

MD² PRO

Stereo Passive Direct Box



Quick Start Guide

SAMSON[®]



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Introduction

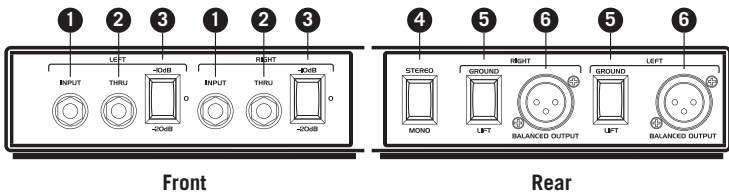
A direct insertion box, or DI box, converts unbalanced, high impedance, signals to balanced, low impedance signals providing the facility for connecting audio into a mixer's microphone input. Samson's S-Max Direct Boxes combines premium sound circuitry with durable, roadworthy construction to provide high-quality signal connection solutions for live and studio applications. The Samson MD2 Pro Professional Stereo Passive Direct Box offers a variety of 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 from the powered speaker output from an amplifier.

Featuring two of Samson's STLX Faraday shielded transformer, which deliver an extended, flat frequency response, ultra-low distortion, and eliminates hum and RF interference. The MD2 Pro balanced output provide a clean signal, that is less susceptible to noise when compared to an unbalanced cable, which allows for running longer lengths of cables. 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.

The THRU jacks enables you to tap off the signal from the input and pass the signal to an 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 as more bands are using in-ear monitors. The Stereo/Mono switch mixes the two input channels together for situations where the number of audio channels is at a premium.

With proper care and maintenance, your MD2 Pro will operate trouble-free for many years. Should your direct box ever require servicing, a Return Authorization (RA) number must be obtained before shipping your unit to Samson. Without this number, the unit will not be accepted. Please call Samson at 1-800-3SAMSON (1-800-372-6766) for an RA number prior to shipping your unit. If your direct box was purchased outside of the United States, contact your local distributor for warranty details and service information.

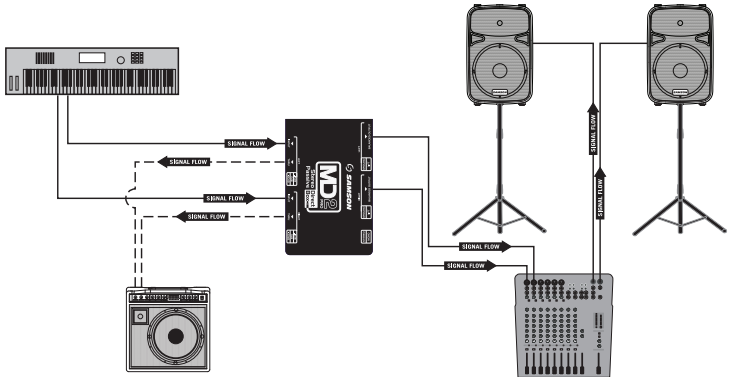
Callouts



1. **INPUT Jacks** – 1/4" hi-Z input jacks for connecting for instrument, line level, or speaker level audio.
2. **THRU Jacks** – 1/4" outputs for passing the input signal through to a stage amplifier or monitor system.
3. **-15dB / -30dB Pad switch** – When engaged, the input level is attenuated by either -15dB or -30dB to prevent distortion or when connecting to a speaker level output.
4. **STEREO/MONO Switch** – When the switch is in the STEREO position, each input is routed to its corresponding output. In the MONO position, the Left and Right input signals are summed together and fed to both Left and Right Output jacks.
5. **GROUND LIFT Switches** – When the switch is engaged, the input ground (shield) is disconnected.
6. **BALANCED OUTPUT Jacks** – Male XLR low-Z connectors.

Setup

The MD2 Pro can be quite useful on stage or in the studio for connecting unbalanced audio sources or instruments with pickups. By utilizing the MD2 Pro, the signal can be sent cleanly for long distances while benefiting from the low noise and common mode rejection provided by the balanced low-level output. The diagram following shows a typical hook-up for a stereo keyboard connected to a keyboard amplifier and a PA system.



