

# *INSTALLATION GUIDE*



## **In-Wall Loudspeakers**

C 280, C 265, and C 260

## **Ceiling Loudspeakers**

C 85, C 70, and C 65



PARASOUND®

[www.parasound.com](http://www.parasound.com)

***Unpacking and Inspection***

Carefully unpack your Parasound loudspeakers. Each carton contains the following:

***Qty Description***

- 2 Baffles and speaker assemblies
- 2 Metal grills
- 2 Paint shields
- 1 Cardboard mounting template

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

***Before You Start***

If you have any doubts about your ability to properly install these loudspeakers, you should consider the services of a custom installer before you start cutting into walls or ceilings.

Parasound in-wall and ceiling speakers mount into standard 4 inch deep stud walls. Determine the final locations for all speakers before cutting the first hole, since the position of each speaker may affect the others, either aesthetically or acoustically. Check for pipes, house wiring, or other items inside walls that might be damaged when you cut holes.

***Prewiring***

Speaker wire should be 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 using at least 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 its 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. Make certain that each power amplifier channel can drive the combined load impedance if it's connected to more than one speaker. You may need additional amplifiers or the load impedance protection that's included with many loudspeaker selectors.

If you plan to hide an infrared receiver behind the loudspeaker grill, you'll need to pre-wire a three conductor control wire along with the speaker wire.

