

CONNECTION, OPERATION AND SPEAKER PLACEMENT

Like any quality audio component, Phase Research speakers should give you years of enjoyment, provided you know how to use them and take reasonably good care of them. There is always the temptation to set your system up quickly so you can start enjoying it as soon as possible. Please resist that temptation until you've read this manual thoroughly. It will help you enjoy your speakers more, and could save you unnecessary problems.

Some Precautions

1. When setting your system up, leave the receiver unplugged. Plugging the AC cord into the wall should be the last connection you make. This is to avoid short circuiting, or sending signals through the system which it is not yet prepared to tolerate.

2. As a general rule, turn the volume control down when performing the following operations: (a) turning the power on, (b) changing the receiver function (e.g. changing from turntable to radio), and (c) actually handling the turntable, such as when putting records on the platter or cueing the tonearm. This is to avoid sending bursts of power through the system, which might result in speaker damage. For example, switching functions or turning the power on sometimes makes an electronic click or pop. Accidentally touching the stylus, or dropping the tonearm on the turntable, sends an electronic "spike" through the system. With the volume turned down, it is very unlikely that such "spikes" will ever damage your speakers. With the volume turned up, however, the possibility of damage is increased.

3. Avoid extreme tone-control boosts when you're listening to your system at high volume levels. You're asking for trouble if you turn the loudness switch on, turn the bass control all the way up, and then listen to bass-heavy rock music at high volume levels. This could damage the speakers' woofer cones. Likewise, turning the treble control all the way up and listening at high volume levels could result in a "blown" tweeter. Remember, when you boost the tone controls, you're increasing the power levels transmitted to your speakers. Tone controls should be used to tailor the sound to your liking, but exercise reasonable caution and judgment when using them.

4. Phase-R speakers will provide more than enough volume for most people. Don't play your system so loud that the sound becomes significantly distorted. If you do, you may damage the receiver, speakers, or both.

Connecting the Speakers to the System

You'll notice that the speaker output terminals on your receiver, and the input terminals on the speakers themselves, are marked "plus" and "minus". When connecting the speakers to the receiver, connect the + terminal of the receiver to the + terminal of the speaker, and the - terminal to the - terminal (fig. 1). Using rib-coded wires makes this task quite simple. For example, you might attach the "ribbed" side of the lead to the + terminals, and the "unribbed" side to the - terminals.

The wires should have about 1/2" of insulation stripped away, so that you are left with enough soldered bare wire at the end of each lead to permit secure attachment to each terminal (but not so much that the bare wires can touch each other, as this will cause a short). Once these attachments are made as described above, your speakers should be connected "in phase." That is, they will produce the full range of sound, including bass sounds. Don't forget to observe this when making connections to your speakers, in order to get proper phasing.

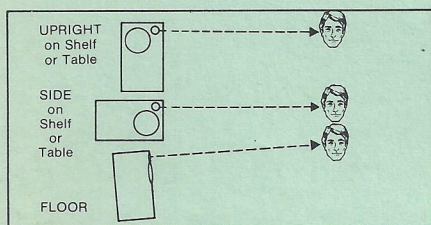
Speaker Placement

The purpose of stereo sound reproduction is to give the sonic impression of breadth. You should be able to close your eyes and imagine that the orchestra is playing in front of you — with some instruments located on the left, some on the right, and some in the middle, between the speakers. Of course, some records may be engineered to make certain sounds "move around". But the goal of stereo is to give this lifelike impression of breadth, or a good "stereo image."

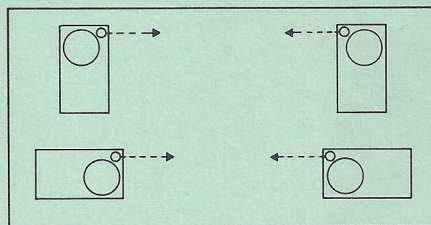
Poor speaker placement will detract from the stereo image. If they are too close together, the sound will seem to be narrowed into one monophonic source, with very little sense of stereo separation. If they are too far apart, the sound will seem unnaturally split apart. Usually, the stereo image will be best if the speakers are placed equally distant from each other and from the listener, although a distance of less than 6 feet usually isn't enough. There is no hard and fast rule concerning distances between the speakers, so experiment to see what you like best.

The sound of the speakers themselves can also be influenced by placement. Here are some guidelines to follow when placing your speakers.

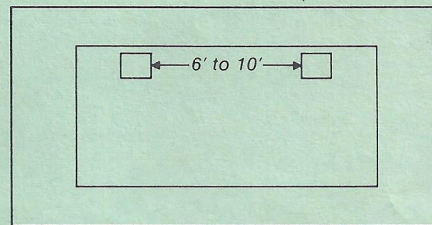
Recommended Speaker Placement and Positioning For Optimum Image and Enjoyment



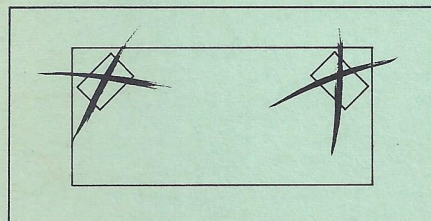
Try to place speaker to aim at ear level



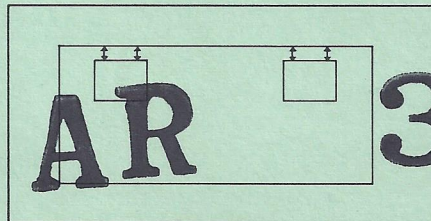
Keep tweeters positioned to inside



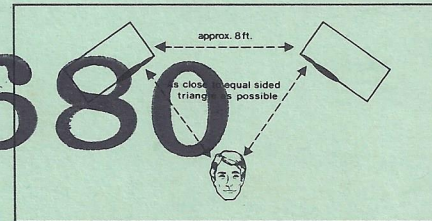
Long wall is preferable 6' to 10' apart



Avoid corner placement



Keep speaker at least 3" from wall so rear opening can breathe



Optimum listening position — 1'-1 1/2' from wall, 24"-36" off floor — angled in 10 to 20 degrees and sitting right in middle of both units

PHASE-R 5 YEAR LIMITED WARRANTY

Phase Research Corporation guarantees its products to be free of material and workmanship defects for a period of 5 years from its retail date of purchase. If any parts should fail during operation within its specified power rating (i.e. maximum of 100 watts Continuous Program Material) because of a material or workmanship defect, Phase Research Corporation will replace the defective part at no charge. Phase Research Corporation does not warranty its products beyond its maximum power rating. Phase Research Corporation reserves the right to examine all defective units sent back to the factory and a final determination as to the nature of the defect shall rest solely with the manufacturer. This warranty covers normal consumer use and does not cover damage which occurs in shipment or failure which results from alteration, accident, mis-use, abuse, neglect, installation, or commercial use.