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› Precision Power i1000.4 Class D 4-Channel Amplifier User Manual

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Precision Power i1000.4 Class D 4-Channel Amplifier User Manual

Model: i1000.4

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Precision Power i1000.4 Class D Full Range 4-Channel Amplifier. Please read this manual thoroughly before attempting installation or operation to ensure proper use and to prevent damage to the unit or your vehicle's audio system.

The Precision Power i1000.4 is a high-performance Class D amplifier designed to deliver powerful and clear audio output for your car audio system. Its compact design and efficient technology make it suitable for various installations.



Figure 1: Top view of the Precision Power i1000.4 Class D 4-Channel Amplifier, showcasing its compact design and branding.

2. SAFETY INFORMATION

Always observe the following safety precautions during installation and operation:

- Disconnect the vehicle's negative battery terminal before starting any electrical work.
- Ensure all wiring is properly insulated to prevent short circuits.
- Mount the amplifier securely to prevent it from becoming a projectile in the event of a sudden stop or accident.
- Avoid installing the amplifier in areas exposed to direct sunlight, excessive heat, moisture, or dust.
- Use appropriate gauge wiring for power, ground, and speaker connections as specified in this manual.
- Do not open the amplifier casing. There are no user-serviceable parts inside. Refer all servicing to qualified personnel.
- Prolonged exposure to high volume levels can cause hearing damage. Adjust volume to a safe level.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Precision Power i1000.4 4-Channel Amplifier
- Mounting Hardware (screws)
- User Manual (this document)

4. FEATURES

The Precision Power i1000.4 amplifier incorporates several key features for optimal performance:

- iON Series 4-Channel Class D Car Amplifier
- Pulse Width Modulated MOSFET power supply
- LED power (green) and protect (red) indicators
- SMT (Surface Mount Technology) for easy installation
- Variable 12dB High Pass, Low Pass, & Subsonic Crossovers (for input channels)

5. SETUP AND INSTALLATION

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

5.1 Mounting Location

Choose a mounting location that is dry, well-ventilated, and protected from direct heat and moisture. Ensure there is sufficient space around the amplifier for air circulation. Common locations include under seats, in the trunk, or behind panels.

5.2 Wiring Connections

Refer to the diagrams below for proper wiring. Use high-quality wiring components.

5.2.1 Power and Ground Connections



Figure 2: Power input panel of the Precision Power i1000.4 amplifier, showing connections for 12V DC, GND, and REM terminals.

- **12V DC (Power):** Connect a fused power cable (minimum 8 AWG, preferably 4 AWG for optimal performance) directly from the vehicle's positive battery terminal to the amplifier's '12V DC' terminal. Install a fuse holder within 18 inches of the battery.
- **GND (Ground):** Connect a ground cable (same gauge as power cable) from the amplifier's 'GND' terminal to a clean, unpainted metal surface on the vehicle's chassis. Ensure a solid, low-resistance connection.
- **REM (Remote Turn-On):** Connect a remote turn-on wire (18 AWG) from your head unit's remote output to the amplifier's 'REM' terminal. This signal turns the amplifier on and off with your head unit.

5.2.2 Input Connections



Figure 3: Input panel of the Precision Power i1000.4 amplifier, displaying gain controls, RCA inputs, and crossover switches for front and rear channels.

- **RCA Inputs:** Connect RCA cables from your head unit's pre-amp outputs (Front and Rear) to the corresponding 'IN PUT' RCA jacks on the amplifier.
- **High-Level Inputs:** If your head unit does not have RCA outputs, use the 'HI-INPUT' terminals. Connect the speaker wires from your head unit directly to these terminals. Observe correct polarity (+/-).

5.2.3 Speaker Connections

Connect your speakers to the amplifier's speaker output terminals. The i1000.4 is a 4-channel amplifier, supporting four speakers or two speakers in bridged mode. Ensure correct polarity for all speaker connections.

