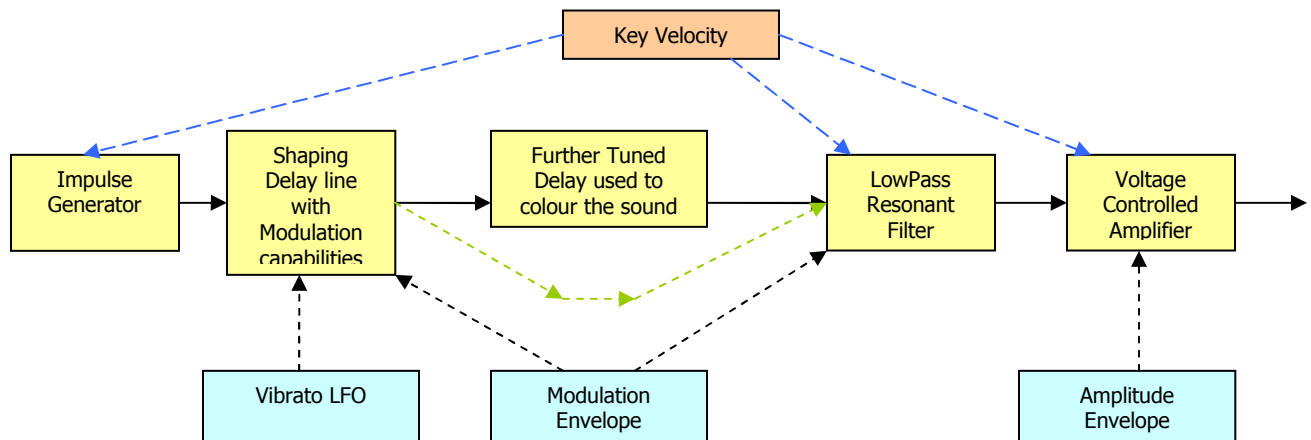StringZ is a Physically Modeled String Ensemble Instrument from Krakli Software.. This simple handbook seeks to demystify some of its controls..

Impulse Generator

The impulse to drive the tuned delay line which acts as the master oscillator in StringZ is provided by a Pink noise (a low frequency hiss) oscillator, but StringZ also offers the chance to mix in 2 extra sine wave frequencies. There are controls for Pitch and level for each. These provide a means to add extra harmonics into the impulse signal which have the result of a brighter signal. Experiment with small differences for the best effect.

The Attack control determines the intensity of the impulse start signal and higher settings create more of a 'scraped' quality to the note.

The tunnel control alters the basic spread of oscillator frequencies at its lower settings you get a more intense sound, at the higher settings you get a more 'ensemble' sound.

The velocity control alters the volume of the overtone levels the harder that you play on the keyboard.

Shaping Tuned Delay

This section is used to create the movement in the StringZ tone. The Envelope controls at the top are used to control the Attack, Decay, Sustain and release of both the Shaping Section and also as a control source for the Low pass filter mentioned further down.

The modulation controls affect the quality of the basic tone and the Env sliders adjust how much the envelope affects the tone over time.

The Cycle section controls are used to adjust the bowing or ensemble effect, with control for both rate or speed of effect and the intensity or depth of the effect.

The Colour Section

This is a further tuned delay line which can be wired In Line (ILine)with the signal, between the oscillators and the filter section or Out of Line (Oline) with the signal, with the Oscillators signal going straight to the filter and also running in parallel into the Colour unit and then onto the filter.

The Type control sets the basic form of colouration that the unit provides, small movements will deliver vastly different results.

The Intensity control feeds the colouration back onto itself to increase the perceived effect.

The numbered slider alter the volume of the tuned frequency bands. NB With all sliders at the minimum setting the unit has no effect on the signal.

The Damp control calms the effect slightly when move to the top of its travel

The Cut and Resonance controls bring in a HI&Bandpass filter which can be used to remove some of the boominess in the colour effect or as an effect in their own right.

LowPass Resonant Filter

This is a basic SV filter with a couple of extra controls.

The Cut and Resonance controls affect the basic cutoff frequency and resonance or peakiness of the filter effect. However because the oscillator might have already passed through the colour unit the results achieved are not always as you might expect from a tradition subtractive filter.

The Env control adjusts how much the modulation envelopes ADSR signal affects the Cutoff frequency of the Filter.

The Velocity control affects how much the 'hardness' of your keypresses affect the cutoff frequency.

The Track control adjusts how the cutoff frequency is affected by the position of the note that you are playing is in relation to the whole keyboard, two further controls affect the shape of the keytrack effect (Normal or Inverse) , and the shape of the curve of the Track effect (Linear, Exponential curve or Inverse Exponential curve)

Volume Section

A simple section providing an independent ADSR envelope controlling the volume of the signal over time, An overall volume control and two controls for velocity control: The Velocity slider which adjusts the volume of the notes in relation to how hard you play the keyboard, and the A-Veloc control which shortens the ADSR attack cycle in relation to how hard you play the keyboard.

The Glide Section

Is used to provide a simple glide up or down at the start of each note played. The speed control determins how long the effect takes to reach its highest point. The Hold control determins the time spent at the highest point and the range slider affects the overall tuning offset that the effect applies. The Up/Down selector determines if the sweep is up to the correct note pitch, or down to the correct note-pitch.

Vibrato Section
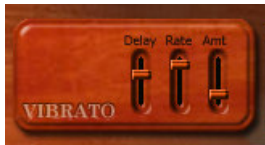
Used to provide a vibrato to the notes pitch the controls are used to determine the delay before the effect comes in, The speed or rate of the effect and the amount or intensity of the vibrato effect.

Portamento Slider

A single slider used to control the rate of sweep from one note to the next. This occurs when one note is still held down as a new one is played. In Polyphonic mode this effect is a little harder to predict due to the note allocation rules, however in the mono modes the effect is far more predictable.

Mono Section
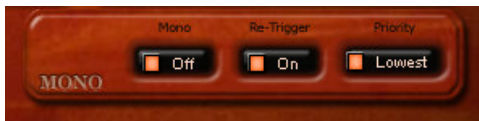
A section used to switch StringZ into a monophonic or one note playable mode. Once switched on the further two switches become applicable and are used to decide if the envelopes retrigger on each new keypress, regardless of if the previous note has been released, and whether the highest or lowest note played takes precedence.

We hope that you enjoy using StringZ as much as we enjoyed developing it. Many thanks to the various beta testers and patch writers who helped to bring this plug-in to completion.

By its very nature StringZ sounds most like its intended emulation when it is played through a little reverb or delay. We have deliberately not included these within the design, however, as the majority of hosts include good quality units as part of their basic feature set. If this is not the case there are a number of excellent 3rd party Reverb units which are free and yet give excellent results. Further details can be found on the forums at www.kvraudio.com or www.krakli.co.uk