VEIRA

DRIVE AND MODULATION

VEIRA Mod Drive

User Manual

A drive pedal into a modulation pedal, in one unit. DRIVE warms and breaks up the sound without making it louder, TONE tilts it darker or brighter, and CHORUS, FLANGER, PHASER, TREMOLO or VIBRATO set it moving, at a free rate or locked to the song.



Contents

Welcome 3

Getting started 4

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

The panel at a glance 6

- Quick start: moving sound in four moves 7
- Using the controls 7

How drive and modulation work 9

- Two pedals in a row 9
- Inside VEIRA Mod Drive 10
- Latency, bypass and bouncing 10

Controls 11

- DRIVE and TONE 11
- MODULATION 15
- MIX and OUTPUT 20

Modulation in time 21

- SYNC 21
- Stereo and mono 22

Displays 23

- The MOTION display 23
- The DRIVE meter 25
- Meter bridge (IN | OUT) 26

Presets 28

- The preset browser 28
- The preset menu 28
- Saving your own presets 28
- Presets in your DAW 29
- The factory folders 29

Recipes 30

- A wide clean chorus from a mono DI 30
- Crunch rhythm with movement 30
- A funk phaser in time with the groove 30
- Rhythmic tremolo for a pad or chords 30
- Classic keys 30
- A lo-fi, warbling part 31

Specifications 32

Troubleshooting and questions 33

Welcome

Thank you for choosing **VEIRA Mod Drive**, made for electric guitars, keys and synths. It is the two pedals that sit at the start of countless pedalboards, in one unit: a **drive** that warms the sound and breaks it up, and a **modulation** pedal that sets it moving. The drive comes first, as it does on a pedalboard, so the modulation moves a sound that already has its grit and its harmonics.

The drive section has two knobs: DRIVE, from a touch of warmth to a fuzz, and TONE, darker or brighter. The modulation section has five pedals in one, on five buttons: CHORUS, FLANGER, PHASER, TREMOLO and VIBRATO. RATE sets how fast it moves, in Hz or, with SYNC on, as a note value in time with your song; DEPTH sets how far. MIX blends the effect with the dry signal and OUTPUT sets the level.

What makes it different

- **The drive doesn't make it louder.** A real drive pedal gets louder as you turn it up, and louder always sounds "better" at first. VEIRA Mod Drive takes the extra loudness back by itself, so DRIVE changes the colour, not the level, and you judge the sound, not the volume.
- **The same setting on any track.** The drive is set against your playing's own level, so 50 % does the same to a quiet DI as to a hot one. No input gain to find.
- **Every mode at the same loudness.** Switching MODE or turning DEPTH changes the movement, not the level. Each mode is trimmed to the dry signal's loudness, measured on chords, riffs, arpeggios and keys.
- **Locked to the song.** With SYNC on, the modulation runs at a note value from 2/1 to 1/32, dotted and triplets included, and its cycle is tied to the song's position: every bar moves the same way, every time you press play, in a bounce too.
- **Mono in, stereo out.** On a mono guitar track, CHORUS, FLANGER and PHASER come out in stereo, the two sides moving a quarter cycle apart.
- **Clean, smooth and click-free.** The drive is computed at four times the sample rate with anti-aliasing, a MODE change crossfades over 60 ms, and every knob glides, so you can automate anything while the music plays.
- **40 measured presets** in 10 folders: one per kind of movement, plus *Drive & Mod*, *Synced*, *Keys & Synths* and *Creative FX*.
- **A clean, legible face.** Knobs with their value in the middle, text you can read at a glance, and a window you can scale from 75 % to 200 %.

How this manual is organised. *Getting started* covers installing and activating. *The panel at a glance* names every part of the window and has a quick start. *How drive and modulation work* explains, without maths, what each pedal does to the sound and what happens inside the plug-in. *Controls* explains every control, with drawings computed from the plug-in's own engine. *Modulation in time* covers SYNC and stereo. *Displays* teaches you to read the MOTION display, the DRIVE meter and the meter bridge, and *Presets*, *Recipes*, *Specifications* and *Troubleshooting* follow.

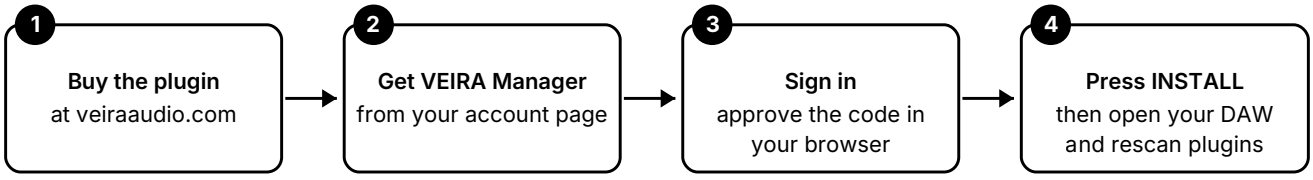
Getting started

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

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 Mod Drive 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.

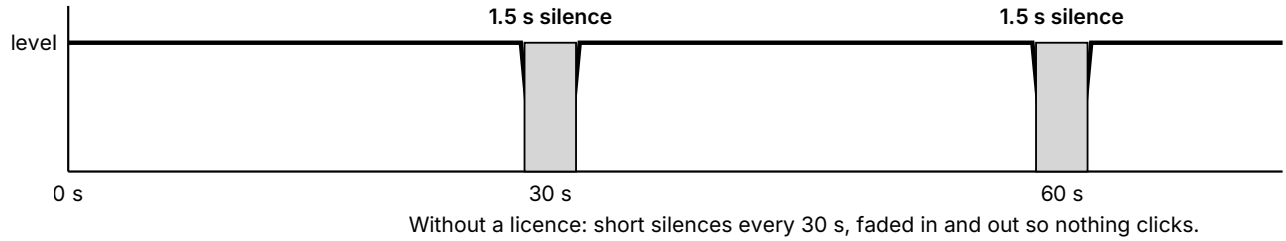


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **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 Mod Drive. 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 Mod Drive 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



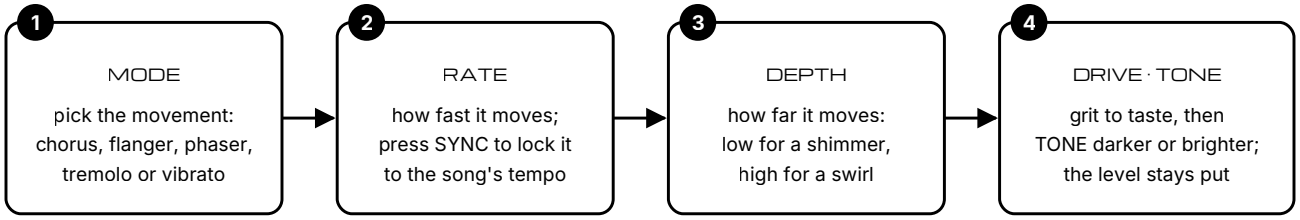
FIGURE 3 VEIRA Mod Drive with the *Init* preset (DRIVE 30 %, CHORUS, RATE 1.0 Hz, DEPTH 50 %) while an electric guitar strums chords.

The window has four areas: the **MOTION display** across the top, and under it three groups, captioned from left to right: DRIVE (the drive pedal: DRIVE, TONE and the DRIVE meter), MODULATION (the modulation pedal: the MODE buttons, RATE with SYNC, and DEPTH) and OUTPUT (MIX and OUTPUT). The **meter bridge** runs down the right. The signal flows the same way, from left to right.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	MOTION display	Two cycles of the modulation, where it is now, the MODE, the RATE and what DEPTH sweeps.
3	DRIVE	How hard the drive works, from clean to fuzz. Its loudness is taken back.
4	TONE	Darker to the left, brighter to the right; flat in the middle.
5	DRIVE meter	How much the drive changes the signal, in dB.
6	MODE buttons	CHORUS, FLANGER, PHASER, TREMOLO or VIBRATO.
7	RATE	How fast the modulation moves: in Hz, or as a note value with SYNC on.
8	SYNC	Locks RATE to the song's tempo and position.

	Part	What it does
9	DEPTH	How far the modulation moves.
10	MIX	The effect against the dry signal.
11	OUTPUT	The level going out.
12	Meter bridge	Input and output level and loudness.

Quick start: moving sound in four moves

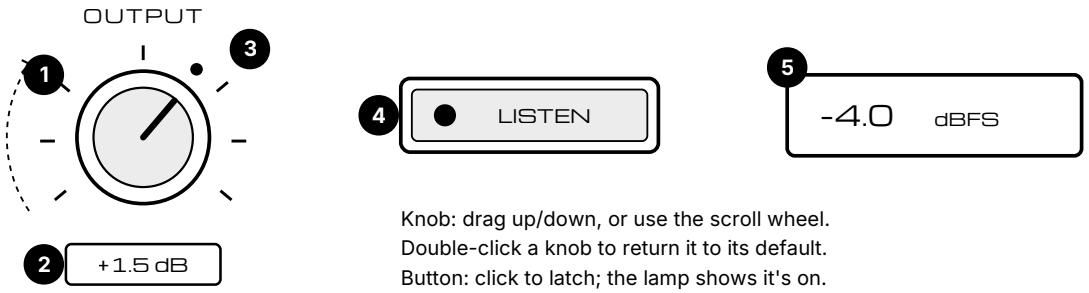


Or start from a preset: each folder is a kind of movement, or a job (Drive & Mod, Synced, Keys & Synths).

FIGURE 4 The quickest way to a good result. Choose the movement first, then add drive: the level stays the same whatever you turn, so judge by ear.

Using the controls

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



Knob: drag up/down, or use the scroll wheel.
Double-click a knob to return it to its default.
Button: click to latch; the lamp shows it's on.
Readouts always carry a unit (dB, dBFS, LUFS, LU, ms, %).

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

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

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

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

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

On VEIRA Mod Drive'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) and a short pointer tick show 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: **55** for DRIVE, **0.5** for RATE, **70** for DEPTH. Press Escape or click elsewhere to leave it unchanged.
- **Buttons** have no lamps. The MODE buttons work like radio buttons: the selected one is filled (orange on screen; in print, the solid, lighter button) and the other four are dark with an outline. SYNC is a toggle: click it once to lock RATE to the song (it fills), and again to set RATE in Hz. The RATE knob changes what it sets when you press SYNC: a frequency in Hz, or a note value; its name stays RATE.
- **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.

