CUBASE VST

The included VST Instruments

Steinberg

Operation Manual by Ernst Nathorst-Böös, Ludvig Carlson, Anders Nordmark, Roger Wiklander
Quality Control: Cristina Bachmann, Heike Horntrich, Sabine Pfeifer, Claudia Schomburg

Introduction

This chapter covers the functions and parameters for the included VST Intruments. The following VST Instruments are included and installed with Cubase VST.

- **Neon - a software synthesizer.**
  See

- **VB-1 – a virtual bass instrument built on realtime physical modelling principles.**
  See

- **LM-9 - a drum machine**
  See

- **Universal Sound Module - a sound module with over 70 MB of sampled waveforms.**
  See

❐ **For specifics about how to install, set up and activate VST Instruments please refer to the chapter "VST Instruments" in the "Getting into the Details" documentation.**

The Neon

The Neon is a simple software synthesizer. It has the following properties:

- **The Neon is polyphonic with up to 16 voices.**
  However, since each added voice consumes CPU power, the maximum polyphony may be limited by the speed of your computer.

- **The Neon receives MIDI in Omni mode (on all MIDI channels).**
  You don't need to select a MIDI channel to direct MIDI to the Neon.

- **The Neon responds to the following MIDI messages:**
  MIDI Note On/Off (velocity governs volume).
  Volume.
  Pan (remember to pan the two Instrument channels hard Left/Right if you want to use MIDI Pan messages).
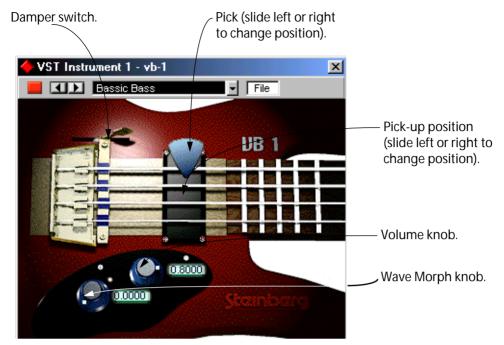 Pitch Bend (± 2 semitones).
  Modulation (vibrato).

  Furthermore, all parameters can be automated as described in the Getting into the Details chapter "VST Instruments".

Neon Parameters:

Parameter	Description
Range	Selects an octave range for the oscillators: 16, 8 or 4 feet.
Waveform	The basic waveform for the oscillators: Triangle, Sawtooth or Square.
LFO Speed	Governs the speed of the vibrato. The vibrato depth is controlled via MIDI Modulation messages (for example, using the Mod Wheel on your MIDI controller).
Osc 2 Detune	Allows you to detune the "second oscillator" ± 7 semitones. By setting this to a value close to "twelve o'clock", you will get fine detuning, for a warmer, fatter sound.
VCF Cutoff	The Cutoff Frequency for the filter, governing the amount of high frequencies in the sound. On the Neon, the Cutoff control also serves as a Depth control for the Filter Envelope (VCF Attack, Decay, Sustain, Release), so that the lower the setting of the Cutoff parameter, the more will the filter be affected by the Filter Envelope.
VCF Resonance	The Resonance control for the filter. Raise this for a more hollow, pronounced filter effect.
VCF Attack, Decay, Sustain, Release	The Filter Envelope. Use these parameters to determine how the filter should open and close with time, when a note is played.
VCA Attack, Decay, Sustain, Release	The Amplitude Envelope. Use these parameters to determine how the amplitude (volume) should change with time, when a note is played.

VB-1

Damper switch.

Pick (slide left or right to change position).

Pick-up position (slide left or right to change position).

Volume knob.

Wave Morph knob.

The VB-1 is a virtual bass instrument built on realtime physical modelling principles. This has the following properties:

• **VB-1 is polyphonic with up to 4 voices.**

• **VB-1 receives MIDI In Omni mode (on all MIDI channels).**
  You don't need to select a MIDI channel to direct MIDI to the VB-1.

• **VB-1 responds to the following MIDI messages:**
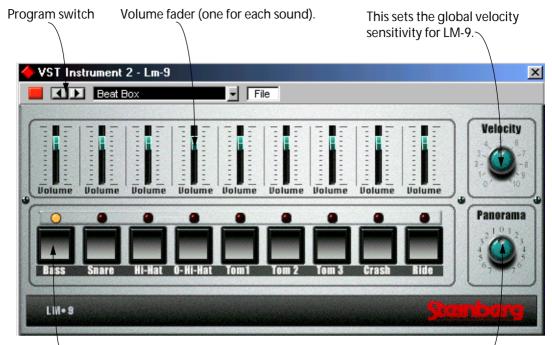 MIDI Note On/Off (velocity governs volume).
  Volume.
  Pan (remember to pan the two Instrument channels hard Left/Right if you want to use MIDI Pan messages).

