

After weeks or even months of hectic auditioning, you finally settle for a pair of exquisite speakers. These, in your opinion, are the most perfect sounding speakers ever made. The Bass is tight, the Mid-range is rich and mellow, the Treble is sweet and the Imaging is very stable and accurate. You complete the formalities and eagerly await the delivery. A couple of days later it actually arrives. The arrival is a big event in your life. The entire scenario climaxes and brings you to the moment of truth. You've hooked on your new speakers and just switched on your system. You're about to sit on your couch and your heart skips a beat. You are aghast! Where's the tight bass? The life-like sound? These can't be the speakers you fell in love with! Your dream speakers sound horrible.

What went wrong here? As in a chain, every link is vital. The listening room is the final link in a chain that extends back to the recording of a musical performance. Ignore this and you may be treading on quicksand.

During a recording session, the sound engineer places microphones at strategic locations in and around the performance area. He attempts

1) The direct sound from the singers and the instruments. This direct sound goes straight from the musical source to the microphones. This brings clarity, presence and life to the recordings. It also determines the stereo image during playback, thus giving the listener a sense of relative position of each performer and instrument.

2) Sounds that reflect off surfaces close to the performance area. These sounds are called 'Early Reflections' and help define the spacing between instruments as well as the size of the stage area.

3) The reverberant characteristics of the recording

## SOUND TREATMENT

the longer it takes for sounds to die out, hence the more spacious the recording.

It is now easy to understand



# Quadrophonia

**Sanjeev Malvi** advises you on how to get the best out of your speakers

that your listening room has its own character and acoustical space itself. Each of these components is an important contributor to the final reality of the musical experience. Reverberation is the diffused sound coming from random directions as it reflects off the walls, ceiling and floor. It provides the acoustical signature of the recording space. It tells the listener whether the recording was made in a small room, dead room, live room, large room, etc. Basically, the larger the recording space, signature. This will be superimposed on the acoustical signature of the original recording. In a perfect world this wouldn't mess up the sound too much. In the real world problems are inevitable.

To begin with, we need to experiment with speaker placement in our listening rooms. Plan to place the speakers along the room's shorter walls, considering that

your speakers are of good quality. A general rule of thumb would be to measure the length of the wall behind the speakers. Divide this by three. This number represents the approximate distance between the side wall and the speaker. In a 15 foot

Use a well recorded piece of music you are very familiar with. It has got to have the full spectrum of sound. Sit in your favourite listening position and ask someone to help move your speakers around. After having roughed in your speakers you should be able to optimize the



wide room, each speaker would be approximately five feet from the closest side wall. The speakers should also generally be at least three feet from the rear wall. If the speakers are located nearer the walls, bass re-enforcement occurs and the mid-range tends to become 'muddy'. Bringing the speakers out will improve Imaging at the cost of bass response. Following these instructions allows you to rough in your speakers.

The next step involves optimizing the tonal balance.

tonal balance by moving the speakers about, in a radius of one foot, from the original position.

It is important to note that proper placement of speakers affects the Bass and Lower Mid-range response to the maximum. Any aberrations in the higher mid-range and high frequencies will have to be dealt by acoustically treating your listening room. We will discuss this in detail next time. Till then happy listening and discovering the potential of your music system!