

# DB2•A

**2-CH ACTIVE D.I. BOX**

## USER'S MANUAL

**PROEL**

TECHNOLOGY AS ART



This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

### SAFETY AND PRECAUTIONS

- **CAUTION** - Before using this product read carefully the following safety instructions. Take a look of this manual entirely and preserve it for future reference.

When using any electric product, basic precautions should always be taken, including the following:

- To reduce the risk, close supervision is necessary when the product is used near children.
- Protect the apparatus from atmospheric agents and keep it away from water, rain and high humidity places.
- This product should be site away from heat sources such as radiators, lamps and any other device that generate heat.
- Care should be taken so that objects and liquids do not go inside the product.
- The product should be connected to a power supply only of the type described on the operating instructions or as marked on the product.

### IN CASE OF FAULT

- In case of fault or maintenance this product should be inspected only by qualified service personnel when:
  - Liquids have spilled inside the product.
  - The product has fallen and been damaged.
  - The product does not appear to operate normally or exhibits a marked change in performance.
- Do not operate on the product, it has no user-serviceable parts inside.
- Refer servicing to an authorized maintenance centre.

### CE CONFORMITY

- Proel products comply with directive 89/336/EEC (EMC) and following modifications 92/31/EEC and 93/68/EEC, as stated in EN 55103-1 and EN 55103-2 standards and with directive 73/23/EEC (LVD) and following modifications 93/68/EEC, as stated in EN 60065 standard.

### PACKAGING, SHIPPING AND COMPLAINT

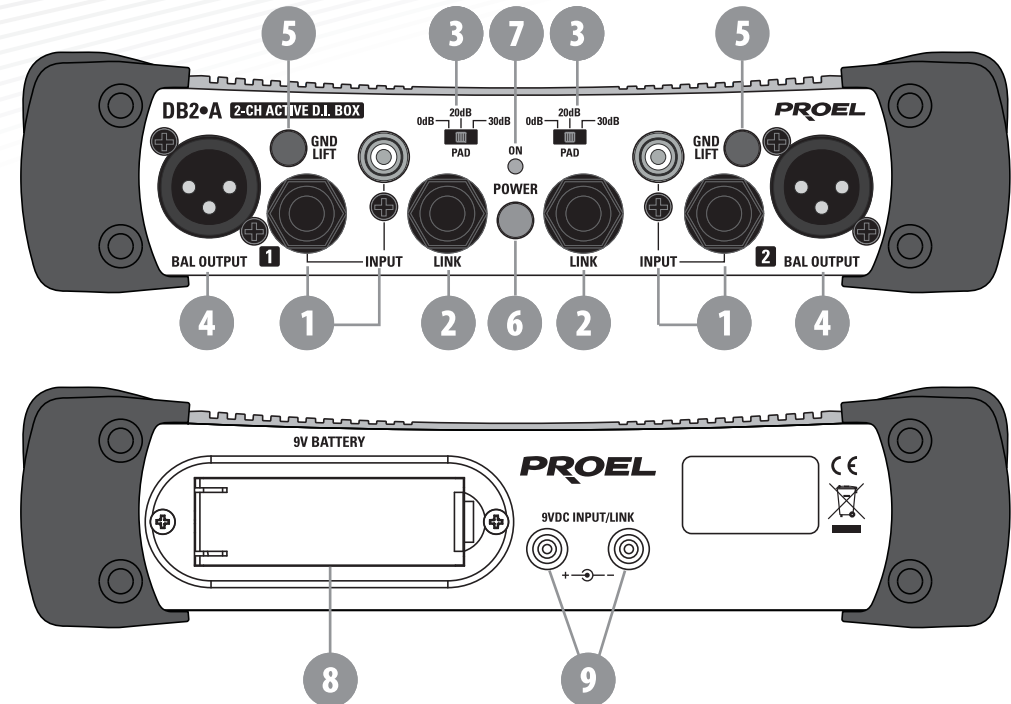
- This unit package has been submitted to ISTA 1A integrity tests. We suggest you control the unit conditions immediately after unpacking it.
- If any damage is found, immediately advise the dealer. Keep all unit packaging parts to allow inspection.
- Proel is not responsible for any damage that occurs during shipment.
- Products are sold "delivered ex warehouse" and shipment is at charge and risk of the buyer.
- Possible damages to unit should be immediately notified to forwarder. Each complaint for manumitted package should be done within eight days from product receipt.

