

# **melodya**

**motive editor and melody generator**

## User Guide

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# Glossary

**Contour Transformations:** keep the same basic shape, but make the intervals between notes larger or smaller.

**DAW:** Digital Audio Workstation, the host application where VST and Audio Unit plugins are loaded.

**Inversion:** horizontal or vertical mirroring of notes. Play the motive upside down or right to left. The latter is also called 'retrograde'.

**Melody sections:** the basic building blocks of a melody. Sections are often repeated. A section in **melodya** contains a motive and a rhythm pattern (typically from the same motive or sometimes from another motive)

**Motive:** A motive is the smallest possible musical idea, no more than five or six notes at the most. A composer will use a motive to build larger structures by repeating, modifying and combining it with other motives. Motives are denoted as A, B, C, D, E, F, G and H.

# Introduction

**melodya** is an interactive motive editor and melody generator which is simple to use but at the same time it offers many detailed settings for deeper control. It not just creates new melodies but can mutate existing melodies in different ways. The generated melody can be freely edited.

**melodya** differs from other similar applications not just in the detailed melody and rhythm options, the many melodic and rhythmic transformations offered but also in the way motive shape and rhythm are logically separated. Due to the built in rhythm mapping algorithms you can use the same motive shape with multiple rhythm patterns, or the same rhythm with multiple shapes, as often happens in top hits regardless of the music genre.

**melodya** features:

- a motive editor and one-click melody generation based on detailed rhythm and shape options
- an advanced rhythm mapping algorithm that makes separation of shape and rhythm possible
- several melodic and rhythmic transformations used in famous, well-known melodies
- suitable for modern genres: a “Modern” rhythm generator is included (+2 others)
- a simple single-page UI which is fully customizable (colors, fonts, keyboard shortcuts...)
- MIDI file import. The dropped MIDI file can be split into melody sections that can be changed or regenerated
- melody generation and mutating an existing melody for a single click
- simple activation. No internet connection is required for activation or operation

**melodya** is available for Windows and macOS and comes as VST2.4, VST3 and AU (MIDI FX) plug-in versions.

# Getting started

## System requirements

### Windows

- Supported operating systems: Windows Vista/7/8/10 (32-bit or 64-bit)
- Intel/AMD processor 1.4 GHz minimum
- For VST2/VST3 plug-ins: a DAW supporting these plug-in formats

### macOS

- macOS 10.11 - 10.15 (latest update)
- Intel processor 1.4 GHz minimum
- For VST2/VST3/AU plug-ins: a DAW supporting these plug-in formats

**melodya** is a MIDI FX plug-in which means it sends and receives MIDI events. It does not output audio. In order to use the plug-in you need to route the plug-in output to a virtual instrument track. You will find more details for how to accomplish this in the user guide of your DAW.

# Installation

The installation should be guided and straight-forward. You only have to follow the steps described in the installation program.

## Installation on Windows

VST2.4 (32-bit) plug-in location:

`C:\Program Files (x86)\VSTPlugins\Melodya_Win32.dll`

VST2.4 (64-bit) plug-in location:

`C:\Program Files\VstPlugin\Melodya_x64.dll`

You can override the VST2.4 plug-in paths during installation.

The VST3 plug-in is installed in

`C:\Program Files\Common Files\VST3`

, and in

`C:\Program Files (x86)\Common Files\VST3`

on 64-bit Windows.

Melody presets are stored in your user documents folder:

`C:\Users\<username>\Documents\Melodya`

After a successful installation it might be required to add the corresponding plug-in search path to your host software. Please refer to your DAWs manual to find out how to do that.

## Installation on macOS

VST2.4 plug-in location:

`/Library/Audio/Plug-Ins/VST/Melodya.vst`

VST3 plug-in location:

`/Library/Audio/Plug-Ins/VST3/Melodya.vst3`

Audio unit plug-in location:

`/Library/Audio/Plug-Ins/Components/Melodya.component`

Melody presets are stored in

`~/Documents/Melodya`

## Software activation

When first running **melodya**, you will be asked to type the license key that you received with your order. **No internet connection is required for activation or operation.**

# Overview

## Workflow

You design or generate a melody line for the selected scale, drag the melody to the DAW, harmonize it to add chords, and finish the composition in the DAW. From v1.1 **melodya** offers melody generation for a chord progression if you enable the chords track. So two different workflows are supported:

- Create a catchy melody, then find chords for the melody later (chords track disabled)
- Create melody for a given chord progression (chords track enabled)

Dropping a MIDI file on the workspace lets you work with existing melodies. The MIDI file is imported as one big section. You can make smaller sections by splitting the big section, regenerate parts of melody, make repetitions, etc.

## User interface

There are three main pages in the user interface:

- **Melody Editor:** the main melody editing workspace where you create or edit a melody
- **Settings:** miscellaneous and user interface settings, keyboard shortcuts.
- **Support:** update checking, version history and feedback

## The Melody Editor

The user interface consists of the tool bar at the top and the workspace where you can edit the current melody notes.







