VEIRA

MASTERING EXCITER

VEIRA Mastering Exciter

User Manual

A four-band harmonic exciter for mastering. Split the master into LOW, LOW MID, HIGH MID and HIGH, give each band its own colour (TUBE, TAPE, TRANSISTOR or EXACT) and its own DRIVE, and hear exactly what each one adds, at the level it came in.



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Welcome

Thank you for choosing **VEIRA Mastering Exciter**. An exciter adds **harmonics**, quiet copies of each note at two, three, four and five times its pitch, to bring out what a master already has: weight under the kick, body in the vocal, presence in the guitars, air on the cymbals. Unlike an EQ, which can only turn up what is there, an exciter makes new tones from the music itself, so a dull master gets real shine and a thin one real weight, rather than more hiss or more boom.

VEIRA Mastering Exciter splits the master into four bands, **LOW**, **LOW MID**, **HIGH MID** and **HIGH**, and gives each band **its own colour** and **its own** DRIVE:

- TUBE: a warm triode curve, mostly the 2nd harmonic (an octave up). Warmth and weight; it rounds the peaks softly.
- TAPE: a soft, nearly symmetric curve, mostly the 3rd harmonic with a hint of the 2nd. Density and glue.
- TRANS (TRANSISTOR): a firmer knee, with only odd harmonics reaching higher (3rd, 5th, 7th). Edge, bite and presence.
- EXACT: the 2nd, 3rd and 4th harmonics made exactly, at the same ratio at any level. Clean shine and air, with no peak rounded.

Every band has ON and SOLO. DELTA plays only what the exciter adds, so you can set each band by ear. MIX blends with the dry signal, AUTO GAIN keeps the loudness where it was, and OUTPUT sets the level.

What makes it different

- **A colour per band.** Tube weight on the lows, tape density on the low mids, transistor presence on the upper mids and exact air on top, all at once, each with its own amount.
- **The dry signal is never filtered.** What you hear is your master, untouched, plus what each band's colour adds. With every band off or at 0 %, or MIX at 0 %, the output is the input, bit for bit.
- **Hear what you add.** DELTA plays only the harmonics, SOLO plays one band with its colour exactly as it sits in the master.
- **The level stays put.** AUTO GAIN takes back the loudness the colour adds. Every factory mastering preset stays within 0.02 dB of the input's loudness.
- **The same on a quiet master and a loud one.** The curves are driven against each band's own long-term level, so you never have to gain-stage into the plugin.
- **58 measured presets** in 11 folders: nine for mastering by genre and job, plus Mix Bus and Stems.
- **A clean, legible face**, in a window you can scale from 75 % to 200 %.

How it differs from VEIRA Harmonic Saturator. That plugin colours a track with one character (TUBE or EXACT) made from three bands, with a knob for each harmonic, for instruments and the mix bus. VEIRA Mastering Exciter is built for the master: four bands, a colour of its own for every band, per-band SOLO and DELTA, and presets that move a master's level by a few hundredths of a dB at most.

How this manual is organised. *Getting started* and *The panel at a glance* get you running, *How an exciter works* explains the idea, *Controls* and *Displays* cover everything on the panel, and *Presets*, *Recipes*, *Specifications* and *Troubleshooting* follow.

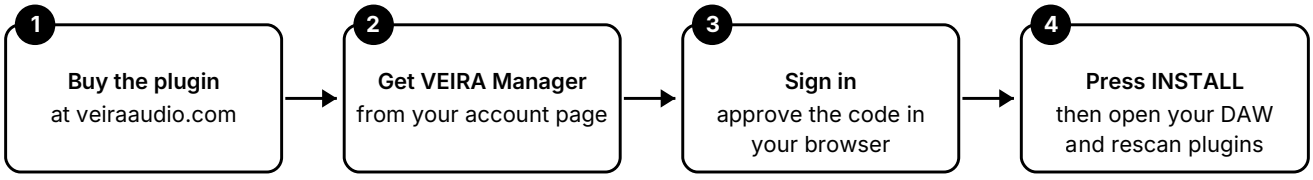
Getting started

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

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 Mastering Exciter 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.

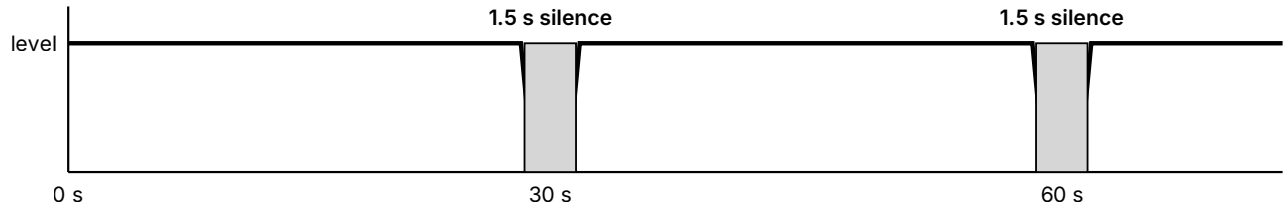


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 Mastering Exciter. 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 Mastering Exciter 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 Mastering Exciter with the factory preset *Default: Init* loaded (LOW [TUBE] 15 %, LOW MID [TAPE] 10 %, HIGH MID [TRANS] 10 %, HIGH [EXACT] 60 %) while a mix plays.

The window has three areas: the **SPECTRUM** and **HARMONICS** displays across the top, the controls underneath in five strips captioned [LOW], [LOW MID], [HIGH MID], [HIGH] and [OUTPUT], and the **meter bridge** down the right. The four band strips are identical: what you learn on one works on all four.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	SPECTRUM display	The input, the output and the colour the plugin adds, from 20 Hz to 20 kHz.
3	Split handles	Three handles: drag them to set where the four bands meet.
4	Band labels	Each band's name, colour and [DRIVE]; a band without colour is veiled.
5	Legend	Names the three lines: [COLOUR ADDED], [OUT], [IN].
6	HARMONICS display	Per band, how loud the 2nd to 5th harmonics are right now.
7	Colour buttons	[TUBE], [TAPE], [TRANS], [EXACT]: the band's colour. One set per band.
8	[DRIVE]	How much colour is made from the band. One per band.
9	[ON] and [SOLO]	The band's colour on or off; hear only this band. One pair per band.

	Part	What it does
10	OUTPUT section	MIX (excited against dry) and OUTPUT (the final level).
11	AUTO GAIN	Keeps the loudness where it was.
12	DELTA	Plays only what the colour adds.
13	Meter bridge	Input and output level and loudness.

Using the controls

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

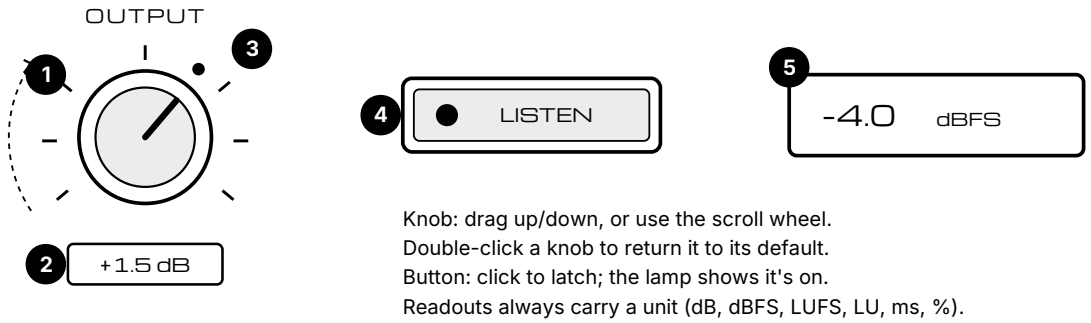


FIGURE 4 The parts you'll find on every VEIRA panel (the labels are examples).

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

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

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

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

On VEIRA Mastering Exciter'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: **15** for a DRIVE, **-0.5** for OUTPUT. Press Escape or click elsewhere to leave it unchanged.
- **Buttons** have no lamps. The colour buttons work like radio buttons, one set per band: the selected one is filled (orange on screen; in print, the solid, lighter button) and the band's other three are dark with an outline. ON, SOLO, AUTO GAIN and DELTA are switches: click to turn one on (filled) or off (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 master in four moves

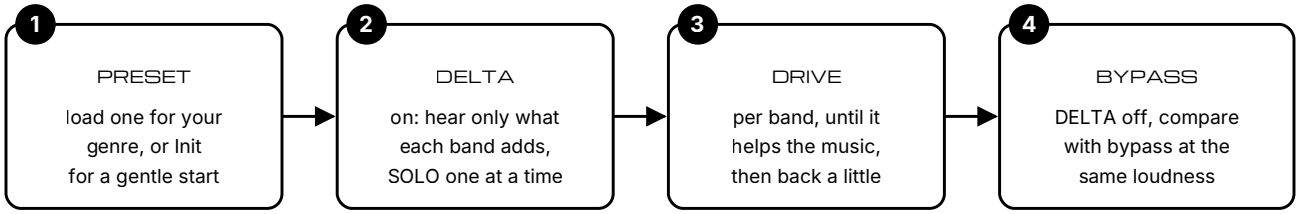


FIGURE 5 The quickest way to a good result. Put the plugin before your limiter.

