VEIRA

BASS ENHANCER

VEIRA Bass DI Enhancer

User Manual

A whole bass chain on one knob. Turn ENHANCE and a bass recorded through a DI box gets an even low end, harmonics that carry on small speakers and the tone engineers give a DI, all in proportion, at the level it came in.



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Welcome

Thank you for choosing **VEIRA Bass DI Enhancer**. A bass recorded straight into the desk through a **DI box** is clean, but it rarely sounds finished: the low notes jump out while others disappear, the tone is a little dull and boomy, and on a phone or a laptop the bass line can vanish altogether. Engineers fix that with a small chain of processors: a compressor to even the notes out, some saturation so the bass is heard on small speakers, and an EQ to take out the rumble and the mud and bring up the weight, the growl and the string.

VEIRA Bass DI Enhancer is that whole chain on **one knob**. Turn ENHANCE and all three move together, in proportion. **AUTO GAIN** keeps the loudness about where it was while you turn, so you judge the tone, not the volume. The STYLE switch picks the path the knob takes: CLEAN (modern and hi-fi), WARM (round and vintage) or GRIT (driven, to cut through a mix). MIX blends the result with the dry DI and OUTPUT sets the level.

It works on any bass that should sound more finished: an electric bass through a DI, a synth bass, a bass amp's microphone or an upright's pickup.

What makes it different

- **One knob, three processors, in proportion.** Low-end compression, saturation and a DI-bass EQ rise together along a path made for bass, so you never have to balance three plugins against each other.
- **The level stays put.** AUTO GAIN takes back what the EQ and the saturation add in loudness. Measured on finger, pick and slap lines from 25 to 100 % on all three styles, the output stays within 1.3 dB of the input's loudness.
- **The same on a quiet DI and a hot one.** The compressor and the saturation measure the bass against **its own level**, so a quiet DI and one 26 dB hotter come out the same, just 26 dB apart.
- **Grit with a clean low end.** GRIT drives only what is above 220 Hz, the way engineers blend a clean DI under a driven amp, so the notes' fundamentals stay solid and clean under the growl.
- **Untouched when you don't use it.** At ENHANCE 0 % or MIX 0 %, the output is the input bit for bit, only delayed by 64 samples (1.3 ms at 48 kHz).
- **69 measured presets** in 14 folders, sorted by how the bass is played (finger, pick, slap, synth, upright) and by style of music, plus a *Mix Fix* folder for the usual problems.
- **A clean, legible face.** Large knobs with the value in their middle, text you can read at a glance, and a window you can scale from 75 % to 200 %.

How this manual is organised. *Getting started* covers installing and activating. *The panel at a glance* names every part of the window. *How a DI bass gets finished* explains, without maths, what each of the three processors does to a bass and what happens inside the plugin. *Controls* explains ENHANCE, STYLE, MIX and OUTPUT with drawings of what they do, *Displays* teaches you to read the TONE display, the LOW-END COMP reduction meter and the DRIVE meter, and *Presets*, *Recipes*, *Specifications* and *Troubleshooting* follow.

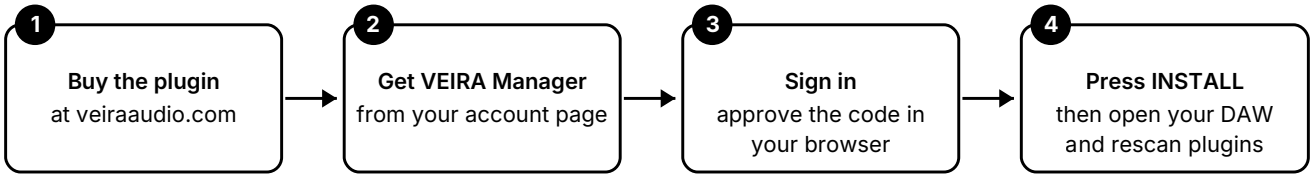
Getting started

What you need

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

Install with VEIRA Manager

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



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

FIGURE 1 From purchase to first sound in four steps.

1. **Buy** VEIRA Bass DI Enhancer 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 Bass DI Enhancer 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 Bass DI Enhancer appears in your DAW under the manufacturer **VEIRA** (in Logic Pro: Audio Units ▸ VEIRA ▸ VEIRA Bass DI Enhancer).

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 Bass DI Enhancer 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.

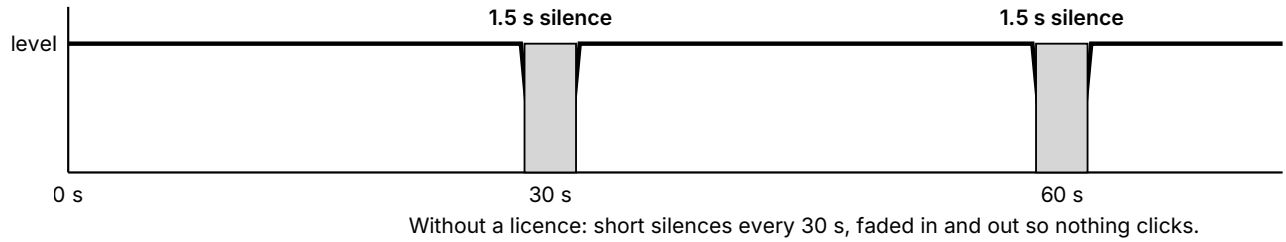


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 Bass DI Enhancer. 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 Bass DI Enhancer 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 Bass DI Enhancer with the factory preset *Default: Init* loaded (WARM, ENHANCE 50 %) while a finger-played DI bass plays.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	TONE display	The EQ that ENHANCE and STYLE set, over the spectrum of the bass.
3	The four moves	WEIGHT, MUD, GROWL and DEFINITION: where the EQ works, and by how much right now.
4	The EQ curve	The EQ's shape, read on the dB scale at the right.
5	The spectrum	The output (amber on screen, filled) and the input (a thin grey line).
6	Legend	Names the three lines: ENHANCE EQ, OUT, IN.
7	LOW-END COMP	The REDUCTION meter: a bar and a number showing how much the compressor takes off the low end now.
8	STYLE	CLEAN, WARM or GRIT: the path ENHANCE takes.
9	ENHANCE	The one knob: how much of everything.

	Part	What it does
10	DRIVE	How hard the saturation works.
11	MIX	The enhanced bass against the dry DI.
12	OUTPUT	The final level.
13	Meter bridge	Input and output level and loudness.

The window has three areas: the **TONE display** across the top, the controls underneath in three groups captioned LOW-END COMP, ENHANCER and OUTPUT, and the **meter bridge** down the right.

Using the controls

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

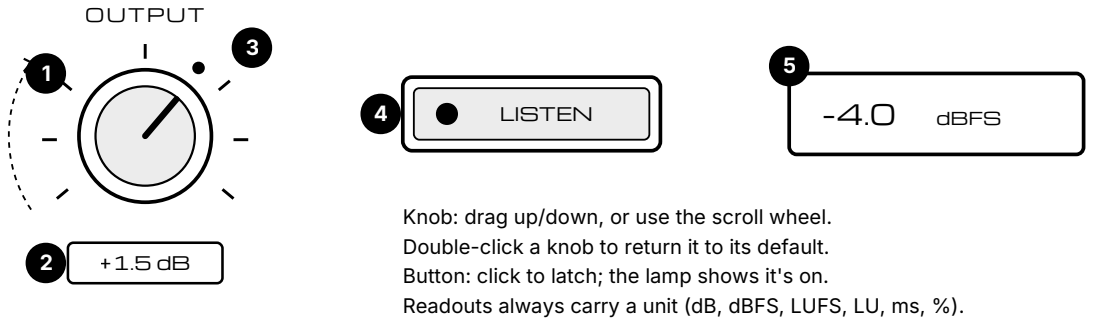


FIGURE 4 The parts you'll find on every VEIRA panel (the labels are examples).

