

# DAVE SMITH INSTRUMENTS PROPHET '08

## ANALOG SYNTHESIZER

by Francis Preve



	<p>The modulators section governs the four-way matrix and four gated step sequencers for over-the-top results you thought you needed a modular synth to get.</p>		
		<p>Individual LEDs for each voice show which voices are sounding at a given moment.</p>	
	<p>The LCD area includes a tempo knob, as well as buttons for toggling the arpeggiator, step sequencers, layers, and splits. The LCD lets you compare edited and original values for any setting you're tweaking.</p>		<p>The amplifier section includes the volume envelope, plus knobs for stereo spread, envelope amount, and even overall VCA level, which you could turn up for drone effects.</p>
		<p>The filter is every bit as fat and punchy as anything on vintage analog gear, but hella more stable. It has uncommon knobs for settings like velocity and FM, and can toggle between 2- and 4-pole modes.</p>	
	<p>The dual oscillator section includes hard sync and a noise generator.</p>		<p><i>Analog synthesizer with built-in step sequencer.</i></p>
	<p>You can route envelope 3 to almost any parameter, as well as set it to loop for custom LFO shapes.</p>	<p>Four LFOs can operate in standard, tempo-synced, or audio-range modes. Each can modulate any parameter you choose.</p>	<p><b>PROS</b> ↑ <i>Totally analog signal path. Warm, fat, ballsy, earth-shaking sound. Extensive modulation options. User interface has huge instant-gratification factor. Sounds in a split or layer can be routed to separate stereo outputs.</i></p>
	<p>On the Special Edition, the pitch and mod wheels are backlit in red, the side panels are made of hardwood, and there's a plaque signed by Dave Smith.</p>	<p>The keyboard is quiet, semi-weighty, velocity-sensitive, and has smooth aftertouch response.</p>	<p><b>CONS</b> ↓ <i>No built-in effects. No keypad for random access to stored presets.</i></p> <p><b>\$2,199; special edition, \$2,699</b></p> <p>Dave Smith Instruments, <a href="http://www.davesmithinstruments.com">www.davesmithinstruments.com</a></p>

In recent months, I've rediscovered analog synths. I dug my Roland SH-101 out of mothballs, purchased an old Siel string synth, and started making music using the techniques from my youth. At the time, I was scouring eBay for a vintage polyphonic synth such as the legendary Prophet-5... but when Dave Smith startled the world with the Prophet '08, I called *Keyboard* and said, "I know you think of me as the soft synth guy, but I *have* to do this review!" After nearly a month of hands-on playing, here's my assessment.

## OVERVIEW

When it comes to keyboards, the phrase "best of both worlds" is tossed around haphazardly. In the case of the Prophet '08, it's dead-on. Here's why:

The world the audio signal inhabits is purely analog. The oscillators rely on voltage, not samples or number-crunching, to generate their waveforms. The filters use analog Curtis chips, just like the Prophet-5. However, the Prophet '08's matrix modulation, tempo-synced LFOs, and the four-track step sequencer are from the digital world. Unlike Dave's Evolver line, the '08 has no digital conversion in the audio signal path, which the Evolvers require because they have digital oscillators alongside their analog ones, not to mention digital effects. The Prophet's oscillators are digitally controlled, meaning that a microprocessor oversees their settings for stability, but that's it. If a computer tells your front porch light to go on at 8 P.M., that doesn't make light from the bulb "computer-generated" either.

The '08's sound engine consists of two oscillators, a fully resonant filter (with FM input from the oscillator section), voltage controlled amplifier, four LFOs, three envelopes, and a four-way matrix modulation section for additional routing. Now, take the above voice architecture and double it, because you can do splits and layers within a single preset. So, every sound can have up to four oscillators, two filters, and so forth, right out of the gate. Tranceheads can (and will) take this to extremes, whipping up 16-oscillator mega-leads by simply pressing the Unison button.

You access the second sound by pressing the Edit Layer B button. If neither splitting nor layering is active, this button simply switches between two sounds, turning one patch into two. When both layers are active, you only get four notes of polyphony, and with splits, voices are not dynamically allocated; you simply get four voices for each part. It's doubtful you'll need more — when dealing with analog sound that's this fat, the rules are different. Heck, some modern analog synths have *one* voice, and nobody complains.

To top it all off, you can route layer B to the Prophet's secondary stereo outputs, letting you run a preset's two sounds through different outboard mixer channels and effects. In fact, you'll need outboard gear to add effects such as delay or reverb. While this seems stingy if you're used to the extensive effects menus in today's digital keyboards, it's a purist design choice here: Building in these effects would have

meant converting the sound to digital, then back to analog as it hit the outputs.

## OSCILLATORS

Each oscillator has four waveforms: sawtooth, triangle, saw/triangle hybrid, and adjustable pulse width, which can be used for everything from reedy sounds to bold square waves. The saw/triangle is a nice touch, as it has more body and less fizz than a regular saw, making it good for blending low end beef into a sound when the filter's cutoff is wide open. If you want more highs, the regular saw packs enough sizzle to fry a steak. There's also a noise knob for adding percussive and breathy effects.

