

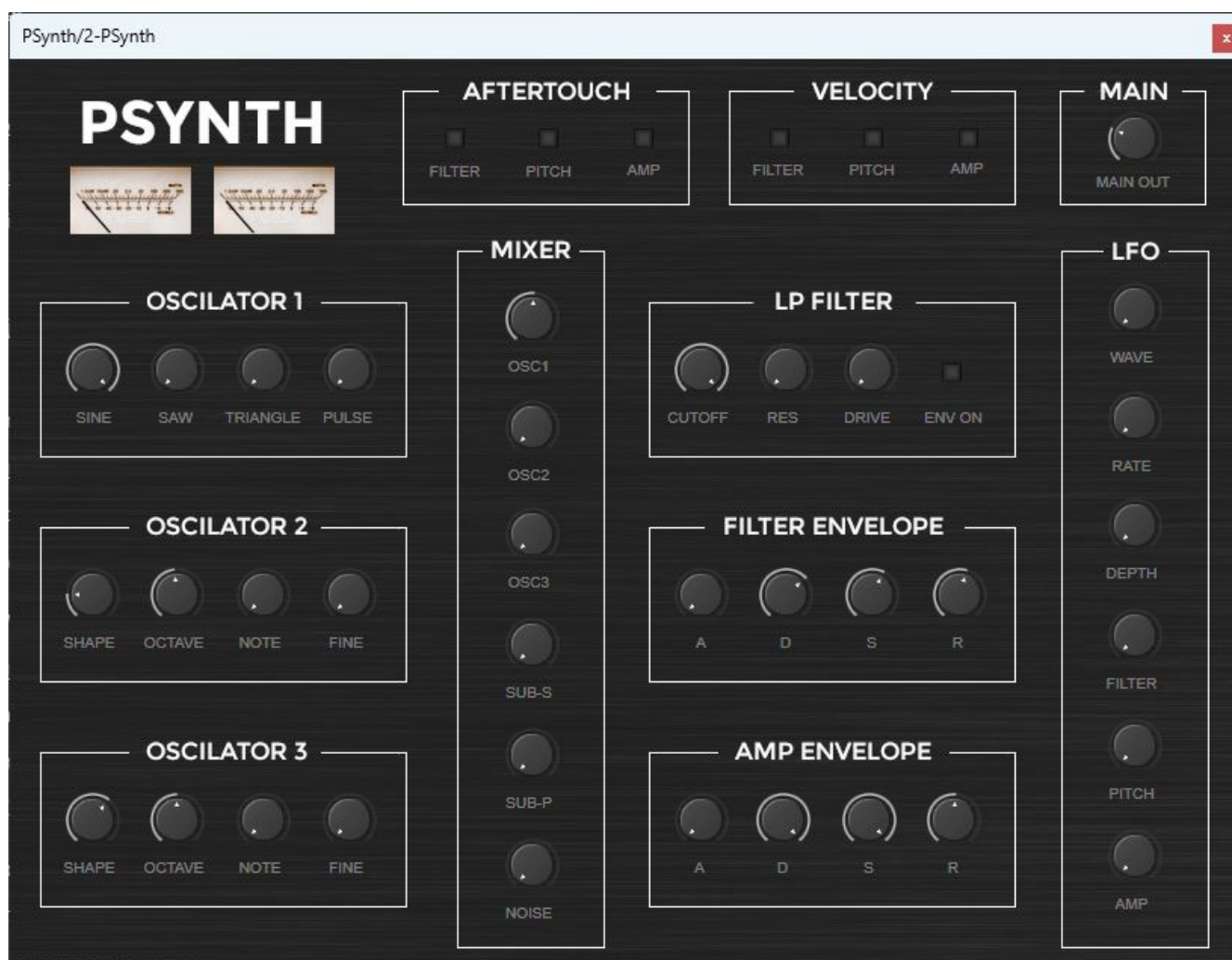
PSynth

User manual

1.41 · Home Records Label

English edition · Windows x64 · VST3

This manual takes you from first launch to making your own sounds. It explains the panel controls, their dependencies, MIDI performance controls and saving settings in your music host. Control labels match the interface so you can find each function on screen.



Panel screenshot · Ableton Live

This manual covers version 1.41. Screenshots show the running plugin in Ableton Live. Knob positions illustrate a panel state and are not required starting settings.