How drive and modulation work

If you have used guitar pedals, much of this will be familiar. These pages explain what each half of VEIRA Mod Drive does to the sound, and what the plug-in does differently from a pedal.

Two pedals in a row

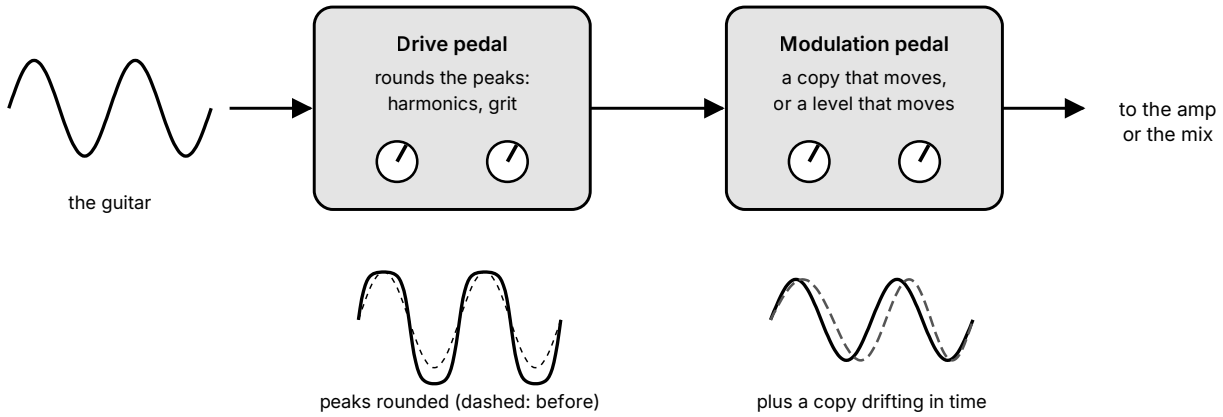


FIGURE 6 VEIRA Mod Drive is two pedals in one unit, in the order most players put them: the drive first, so the modulation moves a sound that already has its grit.

A drive pushes the signal into a curve that bends over at the top: quiet parts pass almost unchanged, and the peaks are rounded off. Rounding a wave adds **harmonics**: new tones at two, three, four times the note's frequency. A little rounding adds warmth and thickness; a lot adds bite, sustain and grit, until the sound is more harmonics than note: a fuzz. Because the rounding flattens the peaks, a driven guitar also sounds more even: the loud strums are held back and the quiet notes come forward.

A modulation pedal makes something about the sound change over time, following a slow, repeating wave called the **LFO** (low-frequency oscillator). RATE is how fast the LFO goes; DEPTH how far it swings. What it moves depends on the pedal:

- **Chorus, flanger and phaser** add a copy of the sound that is shifted in time or in phase, and that shift moves with the LFO. Mixed with the original, the copy reinforces some frequencies and cancels others, and as it moves, so do they: a shimmer, a whoosh or a swirl.
- **Tremolo** moves the level up and down.
- **Vibrato** moves the pitch up and down.

Why drive first? A drive in front of the modulation is the classic order: the drive shapes the tone, and the modulation moves the finished sound, so the movement stays clear and even. (The other way round, the drive would react to the modulation's peaks and notches, and the movement turns lumpy.) In VEIRA Mod Drive the order is fixed, drive first.

Inside VEIRA Mod Drive

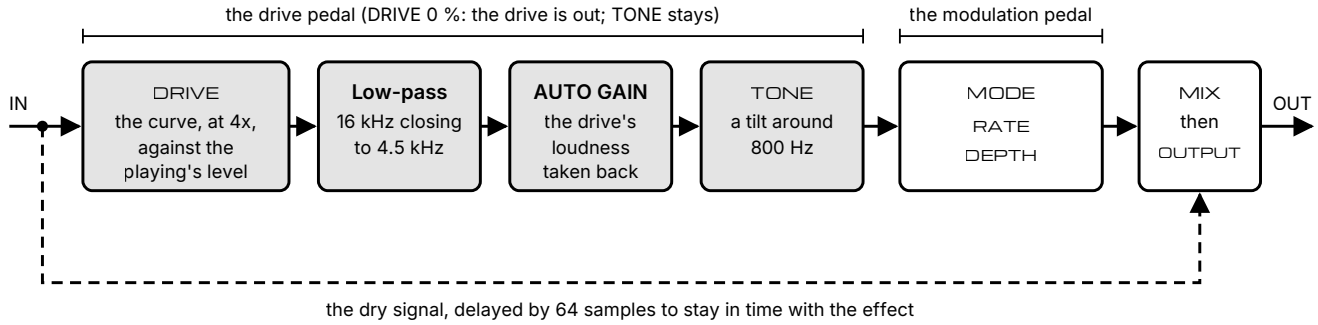


FIGURE 7 Signal flow. The drive pedal on the left, the modulation pedal on the right, then the blend with the dry signal (dashed), which is delayed to stay in time.

Step by step:

1. DRIVE pushes the signal into its curve. How far it pushes is set **against the playing's own level**, which the plug-in measures all the time, so the knob does the same on any track. The curve is computed at four times the sample rate (twice at 88.2 and 96 kHz) with anti-aliasing, so even full fuzz stays clean at the top. See *DRIVE*.
2. **The low-pass** softens the very top of the driven sound, like the filter after a pedal's clipping stage: open at low DRIVE, closing as it rises.
3. **AUTO GAIN** measures the loudness of the driven signal against the dry signal's and takes the difference back, so the drive changes the sound, not the level.
4. TONE tilts the sound darker or brighter around 800 Hz.
5. **The modulation** (MODE, RATE, DEPTH) sets the sound moving. Each mode is trimmed to keep the loudness of the sound going into it.
6. MIX blends the effect with the dry signal, and OUTPUT sets the level.

The oversampling takes **64 samples** (1.3 ms at 48 kHz). That is the plug-in's latency, and the dry signal is delayed by exactly the same amount, so MIX blends two paths that are lined up to the sample.

Latency, bypass and bouncing

- **Latency** is 64 samples at 44.1 to 96 kHz (1.3 ms at 48 kHz), and none at 176.4 and 192 kHz, where the drive doesn't need a higher internal rate. It is constant and reported to your DAW, which compensates for it on playback and in a bounce. If you play live through the plug-in while recording, 1.3 ms is far less than an amp's distance from your ears.
- **Bypass stays in time.** Bypassed, the plug-in still delays the signal by the latency, so switching bypass on and off never makes the track jump. The plug-in also keeps running in the background while bypassed, so when you switch it back on the drive already knows your level and the modulation is where it would have been.
- **Bounces** (export, bounce in place, render, freeze) sound exactly as playback, and with SYNC on, the modulation sits in the same place in the song, every time.

Controls

DRIVE and TONE



FIGURE 8 The drive section, with the preset *Fuzz Phase* (DRIVE 85 %): 1 DRIVE, 2 TONE and 3 the DRIVE meter, here lit to the top.

Control	Range	Default	What it does
DRIVE	0 to 100 %, in 1 % steps	30 %	How hard the drive works: from clean (0 %) through warm and crunchy to a fuzz. Its loudness is taken back automatically.
TONE	Dark 50 to Flat to Bright 50 (0 to 100 %)	Flat (50 %)	Tilts the sound around 800 Hz: lows up and highs down to the left, the opposite to the right, up to 4 dB each way.

DRIVE

DRIVE is a soft, slightly asymmetric drive: the curve bends over smoothly instead of chopping the peaks off, and its top levels off a little sooner than its bottom. That asymmetry is what gives it the warm, even-harmonic character of a tube amp or a classic overdrive pedal at low settings, before the odd harmonics of a fuzz take over at high ones.

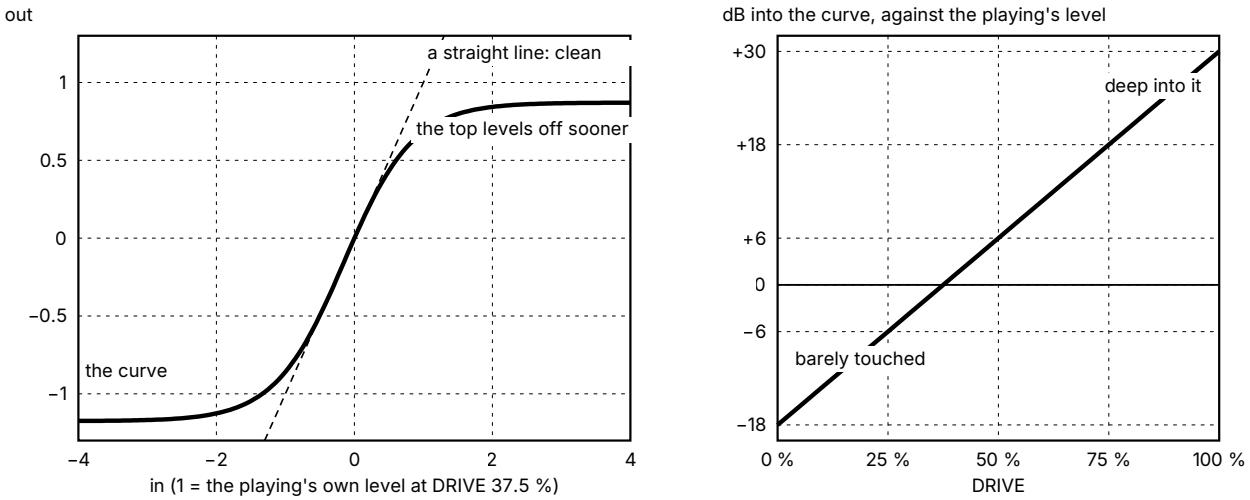


FIGURE 9 Left: the drive's curve (heavy line) against a straight line (dashed): it bends over at the bottom and, a little sooner, at the top. Right: how far DRIVE pushes the playing into it, from 18 dB under to 30 dB over the playing's own level.

