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7 505-508

(74)

:

(54)

2
3 2 (108)
4
5
6
7 (702) (aliasing) (701)
8 B/D
9 (Gap filling mode)
10 (spectrum gap filling)
11
12 가 (delay) 가
13
14
15 ,
00 :
01 :
02 :
03 :
04 : FFT
05 :
06 : DC
01 :
02 :
03 :
04 :

1
, (transducer array; 103)
, , t=t₀
, t₀
v 1

$$v = \frac{\Delta_\Theta \lambda_0}{2\pi T_{PBF}}$$

, T_{PRF} , , (Pulse Repetition Frequency, PRF)
 0 , , . 1

2
ducer array; 103) - (pre-amp, 104), TGC (105) - (104)
3) . TGC (105) A/D (106) (gain) , (108) (quadrature demo
dulator, 107) , (108) 2N
(2N) (109)

$$3 \quad 2 \quad , \quad (108) \quad , \quad (301) \quad , \quad . \quad 2$$

, (301) (high-pass filter)

, 2 , (301)

(301) (low-pass filter)

FFT (Fast Fourier Transforming part, 302) 2N , 2N

(post-processing portion; 303)
compression) (base line shifting) . . . (log
(108) (109)

5 , (701) (701-1) (703) . ,
5 (701) (702) (704)
, 5 가 ,
가 6

,
7 (aliasing)

· , 가 , (702) (701) (aliasing) 7
 . , (702) (702) (701) 7

· · · (702) (,) 가

가 (Gap filling mode) { (Gap) 8 + 12 } (N) $\frac{(N-1)}{2}$ 가 (FIR)

8 B/D , 9 (Gap filling mode)

DC

2

(208)

2

(208)

13

14

13

(, I/Q)

(400)

3

(400)

(301)
(107)

DC (406),

(107)
(401),

(402)

(403)

(400)

(107)

DC (406)

(501)
(401)

(502)

14

(401)

(502)

)

(FFT)

(401)

FFT (

)

(401)

(504)

(,) (504)

가

가

(402)

가 A

(A) 0.03

A

가 0

(401)

(402)

(403)

(,2A)

0.03

(402)

0.015

(403)

가

(107)

DC

(406)

DC가

(403) DC (406) DC가 (403)
(503) (502) . , (400))

(405) , (405) , (400)
 , (405) , (403) (405)
 , (405) (109)

(, 0.04 0.03) 가

15 (400)

가

가) 가 . . , . , (,)

가 . , 가 (aliasing)

(N - 1)/2

가 가 가

1

가

(57)

1.**2.**

1

DC

3.

2

0

4.

2

5.

1

6.

7.

6

,

DC

,

,

,

8.

7

,

0

9.

