

Title (en)

A hearing aid with an adaptive filter for suppression of acoustic feedback

Title (de)

Hörgerät mit adaptivem Filter zur Unterdrückung akustischer Rückkopplung

Title (fr)

Prothèse auditive avec un filtre adaptatif pour la suppression de la réaction acoustique

Publication

**EP 1191814 A1 20020327 (EN)**

Application

**EP 00610124 A 20001201**

Priority

- EP 00610124 A 20001201
- EP 00610097 A 20000925

Abstract (en)

The present invention relates to a hearing aid with an adaptive filter for suppression of acoustic feedback in the hearing aid. The hearing aid further comprises a controller that is adapted to compensate for acoustic feedback by determination of a first parameter of an acoustic feedback loop of the hearing aid and adjustment of a second parameter of the hearing aid in response to the first parameter whereby generation of undesired sounds is substantially avoided. Hereby a gain safety margin requirement is significantly reduced. <IMAGE>

IPC 1-7

**H04R 25/00**; **H04R 3/02**

IPC 8 full level

**H04R 25/00** (2006.01)

CPC (source: EP)

**H04R 25/453** (2013.01); **H04R 25/353** (2013.01); **H04R 25/505** (2013.01); **H04R 2430/03** (2013.01)

Citation (search report)

- [A] WO 9847313 A2 19981022 - DSP FACTORY LTD [CA], et al
- [A] US 5500902 A 19960319 - STOCKHAM THOMAS G JR [US], et al
- [A] WO 9856210 A1 19981210 - AUDIOLOGIC HEARING SYS LP [US]
- [A] EP 0814639 A2 19971229 - AUDIOLOGIC INC [US]
- [A] LUNNER T ET AL: "A DIGITAL FILTERBANK HEARING AIDDESIGN, IMPLEMENTATION AND EVALUATION", INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH & SIGNAL PROCESSING. ICASSP,US,NEW YORK, IEEE, vol. CONF. 16, 14 May 1991 (1991-05-14), pages 3661 - 3664, XP000242759, ISBN: 0-7803-0003-3
- [A] KARJALAINEN M ET AL: "COMPARISON OF LOUDSPEAKER EQUALIZATION METHODS BASED ON DSP TECHNIQUES", JOURNAL OF THE AUDIO ENGINEERING SOCIETY, AUDIO ENGINEERING SOCIETY. NEW YORK, US, vol. 47, no. 1/2, January 1999 (1999-01-01), pages 14 - 30, XP000823370, ISSN: 0004-7554
- [A] HARMA A: "Implementation of frequency-warped recursive filters", SIGNAL PROCESSING, AMSTERDAM, NL, vol. 80, no. 3, March 2000 (2000-03-01), pages 543 - 548, XP004188172, ISSN: 0165-1684

Cited by

EP1858289A1; WO2007112777A1; EP2533551A1; EP1471765A3; AU2006341496B2; EP1949757A4; EP1433359A4; EP2203000A1; US7974428B2; DE10245667A1; DE10245667B4; AU2007202232B2; EP1278396A3; DE10242700A1; DE10242700B4; EP1480494A3; CN103262572A; US8189833B2; US7778426B2; US7885991B2; US10602282B2; US8280088B2; US7174027B2; WO2004079901A3; WO2010040863A3; EP1471765A2; US9712908B2; US8594354B2; WO2007053896A1; US8170248B2; EP2003928A1; EP3429232A1; WO2005091675A1; WO2008151970A1; US7688990B2; EP2217007A1; US8503705B2; US8594355B2; US8923540B2; EP3273608B1; EP1648197B2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

**EP 1191814 A1 20020327**; **EP 1191814 B1 20090909**; **EP 1191814 B2 20150729**; AU 2001289592 B2 20050414; AU 8959201 A 20020402; CA 2417803 A1 20020328; CA 2417803 C 20101123; EP 2066139 A2 20090603; EP 2066139 A3 20100623; JP 2004509543 A 20040325; JP 3899023 B2 20070328; WO 0225996 A1 20020328

DOCDB simple family (application)

**EP 00610124 A 20001201**; AU 2001289592 A 20010920; AU 8959201 A 20010920; CA 2417803 A 20010920; DK 0100604 W 20010920; EP 09155301 A 20001201; JP 2002528238 A 20010920