Set against your playing. The plug-in measures your playing's level all the time (averaged over a couple of seconds of playing, holding through the pauses), and DRIVE sets how far into the curve that level is pushed: from 18 dB under the bend at 0 % to 30 dB over it at 100 %, in a straight line. So DRIVE does the same to the same part whatever level it arrives at: the plug-in's own tests drive a guitar line and the same line 26 dB quieter, and the DRIVE meter reads the same on both. There is no input gain to set, and a quiet DI recorded with lots of headroom breaks up just like a hot one.

The level is learnt when the playing starts: the loudest of the first 60 ms, then it settles over about a second and a half. This happens again only if your DAW resets the plug-in (for example when the sample rate changes).

What you hear as you turn it up:

- **0 %:** the drive is out of the signal entirely. The drive fades in over the first 3 % of the knob, so there's no step.
- **5 to 25 %:** warmth. The peaks are barely touched; a little second harmonic thickens the sound without sounding distorted (*Amp Tremolo*, *Jet Flanger*).
- **25 to 50 %:** crunch. The strums break up, the single notes stay fairly clean, and the sound gets more even and forward (*Driven Chorus*, *Overdrive Tremolo*).
- **50 to 75 %:** a driven lead sound, with sustain and bite (*Crunch Chorus*, *Driven Phase*, *Lead Flanger*).
- **75 to 100 %:** fuzz. Almost all of the sound is in the curve's flat top, and the odd harmonics dominate (*Fuzz Phase*, *Broken Radio*, *Jet Fuzz*).

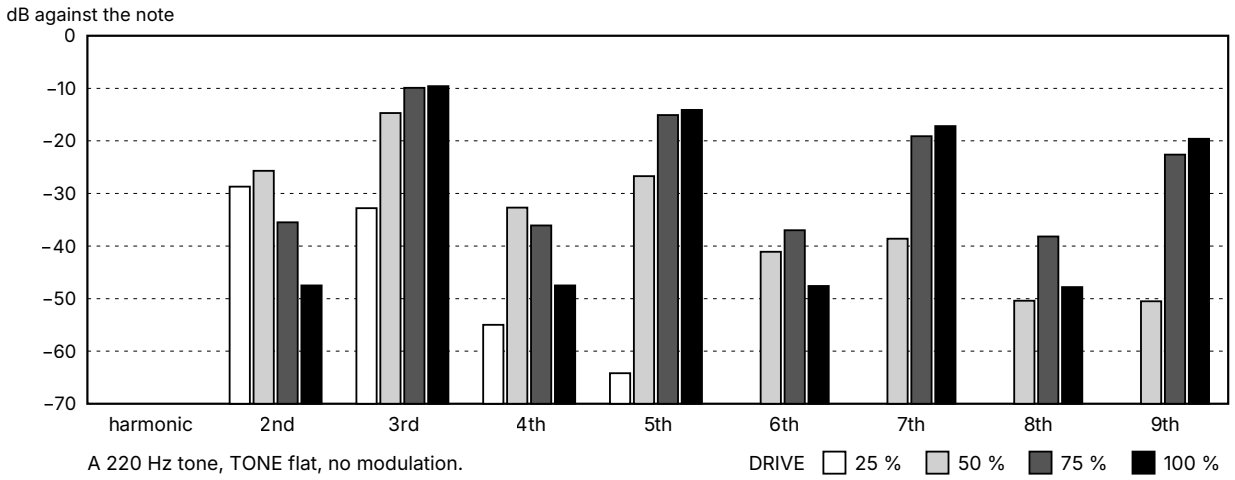


FIGURE 10 The harmonics the drive adds to a 220 Hz tone, measured on the plug-in's engine. At 25 % the second harmonic leads (the asymmetry: warm); from 75 % the odd harmonics (3rd, 5th, 7th) take over: a fuzz.

It darkens as it rises. Like a real pedal, the drive has a low-pass filter after its curve that closes as DRIVE rises: at 16 kHz at 0 %, about 8.5 kHz at 50 % and 4.5 kHz at 100 % (see the drawing under *TONE*). That takes the fizz off the top of a heavy drive, the harsh part that makes direct-recorded distortion sound like a buzzing bee, and keeps a fuzz round.

The loudness stays. The rounding adds harmonics but takes off peak, and a drive pedal compensates with a lot of extra level. VEIRA Mod Drive works out the right makeup itself: a fixed amount for a typical guitar, then **AUTO GAIN**, which measures the loudness of the driven signal against the dry signal's (the way a loudness meter hears it, over about a second and a half, only while you play) and trims it within ±12 dB to match. What you hear as you turn DRIVE is the sound getting thicker, rounder and more even, at the same loudness.

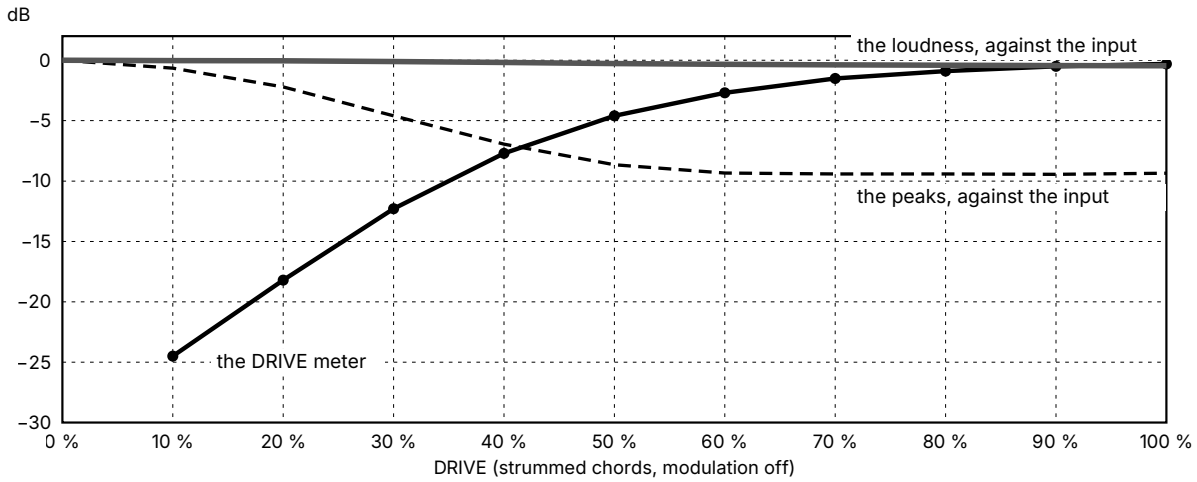


FIGURE 11 Measured on strummed chords with the modulation off: as DRIVE rises, the DRIVE meter climbs from −24 to 0 dB, the peaks come down by up to 9 dB (the curve rounds them), and the loudness stays within 0.5 dB of the input.

> **Tip:** Because the loudness stays the same, bypass is a fair comparison. Set DRIVE by switching bypass on and off: the driven sound should be thicker, not louder.

DRIVE glides over about 60 ms, so it can be turned or automated while you play: more for the solo, less for the verse.

TONE

TONE sits after the drive. It is a **tilt**: two gentle shelves meeting at 800 Hz, moving in opposite directions, so the sound swings darker or brighter around the middle and its loudness stays about the same.

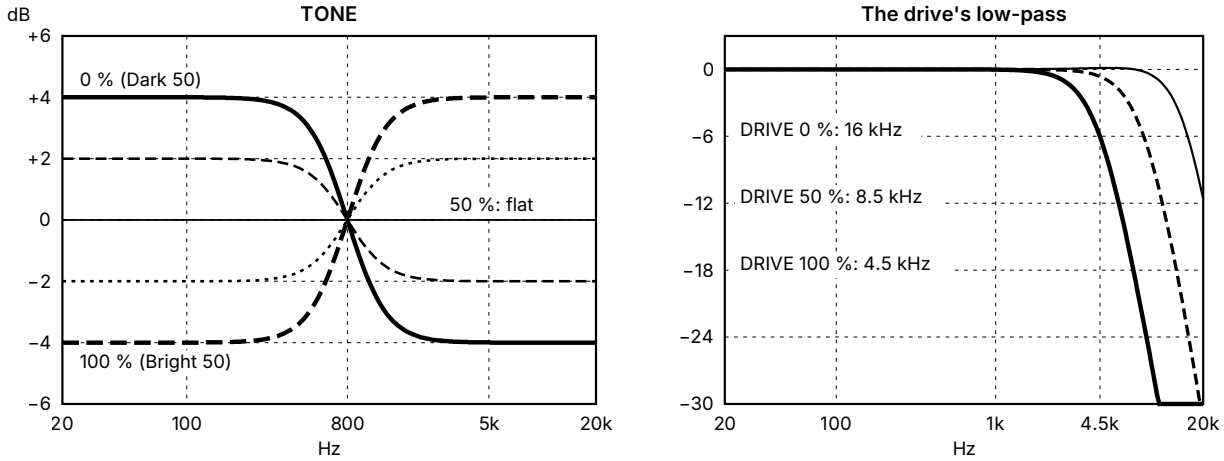


FIGURE 12 Left: TONE at 0, 25, 50, 75 and 100 %: up to 4 dB more lows and 4 dB fewer highs at Dark 50, the opposite at Bright 50. Right: the drive's own low-pass, which follows DRIVE (not TONE).

- **The knob reads Flat in the middle**, Dark 1 to Dark 50 to the left and Bright 1 to Bright 50 to the right: how far you have turned from the centre, not decibels. At the ends the lows and the highs are 8 dB apart.
- **Turn it darker** for a warmer, rounder drive, to take the glass off a bright chorus (*Eighties Chorus* note), or for lo-fi (*Tape Wow*, *Broken Radio*).
- **Turn it brighter** to make a driven sound cut through a mix, or to bring sparkle back to a dark pickup.

TONE works at every DRIVE setting, including 0 %, so it's also a quick tone control in front of a clean chorus or tremolo.

MODULATION



FIGURE 13 The modulation section: 1 the MODE buttons (CHORUS selected), 2 RATE, with its value in its middle, 3 SYNC and 4 DEPTH.

