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› Genius G4B-5000.2K 2-Channel Car Amplifier Instruction Manual

Genius G4B-5000.2K

Genius G4B-5000.2K 2-Channel Car Amplifier

Instruction Manual

1. INTRODUCTION

Thank you for choosing the Genius G4B-5000.2K 2-Channel Car Amplifier. This amplifier is designed to deliver powerful and clear audio performance for your vehicle's sound system. To ensure optimal performance and longevity of your amplifier, please read this manual thoroughly before installation and operation. This guide provides essential information on safety, installation, operation, and maintenance.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the amplifier and vehicle:

- **Professional Installation Recommended:** Due to the complexity of car audio systems and electrical wiring, professional installation by a qualified technician is highly recommended.
- **Power Disconnection:** Before starting any installation, disconnect the vehicle's negative battery terminal to prevent electrical shorts.
- **Proper Wiring:** Use appropriate gauge wiring for power, ground, and speaker connections as specified in the installation section. Incorrect wiring can cause overheating, fire, or damage to components.
- **Ventilation:** Ensure the amplifier is mounted in a location with adequate ventilation to prevent overheating. Do not cover the amplifier or block its cooling fins.
- **Moisture and Heat:** Avoid exposing the amplifier to moisture, water, or extreme heat.
- **Fuse Protection:** Always use the correct fuse rating for the amplifier's power input. Never replace a fuse with one of a higher rating.
- **Volume Levels:** Prolonged exposure to high volume levels can cause hearing damage. Adjust volume responsibly.

3. PACKAGE CONTENTS

Please check the contents of your amplifier package. If any items are missing or damaged, contact your dealer immediately.

- One Genius G4B-5000.2K 2-Channel Car Amplifier
- Mounting hardware (screws, washers)
- User Manual (this document)

4. PRODUCT OVERVIEW

The Genius G4B-5000.2K is a 2-channel Class A/B amplifier designed for high-performance car audio systems. It features adjustable high-pass and low-pass filters, bass boost, and comprehensive protection circuitry.

4.1 Rear Panel Connections



Image: Rear panel of the Genius G4B-5000.2K amplifier. This view shows the power input terminals (GND, REM, B+) on the left and the speaker output terminals (CH1/BRIDGE, CH2) on the right.

- **POWER INPUT (GND, REM, B+):** These terminals are for connecting the amplifier to the vehicle's electrical system. 'GND' is for ground, 'REM' is for the remote turn-on signal, and 'B+' is for the main positive battery connection.
- **SPEAKER OUTPUT (CH1/BRIDGE, CH2):** These terminals are for connecting your speakers. The amplifier supports 2-channel stereo output or can be bridged for a single, more powerful mono output.

4.2 Front Panel Controls

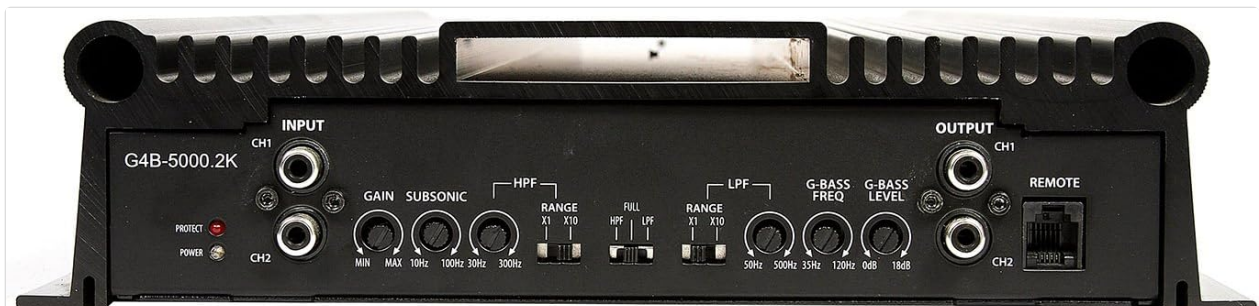


Image: Front panel of the Genius G4B-5000.2K amplifier. This view displays the input RCA jacks, gain controls, subsonic filter, high-pass filter (HPF), low-pass filter (LPF), G-Bass frequency, G-Bass level, output RCA jacks, and remote port.

- **INPUT (CH1, CH2):** RCA jacks for connecting the audio signal from your head unit or pre-amplifier.
- **GAIN:** Adjusts the input sensitivity of the amplifier to match the output of your head unit.
- **SUBSONIC:** A filter that removes extremely low frequencies below the audible range, protecting subwoofers and improving sound quality.

- **HPF (High Pass Filter):** Allows frequencies above the set point to pass through, typically used for full-range speakers. Adjustable from 30Hz - 300Hz.
- **LPF (Low Pass Filter):** Allows frequencies below the set point to pass through, typically used for subwoofers. Adjustable from 50Hz - 500Hz.
- **G-BASS FREQ (Bass Boost Frequency):** Selects the center frequency for the bass boost. Adjustable from 35Hz - 120Hz.
- **G-BASS LEVEL (Bass Boost Level):** Adjusts the intensity of the bass boost. Adjustable from 0 - 12dB.
- **OUTPUT (CH1, CH2):** RCA jacks for passing the audio signal to another amplifier in a multi-amp setup.
- **REMOTE:** Port for connecting an optional remote bass level control.
- **PROTECT/POWER Indicators:** LEDs indicating the amplifier's status. 'POWER' illuminates when the amplifier is on. 'PROTECT' illuminates when the amplifier enters protection mode due to a fault.