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

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

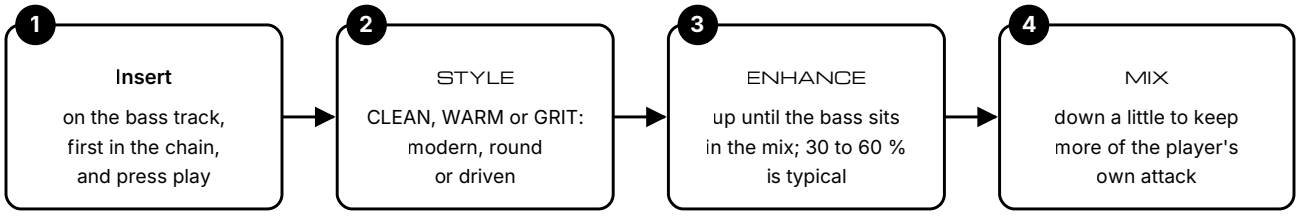
Automation: every knob and button is a host parameter, so you can automate it in your DAW and control it from a MIDI controller or control surface that your DAW maps.

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

On VEIRA Bass DI Enhancer's panel the parts look a little different from the drawing above:

- **Knobs** show their value **in their middle**, and a lit ring (blue on screen; in print, the lighter arc) shows how far each is turned. Drag, use the wheel, or double-click (or Alt/Option-click) for the default, as on every VEIRA knob.
- **Type a value:** right-click a knob (Control-click on a Mac). A field opens over the knob with the current value; type the new one and press Return. The number is enough: **40** for ENHANCE or MIX, **-1.5** for OUTPUT. Press Escape or click elsewhere to leave it unchanged.
- **The STYLE buttons** have no lamps and work like radio buttons: click one and it fills (orange on screen; in print, the lighter, solid button against the two dark ones), and the other two go dark.
- **Resize the window:** drag its bottom-right corner (the small diagonal lines). It scales from 75 % to 200 % of its normal size and keeps its proportions, so everything stays sharp. Your DAW saves the size with the session.

Quick start: a finished DI in four moves



Judge it in the mix, not solo: the level stays about the same, so what you hear changing is the tone.

FIGURE 5 The quickest way to a good result. Or load a preset for how the bass is played (Finger, Pick, Slap, Synth Bass, Jazz & Upright) or for the style of music.

How a DI bass gets finished

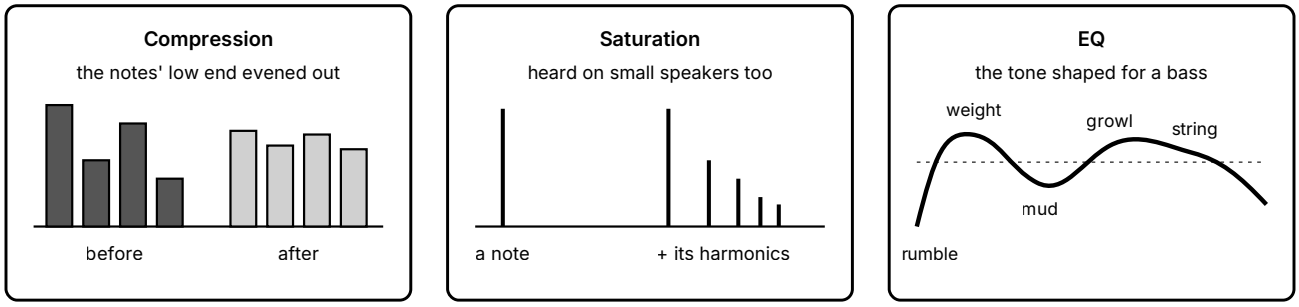
If you already mix bass every day, skim this chapter; it explains what the three processors do and why VEIRA Bass DI Enhancer moves them together.

What a DI records, and what's missing

A **DI box** (direct injection) takes the electric signal from the bass's pickups straight into the recording, without an amplifier or a microphone. It's clean and full-range, which is why most basses are recorded that way, often alongside an amp. But a DI on its own tends to have three problems:

- **Uneven notes.** Some notes on a bass ring louder than others (open strings, notes near the body's resonance), and players don't hit every note the same. In the low end, where the bass carries the song's weight, these jumps are very audible.
- **A plain tone.** The pickups capture everything, including rumble below the notes and a boxy build-up in the low mids (around 200 to 500 Hz, the "mud"), while the growl and the sound of the string and pick that help a bass be heard are fairly quiet.
- **Lost on small speakers.** A low E is about 41 Hz. Phones and laptop speakers can't play that at all: what makes a bass line audible on them are its **harmonics**, higher copies of each note that the ear uses to hear the pitch. A clean DI has few of them.

The three tools



VEIRA Bass DI Enhancer runs all three, in this order, and turns them up together with ENHANCE.

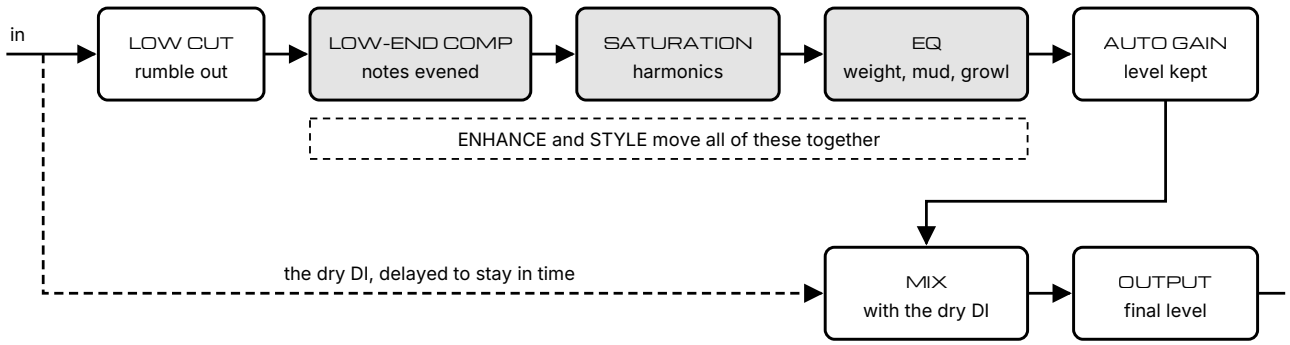
FIGURE 6 What the three processors do to a bass. Each is a separate plugin in a usual chain; here they share one knob.

Compression turns loud notes down and, with makeup gain, quiet notes up, so the bass line sits at one steady level in the mix. On a bass it matters most in the low end: that's where the jumps are heard, and where the bass and the kick drum share the space.

Saturation gently distorts the signal, the way an overdriven valve amp or a tape machine does. Distortion sounds harsh when it's pushed, but a little of it adds **harmonics**: quieter copies of each note at two, three, four times its frequency. They thicken the tone and let the ear hear the bass line on speakers that can't play its fundamental. Saturation also rounds off the sharpest peaks, a little like a compressor.

EQ shapes the tone. For a DI bass, engineers usually take out the rumble below the notes, add some **weight** around 80 to 100 Hz, cut the **mud** around 300 to 400 Hz, and lift the **growl** (700 Hz to 1.1 kHz) and the **definition**, the sound of the string and the pick (2 to 3 kHz).

What happens inside VEIRA Bass DI Enhancer



The shaded boxes measure the bass against its own level, so a quiet and a hot DI are treated alike.

FIGURE 7 The signal flow. Everything between the input and MIX is the enhanced path; MIX blends it with the dry DI, which is delayed by the same 64 samples so the two stay in time.

Step by step:

1. **LOW CUT** takes out the rumble under the lowest notes (a 12 dB per octave high-pass). It stays out of the way, at 1 Hz, until ENHANCE reaches 20 %, then rises to 30 to 35 Hz at 100 % depending on the style.
2. **The low-end compressor** listens to the lows only (the bass below about 150 Hz, both channels together) and compares each note with the bass's own long-term level. It then turns the lows up or down with a low shelf at 180 Hz, so the notes' fundamentals are evened out while their attack and the strings' top pass as played. See *What the compressor does*.
3. **The saturation** adds harmonics. It also measures the bass against its own level, so a quiet and a hot DI saturate alike, while harder notes still saturate more than soft ones. With GRIT only what is above 220 Hz is driven.
4. **The EQ** shapes the tone: weight, mud, growl, definition and, on WARM and GRIT, a gentle top cut.
5. **AUTO GAIN** takes back the loudness the EQ and the saturation add or take away, so turning ENHANCE changes the tone, not the level. It's always on.
6. MIX blends this with the dry DI, and OUTPUT sets the final level.

How the parts move together

ENHANCE moves each part along its own path, so they stay in proportion but don't all rise at the same rate. The EQ moves a little quicker at first, so even a light setting changes the tone; the compressor and the saturation come in more gently, and do most of their work in the upper half of the knob.

