

*Suhr*<sup>®</sup>

ACE.

## User Guide



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**Thank you** for purchasing the Suhr Analog Cabinet Emulator™ (A.C.E)

Please take the time to read this manual to get the most out of the A.C.E. The more you familiarize yourself with the features of this pedal, the more you will enjoy its benefits and maximize its potential.

## Overview

The A.C.E. (Analog Cabinet Emulator) is an active analog cabinet emulator designed to offer guitarists a portable and convenient way to capture the complex characteristics of a guitar speaker cabinet for a variety of recording and live performance applications without the use of a microphone.

100% pure analog signal path from start to finish, the A.C.E. employs an advanced Multi-Stage Filtering (MSF) network to generate stunningly realistic speaker cabinet simulations that capture/bring to life all the warmth, punch and character of a mic'd speaker cabinet to any performance without the assistance of DSP (digital signal processing).

A.C.E.'s on-board filtering is not your run of the mill EQ. Each control (Subs, Highs and Presence) was carefully voiced to offer a musical range of tone shaping versatility without becoming unrealistic, synthetic or fatiguing when fine tuning your desired cabinet response.



# Powering A.C.E.

- 1 **DC Input\*:** A.C.E. accepts power from power supplies that are regulated 9 Vdc (center negative) *See Technical Specifications on pg 14.* A.C.E. can also be powered internally from a 9V battery as described below.

**\*WARNING:** A.C.E. is NOT a Phantom Powered device.

## Installing/Replacing The Battery:

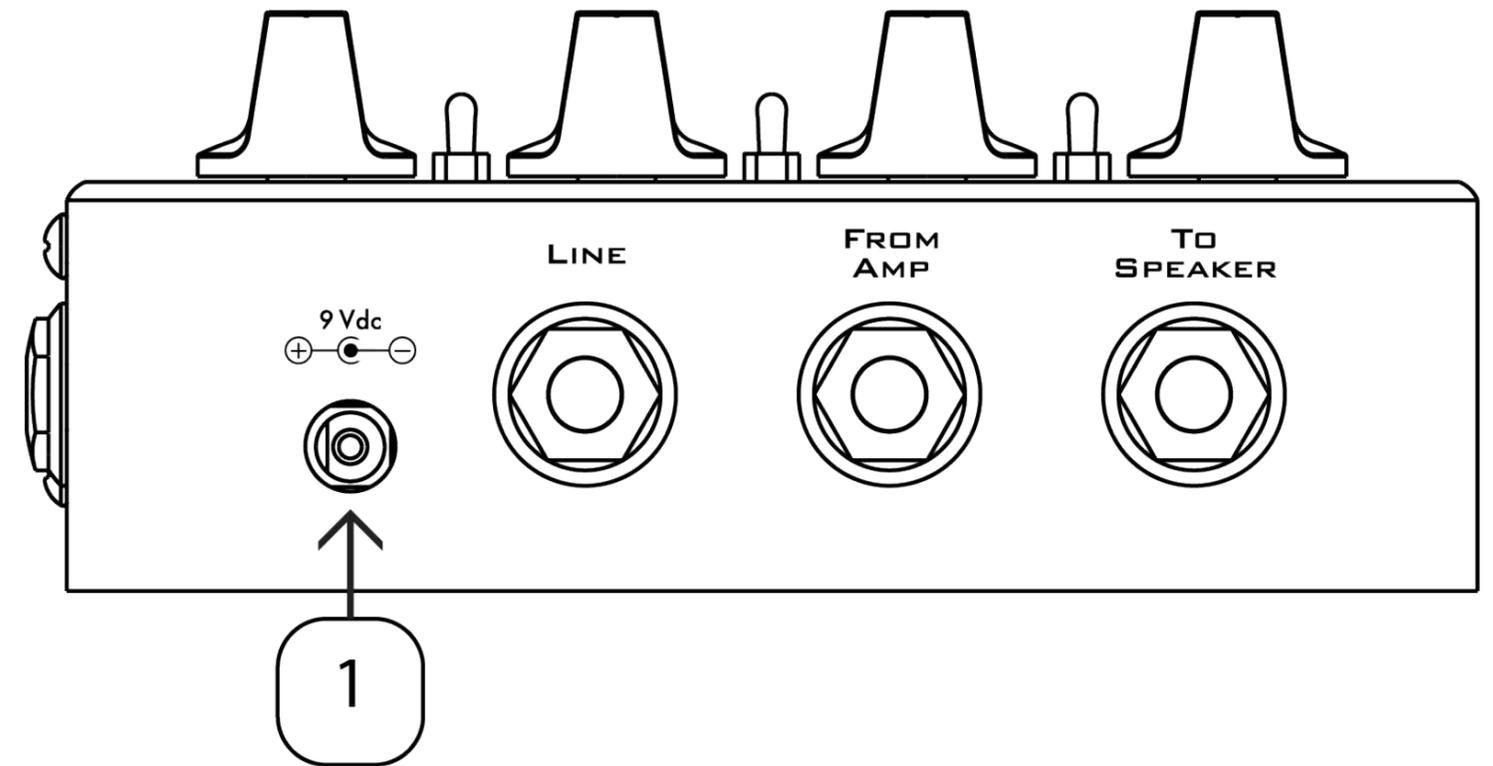
1. Unscrew the backplate of the pedal to access the battery compartment with the battery snap located inside.
2. Plug in a 9V battery to the snap and re-screw the backplate.

### NOTES:

*The battery is connected when a cable is plugged into the FROM AMP input or the LINE input and when there is no cable plugged into the DC input.*

*ACE is a higher power device. A battery will last in the range of 3 hours. Using the provided power supply is recommended for continued use.*

*TIP: For longer battery life, an Alkaline battery is recommended.*



# Inputs & Outputs

## INPUTS

**LINE:** This input is for line level signals only.

**NOTE:** When using the line input, the *INPUT* level control is bypassed. Use a signal cable for connections.

**FROM AMP:** This input is for Amplifier Level signals. The output of an amplifier can be plugged into this input while the amp is loaded by a suitable load, such as a speaker cabinet or a Suhr Reactive Load. The load can be connected to the *TO SPEAKER* input, which is connected in parallel to the *FROM AMP* input. The load can also be connected in parallel with the A.C.E. if the amplifier has multiple available outputs.

**TO SPEAKER:** This input is a through connection from the *FROM AMP* jack to allow the connection of a suitable load or speaker cabinet.

