

OSCILLATORS

- Two discrete VCOs per voice
- Continuously variable wave shape (triangle, sawtooth, pulse, square) per oscillator
- Continuously variable wave shape (sawtooth and variable-width pulse, plus triangle on oscillator 2) per oscillator
- Pulse width per oscillator
- Hard sync: oscillator 1 syncs to oscillator 2
- Triangle sub-octave generator (oscillator 1) per voice
- Square wave sub-octave generator (oscillator 1) per voice
- Low frequency mode (oscillator 2)
- Keyboard tracking on/off (oscillator 2)
- Oscillator slop/detune amount for increased tuning instability, from subtle to extreme

MIXER

- Oscillator 1 amount
- Oscillator 1 sub-octave amount
- Oscillator 2 amount
- White noise amount

HIGH-PASS FILTER

- Two-pole, resonant, high-pass filter per voice
- Bi-polar filter envelope amount
- Velocity modulation of envelope amount
- Keyboard tracking: off, half, full

LOW-PASS FILTER

- Four-pole, resonant, low-pass filter per voice, inspired by the original Prophet 5 filter
- Filter can be driven into self-oscillation with the Resonance control
- Bi-polar filter envelope amount
- Velocity modulation of envelope amount
- Keyboard tracking: off, half, full

STATE-VARIABLE FILTER

- Two-pole, resonant, filter per voice with low-pass, high-pass, band-pass, and notch functionality inspired by the original Oberheim SEM filter
- Bi-polar filter envelope amount
- Velocity modulation of envelope amount
- Keyboard tracking: off, half, full

FILTER ENVELOPE

- Four-stage (ADSR) envelope generator
- Velocity modulation of envelope amount

AMPLIFIER ENVELOPE

- Four-stage (ADSR) envelope generator
- Velocity modulation of envelope amount

LOW FREQUENCY OSCILLATOR

- Five wave shapes: triangle, sawtooth, reverse sawtooth, square, and random (sample and hold)
- Clock sync (internal or external MIDI clock)
 - Initial amount
- Mod destinations: oscillator 1 frequency, oscillator 2 frequency, oscillator 1 and 2 pulse width, low-pass filter cutoff, high-pass filter cutoff
- Mod destinations: oscillator 1 frequency, oscillator 2 frequency, oscillator 1 and/or 2 pulse width, filter cutoff, filter mode

POLY MOD

- Sources: filter envelope (bi-polar) and oscillator 2 (bi-polar)

- Destinations: oscillator 1 frequency, oscillator 1 shape, oscillator 1 pulse width, low-pass filter cutoff, high-pass filter cutoff

X-MOD

- Destinations: oscillator 1 frequency, oscillator 1 shape, oscillator 1 pulse width, filter cutoff, filter mode

AFTERTOUCH

- Source: channel (mono) aftertouch with bi-polar amount
- Destinations: oscillator 1 frequency, oscillator 2 frequency, LFO amount, amplifier envelope amount, low-pass filter envelope amount, high-pass filter envelope amount
- Destinations: oscillator 1 frequency, oscillator 2 frequency, LFO amount, amplifier envelope amount, filter envelope amount

CLOCK

- Master clock with tap tempo
- BPM control and display
 - MIDI clock sync

ARPEGGGIATOR

- Selectable note value: 16th note, 8th note triplet, 8th note, dotted 8th note, quarter note
 - One, two, or three octave range
 - Up, down, up/down, random, and assign modes

SEQUENCER

- Polyphonic step sequencer with up to 64 steps and rests

EFFECTS

- Stereo analog distortion
- Dual, 24-bit, 48 kHz digital effects, including: reverb (room, hall, plate, spring), delay (full bandwidth digital delay and emulated bucket brigade and tape delays), chorus, and phase shifter
- Dual, 24-bit, 48 kHz digital effects, including: reverb (room, hall, plate, spring), delay (full bandwidth digital delay and emulated bucket brigade and tape delays), chorus, flanger, phase shifters, and ring modulator
- Delay sync
- True bypass maintains fully analog signal path when digital effects are off

PERFORMANCE CONTROLS

- Full-sized, semi-weighted, 4-octave keyboard with velocity and aftertouch
 - Backlit pitch and mod wheels
- Spring-loaded pitch wheel with selectable range per program (1 to 12 semitones up and down)
 - Transpose controls for an 8-octave range
 - Hold switch latches held notes on
 - Polyphonic glide/portamento
- Unison (monophonic) mode with configurable voice count, from one to all six voices, chord memory, and key modes
 - Preset/Manual switch: when off, the front panel is live; what you see is what you hear

PATCH MEMORY

- 500 user and 500 factory programs in 10 banks of 100 programs each
- Direct program access, including single-button access to the current set of 10 programs

IN/OUT

- Left/mono and right audio outputs (2 x 1/4" phone jack)
 - Headphone output (stereo, 1/4" phone jack)
 - MIDI in, out, and thru ports
 - USB for bidirectional MIDI communication
- Low-pass filter cutoff expression pedal input
- Filter cutoff expression pedal input
- Volume expression pedal input
 - Sustain footswitch input
- Sequencer start/stop footswitch input

POWER

- IEC AC power inlet for internal power supply
- Operates worldwide on voltages between 100 and 240 volts at 50 to 60 Hz; 30 watts maximum power consumption

PHYSICAL SPECS

- 32" L x 12.7" W x 4.6" H (81.3 cm x 32.3 cm x 11.7 cm)
 - 20.0 lbs (9.5 kg)
 - Walnut end panels and trim