: Play back the currently edited melody. At the end of the playback the cursor returns to the last clicked position. Right-click to edit playback options



: Loop playback



: Generate melody. Right-click to edit generation options



: Mutate melody. Right-click to edit mutation options



: Drag melody as MIDI. You can drag the edited melody directly to the DAW



: Access melody presets. You can save a preset here. All the settings are saved with the preset



: Undo last change



: Redo

**C Major**: the scale the melody will use

**120.00 BPM**: playback tempo. By default this is the host tempo. Overriding the tempo is possible, see "Use Host Tempo" in the settings.

**4/4**: the signature to use. By default this is the host signature. Overriding the signature is possible, see "Use Host Signature" in the settings.

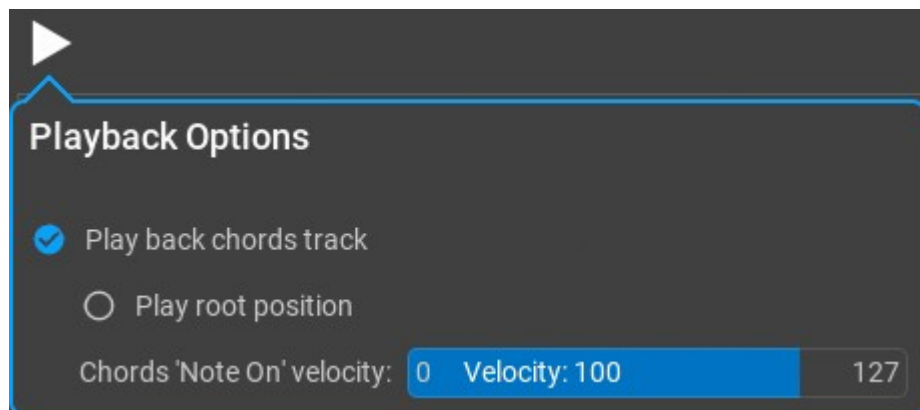
**+0 Octaves**: octave offset applied to the melody

**Default**: note lengths options. Right-click for menu. Possible values: Default, Legato, 2/4, 1/4, 3/16, 1/8, 3/32, 1/16

**100%**: 'note on' velocity for melody notes

## Playback options

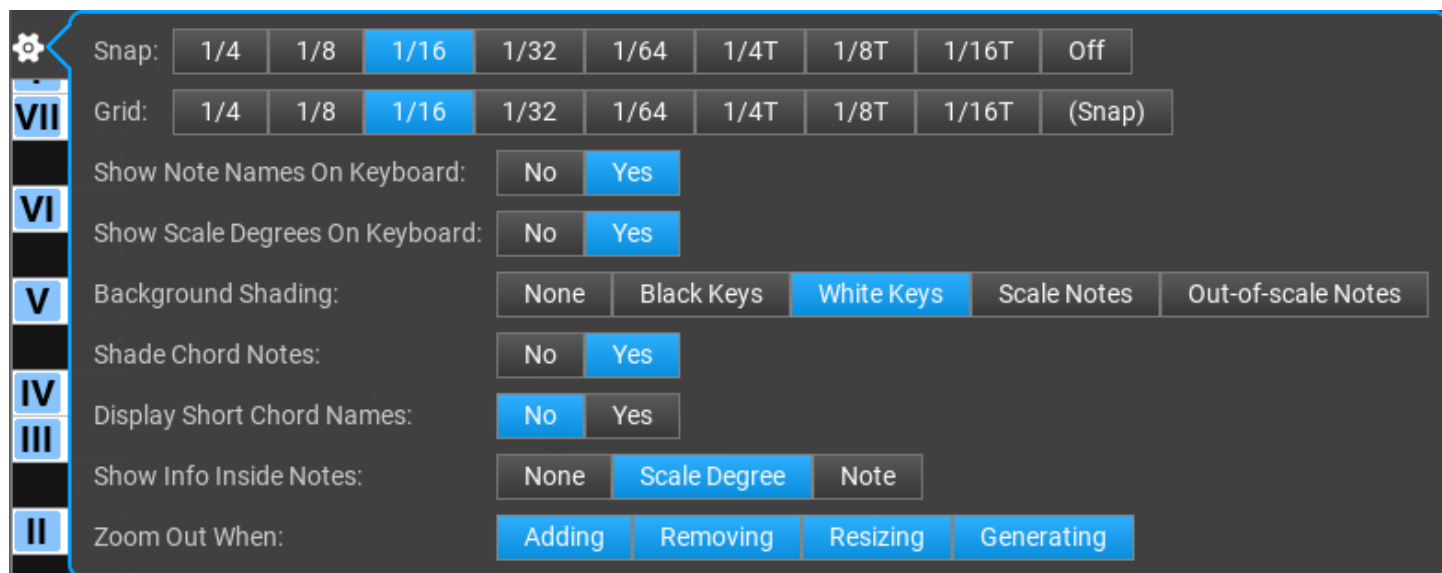
By right-clicking on the 'PLAY' button you can enable chords track playback, which can be very useful during melody editing. You can set the volume (actually 'note on' velocity) and voice leading here:



## Piano roll options

The piano roll does automatic vertical zooming by default. You can scroll the keyboard (vertical drag or mouse-wheel) and zoom the keyboard (Ctrl+vertical drag or Ctrl+mouse-wheel). Double-click to return to automatic zooming.

