

VastWave

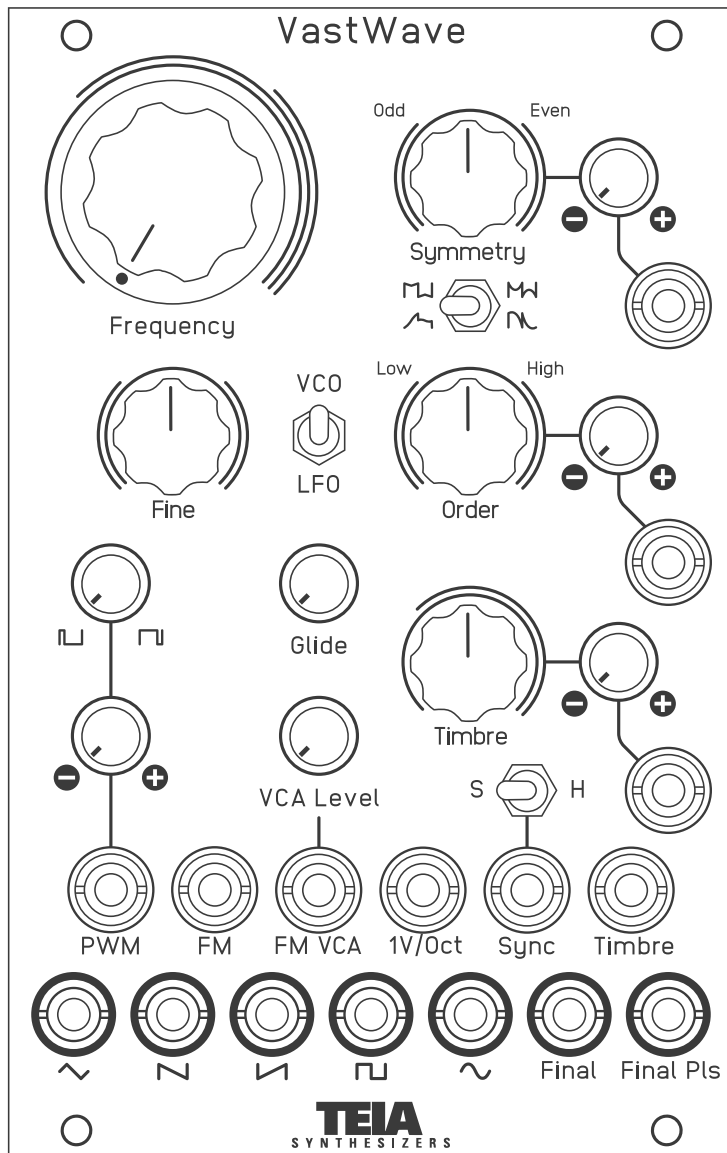


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VastWave

Analog Complex Oscillator

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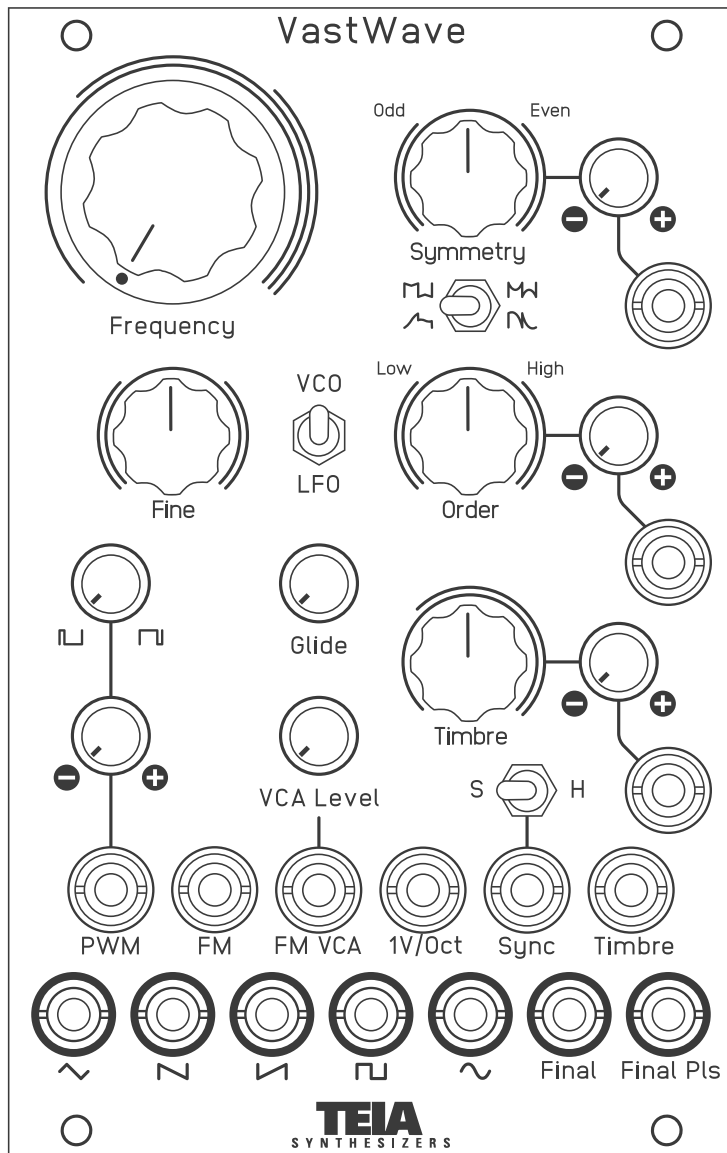


