



# UNiKA PRO248 Pro Series Audio Interface Design and Made In Taiwan Dual Active User Manual

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**UNiKA**

## UNIKA PRO248 Pro Series Audio Interface Design and Made In Taiwan Dual Active



### GENERAL PRECAUTION BEFORE USE

Thank you for purchasing the UNiKA PRO SERIES AUDIO INTERFACE. Before using, please read this manual carefully and pay attention to every detail that you must pay attention to. If you use a mixer to connect to this interface, please turn off the mixer power and +48V phantom power before connecting, and then turn on the power and phantom power after inserting the signal cables. For passive models, please do not turn on the phantom power to avoid leakage or damage the equipment. If using a model with a volume knob, turn the volume knob to the minimum. During use, please do not plug or unplug the wires arbitrarily to avoid signal loss. Please refer to the following instructions for the soldering method of the plugs to ensure the expected level and keep the signal smooth. If you need further installation or operation guidance, please directly contact UNiKA's dealer or distributor, or write to the following mail address for help: [info@unikapro.com](mailto:info@unikapro.com)

### PRODUCT OVERVIEW

PRO 248 is an active dual-channel DI box. Unlike traditional DI, PRO 248 uses +48V phantom power instead of the traditional 9V dry cell battery, so users can use it on the mixer or external phantom power supply. Power is supplied to PRO 248, the power supply circuit and the output signal line are shared, and no additional power cord is required. The +48V indicators are set on the upper cover. The +48V circuit specially selects the British OEP PT-4 pulse transformer. PRO 248 has a pair of built-in UNiKA-PROTM EI30A10E 1+1:1+1 isolation transformers, which has a special copper foil layer and a dedicated ground layer, which allows this device to restore high signal/noise ratio and dynamic sound, and can avoid unnecessary leakage caused by radio frequency interference, ground interference and potential difference. PRO 248 is especially suitable for electronic musical instruments, recording studios and fixed installation projects by using mixers. The PRO 248 uses two TRS sockets on the input, and two TRS throughout are convenient for musician to pass the direct signal to the instrument amplifier. In addition, it is equipped with a 0/-20dB attenuation switch and LED indicator, which is suitable for various types of audio signals with high and low impedance. The output terminal is also equipped with a GND/LIFT button to quickly eliminate ground noise.

### PARAMETER TEST CONDITIONS

In the development and manufacturing process, Audio Precision's 2700 series and 500 series are used to test and verify electrical characteristics.

## FEATURES

- Power by external +48V phantom power
- Built-in UNiKA-PROTM EI30A10E isolation transformer
- Use British OEP PT-4 1:1 audio pulse transformer in phantom power circuit
- +48V status indicator on the upper cover
- The input socket uses a pair of TRS jacks
- Use a pair of TRS jacks as throughout terminal
- At 0dB input, the set load impedance is 260K $\Omega$ , which can clearly show the high-frequency overtones , harmonic and graininess of electric guitars or electric bass
- 50 $\Omega$  ultra-low impedance output, suitable for various types of mixers and pre-amp equipment
- There is 0dB/-20dB input signal attenuation switch with status indicator
- The output is equipped with a GND/LIFT switch

