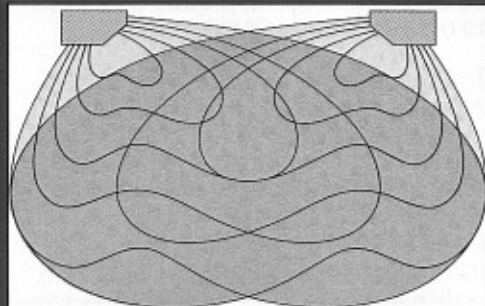


The Bose[®] 2.2[™] Direct/Reflecting[®] Speaker System



The Bose® 2.2™ Direct/Reflecting® Speaker System

Before you begin:

Congratulations on purchasing Bose speakers! We are confident that our advanced technology and quality construction will provide you a lifetime of musical listening pleasure.

The operating principles of the Bose 2.2 speaker system are **significantly** different from those of conventional speakers. To obtain the best results, **please take time to read this owner's manual.**

I. Unpacking the 2.2 System

After opening the carton from the top, remove all packing materials. Then, carefully lift the speakers from the carton. We suggest that you save the carton and packing materials in case you ever need to transport your speakers.

If either speaker appears to be damaged, do not attempt to use it. Instead, repack the speakers in the original carton and notify your authorized Bose dealer immediately.

II. Setting up Your Speaker System

Unlike conventional speakers, the Bose 2.2 system uses Direct/Reflecting® technology to re-create an exceptionally realistic stereo image. (See Figures 1 and 2.) Please note that **there is a distinct left and right 2.2 speaker.** To obtain maximum performance, please use the following guidelines.

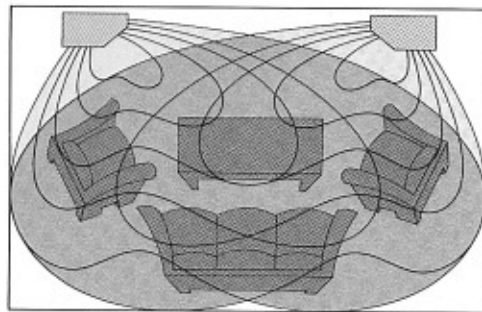


Figure 1. Direct/Reflecting® listening area produced by the Bose 2.2 speaker system.

Important: While the 2.2 system delivers good performance when played in the vertical position, you should orient the speakers horizontally to enjoy the full benefit of Direct/Reflecting® speaker technology.

Unlike conventional speakers, the 2.2 system is designed to deliver excellent performance when located on either the long or short walls of your listening room.

- Select the wall where you intend to place the speakers. Imagine that the length of the wall is divided in half, forming two equal parts. Now divide each part in half again. These second wall divisions (equal to $\frac{1}{4}$ of the wall's entire length) are the approximate locations for each speaker.

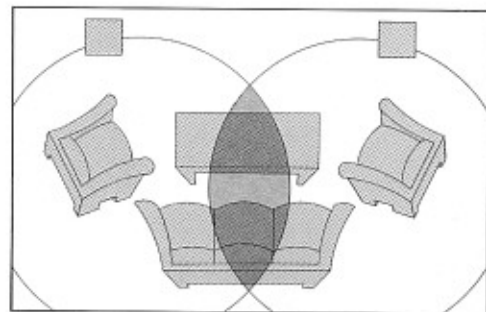


Figure 2. Stereo listening area produced by conventional speaker systems.

The speakers will give best stereo coverage if they are placed a good distance apart. This is not a requirement, however. In most listening rooms, separation as great as 15 feet or as small as 3 feet provides excellent results. (Refer to the "Room Acoustics" section of this guide for more information on speaker placement.)

- Once you have selected your speaker locations, place the left speaker (Part 1) on the left side of the wall and the right speaker (Part 2) on the right side.
- The Bose® 2.2 speakers are bookshelf speakers, and should be placed roughly at ear level, not on the floor. If placed on a shelf, keep books or other objects at least 6" away from the grilles.

Room Acoustics

Where you place the 2.2 speakers in the room is important for getting the best sound. There is no one required placement; rather, it is important to know that placement does affect sound. We recommend that you experiment with various locations and put the speakers where they sound best to you before determining final placement. The following tips will help you maximize the sound of your 2.2 system.

