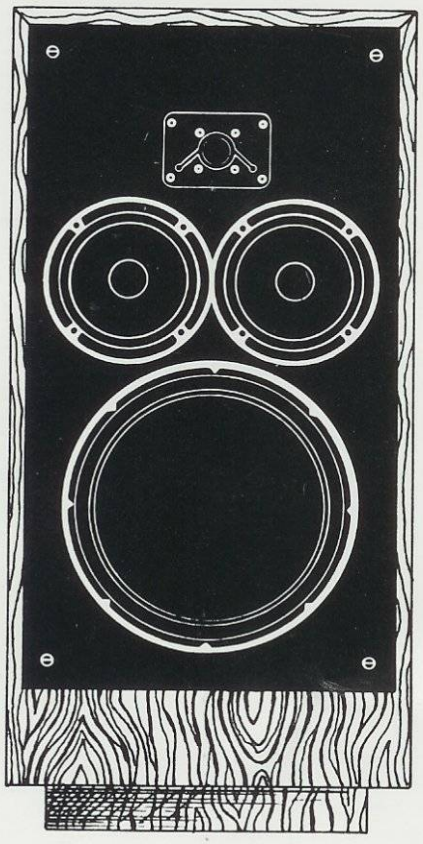
polk audio®

Model 11 Real-Time Array
Reference Monitor System (R.T.A. 11)

Instruction Manual



IMPORTANT: Please read instructions completely before proceeding.

Congratulations on your purchase of the Polk Audio Model 11 Real-Time Array. 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 this extraordinary 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 RTA 11 is a sophisticated three-way, mirror-imaged, floor-standing speaker system incorporating many of the features of the highly acclaimed Polk RTA 12B. The development program had as its principle goals: (1) open, boxless, three-dimensional sound; (2) smooth,. accurate, narrow-band frequency response across the musically relevant audio bandwidth; (3) consistently excellent transient response in all ranges; (4) nearly perfect hemispherical dispersion; (5) stable stereo and quadrophonic imaging; (6) efficiency and power handling to match virtually any high fidelity amplifier or receiver; (7) extended deep-bass response and dynamic range capability; (8) floor-standing cabinet configuration to allow ease of room placement.

The RTA 11 utilizes two MW-6600, 6½" bass midrange units, one 12" low resonance sub-bass radiator, and a 1" wide-dispersion soft dome high-frequency unit. The two 6½" bass midrange drivers are driven separately from two phase compensated crossover networks. One 6½" mid-bass driver, alone, reproduces most of the midrange. The two drivers act together in reproducing the mid-bass and in driving the sub-bass radiator. Mirror imaging is achieved by offering left-right matched speaker pairs with the midrange driver toward the inside. (The speakers are marked on the back, Left or Right channel as viewed by the listener.) The electrical crossover network comprises three phase compensated sections. Complementary slopes of 12db/octave and 18db/octave are achieved with the use of large critically coupled air-core coils, metal foil capacitors and precision resistors. A special computer derived grille frame geometry helps to maintain extremely smooth, narrow-band frequency response. The fourth order alignment of the sub-bass radiator and acoustical crossover at 60Hz provide both high efficiency and clean, usable bass response down to the limit of the audible range.

Inspecting For Shipping Damage:

When you unpack your Model 11, inspect it for shipping damage. Each unit leaves our plant after thorough inspection and in perfect condition. Therefore, any visible or concealed damage must of necessity have occurred in handling after it left the plant. If you obtained a delivery of the speaker directly from a Polk Audio dealer, it should be returned to him for inspection. If you received your speakers via public transportation, report the damage at once to the shipping company and follow the directions for returning the system to the factory.

Connecting the Speakers to Your Amplifier or Receiver

Look at the back of your speakers. You should connect the red (or plus) terminal to the red (or plus) terminal on your amplifier. The black (or minus) terminal should then be connected to the black (or minus) amplifier terminal. Make certain that both speakers are connected the same way, that is, in phase with each other. If you notice an odd lack of bass or vague swirling sonic image it is likely that one speaker is out of phase (speaker leads reversed). Almost all wires used as speaker hookup wire have some marking to show the difference between the two strands such as color coding or a molded ridge following one side of the insulation.