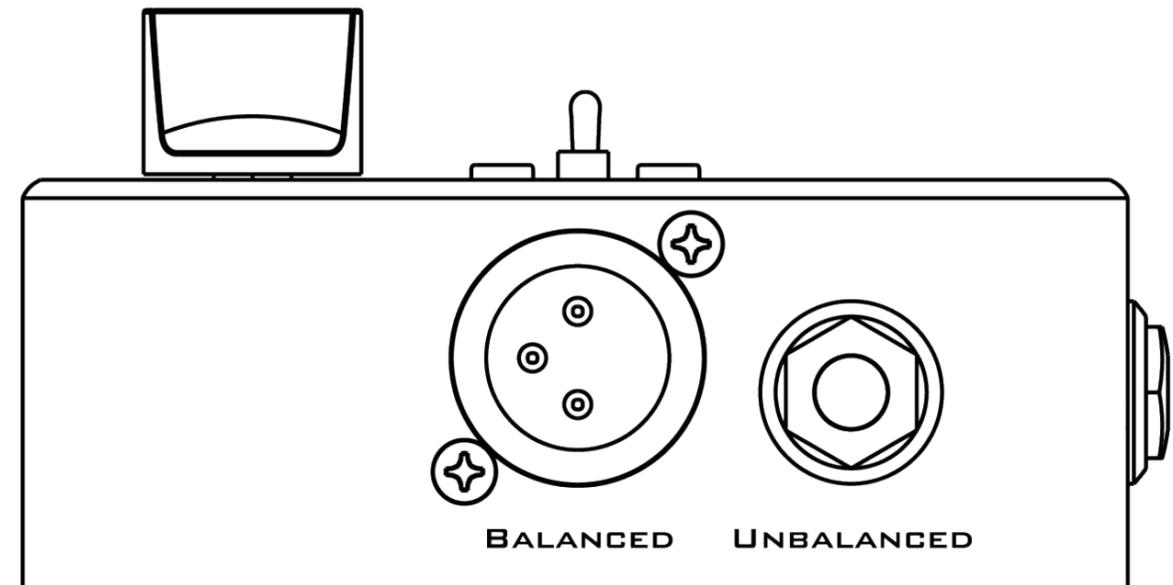
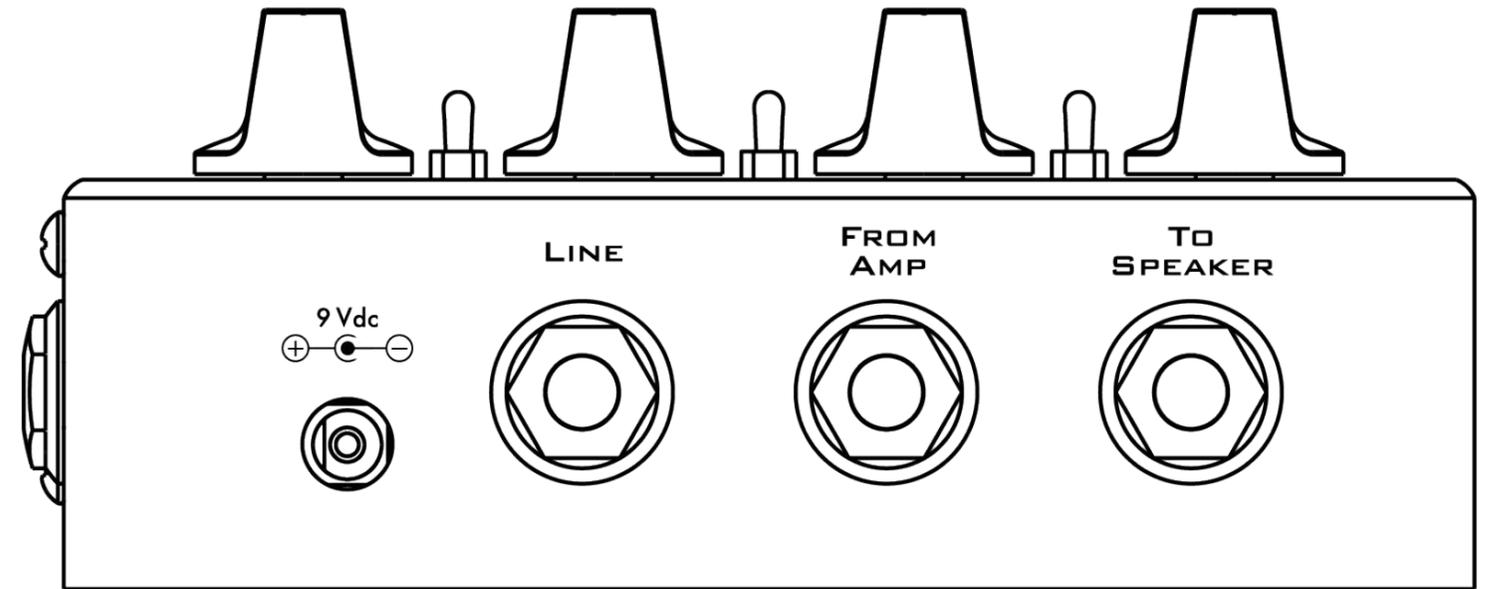
**NOTE:** When using the *FROM AMP / TO SPEAKER* jacks, use a speaker cable for connections.

## OUTPUTS

**BALANCED:** The balanced XLR output is a low impedance *line level* output.

**UNBALANCED:** The unbalanced output is a low impedance *line level* output. Use a mono 1/4" phone jack for this output.

**Tip:** The *BALANCED* output is the preferred output when driving long cable lines. Balanced signals have the benefit of rejecting injected noise from the environment.



# Controls

**INPUT:** This control functions only when using the *From Amp* input. It is used to set the volume of your amp signal before it goes through the filter.

*\*This control can be set as desired as long as the Clip light does not turn on. If it does, turn the Input knob counter clockwise to prevent the filter from clipping.*

