
Diamond Comp SL

Opto Compressor + EQ

User Manual
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INTRODUCTION

When we began work on the original Diamond Compressor back in 2004, our goal was to build a versatile ‘guitar channel’ – a dynamics and tone shaping tool to front-end your effects chain - much like the gain, compression and EQ channels used in traditional recording studio mixers. Introduced at MusikMesse 2005 in Frankfurt, the Diamond Compressor has found its way onto thousands of pedal boards worldwide - and our sincere thanks to all those who have supported us over the years. Since introducing the original comp, we’ve released a version tailored to the bass (the Bass Comp), a special ‘audiophile’ edition of the comp called the Comp SE, and most recently a compact version called the Comp Jr . Since the release of the Comp SE, we’ve had numerous requests to get the SE’s noted transparency and definition in a more mainstream package... **now introducing the Diamond Comp SL!**

Remember to protect your hearing and wear appropriate hearing protection when playing loud...

FEATURES

- vactrol opto-isolator variable resistance path as used in high-end studio compressors for smooth attack and decay characteristics while preserving initial signal transients.
- ‘select’ audiophile-grade component selection in the audio signal path, including WIMA polyprop caps and precision Analog Devices opamp
- post-compressor ‘tilt’ EQ provides a very musical tailoring of frequency response - seamlessly transition from a darker jazz voicing to a bright jangle, with flat frequency response at the center detent position.
- optimized gain staging and use of ultra low noise transistor and opamps in signal path for lowest possible noise and extended signal headroom.
- 9V battery power, with standard 9V negative tip adapter ready
- bi-color LED provides visual indication of depth of compression and power
- true bypass operation

CONTROLS

It really doesn’t get any simpler than the on/off footswitch and three controls:

ON/OFF switch: this switches the pedal between bypass and in-circuit operation. A green color in the LED indicates that the pedal is on, while increasing levels of red mixed with the green indicates increasing levels of compression on the guitar signal.

COMP: this controls the amount of compression to be applied to the guitar signal. Backing it off all the way gives just a touch of compression on signal peaks, while turning the control clockwise gives an increasing amount of signal ‘squash’. The compression threshold, the input signal level at which compression begins to take effect, is sensitive to level variations like pickup output and players picking strength, so certainly experiment with this control for your particular setup.

EQ: the EQ in the Diamond Comp SL is not a typical boost/cut treble control. Instead, we've implemented a 'tilt' style EQ first introduced in the 1970's hi-fi market. The goal of this eq is to provide subtle yet powerful spectral shifts in the overall frequency balance, not just a simple dulling or brightening of the treble frequencies. You can think of the EQ as a spectral 'see-saw' with the balance point fixed at a mid range frequency. With the EQ in the center detent position, the EQ is completely flat. Turning the EQ counterclockwise tips the balance of the 'see-saw' towards the low-end, with a gradual increase in lows moving out from the midrange balance point toward the low end of the frequency spectrum and a simultaneous gradual decrease in highs moving toward the high end. Clockwise past the detent position, the converse takes place, with a gradual increase in highs moving out from the midrange balance point toward the high end of the frequency spectrum and a simultaneous gradual decrease in lows moving toward the low end. So, it works like a tone control, but it affects sound more musically.

VOLUME: this adjusts the overall output volume of the compressor. Once the relative levels of compression and EQ are set, this control can be used to adjust overall clean vs. effect levels.

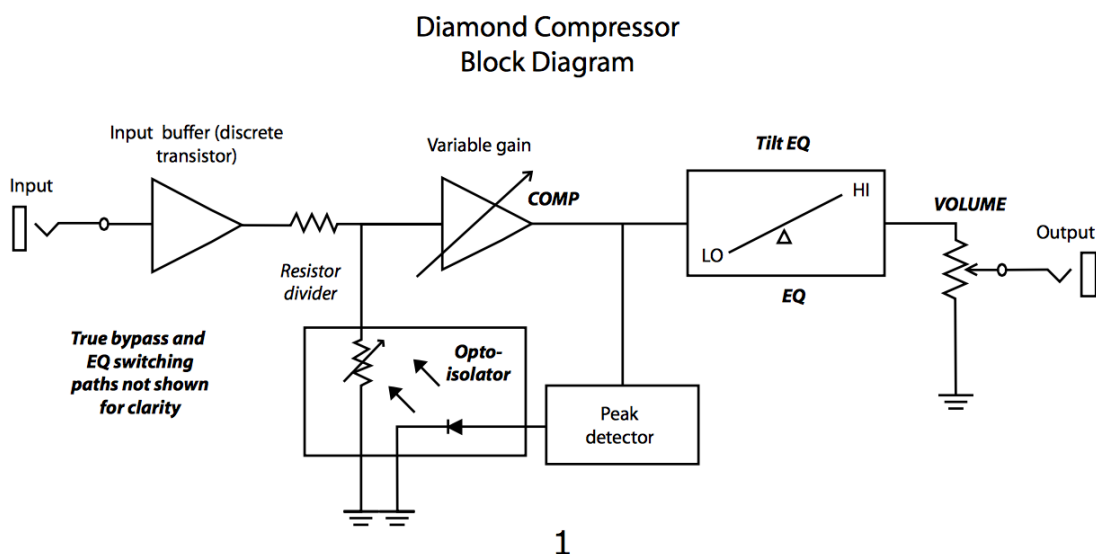
The SL also has a couple of internal options to further tailor and optimize your tone for your signal chain.

EQ In/Out (*internal*): This switch inserts or removes the tilt EQ circuit from the signal path. Although the EQ gives a flat frequency response at the center detent position of its control, this switch is provided for those who wish to bypass the EQ processing entirely. The switch can be accessed by removing the back – it's a small slide switch on the PC board labeled with In/Out.

Hi-cut jumper (*internal*): This jumper is factory set so that the 4.8 kHz hi-cut filter is not in the signal path. However, if you use the compressor frequently in front of a high gain device like a distortion pedal, you may want to enable the internal hi-cut filter by setting its jumper to the in position. This places a 4.8 kHz cutoff, 6 dB/octave lowpass filter between the tilt EQ and volume control. This will help reduce any audible amplification of low level white noise by subsequent high gain stages without significant impact on the midrange band. The jumper is easy to set – with the pedal oriented with the effect on-off switch at the bottom, first find the jumper located to the left of the EQ slider switch, then move the jumper from the left and middle pins (hi-cut filter out) to the middle and right pins (hi-cut filter in).

ARCHITECTURE

The Diamond Comp SL is architecturally identical to the original Diamond Compressor, with a very simple analog signal path and optical driven resistor divider for optimal transparency.



A NOTE ABOUT POWERING THE DIAMOND COMP SL

The Diamond Comp SL is designed to be powered from either a 9V battery (included), standard 9V negative tip DC power adapter or from a multi pedal power supply. It can also be powered from negative tip supplies up to 24V for additional headroom as needed.

WARRANTY

Your Diamond pedal is covered by a 5 year warranty on materials and workmanship. Please contact us by telephone (902-832-7139) or email info@diamondpedals.com if you experience any problems with your pedal. We're here to help!