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Quantum Audio QWX400012D4

Quantum Audio X Series QWX400012D4 Subwoofer User Manual

Model: QWX400012D4

1. INTRODUCTION AND OVERVIEW

The Quantum Audio X Series QWX400012D4 is a high-performance 12-inch Dual Voice Coil (DVC) subwoofer designed to deliver powerful and accurate deep bass. Engineered with a focus on maximum excursion and durability, this subwoofer features a double-stitched high excursion foam surround, a die-cast aluminum vented basket, and a 2.5-inch high-temperature voice coil. Its robust construction and advanced design contribute to superior sound quality and long-term reliability.



Figure 1.1: Quantum Audio X Series QWX400012D4 Subwoofer (Angled View)

2. SAFETY INFORMATION

Please read all safety instructions carefully before installing and operating your subwoofer. Failure to follow these guidelines may result in injury or damage to the product or vehicle.

- **Power Handling:** This subwoofer is rated for up to 4000 watts maximum power. Ensure your amplifier is appropriately matched and does not exceed this rating to prevent damage.

- **Proper Wiring:** Always use appropriate gauge wiring for power, ground, and speaker connections. Incorrect wiring can lead to overheating and fire hazards.
- **Ventilation:** Ensure adequate ventilation around the subwoofer and amplifier to prevent overheating, especially during extended use.
- **Secure Mounting:** Mount the subwoofer securely in a suitable enclosure or location to prevent it from becoming a projectile during sudden stops or accidents.
- **Hearing Protection:** Prolonged exposure to high sound pressure levels can cause permanent hearing damage. Use caution when adjusting volume levels.
- **Professional Installation:** If you are unsure about any aspect of installation, consult a qualified car audio professional.

3. PACKAGE CONTENTS

Carefully unpack your Quantum Audio QWX400012D4 subwoofer and check for any signs of damage. The package should contain the following items:

- Quantum Audio X Series QWX400012D4 12-inch Subwoofer (1 unit)

If any items are missing or damaged, please contact your dealer or Quantum Audio customer support immediately.

4. FEATURES

The Quantum Audio QWX400012D4 subwoofer incorporates several key features designed for optimal performance and durability:

- **Ground-Shaking Bass Design:** Engineered to produce deep, impactful bass frequencies.
- **Max Excursion and Durability:** Features a double-stitched high excursion foam surround and a die-cast aluminum vented basket for maximum cone movement and structural integrity.
- **Power Handling Up to 4000 Watts (Maximum):** Capable of handling significant power for high-output audio systems.
- **Rugged Stylish Look:** Protective magnet cover and overall design provide a robust and aesthetically pleasing appearance.
- **12-inch Size:** Standard size for versatile installation in various vehicle types and enclosures.
- **2.5-inch High-Temperature Voice Coil:** Designed to withstand high power levels and prolonged use without thermal breakdown.
- **Compressed Paper Cone:** Known for its ability to produce clear and accurate bass tones.
- **Proprietary Full Round PVC Gasket:** Ensures a secure seal when mounted.
- **Heavy-Gauge Spring Terminals:** Provide reliable and secure electrical connections.



Figure 4.1: Top View of Subwoofer Cone and Surround



Figure 4.2: Subwoofer Magnet and Model Label

5. SETUP

Proper setup is crucial for optimal performance and longevity of your subwoofer. Follow these general guidelines:

5.1 Enclosure Selection

The QWX400012D4 is designed to perform well in both sealed and ported enclosures. Consult a car audio specialist or use a reputable enclosure design software to determine the ideal enclosure volume and port tuning frequency for your specific application and desired sound characteristics.

5.2 Mounting

Mount the subwoofer securely within the chosen enclosure. Ensure that the mounting holes align perfectly and use appropriate screws to fasten the subwoofer to the enclosure baffle. Avoid overtightening, which can strip screws or damage the subwoofer frame.

5.3 Wiring Connections

The QWX400012D4 is a Dual Voice Coil (DVC) 4-ohm subwoofer. This allows for various wiring configurations to achieve different impedance loads at the amplifier. Common configurations include:

- **Parallel Wiring (2 ohms):** Connect the positive terminals of both voice coils together, and the negative terminals of both voice coils together. Then connect these combined terminals to the amplifier. This configuration presents a 2-ohm load.
- **Series Wiring (8 ohms):** 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. This configuration presents an 8-ohm load.

Always ensure correct polarity (+ to + and - to -) to prevent phase issues. Use heavy-gauge speaker wire (e.g., 12-gauge or 10-gauge) for optimal power transfer.



Figure 5.1: Subwoofer Terminals for Wiring

5.4 Amplifier Matching

Select an amplifier that can provide sufficient power to the subwoofer without clipping. While the subwoofer can handle up to 4000 watts maximum, it is recommended to use an amplifier that provides RMS power within the subwoofer's continuous power handling capabilities (not explicitly stated in provided data, but typically lower than max). Ensure the amplifier's impedance output matches the subwoofer's wired impedance load.

6. OPERATING

Once installed, follow these guidelines for operating your Quantum Audio subwoofer:

6.1 Break-In Period

Allow 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, improving performance and longevity.

