Vibrato

Analog pitch vibrato effect pedal

User Manual
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INTRODUCTION

Thank you for purchasing a Diamond Vibrato pedal. This analog design offers a true vibrato effect - pitch modulation rather than the amplitude modulation commonly (and incorrectly) referred to as vibrato but which is in fact, more accurately described as tremolo. The two effects sound distinctly different from each other and you will instantly hear the difference when comparing the two.

In addition we've included the capability of mixing a variable dry signal with the pitch shifted signal for a wonderful sounding chorus!

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 Diamond Vibrato design began as an idea in late 2006 to produce an analog, true vibrato pedal designed around the MN3007 bucket brigade device. The design has gone through numerous design and feature set changes since that time with various form factors prototyped, experimental controls added and removed before arriving at what we consider the ideal balance of ease of use, simplicity and flexibility.
Many of the features of the Diamond Vibrato are based on feedback from players just like you... thank you all!

FEATURES

- True pitch modulating vibrato
- Versatile control over vibrato depth and speed
- HIGH switch provides two ranges of depth control
- JAZZ switch for darker, vintage tones
- CHORUS control for mixing dry signal with the pitch shifted signal
- Output volume control
- Pure sinusoidal LFO waveform, speed adjustable from .9Hz to 10Hz
- True Bypass operation
- 100% Analog circuit
- LED indication of LFO speed
- Expression pedal control of both LFO speed and depth
- High quality components throughout - Fairchild BJT, Burr-Brown audiophile opamps and Panasonic capacitors
- Genuine Hammond cast aluminum 4.7 x 4.7 x 1.0 inch case

CONTROLS

The Vibrato is an easy to use pedal and a thorough understanding of the available controls will allow you to easily produce the sounds you are looking for.

SPEED

This sets the speed of the Low Frequency Oscillator (LFO) within a range of .9Hz to 10Hz- from a very slow sweep to a fast 'wobble'. Speed can also be controlled via an expression pedal. Note that the LED provides a visual reference to the speed setting even when the pedal is bypassed (LED green).

DEPTH

This control determines the intensity of pitch modulation. Low settings provide a more subtle effect while high setting allow for very prominent 'pitch bend'.

CHORUS

This control allows a variable amount of the dry signal to be mixed with the pitch shifted signal. When turned fully counterclockwise, there is no dry sound added and the pedal is producing the vibrato effect only. As the control is turned up, dry signal is added and at fully clockwise the resulting effect is a very lush sounding analog chorus effect.

VOL

This control allows the user to match the level of the bypassed sound and the sound with the pedal engaged. Additionally, the range of the VOL control allows for an increase or a decrease in level if desired.

SWITCHES

JAZZ

This toggle provides a darker tonality resulting in a much more 'vintage' sounding effect, subtly rolling of high frequencies.

HIGH

The High switch determines the overall range of the Depth control, Setting this switch to the HIGH setting allows for much more extreme changes in pitch.

ON / OFF

This switches the entire effect circuit between bypass and in-circuit operation, with a green LED indicating that the effect is bypassed and a red LED indicating the effect is engaged.

INPUT / OUTPUT JACKS

INPUT
The input jack is located on the right side of the pedal and is indicated by the "<" symbol. Plug in your guitar, the output of another pedal or the 'send' of your effects loop into this jack.

DEPTH EXP
The DEPTH EXP expression jack is located on the right side of the pedal below the INPUT jack. Plug in an expression pedal to manually control DEPTH 'on the fly', allowing the vibrato effect to 'fade' in and out.

SPEED EXP
The SPEED EXP expression jack is located on the right side of the pedal below the DEPTH EXP jack. Plug in an expression pedal to manually control SPEED 'on the fly', slowing down and speeding up the modulation.

OUTPUT (mono)
This output is located on the left side and is indicated by the "<" symbol. It provides a dry signal when the pedal is bypassed and an effected signal when the pedal is engaged. Plug the output of this jack into your amp, the input of another effect or into the 'return' of your effects loop.

POWERING

ADAPTER
The Vibrato comes standard with an 18 or 24V switching power supply included. The voltage is internally regulated down to a steady 15V supply. Due to the internal regulation, the supply voltage does not affect the tone in any way. In order to properly regulate the voltage, the power supply must be a minimum of 18V.

OTHER POWER OPTIONS
The Vibrato can also be powered using multi-pedal power supplies. Power supplies with a dedicated 18-24V output that provide at least 80ma of current can be used. Note that the output must be center positive or a polarity reversing cable must be used!! Power supplies that do not have a 18-24V output can be used with a special cable available from www.diamondpedals.com that combines 2 9V outputs and reverses their polarity. In order to use this method, the 9V outputs of your power supply must be electrically isolated from each other. If you are unsure, please contact the manufacturer of your power supply.

PRESETS

The Vibrato controls provide many tonal possibilities. As a starting point, here are a few presets, but be sure to experiment!

Liquid Vibrato
Volume: 11 o'clock
Jazz switch: up
Chorus: minimum
High switch: down
Depth: 9 o'clock
Speed: 3 o'clock

Lush Chorus
Volume: 12 o'clock
Jazz switch: up
Chorus: maximum
High switch: up
Depth: 12 o'clock
Speed: 12 o'clock

Atonal Aliens
Volume: 11 o'clock
Jazz switch: up
Chorus: minimum
High switch: down
Depth: maximum
Speed: 3 o'clock