Control	Range	Default	What it does
MODE	CHORUS, FLANGER, PHASER, TREMOLO, VIBRATO	CHORUS	Which modulation pedal you're using.
RATE	0.05 to 10 Hz (SYNC off)	1.0 Hz	How fast the modulation moves: one cycle every 20 seconds up to ten cycles a second. 1 Hz sits at the top of the knob.
RATE	2/1 to 1/32 (SYNC on)	1/4	One cycle of the modulation as a note value, in time with the song.
SYNC	off, on	off	Sets RATE as a note value, locked to the song's tempo and position. See *Modulation in time*.
DEPTH	0 to 100 %, in 1 % steps	50 %	How far the modulation moves. What it moves depends on the MODE; the MOTION display spells it out.

What each mode moves

Each mode has its own kind of LFO wave and its own job. The drawing shows all five at DEPTH 50 %, the way the MOTION display draws them:

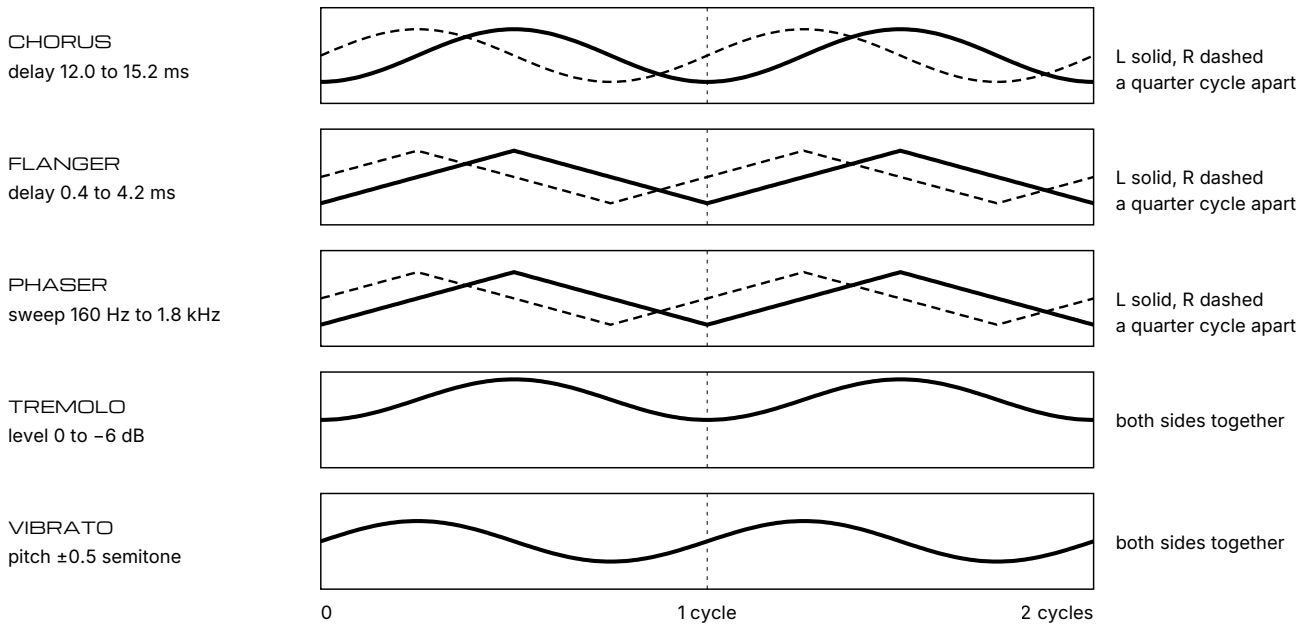


FIGURE 14 What each mode moves over two cycles at DEPTH 50 %. CHORUS, TREMOLO and VIBRATO follow a smooth sine; FLANGER and PHASER a triangle, which spends as long rising as falling. In the three stereo modes the right side (dashed) runs a quarter cycle behind the left.

MODE	What it moves	At DEPTH 0 %	At DEPTH 100 %	LFO	Stereo
CHORUS	Two delayed copies, around 12 ms, against the dry	12.0 to 13.5 ms	12.0 to 17.0 ms	Sine	Sides a quarter cycle apart
FLANGER	One very short delay with feedback, against the dry	0.4 to 1.9 ms, feedback 35 %	0.4 to 6.4 ms, feedback 80 %	Triangle	Sides a quarter cycle apart
PHASER	Six phase stages with feedback, against the dry	160 to 320 Hz	160 Hz to 5.1 kHz	Triangle	Sides a quarter cycle apart
TREMOLO	The level	No movement	Full level down to silence	Sine	Both sides together
VIBRATO	The pitch, with no dry signal	No movement	About ±1 semitone	Sine	Both sides together

Note that DEPTH **0 % is not "off"** for CHORUS, FLANGER and PHASER: they still move a little, so you still hear a gentle chorus, flange or phase. To hear the drive on its own, choose TREMOLO with DEPTH at 0 %, as the preset *Warm Drive Only* does, or MIX 0 %, which leaves only the dry signal (without the drive, too).

CHORUS

The classic shimmering double. Two copies of the sound, delayed by about 12 and 16 ms, drift slowly in time, and so very slightly in pitch, against the dry sound, the way two players never quite play together. The two copies move in opposite directions, so the effect is rich and even rather than wobbly. DEPTH sets how far they drift: low for a subtle thickening, high for a deep, seasick wash. In stereo, the right side's copies run a quarter cycle behind the left's, which spreads the sound wide.

- **Slow and shallow** (0.3 to 0.8 Hz, DEPTH 25 to 45 %): a wider, thicker guitar that doesn't sound "chorused" (*Subtle Thickener*, *Clean Chorus*).
- **Medium** (0.8 to 1.5 Hz, DEPTH 50 to 70 %): the classic clean chorus of 80s pop and 90s alternative (*Eighties Chorus*, *Wide Chorus*).
- **Fast** (5 to 7 Hz): the swirl of an organ's chorus-vibrato (*Organ Chorus*).

FLANGER

The jet-plane whoosh. A single very short delay (0.4 ms at its shortest) is swept up and down, with some of its output fed back into it. Mixed with the dry sound, a delay that short cancels a whole row of evenly spaced frequencies, a **comb** of notches, and as the delay sweeps, the comb slides up and down the spectrum. The feedback deepens the notches and adds peaks between them that ring: the metallic, resonant edge of a flanger. DEPTH raises both the sweep's range and the feedback (35 % at 0, 80 % at 100 %).

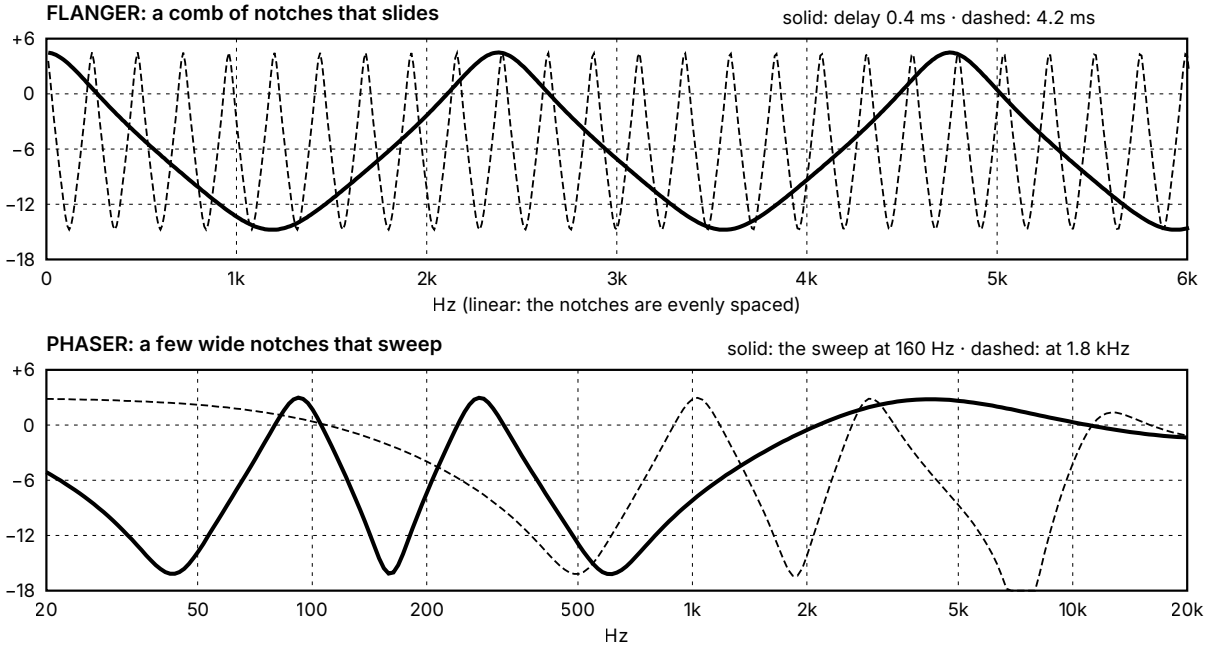


FIGURE 15 Top: the flanger's response at the two ends of its sweep (DEPTH 50 %): a comb of notches, far apart at the shortest delay and close together at the longest. Bottom: the phaser's few wide notches, swept from 160 Hz upward. Both computed from the plug-in's own design.

Slow rates (0.2 to 0.4 Hz) give the long, dramatic sweep; it is most obvious on sustained chords, distorted guitars and cymbals, anything with a lot of high frequencies for the comb to carve. Lower DEPTH for a gentler, airier flange; raise it for ring (*Metallic Flange*).

PHASER

The swirling, vocal sound of a phase pedal. Six phase stages shift the sound's phase by different amounts at different frequencies; mixed with the dry sound, this cancels a few wide **notches**, unevenly spaced, rather than a flanger's comb. The LFO sweeps them from 160 Hz up through one octave at DEPTH 0 % and six octaves (to about 5 kHz) at 100 %, and some feedback (45 %) sharpens them. Because there are only a few notches, a phaser sounds smoother and more liquid than a flanger: a swoosh rather than a jet.

Slow and deep is the classic 70s phase pedal on rhythm guitar and electric piano (*Classic Phase*, *Keys Phaser*); very slow and deep, an ambient swirl (*Slow Swirl*); in time with the groove, funk (*Funk Phase*).

