

# ANALOGy5



## VIRTUAL ANALOG 5-VOICE POLYPHONIC SYNTHESIZER



waverley-instruments.com

MADE FOR



Thanks for your interest in, or purchase of ANALOGy5 - a virtual analog 5-voice poly synth for Voltage Modular.

We hope you enjoy checking ANALOGy5 out and playing it, as much as we enjoyed making it!

All the best, from Rob and the Waverley Instruments team.

[www.waverley-instruments.com](http://www.waverley-instruments.com)

# ANALOGy5



VIRTUAL ANALOG 5-VOICE POLYPHONIC SYNTHESIZER  
4 SOUND SOURCES PER VOICE  
2 VARIABLE SHAPE OSCILLATORS WITH WAVE FOLDING  
SUB OSCILLATOR AND NOISE SOURCE  
DEDICATED ENVELOPES FOR EACH SOUND SOURCE  
2 FILTERS WITH SOUND SOURCE ROUTING  
4 LFO MODULATION SOURCES WITH ASR ENVELOPES  
20 MODULATION DESTINATIONS  
BUILT-IN DELAY, REVERB AND COMPRESSOR

The aim of ANALOGy5 was to create an analog-flavoured synth that could make complex sounds, but still be relatively simple and fun to use.

ANALOGy5 runs inside Voltage Modular, but isn't a module in the conventional sense - it's a self-contained MIDI-controlled instrument, complete with its own effects section.



MIDI IN / STEREO AUDIO OUT

SELECT RECEIVING MIDI CHANNEL VIA LABEL DROP-DOWN MENU

WAVE SHAPE FROM SAW, TO TRIANGLE TO VARIABLE PULSE WIDTH

WAVE FOLDING FOR EXTRA HARMONICS

FINE TUNE IN CENTS / SHIFT UP AND DOWN IN SEMITONES

SUB OSCILLATOR - SAW, TRIANGLE, SQUARE, RAMP AND SINE SHAPES

VARIABLE WHITE / PINK NOISE SOURCE

VOICE MIXER FOR EACH SOURCE

Simply make a MIDI connection from your host, then connect the outputs to Voltage Modular's main outs, and you're good to go!

The wave shapes for the two main oscillators are continuously variable and can also be subjected to wave-folding. The graphics displays are accurate representations of a single cycle of the oscillators.

The sub-oscillator has pre-defined shapes, can't be fine-tuned, and is generally more stable, tuning-wise.

The random noise source generates white noise to the left, pink to the right, or a mix of the two.



MONO MODE WITH LEGATO  
OPTION VIA MONO LABEL DROP-  
DOWN MENU

VARIABLE POLY VOICE STEREO  
SPREAD / AUTO-PAN

TUNING DRIFT FOR OSC 1 & 2

VOICE PITCH GLIDE /  
PORTAMENTO

MIDI PITCH BEND UP / DOWN  
RANGE

For old school monophonic sounds, engage the MONO button. Note a drop-down menu is accessible from the MONO label for legato options.

Poly spread only works in poly (non-mono) mode. As the control is turned up, each of the five voices will be panned to different positions in the stereo field. This can create a nice effect when playing chords.

For vintage hardware pitch instability, try turning up the drift control. This will affect the tuning stability of oscillators 1 and 2 only.



DEDICATED ADSR ENVELOPES  
FOR EACH SOUND SOURCE

VARIABLE VELOCITY SENSITIVITY  
FOR EACH SOUND SOURCE

Having dedicated envelopes for each sound source can be useful when designing certain sounds as it allows a layered approach. For example, one oscillator pitched an octave above the other could fade in gradually “underneath” the first.

Similarly, different velocity sensitivities can make certain sources more or less responsive, giving you dynamic control over the timbre of the combined sources depending on the velocity of the incoming notes.

2 FILTERS - LOW PASS, BAND  
PASS AND HIGH PASS, EACH WITH  
TWO-POLE OR FOUR-POLE  
OPTION



ANALOG-VOICED CUTOFF  
FREQUENCY AND RESONANCE  
CONTROLS

DRIVE ADDS SATURATION AND  
GRIT TO THE FILTER STAGE

VARIABLE CUTOFF VELOCITY  
SENSITIVITY FOR DYNAMIC TONE  
CHANGES

EACH SOUND SOURCE CAN BE  
ROUTED TO EITHER OF THE  
FILTERS OR BYPASS THEM  
COMPLETELY

DEDICATED ADSR ENVELOPES  
FOR BOTH FILTERS

Having two filters opens up some interesting possibilities especially with the routing option. Alternatively, you can bypass the filters altogether.

Note that the filters run in parallel, not series.



