

# UNiKA

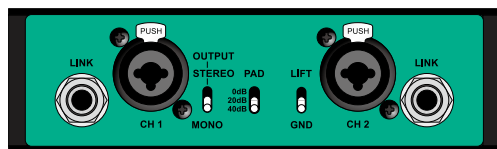
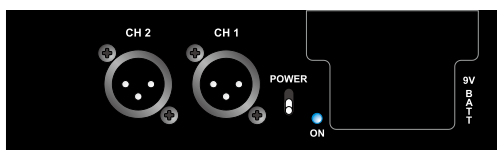
PROFESSIONAL AUDIO

# USER GUIDE

## Box Series

Made in Taiwan

# DI-BOX2



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## OVERVIEW

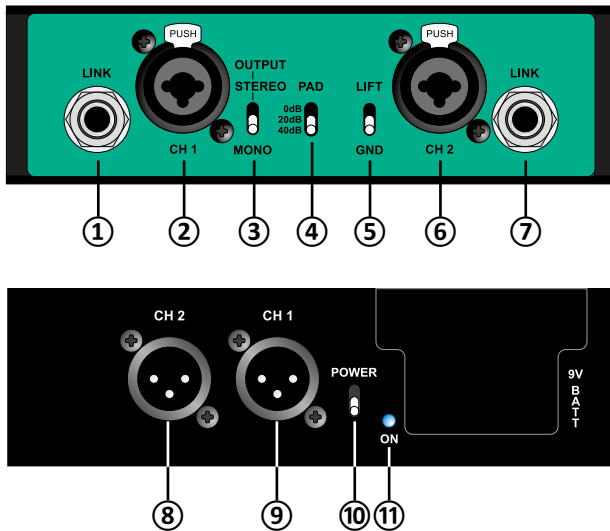
The Unika DI-BOX2 is a 2 channels active direct box, it is very easy to use, simply plug it in, turn on the power and it goes to work. However, there are a number of features built in that should be understood in order to get the most out of the DI-BOX2. So please take a few minutes to go through this user guide to ensure you get the most out of it.

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If you still need further clarification, please send email to us and we will do our very best to reply you in short order.

## FEATURES

- 2 channel high impedance direct inputs for electronic musical instrument signal feed.
- The ¼" TRS LINK socket carries a parallel-wired direct feed from the input.
- Selectable 3 steps attenuator for Hi-Z direct input.
- Accept power from plug-in 9V battery or +20V to +48V phantom power.
- 2 channel XLR Balanced Low-Z output with isolation transformer.



- ① Ch-1 1/4" TRS LINK socket carries a parallel-wired direct feed from the input.
- ② Ch-1 high impedance direct input for electronic musical instrument signal feed.
- ③ Output Stereo / Mono mode selector, set the operation mode to Stereo, or in Mono mode the 2 inputs are summed so that the outputs become mono.
- ④ Input PAD: 0dB, -20dB & -40dB selectable 3 steps attenuator reduces the input sensitivity to prevent overload.
- ⑤ Ground lift switch, lifts the pin-1 on XLR output connectors to help eliminate hum and buzz caused by ground loops.
- ⑥ Ch-2 high impedance direct input for electronic musical instrument signal feed.
- ⑦ Ch-2 1/4" TRS LINK socket carries a parallel-wired direct feed from the input.
- ⑧ Ch-2 XLR Balanced Low-Z output with isolation transformer.
- ⑨ Ch-1 XLR Balanced Low-Z output with isolation transformer.
- ⑩ POWER switch: Used to switch the power ON/OFF.
- ⑪ POWER ON/OFF LED indicator.

## AUDIO CONNECTION

### Instrument direct input & Parallel link connection

As with all audio gear, always ensure audio system levels are turned down or equipment turned off before making connections. This will avoid plug-in or turn-on transients from damaging more sensitive components such as tweeters.

There are two channels on the DI-BOX2. These are identical and feature XLR- $\frac{1}{4}$ "TRS combo jack INPUT, a  $\frac{1}{4}$ " thru-put LINK and a balanced XLR OUTPUT.