Clicking on the 'cogwheel' icon will show more options:



## Melody sections and operations

The melody includes several melody sections. A shape and rhythm is assigned to each section. The shape and rhythm comes from a motive that are displayed as capital letters from A to H and indicated with different colors. You can see the motives above the sections:



There are lots of things you can do with a section: you can resize, remove, mute, duplicate, split, glue, regenerate them, add variations (which belong to the section, and not the motive!). Add rest or held notes. Inside the sections you can freely edit the notes.

The top bar (**ACTIONS**) offers the following buttons in this order: remove (✕), mute/rest (■), create new motive (⊕), clone motive for editing (□).

The **MOTIVE** and **RHYTHM** bars select the motive and rhythm for the particular section. The two letters need not be the same, you can use the rhythm from motive A for motive B, for example. Clicking a letter will select the motive, but clicking on the SAME letter will regenerate the motive, or just the rhythm for the clicked motive.

The **VARIATION** bar offers often used melodic transformations. Right-clicking resets/removes the transformation, Ctrl-clicking will apply the change to all sections, not just the edited one.



: horizontal offset in 16<sup>th</sup> note steps



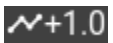
: transposition by scale steps



: retrograde (mirroring horizontally)



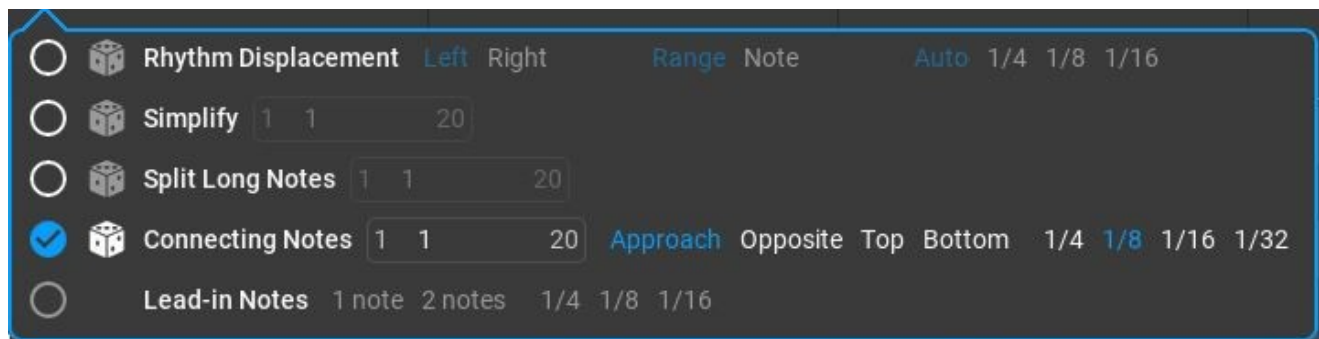
: inversion (mirroring vertically)



: contour transformations (keep the same basic shape, but make the intervals between notes larger or smaller)

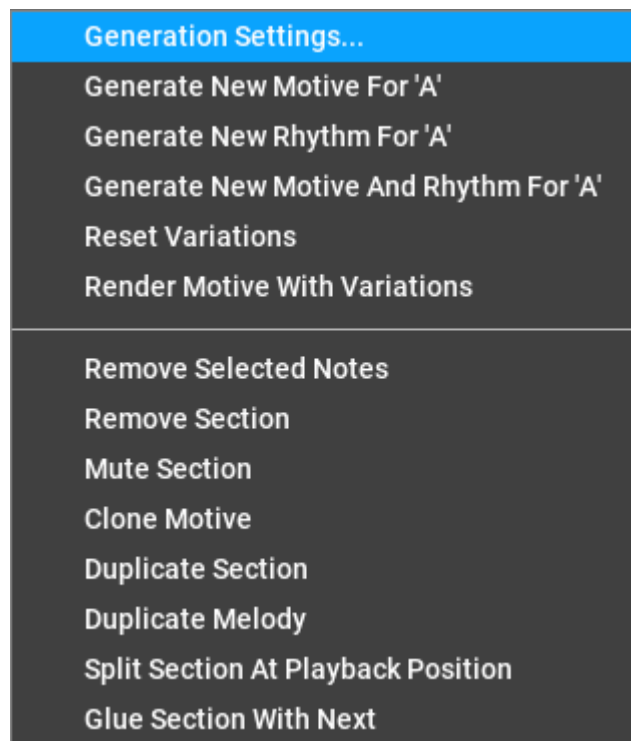


: menu with further variations:



- **Rhythm Displacement:** either a single randomly selected note or all notes left to or right to a randomly selected note will be shifted by the specified amount making an interesting rhythmic effect. This is often used in melodies.
- **Simplify:** removes less important notes from a motive. You can set how many times this is performed.
- **Split Long Notes:** find the longest note in the motive and split it at a sensible position, thus making two notes from a longer note.
- **Connecting Notes:** insert an additional short note between 2 motive notes, by making a connection between them. 'Approach' means the inserted note will be between the two notes, e.g. C → E → F. The 'Opposite' option inserts a note from the other direction, e.g. C → G → F
- **Lead-in Notes:** insert lead-in (pick-up) notes before the section, at the end of the previous section. This variation is not available for the very first section.

