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Comparisons between a new Binaural Microphone and a traditional Head and Torso Simulator

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In some cases, Binaural Recording using a conventional Head & Torso Simulator (HATS) is not practical or desirable. Then the use of a Binaural Microphone featuring two miniature microphones positioned at the entrance to the ear canal is an obvious choice. The first experiment lists the range of measured objective differences in a few Head Related Transfer Functions with the Binaural Microphone mounted on a small number of test persons. Measurements were done both in Free field and Diffuse field. The results were very satisfying. In another test set-up, recording of sounds with a traditional HATS and the Binaural Microphone mounted on a number of test persons were made. After this followed Paired Comparison preference evaluation of all recorded sounds. Included, as jury members were the test persons participating in the sound recordings as well as other jurors for later comparison. A preliminary analysis of the results indicates that the bias errors, when comparing recordings from a HATS and the Binaural Microphone, mounted on different persons are small and generally acceptable. However, some deviations in the results seem to relate to the size of the head - distance between the ears of the person wearing the Binaural Microphone. Further investigations regarding this as well as the use of more test persons and other test conditions have been used to validate the first findings.

The complete document was not available at the publication time. It has been replaced by the submitted abstract.