

AvrX specifications

Dimensions

(WxDxH) 365x256x100 mm

User interface

2x40 character backlit LCD

4 endless knobs

12 buttons.

2 LEDs

Connectors

Power

Line out

Line in

Headphones

MIDI in

MIDI out

Programmer

Modes

- Select mode
Used for selecting patches from memory, initialize and ransomize patches.
- Perform mode
Used as a performance mode with four optional parameters available at the knobs.
- Store mode
Used for storing patches in memory.
- Edit mode
Used for patch editing.

Signal path

Oscillators → Waveshapers → Wavetables → Bit reduction → DAC → VCF1 → VCF2 → VCA

The order of the waveshapers and wavetables can be changed. The VCFs can be connected in series or parallel.

Oscillators

Two digital oscillators with range and detune parameters. One modulation input per oscillator. One level parameter per oscillator. Oscillator 1 can be synced to oscillator 2.

Waveshapers

One waveshaper per oscillator. 24 algorithms (PWM, phase distortion etc.) Two independent modulation inputs per waveshaper (the inputs controll different parameters).

Wavetables

One wavetable generator per oscillator. 256 single cycle waveforms. (256 samples per cycle). One modulation input per wavetable. The wavetable generators van be set to scan de program memory instead of the waveform memory.

Filters

Two 2-pole multimode VCFs. Parameters for cutoff, resonance and type (LP, BP, HP). Two modulation inputs per filter routed to cutoff.

Ring modulation

A ring modulator with a level parameter is multiplying the signals after the waveshapers and wavetables.

Noise

One noise source.

Bit reduction

Each of the 12 bits in the signal before the ADC can be masked out.

Modulation inputs

(number of inputs in parentheses)

Oscillator 1/2 frequency (1)

Waveshaper 1/2 (2)
Wavetable 1/2 (1)
VCF 1/2 cutoff (2)
LFO 1 rate (1)
LFO 1 sample and hold (1)
VCA (2)
Modulation combiner (2)

Modulation sources

- Envelopes
Three ADSR envelope generators with positive and negative outputs
- LFOs
Three LFOs with square, triangle, positive saw, negative saw and sample and hold outputs. All LFOs can be made to restart at key down and are syncable to MIDI clock. LFO1 has a modulation input that controls its rate. The sample and hold function for LFO1 can sample any modulation source. LFO2/3 samples the noise source.
- Sequencers
Two eight step sequences that follows the same tempo. The tempo can be synced to MIDI clock.
- KeyRandom
Samples the noise source at note on.
- Oscillators
The oscillators can be used as modulation sources.
- Noise
- Modulation combiner
The modulation combiner has two modulation inputs and outputs the product of the input signals.
- MIDI
MIDI velocity, pitch bend and modulation wheel can be used as modulators.

Modulation routing

Any modulation input can be connected to any modulation source, even those that are already connected to other modulation inputs.