RedShift Effects

MIRAGE

User's Manual V0.94

Decay   Depth | Pattern Select   LFO Rate | Variance

Mix

Output
Volume

Tap Tempo
& Swell

DECAY   DEP | PAT   RATE | VAR

MIRAGE

Mode
Select

Sub-mode
Select

Bypass

Tempo
Indicator

Multi-Function
Button

Bypass
Indicator

Filter Select
Real-time pattern create
Expression/Switch Select **[Hold]**

USB

Exp/CV Input   Mono Input   Mono Output   External Switch/CV
Input

2.1mm 9V DC

Power Specs

The MIRAGE uses a standard 2.1mm 9V center negative DC supply. The pedal consumes approximately 200mA and should be used with a supply that can deliver at least 250mA.

Note: If the pedal enters firmware update/reset mode (cycling LEDs) when plugged in, this may indicate that the pedal is not compatible with your supply. While the pedal is plugged in, try pressing both footswitches and the multi-function button at the same time to trigger a reset.

The MIRAGE does not operate on batteries.

Bypass

The MIRAGE features true-bypass switching. In any mode, the footswitch on the right side of the pedal functions as the bypass control. The LED next to this switch indicates the bypass state (ON = engaged, OFF = bypassed).

Decay

The top-left knob, labelled 'Decay' controls the rate at which the signal decays after each repeat. This knob's function remains the same in any mode.

Tap

The footswitch on the left side of the pedal labelled 'Tap', controls the repeat time (or tempo) of the delay in all modes. The number of taps required to set the tempo can be configured in our pattern and configuration application. The default setting is 3 taps.

Swell

The footswitch on the left side of the pedal doubles as the 'swell' control. When this switch is held down, the decay 'swells'. When it is released, the swell subsides back to the decay value specified by the Decay knob. The four LEDs in the middle of the pedal indicate the 'swell level' while swell is active.

The rate at which swell increases and decays can be modified in the pattern and configuration application. The maximum swell value can also be configured in software. When the maximum swell value is 1.0, swell can be used to achieve repeat oscillation. When this value is greater than 1.0, swell can cause repeats to increase in volume. (**Note:** This can result in signal clipping/distortion).

Volume and Mix

The two small black knobs located on the left side of the pedal control volume and mix. The volume knob controls the output volume of the pedal. The mix knob is used to crossfade between the dry and wet signals.

Modes

The MIRAGE features two main modes, selectable with the 'mode switch'. Each mode features three sub-modes, selectable with the 'sub-mode switch'.

Modulation Mode

In modulation mode, the middle knob controls the modulation LFO depth and the right knob controls the modulation LFO rate.

Modulation can be performed using volume (tremolo), a low-pass filter, a high-pass filter or a resonant filter. The modulation method is selected using the multi-function button. The LEDs indicate which method is in use. The illuminated LED will also indicate the LFO rate and depth. The default modulation method can be set in the pattern and configuration application.

Setting the rate knob fully counter-clockwise enables **non-modulated filter mode**. In this mode, the selected filter is not modulated by the LFO, but can be adjusted with the depth knob.
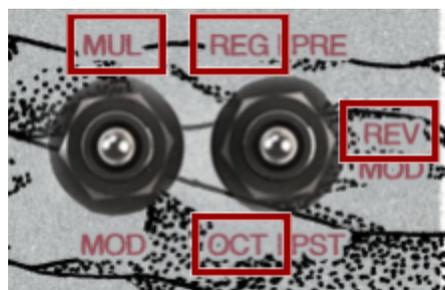
Modulation mode has three modulation sub-modes, allowing you to decide where the modulation occurs; at signal input (**PRE**), before feedback (**MOD**) or after feedback (**POST**).

Multi Delay Mode

In multi delay mode, the middle knob selects the repeat pattern and the right knob controls repeat 'variance'.

Multi delay mode has three sub-modes or playback modes including **reg**ular, **rev**erse and **oct**ave. Whether or not a repeat is played in reverse in 'reverse mode' or an octave up in 'octave mode' depends on the pattern. This can be modified in the pattern editor.

The MIRAGE can store up to 15 custom patterns. When turning the pattern selection knob, the selected pattern is indicated by the cluster of 4 LEDs.

Pattern 0 (pattern select knob fully counter-clockwise) is **real-time pattern mode**. In this mode, repeats can be added by pressing the multi-function button. Repeats will be created at the time of the press; pay attention to the tap tempo LED flashes to dial in your timing. Up to six repeats can be added in this mode. To clear the repeats, simply switch to pattern 1 then back to pattern 0.