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Installation and first launch

You need Windows with x64 application support and a 64-bit DAW that supports VST3. PSynth runs as an instrument inside a host. The installer shortcuts in the Start menu provide information, component notices and the uninstaller.

Close your DAW before installing or updating. Run PSynthSetup.exe. Choose a language and destination folder. The usual path is C:\Program Files\Common Files\VST3\PSynth.vst3. An update may propose the previous location. The final destination should end with PSynth.vst3.

Setup copies the complete plugin bundle, including Resources and its modules. NI Resources integration artwork is installed in the shared Windows Documents folder. Do not move only the inner binary without the rest of the bundle.

Open your DAW after installation and rescan VST3 plugins if needed. Add PSynth to an instrument or MIDI track. In Ableton Live, open Plug-ins, find Home Records Label and drag the instrument onto a MIDI track.

Select a MIDI input and enable track monitoring. Play a MIDI keyboard or a clip containing notes. Check MIDI activity, the plugin meters, track meters and your DAW audio output. If there is no sound, see Troubleshooting.

Close the host before updating or uninstalling. Use the Start menu uninstaller or Windows app settings. Save your own projects and sounds before an update.

Panel operation and MIDI control

Adjust knobs by dragging with the mouse and watch the value in your host. Square buttons switch functions between ON and OFF; their meaning is explained with each section. SHAPE or WAVE selects a waveform, while OCTAVE or OCT and NOTE select discrete tuning positions.

Modulation needs a source, depth and an active route to its destination. If an LFO has no audible effect, check DEPTH, the destination amount and the relevant switches. ADSR attack and decay run after a note begins; release starts when the note ends.

The knob context menu contains About..., Learn and UnLearn. To assign a MIDI controller, right-click a knob, choose Learn and move the controller you want to use. UnLearn removes the assignment. The PSynth 2 menu was checked on the running panel; both bundles use PatchMemory controls.

Velocity is supplied at the start of a note and represents how hard it is played. Aftertouch is pressure sent after the note begins. Enabling a route does not generate aftertouch: your keyboard or MIDI clip must supply it. Do not assume MPE or independent pressure control for each note.

Pitch bend and the sustain pedal are separate MIDI messages. A held pedal can keep notes active after the keys are released, delaying the envelope release stage. Relevant host and instrument settings are also described in the MIDI parameter sections.

Save the DAW project after editing. The panel has no visible dedicated preset browser. Use the host's mechanisms to save and recall sounds. After reopening, check the sound and switches; saving knob positions alone is not a substitute for checking the result.

DAW automation records parameter changes over time. In Ableton, use Configure on the device, move the target control, then select the exposed parameter for automation. Some PSynth 2 automation names are repeated or abbreviated, so verify which knob a parameter actually moves.

Synthesis and envelope basics

Oscillator Generates a waveform at a pitch set by the note. Mixing, tuning and filtering oscillators shapes the tone. A sine is smooth; saw and pulse waves offer more upper harmonics for filtering.

Sine A sine wave is useful for a clean tone and low end. A low-pass filter changes its tone less dramatically than a saw wave.

Saw / Ramp A sawtooth contains many harmonics. Saw and Ramp in PSynth are opposite sawtooth directions. PSynth 2 offers one Saw position.

Triangle / Tri A triangle is smoother than a saw or pulse. The PSynth 2 label is shortened to Tri.

Pulse An impulse-like waveform with a distinct tone. Selecting Pulse does not imply a visible pulse-width control or PWM modulation.

White Noise / Pink Noise Noise has no single defined pitch. White noise sounds brighter; pink noise has relatively more energy in lower ranges. PSynth also offers these in the OSC2, OSC3 and LFO waveform selection; PSynth 2 provides separate noise levels.

Cutoff and resonance Cutoff sets the filter boundary frequency; resonance emphasizes the region around it. LP reduces high frequencies, HP reduces low frequencies, BP passes a band and Band Reject removes a band. These modes are available only where a TYPE selector is documented.

A / Attack The rise after a note begins. A short attack gives a fast onset; a long attack creates a gradual fade-in.

D / Decay The move from the peak to the sustain level. A shorter decay emphasizes the initial transient and reaches the held portion sooner.

S / Sustain The level maintained while the note is held. This is a level, not a time. Setting amplitude sustain to zero makes the sound decay even while the key remains down.

