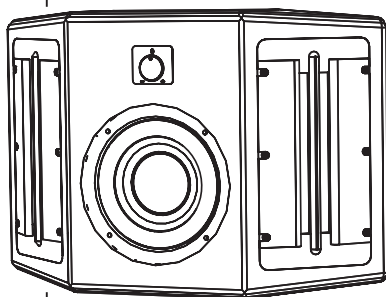


Sunfire[™]

==XT
SERIES

*Cinema Ribbon
Bipole Loudspeaker
CRM-2BIP*



User's Manual

Important Safety Instructions

- 1. Read Instructions.
- 2. Keep these Instructions.
- 3. Heed all Warnings.
- 4. Follow all Instructions.
- 5. Do not use this apparatus near water.
- 6. Clean only with a dry cloth.
- 7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 8. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as a connector is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 9. Object and Liquid Entry — Care should be taken so that objects do not fall into and liquids are not spilled into the inside of the apparatus.



WARNING: THIS LOUDSPEAKER IS CAPABLE OF PRODUCING VERY HIGH SOUND PRESSURE LEVELS. YOU MUST TAKE EVERY PRECAUTION TO PROTECT YOUR HEARING FROM PERMANENT DAMAGE.



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For more information on this and other Sunfire products, please visit our website:
www.sunfire.com



Introduction

Thank you for purchasing a Sunfire XT-Series Cinema Ribbon CRM-2BIP bipole loudspeaker. We hope you enjoy it and the music it makes as much as we have enjoyed creating it for you.

As an exclusive XT-Series product, this loudspeaker follows a great heritage of both world-class ribbon loudspeaker designs and industry-leading subwoofer technologies.

The CRM-2BIP bipole loudspeakers are designed as a perfect match to our Cinema Ribbon series loudspeakers and SubRosa subwoofers, resulting in the ultimate home theater experience... the kind of heart-felt experience that could only come from Sunfire.

Unpacking

Your Sunfire Cinema Ribbon CRM-2BIP bipole loudspeaker should reach you in perfect condition. If you do notice any shipping damage, please contact Sunfire immediately.

Gently lift out the loudspeaker and all the packing material. It is important to save all the packing materials and the box in case your loudspeaker ever needs to be moved or shipped for repair.

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.

Features

- CRM-2BIP loudspeaker for surround, and back surround applications
- 2 way design
- Two waveguide-loaded Neodymium ribbons, side-firing, bipole configuration
- 4.5-inch High Back-emf driver
- 117 dB maximum output
- 400 watts maximum power
- Ribbon level control
- Gold plated, spring-loaded terminals
- Removable grilles
- Hardware kit provided, includes wall anchors, mounting template, and anti-vibration pads

Care

If your loudspeaker needs servicing, please read the Troubleshooting section on page 10. If a problem persists, please contact your nearest authorized Sunfire Dealer.

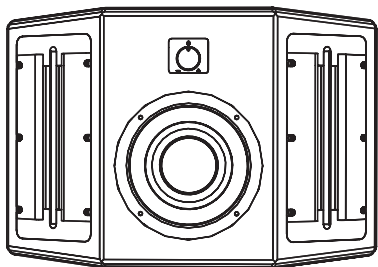
Please take a moment to fill out and mail the Sunfire Customer Response card. Also read the serial number located on the rear label and record it below:

Serial Number:

Purchased from:

Date:

Overview



Front view (with grilles removed)

The Cinema Ribbon CRM-2BIP is specifically designed as a bipole loudspeaker. Sharing technology with the rest of the Cinema Ribbon line, years of research and decades of experience have gone into this amazing loudspeaker.

The ribbons - a legacy refined

The ribbons in this loudspeaker are a remarkable piece of engineering, because they have the output capability, purity, and low distortion of large 6-foot-tall ribbons - in fact, they are derived from Bob Carver's award-winning Amazing Loudspeakers from the late 1970s! The CRM-2BIP features dual ribbons for lifelike detail, wide dispersion and high power handling, ideal characteristics for a surround sound application.

