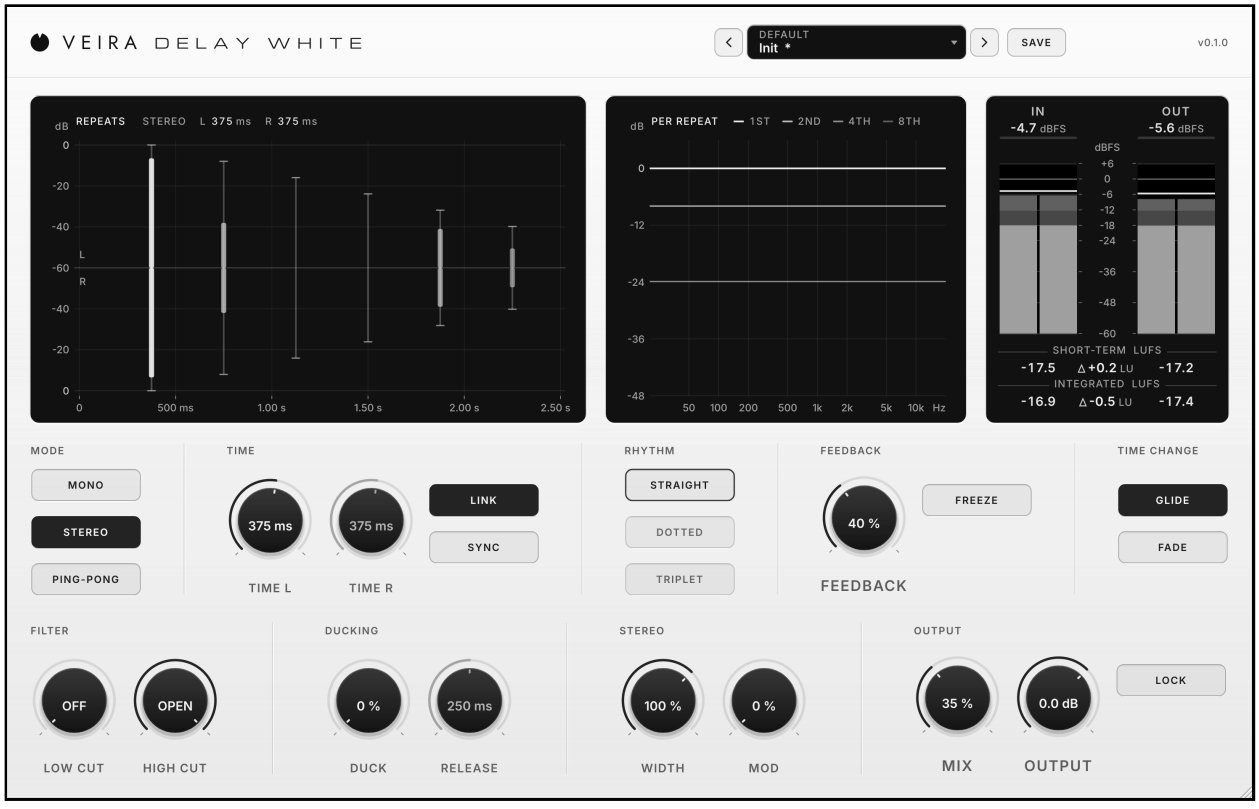
VEIRA

DELAY

VEIRA Delay White

User Manual

The clean one of the four VEIRA colour delays: a modern digital delay whose repeats are the sound itself, landing exactly on time. Mono, stereo or ping-pong, tempo sync with dotted and triplet values, feedback that sings safely, ducking and FREEZE.



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Welcome

Thank you for choosing **VEIRA Delay White**. It is a modern digital delay: it records what you play and plays it back a moment later, as many times as you like, and each repeat is the sound itself, untouched and exactly on time. You choose how the echoes sit in the stereo field (MONO, STEREO or PING-PONG), set the time in milliseconds or as a note value at the song's tempo, decide with FEEDBACK how many repeats you hear, and shape them with filters in the loop, ducking, width and a touch of movement. It is the clean one of the four VEIRA colour delays (White, Red, Gold and Blue), and it is painted like VEIRA Reverb White, Comp White, Limiter White and EQ White.

What makes it different

- **Repeats that are the sound itself.** At rest, every repeat lands on the exact sample (within half a sample: 10.4 µs at 48 kHz) and is the input itself, multiplied by FEEDBACK: no colour, no blur, no drift, from 1 ms to 4 s.
- **Two times, three modes.** TIME L and TIME R for separate left and right echoes, LINK to move them together, and MONO, STEREO or PING-PONG; or SYNC with NOTE L / NOTE R from 1/64 to a whole note, STRAIGHT, DOTTED or TRIPLET.
- **Feedback that sings safely.** At 100 % the echoes repeat for ever at the same level; up to 110 % the loop builds and sings, held under control by a level limiter that adds no distortion of its own.
- **Made for a mix.** LOW CUT and HIGH CUT in the loop, so each repeat is thinner and darker than the last; DUCK with its own RELEASE to keep the echoes out of the way while you sing or play; WIDTH; and LOCK to keep MIX at 100 % on an aux.
- **Moves without clicks.** GLIDE bends the echoes in pitch like tape when you change the time; FADE crossfades cleanly. FREEZE holds the echoes for as long as you like while you play over them.
- **Clean at the edges.** No latency. At MIX 0 % the output is the input, bit for bit, and when the echoes have died away the output ends in true digital silence.

How this manual is organised. *Getting started* covers installing and activating. *The panel at a glance* names every part of the window. *How a delay works* is a short primer. *Controls* and *Displays* explain every knob, button and graph with drawings. *Inserts and aux sends* covers routing, *Which colour delay to choose* compares the four, and *Presets*, *Recipes*, *Specifications* and *Troubleshooting* close the manual.

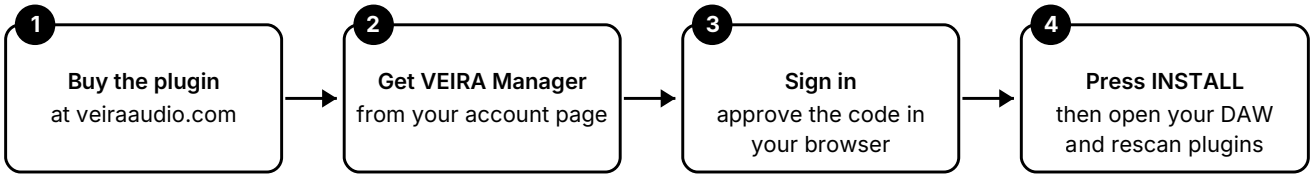
Getting started

What you need

macOS	macOS 11 Big Sur or later. Native on Apple silicon and Intel Macs (universal).
Windows	Windows 10 or 11, 64-bit.
Plugin formats	VST3 (macOS and Windows), Audio Units (macOS), and a standalone app. Pro Tools (AAX) versions arrive once they are signed for Pro Tools.
Hosts	Any DAW that loads VST3 or Audio Units: Logic Pro, Cubase, Nuendo, Ableton Live, Studio One, Reaper, FL Studio, Bitwig and others.
Account	A VEIRA account at veiraaudio.com, and the free **VEIRA Manager** app.
Internet	Needed to install and to refresh the licence. The plugin itself never goes online.

Install with VEIRA Manager

VEIRA plugins are not downloaded from the website one by one. You install them with **VEIRA Manager**, the free VEIRA app that installs, updates and activates everything you own. Its own manual covers it in full; the short version is:



One account works on up to three computers. Updates are free for life.

FIGURE 1 From purchase to first sound in four steps.

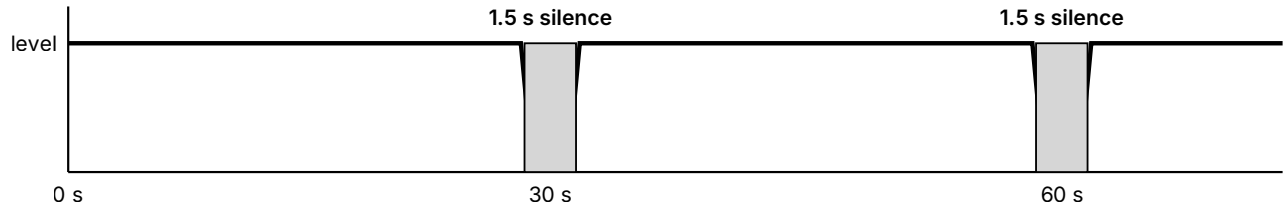
1. **Buy** VEIRA Delay White at **veiraaudio.com**. It's a one-time purchase: you own it for good, with free updates.
2. **Download VEIRA Manager** from your account page (or veiraaudio.com/manager) and install it.
3. **Sign in.** VEIRA Manager shows a short code and opens your browser; confirm the code there. Your password is never typed into the app.
4. Find VEIRA Delay White in the list and press INSTALL. When it says SHOW, it's installed. Open your DAW and let it rescan its plugins.

After installing, VEIRA Delay White appears in your DAW under the manufacturer **VEIRA** (in Logic Pro: Audio Units ▸ VEIRA ▸ VEIRA Delay White).

Activation and the licence

VEIRA Manager keeps a licence on your computer that the plugins check. It is refreshed every time VEIRA Manager opens and stays valid for 30 days offline, so you can work without internet as long as you open VEIRA Manager now and then.

Without a valid licence, VEIRA Delay White still loads and works, but **its sound fades out for 1.5 seconds every 30 seconds**, and a strip along the bottom of its window says why (for example, *NOT ACTIVATED ON THIS COMPUTER. SIGN IN WITH VEIRA MANAGER.*). Clicking the strip opens your account page.



Without a licence: short silences every 30 s, faded in and out so nothing clicks.

FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **Activating while your DAW is open** takes effect within about two minutes. You don't need to reload the plugin.
- **"Not activated on this computer"**: open VEIRA Manager and sign in.
- **"Expired"**: open VEIRA Manager while online; it renews the licence at once.
- **"Not included"**: the signed-in account doesn't own VEIRA Delay White. Check that you're signed in with the account you bought it with.

Formats and where the files go

VEIRA Manager puts every format in the standard place, so you never need to copy files by hand:

Format	macOS	Windows
VST3	`~/Library/Audio/Plug-Ins/VST3` (just for me, the default) or `/Library/Audio/Plug-Ins/VST3` (all users)	`C:\Program Files\Common Files\VST3` (all users, the default) or `%LOCALAPPDATA%\Programs\Common\VST3`
Audio Units	`~/Library/Audio/Plug-Ins/Components` or `/Library/Audio/Plug-Ins/Components`	(Audio Units are macOS only)
Standalone	`~/Applications/VEIRA` or `/Applications/VEIRA`	`C:\Program Files\VEIRA` or `%LOCALAPPDATA%\Programs\VEIRA`

You choose *just for me* or *all users* in VEIRA Manager's install settings.

The standalone app runs VEIRA Delay White on its own, with your audio interface's input and output, which is handy for trying presets without a DAW.

