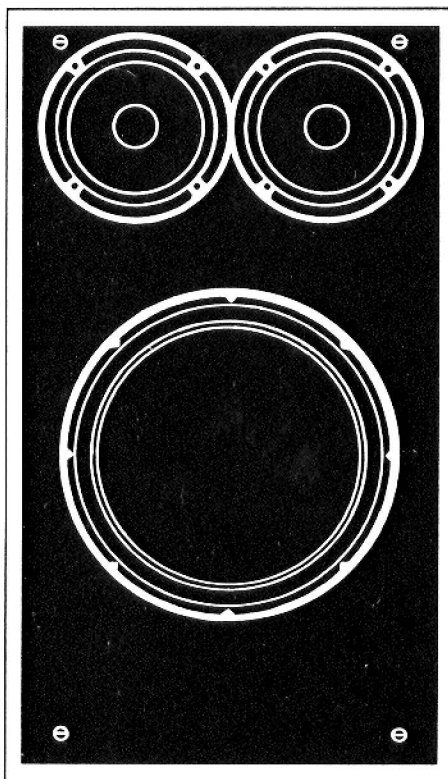




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Reference Monitor Low Frequency System L.F.14

# Instruction Manual



**IMPORTANT:** Please read instructions completely before proceeding.

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**Congratulations on your purchase of the Polk Audio Reference Monitor Low Frequency System (L.F. 14). 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.**

### **Inspecting For Shipping Damage:**

When you unpack your L.F. 14, 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.

### **Assembly and Set-Up Instructions:**

The L.F. 14 is a self-contained bass unit with a very flexible built-in crossover. The switches on the crossover module of the L.F. 14 will allow you to choose the sound that best compliments your system.

You will need: One pair of heavy (at least 16 gauge) speaker connecting cables in addition to the ones already in your system.

1. First remove the L.F. 14 from its packing carton by opening one end, turning the speaker over and sliding the carton up and off of the L.F. 14. (Note how the cardboard inserts are folded for future repacking).
2. If you have purchased two L.F. 14's follow the instructions for stereo pair operation. If you have one L.F. 14 follow the instructions for center channel operation.

FIGURE 1



### Center Channel Operation:

In center channel mode each amplifier channel drives one 6.5 in. driver and the sub-bass information is acoustically combined by the passive radiator. It also allows a choice of two efficiency/crossover point settings which may be selected according to the requirements of your system.

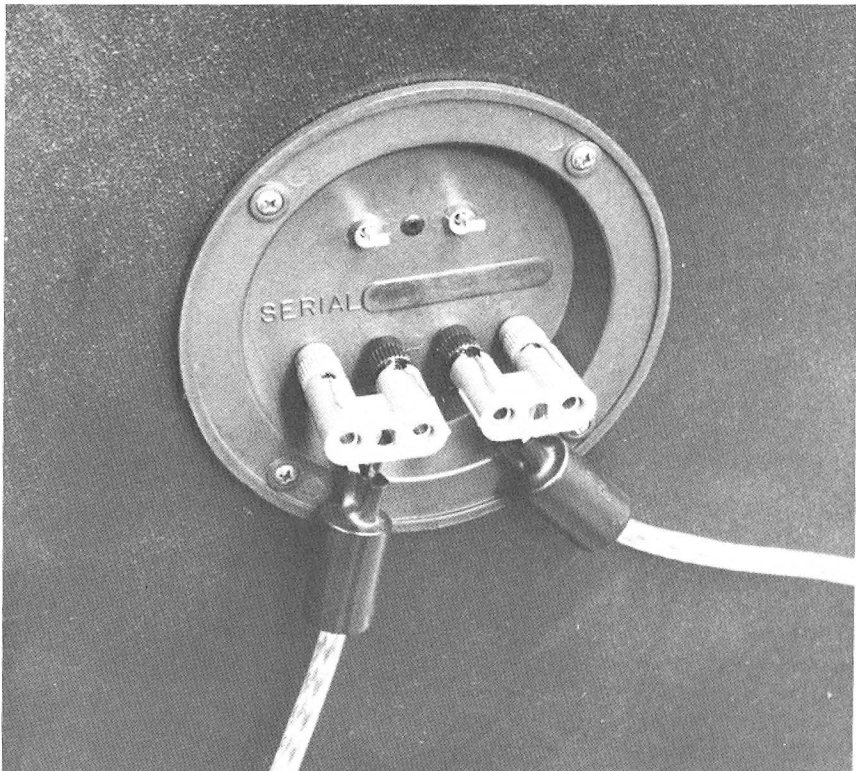
1. Refer to Figure 1, locate the 'mode' switch at the upper left of the crossover plate at the rear of the L.F. 14. Push this switch UP to the 'CENTER CHANNEL' mode.

