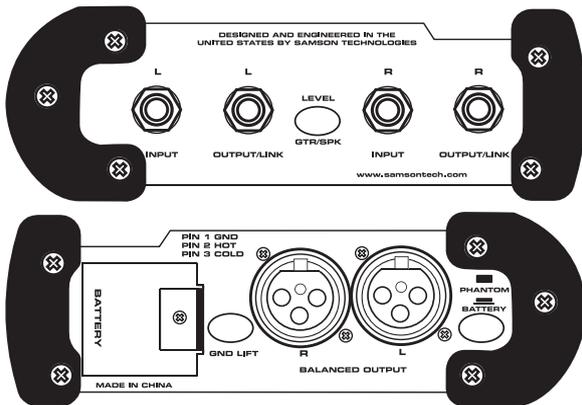


# S·direct plus



**Stereo Direct Insertion Box**

**Owners Manual**

**SAMSON®**  
A U D I O

## Table Of Contents

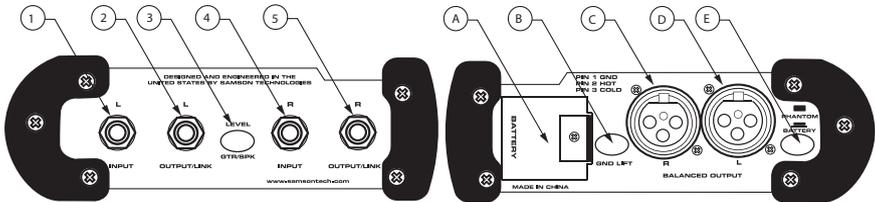
<b>Front and Rear Panel Layout</b>	3
<b>Powering S direct plus</b>	3
<b>Operating the S direct plus</b>	
Direct insertion of an instrument into a PA system	4
Converting the output of unbalanced devices	6
High power signals	7
<b>Specifications</b>	8

Copyright 2004, Samson Technologies Corp.

Printed April, 2004

Samson Technologies Corp.  
575 Underhill Blvd.  
P.O. Box 9031  
Syosset, NY 11791-9031  
Phone: 1-800-3-SAMSON (1-800-372-6766)  
Fax: 516-364-3888  
[www.samsontech.com](http://www.samsontech.com)

## S direct Front and Rear Panel Layout



- 1 LEFT INPUT** - 1/4" input connector.
  - 2 LEFT OUTPUT/LINK** - 1/4" output for passing the input signal through to a stage amplifier or monitor system.
  - 3 LEVEL SWITCH** - When engaged, the level is switched from instrument GTR to amplifier speaker SPK level.
  - 4 RIGHT INPUT** - 1/4" input connector.
  - 5 RIGHT OUTPUT/LINK** - 1/4" output for passing the input signal through to a stage amplifier or monitor system.
- A BATTERY COMPARTMENT** - Houses a standard 9 Volt Battery.
  - B GROUND LIFT** - When the switch is engaged, the input ground (shield) is disconnected from the S direct plus circuit ground.
  - C RIGHT BALANCED OUTPUT** - Male XLR connector.
  - D LEFT BALANCED OUTPUT** - Male XLR connector.
  - E BATTERY/PHANTOM** - Switches S direct plus from phantom power to battery operation.

### Powering S direct plus

The S direct plus can operate on a single 9 Volt battery or standard 24-48 volt phantom power. Whenever phantom power is present on the XLR cable that is connected to the Balanced Output, the S direct plus will automatically switch to phantom power and disconnect the 9 Volt battery. In fact, when the Battery switch is in, the S direct plus will sense the voltage and chose which ever is greater. The Phantom/Battery switch can be used to turn off the battery power when the unit is not in use.