A context pop-up is available if you right click in a melody section with all possible operations on a section:



## Generation Settings (For a Section)

Each section has its own settings, which were assigned during melody generation. You can change these settings and regenerate the motive or just the rhythm. The simplest way for regeneration is clicking on the same highlighted letter in the **MOTIVE** or **RHYTHM** bar. The settings are very similar to global melody settings:

Rhythm 'A'
⚡
🎲

Density:

Simple 41 %
Complex

Method:

Weighted Random
Subdivision
Modern

Motive 'A'
⚡
🎲

Steps/Leaps:

Steps 54 %
Leaps

Repetition:

Never 4 %
Always

Returning:

Never 7 %
Often

After Leap:

Step in the opposite direction

Leap Weights:

||||

|||

..|

0

0

0

20

60

100

100

60

20

0

0

0

-7:

-6:

-5:

-4:

-3:

-2:

+2:

+3:

+4:

+5:

+6:

+7:

Scale Note Weights:

||||

|||

100

50

90

50

100

60

30

Root

2nd

3rd

4th

5th

6th

7th

Formula:

du

You can generate (⚡) or mutate (🎲) the rhythm or motive. Ctrl-click to generate both motive and rhythm.

## Rhythm settings

**Density:** it is proportional to the number of melody notes used. 100% means the maximum note count for all types of rhythms. For straight rhythm 100% means a note on each 1/8 grid.

**Method:** the rhythm generation method. Possible values:

- Weighted Random: probabilities used for notes: downbeats > on-beats > off-beats > 1/8 notes. The 'randomness' setting affects these probabilities.
- Subdivision: works by dividing time into halves
- Modern: rhythm used in deep house and other modern genres

## Motive settings

**Steps/Leaps:** the proportion of steps and leaps. For each motive a random value is used between the minimum and maximum values on slider.

**Repetition:** the probability of note repetition. Melodies often have repeated notes. For each motive a random value is used between the minimum and maximum values on slider.

**Returning:** the probability of repeating the note before the previous melody note, like in C → D → C

**After Leap:** specify what should happen after a leap. Possible values:

- Step in the opposite direction
- Step anywhere
- Step or small leap in the opposite direction
- Leap in the opposite direction
- Anything

**Leap Weights:** the probabilities of jumps (leaps) in the melody in both directions.

**Scale Note Weights:** the probabilities of each scale note to be used.


If you set all leap weights to the same amount, only scale note weights will be used. Similarly if you set all scale note weights to the same amount, only the leap weights will count.

## The timeline

Dragging the timeline vertically will zoom in/out, horizontal dragging scrolls the timeline. Double-clicking will automatically zoom out the melody to the most optimal view.

# Creating melodies

## Melody generation

Clicking on the 'Generate' button () will generate a new melody based on the melody generation settings.

Right-clicking on the 'Generate' button () will open the generation setting dialog.

Under the 'Global' tab you'll find the following basic settings:

**Generation Options**

**Global** Rhythm Motive Variations

Melody Length: 4 Bars 0 Quarter Note

Melody Variety: 1 2 8

Rhythm Variety: 1 2 8

Note Range: C2 C3-C5 C6

Generate Melody!

**Melody Length:** in bars and optionally in quarter notes

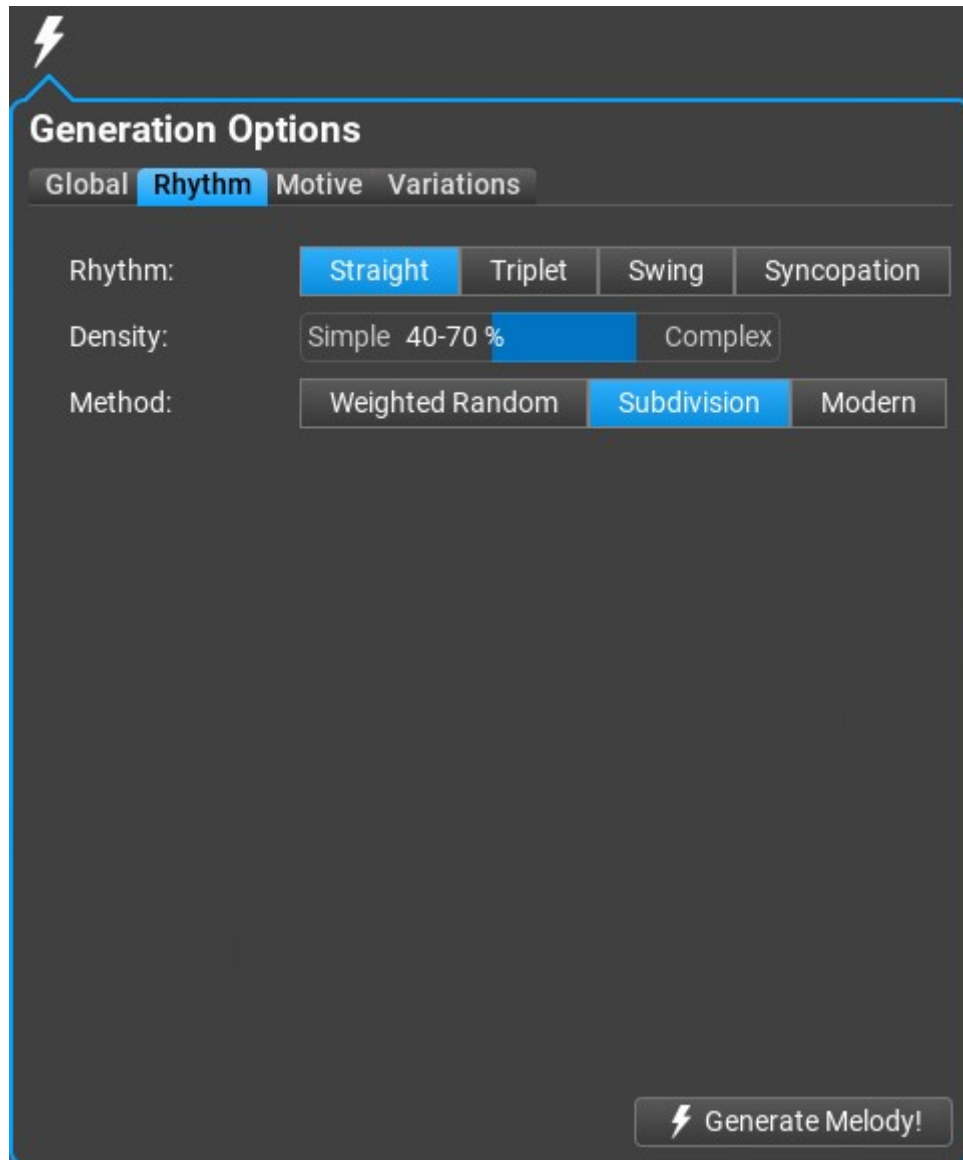
**Melody Variety:** an important setting: the number of motives to use. Motives are denoted as capital letters from A to H (maximum 8 motives). Typically 1 to 3 motives are used.

