

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
26.01.2000 Bulletin 2000/04

(51) Int Cl.7: H04R 25/00

(43) Date of publication A2:
11.02.1998 Bulletin 1998/07

(21) Application number: 97305981.9

(22) Date of filing: 06.08.1997

(84) Designated Contracting States: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE (30) Priority: 07.08.1996 US 691028 (71) Applicant: BELTONE ELECTRONICS CORPORATION Chicago Illinois 60646 (US)	(72) Inventor: Brander, Richard Cicero, Illinois (US) (74) Representative: Fenlon, Christine Lesley et al Haseltine Lake & Co., Imperial House, 15-19 Kingsway London WC2B 6UD (GB)
--	---

(54)

Digital hearing aid system

(57)

A hearing aid (12,14), having alterable parameters, includes analog-to-digital input circuitry (30) for forming a digital signal representative of an incident acoustic wave. A digital signal processor (32), coupled to said input circuitry (30), forms and processes, at a first rate, first and second frequency distinguishable data streams representative, at least in part, of the digital

signal. A control unit (34) coupled to said processor (32) includes circuitry for logarithmically processing at least one of the digital data streams, at a reduced rate which is less than the first rate. A parameter value storage memory (34b) is coupled to the unit (34), and an interface (38) is provided for accessing the memory (34b) and altering parametric values stored therein.

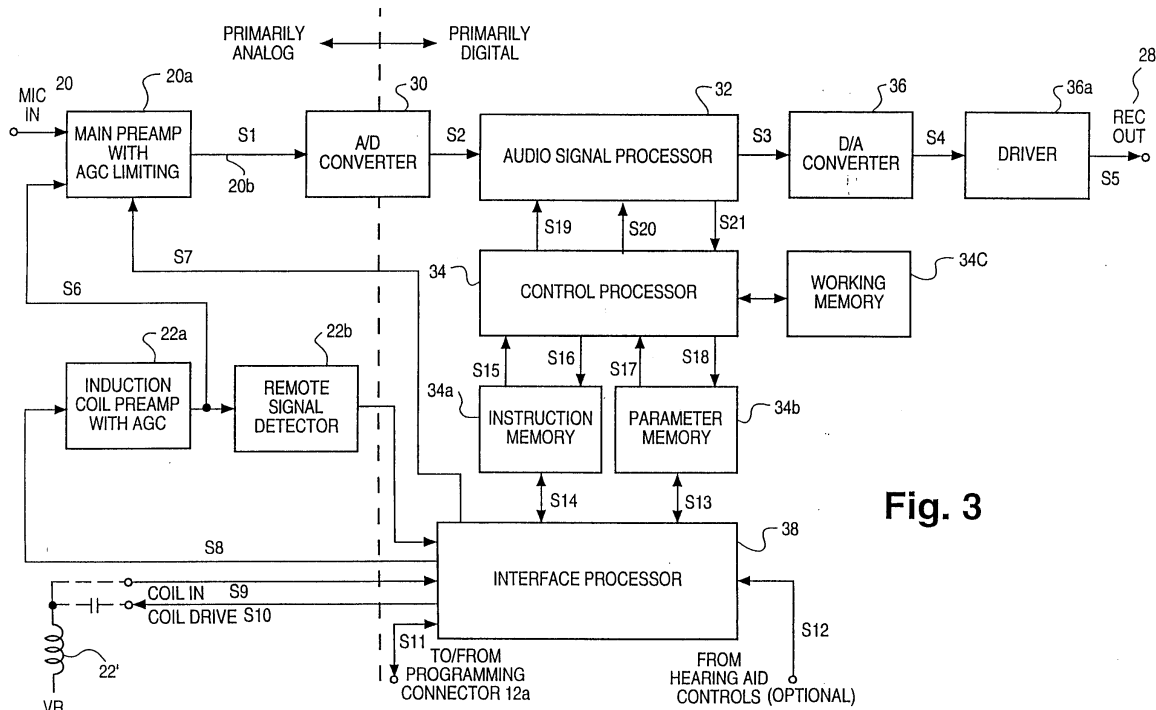


Fig. 3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 30 5981

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	EP 0 339 819 A (CENTRAL INST DEAF) 2 November 1989 (1989-11-02) * column 6, line 24 - column 12, line 25; figures *	1,3-5,9,10	H04R25/00
A	US 5 029 217 A (CHABRIES DOUGLAS M ET AL) 2 July 1991 (1991-07-02) * column 13, line 44 - line 52; figures *	1,2	
A	EP 0 448 764 A (SIEMENS AG) 2 October 1991 (1991-10-02) * column 3, line 35 - column 4, line 35; figures *	6-8	
A	US 4 852 175 A (KATES JAMES M) 25 July 1989 (1989-07-25) * column 3, line 45 - column 4, line 7; figure 3 *	1	
A	WO 97 14266 A (AUDIOLOGIC INC) 17 April 1997 (1997-04-17) * page 18, line 27 - line 34; figure 22 *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			H04R
Place of search		Date of completion of the search	Examiner
THE HAGUE		8 December 1999	Gastaldi, G
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 97 30 5981

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

08-12-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0339819 A	02-11-1989	US 5111419 A	05-05-1992
		AU 3245889 A	12-10-1989
		CA 1335674 A	23-05-1995
		DE 68919741 D	19-01-1995
		DE 68919741 T	20-04-1995
		DK 170789 A	12-10-1989
		JP 1316016 A	20-12-1989
		KR 138526 B	15-06-1998
		US 5357251 A	18-10-1994
		US 5475759 A	12-12-1995
		US 5225836 A	06-07-1993
US 5029217 A	02-07-1991	AU 596633 B	10-05-1990
		AU 6767187 A	23-07-1987
		CA 1284529 A	28-05-1991
		DK 33587 A	22-07-1987
		EP 0252205 A	13-01-1988
		JP 62224200 A	02-10-1987
EP 0448764 A	02-10-1991	AT 106651 T	15-06-1994
		DE 59005947 D	07-07-1994
		DK 448764 T	03-10-1994
US 4852175 A	25-07-1989	AT 61504 T	15-03-1991
		AU 2956289 A	03-08-1989
		DK 43989 A	04-08-1989
		EP 0326905 A	09-08-1989
		JP 1288199 A	20-11-1989
		JP 2962732 B	12-10-1999
WO 9714266 A	17-04-1997	AU 7118696 A	30-04-1997
		EP 0855129 A	29-07-1998
		NO 981561 A	09-06-1998

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82