

Ancora — Manual

Automatic stereo image correction with frequency-dependent panning & width control.

Version 1.2.4 · Version history

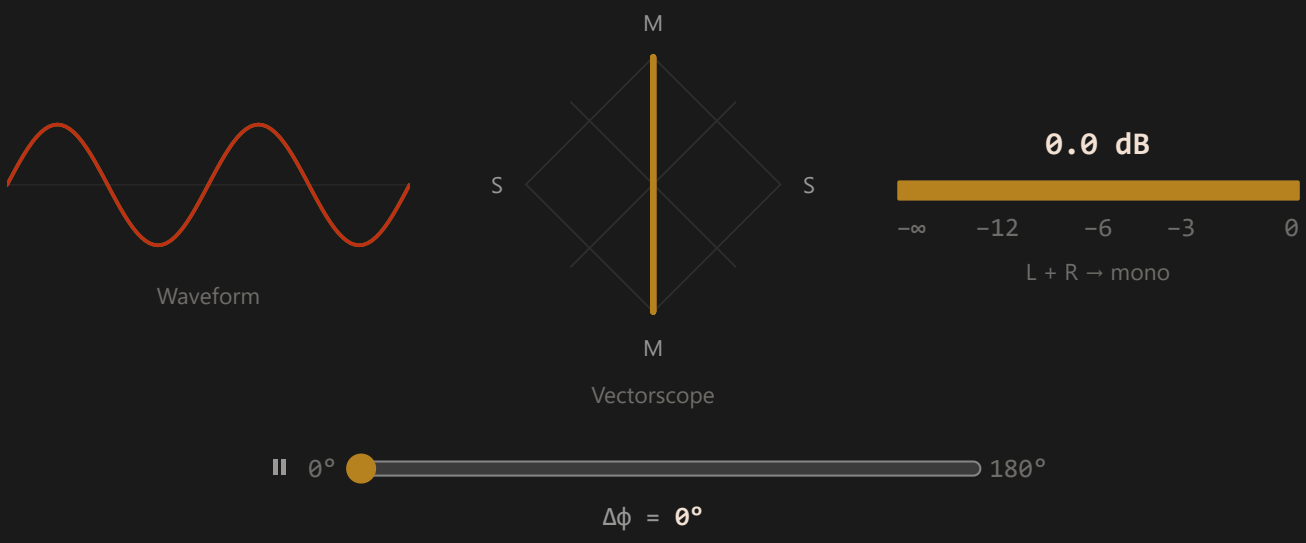
Background

Stereo gave music its space. Ever since Blumlein demonstrated stereophonic recording in the 1930s, we have been able to place sounds across a field - to give a mix width, depth and a sense of room. But everything that lives in two channels eventually has to survive being collapsed back into one: radio, phone speakers, club PAs and smart speakers all sum stereo to mono, and even a vinyl groove is cut from the mono sum and the stereo difference of the two channels.

To see what survives that fold-down and what does not, picture a single sine tone playing from both speakers. If the left and right copies are identical - same level, same phase - the tone sits dead centre and is effectively mono. From here the two channels can differ in only two fundamentally different ways, and the whole of stereo is built from them.

Panning is a level difference. Turn the right channel up and the left down and the tone moves to the right, but both channels still carry the very same waveform, perfectly in phase. The position changes; the relationship stays coherent. Summed to mono nothing cancels - a panned tone is mono-safe, it simply sits louder or quieter in the balance.

Width is a phase difference. Keep both channels at the same level but shift one slightly in time against the other, and the tone stops being a single point - it spreads wide. Width, in essence, is a phase (or timing) difference between left and right, and a small amount is exactly what gives music its sense of space. The trouble begins only when that difference grows too large: as left and right drift toward opposite phase, their mono sum shrinks, and at full antiphase they cancel completely and the tone vanishes. This is why excessive width is the real problem - the widest frequencies are precisely the ones that hollow out when a mix is folded down toward mono.



Drag the slider. At 0° the channels are identical and the vectorscope shows a single vertical line — the mix is mono-safe. At 90° the channels are uncorrelated — the cloud opens into a circle, mono drops 3 dB. At 180° the channels are anti-phase — a horizontal line, and the mono sum vanishes entirely.

Panning is the safer of the two, but not always free: on vinyl a hard-panned element feeds the same vertical groove modulation that excessive width does, so a cutting lathe struggles with both - too much low-frequency difference pushes the stylus beyond what the groove can hold, causing tracking problems and skipping. This is why mastering engineers have long kept correlation in check for clean, reliable pressings. And none of this is one number for the whole mix - it varies by frequency. A vocal may sit perfectly centred while cymbals spread wide; bass usually wants to stay tight and mono-solid while the highs can afford more air. Managing the stereo field therefore means working frequency by frequency, not with a single global width control.