The woofer - a legacy refined

Sunfire created the category of small-box, high-power subwoofers more than a decade ago with the original True Subwoofer. This design relies on high-pressure, "High Back-emf" technology that provides very high bass output from a very small box. When migrating this subwoofer technology to the midrange and high frequencies on the Cinema Ribbon CRM-2BIP bipole loudspeaker, you get the same advantages: high output, small size, high efficiency, and years of trouble-free operation.

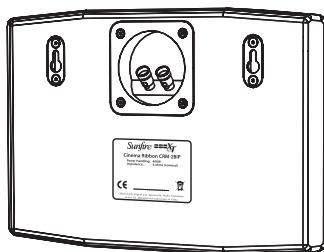
Conclusion

The Cinema Ribbon CRM-2BIP loudspeakers are a no-compromise answer to the age-old question of Form vs. Function. Why not get both... With a striking high gloss black cabinet that is only 3-5/8" deep, the CRM-2BIP is the most stylish and slimmest surround speaker in its class. Combine these speakers with the Sunfire Cinema Ribbon range of front and center loudspeakers, and a Sunfire subwoofer for the ultimate in high performance home theater.

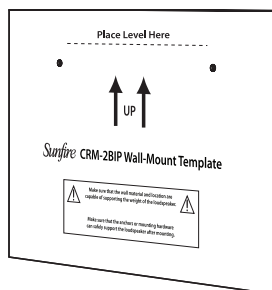
Installation overview

A wall template is supplied to help mark the walls for drilling and installation of two support screws. Two keyhole mounts on the rear panel of the CRM-2BIP allow it to be easily fitted over the two screws and securely mounted on the wall.

Four anti-vibration pads are supplied, and can be fitted to prevent vibration between the loudspeaker and the wall.

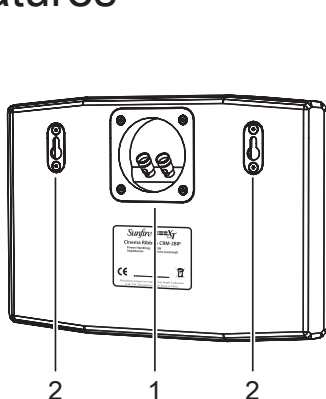


Rear view



Wall template

Features



1. Speaker Terminals

The spring-loaded terminals accept bare wire, tinned-wire, or pins. Always use high quality connections and speaker wires, and make sure there are no loose fittings or stray wire strands.

Connect the positive speaker-level output of your power amplifier or receiver to the positive (red) input of the loudspeaker. Connect the negative speaker-level output of your power amplifier or receiver to the negative (black) input of the loudspeaker.

Make sure that the positive and negative connections do not touch, or this may damage your power amplifier.

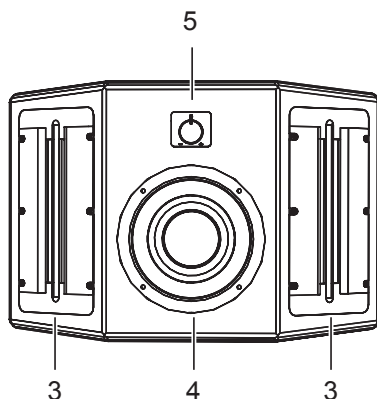
2. Keyhole mounts

Two keyhole mounts allow the loudspeaker to be easily fitted to your walls.

(See page 9 for installation details)

3. Ribbons

Two identical Cinema Ribbons are used in the CRM-2BIP. The position and angle of the ribbons is specially designed for surround applications. Reflections from the back of the room spread the surround soundstage and avoids localization of surround effects.



4. Woofer

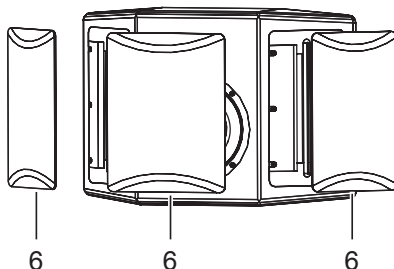
The High Back-emf woofer plays the frequency range below the internal crossover frequency of 500 Hz.

