

BETA

SERIES



# SPEAKER SYSTEMS

Owner's Guide  
INFINITY BETA™ ES250



## Infinity Beta™ Series

The Infinity Beta™ Series of loudspeakers continues Infinity's longstanding commitment to accurate sound reproduction. Our patented Ceramic Metal Matrix Diaphragm (CMMD™) drivers, precision dividing networks and rigid, heavily braced enclosures combine to deliver uncompromised performance in any stereo or multichannel home theater system. The Beta ES250 is the perfect surround loudspeaker to complete any home theater system.

## Unpacking the Speaker

If you suspect damage from transit, report it immediately to your dealer. Keep the shipping carton and packing materials for future use.

# PLANNING YOUR SYSTEM

## Choosing Proper Placement and Setup

The Beta ES250 surround speaker can be used in side or rear channel applications. Please refer to the placement and setup method for your application. The first step is to determine the application for which your Beta ES250 surround speaker will be used.

If you are using the Beta ES250 for surround channels in a 5-channel home theater system or for side channels in a 6- or 7-channel home theater system (Application 1), please follow the directions below.

If you are using the Beta ES250 as a rear speaker in a 6- or 7-channel home theater system (Application 2), please follow the directions on page 3.

The Beta ES250 also possesses the unique capacity to behave as two distinct loudspeakers from one enclosure. This allows you to use a single ES250 for both the left and right rear speakers in a 7-channel system. If you are using the Beta ES250 this way, please follow the instructions on page 3 (Application 3).

## Placement (Application 1)

When using the Beta ES250 for the surround channels in a 5-channel home theater system or for side channels in a 6- or 7-channel home theater system, refer to Figures 1 and 2. The speakers should be placed perpendicular to or slightly behind the primary listening location, as shown.

## Setting the Surround Configuration Selector

It is generally recommended that the selectable surround mode configuration be set to Bipole. This will provide a large ambient surround sound field while allowing for precise localization of sound effects that the filmmaker has placed in the surround tracks.

If the side walls on which the speaker will be mounted are more than about 14' (4.3m) from the listening position, setting the Surround Mode Configuration Switch to Monopole may offer

improved performance. It is also recommended that the Monopole position be selected if the speakers will be mounted close to a corner, as shown in Figure 2.

If you are using a receiver/processor with a THX® surround mode and have selected the THX surround mode, it may be beneficial to use the Dipole setting. This is a matter of personal preference and may change depending on the individual film soundtrack. It is also recommended that the Dipole setting be used with older recordings that are only recorded with a Dolby® Pro Logic® (not the newer Dolby Digital) soundtrack.

Figures 1 and 2. These overhead views show typical home theater plans.

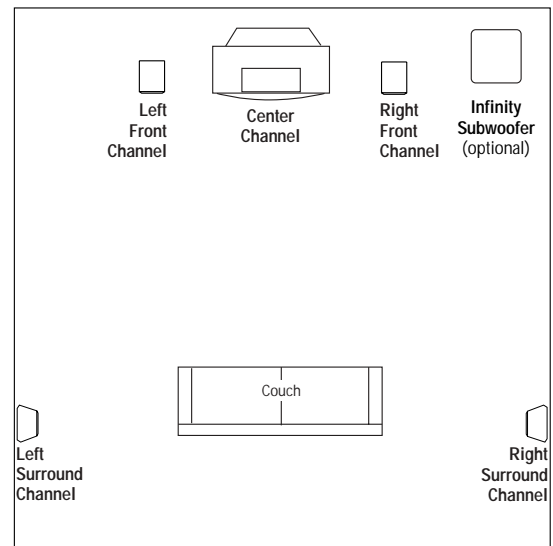


Figure 1.

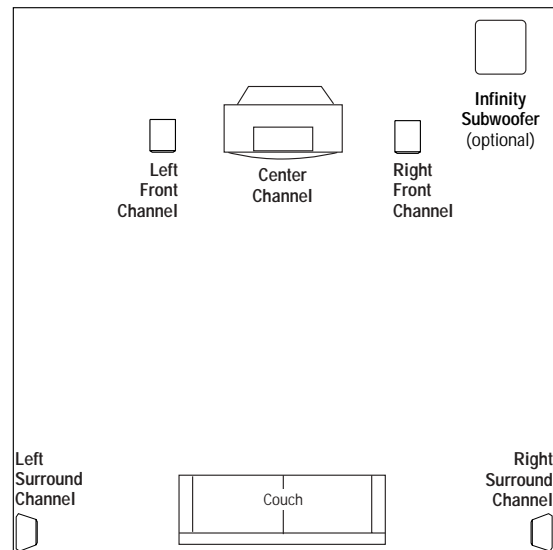


Figure 2.

