Bloom Infinity Series | Rilum Multi-head Delay Effects Pedal

User Manual

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1. Introduction

Thank you for choosing the ***Rilum Multi-head Delay*** by **Klowra**.

Rilum is a multi-head delay and modulation pedal inspired by classic multi-track tape echo machines. It delivers authentic vintage multi-head delay textures, lets you explore tape-like flanging and chorus tones born from analog friction, and creates warm, atmospheric trails with rich spatial depth. The sound evolves through layers of feedback, eventually reaching unpredictable self-oscillation.

The Ramp function allows tonal characteristics to evolve organically, while Tap tempo and the unique Twisted Tempo control keep your delay time tightly synchronized with your musical rhythm. With an expression pedal or external footswitch, you can instantly trigger expressive, dynamic variations.

Featuring Analog Dry-Through, selectable True Bypass/Buffered Bypass and multiple stereo modes, ***Klowra Rilum Multi-head Delay*** provides pure signal integrity and versatile performance support for any stage or studio 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.

- **Unfold the Scroll of Inspiration -** Echoes, rhythms, chorus, and flanging are rewoven into one. Fine-tune time, blend multiple heads, and layer gentle modulation as the sound unfurls between color and space, revealing its own depth and breadth like a scroll slowly unrolling in shifting light.

- **The Beating Heart of a Vintage Tape Machine** - Modern algorithms meticulously sculpt the soul of classic tape, capturing its hazy phase-breath interference, the organic vitality of random flutter, and the warm softness of analog saturation. A living multi-head tape machine awakens beneath your feet.

- **Zero-Cross Flange & Chorus Stack** - Authentic zero-cross flanging meets warm, full-bodied chorus. From glass-like shimmer to velvet-smooth flow, it makes clean tones ripple with texture and brings dimensional depth to distortion.

- **Warm Ambience and Spatial Fracture** - Layered multi-head delays shape a reverb-like sound field and spatial trails, building into cascading feedback that leads to unpredictable self-oscillation. From warm ambience to the edge of instability, a single twist takes you there.

- **Tap Tempo & Twisted Tempo** - Control the Time parameter in real time with Tap Tempo, perfectly syncing delays to your performance. The exclusive Twisted Tempo lets you manipulate the “playback motor” at will, creating pushes, warbles, and

rhythmic shifts. When order breaks, new inspiration instantly emerges.

- **Ramp** - The Ramp function provides linear parameter variation, controlling the fading back and forth between settings to create a dynamic, evolving effect.
- **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** - Dry/Wet Separation and True Stereo Outputs.
- **Bypass Modes** - Switchable True Bypass (trail off) and Buffered Bypass (trail on), with Analog Dry-Through.
- ***WildSeed* Engine** - Class-leading sound quality with 24-bit AD/DA and 32-bit DSP floating-point processing.
- **Built to Last** - Premium aluminum alloy chassis, sturdy and reliable, designed for heavy-duty use and life on the road.

3. Knobs and Switches

LAG TIME
Adjusts the delay time.
- **Below 12 o'clock:** Transitions from flanger into chorus tones.
- **Above 12 o'clock**: Ranges from slapback into long echoes (up to 1000 ms).

FEEDBACK
Adjusts the number of delay repetitions. Ranges from a single repeat at full counterclockwise to near-infinite oscillation at full clockwise.

MIX
Adjusts 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.

RATE
Adjusts the modulation speed of the delayed signal. Turning clockwise increases the speed and produces more rapid fluctuations.

HEADS VOL
Adjusts the output level of the other heads.
Note: **The Main Head** remains active at all times and cannot be muted via this knob.

LO-FI
Adjusts saturation and texture of the delayed signal. Turning clockwise adds stronger degradation for a vintage character and increases the sensitivity for self-oscillation.

Footswitch
Controls effect ON/OFF. Press & hold to trigger **Tap Tempo/Twisted Tempo** or **Ramp**.

*Refer to the ***Tap Tempo/Twisted Tempo*** or ***Ramp*** section for details.*

The LED Button
Lit when active, press & hold this button while turning other knobs to adjust various functions and hidden parameters.

