SCHMIDT

EIGHTVOICE POLYPHONIC SYNTHESIZER

powered by

:e:m:c:
electronic music components

NO COMPROMISE !

Almost every product in our world of today has been optimized in terms of commercial viability and market value. Inevitably, the resulting product is more or less just that – nothing but a widely accepted compromise.

Schmidt is totally unlike that! Schmidt has been created without any compromise whatsoever in mind.

Schmidt is the dream come true of an engineer dedicated to sound, conceived and perfected in close collaboration with musicians and music producers, brought to life in the most uncompromising way imaginable.

Perfection is not just a word: The sound of Schmidt is simply unique, as are its user interface and build quality – a bold statement against the fast-paced and superficial age we live in.

Schmidt is a thoroughbred analog eight-voice polyphonic synthesizer with true multitimbrality. It sports full MIDI implementation and programmability.

ABOUT...

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soon online:
www.schmidt-synthesizer.com

Schmidt´s sound generation engine features virtually everything that subtractive synthesis is endowed with – and even more: Schmidt gives you additional features that have never been implemented in a fully analog synthesizer before! Features that are truly unique to Schmidt – picture multiple pulsewidth modulation and multiple ringmodulators, for starters.

Every single parameter – even for the most complex modulation routings you might envisage – can be accessed directly using dedicated frontpanel controls and switches. No more browsing through mind-boggling and confusing menues! Instant tweaking heaven! Instant sound sculpting! Instant performance and delight!

Schmidt is crafted to match the highest production standards – it is entirely hand-made in Germany. The casing, made of carefully selected wood and metal, is as beautiful as it is sturdy and reliable. No compromise!

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Signal path

Schmidt's signal path is a prime example for perfect flexibility. It starts with four full featured analogue oscillators, followed by two Moog-style ladder filters (VCF1,VCF2) and two versatile dual multimode filters (DF1, DF2). Each of the multimode filters consists of two parallel 12dB filters with different modes. Each of the filters has two individual input sources (Osc1… 4). The filter outputs are combined into two groups. Group 1 combines VCF1+DF1, group 2 combines VCF2+DF2, selectable in parallel or serial mode. The volume control is in the first place done by mixing the levels of groups 1/2 either manually or by Envelope Generator controlled panning between group1 and group 2 or contrariwise. Several panning modes are available. Additionally, the stereo-mix of groups 1/2 can be modulated manually or by using LFO/EG.

An additional lowpass filter (without modulation) can be mixed to groups 1/2 for boosting the low end. At the last stage of the signal path, the volume can be modulated by a master VCA/EG combination that affects groups 1+2.

Parameter access

One of the most powerful features of Schmidt is the direct access to all parameters by individual control elements (switches/potentiometers). There is no need for mind boggling layered functions and menus.
The large LC-display just makes preset handling and working on utility functions a breeze.

Sound memory (Singles / Multis)

The memory is divided into the sections "singles" and "multis".
The singles represent the different sounds of the Schmidt. 1024 singles can be stored on board (8 banks /128 singles). Playing singles means that all voices generate the same sound at one time.
The multis assign different single-sounds to one group or a group of voices – with no limitations. Think of split- and layer-sounds, different play-modes (controlling the voices by different MIDI channels, the internal keyboard or both).
In multi-mode some parameters of the singles are replaced by multi settings (e.g. detune, transpose, volume). 256 multis (8 banks/32 multis) can be stored in the machine.

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The header "MORE ABOUT..." is at top right.

Oscillators

The Oscillators (waveform generators) are purely analogue. In order to achieve maximum tuning stability for all 32 oscillators, the tuning is controlled digitally. Unlike most other DCO based synthesizers the oscillators of Schmidt work independent of each other. Each oscillator has its own digital frequency- and phase-control, generated by its own digital clock source. This provides best of both worlds: perfect tuning on one hand and unequalled sonic richness on the other.