The panel at a glance

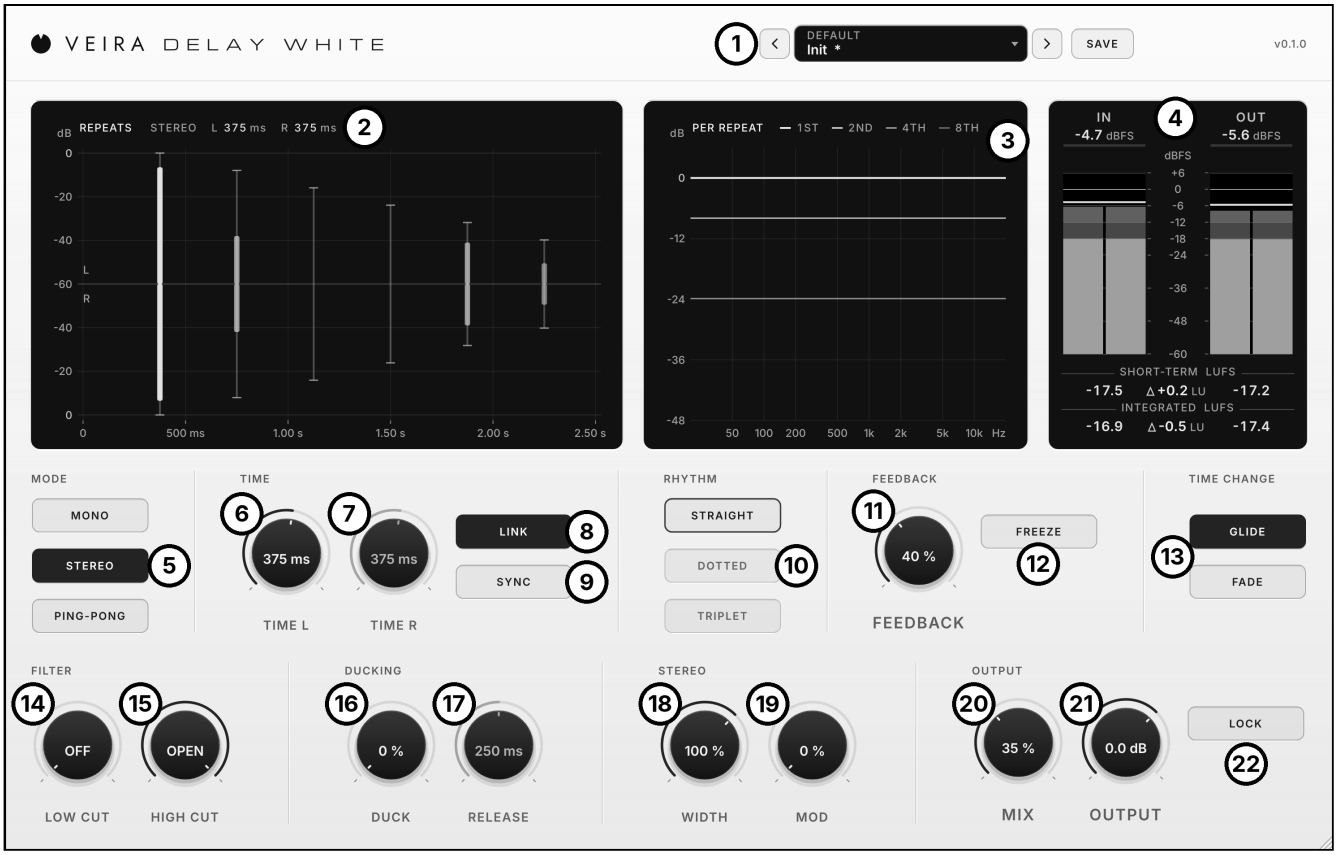


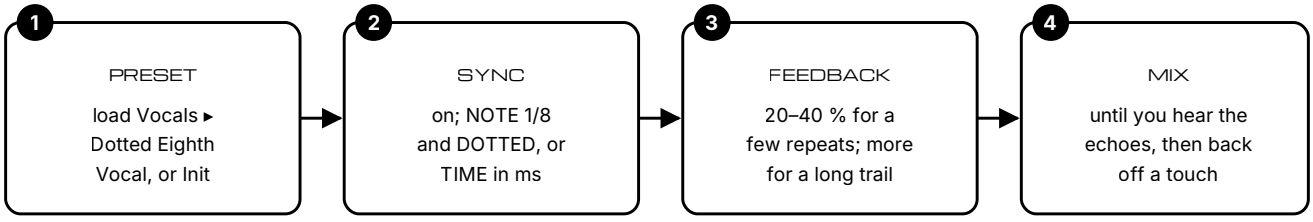
FIGURE 3 VEIRA Delay White, the pearl unit, at its default STEREO delay of 375 ms (MIX at 35 %) on a sung phrase and a plucked line: the REPEATS display lights each echo as it goes by.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	REPEATS	Every echo at its time and level, lit live as the echoes go by.
3	PER REPEAT	The 1st, 2nd, 4th and 8th echo across frequency.
4	Meter bridge	IN and OUT meters with short-term and integrated loudness.
5	MODE	MONO, STEREO or PING-PONG.
6	TIME L	The left delay (with LINK, both). NOTE L with SYNC on.
7	TIME R	The right delay. NOTE R with SYNC on.
8	LINK	The right side follows the left.
9	SYNC	The time follows the song's tempo, as a note value.
10	RHYTHM	STRAIGHT, DOTTED or TRIPLET note values.

	Part	What it does
11	FEEDBACK	How much of each echo goes round again.
12	FREEZE	Holds the echoes as they are.
13	TIME CHANGE	GLIDE or FADE to a new time.
14	LOW CUT	A high-pass filter in the loop.
15	HIGH CUT	A low-pass filter in the loop.
16	DUCK	The echoes dip while you play.
17	RELEASE	How fast they come back.
18	WIDTH	The echoes' stereo width.
19	MOD	A slow, subtle movement of the echoes.
20	MIX	The dry sound against the echoes.
21	OUTPUT	The final level.
22	LOCK	Presets leave MIX where it is.

The window has the two displays at the top left and the meter bridge at the right. The controls sit in two rows under the captions MODE, TIME, RHYTHM, FEEDBACK and TIME CHANGE (top), and FILTER, DUCKING, STEREO and OUTPUT (bottom).

Quick start: a vocal echo in four moves



On an aux instead: set MIX to 100 % and switch on LOCK (see Inserts and aux sends).

FIGURE 4 The quickest way to a vocal echo. *Default* ▸ *Init* is a neutral start: STEREO, 375 ms on both sides, FEEDBACK 40 %, no filters and MIX 25 %.

Using the controls

Every VEIRA plugin is played like a piece of hardware. The same few parts appear on every panel:

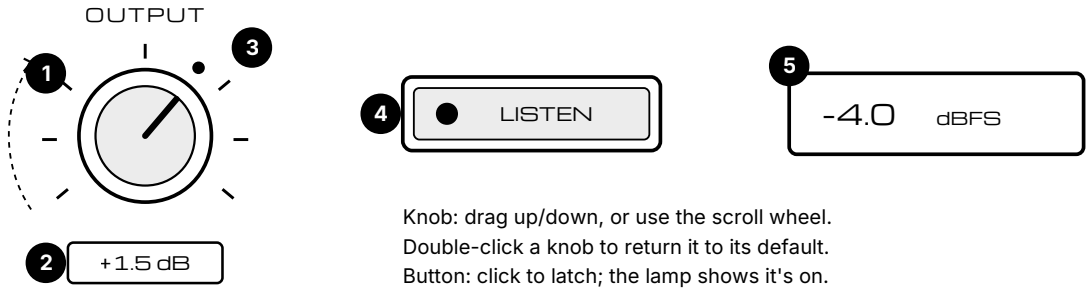


FIGURE 5 The parts you'll find on every VEIRA panel (the labels are examples).

- 1 **Knob.** Drag up to turn it clockwise, down to turn it back, or use your mouse wheel. **Double-click** returns it to its default. The engraved pointer and the small dot on the scale show where it's set.
- 2 **Value window.** The backlit window under each knob shows its exact value with its unit.
- 3 **Silkscreen label.** The control's name, as it appears in your DAW's automation list.
- 4 **Push button.** Click to switch on; the lamp lights and the cap sits lower in its bezel. Click again to switch off.
- 5 **Readout.** Live numbers update ten times a second so you can read them while the meters move. A value over 0 dBFS shows as a warning.

Tooltips: hover over any control or display for a short explanation. On displays, the tooltip depends on where you point.

Automation: every knob and button is a host parameter, so you can automate it in your DAW and control it from a MIDI controller or control surface that your DAW maps.

Units: VEIRA never shows a bare number. **dBFS** is level against digital full scale (0 dBFS is the loudest a digital signal can be); **dB** is a change in gain; **LUFS** is loudness as streaming services and broadcasters measure it; **LU** is a difference in loudness (1 LU = 1 dB).

On VEIRA Delay White's panel the parts look a little different from the drawing above:

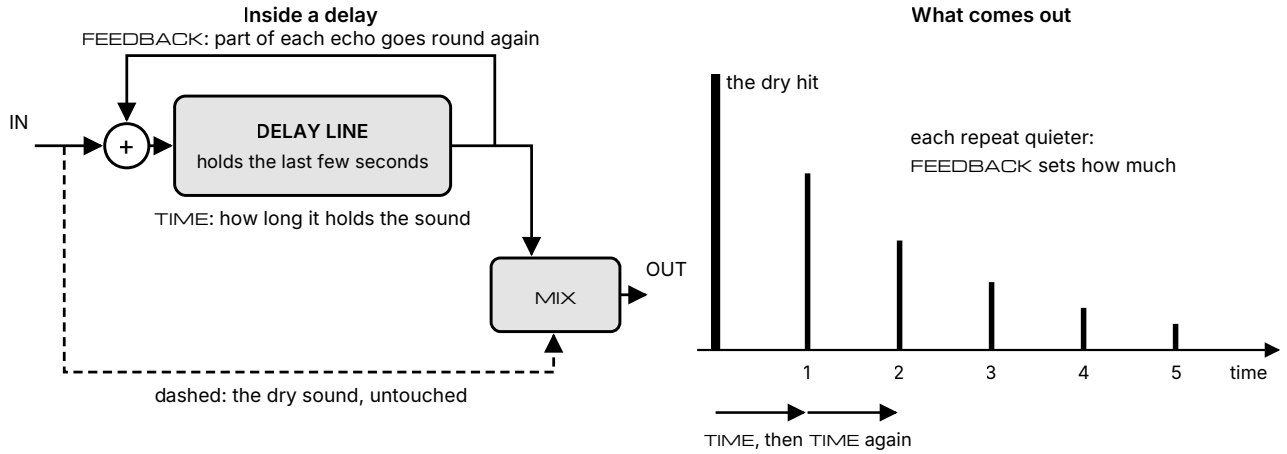
- **Knobs show their value in the middle** (375 ms, 40 %, OFF, 0.0 dB): the knobs are black on the pearl paint, and a ring printed in charcoal around each one (in print, the dark arc) shows how far it is turned. The control's name is printed under the knob. FEEDBACK, MIX and OUTPUT have the larger labels.
- **Type a value:** right-click a knob (Control-click on a Mac). A field opens over it with the current value; type the new one and press Return. The number is enough: **420** for 420 ms, **1.5 s** for a second and a half, **4k** for 4 kHz, **off** for LOW CUT, **open** for HIGH CUT. Press Escape or click elsewhere to leave it unchanged.
- **Buttons have no lamps:** the selected MODE and TIME CHANGE, and LINK, SYNC, FREEZE and LOCK when they are on, fill with charcoal with pale lettering (in print, a dark button); when they are off they are shallow wells in the paint with dark lettering. While SYNC is off, the selected RHYTHM keeps a firm outline.

- **Dimmed controls** are the ones that have no effect at the moment: TIME R while LINK is on or in MONO, the RHYTHM buttons while SYNC is off, RELEASE while DUCK is at 0 %, and FEEDBACK, LOW CUT and HIGH CUT while FREEZE holds the echoes. You can still set them.
- SYNC **swaps the knobs:** with SYNC on, TIME L and TIME R give way to NOTE L and NOTE R in the same places.
- **Resize the window:** drag its bottom-right corner (the small diagonal lines). It scales from 75 % to 200 % of its normal size (1480 × 940 points) and keeps its proportions. Your DAW saves the size with the session.

