Ground Zero GZNA 1.2550DXII

Ground Zero GZNA 1.2550DXII Monoblock Amplifier User Manual

Model: GZNA 1.2550DXII

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your Ground Zero GZNA 1.2550DXII Class-D monoblock amplifier. Please read this manual thoroughly before attempting to install or operate the amplifier to ensure proper function and safety.
The Ground Zero GZNA 1.2550DXII is a high-performance Class-D monoblock amplifier designed for powerful audio reproduction in automotive applications. It features a robust design and advanced controls for optimal sound customization.

Key Features

- Class-D design for high efficiency.
- Stabilized dual power supply.
- Linkable with another amplifier for increased power.
- 1 Ohm stable operation (2 Ohm in linked mode).
- Full Power MOS-FET amplifier.
- Power and Protect status indicators.
- Adjustable Lowpass filter (30 - 250 Hz).
- Adjustable Subsonic filter (5 - 50 Hz).
- 180° variable phase shift.
- Solid aluminum heatsink for efficient cooling.
- Adjustable input sensitivity (200 mV ~ 9 Volts).
- RCA inputs and outputs.
- Includes Bass Remote Control.
- Adjustable Bass Boost (0 ~ +9dB at 30 - 80 Hz).

Setup and Installation

Proper installation is crucial for optimal performance and safety. If you are unsure about any part of the installation process, consult a professional installer.

1. Mounting the Amplifier

Choose a secure, dry location with adequate ventilation. Avoid mounting the amplifier in direct sunlight or near heat sources. Ensure sufficient space around the heatsink for airflow.



Image: Top view of the Ground Zero GZNA 1.2550DXII amplifier, showing the heatsink design. This view highlights the robust construction and cooling fins.

2. Power Connections

- **Power (BATT+)**: Connect a heavy-gauge power cable directly from the positive terminal of the vehicle's battery to the BATT+ terminal on the amplifier. Use an appropriate fuse holder within 18 inches (45 cm) of the battery.
- **Ground (GND)**: Connect a heavy-gauge ground cable from the GND terminal on the amplifier to a clean, unpainted metal surface of 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. This wire signals the amplifier to turn on and off with your head unit.



Image: Rear panel of the Ground Zero GZNA 1.2550DXII amplifier, showing power, ground, remote, and speaker output terminals on the right, and RCA inputs/outputs and control knobs on the left. This view is essential for understanding wiring connections.

3. Audio Input Connections

Connect RCA cables from your head unit's pre-out (subwoofer output recommended) to the RCA INPUTs on the amplifier. Ensure correct left and right channel connections if applicable, though for a monoblock, typically a single summed input is used or both inputs are connected for optimal signal.

4. Speaker Output Connections

Connect your subwoofer(s) to the SPEAKER OUTPUT terminals on the amplifier. Pay close attention to polarity (+ to + and - to -). Ensure the total impedance of your connected subwoofers is within the amplifier's stable operating range (1 Ohm minimum for single amplifier, 2 Ohm minimum for linked mode).

5. Initial Settings

- **Input Sensitivity (GAIN)**: Start with the gain control set to minimum. Gradually increase it until the desired volume is achieved without distortion.
- **Lowpass Filter (LPF)**: Set the LPF to filter out frequencies above your subwoofer's optimal range, typically between 60-100 Hz.
- **Subsonic Filter**: Set the subsonic filter to protect your subwoofer from playing frequencies below its resonant frequency, typically between 20-30 Hz.
- **Phase Shift**: Adjust the phase (0-180°) to achieve optimal blending with your front speakers.
- **Bass Boost**: Use bass boost sparingly and carefully to avoid distortion and potential damage to your speakers.

Operating the Amplifier

Once installed and configured, the amplifier will turn on automatically when your head unit is powered on, and turn off when the head unit is off. The "Power" indicator light will illuminate when the amplifier is operational. The "Protect" indicator light will illuminate if the amplifier detects a fault condition (e.g., overheating, short circuit, low voltage), and the amplifier will shut down to prevent damage.
Use the included bass remote control to adjust the subwoofer level conveniently from the driver's seat.

Maintenance

- **Cleaning**: Periodically clean the amplifier's exterior with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners. Ensure the heatsink fins are free from dust and debris to maintain proper cooling.
- **Connections**: Regularly check all power, ground, remote, and speaker connections to ensure they are secure and free from corrosion. Loose connections can lead to poor performance or damage.
- **Ventilation**: Ensure that the amplifier's mounting location continues to provide adequate ventilation and is not obstructed by objects.

Troubleshooting

Problem	Possible Cause	Solution
No Power / Amplifier does not turn on	Blown fuse (in-line or amplifier) Loose power or ground connection No remote turn-on signal Low battery voltage	Check and replace fuses. Verify all power, ground, and remote connections are secure. Check remote wire connection at head unit and amplifier. Check vehicle battery voltage.

Problem	Possible Cause	Solution
No Sound Output	RCA input cables disconnected or faulty Speaker wires disconnected or shorted Gain set too low Head unit volume too low or muted	Check RCA connections and test cables. Inspect speaker wiring for shorts or disconnections. Increase gain setting gradually. Increase head unit volume and check mute status.
Distorted Sound	Gain set too high (clipping) Speaker impedance too low Faulty speaker Poor ground connection	Reduce gain setting. Verify speaker impedance is within amplifier's stable range. Test speaker with another amplifier if possible. Ensure ground connection is clean and secure.
Amplifier Overheats / Protect Light On	Insufficient ventilation Speaker impedance too low Prolonged high volume operation Internal fault	Ensure adequate airflow around the amplifier. Verify speaker impedance. Reduce volume or allow amplifier to cool down. If problem persists, seek professional service.

Technical Specifications

The WRMS performance data is based on the CEA standard CEA-2006-A (14.4 V, 1% THD).

Specification	Value
Model	GZNA 1.2550DXII
Type	1 Channel Class D
Output Power @ 4 Ohm (CEA*)	1 x 850 W
Output Power @ 2 Ohm (CEA*)	1 x 1500 W
Output Power @ 1 Ohm (CEA*)	1 x 2400 W
Output Power Link Mode @ 2 Ohm	1 x 6200 W
Lowpass Filter	30 - 250 Hz (24 dB/octave)
Bandpass Filter	5 - 250 Hz (24 dB/octave)
Subsonic Filter	5 - 50 Hz (24 dB/octave)
Bass Boost	0 - +9 dB (at 30 - 80 Hz)
Phase Shift	0 - 180° (variable)

Specification	Value
Input Sensitivity	200 mV ~ 9 Volts
Dimensions (L x W x H)	56 x 29.3 x 6.7 cm (22.05 x 11.54 x 2.64 inches)
Voltage	9 - 14.4 VDC
Weight	10 kg

Warranty and Support

Ground Zero products are designed and manufactured to the highest quality standards. For information regarding warranty coverage, terms, and conditions, please refer to the warranty card included with your product or visit the official Ground Zero website. For technical support or service inquiries, please contact your authorized Ground Zero dealer or distributor.
Please retain your proof of purchase for warranty claims.

© 2023 Ground Zero. All rights reserved.