TREMOLO

The level pulses up and down, like an amp's tremolo circuit. DEPTH sets how far down: 6 dB at 50 %, to silence at 100 %. The MOTION display reads it as LEVEL 0 to -6.0 dB (or 0 to -inf dB at 100 %).

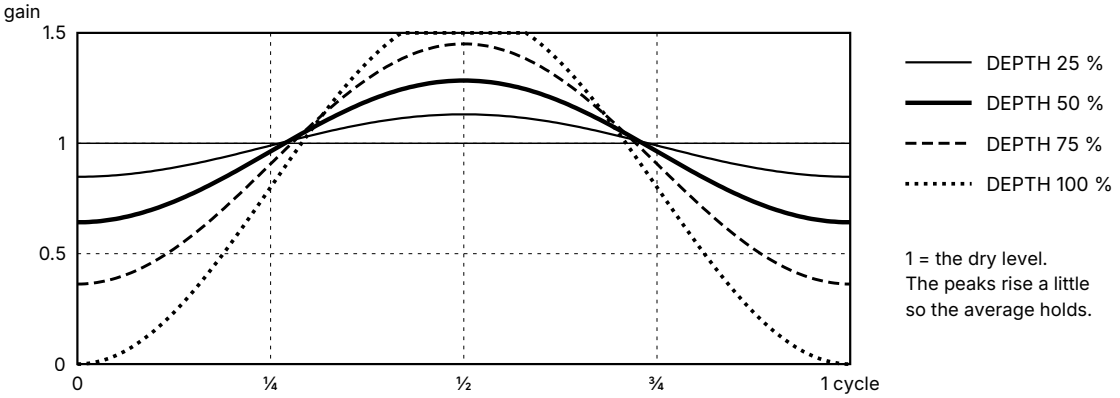


FIGURE 16 The tremolo's gain over one cycle at four depths. It starts at the top of a cycle; the deeper it goes, the more the high points are raised, so the average loudness stays close to the dry signal's.

A tremolo that only turned the sound down would make it quieter on average, more so the deeper you set it. VEIRA Mod Drive raises the high points a little to make up for most of it, so the loudness stays put as you turn DEPTH, and the peaks rise by at most about 4 dB at full depth. Both sides move together, so a stereo track stays centred.

- **Slow** (1 to 2 Hz): a breathing swell for ballads (*Slow Swell*).
- **Medium-fast** (4 to 7 Hz): the vintage amp and surf tremolo (*Amp Tremolo*, *Surf Tremolo*), and the classic electric piano (*Electric Piano Trem*).
- **Synced, full depth:** rhythmic chopping (*Eighth Pulse*, *Sixteenth Chop*, *Helicopter*).

VIBRATO

The pitch bends up and down, smoothly, like a singer's vibrato or a warped record. DEPTH sets how far: about ±0.5 semitone at 50 % and ±1 semitone at 100 % (the MOTION display reads PITCH +-0.50 st). There is **no dry signal** in VIBRATO: everything you hear is bent. That's the point: a pure vibrato. Blend it with MIX and the bent copy beats against the dry one, which turns it into a chorus of your own: *Vibe Chorus* does this at MIX 50 %, for the sound of the vintage "vibe" pedals.

The pitch is bent by a moving delay, and the slower the rate, the longer the delay a given bend needs. The delay is capped, so below about 1 Hz the deepest settings bend a little less than the read-out says. *Tape Wow* (0.6 Hz) uses that gentle range for an old tape machine's drift.

RATE

RATE sets how fast the LFO runs, from 0.05 Hz (one cycle every 20 seconds) to 10 Hz (ten cycles a second). The knob is spread so that 1 Hz sits at the top, with as much travel for the slow sweeps below it as for the fast pulses above. The knob shows two decimals under 1 Hz (0.25 Hz) and one above (4.5 Hz).

As a rule: **chorus, flanger and phaser** sound best slow (0.1 to 1.5 Hz), where the movement is a sweep; **tremolo and vibrato** sound best faster (3 to 7 Hz), where it is a pulse or a shimmer. Fast chorus and slow tremolo are effects in themselves.

Turned while the music plays, the rate glides to its new speed without a jump. With SYNC on, RATE becomes a note value: see *Modulation in time*.

DEPTH

DEPTH sets how far the LFO swings, from 0 to 100 %; the table above lists what that means for each mode, and the MOTION display spells it out as you turn it (DELAY, SWEEP, LEVEL or PITCH). It glides over about 60 ms.

The level stays. Chorus, flanger and phaser change the loudness as they mix copies with the dry sound, by different amounts at different depths. VEIRA Mod Drive trims each mode at each depth so that its loudness matches the sound going into it. Measured on strummed chords, every mode at every depth stays within 0.7 dB:

MODE	DEPTH 0 %	50 %	100 %
CHORUS	+0.1 dB	−0.1 dB	0.0 dB
FLANGER	−0.4 dB	−0.2 dB	+0.2 dB
PHASER	−0.6 dB	−0.1 dB	−0.1 dB
TREMOLO	0.0 dB	+0.1 dB	+0.2 dB
VIBRATO	0.0 dB	0.0 dB	0.0 dB

So you can switch modes and turn DEPTH without riding the fader.

Switching MODE

A MODE change while the music plays crossfades from the old mode to the new over 60 ms: no click, no gap. MODE can be automated, so a verse can chorus and a chorus can phase.

MIX and OUTPUT

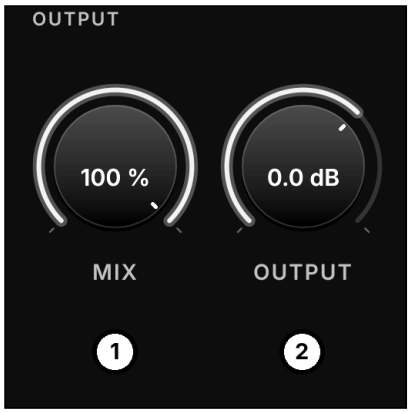


FIGURE 17 1 MIX and 2 OUTPUT.

Control	Range	Default	What it does
MIX	0 to 100 %, in 1 % steps	100 %	The effect (drive, tone and modulation) against the dry signal. 0 % is the dry signal only.
OUTPUT	−24 to +12 dB, in 0.1 dB steps	0.0 dB	The level going out, after the blend.

MIX

MIX blends the whole effect, drive and modulation together, with the dry signal, sample for sample. Because the dry signal is delayed by exactly the plug-in's latency, the blend never colours the sound with phasing of its own.

CHORUS, FLANGER and PHASER already mix the dry sound with their moving copies inside the mode, so at MIX 100 % they sound complete; lowering MIX makes them subtler (*Gentle Flange* at 70 %, *Subtle Thickener* at 60 %). For TREMOLO, a lower MIX makes the dips shallower. For VIBRATO, which has no dry signal of its own, MIX 50 % turns the vibrato into a chorus.

MIX is also a parallel drive: at 50 to 80 % with plenty of DRIVE, the clean signal keeps the attack and the definition while the driven one adds thickness. At exactly 0 % the output is the input, bit for bit, delayed by the latency. MIX glides over 20 ms.

OUTPUT

OUTPUT sets the level after everything else, from −24 to +12 dB. Because the drive and every mode keep the input's loudness, you rarely need it: the factory presets use it only to fine-tune by a dB or so (and *Vibe Chorus* by +3.4 dB, to make up for what the half-and-half vibrato blend cancels). Use it to match bypass exactly, or to trim the track into your mix. It glides over 20 ms.

Modulation in time

SYNC

With SYNC off, the LFO runs at the RATE you set, in Hz, and where it is in its cycle depends on when you pressed play. With SYNC **on**, two things change:

- **The rate follows the song's tempo**, as a note value: one cycle of the modulation lasts a note of that length. 1/4 is one cycle per beat; 1/1 one per bar (in 4/4); 2/1 one every two bars; 1/32 eight per beat.
- **The cycle is locked to the song's position.** While the song plays, the plug-in reads where it is in the song and sets the LFO there, so a cycle always starts on the same beat. Every bar moves the same way, every time you press play, wherever you start playback, and in a bounce. Tempo changes are followed at once.

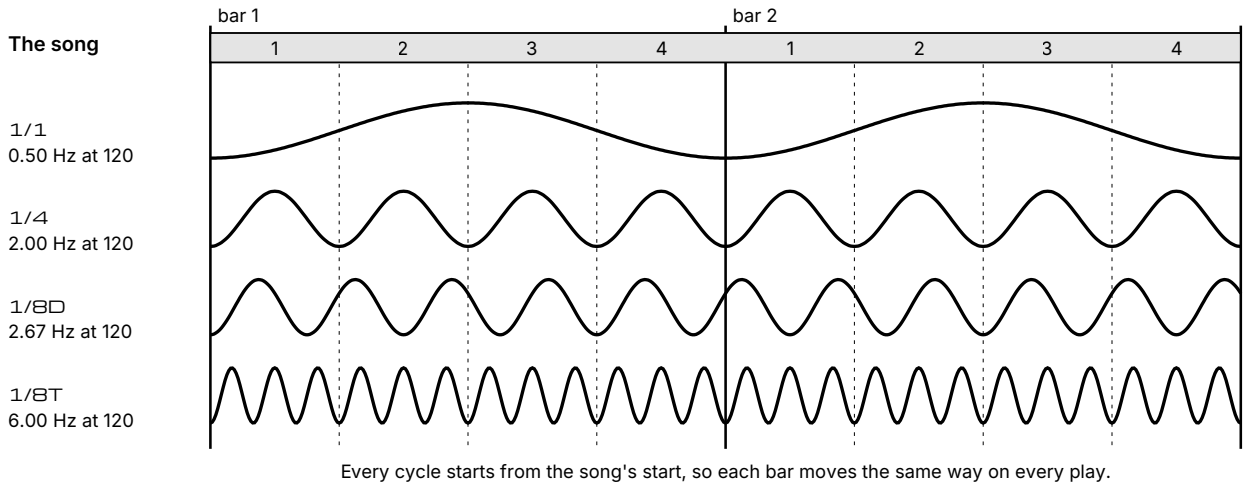


FIGURE 18 Four note values over two bars of 4/4: each cycle starts at the song's start and repeats exactly with the bars (or, for the dotted and triplet values, with the beat pattern they share with the bars).