We recommend that you use 18 gauge wire or larger to connect the speakers to your amplifier. This will ensure that the full power and damping capabilities of your amplifer will be available to the speakers. Use of insufficiently heavy hookup wire will result in poor coupling to the amplifier and a general deterioration in performance.

For 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 cables and the terminals both on the speakers and the amplifier. When connecting the cables first, twist the strands into a stiff wire, then wrap it clockwise around the post or push the wire through the hole in the base of the post (see fig. 1). Tighten the threaded post making sure that no loose wire strands short circuit between the posts. Alternatively, fit a double banana plug to your speaker leads for an easy, positive, and quickly detachable connection.

Figure 1

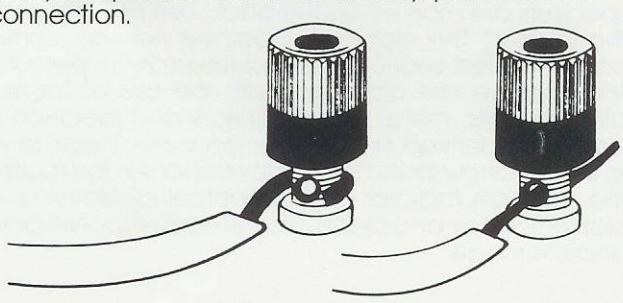


Figure 1

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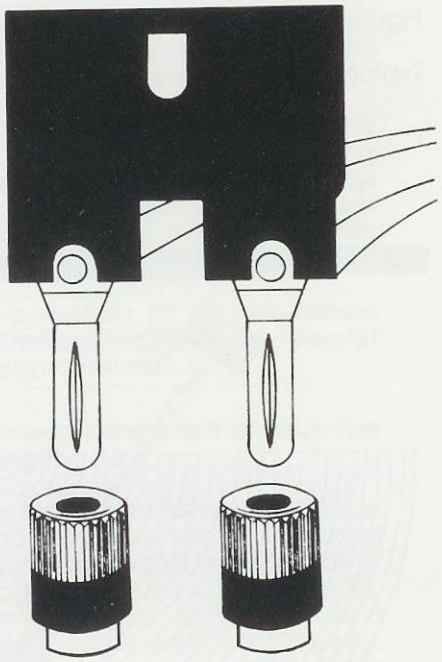


Room Placement:

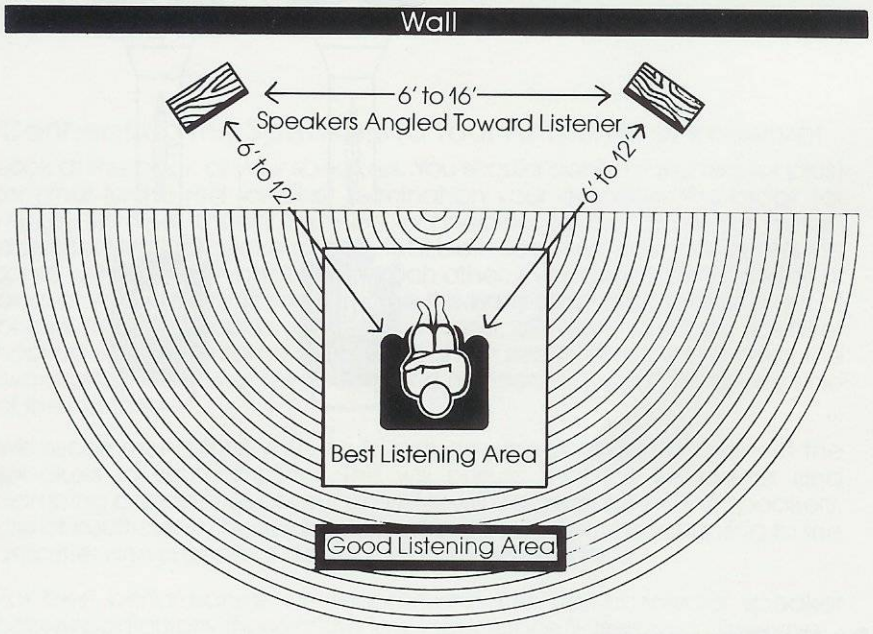
The decision on where to place the speakers is a matter of personal preference as well as a matter of acoustics. Although the Model 11 is unusually free of room dependent acoustical effects, proper positioning of the speakers will, nevertheless, enhance their performance.

