

TELEFUNKEN TDP-1

TELEFUNKEN Elektroakustik TDP-1 Passive Mono Direct Box User Manual

Model: TDP-1

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1. INTRODUCTION

This manual provides essential information for the proper setup, operation, and maintenance of your TELEFUNKEN Elektroakustik TDP-1 Passive Mono Direct Box. The TDP-1 is designed to convert unbalanced, high-impedance instrument signals into balanced, low-impedance signals suitable for professional audio equipment such as mixing consoles and preamplifiers. Its passive design ensures a clean signal path without requiring external power.

2. SAFETY INFORMATION

Please read and understand all safety instructions before using this product. Retain this manual for future reference.

- Do not expose the unit to water, moisture, or extreme temperatures.
- Avoid dropping or subjecting the unit to severe impacts.
- Do not attempt to open or modify the unit. There are no user-serviceable parts inside.
- Ensure all connections are secure before operating.
- Use only high-quality cables to prevent signal degradation or damage.

3. PRODUCT OVERVIEW

The TELEFUNKEN TDP-1 is a robust passive direct box featuring a custom-wound transformer, a -15 dB pad switch, and a ground lift switch. Its durable aluminum construction and recessed switches ensure reliability in various environments.

3.1. Key Features

- Custom-wound transformer for optimal audio fidelity.
- -15 dB pad switch for handling high-level input signals.
- Ground lift switch to eliminate hum and ground loop noise.
- Rugged aluminum construction for durability.
- Recessed switches and connectors for enhanced protection.
- 100% through-hole components for reliable performance.

3.2. Component Identification





Figure 1: Overall view of the TDP-1 Direct Box. This image shows the compact black aluminum casing with the silver front and rear panels visible. The front panel features the XLR output and ground lift switch, while the rear panel displays the 1/4" input and thru jacks, along with the -15dB pad switch.



Figure 2: Output Panel. This close-up view highlights the XLR output connector and the Ground Lift switch. The XLR output is a standard 3-pin male connector for balanced audio signals. The Ground Lift switch helps to break ground loops, reducing hum and noise.



Figure 3: Input Panel. This image shows the 1/4" Input jack, the 1/4" Thru jack, and the -15dB Pad switch. The Input jack is where the instrument signal is connected. The Thru jack allows the signal to pass directly to an amplifier or other device. The -15dB Pad switch attenuates the input signal by 15 decibels, useful for high-output sources.



Figure 4: Detailed Input and Thru Jacks. A closer look at the 1/4" Input and Thru jacks, emphasizing their robust construction and clear labeling. This panel also shows the -15dB pad switch in detail.

Controls and Connectors:

- **INPUT (1/4" Jack):** Connect your instrument (e.g., guitar, bass, keyboard) here using a standard 1/4" TS cable.
- **THRU (1/4" Jack):** This jack provides a direct, unprocessed copy of the input signal. Use it to send your instrument's signal to an amplifier or monitor without affecting the signal sent to the XLR output.
- **-15dB PAD Switch:** Engages a 15dB attenuation pad on the input signal. Use this when connecting high-output sources (e.g., active bass guitars, keyboards) to prevent signal clipping or distortion.
- **OUTPUT (XLR Male):** This is the balanced, low-impedance output. Connect this to a microphone preamplifier on a mixing console or audio interface using a standard XLR cable.
- **GROUND LIFT Switch:** Disconnects the ground connection between the input and output. Use this switch to eliminate hum or buzz caused by ground loops between connected equipment. Flip the switch to the position that yields the quietest operation.

4. SETUP

Follow these steps to properly set up your TDP-1 Direct Box:

1. **Connect Instrument:** Plug your instrument (e.g., electric guitar, bass, keyboard) into the **INPUT** 1/4" jack on the TDP-1 using a high-quality instrument cable.
2. **Connect to Amplifier/Monitor (Optional):** If you wish to send your instrument's signal to an amplifier or stage monitor, connect a 1/4" cable from the **THRU** jack on the TDP-1 to the input of your amplifier or monitor.
3. **Connect to Mixer/Interface:** Connect an XLR cable from the **OUTPUT** XLR connector on the TDP-1 to a microphone input on your mixing console, audio interface, or preamplifier.
4. **Set Pad Switch:** If your instrument has a very high output level (e.g., active pickups, high-gain keyboards), engage the **-15dB PAD** switch to prevent input clipping. If the signal is clean without the pad, leave it disengaged.
5. **Check Ground Lift:** If you hear a hum or buzz after connecting all equipment, toggle the **GROUND LIFT** switch. Select the position that minimizes or eliminates the noise.
6. **Adjust Levels:** Once connected, gradually increase the gain on your mixing console or audio interface until you achieve an appropriate signal level.