**IMPORTANT NOTE:** The set of drivers closer to the monopole setting indicator in Figure 3 should be installed toward the front of the room. It does not matter whether the tweeter is positioned above or below the woofer. This will ensure proper operation and performance should the Monopole or Dipole position on the surround mode configuration switch be selected.

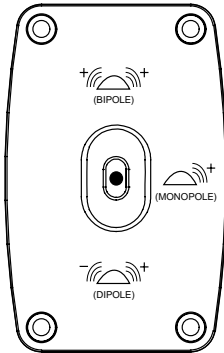


Figure 3. Surround mode configuration switch.

### Placement (Application 2)

When using the Beta ES250 as a rear speaker(s) in a 6- or 7-channel home theater system, refer to Figures 4 and 5. The speaker(s) should be mounted on the rear wall facing the listening area, between the side channel speakers. If you are using one rear speaker, it should be mounted as close as possible to the center of the listening area. When using two rear speakers, they should be spaced evenly within the width of the listening area.

### Setting the Surround Configuration Selector

When used as a rear channel speaker in a 6- or 7-channel system, it is recommended that the Surround Mode Configuration Switch be set to Bipole, as shown in Figure 6.

### Placement (Application 3)

The Beta ES250 also possesses the unique capacity to behave as two distinct loudspeakers from one enclosure. This allows you to use a single ES250 for both the left and right rear speakers in a 7-channel system.

To utilize the ES250 in this application, follow these simple steps:

1. Decide where you want to mount the speaker. Ideally, it should be mounted in the center of the rear wall, similar to how it would be mounted in a 6-channel system (Fig. 4).
2. Loosen the terminals and remove the strapping bars that connect the two sets of terminals (Fig. 9).
3. To ensure proper left/right connections, make sure that the speaker is in the "upright" position. The label on the back of the speaker should be readable, not upside down.
4. Connect the speaker wire for the RIGHT REAR speaker to the top set of terminals (Fig. 10).
5. Connect the speaker wire for the LEFT REAR speaker to the bottom set of terminals (Fig. 10).
6. Set the mode configuration switch to the Bipole position (Fig. 6).

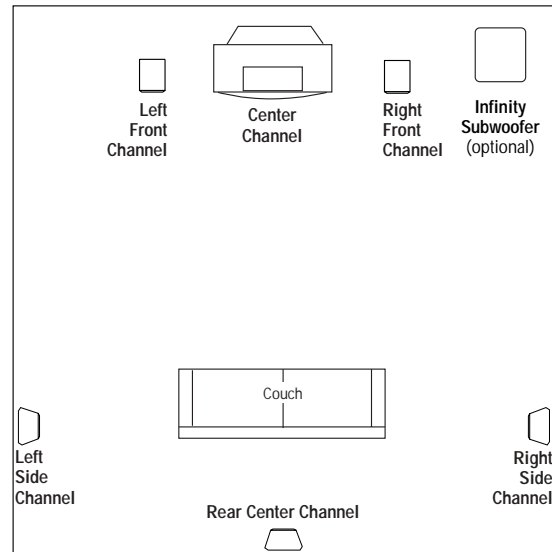


Figure 4. This overhead view shows a typical home theater plan with a single rear-center surround channel.

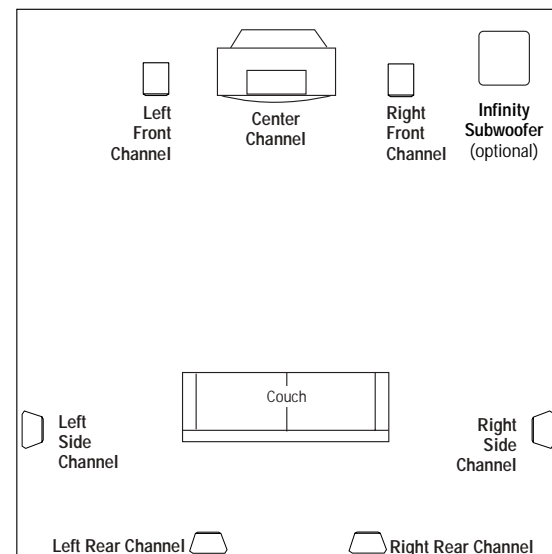


Figure 5. This overhead view shows a typical home theater plan when using two rear channel speakers.

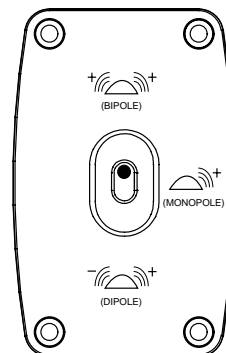


Figure 6. Surround mode configuration switch.