Hidden Parameters

To adjust the hidden parameters, press & hold **the LED Button while turning the knob. A successful adjustment is indicated by the LED blinking yellow.**

- **Spawn**
  Controls random volume changes between **the main and other heads**. Turn clockwise to add life and character to the **FEEDBACK.**
- **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**.
- **Depth**
  Controls the intensity of the modulation applied to the delayed signal. Turn clockwise for deeper, more dramatic sweeping effects.
- **Groove**
  Linearly blends the volume of the other heads to allow for smooth rhythmic transitions. Specific subdivisions are isolated at the following positions:

  - **Fully Counterclockwise:** Dotted-eighth head.
  - **12 o'clock:** Straight-eighth head.
  - **Fully Clockwise**: Quarter-note triplet head.

- **Sum-Inv**
  Selects the phase relationship of the other heads to tailor tonality and low-end response.

  - **Sum (Turn fully counterclockwise):** The other heads are summed **in phase** with the main head.
  - **Invert (Turn fully clockwise):** The other heads are summed **out of phase** with the main head.

*For adjustments to hidden parameters, please refer to the ***Description of the LED Button** section.*

4. REAR PANEL I/O

9V DC

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

Note: Insufficient power may cause the pedal to malfunction.

IN L (Mono)

1/4" TS mono input. Use this jack for mono instruments or the left channel of a stereo source.

IN R (Stereo)

1/4" TS mono input. Use this jack for the right channel of a stereo source.

OUT L (Mono)

1/4" TS mono output. Use this jack for mono setups or the left channel of a stereo setup.

OUT R (Stereo)

1/4" TS mono output. Use this jack for the right channel of a stereo setup.

