PHANTOMEXPOSURE · USER GUIDE

COMB·GRAIN

Version 0.27.2 · Dual-engine delay, comb resonator and granular processor



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1 What CombGrain is

CombGrain is two echo engines side by side. Each one can be a **delay**, a tuned **comb** resonator or a **granular** cloud. **Phasefield** links the engines so they push, pull, orbit and fracture each other, five routings decide how the audio passes between them, and a reverb (**Space**) and a master section finish the sound.

Every control shows its value under it, and hovering over a control explains it in the help line along the bottom of the window. Modulation is drag and drop: pull LFO 1, LFO 2, the envelope follower or a macro onto any knob.

SIGNAL FLOW

1. **Input.** The dry signal is kept for WET / DRY.
2. **Engines A and B**, wired by the routing (Coupled, Decoupled, Series, Ping-Pong or Send). Phasefield acts inside the engines, each one driven by its partner's delay time and energy. With oversampling on, only the engines run oversampled.
3. **ECHO DUCK** pulls the echoes down while you play. It listens to the dry input.
4. **WET / DRY** balances dry signal and echoes with an equal-power law, so 50% keeps the level even.
5. **SPACE** reverb on the mix. With `ECHOES ONLY` it reverberates just the echoes.
6. **OUTPUT** gain, then the **LIMIT** safety limiter at −0.9 dBFS.

After about four seconds of silence with both delay lines empty, the engines and Space go to sleep to save CPU, and wake on the first sound.

THE WINDOW

The window is 1120 × 704 at 100% and resizes from 70% to 200% at a fixed shape: drag the corner. It opens at the largest size that fits your screen, up to 125%, and remembers the size you leave it at. CombGrain is a VST3 and CLAP plug-in on Windows, macOS and Linux, and an AU on macOS. There is no standalone app. It takes stereo or mono in and gives stereo out, and accepts MIDI for keytracking and freezing.

INSTALLING

SYSTEM	FORMATS	INSTALLING
Windows (64-bit)	VST3, CLAP	Unzip. Copy CombGrain.vst3 into C:\Program Files\Common Files\VST3 and CombGrain.clap into C:\Program Files\Common Files\CLAP.
macOS 11 or later	VST3, AU, CLAP	One universal installer (.pkg) for Apple silicon and Intel, signed and notarised. It installs into /Library/Audio/Plug-Ins: VST3, Components (the AU) and CLAP.
Linux (64-bit x86)	VST3, CLAP	Unzip, open a terminal in the folder and run **bash install.sh**. It copies the plug-ins to ~/.vst3 and ~/.clap (no sudo), or copy them there by hand. Needs glibc 2.30 or newer (Ubuntu 20.04+, Debian 11+, Fedora 32+…) and X11 or Xwayland.

Then restart your host and rescan plug-ins. Replace an older CombGrain rather than keeping both copies.

2 Quick start

NEW INSTANCES ARE DRY

A new CombGrain, and the Init preset, start with WET / DRY at 0%, so you hear only the dry signal. Load a preset, or turn WET / DRY up, to hear the engines.

1. **Load a preset.** Click the preset name to open the browser, or step with ◀ ▶. Start in TEXTURE, MOTION or RHYTHMIC.
2. **Pick each engine's mode.** DELAY, COMB or GRAIN at the top of each engine panel.
3. **Set the hero control.** TIME in Delay, PITCH in Comb and Grain. Then FEEDBACK and MIX.
4. **Link the engines.** Choose a Phasefield mode and raise AMOUNT. Try the routing tiles under it.
5. **Add space and balance.** A Space mode and some MIX, then WET / DRY and OUTPUT in the master section.

Tempo echoes

Engine A in DELAY with SYNC on and a 1/4D note length. Engine B off by setting its MIX to 0, or as a Comb ringing quietly. TAPE loop character and a little ECHO DUCK.

Playable resonator

Engine A in COMB at A4 440 Hz with KEYTRACK at 100%, then play MIDI notes into CombGrain. DAMPING shortens the ring; SMEAR in Phasefield turns it to wash.

Grain cloud

Engine B in GRAIN, SIZE 80–200 ms, DENSITY around 2x, POSITION 1 s. Open the GRAIN tab for SCALE, SPREAD and REVERSE. Add a Hall in Space.

GOOD HABITS

Keep LIMIT on, especially with PUSH or Ping-Pong. Hover anything you don't recognise: the help line explains it. RND makes a new sound; Shift-click varies the one you have, and Ctrl+Z steps back.

