PARAMETIC

Smart Parallel Tone-Shaper // Emetic DSP

Overview

Parametic is an intelligent parallel tone-shaping processor designed for broad, musical equalization across production, mixing, and mastering workflows.

Its architecture combines four carefully voiced parallel tone bands, tuned proportionate-Q behaviour, dynamic Bass and High response in Live mode, adaptive Smart frequency steering and Mid/Side weighting in the midrange, tone-protection filters, Low Focus, EQ Blend, mode-specific harmonic Colour processing, optional programme-dependent Auto Level, and proprietary Headroom Hold in Master Mode.

Rather than behaving like a conventional static EQ, Parametic is designed as a connected tone system. Each stage works in support of the overall result: weight, density, focus, openness, stereo stability, harmonic cohesion, headroom, and reliable level judgement.
The interface is intentionally direct, while the DSP underneath responds to the programme in controlled, bounded ways that preserve the engineer's manual decisions.

System Requirements

Windows

Windows 10 or Windows 11. A DAW that supports VST3 plugins.

macOS

macOS 11 or later. VST3 and Audio Unit (AUv2) versions are included. Compatible with both Apple silicon and Intel Macs.

Installation

Windows VST3

Extract the download and copy the complete Parametic.vst3 folder to:

C:\Program Files\Common Files\VST3

macOS

Open the Parametic .pkg file and follow the installer steps. It installs both the VST3 and Audio Unit (AUv2) versions in the standard macOS plugin folders.

Close your DAW before installing or removing the plugin. Reopen it and rescan plugins if required.

Trial, Licence & Activation

A 14-day trial starts automatically the first time you open the plugin window. No licence key or internet connection is needed during the trial, and all controls and processing are available. After 14 days, the plugin continues to work but silences the audio for 3 seconds every 60 seconds until it is activated.

To activate, open the information panel, choose Licence & Activation, paste your licence key and click ACTIVATE. An internet connection is required for activation. The duo bundle licence unlocks Parametic and Smile Bus 3000 on the same computer. After activating one plugin, open the other and click REFRESH LICENCE so it updates. If "Unable to connect to activation server." appears, check your internet connection and try REFRESH LICENCE again.

Click DEACTIVATE before moving the licence to another computer.