How an exciter works

If you already use exciters and saturation every day, skim this chapter; it explains what harmonics are, what each colour sounds like, and what happens inside VEIRA Mastering Exciter.

Harmonics: the copies above every note

Play a note at 100 Hz on almost any instrument and you hear more than 100 Hz. There are quieter tones at 200, 300, 400, 500 Hz and up, whole-number multiples of the note: its **harmonics**. Their balance is what makes a cello sound different from a flute on the same note. An exciter adds new harmonics on top of the ones already there, and the ear hears that as colour.

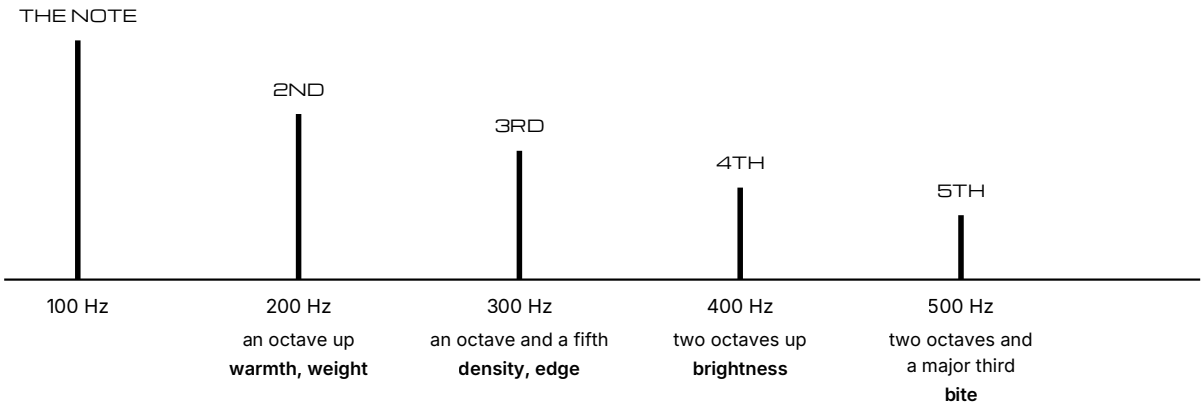


FIGURE 6 A note at 100 Hz and its first four harmonics. The heights are only an illustration.

- **The 2nd harmonic** is an octave above the note. It blends with the note so well that the ear hears it as part of it: the sound gets **warmer and fuller**, and on a low note it is what lets a bass be heard on small speakers.
- **The 3rd harmonic** is an octave and a fifth up. It adds **density and edge**. A little sounds thick and glued; a lot sounds hard.
- **The 4th** is two octaves up, another octave of the 2nd: it adds **brightness** on top of the warmth.
- **The 5th** sits two octaves and a major third up. It adds **bite**; with the 3rd it moves the colour towards a fuzz.

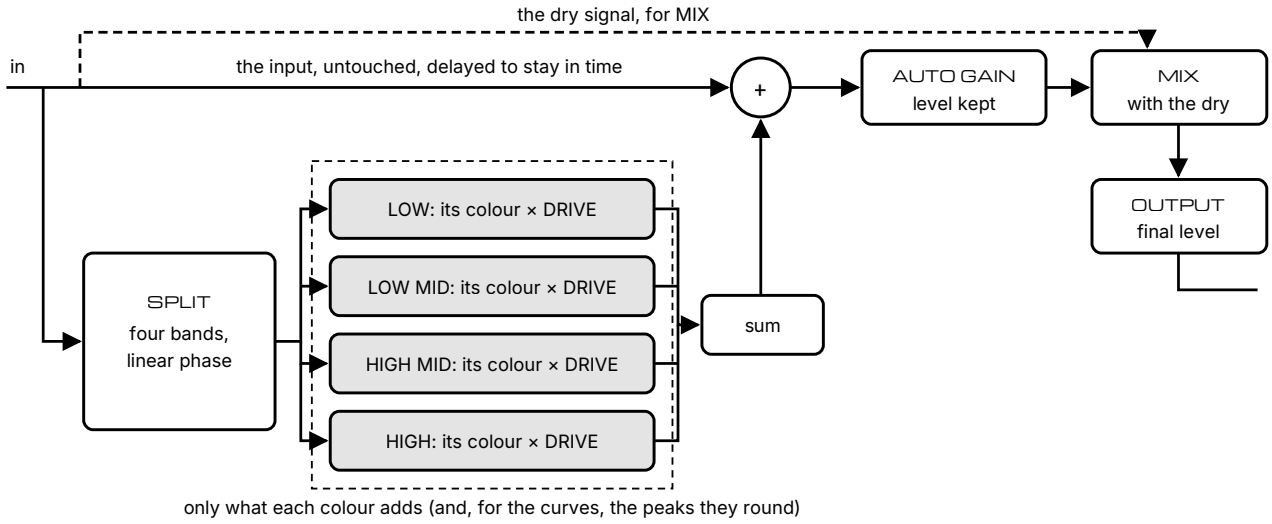
Even harmonics (2nd, 4th) generally sound sweet, odd ones (3rd, 5th) more aggressive. A **symmetric** curve, one that treats the top and bottom of a wave alike, makes only odd harmonics; a **lopsided** one, like a triode valve's, makes even ones too. On music with many notes, any curve also creates tones at the sums and differences of the notes, exactly as an analog stage does.

Why four bands

On a whole master, one saturator colours everything with the same character: warming the bass also thickens the vocal and dulls the cymbals. Splitting the master lets each part of the spectrum get what it needs. Weight under the kick is a different job from air on the cymbals, and a tube that sounds lovely on the

low end can sound woolly in the low mids. With four bands, each with its own colour and amount, you put tube weight only under 150 Hz, transistor presence only between 1.2 and 6 kHz, and exact air only above 6 kHz.

What happens inside VEIRA Mastering Exciter



The bands decide what each colour is made from. The input itself never goes through them.

FIGURE 7 The signal flow. The input goes straight through; what each band's colour adds is summed onto it. MIX blends the result with the dry signal, which is delayed by the same amount so the two stay in time.

Step by step:

1. **The input goes straight through**, only delayed by the plugin's latency. It is never filtered, so the plugin can't change its tone except by what it adds.
2. **The split** divides a copy of the signal into four bands with linear-phase filters (the ones in VEIRA Multiband Compressor). The four bands add up exactly to the input and stay in time and in phase with it.
3. **Each band makes its colour** with TUBE, TAPE, TRANS or EXACT, from its own signal, as much as its DRIVE says. Only **what the colour changes** is kept: the harmonics added and, with the three curves, the peaks rounded.
4. **The four colours are added** to the input.
5. AUTO GAIN takes back the loudness the colour adds, so turning DRIVE changes the colour, not the level.
6. MIX blends this with the dry signal, and OUTPUT sets the final level.

Why the bands are linear phase. Because every band is exactly in time and in phase with the dry signal, the peaks a curve rounds in a band land exactly on that band's peaks in the input, and SOLO plays a band exactly as it sits in the master: solo all four and you hear the input. The price is latency: 1,216 samples at 44.1 and 48 kHz (about 25 ms), reported to your DAW so it can compensate. See *Specifications*.

Controls

A band strip: colour, DRIVE, ON and SOLO

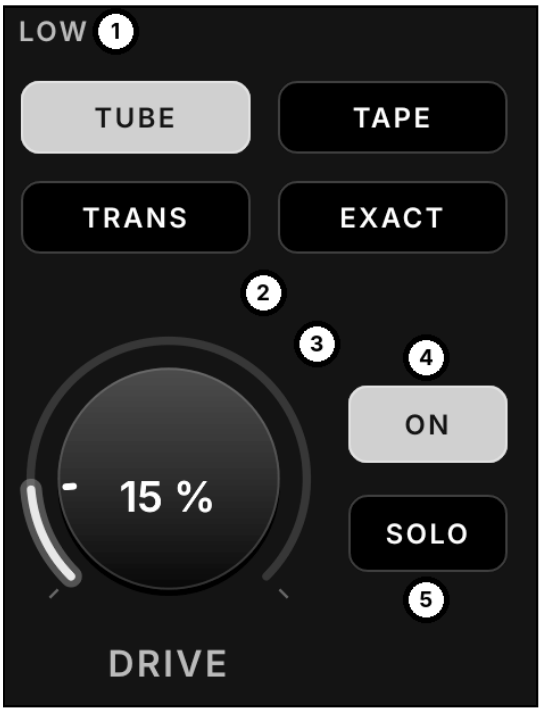


FIGURE 8 The LOW strip: 1 the band's name, 2 the four colour buttons (TUBE selected), 3 DRIVE, with its value (here 15 %) in its middle, 4 ON and 5 SOLO. LOW MID, HIGH MID and HIGH have the same controls.