3 A tour of the window



A busy patch: Engine A is a comb at A4, Engine B a grain cloud, Phasefield on SHATTER with GRID, four modulation routes, a Hall in Space and the limiter working.

1 **Preset display.** The preset name, an **EDITED** tag once you change something (**RANDOM** for a randomizer sound) and its position, e.g. 1 / 69. Click to open the browser; right-click for the PRESET menu. ◀ ▶ step through presets.

2 **RND and its "...".** RND makes a new sound; Shift-click varies the current one. The "..." opens the randomizer options.

3 **PRESET.** Save, rename, delete, import and export presets.

4 **A / B.** Two versions of your settings to compare.

5 **Undo / redo.** Right-click either arrow for the history.

6 **OS.** Oversampling: OS OFF, OS 2X or OS 4X.

7 **Engine A** (amber).

8 **Phasefield**: mode, display, GRID, AMOUNT and the five routings.

9 **Engine B** (blue).

10 **Modulation**: LFO 1, LFO 2, the ENV follower and the route list, with MACROS on the second tab.

11 **Space**: the reverb.

12 **Master**: WET / DRY, meters, ECHO DUCK, OUTPUT and LIMIT.

13 **Help line.** Shows what the control under the mouse does.

4 Engines A and B

The two engines are identical. Each has three modes, and each mode shows only the controls it uses.



DELAY: echoes from 72 ms to 4.6 s, with optional tempo sync.



COMB: a tuned resonator, 110 Hz to 7 kHz, and down to 27.5 Hz when played from MIDI.



GRAIN: a granular cloud that re-pitches and scatters the recent audio.

THE HERO CONTROL

The big knob is one control that means something different in each mode:

MODE	BIG KNOB	RANGE AND READOUT
Delay	TIME	4.64 s down to 72.5 ms, default 1.16 s. Reads "580 ms", or "SYNC 1/4D" when synced.
Comb	PITCH	110 Hz to 7.04 kHz, default A4 440 Hz. Reads e.g. "A4 440.0 Hz".
Grain	PITCH	−24 to +48 semitones, default 0 st. Reads "+7 st", with cents when between semitones.

ENGINE CONTROLS

CONTROL	MODES	WHAT IT DOES
FEEDBACK	all	How much of each echo is fed back, −100 to +100%. Negative values invert it each pass.
MIX	all	This engine's level in the echoes.
KEYTRACK	all	How much incoming MIDI notes retune the engine; 100% plays in tune (A4 is no change). In Delay it scales the delay time.
L/R OFFSET	Delay	Gives the right side its own delay time: +50% is 1.5× the left (a dotted feel), −50% half. At 0 both sides share one time.
DAMPING	Comb	Darkens the comb's ring on every pass, like a plucked string dying away.
SIZE	Grain	Length of each grain, 5–500 ms.
DENSITY	Grain	How many grains overlap, 0.5–8x.
POSITION	Grain	How far back in time grains are picked from, 0–4 s.
STEREO	Grain	How widely grains are spread across the stereo field.
SCAN	Grain	Where grains are taken from. At **Now** they follow the newest audio; otherwise up to 2 s further back. While frozen it scrubs through the held moment.

LOW CUT	all	Removes lows from each repeat, 20 Hz (off) to 2 kHz.
HIGH CUT	all	Removes highs from each repeat, so echoes darken as they fade. At 20 kHz it is off.
RES	all	Resonance at the High Cut frequency. Near the top the loop can sing on its own. It does nothing while High Cut is at 20 kHz, and is drawn faded then.

LOOP CHARACTER

The loop row sets what happens to each repeat as it goes round. Switching crossfades smoothly.

CLEAN	Repeats stay untouched until they near full scale, then a soft ceiling holds them.
TAPE	Warm, compressive saturation and a gentle loss of highs on every pass. A loop pushed past 100% settles into a squashed sustain.
GRIT	Hard, lopsided clipping in a thinner, darker loop, for broken and aggressive repeats.
DRIVE	How early Tape and Grit start to saturate. Not used by Clean.
PUSH	Takes the loop past 100%, up to 125% of Feedback, so repeats grow instead of fading. Clean stops near +3 dBFS; Tape and Grit settle lower.

SYNC AND TAP (DELAY)

`SYNC` locks the delay time to the host tempo (120 BPM if the host gives none). The note-length box offers 4/1 to 1/32 in three columns, straight, dotted (1.5×) and triplet (2/3). `TAP` two or more times to set the time from your taps; it turns Sync off and averages up to the last five taps.

