

Anna 1.0 Hybrid Synthesizer

Features

- Four oscillators capable of complex waveforms, utilizing internal frequency modulation with separate waveforms and frequencies for the carrier and modulator.
- Spread knob on oscillators, running three detuned oscillators internally in the oscillator, resulting in a total of up to 12 oscillators.
- Two multi-mode filters with 14 different modes and internal filter overdrive.
- Pitch tracking of the filters, allows the user to "play" the filters.
- Four multi-mode LFO's with random, waveform and step sequencer modes.
- Four modulation envelopes with basic and multi-point modes, user-defined slopes for each of the stages and looped sustain section.
- Extensive modulation matrix with 16 slots. Modulation sources include oscillator and filter outputs (all modulations are "audio rate").
- Frequency Modulation XY-pad defining the following oscillator frequency modulations: oscillator 1 > 2, 1 > 3, 2 > 3 and 3 > 4.
- Effects section with fully parametric two-band equalizer, two modulated stereo delays with four-band filter control in the feedback loop and cross-feedback between the two delay units and a crusher unit capable of sample rate reduction, bit resolution distortion (not the standard kind, sounds more like a broken transistor radio) and distortion. The order of the effects is user-definable.
- Auto-disabling of unused sections to reduce CPU usage.

Release notes

Due to lack of time Anna is yet to be optimized, and hence the CPU usage easily sky-rockets. When using Anna, remember to use as few resources as possible, turning off unused sections and removing unnecessary modulations. Also setting the envelope knobs on the filters to the absolute middle makes sure that envelope 1 & 2 aren't used if not needed elsewhere. Anna allocates voices four and four (it uses the CPU's SSE extensions which allows four parallel voices to be calculated simultaneously) but try to keep the polyphony as low as possible.

Credits

Thanks to Sambean, Shifrin and Angstrom for their work on the modulation envelope.

Thanks to Lalo, skOre and rl for the presets they supplied me with.

Thanks to all of the beta testers.

End note

I'm looking forward to your feedback, be it comments, suggestions or bug reports. Cheers!

/Stefan