R / Release The fade after a note ends. Amplitude release controls the instrument's own tail; delay and reverb tails can last longer.

LFO A slow control waveform. Pitch modulation produces vibrato, amplitude modulation produces tremolo, and filter modulation moves the tone. RATE sets speed, SHAPE or WAVE sets the waveform and DEPTH scales the modulation.

Oscillator 1: blending waveforms



Panel detail · Oscillator 1: blending waveforms

OSC1 combines four waveforms at the pitch supplied by the MIDI note. Each knob sets the contribution of its own waveform. Several waveforms can be blended at once. The OSC1 mixer knob sets the level of this entire group.

SINE Sine contribution. Provides a smooth fundamental component with little harmonic content; useful as a starting point or a bass foundation.

SAW Saw contribution. Adds a harmonically rich component that makes filter changes more apparent.

PULSE Pulse contribution. Adds a more hollow, defined component. This adjusts its level; it is not a pulse-width control.

TRIANGLE Triangle contribution. Combines a smooth character with more harmonic content than a sine wave.

When all four contributions are zero, turning up OSC1 in the mixer will not restore sound from this group.

The declared maximum for each contribution is 1 in the parameter metadata. These are not dB values.

The state supplied in the bundle sets SINE to 1 and SAW, PULSE and TRIANGLE to 0.

Oscillator 2: waveform and tuning



Panel detail · Oscillator 2: waveform and tuning

OSC2 is a separate sound source. Choose one waveform, then adjust its tuning relative to the played note. Its level is set by OSC2 in the mixer.

SHAPE Selects one of seven shapes: Sine, Saw, Ramp, Triangle, Pulse, White Noise, Pink Noise. Saw and Ramp are opposite sawtooth directions; the final two modes are white and pink noise.

OCTAVE Selects an octave offset of -2, -1, 0, +1, +2 or +3. Zero retains the basic note register; negative values lower the pitch and positive values raise it.

NOTE Selects an additional offset of 0-11 semitones. Combine it with OCTAVE to create a unison, octave or interval relative to OSC1.

FINE Continuous fine tuning. A small difference relative to another oscillator creates beating and a broader sound. The interface does not declare a conversion of this scale into cents.

Turn up OSC2 in the mixer before evaluating these controls; its supplied initial level is 0.

SHAPE, OCTAVE and NOTE produce discrete selections although they are operated with knobs.

White and pink noise do not produce a stable musical pitch like periodic waveforms.

Oscillator 3: an additional layer



Panel detail · Oscillator 3: an additional layer

OSC3 provides the same user controls as OSC2. Set its own waveform and tuning, then add it with the OSC3 mixer knob. This allows a third harmonic component or a separate noise layer.

SHAPE OSC3 shape: Sine, Saw, Ramp, Triangle, Pulse, White Noise or Pink Noise. This selection is independent of OSC2.

OCTAVE OSC3 octave offset: -2, -1, 0, +1, +2 or +3 relative to the basic register of the played note.

NOTE Additional OSC3 tuning offset of 0-11 semitones. A setting of 0 adds no semitone interval.

FINE Continuous fine tuning for OSC3. Use a small difference from OSC1 or OSC2 to change the beating between layers.

The supplied initial OSC3 mixer level is 0.

The DAW automation list may show OSC3NOTE for both NOTE and FINE. Verify on the panel which knob the selected parameter moves.

Mixer: source levels



Panel detail

The mixer sets the contribution of six sources before the common filter. The combined sources pass through the filter and amplitude stage. Raising several source levels at once can substantially increase the overall instrument level.

OSC1 Level of the group built from SINE, SAW, PULSE and TRIANGLE. It does not alter the balance of those four waveforms within OSC1.

OSC2 Level of OSC2 with its selected shape and tuning. Zero removes its contribution.

OSC3 Level of OSC3. Adds a third component independently of the OSC2 level.

SUB-S Level of an additional low sine source. The bundle connections apply a fixed offset of two octaves down. It can reinforce the bass foundation.

SUB-P Level of an additional low pulse source. The bundle connections apply a fixed offset of two octaves down. It adds a foundation with more harmonic content.

NOISE Level of the separate white-noise generator. Useful for breathy components, transients and effects; the common filter shapes its spectrum.