The Concept



Ancora (from the Latin for 'anchor') manages the stereo field exactly that way: frequency by frequency, without fixed crossovers, analysing the image in real time. Its measurement is based on spectral Mid/Side balance rather than a traditional correlation meter, so it reads both phase relationships and panning asymmetries across the whole spectrum. Ancora shapes the result through three curves - Depth, Timing and Target - and addresses the two phenomena above with two complementary modes.

L/R mode is the **panning compressor**. It compresses excessive left/right level imbalance for a frequency, moving an off-centre element back toward its place without collapsing its width - the mix keeps its sense of space, only the balance is corrected.

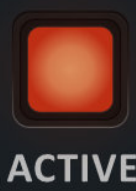
M/S mode is the **width compressor**. It compresses Side content that exceeds the Mid level, raising correlation and narrowing the image only where the phase difference has grown too large.

Target sets the threshold and Depth the amount - in compressor terms a percentage equivalent of ratio (50% behaves like 2:1, 100% like a limiter). An optional RePhase function restores the energy that narrowing would otherwise lose, keeping punch and presence intact.

The order matters. A panning imbalance also shows up as Side content, so if you reach for M/S narrowing first you pull the off-centre element toward the centre and take its width with it - you sacrifice spread that was only ever off-balance. So correct panning first in L/R mode, leaving the width untouched; whatever Side energy remains is then genuine width, which M/S mode can rein in precisely where it is excessive.

Because all of this is dynamic and level-independent, Ancora works as a true "set & forget" processor - in effect two frequency-dependent compressors in one, a width compressor in M/S and a panning compressor in L/R, taming excess where it occurs while preserving the natural spatial character of your mix. Mixes processed with Ancora often feel more stable and focused without sounding narrower.

Controls



Active

Enables or disables the Ancora processor. When disabled, the signal passes through unprocessed, allowing for quick A/B comparisons.



Depth

Sets how firmly Ancora pulls content back toward the Target threshold — in L/R mode, this centers excessive panning more aggressively; in M/S mode, it reduces over-threshold Side content more firmly. At Depth 0 no correction happens, regardless of the Target setting. Target and Depth work like a compressor: Target sets the threshold (which content gets corrected), Depth sets the amount (how hard). This main control is bidirectionally linked with the Depth curve — adjusting the slider updates all curve handles proportionally, while modifying individual curve handles updates the slider to reflect their average value.



Bands

Determines the resolution of the full-spectrum analysis engine. Higher values provide finer frequency resolution, allowing more detailed control over individual frequency regions throughout the complete spectral range. The 12-bands-per-octave setting provides a good starting point for diverse material.



Timing

Adjusts how quickly Ancora responds to changes in the audio signal. Lower values result in faster response that catches transient panning changes. Higher values create slower, smoother processing that preserves natural stereo dynamics. Like the Depth control, this slider is bidirectionally linked with the Timing curve, allowing both broad adjustments and frequency-specific fine-tuning.

> **Tip:** Match values to source material — faster settings work well for dynamic stereo effects and transient-rich material, while slower values suit more stable stereo images.



Target

Sets the target threshold in dB.

- **L/R mode:** Minimum panning difference to correct. Lower values correct smaller differences (more centered result), higher values allow more panning to remain.
- **M/S mode:** How far the Side is held below Mid. Higher values push Side further down (narrower/mono), lower values allow more Side content (wider).

  The Target dB scale is calibrated to even steps of stereo correlation. It sets a ceiling for width, a floor for correlation: a higher Target holds the Side further below Mid, raising the minimum correlation and narrowing the image. Frequency regions that are already more correlated than the threshold are left untouched.

Target	Side vs. Mid	Correlation floor
0 dB	equal	0
2.2 dB	−2.2 dB	0.25
4.8 dB	−4.8 dB	0.50
8.5 dB	−8.5 dB	0.75
90 dB	≈ none	1.0 (mono)

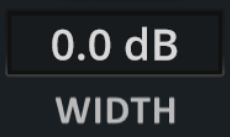
The Target control features the same intelligent bidirectional linking with its corresponding curve.



Width Pre

Determines whether the Width control is applied before or after Ancora's processing.

When enabled (Pre): Width is applied to the input signal before analysis and processing. When disabled (Post): Width is applied after Ancora's processing, allowing you to shape the stereo field independently of the correction.



Width

Controls the stereo width by applying gain to the Side signal in dB. Negative values reduce stereo width (narrower), 0 dB keeps the original width, and positive values expand stereo width (wider). Works in both L/R and M/S modes.

Channel Processing

Ancora offers two complementary processing modes for different stereo correction scenarios.

