

# SOUND TREATMENT

**W**e were listening to some good music and the topic of discussion on a lazy afternoon drifted towards 'Sound' and our growing awareness of it in today's world. Someone mentioned the word 'Stereo' so casually, that it prompted me to ask whether anyone knew what it really meant. The reaction of my friends was one of laughter at a seemingly stupid question. Yet, no one could provide a satisfactory answer. Being an audio specialist myself, I

players and these have further evolved into 'state of the art' Compact Disc players. These use the technology of Lasers to pick up the sound from the Compact Disc. Magnetic tapes have been another popular format, which have seen evolution from the mono spool tapes & recorders to stereo. The eight-track cartridge systems lasted a short while. Today's cassette players and cassettes are by far the most popular and widely used ever, all over the world. Just as the

were blended into one single channel of music. This, when played back, gave the impression that the music was coming from a very narrow source. The effect this had was to totally compress the width and depth of the original sound stage. Thus the reproduced music lost the expansiveness, liveliness and warmth of a live performance. The Stereophonic age became an instant hit because it brought into our homes a three-dimensional sound stage. It captured the depth and breadth of a live performance by recording and reproducing sound on two separate channels set apart in space. Incidentally, Stereo in Greek means solid. Very simply understood, a stereo recording would involve the use of two microphones placed at a distance from each other. The information received by each of the microphones would be recorded on separate channels. In more advanced recording processes, sound signals containing 'depth cues', would be superimposed on the sound track. Depth cues simply described, are those sound signals extracted from the recorded music, which help the brain to perceive, the music being played back as three dimensional. Believe it or no, the simple cassette we buy off the road is packed with all this complex information. The effect of this procedure is well worth the complexities. The degree of stimulation our auditory sense receives is far subtler than what a monophonic reproduction would do. Our state of relaxation is more

## The quest for Fidelity

SANJIV MALVI enters the world of stereophonic music

do not presume that all are ignorant about such terminology. We often tend to overlook the definitions and concentrate on the use of trendy words. What does all this jargon of words mean — Hi-Fi, Mono, Stereo, Surround Sound and many more?

Hi-Fi literally means 'High-Fidelity'. What has 'High-Fidelity' got to do with a music system? Are we talking about loyalties? In a way, yes. We are referring to the loyalty, to the task of accurately reproducing the music source. It is this quest for accuracy which has led to the evolution of music recording and reproducing equipment. A hundred years ago one wouldn't have been able to conceive that a 100-piece orchestra could

give a near-live performance in the arm chair comfort of one's living room. Today this doesn't surprise us anymore, what with the advent of high technology and state-of-the-art music systems.

Home entertainment equipment has evolved a lot from the humble hand-wound gramophones. One trip to 'chor bazar' and you see these hand-wound 'antique' gramophones by the dozen. It would be interesting to hear one of these though. One would find that they sound very different from the modern day players. The difference being the inability of this ancestor to fully reproduce the entire spectrum of sound which the human ear can hear. Thus categorizing it as a 'Lo-Fi' or Low Fidelity piece of equipment. The hand-wound gramophone has since evolved into electrically powered record

compact disc format is the digital grandchild of our humble ancestor, 'the gramophone'. Digital tape formats like the D.A.T. and the D.C.C. are the digital grandchildren of the spool tapes.

Another very interesting direction in which the quest for 'Fidelity' has pushed the evolution of sound is from the Monaural age to the Stereophonic age and now entering our lives, is the Surround Sound age. The Monaural age is a relic of the past. It involved the playback of only one singular channel or programme of music. In the recording process, sound signals from different sources

total, more three-dimensional.

For those of us whose taste-buds have been titillated by the 'Toblerone', never will we be satisfied by mama's home made chocolates. Similarly, those whose senses have been stimulated by Surround Sound, will never settle for less.

It is commonly said in Audio parlance that stereo sound brought the musicians into our homes, but Surround Sound takes us to where the musicians are, into a totally new reality. A subtle but profound difference.

But more of Surround Sound later.



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