

ROLAND V-SYNTH XT

SAMPLING AND MODELING SYNTHESIZER

by Stephen Fortner



Use a mini-PC memory card (or SmartMedia or Compact Flash with an adapter) to back up internal memory and store multiple projects.

The Control button turns the touch screen into the V-Synth keyboard's "Time Trip" pad.

The Mode button accesses a master menu of system, USB, MIDI, sampling, and storage functions.

Corresponding red numbers on nearly every screen make it crystal clear what settings these knobs change at any given time.

FOR MORE V-INFO
V-Synth user forums:
www-tribe.info

This is one gorgeous touch screen. Colors are brilliant, response is ultra-fast, and the confirmation beep can be turned off.

PROS
Sound design power is mind-bending, but user interface isn't. More playable, analog-style patches than original V-Synth. Onboard sampling and resampling. Vari-Phrase processing sounds and works great. Vocal Designer and D-50 expansions are standard. Bright, fast color touch screen. Will compete with your spouse for attention.

The USB port streams audio in real time, allows the XT to be accessed as a drive on your Mac or PC for drag-n-drop file movement, or talks MIDI to your sequencer program.

Even when rack-mounted, the V-Synth XT can tilt upwards for easier panel access.

CONS
Incompatible with original V-Synth factory patches. No D-Beam onboard. Oscillators can't be panned. Sample memory can't be expanded. Will compete with your spouse for attention.

Plug in a mic here to use the V-Synth XT as a vocoder or harmonizer. Phantom power is a nice touch.

Roland,
323-890-3700,
www.rolandus.com

\$2,499

The V-Synth's tabletop configuration is well-considered and highly inviting.



Since the days of room-filling modulars, “synthesizer” has meant at least two things: Something that electronically imitates sounds of other instruments, and something that sculpts timbres *impossible* on other instruments. Manufacturers have been re-discovering the latter sense in the past couple of years, and Roland’s original V-Synth did this so brilliantly that we gave it a Key Buy award in May ’03. Never purely intended as a “virtual analog” machine, it wasn’t shy about its aggressive sonics, which some flagged as “too digital” while others just dove into the sound-molding possibilities. With the rack-mount V-Synth XT, the experimental is joined by a broad palette of more playable and recognizable patches. Roland has added some powerful new goodies, too. Let’s see how it all adds up.

WHAT’S NEW

To make sense of it all, we need three categories: Stuff you got on an original V-Synth, stuff you get with the new operating system, and stuff you only get on the XT. The first category explains the concept: A synth that can combine virtual analog and sample playback sounds in the same patch. The latter can use Vari-Phrase, which alters time and pitch so flexibly and with such superior audio quality that the marketing term “elastic audio” is no exaggeration. The touch pad can perform X-Y control or take your sound on a “Time Trip:” Move your finger in circles to speed up, slow down, reverse, or freeze how a sampled sound plays, almost as if it were sitting on a DJ’s turntable.

Version 2 software, available as an upgrade and shipping in new Vs, adds the updated patches, based on entirely new raw waveforms, “sound shaper” templates to get you started creating your own waveforms, a rhythm set mode that triggers a different sound — with different filtering if desired — from every key, and step-based modulation so cool we gave it its own section.

Roland summed up the further XT differences nicely (see “Claim Check”), but I’ll add that they put in balanced main outs plus an XLR combo jack with phantom-powered mic preamp on the front panel. There’s no D-Beam, their signature Theremin-like optical controller, but one from an external piece of MIDled-up Roland gear will work fine.

Physical design is very clean. Everything looks and feels sturdy and elegant, and the wedge shape is almost cuddly enough to curl up in bed with. (*Too much information — Ed.*) When racked, pulling the stainless steel handles clicks it to one

JARGON JOCKEY

- ♪ **COSM:** Composite Object Sound Modeling, Roland’s term for modeling everything from filters to speaker cabinets to the acoustics of a guitar body.
- ♪ **Formant:** In human speech, a mouth movement to create a vowel sound. In the V-Synth, this setting varies the vowel-like character of an oscillator.
- ♪ **Model:** A complex mathematical picture of how anything that makes or alters sound behaves. It’s an alternative to sampling, and often more expressive, as a good model responds to your input. The synth does the math so you can do the music.
- ♪ **Structure:** One of three arrangements of “virtual synth modules” in a patch. They’re called algorithms by some other companies.
- ♪ **Vari-Phrase:** Roland’s means of independently altering the pitch, time, and formant qualities of sampled sounds in real time.
- ♪ **Zone:** A single patch can have completely different sound settings, such as structure, waveform, COSM type, you name it, for up to 16 non-overlapping key ranges. It’s like a drum map, but to the extreme.

STEP TO THIS

Imagine soft synth automation and an old-school step sequencer fused by Dr. Frankenstein — make that Dr. Tyrell, for you in the *Blade Runner* generation — and you have the multi-step modulator, a monster feature not found on the first V-Synth. Each step can send a different value to a destination chosen from an exhaustive list of nearly every setting in a patch. The 16-step grid quantizes from quarter to 32nd-notes, including dotted varieties (but no triplets as such), and you can clock tempo from an external source. Opening and closing the filter to the beat is an obvious use, but barely scratches the surface.

