VEIRA

SATURATOR

VEIRA Saturator

User Manual

VEIRA's modern saturator: eight styles from warm to wild, a MORPH that blends any two of them, up to three bands with their own drive and style, a drive that can follow the music, and a loudness-matched AUTO GAIN, so you hear the colour, not a louder sound.



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Welcome

Thank you for choosing **VEIRA Saturator**. A saturator adds harmonics: new tones above each note that make a sound warmer, thicker, brighter, grittier or wilder. VEIRA Saturator does it eight ways, from a gentle warmth to a fold, an octave fuzz and a bit crusher, and lets you choose a different one for the lows, the mids and the highs.

It is VEIRA's modern saturator, drawn flat in an electric violet. The big DRIVE knob sets how hard the music hits the curve, the eight STYLE tiles choose the curve, and AUTO GAIN keeps the level where it was, so turning DRIVE up changes the colour, not the loudness.

What makes it different

- **Eight styles.** WARM, TAPE, TUBE, CRUNCH, CLIP, FOLD, RECTIFY and BIT: soft even harmonics, a tape knee, a hot tube, a firm clip, a clean clipper, a wavefolder, an octave-up fuzz and a smooth bit reduction.
- **MORPH between two styles.** Each band has a STYLE and a STYLE B. MORPH blends the two curves into a new one, smoothly, while the music plays.
- **Up to three bands.** Split the sound at one or two crossovers you drag in the strip, and give each band its own DRIVE, STYLE, BAND MIX, MORPH, solo and bypass. Undriven, the bands add back to the input, flat.
- **A drive that follows the music.** DYNAMIC drives the hits harder than the rest, or the quiet parts harder than the loud ones.
- **Hear the colour, not the volume.** AUTO GAIN gives back what the curve takes at once, then matches the loudness to the input over a few seconds. All 50 presets come out as loud as they go in, on the material they were made for.
- **Clean where it should be.** The curves run at 8 or 16 times the session's rate, so at DRIVE 50 % nothing folds back above −100 dBc (BIT aside, which does it on purpose). At DRIVE 0 % or MIX 0 % with one band, the output is the input, delayed, bit for bit.
- **A true-peak safety net.** Switch on the CEILING and the output's true peak stays under the level you set.
- **50 factory presets** in 10 folders, for drums, bass, guitar, keys, vocals, the mix bus, the master and more.

VEIRA Saturator or a colour saturator? VEIRA also makes four colour saturators, *VEIRA Saturator White*, *Red*, *Gold* and *Blue*. Each of them is one colour: three or four characters of one kind, painted in that colour, with LOW CUT and HIGH CUT to shape what is driven. VEIRA Saturator is the modern all-rounder: eight styles of every kind on one panel, MORPH between any two, and up to three bands, each with its own style. If you know the colour saturators, DRIVE, AUTO GAIN, MIX and the TRANSFER and HARMONICS displays will feel familiar.

How this manual is organised. *Getting started* installs and activates the plugin. *The panel at a glance* names its parts. *How saturation works* explains harmonics and what happens inside. *The band*, *Bands and styles* and *The control bar* go through every control; *The display* explains the graphs and meters, and *QUALITY and latency* what happens behind them. *Presets*, *Recipes*, *Specifications* and *Troubleshooting* close the manual.

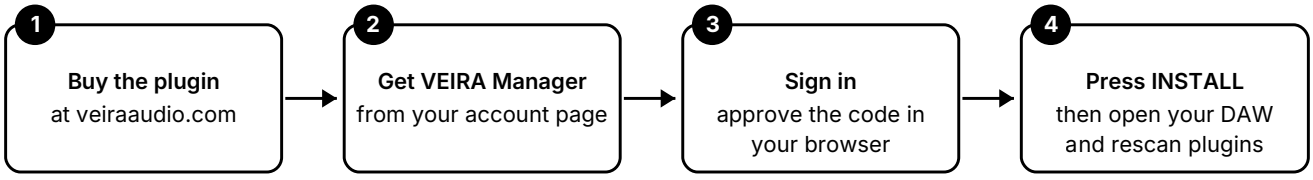
Getting started

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

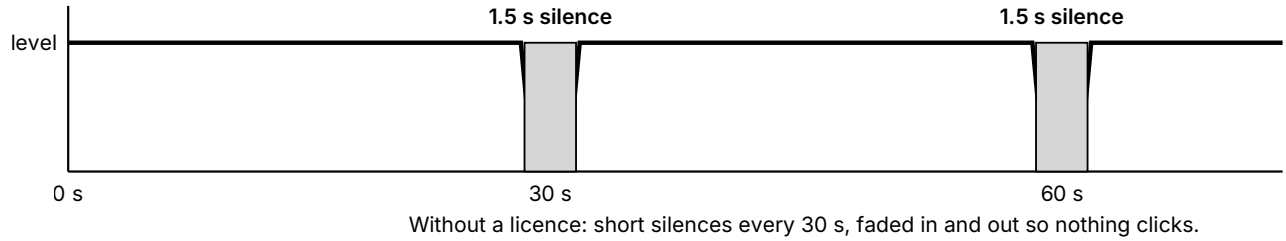


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 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 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 Saturator with the preset *Three Colours*, band 2 shown, a mix playing: 1 the header, 2 HARMONICS, 3 TRANSFER, 4 IN | OUT, 5 the band shown, 6 its DRIVE, 7 BANDS and the band strip, 8 the eight STYLE tiles, 9 BAND MIX, MORPH and STYLE B, and 10 the control bar.

	Part	What it does
1	Header	The VEIRA logo, the name and the version, the preset browser, SAVE and the size button.
2	HARMONICS	The harmonics the band shown is making now, the 2nd to the 12th, and its THD.
3	TRANSFER	The band's curve, with a dot where the music's peaks hit it.
4	The meters	IN and OUT level meters, the output's true peak and loudness, and what AUTO GAIN is doing.
5	The band shown	Which band the knobs on the right belong to, and its STYLE (here BAND 2 CRUNCH).
6	DRIVE	The big knob: how hard the band hits its curve.
7	BANDS	1, 2 or 3 bands, and the strip where you choose a band, move the crossovers, solo and bypass.
8	STYLE	The eight curves. Click one for the band shown.
9	BAND MIX, MORPH, STYLE B	The band's own blend, and the second style MORPH moves towards.

	Part	What it does
10	The control bar	TONE, DYNAMIC, AUTO GAIN, MIX, OUTPUT, the CEILING and QUALITY, for the whole plugin.

Left to right, top to bottom. The display at the top left shows what the band does. The right-hand column is that band: its DRIVE, its blend and its second style. Under the display, choose how many bands and which one you are setting, then its STYLE. The control bar at the bottom acts on everything.

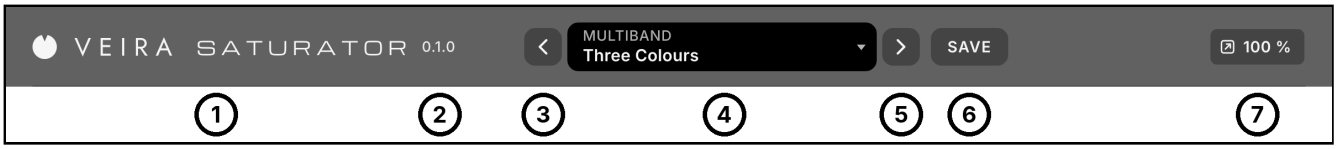


FIGURE 4 The header: 1 the VEIRA logo and the name, 2 the version, 3 and 5 the previous and next preset, 4 the preset's folder and name (an asterisk: changed since it loaded), 6 SAVE, and 7 the size button, here at 100 %.

Using the controls

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

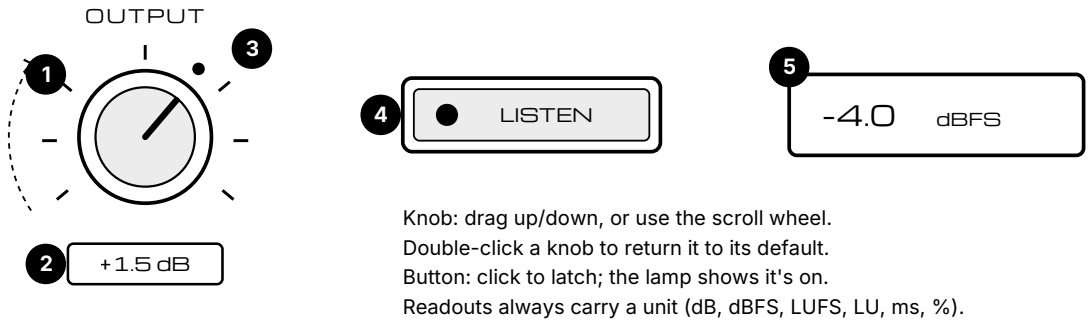


FIGURE 5 The parts you'll find on every VEIRA panel (the labels are examples).

