Skar Audio VD-12 D2

Skar Audio VD-12 D2 12-inch Dual 2 Ohm Shallow Mount Car Subwoofer Instruction Manual

Model: VD-12 D2

Introduction Features Setup Operation Maintenance Troubleshooting Specifications Warranty Support

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your Skar Audio VD-12 D2 12-inch Dual 2 Ohm Shallow Mount Car Subwoofer. Please read this manual thoroughly before installation and use to ensure optimal performance and longevity of your product.



Image: The Skar Audio VD-12 D2 12-inch subwoofer, shown from an angled perspective, highlighting its shallow mount design and robust construction.

2. Key Features

- **Size:** 12-inch diameter
- **Voice Coil Configuration:** Dual 2 Ohm
- **Power Handling:** 800 Watts Peak Power, 500 Watts RMS Power
- **Design:** Shallow Mount for versatile installation
- **Cone Material:** High Performance Pressed Paper Cone
- **Surround:** Stitched to Premium Foam Surround
- **Sensitivity:** 86.7 dB
- **Frequency Response:** 25 Hz - 300 Hz
- **Mounting Depth:** 4.92 inches



Image: A graphic highlighting the Skar Audio VD-12 subwoofer with its key power ratings and shallow mount description.

3. Setup and Installation

Proper installation is crucial for the performance and safety of your subwoofer. If you are unsure about any steps, consult a professional car audio installer.

3.1. Safety Precautions

- Disconnect the vehicle's negative battery terminal before starting any electrical work.
- Wear appropriate safety gear, including eye protection.
- Ensure all wiring is properly insulated and secured to prevent shorts and damage.
- Do not mount the subwoofer in a location where it could obstruct vehicle operation or safety features.

3.2. Enclosure Requirements

The VD-12 D2 is designed for shallow mount applications. It requires a suitable enclosure for optimal sound reproduction. Refer to the specifications section for recommended enclosure volumes and dimensions. Ensure the enclosure is robust and sealed properly (for sealed enclosures) or ported correctly (for ported enclosures).



Image: A side profile of the Skar Audio VD-12 D2 subwoofer, illustrating its compact, shallow mounting depth.

3.3. Wiring the Subwoofer (Dual 2 Ohm)

The VD-12 D2 features dual 2 Ohm voice coils, offering flexibility in wiring configurations to match your amplifier's impedance requirements. Common configurations include:

- **1 Ohm Load (Parallel Wiring):** Connect the positive terminals of both voice coils together, and the negative terminals of both voice coils together. Then connect the combined positive to the amplifier's positive output and the combined negative to the amplifier's negative output. This configuration results in a 1 Ohm load.
- **4 Ohm Load (Series Wiring):** Connect the positive terminal of one voice coil to the negative terminal of the other voice coil. Then connect the remaining positive terminal to the amplifier's positive output and the remaining negative terminal to the amplifier's negative output. This configuration results in a 4 Ohm load.

Warning: Ensure your amplifier is stable at the chosen impedance load. Incorrect wiring can damage both the subwoofer and the amplifier.

3.4. Amplifier Selection

Select an amplifier that can provide between 300-500 Watts RMS at the impedance load you choose (1 Ohm or 4 Ohm). An amplifier with a dedicated low-pass filter and subsonic filter is recommended for optimal performance and protection.

4. Operating Guidelines

4.1. Break-in Period

Allow a break-in period of approximately 20-30 hours of normal listening before operating the subwoofer at high volumes. This allows the suspension components (surround and spider) to loosen up and reach their optimal compliance, improving performance and longevity.

4.2. Amplifier Settings

- **Gain Setting:** Set the amplifier gain correctly to match the output voltage of your head unit. Do not use the gain control as a volume knob; it should be set to prevent clipping (distortion).
- **Low-Pass Filter (LPF):** Set the LPF to filter out frequencies above the subwoofer's effective range, typically between 60 Hz and 100 Hz. This ensures the subwoofer only reproduces bass frequencies.
- **Subsonic Filter (HPF):** If available, set the subsonic filter to protect the subwoofer from playing frequencies below its resonant frequency (Fs), which can cause excessive excursion and damage. For the VD-12 D2 (Fs: 35.3 Hz), a setting around 25-30 Hz is often appropriate.
- **Bass Boost:** Use bass boost sparingly, if at all. Excessive bass boost can lead to clipping and damage.



Image: A graphic emphasizing the powerful, accurate, and deep bass tones produced by the Skar Audio VD-12 subwoofer.

5. Maintenance

The Skar Audio VD-12 D2 subwoofer requires minimal maintenance to ensure long-term performance.

- **Cleaning:** Periodically wipe the subwoofer cone and surround with a soft, dry cloth to remove dust and debris. Avoid using harsh chemicals or excessive moisture.
- **Inspection:** Regularly inspect the subwoofer for any signs of damage, such as tears in the surround, punctures in the cone, or loose connections. Address any issues promptly.
- **Environmental Protection:** Protect the subwoofer from extreme temperatures, direct sunlight, and moisture.