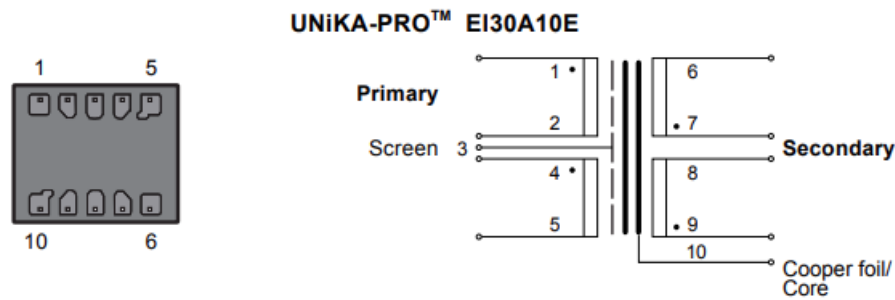
## APPEARANCE PARTS & FUNCTIONS



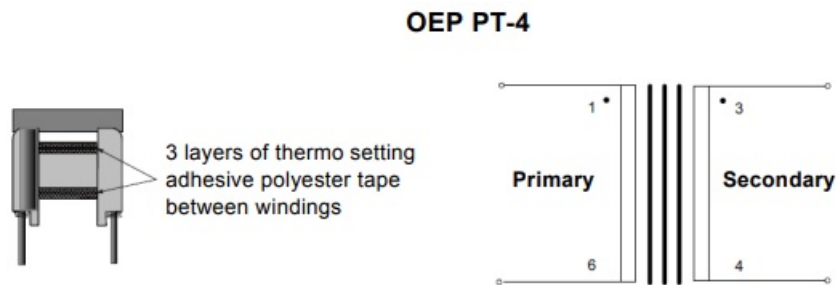
1. CH-1 signal output: XLR terminal, isolated balanced output of the transformer, need to turn on +48V phantom power supply for PRO 248 proper working after connecting to the mixer.
2. Output grounding/floating switch: when the switch is not pressed, the first pin (PIN-1) of XLR is grounded. PIN-1 will be disconnected from ground after pressing. This button should depend on the system. Used in the situation, in order to isolate the ground loop noise or leakage.
3. CH-2 signal output: XLR terminal, Isolated balanced output of the transformer, need to turn on +48V phantom power supply for PRO 248 proper working after connecting to the mixer.
4. +48V phantom power indicator: When CH-1 or CH-2 receive +48V phantom power, the indicator will be shining the blue color.
5. CH-1/CH-2 Signal input: A pair of 6.35mm TRS sockets, can input balanced or unbalanced LINE signal.
6. PAD input attenuation switch: Provide 0/-20dB two options, when inputting signals of various impedances and levels.  
It can be attenuated by 20dB to avoid overload or clipping.
7. Attenuation active indicator: When the PAD attenuation switch is pressed (-20dB), the indicator light will be shining the yellow color.

8. CH-1/CH-2 signal through out: Convenient for musicians musical instrument speakers or other DI and peripheral equipment.

## ISO TRANSFORMER SCHEMATIC



## PULSE TRANSFORMER SCHEMATIC



## INPUT PAD ATTENUATION

The most widely used DI box is to connect electronic musical instruments, sound source of A/V equipment and computers, convert their output signals into balanced signals and then extend the transmission distance. The most ideal state is to set the attenuator to 0dB position (button up) for musical instrument. For some other type of signals, you can press the button to make the signal is attenuated by 20dB to avoid clipping caused by signal overload. When the button is pressed, the PAD indicator on the right will light up. This attenuator acts on the input terminals of CH-1 and CH-2 at the same time.