To recapture the sonic imperfections of the original Prophet, a parameter called Oscillator Slop introduces a bit of pitch drift between the oscillators. You may find you'd rather turn off Slop entirely. If you've used a two-oscillator vintage synth at length, you may have noticed that phase issues can cause "thinness" in bass patches, unless you limit yourself to one oscillator, or separate two oscillators by an octave. When both oscillators are locked in tune, you can create sounds that retain their low end, yet stay punchy and consistent. You really can have the best of both worlds with this system.

It wouldn't be a Prophet without hard sync, the source of those swept leads in '80s tracks such as the Cars' "Let's Go" and Parliament's "Atomic Dog." True to form, you can sync oscillator 2 to oscillator 1 and have at it. The results can vary from subtle harmonic motion to full-on squawk.

A really neat innovation Dave carried over to the '08 from his Poly Evolver line is independent glide rates for each oscillator. When the rates are similar to each other, the result is a detuned swoop. Setting them further apart gives gliding notes a super-thick texture. Dialing in a really big difference sounds amazing, especially with hard sync active.

## FILTER

If you've never enjoyed the sound of an analog filter up close, it's light years better than any soft synth. At low cutoff frequencies, it has a velvety caress. Wide open, it sizzles with high frequencies that you feel more than actually hear. Real analog filters have a presence that makes them pop in a track like nothing else, and the filters in the '08 are as real as it gets.

In addition to cutoff frequency, resonance, and envelope amount, the filter section has knobs for keyboard tracking, velocity amount, and audio modulation. The Audio Mod knob controls the amount of filter FM, derived from the output of oscillator 1. This is a nod to the original Prophet-5's Poly-Mod section, and is a rich source of metallic and bell-like textures.

While these filters are strictly a lowpass affair, they can operate in either two-pole or four-pole mode. The two-pole mode has a more Oberheim-like character, while four-pole brings the thick Prophet sound we've come to know and adore. In both modes, the

## VITAL STATS

**SYNTHESIS TYPE**  
Analog.

**POLYPHONY**  
8 voices.

**MULTITIMBRAL PARTS**  
2 via split or layer mode.

**INTERNAL STORAGE**  
256 patch locations, all pre-loaded with factory sounds.

**EXTERNAL STORAGE**  
Via MIDI sys-ex only.

**OSCILLATORS PER VOICE**  
2, 4 in layered mode.

**FILTER MODES**  
2-pole (12dB/octave), 4-pole (24dB/octave).

**STEP SEQUENCER**  
4 assignable tracks, up to 16 steps each.

**AUDIO OUTPUTS**  
L and R unbal. 1/4" main, L and R unbal. 1/4" output B, 1/4" stereo headphone jack.

**PEDAL INPUTS**  
1 expression/sweep, 1 sustain.

**MIDI CONNECTORS**  
In, thru, out, poly chain out for cascading multiple Prophet '08s.

**POWER SUPPLY**  
External 13.5V DC, includes international plugs.

**DIMENSIONS/WEIGHT**  
34.8" W x 12.1" D x 3.1" H; 22 lbs.



The Prophet '08's "B" outputs automatically steal the second layer from a split (or left-hand part from a stack) when you plug audio cables into them. Connect a second Prophet '08 to the "Poly Chain Out" MIDI port, and it will act as eight more voices of polyphony for the master. Any knob you tweak on the master will affect both Prophets identically, but both must have identical program banks loaded for this to work.





/1107120

To hear sounds Francis Preve created for the "In Use" section of this review, visit [www.keyboardmag.com/1107120](http://www.keyboardmag.com/1107120).

### SOUND HOUND

The '08's factory sounds are in two banks of 128 presets each, and cover a massive range of styles, with an emphasis on the rich, warm, wide sounds that are the reason so many soft synths focus on imitating analog hardware. Fat basses, silky pads, snappy percussive sounds, and a boatload of sassy leads are the order of the day here, though there are enough exotic sequenced and rhythmic patches to whet the appetite of dance music creators.

### JARGON JOCKEY

■ **LFO:** Low Frequency Oscillator. This is the part of a synth that's usually used to add vibrato, tremolo, or other regular variations to a sound. "Low" means that the oscillations are below the range of human hearing, but the Prophet '08's LFOs can actually be sped up well into the audible range.

There's also a basic arpeggiator, independent of the sequencer. Its four modes are up, down, up/down, and assign, which plays the arpeggio in the order that you pressed the keys. Oddly, range is not programmable, and there's no random mode for Duran Duran-style effects. If you want more involved arpeggios, that's what the sequencer is for.

### IN USE

I'm all over the tech-house and electro sound these days, so I started my experiments by making exotic rhythmic swoops and burbles. The '08's combination of tempo-synced LFOs and step sequencers made light work of this, and thanks to having a knob for every commonly-tweaked function, the process was truly a right-brained delight.

