

Pyle PHE400

Pyle PHE400 2-Channel Passive Hum Eliminator Instruction Manual

Model: PHE400 | Brand: Pyle

1. INTRODUCTION AND OVERVIEW

The Pyle PHE400 is a compact, 2-channel passive hum eliminator designed to remove 60Hz AC hum caused by ground loops in audio systems. This device acts as a noise filter and ground loop isolator, safely breaking the ground loop to prevent AC noise from entering your signal lines. As a passive device, it requires no external power to operate. It features 1/4" TRS phone and XLR inputs and outputs, automatically converting unbalanced signals to balanced without signal loss, ensuring high sonic quality and robust performance.

2. KEY FEATURES

- **Effective AC Noise Removal:** Eliminates 60Hz AC hum caused by ground loops, which act like radio antennae.
- **Passive Operation:** No external power supply is required for functionality.
- **Versatile Connectivity:** Equipped with 1/4" TRS phone and XLR inputs/outputs on two independent channels.
- **Signal Conversion:** Automatically converts unbalanced signals to balanced without any signal degradation.
- **1:1 Isolation Transformer:** Utilizes a 1:1 isolation transformer to safely break ground loops and balance audio lines, ensuring clear sound.
- **Compact and Portable Design:** High-performance, ultra-compact, and rugged steel construction for durability and easy transport.
- **Mono or Stereo Compatibility:** Supports both mono and stereo audio connections.



dual inputs and outputs for professional and home setups.

High-Performance Ultra-Compact



Image: The Pyle PHE400 Hum Eliminator showcasing its compact and travel-friendly design, suitable for fitting into a gig bag.

Design

Portable, rugged build delivers superior audio quality anywhere.



Image: A close-up of the Pyle PHE400 Hum Eliminator, highlighting its rugged steel chassis and durable construction.

3. WHAT'S IN THE BOX

- (1) Pyle PHE400 2-Channel Passive Hum Eliminator Box with 1/4" TRS and XLR Jacks

Silence the Buzz

Clear, clean sound, perfect for home studios, live rigs & AV setups.

2 channel ground loop isolation

PYLE



Image: The Pyle PHE400 Hum Eliminator, illustrating its compact dimensions and indicating it is the primary item included in the box.

4. SETUP

The Pyle PHE400 is a passive device, meaning it does not require any external power. Setup involves simply connecting

your audio cables to the appropriate input and output jacks.

1. **Identify the Source and Destination:** Determine which audio device is producing the signal (source) and which device is receiving it (destination).
2. **Connect Input:** Plug the audio cable from your source device (e.g., mixer, instrument, microphone) into one of the "IN" jacks on the PHE400. You can use either a 1/4" TRS or an XLR cable, depending on your source's output.
3. **Connect Output:** Plug an audio cable from the corresponding "OUT" jack on the PHE400 to your destination device (e.g., amplifier, powered speaker, recording interface). Ensure you use the correct cable type (1/4" TRS or XLR) for your destination's input.
4. **Dual Channel Use:** The PHE400 provides two independent channels. Repeat steps 2 and 3 for the second channel if you are using a stereo signal or two separate mono signals.
5. **No Phantom Power:** This device is passive and does not support phantom power. Do not use it with microphones or other devices that require 48V phantom power directly through the unit, as this may cause damage or malfunction.



Image: Diagram illustrating the XLR and 1/4" TRS input and output connections on the Pyle PHE400 Hum Eliminator.



Image: The Pyle PHE400 Hum Eliminator in a typical setup, demonstrating its plug-and-play functionality without needing external power.

5. OPERATING INSTRUCTIONS

The Pyle PHE400 operates automatically once connected. Its primary function is to eliminate unwanted hum and buzz from your audio signal.

1. **Ground Loop Isolation:** The device uses 1:1 isolation transformers to break the ground loop in your audio system. Ground loops occur when multiple pieces of audio equipment are connected to different ground points, creating a loop that picks up electrical interference (often 60Hz AC hum).
2. **Automatic Noise Filtering:** By isolating the ground, the PHE400 prevents this interference from being picked up by

your signal lines, resulting in a cleaner, hum-free audio output.

3. **Signal Integrity:** The passive design ensures that the audio signal passes through the unit without requiring amplification or active processing, preserving the original sonic quality.



Image: Visual representation of the Pyle PHE400 Hum Eliminator's effect, showing a noisy waveform 'Before' and a clean waveform 'After' processing.

6. TROUBLESHOOTING

- **Persistent Hum:** If hum persists after connecting the PHE400, ensure all cable connections are secure and correctly seated. Verify that the hum is indeed a 60Hz AC ground loop hum and not another type of interference (e.g., radio frequency interference, faulty cables, or equipment issues).
- **No Sound or Weak Signal:**
 - Check all cable connections. Ensure cables are fully inserted into the jacks.
 - Verify that the correct input/output jacks are being used for each channel.
 - Ensure the source device is powered on and producing a signal, and the destination device is powered on and set to the correct input.
- **Tone Alteration:** Some users may perceive a slight alteration in tone, particularly a reduction in high-end frequencies or overall signal level. This can be a characteristic of passive isolation transformers. If tone alteration is significant, consider adjusting EQ settings on your amplifier or mixer to compensate.
- **Incorrect Input/Output Labeling (User Reported):** In some instances, users have reported that the "IN" and "OUT" labels might appear reversed or function unexpectedly. If you experience issues, try reversing your input and output connections to see if it resolves the problem.
- **Phantom Power Issues:** The PHE400 is a passive device and does not pass phantom power. Do not use it with condenser microphones or other devices that require phantom power, as this will prevent them from functioning correctly.

7. SPECIFICATIONS

Feature	Detail
Model Number	PHE400
Item Weight	14.4 ounces
Product Dimensions	6.2 x 2.5 x 7.2 inches
Body Material	Alloy Steel
Color Name	Black

Feature	Detail
Compatible Devices	Audio equipment (e.g., mixers, amplifiers, instruments)
Connector Type	XLR, 1/4" TRS
Material Type	Steel

8. MAINTENANCE

The Pyle PHE400 is designed for durability and requires minimal maintenance.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid using liquid cleaners or solvents.
- **Storage:** Store the device in a cool, dry place away from direct sunlight and extreme temperatures.
- **Handling:** While rugged, avoid dropping the unit or subjecting it to excessive force to prevent internal damage.

9. WARRANTY AND SUPPORT

Pyle offers a 30-day money-back guarantee for the PHE400 Hum/Noise Eliminator. For further support or warranty claims, please refer to the official Pyle website or contact their customer service directly.

Official Website: www.pyleaudio.com