Connect your source instrument to the input and the balanced XLR output to the PA system or recorder. The LINK connector output provides the means for connecting the signal to a stage amp or personal monitor system. Simply connect the LINK to your amp or monitor. Unbalanced cables are much more susceptible to noise than their balanced counterparts. Keeping unbalanced cables under 8 meters (25') in length is good practice while balanced cables can easily extend to 100 meters (300'). The balanced output of the DI-BOX2 is mic level, meaning that it should be connected to the mic input of a mixing console or mic preamp. Once connected, make sure phantom power is activated.

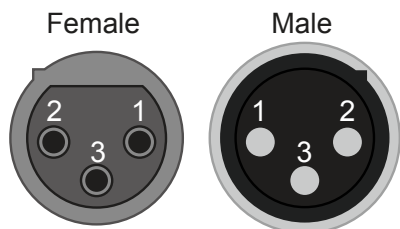


Fig-1: XLR Plugs Balanced connection:  
1-Ground  
2-Signal Hot (+)  
3-Signal Cold (-)

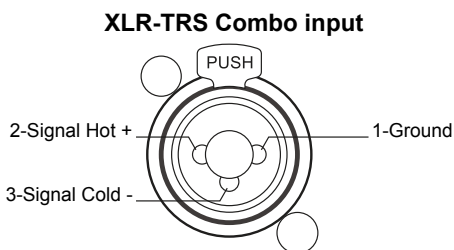


Fig-2: XLR- $\frac{1}{4}$ "TRS Combo socket for direct input

For Unbalanced connection, pin-3 should be connected to Ground with pin-1.

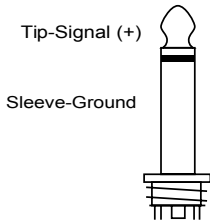


Fig-3: 1/4"TS Unbalanced connection

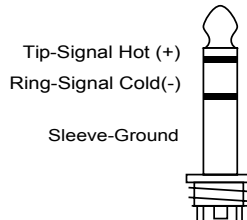


Fig-4: 1/4"TRS Balanced connection

## VARIOUS INSTRUMENTS CONNECTION



Fig-5: 2 instruments, Guitar amps & PA connection

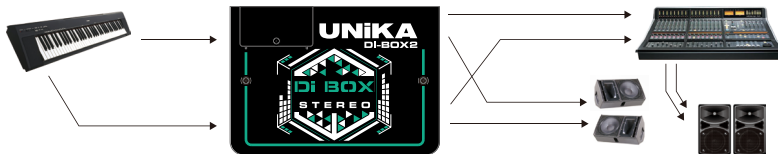


Fig-6: Stereo keyboard, Monitors & PA connection

## INPUT PAD ATTENUATION

The most common use of the direct input is with guitar pick-ups or keyboards. The optimal setting for this is most likely with the pad switch set to 0dB, although with some high-output pick-ups the performance of the direct input may be improved if the pad switch is set to -20dB to prevent possible clipping of the input signal.

The instrument is connected to the XLR-1/4" Combo jack socket, and a parallel link feed taken from the other jack socket to the instrument's own amplifier.

The direct input can also be fed either from a line-level output from the head (pad set to -20dB) or from the amplifier power output (speaker output, pad set to -40dB).

