VEIRA

TAPE SATURATOR

VEIRA Tape Saturator

User Manual

A 2-inch, 24-track studio tape machine for your mix: four tapes, three speeds, a record level you set on a VU scale, and the wow, flutter and hiss of a real transport when you want them.



Contents

Welcome 3

Getting started 4

- What you need 4
- Install with VEIRA Manager 4
- Activation and the licence 5
- Formats and where the files go 5

The panel at a glance 6

- Using the controls 7
- Quick start: tape in four moves 8

How tape saturation works 9

- Recording on magnetic tape 9
- Magnetic hysteresis 9
- What saturation does to a sound 10
- Record level and the VU meter 10
- Tape speed: head bump and high-frequency loss 11
- Wow, flutter and hiss 12
- What happens inside VEIRA Tape Saturator 13

The machine 14

- TAPE TYPE: four tapes 14
- SPEED IPS: three speeds 16
- The reels and the tape path 17
- Lamps and counter 17

Controls 18

- DRIVE and the RECORD LEVEL meter 18
- AUTO GAIN 19
- MIX and OUTPUT 20
- LOW CUT and HIGH CUT: filters before the tape 20
- WOW, FLUTTER and HISS: the transport 22

Displays 24

- The RESPONSE display 24
- The RECORD LEVEL meter 25
- Meter bridge (IN | OUT) 25

Presets 27

- The preset browser 27
- The preset menu 27
- Saving your own presets 27
- Presets in your DAW 28
- The factory folders 28

Recipes 29

- Glue and warmth on the mix bus 29
- Weight and punch on a drum bus 29
- Fatten a bass 29
- Smooth a bright vocal 29
- Tape on a master 30
- Cassette and lo-fi 30
- Vibrato and warble effects 30

Specifications 31

Troubleshooting and questions 32

Welcome

Thank you for choosing **VEIRA Tape Saturator**. It records your track onto analogue tape and plays it back: the soft rounding of loud peaks, the added harmonics, the extra weight in the low end and the gentler top that engineers have chased since tape left the studio. Its window shows the machine, drawn flat and simple, with its reels turning while your song plays.

You set it the way you'd set a real machine: choose a **tape** (TAPE TYPE) and a **speed** (SPEED IPS), then turn up DRIVE while you watch the **RECORD LEVEL** meter, which shows on a VU scale how hard the tape is hit. Everything else is optional: filters that decide what goes onto the tape, the transport's WOW and FLUTTER, the tape's HISS, and a MIX for parallel tape.

What makes it different

- **A real tape model, not a clipper.** The heart of the plugin is a model of magnetic hysteresis, how tape actually magnetises. Quiet signals pass at their own level, loud ones round off softly, and the highs saturate first, as on tape.
- **Calibrated like a studio machine.** 0 VU on the RECORD LEVEL meter is a tone at −18 dBFS RMS. Set your record level by its bars, and the same reading means the same amount of tape colour on every track.
- **Louder input, not louder output.** With AUTO GAIN on (the default), DRIVE changes how hard the tape works, not how loud the plugin plays, so you can judge the colour fairly.
- **Four tapes and three speeds that really differ.** Each tape has its own headroom, harmonics and noise; each speed has its own head bump, top end and high-frequency saturation. The **RESPONSE** display draws the machine's curve for your choice.
- **Filters before the tape.** LOW CUT and HIGH CUT keep rumble, sub and harsh highs from hitting the tape, so you saturate only what you want.
- **The machine shows what it does.** The reels turn with your song and the tape winds from one to the other, the record head glows and the SAT lamp lights as the tape saturates, and the counter follows your session.
- **A clean, legible face.** Knobs with their value in the middle, text you can read at a glance, 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. *How tape saturation works* is a short primer on magnetic tape, record level and tape speed; read it if words like *head bump* or *0 VU* are new to you. *The machine* explains the transport: tape types, speeds, reels, lamps and counter. *Controls* explains every knob with drawings of what it does, *Displays* teaches you to read the meters and the RESPONSE display, and *Presets*, *Recipes*, *Specifications* and *Troubleshooting* follow.

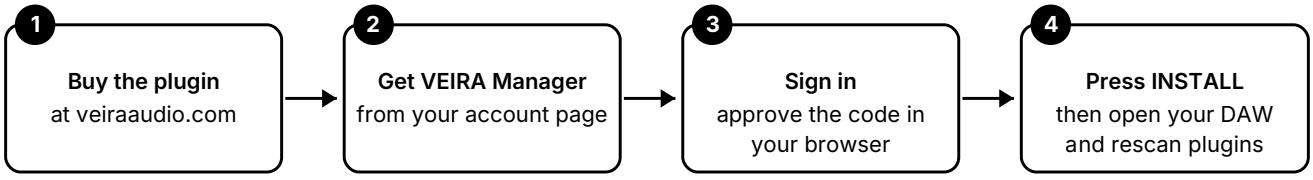
Getting started

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

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 Saturator 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.

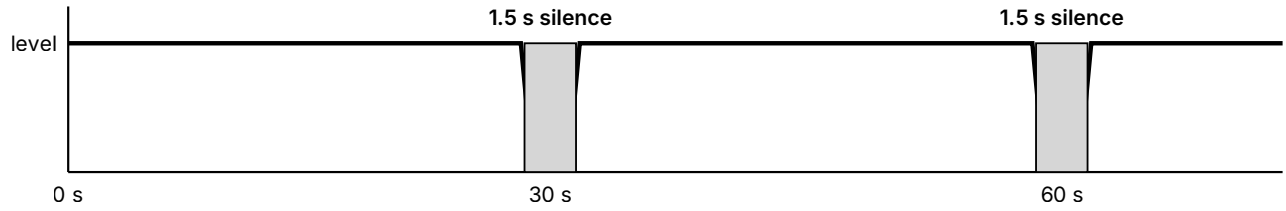


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 Saturator. 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 Saturator 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 Saturator while a mix plays, starting from *Default: Init* and changed (the asterisk after the name): WARM, DRIVE +3.0 dB, LOW CUT 40 Hz, HIGH CUT 16.0 kHz, WOW 35 % and FLUTTER 30 %.

The window has the **machine** across the top (reels, heads, lamps and counter) with the TAPE TYPE and SPEED IPS buttons beside it; under it the **RECORD LEVEL** meter, DRIVE and the **RESPONSE** display; the knobs along the bottom in three groups captioned FILTERS BEFORE THE TAPE, TRANSPORT and OUTPUT; and the **meter bridge** down the right.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	STOP PLAY REC lamps	Show whether the tape is rolling.
3	TAPE TIME counter	Your song's position, in hours, minutes and seconds.
4	SAT lamp	Lights as the tape saturates.
5	TAPE TYPE	Four buttons beside the machine: MODERN, CLASSIC, WARM or WORN.
6	SPEED IPS	Three buttons for the tape speed: 7.5, 15 or 30 inches per second.

	Part	What it does
7	Reels	Turn while the tape rolls and waver with WOW and FLUTTER; the tape winds from left to right as the song plays.
8	Heads and tape path	The ERASE, REC and PLAY heads; the REC head glows as the tape saturates.
9	RECORD LEVEL	The level going onto the tape, left and right, on a VU scale.
10	DRIVE	How hard the tape is hit.
11	RESPONSE display	The machine's frequency response over the spectrum of your signal, with the filter handles.
12	LOW CUT, HIGH CUT	Filters before the tape.
13	WOW, FLUTTER, HISS	The transport's speed changes and the tape's noise.
14	AUTO GAIN	Keeps the output level steady while you change DRIVE.
15	MIX, OUTPUT	Tape against dry signal, and the final level.
16	Meter bridge	Input and output level and loudness.

Using the controls

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

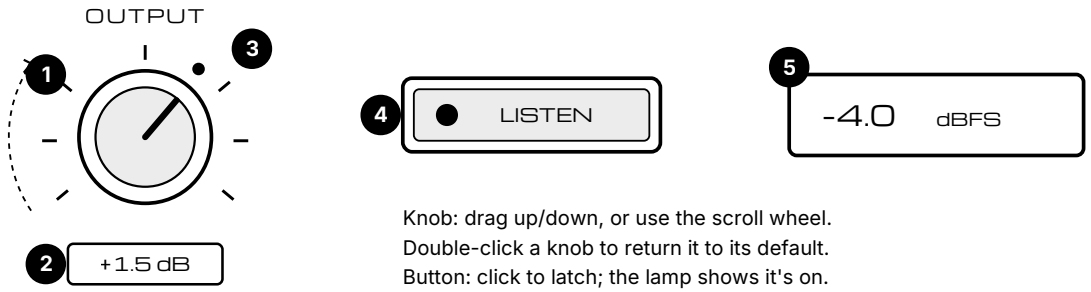


FIGURE 4 The parts you'll find on every VEIRA panel (the labels are examples).

- 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.

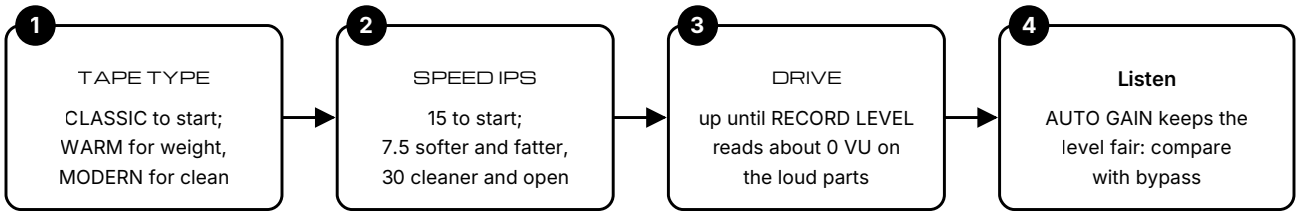
Automation: every knob and button is a host parameter, so you can automate it in your DAW and control it from a MIDI controller or control surface that your DAW maps.

