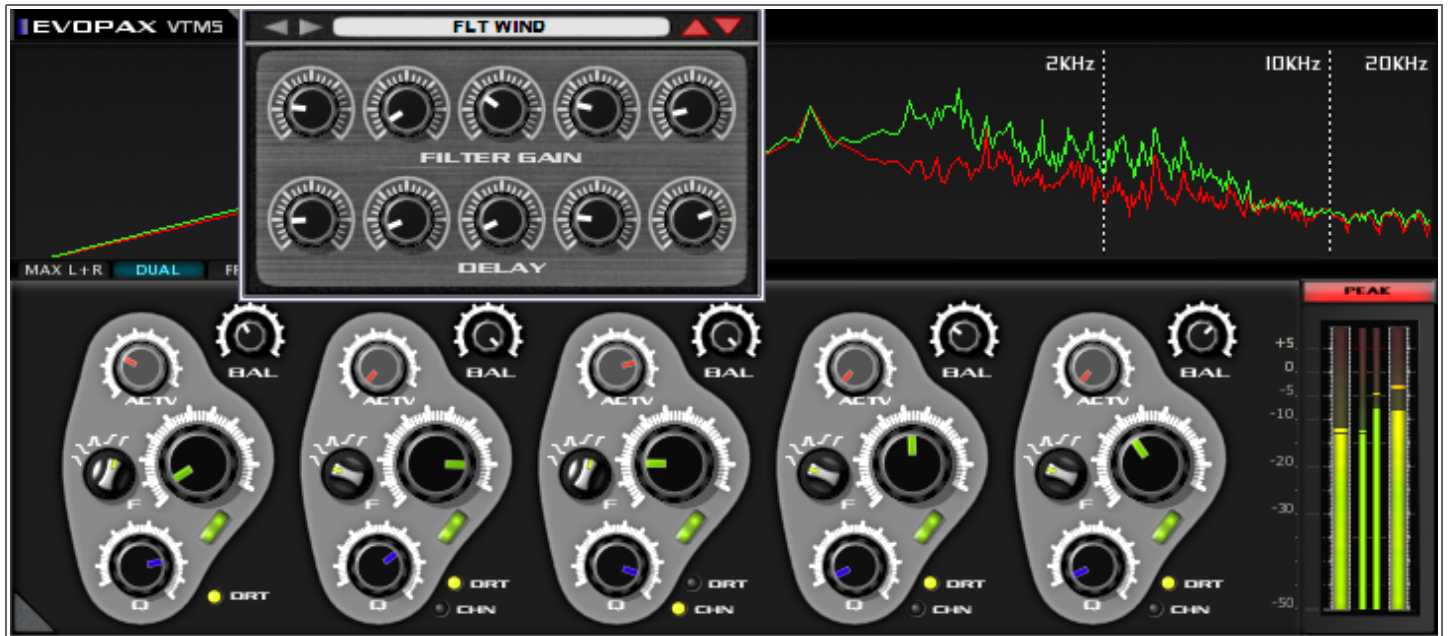


VTM5
POLYPHONIC EQ
MANUAL

OVERVIEW

Besides being an equalization with parametric LP, HP, Peak, Low Shelving and High Shelving filters—the first three with resonance—it has been included an internal mixer for mixing independently each one of the five voices, and the possibility of making changes in the time line. This system permits to add fast and commodiously polyphony getting a new degree of possibilities. It is suggested to utilize the plug-in not only like an equalization, or maybe for creating delay based effects, but also for incrementing the degree of presence of any sound. It's optimized for low consumption and uses one of the world fastest mathematical and FFT routines. It should work simultaneously tens of plug-in instances, so don't hesitate to use VTMS in a unique snare!



VTMS Main panels

VTMS operates in two modes: DRT and CHN, shortening of 'DIRECT' and 'CHAIN' respectively. The first means that the channel is independent of the rest. In Chain Mode the filter takes its input from the filter preceding it from the left.

Since 1.2 version it have been added a spectrum analyzer worked for being comfortable, avoiding excessive blinking or an too fast actualization. In the configuration menu the user can configure options like line colors or more technical parameters such as variables that affect the manner of representing frequency. Visual saturation warning, RMS and peak metering help to control that the permitted volume levels don't surpass the allowed limits.

Multiple efforts was destined in selection, creation and algorithm testing for guarantee sound quality. The internal 64 bit process truly entail more precision/curvature in the task of calculating coefficients to digital filters, although in other typology of effects seems more a resource waste.

