

[Manuals.plus](#) /

> [Nakamichi](#) /

> Nakamichi NS-W12D 12" 1200 Watts Car Audio Stereo Sub Woofer Dual 4-Ohm Voice Coil Ceramic Magnet with Protective Boot and Pole Venting Stereo Subwoofer

Nakamichi NS-W12D

Nakamichi NS-W12D Subwoofer User Manual

Model: NS-W12D

1. INTRODUCTION

Thank you for choosing the Nakamichi NS-W12D 12-inch Dual Voice Coil Subwoofer. This manual provides essential information for the proper installation, operation, and maintenance of your new subwoofer. Please read this manual thoroughly before attempting installation or use to ensure optimal performance and safety.

The NS-W12D is engineered to deliver powerful and accurate bass response, featuring a durable polypropylene cone, foam surround, and a robust ceramic magnet structure. It is designed for optimal performance in small sealed enclosures, making it a versatile choice for various car audio applications.

2. SAFETY INFORMATION

Always observe the following safety precautions when installing and operating the subwoofer:

- **Professional Installation Recommended:** Installation of car audio components can be complex. If you are unsure about any aspect of the installation, consult a qualified professional installer.
- **Disconnect Battery:** Before starting any wiring, disconnect the vehicle's negative battery terminal to prevent electrical shorts and damage.
- **Proper Wiring:** Ensure all wiring connections are secure and properly insulated to prevent short circuits and potential fire hazards. Use appropriate gauge wire for power and speaker connections.
- **Avoid Overpowering:** Do not exceed the subwoofer's maximum power handling capabilities (1200 Watts MAX / 120 Watts RMS) to prevent damage to the subwoofer and amplifier.
- **Secure Mounting:** Mount the subwoofer securely within its enclosure and ensure the enclosure is firmly secured within the vehicle to prevent movement during driving.
- **Ventilation:** Ensure adequate ventilation around the subwoofer and amplifier to prevent overheating.
- **Hearing Protection:** Prolonged exposure to high sound pressure levels can cause permanent hearing damage. Use caution when adjusting volume levels.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Nakamichi NS-W12D 12" Subwoofer
- User Manual (this document)
- Mounting Screws (if included by manufacturer)



Figure 3.1: Front angle view of the Nakamichi NS-W12D 12-inch Subwoofer, showcasing its black polypropylene cone and red Nakamichi logo.

4. KEY FEATURES

The Nakamichi NS-W12D subwoofer incorporates several design elements for superior performance:

- **12-inch Diameter:** Optimized for deep bass reproduction.
- **Dual 4-Ohm Voice Coils:** Offers flexible wiring configurations for various amplifier setups.

- **Polypropylene Cone Woofer:** Provides rigidity and durability for accurate sound reproduction.
- **Foam Surround with EVA Foam Rubber Gasket:** Ensures excellent excursion control and durability.
- **Ceramic Magnet with Protective Boot:** Delivers strong motor force for powerful bass and is protected from damage.
- **Pole Venting:** Helps dissipate heat from the voice coil, improving power handling and longevity.
- **High Power Handling:** Rated at 1200 Watts MAX and 120 Watts RMS.
- **Designed for Sealed Enclosures:** Optimized for compact sealed box applications.



Figure 4.1: Side view of the Nakamichi NS-W12D subwoofer, highlighting the robust ceramic magnet structure and the pole venting for heat dissipation.

5. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your subwoofer. It is highly recommended to have this unit installed by a qualified car audio professional.

5.1 Enclosure Requirements

The NS-W12D is designed to perform optimally in small sealed enclosures. Consult the specifications section for recommended enclosure volume. Ensure the enclosure is constructed from sturdy material (e.g., MDF) and is airtight to prevent air leaks that can degrade performance.

5.2 Wiring Configurations (Dual 4-Ohm Voice Coils)

The dual 4-ohm voice coils offer flexibility in wiring to match your amplifier's impedance requirements. Always verify your amplifier's stable impedance range before wiring.

- **1-Ohm Parallel Wiring:** Connect the positive terminals of both voice coils together, and the negative terminals of both voice coils together. Then connect these combined positive and negative terminals to the amplifier's output. This configuration presents a 1-ohm load to the amplifier.

- **8-Ohm Series Wiring:** Connect the positive terminal of one voice coil to the negative terminal of the other voice coil. Then connect the remaining positive and negative terminals to the amplifier's output. This configuration presents an 8-ohm load to the amplifier.



Figure 5.1: Close-up view of the Nakamichi NS-W12D subwoofer's dual voice coil terminals, ready for wiring connections.

