

Roland®

# V-Synth GT

# V-Synth XT

Elastic Audio  
Synthesis





## A New World of Power and Expression Sounds That Have Never Been Heard Before

So powerful, so unique — Roland's V-Synth GT is unlike any synthesizer that has come before it. This is not only the birth of a new synthesizer, it's the arrival of a bold new form of sonic expression unknown to musicians until now. Elastic Audio Synthesis has already captivated artists the world over. Now the V-Synth GT's multi-core engine supercharges your expressive power, and enables sounds to go even deeper. The power of AP-Synthesis and other innovative synthesizer technologies will give you the tools to break through into new realms of creativity. Delve in and explore unknown dimensions with the V-Synth GT!

### Roland's V-Synth GT Represents a Significant Stride Forward

Through a fusion of Elastic Audio Synthesis, VariPhrase, COSM®, and other pioneering technologies, Roland's award-winning V-Synth brought new potential to the synthesizer. All over the world, on stage and in studios, top artists have been empowered to create dramatically new sounds. Today, with the V-Synth GT, Roland has infused the phenomenal Elastic Audio Synthesis engine with even more advanced technologies, enabling musicians to stretch beyond previous limitations in sound design and expression. With the V-Synth GT, Roland once again delivers a synthesizer that takes musicians to new, unexplored dimensions.

### Two V-Synths in One, and Beyond! Multi-Core Processing For Powerhouse Performance

The sound engine of the V-Synth GT has been completely revamped with powerful multi-core technology for amazing depth and creativity. Imagine having the creative power of two combined V-Synth units, with multilayered VariPhrase and COSM® processing along with Vocal Designer® and other features! In addition to its raw synthesis power, the V-Synth GT also features dual multi-effects processors, independently optimized control of both upper and lower tones. Freely shape your effects for an even greater diversity of sounds and textures.

### World's First! Behavior Modeling of Musical-Instrument Articulation — Revolutionary AP-Synthesis Technology

AP (Articulative Phrase) Synthesis is a revolutionary technology that, for the first time, enables a synthesizer to have the kind of organic nuance and expression of an acoustic musical instrument. Based on modeling of the responsive changes that occur when musicians play actual instruments, Roland's AP-Synthesis is a great advance over simple PCM sound sources and physical modeling. With integrated behavior modeling and synthesizer processing, the V-Synth GT lets you freely manipulate various waveforms from acoustic instruments to synth sounds. This technology has fundamentally revolutionized the synthesizer.



# V-Synth GT

Elastic Audio Synthesis

AP-SYNTHESIS VariPhrase COSM V-LINK USB for Microsoft Windows XP for Mac OS X



### AP-Synthesis Models the "Performance" of Acoustic Solo Instruments

AP-Synthesis is a groundbreaking technology that models the behavior of four instruments (sax, flute, erhu, and violin), recreating the expressive response characteristics of actual playing techniques. Directly from the keyboard, the V-Synth GT lets you effortlessly produce authentic trills, glissandos, vibrato, crescendos, and other expressive nuances. The essence of AP-Synthesis is its ability to be used with the synthesizer sound source, such as an "analog lead synth" that provides the expressiveness of violin playing. AP-Synthesis brings organic, emotional expression to synthesis. Moreover, in the V-Synth GT, these sounds undergo processing in the COSM<sup>®</sup> section as well as VariPhrase layering and other effects. Going beyond the mere reproduction of the sounds found in existing instruments, a whole new world of sound creation has been opened.

\*AP-Synthesis can be used with either upper or lower tones.

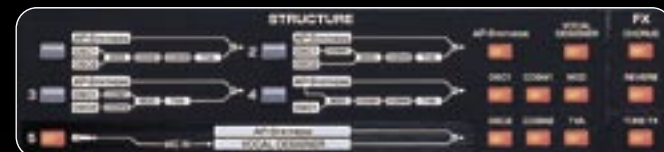
### Elastic Audio Synthesis: Amazing Expression and Creative Control

Roland has integrated its leading technologies in the V-Synth GT. One of the key components is VariPhrase, which let you control the elements of sound in flexible, creative ways. As well as providing analog-like control over the PCM oscillator, it controls SUPER SAW, feedback, and other high-quality analog modeling oscillators that generate 16 very different types of waveforms. The configuration also comprises a COSM<sup>®</sup> processor that drives a powerful modulator, side-band filter, resonator, and effect types for a total of 16.

