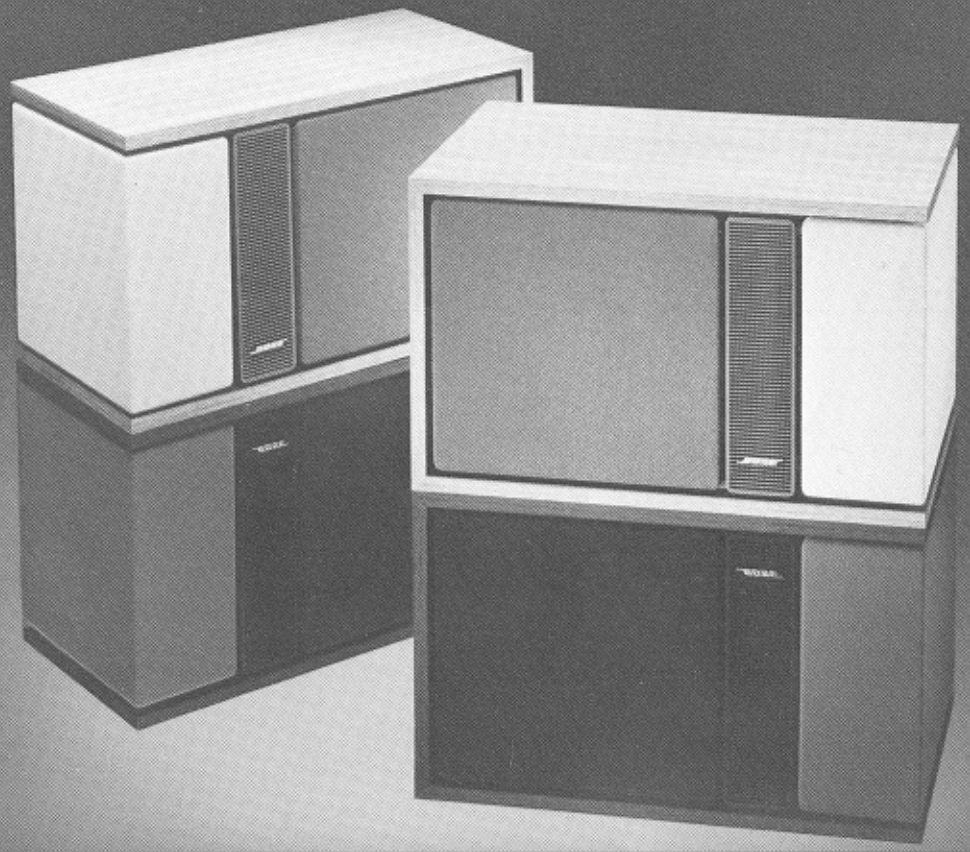
Owner's Manual

Bose® 301™ Series II Direct/Reflecting® Loudspeaker System



BOSE®

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1. Introduction

Thank you for purchasing the Bose 301 Series II Direct/Reflecting® Loudspeaker System. Its advanced design and quality construction will give you many years of listening pleasure.

The installation and operating principles of your 301 system are significantly different from those of conventional speaker systems. To obtain the best possible performance, **please take the time to read this manual.**

2. Unpacking

The shipping carton contains **two** 301 speakers labeled **Part 1** (left) and **Part 2** (right). Unpack each unit carefully, saving the carton and all packaging materials for later use.

If either speaker appears to be damaged when unpacking, **do not operate the damaged unit.** Repack both speakers in their original carton and notify your authorized Bose dealer immediately.

3. Placement

The following placement guidelines will help you to realize the best possible performance from your 301 Loudspeakers. Refer to FIGURE 1.

a. 301 speakers work best when music is given space to develop "around" the cabinets, reflecting off nearby walls to create a wide, transparent stereo image. Hard materials such as wood, brick, glass, sheetrock and/or sturdy paneling generally provide the most effective sound-reflecting surfaces. Sound-absorbent furnishings (heavy drapes, etc.) should be kept away from the immediate vicinity of the speakers.

b. Place the **Part 1** and **Part 2** speakers on the **left** and **right** sides of the room respectively, spaced 4-12 feet (1.2-3.6 m) apart. Vertical placement (with the tweeters facing directly upward or downward) is not recommended.