  Furthermore, all parameters can be automated as described in the Getting into the Details chapter "VST Instruments".

VB-1 Parameters:

Parameter	Description
Volume	This regulates the VB-1 volume.
Damper	This switch controls the length of time the string vibrates after being plucked.
Pick-up position	By dragging the "mic" left or right you can change the tone. Positioning it towards the bridge position produces a hollow sound that emphasises the upper harmonics of the plucked string. When placed towards the neck position, the tone is fuller and warmer.
Pick position	This determines where along the length of the string the initial pluck is made. This controls the "roundness" of the tone, just like on a real guitar.
Wave Morph	This knob selects the basic waveform that is used to drive the plucked string model. This parameter can drastically change the sound character. The control smoothly morphs through the waves. It is possible to create sounds that have no relation to a bass guitar with this control.

LM-9

Program switch   Volume fader (one for each sound).   This sets the global velocity
                                                         sensitivity for LM-9.

Pad (one for each drum sound).   This adjusts the Pan (the position in the stereo
Press to audition the drum   image) for the individual drums. The setting is
sound assigned to the Pad, or to   applied to the currently selected drum , indicated
select a sound for adjusting pan. by a lit yellow LED over the Pad button.

The LM-9 is a simple drum machine. It has the following properties:

• **LM-9 is polyphonic with up to 9 voices.**

• **LM-9 receives MIDI in Omni mode (on all MIDI channels).**
  You don't need to select a MIDI channel to direct MIDI to LM-9.

• **LM-9 responds to the following MIDI messages:**
  MIDI Note On/Off (velocity governs volume).

  Furthermore, all parameters can be automated as described in the Getting into the Details
  chapter "VST Instruments".

LM-9 Parameters:

Parameter	Description
Velocity	This sets the global velocity sensitivity for LM-9. The higher the value, the more sensitive LM-9 will be to incoming velocity data. If set to "0", the sounds will play back with a fixed velocity value.
Volume sliders	The volume sliders are used to adjust the volume for each individual drum sound.
Pad	The Pads are used for two things: To audition the individual drum sounds, and to select a sound for adjusting pan.
Panorama	This is used to position an individual sound in the stereo image. The setting applies to the currently selected sound, indicated by a lit yellow LED over the Pad button.

Drum sounds

LM-9 comes with two sets of drum sounds: "Acoustic" and "Beat Box". Acoustic features samples of an acoustic drum kit and Beat Box features classic analog drum machine sounds. The table below shows how the drum sounds are assigned to note values on your MIDI keyboard. The mapping is GM compatible:

Drum sound	Note value
Bass	C1
Snare	D1
Hi-Hat	F#1
O-Hi-Hat	A#1
Tom 1	D2
Tom 2	B1
Tom 3	A1
Crash	C#2
Ride	D#2

Switching the sets

Use the Program button to switch between the two supplied drum sets, just like you switch between effect programs.

Universal Sound Module (USM)

The USM is a General MIDI compatible sound module. General MIDI (GM) is a standard set up by the MIDI Manufacturers Association (MMA) and the Japanese MIDI Standards Committee (JMSC).

It defines a standardized group of sounds and the minimum requirements for General MIDI compatible synthesizers or sound modules, so that a specially prepared sequence or MIDI file that is sent to the instrument via MIDI will play back the correct sound types, regardless of make and model of the instrument.

MIDI identifies sounds by their program change number. Before the General MIDI standard was introduced, the same MIDI program change number often addressed totally different *types* of sound in any two synthesizers or sound modules from different manufacturers, eg. a flute type sound in one instrument and a piano type sound in the other.

With the introduction of General MIDI standard compatible instruments this changed. These instruments use the same program change numbers for the same *types of instruments*.

So, if the person that prepared a sequence or MIDI file wants the melody to be played by a "piano", he can use a certain program change command embedded into the sequence to automatically select a piano sound in any GM compatible sound module. The GM standard, however, does not specify in great detail how that piano should sound. It is simply assumed that the manufacturer reproduces an acoustic piano within the capabilities of the instrument. A consequence of this was that, depending on the GM module used, a song could sound very different, even though the instrument sounds were mapped correctly.

This problem is solved by the Universal Sound Module!
Cubase users can make sure that their music created using the USM will sound *exactly* the same when played back on another computer, because the sound reproduction is no longer hardware based - perfect for Rocket users!

❐ **RocketPower is described in a separate document.**

Thank You for previewing this eBook

You can read the full version of this eBook in different formats:

- ➢ HTML (Free /Available to everyone)

- ➢ PDF / TXT (Available to V.I.P. members. Free Standard members can access up to 5 PDF/TXT eBooks per month each month)

- ➢ Epub & Mobipocket (Exclusive to V.I.P. members)

To download this full book, simply select the format you desire below