

O W N E R ' S M A N U A L



PARASOUND

PAL-245 Precision Architectural Loudspeakers

Introduction

Congratulations on your purchase of your PAL-245 Precision Architectural Loudspeaker system and thank you for choosing Parasound. The PAL-245 Precision Architectural Loudspeakers were developed using the finest loudspeaker and crossover components available. Countless hours of computer modeling were spent to insure accurate audio reproduction in a variety of installations where placement compromises must sometimes be made. The PAL-245 Precision Architectural Loudspeakers mounted in your walls deliver the high-fidelity audio reproduction you have come to expect from high-end loudspeakers in a cabinet. Please take a few minutes to read these instructions thoroughly to make the installation easier and insure the best performance of your new PAL-245 Precision Architectural Loudspeakers.

Unpacking and Inspection

Carefully unpack your PAL-245 loudspeakers locate the enclosed accessories:

<u>Qty</u>	<u>Description</u>
2	PAL-245 baffle and loudspeaker assembly
2	Metal grilles
2	Foam grille inserts
2	Paint Shields

Be sure to carefully inspect the speakers for any signs of shipping damage. If you believe you notice any, contact your Parasound Dealer immediately.

Precautions

If you have any doubts about your ability to properly install in-wall loudspeakers, you should consider the services of a custom installer. If you plan to install them yourself, always use good quality tools to save time and make the installation go more smoothly.

The PAL-245 Precision Architectural Loudspeakers mount into standard 4 inch (or greater) stud depth walls. Determine the final location of both left and right speakers before cutting any holes since changes to one speaker may affect the other either aesthetically or acoustically. Look for pipes, wiring or any other conflicting material that might be damaged before beginning the installation.

Prewiring

Before you purchase loudspeaker wire, check local building codes to make sure that the wire is rated to comply with applicable local safety codes such as UL or CL-2. Use only stranded wire no thinner than AWG 16. For runs longer than 100 feet, we recommend minimum of AWG 14. When pulling wire, take care not to pull the wire too fast to prevent stretching the wire or scorching the insulation from friction. Leave 2 to 3 feet of excess loudspeaker wire at both ends; it is easier to trim off excess wire than to splice additional wire. When securing the wire inside the walls, be careful not to pierce the insulation with nails or staples.

For best performance and easier troubleshooting, always “home run” wiring when installing multiple speakers rather than connecting from one speaker to the next. When connecting multiple speakers, make sure that the power amplifier is capable of adequately driving the combined impedance of the speakers. If not, you may need additional amplifiers or an impedance protection device that are often built into loudspeaker selection boxes.

Installing the PAL-245 Precision Architectural Loudspeakers

1. Confirm that there is at least 1 1/2" of clearance between each edge of the planned cutout and adjacent studs or joints.
2. Fasten the supplied cardboard template to the wall or ceiling with tape or thumbtacks. Check again for equal distance of both speakers from the ceiling or floor.
3. Use a level or the included template's self-leveling feature to insure the cutout will be level.
4. Trace around the perimeter of the template.
5. Before making the final cutout, make a small 6-inch square “test cutout” in the center of the penciled outline. Reach inside the test hole to verify that there are no obstructions in the way of your planned cutout.
6. Before cutting the hole, first score the drywall with a razor knife and use a keyhole saw to complete the cut. Remove debris from the edge of the hole.
7. Secure the speaker wire to a stud near the cutout so its weight will not tug on the terminals of the speaker after it is connected. This also keeps the wire from dropping behind the wall before you can connect it.
8. Push down the tab on the speaker terminals and insert the speaker wire into the connector.
9. Insert the PAL-245 into the cutout to make sure it fits easily without forcing.
10. Evenly tighten the mounting screws on the bezel. The mounting “swing-arms” (also known as mounting “dogs”) will automatically swing out 90 degrees. After they swing out, the arms then clamp against the drywall from behind the wall. Avoid using excessive force to prevent deforming the drywall or cracking the speaker's mounting frame.
11. We recommend that you add a “blanket” of sound absorbing material such as ceiling insulation behind the woofer to reduce sound transmission into the adjoining room. Additionally, any sound leakage from behind the molded frame can be blocked with foam weather-stripping directly behind the plastic speaker bezel.