**Rhythm Variety:** another important setting for the rhythmic variety: the number of motives to use for rhythm.

**Note Range:** the allowed notes to use. Please note that some variations (transposition, lead-in notes...) may create notes outside of this range.

Under the 'Rhythm' tab you'll find the following settings:





**Rhythm:** straight, triplet, swing or syncopation

**Density:** it is proportional to the number of melody notes used. 100% means the maximum note count for all types of rhythms. For straight rhythm 100% means a note on each 1/8 grid.

**Method:** the rhythm generation method. Possible values:

- Weighted Random: probabilities used for notes: downbeats > on-beats > off-beats > 1/8 notes. The 'randomness' setting affects these probabilities.
- Subdivision: works by dividing time into halves
- Modern: rhythm used in deep house and other modern genres

Under the 'Motive' tab you'll find the following settings:

**Generation Options**

Global Rhythm **Motive** Variations

Start Note: I II **III** IV V VI VII

Steps/Leaps: Steps 40-60 % Leaps

Repetition: **Never** 0-20 % Always

Returning: **Never** 0-20 % Often

After Leap: Step in the opposite direction ▼

Leap Weights: |||| |.|| .||

-7:	-6:	-5:	-4:	-3:	-2:	+2:	+3:	+4:	+5:	+6:	+7:
0	0	0	20	60	100	100	60	20	0	0	0

Scale Note Weights: |||| |.||

Root	2nd	3rd	4th	5th	6th	7th
100	50	90	50	100	60	30

**Generate Melody!**

The melody consists of steps and leaps. Step means a single scale step, a leap is bigger than a scale step. The proportion of steps and leaps, note repetitions, probabilities of leaps and scale notes, describe the melody shape.

**Start Note:** the possible start notes for the motives (scale degrees)

**Steps/Leaps:** the proportion of steps and leaps. For each motive a random value is used between the minimum and maximum values on slider.

**Repetition:** the probability of note repetition. Melodies often have repeated notes. For each motive a random value is used between the minimum and maximum values on slider.

**Returning:** the probability of repeating the note before the previous melody note, like in  $C \rightarrow D \rightarrow C$

**After Leap:** specify what should happen after a leap. Possible values:

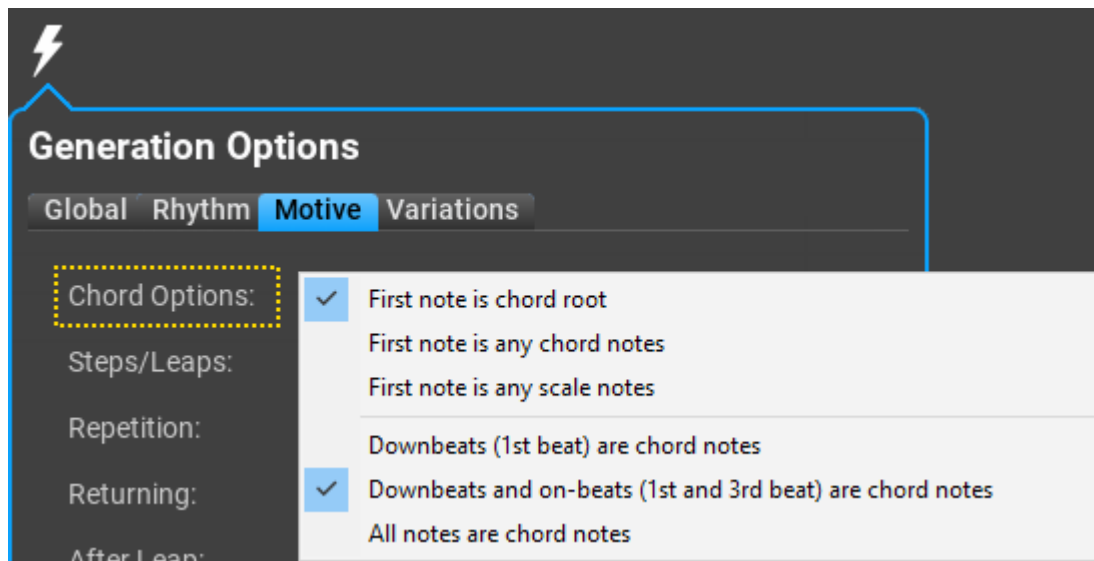
- Step in the opposite direction
- Step anywhere
- Step or small leap in the opposite direction
- Leap in the opposite direction
- Anything