### WARRANTY AND PRODUCTS RETURN

- Proel products have operating warranty and comply their specifications, as stated by manufacturer.
- Proel warrants all materials, workmanship and proper operation of this product for a period of two years from the original date of purchase. If any defects are found in the materials or workmanship or if the product fails to function properly during the applicable warranty period, the owner should inform about these defects the dealer or the distributor, providing receipt or invoice of date of purchase and defect detailed description. This warranty does not extend to damage resulting from improper installation, misuse, neglect or abuse. Proel S.p.A. will verify damage on returned units, and when the unit has been properly used and warranty is still valid, then the unit will be replaced or repaired. Proel S.p.A. is not responsible for any "direct damage" or "indirect damage" caused by product defectiveness.

### MAINTENANCE AND DISCLAIMER

- Clean only with dry cloth.
- Proel products have been expressly designed for audio application, with signals in audio range (20Hz to 20kHz). Proel has no liability for damages caused in case of lack of maintenance, modifications, improper use or improper installation non-applying safety instructions.
- Proel S.p.A. reserves the right to change these specifications at any time without notice.
- Proel S.p.A. declines any liability for damages to objects or persons caused by lacks of maintenance, improper use, installation not performed with safety precautions and at the state of the art.



### INTRODUCTION

The name DI box comes from direct injection box, that means exactly: To inject a signal directly or take an audio signal from the source and send it directly to a mixer console or recorder. Direct boxes perform several important functions: they are designed as impedance matching and signal balancing devices. This means that they take the high impedance of a guitar or keyboard and 'transform' it to the low impedance used in balanced sound systems. Balanced signals inherently cancel noise and, due to their lower impedance, are capable of very long cable runs. Balanced signals are the norm in professional recording, broadcast and live sound. By properly matching the impedance you will enjoy better sound, less noise and an extended frequency response.

DB2-A is a 2-channel active direct box that includes a double powered circuit to convert the impedance and balance the signal. DB2-A with its two channels is specifically designed as a 'consumer to pro' stereo direct box for keyboards, computer sound cards and electronic media.

The moulded sides make stacking of multiple units easier, and help isolate the case of the DI-box from the stage both electrically and mechanically.

The DB2-A derives its power from the mixing console phantom power, from a battery or from an external AC/DC adaptor.

## CONTROLS AND AUDIO CONNECTION

### 1. INPUT - (unbalanced JACK or RCA)

Connect the source instrument to this 1/4" jack or rca pin socket to receive the signal. The input impedance depends by PAD setting: 200 Kohm with no pad, 47 Kohm with pad insertion.

### 2. LINK - (unbalanced JACK)

Connect this 1/4" jack to the input of the backline instrument or monitor amplifier.

### 3. PAD - (switch)

The pad switches reduce the input signal to the circuit to ensure a clean and distortion-free signal.

Three steps are possible: 0 dB (no pad), -20 dB, -30 dB. Always use as little as attenuation as possible to get the best possible signal with reference to the noise floor.

### 4. BAL OUTPUT - (male XLR)

This male XLR output connector is the balanced microphone level output of the DI and it is wired with pin-1 ground, pin-2 hot and pin-3 cold. To power the DI box it must be connected to the phantom powered MIC input of the mixing console. Connecting the DI box to a mixer LINE input the DI box must be powered with battery or AC/DC adaptor.