5. Ribbon Adjustment

This allows you to adjust the level of the ribbon section relative to the woofer. The range of adjustment is ± 3 dB, and the default setting is in the middle (0 dB). Perform a listening test and adjust this control as desired.

6. Grilles

The ribbon and woofer grilles are held in place with small magnets, and can be easily removed if required. Gently pry them off by hand by lifting the corners one at a time.



Loudspeaker Location

Consult the owner's manuals to find the best location for your left, right, center loudspeakers and the subwoofer. The CRM-2BIP dipole loudspeakers are used as surround and surround-back loudspeakers in the following configurations.

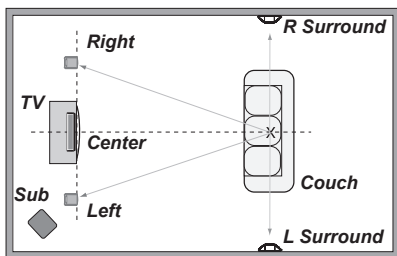


Remember to keep the loudspeakers away from any TV display, computer, VCR or magnetic tapes and discs. This will reduce the chance of the magnetic fields upsetting the TV screen or erasing your magnetic media.

5.1 Configuration

Place each surround loudspeaker an equal distance away from your central listening position, and keep them at least one or two feet above ear level (with you sitting down).

They can be placed on the side walls at either side of the listening position as shown below, or behind on the rear walls.



5.1 System

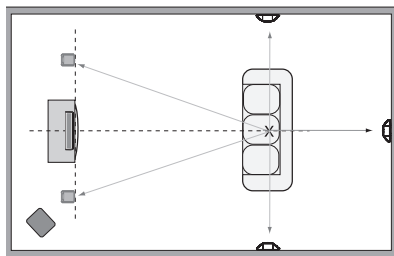
The CRM-2BIP ribbons will create desired reflections from the side and rear walls. This broadens the soundstage so that you cannot distinguish the sound as coming from the loudspeakers, but rather from a larger area behind you.

6.1 and 7.1 Configuration

Sunfire home theater processors and receivers have two extra outputs for surround back loudspeakers. These create a wonderful sense of realism in surround effects during playback of Dolby Digital EX, Dolby Pro Logic IIx, and DTS-ES.

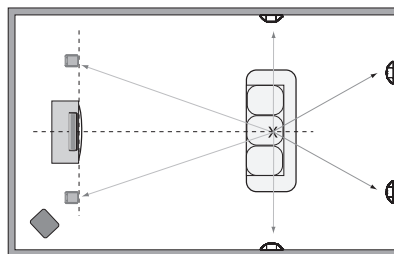
Such systems can be configured for one or two surround back loudspeakers.

If you are connecting one surround back loudspeaker, place it directly behind your listening position, with the surround loudspeakers to the side as shown below.



6.1 System

With two surround back loudspeakers, set the surround back loudspeakers behind and between the surround loudspeakers.



7.1 System

Using a subwoofer



The Cinema Ribbon loudspeakers are designed to be used with a subwoofer to fill in the lower frequency range. They are not designed to accept 400 watts of power at the full frequency range.

Your system should be designed so that the Cinema Ribbon loudspeakers receive only the range above 80 Hz, with a subwoofer to handle the frequencies below 80 Hz.

Sunfire home theater processors and receivers have a bass management system that allows you to redirect the bass frequency range of each channel to the subwoofer. The advantages are :

- The overall bass of the system is improved, as subwoofers, such as Sunfire's powered True Subwoofers are specially designed for this frequency range.
- The subwoofer can simultaneously play the bass from all of the loudspeakers, in addition to it's own low frequency effects channel (LFE).
- There is no loss in perception of the position of movie or music sound effects, as the ear cannot easily locate the position of bass sound sources.
- Compact loudspeakers can be used for front, center and surrounds, as they do not have to reproduce the low frequency range. This leads to a saving in room space.
- Your amplifiers do not waste power reproducing the low frequency range.