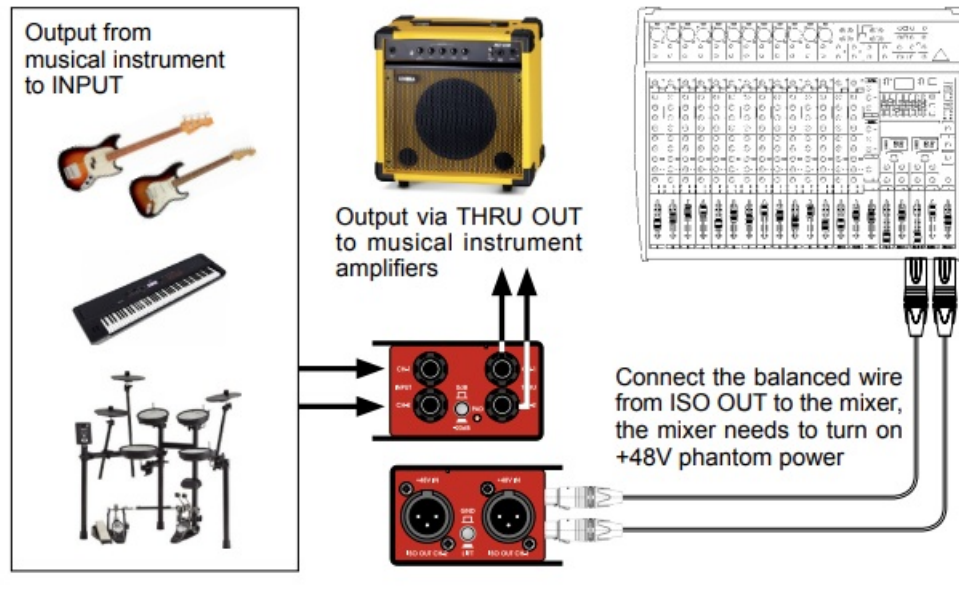
## POWER SUPPLY

PRO 248 is an active DI box and requires +48V phantom power. It can work normally when it is powered, but no additional power supply is required. Just use balanced wires to connect the device to the mixer's input channel, and turn on the +48V power switch of the mixer, similar to connect a condenser microphone to the mixer. When the +48V power supply is supplying properly, the +48V ACTIVE indicator light on the upper cover will light up.

## ELIMINATING GROUND LOOP NOISE

The built-in channel-independent balanced isolation transformer has solved the potential difference leakage problem. When the system causes a ground loop due to poor wiring, the noise can be eliminated through the GND/LIFT button. The GND/LIFT button determines whether pin 1 of the output XLR is grounded, grounded when it bounces, and disconnected from ground when pressed.

## CONNECTION GUIDE



XLR-Female connector

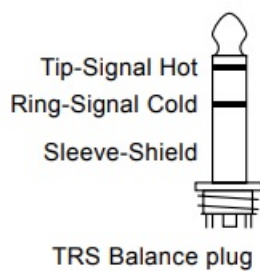


XLR-Male output jack

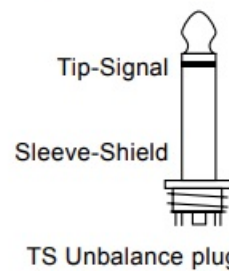


- 1-Shield pin
- 2-Hot pin
- 3-Cold pin

The unbalanced connection, pin-2 is hot, pin-3 is shield paralleled with pin-1.



TRS Balance plug



TS Unbalance plug

SPECIFICATIONS

PRO 248	
Circuit principle	Active low-noise op-amp with Transformer balance output
Input connector	2 x TRS
Thru connector	2 x TRS
Input pad switch/indicator	0/-20dB push button with LED
Power supply	+48V Phantom power through output connector with LED indicator on top cover
Output connector	2 x Male XLR through ISO Transformer
Output GND/LIFT switch	Shared push button
Input impedance	260KΩ / 0dB, 50KΩ/-20dB
Output impedance	50Ω
Max. input level before clipping	+10dB
Max Output level	+10dB
Frequency response	20Hz-20KHz, +0.05/-0.5dB
S/N ratio @20Hz~20KHz un-weight	>95dB
T.H.D. @1KHz 0dBV output	<0.02%
Transformer Ratio	1:1+1:1
Chassis	1.6mm/1.2mm steel cabinet and chassis
Surface finished	Durable complex painting
Dimension (W x D x H)	78 x 124 x 46 mm
Weight	0.66kg
Shipping weight	0.69kg
Packing per carton	20pc/14.40kg
Shipping dimension per carton	305 X 283 X 195 mm

Documents / Resources

	<p><a href="#">UNiKA PRO248 Pro Series Audio Interface Design and Made In Taiwan Dual Active</a> [pdf]</p> <p>User Manual</p> <p>PRO248 Pro Series Audio Interface Design and Made In Taiwan Dual Active, PRO248, Pro Series Audio Interface Design and Made In Taiwan Dual Active</p>
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