**SUB:** This control reduces or increases the amount of low frequency bass of the output

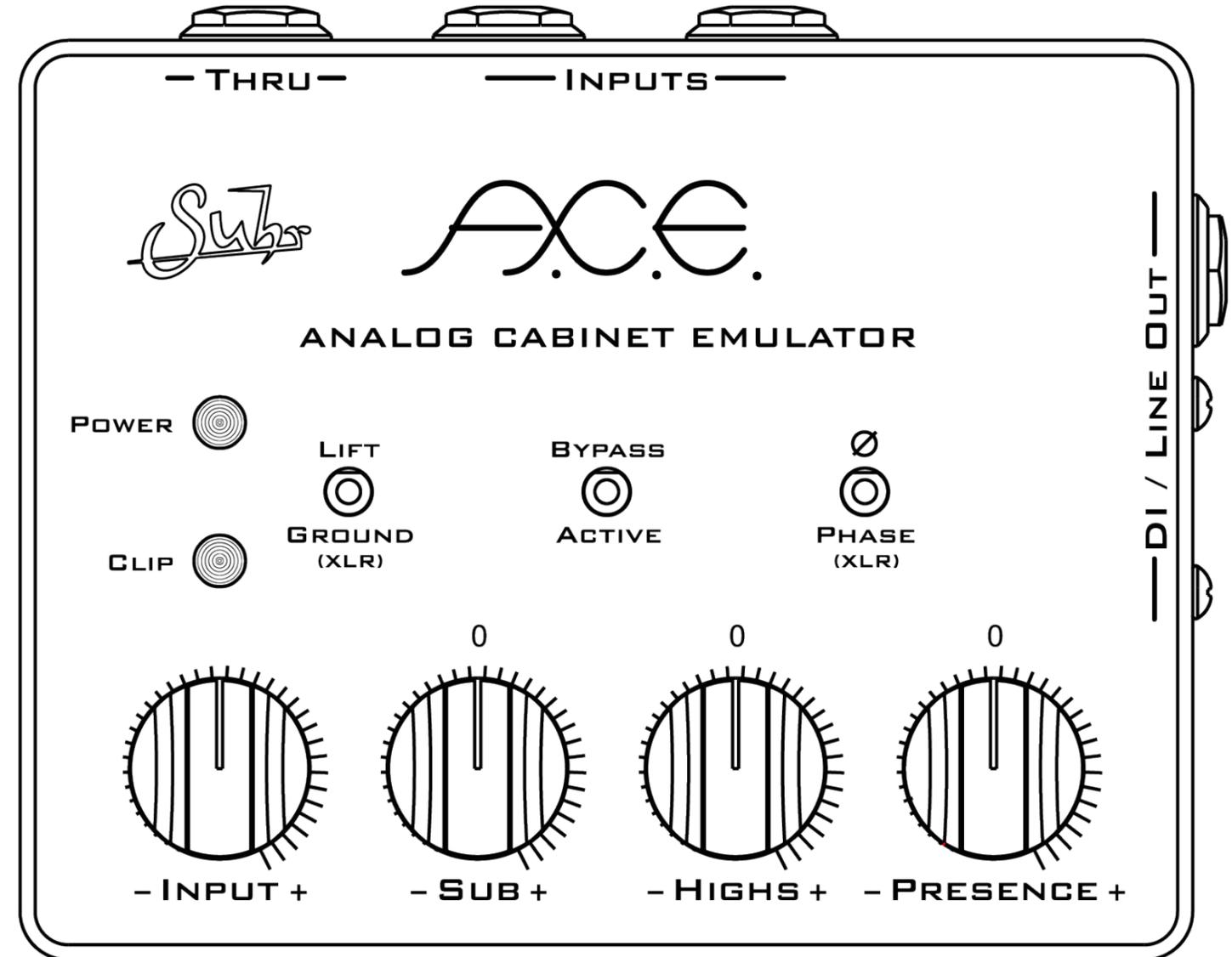
**HIGHS:** This control reduces or increases the amount of middle and high frequencies of the output

**PRESENCE:** This control reduces or increases the amount of presence frequencies of the output

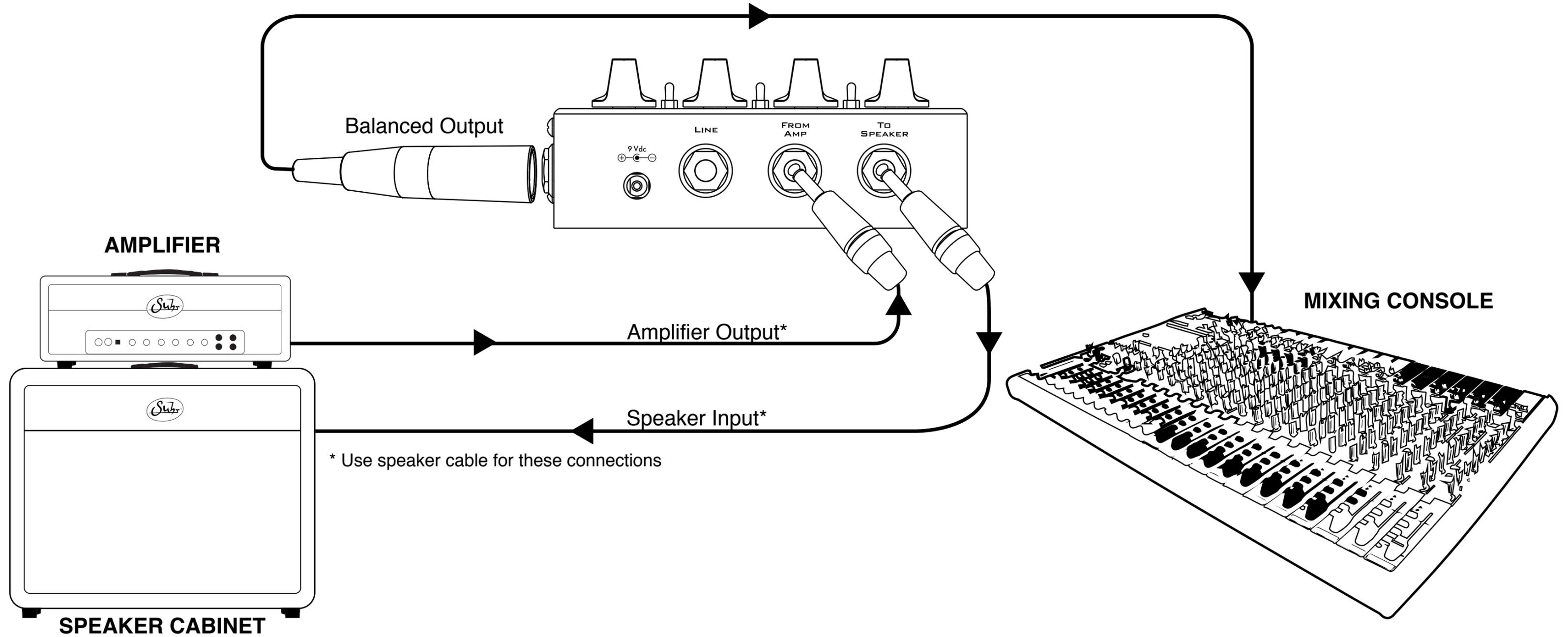
**LIFT GROUND (XLR):** This switch lifts the ground on the XLR output when flipped to the up position.

**BYPASS/ACTIVE:** When set to Bypass, the filter is bypassed and the output is an unfiltered line level signal. When set to Active, the filter is engaged as in normal operation.

