

Substance *user guide*

Use this guide for the dedicated Substance plug-in included with Voltage Drums and Voltage Synths. It covers the oscillators and mixer, then the ladder filter and envelope. You will also learn the LFO, performance controls and presets. Project recall is covered too.



SUBSTANCE

The MODEL display is a fixed identity label. It has no arrows or action.

Load to first bassline

1. Load Substance

Insert Substance in a CLAP / VST3 / Audio Unit instrument slot. The plug-in and its parameters are the same in both collections. The preset bank is identical too.

2. Choose a preset

Use the arrows beside PRESET to load one of ten complete patches. Burgs is a clean starting point with a triangle foundation and full sub.

3. Play a note

Send host MIDI or use the on-panel keyboard. Substance is monophonic: the most recently held note owns the voice.

4. Shape the line

Balance the sources, move Cutoff and Resonance, add Drive, then use Glide and Portamento for connected movement.

Drag a knob vertically. Hold Shift for fine adjustment. Double-click a parameter control to restore its default. The on-panel keys control waveform and source mute. Other keys choose slope and mode, or toggle performance options.

02

OSCILLATORS AND MIXER

Build the source stack

Oscillator 1 and 2

Wave selects triangle / saw / pulse independently for each oscillator.

Octave selects one of five ranges: 32 / 16 / 8 / 4 / 2 foot.

Tune moves each oscillator continuously across plus or minus 7 semitones.

PWM sets pulse width when pulse is selected.

Sync hard-syncs Oscillator 2. **XMOD** adds cross-modulation from Oscillator 1.

Sub and noise in the mixer

The dedicated **Sub** source is square and sits below the oscillator pair.

Noise is seeded, so the same recalled state follows the same deterministic source movement.

The Sub and Noise keys mute their source and leave its stored level unchanged.

Oscillator 1 and Oscillator 2 have separate mixer levels. Sub and Noise do too.

Drive pushes the combined mixer into the ladder-filter path.

FAST PATCH MOVE

Start with one oscillator, then bring in the second slightly detuned. Add Sub for a stable lower octave or Noise for attack texture. Raise Drive after setting the source balance.

03

LADDER AND CONTOUR

Shape colour and time

Transistor-ladder filter

Mode selects low-pass / band-pass / high-pass output.

Slope switches between 12 and 24 dB per octave.

Cutoff sets the base frequency. **Resonance** emphasizes the cutoff region.

Key Track moves cutoff with MIDI note.

Env Amount and **Accent Amount** feed separate control paths into cutoff.

ADSR envelope

Attack sets the rise time after a note begins.

Decay moves from the peak toward Sustain.

Sustain holds while the note remains gated.

Release sets the fall after the final held note ends.

VCA ENV applies the ADSR to loudness. Gate mode keeps loudness open while a note is held.

LP

Low-pass keeps the body.

Use 24 dB for the strongest roll-off or 12 dB for more upper-harmonic reach.

BP

Band-pass isolates a region.

Resonance and key tracking can turn the focused band into a playable colour.

HP

High-pass clears the floor.

Use it for lighter lines, animated resonance or layers that leave room below.

04

MOTION

Route modulation with intent

Modulation bus

Destination chooses Cutoff / PWM / Pitch.

Mod Amount sets the base depth.

Mod Velocity lets note velocity add to that depth.

For PWM, select pulse on the oscillator you want to hear moving.

LFO

Wave selects triangle / saw / square.

Rate spans 0.1 to 20 Hz.

Amount scales LFO contribution to the chosen destination.

Retrigger restarts the LFO with each articulated note. Turn it off for free-running motion.

Control how notes take over

01

Last-note priority

The newest held key owns the voice. Substance remembers up to eight held notes; releasing the newest restores the previous held note.

02

Legato

With Legato on, overlapping notes take over and keep the envelope running. The noise seed and a retriggering LFO continue too. With it off, every note-on articulates again.

03

Glide and Portamento

Portamento enables a constant-rate glide. Wider intervals take longer because the pitch travels at the same rate across a greater distance.

04

Transpose and bend

Transpose covers 2 octaves down through 2 octaves up. Host pitch bend spans plus or minus 2 semitones.

Level and modulation respond.

The Performance Velocity control sets note-velocity influence. Mod Velocity adds a separate path to the selected modulation destination.

ACCENT

Hard notes open a dedicated path.

MIDI velocity 101 of 127 or above engages Accent. Performance Accent sets its level contribution; Accent Amount sends it to cutoff.

PRESSURE

Aftertouch remains live.

Poly pressure and channel pressure feed the same dedicated performance bus at the depth set by Aftertouch.

06

TEN COMPLETE PATCHES

Choose a starting point

PRESET	STARTING CHARACTER	PRESET	STARTING CHARACTER
01 • Burgs	Triangle foundation · full sub	06 • Snag	Filter sweep · tracked resonance
02 • Roadtrain	Detuned saw pair · 32 foot sub	07 • Northerly	Free-running PWM · sub

PRESET	STARTING CHARACTER	PRESET	STARTING CHARACTER
03 • Bitumen	Pulse stack · deep drive	08 • Drive-Thru	Hard sync · tuned interval
04 • Goanna	Resonant decay · glide	09 • Hume	Unison saws · long portamento
05 • The Horses	Single pulse · steady low end	10 • Currawong	Open pulse · pitch modulation

PRESET EDITS

A preset loads the complete Substance parameter state. After changing a control, save the host project or a host preset to keep your version.

07

STEREO INSTRUMENT STATE

Output and recall

OUTPUT

Stereo Main carries the voice.

Substance exposes one stereo Main output. The individual drum buses belong to Voltage 80 and Voltage 78.

PATCH

The complete sound returns.

The host stores all source and filter parameters, plus the envelope. Modulation and performance settings return with the output level.

IDENTITY

Substance stays Substance.

The MODEL label is fixed. Reopening the project restores the dedicated Substance instrument.

AUTOMATION

Continuous controls ramp between host values. Switches and selectors land on their declared state. CLAP / VST3 / Audio Unit use the same underlying parameter and state contract.

08

FAST CHECKS

Troubleshooting

No sound

Check the host MIDI input and Substance Level. Confirm at least one oscillator or the Sub source is raised. Noise can provide the active source too. Make sure its source key has not muted it.

The filter seems closed

Raise Cutoff, reduce negative envelope movement, or try low-pass mode with lower resonance. Key Track and performance Accent can also move the final cutoff position.

Glide does not occur

Turn Portamento on and raise Glide. Hold one note while playing the next. Wider intervals take longer because Substance uses a constant-rate glide.

Overlapping notes retrigger the patch

Turn Legato on. The newest held note will take over and keep the envelope running. Seeded noise and a retriggering LFO continue too.

Aftertouch has no audible effect

Raise Performance Aftertouch and send channel pressure or poly pressure from the host or controller.

No individual outputs appear

This is expected. Substance is a stereo instrument and exposes only Main.

For support, include your operating system, host, plug-in format and sample rate. Name the preset or provide the shortest sequence that reproduces the problem.

VOLTAGE SUPPORT

OPEN SUPPORT