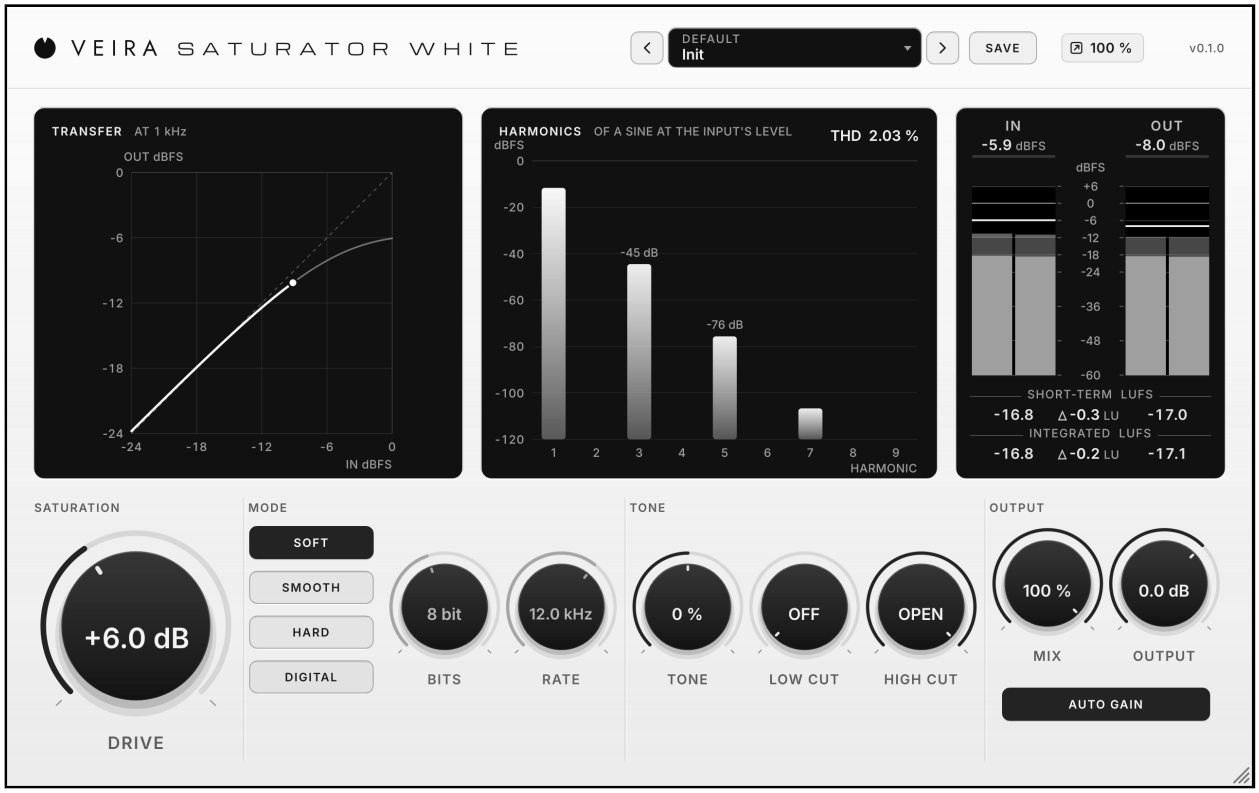
VEIRA

SATURATOR

VEIRA Saturator White

User Manual

The clean one of the VEIRA colour saturators: four precise curves, from a smooth soft saturation to clean-then-hard clipping and a deliberate digital crush, all oversampled and anti-aliased, with AUTO GAIN so you judge the colour, not the loudness.



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Welcome

Thank you for choosing **VEIRA Saturator White**. It adds harmonics and density to anything from a single vocal to the mix bus: a soft, rounded warmth, an edge that only appears when the signal is pushed, precise hard clipping, or a deliberately crushed digital texture.

It is the White member of the VEIRA colour family: clean, precise and modern, with a light face, dark screens and black knobs. Each MODE is an exact mathematical curve, drawn on the screen as it is applied, and everything that distorts runs at four times your session's rate with an anti-aliasing technique that keeps even a hard clip on a high note free of fold-back.

What makes it different

- **Four exact curves.** SOFT (smooth from the first dB), SMOOTH (perfectly clean up to −6 dBFS, then a soft knee), HARD (perfectly clean up to 0 dBFS, then a hard ceiling) and DIGITAL (BITS and RATE into the hard ceiling).
- **Anti-aliased.** The curves run at 4x through their antiderivatives: hard clipping at DRIVE +18 dB kept its fold-back at −91 dB and lower, where the same clip without them reached −28.5 dB.
- **AUTO GAIN.** A sine at −18 dBFS RMS comes out as loud as it went in at any DRIVE and MODE (within 0.006 dB), so turning up DRIVE changes the colour, not the level.
- **TONE that changes the distortion, not the EQ.** It tilts the signal into the curve and exactly undoes the tilt after it: the clean sound stays flat, but + drives the highs harder and − the lows.
- **Parallel, in time.** MIX blends with the dry signal delayed by exactly the plugin's latency: 96 samples at every rate and setting.
- **See what it does.** TRANSFER draws the curve with the range your signal reaches; HARMONICS shows the harmonics it makes and the THD.

How this manual is organised. *Getting started* installs and activates the plugin. *The panel at a glance* names its parts. *How saturation works* is a short primer. *Controls* and *Displays* explain every knob, button and graph. *Presets*, *Recipes*, *Specifications* and *Troubleshooting* close the manual.

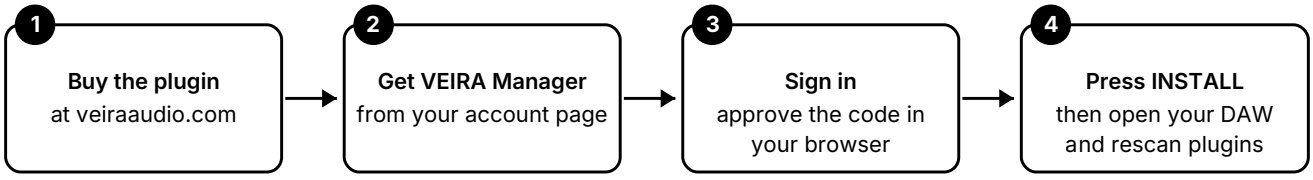
Getting started

What you need

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

Install with VEIRA Manager

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



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

FIGURE 1 From purchase to first sound in four steps.

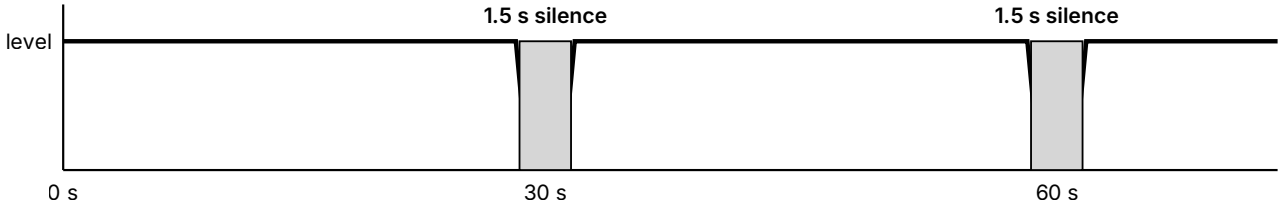
1. **Buy** VEIRA Saturator White at **veiraaudio.com**. It's a one-time purchase: you own it for good, with free updates.
2. **Download VEIRA Manager** from your account page (or veiraaudio.com/manager) and install it.
3. **Sign in.** VEIRA Manager shows a short code and opens your browser; confirm the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

