

Congratulations on your purchase of the Miktek Audio Tool Box Series signal processor! The audio industry is filled with a lot of 'good' audio gear. At Miktek we believe 'good' is not good enough! We manufacture our products to go beyond average quality and performance. Thank you for trusting our vision and choosing Miktek for your important audio application.

In this manual you will find descriptions of the DI2, the active direct box's features, step-by-step set-up and operating instructions along with detailed specifications. In addition, we've also included some simple application examples to explain the features and functions of the DI2. For the experienced audio engineer these applications may seem basic, however at Miktek, we wish to support and encourage new engineers to use our products and appreciate audio quality! No explanation is too basic! We know you are serious about your audio equipment, and at Miktek, we are serious about providing superior products and service to our customers. We appreciate your patronage and hope you enjoy using your Audio Tool Box line as much as we enjoy making them available to you.

Sincerely,
 Michael Ketchell
 Managing Director

INTRODUCTION

The Miktek DI2 provides direct insertion of a STEREO audio signal into a STEREO mixer or recorder. It offers a variety of DI solutions for live sound and recording applications. A variety of audio signals can be connected to your DI2, e.g. guitars, bass guitars, drum machines, keyboards, outboard signal processors, high powered speaker outputs from an amplifier, etc.

FEATURES

- Two 1/4" inputs for a music instrument's audio signal
- Two 1/4" Thru outputs for linking the audio signal to an amplifier/recorder
- Two Balanced XLR outputs to send audio signal to main mixer
- Two PAD switches for attenuating each channel's input signal
- Two COMBINE switches for summing/combining the input and thru signals passively
- GROUND LIFT button to detach the XLR jak ground from the DI2 chassis
- Battery compartment at the bottom of the DI2
- Battery/Phantom switch for swapping between battery or phantom power operation

1. Ch2 - COMBINE: INPUT & THRU signals are passively summed for channel 2
2. Ch2 - INPUT: 1/4" unbalanced input connector for channel 2
3. Ch2 - PAD: Input signal attenuator for channel 2
4. Ch2 - THRU: 1/4" output for passing the input signal through to a stage amplifier or monitor system for channel 2
5. Ch1 - COMBINE: INPUT & THRU signals are passively summed for channel 1
6. Ch1 - INPUT: 1/4" unbalanced input connector for channel 1
7. Ch1 - PAD: Input signal attenuator for channel 1
8. Ch1 - THRU: 1/4" output for passing the input signal through to a stage amplifier or monitor system for channel 1
9. GND LIFT: When pressed, the ground from the DI2 chassis detaches from the XLR jack.
10. Ch1 - OUTPUT: Balanced output XLR connector for channel 1
11. Ch2 - OUTPUT: Balanced output XLR connector for channel 2
12. BATTERY/PHANTOM SWITCH: Switches between battery or phantom powered

SETTING UP YOUR DI2

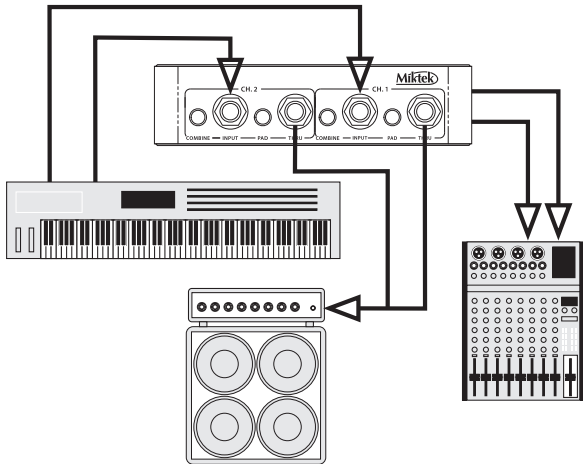
The DI2 can be powered either by a single 9 volt battery or standard 48 volt phantom power. Whenever phantom power is present on the XLR cable, the DI2 will automatically disconnect the 9 volt battery and switch to phantom power. When the battery switch is in, the DI2 will sense the voltage and chose which is greater. The battery/phantom switch can be used to turn off the battery power when DI2 is not in use.

The DI2 enables you to take the signal from a guitar or bass guitar and pass the signal from the THRU output to an amplifier without affecting the original sound. This can eliminate the need for miking the amplifier, especially with bass guitar. Because the DI2 is an active direct box with its own power supply, you can rely on an even frequency response on any audio signal you connect to regardless of its output impedance. The OUTPUT connection cancels hums/buzzes while leaving the original signal clean and pure. Besides that the DI2 is also useful for connecting unbalanced signals such as DJ mixers, effects processors, and keyboards to a main PA or recording mixer.

DIRECT APPLICATION OF AN INSTRUMENT INTO A PA SYSTEM

One of the common practices for using a stereo direct box is getting the signal of a stereo keyboard into the PA system. The following example gives an idea of how to do this.

