VA-1 Synth

Focused synthesis, fast sequencing, and performance-ready MIDI for iPhone, iPad, Mac, and AUv3 hosts.

500 factory presets · **7 sound categories** · **16 voice polyphony** · **No subscription**

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About This Manual

This manual explains VA-1 as an instrument: how to play it, how to program it, how to record patterns, and how to connect it to MIDI hardware or an AUv3 host.

What VA-1 Is

VA-1 is a focused virtual-analog synthesizer for iPhone, iPad, and native Mac. It uses a familiar subtractive signal path: two oscillators per voice, noise, a multi-mode state-variable filter, amp and filter envelopes, one LFO per voice, four global effects, and an output protection stage.

The app is designed to feel immediate. Start from a finished preset, shape the sound from the front panel, record a sequence, then transpose the result from the keyboard or an external controller.

Conventions

Buttons appear in the manual in uppercase, such as REC, PLAY, KEY, CLEAR, or LEARN.

Knobs are named by their panel labels, such as Cutoff, Reso, Attack, Rate, Mix, or Master.

Parameter ranges match the current Swift parameter catalog in the VA-1 codebase. When the website and an older README disagree, the current app resources and source code are used as the source of truth.

IMPORTANT AUDIO NOTE

VA-1 can produce high output levels, especially with resonance, stacked release tails, delay feedback, and reverb. Start with the device or monitor volume low, then raise it gradually.

STANDALONE APP — IOS/MACOS

Use the complete performance surface: preset browser, on-screen keyboard, pitch bend, mod strip, transport, step sequencer, MIDI input, MIDI Learn, and user preset saving.

AUV3 INSTRUMENT — HOST

Use VA-1 inside supported hosts as a stereo instrument with factory presets, parameter automation, MIDI input, and AUv3 MIDI Learn mapping.

WEBSITE DOWNLOAD — PDF

This file is written for users who want to learn the synth away from the app, with deeper explanations than the quick-start panel on the website.

CONTENTS

Owner's Manual

1 Quick Start

This chapter gets sound moving in the shortest path: choose a preset, play the keyboard, record a pattern, and make your first edits.

Main performance surface: preset controls, transport, synthesis panels, step grid, bend/mod strips, and two-octave keyboard.

1. **Open the preset browser.**
   Tap the current preset name in the header. Choose a factory category such as Bass, Pad, Lead, Keys, Pluck, Arp, or FX. On iPad and Mac, the browser opens as a three-pane layout with category, preset list, and detail panel.

2. **Play notes.**
   Use the two-octave keyboard. On iPhone and iPad, the keyboard supports multi-touch. On Mac, you can use the on-screen keyboard, a MIDI controller, or the QWERTY mapping described later.

3. **Change the tone.**
   Turn Cutoff, Reso, Env Amt, Attack, Release, LFO Rate, LFO Depth, and the FX buttons. Changes are applied immediately to the audio engine.

4. **Record a sequence.**
   Tap REC, then play notes. If playback is stopped, VA-1 records step-by-step. If PLAY is running, VA-1 records live and quantizes to the step grid when Q is on.

5 **Transpose the sequence.**
Tap KEY while the sequence is playing. Now keyboard notes transpose the running pattern on the next 16th-note boundary instead of playing freely over it.

6 **Save your sound.**
Tap SAVE, enter a name, and store the current sound as a user preset. User presets appear in the User tab of the preset browser.

FAST FIRST PATCH

Load Init, set Osc 1 to SAW, lower Cutoff to about 40%, add Filter Env Amt, set Amp Release to 0.2 s, turn on DLY, then record a 16-step bass line.

PANIC / ALL NOTES OFF

The STOP button is also the safest way to silence the instrument. It stops the sequencer, clears held UI notes, and sends a panic event to the audio engine.

2 Panel Tour

VA-1 keeps the most important controls on one performance surface, so you can edit, play, sequence, and connect MIDI without changing pages.

METERS — OUT/CPU

The output meter shows stereo peak activity. iPad and Mac also show a CPU meter. If the system is under heavy load, VA-1's safety logic can reduce voice pressure and temporarily protect the output from glitches.

HEADER — PRESET/SAVE

The header contains VA-1 branding, preset selection, SAVE, transport, CLEAR, BPM, KEY, LEN, octave selection, MIDI Learn, and MIDI connection status.