Ctrl

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

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

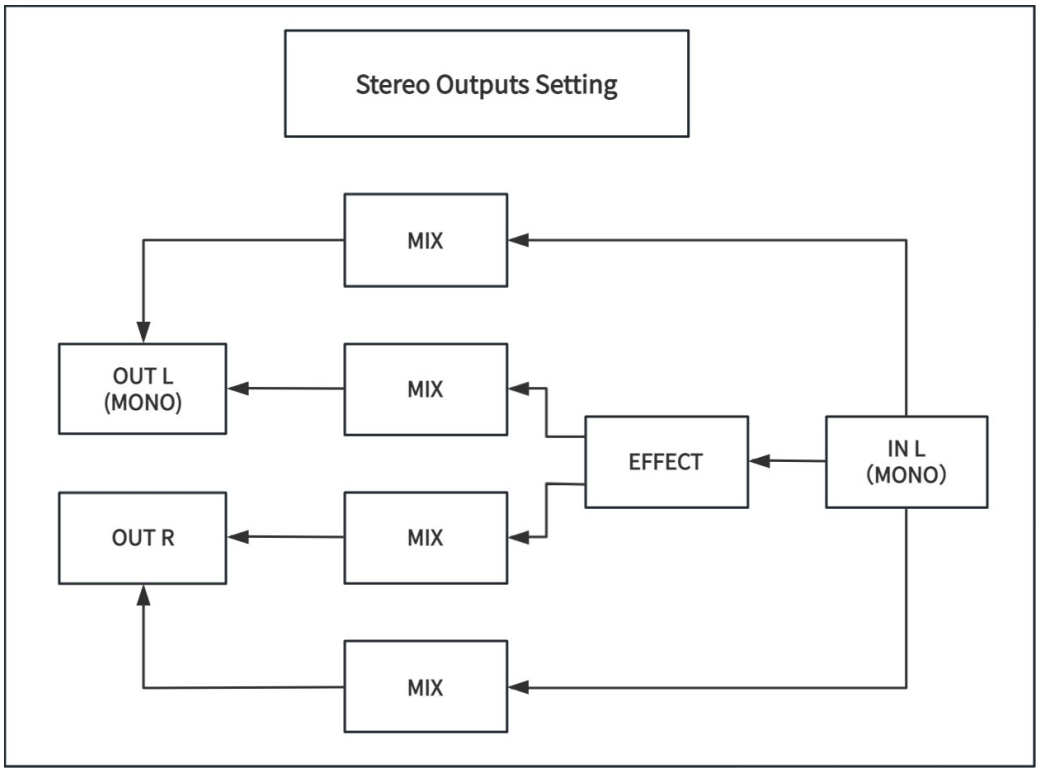
5. Signal Path

Configuring the In/Out Settings

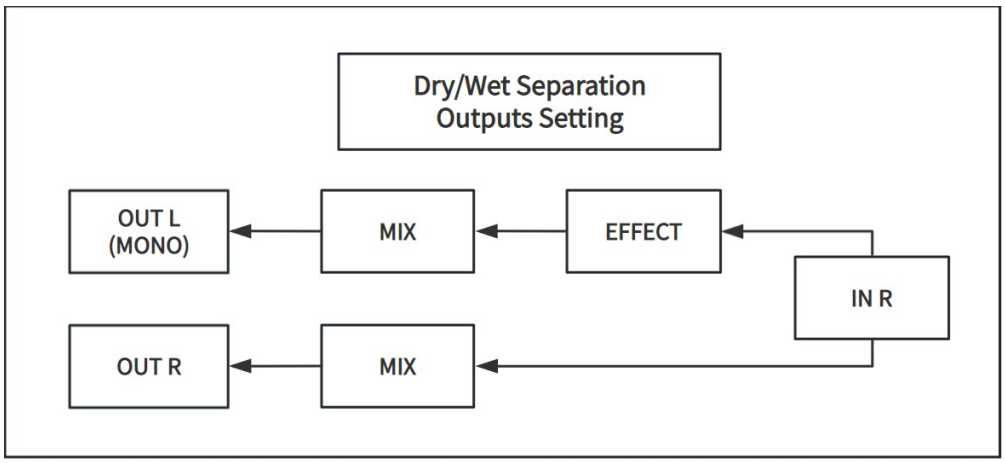
1-in, 1-out:

- Mono input with mono output. Dry and wet signals are mixed at the mono output.

1-in, 2-out



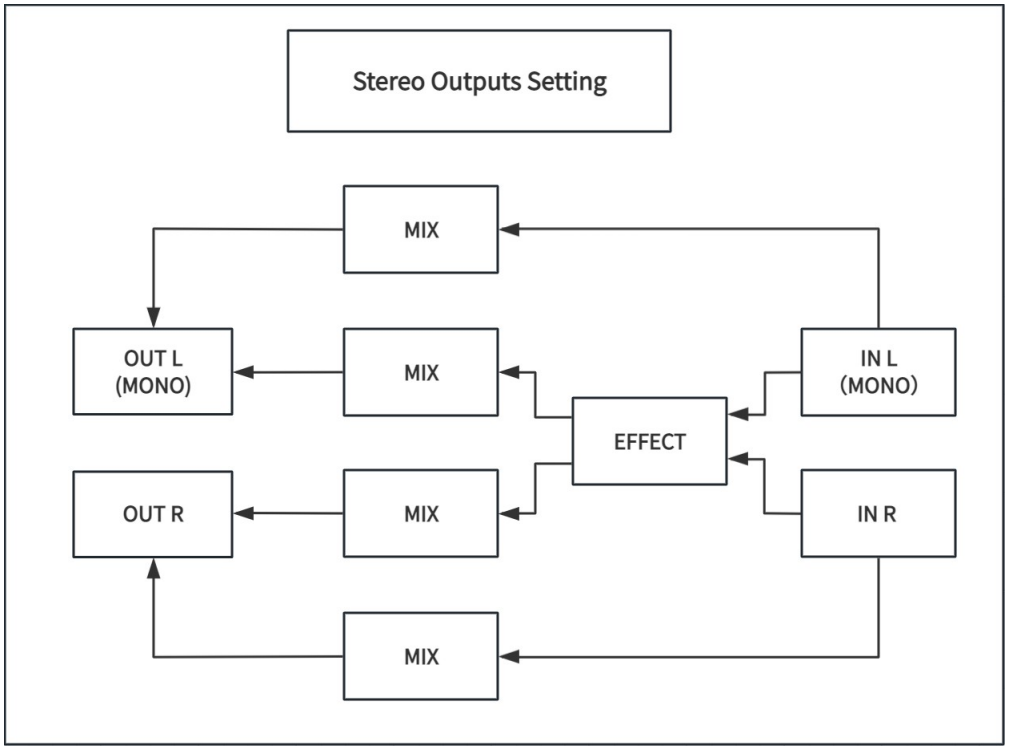
- For the **IN L**, the pedal processes the mono input and creates a stereo soundstage across both outputs.