OSC1/2/3 declare a maximum of 3, while SUB-S, SUB-P and NOISE declare a maximum of 0.3. These are internal scales, so the numbers do not represent equivalent dB levels.

The host parameter name for SUB-P may appear as SUB-S. Identify the corresponding knob on the panel.

Start with one source. Add the others individually and adjust MAIN OUT as required.

Filter and DRIVE



Panel detail · Filter and DRIVE

A common Moog-type low-pass filter shapes the combined sources. CUTOFF sets the basic brightness, RES emphasizes the region around the cutoff, and DRIVE controls a soft-distortion stage after the filter.

CUTOFF Basic filter cutoff setting. Lower settings remove more high-frequency content; higher settings preserve a brighter sound. Filter modulation is added to this setting.

RES Filter resonance. Increases emphasis around the cutoff frequency and makes CUTOFF movement more pronounced.

DRIVE Soft-distortion control. In the DSP connections, one knob feeds both Shape and Limit of this module, so it changes the signal shaping and limiting together.

ENV ON This button enables or disables FILTER ENVELOPE modulation of filter cutoff. When disabled, the envelope contributes no modulation; CUTOFF and the other filter modulation sources still operate.

CUTOFF can still receive LFO, velocity and aftertouch modulation when ENV ON is disabled.

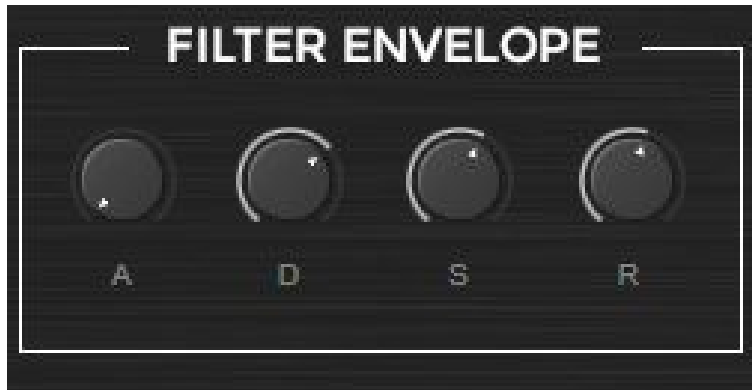
RES declares a maximum of 45 and CUTOFF a minimum of -1 in the metadata. The interface gives no conversion into Hz or filter Q.

The DSP connects the filter signal together with the distortion branch. DRIVE is not documented as a separate bypass switch.

Keep MAIN OUT moderate while evaluating RES and DRIVE.

ENV ON is a toggle button in the GUI. Its internal parameter is a float with a maximum of 1; the panel does not offer continuous adjustment of the envelope contribution.

Filter envelope: A, D, S, R



Panel detail · Filter envelope: A, D, S, R

The envelope describes the filter-cutoff change over a note. Enable ENV ON for it to contribute audibly. It is separate from the amplitude envelope.

A - Attack Envelope rise time at the start of a note. A short attack produces a fast filter movement; a longer attack produces a gradual opening.

D - Decay Time to move from the peak to the S level. A short decay makes the transition quick; a longer decay extends the timbral change after the attack.

S - Sustain Envelope level held while the note remains on. This is a level, not a time. Together with CUTOFF, it determines the character of a sustained sound.

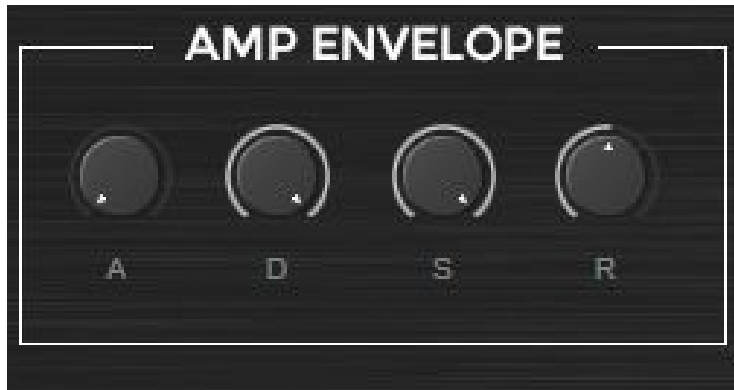
R - Release Envelope fall time after releasing the note. A longer release keeps filter movement in the tail, provided the amplitude envelope still allows the sound to continue.

