DerVoco

DerVoco is an Audio Unit Extension effect that works as a plug-in inside host apps. To start using DerVoco, open up your favourite host that supports Audio Units and add it as an effect.
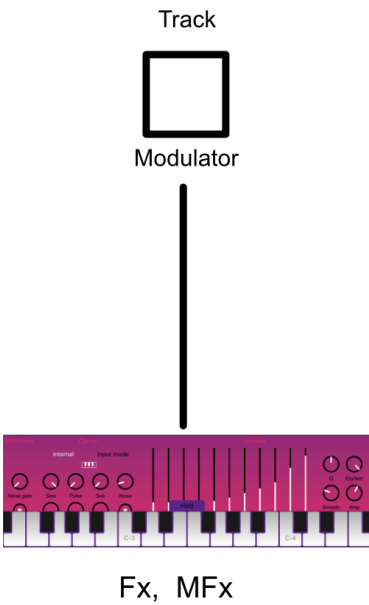
HELLO ROBOTS !

DerVoco is a vintage vocoder emulation. It does not use modern digital signal processing techniques like FFT (Fast Fourier Transform). Instead it includes analog modelled components like: filters, envelope followers and compressor. The carrier signal may be generated by internal VCO. It's also possible to use any audio source as a carrier, thanks to a special "Input mode", where both signals are transmitted as a left and right channel in stereo input signal.
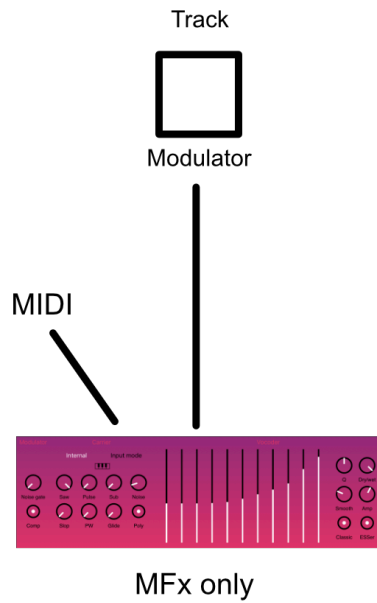
Modes of operation

Due to variety of host capabilities, 3 modes of operation are possible.

DerVoco may be used as **Audio Unit effect DerVoco (Fx)** or Audio unit music effect: **DerVoco (MFx)**. Only Audio Unit music effect can receive MIDI. Not all hosts support MFx plugins.
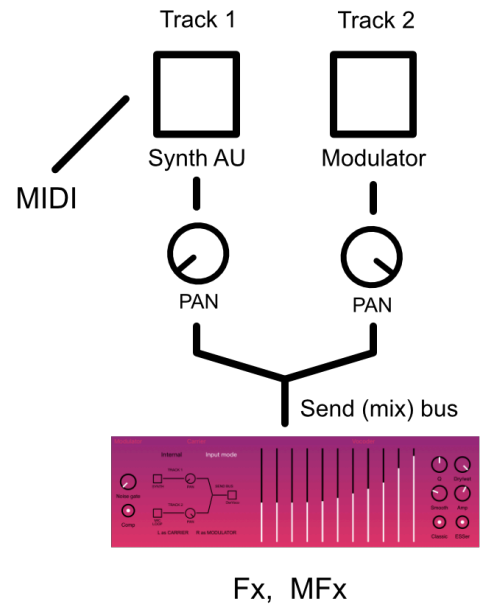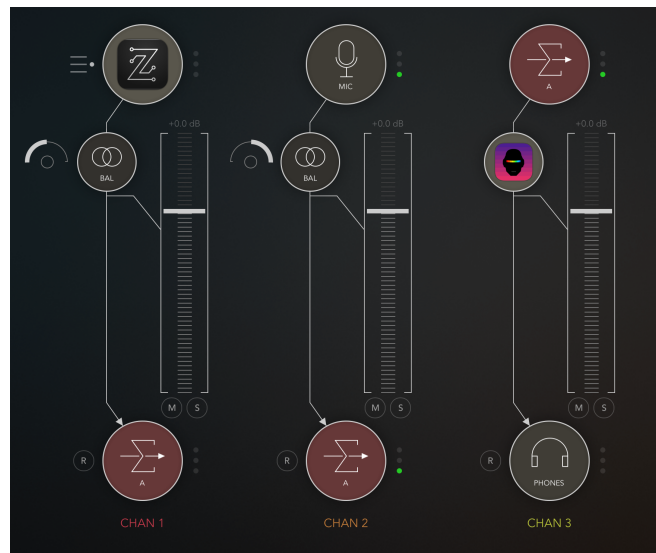

When input mode is selected, DerVoco takes the left stereo input as carrier and the right input as modulator. This way, it can be used in a send (mix) bus, where the carrier input of this bus is paned to left and the modulation input, such as a voice, is paned to the right.

Input mode: example configuration in AUM app

Controls

Modulator

Noise gate - controls noise gate level

Comp - enables compressor on modulator signal

Carrier

Saw, Pulse, Sub, Noise - controls amount of wave components in VCO wave shape

Slop - controls oscillator analog drift depth

PW - Pulse width of Pulse wave VCO component

Glide - portamento time, when VCO is in mono mode (Poly: disabled)

Poly - when enabled, VCO operates in polyphonic mode

Vocoder

11-15 band equalizer - controls the volume of each frequency band

Q - resonance of the filters in each band

Smooth - release time of envelope followers in each band.

Amp - output signal level

Dry/wet - vocoder / modulator mix in output singal

Classic - number of bands and frequency distribution is the same, as in one of famous vintage vocoders

ESSer - preserves consonants and makes the voice more understandable. When ESSer is on, last band filter is set to high pass mode and passes modulator signal highest frequencies.

Credits

Idea, coding, user interface: Jarosław Jacek

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