velocity area between the boundaries, click on any of them with the ALT or CTRL key held down.



A situation may arise when the string you have selected cannot be played while being above/below the play range. Then, CABAL 8 begins to search for the closest string to the selected one, which is included in the play range of the played note.

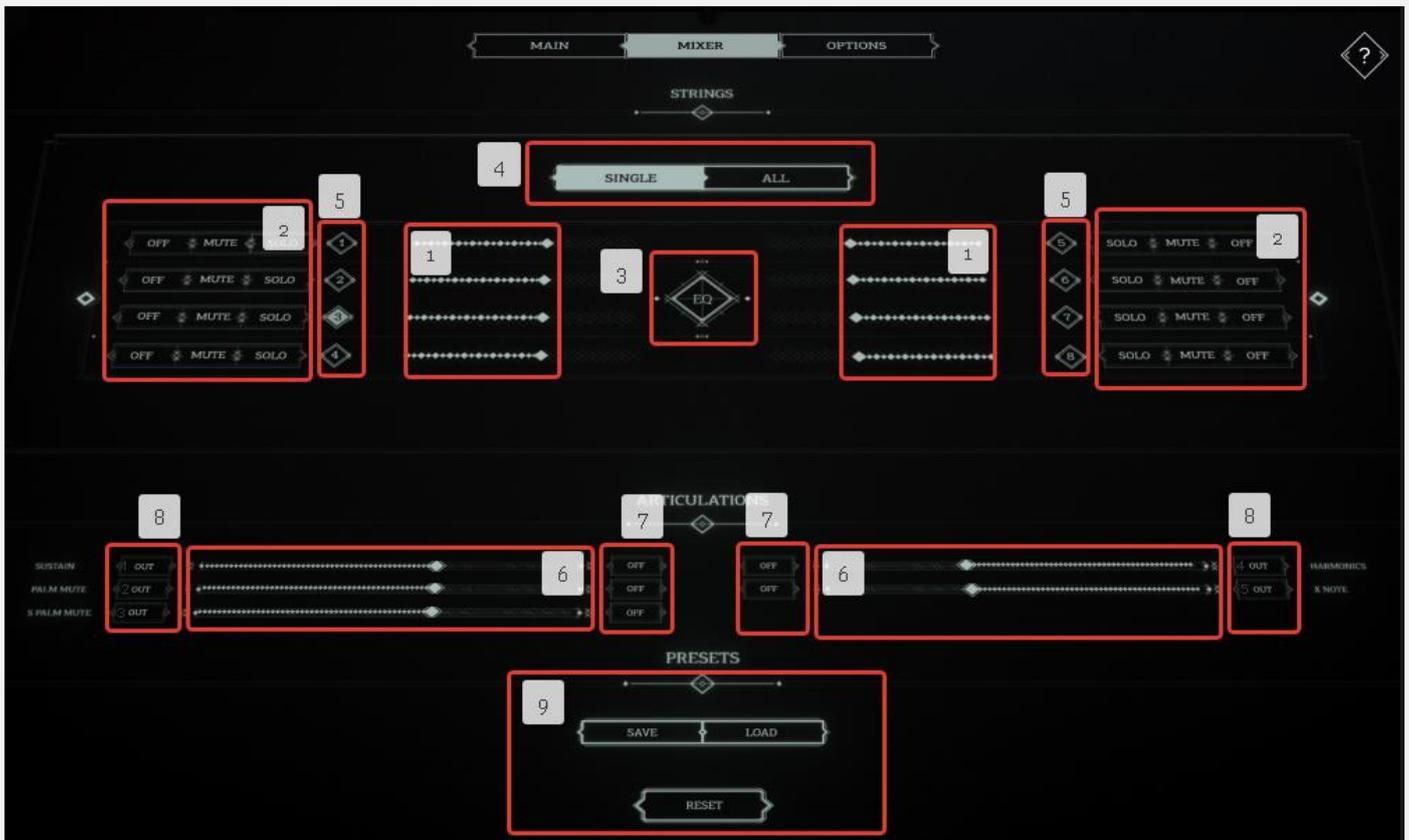
8. In this area, you can reverse the incoming velocity signal. By default, filling of the area (7) goes from left to right. If this button is active, the engine works exactly the opposite.
9. Kontakt Message Box. Sometimes this message box shows the important information from CABAL 8. For example, when you press a note, you can see the information about the string being played, fret, and articulation.
10. This small button allows you to go to the Additional Main tab.