- 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's panel the parts look a little different from the drawing above. The face is flat and bold: an electric violet surface, a near-black display, off-white and near-black print, no shading.

- DRIVE **is a large dark disc** inside a ring. The ring's bright arc shows the setting; the value is printed in large figures in the middle (40.0 %), and the drive in decibels under it (+14.4 dB).
- **The other knobs are small dark discs** with a bright arc and their value under them. Drag up and down or use the wheel; double-click (or Alt-click) for the default; right-click (Control-click on a Mac) to type a value.
- **Keys** are flat and rounded. The one that is on is filled off-white with dark letters, like 3 under BANDS, PRE, AUTO GAIN and ECO in the picture above; the ones that are off are violet with light letters, like POST, ON and HIGH. In print, a key that is on is the lightest shape around it.
- **The band shown** is off-white in the strip, like band 2 above, and its STYLE tile is off-white too (CRUNCH).
- **Tooltips** explain every control and every part of the display: hover over it.
- **The window size.** VEIRA Saturator opens at 100 %, 1200 × 700 points, which fits a 1280 × 800 screen. To change it, click the size button 7 in the header and choose 75, 90, 100, 125, 150 or 200 % or *Fit to screen*; or drag the grip in the bottom-right corner (double-click it for 100 %); or press Cmd + = and Cmd + - (Ctrl on Windows) to step up and down and Cmd + 0 for 100 %. Your DAW saves the size with the session, and new instances open at the size you chose last. The band shown is saved with the session too.

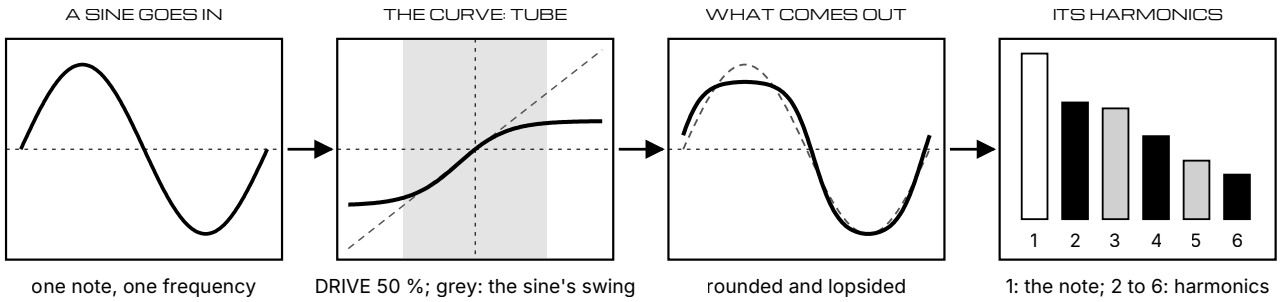
Where to find it in your DAW. VEIRA Saturator is an audio effect for mono and stereo tracks, buses and the master. Hosts that sort plugins by kind list it with the distortion or harmonic effects, under the manufacturer **VEIRA**.

How saturation works

If you know saturation already, skip to *What happens inside VEIRA Saturator*.

Harmonics: the colour

Every analog stage has a limit. Push a valve, a tape or a transistor near it and the signal bends: the peaks are rounded and the wave changes shape. A saturator does the same with a **curve**: the music goes in along the bottom, and what comes out is read off the curve.



The curve bends the loud parts of the wave. A bent wave is no longer one pure frequency: it is the note plus new ones at 2, 3, 4 … times its frequency. Those harmonics are the colour you hear.

FIGURE 6 A sine through TUBE's curve at DRIVE 50 %, and the harmonics it gets.

Where the curve is straight, nothing changes. Where it bends, the wave changes shape, and a changed shape means **new frequencies** at 2, 3, 4 … times each note: its **harmonics**. They are what you hear as warmth, weight, edge, bite or fuzz. They also make a sound seem louder and closer for the same peak level, and they let a bass be heard on small speakers that can't play its lowest notes.

DRIVE turns the music up into the curve. The harder it goes in, the further it reaches into the bend, and the more harmonics come out.

Even and odd

Which harmonics, and how loud, is the character of a curve.

- **Even harmonics** (the 2nd, 4th …) sit one and two octaves above the note. They thicken and warm it without changing what it is. A curve that is lopsided, bending more one way than the other, makes them.
- **Odd harmonics** (the 3rd, 5th …) sit an octave and a fifth above and higher. They make a sound firmer, edgier and more forward. A curve that bends the same both ways makes only odd ones.

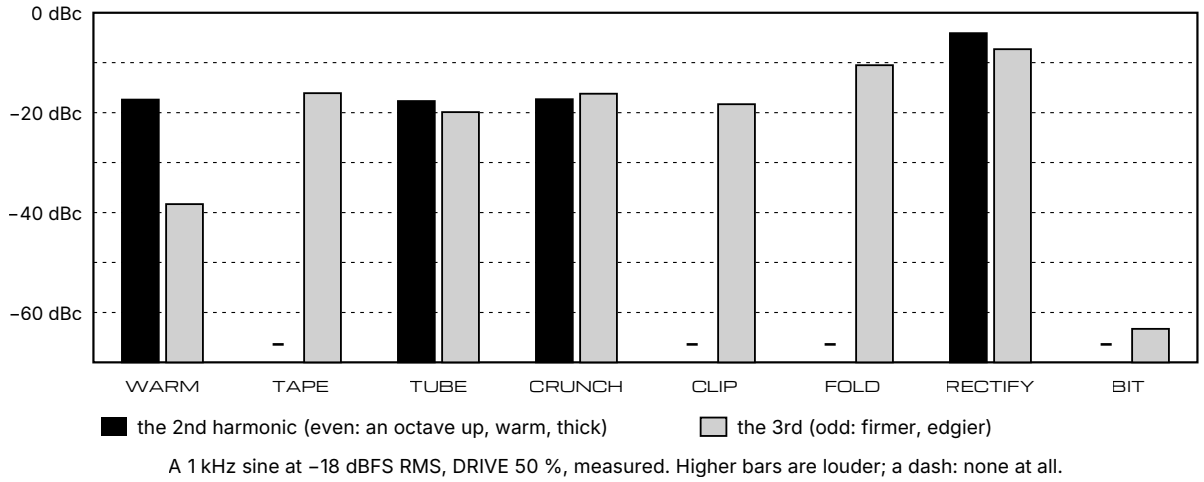


FIGURE 7 The 2nd and 3rd harmonics of each STYLE at DRIVE 50 %, measured.

WARM makes mostly the 2nd. TAPE, CLIP and FOLD make only odd ones. TUBE and CRUNCH make both, at about the same level. RECTIFY makes both very loudly: that is its octave-up fuzz. BIT makes almost none at this level: its colour is noise and grain, not harmonics.

Why bands

A whole mix through one curve is driven by its loudest part, usually the kick and the bass. Split it into bands and each one meets its own curve: a clean, tight low end under gritty mids, warm lows under an untouched top, or a harmonic sheen on the air alone. VEIRA Saturator splits the sound into up to three bands; see *Bands and styles*.

Keeping it clean

A curve makes harmonics far above the music too, and a digital plugin can't hold anything above half its sample rate: whatever goes over folds back down as tones that have nothing to do with the notes (**aliasing**). It sounds harsh and grainy. VEIRA Saturator works its curves at 8 times the session's rate (16 times with QUALITY HIGH), filters off what is too high, and comes back down. Only what the curve adds goes through this; the clean part of each band never passes a filter. See *QUALITY and latency*.

What happens inside VEIRA Saturator

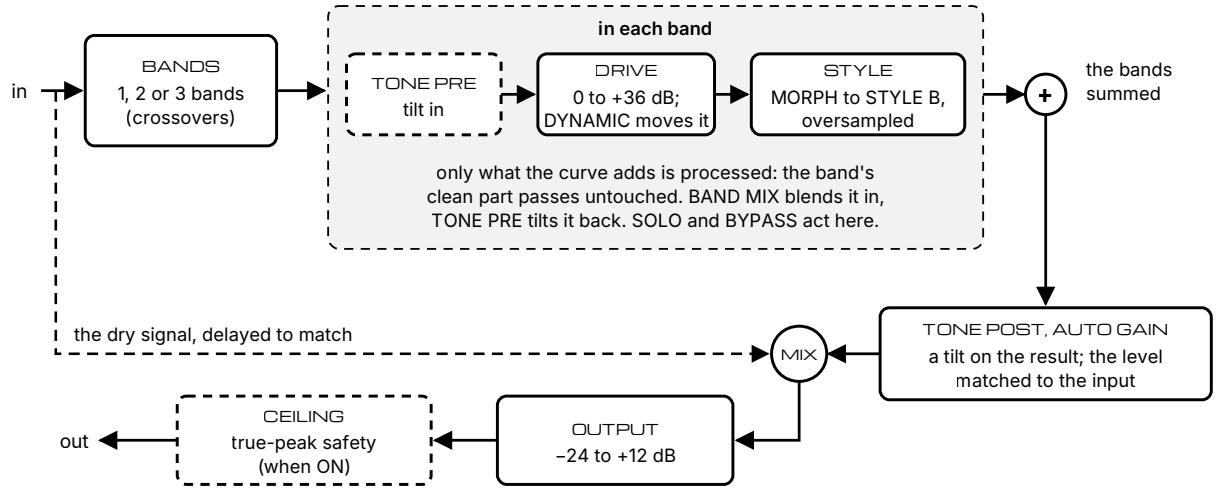


FIGURE 8 The path through the plugin.