L/R 

L/R Mode

In this mode, Ancora operates on the Left and Right channels, analyzing the panning difference between them. When this difference exceeds the Target threshold, Ancora reduces it by the amount set with Depth, bringing excessively panned elements closer to center while maintaining the overall stereo field. This improves mono compatibility while preserving the stereo width.

Unlike M/S width reduction, which pulls everything toward center by attenuating the side channel, L/R mode redistributes energy between left and right for specific frequencies without changing the stereo width. If a cymbal is panned hard right and Ancora shifts the highs toward left, the cymbal moves position but remains a distinct, laterally positioned element. This preserves the mix's original sense of space and depth with a different frequency-dependent balance.

Corrections are limited to ±20 dB per band. For extreme panning, corrections fade out smoothly to avoid artifacts with hard-panned content.

> **Note:** This mode uses minimum-phase filtering with lower latency than M/S mode.

> **Note:** At extreme panning (mean inter-channel difference above 20 dB), correction softly fades out to prevent instability — fully muted at 40 dB.

> **Tip:** Ideal for correcting excessive panning on individual tracks or busses and improving overall mix mono compatibility.



M/S Mode

In this mode, Ancora processes in Mid/Side domain. It measures the relative level difference between Side and Mid signals (S–M in dB). When this difference exceeds the Target threshold, Ancora attenuates the excess Side content by the Depth amount. This allows active correlation control, shaping the stereo correlation into your desired range.

> **Note:** This mode uses linear-phase filtering with higher latency than L/R mode.

> **Tip:** Perfect for mastering applications requiring precise correlation control, managing excessive stereo width in the side channel, vinyl cutting preparation, or creating frequency-dependent stereo width control.

RePhase

In M/S mode, Ancora can apply phase & energy compensation to recover the natural punch and presence that would otherwise be lost when reducing Side content for narrower stereo width.



RePhase

When enabled, RePhase applies phase & energy compensation in frequency regions where Ancora's stereo width correction causes a loss of energy. Whenever Side content is reduced, some energy is lost as the out-of-phase portion of the signal partially cancels. RePhase restores this energy by dynamically realigning the phase of the uncorrelated signal to prevent the phase cancellation that would otherwise occur when summing to mono. Regions where no correction is applied remain unaffected.

> **Note:** Only available in M/S mode.



RePhase Amount

Controls the overall scaling of RePhase compensation. At 100%, RePhase restores up to 120° of phase coherence.

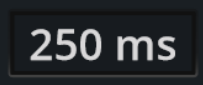
RePhase is closely linked to the Timing curve — it uses the same frequency-dependent timing to track how Ancora's correction evolves over time. The effect is most noticeable in the bass range, where energy loss from stereo width reduction is most audible. RePhase restores the natural punch and presence that would otherwise be lost in mono playback systems.

> **Note:** Only active when RePhase button is enabled and in M/S mode.

The Curve System



Ancora's unique curve system provides intuitive visual control over frequency-dependent stereo correction. Each curve type can be selected using its corresponding button, and all curves are displayed and edited directly on the spectrum analyzer.

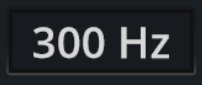


Handle Value

Shows and controls the value of the selected drag handle.

This field displays the current value of the selected handle and allows direct numeric input. The displayed value automatically updates when you drag handles in the spectrum display and is bidirectionally linked to the master sliders when changed here.

> **Note:** Only visible when a single handle is selected.



Handle Frequency

Shows and controls the frequency of the selected drag handle.

This field displays the current frequency of the selected handle and allows direct numeric input. The displayed value automatically updates when you drag handles in the spectrum display.

> **Note:** Only visible when a single handle is selected.



Depth Curve

Shapes how strongly each frequency region is corrected. Apply more correction to problematic frequency ranges (like overly wide cymbals) while maintaining natural width in others (like centered vocals).



Timing Curve

Adjusts the response speed across the frequency spectrum. Set faster times for controlling dynamic stereo effects in the high frequencies while maintaining slower, more musical processing in the low end for stable bass imaging.



Target Curve

Defines frequency-dependent correction thresholds. In L/R mode, this sets how much panning must remain untouched before correction is applied per frequency. In M/S mode, it sets the per-frequency Side–Mid threshold — the same direction as the Target slider: higher values hold the Side further below Mid (narrower/more mono), lower values let more Side through (wider).

> **Tip:** Clicking the currently selected channel-mode button (L/R or M/S) again inverts the Target curve. Each additional click toggles the inversion back and forth.

Curve Editing



The spectrum display serves as both a real-time analyzer and an interactive curve editor:

- Click and drag any handle to adjust its frequency and value.
- Double-click to add new points at specific frequencies.
- Double-click on a handle to remove it.
- Left-click and drag to create a selection rectangle around multiple handles for grouped adjustments.
- Hold **Shift** and drag horizontally to lock the value.
- Hold **Alt** and drag vertically to lock the frequency.