## **Installation**

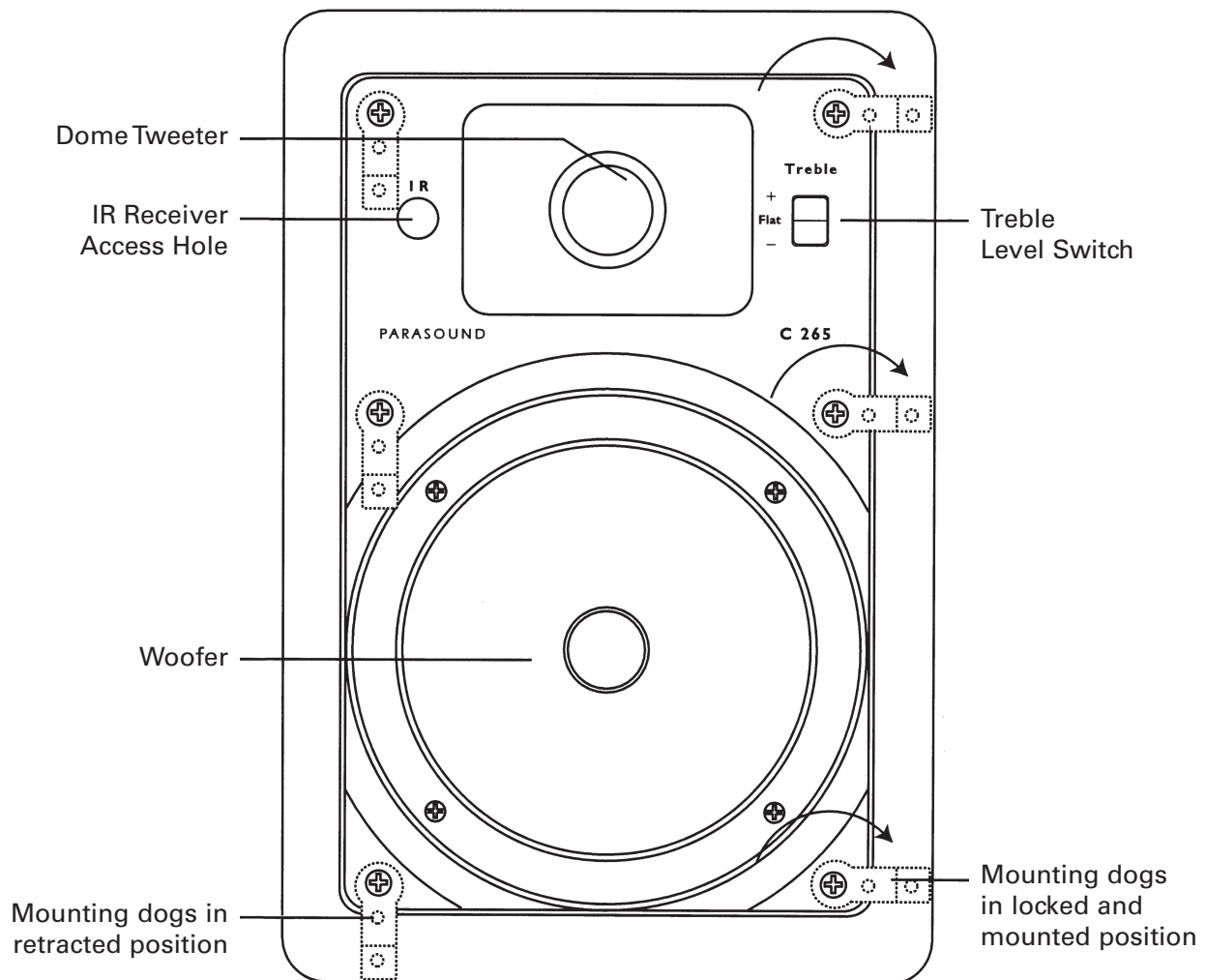
1. Reconfirm that there is clearance between each edge of the planned cutout and wall studs or floor joists.
2. Fasten the supplied cardboard template to the wall or ceiling with tape or thumbtacks.
3. Use either the inner or outer section of the template, whichever is easier for you.
4. Hold a level against the edge of the rectangular template to insure the cutout will be parallel to the ceiling or floor.
5. Trace the cutout guide with a pencil.
6. Before making the final cutout, make a smaller "test cutout" in the center of the penciled outline. Reach inside the test hole to verify that there are no obstructions.
7. Score the drywall with a razor knife and use a keyhole saw to complete the cut. Remove debris from the exposed edge of the wall or ceiling.
8. Secure the speaker wire to a wall stud adjacent to the cutout to prevent its weight from pulling it loose from the speaker terminals. This also keeps the wire from dropping behind the wall before you connect it.
9. We recommend that you install sound-absorbing material such as ceiling insulation behind the woofer to reduce sound transmission into the adjoining room. Sound leakage from behind the molded frame can be blocked with foam weather-stripping applied to the rear surface of the speaker bezel.
10. Insert the speaker wires into the connectors, making sure + and - polarity is correct.  
**Note about C 70:** Matching + and - polarity for both channels is even more important for the two channels of the C 70. If you are attaching only one wire to the C 70 you may use either of its two input terminals.
11. Insert the speaker frame into the cutout; it should go into the cutout easily, without forcing. You may need to swing some or all of the mounting dogs back in their resting positions first.
12. Tighten the mounting screws on the bezel. There are six screws for Parasound rectangle-shaped in-wall speakers and four screws for Parasound round ceiling speakers. When you first turn these screws, small clamps or "mounting dogs" will automatically swing out from their resting positions. As you continue turning the screws, the dogs will then clamp against the rear surface of the wall or ceiling. Avoid using excessive force to prevent deforming or cracking the speaker's mounting frame.

**Hole for Infrared Receivers**

The in-wall models have a ½" round hole in their frames marked IR. It accommodates an infrared receiver such as the Xantech Video Link® model 490. The hole is exposed by removing the foam rubber insert plug from the rear side.