Follow the directions in your subwoofer's owner's manual, to find the best location for your subwoofer.

Break-in period

Like many high performance automobiles, the Cinema Ribbon CRM-2BIP dipole loudspeakers perform at their best after an initial break-in period. A minimum of 20 hours is recommended prior to performing critical listening, however the speakers will sound their best after a period of 300 to 400 hours. During this time, the driver suspensions and ribbon structure will relax into their operating design positions and give optimum performance.

To facilitate break-in during the initial 20 hours, it is recommended that you play material with a wide dynamic range at louder volumes – such as your favorite rock and roll album (that is if your family or neighbors can stand it).



It is important that your amplifier supplies good clean power, and not run into distortion. Amplifier distortion due to clipping causes high-frequency output components that can damage loudspeakers. Even a 100 watt amplifier running into clipping can damage loudspeakers rated at 400 watts or more.

Installation

Read the details on page 6 to help determine the best position for your loudspeakers.

Tools required:

- Phillips screwdriver
- Pencil or other marker
- Electric drill and 5/16" drill bit
- Level
- Safety glasses
- Step ladder if needed
- Electronic stud finder if needed

Preliminary steps:

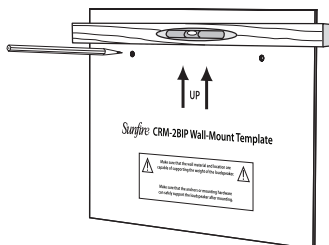
- Clear the area where you are going to work, so it will be safe.



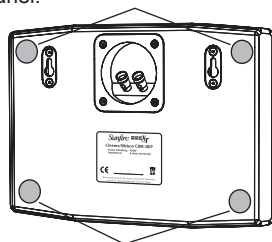
- Make sure there is no wiring, or gas or water pipes behind the wall where you are going to drill!
- If you have to mount the bracket onto a masonry wall, we recommend that you consult with your hardware supplier to buy suitable masonry hardware. The loudspeaker weighs 8 lb (3.6 kg), but you should allow a good safety margin. If in doubt, please contact your Sunfire dealer for professional installation.

Mounting onto sheetrock

1. Choose the best location for your CRM-2BIP loudspeakers.
2. Hold the wall mount template onto the wall surface. Use a level to make sure that the two holes are horizontal.



3. Mark the wall with a pencil in the location of the two holes, and remove the template.
4. Put on your safety glasses. With a 5/16" drill bit, drill two holes into the marked positions on the wall. Remove any dust or particles.
5. Press a dry wall anchor into each hole, and gently tap them in flush.
6. Tighten the screws by hand, until the heads are sticking out approximately 1/8".
7. Connect your speaker wires to the back of the loudspeakers, making sure of the correct polarity. Gently pull on the wires to make sure of a good connection. Secure the wires so their weight is not pulling against the terminals.
8. To reduce the chance of the loudspeaker vibrating against the wall, place the supplied anti-vibration pads in four locations on the rear panel.



Anti-vibration pads

9. Hold the loudspeaker in place, so the keyholes in the rear of the loudspeaker line up with the screws on the wall. Make sure that the screw-heads are securely in the keyholes. If the loudspeaker feels loose, drive the screws in further and remount the loudspeaker.
10. Enjoy your new loudspeaker. See page 8 regarding the break-in period required before the loudspeakers will sound their best.

Specifications

Design

2 way

Bipole Configuration

Drive Units

HF: Waveguide loaded Neodymium Ribbons

LF: 4.5-inch High Back-emf

Frequency Response

80 Hz to 40 kHz

Crossover Frequency

500 Hz (-6 dB)

Maximum Power

400 watts

Minimum Power

25 watts

Sensitivity (2.83 V/1 meter)

90 dB

Maximum Output

117 dB

Impedance

6 ohms nominal

Connections

1 pair gold plated spring binding posts

Dimensions

| | |
|--------|-----------------|
| Height | 8.25" (210 mm) |
| Width | 12.18" (309 mm) |
| Depth | 4.25" (108 mm) |
| Weight | 8 lb (3.6 kg) |

Troubleshooting

The Cinema Ribbon CRM-2BIP dipole loudspeakers are designed and built to provide years of trouble-free performance. Most problems that occur can usually be solved by checking your setup, or by making sure all components are fully operational.

