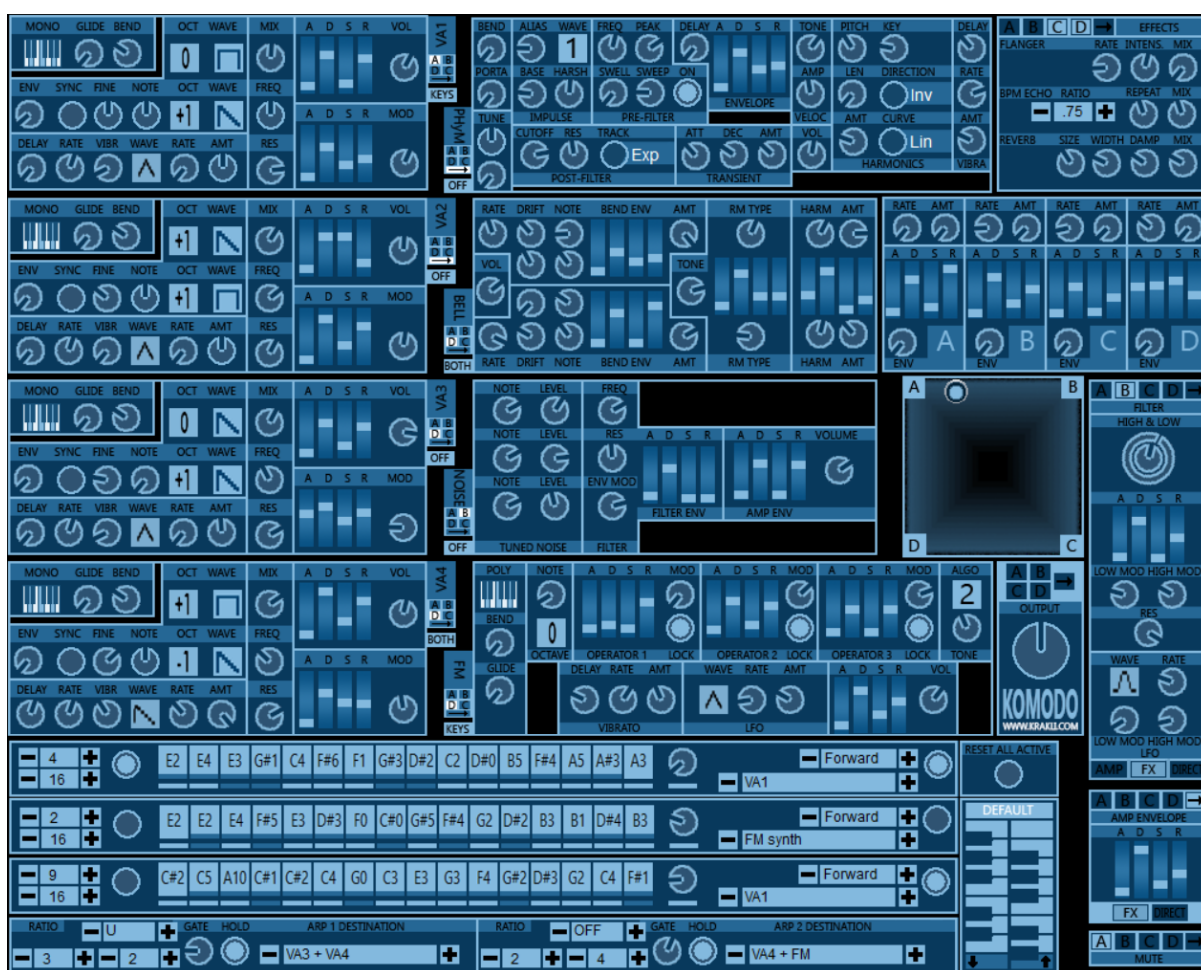


KOMODO

Multi-Module VST Instrument



This manual describes the functionality and controls of the various modules within the Komodo VST instrument. Developed by Krakli using the SynthEdit development environment Komodo is designed for use on PCs using the 32bit VST standard.