FILTER ENVELOPE changes can be hard to hear with a sine wave or a very high CUTOFF. Use a saw wave for learning.

A long filter release does not extend the amplitude of a note by itself. Set a suitable R in AMP ENVELOPE too.

The A/D/S/R assignments are confirmed by the ADSR module connections. Time scales in seconds are not provided.

Amplitude envelope: A, D, S, R



Panel detail · Amplitude envelope: A, D, S, R

AMP ENVELOPE controls note amplitude through the VCA stage. It determines whether the sound starts immediately, falls after the attack, continues while holding the key and how long it fades after release.

A - Attack Amplitude rise time. A low attack gives a defined onset; a longer attack allows gradual pad entries.

D - Decay Time for amplitude to fall from its peak to the S level. With S below the peak, this produces an initial accent followed by a quieter held sound.

S - Sustain Amplitude held while the note remains on. A low S supports short or percussive sounds; a higher S allows a sustained note.

R - Release Fade time after releasing the note. A low R ends the sound quickly; a longer R produces a longer tail.

When S is at the maximum level, changing D can have little effect because the post-attack level need not fall noticeably.

MAIN OUT changes the final level of the whole patch; ADSR shapes the level over the note.

AMPENV-D declares a maximum of 9 and AMPENV-R a maximum of 11. These are internal values, not seconds.

LFO: repeating modulation



Panel detail

One LFO can modulate source pitch, amplitude and the common filter cutoff simultaneously. **WAVE** and **RATE** set its waveform and speed, **DEPTH** sets its common scale, and **PITCH**, **AMP** and **FILTER** set individual contributions to the three destinations.

WAVE LFO shape: Sine, Saw, Ramp, Triangle, Pulse, White Noise or Pink Noise. Sine and triangle produce smooth changes, pulse produces abrupt changes, and noise modes produce irregular modulation.

RATE LFO speed. Increasing the value speeds up modulation. The parameter explicitly declares an internal range of -10 to +4; this is not a range in Hz or tempo divisions.

DEPTH Common LFO depth before the signal splits into three destinations. At zero, none of them receives LFO modulation.

PITCH LFO contribution to source pitch. At low depth it can produce vibrato; at higher depth it creates more obvious pitch movement.

AMP LFO contribution to amplitude control. Can create tremolo or pulsing. It combines with the amplitude envelope and other amplitude modulation.

FILTER LFO contribution to filter cutoff. Moves the brightness around the basic CUTOFF setting.

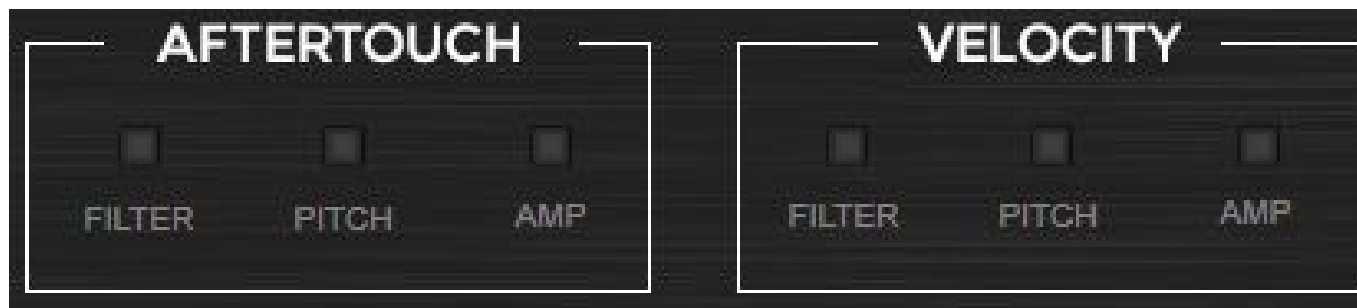
For modulation, set **DEPTH** and at least one of **PITCH**, **AMP** or **FILTER** above zero.

The supplied initial **DEPTH** is 0. **PITCH** has a small value of 0.005, but this does not produce active vibrato without **DEPTH**.

There is no visible switch for synchronizing the LFO to DAW tempo. **RATE** controls its free-running speed.