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

Activation and the licence

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

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



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

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

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

Formats and where the files go

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

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

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

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

The panel at a glance

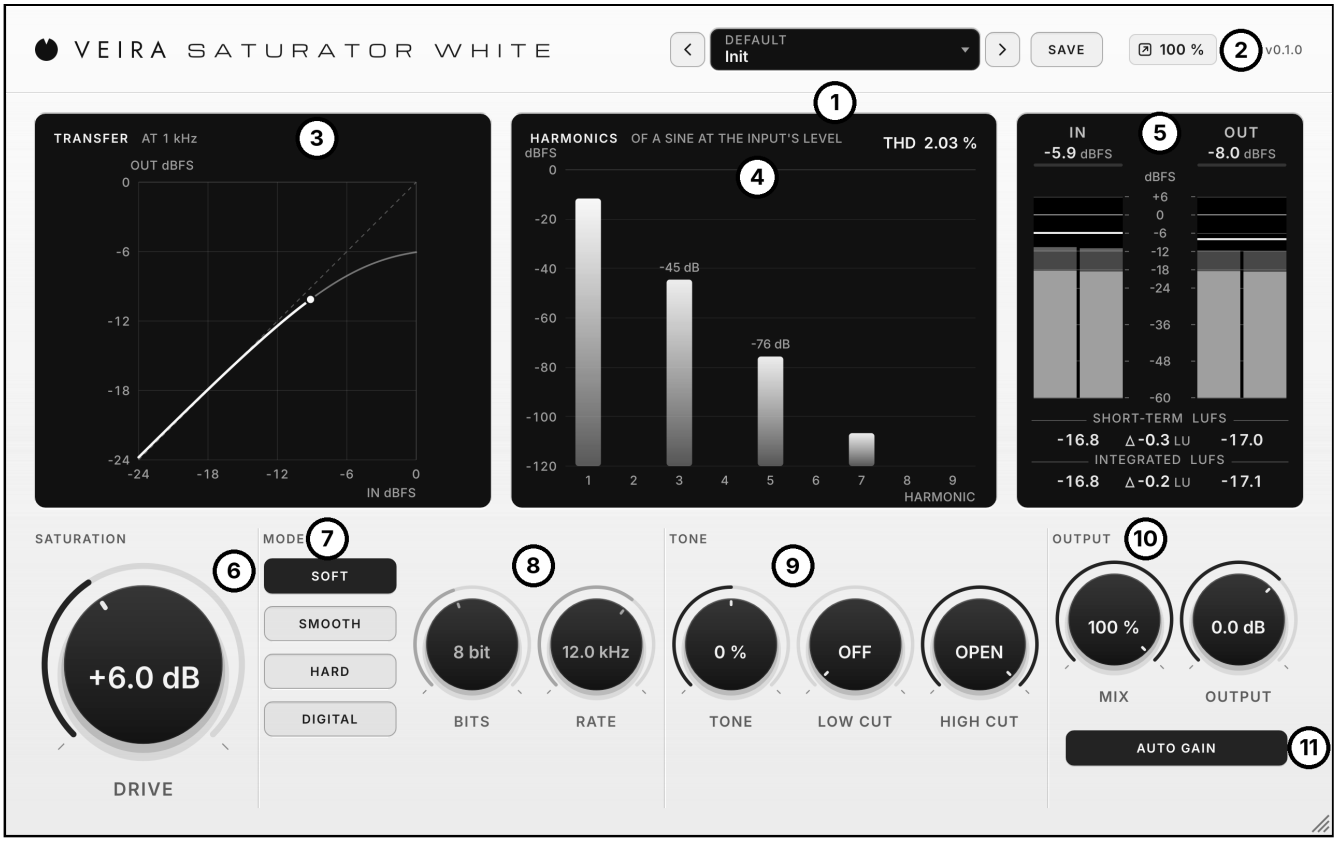
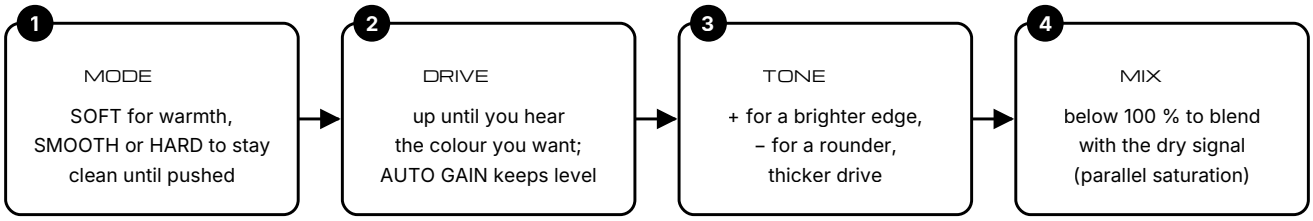


FIGURE 3 VEIRA Saturator White with the *Init* preset: DRIVE +6.0 dB into SOFT, with AUTO GAIN on.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	Size button	The window's size: 75 to 200 %, or *Fit to screen*.
3	TRANSFER	The curve the signal goes through, with the range it reaches now.
4	HARMONICS	The harmonics the curve makes of the level coming in, and the THD.
5	Meter bridge	IN and OUT meters with short-term and integrated loudness.
6	DRIVE	How hard the signal is pushed into the curve.
7	MODE	The curve: SOFT, SMOOTH, HARD or DIGITAL.
8	BITS, RATE	The resolution and sample rate of DIGITAL (dimmed in the other modes).
9	TONE, LOW CUT, HIGH CUT	What is driven harder, and the band that is saturated.
10	MIX, OUTPUT	Parallel saturation and the level going out.
11	AUTO GAIN	Keeps the level as DRIVE goes up.

The two displays and the meter bridge fill the top of the window. Underneath, from left to right: SATURATION with the large DRIVE knob, MODE with BITS and RATE, TONE, and OUTPUT.

Quick start: colour in four moves



Compare with bypass at equal loudness: the meter bridge's Δ INTEGRATED should read about 0.0 LU.

FIGURE 4 The quickest way in. *Default* ▸ *Init* sets DRIVE +6.0 dB into SOFT with AUTO GAIN on: a gentle saturation.

Using the controls

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

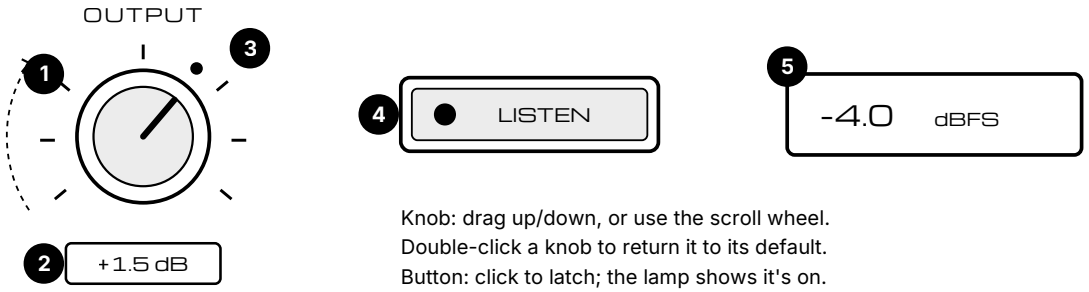


FIGURE 5 The parts you'll find on every VEIRA panel (the labels are examples).