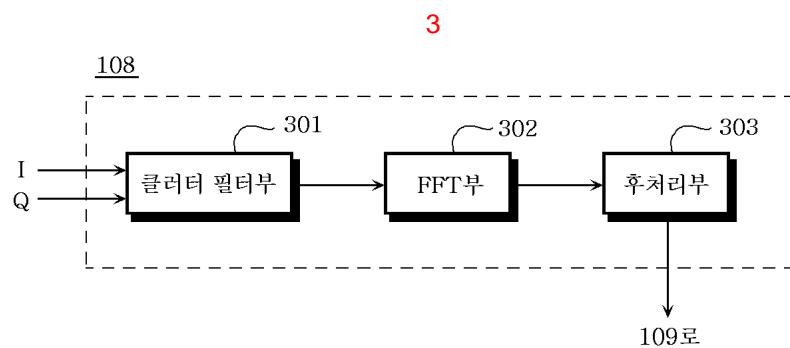
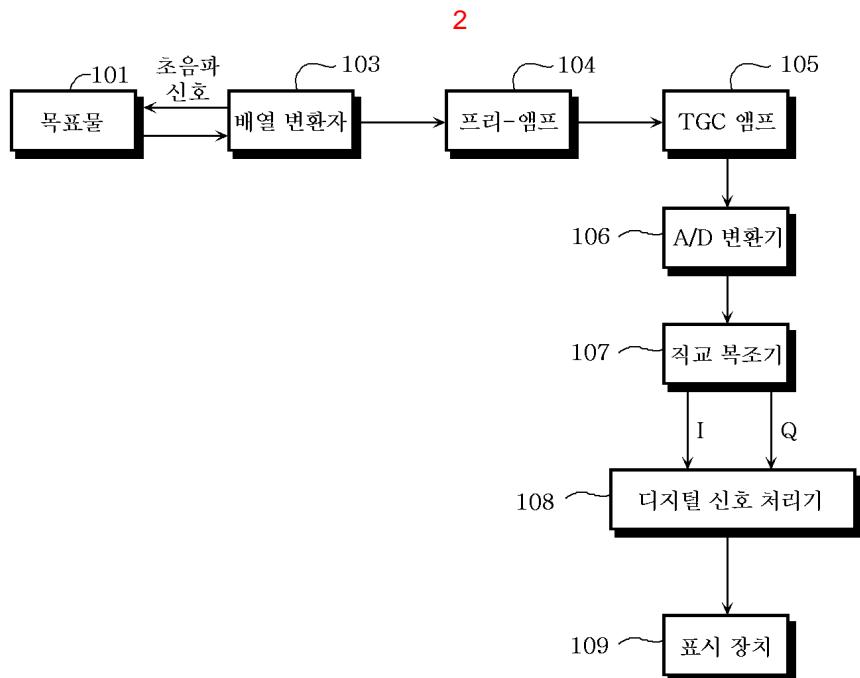
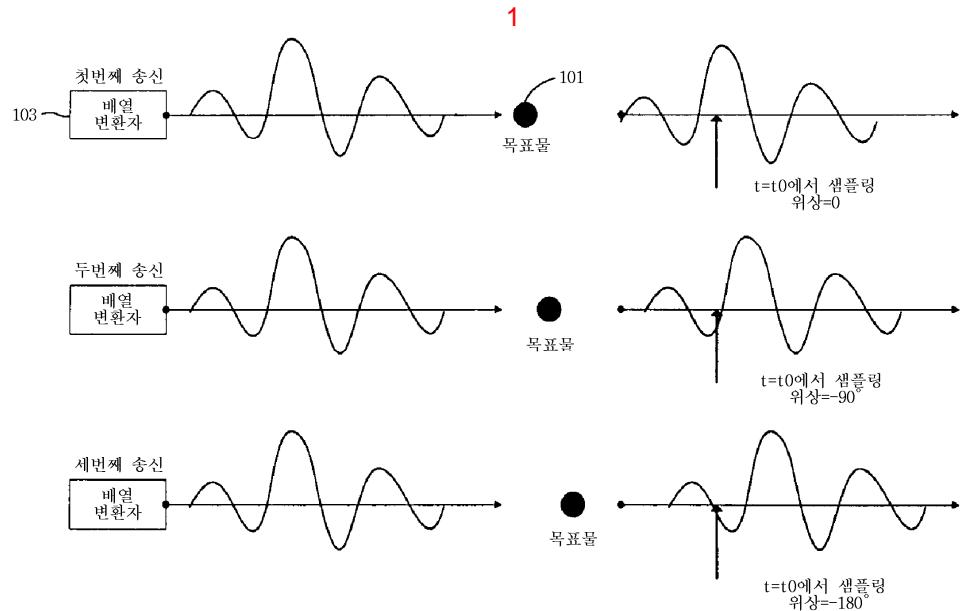
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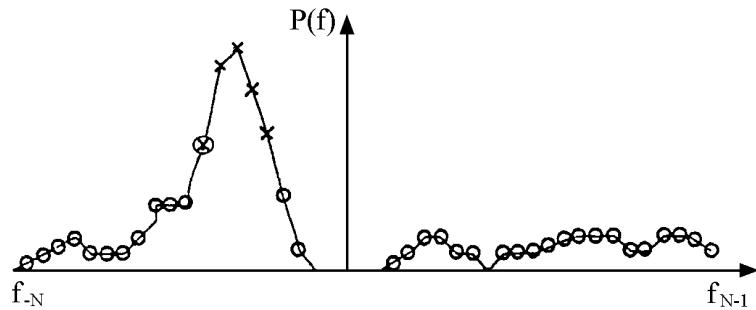
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6

