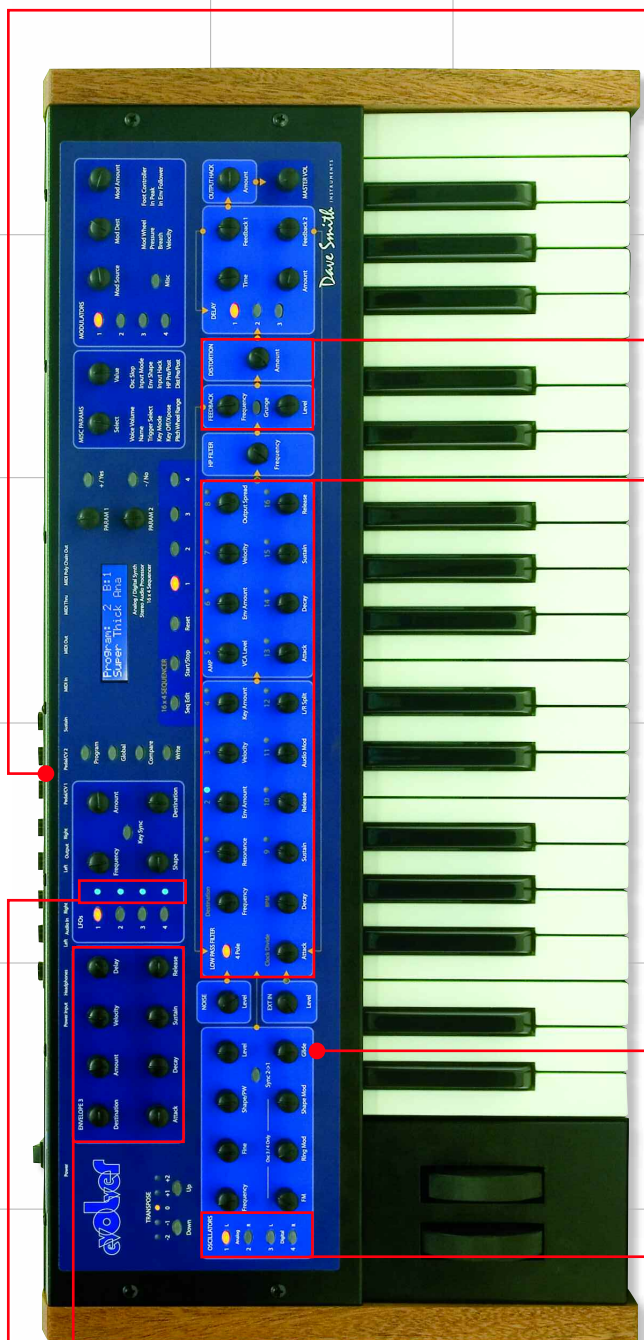


DAVE SMITH INSTRUMENTS EVOLVER KEYBOARD MONOPHONIC SYNTHESIZER

by Stephen Fortner



MIDI poly chain out lets you cascade other Evolver synths to expand polyphony. Say, four Poly Evolver Racks to make a 17-voice monster. Your spouse signed a pre-nup, right?



Between tuned feedback, killer distortion, and the filter's ability to self-oscillate, genome-unraveling sounds not found in nature come just as easily as creamy leads and delicate pads.

Knobs in the filter and amp sections double as controls for the step sequencer when the SEQ EDIT button is lit.

Except for master volume, all knobs are the endless type. They track how fast you turn them very smoothly, and parameters never jump suddenly.

Hold down one of these four buttons for a moment to solo one of the four oscillators, a real convenience for sound design work.

Unlike other means of "seeing the sound," the four LEDs that pulse LFO rates won't make you dehydrated.

If one envelope generator each for amp and filter isn't enough, assign this third envelope to any parameter you please.

Monophonic true analog/digital hybrid synthesizer and 4-track sequencer.

PROS

The sound will blow you away. Sonic character ranges from retro to metro to destructo. Plethora of knobs makes it an unbeatable solo synth for live performance. Power supply adjusts to any wall voltage, and includes changeable plugs for European outlets. Price is very reasonable, given its abilities.

