



di1 DIRECT BOX

ONE CHANNEL DIRECT BOX



OWNER'S MANUAL

Warranty

1. Please register your product online at www.dbxpro.com. Proof-of-purchase is considered to be the responsibility of the consumer. A copy of the original purchase receipt must be provided for any warranty service.
2. dbx warrants this product, when purchased new from an authorized U.S. dbx dealer and used solely within the U.S., to be free from defects in materials and workmanship under normal use and service. This warranty is valid to the original purchaser only and is non-transferable.
3. dbx liability under this warranty is limited to repairing or, at our discretion, replacing defective materials that show evidence of defect, provided the product is returned to dbx WITH RETURN AUTHORIZATION from the factory, where all parts and labor will be covered up to a period of two years. A Return Authorization Number must first be obtained from dbx. The company shall not be liable for any consequential damage as a result of the product's use in any circuit or assembly.
4. dbx reserves the right to make changes in design or make additions to or improvements upon this product without incurring any obligation to install the same additions or improvements on products previously manufactured.
5. The foregoing is in lieu of all other warranties, expressed or implied, and dbx neither assumes nor authorizes any person to assume on its behalf any obligation or liability in connection with the sale of this product. In no event shall dbx or its dealers be liable for special or consequential damages or from any delay in the performance of this warranty due to causes beyond their control.

Technical Support & Service

If you require technical support, contact dbx Technical Support. Be prepared to accurately describe the problem. Know the serial number of your device – this is printed on a sticker attached to the chassis.

Before you return a product to the factory for service, we recommend you refer to this manual. Make sure you have correctly followed installation steps and operating procedures. For further technical assistance or service, please contact our Technical Support Department at (801) 566-8800 or visit www.dbxpro.com. If you need to return a product to the factory for service, you MUST first contact our Technical Support Department to obtain a Return Authorization Number.

NO RETURNED PRODUCTS WILL BE ACCEPTED AT THE FACTORY WITHOUT A RETURN AUTHORIZATION NUMBER.

Please refer to the Warranty information, which extends to the first end-user. After expiration of the warranty, a reasonable charge will be made for parts, labor, and packing if you choose to use the factory service facility. In all cases, you are responsible for transportation charges to the factory. If the product is still under warranty, dbx will pay the return shipping.

Use the original packing material if it is available. Mark the package with the name of the shipper and with these words in red: DELICATE INSTRUMENT, FRAGILE! Insure the package properly. Ship prepaid, not collect. Do not ship parcel post.

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Overview

Introduction

Congratulations on purchasing the dbx di1 Active Direct Box. Ideal for both studios and on the road, the di1 will ensure audio signals reach their intended destination free from unwanted noise and in a balanced format. The di1 provides a range of features such as level and impedance matching, phantom power indication, signal pass through, and ground lift functionality. The di1's versatility makes it suitable for a wide range of applications. You can connect the output from electric guitars, bass guitars, keyboards, or just about any other audio signal output directly to a mixer, without the use of a microphone.

We hope your new dbx di1 will serve as an indispensable creative tool for your sound processing and music production needs. Thank you for choosing dbx.

Every effort has been made to ensure all information provided in this manual is accurate at the time of writing.

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<http://www.dbxpro.com>

Features

- *Level and impedance matching function*
- *Signal pass through connector*
- *Output connector: XLR balanced*
- *Balanced XLR and 1/4" Connectors*
- *Battery LED indicator*
- *Phantom Power: +18 V DC to +48 V DC*
- *TS and XLR inputs and outputs*
- *Attenuation control*
- *Ground lift switch*
- *Main/Standby: 9 Volt battery*
- *Sturdy metal chassis*

Using a Direct Box

First, a direct box converts the audio signal originating from an unbalanced device (like a guitar) to a balanced audio signal for transmission over a longer distance than is recommended for an unbalanced signal to travel. As audio industry people know, the advantage of a balanced signal is realized at the receiving end (audio input) of the balanced cable, typically in the form of a mic pre-amp input on a mixing console. The mic pre input circuitry consists of a “differential amplifier” whose job it is to “accept” the audio portion of input signal and “reject” the noise portion of the signal. The noise portion happens to be roughly equivalent on (or “common to”) both the “+” and “-” balanced conductors in the mic cable, since external electromagnetic fields are induced onto both conductors in a roughly similar fashion. Since the conductors are always in a “twisted pair” configuration, they “see” the same noise field. Thus, this is known as “common-mode noise”. Another type of common-mode noise somewhat evenly-induced onto both conductors is due to the inherent physics of connecting two pieces of equipment together and the resulting flow of electrons due to noise voltages present at each piece of equipment. The ability of a balanced input to reject common-mode noise is measured in dB and called its “common-mode rejection ratio”, or CMRR.

The second function of a direct box is to convert from a high-impedance output – on an instrument such as electric guitar with passive pickups, for instance – to a low-impedance output. A cable driven by a high-impedance output is more susceptible to signal loss and noise pickup than a cable driven by a low-impedance output. Thus, using a direct box again improves, for a different reason, the ability to run longer distances due to the impedance conversion from high to low-impedance.