5. SETUP AND INSTALLATION

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

5.1 Mounting Location

- Choose a dry, well-ventilated location away from direct sunlight and heat sources.
- Ensure sufficient airflow around the amplifier's cooling fins.
- Mount the amplifier securely to a solid surface using the provided mounting hardware.
- Avoid mounting on carpet or other materials that could obstruct airflow.

5.2 Wiring Connections

Always disconnect the vehicle's negative battery terminal before making any electrical connections.

1. **Power Wire (B+):** Run a heavy-gauge power cable (e.g., 4-gauge or larger, depending on total system power) directly from the positive terminal of the vehicle's battery to the amplifier's 'B+' terminal. Install an in-line fuse holder within 18 inches (45 cm) of the battery.
2. **Ground Wire (GND):** Connect a heavy-gauge ground cable (same gauge as power wire) from the amplifier's 'GND' terminal to a clean, unpainted metal surface on the vehicle's chassis. Ensure a good electrical connection.
3. **Remote Turn-On Wire (REM):** Connect a smaller gauge wire (e.g., 18-gauge) from the head unit's remote turn-on output to the amplifier's 'REM' terminal. This wire turns the amplifier on and off with the head unit.
4. **RCA Input Cables:** Connect RCA cables from your head unit's pre-amp outputs to the amplifier's 'INPUT' RCA jacks.
5. **Speaker Wires:** Connect your speakers to the 'SPEAKER OUTPUT' terminals. Ensure correct polarity (+ to + and - to -) for each speaker. For bridged mode, refer to the diagram on the amplifier or consult a professional.

6. OPERATING INSTRUCTIONS

Once the amplifier is installed and all connections are secure, you can power on your system and adjust the settings.

1. **Initial Power-Up:** Reconnect the vehicle's negative battery terminal. Turn on your head unit. The 'POWER' indicator on the amplifier should illuminate.
2. **Gain Adjustment:** Start with the amplifier's GAIN control set to minimum. Play a familiar piece of music at a moderate volume on your head unit (about 75% of maximum). Slowly increase the GAIN control on the amplifier until you hear slight distortion, then back it off slightly. This matches the amplifier's input sensitivity to your head unit's output.
3. **Filter Settings (HPF/LPF):**
 - **For Full-Range Speakers:** Set the HPF to a suitable frequency (e.g., 80Hz-120Hz) to remove low bass frequencies that small speakers cannot reproduce effectively.
 - **For Subwoofers (Bridged Mode):** Set the LPF to a suitable frequency (e.g., 80Hz-100Hz) to allow only low frequencies to pass to the subwoofer. The SUBSONIC filter can be used to cut frequencies below the subwoofer's resonant frequency (e.g., 20Hz-30Hz).
4. **Bass Boost (G-BASS):** Adjust the G-BASS FREQ and G-BASS LEVEL controls to enhance bass response to your preference. Use sparingly to avoid distortion and speaker damage.

7. MAINTENANCE

The Genius G4B-5000.2K amplifier requires minimal maintenance.

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure the cooling fins remain free of dust and debris to maintain proper heat dissipation.
- **Connections:** Occasionally check all power, ground, and speaker connections to ensure they are secure and free from corrosion.

8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No Power (POWER LED off)	Blown fuse, poor power/ground connection, no remote turn-on signal.	Check in-line fuse, verify power and ground connections, check remote wire connection to head unit.
PROTECT LED is on	Short circuit in speaker wiring, amplifier overheating, low voltage.	Check speaker wires for shorts, ensure adequate ventilation, check vehicle's battery voltage. Disconnect power, let cool, then reconnect.
No Sound Output	No input signal, incorrect gain setting, speaker wires disconnected, amplifier in protection mode.	Verify RCA input connections, adjust gain, check speaker wiring, refer to 'PROTECT LED' solution.
Distorted Sound	Gain set too high, improper filter settings, poor ground connection, damaged speakers.	Reduce gain, adjust HPF/LPF settings, check ground connection, inspect speakers for damage.
Engine Noise (Whine)	Poor ground, RCA cables too close to power wires, faulty head unit.	Improve ground connection, reroute RCA cables away from power wires, try a ground loop isolator.

If these steps do not resolve the issue, contact Genius customer support or your authorized dealer.

9. SPECIFICATIONS

The following are the technical specifications for the Genius G4B-5000.2K 2-Channel Car Amplifier:

Feature	Specification
Model	G4B-5000.2K
Number of Channels	2
Output Power (Max)	4000 Watts
High Pass Filter (HPF)	30Hz - 300Hz (1X - 10X range)
Low Pass Filter (LPF)	50Hz - 500Hz (1X - 10X range)
Total Harmonic Distortion (THD)	0.5%
Input Sensitivity	6V
Bass Boost Frequency (G-BASS)	35Hz - 120Hz
Bass Boost Level (G-BASS)	0 - 12dB
Output	RCA Output
Protection System	Temperature, Short Circuit
Item Dimensions (L x W x H)	30.71 x 12.4 x 4.33 inches
Voltage (Operating)	Typically 12V DC (6V input sensitivity)

10. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the warranty card included with your product or visit the official Genius Audio website. Keep your purchase receipt as proof of purchase for any warranty claims.

If you require technical assistance or have questions not covered in this manual, please contact Genius customer service through their official channels.