Through the mic and line input jacks, external waveforms can also be processed by the V-Synth GT's engine. All this functionality is accessible via a section structure that allows instant selection, layering, and editing.



■ VariPhrase & COSM



■ Control structure enables direct selection of diverse synthesizing processes.

### Vocal Designer Built-In

Roland's acclaimed Vocal Designer<sup>®</sup> has also been included as one of the core components of the V-Synth GT. With the press of a key, live vocals from a mic can be altered as they are input. Imagine a single voice transforming into a large-scale choir, for example, or a backing chorus for a pop tune. You can also use an audio phrase or other sampled waveform as a carrier for a vocoder sound. Whatever the application, Vocal Designer provides unrestricted control and modeling of the human voice.

But that's only where the creative possibilities begin. It's now possible to combine Vocal Designer with VariPhrase functions, analog modeling, and AP-Synthesis. Create complex multi-core sounds that can be manipulated organically in ways unlike anything ever heard from a synthesizer.

\*Vocal Designer can be used with either upper or lower tones.



■ Screen of Vocal Designer

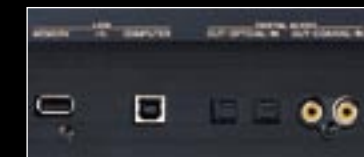
### High-Quality Color Touch-Panel LCD User Interface Further Refined

The V-Synth GT's high-resolution TFT—LCD color touch panel uses vivid graphics to display large amounts of information in a friendly format. The display offers a wide viewing angle, and provides greatly enhanced readability compared to its predecessors. Since the display is touch sensitive, editing is as simple as pointing to and touching the onscreen menu items and icons. In addition, there are eight control knobs below the LCD touch panel with companion onscreen monitoring. In addition, jog dials and cursor control buttons are logically integrated, and the D-Beam and other real-time controllers are grouped in the same area. Tasks are quick and easy since the controls are concentrated in one area, which improves speed and convenience during real-time performances.



■ Color touch panel and logically positioned knobs offer fast, friendly control.

■ Rear Panel



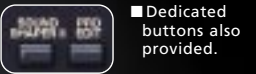
### Sound Shaper II Facilitates Speedy Creation of Original Sounds

Serious sound designers will love the complexity and editing depth of the V-Synth GT, but there are many instances where musicians need fresh sounds fast — and that's the beauty of Sound Shaper II. Based on the original Sound Shaper, this enhanced mode lets you choose a patch, and it brings the most relevant parameters directly to the surface.

By simply turning knobs or using the onscreen touch buttons, Sound Shaper lets you create pro-quality sounds in seconds!



■ Screen of Sound Shaper II



■ Dedicated buttons also provided.

### Equipped for USB Memory and Audio/MIDI Interfacing. File Transfer Upgraded to High-Speed USB 2

Compared to its predecessor, the V-Synth GT offers greatly enhanced USB functions. For starters, USB 2.0 is now supported, which allows significantly faster transmission speed. In addition, two USB ports are now provided: one port for USB-memory devices (which can be plugged in directly for data storage and retrieval) and another port that enables audio/MIDI streaming and file transfer for direct connection to computer-based DAW applications.

### V-LINK Support for Images and Sound



The V-Synth GT fully supports Roland's pioneering V-LINK protocol, which allows real-time manipulation of music and images. Using the V-Synth GT's expressive controllers, you can connect compatible Roland/EDIROL video devices and add a new level of visual expression and excitement to your performances.





