

# soundblox® 2

---



## BASS | microMODELER

OVERDRIVE FUZZ DISTORTION

**USER'S GUIDE**

SA228

# WELCOME

---

Thank you for purchasing the Soundblox 2 OFD Bass microModeler. The SB2 OFD Bass is the newest addition to our line of distortion pedals designed specifically for the bass. The SB2 OFD Bass provides a diverse palette of modeled overdrives, fuzzes, and distortions (O.F.D) based on our meticulous research of the most popular bass distortion boxes. Each effect was designed and redesigned again to meet our high-standards for quality bass effects.

Soundblox 2 pedals are housed in a compact physical format with many layers of useful features designed for both easy out-of-the-box use and dedicated deep tweaking. Like all Soundblox effects pedals, the Soundblox 2 Bass OFD is “Hot Hand® Ready”.

The Quick Start guide will help you with the basics. For more in-depth information about Soundblox 2 OFD Bass microModeler move on to the following sections.

Enjoy! -The Source Audio team



If possible, dispose of the device at a recycling center. Do not dispose of the device with the household waste.

For full compliance with EN 61000-4-6 standard, input cable must be less than 3 meters in length.

# OVERVIEW

---

## **DIVERSE SOUND PALETTE**

Featuring 12 unique varieties of overdrive, fuzz, and distortion effects.

## **STATE-OF-THE-ART DSP**

Our proprietary 56-bit Digital Signal Processor, the SA601, and crystal clear 24-bit converters.

## **COMPACT DESIGN**

A compact, rugged, cast-aluminum housing

## **UNIVERSAL BYPASS™**

Select either analog buffered or relay-based True Bypass.

## **2 USER PRESETS**

Easy to configure user presets selectable via two footswitches.

## **3-BAND TONE CONTROL**

An ultra-flexible Treble-Mid-Bass tone control.

## **DUAL FUNCTION MIXING KNOB**

Choose between two mixing options on either side. Turning to the left increases the amount of clean signal in the mix. Turning to the right increases the amount of a clean signal EQ'd to provide only low end.

## **MULTI-FUNCTION INPUT**

A multi-purpose control input for use with Hot Hand®, expression pedal, or MIDI.

# QUICK START

---

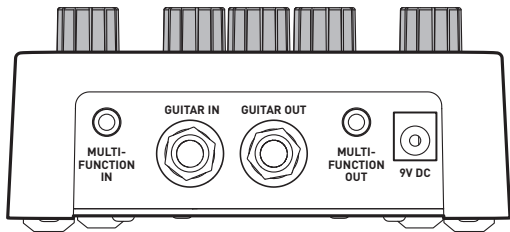
## 1. POWER

To power the unit, connect the included DC adapter power supply to the 9V DC jack on the back panel.

**Note:** Using a different supply could damage the unit and void the warranty.

## 2. GUITAR/AUDIO CONNECTIONS

Next, plug your guitar (or other instrument) into the jack labeled GUITAR IN via a standard ¼" cable. Connect your amp (or other audio device) to the GUITAR OUT jack, again with a standard ¼" cable. Both input and output are mono signals.

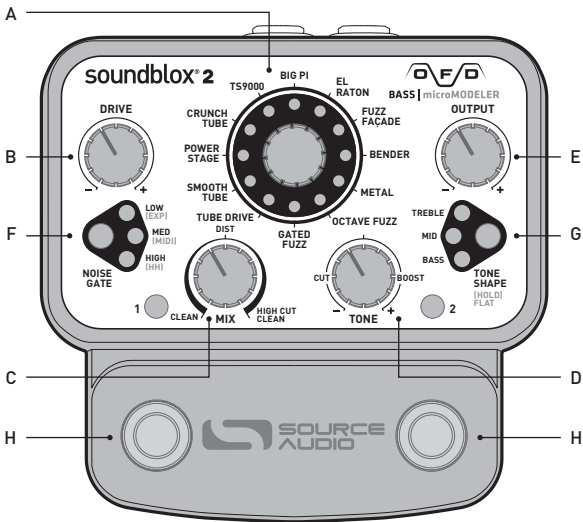


## 3. BRIEF KNOB, FOOTSWITCH, AND BUTTON DESCRIPTIONS

(see *Controls* section for more details)

- **EFFECT KNOB (A):** selects the type of overdrive, fuzz, or distortion.
- **DRIVE (B):** the amount of distortion gain applied to the signal.