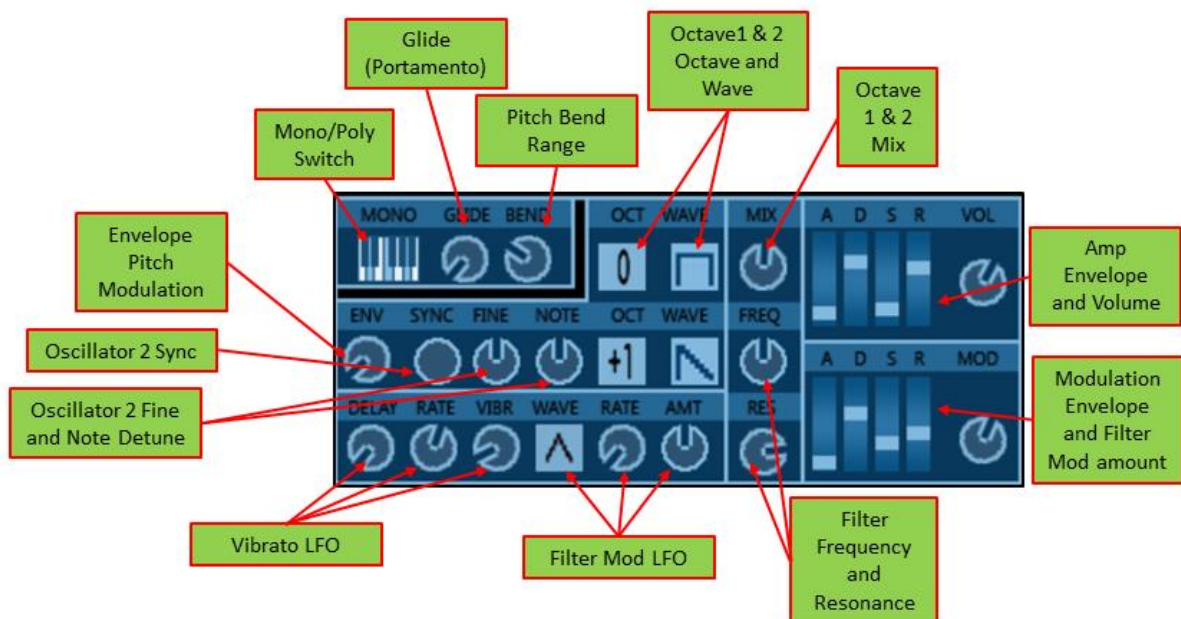


Unlike many VSTi Plugins Komodo is not really designed to be operated with every module being actively used but rather as a Pick'n'mix system using the switching of various sound generators, note generators and a complex routing system to create sounds. This manual will describe the function and controls of each module in turn on the following pages.

Sound Generators:

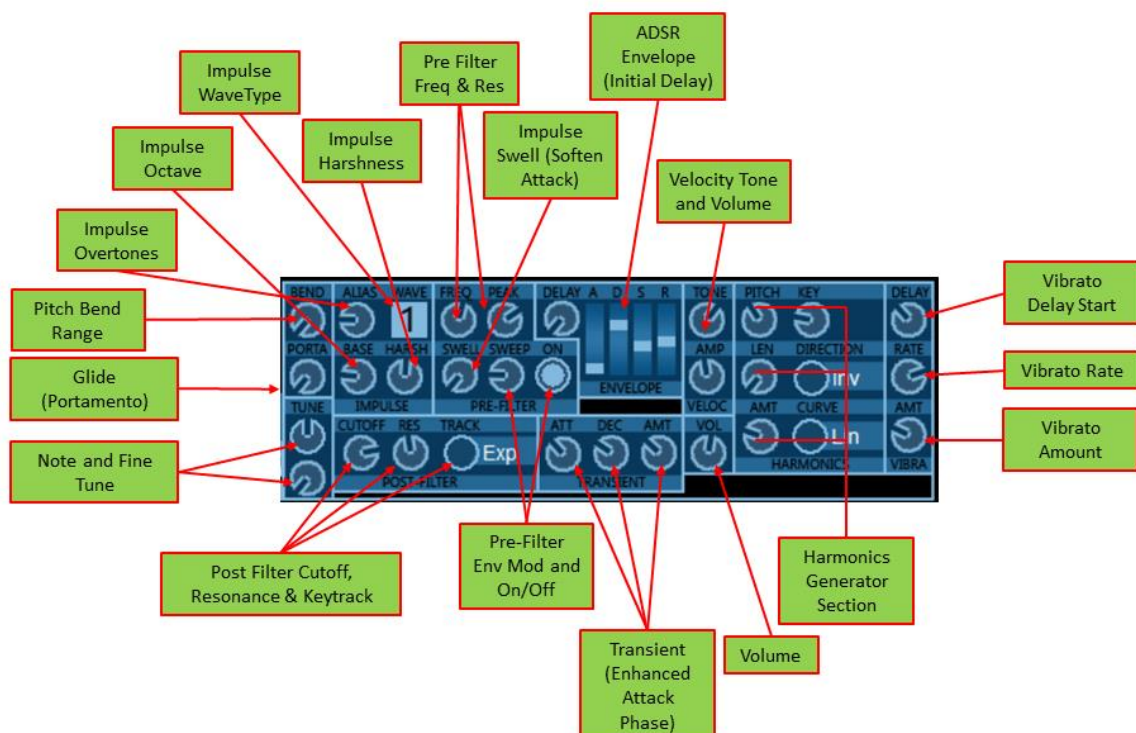
Virtual Analog Modules (VA1 – VA4)

