

# Psychic Wah Operation Manual

Thanks for purchasing the Psychic Wah sound effect pedal. We are confident the Psychic Wah will provide you the most amazing combination of effortless use and dynamic wah effect available anywhere. Featuring the patented Psychic Circuits technology, the Psychic Wah is the flagship model of a line of sound effect pedals, the response and control of which are unparalleled in the industry.

## **IMPORTANT NOTICE!**

**The Psychic Wah may not tolerate an input signal of more than 9 volts peak to peak for an extended period of time. Be advised that some pre-amps, boosters and effects pedals can exceed this level and could potentially damage some of the Psychic Wah's electrical components.** The Psychic Wah pedal is designed to operate as the first pedal in your effects line-up. That is, the Psychic Wah responds best to a clean input signal from the instrument, in order to function as described herein.

That's not to say that you might not find some interesting applications for the pedal in combination with other pedals. But if you do insert other pedals between the instrument and the Psychic Wah pedal, you may notice some deviations in the automatic responses, especially with boosters, fuzz boxes and distortion pedals.

## **Power :**

The Psychic Wah is powered by either a 9V battery (included) or a 9V, outside positive, DC adapter of at least 250 mA or greater. The power jack is located on the rear of the pedal between the input and output jacks (see Fig 1). It is recommended that the user employ DC adapter whenever possible, in that the Psychic Wah pedal is hard on batteries.

Like almost all sound effect pedals the psychic Wah is powered up whenever a chord is plugged into the input jack. Thus, when using a battery, the input jack should be unplugged whenever the pedal is not in immediate use to preserve battery life. It should be noted as well, that the power drain on the battery is far and away greatest when the red effects indicator is illuminated (i.e. when any of the four wah sound effect modes are active). Thus when using a battery, the Psychic Wah should **not** be left in the active mode except during immediate used of the wah effect (i.e. don't leave your pedal in active mode even to take a smoke or do a sound check when using battery power). As with any pedal on battery only, the Psychic Wah should never be left for long periods with a chord plugged into the input jack, even with the effect inactive.



Fig 1

The battery is installed by removing the four screws in the center of each of the rubber feet on the bottom of the pedal and removing the back plate. The battery should be plugged into the 9V connector and centered carefully in the gap between the circuit board and the front side of the pedal's cast aluminum case (Fig 1). Be sure that the battery connector wires are not crimped or pinched when replacing the back plate cover.



Fig 2

## Operation:

The Psychic Wah is controlled by three foot switches located on the top face of the pedal. The main footswitch is the classic heavy duty stomp switch that toggles the effect circuitry in and out of the signal path. When the red power indicator LED is illuminated the wah effect is active. When it is dark, the signal path fully bypasses the wah circuitry. (See Fig 2)

The other two footswitches are momentary pushbutton switches that control the pedal's mode and timing parameters. The four blue LEDs across the face of the Psychic Wah pedal indicate two main pedal parameters:

- 1) Which of the four modes is currently active and,
- 2) What the position of the virtual digital wah rocker pedal is at any given moment.

The leftmost pushbutton switch is the Mode switch. The Mode switch sequences the Psychic Wah through the 4 different wah effect modes of operation, which are:

- 1) Full wah mode
- 2) Lead cuing mode
- 3) Autowah mode
- 4) Oscillation (vibro-wah) mode

Each of the four modes is indicated by its respective blue indicator LED from left to right. When the unit powers up, it defaults to mode 1 (full wah mode). As you cycle through the modes with the bottom left push button, the blue LEDs will illuminate sequentially, indicating the respective mode. (See Fig 2)

In mode 1, the leftmost LED will be constantly illuminated and the remaining three LEDs will indicate the virtual "position" of the internal wah rocker pedal. That is, when with the leftmost LED is constantly illuminated, the pedal is in mode 1, full wah mode.

In this mode, as the player begins to play their instrument, the Psychic Circuits technology will begin to activate the virtual internal rocker pedal invoking the remaining three blue LEDs (positions 2, 3 & 4, from left to right) to illuminate in sequence indicating the position of the internal wah rocker pedal.

When only the first LED is lit, the unit is in the low tone position (equivalent to the rocker pedal in a manual wah pedal being rocked all the way back to the heel-down position). When the 1<sup>st</sup> and 2<sup>nd</sup> LEDs illuminate, the virtual wah rocker pedal is in the low-to-mid position with the heel rocked partially back. When the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> LEDs illuminate, the virtual wah rocker pedal is in the mid-to-high position (equivalent to the rocker pedal in a manual wah being just forward of a level position). If the all the LEDs illuminate, the virtual wah rocker pedal is in the

high tone position (equivalent to the rocker pedal in a manual wah pedal being rocked all the way forward in the toe down position).

Normally these indicator LEDs will be very active, giving the user a visual confirmation of what the ear is hearing. Having both an audible and visual feedback as to what the Psychic Circuit technology is doing enables the musician to tailor their playing technique to the nuance and responses of the Psychic Wah pedal. In essence, the musician will actually begin to “play” the pedal as well as well as their instrument.

### Mode 1; Full Wah

The power-up default is in full automatic wah mode (mode 1). The leftmost LED will be constantly illuminated and other 3 LEDs will be responsive to the input signal. While there are a number of algorithms driving this mode, the fundamental trend is for the wah effect to track the relative rise and fall of the pitch of the musicians’ note choice or playing technique. If the next note is higher in pitch than the prior note, then the Psychic Wah rocks the virtual pedal forwards towards the toe-down position of the traditional wah pedal. If the next note played is lower in pitch than the prior note, then the unit rocks the virtual pedal back towards the heel-down position of the traditional wah pedal.