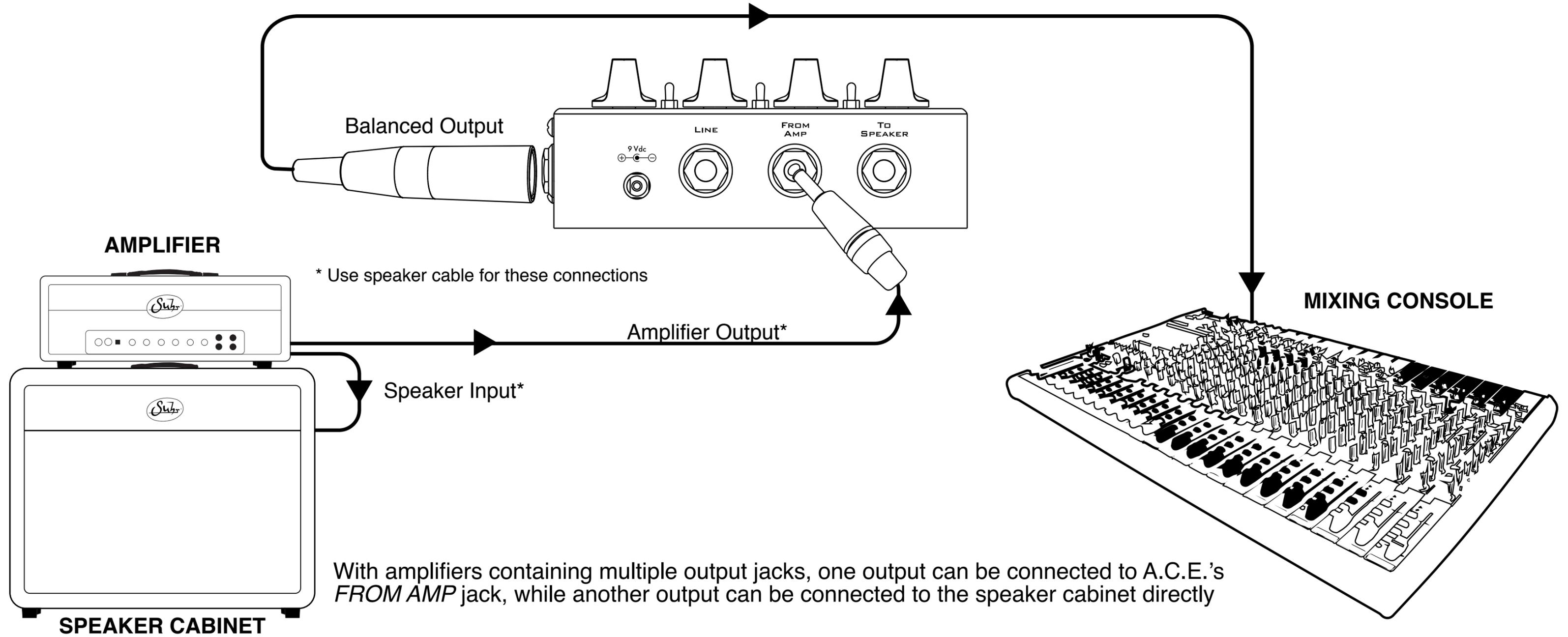
**PHASE (XLR):** This switch flips the phase of the Balanced output (XLR) when flipped to the up position.



