polkaudio

The Speaker Specialists ®

Monitor Reference Series Loudspeakers

Instruction Manual

Important: Please read the instructions thoroughly before attempting to use your Monitor Loudspeakers

Congratulations

on your purchase of a Polk Audio Monitor Series Loudspeaker System. Careful design, frequent and critical testing, and use of only the finest materials and components insure prolonged physical integrity and trouble-free operation. To realize the full potential of your loudspeaker system, please read and follow all instructions carefully.

If you have any questions or comments, please do not hesitate to call us directly or contact your nearest Polk Audio dealer.

GENERAL DESCRIPTION

The Polk Audio Monitor Series is comprised of a number of sophisticated loudspeaker systems designed to provide the greatest possible listening pleasure. The design goals for all the Monitor Series systems were (1) open, boxless, three-dimensional sound; (2) smooth, accurate frequency response; (3) consistently excellent transient response across the audio bandwidth; (4) nearly perfect hemispherical dispersion; (5) stable imaging; and (6) high efficiency to allow use with virtually any high fidelity amplifier.

All the Monitor Series systems feature mid-bass drivers with Polk Audio's proprietary trilaminate polymer diaphragm structure for excellent transient response and near-absence of mid-range coloration, and hemispherical soft-dome high-frequency units for superb definition and smooth, extended high-frequency response. The smaller models are ported designs to make the best use of their small cabinet sizes, while the larger models feature passive sub-bass radiators for solid, tight bass response. All designs benefit from the use of Polk Audio's sophisticated computer design and testing capabilities.

Pertinent specifications for all models are contained at the rear of this manual to aid in proper system setup.

INSPECTING FOR SHIPPING DAMAGE

When you unpack your loudspeaker inspect it for shipping damage. Each unit leaves our plant after thorough inspection and in perfect condition. Therefore, any visible or concealed damage most likely occurred in handling after it left the plant. If you obtained delivery of the speaker directly from a Polk Audio dealer, it should be returned to him for inspection. If you received your speaker via public transportation, report the damage at once to the shipping company and follow the instructions later in this manual for returning your speaker to the factory.