Additional Main



1. Portamento slide range.
2. In this area, there are the controllers to tune each of the strings. It allows you to customize the guitar as you need. Under the tuner settings, controllers are showing the thickness of each of the strings in inches. In the future, the sets of new recorded strings will be added and the thickness of each of the strings can be changed.

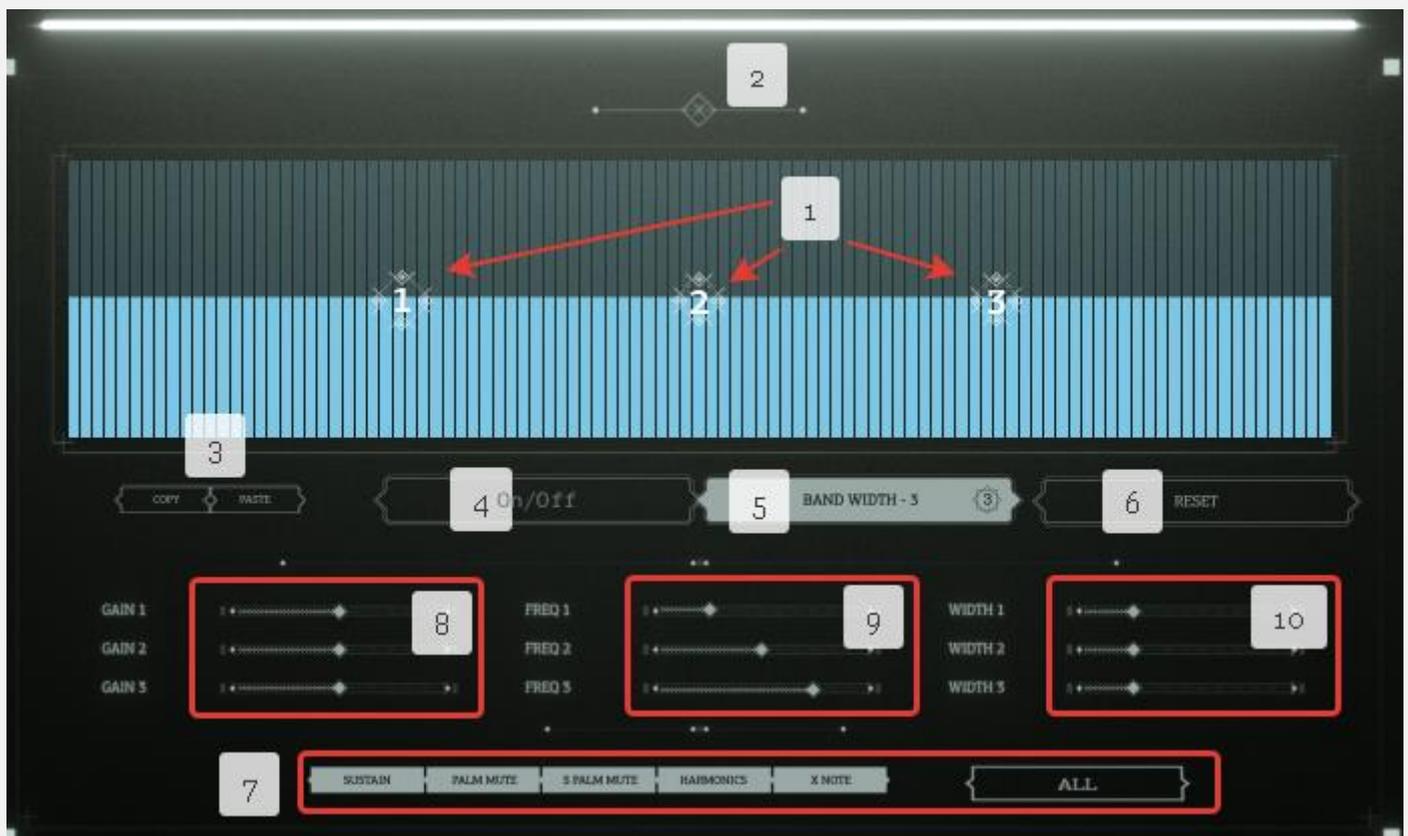
Mixer



1. In these areas, we can adjust the volume of the strings.
2. For each of the eight strings, three buttons allow to mute, solo and deactivate the string. Deactivating the string turns off the string from the instrument, unloading it from memory, and reducing the size occupied by the library. Note, you cannot enable the string on the main tab while it is deactivated.
3. Button to display the equalizer settings. If you press this button while holding the ALT key, the equalizer will be activated/deactivated, without opening its settings window. The window with the equalizer settings will be detailed below.
4. In CABAL 8, you can equalize both the entire instrument and specific articulations for the selected strings. Using the buttons (4) and (5) you can choose which of the strings should be equalized.