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

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

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

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

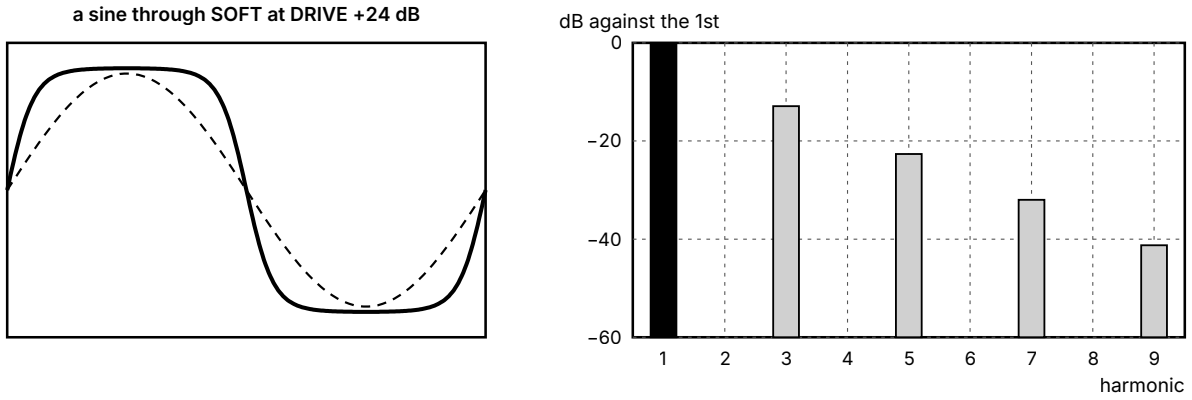
On VEIRA Saturator White's panel the parts look a little different from the drawing above:

- **Knobs show their value in the middle** ([+6.0 dB], [8 bit], [OFF]): the knobs are black, with a dark ring around each one on the light face showing how far it is turned. The control's name is printed under the knob. [DRIVE], the one you touch most, is the large one.
- **Type a value:** right-click a knob (Control-click on a Mac). A field opens with the current value; type the new one and press Return. **12** for [DRIVE] +12 dB, **4k** or **4000** for 4 kHz, **off** for [LOW CUT] off and **open** for [HIGH CUT] open.
- **Buttons have no lamp:** a button that is on fills dark with light lettering ([SOFT] and [AUTO GAIN] in the picture; in print, dark buttons); one that is off is a light key. The four [MODE] buttons work as a group: one of them is always on.
- **A dimmed control** doesn't act right now: [BITS] and [RATE] outside [DIGITAL].
- **The window size.** VEIRA Saturator White opens at 100 %, 1280 × 800 points. To change it, click the size button 2 and choose 75, 90, 100, 125, 150 or 200 % or *Fit to screen* (sizes that don't fit your display are left out); or drag the grip in the bottom-right corner (double-click it for 100 %); or press Cmd + [=] and Cmd + [-] (Ctrl on Windows) and Cmd + [0] for 100 %. Your DAW saves the size with the session, and new instances open at the size you chose last.
- **The face:** a light, clean face with dark screens for the displays and the preset window. Every label stands at least 4.5:1 against what is behind it (the WCAG AA contrast for text), and no text is smaller than 12 points.

How saturation works

Harmonics

A saturator bends the top of the waveform. When a wave is pushed into a curve that flattens towards a ceiling, its peaks come out rounder or flatter than they went in, and that change of shape is heard as **harmonics**: new tones at whole multiples of each note's frequency (two, three, four … times). A few quiet harmonics sound like warmth and density; more sound like grit and edge; a hard clip sounds like fuzz.



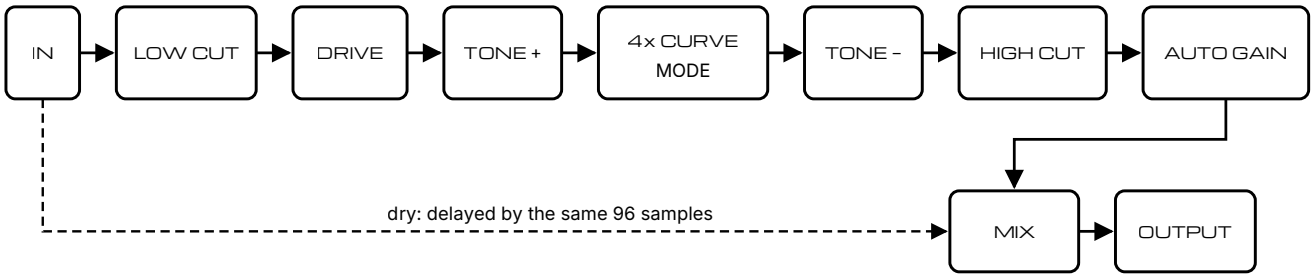
Bending the wave's top adds harmonics: tones at whole multiples of the note. A symmetric curve like SOFT makes only the odd ones (3rd, 5th, 7th …), computed here from the curve. The more DRIVE, the stronger they get.

FIGURE 6 A sine pushed into [SOFT], and the harmonics that come out (computed from the curve).

Two things decide the sound: **the shape of the curve** (how early and how sharply it bends) and **how hard you drive it**. Curves that bend the same way up and down, like the four in VEIRA Saturator White, make mostly odd harmonics (3rd, 5th, 7th …).

Saturation also **compresses**: the peaks can't go past the ceiling, so a driven signal is denser and, without correction, louder. That is why [AUTO GAIN] matters: it keeps the level steady so you can judge the colour.

What happens inside VEIRA Saturator White



TONE tilts the signal before the curve and exactly undoes the tilt after it, so it changes what is driven, not the EQ.
LOW CUT and HIGH CUT shape the saturated path only. Latency: 96 samples at every rate and setting.

FIGURE 7 The signal flow. The dry path is delayed by exactly the latency, so [MIX] blends in time.

1. [LOW CUT] takes the lows out of what will be driven (12 dB per octave).
2. [DRIVE] sets how hard the signal is pushed, and [TONE] tilts it (the pre-emphasis).
3. **The curve** of the chosen [MODE] is applied at **4x** the session's rate, through its antiderivative (see *Aliasing*), then the signal comes back down to your rate.
4. [TONE]**'s inverse tilt** puts the frequency balance back, and [HIGH CUT] tames the top (12 dB per octave).
5. [AUTO GAIN] brings the level back, [MIX] blends with the dry signal, delayed by the same 96 samples, and [OUTPUT] sets the level.

Changing [MODE] crossfades along an S-curve over 20 ms, and every gain glides, so nothing clicks while you play.

Controls

SATURATION: DRIVE

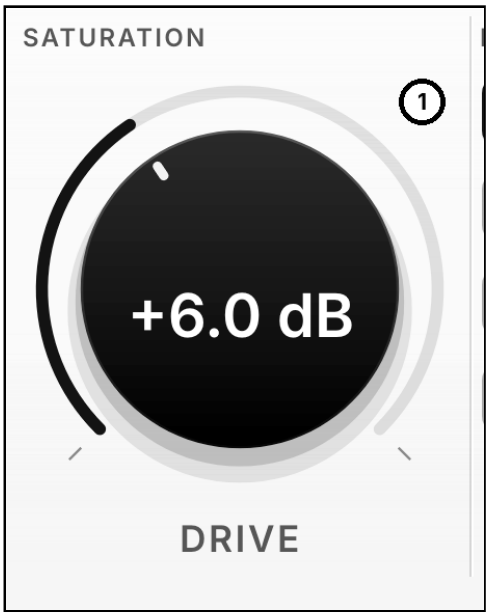


FIGURE 8 1 DRIVE, here at +6.0 dB.

Control	Range	Default	What it does
DRIVE	−12 to +36 dB	+6.0 dB	How hard the signal is pushed into the curve.

DRIVE is a gain in front of the curve. The curve's ceiling is 0 dBFS, so DRIVE decides how much of your signal reaches the bend: on a track peaking at −8 dBFS, +8 dB of DRIVE brings the peaks to the ceiling. Negative values keep a hot signal under the bend for the gentlest touch.

- **+1 to +6 dB:** density and a hint of warmth on loud moments; the mix bus and mastering presets sit here.
- **+6 to +18 dB:** clear saturation, from warm to gritty depending on the MODE.
- **+18 to +36 dB:** heavy distortion and fuzz; the *Creative FX* range.

