

Stereo Control

User Guide | Parish Audio

Stereo field utility for width, mono-bass management, balance, routing, polarity, and correlation monitoring.



Product page: <https://parishaudio.com/products/stereo-control>

Stereo Control is designed to shape, inspect, and manage a stereo signal without turning basic stereo tasks into a chain of separate utilities. Width, Mono Bass, Balance, monitoring, routing, polarity, metering, and correlation are available in one focused interface.

1. Quick Start

1. Insert Stereo Control on a stereo track, bus, or master where you want to manage width or inspect stereo behavior.
2. Set Width to 100% for the original stereo width. Reduce it toward 0% to narrow the image, or raise it above 100% to increase side information and widen the field.
3. Enable Mono Below when you want low-frequency stereo information centered, then choose the cutoff frequency with the Mono Bass control.
4. Use Balance to attenuate one side without boosting the opposite side.
5. Use Mono to check centered mono compatibility, or Side Solo to audition only the stereo side information.
6. Use Swap L/R and Invert L / Invert R when checking channel routing or polarity.
7. Watch the L/R output meters and correlation meter while making stereo changes.
8. Use Output for final level matching. Power bypass returns the untouched dry signal.

2. Signal Flow at a Glance

- On stereo material, channel swap and polarity inversion are applied before the main stereo-field processing.
- Stereo Control converts the signal conceptually into Mid and Side components. Width scales the Side component while leaving the Mid component intact.
- Mono Bass removes low-frequency Side information below the selected cutoff while leaving the Mid channel unchanged, which centers low-frequency stereo content.
- Balance is applied after the width and mono-bass processing. It attenuates one channel while leaving the other at unity.
- Mono and Side Solo are monitoring stages after the main field and balance processing.
- Output gain is applied after stereo processing and monitoring. Power bypass crossfades back to the untouched input.
- At neutral stereo settings, the stereo path is designed for exact passthrough rather than performing an unnecessary Mid/Side round trip.

3. Stereo Width

Width 0 to 200%

Controls the level of the Side component. 100% is normal stereo width, 0% removes the Side component and produces centered mono, and values above 100% increase the Side component for a wider image.

Practical note: Width is a Mid/Side side-gain control. It does not add delay, modulation, reverb, or artificial double tracking.

4. Mono Bass

Mono Below

Enables low-frequency centering. The Side channel is high-passed so stereo difference information below the selected cutoff is reduced, while the Mid channel remains untouched.

Cutoff 40 to 400 Hz

Sets the transition frequency for Mono Bass. The default is 120 Hz. The processing uses two cascaded 2-pole stages on the Side channel for an approximately 24 dB/octave transition.

Practical note: Mono Bass does not low-pass or remove the audible bass. It reduces low-frequency Side information so that low-frequency energy becomes more centered.

5. Balance

Balance -100 to +100

Adjusts the left/right balance by attenuating one side while leaving the opposite side at unity. -100 produces left-only output, 0 is centered, and +100 produces right-only output.

Practical note: This is a true balance control rather than a pan control; it does not move a mono source across a stereo field by crossfeeding between channels.

6. Channel Tools

Tool	What it does
Mono	Sums the post-field stereo signal to centered mono for compatibility checking.
Side Solo	Auditions only the post-field Side component. The left output carries Side and the right output carries inverted Side.
Swap L/R	Swaps the left and right input channels before the main stereo-field processing.
Invert L	Inverts the polarity of the left channel.
Invert R	Inverts the polarity of the right channel.

Mono and Side Solo are mutually exclusive in the current interface, so enabling one turns the other monitoring mode off.

7. Output Metering and Correlation

- The L and R output meters show the processed output level for each channel.
- The correlation meter runs from -1 to +1 and measures the relationship between the final left and right output signals.
- Values near +1 indicate strongly correlated left/right content. Values near 0 indicate a less correlated stereo field. Negative values indicate increasingly opposite-polarity relationship and can warn of potential mono-compatibility problems.
- Correlation is a diagnostic aid, not a target that every mix must hold at one specific value.