- **MIX (C):** adjusts the level of clean signal added to the mix. Choose between standard clean tone and EQ'd clean tone.
- **tone (D):** cuts or boosts the selected TONE SHAPE (TREBLE, MID, and BASS).
- **OUTPUT (E):** adjusts the overall signal volume.
- **Noise Gate Button (F):** selects the noise gate threshold level.
- **Tone Shape Button (G):** selects between BASS, MID, and TREBLE EQ ranges controlled by the TONE knob.
- **FOOTSWITCHES (H):** Enables/Disables a preset depending on the selected footswitch. Press and hold to save an edited preset.



# THEORY OF OPERATION

---

The Soundblox 2 OFD Bass microModeler presents a curated collection of what we consider to be the best and most essential overdrive, fuzz, and distortion effects for bass. We have chosen names for each OFD effect that are suggestive of the sounds you may find in many famous stomp boxes or overdrive circuits. We have rendered each effect to not only be the best possible representation of each classic distortion sound but also to be highly customizable with a broad range of adjustable parameters to make them your own.

# CONNECTIONS

---

**GUITAR IN (A):** Connect your bass or other instrument here using a standard MONO ¼" cable.

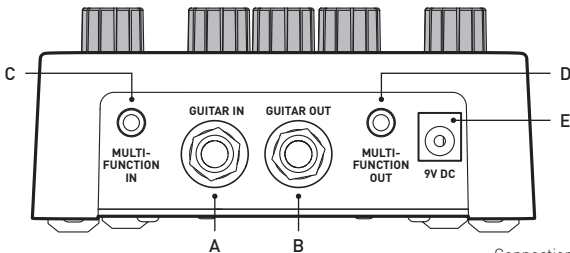
**GUITAR OUT (B):** Connect this to your amp, pedal, or other audio device.

**MULTI-FUNCTION IN (C):** The multi-function input is a flexible control input for use with external controllers. It can accept digital or analog signal which allows the Soundblox 2 OFD Bass to interface with the following accessories:

- SA115 Hot Hand Wireless Adapter
- SA111 Hot Hand Wired Sensor
- SA161 Source Audio Dual Expression Pedal
- Source Audio Soundblox 2 MIDI Adapter

**MULTI-FUNCTION OUT (D):** Use a Source Audio daisy-chain cable to connect this jack to the sensor input of another Soundblox pedal.

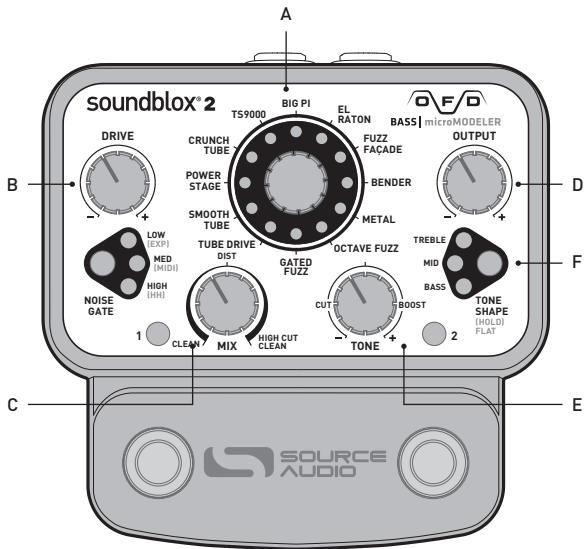
**9V DC (E):** Connect the included 9 Volt DC power supply here. Use of a non-Source Audio power supply may cause damage and void the warranty.