How a delay works

If you already know delays, skip to *What happens inside VEIRA Delay White*. If not, these pages make every control obvious.

A delay is a memory: it records what you play and plays it back a moment later. On its own that gives one echo, a “slap”. Feed part of that echo back into the memory and it comes round again, a little quieter each time, and one echo becomes a train of repeats that dies away.



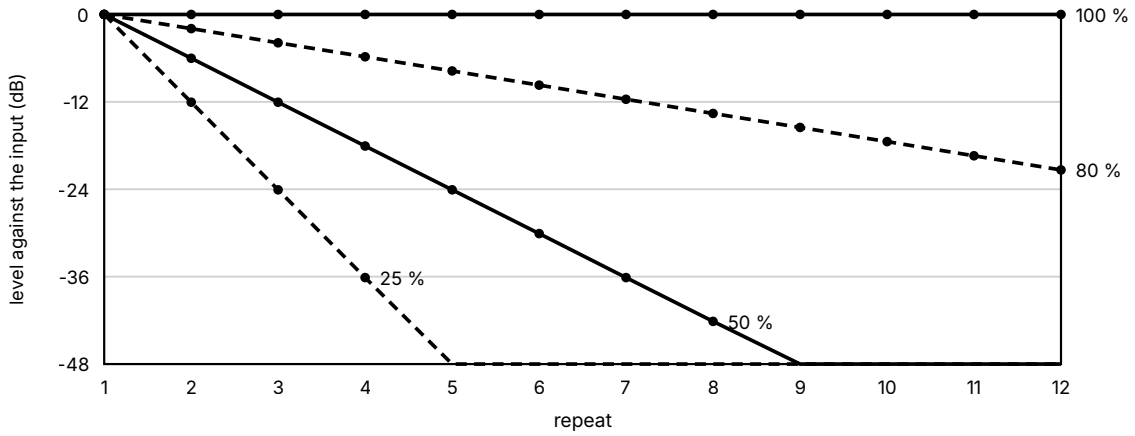
A delay records what you play and plays it back a moment later. Fed back into itself, one echo becomes a train of repeats.

FIGURE 6 A delay in one picture. Left: the delay line with its feedback loop. Right: a hit and its repeats.

Four ideas cover almost everything:

- **The time** between the sound and its echo. Under about 30 ms the ear doesn’t hear an echo but a thicker or wider sound (doubling); from 60 to 150 ms it hears a “slap”; beyond about 200 ms, distinct echoes.
- **Feedback:** how much of each echo goes round again, and so how many repeats you hear.
- **Rhythm:** a delay set to a note value at the song’s tempo plays in time with the music, and becomes part of the groove.
- **Tone and place:** what happens to the echoes on their way round (filters that darken them, width, ducking), and where they sit against the dry sound (MIX).

Feedback: how many repeats



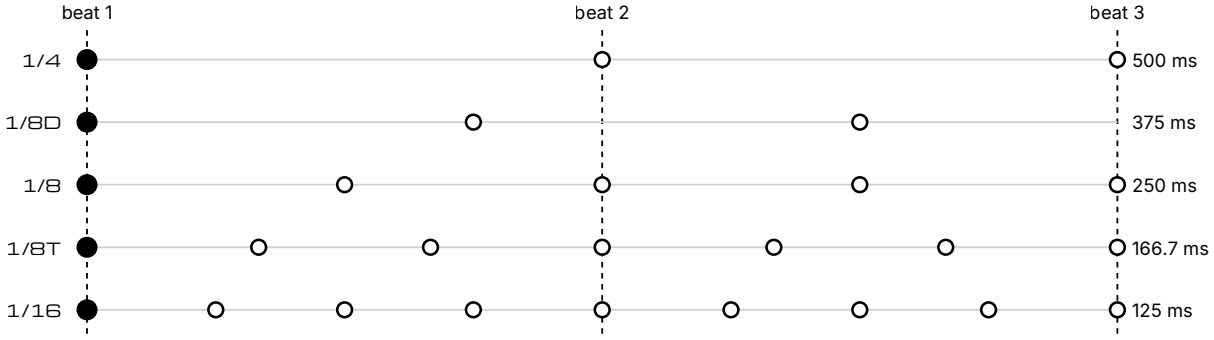
Each repeat is the one before times FEEDBACK: 50 % is 6 dB down per repeat, 80 % about 2 dB. At 100 % they never fade.

FIGURE 7 Each repeat's level against the input for four FEEDBACK settings, with the loop's filters off. The first repeat is always as loud as the input; FEEDBACK decides how quickly the next ones fall.

With the filters off, the repeats of VEIRA Delay White fall by exactly what FEEDBACK says: at 50 %, each is half the one before (1, 0.5, 0.25 …), 6 dB down per repeat. A few repeats (20–40 %) give a clear echo that doesn't clutter the mix; 50–70 % a long trail; at **100 %** the echoes repeat for ever at the same level (measured: exactly the same level after 60 s); over 100 % the loop builds (see *FEEDBACK and FREEZE*).

Tempo: note values

Most delays in a song are set to the tempo: the echoes then land on the beat, or on a rhythm against it, and the part sounds tighter, not busier.

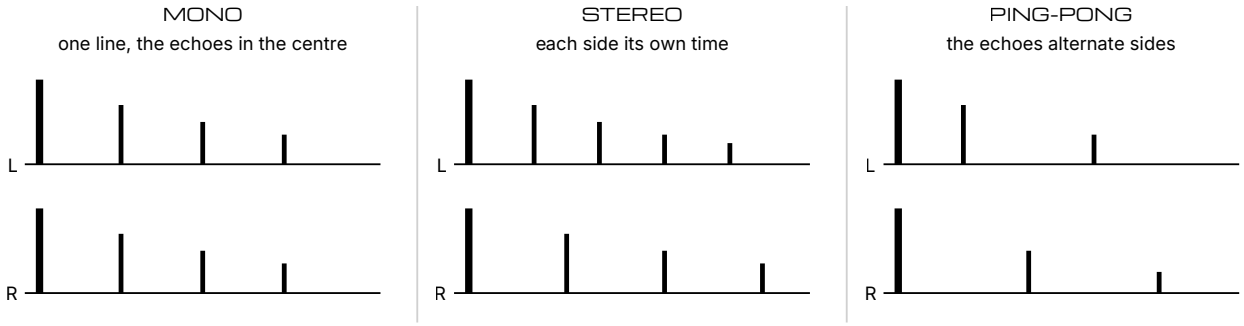


With SYNC on, the delay is a note value at the song's tempo: here 120 BPM. The black dot is the sound; each white dot an echo.

FIGURE 8 Note values at 120 BPM. A dotted value (D) is half as long again; a triplet (T) two thirds as long.

The **dotted eighth** is the most useful rhythmic echo there is: play straight eighths and the echoes fill in the sixteenths between them. **Triplets** against straight playing give a lilting, three-against-two feel. A **quarter** or **half note** sits behind a part as a pulse.

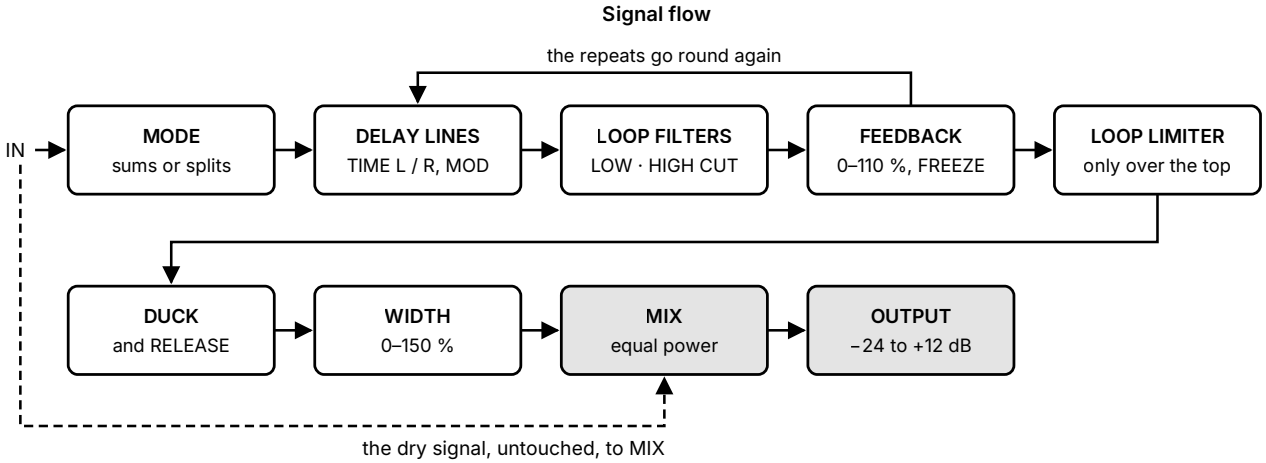
Mono, stereo and ping-pong



The tall line is the dry sound, on both sides; the shorter ones are the echoes, left (top) and right (bottom).

FIGURE 9 The three modes. In STEREO the left echoes come every TIME L, the right every TIME R; in PING-PONG they cross from left to right and back.

What happens inside VEIRA Delay White



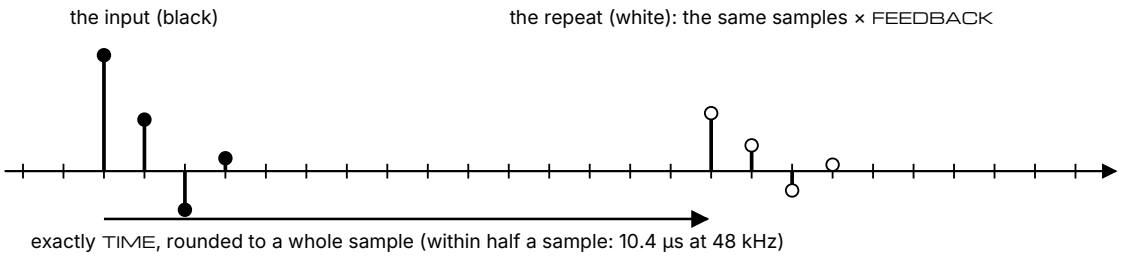
The dry path is never processed: at MIX 0 % the output is the input, bit for bit. There is no latency.

FIGURE 10 Signal flow. The echoes leave the delay lines through the loop filters; FEEDBACK sends them round again, and the loop limiter steps in only when the loop would build past a safe level.

Step by step:

1. **MODE.** MONO sums the input to one line; STEREO gives each side its own line; PING-PONG sums the input into the left line, whose echoes feed the right.
2. **The delay lines** hold up to 4 s and read at TIME L and TIME R (or the synced NOTE L / NOTE R). At rest each read is a whole sample, so each repeat *is* the input sample.
3. **The loop filters** (LOW CUT, HIGH CUT) shape each echo; because they are in the loop, every repeat passes them once more.
4. **FEEDBACK** sends the echo back into the line. The **loop limiter** is a level control on what goes round again: it lets the loop through untouched until it would build too far (only with FEEDBACK near or over 100 %), and it never touches the input's own first repeat.

5. **DUCK, WIDTH** shape the echoes only; **MIX** blends them with the untouched dry signal, and **OUTPUT** sets the final level.



At rest, with no filters, each repeat is the input itself: at FEEDBACK 50 % exactly 1, 0.5, 0.25 … of it.
Only while GLIDE or MOD moves the read does it pass through a 16-point interpolator, and it is exact again when it lands.

