

Diamond Audio Technology HX1600.1D

Diamond Audio HX1600.1D

HEX Mono Class D Subwoofer Amplifier User Manual

INTRODUCTION

Thank you for choosing the Diamond Audio HX1600.1D HEX Mono Class D Subwoofer Amplifier. This amplifier is designed to deliver powerful and clear bass performance for your vehicle's audio system. This manual provides essential information for the proper installation, operation, and maintenance of your amplifier. Please read this manual thoroughly before attempting installation or operation to ensure optimal performance and safety.

SAFETY PRECAUTIONS

Always observe the following safety precautions during installation and operation:

- Disconnect the vehicle's battery negative terminal before beginning any electrical work.
- Ensure all wiring is properly routed and secured to prevent damage or short circuits.
- Use appropriate gauge power and ground wires as specified for high-current applications.
- Install the amplifier in a location that allows for adequate ventilation to prevent overheating.
- Avoid installing the amplifier in areas exposed to moisture or excessive vibration.
- If you are unsure about any aspect of installation, consult a professional car audio installer.

SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your amplifier. The HX1600.1D is designed for a fully concealed mount.

Mounting the Amplifier

Select a secure, dry location with sufficient airflow. Common mounting locations include under a seat, in the trunk, or behind a panel. Ensure the mounting surface is sturdy enough to support the amplifier's weight and that no vehicle wiring or fuel lines are punctured during drilling.



Figure 1: Top view of the Diamond Audio HX1600.1D amplifier, showing its compact design suitable for concealed mounting.

Wiring Connections

Refer to the amplifier's terminal layout for correct connections. Ensure all connections are tight and secure to prevent power loss or intermittent operation.

- **Power (BATT+):** Connect to the positive terminal of the vehicle's battery using an appropriate gauge power cable with an inline fuse (not included) located within 18 inches of the battery.
- **Ground (GND):** Connect to a clean, unpainted metal surface of the vehicle's chassis. The ground cable should be the same gauge and as short as possible.
- **Remote (REM):** Connect to the remote turn-on output of your head unit. This signal turns the amplifier on and off with your audio system.
- **RCA Inputs:** Connect the RCA cables from your head unit's subwoofer or full-range pre-outs to the amplifier's RCA input jacks.
- **Speaker Outputs:** Connect your subwoofer(s) to the amplifier's speaker output terminals. Observe correct polarity (+ to + and - to -) for optimal performance.



Figure 2: Rear view of the Diamond Audio HX1600.1D amplifier, showing the various input and output terminals for power, ground, remote, RCA, and speaker connections.

OPERATING INSTRUCTIONS

Once installed, the amplifier can be configured for optimal sound performance.

- **Gain Control:** This adjusts the input sensitivity of the amplifier to match the output voltage of your head unit. Start with the gain at minimum and slowly increase it until you hear distortion, then back off slightly.
- **Low Pass Filter (LPF):** As a subwoofer amplifier, the HX1600.1D includes an adjustable low-pass filter. This filter allows only frequencies below the set point to pass through to the subwoofer, preventing higher frequencies from being reproduced. Adjust this based on your subwoofer's characteristics and personal preference, typically between 50Hz and 120Hz.
- **Subsonic Filter:** This filter removes extremely low frequencies that are below the audible range and can cause damage to your subwoofer. Set it slightly below your subwoofer's port tuning frequency (for ported enclosures) or around 20-30Hz for sealed enclosures.
- **Bass Boost:** This control provides an adjustable boost at a specific low frequency. Use sparingly to avoid distortion

and potential damage to your subwoofer.

- **Phase Control:** This switch (0°/180°) helps to align the subwoofer's output with the rest of your audio system. Experiment with both settings to find the one that provides the most cohesive bass response.

MAINTENANCE

The Diamond Audio HX1600.1D amplifier requires minimal maintenance to ensure long-term performance.

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth to remove dust and debris. Do not use harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure that the amplifier's cooling fins are not obstructed by objects or debris. Proper airflow is essential to prevent overheating.
- **Connection Check:** Occasionally check all wiring connections (power, ground, remote, RCA, speaker) to ensure they remain tight and free from corrosion.

TROUBLESHOOTING

If you experience issues with your amplifier, refer to the following common problems and solutions before seeking professional assistance.

Problem	Possible Cause	Solution
No Power / Amplifier does not turn on	Blown fuse, poor power/ground connection, no remote signal.	Check inline fuse, verify power and ground connections, ensure remote wire is connected and receiving 12V from head unit.
No Sound Output	No input signal, incorrect gain setting, speaker wiring issue, amplifier in protection mode.	Check RCA connections, adjust gain, verify speaker wiring polarity and connection, check amplifier status indicator (protection LED).
Distorted Sound	Gain set too high, incorrect crossover settings, poor speaker connection, damaged speaker.	Reduce gain, adjust LPF/Subsonic filters, check speaker wiring, inspect speaker for damage.
Amplifier Overheating	Insufficient ventilation, low impedance load, prolonged high output.	Ensure proper airflow around amplifier, verify speaker impedance matches amplifier's capabilities, reduce listening volume.

SPECIFICATIONS

The following are key technical specifications for the Diamond Audio HX1600.1D amplifier:

- **Model Number:** HX1600.1D
- **Amplifier Type:** Mono Class D
- **Number of Channels:** 1
- **Voltage:** 12 Volts (DC)
- **Mounting Type:** Fully Concealed Mount
- **Typical Power Output:** Up to 1600 Watts (RMS, depending on impedance and voltage)
- **Manufacturer:** Diamond Audio

WARRANTY AND SUPPORT

Diamond Audio Technology products are designed for reliability and performance. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Diamond Audio Technology website. Warranty coverage typically includes defects in materials and workmanship for a specified period from the date of purchase.

For technical support, service, or warranty claims, please contact Diamond Audio Technology customer service or an authorized dealer. Keep your proof of purchase for warranty validation.

Online Resources: For the most up-to-date information, FAQs, and additional support, please visit the official Diamond Audio Technology website.

© 2023 Diamond Audio Technology. All rights reserved.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Email

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Details

Submit question