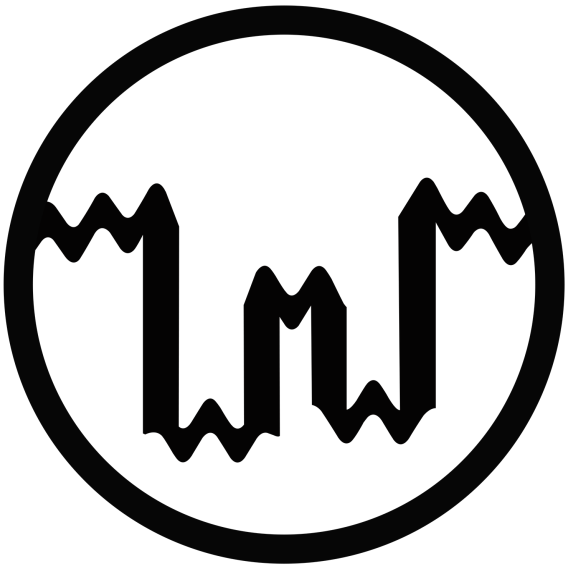


WIGGLE

DYNAMIC WAVESHAPING SYNTHESIZER

V1.1.1

Operation Manual

www.2ndSenseAudio.com

Table of Contents

1.OVERVIEW **5**

1.1 Sections 5

1.2 Special Controls 7

2. SYNTH PAGE **8**

2.1 The Sound Generators (OPs) 8

2.1.1 WAVE (Wavetable) 8

2.1.2 TUNE (Tuning) 9

2.1.3 PD (Phase Distortion) 9

2.1.4 AMP (Amplitude Envelope) 9

2.1.5 Wavetable Display and Control Points 10

2.1.6 MOVE 10

2.1.7 Pan and Filter Selector 10

2.1.8 Wave Type Mixing 11

2.1.9 Reset All OP's Parameters 11

2.2 FM Matrix & OP Mix 12

2.3 Filters & Effects 13

2.3.1 Filters 13

2.3.2 Equalizer 13

2.3.3 Distortion 13

2.3.4 Chorus 13

2.3.5 Phaser 14

2.3.6 Delay 14

2.3.7 Reverb 14

2.4 Master Control 15

2.4.1 Unison Control 15

2.4.2 Velocity Curves 15

2.4.3 Pitch Bend 15

2.4.4 Random 15

2.4.5 Panic 16

2.4.6 Poly/Mono 16

2.4.7 Master 16

2.5 Morph Pad 16

2.5.1 Snapshots 17

2.5.2 Morphing 17

2.5.3 Remove From Morph Pad 17

2.5.4 Motion 17

2.5.5 Direction 18

2.5.6 Transition 18

2.5.7 Sync & Interval 18

2.5.8 Retriggering (Retrig) 18

2.6 Modulations 19

2.6.1 Mod 1 - 8 20

2.6.2 Macro 21

2.6.3 Key-Switch Mod 21

2.6.4 Velocity Mod 21

3. PRESET BROWSER 22

4. UTILITY **23**

4.1 Quality 23

4.2 Master Tune 23

4.3 Record Audio 23

4.4 Tutorial 23

4.5 Left Handed 23

5. SEQUENCER PAGE **24**

5.1 Sequencer Global Control 24

5.2 Step Activation and Connection 24

5.3 Sequencer Control Tabs 24

5.3.1 Length 24

5.3.2 Velocity 25

5.3.3 Octave 25

5.3.4 Semitone 25

5.3.5 Nudge 25

5.3.6 Stretch 26

5.3.7 Slice 26

5.3.8 Custom 26

5.4 Sequencer Modulator 28

6. STAND ALONE HOST **29**

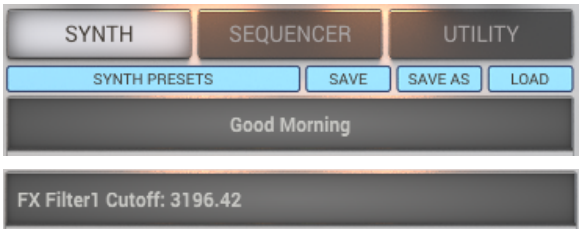
1.OVERVIEW

WIGGLE is a dynamic waveshaping synthesizer. The user interface is designed to assist you in programming expressive sounds with an intuitive workflow. Let's look at the overall structure of the synth and then we'll dive deeper into each section.

1.1 Sections

Page Selector & Parameter Display

Use the 3 big buttons to access the **Synth** page, **Sequencer** page and the **Utility** window. Below is a **Preset Browser** and a **Parameter Display** that shows the current preset's name and the parameter if the mouse cursor is placed on a knob.



Synth Page

There are 4 **Sound Generators** (labeled as OP1,2,3 and 4), 2 **Filters**, 6 **Effects**, an **FM Matrix** , a **Mixer**, a **Morph Pad**, a **Master Control Section** and a **Modulation Section**.

Sequencer Page

You can arrange musical pattern with the **Sequencer** on the top and use the **Sequencer Modulator** below to create step-based modulation patterns to control the synth parameters in the Synth Page.

Utility

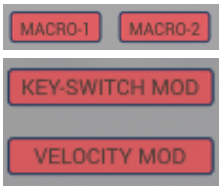
Here you can adjust the Quality (the Oversampling Settings) and Master Tune. You can sample the internal audio coming from WIGGLE using the Record Audio function and enable On-board Tutorial, which is an interactive tutorial that shows you the basic functions of the synth upon its first launch.

1.2 Special Controls

Modulatable Knobs - These knobs can be controlled by modulators from the Modulation Section and the Sequencer Modulators on the Sequencer Page.

Disabled Knobs - Sometimes a knob can be "greyed out", that means it's not controllable under the current settings. For example, the Glide knob only works in Monophonic Mode and the Left, Right delay time knobs only work when they are not Synced.

Reset Knob to Default Value
Opt+Click (Mac) or Alt+Click (Windows) on a knob to reset the knob to its default position. You can also use Right-click and choose "To Default Value".



Drag-and-Drop Tabs
Modulation Tabs - These tabs can be drag-and-drop to the Modulatable Knobs.

Media Tabs - DRAD MIDI tab of the Sequencer and DRAG tab of the Record Audio function can be drag-and-drop to your DAW's timeline as MIDI or Audio clips.

Combo Boxes
Different values or controls messages can be selected from these boxes.

MIDI Learn
All knobs can be MIDI Learned - Right click and select MIDI Learn.
A MIDI CC message can only be used to control one knob at a time.

2. SYNTH PAGE

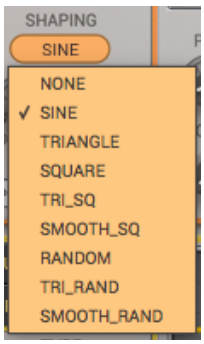
2.1 The Sound Generators (OPs)

WIGGLE has 4 OPs (Operators), these sound generators offer you various controls to program the sound.