Overview

VastWave is a complex analog Oscillator with advanced waveshaping capabilities that invites new textural and harmonic exploration beyond subtractive synthesis principles.

Crossfading between harmonically rich folded waveforms and waveforms with Odd/Even harmonics, the VastWave waveshaper expands on the Principal Oscillator heritage, bringing an additional set of waveforms with Odd and Even harmonics and a pulse waveform derived from the Waveshaper's Final output stage.

Furthermore the linear FM input has a dedicated VCA for external FM amplitude modulation and an on board linear Glide delivers a more musical approach to this classic feature.



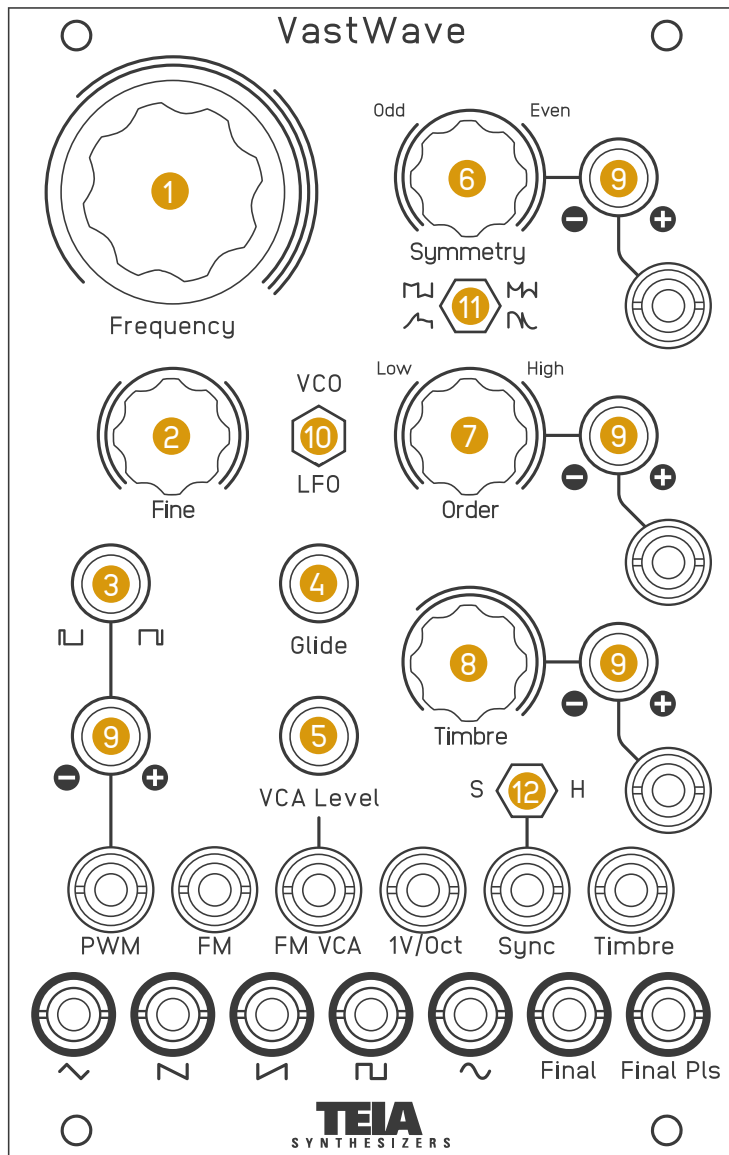
Overview

Features:

- Voltage controlled complex waveshaping.
- Triangle core.
- FM input with voltage controlled amplitude for FM amplitude modulation.
- On board linear Glide.
- Voltage controlled Pulse-width modulation for Pulse and Final Pls waveforms.
- Modern temperature and tuning stability.
- High Frequency (VCO) or Low Frequency (LFO) operation.
- External Timbre input with sine wave normalization if no external source is patched.
- Attenuator/inverter knobs on all voltage controlled inputs.
- Inverted or double Sawtooth waveform (selectable by jumper).

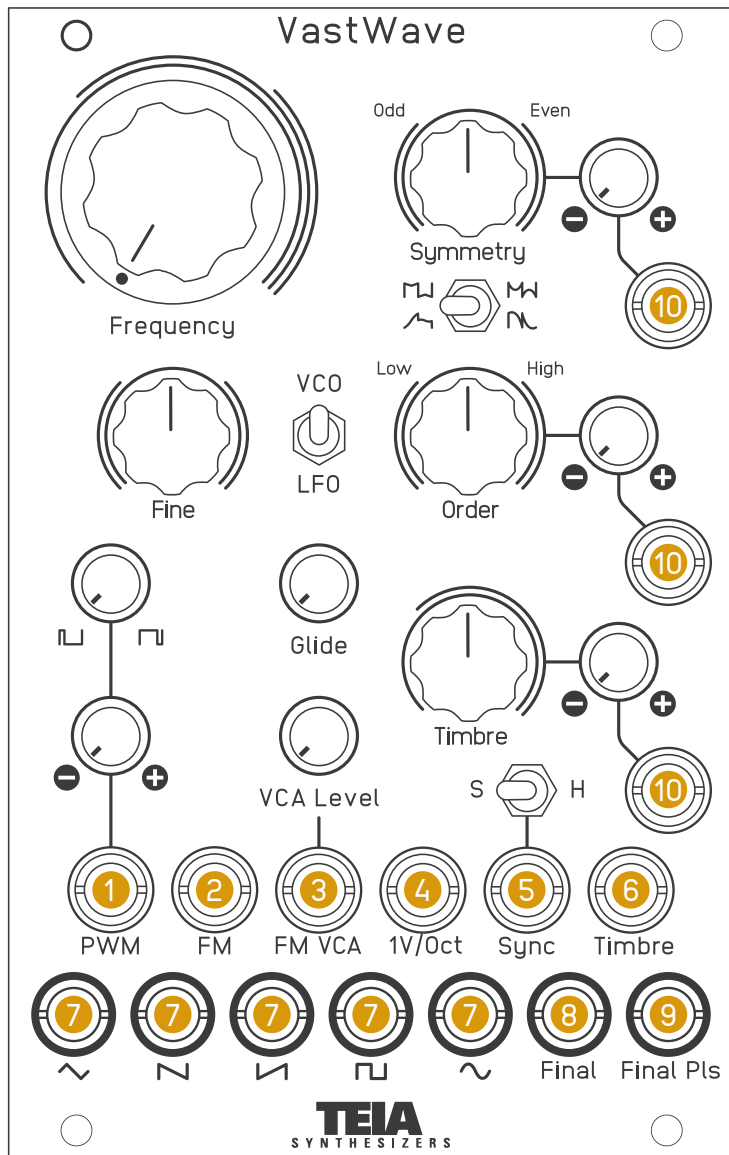
Specs:

- Width: 16HP
- Depth: 33mm
- Power consumption: ##mA +12 ##mA -12
- Eurorack Format
- Doepfer power connection