Control	Range	Default (Init)	What it does
TUBE / TAPE / TRANS / EXACT	one of four	LOW TUBE, LOW MID TAPE, HIGH MID TRANS, HIGH EXACT	The band's colour.
DRIVE	0 to 100 % in 1 % steps	LOW 15 %, LOW MID 10 %, HIGH MID 10 %, HIGH 60 %	How much colour is made from the band.
ON	on, off	on	The band's colour on or off. Off, the band passes clean.
SOLO	on, off	off	Hear only this band (and any other soloed band), with its colour.

Switching is smooth. A change of colour crossfades over 30 ms, with both colours running during the change, so you can switch while the music plays without a click. ON, SOLO and DELTA fade over 10 ms, and every knob glides over about 50 ms.

At DRIVE **0 %**, or with ON off, a band makes nothing. With all four bands at 0 % or off, the output is the input, bit for bit, delayed by the latency.

DRIVE **is set against the band's own level.** The three curves are driven against **the band's long-term level** (its level averaged over about 2.5 seconds while it plays). So a quiet master and a loud one get the same colour, and you never have to gain-stage into the plugin, while within the song the louder moments still get a little more, as with hardware. EXACT works in dB against the signal, so it is level-independent by nature.

The four colours do about as much at the same DRIVE**.** TAPE and TRANS are driven so that they change music-like material as much as TUBE does at the same setting: compare colours at one DRIVE and you hear their character, not a jump in amount. On a pure tone they differ more, as the drawings below show, because each curve has its knee in a different place.

The four colours

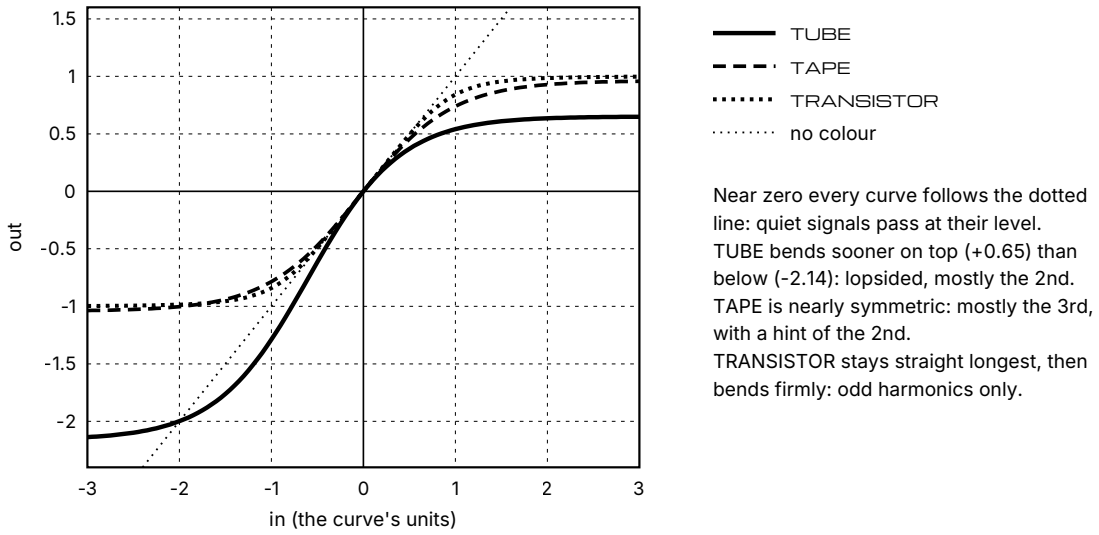


FIGURE 9 TUBE's, TAPE's and TRANSISTOR's curves, drawn from the plugin's formulas. Each starts with a slope of one, so quiet signals pass at their own level.

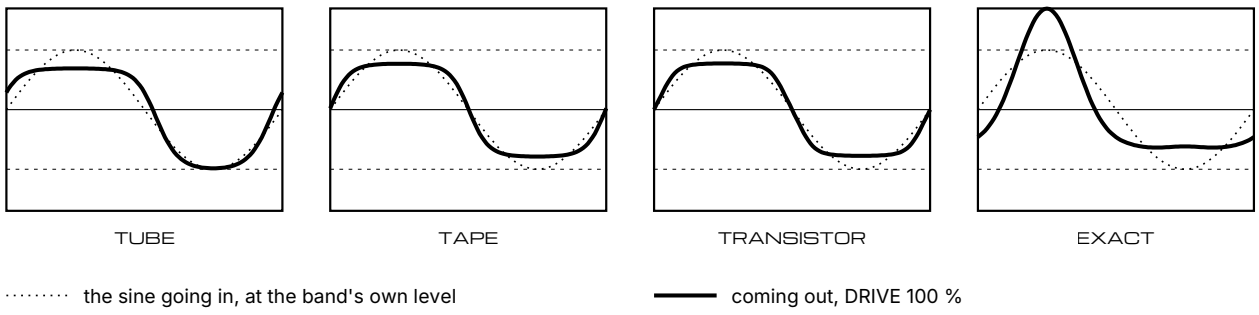


FIGURE 10 One cycle of a sine at the band's own level through each colour at DRIVE 100 %, drawn from the plugin's formulas (with each curve's make-up gain, and centred as the plugin's 20 Hz high-pass does). The three curves round the wave; EXACT changes its shape but rounds nothing.

TUBE is a warm triode-style curve. It is **lopsided**: the top of the wave bends sooner than the bottom. That's why it makes **mostly the 2nd harmonic**, with more of the 3rd and above as you push it, and why it rounds the peaks softly, as a valve does. Use it for warmth and weight: on LOW under the kick and bass (the genre presets use 10 to 20 %), or lightly in the mids for an analog thickness.

TAPE is nearly symmetric (the same curve as TUBE around a much smaller offset), so it makes **mostly the 3rd harmonic, with a hint of the 2nd**, and it bends gently. It sounds like density and glue: notes sit closer together and the low end steadies. The presets use it at 27 % on LOW for glue, 8 to 12 % in the mids.

TRANS (TRANSISTOR) is symmetric with a flatter start and a **firmer knee**: it stays nearly straight longer, then bends harder. It makes **only odd harmonics** (3rd, 5th, 7th), reaching higher than TAPE's. It sounds like edge, bite and presence. On HIGH MID it brings guitars and vocals forward (10 to 20 % in the presets); on LOW it tightens and steadies a sub (42 % in *Metal Low-End Grip*).

EXACT has no curve. It makes the **2nd, 3rd and 4th harmonics** of the band directly, the 3rd always 10 dB under the 2nd and the 4th 22 dB under it, at the same ratio whatever the level. Nothing is bent, so **no peak is rounded**. It is the clean colour: weight on a sub, body on the low mids, sheen and air on top. DRIVE sets its 2nd against the signal: −6 dB at 100 %, −18 dB at 50 %, −30 dB at 25 %.

