MegaHertz

Thank you for choosing Exonic UK!

This brief manual will detail the various controls of MegaHertz, and explain their functionality.

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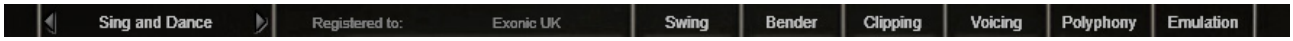
Utility Bar



Preset browser:
The preset browser is used to select the one of the many categorised presets to be played.
This can be done either by selecting a specific preset, or by using the arrow keys to jump +/- 1 preset.
Right clicking the preset browser opens a quick menu with extra functionality such as saving a new preset.
Saved presets will automatically appear in the 'User' category.

It is recommended to save presets as *.vstpreset in Windows, and as *.aupreset on Mac.
*.xmlpreset should only be used when attempting to transfer presets between different operating systems.

Registration information:
Once registered, your user name will appear here.

Swing:
This controls the global swing amount.
It is possible to enable/disable swing for various parts of MegaHertz individually using dedicated controls.

Bender:
Controls the maximum amount in semi-tones, by which the pitch bend wheel raises/lowers the pitch.

Clipping:
Selects whether the overall output of MegaHertz is internally clipped, and which type of clipping is used.
Hard clipping only affects the signal once the level rises above 0dB.
Soft clipping starts affecting the signal at much lower levels, often leading to a more “natural” sound.

Voicing:
Selects whether MegaHertz is polyphonic, monophonic 1st note priority (Legato), or monophonic last note priority (Retrigger).

Polyphony:
Selects the maximum, number of voices that MegaHertz is allowed to play simultaneously.

Emulation:
Provides three levels of emulation authenticity, with higher levels sounding more analogue at the expense of higher processor overhead.

Oscillators

Shape:
Selects one of four wave shapes as the basic building block of the sound.

Oct:
Controls the pitch of the oscillator in one octave increments.

Tune:
Controls the pitch of the oscillator in one semi-tone increments.

Fine:
Controls the pitch of the oscillator in one cent increments.

PW:
Controls the width of the pulse wave (only active when 'Pulse' is selected as the wave shape).

Sub:
Controls the level of a sub oscillator, pitched 1 octave below OSC1.

FM:
Controls the amount by which OSC1 is modulating the pitch of OSC2.

Sync:
When engaged, locks the start phase of OSC2 to the start phase of OSC1.

Mixer

OSC1:
Controls the level of oscillator 1 and its sub oscillator before entering the filter.

OSC2:
Controls the level of oscillator 2 before entering the filter.

Ring:
Controls the level of the ring modulated sum of OSC1 and OSC2 before entering the filter.

Noise:
Controls the level of the internal stereo white noise source before entering the filter.

VCF

Freq:
Controls the cutoff point of the filter.

Res:
Determines the resonance amount of the filter.

Drive:
Controls how much the signal is saturating the filter.

Env:
Controls how sensitive the filter cutoff point is to its dedicated envelope.

Kbd:
Controls how sensitive the filter cutoff point is to the pitch of played noted.

Att:
Controls the attack rate of the dedicated envelope.

Dec:
Controls the decay rate of the dedicated envelope.

Sus:
Controls the sustain level of the dedicated envelope.

Rel:
Controls the release rate of the dedicated envelope.

Vel:
Controls how sensitive the envelope amount is to velocity.

AT:
Controls how sensitive the envelope amount is to aftertouch.

Mode:
Selects between three different types of filters.

4 Pole:
When engaged, the filter will operate in 24dB/Oct mode rather than 12dB/Oct mode.

VCA

Volume:
Controls the global output level.
Two clipping indicators indicate whether the left an right channels are currently internally clipping.

Display:
Enables/disables the stereo oscilloscope display.
The oscilloscope draws bright green for mono signals, dark green for the left channel, and yellow for the right channel.

Att:
Controls the attack rate of the dedicated envelope.