General Guidelines

The acoustics of your listening room can affect the overall sound quality of your speakers.

1. Rooms with a lot of sound absorbing furnishings (upholstered furniture, wall-to-wall carpets, heavy drapes, etc.) may reduce the treble sound of your system, making it sound dull. The missing treble can be restored by slightly turning up the treble control on the receiver/amp.
2. Rooms with few sound absorbing furnishings, especially those with bare floors and walls, may sound overly shrill because of too much treble. Turning down the treble control or adding sound absorbers such as area rugs or drapes will usually solve this problem.

3. In general, the closer the speaker is to the wall, the more bass you will hear. Placing the speakers close to the corners of the room will increase bass even more. By keeping this rule in mind, you can tune your system to your room. So if your system seems to lack bass, try moving the speakers a little closer to the room's corners. If your system has too much bass, move the speakers away from the corners.
4. Many problems with acoustics can be solved by the judicious use of your tone controls (bass and treble). However, using tone and loudness controls may put greater power demands on your receiver/amp. **Excessive tone control use can cause an amplifier or receiver to run out of power and distort, potentially damaging your system.**
5. Outboard signal processors (such as graphic and parametric equalizers) can be used with your 2.2 speakers if a greater degree of acoustic control is required. Consult your Bose® dealer for advice.

Please Note: The greatest chance of damaging a speaker occurs when the amplifier is being overdriven, which means you have asked the amplifier for more power than it is rated to deliver. An amplifier that is pushed beyond its oper-

ating limit will produce high-frequency distortion which may damage the tweeters. This is called "clipping," and is heard as a fuzzy crackling sound. When an amplifier reaches the clipping point, turning up the volume results in more distortion, not more volume. If this happens, turn it down. This will protect both your speakers and your ears. Certain unusual recordings may exceed the bass power limit. This is audible as a popping sound during loud bass passages. If this occurs, reduce the volume.

III. Connecting the Bose 2.2 Speaker System

We recommend using standard zipcord or lamp cord, the wire most commonly carried by audio dealers and electrical stores. 18-gauge zipcord is adequate for lengths up to 20 feet per speaker. Heavier gauges (16 to 14) should be used for greater lengths. Avoid thin wire (20-24 gauge) commonly labeled "speaker wire"—this wire is generally not suitable for high fidelity use. The following table shows the minimum thickness of wire to use.

Length of Wire	Minimum Thickness
Under 20 ft.	18 gauge
20-40 ft.	16 gauge
40-80 ft.	14 gauge

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- A. Measure and cut the amount of wire required to connect each speaker to the receiver/amp. If possible, use approximately the same length of wire for each speaker.
- B. Separate the conductors at the end of each wire. Strip off approximately 1/2 inch (12 mm) of insulation from each conductor.
- C. Examine the wire ends carefully. There will be some visible difference between the two conductors. If the wire is clear, one side may be silver and the other copper. Or if the wire is not color coded, then one side will be ribbed or striped. In any event, **consider the ribbed, striped, or copper side to be positive (+). The remaining side (plain, smooth, or silver) is negative (-).**
- D. Locate the speaker terminals on the back of the left speaker (Part 1). Connect the positive side of the wire to the (+) red terminal and the negative side of the wire to the (-) black terminal by pressing in the plastic terminal tab, inserting the wire end into the hole, and releasing the tab. The wire should now be firmly in place. (Refer to Figure 3.)
- E. **Make sure your receiver or amplifier is OFF and unplugged.** Connect the other end of the wire to the terminals marked LEFT on the back of the receiver/amp, making sure to connect

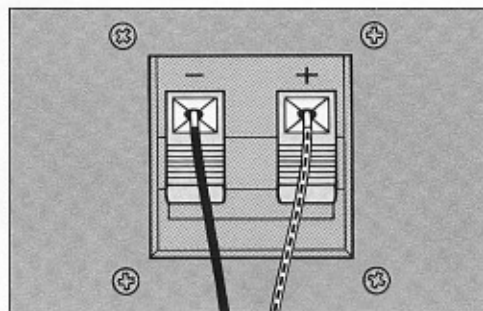


Figure 3. Connecting the speaker.

the positive side of the wire to the receiver/amp positive terminal (marked + or colored red) and the negative side of the wire to the negative terminal (marked - or colored black). **Refer to Figure 4.** This assures that the speaker's positive terminal is connected to the receiver/amp's positive terminal, and the speaker's negative terminal is connected to the receiver/amp's negative terminal. Make sure all connections are secure.