2.1.1 WAVE (Wavetable)

TYPE - You can choose from 8 types of waveforms from each of the 2 combo boxes as the starting point and use the knob to morph between different waveforms (please see **2.1.7** for details)

The “Movable” Waveforms - **Linear**, **Square**, **Cosine** and **Cubic** can be freely modified by dragging the 4 control points on the wavetable display.
You can also select the traditional “Non-Movable” waveforms like **Sine**, **Saw**, **Triangle** and **Noise**. The control points would disappear since these waveforms are not meant to be modified using the control points.



SHAPING - You can further modify the waveform by applying one of these 8 types of shaping waveforms.
The DEPTH and FREQ knobs are used to control the intensity of the shaping effect.

RANDOMIZE - There are 2 Randomize functions - The PHASE button randomizes the starting phase of the waveform each time a voice is generated. The POINT button randomizes the control points’ positions.

2.1.2 TUNE (Tuning)

There are 5 controls that you can use to change the pitch of the OP.

OCT - Tuning by Octaves.
SEMI - Tuning by Semitones.
CENT - Tuning by cents in a semitone up or down range.
CONT - Continuous, tuning by cents in a 2 octaves up or down range.
HARM - Tuning by Harmonic Sequence, up to the 10th harmonic.

2.1.3 PD (Phase Distortion)

The Phase Distortion can dynamically change the harmonic content of the OP's sound by applying a modulator waveform to modulator the OP's current waveform.

You can choose the **1/4 Cosine**, **Sine** or **Customize** as the modulator waveform.
The DEPTH knob changes the steepness of the modulator waveform's curve. When choosing the Customize option, you can draw a waveform on the display - Single-click to add a point; double-click to remove a point; drag the handle between 2 points to change the curve; click and drag a point to change its position; right click on the empty space of the display and choose "Reset" to set the waveform to default.

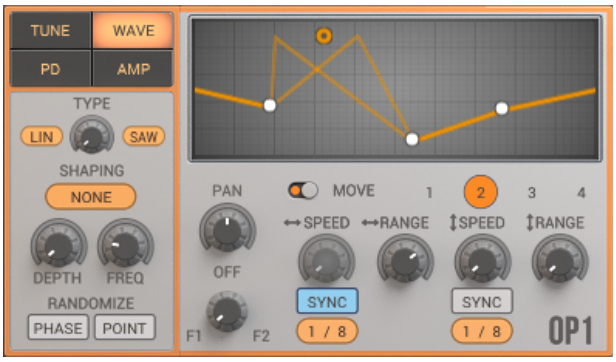
2.1.4 AMP (Amplitude Envelope)

You can adjust the Amplitude Envelope here.

A (Attack) - It's the time taken for the amplitude to rise up to its peak from zero when a voice is generated.
H (Hold) - It's the time for the amplitude to hold after the attack stage, before it decays.
D (Decay) - It's the time for the amplitude to decay before it reaches the sustain stage.
S (Sustain) - It's the amplitude level when the envelope reaches the sustain stage, until the voice is released.
R (Release) - It's the time for the amplitude to decay from sustain level to zero when a voice is released.

2.1.5 Wavetable Display and Control Points

You can click and drag these 4 control points on the wavetable display to manipulate the OP's waveform. It's the most intuitive way to adjust the timbre of the OP.



2.1.6 MOVE

This is the signature feature of WIGGLE. There are 4 built-in **LFO**s (Low Frequency Oscillator, basically a control signal) that can control the movement of the 4 control points.

Turn on the MOVE switch or move any of the SPEED or RANGE knobs will put the LFO to work.

Click on the number 1 to 4 or click on a control point on the wavetable display to select the LFO you want to adjust.

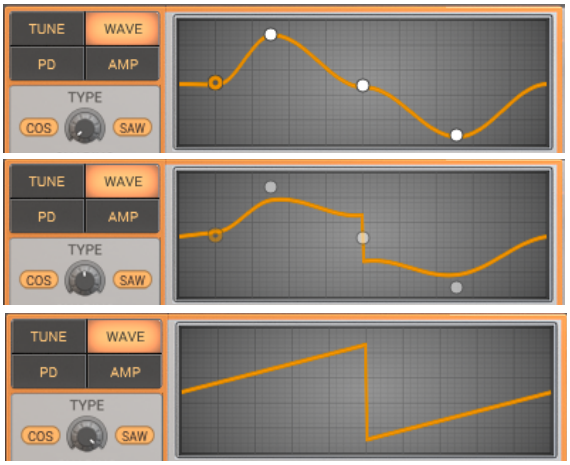
The horizontal and vertical speed and range can be individually adjusted on each LFO. The speed can be synced to your DAW's tempo setting. When the SYNC button is on, you can select the sync value from the combo box; when not synced, the speed is set in seconds.

2.1.7 Pan and Filter Selector

There's a panning control to pan the OP's output in the stereo field.

Below that is the selector for the OP's output to go to any of the 2 Filters (F1, F2) or Bypass (OFF).

2.1.8 Wave Type Mixing



This is a newly added feature for version 1.0.3. Now, for each OP, you can select 2 types of waveforms and adjust the mix between them using the control knob.

If the **Source (left) Wave Type** is a Movable waveform and the **Destination (right) Wave Type** is Non-Movable waveform, the Control Points would fade out when the knob is turned to the right, as shown on the pictures on the left; and vise versa.

The MOVE function is enabled if either of the Source or Destination Wave Type is Movable. If both Wave Types are Non-Movable, the MOVE switch and all of its control knobs would be disabled as shown below.

2.1.9 Reset All OP's Parameters

If you don't like the current settings of an OP, now you can reset all its parameters to the default state by right-click on an empty area of the OP and select "Reset All in OP".

2.2 FM Matrix & OP Mix

In WIGGLE, the 4 OPs can be layered together to create rich sounds. Even better, they can modulate each other to create more complex and expressive sounds using **Frequency Modulation (FM) Synthesis**. The FM Matrix and OP Mix section helps you achieve that.

In FM Synthesis, the timbre of a waveform (let's call it FM Carrier) is changed by modulating its frequency with a modulator frequency (let's call it FM Modulator) that is also in the audio range, resulting a more complex waveform.

The knobs on the FM Matrix are color-coded. On each knob, the **color of the left side** represents the OP that works as the **FM Modulator**; the **color of the right side** represents the OP that works as the **FM Carrier**. For instance, the knobs on the upper row each means that OP1 modulates itself, OP2 modulates OP1, OP3 modulates OP1, OP4 modulates OP1. The FM knobs control the modulation amount.

The OP Mix knobs control the mix of the OPs in the final output. The Solo (S) buttons are useful when you want to listen and adjust the sound of a specific OP.

Tips:
The FM Modulator's pitch and amplitude envelope have significant influence on the resulting sound. Experiment with different TUNE and AMP settings to explore the possibilities.
An OP can be used purely as an FM Modulator to alter the timbre of other OPs. It's own audio output does not need to be present at the final out put.

2.3 Filters & Effects

2.3.1 Filters

WIGGLE's OPs and FM Matrix are capable of generating rich sounds. But sometime you might want to shave off some high frequencies, or add the classic flavor of resonant filtering sound; so we've prepared 2 filters for you to further shaping the sound.