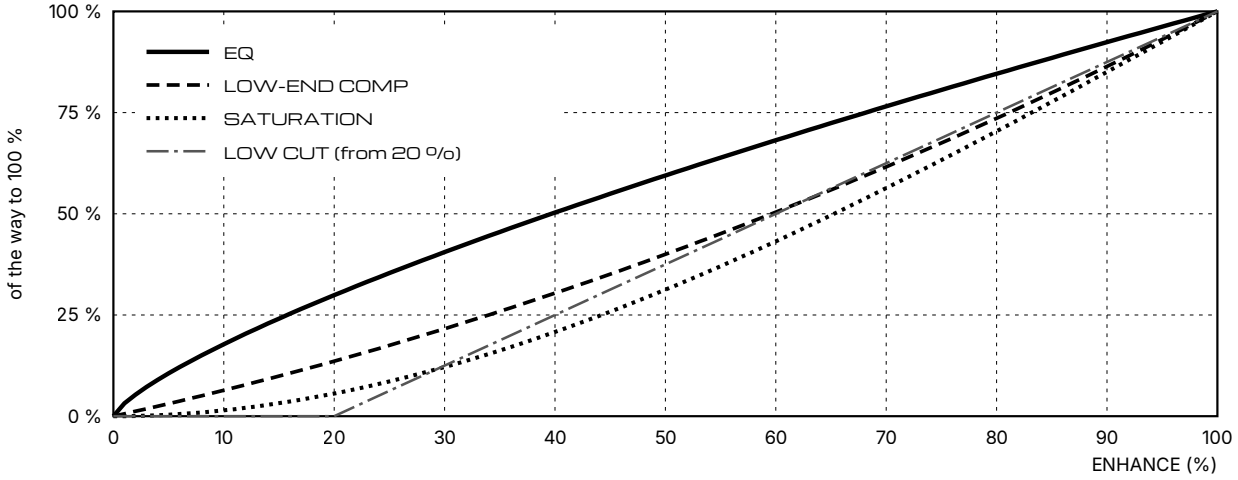


FIGURE 8 How far each part has gone towards its 100 % setting as ENHANCE turns. At 50 % the EQ is about 60 % of the way, the compressor about 40 % and the saturation about 30 %. Over the first 3 % of the knob the whole chain fades in from nothing.

At **0 %** the plugin does nothing at all: the output is the input, bit for bit, delayed by the latency. Over the first 3 % the whole chain fades in, so there's never a jump. Around **30 to 60 %** is a typical "make the DI sound finished" setting; **100 %** is a lot of everything.

Controls

ENHANCER: STYLE, ENHANCE and DRIVE

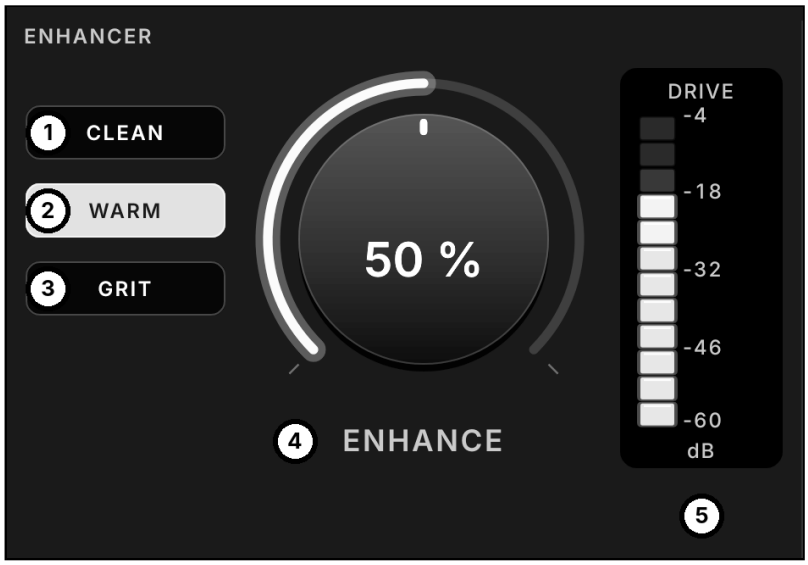


FIGURE 9 The ENHANCER group: the STYLE buttons 1 CLEAN, 2 WARM (chosen) and 3 GRIT, 4 the ENHANCE knob (here at 50 %) and 5 the DRIVE meter (see *Displays*).

Control	Range	Default	What it does
ENHANCE	0 to 100 % in 1 % steps	50 %	How much of everything: compression, saturation and EQ.
STYLE	CLEAN, WARM, GRIT	WARM	The path ENHANCE takes: the EQ's shape, how much compression and what kind of saturation.

ENHANCE

ENHANCE is the one knob. Turn it up and the low end gets even and solid, the bass gets harmonics, and the tone moves towards the style's shape, all at once. The lit ring around the knob shows how far it's turned, and the setting is written in its middle. To set an exact amount, right-click it and type the number.

Changes glide over about 60 ms, so you can move the knob while the bass plays, and automate it, without clicks.

A good way to set it: start at 0 %, play the busiest part of the song **in the mix**, and turn up until the bass sits steadily and you can follow the line on small speakers. Then go back a little. Because AUTO GAIN keeps the level, you won't be fooled into thinking "louder is better".

STYLE

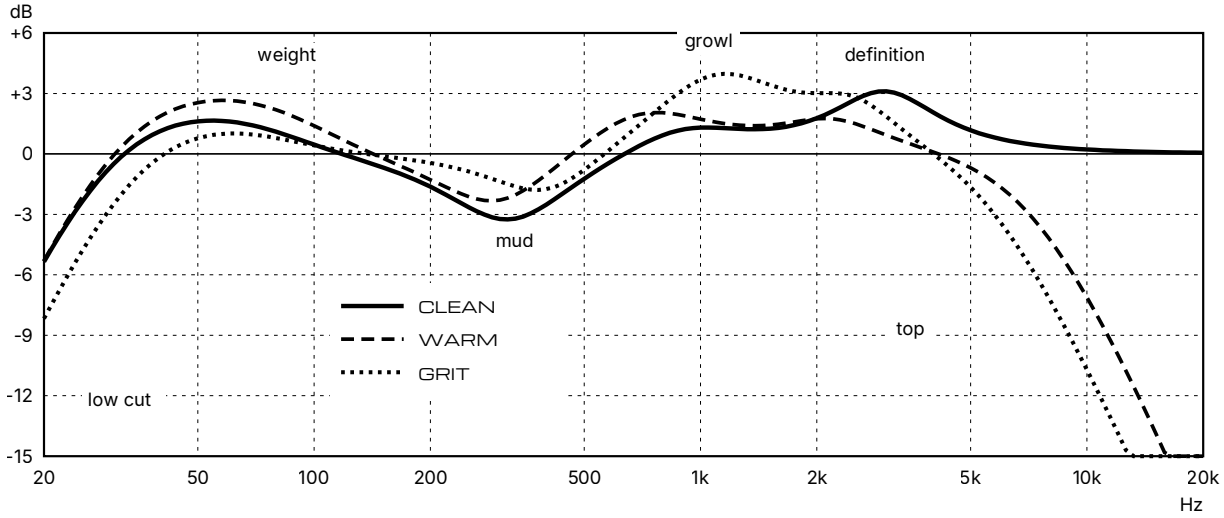


FIGURE 10 The EQ of each style at ENHANCE 100 %, drawn from the plugin's own filters (before AUTO GAIN). The names show where each move works; the bells overlap, so the curve's peaks are a little different from the table's figures.

CLEAN is a modern, hi-fi bass. It has the most compression of the three and the least saturation (only a touch of harmonics), a firm low shelf at 85 Hz, the mud cut at 320 Hz, a little growl at 900 Hz and a clear string and pick at 3 kHz. It doesn't cut the top. Choose it for pop, funk, modern rock and metal that will go through an amp simulator later, and whenever the player's tone is already right and you only want it more even.

WARM is a round, vintage bass: the most weight (a low shelf at 100 Hz), tube-like harmonics (even and odd) on the whole bass, growl at 700 Hz and a softer top (a low-pass that comes down to 7 kHz at 100 %). Think flatwound strings and a valve DI. It's the default, and suits soul, reggae, R&B, ballads and anything that should feel warm rather than bright.

