



Cali76

"FET" BASED STUDIO-STYLE LIMITING AMPLIFIER

GERMANIUM PARALLEL-BOOST OPTION - USER INFO



Key Features:

- 100% Class-A discrete signal path
- Variable-headroom NOS germanium transistor output stage
- Low impedance balanced / unbalanced output connectivity
- Independent dry level control for parallel compression
- Independently switchable wide-bandwidth boost with boost level control
- 7-position high-pass filter (boost mode only)
- Strictly limited to 100 units
- Designed and built in England

Strictly limited to 100 units, this very special version of the celebrated Cali76 compressor features a Class-A germanium transistor output stage. This provides additional tone-options and connectivity. We've also added the sought-after parallel and boost functions from 2014's limited run of Cali76-TX-P pedals to create what is probably the most powerful, most flexible and most desirable Cali76 yet!



Figure 1: Angled view of Cali76-G-P.

Figure 2: Top view of Cali76-G-P, showing regular Cali76 compression controls (in dark border). Additional controls for "Dry Level", "Boost Level" & "Headroom Adjust" appear outside the border.

Cali76

Output Connections

The Cali76-G-P is equally at home driving a guitar amp or the input of your DAW or console. The pedal automatically switches to a balanced output when you plug in a TRS jack, allowing it to interface happily with mixers, preamps and audio interfaces with a nominal "line" input-impedance of 10k to 22k Ohms.

Inserting an unbalanced guitar cable will configure the unit as a standard guitar pedal, with a conventional single-ended output.

Parallel Compression / Dry Level

A popular technique with veteran recording engineers, Parallel Compression yields "best of both worlds" results. Fattened tone, fuller dynamics, combined with great sustain.

By blending dry ("DRY LEVEL" knob) and compressed signals ("OUTPUT" knob) it's possible to benefit from the shimmering sustain and touch sensitivity that the Cali76 delivers, while retaining natural pick attack and overall dynamic integrity.

Boost Function

We've included a wideband boost circuit that functions independently of the compressor. Simply dial in the desired boost amount and hit the "BOOST" switch to engage.

Headroom Adjustments

During boost-mode, the headroom of the output stage can be finely controlled using the "HEADROOM ADJUST" knob.

Unlike a purpose designed overdrive device, this works in a very literal way, by actually scaling the power supply feeding the Class-A germanium circuitry. This limits the voltage swing of the output stage and is true to the definition of the term "headroom".

This approach allows the user to degrade the performance of the output stage by directly varying the characteristics of the germanium devices themselves. At lower voltages the transistors lose current-gain becoming increasingly non-linear in their performance. Clipping is more frequent whilst simultaneously becoming a little softer. Class-A performance is maintained through out with a very slight asymmetrical bias at the lowest settings.

The headroom control is designed to add subtle grit to the output of the unit. Having said this, grungy settings are achievable by cranking the input & output of the compressor to their maximum positions (though at these settings there will be a marked jump in level when switching from bypass).

It should be noted that there is a slight lag as the supply gradually ramps from the default value (high headroom) down to the new value corresponding to the position of the headroom control. Due to the technical challenges involved, the supply cannot be changed instantaneously, there is a 2.5 second lag between maximum and minimum headroom settings. With the compressor set-up around unity gain this amounts to a subtle transition where harmonics gradually creep in.

Boost / Headroom Applications

We suggest two approaches in use of the boost facility. Firstly, as an instantaneous clean boost to push your amp into overdrive, or to get above the mix for soloing. The "HEADROOM ADJUST" should be kept in the clockwise position to result in the maximum shift in the level.

Secondly, as a switchable patch to allow access to slightly dirtier sounds between songs. Here the "HEADROOM ADJUST" can be set in order to achieve the desired amount of grit.

High-Pass Filter

An internal jumper can be used to apply a high-pass filter to the boost function. Removing low bass can be useful when overdriving the input of an amp. Excessive bass can often result in subjectively inferior break-up characteristics. See Figure 3 for filter frequency details.

About Origin Effects

Origin Effects is the brainchild of Simon Keats, a guitarist, electronic engineer and analogue circuit designer who has worked for the likes of Vox, Focusrite and Trident Audio. Having built bespoke effects for professional musicians and producers for many years, he launched the Origin Effects brand in 2012 to bring his exceptional designs to a wider audience.

Simon Keats / Origin Effects Limited is not affiliated with Urei or Universal Audio in any way. This product draws inspiration from the Urei "1176" compressor, but does not feature any "like-for-like" circuitry!!!

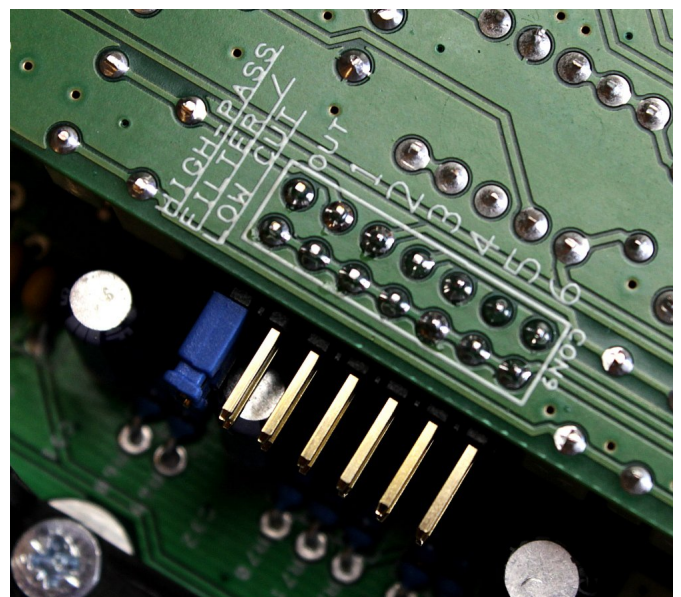


Figure 3: Internal High-Pass Filter jumper. Frequencies vary with boost level to keep bass cleaner and tighter whilst progressively pushing mids & highs.

Default Position "OUT": flat. Position "1": 50-100Hz. Position "2": 70-140Hz. Position "3": 80-160Hz. Position "4": 100-200Hz. Position "5": 120-240Hz. Position "6": 140-280Hz.