The note values, with their rate at 120 BPM:

RATE	Cycle	At 120 BPM	RATE	Cycle	At 120 BPM
2/1	2 bars	0.25 Hz	1/8D	¾ beat	2.67 Hz
1/1	1 bar	0.50 Hz	1/8	½ beat	4.00 Hz
1/2	2 beats	1.00 Hz	1/8T	⅓ beat	6.00 Hz
1/2T	1⅓ beats	1.50 Hz	1/16D	⅜ beat	5.33 Hz
1/4D	1½ beats	1.33 Hz	1/16	¼ beat	8.00 Hz
1/4	1 beat	2.00 Hz	1/16T	⅙ beat	12.00 Hz
1/4T	⅔ beat	3.00 Hz	1/32	⅛ beat	16.00 Hz

"D" is dotted (one and a half times as long), "T" is triplet (two thirds as long). The MOTION display shows the note value and what it comes to in Hz at the song's tempo, for example [RATE 1/4 2.00 Hz at 120 BPM]. Synced rates can go faster than the 10 Hz the free [RATE] reaches: [1/32] at 140 BPM is nearly 19 Hz, an effect rather than a pulse.

When the song is stopped, the synced LFO keeps running at the tempo's rate, so you hear the effect while you tweak; it snaps back to the song's position as soon as you press play.

> **Tip:** Synced, slow modes follow the arrangement: a flanger or a chorus at [2/1] or [1/1] rises and falls with each phrase (*Through Zero Feel*, *Bar Chorus*). Synced, fast modes become rhythm: a tremolo at [1/8D] makes the dotted-eighth pulse of a delay without the echoes (*Dotted Trem*).

Stereo and mono

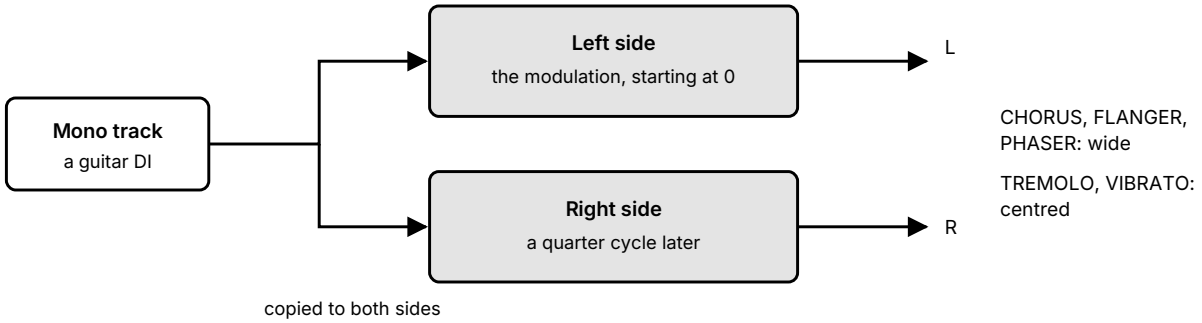


FIGURE 19 On a mono track with a stereo output, the guitar is copied to both sides; CHORUS, FLANGER and PHASER then move the two sides a quarter cycle apart, so the sound spreads wide.

VEIRA Mod Drive runs in three ways:

- **Stereo in, stereo out.** Each side is processed on its own (the drive measures the louder of the two, so both are driven the same). In [CHORUS], [FLANGER] and [PHASER] the right side's LFO runs a quarter cycle behind the left's, which widens the sound; [TREMOLO] and [VIBRATO] move both sides together, so the image stays centred.
- **Mono in, stereo out.** On a mono guitar or keys track, insert VEIRA Mod Drive as a mono-to-stereo plug-in (Logic Pro calls it *Mono → Stereo*; in Pro Tools, a mono/stereo insert; in most other DAWs, it's what happens when you put a stereo effect on a mono track). The input is copied to both sides, then processed as stereo: a mono DI comes out as a wide stereo chorus, flanger or phaser. Measured on a mono guitar, the side (the difference between left and right) sits 3 to 9 dB under the mid: clearly wide, and still solid in mono.
- **Mono in, mono out.** One side only: the effects sound as they do on the left side, and nothing is lost when the mix is folded to mono.

Displays

The MOTION display

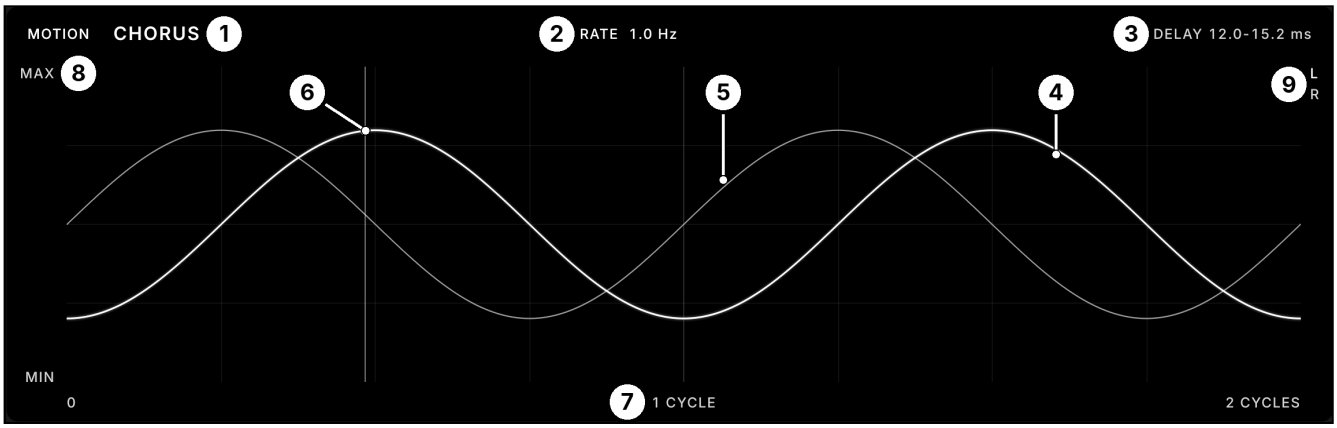


FIGURE 20 The MOTION display with the *Init* preset: 1 the [MODE], 2 the [RATE], 3 what [DEPTH] sweeps, 4 the left side's movement (amber on screen, the heavier line), 5 the right side's (grey, the thinner line), 6 where the modulation is now, 7 the time axis, two cycles, 8 the ends of the sweep and 9 the key to the two lines.

The MOTION display draws **two cycles** of the modulation: what the LFO does to the sound over time, from left to right, as set by [MODE], [RATE] and [DEPTH]. It doesn't scroll: the picture changes only when you change a setting, and a **playhead** moves through it.

- **The top line** reads, from the left: the [MODE] 1 (amber, in larger letters), the [RATE] 2 (in Hz, or with [SYNC] on, the note value and its Hz at the song's tempo), and on the right, what [DEPTH] sweeps 3 : [DELAY 12.0-15.2 ms] for [CHORUS], [DELAY] and [FEEDBACK] for [FLANGER], [SWEEP 160 Hz-1.81 kHz] for [PHASER], [LEVEL 0 to -6.0 dB] for [TREMOLO], [PITCH +-0.50 st] for [VIBRATO].
- **The lines** show the movement. The **left side** 4 is drawn in amber, the heavier, brighter line with a soft glow; the **right side** 5 in grey, a thinner, dimmer line. Without colour: the heavy line is the left. In [CHORUS], [FLANGER] and [PHASER] you see both, a quarter cycle apart; in [TREMOLO] and [VIBRATO], and on a mono track, only the left, because the sides move together.
- **The playhead** 6 is a vertical line with a dot on the left side's line: where the modulation is right now, within the first cycle.
- **The time axis** 7 is marked [0], [1 CYCLE], [2 CYCLES]. At 1 Hz a cycle is one second; at 0.2 Hz, five.
- **The vertical scale** 8 runs from [MIN] to [MAX] (the shortest to the longest delay, the lowest to the highest phaser frequency, the pitch at its lowest and highest), or [LOW] to [FULL] for [TREMOLO]. A bigger [DEPTH] draws a taller wave.
- **The key** 9 reminds you that [L] is the amber line and [R] the grey one.

Hover over the display for a short explanation.

What to look for: the shape tells you the kind of movement (a smooth sine for CHORUS, TREMOLO and VIBRATO, a straight-sided triangle for FLANGER and PHASER), the height how deep it is, and the playhead how fast it moves. With SYNC on and the song playing, the playhead returns to the start of the first cycle on the beat the note value implies, which is an easy way to check that your DAW is passing its position to the plug-in.

Here are two of the other modes, with the factory presets *Phaser* ▸ *Funk Phase* (PHASER, SYNC 1/4) and *Tremolo* ▸ *Sixteenth Chop* (TREMOLO, SYNC 1/16, DEPTH 100 %), at 120 BPM:

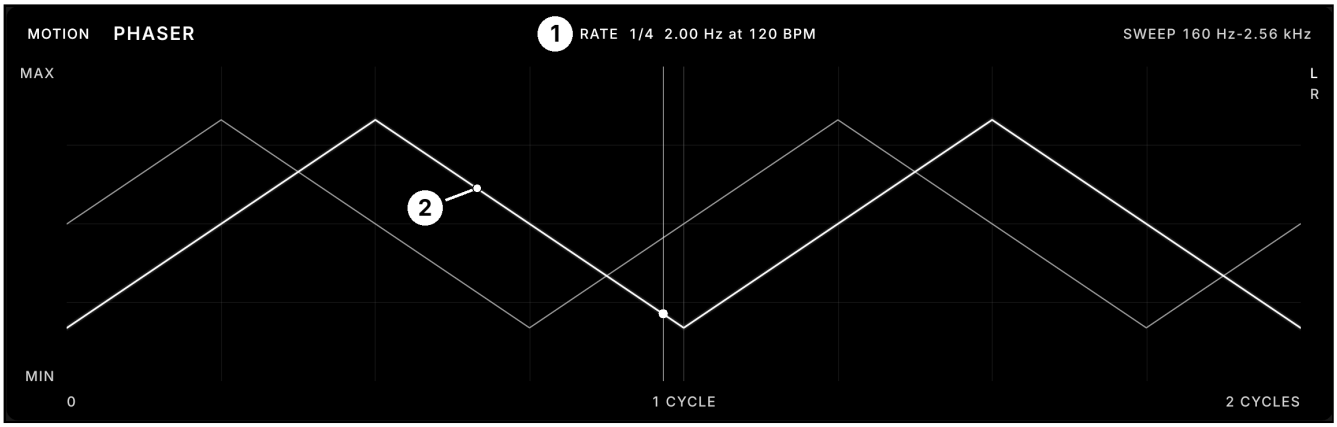


FIGURE 21 *Funk Phase*: 1 RATE 1/4 2.00 Hz at 120 BPM, with SWEEP 160 Hz-2.56 kHz at the right, and 2 the triangle of the phaser's sweep, the two sides a quarter cycle apart.