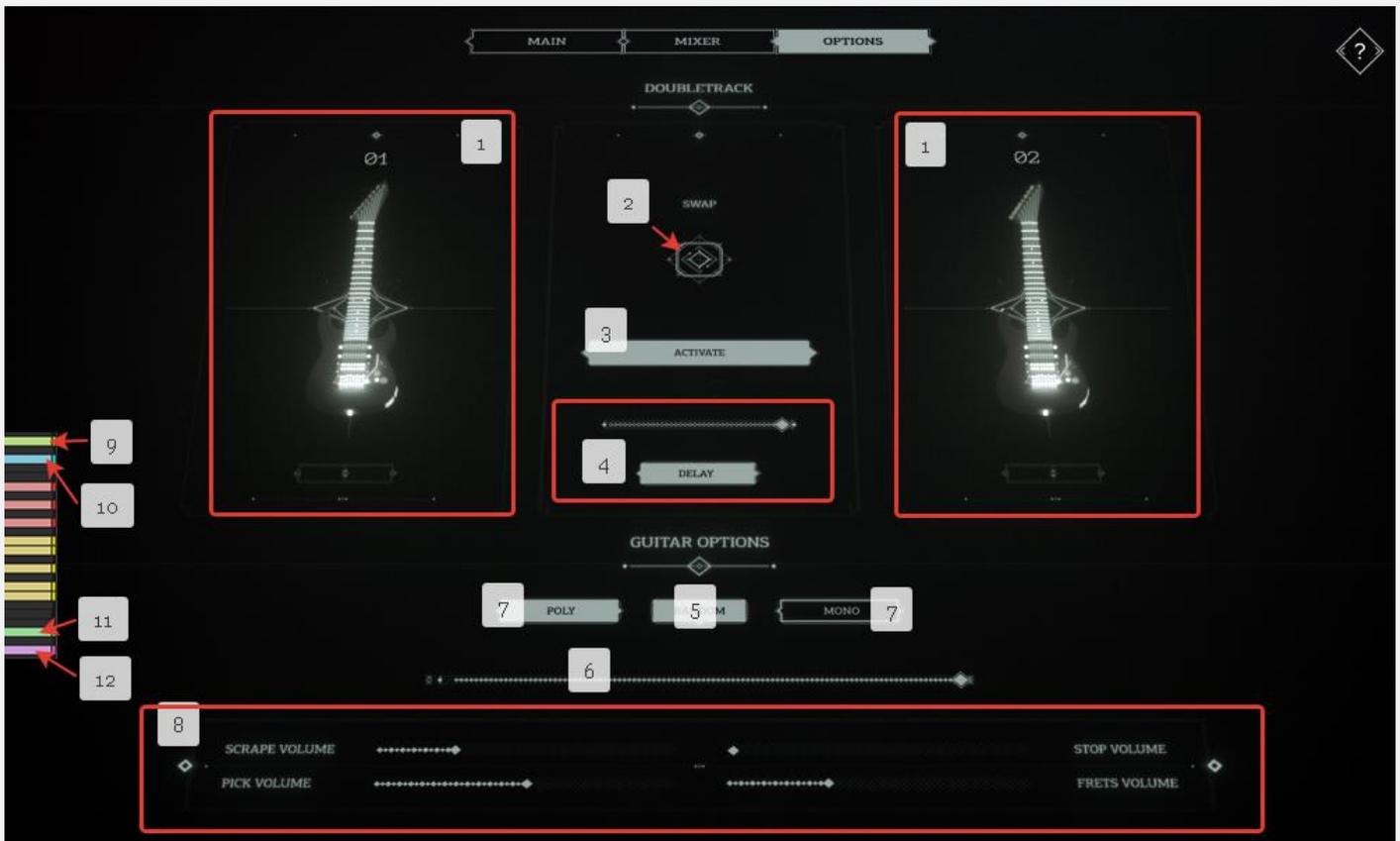
5. If the Single button is selected (4), then one specific string can be selected for equalization. Otherwise, all strings will be chosen.
6. With these sliders, you can adjust the volume of the articulations.
7. These buttons allow you to deactivate articulations, entirely unloading them from memory.
8. In these areas, you can configure the routing of the articulations, sending them to certain buses. For example, you can send two articulations on the same bus, and then apply the same processing in your DAW to both articulations.
9. Area for work with presets.