Dec:
Controls the decay rate of the dedicated envelope.

Sus:
Controls the sustain level of the dedicated envelope.

Rel:
Controls the release rate of the dedicated envelope.

Vel:
Controls how sensitive the envelope amount is to velocity.

AT:
Controls how sensitive the envelope amount is to aftertouch.

Punch:
When engaged, adds a brief amplitude spike during the initial stage of the envelope.

Effects

Delay:
Controls both the mixture and the feedback amount of the internal delay effect.

Rate:
Controls the rate of the internal delay effect.

X-Feed:
When engaged, routes the output of the left delay into the input of the right delay and vice versa.

Phaser:
Controls the amount of the internal phaser effect.

Stereo:
determines whether the internal phaser effects works in stereophonic or monophonic mode.

Dist:
Controls the amount by which the signal is distorted.

Chorus:
Controls the mixture and the depth of the internal chorus effect.

Reverb:
Controls the mixture and the feedback of the internal reverb effect.

Low/Mid/High:
Controls the amplitude of the low, mid, and high frequencies respectively.

Unison:
Gradually introduces, detunes and spreads up to 4 extra virtual voices for each “actual” voice being played.
This unique unison method affects neither polyphony, nor processing overhead.

LFO

Shape:
Selects the wave shape of the low frequency oscillator.
'S&H' is a random value generator.

Rate:
Controls the frequency of the LFO.
The range of 'Rate' is determined by the 'Sync' control.

Sync:
When engaged, locks the 'Rate' to divisions of the current tempo.

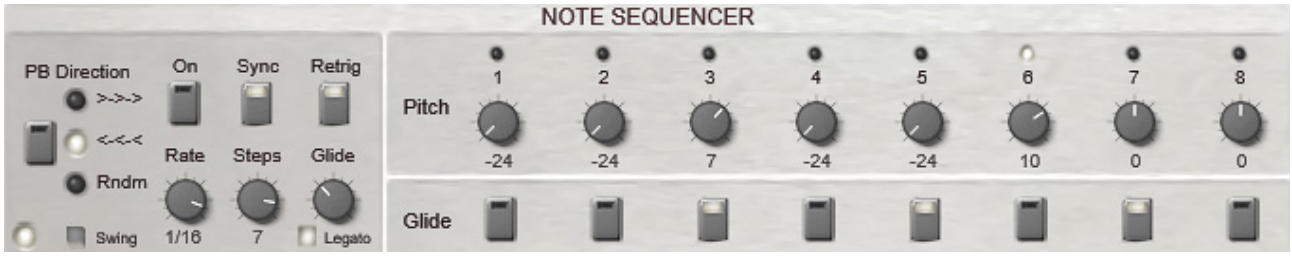
Retrig:
Determines whether the start phase of the LFO is reset upon each key press.

Smooth:
Makes the transition between the peaks of the LFO more gradual.
Especially usefull for 'S&H'.

Swing:
Determines whether the LFO is affected by the global selected 'Swing' amount.
Only works when 'Sync' is enabled.

Mono vs Poly:
The Mono LFO affects all voices simultaneously, while the Poly LFO can affect each voice individually.

Note Sequencer



PB direction:
Determines whether the sequence plays forward, backward, or randomly switches between the two.

On:
Determines whether the sequencer is directly affecting the pitch, or used exclusively as a modulation source in the patch bay.

Rate:
Controls the frequency of the sequencer.
The range of 'Rate' is determined by the 'Sync' control.

Sync:
When engaged, locks the 'Rate' to divisions of the current tempo.

Retrig:
Determines whether the start phase of the sequencer is reset upon each key press.

Steps:
Determines the maximum amount of individual sequencer steps to be played.

