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Polk Audio PAD40004

Polk Audio PA D4000.4 Class-D 4-Channel Car Amplifier User Manual

Model: PAD40004

Introduction

This manual provides essential instructions for the installation, operation, and maintenance of your Polk Audio PA D4000.4 Class-D 4-Channel Car Amplifier. Designed for high-performance audio systems, this amplifier delivers powerful and clear sound with a compact footprint. Please read this manual thoroughly before installation and use to ensure optimal performance and safety.

Key features of the Polk Audio PA D4000.4 amplifier include:

- 125 watts RMS x 4 at 4 ohms (200 watts RMS x 4 at 2 ohms)
- 200 watts RMS x 2 in bridged mode (4-ohm stable in bridged mode)
- Separate variable high-pass filters for front and rear channels (20-4000 Hz, 12 dB per octave)
- Separate variable low-pass filters for front and rear channels (50-5000 Hz, 12 dB per octave)
- Compact dimensions: 6-3/4"W x 10-15/16"L x 1-13/16"H

Safety Information

Always observe the following safety precautions during installation and operation:

- Disconnect the vehicle's battery negative terminal before starting any electrical work.
- Ensure all wiring is properly routed and secured to prevent damage or short circuits.
- Use appropriate gauge wiring for power, ground, and speaker connections as specified in this manual.
- Install the amplifier in a location that allows for adequate ventilation and is protected from moisture and excessive heat.
- Do not operate the amplifier if it is damaged or malfunctioning. Refer to the troubleshooting section or contact support.
- This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

What's in the Box

Upon unpacking your Polk Audio PA D4000.4 amplifier, please verify that all components are present:

- Polk Audio PA D4000.4 4-Channel Amplifier
- Mounting hardware (screws)
- User Manual (this document)

If any items are missing or damaged, please contact your authorized Polk Audio dealer or customer support immediately.

Product Overview

The Polk Audio PA D4000.4 is a compact and powerful 4-channel amplifier. Familiarize yourself with its layout before installation.



Figure 1: Top view of the Polk Audio PA D4000.4 amplifier, showing the Polk Audio logo and Power/Protection indicators.



Figure 2: Close-up of the amplifier's control panel, featuring RCA inputs, Level controls, High-Pass Filter (HPF), Low-Pass Filter (LPF), Frequency adjustment dials, and Channel Mode switch for both Front and Rear channels.



Figure 3: View of the power and speaker terminal connections. This includes GND (Ground), REM (Remote), +12V (Power), fuse holders (40A, 35A), and terminals for Front and Rear speaker outputs.

Setup and Installation

Proper installation is crucial for the performance and longevity of your amplifier. If you are unsure about any steps, consult a professional installer.

1. Mounting Location

Choose a mounting location that is:

- Secure and stable, away from moving parts.
- Well-ventilated to prevent overheating.
- Protected from direct moisture and excessive dust.
- Accessible for wiring and adjustments.

The compact size of the PA D4000.4 (6.69"W x 10.94"L x 1.81"H) allows for flexible installation options within your vehicle.

2. Wiring Connections

Ensure the vehicle's battery negative terminal is disconnected before making any electrical connections.

1. **Power (+12V):** Connect a suitable gauge power cable (e.g., 8-gauge or 4-gauge depending on total system power) from the vehicle's positive battery terminal to the amplifier's +12V terminal. Install an in-line fuse holder within 18 inches of the battery.
2. **Ground (GND):** Connect a power cable of the same gauge from the amplifier's GND terminal to a clean, unpainted metal surface on the vehicle chassis. Ensure a solid, low-resistance connection.
3. **Remote (REM):** Connect a remote turn-on wire from your head unit's remote output to the amplifier's REM terminal. This wire signals the amplifier to turn on and off with your head unit.
4. **RCA Inputs:** Connect RCA cables from your head unit's pre-amp outputs (Front and Rear) to the corresponding RCA input jacks on the amplifier.
5. **Speaker Outputs:** Connect your speakers to the amplifier's speaker output terminals (Front Left, Front Right, Rear Left, Rear Right). Observe correct polarity (+ to + and - to -). For bridged mode operation, refer to the operating section.

After all connections are made, re-connect the vehicle's battery negative terminal.

Operating the Amplifier

Once installed, the amplifier requires proper adjustment for optimal sound quality.