There are 9 filter types can be chosen, they are standard **Low Pass** (LP-SVF, LP-12, LP-24), **High Pass** (HP-SVF, HP-12, HP-24) and **Band Pass** (BP-SVF, BP-12, BP-24) filters. The two filters work in Parallel or in Series. You can click on the Filter Mode Buttons to change between the routing options.

2.3.2 Equalizer

It's a 3-Band Equalizer that helps you balance the frequency content of the sound.

There are a Low-Shelf (LO), a Bell (MID) and a High-Shelf (HI) filter in the equalizer. The 3 FREQ knobs controls the frequency of each filter. The GAIN knob control the boosting or cutting of the selected frequency.

2.3.3 Distortion

You can add a "guitar amp type" distortion to the sound by using this distortion unit.

GAIN - The amount of signal being fed into the distortion unit.
DRIVE - The amount of distortion effect.
MIX - The mix between the original and distorted signal.
CAB - It enables the Guitar Cabinet Simulator.

2.3.4 Chorus

It generates delayed and pitch-modulated copies of the original signal and spread them out in the stereo field to create a choir-like effect.

RATE - The speed of pitch-modulation of the delayed signal.
DEPTH - The amount of pitch-modulation of the delayed signal.
MIX - The balance between the original and delayed signal.

2.3.5 Phaser

Various frequencies of the original signal are delayed by different amounts and mixed with the original signal, resulting a sweeping resonant swirl effect.

RATE - The speed of phase modulation.
DEPTH - The amount of phase modulation.
FB - Feedback, the amount effected signal being fed back to be processed again.

2.3.6 Delay

2 delayed signal are panned hard left and right and mixed with the original signal to create repeating, decaying echoes.
LEFT, RIGHT - The amount of delay time.
SYNC - Sync the delay time to DAW's tempo, the sync value can be chosen from the combo box below.
LO CUT, HI CUT - A High-Pass and a Low-Pass filter to limit the frequency bandwidth of the delayed signal.
FB - Feedback, the amount of delayed signal being fed back to be processed again; more feedback, longer the repeating echoes.
MIX - The balance between the original and effected signal.

2.3.7 Reverb

It generates many delayed signals as reverberation to add space to the sound.

SIZE - The perceived room size.
TIME - The decay time of reverberation.
MIX - The balance between dry and reverberant signal.

2.4 Master Control

2.4.1 Unison Control

UNISON - It's similar to the chorus effect, every note triggered will also trigger multiple copies (unisons) of the same note stacking on each other. The knob controls the numbers of the unisons.
DETUNE - It tunes the pitch of the unisons in various amount, from subtle chorus effect to extremely dissonant effect.
WIDTH - It pans the unisons in the stereo field in various amount to widen the sound.
Tips: Enabling RANDOMIZE PHASE on an OP while using the WIDTH control can enhance the stereo image of a sound but it also soften the transient (attack portion) of the sound.

2.4.2 Velocity Curves

There are 4 velocity curves available if you want to control the amplitude by how hard you play the MIDI keyboard.

FIXED - Select this curve if you wish the amplitude stays the same no matter how you play the keyboard.
NORMAL - This is the standard, linear curve.
LIGHT - Select this curve if you play the keyboard lightly, but wish for the amplitude to respond as though you were playing the keyboard a little harder.
HEAVY - Select this curve if you play the keyboard heavily, but wish for the amplitude to respond as though you were playing the keyboard a little lighter.

2.4.3 Pitch Bend

The up and down range can be adjusted up to 2 octaves.

2.4.4 Random

Click and choose "Random Preset" to create a brand new randomized preset or choose "Random Current Modulator" to create a randomized modulation envelope.

2.4.5 Panic

It simply sends an “All Notes Off MIDI” message to the synth just in case you need to kill any hanging notes while the synth malfunctions.

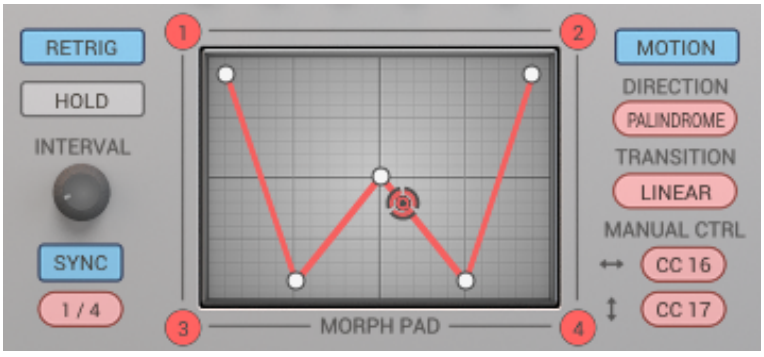
2.4.6 Poly/Mono

POLY - In Polyphonic Mode, the synth can produce multiple notes at once.
MONO - In Monophonic Mode, the synth produces only one note at a time.
The combo box lets you choose the number of polyphony; in Poly Mode, the polyphony can be chose from 2 to 24. And the combo box is disabled if Mono Mode is chosen.
LEGATO - It only works in Mono Mode, if you play the notes in a slurred fashion (making smooth transition from note to note with no intervening gaps), the attack and decay phases of the Amplitude Envelope would sound only once for an entire legato sequence of notes, until the final note is released, thus creating a smooth phrase.
GLIDE - It only works in Mono Mode, on some synths it’s also called “Portamento”, it adds a pitch sliding effect from one note to another. The higher the value, the longer it takes the pitch of a note to glide to another.

2.4.7 Master

It changes the level of the final output, as a master volume knob. When the Unison number is high, the output can be easily clipped. So watch out the output meter of your DAW and use the Master knob to adjust the volume appropriately.

2.5 Morph Pad



This is another major sound design feature of WIGGLE. You can create 4 variations (snapshots) of the sound and morph between them by using the computer mouse, a MIDI controller or its built-in **Motion** function. It can generate a wide range of sonic results, from subtle timbre variations to drastic transformation of sounds.

2.5.1 Snapshots

To take snapshots of the current sound, simply click on the SNAPSHOT (1,2,3,4) buttons at the corners of the Morph Pad. The Control Points of the OP's wavetable and most of the knobs' positions can be recorded by the snapshots. There's a list of knobs that cannot be recorded - the OP's filter selector, the ones on Master Control and the ones on the bottom row of the Modulation section (ATT, REL, LENGTH, GRID and OFFSET).

You can erase the information saved in all the snapshots, by right-clicking on the morph pad and choose "Reset All Snapshots". The red snapshots buttons would turn grey and the sound would remain in its current state.

2.5.2 Morphing

Once you've taken the snapshots, you can experiment with the morphing by moving the Morph Point. If you prefer to control the morph point with a MIDI controller, like an XY Pad, just use the MANUAL CONTROL to select the corresponding MIDI CC number for your controller. You can also use the LEARN function to assign the MIDI CC.

