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BOSS Audio Systems AR2000M

BOSS Audio Systems AR2000M Monoblock Car Amplifier User Manual

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your BOSS Audio Systems AR2000M Monoblock Car Amplifier. Please read this manual thoroughly before attempting installation or operation to ensure proper use and optimal performance. Retain this manual for future reference.

Important Safety Information

Warning: Professional installation is highly recommended for this product. Improper installation can result in damage to the amplifier, vehicle, or personal injury. Always disconnect the vehicle's battery negative terminal before starting any electrical work.

- Ensure all wiring is properly routed and secured to prevent damage or short circuits.
- Use appropriate gauge wiring for power and ground connections as specified in the installation section.
- Do not mount the amplifier in locations exposed to direct sunlight, excessive heat, moisture, or dust.
- Ensure adequate ventilation around the amplifier to prevent overheating.
- Never operate the amplifier with damaged wiring or components.

Package Contents

Verify that all items are present upon unpacking:

- BOSS Audio Systems AR2000M Monoblock Car Amplifier
- Remote Subwoofer Control
- User Manual (this document)

Product Overview

The BOSS Audio Systems AR2000M is a monoblock car amplifier designed to deliver powerful audio output for your vehicle's subwoofer. It features a Class A/B topology, high/low level inputs, and various adjustable controls for precise sound customization.

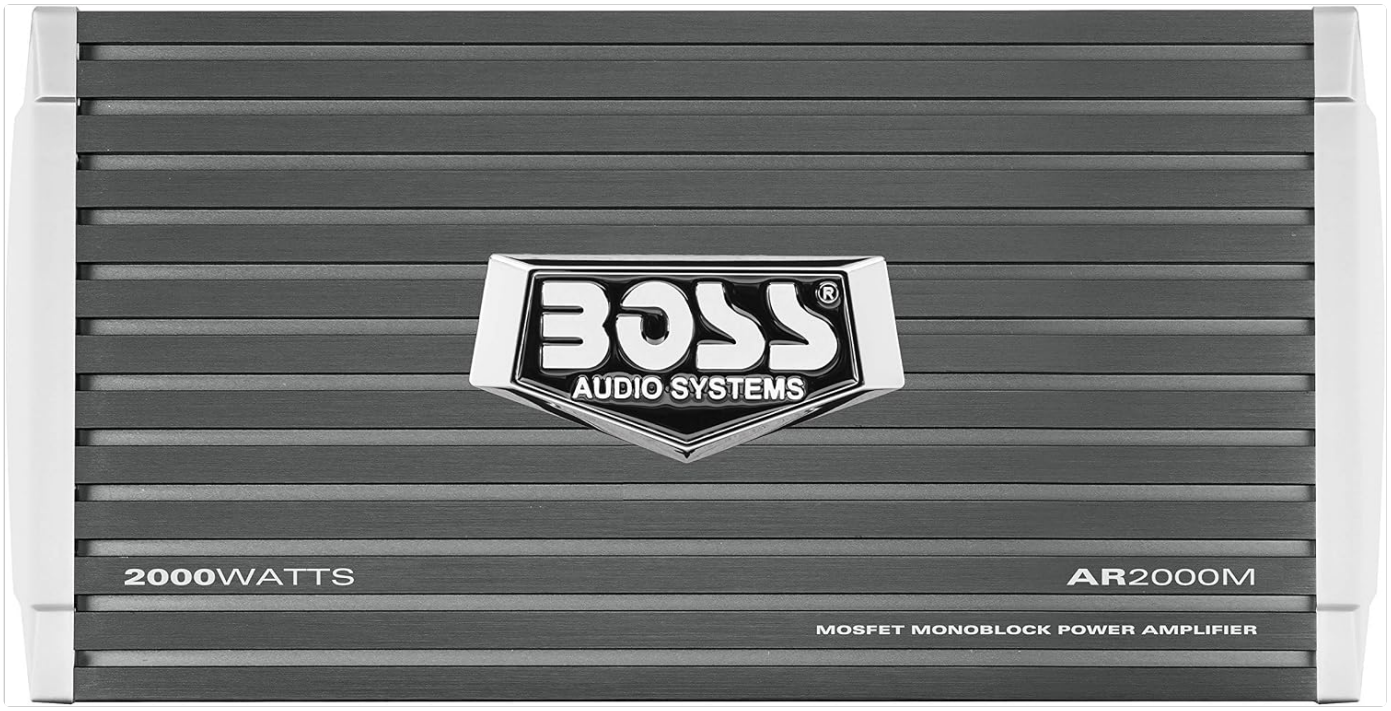


Figure 1: Top view of the BOSS Audio Systems AR2000M Monoblock Car Amplifier.



Figure 2: Angled view of the amplifier, highlighting the input and control panel.



Figure 3: Rear view of the amplifier's control panel, showing High Level Inputs, RCA Inputs, Level, Bass Boost, LP (Low-Pass) Crossover, and Remote Subwoofer Control port.



MOSFET Power Supply: Utilizes MOSFETs for efficient power delivery.



Class A/B Topology: Offers a balance of sound quality and efficiency.



2 Ohm Stable: Capable of operating with a 2-ohm load for increased power output.



High/Low Level Inputs: Allows connection to various head units, either via RCA (low-level) or speaker wires (high-level).



Variable Low-Pass Crossover: Adjusts the frequency range for subwoofer output, ensuring only low frequencies are reproduced.



Variable Bass Boost: Provides adjustable bass enhancement within a specific frequency range.



Variable Gain Control: Matches the amplifier's input sensitivity to the output of the source unit.