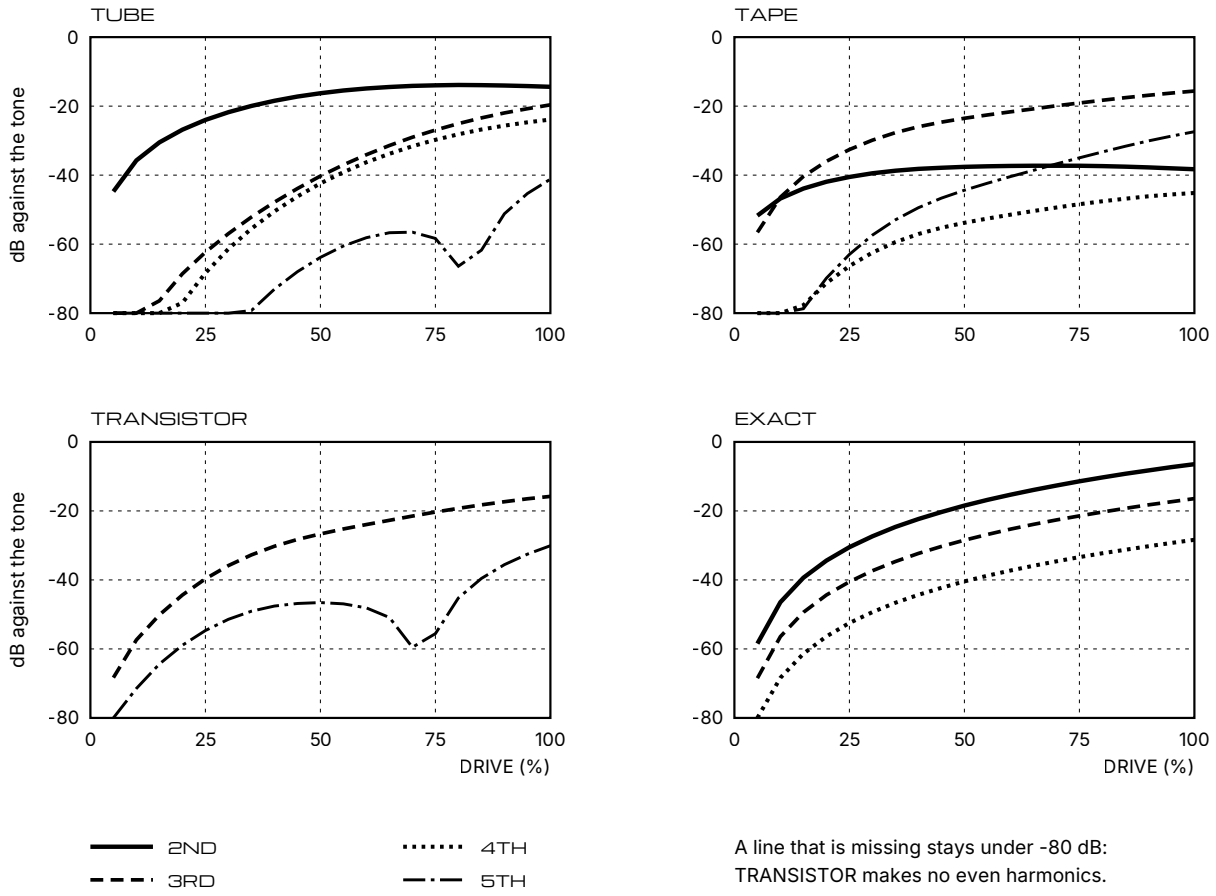


FIGURE 11 Measured by running the plugin's engine: the 2nd to 5th harmonic that each colour adds to a 220 Hz tone on LOW MID, against the tone, as DRIVE turns (AUTO GAIN off). At 50 %: TUBE's 2nd −16 dB; TAPE's 3rd −24 dB; TRANSISTOR's 3rd −27 dB and 5th −47 dB; EXACT's 2nd −18 dB.

The curves react to the playing

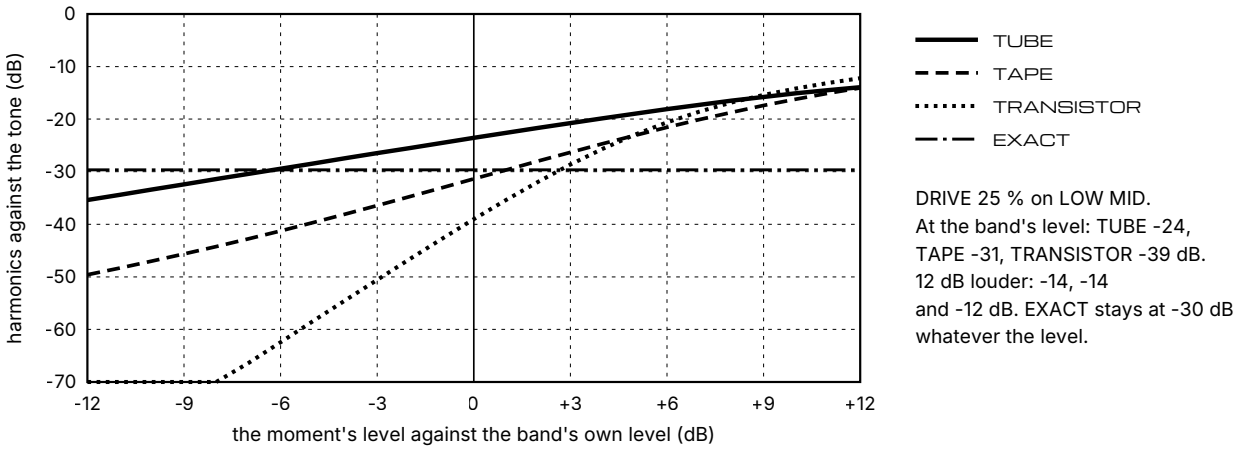


FIGURE 12 All the harmonics together that a tone gets at DRIVE 25 % on LOW MID, against how loud the moment is compared with the band's long-term level, computed from the plugin's curves. EXACT does not depend on level.

Because the curves are driven against the band's long-term level, a moment louder than usual gets more colour and a quieter one less, which is part of what makes them sound alive. They differ in how steeply:

- TUBE grows evenly with level: a moment 12 dB over the band's level gets about 12 dB more harmonics.
- TAPE starts lower and grows faster.
- TRANS leaves average and quiet moments almost clean and grips the loud ones hardest: its harmonics rise by more than 30 dB over those 12 dB. That's what makes it good for presence and grip: it works on the hits and the loudest words.
- EXACT is flat: the same colour on a whisper and a shout.

Rounding peaks. On drums and other sharp material, the hits sit far above the band's usual level, so the three curves round them. On a mix that's usually welcome (the Mix Bus presets lower its peaks by 0.1 to 0.8 dB). On a master that has already been limited there's nothing left to round, and any colour raises the peaks a little: the genre presets add at most +0.30 dB on a limited master. **Use the plugin before your limiter.**

The bands and the splits

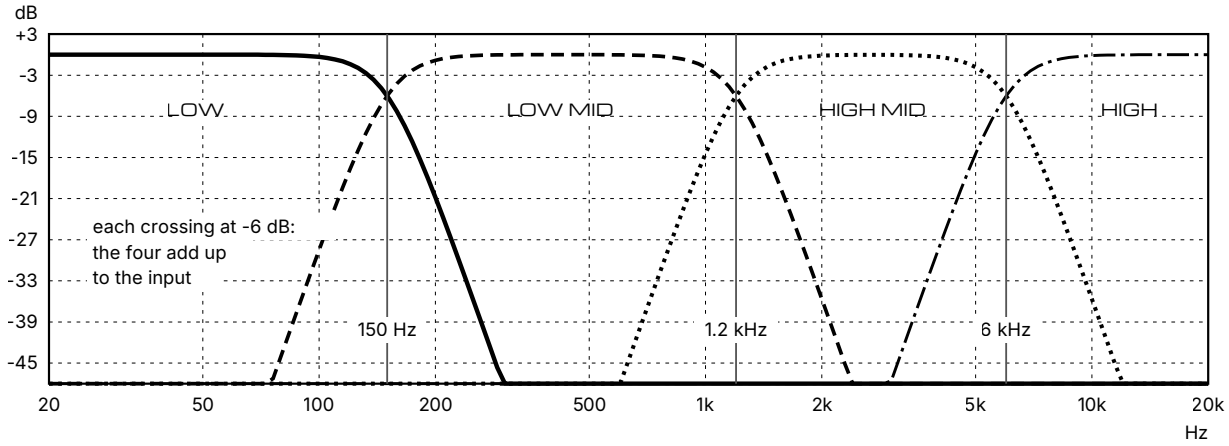


FIGURE 13 The four bands at the default splits, drawn from the plugin's filters: steep (48 dB per octave at the splits), crossing at −6 dB, and adding up exactly to the input.

Split	Range	Default	Where it is
LOW | LOW MID	40 to 600 Hz	150 Hz	The first handle on the SPECTRUM display
LOW MID | HIGH MID	250 Hz to 4 kHz	1.2 kHz	The second handle
HIGH MID | HIGH	2 to 16 kHz	6 kHz	The third handle

Moving the splits. Drag the round handles at the top of the SPECTRUM display left or right; the value shows beside each handle. Double-click a handle to return it to its default. Each split always stays at least 1.5 times above the one under it. The splits glide as they move and the filters are redesigned with a crossfade, so you can move them while the music plays. In your DAW's automation list they're called *Low | Low Mid Split*, *Low Mid | High Mid Split* and *High Mid | High Split*.

The bands only choose **what each colour is made from**: the input itself is never split. A typical master uses them like this:

- **LOW** (under 150 Hz): the kick and the bass's fundamentals. Weight: TUBE, or EXACT to make a sub heard on small speakers; TAPE or TRANS for glue and grip.
- **LOW MID** (150 Hz to 1.2 kHz): body, the vocal's and the instruments' fundamentals. Usually the gentlest band, because it thickens fast.
- **HIGH MID** (1.2 to 6 kHz): presence, the guitars' crunch, the consonants. TRANS for bite, TAPE for density, EXACT for clean sheen.
- **HIGH** (over 6 kHz): air and sparkle. EXACT is the usual choice (55 to 80 % in the genre presets).

