Hifonics BXX4000.1D

Hifonics BXX4000.1D Brutus Class D Mono Car Subwoofer Amplifier User Manual

Model: BXX4000.1D

Important Safety Information

Read all instructions carefully before operating this amplifier. Failure to follow these instructions may result in serious injury or damage to the product or vehicle.

- **Professional Installation Recommended:** Installation of car audio equipment requires experience with electrical wiring and vehicle systems. Professional installation is highly recommended.
- **Power Source:** Connect the amplifier only to a 12V DC negative ground electrical system.
- **Wiring:** Ensure all wiring is correctly routed and secured to prevent pinching or damage. Use appropriate gauge wiring for power and ground connections.
- **Fusing:** Always use an external fuse on the main power cable, located within 18 inches (45 cm) of the vehicle's battery.
- **Ventilation:** Mount the amplifier in a location that allows for adequate air circulation to prevent overheating. Do not cover the amplifier's heat sinks.
- **Volume Levels:** Prolonged exposure to high volume levels can cause hearing damage. Adjust audio levels responsibly.
- **Water and Moisture:** Do not expose the amplifier to water or excessive moisture.

Introduction

Thank you for choosing the Hifonics BXX4000.1D Brutus Class D Mono Car Subwoofer Amplifier. This amplifier is designed to deliver powerful and clear bass performance for your vehicle's audio system. This manual provides detailed instructions for proper installation, operation, and maintenance to ensure optimal performance and longevity of your amplifier.

Key Features

- 4000W RMS 1 Ohm Mono Car Subwoofer Amplifier
- Signal to Noise Ratio: > 95dB
- Subsonic Filter: 15Hz - 35Hz
- Class D Topology for high efficiency
- Variable Low Pass Filter (LPF)
- Variable Bass EQ
- Adjustable Input Level and Phase Control
- Master/Slave Mode for linking multiple amplifiers

Setup and Installation

Proper installation is crucial for the performance and safety of your amplifier. Ensure the vehicle's battery is disconnected before beginning any wiring.

1. Mounting the Amplifier

Select a mounting location that is dry, well-ventilated, and secure. Avoid mounting the amplifier directly on carpet or in enclosed spaces that restrict airflow. Ensure there is sufficient space around the amplifier for cooling.

Image: Top view of the Hifonics BXX4000.1D Brutus amplifier, showcasing its heat sink design and branding. This view helps in identifying the amplifier and planning its mounting orientation.

2. Power and Ground Connections

Connect the power, ground, and remote turn-on wires as follows:

- **Ground (GND):** Connect a heavy-gauge wire (minimum 0-gauge recommended for 4000W) from the amplifier's GND terminal to a clean, unpainted metal surface of the vehicle chassis. Ensure a solid, low-resistance connection.
- **Remote (REM):** 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 when the head unit is active.
- **Battery (+12V):** Connect a heavy-gauge power wire from the amplifier's BATT+12V terminal directly to the positive terminal of the vehicle's battery. Install an appropriate fuse holder with a fuse (not included) within 18 inches (45 cm) of the battery.

Image: Close-up view of the power input (GND, REM, BATT+12V) and speaker output terminals on the Hifonics BXX4000.1D amplifier. This image illustrates where to connect the main power, ground, remote, and speaker wires.

3. Speaker Connections

Connect your subwoofer(s) to the amplifier's SPEAKER OUTPUT terminals. Ensure correct polarity (+ to + and - to -) and that the total impedance of your subwoofers matches the amplifier's capabilities (1 Ohm stable). Refer to your subwoofer's specifications for impedance information.

4. Input Connections

Connect RCA cables from your head unit's subwoofer or pre-amp output to the amplifier's INPUT (L and R) terminals. Use high-quality shielded RCA cables to minimize noise.

Image: Detailed view of the control panel on the Hifonics BXX4000.1D amplifier, showing the input RCA jacks, gain, phase, bass EQ, subsonic, LPF controls, remote port, and power/protect indicators. This image is essential for understanding the various adjustments.