2.5.3 Remove From Morph Pad

Knobs - If you don't want certain knobs to work with the morph pad, right-click on the knob and choose "Remove From Morph Pad". The knobs would stay in their current positions and will not be affected by the morph pad anymore unless you take a new snapshot again.

OP's Control Points - To remove morphing of the OP's Control Points, right-click on the waveform display and choose "Remove Control Points from Morph Pad". If you want the Control Points to be added to the morph pad again, right-click on the Waveform Display and choose "Add Control Points to Morph Pad".

2.5.4 Motion

If you want the morphing to occur automatically, then turn on the MOTION button. The morph point would temporarily disappear, now you can draw a moving path for the morph point - Click to add a point; double-click to remove a point; once a point is set, you can click and drag it to a new position; if you want to erase the current path and start drawing again, click on the empty space on the morph pad and choose "Reset".

When the path is drawn, you can experiment with the movement using the DIRECTION and TRANSITION functions.

2.5.5 Direction

FORWARD - The morph point moves from start point to the end point and repeats.
BACKWARD - The morph point moves from the end point to the start point and repeats.
PALINDROME - The morph point moves from the start point to the end point and then back to the start point and repeat.
CIRCULAR 1 - It closes the morph path and the morph point moves clockwise.
CIRCULAR 2 - It choses the morph pad and the morph point moves counter-clockwise.

2.5.6 Transition

LINEAR - The morph point moves in a linear speed.
EASE IN - The morph point moves slower at beginning and speeds up.
EASE OUT - The morph point moves faster at beginning and slows down.
EASE IN & OUT - The morph point moves slower at beginning, speed up and then slows down in the end.
BOUNCE - The morph point bounces between two points on its path as it moves to the next point.
IMMEDIATE - The morph point immediately jumps from one point to another on its path.
STUTTER 1, 2, 3, 4 - The move points moves in a stuttered fashion. The way it stutters varies in these 4 modes.

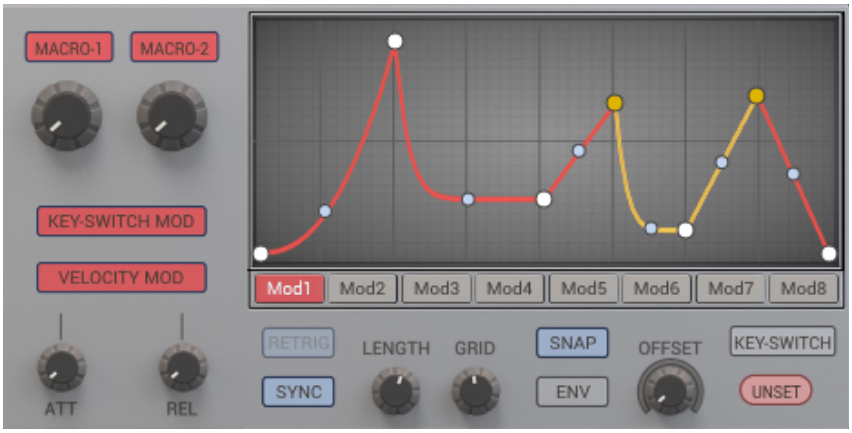
2.5.7 Sync & Interval

In default, the SYNC button is on and the Motion is synced to your DAW's tempo, the sync value shows how long it takes the morph point to move from one point to another on its path, it can be chosen from the combo box. If you'd like the Motion to run freely, just turn off the sync button and use the INTERVAL knob above to adjust the speed, higher the interval, slower the speed.

2.5.8 Retriggering (Retrig)

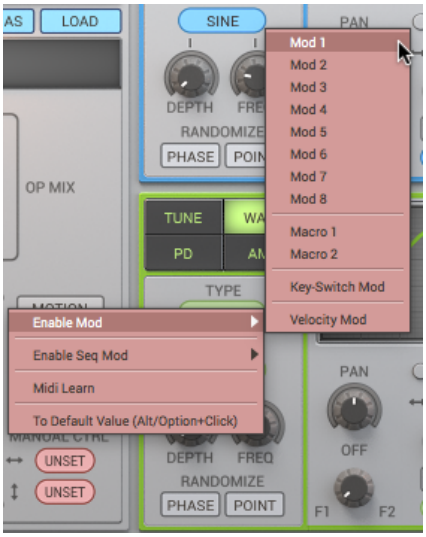
When the RETRIG buttons is on, the morphing starts from the first point every time a note is generated (but if you play the notes in legato, the retriggering will not take effects).
When it's off, the morphing carries on from where it stopped last time when a new note is generated. When the HOLD button is on, the morphing always continues on its path regardless of the note input.

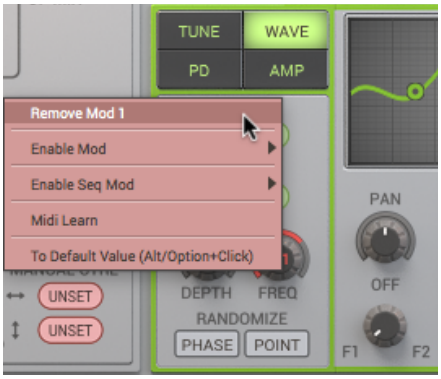
2.6 Modulations



WIGGLE offers you many modulation sources to control the synth parameters, consider these modulators as “robotic hands” that assist you in turning the knobs.

There are 8 **LFO/ENV**(Envelope) type modulators, 2 **Macro**, a **Key-Switch** and a **Velocity** modulators available.





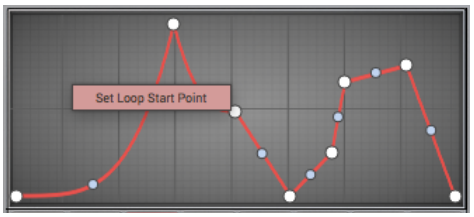
These modulators can be drag-and-drop to any of the knobs that has the modulation ring, or you can right-click on a knob and choose from the “Enable Mod” menu. Once a modulator is mapped to a knob. To remove modulation, right-click on the knob and choose “Remove Mod”.

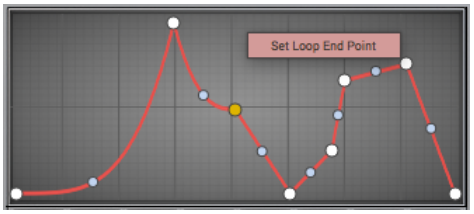
You can double-click the knob to enter **Modulation Range Mode**, then click and drag up or down to change the modulation range, when finished, double-click again to exit the range mode.

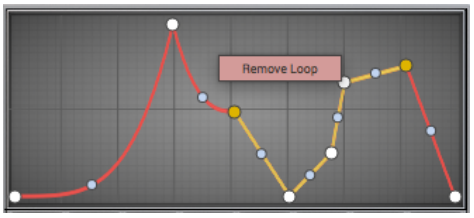
2.6.1 Mod 1 - 8

To edit the envelops of **LFO/ENV Modulators**, click on the display to add points; double click to remove points; drag the handle between two points to change the steepness of the curve; to reset the envelope, right-click on the display and choose "Reset"; to randomize the envelope, right-click on the display and choose "Random".