The declared maximum is 0.05 for **DEPTH** and 0.5 for **PITCH**; do not compare these values directly with amplitude or filter settings.

Performance: VELOCITY and AFTERTOUCH



Panel detail · Performance: VELOCITY and AFTERTOUCH

VELOCITY measures the force of the note onset. AFTERTOUCH controls the sound using pressure after the note starts, if the keyboard and MIDI path supply it. Each section has three buttons that enable its contribution to FILTER, PITCH and AMP.

VELOCITY - FILTER Enables or disables velocity modulation of filter cutoff. When enabled, different velocities can produce different brightness for the same note.

VELOCITY - PITCH Enables or disables velocity modulation of pitch. When enabled, strike force affects source tuning; disable this button for stable tuning.

VELOCITY - AMP Enables or disables velocity modulation of amplitude. When enabled, amplitude can change with strike force.

AFTERTOUCH - FILTER Enables or disables aftertouch modulation of filter cutoff. When enabled, pressure can change brightness while the note is held.

AFTERTOUCH - PITCH Enables or disables aftertouch modulation of pitch. When enabled, pressure after the attack can change source tuning.

AFTERTOUCH - AMP Enables or disables aftertouch modulation of amplitude. When enabled, pressure can change amplitude after the note has started.

All six buttons are disabled in the supplied state (internal value 0). Initially, the instrument may therefore show no velocity response in these three destinations.

A button does not generate MIDI data. Test velocity with notes of different velocities; test aftertouch by supplying pressure messages.

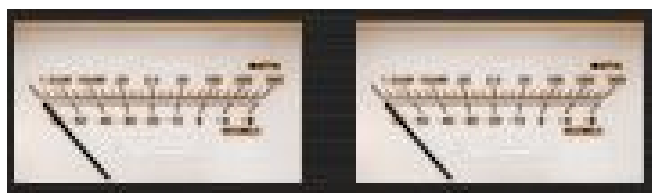
In this version's DSP, AFTERTOUCH receives its signal from the Controllers module. The AFTERTOUCH label alone does not confirm MPE or separate expression for each note.

The panel buttons enable or disable the stored contribution; they do not adjust it continuously. The internal parameters are floats: the maximum is 0.6 for VELOCITY and AFTERTOUCH FILTER/AMP, and 0.2 for AFTERTOUCH PITCH. These are internal values, not panel depth knobs.

Output, meters and DAW operation



Panel detail · Output, meters and DAW operation



Output meters

MAIN OUT sets the final level after filtering, distortion and amplitude control. The two panel meters are connected to the same final signal. PSynth declares a single Audio Out output in its metadata.

MAIN OUT Final instrument level. Reduce it when the combined sources are too loud; raise it cautiously when the output is too quiet. It does not change the source balance in the mixer.

VU / meters Output activity and level indicators. They confirm that the instrument is generating a signal. Also use the DAW track meter to assess level and possible clipping.

MIDI notes / pitch bend / sustain The instrument uses a MIDI input. Its metadata and connections provide notes, pitch bend and HoldPedal. The panel has no separate pitch-bend-range or sustain-pedal controls.

Presets and saving The panel has no visible custom preset browser. Save the project and plug-in states using your DAW's features. The program recorded in the supplied parameters is named INT.

Automation Parameters marked public in the metadata can be used for host automation. The exact automation, save and reload menus depend on the DAW; some parameter names are blank or repeated.

Do not take the two meters as evidence of two independent stereo channels: both read the same output.

No separate .vstpreset, .fxp or .fxb files were found in the bundle. This does not limit the DAW's ability to save plug-in state.

MAIN OUT declares a maximum of 0.3; its supplied initial value is about 0.0823. This scale is not expressed in dB.

Polyphony settings are internal; the PSynth 1.41 panel does not show a voice-count selector.

Sound design examples

These are suggested starting points for your own experiments. Save the current state first and test one function at a time.

Your first clean note

1. Use a fresh instance with its supplied INT state and route MIDI notes to its track.
2. Keep SINE in OSC1 high and the other three waveform contributions at zero.
3. Keep the OSC1 mixer level above zero and silence the remaining sources.
4. Set CUTOFF high, RES low and MAIN OUT to a moderate level. Disable ENV ON.
5. Play a note and watch the track meter. Adjust MAIN OUT for a comfortable level.