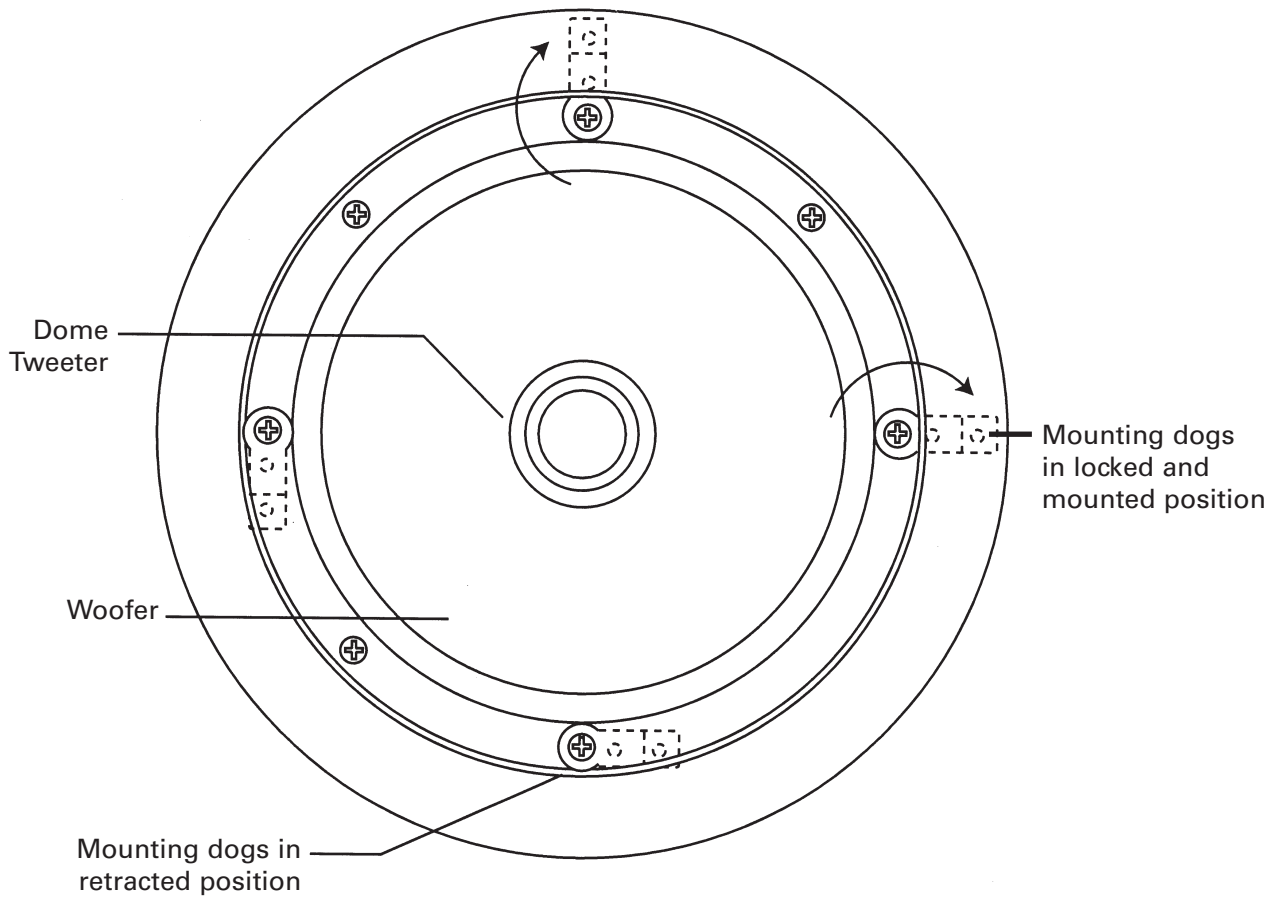
**Three Position Treble Adjustment Switch (C 265, C 280 only)**

The C 265 and C 280 include a treble adjustment switch. This selects tweeter output that is flat, reduced 3 dB or boosted 3 dB. If you're mounting the speaker in a "live" room, you may prefer to reduce its treble response. If you're mounting the speaker in a "dead" room, you may wish to boost its treble response.



## *Pivoting Tweeter (C 65, C 70, and C 85 only)*

You may pivot the tweeter of Parasound ceiling speakers C 65, C 70, and C 85 up to 15 degrees off-axis to direct treble towards the intended listening area. Sometimes ceiling speakers are mounted close to side walls; the sound can be improved by aiming the tweeter into the room to reduce reflections from the nearby wall.