CONS

Power supply is a wall wart.

\$1,329
Dave Smith Instruments,
www.davesmithinstruments.com

photo by Gaiith Kawar

If Jack Black had reached for a synth instead of a guitar while cheering on his *School of Rock* pupils to “melt some faces,” this would have been the one. Though its sound engine has been around since Dave Smith released the Key Buy-winning desktop Evolver, the army of knobs and blinking lights on the mono Evolver Keyboard — MEK to its friends — accomplishes two missions. First, to be so blingy that it can’t help but attract some well-deserved attention to the sonic potential that lies beneath, even from across a crowded music store. Second, to make realizing that potential so hands-on and gratifying that they’ll have to pry you away at closing time. Of course, they’d prefer you take the thing home. Should you? Keep reading if you need a more detailed answer than, “Hell yeah!”

CONTROLS AND KEYBOARD

The user interface is so straightforward that anyone can start having fun, and even glean a thing or two about the basics of synthesis, without cracking the manual. A blue background (on the two knob rows closest to the keys) denotes things in the actual audio path, and orange arrows clearly show signal flow. Controls for programming, as well as modifiers like the LFOs, third envelope, and modulators all have a darker, indigo background.

Grab any knob, and the setting it adjusts shows up on the display. Once you do this, the YES and NO buttons change that setting by increments, and the PARAM1 knob, which normally changes programs, goes inactive until the next time you hit the PROGRAM button. The point of this is to prevent absent-minded sound-switching and loss of your changes, and it works. My only suggestion is to include some way to see a parameter without turning the knob enough to possibly change it. This takes a very gentle touch on the MEK.

On a lot of keyboards I’ve played, aftertouch seems to have two moods: zero and full blast. Not so on the MEK, whose wide, usable middle range responded evenly to increasing finger pressure. This went miles towards making already-expressive sounds even more so.

THE SOUND ENGINE

Imagine a Prophet-5, only stereo and way more stable, and you have a good description of the sound of the MEK’s real analog oscillators and filters. On top of that, two digital oscillators play the 128 waveforms originally found in the Prophet-VS. Of these, some do good triangle and sawtooth imitations, facilitating fat, four-oscillator patches that sound totally retro; others are proudly digital, lending themselves well to struck, plucked, and other organic sounds, as well as ear-shearingly aggressive textures if you want them.

It’s almost unfair to call the MEK a monophonic synth. It’s actually sort of pseudo-polytimbral. While you can play only one note at a time on the keys, the built-in step sequencer’s four independent tracks can each control virtually any parameter in the machine, including each oscillator’s pitch. This lets you create up to four-part chords or counterpoints, and bank 3 is chock full of factory sounds that show this off beautifully.

The modulation routings are so exhaustive that the MEK is almost like a giant modular synth in a tiny package. Sure, you can do all the usual stuff like varying the filter cutoff with a physical controller or LFO, but how about this for flexibility: Not only does each sequencer track have its own destination control as described above, but that same track can modulate a totally different parameter at the same time, thanks to the controls in the MODULATORS block. Within the four-way modulation router, sources can have multiple destinations, destinations can have multiple sources, and musicians can have a valuable weight-loss tool: Start creating a sound on the MEK, and you *will* forget to eat.

The MEK’s sequencer really is a keystone of its sound design philosophy. It’s for *creating* sounds just as much as for laying down Kraftwerkian phrases using already-existing sounds. The latter may be the more prevalent way to think of an old-school step sequencer, but the former is why I’m raving about it in the “Sound Engine” part of the review.

Distortion, three separate delays, and “output hack” complete the signal chain. There’s also a “tuned feedback” path — really a digital stereo delay line — that can have a constant pitch or track the keys, independently of the main signal. Like on the MEK’s predecessors, filters, feedback, and effects can also process external audio, and placing the level knob on the front panel (not around back like on some keyboards with audio inputs) invites you to treat the incoming signal as another “oscillator.”

