IN-WALL

ERS™

Infinity®

TOTAL SPEAKER SOLUTIONS

ERS 110II
ERS 110DT
ERS 210II
ERS 310
ERS HV250
Owner's Guide

Introduction

Infinity ERS™ Series

The ERS Series of in-wall/ceiling loudspeakers continues Infinity's longstanding commitment to accurate sound reproduction. Our patented Ceramic Metal Matrix Diaphragm (CMMD™) drivers and precision dividing networks 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. All models include a mounting template and paint shield.

Planning Your System

Before deciding where to best place your speakers, survey your room and study Figures 1–3.

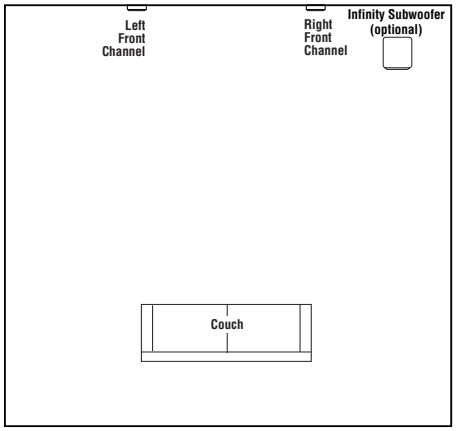


Figure 1.

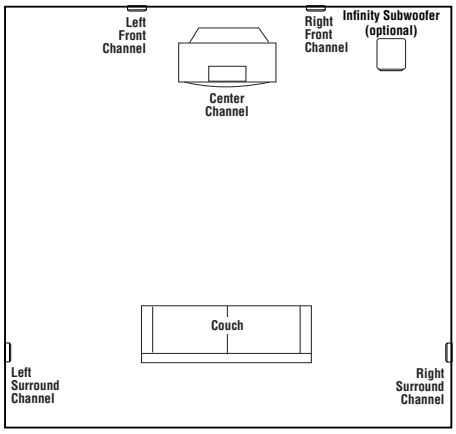


Figure 2. This overhead view shows a typical home theater system arrangement.

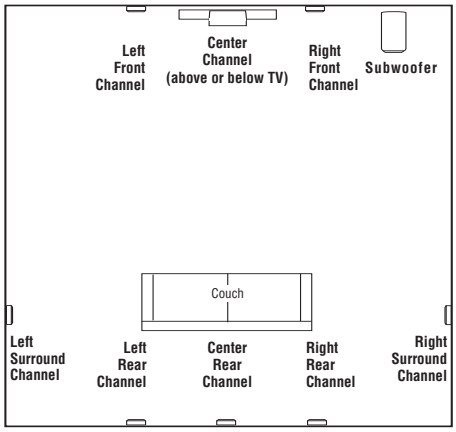


Figure 3. This overhead view shows a 6- or 7-channel home theater system arrangement. Left/right rear channels are for a 7-channel system. Center rear channel is for a 6-channel system.

Note: Figures 1, 2 and 3 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 ERS Series speakers, survey your room and think about placement, keeping the following points in mind, and using Figure 1, on previous page, 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 left and right surround channels, place one speaker on the left and another on the right, to the side of or slightly behind the listening area. The surround speakers should be mounted at a height of between 4 feet and 7 feet.

In 6- or 7-channel configurations, place the rear channel(s) behind the listening position, as shown in Figure 3.

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 optimal placement of the loudspeakers. Use these placement recommendations as a guide. Slight variations will not diminish your listening pleasure.

Installation

The ERS 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.

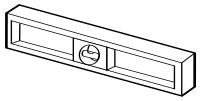
Tools Needed

Pencil

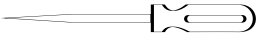
Phillips #2 screwdriver

Measuring tape

Utility knife



Carpenter's level



Awl

Speaker Connections

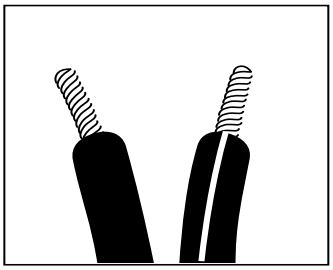
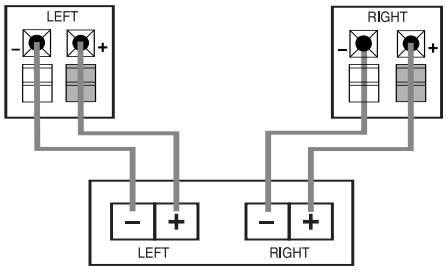


Figure 4.