1. BANDS splits the input into 1, 2 or 3 bands at the crossovers.
2. **In each band**, TONE (when set to PRE) tilts what goes into the drive; DRIVE, moved by DYNAMIC, sets how hard it hits the curve; and the curve is the band's STYLE, blended towards STYLE B by MORPH.
3. **Only what the curve changes** is worked out at the higher rate; BAND MIX sets how much of it is added to the band, and TONE PRE tilts it back. A soloed band plays alone; a bypassed band passes clean.
4. **The bands are added back together.** TONE POST tilts the result, and AUTO GAIN matches its level to the input.
5. MIX blends it with the dry signal, delayed to match. OUTPUT sets the level, and the CEILING, when on, keeps the true peak under it.

A constant delay. The whole path delays the sound by 194 samples, at every sample rate and whatever the settings (4.0 ms at 48 kHz). The plugin tells your DAW, which compensates; see *QUALITY and latency*.

The band

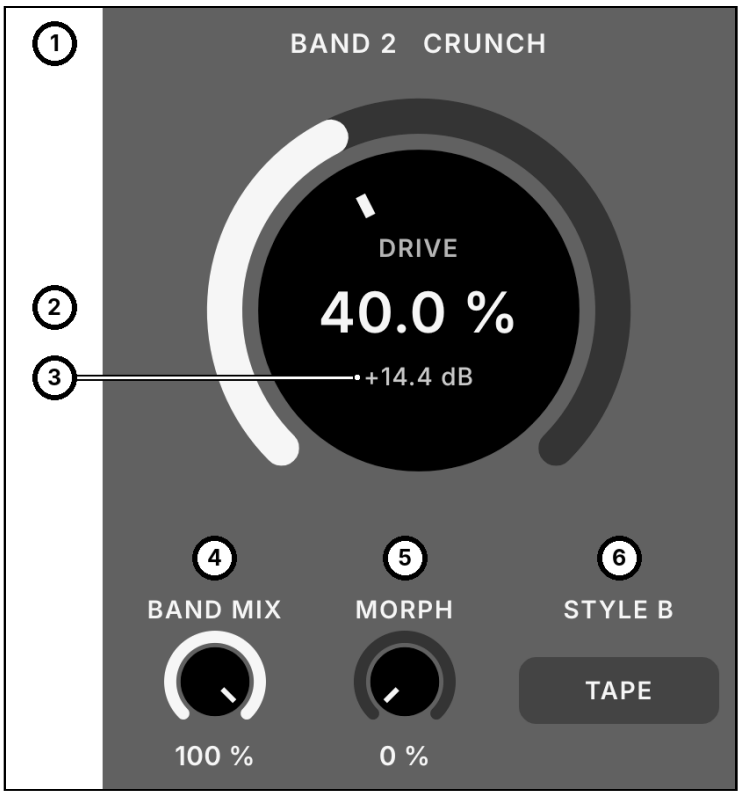


FIGURE 9 The band shown, here band 2: 1 which band and its STYLE; 2 DRIVE, here 40.0 %; 3 the drive in dB, DYNAMIC included; 4 BAND MIX; 5 MORPH; 6 STYLE B.

The right-hand column always belongs to **the band shown**. With one band, its title reads FULL BAND; with two or three, BAND 1, BAND 2 or BAND 3. Click a band in the strip to show it (see *Bands and styles*). The title also names the band's STYLE, and while MORPH is above 0 %, the style it is morphing towards: BAND 2 CRUNCH > TAPE.

Every band has its own set of these controls, so a preset can drive band 1 with WARM at 35 % and band 3 with FOLD at 25 %.

Control	Range	Default	What it does
DRIVE	0 to 100 % (0 to +36 dB)	30.0 %	How hard the band hits its curve.
BAND MIX	0 to 100 %	100 %	The band's saturated sound against its clean self.
MORPH	0 to 100 %	0 %	Blends the band's STYLE into STYLE B.
STYLE B	the eight styles	TAPE	The style MORPH blends towards.

DRIVE

DRIVE turns the band up into its curve, from 0 to +36 dB. The read-out under the value says how many decibels it is now 3 .

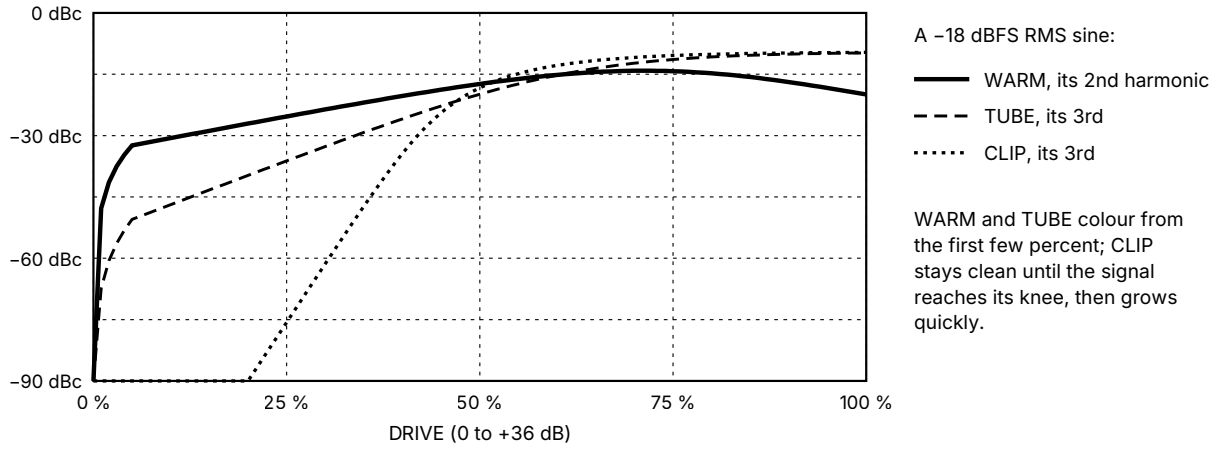


FIGURE 10 How the harmonics grow with DRIVE for a sine at −18 dBFS RMS, computed from three of the curves.

- **0 %** is clean: the curve is not used at all. With one band, OUTPUT at 0.0 dB, TONE at 0 % (or PRE) and the CEILING off, the output is the input, delayed, bit for bit.
- **The first 5 %** fade the curve in, so the colour starts without a step.
- **10 to 30 %** is gentle colour for mixing: warmth and density you feel more than hear.
- **30 to 60 %** is clearly saturated: grit, bite and fuzz you hear.
- **60 to 100 %** is distortion as an effect.

How much a given setting does depends on the **level that comes in**: a track peaking at −20 dBFS needs more DRIVE than one peaking at −6 dBFS for the same colour. The HARMONICS display and the dot on TRANSFER show what your track is getting.

With AUTO GAIN on (the default), the level stays where it was as you turn DRIVE, so you judge the colour alone. With it off, DRIVE is also gain: +36 dB at 100 %.

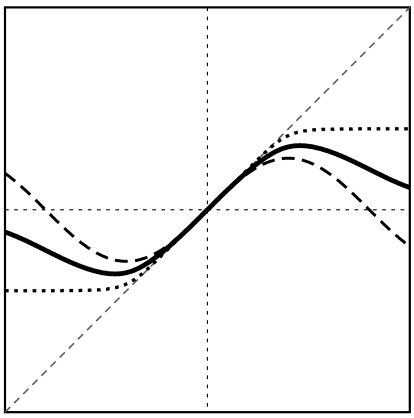
When DYNAMIC is working, the drive moves with the music, and the read-out 3 shows the drive as it is now, DYNAMIC included; a thin arc around the ring follows it. A bypassed band's DRIVE is dimmed.

BAND MIX

BAND MIX blends the band's saturated sound with its own clean sound: at 100 % you hear only the saturated band, at 50 % half of each, at 0 % the band is clean. It is a parallel blend for one band only. *Three Colours* uses 60 % on its top band, so the fold is a sheen rather than a sizzle; *Sub Octave Fuzz* blends its fuzz in at 60 %.

MIX, in the control bar, does the same for the whole plugin; see *The control bar*.

MORPH and STYLE B



STYLE FOLD, STYLE B CLIP (the preset Morph Fold To Clip uses 50 %):

- MORPH 0 %: FOLD
- MORPH 50 %: halfway
- MORPH 100 %: CLIP

MORPH blends the two curves point by point, so 50 % is a new curve between them, not two sounds mixed. It moves smoothly while the music plays, so you can automate it.