EQ Window



1. There are three bands maximum. These points are bands indicators controlling band gain, band frequency, and bandwidth. Use the ALT button to manage bandwidth.
2. This button (cross) closes the equalization window. Also, you can click outside the window to close it.
3. Copy / Paste of whole EQ settings.
4. You can activate/deactivate EQ using this button.
5. Choose how many bands you need from 1 to 3. Please note this function may require some amount of time.
6. Reset the equalizer to the default settings.
7. If the selection of strings for equalization occurs in the Mixer window, then the selection of articulations for equalization occurs in this area.
8. You can control bands gain using these sliders.
9. You can control bands freq using these sliders.
10. You can control bands width using these sliders.

Options



In CABAL 8 for modeling a doubletrack, the guitar was recorded entirely twice for two independent channels. If doubletrack is enabled, then both channels become active. One of them becomes left, the other – right. If doubletrack is turned off, then one channel remains active, which sounds strictly in the center.

1. If doubletrack is on, one of the channels sounds with a delay (4). If doubletrack is turned off, only one window remains active, showing which of the two guitars is currently active. You can click on the image of the guitar to completely turn it off from memory and the engine. After that, doubletrack will not be enabled. Turning off both guitars at the same time is impossible.

Tip: If you want to use two NKI instruments in your project at once to simulate doubletrack, it makes sense to use only one guitar in both NKI. The second guitar should be turned off (to save memory). And then you can use both NKIs for greater humanization and detailing of guitar parts.

Important note: in this case you cannot use the same guitar in both instruments! It is necessary to use both – 01 and 02. Otherwise, phasing will occur as different instruments may trigger the same sample in differing NKIs.

2. When doubletrack is on, this button allows you to swap guitars. When doubletrack is off, this button changes the active guitar, making the other one inactive.
3. Button turning doubletrack on/off.
4. In this area, there is a button for turning on/off the delay between the left and right channels. The slider allows you to set the amount of delay.
5. Enable / disable random function. If after pressing a note, this function has worked, then the channels are automatically swapped.
6. This slider allows you to control the degree of randomization. For example, if the value is set to 0, then the channels will never change places during the play. If the slider is set to 100, then the channels will change all the time with each touch of the note.
7. Poly allows using as many strings as possible at the same time. This option is ideal for riffs or any chordal playing. In mono mode, no more than one string can be active. Useful for any forms of fast monophonic solo leads.
8. The volume of all noise in the CABAL 8 is controlled in this area.
 - a. Scrape – the noise from the string, activated with portamento slide.
 - b. Pick – the volume of pre-pick modulation which activates before note playing.
 - c. Frets – the noise of a string hitting a fret on a guitar fretboard.
 - d. Stop – the noise after sustain note release.
9. Keyswitch, duplicating the buttons (7).

10. This keyswitch enables/disables Infinity Mode. In the interface, this function is not duplicated. When Infinity Mode is on, the release of the note does not work. Every note continues to play until the very end. Alternatively, until the same string retriggering. A handy feature when playing live.

Please, note! When Infinity Mode is on, the pitch works only when the note is pressed.

11. FX Keyswitch activates FX Sustain and FX Palm Mute articulations. Depends on velocity and works as follows:

VELOCITY VALUE	FX KEYSWITCH
0..9	FX Palm Mute. String: 6. Fret: 4.
10..19	FX Sustain. String: 6. Fret: 4.
20..29	FX Palm Mute. String: 6. Fret: 3.
30..39	FX Sustain. String: 6. Fret: 3.
40..49	FX Palm Mute. String: 7. Fret: 4.
50..59	FX Sustain. String: 7. Fret: 4.
60..69	FX Palm Mute. String: 7. Fret: 3.
70..79	FX Sustain. String: 7. Fret: 3.
80..89	FX Palm Mute. String: 8. Fret: 4.
90..99	FX Sustain. String: 8. Fret: 4.
100..109	FX Palm Mute. String: 8. Fret: 3.
110..127	FX Sustain. String: 8. Fret: 3.

12. Stop Keyswitch stops all played notes, imitating the muting of strings by player's hand.

Credits

Wavelet Audio, 2019

We want to express our gratitude to ALL musicians, beta-testers, demo-testers who worked on Cabal 8 and clients for the trust and support. Thanks a million!

Samples recording and processing: **Ksay Mentor**

Samles editing: **Ksay Mentor, Evgeny Emelyanov**

Scripting, engine developing: **Evgeny Emelyanov**

