

Vaelyra Stryn X

User Guide

eXtended Resonant String & Pluck Synth



Uryan Audio

Version 1.0.1

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This edition is updated for Vaelyra Stryn X version 1.0.1, including the new Main screenshot, the removal of Hold and Sustain from the Main performance controls, improved selector-orb behavior, and stronger audible Main macro response.

1. Introduction and concept

Vaelyra Stryn X is a deep digital-acoustic synthesizer built around excitation, vibrating-string behavior, resonant body models, multi-stage filtering, organic motion, modulation routing and spatial effects. It is designed for playable plucks, struck and bowed textures, resonant basses, hybrid leads, glass, wood and metal characters, and unusual cinematic instruments.

It is not intended to imitate one specific acoustic instrument. Its identity is a futuristic resonant instrument: familiar enough to play musically, but free to move beyond realistic strings, plates, cavities, bows and impacts.

Important DSP and CPU note

A Vaelyra Stryn X sound can contain several simultaneous layers: exciter behavior, one or more string/resonance processes, body resonators, envelopes, a three-stage filter architecture, Motion sources, up to twelve Matrix routes, and multiple effects. Long releases and overlapping notes can keep several of these layers active at the same time. On older computers, or in projects with many plugin instances, this can produce noticeable DSP/CPU load. The four Performance modes exist specifically so you can choose the right balance between maximum depth and practical session performance.

Core area	Current interface
Main architecture	Exciter + String + Body, followed by Filter, Motion, Matrix and FX systems
Performance modes	Full, Optimal, CPU Saver and Ultra Saver
Top-level tabs	Main, Exciter, Body, String, Filter, Motion, FX, Matrix and Presets
Main selectors	Exciter type, Stryn Core body type and String mode
Motion sources	3 LFOs and 3 organic random generators
Matrix routing	12 source / target / bipolar amount routes
FX modules	Chorus, Ensemble, Dimension, Delay, Reverb and Glass & Glow
Preset browser	The current screenshot reports 300 visible presets

What Vaelyra Stryn X is best at

- Plucked and struck string instruments with a clear, playable attack.
- Bowed, scraped and friction-based textures with controllable pressure and grain.
- Resonant wood, glass, metal, dark-body and cavity characters.
- Cinematic plucks, dark string basses, hybrid leads and modal textures.
- Organic motion that does not need to repeat like a conventional LFO.
- Deep modulation setups that remain accessible through the Main performance controls.

2. Quick start

A practical first-session workflow

1. Open the Presets tab and choose a category or load a factory sound.
2. Return to Main and leave Performance mode on Optimal for normal writing and browsing.
3. Play the sound and turn the three large selectors: Exciter, Stryn Core and String.
4. Use Tone, Body, Damp, Width, Space, Air and Warmth for broad musical changes.
5. Use Glow, Chorus, Ensemble, Dimension, Reverb and Glass for fast finishing.
6. Open Exciter when the attack, bow, contact or impact character needs detail.
7. Open Body when material, size, density, modal resonance or surface character needs detail.
8. Open String when damping, stiffness, harmonics, sympathetic response or the amplitude envelope needs detail.
9. Open Filter for cutoff, resonance, architecture, the three processing stages and brightness-envelope movement.
10. Use Motion for LFO and random-source shaping, then connect sources to destinations on Matrix.
11. Use FX for final width, echo, space, glass and glow treatment.
12. Save the result as a User Preset before pressing Inspire, Evolve or Factory Idea again.

A useful mental model

Stage	Question to ask
Exciter	What starts the sound - a contact, strike, bow, scrape or material-like excitation?
String	How does the vibrating element behave - damped, stiff, dual, harmonic, sympathetic or overtone-rich?
Body	What does the vibration resonate through - wood, glass, metal, dark body, cavity or a blend?
Filter	How is the spectrum shaped, colored and moved over the life of the note?
Motion	How does the sound change while the note is active?
FX	How wide, deep, bright, delayed or spatial should the finished sound be?

Interaction matters

The core systems are strongly connected. A bright exciter can become soft when the String section is heavily damped; a short pluck can create a long body tail when Body Decay is high; and a dark body can still gain air and glass through Surface / Character, Filter and FX.

3. Performance modes and CPU behavior

Vaelyra Stryn X can combine several resonant processes, envelopes, modulation sources, Matrix routes, filter stages and internal effects. The four Performance modes provide a direct balance between maximum depth and lighter processing.

Mode	Purpose	Recommended use
Full	Maximum internal depth and richest processing path.	Detailed sound design, final checks, rendering or freezing.
Optimal	Balanced quality and workload. Recommended default.	Everyday playing, preset browsing and normal production.
CPU Saver	Reduced processing pressure for larger sessions.	Several instances, dense arrangements or heavier projects.
Ultra Saver	The lightest performance path.	Older systems, live stability or projects with many active tracks.

What can increase workload

- Several held notes with long Amp Release times.
- Complex Body settings with high Decay, Reson and modal detail.
- Dual, harmonic, sympathetic and overtone-rich String behavior.
- Complex Filter architecture with multiple active stages and moving envelopes.
- Multiple active Motion sources and Matrix routes.
- Chorus, Ensemble, Dimension, Delay, Reverb and Glass & Glow used together.
- Higher voice counts and large spreads stored in the loaded preset.