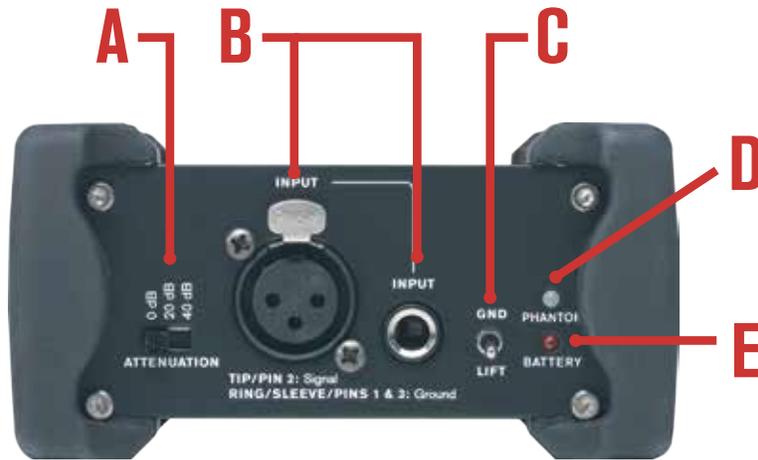
Direct Insertion of an Instrument into a PA System

One of the most common applications for using a DI box is getting the signal from a bass guitar into the PA system. Simply put, the low frequencies produced by bass are difficult to mic, so use of a DI box is almost always preferable.

Additionally, the signal going to the PA system can be adjusted by the FOH (front of house) engineer, without affecting the sound the musician dial up on stage. You can use the di1 to plug a guitar directly into the PA system as well. This is especially useful for acoustic guitars with pickups or when using guitar signal processors. Follow these steps to connect a guitar to a PA mixer:

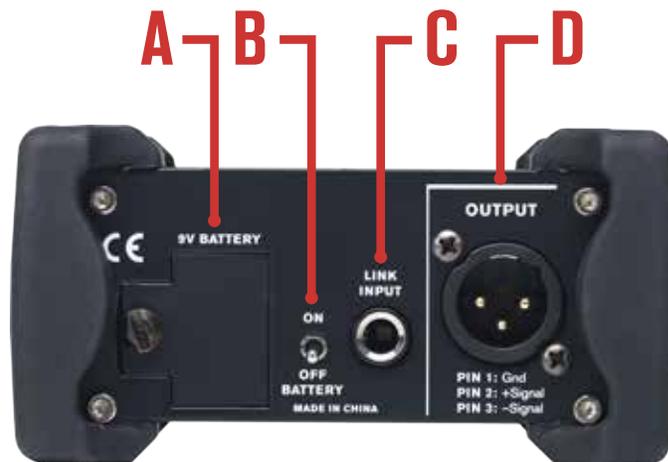
1. Mute or turn down the volume/gain on you mixer before making connections
2. Connect the output of the guitar or bass to the 1/4" input on the di1
3. Connect the di1's XLR output to the input of the PA mixer
4. Adjust the mixer's volume/gain to your liking

Front Panel



- A. Attenuation Switch
- B. Input Connectors
- C. Ground Lift Switch
- D. Phantom Power LED Indicator
- E. Battery Power LED Indicator

Rear Panel



- A. Battery Compartment
- B. Battery On/Off Switch
- C. Link Input
- D. Output Connector

di1 DIRECT BOX

Application & Operation

Battery Power & Installation

The di1 operates using a standard 9V battery (not included) or phantom power.

There is a secured battery compartment housed within the di1 with access provided through a removable metal compartment cover. Simply unscrew the battery compartment cover to gain access to the battery compartment for battery installation or replacement of expired batteries.

Battery On/Off Switch

The Battery on/off switch enables and disables the battery operation. To preserve battery life always disable the battery power when the unit is not in use or using phantom power.

Battery LED Indicator

There is a LED indicator located on the di1's front panel. This is illuminated to indicate that battery power is enabled and the unit is ready for operation.

Phantom Power LED Indicator

The phantom power LED will illuminate when phantom power is detected. To preserve battery life, switch the battery off whenever phantom power is detected.

Connections

Input Connections

The di1 offers both TS and XLR unbalanced inputs on the front panel of the unit.

Output Connections

The di1 offers both TS unbalanced and XLR balanced outputs on the rear panel of the unit. The TS unbalanced "Link Input" connector is an unbalanced parallel output of the incoming signal from either the XLR or TS input source. This is for passing signals directly through the di1 for local use such as monitor amplifiers. The XLR output connector is wired - Pin 1 = GROUND, Pin 2 = (+) Signal, Pin 3 = (-) Signal. This output is for connection to your console mixer or destination receiving unit.

Controls

Attenuation Switch

The attenuation switch provided allows for incoming source signal to be attenuated by 20dB or 40dB. This is useful for operation with very hot signals that would otherwise overload the di1.

Ground Lift Switch

The Ground lift switch enables or disables continuous connection of the input and output ground connection. This is useful for helping to eliminate ground loop hum problems that can arise between connected devices. When this switch is in the down position the ground lift is enabled and no ground connection is made between the incoming and output signal.

Specifications

POWER REQUIREMENT

9V battery (Battery not included)

Phantom Power: +18 V DC to +48 V DC

DIMENSIONS (WITHOUT FEET)

10cm (W) x 10.2cm (L) x 4.5cm (H)

3.93" (W) x 4.01" (L) x 1.77" (H)

dbx is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or shown.

Important Note:

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di1 Owner's Manual

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