

Title (en)

Hearing aid and method for feedback suppression with directional microphone

Title (de)

Hörgerät und Verfahren zur Rückkopplungsunterdrückung mit einem Richtmikrofon

Title (fr)

Appareil auditif et procédé de suppression de la contre-réactions avec microphone directif

Publication

EP 2317779 A3 20130227 (DE)

Application

EP 10173364 A 20100819

Priority

DE 102009051200 A 20091029

Abstract (en)

[origin: EP2317779A2] The method involves attenuating sound signals fed back from a listener (37) of a hearing aid (30) to a directional microphone (33) by adaptation of the directional microphone in a preset frequency band. The frequency band is determined by an open-loop-gain measurement. The directional microphone is adapted by changing adaptation parameters to attenuate feedback signal components of white noise received from the directional microphone. The adaptation of the directional microphone is continued when attenuation exceeds a threshold value. Independent claims are also included for the following: (1) a method for operating a hearing aid (2) a hearing aid comprising an adaptation unit.

IPC 8 full level

H04R 25/00 (2006.01)

CPC (source: EP US)

H04R 25/453 (2013.01 - EP US); **H04S 2420/07** (2013.01 - EP US)

Citation (search report)

- [X] US 2005157895 A1 20050721 - LICHTBLAU GEORGE J [US]
- [XA] WO 2007113282 A1 20071011 - WIDEX AS [DK], et al
- [X] JP 4355359 B1 20091028 & US 2010092016 A1 20100415 - IWANO KENJI [JP], et al
- [A] EP 2071873 A1 20090617 - BERNAFON AG [CH]
- [A] US 2002015503 A1 20020207 - HOU ZEZHANG [US]
- [A] EP 2003928 A1 20081217 - OTICON AS [DK]
- [A] WO 9926453 A1 19990527 - AUDIOLOGIC HEARING SYS LP [US]
- [A] KATES J M: "FEEDBACK CANCELLATION IN HEARING AIDS: RESULTS FROM A COMPUTER SIMULATION", IEEE TRANSACTIONS ON SIGNAL PROCESSING, IEEE SERVICE CENTER, NEW YORK, NY, US, vol. 39, no. 3, 1 March 1991 (1991-03-01), pages 553 - 562, XP000224129, ISSN: 1053-587X, DOI: 10.1109/78.80875

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)

BA ME RS

DOCDB simple family (publication)

EP 2317779 A2 20110504; EP 2317779 A3 20130227; DE 102009051200 A1 20110505; DE 102009051200 B4 20140618; US 2011103611 A1 20110505

DOCDB simple family (application)

EP 10173364 A 20100819; DE 102009051200 A 20091029; US 91096510 A 20101025