SYNTH PANELS — EDIT

The main panels expose oscillator, filter, ADSR, LFO, mix, FX, and master volume controls. iPhone uses a compact layout; iPad and Mac scale the controls larger.

TRANSPORT STRIP — GRID

The strip above the keyboard shows the 16 visible steps. For 32 and 64 step patterns, the display pages through the current block of 16 steps.

KEYBOARD — 2 OCTAVES

The keyboard covers two octaves from the selected base octave. Use the left and right octave buttons to move the playable range from C1 through C7.

BND / MOD — PERFORMANCE

BND is pitch bend and springs back to center. MOD writes directly to LFO Depth, so it becomes vibrato, tremolo, or filter movement depending on the LFO destination.

CONTROL	ACTION	OPERATIONAL DETAIL
REC	Toggle record	Stopped playback records step input; running playback records live.
PLAY	Start/stop playback	The sequencer loops over the selected step length.
STOP	Panic/stop	Stops the sequence and clears held notes.
CLEAR	Clear the pattern	Available when the sequence contains events.
BPM -/+	Tempo adjust	Tempo range is 40-300 BPM. Hold the buttons for accelerated repeat.
KEY	Sequence transpose mode	When playing and not recording, keys transpose the sequence instead of triggering direct notes.
LEN	Cycle pattern length	Cycles 16, 32, and 64 steps while scaling loop length so step duration stays musical.
LEARN	MIDI Learn	Enable Learn, tap a control, then move a MIDI CC or program-change control.

3 Signal Flow

VA-1 follows a classic subtractive path with modern smoothing, safety limiting, and global stereo effects.

INPUT	VOICE	OSCILLATORS	FILTER/AMP	OUTPUT
Keyboard, MIDI note input, sequencer, AUv3 host MIDI.	16-voice allocator with release-tail management.	Osc 1, Osc 2, noise, tune, level, mix.	SVF filter, amp envelope, filter envelope, LFO.	Chorus, delay, phaser, reverb, limiter, stereo out.

```
INPUT -> VOICE -> OSC/MIX -> FILTER -> AMP -> FX -> LIMITER -> OUTPUT
```

Voice Architecture

VA-1 uses up to 16 voices. Each voice contains two oscillators, two white-noise generators, an SVF filter, an amplitude envelope, a filter envelope, and one LFO. Repeated same-note hits retrigger intelligently, while release tails are preserved until the voice budget needs them.

When all voices are occupied, VA-1 steals the quietest releasing voice first, then the quietest active voice. This reduces abrupt note cuts during dense chords and long releases.

Output Protection

The master bus includes smoothed gain, soft saturation, a peak limiter, DC blocking, and an output guard. These stages are not creative "effects" controls; they are designed to keep bright resonant patches, long reverb tails, and high polyphony stable in real time.

The master volume can add a little drive at higher settings, but the limiter and output guard remain active to prevent dangerous peaks.

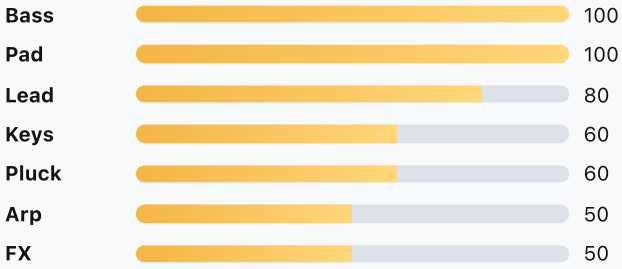
STAGE	WHAT IT DOES	PERFORMANCE TIP
Oscillator phase seeding	New notes start from deterministic per-note/per-voice phase positions.	Chords avoid the hard transient caused by every oscillator starting from the same phase.
Parameter smoothing	Tuning, gain, filter cutoff, resonance, and modulation are smoothed before audio-rate use.	Move knobs boldly; VA-1 is designed to avoid zippering and clicks.
Release-tail protection	Heavy release stacks are trimmed and protected under CPU or voice pressure.	Very long releases are musical, but dense fast playing can reduce tail level to keep playback stable.
Effects chain	Global post-mixer effects run Chorus -> Delay -> Phaser -> Reverb.	Use Mix controls to blend effects instead of only toggling them fully on or off.