With AUTO GAIN on, the level stays where it was as you turn DRIVE up. With it off, DRIVE also raises the level until the ceiling stops it.

MODE, BITS and RATE

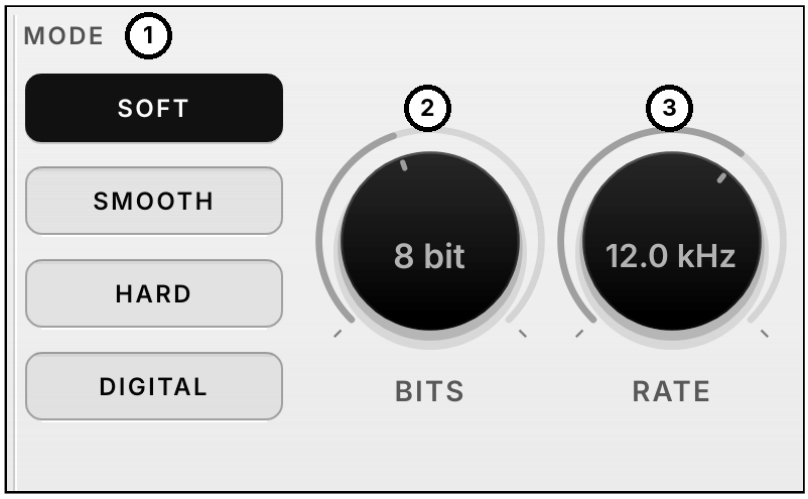
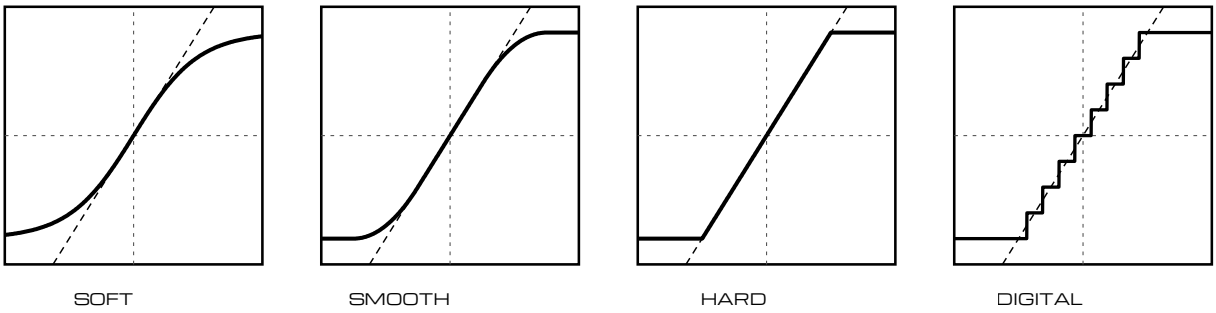


FIGURE 9 1 the MODE buttons (SOFT selected), 2 BITS and 3 RATE, dimmed because DIGITAL isn't selected.

Control	Range	Default	What it does
MODE	SOFT, SMOOTH, HARD, DIGITAL	SOFT	The curve the signal is pushed into.
BITS	16 to 2 bit	8 bit	DIGITAL: the resolution the signal is rounded to.
RATE	48 kHz to 1 kHz	12.0 kHz	DIGITAL: the rate the signal is held at.

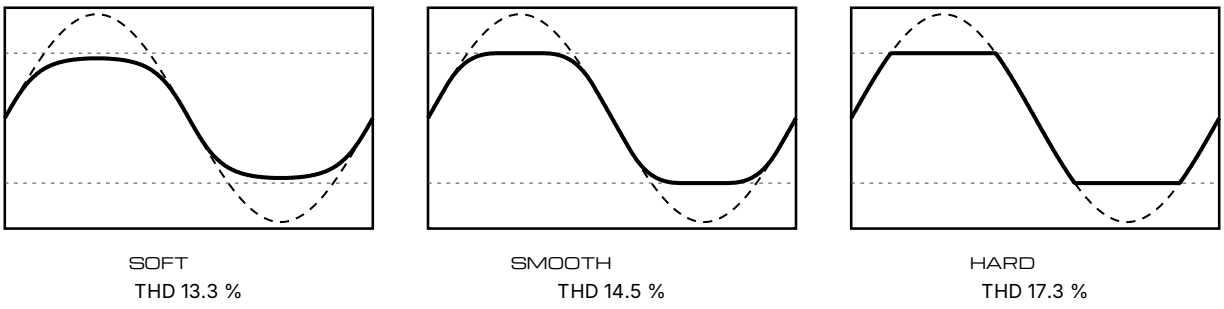
Every curve passes small signals unchanged (its slope is exactly one at zero) and has its ceiling at 0 dBFS. What differs is how they get there:

- SOFT: a smooth curve (the hyperbolic tangent) that starts bending from the first dB. Warm and rounded, the classic soft saturation; it makes only odd harmonics. Measured on a 1 kHz sine at −18 dBFS RMS: 0.26 % THD at DRIVE 0 dB and 3.7 % at +12 dB.
- SMOOTH: a perfectly straight line up to −6 dBFS, then a soft, rounded knee into the ceiling. **Clean until pushed**: quiet parts pass untouched (−144 dB of distortion at −12 dBFS RMS), and only the peaks that cross −6 dBFS are shaped.
- HARD: perfectly clean up to 0 dBFS, then a hard ceiling: precise clipping. Below the ceiling nothing at all is added (−142 dB of distortion at −6 dBFS RMS); over it, the peaks are cut flat.
- DIGITAL: the signal is rounded to BITS and held at RATE, then goes into the hard ceiling. Lo-fi on purpose.



Input across (the signal after DRIVE), output up; the dashed line is no change, and the top and bottom edges are the 0 dBFS ceiling. SMOOTH is a straight line up to −6 dBFS; HARD up to 0 dBFS. DIGITAL is drawn here at 3 bits.

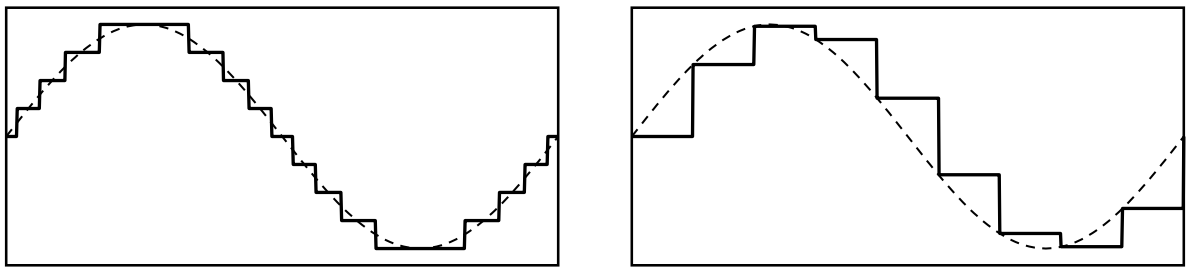
FIGURE 10 The four curves (computed from the plugin's formulas).



One sine pushed 4 dB past the ceiling (dashed: the sine; dotted lines: 0 dBFS), and the distortion each curve makes, computed from the curves. SOFT bends early and gently, SMOOTH later, HARD only at the ceiling, and hardest.

FIGURE 11 The same sine through the three smooth-to-hard curves.

BITS and RATE act only in [DIGITAL] and are dimmed in the other modes. [BITS] rounds every sample to the nearest of a fixed number of steps: at 16 bits it is clean, at 8 a gritty noise follows the music, at 2 to 4 the sound breaks up. [RATE] holds each sample for a while, like a sampler running at a lower rate: from 48 kHz down to 1 kHz. Whatever lies above half of [RATE] folds back down as inharmonic, metallic tones. That fold-back is the effect, so [DIGITAL] aliases on purpose; the hold is run on the 4x clock, so its steps are exact.



