

Sunfire Cinema Ribbon In-Wall Pre-Construction Kit

Introduction

Thank you for purchasing a Sunfire pre-construction kit. These will allow you to fit the CRW-3 and CRW-3C in-wall ribbon loudspeakers in position, and are meant to be used in new construction before sheetrock is installed.

For information regarding the operation of the system, please refer to the CRW-3/CRW-3C user's guide.

Experience required

The pre-construction kits should only be installed by qualified and experienced professional installers.

Installation overview

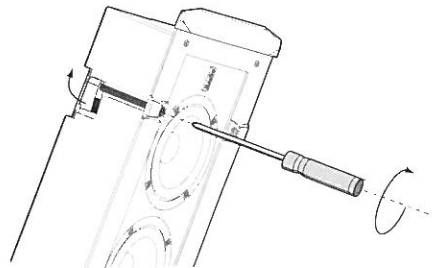
Each kit comes with a rectangular sheet metal frame that accepts the loudspeaker.

Sheet metal wings are bolted to this rectangular frame so the assembly can be positioned horizontally or vertically, and screwed between the wall studs.

The CRW-3 ribbon loudspeakers are designed to be left and right speakers, typically mounted vertically either side of a flat screen display. They can also be used as surround speakers.

The CRW-3C center speaker is typically mounted horizontally above or below a flat screen display. They can also be mounted vertically.

Once the kits are installed onto the studwork of your room, they can be sheetrocked over, and the opening cut out. When the time comes to fit the loudspeakers, they can be wired and pressed into place in the opening. Screws on each loudspeaker will engage dog clamps that catch onto the sheet metal frame, and clamp the loudspeaker firmly in place on the wall.



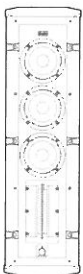
Tightening the clamps (sheetrock is not shown for clarity)

Unpacking

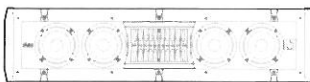
Your kit should reach you in perfect condition. If you do notice any shipping damage, please contact Sunfire immediately. Make sure that you keep your sales receipt. It is the only way to establish the duration of your Limited Warranty and it may come in useful for insurance purposes.

Contents of each kit

- Sheet metal rectangular frame
- Four sheet metal wings
- Thumb nuts and lock washers to hold wings to the frame