4 Preset Browser

VA-1 ships with 500 factory presets across seven categories, plus a user bank for your own saved sounds.

Factory Bank

The factory bank is loaded from the bundled preset resources at launch. Presets include names, categories, subcategories, tags, authorship, version metadata, and short descriptions.



Finding Sounds

Use categories for quick browsing. Use search when you know the character you want: try terms such as warm, vintage, bright, cinematic, house, Juno, Moog, pluck, riser, evolving, or clean.

Favorites are stored locally, so you can build a performance shortlist. Tag filters narrow the bank by descriptive metadata, and subcategory filters expose groups like Sub, Reese, Deep House, Evolving, PWM, Clav, and Riser.

BROWSER FEATURE	HOW TO USE IT	NOTES
Factory/User tabs	Switch between built-in sounds and your saved presets.	User presets can be renamed, duplicated, and deleted.
Category list	Select Bass, Pad, Lead, Keys, Pluck, Arp, or FX.	iPhone uses horizontal chips; iPad/Mac use a side list.
Search	Type a name, tag, description, category, or subcategory.	Search combines with the active category, tag, and favorite filters.
Favorites	Tap the star next to a preset.	Favorites are saved on the device.
Save Current	Use SAVE in the header or Save Current in the User tab.	The saved preset stores parameter state, not the live performance pitch-bend position.

EXPANSION FOLDER

The preset loader supports expansion packs in the user's Documents area at VA1/ExpansionPacks/[pack-name]. The shipped website-facing product is the 500-preset factory bank plus local user presets.

5 Oscillators And Filter

The oscillator and filter section is where most VA-1 patches get their identity: raw waveform, tuning relationship, noise color, cutoff position, resonance, and envelope movement.

Oscillators

Each voice has two oscillators. Both can be set to Sine, Saw, Square, or Triangle. Saw and square use PolyBLEP edge smoothing for a cleaner virtual-analog tone. Coarse tuning spans two octaves down to two octaves up; fine tuning spans one semitone down to one semitone up in cents.

Use Osc 2 at -12 or -24 semitones for sub duties, +7 semitones for fifth leads, or a few cents sharp/flat for width. Add noise for breath, bite, transient grit, or synthetic percussion.

Filter

VA-1's filter is a numerically stable state-variable design with low-pass, high-pass, and band-pass modes. Resonance increases the filter's emphasis near the cutoff. Low-pass mode adds a controlled cutoff-edge brightness that reads like classic synth filter character without unstable self-oscillation.

Filter Env Amt can raise cutoff by up to eight octaves from the filter envelope. Use low sustain and medium decay for plucks, or slow attack and high release for pads and risers.

CONTROL	RANGE	DEFAULT	USE
Osc 1/2 Wave	Sine, Saw, Square, Triangle	Saw	Basic tone source. Sine is pure, saw is bright, square is hollow, triangle is soft.
Osc 1/2 Coarse	-24 to +24 st	0 st	Octaves, fifths, intervals, and sub layers.
Osc 1/2 Fine	-100 to +100 ct	0 ct	Detune for chorus-like width or beating.
Osc 1/2 Level	0-1	Osc 1: 1, Osc 2: 0	Per-oscillator source level before mix weighting.
Osc 1/2 Noise	0-1	0	Noise layer trimmed internally for musical level.
Osc Mix	0-1	0	Crossfades toward Osc 2. At 0, Osc 1 dominates; at 1, Osc 2 dominates.
Filter Mode	LP, HP, BP	LP	Low-pass warmth, high-pass thinness, band-pass focus.
Cutoff	20-20000 Hz	20000 Hz	Main brightness control, exponential response for MIDI mapping.
Reso	0-1	0	Emphasizes the cutoff area.
Env Amt	0-1	0	Filter envelope modulation depth.

WIDE SAW

1. Osc 1 Saw, Osc 2 Saw.
2. Set Osc 2 Fine to +6 to +12 ct.
3. Set Osc Mix near center.
4. Add Chorus Mix around 0.25-0.45.

SUB BASS

1. Osc 1 Sine or Triangle.
2. Osc 2 Sine at -12 st.
3. Keep Cutoff low and Reso low.
4. Use short release for tight lines.

