

Title (en)  
HEARING AID DEVICES

Publication  
**EP 0054450 B1 19840704 (FR)**

Application  
**EP 81401782 A 19811110**

Priority  
FR 8025323 A 19801128

Abstract (en)  
[origin: EP0054450A1] 1. Hearing aid device comprising means for taking bands of acoustic signals (C,D,R,S,T) contained respectively in various bands of useful frequencies which are in the range inaudible to the deaf, and for transposing them into acoustic signals the amplitude of which is sufficient and the frequency is in the audible range for deaf persons, characterised in that the means are arranged so as to give to the latter signals the form of image bands (c,d,r,s,t) of the above mentioned bands (C,D,R,S,T), constituting respectively images of the said bands faithfully amplified in amplitude, but condensed and reduced in frequency, the modulation of amplitude of each image band being similar to that of the corresponding band, but the frequency at each point of this image band being equal to a fraction  $1/n$  of the frequency at the corresponding point of the said band and the rate of reduction  $n$  being a number greater than 1, preferably a whole number, which is the same for all the points of a given band, in that the different image bands (c,d,r,s,t) are arranged together stepwise in the spectrum audible to the deaf person, which arrangement corresponds to different rates of reduction  $n$  for different image bands and also in that the spacing period adopted for the taking of the amplitude envelope of each band, in order to modulate the amplitude of the corresponding image band, is between 0.8 and 1.2 ms.

IPC 1-7  
**H04R 25/00**

IPC 8 full level  
**H04R 25/00** (2006.01)

CPC (source: EP)  
**H04R 25/353** (2013.01)

Cited by  
EP1796082A1; EP3128765A1; AU2005333866B2; USRE41005E; EP0329383A3; US5014319A; US4617536A; US4499339A; EP0246970A1; US4843623A; US7248711B2; US8949113B2; US8031892B2; EP2375782A1; EP1333700A3; EP1661434A4; US8086451B2; US8219389B2; US7813931B2; US8249861B2; WO2007000161A1; WO9914986A1; JP2008544660A; JP4759052B2; EP2437521B2

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