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).

On VEIRA Tape Saturator's panel the parts look a little different from the drawing above:

- **Knobs** show their value **in their middle**, and a lit ring (blue on screen; in print, the lighter arc) shows how far each is turned. Drag, use the wheel, or double-click (or Alt/Option-click) for the default, as on every VEIRA knob.
- **Type a value:** right-click a knob (Control-click on a Mac). A field opens over the knob with the current value; type the new one and press Return. The number is enough: **6** for DRIVE, **80** for LOW CUT, **25** for WOW. Press Escape or click elsewhere to leave it unchanged.
- **Buttons** have no lamps. TAPE TYPE and SPEED IPS are rows of choice buttons: the selected one is filled (orange on screen; in print, the solid, lighter button), the others are dark with an outline, and clicking another switches to it. In your DAW they appear as two parameters, *Tape Type* and *Tape Speed*. AUTO GAIN is a single button, filled the same way when it's on.
- **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 everything stays sharp. Your DAW saves the size with the session.

Quick start: tape in four moves



Then, only if you need them: LOW CUT / HIGH CUT, WOW / FLUTTER / HISS, MIX and OUTPUT.

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

Or load a factory preset close to your job (see *Presets*) and start from step 3: every preset is set for typical levels, so on a hotter or quieter track it's DRIVE that needs adjusting first.

How tape saturation works

If you already know tape machines, skip to *The machine*. If not, these pages explain everything the plugin does, and why engineers still use tape, or a model of it, on almost every kind of record.

Recording on magnetic tape

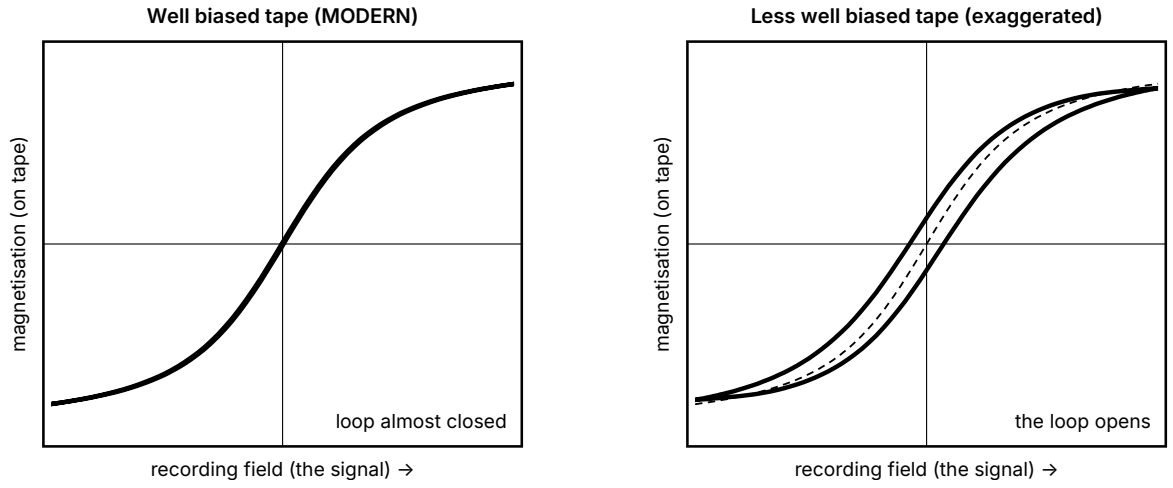
Tape is a plastic ribbon coated with tiny magnetic particles. The **record head** is a small electromagnet: the audio signal becomes a magnetic field in its gap, and as the tape runs past, the field leaves the particles magnetised in a pattern that follows the music. On playback, the **play head** reads that pattern back and turns it into a signal again. A third head, the **erase head**, wipes the tape clean just before it is recorded.

The catch is that magnetic particles don't follow the field in a straight line. Push them a little and they respond in proportion; push them hard and they run out of room to magnetise further, so the curve bends over. That bend is **tape saturation**.

Magnetic hysteresis

Magnetic material also has memory: on the way up it follows a different path than on the way down. Drawn as field (the signal going in) against magnetisation (what ends up on the tape), one cycle of a loud sine traces a loop. This is called **hysteresis**.

Real machines add a strong, very high-frequency signal called **bias** to the recording. Bias shakes the particles so they forget their memory and follow one smooth curve, the *anhysteretic* curve, instead of the loop. A well-biased tape is clean at low levels and rounds off gently when pushed. A tape that is less well biased, older or of a different formula keeps part of its loop, and distorts a little even at low levels.



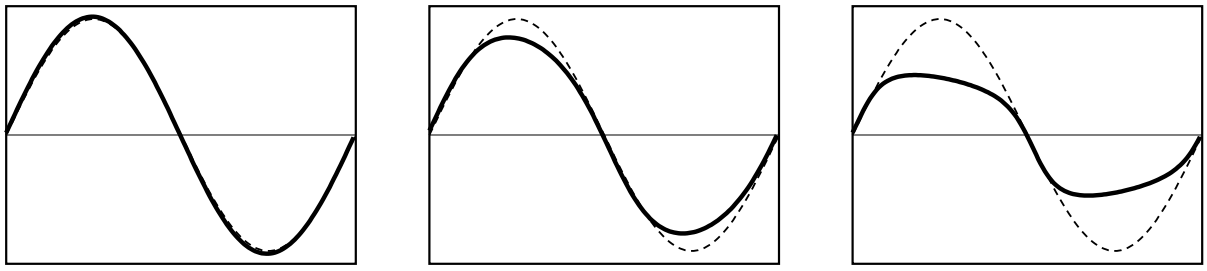
Dashed: the smooth anhysteretic curve. Solid: the path a loud sine actually traces.

FIGURE 6 The tape's magnetisation against the recording field, computed with the plugin's own tape model. Left: a well-biased tape follows the smooth curve almost exactly. Right: an exaggerated, poorly biased tape traces an open loop. VEIRA Tape Saturator's four tapes sit between these two.

VEIRA Tape Saturator models this with the **Jiles-Atherton** model of hysteresis, the same physics used to design transformers and tape heads. How well the tape is biased is exactly what separates its four tape types: [MODERN] is the best biased and cleanest, [WORN] the least.

What saturation does to a sound

As the record level rises past the tape's comfortable range, the top of each wave is rounded off. The rounding is soft: there is no hard corner as in a digital clipper, so the added harmonics fall away quickly with their number and the result sounds full rather than harsh.



DRIVE 0 dB (about 0 VU) **DRIVE +12 dB (+12 VU)** **DRIVE +20 dB (+20 VU)**

Dashed: the input sine, scaled to the same size. Solid: what comes off the tape (CLASSIC, AUTO GAIN off, drawn at the same scale).

FIGURE 7 One cycle of a 100 Hz tone through the CLASSIC tape at three record levels, measured from the plugin. At 0 VU the output follows the input; at +12 VU the peaks are rounded; at +20 VU the tape is well into saturation and the wave has a broad, flattened top.

Rounded peaks mean two things you can hear:

- **Peak control.** Short, loud hits (a snare, a picked bass note, a consonant) come out a little lower than the body around them. Tape glues a drum kit together partly because of this.
- **Harmonics.** Rounding a wave adds new frequencies at whole multiples of each note: the **2nd harmonic** an octave up, the **3rd** an octave and a fifth up, and so on. Odd harmonics (3rd, 5th) come from a shape that is the same on top and bottom; even harmonics (2nd, 4th) come from a shape that is a little lopsided. Even harmonics sound warm and thick; odd harmonics sound denser and edgier.

Record level and the VU meter

On a tape machine, the amount of colour depends on the **record level**: how hot the signal is when it reaches the tape. Studios measured it with **VU meters**, slow needle meters that show the average level, close to how loud the music feels, rather than every short peak.

The meters are calibrated so that **0 VU** is the machine's standard operating level: a comfortable, clean level with some colour. VEIRA Tape Saturator uses the common digital calibration: **0 VU = a sine wave at −18 dBFS RMS**. VEIRA Tape Saturator prints it above its RECORD LEVEL meter: [0 VU = -18 dBFS].

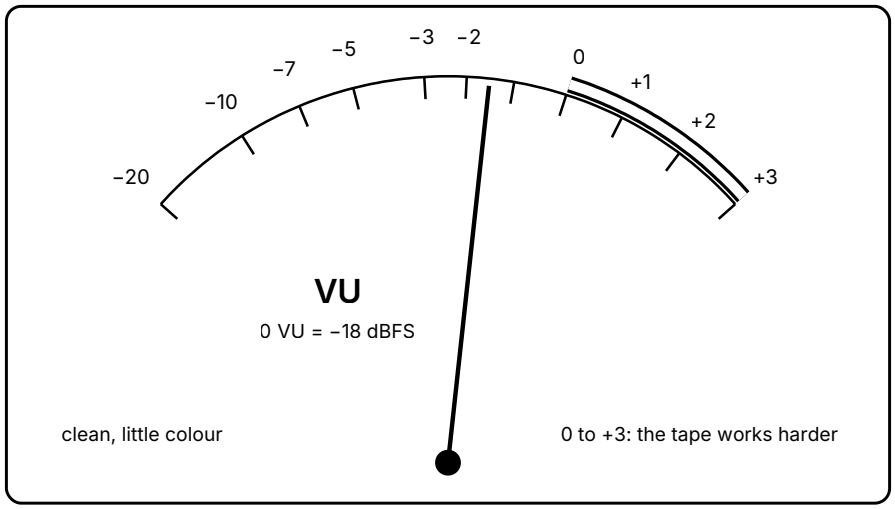


FIGURE 8 A VU meter. The scale is crowded at the right because a VU meter is a voltmeter: each dB near 0 VU moves the needle further than a dB near −20. VEIRA Tape Saturator's RECORD LEVEL meter uses the same scale and spacing on two bars; its zone from 0 to +3 VU is red on screen, here the outlined band.