BITS at 3: the wave rounded to a few steps

RATE low: the wave held between samples

Lower BITS adds a gritty noise that follows the music; lower RATE folds what lies above half the rate back down, as inharmonic, metallic tones. That fold-back is the effect: DIGITAL is lo-fi on purpose.

FIGURE 12 [BITS] and [RATE] on one cycle of a sine, drawn exaggerated.

TONE, LOW CUT and HIGH CUT

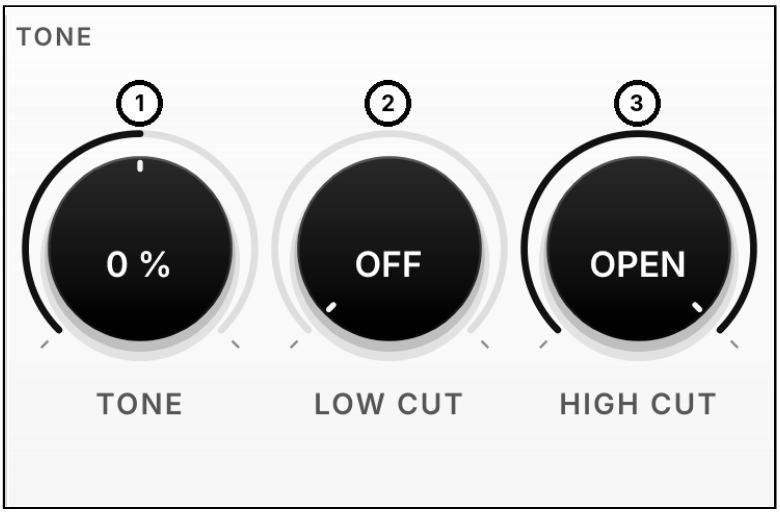
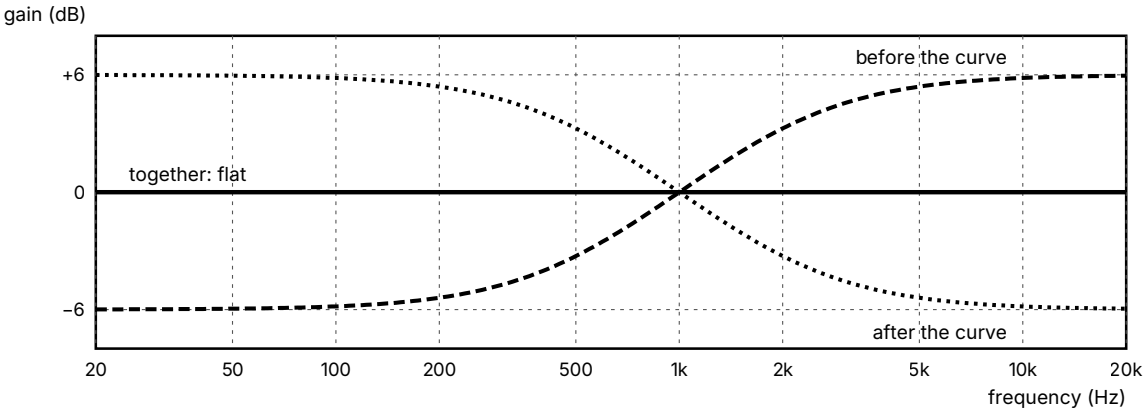


FIGURE 13 1 TONE (0 %), 2 LOW CUT (OFF) and 3 HIGH CUT (OPEN).

Control	Range	Default	What it does
TONE	−100 to +100 %	0 %	+ drives the highs harder (brighter, edgier); − the lows (thicker, rounder).
LOW CUT	OFF (20 Hz) to 1 kHz	OFF	Keeps the lows out of the distortion (12 dB/oct, before the curve).
HIGH CUT	1 kHz to OPEN (20 kHz)	OPEN	Tames the top of the distortion (12 dB/oct, after the curve).

TONE is not an EQ. It tilts the signal around 1 kHz before the curve, up to 6 dB up at the top and 6 dB down at the bottom at +100 % (12 dB from end to end), and applies the exact inverse tilt after it. Where the curve is clean, the two cancel (measured at −121 dB) and you hear no change in tone. Where it saturates, the side that was tilted up is driven harder: at + the highs get the most distortion (a brighter, edgier, more forward sound), at − the lows do (a thicker, rounder one). A 5 kHz tone at DRIVE +9 dB came out 3.3 dB more compressed at +100 % than at −100 %, and a 100 Hz tone 3.5 dB less.



TONE at +100 %: the highs go into the curve 6 dB hotter and the lows 6 dB cooler, and the exact inverse after it puts the level back. Only the distortion changes: brighter and edgier at +, thicker and rounder at − (the mirror image).

FIGURE 14 TONE at +100 %: the tilt before the curve, its inverse after it, and the two together (computed from the plugin's filters).

LOW CUT filters the lows out before the curve, so a bass, a kick or a voice's chest doesn't drive the distortion and turn muddy; OFF (fully left, 20 Hz) leaves the lows in. **HIGH CUT** filters the top of the saturated sound, taming fizz; OPEN (fully right) leaves it open. Both shape the **saturated path only**: with MIX below 100 %, the dry signal brings the full range back. That is how *Bass* ▸ *Bass Parallel Drive* keeps a solid sub under a driven midrange.

OUTPUT: MIX, OUTPUT and AUTO GAIN

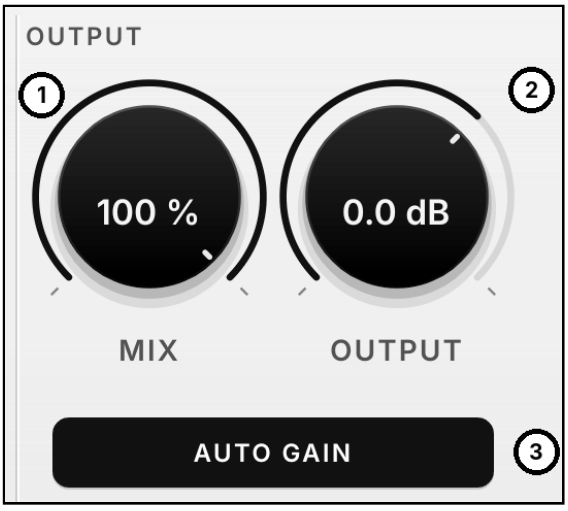
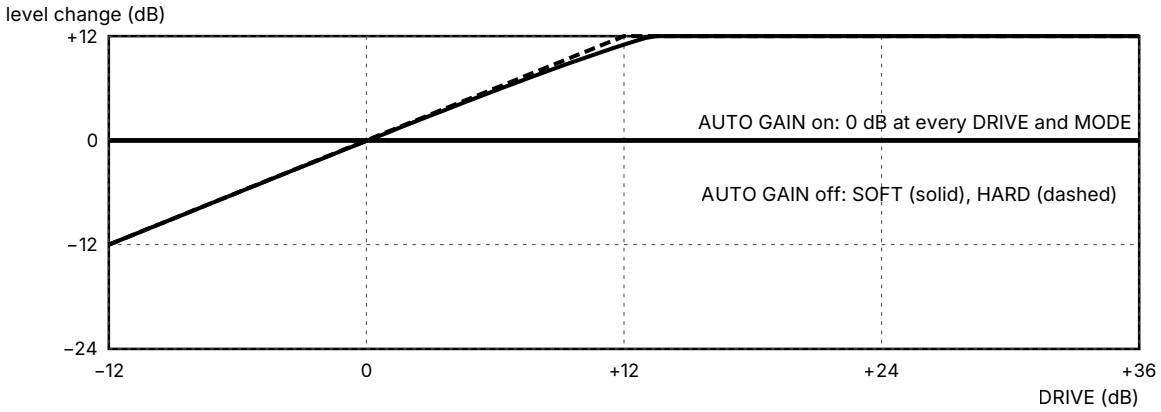


FIGURE 15 1 MIX, 2 OUTPUT and 3 AUTO GAIN (on).