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 wil 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 6 to 12 feet from the speakers, with the speakers separated by at least 6 to 16 feet.

Figure 2

Typical Room Placement (Experimentation is Recommended)



Listening Levels and Amplifier Power:

The Model 11 is a highly efficient system and will easily achieve high listening levels with moderate amounts of power. However, it will perform best with the reserve of power offered by large amplifiers so long as this power is not abused.

When properly set up, the Model 11 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 powered 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 ampifier.

A blown tweeter fuse is usually a symptom of an overdriven amplifier. Do not under any circumstances replace the tweeter fuse with one of a larger value.

A large amp able to deliver more clean power will enable the speakers to go louder without blowing the fuse.

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, many amplifiers are able to produce distorted power several times greater than their rated power.

Physical Specifications:

Dimensions:	31 3/4" H x 15 7/8" W x 10 7/8" D
Shipping Weight (each):	60 lbs.
Driver Compliment:	2 x MW6600 Mid-L.F. 1 x HF1000 H.F. 1 x D-1200-A Passive
DC Resistance:	4.5 ohms
Fuse:	3/4 amp, 3AG fast-blo, HF only
Enclosure Type:	Passive Radiator
Crossover Type:	
High Pass	3rd order Gaussian, Phase Compensated, 3.5 KHz
Low Pass #1	2nd order, Phase Compensated, 3.5 KHz
Low Pass #2	3rd order, Impedance Compensated, 400Hz

Troubleshooting Chart:

Problem	Solution
1. No sound from speaker	1a. Check rear connections and amplifier connections
2. No high frequency output	2a. Check fuse at rear of cabinet. It should be a 3/4 amp std. fuse. Replace only with 3/4 amp std. fuse.
3. Sonic image is offset or too diffuse.	3a. Make sure you have one left speaker and one right speaker. 3b. Make sure you have them on the correct sides.
4. Bottoming of drivers (clacking) or excessive cone motion.	4a. Make certain that loudness-contour control is off. 4b. Check for warped record. 4c. Use low frequency filter on amp or preamp. 4d. Increase tracking force or effective mass of tonearm. 4e. Use sturdier mounting for turntable.
5. Unnatural bass emphasis	5a. Place speakers farther from walls or corners. 5b. Reduce bass control on amp. 5c. Make certain loudness-contour is off.
6. Howling occurs at high volumes (Acoustic Feedback)	6a. Place turntable farther from speakers. 6b. Sturdier mounting for turntable. (See also 5a, b, and c)
7. Breakup or distortion on forceful recordings (especially horns, female vocals, piano, etc.)	7a. If this occurs at all listening levels, check the stylus carefully for dirt. If problem persists, increase tracking force. For best results, tracking force should be set at the **maximum** recommended for that cartridge. Be sure to use several different records when checking cartridge set-up.

Problem	Solution
8. Distortion at very high listening levels.	8a. Listen at lower levels. 8b. Purchase a larger amplifier.
9. High frequency fuse blows repeatedly.	9a. Amplifier too small for listening level (see section on "Listening Levels and Amplifier Power.") Reduce volume setting. 9b. Fuse should be .75 amp fast-blo. REPLACEMENT WITH ANY OTHER SIZE FUSE VOIDS WARRANTY. 9c. Have amplifier checked for proper operation.

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 Model 11 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
1915 Annapolis Road
Baltimore, Md. 21230

Limited Five-Year Warranty

Each Model 11 Loudspeaker is warranted to the original purchaser to be free from defects in materials or workmanship for a period of 5 years from the date of purchase.

Defective units must be shipped prepaid insured to an Authorized Warranty Service Station or to the factory. If upon examination at the factory or Authorized Warranty Service Station it is determined that the unit was defective in materials or workmanship, the Authorized Warranty Service Station or Polk Audio will, at its discretion, repair or replace the unit at no cost to the consumer and return it via prepaid freight.

This warranty does not cover damage due to commercial use, or voltage inputs in excess of the rated maximum of the unit, or other abuse. It will be void if unauthorized service has been done on the unit or if the serial number tag is removed or defaced.

This warranty is in lieu of all other warranties, expressed or implied.