



Voices

VSTi Formant Synth

Operation manual

| | | |
|------------|-------------|--------------------|
| 0 | 20/12/05 | First emission |
| Draft | 13/12/05 | Draft |
| rev | date | description |

1 INTRODUCTION

This is a formant sound synthesizer. You can build a sound from scratch by means of additive synthesis. If you are able to analyze time/frequency spectrograms, you should be able to emulate virtually any sound and modulate parameters to achieve new sounds.

All parameters are accessible from a single screen.

The vst has 2 outputs (1 stereo output).

NO SAMPLES INSIDE.

On www.sknote.it we maintain active a forum. Please, feel free to contribute! Patches, sound examples, comments, will be very appreciated.

Disclaimer: We are not english people. This is the best english we can write. Please, be good ! ;-)

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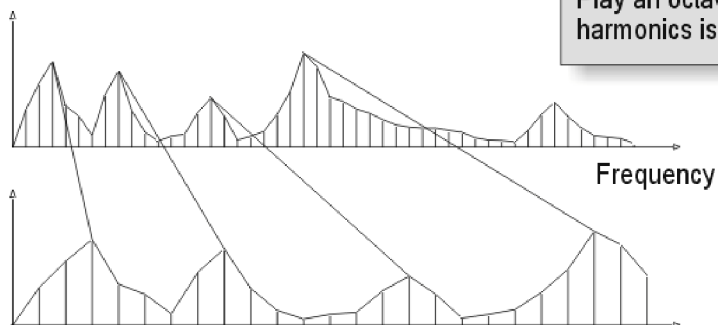
VST is a trademark of Steinberg Media Technologies GmbH

2 INSTALLATION

This synth is a VSTi plugin software.
It requires a VST Host application to work.

Simply copy the software (dll) in your plugins directory.
Add support files (dll) in your system directory (C:\Windows\System32).

Amplitude

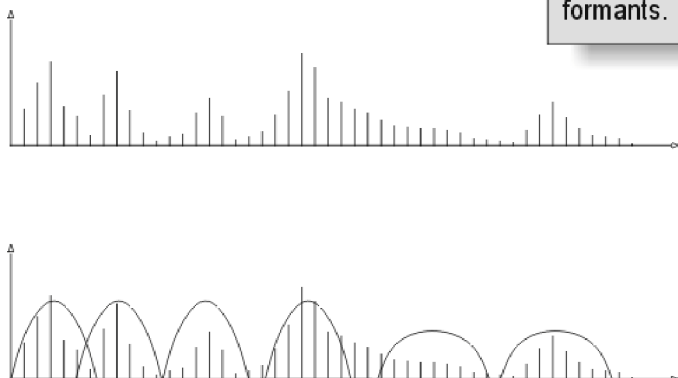


Play a note. We can look at the sound as several superimposed sinusoids.
Play an octave higher. Distance between harmonics is two times the previous one

With some instruments (and voice) part of the spectrum has the same shape, while the distance between harmonics doubles. There are formants



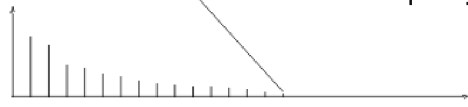
This synth builds sound spectra by means of changing shapes (traditional bandlimited oscillators and harmonic clusters) and formants.



Amplitude



There are eight oscillators. Each one can be common, common only even harmonics, formant, harmonic cluster or percussion. The first two are like a common bandlimited synth oscillator. Percussion is like the first one, but fundamental frequency isn't quantized to key note (useful for drums and percussions)



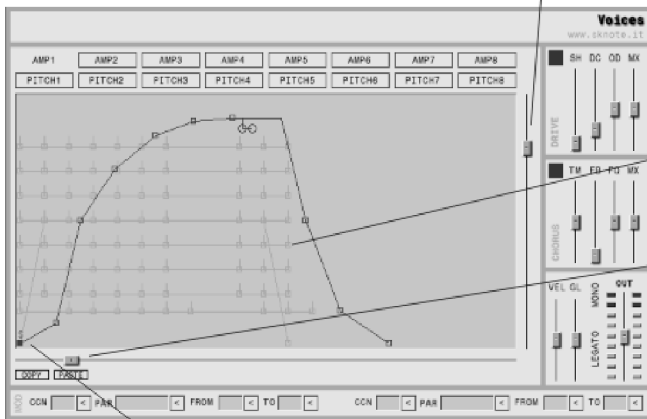
The third one is a formant. When you play a note higher than the previous one, the formant is in the same place, while the harmonics inside change...



