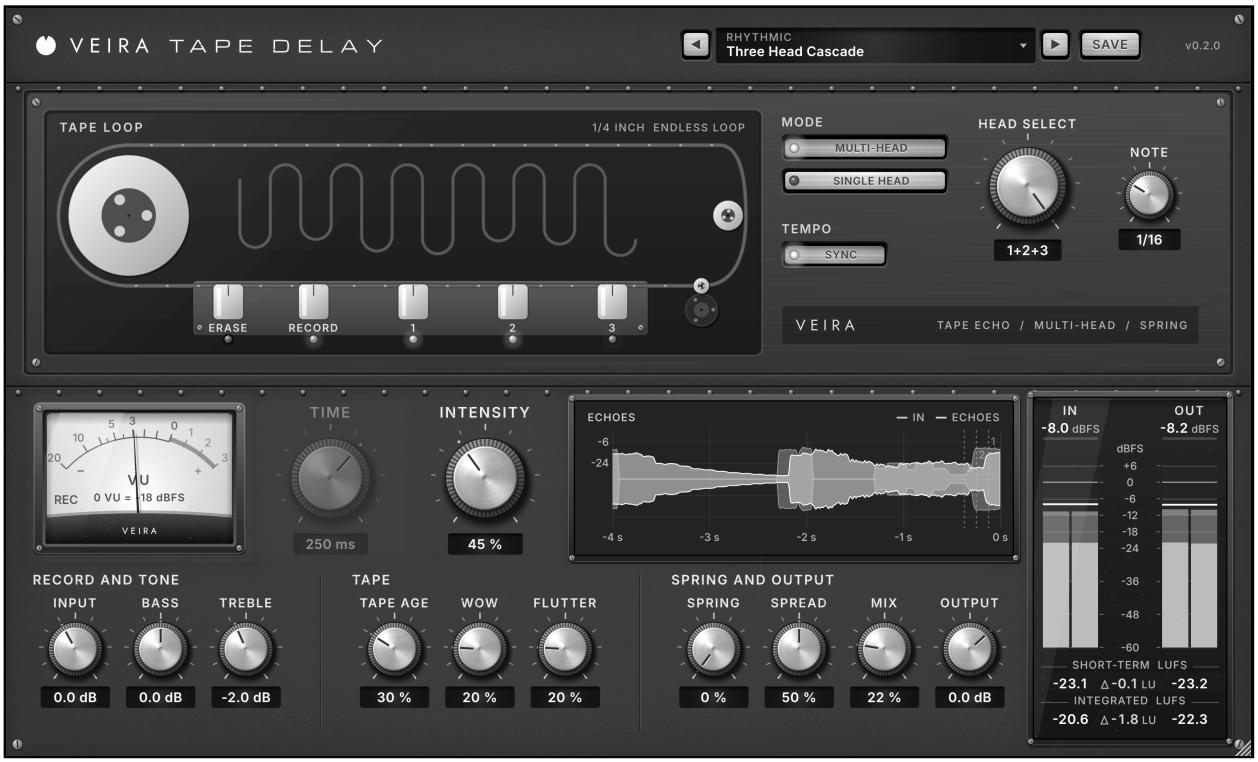
VEIRA

TAPE ECHO

VEIRA Tape Delay

User Manual

A tape echo machine: a loop of tape past three playback heads, every repeat recorded onto the tape again, so the echoes saturate, darken and bend in pitch as on the classic studio echoes.



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Welcome

Thank you for choosing **VEIRA Tape Delay**. It is a tape echo machine of the kind studios used before digital delays: an endless loop of tape runs past an erase head, a record head and the playback heads, and each playback head plays back what was recorded a moment earlier. Feed part of the echo back to the record head and every repeat is recorded onto the tape again, so the repeats saturate, darken and round off as they fade.

The whole top of the plugin is the machine. The tape moves at the motor's speed, the rollers turn with it, the RECORD lamp glows with the level going onto the tape and a lamp under each playback head glows with its echo. Underneath sit the controls a real machine has: the record level with its VU meter, the echo time and the feedback, a tone control in the loop, the tape's wear and the transport's wobble, a spring reverb, and the mix.

What makes it different

- **Two machines in one.** MULTI-HEAD is the classic studio echo: three playback heads at one, two and three times the echo time, in any of seven combinations, for rhythmic patterns. SINGLE HEAD is one sliding playback head on a faster tape: brighter, cleaner repeats with less wow, for slapback.
- **Every repeat goes through the tape again.** The repeats are recorded through BASS and TREBLE and onto a model of magnetic tape (VEIRA Tape Saturator's), so each pass comes back a little darker and rounder, and a hot INPUT saturates them.
- **TIME is the motor.** In MULTI-HEAD, changing TIME changes the tape's speed: the motor takes about a second to settle, and the echoes on the tape bend down in pitch as it slows and up as it speeds up. A slower tape is also a darker one, as on a real machine.
- **Self-oscillation that stays musical.** INTENSITY goes to 120 %. Past about 100 % the loop runs away into the tape's saturation, not past it: the echoes never go over −1 dBFS.
- **A tape that wears.** TAPE AGE, WOW and FLUTTER add distortion, hiss, a duller top, pitch waver and dropouts: worn spots fixed on the loop that pass each head in turn and come round again.
- **No latency.** At MIX 0 % the output is the input, bit for bit, so you can use it while you record.
- **Legible at any size.** Clear, plain lettering on the vintage machine, and a window you can scale from 75 % to 200 %.

How this manual is organised. *Getting started* covers installing and activating. *The panel at a glance* names every part of the window and gives a quick start. *How a tape echo works* is a short primer on tape echoes; read it if words like *feedback* or *self-oscillation* are new to you. *The machine* explains the top of the plugin: the tape, the heads, MODE, HEAD SELECT and the tempo controls. *Controls* explains every knob with drawings measured from the plugin, *Displays* teaches you to read the ECHOES display and the meters, and *Inserts and sends*, *Presets*, *Recipes*, *Specifications* and *Troubleshooting* follow.

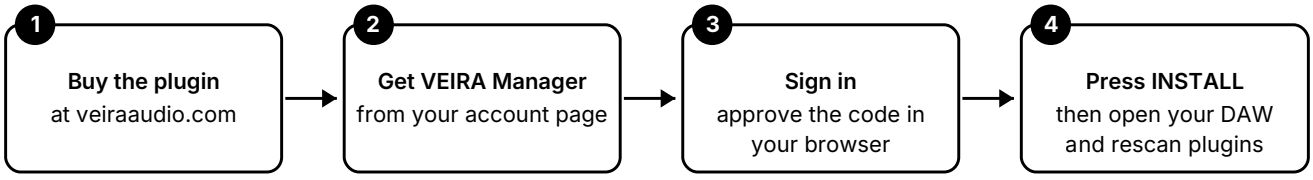
Getting started

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 Tape Delay 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 Tape Delay 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 Tape Delay appears in your DAW under the manufacturer **VEIRA** (in Logic Pro: Audio Units ▸ VEIRA ▸ VEIRA Tape Delay).

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 Tape Delay 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.

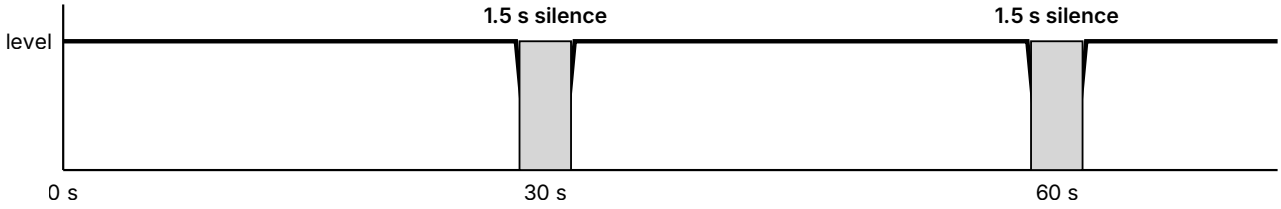


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 Tape Delay. 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 Tape Delay 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

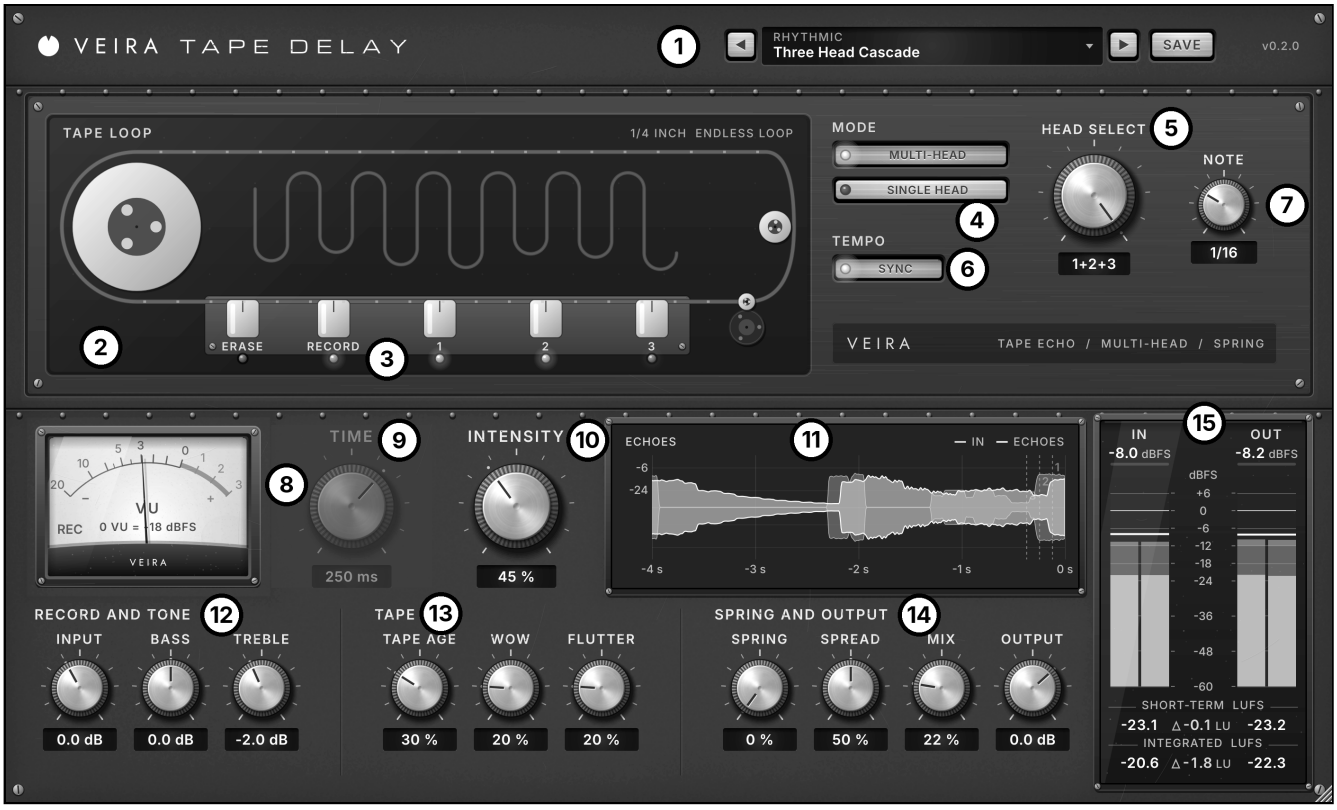


FIGURE 3 VEIRA Tape Delay, with the factory preset *Rhythmic: Three Head Cascade* loaded.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	The tape loop	The machine's tape compartment: the loop moves at the tape's speed, the rollers turn with it.
3	The heads and lamps	ERASE, RECORD and the playback heads 1, 2 and 3; the RECORD lamp glows with the record level, each head's lamp with its echo.
4	MULTI-HEAD, SINGLE HEAD	MODE: three fixed playback heads, or one sliding head.
5	HEAD SELECT	Which playback heads play (MULTI-HEAD).
6	SYNC	TIME follows your DAW's tempo.
7	NOTE	The first head's echo as a note value, while SYNC is on.
8	RECORD LEVEL (VU meter)	The level going onto the tape: the input and the repeats together.
9	TIME	The first head's echo time, 20 ms to 1 s.
10	INTENSITY	The feedback: how many repeats.