Short Protection: Integrated circuitry protects the amplifier from damage due to short circuits.

Setup and Installation

Proper installation is crucial for the performance and longevity of your amplifier. It is strongly recommended to have this product professionally installed.

1. Planning the Installation

- **Location:** Choose a mounting location that is dry, well-ventilated, and protected from direct heat and moisture. Ensure sufficient space for wiring and air circulation.
- **Wiring:** Plan the routing of power, ground, remote, signal, and speaker wires to avoid interference and ensure proper lengths.

2. Wiring Connections

Before making any connections, disconnect the vehicle's negative battery terminal.

1. **Power Connection:** Connect a heavy-gauge power cable (e.g., 4-gauge) directly from the positive terminal of the vehicle's battery to the amplifier's +12V terminal. Install an in-line fuse holder (with an appropriate fuse, typically 30A for this model) within 18 inches of the battery.
2. **Ground Connection:** Connect a heavy-gauge ground cable (e.g., 4-gauge) from the amplifier's GND terminal to a clean, unpainted metal surface on the vehicle's chassis. Ensure a solid, low-resistance connection.
3. **Remote Turn-On Connection:** Connect a remote turn-on wire (e.g., 18-gauge) 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.
4. **Signal Input:**
    - **Low-Level Input (RCA):** If your head unit has RCA pre-outs, connect RCA cables from the head unit's subwoofer output to the amplifier's RCA INPUTS (Left and Right).
    - **High-Level Input:** If your head unit does not have RCA pre-outs, use the high-level input. Connect the speaker wires from your head unit's rear speakers to the amplifier's HIGH LEVEL INPUTS. Ensure correct polarity (+ to + and - to -).
5. **Speaker Output:** Connect your subwoofer's speaker wires to the amplifier's speaker output terminals. Ensure correct polarity and that the subwoofer's impedance matches the amplifier's capabilities (2-ohm stable).
6. **Remote Subwoofer Control:** Connect the included remote subwoofer control to the designated port on the amplifier. Mount the control in an accessible location for easy adjustment.

3. Final Checks

- Double-check all wiring connections for security and correct polarity.
- Ensure no bare wires are touching metal surfaces or other wires.
- Reconnect the vehicle's negative battery terminal.

Operating the Amplifier

Once installed, adjust the amplifier settings for optimal sound performance.

- **Gain Control (LEVEL):** This control matches the amplifier's input sensitivity to the output voltage of your head unit. Start with the gain at minimum. Play a familiar track at about 75% of your head unit's maximum volume. Slowly increase the amplifier's gain until you hear distortion, then back it off slightly. This is not a volume control.
- **Low-Pass Crossover (LP):** This filter allows only frequencies below the set point to pass through to the subwoofer. Adjust this control (typically between 50Hz and 250Hz) to blend the subwoofer's output seamlessly with your main speakers.
- **Bass Boost:** This control allows you to enhance the low bass frequencies. Adjust it to your preference, but avoid excessive boosting which can lead to distortion or damage.
- **Remote Subwoofer Control:** Use this wired remote to conveniently adjust the subwoofer's output level from your driving position.

Maintenance

The BOSS Audio Systems AR2000M amplifier requires minimal maintenance.

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth to remove dust. Do not use harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure that the amplifier's cooling fins are free from obstructions to maintain proper airflow and prevent overheating.
- **Connections:** Occasionally check all wiring connections to ensure they remain secure.

Troubleshooting

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

Problem	Possible Cause	Solution
No Power / Amplifier does not turn on	Blown fuse Poor power/ground connection No remote turn-on signal	Check and replace fuse (if necessary, with correct rating). Verify all power and ground connections are secure and clean. Check remote wire connection and ensure head unit is providing a turn-on signal.
No Sound Output	Incorrect input connection Speaker wires disconnected/shorted Gain set too low	Verify RCA or high-level input connections are correct. Check speaker wire connections at both amplifier and subwoofer. Ensure no shorts. Adjust gain control (LEVEL) as described in the Operating section.
Distorted Sound	Gain set too high Incorrect crossover settings Damaged speaker/subwoofer	Reduce gain control (LEVEL). Adjust Low-Pass Crossover (LP) for optimal sound. Inspect subwoofer for damage.
Amplifier Overheating (Protection light on)	Insufficient ventilation Improper speaker impedance Extended high-volume operation	Ensure amplifier has adequate airflow. Relocate if necessary. Verify subwoofer impedance is 2 ohms or higher. Reduce volume or allow amplifier to cool down.

Specifications

Feature	Specification
Model	AR2000M
Output Power (Max)	2000 Watts x 1 @ 2 Ohms 1000 Watts x 1 @ 4 Ohms
Amplifier Class	Class A/B
Number of Channels	1 (Monoblock)

Feature	Specification
Minimum Impedance	2 Ohms
Low-Pass Crossover	Variable (50Hz - 250Hz)
Bass Boost	Variable (+0 to +12dB)
Input Sensitivity	High/Low Level Inputs
Voltage	10 Volts (Operating)
Product Dimensions (L x W x H)	13.1 x 6.5 x 2.8 inches
Item Weight	3.81 pounds
Special Features	MOSFET Power Supply, Short Protection, Remote Subwoofer Control

Warranty and Support

Warranty Information

BOSS Audio Systems provides a powerful 6-year platinum online dealer warranty for this product, provided the purchase is made through an authorized dealer. Please retain your proof of purchase for warranty claims.

Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact BOSS Audio Systems customer support. Refer to the official BOSS Audio Systems website for the most current contact information.

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