- Hold **Ctrl** and click to select or deselect multiple handles.
- With **Auto Curve Selection** on, hover to highlight the nearest curve and click to select it, or grab a handle to select and drag its curve in one motion. Toggle it in the context menu.
- Hold the **right mouse button** over the display to Listen — audition a sweepable band of the input, its width set by the mouse wheel. Listen can also be bound to a key in the shortcuts dialog.
- While auditioning, **left-click** to drop a matching notch on the Depth curve — four points spanning the band with its edges anchored open and the inner pair pre-selected, so a single drag sets the notch depth.

Each curve maintains between 1 and 12 active points, automatically interpolating smooth transitions between them.

Bidirectional Link

The bidirectional connection between sliders and curves employs an intelligent priority system to prevent feedback loops and ensure smooth operation:

When you adjust the main slider (Depth, Timing, or Target), the corresponding curve handles update proportionally while maintaining their relative positions. Conversely, when you modify individual curve handles, the main slider automatically reflects the average of all active points.

This system uses a priority mechanism that gives precedence to the most recent user action. Whether adjusting via the plugin GUI or through DAW automation, Ancora ensures that intended changes are applied without conflicts or unwanted feedback. For automation purposes, it is recommended to use the main sliders (Depth, Timing, Target) rather than individual curve points. Hold **Shift** while dragging the **master slider** to activate multiplicative scaling mode, preserving the relative proportions of curve points. (When dragging individual curve handles, Shift instead locks the frequency — see Curve Editing.)

> **Note:** If you would like to automate individual curve points, make sure you're not automating them together with the corresponding main slider.

Immersive & Surround

Ancora processes any channel layout from simple stereo up to 9.1.6. The stereo-image correction is applied per symmetric channel pair — the front L and R, the side and rear surrounds, the height (ceiling) channels — each inheriting the L/R or M/S mode you have selected. Centre and LFE have

no stereo pair and always pass through untouched. Surround and immersive layouts are supported in the VST3, AU and AAX versions.

By default only the front L/R pair is corrected. Additional channel sets are switched on individually, so a surround mix stays predictable and CPU is spent only where you actually want correction. All per-pair controls and meters live in the **Channels** panel, opened from the toolbar.

> **Note:** The Channels button only appears in the toolbar when the plugin is on a surround bus (more than two channels). On mono or stereo it stays hidden, and if the host narrows the bus back to stereo the panel closes on its own.



The Channels panel groups the layout into channel sets — **LR**, **Surr** (surround) and **Ceil** (ceiling). Each stereo pair shows a two-part image meter — the top bar is the pair's **original** position, the bottom bar the **corrected** result — plus its own controls:

- **On** — enables correction for the set. When off, the set passes through unprocessed.
- **Depth Scaling (D)** — scales how strongly the set's stereo pairs are corrected relative to the main Depth: 100% = full correction, 0% = none.
- **Solo (S)** — mutes all other sets so you hear only this set's channels.
- **Link (L)** — ties the set's stereo pairs together per frequency band so they share one correction, from 0% (independent) to 100% (fully linked), for a stable surround image.
- **View** — the eye button lays a set's channels onto the main display as curves, so you can see exactly what each pair is doing.

The **ALL** toggle in the panel header switches every set on at once, or back to L/R only. A **MAX / 90%** button sets the meter statistic — MAX shows the band with the largest correction, 90% the 90th-percentile band for a calmer, more representative reading.

> **Note:** In surround layouts only L and R are processed until you switch on more sets — either one at a time or with the ALL toggle.

Control Behavior



- **Reset to default** — Double-click directly on the control.
- **Edit by text entry** — Click the displayed text value, type a new value, then press Enter.

Toolbar





Undo / Redo

Use the undo/redo buttons to recall previous/next parameter changes. The exact event is shown in a tool tip.

> **Note:** certain parameter changes are not tracked by this function (e.g. "Bypass").