Pre-Drilled Hole for Infrared Receivers

The PAL-245 has a 1/2" hole in the bezel to accommodate an infrared receiver such as the Xantech Video Link model 490. The hole can be easily accessed by removing the rubber bushing from the rear of the bezel. If you plan to hide an infrared receiver behind the loudspeaker grille, be sure to pre-wire a three conductor control wire along with the speaker wire.

Fine Tuning the Frequency Response of Your Loudspeakers

High *Three Position Treble Adjustment*

- ^ The PAL-245 treble adjustment switch allows you to adjust the tweeter level from 0 dB (flat) to -3 dB or + 3 dB. If you are mounting the speaker in a “live” room with many reflective surfaces, you may want to attenuate the treble response and tame sibilance. If you are mounting the speaker in a room with many absorptive surfaces, you may want to boost the treble response.
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Mid *Two Position Mid-Bass Contour Adjustment*

- Ⓢ The PAL-245 mid adjustment switch allows you to attenuate the mid response from 0 dB (flat) to -3 dB. If you mounted the PAL-245 near a corner of a wall, you may notice additional boominess of the bass response. You can attenuate the mid-bass response by setting the mid switch to the -3 dB position.
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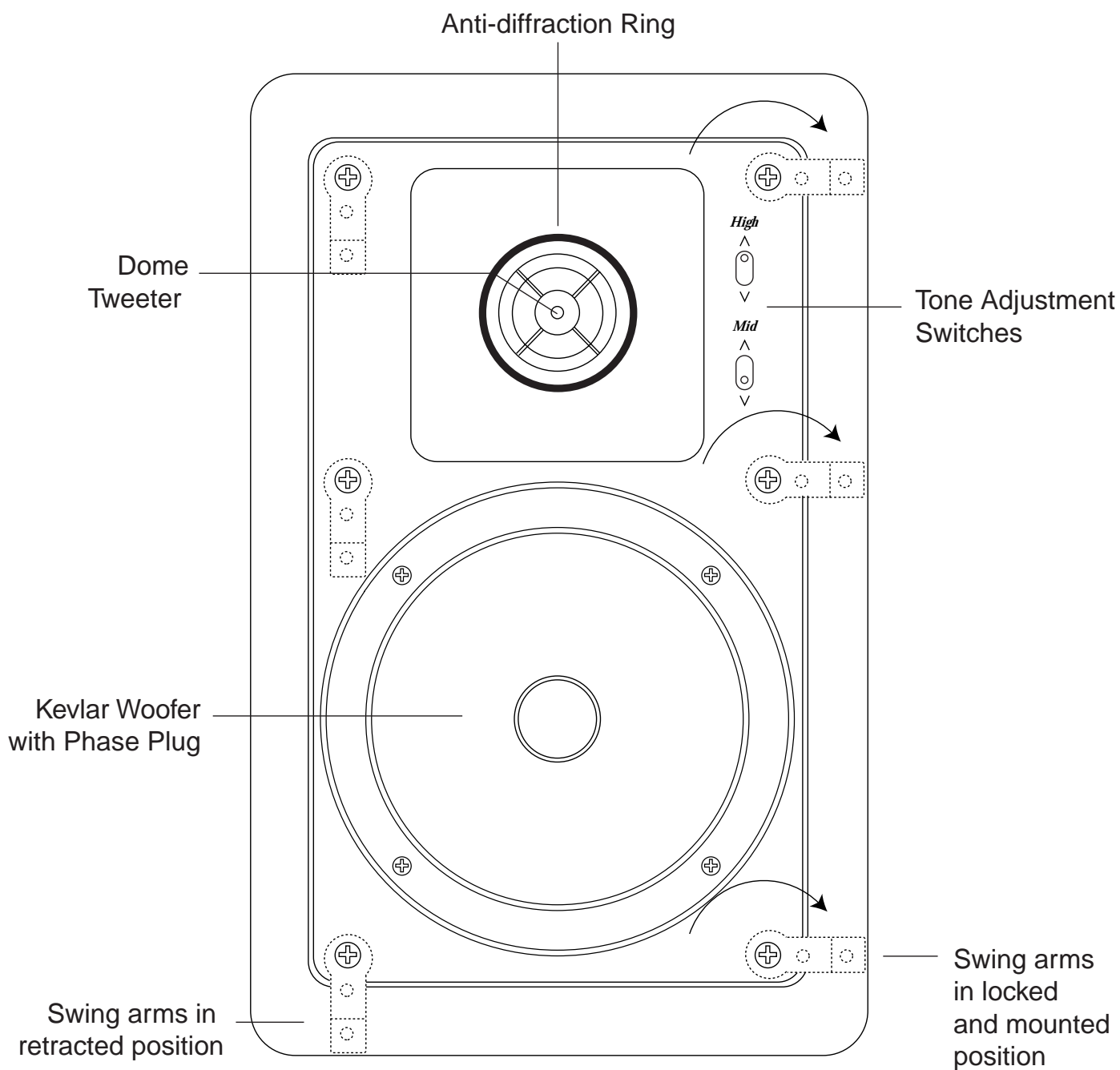
Installation Instructions for NC/K-M Rough-In Kits