FIGURE 11 MORPH from FOLD to CLIP: the curve at 0, 50 and 100 %.

MORPH blends the band's STYLE into its STYLE B, **curve point by curve point**. At 0 % only STYLE sounds; at 100 % only STYLE B; in between is a new curve with something of both. This is not two sounds mixed together: it is one curve, so it makes one set of harmonics.

- **Small amounts** (20 to 40 %) add a touch of another character: *Growl Synth Bass* is TUBE morphed 40 % towards CRUNCH, *Lead Fuzz Push* CRUNCH with 30 % of RECTIFY's octave fuzz.
- **Halfway** makes curves that no single style has: *Morph Fold To Clip* sits at 50 % between a wavefolder and a clipper.
- **Automate it.** MORPH moves smoothly while the music plays, with no zipper noise, so you can sweep it through a build or ride it from section to section.

To choose STYLE B, click the STYLE B key 6 and choose from the menu, or Shift-click (or right-click) a STYLE tile. While MORPH is above 0 %, that tile shows a small **B**.

Bands and styles

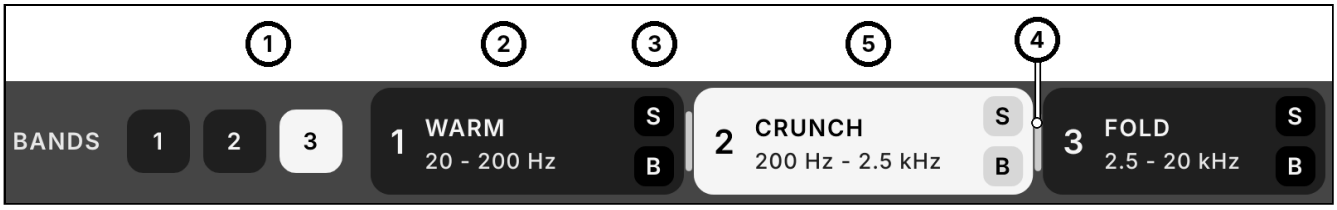


FIGURE 12 BANDS and the strip: 1 1, 2 or 3 bands, here 3; 2 a band's number, STYLE and range; 3 its S (solo) and B (bypass); 4 a crossover, drag it; 5 the band shown, in off-white.

Control	Range	Default	What it does
BANDS	1, 2, 3	1	How many bands the sound is split into.
Crossover 1	40 Hz to 6.00 kHz	180 Hz	Between band 1 and band 2.
Crossover 2	200 Hz to 10.0 kHz	2.50 kHz	Between band 2 and band 3 (3 bands only).
S	on or off, per band	off	Solo: hear only this band, and any other soloed one.
B	on or off, per band	off	Bypass: this band passes clean.

BANDS and the strip

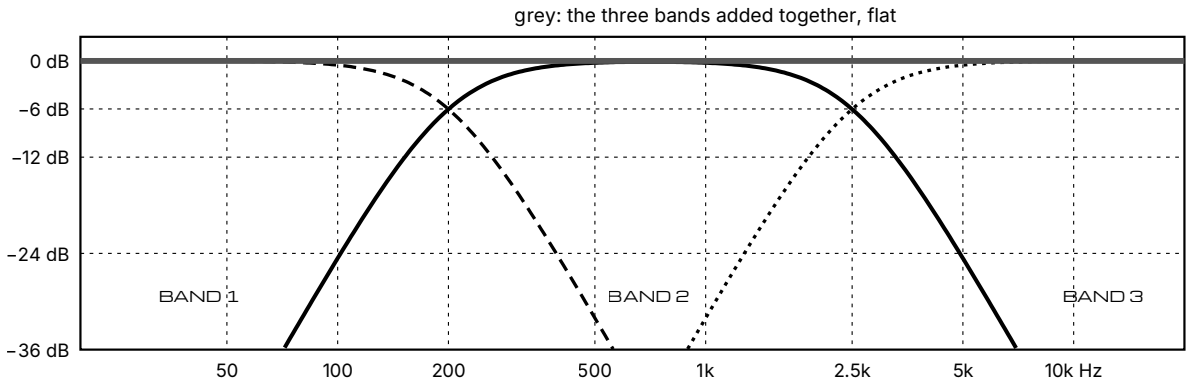
With 1 the whole sound is one band: the strip shows a single region, FULL BAND. With 2 it is split at crossover 1 into lows and highs; with 3 at both crossovers into lows, mids and highs.

The strip runs from 20 Hz on the left to 20 kHz on the right. Each band's region shows:

- **Its number, its STYLE and its range**, for example 2 CRUNCH 200 Hz - 2.5 kHz.
- S to solo it: you hear that band alone (and any other soloed band). Use it to set a band's DRIVE and STYLE while hearing exactly what it does. *Radio Crunch Vocal* and *Telephone Fuzz* keep their middle band soloed on purpose, for a band-limited sound.
- B to bypass it: the band passes clean, as if its DRIVE were 0 %.

Click a region to show that band: the right-hand column and the STYLE tiles then set it. **Drag the gap between two regions** to move that crossover; double-click the gap for its default (180 Hz or 2.5 kHz). When you drag, the two crossovers stay at least 2.2 times apart, so the middle band keeps room for its keys. Hover over a gap to read its frequency.

The crossovers



Three bands at 200 Hz and 2.5 kHz (the preset Three Colours). Each crossover is −6 dB on both sides and falls 24 dB per octave; undriven, the bands add back to the input, flat within 0.0001 dB (measured).

FIGURE 13 What each band hears with crossovers at 200 Hz and 2.5 kHz.

The crossovers are steep (24 dB per octave) and built so that **undriven bands add back to exactly the input level**: flat within 0.0001 dB across 20 Hz to 20 kHz. So two or three bands at DRIVE 0 % sound like the input. What changes is only what you drive.

Good places to split:

- **100 to 200 Hz** separates the kick and the bass from the rest: drive above it and the low end stays tight (*Lows Clean Mids Dirty*, *Sub Octave Fuzz*), or drive below it alone for weight (*Low End Thickener*).
- **2 to 5 kHz** separates the body from the bite and the air: *Air Exciter* drives only what is above 5 kHz.
- **Three bands** give each range its own character: *Bass Three Ways*, *Multiband Mix Push*, *Three Colours*.

Changing BANDS while playing is smooth but not instant. The plugin starts the new layout alongside the old one and crossfades between them, so there is no gap and no click; a band that comes or goes opens or closes its crossover from the top of the spectrum. One band more takes about a tenth of a second, three bands to one about a third of a second. Measured on music, the level dips by at most 0.4 dB on the way. Automate BANDS at a section change, not on every beat.

The eight STYLES

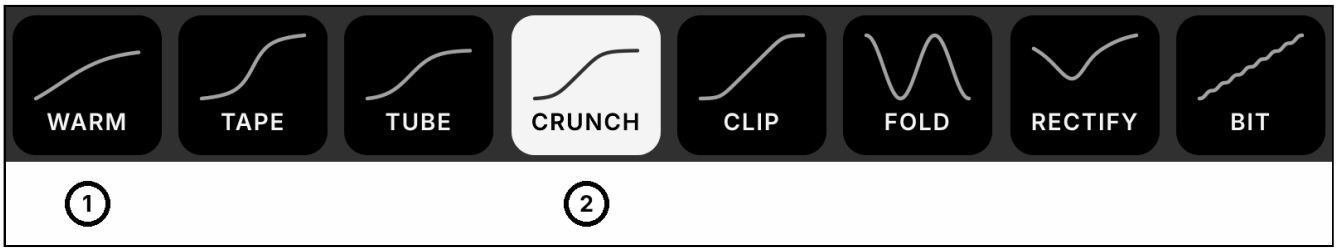
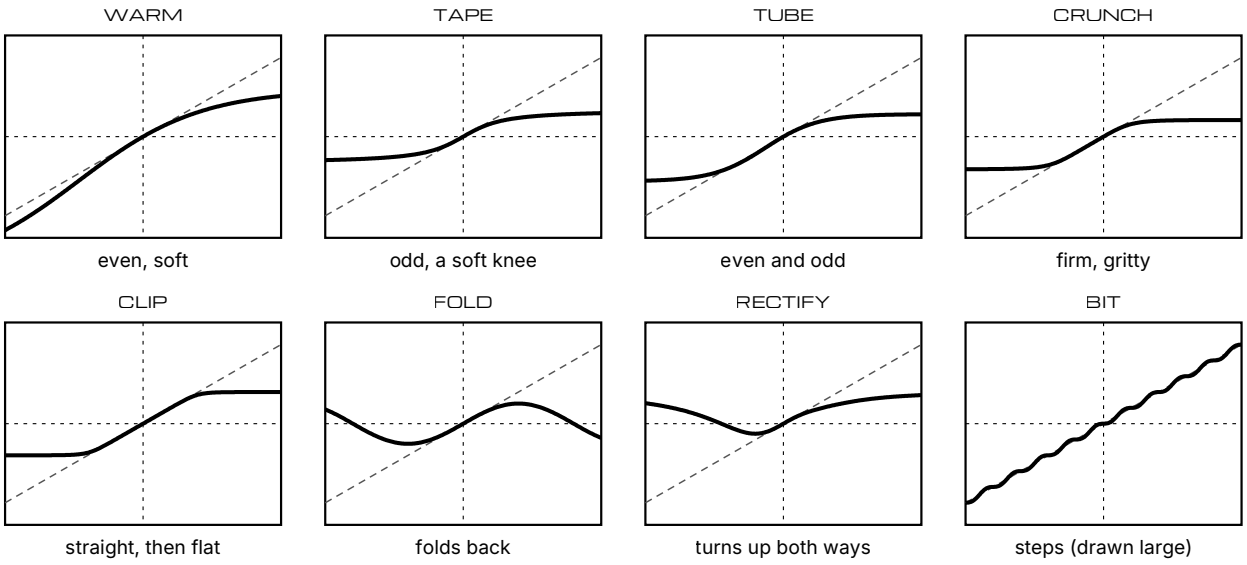


FIGURE 14 The STYLE tiles: 1 each tile draws its curve small; 2 the band's STYLE, here CRUNCH, in off-white.