	Part	What it does
11	ECHOES display	The last 4 seconds: what comes in, the echoes, the heads' times and the dropouts.
12	RECORD AND TONE	INPUT, BASS and TREBLE: the record level and the tone in the loop.
13	TAPE	TAPE AGE, WOW and FLUTTER: the tape's wear and the transport's wobble.
14	SPRING AND OUTPUT	SPRING, SPREAD, MIX and OUTPUT.
15	Meter bridge	Input and output level and loudness.

The window is laid out like the machine itself: the **transport** across the top (the tape compartment, then the mode, head and tempo controls) and the **electronics** underneath (the record level, the echo controls, the ECHOES display, the knobs and the meters).

Using the controls

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

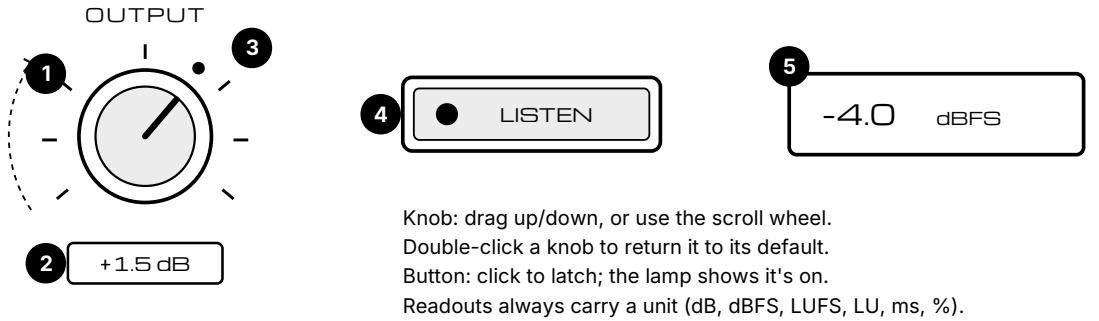


FIGURE 4 The parts you'll find on every VEIRA panel (the labels are examples).

- 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).

The MODE buttons (MULTI-HEAD and SINGLE HEAD) work as a pair: one is always lit, and pressing the other switches to it. In your DAW they are one parameter, *Mode*. HEAD SELECT and NOTE are knobs that click through their positions.

Dimmed controls. While SYNC is on, NOTE sets the echo time and TIME is dimmed; while it's off, NOTE is dimmed. A dimmed control still turns, and its value is kept for when you switch back.

Resize the window: drag its bottom-right corner (the small diagonal lines). It scales from 75 % to 200 % of its normal size and keeps its proportions, so the machine, the meters and the lettering stay sharp. Your DAW saves the size with the session. Every legend, scale and readout is printed in a plain, legible type, 12 points and up at the normal size.

Quick start: an echo in five moves

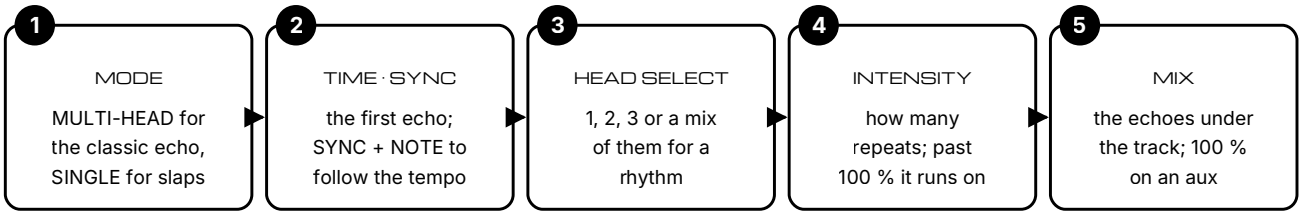


FIGURE 5 The quickest way to a good tape echo. The rest of this manual explains each step.

Or load a factory preset close to your job (see *Presets*): each preset's note says which control to set first, usually TIME, INTENSITY or MIX.

How a tape echo works

If you already know tape echoes, skip to *The machine*. If not, these pages explain everything the plugin does, and why the sound of a tape echo is still so sought after.

A loop of tape and its heads

A tape echo is a small tape recorder whose tape is joined into an **endless loop**. The tape runs past three kinds of head. The **erase head** wipes it clean; the **record head** writes the sound onto it a moment later; then one or more **playback heads**, further along, read it back. The distance between the record head and a playback head, divided by the tape's speed, is the **echo time**. Run the tape faster and the echo comes sooner; run it slower and it comes later.

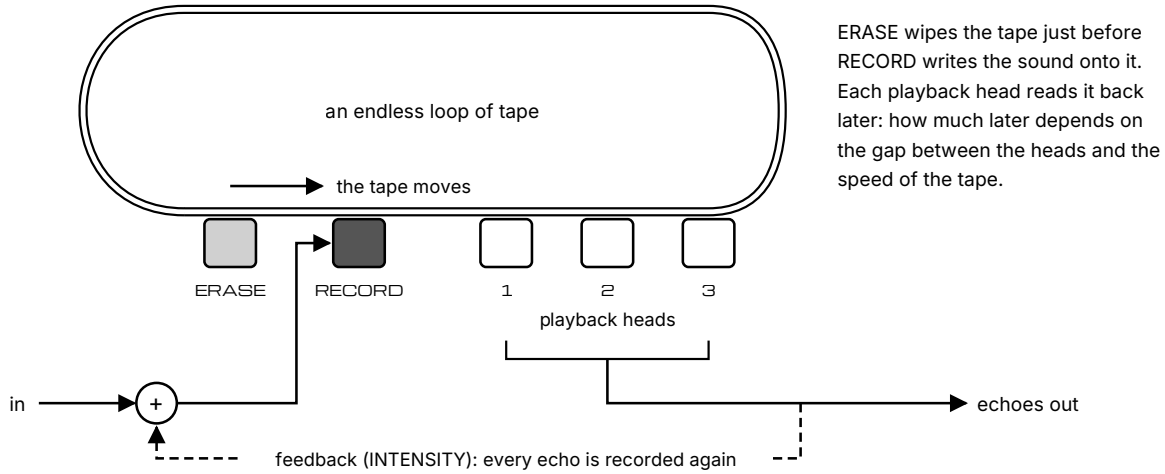


FIGURE 6 A tape echo. The sound is recorded onto an endless loop of tape and played back by heads further along it. Part of what the heads play goes back to the record head, so each echo is recorded again and comes back once more: the repeats.

Feedback: the repeats

Send part of what the playback heads read back to the record head, and each echo is recorded again and played back again, a little quieter each time. That is **feedback**; on tape echoes the knob is often called **intensity**. At low settings you hear one or two repeats; at high settings a long trail; and past the point where each repeat is as loud as the one before, the loop feeds itself and grows into a howl or a drone: **self-oscillation**, a sound dub engineers play like an instrument.

Every repeat through the tape again

On a digital delay, each repeat is a perfect copy of the last. On a tape echo, each repeat has been recorded onto tape and played back once more, so it carries the tape's sound again, and again:

- **It saturates.** Tape rounds off loud peaks softly. A repeat that hits the tape hard comes back rounder and denser, and the next pass adds more.

- **It darkens.** Each trip through the heads loses a little of the highest frequencies, so the repeats get warmer and further away as they fade.
- **It thins at the bottom.** The heads also lose a little of the deepest lows on each pass.

That is why a tape echo sits behind a voice or a guitar instead of competing with it.

The motor, wow and flutter

On a multi-head machine the heads are fixed, and the echo time is set by the **speed of the motor**. Turn the speed down and the motor slows over a moment; the sound already on the tape now passes the heads more slowly, so it plays back **lower in pitch** until the new speed settles. That swoop is part of the classic sound. A slower tape is also a **darker** one: the same high note is packed into less tape, and the heads read it less well.

No transport runs perfectly steadily. Slow changes in speed make the pitch sway: **wow**. Fast ones, from the capstan and rollers, add a roughness to held notes: **flutter**. And the tape itself hisses, wears and loses its oxide in places, so the sound dips for a moment as a worn spot passes the head: a **dropout**.

What happens inside VEIRA Tape Delay

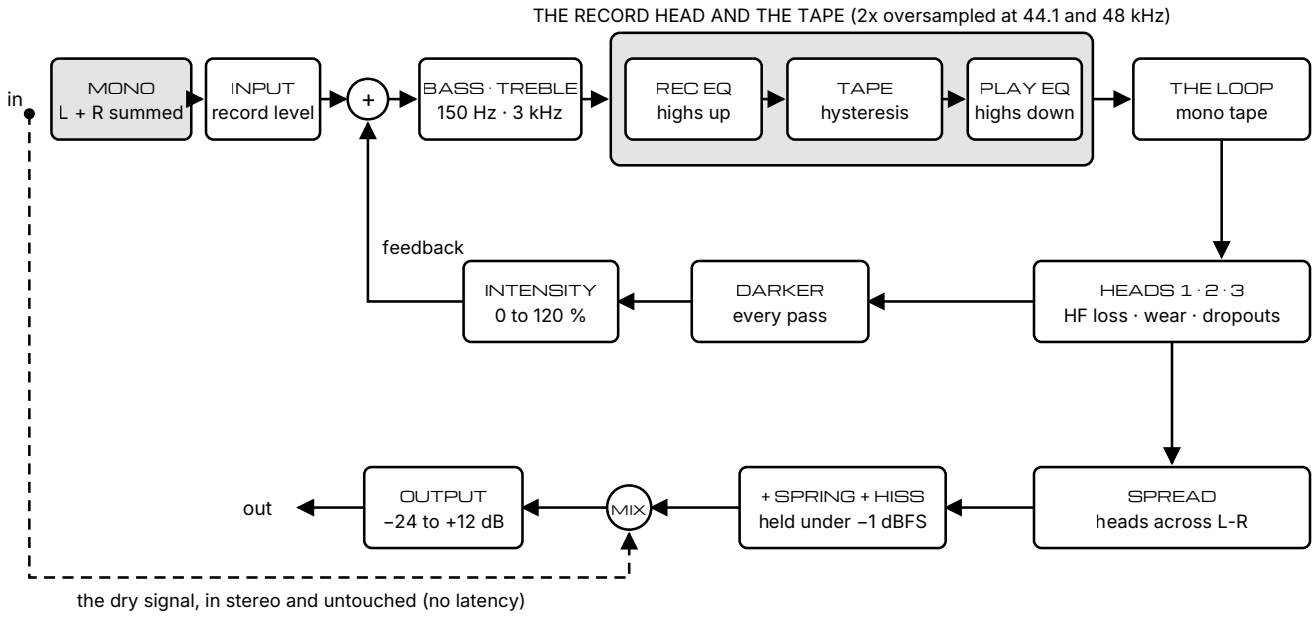


FIGURE 7 Signal flow. The input, summed to mono, is recorded with the feedback through BASS and TREBLE onto a model of magnetic tape. The heads read the loop back; their sum goes back to the record head at INTENSITY, a little darker every pass. The heads are spread across the stereo field, the spring and the tape's hiss are added, and MIX blends the echoes with the untouched dry signal.

