

Title (en)
Hearing aid devices.

Title (de)
Hörhilfsgeräte.

Title (fr)
Perfectionnements aux dispositifs de prothèse auditive.

Publication
EP 0054450 A1 19820623 (FR)

Application
EP 81401782 A 19811110

Priority
FR 8025323 A 19801128

Abstract (en)
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.

Abstract (fr)
L'invention concerne un appareil de prothèse auditive comprenant des moyens pour prélever des tranches de signaux acoustiques (C1, D1) contenues dans des bandes de fréquence utiles (C, D) situées dans le spectre inaudible aux sourds et pour les transposer en des images fidèles (c1, d1), mais amplifiées en amplitude et comprimées en fréquence selon des taux de réduction appropriés, situées dans le spectre audible aux sourds. Pour le traitement de la surdité profonde, les bandes utiles sont celles comprises entre 1500 Hz et 2400 Hz et entre 4800 Hz et 6000 Hz et les taux de réduction sont respectivement de 3 et de 6.

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H04R 25/353 (2013.01)

Citation (search report)
• DE 1762185 A1 19700416 - BIONDI DR ING EMANUELE, et al
• FR 2142807 A1 19730202 - ANVAR
• Journal of the Audio Engineering Society, Volume 18, No. 1, Fevrier 1970, New York (US) I.B. THOMAS et al. "The Intelligibility of Speech Transposed Downward in Frequency by One Octave", pages 56 a 62 *page 57, colonne de droite, dernier alinea a page 58, colonne de droite, alinea 1; page 61, colonne de gauche, dernier alinea a colonne de droite, ligne 18; figures 1 a 4*
• AICA: Conference on Hybrid Computation; Seventh Internationale Analogue Computation Meetings, 27-31 Aout 1973 Prague (CS) A. BURON et al. "Speech Translation Analog Unit", pages 253 a 255 *page 253, ligne 1 a page 255, alinea 3; figure 1*

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