Gaines Pressure Compressor PC-1

COMPRESSION WITH SOUL

USER MANUAL · v2.0 · macOS (Apple Silicon) · AU / VST3

OVERVIEW

PC-1 is a classic-feeling VCA-style compressor built around six controls you already know how to use, plus one that most compressors don't offer: a dedicated tone circuit that adds harmonic warmth independent of gain reduction. The result is a compressor that can stay perfectly transparent, or lean into vintage-style saturation, entirely on your terms.

PC-1 rewards straightforward technique — set your threshold and ratio to taste, dial in attack and release to match the material, and use makeup gain to restore level. The gain reduction meter gives you an honest, immediate read on how hard the compressor is working.

> **SOFT KNEE, MANUAL GAIN, CLEAN**
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> PC-1's compression curve uses a soft knee by default, meaning gain reduction ramps in gradually around the threshold rather than snapping on abruptly. Makeup gain is always manual — PC-1 does not auto-compensate output level, which means what you hear when you bypass is directly comparable to what you hear engaged, at the same perceived loudness, once you've dialed in MAKEUP by ear.

QUICK START

- Insert PC-1 on a vocal, bus, or full mix.
- Set **RATIO** for the style of control you want — low ratios (2:1–4:1) for glue, high ratios (8:1+) for control and loudness.
- Pull **THRESHOLD** down until the gain reduction meter shows the amount of squeeze you want.
- Adjust **ATTACK** and **RELEASE** to taste — faster settings catch more transient energy, slower settings let more of the initial hit through.
- Use **MAKEUP** to bring the compressed signal back up to match your bypassed level.
- Optionally engage **TONE** for added harmonic warmth — see below.

INTERFACE GUIDE

Header

Control	Function
BYPASS	Bypasses all processing; audio passes through unaffected.

Control	Function
AUTO	Enables automatic makeup gain, estimated from the current threshold and ratio. Turn off for full manual control via MAKEUP.
TONE	Enables the tone/saturation circuit. See below.

Compression Controls

Control	Range	Function
THRESHOLD	–60 dB to 0 dB	Level above which compression engages.
RATIO	1:1 – 20:1	Amount of gain reduction applied above threshold. Higher ratios compress more aggressively.
ATTACK	0.1 – 200 ms	How quickly compression engages once the signal crosses threshold.
RELEASE	10 – 1000 ms	How quickly compression disengages once the signal falls back below threshold.
KNEE	0 – 12 dB	Width of the soft-knee transition zone around the threshold. Higher values make the onset of compression more gradual and less audible.
MAKEUP	0 – 24 dB	Manual output gain to compensate for the level lost to compression. Has no effect when AUTO is engaged.

THE TONE CIRCUIT

TONE is a saturation stage, separate from the compressor's gain-reduction path, that adds soft harmonic distortion to the signal. It is disabled by default — PC-1 is fully transparent until you choose to engage it.

> **HOW TONE INTERACTS WITH COMPRESSION**
>
> TONE applies a gentle tanh-based saturation curve to the signal, gated by the TONE header button — when TONE is off, the saturation stage is fully bypassed regardless of the TONE knob's position. When engaged, the TONE knob controls the intensity of the added harmonic content, from a whisper of analog warmth at low settings to an overtly driven, vintage-leaning character at higher settings. Because this is independent of the gain-reduction path, you can add saturation with zero compression, heavy compression with zero saturation, or any blend of the two.

GAIN REDUCTION METER

The needle meter reads 0–20 dB of gain reduction in real time, with a numeric readout beneath showing the exact current value. Use this as your primary guide for how hard the compressor is working — as a general rule, 3–6 dB reads as gentle glue, 6–12 dB as noticeable control, and beyond that as intentional, aggressive squeeze.

PRESETS

Use the PRESETS dropdown to load a starting point — presets like *Vocal Glue* are tuned for specific sources and are meant to be refined by ear once loaded, not used as-is across every mix.

SPECIFICATIONS

Formats	Audio Unit (AU), VST3
Platform	macOS — Apple Silicon (Windows in development)
Latency	Zero added latency
Channel config	Mono and stereo

SUPPORT

Questions, issues, or feature requests: **gainesaudio63@gmail.com**. Please include your Stripe receipt, your DAW and macOS version, and a short description of what you're hearing or seeing.