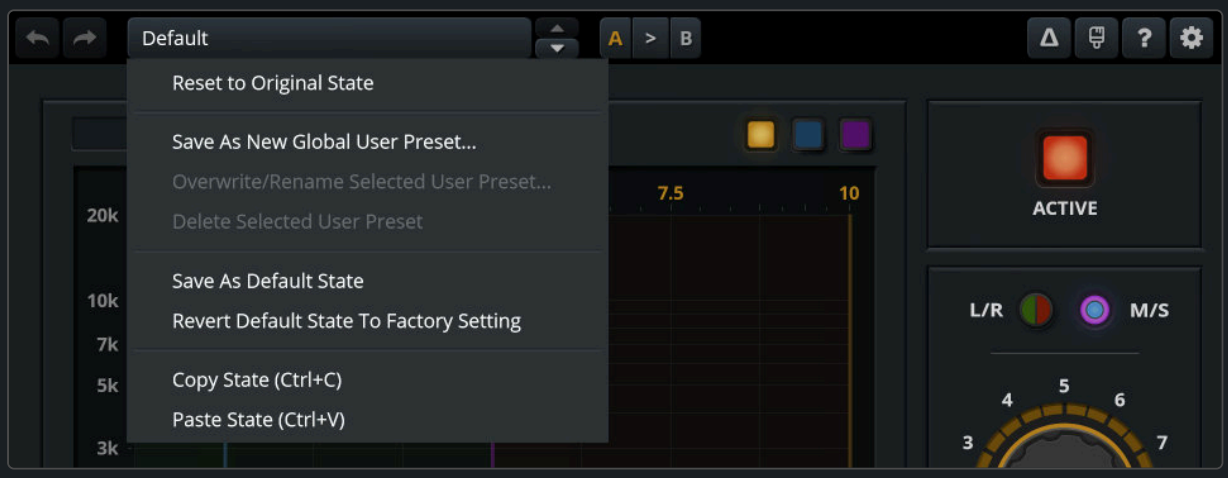
Preset Management



The preset drop-down list offers quick access to factory settings and user presets.



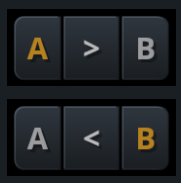
The next/previous buttons allow you to cycle through the presets. The mouse wheel over the preset box does the same, one preset per notch.



Advanced preset management options are available from the context menu (Right-click). Where an option needs a name or a confirmation, it asks inside the plugin window.

- **Reset to Original State** — resets the currently active preset to its original state.
- **Save As New Global User Preset...** — asks for a name and creates a User Preset. These persist across sessions and DAWs (saved on your machine). Total user presets are limited to 20.
- **Overwrite/Rename Selected User Preset...** — overwrite or rename presets.
- **Delete Selected User Preset** — delete the current user preset.
- **Save As Default State** — replaces the plugin's default preset with the current parameter state.
- **Revert Default State To Factory Setting** — deletes an overwritten default state.

- **Copy State (Ctrl+C)** — copies the current control states to the clipboard. Apply across instances and hosts using Paste State.
- **Paste State (Ctrl+V)** — pastes the control states from the clipboard.



A/B Control

A and **B** are two parameter states to switch between. They start *linked*: every change writes to both, so B holds whatever A holds until you separate them — and the first press on B is what separates them. A keeps your edits, B falls back to the state a freshly loaded instance has. That is the comparison the pair exists for: what you built against what the plugin does untouched.

Between them sits a single copy arrow, and it always points the way the copy goes: while A is active it copies A into B, while B is active it turns round and copies B into A.

Right-click **A** or **B** for **Reset A to Initial State** or **Reset B to Initial State**. It puts that one slot back where a fresh instance starts, without switching to it, so you can clear the slot you are not listening to. Undo takes it back.

That starting point follows your own saved default state, not the factory one — “untouched” means a fresh instance as *you* have set it up. Once the two are separated, B is an ordinary second state and behaves like A.



Help

The dynamic help mode offers detailed information about the various elements of the user interface. Click "?" to activate the online help and move the mouse cursor over the control of interest. A small info bubble will appear displaying the function and details of the item. Help mode can also be switched on from Settings → Help → **Help on the interface**; a bubble at the "?" button then confirms it for a few seconds. Click "?" again to leave help mode.



Channels

Opens and closes the Channels panel for surround and immersive layouts: per-set controls and meters, described under Immersive & Surround.

> **Note:** This button only appears in surround setups. It shows when the plugin sits on a bus with more than two channels, and stays hidden on mono or stereo.



Delta Mode

Toggles Delta Mode on or off. When active, outputs only the difference between the original and processed signals, letting you hear exactly what Ancora adds or removes from your audio.

> **Note:** Delta Mode does not include the effects of the Width control.