Front or Rear Speaker Outputs

Wire Length	Recommended Size
Up to 100 ft.	16-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 below left or your dealer for recommendations. The side of the wire with a ridge or other coding is usually considered positive (+) polarity. Also, consult the owner's manuals that were included with your amplifier or receiver to confirm connection procedures.

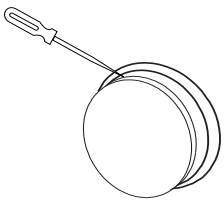
Observe polarities when making speaker connections, as shown in Figure 4. Connect each + terminal on the back of the amplifier or receiver to the respective + (red) terminal on each speaker. Connect the – (black) terminals in the same way.

Important!

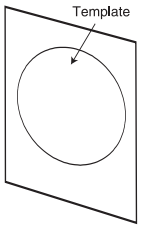
Do not reverse polarities (i.e., + to – , or – to +) when making connections. Doing so will cause poor imaging and diminished bass response. Be certain that positive and negative wire strands are completely isolated to avoid short circuits that may damage your equipment.

Existing Construction

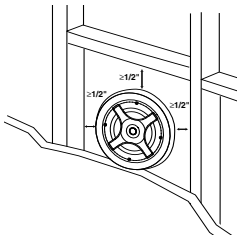
ERS 110II, ERS 110DT, ERS 310



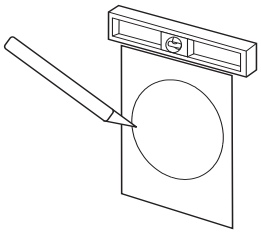
1. Remove the plastic paint shield from the speaker frame.



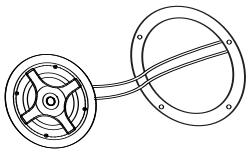
2. Determine the correct speaker location.
Note: Use the included template when cutting the drywall.



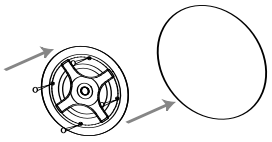
3. **Note:** Always allow at least one-half inch between a wall stud and the speaker cutout or the locking tabs will not be able to swivel into place.



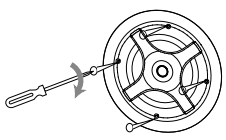
4. Cut the drywall.



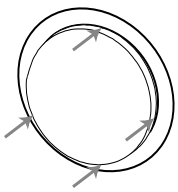
5. Connect the speaker wires to the speaker.



6. Place the frame assembly in the wall.

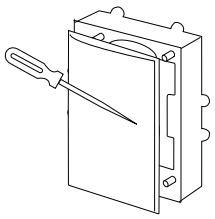


7. Screw down each of the four Phillips head screws. The locking tabs will swivel into place and secure the unit to the rear surface of the drywall.

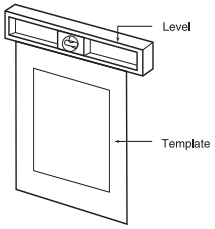


8. Attach the metal grille.

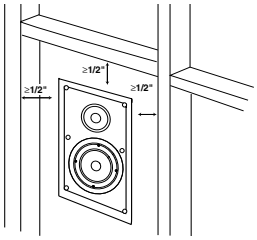
ERS 210II, ERS HV250



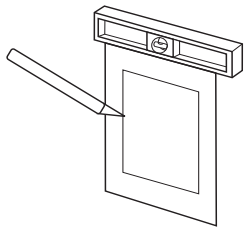
1. Remove the plastic paint shield from the speaker frame.



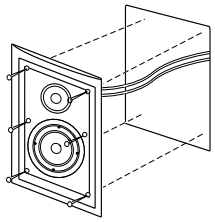
2. Determine the correct speaker location.
Note: Use the included template when cutting the drywall.



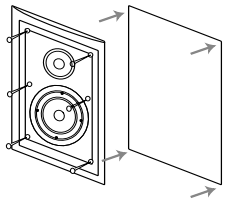
3. **Note:** Always allow at least one-half inch between a wall stud and the speaker cutout or the locking tabs will not be able to swivel into place.



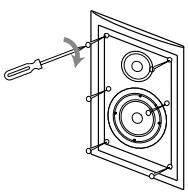
4. Cut the drywall.