Each band's colour stays in its band

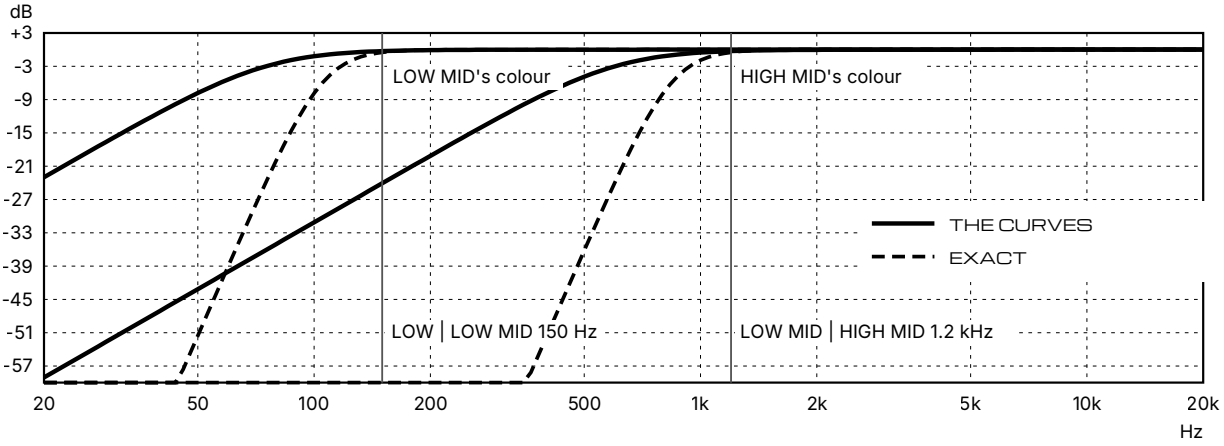


FIGURE 14 What is kept of a band's colour below the band, drawn from the plugin's filters at the default splits: the curves' colour fades gently (12 dB per octave) an octave under the band, EXACT's steeply (48 dB per octave) from 0.7 times the split.

Any curve also creates tones *below* the notes it's made from: difference tones, and a thump that follows the music's envelope. So that air on HIGH stays on top and the low end stays clean, what each band's colour makes below its band is filtered out:

- **The curves' colour** is rolled off gently, at 12 dB per octave, from an octave under the band's lower split. It has to stay gentle, because the curves' colour also holds the peaks they round, and those must stay in phase with the dry signal.
- EXACT**'s colour** is taken out steeply, at 48 dB per octave, from 0.7 times the band's lower split: what it makes below its band stays 80 dB down. Its harmonics all lie above the split, so nothing it should add is lost, and a tone right at a split still gets its 2nd from both bands in phase.
- Everything the plugin adds is also cleared of anything under 20 Hz.

What each colour hears

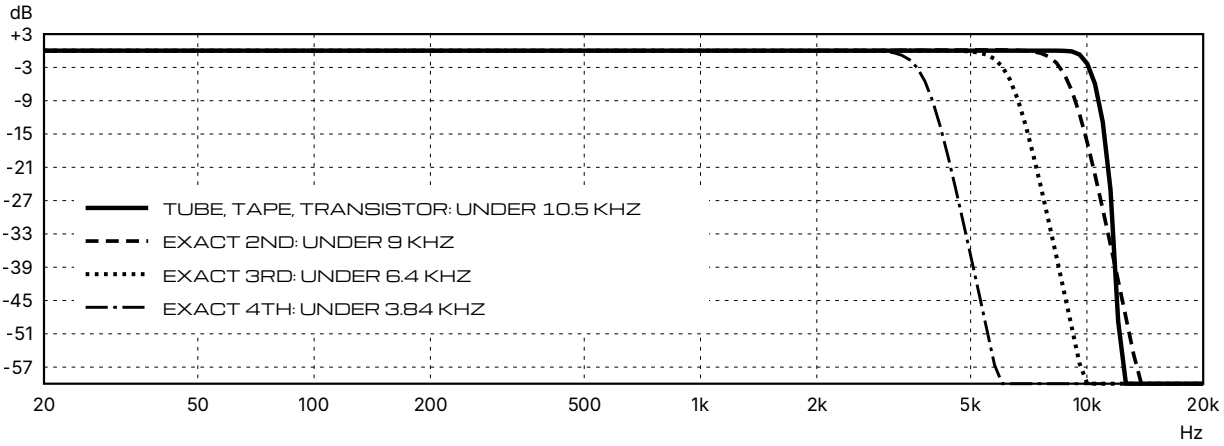


FIGURE 15 What each colour makes its harmonics from at 44.1 and 48 kHz, drawn from the plugin's filters: the curves from what is under 10.5 kHz, EXACT's 2nd from what is under 9 kHz, its 3rd under 6.4 kHz and its 4th under 3.84 kHz. Nothing is made from what lies above, so nothing can fold back.

A harmonic of a tone above about 10 kHz would land over the top of what the session can hold and fold back down as a harsh, out-of-tune tone (**aliasing**). So each colour only listens to what it can safely use:

- **The curves** hear each band only up to 10.5 kHz, and what they change is computed at eight times the sample rate (four times at 88.2 and 96 kHz, twice above) and brought back down. They leave nothing above −110 dB where a 7 kHz tone's folded harmonics would land.
- EXACT makes its 2nd from what is under 9 kHz, so HIGH's air is made too (a 7 kHz tone at 100 % gets its 2nd at −6 dB, at 14 kHz), its 3rd from what is under 6.4 kHz and its 4th from what is under 3.84 kHz.

So TUBE, TAPE and TRANS on HIGH work on the 6 to 10.5 kHz octave at the default split, and EXACT's air comes from 6 to 9 kHz. To make air from more of the top, drag the HIGH MID | HIGH split down (the *Soundtrack Clean Air* and *String Sheen* notes suggest it).

SOLO and DELTA: hear what you're doing

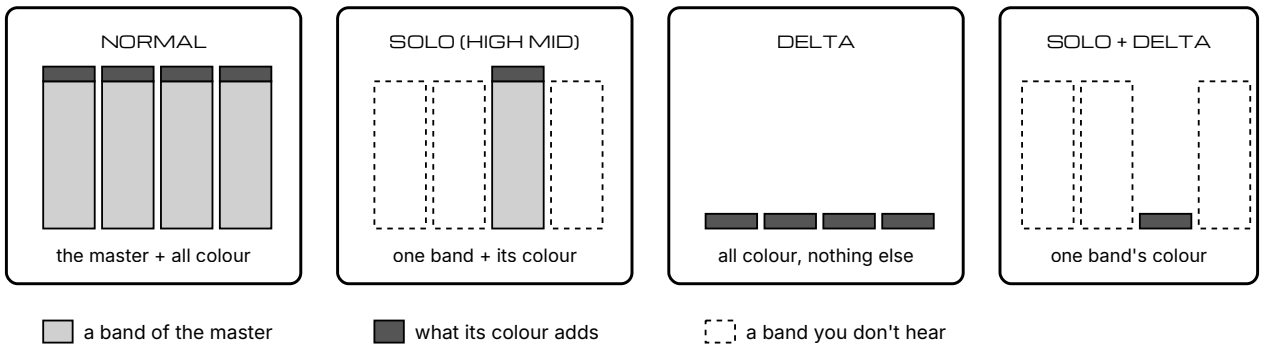


FIGURE 16 What you hear with SOLO and DELTA. Each column is LOW, LOW MID, HIGH MID and HIGH. DELTA alone plays every band's colour; with SOLO it plays only the soloed bands' colour.

SOLO plays only the soloed band, with its colour, exactly as it sits in the master (the bands are linear phase, so nothing smears). More than one band can be soloed at once; solo all four and you hear the whole master. While a band is soloed, the others are shown darker on the SPECTRUM display.

DELTA plays **only what the exciter adds**: the harmonics, and with the curves the small part of each peak they round. It's the best way to set DRIVE: you hear clearly whether a band's colour is a sweet octave, a gritty edge or noise. DELTA follows AUTO GAIN and MIX, so what you hear is exactly what is added to the master.

Together, SOLO and DELTA play only the soloed band's colour. Set each band this way, one at a time, then switch both off and compare with bypass.

> **Tip:** The colour of a good master is quiet: with DELTA on, the genre presets play 24 to 36 dB under the master. If DELTA sounds as loud as music, you're colouring heavily.

SOLO and DELTA are listening aids: they are not automatable, and they're not part of the sound you bounce unless you leave them on. Remember to switch them off before you export.

OUTPUT: MIX, OUTPUT, AUTO GAIN and DELTA

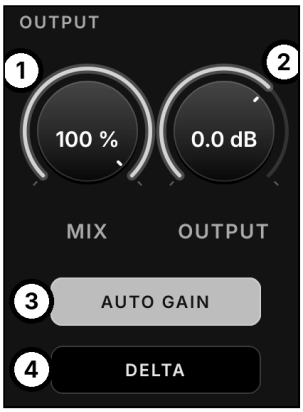


FIGURE 17 1 MIX, 2 OUTPUT, 3 AUTO GAIN (on), 4 DELTA (off).

Control	Range	Default	What it does
MIX	0 to 100 % in 1 % steps	100 %	The excited signal against the dry one, in time with it.
OUTPUT	−24 to +12 dB in 0.1 dB steps	0.0 dB	The final level, after MIX (0.0 dB in every preset).
AUTO GAIN	on, off	on	Takes back the loudness the colour adds.
DELTA	on, off	off	Plays only what the colour adds. Not automatable.

