

Head-Related Transfer Function and Virtual Auditory Display (Second Edition)

Xie Bosun

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I find the book excellent and, as indicated by Professor Jens Blauert (whom I have known since 1986 and whose opinions I value and trust), it is extremely thorough, multifaceted, detailed, mathematically deep, yet clear — I agree. I give it an extremely positive review.

The summary concluding each chapter or section is particularly valuable, an excellent idea and feature.

I have a few criticisms but they have little relation to the excellence and content of the overall work:

1. The index, though very thorough, is incomplete. For example there are two important and detailed references in the text to the work of Cooper and Bauck regarding crosstalk cancellation, but no reference in the index.
2. Equalization of artificial heads is discussed only in the context of loudspeaker presentation and headphone presentation, although with correct indication that what is spectrally appropriate for one playback means that it will be incorrect for the other. The concept of split or divided equalization is then discussed (page 271), in the context of the diffuse or free field equalization associated

with the artificial head being placed in series with a second equalization correcting for the headphones, the loudspeaker tone-color-corrected signal being taken at the intermediate point. There is another important application for split equalization and its takeoff point in the signal chain is not discussed:

The split equalization concept also permits using an artificial head for acoustic measurement while also listening binaurally, in which case the first equalizers as shown on page 271 (associated with the artificial head) are for obtaining measurement compatibility in a given sound field (compensating the spectral response), and the second is for obtaining the proper result at the listener's ears via the headphones.

The simplified shapes of one of the artificial heads, the HMS head, are mentioned in the overview of artificial heads early in the book but the background of their derivation and testing relative to human and to anthropomorphic artificial head shapes are not given, also in the section on simplification of artificial head shapes.

I give the book top rank. My criticisms are few and small.

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