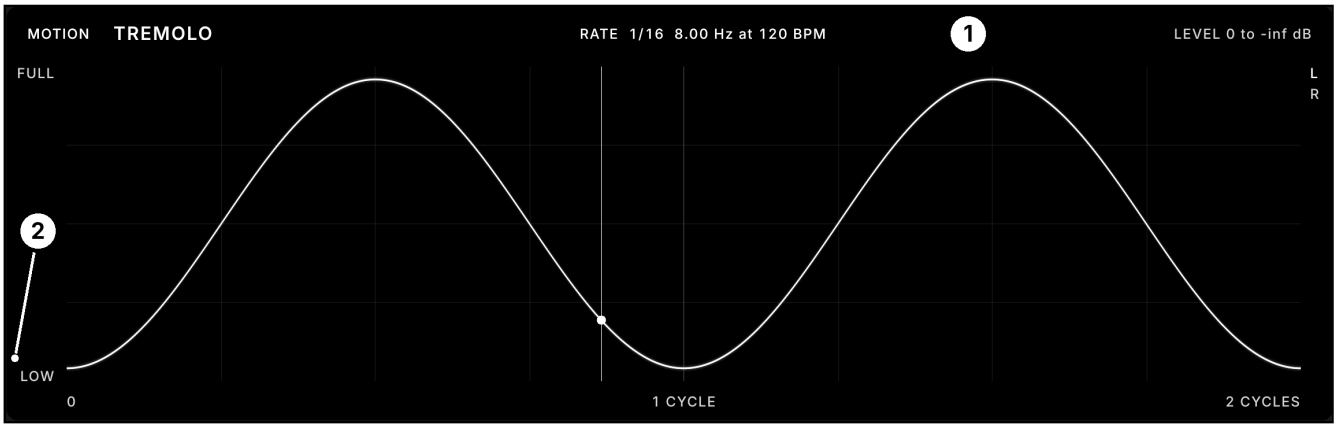


FIGURE 22 *Sixteenth Chop*: 1 LEVEL 0 to -inf dB (full depth) and 2 the scale's FULL and LOW ends; one line only, because the tremolo moves both sides together.

The DRIVE meter

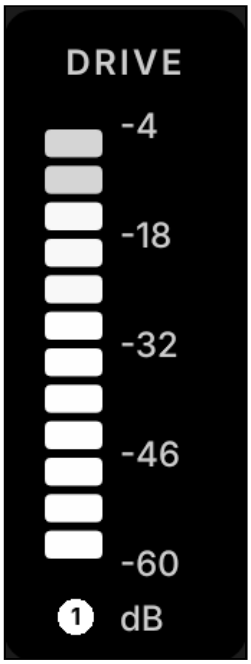


FIGURE 23 ❶
The DRIVE meter, with DRIVE at 85 %.

The DRIVE meter is a column of twelve lamps, scaled from −60 dB at the bottom to −4 dB at the top. It shows **how much the drive changes the signal**: the energy of what the curve adds or takes away (the harmonics, the rounded peaks), against the energy of the signal itself, averaged over about a tenth of a second. It reads the drive alone, before the AUTO GAIN, TONE and the modulation.

The lower seven lamps are green, the next three orange and the top two red (in black and white: the colours run from the bottom up, so read the height). The reading rises quickly and falls back over about 0.3 seconds. At DRIVE 0 % it is dark.

As a guide, from the measurements on strummed chords: around **−25 dB** (two or three lamps) is warmth you feel more than hear (DRIVE 10 %); **−12 dB**, halfway up, a clear crunch (30 %); **−5 dB** a heavy drive (50 %); the top lamps a fuzz (from about 70 %). The red lamps are not a warning: the drive can't clip your track, and a fuzz lives up there.

Hover over the meter for a short explanation.

Meter bridge (IN | OUT)

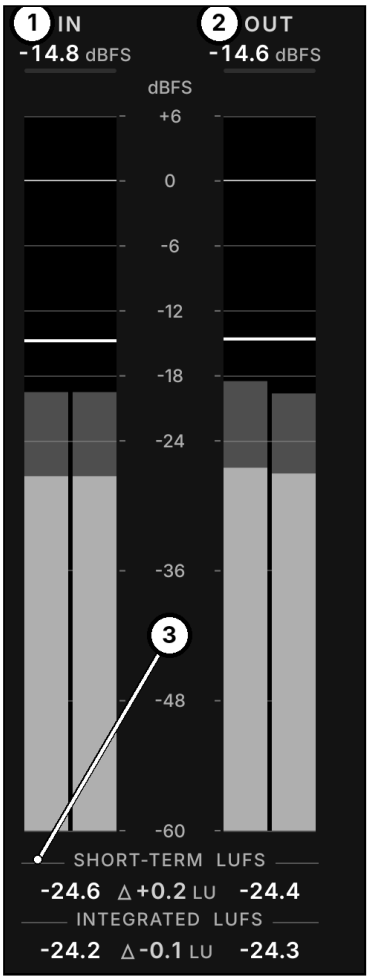


FIGURE 24 The meter bridge: 1 input and 2 output level, 3 short-term and integrated loudness with the OUT − IN difference.

VEIRA Mod Drive's meter bridge is the standard one, measured on the plug-in's input and output. Because the drive and every mode keep the input's loudness, the Δ readings should sit close to 0 LU at any setting (+0.2 and −0.1 LU in the picture); a larger difference usually means OUTPUT has been moved. The output's peaks can sit a few dB under the input's with plenty of DRIVE (the curve rounds them), or up to a few dB over them in CHORUS, FLANGER and PHASER, where the delayed copies add up where they line up. On a mono track with a stereo output, the IN meter's two bars show the same mono signal.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA Mod Drive 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.

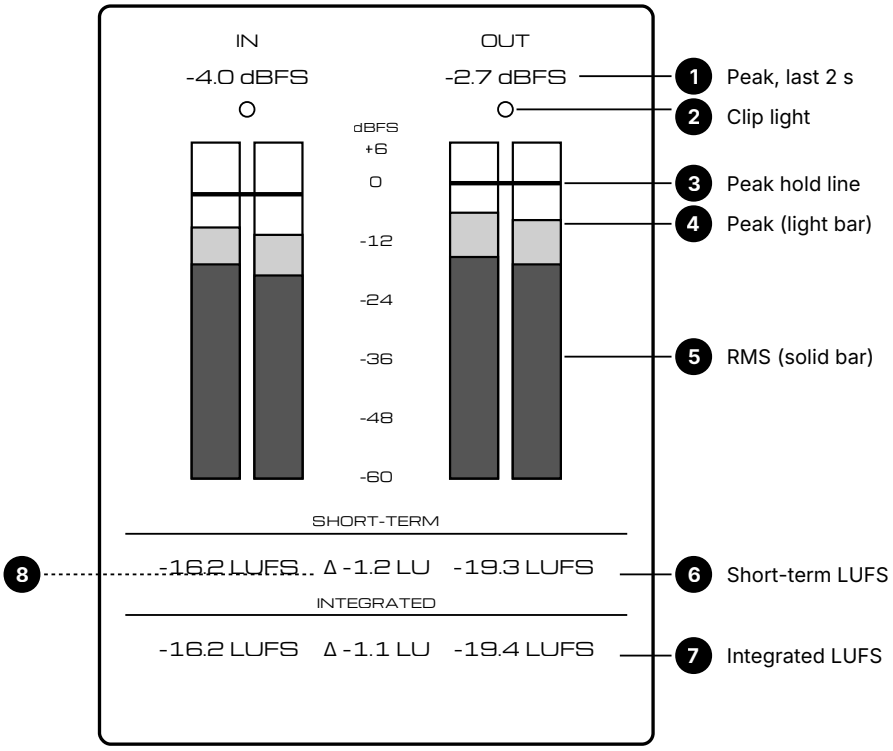


FIGURE 25 The meter bridge, left and right channel bars for input and output, with loudness below.

- 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 Mod Drive 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.

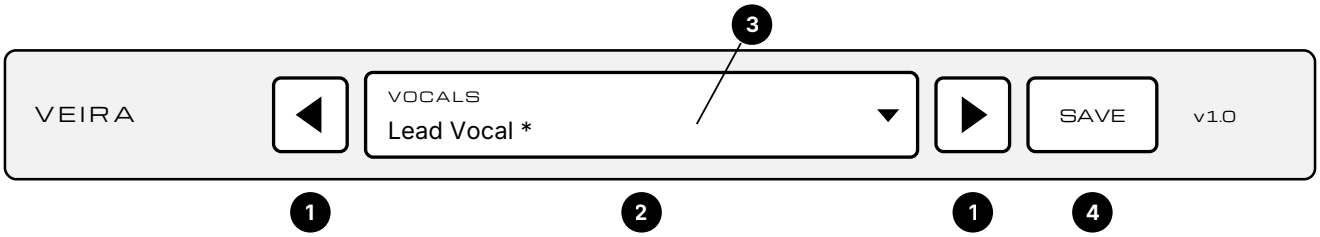
Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Presets

VEIRA Mod Drive comes with **40 factory presets** in 10 folders. Each one is a starting point made for a real job. Load one close to what you need, then adjust the first control its note mentions.