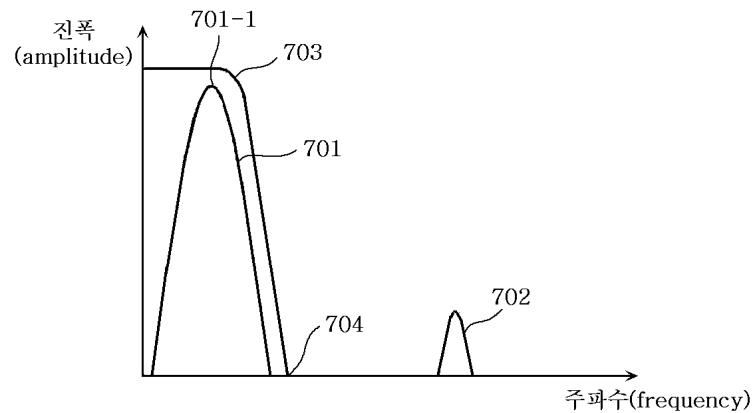
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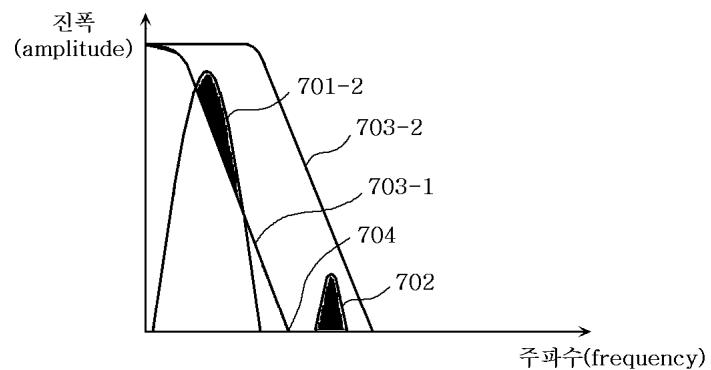
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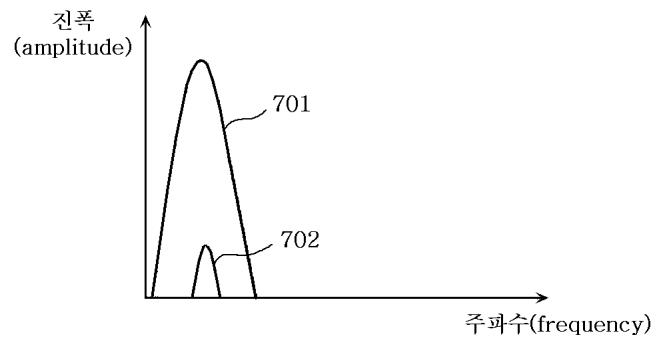
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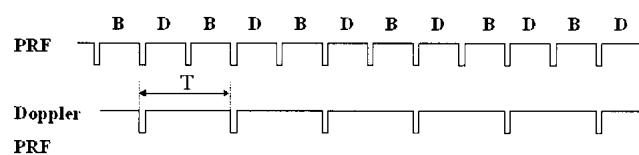
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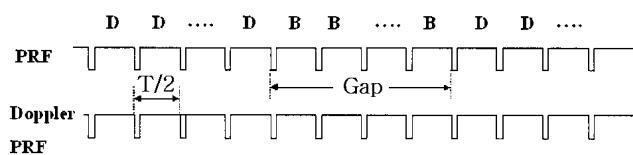
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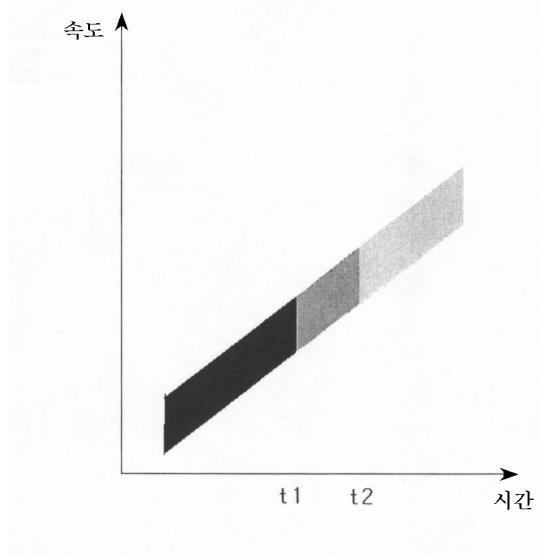
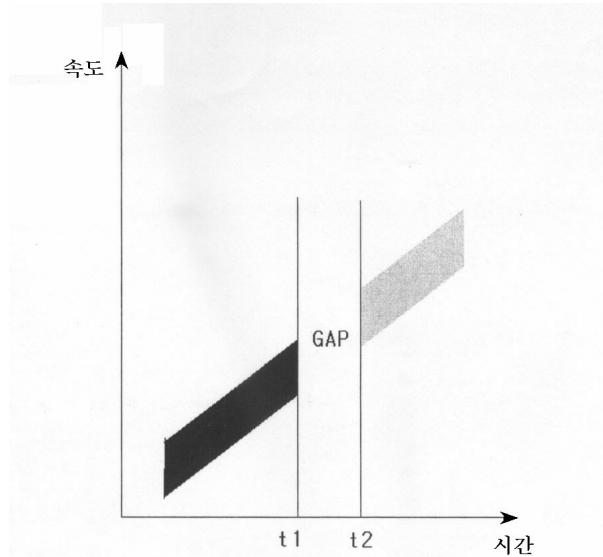