**Leap Weights:** the probabilities of jumps (leaps) in the melody in both directions.

**Scale Note Weights:** the probabilities of each scale note to be used.

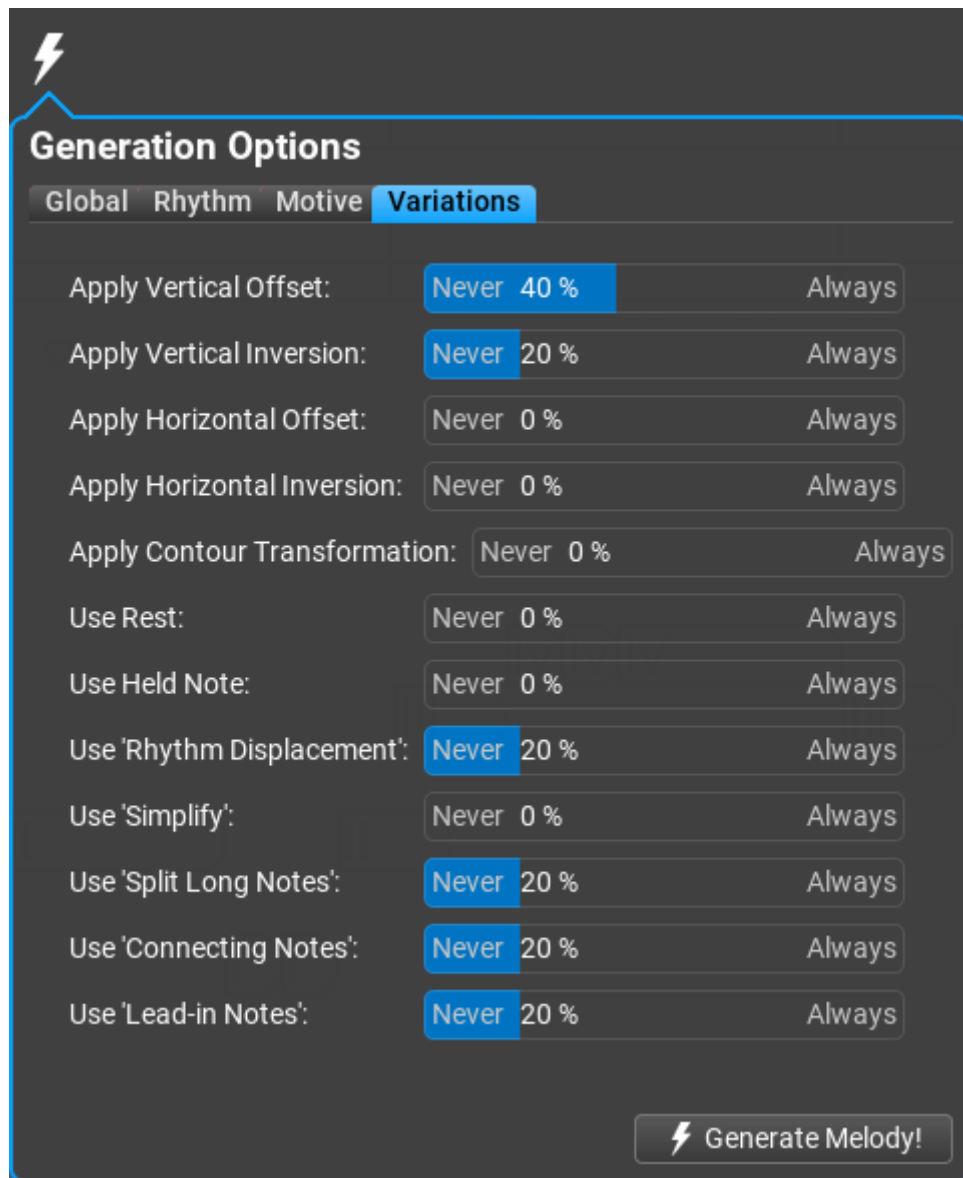
If you set all leap weights to the same amount, only scale note weights will be used. Similarly if you set all scale note weights to the same amount, only the leap weights will count.