ACID BITE

1. Use Saw or Square.
2. Set Reso high.
3. Lower Cutoff.
4. Raise Env Amt and use fast filter decay.

6 Envelopes And LFO

The envelopes shape each note; the LFO adds repeating movement per voice.

Amplitude Envelope

The Amp ADSR controls loudness over time. Attack controls fade-in, Decay moves from full level to Sustain, Sustain holds while the note is held, and Release fades the note after note-off.

Fast attacks below a few milliseconds create percussive edges. Longer attacks make pads and swells. Long releases can sound beautiful, but very dense playing with long tails uses more of the 16-voice budget.

Filter Envelope

The Filter ADSR controls the movement added by Env Amt. It does not replace Cutoff; it pushes the cutoff upward from the current cutoff position.

For classic plucks, set Filter Sustain near 0, Decay around 0.15-0.5 s, and Env Amt above 0. For slow evolving pads, increase Filter Attack and Release.

ENVELOPE CONTROL	RANGE	DEFAULT	SOUND DESIGN ROLE
Amp Attack	0.001-5 s	0.01 s	How quickly the note reaches full volume.
Amp Decay	0.001-5 s	0.3 s	How quickly the note settles to Sustain.
Amp Sustain	0-1	0.7	Held note level.
Amp Release	0.001-30 s	0.3 s	Fade after release.
Filter Attack	0.001-5 s	0.01 s	How quickly cutoff movement rises.
Filter Decay	0.001-5 s	0.3 s	How quickly cutoff falls to filter sustain.
Filter Sustain	0-1	0	Held filter modulation level.
Filter Release	0.001-30 s	0.3 s	Filter movement after note-off.

LFO

The LFO has Sine, Triangle, Square, and Saw waveforms. Rate spans 0.1-20 Hz and Depth spans 0-1. The destination can be Filter, Pitch, or Amp.

LFOs are per voice and free-running rather than tempo-synced. This gives each new note its own modulation path, useful for pads, vibrato leads, and alive-sounding stacked chords.

Modulation Amounts

DESTINATION	MAXIMUM MOVEMENT
Filter	Up to about +/-3.5 octaves of cutoff motion.
Pitch	Up to about +/-2 semitones.
Amp	Up to about +/-50% tremolo movement.

7 Effects

VA-1 includes four global stereo effects. Use the front-panel FX buttons to toggle them, and EDIT to open detailed controls.

CHORUS CHO

Chorus uses a short modulated delay with stereo offset. It thickens saws, pads, strings, and electric-piano style patches.

Rate	0.1-5 Hz
Depth	0-1
Feedback	0-0.95
Mix	0-1

DELAY DLY

Delay provides tempo-friendly echo times, feedback, damping, and mix. Damping softens repeats and can add a subtle unstable feel in the feedback path.

Time	10-2000 ms
Feedback	0-0.90
Damping	0-1
Mix	0-1

PHASER PHS

Phaser uses a multi-stage all-pass sweep with feedback and stereo movement. It is excellent for keys, mono leads, and animated pads.

Rate	0.1-5 Hz
Depth	0-1
Feedback	0-0.95
Mix	0-1

REVERB RVB

Reverb is a stereo hall/plate style space with predelay, early reflections, input diffusion, and a modulated feedback tank.

Size	0-1
Damping	0-1
Mix	0-1

GOAL	SUGGESTED EFFECTS MOVE	WHY IT WORKS
Wider bass without mud	Use Chorus Mix lightly, around 0.10-0.25.	Adds motion without washing out the fundamental.
Classic synth-pop lead	Delay Time 300-450 ms, Feedback 0.25-0.45, Mix 0.20-0.35.	Gives phrases musical space while staying playable.
Slow pad atmosphere	Chorus on, Reverb Size high, Reverb Mix 0.25-0.45.	Creates width before the reverb tail.
Funky keys	Phaser Rate slow-to-medium, Depth 0.35-0.65, Mix 0.25-0.45.	Adds moving notches without covering the attack.

8 Sequencer

The built-in sequencer is designed for fast sketches: record notes, loop them, delete steps, change length, and transpose the pattern from the keyboard.

Step Input

When REC is on and playback is stopped, each keyboard note is placed at the record head. VA-1 previews the note briefly, then advances to the next empty step.