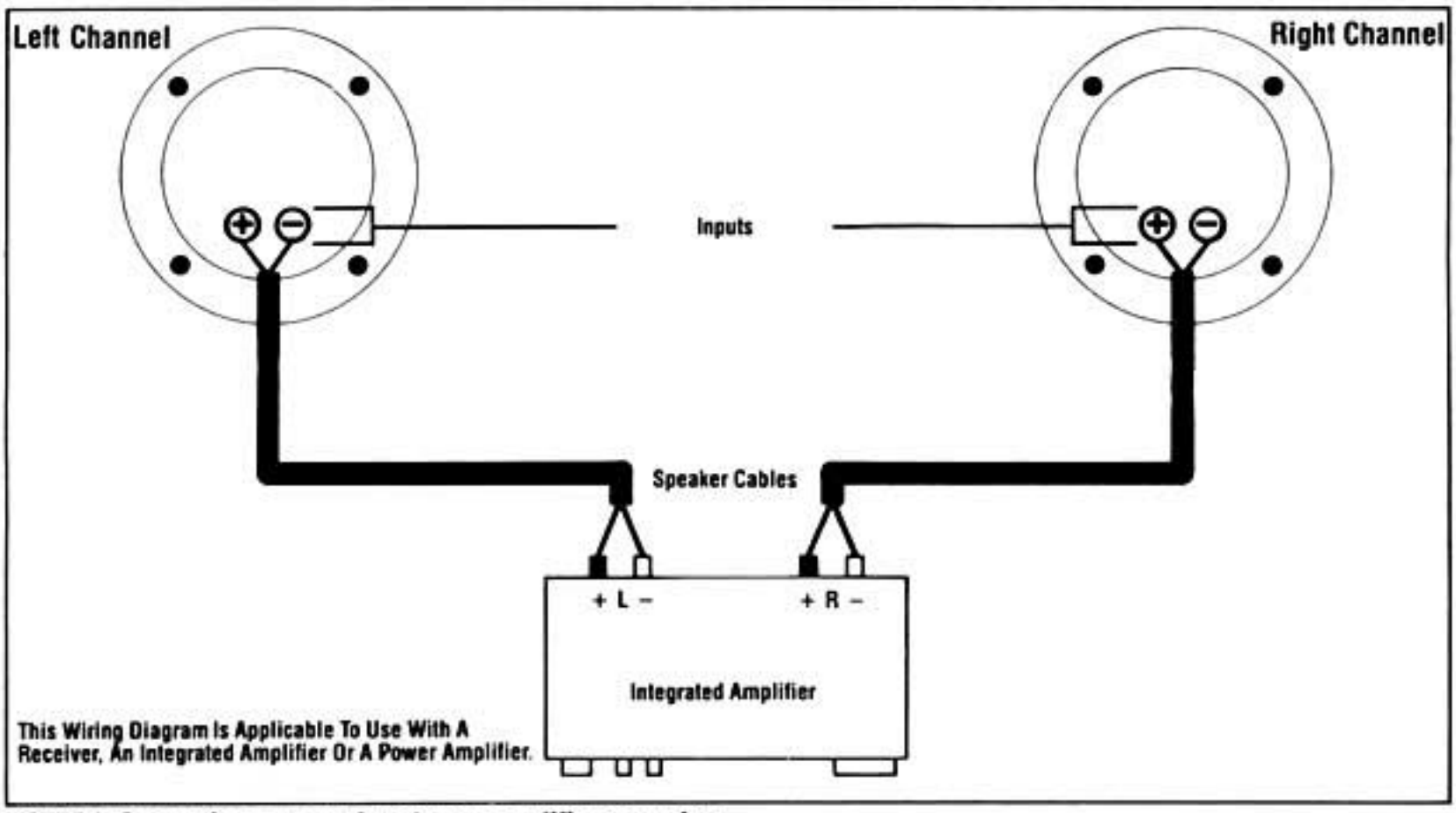

FIGURE 1. Connecting your speakers to your amplifier or receiver

CONNECTING THE SPEAKERS TO YOUR AMPLIFIER OR RECEIVER

Proper phasing of the speakers is essential if you are to realize the full potential of your system. Note that one of the terminals on the rear of your speaker is colored red (+) and one is black (−). Make certain that you connect the red (+) terminal to the red (+) terminal on your amplifier, and the black (−) terminal to the black (−) terminal on your amplifier (see figure 1). If your amplifier outputs have multiple impedance taps, connect your speakers to the output terminals labeled "4 ohms" (+) and "common" (−). It is essential that both speakers be connected in the same manner, that is, in phase. If you notice a great loss of low frequency (bass) sound from your system, it is quite likely that your speakers are out of phase. This can be corrected simply by reversing the connections at one of the loudspeakers.

We recommend that you use #16 gauge lamp cord or larger to connect the speakers to your amplifier. This will ensure that the full power and damping capabilities of your amplifier will be available to the speakers. Use of lighter than #16 gauge line, such as thin, clear-coated line often sold as speaker hookup wire, will result in line losses and an attendant drop in performance. For the best performance we recommend the use of special speaker cables, particularly those of the low-inductance transmission line type.

Take special care to ensure a clean, positive connection between the speaker cables and the terminals on both the speakers and your amplifier. When connecting the cables, first twist any loose copper strands into a stiff wire; then wrap it clockwise around the terminal post or insert it into the hole in the threaded shaft; then tighten the screw, making sure the connections are not touching one another.