Control	Range	Default	What it does
MIX	0 to 100 %	100 %	The saturated signal against the dry one, in time with it (parallel saturation).
OUTPUT	−24 to +12 dB	0.0 dB	The level going out, after MIX.
AUTO GAIN	on, off	on	Keeps the level as DRIVE goes up.

AUTO GAIN keeps the level steady at any DRIVE and MODE: it is calibrated on a sine at −18 dBFS RMS, which comes out as loud as it went in (within 0.006 dB), using a table of each curve's level worked out from its maths, gliding over 40 ms. On real music it is close but not exact, because dense material is compressed more than a sine: filtered noise came out within 1.6 dB. Check the meter bridge's Δ and trim with OUTPUT; the factory presets already do.



A sine at −18 dBFS RMS: without AUTO GAIN, DRIVE first makes it louder, then the 0 dBFS ceiling stops it. AUTO GAIN keeps that tone at its level (within 0.006 dB), so you hear the colour, not the loudness.

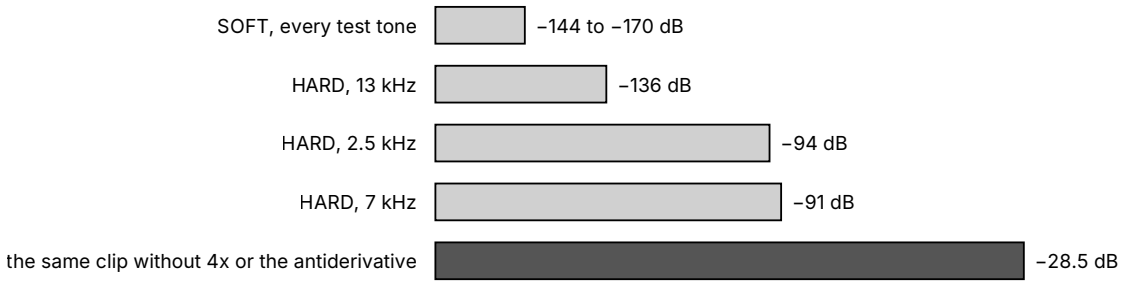
FIGURE 16 The level of the reference sine against DRIVE, with AUTO GAIN off (computed from the curves) and on.

MIX blends the saturated signal with the dry one for **parallel saturation**. The dry signal is delayed by exactly the same 96 samples, so the blend is in time: no comb filtering. At 0 % the output is the input, delayed, bit for bit. Low settings (25 to 50 %) add energy and harmonics under a clean sound; the parallel presets use them.

OUTPUT sets the final level, after MIX.

Aliasing, oversampling and latency

When a curve bends a wave sharply, it makes harmonics far above the audio range. A plain digital saturator can't hold them: they fold back down as **aliasing**, inharmonic tones that sound harsh and grainy, worst with hard clipping on high notes. VEIRA Saturator White runs the curve at **4x** your session's rate and applies it through its **first antiderivative** (a technique that suppresses what the curve makes above the 4x range before it can fold back). The filters are designed so the clean range stays flat to 20 kHz.



The loudest component that isn't a harmonic (20 Hz to 20 kHz), with DRIVE +18 dB and a tone at −6 dBFS: shorter is cleaner. Running the curve at 4x through its antiderivative keeps fold-back far down, even for hard clipping.

FIGURE 17 Measured aliasing: the loudest unwanted component in each case.

The cost is a fixed **latency of 96 samples** at 44.1, 48, 96 and 192 kHz, in every mode (2 ms at 48 kHz). It is reported to your DAW, which delays the other tracks to match, and your DAW's own bypass is delayed by the same amount, so comparing never jumps in time. Clean settings stay clean: SMOOTH at −10 dBFS was flat from 20 Hz to 20 kHz within 0.0001 dB and nulled against the delayed input at −118 dB.

Displays

TRANSFER

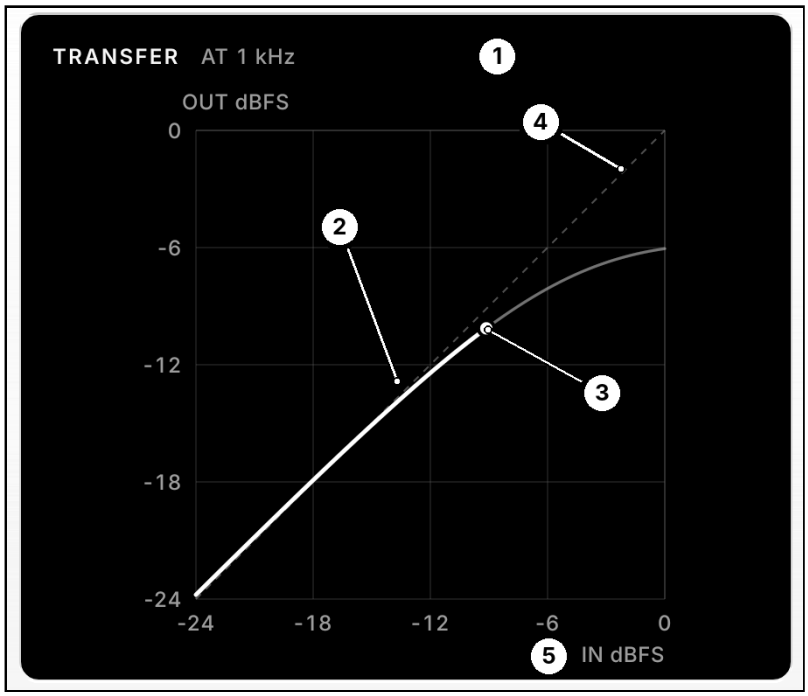


FIGURE 18 TRANSFER AT 1 kHz: 1 the title, 2 the range the signal reaches now (bright), 3 its peak, 4 the dashed 1:1 line, and 5 the input scale.

TRANSFER draws what the whole plugin does to each sample at 1 kHz: **IN** across and **OUT** up, both −24 to 0 dBFS. It includes DRIVE, MODE, BITS, AUTO GAIN, MIX and OUTPUT, and is drawn from the curve's maths, not measured.

- The **dashed line** is no change (1:1). Where the curve leaves it, the signal is being shaped.
- The **bright part** of the curve is the range your signal reaches right now, and the **dot** is its peak; the rest of the curve is drawn dimmer. If the dot sits on the straight part, little is happening; past the bend, you are saturating.
- At other frequencies TONE drives the curve harder or softer, so the drawing is exact at 1 kHz.

HARMONICS

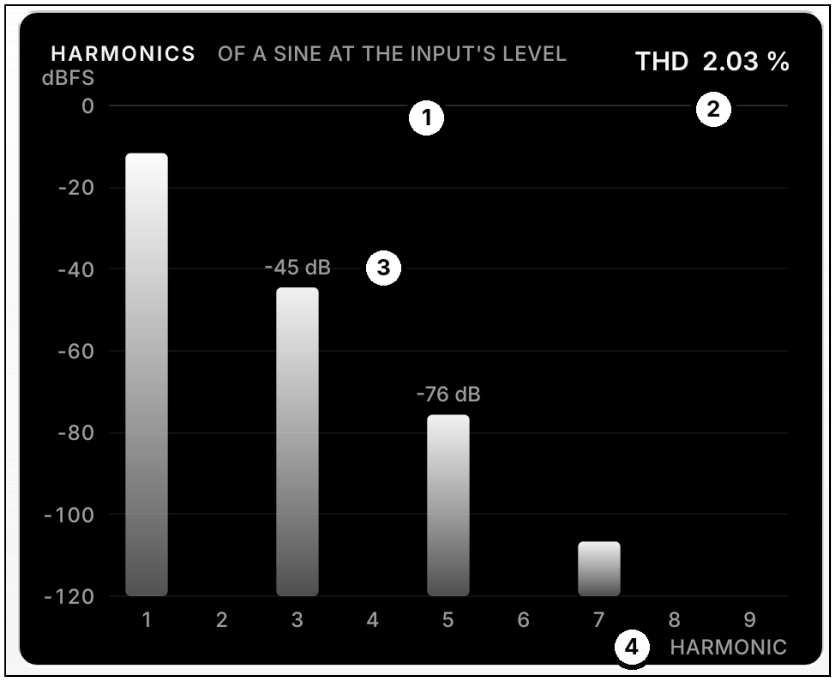


FIGURE 19 HARMONICS OF A SINE AT THE INPUT'S LEVEL: 1 the bars, 2 the THD read-out, 3 a harmonic's level and 4 the harmonic numbers, 1 to 9.