MIX blends the excited signal with the dry one. The dry signal is delayed by exactly the same amount, so the two stay in time and add up cleanly. At 0 % the output is the input, bit for bit. Lower MIX to drive the curves hard and blend them under the clean master, as *Bus Parallel Heat* (35 %) and the *Creative* presets do.

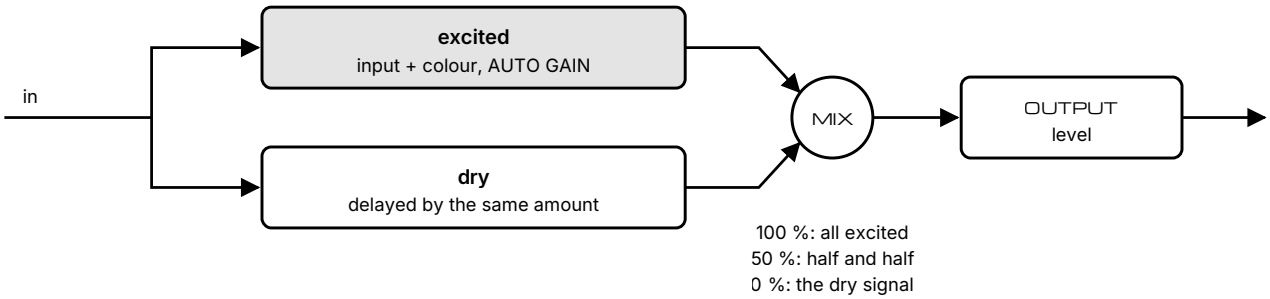


FIGURE 18 MIX: the excited signal and the dry one, kept in time, blended before OUTPUT.

AUTO GAIN takes back the loudness the colour adds (or, with the curves, the loudness the rounding takes off), so turning DRIVE changes the colour, not the level. It estimates from the settings how much each band adds, weighted for a master's typical balance, then measures the loudness in and out (K-weighted, over about 3 seconds) and gives back the difference, up to 4 dB: with every colour at 25 to 100 % on every band, a mix stayed within 0.05 dB of its input's loudness. It's on in every factory preset; switch it off to let the colour make the master louder, as a hardware exciter does.

Displays

The SPECTRUM display

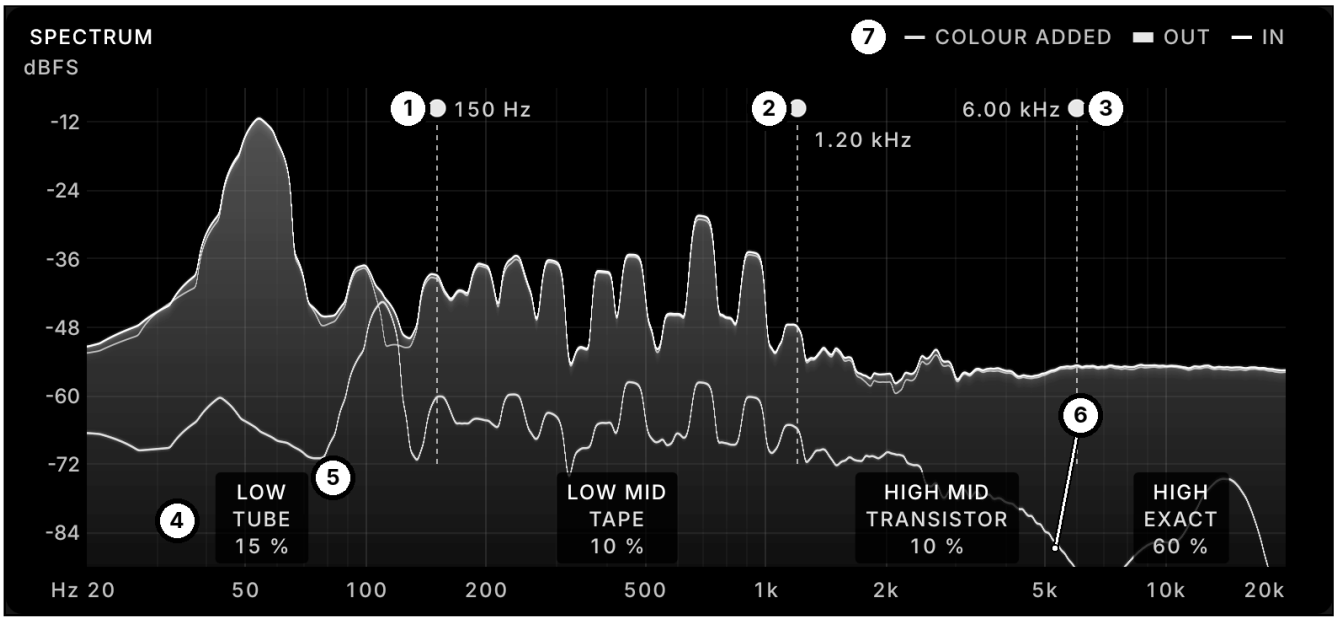


FIGURE 19 1 2 3 The three split handles (150 Hz, 1.2 kHz, 6 kHz), 4 a band's name, colour and DRIVE, 5 the output's spectrum (amber on screen, filled), 6 the colour the plugin adds (teal on screen, a line) and 7 the legend. The input is a thin grey line that mostly runs along the top edge of the output.

The SPECTRUM display shows the sound from 20 Hz to 20 kHz, the lows on the left and the highs on the right, on a musical scale (each octave the same width), read on the **dBFS scale at the left**.

- **The output** 5 is the filled shape (amber on screen) and **the input** a thin grey line (IN in the legend). Where the line shows above the fill, the plugin took level away there; where the fill rises above it, it added level.
- **The colour added** 6 (teal on screen, COLOUR ADDED in the legend) is drawn as a separate line: exactly what the colour adds. Without colour, tell the three apart by their shape: the output is the **filled** area, the input a thin line along its top, the colour a separate line, usually well below both.
- **The bands** are labelled along the bottom 4 with their name, colour and DRIVE (LOW / TUBE / 15 %), or OFF. A band without colour (off, or at 0 %) is **veiled** (drawn darker); with SOLO, the bands not soloed are darker still.
- **The split handles** 1 2 3 sit at the top of dashed lines, with their frequency beside them.

Hover over the display for a tooltip that names the frequency under the mouse, and over a handle to see which split it is.

What to look for: the colour line rising in a band as you turn up its DRIVE, and staying low in a band that's off. With EXACT on HIGH, look for the colour line above the split: its rise there is the air. In the drawing above, the colour line falls away above about 4 kHz because HIGH MID's TRANS at 10 % adds very little on average, and rises again above 10 kHz where HIGH's EXACT adds its air.

The HARMONICS display

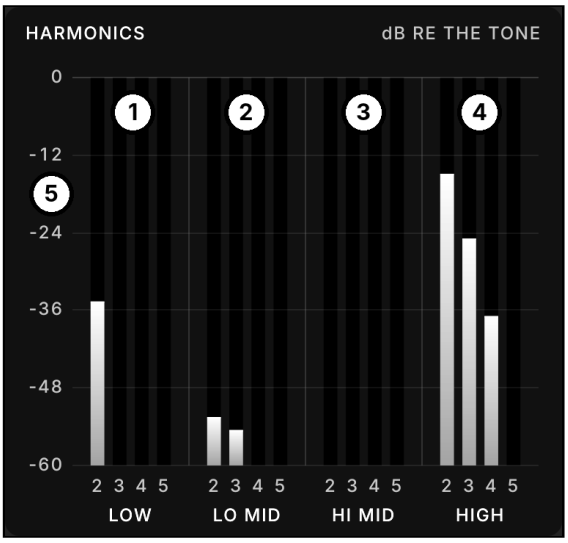


FIGURE 20 The HARMONICS display: the 2nd to 5th harmonic for 1 LOW (TUBE), 2 LO MID (TAPE), 3 HI MID (TRANSISTOR: no bars above the scale here) and 4 HIGH (EXACT), read on 5 the scale in dB against the tone.

For each band, four bars show how loud the **2nd, 3rd, 4th and 5th** harmonics are right now, **against the tone** they come from (the scale reads dB RE THE TONE, from 0 at the top to −60 at the bottom). The numbers 2 3 4 5 under each group name the harmonics, and LOW, LO MID, HI MID and HIGH the bands.

- **With** TUBE**,** TAPE **and** TRANS the bars show what a tone at the band's current level gets from the curve. They **move with the music**: louder moments drive the curve harder and the bars rise, quieter ones fall. TUBE shows a tall 2nd; TAPE a tall 3rd with a shorter 2nd; TRANS only the 3rd and 5th. At a low DRIVE, TRANS often shows nothing at all on average material, and its bars jump up on the loud moments (see *The curves react to the playing*).
- **With** EXACT the bars are set by DRIVE alone: three bars (2nd, 3rd 10 dB under it, 4th 22 dB under it), steady while the music plays.
- A band that's off shows no bars. Bars rise at once and fall back at 30 dB per second.