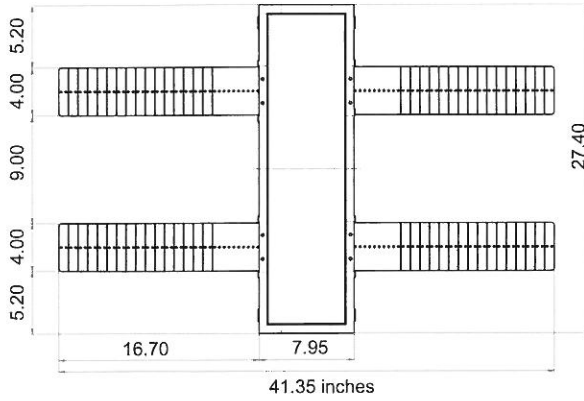
CRW-3 loudspeaker



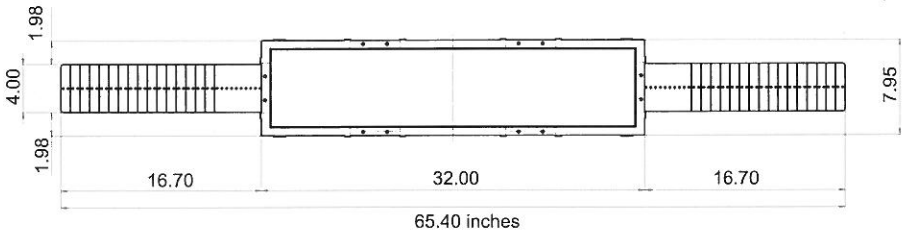
CRW-3C center loudspeaker

Dimensions

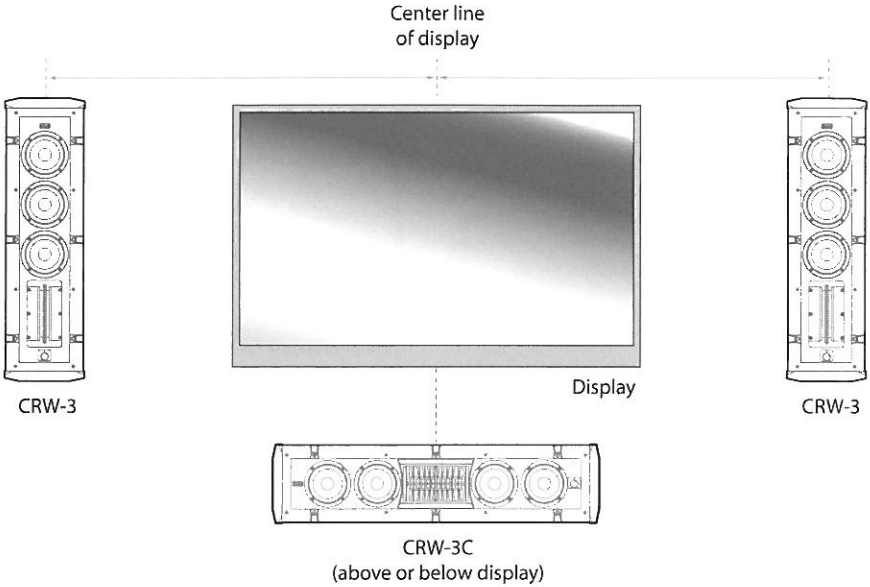
CRW-3 as left, right, or surround speaker



CRW-3C (as center speaker)



Loudspeaker Location



The following information will help you choose the locations for the loudspeakers in your room.



As with all loudspeaker installations, check that the position does not interfere with the picture quality.

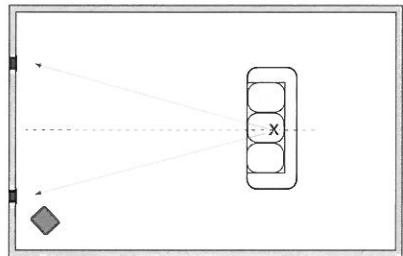
Ideally, all of the surround loudspeakers in a home theater system should be of the same make and model, and positioned at similar heights to produce a smooth and continuous soundfield.

The height of the ribbon should be located at, or slightly above ear level (a few inches). In many cases, when aligning the speaker height with your flat panel, the speaker will need to be mounted with the ribbon on the bottom of the speaker as shown in the above illustration. This is perfectly normal and our design takes this into consideration

Front Left/Right Speakers

The front left and right CRW-3 loudspeakers should be positioned so that your TV display is exactly centered between them. This will help focus your attention towards the display.

Your left loudspeaker should be set exactly the same distance and angle away from your listening position as the right loudspeaker.



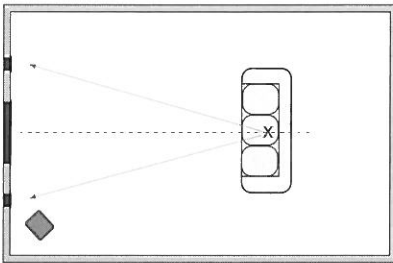
Front left and right loudspeakers

If you have a smaller TV, the loudspeakers should be no more than two feet away from the sides of the display.

If you have a Sunfire or Carver system equipped with Sonic Holography, then it is recommended that you use a tape measure to set the left and right loudspeakers to be an equal distance away from your listening position, within half an inch tolerance. (Sonic Holography is a unique process designed by Bob Carver to enhance the three-dimensional effects and realism of stereo sound.)

The Center Loudspeaker

Most movie dialog will come from the CRW-3 center loudspeaker, so careful positioning is an important part of a good home theater system. Your eyes and ears should focus your attention towards the center of the display.