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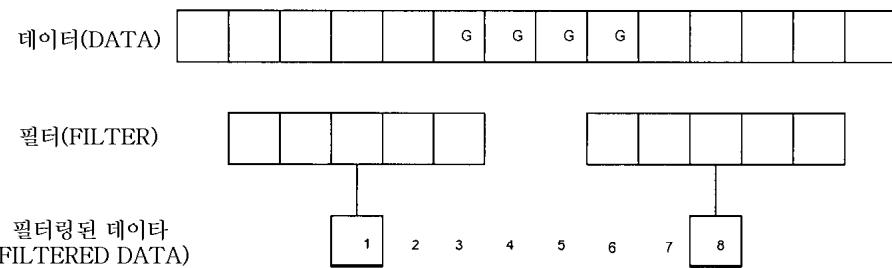
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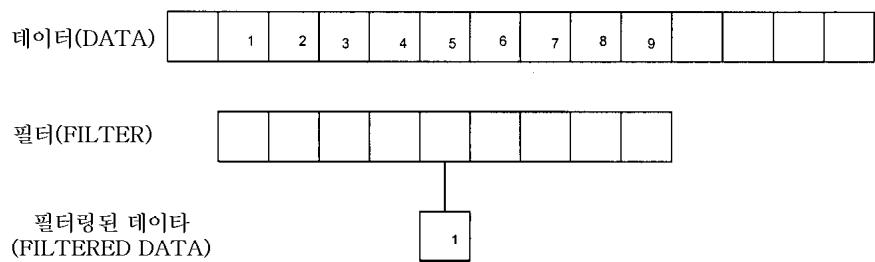
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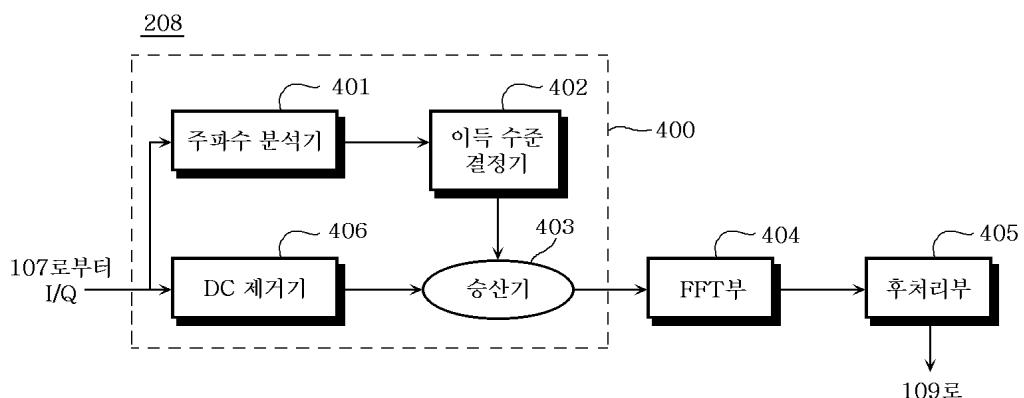
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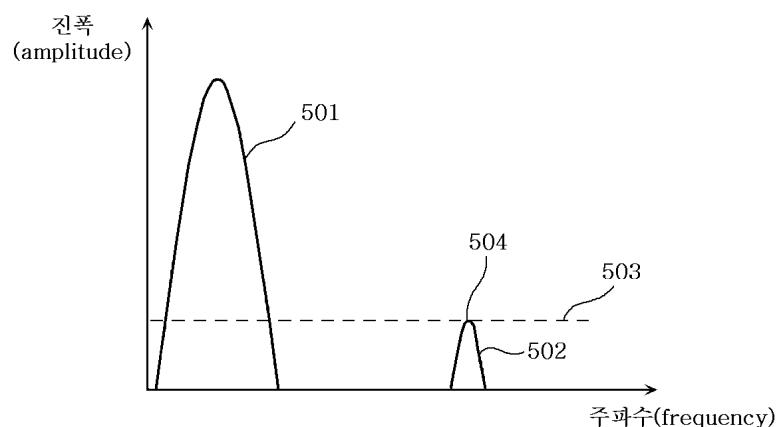
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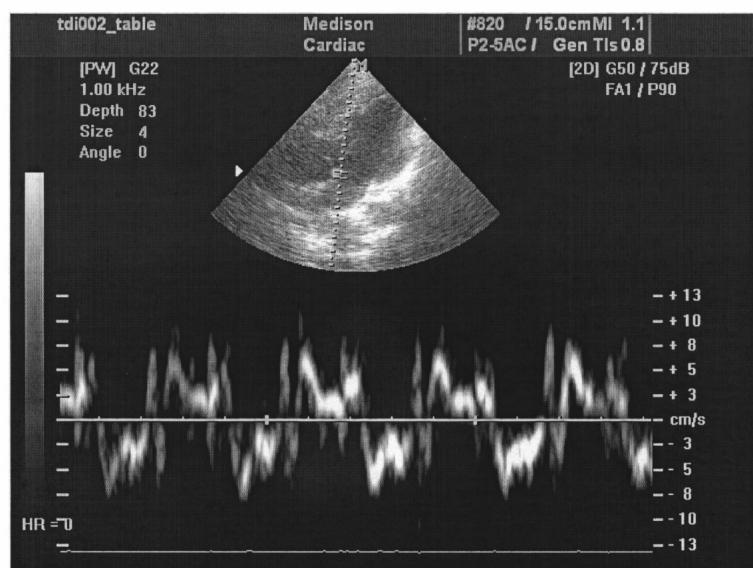
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专利名称(译)	使用多普勒效应测量人体组织速度的超声诊断设备和方法		
公开(公告)号	KR1020030082213A	公开(公告)日	2003-10-22
申请号	KR1020020020839	申请日	2002-04-17