To switch between LFO or Envelope modes, click on the LFO/ENV button. In LFO mode, the start point and end point's positions are matched. In ENV mode, the end point becomes the **Release Point**, and the point before becomes the **Sustain Point**.







The ENV mode also has a looping function, select a point, right-click and choose "Set Loop Start" and repeat the same to "Set Loop End", then the looping portion of the modulation curve will turn yellow. To disable the loop, right-click on any point within the loop and choose "Remove Loop".

RETRIG- It only works in LFO mode, it controls if the modulator starts from the start point every time a note is generated.

SYNC/FREE - It controls if the modulator follows the DAW's tempo or run freely.

LENGTH - It controls the modulation length. When in SYNC Mode, its value is locked to the beats; when in FREE Mode, its value is set in seconds.

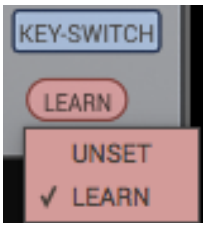
GRID - It sets the number of the guiding lines showing on the modulation display that help you draw the modulation envelope in time.

SNAP - When its on, you can snap a point to a grid by dragging it close to it; When its off, the points won't snap to any grids.

OFFSET - It only works in ENV mode, it moves the starting point of the modulator further to the right as the value gets higher. It can be modulated by any of the Modulators to create interesting effects, adding randomness to the modulation.

2.6.2 Macro

MACRO 1 & 2 can be mapped to control multiple knobs. As shown, the MACRO-1 knob is used to control the Shaping Depth and Frequency of OP4.



2.6.3 Key-Switch Mod

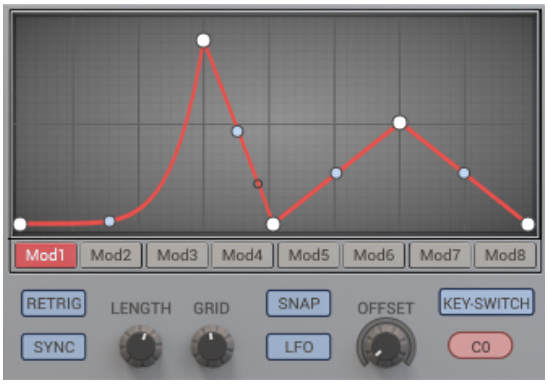
It's similar to sampler instruments that uses Key-Switch to switch between different articulations. The KEY-SWITCH MOD lets you switch between different modulators to control the knobs it has mapped to. The KEY-SWITCH MOD needs to be used along with the LFO/ENV modulators.

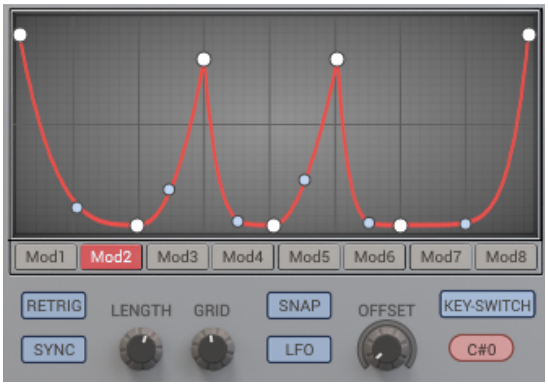
For example: First, map the KEY-SWITCH MOD to the Filter Cutoff and Resonance knobs of Filter1.

Then turn on the KEY-SWITCH buttons on MOD1 and MOD2. Assign a MIDI note to each one by using LEARN from the combo box and press the key or pad on the MIDI controller (C0 and C#0 assigned).

By doing this, now you can use the MIDI controller to switch between MOD1 and MOD2 alternatively to control the Filter Cutoff and Resonance of Filter 1.

Please notice the MIDI notes used as "key-switch" cannot trigger sounds anymore, unless you turn off the KEY-SWITCH button.



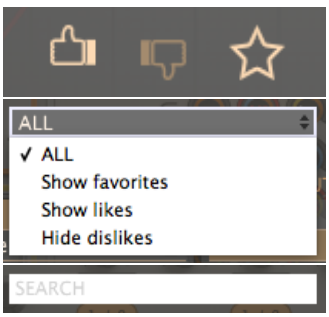


2.6.4 Velocity Mod

You can use velocity to set the modulation depth with Velocity Mod. The ATT and REL let you set the attack and release time for the modulator. Please notice, in order for the REL to take obvious effect, the sound needs to have enough release time in the first place.

3. PRESET BROWSER

Click SYNTH PRESETS button to access the browser.
SAVE - Press it for the first time when you are working from a blank or Initialized preset, it would lead you to save the preset as new one by opening the Preset Attributes Window. After loading a previously saved preset, SAVE would override the current preset's settings every time you press it.
SAVE AS - It saves the preset as a new one or you can use it to change the Type, Tag, Author and Notes info of a preset.
LOAD - Use this button if you want to load presets by manually selecting a preset using your computer's finder or file manager.
INITIALIZE PRESET - Click it to load up the initialized preset if you'd like to start design a sound from scratch.



You can **Like**, **Dislike** and **Favorite** a preset by clicking on the thumb up, thumb down and star signs in the Notes section.
You can choose to view all presets, or only the favorites and likes, or hide the dislikes.
You can also search a preset by its name or author using the search box on the top left corner.

4. UTILITY

4.1 Quality

You can choose from 3 oversampling settings. Oversampling reduces noise by helps avoid aliasing (the high frequency content generated that are beyond the processing limit of the DAW would be fold back to a frequency range that the DAW can work with, but these extra frequencies or “aliases” are not harmonic of the original signal). A higher oversampling setting would results in less aliasing, but it consumes more CPU power. Complex sounds that have lots of high harmonic content benefits from higher oversampling setting more obviously.

4.2 Master Tune

The default is set at the A440 standard (The A Note above Middle C is tuned at 440Hz as a reference). If you work on a piece of music that uses a different tuning reference such as A432, you can make adjustment here.

4.3 Record Audio

This simple recorder can record the internal audio of WIGGLE. It’s a convenient feature for you to capture audio samples while you’re experimenting with the sound design process. Press RECORD to start recording, and press STOP to stop the recording, if you like anything you just captured, then drag the DRAG tab to place the audio clip to your DAW’s timeline or to the desktop. If you push the RECORD button again, the previously recorded audio will be deleted and a new recording process starts.

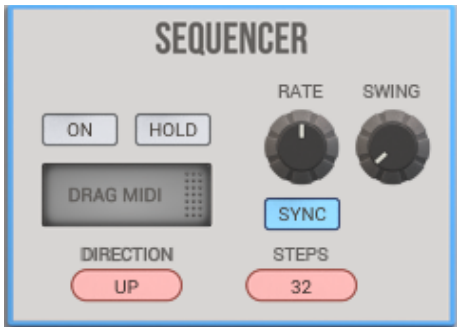
4.4 Tutorial

When you opens WIGGLE for the first time, an Interactive Tutorial would guide you to operate on some basic functions of the synth. If you’d like to revisit the tutorial, just choose “First Start”.