Operating Instructions

Once all connections are securely made and verified, reconnect the vehicle's battery. Turn on your head unit. The amplifier's POWER indicator should illuminate green. If the PROTECT indicator illuminates red, refer to the Troubleshooting section.

Controls and Adjustments

The Hifonics BXX4000.1D amplifier features several controls for fine-tuning your audio system:

- **LEVEL (Gain):** Adjusts the input sensitivity of the amplifier to match the output voltage of your head unit. Start with the gain at minimum (0.2V) and slowly increase it until the desired volume is achieved without distortion. Avoid setting the gain too high, as this can lead to clipping and damage.
- **PHASE:** Allows adjustment of the subwoofer's phase (0° or 180°) to ensure it is in sync with other speakers in the vehicle, preventing cancellation and improving bass impact.
- **BASS EQ:** Provides a bass boost at a specific frequency. Use sparingly to enhance bass response without overdriving the subwoofer.
- **SUBSONIC:** A high-pass filter for frequencies below the audible range (15Hz - 35Hz). This protects the subwoofer from playing extremely low frequencies that can cause damage and waste power. Set it slightly below your subwoofer's resonant frequency or port tuning frequency.
- **LPF (Low Pass Filter):** A low-pass filter that allows only frequencies below the set point (35Hz - 250Hz) to pass through to the subwoofer. Adjust this to blend the subwoofer's output seamlessly with your main speakers.
- **REMOTE HFR-31:** Port for connecting the optional wired remote bass level control.
- **MODE (MST/SLV):** This switch selects between Master and Slave modes for linking multiple BXX4000.1D amplifiers.

    - **MST (Master):** The amplifier acts as the primary unit, controlling the settings for linked slave amplifiers.
    - **SLV (Slave):** The amplifier receives control signals from a master amplifier.
- **MASTER OUT:** RCA output for sending the audio signal to a slave amplifier when operating in Master mode.
- **SLAVE IN:** RCA input for receiving the audio signal from a master amplifier when operating in Slave mode.

Maintenance

The Hifonics BXX4000.1D amplifier requires minimal maintenance. Follow these guidelines to ensure continued performance:

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

Troubleshooting

If you experience issues with your amplifier, consult the following table before seeking professional service:

Problem	Possible Cause	Solution
No Power (Power LED off)	Blown fuse on power cable Poor ground connection No +12V at BATT+12V terminal No remote turn-on signal	Check and replace fuse if necessary. Verify ground connection is secure and clean. Check +12V power cable and connections. Check remote wire connection and head unit output.
Amplifier in Protect Mode (Protect LED on)	Overheating Speaker short circuit Low impedance load DC offset on output	Allow amplifier to cool down. Ensure proper ventilation. Check speaker wiring for shorts. Verify speaker impedance is 1 Ohm or higher. Disconnect speakers and RCA inputs. If still in protect, amplifier may require service.
No Sound Output	RCA input cables disconnected or faulty Gain set too low Speaker wires disconnected or faulty Head unit not providing signal	Check RCA connections and cables. Adjust gain setting. Check speaker wiring and connections. Verify head unit is on and outputting audio.

Problem	Possible Cause	Solution
Distorted Sound	Gain set too high (clipping) Incorrect LPF/Subsonic settings Poor ground connection Damaged speakers	Reduce gain until distortion disappears. Adjust LPF and Subsonic filters for optimal sound. Verify ground connection. Test speakers with another amplifier if possible.

Specifications

Feature	Specification
Model	BXX4000.1D
Power Output (RMS)	4000W @ 1 Ohm
Signal to Noise Ratio	> 95dB
Subsonic Filter	15Hz - 35Hz
Low Pass Filter (LPF)	35Hz - 250Hz
Product Dimensions	27 x 10.3 x 3.7 inches
Item Weight	13.42 pounds
Manufacturer	Hifonics

Warranty and Support

Hifonics products are engineered for performance and reliability. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Hifonics website. Keep your purchase receipt as proof of purchase for warranty claims.
For technical support or service inquiries, please contact Hifonics customer service through their official channels. Do not attempt to repair the amplifier yourself, as this may void your warranty and cause further damage.