2. REMOVE ANY WIRES CONNECTING THE BLACK OR RED TERMINALS TOGETHER. If the L.F. 14 has been previously used for stereo operation there may be a wire connecting the two black terminals together or the two red terminals together. REMOVE ALL SUCH WIRES BEFORE CONNECTING THE L.F. 14 TO YOUR AMPLIFIER.

3. Refer again to Figure 1. Locate the pair of terminals marked 'Right.' Connect the Right channel of your amplifier to this pair of terminals such that Positive goes to Red and Negative goes to Black. Connect the Left channel of the amplifier to the other two terminals in the same way. Leave your main speakers connected as normal. Check your connections against the wiring diagram on the back of the L.F. 14.

4. The L.F. 14 is now ready to use in Center Channel Mode (see Figure 2). While the system is playing try both positions of the 'efficiency' switch (see Figure 1) to find the best position for your system. UP will give more bass, DOWN will give less bass.

FIGURE 2

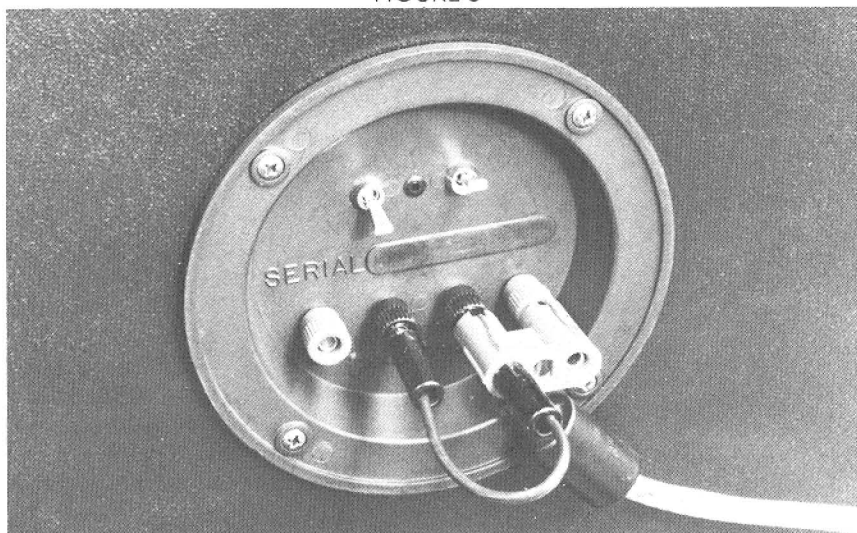


## Stereo Pair Operation:

When two L.F. 14's are used, each one is driven directly by one of the two amplifier channels exactly like your main speakers. Three efficiency settings are available which may be selected according to the requirements of your system.

1. Refer to Fig. 1. Locate the 'mode' switch at the upper left of the crossover plate at the rear of the L.F. 14. Push this switch DOWN to the 'STEREO' mode on each L.F. 14.
2. Locate the pair of terminals marked 'STEREO MODE INPUT' (lower right of the crossover plate) and connect the same amplifier channel as the main speaker nearest that L.F. 14 to this pair of terminals. Positive to Red, Negative to Black. Connect the other amplifier channel to the other L.F. 14 in the same way. Leave your main speakers connected as normal. Check your connections against the wiring diagram on the back of the L.F. 14.
3. Using the short piece of wire included with the L.F. 14 (or any short piece of wire) connect the two black terminals together. (See Figure 3).
4. The L.F. 14's are now ready to use for stereo operation. While the system is playing try the two positions of the 'efficiency' switch (see Figure 1) to find the best position for your system. UP will give more bass, DOWN will give less bass. If still more bass is desirable additional efficiency may be obtained by placing the 'mode' switch in the UP position and using a second short piece of wire to connect the two red terminals together.

FIGURE 3



Note: For main speakers with very low power handling a low frequency blocking capacitor may be desirable where very high listening levels are anticipated. Contact your dealer or the factory for more information.

## Speaker Hookup Wire:

We recommend that you minimally use #16 gauge wire to connect speakers to the amplifier. This will ensure that the full power and damping capabilities of your amplifier will be available to the speakers. Heavier gauge wire will represent an additional improvement especially on long runs.