Figure 1

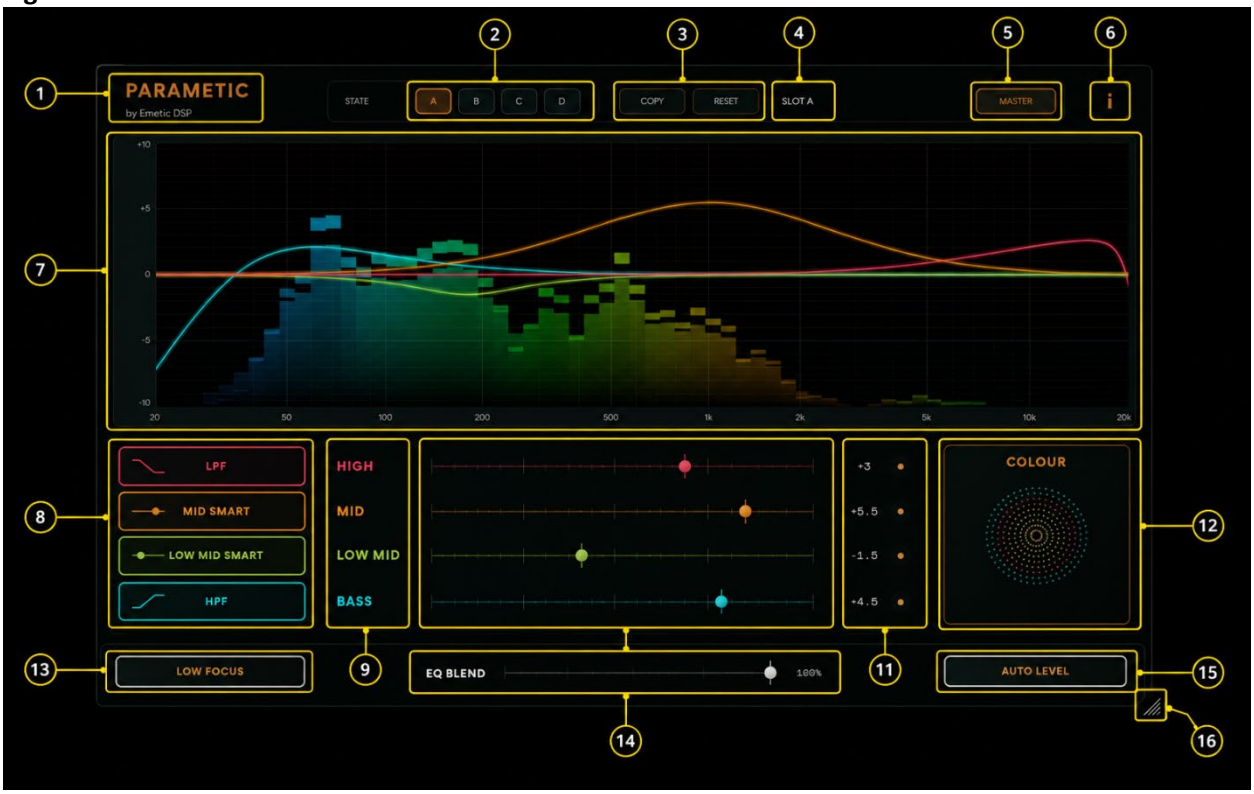


Figure 1 shows the main Parametic interface.

Control Layout

1. **Plugin Name / Bypass** – clicking Parametic toggles plugin bypass.
2. **A / B / C / D State Slots** – instant store/recall comparison slots.
3. **Copy / Reset Controls** – duplicate the current slot or restore it to default after confirmation.

4. **Slot Name Display** – identifies the active state slot.
5. **Master Mode Button** – switches between zero-latency Live mode and the look-ahead Master Mode path with Headroom Hold.
6. **Info Button** – displays plugin information, manual access, website link, and version.
7. **Truth Graph** – effective EQ/filter response and live processed-output energy analysis; click to disable or re-enable the Truth bars.
8. **LPF / Smart / HPF Buttons** – protection-filter and adaptive mid-band controls.
9. **Band Audition Labels** – click HIGH, MID, LOW MID, or BASS to audition that band's processing contribution.
10. **EQ Band Gain Sliders** – stepped High, Mid, Low Mid, and Bass gain controls.
11. **Band Readouts / Hold Indicators** – manual and dynamic values in Live mode, and real per-band Headroom Hold activity in Master Mode.
12. **Colour Section** – mode-specific harmonic density and cohesion control.
13. **Low Focus** – optional programme-dependent low-frequency stereo control.
14. **EQ Blend** – sample-aligned blend for the four-band EQ contribution.
15. **Auto Level** – optional programme-dependent level matching for the EQ section.
16. **Resize Handle** – drag to scale the interface.

Main Controls

Parametic is built around four primary tone controls:

- Bass
- Low Mid
- Mid
- High

Each band operates in precise 0.5 dB increments from -8.0 dB to +8.0 dB.
This stepped structure is intentional. It supports fast, recallable decisions, dependable comparison between settings, and fine enough resolution for subtle professional tone-shaping.
The four bands operate within a minimum-phase parallel tone-shaping architecture rather than as isolated serial corrective filters. Their responses are designed to combine smoothly across the full signal range. Parametic also uses tuned proportionate-Q behaviour. Gentler moves remain broad and natural, while stronger moves become more focused and purposeful without turning into narrow surgical EQ.

Master Mode switches Parametic from its zero-latency Live response into a look-ahead mastering path and reports 448 samples of latency to the host. Live mode is intended for tracking and mixing, with faster control response and no added delay. Master Mode is intended for critical bus and mastering work: Colour changes to a smoother tube/mastering process with sample-rate-aware oversampling; Auto Level, when enabled, uses gentler ballistics; Low Mid and Mid Smart centre steering remains available while detector-driven gain, Q and Mid/Side modulation are disabled to avoid sustained dynamic-EQ sidebands; the HPF and LPF use mode-specific full-range protection behaviour; and proprietary Headroom Hold manages the headroom created by positive EQ and Colour moves while preserving transients. The result is a calmer, more refined path for situations where audio quality and reliable judgement take priority over zero latency.