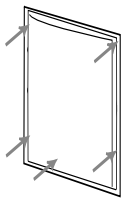
5. Connect the speaker wires to the speaker.



6. Place the speaker assembly in the wall.



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



8. Attach the metal grille.

New Construction

If you wish to preinstall a rough-in frame before the drywall is installed, you will need to purchase the correct rough-in-frame kit for your model:

Speaker Model	Rough-In-Frame Kit
ERS 110II, ERS 110DT	ERS 110RIF or IW6R RIF
ERS 210II	ERS 210RIF
ERS 310	IW8R RIF
ERS HV250	IW55 RIF

Detailed installation instructions are supplied with the rough-in kit.

Painting the Speaker Frame and Grille

ERS Series loudspeakers can be painted to match any décor. If you wish to change their color, the satin finish on the grille and frame will function as a primer coat. Before painting, install the paint shield (inner section of template in the assembly kit) securely into the recess in the baffle. This will protect the speaker components and baffle from paint residue. Use a high-quality spray paint, and apply a thin coat of color. **Be certain the grille perforations remain free of paint. Filling them with paint will diminish the sound quality.**

Note: Gently remove the acoustical foam blanket from the grille before painting. Reattach the blanket after the paint has dried.

Operation

Surround Modes

When using the system in a Dolby* Digital or DTS® home theater system, make sure all speakers are set to "Small." When using the ERS Series in a Dolby Pro Logic* home theater system, make sure the receiver's center channel mode is set to "Normal."

Some Dolby Digital-equipped receivers/processors offer different setup options for each source or surround mode: e.g., CD-stereo, videotape, Dolby or Pro Logic. In each case, follow your equipment's instructions to ensure that the subwoofer (if you have one) output is turned on and that the speakers are set to "Small" in each mode.

SPECIFICATIONS

ERS Series	ERS 110II	ERS 110DT	ERS 310	ERS 210II	ERS HV250
Frequency Range	47Hz – 22kHz (±3dB) 35Hz (–10dB)	47Hz – 22kHz (±3dB) 35Hz (–10dB)	45Hz – 22kHz (±3dB) 29Hz (–10dB)	47Hz – 22kHz (±3dB) 35Hz (–10dB)	45Hz – 22kHz (±3dB) 38Hz (–10dB)
Recommended Amplifier Power Range	10 – 125 Watts	10 – 130 Watts (65 WPC)	10 – 135 Watts	10 – 125 Watts	10 – 125 Watts
Sensitivity (2.83V @ 1 meter)	89dB	88dB/Channel	89dB	89dB	89dB
Nominal Impedance	8 Ω	8 Ω /Channel	8 Ω	8 Ω	8 Ω
Crossover Frequency	2,300Hz; 24dB/Octave	2,400Hz; 12dB/Octave	2,300Hz; 12dB/Octave	2,300Hz; 24dB/Octave	2,600Hz; 12dB/Octave
Low-Frequency Driver(s) (CMMD™)	6-1/2" (165mm)	6-1/2" (165mm) Dual voice coil	8" (200mm)	6-1/2" (165mm)	Dual 5" (130mm)
High-Frequency Driver(s) (CMMD™)	3/4" (19mm)	Dual 3/4" (19mm)	1" (25mm)	3/4" (19mm)	3/4" (19mm)
External Dimensions (W x H)	Diameter: 9-3/16" (233mm)	Diameter: 9-3/16" (233mm)	Diameter: 10-7/8" (276mm)	8-3/4" x 12-3/4" (222mm x 324mm)	15-3/8" x 7-1/2" (391mm x 191mm)
Mounting Cutout Size (W x H)	Diameter: 7-7/8" (200mm)	Diameter: 7-7/8" (200mm)	Diameter: 9-1/2" (241mm)	7-5/8" x 11-3/8" (194mm x 289mm)	13-7/8" x 6-3/16" (352mm x 157mm)
Mounting Depth	3-1/2" (89mm)	3-1/2" (89mm)	4-1/4" (108mm)	3-1/4" (83mm)	3-7/8" (98mm)
Weight (Net)	3.1 lb (1.4kg)	4 lb (1.8kg)	5.6 lb (2.5kg)	3.5 lb (1.6kg)	5.7 lb (2.6kg)

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

Laurent Rault
Harman Consumer Group International
Chateau-du-Loir, France 1/05

Infinity®

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Infinity Systems, 250 Crossways Park Drive, Woodbury, NY 11797 USA 516.674.4INF (USA only) www.infinitysystems.com

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