This is the fastest way to enter a clean pattern. Use CLEAR to start over, or tap an occupied step in the grid to remove the event at that step.

Live Record

When REC and PLAY are both on, incoming notes are written at the current playhead position. With Q enabled, notes snap to the nearest step. With Q off, the recorded event follows the live timing more closely inside the loop.

Recorded note-offs are placed near the end of the step for clear pattern playback.

SEQUENCER CONTROL	RANGE/MODE	DETAILS
BPM	40-300	Adjust with -/+ buttons. Tempo changes while playing keep the loop position continuous.
Length	16, 32, 64 steps	LEN cycles the step count. Longer patterns are shown in pages of 16 steps.
Q	On/off	Quantizes live-recorded notes to the step grid.
KEY	On/off	Keyboard notes transpose the playing sequence from C4 as root.
Step delete	Tap occupied step	Removes note events that fall inside that step's time range.
CLEAR	Pattern clear	Stops playback, turns off recording, clears all events, and resets transpose.

KEY MODE TIMING

KEY mode queues transpose changes to the next 16th-note boundary. Multiple key presses inside the same boundary use last-note priority. This keeps transposed patterns locked to the groove.

BUILD A BASS LOOP

1. Load a Bass preset.
2. Tap REC while stopped.
3. Enter 8-16 notes from the keyboard.
4. Tap PLAY and adjust BPM.

TRANSPOSE LIVE

1. Record a phrase around C4.
2. Start playback.
3. Tap KEY.
4. Play new roots from the keyboard.

EXTEND THE IDEA

1. Tap LEN to move to 32 steps.
2. Keep recording while the loop runs.
3. Watch the page indicator above the grid.
4. Tap steps to remove clashes.

9 Performance Controls

VA-1 can be played from the touch keyboard, a MIDI controller, a Mac keyboard, or an AUv3 host.

Touch Keyboard

The standalone iOS keyboard uses a UIKit multi-touch overlay, so multiple fingers can trigger and slide between notes. The black-key hit area is intentionally generous for finger playing. On iPhone, an invisible edge strip helps trigger white keys near the screen edge.

The base octave selector shows C1 through C7. The two-octave keyboard begins from the selected C.

Pitch Bend And Mod

BND sends pitch bend from -1 to +1 and springs back to center when released. The default bend range in the engine is 2 semitones.

MOD changes LFO Depth directly. If LFO Destination is Pitch, MOD behaves like vibrato depth. If the destination is Filter, it becomes filter motion. If the destination is Amp, it becomes tremolo depth.

Mac QWERTY Keyboard Map

On Mac, VA-1 captures a standard two-octave computer-keyboard layout when the app is focused. Shortcut modifiers such as Command, Option, and Control are ignored so ordinary system shortcuts still work.

Z C	S C#	X D	D D#	C E	V F	G F#	B G	H G#	N A	J A#	M B
Q C+1	2 C#+1	W D+1	3 D#+1	E E+1	R F+1	5 F#+1	T G+1	6 G#+1	Y A+1	7 A#+1	U B+1

EXTERNAL MIDI VISUAL FEEDBACK

When a MIDI controller plays a note outside the currently displayed two-octave range, VA-1 shifts the base octave so the on-screen keyboard follows the incoming note.

10

MIDI And AUv3

VA-1 supports external MIDI note input, pitch bend, default CCs, MIDI Learn, AUv3 host MIDI, and AUv3 parameter automation.

Standalone MIDI

The standalone app scans CoreMIDI sources and connects to available MIDI input devices. Note on/off, pitch bend, control change, program change, All Sound Off, and All Notes Off are handled.

User-learned mappings take precedence over the default CC behavior. If a CC is assigned through MIDI Learn, that learned target consumes the message.

MIDI Learn Workflow

Tap LEARN, tap a learnable control, then move a MIDI CC or program-change control. After capture, global Learn stays active so you can map several controls quickly.

On Mac, learnable controls also support context-menu style mapping. Mappings are saved locally and can be cleared individually or all at once.