Theme

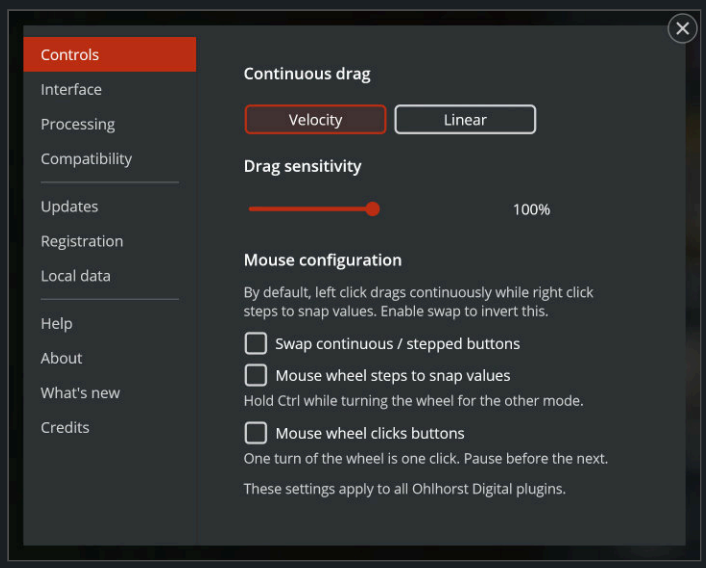
Opens the color theme selector. Choose from different visual themes to customize the plugin's appearance. Each theme offers a unique color scheme for interface elements and curves.

The selected theme is automatically synchronized across all open instances of the plugin and saved with your preferences.



Settings

The settings button opens a dialog which gives control over additional plugin options. Its pages come in three groups: Controls, Interface, Processing and Compatibility; Updates, Registration and Local data; Help, About, What's new and Credits.



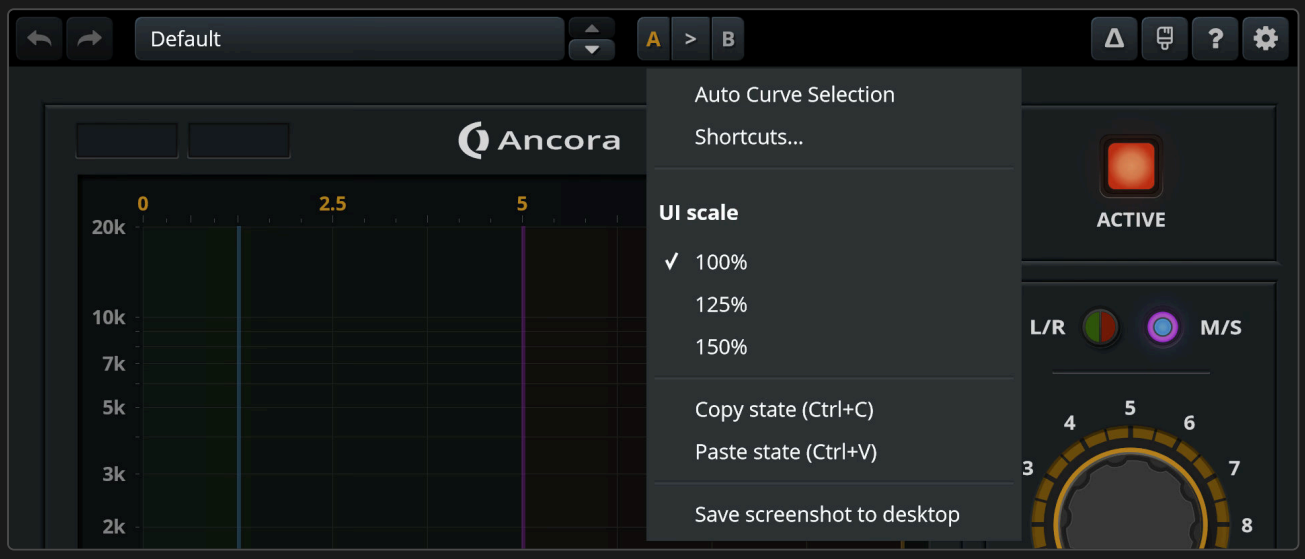
- **Controls** — how knobs and control points respond to the mouse.
  - **Continuous drag** — when **Velocity** is enabled, knob and controller movement relies on mouse speed. When **Linear** is enabled, knob and controller movement is proportional to mouse movement.
  - **Drag sensitivity** — a slider from 1% to 200% that scales how far a control moves for a given mouse movement. Double-click it to return to 100%.
  - **Mouse configuration** — Left-click & drag (Continuous) and Right-click & drag (Stepped, snapping to values) by default. **Swap continuous / stepped buttons** swaps the two mouse buttons. **Mouse wheel steps to snap values** makes the mouse wheel turn in snap steps; holding Ctrl while turning gives the other mode. **Mouse wheel clicks buttons** (off by default) lets a turn of the wheel over any button act as a click on it, in either direction; pause briefly before the next one. Inside the settings and shortcuts panels the wheel scrolls as usual. These settings apply to all Ohlhorst Digital plugins.
- **Interface**
  - **Refresh rate** — how often the meters and analysis displays redraw: Auto, 60, 90, 120 or 144 Hz. It changes nothing about what is measured. Auto follows the monitor the plugin window is on, up to 240 Hz on monitors that run that fast. The setting is shared by all OD plugins; windows that are already open pick it up the next time they are opened.

