CS
SERIES

Infinity®

CS 50
CS 60
CS 60R
CS 60RDT
CS 80R

Owner's Guide

CS Series Owner's Guide

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Introduction

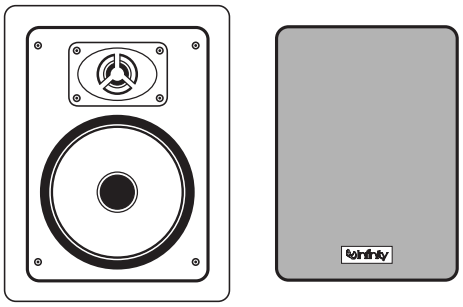
Infinity CS Series

The CS Series of in-wall/ceiling loudspeakers continues Infinity's longstanding commitment to accurate sound reproduction. All CS Series speakers deliver uncompromised performance in any stereo, multichannel home theater or whole-house music system.

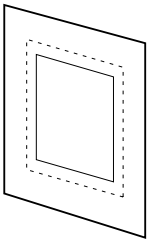
Unpacking the Speakers

Carefully unpack the speakers. If you suspect damage from transit, report it immediately to your dealer and/or delivery service. Keep the shipping carton and packing materials for future use.

CS 50, CS 60

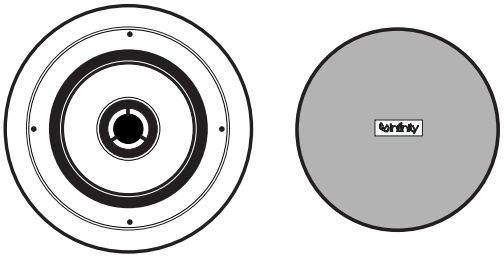


One speaker with grille and removable logo.

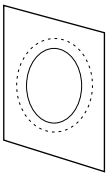


Template/paint shield.
Remove paint shield (inner rectangle) at perforation.

CS 60R/CS 60RDT/CS 80R



One speaker with grille and removable logo.



Template/paint shield.

Remove paint shield (inner circle) at perforation.

Planning Your System

Before deciding where to best place your speakers, survey your room and study Figures 1 and 2.

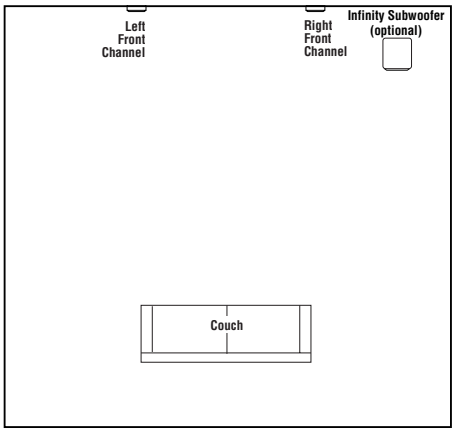


Figure 1.

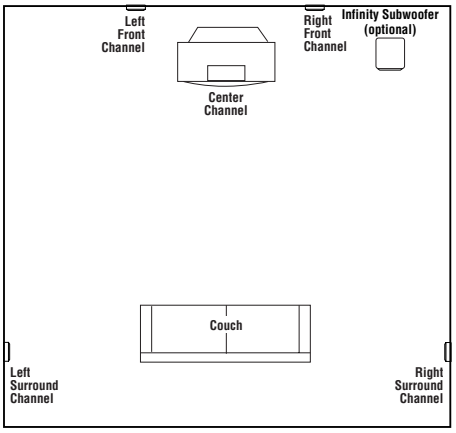


Figure 2. This overhead view shows a typical home theater plan.

NOTE: Figures 1 and 2 show recommended speaker locations. You may also follow these general placement suggestions when installing the speakers in the ceiling.

Placement

Stereo

Before deciding where to place your CS Series speakers, survey your room and think about placement, keeping the following points in mind, and using Figure 1 as a guide:

- For best results, place the speakers 6'–8' apart.
- When installing in the wall, position each speaker so that the tweeter is as close to ear level as practical.
- Refer to "Home Theater" below if you also plan to use the speakers in a home theater system.

Home Theater

For front-channel use, place one speaker on the left and another on the right along either side of the television.

A center channel speaker should go directly above or below the television and can be an in-wall or freestanding center channel.

For surround channel use, install the speakers alongside the listening position.

NOTE: An Infinity powered subwoofer will add impact and realism to both music and film soundtracks. Contact your Infinity dealer for recommendations on subwoofer models for your application.

Proper placement of the speakers is an important step in obtaining the most realistic soundstage possible. These recommendations are for the optimum placement of the loudspeakers. Use these placement recommendations as a guide. Slight variations will not diminish your listening pleasure.

Ideally, the front speakers should be placed the same distance from each other as they are from the listening position.

In a home theater configuration, the two surround speakers should be placed perpendicular to the listening position. If that is not possible, they may be placed in a wall/ceiling behind the listening position.

CS 60RDT

Model CS 60RDT has the ability to play two channels through one loudspeaker, thanks to its dual-tweeter/dual-voice-coil construction. Since the tweeters are close together, generally they should be aimed away from each other for best coverage.