5. OPERATING INSTRUCTIONS

The TDP-1 is a passive device, meaning it does not require external power and operates by converting the signal impedance. Its operation is straightforward:

- **Signal Conversion:** The primary function of the TDP-1 is to convert a high-impedance, unbalanced signal (from an instrument) into a low-impedance, balanced signal (for a mixer). This allows for long cable runs without significant signal loss or noise interference.
- **Using the Pad:** If your instrument's output is strong and causes distortion or clipping at the mixer's input, activate the -15dB pad switch. This reduces the signal level before it enters the transformer, providing a cleaner signal to the mixer.
- **Ground Loop Elimination:** If you encounter a persistent hum or buzz in your audio system, it is often due to a ground loop. The Ground Lift switch isolates the ground connection between your instrument and the mixer, which can effectively eliminate this noise. Experiment with both positions of the switch to find the quietest setting.
- **Thru Output:** The Thru output is useful for live performance or studio monitoring. It allows you to send your instrument's signal directly to your stage amplifier or a dedicated monitor system while simultaneously sending the balanced DI signal to the front-of-house mixer or recording interface.

6. MAINTENANCE

The TDP-1 is designed for durability and requires minimal maintenance.

- **Cleaning:** Wipe the unit with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the unit in a cool, dry place away from direct sunlight and extreme temperatures when not in use.
- **Inspection:** Periodically check cables and connectors for wear or damage. Replace any faulty cables immediately.
- **Servicing:** Do not attempt to service the unit yourself. Refer all servicing to qualified service personnel.

7. TROUBLESHOOTING

If you encounter issues with your TDP-1, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No sound or very low output.	<ul style="list-style-type: none">◦ Incorrect connections.◦ Faulty cables.◦ Mixer input gain too low.◦ -15dB Pad engaged unnecessarily.	<ul style="list-style-type: none">◦ Verify all cables are correctly connected to INPUT, THRU (if used), and OUTPUT.◦ Test with different cables.◦ Increase the gain on the mixer's microphone input.◦ Disengage the -15dB Pad switch if not needed for high-output sources.
Humming or buzzing noise.	<ul style="list-style-type: none">◦ Ground loop.◦ Faulty cables.◦ Interference from other electronic devices.	<ul style="list-style-type: none">◦ Toggle the GROUND LIFT switch to find the quietest position.◦ Replace suspect cables.◦ Ensure the unit is not placed directly on top of power supplies or other noisy electronics.
Distorted or clipped sound.	<ul style="list-style-type: none">◦ Input signal too hot.◦ Mixer input gain too high.	<ul style="list-style-type: none">◦ Engage the -15dB PAD switch.◦ Reduce the input gain on your mixing console or audio interface.

8. SPECIFICATIONS

Technical specifications for the TELEFUNKEN Elektroakustik TDP-1 Passive Mono Direct Box:

- **Model:** TDP-1
- **Type:** Passive Mono Direct Box
- **Input Connector:** 1/4" TS unbalanced
- **Thru Connector:** 1/4" TS unbalanced
- **Output Connector:** XLR Male balanced
- **Pad Switch:** -15 dB attenuation
- **Ground Lift:** Yes
- **Construction:** Rugged Aluminum
- **Item Weight:** 1.06 pounds (approx. 0.48 kg)
- **Product Dimensions:** 3.94 x 3.94 x 1.97 inches (approx. 10 x 10 x 5 cm)
- **Color:** Black

9. WARRANTY AND SUPPORT

9.1. Warranty Information

TELEFUNKEN Elektroakustik products are manufactured to high standards. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official TELEFUNKEN Elektroakustik website. Keep your proof of purchase for warranty claims.

9.2. Customer Support

If you have any questions, require technical assistance, or need to report an issue with your TDP-1 Direct Box, please contact TELEFUNKEN Elektroakustik customer support. Contact information can typically be found on the manufacturer's official website or in the packaging materials.

For more information, visit: www.telefunken-elektroakustik.com