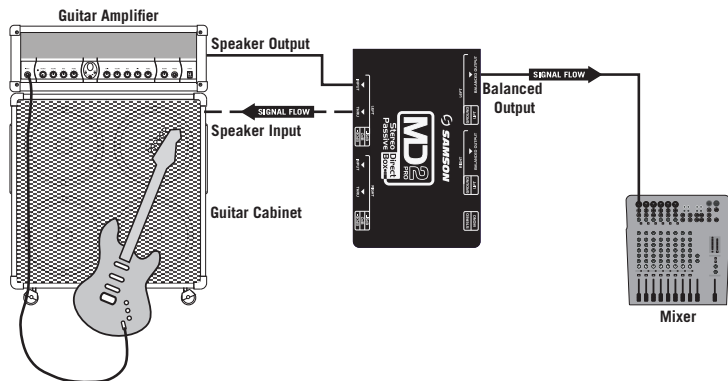
- Set the volume controls of your audio system to the off position.
- Connect your instrument or other audio source to the MD2 Pro INPUT jacks.
- Connect the THRU outputs to a monitor speaker or sub-mixer.
- Connect the BALANCED OUTPUT jacks to the microphone inputs of a mixer or other audio device.
- Raise the level of the audio system to the appropriate level.
- If you hear a hum or buzz set the GROUND LIFT switch to the LIFT position.
- If you hear distortion, set the pad switch to either the -15dB or -30dB position. You may need to adjust the input level of the mixer to make up for the attenuated signal.

Connecting Speaker Level Signals

The MD2 Pro provides the capability of tapping off the signals from amplifiers, such as the output of a guitar amp or any power amplifier. You can even use MD2 Pro to connect to the speaker output of a consumer stereo system to a mixer or PA system.

WARNING: Be sure that the pad switch is set to the -30dB position before connecting the signal from the output of any amplifier.

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



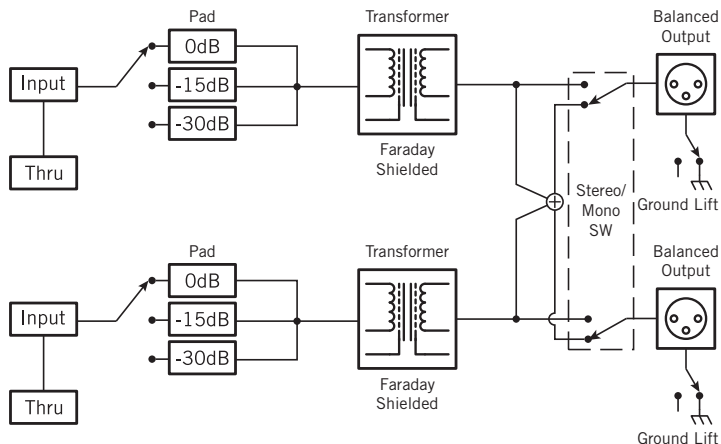
The MD2 Pro can accept signals up to 40 volts when the pad switch is in the -30dB position. Please use the following chart to calculate the maximum power output based on output impedance that will safely work with the MD2 Pro:

Power	Impedance
800 Watts	2 Ω
400 Watts	4 Ω
200 Watts	8 Ω
100 Watts	16 Ω

Specifications

Type	Stereo Passive Direct Box
Frequency Response	18Hz to 40kHz \pm 0.1dB
Maximum Input	+20dBu 0.35% THD
Dynamic Range	>100dB @ Balanced Output
Noise Floor	-117dB
Total harmonic distortion	<0.03% from 20Hz to 40kHz
Input impedance	400k Ω (Stereo Switch Position) >10k (Mono Switch Position)
Output Impedance	250 Ω \pm 20%
Transformer	Faraday Shielded Transformer
Transformer Ratio	15:1
Input PAD Switch	0dB, -15dB, -30dB
Ground Lift Switch	Disconnects XLR pin-1 (Output)
Stereo/Mono Switch	Sums stereo inputs to both outputs
Connectors	1/4" Phone Jack, unbalanced (In & Thru) XLR, balanced (Output)
Construction	14 gauge steel chassis
Dimensions	6.1" x 3.93" x 1.92" 155mm x 100mm x 49mm
Weight	2.08lb 946g

Block Diagram



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