Anticode v0.95

dsp.mutagene.net

Introduction

Anticode is a VST effect that uses warped linear prediction that can be used for anything from subtle chorus effects and timbral modifications to outrageous distortion effects and glitchy sounds.

Signal Flow / Parameters

A rough outline of the plugin's signal flow is shown in Figure 1.

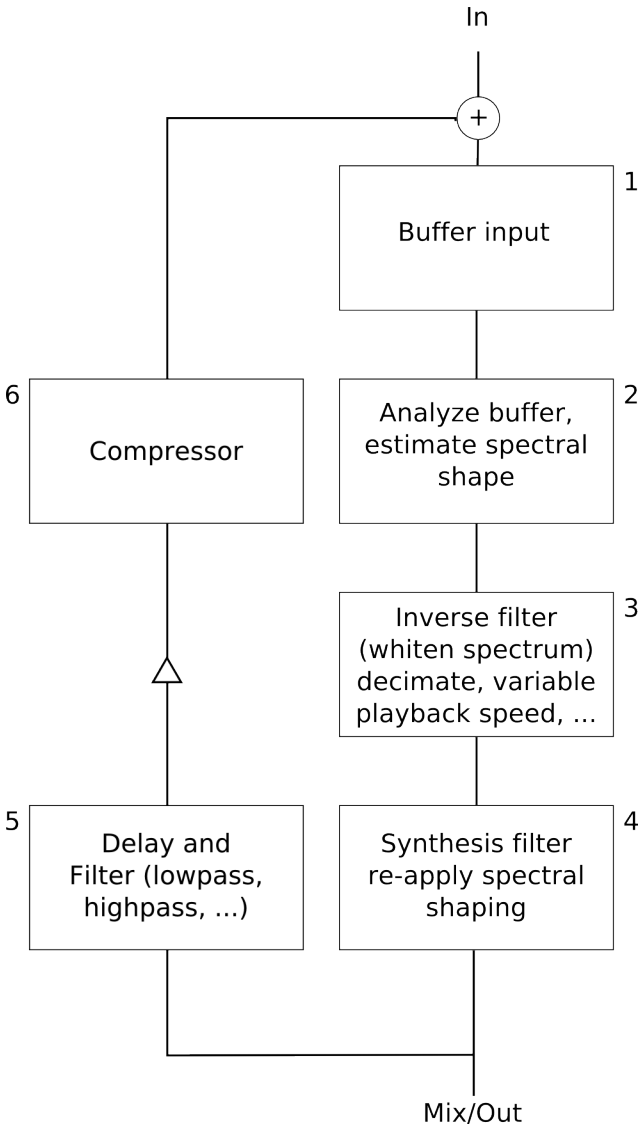
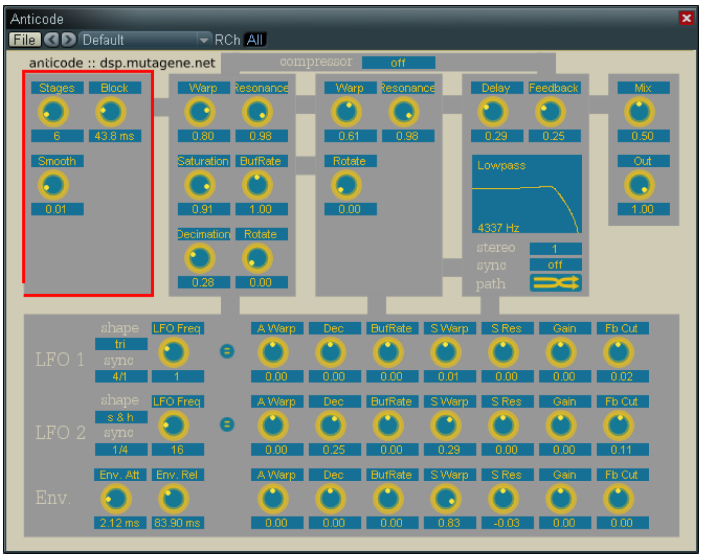


Figure 1. Signal flow (simplied overview)

The controls for each block in the above diagram are outlined below.

Section 1 – Global Parameters, Buffer Input

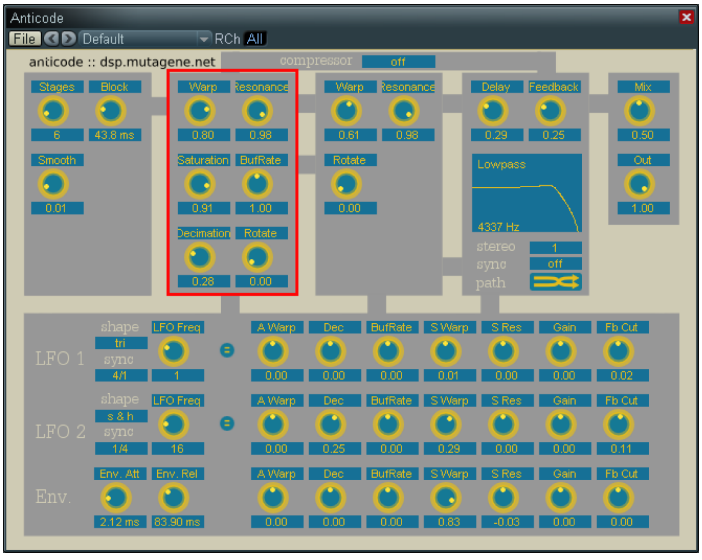


Stages – the order of the linear prediction filters used in sections 3 and 4. Higher orders require more CPU, and also tend to give effects with greater definition (not always a good thing).

