Bloom Infinity Series | Vein Pitch Shifter Effects Pedal

User Manual

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1. Introduction

Thank you for choosing the Vein Pitch Shifter by Klowra. The Vein Pitch Shifter is a high-quality, low-latency polyphonic pitch-shifting pedal offering 17 pitch intervals. In addition to accurate pitch shifting, it provides precise pitch modifications, octaves, and harmonization. It also features LFO-based microtonal modulation to create expansive stereo fields or enhance multi-track layering.

The Vein Pitch Shifter supports both latched and momentary trigger modes and includes the exclusive Ramp modulation, found only in the Bloom Infinity Series. When paired with an expression pedal or external footswitch, the Vein allows for bold, expressive multi-stage pitch shifts with detailed shaping control. With Analog Dry-Through, selectable True or Buffered Bypass, and versatile stereo modes, the Vein ensures transparent tone and flexible performance in any setup.

2. Highlights

- **Bloom Infinity Series -** Original artist hand-painted silkscreen artwork, with individual model stories and concepts, all strung together into a cohesive product line.
- **17 Shift-Drop Types** - As a polyphonic pitch-shifter, *Vein* offers subtle detuning, semitone shifts, and up to two octaves of pitch variation in both directions.
- **Microtonal True Stereo** - Microtonal True Stereo adds pitch variations to create an immersive stereo field, with Dry/Wet Separation mode available.
- **Polyphonic Design -** Vein's polyphonic design enables rock-solid sharp/flat tunings on a standard-tuned guitar without detuning the instrument.
- **Ramp** - The Ramp function provides linear parameter variation, controlling the fading back and forth between settings to create a dynamic, evolving effect.
- **Momentary Mode** - With the footswitch, you have complete control over when the pitch shifts, allowing you to determine the timing entirely on your own.
- **External Control** - You can use an external TS/TRS footswitch and expression pedal for multifunctional continuous control.
- **Analog Dry Through** - Keeps the dry signal analog, never converting it to digital, while mixing with the wet signal.
- **Multiple Stereo Outputs** - Select Dry/Wet Separation and True Stereo Outputs.
- **Bypass Modes** - Switchable True Bypass and Buffered Bypass, with Analog Dry Through.
- ***WildSeed* Engine** - Class-leading sound quality with 24-bit AD/DA and 32-bit DSP floating-point processing.
- **Material** - Made from sturdy aluminum alloy, this pedal is designed to withstand the rigors of your daily use.

3. Knobs and Switches

RATE
Adjusts the LFO's pitch modulation frequency. At the center position (12 o'clock), the modulation frequency is 2Hz, with a maximum oscillation of up to 10Hz.

DETUNE
Adjusts the stereo deviation of the microtonal pitch. The maximum deviation is 100 cents.
When RATE is set above zero, the pitch modulates up and down around the target pitch within the specified deviation range.
When RATE is set to zero, the left channel shifts slightly above the target pitch, while the right channel shifts slightly below it, creating a static stereo detuning effect.

MIX:
Controls the mix between the dry and wet signals. At the minimum, it outputs full dry signal; at the maximum, it outputs full wet signal with no dry signal. A 50/50 mix occurs around 2 o'clock on the knob.

*You can choose between two mix modes - Constant Power Mixer and Linear Superposition Mixer - depending on your tonal preference. For details on how to switch modes, refer to the ***Power-Up Modes**** *section.*

PITCH SELECT:
Selects the interval of the pitch-shifted note. The available intervals are:

- **(-)② : Up (or Down) 24 Semitones**
- **(-)① : Up (or Down) 12 Semitones**
- **(-)p5 : Up (or Down) 7 Semitones**
- **(-)p4 : Up (or Down) 5 Semitones**
- **(-)M3 : Up (or Down) 4 Semitones**
- **(-)m3: Up (or Down) 3 Semitones**
- **(-)M2: Up (or Down) 2 Semitones**
- **(-)m2: Up (or Down) 1 Semitone**
- **UNI: Unison**

*For adjustments to negative interval, please refer to the ***Description of the LED Button**** *section.*

GLIDE:

Defines the process of activating and deactivating the Vein effect. The Vein supports both momentary (LED continuous **orange**) and latched (LED continuous **white**) switching modes to toggle the effect ON/OFF.