How much is a lot? Measured as all the colour together against the whole master, the factory mastering presets add 24 to 36 dB under the signal: around **−35 dB** is a touch, **−28 dB** clearly there on a master, **−20 dB** coloured and **−10 dB** driven. The bars show single harmonics of one band, so read them as a picture of each band's character rather than of that total.

Meter bridge (IN | OUT)

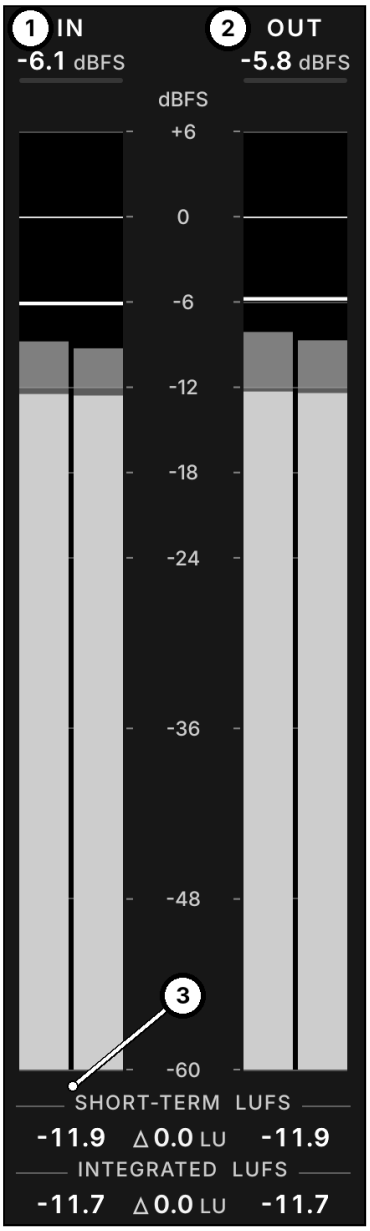


FIGURE 21 The meter bridge: 1 input and 2 output level, 3 short-term and integrated loudness with the OUT − IN difference.

VEIRA Mastering Exciter's meter bridge is the standard one, measured on the plugin's input and output. With AUTO GAIN on, the Δ readings stay at or very close to 0.0 LU as you turn DRIVE, as in the picture: a useful check that you're comparing colour, not level. Watch the OUT peak too: on a master that is already limited, any colour raises it a little. 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 Mastering Exciter 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.

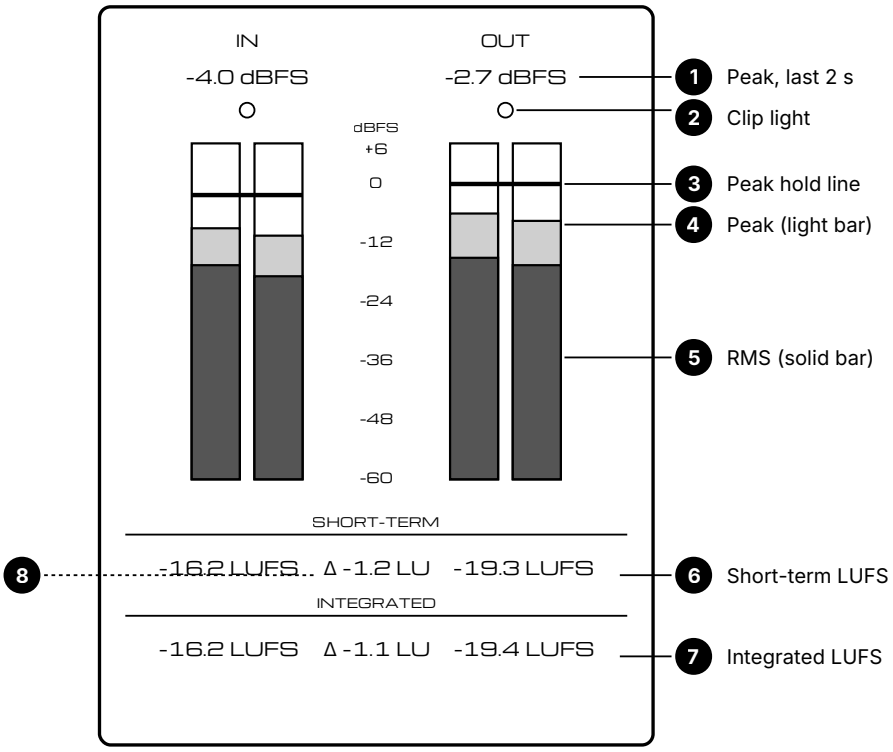


FIGURE 22 The meter bridge, left and right channel bars for input and output, with loudness below.

- 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 Mastering Exciter 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.

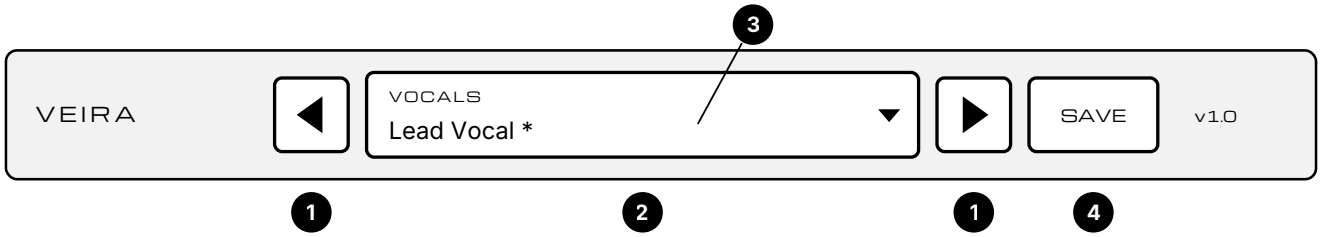
Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Presets

VEIRA Mastering Exciter comes with **58 factory presets** in 11 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 23 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 Mastering Exciter 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 Mastering Exciter/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Mastering Exciter\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
Pop	Pop Polish, Pop Vocal Forward, Pop Sheen, Radio Ready, Warm Pop Ballad, Bright Modern Pop
Rock & Metal	Rock Master Glue, Guitar Bite, Metal Low-End Grip, Classic Rock Warmth, Live Rock Energy
Hip-Hop & R&B	808 Weight, Boom Bap Warmth, R&B Silk, Trap Clarity, Vocal Up Front, Kick & 808 Punch
Electronic	Club Low End, Techno Drive, House Groove, EDM Bright Top, Ambient Glow, DnB Snap
Acoustic & Jazz	Jazz Warmth, Acoustic Clarity, Folk Intimacy, Upright Bass Bloom, Singer-Songwriter Air
Orchestral & Cinematic	Orchestral Depth, String Sheen, Trailer Weight, Brass Bloom, Soundtrack Clean Air
Repair & Restore	Dull Master Lift, Thin Master Weight, Lifeless Mids, Buried Vocal Lift, Small Speaker Bass
Mix Bus	Bus Analog Warmth, Bus Glue, Bus Punch & Bite, Bus Air & Clarity, Bus Clean Console, Bus Parallel Heat
Stems	Drum Stem Punch, Drum Stem Crack & Air, Bass Stem Growl, Bass Stem Small Speaker, Vocal Stem Presence, Vocal Stem Air, Music Stem Warmth, Music Stem Shimmer
Creative	Saturated Master, Lo-Fi Crunch, Octave Shimmer, Tape Smash, Fuzz Bass

The folders are sorted by use:

- **The genre folders** (*Pop* to *Orchestral & Cinematic*) are mastering presets: gentle colour, 24 to 36 dB under the master. Their splits move with the genre (a 100 to 120 Hz LOW for trap and drum and bass, a 180 to 200 Hz one for jazz and acoustic music).
- **Repair & Restore** fixes common faults in a finished master: dull, thin or lifeless, a buried vocal, a bass that disappears on small speakers.
- **Mix Bus** is for the stereo bus while mixing: a little hotter (20 to 26 dB under the mix), and it softens the mix's peaks a little.
- **Stems** has two presets each for drum, bass, vocal and music stems, for stem mastering.
- **Creative** goes further. Each of its notes begins with "Strong:".

Each preset's note (in the preset menu) says which control to move first. AUTO GAIN is on and OUTPUT at 0.0 dB in all of them.

Levels. The curves drive each band against its own level, and EXACT works in dB against the signal, so the presets behave the same on a quiet master and a loud one: no gain staging needed. Every preset was measured on material that matches its folder. The loudness stays within 0.02 dB of the input in the genre folders and Repair & Restore, 0.09 dB on Mix Bus, 0.10 dB on Stems and 0.16 dB in Creative. On a limited master the genre presets change the sample peak by −0.02 to +0.30 dB, Repair & Restore by at most +0.46 dB. Real material differs, so trust your ears and the meter bridge.

Recipes

Step-by-step starting points. In each, set the bands with DELTA on, then switch it off and compare with the plugin bypassed: the meter bridge's Δ readings tell you the levels match. Put VEIRA Mastering Exciter before your limiter.