    - **VSync** — on by default. Ties every redraw to the screen's refresh: the smoothest motion, and never faster than the screen, so a rate above the screen's is capped at the screen's.
    - **UI scale** — sets the size of the plugin window, up to the largest size that fits your screen (at most 200%). The smallest size depends on the display: 75% on a standard display, down to 50% on high-resolution ones. Double-click the value to type an exact one. You can also drag the bottom-right corner of the plugin window — there is no visible handle, the cursor changes when you are over it. Only your own choice is saved: opened on a smaller screen, the plugin is drawn smaller there and the saved scale stays as it was.
    - **Quick scale presets** — the sizes the context menu offers, 100%, 125% and 150% by default.
- **Processing** — **Status** shows the plugin's latency and the sample rate.
    - **Messages** — **Show a banner when the plugin latency changes**: a short note with the new latency in samples whenever it changes, for example after a Ch Mode switch. Off by default; the setting is shared by all OD plugins.
- **Compatibility** — **Hold left click for context menu**: **Auto**, **On** or **Off**, Auto by default. Some hosts don't pass a right click on to the plugin — DaVinci Resolve is one. With this setting on, holding the left mouse button still for half a second opens the menu a right click would open at that spot, such as the context menu or the preset options. It does not act on knobs (a press there starts a drag), in the curve display, where holding and dragging already mean something, or on toolbar buttons, which act as soon as they are pressed. While it is on, the preset list opens when you release the mouse button. **Auto** switches it on in DaVinci Resolve only; the panel shows whether it is on in the host you are using. The setting applies to all Ohlhorst Digital plugins and is never saved with a preset or project; other OD plugins pick up a change the next time their window opens.
- **Updates** — under **Latest version**, **Check now** looks for a newer version, and **Download** appears with its version number when there is one. **Automatic check** looks once per day.
- **Registration** — shows who the plugin is **Registered to**, with the offline and online registration options. With **Register all OD products** ticked, the online sign-in also installs the keys of every other Ohlhorst Digital plugin your account owns; each of them is registered the next time your DAW loads it. Deregistering asks for confirmation.
- **Local data** — **Data folder** opens the folder where your preferences, presets and keys are stored, **Export** saves them as a zip file (keys optional), and **Import** restores such a file, replacing what is there. These operations affect **all** TDR plugins.
- **Help** — **Online**: this manual, **Support** — bug reports, installation, licences and other questions; the support form opens with plugin, version, format, OS and DAW filled in —

and the newsletter. **In the plugin**: the keyboard shortcuts, and help on the interface — point at any control to see what it does.

- **About** — version, format, build, authors and copyright, and the trademark notice of the plugin format in use.
- **What's new** — the changes in the installed version, taken from the plugin's changelog. The tab only appears when the changelog has an entry for that version. Earlier releases are listed in the version history.
- **Credits** — what the plugin is built with, and the testers who evaluated it.

