Analog to Digital

Supersaw Plus

User manual

Description

Supersaw Plus is a polyphonic analog-modeled vst instrument synthesizer with an effect section (three effects).

It has 2 treble-mode (Lowpass/Highpass/Bandpass) resonant filters with ADSR and velocity control and an lfo with separate levels for each oscillator. The filter controls can be linked so that a single knob can control both filters, as well as an offset slider to create separate left and right levels.

This is a stereo synth with 10 voices, split into two each having a separate level and pan controls. There are master volume and velocity sensitivity controls and an ADSR volume envelope

Each oscillator can have Sine ,Saw ,Ramp ,Triangle ,Pulse ,White Noise, Pink Noise waveforms. An lfo controls pitch and Pulse Width Modulation (PWM).
The synth is 16 voice polyphonic including a mono mode with retrigger option.
The number of voices can be selected (2,4,6,10) and there is a single FAT button that proportionately detunes the oscillators against each other.

The oscillators have separate octave pitch controls and osc2 has a semi-tone select control.There is a separate Pitch ADSR Envelope with level control and a sync button for synced sounds. The effects only use cpu when the synth is playing unlike most vst instruments.

Double Delay
A tempo synced double delay modelled on the one in cubase 5 with an additional high pass filter.

Reverb has level control, size, depth and damp.

Chorus has mix, speed, depth, pre-delay and feedback.
The major controls can be automated and each of there is a midi learn facility to let the user set their own controller numbers.

There are 128 presets to use as starting points for your own sounds.

Low cpu usage.

Installation

Double click on supersaw.zip file to extract the vst instrument (supersaw.dll or supersawdemo.dll if you are using the demo version) into your normal vst instrument folder.

Load the vst instrument into your host sequencer. In cubase vst - Panel, Vst Instruments. Choose the instrument 'supersaw' Change the playback instrument/output to 'supersaw' .

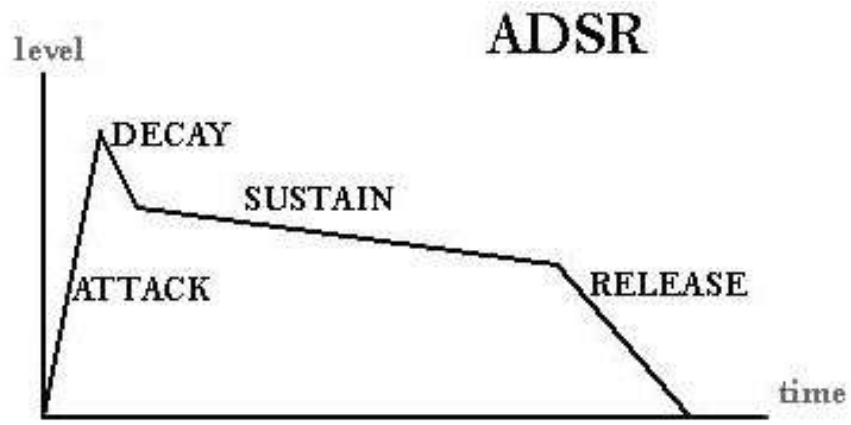
Start playing !!

What the controls do

Presets/banks
The arrow keys at the top of the screen allow you to step through the presets. The file menu is used to lead/save presets and whole banks of (128) sounds.

Oscillator panel
The oscillator waveforms are changed using the blue flashes, there are Sine , Saw ,Ramp ,Triangle ,Pulse ,White Noise, Pink Noise to choose from
The lfo button switches on the lfo, the speed of which can be altered using the speed knob. There are controls to vary the level of pitch modulation (vibrato) and Pulse Width Modulation (PWM). **Both of these increase cpu usage a little.**
There are mono mode and retrigger options in this section too. Retrigger retriggers the envelope when a new note is played.

Volume Panel
Here there are *master* volume and velocity sensitivity controls and an ADSR volume envelope.
``ADSR" is an acronym for ``Attack, Decay, Sustain, Release", the four segments of the ADSR generator's output. The ADSR generator is controlled by a control stream called a ``trigger". Triggering the ADSR generator ``on" sets off its attack, decay, and sustain segments. Triggering it ``off" sets off the release segment.



There are also separate level and pan controls for each oscillator.

Voice/Tune
Here the number of voices (2,4,6,10) can be selected (doesn't affect cpu), the octaves for each oscillator and osc2 semi-tone select control.

Pitch ADSR
This also affects cpu, so switch off if not being used Sync is when the phase of one of the oscillators is determined by the other one. It is generally used with a pitch envelope. Try the sync presets to hear what it sounds like.

Main filter panel
The filter types for each filter are changed using the blue flashes, there are Lowpass, Highpass and Bandpass modes. There are also cutoff and resonance controls for both filters. The linked switch means both filters are controlled by cut1 which is generally what is required. . When the filters are linked, The offset slider creates separate left and right filter levels like the Access Virus synth .

Filter Envelope Panel
The ADSR and velocity sensitivity controls affect *both* filters.

LFO filter Panel
This is a tempo synced lfo with separate levels for each oscillator. The sync goes from 1/32 of a beat to a full 16 beats !

Effects Section

Double Delay
A tempo synced double delay modelled on the one in cubase 5.1. There are seperate controls for left and right channels. Apart from the on off switch and the mix level (controlled by midi controller 6 for left, 8 for right) there is beat which sets the base delay beat to be 1/32 1/16 1/8 ¼ or ½ of a beat and the multiplier which you multiply to get the actual delay. The values go from 1 to 8.

Example
If the beat is set to be 1/16 and the multiplier is 4 then the delay is actually ¼ of a beat. 4 times 1/16 is ¼.

These controls have black flashes and are at the bottom of the section.
The feedback determines how much of the delayed signal is fed back in to the delay.

Be careful with this, it can generate loud sounds. Filter applies a high pass filter to the delayed sound ,

Reverb
Reverb has on/off, level control, size, depth and damp controls.

Chorus
Chorus has on/off, mix, speed, depth, pre-delay and feedback controls.

Midi Learn
At the bottom of the screen there are three buttons. To start midi learn, click the light green button on the left. The blue led should light up. Move the slider you want to change with the mouse. Now move the external controller's knob, slider or modwheel. When the controller has been learned, the blue led goes out. Any other slider previously assigned to that controller will have to be re-assigned. The grey button on the right. resets all learned controllers to their original values !!!.
You cannot use values between 32 and 63 unfortunately, everything else is ok.

These are the **midi controllers** for the various knobs

filter
cut1 1
cut2 2
res1 3
res2 4
offset 6
env lev 17
lfo1 18
lfo2 19
glide 5

volume/pan
main vol 7
lev1 8
lev2 9
pan1 10
pan2 11

volume envelope
a 12
d 13
s 14
r 15
FAT 16

delay
delay 1 mix 20
delay 1 fdbk 21
delay 2 mix 22
delay 2 fdbk 23

Reverb
Reverb mix 25
Reverb size 26

Chorus
Chorus mix 27
Chorus depth 28

Vst Plugin Technology by Steinberg
The midi learn was created by David Haupt - http://www.dehaupt.com/ dave@dehaupt.com
This VST/i features modules by Chris Kerry www.chriskerry.f9.co.uk

Any support questions, please contact Eric - atod@ntlworld.com