- **Glide ATK:**
  Adjusts the attack time of the glide, determining how quickly it reaches the target interval upon activation.

- **Glide RLS:**
  Adjusts the release time of the glide, controlling how gradually it fades back to the dry signal upon deactivation.

Footswitch

Control ON/OFF, Press&Hold to trigger Glide momentary or Ramp.

*Refer to the ***Glide**** *and ***Ramp**** *section for details.*

The LED Button

Lit when active, pressed or in combination with other knobs to adjust various functions and Hidden Parameters.

Hidden Parameters

- **Tone**
  Adjusts the high frequencies in the wet signal, allowing you to shape the tonal character of the effect. Increasing the tone emphasizes the higher frequencies, resulting in a brighter and more cutting sound, while decreasing it softens the effect, reducing harshness.

- **RampATK**
  Controls the attack time of the Ramp modulation, determining how quickly the fade reaches the **Snap-Set**. A shorter attack time results in a quicker transition to the **Snap-Set**, while a longer attack time creates a smoother, more gradual fade.

- **RampRLS**
  Controls the release time of the Ramp modulation, determining how gradually

the transition fades back to the **Panel-Set**. A shorter release time results in a quicker return to the **Panel-Set**, while a longer release time provides a more drawn-out, fluid return to the **Panel-Set**.

*For adjustments to Hidden Parameters, please refer to the ***Description of the LED Button** section.*

4. REAR PANEL I/O

9V DC

Connect to a 9V DC power supply with a center-negative polarity and a minimum current rating of 250mA.

Note: If the power supply is insufficient, the pedal may malfunction.

IN (Mono)

1/4" mono (TS) unbalanced left input for mono setups.

OUT L (Mono)

1/4" mono (TS) unbalanced left output for mono setups.

OUT R (Stereo)

1/4" mono (TS) unbalanced right output for stereo setups.

Ctrl

1/4" stereo (TRS) balanced input for connecting an expression pedal or external footswitch.

*Note: Please refer to the ***External Control** section for information on how connection is recognized.*

5. Signal Path

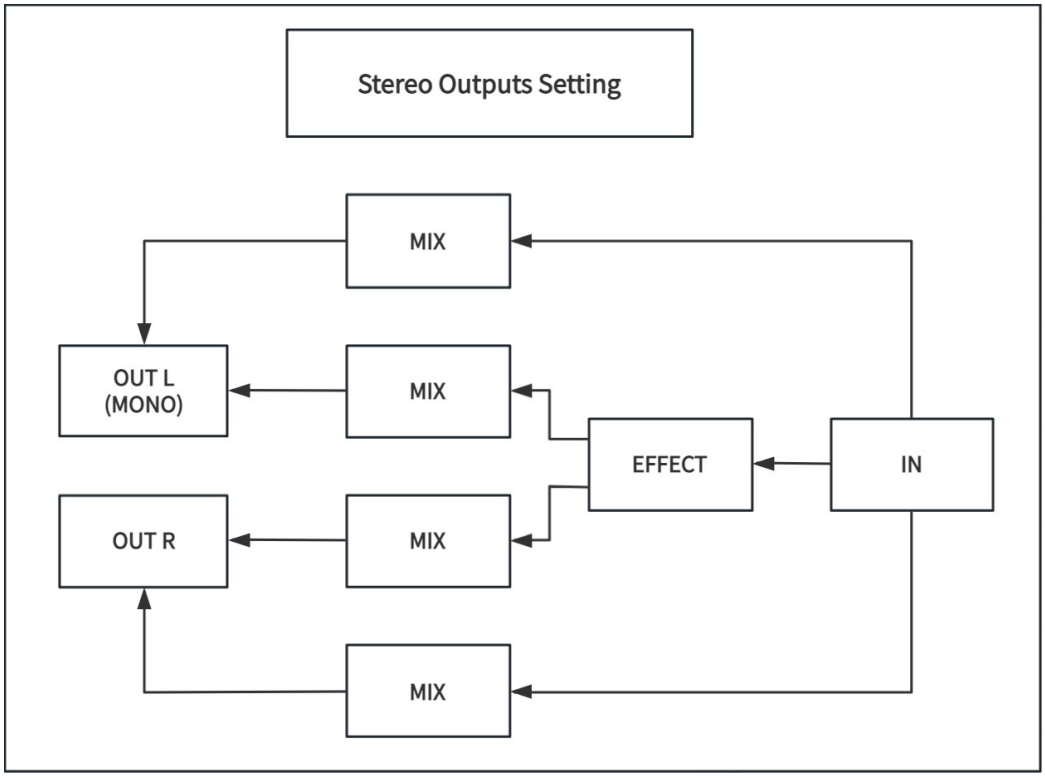
For optimal performance, place the Vein first in your signal chain. Placing other effects before it may interfere with its pitch-shifting accuracy.