Unlike a digital meter, the red zone on a tape machine is not a wall. Engineers often recorded with the needles kissing or passing 0 VU on purpose, because that's where tape starts to sound like tape. A practical guide for VEIRA Tape Saturator, with the meters reading the loud parts of the music:

RECORD LEVEL	What you get
−6 to 0 VU	Clean, a touch of glue.
0 to +4 VU	Warm glue: peaks softened, harmonics you feel more than hear.
+4 to +8 VU	Driven: obvious thickness and rounding.
Above +8 VU	Crushed: a sound effect.

Drums read lower on a VU meter than they sound, because each hit is short: a close-miked kit can sit around −8 VU and still hit the tape hard on every stroke. Judge drums by ear and by the SAT lamp as much as by the meter.

Tape speed: head bump and high-frequency loss

Tape machines run at a fixed speed, measured in **inches per second (ips)**. Studios used 15 ips as the standard, 30 ips for the cleanest masters, and 7.5 ips where tape was expensive. Speed changes the sound in three ways:

- **Head bump.** At low frequencies, the play head picks up a little extra from the recorded wavelength, giving a gentle lift with a dip beneath it and a roll-off further down. The bump sits lower at slower speeds: about **32 Hz at 7.5 ips, 55 Hz at 15 ips and 100 Hz at 30 ips**. This is much of the "tape weight" people talk about.
- **High-frequency loss.** At slower speeds a cycle of a high note is packed into less tape, and the heads read it less well. 7.5 ips is noticeably softer on top; 30 ips is flat to 20 kHz.
- **Highs saturate sooner.** To keep the highs above the tape's noise, machines boost them before the tape (**pre-emphasis**) and cut them by the same amount after it (**de-emphasis**). Quiet highs come back flat, but

loud highs hit the tape harder than the rest of the music and saturate first. The slower the speed, the bigger the boost, so the sooner a loud cymbal or a sibilant gets softened.

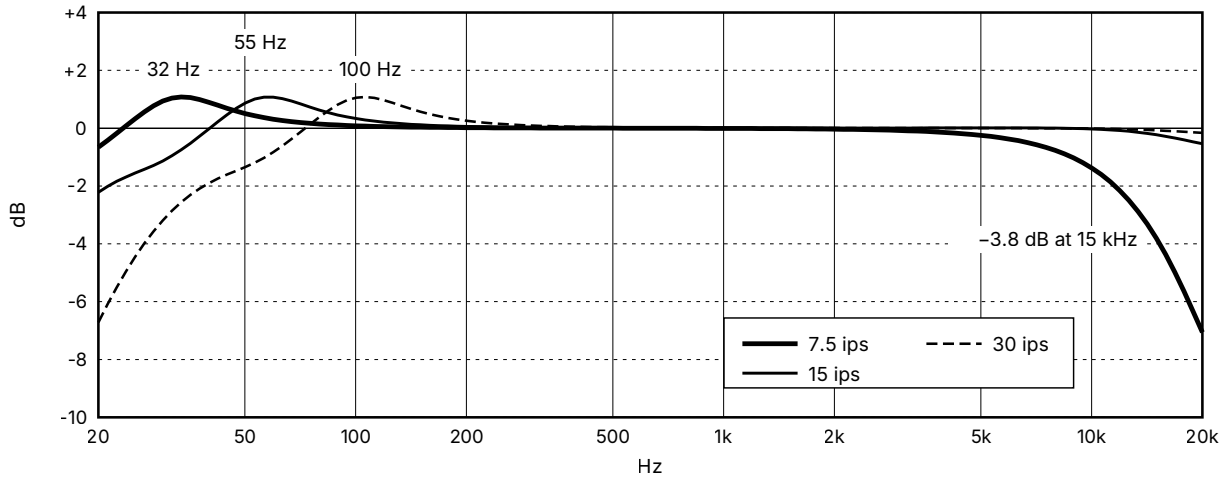


FIGURE 9 The machine's frequency response at the three speeds, with the CLASSIC tape (computed from the plugin). The head bump moves up with the speed; 7.5 ips rolls off the top end, 15 ips is down only 0.5 dB at 20 kHz and 30 ips is flat. The deep low end rolls off most at 30 ips, where the bump is highest.

Wow, flutter and hiss

A tape transport never runs at a perfectly steady speed. Slow changes, from a reel that isn't quite round or a drifting motor, make the pitch sway: that's **wow**. Fast changes, from the capstan, the rollers and the tape scraping over the heads, add a roughness or shimmer to held notes: that's **flutter**. And the magnetic particles themselves make a soft, broadband noise: **tape hiss**. Good studio machines keep all three very low; cassettes, old machines and worn tape make them part of the sound.

What happens inside VEIRA Tape Saturator

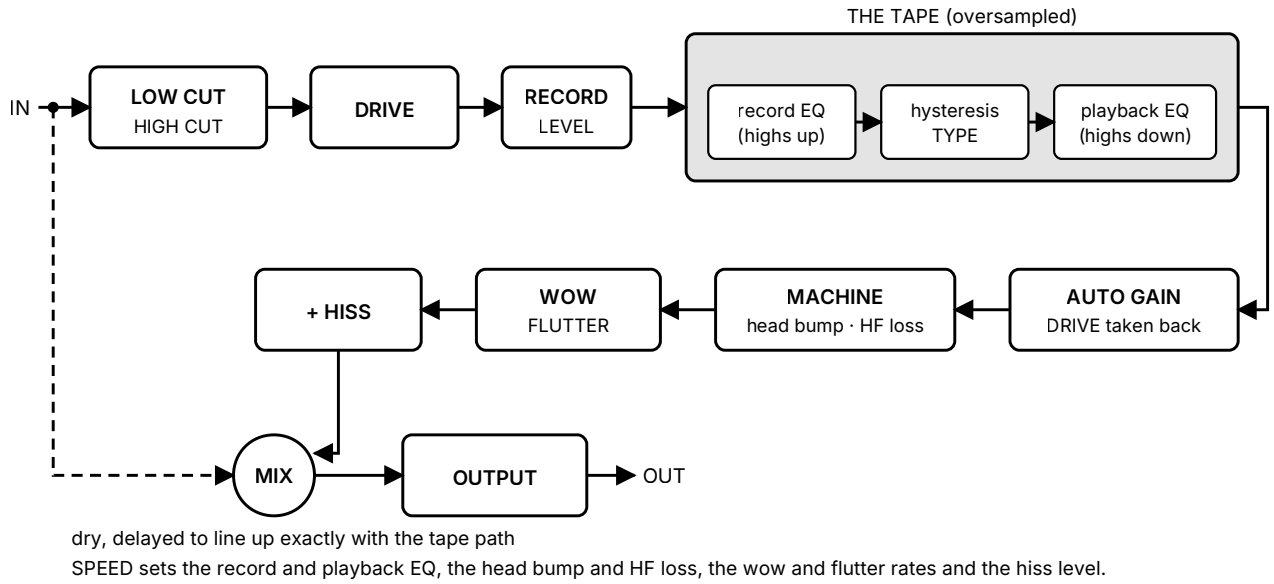


FIGURE 10 Signal flow. The filters and DRIVE decide what reaches the tape, and the RECORD LEVEL meter shows it. The tape runs at several times the sample rate, between a record EQ and its exact inverse. Then come the machine's response, the transport and the hiss. MIX blends in the untouched dry signal.

Step by step:

1. LOW CUT **and** HIGH CUT take lows and highs away *before* the tape, so they don't drive it.
2. DRIVE sets the record level, which the **RECORD LEVEL** meter shows.
3. **The tape.** The signal is oversampled (4× at 44.1 and 48 kHz, 2× at 88.2 and 96 kHz, none above), its highs are boosted by the record EQ for the chosen speed, it passes through the hysteresis model of the chosen tape, and the playback EQ takes the highs back down. Quiet signals come out exactly as they went in; loud ones, and loud highs first, are rounded off.
4. AUTO GAIN takes the DRIVE back off, so the level stays put.
5. **The machine:** the head bump and high-frequency loss for the speed, and on the WARM and WORN tapes a little extra top-end loss.
6. WOW **and** FLUTTER move the tape speed; both channels move together, as on one transport.
7. HISS adds the tape's noise, separately on each channel.
8. MIX blends the tape with the dry input, and OUTPUT sets the final level.

The whole path has a constant **latency** of 254 samples at 48 kHz (240 at 44.1 kHz, 437 at 96 kHz, 738 at 192 kHz), for the oversampling filters and for the room the transport needs to speed up and slow down. Your DAW compensates for it automatically.

The machine

The top of the window is the tape transport, with the TAPE TYPE and SPEED IPS buttons beside it. The buttons choose the tape and the speed; everything else shows you what the machine is doing.

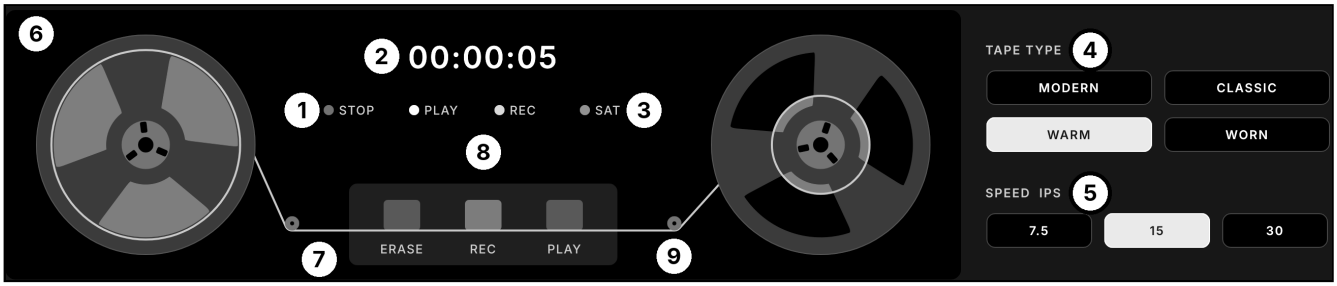


FIGURE 11 The transport: 1 the STOP, PLAY and REC lamps, 2 the TAPE TIME counter, 3 the SAT lamp, 4 TAPE TYPE, 5 SPEED IPS, 6 the supply reel (the take-up reel is on the right), 7 the head block with the ERASE, REC and PLAY heads, 8 the REC head and 9 a guide roller.

