

## 1 Introduction

Retoone is a VST virtual effect for Windows. It requires a VST compatible host to run. VST and Windows are trademarks of the respective owners.

## 2 General description

Retoone is a multi-voice pitch-shifter and stereo chorus with midi control functions.

It has one input and two outputs (stereo pair).

The interface has been kept as simple as possible, by means of multi-function and graphical controls, but it is a very powerful effect.

Retoone contains three interacting modules:

- three voices (plus direct) pitch shifter with "humanizing" functions
- three voices (plus direct) stereo chorus
- stereo image positioning with mid-side control

Main uses are:

- fixed or midi/automation controlled harmonizing chorus
- unison voice doubling
- stereo chorus

## 3 Installation

Copy the dll file to your host's plugins directory.

No authorization procedure is needed. The software is custom licensed on order (reference on the right-lower part of the interface).

## 4 Interface

The interface is subdivided in:

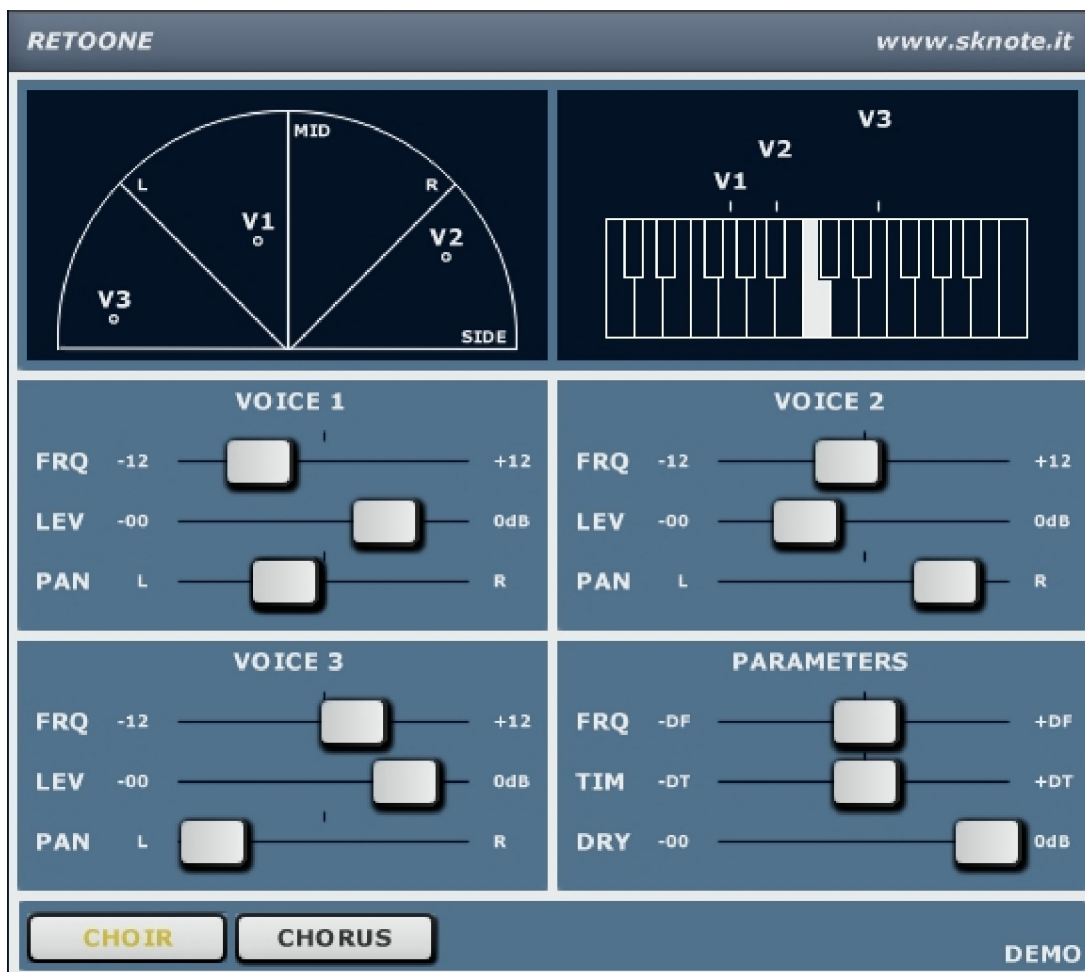
- Stereo image graph
- Keyboard pitch-shifting diagram
- Control sliders
- Mode buttons (choir and/or chorus)



Sliders are divided in 3+1 groups:

- Pitch shift, output level and pan position for each voice
- Parameters: automatic timing control, automatic frequency control, dry signal mix

## 5 Details



### 5.1 Choir and chorus mode

The lower big buttons set the working mode.

- 1) Choir and chorus off - Up to three voices are combined with the direct one. The difference is limited to stereo position, timing and micro-pitch variation
- 2) Choir on and chorus off - Each voice is subject to pitch shifting. Parameter Frq and Tim set "humanizing" automatic control on the voices



- 3) Choir off and chorus on - Each voice is subject to sinusoidal micro-pitch-shifting (the classic chorusing effect), with separate pan control for each voice
- 4) Choir on and chorus on - Like (1) but Frq and Tim parameters control the chorus, while humanizing variations are off.

## **5.2 Pitch shifting**

Each voice is independent and is mixed with the direct signal.

Voice1, voice2 and voice3 slider groups set the parameters for each additional voice. The small button near the group switches on the single voice.

"Frq" sets the pitch shift, from -12 semitones, to 0 to +12 semitones. Pitch shift "snaps" to nearest whole semitone.

"Lev" sets the output level for the single voice.

"Pan" sets the stereo panorama position for the single voice. Be careful: pan control can place the voice outside the common stereo field (+/-90° range). When in the "forbidden zone", the voice appears as coming from outside the speakers. This can give very interesting results while setting the necessity for mono-compatibility check.

## **5.3 Chorus**

Each voice oscillates with a slow pitch variation (classic chorus effect, but with independent stereo placement for each voice).

When "chorus" button is on, humanizing variations are switched off and the parameters slider ("Frq" and "Tim") set chorus parameters (frequency and amount).

## **5.4 Parameters**

The "parameters" slider group contains:

- "Frq": when chorus is off, sets the amount of random slow variation of the frequency, for each additional voice. It is active when "choir" is off, too. When "chorus" is on, sets the chorus amount (the frequency of the slow oscillation of the pitch).
- "Tim": when chorus if off, sets the amount of random slow variation of the timing, for each additional voice. It is active when "choir" is off, too. When "chorus" is on, sets the chorus delay (the amplitude of the slow oscillation of the pitch).
- "Dry": sets the amount of dry signal mixed to the additional voices.

## **5.5 Remote control**

Single additional voices can be controlled by means of midi notes, midi control change messages or host automation.



Midi note on/note off: a note on switches on the next available voice (up to three), and sets the output level proportional to note on velocity. Midi off switches off the correspondent voice (if any). This is shown by the controls on the interface. Midi note number 60 (C3) is the pitch reference. I.e. midi note 63 sets a voice to a pitch shift +3 semitones referred to the input.

## 5.6 Tips

- For voice doubling: choir off, chorus off, set "Frq" and "Tim" parameters for humanizing variations.
- For standard harmony: program an harmony midi track, relating each harmonization scheme to midi note 60 (C3).
- For very wide stereo chorus: switch on "Chorus" button, set pan position for each voice (out of +/-90 range gives an ultra-wide effect while needing check for mono compatibility).

## 6 Feedback and support

Please refer to [www.sknote.it](http://www.sknote.it).