Multiple Speaker Connections

Two pairs of Polk Monitor Series speakers may be connected to your amplifier. Depending on your amplifier, one or both of the following connection schemes may be used:

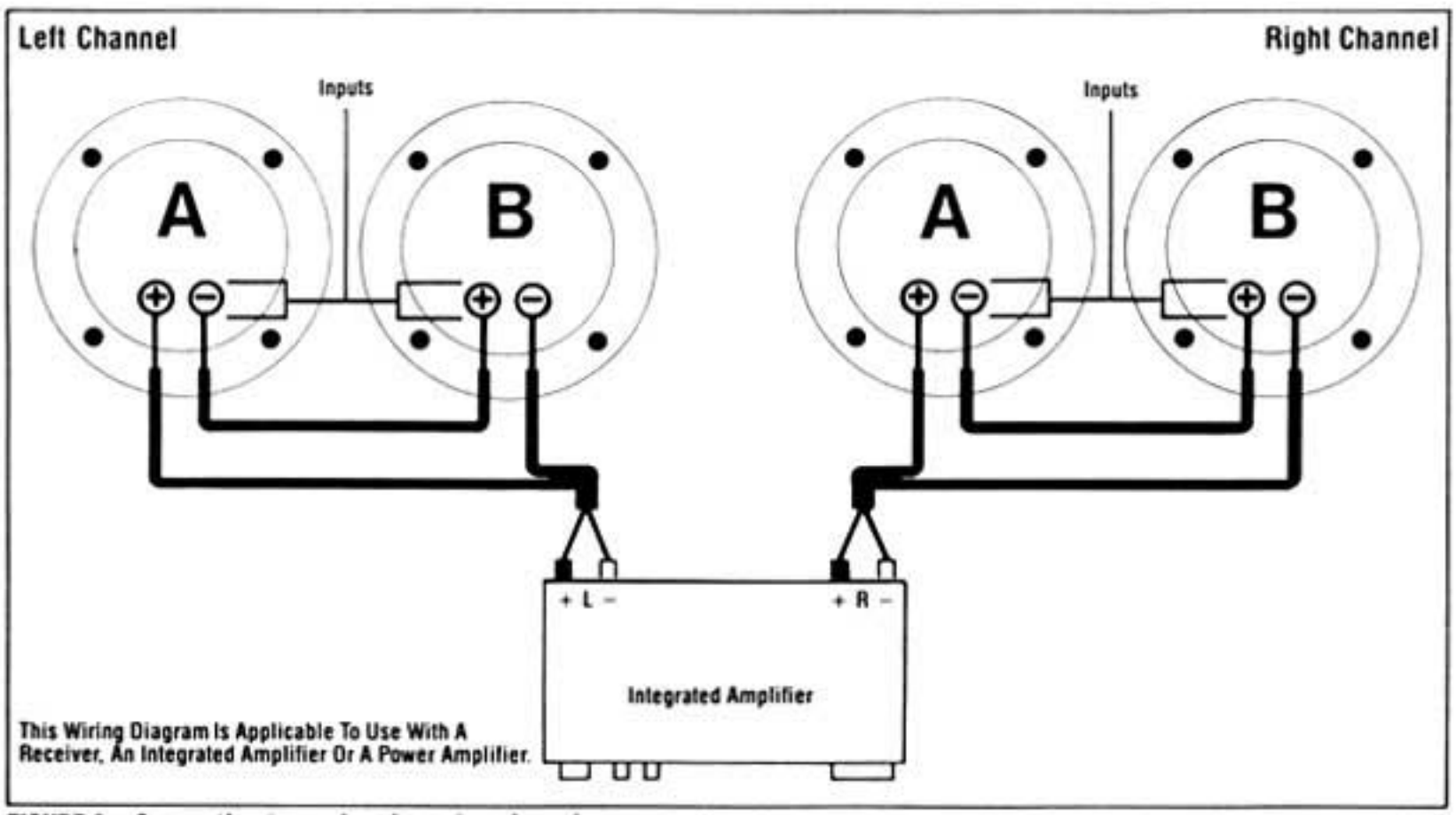

FIGURE 2a. Connecting two pairs of speakers in series

Series Connection (figure 2a)

This technique may be used with any amplifier. Both pairs of speakers will be active all the time. If you are using an amplifier with multiple impedance taps, you should connect a series pair of Polk Monitors to the terminals marked "8 ohms" (+) and "common" (−).