Step by step:

1. **The input** is summed to mono (the machine has one tape) and set to the record level by INPUT.
2. **The feedback** from the heads is added to it.
3. BASS **and** TREBLE shape both together before the record head, so every repeat is shaped again on every pass. The **RECORD LEVEL** meter shows the level here.

4. **The tape.** The signal is oversampled (2× at 44.1 and 48 kHz), its highs boosted by the record EQ, recorded through a model of magnetic hysteresis (the tape model of VEIRA Tape Saturator), and the highs taken back down by the playback EQ. Quiet signals come back at their own level; loud ones, and loud highs first, are rounded off.
5. **The heads** read the loop, each through its own high-frequency loss, the spacing loss of a worn tape and its dropouts.
6. **The loop back:** the heads that play are summed, a gentle low-pass takes a little more top off every pass, a 35 Hz high-pass keeps the loop from building up rumble, and the sum goes back to step 2 at INTENSITY.
7. **The output:** the heads are spread across the stereo field by SPREAD, through the playback head's low-frequency bump, and held under −1 dBFS by a soft knee. The **spring** and the tape's **hiss** are added.
8. MIX blends these echoes with the dry input, which stays in stereo and untouched, and OUTPUT sets the final level.

There is **no latency**: the dry signal is never delayed, and the echoes land exactly on their times.

The machine

The top of the window is the machine: the tape compartment on the left, and on the right the mode, head and tempo controls.

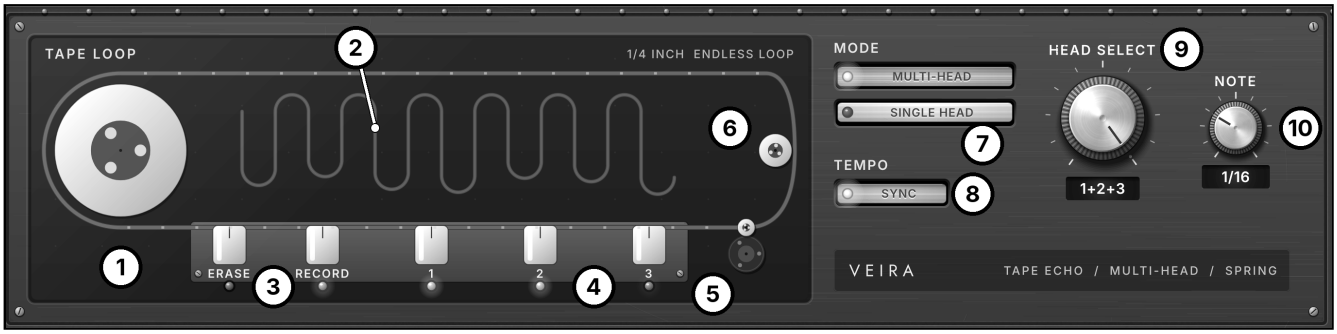


FIGURE 8 The machine: 1 the left roller, 2 the slack of the loop, folded in the compartment, 3 the ERASE and RECORD heads, 4 the playback heads 1, 2 and 3 with their lamps, 5 the capstan and pinch roller, 6 the tension roller, 7 MODE, 8 SYNC, 9 HEAD SELECT and 10 NOTE.

The tape loop and the heads

The loop of tape runs from the left roller 1 along the head block, past ERASE, RECORD and the playback heads 3 4 , between the capstan and the pinch roller 5 , which pull it at the motor's speed, round the tension roller 6 and back along the top; the rest of the loop lies folded in the compartment 2 .

- **The tape moves** while your DAW plays, and also while sound comes in (and for two seconds after it stops), so it moves when you play a live input with the transport stopped. It moves at the tape's real speed for your TIME (see *TIME*): fast for short echoes, slowly for long ones, and it speeds up and slows down like a motor.
- **The RECORD lamp** (red on screen) glows with the level going onto the tape. The ERASE head has no lamp.
- **Each playback head's lamp** (amber on screen) glows with that head's echo: dark below about −48 dBFS, full at −6 dBFS. Heads that HEAD SELECT has switched off are drawn darker, with a faint label, and their lamps stay dark.

MODE: MULTI-HEAD and SINGLE HEAD

The two buttons 7 choose the machine.

Mode	The machine	The tape	The sound
MULTI-HEAD	Three playback heads, evenly spaced, at 1×, 2× and 3× TIME. TIME is the motor's speed.	7.5 inches per second at TIME 250 ms; faster for shorter times, slower for longer ones	The classic studio echo: warm, fat repeats, and the pitch bends when TIME changes. The default.

Mode	The machine	The tape	The sound
SINGLE HEAD	One playback head that slides along the head block to TIME.	15 inches per second, always	Brighter, cleaner repeats with less wow (60 % of MULTI-HEAD's); TIME moves the head. For slapback and short, clean echoes.

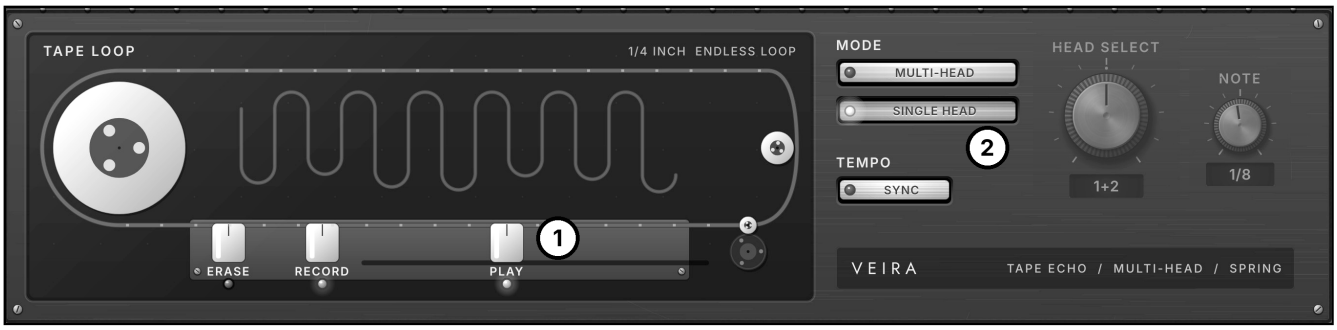
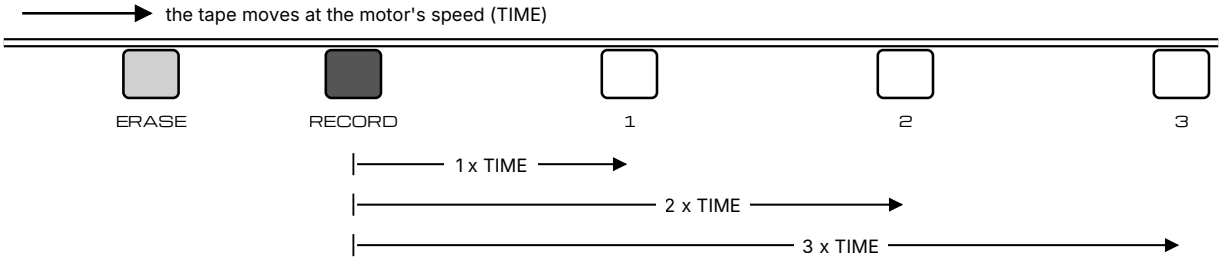


FIGURE 9 SINGLE HEAD (the preset *Guitar: Rockabilly Slapback*, TIME 110 ms): 1 the one playback head, PLAY, which slides along its rail as TIME changes, and 2 SINGLE HEAD lit.

In SINGLE HEAD the machine shows one playback head labelled PLAY on a rail; it slides to the right for longer times and to the left for shorter ones. HEAD SELECT has no effect in this mode (the knob stays where it was, for when you switch back), and SPREAD works differently (see *SPREAD*).

Switching between the modes glides the machine to its new character, and the two are matched in level, so you can compare them while the music plays.

HEAD SELECT: which heads play



The echo times, MULTI-HEAD

TIME	head 1	head 2	head 3
100 ms	100 ms	200 ms	300 ms
250 ms (default)	250 ms	500 ms	750 ms
400 ms	400 ms	800 ms	1.20 s
1000 ms	1.00 s	2.00 s	3.00 s
SYNC 1/16 at 120 BPM	125 ms (1/16)	250 ms (1/8)	375 ms (1/8D)

FIGURE 10 The head block in MULTI-HEAD. The three playback heads sit at one, two and three head spacings from the RECORD head, so their echoes come at one, two and three times TIME.

HEAD SELECT 9 chooses which of the three playback heads play: 1, 2, 3, 1+2, 2+3, 1+3 or 1+2+3 (the default is 1+2). Every head that plays is heard **and** feeds the repeats, so with two or three heads the repeats interleave into rhythms. To keep the loop the same whatever you choose, the feedback is shared between the heads that play, and their sum is balanced so that more heads don't sound louder.