***Installation Instructions for Optional NC/K 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 loudspeaker.
2. Nail or screw one of the 25" metal mounting bars horizontally between two studs or ceiling joists with its 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 metal cutout frame into the slot, in the desired location, with its  $\frac{3}{8}$ " perpendicular tabs facing toward you.
5. Place the other 25" metal bar onto the opposite side of the cutout frame and nail or screw it into the studs or joists.
6. Flatten the slots of the mounting bars against the studs or joists with a hammer to keep the cutout frame from sliding.
7. After the drywall has been hung, use a pin router to cut out the hole against the tabs of the cutout frame.
8. Install the loudspeaker as shown above in Installing in Existing Walls and Ceilings.

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

7. Once the drywall has been hung, use a keyhole or similar saw to cut the hole along the inside edge of the cutout frame.

***Painting the Speakers***

You can paint the speakers when painting the wall or ceiling. Make sure to insert the transparent paint shields first to protect the drivers and baffle.

You can also paint the grills. Before painting, remove the white masking material which is attached to the four corners of each grill. If you don't remove this, paint will get stuck and block the sound. When you paint the grill, make sure to blow lightly against the grill to prevent paint from clogging the fine holes in the metal. You can reattach the white material after the paint is dry. Its adhesive is suitable for removing and replacing a few times.

## In-Wall Speaker Specifications

	<b>C 280</b>	<b>C 265</b>	<b>C 260</b>
Frequency Response	36 Hz-22 kHz +/- 3 dB	42 Hz-22 kHz +/- 3 dB	52 Hz-20 kHz +/- 3 dB
Nominal Impedance	8 Ohms	8 Ohms	8 Ohms
Minimum Impedance	6 Ohms	6 Ohms	6 Ohms
Sensitivity 1 Watt/1Meter	89 dB	88 dB	88 dB
RMS Power Range	10-100 Watts	10-80 Watts	10-70 Watts
Woofer Size	8"	6 1/2"	6 1/2"
Woofer Cone Material	Kevlar	Kevlar	Polypropylene-Mica
Woofer Surround Material	Butyl Rubber	Butyl Rubber	Santoprene
Dome Tweeter Size	1"	1"	1"
Tweeter Diaphragm Material	Aluminum	Aluminum	Polyester Fabric
<b>Dimensions</b>			
Hole Cut-Out (inches)	8 5/8" x 12 1/8"	7 3/8" x 10 3/4"	7 3/8" x 10 3/4"
Hole Cut-Out (millimeters)	219 mm x 327 mm	187 mm x 273 mm	187 mm x 273 mm
Outer Frame (inches)	10" x 14"	8 5/8" x 12"	8 5/8" x 12"
Outer Frame (millimeters)	254 mm x 356 mm	219 mm x 304 mm	219 mm x 304 mm
<b>Optional Accessories</b>			
Rough-In Kits	NC/K-8M	NC/K-6M	NC/K-6M

## Ceiling Speaker Specifications

	<b>C 85</b>	<b>C 70 Two-Channel Speaker</b>	<b>C 65</b>
Frequency Response	48 Hz-22 kHz +/- 3 dB	58 Hz-22 kHz +/- 3 dB	58 Hz-22 kHz +/- 3 dB
Nominal Impedance	8 Ohms	8 Ohms, Stereo or Mono	8 Ohms
Minimum Impedance	6 Ohms	6 Ohms, Stereo or Mono	6 Ohms
Sensitivity 1 Watt/1Meter	89 dB	89 dB	89 dB
RMS Power Range	10-80 Watts	10-70 Watts	10-70 Watts
Woofer Size	8"	6 1/2"	6 1/2"
Woofer Cone Material	Polypropylene-Mica	Polypropylene-Mica	Polypropylene-Mica
Surround Material	Santoprene	Santoprene	Santoprene
Dome Tweeter Size	1"	1"	1"
Tweeter Diaphragm Material	Aluminum	Aluminum	Aluminum
<b>Dimensions</b>			
Hole Cut-Out (inches)	9 1/2"	7 5/8"	7 5/8"
Hole Cut-Out (millimeters)	241 mm	194 mm	194 mm
Outer Frame (inches)	10 3/4"	9"	9"
Outer Frame (millimeters)	273 mm	229 mm	229 mm
<b>Optional Accessories</b>			
Rough-In Kits	NC/K-8R	NC/K-3M	NC/K-3M



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