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Memphis PRXA300.4

Memphis PRXA300.4 4-Channel Amplifier Instruction Manual

Model: PRXA300.4

1. Introduction and Safety Information

Thank you for choosing the Memphis PRXA300.4 4-Channel Power Reference Series Amplifier. This manual provides essential information for the proper installation, operation, and maintenance of your amplifier. Please read it thoroughly before attempting installation or use.

Important Safety Instructions:

- **Professional Installation Recommended:** Due to the complexity of car audio systems and the electrical nature of this product, professional installation by an authorized Memphis dealer is highly recommended. Improper installation can lead to damage to the amplifier, vehicle, or personal injury.
- **Electrical Safety:** Always disconnect the vehicle's negative battery terminal before making any power connections. Ensure all wiring is properly sized and fused to prevent electrical fires.
- **Ventilation:** Mount the amplifier in a location that allows for adequate airflow to prevent overheating. Do not cover the amplifier's heatsink fins.
- **Avoid Moisture:** Do not expose the amplifier to moisture or water.
- **Proposition 65 Warning:** This product may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

2. Product Overview

The Memphis PRXA300.4 is a high-performance 4-channel amplifier designed to deliver clear and powerful audio to your vehicle's speaker system. It features a compact design with robust construction for reliable operation.



Figure 2.1: Top view of the Memphis PRXA300.4 amplifier, showcasing the brand logo and sleek design.



Figure 2.2: Side view of the amplifier, highlighting the heatsink fins crucial for thermal management.

Key Features:

- 4-Channel Configuration
- 300W RMS Power Output (Total)
- Compact Design
- Robust Metal and Circuit Board Construction

3. Setup and Installation

Proper installation is critical for optimal performance and longevity of your amplifier. If you are unsure about any step, consult a professional installer.



Figure 3.1: Rear panel of the PRXA300.4 amplifier, showing power, speaker, and input connections, along with control switches.

3.1 Mounting the Amplifier

- Choose a secure, dry location with sufficient ventilation. The amplifier is designed for surface mounting.
- Ensure the mounting surface is strong enough to support the amplifier's weight.
- Avoid mounting near heat sources or in direct sunlight.

3.2 Power Connections

Refer to Figure 3.1 for connection points.

1. **Ground (GND):** Connect a heavy-gauge wire (minimum 8 AWG recommended) from the amplifier's GND terminal to a clean, bare metal point on the vehicle's chassis. This connection must be as short as possible.
2. **Remote (REMOTE):** Connect a remote turn-on wire (typically 18 AWG) from your head unit's remote output to the amplifier's REMOTE terminal. This wire turns the amplifier on and off with your head unit.
3. **+12V:** Connect a heavy-gauge wire (minimum 8 AWG recommended) from the amplifier's +12V terminal directly to the vehicle's positive battery terminal. Install an appropriate fuse holder (e.g., 40A) within 18 inches (45 cm) of the battery.

3.3 Speaker Connections

Connect your speakers to the amplifier's speaker terminals. Ensure correct polarity (+ to + and - to -) for each speaker. The PRXA300.4 supports 4-channel operation.

3.4 Input Connections

Connect your head unit's RCA outputs to the amplifier's LF (Left Front), LR (Left Rear), RF (Right Front), and RR (Right Rear) RCA input jacks. If using a 2-channel source, you may need to adjust the 4CH/2CH switch.

3.5 Control Settings (Refer to Figure 3.1)

- **SUBREMOTE:** This port is for an optional wired remote level control for subwoofer output (if configured).
- **AUTO ON:** This switch controls the amplifier's turn-on method. When set to 'ON', the amplifier can turn on automatically via DC offset or signal sensing if a remote wire is not used. When set to 'OFF', a remote turn-on wire is required.
- **4CH/2CH:** This switch selects the input mode. Set to '4CH' for a 4-channel input source. Set to '2CH' if using a 2-channel input source to drive all four amplifier channels.
- **PRT (Protection Indicator):** Illuminates when the amplifier is in protection mode due to overheating, short circuit, or low voltage.
- **PWR (Power Indicator):** Illuminates when the amplifier is powered on and operating normally.

4. Operating Instructions

Once installed, the amplifier's operation is largely automatic, turning on and off with your head unit. However, some initial adjustments may be necessary.

4.1 Initial Power-Up

1. Double-check all wiring connections.
2. Reconnect the vehicle's negative battery terminal.
3. Turn on your head unit. The PWR indicator on the amplifier should illuminate.

4.2 Gain Adjustment

The gain control (not explicitly labeled in the provided image but standard on amplifiers) matches the amplifier's input sensitivity to the output level of your head unit. Start with the gain set to minimum. Play a familiar piece of music at about 75% of your head unit's maximum volume. Slowly increase the amplifier's gain until you hear distortion, then back it off slightly. This ensures maximum clean output from the amplifier.

4.3 Crossover Settings (if applicable)

While specific crossover controls are not visible in the provided image, many amplifiers include them. If present, adjust the high-pass filter (HPF) for full-range speakers to prevent low frequencies from distorting them, and the low-pass filter (LPF) for subwoofers to ensure they only reproduce bass frequencies.

5. Maintenance

The Memphis PRXA300.4 amplifier requires minimal maintenance to ensure long-term performance.

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure that the heatsink fins remain clear of dust and debris to maintain proper cooling. Never block the airflow around the amplifier.
- **Connection Checks:** Occasionally check all power, ground, and speaker connections to ensure they are secure and free from corrosion.

6. Troubleshooting

If you experience issues with your amplifier, refer to the following common problems and solutions before contacting support.

Common Issues:

- **No Power (PWR indicator off):**
  - Check the in-line fuse near the battery.
  - Verify +12V, Ground, and Remote wire connections.
  - Ensure the AUTO ON switch is set correctly for your installation.
- **No Sound:**
  - Check RCA input connections from the head unit.
  - Verify speaker wire connections and polarity.
  - Ensure head unit volume is up and source is selected.
- **Distorted Sound:**
  - Reduce the amplifier's gain setting.
  - Check speaker impedance; ensure it matches the amplifier's capabilities.
  - Inspect speaker wires for shorts or damage.
- **Amplifier in Protection Mode (PRT indicator on):**
  - **Overheating:** Turn off the system and allow the amplifier to cool. Ensure adequate ventilation.
  - **Short Circuit:** Check all speaker wires for shorts to ground or to each other.
  - **Low Voltage:** Verify the vehicle's battery and charging system are functioning correctly.

7. Specifications

Specification	Value
Model Number	PRXA300.4
Number of Channels	4
RMS Output Power	300W (Total)
Max Output Power	1200 Watts
Item Dimensions (L x W x H)	13.2 x 7.5 x 2.1 inches
Mounting Type	Surface Mount
Material	Metal, Circuit Board
Package Weight	5 Pounds
UPC	702588207528

Note: The listed 'Voltage: 6 Volts (DC)' in some specifications may refer to a control voltage. The amplifier operates on a standard 12V automotive electrical system.

8. Warranty and Support

Memphis Audio products are designed and manufactured to the highest quality standards. This product is covered

by a limited warranty against defects in materials and workmanship. The specific terms and duration of your warranty may vary by region and purchase location.

For detailed warranty information, technical support, or service inquiries, please contact your authorized Memphis Audio dealer or visit the official Memphis Audio website. Keep your proof of purchase for warranty claims.

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