Switched Amplifier Speaker Outputs (figure 2b)

If your amplifier provides direct connections for more than one pair of speakers (outputs labeled "Speakers A" and "Speakers B," for example), these may be used for greatest convenience, provided that only one pair of speakers at a time is active. The "A + B" switch position, connecting both pairs of speakers simultaneously, should be used only if your amplifier is rated to drive loads of less than four ohms safely or if the switch connects the two pairs of speakers in series internally.

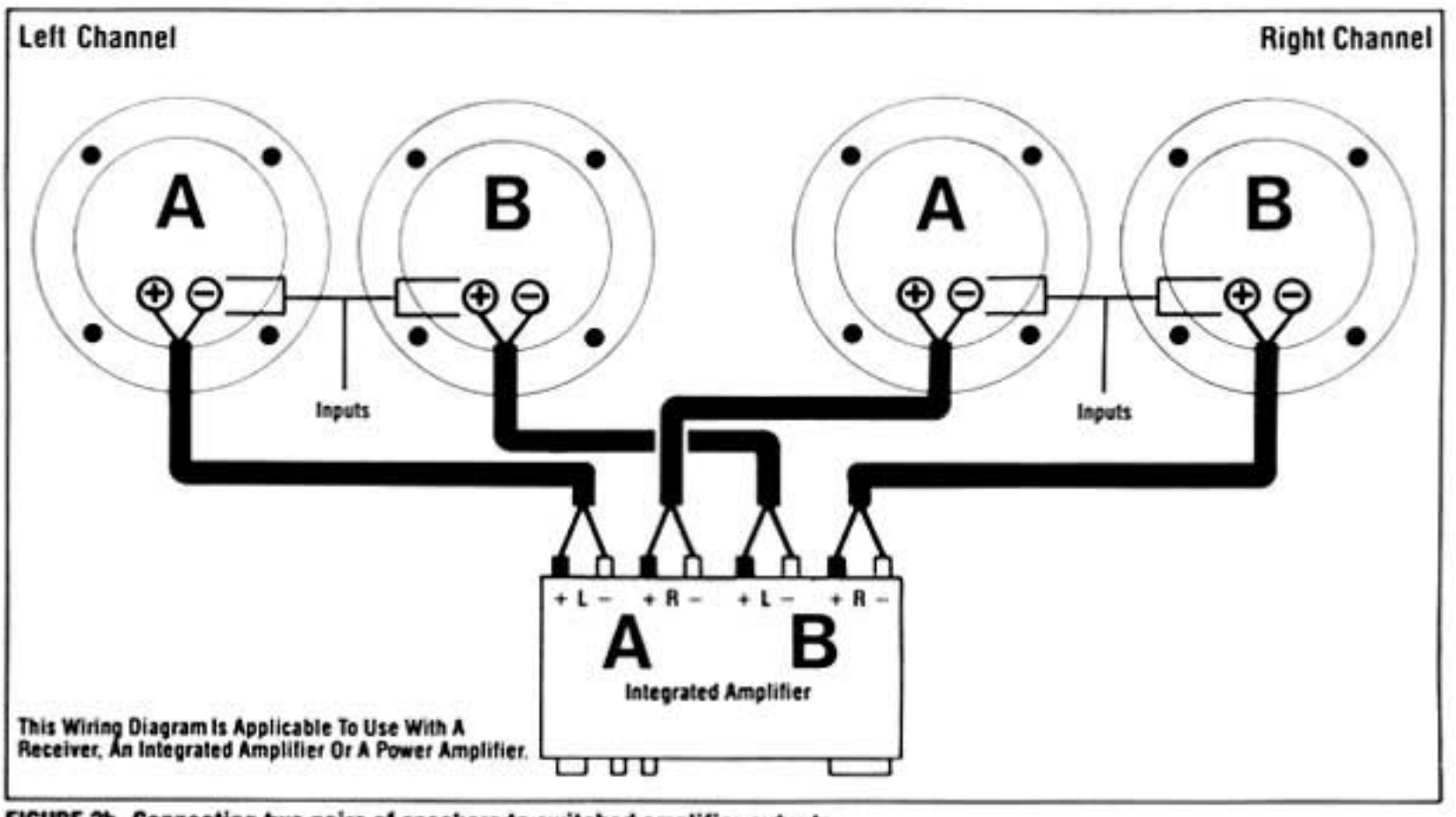

FIGURE 2b. Connecting two pairs of speakers to switched amplifier outputs

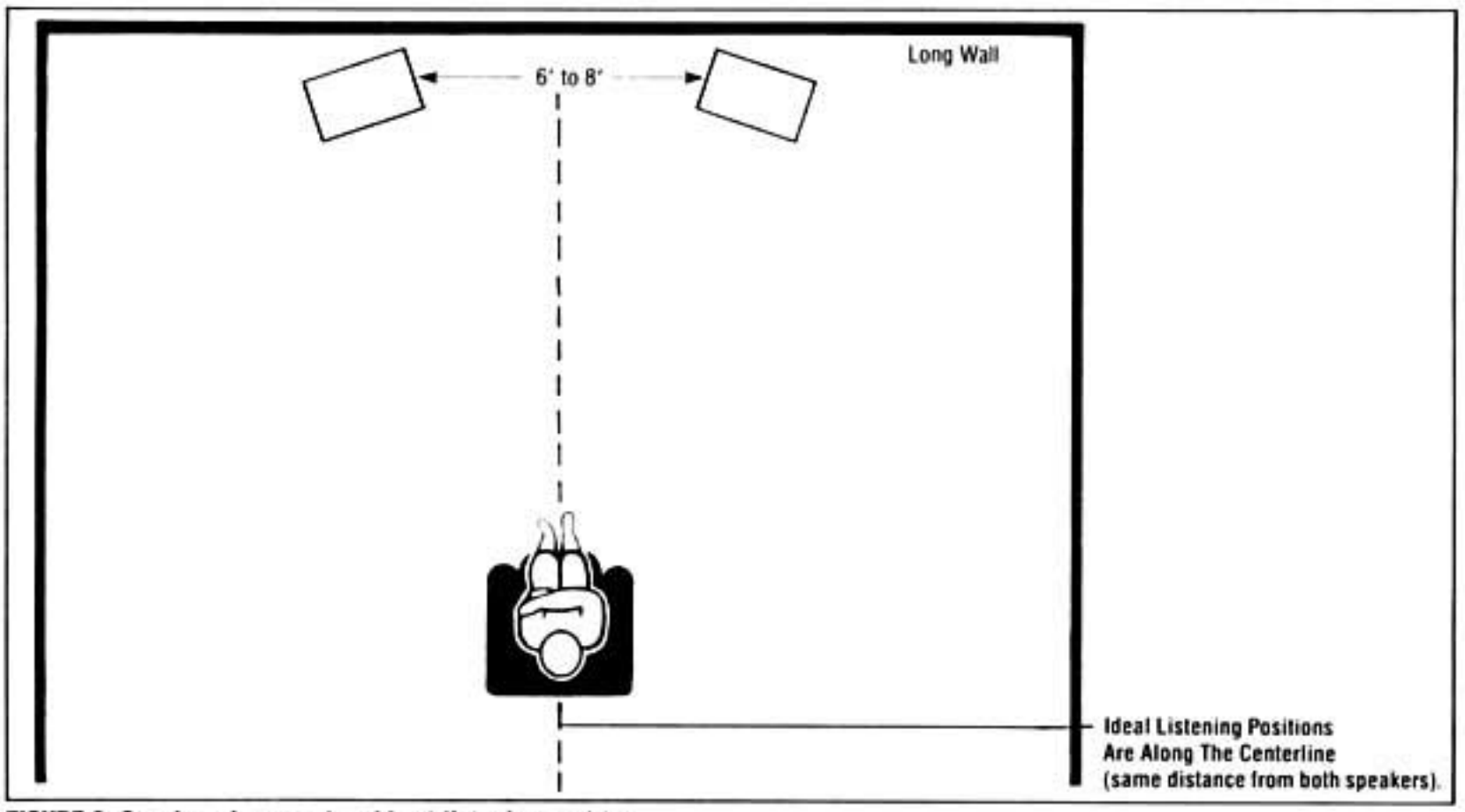

FIGURE 3. Speaker placement and best listening position

SPEAKER PLACEMENT

Speaker placement is a matter of personal preference as well as a matter of acoustics. Although the Monitor Series loudspeakers are unusually free of room-dependant acoustical effects, proper positioning of the speakers will, nevertheless, enhance their performance.

The best three-dimensional imagery will be obtained with the speakers placed far from the walls and corners. However, bass response will be increased by placement against or nearer the back wall. Speakers usually will perform best when oriented so that the listener faces the long wall of the room. Corner placement should be avoided.