For two-channel (stereo) applications (e.g., as a single speaker in a remote room of a distributed audio system), install the CS 60RDT speaker centrally in the ceiling for best stereo imaging, pivoting the tweeters so that one points toward the left and the other toward the right of the listening position.

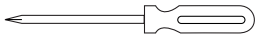
The CS 60RDT may also be used to play the left and right surround channels in a 5.1-channel home theater system, in which case it should be mounted in the ceiling slightly behind the listening position, centered from left to right and with the tweeters pointing toward the left and right of the listening position, aimed slightly downward. For 7.1-channel systems where it is desired to use two CS 60RDT speakers, one to play both the left surround and surround back channels and the other to play both the right surround and surround back channels, mount each CS 60RDT speaker in the ceiling, slightly behind the listening position, one closer to the left side of the room and the other closer to the right side. Aim the tweeters, on each speaker, away from each other, toward the front and rear of the room.

Installation

The CS Series in-wall speakers were designed to be easily installed. However, if you are unsure of your ability to properly install these loudspeakers, please contact your dealer or a qualified installer.

Tools Needed

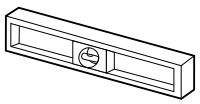
Pencil



Phillips #2 screwdriver

Measuring tape

Utility knife



Carpenter's level

Awl

Speaker Connections

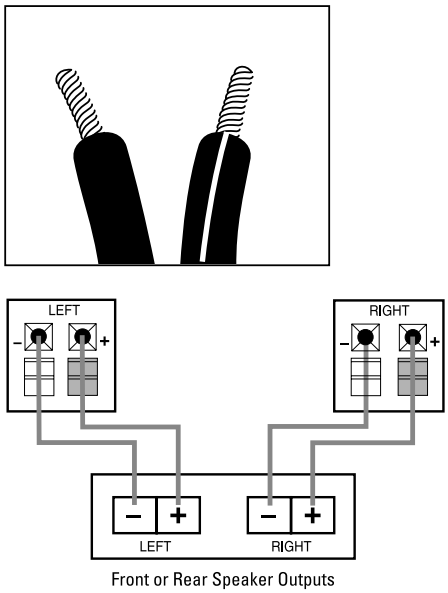


Figure 3.

Wire Length	Recommended Size
Up to 50 ft.	16-gauge
Up to 100 ft.	14-gauge
Greater than 100 ft.	12-gauge

Turn Off All Power

Before completing the installation, you must connect your speakers to your system. First, turn off all audio-system power. Use high-quality speaker wire to make your connections. Use at least #16-gauge speaker wire with polarity coding. Heavier gauge wire is recommended for larger distances. Consult the chart above or your dealer for recommendations. The side of the wire with a ridge or other coding is usually considered positive polarity (i.e., +). Also, consult the owner's manuals that were included with your amplifier or receiver to confirm connection procedures.

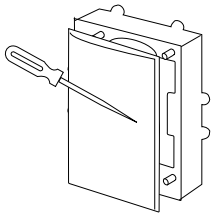
Observe polarities when making speaker connections, as shown in Figure 3. Connect each + terminal on the back of the amplifier or receiver to the respective + (red) terminal on each speaker. Connect the – (black) terminals in the same way.

Important!

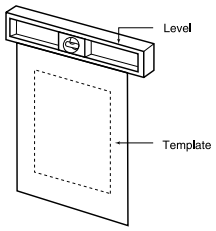
Do not reverse polarities (i.e., + to – or – to +) when making connections. Doing so will cause poor imaging and diminished bass response. Be certain that positive and negative wire strands are completely isolated to avoid short circuits that may damage your equipment.

Existing Construction

CS 50, CS 60

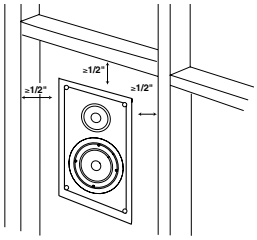


1. Remove the grille from the speaker frame.

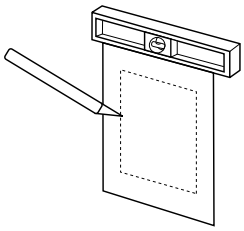


2. Determine the correct speaker location.

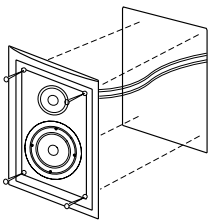
NOTE: Remove the inner template, which is the paint shield, at the perforation. Use the outer template when cutting the drywall.



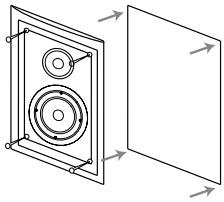
3. **NOTE:** Always allow at least one-half inch between a wall stud and the speaker cutout or the locking tabs will not be able to swivel into place.



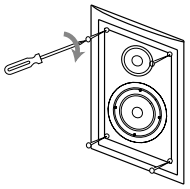
4. Cut the drywall.



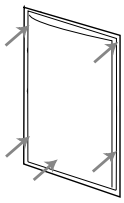
5. Connect the speaker wires to the speaker.



