

Dayton Audio XO2W-2.5K

Dayton Audio XO2W-2.5K 2-Way Speaker Crossover User Manual

Model: XO2W-2.5K

INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Dayton Audio XO2W-2.5K 2-Way Speaker Crossover. Please read these instructions carefully before use to ensure optimal performance and longevity of the product.

The Dayton Audio XO2W-2.5K is a passive 2-way speaker crossover designed to separate audio frequencies, directing low frequencies to a woofer and high frequencies to a tweeter. It features a 2,500 Hz crossover point and a 12 dB/octave Linkwitz-Riley alignment for precise frequency division.

SETUP AND INSTALLATION

The XO2W-2.5K crossover is designed for integration into 2-way speaker systems. Follow these steps for proper installation:

- Mounting:** The crossover board measures 6-1/2" W x 4-1/4" H x 1-3/8" D. It features eyelet holes for easy mounting within your speaker enclosure. Ensure the board is securely fastened to prevent buzzing or vibrations during operation.
- Wiring Connections:** Identify the input and output terminals on the crossover board. The board is clearly marked for input (+ IN -), woofer output (+ W -), and tweeter output (+ T -).
- Input Connection:** Connect the full-range audio signal from your amplifier to the '+ IN -' terminals.
- Woofer Connection:** Connect your woofer to the '+ W -' terminals. The low-pass section of this crossover supports both 4 ohm and 8 ohm woofers, offering flexibility for various speaker designs, including D'Appolito style or multi-woofer 2-way systems.
- Tweeter Connection:** Connect your tweeter to the '+ T -' terminals. The high-pass crossover frequency is rated for an 8 ohm load.
- Inductors and Capacitors:** The crossover utilizes 18 gauge inductors to minimize DC resistance and metallized polyester film capacitors in both high and low pass sections for reliable performance.



Image: The Dayton Audio XO2W-2.5K speaker crossover board, showing input, woofer, and tweeter terminals, along with inductors and capacitors. The board is blue with white markings.

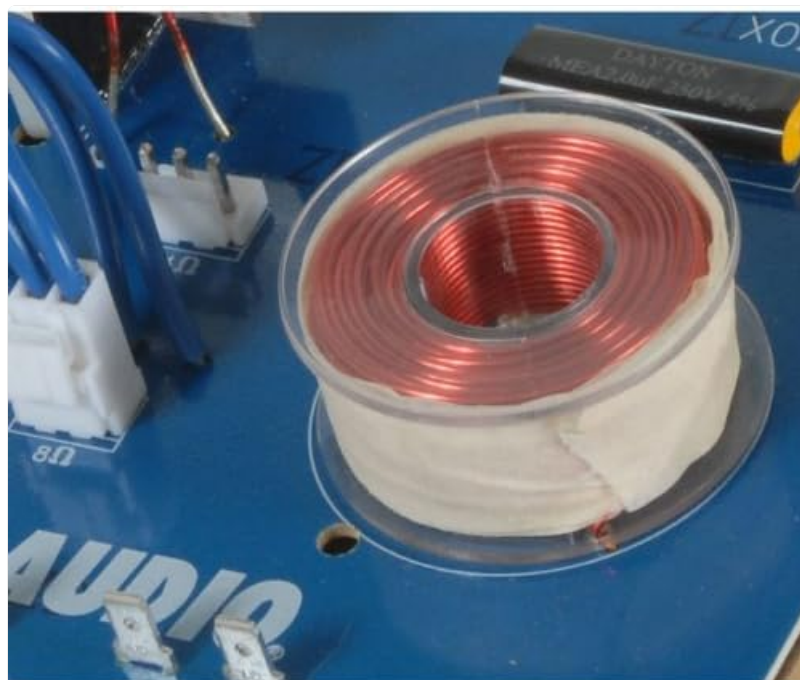


Image: A close-up view of a red inductor coil on the Dayton Audio XO2W-2.5K crossover board, highlighting the component quality.

OPERATION

The Dayton Audio XO2W-2.5K is a passive component and does not require external power or user adjustments during operation. Once correctly installed and wired into your speaker system, it automatically performs its function of frequency division.

- It directs frequencies below 2,500 Hz to the connected woofer.

- It directs frequencies above 2,500 Hz to the connected tweeter.
- The 12 dB/octave Linkwitz-Riley alignment ensures a smooth transition between the woofer and tweeter, minimizing phase distortion at the crossover point.

Ensure that the power handling of your speakers and amplifier are compatible with the crossover's 300W power handling capacity.

MAINTENANCE

The XO2W-2.5K crossover requires minimal maintenance. Follow these guidelines to ensure its longevity:

- **Cleaning:** If the crossover board becomes dusty, gently wipe it with a dry, soft cloth. Avoid using liquid cleaners or solvents, as these can damage components.
- **Environment:** Install the crossover in a dry environment, away from excessive heat, humidity, and direct sunlight.
- **Connections:** Periodically check all wiring connections to ensure they remain secure. Loose connections can lead to signal loss or intermittent sound.
- **Physical Inspection:** Occasionally inspect the board for any signs of physical damage or loose components. All components are glued or fastened down during manufacturing to prevent issues.

TROUBLESHOOTING

If you encounter issues with your speaker system after installing the XO2W-2.5K crossover, consider the following:

- **No Sound or Distorted Audio:**
 - Verify all wiring connections are correct and secure at the amplifier, crossover, woofer, and tweeter.
 - Ensure the impedance of your woofer (4 or 8 ohms) and tweeter (8 ohms) is compatible with the crossover's design.
 - Check the amplifier's output and speaker cables for damage.
- **Buzzing or Vibrations:**
 - Confirm that the crossover board is firmly mounted within the speaker enclosure and that all components are securely attached to the board.
 - Check for any loose wires or components that might be vibrating against the enclosure.
- **Imbalanced Sound:**
 - Ensure that both crossovers (if using a stereo pair) are wired identically and correctly.
 - Verify that the woofer and tweeter are functioning correctly independently.

If problems persist, consult a qualified audio technician.

SPECIFICATIONS

Feature	Detail
Model Number	XO2W-2.5K
Brand	Dayton Audio

Crossover Type	2-Way Passive
Crossover Frequency	2,500 Hz
Slope	12 dB/octave Linkwitz-Riley
Power Handling	300W
Woofer Impedance Compatibility	4 or 8 Ohms
Tweeter Impedance Compatibility	8 Ohms
Inductors	18 gauge
Capacitors	Metallized polyester film
Material	Printed Circuit Board (PCB)
Product Dimensions (D x W x H)	1.38" x 6.5" x 4.25"
Item Weight	13.4 ounces
UPC	844632045141
ASIN	B0002ZPLAW

WARRANTY INFORMATION

The Dayton Audio XO2W-2.5K Speaker Crossover comes with the following warranty:

- **Parts:** 5 Years
- **Labor:** 5 Years

This limited warranty covers defects in materials and workmanship under normal use. For specific terms and conditions, please refer to the official Dayton Audio warranty policy or contact customer support.

CUSTOMER SUPPORT

For further assistance, technical support, or inquiries regarding your Dayton Audio XO2W-2.5K speaker crossover, please visit the official Dayton Audio website or contact their customer service department. You can also find more information and products from Dayton Audio by visiting their store on Amazon [Dayton Audio Store](#)