All of the four oscillators have different features for maximum versatility:

- Osc 1: Square (50%), PWM, SAW, Double-SAW, Noise, Multi-Pulse (a complex waveform consisting out of four pulses, modulated in phase and width – a very unique feature that sounds quite similar to a mix of PWM and oscillator sync), additional suboscillator
- Osc 2: Square (50%), PWM, SAW, Double-SAW, Noise, Ringmod (Source Osc 3)
- Osc 3: Square (50%), PWM, SAW, Double-SAW, Noise, Sync (Source Osc 2), Sync with additional suboscillator
- Osc 4: Several combinations of ringmodulated square-waves create a sonic spectrum from briliant "clean" sounds up to metallic effects and "unearthly" noises.

Special filter features

- VCF 1/2: 24dB Moog-style ladder filter – with additional bandpass and highpass functions
- VCF 1/2: with oscillator modulation by Osc. 1 – 4
- VCF 1/2: envelopes with unique double-decay feature
- DF 1/2: dual filter with oscillator modulation
- DF 1/2: distortion
- Spread-modulation of both cutoff frequencies of DF1/2 (dualfilter) generates vovel-like effects

Modulators (LFOs, Envelopes)

Another handsome feature, which gives you most flexible sound creation capabilities, is the powerful modulator assignment:

Most of the modules have their own modulators, so every oscillator has its own LFO and EG for pitch modulation, every filter can be modulated by its own LFO and EG and so on.

To keep things easy, one single modulator may control several modules at once. For example, Osc. 1, 2, 3 and 4 is modulated individually by seperate pitch-LFOs or the pitch-LFO of Osc 1 modulates all oscillators simultanously.

The most important modulator parameters like e.g. EG attack and decay can be controlled by velocity data. Again, all of the modulator assignments and value settings are accessible by their own individual knobs and switches. No modulation matrix and no complex menus are needed.

Unisono

The unison function is available in single and multi-mode (if two or more voices use the same single-sound). In unison mode all voices are played together on one single note. Schmidt becomes monophonic with up to 32 oscillators playing on one note!
Detuning of the voices can be set from 0 to +/- 50 cent.

Performance controllers

Numerous powerful performance controllers are available, e.g.:
• Aftertouch
• Joystick (X/Y)
• Mod- and Pitch-Wheels
• External inputs for control voltages and/or foot pedals
  These controllers can be routed to every continuous parameter (meaning control knobs), each with individual settings for modulation depth and polarity. Every sound stores its own set of controller settings.

Midi/USB Parameter Control

All sound parameters and controllers (joystick, aftertouch…) can be controlled by Midi/USB. This is done by sending continous controller messages to Schmidt. Conversely, Schmidt sends out MIDI controller data of all his control panel functions.

Midi Clock

The LFOs of VCF1 and VCF2 can be synchronised to MIDI-clock.

Utilities

• External storage of singles and multis. Schmidt is able to send and receive single and multi sounds via sysex-dumps (a dump includes a complete bank).
• Software-Updates. In case of software-updates the complete operation software or some parts can be loaded into Schmidt via sysex-dump. This can be done easily by the user.

Inputs/Outputs

• 1 Stereo master output (jack, unbalanced)
• 8 single outputs stereo (voice 1…8, jack, unbalanced)
• Midi In/Out/Thru, MIDI via USB port
• 4 External Inputs (switching controller)
• 4 External Inputs (continuous controller)
• Stereo phones output with independent level control

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Additional Features

• Single outputs: Each voice has its own output on the back panel. In multi-mode, voices may be disconnected from the master output and only sent out to individual outs in order to modify them individually.
• Fatar-Keyboard 61-keys half weigthed with aftertouch
• Adjustable colors for LEDs and LC-Display
• Internal ubiversal power-supply for 110V/220V
• Weight: 45 Kg
• Dimensions (cm): 114 x 14 x 61

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