### VariPhrase-Powered Synthesis plus Vocal Designer® & D-50 Simulation

Empowered by VariPhrase, the V-Synth XT provides an amazing synthesis engine comprising analog-modeling oscillators, a PCM oscillator, modulators, a COSM® processor, external-audio inputs, and other creative elements. Even though the XT is a full-blown V-Synth, all of the features from its keyboard counterpart (plus more!) have been squeezed into a 4U body. To complete the package, Roland equipped the V-Synth XT with a perfect simulation of the legendary D50 synthesizer as well as the acclaimed Vocal Designer, a new dimension in vocal processing. Without having to add VC cards or power the unit on and off, a single V-Synth XT is able perform three different roles through live switching.



■ Through live switching, a single V-Synth XT can function as three synthesizers.

### An Amazing New Collection of Built-In Patches Use the Sound Shaper Function For Fast Sound Design

The V-Synth XT comes with a custom collection of unique sounds created by an A-list group of star artists and producers. Many of the patches are programmed to sound like familiar classics at first touch, but they explode to animated life when modulated. When you want to create your own sounds, the XT's Sound Shaper function allows you create new sounds with the virtual "know-how" of professional sound designers. By selecting your desired category — whether a pad, bass, lead sound, etc. — this friendly function guides you quickly through relevant parameters while editing. Complex editing is made fast and easy.



■ With Sound Shaper, sound design is fast and fun!

### Innovative Rackmount/Tabletop Design Incredible Convenience and Ease of Use

The V-Synth XT can be mounted in a rack, where it can be positioned flush or tilted and locked at an angle that best suits your working environment. Or, if you prefer, you can take the XT out of the rack and place it on a flat surface. The large, color touch-screen display provides luxurious navigation, and its row of eight universal edit knobs makes using the synth fast, friendly, and expressive. Also noteworthy on the front panel is the Hi-Z input, which allows the XT to function as a unique and powerful effects rack for guitar or other instruments, while the XLR input (with phantom power) allows the XT to be utilized as a full-blown vocoder via the built-in Vocal Designer feature.



■ Mic jack conveniently located on front panel



■ Innovative multi-use body and tilt mechanism  
 \*When tilt is used during rackmounting, one rackspace must be left empty directly above.

The Creativity of Elastic Audio Synthesis in a Module One Unit Provides Three Roles with "Live Switching"



Roland's flagship V-Synth XT was honored at the 2007 Musikmesse International Press Awards (MIPA) in the Best Synthesizer/Hardware category. The Musikmesse International Press Awards are chosen by editors from 107 magazines around the world.



■ Edit by simply touching the color LCD

### Audio/MIDI Interfacing & File Transfer Via USB

As well as offering MIDI communication via USB, the V-Synth XT's USB port can also be used as an audio interface. Support is provided for various computer-related tasks, including data backup to computer, audio-data transfer, and compatibility with computer-based DAW applications.