FIGURE 11 Exact repeats. With nothing moving the read, the repeat is a copy of the input's samples, scaled by FEEDBACK and shifted by TIME.

Controls

MODE

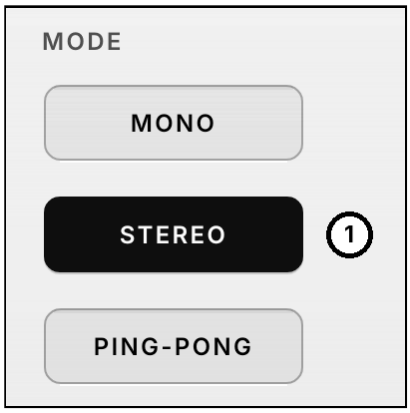


FIGURE 12 1 MODE: MONO, STEREO (selected) or PING-PONG.

Control	Range	Default	What it does
MODE	MONO, STEREO, PING-PONG	STEREO	How the echoes sit in the stereo field.

- MONO: the input summed to one delay line, the echoes in the centre. The right-hand time is not used (TIME R and LINK are dimmed). Choose it for a slap or an echo that should stay behind a centred vocal, or on a mono track.
- STEREO: each side has its own line, the left at TIME L, the right at TIME R. With LINK on, both sides use TIME L, and a stereo track's echoes keep its image. Turn LINK off and set two slightly different times (for example 380 and 510 ms, as *Ballad Echo* does) for a wide echo; or two very short ones (15–30 ms) to widen a part without hearing an echo (*Rap Doubler*, *Pad Widener*).
- PING-PONG: the input is summed into the left line, whose echoes feed the right: the first echo comes from the left after TIME L, the next from the right after TIME R more, and so on, side to side. With LINK on both hops are the same.

A change of MODE fades the echoes out and back in over 30 ms, so it never clicks.

TIME: TIME L, TIME R, LINK and SYNC

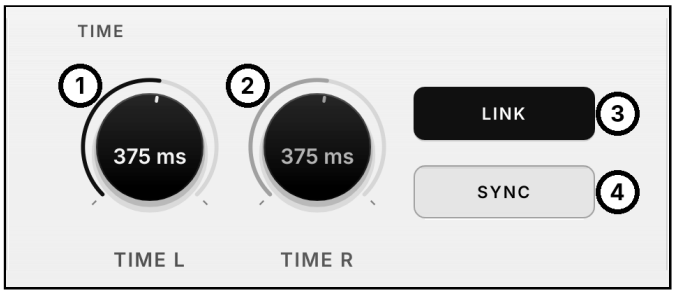


FIGURE 13 1 TIME L, 2 TIME R (dimmed while LINK is on), 3 LINK and 4 SYNC.

Control	Range	Default	What it does
TIME L	1 ms to 4 s	375 ms	The left delay (with LINK on, both).
TIME R	1 ms to 4 s	375 ms	The right delay.
LINK	on / off	on	The right side follows the left.
SYNC	on / off	off	The time as a note value at the song's tempo.
NOTE L / NOTE R	1/64, 1/32, 1/16, 1/8, 1/4, 1/2, 1/1	1/8	The delay as a note value (with SYNC on), made dotted or triplet by RHYTHM.

TIME L and TIME R set the delays. Type a time in milliseconds or in seconds ("1.5 s"). Typical settings:

- **1–30 ms:** no echo is heard; the part sounds thicker or wider (doubling, widening, and with MOD and FEEDBACK, flanging: *Creative* ▸ *Comb Flanger*).
- **60–150 ms:** a slap, the 1950s vocal and guitar sound (*Vocal Slapback* 95 ms, *Rockabilly Slap* 110 ms).
- **250–600 ms:** distinct echoes, the classic delay.
- **Over a second:** long, spacious repeats for ambient parts.

LINK makes the right side follow the left: TIME R (or NOTE R) is set by TIME L (or NOTE L) and dimmed. Switch it off for different times on each side.

SYNC. With SYNC on, TIME L and TIME R give way to NOTE L and NOTE R: the delays as note values at the tempo your DAW plays, from a sixty-fourth to a whole note, each made dotted or triplet by RHYTHM. At 120 BPM an eighth is 250 ms, a dotted eighth 375 ms (measured: 375.000 ms) and an eighth triplet 166.667 ms. Synced times stay within 1 ms to 4 s.

How a new time is reached, GLIDE or FADE, is set by TIME CHANGE (see below).

RHYTHM: STRAIGHT, DOTTED and TRIPLET

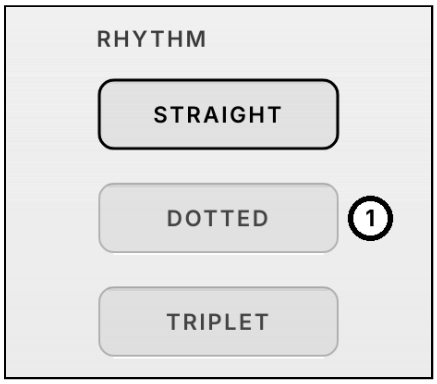


FIGURE 14 1 RHYTHM: STRAIGHT (selected, with its outline), DOTTED and TRIPLET, dimmed while SYNC is off.

Control	Range	Default	What it does
RHYTHM	STRAIGHT, DOTTED, TRIPLET	STRAIGHT	With SYNC: the note value as it is, × 1.5, or × 2/3.

DOTTED makes the note value half as long again (a dotted eighth is three sixteenths); TRIPLET makes it two thirds as long (three in the time of two). RHYTHM applies to both NOTE L and NOTE R. With NOTE L 1/4 and NOTE R 1/8 (LINK off), you get two rhythms at once (*Rhythmic ▸ Split Quarter Eighth*).

FEEDBACK and FREEZE

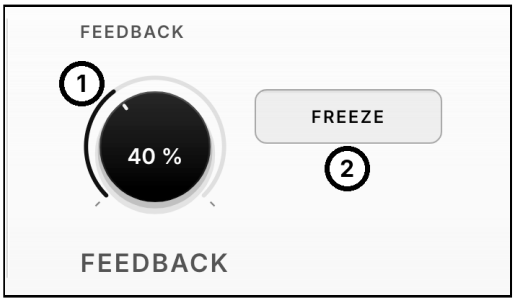
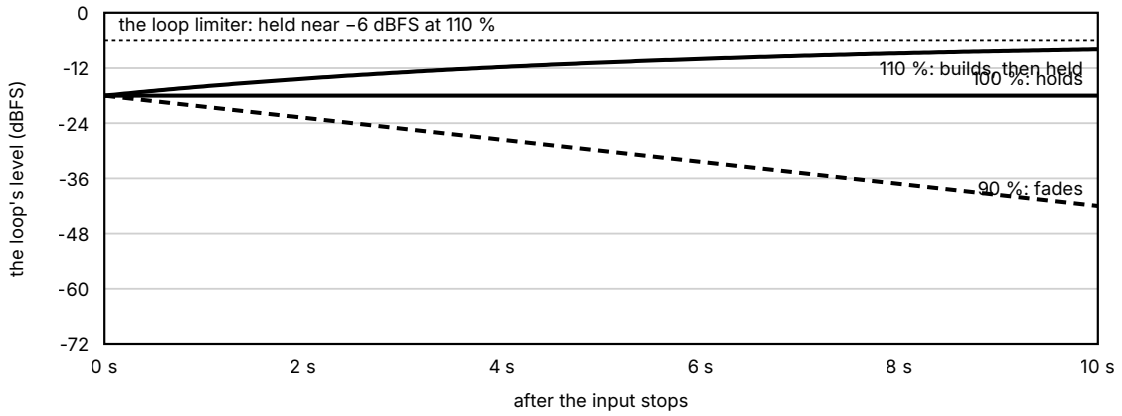


FIGURE 15 1 FEEDBACK and 2 FREEZE.

Control	Range	Default	What it does
FEEDBACK	0 to 110 %	40 %	How much of each echo goes round again.
FREEZE	on / off	off	Holds the echoes as they are, for as long as it is on.

FEEDBACK

FEEDBACK sets how many repeats you hear (see *How a delay works*). At **0 %** there is one echo; at **100 %** the echoes repeat for ever at the same level; **over 100 %** each pass is louder than the one before, and the loop builds and sings.



After the input stops, at 375 ms. Over 100 % the loop limiter keeps the singing loop safe; measured at 110 %: peak −4.2 dBFS, steady over 60 s.

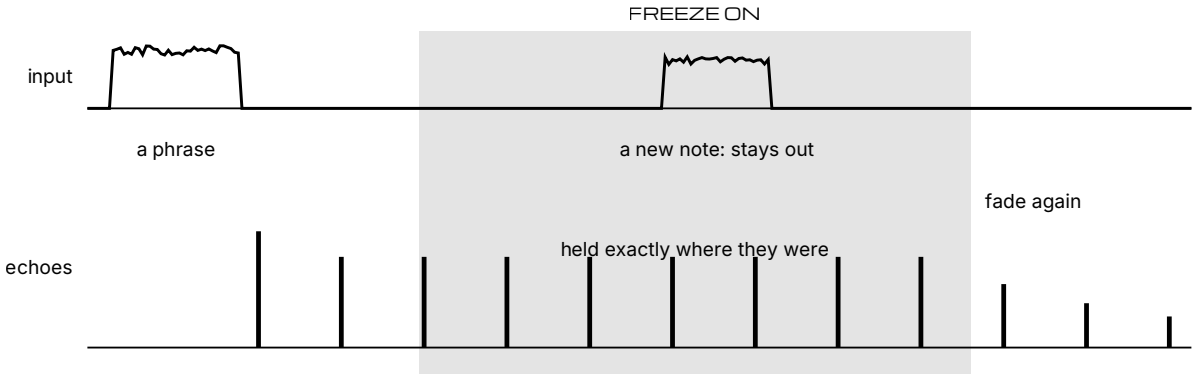
FIGURE 16 What the loop does after you stop playing, at three FEEDBACK settings. The limiter is a level control, not a distortion, so even a singing loop stays clean.

The loop limiter holds what goes round again under −1 dBFS up to FEEDBACK 100 %, and brings its ceiling down to −6 dBFS at 110 %, where the loop sings. Being a level control and not a curve, it adds no harmonics, so nothing in the loop distorts or aliases. Use it for dub-style builds: push FEEDBACK over 100 % for a few beats and pull it back, or turn TIME while it sings (*Creative* ▸ *Runaway Dub* is set at 104 %).

> **Tip:** With LOW CUT and HIGH CUT in the loop, a high FEEDBACK darkens and thins as it goes, which is the classic dub sound. With both filters open, it stays bright to the last repeat.

FREEZE

FREEZE holds the echoes exactly as they are, for as long as it is on, and keeps **new sound out of them**: play a phrase, press FREEZE, and play over the loop you have caught.



FREEZE holds the loop at its level (measured: to 0.000 dB over 21 s). Nothing new enters it.
The dry signal still passes as MIX sets. It fades in and out over 60 ms, so it never clicks.

FIGURE 17 FREEZE: infinite repeats of what was in the delay when you pressed it.

- While FREEZE is on, the loop is a perfect wire: FEEDBACK, LOW CUT and HIGH CUT are stepped aside (and dimmed), and MOD eases out, so the loop repeats without changing.

- The length of the frozen loop is the delay time: with a dotted eighth at 120 BPM you hold 375 ms.
- The REPEATS display shows FROZEN while it is on.
- Automate it in your DAW to hold a phrase under a break.