GRIT is a driven bass that cuts through. Only what is above 220 Hz is driven, and driven hard, for growl, while the lows underneath stay clean (see below). Growl at 1.1 kHz, the fizz tamed by a low-pass that comes down to 5.5 kHz. Choose it for rock and metal, and to make a bass heard on small speakers.

What ENHANCE does at 100 %, per style (it moves there in proportion, as drawn in *How the parts move together*):

	CLEAN	WARM	GRIT
Low cut (12 dB/oct, from 20 % ENHANCE)	30 Hz	32 Hz	35 Hz
Low-end compression	75 %	65 %	85 %
Weight (low shelf)	+2.5 dB at 85 Hz	+3.5 dB at 100 Hz	+2.0 dB at 80 Hz
Mud (bell)	−3.5 dB at 320 Hz	−3.0 dB at 300 Hz	−2.5 dB at 400 Hz
Growl (bell)	+1.5 dB at 900 Hz	+2.5 dB at 700 Hz	+4.0 dB at 1.1 kHz
Definition (bell)	+3.0 dB at 3 kHz	+1.5 dB at 2.2 kHz	+2.0 dB at 2.5 kHz
Top (low-pass)	none	7 kHz	5.5 kHz
Saturation	light, whole bass	tube-like, whole bass	hard, above 220 Hz only

Switching styles is smooth. A STYLE change crossfades over 40 ms: both styles' saturation run during the change, and the EQ moves from one shape to the other. You can switch while the bass plays, or automate the switch, without a click.

The EQ as ENHANCE turns

Each EQ move grows with ENHANCE. The TONE display draws the curve for the current setting and names each move with its amount, so you always see what's happening.

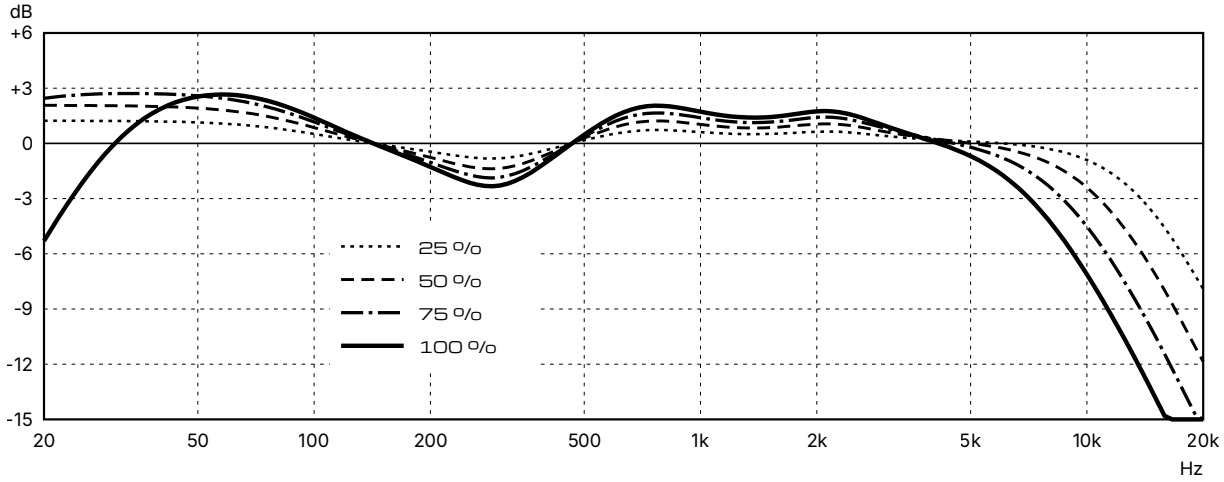


FIGURE 11 WARM's EQ at ENHANCE 25, 50, 75 and 100 %. The low cut only appears from 20 %, and here only shows at the left edge from 75 %.

At the default (WARM, 50 %) the moves read WEIGHT +2.1 dB, MUD −1.8 dB, GROWL +1.5 dB and DEFINITION +0.9 dB, as in the screenshot in *The panel at a glance*.

What the compressor does

The low-end compressor is the one from VEIRA Sub Control, set up for a bass. Three things make it different from an ordinary compressor:

- **It listens to the lows only.** It measures the bass below about 150 Hz (a 24 dB per octave low-pass, both channels linked), where the uneven notes are heard.
- **It measures against the bass's own level.** It keeps a long-term average of how loud the lows usually are while notes play (over about 2.5 seconds), and compares each note with that. So the same setting does the same thing on a quiet DI and a hot one: you never set a threshold.
- **It acts on the lows only.** The gain is applied by a steep low shelf at 180 Hz, so the notes' fundamentals are evened out while the attack and the strings' top pass as played.

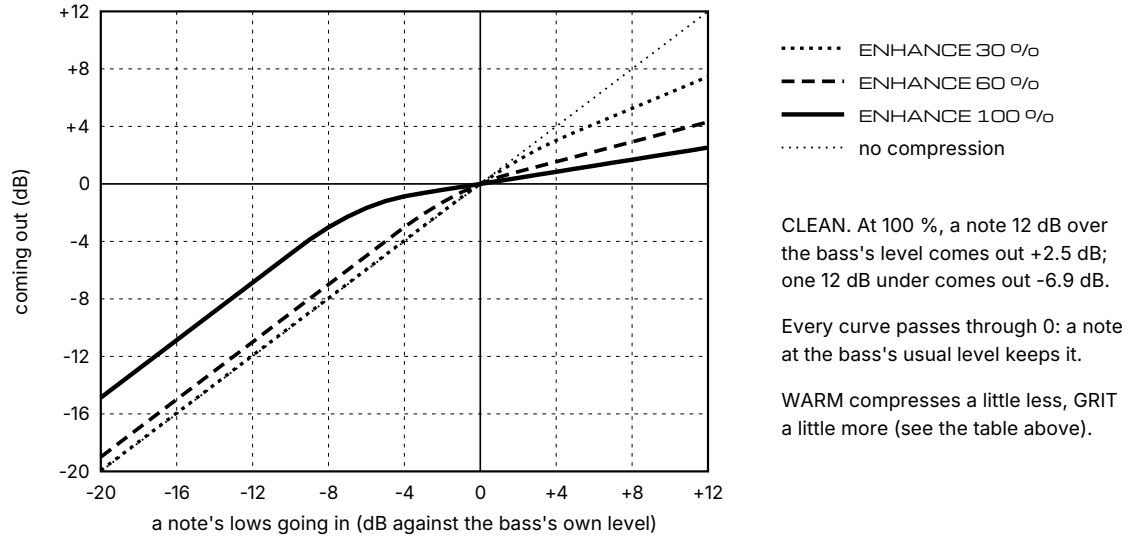


FIGURE 12 The compressor's curve on CLEAN, from the plugin's formulas: how loud a note's lows come out against how loud they go in, both measured against the bass's own level (the gain moves down in 20 ms and up in 120 ms, so real notes follow it with a short delay).

As ENHANCE rises, the threshold falls from 4 dB above the bass's level towards 10 dB under it, and the ratio rises towards 6:1, with a soft 6 dB knee. At 100 % the threshold and ratio are 6.5 dB under and 4.75:1 on CLEAN, 5.1 dB under and 4.25:1 on WARM, and 7.9 dB under and 5.25:1 on GRIT. **Makeup** gives back what a note at the usual level loses, so loud notes come down and quiet ones come up, and the average level stays where it was.

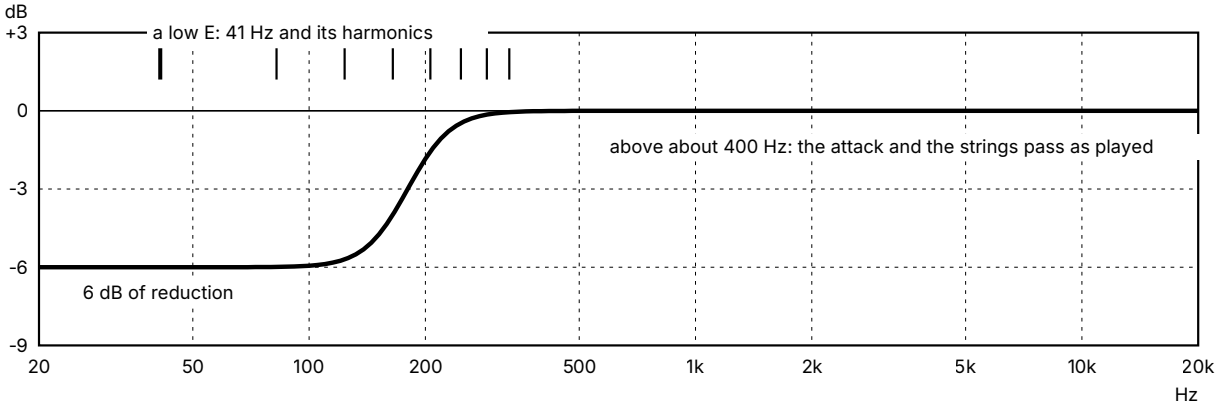


FIGURE 13 Where the compressor acts: its shelf at 6 dB of reduction, drawn from the plugin's filter. A low E's fundamental and first harmonics are turned down; above a few hundred hertz the note passes untouched.