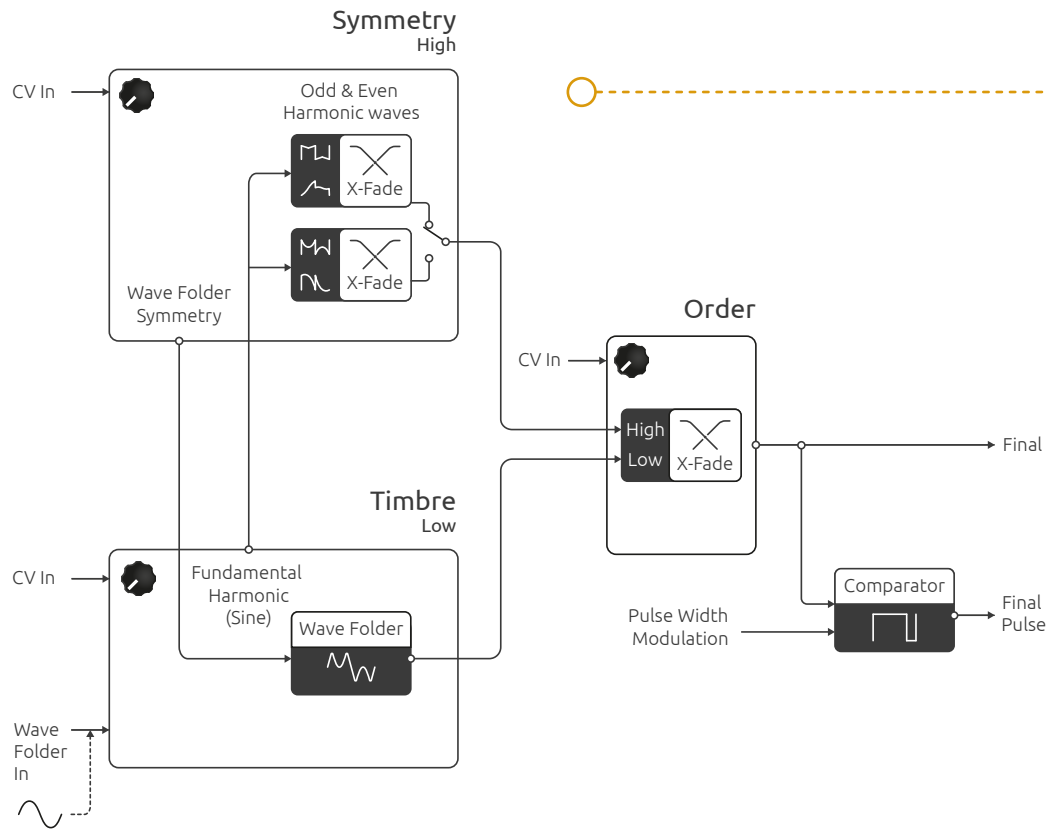
Manual Controls

- 1 Frequency Offset control
- 2 Frequency Fine tune control
- 3 Pulse Width control for both Pulse wave and Final Pls wave
- 4 1 Volt per octave linear glide amount
- 5 Linear FM amplitude level
- 6 Even to Odd harmonics waveform Crossfade (High section) and Timbre (Low section) Symmetry control
- 7 Low to High section Crossfade
- 8 Timbre control (Low Section) and High section fundamental Sine wave
- 9 CV attenuator-inverter
- 10 Low frequency (LFO) or High frequency (VCO) operation switch
- 11 Even and Odd harmonics waveform set switch
- 12 Hard or Soft synchronisation switch



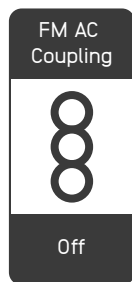
Inputs e Outputs

- 1 Pulse Width modulation CV Input (+5v/-5v)
- 2 Linear FM input (+5v/-5v)
- 3 Linear FM CV input (0v/+5v)
- 4 1 volt per octave pitch input
- 5 Oscillator synchronisation input
- 6 External Timbre audio input. Replaces sine-to-timbre normalization (+5v/-5v)
- 7 Waveform output
- 8 Waveshaper output
- 9 Waveshaper output pulse wave
- 10 CV input (+5v/-5v)



Wave Shaper Diagram

- High section controls the Wave Folder's Symmetry and crossfades two sets of Odd and Even harmonic waveforms.
- Order crossfades between Low and High section.
- Low section controls the Wave Folder, folding the input wave in on it self creating new harmonics and also adds or subtracts the fundamental harmonic into the High section.
- Sine wave is internally normalized to the Wave Shaper input. Will switch off if an external source is Patched.



Back Jumper Switches

- The jumper on the Left selects if the FM input is AC coupled. If AC coupling is ON, DC voltage will be blocked.
- The jumper on the right selects if the second sawtooth output is an inverted sawtooth or a double frequency sawtooth.

