

## INTRODUCTION

Check your system carefully. If it has been damaged in transit, report the damage immediately by calling your Acoustic Research dealer and/or the trucking firm that delivered it. Observe all warnings and cautions.

## WARNING

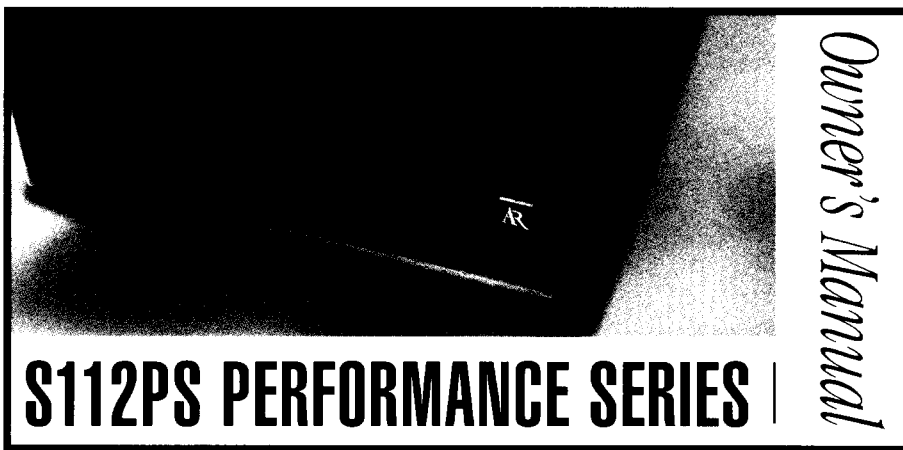
To prevent fire or shock hazard, DO NOT EXPOSE this subwoofer system to rain or excessive moisture.

We recommend that you not operate your speakers or subwoofer with the bass, treble and loudness controls set to full boost. This will place undue strain on the electronics and speakers and could damage them.

The volume control setting on your TV is not a specific indication of the overall loudness level of the speakers. The only important consideration is the loudness level at which the system can be played, regardless of where the volume control is set.

Whenever changing cables, pulling plugs, etc., ALWAYS TURN OFF ALL EQUIPMENT including the Subwoofer. This prevents transients from entering the speakers and prevents electrical energy from reaching you. Keep all connections out of the reach of children.

To avoid electrical shock, **DO NOT OPEN THE SUBWOOFER!** There are no user serviceable parts inside.



# S112PS PERFORMANCE SERIES

Owner's Manual



**WARNING: SHOCK HAZARD - DO NOT OPEN**  
**AVIS: RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR.**

**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,  
DO NOT REMOVE THE COVER. NO USER SERVICEABLE  
PARTS INSIDE. REFER SERVICING TO QUALIFIED SER-  
VICE PERSONNEL.**



*The lightning flash with arrowhead symbol, within a equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.*



*The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.*

**AR**  
Acoustic®  
Research

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© 1999 Recoton Corporation. All rights reserved. All specifications and prices subject to change without notice.

[www.acoustic-research.com](http://www.acoustic-research.com)

Your Acoustic research Subwoofer delivers powerful, deep bass sound output for a natural, life-like sonic experience. Please follow the directions in this manual to achieve the best performance from your system.

The hook-up and operation of the Subwoofer is the same for a Home Theater surround sound system or a stereo music system. The Subwoofer has its own built-in amplifier, so it works with any sound system. The Subwoofer's own crossover network sends bass-only signals to the Subwoofer's built-in amplifier. This lets the Subwoofer add extra bass to the output from your other speakers.

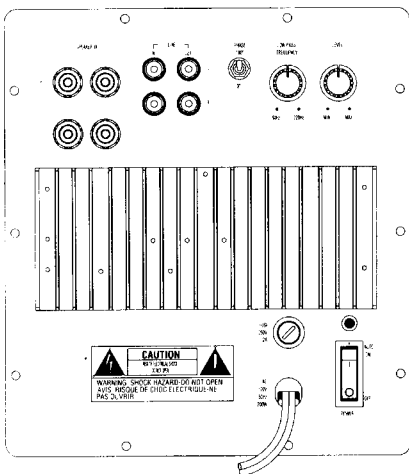
For simplicity, we call your Home Theater system's or music system's main speakers the Front speakers. We call your AV receiver, stereo receiver, or integrated amplifier the Receiver.

## PLACEMENT

Your Acoustic Research Subwoofer must sit on the floor, in a corner to work properly. The floor and corner are actually a part of the Subwoofer's design.

Place your Subwoofer in the corner nearest your system's electronic components to keep wire or cable runs short.