Click a tile to give the band shown that STYLE. Shift-click or right-click a tile to make it the band's STYLE B instead. Switching while the music plays is smooth: the curves blend into each other over 30 ms.



Across: the signal after DRIVE (−2.5 to +2.5; 1 is about full scale). Up: what the curve makes of it.
Dashed: no change. Where the curve leaves the dashed line, it adds harmonics.

FIGURE 15 The eight curves, as TRANSFER draws them.

STYLE	Its harmonics at DRIVE 50 % (2nd / 3rd)	The sound
WARM	−17 / −38 dBc	Soft, even, mostly the 2nd: thickness without edge.
TAPE	none / −16 dBc	A soft knee with odd harmonics and a little lag: rounded peaks, glue.
TUBE	−18 / −20 dBc	A hot valve: the 2nd and the 3rd, lopsided when pushed.
CRUNCH	−17 / −16 dBc	A firm, biased clip, odd and even: the drive pedal of the set.
CLIP	none / −18 dBc	Clean, then a short knee into full scale: loudness without colour.
FOLD	none / −11 dBc	A wavefolder: past full scale the wave folds back, bright and metallic.
RECTIFY	−4 / −7 dBc	Quiet parts pass clean; loud ones turn into an octave-up fuzz.
BIT	none / −63 dBc	Fewer bits, and above DRIVE 50 % a lower sample rate: digital grain.

The harmonics are those of a 1 kHz sine at −18 dBFS RMS, measured; “none” means none at all.

WARM

The gentlest style and the default. A biased curve that leans one way, so it makes mostly the **2nd harmonic**, an octave above each note: a fuller, rounder, warmer sound that doesn’t sound distorted until you push it hard. Use it on anything that sounds thin: a DI bass, a kick, a vocal, a whole mix (*Mix Warmth*, *Kick Thump Warmth*, *Master Gentle Warmth*).

TAPE

The curve of magnetic tape: a soft knee that rounds the peaks and makes **odd harmonics**, with a short memory that lets the highs lag a little behind. It tucks peaks in and glues parts together without much brightness. On a mix bus, drums, pads, an acoustic guitar and vocals (*Mix Glue Tape*, *Vocal Tape Warmth*, *Master Tape Polish*).

TUBE

A hotter valve curve that makes **both the 2nd and the 3rd**: warmth with presence. Pushed, it leans more one way and growls. On guitars, electric piano, snare and vocals that should come forward (*Clean Guitar Glow*, *Snare Tube Crack*, *Vocal Presence Tube*).

CRUNCH

A firm, biased clip: **gritty, odd and even**, the overdrive pedal of the set. It bites quickly and stays solid when pushed. On drums, rhythm guitar, organ and in parallel on vocals (*Drum Crunch Bus*, *Crunch Rhythm*, *Parallel Vocal Grit*).

CLIP

A clean clipper: **straight until the signal nears full scale**, then a short knee into it. Below the knee it changes nothing, so it shaves peaks without colouring the rest. With AUTO GAIN on it gives you the same loudness with lower peaks (*Clip Loud Drums*); with AUTO GAIN off, DRIVE pushes the sound into a ceiling at 0 dBFS, a loudness clipper (see *The control bar ▸ AUTO GAIN*).

FOLD

A wavefolder: where other curves flatten, this one **folds the wave back**. The harder you drive, the more often it folds: bright, metallic, synthetic tones that don't follow the usual harmonic patterns. Subtle in parallel on keys and leads (*Keys Fold Shimmer*, *Fold Lead Sizzle*), wild on its own (*Wavefold Madness*).

RECTIFY

Quiet passes clean; loud turns over. As the level rises, the curve turns the bottom of the wave upwards, which doubles its frequency: an **octave-up fuzz** that blooms on loud notes and disappears on soft ones. On a bass above a clean sub (*Sub Octave Fuzz*), on leads, or as an effect (*Octave Rectifier*, *Telephone Fuzz*).

BIT

A clean, smooth **bit reduction**, from 14 bits at DRIVE 0 % to 2 bits at 100 %, and above 50 % a **lower sample rate** too, down to an eighth of the session's. Grain, hiss-like texture and the steppy sound of old samplers (*Lofi Bit Keys*, *Bitcrushed Grit*, *Lofi Sampler*). Unlike the other styles, BIT's lower rate folds tones back on purpose: that is its sound.

> **Tip:** Choose the STYLE first at a fairly high DRIVE, where the character is easy to hear, then turn DRIVE down until it sits.

The control bar

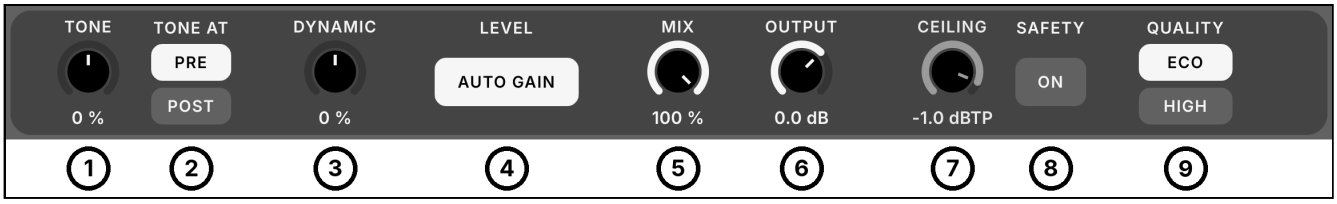
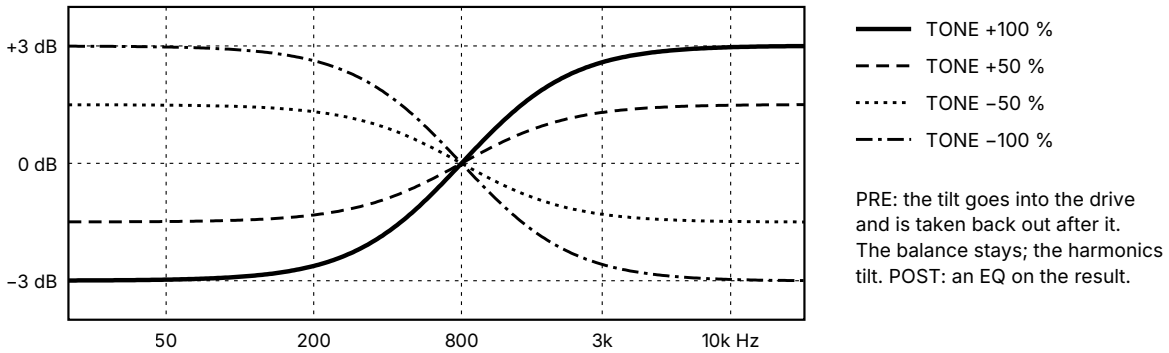


FIGURE 16 The control bar: 1 TONE, 2 TONE AT PRE or POST, 3 DYNAMIC, 4 AUTO GAIN, 5 MIX, 6 OUTPUT, 7 CEILING, 8 its ON key under SAFETY, 9 QUALITY ECO or HIGH.

The control bar acts on the whole plugin, on every band at once.

Control	Range	Default	What it does
TONE	−100 to +100 %	0 %	A tilt around 800 Hz: + towards the highs, − towards the lows.
TONE AT	PRE, POST	PRE	Where the tilt acts: around the drive, or on the result.
DYNAMIC	−100 to +100 %	0 %	Moves the drive with the music's level.
AUTO GAIN	on or off	on	Keeps the level matched to the input.
MIX	0 to 100 %	100 %	The saturated sound against the dry signal.
OUTPUT	−24.0 to +12.0 dB	0.0 dB	The level out, before the CEILING.
CEILING	−12.0 to 0.0 dBTP	−1.0 dBTP	The highest true peak let out, when ON.
ON (SAFETY)	on or off	off	Switches the CEILING on.
QUALITY	ECO, HIGH	ECO	The curves at 8 or 16 times the rate.