How much evener does it get? We measure it as the spread of the lows' level from one 50 ms moment to the next: on a finger-played line it goes from 3.2 dB to about 2.3 to 2.4 dB at 100 %, and the factory presets bring it from about 3.1 dB to between 1.5 and 3.0 dB, more as ENHANCE rises.

> **Note:** The compressor has **no lookahead**, so it adds no latency of its own. The price is that a note's first few milliseconds pass at the gain the lows had just before it: after a quiet passage, the first note's attack comes through a little louder, as with any compressor without lookahead. The REDUCTION meter shows the reduction as it happens.

What the saturation does

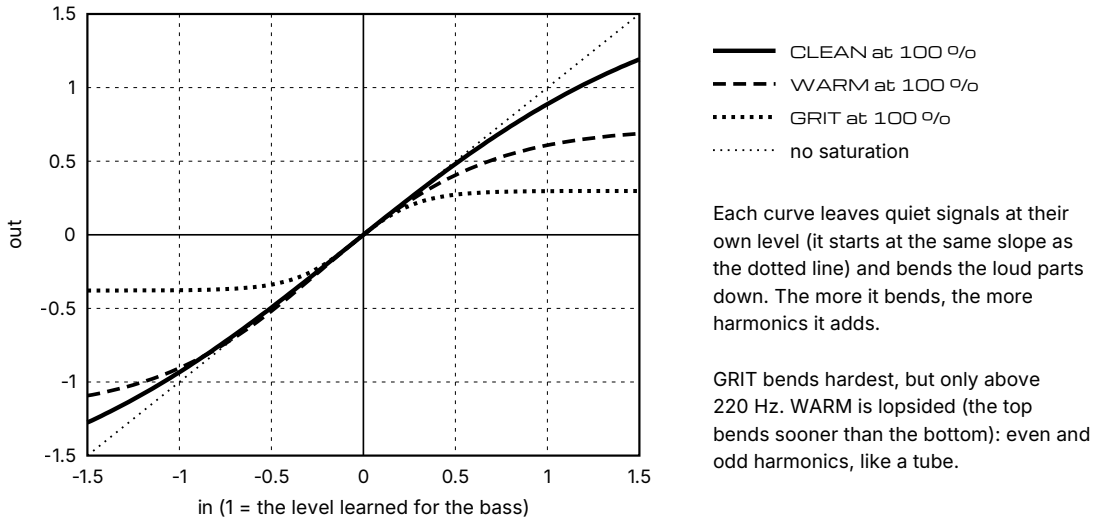


FIGURE 14 The saturation curve of each style at ENHANCE 100 %, drawn from the plugin's formula (before GRIT's own makeup, which gives back the level the curve takes from the driven band).

The saturation is a soft curve with a little asymmetry (the lopsided shape adds even harmonics as well as odd ones, like a valve). It's driven against the bass's own level, so it always lands at the same place on the curve for a typical note: a hot DI and one 26 dB quieter saturate alike. Within a performance, harder notes still saturate more than soft ones, as with a real amp.

- CLEAN adds only a touch of harmonics, mostly odd ones.
- WARM adds even and odd harmonics on the whole bass, and keeps adding more up to 100 %.
- GRIT drives hard, but only what is above 220 Hz.

The saturation never touches the bass itself through extra filters: only what the curve **adds** is computed at a higher sample rate (four times the session rate at 44.1 and 48 kHz, twice at 88.2 and 96 kHz) and mixed back in. That's why nothing **aliases** (no harsh, out-of-tune tones folding back down from the harmonics), and why the plugin needs its 64 samples of latency.

GRIT's clean low end

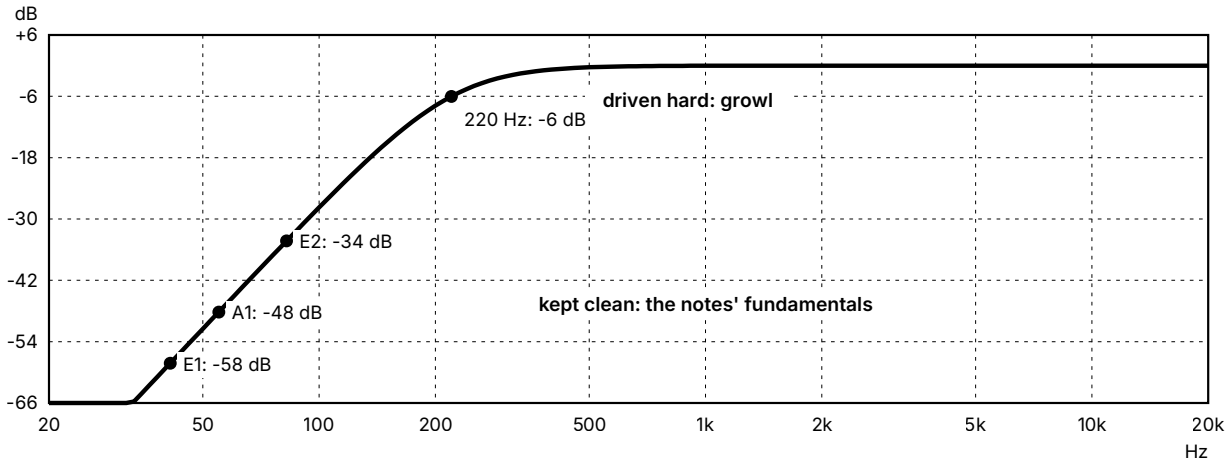


FIGURE 15 What GRIT drives: the signal through a 24 dB per octave high-pass at 220 Hz, drawn from the plugin's filter. A low E's fundamental reaches the drive 58 dB down; its harmonics stay 66 dB under the note.

Engineers often record a bass twice, through a DI and through a driven amp, and blend the two: the clean DI holds the low end, the amp brings the growl. GRIT does the same inside one plugin. It splits off what is above 220 Hz (a steep 24 dB per octave high-pass), drives only that, and adds it back over the clean bass. A low E's harmonics from the drive stay 66 dB down, so the bottom stays tight and in tune while the mids growl. What the curve takes off the driven band's level is given back, so the mids don't thin out as you turn up.

> **Tip:** GRIT works on what is above 220 Hz, so it reacts to how bright the bass is. On a bright pick or slap tone, or a synth, keep ENHANCE moderate (25 to 45 %) or blend with MIX; on a darker finger-style bass you can go further.

OUTPUT: MIX and OUTPUT

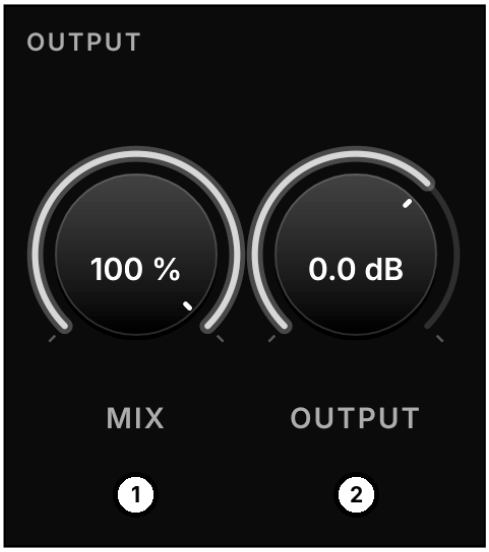


FIGURE 16 1 MIX (here 100 %) and 2 OUTPUT (here 0.0 dB).