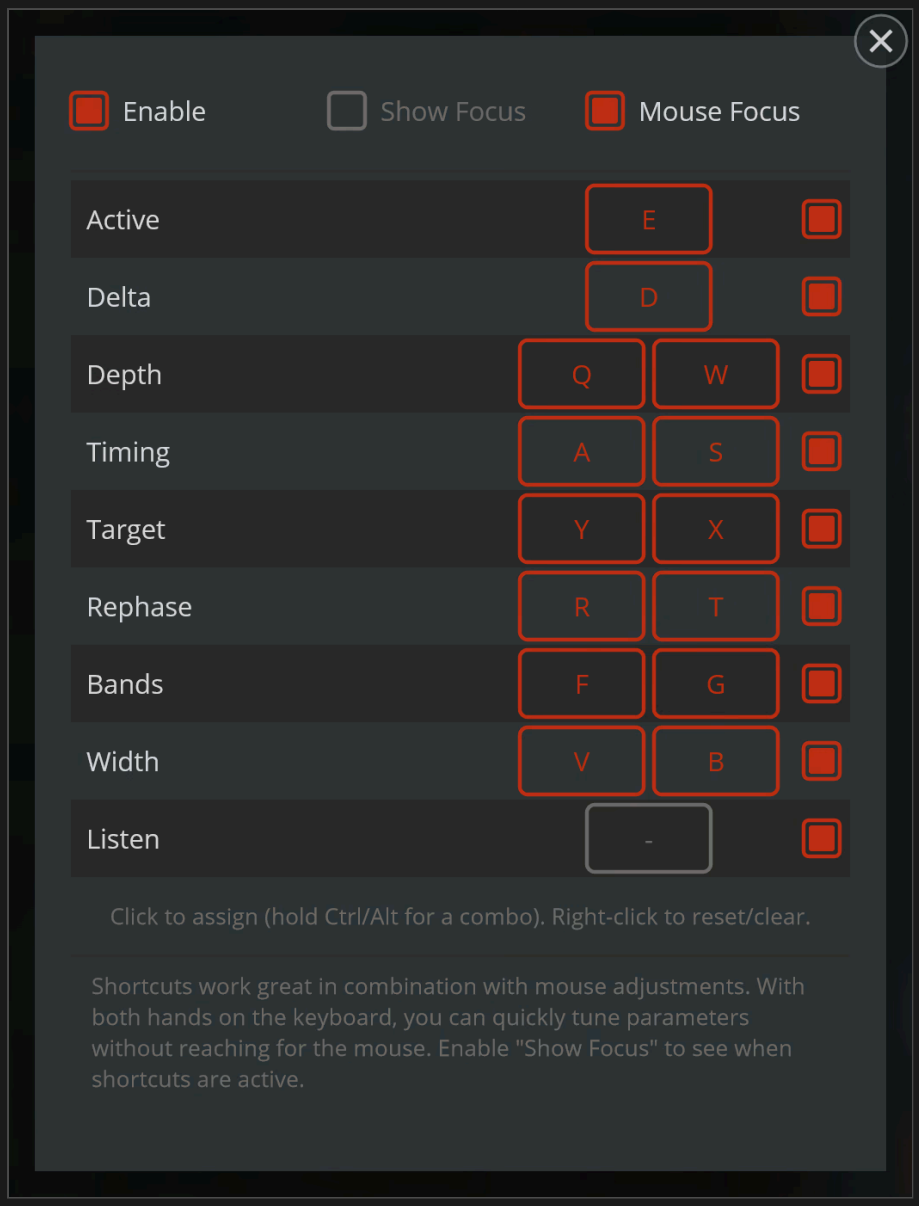
Context Menu



Additional options can be accessed using the standard context menu. This is opened by Right-clicking on a blank area anywhere in the UI. A click outside of the menu closes it.

- **Auto Curve Selection** — when enabled, hovering the display highlights the curve nearest the cursor and a single click selects it for editing. Off by default; your choice is remembered.
- **Shortcuts...** — opens the keyboard shortcuts configuration dialog.
- **UI scale** — switches to one of the quick scale presets from the settings dialog (100%, 125% and 150% by default). A preset your screen cannot fit is left out, and the greyed line *Larger scales do not fit this screen* says so.
- **Copy state (Ctrl+C)** — copies the current control states to the clipboard.
- **Paste state (Ctrl+V)** — pastes the control states from the clipboard.
- **Save screenshot to desktop** — captures the current plugin window and saves it as a PNG to your desktop.

Shortcuts



Ancora supports configurable keyboard shortcuts for quick parameter access. Open the shortcuts dialog via right-click → **Shortcuts...** anywhere on the plugin interface.

Keyboard shortcuts require the plugin to have keyboard focus. Click anywhere on the plugin interface to grab focus. When "Mouse Focus" is enabled (default), shortcuts are only active while the mouse cursor is over the plugin window — they deactivate automatically when the mouse leaves the UI, preventing accidental triggering from other windows.

- **Enable** — Enables or disables all keyboard shortcuts globally.
- **Show Focus** — A coloured border appears around the plugin when shortcuts are active.
- **Mouse Focus** — Shortcuts are only active while the mouse cursor is over the plugin window.

All shortcuts are fully rebindable. Each shortcut has its own enable checkbox. To reassign, click on the key slot in the dialog and press the desired key. You can also assign Shift or Alt on its own to

any slot, or hold Ctrl or Alt while pressing a key to bind a combination such as Ctrl+B. Right-click a slot to reset to default or clear. Conflicts are resolved automatically — assigning a key already in use will clear the previous assignment.

Default shortcuts:

- Active (toggle): `E`
- Delta (toggle): `D`
- Depth (− / +): `Q` / `W`
- Timing (− / +): `A` / `S`
- Target (− / +): `Y` / `X`
- RePhase (− / +): `R` / `T`
- Bands (− / +): `F` / `G`
- Width (− / +): `B` / `V`

Step keys increment or decrement the parameter using snap values for stepped control.

> **Note:** Keyboard shortcut availability depends on the host application. Some DAWs may intercept certain key events before they reach the plugin.

Adaptive Load

Ancora continuously monitors the incoming signal and its internal state — filter memory and the like — and releases processing resources whenever they are not needed.

On a track that only plays during part of an arrangement, Ancora detects the silence and bypasses its filters and processing entirely, dropping to almost 0% CPU within a few milliseconds. Processing resumes the moment audio returns, with no change to the sound or to your settings.

In practice: more instances per project, and shorter export times.

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