

Title (en)

Method for elimination of feedback and for spectral expansion in hearing aids.

Title (de)

Verfahren zum Unterdrücken von Rückkopplungen und zur Spektralerweiterung bei Hörvorrichtungen

Title (fr)

Méthode pour la suppression de la rétroaction et pour l'expansion spectrale pour des appareils de correction auditive

Publication

EP 1853089 B2 20130925 (DE)

Application

EP 07106332 A 20070417

Priority

DE 102006020832 A 20060504

Abstract (en)

[origin: EP1853089A2] The method involves determining a feedback-endangered frequency range. An input signal is received with a spectral portion in the frequency range. The known spectral portion of the input signal is reduced. The reduced spectral portion is mixed with a synthetic signal, in such a manner that in the spectral region, the efficiency of the entire signal corresponds to the efficiency before the reduction. The synthetic signal is produced by frequency shift from the input signal. A spectral envelope of the mixed signal is corrected with the help of linear predictive coding analysis. Independent claims are also included for the following: (1) a hearing device with feedback suppression device (2) a method for providing the spectral expansion in a hearing device.

IPC 8 full level

H04R 25/00 (2006.01); **H04R 3/02** (2006.01)

CPC (source: EP US)

H04R 25/453 (2013.01 - EP US); **H04R 2430/03** (2013.01 - EP US)

Citation (opposition)

Opponent :

- EP 1471765 A2 20041027 - UNITRON HEARING LTD [CA]
- WO 2005079109 A1 20050825 - KONINKL PHILIPS ELECTRONICS NV [NL], et al
- EP 0415677 B1 19990623 - GN DANAVOX AS [DK]
- US 2005094827 A1 20050505 - MCDERMOTT HUGH [AU], et al
- US 2004109578 A1 20040610 - NIEDERDRANK TORSTEN [DE], et al
- US 2002150264 A1 20021017 - ALLEGRO SILVIA [CH], et al
- WO 2007006658 A1 20070118 - OTICON AS [DK], et al
- EP 1216598 B1 20050209 - STARKEY LAB INC [US]
- US 5394475 A 19950228 - RIBIC ZLATAN [AT]
- US 5305307 A 19940419 - CHU PETER L [US]

Cited by

EP2164283A3; EP2309777A1; CN102149038A; US8345902B2; US10524062B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1853089 A2 20071107; EP 1853089 A3 20071226; EP 1853089 B1 20090729; EP 1853089 B2 20130925; AT E438267 T1 20090815; DE 102006020832 A1 20071115; DE 102006020832 B4 20161027; DE 502007001153 D1 20090910; DK 1853089 T3 20091116; DK 1853089 T4 20140106; US 2007269068 A1 20071122; US 8571243 B2 20131029

DOCDB simple family (application)

EP 07106332 A 20070417; AT 07106332 T 20070417; DE 102006020832 A 20060504; DE 502007001153 T 20070417; DK 07106332 T 20070417; US 79995507 A 20070503