Each Module is a 2 oscillator synth with 2 envelopes, 2 LFOs Oscillator Sync and Mono and Polyphonic Modes. Each Oscillator has a choice of 3 waveforms with the option to tune both in Octave steps and the ability to detune Oscillator 2 by note and fine amount:



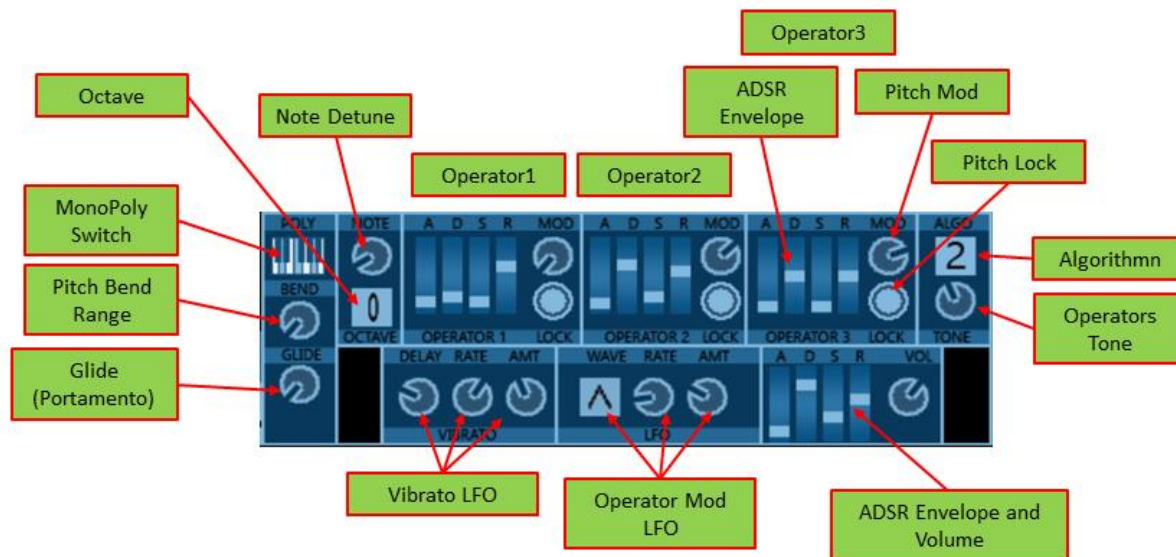
Phys Mod Module (PhyM)

A module based on the RM Krakli synths The PhyM module uses Physical Modelling to create realistic sounding Plucked sounds particularly well suited to use with the sequencers or arpeggiators.