# Live Setup 1

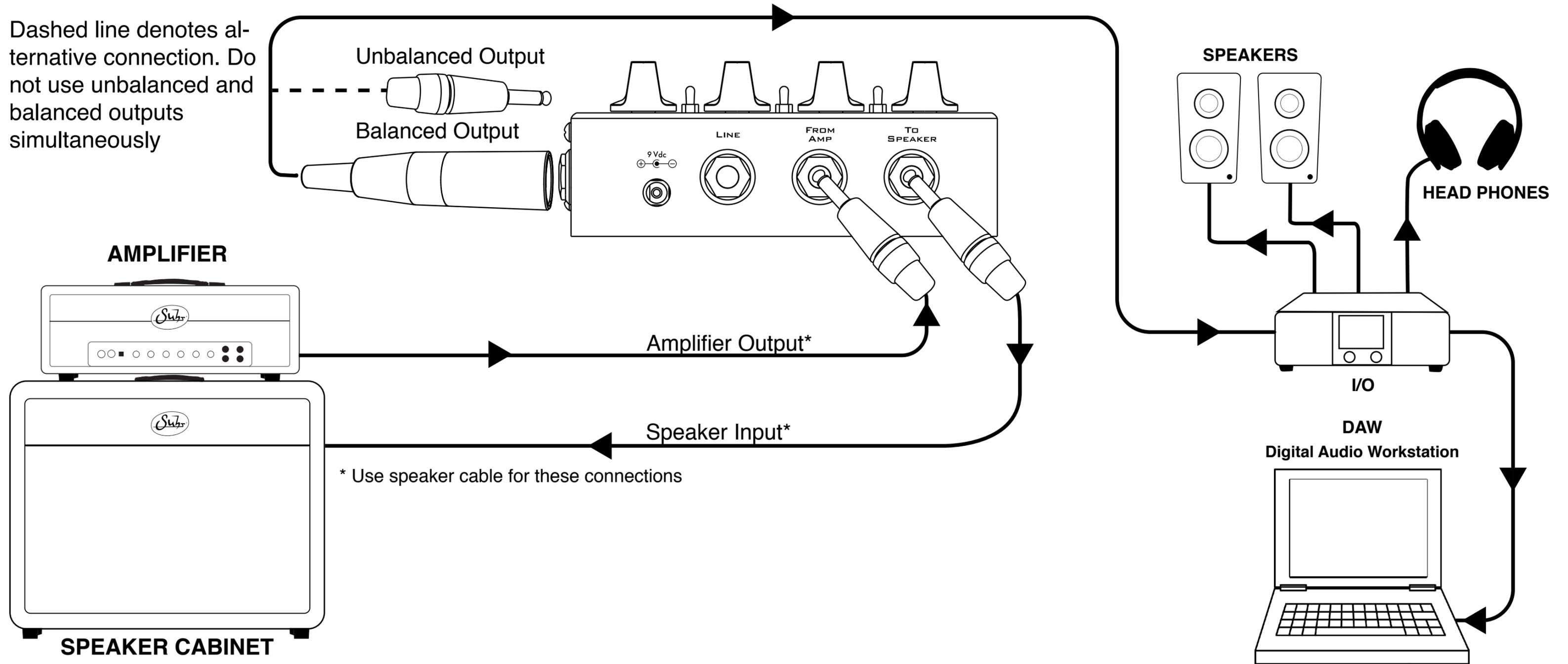


# Live Setup 2



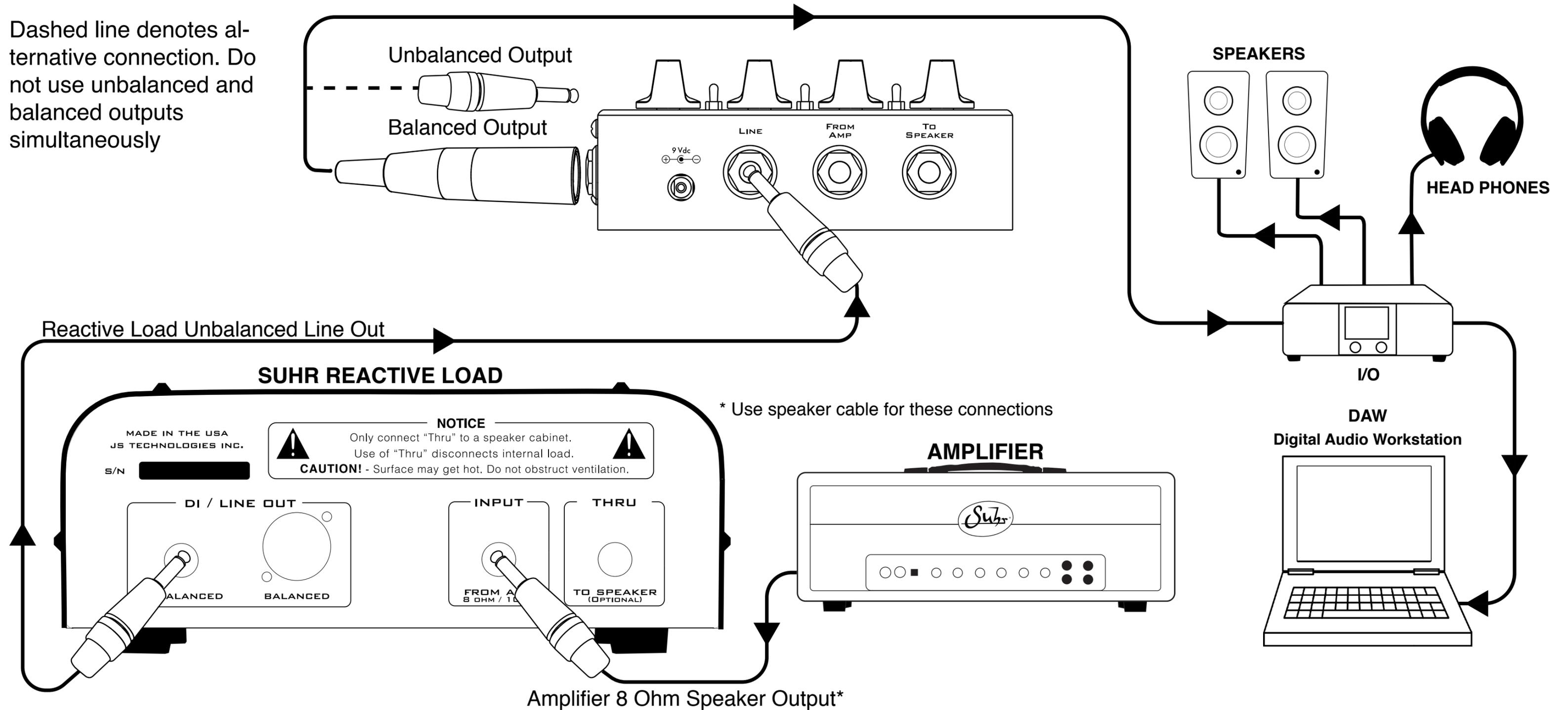
# Recording Setup with Speaker Cabinet

Dashed line denotes alternative connection. Do not use unbalanced and balanced outputs simultaneously



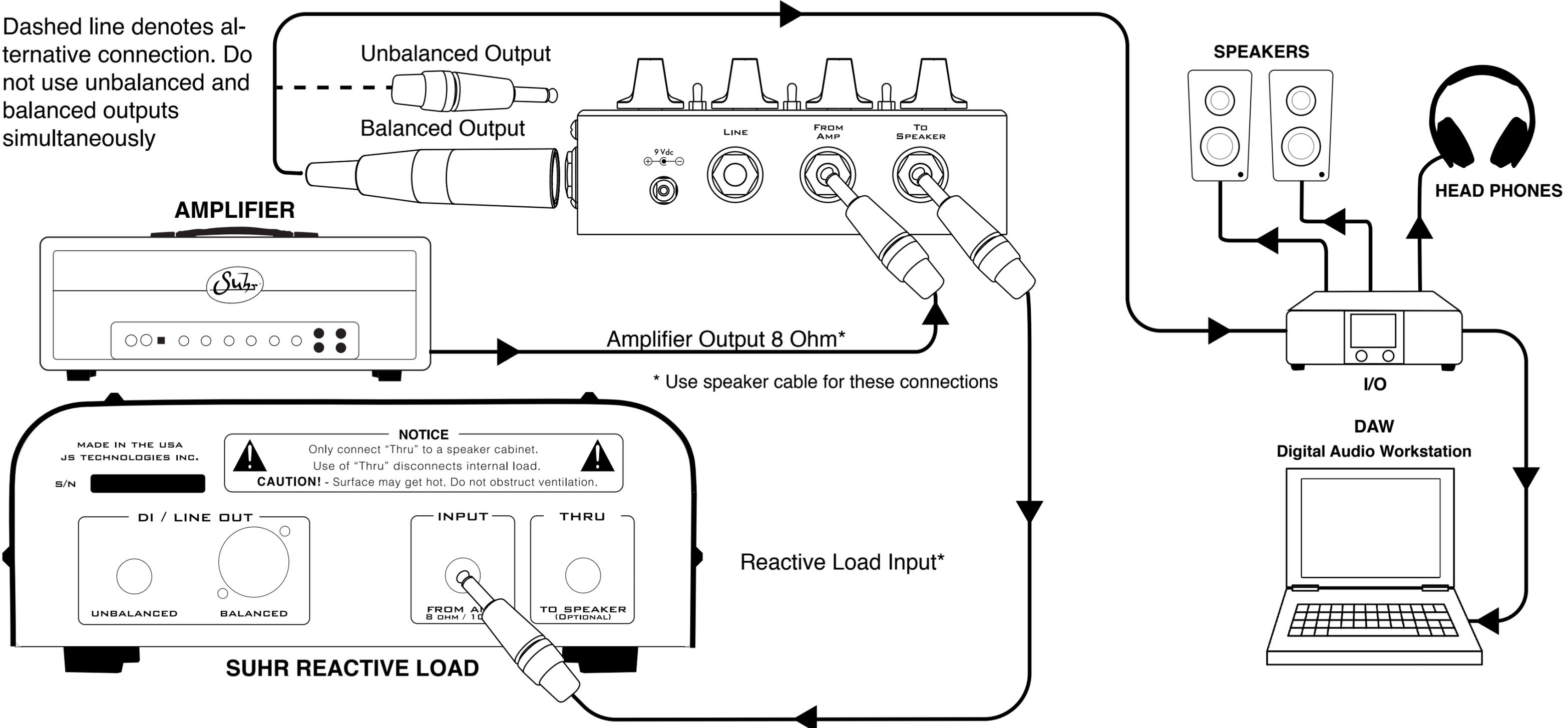
# Silent Recording Setup with Reactive Load