TAPE TYPE: four tapes

The four buttons 4 choose the tape. Each is a different magnetic character (how well it is biased, how much headroom it has, how lopsided its curve is) and a different machine around it (head bump size, top-end loss and noise). The colour of the tape on the reels changes with the type, too: dark for MODERN, chocolate brown for CLASSIC, reddish brown for WARM and faded brown for WORN.

Type	Character	THD at 0 VU	3 % THD at	Harmonics	Hiss (HISS 50 %, 15 ips)
MODERN	A clean, high-output tape with lots of headroom. Glue without colour, until you push it hard.	0.19 %	+12.7 VU	Odd only	−82 dBFS
CLASSIC	The studio tape of the 70s and 80s: soft saturation, a touch of 2nd harmonic, a gentle head bump. The default.	0.45 %	+9.4 VU	Mostly odd, some even	−78 dBFS
WARM	An older, lower-headroom tape: saturates earlier, the 2nd harmonic about as strong as the 3rd, a bigger head bump and a slightly softer top.	0.97 %	+6.8 VU	Even and odd about equal	−75 dBFS
WORN	Tired tape on a worn machine: grit even at low levels, a duller top where the tape no longer touches the head closely, and more noise.	1.0 %	+6.1 VU	Odd ahead of even	−68 dBFS

THD (total harmonic distortion) is how loud all the added harmonics are together, against the note. The hiss figures are the noise on its own, at DRIVE 0 dB with AUTO GAIN on.

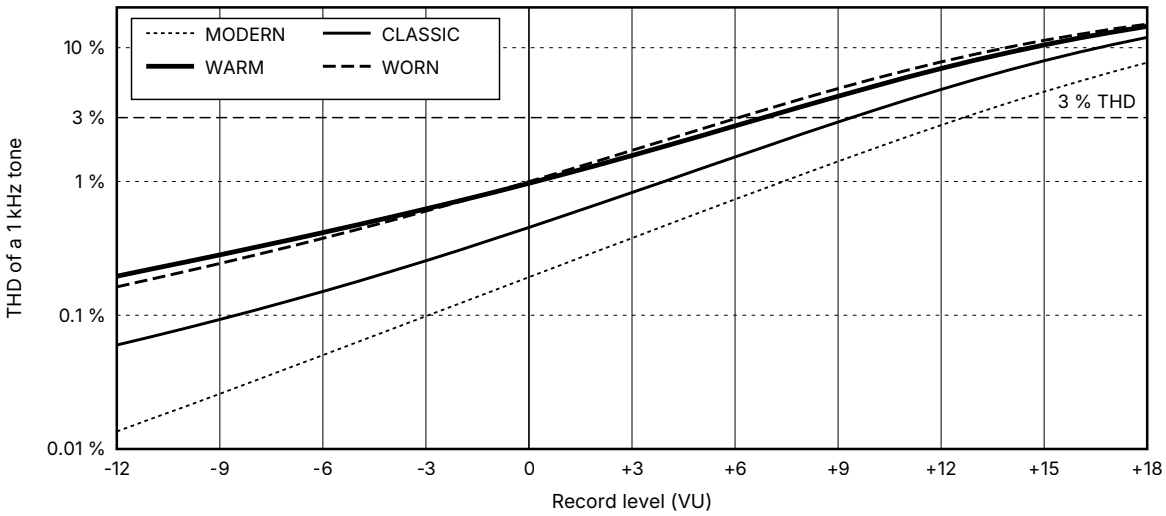
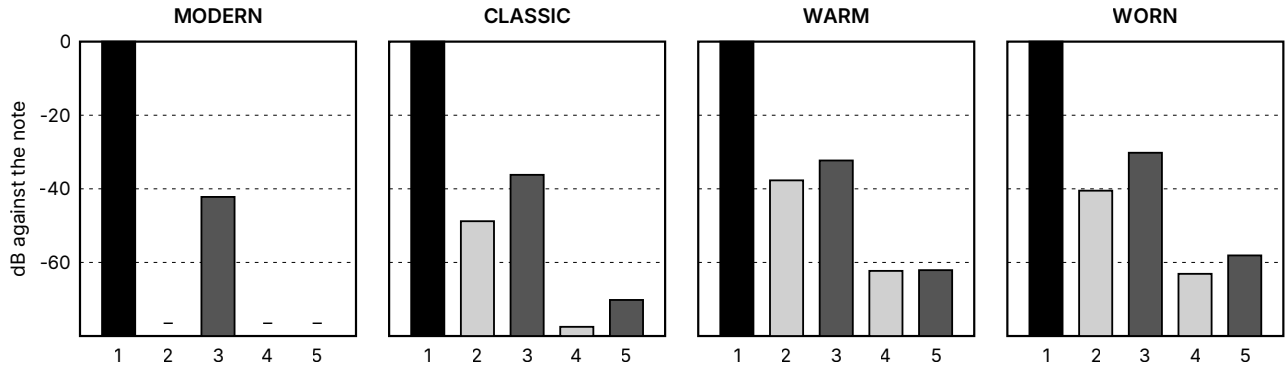


FIGURE 12 Distortion against record level for the four tapes (a 1 kHz tone at 15 ips, measured from the plugin). Every tape gets steadily dirtier as you turn up DRIVE, with no sudden edge. MODERN stays cleanest; WARM and WORN start dirtier and reach 3 % about 6 dB sooner than MODERN.

The tapes also differ in *which* harmonics they add:



Harmonic number (1 = the note itself). Light grey: even harmonics (2nd, 4th). Dark grey: odd (3rd, 5th).
A 500 Hz tone at +6 VU, 15 ips. Bars below −80 dB are left out.

FIGURE 13 The harmonics each tape adds to a tone at +6 VU (measured from the plugin). MODERN is perfectly symmetrical: only odd harmonics. CLASSIC adds a little 2nd. WARM's 2nd harmonic is nearly as strong as its 3rd: the warm, thick sound of its name. WORN is the dirtiest overall.

And each tape changes the machine's frequency response a little:

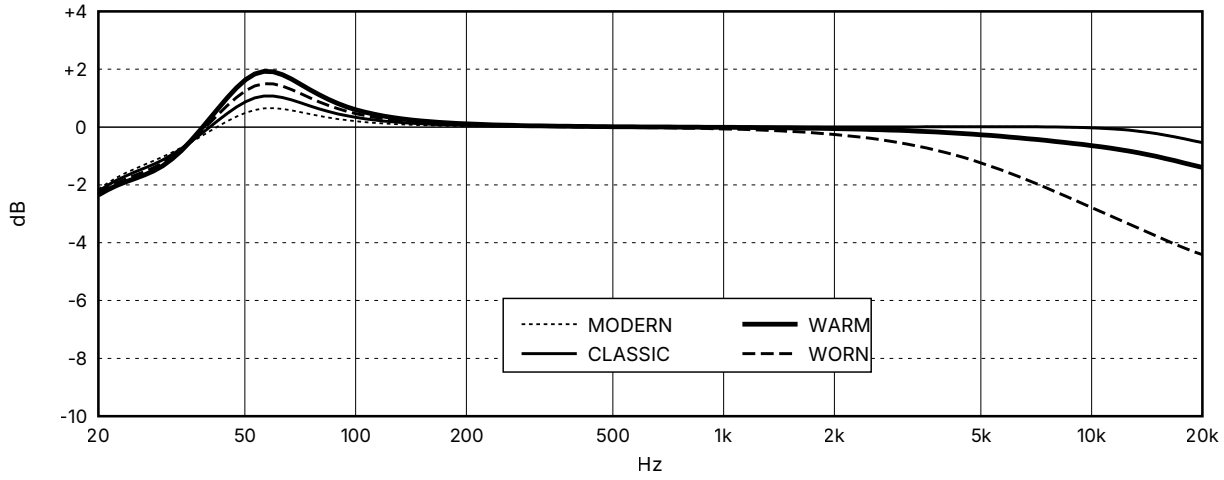


FIGURE 14 The four tapes at 15 ips (computed from the plugin). The head bump grows from MODERN (+0.6 dB) to WARM (+1.8 dB). WARM's top is down about 1 dB at 15 kHz, WORN's about 4 dB: its spacing loss.

Choosing a tape. Start with [CLASSIC]: it suits almost everything. Use [MODERN] when you want glue and peak control with little audible colour (mastering, acoustic instruments, clean pop), [WARM] for weight and thickness (bass, drums, the mix bus, anything thin), and [WORN] for character: lo-fi, grit, the sound of an old tape.

SPEED IPS: three speeds

The three buttons (5) choose the tape speed. The speed moves the head bump and the top end, and changes how soon loud highs saturate (see *How tape saturation works*).

Speed	Head bump	Top end (CLASSIC)	Loud highs	Hiss
[7.5]	About 32 Hz: the fattest, deepest low end	−3.8 dB at 15 kHz: the softest top	Saturate first: at +6 VU a 10 kHz tone is squeezed 2.0 dB more than a 1 kHz tone	4 dB more than at 15 ips
[15]	About 55 Hz	−0.5 dB at 20 kHz: smooth	0.8 dB more	The tape's reference
[30]	About 100 Hz: a tighter, lighter deep low end	Flat	0.15 dB more	3 dB less than at 15 ips

The wow and flutter rates follow the speed, as on a real transport: faster at higher speeds.