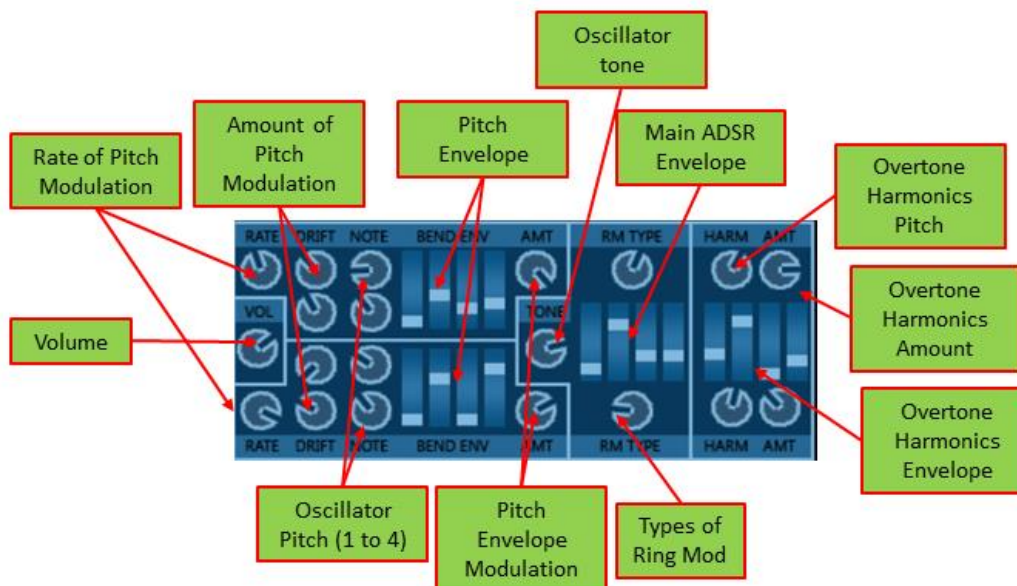
FM Module

The FM module is a very simple FM synth (for a better FM experience try K200 also from Krakli) It has 3 Operators and these are only able to be affected by an ADSR envelope in each case. Also it only has 3 algorithms, but it is still useful for sounds that would be difficult to achieve in the VA modules. The Tone Control also expands the sounds achievable. For more outrageous FM sounds you can unlock the Operators frequency using the Lock button below the Mod Control.



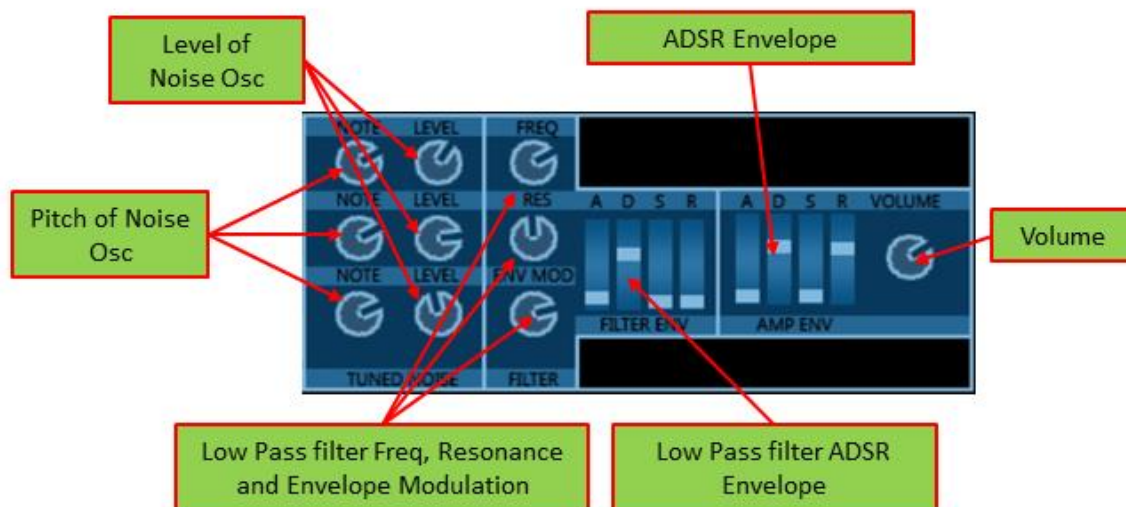
BELL Synth Module

Useful for clangorous sounds or weird ambient tones the Bell module used multiple oscillators connected via ring modulators. Pitch of all 4 oscillators is infinitely variable so this module will not necessarily be in tune with notes played on the keyboard, but this module is more useful as an effect or as a transient tone when mixed in with one of the other generators.