# WIRING THE SYSTEM

**IMPORTANT:** Make sure all equipment is turned off before making any connections.

For speaker connections, use a high-quality speaker wire with polarity coding. The side of the wire with a ridge or other coding is usually considered positive polarity (i.e., +). Heavier-gauge wire should be used when more than 50 feet (15m) of speaker wire is required. The wire channels on the rear of the Beta ES250 will accommodate most types of 14- to 18-gauge wire.

**NOTE:** If desired, consult your local Infinity dealer about speaker wire and connection options.

To ensure proper polarity, connect each + terminal on the back of the amplifier or receiver to the respective + (red) terminal on each speaker, as shown in Figure 8. Connect the - (black) terminals in a similar way. See the owner's guides that were included with your amplifier or receiver to confirm connection procedures.

**IMPORTANT:** Do not reverse polarities (i.e., + to - or - to +) when making connections. Doing so will cause poor imaging and diminished bass response.

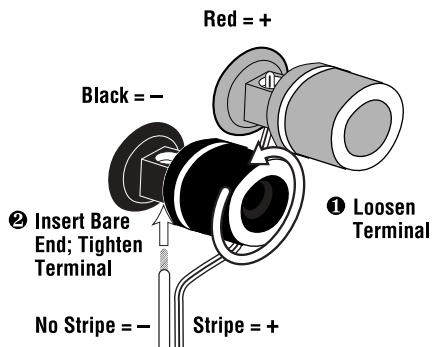


Figure 7. This example shows how to connect bare wires to the terminals.

## Applications 1 and 2

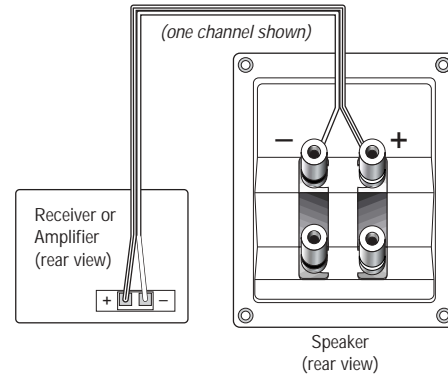


Figure 8. Wiring diagram shows polarity connections for one channel using Applications 1 and 2.

## Application 3

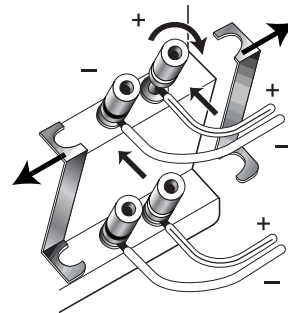


Figure 9. Loosen the terminals and remove the strapping bars that connect the two sets of terminals.

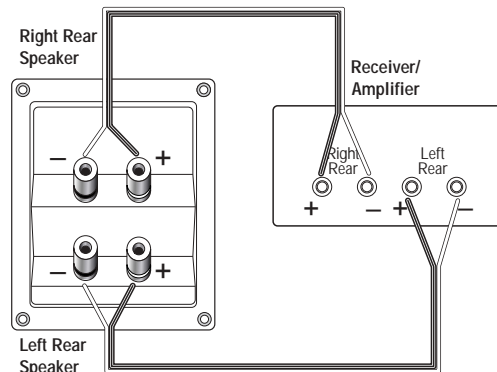


Figure 10. Wiring diagram shows connections for two channels using Application 3.

## WALL-MOUNTING

The Infinity Beta ES250 speaker is designed to mount directly to a wall. Each speaker has (4) keyholes in the rear to allow either left- or right-side placement. Each speaker will require (2) 1-1/2" (38mm), #8 wood screws fastened to a wall stud. If a wall stud is unavailable, install an anchor appropriate for a 1-1/2" (38mm), #8 screw. Use the supplied template to accurately position the screws on the wall and refer to the diagrams for more assistance.

**NOTE:** The customer is responsible for the correct selection and use of mounting hardware (available through hardware stores) that will ensure the proper and safe wall-mounting of the speakers.

### Step 1.

Position the supplied wall-mount template on the wall in the desired speaker location. Make two markings per speaker.

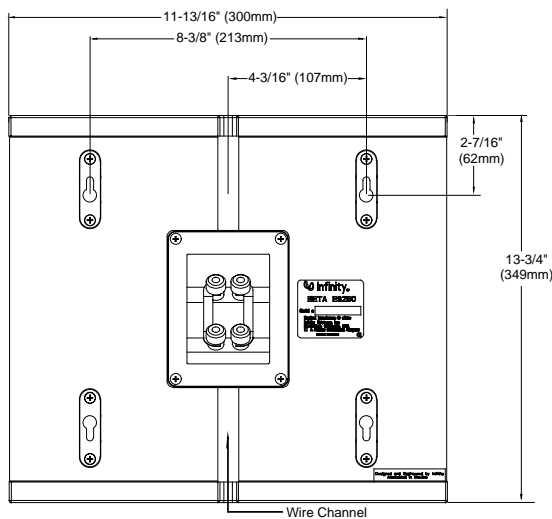


Figure 11.