Dashed line denotes alternative connection. Do not use unbalanced and balanced outputs simultaneously



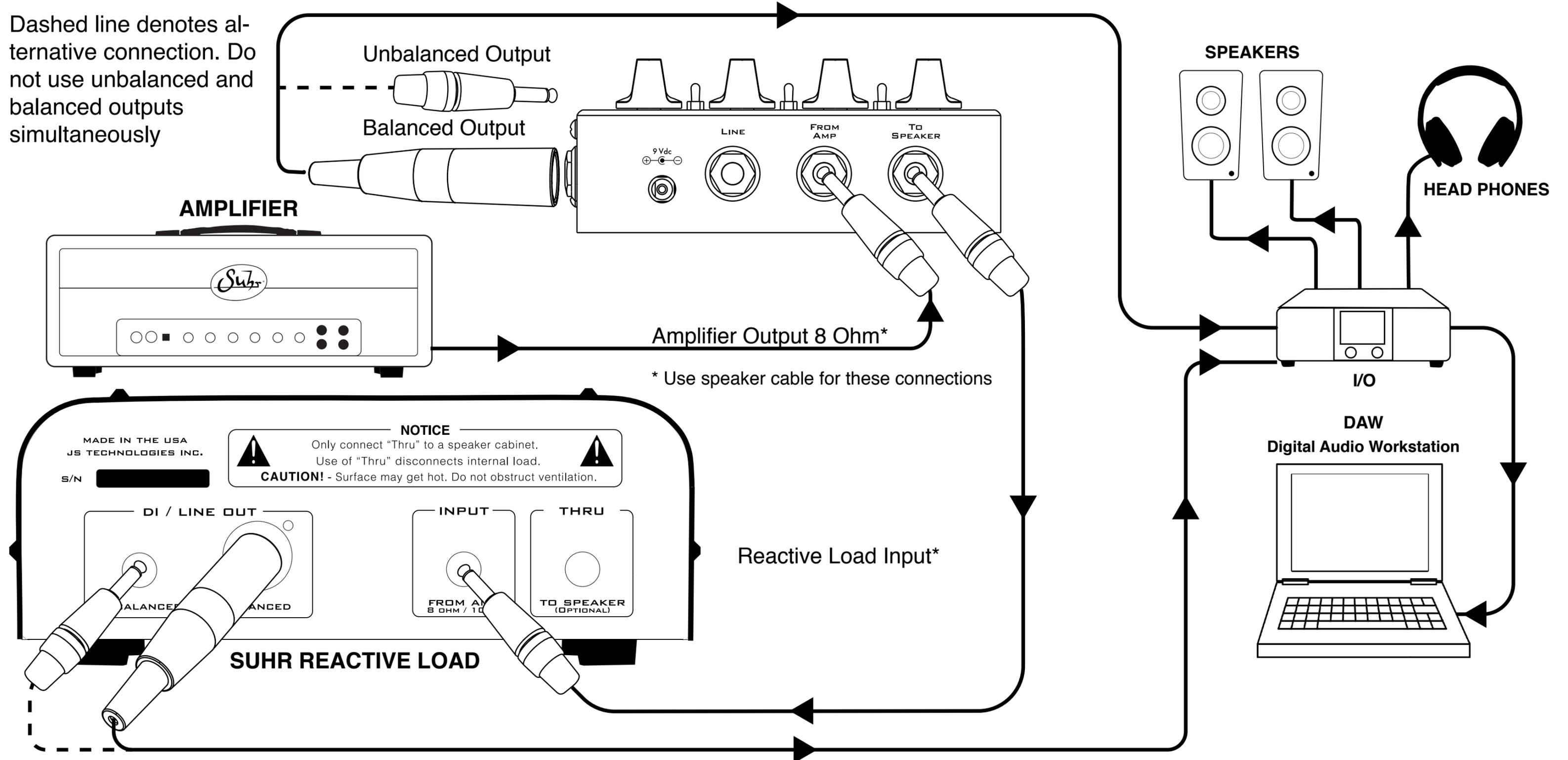
# Silent Recording Setup with Reactive Load (Alternative)

Dashed line denotes alternative connection. Do not use unbalanced and balanced outputs simultaneously



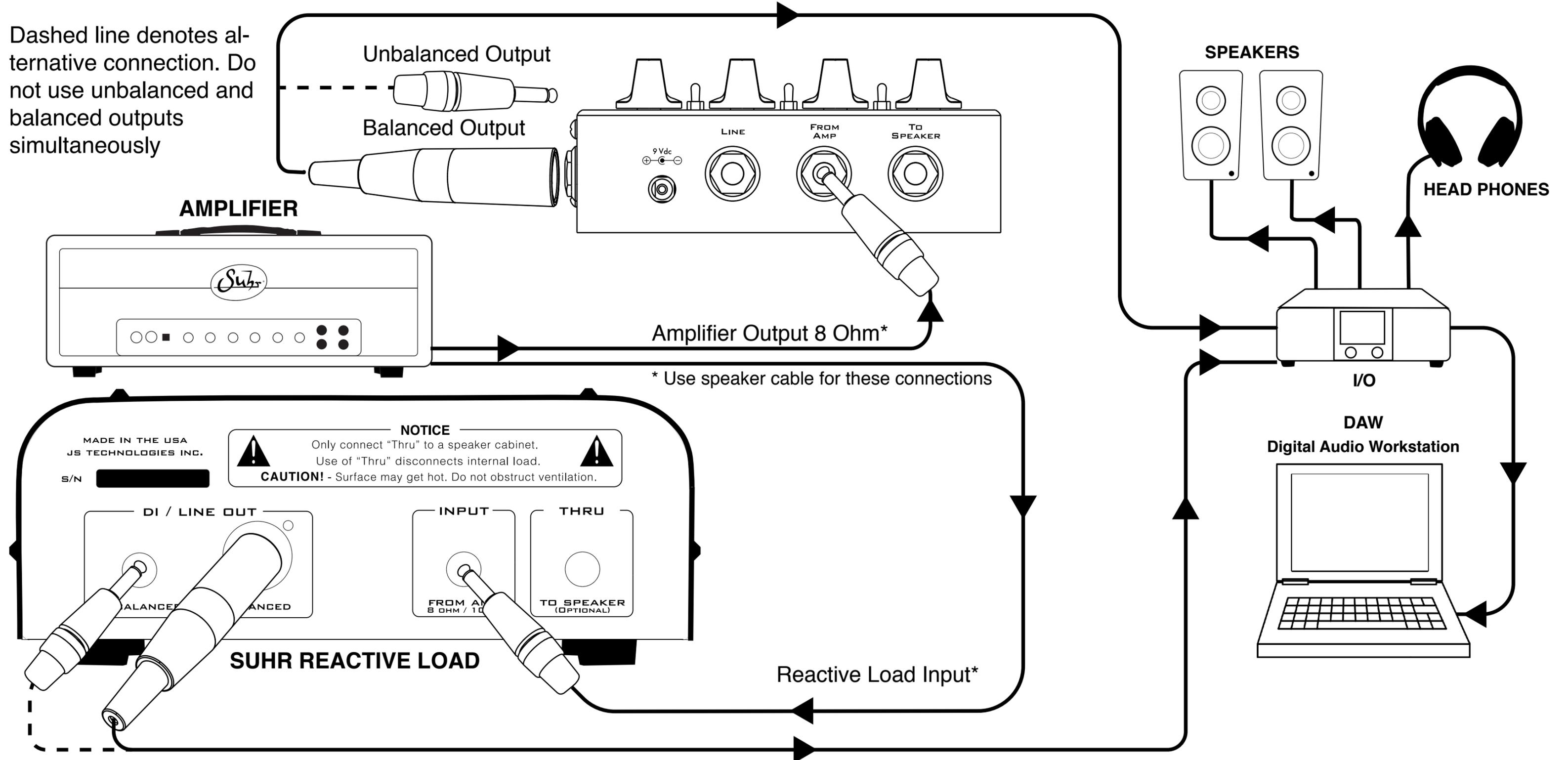
# Silent Recording Setup with Reactive Load (Filtered & Unfiltered Signals Simultaneously)

