

Localization of the hearing direction and phase difference of coherent tones

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The localization of a sound source by an organism follows by analyzing of information included in a difference of phases and amplitudes of acoustic signals received by the left and right ears. In our article the biophysical model of neuron structures of the part of the ural system responsible for the localization of a sound source is described. For experimental verification of the phase difference influence on the sound source localization two phase shifting circuits PF-O1 and PF-O2 were built and applied with an audiometer. The detailed description of their construction and work is given. Introductory investigations by use of PF-O1 is showed, that in the frequency range 125-1000 Hz all the persons under examination found the localization of a sound source when the phase difference changed from 30 to 90°