## SUBWOOFER CONTROLS & CONNECTIONS



**POWER CORD** Plug the power cord into an AC wall outlet or other AC outlet capable of supplying at least 200 Watts.

**POWER SWITCH** Turns the AC supply completely OFF or sets the Subwoofer to AUTO ON operation. In AUTO ON, the Subwoofer is in standby mode until it detects an audio signal input, then the Subwoofer turns on automatically. A few minutes after audio input signals cease, the Subwoofer automatically returns to standby mode.

**POWER INDICATOR LED** This LED is unlit when the AC power switch is OFF. It glows red when the Subwoofer is in standby mode and green when the Subwoofer is on.

**FUSE 250V 2A** This fuse protects against internal and external faults. If the POWER switch is ON and the power indicator LED is unlit, unplug the power cord from the AC outlet and check the fuse by unscrewing the center piece from the holder. IMPORTANT If the fuse is blown, replace it only with a fuse of the same type and current rating.

**L, R SPEAKER-IN TERMINALS** — See Connection Option 1

These terminals are for making connections using speaker wire. If you use this option, do not use Option 2

**L, R LINE IN AND OUT JACKS** — See Connection Option 2

These jacks are for input and output connections using audio cables. If you use this option, do not use Option 1.

**LOW PASS FREQUENCY CONTROL** Adjusts the upper frequency limit for audio signals going to the Subwoofer amplifier. This control helps you adjust the system tonal balance.

**LEVEL CONTROL** Balances the loudness of the Subwoofer relative to the Front speakers and compensates for room effects on the Subwoofer's output.

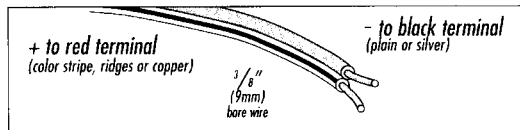
**PHASE SWITCH** The Phase Switch controls the phase of the subwoofer's output relative to the front speakers. Listen carefully to the sound quality while playing a CD with low bass. Select the position of the switch that produces the fullest deep bass without boominess. You may need to readjust the Level and Low Pass Frequency controls after setting the Phase Switch.

## CONNECTING YOUR SUBWOOFER

**IMPORTANT** When you make connections, make sure that the power switches of all components, including the Subwoofer, are OFF.

**Audio cables** If you are connecting the Subwoofer into a system made up of separate components (preamp & power amps), you will need audio cables long enough to reach the Subwoofer from the preamplifier and the power amplifier.

**Speaker wire** Typical speaker wire has a pair of separate conductors with insulating jackets that are molded together. We recommend that you use 16-gauge speaker wire for hooking your Receiver to your Front speakers. To make connections to the Subwoofer in parallel with the Front speakers easier, the speaker wire connecting the Receiver to the Subwoofer can be smaller (higher gauge number), since the Subwoofer does not draw large amounts of power through these wires.



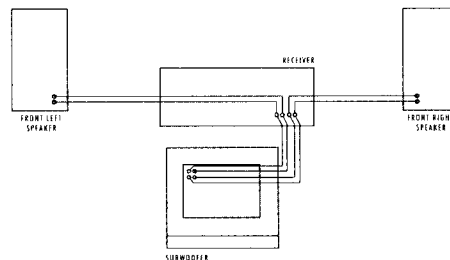
**Polarity** All speakers in a system must be connected with the same polarity. Speaker wire is marked for polarity so that you can identify which wire in the pair is which. Polarity is shown by a color stripe on the insulation, by ridges molded into the insulation, or by the colors of the wires — one copper and one silver.

Strip the insulation from speaker wire ends to reveal the bare conductors before connecting to Receiver, Subwoofer or Speaker terminals.

**IMPORTANT** Always connect the red + terminal on the Receiver to the red + terminal on the Subwoofer, and the black - terminal on the Receiver to the black - terminal on the Subwoofer. The same is true for hooking the Receiver outputs to the Front speakers: red + to red +, and black - to black -.

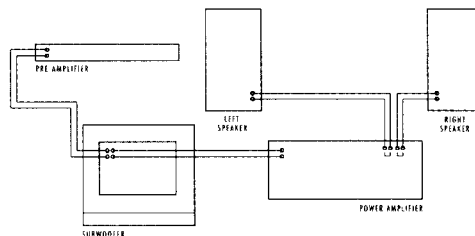
## IMPORTANT USE OPTION 1 OR OPTION 2, NOT BOTH.

### OPTION 1 — CONNECTION WITH SPEAKER WIRE



Connect speaker wires from the Receiver's Front Left and Right Speaker Outputs to the Subwoofer's SPEAKER-IN terminals. Connect Left channel to Left, and Right channel to Right. The connections to the Subwoofer are in parallel with the wires from your Receiver to your Front Speakers.

