Synthesis Engine

- 2 Oscillators (sine wave, adjustable jitter/noise)
- Phase modulation: Self, A>B, B>A, via the Shapers, and by the feedback signal
- 2 Shapers (sine curve, adjustable folding and asymmetry)
- Ring Modulator
- Comb Filter (tunable, with allpass and lowpass)
- State Variable Filter (2-4 poles, multi-mode, spread cutoffs, FM)
- Feedback Mixer (4 inputs, shaper for the sum)
- Feedback bus with 4 destinations
- Output Mixer (4 inputs, stereo output, shaper for the sum)
- 3 ADBDSR Envelopes, adjustable Attack Curve
- Velocity amounts for envelope levels and all times
- Note-off velocity can be applied to the release times

- 24-voice polyphony
- Split and Layer modes for two groups of 12 voices
- Unison: 2-24 voices, adjustable detune, phase and pan spreading
- Monophonic mode, adjustable priority, legato modes, and glide time
- Micro-tuning for the 12 steps of the octave

- 5 Stereo Effects
  – Flanger/Chorus/Phaser/Tremolo
  – Cabinet (amp simulation)
  – 8-pole Gap/Band Filter
  – Echo
  – Reverb

- Parameter resolution: typically 1000 steps (250-15000 steps)
- 6 Macro Controls, each can be routed to up to 106 target parameters

Keys and Controls

- 61-key Fatar TP/8S keybed with semi-weighted long-arm keys
- Two 800 mm ribbons (touch strips), each with 33 LEDs
- Ribbon modes: absolute, relative, combinable with return-to-center
- Lever (magnetic force loaded) for pitchbending and similar applications
- Aftertouch (global)

- Resolution of velocity, ribbons, bender, aftertouch, pedals: 4000 steps
- Free mapping of pedals, ribbons, bender and aftertouch to the 6 Macro Controls

User Interface

- 96 high-quality buttons for quick access to all parameters
- Magnetic front panel foils are replaceable to support future synthesis engines
- The base unit can be used without the panel unit
- Graphical user interface, available in the browser on WiFi-enabled devices
- Designed for mouse and touch input, unique zoom-and-pan navigation
- Drag and drop handling of presets

Preset System

- Unlimited number of banks and presets per bank
- User-editable comment and color tag per preset
- Functions for searching and comparing presets
- Morphing transition between presets

Undo System

- Unlimited undo for all user interactions, including sound editing steps
- Undo list with support for multiple editing branches (tree view)
- Change indication and comparison with the original parameter value

Continuous Digital Audio Capture

- Permanent lossless recording of the digital output signal
- Hours of FLAC-compressed audio (at least 80 min) stored in a ring buffer
- Browser-based graphical UI for review, play-back and download
- The states of the synth engine along the time line can be restored
- Download of selected segments to the computer as WAV or FLAC files

Connections

- Stereo line outputs, balanced by transformers (TRS and XLR connectors)
- Headphones output at the front with separate volume control
- Four inputs for pedals, switches or CV (TRS, flexible pin-assignment)
- USB host connector for data storage, software updates, and MIDI
- Directly connectable to USB MIDI devices
- Optional MIDI Bridge accessory for connection to a computer
- High resolution (14-bit) option for MIDI velocities and control values

Dimensions, Weight

- Base unit only: 900 x 290 x 100 mm (width x depth x height), 10.5 kg
- Including panel unit: 900 x 410 x 160 mm (width x depth x height), 13.5 kg

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