FREEZE

`FREEZE` holds what is in the buffer and loops it indefinitely; the input is muted while frozen. The "..." beside it sets how it is held:

- **FREEZE WITH**: **BUTTON** (only the button), **PEDAL** (the sustain pedal also freezes while it is down) or **NOTES** (holding any MIDI note freezes until you let go of the last one). The button lights half while MIDI is holding it.
- **FADE**: how gently the freeze catches and lets go, Off to 2 s.



The freeze options pop-up.

THE GRAIN TAB

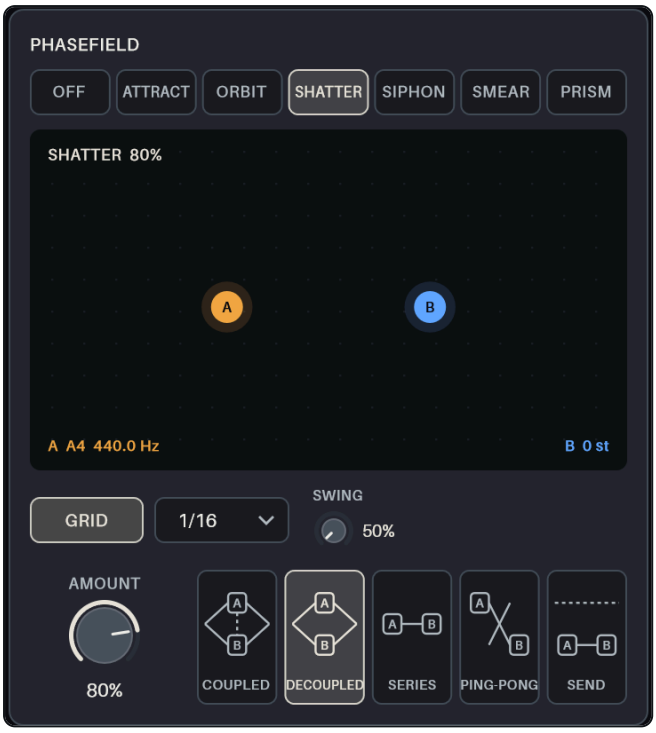
In Grain mode the loop row has a second tab, **GRAIN**. A dot marks whichever tab is hidden when something on it is set.

- **SCALE**: Off, Chromatic, Major, Minor, Pentatonic, Fifths or Octaves; grain pitches snap to it.
- **SPREAD**: random pitch spread, up to ±12 st.
- **REVERSE**: the chance that a grain plays backwards.
- **SHAPE**: Smooth swells in and out for soft clouds; Perc strikes at once and decays, for plucked, rhythmic grains.



Engine B with the GRAIN tab open.

5 Phasefield and routing



Phasefield on SHATTER at 80%, with GRID on at 1/16 and the Decoupled routing.

Phasefield links the two engines. Each mode uses the partner engine's delay time and level to move the other one. **AMOUNT** sets the depth: the lower half stays subtle, and the top quarter is where each mode gets extreme.

The display draws each engine as a body sized by its output and pulsing at its delay rate, with the mode and amount at the top and each engine's setting at the bottom.

MODE	WHAT IT DOES
OFF	The two engines run independently.
ATTRACT	Pitch gravity. The engines pull each other toward unison, strongest when already close.
ORBIT	Rotary motion. Each engine circles its own delay time; the other engine sets the radius.
SHATTER	Fracture. Sparse jumps to musical intervals (up to an octave either way), with dropouts and polarity flips.
SIPHON	Dynamics. Each engine ducks while the other is loud, so they trade the tail. No pitch change.
SMEAR	Dispersion. Allpass diffusion in the loop turns resonance into wash. With a comb it can wash for seconds.
PRISM	Spectrum. Four frequency bands each get their own delay and stereo position, and rotate around you.

