

uxcell a19051000ux0446

uxcell 57mm Bass Speaker Passive Radiator (Model a19051000ux0446) Instruction Manual

Enhancing Subwoofer Performance

INTRODUCTION

This manual provides essential information for the installation, function, and maintenance of your uxcell 57mm Bass Speaker Passive Radiators. These components are designed to enhance the low-frequency response of your subwoofer system by replacing traditional ported designs.

PRODUCT FEATURES

- Functions as a "drone cone" for replacing inverted tubes or traditional back subwoofers.
- Utilizes trapped sound within the enclosure to excite resonance, facilitating deeper bass pitches.
- Eliminates air turbulence noise common with ported designs at high volumes.
- Prevents high frequencies from reflecting out of a port.
- Operates in conjunction with the active driver at low frequencies, sharing the acoustic load and reducing driver excursion.
- Acts similarly to a vent, contributing to acoustic output.

SPECIFICATIONS

Attribute	Value
Model Name	a19051000ux0446
Material	Rubber, Iron (metal plate at the middle)
Color	Black
Outer Diameter	57mm (2.24 inches)
Inner Diameter	35mm

Attribute	Value
Height	5mm (0.2 inches)
Number of Items	4
Item Weight	2.08 ounces (for the set)

SETUP AND INSTALLATION

Passive radiators are used in speaker enclosures to augment bass response. Proper installation is crucial for optimal performance.

- 1. Enclosure Design:** Ensure your speaker enclosure is designed to accommodate passive radiators. These units are typically used to replace a traditional bass reflex port or to enhance a sealed enclosure.
- 2. Opening Size:** The mounting hole for the passive radiator must precisely match its outer diameter (57mm or 2.24 inches). An exact fit is critical for proper movement and sealing. If the opening is not precise, the radiator may not move correctly, affecting bass performance.
- 3. Mounting:** Secure the passive radiator firmly to the enclosure using appropriate fasteners (not included). Ensure a tight seal around the perimeter to prevent air leaks, which can degrade performance.
- 4. Tuning:** Passive radiators require tuning to the specific active driver and enclosure volume. This often involves adding or removing mass from the radiator's diaphragm (if applicable, this model has a metal plate in the middle for potential mass adjustment, though specific instructions for this are not provided). Consult speaker design resources for detailed tuning procedures.



Image 1: A set of four uxcell 57mm Bass Speaker Passive Radiators. These black, circular units feature a rubber surround and a central diaphragm, designed to enhance low-frequency sound reproduction in speaker systems.



Image 2: A single uxcell 57mm Bass Speaker Passive Radiator, highlighting its 57mm outer diameter. This image provides a clear view of the unit's construction, including the mounting holes and the central diaphragm.

OPERATING PRINCIPLES

Unlike active drivers, passive radiators do not have a voice coil or magnet and are not directly connected to an amplifier. Their "operation" is purely mechanical, driven by the air pressure changes within the speaker enclosure created by the active subwoofer driver.

- When the active driver moves inward, it compresses the air inside the enclosure, pushing the passive radiator outward.
- When the active driver moves outward, it creates a vacuum, pulling the passive radiator inward.
- This sympathetic movement of the passive radiator generates additional low-frequency sound waves, effectively extending the bass response of the system without requiring additional amplifier power or a port that can produce chuffing noise.

MAINTENANCE

The uxcell passive radiators are designed for durability and require minimal maintenance.

- **Cleaning:** Periodically inspect the rubber surround and diaphragm for dust or debris. Clean gently with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials.
- **Inspection:** Check for any signs of damage to the rubber surround, such as cracks or tears, which could affect performance. Ensure all mounting screws remain tight.
- **Environment:** Store and operate the radiators in a clean, dry environment, away from direct sunlight and extreme temperatures, to prolong their lifespan.

TROUBLESHOOTING

If you experience issues with your passive radiator setup, consider the following:

- **Weak Bass Response:**
 - *Improper Tuning:* The passive radiator may not be correctly tuned for the active driver and enclosure. Adjusting the mass of the radiator (if possible) or re-evaluating the enclosure volume may be necessary.
 - *Air Leaks:* Check for any air leaks around the mounting points of the passive radiator or other parts of the enclosure. Even small leaks can significantly reduce performance.
- **Distorted Sound / Rattling:**
 - *Loose Mounting:* Ensure the passive radiator is securely mounted and all screws are tightened.
 - *Obstruction:* Check if anything is obstructing the free movement of the passive radiator's diaphragm.
 - *Over-excursion:* The passive radiator might be moving beyond its intended limits, possibly due to incorrect tuning or excessive power to the active driver.
- **No Improvement in Bass:**
 - *Incorrect Sizing:* Verify that the passive radiator's size and specifications are appropriate for your active driver and enclosure volume.
 - *Installation Errors:* Double-check all installation steps, especially the precision of the mounting hole and sealing.

SUPPORT

For further assistance or inquiries regarding your uxcell passive radiators, please refer to the uxcell official website or contact their customer support directly. Please have your model number (a19051000ux0446) available when seeking support.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question