For the **best** performance we recommend the use of special speaker cables particularly those of the low-inductance transmission line type such as Polk Audio SoundCables.

## Room Placement:

The decision on where to place the L.F. 14 in your room is a matter of personal preference as well as a matter of acoustics. However, since the L.F. 14 operates only at the lowest frequencies it may be placed virtually anywhere without compromising its performance. In general the L.F. 14 should not be placed much closer to the listener than the main speakers although it would be okay to separate the L.F. 14 from the main speakers by quite a distance (such as placement at the back of the room).

Some subtle refinements in the sound of your system are possible by adjusting the room placement of your L.F. 14. Placement near walls or in corners will emphasize certain bass frequencies. Placement away from walls or on a stand will correspondingly reduce bass output. Some excellent systems actually use the L.F. 14 facing away from the listener.

Changes in room placement will have a much greater effect on your main speakers. Refer to the manufacturers instructions for the correct placement of your main speakers.

Generally, when using a single L.F. 14 in the center channel mode a good position to begin placement experimentation is between the two main speakers, up against the back wall on the floor. If this provides too much bass output try moving the speaker either out from the wall or up in the air (on a PolkStand or other suitable device). Similarly, when using 2 L.F. 14's as a stereo pair, a good position to begin placement experimentation is behind the main speakers, up against the back wall on the floor (or against the side walls next to the main speakers). It is also possible to locate the 2 L.F. 14's next to each other in the center between the two main speakers.

One final word on placement. Due to its flexibility the L.F. 14 may be used as a practical piece of furniture (such as an end table) in your room. However, due to the high levels of low frequency energy generated by the L.F. 14, breakable items such as lamps or vases should use a felt pad or other suitable pad if they are set on top of the cabinet.

## **Biampification:**

For use in biamp applications the L.F. 14 may be modified for use with its own amplification and an active electronic crossover. This is an internal modification and should be done by your dealer or by the factory.

## **Listening Levels and Amplifier Power:**

The L.F. 14 is a highly efficient subwoofer system and will easily achieve high levels of bass output with moderate amounts of power. However, it will perform best with the reserve of power offered by large power amplifiers so long as this power is not abused.

The L.F. 14 will handle the full output of the largest power amplifiers, even at the lowest frequencies. However the greatest chance of damage to any speaker occurs when the amplifier, regardless of size is overdriven. Generally this occurs with small or moderate powered amplifiers. Surprisingly, the possibility of damage to a speaker is usually greater with small amplifiers than with large ones.

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**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. A larger amp able to deliver more clean power will enable the speakers to go louder.**

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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.

## Troubleshooting Chart:

<u>Problem</u>	<u>Solution</u>
1. No sound from L.F. 14	1a. Check connections to amplifier.
2. L.F. 14 appears to work but does not produce solid low bass.	2a. If using center channel mode check amp connections for proper phase. 2b. Check mode switch for proper position. 2c. If using stereo mode make sure two black terminals are connected.
3. Bottoming of drivers (clacking) or excessive cone motion.	3a. If using center channel mode check amp connections for proper phase. 3b. Make certain that loudness contour control is off. 3c. Check for warped record. 3d. Increase tracking force or effective mass of tonearm. 3e. Use sturdier mounting for turntable, or turntable isolation platform. 3f. Use subsonic filter on amp or pre-amp if problem persists.
4. Howling occurs at high volumes.	4a. Place L.F. 14 farther from turntable. 4b. Use sturdier turntable mounting, or isolation platform.
5. Breakup or distortion on forceful recordings (especially horns, female vocals, piano, etc.)	5a. 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 <b>maximum</b> recommended for that cartridge. Be sure to use several different records when checking cartridge set-up.



- 6. Distortion at very high listening levels.
- 7. Unnatural bass emphasis.
- 8. Lower midrange is hollow or thin.
- 6a. Listen at lower levels.
- 6b. Purchase a larger amplifier.
- 7a. See section on room placement.
- 7b. Check efficiency switch.
- 7c. Make certain loudness-contour is off.
- 8a. Check phase of L.F. 14 versus phase of main speakers. Try reversing phase of L.F. 14 amplifier connections.

### 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 L.F. 14 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 addresses are:

For Correspondence:  
Polk Audio, Inc.  
1205 S. Carey St.  
Baltimore, Md. 21230

For Shipping:  
Polk Audio, Inc.  
Warranty Service  
236 N. Franklinton Rd.  
Baltimore, Md. 21223