Listening position is not particularly critical. However, as with any fine loudspeaker, there will be one position that will offer the best stereo image and reproduction. With the speakers aimed directly at the listener, this position will be 8 to 14 feet from the speakers, with the speakers separated by at least 6 to 8 feet. (figure 3)

LISTENING LEVELS AND AMPLIFIER POWER

The Monitor Series loudspeakers are highly efficient systems and will easily achieve high listening levels with moderate amounts of power. However, they will perform best with the reserve of power offered by large amplifiers so long as this power is not abused. Refer to the physical specifications at the rear of this manual to determine the appropriate amplifier power for your model.

When properly set up, the Monitors will handle the output of large amplifiers on program material. However, the greatest chance of damage to any speaker occurs when the amplifier, regardless of size, is overdriven. Generally, this occurs only with small or moderate power amplifiers. Surprisingly, the possibility of damage is usually greater with small amplifiers than with large ones.

In most cases when audible distortion is heard at high levels it is caused by the overdriven amplifier and not by the speaker. It is absolutely critical to understand that regardless of amplifier size or speaker power rating, when you turn the volume control past the point where distortion becomes audible you are risking damage to both the speaker and amplifier.

The larger models are equipped with a solid-state thermal protective device in the tweeter circuitry to protect the tweeter against over-current situations which may occur when an amplifier malfunctions or is overdriven. When an overload condition is detected in this circuit, the protective device quickly reduces the current flow to a safe level until the condition is removed; the effect on the sound of the speakers is to reduce the output from the tweeter. The device will reset itself within about thirty seconds after the volume level is turned down.

When the tweeter protective device trips, it is usually an indication that the amplifier is being overdriven. A larger amplifier able to deliver more clean power will enable the speakers to go louder without tripping the protective device.

To see how this may happen, consider that the amplifier is a device which allows a controlled amount of power to flow from the AC wall outlet to the speaker. If the volume control is advanced too far, the amp may lose control of the flow and dump much of the power of the AC outlet into your loudspeaker. The power rating of an amplifier is a measure of how much clean power it will safely produce. However, most amplifiers are able to produce distorted power several times greater than their rated power.