## Operating the S direct plus

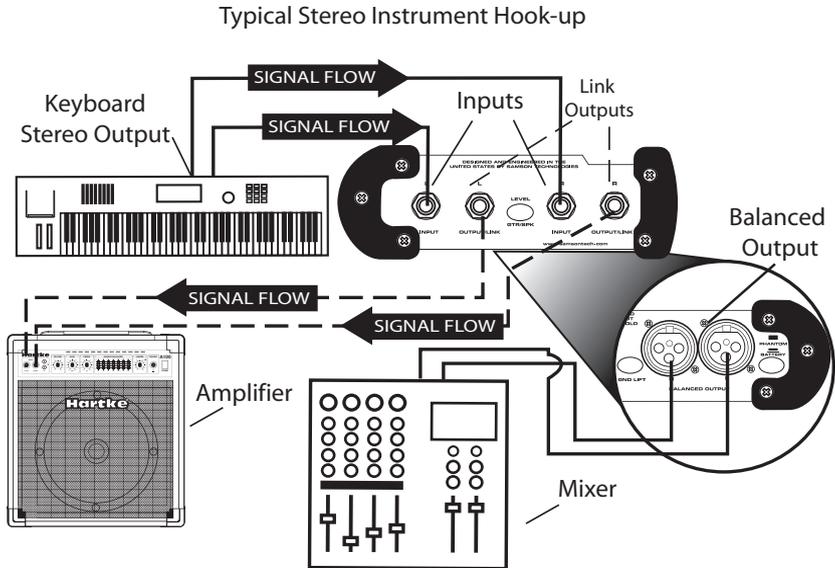
A direct insertion, or DI, box provides the facility for connecting an audio signal into a mixer or recorder. The S direct plus offers a variety of stereo DI solutions for live sound and recording applications. You can connect all kinds of audio signals like those from keyboards, drum machines, mixers, guitars, outboard signal processors and even the powered speaker output from an amplifier. The S direct plus enables you to tap off the signal from a stereo keyboard, mixer, drum machine or guitar and pass the signal from the Link outputs to the on stage amplifier or monitor without affecting the original sound. This can eliminate the need for miking the guitar amplifier, which in many cases is preferable, especially with bass guitar. The S direct plus is also very useful for connecting unbalanced signals from sources like signal DJ and sub-mixers, effects processors and keyboards to a main PA or recording mixer. Unlike passive direct boxes, the S direct plus is active (has a power supply), so you can rely on an even frequency response on any audio signal you connect to, regardless of its output impedance. Also, the S direct plus's balanced outputs provide a clean signal at a low level so long runs of cable are possible. Another benefit from a balanced connection is CMR (Common Mode Rejection), which provides cancellation of interference (hums and buzzes), while leaving the original signal pure.

### **Direct Insertion of an Instrument into a PA System**

One of the most common applications for using a stereo DI box is getting the signal of a keyboard or sub-mixer into the PA system. Simply put, the broad frequencies produced by keyboards are difficult to mic, so use of a DI box is almost always preferable. In addition, the signal going to the PA system can be tweaked by the FOH (front of house) engineer, without affecting the sound the musician dials up on stage. You can use S direct to plug a guitar directly into the PA system as well (especially acoustic guitars with pick-ups) and to connect electronic guitar processors and modelers. Follow the diagram and steps below to connect a stereo keyboard to a PA mixer and on-stage amplifier.

- Connect the outputs of the keyboard to the S direct plus's Left and Right INPUTS.
- Connect S direct plus's Left and Right OUTPUT/LINK's to the input of the keyboard amplifier.
- Connect S direct plus's Left and Right BALANCED OUTPUTS to the inputs of main PA mixer.

## Operating the S direct

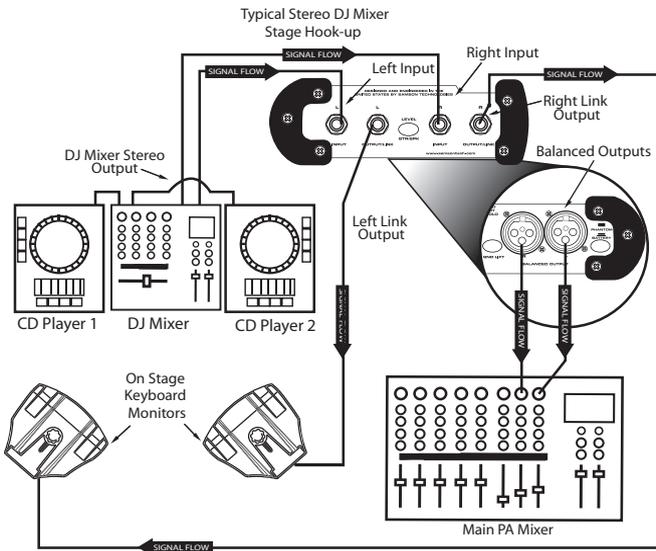


***NOTE:*** To avoid annoying pops and clicks be sure to mute (or turn down the volume control) of your mixer's output while connecting the S direct plus, or when switching from battery to phantom power.