Practical CPU strategy

- Start in Optimal. It is the intended default for normal creative work.
- Use Full when final detail is more important than session load.
- Move to CPU Saver before changing the sound itself when a project becomes heavy.
- Use Ultra Saver for older systems, demanding live projects or very dense arrangements.
- Shorten Amp Release when many notes overlap and CPU rises after chords.
- Disable effects that are not contributing clearly to the patch.
- Freeze or bounce finished layers when several complex instances are needed.

A mode change is not a failure

Performance modes are part of the instrument design. Choosing CPU Saver or Ultra Saver is the correct workflow when the project needs it; the modes let you keep the musical patch while reducing processing pressure.

4. Interface overview

The top tab bar remains visible throughout the instrument. The layout moves from fast performance and physical sound generation toward spectral shaping, modulation, effects and preset management.

Tab	Main purpose
Main	Fast core selection, broad macros, performance mode, preset access, Inspire, Evolve, output and quick effect controls.
Exciter	Exciter type, performance variation, contact, impact, friction, bowing, tone and body coupling.
Body	Body model, material properties, modal resonance, material blend and surface character.
String	String mode, damping, stiffness, dual/harmonic response, sympathetic resonance and Amp ADSR.
Filter	Filter curve, core tone controls, model/mode/slope, three-stage architecture and filter envelope.
Motion	LFO 1, LFO 2, LFO 3 / internal motion, and three random generators.
FX	Chorus, Ensemble, Dimension, Delay, Reverb and Glass & Glow.
Matrix	12 modulation routes with source, target and bipolar amount.
Presets	Factory and user browsing, categories, search, favourites, current-preset summary, snapshot and save/load actions.

Visual organization

- Large displays summarize the active physical, resonant or spectral idea.
- Large selector-style orbs handle broad changes on Main.
- Smaller controls provide detailed shaping without hiding the overall signal concept.
- Amber and gold accents show active values and selected pages.
- Motion displays show the effective movement shape; Filter graphs show spectral and envelope response.
- Matrix rows show source, target and bipolar routing amount.

Most controls are stored as part of the preset state. A preset can therefore recall excitation behavior, body material, string response, envelopes, filter architecture, motion, effects and Matrix routing.

5. Main tab



Main tab - version 1.0.1: updated Main image, refined selectors, stronger macros and streamlined controls

Purpose of the Main tab

The Main tab is the performance surface of Vaelyra Stryn X. It provides the fastest route from a preset to a playable result. The three large selector orbs define the instrument concept, while the smaller macros shape tone, body, damping, width, space and enhancement.

The three large selectors

Selector	Purpose
Exciter	Chooses the excitation family - the action or material-like source that starts the vibration. In the version 1.0.1 Main screenshot the selected Exciter is Hammer.
Stryn Core	Chooses the main resonant body type. Visible positions include Wood, Glass, Metal, Hybrid, Hollow, Dark Body and Crystal. In the version 1.0.1 screenshot the selected body is Hollow.
String	Chooses the main string/resonance behavior. In the version 1.0.1 Main screenshot the selected String mode is Bass.

Selector behavior in version 1.0.1

Improved orb handling
The three Main selector orbs now use endpoint-gap protection, sticky selection behavior and mouse-wheel stepping. This makes the first and last positions easier to reach and helps prevent accidental jumps while choosing Exciter, Stryn Core and String states.

Main macro row

Control	Musical role
Tone	Broad tonal balance of the patch.
Body	Overall resonant-body presence and weight.
Damp	Shortens, darkens or absorbs the resonant response.
Width	Broad stereo and spatial width.
Space	Overall sense of distance and ambience.
Air	High-frequency openness and breath.
Warmth	Warmer and fuller tonal emphasis.

Macro behavior in version 1.0.1
Main macros remain high-level musical controls, but their audible influence has been strengthened. Damping, overtone, exciter energy, body presence, warmth, motion and space-related behavior now reach deeper into the engine while staying within controlled musical ranges.

Main enhancements and performance controls

Control	Use
Glow	Adds a warmer resonant bloom and finishing presence.
Chorus	Adds classic modulation movement.
Ensemble	Adds multi-voice width and richness.
Dimension	Adds polished micro-delay width.
Reverb	Adds spatial tail and depth.
Glass	Adds bright resonant detail and glass-like enhancement.

Inspire and Evolve

Action	Description
Inspire	Creates a new engine-aware musical starting point using curated ranges and coherent parameter relationships.
Evolve	Creates a related variation from the current sound rather than replacing its identity completely.

Version 1.0.1 control cleanup

Hold and Sustain are no longer part of the Main performance controls. They have been removed from the visible interface and from the active control workflow, keeping Vaelyra Stryn X focused on plucked, struck, bowed and resonant performance behavior.

Preset strip and output

- Use Category and Preset for fast browsing without leaving Main.
- Previous and Next move through the available preset list.
- Favourite, Save and Load provide fast preset management.
- The Output knob and meter control and display the final plugin level.
- The right-side switches provide immediate on/off comparison for Chorus, Ensemble, Dimension and Reverb.
- The Performance mode buttons are available directly on Main so the processing level can be changed without leaving the playing page.

Recommended Main-page workflow

1. Load a preset.
2. Choose the Exciter, Stryn Core and String character.
3. Adjust Tone, Body and Damp first.
4. Set Width, Space, Air and Warmth for placement in the mix.
5. Add only the enhancement effects that clearly improve the sound.
6. Open the deep tabs when a broad macro change is no longer precise enough.