### OPTION 2 — CONNECTION WITH AUDIO CABLES



Connect a pair of audio cables from the preamp's output jacks to the Subwoofer's LINE IN jacks. Connect Left channel to Left, and Right channel to Right. Connect a pair of audio cables from the Subwoofer's LINE OUT jacks to the power amplifier's input jacks. Connect Left channel to Left, and Right channel to Right.

If your preamp, receiver or processor has a Subwoofer or Mono Output jack that is controlled by the master volume control, use a single audio cable to connect that output to the Subwoofer's L LINE IN jack. No audio cables from the Subwoofer's LINE OUT jacks are needed in this set-up.

## SUBWOOFER ADJUSTMENT & USE

Subwoofer initial control settings

- Set the LOW PASS FREQUENCY Control to its center position.
- Set the LEVEL Control fully counterclockwise to MIN. You'll reset this control after you make other adjustments.

Adjusting the Subwoofer controls

Play a program on your system. For the following adjustments, use the Dolby® Pro-Logic Normal surround mode and select a movie that has a Dolby Surround soundtrack with lots of music, or play a music CD. Adjust the Receiver's volume control for a comfortable sound level from the system speakers.

- Increase the Subwoofer's LEVEL Control setting clockwise, so that you hear the deep bass. Adjust the control for a natural, musical balance that has plenty of deep bass sound when it's actually present in the music.
- Listen carefully to bass voices and, if needed, adjust the LOW PASS FREQUENCY Control so that they sound natural. Setting the frequency too high will make deep voices sound excessively "chesty" or resonant and will give the upper bass in music a "one-note" quality. Setting the frequency too low will make deep voices sound "thin" and will give music a lack of "wormth."
- Make fine adjustments until the program has satisfying and natural sound quality on both bass voices and music.

## TROUBLESHOOTING

Subwoofer POWER Indicator LED does not light

- Check that the Subwoofer's POWER Switch is in the AUTO ON position.
- If the POWER Switch is in the AUTO ON position, check the AC outlet the Subwoofer is plugged into to be sure that it is live. You can use a tester or plug-in a lamp to check it.
- If the AC outlet is live, either the power cord or Subwoofer has a problem. Unplug the power cord from the AC outlet and check the fuse by unscrewing the center piece from the holder. If it is blown, replace the fuse only with a fuse of the same type and rating. If this doesn't help, take the Subwoofer to your dealer for service — THERE ARE NO USER SERVICEABLE PARTS INSIDE.

No sound from the Front speakers

- Be sure the Receiver and Subwoofer POWER Switches are in the On positions.
- Check the Receiver's Volume control setting — if it is all the way down, there won't be any sound.
- Check that the Receiver's Input Selector is set to an active source of audio signals and that a Tape Monitor Loop is not engaged.
- Be sure that the Receiver's Speaker Selector switch is turned on to the terminals [A or B, 1 or 2] that you have your front speakers connected to. If the Receiver has a headphone jack, you can use headphones to check the Receiver for output.
- Check the wires and connections from the Receiver's Front Speaker Output terminals to the Subwoofer's SPEAKER-IN terminals.
- Try removing the Subwoofer from the system, leaving your Front speakers connected to the Receiver. If there still is no sound, take the Receiver to your dealer for service.

No sound from the Subwoofer

- First, be sure there is sound from the Front speakers and that the Receiver is working correctly as outlined above.
- Check the Subwoofer's LEVEL Control. If it is all the way counterclockwise, there may be no sound.
- The Subwoofer only reproduces deep bass sound. If the program has no deep bass, the Subwoofer will not make any sound. Play a program with plenty of bass, such as jazz or rock music, or an action movie.
- If everything else checks OK, take the Subwoofer to your dealer for service — THERE ARE NO USER SERVICEABLE PARTS INSIDE.

## SPECIFICATIONS

Driver Complement and Enclosure

12" (300mm) high-excursion woofer in a down-firing configuration.  
Slot-loaded, Port Tuned enclosure design.

Frequency Response

20 Hz to 200 Hz,  $\pm$  3 dB

Amplification

Power output: 120 Watts RMS into 4  $\Omega$ ms with protective limiter enabled.  
480 Watts of dynamic power output

Total Harmonic Distortion

10% @ 120 Watts output  
0.015% @ 1 Watt output

Signal-to-Noise Ratio

81.5 dB, wideband

Crossover frequency (-3 dB)

80 Hz @ MIN 220 Hz @ MAX

Special Features:

High level inputs, Low level inputs with loop-thru outputs, RCA-type phono jacks, Adjustable upper crossover frequency, 80 Hz to 220 Hz, continuous, Automatic signal-sensing on/off, Auto On: sensitivity of 6 mV RMS,  $\pm$  2 mV, Auto Off delay time of approx. 17 minutes, Complete power off by manual switch

Finish: Black

Dimensions: 16" (40.6cm) x 16" (40.6cm) x 15<sup>1</sup>/<sub>4</sub>" (40cm) (HxWxD)

Weight: 44 lbs (17kg)

## LIMITED WARRANTY

This warranty remains in effect for five years from the date of purchase for speaker products and one year for electronic products.