- F. Repeat steps D and E for the right speaker (Part 2) and right receiver/amp side. Make sure all connections are secure.
- G. Finally, **check carefully** to make sure that no loose strands of wire are brushing against the other terminal on either

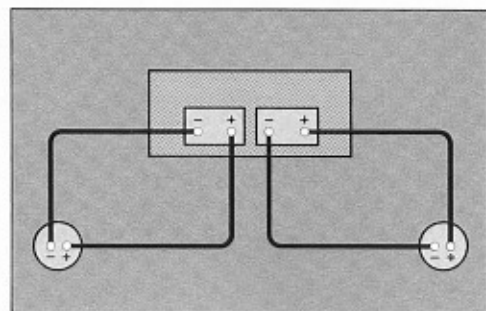


Figure 4. Connecting the speakers to the receiver/amp.

the speaker or receiver/amp. *Such bridged wires create short circuits which can damage your amplifier. Repair any loose wire strands before plugging in your receiver/amp.*

Please Note: Care is required if you intend to staple speaker wires. If a staple or other object pierces the wire, it could cause a short circuit.

- H. If you are not sure the speakers are hooked up correctly or in phase (positive to positive, negative to negative), try this test:
1. Set your receiver/amp to MONO (monophonic or L + R). Be sure that the balance control is in the normal or centered position.
 2. Move the speakers until they are **facing each other closely.**

3. Play some music with deep bass. If the speakers are hooked up correctly, the sound will come from a point between the speakers and will have full, natural bass response.
4. **If you do not hear much deep bass, shut the receiver/amp off.** Then reverse the + and - connections on **one speaker only** and repeat the test. **Use whichever connection produces the most bass.**

Connecting Multiple Speakers

The Bose 2.2 speaker is an 8-ohm system. **Consult your amplifier or receiver's User Guide for information on connecting multiple speakers.**

IV. Using the 2.2 Speaker System

Once set up and connected properly, your speakers will require very little attention. However, we suggest that you observe the following guidelines to get the most out of your speaker investment:

A. Fusing

Any loudspeaker can be damaged if the amplifier driving it should fail. Fusing will provide additional protection from amplifier failure, and is recommended.

1. To insert the fuse into the speaker wiring, attach a fuseholder to the + (red) terminal of the speaker. (Refer to Figure 5.) Then connect the speaker wire to the holder, putting the fuseholder between

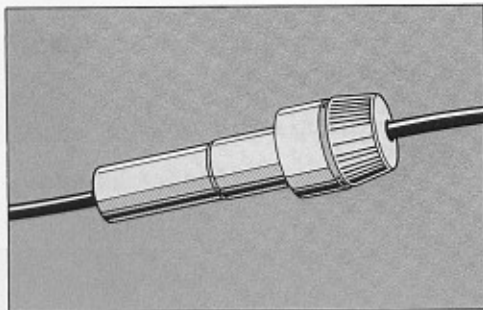


Figure 5. Fusing the speakers. Insert fuse holder between positive speaker wire end and positive speaker terminal.

- the speaker's + (red) terminal and the receiver/amp's + terminal.
2. When the fuse is inserted into the fuseholder, the fusing protection system is complete. A **1.5 ampere, fast-blow AGC Series or Littlefuse AG series fuse** is recommended.

A fuse kit containing fuses and holders is available from the Bose® Customer Service Department, 78 Turnpike Road, Westboro, MA 01581, for \$7.50. Call (508) 366-9896 and ask for Part No. 108938-4.

B. Maintenance

The cabinet of the 2.2 speaker can be easily cleaned with a damp cloth, and, if necessary, a mild detergent such as dishwashing liquid.

Do not allow liquids to spill through the grille assembly or in any way enter the speaker.

Do not attempt to remove the 2.2 grille.

The grille is **not** designed to be removed by the owner and should be removed only by qualified service personnel.