6. Exciter tab



Exciter tab - excitation type, contact, impact, friction, bowing, tone and body coupling

Purpose of the Exciter tab

The Exciter tab determines how energy enters the instrument. It controls the initial action - such as a finger pluck, hard impact, soft contact, metallic strike, scrape or bowed friction - before the String and Body systems transform that energy.

Exciter Type / Performance

Control	Description
Type	Selects the main exciter family. The current screenshot shows Finger.
Variant	Chooses a variation inside the selected exciter family.
Energy	Controls the strength and intensity of the excitation.
Velocity	Controls how strongly MIDI velocity changes the excitation.
Human	Adds controlled variation so repeated attacks feel less mechanical.

Start with Type and Variant, then use Energy and Velocity to establish playability. Add Human only after the basic attack is working.

Contact / Impact

Control	Description
Contact	Changes the amount or duration of contact between exciter and resonant element.
Hard	Moves the attack toward a harder, sharper strike.
Mass	Changes the perceived weight of the impact.
Click	Adds a short high-frequency attack component.
Knock	Adds a more body-centered knock component.
Thump	Adds low, heavy impact weight.

Friction / Bow

Control	Description
Friction	Sets the overall friction energy applied to the resonant system.
Scrape	Adds rough, sliding or scraped texture.
Bow	Adds a more continuous bowed excitation component.
Press	Changes the perceived pressure of the contact.
Grain	Adds fine irregular detail to the friction texture.

Friction and Bow can turn a short pluck engine into a sustained or semi-sustained texture. Use small amounts first; high Scrape, Press and Grain values can intentionally dominate the attack.

Tone / Body Send

Control	Description
Tone	Sets the broad brightness of the exciter before it reaches the resonant system.
Blur	Softens sharp transient detail and creates a less defined excitation.
Send	Controls how much exciter energy is coupled into the body path.
Bridge	Moves the coupling toward a tighter, bridge-like response.
Damp	Absorbs excitation detail and shortens or darkens the attack response.

Exciter design examples

Goal	Starting direction
Finger-like pluck	Moderate Contact, low Hard, controlled Click, low Thump and moderate Blur.
Metal strike	A metallic Type, higher Hard and Click, moderate Mass and brighter Tone.
Soft felt attack	Lower Hard, higher Contact, more Blur and Damp, reduced Click.
Bowed texture	Raise Friction and Bow, adjust Press, keep Grain subtle and lengthen the Amp envelope.
Cinematic impact	Increase Mass, Knock and Thump, then send strongly into a large resonant Body.

7. Body tab



Body tab - resonant model, modal core, material blend and surface character

Purpose of the Body tab

The Body tab determines what the string and exciter appear to resonate through. It combines a main body model with size, thickness and density controls, a modal resonance core, independent material contributions and a surface-character layer.

Body Model

Control	Description
Body Type	Selects the main body family. The current screenshot shows Wood / Medium Wood.
Variant	Selects a variation inside the active body family.
Size	Changes the perceived scale of the resonant body.
Thick	Changes the perceived thickness or rigidity of the body.
Density	Changes the perceived material density and weight.
Knock	Emphasizes a struck, body-centered resonant component.
Drive	Adds intensity and nonlinear edge to the body response.

Size, Thick and Density interact. A larger body does not automatically need a long decay, and a dense body does not automatically need to be bright. Use the Resonance Core to decide how long and how sharply the selected body rings.

Resonance Core

Control	Description
Modal Q	Controls how narrow and pronounced the modal resonant peaks feel.
Reson	Controls the overall intensity of the body resonance.
Decay	Controls how long the resonant body continues to ring.
Spread	Distributes or widens the resonant modes for a broader response.
Damp	Absorbs high resonant energy and shortens or darkens the tail.

Material Blend

The five Material Blend controls add independent material tendencies around the selected Body Type. They are useful for creating hybrid bodies rather than forcing the sound to remain a single material.

Material	Character
Wood	Organic, rounded and naturally resonant body contribution.
Glass	Hard, bright, clear and plate-like resonance.
Metal	Sharper, denser and more metallic resonant energy.
Dark	Darker, heavier and less exposed tonal contribution.
Cavity	Hollow, enclosed or chamber-like resonance.

The material controls do not need to add up to 100 percent. Treat them as independent contributions. A Wood body can receive a small Glass layer for clarity, or a Glass body can receive Cavity for a more hollow result.

Surface / Character

Control	Description
Bloom	Controls how the body resonance opens and expands after excitation.
Shimmer	Adds upper resonant sparkle and fine high-frequency motion.
Air	Adds openness and high-frequency breathing space.
Warp	Deforms or destabilizes the body character for a less regular resonance.

Body design examples

Goal	Starting direction
Warm wooden pluck	Wood body, moderate Size, lower Drive, moderate Reson, controlled Decay and low Glass.
Icy glass plate	Glass body, higher Modal Q, moderate Shimmer and Air, controlled Damp.
Dark hollow bass	Dark and Cavity blend, larger Size, lower Shimmer, moderate Knock and Damp.
Metallic cinematic hit	Metal blend, higher Density and Drive, longer Decay and moderate Warp.
Hybrid alien body	Choose one main type, blend two contrasting materials and add Warp slowly.