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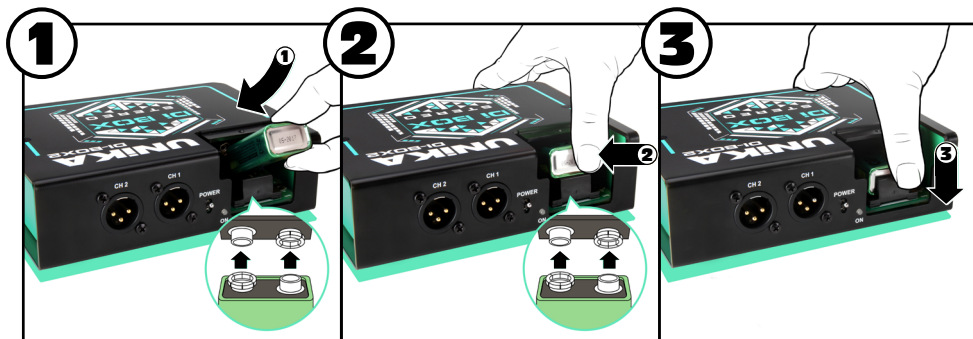
## ELIMINATING HUM AND BUZZ AND THE GROUND LOOP

The DI-BOX2 is equipped with output isolation transformers to eliminate hum and buzz caused by stray DC voltage and ground loops.

Computers, optical projectors and other consumer equipment can be particularly noisy, anyone that has incorporated audio with a projector knows that noise can be a serious problem, so transformers can be incredibly useful when combating system noise.

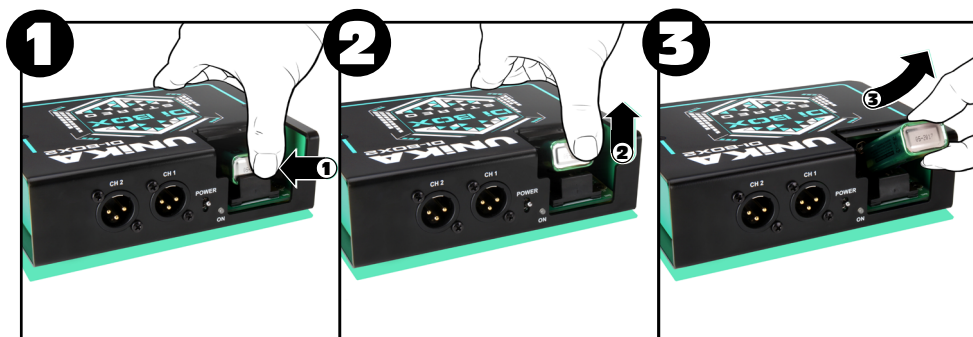
A ground lift switch on the outputs takes this one step further by lifting pin-1 on the XLRs. Computers are often the source for noise problems in audio systems, so greater care is certainly needed to keep things quiet.

## HOW TO REPLACE DI-BOX BATTERY



Battery installation:

- ① Put the battery into the slot.
- ② Verify the battery polarity is correct and snap it in.
- ③ Press it down into the battery holder.



Battery removal:

- ① Press and hold the battery on its bottom end.
- ② Then pull to lift it up from the battery holder.
- ③ Lift off the battery.

## SPECIFICATIONS

(Specifications are subject to change without notice.)

Direct Input	Unbalanced, XLR/¼"TRS combo jack. (Pin-2 Hot, Pin-3&1 Ground).		
Link Output	Unbalanced, Parallel link output ¼"TRS jack for feeding to other equipment.		
Direct Input pad	At 0dB	At -20dB	At -40dB
Direct Input Impedance	1 MΩ	47KΩ	47KΩ
Max. input level before Clip	+9dBu	+29dBu	+49dBu
Output level	Mic level		
Output impedance	200Ω nominal, Transformer Balanced.		
Analog output	Balanced transformer isolated (XLR-M, Pin-1 Ground, Pin-2 Hot, Pin-3 Cold)		
Frequency response	20Hz to 20KHz , +1/-1 dB		
Dynamic range	>109dB		
Noise floor	<-90dBu, unweighted 20Hz to 20KHz.		
Total harmonic distortion	Less than 0.008% at 1KHz, 0dBu output		
Ground lift	Lifts pin-1 on both XLR outputs		
DC Power	plug-in 9V battery or +20V to +48V Phantom power		
Finish	Durable powder coat		
Size	158mm (W) x 112mm (D) x 46mm (H)		
Weight	1.2Kg, 2.6lbs.		
Construction	14 gauge steel cabinet & chassis		

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