4 MODULATION SOURCES WITH DEDICATED LFOS AND ASR ENVELOPES - ENABLE / DISABLE WITH COLOR-CODED BUTTON

SET LFO RATE IN HZ OR SELECT TEMPO-SYNCD NOTE LENGTH FROM DROP-DOWN MENU ABOVE CONTROL

SET LFO RATE TO ZERO TO DISABLE THE LFO

SELECT LFO SHAPE FROM SINE, TRIANGLE, RAMP, SAW, PULSE AND S&H (SAMPLE AND HOLD)

USE ASR ENVELOPE TO CREATE RISE AND FALL MODULATIONS

DRIFT INTRODUCES RANDOM LFO TIMING VARIATIONS

GLIDE CAN BE USED TO SMOOTH LFO SHAPES

DEPTH VARIES THE OVERALL MODULATION STRENGTH

MODULATION DEPTH CAN BE CONTROLLED VIA MIDI MOD WHEEL OR AFTERTOUCH (CHANNEL PRESSURE)

The modulation section is where your sounds can really come to life!

Four modulation sources may not seem a lot to begin with, but there are 20 different modulation destinations - things can get pretty wild, so we think four is maybe enough!

When the LFO is disabled (RATE set to zero) the mod source functions as an ASR envelope.

Try assigning your mod wheel to one or more of the sources for realtime expressive control, or combine it with aftertouch if your controller supports it.

Please note the aftertouch currently supported is channel pressure, not MPE.

20 MODULATION TARGETS CORRESPONDING  
TO ANALOGY5 PARAMETERS + VOICE  
VOLUME AND STEREO PAN



POSITION AND COLOR OF THE SLIDER SHOWS  
THE MOD SOURCE (1-4)

CONTROLS BELOW SLIDERS CAN BE USED TO  
REDUCE THE MODULATION AMOUNT

ABBREVIATIONS:

O1 / O2 - OSCILLATOR 1 / 2  
SB - SUB  
NS - NOISE  
COL - NOISE COLOR  
F1 / F2 - FILTER 1 / 2  
RES - RESONANCE

We recommend building up your modulation matrix slowly, a step at a time. And don't forget you can toggle off a mod source with the color-coded buttons so you can A/B test the effect it's having on your overall sound.

The amount / depth controls all feature custom scaling that best suit the target parameter. For example, pitch does not scale in a linear fashion, but pan does.





EFFECTS SECTION BASED ON THE  
ECHOVERB 2 MODULE - USE BUTTONS  
TO ENABLE / DISABLE EACH EFFECT

ANALOG FLAVOURED PING-PONG DELAY  
WITH OPTIONAL TEMPO SYNC AND  
VARIABLE DELAY TIME RATIOS

VINTAGE SOUNDING REVERB CAN  
EMULATE SMALL ROOMS OR LARGE  
HALLS

SIMPLE ONE CONTROL COMPRESSOR

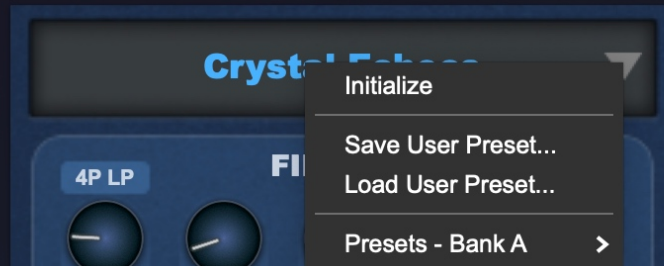
MASTER VOLUME AND OUTPUT LEVEL  
METERS

VOLUME (PRE-FX) CAN BE OPTIONALLY  
CONTROLLED VIA MIDI EXPRESSION

The effects have been selected and tweaked to compliment the overall sound of ANALOGy5, so they tend towards a more vintage type character.

The compressor can be useful to tighten-things up or add more presence and punch to some sounds.

Don't forget to keep an eye on output levels! ANALOGy5 has a built-in limiter, but you probably don't want to see the meters in the red all the time as hard-limiting / clipping will occur!



CLICK ON THE DOWN-ARROW IN THE  
PRESETS WINDOW FOR THE PRESETS  
MENU

THE MENU HAS OPTIONS TO INITIALIZE,  
SAVE AND LOAD USER PRESETS TO  
FILES, AND SELECT FACTORY PRESETS

We recommend using the Initialise option from the presets menu when starting work on a new preset.

User preset files are saved with an .ANALOGy5 extension. By default, presets are saved in your [documents folder]/Voltage Modular/ANALOGy5/User Presets. The name and location of your [documents folder] depends on your operating system.

The Generate Preset menu option creates a new preset by combining related parameter sections (e.g. filter, effects, etc.) from randomly selected factory presets. You can also “Nudge Controls” to make subtle changes to presets.

Many thanks to James Dyson of JD Soundsets for kindly providing his sound design skills to create some of the factory preset banks.