8. String tab



String tab - string core, resonant coupling, Amp ADSR and Engine Layers

Purpose of the String tab

The String tab controls the vibrating element and its response over time. It determines whether the sound behaves as a clean string, damped pluck, stiff inharmonic object, dual-string layer, bowed resonance or overtone-rich hybrid.

String Core

Control	Description
Mode	Selects the main string behavior. The current screenshot shows Pure.
Damping	Shortens and darkens the vibration by absorbing energy.
Stiff	Increases rigidity and inharmonic character.
Dual	Adds or strengthens a second string/resonant layer.
Harmonic	Increases harmonic content and upper partial activity.

String Resonance

Control	Description
Sympathy	Adds sympathetic resonance that responds around the main string.
Body Send	Controls how strongly the String system excites the Body system.
Bow	Adds bowed or sustained string energy.
Overtone	Emphasizes upper resonant partials and overtone behavior.

Damping and coupling

Damping decides how much string energy survives, while Body Send decides how much of that energy reaches the body. A short damped string can still create a long body tail when Body Send and Body Decay are high.

Amp ADSR

Control	Description
Attack	Time required for the sound level to rise after a note begins.
Decay	Time required to move from the attack peak to the sustain level.
Sustain	Level held while the note remains active.
Release	Time required for the sound to fade after the note ends.
Velocity	Controls how strongly MIDI velocity changes the output level.

Envelope design examples

Goal	Starting direction
Tight pluck	Very fast Attack, short Decay, low Sustain and short Release.
Sustained bow	Fast or medium Attack, higher Sustain, longer Release and more Bow.
Soft evolving string	Longer Attack and Release, moderate Sustain, controlled Damping.
Velocity-playable patch	Raise Velocity, then test repeated soft and hard notes.
Long resonant layer	Use moderate String Release, then extend Body Decay rather than relying only on amplitude release.

String balancing tips

- Increase Damping before reducing Body Reson when the source itself rings too long.
- Reduce Overtone and Harmonic when the sound becomes brittle before darkening the entire Filter.
- Use Dual and Sympathy carefully in the low register; both can broaden the sound and add energy.
- Use Bow with a supportive Amp Sustain value for continuously playable textures.
- Keep Body Send musical: too little can make the body irrelevant, while too much can dominate the original string identity.

Engine Layers

Engine Layers add sustained tonal support beneath the plucked and resonant core. They follow the Amp ADSR, so higher Sustain or a longer Release can keep these layers audible after the initial pluck has faded.

Layer	Available modes	Main role
Layer 1	String, Modal Table, Modal, Body Table, Hybrid	Primary sustained tonal support.
Layer 2	String, Modal, Body Modal, Modal Table, Low Modal	Secondary modal and body reinforcement.
Layer 3	Utility, Body Table, Bright Utility, Utility Modal, Hybrid	Utility, brightness and body-color layer.

Mix and true hard-off behavior

Each layer has its own Mix control. At exactly 0%, the layer is fully removed from the signal path: internal movement and Matrix modulation cannot bring it back. Above 0%, Mix sets the layer contribution. Use lower values for clear plucks and higher values for sustained hybrid tones.

9. Filter tab



Filter tab - core response, architecture, three-stage chain and dedicated filter envelope

Purpose of the Filter tab

The Filter tab shapes the spectrum after the resonant sound has been formed. It combines direct cutoff and resonance controls with a selectable filter architecture, three processing stages and an envelope that can animate brightness over the life of the note.

Filter Core

Control	Description
Cutoff	Sets the principal frequency boundary of the selected filter response.
Resonance	Emphasizes frequencies around the cutoff region.
Drive	Adds level, density and nonlinear color into the filter path.
Key Track	Makes the filter response follow played note pitch.
Env Amount	Controls how strongly the Filter Envelope moves the response.

The response graph provides a direct visual summary of the active model, mode, slope and cutoff position. In the supplied screenshot the architecture reads SVF / Low Pass / 24 dB.

Filter Architecture

Control	Description
Model	Selects the main filter model or core behavior.
Mode	Selects the response type, such as the visible LP setting.
Slope	Selects the steepness of the response, such as the visible 24 dB setting.
Bypass	Temporarily removes the filter architecture for direct comparison.
Stage 1-3	Select three sequential character/filter stages. The screenshot example shows Ripple, LP12 and Ladder Tone.

Architecture before correction

Choose the Model, Mode, Slope and three stages for the intended character first. Then use Cutoff, Resonance, Drive and the envelope to place that character musically. This avoids using the core controls to compensate for an unsuitable architecture.

Filter Envelope

Control	Description
Attack	Time required for the brightness movement to rise after note-on.
Decay	Time required to move from the envelope peak toward Sustain.
Sustain	Brightness-envelope level held while the note remains active.
Release	Time required for the envelope movement to return after note-off.
Velocity	Lets MIDI velocity influence the filter movement.
Brightness	Sets or emphasizes the brightness character associated with the envelope system.
Bright Rate	Controls the rate or speed of the additional brightness movement.

Filter design examples

Goal	Starting direction
Bright transient	Fast Attack, short Decay, low Sustain and positive Env Amount.
Soft pluck	Lower Cutoff, restrained Resonance, modest Drive and a short gentle envelope.
Resonant sweep	Higher Resonance, moderate Env Amount and a longer Decay.
Keyboard-consistent tone	Use Key Track so higher notes remain open and lower notes remain controlled.
Complex digital color	Choose contrasting Stage 1-3 types, then keep Drive and Resonance moderate until the chain is balanced.

