

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 December 2002 (05.12.2002)

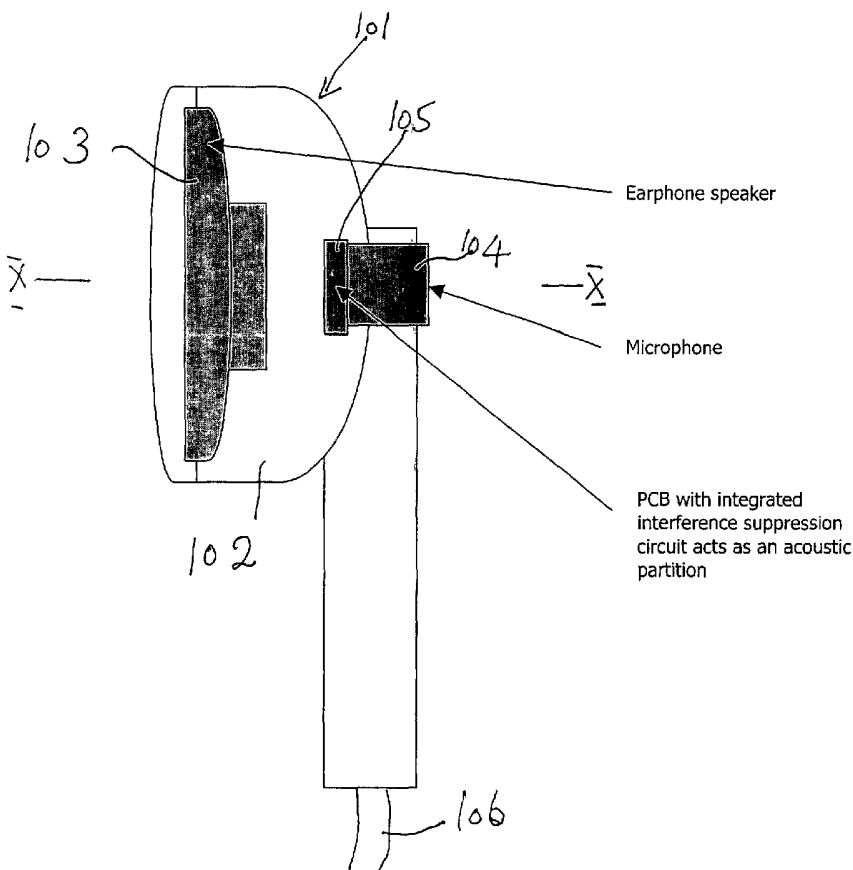
PCT

(10) International Publication Number
WO 02/098167 A3

- (51) International Patent Classification⁷: H04M 1/60, 1/05, H04R 1/08 **John** [GB/GB]; The Old Arbrook Farm, 21 Copsem Lane, Esher, Surrey KT10 9HQ (GB).
- (21) International Application Number: PCT/GB02/02507 (74) Agent: LUCAS, BRIAN RONALD; Lucas & Co., 135 Westhall Road, Warlingham, Surrey CR6 9HJ (GB).
- (22) International Filing Date: 29 May 2002 (29.05.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0112937.8 29 May 2001 (29.05.2001) GB
- (71) Applicant (for all designated States except US): EARVO-LUTION LIMITED [GB/GB]; 10 Seaforth Avenue, New Malden, Surrey KT3 6JP (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent
- (72) Inventor; and
(75) Inventor/Applicant (for US only): HEYWOOD, Adrian,

[Continued on next page]

(54) Title: DEVICE AND APPARATUS FOR USE WITH A PORTABLE COMMUNICATIONS DEVICE



(57) Abstract: In or for use with a portable communications device, a device which comprises an earpiece having a loudspeaker and a microphone mounted thereon. An apparatus for use with a portable communication device, said apparatus having a compartment therein which accommodates a flex which connects said portable communications device to an earpiece.



WO 02/098167 A3



(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
19 June 2003

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*

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.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 02/02507

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H04M1/60 H04M1/05 H04R1/08

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 H04M 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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 5 721 783 A (ANDERSON JAMES C) 24 February 1998 (1998-02-24) abstract column 1, line 5 -column 7, line 19; figures 1,2 ---	1-3, 6-14, 16-20 15
X A	US 5 664 014 A (KONOMI MASAO ET AL) 2 September 1997 (1997-09-02) abstract column 1, line 9 -column 7, line 16; figures 2-7 ---	1,4-14, 16-20 15
X	US 5 812 659 A (MCCLENDON CHARLES L ET AL) 22 September 1998 (1998-09-22) column 4, line 8 -column 5, line 20 column 7, line 9 -column 11, line 50; figures 1-5,14 -----	1-3,5-9, 11,16,19

Further documents are listed in the continuation of box C.

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

12 February 2003

Date of mailing of the international search report

29.04.03

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

Gerken, S