Control	Range	Default	What it does
MIX	0 to 100 % in 1 % steps	100 %	The enhanced bass against the dry DI, in time with it.
OUTPUT	−24 to +12 dB in 0.1 dB steps	0.0 dB	The final level.

MIX blends the enhanced bass with the dry DI. The dry signal is delayed by exactly the same 64 samples as the enhanced one, so the two stay in time and add up cleanly, without the hollow sound of a delayed copy. At 0 % the output is the input, bit for bit.

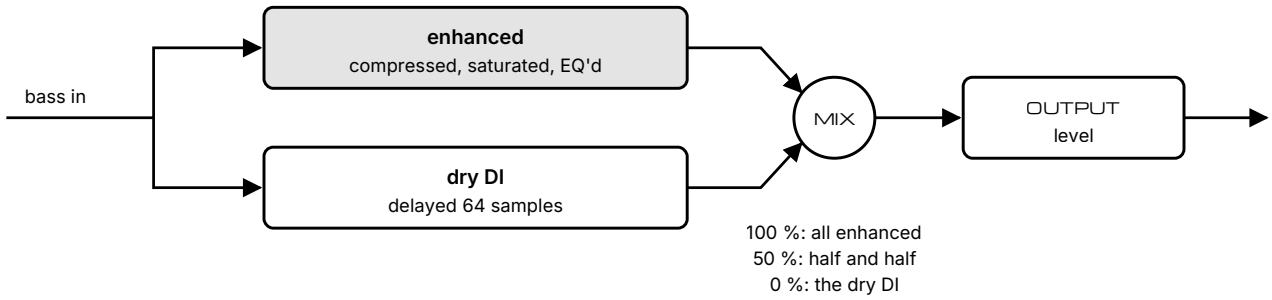


FIGURE 17 MIX as parallel processing. Heavy settings blended under the dry DI are a classic way to get control and thickness while keeping the player's attack.

Parallel processing. Setting ENHANCE high and MIX between 30 and 50 % gives you the weight, the evenness and the harmonics of a heavy setting, while the dry DI keeps the player's original attack and dynamics. Many factory presets work this way (*Slap Parallel Snap*, *Pop Parallel Polish*, *Parallel Warmth*, *Parallel Fuzz*). At 50 %, about half of the lows' evening and half of the EQ moves survive.

OUTPUT sets the level leaving the plugin, after MIX. AUTO GAIN already keeps the loudness close to the input's, so you'll mostly use OUTPUT for small trims (the factory presets use −0.8 to +0.3 dB), or to set the level for the next plugin.

Displays

The TONE display

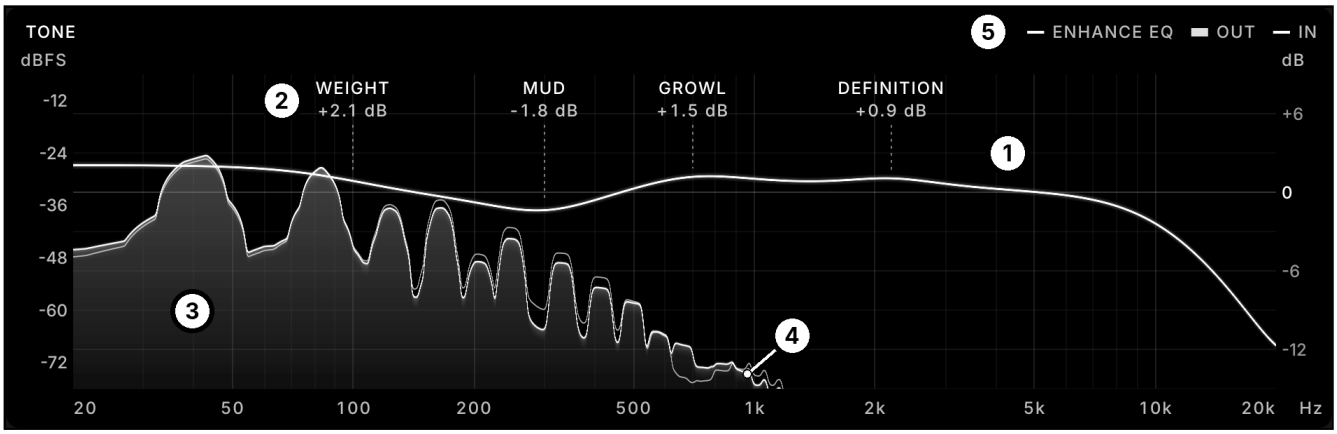


FIGURE 18 1 The EQ curve, 2 the four moves with their amounts, 3 the output's spectrum (amber on screen, filled), 4 the input's spectrum (a thin grey line) and 5 the legend.

The TONE display shows the bass from 20 Hz to 20 kHz, the low notes on the left and the highs on the right, on a musical scale (each octave the same width).

- **The EQ curve** 1 (the light line, ENHANCE EQ in the legend) is the shape the EQ has at the current ENHANCE and STYLE. Read it on the **dB scale at the right**: 0 is no change, +6 a 6 dB boost. It changes as you turn ENHANCE or switch STYLE. It's the EQ before AUTO GAIN, and doesn't include the compressor or the saturation.
- **The four moves** 2 name where the EQ works (WEIGHT, MUD, GROWL, DEFINITION), each with a dotted line down to the curve and its amount right now, for example MUD -1.8 dB. A move that's at zero (at ENHANCE 0 %) is drawn dimmed.
- **The spectrum** shows the bass as it plays, read on the **dBFS scale at the left**: the output 3 as a filled shape (amber on screen) and the input 4 as a thin grey line. Without colour, tell them apart by their shape: the output is the **filled** area with a bright edge, the input only an outline. Where the outline shows above the fill, the plugin took level away there; where the fill rises above it, the plugin added.
- **The legend** 5 names the three lines.

Hover over the display for a read-out of the EQ at any frequency, for example *At 320 Hz ENHANCE's EQ changes the level by −1.8 dB (before AUTO GAIN)*.

What to look for:

- **The low notes' peaks.** In the left third of the display each note of the line draws a hump. With a busy line the humps of an uneven DI jump up and down; as you raise ENHANCE, the output's humps settle into a steadier row.
- **The harmonics.** Above 200 Hz, the saturation's harmonics add level between the bass's own harmonics, more as ENHANCE rises and most with WARM and GRIT: look for the fill rising above the input's outline there. At moderate settings the difference is small; trust your ears.
- **The top.** On WARM and GRIT, the curve bends down on the right: the fizz and fret noise get softer.

The LOW-END COMP reduction meter



FIGURE 19 The LOW-END COMP meter, captioned REDUCTION: 1 the number, 2 the bar and 3 its scale, from 0 dB (right) to 18 dB (left).

The meter shows how much the compressor takes off the low end right now, in dB.

- 2 **The bar** (red on screen; in print, the lighter block) grows from the right-hand end, 0 (resting), towards the left as the compressor turns the lows down. A small white marker sits at its tip.
- 3 **The scale** runs from 0 at the right to -18 at the left, evenly spaced in dB, with marks at -3, -6 and -12.
- 1 **The number** shows the most reduction of the last quarter-second, for example -1.6 dB; it turns red on screen while there is reduction, and reads 0.0 at rest. Because it holds the peak, it usually reads a little more than the bar.

The bar moves exactly like the needle of an analog VU meter (it reaches 99 % of a change in 300 ms, with a slight overshoot), so it's easy to follow by eye.

- On a steady line at a moderate setting, the bar **swings a few dB** with the loudest notes and shrinks back between them. That's the low end being evened out.
- Because makeup gives back what a typical note loses, **an empty bar doesn't mean the plugin is idle**: quiet notes are being lifted.
- If the bar stays long most of the time, reaching far to the left, the bass is very uneven or ENHANCE is high; check by ear that the low notes still have life.
- After you start playback, the compressor takes about a second and a half to learn the bass's level before it settles.

The DRIVE meter

The DRIVE meter (see the *ENHANCER* figure, 5) is a column of twelve lamps showing **how hard the saturation works**: how loud what it changes is (the harmonics added and the peaks rounded) compared with the bass, from −60 dB at the bottom to −4 dB at the top. The lamps are green on screen for the lower seven, amber for the next three and red for the top two; without colour, read the height of the column.

As a guide, from the factory presets' measurements: around **−60 to −40 dB** is a touch (CLEAN on a jazz bass), **−20 dB** clearly warm, **−10 dB** driven (the Creative FX presets). The meter falls back over about 0.3 seconds.