DEFAULT MIDI MESSAGE	TARGET	NOTES
Pitch Bend	Pitch Bend	Normalized to -1...+1.
CC 1	LFO Depth	Standard mod wheel behavior.
CC 7	Master Volume	Linear 0-1.
CC 71	Filter Resonance	Linear 0-1.
CC 72	Amp Release	Exponential time mapping.
CC 73	Amp Attack	Exponential time mapping.
CC 74	Filter Cutoff	Exponential 20-20000 Hz mapping.
CC 75	Amp Decay	Exponential time mapping.
CC 120	Panic	Immediate engine panic.
CC 123	All Notes Off	Releases active notes.

Learnable Commands

In addition to synth parameters, VA-1 can learn app commands: Record, Play, Stop, Clear, BPM Down, BPM Up, Key Mode, Octave Down, and Octave Up.

Toggle parameters such as effect bypass respond to non-zero learned input as toggles. Program change inputs can also be used as learned triggers.

AUv3 Instrument

The AUv3 component appears as **Gillespie Audio: VA-1**, type **aumu**, subtype **VA1s**, manufacturer **Gpie**. It exposes the VA-1 synth engine as a stereo instrument with 500 factory presets.

Host automation addresses match the parameter catalog. Continuous parameters can ramp; indexed parameters provide value strings for waveform, filter mode, LFO waveform, and LFO destination.

11 Patch Recipes

Use these recipes as starting points. They are written as instrument techniques, not exact preset coordinates, so they adapt to different starting sounds.

CLASSIC ANALOG BASS

1. Start from Init or a Bass preset.
2. Use Saw or Square on Osc 1.
3. Set Osc 2 to Sine or Triangle at -12 st for weight.
4. Lower Cutoff, add Reso, and raise Env Amt.
5. Use short Amp Release and medium Filter Decay.

WARM POLY PAD

1. Use two Saw waves with slight Osc 2 fine detune.
2. Set Amp Attack to 0.6-1.5 s and Release above 1.5 s.
3. Use low-pass Cutoff below full brightness.
4. Add Chorus and Reverb with moderate Mix.
5. Set LFO Destination to Filter for slow motion.

PLUCKED SEQUENCE TONE

1. Use Triangle or Saw with a little Osc 2 level.
2. Set Amp Attack very fast and Sustain low.
3. Set Filter Sustain near 0 with Filter Decay around 0.2 s.
4. Add delay for rhythmic repeats.
5. Record step input and adjust BPM.

EXPRESSIVE LEAD

1. Use Saw or Square and add subtle detune.
2. Set LFO Destination to Pitch.
3. Use MOD as vibrato depth while performing.
4. Add Delay and a little Reverb.
5. Use BND for phrase endings.

CINEMATIC RISER

1. Choose an FX or Pad starting point.
2. Use slow Amp Attack and long Release.
3. Set Filter Attack slow with high Env Amt.
4. Add noise and Reverb.
5. Use LFO to move Filter or Pitch.

ELECTRIC PIANO STYLE KEYS

1. Use Sine or Triangle as the main source.
2. Add Osc 2 an octave up at low level for tine color.
3. Use fast attack, medium decay, and moderate sustain.
4. Add Phaser or Chorus lightly.
5. Keep resonance low and cutoff moderately open.

Troubleshooting

SYMPTOM	LIKELY CAUSE	WHAT TO TRY
No sound	Output muted, device volume low, app just launched, or audio route changed.	Raise device volume slowly, press STOP, wait a moment after launch, reconnect audio device, or reopen the app.
MIDI controller not playing	No MIDI source connected or device changed after launch.	Reconnect the controller. VA-1 rescans CoreMIDI sources when devices are added or removed.
Effect seems off	Bypass is enabled.	FX buttons are named CHO, DLY, PHS, RVB. A dim button means bypassed; an amber button means active.
Sequence transposes instead of playing notes	KEY mode is enabled while the sequence is running.	Tap KEY to return to direct playing.
Long release tails disappear under dense playing	Voice budget and stability protection are active.	Shorten Release, reduce reverb/delay feedback, lower master level, or use fewer simultaneous notes.
AUv3 host automation does not show a parameter	Host parameter list is collapsed or filtered.	Look for VA-1 parameter names such as Osc 1 Waveform, Filter Cutoff, LFO Depth, Delay Mix, or Master Volume.

12 Reference

This chapter collects specifications and the complete user-facing parameter catalog.