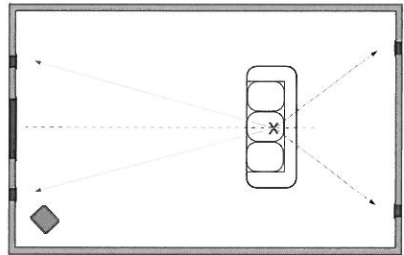


Center loudspeaker

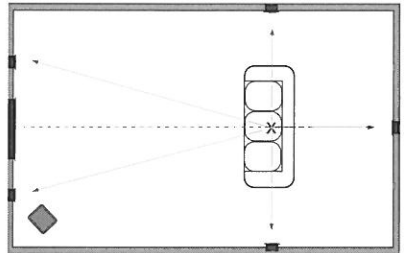
The CRW-3C center loudspeaker can be mounted above, or directly underneath the display, as long as it is located on the centerline and not off to one side.

If possible, have the center, left and right loudspeakers at the same height (within two feet). This will help give a smooth transition when sound effects move from loudspeaker to loudspeaker.

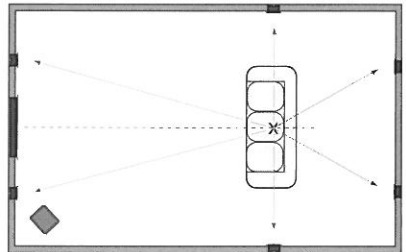
The CRW-3 and CRW-3C (mounted vertically) can be used in all surround locations as shown in the drawings below.



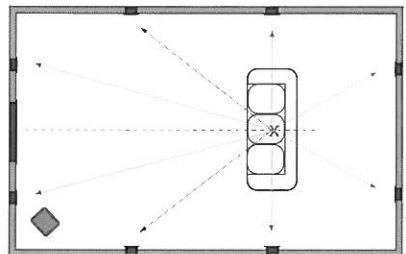
5.1 System



6.1 System



7.1 System



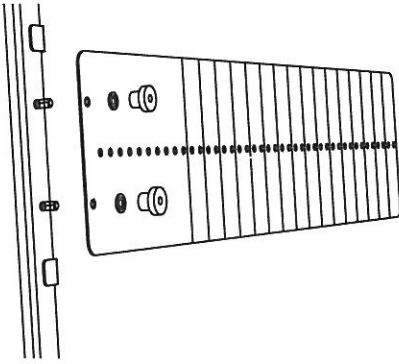
9.1 System

Vertical installation

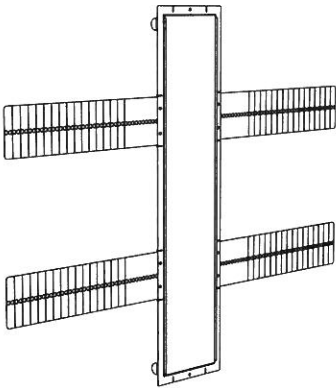
The following details show how the pre-construction kits are used to mount the CRW-3 ribbon loudspeakers vertically between wall studs. The CRW-3C center loudspeaker can also be fitted vertically.

Use the illustrations as a guide, but follow all local building codes regarding the actual framing methods.

1. Add four wings to the longest sides of the rectangular frame of the kit, using the lock washers and thumb nuts supplied.

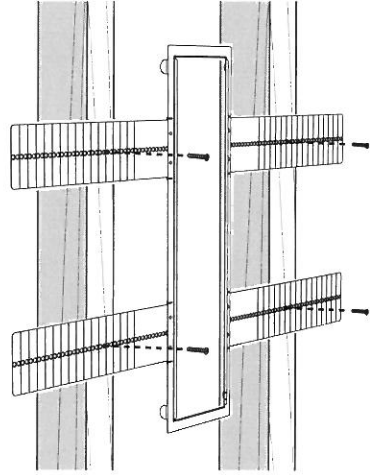


Bolting a wing to the rectangular frame

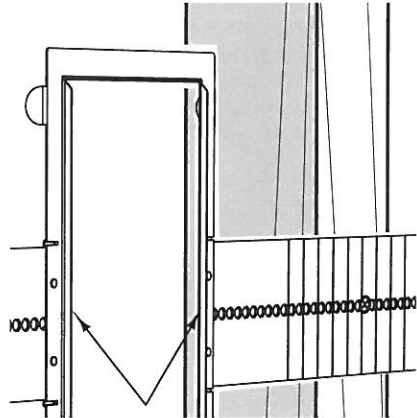


CRW-3C kit assembled for optional vertical installation

2. Use a level to make sure the assembly is vertical. Screw the assembly in place between the studs, in the location required. Make sure that the metal lip surrounding the rectangle is pointing outwards as shown.

