

SOUND SUBSTANCE *WaitStates* instruction sheet

Thank you very much for your purchase of the *Sound Substance WaitStates*; a state of the art multi-function delay pedal for the guitarist who wants more. It has transparent analog tonal quality and features multiple modes of operation. (*Wait States* is a term that defines the amount of time delay per section of an electronic system.) The following paragraphs detail the procedures on how to hook up your guitar and amplifier to the pedal with an external power supply, general overview of the controls, and operational illustration. Warranty details, serial number, and product registration are also discussed.

1. General hookup instructions



The *Sound Substance WaitStates* delay pedal is connected to your guitar and amplifier by simply plugging the cable from your guitar in the *WaitStates* jack labeled *Guitar*. Connect the other cable from the jack labeled *Wet Out* to the instrument input of your amplifier. The *Dry Out* can be connected to a second amplifier or monitoring device for a stereo effect. This pedal is true bypass. In order for the pedal to be true bypass, the signal must pass through the pedal with the power off. This means that the amplifier driving the *Dry Out* will have no power applied to it. Thus in bypass mode, the *Dry Out* is disconnected internally by design; according to the definition of true bypass. *Dry Out* is reconnected when pedal mode is on. This feature allows the dry out signal to move back and forth from the *Wet Out* jack when in bypass to the *Dry Out* jack when in pedal mode. This provides a back and forth effect that can be used with two amplifiers.

An expression pedal may be added for extra effects as described in the paragraphs below. **Any manual adjustment knob on the side of the expression pedal should be set to zero (maximum counterclockwise) for optimum results.** The *WaitStates* pedal was designed using an M-Audio EX-P expression pedal with the selector switch set to either position. It has also been tested with a Roland EV-5 expression pedal. The *WaitStates* was not designed for use with any particular product. These expression pedals were available during the design phase of the product. Any other pedal that is similar to the above two mentioned should be compatible. However, no expression pedal product endorsement is offered nor is any warranty offered or implied if any brand of expression pedal yields less than satisfactory results.

The *WaitStates* delay is designed to use an external power supply only. **CAUTION:** Only use a listed, regulated 9 VDC, 200 mA minimum power supply. The power plug shall be negative center, 2.1 mm. The outer plug ring shall be positive as indicated by the symbol on the top of the pedal. This is the only type of power supply that will work with this product. **Any attempt to use any other type of power supply or voltage may damage the product and shall void the warranty.** A power jack is provided on the back side of the pedal and labeled 9 VDC on the top of the pedal. This type of power supply is commonly used with the majority of pedal products. One can be purchased from you local music store at a nominal cost. **CAUTION:** Read section 3 for warranty details.

2. Control description

- > **Indicator LED** – The indicator LED near the Repeat and Speeds controls of the pedal has the dual feature of showing that power is on regardless of the pedal operating mode. Green is pedal mode. Red is bypass.
- > **Foot switch** – Pedal operation is designed to be heel and toe. The stomp switch is located on the pedal such that a simple tap of the toe with your heel on the floor will toggle the pedal operating mode.
- > **Clock** – Low frequency oscillator (LFO) that replaces the repeats or speed controls when selected. This makes the repeat and speed functions vary as the frequency of the oscillator. (See details under 5-way selector switch.)
- > **Repeats** – This control sets the number of times the signal repeats or regenerates itself. Counter clockwise is minimum. Clockwise is maximum.
- > **Speed** – This control sets the rate (delay time) the signal repeats or regenerates itself. Counter clockwise is slowest, maximum delay. Clockwise is fastest, minimum delay.
- > **Wet Mix** – This control balances the ratio of delayed signal to the non-delayed or dry signal. In other words, it sets the level of the delayed signal referenced to the dry.

The *WaitStates* delay pedal also has a two-position toggle switch and a five-way selector switch. Their operations are described as follows:

- > **Mode Switch** – The *WaitStates* delay pedal has a variable delay time of approximately 50 to 350 mSec when this switch is in the *Normal* mode. Changing the switch position to *Extended* adds additional fixed delay time. This increases the total delay time an additional 350 mSec; or up to approximately 700 mSec.
- > **5-way selector switch** – This switch allows you to control the *WaitStates* delay pedal features.

Repeat clock – Placing the switch in this position replaces the Repeat control with the action of the low frequency oscillator. Counter clockwise adjusts the repeats to minimum slow. Clockwise adjusts the repeats to fastest. Turn the control maximum clockwise and adjust the Speed control for a shimmering effect.

Repeat exp – Placing the switch in this position replaces the Repeat control with the action of the expression pedal.

Normal – This is standard delay pedal operation. Control the Repeats and Speed with their respective control knobs.

Speed clock – Placing the switch in this position replaces the Speed control with the low frequency oscillator. It has some interest sound effects.

Speed exp – Placing the switch in this position replaces the Speed control with the expression pedal.

Note: The Repeat and Speed knobs interact with the Clock and expression pedal. It will be necessary to adjust them individually for use with the Clock and expression pedal. These settings may vary apart from the Normal settings.

3. **Warranty.** Your *Sound Substance WaitStates* carries a 1 year limited warranty. Please retain your sales receipt as proof of purchase. A copy of the receipt and a written description of the claim must be presented for warranty service.

Application of the wrong power supply voltage, (see below,) physical abuse, disassembly and attempted reverse engineering are illustrations of things that void the product warranty.

CAUTION: USE OF THE WRONG VOLTAGE AND POLARITY CAN CAUSE DAMAGE TO THE PEDAL AND SHALL VOID THE WARRANTY. ALTERNATING CURRENT, AC, SHOULD NEVER BE APPLIED TO THE EXTERNAL POWER JACK. THIS TOO, WILL DAMAGE THE PEDAL AND SHALL VOID THE WARRANTY.

4. **Serial Number** - The serial number of your product is found on the chassis bottom cover. Please keep a record of this for your personal insurance purposes.
5. **Product Registration** - Please e-mail register your product and request notifications of new product announcements via e-mail. Please be assured, your contact information will be kept strictly confidential.

Please visit our web site: www.soundsubstance.com e-mail: info@soundsubstance.com