

Harmony Audio HA-A1500.1

Harmony Audio HA-A1500.1 Car Stereo Class D Mono Amplifier User Manual

Model: HA-A1500.1

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Harmony Audio HA-A1500.1 Class D Mono Subwoofer Amplifier. Please read this manual thoroughly before attempting installation or operation to ensure proper use and to prevent damage to the unit or your vehicle's audio system.

The Harmony Audio HA-A1500.1 is a high-performance mono-channel Class D amplifier designed to deliver powerful and reliable bass output for car audio enthusiasts. It features a 3000-watt peak power output, 1-ohm stability, smart power control, an innovative daisy chain feature, and includes a remote bass control for convenient adjustments.

2. SAFETY INFORMATION

WARNING: Improper installation or use can result in serious injury or damage to your vehicle. Always consult with a professional installer if you are unsure about any part of the installation process.

- Disconnect the vehicle's negative battery terminal before starting any electrical work.
- Ensure all wiring is properly routed and secured to prevent pinching or damage.
- Use appropriate gauge wiring for power, ground, and speaker connections as specified in this manual.
- Install the amplifier in a location that allows for adequate ventilation to prevent overheating.
- Avoid mounting the amplifier directly to a subwoofer enclosure, as vibrations can cause damage.
- Do not expose the amplifier to moisture or extreme temperatures.
- Always use fuses of the specified rating. Never replace a fuse with one of a higher rating.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Harmony Audio HA-A1500.1 Class D Mono Amplifier
- Remote Bass Control Knob

- Remote Bass Control Cable
- HA-EASY Adapter (High-Level Input Adapter)
- Mounting Screws
- User Manual (this document)