The following information will help you deal with common problems you may experience. If a problem persists, please contact your Dealer for assistance.

Poor or no sound

- Check all the connections from the loudspeaker to the amplifier or receiver. Swap loudspeakers around, and see if the poor sound follows a particular loudspeaker.
- Check that your amplifier is not driven too hard or is clipping. Even a low-powered amp driven into clipping can cause distortion or damage your loudspeakers.
- Many processor/preamps can send test tones through all the loudspeakers in your system. Use this to adjust the volume of each channel until they are all playing at the same level. Make sure that any bass management options are set correctly, and any channels using the Cinema Ribbon loudspeakers are set to "small."
- If the system bass is weak only when playing surround sources, check that your processor is correctly set to decode the surround modes, such as Dolby Digital or DTS.
- Some DVD discs have a menu that allows you to select which soundtrack to play. Check that the correct surround audio soundtrack is selected.

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Manual 913-151-00 Rev A

Limited Warranty

Sunfire Corporation is proud of its products which have been built with care using advanced technology and premium component parts. Your unit has been crafted to perform properly for many years. Sunfire Corporation offers the following Warranty to you, the owner of a new Sunfire product:

The Sunfire Corporation Warranty for the XT-Series Cinema Ribbon CRM-2BIP bipole loudspeaker is in effect for FIVE years from the date of original retail purchase. The Sunfire Corporation Warranty covers defects in materials and workmanship. The following, however, are excluded:

- a) Damage caused during shipment.
- b) Damage caused by accident, misuse, abuse of operation contrary to the instructions specified in the Sunfire Corporation user's manual
- c) Units where the serial number has been defaced, modified or removed,
- d) Damage resulting from modification or attempted repair by any person not authorized in writing by Sunfire Corporation.
- e) Units purchased from unauthorized dealers.

The Sunfire Corporation Warranty extends to the original owner during the five year warranty period so long as the original dated purchase receipt is presented whenever warranty service is required.

All implied warranties, including warranties of merchantability and fitness for particular purposes, are limited in duration to the five year length of this Warranty, unless otherwise provided by state law.

Sunfire Corporation's liability is limited to the repair or replacement, at our option, of any defective product and shall not in any event include property or any other incidental or consequential damages which may result from the failure of this product.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. We suggest that you attach your purchase receipt to this Warranty and keep these in a safe place. Thank you for your choice of a Sunfire Corporation product.

Service Assistance

We suggest that you read the Limited Warranty completely to fully understand your Warranty/Service coverage.

If your Sunfire Corporation product ever requires service, write to us, or call:

Sunfire Corporation
Technical Services Department
P.O. Box 1589
Snohomish, WA 98290
support@sunfire.com
Tel (425) 335-4748
Fax (425) 335-4746

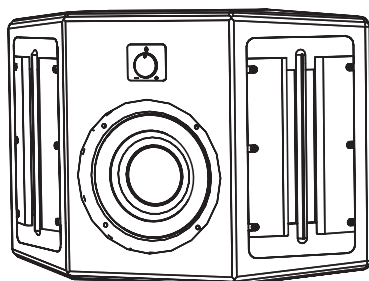
You will be directed to an authorized Sunfire Corporation Service Station or receive instructions to ship the unit to the factory. Please save the original shipping carton and packing materials in case shipping is required. Please do not ship Parcel Post.

NOTE: Before sending in your unit for repair, you must call Sunfire for return authorization (RA).

Include a complete description of the problem, indicating how you have it connected, the associated equipment in your system and a copy of your purchase receipt. Initial shipping costs are not paid by Sunfire Corporation; return ground shipping costs will be prepaid if repairs were covered by the scope of this Warranty.

*Sunfire*TM

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SERIES



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Bipole Loudspeaker
CRM-2BIP*

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