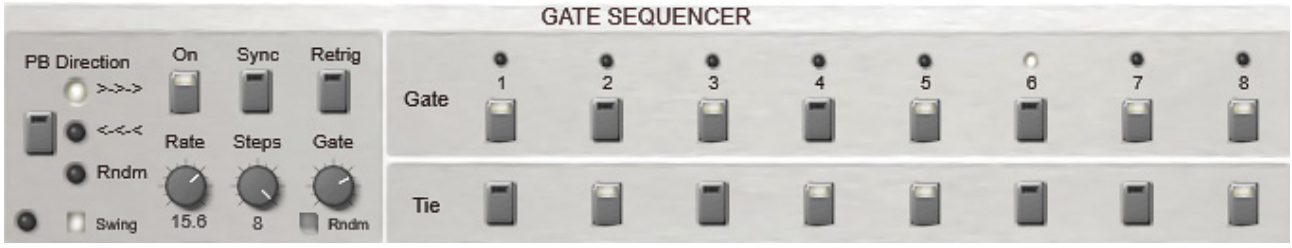
Glide:
When sequencer is off, controls the global portamento amount.
When sequencer is on, controls the portamento amount only of steps that have their dedicated (per step) 'Glide' button is enabled.

Legato:
When engaged, glide will only affect notes that are played while a previously played note is still held.

Swing:
Determines whether the Sequencer is affected by the global selected 'Swing' amount.
Only works when 'Sync' is enabled.

Pitch:
Controls the pitch modulation of individual steps in one semi-tone increments.

Gate Sequencer



PB direction:
Determines whether the sequence plays forward, backward, or randomly switches between the two.

On:
Engages the 'Gate Sequencer'

Rate:
Controls the frequency of the sequencer.
The range of 'Rate' is determined by the 'Sync' control.

Sync:
When engaged, locks the 'Rate' to divisions of the current tempo.

Retrig:
Determines whether the start phase of the sequencer is reset upon each key press.

Steps:
Determines the maximum amount of individual sequencer steps to be played.

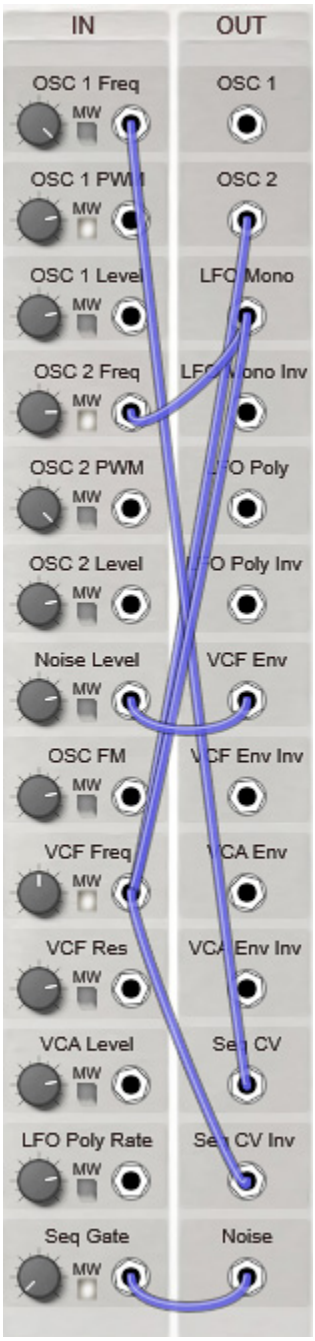
Gate:
Controls the gate length of notes that have their individual 'Gate' button enabled.

Rndm:
Randomises the overall gate length.

Swing:
Determines whether the Sequencer is affected by the global selected 'Swing' amount.
Only works when 'Sync' is enabled.

Tie:
Determines whether a specific step is tied to the adjacent step.

Patch Bay



Out:
Accesses the individual outputs of various modules.

In:
Accesses the individual inputs of various modules.
Each input has a dedicated modulation amount knob.

MW:
Determines whether the modulation amount is controlled via the modulation wheel.

Cables:
Multiple inputs and outputs can be connected using virtual cables.
To disconnect a cable, right click on the cable at one of its ends (either the 'In' or the 'Out' end).