

## Hifonics ZG 2401 1D

# Hifonics ZG-2400.1D Zeus Gamma Monoblock Amplifier User Manual

Model: ZG-2400.1D

## 1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Hifonics ZG-2400.1D Zeus Gamma 1-Channel Class D Monoblock 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 ZG-2400.1D is designed to deliver high-efficiency power for car audio subwoofers.

## 2. SAFETY INFORMATION

Always observe the following safety precautions during installation and operation:

- Disconnect the vehicle's battery negative terminal before starting any electrical work to prevent short circuits.
- Ensure all wiring is properly routed and secured to prevent damage from sharp edges or moving parts.
- Use appropriate gauge wiring for power and ground connections as specified in the installation section.
- Install the amplifier in a location that allows for adequate ventilation to prevent overheating.
- Do not mount the amplifier in areas exposed to moisture or excessive vibration.
- Always use the correct fuse rating as specified for the amplifier.
- If you are unsure about any part of the installation process, consult a professional car audio installer.

## 3. FEATURES

The Hifonics ZG-2400.1D amplifier incorporates several features for optimal performance:

- **Low Noise Preamp Circuit:** Designed to minimize distortion from the source unit's low voltage signal.
- **RCA Inputs:** Nickel-plated, high-temperature, impact-resistant terminals with hex screws for secure, erosion-resistant connections.

- **High Level Inputs:** Allows connection to OEM audio systems lacking RCA outputs.
- **Class D Topology:** High efficiency design providing significant power in a compact footprint.
- **Variable Electronic Crossover:** 12dB per octave slope for precise frequency control.

## 4. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your amplifier. Follow these steps carefully.

### 4.1 Mounting the Amplifier

Choose a mounting location that is dry, well-ventilated, and secure. Avoid mounting on carpet or in enclosed spaces without airflow. Ensure the amplifier is securely fastened to a solid surface to prevent movement during vehicle operation.



Figure 1: Top view of the Hifonics ZG-2400.1D amplifier, showing its compact design.

### 4.2 Wiring Connections

Refer to the diagram below for proper wiring connections. Use a 4-gauge power kit for optimal performance and safety.

- **Power (BATT+):** Connect directly to the positive terminal of the vehicle's battery using a fuse holder within 18 inches of the battery.
- **Ground (GND):** Connect to a clean, unpainted metal surface of the vehicle chassis. Ensure a good electrical connection.
- **Remote (REM):** Connect to the remote turn-on output of your head unit.
- **RCA Inputs:** Connect to the RCA pre-outs of your head unit.
- **High Level Inputs:** If your head unit lacks RCA outputs, connect speaker wires directly to the high-level input terminals.
- **Speaker Output:** Connect your subwoofer(s) to the speaker output terminals. Ensure correct polarity.



Figure 2: Rear panel connections, including power, ground, remote, and speaker outputs. Note the 100A fuse.

### 4.3 Fuse Information

The amplifier is equipped with a 100A fuse. Always replace with a fuse of the same rating to prevent damage and ensure safety.

## 5. OPERATING INSTRUCTIONS

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



Figure 3: Front panel controls for input level, bass EQ, phase, subsonic filter, and low pass filter.

- **Level (Gain):** Adjust this control to match the output voltage of your head unit. Start with the gain at minimum and slowly increase until desired volume is achieved without distortion.
- **Bass EQ:** Use this control to boost bass frequencies. Adjust carefully to avoid distortion and speaker damage.
- **Phase:** Adjust the phase (0° or 180°) to ensure the subwoofer's output is in phase with the rest of your audio system.
- **Subsonic Filter:** This filter removes extremely low frequencies that are inaudible and can cause damage to subwoofers. Set it slightly below your subwoofer's resonant frequency.
- **Low Pass Filter (LPF):** This filter allows only frequencies below the set point to pass to the subwoofer. Adjust to blend smoothly with your main speakers.

## 6. MAINTENANCE

The Hifonics ZG-2400.1D amplifier requires minimal maintenance. Follow these guidelines to ensure long-term performance:

- Keep the amplifier clean and free of dust and debris. Use a soft, dry cloth for cleaning.
- Ensure adequate ventilation around the amplifier at all times to prevent overheating.
- Periodically check all wiring connections for tightness and corrosion.
- Do not expose the amplifier to extreme temperatures or moisture.

## 7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No power/Amplifier not turning on	Blown fuse, loose power/ground/remote wire, faulty head unit remote output.	Check and replace fuse (100A). Verify all power, ground, and remote connections are secure. Test remote wire for 12V signal.
No sound output	Loose RCA/speaker connections, incorrect gain setting, amplifier in protect mode.	Check all RCA and speaker wire connections. Ensure gain is set correctly. Check if the protect LED is illuminated; if so, refer to the manual or consult support.
Distorted sound	Gain set too high, improper crossover settings, poor ground connection, damaged speaker.	Reduce gain. Adjust LPF and Subsonic filter settings. Verify ground connection. Inspect speakers for damage.

Problem	Possible Cause	Solution
Amplifier overheating	Inadequate ventilation, impedance too low, prolonged high volume.	Ensure proper airflow around the amplifier. Verify speaker impedance matches amplifier specifications. Reduce listening volume.

## 8. SPECIFICATIONS

Key technical specifications for the Hifonics ZG-2400.1D Zeus Gamma Monoblock Amplifier:

- **Model:** ZG 2401 1D
- **Channels:** 1 (Monoblock)
- **Topology:** Class D
- **Power Output @ 1 Ohm:** 1 x 2400 Watts
- **Power Output @ 2 Ohms:** 1 x 1200 Watts
- **Power Output @ 4 Ohms:** 1 x 600 Watts
- **Crossover:** Variable Electronic 12dB Per Octave
- **Fuse Rating:** 100A
- **Input Type:** RCA and High Level
- **Preamplifier:** Low Noise Circuit

## 9. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the documentation included with your purchase or visit the official Hifonics website. Keep your proof of purchase for warranty claims.

**Hifonics Official Website:** [www.hifonics.com](http://www.hifonics.com)

