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PIONEER GM-DX975

Pioneer GM-DX975 5-Channel Car Amplifier User Manual

Model: GM-DX975

1. PRODUCT OVERVIEW

The Pioneer GM-DX975 is a 5-channel Class D car amplifier designed to enhance your vehicle's audio system. It delivers a maximum power output of 2,000 watts, providing dynamic and impactful sound reproduction. This amplifier supports Hi-Res Audio playback with a frequency response up to 50,000 Hz, utilizing high-grade electronic components and gold-plated RCA connections for optimal performance. Its compact design facilitates installation in various vehicle types, even those with limited space. The GM-DX975 also features adjustable low-pass and high-pass filters, a built-in bass boost, and a protection control system to ensure stable operation and speaker safety.



Figure 1.1: The Pioneer GM-DX975 5-Channel Car Amplifier, showcasing its compact design and input/output terminals.

2. INSTALLATION GUIDE

Proper installation is crucial for optimal performance and safety. It is recommended that installation be performed by a qualified professional. Always disconnect the vehicle's negative battery terminal before beginning any electrical work.

2.1 Mounting the Amplifier

The GM-DX975 features a compact design, allowing for flexible mounting options. Choose a location that is dry, well-ventilated, and protected from direct sunlight or excessive heat. Ensure sufficient space around the amplifier for proper heat dissipation. Secure the amplifier firmly using appropriate hardware to prevent movement during vehicle operation.



Figure 2.1: Dimensions of the Pioneer GM-DX975 amplifier, illustrating its compact size for installation.

2.2 Power Connections

- **Battery (BATT) Connection:** Connect a power cable directly from the vehicle's positive battery terminal to the amplifier's BATT terminal. Use a fuse holder with an appropriate fuse rating as close to the battery as possible.
- **Ground (GND) Connection:** Connect a ground cable from the amplifier's GND terminal to a clean, unpainted metal surface on the vehicle's chassis. Ensure a secure connection for proper grounding.

- **Remote (REM) Connection:** 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.

2.3 Audio Input Connections

The GM-DX975 supports both RCA (low-level) and speaker-level (high-level) inputs.

- **RCA Input:** Connect RCA cables from your head unit's pre-out terminals to the amplifier's RCA input jacks.
- **Speaker-Level Input:** If your head unit does not have RCA pre-outs, connect the speaker wires directly from the head unit to the amplifier's speaker-level input terminals.

2.4 Speaker Output Connections

Connect your speakers to the amplifier's speaker output terminals. Ensure correct polarity (+ to + and - to -) for each speaker. Refer to the full wiring diagram in the complete user manual for specific channel assignments and bridging options.

3. OPERATION AND ADJUSTMENTS

The GM-DX975 offers several controls to fine-tune your audio experience.

Adjustable & self-monitoring.

Built-in high and low pass filters including an internal protection control system.



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GM-DX975

Figure 3.1: Overview of the control panel on the Pioneer GM-DX975 amplifier, showing various adjustment knobs and switches.

3.1 Gain Control

The gain control matches the amplifier's input sensitivity to the output level of your head unit. Set the gain to the lowest possible level that produces clear, undistorted sound at your desired maximum volume. Incorrect gain settings can lead to distortion and potential speaker damage.

3.2 Crossover Filters (LPF/HPF)

- **Low-Pass Filter (LPF):** Adjustable from 40 Hz to 240 Hz. This filter allows only frequencies below the set point to pass through, typically used for subwoofers.
- **High-Pass Filter (HPF):** This filter allows only frequencies above the set point to pass through, typically used for full-range speakers to prevent them from playing low bass frequencies.

Adjust these filters to optimize sound distribution to your speakers and subwoofers, preventing distortion and improving overall sound quality.

3.3 Bass Boost Control

The built-in bass boost feature allows you to increase the low-frequency output. Use this control sparingly and adjust it to your preference, ensuring the bass remains clear and undistorted.

3.4 Hi-Res Audio Playback

The GM-DX975 is designed to support Hi-Res Audio playback with a wide frequency response. For the best audio quality, use high-resolution audio sources and ensure all components in your audio chain are capable of Hi-Res Audio reproduction.



Figure 3.2: The Pioneer GM-DX975 amplifier highlighting its Hi-Res Audio playback capability up to 50kHz.

4. MAINTENANCE

To ensure the longevity and optimal performance of your Pioneer GM-DX975 amplifier, follow these maintenance guidelines:

- **Cleaning:** Regularly wipe the amplifier's exterior with a soft, dry cloth to remove dust and dirt. Avoid using abrasive cleaners or solvents.
- **Ventilation:** Ensure that the amplifier's cooling fins are free from obstructions to allow for proper airflow and heat dissipation.

- **Cable Inspection:** Periodically check all power, ground, and signal cables for any signs of wear, fraying, or loose connections. Secure any loose connections immediately.
- **Environment:** Keep the amplifier in a dry environment, away from moisture and extreme temperatures.

5. TROUBLESHOOTING

If you encounter issues with your GM-DX975 amplifier, refer to the following common troubleshooting steps. For more complex problems, consult a professional installer or Pioneer customer support.

5.1 No Power

- Check the in-line fuse near the battery.
- Verify all power (BATT), ground (GND), and remote (REM) connections are secure and correctly wired.
- Ensure the vehicle's battery has sufficient charge.

5.2 No Sound Output

- Confirm that the head unit is powered on and playing audio.
- Check RCA or speaker-level input connections for proper seating and continuity.
- Inspect speaker wire connections at both the amplifier and speakers for correct polarity and secure contact.
- Adjust the amplifier's gain control.

5.3 Distorted Sound

- Reduce the gain setting on the amplifier.
- Check the head unit's volume level; avoid excessive volume that causes distortion.
- Verify that the crossover filter settings (LPF/HPF) are appropriate for your speakers.
- Ensure speaker impedance matches the amplifier's specifications.

5.4 Amplifier Overheating (Protection Mode)

The GM-DX975 includes a Protection Control System. If the amplifier enters protection mode (indicated by a red light), it may be due to overheating, a short circuit, or an unstable voltage supply.

- Allow the amplifier to cool down.
- Ensure adequate ventilation around the amplifier.
- Check speaker wiring for any short circuits (e.g., bare wires touching).
- Verify the power and ground connections for proper gauge and secure contact.

6. TECHNICAL SPECIFICATIONS

Brand	PIONEER
Model Number	GM-DX975
Number of Channels	5
Output Power	2000 Watts (Max)
Amplifier Class	Class D
Voltage	12 Volts (DC)
Item Dimensions (L x W x H)	8.5 x 11.88 x 2.38 inches
Item Weight	7.3 pounds
Mounting Type	Surface Mount
Connectivity Technologies	RCA
UPC	884938421867
What's in the box	5-Channel amplifier

7. WARRANTY AND SUPPORT

The Pioneer GM-DX975 amplifier is manufactured by Pioneer Corporation. For detailed warranty information, including coverage periods and terms, please refer to the warranty card included with your product or visit the official Pioneer website. For technical support, service, or inquiries, please contact Pioneer customer service through their official channels.

Manufacturer: Pioneer Corporation

For further assistance, please visit the Pioneer Brand Store or consult the full product documentation.