Avoiding harshness

- Check Exciter Hard, Click and Tone before assuming the Filter is the only source of brightness.
- Reduce Body Glass, Metal, Shimmer and Air if resonant upper energy is already excessive.
- Lower Resonance or Drive when the filter itself produces narrow, aggressive peaks.
- Reduce Env Amount when the static tone is good but the attack becomes too sharp.
- Use the graph as a guide, but judge the result while playing across the keyboard.

10. Motion tab



Motion tab - three LFOs and three slow organic random modulation sources

Purpose of the Motion tab

The Motion tab creates cyclic and non-cyclic movement. LFO 1 and LFO 2 are primary Matrix modulation sources, LFO 3 also represents internal Vaelyra movement, and RND 1-3 create slow organic variation.

LFO 1 and LFO 2

Control	Description
Shape	Selects the available LFO waveform from the dropdown.
Rate	Controls modulation speed.
Depth	Controls the effective strength of the LFO source.
Phase	Offsets the cycle position.
Smooth	Softens sharp transitions and reduces abrupt edges.
Bend	Changes the curve balance and movement shape.
Bias	Offsets the movement toward one side of the range.

The display reflects the effective LFO shape, including curve-shaping changes. The AMP readout shows the effective source amplitude. A Matrix route remains weak when LFO Depth is low, even if Matrix Amount is high.

LFO 3 / Internal Motion

LFO 3 provides the same essential movement controls in a compact layout and also represents Vaelyra engine movement. It can be used internally and as a Matrix source.

Random Generators

RND 1, RND 2 and RND 3 are intended for non-repeating organic movement. They are not additional sine-wave LFOs. Each source produces changing values that can be smoothed and biased before Matrix routing.

Control	Description
Rate	Controls how quickly new random movement is generated.
Depth	Controls the effective strength of the random source.
Smooth	Blends abrupt changes into slower, more fluid transitions.
Bias	Offsets the random movement toward a preferred region.

Important source-strength rule

Stage	Effect on final modulation
Motion source Depth	Sets how much movement leaves the LFO or random generator.
Matrix Amount	Scales and directs that source at the selected target.
Target base value	Defines the starting point around which modulation is applied.

Depth is intentionally part of the route strength

If LFO Depth or RND Depth is near zero, increasing Matrix Amount alone will not create strong movement. Raise the source Depth, the Matrix Amount, or both according to the desired behavior.

Organic modulation examples

Goal	Suggested route
Subtle body instability	RND 1 -> Body: Warp, low Depth and high Smooth.
Changing string damping	RND 2 -> String: Damping, small Matrix Amount.
Slow space movement	LFO 3 -> Main: Space, very low Rate.
Living sympathetic resonance	LFO 1 -> String: Sympathy, low Depth.
Unpredictable stiffness	RND 3 -> String: Stiffness, very small amount.

11. FX tab



FX tab - modulation, width, delay, reverb and resonant brightness enhancement

Purpose of the FX tab

The FX tab provides the final movement, width, echo, space and resonant-brightness treatment. Each module has its own on/off switch so the effect can be compared directly without changing its control settings.

Module	Controls	Best use
Chorus	Amount, Rate, Depth, Mix	Classic movement, soft detune and animated width.
Ensemble	Amount, Rate, Depth, Spread, Mix	Richer multi-voice width and lush movement.
Dimension	Amount, Rate, Depth, Spread, Tone, Mix	Polished micro-delay width with controlled color.
Delay	Type, Time, Feedback, Mix	Echo, rhythmic space, depth and feedback trails.
Reverb	Type, Amount, Size, Damp, Mix	Body space, room size, tail and tonal damping.
Glass & Glow	Glass, Color, Motion, S Mix, Glow, Warmth, Bloom, G Mix	Bright resonant detail, warmth, motion and bloom.

Understanding Amount and Mix

Where both controls are present, Amount changes the internal intensity or character of the effect, while Mix controls how much processed signal is blended with the dry sound. A high Amount with a low Mix can create a strong but subtle layer; a high Mix makes the effect more obvious.