Polish a finished pop or rock master

1. Load **Pop ▸ Pop Polish** (or *Rock & Metal ▸ Rock Master Glue*).
2. Switch on DELTA and listen to each band with SOLO. Lower any band's DRIVE whose colour sounds gritty on its own.
3. Set HIGH's DRIVE for the amount of shine; the note says to start there.
4. Switch DELTA off and compare with bypass.

Give a thin master weight

1. Load **Repair & Restore ▸ Thin Master Weight** (TUBE 25 % on LOW, EXACT 40 % on LOW MID).
2. Raise LOW's DRIVE for more weight.
3. Drag the LOW | LOW MID split to where the kick and bass sit (150 Hz by default; try 100 to 200 Hz).
4. Watch the OUT peak: weight adds level to the bass's peaks, so leave room for your limiter.

Bring back the top of a dull master

1. Load **Repair & Restore ▸ Dull Master Lift** (EXACT 40 % on HIGH MID from 2 kHz, EXACT 70 % on HIGH from 6 kHz).
2. Raise HIGH's DRIVE first, then HIGH MID's.
3. Drag the HIGH MID | HIGH split down to 4 or 5 kHz for more air, up for a finer top.
4. If the S's rise, lower HIGH MID's DRIVE: its colour lands on the vocal's consonants.

Make the bass heard on phones

1. Load **Hip-Hop & R&B ▸ 808 Weight**, or **Repair & Restore ▸ Small Speaker Bass** for a bass-heavy master.
2. Listen on small speakers, or on one earbud at low volume, and raise LOW's DRIVE until you can follow the bass line.
3. Move the LOW | LOW MID split to just above the bass's fundamentals: 100 to 120 Hz.
4. EXACT makes the sub's 2nd and 3rd harmonics without rounding the kick, so the low end gets clearer without losing punch.

Bring a buried vocal forward

1. Load **Repair & Restore ▸ Buried Vocal Lift**, or **Pop ▸ Pop Vocal Forward**.
2. Set the LOW MID | HIGH MID split near the top of the vocal's body (900 Hz to 1 kHz) and the HIGH MID | HIGH split at about 5 kHz.
3. Raise HIGH MID's DRIVE for more presence; stop before the vocal sounds edgy.

Glue on the mix bus

1. Insert the plugin on the mix bus and load **Mix Bus ▸ Bus Glue** (TAPE on every band).
2. Raise LOW's DRIVE for more glue on the kick and bass.
3. For heat with the punch kept, load **Bus Parallel Heat** instead (TUBE at 60 % blended at MIX 35 %) and set MIX first.

Stem mastering

1. Insert one instance on each stem and load the matching preset from **Stems** (*Drum Stem Punch*, *Bass Stem Small Speaker*, *Vocal Stem Presence*, *Music Stem Warmth*, …).
2. Set each stem's colour with DELTA on, the others muted.
3. The latency is the same on every instance, so the stems stay in time.

Specifications

Type	Four-band harmonic exciter for mastering: a colour (TUBE, TAPE, TRANSISTOR or EXACT) and a DRIVE per band, with automatic gain
Channels	Mono and stereo
Latency	1,216 samples at 44.1 and 48 kHz (about 25 ms: the linear-phase band split, 1,152, and the curves' oversampling filters, 64); 2,368 at 88.2 and 96 kHz; 4,672 at 176.4 and 192 kHz. Constant, reported to the host for delay compensation
Transparency	Every band off or at 0 %, MIX 0 %, and bypass: the output is the input delayed by the latency, bit for bit. The input itself is never filtered. The output is the same at any buffer size
Bands	LOW, LOW MID, HIGH MID, HIGH: linear phase, 48 dB/oct at the splits, adding up exactly to the input
Splits	LOW | LOW MID 40 to 600 Hz (default 150 Hz); LOW MID | HIGH MID 250 Hz to 4 kHz (1.2 kHz); HIGH MID | HIGH 2 to 16 kHz (6 kHz); each at least 1.5 times the one under it
Colour (per band)	TUBE, TAPE, TRANS or EXACT; a change crossfades over 30 ms. Init: LOW TUBE, LOW MID TAPE, HIGH MID TRANS, HIGH EXACT
DRIVE (per band)	0 to 100 % in 1 % steps (Init: 15, 10, 10 and 60 %). The curves: against the band's long-term level (about 2.5 s). EXACT: its 2nd at −6 dB against the signal at 100 %, −18 dB at 50 %, −30 dB at 25 %
ON, SOLO (per band)	On, off (defaults on, off); SOLO is not automatable
TUBE	(tanh (u + 0.6) − tanh 0.6) / (1 − tanh² 0.6); mostly the 2nd
TAPE	The same around 0.04; mostly the 3rd, a hint of the 2nd
TRANSISTOR	u / (1 + u⁴)^¼; odd harmonics only
EXACT	The 2nd, 3rd (−10 dB) and 4th (−22 dB) made exactly, at the same ratio at any level; the 2nd from under 9 kHz, the 3rd from under 0.4 × the sample rate / 3, the 4th from under 0.4 × the sample rate / 5
Measured (220 Hz tone, LOW MID, 50 %)	TUBE 2nd −16 dB, 3rd −40 dB; TAPE 2nd −38 dB, 3rd −24 dB; TRANSISTOR 3rd −27 dB, 5th −47 dB; EXACT 2nd −18 dB, 3rd −28 dB
Aliasing	The curves at 8x (4x at 88.2/96 kHz, 2x above), hearing each band up to 10.5 kHz: nothing above −110 dB from a 7 kHz tone
Bands' colour	Below the band: the curves' rolled off at 12 dB/oct an octave under the band's lower split, EXACT's at 48 dB/oct from 0.7 times the split; everything added high-passed at 20 Hz
MIX	0 to 100 % in 1 % steps (default 100 %); the dry signal is delayed to stay in time
AUTO GAIN	On by default; from the settings and measured (K-weighted, about 3 s), up to 4 dB back; within 0.05 dB on a mix
DELTA	Off by default; plays only what the colour adds; not automatable

OUTPUT	−24 to +12 dB in 0.1 dB steps (default 0.0 dB)
Displays	SPECTRUM (20 Hz–20 kHz: output, input and colour added, dBFS; the bands and their split handles); HARMONICS (per band, the 2nd to 5th harmonic, 0 to −60 dB against the tone)
Metering	IN and OUT meters (sample peak, RMS); short-term and integrated loudness per ITU-R BS. 1770-4 / EBU R 128
Presets	58 factory presets in 11 folders, plus your own
Window	1480 × 860 points; resizable from 75 % to 200 %, saved with the session
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vmex

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 Mastering Exciter 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 DRIVE and hardly hear a difference. That's AUTO GAIN doing its job: the level doesn't rise, so the change is in the colour, and on a master the colour is meant to be subtle. Switch on DELTA to hear exactly what each band adds, or switch AUTO GAIN off for a moment. Check also that the band's ON is lit.

TRANSISTOR does nothing at low DRIVE. TRANS stays nearly straight until the music gets loud, then grips hard: on average material at 10 % it adds very little, and its bars on the HARMONICS display jump up only on the loudest moments. That's its character. Raise DRIVE, or use TAPE for colour that's there all the time.

The peaks went up on my master. On a master that's already been limited there's nothing left to round, so any colour raises the sample peak a little (the genre presets by up to +0.30 dB). Put the limiter after VEIRA Mastering Exciter. EXACT's 2nd also lines up with a bass's peaks, so heavy EXACT on LOW raises them more.

The low mids got muddy. LOW MID thickens fast: most presets keep it at 8 to 12 % with a curve, or use EXACT, which rounds nothing. Lower its DRIVE, or move the LOW | LOW MID split up so less of the bass reaches it.

The S's got harsher. HIGH MID's colour lands on the vocal's consonants. Lower HIGH MID's DRIVE, use TAPE or EXACT instead of TRANS there, or move the HIGH MID | HIGH split down so the S's fall into HIGH.

My export sounds different from what I heard. Check that DELTA and every SOLO are off: they're listening aids and aren't automatable, so they stay as you left them.

There's a delay when I play through it live. The linear-phase band split needs 1,216 samples at 44.1 and 48 kHz (about 25 ms). Your DAW compensates for it on playback, but it's too much to play through while recording. Use the plugin on the master or the mix bus after recording (bypassed, it still delays the signal by the same amount so the timing stays steady).

Where should it go in my chain? On a master: after EQ and any compression, before the limiter. On the mix bus: after the bus compressor, or before it if you want the compressor to react to the colour.

The window is too small (or too big) on my screen. Drag its bottom-right corner. It scales from 75 % to 200 % and keeps its proportions; the size is saved with your session.

Do my sessions keep my settings? Yes. Every control, the three splits, the selected preset and the window size are saved with your session. Everything except SOLO and DELTA 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 Mastering Exciter · User Manual · Version 0.2.0

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

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