Meter bridge (IN | OUT)

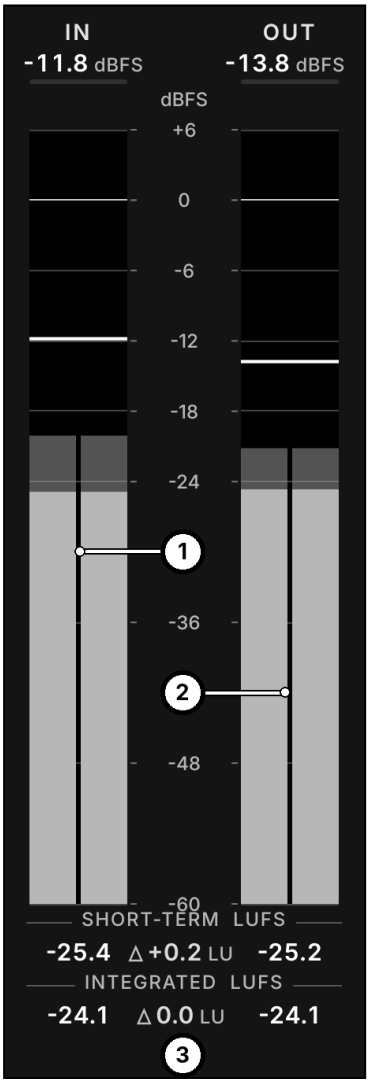


FIGURE 20 The meter bridge: 1 input and 2 output level, 3 short-term and integrated loudness with the OUT − IN difference.

VEIRA Bass DI Enhancer's meter bridge is the standard one, measured on the plugin's input and output. Thanks to AUTO GAIN the Δ readings stay close to 0 LU as you turn ENHANCE: a useful check that you're comparing tone, not level. On a mono track, both bars of each meter show the same mono signal.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA Bass DI Enhancer 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.

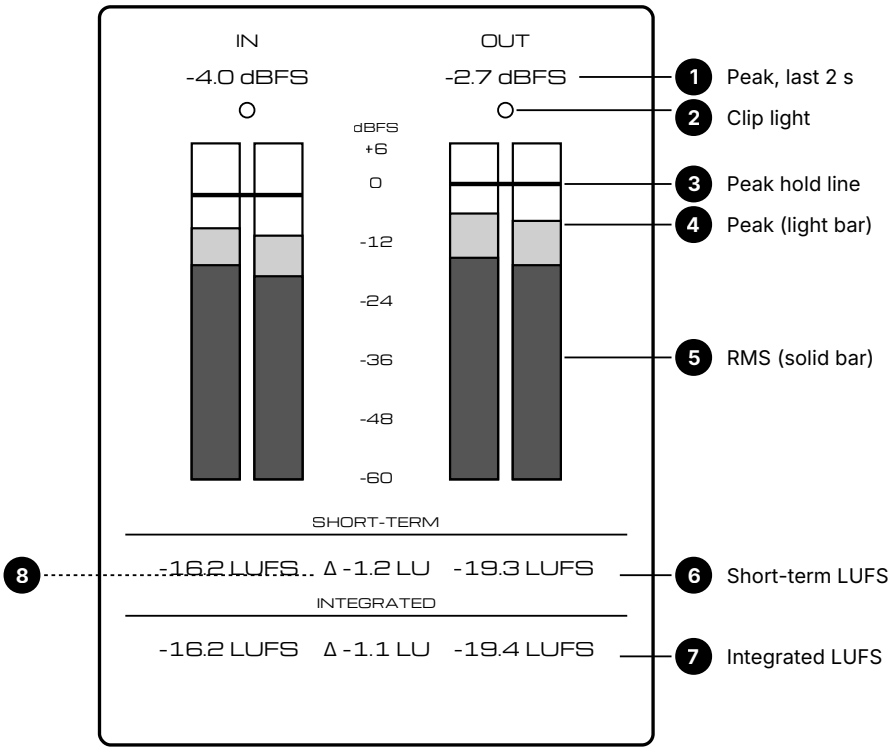


FIGURE 21 The meter bridge, left and right channel bars for input and output, with loudness below.

- 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 Bass DI Enhancer 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.

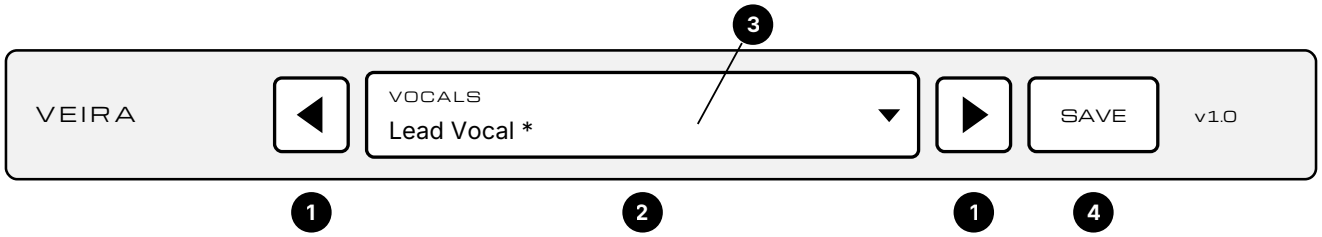
Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Presets

VEIRA Bass DI Enhancer comes with **69 factory presets** in 14 folders. Each one is a starting point made for a real job. Load one close to what you need, then adjust the first control its note mentions.

The preset browser

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



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

FIGURE 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 Bass DI Enhancer 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 Bass DI Enhancer/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Bass DI Enhancer\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
Finger	Finger Clean Polish, Finger Warm Round, Finger Even Low End, Finger Vintage Thump, Finger Growl, Finger Gentle Touch
Pick	Pick Clean Attack, Pick Warm Body, Pick Click Tamer, Pick Punk Drive, Pick Bright Modern
Slap	Slap Modern Clean, Slap Tight Thumb, Slap Warm Thumb, Slap Parallel Snap, Slap Light Polish
Synth Bass	Synth Clean Polish, Synth Warm Analog, Synth Thick Blend, Synth Even Sub, Synth Soft Warmth
Rock	Classic Rock Bass, Hard Rock Drive, Indie Rock Grit, Garage Fuzz Blend, Rock Ballad Warmth
Funk & Soul	Funk Tight Clean, Motown Round, Soul Warm Pocket, Funk Even Snap, Disco Bright Pocket
Pop	Pop Clean Modern, Pop Solid Low End, Pop Warm Ballad, Pop Small Speaker, Pop Parallel Polish
Metal	Metal Tight Grit, Metal Clank Clean, Metal Drive Blend, Djent Tight Low, Doom Warm Fuzz
Hip-Hop & R&B	R&B Warm Smooth, Hip-Hop Live Bass, Neo Soul Round, Trap Sub Control, Boom Bap Thump
Reggae & Dub	Reggae Deep Round, Dub Heavy Weight, Roots Clean Low, Ska Bright Pocket, Dub Sub Blend
Jazz & Upright	Upright Natural, Upright Warm Wood, Upright Even Walk, Rockabilly Slap Grit, Jazz Electric Clean, Fretless Singing Warm
Mix Fix	Light Touch Clean, Gentle Polish, Tame The Boom, Even Out Dynamics, Small Speaker Bite, Parallel Warmth
Creative FX	Full Warm Saturation, Full Grit, Everything Clean, Parallel Fuzz, Dark Lo-Fi Bass

Most folders are sorted by how the bass is played or by style of music, and two more are for problems and effects:

- **By how the bass is played**: *Finger*, *Pick*, *Slap*, *Synth Bass* and *Jazz & Upright*. Each preset suits that kind of attack: pick and slap presets, for example, keep GRIT moderate because it reacts to a bright attack.
- **By style of music**: *Rock*, *Funk & Soul*, *Pop*, *Metal*, *Hip-Hop & R&B* and *Reggae & Dub*, each with a clean, a warm and a driven or blended idea.

- **Mix Fix** is for a bass that has a problem in the mix: boomy (*Tame The Boom*), uneven (*Even Out Dynamics*), lost on small speakers (*Small Speaker Bite*), or that only needs a light touch.
- **Creative FX** goes all the way: full saturation, full grit, fuzz layers and a dark lo-fi bass.

Each preset's note (in the preset menu) says which control to move first.