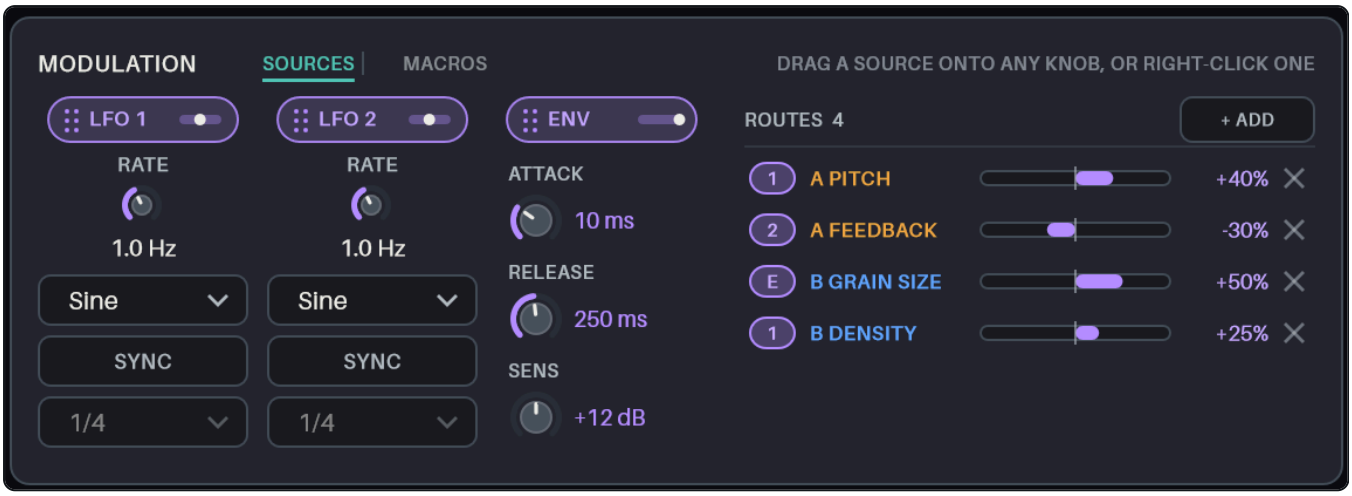
ROUTING

COUPLED	Both engines hear the input, and A also feeds a little into B.
DECOUPLED	The engines run side by side on the same input. The default.
SERIES	A feeds B, so B processes A's echoes.
PING-PONG	Left into A, right into B, each feeding the other side. Keep feedback moderate: the cross-feed adds up.
SEND	A feeds B as in Series, and A's own echoes are also heard at half level, like an effects send and return.

GRID

GRID puts Shatter's jumps and the grain clouds' triggers on the host's beat grid, so fracture turns into rhythm. Choose the step (1/8, 1/16 or 1/32) and **SWING**: 50% is straight, 66% a triplet shuffle, 75% the heaviest swing. It follows the host transport when it plays and free-runs otherwise.

6 Modulation and macros



SOURCES tab: LFO 1, LFO 2, the envelope follower and four routes.

SOURCES

LFO 1 / LFO 2	RATE 0.05–20 Hz, or `SYNC` with a note length (4/1 to 1/32, straight, dotted or triplet). Shapes: Sine, Triangle, Saw, Square, Random. Synced LFOs follow the host position while the transport plays and free-run when it is stopped.
ENV	Follows the input level. ATTACK 0.5–200 ms, RELEASE 10–2000 ms, SENS −12 to +36 dB: higher reaches full ENV with quieter playing. At +12 dB, playing around −12 dBFS opens it fully.
Macros 1–4	On the MACROS tab. Each macro moves every control you route it to. Presets name them; Init calls them Macro 1–4.

MAKING A ROUTE

- **Drag** a source chip (LFO 1, LFO 2, ENV or a macro) onto any knob. Knobs that can take it light with a violet ring.
- **Right-click a knob** and choose *Modulate with ...*.
- **+ ADD** in the route list, grouped by engine, Phasefield, Space and Master. Only controls that are active right now are listed.

A new route starts at 25% for an LFO (10% on TIME/PITCH) and 50% for ENV or a macro (20% on TIME/PITCH). Every engine control can be modulated except KEYTRACK, as can Phasefield AMOUNT, Space MIX, SIZE, TONE and SCATTER, and WET / DRY.

Each modulated knob carries a small **badge** (1, 2, E or M1–M4, with "-" when inverted). Drag the badge up or down for depth (Shift for fine), double-click it to remove the route, or right-click for *Depth 10/25/50/100%*, *Invert* and *Remove*. The route list shows the same routes as bars: drag a bar sideways for depth, or press × to remove it. A route that can't act right now says why, e.g. GRANULAR ONLY, DELAY ONLY, SYNC IS ON or SPACE IS OFF.