HARMONICS shows what the curve makes of **a sine at the level coming in now**: the fundamental (bar 1) and the 2nd to 9th harmonics, as levels in dBFS at the output, with the **THD** (total harmonic distortion) in % at the top right. Harmonics above −100 dBFS carry their level above the bar. It is computed from the curve and eased as the level moves, so it reads calmly on music.

With the symmetric curves you see only odd harmonics (1, 3, 5, 7, 9). Turn up DRIVE and the upper bars grow; switch from SOFT to HARD and they reach higher. In DIGITAL, the display shows the hard ceiling's harmonics; the steps of BITS and the fold-back of RATE come on top of them.

Meter bridge (IN | OUT)

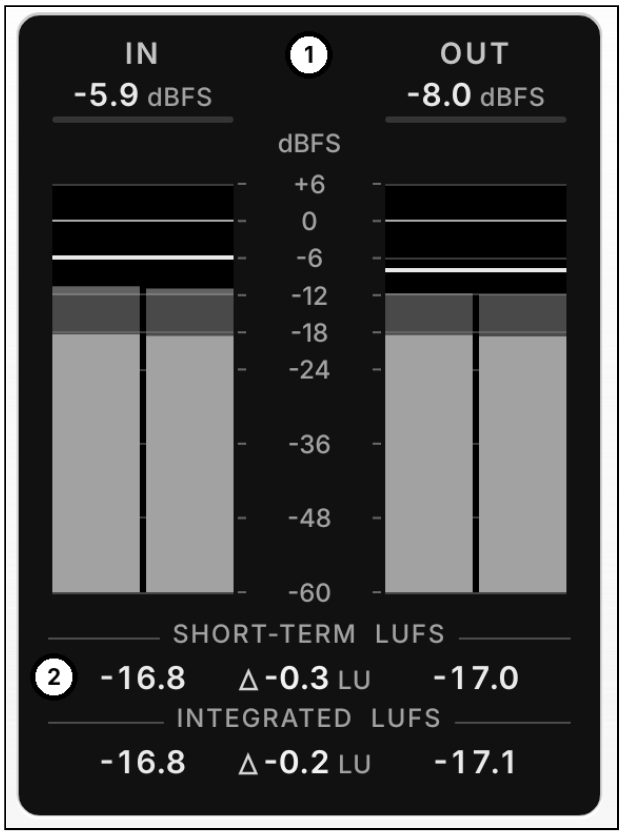


FIGURE 20 The meter bridge: 1 IN and OUT, with 2 short-term and integrated loudness.

Reading the IN and OUT meters

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

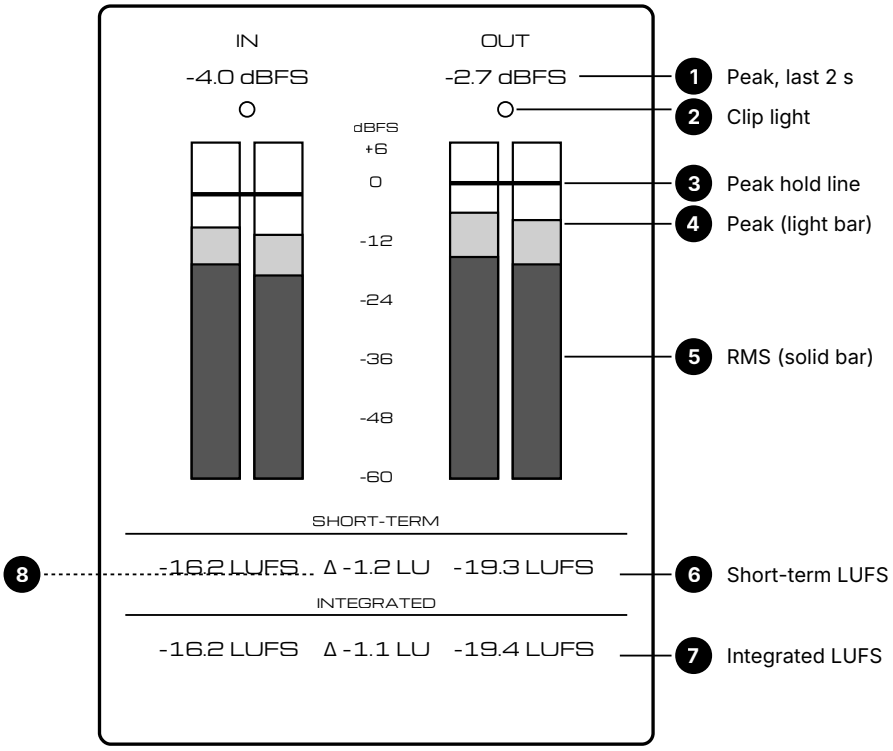


FIGURE 21 The meter bridge, left and right channel bars for input and output, with loudness below.

- 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 Saturator White made the signal, so you can match levels fairly when you compare with bypass. It reads [--] while either side is too quiet to measure (below −70 LUFS).

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

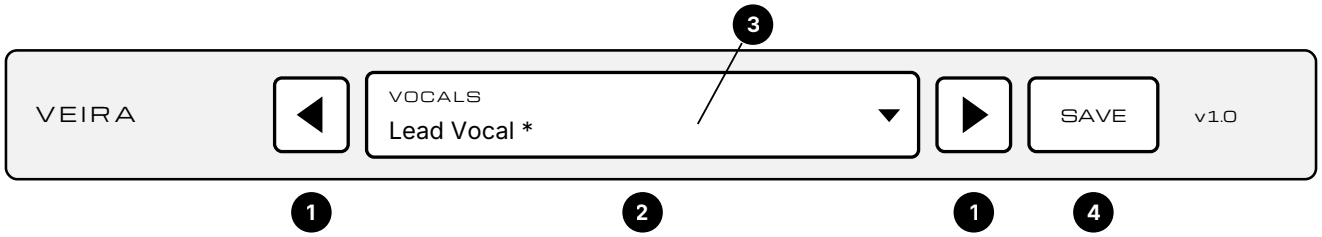
Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Presets

VEIRA Saturator White comes with **41 factory presets** in 10 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 22 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 Saturator White the way you like it.
2. Press SAVE. A dialog opens inside the plugin window.
3. Type a name, choose a folder or type a new folder name, and confirm.

