Dayton Audio DMA80-8

Dayton Audio DMA80-8 3-inch Full-Range Driver Instruction Manual

Model: DMA80-8

1. Introduction

The Dayton Audio DMA80-8 is a 3-inch dual magnet aluminum cone full-range driver designed for high-performance audio applications. This driver features an 8 Ohm impedance, a rigid aluminum cone, a powerful dual neodymium motor, and a proprietary open frame. It is engineered to deliver low distortion, natural frequency response, and excellent high-frequency capability, making it suitable for smart speakers, portable Bluetooth speakers, and line array designs.

2. Product Features

- **Excellent High Frequency Response:** Designed for true full-range applications, providing clear and detailed treble.
- **Dual Neodymium Motor:** Creates a symmetrical magnetic field for precise control and improved audio fidelity.
- **Large Copper Cap:** Reduces distortion and enhances high-frequency performance.
- **Vented Aluminum Voice Coil Former:** Ensures exceptional heat dissipation, contributing to high power handling and reliability.
- **Exclusive 12-Spoke Open Frame Design:** Provides extensive venting and minimizes reflections for cleaner sound reproduction.

3. Specifications

Model Name	DMA80-8
Brand	Dayton Audio
Speaker Type	Full-Range
Material	Aluminum
Impedance	8 Ohms

Speaker Size	3 Inches
Maximum Output Power	600 Watts
Product Dimensions	3.94 x 3.46 x 2.2 inches
Item Weight	6.1 ounces
Included Components	1 x Speaker

4. Setup and Installation

Proper installation is crucial for optimal performance and longevity of your Dayton Audio DMA80-8 driver. This driver is intended for integration into custom speaker enclosures or existing systems.

4.1 Unpacking

Carefully remove the driver from its packaging. Inspect for any signs of damage during transit. Retain packaging for future transport or storage.

4.2 Mounting

The DMA80-8 driver is designed for freestanding mounting within a speaker enclosure. Ensure the mounting surface is rigid and provides a secure fit. Use appropriate screws (not included) to fasten the driver to the baffle. Avoid overtightening, which can warp the frame.



Image: Front view of the Dayton Audio DMA80-8 driver, showing the aluminum cone and mounting holes.

4.3 Wiring Connections

Connect the speaker wires from your amplifier or crossover network to the terminals on the back of the DMA80-8 driver. Observe correct polarity: the positive (+) terminal on the driver should connect to the positive output of your amplifier/crossover, and the negative (-) terminal to the negative output. Incorrect polarity can lead to phase issues and degraded sound quality.



Image: Rear view of the Dayton Audio DMA80-8 driver, highlighting the connection terminals.



Image: Close-up of testing leads connected to a speaker driver's terminals, demonstrating proper connection points.

4.4 System Integration

The DMA80-8 is an 8 Ohm driver. Ensure your amplifier or crossover network is compatible with this impedance. For multi-driver systems, proper crossover design is essential to allocate appropriate frequency ranges to the DMA80-8 and other drivers (e.g., woofers, tweeters).

5. Operation

The Dayton Audio DMA80-8 is a passive component and does not have user-operable controls. Its operation is entirely dependent on the audio signal provided by your amplifier and the acoustic environment of its enclosure. Once properly installed and connected, the driver will reproduce sound according to the input signal.

5.1 Break-in Period

Like many new speaker drivers, the DMA80-8 may benefit from a break-in period. During this time, the suspension components (surround and spider) will loosen, allowing the driver to achieve its full performance potential. Play music at moderate volumes for several hours to allow the driver to break in naturally.

5.2 Power Handling

The driver has a maximum output power of 600 Watts. While it can handle significant power, avoid prolonged operation at extremely high volumes that cause audible distortion, as this can damage the voice coil.

6. Maintenance

The Dayton Audio DMA80-8 driver requires minimal maintenance to ensure long-term performance.

- **Cleaning:** Use a soft, dry cloth to gently wipe away dust from the cone and frame. Avoid using liquids or harsh chemicals, which can damage the cone material or surround.
- **Environmental Conditions:** Keep the driver in a dry environment, away from direct sunlight, extreme temperatures, and excessive humidity. While the product description mentions 'Portable' as a special feature, it is not waterproof.
- **Physical Protection:** Protect the cone from physical impact or punctures. If the driver is exposed, consider using a protective grille.

7. Troubleshooting

If you encounter issues with your DMA80-8 driver, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No sound from driver	• Loose or incorrect wiring connection • Faulty amplifier or audio source • Damaged driver	• Check all wiring connections for proper polarity and secure contact. • Test with a different amplifier or audio source. • Inspect the driver cone and voice coil for visible damage.
Distorted sound	• Overpowering the driver • Incorrect impedance matching • Damaged voice coil or suspension • Poor enclosure design	• Reduce volume or amplifier gain. • Ensure amplifier impedance matches driver (8 Ohms). • Inspect driver for physical damage. • Verify enclosure design and sealing.
Intermittent sound	• Loose wiring connection • Intermittent signal from source	• Re-check and secure all wiring connections. • Test with a different audio source and cables.

If troubleshooting steps do not resolve the issue, contact Dayton Audio customer support for further assistance.

8. Warranty and Support

The Dayton Audio DMA80-8 driver comes with a Full Warranty. For specific details regarding warranty coverage, duration, and claims, please refer to the official Dayton Audio warranty policy available on their website or contact their customer service department.

For technical support, product inquiries, or warranty service, please visit the official Dayton Audio website or contact their customer support team directly. Provide your product model number (DMA80-8) and any relevant purchase information when seeking assistance.