Truth Graph

The Truth Graph combines a response view with live processed-output energy analysis.
Its coloured response curves show Parametic's current effective EQ and protection-filter response, including actual Bass and High Smart gain, Low Mid and Mid Smart centres, tuned Q, Smart Mid/Side weighting, EQ Blend, and HPF/LPF movement.
The live Truth bars analyse the processed output. Later processes such as Colour can therefore be reflected in the energy display even though Colour harmonics, Auto Level trim, Low Focus and Headroom Hold are not drawn as transfer-function curves. Real Headroom Hold activity is shown by the band indicators.
Visual state is published from a fixed sample clock, so the displayed response remains consistent at all host buffer sizes. The graph is there to support listening, not replace it.
Click inside the graph panel to disable or re-enable the live Truth bar analysis. This does not change the audio path or processing; it simply reduces analyser/display activity when visual feedback is not required.

A / B / C / D Recall

Parametic includes four internal comparison slots: A, B, C, and D.
These allow alternate settings to be stored and recalled instantly for rapid evaluation in a session. They can compare EQ balances, filter combinations, Smart settings, Colour, Low Focus, EQ Blend and Auto Level without rebuilding settings manually. The slots auto-save as controls are amended and can be copied with the Copy button.
A slot can be returned to default with the Reset button after a second-press confirmation.
Master Mode and plugin bypass are global rather than slot-specific. The slot system is designed to make tonal comparison faster, more accurate, and more repeatable.

Scalable Interface

Parametic's high-resolution GUI is resizable. To scale the interface, drag the lower-right corner of the window.
The chosen size is saved and restored with the plugin state, allowing the interface to adapt to different screens and working environments while preserving the same control layout.

Bass / Low Mid / Mid / High

Bass

Bass controls low-frequency foundation, weight, and scale.
It uses an analogue-style low shelf with tuned gain-dependent response. In Live mode its effective gain can move by up to 1 dB at the full ±8 dB setting, scaled proportionally at smaller moves, so clean supportive low end can pass while boom and Bass/Low Mid stacking receive more protection. Low Mid content and the Low Mid control both inform this decision.

Low Mid

Low Mid controls body, density, warmth, and low-mid congestion.
This band is central to perceived solidity. Tuned proportionate-Q behaviour keeps broad moves controlled and musically relevant, while Smart operation can refine gain, Q and Mid/Side weighting in Live mode.
When Low Mid Smart is enabled, the operating centre is adaptively steered according to the incoming material.

Mid

Mid controls focus, projection, presence, and tonal position.
It shapes how directly a signal presents itself while maintaining impact and clarity across subtle and stronger settings. Its analysis also informs the High shelf so adjoining presence and brightness moves remain connected.
When Mid Smart is enabled, Parametic adaptively steers the band towards a prominent centre area that deserves attention as the source changes.

High

High controls openness, brightness and air.
It uses a dynamic, de-cramped analogue-style high shelf designed to remain natural and silky. In Live mode its effective gain can move by up to 1 dB at the full ±8 dB setting, scaled proportionally at smaller moves. High frequency analysis and Mid interaction help protect against harshness without removing air unnecessarily.
Together, these four bands form a connected parallel tone network rather than a conventional, serial fixed-band EQ layout.

HPF and LPF

The HPF and LPF are adaptive tone-protection filters with mode-specific behaviour.

HPF

The high-pass filter intelligently reduces unwanted rumble and sub-energy while preserving useful low-end impact and movement.

LPF

The low-pass filter controls excessive high-frequency build-up and harshness while retaining useful air and musical sheen.

In Master Mode, look-ahead analysis helps both filters respond more gently to full-range material, protecting low-frequency transients and high-frequency detail rather than imposing an obvious filtered character.

Smart Mode

Smart Mode brings together adaptive centre selection, controlled Live-mode gain/Q movement, and Mid/Side weighting while keeping the engineer's manual setting authoritative.
When LOW MID SMART or MID SMART is disabled, the corresponding bell remains fixed and predictable.

When enabled, Parametic analyses the incoming signal and steers the selected band towards a more musically useful operating area as the source changes.
In Live mode, Bass and High remain programme-adaptive even though they do not have separate Smart buttons. Their effective gain can move by up to 1 dB at a full ±8 dB setting, scaled proportionally at smaller moves. Low Mid informs Bass decisions, while Mid informs High decisions.

Live Low Mid and Mid Smart processing is confidence-gated to avoid hunting during quiet tails or low-energy passages, and is damped against momentary broadband hits so modern kick-heavy material can retain its body without dragging the selected centre unnecessarily.
In Master Mode, Smart centre steering remains active, while detector-driven gain, Q and Mid/Side modulation is disabled to keep sustained material free from dynamic-EQ sidebands. Headroom Hold provides separate headroom management.

