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Behringer DI100

Behringer Ultra-Di Di100 Active Di-Box Instruction Manual

Model: DI100

INTRODUCTION

The Behringer Ultra-Di Di100 is an active direct injection (DI) box designed to convert unbalanced, high-impedance instrument signals into balanced, low-impedance signals suitable for direct connection to mixing consoles and other audio equipment. This ensures a clean, noise-free signal transmission over long cable runs.



Image: The Behringer Ultra-Di Di100 Active Di-Box, a compact silver unit with black protective corners, featuring various input and output jacks and control switches.

Key features include switchable input attenuation and a ground lift function to eliminate hum. The robust stainless steel enclosure ensures durability for live and studio environments. It can handle high-power signals, such as those from a guitar amplifier's speaker output, delivering a perfect signal without degradation.

SETUP

Powering the DI100

The DI100 is an active DI box and requires power to operate. It can be powered in two ways:

- **9V Battery:** The unit requires one 9V battery. To install, open the battery compartment usually located on the side or bottom of the unit. Ensure correct polarity when inserting the battery.
- **Phantom Power:** The DI100 can also be powered by phantom power (18-48V) supplied directly from a mixing console or audio interface via the XLR output cable. When phantom power is detected, the unit automatically switches from battery power.

Connecting Your Instrument

Follow these steps to connect your instrument:

1. **Input:** Connect your instrument (e.g., guitar, bass, keyboard) to the 1/4" TS INPUT jack on the DI100. This input has a high impedance of 250 kOhm.
2. **Link Output:** If you need to send the signal to an amplifier or monitor on stage, connect a 1/4" TS cable from the LINK output jack on the DI100 to your amplifier's input. This provides a direct, uncolored signal to your stage amp.
3. **XLR Output:** Connect a balanced XLR cable from the OUTPUT jack (600 Ohm) on the DI100 to the microphone input of your mixing console or audio interface. This sends a balanced, low-impedance signal to the front-of-house or recording system.

OPERATING CONTROLS

Attenuation Switch

The DI100 features an attenuation switch to adjust the input signal level. This is crucial when connecting high-output sources to prevent signal clipping or distortion at the mixer input.

- **0 dB:** No attenuation. Use for standard instrument levels.
- **-20 dB:** Reduces the input signal by 20 decibels. Use for hotter signals from active pickups or line-level sources.
- **-40 dB:** Reduces the input signal by 40 decibels. Use for very high-output sources, such as speaker outputs from amplifiers (up to 3,000 watts).

Ground Lift Switch

The Ground Lift switch helps eliminate hum and buzz caused by ground loops. A ground loop occurs when there are multiple ground paths in an audio system, creating unwanted noise.

- **Lifted:** Disconnects the ground connection between the input and output. If you hear hum or buzz, try engaging this switch.
- **Grounded:** Maintains the ground connection. This is the default setting and should be used unless hum is present.

MAINTENANCE

To ensure the longevity and optimal performance of your DI100:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid using abrasive cleaners or solvents.
- **Battery Replacement:** If using battery power, replace the 9V battery when the indicator light (if present) shows low power or the unit stops functioning. Always remove the battery if the unit will not be used for an extended period to prevent leakage.
- **Storage:** Store the DI100 in a cool, dry place away from direct sunlight and extreme temperatures.

TROUBLESHOOTING

- **No Sound:**
 - Check all cable connections to ensure they are secure.
 - Verify the DI100 is receiving power (either from a fresh 9V battery or active phantom power from the mixer).
 - Ensure the attenuation switch is not set too high for your input source, which could reduce the signal to an inaudible level.
- **Hum or Buzz:**
 - Engage the Ground Lift switch to break potential ground loops.
 - Check for faulty cables or connections.
 - Ensure all equipment is properly grounded.
- **Distorted Sound:**
 - Reduce the input signal level using the attenuation switch (-20dB or -40dB) if the source is too hot.
 - Check the input level on your mixing console or audio interface to ensure it's not clipping.

TECHNICAL SPECIFICATIONS

- **Model Name:** DI100
- **Connectivity Technology:** XLR
- **Connector Type:** XLR : 1/4" TS
- **Input Impedance (HI-Z):** 250 kOhm
- **Output Impedance:** 600 Ohm
- **Attenuation:** Switchable -20 dB, -40 dB
- **Power Source:** Battery Powered (1 x 9V battery required) / Phantom Power (18-48V)
- **Signal-to-Noise Ratio:** 110 dB
- **Audible Noise:** 110 Decibels
- **Enclosure Material:** Stainless Steel
- **Item Weight:** 1.7 Pounds
- **Item Dimensions:** 6.22 x 5.35 x 2.83 inches

WARRANTY AND SUPPORT

For detailed warranty information and customer support, please refer to the official Behringer website:

<http://www.music-group.com/warranty.aspx>