The option High Precision Mode changes the computation mode to “per sample” instead of pre-configured one that elaborate them in groups, and it is recommended to work without HPM. But this option assures that in all the process chain doesn't exist neither interpolation methods or other mathematical approximations. With high end equipment should be possible to perceive differences and it's also secure that the filters seem more stable operating at low frequencies or with maximum levels of resonance.

INSTALLATION

- 1) Uncompress the archive with any .zip tool.
- 2) Click in the icon “setup.exe” using an account without limited rights.
- 3) Introduce name, surname and activation code.
- 4) Select the installation folder recognized for the VST host as usual.

Anti-virus and system protection note: the installer places an archive denominated VTM5CoreA.dll in the system folder.

USER INTERFACE

MAIN PANEL



- 1. Peak warning.
- 2. Panning knob.
- 3. Gain Knob. It is deactivated with LP and HP filters.
- 4. Peak meter.
- 5. Frequency knob.
- 6. Filter selection.
- 7. RMS meter.
- 8. On / off switch.
- 9. Mode selector.
- 10.. Info panel.

MIXER

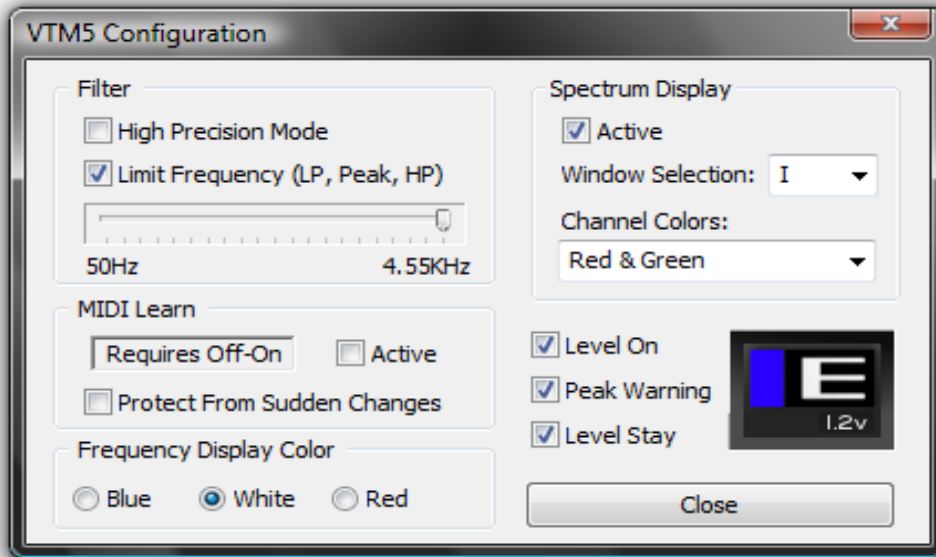


This icon activates the mixer window:

CONFIGURATION

The configuration menu appears when this area is clicked:





FILTER OPTIONS

High Precision Mode .— Means raw processing without interpolation tricks.

Limit Filter Frequency .— Setup the highest limit in Low Pass, Peak and High Pass, multiplying knob range.

MIDI LEARN

Active.— Check it for activating MIDI Learn.



CONTROL key + RIGHT MOUSE activates MIDI Learn in the knob of interest.



ALT Key + RIGHT MOUSE forgets the last setup.

Protect from sudden changes.— When an external control is set and exists other change from the user interface, only the same last value before using MIDI or automation in a fixed range could adjust the knob.



When CONTROL key is pressed, Frequency Knob uses X10 resolution.
With Limit Frequency option are reachable 1Hz steps.

FILTER MODES

POLYPHONY CASE



In Direct Mode (DRT) five independent voices for mixing together.

CHAIN MODE



Chain Mode (CHN). Each filter is feed of the immediately prior with left to right flow

also,



starting in any direct.



This is an example of double chain.

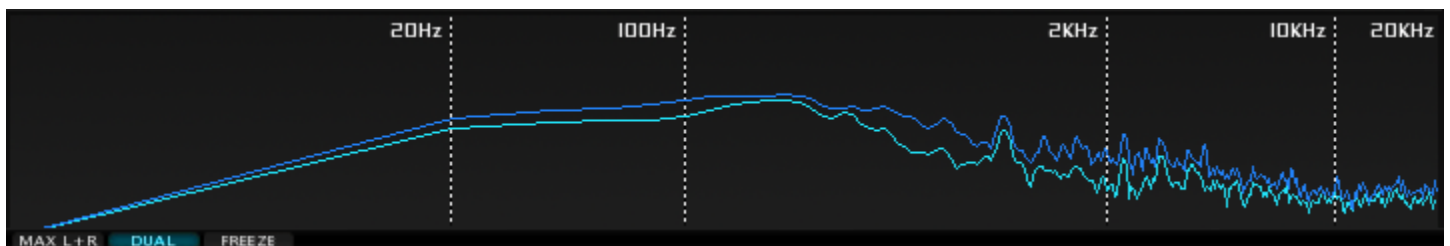
WRONG SETUP:



This configuration will not produce sound in the activated filter

In chain mode the rightmost mixer volume knob is the general gain of all the filters. If other volume knobs are active it's produced a sum of volumes. Testing different values could enhance a frequency of interest in one part of the chain.

