

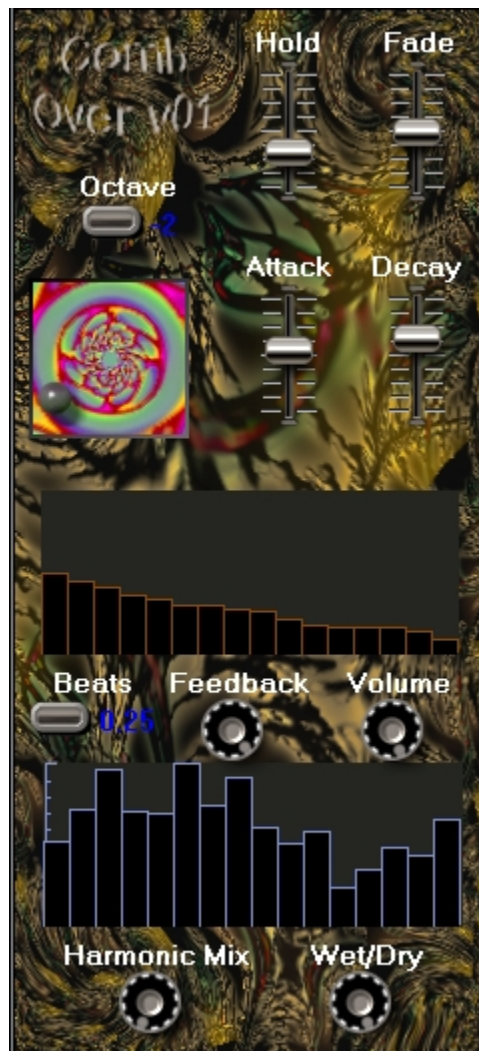
# COMBOVER VST v0.1

**This is the user manual for CombOver version 0.1**

**This is an beta version of a project, and as such use at your own risk.**

**Proudly made in SynthEdit – This VST plug-in is Freeware**

**This effect will be changed, possibly drastically, in future versions.**



CombOver VST is an FSU effect based on Comb Filters. Unlike a normal comb filter effect CombOver is trying too hard to cover up the naked pate of boring audio. If you liked my old plug-ins Narcissus + Echo VST & Dirty Sanchez VST, you'll love this one! Unlike those old FSU fx this one is understandable, programmable and doesn't explode with feedback. But similarly otherworldly, wet or electric, exploding or glitchy and twitching sounds are possible with CombOver.

CombOver features delay times controlled by pitch detection and harmonic overtone series slider bank modulated by a step sequencer, a vector mixing X/Y pad top select amongst the delay times of four different harmonic-modulated delay times and a harmonic mix control to blend in harmonics with the root pitch-controlled comb filter. There are five comb filters in all.

## Here is a brief explanation of what's going on inside the signal chain:

There are 5 comb filters. All combs' delay times are controlled by a stereo pitch detector with a peak hold control to ensure that two different channels, left and right, output a sensible pitch. This pitch detector's stereo peak hold is controlled by the Attack and Decay controls. Move them up and the modulation remains more stable, move them down and the modulation greatly increases it's reaction speed and makes all the combs fluctuate wildly. The Octave selection button tells the pitch detector what octave it should assume incoming audio is, which more than anything else gives the resulting comb filtering different flavors.

But the pitch detector doesn't modulate each comb in the same way! The second through fifth combs are modulated by a harmonic overtone of the root pitch. Just move the little ball around. The first bank of sliders, the one outlined in orange, allows you to choose the nth harmonic of the root pitch, there being 16 choices, one per slider. The second bank of sliders controls which of these 16 harmonics is being sent as modulation to the comb filters' time in a stepped sequence. More on that later. Each comb filter from the third through fifth automatically has an increasingly higher harmonic from the base level, which is what comb two receives.

The X/Y joystick is a vector mixer, mixing between the second through fifth combs, for a more precise choice of comb sounds. Keep in mind that, as each has a higher harmonic being sent to its modulation, each of them represents a longer delay length. Dead center on the X/Y gives you a blended mix of all four times, and thus more chaos.

The Harmonic Mix knob mixes between the combs output from the vector mixer and the first comb, the one being modulated at base pitch. The wet/dry mixes between dry and wet, the opposite of its label. I'll fix that sometime, really.

The Volume control controls the overall level gain of the plug-in's audio output.

The Beats selector button controls the speed of the second bank of sliders, the step sequencer. 24 is the slowest; 0.25 is the fastest. In this version I only gave options for standard multiples of 2 and 3 for ease in familiarizing oneself with the plug-in; future versions (with nice professional GUI controls hopefully) will most likely have many more, and more easily selectable, options.

The Feedback knob controls all of the comb filters' feedback level. In general you're going to want that knob set at between 80% and 95% to the maximum. Lower and the combs are too quiet; higher and the feedback gets out of control sometimes, but not always, and unlike most such effects letting it sit at 100% generally doesn't cause destructive feedback at most settings.

The second bank of sliders, which is the step sequencer, in addition to modulating the harmonic choice over time also controls the comb filters' damping parameter and THIS IS IMPORTANT, only the first slider controls how the feedback behaves! Don't ask me why this is, I honestly don't know. But it works. The first slider of this step sequencer probably contributes more to the overall sound of CombOver than any other. Just remember that when designing sounds.

The Attack and Decay sliders currently do nothing, and are there for future updates and they fill space on the GUI. I bet if you didn't bother reading the manual (not such a good idea with my extremely wrongheaded designs) you're pissed that you kept twiddling them.

CombOver VST v0.1 contains a default bank of presets to demonstrate some of the possibilities of what all this sounds like.

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## Donations:

This plug-in is freeware, so you are free to use it at no cost. However, there is a cost associated with hosting all the freeware plug-ins and the increased bandwidth requirements as more people download them. Any donations would help to ensure the future hosting of the plug-ins.

If you do wish to make a donation, please visit;  
[www.delamancha.co.uk/donate.htm](http://www.delamancha.co.uk/donate.htm)

Or go to the Music page on my website and buy one of my \$5 mp3 albums or \$0.79 ringtones (!?) as previous donations are what allowed me to buy the high-quality CK and DH modules which make this significantly less amateurish plug-in possible. The music page links to [www.musicfreedom.com/runagate](http://www.musicfreedom.com/runagate)

#### **Links:**

SynthEdit <http://www.synthedit.com/>  
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Lance Putnam Modules <http://www.uweb.ucsb.edu/~ljputnam/synthedit.html>  
Some controls elements created by Vera Kinter <http://www.phpwebscripts.com/artvera/>  
Thanks to the above developers as well as Etric van Mayer & bobsled without whom this wouldn't be possible.

The GUI's background image was made in The Gimp and paint.net, both freeware available from [www.filehippo.com](http://www.filehippo.com)  
VST is a trademark of Steinberg Soft- und Hardware GmbH

#### **About the Developers**

de la Mancha is a UK based producer of odd-skool breakbeat, downtempo glitchy beats and other assorted bleeps and noises. He also develops freeware synth, drum machine and effect plugins and still finds time to make babies and sleep. You can find his music, plug-ins and other junk at [www.delamancha.co.uk](http://www.delamancha.co.uk)

runagate is a USA-based producer of psychotic psychedelic electronic music who spends an inordinate amount of time haranguing fellow musicians about how they can now make music largely for free with software tools that would have been unimaginable at any price a scant few years ago. If you like this effect I've got a few similarly half-assed crazy freeware at [www.3amnoise.net/runagate](http://www.3amnoise.net/runagate)

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