■ Full-featured USB for easy connection to computers

**V-Synth XT** Elastic Audio Synthesis



■ Rear Panel

# SPECIFICATIONS

	V-Synth GT	V-Synth XT
<b>Keyboard</b>	61 keys (with velocity and channel aftertouch)	—
<b>Sound Generator Configuration</b>	Dual-core (2 Tones per Patch: Upper, Lower), Sections per Tone: Oscillator (envelope x 4 + LFO x 1) x 2, Modulator x 1, COSM (envelope x 2 + LFO x 1) x 2, TVA (envelope x 1 + LFO x 1) x 1, Multi Step Modulator x 1, Tone-FX x 1, AP-Synthesis (Articulative Phrase Synthesis) x 1*, Vocal Designer x 1* * Usable on either upper or lower (not both)	Oscillator (envelope x 4 + LFO x 1) x 2, Modulator x 1, COSM (envelope x 2 + LFO x 1) x 1 x 2, TVA (envelope x 1 + LFO x 1) x 1
<b>OSC1/OSC2 (Oscillator 1, 2)</b>	Analog Modeling: 14 waveforms (SAW, SQUARE, TRIANGLE, SINE, RAMP, JUNO, HQ-SAW, HQ-SQUARE, NOISE, LA-SAW, LA-SQUARE, SUPER-SAW, FEEDBACK-OSC, X-MOD-OSC), PCM/VariPhrase (Preset waveforms + Sampling waveforms), External Input	Analog Modeling: 14 waveforms (SAW, SQUARE, TRIANGLE, SINE, RAMP, JUNO, HQ-SAW, HQ-SQUARE, NOISE, LA-SAW, LA-SQUARE, SUPER-SAW, FEEDBACK-OSC, X-MOD-OSC), PCM/VariPhrase (Preset waveforms + Sampling waveforms), External Input
<b>MOD (Modulator)</b>	4 types (RING, FM, ENV-RING, OSC-SYNC)	4 types (RING, FM, ENV-RING, OSC-SYNC)
<b>COSM</b>	16 types (OD/DS, W-SHAPE, AMP, SPEAKER, RESONATOR, SBF1, SBF2, COMB, DUAL, TVF, DYN-TVF, COMP, LIMITER, F-SHIFT, LO-FI, TB FILTER)	16 types (OD/DS, W-SHAPE, AMP, SPEAKER, RESONATOR, SBF1, SBF2, COMB, DUAL, TVF, DYN-TVF, COMP, LIMITER, F-SHIFT, LO-FI, TB-FILTER)
<b>Zones</b>	Upper Tone: 16, Lower Tone: 16	16
<b>Multi Step Modulator</b>	Provided independently for the Upper Tone and Lower Tone Tracks per tone: 4, Maximum number of step: 16, Tempo: 20 to 250 BPM	Tracks: 4, Steps: 16, Tempo: 20 to 250 BPM
<b>AP-Synthesis</b>	Source Waveforms: 38 types, Phrase Models: Violin, Erhu, Sax, Flute, Multifade	—
<b>Vocal Designer</b>	Carrier: Oscillator x 2, Modulator x 1, COSM x 2, TVA x 1, Multi Step Modulator x 1, Vocoder: 4 types (Stereo, Mono, Vintage, Enhance), Formant: 7 types (Maximum)	Switchable from the standard system while the power remains on.
<b>Arpeggiator</b>	Patterns: User programmable (supports use of control change messages), Motifs: 8 types, Tempo: 20 to 250 BPM	Patterns: User programmable (support use of control change messages), Motifs: 8 types, Tempo: 20 to 250 BPM
<b>MIDI Parts</b>	1	16 (normally), 12 (when using a rhythm kit)
<b>Maximum Polyphony</b>	28 voices (varies according to the sound generator load)	24 voices (Varies depending on the load placed on the sound generator.)
<b>Internal Memory</b>	Project: 1, Patches: 512, Tones: 896, Waves: 999, Wave Memory (RAM): 64 MB	Project: 1, Patches: 512, Waves: 999, Wave memory (RAM): 50 MB (When the unit ships from the factory, 32 MB of this is taken up by the preset waves.)
<b>Internal Storage</b>	Internal Flash Memory: 49.5 MB	Internal Flash Memory: 23.3 MB
<b>External Storage Device</b>	USB Flash Memory	PC CARD slot (Microdrive, SmartMedia or CompactFlash can be used with PC card adapter.)
<b>Effects</b>	Tone-FX: 41 types, Chorus: 8 types, Reverb: 13 types, Input Effects (Mic/Sampling)	MFX (Multi-effects): 41 sets, Chorus: 8 sets, Reverb: 10 sets
<b>System EQ</b>	4 bands	4 bands