Block – the amount of time that passes between analyses of the input/fed back data

Smooth – smoothing of acquired linear prediction parameters (reflection coefficients) – higher values mean that the analysis and synthesis filters change slowly, a value of 0 means they instantaneously change each time a block of input is analysed. Instantaneous changes in filter coefficients will cause clicking, so it's generally preferable to keep the smoothness slightly above 0.

Sections 2,3 – Analysis Parameters



Warp – frequency warping of the analysis filter. See the 2WarpDelay manual (@dsp.mutagene.net) for more information.

Resonance – the 'strength' of the analysis filter (the degree to which it tries to remove spectral peaks)

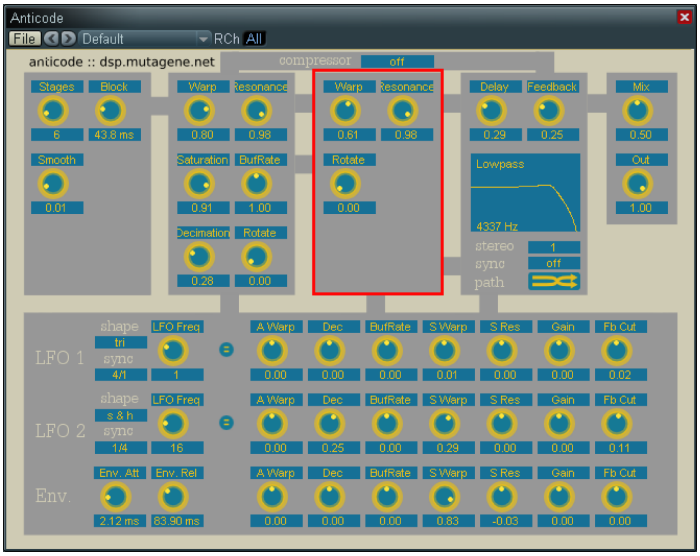
Saturation – saturation of the signal immediately **after** being filtered (0 = off)

BufRate – the rate at which data is processed **after** the analysis filter. A value of 2 is like a (cheap) lofi pitch shift of a full octave up, and a value of 0.5 is a pitch shift of an octave 2. Modulate this value to create a simple chorus effect (with stereo polarity to make it more rich).

Decimation – decimate the signal immediately following the analysis filter.

Rotate – rotation of the analysis filter. Rotates the reflection coefficients (e.g., a sequence like [1,2,3] rotated by one becomes [3,1,2]). Dramatically changes the frequency response of the filter, creating sqawking or funky synchronized effects.

<u>Section 4 – Synthesis Parameters</u>



Warp – frequency warping of the synthesis filter.

Resonance – same as with the analysis filter (section 2).

Rotate – same as with the synthesis filter (section 2).

Section 5 – Delay/Feedback parameters

Delay – The amount of delay in the feedback path between the synthesis filter and the analysis block. Can be synchronized to the song temp.

Feedback – gain of the feedback path.

Filter – choose between filter types (lowpass, highpass, etc...), filter cutoff and Q. Right click for filter types or to learn the MIDI CCs for cutoff or Q, left click and drag to adjust cutoff/Q.

Stereo – make the right channel feedback path length different from the left path by a simple ratio. Gives more interesting stereo delays.

Sync – synchronize the feedback delay to the song tempo.

Path – Straight or ping-pong (L->L, R->R or L->R, R->L)

Section 6 – Feedback Compression

Compressor – selected between several fixed compressor types. More parameters may be made accessible in the future.

Modulations – LFO & Envelope follower

Two LFOs and an envelope follower can be used to modulate some of the plugin parameters. Of note – in between the "LFO Freq" control and the modulation destinations the right, you can click on the "=" sign to turn it into a "+ -" symbol. In "=" mode the modulation is applied to right and left stereo channels equally, but in "+ -" mode the right channel is modulated 180 degrees out of phase with the left channel. The envelope follower follows the amplitude of the signal that is input to the plugin before it is combined with the feedback path.

Interface Misc.

Hovering over a control will bring up a tooltip. Clicking on the label above a knob controller brings up a menu which allows you to either learn a MIDI CC for that control or forget the current setting. MIDI CC settings are saved with patches.