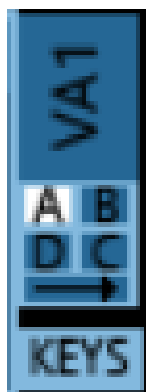
Tuned Noise

A simple module consisting of 3 noise generators passed through Hi-Resonance bandpass filters. This module is capable of 'Hissy' sine waves but can add massive low end or high sibilants to sound as well as being useful for percussive effects.



Generator Midi Control and Routing

Alongside each Generator Module is a small control panel which is used to decide which MIDI source to use as well as how to route the output of the generator.



The top area names the generator in question (in this example VA1) and is just for reference then below this are 5 choices A,B,C,D and an arrow. This section determines the destination of the Generators output. A,B,C,D are points on the Vector Mix panel mentioned later in this document. The right arrow bypasses the Vector control and goes directly to a modifier which has the matching arrow indicated as its input.

The Bottom control is used to select the Midi source used. The options are:

- KEYS. Midi input is from the keys played within the host software only
- SEQ. Midi input is from the Sequencer or Arpeggiator with the matching Module in its output choices
- BOTH. Midi input from both Host keyboard and Sequencer/Arpeggiator.
- OFF. No Midi input received, use this to save CPU if a module is not being used.

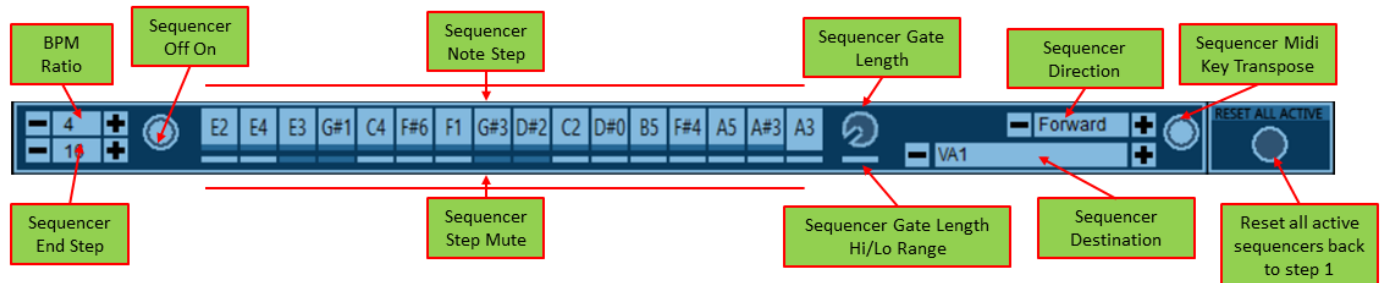
Multiple sources can be used to trigger a generator and it will play polyphonically or not depending on the MonoPoly setting of the generator if it has one.

Note Generators:

Sequencers

There are 3 matching Note sequencers inside KOMODO which can be used to trigger one or more of the Synth Modules. They are locked to a Ratio of the Hosts BPM setting.

The controls are as follows:



- The Note step controls cover the full 10 octave range, to make their movement more sensitive hold down the shift key while you scroll through them with the mouse.
- The BPM ratio's range from extremely slow to extremely fast a setting of 1, 2, 3 or 4 will be most useful in a musical context.
- The sequencer Gate length has two settings to reflect the extreme range of BPM ratios
- Turn the sequencer off when not in use to save CPU.

The Sequencer can be transposed by two methods:

Method1: Midi Transpose.

If this option is turned on then any notes played on the host's keyboard will transpose the sequencer within a range of 1 octave.. The offset is based on the note 'A' .i.e, Playing an A on the Hosts keyboard will not transpose the sequence, Playing a 'C' will transpose by 3 semitones. The transpose will only last for the duration of the key press.

Method2: Transpose via the interface

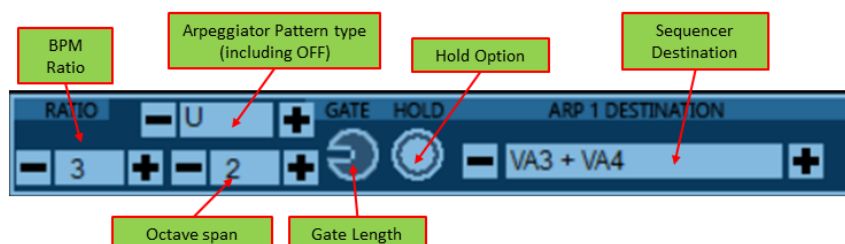


Using the keyboard on the interface you are able to transpose up or down over a range of +/- 1 octave. This affects all 3 sequencers but does last for as long as you have the interface 'note' selected. The two transpose functions will both operate together and the use of these can create some interesting effects.