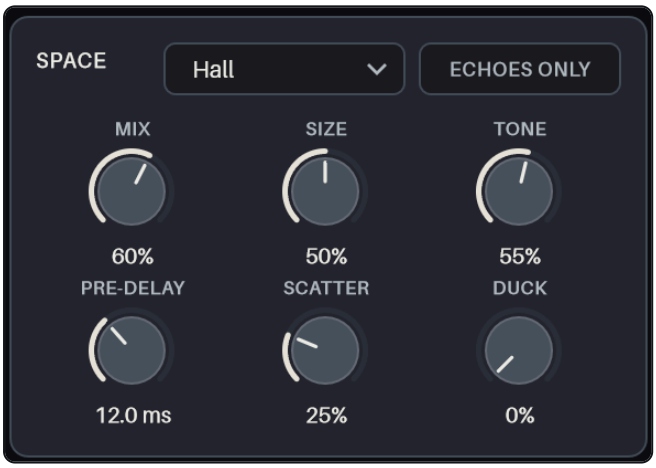
MACROS



The MACROS tab. Right-click a macro chip to rename it (12 characters), restore its default name or remove its routes.

Factory presets fill the macros in a consistent way: **M1** sets repeats, ring or cloud amount, **M2** darkens or scatters, **M3** warps or skews, and **M4** adds wash.

7 Space



Space set to Hall.

A reverb after the engines. With `ECHOES ONLY` on, only the echoes go into Space and the dry signal stays clean; off, Space processes everything.

MIX how much is added · **SIZE** tighter and shorter, or larger and longer · **TONE** darker to brighter · **PRE-DELAY** 0–250 ms before the reverb starts · **SCATTER** smears the tail from discrete toward cloudy · **DUCK** pushes the reverb down while you play and lets it bloom in the gaps.

MODE	CHARACTER
Room, Hall, Cathedral	Classic rooms from small to vast.
Spring	A dispersive spring tank with chirping bounces.
FDN Hall, FDN Cathedral	Denser, smoother tails from a feedback delay network.
Shimmer	A pitch shifter inside the tail, so it climbs. SCATTER picks the interval (+12, +7 or −12 st) and how deep it regenerates.
Bloom	Reverse grains that swell up into what you played, with no added latency.
Strata	Low, mid and high layers that decay independently.

