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› Hifonics ZRX3216.1D Zeus Series Mono Block D Class Amplifier User Manual

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Hifonics ZRX3216.1D Zeus Series Mono Block D Class Amplifier User Manual

Model: ZRX3216.1D | Brand: Hifonics

1. INTRODUCTION AND OVERVIEW

This manual provides essential information for the proper installation, operation, and maintenance of your Hifonics ZRX3216.1D Zeus Series Mono Block D Class 3200 Watt Vehicle Amplifier. The ZRX3216.1D is a high-performance 3200W monoblock amplifier designed for mono channel operation, featuring a subsonic filter (24 dB at 15 Hz) and an Old School Hifonics heat sink for superior heat dissipation. It incorporates military-grade PCB construction, Simpatico coil design, and Hifonics surface mount technology. Built-in protection circuits include DC, short circuit, thermal, and overload protection to ensure reliable performance.

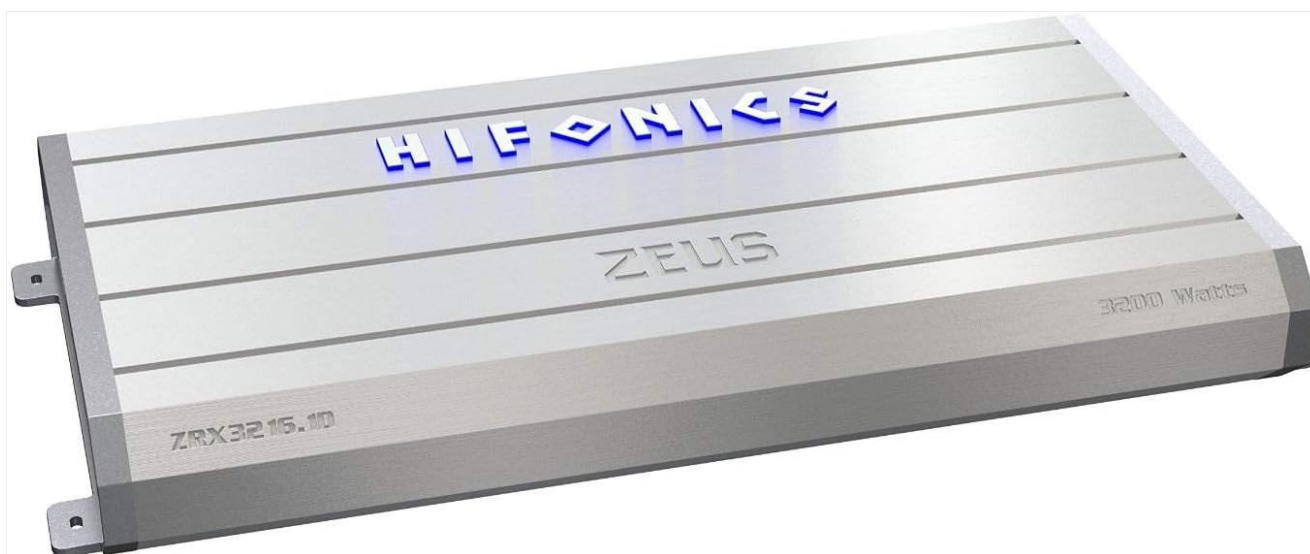


Image 1.1: Top view of the Hifonics ZRX3216.1D Zeus Series Mono Block D Class Amplifier, showcasing its sleek design and Hifonics branding.

2. SAFETY INFORMATION

Always observe the following safety precautions during installation and operation:

- **Professional Installation Recommended:** Due to the complexity of car audio systems and high power requirements, professional installation is highly recommended.
- **Disconnect Battery:** Before beginning any wiring, always disconnect the vehicle's negative battery terminal to prevent electrical shorts and damage.
- **Proper Wiring Gauge:** Ensure all power and ground wiring meets the specified 1/0 gauge requirement for safe and optimal performance. Undersized wiring can lead to overheating and fire hazards.
- **Secure Mounting:** Mount the amplifier securely to a solid surface to prevent it from becoming a projectile in the event of a sudden stop or accident.
- **Ventilation:** Ensure adequate ventilation around the amplifier to prevent overheating. Do not block cooling fins or mount in enclosed spaces without airflow.
- **Avoid Moisture:** Do not expose the amplifier to moisture or water.
- **Correct Impedance:** Ensure your speakers or subwoofers are compatible with the amplifier's impedance ratings to prevent damage.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Hifonics ZRX3216.1D Zeus Series Mono Block D Class 3200 Watt Vehicle Amplifier
- User Manual (this document)
- Wired remote bass level control

4. KEY FEATURES

The Hifonics ZRX3216.1D amplifier offers the following features:

- Zeus Series Monoblock Class D Car Amplifier
- Maximum Power Output: 3200 Watts
- Mono channel operation
- Variable Bass Boost (0 to +12 dB bass boost at 45 Hz)
- Variable low-pass filter (40-300 Hz, 24 dB/octave)
- Subsonic filter (24 dB at 15 Hz)
- Old School Hifonics heat sink for superior heat dissipation
- Military grade PCB construction
- Simpatico coil design
- Hifonics surface mount design
- DC, short circuit, thermal, and overload protection circuits
- Wired remote bass level control included

5. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and safety. Follow these general guidelines:

5.1 Mounting the Amplifier

Choose a mounting location that provides adequate ventilation and is secure. The amplifier is designed for surface mounting. Ensure the location is dry and away from direct heat sources or moving parts. Allow sufficient space around the amplifier for air circulation.