4.5 Left Handed

Enable it if you’re left-handed and wish to switch the Left / Right mouse clicks. It will take effect on your next start of the plug-in.

5. SEQUENCER PAGE

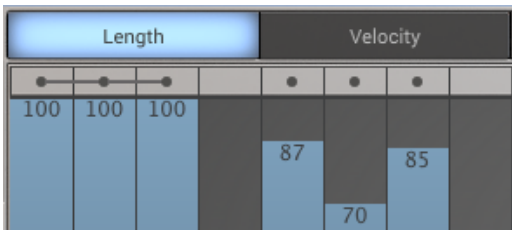


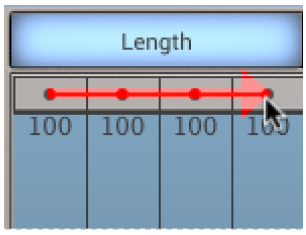
5.1 Sequencer Global Control

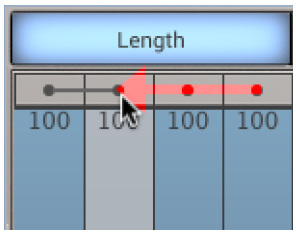
ON/OFF - It enables or disables the Sequencer.
HOLD - It sustains the sequence once generated.
RATE - It controls how fast the sequencer runs. It can be synced to the DAW's tempo; once synced, the RATE value is set to the sub-divisions.
STEPS - The number of steps in a sequence.
DIRECTION - Choosing different sequencing directions.
DRAG MIDI - If you like the currently running sequence, you can drag this tab to your DAW's timeline. You'll find the sequence becomes a MIDI clip.
SWING - It delays the even-numbered steps to create a groovy effect. When enabled, the Nudge, Stretch, Slice and Custom functions will be disabled.

5.2 Step Activation and Connection

On the Sequencer Map, the **black dot** indicates that a step is active, clicking the dot can deactivate or activate a step. You can connect steps by clicking on a dot and dragging it to any dot that is not connected. To disconnect steps, click on a dot and drag it to another dot that is already connected.





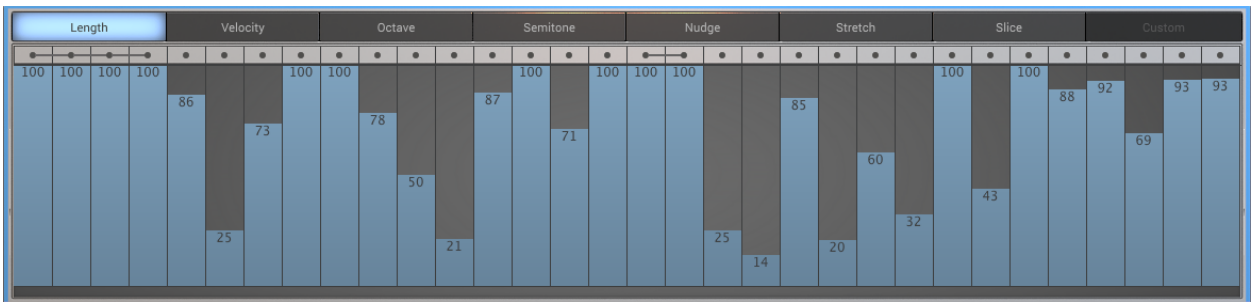


5.3 Sequencer Control Tabs

There are 8 control tabs each offers detailed control for arranging musical patterns.

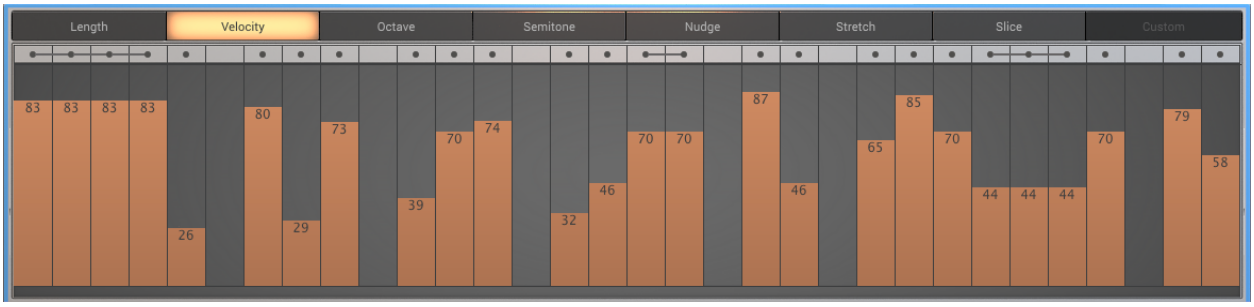
5.3.1 Length

It controls the note length of each step. You can shorten a note without tweaking the Amplitude Envelope on the SYNTH page.



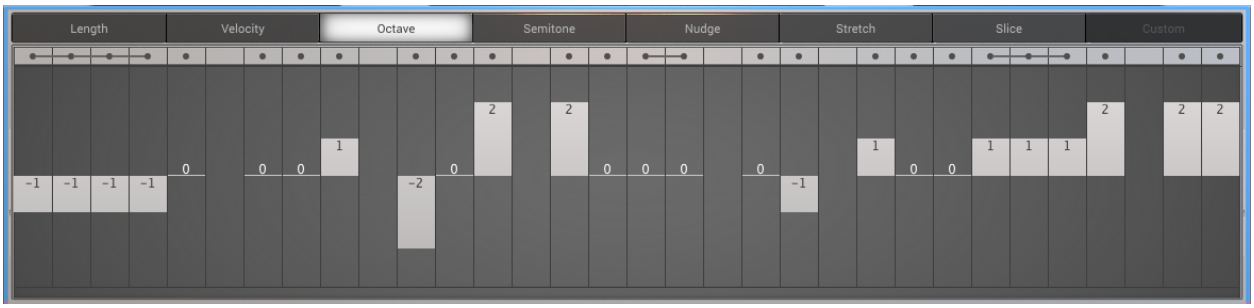
5.3.2 Velocity

It sets the velocity of each step, which is useful to emphasis certain notes. It overrides the Velocity Curve selection on the SYNTH page.



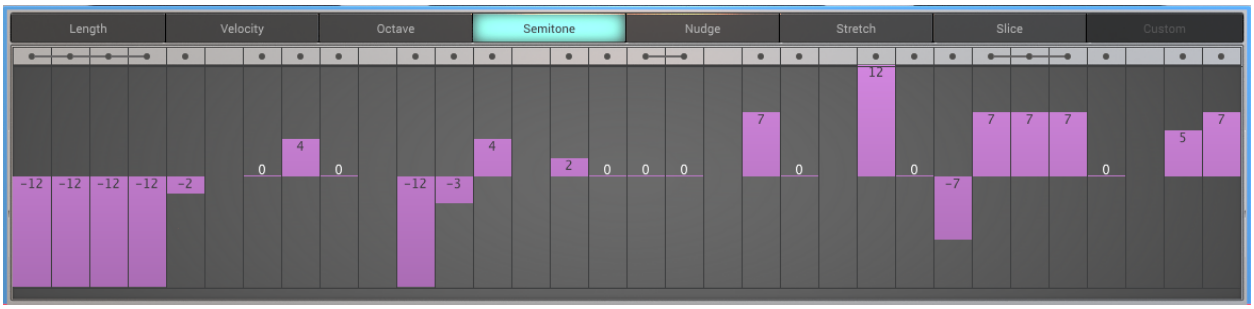
5.3.3 Octave

It transposes each step's pitch in octaves, up to 4 octaves up or down.