The dyn readouts show the actual effective Bass and High gain to 0.1 dB. Where M and S values are shown, they are the effective Mid and Side gain values being applied, not general activity meters.

Band Audition

Click HIGH, MID, LOW MID or BASS to audition that band's processing contribution. Audition remains active while its controls are adjusted; click the highlighted label again to return to the complete signal. 'Band Audition' appears in the top left of the graph when active.

The active HPF/LPF monitor context is retained, and the live Truth bars are temporarily suspended so an isolated contribution is falsely not presented as full-programme analysis. Band Audition is a checking tool rather than a separate processing mode.

Low Focus

Low Focus is an optional programme-dependent low-frequency stereo-control stage. It monitors the low-band Mid/Side balance and gently restrains excessive Side energy while preserving centre weight, avoiding a hard mono collapse. This will help give the bottom end a tighter feel. Low Focus defaults off.

EQ Blend

EQ Blend controls the sample-aligned contribution of the four EQ bands from 0% to 100% and defaults to 100%. At 0%, the band EQ contribution is removed, but HPF, LPF, Low Focus, Colour and other enabled stages remain active. EQ Blend is therefore not a global wet/dry control.

Auto Level

Auto Level is optional programme-dependent level matching for the EQ section and defaults off. It compares the pre-EQ signal with the post-EQ-Blend result and applies a slow, peak-aware trim to reduce the bias caused by broad EQ level changes. Master Mode uses gentler matching ballistics.
Auto Level is not a limiter, LUFS normaliser, or guaranteed final-output matcher. It does not compensate Colour, Low Focus, HPF/LPF, Headroom Hold, or every later process in the complete output path.

Colour

Colour is an integrated harmonic tone stage with different behaviour in Live and Master Mode.
In Live mode, Colour is voiced like a large-format analogue console path, adding density, punch, transformer-style body and cohesive harmonic weight while remaining zero-latency.
In Master Mode, Colour changes to a smoother tube/mastering-style process. It uses sample-rate-aware oversampling - 4× at 44.1/48 kHz, 2× at 88.2/96 kHz, and native processing at higher rates - together with Master look-ahead behaviour to add warmth and polish while gently smoothing sustained harshness rather than simply adding drive.
Rather than acting as a simple drive or clipper, Colour is designed to bind the tonal moves together and enhance perceived solidity. Lower settings add subtle density and glue; higher settings introduce more audible harmonic weight and character. A useful workflow is to set the tonal balance first, then add Colour.

Headroom Hold

Headroom Hold is Parametic's proprietary Master Mode headroom-protection system.
It is not a conventional limiter, clipper or compressor. Each positive EQ band has its own detector and residual Hold gain, so activity in one band cannot globally dull another. Colour has a separate residual-only Hold stage.
At a full +8 dB setting, an individual EQ band can contribute up to 1 dB of Hold. Colour can contribute up to 1.5 dB, while the combined ceiling remains 2 dB. A live-input transient preview relaxes active Hold before an important crest reaches the delayed Master path, helping preserve punch and transient impact.
Headroom Hold has no separate user control and acts only when required. The small indicators beside boosted bands show real Hold activity being applied to that band; Headroom Hold does not guarantee an output ceiling and does not replace a final limiter.

Gain Staging Notes

Auto Level and Headroom Hold are separate judgement aids rather than universal output matching systems. Auto Level is optional and defaults off; Headroom Hold acts automatically only in Master Mode when required.
Broad EQ boosts can create an impression of improvement simply because the signal becomes louder. When Auto Level is enabled, Parametic compares the input of the EQ section with the post-EQ-Blend result and applies slow, peak-aware compensation to reduce this bias.
Auto Level is not simple peak matching or a formal LUFS measurement, so peak readings may still change. It does not compensate Colour, Low Focus, the protection filters, Headroom Hold, or the complete final output. This is expected.
Headroom Hold manages only the additional residual headroom cost created inside Parametic and remains bounded to 2 dB. Leave appropriate downstream margin and use a dedicated limiter when a defined output ceiling is required. These systems are designed to support reliable tonal judgement, not replace engineering decisions.

Version: 1.0.0
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