Each user preset is one small .veirapreset file:

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

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

Presets in your DAW

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

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

The factory folders

Folder	Presets
Default	Init
Drums	Kick Weight, Snare Crack, Room Smash, Kit Glue, Hats Fizz
Bass	Bass Growl, Bass Parallel Drive, Synth Bass Edge, Round Bass
Guitar	Clean Guitar Sheen, Crunch Boost, Hard Edge Lead, Acoustic Body
Keyboards	Piano Warmth, Electric Piano Bark, Organ Drive, Synth Pad Grain
Vocals	Vocal Presence, Vocal Thickener, Parallel Vocal Grit, Rap Vocal Edge, Telephone Voice
Mix Bus	Mix Bus Glow, Mix Bus Density, Mix Bus Bright Edge, Parallel Mix Crush
Mastering	Master Soft Clip, Master Peak Shave, Master Warmth, Master Presence
Lo-Fi	Twelve Bit Sampler, Eight Bit Console, Crushed Drums, Radio Lo-Fi, Low Rate Pad
Creative FX	Fuzz Wall, Bit Crusher, Dark Saturation, Bright Splatter, Parallel Destroy

Levels. The presets were made on tracks peaking at −8 dBFS, drums at −6 dBFS, the mix bus at −4 dBFS and masters at −3 dBFS. How much a preset saturates depends on how hot your track is, so on a quieter track raise DRIVE by the difference, and on a hotter one lower it. Every preset has AUTO GAIN on, and every preset but *Init* comes out within 0.15 dB of bypass loudness (K-weighted) on the material it was made for; where AUTO GAIN alone doesn't get there (dense material), its OUTPUT makes up the rest.

Recipes

Each recipe starts from a factory preset; the numbers are a starting point for your track.

Warmth on a whole mix

1. Load *Mix Bus* ▸ *Mix Bus Glow* (DRIVE +3.0 dB, SOFT).
2. Raise DRIVE slowly while watching TRANSFER: keep the dot near the start of the bend.
3. For density without a change of tone, try *Mix Bus* ▸ *Mix Bus Density* (SMOOTH): clean until the loudest moments.

A bass that reads on small speakers

1. Load *Bass* ▸ *Bass Growl* (DRIVE +14.0 dB, SOFT, TONE +30 %, LOW CUT 60 Hz, HIGH CUT 9.00 kHz).
2. Raise TONE for more growl, lower HIGH CUT to tame fizz.
3. To keep the sub perfectly clean, use *Bass* ▸ *Bass Parallel Drive*: LOW CUT 120 Hz on the driven copy, MIX 40 %.

A snare with crack

1. Load *Drums* ▸ *Snare Crack* (SMOOTH, DRIVE +12.0 dB, TONE +45 %).
2. SMOOTH stays clean until the hit, then adds the edge. Raise TONE for more snap, lower MIX to keep more of the original.

Vocal presence

1. Load *Vocals* ▸ *Vocal Presence* (SMOOTH, DRIVE +8.0 dB, TONE +40 %, LOW CUT 120 Hz).
2. Quiet words stay clean; loud ones get a soft edge that brings the voice forward.
3. In a dense mix, try *Vocals* ▸ *Parallel Vocal Grit*: a clipped copy at MIX 30 % under the clean vocal.

Shave the master's peaks before a limiter

1. Load *Mastering* ▸ *Master Peak Shave* (HARD, DRIVE +1.0 dB) or *Mastering* ▸ *Master Soft Clip* (SMOOTH, +2.0 dB).
2. Raise DRIVE until only the few highest peaks reach the ceiling: watch the dot in TRANSFER.
3. Put your limiter after it: it has less to do. The clipping is anti-aliased, so it stays clean on bright material.

A lo-fi drum loop

1. Load *Lo-Fi* ▸ *Crushed Drums* (DIGITAL, BITS 6, RATE 11.0 kHz, MIX 70 %).
2. Lower RATE for more metallic fold-back, lower BITS for more grit.
3. For the sound of an older sampler, try *Lo-Fi* ▸ *Twelve Bit Sampler* (12 bit, 26.0 kHz).

A phone-line voice

1. Load *Vocals* ▸ *Telephone Voice* (HARD, DRIVE +16.0 dB, LOW CUT 500 Hz, HIGH CUT 3.50 kHz).
2. LOW CUT and HIGH CUT set the band; DRIVE the amount of clipping.

Specifications

Type	Saturator with four curves, oversampled and anti-aliased
Channels	Mono and stereo
Latency	96 samples at 44.1, 48, 96 and 192 kHz, every mode, reported to the host (host bypass delayed to match)
Processing	4x oversampling (385-tap up, 384-tap down); each curve applied by its first antiderivative; flat to 20 kHz in the clean range
DRIVE	−12 to +36 dB (default +6.0 dB)
MODE	SOFT (hyperbolic tangent), SMOOTH (linear to −6 dBFS, then a quadratic knee), HARD (linear to 0 dBFS, then a hard ceiling), DIGITAL (BITS and RATE into the hard ceiling) (default SOFT)
BITS	16 to 2 bit (default 8 bit), DIGITAL only
RATE	48 kHz to 1 kHz (default 12.0 kHz), DIGITAL only
TONE	−100 to +100 % (default 0 %): a tilt around 1 kHz of up to 12 dB end to end before the curve, exactly undone after it
LOW CUT	OFF (20 Hz) to 1 kHz, 12 dB/oct, before the curve (default OFF)
HIGH CUT	1 kHz to OPEN (20 kHz), 12 dB/oct, after the curve (default OPEN)
MIX	0 to 100 % (default 100 %), in time with the dry signal
OUTPUT	−24 to +12 dB (default 0.0 dB)
AUTO GAIN	On or off (default on): a sine at −18 dBFS RMS keeps its level within 0.006 dB
Measured	SOFT, 1 kHz at −18 dBFS RMS: 0.26 % THD at DRIVE 0 dB, 3.7 % at +12 dB; aliasing at DRIVE +18 dB, tone at −6 dBFS: SOFT −144 to −170 dB, HARD −91 to −136 dB
Metering	TRANSFER (the curve at 1 kHz with the range reached now); HARMONICS (fundamental and 2nd to 9th, THD); IN and OUT meters (peak, RMS); short-term and integrated loudness per ITU-R BS. 1770-4 / EBU R 128
Sample rates	44.1 to 192 kHz
Presets	41 factory presets in 10 folders, plus your own
Window	1280 × 800 points at 100 %; 75 to 200 % or Fit to screen, from the size button, the corner grip or Cmd/Ctrl + = - 0; saved with the session and remembered for new instances
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vsaw

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 Saturator White in my DAW. Make sure VEIRA Manager shows SHOW (installed) for it, then rescan plugins in your DAW. In Logic Pro, open the Plug-in Manager and choose *Reset & Rescan Selection* if needed. Look under the manufacturer **VEIRA**.

I turn up DRIVE and hear little difference. Your signal may not reach the bend yet: in SMOOTH nothing happens below −6 dBFS, and in HARD nothing below 0 dBFS (after DRIVE). Watch the dot in TRANSFER and keep turning up, or switch to SOFT.

BITS and RATE do nothing. They only act in DIGITAL, and they are dimmed in the other modes.

The level jumps when I change DRIVE. AUTO GAIN is off. Switch it on, or set OUTPUT yourself.

With AUTO GAIN on, it is still a little louder or quieter. AUTO GAIN is exact for a sine and close on music: dense material is compressed more (noise came out within 1.6 dB). Trim with OUTPUT until Δ INTEGRATED reads about 0.0 LU.

It sounds harsh at high DRIVE. Lower HIGH CUT, set TONE towards −, or use SOFT instead of HARD. In DIGITAL, harshness from a low RATE is the effect: raise RATE.

The lows get muddy when I drive a bass or a mix. Raise LOW CUT so the lows aren't driven, and bring them back clean by lowering MIX.

Does VEIRA Saturator White add latency? Yes, a fixed 96 samples (2 ms at 48 kHz) at every rate and setting, reported to your DAW so everything stays in time.

Does it work on a mono track? Yes, mono and stereo.

The window is too small (or too big) on my screen. Click the size button in the header and pick a size or *Fit to screen*, or drag the bottom-right corner. The size is saved with your session.

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

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

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



VEIRA Saturator White · User Manual · Version 0.1.0

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

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