TONE, PRE and POST



The tilt turns around 800 Hz, up to 3 dB each way at the ends (6 dB from end to end).

FIGURE 17 TONE's tilt at four settings.

TONE is a gentle tilt that turns around 800 Hz: at +100 % the highs are 3 dB up and the lows 3 dB down, at −100 % the other way round. Where it acts changes what it does:

- PRE (the default) tilts what goes **into** the drive and takes the same tilt back out afterwards. The sound's balance stays as it was; what changes is **which part is driven harder**. + drives the highs harder: brighter, more biting harmonics (*Snare Tube Crack*, *Vocal Presence Tube*). − drives the lows harder: darker, rounder harmonics, and highs that stay cleaner (*Kick Thump Warmth*, *Warm DI Bass*). Only what the curve adds is tilted back, so at DRIVE 0 % TONE PRE changes nothing.
- POST is a tilt EQ on the saturated sound, after the bands are added together: + brightens, − darkens. *Mix Tube Sheen* uses +15 %, *Lofi Sampler* −30 %.

DYNAMIC

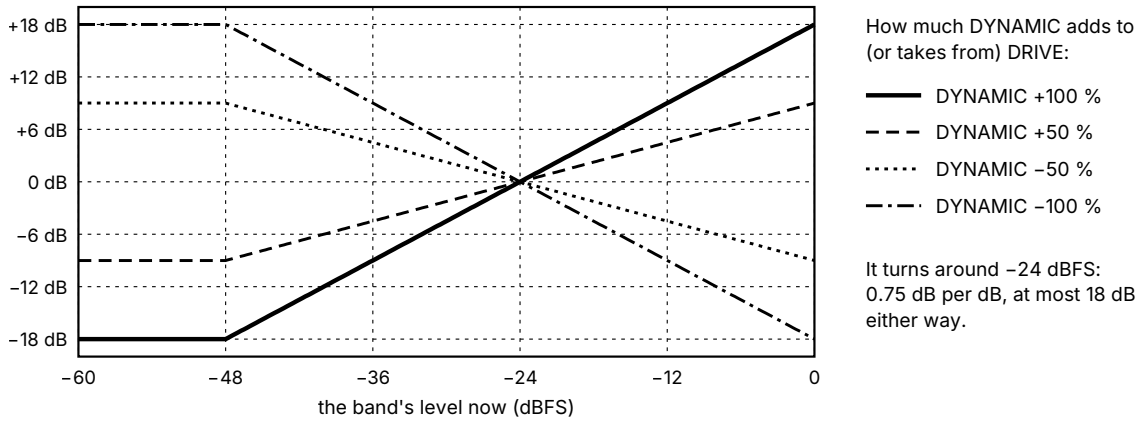


FIGURE 18 How DYNAMIC moves the drive with each band's level.

DYNAMIC lets the drive follow the music. Each band listens to its own level, quickly as it rises and more slowly as it falls, and its drive moves with it around −24 dBFS, up to 18 dB either way.

- **+** drives the **loud parts** harder: the hits, the attacks, the accents. Transients get bite and grit, the quiet parts stay cleaner. Measured: at +100 %, a note at −12 dBFS gets 8 dB more 3rd harmonic. *Drum Crunch Bus* (+30 %), *Electric Piano Bark* (+45 %), *Mix Transient Grit* (+40 %).
- **−** drives the **quiet parts** harder: softer attacks, a denser, more even body and tail. At −100 %, a note at −36 dBFS gets 18 dB more. *Smooth Vocal Glue* (−30 %), *Low Boom Saturation* (−20 %).

At 0 % the drive is steady. DYNAMIC moves the colour, not the level, whether AUTO GAIN is on or off. With DRIVE at 0 %, DYNAMIC does nothing.

AUTO GAIN

A curve changes the level: driving it harder makes the sound louder, and louder always seems better. AUTO GAIN takes that out of the way, so what you compare is the colour.

It works in two steps. **At once**, it gives back the level each STYLE takes from a sine at the DRIVE you set (and the blend you set with MORPH). **Then, over the last three seconds of music**, it compares the loudness of what comes out with what goes in, the way loudness meters do, and corrects the rest, gliding over half a second. Quiet passages are not counted, and while a band is soloed the correction holds where it is. The AUTO read-out in IN | OUT shows that correction.

- Measured on music driven at 60 %, six of the styles come out within 0.12 dB of the input. FOLD and RECTIFY come out about 1 dB quieter on a plain level meter, because they add highs, which loudness counts as louder.
- After you change BANDS or a band's STYLE, the correction may settle over a few seconds. That is by design: it is slow so that it never pumps with the music.

With AUTO GAIN **off**, DRIVE is also gain. WARM at 50 % is then louder by up to 18 dB, and CLIP becomes a **loudness clipper**: DRIVE pushes the sound into its ceiling at 0 dBFS. Turn OUTPUT down to set the level.

MIX

MIX blends the whole plugin's saturated sound with the dry signal: parallel saturation. At 100 % you hear only the saturated sound; at 30 to 50 % the dry sound keeps its punch and the saturation adds density underneath (*Parallel Vocal Grit* 30 %, *Room Smash Blend* 35 %).

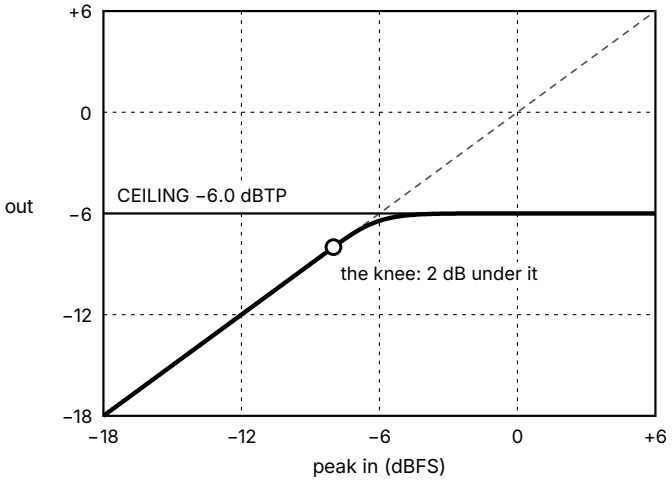
The dry signal is delayed to match, and with two or three bands it is the bands added together, undriven, so the blend is **in phase at every setting**: no thin, hollow sound near a crossover. With one band and the CEILING off, MIX 0 % is the input, delayed, bit for bit.

BAND MIX blends one band; MIX blends everything.

OUTPUT

OUTPUT sets the level out, from −24 to +12 dB, after MIX and before the CEILING. With AUTO GAIN on it can usually stay at 0.0 dB; the factory presets set it within about 1 dB of 0.

CEILING and SAFETY ON



1. Under the knee, nothing changes: the signal passes bit for bit.
2. Above it, a smooth bend (a soft clip, worked out at 4 × the rate) leads into the ceiling.
3. A true-peak limiter with 1 ms of lookahead catches what is left, also between the samples.

Measured: tones from 100 Hz to 19 kHz at 0 dBFS come out at −6.20 to −6.05 dBTP, music at −6.03 to −6.02: never over.

FIGURE 19 The CEILING at −6.0 dBTP: what it does to a peak.

The CEILING is a safety net at the very end. Click ON under SAFETY to switch it on, and set the highest level the output may reach with the CEILING knob, from −12.0 to 0.0 **dBTP** (decibels of true peak, which counts the peaks between the samples as well). Its knob is dimmed while it is off.

1. **Up to 2 dB under the ceiling**, nothing changes, bit for bit.
2. **Above that**, a smooth bend leads into the ceiling, worked out at 4 times the rate so it adds no aliasing.
3. **What is left**, mostly bright, fast peaks the bend can't hold, is caught by a true-peak limiter with 1 ms of lookahead.

Measured at −6 dBTP, tones from 100 Hz to 19 kHz at full scale come out between −6.20 and −6.05 dBTP, and music peaking at 0 dBFS between −6.03 and −6.02 dBTP: never over. The OUT read-out shows the true peak, so you can see it hold.

- On a mix bus or a master, **−1.0 dBTP** (the default) or −0.5 leaves room for later conversion. The *Mix Clip Headroom* preset uses −0.5, the *Mastering* presets with a ceiling −0.3.
- The CEILING is a safety net, not a limiter for loudness: if it works all the time, turn OUTPUT or DRIVE down, or use CLIP for loudness.
- Switching it on or off fades over 20 ms. It doesn't change the delay: the plugin always reports the same latency.

QUALITY

ECO runs the curves at 8 times the session's rate, HIGH at 16 times. Both sound the same at moderate drive; HIGH is cleaner when you drive bright material hard, and uses about twice the CPU. The delay is the same. See *QUALITY and latency*.