Four “tracks,” or independent step-mod screens, each control a different parameter, even in other zones if you choose. The coolest thing, though, is the ability to hand-draw right on the grid. Fingers work fine, but a PDA stylus is even better. Use the knobs if you prefer, or select from preset patterns.



of five angles for better panel access, very useful in a rack where your gear is partially recessed. Leave a free space above it for room to turn.

CLAIM CHECK

Roland product manager Vince LaDuca says, “The V-Synth XT was developed to bring the unique power of the original V-Synth’s variable oscillator and elastic audio technologies into a flexible, studio-friendly rack/tabletop form. It also offers powerful extras such as USB audio streaming, color touch screen, and two V-Cards pre-installed. Some of the lucky ones to receive the first batch of XTs have commented that this machine has brought back ‘the joy of hardware synthesis.’ We agree, since the idea was to combine the visually stimulating interface of soft synths with hardware benefits such as knobs, virtual Time Trip Pad, and touch screen. Does it compare to other software or hardware synths? Well, we think the XT is in a class of its own, since there is no other technology in a box, keyboard, or software program like it.”

THE SOUND

There’s plenty to dance about in the XT’s architecture. Refer to the May ’03 review for a full primer, but briefly, a V-Synth patch uses one of three structures, or chains of sound-making modules. You get two oscillators, two COSM blocks, a block to modulate one oscillator with the other if desired, and a “TVA” or overall volume envelope. Each oscillator can get its sound one of three ways: analog modeling, sample playback, or external audio from any physical input on the machine: analog, S/PDIF, or USB.

COSM, used for sounds and effects on a ton of Roland products, sits where you’d expect to find filters, and filters it can do quite well. It also models things normally found in effects sections, like distortion and speaker cabinets, and has more exotic chops, like sideband filtering (which can turn unpitched transients into playable, pitched sounds), and a shaper to monkey around with the actual waveform, adding anything from a subtle edge to unashamed digital grunge. All of this can be done without touching the effects section proper, which is last in the chain. I’ll describe Vari-Phrase, another key technology, below in “In Use.”

How does all this flexibility sound? From shimmer to grease, everything I got out of it was addicting, with tons of attitude, none of it bad, and the low end had me wanting to re-track the bass parts on all my existing songs. Put the XT right next to something solely dedicated to smooth-n-creamy analog, and it may sound subtly fizzier, but let’s emphasize “subtly” and “right next to.” Its virtual analog personality is so vastly improved over the original, and integrated so seamlessly with so much else, that one might as well

complain that a flying, amphibious, time-traveling car doesn’t handle *exactly* like a ‘66 Jaguar XKE.

The only trade-off is that version 1 factory sounds won’t load now, and neither will user-created sounds employing the old wave data. Anything based on user-sampled waves is fine, though.

IN USE

In my opinion, Roland currently leads the hardware world in user interface design. Compared to the keyboard, eight knobs may seem sparse, but only at first glance. Onscreen knobs have numbered red tags to show which physical knob to grab, and yes, you can change the assignments. To get to something not mapped to a real knob, touch it, and the display goes a level deeper. Touching a data field always assigns it to

FACTORY SOUNDS

The XT is a true synthesist’s machine, and if you play only the factory presets, you’re limiting yourself. Still, they’re stellar, so here are some standouts you can hear at www.keyboardmag.com.

Da V Code. One oscillator drones while the other chants eerily in Latin. It’s like that enviable keyboard gig in *Eyes Wide Shut*, only without the masks and password.

Physical Bass. Gorgeous synth bass: dense, tight, and best of all, *simple*. Perfect for hip-hop and R&B.

Ocean of Saws. Humongous analog pad showing off the “SuperSaw” waveform, a stack of 7 sawtooth waves that plays as one. This is new to the XT but familiar to JP-8000 users.

Touch Return. An evolving crystal landscape reminiscent of Brian Eno, and a perfect example of what standard VA machines don’t sound like.

MetalTekPhrs. Good demonstration of the XT’s tear-ass side, and of what the COSM sideband filter can do: The root samples are a drum loop and spoken vocal phrase!

AUDITION

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the main “value” knob too. Words don’t really capture how inviting the editing process is. It sucks you in, and the next thing you know, it’s four hours later.

I first tweaked a sampled drum loop I’d grabbed from a colleague’s website and dropped into the XT over USB, until it played in perfect sync with a 16-bar bass and comp groove I had going in Logic. Once I had encoded the sample, a short process that makes Vari-Phrase able to handle it, this literally involved nothing more than turning a knob until I liked what I heard . . . now *that’s* time correction, and pitch and formant qualities are changed just as easily. Vari-Phrase locks up to MIDI, so once I had flipped the XT to external clock, I could drag Logic’s tempo up and down on the Mac with the loop always in perfect time. It’s remarkable all this is non-destructive, the original file sitting unchanged in the XT’s memory. I should also mention that encoding doesn’t turn the file into something unrecognizable: Your computer will see it as a WAV file if you drag it back again via USB.