5.3 Mounting the Subwoofer

1. Ensure the enclosure has a cutout of the correct diameter (refer to specifications).
2. Place the subwoofer into the cutout, ensuring the mounting holes align.
3. Secure the subwoofer using appropriate screws, tightening them evenly in a cross pattern to ensure a flush and secure fit. Do not overtighten.



Figure 5.2: Top-down view of the Nakamichi NS-W12D subwoofer, showing the mounting flange with screw holes for secure installation into an enclosure.

6. OPERATING YOUR SUBWOOFER

Once installed, proper tuning of your amplifier and head unit is essential for optimal sound quality and subwoofer longevity.

6.1 Amplifier Gain Setting

Set the amplifier gain carefully. Start with the gain at its minimum setting. Play a familiar track with strong bass. Slowly increase the gain until you hear distortion, then back it off slightly. The gain knob is not a volume control; it matches the amplifier's input sensitivity to the head unit's output voltage.

6.2 Crossover Settings

Use the low-pass filter (LPF) on your amplifier or head unit to ensure the subwoofer only plays low frequencies. A common starting point for the LPF is between 80 Hz and 100 Hz. Adjust this setting to blend seamlessly with your main speakers.

6.3 Bass Boost

If your amplifier has a bass boost feature, use it sparingly. Excessive bass boost can lead to distortion and damage the subwoofer. It is generally recommended to keep bass boost at or near zero.

7. MAINTENANCE

The Nakamichi NS-W12D subwoofer requires minimal maintenance to ensure long-term performance.

- **Cleaning:** Use a soft, dry cloth to wipe down the cone and surround. Avoid using harsh chemicals or abrasive cleaners.
- **Inspection:** Periodically inspect the subwoofer for any signs of damage to the cone, surround, or terminals. Ensure all mounting screws remain tight.
- **Environmental Factors:** Protect the subwoofer from extreme temperatures, direct sunlight, and moisture.

8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No Sound from Subwoofer	<ul style="list-style-type: none">◦ Amplifier not powered on◦ Loose or incorrect wiring◦ Blown fuse◦ Head unit settings	<ul style="list-style-type: none">◦ Check amplifier power, ground, and remote turn-on connections.◦ Verify all speaker and RCA connections are secure and correct.◦ Check fuses on amplifier and power wire.◦ Ensure subwoofer output is enabled and volume is up on head unit.
Distorted Sound	<ul style="list-style-type: none">◦ Amplifier gain set too high◦ Incorrect crossover settings◦ Overpowering subwoofer◦ Damaged subwoofer	<ul style="list-style-type: none">◦ Reduce amplifier gain.◦ Adjust LPF to appropriate frequency (e.g., 80-100 Hz).◦ Ensure amplifier RMS output matches subwoofer RMS rating.◦ Inspect subwoofer cone and surround for physical damage.
Weak Bass Output	<ul style="list-style-type: none">◦ Incorrect wiring impedance◦ Insufficient amplifier power◦ Enclosure issues	<ul style="list-style-type: none">◦ Verify voice coil wiring matches amplifier's stable impedance.◦ Ensure amplifier provides sufficient RMS power for the subwoofer.◦ Check enclosure for air leaks or incorrect volume.

9. SPECIFICATIONS

Technical specifications for the Nakamichi NS-W12D Subwoofer:

Feature	Specification
Speaker Type	Subwoofer

Feature	Specification
Subwoofer Diameter	12 Inches
Peak Power Handling	1200 Watts MAX
RMS Power Handling	120 Watts RMS
Impedance	Dual 4 Ohms
Frequency Response	40 Hz to 1,000 Hz
Sensitivity	90 dB at 1 watt/1 meter (± 3 dB)
Mounting Depth	5.28 inches (13.41 cm)
Cone Material	Polypropylene
Surround Material	Foam
Magnet Type	Ceramic
Product Dimensions	45 x 45 x 40 cm (approx. 17.7 x 17.7 x 15.7 inches)
Item Weight	2.7 kg (approx. 5.95 lbs)
Recommended Enclosure Type	Sealed Enclosures



Figure 9.1: Bottom view of the Nakamichi NS-W12D subwoofer, illustrating the ceramic magnet structure and the central pole venting for thermal management.

10. WARRANTY AND SUPPORT

Nakamichi products are designed and manufactured to the highest quality standards. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Nakamichi website. Keep your purchase receipt as proof of purchase for warranty claims.

For technical support, troubleshooting assistance beyond this manual, or service inquiries, please contact Nakamichi customer support through their official website or authorized service centers. You can typically find contact information on the Nakamichi website: www.nakamichicaraudio.com