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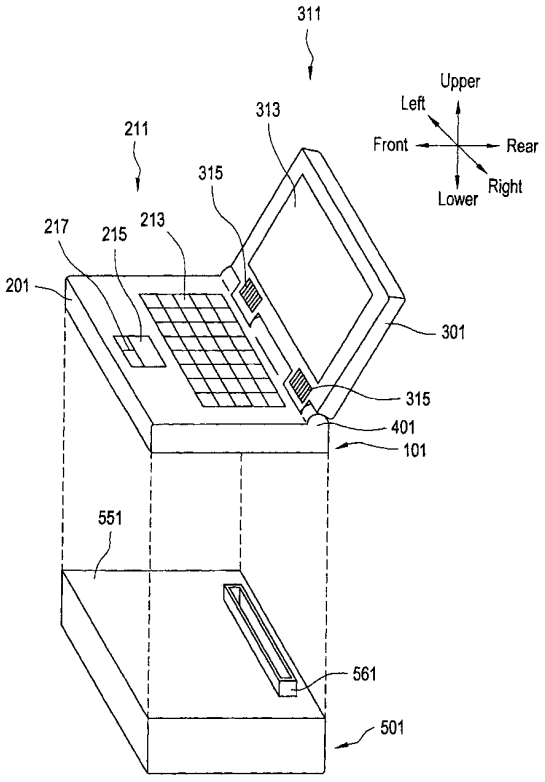
(54) **Time-gain controlling method and apparatus, recording medium and ultrasonic imaging apparatus**

(57) In order to perform precise time-gain control using a small manual setting device, one of two-dimensional coordinates of a position on a surface of a tablet pointer (215) which an external object touches is defined as a coordinate on a time axis, and the other as a coordinate on a gain axis; and the time gain is controlled based on the two-dimensional coordinates. In order to provide an ultrasonic imaging apparatus that responds to the requirement for both portability and versatility, the ultrasonic imaging apparatus comprises a portable imaging apparatus (101) comprising ultrasonic imaging means, and a support apparatus (501) which comprises supporting means for supporting extension of functions of the imaging apparatus, and which is electrically connected to and mechanically joined to the imaging apparatus so that it can be removably combined with the imaging apparatus.

FIG. 13



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EUROPEAN SEARCH REPORT

Application Number
EP 01 31 0730

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.7)
A	US 6 063 030 A (VARA ALBERT ET AL) 16 May 2000 (2000-05-16) * abstract * * column 7, line 55 - column 9, line 32 * ---	1,4,10	G01S7/52
A	WO 93 16641 A (DIASONICS INC) 2 September 1993 (1993-09-02) * abstract * * page 43, Imaging Sub-menu F1 * ---	1,4,10	
A	US 5 482 045 A (RUST DAVID W ET AL) 9 January 1996 (1996-01-09) * abstract * * column 1, line 32 - line 67 * * column 4, line 10 - line 33 * -----	1,4,10	

TECHNICAL FIELDS SEARCHED (Int.Cl.7)

G01S
A61B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	21 October 2003	Roost, 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

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 01 31 0730

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21-10-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6063030 A	16-05-2000	AU 1294995 A	19-06-1995
		WO 9515521 A2	08-06-1995
WO 9316641 A	02-09-1993	AU 3727993 A	13-09-1993
		WO 9316641 A1	02-09-1993
		US 5762066 A	09-06-1998
		US 5882302 A	16-03-1999
US 5482045 A	09-01-1996	AT 189315 T	15-02-2000
		DE 69514749 D1	02-03-2000
		DE 69514749 T2	17-08-2000
		EP 0707221 A1	17-04-1996
		JP 8206112 A	13-08-1996

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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)	时间增益控制方法和装置，记录介质和超声波成像装置		
公开(公告)号	EP1219972A3	公开(公告)日	2003-12-10
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申请(专利权)人(译)	GE医疗系统的全球技术公司LLC		
当前申请(专利权)人(译)	GE医疗系统的全球技术公司LLC		
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IPC分类号	A61B8/14 A61B8/00 A61B8/06 G01S7/52 G01S15/89		
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优先权	2000400840 2000-12-28 JP		
其他公开文献	EP1219972B1 EP1219972A2		
外部链接	Espacenet		

摘要(译)

为了使用小型手动设定装置进行精确的时间增益控制，将外部物体接触的平板电脑指针（215）的表面上的位置的二维坐标之一定义为时间轴上的坐标，另一个作为增益轴上的坐标;并且基于二维坐标控制时间增益。为了提供响应便携性和多功能性要求的超声成像设备，超声成像设备包括便携式成像设备（101），其包括超声成像装置，以及支撑装置（501），其包括用于支撑延伸的支撑装置具有成像装置的功能，并且与成像装置电连接并机械连接，使得它可以与成像装置可拆卸地结合。