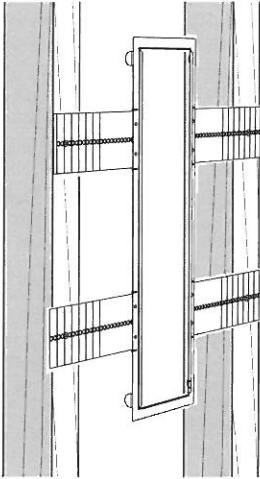


Screwing the CRW-3 assembly to the studs



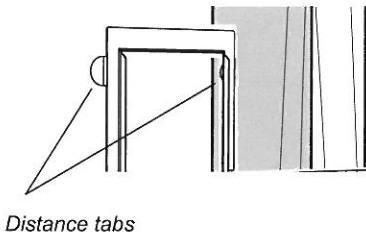
Detail showing metal lip pointing outwards

3. The extra wing length can be removed before or after installation. Each wing is scored with multiple V-grooves to help in removing the extra length by bending and snapping off.



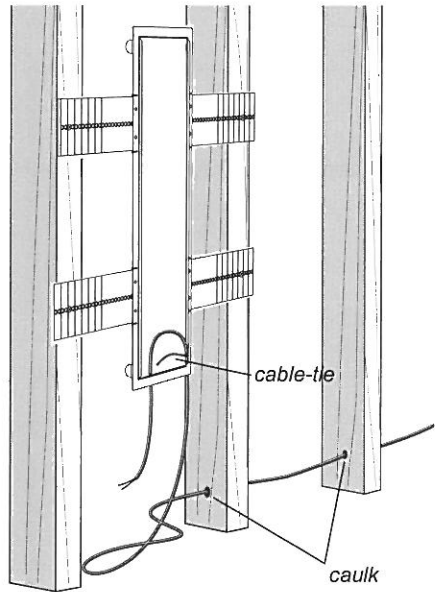
Remove excess wing length

NOTE: Do not mount the vertical frame too close to studs, or the loud-speaker will not install. (Its dog clamps will not have enough room to swing out.) The four metal tabs on the frame will prevent the frame face from overlapping the front face of a stud. Do not bend them over.



Wiring

1. Install the speaker wires following all local codes for electrical wiring installation. Use class 2 wiring, and 12 gauge is recommended, 16 gauge is the minimum.
2. Follow common low voltage practices like avoiding high voltage electrical wiring, or crossing them perpendicularly. This will reduce the chance of picking up hum or other interference.
3. The rectangular frame of the kit has two small holes for using a cable-tie to secure the speaker wire as shown. This will allow the wiring to be pulled out easily after the sheetrock has been added.
4. Secure the wire to the studs with electrical staples to prevent rattles and movement in operation.

