
Bass Comp

Optical Compressor pedal

User Manual

v1.00 • June 22, 2008

INTRODUCTION

Thank you for purchasing the Diamond Bass Comp pedal. Although bass players have been purchasing and using our other pedals for some time, this is our first product designed specifically with you in mind. Offering high quality optical compression and a simple but effective ‘Tilt’ EQ control with selectable center frequency, the Bass Comp provides an extended frequency response and high headroom to suit a wide variety of passive or active 4/5/6 string basses.

We hope you’ll enjoy using this pedal as much as we have enjoyed designing it.

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

DESIGN BACKGROUND

The original Diamond Compressor was released in February, 2005 and quickly became a hit with guitar players. Soon bass players were adopting the Compressor for its smooth sound and ease of use. However feedback from bassists soon revealed that the low frequency response of the original design wasn’t ideal, especially for 5 and 6 string players. In addition, basses with particularly high output active pickups were capable of overloading the input of the original design. After developing a modification of the design for bassists, it was clear that a dedicated bass version was inevitable. Many of the features of the Diamond Bass Comp are based on feedback from players just like you... thank you all!

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
- Post compressor ‘Tilt’ EQ provides a very musical tailoring of frequency response - from a massively fat low end, to a bright solo tone with flat frequency response at the center detent position.
- Selectable 250Hz or 900Hz EQ tilt point
- Optimized gain staging and use of ultra low noise transistors and opamps in the signal path for lowest possible noise and extended signal headroom
- Premium audio components, including Rubycon electrolytic capacitors, 2% polypropylene capacitors and 1% metal film resistors.
- Bi-color LED provides visual indication of depth of compression
- True Bypass operation

A NOTE ABOUT POWERING THE BASS COMP

For maximum headroom and performance, the Bass Comp should be powered using the included 18V, positive tip adapter. However, for a situation where the 18V adapter is unavailable, the Bass Comp can be powered from a standard 9V, negative tip power supply provided the included red polarity reversing cable is used. The polarity reverse cable **should not** be used with the supplied 18V adapter for normal operation.

Also, please note that if you haven't played your Bass Comp in a while, it may make some noise when initially powered up. This is normal. The special capacitors we use to achieve the excellent low frequency response sometimes need a few minutes to charge. You can continue to play through the pedal while they warm up without fear of damage.

USAGE NOTES

How the Bass Comp works

Fundamentally, compression acts as a leveling control- leveling the amplitude of notes to make them similar in volume. There have been many design approaches developed over the years to accomplish this task. The method used in the Bass Comp utilizes an analog Vactrol opto-isolator which provides a very smooth compression, retaining the attack characteristics of the input signal.

Where to place the Bass Comp:

The Bass Comp should be placed either as the first pedal in your chain or very close to first (e.g. a clean boost or tuner could effectively be placed in front of the Bass Comp). However, there are no hard and fast rules here, there are interesting possibilities in putting the Bass Comp elsewhere in the chain. Feel free to experiment!

WARRANTY

Diamond Pedals carry a full five year warranty on registered products- make sure to send us your warranty card! The warranty is simple- if you have a problem, call us and we'll make it right. Damage due to misuse is not covered by this warranty, however we will do everything we can do get your pedal working again. We want you to be happy!

CONTROLS

The Bass Comp is an intuitive pedal and a few moments of adjusting the controls should be all that is needed to dial in the tone you want.

COMP

This controls the amount of compression to be applied to the instrument 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 at which compression begins to take effect, is sensitive to level variations like pickup output and string attack, experiment with this control for your particular setup and desired sound.

EQ

The EQ in the Bass Comp is not a typical boost/cut tone control. Instead we've incorporated a 'tilt' style EQ first introduced in the 1970's hi-fi market. The goal of this control is to provide subtle yet powerful shifts in overall frequency balance, not just a simple dulling or brightening of treble frequencies. You can think of the EQ as a 'see-saw' with the balance point determined by the 250/900Hz switch (see below). Turning the EQ control counterclockwise provides a boost to low-end frequencies below the tilt point while simultaneously providing a gradual decrease in frequencies above the center point. Turning clockwise from the detent position provides the reverse- a boosting of frequencies above the tilt point while decreasing those below the tilt point. This control is easy to use and provides a very musical means of adjusting your overall tone.

250/900 switch

This switch determines the center frequency of the EQ control around which the low and high frequencies are adjusted. 250Hz or 900Hz can be selected as the 'tilt' point. There is no 'correct' setting for this switch- experiment and find the setting that provides the best tone in your particular setup.

VOL

This adjusts the overall output volume of the Bass Comp. Use this control to match your clean versus effect level, or use it to provide a boost in volume for those times when you want the bass to really stand out in a mix.