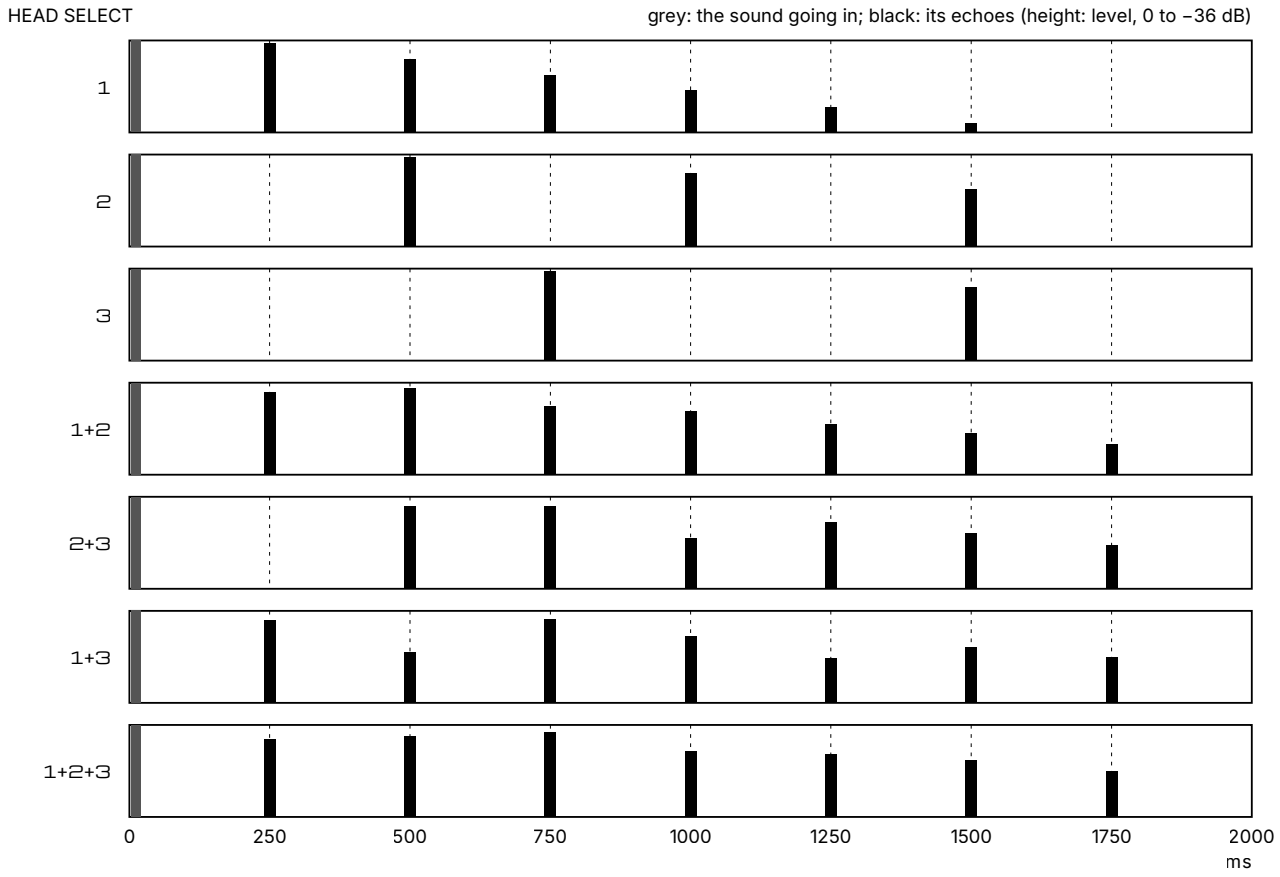


FIGURE 11 The seven HEAD SELECT positions, measured from the plugin: a short 1 kHz burst at 0 ms, TIME 250 ms, INTENSITY 50 %. Head 1 alone repeats every 250 ms, each repeat about 6 dB quieter. Two or three heads make patterns: 1+3 gives a long-short gallop, 1+2+3 a dense cascade where the repeats of different heads land together.

Some patterns to know (with TIME set to a beat value, or with SYNC):

- 1: a plain, even echo. 2 or 3 alone give the same, at twice or three times the time.
- 1+2: an echo and its double: the default, and a good general echo.
- 1+3: a gallop (TIME 1/16: hits on the 1/16 and the dotted 1/8).
- 2+3: two longer echoes, a 2:3 pattern that suits slow, washy parts.
- 1+2+3: three echoes per pass: a cascade that fills up fast. Lower INTENSITY with it.

SYNC and NOTE: echoes in time

SYNC 8 makes TIME follow your DAW's tempo. While it's lit, NOTE 10 sets the **first head's** echo as a note value: 1/64, 1/32T, 1/32, 1/16T, 1/32D, 1/16, 1/8T, 1/16D, 1/8, 1/4T, 1/8D, 1/4, 1/2T, 1/4D, 1/2, 1/1T, 1/2D or 1/1 (T: triplet, D: dotted; the default is 1/8). Heads 2 and 3 follow at twice and three times it, so NOTE 1/16 with 1+2+3 gives echoes on the 1/16, the 1/8 and the dotted 1/8.

- The echo time stays within TIME's range, **20 ms to 1 s**. At slow tempos the longest values are held at 1 s: at 120 BPM a 1/2 is exactly 1 s, so 1/2D, 1/1T and 1/1 also play at 1 s. Heads 2 and 3 can go up to 2 and 3 s.
- A tempo change in your DAW changes the motor's speed, so in MULTI-HEAD the echoes bend in pitch on the way, as with TIME.
- Without a tempo from the host (some standalone setups), SYNC uses 120 BPM.

Controls

TIME, INTENSITY and the RECORD LEVEL meter



FIGURE 12 1 The RECORD LEVEL meter, 2 TIME and 3 INTENSITY (here the preset *Guitar: Lead Guitar Echo*: SYNC off, TIME 350 ms, INTENSITY 40 %).

Control	Range	Default	
TIME	20 ms to 1 s, in 1 ms steps	250 ms	The first head's echo. Heads 2 and 3 at 2× and 3× it.
INTENSITY	0 to 120 %	40 %	The feedback: how many repeats.

TIME

TIME is the first playback head's echo: from 20 ms (a metallic flam) through slapback (70 to 130 ms) to a full second. Its knob is logarithmic, so the short times get as much of its travel as the long ones. Above 999 ms it reads in seconds (1.00 s).

In MULTI-HEAD, TIME sets the **motor's speed**, and two things follow from that:

The pitch bends when you change it. The motor glides to its new speed (most of the way in about a third of a second, settled after about a second). While it changes, the sound already on the tape plays back at a different speed from the one it was recorded at: lower while the tape slows down, higher while it speeds up. The later heads hold more tape, so they bend further and for longer.

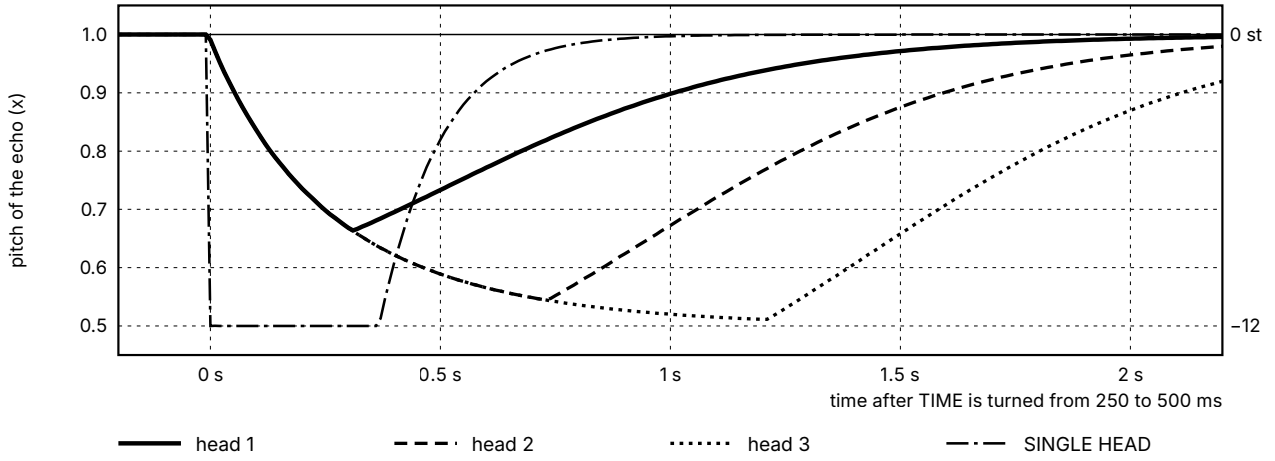


FIGURE 13 The pitch of a steady tone's echo when TIME is turned from 250 to 500 ms, measured from the plugin. In MULTI-HEAD, head 1 dips to about 0.66 of its pitch (seven semitones down), head 2 to 0.54 and head 3 to 0.51, each until the tape recorded at the new speed reaches it. In SINGLE HEAD the head slides instead: exactly an octave down while it moves, for about 0.4 s.

Turned the other way (from 500 to 250 ms), the echoes rise instead: head 1 to about 1.58 times its pitch and head 3 to about 1.9 times. Nothing stalls, runs backwards or clicks on the way. This is the classic *tape warble* effect: sweep [TIME] while the echoes ring (or automate it) for swoops and sirens. If you don't want it, change [TIME] between phrases, or use [SINGLE HEAD].

In [SINGLE HEAD] the motor runs at a fixed speed and the head moves instead, as fast as it can: it can't move faster than half the tape's speed, so a small change is over in about a tenth of a second and a big one takes longer (250 to 500 ms: about 0.4 s). On the way the echo is at most an octave down (longer times) or a fifth up (shorter times), and then it is back at its pitch at once.

A slower tape is a darker tape. In [MULTI-HEAD] the tape runs at 7.5 inches per second (ips) at 250 ms, the classic speed; at 125 ms it runs at 15 ips, at 500 ms at 3.75 ips and at 1 s at 1.9 ips. Short echoes are brighter; long ones are darker and softer, as on a real machine. [SINGLE HEAD] always runs at 15 ips.

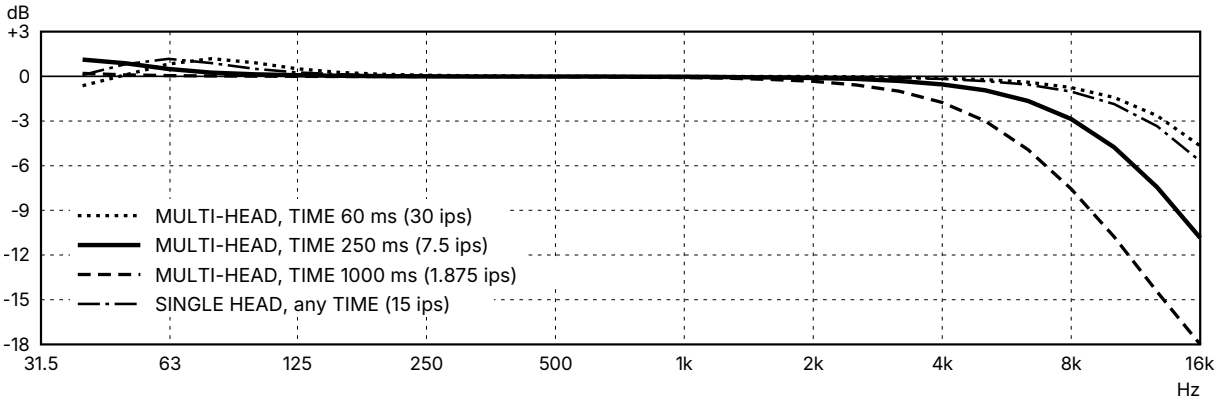


FIGURE 14 The first echo's frequency response (TAPE AGE 0 %), measured from the plugin. In MULTI-HEAD the top end falls with the tape's speed: at 1000 ms it is 18 dB down at 16 kHz, at 250 ms 11 dB, at 60 ms under 5 dB. SINGLE HEAD's faster tape is about as bright as MULTI-HEAD at 60 ms. The small lift in the low end is the playback head's bump.