Clicking on the default button removes the transpose

Arpeggiators

Komodo also contains two arpeggiators whose controls are as follows:



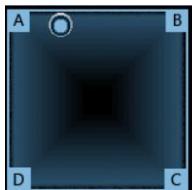
As with the sequencers the BPM ratio range is very large. The arpeggiators are not affected by any of the Transpose functions. If you don't want the Arpeggiators to run use the OFF option in the Pattern Type selector.

Modifiers:

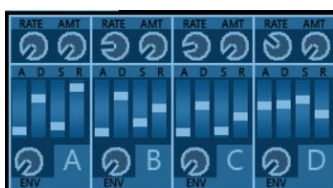
Vector Controls

If any of the generators have be routed to the A, B, C or D options then they will be affected by the vector control.

The Vector control has two parts, an XY joypad area for live adjustments of the mix,



and a set of 4 LFOs and Envelopes for dynamic control of the mix.

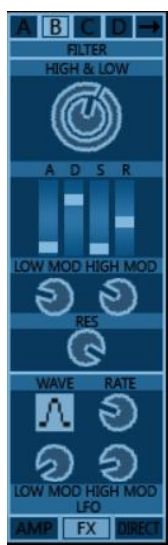


Manual control is merely a case of moving the blue circle within the XY pad area. As its simplest this offers a method to balance the mix between Generators, but this area really becomes interesting once you start using Envelopes and LFOs

Each Vector A through D has its own Triangle wave LFO with controls for Rate and Amount. It also has an envelope with controls for ADSR and an amount control. (This envelope as is the case with all the modifiers operates paraphonically. (ie. Will retrigger all audio at each new key press).

The interaction of these controls and the effect that they are having on the mix is indicated by the blue ring that animates on the Vector pad, movement of the manual control also determines the centre point of the automated controls.

Filter



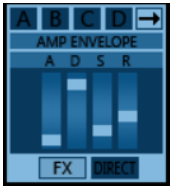
There is a filter provided for further sound shaping which is configured as a Hi and Lo Pass filter in series (meaning that it can also operate as a band pass with variable width). The filters are fixed at a 24db response rate and include resonance so can affect the sound drastically. The filter has its own envelope and LFO section with different waveforms including Noise and separate modulation of Hi and Lo frequencies in both cases.

Its inputs can be a combination of the outputs from the A,B,C,D of the vector control or the direct outputs from the generators (indicated by the right facing Arrow).

The inputs to the modifiers are mutually exclusive. i.e. selecting the A option on another Modifier will remove it from the Filters input and visa-versa.

There are 3 options for the destination from the filter module AMP which sends it onto and ADSR, FX which bypasses the AMP and sends it onto the FX section, and DIRECT which bypasses both AMP and FX and sends the output of the filter directly to the Main Volume control.

AMP



A simple Paraphonic ADSR Envelope which can be used. As with the filter its input can be the A,B,C,D output from the Vector control or the direct output from the Generators. Conversely its input could be the output from the filter if that option had been chosen in the filter module. You will note though that the generator or Vector outputs can only go to one modifier, mutually exclusive as mentioned above.

The output from the amp can only go to the FX section or DIRECT to the Main Volume control.

FX Section



The last Modifier is the FX section. Its inputs can be chosen as with the Filter and Amp modifiers and the Effects are hardwired in the Order of Flanger – BPM locked Echo – Reverb

The only output available from the FX section is the DIRECT option to the Main Volume control. Each effect in the chain has its own mix control. Moving this to the Minimum setting removes the effect from the chain.

Main Volume



Choosing A,B,C,D or direct options here bypasses all other modifiers and passes the Vector output or generators directly to the Main Volume control.

Mute Section



Although not a modifier in its own right the mute section allows you to quickly route the A,B,C,D and Direct generator outputs into a mute situation Bypassing all other routes including the main Volume