

(19) World Intellectual Property Organization
International Bureau



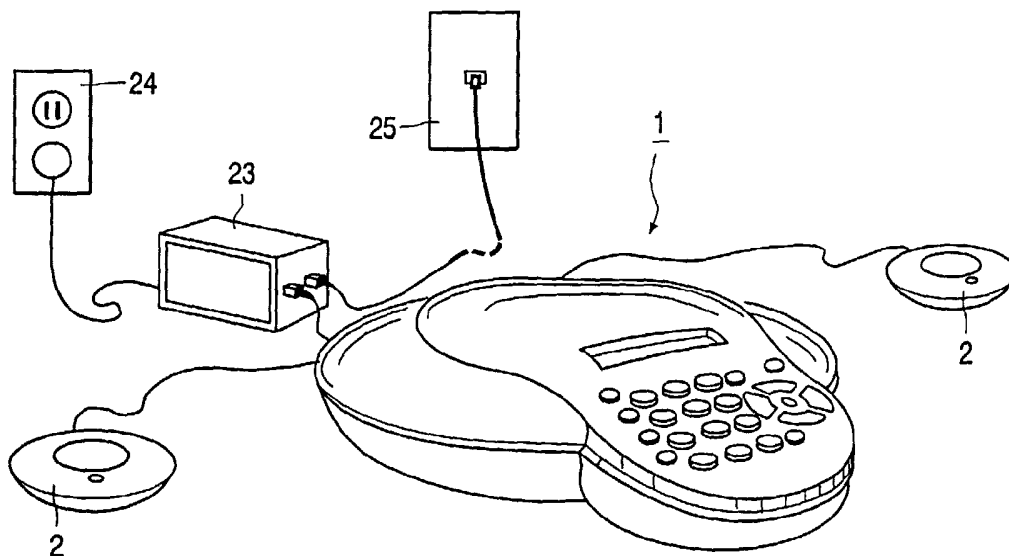
(43) International Publication Date
3 January 2002 (03.01.2002)

PCT

(10) International Publication Number
WO 02/001915 A3

- (51) International Patent Classification⁷: H04R 29/00
- (21) International Application Number: PCT/EP01/07093
- (22) International Filing Date: 22 June 2001 (22.06.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
00202298.6 30 June 2000 (30.06.2000) EP
- (71) Applicant: KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors: JANSE, Cornelis, P.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). BELT, Harm, J., W.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (74) Agent: GROENENDAAL, Antonius, W., M.; Internationaal Octrooibureau B.V., Prof Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (*national*): CN, JP, KR.
- (84) Designated States (*regional*): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report:
31 October 2002
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: DEVICE AND METHOD FOR CALIBRATION OF A MICROPHONE



(57) Abstract: A device for and method of calibrating a microphone, comprising a loudspeaker (3) for converting a loudspeaker input signal (5) into sound; a microphone (4) for converting received sound into a microphone output signal (16), and calibration means for calibrating an output power of the microphone relative to a desired power level. The calibration means comprise impulse response estimating means (7) for estimating an acoustic impulse response of the microphone by correlating the microphone output signal (6) and the loudspeaker input signal (5) when the microphone (4) receives the sound from the loudspeaker (3), whereby the output power of the microphone (4) is estimated.



WO 02/001915 A3

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 01/07093

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04R29/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) IPC 7 H04R		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 844 994 A (GRAUMANN DAVID L) 1 December 1998 (1998-12-01) column 3, line 36 -column 10, line 41	1-12
A	US 5 187 741 A (MILLER ROBERT R ET AL) 16 February 1993 (1993-02-16) column 4, line 25 -column 9, line 28 column 12, line 46 -column 18, line 61	1-12
A	US 5 928 160 A (KEWLEY-PORT DIANE ET AL) 27 July 1999 (1999-07-27) column 6, line 10 -column 13, line 54	1-12
<input type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
° Special categories of cited documents :		
A document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed		*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family
Date of the actual completion of the international search 27 August 2002		Date of mailing of the international search report 03/09/2002
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Psatha, H

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 01/07093

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
US 5844994	A	01-12-1998	NONE	
US 5187741	A	16-02-1993	CA 2055364 A1 GB 2253977 A ,B HK 33296 A JP 2101077 C JP 4287548 A JP 7123266 B KR 210991 B1	31-05-1992 23-09-1992 08-03-1996 22-10-1996 13-10-1992 25-12-1995 15-07-1999
US 5928160	A	27-07-1999	NONE	