Though you get lots of knobs on virtual analog synths, I haven't found one that's as incapable as the Prophet '08 of ever sounding bad or even awkward. This inspired me to turn my attention to crazy modulation schemes. I started by creating a Roland TB-303-esque bass sequence, but was dismayed by the absence of a slide function for pitch swoops. After a little head-scratching, I created a sequence that controlled the amount of tempo-synced LFO I'd assigned to pitch. Bingo. Better still, this approach provided a lot more fine control of the slides than a real TB-303. Alternately, I could have used a pitch envelope.

Next, I came up with a patch with step sequencers that created one rhythm at low filter cutoff values, morphing into a more complex rhythm as the cutoff increased. Using the modulation matrix, I attached pulse width and sync sweeps to the mod wheel. The outcome was perfect for long, slow builds.

I had to recreate a few classic sounds as well. The infamous "Jump" brass stab took about two minutes from scratch. Since the sound of the original came from an Oberheim OB-8, which had a two-pole filter, I used the Prophet's two-pole mode, and the result was identical. [*You didn't actually play the riff, did you? It's the keyboard equivalent of "No Stairway!" —Ed.*] The lead from Emerson, Lake, and Palmer's "Lucky Man" was a simple matter of layering two detuned square waves with wide-open filters and lots of glide.

If you add the '08 to a soft synth-based composition, it declares, "I . . . am . . . here!" It layers beautifully with *itself* in a multitrack mix, and I'd have no reservations using it for every synth sound in an entire production. In fact, that's what I did (except for a few drum samples) in order to enlist the ears of chart-topping electronica artist and remixer Josh Gabriel. Josh has a huge collection of vintage gear, and after listening to my tracks, he commented, "This thing is way punchier than my Prophet-600 or Prophet-5. It has a really thick sound that's somehow very modern without being digital in any way." Want to judge for yourself? Listen to the tracks at [www.keyboardmag.com/1107120](http://www.keyboardmag.com/1107120).

Almost every knob on the '08 (the two parameter knobs to the right of the LCD) can transmit MIDI control messages. With a total of 52 knobs, I've become addicted to recording these moves as part of my sequences. The Prophet plays them back with no problem. The one feature I miss on the '08 is a keypad for random access to sounds. The Poly Evolver

### CLAIM CHECK

Dave Smith says, "The Prophet '08 was designed to fill a big void in the synth world. An eight-voice synth for about \$2K, with a 100% analog signal path, stands alone. There are monophonic analog synths that cost more, and of course a zillion 'virtual analog' hard and soft synths, but there is nothing close to this instrument.

"It was time to rescue the Prophet name from the simulations, and let players hear and appreciate the real thing. The '08 also re-introduces the easy-to-use, knob-per-function interface that's been missing for too many years. While retaining the basic voice structure (and Curtis filters!) of the original Prophet-5, the '08 goes well beyond it in terms of features, sound capability, and bang-for-buck. It's already being appreciated by beginners who had always heard about the Prophets and now get to experience the sound. Pro musicians, on the other hand, feel like they're being reunited with an old friend."

Keyboard (reviewed Aug. '05) had one; for that matter, so did the Prophet-5. Here, you need to step through presets using the data knobs or up/down buttons, or trigger them by sending the '08 MIDI program change commands.

### CONCLUSIONS

The Prophet '08 has a soul that even the most sophisticated soft synths and virtual analog hardware simply can't touch. Comparisons to other current analog synths are inevitable, but only one is really fair: The Alesis Andromeda (reviewed May '01) is the only other machine that's polyphonic, analog, and anywhere near the Prophet in price. Well, "anywhere near" means \$3,499, but for that, you get twice the polyphony, separate two- and four-pole filters instead of one filter with dual modes, inputs to route audio through the filters, onboard effects and reverb, and a graphic LCD to aid in editing envelopes, sequencer steps, and other settings. On the Prophet, I find that simply turning knobs and playing provides such immediate and gratifying feedback that I don't need to look at a display.

Comparing on sound instead of specs, Dave Smith's synths have a comfortable edge. Tech editor Stephen Fortner, who had an Andromeda at *Keyboard* Central, commented, "Even the Poly and Mono Evolver keyboards, both of which I reviewed, have creamier oscillators and filters and snappier envelopes than the Andromeda, to my ears. And unlike the Prophet, they use digital conversion in the audio path. The Andromeda is more 'lush' and less 'thick' — a good analogy is how a Roland Jupiter-8 would have sounded next to a Prophet-5 in 1985."

At a time when the expense was a stretch for me, I bought the Prophet '08 review unit — and I'm a soft synth die-hard. I've learned my lesson: I simply cannot live without a real analog synth, and without a doubt, the '08 is that synth. It's awakened the creative joy that I felt as a teenager, playing with my Korg Polysix and Roland SH-101 (and wishing I could afford a Prophet-5). They say you can't buy inspiration. Now that I have a Prophet '08, I beg to differ. In my opinion, it's quite possibly the best-sounding, most fun-to-play analog polysynth in the history of keyboards, and absolutely a Key Buy winner. Bravo!