The preset browser

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



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

FIGURE 26 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 Mod Drive 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 Mod Drive/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Mod Drive\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
Chorus	Clean Chorus, Wide Chorus, Eighties Chorus, Driven Chorus, Subtle Thickener
Flanger	Jet Flanger, Metallic Flange, Gentle Flange, Through Zero Feel
Phaser	Classic Phase, Funk Phase, Slow Swirl, Driven Phase
Tremolo	Amp Tremolo, Surf Tremolo, Eighth Pulse, Slow Swell, Sixteenth Chop
Vibrato	Gentle Vibrato, Warble, Vibe Chorus, Tape Wow
Drive & Mod	Crunch Chorus, Fuzz Phase, Overdrive Tremolo, Lead Flanger, Warm Drive Only
Synced	Bar Chorus, Half Bar Phase, Dotted Trem, Triplet Vibrato
Keys & Synths	Electric Piano Trem, Keys Phaser, Organ Chorus, Pad Widener
Creative FX	Broken Radio, Helicopter, Seasick, Jet Fuzz

Levels. The presets were measured at 120 BPM on guitar DI lines (strummed chords, a picked riff, clean arpeggios) and on keys. Every preset kept the input's loudness within 1 dB on the material it was made for (most within 0.2 dB). Their peaks stay within 3 dB of the input's without modulation, 4 dB with TREMOLO and 6 dB with CHORUS, FLANGER, PHASER and VIBRATO. Because the drive follows your playing's own level, the presets drive your track the same whatever level it was recorded at.

Each preset is a full setting of the eight controls, and its note in the preset menu says what it's for and what to turn first. The folders:

- **Chorus** to **Vibrato**: one folder per mode, clean and subtle first, then deeper, faster and driven.
- **Drive & Mod** puts the drive up front, ending with *Warm Drive Only* (TREMOLO at DEPTH 0 %: just the drive and the tone, no movement).
- **Synced** moves in time with your song, **Keys & Synths** is made for electric piano, organ and pads, and **Creative FX** goes over the top.

Recipes

Step-by-step starting points. Play for a couple of seconds before you judge (the drive learns your level), and compare with bypass now and then: the level stays the same, so bypass is a fair comparison.

A wide clean chorus from a mono DI

1. Insert VEIRA Mod Drive on the guitar track as a mono-to-stereo plug-in (see *Stereo and mono*) and load **Chorus ▸ Wide Chorus** (DRIVE 0 %, CHORUS, 0.5 Hz, DEPTH 75 %).
2. Pan the track to the centre. The two sides now move apart: the guitar fills the stereo field.
3. For a subtler width that doesn't sound "chorused", go to **Subtle Thickener** (0.35 Hz, DEPTH 25 %, MIX 60 %). Check the mix in mono: the guitar should stay solid.

Crunch rhythm with movement

1. Load **Drive & Mod ▸ Crunch Chorus** (DRIVE 55 %, CHORUS, 0.9 Hz, DEPTH 45 %).
2. Set DRIVE for the amount of break-up you want: watch the DRIVE meter sit around −5 to −3 dB for a solid crunch. The level won't change as you turn it.
3. Turn TONE a few steps brighter if the guitar hides behind the drums, darker if it fizzes.
4. Try the other modes at the same drive: PHASER for a 70s swirl, TREMOLO for a vintage amp (*Overdrive Tremolo*).

A funk phaser in time with the groove

1. Load **Phaser ▸ Funk Phase** (PHASER, SYNC 1/4, DEPTH 60 %). Make sure your DAW's tempo is the song's tempo.
2. Press play: the phaser sweeps once per beat, and the same way on every beat.
3. For a slower swirl that follows the bar, set RATE to 1/2 or 1/1 (*Half Bar Phase* is twice a bar).

Rhythmic tremolo for a pad or chords

1. Load **Tremolo ▸ Eighth Pulse** (TREMOLO, SYNC 1/8, DEPTH 80 %) on sustained chords or a pad.
2. For the dotted-eighth pulse of modern pop guitar, set RATE to 1/8D (*Synced ▸ Dotted Trem*).
3. For hard gating, 1/16 at DEPTH 100 % (*Sixteenth Chop*); lower DEPTH until the pulse sits in the groove rather than chopping it.

Classic keys

1. On an electric piano, load **Keys & Synths ▸ Electric Piano Trem** (TREMOLO, 4.5 Hz, DEPTH 50 %), or for the other classic, **Keys Phaser** (PHASER, 0.4 Hz).
2. On an organ, **Organ Chorus** (CHORUS, 6 Hz, a little drive) adds the fast, rich swirl of a chorus-vibrato; raise DRIVE for an overdriven organ.

3. On a mono synth pad, **Pad Widener** (mono-to-stereo, CHORUS 0.25 Hz, DEPTH 70 %) spreads it across the stereo field.

A lo-fi, warbling part

1. Load **Vibrato ▸ Tape Wow** (VIBRATO, 0.6 Hz, DEPTH 70 %, TONE dark) on keys or a clean guitar: an old tape machine's drift.
2. For a faster, seasick wobble, **Warble** (3 Hz); for over the top, **Creative FX ▸ Broken Radio** (fuzz, dark, a fast vibrato).
3. Blend with MIX to taste: at 50 % the vibrato becomes a chorus (*Vibe Chorus*).

Specifications

Type	Drive and modulation: a drive (with tone tilt) into a chorus, flanger, phaser, tremolo or vibrato, in one unit
Channels	Mono, stereo, and mono in to stereo out (the input copied to both sides, then processed as stereo)
Latency	64 samples at 44.1 to 96 kHz (1.3 ms at 48 kHz); none at 176.4 and 192 kHz. Constant, reported to the host for delay compensation
Transparency	MIX 0 % and bypass: the output is the input delayed by the latency, bit for bit
Level	The drive's loudness taken back (a fixed makeup and AUTO GAIN, ±12 dB, over about 1.5 s while playing); every mode trimmed to its input's loudness. Factory presets within 1 dB of the input's loudness
DRIVE	0 to 100 % in 1 % steps (default 30 %). A soft, slightly asymmetric curve, its input from −18 to +30 dB against the playing's own level; computed at 4x (2x at 88.2 and 96 kHz) with antiderivative anti-aliasing; a low-pass after it from 16 kHz (0 %) to 4.5 kHz (100 %). Out at 0 %, fading in over the first 3 %. Glides over about 60 ms
TONE	0 to 100 % in 1 % steps, shown Dark 50 to Flat to Bright 50 (default Flat). Two shelves around 800 Hz in opposite directions, up to ±4 dB. Glides over about 60 ms
MODE	CHORUS (two voices, 12 ms + up to 5 ms, sine), FLANGER (0.4 ms + up to 6 ms, feedback 35 to 80 %, triangle), PHASER (six all-pass stages from 160 Hz over 1 to 6 octaves, feedback 45 %, triangle), TREMOLO (level, to silence at 100 %, sine), VIBRATO (pitch, up to about ±1 semitone, sine, no dry); default CHORUS. Changes crossfade over 60 ms
RATE	0.05 to 10 Hz (default 1.0 Hz); with SYNC, 2/1, 1/1, 1/2, 1/2T, 1/4D, 1/4, 1/4T, 1/8D, 1/8, 1/8T, 1/16D, 1/16, 1/16T, 1/32 (default 1/4), locked to the song's position while it plays
SYNC	Off / on (default off)
DEPTH	0 to 100 % in 1 % steps (default 50 %). Glides over about 60 ms
Stereo	CHORUS, FLANGER, PHASER: the right side a quarter cycle behind the left; TREMOLO, VIBRATO: both sides together
MIX	0 to 100 % in 1 % steps (default 100 %): a linear blend with the dry signal, sample-aligned. Glides over 20 ms
OUTPUT	−24 to +12 dB in 0.1 dB steps (default 0.0 dB). Glides over 20 ms
Displays	MOTION (two cycles of the modulation, both sides, playhead; MODE, RATE and sweep read-outs); DRIVE meter (12 lamps, −60 to −4 dB)
Metering	IN and OUT meters (sample peak, RMS); short-term and integrated loudness per ITU-R BS.1770-4 / EBU R 128
Presets	40 factory presets in 10 folders, plus your own
Window	1440 × 780 points; resizable from 75 % to 200 %, saved with the session
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vmdr

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 Mod Drive 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**.

My mono guitar stays mono. The plug-in is on a mono insert with a mono output. Insert it as a mono-to-stereo plug-in (in Logic Pro, choose *Mono → Stereo*), or put it on a stereo track or bus. Only CHORUS, FLANGER and PHASER widen the sound; TREMOLO and VIBRATO stay centred by design.

SYNC doesn't follow my song. The synced LFO takes the tempo and the position from your DAW while the song plays. Check that the project's tempo is set to the song's tempo, and that the transport is running (when it's stopped, the LFO runs free at the tempo's rate). In the standalone app there is no song: synced rates run at 120 BPM.

The drive gets louder or quieter. It shouldn't: the drive's loudness is taken back, and the level should stay within about half a dB as you turn DRIVE. Right after you start playing, AUTO GAIN needs a second or two to measure; if a part starts on a single loud chord, start playback a bar earlier. Check OUTPUT and the Δ readings on the meter bridge.

The first note sounds different. The drive learns your level from the first 60 ms of playing, then settles over a second and a half. Start playback or the bounce a bar before the part.

I want the drive without modulation. Choose TREMOLO and set DEPTH to 0 % (or load *Drive & Mod ▸ Warm Drive Only*). CHORUS, FLANGER and PHASER still move a little at DEPTH 0 %.

I want the modulation without drive. Set DRIVE to 0 %: the drive is then completely out of the signal. TONE still works, so leave it at Flat (50 %) for the plain modulation.

The flanger rings or sounds metallic. That's the feedback, which rises with DEPTH. Lower DEPTH, or lower MIX to 60 to 80 % for a softer flange.

The vibrato sounds out of tune. That's what a vibrato does: everything you hear is bent. For a gentle shimmer, lower DEPTH to 20 to 30 % and keep the rate around 5 Hz; or blend with MIX at 50 % for a chorus instead.

Can I use it on other sources? Yes: keys, synths, pads, a bass (a slow chorus or phaser, with little DRIVE), drums for a flanged or phased effect, a vocal for a lo-fi effect. The drive follows the source's own level, so it adapts.

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 selected preset and the window size are saved with your session, and every control can be automated.

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



VEIRA Mod Drive · User Manual · Version 0.2.0

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