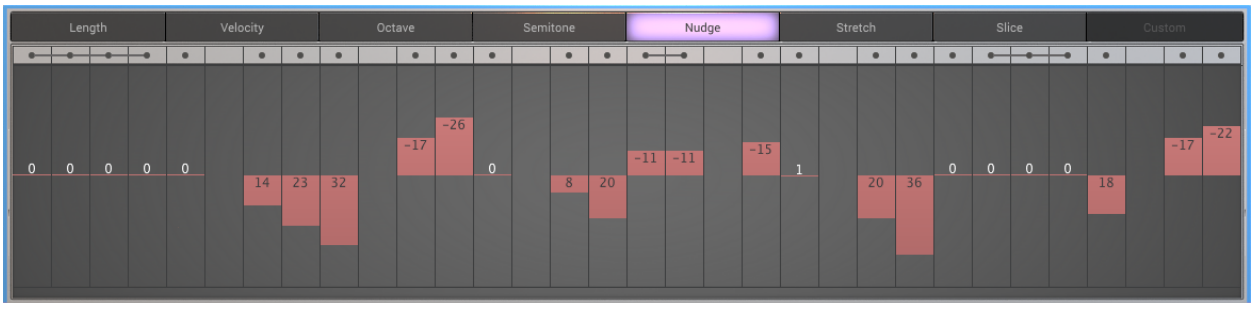
5.3.4 Semitone

It transposes each step's pitch in semitones, up to 12 semitones up or down.



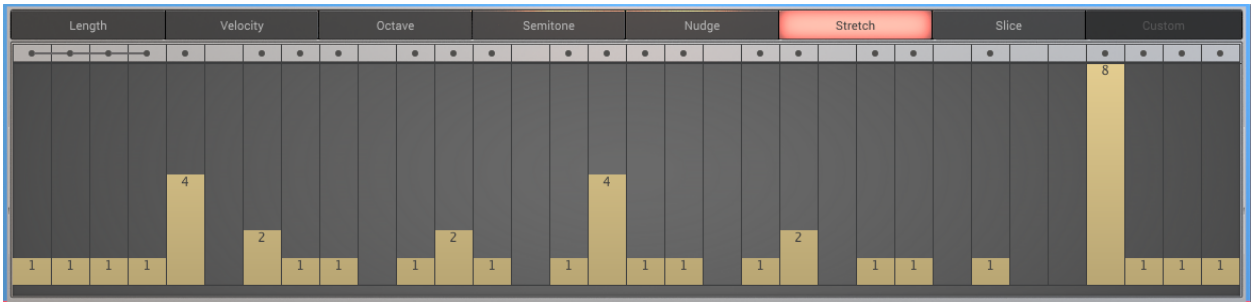
5.3.5 Nudge

It shifts the timing of a step earlier or later to create a groovy sounding result, consider it as a "manual swing" function.



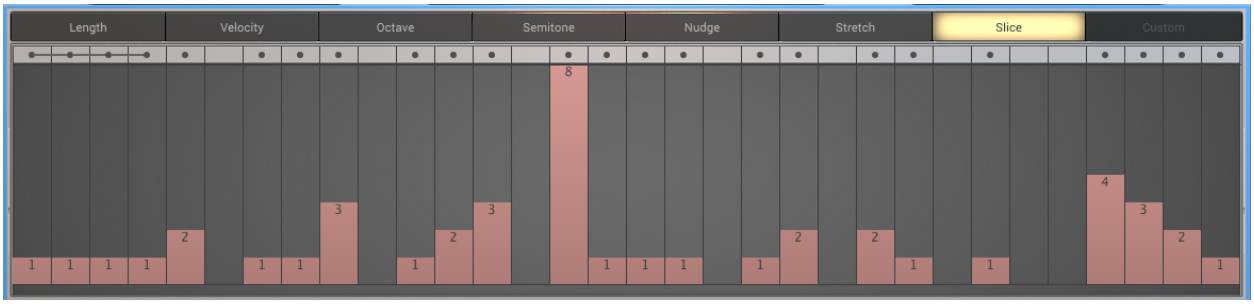
5.3.6 Stretch

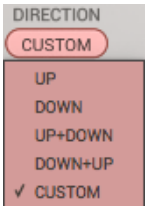
It stretches the step's length by multiplying the number you set with the current step's length. For example, if the RATE is 1/16 Note, a Stretch setting at 4 would stretch that step's note length to a 1/4 Note.



5.3.7 Slice

It divides the step's length by the set number and repeats the step. For example, if the RATE is 1/4 Note, a Slice setting at 4 would slice the step's note length to 1/16 Note and repeats it 4 times.



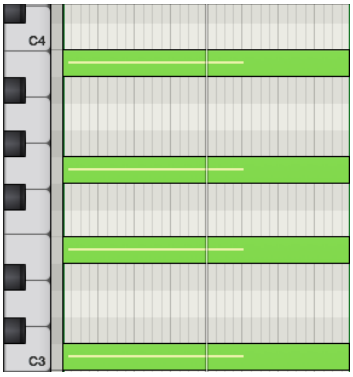


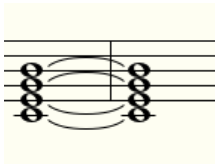
5.3.8 Custom

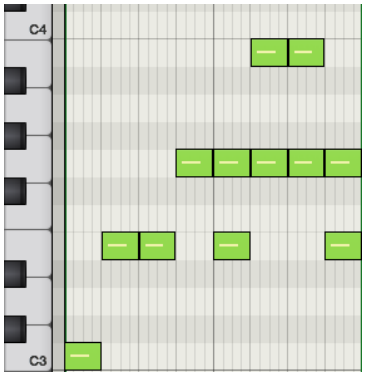
First, it has to be activated by selecting CUSTOM in the DIRECTION combo box. The Custom function is designed to create chord patterns or arpeggio patterns that cannot be achieved by the normal Up & Down directions. It works best if you play chords in Custom mode. There are 8 rows of squares that each corresponds to a note in a chord.

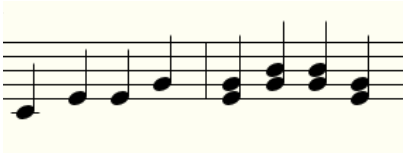
It's better to explain it with a specific example. As the picture shown, the Sequencer is set up as such - RATE at 1/4 Note; Steps set to 8 and Direction set to Custom.

If you play a C Major 7th Chord with the root note on Middle C for 2 Bars as the picture shown on the left, with the Sequencer on, the note pattern would become as the picture shown on the right.