- **4-Channel Mode:** Connect each speaker to its dedicated channel output (L CH+, L CH-, R CH+, R CH- for Front and Rear).
- **Bridged Mode (2-Channel):** For higher power output to two speakers (e.g., subwoofers), bridge two channels. Connect the positive (+) terminal of the speaker to the R CH+ terminal of one channel pair and the negative (-) terminal of the speaker to the L CH- terminal of the same channel pair. Refer to the amplifier's output panel markings for specific bridged connections.

6. OPERATING INSTRUCTIONS

After installation, adjust the amplifier settings for optimal audio performance.

6.1 Gain Adjustment

The 'GAIN' control matches the amplifier's input sensitivity to the output level of your head unit. It is not a volume control.

1. Turn the amplifier gain controls to their minimum (counter-clockwise) position.
2. Set your head unit's volume to about 75% of its maximum level.
3. Slowly increase the amplifier's gain control until you hear slight distortion, then back off slightly until the sound is clear.
4. Repeat for both Front and Rear channels if using separate gain controls.

6.2 Crossover Settings

The i1000.4 features variable high-pass (HPF) and low-pass (LPF) filters, as well as a FLAT setting, for each channel pair (Front and Rear).

- **HPF (High Pass Filter):** Allows frequencies above the set point to pass through. Useful for full-range speakers to prevent low bass distortion.
- **LPF (Low Pass Filter):** Allows frequencies below the set point to pass through. Useful for subwoofers.

- **FLAT:** Disables the crossover, allowing all frequencies to pass through.

Adjust the crossover frequency (35Hz-250Hz) according to your speaker type and desired sound. For example, if using full-range speakers, set the HPF to around 80-100Hz to protect them from damaging low frequencies.

7. MAINTENANCE

The Precision Power i1000.4 amplifier requires minimal maintenance.

- Keep the amplifier clean and free of dust. Use a soft, dry cloth for cleaning.
- Ensure proper ventilation around the amplifier to prevent overheating.
- Periodically check all wiring connections for tightness and corrosion.

8. TROUBLESHOOTING

If you experience issues with your amplifier, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No Power (Power LED off)	Blown fuse, poor power/ground connection, no remote signal.	Check inline fuse, verify 12V DC and ground connections, ensure remote wire has 12V.
Protection LED On	Short circuit in speaker wiring, impedance too low, overheating, DC offset.	Check speaker wiring for shorts, verify speaker impedance, ensure proper ventilation, disconnect speakers and test.
No Sound Output	No input signal, incorrect gain setting, speaker wires disconnected.	Check RCA/high-level input connections, adjust gain, verify speaker connections.
Distorted Sound	Gain set too high, incorrect crossover settings, poor input signal.	Reduce gain, adjust crossover filters, check head unit output.
Engine Noise (Whine)	Poor ground connection, RCA cables routed near power cables, ground loop.	Improve ground connection, reroute RCA cables away from power, use a ground loop isolator.

If the problem persists after attempting these solutions, contact Precision Power customer support or a qualified service technician.

9. SPECIFICATIONS

Technical specifications for the Precision Power i1000.4 Class D 4-Channel Amplifier:

- **Model:** i1000.4
- **Type:** Class D Full Range 4-Channel Amplifier
- **RMS Power Rating:**
 - 4 ohms: 140 watts x 4 channels
 - 2 ohms: 250 watts x 4 channels
 - Bridged, 4 ohms: 500 watts x 2 channels

- **Maximum Supply Voltage:** 16 Volts (DC)
- **Minimum Supply Voltage:** 14 Volts
- **Item Dimensions (L x W x H):** 10.2 x 4.78 x 1.5 inches
- **Item Weight:** 5 pounds
- **Mounting Type:** Surface Mount
- **UPC:** 709483050051

10. WARRANTY AND SUPPORT

Precision Power products are designed and manufactured to the highest quality standards. For warranty information, please refer to the warranty card included with your product or visit the official Precision Power website. For technical support or service inquiries, please contact Precision Power customer service through their official channels.

Contact Information: Please refer to the Precision Power official website for the most current contact details.