

We also used the near-field subwoofer with near-field satellites, where the delay of the subwoofer was not essential. Near-field listening sets have overcome the typical problems of traditional far-field listening in rooms and facilitated obtaining very high sound pressure levels with very low distortion at the listeners' ears. Certainly, this was no discovery.

A drawback of near-field listening is—as with exact room equalization—that one near-field listening set can be used by one listener only. However, well-designed near-field loudspeaker sets can easily be equalized accurately. One essential problem with near-field listening, at least as it seems to me now, has been that almost all recordings were and are being produced for traditional far-field listening. This could also be one of the many reasons, as yet, that none of the stereophonic armchairs or “near phones” have been very successful on the market.

In recent years near-field listening monitoring seems to have been used more often. However, this practice is not quite near-field listening. The near-field listening monitors, as a rule, are situated too far from the sound engineer. In such cases primary, direct sound cannot have much higher levels than the reflected sound waves. Moreover near-field listening sound monitors are often too weak, at least at low frequencies. According to our knowledge, the near-field subwoofer is not well known to this day.

Although it is unlikely that near-field listening monitors will ever be in much use in current recording production, among “real” hifi enthusiasts there seems

to be a great challenge, just now, to reinvent near-field listening as the most exact and accurate way of listening to transaural stereo. If a near-field listening loudspeaker set is designed and adjusted properly, then listening to good artificial-head recordings over a near-field listening set can be an experience, even without special processing for interaural crosstalk cancellation.

Provided that effective transaural crosstalk cancellation is used, an artificial head with a properly adjusted near-field listening set will make it possible to reach the goal of nearly exact reproduction of complex audio images, almost independently of the environment.

Years ago we were considering a process that we called local sound-field synthesis, as opposed to global sound-field synthesis. In rooms precise global synthesis is not yet possible without many fundamental constraints. The near-field listening concept, originally aimed at overcoming the influence of the room on the resulting sound field, is a simple way to local sound-field synthesis, especially now with digital signal processors.

The basic idea of near-field listening is elementary. The concept, up to the design and equalization of near-field listening loudspeaker sets, is not as elementary, but is ready to be taken seriously by the audio industry, as the concept of transaural stereo should be too. Mass production in the recording and audio equipment industries clearly cannot be concerned with such a non-traditional concept. However, there is not much room for further development in traditional concepts in the areas of sound recording and reproduction.