5.2 Wiring Connections

All wiring should be performed with the vehicle's battery disconnected. The Hifonics ZRX3216.1D requires 1/0 gauge power and ground wiring for proper operation.

- **Power (BATT+12V):** Connect a 1/0 gauge cable directly from the positive terminal of the vehicle's battery to the BATT+12V terminal on the amplifier. Install an appropriate fuse (not included) within 18 inches of the battery.
- **Ground (GND):** Connect a 1/0 gauge cable 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 (typically 18 gauge) from your head unit's remote output to the REM terminal on the amplifier. This wire turns the amplifier on and off with your head unit.
- **Speaker Output:** Connect your subwoofer(s) to the SPEAKER OUTPUT terminals. Pay close attention to polarity (+ and -) and ensure the total impedance of your speakers matches the amplifier's capabilities (e.g., 1 ohm, 2 ohms, 4 ohms).
- **RCA Input:** Connect RCA cables from your head unit's subwoofer or full-range output to the INPUT (L/R) RCA jacks on the amplifier.



Image 5.1: Rear view of the amplifier, detailing the power, ground, remote, and speaker output connections.



Image 5.2: Front view of the amplifier, illustrating the control panel with various adjustment knobs and RCA input jacks.

6. OPERATING INSTRUCTIONS

Once installed, the amplifier's performance can be fine-tuned using the control knobs located on the front panel.

- **Level Control:** Adjusts the input sensitivity of the amplifier to match the output voltage of your head unit. Start with the level control at minimum and slowly increase it until the desired volume is achieved without distortion.
- **Low Pass Filter (LPF):** This variable filter (40-300 Hz, 24 dB/octave) allows only frequencies below the set point to pass through to the subwoofer. Adjust this to blend the subwoofer's output with your main speakers.
- **Subsonic Filter:** A 24 dB at 15 Hz filter that removes extremely low frequencies below 15 Hz. This protects your subwoofer from playing frequencies it cannot reproduce effectively, which can cause damage and waste power.
- **Bass EQ:** Provides a variable bass boost (0 to +12 dB at 45 Hz). Use this to enhance bass response, but use sparingly to avoid distortion and potential speaker damage.
- **Remote Control:** The included wired remote bass level control allows for convenient adjustment of the subwoofer output level from the driver's seat.



Image 6.1: The Hifonics ZRX3216.1D amplifier with its illuminated Hifonics logo, indicating power.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No Power / Amplifier Not Turning On	Blown fuse, loose power/ground/remote wire, no remote signal.	Check fuse at battery. Verify all power, ground, and remote connections are secure and receiving proper voltage. Ensure head unit is on and sending a remote signal.
No Sound Output	Loose RCA cables, incorrect input level, speaker wires disconnected, amplifier in protection mode.	Check RCA connections. Adjust input level. Verify speaker wire connections and polarity. Check for protection light (red LED) and address underlying cause (e.g., short circuit, overheating).

Problem	Possible Cause	Solution
Distorted Sound	Input level too high, speaker impedance mismatch, damaged speakers, incorrect filter settings.	Reduce input level. Verify speaker impedance. Inspect speakers for damage. Adjust LPF, Subsonic, and Bass EQ settings.
Amplifier Overheating (Thermal Protection)	Insufficient ventilation, impedance too low, prolonged high output.	Ensure adequate airflow around the amplifier. Verify speaker impedance is within specifications. Reduce listening volume or allow amplifier to cool.
Protection Light On	Short circuit in speaker wiring, overheating, DC offset, low voltage.	Immediately turn off the system. Check all speaker wiring for shorts. Allow amplifier to cool. Verify power supply voltage. If the issue persists, consult a professional.

8. SPECIFICATIONS

Detailed technical specifications for the Hifonics ZRX3216.1D amplifier:

- **Model:** ZRX3216.1D
- **Number of Channels:** 1 (Mono)
- **Output Power:** 3200 Watts (Maximum)
- **Max Power Rating:**
 - 4 ohms: 800 watts x 1 channel
 - 2 ohms: 1600 watts x 1 channel
 - 1 ohm: 3200 watts x 1 channel
- **Frequency Response:** 10-300 Hz
- **Variable Low-Pass Filter:** 40-300 Hz, 24 dB/octave
- **Subsonic Filter:** 24 dB at 15 Hz
- **Variable Bass Boost:** 0 to +12 dB at 45 Hz
- **Minimum Supply Voltage:** 12 Volts
- **Maximum Supply Voltage:** 14 Volts (Rated), 16 Volts (Absolute Max)
- **Mounting Type:** Surface Mount (Compact)
- **Item Dimensions (L x W x H):** 19.7 x 10 x 2.4 inches
- **Item Weight:** 13 Pounds
- **Specification Met:** FCC

9. MAINTENANCE

To ensure the longevity and optimal performance of your Hifonics ZRX3216.1D amplifier, follow these simple maintenance tips:

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Ventilation:** Regularly check that the amplifier's cooling fins are free from dust and debris. Ensure nothing is obstructing airflow around the unit.
- **Connections:** Occasionally inspect all wiring connections (power, ground, remote, speaker, RCA) to ensure they

remain tight and free from corrosion. Loose connections can lead to poor performance or damage.

- **Environment:** Keep the amplifier in a dry environment, away from extreme temperatures and direct sunlight.

10. WARRANTY AND SUPPORT

Warranty information for the Hifonics ZRX3216.1D amplifier is typically provided with the product at the time of purchase or can be found on the official Hifonics website. Please retain your proof of purchase for warranty claims.

For technical support or further assistance, please refer to the contact information provided in your product packaging or visit the official Hifonics website. You can also visit the [Hifonics Store on Amazon](#) for more product information.