Choosing a speed. [15] is the studio standard and the default. [7.5] softens harsh cymbals, sibilant vocals and bright synths and fattens the bottom; it is the speed of most Lo-Fi presets. [30] is the clean, open choice for mastering and for anything where you want the tape's glue without losing the top end.

> **Tip:** Switching [TAPE TYPE] or [SPEED IPS] while the music plays never clicks: the tape glides to its new character over about 40 ms. Try each one on the chorus and listen.

The reels and the tape path

The two reels (6) turn while the tape rolls: that is, **while your DAW plays**. They turn at the speed you've chosen (a nearly full supply reel about 0.4 times a second at 15 ips), and the reel with less tape on it turns faster. They spin up and run down like motors. With WOW and FLUTTER turned up, the reels waver; the movement is shown about 25 times larger than life, because a real 0.1 % speed change would be invisible.

The tape packs follow TAPE TIME. The tape wound on each reel (the coloured ring you see through the reel's three windows) moves from the supply reel (left) to the take-up reel (right) as your song plays, so near the start of a song the left reel is nearly full, and further in the right one grows. Its colour follows TAPE TYPE.

The tape runs from the supply reel over a guide roller, past the ERASE, REC and PLAY heads (7), and over another guide roller (9) to the take-up reel.

If your DAW doesn't send its transport to the plugin (some standalone or live setups), the tape rolls whenever sound comes in, and stops half a second after it goes silent.

Lamps and counter

- (1) STOP, PLAY, REC: STOP lights while the tape stands still; PLAY and REC light while it rolls. Everything you play goes onto the tape: there is no separate record switch.
- (3) SAT: lights as the tape saturates, once the peaks are rounded off by about 1 dB or more. It grows brighter the harder the tape works and fades smoothly as the music gets quieter.
- (8) **The REC head** glows warm (orange on screen; in print, lighter) together with the SAT lamp.
- (2) **TAPE TIME:** large digits showing your song position in hours, minutes and seconds. Without a host transport, it shows how long the tape has rolled.

> **Tip:** The SAT lamp is a quick way to set DRIVE on drums, where the RECORD LEVEL meter reads low. For gentle glue, aim for the lamp flickering on the loudest hits; if it stays lit, you're driving hard.

Hover over any part of the transport (the reels, lamps, counter or heads) for a tooltip that says what it is.

Controls

DRIVE and the RECORD LEVEL meter

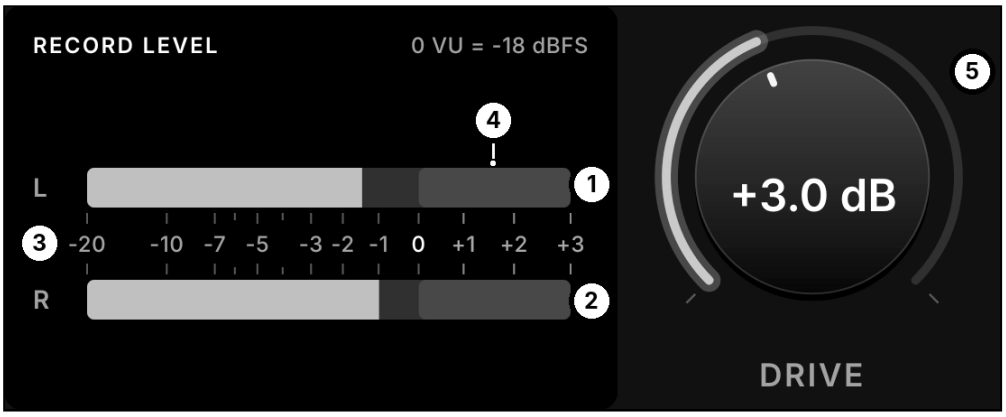


FIGURE 15 The RECORD LEVEL meter: 1 the left and 2 the right channel, 3 the VU scale between them and 4 the red zone from 0 to +3 VU; 5 DRIVE, with its value in its middle.

Control	Range	Default	
DRIVE	−12 to +24 dB	0.0 dB	The level going onto the tape.

DRIVE is the record level: how hard the tape is hit. Turn it up and the tape works harder: more rounding, more harmonics, and the highs saturate first. Turn it down (it goes to −12 dB) for a cleaner tape on hot material such as a finished master.

At DRIVE 0 dB, a track peaking around −8 dBFS sits a little under 0 VU. From there:

1. Play the loudest part of the track.
2. Turn DRIVE up until the bars reach the level you want (see the table in *Record level and the VU meter*): around 0 VU for gentle colour, +4 to +8 VU for an obvious tape sound.
3. Listen, with AUTO GAIN on, and fine-tune by ear.

The RECORD LEVEL meter shows the level **going onto the tape**, after LOW CUT, HIGH CUT and DRIVE: a bar for the left channel (L) and one for the right (R); on a mono track both show the same. It is a true VU meter laid on its side: the bars move with standard VU ballistics (they rise and fall over about a third of a second, as the needles of a VU meter do) and show the average level, not the peaks. The scale between the bars runs from −20 to +3 VU and is spaced like a VU meter's arc, so the last few dB below 0 VU take the most room; 0 VU = -18 dBFS is printed above it.

Up to 0 VU the bar is amber; past 0 VU it turns red, over a red-tinted zone that runs to +3 VU (in print: the part of the bar to the right of the 0 mark, over the lighter end of the track). The red zone is where the tape starts to saturate.

Because the meters come after the filters, a LOW CUT on a bass-heavy track or a HIGH CUT on a bright one lowers the reading: what the filters take away doesn't reach the tape.

AUTO GAIN

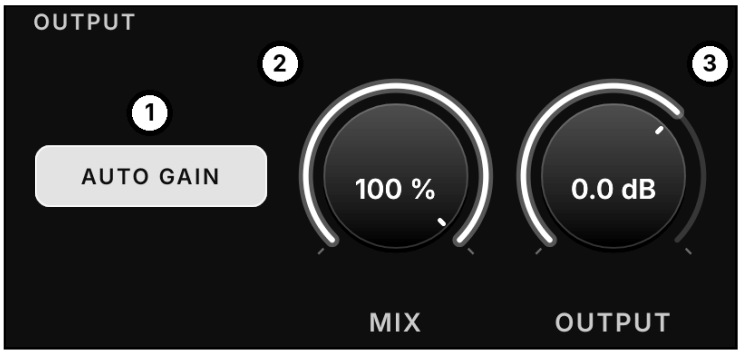


FIGURE 16 The OUTPUT group: 1 AUTO GAIN (on: filled), 2 MIX and 3 OUTPUT.

Control	Range	Default	
AUTO GAIN	On / off	On	Takes DRIVE back off after the tape, so the level stays put.

Turning up a gain control almost always sounds “better” because it’s louder. AUTO GAIN removes that trap. It takes the DRIVE back off after the tape, and also gives back what the tape’s saturation takes off the level, so a 0 VU tone comes out exactly as loud at DRIVE +18 dB as at DRIVE 0, on every tape. You hear the tape working, not the level going up.

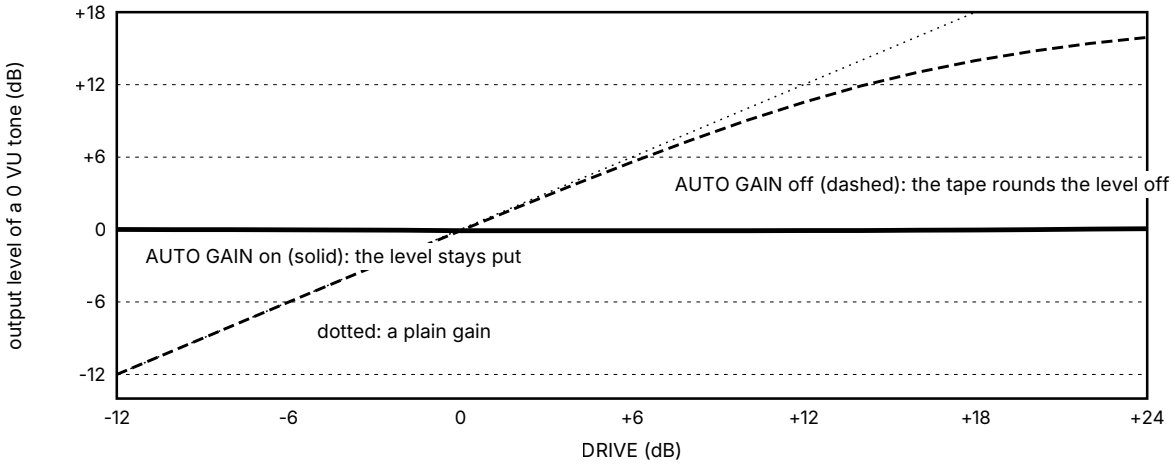


FIGURE 17 The output level of a 0 VU tone as you turn up DRIVE (CLASSIC, measured from the plugin). With AUTO GAIN off, the output rises with DRIVE until the tape rounds it off. With AUTO GAIN on, it stays within about 0.1 dB from −12 to +24 dB of DRIVE.

- AUTO GAIN also lowers the **hiss** as you drive harder, as on a real machine: a hotter recording puts the music further above the tape’s noise.
- It is calibrated on a 1 kHz tone. On real music the level can still move a little when you drive hard: bright, sustained sources (electric guitar, brass, organ) can come out a dB or two quieter, because their highs saturate first, and bass can come out louder, because the harmonics the tape adds are easier to hear than the deep fundamental. Trim with OUTPUT, and check the Δ readings on the meter bridge.

- Switching it crossfades over 30 ms, so it never clicks. With it off, DRIVE raises the level like a plain gain until the tape saturates; use OUTPUT to bring it down.