Configuring the In/Out Settings

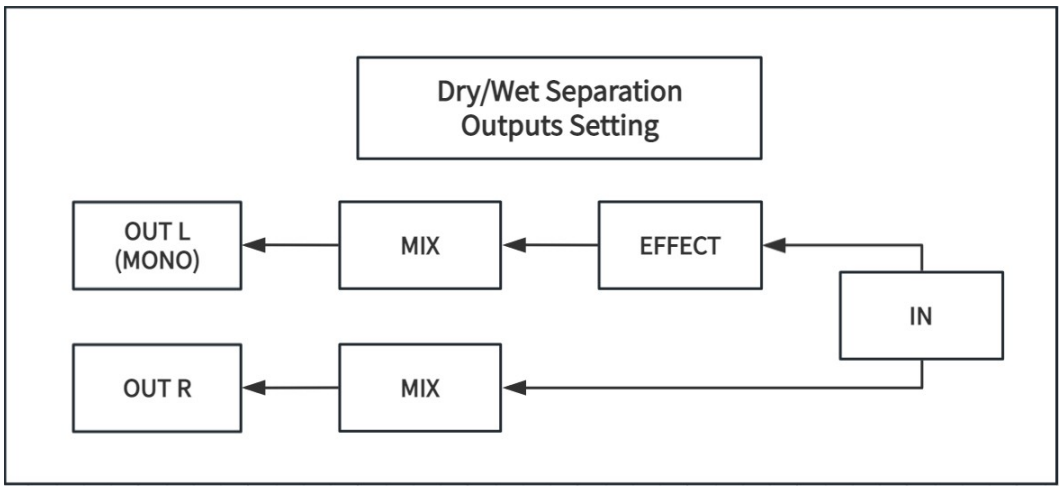
1-in, 1-out:

Mono input with mono output. The dry and wet signals are mixed together in the mono output.

1-in, 2-out



- For the **IN**, the dry and the wet sounds are mixed when stereo output.



- **Dry/Wet Separation stereo output** : For the **IN, OUT R** carries the dry signal; **OUT L** carries the wet signal.

**Dry/Wet Separation stereo output allows a guitar signal to be split into two distinct paths:* one carrying the unaffected (dry) sound, and the other carrying the processed (wet) effect signal. This configuration offers a range of creative and practical applications, particularly useful for live performances, studio setups, and advanced signal routing. **

Note: You can select the ***outputs Setting*** *via the* ****Power-Up Modes****. *Signal routing will vary based on the selected configuration.*

6. Description of the LED Button

The LED Button is the heart of the Vein.
You can determine the current operating status of the Vein by observing the color of the LED button. The LED button can be pressed briefly or in combination with other knobs to adjust various functions or parameters.

Learning to interpret the LED colors and understanding the different ways the button can be pressed are essential for familiarizing yourself with the Vein's operation.

What the LED Colors Mean

- **White** : Ramp function active; Vein ON/OFF is in latched mode.
- **Orange** : Vein ON/OFF is in momentary mode.
- **Violet** : Ramp is actively being triggered.