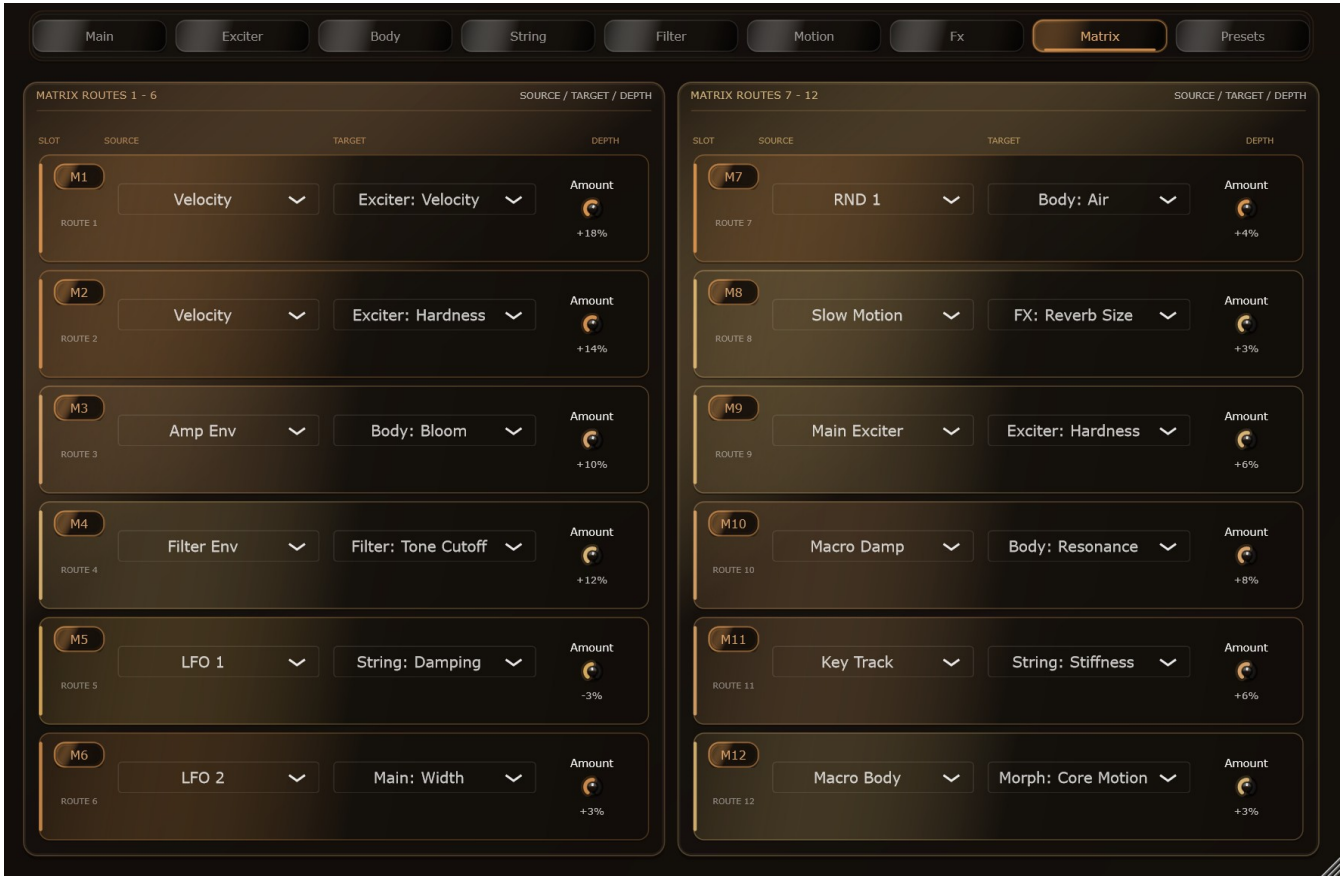
Glass & Glow

Control	Description
Glass	Strength of the bright resonant upper layer.
Color	Spectral color of the Glass layer.
Motion	Movement inside the upper resonant layer.
S Mix	Mix level of the upper Glass section.
Glow	Strength of the warmer glow layer.
Warmth	Warmer tonal emphasis inside Glow.
Bloom	Expansion and swelling character of Glow.
G Mix	Mix level of the Glow section.

Physical tail before external space

For a clear playable pluck, keep Delay and Reverb controlled. For a cinematic texture, use Body Decay for the physical resonant tail first, then add Reverb for external space.

12. Matrix tab



Matrix tab - 12 source / target / bipolar amount modulation routes

Purpose of the Matrix tab

The Matrix connects modulation sources to continuous sound targets. Twelve routes are available, arranged as M1-M6 and M7-M12. Each route contains a Source, a Target and an Amount control.

Route element	Function
Slot	Identifies the route from M1 to M12.
Source	Selects the LFO, random generator, envelope, velocity, macro or other source.
Target	Selects the continuous parameter that will be moved.
Amount	Sets modulation strength and direction. Negative values invert movement.

How to create a route

- 19.Choose a route slot.
- 20.Select a source such as LFO 1, RND 2, Amp Env, Filter Env, Velocity or a macro source.
- 21.Select a target with its section prefix, such as String: Damping or Body: Air.
- 22.Set Amount slowly while playing a note.
- 23.Return to Motion or the source control and adjust Rate, Depth, Smooth, Bend or Bias when the movement needs a different character.

Routes shown in the current Matrix screenshot

Slot	Source	Target	Amount
M1	Velocity	Exciter: Velocity	+18%
M2	Velocity	Exciter: Hardness	+14%
M3	Amp Env	Body: Bloom	+10%
M4	Filter Env	Filter: Tone Cutoff	+12%
M5	LFO 1	String: Damping	-3%
M6	LFO 2	Main: Width	+3%
M7	RND 1	Body: Air	+4%
M8	Slow Motion	FX: Reverb Size	+3%
M9	Main Exciter	Exciter: Hardness	+6%
M10	Macro Damp	Body: Resonance	+8%
M11	Key Track	String: Stiffness	+6%
M12	Macro Body	Morph: Core Motion	+3%

Matrix design principles

- Use small amounts first. Five to twenty percent is often enough for organic movement.
- Source Depth is part of final strength. A low-depth LFO produces a low-strength route by design.
- Several routes can move the same target; their combined movement can become much stronger than one route.
- Route prefixes make targets easier to find: Main, Exciter, Body, String, Filter, Motion, FX and other internal target groups.
- Continuous controls are suitable for smooth modulation. Selector and on/off controls are normally kept outside continuous routing.
- A source can modulate a modulation-related parameter, allowing compound movement.