A short filtered bass

1. Add SAW in OSC1 and set its mixer contribution. Blend in SUB-S if a stronger foundation is needed.
2. In AMP ENVELOPE, use a short A, a short or medium D, a low S and a short R.
3. Lower CUTOFF, set a little RES and enable ENV ON.
4. In FILTER ENVELOPE, use a short A and D with a low S for a brighter onset followed by a darker sound.
5. Adjust MAIN OUT and save the state in your DAW.

Two layers with slow movement

1. Set SAW or TRIANGLE in OSC1, then bring up OSC2 in the mixer.
2. In OSC2, choose a periodic waveform, the same octave and NOTE 0. Adjust FINE slightly.
3. Lengthen A and R in AMP ENVELOPE and use a high S.
4. Choose Sine for the LFO, set a slow RATE and a small DEPTH.
5. Add a little FILTER or PITCH. Compare each destination separately and save the patch.

Appendix: public parameters outside the panel

parameters.se.xml contains 49 parameters without a Private=1 flag. Of these, 43 are linked to 36 visible knobs and 7 toggle buttons. A float type in the metadata does not mean that a panel button provides continuous adjustment. The following six have no visible control in the GUI definition. This table documents their metadata; actual presentation in an automation list depends on the host. An absent minimum or maximum means it is not explicitly declared in this file.

Index	Host name	Minimum	Maximum	Default
0	unnamed	-	1	1
1	unnamed	-	1	1
2	unnamed	-	1	1
10	Knob	-	-	2.00941
54	unnamed	-	1	1
55	Knob	-	-	2.00941

A blank name is not a label for an additional panel function. Identify automation through visible controls and observe their movement.

Distinguish repeated OSC3NOTE and SUB-S names by the linked GUI control, rather than the list text alone.

Troubleshooting

Plugin missing from the list Check that the host is x64, supports VST3 and scans the installation folder. Reopen the host and rescan after installation. Keep the full .vst3 bundle structure. Look in the instrument list as well as the plugin list.

No sound Check MIDI input, monitoring, track mute, audio output and MAIN. Enable at least one source and raise its level. Open the filter and set an audible amplitude envelope. In PSynth 2 also check the oscillator switch and its local envelope.

Sound is too dark or thin Check every filter in the path, including local filters. A low LP cutoff removes highs; a high HP cutoff removes lows. Temporarily disable filter envelopes and LFO routes to identify the stage changing the tone.

LFO or envelope has no effect Check depth, destination amount, route switches and envelope settings. Test with a held note. Filter envelopes and amplitude envelopes control different destinations.

Velocity or aftertouch has no effect Enable the intended destination and verify that the host passes the messages. Test velocity with different note strengths, and aftertouch with pressure after note onset. Check that other settings do not mask the change.

Distortion or sudden level increase Reduce MAIN, the combined oscillator and sub levels, resonance and drive or DIST. In PSynth 2 also check delay feedback and effect levels. Watch the DAW output meter too.

Sound does not fade Check sustain pedal, amplitude release and any held notes. In PSynth 2 lower delay feedback and the delay/reverb MIX controls separately to distinguish a held note from an effect tail.

Sound changes after reopening Check the plugin version, MIDI data, Learn assignments, automation and recalled switch states. Keep a copy of the working project and render audio when needed.

High CPU use Shorten long tails and reduce simultaneous notes. In PSynth 2 temporarily disable unused oscillators and modulation. Increase the host's audio buffer or freeze the track if the project requires it.

Version and documentation scope

PSynth 1.41 · Home Records Label · VST3 for Windows x64. The manual covers this version's panel and the additional host parameters described in the relevant chapters.

Screenshots were captured on 7 October 2026 in Ableton Live 12 Suite. The interface configuration was compared with the package used for the descriptions. Screen positions are not a preset catalog.

Routing descriptions were prepared from the bundled interface configuration, parameter list and signal graph. They document the behavior represented by those connections. The manual does not include acoustic measurements or listening verification of every setting combination.

Numbers and units are given only where they can be unambiguously mapped to the function. Do not interpret a raw automation value from 0 to 10 as seconds, hertz or decibels. Where no unit is specified, adjust the parameter by its function and by listening.

Installation information is in README-HRL.txt in the bundle. Component notices are in Contents\Resources\License.txt. News and support: www.homerecordslabel.com.