## Operating the S direct plus

### Converting the Output of Unbalanced Devices

The S direct plus can be quite useful on stage or in the studio for connecting unbalanced devices, particularly keyboards and DJ mixers. The output levels of many keyboards and DJ mixers are low, so their signals can benefit greatly by connecting their unbalanced outputs to the S direct plus. By doing so, the signal can be sent cleanly for long distances while benefiting from the low noise and common mode rejection provided by S direct plus's balanced low-level output. The diagram following shows a typical hook-up for a DJ mixer connected to a stereo stage monitor system and the main PA mixer.



**NOTE:** In this example, the S direct plus is converting the unbalanced signal from the DJ mixer to balanced outputs that can be connected to the main PA mixer.

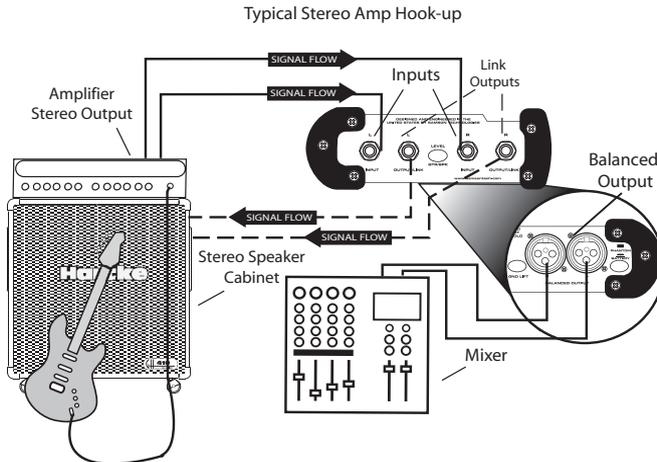
## Operating the S direct plus

### Connecting to High Power Signals

The S direct plus provides the capability of tapping off the signals from amplifiers, such as the output of a guitar amp with stereo effects or any power amplifier. You can even use S direct plus to connect to the speaker output of a consumer stereo system or boom box, for example, if you want to sample some old records or cassette tapes.

**NOTE:** Be sure that the LEVEL switch is set to the SPK position before connecting the signal from the output of any amplifier.

The following diagram shows how to connect the powered output of a stereo guitar amplifier to a PA mixer.



***NOTE:*** In this example, the S direct plus is tapping the sound of the instrument and amp, as opposed to just the instrument itself.

## Specifications

Frequency Response	10Hz - 20 kHz, -1 dB
Noise Level (22-22kHz, Input Shorted)	-100 dBu
THD + N (10 Hz -22 kHz)	0.013% typ. @ 1 VRMS,1 kHz.
Input Impedance (GTR)	1 Meg. Ohm
(SPK)	10 k Ohm
Max. Input Level GTR (1% THD)	+7 dBu ( 9v. Batt.)
	+0 dBu (48v. Phantom)
Max. Input Level SPK (1% THD)	v+30 dBu ( 9v. Batt.)
	+22 dBu (48v. Phantom)
GTR/SPK Inputs	1/4" Phone Jack, unbalanced
OUTPUT/LINK	1/4" Phone Jack, unbalanced
BALANCED OUTPUTS	XLR Connector, balanced
Phantom Power	24-48 VDC
Battery	9 Volt
Dimensions	5.6" W x 4" D x 2" H
	142mm W x 101.6mm D x 50.8mm H
Weight	15 oz. .43 Kg

Samson Technologies Corp.  
575 Underhill Blvd.  
P.O. Box 9031  
Syosset, NY 11791-9031  
Phone: 1-800-3-SAMSON (1-800-372-6766)  
Fax: 516-364-3888  
[www.samsontech.com](http://www.samsontech.com)