With one oscillator yet unused, I really wanted a light phasey wash, and being in a hurry, wished I could somehow plagiarize just one osc from some other patch. The “patch copy” menu let me do precisely that; in fact, it imports zone, COSM, envelope, effects, arpeggiator, and step-mod settings separately too. I’ve never seen anything splice together desired elements of different sounds this quickly, and the screen graphics make it dead obvious what’s going where.

Live, the matrix control handled MIDI controller assignments just as quickly. “Performance” or “combi” mode has this job on workstations, but the thought, “I want *this* knob on *this* keyboard to change, um, the pulse width . . . *now!*” translated into reality with unprecedented ease.

I saved two small gripes for the end: First, oscillators can’t be panned individually. Patches and zones within patches can, but it’d rock to have, say, one oscillator centered while the step mod ping-pongs the other *à la* the Who’s “Who Are You?” Second, 50MB of non-expandable sample RAM is not a lot, especially considering that all the factory waves live there, so you have to lose something if you want more room. Though it’s a simple enough matter to store multiple projects, which include waves and patch data, on a large memory card and load one at a time, it would be nicer still to have all those great factory sounds alongside your personal sample collection in the same project.

CONCLUSIONS

The new sounds make the XT as much of

VITAL STATS

SYNTHESIS TYPE

PCM sample playback and analog modeling, with Vari-Phrase and COSM.

POLYPHONY

up to 24 voices, depending on patch complexity.

MULTITIMBRAL PARTS

16.

DISPLAY

color touch LCD, 320 x 240 pixels.

AUDIO OUTPUTS

1/4" TRS balanced main L&R, 1/4" direct out L&R, stereo 1/4" headphones.

AUDIO INPUTS

1/4" L&R, XLR-TRS combo jack w/ input gain and phantom power.

DIGITAL I/O

2-channel coaxial and optical S/PDIF, 2-channel USB

MIDI I/O

in, out, thru

COMPUTER COMPATIBILITY

Windows Me/2000/XP; Mac OS 9/OS X.

POWER SUPPLY

internal w/detachable 3-prong cord.

DIMENSIONS/WEIGHT

4U, 9.75 lbs.

GORY DETAILS

FACTORY PATCHES

512

COSM TYPES

16, including overdrive, wave-shaper, amp and speaker simulators, guitar body, filters galore (sideband, comb, and analog types), compressor, and lo-fi.

EFFECTS

multi-FX (41 types), chorus (8 types), and reverb (10 types).

SAMPLE RATES

analog input, 44.1kHz; digital input, 44.1/48/96kHz.

SAMPLE MEMORY

50MB; 18MB avail. w/ factory sounds loaded.

SAMPLING TIME

@ 44.1kHz: 115 seconds stereo, 230 sec. Mono, w/factory sounds loaded; 280 sec. Stereo, 560 sec. mono w/empty project.

AUDIO FILE FORMATS

WAV, AIFF.

MEMORY CARD FORMATS

PC card; Compact Flash or SmartMedia w/ adapter.

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Although this image is too small to reveal them, the V-Synth has lots of connections. Trust us.



V-CARDS

The V-Card expansion cards are optional for the V-Synth keyboard and Vari-OS, but they're built-in on the XT, leaving the PC card slot open. With the VC-1, an emulation of the now-classic D-50 synth, none of your old friends, from "Fantasia" to "DigitalNativeDance," have aged a day. Of more current interest is the VC-2 Vocal Designer, which turns the XT into a killer vocoder-harmonizer. Presets are deeply editable, and cover everything from huge backing choirs to '70s-disco robot voices. Getting that "aggro-Autotune" effect heard on R&B joints is no problem, either.

Both of these are entirely different operating modes, so you can access one or the other, or the regular (the word is ironic in this case) V-Synth sounds. The mic preamp is fine for live work with a dynamic mic, but running a line output from an outboard pre-compressor made the XT's reactions to my vocals audibly smoother.

a player's axe as it is a sound designer's machine. I can think of two things to compare with it — the Clavia Nord Modular G2 and Native Instruments Reaktor — in that they also let you arrange sound generators and processors. The Nord adds physical modeling, but doesn't sample like the XT, and nothing masters time and pitch like Vari-Phrase. But the combination of depth and simplicity is what truly sets this synth apart. I've used a lot of powerful sound design hardware and software, but it's uncanny how fast one comes up with inspiring sounds, and how much the process feels like *play*, on the XT, often evoking a mad-scientist "Mwah-ha-haaa!" In that respect, Roland is right on about the joy thing, and this kinder and gentler V-Synth will certainly bring you many jollies. 

Steve Fortner makes music in and around Santa Barbara, California. He has been known to cackle like a mad scientist without apparent provocation. His South Park likeness (www.planearium2.de/flash/spstudio.html) is unsettlingly realistic.