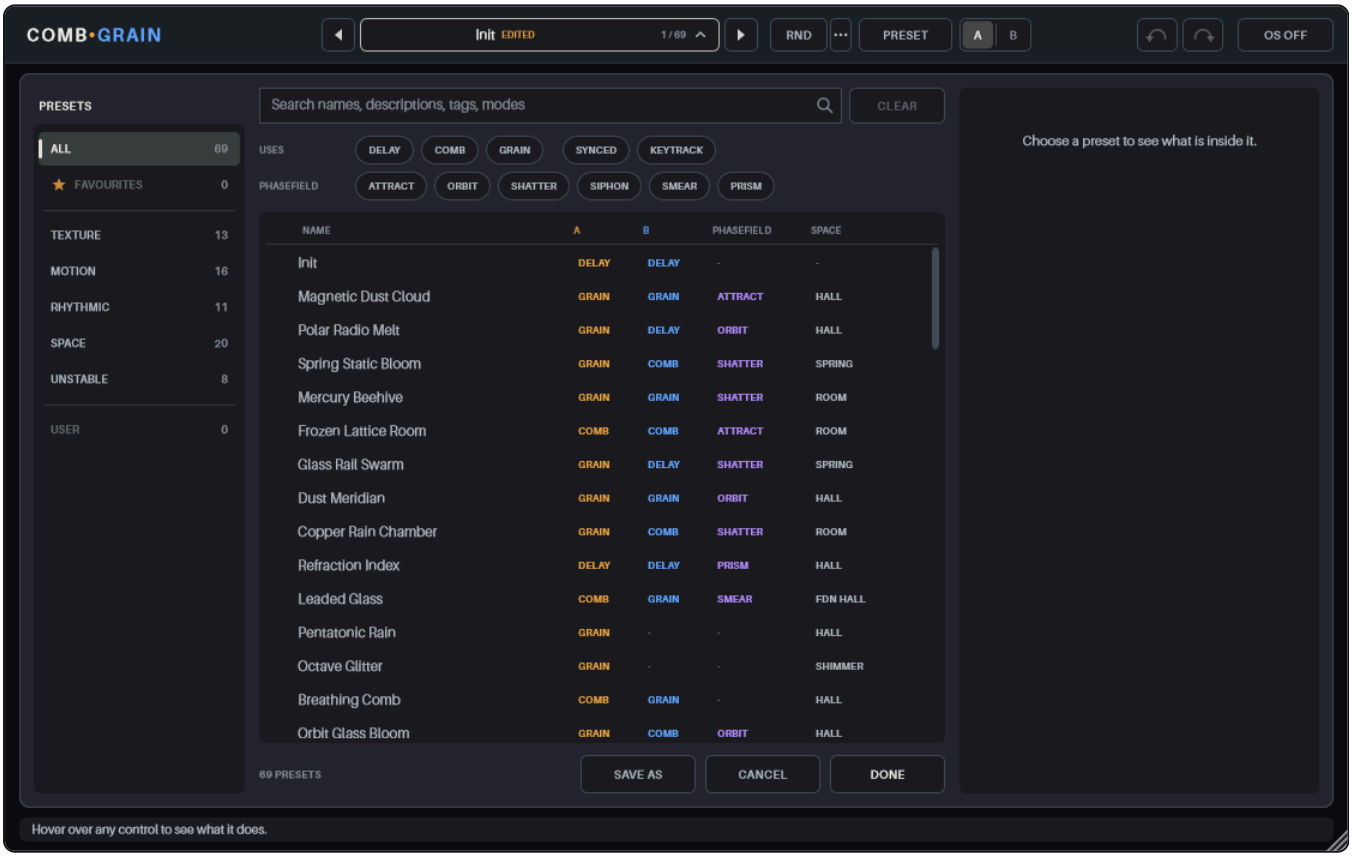
8 Master



The limiter showing gain reduction, and ECHO DUCK pulling the echoes down.

WET / DRY	Balance between dry signal and echoes. 50% keeps the overall level even. Default 0%.
IN / OUT	Level meters with peak hold.
ECHO DUCK	Pulls the echoes down while you play (up to 24 dB) and lets them back in the gaps. The "…" sets THRESHOLD (−60 to −12 dB) and RELEASE (30 ms to 3 s).
OUTPUT	−24 to +12 dB, after everything else.
LIMIT	Safety limiter at −0.9 dBFS. It turns red only while reducing gain. The readout under it shows NOT LIMITING or the gain reduction, plus how far Echo Duck is ducking.

9 Presets, randomizer, A/B and undo



The preset browser. Click a preset to hear it, double-click (or DONE) to keep it, CANCEL to go back to what was running.

THE BROWSER

- Categories on the left: ALL, ★ FAVOURITES, TEXTURE, MOTION, RHYTHMIC, SPACE, UNSTABLE and USER, each with a count.
- Search names, descriptions, tags and modes; every word must match. Filter chips narrow it further: **USES** DELAY, COMB, GRAIN, SYNCED, KEYTRACK (these combine) and **PHASEFIELD** modes (one at a time).

- The details pane shows the description, tags (click one to search for it), a ★ toggle and a wiring diagram of the preset.
- Keys: ↑/↓ from the search box move through the list, Return keeps, Escape clears the search and then cancels.
- While a filter is set, ◀ ▶ in the header walk the filtered list.

PRESET MENU

Browse presets · Load a random preset (from the current filter) · Save as new preset · Rename / Delete preset (user presets only) · Export current settings to file · Import preset from file · Show preset folder · Rescan preset folder. User presets are saved with the project and as files in **Documents\CombGrain\Presets**; saving under an existing name overwrites it.

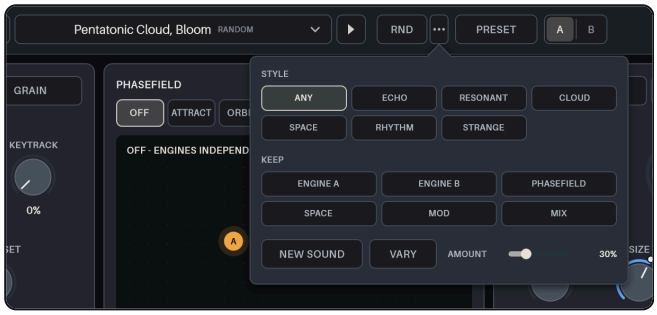
The factory presets also appear in your DAW's own preset list (VST3 and AU, not CLAP), and picking one there loads it. The last entry, (**Custom sound**), shows when you are on your own sound (a user preset, an import or a RND/VARY pass); picking it does nothing.