The fourth one is a harmonic cluster. When you change the note the cluster moves following the frequency, like part of a traditional oscillator.



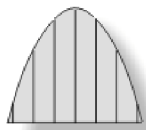
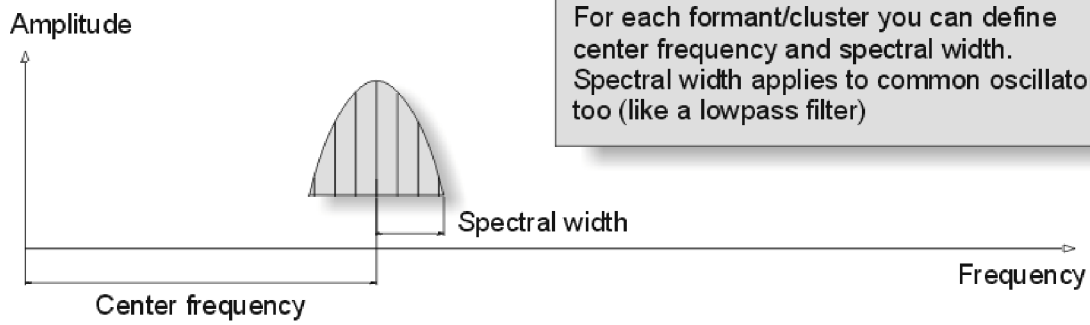
Adjust overall harmonic content HERE



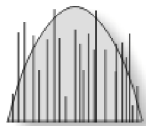
Set frequency width envelope for each oscillator HERE

Adjust overall envelope time HERE

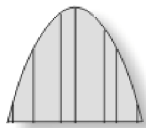
Select oscillator type and switch on/off the oscillator HERE
 S Common oscillator (Single side harmonics)
 F Formant
 G Harmonic cluster (Group)
 E Common - Only Even harmonics
 P Percussion



The formant/cluster defines the contour of the harmonics



Each oscillator (any type) has voiced and unvoiced components. You can mix voiced and unvoiced components.



You can define "skirt". There are enharmonic components of the formant/cluster.

Detune

Skirt

Noise

Spectral width

Center frequency

Spectral width lfo amplitude and frequency

Voices

AMP1 AMP2 AMP3 AMP4 AMP5 AMP6 AMP7 AMP8

PITCH1 PITCH2 PITCH3 PITCH4 PITCH5 PITCH6

SH DC OD MX

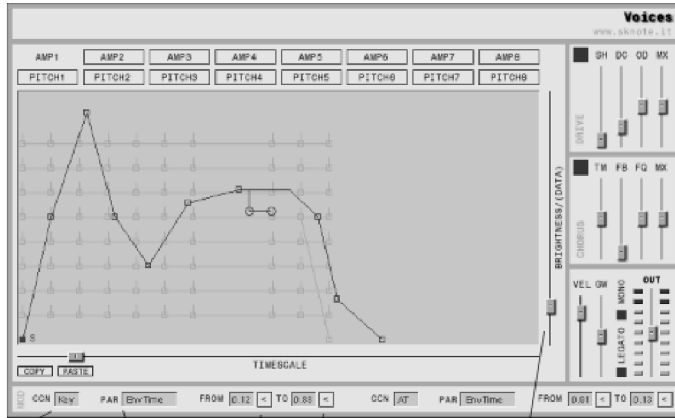
ONLY

CHORUS

VEL GL MONO OUT

LEGATO

INFO CCN PAR FROM TO CCN PAR FROM TO



Select control

Select parameter

Move data slider

Get "From" value

Move data slider

Get "To" value

Control matrix links two controls to synth parameters.
 Controls can be: control change, midi note number, velocity, aftertouch
 The full control scale is linked to a part of the parameter range. Select the range like in this picture.
 If you define "From" larger than "To", the parameter decreases when you increase the control.
 More slots and "morph" function will be added
 To un-link control, select "---"

"Copy" and "Paste" buttons are useful while editing the envelopes.
 Push "Copy". The current envelope is copied to the clipboard. Frequency envelope is copied together with spectral width envelope (vertical bars).
 Activate another envelope.
 Push "Paste". The envelope is copied to the current oscillator.
 Example: If you "Copy" pitch envelope for osc1, then select amplitude envelope for osc 6 and push "Paste", pitch and spectral width envelope is copied in the background, for osc6. LFO and other parameters aren't copied.

"Growl" control works with mono patches. It adds harmonics to the sound, similar to growl effect in some human voices. Use it together with modulation matrix.