When the chords track is enabled, **Chord Options** is displayed instead of **Start Note**:



**Chord Options:** select the possible first note of the motive, as well as notes that must be chord notes when generating a new motive

Under the 'Variations' tab you'll find the following settings:



The screenshot shows a 'Generation Options' dialog box with a lightning bolt icon in the top left corner. The 'Variations' tab is selected, showing a list of settings with sliders. The settings are as follows:

Setting	Never	Current Value	Always
Apply Vertical Offset:	<input type="checkbox"/>	40 %	<input type="checkbox"/>
Apply Vertical Inversion:	<input type="checkbox"/>	20 %	<input type="checkbox"/>
Apply Horizontal Offset:	<input type="checkbox"/>	0 %	<input type="checkbox"/>
Apply Horizontal Inversion:	<input type="checkbox"/>	0 %	<input type="checkbox"/>
Apply Contour Transformation:	<input type="checkbox"/>	0 %	<input type="checkbox"/>
Use Rest:	<input type="checkbox"/>	0 %	<input type="checkbox"/>
Use Held Note:	<input type="checkbox"/>	0 %	<input type="checkbox"/>
Use 'Rhythm Displacement':	<input type="checkbox"/>	20 %	<input type="checkbox"/>
Use 'Simplify':	<input type="checkbox"/>	0 %	<input type="checkbox"/>
Use 'Split Long Notes':	<input type="checkbox"/>	20 %	<input type="checkbox"/>
Use 'Connecting Notes':	<input type="checkbox"/>	20 %	<input type="checkbox"/>
Use 'Lead-in Notes':	<input type="checkbox"/>	20 %	<input type="checkbox"/>

At the bottom right, there is a button labeled 'Generate Melody!' with a lightning bolt icon.


For each variation a minimum and maximum probability is set in the sliders. During melody generation for each melody section all variations use a random probability between the minimum and maximum value. The variation is added according to the selected value.

## Enabling the chords track

The chords track can be enabled by clicking on the small 'chord' button: 



The chords can be set by clicking on the chord note or chord name. Chord boxes are splitted/joined by using Alt-click (Option-click on macOS). It is possible to drag the chord edges to make a chord shorter or longer.

Pressing 'Generate' () will create motives based on the **Chord Settings** under the **Generation Options / Motive** tab. This includes the possible first note, and whether to place chord notes on downbeats only or downbeats and on-beats (first and third beats in a bar), or all notes should be chord notes.


When a motive is repeated under a different chord, the program tries to set the transposition to match the second chord, but sometimes this is not possible. The reason is that motives contain scale notes, and a repeated motive copies the original motive note by note. This means that the repeated motive cannot always be adjusted for different chords.

For best results use different motives (letters) for each melody section, with one or two rhythm patterns repeated. Making all notes to be chord notes may result a boring motive.

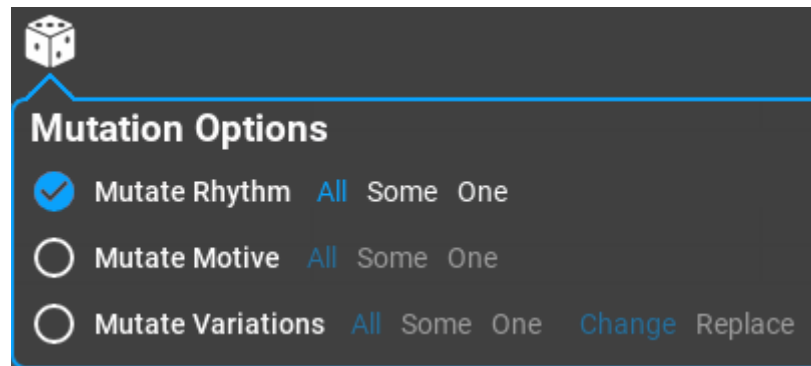
There are no chord-relative notes in a motive, so changing a chord won't update the motive to match the new chord. The chord notes are displayed on the piano roll, so it is easy to adjust the notes if needed.

There are melodic transformations that introduce non-chord notes. Vertical inversion and random transposition is not used when new melody is generated with enabled chords track.

# Melody mutation

Clicking on the 'Mutate' button () will slightly change the melody based on the mutation settings.

Right-clicking on the 'Mutate' button () will open the mutation setting dialog:



**Mutate Rhythm:** You can slightly change the rhythm of all, some or just one melody section.

**Mutate Motive:** You can slightly change the shape of all, some or just one melody section.

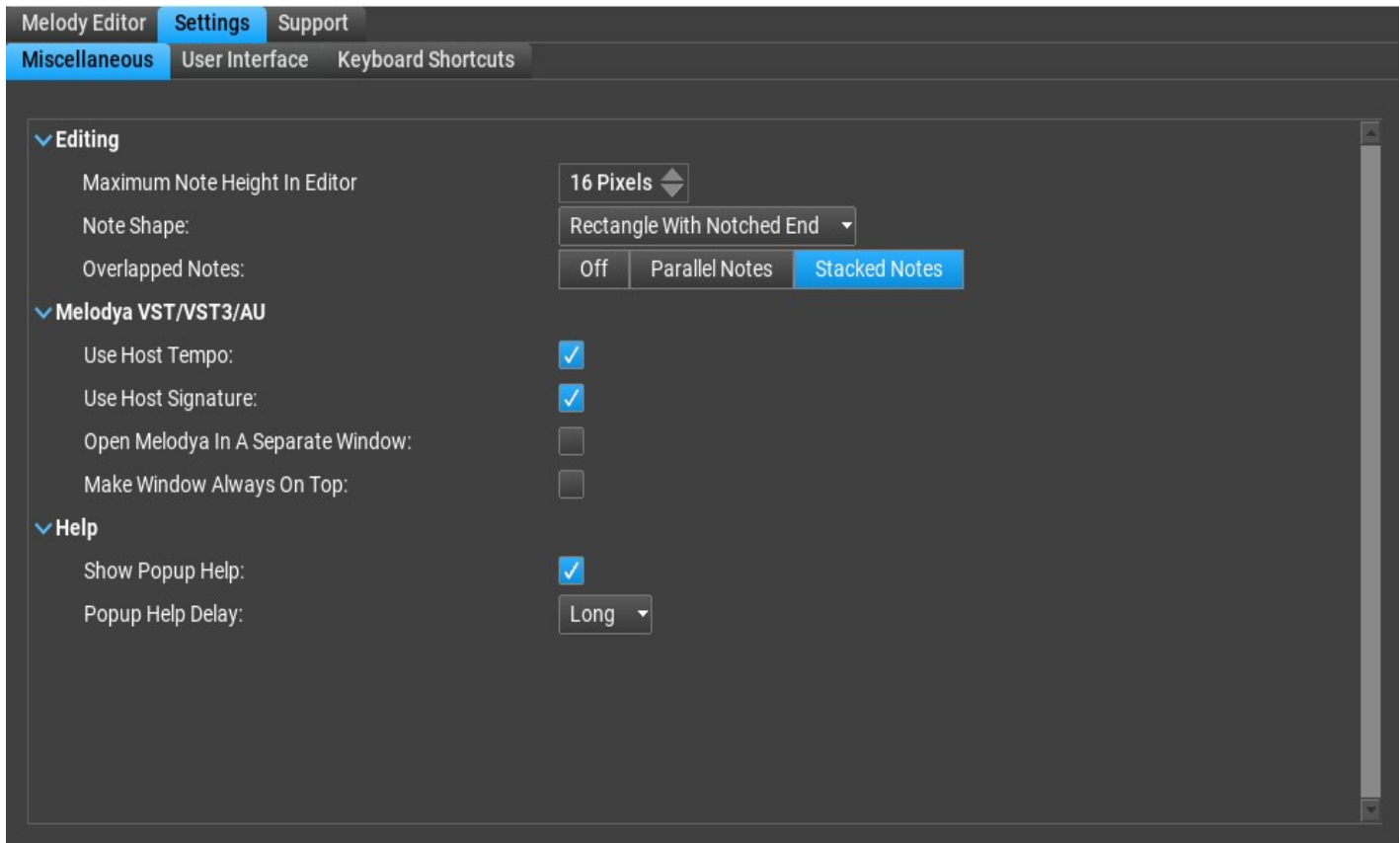
**Mutate Variations:** You can slightly change the rhythm of all, some or just one melody section. When replacing variations, the probabilities in the 'generation settings' will be used.

# Melody editing

Editing melody notes is not just possible but experimentation is encouraged. When you move the mouse over a section, the original motive notes are displayed without any variations (transposition and horizontal offset are still applied). Make modifications, and preview the melody until you are satisfied with the result. Drag the melody to the DAW when you finished it.

# Settings

Accessing the program global settings is possible by clicking on **Settings** in the top bar:



## Miscellaneous

Explanations for the various settings on this page:

### Editing

- **Maximum Note Height In Editor:** You can zoom the piano roll by Ctrl-drag or Ctrl-mouse wheel, and this setting provides the maximum height of a pizno roll note.
- **Note Shape:** Specify how the notes should be displayed. Possible values: Rectangle, Rectangle With Narrowing End, Rectangle With Notched End, Rectangle With Notched End At The Top

- **Overlapped Notes:** specify how overlapped notes are display. It is not a good idea to have overlapped notes. Possible values: Off, Parallel Notes, Stacked Notes

## Melodya VST/VST3/AU

- **Use Host Tempo:** The tempo is automatically synchronized with the host tempo.
- **Use Host Signature:** The signature is automatically synchronized with the host signature.
- **Open Melodya In A Separate Window:** It is possible to open the user interface in its own window, not in the window the plug-in host provides. This is a useful when there are UI rendering issues.
- **Make Window Always On Top:** The plug-in editor window will be always on top of other windows

## Help

- **Show Popup Help:** When enabled, you will see a help message when the mouse is over a UI element
- **Popup Help Delay:** The delay before a pop-up help appears when you leave the mouse over a UI element

# User Interface

**melodya** has a very flexible user interface: you can change colors, adjust font sizes, button shapes, shading and import/export UI themes. We won't list all the color settings here.

# Keyboard Shortcuts

A keyboard shortcut is assigned to most operations. You can re-assign shortcuts, or display them as an HTML page.



# Support

Version and build date is displayed on this page. You can check for updates or send bug reports, or open the on-line user guide in your web browser.

## Checking for updates

Click on “Check For Updates”. If there is an update available, the program offers downloading it. **melodya** does not start installation, and does not install anything automatically, you need to start the installer manually.

## Reporting bugs

Pressing the “Send Bug Report” button opens the standard “mailto:” URL handler on your computer. In some cases this is not configured (e.g. when using a web mail). In this case please send us your questions, suggestions and bug reports to support at musicdevelopments dot com with as much information as possible: OS version, plug-in host version, **melodya** version, the steps required to reproduce the issue. You can include a problematic preset (with .rcMLDY file extension) as an attachment.

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