6.2 Amplifier Gain and Crossover Settings

Properly set your amplifier's gain (input sensitivity) to match the output voltage of your head unit. Avoid setting the gain too high, as this can lead to clipping and damage the subwoofer. Utilize the low-pass filter (LPF) on your amplifier or head unit to send only bass frequencies to the subwoofer, typically set between 60Hz and 100Hz, depending on your system and preferences.

6.3 Listening Levels

While the QWX400012D4 is designed for high output, avoid prolonged listening at extremely high volumes that cause audible distortion or excessive excursion. If you hear distortion, reduce the volume immediately.

7. SPECIFICATIONS

Detailed technical specifications for the Quantum Audio X Series QWX400012D4 Subwoofer:

Specification	Value
Model Name	Subwoofer
Item Model Number	QWX400012D4
Speaker Type	Subwoofer
Subwoofer Diameter	12 Inches
Speaker Maximum Output Power	4000 Watts (Maximum)
Voice Coil Configuration	Dual Voice Coil (DVC)
Voice Coil Impedance	4 Ohm per coil
Connectivity Technology	Wired
Item Weight	18.96 pounds
Product Dimensions	6.1 x 11.14 x 12.48 inches
Manufacturer	Quantum Audio
Mounting Type	Flush Mount

8. MAINTENANCE

To ensure the longevity and continued performance of your subwoofer, follow these simple maintenance tips:

- **Cleaning:** Use a soft, dry cloth to wipe down the subwoofer cone and surround. Avoid using harsh chemicals or abrasive cleaners.

- **Inspection:** Periodically inspect the speaker terminals and wiring for any signs of corrosion or loose connections.
- **Environmental Protection:** Protect the subwoofer from extreme temperatures, direct sunlight, and moisture.
- **Avoid Punctures:** Be careful not to puncture or tear the cone or surround, as this will significantly degrade performance.

9. TROUBLESHOOTING

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

- **No Sound:**
 - Check all wiring connections (power, ground, remote, speaker) at both the amplifier and the subwoofer.
 - Verify the amplifier is powered on (check power indicator light).
 - Check fuses on the amplifier and power wire.
 - Ensure the head unit is sending an audio signal to the amplifier.
- **Distorted Sound:**
 - Reduce the amplifier gain setting.
 - Check for proper low-pass filter (LPF) settings on the amplifier or head unit.
 - Ensure the subwoofer is not over-driven (reduce volume).
 - Check for loose mounting or enclosure rattles.
- **Weak Bass Output:**
 - Verify correct wiring impedance match between subwoofer and amplifier.
 - Check amplifier gain settings.
 - Ensure proper phase (polarity) of the subwoofer wiring.
 - Confirm the enclosure volume and tuning are appropriate for the subwoofer.
- **Subwoofer Overheating:**
 - Ensure adequate ventilation around the subwoofer and amplifier.
 - Check for amplifier clipping (distortion).
 - Verify the amplifier's power output is not excessive for the subwoofer's rating.

If the problem persists after attempting these solutions, contact Quantum Audio customer support or a qualified car audio technician.






10. WARRANTY AND SUPPORT

The Quantum Audio X Series QWX400012D4 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 Quantum Audio website. Keep your proof of purchase for warranty claims.

Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact Quantum Audio customer support through their official website or the contact information provided with your purchase.

Related Documents - QWX400012D4

	<p>JBL Bar 2.1 Deep Bass Quick Start Guide</p> <p>Get started quickly with your JBL Bar 2.1 Deep Bass soundbar system. This guide provides essential setup and connection information for an enhanced audio experience.</p>
	<p>DS18 SRW8.4D 8-Inch Shallow Subwoofer Owner's Manual</p> <p>This manual provides specifications, installation guidelines, and enclosure recommendations for the DS18 SRW8.4D 8-inch shallow subwoofer. Learn about its motor, Thiele & Small parameters, and recommended box dimensions for both sealed and ported enclosures.</p>
	<p>JBL Bar 2.1 Deep Bass Soundbar System: Owner's Manual and Setup Guide</p> <p>Comprehensive owner's manual for the JBL Bar 2.1 Deep Bass soundbar system, covering setup, connections, features, troubleshooting, and specifications.</p>
	<p>Nakamichi NSW-P1206D4 12" DVC Subwoofer User Manual</p> <p>User manual for the Nakamichi NSW-P1206D4 12" Dual Voice Coil Subwoofer, covering installation, safety warnings, troubleshooting, accessory list, and specifications.</p>
	<p>Nakamichi NSW-J1204D4 12" DVC Subwoofer User Manual</p> <p>User manual for the Nakamichi NSW-J1204D4 12-inch Dual Voice Coil Subwoofer, covering installation, safety, troubleshooting, specifications, and wiring.</p>

Sub Mini



Overview

The compact wireless subwoofer for bold bass.

- Compact design with a sleek, modern look.
- Deep bass reproduction with a powerful driver.
- Wireless connectivity for easy setup.
- Adjustable bass level for personalized sound.
- Sleek design that blends seamlessly with your decor.

Controls and buttons

[Sonos Sub Mini: Compact Wireless Subwoofer for Bold Bass](#)

Explore the Sonos Sub Mini, a compact wireless subwoofer designed to enhance your audio experience with deep bass. This guide covers its features, setup, specifications, and important safety information.