IN USE

I wanted to layer an ever-changing series of digital waveforms on top of a warm analog foundation that varied more subtly, perhaps to represent that cocktail of spontaneity and stability that life in general usually refuses to serve. Beginning with the blank-slate program in slot 128, I first turned the analog oscillators’ levels to zero. The SHAPE MOD knob selects which sequencer track, if any, steps through the wave bank for either digital oscillator, so I assigned track 1 to oscillator 3.

VITAL STATS

SYNTHESIS TYPES

Real analog, digital wavetable.

KEYBOARD

37 keys, C to C, velocity and aftertouch.

POLYPHONY

Monophonic.

EFFECTS

Distortion, 3 delays, and output hack (bit reducer).

DISPLAY

2 x 16 character backlit LCD.

AUDIO OUTPUTS

1/4" L/R, 1/4" stereo headphone out.

AUDIO INPUTS

1/4" L/R, line level.

MIDI CONNECTORS

In, thru, out, poly chain out.

CONTROLLER INPUTS

1/4" pedal/CV (2), 1/4" sustain.

POWER SUPPLY

External international type.

DIMENSIONS/WEIGHT

15.75" W x 12.2" D x 3.3" H; 13 lbs.

SOUND HOUND

The Evolver has so many killer presets that it’s almost impossible to highlight just a handful, but we’ll try anyway. Visit www.keyboardmag.com/0806119 to hear these examples.

Big Sawz Bass: Both analog and digital oscillators put out sawtooth waves, all slightly detuned relative to each other, for a string-like bass that’s just huge.

Swirlyly: Arpeggiated and reminiscent of Yes’ “Roundabout,” with a sinister, *Matrix*-like drone brought in by the mod wheel.

Pastoral Plus: If I heard an MP3 of this program, there’s no way I’d believe it was all coming out of the monophonic Evolver in real time. But it is.

Analog Cello+: Using only tuned feedback to generate sound — that’s right, all the oscillators’ volumes are at zero — presents a stunning range of expressive and unpredictable harmonics, from woodwind-like to guitar-like.

Super Thick Ana: One of many sounds that proves the MEK can do retro-analog like a Porsche can get you to the grocery store.

SteveSound: The non-factory sound Fortner describes programming in the “In Use” section of this review.



/0806119

For more on the Web, go to www.keyboardmag.com/0806119.

AUDITION

DAVE SMITH INSTRUMENTS EVOLVER KEYBOARD MONOPHONIC SYNTHESIZER

JARGON JOCKEY

- **Output hack:** This final step in the Evolver's audio path reduces the bit resolution of the D/A convertor, resulting in a trashy, lo-fi sound if you want it.
- **Curtis filters:** The Curtis semiconductor company made the analog oscillator and filter chips from one version of the original Prophet-5, and they're considered to have a desirable sound quality by many analog enthusiasts.

Pressing SEQ EDIT turns the filter and amp sections into sequencer controls, the only exception to the MEK's one-knob-per-function rule. I dialed in a different waveform for each step, and it was a time-saver that I could hear oscillator 3 briefly play each wave as I turned the knobs. The only workflow improvement I'd suggest here is to order the waves in memory from mellow to bright as opposed to the seemingly random order they're in, which is actually the same as on the original Prophet-VS. Since the VS was designed for vector synthesis, not wave sequencing, it made sense to have adjacent waveforms with very different harmonics.

Once I was happy with my wave choices, the real fun began. The MEK's Trigger Type parameter selects whether pressing a key resets the sequencer to step 1, gates the sound from a running sequence, or a plethora of other choices. I chose "Key Steps Seq,"

which as you might guess, advances the sequencer one step with each key press. In other words, one of 16 different waves would play each time I touched the keyboard. I quickly duplicated it with track 2 and oscillator 4, detuning the oscillators just a bit to fatten things up.

Now it was time to deal with the analog oscillators. It was simple enough to create a pulse-wave sound with slow filter cutoff and pulse width fluctuations controlled by two of the LFOs. I added just a hair of portamento, and what I got was evocative of a lead from Yamaha's classic analog CS-80.