6. Troubleshooting

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

Problem	Possible Cause	Solution
No Sound from Subwoofer	◦ Amplifier not powered on ◦ Loose or incorrect wiring ◦ Blown fuse ◦ Amplifier in protect mode ◦ Head unit settings	◦ Check amplifier power and remote turn-on wire. ◦ Verify all power, ground, remote, and speaker wires are securely connected. ◦ Check and replace any blown fuses on the amplifier or power wire. ◦ Refer to amplifier manual for protect mode indicators and solutions. ◦ Ensure subwoofer output is enabled and volume is up on the head unit.

Problem	Possible Cause	Solution
Distorted Sound	◦ Amplifier gain set too high ◦ Incorrect LPF/HPF settings ◦ Overpowering the subwoofer ◦ Damaged subwoofer	◦ Reduce amplifier gain until distortion is eliminated. ◦ Adjust LPF and HPF settings as recommended in the Operating Guidelines. ◦ Ensure amplifier RMS output does not exceed subwoofer RMS rating. ◦ Inspect subwoofer for physical damage.
Weak or Muffled Bass	◦ Incorrect wiring impedance ◦ Improper enclosure ◦ Phase issues ◦ Low-pass filter set too low	◦ Verify wiring matches amplifier's stable impedance. ◦ Ensure enclosure volume and type are appropriate for the subwoofer. ◦ Check phase setting on amplifier or head unit. ◦ Increase LPF frequency slightly.

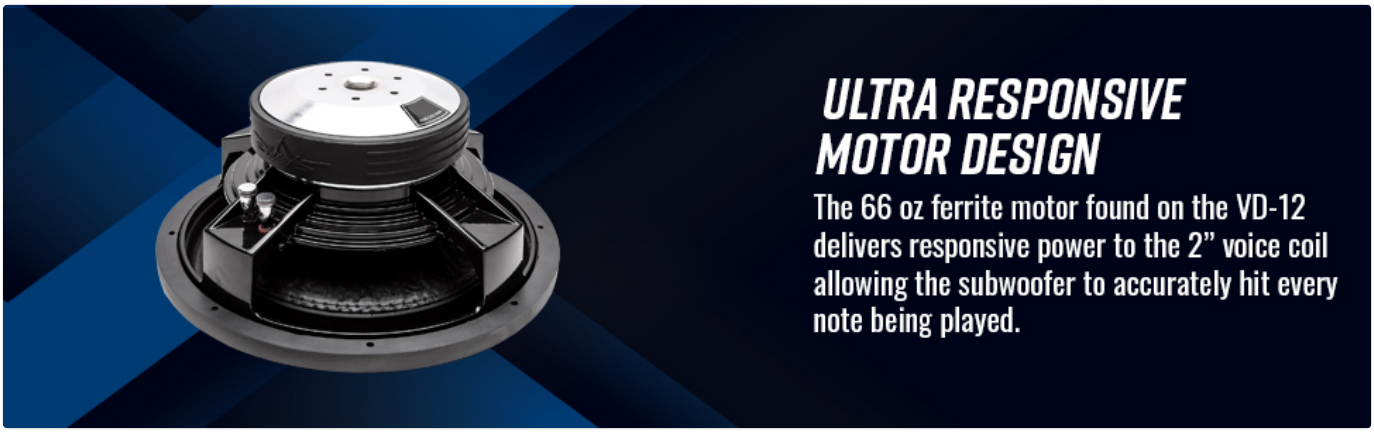


Image: A graphic highlighting the ultra-responsive motor design of the Skar Audio VD-12 subwoofer.

7. Technical Specifications

Feature	Detail
Model Name	VD-12 D2
Speaker Type	Subwoofer
Subwoofer Diameter	12 Inches
Peak Power	800 Watts
RMS Power	500 Watts
Impedance	Dual 2 Ohm
Mounting Type	Shallow Mount
Mounting Depth	4.92 inches
Sensitivity	86.7 dB
Fs (Resonant Frequency)	35.3 Hz
Frequency Response	25 Hz - 300 Hz
Product Dimensions	14"D x 14"W x 8"H
Item Weight	15 Pounds

Feature	Detail
Included Components	Skar Audio VD-12 D2 12-inch Dual 2 Ohm Subwoofer

8. Warranty Information

The Skar Audio VD-12 D2 subwoofer comes with a**2-year limited warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from improper installation, abuse, accident, neglect, unauthorized repair, or modification.
For warranty claims, please retain your proof of purchase and contact Skar Audio customer support.

9. Customer Support

For technical assistance, troubleshooting, or general inquiries regarding your Skar Audio product, please visit the official Skar Audio website or contact their customer support team.
Website: www.skaraudio.com
Contact Information: Refer to the "Contact Us" section on the Skar Audio website for phone numbers, email addresses, or online support forms.

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Question

Example: How do I reset this device or fix this error?

Details

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