TIME CHANGE: GLIDE and FADE

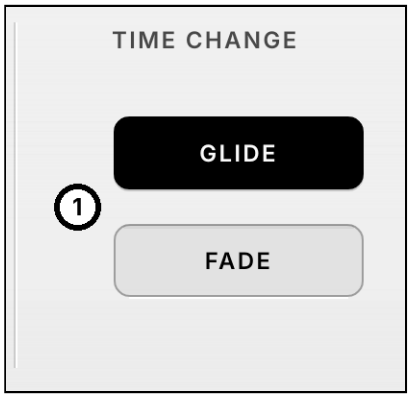


FIGURE 18 1
TIME CHANGE: GLIDE (selected) or FADE.

Control	Range	Default	What it does
TIME CHANGE	GLIDE, FADE	GLIDE	How a new time is reached.

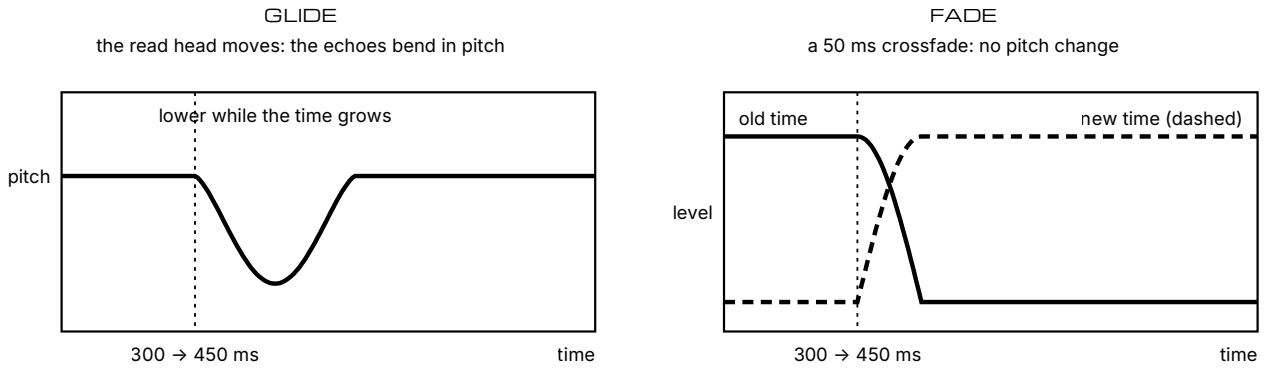


FIGURE 19 Left: GLIDE moves the read like tape, so the echoes bend down while the time grows and come back to pitch when it lands. Right: FADE crossfades from the old time to the new one.

- **GLIDE** moves the read head towards the new time, as on a tape machine: the echoes bend in pitch on the way (down while the delay grows, up while it shrinks), at most an octave down or a fifth up, and land exactly on the new time. Turn TIME L while the echoes play for the classic pitch-bending effect (*Creative* ▸ *Glide Pitch Bender*).
- **FADE** crossfades from the old time to the new one in 50 ms: the echoes jump to the new time with no pitch change. Use it when you automate the time and want the repeats to stay in tune.

Neither clicks (measured, a 440 Hz tone through 300 → 450 → 300 ms: whatever lies above 4 kHz stays 92–93 dB under the tone).

FILTER: LOW CUT and HIGH CUT

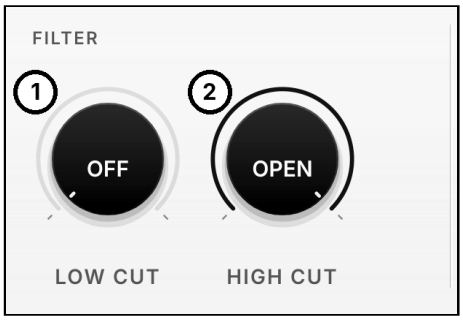
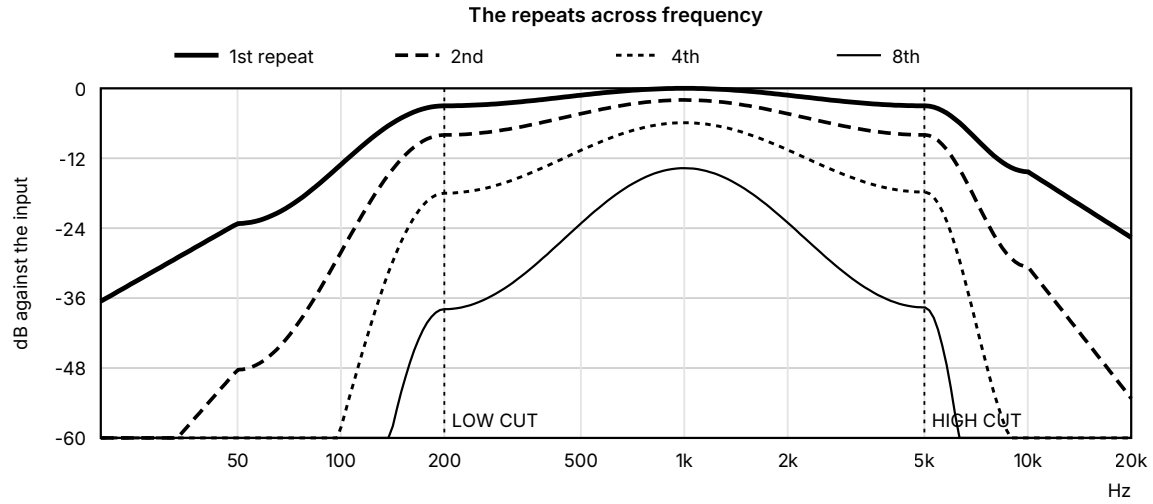


FIGURE 20 1 LOW CUT (here OFF) and 2 HIGH CUT (here OPEN).

Control	Range	Default	What it does
LOW CUT	OFF, 20 Hz to 2 kHz	OFF	A 12 dB/oct high-pass in the loop.
HIGH CUT	1 kHz to 20 kHz, OPEN	OPEN	A 12 dB/oct low-pass in the loop.

Because the filters are **in the loop**, every repeat passes them once more: the first echo is filtered once, the second twice, the eighth eight times. So each repeat is a little thinner and darker than the one before, as echoes in a real space are.



LOW CUT 200 Hz, HIGH CUT 5 kHz, FEEDBACK 80 %, measured: each repeat narrower than the last, as the PER REPEAT display shows.

FIGURE 21 The echoes narrow towards the mids as they repeat. The values are measured through the plugin and match the design to within 0.0001 dB.

- **LOW CUT** keeps the echoes out of the low end, where they turn to mud: 150–300 Hz on vocals and guitars, higher (1–1.2 kHz) to echo only the top of a drum kit (*Drums* ▸ *Hat Ping-Pong*).
- **HIGH CUT** darkens the echoes so they sit behind the dry sound: 5–8 kHz for most parts, 2.5–4 kHz for a dark, distant echo or a dub trail. Together they make a narrow band, as a small speaker (*Creative* ▸ *Telephone Echo*, 800 Hz–2.5 kHz).

Fully left LOW CUT reads OFF; fully right HIGH CUT reads OPEN; then the loop is a wire and every repeat is exact. The filters run all the time, so switching them in or out never steps. The PER REPEAT display shows their effect on the 1st, 2nd, 4th and 8th repeat.

DUCKING: DUCK and RELEASE

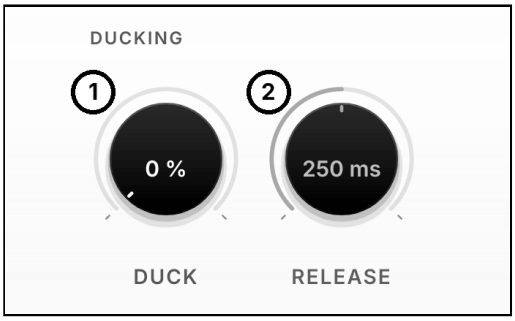


FIGURE 22 1 DUCK and 2 RELEASE (dimmed while DUCK is at 0 %).

Control	Range	Default	What it does
DUCK	0 to 100 %	0 %	The echoes dip (up to 30 dB) while you play and come back in the gaps.
RELEASE	20 ms to 2 s	250 ms	How fast they come back.

A delay with a long trail under a vocal can blur the words. DUCK turns the echoes **down while the input plays** and lets them **come back in the gaps**, so you hear long echoes and clear words.

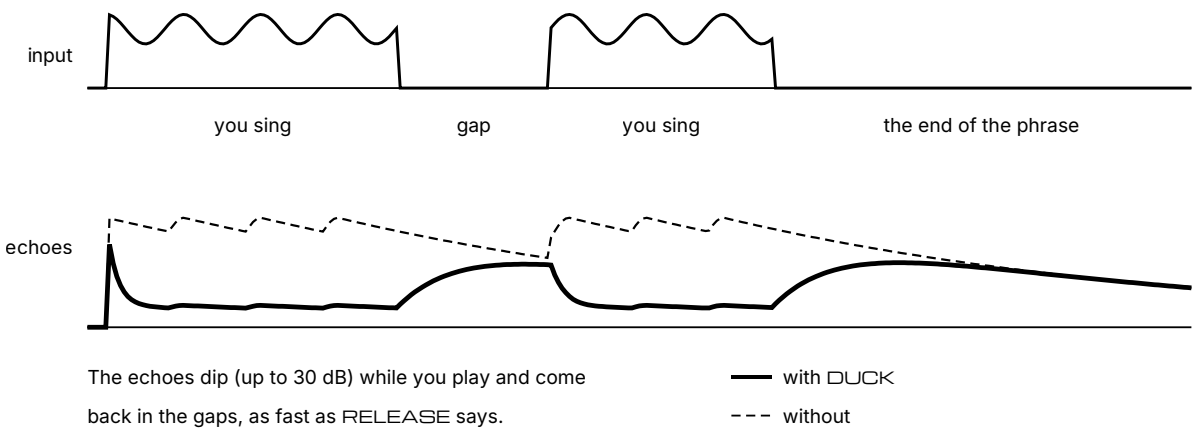


FIGURE 23 DUCK at work: the echoes (solid) stay down while the phrase is sung and swell up when it ends.

DUCK listens to how near the input is to its own recent peak, not to a fixed threshold, so it works the same on a quiet guitar and a loud vocal without any setting. At 100 % it keeps the echoes 30 dB down while the input plays (measured); a second after the input stops they are back to within 0.2 dB.

- **30–45 %:** a gentle clean-up, hardly noticed as an effect (*Dotted Eighth Vocal*, *Ballad Echo*).
- **55–70 %:** clearly ducked; the echoes mostly live between phrases (*Quarter Throw*, *Ducked Lead Wash*).

RELEASE sets how soon they return: short (100–300 ms) for a busy, rhythmic part; long (600–800 ms) for echoes that float up slowly after a line (*Ambient* ▸ *Floating Vocal*, 800 ms).

STEREO: WIDTH and MOD

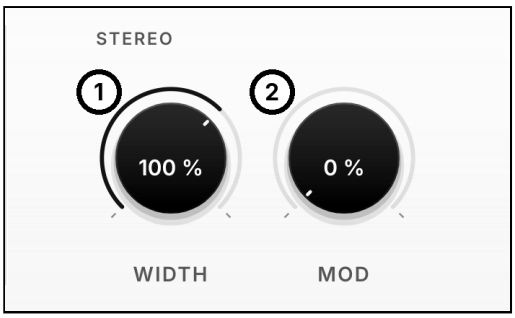


FIGURE 24 1 WIDTH and 2 MOD.

Control	Range	Default	What it does
WIDTH	0 to 150 %	100 %	0 % mono echoes, 100 % as they are, 150 % wider.
MOD	0 to 100 %	0 %	A slow, subtle movement of the echoes.

WIDTH sets the stereo width of the echoes only (the dry sound is never touched). At **0 %** they are mono, in the centre; at **100 %** as the mode makes them; up to **150 %** wider than the speakers. Check a wide setting in mono.