Every factory preset has AUTO GAIN on.

MIX and OUTPUT

Control	Range	Default	
MIX	0 to 100 %	100 %	The tape against the dry signal.
OUTPUT	−24 to +12 dB	0.0 dB	The final level.

MIX blends the tape with the untouched input: **parallel tape**. At 100 % you hear only the tape, at 0 % only the dry signal. The dry signal is delayed to line up exactly with the tape, so blending never causes phasing; at 0 % the output is the input, bit for bit, just delayed by the latency.

Parallel tape lets you drive the tape hard for density and grit, then blend it under the dry signal so the attack and the top end stay intact. LOW CUT and HIGH CUT shape only the tape's path, so the dry part keeps its full range. The presets *Parallel Drum Smash*, *Parallel Vocal Grit*, *Parallel Tape Mix* and *Parallel Master Tape* work this way.

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.

LOW CUT and HIGH CUT: filters before the tape



FIGURE 18 1 LOW CUT (here at 40 Hz) and 2 HIGH CUT (here at 16.0 kHz), under the caption FILTERS BEFORE THE TAPE.

Control	Range	Default	
LOW CUT	20 Hz (Off) to 1 kHz	Off	Takes lows away before the tape, 12 dB per octave.
HIGH CUT	1 kHz to 20 kHz (Open)	Open	Takes highs away before the tape, 12 dB per octave.

The two filters sit **before** DRIVE and the tape, so they decide what the tape saturates. That matters more than it might seem: a tape saturates on whatever is loudest, and in most music the loudest thing is the low end.

- LOW CUT keeps rumble, sub and boom out of the saturation. On a vocal, guitar or overhead, the tape then works on the body and character of the sound, not on low-frequency mud, and the low end stays tight. At its lowest setting the knob reads Off.
- HIGH CUT keeps cymbals and sibilants from hitting the tape. Since loud highs saturate first (more so at 7.5 ips), a HIGH CUT gives a darker, smoother result. At its highest setting (from 19.5 kHz up) the knob reads Open. Turned far down, it makes telephone and radio effects (see *AM Radio Vocal* and *Underwater Mix*).

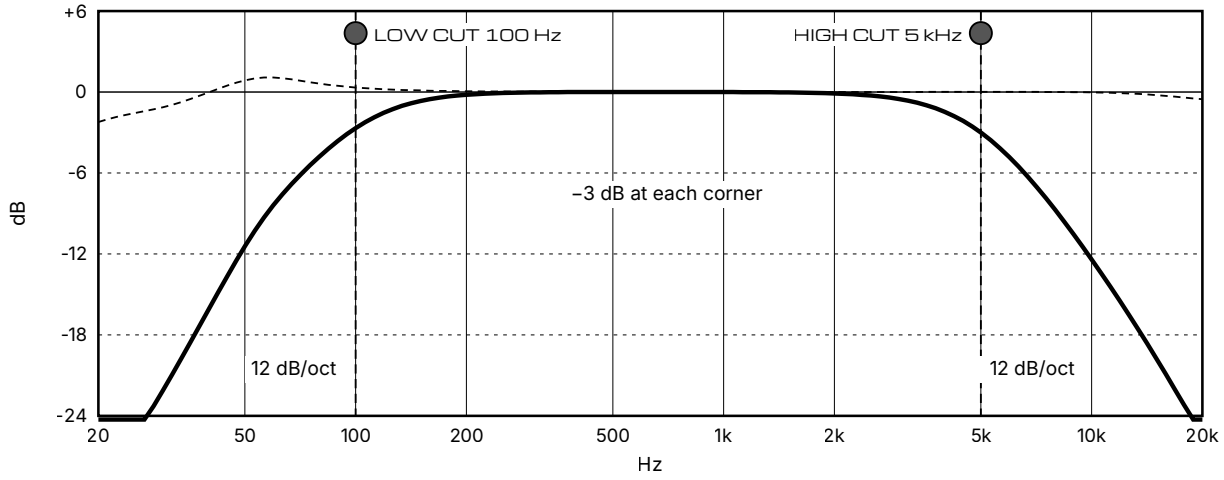


FIGURE 19 LOW CUT at 100 Hz and HIGH CUT at 5 kHz (solid), against the machine alone (dashed): CLASSIC at 15 ips, computed from the plugin. Each filter is 3 dB down at its frequency and falls at 12 dB per octave beyond it.

Both filters are also **handles on the RESPONSE display**: drag them there, see *Displays*. They glide when you move them and fade in and out when you switch them on or off, so they never click.

> **Tip:** Because the filters only shape the tape's path, a LOW CUT with MIX below 100 % is a way to add tape colour to everything *except* the low end: the dry signal still carries the full bass.

WOW, FLUTTER and HISS: the transport

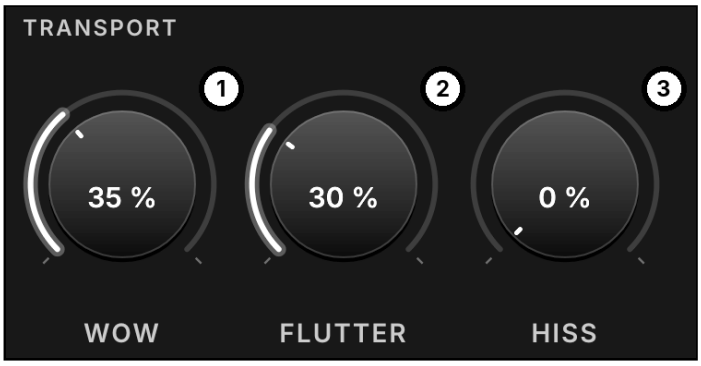


FIGURE 20 1 WOW (here 35 %), 2 FLUTTER (here 30 %) and 3 HISS, under the caption TRANSPORT.

Control	Range	Default	
WOW	0 to 100 %	0 %	Slow speed changes: the pitch sways and drifts. 100 % is up to 0.75 %.
FLUTTER	0 to 100 %	0 %	Fast speed changes: a roughness on held notes. 100 % is 0.3 %.
HISS	0 to 100 %	0 %	The tape's noise. 50 % is the real noise floor of the tape at its speed.

All three are off by default, so the plugin starts as a perfectly steady, silent machine. Turn them up for realism, nostalgia or effect.

WOW is the slow sway of an imperfect transport: a periodic wow (once or twice a second, faster at higher tape speeds) plus a slow random drift that wanders to a new speed every two seconds. At 100 % the speed swings by up to about 0.75 % (around 0.55 % measured over a minute, since the drift and the wow seldom line up), which is an obvious, seasick pitch bend.

FLUTTER is the fast part: the capstan, the rollers and the tape scraping over the heads. At low settings it adds a subtle grain to sustained notes; at high settings it becomes a fast vibrato. 100 % is 0.3 %.

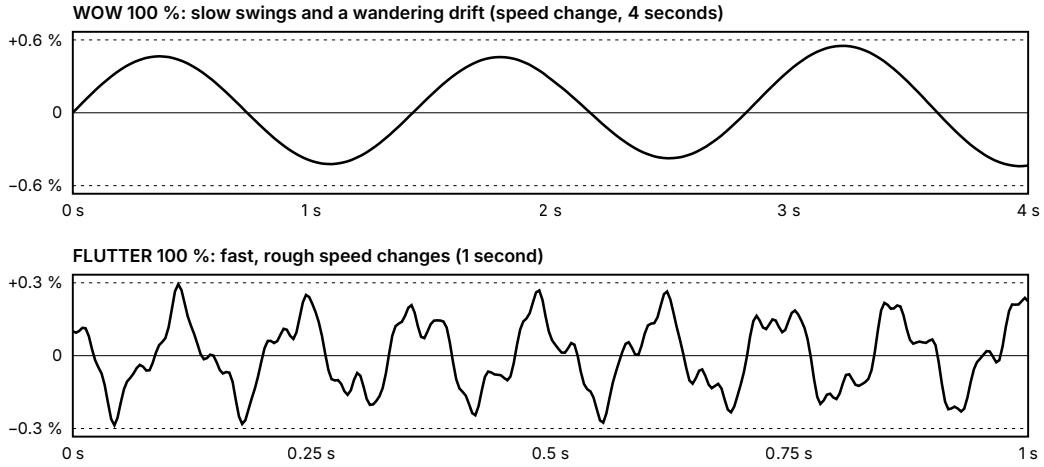


FIGURE 21 The tape's speed change over time at 15 ips, from the plugin's transport. Top: WOW at 100 %: a slow swing with a drifting centre. Bottom: FLUTTER at 100 %: faster and rougher (note the different time scale).

Both knobs have a **squared taper**: 50 % gives a quarter of the full amount, so the lower half of each knob is fine control for realistic settings. A good studio machine sits in the bottom 10–20 %. The Lo-Fi presets use 30–70 %, and the Creative FX presets go up to 100 %.

Wow and flutter move both channels together, as one transport would, so they never smear the stereo image.

HISS adds the tape's noise, shaped like real tape hiss (no rumble, a slight presence around 6 kHz, and the speed's high-frequency loss), separately on each channel.

- **50 %** is the real noise floor of the chosen tape at the chosen speed. **100 %** is 12 dB more; **25 %** is 12 dB less; **0 %** is no noise at all.
- The level depends on the tape (MODERN quietest, WORN noisiest, see the table in *TAPE TYPE*) and on the speed (4 dB more at 7.5 ips, 3 dB less at 30 ips).
- With AUTO GAIN on, a harder-driven tape has less hiss against the music, as on a real machine.
- Hiss is added after the tape, so it doesn't drive it: for just the noise of tape under a track, set HISS and leave DRIVE low.