Follow these instructions if you will cut the final hole for the speaker with a pin router.

1. Determine the final cutout location of the Custom Series loudspeaker.
2. Install one of the 25" mounting bars horizontally between two studs with the slot facing up and toward you.
3. Use a level or carpenter's square before nailing or screwing the bar into the studs.
4. Slide the cutout frame into the desired location with the 3/8" tabs facing toward you.
5. Place the other 25" horizontal bar onto the top of the cutout frame and nail or screw it into the studs.
6. Flatten the outer edge of the slot of the mounting bars against the studs with a hammer to keep the frame from sliding.
7. Once the drywall has been hung, use a pin router to cut out the hole against the outer edge of the cutout frame.
8. Install the Custom Series loudspeaker as shown above in Installing in Existing Walls and Ceilings.

Note: If you will cut the final hole for the speaker with keyhole saw, replace steps 7 and 8 with these:

7. Once the drywall has been hung, use a keyhole or similar saw to cut the hole to the inside edge of the frame.
8. Install the Custom Series loudspeaker as shown above in Installing in Existing Walls and Ceilings. Make sure the Custom Series mounting bracket is installed on the speaker with the slotted side facing toward you and the flat side facing away from you. This allows the upper and lower sections of the mounting bracket to fit into the upper and lower tabs of the cutout frame.



Parasound PAL-245 Baffle and Bezel

PAL-245 Precision Architectural Loudspeaker Specifications

Frequency Response	80 Hz-22 kHz +/- 2 dB
Nominal Impedance	8 Ohms
Minimum Impedance	6 Ohms
Sensitivity 1 Watt/1Meter	88 dB
RMS Power Range	10-80 Watts
Woofer Size	4 1/2"
Cone Material	Kevlar
Surround Material	Polyurethane
Tweeter Size	1 " Dome
Tweeter Diaphragm Material	Aluminum
Crossover Frequency	2.4 kHz
Crossover Slope	12 dB per octave
Dimensions	
Hole Cut-Out	8 1/2" x 5"
Outer Edge of Frame	6" x 9 1/2"



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*Parasound Products, Inc. 950 Battery Street, San Francisco, CA 94111
415-397-7100 / FAX 415-397-0144 www.parasound.com*