

Veld User Manual

Version 1.0.3 — multiband stereo field processor

MARULA MUSIC

Veld shapes stereo width without changing the mono component of a signal. It works in mid/side: width processing scales or creates only Side signal, while Mid remains intact. Use it on stereo tracks, buses, and master buses where a controlled, mono-compatible image matters.



The Veld 1.0.1 interface

Important for existing sessions: Veld 1.0.1 changes the parameter schema. Sessions and user presets made with 1.0 are not compatible and must be recreated or re-saved with 1.0.1. Master Width, Mono Maker, S Tilt, Pan Link, focused-band Width, Continuous phase-limiter mode, and Ambience are not part of the 1.0.1 workflow.

1. Start here

1. Insert Veld on a stereo channel, bus, or master.
2. In **Stereo Field**, drag the horizontal **WIDTH** line. 100 % is neutral; lower values narrow; 0 % makes that band mono; higher values widen.
3. Click + in the top rail to split a band when a frequency area needs separate treatment. Veld supports one to four bands.
4. For mono material, choose an engine in **Stereo Engine** and raise **AMOUNT**.
5. Enable **Phase Limiter**, starting at **FLOOR** 0.00 and **FORCE** 100.
6. Check **MONO** in the Output panel before committing the setting.

Useful starting presets: **Mono Bass** anchors low frequencies, **Master Widen** starts a multiband master-bus treatment, **Drum Anchor** centres transients, and **Synth Stereoizer** creates width from mono sources.

2. Editor at a glance

Area	Purpose
Title bar	Presets, edit history, A/B comparison, settings, about, and bypass.
Stereo Field	Spectrum, bands, crossovers, per-band width, solo, generated widening, and display modes.
Correlation strip	Output goniometer, correlation, L/R/M/S levels, and Phase Limiter.
Input	Gain, rotation, dual pan, channel swap, polarity, and post-processing pan routing.
Stereo Engine	Width creation, transient anchoring, and programme-dependent dynamic width.
Output	Stereo/mono auditioning, output trim, auto gain, and side limiting.
Status footer	Version, active band count, live correlation, and monitor mode.

The default spectrum legend is **MID** and **SIDE**. Switch to **L/R** from the field toolbar when that is more useful for diagnosis.

3. Title bar and workflow



Veld title bar

Use the central preset name to open factory and user presets; its arrows move to the previous or next entry. **SAVE** stores the current state as a user preset.

Undo and **Redo** step through edits. **A/B** holds two independent states; select A or B to compare them, then use **COPY** to copy the active state to the other slot. **BYPASS** is latency-compensated and click-free.

The settings button opens display and window preferences. The information button, product name, or Marula wordmark opens version, credit, and license information.

4. Stereo Field

Veld opens with one full-range band. Stay with one band until there is a clear reason to separate part of the spectrum.



Stereo Field display and toolbar

Make, move, and remove bands

- Hover in the field's upper rail and click **+** to split the band below the pointer. The frequency preview follows the pointer.
- A split inherits its parent settings, so splitting alone does not change sound.
- Drag a crossover grip horizontally to move it. Double-click a grip to enter an exact frequency.
- Hover a crossover and click **×**, or Alt/Option-click the grip, to merge. The lower band's settings remain.
- Crossovers stay ordered and at least an octave apart; there can be at most four bands.

Band count is intentionally not host-automatable: a split or merge also reorganises crossovers and per-band parameters. It is stored in plug-in state and presets.

Set width

Drag a band's horizontal line vertically. The card on the line gives its exact width.

Setting	Result
0 %	The band becomes mono. Use on a split low band for a firm mono bass region.
100 %	Neutral: existing side content passes unchanged.
100–200 %	The band's side component is enlarged.

Double-click a line to return it to 100 %. Shift-drag any line to move all active bands together while preserving their offsets.

