

Title (en)  
ACTIVE SUPPRESSION OF THE OCCLUSION EFFECT IN HEARING AIDS

Title (de)  
AKTIVE UNTERDRÜCKUNG DES OKKLUSIONSEFFEKTES IN HÖRHILFEN

Title (fr)  
SUPPRESSION ACTIVE DE L'EFFET OCKLUSION D'UNE PROTHÈSE AUDITIVE

Publication  
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Application  
**EP 17784169 A 20170928**

Priority  
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• EP 2017001154 W 20170928

Abstract (en)  
[origin: WO2018059736A1] The invention relates to a method for designing a regulator (15, 17) for a hearing aid (1) in order to compensate for the occlusion effect during the emission of an acoustic useful signal into the ear canal (5) of the human ear. The hearing aid (1) has an earbud (8), which can be introduced into the ear canal (5) and which comprises a speaker (2) for emitting a compensation signal ( $y(t)$ ,  $y'(t)$ ) into the ear canal (5) and a microphone (3) for capturing an error signal ( $e(t)$ ) from the ear canal (5), and a control unit (9) for processing the signal to be emitted and the captured signal. The method has the following steps: - measuring a nominal secondary path between the speaker (2) and the microphone (3) and determining a transmission function ( $G$ ) which describes the behavior of the nominal secondary path, - determining a first requirement in the form of a tolerance band ( $W_{tol}$ ) about the transmission function ( $G$ ), - determining a second requirement in the form of a desired sensitivity function ( $S_{gew}$ ) of the hearing aid, - designing the regulator (15, 17) using an optimization method while simultaneously taking into consideration the first and second requirement, and - implementing the regulator (15, 17) in the control unit (9).

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**H04R 25/00** (2006.01)

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Citation (opposition)  
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