> **Levels.** The compressor and the saturation measure the bass against its own level, so the presets behave the same on a quiet DI and a hot one; you don't need to gain-stage into the plugin. Every preset was measured on DI lines played with fingers, a pick and slap, a synth bass and an upright, and on the material it's made for it stays within about half a dB of the input's loudness (−0.2 to +0.6 dB). Real basses differ, so trim OUTPUT by ear if a preset jumps out of the mix.

Recipes

Step-by-step starting points. In each, listen in the mix as well as solo, and compare with the plugin bypassed: the meter bridge's Δ reading tells you the levels match.

Finish a finger-played DI

1. Insert VEIRA Bass DI Enhancer first on the bass track and load **Finger ▸ Finger Clean Polish** for a modern tone, or **Finger ▸ Finger Warm Round** for a rounder one.
2. Play the busiest part of the song. If some notes still jump out, raise ENHANCE to 50 to 60 %, or load **Finger ▸ Finger Even Low End**.
3. Watch the LOW-END COMP meter: its bar should swing a few dB with the loudest notes, not stay far out to the left.
4. If the bass needs more growl to be heard over guitars, try **Finger ▸ Finger Growl**.

Even out an uneven player

1. Load **Mix Fix ▸ Tame The Boom** (CLEAN, 70 %).
2. Raise ENHANCE until the low notes sit at one level; the TONE display's humps settle into a steadier row.
3. If the line starts to feel squashed, load **Mix Fix ▸ Even Out Dynamics** instead: strong control blended half and half with the dry DI, so the player's dynamics come through on top. Set MIX for how even.

Make the bass heard on phones and laptops

1. Load **Pop ▸ Pop Small Speaker** or **Mix Fix ▸ Small Speaker Bite** (both GRIT).
2. Listen on small speakers, or on one earbud at low volume. Raise ENHANCE until you can follow the bass line.
3. Check on full-range speakers that the low end is still clean: GRIT leaves the notes' fundamentals untouched, so it should be.
4. On a bright pick or slap tone, keep ENHANCE under about 45 % or lower MIX.

Rock and metal under heavy guitars

1. Load **Rock ▸ Hard Rock Drive**, or **Metal ▸ Metal Tight Grit** for a scooped, driven tone.
2. With a pick, 40 to 50 % is usually enough. Raise ENHANCE for more bite.
3. If the bass will go into an amp simulator afterwards, use **Metal ▸ Metal Clank Clean** instead: a clean, even, clanky signal for the amp to work on.

A synth bass or an 808-style sub

1. Load **Synth Bass ▸ Synth Clean Polish** to tighten a synth bass, **Synth Warm Analog** for analog-style warmth, or **Hip-Hop & R&B ▸ Trap Sub Control** to even a sub under the kick.
2. Raise ENHANCE for a more even sub; lower MIX to keep more of the patch's own character.

3. Watch the OUT peak on the meter bridge: a low cut turns the phase of a synth's waveform and can lift its peaks a little (the synth presets measured +0.9 to +1.4 dB), even when the loudness is unchanged.

An upright bass

1. Load **Jazz & Upright ▸ Upright Natural** (CLEAN, 30 %): it evens the pickup gently and clears the mud, keeping the wood.
2. If the notes still jump, raise ENHANCE, or load **Upright Even Walk**, which blends in more control with MIX at 70 %.
3. For rockabilly, **Rockabilly Slap Grit** adds a little grit. Raise ENHANCE carefully and watch the OUT peak: on an upright, GRIT raises the body thump's peaks.

Specifications

Type	Bass enhancer: low-end compression, saturation and EQ on one knob, with automatic gain
Channels	Mono and stereo (stereo channels are processed with a linked compressor)
Latency	64 samples at 44.1 to 96 kHz (1.3 ms at 48 kHz); none at 176.4 and 192 kHz; reported to the host for delay compensation
Transparency	ENHANCE 0 %, MIX 0 %, and bypass: the output is the input delayed by the latency, bit for bit
Level	AUTO GAIN, always on. Measured from 25 to 100 % on all three styles: within 1.3 dB of the input's loudness (finger-style up to about 0.9 dB louder, slap up to 0.75 dB quieter at 100 %); factory presets −0.2 to +0.6 dB
Level independence	The compressor and the saturation measure the bass against its own level: a DI 26 dB quieter comes out the same, 26 dB quieter
ENHANCE	0 to 100 % in 1 % steps (default 50 %); glides over about 60 ms
STYLE	CLEAN, WARM, GRIT (default WARM); a change crossfades over 40 ms
MIX	0 to 100 % in 1 % steps (default 100 %); the dry signal is delayed to stay in time
OUTPUT	−24 to +12 dB in 0.1 dB steps (default 0.0 dB)
Low cut	12 dB/oct high-pass, out (1 Hz) up to 20 % ENHANCE, then up to 30 Hz (CLEAN), 32 Hz (WARM) or 35 Hz (GRIT) at 100 %
Low-end compressor	Detects below 150 Hz (24 dB/oct, linked); threshold from 4 dB above to 10 dB under the bass's long-term level, ratio up to 6:1 (6 dB knee) as the amount rises; 20 ms down, 120 ms up; applied by a 4th-order low shelf at 180 Hz; makeup for a note at the usual level; no lookahead
Saturation	Soft asymmetric curve driven against the bass's own level; what it adds computed at 4x (2x at 88.2/96 kHz), linear-phase; GRIT drives only above 220 Hz (24 dB/oct)
EQ	Weight (low shelf), mud, growl and definition (bells), top (low-pass, WARM and GRIT); flat and bypassed at 0 %
Displays	TONE (20 Hz–20 kHz: the EQ, ±dB at the right; the input and output spectrum, dBFS at the left; hover read-out); LOW-END COMP REDUCTION bar (0 to 18 dB, VU movement); DRIVE (−60 to −4 dB, 12 lamps)
Metering	IN and OUT meters (sample peak, RMS); short-term and integrated loudness per ITU-R BS.1770-4 / EBU R 128
Presets	69 factory presets in 14 folders, plus your own
Window	1240 × 780 points; resizable from 75 % to 200 %, saved with the session
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vbdi

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 Bass DI Enhancer 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 ENHANCE and hardly hear a difference. That's AUTO GAIN doing its job: the level doesn't rise, so the change is in the tone. Listen to the low notes' evenness and to the bass on small speakers, and compare with bypass at matched level. CLEAN is the subtlest style; its useful range is about 40 to 80 %.

The first note after a pause comes through a little loud. The compressor has no lookahead, so a note's first milliseconds pass at the gain the lows had just before it. After a quiet passage that gain is higher (quiet notes are being lifted), so the first attack can be a little louder. Lower ENHANCE, or blend with MIX.

The output peaks went up, although the loudness didn't. Two things can raise peaks without raising loudness. On a **synth bass**, the low cut turns the phase of the waveform's fundamental against its harmonics, which can lift its peak (the low cut stays out up to 20 % ENHANCE for this reason). With GRIT, the drive can raise the peaks of a dark finger-style bass and especially an **upright's body thump**. Watch the OUT peak on the meter bridge and lower OUTPUT, ENHANCE or MIX if it matters.

GRIT makes my bass thinner. On a very bright bass (a pick or slap tone, a synth), GRIT's band above 220 Hz is strong to begin with, so the drive changes it most. Lower ENHANCE to 25 to 45 %, blend with MIX, or try CLEAN or WARM.

It sounds woolly or too dark. WARM and GRIT soften the top more as ENHANCE rises. Lower ENHANCE, or switch to CLEAN, which doesn't cut the top.

Can I use it while recording, or on a live bass? Yes. The latency is only 64 samples (1.3 ms at 48 kHz), small enough to play through. Your DAW also compensates for it on playback.

Where should it go in my chain? First, straight after the recorded DI, before an amp simulator or other effects: that's the signal it was designed for. You can still add your own EQ or compressor after it.

Does it work on a bass amp's microphone, or a mixed bass bus? Yes on an amp's microphone or an upright's pickup; it works on any single bass. On a bass bus with several layers, it treats them as one bass.

Do my sessions keep my settings? Yes. Every control, the selected preset and the window size are saved with your session (drag the window's bottom-right corner to resize it, from 75 % to 200 %), and every control can be automated.

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



VEIRA Bass DI Enhancer · User Manual · Version 0.2.1

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

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