Each band also has these overlays:

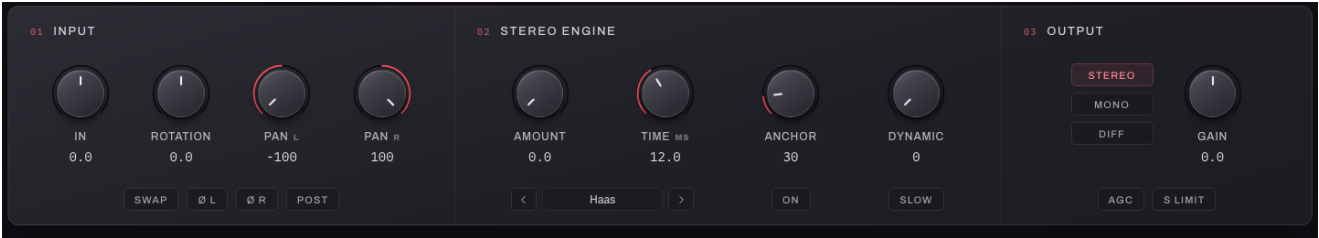
- **WIDEN** enables Stereo Engine's generated side signal in that band. Disable it on a low band to keep generated width out of the foundation.
- **S** solos the band; it appears when more than one band exists. Several bands can be soloed together.
- The small top gauge is that band's correlation. Right of centre is positive; amber to the left indicates mono-cancellation risk.
- An amber line below the requested WIDTH line appears when Phase Limiter is pulling back effective width.

Field toolbar and analysis

LIN Ø chooses linear-phase crossovers. **SCOPE** replaces the spectrum background with a large vectorscope while controls remain usable. **M/S** toggles between Mid/Side and Left/Right display.

In the vectorscope, a vertical trace is mono, a rounded cloud is wide, a diagonal lean is left/right imbalance, and a horizontal trace is anti-phase. Use it with the correlation value, not instead of it.

5. Stereo Engine



Input, Stereo Engine, and Output panels

Stereo Engine creates side information from the mono component, then injects it into active bands with **WIDEN** enabled. Take **AMOUNT** to 0 to silence it; there is no separate Off mode.

Engine	Character	Second control
Haas	One delayed copy; direct and assertive.	TIME: 1–30 ms delay. Longer values can sound doubled.
Allpass	Diffuse, allpass-based decorrelation.	No time control; the knob is disabled.
Velvet	Dense, natural velvet-noise decorrelation.	LENGTH: tail length.
Chorus	Modulated delay with audible movement.	DEPTH: delay/modulation depth.

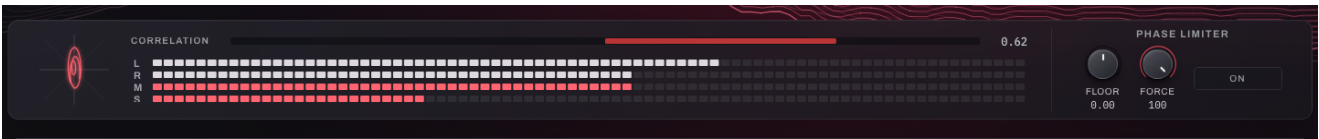
AMOUNT is the common 0–100 % injection control. Created signal is equal and opposite in left and right, so it cancels in a mono sum by design.

Anchor and Dynamic

Enable **ON** below **ANCHOR** to duck generated width around fast mid-signal transients. The 10–150 ms Anchor control sets recovery time. It helps retain kick, snare, and vocal attack in the centre while sustain stays wide.

DYNAMIC (0–100) makes width react to programme movement: active side content expands relative to its longer-term level. Choose **SLOW** for gradual movement or **FAST** for a more immediate response. Start low.

6. Phase Limiter and correlation



Correlation, level metering, and Phase Limiter strip

Phase Limiter measures each band and reduces only Side signal when correlation would fall below the target. It never changes Mid, preserving the centre and mono sum structurally.

Control	Use
ON	Enables correlation protection.
FLOOR	Correlation target from -1.00 to $+1.00$. 0.00 prevents a band settling below zero correlation. Higher values are stricter and can narrow more.
FORCE	0–100 % of the calculated correction. 100 fully enforces the target; lower settings give gentler width riding.

