

# AB SERIES

**AB510**

**AB710**

## **Instruction Manual**



### **A WORD FROM MATTHEW POLK**

*Dear Music Lover,*

*Thank you for purchasing Polk Audio speakers. Designing and building speakers is more than just a business for the people of Polk Audio – it is our passion. We are all dedicated to your complete satisfaction and delight.*

*Your new Polk speakers include the latest loudspeaker technology to assure outstanding performance and unmatched quality. Please take a moment to read through this manual for information on getting the greatest enjoyment from these fine instruments.*

*We make a wide variety of main, center, rear channel, powered sub-woofer, and accessory speakers so you can assemble a complete and well matched high-performance surround sound system. If you would like more information on building the Polk system of your dreams, consult your Polk Audio dealer or call our Customer Service Department. In North America call (800) 377-7655, Monday through Friday, 9:00am through 6:00pm Eastern time.*

*Sincerely,*

*Matthew S. Polk  
Chairman and Co-Founder*

***P.S.: A wealth of information can also be found on our award-winning web site: [www.polkaudio.com](http://www.polkaudio.com).***

### **SYSTEM PLACEMENT**

The Polk AB Series Loudspeaker Systems are designed to provide superior sonic performance without intruding on the design of your living space. The design goals were to create open, three-dimensional sound and smooth, accurate frequency response in an easy-to-install chassis.

Placement of the system in a room bears careful consideration, as the installation is permanent. The AB510 and AB710 loudspeakers can be mounted on almost any wall or ceiling. Keep in mind that placing the loudspeakers at least 6-8 feet apart and away from room edges or corners will result in better stereo imaging.

As ceiling mounted speakers point downward and are closer to the listener than most wall-mount positions, it is sometimes advisable to use more than one pair to get even distribution of sound. Intended uses, ceiling height, room size, and listening position all play a part in determining how many pairs should be used. In an average size room with 8' ceilings we recommend using 2 pairs of ceiling-mounted loudspeakers. Your Polk Audio dealer can help you make the right choice for your room.

If your speakers are used in an outdoor installation, the best location is one that provides shelter from rain and other outdoor elements. The most common and ideal location is under an eave of your house facing downward. If you position the AB loudspeakers where water will directly contact them, it is advisable to use a sealant or caulk between the frame of the loudspeaker and the wall surface. This seal should prevent water from getting behind the loudspeaker and wall surface. Do not position the loudspeakers where water can pool on the surface of the woofer cone or tweeter dome. This will greatly decrease your speaker's useful life.

## **PAINTING THE SPEAKERS**

The Polk AB Series Loudspeakers can be painted to fit your decorating tastes. Paint the speaker frames before assembling them. The grilles and frames should be painted separately. Grille – Either hang the grille in free space or place it on paper before painting. **The grilles must be sprayed – do not use a brush or roller** – Spray two or more thin coats rather than one thick coat to avoid clogging the perforations of your metal grilles, which can impair performance. If you are using an interior paint, it should be thinned before spraying.

## **LISTENING LEVELS AND AMPLIFIER CONNECTIONS**

Our AB Series Loudspeakers are highly efficient systems and will easily achieve high listening levels with moderate amounts of power. Remember 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 larger ones.

If the sound becomes harsh and steely in character, then you may be pushing your amplifier into “clipping” mode. Amplifier clipping creates undesirable high frequency energy and runs the risk of tweeter damage. 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.

**IMPORTANT**—Proper polarity is essential to the Polk AB series. The positive terminal on the driver is designated with a plus(+). It must be connected to the positive(red) terminal on your amplifier. The other terminal, designated with a minus(-) must be connected to the negative(black) terminal of your amplifier.

Use the pigtailed to connect your speaker wire to the loudspeakers. You may use a wirenut, solder, or twist and tape to connect the two wires. Take special care to ensure a clean, positive connection. Make sure that the connections are insulated from touching any other metal or each other.

## **WIRING CONSIDERATIONS**

As with the mounting locations, the wire routing is permanent, and so demands special attention. The following recommendations will help you make the best decisions in selecting and installing the wire used to connect the loudspeakers to the amplifier.