What the Button Can Adjust

- **Toggle Glide Mode (Latched / Momentary)**
  Press once to switch between latched and momentary modes.

- **Save Snap-set**
  Press&Hold to save the current parameter settings as **Snap-Set**.
  The LED blinks **violet** to confirm.

- **Adjustment of Hidden Parameters**
  Press&Hold while rotating the knob above the hidden parameters.
  Successful adjustment is indicated by the LED blinking **yellow**.

- **Adjustment of Negative Interval**
  Press&Hold while rotating the pitch select.
  Successful adjustment is indicated by the LED blinking **yellow**.

7. Glide

Glide defines the way the Vein effect is activated and deactivated, offering a smooth, expressive transition between states. It enables controlled pitch shifting that can either engage instantly or fade in and out, depending on your performance needs.

Glide Modes

The Vein supports two modes for Glide:

Momentary Mode (indicated by a continuous orange LED)
The effect is active only while the footswitch is held down, allowing for real-time, on-the-fly pitch transitions.

Latched Mode (indicated by a continuous white LED)
The effect toggles on or off with each press of the footswitch, ideal for sustained use without needing to hold the switch.

These modes allow for versatile control, whether you want subtle pitch dips or dramatic, evolving transitions. The **GLIDEATK** and **GLIDERLS** parameters further customize how quickly the effect fades in or out when toggled.

Glide Momentary

When the LED button is set to **orange** (or when the effect is off, short-press the LED button), the footswitch will be in momentary operation mode. When the LED light is on, the pitch-shifting function is activated.
When the LED light is off, the pitch-shifting function is deactivated.

- **Momentary Close**

Short-press the LED button to switch to **orange**. Press&Hold the footswitch to fade the target pitch to the dry signal **(LED turns off)**. Release to slide back to the target pitch **(orange LED reactivates)**.

- **Momentary Open (LED off)**

Short-press the LED button With the LED off. Press and hold the footswitch to glide into the pitch (**orange LED lights up**). Release to glide back out (**LED turns off**).

*You can control the operation of the Glide through an external device. For more Information setting up an external device, please refer to the ***External Control** section.*

8. Ramp

Press and hold the footswitch while the LED is **white. When the LED turns **violet**, you've entered **Ramp**.**

Ramp allows for smooth, dynamic transitions between two sets of parameters:

- **Panel-Set** – Your current front-panel parameter settings.
- **Snap-Set** – A saved set of parameters stored using the LED button.

This feature creates expressive, evolving fades that add depth, movement, and emotion to your sound. The speed and character of the transition are defined by two parameters:

RampATK (Attack Time):
Controls how quickly the effect fades from the **Panel-Set** to the **Snap-Set**.
- A shorter attack gives a fast, sharp transition.
- A longer attack creates a smoother, more gradual fade.

RampRLS (Release Time):
Controls how quickly the sound returns from the **Snap-Set** to the **Panel-Set**.
- A shorter release results in a quick recovery.
- A longer release provides a more drawn-out, fluid return.

Ramp Modes

Like Glide,Ramp supports two switching modes - **Momentary** and **Latched**—giving you flexibility to match your performance style.

Momentary Mode:
Press&Hold the footswitch to fade into the **Snap-Set** over **RampATK** time.Release the footswitch to return to the **Panel-Set** over **RampRLS** time.

Latched Mode:
Press once to transition to the **Snap-Set (RampATK)**, and press again to return to the **Panel-Set (RampRLS)**.

*To select between Momentary and Latched modes, see the ***Power-Up Modes** section.*

9. Power-Up Modes

How To enter Power-Up Modes

Press & hold the footswitch while powering on the pedal. A flashing LED indicates successful entry.
Once your settings are configured, short-press the footswitch again to exit **Power-Up Modes**.

In this mode, you can adjust the following settings:

Bypass Modes

Switch between modes by short-press **the LED button**.

- **True Bypass**
  The signal is routed directly through the pedal with no buffering or coloration.
  Green LED flashes to indicate **True Bypass** mode.
- **Buffered Bypass**
  The signal is routed through a buffer with **Analog Dry Through.**
  Red LED flashes to indicate **Buffered Bypass** mode.

