

**polkaudio**

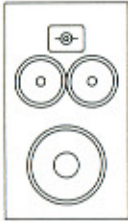
The Speaker Specialists<sup>®</sup>

**Monitor Reference Series Loudspeakers**

## Instruction Manual



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

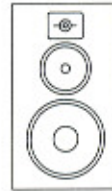


### Monitor 10B

One 1 inch dome tweeter  
 Two 6-1/2 inch drivers  
 One 10 inch fluid-coupled subwoofer  
 28H x 16W x 11-1/2D  
 25Hz - 26kHz  
 37Hz - 20kHz  
 20 - 250 watts/channel  
 6 ohms  
 89 dB  
 48 lbs.

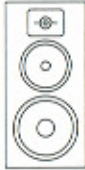
#### Driver Compliment

Size (inches)  
 Overall Frequency Response  
 -3dB limits  
 Rec. Amplification  
 Nominal Impedance  
 Efficiency  
 Shipping Weight



### Monitor 7C

One 1 inch dome tweeter  
 One 6-1/2 inch driver  
 One 10 inch fluid-coupled subwoofer  
 24 H x 14W x 9-5/8D  
 25Hz - 26kHz  
 40Hz - 20kHz  
 20 - 150 watts/channel  
 6 ohms  
 89 dB  
 34 lbs.



### Monitor 5B

One 1 inch dome tweeter  
 One 6-1/2 inch driver  
 One 8 inch fluid-coupled subwoofer  
 21-5/8H x 10-9/16W x 9D  
 30Hz - 26kHz  
 43Hz - 20kHz  
 20 - 125 watts/channel  
 6 ohms  
 90 dB  
 26 lbs.

#### Driver Compliment

Size (inches)  
 Overall Frequency Response  
 -3dB limits  
 Rec. Amplification  
 Nominal Impedance  
 Efficiency  
 Shipping Weight



### Monitor 5jr +

One 1 inch dome tweeter  
 One 6-1/2 inch driver  
 One 8 inch fluid-coupled subwoofer  
 19-1/2H x 9W x 9D  
 30Hz - 26kHz  
 48Hz - 20kHz  
 20 - 125 watts/channel  
 6 ohms  
 91 dB  
 41 lbs./pair



### Monitor 4.5

One 1 inch dome tweeter  
 One 6-1/2 inch driver  
 17H x 9W x 9D  
 30Hz - 25kHz  
 50Hz - 20kHz  
 20 - 100 watts/channel  
 6 ohms  
 91 dB  
 36 lbs./pair

#### Driver Compliment

Size (inches)  
 Overall Frequency Response  
 -3dB limits  
 Rec. Amplification  
 Nominal Impedance  
 Efficiency  
 Shipping Weight



### Monitor 4A

One 1 inch dome tweeter  
 One 6-1/2 inch driver  
 14-1/4H x 8-1/2W x 7-3/8D  
 35Hz - 25kHz  
 55Hz - 20kHz  
 20 - 100 watts/channel  
 6 ohms  
 91 dB  
 32 lbs./pair

# Congratulations!

Congratulations on your purchase of a Polk Audio Monitor Series Loudspeaker System. Painsstaking research, 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) precise imaging and sonic dispersion; 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 midrange coloration, and hemispherical soft dome high frequency tweeters for superb definition and smooth, extended high frequency response. The Monitor 4A and 4.5 are ported designs to make the best use of their small cabinet size, while the larger Monitors feature sub-bass radiators for fast, tight bass response. All designs benefit from the use of Polk Audio's sophisticated computer design and precise testing capabilities.

Pertinent specifications for all models are contained inside the cover of this manual.

## Inspecting for Shipping Damage

Before setting up your system, inspect the carton for shipping damage. Each unit was thoroughly inspected before it left our facility so any visible or concealed damage would have occurred in shipping and handling. If there appears to be damage to your speakers, or to the carton, report it immediately to your Polk Audio dealer for appropriate action or make a notation on the receipt of delivery and request inspection by the transportation company within 15 days.

## Recommended Speaker Wire

We recommend that you use #16 gauge wire 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. Heavier gauge wire will give improved performance especially where long runs are involved.

To achieve the highest level of performance, we recommend the use of special speaker cables. These cables are readily available in most audio stores in a broad variety of types and price ranges. Polk Audio has chosen to use 5-way binding posts to connect your wires in the larger models. These offer superior contact for clean and accurate sound and have the added benefit of being able to accept standard banana plugs, spade lugs, O-rings, pins or bare wire depending on your preference.