MOD moves the reads slowly and subtly: up to ±1.2 ms at 0.55 Hz, the left and right a quarter cycle apart, with a little random drift. A touch (10–25 %) makes the echoes more alive and wider, as an analog unit's; more gives a gentle chorus on the repeats; at 100 % with a very short time it sweeps a comb (*Creative* ▸ *Comb Flanger*). At **0 %** every repeat stays exact.

OUTPUT: MIX, LOCK and OUTPUT

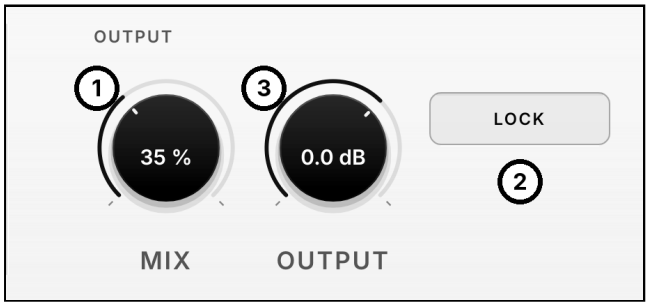


FIGURE 25 1 MIX, 2 LOCK and 3 OUTPUT.

Control	Range	Default	What it does
MIX	0 to 100 %	25 %	The dry sound against the echoes, equal power.
LOCK	on / off	off	Presets leave MIX where it is.

Control	Range	Default	What it does
OUTPUT	−24 to +12 dB	0.0 dB	The final level, after MIX.

MIX is an equal-power blend: the level stays steady as you turn it. At **0 %** the output is the input, bit for bit; at **100 %** it is the echoes only, for an aux. On an insert, 15–35 % is the usual range.

LOCK keeps MIX where it is when you load a preset, and a preset doesn't show as edited (*) just because MIX differs from its own. Switch it on on an aux at 100 %, or when you have balanced an insert by ear and want to try other echoes at the same blend. See *Inserts and aux sends*.

OUTPUT sets the final level. Every insert preset comes out within −1.0 to +0.6 dB of the dry track, so you can compare with bypass fairly; check the meter bridge's Δ reading.

Displays

REPEATS

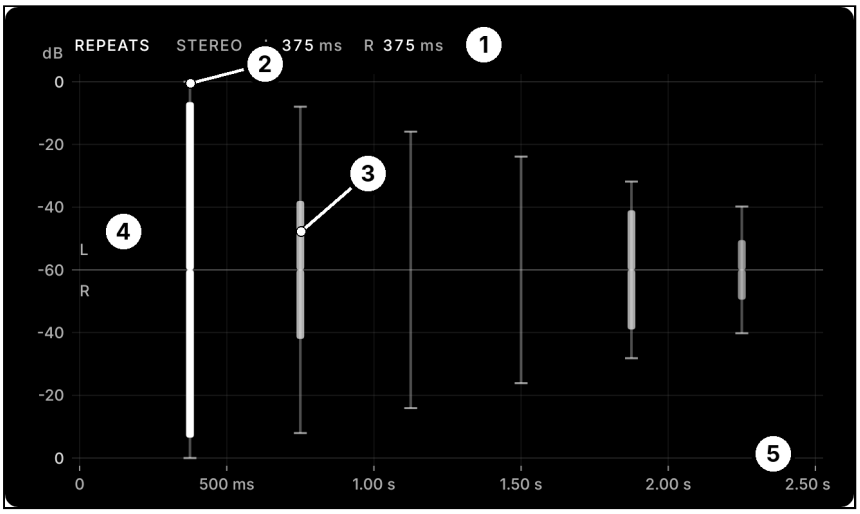


FIGURE 26 The REPEATS display: 1 the mode and times, 2 an echo's level, 3 its live level as the echo goes by, 4 the left (above) and right (below) sides, 5 the time scale.

The REPEATS display draws the echoes as a timeline of taps: each repeat a stem at its time, as tall as its level against the input (at 1 kHz, so FEEDBACK and the loop filters are both in it).

- In STEREO and PING-PONG, 4 the left echoes stand **above** the centre line and the right ones **below** it; in MONO the stems are drawn both ways.
- 2 Each stem's thin line and cap show the echo's level; 3 the thicker, lit part shows the level that echo has *now*, what you played that long ago through the repeat's gain. Watch the echoes of a phrase travel down the line.
- 1 The legend shows the mode and the times (L 375 ms, R 375 ms), the note values with SYNC, and FROZEN or SELF-OSCILLATING when the loop holds or builds.
- Hover a stem for its number, side, time and level: *Repeat 2 (left): 750 ms after the sound, −8.0 dB against it (at 1 kHz)*.

The time scale 5 stretches to show about the first dozen repeats.

PER REPEAT

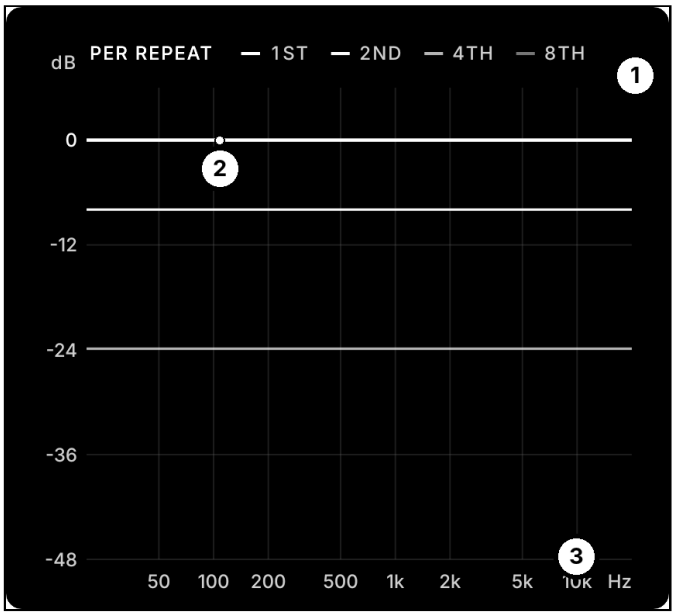


FIGURE 27 The PER REPEAT display: 1 the legend, 2 the repeats across frequency, 3 the frequency scale.

PER REPEAT draws the 1st, 2nd, 4th and 8th echo across frequency against the input, in dB: brightest the first, dimmer the later ones (in print, the top line is the 1st, the lowest the 8th). With the filters off they are flat lines, each lower by FEEDBACK; with LOW CUT and HIGH CUT in, they narrow towards the mids repeat by repeat, and the two cut-offs are marked. It is the picture in *FILTER* above, live.

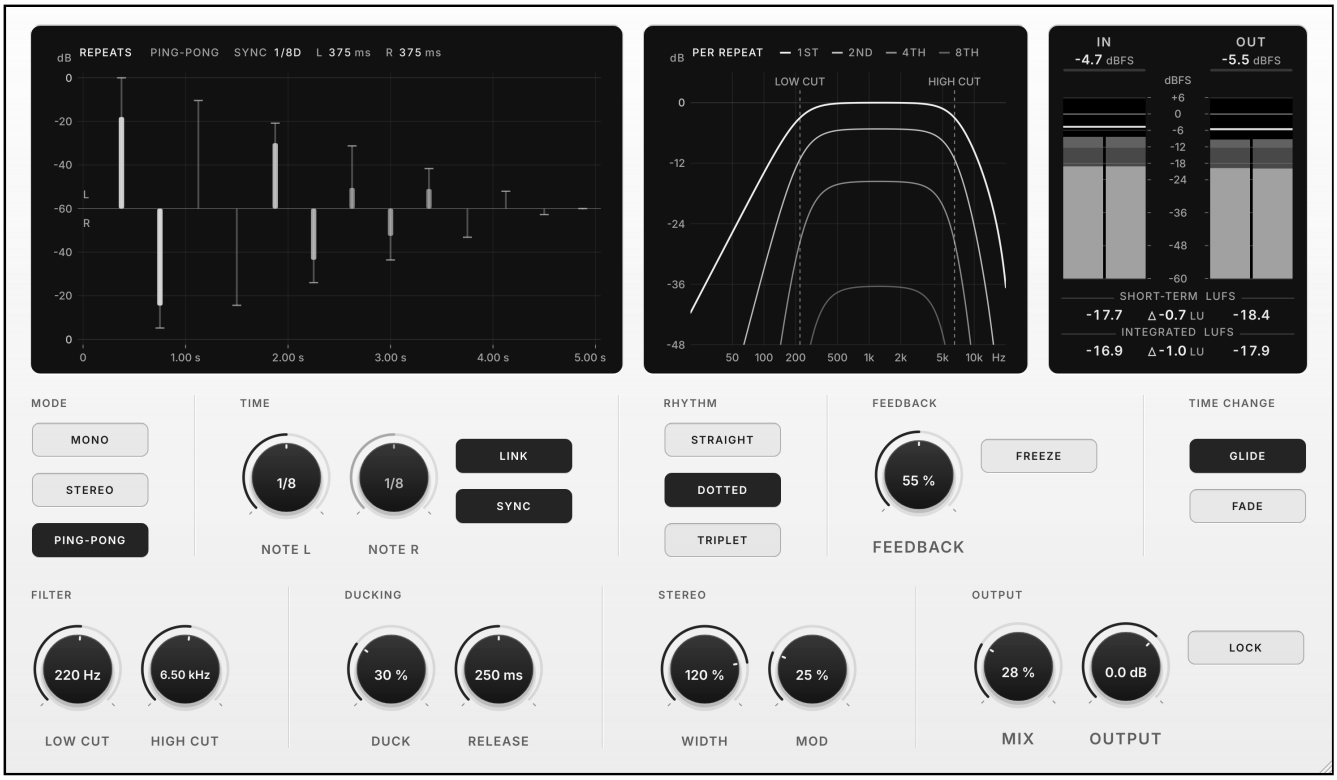


FIGURE 28 PING-PONG synced to a dotted eighth (NOTE L 1/8, DOTTED) with FEEDBACK 55 %, LOW CUT 220 Hz, HIGH CUT 6.50 kHz, DUCK 30 %, MOD 25 % and WIDTH 120 %: REPEATS shows the echoes crossing from left to right, and PER REPEAT the repeats narrowing between the two marked cut-offs.

Meter bridge (IN | OUT)

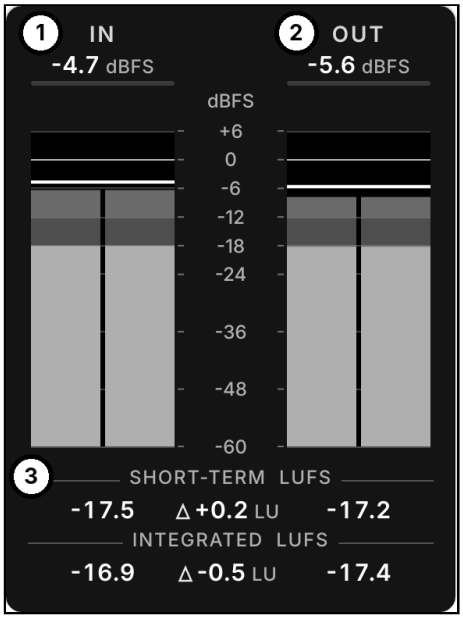


FIGURE 29 The meter bridge: 1 input and 2 output, 3 short-term and integrated loudness with the OUT − IN difference.

VEIRA Delay White uses the standard VEIRA meter bridge.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA Delay White and what comes out, in level and in loudness. The drawing shows the input and output columns; any extra column on your plugin's bridge is described above.