SPECTRUM ANALYZER



MAX L + R: Average value of the two channels.

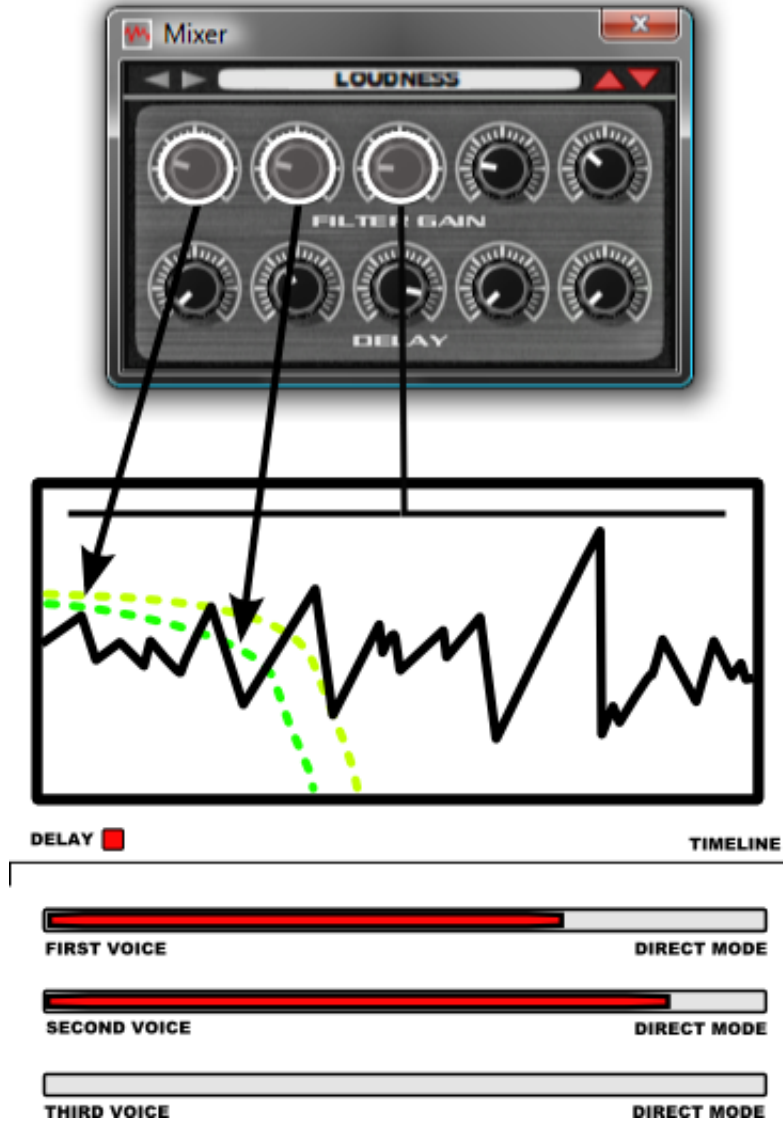
DUAL: Stereo frequency representation.

FREEZE: Stop the analyzer.

PRESET EXAMPLE I

The next is an example which only can be made making use filters with high resonance, adding polyphony whose gain it is controlled in the mixer, and finally delay. All in the same track, speed an easily, without altering the work rhythm.