# CONTROLS: KNOBS

## EFFECT (A) (not labeled)

The effect knob selects which overdrive, fuzz, or distortion type will be used. There are 12 different selections available. For information on the individual settings see the Effect Types section.





## **DRIVE (B)**

The DRIVE controls the level of distortion by adjusting the gain of the signal going into the distortion section.

## **MIX (C)**

The MIX knob controls the amount of dry, unaffected signal blended in with the distortion. The clean signal used in this control does NOT have any TONE SHAPE or NOISE GATE applied. The center point of the knob is 'flat' with no clean signal applied. Turning the knob to the left (toward 'CLEAN') will increase the amount of unaffected clean signal in the mix. Turning the knob to the right (toward 'HIGH CUT CLEAN') will increase the amount of LO-RETAIN EQ'd clean signal in the mix.

## **OUTPUT (D)**

This adjusts the overall level of the final signal.

## **TONE (E)**

The TONE knob along with the TONE SHAPE control **(F)** will cut or boost the Treble, Mid, or Bass frequencies depending on which mode is currently selected. All three bands can be set to the default flat (no cut and no boost) by pressing and holding the TONE SHAPE button **(F)** until it blinks.

**Note:** Since the Soundblox 2 OFD preset values can differ from the physical knob positions, it can be useful to determine the positions of the preset knob values. To do this, start with the pedal in bypass and set all of the knobs to the full counter-clockwise position. Next, enable the preset and slowly turn each knob up one at a time until the preset indicator LED begins to blink rapidly. When this happens, the current position of the knob matches the saved value.

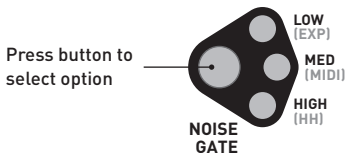
# CONTROLS: BUTTONS

---

## NOISE GATE

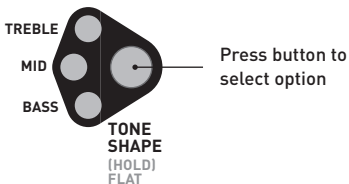
This control allows for quick adjustments to the noise gate threshold. Since distortion effects can have very high signal gain, the background noise and hum are also gained up and can become undesirably loud. Enabling the noise gate on the SB2 OFD Bass will help silence the background noise when the bass is not being played. There are 4 levels for the noise gate threshold: OFF (all LEDs off), LOW, MED, HIGH. Low being the lowest threshold and least aggressive gate action, HIGH being the highest threshold with the most gating action.

**Note:** this button is also used to select and control the function of an external controller through the MULTI-FUNCTION input. See the *External Control* section.



## TONE SHAPE

There are three selectable tone control options: TREBLE, MID, and BASS. This control works in conjunction with the TONE knob. Press the TONE SHAPE button to scroll through the three tone control options. The TONE knob will adjust the level of cut or boost for the selected TONE SHAPE. The three tone shapes can be set independently and will not affect each other. If you need to quickly set all of the three bands back to the default flat setting, simply press and hold the TONE SHAPE button for 2 seconds. The TREBLE, MID, and BASS LEDs will blink three times rapidly to show that they have been reset.



## FACTORY RESET

Should you wish to perform a factory reset, unplug the power supply from the pedal, then press and hold the TONE SHAPE button while plugging the power supply back in. Continue holding the TONE SHAPE button until the 1 and 2 preset LEDs blink in succession — this will erase any saved presets.

# CONTROLS: FOOTSWITCHES

---

There are two footswitches on the Soundblox 2 OFD Bass microModeler. The left footswitch corresponds to preset 1 and the right footswitch corresponds to preset 2. Pressing either of the footswitches will engage the respective preset. Pressing the same footswitch again will put the effect back into bypass mode. Pressing the other footswitch will engage the other preset without going into bypass. There are indicator LEDs for each footswitch that show which preset is currently enabled or both LEDs will be off when the effect is in bypass mode.

