

## Alpine X-W10D4

# Alpine X-W10D4 X-Series 10-inch Subwoofer Instruction Manual

Model: X-W10D4

## 1. OVERVIEW

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The Alpine X-W10D4 is a high-performance 10-inch subwoofer designed for car audio systems. Featuring dual 4-ohm voice coils, this subwoofer is engineered to deliver precise and powerful bass reproduction. It incorporates Alpine's 'Alpine ID' sound culture, focusing on spatial imaging and sound stage depth for an enhanced listening experience. This manual provides essential information for the proper installation, operation, and maintenance of your Alpine X-W10D4 subwoofer.



Figure 1: Front view of the Alpine X-W10D4 10-inch subwoofer.

## 2. KEY FEATURES

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- **900W RMS Power Handling:** Designed to pair effectively with high-power amplifiers, such as the X-Series X-A90M 900W mono amplifier.
- **24mm Linear Xmax (1-way):** Allows for significant cone excursion, contributing to deep and impactful bass.
- **Dual Spiders:** Provides precise control over the large dynamic range of the subwoofer's movement.
- **Dual Shorting Rings:** Ensures strong motor control, reducing total harmonic distortion (THD) and producing tight bass.
- **Center Pole Radial Heat Sink:** Efficiently dissipates heat from the voice coil, ensuring long-term high output and reliability.
- **HAMR Surround:** The High-Amplitude Multi-Roll surround allows for linear cone movement across its large excursion range.
- **Pulp/Mica Cone:** Light yet rigid cone material for accurate bass with natural tone.
- **Twist-lock Trim Ring with Full Mesh Grill:** Included for protection and a clean aesthetic.

### 3. SETUP AND INSTALLATION

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Proper installation is crucial for optimal performance and longevity of your subwoofer. It is highly recommended that installation be performed by a qualified professional. Ensure all connections are secure and correctly polarized to prevent damage to the subwoofer or amplifier.

#### 3.1 Wiring Connections

The X-W10D4 features dual 4-ohm voice coils, offering flexibility in wiring configurations (series or parallel) to achieve the desired impedance for your amplifier. Refer to your amplifier's specifications for compatible impedance loads.



Figure 2: Subwoofer terminal connections for series or parallel wiring.

- **Series Wiring:** Connect the positive terminal of VC1 to the negative terminal of VC2. Connect the remaining negative terminal of VC1 and positive terminal of VC2 to the amplifier. This results in an 8-ohm load.
- **Parallel Wiring:** Connect the positive terminals of VC1 and VC2 together. Connect the negative terminals of VC1 and VC2 together. Connect these combined positive and negative terminals to the amplifier. This results in a 2-ohm load.

#### 3.2 Enclosure Requirements

The performance of the subwoofer is highly dependent on the enclosure design. Consult Alpine's official documentation or a car audio specialist for recommended sealed or ported enclosure volumes and dimensions to achieve optimal sound quality and output.



Figure 3: Rear view of the Alpine X-W10D4 subwoofer, highlighting the robust motor structure.

## 4. OPERATING INSTRUCTIONS

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Once installed, proper tuning of your amplifier and head unit settings is essential for optimal subwoofer performance and system longevity.

- **Gain Setting:** Set the amplifier gain correctly to match the output voltage of your head unit. Avoid setting the gain too high, as this can lead to distortion and potential damage to the subwoofer.
- **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 a 10-inch subwoofer might be between 60Hz and 80Hz, but this can vary based on your full-range speakers and personal preference.
- **Subsonic Filter:** If your amplifier has a subsonic filter, engage it to protect the subwoofer from playing frequencies below its resonant frequency, which can cause excessive excursion and potential damage.
- **Break-in Period:** Allow for a break-in period of several hours of moderate listening before operating the subwoofer at its maximum capabilities. This allows the suspension components to loosen and perform optimally.

## 5. MAINTENANCE

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The Alpine X-W10D4 is designed for durability and requires minimal maintenance. Follow these guidelines to ensure its longevity:

- **Cleaning:** Use a soft, dry cloth to gently wipe away dust from the cone and surround. Avoid using harsh chemicals or excessive moisture.
- **Environmental Protection:** Ensure the subwoofer is installed in an environment protected from direct sunlight, extreme temperatures, and excessive moisture.
- **Inspection:** Periodically check wiring connections for tightness and inspect the subwoofer for any signs of physical damage.

## 6. TROUBLESHOOTING

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

- **No Sound:**
  - Check all power, ground, and remote turn-on connections to the amplifier.
  - Verify the RCA signal cables are securely connected to both the head unit and amplifier.
  - Ensure the amplifier is powered on (check its power indicator light).
  - Confirm the subwoofer wires are correctly connected to the amplifier terminals.
- **Distorted Sound:**
  - Reduce the amplifier gain setting.
  - Check the head unit's volume level and bass boost settings; avoid excessive boosting.
  - Ensure the LPF (low-pass filter) is set appropriately and not too high.
  - Inspect the subwoofer cone and surround for any physical damage.
- **Subwoofer Overheating:**
  - Ensure the amplifier's impedance load matches the subwoofer's wiring configuration.
  - Verify proper ventilation around the amplifier.
  - Reduce prolonged high-volume playback.

If these steps do not resolve the issue, consult a professional car audio technician or contact Alpine customer support.

## 7. SPECIFICATIONS

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Specification	Value
Model Number	X-W10D4
Speaker Type	Component Subwoofer
Subwoofer Diameter	10 Inches
Voice Coils	Dual 4-ohm
RMS Power Handling	900 Watts

Peak Power Handling	2700 Watts (estimated based on typical RMS to Peak ratio)
Frequency Response	24Hz - 200Hz
Linear Xmax (1-way)	24mm
Mounting Depth	6-3/4 Inches
Material	Aluminum (enclosure/frame)
Item Weight	30 Pounds
UPC	793276040497

## 8. WARRANTY INFORMATION

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The Alpine X-W10D4 subwoofer comes with a Limited Warranty. For specific details regarding warranty coverage, duration, and terms, please refer to the warranty card included with your product or visit the official Alpine website. Keep your proof of purchase for warranty claims.

## 9. SUPPORT

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For further assistance, technical support, or to find authorized service centers, please visit the official Alpine website at [www.alpine-usa.com](http://www.alpine-usa.com). You can also find additional resources, FAQs, and contact information there.