When [SYNC] is on, [TIME] is dimmed and [NOTE] sets the time instead (see *SYNC and NOTE*).

INTENSITY

INTENSITY is the feedback: how much of the echo goes back onto the tape. Each repeat comes back at about INTENSITY times the one before:

INTENSITY	Each repeat	What you hear
0 %	No repeats	One echo per playing head (slapback, doubling).
25 %	About 12 dB quieter	Two or three repeats.
50 %	About 6 dB quieter	A clear trail of repeats.
80 %	About 2 dB quieter, and darker	A long trail that fades into the distance.
100 %	About 0.3 dB quieter	Repeats that hardly die away: a held loop.
Over about 102 %	Louder, until the tape saturates	Self-oscillation: the loop runs on by itself.

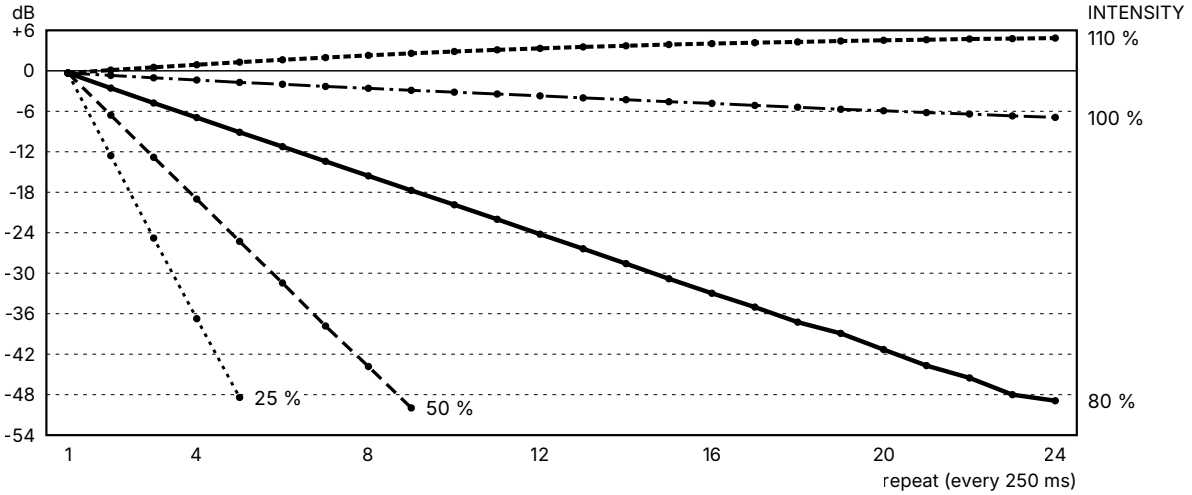


FIGURE 15 Each repeat's level against the input, measured from the plugin (head 1, TIME 250 ms, a 1 kHz burst). The repeats fall in a straight line: about 12 dB each at 25 %, 6 dB at 50 %, 2 dB at 80 %. At 100 % they fall only 0.3 dB each. At 110 % they grow, and then level off a few dB above where they started: the tape's saturation holds the loop.

Self-oscillation. Past about 102 to 105 % (in both modes) the loop gains on every pass and runs away. It doesn't explode: it runs into the tape's saturation, which rounds it off, and a soft ceiling keeps the echoes themselves under −1 dBFS whatever you do (before SPRING, MIX and OUTPUT). The loop becomes a sustained, saturated tone or drone whose pitch follows TIME. Bring INTENSITY back under 100 % to let it die away.

> **Tip:** Self-oscillation is a performance: automate INTENSITY up past 100 % for a bar, sweep TIME for a siren, then pull INTENSITY back. The presets *Dub: Dub Siren Runaway*, *Dub: Self Oscillation Drone* and *Creative FX: Infinite Hold Loop* start there.

With two or three heads, INTENSITY is shared between them, so the loop as a whole repeats at about the same rate whatever HEAD SELECT is. BASS and TREBLE boosts don't raise the loop above INTENSITY either (see *BASS and TREBLE*).

Every repeat is a little darker. On each pass the repeat goes through the tape and the heads again, and a little more top is taken off. The repeats get warmer and further away as they fade, and lose a little of the deepest lows too.

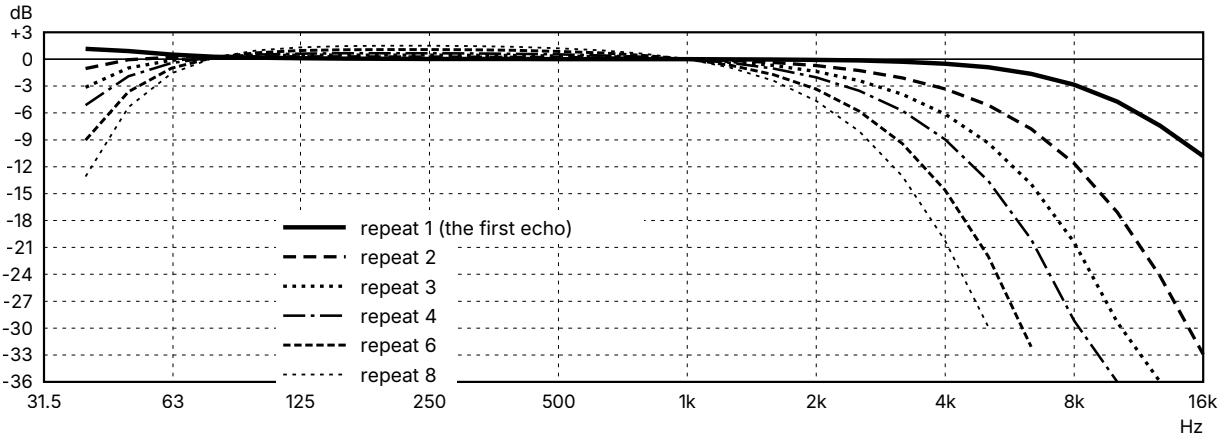


FIGURE 16 The repeats' frequency response, each set to 0 dB at 1 kHz so you can compare their shapes: INTENSITY 80 %, TIME 250 ms, TAPE AGE 0 %, measured from the plugin. Each pass loses about 1.5 to 2 dB more around 3 kHz and more above; by the eighth repeat the top octave is gone. The lows thin a little on each pass too, through the loop's 35 Hz high-pass. Lines stop where the repeat sinks into the tape's hiss.

The RECORD LEVEL meter

The VU meter (1) shows the level **going onto the tape**: the input at the INPUT level, plus the repeats, after BASS and TREBLE. It is a true VU meter with standard needle ballistics: it shows the average level, rising and falling over about a third of a second. The scale runs from −20 to +3 VU, with **0 VU = −18 dBFS RMS** printed on the face. Every tick is there, but only some are numbered (20, 10, 5, 3 and 0 below zero; 1, 2 and 3 in the red), so the figures stay large; REC at the lower left marks it as the record level. From 0 VU up (the red zone) the tape starts to saturate.

Because the repeats are recorded too, the needle stays up while echoes ring, and with a high INTENSITY it can sit higher than the input alone would put it.

RECORD AND TONE: INPUT, BASS and TREBLE



FIGURE 17 (1) INPUT, (2) BASS and (3) TREBLE, under the label RECORD AND TONE.

Control	Range	Default	
INPUT	−12 to +18 dB	0.0 dB	The record level: how hard the tape is hit.
BASS	−12 to +12 dB	0.0 dB	A low shelf at 150 Hz, in the loop.
TREBLE	−12 to +12 dB	0.0 dB	A high shelf at 3 kHz, in the loop.

INPUT sets how hard the sound is recorded onto the tape. Watch the RECORD LEVEL meter: below 0 VU the repeats are clean; around 0 to +6 VU they round off and thicken; well above, they saturate into grit, more so with every pass. The tape plays back what was recorded, so INPUT raises the echoes' level too (not the dry signal's): after a big INPUT move, rebalance with MIX. Turned down (it goes to −12 dB), it keeps a hot track clean on tape.

The factory presets were set on tracks peaking around −8 dBFS (drums −6, a mix −4). On a much hotter or quieter track, set INPUT by the meter first.

BASS and TREBLE are shelving filters **before the record head**, in the loop. That placement matters: they shape the first echo, and then every repeat **again**, on every pass. A cut of 3 dB is a 3 dB cut on the first echo, 6 dB on the second, 9 dB on the third: the repeats grow thinner or darker as they fade. A boost does the opposite: fuller or brighter repeats. They don't touch the dry signal.

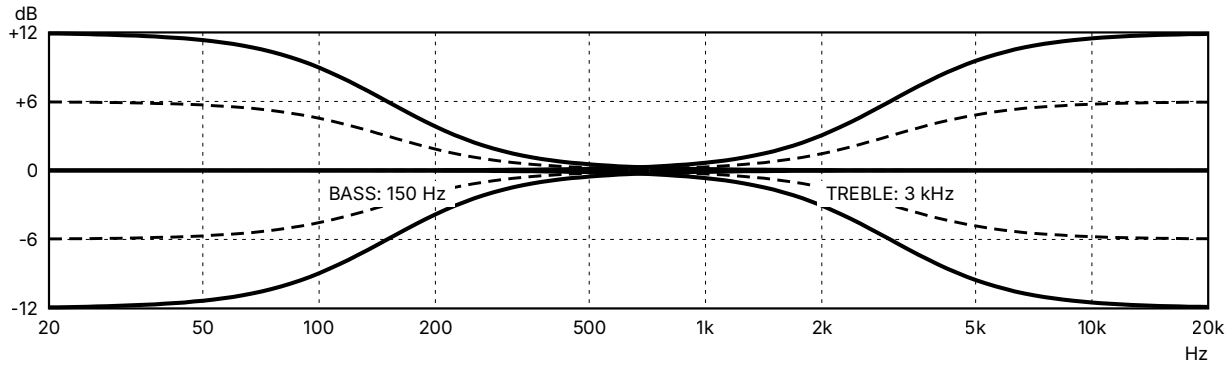


FIGURE 18 BASS (150 Hz) and TREBLE (3 kHz) at ±6 and ±12 dB, as the plugin designs them. Each is a gentle shelf: half its gain at its frequency, all of it an octave or two beyond.