When a preset is enabled and edited, the indicator LED for that preset will begin to blink occasionally to show that the preset has been edited. Once a preset has been edited, it can be saved by pressing and holding the footswitch. The LED will blink quickly to indicate that the preset has been saved. Once changes are saved, the LED will be lit solidly again. See the Preset Saving Details section for other saving options.

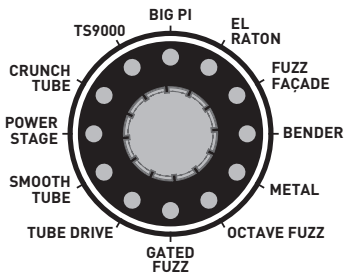
**Note:** Changes made to a preset will be lost if you go into bypass or switch to another preset without saving.

An edited preset can be saved to either of the two preset locations. For example if preset 1 has been selected and edited, it can be saved to preset location 2 by pressing and holding the right footswitch for preset 2. Once the preset has been saved to that location, the new location will be the selected preset.

# EFFECT TYPES

---

Here are some brief descriptions of the effects included in the Soundblox 2 OFD Bass microModeler.



## **TUBE DRIVE (OVERDRIVE)**

An overdriven amp distortion sound with a smooth texture. Good for adding a little extra grind for an 'always on' tone.

## **SMOOTH TUBE (OVERDRIVE)**

Another take on the overdriven amp sound heard in the TUBE DRIVE setting. The mids are rolled off in this setting to smooth out the distortion tone. Similar to the sound of an overdriven Mesa-Boogie® pre-amp distortion.

### **POWER STAGE (DISTORTION)**

Our take on the classic 'stompbox mimicking overdriven amp' sound of the Fulltone Distortion Pro®. This is a meat and potatoes distortion tone that fits right at home in any rock song.

### **CRUNCH TUBE (OVERDRIVE)**

Our own version of an overdriven tube amp made more aggressive and out front.

### **TS9000 (DISTORTION)**

Based on the Ibanez Tube Screamer®, a solid state distortion stomp box with a boost in the mid-range. Good for high lead playing and soloing.

### **BIG PI (DISTORTION)**

A hybrid sound of the big-bottom Electro-Harmonix Big Muff Pi® distortion and gritty Way Huge Swollen Pickle®. Great for power trio grinding bass low end.

### **EL RATON (DISTORTION)**

A high-texture distortion sound bordering on fuzz based on the ProCo Rat®.

### **FUZZ FAÇADE (FUZZ)**

A tweakable take on the highly sought after Dallas Arbiter Fuzz Face® sound. Turn up the drive for a unique buzzing distortion effect.

### **BENDER (FUZZ)**

Our version of the Tone Bender® fuzz sound. This is a bright, grinding distortion that sounds something like a swarm of massive bees.

### **METAL (DISTORTION)**

This wolfy tone with a lot of bite is our own creation. Crank this one to rip serious finger-tapping leads or hold down the bottom with crunchy low string hits.

### **OCTAVE FUZZ (FUZZ)**

A full wave rectifier to mimic the classic Octavia®. Dial back the high frequency tone on your bass to get positively synthy results.

### **GATED FUZZ (FUZZ)**

A wild, digital sounding fuzz held back by a sensitive noise gate. Similar to a ZVex Woolly Mammoth®. Experiment with different levels of additional NOISE GATE to find some of the most unique sounds hidden in the OFD.

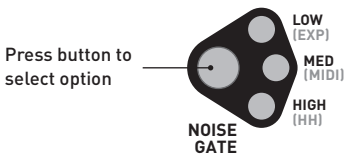
# EXTERNAL CONTROL

---

One of the new Core Features of the Soundblox 2 line of effects pedals is the addition of the Multi-Function Input. The Multi-Function input is an intelligent control input that can accept both digital and analog control signals. The Multi-Function input replaces the Sensor Input on previous Soundblox pedals. The MULTI-FUNCTION input can connect to wired or wireless Hot Hand® accessories, a Source Audio Expression Pedal, or a Source Audio MIDI interface that will enable full MIDI I/O to the pedal.