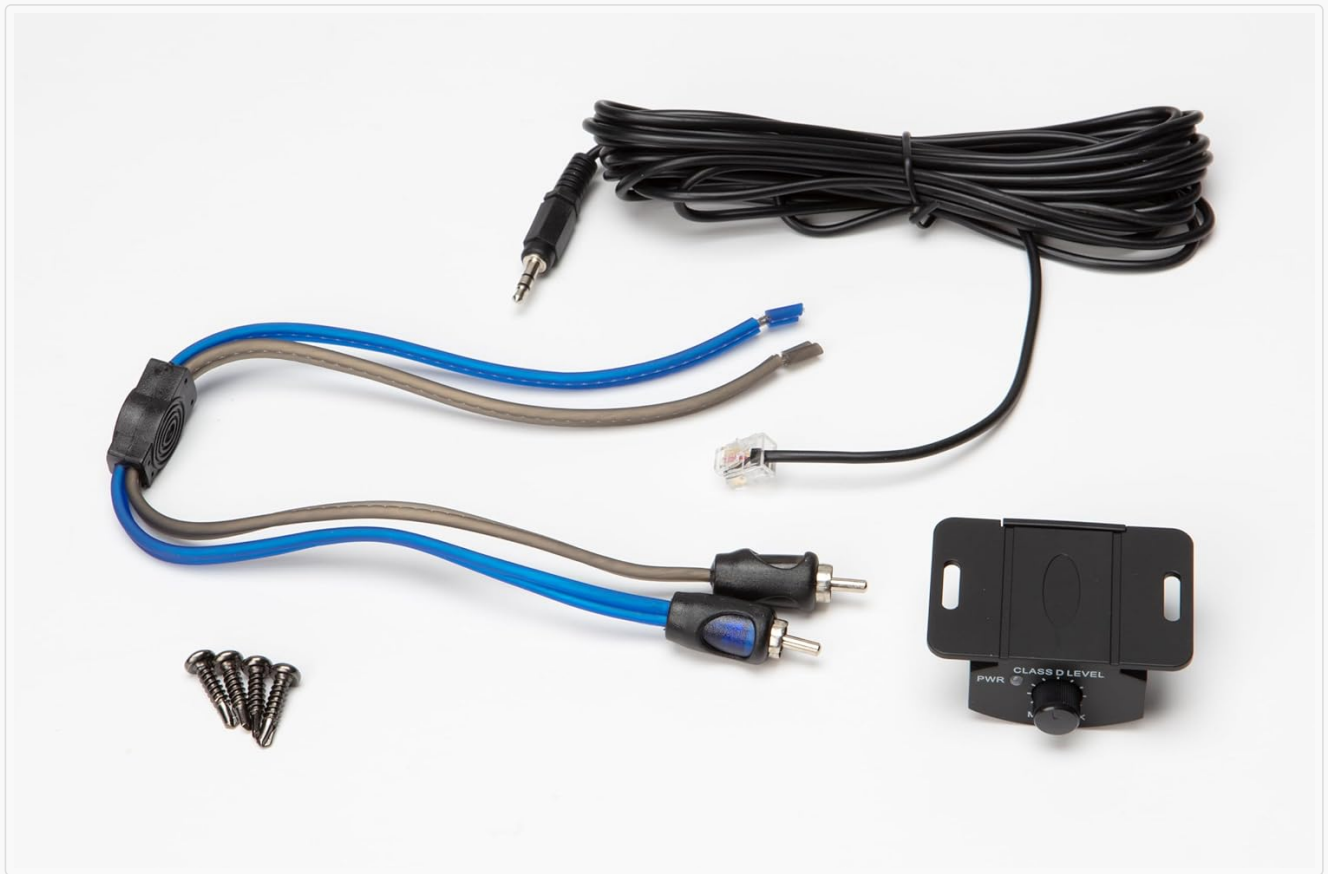


Figure 3.1: Included accessories, including the remote bass control, wiring, and mounting screws.

4. PRODUCT FEATURES

- **3000 Watt Peak Power:** Delivers robust and dynamic bass for an immersive listening experience.
- **1 Ohm Stable:** Allows flexible subwoofer wiring configurations for maximum power output.
- **Smart Power Control:** Offers versatility with DC voltage offset or traditional 12-volt switched remote turn-on lead.
- **Innovative Daisy Chain Feature:** Enables control of a second Harmony amplifier or accessory using the empty remote terminal as a 12-volt switched output.
- **Remote Bass Control:** Conveniently adjust bass levels from the driver's seat with a 0 to 12 dB boost range and a blue LED status light.
- **Class D Topology:** Known for its efficiency and compact design.
- **Built-in Bass Boost Control:** Customize low-frequency response.