RANDOMIZER

RND makes a new sound; Shift-click varies the current one. The "…" sets:

- **STYLE**: ANY, ECHO, RESONANT, CLOUD, SPACE, RHYTHM or STRANGE.
- **KEEP**: any of ENGINE A, ENGINE B, PHASEFIELD (with routing), SPACE, MOD and MIX are left alone.
- **AMOUNT** for VARY, 5–100% (default 30%). Above about 60% an engine may change mode.

Freeze settings, keytrack, the limiter and oversampling are never changed, and loop gain is capped so random sounds can't run away. The pop-up also has its own NEW SOUND and VARY buttons. Every result is one undo step.



Randomizer options.

A / B AND UNDO

A / B switches between two versions of your settings; whatever you leave is kept in its slot. The slots aren't saved with the session. **Undo** keeps 200 steps of what you do in the window (host automation isn't recorded); quick moves of the same control merge into one step. Ctrl+Z undoes and Ctrl+Shift+Z or Ctrl+Y redoes, if your host passes the keys through. Right-click either arrow for the history list, with Start of history and Clear history at the bottom. A and B each keep their own history, and loading a project clears it.

OVERSAMPLING

OS offers Off, 2x and 4x. Higher settings reduce aliasing in the engines at the cost of CPU. A change applies the next time the host prepares audio (the button shows ⁎ until then) and adds a little latency.

10 MIDI, tempo and automation

- **Notes** retune any engine with KEYTRACK above 0, last note first, and the pitch holds after release. Comb mode can reach down to 27.5 Hz from MIDI.
- **Sustain pedal and held notes** can hold FREEZE (FREEZE WITH: PEDAL or NOTES).
- **Tempo**: synced delays, LFOs and the grid follow the host. A synced Delay ignores TIME modulation.
- **Automation**: every control is automatable except oversampling. Modulation runs on a fixed grid, so it sounds the same at any buffer size.
- CombGrain reports a 30-second tail, so hosts don't cut echoes short when rendering.

11 When something feels off

IF YOU HEAR THIS	TRY THIS FIRST
Nothing but the dry sound	WET / DRY is at 0% on a new instance and in Init. Turn it up or load a preset.
Echoes keep growing	Lower PUSH or FEEDBACK. In Ping-Pong keep each engine's feedback moderate. Load Init to stop everything at once.
A RES knob does nothing	Lower HIGH CUT: RES rings at the High Cut frequency, and High Cut at 20 kHz is off.
Comb is out of tune with MIDI	Set PITCH to A4 440 Hz and KEYTRACK to 100%.
A route isn't doing anything	Read the note on its row (GRANULAR ONLY, SYNC IS ON, PHASEFIELD IS OFF…).
Echoes crowd the part	Raise ECHO DUCK, or use SIPHON so the engines trade the tail.
Smear washes for ages	That is Smear with a comb, by design. Lower AMOUNT or the comb's FEEDBACK.
Oversampling change didn't apply	It applies when the host next prepares audio: stop and start playback, or toggle the plug-in.

12 Factory presets

69 presets: Init, then 13 Texture, 16 Motion, 11 Rhythmic, 20 Space and 8 Unstable.

PRESET	DESCRIPTION
Init	A clean slate: dry, no feedback, nothing moving.
TEXTURE	
Magnetic Dust Cloud	Two dusty grain clouds drifting through a soft hall.
Polar Radio Melt	Cold, drifting radio echoes melting into a hall.
Spring Static Bloom	Bright spring reverb full of crackling static grains.
Mercury Beehive	A buzzing swarm of tiny grains, with the odd bee breaking loose.
Frozen Lattice Room	Icy comb tones slowly sliding past each other.
Glass Rail Swarm	Tiny glassy grains over bouncing delays and a bright spring.
Dust Meridian	Wide, slow grains drifting across the stereo field.
Copper Rain Chamber	Quick metallic grain drops pattering in a damped chamber.
Refraction Index	Each frequency band gets its own echo and spins around you. Pitch stays put.
Leaded Glass	A comb tone smeared across the room, like light through old glass.
Pentatonic Rain	Whatever you play falls back as pentatonic droplets.
Octave Glitter	Bright, plucky grains an octave above and below the note.
Breathing Comb	A tuned comb whose tone opens and closes like slow breathing.
MOTION	
Orbit Glass Bloom	Glassy grains circling a tuned comb, slowly widening and darkening.
Send Return Nebula	A short delay feeding a wide, churning cloud of grains.
Ribbon Fault Echo	Wobbly stereo echoes with a little hall behind them.
Orbital Resin	Comb and grains orbiting each other in slow, sticky arcs.
Velvet Comb Chamber	Two soft comb voices swaying together. Smooth and warm.
Tidal Magnetics	Echoes that push and pull like a tide, set back in a hall.
Shard Hall Transit	Hall echoes broken into shards, spaced so they stay playable.
Tidal Exchange	Two delays taking turns: one ducks while the other rings.
Midnight Relay Matrix	Interlocking eighth and quarter ping-pongs folding into a dark hall.
Gravity Well Looper	A half-note loop that keeps sinking through huge, dark grains.
Freeze Scrubber	Press FREEZE and the grains slowly scrub back and forth through what you held.
Filter Sweep Dub	Dub echoes with a resonant filter sweeping slowly through the repeats.
Tide Pool Echoes	Long echoes that swell and brighten, then fall back, like waves coming in.
Orbit Tide	The two engines drift in and out of orbit over about twenty seconds.
Reach Back Grains	Play harder and the grains reach further back into what you just played.