## Selecting an external control input:

Press and hold the TONE SHAPE button, then press the NOISE GATE button so the LOW/EXP LED is lit red. This will change the function of the NOISE GATE button. Now press the NOISE GATE button again to select between the control options. These options are indicated in blue text below the gate level labels. There are four possible settings:



- **OFF (no LEDs on):** External control is disabled in this mode
- **EXP:** Expression Pedal for use with the SA161 Source Audio Dual Expression Pedal. By default, the expression pedal will control the Morph (see the *Morphing* section for details). The expression pedal can also be assigned to control an individual knob parameter.



- **MIDI:** MIDI control mode. Select this mode to enable MIDI I/O through the Soundblox 2 MIDI Interface
- **HH:** Hot Hand mode. Select HH to enable Hot Hand control. By default, Hot Hand will be assigned to control the morph parameter. Alternatively, Hot hand can also be assigned to control an individual knob parameter.

Press the NOISE GATE button again while holding the TONE SHAPE button to resume normal Noise Gate adjustments.

## **CONTROL ASSIGN**

Both the expression pedal and hot hand inputs are by default mapped to control the morph parameter. This effectively allows the control of any parameters since the morph is between two distinct preset effect settings. Alternatively, it might be desirable to assign control of an individual knob parameter to the Hot Hand or Expression input instead of the default morph parameter. To assign control to a knob:

1. Ensure that you are in external control edit mode (NOISE GATE LEDs are red)
2. Select the desired external control option: EXP for expression pedal, HH for Hot Hand.
3. Press and hold the NOISE GATE button until the red LED begins to blink slowly.
4. Set the low position of the desired knob, for example DRIVE, to the lowest setting you would like to use.
5. Press the NOISE GATE button again and the LED will now blink rapidly.
6. Set the desired high position you would like to use.
7. Press the NOISE GATE button to complete the assignment. The LED will blink 3 times to indicate the process is complete.

The same process can be used for either EXP or HH modes. To return to the default morph control, set the external control to OFF, and then press and hold the NOISE GATE button again until all three LEDs blink rapidly.

## **MORPHING**

The Multi-Function control input can be used to morph between the two presets. For example, let's say preset 1 is saved as a low drive SMOOTH TUBE setting and preset 2 is a high drive OCTAVE FUZZ setting. By connecting an SA161 Expression Pedal, you can fade from the preset 1 normal sound into the octave effect saved in Preset 2 by rocking the expression pedal from heel to toe. As you fade between the sounds, the two footswitch LEDs will change brightness depending on where you are in the transition.

Morphing is not a cross fade between two sounds but rather a gradual shift between all of the individual parameters. So the middle of expression pedal range is truly an "in-between" sound.

There are 144 possible pair combinations of OFD effects and some will sound better than others. Some obvious applications are morphing from clean to distorted sounds, low drive settings to high drive settings, changes in volume, or between dramatically different sounds.

The expression pedal can be effectively inverted depending on which preset is initially enabled. This will toggle start and stop presets for the pedal. Keep in mind that adjusting knobs while using the expression pedal will only control the originally selected preset, independent of the expression pedal position. Also, while tweaking presets to get the desired pair of sounds for morphing, don't forget to save before switching to the other preset.

## **MIDI CONTROL**

The OFD can be controlled via generic MIDI messages. To access MIDI functionality, the pedal requires the Source Audio Neuro Hub (sold separately - please check [www.sourceaudio.net](http://www.sourceaudio.net) for availability). The Hub expands your connections to further the control of up to five Soundblox2 or Ones Series pedals. The Hub has 5-pin MIDI DIN In and Out jacks, a USB port, Sensor In (for Hot Hand) and a 1/4" expression input.

Save up to 128 multi pedal presets (or "scenes") complete with assigned expression control. Easily recall complex presets with a single MIDI program change messages. The Hub also receives MIDI clock or continuous controller (CC) messages.