### **Wire Recommendations**

Wiring inside your walls or ceiling should be done before or in conjunction with installation of your in-wall speakers. Wire meeting appropriate building and fire codes must be used. Use at least 18 gauge wire or heavier. Wiring is best performed by a licensed professional.

## **Routing the Wire**

It is beyond the scope of this manual to address all possible situations, but certain basic rules should be followed:

- 1.) The wiring scheme you choose is determined by the number of units you are installing, the way you wish to distribute the sound, the amplifier you have chosen, and degree of flexibility you wish to provide in your system.
- 2.) The wire run lengths should be kept as short as possible. If runs over fifty feet long are necessary, heavier gauge wire is recommended.
- 3.) Avoid routing speaker wires near house electrical cables. If this cannot be avoided, try to make the speaker wires cross the power cable at right angles.
- 4.) Try to avoid routing the wires against sharp objects, particularly plumbing or electrical fittings.
- 5.) Allow about two feet of free wire at the wall cutout to facilitate installation of the loudspeaker.

## **TOOLS NEEDED**

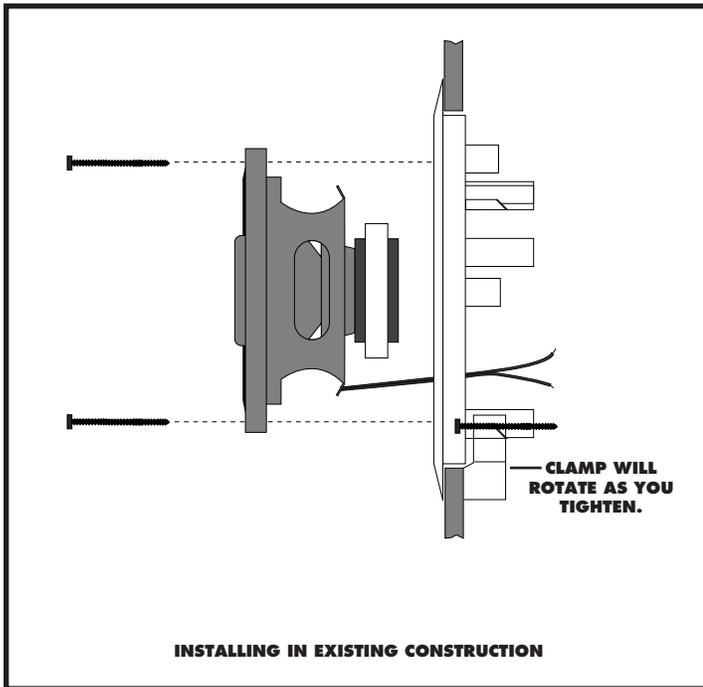
- Pencil and template for marking cutout (template is part of packaging insert)
- Keyhole saw and/or utility knife for cutting mounting opening
- No. 2 phillips head screwdriver
- Wire strippers
- Sharp pointed metal device, such as ball point pen, paper clip, or metal scribe for lifting off the grille

## **INSTALLING IN EXISTING CONSTRUCTION**

Your Polk AB Loudspeakers have been designed for easy installation. If you intend to do the installation yourself we assume that you possess some skill in the proper use of hand and power tools. You should have a thorough understanding of local building and fire codes and a familiarity with the area behind the wall or ceiling where the speakers will be installed.

If you are not accustomed to working on your walls or ceiling, the time to get help is before you start cutting. There must be at least one inch of clearance between the cutout and any studs or joists in order for the mounting hardware (dogs) to place themselves properly. Wall studs are spaced on 16 inch centers in most parts of the country, but actual spacing should be verified.

Your AB's require a mounting depth of at least three inches measured from the face of the wall; they can be installed in walls faced with paneling as little as 5/16" thick or plaster-on-lath as thick as two inches. For acoustical considerations you may wish to insulate the area behind the speaker loosely with a small amount of fiberglass batting or dacron to reduce the potential problem of sound transmission into an adjoining room.