## Connections 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.

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 bare wire, 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 thumbnut, making sure the connections are not touching one another.

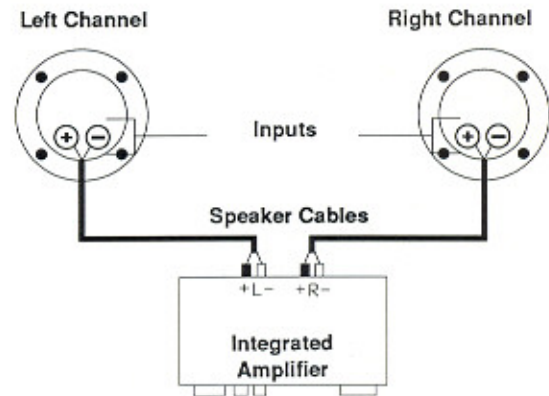
## Multiple Speaker Connections

Most receivers and amplifiers will operate safely with four loudspeakers rated at less than 8 Ohms in parallel at moderate listening levels. If you intend to listen at loud levels we recommend that you hook them up in series or series parallel or listen to one pair at a time. Your Polk Audio dealer can advise you on the best amplifier for your listening needs.

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

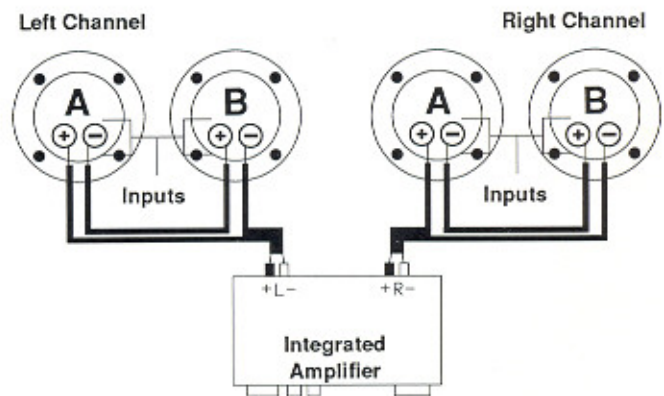
### Series Connection (figure 2a)

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 loudspeakers to the terminals marked '8 ohms' (+) and 'common' (-).



This wiring diagram is applicable to use with a receiver, and integrated amplifier or a power amplifier.

Figure 1. Connecting your speakers to your amplifier or receiver

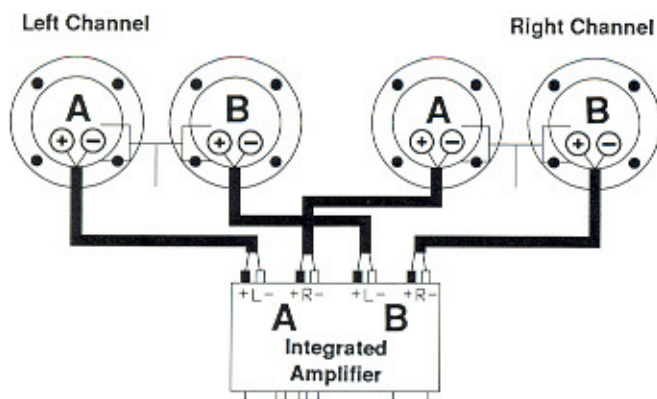


This wiring diagram is applicable to use with a receiver, an integrated amplifier or a power amplifier

Figure 2a. Connecting two pairs of speakers in series

### 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. The 'A+B' switch position, connecting both pairs of speakers simultaneously, should be used only if your amplifier is able to drive loads of less than four ohms safely or if the switch connects the two pairs of speakers in series internally. If you have a question please consult your dealer or contact Polk Audio directly.



This wiring diagram is applicable to use with a receiver, and integrated amplifier, or a power amplifier.

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

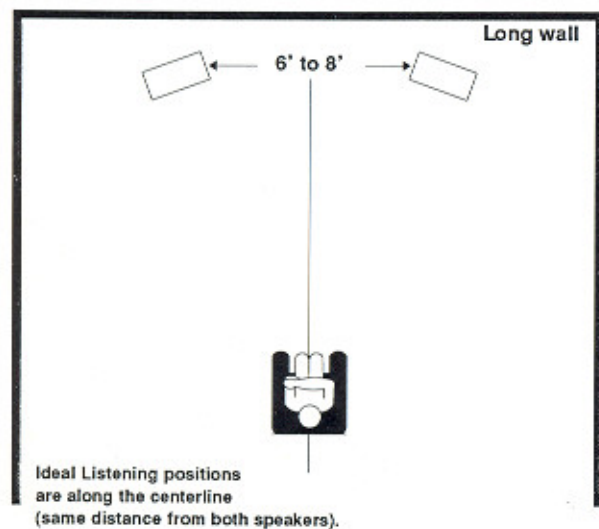


Figure 3. Speaker placement and best listening position

## 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 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 (see figure 3). Experiment--see what works best for you in your listening area.