- **Cut** BASS (−3 to −8 dB) to keep the low end out of the repeats: the echoes of a bass, a kick or a full mix stay clear of the low end instead of muddying it. Many presets do this.
- **Cut** TREBLE (−2 to −6 dB) for dark repeats that sit behind a vocal; turn it right down (−12 dB) for an underwater sound.
- **Boost** TREBLE (+2 dB) for bright, cutting slapback; **boost** BASS for fat, warm repeats.

A boost never makes the loop run away. When you boost either control, the feedback comes down by the biggest boost, so the boosted band repeats at INTENSITY and the rest a little shorter. Cuts don't change it.

TAPE: TAPE AGE, WOW and FLUTTER

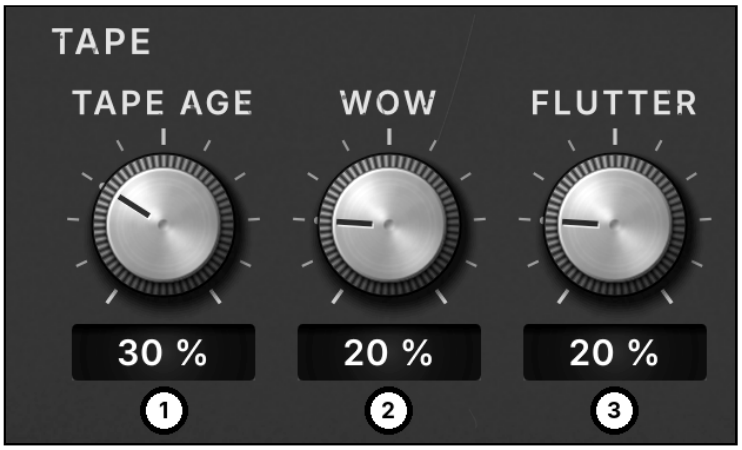


FIGURE 19 1 TAPE AGE, 2 WOW and 3 FLUTTER, under the label TAPE.

Control	Range	Default	
TAPE AGE	0 to 100 %	30 %	The tape's wear: distortion, hiss, a duller top, more wow, dropouts.
WOW	0 to 100 %	20 %	Slow speed changes: a slow pitch sway on the echoes.
FLUTTER	0 to 100 %	20 %	Fast speed changes: a roughness on the echoes.

The defaults are a well-kept machine with a tape that has seen some use. Everything on this row affects only the echoes, never the dry signal.

TAPE AGE wears the tape and the machine, all together:

- **More distortion.** A worn tape is less well biased: it distorts a little even at low levels and saturates sooner, so the repeats get grittier.
- **Less top.** The heads lose more of the highs, a worn tape loses contact with them (spacing loss), and each pass darkens more.
- **More hiss.** From −60 dB under 0 VU at 0 % to −46 dB at 100 % (SINGLE HEAD: 4 dB less). The hiss is added to the echoes, and only while MIX is above 0 %.
- **More wow and flutter**, even with WOW and FLUTTER at 0 %: a worn transport wavers on its own.
- **A bigger head bump** in the low end.
- **Dropouts.** Worn spots on the tape where the sound dips for a moment, by up to 12 dB at 100 %. They are fixed along the loop, as on real tape: each spot passes head 1, then heads 2 and 3, and comes round again every time the loop goes round (once every 24 head spacings: every 6 s at TIME 250 ms, and every 6 s in SINGLE HEAD). More TAPE AGE shows more of them: at the default 30 % there are few or none; from about 60 % they are part of the sound. The ECHOES display marks each one.

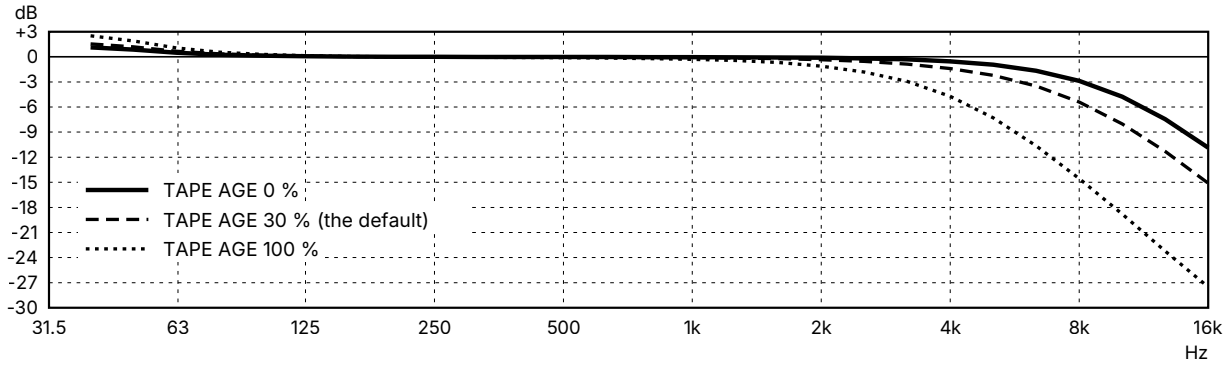


FIGURE 20 The first echo's frequency response at TAPE AGE 0, 30 and 100 % (MULTI-HEAD, TIME 250 ms), measured from the plugin. At 100 % the top is about 15 dB down at 8 kHz and 27 dB at 16 kHz, and the head bump at the bottom grows.

WOW is the slow sway of the transport: a periodic wow (about once every two seconds; a little faster in SINGLE HEAD) plus a slow random drift. **FLUTTER** is the fast part, from the capstan and rollers (about 6 times a second; 9 in SINGLE HEAD), plus a little scrape. Both move the tape, so they bend the pitch of every echo together, and they never touch the dry signal.

- At 100 %, WOW swings the speed by up to about 0.45 % and FLUTTER by about 0.3 %. SINGLE HEAD's faster tape wavers less: 60 % of that.
- Both knobs have a **1.4-power taper**, so the lower half of each is fine control: the default 20 % is a subtle, realistic movement; 40 to 70 % is clearly lo-fi; 100 % is seasick.
- Because the echoes are recorded again on every pass, the wobble builds up in the later repeats.

SPRING AND OUTPUT: SPRING, SPREAD, MIX and OUTPUT



FIGURE 21 1 SPRING, 2 SPREAD, 3 MIX and 4 OUTPUT, under the label SPRING AND OUTPUT.

Control	Range	Default	
SPRING	0 to 100 %	0 %	The spring reverb on the echoes and the input.
SPREAD	0 to 100 %	50 %	The echoes across the stereo field.
MIX	0 to 100 %	35 %	The echoes against the dry signal (equal power).
OUTPUT	−24 to +12 dB	0.0 dB	The final level.

SPRING

SPRING adds the spring reverb tank that classic tape echoes had built in: VEIRA Space's spring, with its drip and twang, a decay of about 2.2 s and a band of about 120 Hz to 7 kHz. It is fed with the echoes and with the input, and it comes out with the echoes, so MIX sets it too. At 15 to 30 % it puts the echoes in a small vintage space; at 40 % and more it is the surf and dub sound (*Guitar: Surf Spring Echo*, *Dub: Spring Tank Dub*).

SPREAD

SPREAD places the echoes across the stereo field. The machine itself is mono (one tape), so at 0 % every echo is in the centre.

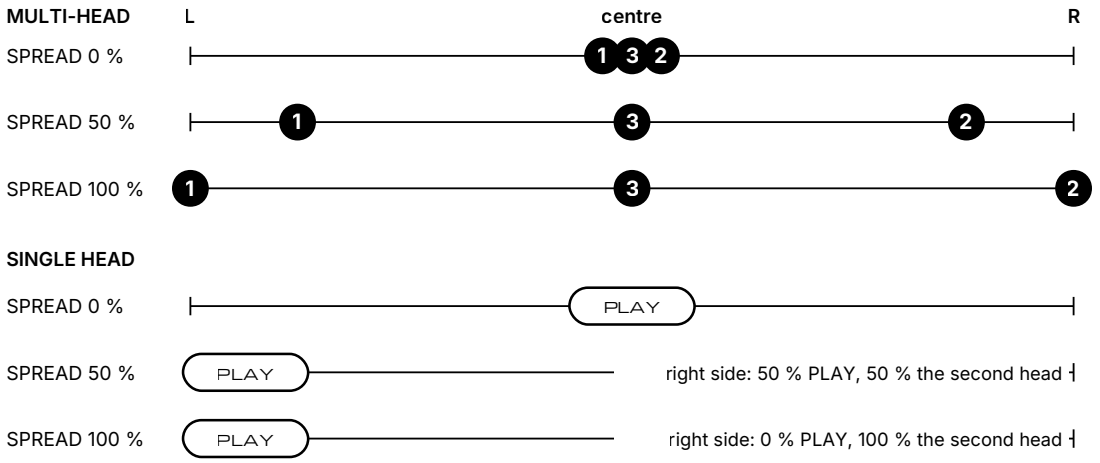


FIGURE 22 Where the echoes sit, from the plugin's pan laws. MULTI-HEAD: head 1 moves left, head 2 right, head 3 stays in the centre. SINGLE HEAD: the PLAY head stays on the left, and the right side crossfades to a second head a little further along the tape.

- MULTI-HEAD**:** head 1 moves to the left, head 2 to the right, head 3 stays in the centre. With 1+2 the echoes alternate left and right, like a ping-pong. The pan law is chosen so the echoes lose only 1.5 dB if your mix is played in mono, even at 100 %.
- SINGLE HEAD**:** the left side plays the PLAY head; the right side crossfades to a second head a little further along the tape, up to 7 % later at 100 % (17.5 ms later at TIME 250 ms). The two sides then differ slightly in time, which widens the echo without moving it. The level doesn't change with SPREAD.

On a mono track (mono in, mono out) SPREAD has nothing to spread; the echoes are summed.

MIX and OUTPUT

MIX blends the echoes with the dry signal, with an equal-power law: at 50 % both are 3 dB down. At 0 % the output is the input, bit for bit. On an insert, 15 to 35 % is typical (the default 35 % is clearly audible; most presets use 15 to 28 %). On an aux return, use **100 %** (see *Inserts and sends*).

OUTPUT sets the level leaving the plugin, after MIX. Use it to match the bypassed level: play a section and adjust until the Δ **INTEGRATED** reading on the meter bridge is close to 0.0 LU.