Do not clean the 2.2 system with any solvents or chemicals. If necessary, the grilles may be **carefully** vacuumed. Please note that the tweeters are located directly behind the grille cloth and are easily damaged. Avoid applying any pressure with the vacuum nozzle.

V. If You Have a Problem

If you experience any difficulty with your Bose® 2.2 system, try the following tests first to determine if the speakers are at fault. In general, most problems occur in components other than speakers.

- A. If one speaker does not play or sounds bad, **shut off the receiver** and disconnect both speakers. Turn the balance control over to the channel which sounded OK and connect it to the "bad" speaker. If the speaker now sounds fine, the problem is elsewhere. **Do not** connect the OK speaker to a receiver channel that may be defective.

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- B. If both speakers sound defective, use the **same** wiring to connect them to another receiver/amp known to be working properly. If the speakers now operate correctly, the problem is not in the speakers or wiring.
- C. Check all accessible fuses. Replace any fuses that appear to be blown. If the fuses blow again, have the receiver/amp checked by qualified personnel.
- D. If trouble persists in one or both speakers, contact your authorized Bose dealer who will verify any defects and arrange for service by an authorized service agency or by the Bose factory. You may also elect to send your system directly to Bose Customer Service, by carefully following this procedure:
1. Obtain a return authorization number from the Bose Customer Service Department, (508) 366-9896.
 2. Return the system together with proof of purchase, freight prepaid, in its original shipping carton. Please follow packing instructions on carton flap. Display your return authorization number prominently on the outside of the carton. Any damage in transit due to improper packing is not covered by the warranty and will not be recognized as an insurance claim by transportation companies. If you do not have your original packing material,

you may order replacement packing materials from Bose Customer Service.

VI. Technical Information Features

Direct/Reflecting® Speaker Technology
Slot Port Bass Tuning System
Syncom®-II Computerized Quality Control

Driver Complement

One (1) 6" long-excursion woofer per enclosure
One (1) 2" fluid-cooled tweeter per enclosure

Nominal Impedance

8 ohms

Amplifier Power Guidelines

Minimum: 10 watts per channel
Maximum: 75 watts per channel

Power Handling

60 watts RMS continuous conforming to IEC standard

Finish

Vinyl Veneer

Dimensions

9⁷/₈" H x 14³/₄" W x 7¹/₂" D (24.1 x 37.5 x 25.4 cm)

Weight

12 lbs (5.5 kg)

Please retain this important warranty information.

Record your serial numbers and purchase information below, and retain it in your records along with proof of purchase.

Speaker Model

Date Purchased

Speaker Serial Numbers (List both)

Dealer Name

Dealer Address

Bose® Corporation warrants this unit to be free from defects in materials and workmanship for a period of five years from the original date of purchase. During that period, Bose will remedy all such defects without charge for parts or labor, upon return of the unit together with the original sales receipt, or other proof of purchase, to Bose, or to an authorized Bose Service Agency. This warranty does not extend to damage resulting from improper installation, misuse, neglect or abuse. This warranty is fully transferable. In no event shall Bose be liable for incidental or consequential damages.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incident-

tal or consequential damages, so this limitation may not apply to you.

Should this unit fail within the warranty period, contact your authorized Bose® dealer. The dealer will tell which one of the following procedures you should follow:

1. Return unit with proof of purchase to dealer, OR
2. Return unit with proof of purchase to the nearest authorized Bose service agency, OR
3. Return the unit with proof of purchase directly to the Bose factory.

If Procedure 3 above is taken, please follow the instructions outlined in section V of your owner's guide ("If You Have a Problem", part D).

Your unit will be repaired and returned to you at Bose's expense. If the defects cannot be repaired after a reasonable number of attempts by Bose to do so, you may elect to receive a refund or a replacement, but only if the unit is returned to Bose free and clear of all liens and other encumbrances.

The foregoing warranty applies only to products sold within the United States of America, its territories and possessions, and to sales at overseas military post exchanges. For information regarding warranty coverage in other areas, consult the Bose subsidiary or authorized dealer nearest you.

BOSE

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Australia, Belgium, Canada, England, France,
Germany, Ireland, Italy, Japan,
Netherlands, Spain, Switzerland, United
States.

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