### Step 2.

Fasten (2) 1-1/2" (38mm), #8 wood screws to the wall using the markings placed in Step 1 as your guide. Leave a 3/16" (5mm) space between the wall and screwhead. If a wall stud is not available, use an appropriate anchor.

### Step 3.

Attach speaker wire, as shown on page 4.

### Step 4.

Place the speaker on the wall by aligning the upper two keyholes on the back of the speaker to the screwheads on the wall. Once positioned properly, the speaker should slide down slightly and become secure.

**IMPORTANT NOTE:** The set of drivers closer to the monopole setting indicator in Figure 3 should be installed toward the front of the room. It does not matter whether or not the tweeter is positioned above or below the woofer. This will ensure proper operation and performance should the Monopole or Dipole position on the surround mode configuration switch be selected.

## FINAL ADJUSTMENTS

Check the speakers for playback first by setting the system volume control to a minimum level, and then by applying power to your audio system. Play a favorite music or video segment and increase the system volume control to a comfortable level.

**NOTE:** You should hear balanced audio reproduction across the entire frequency spectrum. If not, check all wiring connections or consult the authorized Infinity dealer from whom you purchased the system for more help.

When the Beta ES250 speakers are used as part of a Dolby Digital or DTS® multichannel home theater system with a powered subwoofer, it is recommended that you set your receiver/processor speaker mode to "small" or "high-pass" for all channels connected to a Beta ES250. In addition, some receivers/processors allow you to adjust the high-pass frequency for the "small" or "high-pass" setting. If your receiver/processor has this capability, it is recommended that you set the high-pass frequency to between 80Hz and 120Hz. Consult your receiver/processor manual for more information about these adjustments.

The placement and setup instructions in this manual are written in general terms to cover most typical installations. We realize that each room is different and that your specific installation may require some modification to these guidelines. You can be sure that if you need to install the speakers outside the guidelines in the manual, they will still deliver excellent sound with any music or film soundtrack.

Feel free to experiment with the Surround Mode Selector Switch to determine the best settings in your room with your system.

## CARE OF YOUR SPEAKER SYSTEM

The Beta ES250 does not require any routine maintenance. When needed, use a soft cloth to remove any fingerprints or dust.

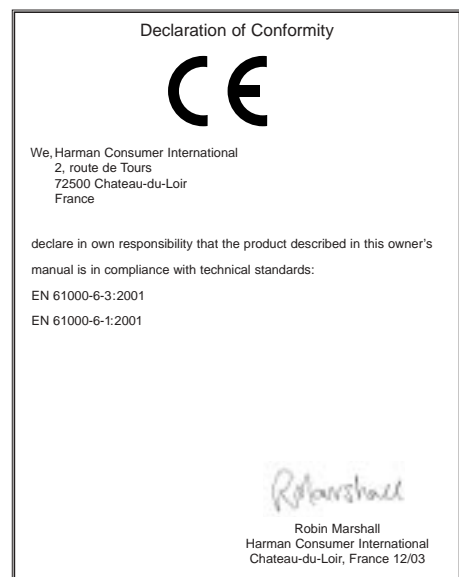
**NOTE:** Do not use any cleaning products or polishes on the cabinet or grille.

# SPECIFICATIONS

## Beta ES250

Frequency Ranges:	60Hz – 20kHz ( $\pm 3$ dB) 50Hz – 40kHz ( $-6$ dB)
Recommended Amplifier Power Range:	10 – 150 watts
Sensitivity: (2.83V @ 1 meter)	87dB
Nominal Impedance:	8 $\Omega$
Crossover Frequency:	2.3kHz; 12dB/octave
Low-Frequency Drivers:	Dual 5" (130mm) CMMD
High-Frequency Drivers:	Dual 1" (25mm) CMMD
Dimensions (H x W xD):	13-3/4" x 11-13/16" x 6-7/8" (350mm x 300mm x 175mm)
Weight:	12.5 lb (5.7kg)

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.





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Infinity Systems, 250 Crossways Park Drive, Woodbury, NY 11797 USA 516.674.4INF (4463)  
[www.infinitysystems.com](http://www.infinitysystems.com)

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Ceramic Metal Matrix Diaphragm (CMMD) patent nos. 6,327,372 and 6,404,897.

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