Just play whatever you like and the Psychic Circuit tech does the rest. Generally speaking it will reproduce a good portion of the action of any of the popular wah pedal artists you might examine. Try playing your favorite wah lead section into the Psychic Wah pedal and let the pedal do the rest.

Playing a smooth picking style and minimal fret and fingering noise will help the pedal track the notes and techniques. But then again, you might find you like the Psychic Circuit’s responses to a less conservative style and technique.

### Mode 2; Lead Cuing

Mode 2 allows the musician to cue the wah effect in and out without touching the pedal. To get to mode 2 after power-up, press the Mode push the button at the bottom left corner of the pedal for one second and the first LED will turn off and the 2<sup>nd</sup> LED will now be persistently illuminated. LEDs 1, 3 & 4 will then track the virtual rocker pedal action just like in mode 1, only mode 2 starts out with the wah effect inactive.

To activate the wah effect, the musician may either bend a string or run a finger up the fret board for 3 or more frets. When the Psychic Circuit detects this action it will automatically activate the wah effect. To deactivate the wah effect, the musician can hit any note lower than a low D and the wah effect will switch out. Note: Be sure to keep the low E and A strings damped while lead is activated so as not to trigger a false cue to cut off the wah effect.

In this fashion, the musician can play any chord that includes the low E string and be assured that the wah pedal will deactivate, then bend a string (or roll up 3 half steps) and have

the wah effect kick in again. The end effect of mode 2 is that the musician can switch the pedal on and off without touching the pedal.

**BEND TRACKING TIPS:** If you are not the greatest string bender, you may prefer to “pre-load” an intended bend to track better. You can prompt the software in to tracking a bend by rolling up the fret board from two frets below the intended bend fret.

Start the technique by picking a string with the index finger holding down the string then rolling up the next two frets with middle and ring finger hammer downs, then crank the bend up with the ring finger. This sets the software “looking” for a bend before the bend actually starts. In fact, you can simulate the entire bend by very clean half-step runs up and down the fret board.

But the half step runs must be fairly clean. In that picking a string with any significant force will cause it to rise slightly in frequency then fall back as the pluck energy dissipates, hard picking will stop the current bend from continuing to track.

### Mode 3: Autowah

Pressing the Mode pushbutton for one second while in mode 2 will cycle the Psychic Wah into mode 3. As in modes 1 and 2 the third LED will now illuminate persistently while LEDs 1, 2, & 4 will track the action of the virtual rocker pedal.

The autowah mode works just like a traditional auto wah, with the added caveat that the autowah will cycle not only with each pluck of the string, but also with any note change like a bend or a slide. Just pluck or bend and the autowah will cycle the virtual foot pedal for you.

The autowah mode uses the bottom right button as a Tap tempo button. That is, the musician can adjust the rate or speed of the autowah cycle faster or slower by tapping in sync with how fast you would want the virtual rocker pedal to go from toe-down, to heel-back and back to toe-down. That is, if you tap the Tap pushbutton once a second for two taps, the rate of oscillation of the virtual rocker pedal will change from the default mode rate of twice a second, to the slower rate of once a second. Similarly, if you then tap the Tap pushbutton once every quarter second for two taps the rate accelerates from once a second to four times a second. The range of rates you can achieve with the Tap button runs from about one tenth of a second, to about four seconds max.

After the first Tap button press, the red pedal active LED will begin to blink, indicating that the unit is waiting for the second tap. If no second tap is delivered after four seconds, the red indicator will blink 3 times, very slowly, then resume operations with no change in rate. The three slow blinks are like a yellow traffic light. If the musician wants the slowest rate, the three slow blinks indicate the last chance for the second tap before the unit ignores the tap tempo request.

Any tap delivered during the three slow blink period will establish the slowest virtual rocker pedal oscillation rate of once every four seconds. The limit on the fastest rate is generally determined by how fast you can reasonably tap the Tap button without the two taps running together. A little experimentation will specify the process.

The user defined tap tempo will be remembered until the unit is powered down. If no battery is in the unit, it can be powered down by either unplugging the power supply or the input

signal chord. If a battery is in the unit, the input chord must be removed to power down the unit (and thus preserve battery life).

#### Mode 4: Bend Oscillation

As with the other modes, mode 4 is invoked by pressing the Mode pushbutton for one second, while in mode three, whereupon the 4<sup>th</sup> LED is persistently illuminated, while LEDs 1, 2 & 3 indicate the movement of the virtual wah pedal.

The oscillation mode oscillates the virtual wah rocker pedal back and forth at a regular rate making a sound similar to the old Hendrix photo vibe pedal. The power-up default rate of oscillation of the virtual rocker pedal is about once every half-second but can be changed with the Tap button as described above in the mode 3 description.

In mode 4 the unit oscillates the virtual wah pedal at a fixed rate until such time as a string bend is detected. During a string bend the Psychic Circuit tracks the bend and raises the rate of oscillation up to 8 times the base rate, in sync with the magnitude of the bend, returning to the base rate as the bend is relaxed (or otherwise terminated).

As may be obvious, pushing the Mode button in mode 4 cycles the mode back to mode 1 and the process repeats.