### 5. GND LIFT - (switch)

Use the GND LIFT switch to either connect the ground pin of input and output or keep them partially separated. Depending on the grounding of the connected devices linking or disconnecting will reduce hum and buzz noises and prevent ground loops.

**NOTE: The proprietary GND LIFT circuit especially developed for DB2-A doesn't allow to connect this unit directly to speaker terminals: please don't use this unit connected to high level amplifier outputs.**

### 6. POWER - (switch)

The power switch is used for both battery and external adaptor power. To avoid battery drain when the unit is not in use, ensure that this switch is set to the OFF position when storing the DB2-A. The power switch has not influence when the DB2-A is powered by the phantom power of a MIC channel.

**NOTE: To prevent damaging of your speaker and avoid switching noise, first connect the DI box and then hook up the respective channel or mute the mix channel before activating or connecting the DB2-A.**

### 7. ON - (green led)

The ON (green) led shows when the DB2-A is powered. If the led doesn't light, be sure that the phantom power of the channel where the DB2-A is connected is activated.

**NOTE: DB2-A needs the phantom power from at least one channel, in any case we suggest to send the phantom power from both channels if connected: this ensure a second power safety option.**

### 8. 9V BATTERY HOLDER

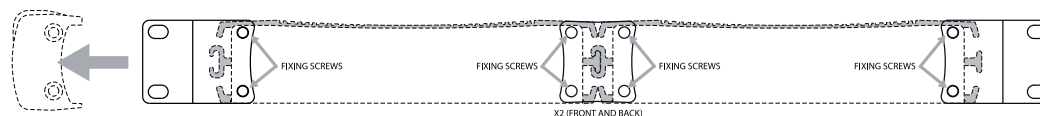
For best reliability and long life, we recommend you use only high quality alkaline battery.

### 9. 9VDC INPUT/LINK

Alternatively to phantom or battery power you can use also an external 9 V DC adaptor. A LINK socket is provided if you have to power more than one unit installed into a rack.

## RACK MOUNTING

Simply removing the two molded sides and attaching two units with the supplied brackets you can mount two by two DI boxes into a standard 19" rack.



## SPECIFICATION

<b>System Type</b>	<b>2 channel active DI</b>	<b>System Performance</b>	
<b>Input Section</b>		Insertion loss	< 1 dB
Input Impedance	200K Ohm (pad at 0 dB) 47k Ohm (pad at -20 dB) 44k Ohm (pad at -40 dB)	CMR	> 40 dB
Max Input Level	+5 dBu (pad at 0 dB) +25 dBu (pad at -20 dB) +35 dBu (pad at -30 dB)	Phase distortion	+4° at 20 Hz, -13° at 20k Hz
Connectors	Two Parallel 1/4" jack connectors and one parallel RCA connector (unbalanced) Jack: Tip Hot / Sleeve Ground	Distortion THD 50÷20k Hz 0dBu	< 0.007 %
<b>Output Section</b>		Noise	< -105 dBu unweighted
Output	Active discrete devices (transformer less) into 600 Ohms or greater	Frequency Response	10 Hz to 70 kHz, +0dB/-1 dB
Max. Output Level	+5 dBu (for 0.1% THD at 50 Hz) +5 dBu (for 0.1% THD at 1k Hz)	<b>Controls</b>	On/off, Pad -20, Pad -30, Gnd Lift.
Connector	XLR male: Pin 2 Hot / Pin 3 Cold / Pin 1 Ground	<b>Indicators</b>	On
		<b>General</b>	
		Phantom Power	+24 volts DC to +48 volts DC
		External AC/DC adaptor	+9 volts DC
		Standalone/Standby	9 volt PP3 type, battery preferably alkaline.
		Current consumption	less than 8 mA
		Dimensions (W x H x D)	215 x 50 x 125 mm
		Weight (excluding batteries)	1 Kg

## EXAMPLES