For more information on using your Soundblox 2 pedals with MIDI, and for MIDI mappings, please visit our website at [www.sourceaudio.net](http://www.sourceaudio.net)

# USE WITH HOT HAND®

---

All Soundblox pedals are compatible with our Hot Hand accessories. Hot Hand units consist of a ring mounted accelerometer that is used to detect motion for controlling effect parameters. On the Soundblox 2 OFD Bass microModeler, a Hot Hand unit can be connected to the Multi-Function input. To enable Hot Hand, select the HH mode as the external control option. This will take the input signals for the Hot Hand unit and use them to control either the Morph or whichever parameter has been selected.

The SB2 OFD Bass can also be calibrated to change the midpoint of the Hot Hand control range. To do this, follow the calibration procedure below. Note that Calibration is only used for Hot Hand mode and calibration is NOT required before use.

## **To perform a calibration:**

1. Select a preset by pressing a footswitch.
2. Enable Hot Hand control by selecting HH mode from the external controls.
3. Press and hold the NOISE GATE button until the HH red LED begins to blink slowly (this is the same as the control assign procedure).
4. Put the Hot Hand sensor into the desired calibration position.
5. Press the footswitch for the currently selected preset.
6. The Calibrate LED will blink to when the calibration is complete.

If you have trouble with calibration and need to get back to the default setting, point the front of the sensor (the H logo) straight up towards the ceiling and run the calibration procedure again.

# UNIVERSAL BYPASS™

---

Another added feature in the Soundblox 2 line is the addition of Universal Bypass. In other effects pedals, both traditional bypass methods have pros and cons associated with them. Active analog bypass (or buffered) provides a consistent input impedance so that if the input is susceptible (like a guitar pickup) to variations in input impedance there won't be any noticeable change in tone. Buffered bypass is typically quieter and less prone to clicks and pops. True bypass has the benefit of providing a dedicated hardwired signal path but can cause clicks/pops typically requires mechanically complex 3PDT (3-pole, double throw). Relay-based true bypass is a better option but can cause tonal variations when the input impedance is changed between when the effect is engaged vs. bypassed.

Ideally, the first pedal in a signal chain should be a buffered input followed by true bypass.

The Soundblox 2 line introduces Universal Bypass™ as the solution to this problem. Each Soundblox 2 pedal can be configured in either buffered or relay-based true bypass modes, depending on what is needed in a pedal signal chain.

By default, the SB2 OFD Bass is set to use the relay-based true bypass. To switch to buffered bypass press and hold the right footswitch when powering up the pedal. Continue to hold the footswitch until the footswitch LED blink slowly 3 times. The pedal is now in buffered bypass. To switch back to true bypass, repeat the same process with the left footswitch instead.

# SPECIFICATIONS

---

## Dimensions

- L: 4.5 inches
- W: 4.5 inches
- H: 2.25 inches (including knobs)

## Weight

- 1.00 lbs

## Power

- 140mA @ 9V DC (max 180mA with Hot Hand Wireless Adapter)
- Negative tip power jack

## Audio Performance

- Maximum input level: 2.0 Vrms (+6 dBV)
- Input impedance: 1 M $\Omega$
- Output impedance: 1 k $\Omega$
- 115dB DNR audio path
- 24-bit audio conversion
- 56-bit digital data path
- Universal Bypass™ (buffered or relay-based true bypass)

# TROUBLESHOOTING

---

## Noise:

Power Source	Ensure that the proper power supply is being used.
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.

## Hot Hand doesn't work:

Low power	Ensure that the proper power supply is being used.
Not calibrated properly	Calibrate the Hot Hand — see page xx.
Not connected properly	Check Hot Hand connections.

### Unit appears dead/no LEDs lit:

Wrong power supply	Use correct power supply as defined on page 14.
Input plug not connected	Ensure that input cable is connected to the GUITAR input.
Corroded input cable plug	Check input cable plug for corrosion on sleeve, swap out cable if necessary.

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

## LIMITED WARRANTY

Source Audio, LLC (hereinafter "Source Audio") warrants that your new Source Audio Soundblox 2 OFD Bass microModeler, 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 two (2) years 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.