## Removal after Installation

If it should ever be necessary to remove the AB Series Loudspeaker from the wall, you must first remove the loudspeaker from the baffle. Loosen the mounting screws just enough to allow the dogs to rotate out of the way of the chassis.

## INSTALLING IN NEW CONSTRUCTION

A rough-in kit is available separately to facilitate installations in open framed walls and ceilings. Instructions and suggestions are provided with this kit.

## TROUBLESHOOTING

1. No sound from speakers.
  - Check all amplifier connections and connections to speakers.
  - Make sure amp is connected to AC outlet and switched on.
2. Distortion at very high listening levels.
  - Listen at lower levels.
  - Purchase larger amplifier.
3. Not enough bass.
  - Make sure speakers are in phase.

## TECHNICAL ASSISTANCE

If you have any questions or problems with your loudspeaker system, please do not hesitate to contact your authorized Polk Audio dealer from whom you purchased your loudspeakers. Your Polk Audio dealer has the experience needed to pinpoint any problems that may exist and has easy access to technical information from the Polk Audio factory. **If you need assistance or information on other Polk Audio loudspeakers for your home or car, call 1-800-377-7655.**

Once you have determined the exact placement of your speakers and the templates are in position on your wall or ceiling, you are ready to cut your mounting hole:

- 1.) Select locations for both of your loudspeakers.
- 2.) Check locations for interference from studs, pipes, wiring etc. before cutting.
- 3.) Use the template (supplied in packaging) to scribe the mounting holes.
- 4.) Cut mounting holes.
- 5.) Fish wires from amplifier (leave at least two feet slack).
- 6.) Secure cables to the wall, ceiling or a stud with cable tie or tape.
- 7.) Make sure mounting screws are extended adequately for wall thickness, fold clamps in towards chassis and place the baffle in the mounting hole.
- 8.) Tighten all three mounting screws. Clamps will rotate into place as you tighten.
- 9.) Connect the speaker wires to the pigtails with wire nuts or solder. Use electrical tape to protect connections. Connect pigtails to loudspeaker matching amplifier positive and negative terminals to plus(+) and minus(-) terminals on loudspeaker.
- 10.) Install the loudspeaker into the baffle with 4 supplied screws. Install the grilles.

## AB SPECIFICATIONS

### AB510

Driver Complement:  
5.25" (133mm) polymer laminate midwoofer  
.5" (12mm) polymer dome tweeter  
Overall Size:  
8.125" (207mm) round  
Cutout Size:  
7.25" (184mm) round  
Mounting Depth (less wall thickness):  
1.525" (39mm)  
Overall Frequency Response:  
60 - 20,000 Hz  
-3dB Limits:  
78 - 18,000 Hz  
Recommended Amplification:  
5 - 75 watts / channel  
Nominal Impedance:  
Compatible with 8 ohm outputs  
Sensitivity:  
88 dB @ 1 watt / 1meter

### AB710

Driver Complement:  
6.5" (165mm) polymer laminate midwoofer  
.5" (12mm) polymer dome tweeter  
Overall Size:  
8.125" (207mm) round  
Cutout Size:  
7.25" (184mm) round  
Mounting Depth (less wall thickness):  
3.135" (79mm)  
Overall Frequency Response:  
40 - 20,000 Hz  
-3dB Limits:  
58 - 18,000 Hz  
Recommended Amplification:  
5 - 100 watts / channel  
Nominal Impedance:  
Compatible with 8 ohm outputs  
Sensitivity:  
88 dB @ 1 watt / 1meter

*Note: Specifications are subject to change without notice.*

## POLK AUDIO LIMITED 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 Product Registration Card(s) and send it to the Factory, at the address provided on the Product Cards(s) within ten (10) days of the date of purchase.

Defective Products must be shipped, together with proof of purchase, prepaid insured to the Polk Audio Authorized Dealer from whom you purchased the Product, or to the Factory at the address given on this manual. 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 prepaid.

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 defect 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 this 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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