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› [BLACK DIAMOND](#) /

› BLACK DIAMOND DIA-R12D2 12-inch Car Subwoofer Instruction Manual

BLACK DIAMOND DIA-R12D2

BLACK DIAMOND DIA-R12D2 12-inch Car Subwoofer

INSTRUCTION MANUAL

Product Overview

The BLACK DIAMOND DIA-R12D2 is a 12-inch car subwoofer designed to deliver powerful and clear low-frequency audio. This subwoofer features a robust construction and flexible wiring options to integrate seamlessly into various car audio systems. It is engineered for enthusiasts seeking impactful, distortion-free bass performance.



Image: Front view of the BLACK DIAMOND DIA-R12D2 12-inch Car Subwoofer.

Key Features:

- **Powerful Low-End Performance:** Delivers a wide frequency response from 20Hz to 300Hz for deep and accurate bass.
- **High Power Handling:** Rated for 600W RMS and 1200W maximum power, ensuring strong bass output.

- **Dual 2+2 Ohm Voice Coils (DVC):** Offers versatile wiring configurations for optimal amplifier matching.
- **2.5-inch Aluminum Voice Coil:** Designed for superior heat dissipation and durability during extended use.
- **Rugged Construction:** Features a strong ferrite magnet, reinforced black steel basket, and non-pressed paper cone with foam surround for longevity and consistent performance.

Setup and Installation

Proper installation is crucial for the optimal performance and longevity of your subwoofer. Ensure all connections are secure and impedance is matched correctly with your amplifier.

Mounting Dimensions:

- **Subwoofer Diameter:** 12 inches (304mm)
- **Overall Diameter:** 12.6 inches
- **Baffle Cutout Diameter:** 10.8 inches
- **Mounting Depth:** 6.6 inches (168mm)



Image: Side view of the subwoofer highlighting key dimensions and specifications.

Wiring Configurations (Dual Voice Coil):

The DIA-R12D2 features dual 2-ohm voice coils, offering flexibility in wiring to achieve different impedance loads for your amplifier. Common configurations include:

- **1-Ohm Load:** Wire both voice coils in parallel.
- **4-Ohm Load:** Wire both voice coils in series.

Consult your amplifier's specifications to determine the optimal impedance load for maximum power output and stability. The subwoofer is equipped with push-style terminals for secure wire connections.



Image: Angled view of the subwoofer showing the push-style terminals for wiring.

Unboxing and Initial Inspection:

For a visual guide on unboxing and initial inspection of the subwoofer, including a closer look at its features and terminals, please refer to the video below.

Video: Unboxing and detailed overview of the Black Diamond DIA-R12D2 subwoofer by Big Jeff Audio. This video demonstrates the physical features and discusses specifications.

Operating Instructions

Once installed, ensure your amplifier settings are correctly configured to match the subwoofer's capabilities and your desired audio output.

Power Handling:

The DIA-R12D2 is designed to handle 600 Watts RMS (Root Mean Square) and up to 1200 Watts Peak/Max power. It is recommended to use an amplifier that can provide sufficient RMS power without exceeding the subwoofer's limits to

prevent damage.

Frequency Response:

This subwoofer operates effectively within a frequency range of 20Hz to 300Hz. For optimal sound quality and to prevent distortion from higher frequencies, it is recommended to use a low-pass filter (LPF) set at approximately 80Hz on your amplifier.

Break-in Period:

Allow for a break-in period of several hours of moderate use before operating the subwoofer at high volumes. This allows the suspension components to loosen and perform optimally.

Maintenance

Regular maintenance helps ensure the longevity and performance of your subwoofer.

- **Cleaning:** Use a soft, dry cloth to clean the subwoofer cone and surround. Avoid using harsh chemicals or excessive moisture.
- **Enclosure Care:** Ensure the subwoofer enclosure is free from debris and moisture. A well-sealed enclosure protects the driver.
- **Ventilation:** The subwoofer features a vented design for voice coil cooling. Ensure adequate airflow around the magnet structure, especially if installed in a custom enclosure.
- **Connection Checks:** Periodically inspect wiring connections to ensure they remain tight and free from corrosion.

Troubleshooting

If you experience issues with your subwoofer, consider the following common troubleshooting steps:

- **No Sound:** Check all power and signal connections. Verify the amplifier is powered on and receiving a signal. Ensure the subwoofer is wired to the correct impedance for the amplifier.
- **Distorted Sound:** Reduce the amplifier gain or volume. Check for proper low-pass filter settings. Ensure the subwoofer is not over-powered or under-powered. Inspect the cone and surround for physical damage.
- **Weak Bass:** Verify amplifier settings, including gain and bass boost. Check wiring for correct polarity. Ensure the enclosure is properly sealed and sized for the subwoofer.
- **Overheating:** Ensure adequate ventilation around the subwoofer and amplifier. Check for proper impedance matching, as incorrect impedance can cause overheating.

If problems persist after checking these points, consult a professional car audio technician.

Specifications

Feature	Specification
Brand	BLACK DIAMOND
Model Name	DIA-R12D2
Speaker Type	Subwoofer
Subwoofer Diameter	12 Inches (304mm)
Speaker Maximum Output Power	1200 Watts (Peak)

Feature	Specification
RMS Power Handling	600 Watts
Impedance	Dual 2-Ohm (DVC)
Frequency Response	20Hz - 300Hz
Voice Coil Size	2.5 Inches (Aluminum)
Magnet Material	Ferrite
Magnet Weight	100 oz
Cone Material	Non-pressed paper
Surround Material	Foam
Basket Material	Reinforced Black Steel
Mounting Type	Car Mount
Mounting Depth	6.6 Inches (168mm)
Baffle Cutout Diameter	10.8 Inches
Overall Diameter	12.6 Inches
Product Dimensions (D x W x H)	7.75"D x 12.6"W x 12.6"H
Item Weight	16.72 pounds (7.6 Kilograms)
Color	Black
Connectivity Technology	Wired
Input Voltage	12 Volts
Is Waterproof	FALSE
Included Components	Subwoofer

Warranty and Support

The BLACK DIAMOND DIA-R12D2 subwoofer comes with a limited warranty. For specific details regarding warranty coverage, duration, and terms, please refer to the warranty information provided with your purchase or contact BLACK DIAMOND customer support.

For technical assistance, installation guidance, or any product-related inquiries, please reach out to the manufacturer's official support channels. Always provide your product model number (DIA-R12D2) and proof of purchase when seeking support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

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

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question