THE EVOLVER LINE

Gotta play chords? Would rather have a module? Here's the rest of the family, their list prices, and when we reviewed each one.

Desktop Evolver	\$599	Mar. '03
Poly Evolver Rack	\$1,495	Nov. '04
Poly Evolver Keyboard	\$2,699	Aug. '05

CLAIM CHECK

Dave Smith tells us, "Synths should be fun to play, versatile, unique, and should have loads of personality. The Evolver Keyboard is a no-corners-cut stereo mono synth at a very reasonable price. Highly portable, but packed with features and a knob-per-function interface that's concise but capable of keeping you exploring for a long time. I use the same Curtis filters as in the Prophet-5, with a separate one in each channel for a true stereo path. The tightly integrated digital side includes two Prophet-VS oscillators to complement the analog ones. Rather than replicate the Prophet-5's 25-year-old design, the goal was to include the old analog stuff but go well beyond it. Nothing can match the Evolver's sheer range of sound and playability."

AUDITION

DAVE SMITH INSTRUMENTS EVOLVER KEYBOARD MONOPHONIC SYNTHESIZER

DAVE-OLGY 101

New to synthesizers? In the '70s and '80s, the holy trinity of American synth designers was Bob Moog, Tom Oberheim, and Dave Smith. While the first two put their names on their keyboards, Smith's company, Sequential Circuits, produced the legendary and now widely-mimicked Prophet-5, and later the Prophet-VS (reviewed Aug. '86), which combined digital wavetable oscillators with an analog filter. Features we now take for granted made the P5's \$4,595 list price a bargain in the eyes of serious pros: Not only was it polyphonic, but you could save sounds you'd created and recall them at the gig.

Think of the mournful lead that permeates *Blade Runner* underneath that crystalline mallet sound from the intro to Peter Gabriel's "San Jacinto," and you'll get a rough idea of the end product. It certainly would have taken longer to do, and been less fun, using any other combination of synths, hard or soft, that I can think of. In fact, the hardest thing about creating sounds on the MEK is knowing when to quit. Programming it is so inviting that I regularly found myself thinking, "But I have two sequencer tracks left, and I could assign aftertouch to *this*, and modulate *that* with *the other thing*, and the sound would be even cooler! Augggh!"

KEY FEATURES

USER MEMORY LOCATIONS

512, loaded with factory sounds..

FILTER MODES

2-pole and 4-pole, separate highpass filter.

ANALOG WAVEFORMS

Sawtooth, triangle, saw-triangle, variable pulse width.

NUMBER OF DIGITAL WAVEFORMS


128.

CONCLUSIONS

If you read last month's review of Arturia's Prophet-V soft synth, you may recall that its hybrid mode puts the "Prophet-5" next to two "VS" oscillators. It's ironic that the Evolver tries less hard to look like the real thing, because under

the hood, it is the real thing: A hardware fusion of two synths now hunted to extinction on eBay, with features and abilities neither of the originals had.

Far beyond that, the MEK is a bargain-priced and user-friendly point of entry into what is likely the deepest hardware synthesis system currently made. To get deeper, your choices are to be happy with software, or spend tons more money in the relatively esoteric world of modular synths. The former's sound is no match for the Evolver line, and unless you're a veteran synth geek, the latter doesn't instantly inspire you to *just play* the way the MEK does, nor can you take it to the gig as easily. It's also scalable, thanks to the Poly Chain output: You can add more Evolvers to get more voices and, provided they're loaded with identical sound banks, it's like having one big synth that responds seamlessly to all your knob twists.

Even by itself, the sound quality and playability that Dave Smith has packed into this jewel-like little monosynth should earn him the Nobel Prize. Since that's a little bit out of our jurisdiction, he'll have to settle for a very enthusiastic Key Buy. 

When he's not working feverishly to get the next issue of Keyboard together, Steve Fortner heads south to play in bands and record in the Los Angeles and Santa Barbara areas. Books on tape are his friends!