## 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. Remember, however, that the greatest chance of damage to any speaker occurs when the amplifier, regardless of size, is overdriven. Surprisingly, the possibility is usually greater with small amplifiers than with the larger ones.

In most cases when distortion is heard at high levels it is caused by an 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.

## Tweeter Protection Circuit

Monitor 5JR+, 5B, 7, and 10's are equipped with an auto-reset protection device internal to the crossover. This protects the tweeter in your Polk loudspeaker from thermal overload due to excessive current usually caused by an overdriven or 'clipping' amplifier. 'Clipping' is what an amplifier does to a musical signal when driven beyond its rated power output. It protects the tweeter by temporarily interrupting the signal to the tweeter when it detects an overload situation. The signal will continue to be interrupted until the amplifier volume is reduced to a level low enough to allow the device to reset itself. If the amplifier volume is reduced to zero, the reset time is about thirty seconds.

## Care and Cleaning of your Monitor Product

The finish of your speakers will maintain their appearance with reasonable care. The cabinets are finished in vinyl and can be cleaned by wiping with a sponge or cloth dampened with water. Household cleaning solvents should not be used as they may damage the vinyl. The grilles may be cleaned by brushing gently or vacuuming.

## Trouble Shooting

### Problem

1. No sound from speakers

### Solution

- ▶ Check all amplifier connections and connections to both speakers.
- ▶ Make sure amp is connected to AC outlet.

2. No high frequency output

- ▶ Tweeter protection circuit has not yet reset; turn down amplifier level for thirty seconds.

3. Bottoming of low-frequency drivers or excessive cone motion

- ▶ Turn off loudness contour
- ▶ Check for warped record.
- ▶ Use low-frequency filter on amp or pre-amp.
- ▶ Increase tracking force or effective mass of tone arm.
- ▶ Use sturdier mounting for turntable.
- ▶ Reduce bass control on amplifier.

4. Unnatural bass emphasis

- ▶ Turn off loudness contour control.
- ▶ Place speakers farther from walls or corners.
- ▶ Reduce bass control on amplifier.

5. Howling occurs at high volumes (Acoustic Feedback)

- ▶ Place turntable farther from speakers.
- ▶ Sturdier mounting for turntable. (See also 4a,b,c)

6. Breakup or distortion on forceful recordings (especially horns, female vocals, piano, etc.)

- ▶ If this occurs at all listening levels, check the stylus carefully for dirt.
- ▶ Increase tracking force. Tracking force should be set at the maximum recommended for that cartridge. Use several records to check this.
- ▶ Amplifier may have excessively sensitive current limiting protection circuit. Have amplifier checked.

7. Distortion at moderate listening levels

- ▶ Check amplifier connections and all rear panel connections on speakers. Check interconnect cable for correct connection.
- ▶ 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')

- ▶ Amplifier is clipping. Listen at lower levels.
- ▶ Purchase a larger amplifier.
- ▶ See solutions to Problem 3.

9. Tweeter protective circuitry trips repeatedly (see section on 'Listening Levels and Amplifier Power')

- ▶ Amplifier too small for listening level. Reduce volume setting.
- ▶ Thermal Protection device is overheated. Turn amplifier volume down for thirty seconds, then listen at a volume lower than previously.
- ▶ Have amplifier checked for proper operation.

10. Not enough bass.

- ▶ Make sure speakers are in phase.
- ▶ Move speakers closer to or up against rear wall.
- ▶ Move speakers closer to a corner.

## 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 set up. 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. You will receive a prompt reply by mail instructing you fully as to the procedure needed for returning your loudspeaker.

Our address is: **Polk Audio Inc., Warranty Services**  
**5601 Metro Drive**  
**Baltimore, MD 21215 (301)358-3600**

## LIMITED FIVE-YEAR WARRANTY

Polk Audio, Inc. warrants to the original 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 Authorized 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 allow Polk Audio to offer the best possible warranty service, please 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 Authorized 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 Authorized 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 Authorized 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.

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 Authorized 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.

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