1. Connect the keyboard output to channel 1 and channel 2 INPUT.
2. Connect channel 1 and channel 2 THRU to the input of a keyboard amp.
3. Connect channel 1 & channel 2 OUTPUT to the input of main PA mixer.



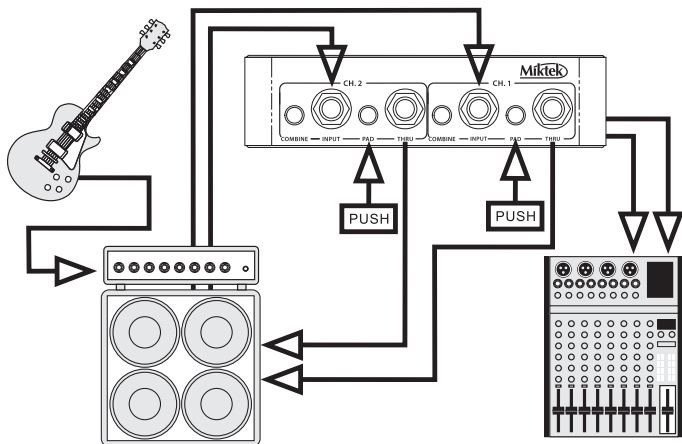
One of the DI2's extra features is the combine switch, which allows you to sum the INPUT and THRU for each channel if needed. With the COMBINE switch engaged, you can plug another line input to THRU to sum the INPUT and THRU together as a single signal.

NOTE: To avoid any annoying sound while connecting the DI2 or when switching from battery to phantom power, please turn down the volume control of your mixer's output.

CONNECTING HIGH POWER SIGNALS

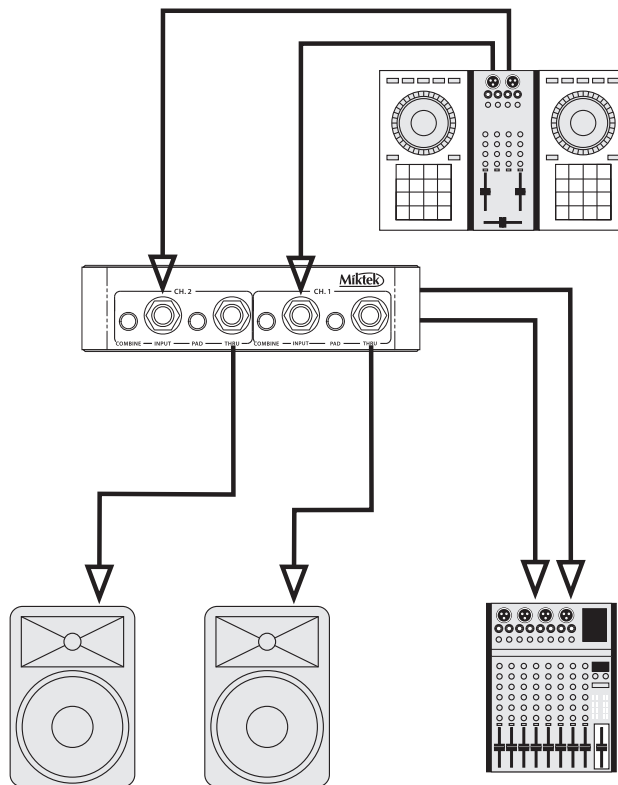
The DI2 provides the capability of tapping off the signals from amplifiers, such as the output of a guitar amplifier. You can also use DI2 to connect to the speaker output of a consumer stereo system or boom box.

1. Make sure the PAD switch is pushed in
2. Connect the output of the guitar/bass guitar to the amplifier's input
3. Connect the guitar amplifier's speaker STEREO output to the DI2 inputs
4. Connect the DI2's THRU to the stereo input of the guitar amplifier's speaker
5. Connect the DI2's stereo balanced XLR OUTPUT to the input of main PA mixer.



CONVERTING THE OUTPUT OF UNBALANCED DEVICES

The DI2 can be very useful in the studio or on stage for connecting unbalanced devices, especially keyboards and DJ mixers. The output levels of most keyboards and DJ mixers are low, so their signals can benefit greatly by connecting their unbalanced outputs to the DI2. After so, the signal can be sent cleanly for long distances while benefitting from the low noise and common mode rejection provided by DI2's OUTPUT. The following shows a typical hook-up for a DJ mixer connected to a stereo stage monitor system and the main PA mixer.



SPECIFICATIONS

Frequency Response	10Hz - 20kHz, -1 dB
Noise Level	-100 dBu
THD+N	0.013% typ. @ 1VRMS, 1kHz
Input Impedance	Guitar -1 Meg. Ohm
Max. Input Level	(1%+7 dBu (9V Battery) +0 dBu (48V Phantom Power)
Input	1/4" Phone Jack, unbalanced
Thru	1/4" Phone Jack, unbalanced
Output	XLR Connector, balanced
Phantom Power	24-48 VDC
Battery	9V
Dimensions	144 W x 102 D x 38 H mm
Weight	3.56 KG



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