1. Initial Power-Up

Turn on your head unit. The "POWER" indicator on the amplifier should illuminate. If the "PROTECTION" indicator lights up, refer to the troubleshooting section.

2. Gain (Level) Adjustment

The Level control (gain) matches the amplifier's input sensitivity to the output voltage of your head unit. It is **not** a volume control.

- Set the amplifier's Level controls to minimum.
- Set your head unit's volume to about 75% of its maximum.
- Slowly increase the amplifier's Level control until you hear slight distortion, then back it off slightly.

3. Crossover Settings

The PA D4000.4 features independent crossover controls for Front and Rear channels:

- **FULL:** Full range audio output.
- **HPF (High-Pass Filter):** Allows frequencies above the set point (20-4000 Hz) to pass through. Useful for protecting smaller speakers from low bass.
- **LPF (Low-Pass Filter):** Allows frequencies below the set point (50-5000 Hz) to pass through. Useful for subwoofers or mid-bass speakers.
- **BPF (Band-Pass Filter):** Achieved by engaging both HPF and LPF, allowing a specific range of frequencies to pass.
- Adjust the frequency dials (FREQ x1, FREQ x10) to select the desired crossover point.

4. Channel Mode Switch

The Channel Mode switch allows configuration for 4-channel stereo or bridged operation:

- **4CH:** Standard 4-channel stereo operation.
- **ST (Stereo/Bridged):** For bridging two channels to power a single speaker (e.g., a subwoofer) with higher power output. Refer to the wiring diagram for bridged mode connections. The amplifier is 4-ohm stable in bridged mode.

Maintenance

Regular maintenance helps ensure the longevity and performance of your amplifier.

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Connections:** Annually check all power, ground, remote, and speaker connections to ensure they are secure and free from corrosion. Loose connections can lead to performance issues or damage.
- **Ventilation:** Ensure that the amplifier's cooling fins are free from obstructions to allow for proper heat dissipation.

Troubleshooting

If you experience issues with your amplifier, consult the following table before contacting support.

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Amplifier does not turn on (No Power/Protection LED)	Blown fuse Loose power or ground connection No remote turn-on signal	Check and replace fuses (40A, 35A). Verify +12V, GND, and REM connections. Check head unit's remote output.
Amplifier turns on but no sound	Loose RCA or speaker connections Incorrect crossover settings Speakers not connected or damaged	Check all RCA and speaker wiring. Ensure crossover settings are appropriate (e.g., not set to HPF too high for full-range speakers). Test speakers with another amplifier if possible.
Distorted sound	Gain (Level) set too high Poor ground connection Speaker impedance too low	Reduce the amplifier's Level control. Verify a solid ground connection. Ensure speaker impedance matches amplifier's capabilities (e.g., 2-ohm minimum per channel, 4-ohm minimum bridged).
Amplifier goes into protection mode (Protection LED on)	Overheating Short circuit in speaker wiring Speaker impedance too low DC offset	Allow amplifier to cool; check ventilation. Inspect speaker wires for shorts to ground or each other. Verify speaker impedance. Disconnect RCA inputs; if protection clears, issue is with source unit.

Specifications

Feature	Specification
Model Number	PAD40004
Brand	Polk Audio
Number of Channels	4
Output Power (RMS @ 4 Ohms)	125 Watts x 4
Output Power (RMS @ 2 Ohms)	200 Watts x 4
Output Power (RMS Bridged @ 4 Ohms)	200 Watts x 2

Feature	Specification
High-Pass Filter (HPF)	Variable 20-4000 Hz, 12 dB/octave
Low-Pass Filter (LPF)	Variable 50-5000 Hz, 12 dB/octave
Input Voltage	16 Volts (Max)
Dimensions (L x W x H)	10.94" x 6.69" x 1.81" (27.79 cm x 16.99 cm x 4.60 cm)
Item Weight	2.2 pounds (1 kg)
Material	Plastic
UPC	747192121938

Warranty and Support

Polk Audio products are designed for reliability and performance. For specific warranty information regarding your PA D4000.4 amplifier, please refer to the warranty card included with your product or visit the official Polk Audio website.

For technical support, troubleshooting assistance beyond this manual, or service inquiries, please contact Polk Audio customer support. You can find more information and contact details on the official Polk Audio store page:

Visit the Polk Audio Store on Amazon

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