<b>Pre-Installed V-Cards (system expansion)</b>	—	VC-1: D-50 Simulator, VC-2: Vocal Designer (Switchable from the standard system while the power remains on.)
<b>Sampling Frequency</b>	Internal: 44.1 kHz, DIGITAL IN/OUT: 96, 48, 44.1 kHz	Internal: 44.1 kHz, Digital Audio IN/OUT: 96, 48, 44.1 kHz
<b>Signal Processing</b>	Internal Processing Sound Generating Section: 32 bits (floating point), Effects Section: 32 bits (fixed point), DA Conversion: 24 bits, AD Conversion: 24 bits	Internal Processing Sound generating section: 32 bits (floating point), Effects section: 24 bits (fixed point), DA Conversion: 24 bits, AD Conversion: 24 bits
<b>Nominal Output Level</b>	MAIN OUT: +4 dBu, DIRECT OUT: +4 dBu	MAIN OUT: +4 dBu, DIRECT OUT: +4 dBu
<b>Nominal Input Level</b>	INPUT (L, R): -10/-20 dBu, MIC IN: -50 to -10 dBu	INPUT (Rear Panel): -10/-20 dBu, MIC (Front Panel, XLR type): -50 to -10 dBu, MIC (Front Panel, 1/4 inch TRS phone type): -36 to +4 dBu
<b>Display</b>	320 x 240 dots backlit TFT full color touch screen	320 x 240 dot backlit color LCD with touch screen
<b>Controllers</b>	Pitch Bend/Modulation Lever, Time Trip Pad, D Beam Controller (Twin Beam), Assignable Control Knobs (C1, C2), Assignable Switches (S1, S2), V-LINK Button	Assignable MIDI Control Knobs (E1-E8)
<b>Connectors</b>	Headphone Jack (Stereo 1/4 inch phone type), Main Output Jacks (L/MONO, R) (1/4 inch TRS phone type), Direct Output Jacks (L, R) (1/4 inch phone type), Input Jacks (L, R) (1/4 inch phone type), Mic Jack (1/4 inch phone type/XLR type, phantom power), Hold pedal Jack, Control pedal Jacks (1, 2), MIDI Connectors (IN, OUT, THRU), USB Connectors, COMPUTER (supports USB 2.0 file transfer, USB 1.1 USB, MIDI, and USB Audio), MEMORY (supports USB 2.0 Flash Memory), Digital Audio Interface (24-bit, IEC60958), COAXIAL (IN, OUT), OPTICAL (IN, OUT), AC Inlet	Headphones Jack (1/4 inch TRS phone type), Main Output Jacks (L/MONO, R), Direct Output Jacks (L, R) (1/4 inch phone type), Input Jacks (L/MONO, R) (1/4 inch phone type), Mic Jack (1/4 inch phone type / XLR type, Hi-Z, phantom power), MIDI Connectors (IN, OUT, THRU), USB Connector (supports USB MIDI, file transfer, and USB Audio), Digital Audio Interface (24-bit, IEC60958), COAXIAL (IN, OUT), OPTICAL (IN, OUT), AC Inlet
<b>Power Supply</b>	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)	AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)
<b>Power Consumption</b>	30 W	16 W
<b>Dimensions</b>	1066 (W) x 411 (D) x 125 (H) mm, 42 (W) x 16-3/16 (D) x 4-15/16 (H) inches	When placed on top of a table: 482 (W) x 179 (D) x 165 (H) mm/19 (W) x 7-1/16 (D) x 6-1/2 (H) inches When mounted in a rack: 482 (W) x 172 (D) x 177 (H) mm/19 (W) x 6-13/16 (D) x 7 (H) inches * EIA-4U size: A vacant rack space immediately above is required in order to utilize the V-Synth XT's rotation feature.
<b>Weight</b>	13.8 kg / 30 lbs 7 oz	4.4 kg / 9 lbs 12 oz
<b>Accessories</b>	Owner's Manual, Quick Start, Driver Installation Guide, CD-ROM (USB Driver), Power Cord	V-Synth XT Owner's Manual, V-Card Owner's Manual, Sound List, CD-ROM (USB Driver, Librarian), PC CARD Protector, Rotation Lock Hardware, Power Cord

(0 dBu = 0.775 Vrms)

## OPTIONS

<b>KS-12</b> Keyboard Stand 	<b>KS-V7</b> Keyboard Stand 	<b>DP-10</b> Pedal Switch 	<b>FS-5U</b> Footswitch 	<b>EV-5</b> Expression Pedal 	<b>M-UF128</b> USB Memory 	<b>DR-50</b> Microphone 
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