8. Output and Power Bypass

Output -18 to +12 dB

Sets the final active-plugin gain after stereo-field processing and monitoring.

Power

Bypasses Stereo Control with a short click-safe transition. Once fully bypassed, the plugin returns the untouched dry input and does not apply Output gain.

Practical note: Power bypass is not the same as leaving the plugin active at neutral settings with a non-zero Output value.

9. Practical Workflows

Goal	Suggested approach
Widen a synth or backing layer	Start around 110-125% Width. Watch correlation and check Mono before pushing farther.
Narrow an overly wide source	Reduce Width below 100%. 75% is a useful moderate starting point.
Keep sub and bass energy centered	Enable Mono Below and start around 100-120 Hz, then raise the cutoff only as needed.
Check mono compatibility	Enable Mono and listen for level changes, cancellations, or important elements disappearing.
Inspect what lives outside the center	Enable Side Solo to audition the Side component by itself.
Troubleshoot routing	Use Swap L/R and the polarity buttons to verify channel assignment and polarity relationships.
Final stereo check	Return to normal monitoring, level-match with Output if needed, and watch correlation while comparing.

10. Factory Presets

Preset	Purpose
Neutral	100% width with all stereo utilities off.
Wide 125	Moderate stereo widening to 125%.
Wide 150	Stronger widening to 150%.
Narrow 75	Narrows the stereo image to 75%.
Mono Bass 100	Centers Side information below 100 Hz.
Mono Bass 120	Centers Side information below 120 Hz.
Mono Bass 180	Centers Side information below 180 Hz.
Mono Check	Engages centered mono monitoring.
Side Check	Engages Side Solo monitoring.
Swap L-R	Swaps the left and right channels.

Preset behavior: Factory preset recall preserves the current Output and Power settings. User preset loading also preserves Output and Power.

11. Presets, Undo/Redo, and Resizing

- Stereo Control includes factory presets and supports saving, loading, renaming, and deleting user presets.
- Parameter edits and preset actions participate in the plugin undo/redo system.
- Numeric control readouts are editable directly in the interface.
- The interface is resizable and remembers its saved window size.

12. Troubleshooting

Symptom	What to check
The mix sounds too wide or hollow in mono	Reduce Width, check correlation, and audition the mix with Mono enabled.
Bass feels unstable or off-center	Enable Mono Below and choose an appropriate cutoff, often beginning around 100-120 Hz.
One side is quieter	Check Balance first, then verify Swap L/R and polarity tools are not engaged unintentionally.
The mix changes dramatically with Mono	Use Side Solo and correlation monitoring to identify information that depends heavily on the Side channel.
Stereo tools seem ineffective on a mono track	Stereo-specific controls are intentionally neutral on mono host tracks. Output and left-channel polarity remain applicable.
Output changes when comparing presets	Factory and user preset loads preserve the current Output setting, so level matching remains under your control.

13. Technical Reference

Item	Current implementation
Width	0-200%, default 100%
Mono Bass	On/Off; cutoff 40-400 Hz, default 120 Hz
Mono Bass slope	Approximately 24 dB/oct on the Side channel
Balance	-100 to +100, default 0
Output	-18 to +12 dB, default 0 dB
Monitoring	Mono and Side Solo
Routing / polarity	Swap L/R, Invert L, Invert R
Metering	Stereo output level meters and -1 to +1 correlation meter
Neutral stereo path	Exact passthrough when stereo controls are neutral
Power bypass	Untouched dry signal after click-safe transition
Formats	Windows VST3; macOS VST3 and AU

14. Product Information and Support

For current downloads, product information, and updates:

<https://parishaudio.com/products/stereo-control>

Parish Audio support: <https://parishaudio.com/contact>