Dashed line denotes alternative connection. Do not use unbalanced and balanced outputs simultaneously



# Silent Recording Setup with Reactive Load (Filtered & Unfiltered Signals Simultaneously) Alternative

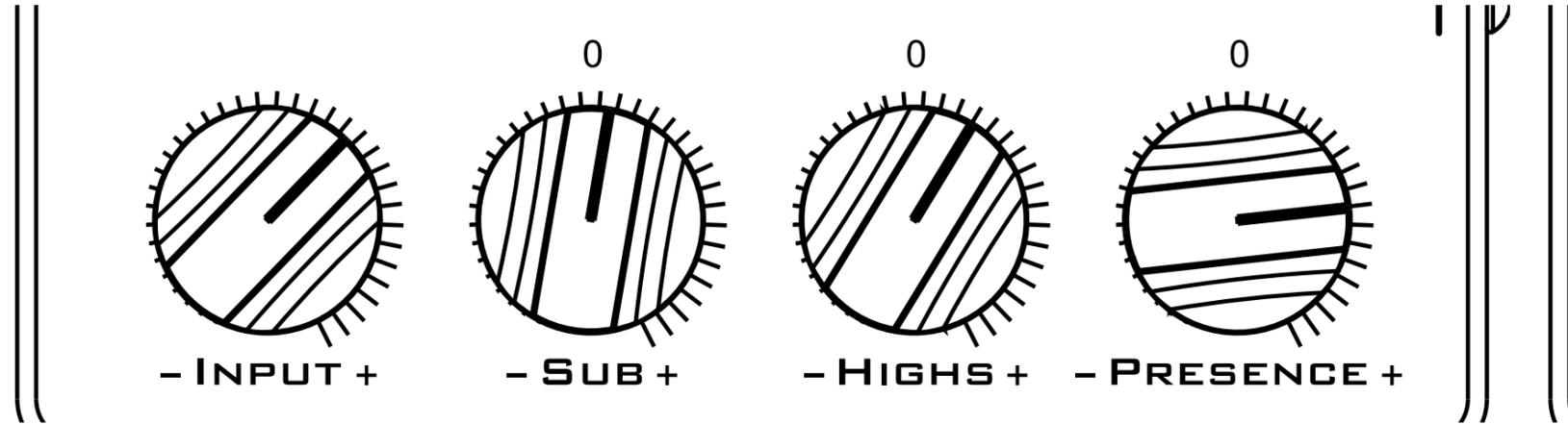
Dashed line denotes alternative connection. Do not use unbalanced and balanced outputs simultaneously



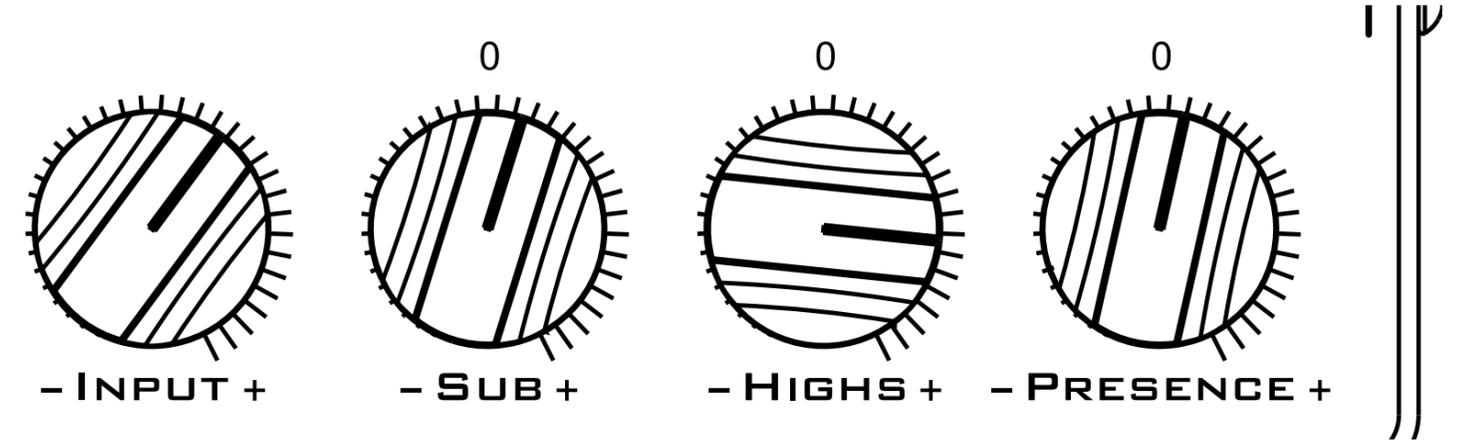
# Sample Settings

With these sample settings, dial the Input knob to suit your amplifier.