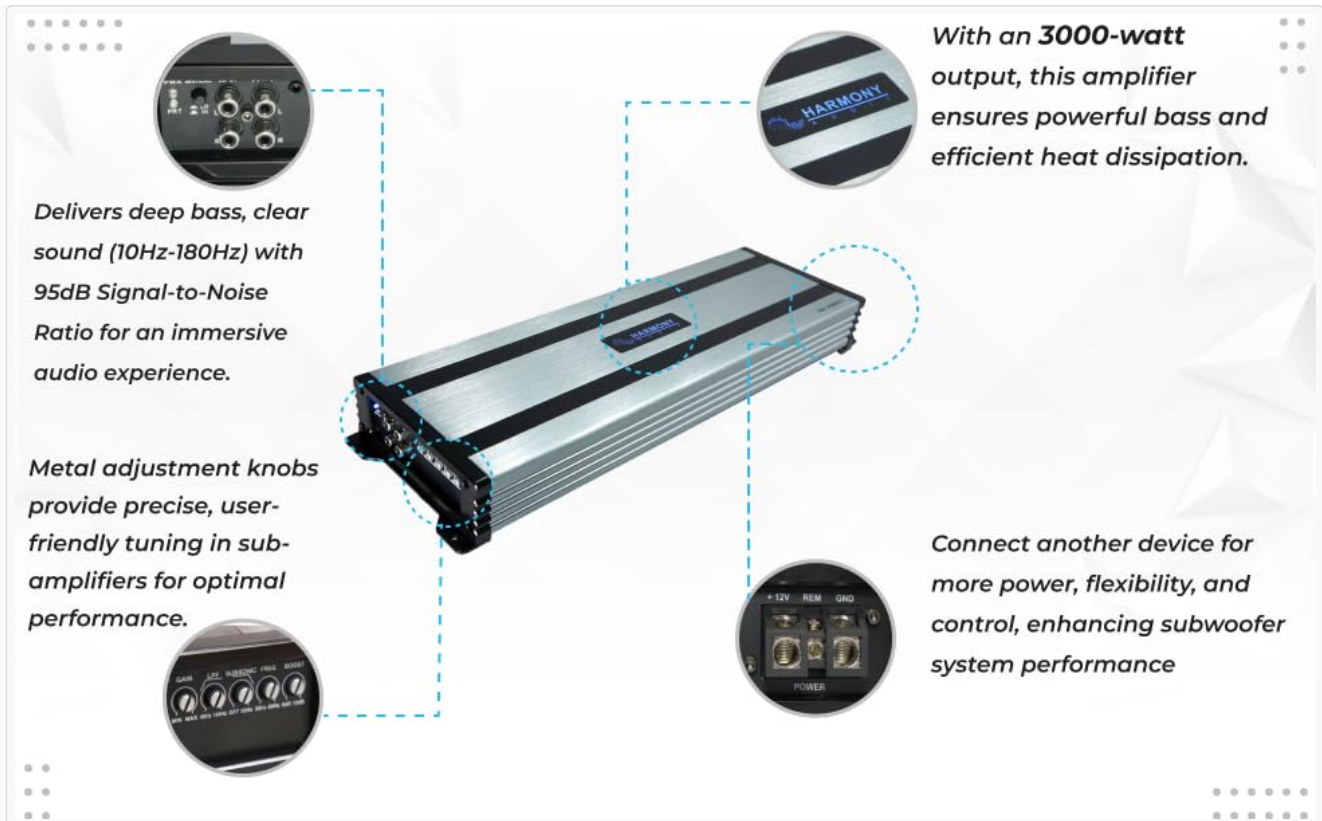


Figure 4.1: Visual representation of amplifier features including 3000-watt output, metal adjustment knobs, and the daisy chain connection point.

5. SETUP AND INSTALLATION

5.1 Mounting the Amplifier

Choose a mounting location that is dry, well-ventilated, and secure. Ensure the amplifier is not exposed to direct sunlight or excessive heat. Avoid mounting on vibrating surfaces like subwoofer boxes.

1. Place the amplifier in the desired location and mark the mounting screw holes.
2. Drill pilot holes for the mounting screws.
3. Secure the amplifier using the provided mounting screws.



Figure 5.1: Top-down view of the HA-A1500.1 amplifier, showing its compact design suitable for various mounting locations.

5.2 Wiring Connections

Proper wiring is crucial for performance and safety. Use high-quality wiring components.

5.2.1 Power and Ground Connections

- **Power (+12V):** Connect a 1/0 gauge power wire directly from the positive terminal of the vehicle's battery to the +12V terminal on the amplifier. Install an appropriate fuse (e.g., 100A or higher, depending on actual power draw) within 18 inches of the battery.
- **Ground (GND):** Connect a 1/0 gauge ground wire from the GND terminal on the amplifier to a clean, unpainted metal surface on the vehicle's chassis. Ensure a solid, low-resistance connection.
- **Remote (REM):** Connect a remote turn-on wire from your head unit's remote output to the REM terminal on the amplifier. Alternatively, utilize the Smart Power Control feature via DC voltage offset if your head unit does not have a dedicated remote output.



Figure 5.2: Close-up of the power (+12V, REM, GND) and mono speaker output terminals on the amplifier.

5.2.2 Audio Input Connections

- **Low-Level Input (RCA):** Connect RCA cables from your head unit's subwoofer or full-range pre-outs to the INPUT (L/R) RCA jacks on the amplifier.
- **High-Level Input (HA-EASY Adapter):** If your head unit does not have RCA outputs, use the included HA-EASY adapter. Connect your speaker wires from the head unit to the HA-EASY adapter, then connect the adapter's RCA outputs to the amplifier's INPUT (L/R) RCA jacks.



Figure 5.3: View of the amplifier's control panel, showing RCA inputs, gain control, LPF, Subsonic filter, and Bass Boost knobs.

5.2.3 Speaker Output Connections

Connect your subwoofer(s) to the MONO speaker terminals on the amplifier. Ensure correct polarity (+ to + and - to -). The amplifier is 1-ohm stable, allowing for various wiring configurations to achieve the desired impedance.

Note: Refer to your subwoofer's specifications for recommended impedance and wiring diagrams.

6. OPERATING INSTRUCTIONS

6.1 Initial Power-Up

After all connections are made and verified, reconnect the vehicle's negative battery terminal. The amplifier's PWR indicator should illuminate blue. If the PRT (Protection) indicator illuminates red, refer to the Troubleshooting section.