[标]申请(专利权)人(译)	三星麦迪森株式会社		
申请(专利权)人(译)	三星麦迪逊有限公司		
当前申请(专利权)人(译)	三星麦迪逊有限公司		
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代理人(译)	CHANG, SOO KIL CHU , 晨敏		
其他公开文献	KR100459616B1		
外部链接	Espacenet		

摘要(译)

本发明涉及超声波诊断设备和使用多普勒效应有效地自动测量人体内组织速度的方法，即使它不使用低通滤波器。该超声波诊断设备包括样本数据生成装置，用于通过对发送的信号进行采样来生成样本数据，该信号是在人体内反射的超声波信号，并且处理人体组织样本数据的速度分量，生成装置包括血流速率分量的频率分布数据，以及用于提取频率分布数据中的人体组织速度分量下的频率分布数据的人体组织速度检测装置。血流速度分量的最大值，以及显示所提取的人体组织速度分量的频率分布数据的显示装置。此外，低通滤波器不被使用，并且该超声波诊断设备乘以关于样本数据的常规益处水平并且去除血流速率分量，由于滤波器顺序导致的延迟问题被阻止了数据持续时间，其中需要插值显着可以减少。因此，由于计算过程的简化，增强了关于所测量的速度组织分量的数据可靠性并且提高了实时处理能力。超声波检查，血流速度，人体组织速度，多普勒效应，增益乘以。