For strict mono-safe master-bus use, start with **ON**, **FLOOR** 0.00 , and **FORCE** 100. For a subtler response, keep Floor near zero and reduce Force to roughly 50–70 %. The field's amber effective-width line shows when protection is active and what it costs.

The correlation strip shows final output correlation from -1 to $+1$; positive values are normally mono-safe, while values below zero deserve inspection. Adjacent ladders show L, R, M, and S level. Use **MONO** and **DIFF** in Output to confirm what the meters suggest.

7. Input

Control	Function
IN	Input gain, ± 24 dB. With Auto Gain active it primarily drives Veld's processing.
ROTATION	$\pm 45^\circ$ rotation of the stereo field; use it to correct a lopsided source.
PAN L / PAN R	Independent input positions. Defaults (-100 / $+100$) are transparent. Move toward centre to narrow before processing. Alt/Option-drag either to move the other equally and oppositely.
SWAP	Exchanges left and right.
Ø L / Ø R	Inverts the selected channel's polarity. Persistent -1 correlation often signals a polarity problem.
POST	Moves dual pan after width processing, for final placement of the processed image.

8. Output and auditioning

Control	Function
STEREO	Normal output.
MONO	Sends mono sum to both outputs: the essential compatibility check.
DIFF	Sends only side/difference signal to both outputs: what disappears in mono.
GAIN	Output trim, ± 24 dB. It remains available with Auto Gain on.
AGC	Matches processed loudness to input, so comparison is less biased by level. It compensates processing, not Output Gain.
S LIMIT	Fast side-channel peak protection. It controls side level; Phase Limiter controls correlation. Leave it enabled as the final safety net.

9. Linear phase

Default crossovers are Linkwitz–Riley IIR filters with no added latency. Engage **LIN Ø** when phase-coherent crossover recombination matters more than latency, such as a mastering pass with substantially different band widths.

One-band linear phase adds no latency. With two to four bands, Veld reports the FIR latency required by the current band count and sample rate; most DAWs compensate it. Avoid it for live input monitoring, and audition transient-heavy low frequencies for possible pre-ringing.

During an offline bounce, Veld keeps the phase mode and band count that were active when processing started. This keeps the reported latency and audible delay consistent throughout the render. Choose these settings before exporting; changes made during the bounce take effect when live playback resumes or processing is prepared again.

10. Settings

Settings affect the editor, not audio processing:

- **Refresh rate:** 30, 60, or 120 Hz for meters and goniometer.
- **Spectrum response:** balance a smoother trace against faster reaction.
- **Goniometer trail:** sets vectorscope persistence.
- **Scope zoom:** enables 2× full-screen vectorscope magnification.
- **Default size:** 67 %, 80 %, 100 %, 125 %, or 150 %. Use **Use current as default** to retain present scale.
- **Reset to defaults:** restores display and window preferences.

11. Practical workflows

Mono bass

Split around the low-frequency region, set the lower band's width to 0 %, and disable its WIDEN switch. Add higher-band width only after checking MONO.

Make a mono source wider

Choose an engine, raise AMOUNT, then choose which bands accept the generated signal with their WIDEN switches. Keep it out of the low band when a stable foundation matters.

Master-bus widening

Start with a modest high-band increase. Enable Phase Limiter at 0.00 / 100, leave S LIMIT on, use AGC for level-matched comparison, and repeatedly switch STEREO, MONO, and DIFF. Engage LIN Ø only when its reported latency suits the session.

12. Specifications

Item	Value
Processing	1–4 band mid/side width and generated-side injection
Width range	0–200 % per active band
Wideners	Haas, Allpass, Velvet, Chorus
Crossover modes	Zero-latency Linkwitz–Riley or linear-phase FIR
I/O	Stereo in / stereo out
Formats	VST3, AU (macOS), CLAP
Platforms	macOS 11+ (Apple Silicon); Windows 10/11 x64
Default latency	Zero; linear-phase latency is host-reported when active

13. Activation and licensing

When licensing is enabled in the distributed build, first launch presents an activation screen. Choose **Activate** to continue in a browser, then sign in and activate a license or trial. The plug-in unlocks after completion. About displays license status and provides **Deactivate this device** when moving a paid license to another machine.