6.2 Adjusting Amplifier Settings

- **GAIN (Input Level):** This control matches the amplifier's input sensitivity to the output of your head unit. Start with the gain set to 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 off slightly.

- **LPF (Low Pass Filter):** This filter allows only frequencies below the set point to pass through to the subwoofer. Adjust between 40Hz and 180Hz. A common starting point is 80Hz-100Hz, but adjust to blend seamlessly with your main speakers.
- **SUBSONIC FREQ (High Pass Filter):** This filter removes extremely low frequencies that are inaudible and can damage subwoofers. Set it slightly below your subwoofer's ported enclosure tuning frequency or around 25-30Hz for sealed enclosures.
- **BOOST (Bass Boost):** This control provides a boost to specific low frequencies (0dB to 12dB). Use sparingly to avoid distortion and potential speaker damage.
- **Remote Bass Control:** Connect the included remote bass control to the REMOTE port. This allows for convenient adjustment of the bass level from the driver's seat.

7. MAINTENANCE

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure that the amplifier's cooling fins are free from dust and obstructions to maintain proper airflow.
- **Connections:** Occasionally check all wiring connections for tightness and corrosion. Loose connections can lead to poor performance or damage.

8. TROUBLESHOOTING

| Problem | Possible Cause | Solution |
|------------------------------|---|---|
| No Power (PWR LED Off) | Blown fuse, poor power/ground connection, no remote turn-on signal. | Check inline fuse near battery. Verify +12V, GND, and REM connections. Test remote turn-on wire for 12V. |
| Protection Mode (PRT LED On) | Overheating, short circuit in speaker wiring, impedance too low, DC offset. | Allow amplifier to cool. Check speaker wiring for shorts. Verify speaker impedance is within specifications (1 ohm minimum). Check for proper ground. |
| No Sound | No input signal, incorrect gain setting, speaker wires disconnected. | Check RCA or high-level input connections. Adjust gain. Verify speaker connections. Ensure head unit is sending audio. |
| Distorted Sound | Gain set too high, LPF/Subsonic settings incorrect, poor ground. | Reduce gain. Adjust LPF/Subsonic filters. Check ground connection. |

9. SPECIFICATIONS

| Feature | Detail |
|-----------------|------------------|
| Model Number | HA-A1500.1 |
| Amplifier Class | Class D |
| Channels | Mono (1-Channel) |

| Feature | Detail |
|------------------------------|-------------------------|
| Peak Power (14.4V @ 1 Ohm) | 3000 Watts |
| RMS Power (14.4V @ 1 Ohm) | 1600 Watts |
| RMS Power (14.4V @ 2 Ohm) | 1200 Watts |
| Frequency Response | 10Hz - 180Hz |
| Signal-to-Noise Ratio | 95dB (A-weighted) |
| Minimum Stable Impedance | 1 Ohm |
| Voltage Range | 12V - 14.4V DC |
| Recommended Power Wire Gauge | 1/0 Gauge |
| Dimensions (L x W x H) | 23.5 x 8.4 x 4.5 inches |
| Weight | 11.05 Pounds |

**HARMONY**
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Car Audio Class D Amp Mono 3000 Watt Sub Amplifier - 1 Ohm Stable

Introducing the Harmony Audio **HA-A1500.1** Car Audio Mono 3000 Watts Subwoofer Amplifier, a powerhouse designed to elevate your car audio experience. With a remarkable 3000 watts of power and a 1-ohm stable configuration, this Class D amplifier delivers precision, efficiency, and exceptional performance.



Figure 9.1: Internal view of the HA-A1500.1 amplifier, showcasing its Class D circuitry and robust components.

10. WARRANTY AND SUPPORT

10.1 Warranty Information

Harmony Audio products are designed and manufactured to the highest quality standards. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Harmony Audio website. Keep your purchase receipt as proof of purchase for warranty claims.

10.2 Customer Support

For technical assistance, troubleshooting, or general inquiries, please contact Harmony Audio customer support. Contact information can typically be found on the Harmony Audio website or on the product packaging. Online resources and FAQs may also be available on the [Harmony Audio Store on Amazon](#).

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