

## QUICK START

### 1. POWER

To power the unit, insert 4 AA batteries (included) or connect a Source Audio SA150 9 Volt DC power supply to the 9V DC jack (A).

**Note:** Power supply must be REGULATED, minimum 200mA, and use a negative tip plug. Use of a non-Source Audio power supply may cause damage and void the warranty.

### 2. GUITAR/AUDIO CONNECTIONS

Next, plug your guitar (or other instrument) into the jack labeled GUITAR IN (B) via a standard 1/4-inch cable. Connect your amp (or other audio device) to the GUITAR OUT (C) jack, again with a standard 1/4-inch cable. Both input and output are mono signals.

**Note:** The unit will not power up until a MONO 1/4-inch plug is inserted into the guitar input. This is to conserve power when the unit is running on batteries. Don't forget to unplug the cable from the input when the unit is not in use—otherwise the batteries will continue to drain.

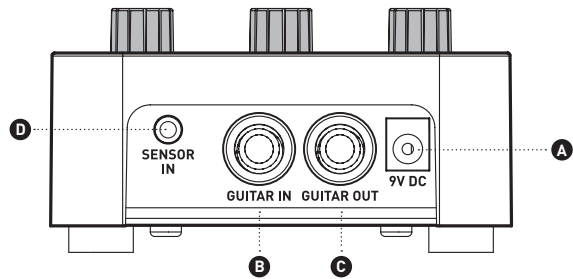
### 3. SENSOR IN (optional)

To use your Tri-Mod Flanger with a Hot Hand sensor: Connect the sensor to the SENSOR IN (D) jack and follow any instructions supplied with the sensor. The sensor input works with both wired and wireless sensors.

### 4. BRIEF KNOB AND PEDAL DESCRIPTIONS

(see *Controls* section for more details)

- **EFFECT** selects desired effect type.
- **DELAY** adjusts the time sweep of the flanging effect.
- **DEPTH** controls the depth of the envelope (left of center) or the depth of the LFO (right of center).
- **ON/OFF** engages and disengages the effect.



## CONTROLS

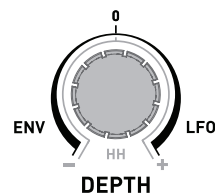
### EFFECT

The effect knob selects the type of flanger to be used. The effect knob also allows you to select the CALIBRATE mode for calibrating the signals from a Hot Hand sensor. See the *Use with Hot Hand* section for details on calibration.



### DELAY

The delay knob adjusts the amount of time delay used to create the flange effect. Flanging effects are created by constantly varying the length of a short delay line. This moving delay line causes small variations in the pitch of the signal. Turning the delay knob clockwise to increase the amount of delay will cause greater variations in the pitch.

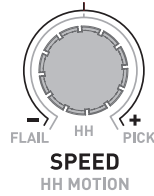


### DEPTH

The depth knob is a multi-purpose control on the Tri-Mod Flanger. It controls the depth of the effect and additionally controls the type of modulation being used. To the left of the '0' position (12 o'clock) the effect will be driven using an envelope follower. Turning the knob further to the left will increase the depth of the envelope. To the right of the '0' position the effect will be

driven using an LFO. Turning the knob further to the right will increase the depth of the LFO. This way you can easily switch back and forth between using the envelope or LFO to drive the effect.

**Note:** If you plug a Hot Hand sensor into the SENSOR IN jack both the envelope and LFO modes will be disabled and the unit will go into Hot Hand Mode. See the *Use with Hot Hand* section for more details.



### SPEED

In envelope mode, the speed knob controls the attack and decay time of the envelope with '-' being the slowest and '+' being the fastest. In LFO mode, it controls the speed of the oscillator again with '-' being the slowest and '+' the fastest. In Hot Hand mode, the knob controls the response of the motion sensor. See the *Use with Hot Hand* section for more details.

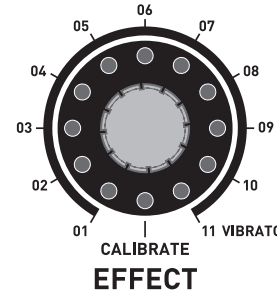
**Note:** The envelope follower signal can be reset to zero by a very brief moment of silence, allowing the next note played to experience the full sweep of the envelope all the way from zero.