Displays

The ECHOES display

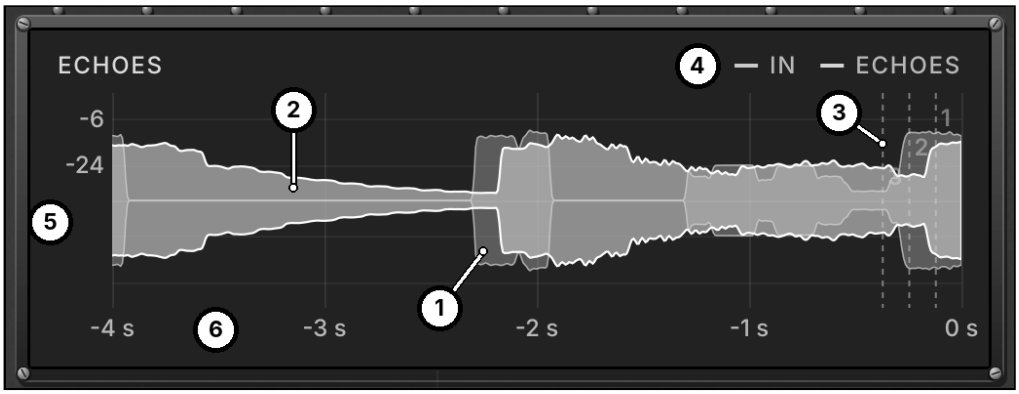


FIGURE 23 1 The input (grey), 2 the echoes (amber), 3 the heads' times, 4 the legend, 5 the level scale and 6 the time scale.

The ECHOES display shows the **last 4 seconds**, scrolling from right (now) to left (4 seconds ago):

- 1 **The input**, as a grey, mirrored envelope: what comes in.
- 2 **The echoes**, as an amber, mirrored envelope in front of it: everything the machine adds (the echoes, the spring and the hiss), before MIX. In print, the input is the paler shape behind.
- 3 **The heads' times:** a dashed line for each playing head, at its echo time back from now and labelled with its number (PLAY in SINGLE HEAD). A sound that has just come in will be repeated as it reaches each line.
- 5 **The level scale:** the height of the envelopes is compressed (amplitude to the power 0.4) so that quiet repeats stay visible; faint lines mark −6 and −24 dBFS.
- 6 **The time scale**, in seconds back from now.

Read the echoes' decay from the amber shape: a high INTENSITY gives a long amber tail after each phrase; 0 % gives one amber copy per playing head.

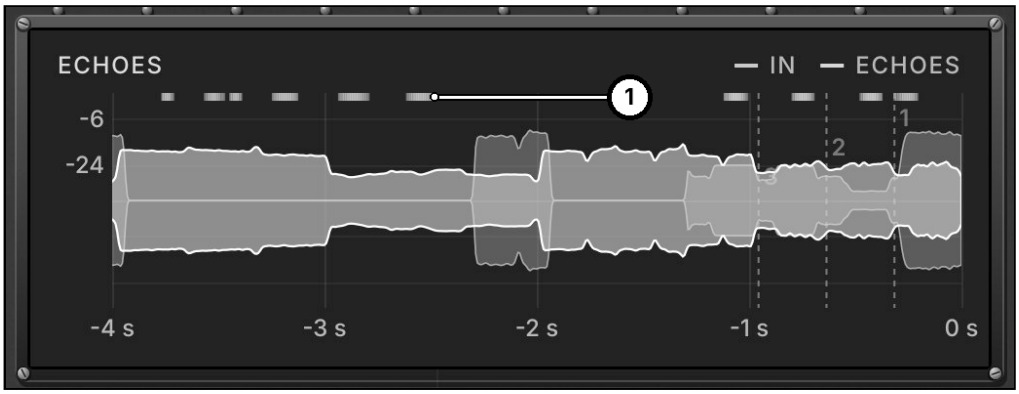


FIGURE 24 The preset *Creative FX: Worn Tape Memory* (TAPE AGE 100 %): 1 dropouts, flagged along the top (orange on screen).

Dropouts are flagged with short ticks along the top of the plot (orange on screen), as deep as they are bright. The pattern repeats each time the loop comes round.

Hover over the display for a reminder of what it shows.

The RECORD LEVEL meter

See *Controls ▸ TIME, INTENSITY and the RECORD LEVEL meter*. Hover over it for a reminder of what it shows.

Meter bridge (IN | OUT)

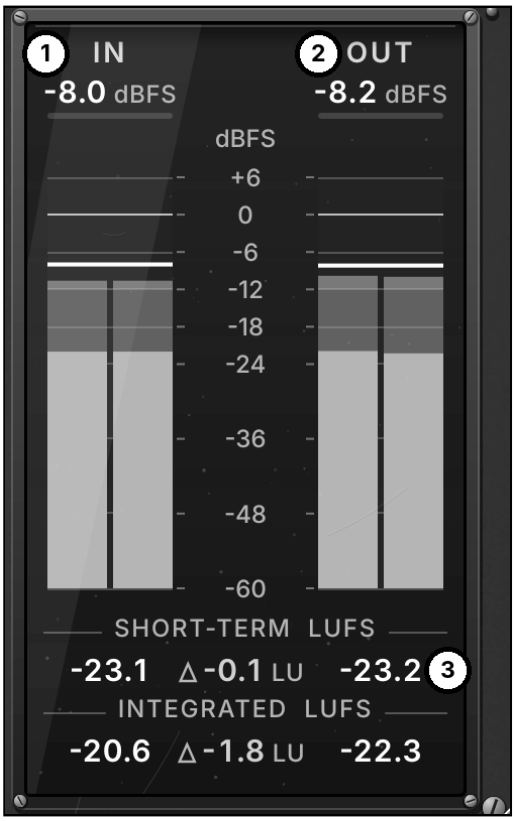


FIGURE 25 The meter bridge: 1 input and 2 output level, 3 short-term and integrated loudness with the OUT − IN difference.

VEIRA Tape Delay's meter bridge is the standard one, measured on the plugin's input and output. On a mono track, both bars of each meter show the same mono signal.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA Tape Delay 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.

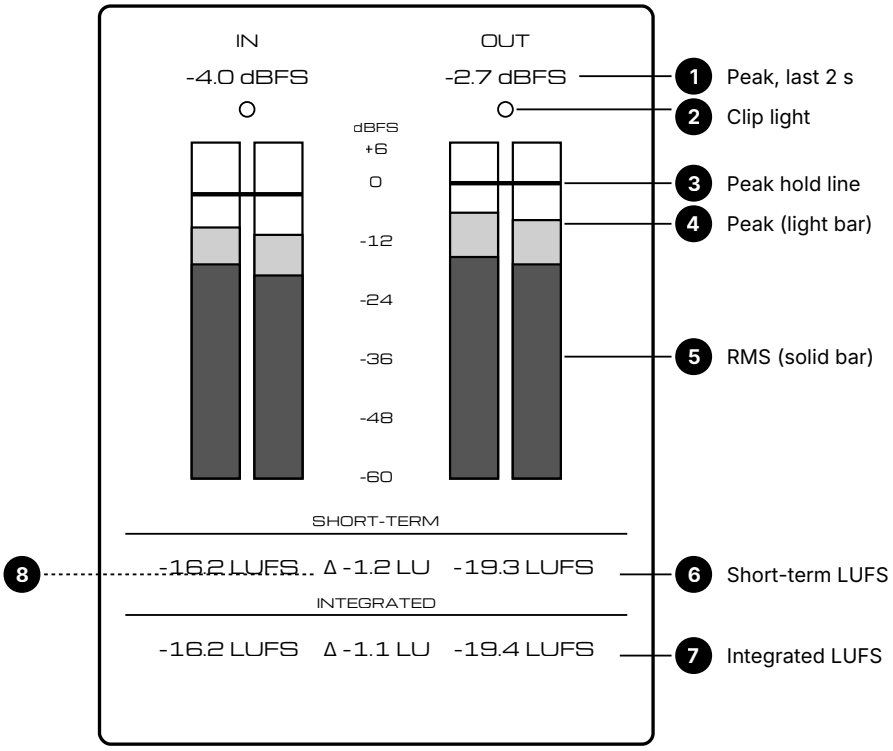


FIGURE 26 The meter bridge, left and right channel bars for input and output, with loudness below.

- 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 Tape Delay 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 sends

VEIRA Tape Delay works both ways, and the factory presets are made for both.

On an insert (on the track itself), MIX sets how much echo you hear: 15 to 35 % is typical. The dry signal passes untouched and without latency. Every preset outside *Sends* is an insert preset, trimmed to within half a dB of bypass in loudness.

On a send (an aux or FX return that several tracks feed):

1. Create an aux (FX) track in your DAW and insert VEIRA Tape Delay on it.
2. Load a preset from **Sends** (or set MIX to **100 %**, so the aux returns only echoes).
3. Send the tracks you want to it, and set each one's send level.
4. Ride the aux's fader for the overall echo level.

The *Sends* presets aren't trimmed: each returns its echoes between 1.5 dB under and 1.6 dB over the level sent to it.

> **Tip:** For dub *throws*, use a send: automate the send level up on the one word or snare hit you want to echo, and let the echoes ring after it. With a high INTENSITY (70 to 80 %), the repeats carry on for bars.

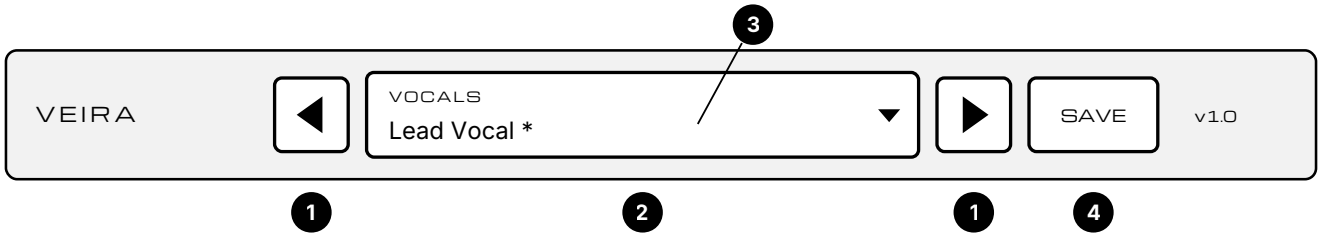
Bypass. When you bypass the plugin, its output is its input, without latency, and the tape keeps running in the background: when you switch it back on, the echoes continue from where they would have been, not from silence. Your DAW keeps calling the plugin for 12 seconds after the sound stops (its *tail*), so the echoes ring out at the end of a region or a song.