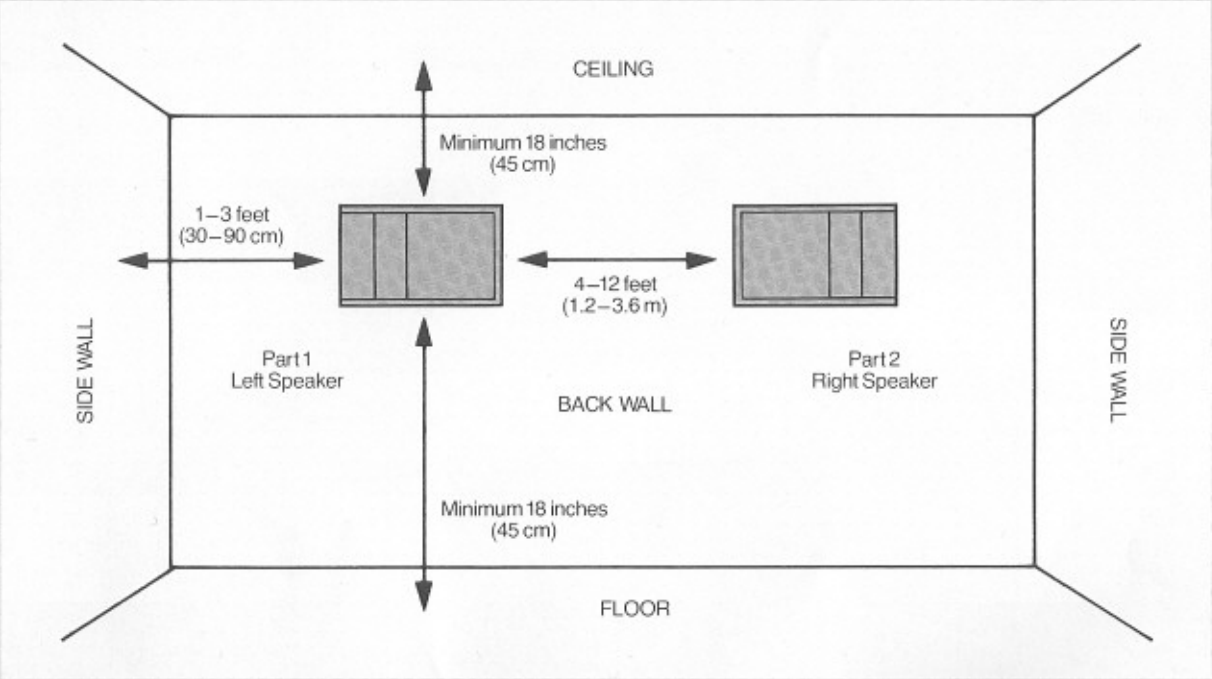

FIGURE 1. Recommended placement in average-sized listening rooms.

c. Position the speakers **at least 12 inches** (30 cm) away from the side walls. Optimum distance is 1½-3 feet (45-90 cm).

d. The most accurate bass response results when the speakers are set **less than 18 inches** (45 cm) away from the wall behind them, and **more than 18 inches** from the floor or ceiling. Avoid placing the speakers exactly halfway between the floor and ceiling.

e. If your music seems to be lacking in deep bass, try moving the speakers closer to the wall behind them and/or nearer to the corners of the listening room. Heavy, "booming" bass can be tamed by moving the speakers away from corners and walls. You can also experiment with the tone controls on your amplifier or receiver to achieve a spectral balance that suits your listening environment and personal tastes.

4. Wire Selection

Audible sound coloration and/or power loss can occur if the wire connecting the speakers to your amplifier or receiver is not thick enough. The table below specifies the **minimum** thickness of 2-conductor wire recommended for various speaker-to-amp distances.

RECOMMENDED WIRE SIZES*

Maximum Length	Wire Gauge
30 feet (9 m)	18 (0.75 mm²)
45 feet (14 m)	16 (1.5 mm²)
70 feet (21 m)	14 (2.0 mm²)

*Based on a maximum frequency response deviation of ±0.5 dB.

Standard 2-conductor zipcord (available at electrical and hardware stores) can be used for speaker connection. This wire is often color-coded, or else has a ribbed line(s) running along one conductor for easy identification of the positive and negative leads.

5. Connection

Follow the next procedure to assure that both 301™ speakers are properly connected to your music system. Refer to FIGURE 2.

a. Turn off your amplifier or receiver and unplug it from the ac power mains before connecting the loudspeakers.

b. Separate the conductors at the end of each length of wire. Strip approximately ½ inch (12 mm) of insulation off each conductor.

c. Locate the push-type input terminals on the back of the **left** speaker cabinet. Note that there are two terminals marked + (positive) and – (negative).