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

About Dry/Wet Split:* This configuration splits your guitar signal into two distinct paths: one carrying the unaffected (dry) sound, and the other carrying the processed (wet) signal. This is particularly useful for parallel mixing in studio setups or advanced live signal routing.

2-in, 2-out



In full stereo operation, the dry and wet signals are processed and mixed independently for the left and right channels.

6. Description of the LED Button

The LED Button is the heart of the *Rilum*.
You can determine the current operating status of the ***Rilum*** 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 ***Rilum***'s operation.

What the LED Colors Mean

- **White**: Tap Tempo/Twisted Tempo function active.
- **Blue**: Tap Tempo/Twisted Tempo is actively being triggered.
- **Orange**: Ramp function active.
- **Violet**: Ramp is actively being triggered.

What the Button Can Adjust

- **Toggle the Tap Tempo/Twisted Tempo or Ramp**
  Press once to switch between **Tap Tempo/Twisted Tempo** and **Ramp**.

- **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.**

7. Tap Tempo/Twisted Tempo

In Power-On Mode, select Tap Tempo or Twisted Tempo (factory default: Tap Tempo).

Press & hold the footswitch while the LED is white. The LED turns blue to indicate the selected Tap Tempo or Twisted Tempo is active.

Tap Tempo

With the LED blue, tap the footswitch repeatedly at your desired tempo. Each tap updates **LAG TIME** to match the BPM. The LED will blink in time with the detected BPM. After 5 seconds of inactivity, the LED returns to white and the pedal exits **Tap Tempo** automatically.

Twisted Tempo

Hold the footswitch to engage **Twisted Tempo**. The effect starts immediately and modulates **LAG TIME** for a tape-scrubbing sound.

- **RATE** sets the modulation speed.
- **LAG TIME** sets the modulation depth (sweeping between the current value and 0).

Release the footswitch to exit **Twisted Tempo,** the LED returns to white.

- For subtle movement, keep **RATE** low and use a small **LAG TIME** setting.
- For extreme warble, increase **RATE** and **LAG TIME**.

External Control Tips

With an external dual footswitch connected, you can combine **Twisted Tempo** and **RAMP** for more expressive textures. Use Twisted Tempo for instant twisting or warbling motion and use **RAMP** to sweep the **RATE** or **LAG TIME** between two settings, creating dynamic back-and-forth transitions.

8. Ramp

Press & hold the footswitch while the LED is **orange. 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

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 & Trails 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.
  LED Green flashes to indicate True Bypass mode.
- **Buffered Bypass (Trails on)**
  The signal is routed through a buffer with **Analog Dry-Through**, allowing delay trails to continue after the effect is bypassed.
  LED Red flashes to indicate Buffered Bypass mode.

Tap Tempo and Twisted Tempo Switching

Select by rotating the **LAG TIME** knob.
- Turn fully left for **Tap Tempo** (LED yellow flashes 3x).
- Turn fully right for **Twisted Tempo** (LED blue flashes 3x).

Ramp Lock

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

LED Brightness

Adjust by rotating the **LO-FI** 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 ***Rilum*** 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 *Tap Tempo/Twisted Tempo*.**
  - **TS Footswitch**: Momentary triggers Ramp.
  - **TRS Footswitch:**
    - Tip Position: Momentary triggers Ramp.
    - Ring Position: Momentary triggers Tap Tempo/Twisted Tempo.

- **LED Orange - The current footswitch-specific function is *Ramp***
  - **TS Footswitch**: Momentary triggers Tap Tempo.
  - **TRS Footswitch:**
    - Tip Position: Momentary triggers Ramp.
    - Ring Position: Momentary triggers Tap Tempo/Twisted Tempo.

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 pressing & holding the footswitch.
- The expression pedal locks the ***Rilum*** into **LED White** (**Tap Tempo/Twisted Tempo active**), and mode switching to **LED Orange (Ramp active)** is disabled.

11. Specifications

Inputs	2 x 1/4" TS Instrument jacks	**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	**Minimum Current Rating**	250 mA
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.