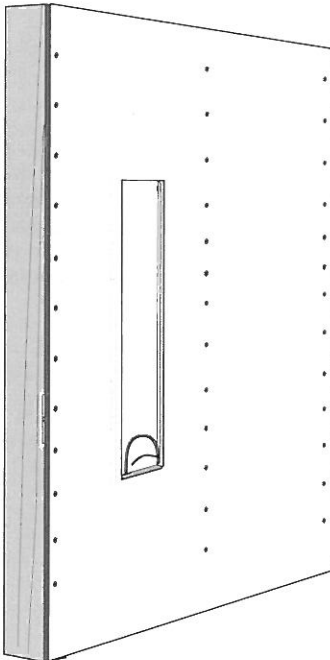


Running speaker wire

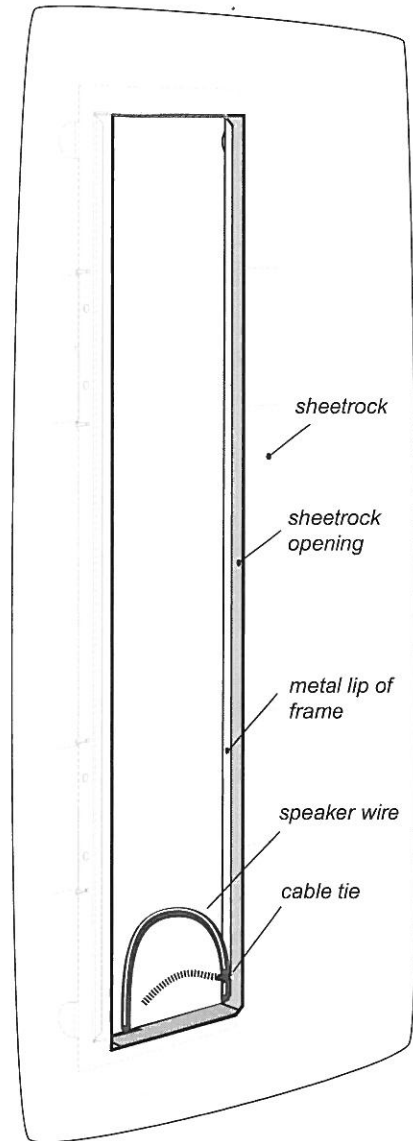
5. Do an electrical continuity test to make sure the connections are good from the amplifier-end of the speaker wire to the speaker-ends.
6. It is a good idea to secure the wiring from vibration as much as possible.

Sheetrock install

1. When the sheetrock is applied, use extra screws on the adjacent wall studs. Use a hand saw to carefully cut out the opening in the sheetrock to the dimensions of the inside of the metal rectangular frame. The metal lip around the edge of the opening will fit inside the sheetrock opening. Remove all debris.



Sheetrock installation (not all screws shown)



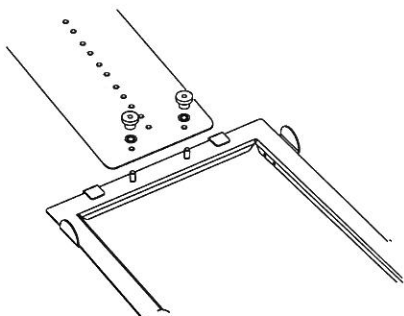
Detail of opening in sheetrock

Horizontal mounting

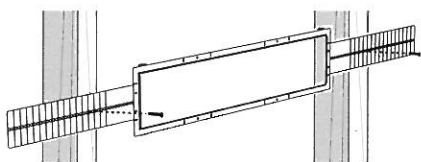
The CRW-3C center loudspeaker is typical mounted horizontally.

The procedure for mounting is basically the same as the vertical mounting shown previously for the CRW-3.

1. Find the best location, either above or below the location of the flat panel display.
2. Attach wings to the shortest ends of the rectangular frame and secure with the lock washer and thumb nut.

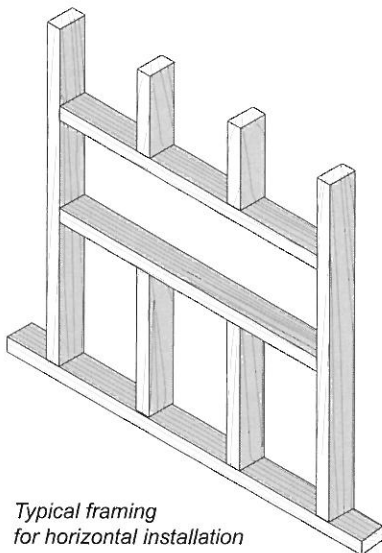


Bolting a wing to the rectangular frame



Screwing the assembly to the studs

3. The width of the CRW-3C is wider than the normal spacing between studs. This diagram shows typical framing for horizontal installation.



*Typical framing
for horizontal installation*

4. Use a level to make sure the assembly is horizontal. Screw the assembly in place between the studs, in the location required. Make sure that the metal lip surrounding the rectangle is pointing outwards as shown.
5. See the previous pages regarding wiring and sheetrock installation.
6. See the ribbon loudspeaker's owner's manual for details of fitting the loudspeakers to the walls.

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