TROUBLESHOOTING CHART

Problem	Solution
1. No sound from speakers	1a. Check all amplifier connections and connections to both speakers. 1b. Make sure amp is connected to AC outlet.
2. No high-frequency output	2a. Tweeter protection circuit has not yet reset; turn down amplifier level for 30 seconds.
3. Bottoming of low-frequency drivers or excessive cone motion	3a. Turn off loudness contour control. 3b. Check for warped record. 3c. Use low-frequency filter on amp or preamp. 3d. Increase tracking force or effective mass of tone arm. 3e. Use sturdier mounting for turntable. 3f. Reduce bass control on amplifier.
4. Unnatural bass emphasis	4a. Turn off loudness contour control. 4b. Place speakers farther from walls or corners. 4c. Reduce bass control on amplifier.
5. Howling occurs at high volumes (Acoustic Feedback).	5a. Place turntable farther from speakers. 5b. Sturdier mounting for turntable (see also 4a,b,c).
6. Breakup or distortion on forceful recordings (especially horns, female vocals, piano, etc.)	6a. If this occurs at all listening levels, check the stylus carefully for dirt. 6b. Increase tracking force. Tracking force should be set at the maximum recommended for that cartridge. Use several records to check this. 6c. Amplifier may have excessively sensitive current limiting protection circuit. Have amplifier checked.
7. Distortion at moderate listening levels	7a. Check amplifier connections and all rear panel connections on speakers. Check interconnect cable for correct connection. 7b. Amplifier may have excessively sensitive current limiting protection circuit. Have amplifier checked.
8. Distortion at very high listening levels (see section on "Listening Levels and Amplifier Power")	8a. Listen at lower levels. 8b. Purchase larger amplifier.
9. Tweeter protective circuitry trips repeatedly (see section on "Listening Levels and Amplifier Power")	9a. Amplifier too small for listening level. Reduce volume setting. 9b. Thermal protection device is overheated. Turn amplifier volume down for 30 seconds, then listen at a volume lower than previously. 9c. Have amplifier checked for proper operation.
10. Not enough bass	10a. Make sure speakers are in phase. 10b. Move speakers closer or up against rear wall.

TECHNICAL ASSISTANCE

It is our pleasure to offer the assistance of our technical staff any time you have a question or observation. Even if your question has nothing to do with loudspeakers we will be happy to help you with any aspect of your system setup. Call your local Polk Audio dealer or call us directly.

SERVICE

If, for any reason, you wish to have service work performed on your speaker, you may either contact your nearest authorized Polk Audio dealer or return it to the factory.

If you wish to return your speaker to the factory for servicing, please write first, describing your problem and requesting permission to return your speaker. You will receive a prompt reply by mail instructing you fully as to how this is to be done. Our address is:

Polk Audio, Inc.
Warranty Service
5601 Metro Dr.
Baltimore, Md. 21215
(301) 358-3600

LIMITED 5-YEAR WARRANTY

Polk Audio, Inc. warrants to the original retail purchaser only that this Polk Audio Loudspeaker Product (the "Product") will be free from defects in materials and workmanship for a period of five (5) years from the date of original retail purchase from a Polk Audio Franchised Dealer. However, this Warranty will automatically terminate prior to the expiration of the five (5) years if the original retail purchaser sells or otherwise transfers the Product to any other party. The original retail purchaser shall hereinafter be referred to as "you". To obtain Warranty protection for your Polk Audio Product(s), you must fill out the Warranty Registration Card(s) and send them to the Factory, at the address provided on the Registration Card(s), within ten (10) days of the date of purchase.

Defective Products must be shipped, together with proof of date of purchase, prepaid insured to the Polk Audio Franchised Dealer from whom you purchased the Product, or to the Factory at the address given in this booklet. Products must be shipped in the original shipping container or its equivalent; in any case the risk of loss or damage in transit is to be borne by you. If, upon examination at the Factory or Polk Audio Franchised Dealer it is determined that the unit was defective in materials or workmanship at any time during this Warranty period, Polk Audio or the Polk Audio Franchised Dealer will, at its option, repair or replace this Product at no additional charge, except as set forth below. All replaced parts and Products become the property of Polk Audio. Products replaced or repaired under this Warranty will be returned to you, within a reasonable time, freight collect.

This Warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of the rated maximum of the unit, cosmetic appearance of cabinetry not directly attributable to defects in materials or workmanship, or service, repair or modification of the Product which has not been authorized or approved by Polk Audio. This Warranty shall terminate if the Serial number on the Product has been removed, tampered with or defaced.