The display

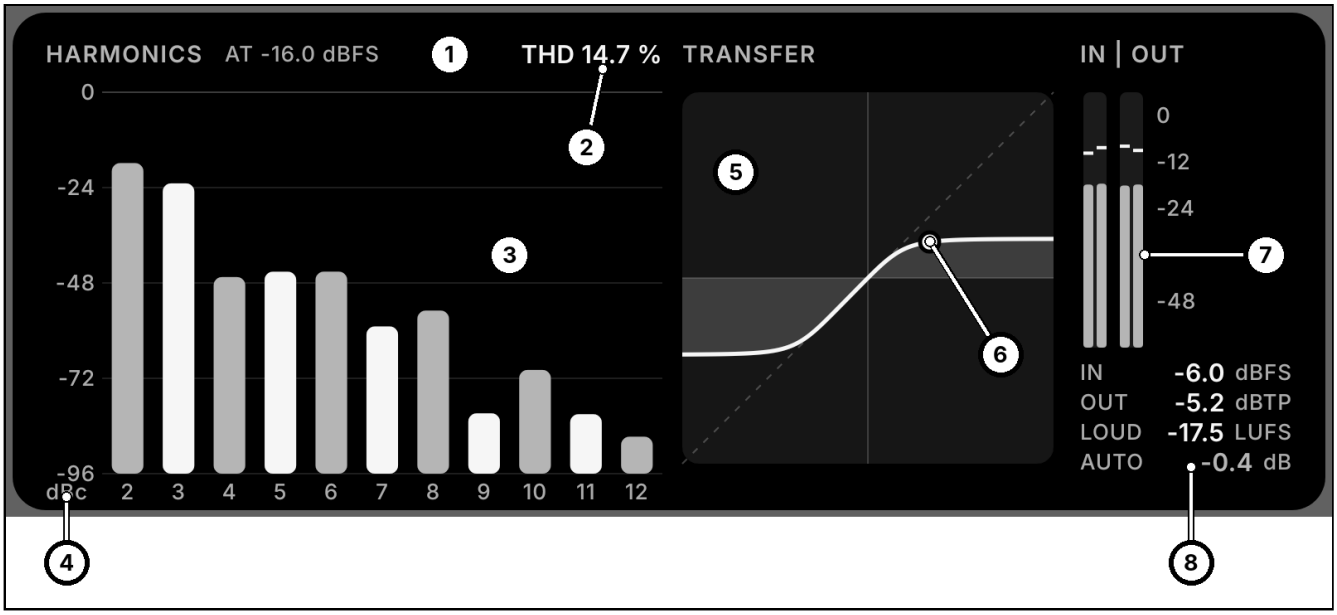


FIGURE 20 The display: 1 HARMONICS and the level it measures at; 2 the THD; 3 the harmonics, the 2nd to the 12th; 4 the scale, 0 to −96 dBc; 5 TRANSFER, the band's curve; 6 where the music's peak hits it; 7 the IN and OUT meters; 8 the read-outs.

The display shows **the band shown**: click another band in the strip and it follows. It updates as smoothly as your screen can draw.

HARMONICS

The bars show the harmonics the band's curve makes of a sine **at the band's level now**: the 2nd harmonic on the left, the 12th on the right, each in **dBc** (decibels under the note itself; a bar at −24 is 24 dB quieter than the note). The **even** harmonics are lilac, the **odd** ones off-white; in print, the even bars are the darker ones.

- AT -16.0 dBFS 1 is the level they are measured at: the band's peak level, as it moves. When nothing plays, it reads REF -18 dBFS RMS and shows a reference sine instead.
- THD 2 adds all the harmonics up, as a percentage of the note: under 1 % is subtle, 10 % is clearly saturated, and a folded or rectified wave can pass 100 %.

HARMONICS follows DRIVE, STYLE and MORPH at once, TAPE's lag and BIT's lower rate included. It shows the curve's own harmonics, so it leaves out BAND MIX, and DYNAMIC and TONE, which change with the music. Use it to compare styles: switch tiles and watch the even and odd bars change places.

TRANSFER

TRANSFER 5 draws the band's curve: the signal after DRIVE across (from −2.5 to +2.5, where 1 is about full scale), what the curve makes of it upwards. The dashed diagonal is "no change". A light fill sits between the curve and the middle line.

The dot 6 is where the music's peaks hit the curve now: the band's level times DRIVE. If the dot is on the straight part, the band is barely coloured; past the bend, it is saturated; far along a flat part, it is clipping hard. Turn DRIVE and watch the dot move along. When nothing plays the dot disappears.

TAPE's lag and BIT's lower rate are not drawn: the curve shows their shape for a slow signal.

IN | OUT

Read-out	What it shows
IN	The highest sample peak coming in, in dBFS.
OUT	The highest **true** peak going out, in dBTP. Over 0, it turns coral.
LOUD	The output's short-term loudness (the last 3 seconds), in LUFS.
AUTO	The correction AUTO GAIN's loudness match is making now, in dB. Lilac while AUTO GAIN is on, dimmed while it is off.

The two meters 7 show the input on the left and the output on the right, one bar per channel, from −60 dBFS at the bottom to +6 at the top, marked at 0, −12, −24 and −48. The lilac bar is the average (RMS) level; the short off-white line above it is the peak. Anything over 0 dBFS is drawn in coral above the 0 mark. The read-outs hold the highest peak for a second and a half.

- OUT **against** IN shows what the saturation did to the peaks: most styles bring them down for the same loudness.
- LOUD lets you check the loudness by ear's measure; with AUTO GAIN on, it stays close to the input's.

QUALITY and latency

Aliasing

Measured with sines at 1, 5, 9 and 15 kHz at −15 dBFS peak, looking for anything that is not a harmonic of the tone between 20 Hz and 20 kHz:

DRIVE	ECO	HIGH
25 %	under −128 dBc	under −128 dBc
50 %	under −100 dBc	under −110 dBc
75 %	−39 to −121 dBc, by style	−85 to −123 dBc
100 %	—	−35 to −122 dBc

BIT is left out: its lower rate folds back by design. At DRIVE 100 %, use HIGH.

What it means. At the settings most mixes use, aliasing is far below anything you can hear in either mode. It only appears when you **drive a bright, loud source very hard**, and then mostly with the styles that bend hardest, RECTIFY and FOLD. A 15 kHz tone at full drive is an extreme test; cymbals, bright synths and sibilant vocals driven past 75 % come closest to it. In that case, switch to HIGH: it is 30 to 50 dB cleaner there.

Latency

VEIRA Saturator delays the sound by **194 samples**, at every sample rate and whatever the settings: 4.4 ms at 44.1 kHz, 4.0 ms at 48 kHz, 2.0 ms at 96 kHz. It comes from the filters that take the curves up and back down, and from the CEILING's bend and lookahead, which stay in the path as plain delays even while it is off, so the delay never changes.

The plugin tells your DAW, which compensates, so the track stays in time with the others. The dry signal for MIX and the DAW's own bypass are delayed by the same amount, so switching the plugin in and out has no gap or jump.

> **Tip:** 4 ms is fine for mixing. If you monitor a performer live through the plugin while recording, it adds those 4 ms to what they hear; most players won't notice, but put it on after the take if they do.

CPU

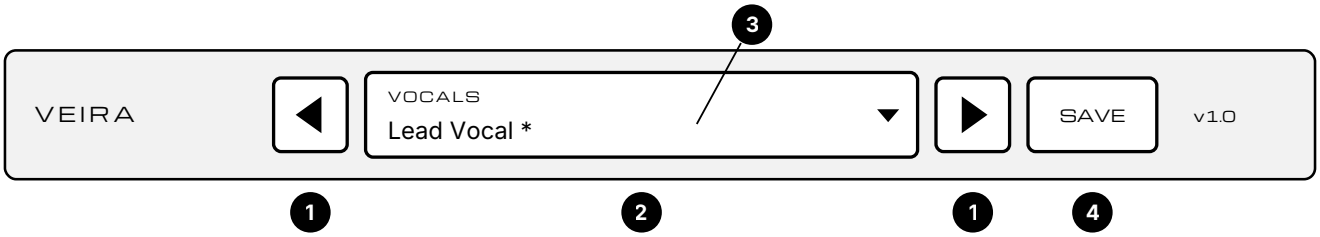
In our measurements on one processor core (stereo, 48 kHz, DRIVE 50 %): ECO with one band uses about 2 to 5 % depending on the style, with three bands about 5 to 10 %; HIGH with one band about 4 to 8 %, with three bands up to about 18 %. The CEILING adds about 2 %. At DRIVE 0 % or on silence it uses almost nothing.

Presets

VEIRA Saturator comes with **50 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 21 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 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/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA 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

Each preset sets every control, including the bands and the crossovers. AUTO GAIN is on in all of them.