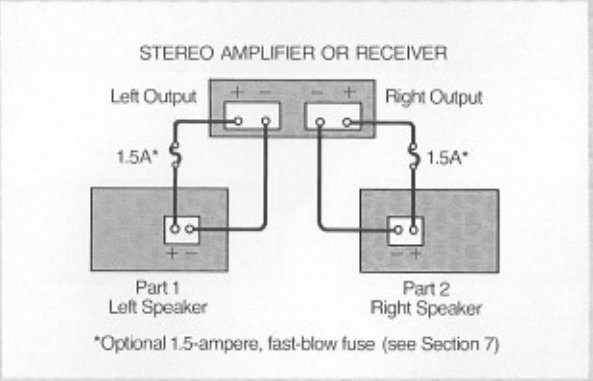

FIGURE 2. Speaker connection.

d. Connect one wire conductor to the terminal marked—on the **left** speaker. Connect the other end of the **same** conductor to the output terminal marked COM, GND, NEG or—on the **left** channel of your amplifier. Use the color-coding or ribbed line(s) on the wire to be sure you are using the same conductor.

e. In the same manner, connect the + terminal on the **left** speaker to the output terminal marked POS or + on the **left** amplifier channel. (If your amplifier offers a choice of output impedances, use the terminal marked 8 or 8 OHMS.)

f. Repeat steps d and e above, connecting the **right** speaker to the **right** output channel of your amplifier.

g. Check **very carefully** to be certain that no loose strands of wire are accidentally "bridged" across the terminals on either the speakers or the amplifier. **Bridged wires create short circuits which can damage your amplifier.** Repair any loose wire strands **before** operating your amplifier or receiver.

6. Phasing Test

If you are not certain that the speakers are connected to your amplifier "in phase" (i.e., positive to positive, negative to negative), perform this simple test:

a. Set your sound system for MONO (monophonic) reproduction. Be sure the balance control is centered or set to normal.

b. Temporarily place the loudspeakers so that they are facing each other closely.

c. Play music containing deep bass notes through the system. If the speakers are phased correctly, the sound will appear to come from a point between the speakers with full, natural bass response.

d. If the music seems to be lacking in deep bass, reverse the + and – wire connections on **one** speaker and repeat the test. **Use the connection that produces the most powerful bass.**

7. Fusing

Any loudspeaker can be damaged if the amplifier driving it should fail. Damage may also occur by playing the music so loudly that it sounds distorted. **This can happen even with a low-powered amplifier or receiver.**

Your 301 speakers incorporate heavy-duty driver elements which are designed to resist many types of electrical stress. Fusing will provide additional protection, and is recommended in most applications.

The fuseholders should be inserted into the + wire connecting each speaker to your amplifier or receiver (see FIGURE 2). Use **1.5-ampere, fast-blow** Buss AGC Series, Littelfuse 3AG Series or equivalent fuses.

A complete fuse kit including fuses and holders is available from the Bose Customer Service Department, The Mountain, Framingham, Massachusetts USA 01701 for $5.00. Ask for the 301 Fuse Kit, Part Number 108938-4.

8. Maintenance

The 301™ speaker enclosures can be cleaned by wiping with a soft damp cloth and a mild detergent. The grille panels require no special care although they may be carefully vacuumed if necessary. All other maintenance should be referred to qualified service personnel.

9. In Case Of Difficulty

If you experience a problem with your 301 speakers, use the following procedures to determine if the difficulty is actually in the speakers or in some other component of your music system.

If one speaker sounds defective, do not switch the speaker cables, as this could damage a speaker. Disconnect the defective speaker at the amplifier output terminals and reconnect it to the amplifier channel that is operating correctly. If the speaker that sounded defective now plays properly, the problem is not in the speaker or wiring.

If trouble appears in both speakers, use the same wiring to connect them to another amplifier or receiver that is known to be working properly. If the speakers now operate correctly, the problem is not in the speakers or wiring.

If trouble persists in one or both speakers, contact your authorized Bose High Fidelity dealer. He will verify any defects and arrange for service by an authorized service agency or by the Bose factory. Bose Corporation will make every effort to remedy any problem within the terms of the warranty at minimum inconvenience to you.

PN 120749

10. Technical Information

Features

Asymmetrical Design
Free Space™ tweeter array
Dual Frequency™ crossover network
Ducted-port enclosure system
Syncom® II computerized quality control

Driver Complement:
One (1) 8-inch (20 cm) woofer
Two (2) 3-inch (7.6 cm) high-sensitivity tweeters

Nominal Impedance: 8 ohms

Crossover Transition Frequencies:
1.5 kHz and 2.5 kHz

Amplifier Power Requirements:
10 watts minimum
75 watts RMS maximum per speaker

Cabinet: Walnut-grain vinyl veneer

Dimensions: 10½" H × 17" W × 9½" D
(27 × 43 × 24 cm)

Weight: 38 lbs (14.2 kg)
Shipping weight per pair

Printed in USA

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Better sound through research.

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