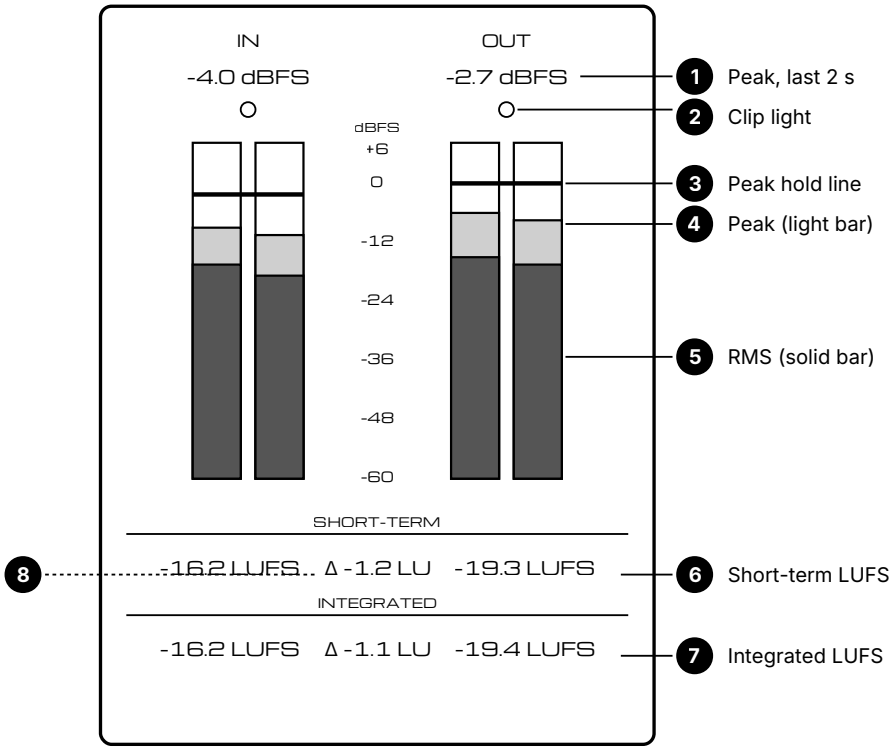


FIGURE 30 The meter bridge, left and right channel bars for input and output, with loudness below.

- 1 **Peak readout:** the highest sample peak of the last two seconds, in dBFS. It turns to a warning above 0 dBFS.
- 2 **Clip light:** lights on any sample at or over full scale. It stays lit until you click the meter.
- 3 **Hold line:** marks the recent peak on the bar.
- 4 **Peak bar** (the lighter part): the instantaneous sample peak of each channel.
- 5 **RMS bar** (the solid part): the average level over 300 ms, closer to how loud it sounds.
- 6 **SHORT-TERM:** loudness over the last 3 seconds, in LUFS, for the input (left) and the output (right).
- 7 **INTEGRATED:** loudness of everything since the measurement started, gated as the ITU-R BS.1770-4 and EBU R 128 standards require.
- 8 **Δ (delta):** OUT minus IN, in LU. It tells you how much louder (+) or quieter (−) VEIRA Delay White made the signal, so you can match levels fairly when you compare with bypass. It reads [--] while either side is too quiet to measure (below −70 LUFS).

The scale: on screen the bars are coloured like a studio console: green below −12 dBFS, yellow from −12 to −3, orange from −3 to 0 and red above 0 dBFS.

Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Inserts and aux sends

A delay can sit on a track in two ways, and VEIRA Delay White is ready for both.

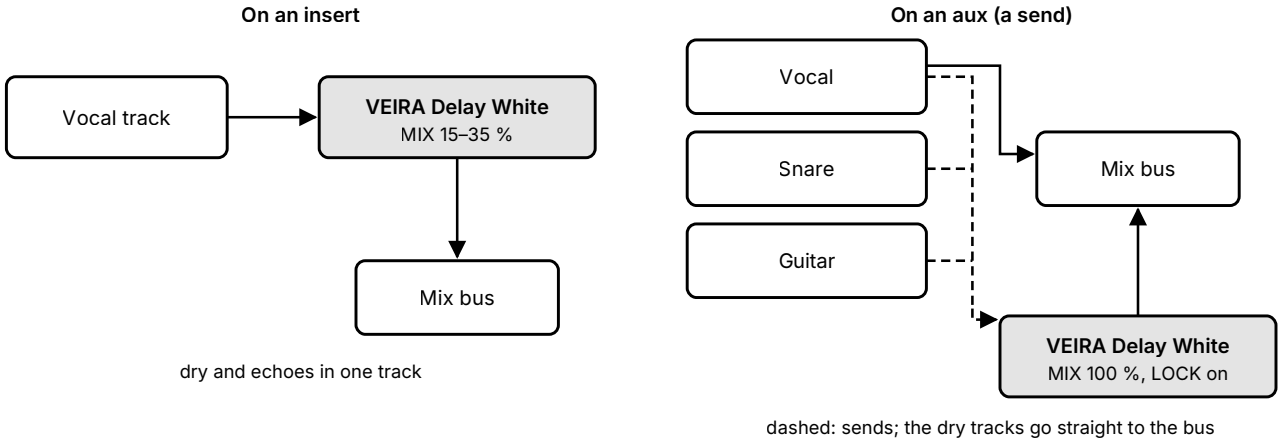


FIGURE 31 Left: on an insert, MIX blends the echoes into the track itself. Right: on an aux, several tracks send to one delay at MIX 100 %; your DAW's send levels decide how much of each track is echoed.

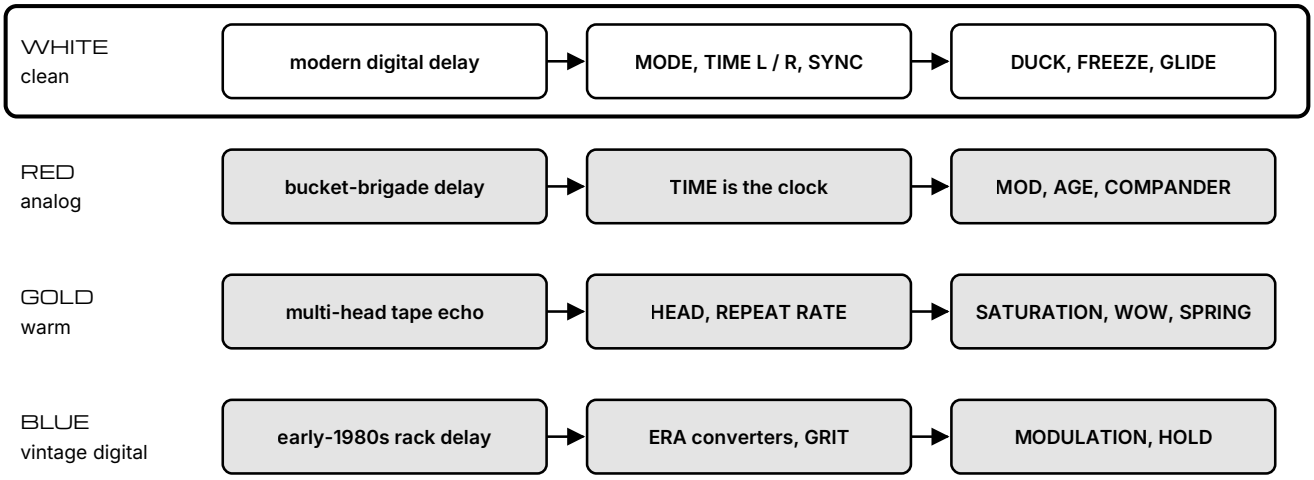
On an insert (the delay straight on the track), MIX sets the balance. The vocal, guitar, keys and drum presets are made for this, at MIX 15–35 %. MIX is an equal-power blend: at 50 % the dry sound and the echoes are each 3 dB down, so the level stays steady as you turn it.

On an aux (a return track or FX channel that several tracks send to), set MIX to **100 %**, so the return carries only the echoes, and switch on LOCK. With LOCK on, loading a preset leaves MIX where it is, so you can step through presets on the aux without the dry signal coming back. The *Mix* folder has ready-made aux returns at 100 %. A delay on an aux lets you throw single words or hits into it with automation of the send, and EQ or compress the echoes on their own.

> **Tip:** For a "throw" (one word or one snare hit echoed, the rest dry), put the delay on an aux at MIX 100 % and automate only the send. The echoes ring on naturally after the send closes.

Which colour delay to choose

VEIRA Delay White is one of four VEIRA colour delays, each painted like the colour compressor, limiter, EQ, gate and reverb of the same name. All four sync to the song's tempo with straight, dotted and triplet values, have an equal-power MIX with LOCK for aux returns, the same meter bridge with loudness, no latency, and echoes that end in true digital silence. What differs is the sound of the repeats: exact, analog, tape or vintage digital.



The framed row, in white boxes, is the delay in your hands.

FIGURE 32 The four colour delays, side by side.

	Character	Choose it when
White	Clean. A modern digital delay whose repeats are the sound itself, landing exactly on time: MONO, STEREO (separate left and right times) or PING-PONG, FEEDBACK to 110 %, LOW CUT and HIGH CUT in the loop, DUCK with its RELEASE, FREEZE, and GLIDE or FADE for a new time.	You want precise, uncoloured echoes that sit exactly on the grid: pop vocals, rhythmic guitar parts, synths, mix throws, ping-pong.
Red	Analog. A bucket-brigade delay in the tradition of the classic analog pedals and rack delays: TIME is the chips' clock, so longer echoes are darker and turning it bends the pitch; MOD with SPREAD, AGE, COMPANDER, NOISE, and FEEDBACK that runs away and sings.	You want warm, soft, chorused repeats that melt behind the part: guitar solos, vintage vocals, synths, dub.
Gold	Warm. A multi-head tape echo in the tradition of the classic 1970s machines: three playback heads and a spring tank in 15 HEAD modes, REPEAT RATE as the tape's speed, INTENSITY into warm self-oscillation, BASS / TREBLE in the loop, SATURATION, TAPE AGE, WOW and FLUTTER.	You want the rhythmic patterns, wavering pitch and saturated, darkening repeats of tape: dub, reggae, rockabilly, surf, psychedelic guitar.
Blue	Vintage digital. An early-1980s studio rack digital delay: long, clean-to-gritty repeats through ERA's converters, GRIT, chorus and flanging from MODULATION, MONO / DUAL / PING-PONG, an infinite HOLD and the vintage PITCH bend.	You want the sound of 1980s records: rack chorus and flanging, long, slightly grainy repeats, the jet flanger on a drum bus.

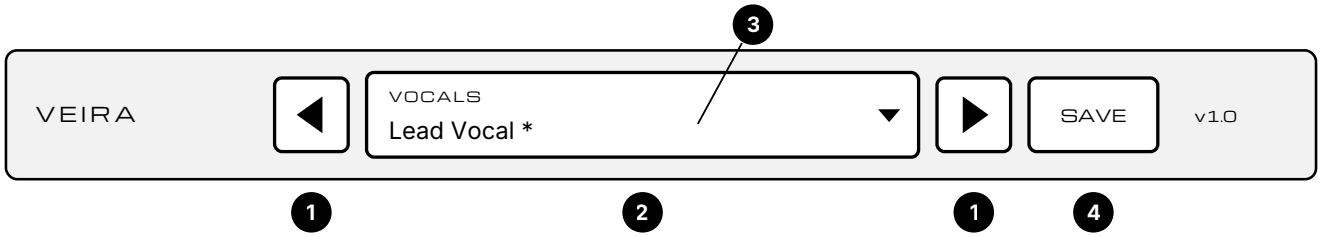
White is the clean one. Reach for it when you want echoes that are exactly the sound you played, on the grid, with full control of the stereo picture: vocals, rhythmic guitars, synths, ping-pong throws, or whenever the job needs FREEZE or two different times. For warm, chorused analog repeats, try Red; for tape's wavering, saturated patterns, Gold; for the grainy rack echoes and flanging of the 1980s, Blue.