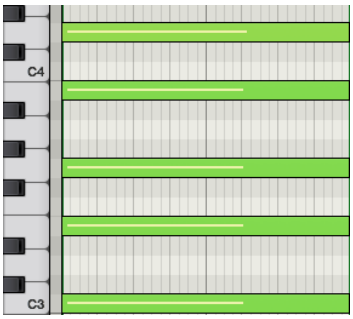


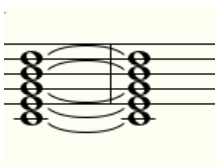


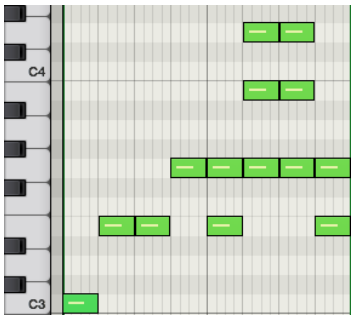


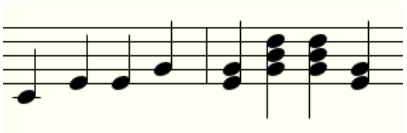


Since the sequence pattern are only drawn on the 1st to 4th rows from bottom to top, if you play a 5-Note chord like the C Major 9th with the setting above, the 5th note “D” would not make a sound, unless you had drawn the pattern on the 5th row, as shown below.



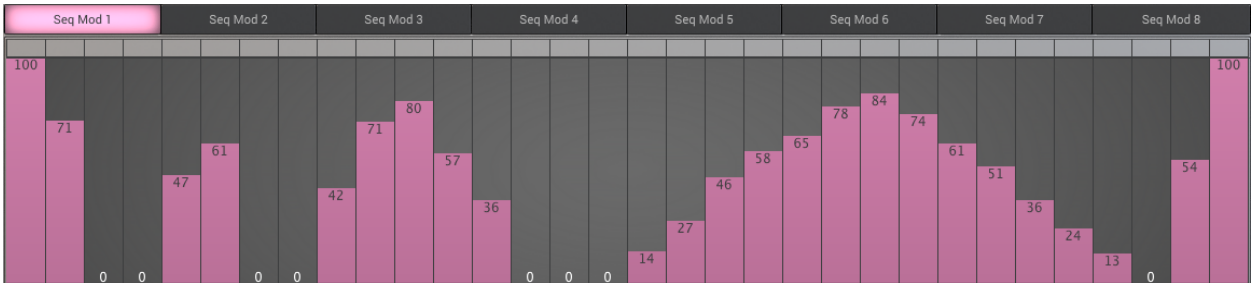




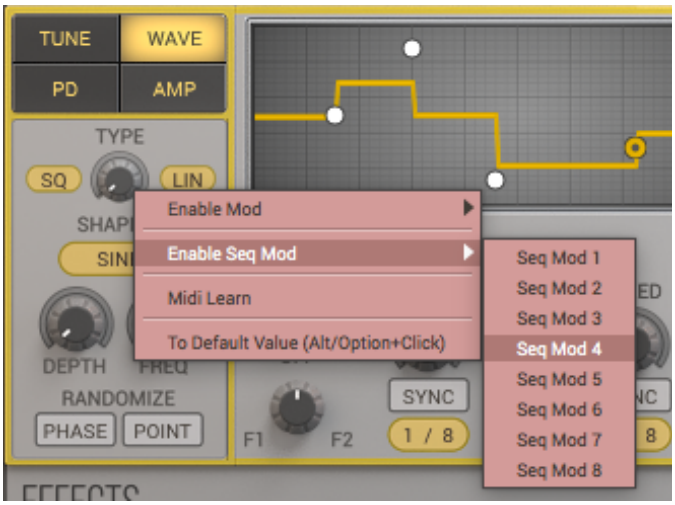


5.4 Sequencer Modulator

There are 8 Seq Mod patterns available.
Each Seq Mod has its own RATE, SYNC and STEPS settings.



You can use these step-based patterns to control any knobs that has a modulation ring on the Synth Page. To enable a Seq Mod, you need to right-click on the knob you want to modulate and choose “Enable Seq Mod”.

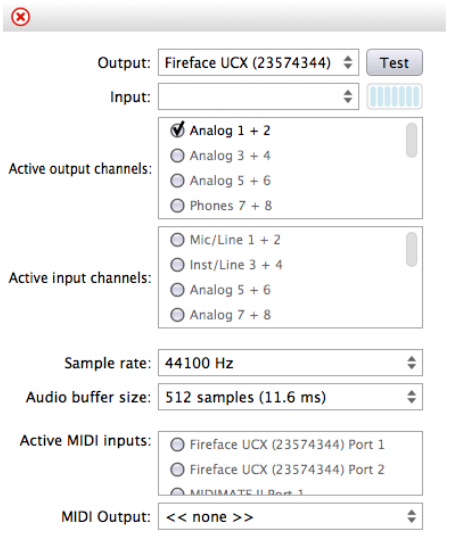


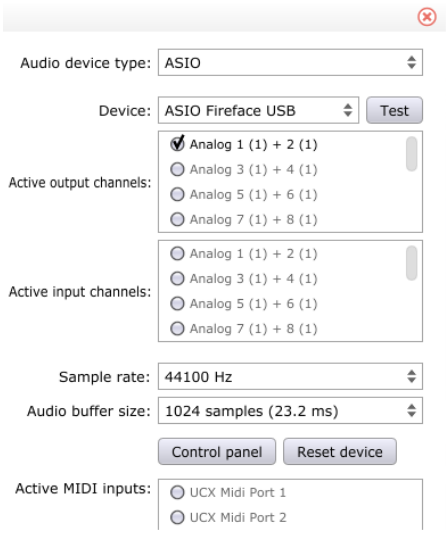
6. STAND ALONE HOST

You might just want to design sounds or take audio samples with WIGGLE outside of the DAW environment. There's a stand alone version for that purpose. Open up WiggleHost from the application folder (MAC) or from the startup menu - 2nd Sense - WiggleHost (This is the default location for the Windows installation).

Options

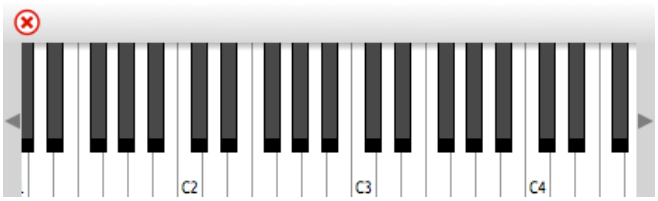
This is where you setup the audio and MIDI devices.
There's a difference between the Option window on **Mac (left)** and **Windows (right)**. On the Windows version, first you need to choose "ASIO" as the Audio Device Type and then select your audio device.





Virtual Keyboard

You can use the computer mouse to operate the virtual keyboard. The left and right arrows allow you to switch the keyboard range in octaves.



BPM Setting

You can adjust the Host's BPM here. Simply click and enter a BPM number as you wish.