In multi delay mode, the top right knob controls repeat **Variance.** The **[VAR]** knob adjusts the amount of random *variance* in the volume of each repeat. This give the repeat pattern a more *organic* feel. This knob also applies a low-pass filter which can smooth the occasional high frequency 'pops' that can occur in the octave and reverse sub modes.
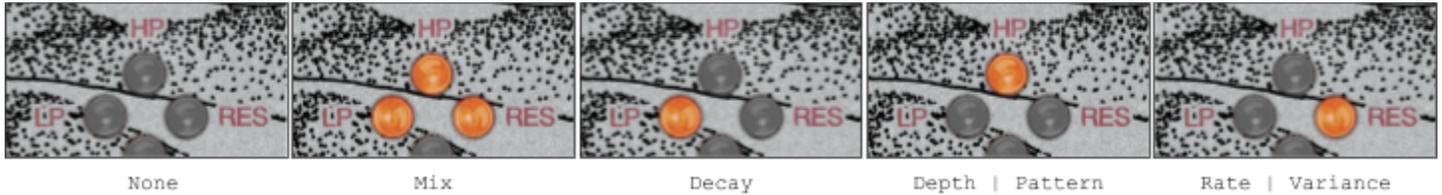
Expression/CV Input

The MIRAGE features a 3.5mm expression and CV combo input. Expression plugs must be TRS - **Tip = Wiper Output, Ring = Input, Sleeve = GND.** CV plugs must be TS (not TRS) - **Tip = Voltage, Sleeve = GND. CV inputs must not exceed 5V.** Improper inputs or plugs can result in damage to the pedal.

To select the parameter to be controlled by expression/CV input, hold down the multi-function button. While holding down this button, turn the top-right knob and use the top three LEDs in the cluster of four LEDs to make a selection. Release the multi-function button to finalize selection. The default selection can be set in the pattern and configuration application.

Note: When selecting, remember that each of the top 3 LEDs corresponds to the knob above it. **Note ii:** When the multi-function button is released, both the switch and expression controls are set based on the top-left and top-right knob positions respectively.
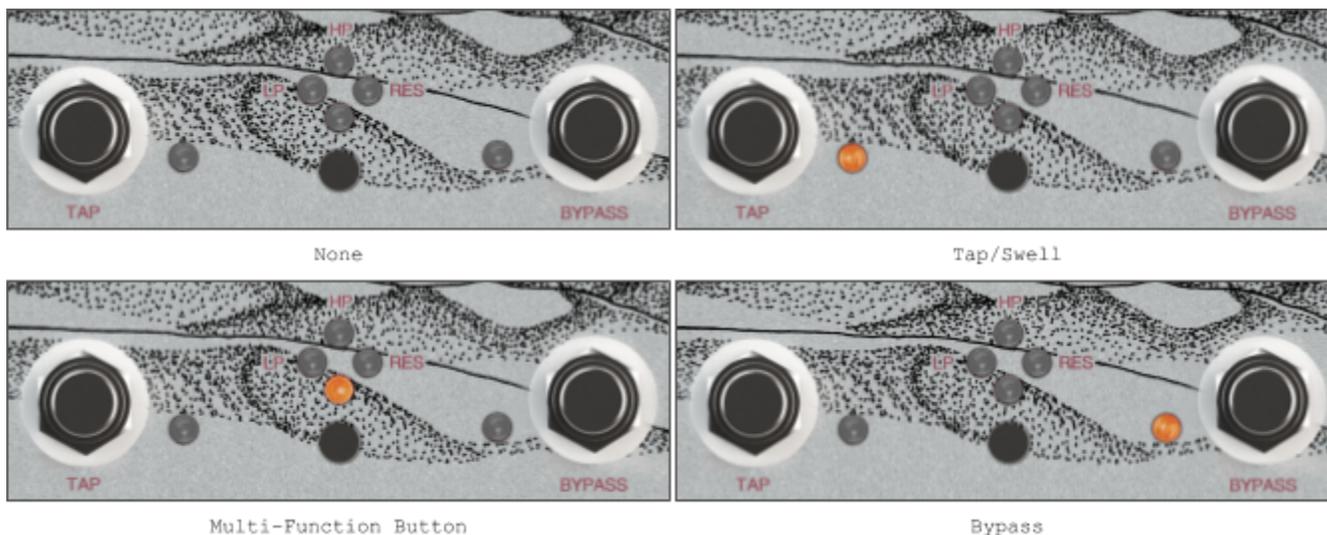