Displays

The RESPONSE display

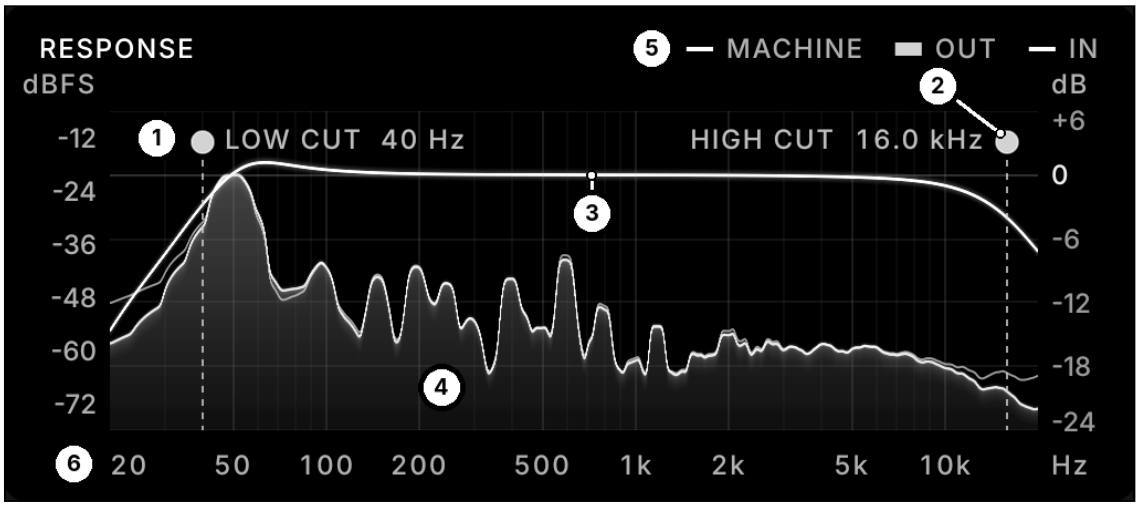


FIGURE 22 1 The LOW CUT handle (here at 40 Hz), 2 the HIGH CUT handle (here at 16.0 kHz), 3 the machine's response, 4 the output spectrum (amber) over the input (grey), 5 the legend and 6 the frequency scale. The spectrum's dBFS scale is at the left, the response's dB scale at the right.

The RESPONSE display draws two things on one frequency axis, from 20 Hz to 20 kHz:

- 3 **The machine's response**: the thin, light line, read against the dB scale on the right (+6 to −24 dB). It shows what the plugin does to the frequency balance of a quiet signal at your current settings: the head bump and top-end loss of the tape and speed, plus LOW CUT and HIGH CUT. It does not show saturation, which depends on level.
- 4 **The spectrum of your signal**, read against the dBFS scale on the left. The **output** is the filled area (amber on screen); the **input** is a thin grey line drawn behind it. Where they match, you see only the output; where the tape changes the sound, the grey line separates from the filled edge. The scale moves up and down in 6 dB steps to follow your track's level.
- 5 **The legend** names the three: MACHINE, OUT and IN.

Moving the filters. The two round handles at the top of the plot are LOW CUT 1 and HIGH CUT 2 . Each draws a dashed line down the plot at its frequency and is labelled with its value (LOW CUT 40 Hz, HIGH CUT OPEN). A handle in use is amber on screen; one that is off sits grey at the edge of the plot. In print, look for the label: it reads OFF or OPEN when the filter is out.

- **Drag** a handle left or right to set its frequency; the knob below follows.
- Drag LOW CUT all the way to the left edge to switch it off; drag HIGH CUT all the way to the right edge to open it.
- **Double-click** a handle to switch that filter off.

Hover anywhere in the plot for a tooltip that reads the machine's response at that frequency, for example *At 63 Hz the machine changes the level by +1.0 dB*.

What to look for: compare the speeds and tapes and watch the head bump move. On a bass or kick, watch whether the bump lines up with the fundamental: at 15 ips it lifts around 55 Hz, at 30 ips around 100 Hz. With DRIVE up, the amber output fills in above the grey input in the upper mids and highs: those are the harmonics the tape adds.

The RECORD LEVEL meter

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

Meter bridge (IN | OUT)

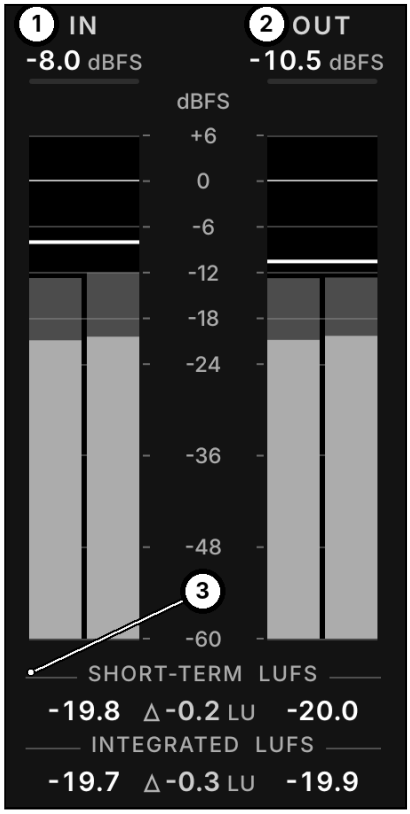


FIGURE 23 The meter bridge: 1 input and 2 output level, 3 short-term and integrated loudness with the OUT − IN difference.

VEIRA Tape Saturator'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 Saturator 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.

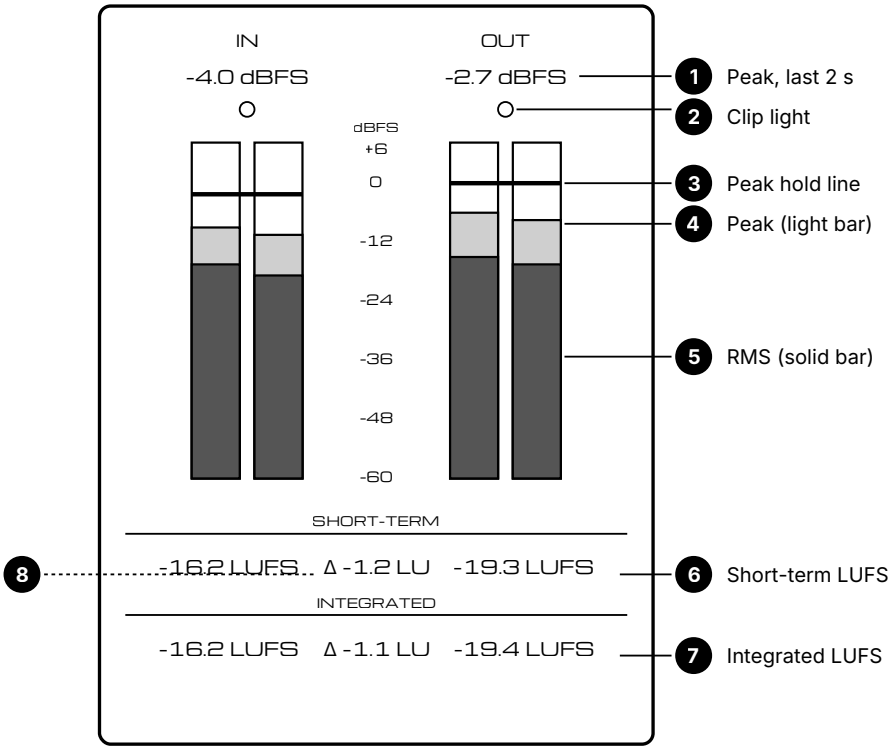


FIGURE 24 The meter bridge, left and right channel bars for input and output, with loudness below.

- 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 Saturator 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.

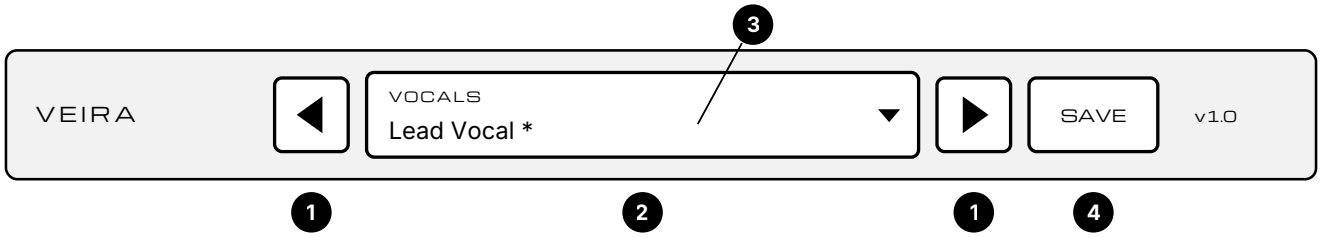
Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Presets

VEIRA Tape Saturator comes with **76 factory presets** in 13 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 25 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 Saturator 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 Saturator/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Tape Saturator\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	Drum Bus Glue, Kick And Snare Weight, Transient Rounder, Parallel Drum Smash, Overhead Smoother, Room Mic Crush, Clean Kit 30 IPS
Bass	Bass DI Warmth, Bass Bump 15 IPS, Driven Bass Grit, Synth Bass Smoother, Punchy Bass 30 IPS
Guitar	Acoustic Sheen 30 IPS, Pick Attack Softener, Electric Rhythm Warmth, Crunch Thickener, Lead Guitar Sustain
Keyboards	Piano Warmth, Bright Piano Tamer, Felt Piano Tape, Organ Drive, Synth Pad Glue
Strings	String Section Warmth, Silky Violins, Clean Strings 30 IPS, Low Strings Body, Vintage Score Strings
Brass	Brass Section Glue, Bright Brass Tamer, Warm Horn Section, Punchy Horn Stabs, Clean Brass 30 IPS
Woodwinds	Woodwind Air 30 IPS, Breathy Flute Tamer, Warm Clarinet, Smoky Sax Grit, Woodwind Section Glue
Vocals	Lead Vocal Warmth, Sibilance Softener, Male Vocal Thickener, Airy Pop Vocal, Driven Rock Vocal, Parallel Vocal Grit, Podcast Voice Polish, Male Voice Over Warmth, Backing Vocal Tuck
Mix Bus	Gentle Mix Glue, Warm Mix Bus, Analog Sheen 30 IPS, Smooth Top End, Parallel Tape Mix, Pushed Mix Bus, Real Machine Mix
Mastering	Clean Master 30 IPS, Gentle Master Glue, Warm Master 15 IPS, Analog Master Polish, Harsh Master Smoother, Parallel Master Tape
Lo-Fi	Cassette Mix, Worn Drum Loop, Dusty Piano Keys, Warped Vocal Tape, Pocket Recorder Voice, Bedroom Demo Guitar, Lo-Fi Beat Tape, Warbly Synth Pad
Creative FX	AM Radio Vocal, Seasick Synth Pad, Tape Destroyer Drums, Saturated Bass Fuzz, Broken Reel Keys, Underwater Mix, Smashed Parallel Kit, Flutter Vibrato Guitar

Levels matter. Tape reacts to level. The presets assume tracks peaking around −8 dBFS, close drums −6, the mix bus −4 and a premaster −3 dBFS (so the Mastering presets use negative DRIVE); there, each stays within about half a dB of bypass. On hotter or quieter material, set DRIVE by the RECORD LEVEL meter first, then trim OUTPUT by ear.