### ON/OFF

The ON/OFF switch engages or disengages the effect. When the effect is engaged, the ON/OFF LED will be lit. The LED will be off in bypass mode. The ON/OFF switch is also used to start the calibration routine when the EFFECT knob is set to CALIBRATE. See the section on *Use with Hot Hand* for more details.

## EFFECTS

Here are some brief descriptions of the effects included in the Tri-Mod Flanger. The type of modulation used to control the effect, either Envelope, LFO, or Hot Hand, can create dramatically different sounds for the same effect setting. We encourage you to experiment with different combinations to find what you like best.



**01:** Classic flanger with resonance.

**02:** Delayed subtracted from input, producing a hollow sound.

**03:** Multiple, individually varying, delay lines summed.

**04:** High resonance, peaks only, no notches.

**05:** Multiple delays, no resonance.

**06:** Multiple delays, with resonance.

**07:** Classic flanger with resonance, but with an extra delay network inserted into the feedback path, resulting in a more complicated frequency response curve.

**08:** A lot of individual delays, with resonance and extra delay network in feedback. Hollow sound. At short delay times, this is rather thin sounding, but is quite nice at longer delays.

**09:** A lot of individual delays, with resonance and extra delay network in feedback.

**10:** Classic flanger, hollow sound. With resonance and extra delay network in feedback. Heavy modulation inside the extra delay network.

**11:** Delayed signal only, no flanging effect. Meant for pitch modulation, such as vibrato. There are some small resonance peaks, so that vibrato doesn't sound too sterile and mechanical. Slow modulation will be nearly inaudible. Shorter delay times will produce less of an effect than long delay times.

## SPECIFICATIONS

### Dimensions

- L: 7 inches
- W: 4 inches
- H: 2 inches (including knobs)

### Weight

- 1.25lbs

### Power

- 110mA @ 9V DC (max 145mA with Hot Hand Wireless Adapter)
- 15-20 hours battery life
- NEGATIVE tip power jack

### Audio Performance

- 115dB DNR audio ADC
- 24-bit audio conversion
- 56-bit digital data path
- Analog bypass

## TROUBLESHOOTING

### Noise:

Low Power	Change batteries or plug in a DC power supply.
Near noise source	Move pedal away from power supplies and other equipment.
Other equipment	Remove other effects from signal chain, see if noise persists.
Bad cables	Swap out audio cables.

### Low volume:

Low power	Change batteries or plug in a DC power supply.
-----------	--

### Hot Hand doesn't work:

Low power	Change batteries or plug in a DC power supply.
Not calibrated properly	Calibrate the Hot Hand (see <i>Use with Hot Hand</i> ).
Not connected	Check Hot Hand connections.

### Knobs don't work /light up:

Low power	Change batteries or plug in a DC power supply.
Wrong power supply	Use correct power supply (see <i>Quick Start</i> ).
Corroded input cable plug	Check input cable plug for corrosion on sleeve, swap out cable if necessary.
TRS (stereo) cable used	Only use mono cable for input cable.

For additional assistance, please visit [www.sourceaudio.net](http://www.sourceaudio.net)

# TRI-MOD FLANGER

## USERS GUIDE

Thank you for purchasing a SoundbloX Tri-Mod Flanger. The Tri-Mod Flanger offers a wide palette of flanger sounds that can be controlled in various ways. The effects and control features allow you to go far beyond the sounds possible with standard flanging effects. The Tri-Mod Flanger and other effects in the SoundbloX line are all HOT HAND® READY and can be controlled with any Hot Hand motion sensor for even more sonic possibilities.

Enjoy!  
The Source Audio team

- **DIVERSE SOUND PALETTE**  
Featuring 11 types of flanger effects.
- **MULTIPLE CONTROL OPTIONS**  
Any of the 11 effects can be controlled with three distinct modulation sources.
- **MODERN DESIGN**  
A thoughtfully designed box which features rugged construction and sleek looks.
- **STATE-OF-THE-ART DSP**  
Our proprietary 56-bit Digital Signal Processor, the SA601, and crystal clear 24-bit converters.
- **HOT HAND READY**  
All SoundbloX pedals can be used with any Hot Hand motion sensor to extend the capabilities of the unit.
- **ACTIVE ANALOG BYPASS**  
Bypass is fully routed around the DSP and active input ensures zero signal degradation.

