



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
21.09.2005 Bulletin 2005/38

(51) Int Cl.⁷: **G01S 7/52, G10K 11/34**

(43) Date of publication A2:
29.09.2004 Bulletin 2004/40

(21) Application number: **04006862.9**

(22) Date of filing: **22.03.2004**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PL PT RO SE SI SK TR
 Designated Extension States:
AL LT LV MK

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(30) Priority: **24.03.2003 JP 2003081316**

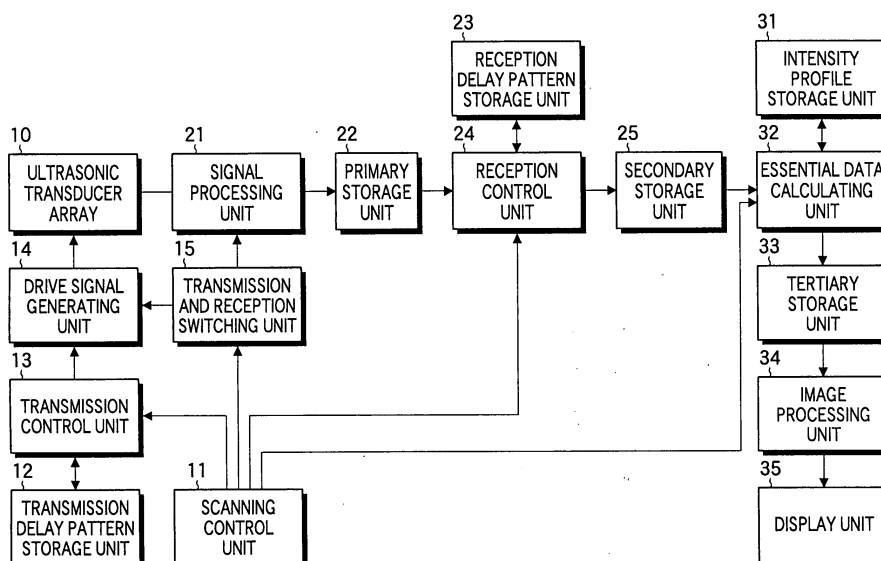
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(54) **Ultrasonic imaging apparatus with multiple transmit beams and reduced sidelobes**

(57) An ultrasonic transmitting and receiving apparatus capable of obtaining high quality ultrasonic images with reduced effect of side lobes. The apparatus includes: an ultrasonic transducer array (10) including ultrasonic transducers; a drive signal generating unit (14) for generating drive signals for driving the ultrasonic transducers; a transmission control unit (13) for controlling the drive signal generating unit such that ultrasonic waves transmitted from the ultrasonic transducers form

at least one ultrasonic beam; a reception control unit (24) for performing reception focusing processing on detection signals obtained based on the ultrasonic echoes to form a reception focal point thereby obtaining plural pieces of measurement data; a storage unit (31) for storing plural different acoustic pressure intensity profiles; and an essential data calculating unit (32) for calculating image data based on the plural pieces of measurement data and the plural different acoustic pressure intensity profiles.

FIG.1





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 00 6862

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 105 814 A (DRUKAREV ET AL) 21 April 1992 (1992-04-21) * abstract; figures 2-4b * * column 1, line 7 - column 5, line 23 * * column 5, line 47 - column 11, line 44 * * claims 1-8 *	1-17	G01S7/52 G10K11/34
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D,Y	US 6 179 780 B1 (HOSSACK JOHN A ET AL) 30 January 2001 (2001-01-30) * abstract; figures 1-10 * * column 2, line 10 - column 5, line 17 *	1-15,17	
Y	EP 0 684 486 A (HONDA GIKEN KOGYO KABUSHIKI KAISHA) 29 November 1995 (1995-11-29) * abstract; figures 1-9 * * page 1, lines 1-4 * * page 2, lines 13-31 * * page 4, line 53 - page 7, line 53 * * page 8, line 43 - page 9, line 7 * * page 9, line 56 - page 10, line 4 *	1-15,17	TECHNICAL FIELDS SEARCHED (Int.Cl.7) G01S G10K
A	LOUIS A K: "Inverse und schlecht gestellte Probleme passage" INVERSE UND SCHLECHT GESTELLTE PROBLEME, 1989, pages 146-165, XP002270893 * the whole document *	9,11-15	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 28 July 2005	Examiner Reuss, T
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			

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EPO FORM 1503 03.82 (P04C01)

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

EP 04 00 6862

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

专利名称(译)	具有多个发射光束和减少的旁瓣的超声成像设备		
公开(公告)号	EP1462819A3	公开(公告)日	2005-09-21
申请号	EP2004006862	申请日	2004-03-22
[标]申请(专利权)人(译)	富士摄影胶片公司		
申请(专利权)人(译)	富士胶片CO.LTD.		
当前申请(专利权)人(译)	富士胶片株式会社		
发明人	OGAWA, EIJI, FUJI PHOTO FILM CO., LTD.		
IPC分类号	G01N29/26 A61B8/00 G01S7/52 G01S15/89 H04R1/32 H04R3/00 G10K11/34		
CPC分类号	G01S7/52047 G01S7/5205 G01S7/5209		
优先权	2003081316 2003-03-24 JP		
其他公开文献	EP1462819B1 EP1462819A2		
外部链接	Espacenet		

摘要(译)

一种超声波发射和接收装置，能够获得具有降低的旁瓣效应的高质量超声波图像。该装置包括：超声换能器阵列（10），包括超声换能器；驱动信号发生单元（14），用于产生驱动超声换能器的驱动信号；传输控制单元（13），用于控制驱动信号产生单元，使得从超声换能器传输的超声波形成至少一个超声波束；接收控制单元（24），用于对基于超声回波获得的检测信号进行接收聚焦处理，以形成接收焦点，从而获得多条测量数据；astorageunit（31）用于存储多个不同的声压强度曲线；基本数据计算单元（32），用于根据多个测量数据和多个不同的声压强度分布计算图像数据。