Practical Matrix examples

Goal	Example route	Starting amount
Natural string life	RND 2 -> String: Damping	Small positive
Body deformation	RND 1 -> Body: Warp	Very small positive
Expressive attack	Velocity -> Exciter: Hardness	Small to moderate
Evolving coupling	LFO 2 -> String: Body Send	Small positive
Breathing ambience	LFO 3 -> Main: Space	Small positive
Inverse brightness motion	LFO 1 -> Filter: Brightness	Small negative
Envelope-driven bloom	Amp Env -> Body: Bloom	Small positive

When modulation is not audible

- 24. Check that the selected source is producing movement.
- 25. Raise source Depth on Motion when the source is an LFO or random generator.
- 26. Raise Matrix Amount gradually.
- 27. Check whether the target is already at an extreme value.
- 28. Check whether another route is moving the same target in the opposite direction.
- 29. Confirm that a global test, bypass or modulation-off switch is not disabling the modulation path.

Subtle routes often sound more expensive
Large values are useful for deliberate special effects, but small interacting routes usually produce more natural, playable and professionally controlled movement.

13. Presets tab



Presets tab - browser, search, current preset summary, engine snapshot and preset actions

Purpose of the Presets tab

The Presets tab is the central browser and management page. It combines source and category filtering, text search, a preset list, a current-preset overview, an engine snapshot and the main preset actions.

Preset browser

Control	Function
Source	Filters the browser by Factory, User, Favourites or the available source views.
Category	Limits the list to a selected sound category.
Search	Finds presets by name or category text.
Preset list	Shows the matching sounds and categories.
Visible count	The current-build screenshot reports 300 visible presets.

Current preset and engine snapshot

The Current preset panel summarizes the loaded sound, including source, category, body type, macro values, motion values, resonance values, voice information, gain and generation seed. The current screenshot shows Rosewood Finger Pluck in the Wood Instruments category with Body Type: Wood.

The Vaelyra engine snapshot provides quick bars and text for Core Mix, Cutoff, Reverb, Delay, Glass, Strings, Resonators, Filters and Space. It is a fast technical overview, not a replacement for the dedicated edit pages.

Preset actions

Action	Description
Inspire	Creates a new musically structured, engine-aware starting point.
Evolve	Creates a related variation from the current sound.
Factory Idea	Creates an unsaved category-based candidate. Save it before loading another sound.
Load Selected	Loads the selected item from the browser.
Favourite	Marks or unmarks the selected/current preset as a favourite.
Save User Preset	Saves the current instrument state as a user preset.
Load From File	Loads an external preset file.

Recommended preset workflow

30. Choose a Source and Category.
31. Load a sound or press Inspire.
32. Use Main to establish the broad instrument character.
33. Use Exciter, Body, String and Filter for the detailed response.
34. Use Motion, Matrix and FX only as far as the sound needs.
35. Return to Presets and save the finished result as a User Preset.

14. Practical sound-design workflows

Workflow 1 - warm wooden finger pluck

- 36. Choose a Wood Instruments preset or a wood-oriented Stryn Core body.
- 37. Use Finger or another soft Exciter with moderate Contact, low Hard and controlled Click.
- 38. On Body, raise Wood and keep Glass and Metal low.
- 39. Use moderate Body Reson and a short-to-medium Decay.
- 40. On String, use moderate Damping, low Dual and moderate Harmonic.
- 41. Set a fast Amp Attack, short Decay, low Sustain and short Release.
- 42. Use a gentle low-pass Filter response with restrained Resonance.
- 43. Add a small Chorus or Dimension amount, with restrained Reverb.

Workflow 2 - icy glass cinematic pluck

- 44. Select Glass as the Stryn Core body and choose a bright Exciter.
- 45. Raise Modal Q, Glass blend, Shimmer and Air while controlling Damp.
- 46. Increase String Harmonic and Overtone, but keep Sympathy moderate.
- 47. Use a fast Amp envelope and a brighter Filter envelope.
- 48. Add Glass FX, a small S Mix and controlled Reverb.
- 49. Route a slow LFO to Body: Spread, Filter brightness or Main: Space.

Workflow 3 - bowed alien string

- 50. Increase Friction and Bow on Exciter, then shape Press and Grain carefully.
- 51. Increase Bow and Sympathy on String Resonance.
- 52. Use higher Amp Sustain and a longer Release.
- 53. Blend Dark, Metal or Cavity into Body and add a small Warp value.
- 54. Use a filter architecture with moderate Drive and a slow brightness envelope.
- 55. Use RND sources with high Smooth and low Depth for non-repeating motion.
- 56. Add Ensemble or Dimension for width, then use Reverb for external space.

More practical workflows

Workflow 4 - dark resonant bass

57. Use a heavier Exciter with moderate Mass and Thump.
58. Choose a Dark Body or blend Dark and Cavity.
59. Use lower Body Shimmer and Air, moderate Reson and controlled Decay.
60. Increase String Damping and reduce Overtone if the bass becomes too bright.
61. Use a low-pass Filter with moderate Key Track and restrained Resonance.
62. Keep Width and modulation effects restrained for focused low end.
63. Use a small Velocity route to Exciter Hardness, Filter brightness or Body Knock for expression.