6. Place the speaker assembly in the wall.

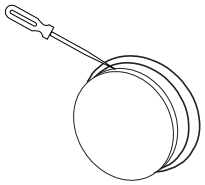


7. Screw down each of the Phillips head screws. The locking tabs will swivel into place and secure the unit to the rear surface of the drywall.

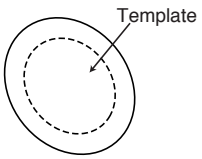


8. Replace the metal grille.

CS 60R, CS 60RDT, CS 80R

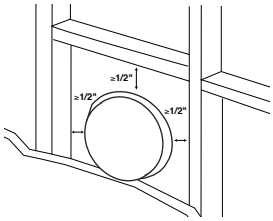


1. Remove the grille from the speaker frame.



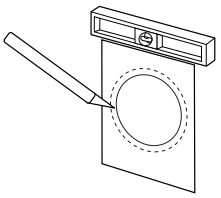
2. Determine the correct speaker location.

NOTE: Remove the inner template, which is the paint shield, at the perforation. Use the outer template when cutting the drywall.

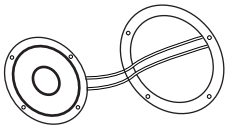


3. Determine the correct speaker location.

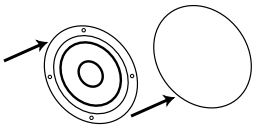
NOTE: Always allow at least one-half inch between a wall stud and the speaker cutout, or the locking tabs will not be able to swivel into place.



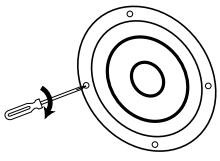
4. Cut the drywall.



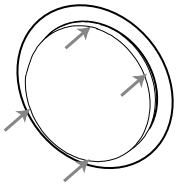
5. Connect the speaker wires to the speaker. Model CS 60RDT requires two sets of speaker wires, one for each channel.



6. Place the frame assembly in the wall.



7. Screw down each of the four Phillips head screws. The locking tabs will swivel into place and secure the unit to the rear surface of the drywall.



8. Replace the metal grille.

SPECIFICATIONS

	CS 50	CS 60	CS 60R	CS 60RDT	CS 80R
Frequency Range	48Hz – 20kHz (±3dB) 45Hz (–10dB)	45Hz – 20kHz (±3dB) 38Hz (–10dB)	50Hz – 20kHz (±3dB) 40Hz (–10dB)	50Hz – 20kHz (±3dB) 40Hz (–10dB)	45Hz – 20kHz (±3dB) 32Hz (–10dB)
Recommended Amplifier Power Range	10 – 75 watts	10 – 100 watts	10 – 100 watts	10 – 100 watts total (50WPC)	10 – 100 watts
Sensitivity (2.83V @ 1 meter)	87dB	88dB	88db	88dB, both channels driven	89dB
Nominal Impedance	8Ω	8Ω	8Ω	8Ω per input	8Ω
Crossover Frequency	2400Hz; 12dB/Octave	2,800Hz; 12dB/Octave	2,600Hz; 12dB/Octave	2,600Hz; 12dB/Octave	2,400Hz; 12dB/Octave
Low-Frequency Driver	5-1/4" (130mm)	6-1/2" (165mm)	6-1/2" (165mm)	6-1/2" (165mm)	8" (200mm)
High-Frequency Driver(s)	1" (25mm) with acoustical waveguide	1" (25mm) with acoustical waveguide	1" (25mm)	Dual 3/4" (19mm)	1" (25mm)
External Dimensions (W x H)	7-1/2" x 10" (191mm x 254mm)	8-1/2" x 11" (216mm x 279mm)	9-3/16" (Dia.) (233mm)	9-3/16" (Dia.) (233mm)	10-7/8" (Dia.) (275mm)
Mounting Cutout Size (W x H)	6-1/8" x 8-11/16" (156mm x 221mm)	7-1/8" x 9-11/16" (181mm x 246mm)	7-7/8" (Dia.) (200mm)	7-7/8" (Dia.) (200mm)	9-1/2" (Dia.) (240mm)
Mounting Depth	3-3/4" (95mm)	3-7/8" (98mm)	4-1/4" (108mm)	4-1/4" (108mm)	4-1/4" (108mm)
Weight	3 lb (1.4kg)	5 lb (2.3kg)	4.5 lb (2.0kg)	4 lb (1.8kg)	5.6 lb (2.5kg)
Optional Preconstruction Rough-In Frame	CS 50RIF	IW6 RIF	IW6R RIF	IW6R RIF	IW8R RIF

Infinity continually strives to update and improve existing products, as well as create new ones. The specifications and construction details in this and related Infinity publications are therefore subject to change without notice.

Declaration of Conformity

CE

We, Harman Consumer Group International
2, route de Tours
72500 Chateau-du-Loir
France

declare in own responsibility that the products described in this owner's manual are in compliance with technical standards:

EN 61000-6-3:2001

EN 61000-6-1:2001

R Marshall

Robin Marshall
Harman Consumer Group International
Chateau-du-Loir, France 8/04

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