Presets

VEIRA Tape Delay comes with **74 factory presets** in 14 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 27 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 Tape Delay 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 Tape Delay/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Tape Delay\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
Drums	Snare Slap Room, Kit Tape Doubler, Dotted Snare Echo, Spring Drum Ambience, Tom Tail Repeats, Lo-Fi Drum Smear
Bass	Dub Bass Shadow, Bass Slap Thickener, Synth Bass Eighths, Round Bass Echo
Guitar	Rockabilly Slapback, Country Slap, Surf Spring Echo, Lead Guitar Echo, Dotted Eighth Lead, Ambient Swell Repeats, Clean Chord Wash, Blues Lead Tape
Keyboards	Electric Piano Echo, Organ Room Slap, Synth Lead Repeats, Piano Halo, Pad Tape Wash
Strings	String Section Depth, Pizzicato Echoes, Solo Violin Tape, Cinematic Strings Wash
Brass	Horn Section Slap, Trumpet Ballad Echo, Sax Lounge Tape, Brass Stab Repeats
Woodwinds	Flute Air Echo, Clarinet Room Slap, Reed Tape Halo, Woodwind Eighth Echo
Vocals	Vintage Vocal Slap, Quarter Note Vocal, Dotted Vocal Throw, Doo-Wop Echo Chamber, Ballad Vocal Tape, Lo-Fi Vocal Haze
Mix Bus	Mix Tape Ambience, Bus Glow Echo, Mix Spring Air, Vintage Mix Depth
Sends	Send Tape Echo, Send Slapback, Send Dotted Eighth, Send Spring Echo, Send Long Wash, Send Dark Repeats
Rhythmic	Head One Eighths, Heads 1+3 Gallop, Three Head Cascade, Triplet Heads, Triplet Over Straight, Dotted Eighth Sync, Quarter Triplet Echo, Sixteenth Shimmer
Dub	Dub Snare Throw, Steppers Echo, Skank Chord Repeats, Spring Tank Dub, Dub Vox Delay, Dub Siren Runaway, Self Oscillation Drone
Creative FX	Worn Tape Memory, Warped Speed Echo, Lo-Fi Cassette Echo, Metallic Short Loop, Infinite Hold Loop, Broken Machine, Underwater Repeats

- **Sends** presets have MIX at 100 %, for an aux.
- **Rhythmic** presets use the head combinations and SYNC for dotted, triplet and gallop patterns.
- Many presets use SYNC: their notes give the time at 120 BPM, and in your session they follow your tempo.

- Two presets in **Dub** (*Dub Siren Runaway*, *Self Oscillation Drone*) and one in **Creative FX** (*Infinite Hold Loop*) run away on purpose: their INTENSITY is over 100 %, and their notes say to ride it back down.

Levels. Each preset was measured on the real plugin, at 48 kHz and 120 BPM, on material that suits its folder: drums peaking at −6 dBFS, a mix at −4 dBFS, and bass, keys, strings, brass, woodwinds, vocals and guitar at −8 dBFS, with gaps between phrases so the echoes are heard. On that material each insert preset comes out within half a dB of bypass in loudness, so you can compare fairly, and the output peaks between −9.8 and −3.6 dBFS. The echoes die away in 0.2 to 19 seconds, except in the three presets that run away.

Set INPUT first on a different level. INPUT is the record level, so on a track recorded hotter than the presets assume, the repeats saturate sooner and come back louder; on a quieter one they're cleaner and quieter. Set INPUT by the RECORD LEVEL meter, then MIX.

Recipes

Step-by-step starting points. In each, finish by comparing with bypass: the Δ INTEGRATED reading on the meter bridge should be close to 0.0 LU on an insert; trim [OUTPUT] if it isn't.

Fifties slapback on a guitar or a voice

1. Load **Guitar ▸ Rockabilly Slapback** (or **Vocals ▸ Vintage Vocal Slap**). Both use [SINGLE HEAD], one bright repeat.
2. Set [TIME] between 90 and 130 ms: shorter is tighter, longer is more obvious. Slapback is usually set by feel rather than with [SYNC].
3. Keep [INTENSITY] at 5 to 15 %: one repeat, perhaps a faint second.
4. Set [MIX] so the slap is felt more than heard (20 to 30 %).

The dotted-eighth lead

1. Load **Guitar ▸ Dotted Eighth Lead** (or **Rhythmic ▸ Dotted Eighth Sync**). [SYNC] is on with [NOTE] [1/8D].
2. Play single notes on the beat: the echoes fill in the off-beats and the line turns into a running pattern.
3. Set [INTENSITY] for the length of the trail (40 to 50 %), then [MIX].
4. Cut [TREBLE] 2 to 3 dB if the repeats compete with the dry notes.

Rhythmic head patterns

1. Load **Rhythmic ▸ Heads 1+3 Gallop**, **Three Head Cascade** or **Triplet Heads**.
2. Change [HEAD SELECT] while the music plays and listen to each pattern (see *HEAD SELECT*).
3. With three heads, lower [INTENSITY] (35 to 45 %): three heads fill up fast.
4. Change [NOTE] to move the whole pattern: [1/16] for fast figures, [1/8] for slower ones.

Dub throws and a runaway siren

1. Put VEIRA Tape Delay on an aux with **Dub ▸ Dub Snare Throw** or **Dub Vox Delay**, and set [MIX] to 100 % (or use **Sends ▸ Send Dark Repeats** as a start).
2. Automate the send from the snare or the vocal up on the hit you want to throw, and back down after it.
3. For the long dub trail, set [INTENSITY] to 70 to 80 %, with [BASS] and [TREBLE] cut a few dB so each repeat gets darker and thinner. Add [SPRING] for the tank.
4. For a siren, load **Dub ▸ Dub Siren Runaway**: [INTENSITY] is over 100 %, so the loop runs on. Sweep [TIME] (with [SYNC] off) to bend it, and ride [INTENSITY] under 100 % to let it fall away.

A tape echo on an aux for the whole mix

1. Create an aux and load **Sends ▸ Send Tape Echo** (heads [1+2] at a 1/4 and a 1/2).
2. Send the vocal, a guitar and a keyboard to it, each at its own level.

3. Cut BASS (−4 to −6 dB) so the echoes stay out of the low end, and TREBLE (−2 to −3 dB) to sit them behind the dry parts.
4. Ride the aux's fader for the overall amount.

Worn and lo-fi echoes

1. Load **Creative FX ▸ Lo-Fi Cassette Echo**, **Worn Tape Memory** or **Vocals ▸ Lo-Fi Vocal Haze**.
2. Set the wear with TAPE AGE (60 to 100 %: hiss, dull top, dropouts), then the wobble with WOW and FLUTTER (remember the taper: 40 to 70 % is already clearly lo-fi).
3. Push INPUT for gritty repeats (**Creative FX ▸ Broken Machine** goes all the way).
4. For warped, pitch-bent repeats, load **Creative FX ▸ Warped Speed Echo** and sweep TIME while it plays.

Specifications

Type	Tape echo: an endless tape loop with a record head and three playback heads (MULTI-HEAD) or one sliding head (SINGLE HEAD); every repeat recorded through a Jiles-Atherton hysteresis tape model; spring reverb
Channels	Mono, mono in with stereo out, and stereo. The tape is mono (the input is summed); the dry signal stays in stereo
Latency	None
Transparency	At MIX 0 %, and when bypassed, the output is the input, bit for bit
Tail	12 s reported to the host
Calibration	0 VU = a sine at −18 dBFS RMS
MODE	MULTI-HEAD, SINGLE HEAD (default MULTI-HEAD)
HEAD SELECT	1, 2, 3, 1+2, 2+3, 1+3, 1+2+3 (default 1+2); heads at 1×, 2× and 3× TIME (MULTI-HEAD)
SYNC, NOTE	On / off (default off); 1/64 to 1/1 with dotted and triplet values, 18 in all (default 1/8); kept within 20 ms to 1 s
TIME	20 ms to 1 s, logarithmic, 1 ms steps (default 250 ms). MULTI-HEAD: the motor's speed, 0.35 s glide; tape 7.5 ips at 250 ms (30 ips at 62.5 ms and below, 1.9 ips at 1 s). SINGLE HEAD: the head slides, 0.12 s glide; tape 15 ips
INTENSITY	0 to 120 % (default 40 %); 50 % ≈ −6 dB per repeat; self-oscillation from about 102 to 105 %; echoes held under −1 dBFS
INPUT	−12 to +18 dB in 0.1 dB steps (default 0.0 dB)
BASS, TREBLE	±12 dB in 0.1 dB steps (default 0.0 dB); shelves at 150 Hz and 3 kHz, in the loop
TAPE AGE	0 to 100 % (default 30 %)
WOW, FLUTTER	0 to 100 % (default 20 % each); up to about 0.45 % and 0.3 % speed change; 1.4-power taper; SINGLE HEAD 60 % of that
SPRING	0 to 100 % (default 0 %); VEIRA Space's spring tank
SPREAD	0 to 100 % (default 50 %)
MIX	0 to 100 %, equal power (default 35 %)
OUTPUT	−24 to +12 dB in 0.1 dB steps (default 0.0 dB)
Oversampling	The tape: 2× at 44.1 and 48 kHz, none above
Displays	Animated machine (moving tape and rollers, RECORD and playback head lamps, the sliding head in SINGLE HEAD); ECHOES (the last 4 s: input, echoes, heads' times, dropouts)

Metering	RECORD LEVEL VU meter (−20 to +3 VU, IEC 60268-17 ballistics); IN and OUT meters (sample peak, RMS); short-term and integrated loudness per ITU-R BS.1770-4 / EBU R 128
Presets	74 factory presets in 14 folders, plus your own
Window	1400 × 840 points; resizable from 75 % to 200 %, saved with the session
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vtdl

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 Tape Delay 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**.

The echoes keep growing and won't stop. INTENSITY is above about 100 %, so the loop is self-oscillating. Turn it below 100 % and the echoes die away. The presets *Dub Siren Runaway*, *Self Oscillation Drone* and *Infinite Hold Loop* do this on purpose.

The pitch of the echoes bends when I change TIME (or the tempo). That's the motor: in MULTI-HEAD, TIME is the tape's speed, and the echoes already on the tape bend while it changes, as on a real machine. Change TIME between phrases, or use SINGLE HEAD, which moves its head quickly instead.

The echoes aren't in time with the song. Switch SYNC on and choose a NOTE; with SYNC off, TIME is in milliseconds and doesn't follow the tempo. Long note values at slow tempos are held at 1 s, the longest TIME: at 120 BPM, 1/2D, 1/1T and 1/1 all play at 1 s. Remember that heads 2 and 3 come at twice and three times the NOTE.

HEAD SELECT does nothing. SINGLE HEAD is lit: that machine has one playback head. Switch to MULTI-HEAD.

I hear hiss, or the echoes dip for a moment. That's the worn tape: TAPE AGE adds hiss and dropouts. Lower it for a cleaner tape; at 0 % the hiss is 60 dB under 0 VU and there are no dropouts. The hiss is added only while MIX is above 0 %.

The echoes sound distorted. Check the RECORD LEVEL meter: if the needle sits well into the red, the tape is saturating. Lower INPUT, or lower INTENSITY (the repeats are recorded too), or lower TAPE AGE.

On a mono track, SPREAD does nothing. On a mono track (mono in, mono out) the echoes are summed into one channel. Insert the plugin on a stereo track, or a stereo aux, to hear them spread. Mono in with stereo out works too.

The tape doesn't move. It moves while your DAW plays, and while sound comes in (and for two seconds after). With the transport stopped and no sound coming in, the machine stops. This is only the picture: the echoes carry on as they should.

Is there a delay on the dry signal? No. VEIRA Tape Delay has no latency, so you can use it while you record or monitor a live input.

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.

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

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



VEIRA Tape Delay · User Manual · Version 0.2.0

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

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