PLATFORMS	iPhone, iPad, native Mac. iOS 17.0 / macOS 14.0 deployment targets in the project.	**PURCHASE**	Universal App Store purchase; no subscription, no ads, no account, no tracking.
ENGINE	Pure Swift AVAudioEngine plus AVAudioSourceNode render path.	**POLYPHONY**	16 voices with release-tail management and quietest-voice stealing.
OSCILLATORS	Two per voice; Sine, Saw, Square, Triangle, plus per-oscillator noise.	**FILTER**	Low-pass, high-pass, and band-pass state-variable filter.
MODULATION	Amp ADSR, Filter ADSR, one per-voice LFO.	**EFFECTS**	Global Chorus, Delay, Phaser, Reverb, limiter/output guard.
PRESETS	500 factory presets across Bass, Pad, Lead, Keys, Pluck, Arp, FX.	**AUV3**	Stereo instrument, factory presets, parameter automation, host MIDI input.

Parameter Catalog

GROUP	PARAMETER	RANGE / VALUES	DEFAULT	AU
Osc	Osc 1 Waveform	Sine, Saw, Square, Triangle	Saw	0
Osc	Osc 1 Coarse	-24…+24 st	0	1
Osc	Osc 1 Fine	-100…+100 ct	0	2
Osc	Osc 1 Level	0…1	1	3
Osc	Osc 2 Waveform	Sine, Saw, Square, Triangle	Saw	4
Osc	Osc 2 Coarse	-24…+24 st	0	5
Osc	Osc 2 Fine	-100…+100 ct	0	6
Osc	Osc 2 Level	0…1	0	7
Mix	Osc Mix	0…1	0	8
Filter	Filter Mode	Low Pass, High Pass, Band Pass	Low Pass	9
Filter	Filter Cutoff	20…20000 Hz	20000	10
Filter	Filter Resonance	0…1	0	11
Filter	Filter Env Amount	0…1	0	12
Amp Env	Amp Attack	0.001…5 s	0.01	13
Amp Env	Amp Decay	0.001…5 s	0.3	14
Amp Env	Amp Sustain	0…1	0.7	15
Amp Env	Amp Release	0.001…30 s	0.3	16
Filter Env	Filter Attack	0.001…5 s	0.01	17
Filter Env	Filter Decay	0.001…5 s	0.3	18
Filter Env	Filter Sustain	0…1	0	19
Filter Env	Filter Release	0.001…30 s	0.3	20
LFO	LFO Rate	0.1…20 Hz	1	21
LFO	LFO Depth	0…1	0	22
LFO	LFO Waveform	Sine, Triangle, Square, Saw	Sine	23
LFO	LFO Destination	Filter Cutoff, Osc Pitch, Amplitude	Filter Cutoff	24
Performance	Velocity Sensitivity	0…1	0.8	25
Chorus	Chorus Bypass	Off/On	On	26
Chorus	Chorus Rate	0.1…5 Hz	0.4	27
Chorus	Chorus Depth	0…1	0.5	28
Chorus	Chorus Feedback	0…0.95	0	29
Chorus	Chorus Mix	0…1	0.5	30
Delay	Delay Bypass	Off/On	On	31
Delay	Delay Time	10…2000 ms	375	32
Delay	Delay Feedback	0…0.90	0.4	33
Delay	Delay Damping	0…1	0	34
Delay	Delay Mix	0…1	0.3	35
Phaser	Phaser Bypass	Off/On	On	36
Phaser	Phaser Rate	0.1…5 Hz	0.3	37

GROUP	PARAMETER	RANGE / VALUES	DEFAULT	AU
Phaser	Phaser Depth	0…1	0.5	38
Phaser	Phaser Feedback	0…0.95	0.3	39
Phaser	Phaser Mix	0…1	0.5	40
Reverb	Reverb Bypass	Off/On	On	41
Reverb	Reverb Room Size	0…1	0.5	42
Reverb	Reverb Damping	0…1	0.5	43
Reverb	Reverb Mix	0…1	0.3	44
Master	Master Volume	0…1	0.8	45
Osc	Osc 1 Noise	0…1	0	46
Osc	Osc 2 Noise	0…1	0	47

SUPPORT

Product page: richardgillespie.ca/apps/va-1. Support page: richardgillespie.ca/apps/va-1/support. VA-1 is authored by Gillespie Audio in London, Ontario, Canada.