Orbit Pressure	The harder you play, the wider the two engines swing around each other.
RHYTHMIC	
Broken Halo PingPong	Ping-pong echoes with a slightly broken halo of grains.
Cryo Tape Staircase	Comb pitches stepping down in time, like tape walking down a scale.
Ion Halo Corridor	A ringing comb halo around synced ping-pong bounces.
Phase Garden	Tempo-synced drops ringing a comb that follows your MIDI notes.
Tape Wander Echo	Warm tape echoes that darken on each pass and wander like a worn machine.
Dotted Dub Tape	Dotted-eighth tape echoes that darken as they fade and duck while you play.
Triplet Bounce	Triplet and quarter-note repeats bouncing from side to side.
Wide Slapback	A short, wide slap with a little tape grit. Great on vocals and guitar.
Swung Grain Steps	Plucked grain notes on a swung sixteenth grid, always in a pentatonic key.
Dig In Echoes	Echoes that open up and ring on when you dig in, and stay polite when you play soft.
Warped Tape Hits	Hard hits bend the tape echoes out of pitch, then they settle back.
SPACE	
Cathedral Teeth	A dark cathedral with a comb biting into the tail.
Ghost Constellation	Airy grains floating up through a cathedral.
Drift Cathedral	A nearly still grain pad in a huge cathedral, held down by a slow comb pulse.
Sootheburn Spring	A warm, dark spring wash with slow, breathing grains.
Lantern Roomline	A room that swells every half bar, with a soft comb throb behind it.
Blue Hall Canopy	A glassy hall bloom slowly circling over quiet delays.
Spring Wire Lantern	A taut ringing wire and pulsing grains in bright spring reverb.
Cathedral Airloom	A dark cathedral with airy, floating grains and a late, long bloom.
Orbit Chapel Relay	A chapel reverb with its echoes gently pulled into orbit.
Ascension Glass	Every repeat rises an octave. Hold a chord and a choir builds above it.
Undertow Bloom	What you just played swells back in reverse. Raise Size for longer swells.
Polar Strata	A warm low floor under a slowly moving, glassy canopy.
Frozen Hall Static	A cold hall with crackling static on top, like a far-off broadcast.
Magnet Spring Veil	A short, bright spring with grains tugging at the tail.
Event Horizon Organ	Two organ-like comb pipes that follow your MIDI notes, in a vast cathedral.
Singing Pipe	Two resonant pipes, one following your MIDI notes, singing into a cathedral.
Backwards Choir	Reversed, overlapping grains that swell into a soft backwards choir.
Minor Mist	A slow minor-key haze for pads and ambient guitar.
Ducked Ambience	Big ambient echoes that step aside while you play and bloom in the gaps.
Bloom On Impact	A thin grain haze that blooms into a thick cloud on every strong note.
UNSTABLE	

Shattered Shortwave	Short radio-like echoes that splinter apart, but stay tight enough to play through.
Broken Aurora Loop	A shimmering comb loop that keeps tearing open and healing.
Neon Birdcage	Chirping little grains ricocheting around a tiny, hard room.
Grit Spring Rattle	Crunchy sixteenth-note repeats rattling around a tight spring.
Runaway Tape Bloom	Echoes that grow instead of fading. Turn Push down or load Init to stop them.
Stutter Memory	Grains jump between right now and a second ago in eighth-note steps.
Grit Pulse	Crunchy sixteenth repeats that flip between clean and broken on the beat.
Bite Grit	Soft notes echo clean; hit harder and the repeats bite and break up.