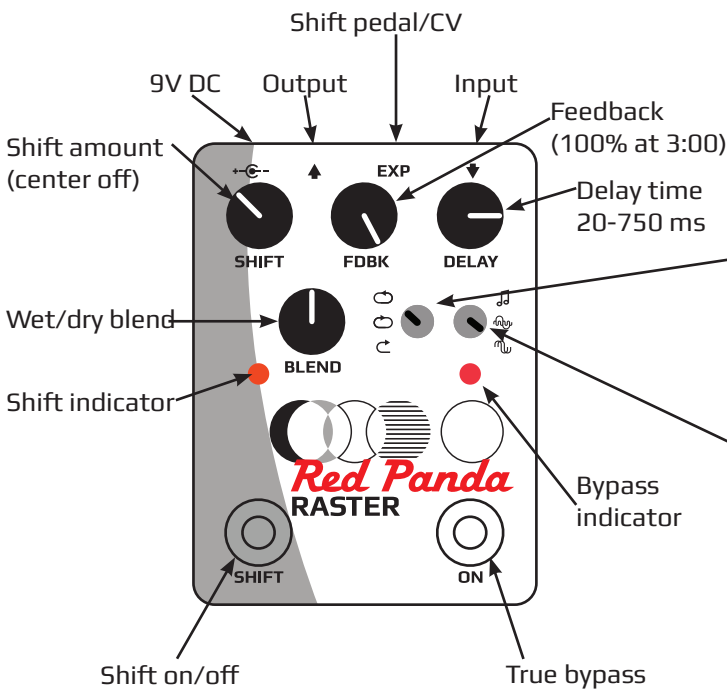


RASTER



Thank you for purchasing the Red Panda Raster. The Raster is a digital delay with a pitch shifter integrated into the feedback loop. Knob responses are carefully tuned for exploration of self-oscillation and feedback on the verge of blowing up, but it also works great for clean delays up to 750 ms.

The pitch shifter operates in three modes, with three types of feedback, for a total of 8 different combinations:



Feedback	Description
	Initial delay and all repeats are reversed. Each repeat is shifted higher or lower than the previous.
	Each repeat is shifted higher or lower than the previous.
	The first repeat is shifted. Subsequent repeats stay at the same pitch.

Shift	Description
	Transpose by semitones, +/- 12 semitone range (25 steps).
	Detune from a 4th down to a minor third up (continuous).
	Phase shifter (not available with reverse feedback).

SHIFT

Amount of pitch or phase shift. When the **SHIFT** footswitch is disengaged (orange LED off), the signal is not shifted. Plugging in an expression pedal will override the shift knob.

FDBK

Feedback intensity. Infinite repeats occur with the knob at approximately 3:00. At settings above 3:00, the repeats gain in strength for self-oscillation, distorted echoes, and feedback loops.

DELAY

Delay time, from approximately 20 to 750 milliseconds. Short delays with high feedback will create resonance or self-oscillation, especially when the shift knob is near zero. The delay knob is tuned for short delays. By carefully adjusting the delay time and feedback, you can create chaotic self-oscillating drones.

BLEND

Adjusts output from 100% dry to 100% wet.

POWER

Red Panda pedals require a 9V DC center negative, regulated power supply (Boss style). A few examples are the Boss PSA-1205, Visual Sound One Spot, and the Voodoo Lab Pedal Power series. Using an incorrect power supply may damage your pedal.

WARRANTY

This product is warranted against defects in materials or workmanship for one (1) year from date of original purchase. It does not cover damages or wear resulting from accident, misuse, abuse, or unauthorized adjustment and/or repair. Should this product require service (or replacement at our option) while under warranty, please contact info@redpandalab.com.

SOUNDS

CHORUSED DELAY

Use detune (🎵) or phase (🎵) mode with small shifts to create chorused repeats.

OCTAVE/HARMONY DELAY

Use transpose (🎵) mode with only the first repeat shifted (↻).

SELF-OSCILLATION

Set the **SHIFT** knob at or near 12:00, **FDBK** above 3:00, and **DELAY** below 10:30. Adjust the delay to change the frequency. Phase shifted (🎵+↻) repeats create bubbling, psychedelic resonant sounds. Unshifted repeats (↻) give distorted self-oscillation.

OVERDRIVEN FEEDBACK

Feedback settings above 3:00 create overdriven feedback and distorted growls. Phase shift (🎵) mode with unshifted repeats (↻) is good for creating squelchy, overdriven feedback sounds.

OLD SCHOOL PITCH SHIFTING

Use transpose (🎵) mode with no delay or feedback for discrete semitone shifts. For continuous pitch shifting, use detune (🎵) mode. The pitch shifting algorithm adds a slight warble, similar to classic digital pitch shifters.

PLASTIK BASS

Use detune (🎵) mode with reverse (↻) repeats. Set **SHIFT** to approximately 1:30, **FDBK** to 2:00, **DELAY** to 8:00, **BLEND** at 9:30. Adjust **SHIFT**, **FDBK**, and **DELAY** for squelchy resonance.

REVERSE DELAY

Disable **SHIFT** and set feedback mode to reverse (↻). The reverse effect is more noticeable at longer delay settings. At shorter delays, short segments are reversed which gives more of a tremolo sound. With feedback and pitch shifting, short delays create cascading shifted trails and alien textures.

BARBER POLE FLANGING

Use phase (🎵) mode with shifted (↻) repeats. Set **FDBK** around 2:30 and a short delay to create sounds that seem to continuously shift up or down in pitch.

ORGAN

Use transpose (🎵) mode with repeats shifted (↻), **SHIFT** at 5:00, **FDBK** around 2:00, **DELAY** at 7:00, and **BLEND** around 3:00. Lowering the blend will bring in more of the guitar attack and adjusting the **FDBK** knob will change the overtones.

ARPEGGIOS

Use transpose (🎵) mode with medium to long delays to shift (↻) each repeat up or down by semitones.

Minor thirds: dissonant intervals that stack to form diminished 7th chords.

Major thirds: augmented chords have a static harmonic characteristic, which can blur tonality.

4ths and 5ths: stack to form quartal and quintal harmonies.

7ths: stacking 7ths will give you nicely spaced tone clusters that sound very dissonant.

Expression Pedals and Control Voltages

Any expression pedal with a 10k-50k ohm linear pot will work. For example, the Roland EV-5, Moog EP-3, M-Audio EX-P, or Mission Engineering EP-1. You can also use an Electro-Harmonix 8-Step Program to sequence the sampling rate. For control voltages, 0-3.3V on the tip is the correct range. The Raster has current limiting in case you use a TS cable, but it is best to use a 1/4" TRS cable with the ring unconnected. The Expert Sleepers "floating ring" cable is an easy way to do that. We also sell suitable cables at store.redpandalab.com.