



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**10.03.1999 Bulletin 1999/10**

(51) Int. Cl.<sup>6</sup>: **G10K 15/02, H04S 1/00**

(43) Date of publication A2:  
**01.04.1998 Bulletin 1998/14**

(21) Application number: **97116818.2**

(22) Date of filing: **26.09.1997**

(84) Designated Contracting States:  
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC  
 NL PT SE**  
 Designated Extension States:  
**AL LT LV RO SI**

(72) Inventor:  
**Sotome, Hiromi,  
 Sunny-Palace Motoshiro No. 705  
 Hamamatsu-shi, Shizuoka-ken, 430 (JP)**

(30) Priority: **27.09.1996 JP 257192/96**

(74) Representative:  
**Geyer, Ulrich F., Dr. Dipl.-Phys. et al  
 WAGNER & GEYER,  
 Patentanwälte,  
 Gewürzmühlstrasse 5  
 80538 München (DE)**

(71) Applicant: **YAMAHA CORPORATION  
 Hamamatsu-shi Shizuoka-ken (JP)**

(54) **Sound field reproducing device**

(57) Right and left sound signals (R, L) output from a sound signal source (20) are supplied to any one of a plurality of crosstalk cancelling circuits (6 - 10) depending on actual user-selected arrangement of right and left speakers (30R, 30L) relative to a listener, where the supplied sound signals are subjected to processing to cancel unwanted crosstalk at a listening position of the

listener. The thus-processed sound signals are then passed to power amplifiers (31R, 31L) to be audibly reproduced via the right and left speakers (30R, 30L). In this manner, a sound field reproducing device is provided which is capable of effectively cancelling crosstalk in a variety of possible speaker arrangements.

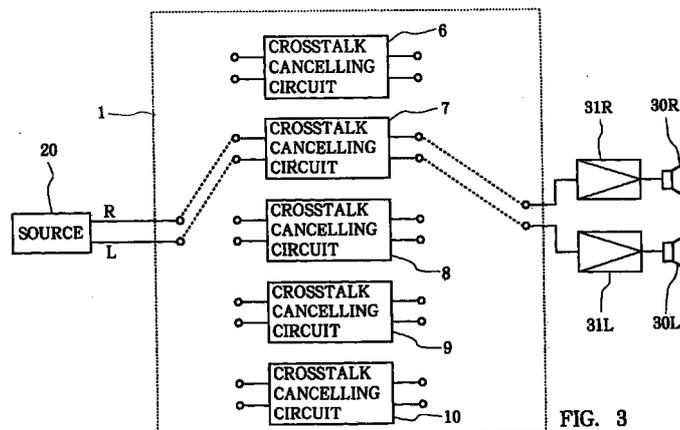


FIG. 3



European Patent  
Office

EUROPEAN SEARCH REPORT

Application Number  
EP 97 11 6818

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)
Y	EP 0 666 556 A (MATSUSHITA ELECTRIC IND CO LTD) 9 August 1995 * abstract; claim 1; figure 3 * * page 8, line 23 - page 10, line 34 * ---	1-4	G10K15/02 H04S1/00
Y	US 5 333 200 A (COOPER DUANE H ET AL) 26 July 1994 * abstract; figure 1 * ---	1-4	
A	US 5 404 406 A (FUCHIGAMI NORIHIKO ET AL) 4 April 1995 * abstract * ---		
A	EP 0 357 402 A (Q SOUND LTD) 7 March 1990 * abstract * -----		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			G10K H04S
Place of search		Date of completion of the search	Examiner
THE HAGUE		14 January 1999	Haasbroek, J
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 (P04/C01)

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

EP 97 11 6818

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.

14-01-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0666556 A	09-08-1995	JP 7222297 A	18-08-1995
		JP 7284188 A	27-10-1995
		JP 7288899 A	31-10-1995
		US 5742688 A	21-04-1998
US 5333200 A	26-07-1994	US 4893342 A	09-01-1990
		US 5034983 A	23-07-1991
		US 5136651 A	04-08-1992
		CA 1297417 A	17-03-1992
		WO 8903632 A	20-04-1989
		US 4910779 A	20-03-1991
		US 4975954 A	04-12-1992
US 5404406 A	04-04-1995	JP 6178397 A	24-06-1994
		JP 2755081 B	20-05-1998
		JP 6178398 A	24-06-1994
EP 0357402 A	07-03-1990	US 5046097 A	03-09-1991
		AT 123369 T	15-06-1995
		AU 621655 B	19-03-1992
		AU 4100089 A	08-03-1990
		BG 60225 B	30-12-1993
		CA 1329911 A	31-05-1994
		DE 68922885 D	06-07-1995
		DE 68922885 T	12-10-1995
		DK 433789 A	03-03-1990
		ES 2075053 T	01-10-1995
		FI 894143 A	03-03-1990
		IL 91464 A	28-11-1994
		JP 2298200 A	10-12-1990
		NO 175229 B	06-06-1994
		PL 163716 B	29-04-1994
		RU 2092979 C	10-10-1997
		US 5208860 A	04-05-1993
		CN 1050119 A,B	20-03-1991
US 5105462 A	14-04-1992		