Skar Audio EVL-12 D2

Skar Audio EVL-12 D2 Car Subwoofer Instruction Manual

Model: EVL-12 D2

Introduction and Overview

Thank you for choosing the Skar Audio EVL-12 D2 12-inch car subwoofer. This manual provides essential information for the proper installation, operation, and maintenance of your new subwoofer. Designed for high-performance car audio systems, the EVL-12 D2 delivers powerful and accurate bass reproduction.
Key features of the EVL-12 D2 include:

- **Peak Power:** 2,500 Watts | **RMS Power:** 1,250 Watts
- 3-inch High Temperature Dual 2-ohm Voice Coil with Black Coating
- Competition Grade Paper Cone & High Roll Foam Surround
- Premium Suspension Featuring the EVL Series Signature Red Two Layer Spider
- Deep, Low, Extremely Responsive Bass | **Sensitivity:** 85.1 dB
- **Frequency Response Range:** 25 Hz - 250 Hz | **Xmax:** 23.5 mm (one-way)



Figure 1: Skar Audio EVL-12 D2 12-inch Car Subwoofer.

Setup and Installation

Proper installation is crucial for the performance and longevity of your subwoofer. It is highly recommended that installation be performed by a qualified professional.

Enclosure Requirements:

The EVL-12 D2 is designed to perform optimally in a properly sized and constructed enclosure. Refer to the specifications section for recommended enclosure volumes and tuning frequencies. Ensure the enclosure is sealed and braced to prevent air leaks and vibrations.



Figure 2: Skar Audio EVL-12 D2 Subwoofer Dimensions. The subwoofer measures 14.5 inches in depth, 14.5 inches in width, and 11.5 inches in height.

Wiring Connections:

The EVL-12 D2 features a dual 2-ohm voice coil. This configuration allows for various wiring options to match your amplifier's impedance requirements. Common wiring configurations include:

- **1-ohm Load:** Wire the two 2-ohm voice coils in parallel.
- **4-ohm Load:** Wire the two 2-ohm voice coils in series.

Always ensure correct polarity (+ to + and - to -) to prevent phase issues and damage to the subwoofer or amplifier. Use high-quality speaker wire of appropriate gauge for the power levels involved.



Figure 3: Rear view of the Skar Audio EVL-12 D2 showing the dual voice coil terminals for wiring.

Amplifier Selection:

Select an amplifier that can provide sufficient RMS power (1,250 Watts) at the desired impedance load. An underpowered or overpowered amplifier can lead to damage. Ensure the amplifier has proper gain control and crossover settings.

Operating Guidelines

To achieve the best performance and ensure the longevity of your Skar Audio EVL-12 D2 subwoofer, follow these operating guidelines:

Break-in Period:

Allow for a break-in period of approximately 20-30 hours of normal listening before pushing the subwoofer to its limits. This allows the suspension components (surround and spider) to loosen up and reach their optimal compliance.

Gain Setting:

Properly set the gain on your amplifier. The gain knob is not a volume control; it matches the output voltage of your head unit to the input sensitivity of the amplifier. Setting the gain too high can lead to clipping, which is a major cause of subwoofer damage.

Crossover Settings:

Utilize the low-pass filter (LPF) on your amplifier or head unit to send only low frequencies to the subwoofer. A typical LPF setting for the EVL-12 D2 would be between 60 Hz and 80 Hz, with a slope of 12 dB or 24 dB per octave. Avoid sending

full-range audio signals to the subwoofer.

Subsonic Filter:

If your amplifier has a subsonic filter (also known as a high-pass filter for subwoofers), set it slightly below your enclosure's tuning frequency. This protects the subwoofer from playing frequencies too low for the enclosure, which can cause excessive excursion and damage.



Figure 4: Top view of the Skar Audio EVL-12 D2 subwoofer, showing the cone and surround.

Maintenance

The Skar Audio EVL-12 D2 subwoofer is built for durability, but regular maintenance can extend its lifespan and ensure consistent performance.

- **Cleaning:** Periodically wipe down the subwoofer cone and surround with a soft, dry cloth to remove dust and debris. Avoid using harsh chemicals or excessive moisture.

- **Connection Checks:** Regularly inspect all wiring connections to ensure they are secure and free from corrosion. Loose connections can lead to power loss or intermittent sound.
- **Environmental Factors:** Protect the subwoofer from extreme temperatures, direct sunlight, and excessive moisture. While designed for car environments, prolonged exposure to harsh conditions can degrade materials.
- **Enclosure Integrity:** Check your subwoofer enclosure periodically for any signs of damage, cracks, or air leaks. A compromised enclosure can negatively impact sound quality and subwoofer performance.



Figure 5: Side view of the Skar Audio EVL-12 D2, illustrating the durable construction.

Troubleshooting

If you experience issues with your Skar Audio EVL-12 D2 subwoofer, consult the following troubleshooting guide:

Problem	Possible Cause	Solution
No Sound from Subwoofer	◦ Loose or disconnected wiring ◦ Amplifier in protect mode or off ◦ Incorrect gain setting ◦ Blown fuse	◦ Check all power, ground, remote, and speaker wires. ◦ Verify amplifier power and status lights. ◦ Adjust amplifier gain properly. ◦ Check and replace amplifier or head unit fuses.

Problem	Possible Cause	Solution
Distorted Sound	◦ Amplifier gain set too high (clipping) ◦ Incorrect crossover settings ◦ Damaged subwoofer or voice coil ◦ Poor ground connection	◦ Reduce amplifier gain until distortion disappears. ◦ Adjust LPF and subsonic filter settings. ◦ Inspect subwoofer for physical damage. ◦ Ensure a clean, secure ground connection.
Subwoofer Overheating	◦ Underpowered amplifier (clipping) ◦ Improper enclosure volume ◦ Playing at excessive volumes for extended periods	◦ Ensure amplifier provides sufficient RMS power. ◦ Verify enclosure matches recommended specifications. ◦ Reduce listening volume.

If problems persist after attempting these solutions, please contact Skar Audio customer support or a certified car audio technician.

Specifications

Feature	Detail
Model Name	EVL-12 D2
Speaker Size	12 Inches
Peak Power	2500 Watts
RMS Power	1250 Watts
Impedance	Dual 2 Ohm
Frequency Response Range	25 Hz - 250 Hz
Sensitivity (Signal-to-Noise Ratio)	85.1 dB
Voice Coil Diameter	3 Inches
Xmax	23.5 mm (one-way)
Material	Paper Cone, Foam Surround
Product Dimensions (D x W x H)	14.5" x 14.5" x 11.5"
Item Weight	33.4 pounds (15.19 Kilograms)
UPC	767408281331

Warranty and Support

The Skar Audio EVL-12 D2 subwoofer comes with a **Limited Warranty**. Please refer to the warranty documentation included with your purchase for specific terms and conditions, including coverage duration and claim procedures.

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact Skar Audio customer support directly. You can find more information and contact details on the official Skar Audio website or their Amazon Brand Store:

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

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