Workflow 5 - metallic hybrid lead

64. Choose a hard or metallic Exciter with controlled Click and moderate Mass.
65. Use a Metal or Hybrid body with moderate Drive and short Decay.
66. Raise String Stiff and Harmonic, then balance Overtone.
67. Use the three Filter stages to add contrasting digital color without excessive Resonance.
68. Route Velocity to Exciter Hardness and Key Track to String Stiffness.
69. Use a small Delay and Dimension layer, keeping Reverb short.

Workflow 6 - organic evolving resonance

70. Start from a playable pluck with moderate body and string decay.
71. Use RND 1-3 at slow rates, low Depth and high Smooth.
72. Route separate random sources to Body Air, Body Warp and String Damping.
73. Use one slow LFO for Main Width or Space.
74. Keep each Matrix Amount small so the movements combine naturally.
75. Add subtle Glass & Glow motion rather than a large wet mix.
76. Save the patch before pressing Evolve so the original can be recovered.

15. CPU optimization and troubleshooting

The sound is too bright or brittle

- Reduce Exciter Hard, Click and Tone.
- Reduce Body Glass, Metal, Shimmer and Air.
- Increase Body Damp or String Damping.
- Reduce String Harmonic and Overtone.
- Lower Filter Resonance, Drive, Env Amount or Brightness.
- Lower Glass FX, S Mix or bright Reverb content.

The sound is too dull or disappears too quickly

- Reduce String Damping and Body Damp.
- Increase Body Reson or Decay.
- Increase String Harmonic, Sympathy or Overtone.
- Raise Filter Cutoff, Env Amount or Brightness.
- Increase Body Send if too little string energy reaches the body.

The attack is too sharp

- Reduce Hard, Click and Knock.
- Increase Blur or Exciter Damp.
- Use a slightly slower Amp Attack.
- Reduce Exciter Energy or Velocity sensitivity.
- Reduce Filter Env Amount when the envelope adds too much transient brightness.

The sound is too boomy or unfocused

- Reduce Thump, Cavity, Body Reson and Body Decay.
- Reduce Reverb Amount/Mix and Delay Feedback.
- Reduce Width, Ensemble Spread and Dimension Spread.
- Use less Dual and Sympathy in the String section.
- Lower low-frequency filter resonance or excessive Drive.

Troubleshooting modulation and CPU load

Matrix movement is too weak

- Raise source Depth on Motion.
- Raise route Amount on Matrix.
- Check that the target is not already at its minimum or maximum.
- Use less Smooth when random movement has become almost static.
- Check for another route moving the same target in the opposite direction.
- Confirm that no global modulation-off, bypass or temporary test switch is active.

The plugin is too CPU-heavy

- Switch from Full to Optimal, then to CPU Saver or Ultra Saver if needed.
- Shorten Amp Release so fewer voices overlap.
- Reduce long Body Decay when many resonant tails accumulate.
- Disable unused Chorus, Ensemble, Dimension, Delay, Reverb or Glass & Glow modules.
- Simplify unnecessary Matrix movement and avoid running every effect only because it is available.
- Freeze or bounce finished layers.
- Increase the audio buffer size when the host and performance situation allow it.

Clicks, overload or unstable playback

- Lower Output and check the host channel meter for overload.
- Test the same preset in Optimal or CPU Saver.
- Reduce overlapping sustained notes and long releases.
- Disable effects one at a time to identify the heaviest combination.
- Check whether the project buffer is set unusually low for the current system.
- Save the preset and restart the host if a temporary system or audio-driver issue is suspected.

CPU load depends on the complete context

The same preset can behave differently depending on sample rate, buffer size, polyphony, host, operating system, other plugins and the age of the computer. Use the Performance modes as the first-line solution before removing the sound-design character of the patch.

16. Appendix - signal flow, modulation and target areas

Practical signal-flow model

Stage	Role
Exciter	Creates initial energy: impact, contact, friction, bow, tone and coupling.
String	Turns energy into a vibrating, damped, stiff, harmonic or sympathetic response.
Body	Transforms vibration through material, modal resonance and surface character.
Amp / Filter	Shapes level, spectrum, velocity response and brightness movement.
Motion / Matrix	Creates cyclic, random, envelope, macro and performance-driven movement.
FX / Output	Adds width, echo, space, glass and glow, then sets final level.

This is a practical sound-design model, not a claim that every DSP process is one simple serial chain. Coupling controls, macros and Matrix routes create interaction between the main systems.

Modulation sources visible in the current interface

Source group	Examples
Cyclic / random	LFO 1-3 and RND 1-3
Envelopes	Amp Env, Filter Env and other envelope or internal sources shown in route menus
Performance	Velocity and Key Track
Macros / internal	Main Exciter, Macro Damp, Macro Body, Slow Motion and other engine-aware sources

Target areas visible in practice

Target area	Examples
Main	Width, Space and broad performance macros
Exciter	Velocity, Hardness, contact, impact, friction, bow, tone and send
Body	Resonance, Spread, materials, Bloom, Shimmer, Air and Warp
String	Damping, Stiffness, Sympathy, Body Send, Bow and Overtone
Filter / Motion	Cutoff, brightness, envelopes, LFO and RND controls
FX / internal groups	Continuous FX parameters and named internal targets such as Morph: Core Motion

Final note

Start with Main and Presets, then open one deep page at a time. The most convincing sounds usually come from a clear Exciter-String-Body relationship, purposeful filtering, restrained Motion, small Matrix amounts and effects that support the instrument instead of hiding it.

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