SA123

### Calibration

The Tri-Mod Flanger has a calibration feature which is only used in Hot Hand mode. However, calibration is not required before use. The calibration feature allows you to set the midpoint of the flanger sweep for any position of your hand. Depending on your playing style, you may find it useful to try some different calibration positions. The most common use of calibration is setting your resting hand position on the guitar to be the midpoint of the flanger sweep. Calibration can also be useful if you are putting the sensor on a headband or other alternate locations.

### To perform a calibration

- Turn the EFFECT knob to the CALIBRATE position.
- Hold the sensor in the desired position.
- While holding the sensor steady, press the ON/OFF footswitch and wait for 1 second.
- Turn the EFFECT knob away from calibrate to use your new calibration setting. Note: Calibration settings will be saved between power cycles.
- If you have trouble with calibration and need to get back to the default setting, place the sensor on a flat, level surface with the blue LED facing down and run the calibration procedure again.

## USE WITH HOT HAND

### Depth

In Hot Hand mode, the depth knob becomes the depth of the effect based on the sensor input. It can alternatively be thought of as a gain control for the Hot Hand signal. Increasing the depth will cause the flanger to move more based on smaller motions of the sensor. Decreasing the depth will decrease the movement of the flanger. In envelope and LFO mode, the two regions of the depth knob were used to control the depth in two separate modes. In Hot Hand mode, the depth increases turning the knob to the left or right except that in the '+' region the motion of the flanger will be from low to high and in the '-' region the flanger will move from high to low. This effectively inverts the Hot Hand signals.

### Motion Control

The SPEED control becomes the MOTION control in Hot Hand mode and is used to smooth out the input from the sensor by filtering out fast changes in the signals. The amount of smoothing is controlled by the knob. Turning the knob towards FLAIL provides the most amount of smoothing and the effect will now only react to large, slow motions of the sensor. This is useful when you only want the effect to respond to large, deliberate motions. Turning the knob all the way to PICK sets the smoothing at a minimum. This means that fast changes in the sensor signal will be applied to the effect. The motions created from normal picking will be enough to move the flanger. This may cause the sound to be too "jittery", in which case, turn the knob towards STRUM and FLAIL to get the desired response. The STRUM setting is a nice compromise that allows some moderately fast motions through without being too jittery.

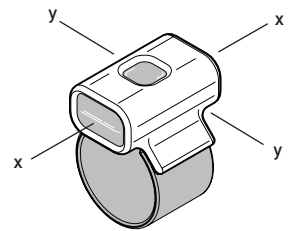
## HOT HAND READY

While the primary function of the Tri-Mod Flanger is as a standalone effect pedal you also have the option of exploring some additional functions by plugging in a Hot Hand sensor. When a sensor is plugged in the envelope and LFO modes are disabled and the unit goes into Hot Hand mode. In Hot Hand mode, the controls take on some secondary functions. These are shown by the white text beneath main label of the knobs.

### Hot Hand Basics

The Hot Hand motion sensors are sold separately and come in either wired or wireless versions. Both will work with the Tri-Mod Flanger. Additionally, the SENSOR IN jack will be compatible with any future Source Audio sensors.

The Hot Hand ring contains an accelerometer that responds to acceleration and is not based on any type of proximity to the guitar. By moving your hand or by changing the position of your hand you can modulate the effect. For a good description of Hot Hand Theory, download the Hot Hand Motion Controlled Flanger Filters manual. It is available at [www.sourceaudio.net](http://www.sourceaudio.net). Keep in mind that the Tri-Mod Flanger can only use the x-axis of the ring sensor.



## FEATURES

The SoundbloX Tri-Mod Flanger is a new type of flanger or "Envelope Flanger" effect. The unit features multiple flanger types ranging from classic to modern and beyond. Each flanger type can be controlled by an envelope follower or an LFO. An envelope follower is an algorithm that responds to the amplitude (or volume) of the incoming signal and creates a control signal based on the input level. This control signal is used to "move" or modulate the flanging effect. In addition to controlling the flanger with the envelope follower, it can also be driven with an LFO (Low Frequency Oscillator). LFOs are most commonly used in effects like phasers, flangers, and choruses. Finally, the flanging effects can also be controlled by a Hot Hand Motion Sensor. Either a wired or wireless sensor can be plugged into the sensor input on the back panel. When a sensor is plugged in, the LFO and envelope follower are disengaged and the unit goes into "Hot Hand Mode" and the controls take on slightly different functions. Also, the calibrate feature is intended for use with the "Hot Hand Mode" only. The Tri-Mod name comes from the fact that there are three distinct modulation sources for controlling the flanger effects: Envelope, LFO, or Hot Hand.