Polk Audio makes no Warranty with respect to its Products purchased from dealers or outlets other than Polk Audio franchised dealers.

This Warranty is in lieu of all other expressed Warranties. If this Product is defective in materials or workmanship as warranted above, your sole remedy shall be repair or replacement as provided above. In no event will Polk Audio, Inc. be liable to you for any incidental or consequential damages arising out of the use or inability to use the Product, even if Polk Audio, Inc. or a Polk Audio Franchised Dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply to you.

All implied warranties on the Product are limited to the duration of this expressed Warranty. Some states do not allow limitation on how long an implied Warranty lasts, so the above limitations may not apply to you. This Warranty gives you specific legal rights, and you also may have other rights which vary from state to state.

This Warranty applies only to Products purchased in the United States of America, its possessions, and U.S. and NATO armed forces exchanges and audio clubs. The Warranty terms and conditions applicable to Products purchased in other countries are available from the Polk Audio Authorized Distributors in such countries.

MONITOR SERIES SPECIFICATIONS

	Monitor 11	Monitor 10B	Monitor 7C	Monitor 5B
Driver Complement	One 1 inch Polk SL 2000 silver coil dome tweeter Two 6½ inch Polk tri-laminate polymer bass-midrange drivers (6510) One 10 inch fluid-coupled sub-woofer	One 1 inch Polk SL 2000 silver coil dome tweeter Two 6½ inch Polk tri-laminate polymer bass-midrange drivers (6503) One 10 inch fluid-coupled sub-woofer	One 1 inch Polk SL 2000 silver coil dome tweeter One 6½ inch Polk tri-laminate polymer bass-midrange driver (6502) One 10 inch fluid-coupled sub-woofer	One 1 inch Polk SL 2000 silver coil dome tweeter One 6½ inch Polk tri-laminate polymer bass-midrange driver (6502) One 8 inch fluid-coupled sub-woofer
Size (inches)	33¾H × 16W × 11⅜D	28H × 16W × 11⅜D	24H × 14W × 9¼D	21½H × 10½W × 8½D
Shipping Weight	60 pounds	50 pounds	36 pounds	29 pounds
Frequency Response	19 Hz-26,000 Hz	20 Hz-26,000 Hz	24 Hz-26,000 Hz	28 Hz-26,000 Hz
Recom. Assoc. Amplification	10-200 watts/channel	10-200 watts/channel	10-150 watts/channel	10-125 watts/channel
Nominal Impedance	6 ohms	6 ohms	4 ohms	4 ohms
Efficiency	92dB	92dB	91dB	91dB
Warranty	Limited five year parts and labor	Limited five year parts and labor	Limited five year parts and labor	Limited five year parts and labor

	Monitor 5jr	Monitor 4.5	Monitor 4A
Driver Complement	One 1 inch Polk SL 2000 silver coil dome tweeter One 6½ inch Polk tri-laminate polymer bass-midrange driver (6502)	One 1 inch polymer dome tweeter One 6½ inch Polk tri-laminate polymer bass-midrange driver (6502)	One 1 inch polymer dome tweeter One 6½ inch Polk tri-laminate polymer bass-midrange driver (6502)
Size (inches)	17H × 9W × 8⅞D	17H × 9W × 8⅞D	14½H × 8½W × 7⅜D
Shipping Weight	45 pounds per pair	44 pounds per pair	32 pounds per pair
Frequency Response	30 Hz-26,000 Hz	30 Hz-25,000 Hz	31 Hz-25,000 Hz
Recom. Assoc. Amplification	10-100 watts/channel	10-80 watts/channel	10-80 watts/channel
Nominal Impedance	4 ohms	4 ohms	4 ohms
Efficiency	92dB	92dB	92dB
Warranty	Limited five year parts and labor	Limited five year parts and labor	Limited five year parts and labor