| None | Mix | Decay | Depth \| Pattern | Rate \| Variance |

External Switch/CV Input

The MIRAGE features a 3.5mm external switch and CV combo input. Switch plugs must be TS (not TRS). This input is compatible with normally open (N-O) type switches. For CV inputs, **Tip = Voltage, Sleeve = GND. CV inputs must not exceed 5V.** Improper inputs or plugs can result in damage to the pedal.
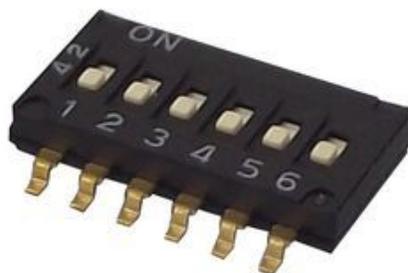
To select the parameter controlled by the external switch, use the same method as expression selection with the top-left knob and bottom three LEDs (including the tap LED and bypass LED). **Note:** When selecting, remember that each of the bottom 3 LEDs corresponds to the nearest button/footswitch. The default selection can be set in the pattern and configuration application.

None

Tap/Swell

Multi-Function Button

Bypass

Pre-gain/Attenuation - Internal DIP Switch

The input gain/attenuation of the MIRAGE can be configured using a small DIP switch (labelled 'Input Level') located on the pedal's circuit board. To access this switch, the back of the enclosure must be carefully removed. The DIP switch is quite delicate, use care when setting it.

Many gain/attenuation settings are possible with this switch. The table below some of the available settings. The default setting is 0dB (unity gain).

Gain (dB)	Gain (AV)	Switch Position					
		1	2	3	4	5	6
5.9	1.98	1	0	0	0	0	0
3.4	1.49	0	1	0	0	0	0
2.0	1.26	0	0	1	0	0	0
0.0	1	0	0	0	1	0	0
-1.4	0.85	1	1	0	0	0	0
-2.3	0.77	1	0	1	0	0	0
-2.6	0.74	0	0	0	0	1	0
-3.4	0.68	0	1	1	0	0	0
-4.5	0.6	0	1	0	1	0	0
-5.4	0.54	1	0	0	0	1	0

-6.0	0.5	0	0	0	0	0	1
-6.6	0.47	0	0	1	0	1	0
-7.4	0.43	0	0	0	1	1	0
-8.5	0.38	0	1	0	0	0	1
-9.6	0.33	0	1	0	1	1	0
-10.0	0.32	1	1	0	0	0	1
-10.5	0.3	0	0	0	0	1	1
-10.8	0.29	0	1	1	0	0	1
-11.7	0.26	1	0	0	0	1	1
-12.7	0.23	0	0	0	1	1	1
-13.7	0.21	1	0	0	1	1	1
-14.2	0.19	0	0	1	1	1	1

(1 = ON, 0 = OFF)

Loading Firmware

The RedShift Effects Firmware Loader software currently supports the following operating systems:

- Windows 7 and higher
- Mac OS X 10.12 and higher
- 64-bit Linux

Loading firmware onto the MIRAGE is simple:

1) Download and install the USB VCP drivers found here.
2) Download and install the RedShift Effects Firmware Loader from here.
3) Connect your 9V power adapter to the MIRAGE.
4) Connect the MIRAGE to your computer with the Mini-USB cable provided (**Note:** The tip of the cable may protrude slightly when inserted, be careful not to force it).
5) Launch the RedShift Effects Firmware Loader software.
6) The application should display 'Connected' with a green circle beside it. A drag-and-drop box should appear.
7) Drag in your **.rse** file and wait for the installation to complete.
8) Once complete, unplug your pedal and test out your new patterns and settings!

Note: If you experience an error during a firmware upload and the pedal will no longer connect to the loader application, you can manually trigger firmware update mode. To do this, disconnect the power cable. While holding down both footswitches, reconnect the power cable. The LEDs should start to cycle, indicating that the pedal is in firmware update mode.

Creating Patterns and Configuring

Pattern creation and core configuration can be performed using the MIRAGE Tools web application. MIRAGE patterns and configurations are stored in **.rse** files, which are created and edited within the web application. As we improve our software, new firmware versions will also become available through this application.

Need Help? Let us know.

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