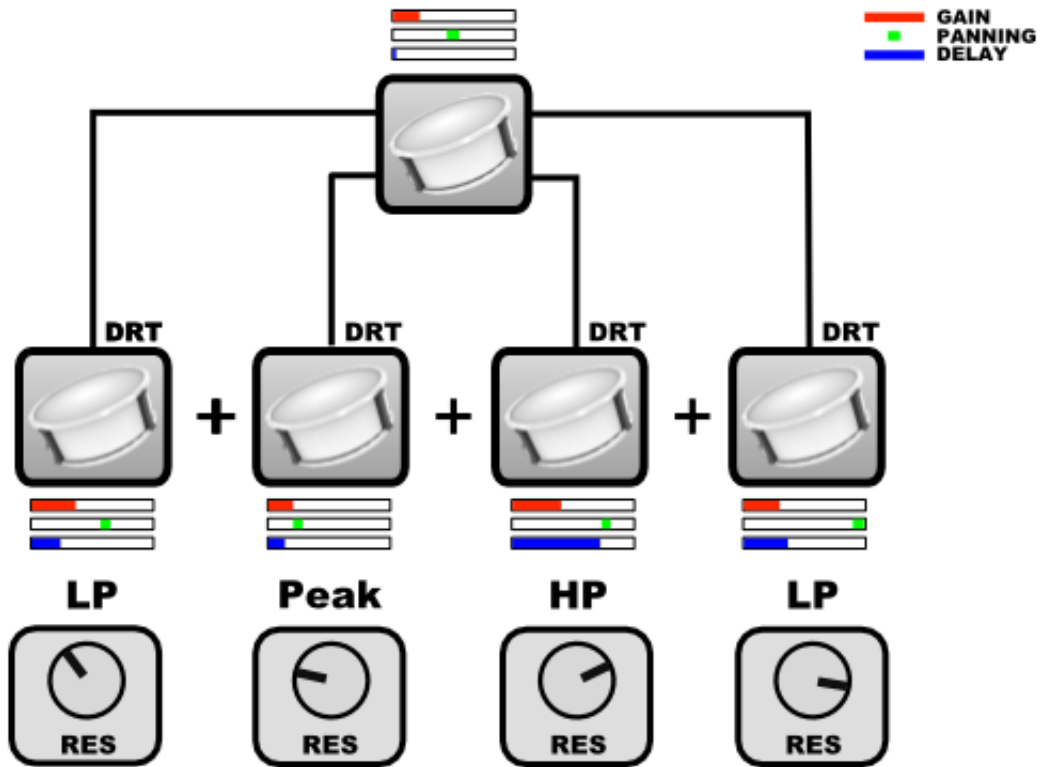
- 1) Activate three filters in DRT mode.
- 2) Apply a LP filter at 50Hz to two voices and configure the resonance until the maximum without reaching oscillation.
- 3) Add unequal delay to each voice.
- 4) Also optional would be mixing a clean voice.



In step three it does not been generated the habitual FX known by "phaser" but loudness increment.

PRESET EXAMPLE II

In some music genres (house, funky...) it's utilized a method that consist in slightly delaying the snare and to construct several layers. VTM5 Polyphonic EQ can be used for achieving this effect.



TECHNICAL FILTER INFO

I.M. (Interpolation Mode) means that the process is made in blocks of 64 samples. Remember that the sample rate maybe is 44100 or even 96000 so the difference is almost inaudible.

H.P. (High Precision), each sample is processed.

Fixed: 20Hz to 4.55Khz in all filters except Peak in I.M. 30Hz to 4.55Khz.

LOW PASS

Active frequency: 14Hz to 20KHz.

LOW SHELVING

Active frequency: 37Hz to ~5.7KHz.

PEAK

Active frequency: I.M. 30Hz to 20KHz, H.P. 14Hz to 20KHz.

HIGH SHELVING

Active frequency: ~6.5KHz to 20KHz.

HIGH PASS

Active frequency: 20Hz to 20KHz.



Although 14Hz is out of the audible range it permits different kind of EQ curves.

KEYS

CONTROL	+	MOUSE LEFT	Increase knob resolution
SHIFT	+	MOUSE LEFT	Reset balance and activity knob value
CONTROL	+	MOUSE RIGHT	MIDI Learn
SHIFT	+	MOUSE RIGHT	MIDI Forget

ADVANCED REGISTRY OPTIONS

If it's necessary to configure VTM5 for an unusual sample rate, navigate in registry options to this key:

HKEY_CURRENT_USER\Software\evopax\Digital Species\VTM5

...and assign an one in "Use External Fs" option. Now, the plug-in will utilize the DWORD value specified as exclusive sample rate.

Warning: This option could cause dangerous instability if the host is running at different sample rate. For avoiding potential and irreversible difficulties, test it with almost zero volume.

SYSTEM REQUIREMENTS

Recommended CPU: 700 Mhz with 256 of RAM or higher. SSE2, SSE3 instructions enabled. AMD or Intel.

Memory consumption: Less than 5Mb.

Supported sample rate: 44.1KHz, 88.2KHz, 96KHz or any.

Internal engine: 64Bits, output 32Bits.

Operate system: Exclusively Windows XP or Vista.



It's not recommended to use more than 32bit / 96KHz for non scientific audio

Max load program number: 128

Not recommended use in: Audition, SF.

For any consult, compatibility issue or bug report, please send an email to support@evopax.com