Recipes

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

Glue and warmth on the mix bus

1. Load **Mix Bus ▸ Gentle Mix Glue** or **Mix Bus ▸ Warm Mix Bus**.
2. Play the loudest section. Set DRIVE so the RECORD LEVEL bars move around −3 to 0 VU on the loud parts.
3. Try CLASSIC against WARM, and 15 against 30: listen to the low end and the top.
4. If the low end gets woolly, raise LOW CUT to 25–30 Hz.
5. For the movement of a real machine, try **Mix Bus ▸ Real Machine Mix**: a touch of WOW and FLUTTER (15–18 %).

Weight and punch on a drum bus

1. Load **Drums ▸ Drum Bus Glue**.
2. Turn up DRIVE until the SAT lamp flickers on the loudest hits. The RECORD LEVEL meter will read lower than on other material; that's normal for drums.
3. For more weight, switch to WARM (**Drums ▸ Kick And Snare Weight**). For rounder transients, drive harder (**Drums ▸ Transient Rounder**).
4. For a big, dense sound that keeps the attack, load **Drums ▸ Parallel Drum Smash**, then set the amount with MIX and the grit with DRIVE.

Fatten a bass

1. Load **Bass ▸ Bass DI Warmth**, or **Bass ▸ Bass Bump 15 IPS** for more low end.
2. Watch the RESPONSE display and choose the speed whose head bump sits under the bass's fundamental: 15 for most electric bass, 7.5 for deep synth bass, 30 for punch around 100 Hz.
3. Raise DRIVE for more harmonics; they help the bass carry on small speakers.
4. Driven bass can get louder in perceived level as the harmonics come in: check the Δ reading and lower OUTPUT if needed.

Smooth a bright vocal

1. Load **Vocals ▸ Lead Vocal Warmth**, or **Vocals ▸ Sibilance Softener** if the "s" sounds are harsh.
2. Keep LOW CUT around 80 Hz so breath pops and proximity boom don't drive the tape.
3. 7.5 ips softens loud sibilants more than quiet speech, because loud highs saturate first. Raise DRIVE until the sibilants round off but the voice stays open.
4. For an edgy rock vocal, drive CLASSIC at 15 harder (**Vocals ▸ Driven Rock Vocal**), or blend a crushed WORN tape under it (**Vocals ▸ Parallel Vocal Grit**).

Tape on a master

1. Insert VEIRA Tape Saturator **before** your final limiter.
2. Load **Mastering ▸ Gentle Master Glue**, or **Mastering ▸ Clean Master 30 IPS** for the most transparent sound. These use negative DRIVE because a premaster is already hot.
3. Aim for RECORD LEVEL around −6 to −2 VU. Listen for the low end tightening and the top end settling, not for distortion.
4. Watch the output peak on the meter bridge; tape can raise the peak a little through its low-end response. Your limiter after it takes care of the rest.

Cassette and lo-fi

1. Load **Lo-Fi ▸ Cassette Mix** (or **Lo-Fi Beat Tape** for beats, **Dusty Piano Keys** for keys).
2. Set the wobble with WOW (the slow sway) and FLUTTER (the fast roughness). Remember the squared taper: 30–50 % is already strongly audible.
3. Set the noise with HISS; 50–60 % is a realistic cassette floor.
4. Narrow the range with HIGH CUT (8–12 kHz) and LOW CUT (50–100 Hz) for a smaller, older sound.

Vibrato and warble effects

1. Load **Creative FX ▸ Flutter Vibrato Guitar** for a fast vibrato, or **Creative FX ▸ Seasick Synth Pad** for slow, wide pitch bends.
2. On sustained sounds, raise WOW toward 100 % for a warped-record sway; raise FLUTTER for a faster shimmer.
3. Pull MIX down to blend the wobble with the steady dry signal for a chorus-like width.

Specifications

Type	Tape saturator: magnetic hysteresis (Jiles-Atherton) tape model with record and playback EQ, head bump, HF loss, wow, flutter and hiss
Channels	Mono and stereo
Latency	254 samples at 48 kHz (240 at 44.1 kHz, 437 at 96 kHz, 738 at 192 kHz), constant, reported to the host for delay compensation
Oversampling	4× at 44.1/48 kHz, 2× at 88.2/96 kHz, none above; linear-phase filters
Transparency	At MIX 0 %, and when bypassed, the output is the input delayed by the latency, bit for bit
Calibration	0 VU = a sine at −18 dBFS RMS
TAPE TYPE	MODERN, CLASSIC, WARM, WORN (default CLASSIC); THD at 0 VU 0.19 / 0.45 / 0.97 / 1.0 %; 3 % THD at +12.7 / +9.4 / +6.8 / +6.1 VU
SPEED IPS	7.5, 15, 30 ips (default 15); head bump about 32 / 55 / 100 Hz; top end −3.8 dB at 15 kHz / −0.5 dB at 20 kHz / flat; record EQ 70 / 35 / 17.5 µs
DRIVE	−12 to +24 dB in 0.1 dB steps (default 0.0 dB)
LOW CUT	20 Hz (Off) to 1 kHz, 12 dB/octave (default Off)
HIGH CUT	1 kHz to 20 kHz (Open from 19.5 kHz), 12 dB/octave (default Open)
WOW	0 to 100 % (default 0 %); up to 0.75 % speed change; squared taper
FLUTTER	0 to 100 % (default 0 %); up to 0.3 % speed change; squared taper
HISS	0 to 100 % (default 0 %); 50 % = the tape's real noise floor, 100 % = +12 dB
AUTO GAIN	On / off (default on); 30 ms crossfade
MIX	0 to 100 % (default 100 %)
OUTPUT	−24 to +12 dB in 0.1 dB steps (default 0.0 dB)
Switching	TAPE TYPE and SPEED IPS glide over 40 ms; filters glide over 20 ms and fade in and out over 5 ms
Displays	Animated transport (reels, tape packs following the tape time, STOP / PLAY / REC / SAT lamps, TAPE TIME counter); RESPONSE (20 Hz–20 kHz, machine response +6 to −24 dB, input and output spectrum, filter handles)
Metering	RECORD LEVEL: L and R bars on a VU scale (−20 to +3 VU), VU ballistics per IEC 60268-17; IN and OUT meters (sample peak, RMS); short-term and integrated loudness per ITU-R BS.1770-4 / EBU R 128
Presets	76 factory presets in 13 folders, plus your own
Window	1360 × 868 points; resizable from 75 % to 200 %, saved with the session
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vtap

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 Saturator 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 turned up DRIVE and nothing got louder. That's AUTO GAIN doing its job: it keeps the level steady so you hear the tape, not the volume. Listen to the character: the rounding, the thickness, the softer top. Switch AUTO GAIN off if you want DRIVE to raise the level too.

I can't hear any difference. Check the RECORD LEVEL meter. If it sits well below 0 VU, the tape has little to do: turn up DRIVE. A MODERN tape at 30 ips is also designed to be nearly transparent; try CLASSIC or WARM at 15.

The reels don't turn. They turn while your DAW plays. If your DAW is stopped but you hear sound (for example while monitoring a live input), the tape stands still in most DAWs. Without a host transport (some standalone setups), the reels turn whenever sound comes in.

My bass or kick got louder, or my guitar got quieter, when I drove the tape. AUTO GAIN is calibrated on a 1 kHz tone. On bass, the harmonics the tape adds are easier to hear than the deep fundamental, so it can sound louder; on bright, sustained sounds the highs saturate first and the level can drop a dB or two. Trim OUTPUT until the Δ INTEGRATED reading is near 0.0 LU.

The output peak went up even though the loudness didn't change. The head bump and the low-end roll-off shift the phase of the low frequencies a little, as on a real machine, which can raise the sample peak of a dense mix slightly. On a master, keep your limiter after VEIRA Tape Saturator.

The pitch wobbles, or the track sounds noisy. Check WOW, FLUTTER and HISS. Many Lo-Fi and Creative FX presets use them; Init and most other presets keep them at 0 %.

Is there a delay? Yes, a small, constant one (254 samples at 48 kHz, about 5 ms), which your DAW compensates automatically. If you monitor a live input through the plugin while recording, you may notice it; insert the plugin after tracking, or use your DAW's low-latency monitoring mode.

Does the plugin record anything? No. The "tape" is a model: nothing is stored, and the counter only follows your song position.

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, including the tape type and speed, 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 Saturator · User Manual · Version 0.2.0

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

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