Folder	Presets
Default	Init
Drums	Drum Crunch Bus, Kick Thump Warmth, Snare Tube Crack, Clip Loud Drums, Room Smash Blend, Drum Multiband Punch
Bass	Bass Three Ways, Warm DI Bass, Tape Round Bass, Growl Synth Bass, Sub Octave Fuzz, Low Boom Saturation
Guitar	Clean Guitar Glow, Crunch Rhythm, Lead Fuzz Push, Acoustic Tape Soften, Fold Lead Sizzle
Keyboards	Electric Piano Bark, Keys Fold Shimmer, Organ Drive, Pad Tape Warmth, Lofi Bit Keys
Vocals	Vocal Tape Warmth, Vocal Presence Tube, Radio Crunch Vocal, Parallel Vocal Grit, Smooth Vocal Glue
Mix Bus	Mix Glue Tape, Mix Warmth, Mix Tube Sheen, Mix Transient Grit, Mix Clip Headroom
Mastering	Master Gentle Warmth, Master Tape Polish, Master Clip Loudness, Master Tube Air, Master Low Glue
Multiband	Multiband Mix Push, Lows Clean Mids Dirty, Air Exciter, Low End Thickener, Three Colours, De-Harsh Tape Top
Creative FX	Wavefold Madness, Octave Rectifier, Bitcrushed Grit, Morph Fold To Clip, Lofi Sampler, Telephone Fuzz

Init is the plugin's defaults: one band, WARM at 30 %, AUTO GAIN on, the CEILING off, QUALITY ECO. The *Mastering* presets use QUALITY HIGH; *Master Gentle Warmth*, *Master Clip Loudness* and *Mix Clip Headroom* switch the CEILING on.

> **Levels:** every preset was made for typical levels: single tracks (bass, guitar, keys, vocals) peaking around −8 dBFS, drums and buses around −4 dBFS, premasters around −3 dBFS. On that material each one comes out as loud as it went in, within 0.05 dB, so switching presets compares colours, not volumes. **On hotter material the colour is stronger, on quieter material weaker:** adjust DRIVE first.

Recipes

Warm up a thin track

1. Put VEIRA Saturator on the track. A new instance is *Init*: WARM at 30 %.
2. Play, and bypass the plugin in your DAW to compare: the level stays the same, only the colour changes.
3. Raise DRIVE until the track sounds fuller, then back off a little. Try TAPE for rounder peaks or TUBE for more presence.

Crunch on the drum bus, punch intact

1. Load *Drums* ▸ *Drum Crunch Bus*: CRUNCH at 35 %, DYNAMIC +30 %, MIX 70 %.
2. Raise DYNAMIC for more bite on the hits, lower it for a more even crunch.
3. Lower MIX to bring back more of the dry punch; raise it for a dirtier kit.

A growling bass with a clean, tight sub

1. Load *Bass* ▸ *Bass Three Ways*, or set BANDS to 2.
2. Drag the first crossover to between 100 and 150 Hz. Click band 1 and turn its DRIVE to 0 % (or click its B).
3. Click band 2, choose CRUNCH or TUBE, and raise its DRIVE until the bass growls. Solo it with S to hear only what you are driving.
4. For an octave fuzz above a clean sub, try *Sub Octave Fuzz*.

Air and sheen on the top only

1. Load *Multiband* ▸ *Air Exciter*: two bands split at 5 kHz, TUBE on the top, blended in at 70 %.
2. Move the crossover between 4 and 8 kHz until the air sits where you want it.
3. Use QUALITY HIGH when you drive the top hard.

Sweep from one character to another

1. Load *Creative FX* ▸ *Morph Fold To Clip*, or choose any STYLE, then Shift-click a tile for STYLE B.
2. Turn MORPH slowly from 0 to 100 % while the music plays, and watch TRANSFER change.
3. Automate MORPH in your DAW through a build-up or between sections.

Louder, with peaks that stay put

1. Load *Mastering* ▸ *Master Clip Loudness*, or choose CLIP with QUALITY HIGH.
2. With AUTO GAIN on, CLIP shaves the peaks at the same loudness: room for the next stage. For more loudness, switch AUTO GAIN off and raise DRIVE a little at a time.
3. Click ON under SAFETY and set the CEILING to −1.0 dBTP. Check OUT: it stays at or under the ceiling.

A radio or telephone voice

1. Load *Vocals* ▸ *Radio Crunch Vocal*: three bands, the middle one soloed and crunched.
2. Move the two crossovers closer together for a smaller, thinner sound, further apart for a fuller one.
3. For a fuzzier version try *Creative FX* ▸ *Telephone Fuzz*.

Specifications

Type	Saturator: eight styles, up to three bands
Channels	Mono or stereo
Styles	WARM, TAPE, TUBE, CRUNCH, CLIP, FOLD, RECTIFY, BIT; per band a STYLE (WARM) and a STYLE B (TAPE)
Per band	DRIVE 0 to 100 %, 0 to +36 dB (30.0 %); BAND MIX 0 to 100 % (100 %); MORPH 0 to 100 % (0 %); solo (off); bypass (off)
Bands	BANDS 1, 2 or 3 (1); crossover 1 40 Hz to 6.00 kHz (180 Hz); crossover 2 200 Hz to 10.0 kHz (2.50 kHz); 24 dB per octave, undriven bands sum flat
Control bar	TONE −100 to +100 % (0 %), a tilt around 800 Hz, up to ±3 dB at the ends; TONE AT PRE or POST (PRE); DYNAMIC −100 to +100 % (0 %), up to ±18 dB of drive; AUTO GAIN (on); MIX 0 to 100 % (100 %); OUTPUT −24.0 to +12.0 dB (0.0 dB)
Ceiling	CEILING −12.0 to 0.0 dBTP (−1.0 dBTP); ON under SAFETY (off); a soft bend from 2 dB under it, then a true-peak limiter with 1 ms of lookahead
Quality	ECO: the curves at 8 × the rate (default); HIGH: 16 ×
Latency	194 samples at every sample rate and setting (4.0 ms at 48 kHz); reported to the host; the dry signal and the host's bypass delayed by the same amount
Metering	HARMONICS (the 2nd to the 12th harmonic, 0 to −96 dBc, and THD); TRANSFER (the curve and the music's peak on it); IN and OUT meters (−60 to +6 dBFS, RMS and peak); IN peak (dBFS), OUT true peak (dBTP), LOUD short-term loudness (LUFS), AUTO (dB)
Sample rates	44.1 to 192 kHz
Presets	50 factory presets in 10 folders, plus your own
Window	1200 × 700 points at 100 %; 75 to 200 % or Fit to screen, from the size button, the corner grip or Cmd/Ctrl + = - 0; opens at 100 %, saved with the session and remembered for new instances
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vsat

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 turn DRIVE up and it doesn't get louder. That is AUTO GAIN at work: it keeps the level, so you hear the colour. Switch AUTO GAIN off if you want DRIVE to add level too.

The level moves a little a few seconds after I change something. AUTO GAIN's loudness match listens to the last three seconds and glides to its new correction. It settles on its own. While you solo a band it holds still.

FOLD or RECTIFY sound a little quieter than the other styles. They add a lot of highs, and AUTO GAIN matches loudness the way the ear and loudness meters weigh it, which counts highs as louder. On a plain level meter they read about 1 dB lower. Raise OUTPUT if you prefer them level on the meter.

It sounds harsh or grainy when I drive a bright sound hard. Switch QUALITY to HIGH. Also try a little less DRIVE, TONE towards – at PRE, or TAPE or WARM, which bend more gently. BIT is meant to sound grainy.

I only hear part of the sound. A band is soloed: look for a lit S in the strip, and click it to switch it off. Some presets solo a band on purpose (*Radio Crunch Vocal*, *Telephone Fuzz*).

Changing BANDS isn't instant. It crossfades from the old layout to the new one, with no gap and no click, over about a tenth to a third of a second. Automate it at a section change.

A band does nothing. Its DRIVE is at 0 %, its BAND MIX at 0 %, or its B (bypass) is on. Or the music has nothing in that band's range: check the crossovers.

The output goes over 0 dBFS. With AUTO GAIN off, or with a hot OUTPUT, it can. Switch on the CEILING (ON under SAFETY) and keep it at −1.0 dBTP; the OUT read-out shows the true peak.

My DAW shows latency. VEIRA Saturator always delays the sound by 194 samples (4 ms at 48 kHz) and tells your DAW, which compensates. The amount never changes with the settings.

Does it work on mono tracks? Yes: mono in and out, or stereo. In stereo both channels get the same settings.

Is it the same as the colour saturators? No. *VEIRA Saturator White*, *Red*, *Gold* and *Blue* each have three or four characters of one kind, with LOW CUT and HIGH CUT to shape what is driven. VEIRA Saturator has eight styles of every kind, MORPH between two, up to three bands with their own style, and DYNAMIC. Their presets are not shared.

How much CPU does it use? In our measurements on one processor core, about 2 to 5 % with one band in ECO, and up to about 18 % with three bands in HIGH. See *QUALITY and latency ▸ CPU*.

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



VEIRA Saturator · User Manual · Version 0.1.0

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

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