Outputs Setting

Select by rotating the **RATE** knob.
- Turn fully left for **True Stereo** (LED yellow flashes 3x).
- Turn fully right for **Dry/Wet Separation** (LED blue flashes 3x).

**Dry/Wet Separation stereo output allows a guitar signal to be split into two distinct paths:* *one carrying the unaffected (dry) sound, and the other carrying the processed (wet) effect signal. This configuration offers a range of creative and practical applications, particularly useful for live performances, studio setups, and advanced signal routing. **

Ramp Lock

Select by rotating the **DETUNE** knob.
- Turn fully left for Momentary (LED yellow flashes 3x).
- Turn fully right for Latched (LED blue flashes 3x).

- **Momentary:**
  Hold the footswitch to transition to **Snap-Set** over **RampATK** time. Release to return to the current set over **RampRLS** time.
- **Latched:**
  The first press transitions to **Snap-Set** over **RampATK** time. The second press returns to the current set over **RampRLS** time.

MIX Modes

Select MIX Mode by rotating the **MIX** knob.
- Turning it fully left selects the Constant Power Mixer (LED yellow flashes 3x).

- Turning it fully right selects the Linear Superposition Mixer(LED **blue** flashes 3x).

Constant Power Mixer

In this mode, the wet and dry signals are mixed in a way that maintains consistent power across the mix. This means that the volume of the wet signal will increase or decrease in relation to the dry signal to maintain a balanced overall sound, with no excessive gain or loss when blending the signals.

Linear Superposition Mixer

This mode blends the dry and wet signals using a linear approach, meaning the signals are simply added together at equal strength, without adjusting for perceived loudness. This results in a more direct, unaltered blend of both signals, which may introduce some dynamic changes depending on the level of the wet signal.

LED Brightness

Adjust by rotating the **GlideRLS** knob.

- Turn fully left for dimmest.
- Turn fully right for brightest.

10. External Control

Connection & Activation

When connecting an **external TS/TRS footswitch or expression pedal**, the LED indicator will flash **red**. Trigger the footswitch or pedal repeatedly during this state. Once the connection is successfully recognized, the Vein will return to normal operation.

*Note: If the **External Control** is not fully activated, it may result in limited functionality.*

External Footswitch Compatibility

When connecting an external TS/TRS footswitch, there are two specific functional settings, depending on the color of the LED indicator:

- **LED White - The current footswitch-specific function is *Ramp*.**
  - **TS/RS Footswitch** : Momentary triggers Glide.
  - **TRS Footswitch:**
    - Tip Position: Momentary triggers Ramp.
    - Ring Position: Momentary triggers Glide.

- **LED Orange - The current footswitch-specific function is *Glide Momentary*.**
  - **TS/RS Footswitch**: Momentary triggers Ramp.
  - **TRS Footswitch:**
    - Tip Position: Momentary triggers Ramp.
    - Ring Position: Latched triggers Glide.

Expression Pedal Compatibility

When an expression pedal is connected, it takes direct control over the Ramp by blending between the **Panel-Set** and **Snap-Set**. In this mode:

- The **RampATK** and **RampRLS** parameters are disabled.
- Ramp cannot be triggered by Press&Hold the footswitch.
- The expression pedal can be used in any LED mode.

11. Specifications

Inputs	1 x 1/4"TS Instrument jack	**Outputs**	2 x 1/4"TS Instrument jacks
Input Impedance	500k Ohm	**Output Impedance**	100 Ohm
A/D & D/A	24 Bit 44.1K Hz	**Max Input Level**	+10 dBu
Power Source	9V DC power supply required	**Current**	250mA
External Control	TS/TRS Momentary footswitch,or TRS expression pedal	**Bypass Mode**	Switchable: True Bypass, Buffered Bypass(Analog Dry-Through)
Hardware Interface	USB-C	**Dimensions**	54.7mm H x 124.8mm D x 69.2mm W(2.0"H x 4.9"D x 2.7"W)

Where Every Tone Blooms.