Presets

VEIRA Delay White comes with **44 factory presets** in 9 folders. Each one is a starting point made for a real job. Load one close to what you need, then adjust the first control its note mentions.

The preset browser

The preset browser sits in the header, at the top of the window.



The header: logo and plugin name, then the preset browser, then the version.

FIGURE 33 The preset browser.

- 1 ◀ ▶ step to the previous or next preset, through every folder in order.
- 2 **The display** shows the folder (small, above) and the preset's name. Click it to open the preset menu. Hover over it to read the preset's note: what it's for and what to adjust first.
- 3 **An asterisk (*)** after the name means you've changed something since the preset loaded.
- 4 SAVE stores your current settings as a user preset.

The preset menu

Clicking the display opens a menu with:

- one submenu per **factory folder**, in the order shown below;
- **User Presets**, with your own presets in their folders;
- **Save...**, **Delete** (only for user presets: factory presets can't be deleted), **Rescan** (re-reads the user folder, if you copied presets in by hand) and **Show User Preset Folder** (opens it in Finder or Explorer).

Saving your own presets

1. Set VEIRA Delay White the way you like it.
2. Press SAVE. A dialog opens inside the plugin window.
3. Type a name, choose a folder or type a new folder name, and confirm.

Each user preset is one small .veirapreset file:

	Folder
macOS	~/Library/Audio/Presets/VEIRA/VEIRA Delay White/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Delay White\Presets\<Folder>\

Copy these files to move your presets to another computer, or to back them up. Presets keep loading in future versions: any control added later simply starts at its default.

Presets in your DAW

The factory presets also appear in your DAW's own preset or program menu, named *Folder: Name* (for example *Vocals: Lead Vocal*). Whatever preset is selected is saved with your session and comes back when you reopen it, including the asterisk if you'd changed it.

The **Default ▸ Init** preset equals a fresh instance of the plugin: every control at its default.

The factory folders

Folder	Presets
Default	Init
Vocals	Vocal Slapback, Dotted Eighth Vocal, Quarter Throw, Ballad Echo, Rap Doubler, Ducked Lead Wash
Guitars	Clean Guitar Echo, Rockabilly Slap, Solo Lead Delay, Wide Ping-Pong Pick, Acoustic Space, Dotted Arpeggio
Keys & Synths	Piano Room Echo, Synth Lead Ping, Pad Widener, Keys Quarter Echo, Arp Triplets
Drums	Snare Slap, Kit Sixteenths, Drum Room Doubler, Hat Ping-Pong, Percussion Triplet
Mix	Mix Glue Echo, Tight Space, Ping-Pong Send, Stereo Echo Send
Rhythmic	Dotted Eighths, Triplet Bounce, Split Quarter Eighth, Sixteenth Shuffle, Half-Note Wash, Vocal Chop Echo
Ambient	Endless Hall Echo, Dark Long Echoes, Floating Vocal, Wide Drift, Ambient Pad Send
Creative	Glide Pitch Bender, Runaway Dub, Comb Flanger, Telephone Echo, Robot Resonator, Stutter Thirty-Seconds

Levels and MIX. A delay doesn't depend on your track's level the way a compressor does: the presets sound the same on a quiet or a loud track. What matters is MIX. The presets are set for an **insert** (MIX 8–40 %), except the aux returns (*Ping-Pong Send*, *Stereo Echo Send* and *Ambient Pad Send*, at MIX 100 % with OUTPUT −3 or −4 dB). Measured at 120 BPM on matching material, every insert preset comes out within −1.0 to +0.6 dB of bypass, and every tail dies away (in 0.05 to 28 s) except *Runaway Dub*, which sings on by design. The synced presets follow your song's tempo. If you use a preset on an aux, switch on LOCK and set MIX to 100 %.

Recipes

Step-by-step starting points. In each, set MIX last, in the mix, not soloed.

The pop vocal echo

1. Load **Vocals ▸ Dotted Eighth Vocal** (STEREO, a dotted eighth, FEEDBACK 28 %, the loop filtered to 250 Hz–6 kHz, DUCK 40 %, MIX 20 %).
2. Raise DUCK until the echoes stay out of the words and answer in the gaps; set RELEASE for how soon they return.
3. For a bigger, bouncing throw, try **Quarter Throw** (PING-PONG, a quarter note, DUCK 60 %).

A slap on a vocal or a guitar

1. Load **Vocals ▸ Vocal Slapback** (MONO, 95 ms, FEEDBACK 8 %) or **Guitars ▸ Rockabilly Slap** (110 ms).
2. Move TIME L between 80 and 140 ms: shorter is tighter, longer more obvious.
3. Keep FEEDBACK low (0–15 %): a slap is one repeat.

Rhythmic guitar echoes

1. Load **Guitars ▸ Dotted Arpeggio** (MONO, a dotted eighth, FEEDBACK 45 %, MIX 35 %).
2. Play straight eighths: the echoes fill in the sixteenths between them.
3. For a wider part, try **Clean Guitar Echo** (STEREO) or **Wide Ping-Pong Pick** (PING-PONG, eighths).

A wide double, no echo

1. Load **Vocals ▸ Rap Doubler** (STEREO, 22 ms and 31 ms, MOD 20 %, WIDTH 130 %) or **Keys & Synths ▸ Pad Widener**.
2. Turn LINK off and keep both times under 35 ms and a few milliseconds apart.
3. Check in mono; if the part thins, lower WIDTH or bring the two times closer together.

A dub build and a frozen loop

1. Load **Creative ▸ Runaway Dub** (PING-PONG, a dotted quarter, FEEDBACK 104 %, the loop filtered to 300 Hz–2.5 kHz).
2. Play a short phrase and let the loop build; ride HIGH CUT and turn TIME L (with GLIDE) for pitch swoops. Bring FEEDBACK under 100 % to let it fade.
3. Or press FREEZE while a phrase repeats: it holds for as long as FREEZE is on, while you play over it.

Echoes for the whole mix on an aux

1. On an aux, load **Mix ▸ Stereo Echo Send** (a dotted eighth) or **Ping-Pong Send** (quarters side to side), both at MIX 100 %, and switch on LOCK.

2. Send each track to it: a little for depth, more for the parts that should echo; automate a send up for a single word or a snare hit to “throw” it into the echoes.

Specifications

Type	Digital delay: two delay lines with exact repeats, filters and a level limiter in the loop
Channels	Mono, stereo, and mono in / stereo out
Latency	None
Transparency	MIX 0 % with OUTPUT 0 dB returns the input bit for bit
Accuracy	The first repeat lands on the nearest sample to TIME × sample rate at 44.1, 48 and 96 kHz, from 1 ms to 4 s, and is the input sample itself; repeat n is the input × FEEDBACK^(n−1) with the filters off
Silence	The output ends in true digital zeros once every sample in the lines is under −140 dBFS
MODE	MONO, STEREO, PING-PONG (default STEREO)
TIME L / TIME R	1 ms to 4 s (default 375 ms) / LINK on, off (default on)
NOTE L / NOTE R / SYNC	1/64 to 1/1 (default 1/8); SYNC off
RHYTHM	STRAIGHT, DOTTED (× 1.5), TRIPLET (× 2/3) (default STRAIGHT)
FEEDBACK	0 to 110 % (default 40 %); over 100 % held by the loop limiter (−6 dBFS at 110 %)
FREEZE	On / off (default off)
TIME CHANGE	GLIDE (pitch bends, at most an octave down or a fifth up) or FADE (50 ms crossfade) (default GLIDE)
LOW CUT	OFF, 20 Hz to 2 kHz, 12 dB/oct, in the loop (default OFF)
HIGH CUT	1 to 20 kHz, OPEN, 12 dB/oct, in the loop (default OPEN)
DUCK / RELEASE	0 to 100 %, up to 30 dB (default 0 %) / 20 ms to 2 s (default 250 ms)
WIDTH	0 to 150 % (default 100 %)
MOD	0 to 100 %, up to ±1.2 ms at 0.55 Hz (default 0 %)
MIX / LOCK	0 to 100 %, equal power (default 25 %) / on, off (default off)
OUTPUT	−24 to +12 dB (default 0.0 dB)
Metering	REPEATS (every echo at its time and level, lit live); PER REPEAT (the 1st, 2nd, 4th and 8th echo across frequency); IN and OUT meters (peak, RMS); short-term and integrated loudness per ITU-R BS.1770-4 / EBU R 128
Presets	44 factory presets in 9 folders, plus your own
Window	1480 × 940 points; resizable from 75 % to 200 %, saved with the session
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vdwh

Troubleshooting and questions

The sound drops out for a moment every 30 seconds. The plugin isn't activated on this computer. Open VEIRA Manager and sign in; the strip at the bottom of the plugin's window says exactly what's wrong. See *Getting started ▸ Activation and the licence*.

I don't see VEIRA Delay White in my DAW. Make sure VEIRA Manager shows SHOW (installed) for it, then rescan plugins in your DAW. In Logic Pro, open the Plug-in Manager and choose *Reset & Rescan Selection* if needed. Look under the manufacturer **VEIRA**.

I can't hear the echoes. Check MIX: at 0 % the output is the dry signal only. Check that DUCK isn't at 100 % on a track that never pauses, and that FREEZE is off (with FREEZE on, nothing new enters the delay). On an aux, check that the tracks' sends are up.

The echoes don't follow the tempo. Switch on SYNC: TIME L and TIME R then give way to NOTE L and NOTE R. If they still drift, check your DAW's tempo; the delay follows the tempo your DAW reports.

The right side doesn't change when I turn TIME R. LINK is on (the right follows the left), or the MODE is MONO. Switch LINK off, or choose STEREO or PING-PONG.

The echoes keep getting louder. FEEDBACK is over 100 %: the loop builds by design and the loop limiter holds it. Turn FEEDBACK under 100 % to let it fade.

The echoes muddy the mix. Raise LOW CUT (150–300 Hz), lower HIGH CUT (5–7 kHz), or add DUCK. Echoes almost always need less low end than they seem to soloed.

Turning TIME bends the pitch. That's GLIDE. Choose FADE under TIME CHANGE for clean jumps with no pitch change.

The echoes came back with the dry signal on my aux after I changed preset. The preset set MIX to its own value. Set MIX to 100 % and switch on LOCK.

The doubled part sounds thin in mono. Very short, different times either side can cancel some frequencies when summed. Lower WIDTH, bring the two times closer, or use MONO.

Does VEIRA Delay White add latency? No. Nothing in it looks ahead, so it adds no delay beyond the echoes, and your DAW's bypass needs no compensation.

Does it colour the sound? The dry signal, never: at MIX 0 % the output is the input, bit for bit. With the filters off and MOD at 0 %, the echoes themselves are exact copies of the input. For colour, see *Which colour delay to choose*.

The window is too small (or too big) on my screen. Drag its bottom-right corner. It scales from 75 % to 200 % and keeps its proportions; the size is saved with your session.

How do I type an exact value? Right-click the knob (Control-click on a Mac), type the number and press Return.

Do my sessions keep my settings? Yes. Every control, the selected preset and the window size are saved with your session.

Contact: support@veiraaudio.com. Mention your computer (Mac or Windows and its version), your DAW and version, and what you see.



VEIRA Delay White · User Manual · Version 0.1.0

Support: **support@veiraaudio.com** · Web: **veiraaudio.com**

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