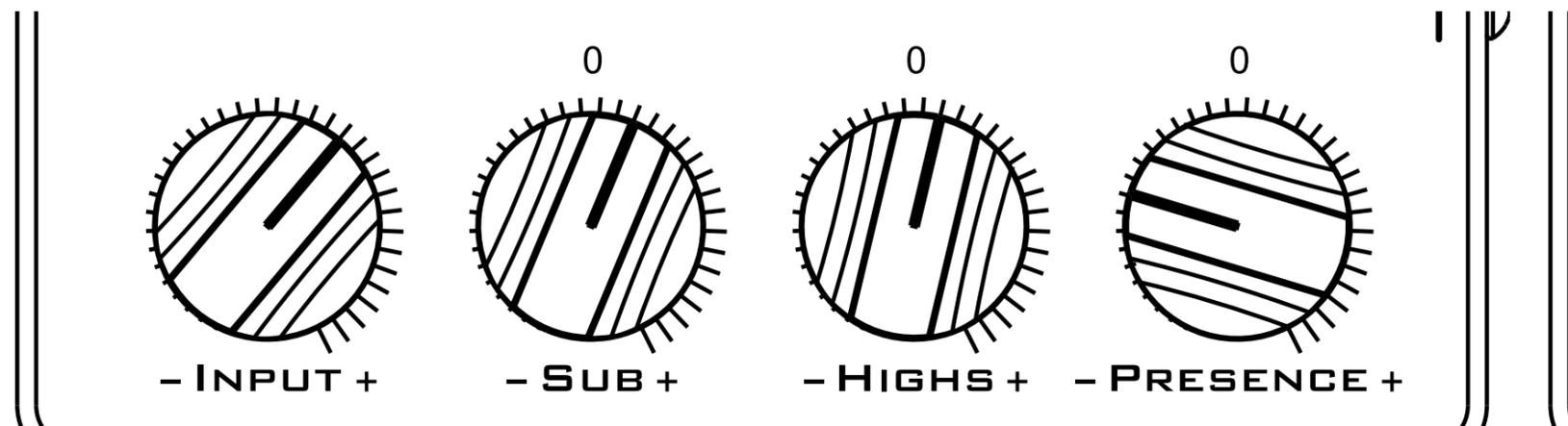
## Rock (4x12 cabinet with 57 mic)



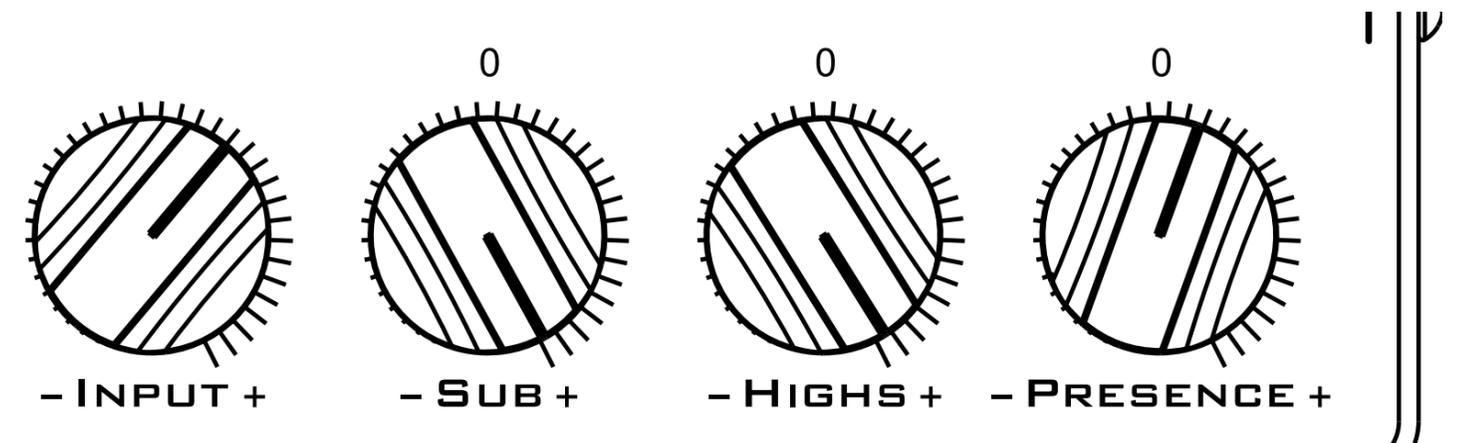
## Rock (More Mids)



## Balanced (Single Coils)



## High Gain Rock (Full Bottom)



# Technical Specifications

<b>Input Impedance:</b>	100 KOhm
<b>Output Impedance:</b>	600 Ohm
<b>Power Connector:</b>	9Vdc, center negative, 2.1mm x 5.5mm
<b>Operating voltage:</b>	9Vdc, regulated
<b>Maximum Voltage:</b>	10Vdc
<b>Reverse Battery Protection:</b>	Yes
<b>Over Voltage Protection:</b>	Yes
<b>Current Consumption:</b>	80mA
<b>Estimated Battery Life:</b>	4.5 hours continuous use
<b>Dimensions:</b>	4.875”(W) x 3.875”(D) x 1.375”(H)
<b>Weight:</b>	1.05 lbs
<b>ROHS Compliant:</b>	Yes

# Warranty

JS Technologies, Inc. (JST) warrants for lifetime from date of purchase by the initial retail purchaser that this product shall be free from defects in workmanship. Electronic components such as capacitors, resistors, filters, transformers, jacks, and pots are covered for 5 years. Any parts determined defective by JST within the five (5) year term shall be repaired or replaced by JST without charge for parts and labor provided the unit is returned, transportation costs prepaid, to JS Technologies, Inc., 601 Crane Street, Unit A, Lake Elsinore, CA 92530, or to such facility authorized by JST. JST will pay shipping costs to return the unit to its owner. Defects in workmanship will be determined by JST for limited lifetime coverage.

This warranty does not cover damage caused by accident, misuse, abuse, neglect, unauthorized or improperly performed repairs, alterations, and/or wear and tear occasioned by use of the product, and does not include any expense for inconvenience or loss of use while the product is being repaired or replaced. JST expressly disclaims any liability for consequential damages arising from the sale, use, or inability to use the product. Any warranty implied by law, including any warranty of merchantability or fitness, is expressly limited to the one (5) year warranty term for the parts on our amplifiers and electronic products. The foregoing statements of warranty are exclusive and in lieu of all other remedies. Workmanship lifetime warranty is limited strictly to the original retailer purchaser of the instrument registered with JST within 10 days of purchase from an authorized JST dealer or distributor. JST will pay shipping costs to return the unit to its owner within the mainland U.S.

The above warranty policy only applies to customers in USA. If you are an international customer, please check with your distributor and the dealer in your country for warranty matters. Warranty issues must be handled through your dealer or distributor. If you are an international customer who purchased (or plan to purchase) from a US dealer, we can handle warranty matters direct but you will be responsible for shipping both ways. We encourage international customers to purchase through your local distributor or dealer for this reason. Our international distributors are set up to handle warranty issues in their respective countries. If you do not have an authorized Suhr dealer in your country, please contact us direct for further details.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: - Reorient or relocate the receiving antenna. - Increase the separation between the equipment and receiver. - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. - Consult the dealer or an experienced radio/ TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.