## LIMITED WARRANTY

Source Audio, LLC (hereinafter "Source Audio") warrants that your new Source Audio SoundbloX Effects Pedal, when purchased at an authorized Source Audio dealer in the United States of America ("USA"), shall be free from defects in materials and workmanship under normal use for a period of one (1) year from the date of purchase by the original purchaser. This Limited Warranty does not extend to the batteries which are purchased as is. Please contact your dealer for information on warranty and service outside of the USA.

Under this Limited Warranty, Source Audio's sole obligation and the purchaser's sole remedy shall be repair, replacement, or upgrade, at Source Audio's sole discretion, of any product that, if properly used and maintained, proves to be defective upon inspection by Source Audio. Source Audio reserves the right to update any unit returned for repair and to change or to improve the design of the product at any time without notice. Source Audio reserves the right to use reconditioned parts and assemblies as warranty replacements for authorized repairs. Any product repaired, replaced, or upgraded pursuant to this Limited Warranty will be warranted for the remainder of the original warranty period.

This Limited Warranty is extended to the original retail purchaser. This Limited Warranty can be transferred to anyone who may subsequently purchase this product provided that such transfer is made within the applicable warranty period and Source Audio is provided with all of the following information: (i) all warranty registration information (as set forth on the registration card) for the new owner, (ii) proof of the transfer, within thirty (30) days of the transfer, and (iii) a photocopy of the original sales receipt. Warranty coverage shall be determined by Source Audio in its sole discretion. This is your sole warranty. Source Audio does not authorize any third party, including any dealer or sales representative, to assume any liability on behalf of Source Audio or to make any warranty on behalf of Source Audio.

### WARRANTY INFORMATION

Source Audio may, at its option, require proof of the original purchase date in the form of a dated copy of original authorized dealer's invoice or sales receipt. Service and repairs of Source Audio products are to be performed only at the Source Audio factory or a Source Audio authorized service center. Prior to service or repair under this Limited Warranty, the purchaser must request from Source Audio a return authorization, which is available at:

Source Audio LLC  
120 Cummings Park, Woburn, MA 01801  
(781) 932-8080 or at [www.sourceaudio.net](http://www.sourceaudio.net).

Unauthorized service, repair, or modification will void this Limited Warranty.

### DISCLAIMER AND LIMITATION OF WARRANTY

DO NOT OPEN THE EFFECTS PEDAL UNDER ANY CIRCUMSTANCE. THIS WILL VOID THE WARRANTY.

THE FOREGOING LIMITED WARRANTY IS THE ONLY WARRANTY GIVEN BY SOURCE AUDIO AND IS IN LIEU OF ALL OTHER WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, EXCEEDING THE SPECIFIC PROVISIONS OF THIS LIMITED WARRANTY ARE HEREBY DISCLAIMED AND EXCLUDED FROM THIS LIMITED WARRANTY. UPON EXPIRATION OF THE APPLICABLE EXPRESS WARRANTY PERIOD, SOURCE AUDIO SHALL HAVE NO FURTHER WARRANTY OBLIGATION OF ANY KIND, EXPRESS OR IMPLIED. SOURCE AUDIO SHALL IN NO EVENT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES SUFFERED BY THE PURCHASER OR ANY THIRD PARTY, INCLUDING WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS OR BUSINESS OR DAMAGES RESULTING FROM USE OR PERFORMANCE OF THE PRODUCT, WHETHER IN CONTRACT OR IN TORT. SOURCE AUDIO SHALL NOT BE LIABLE FOR ANY EXPENSES, CLAIMS OR SUITS ARISING OUT OF OR RELATING TO ANY OF THE FOREGOING. Some states do not allow the exclusion or limitation of implied warranties so some of the above limitations and exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights, which vary, from state to state. This Limited Warranty only applies to products sold and used in the USA. Source Audio shall not be liable for damages or loss resulting from the negligent or intentional acts of the shipper or its contracted affiliates. You should contact the shipper for proper claims procedures in the event of damage or loss resulting from shipment.