This warranty protects the original owner providing that the product has been purchased from an authorized Acoustic Research dealer in the United States. The original bill of sale must be presented whenever warranty service is required. For warranty service outside the United States, contact the authorized Acoustic Research distributor in the country where the product was purchased.

Except as specified below, this warranty covers all defects in material and workmanship. The following are not covered: Damage caused by accident, misuse, abuse, product modification or neglect, damage occurring during shipment, damage from failure to follow instructions contained in the owners manual, damage resulting from the performance of repairs by someone not authorized by Acoustic Research, or any claims based on misrepresentations by the seller. This warranty does not cover incidental or consequential damages. It does not cover the cost of removing or reinstalling the unit. This warranty is void if the serial number has been removed or defaced.

You are responsible for transporting your product for repair. However, Acoustic Research will pay return freight charges if the repair is covered under warranty.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above may not apply to you.

## HOW TO OBTAIN SERVICE

Please call us at (800) 225-9847 or write to: Acoustic Research (Attention: Customer Service Department) 527 Stone Road, Benicia, CA 94510.

We will promptly advise you of what action to take. We may direct you to a authorized Acoustic Research Service Center or ask you to send your speaker to the factory for repair. You will need to present the original bill of sale to establish the date of purchase. **PLEASE DO NOT SHIP YOUR ACOUSTIC RESEARCH PRODUCT FOR REPAIR WITHOUT PRIOR AUTHORIZATION. PLEASE DO NOT RETURN PRODUCT TO THE ABOVE ADDRESS, IT IS NOT A SERVICE LOCATION.** You are responsible for transporting your product for repair and for payment of any initial shipping charges. However, we will pay the return shipping charges if the repairs are covered under warranty.

## IMPORTANT SAFETY PRECAUTIONS

### ATTENTION:

Please read these instructions thoroughly before attempting to operate your AR Subwoofer. Be sure to save this manual for future reference. Also save your bill of sale, as it may be required for warranty service.

### CAUTION:

Please ensure that the correct plug is used on your AC outlet.

**CLEANING** - Unplug the AR subwoofer from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

**ATTACHMENTS** - Do not use attachments not recommended by Acoustic Research as they may cause hazards.

**WATER AND MOISTURE** - Do not use the AR Subwoofer near water - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.

**ACCESSORIES** - Do not place the AR subwoofer on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with cart, stand, tripod, bracket, or table recommended by Acoustic Research, or sold with the AR Subwoofer. Any mounting of the speakers should follow Acoustic Research's instructions and should use a mounting accessory recommended by Acoustic Research.

**VENTILATION** - Slots and openings in the AR subwoofer are provided for ventilation, to ensure reliable operation and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa rug, or other similar surface. The AR subwoofer should not be placed in a built in installation such as a bookcase or rack unless proper ventilation is provided or Acoustic Research's instructions have been adhered to.

**POWER SOURCES** - The AR subwoofer should be operated only from the type of power source indicated on the marking label. If you are not sure of power supply to your home, consult your Acoustic Research dealer or local power company.

**GROUNDING OR POLARIZATION** - The AR subwoofer may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug is still unable to fit, contact your electrician to replace your obsolete outlet.

**POWER-CORD PROTECTION** - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the subwoofer.

**LIGHTNING** - For added protection for the AR subwoofer during a lightning storm, or when left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the AR subwoofer due to a lightning and power-line surges.

**OVERLOADING** - Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

**OBJECT AND LIQUID ENTRY** - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the AR subwoofer.

**SERVICING** - Do not attempt to service the AR subwoofer yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified Acoustic Research service personnel.

**DAMAGE REQUIRING SERVICE** - Unplug the AR subwoofer from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- A. When the power-supply cord or plug is damaged.
- B. If liquid has been spilled, or objects have fallen into the product.
- C. If the product has been exposed to rain or water.
- D. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the AR subwoofer to its normal operation.
- E. If the AR subwoofer has been dropped or damaged in any way.
- F. When the product exhibits a distinct change in performance - this indicates need for service.

**REPLACEMENT PARTS** - When replacement parts are required, be sure the service technician has used replacement parts specified by Acoustic Research or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

**SAFETY CHECK** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

**WALL OR CEILING MOUNTING** - The AR subwoofer should be mounted to a wall or ceiling only as recommended by Acoustic Research.

**HEAT** - The AR subwoofer should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.