

(19) (KR)
(12) (A)

(51) 。 Int. Cl.7
A61B 5/0402

(11)
(43)

10-2004-0081427
2004 09 21

(21) 10-2004-7008228

(22) 2004 05 28

2004 05 28

(86) PCT/US2002/038097

(87)

WO 2003/047427

(86) 2002 11 06

(87)

2003 06 12

(30) 09/998,733 2001 11 30 (US)

(71) , . 1701 (: 33301)

(72) , 33301 1701

, 33316 11 1200

, 33331 16732

, 01720 , 21

, 01720 , 28

, 60047 , . 310

, 02061 , . 180

, 33327 1816

, 33305 . #904 2100

(74)

:

(54)

(EG)

ECG

1

(cardiac monitoring system)

(electrocardiograph

; ECG)

(ECG)

ECG

(raw)

ECG

ECG

ECG

ECG

(telemetry)

EC

G

가

가,

ECG

(chest assembly), ECG

가 ECG
(body electronics unit)

(base station) ECG

'7 (lead)

(precordial assembly)

'12

(armband)

가

ECG

E

CG

ECG

(radio link)

ECG

ECG

가

가

가

ECG

(health practitioner)가

- 1 ECG ;
- 2 ;
- 3 ;
- 4 ;
- 5 ;
- 6 ;
- 7 ;
- 7a ;
- 8 ;
- 9a ;
- 9b ;
- 10 ;
- 11 ;
- 11a ;
- 12 ;
- 13 ;
- 14 ;
- 15 ;
- 16 ;
- 17 ECG

, (14) EGC (16) . 1 , ECG (10) (12),
 (12) (18) , 18a, 18b, 1
 8c, 18d 18e (18) (20) 가 (18)
 가 , 20a, 20b, 20c, 20d 20e (18)
 (snap terminal) (20) (18)

(62a, 62b, 62c, 62d, 62e, 63f) V1, V2, V3, V4, V5 V6 (60) (60)가

(12) V (60) (60) (60)

4 (60) (60)

4 (60) (60) (60)

(68) (69) (66) (69) 1 (68)

1 (70) 가 V2 1 (72) V1 1 (72)

(72) 1 (74) 2 (76) 1 (72)

2 (78) 2 (76) V4 2 (76) V3

2 (76) (80) 2 (82) 2 (82) 2 (78)

3 (82) 3 (84) V5 3 (84)

4 (86) 3 (84) V6 4 (86)

(60) 가 (60) (60)

(62) 가 (60)

(12) (60) (12)

(14) (14) RL, RA, LL, LA V (12)

(14) RL (14) (14) (12)

(60)가) (60) RL, RA, LL

LA) (14)

7 2 7 12 (1

2) (60) (respiration rate), (heart rate), EEG (1

(oximeter), (vital sign)

5 (12) (21) (14) (14) 가 (66)(

(21) (14) (88) 가 (66)(

(60) (90) 가 (14) 가 가 (66)(

) (88) (90) (14) (d

efibrillator) (, 5kV (defibrillation) (excitation)) (21, 66)

(88, 90) 가, (21) (90) 가

(keyed). (66) (88) 가

5A (21) (88)

(21b) (tongues, 21a) (88)

(21) (21) (88) (21a)

(21b) (66) (90) ()

6 (21) (66)() (21, 66)

(88, 90) 가 (21, 66) (21, 66) (88, 90) 가

(92) (21, 66) (21, 66) (88, 90) 가

(94) (88, 90) (secure fit) 가 (21, 66)

(88, 90) 가 (21, 66)

(21, 66) (14)

가 (21, 66) (21,

66) (88, 90) 가
 (rib, 96)

) (21) (21)가 (88) (14
 e)' (14) (98) 가 , (sleep mod
 (14) (98) (12) (88) (14)
 (wearables) (on-body) (14)
 (12) (98) (14) (14)

ABS) (14) (casing) - - (acrylonitrile-butadiene-styrene;
 ,가 (14) (14) (100)
 가 , 1 , (14) (100)
 (100) Velcro ,
 (14) (100) 가 (strap) 7 ,
 (14) (102) (104) (102)
 (102)
 (14) (16) (14) (104)가 (14)
 (104)가 , (12) , (14)
 (16) (102) (14)
 , LED, LCD, , 가 7a 가 (102)
 (14) (100) (104) (106) (104)
 (104) (14) (106) (104) 3.6V
 - 가 가 (104) (14) (100)

(14) (14) (12) (60) ECG
 (14) (108) 3kbps (12) (60) ECG
 '7 (, (12))
 , (14) RL, RA, LL, LA V '12 '(,
 (12) (60)가) (14)
 (12) RL, RA, LL LA , (60) V1 V6
 , EEG ,
 (14)

8 , (108) ASIC, (110), (112),
 (114), - (ADC, 116), (118), (120) 가 ,
 (14) (12) (60) 10
 9 (112) (112) (122), (124), (
 126), (128) (130) (112) (122) (
 (112) (12) (60) ,)
 88) (90) (124) (128)

(126) (out-of-band) (128)
 (130) ECG 9 (differential error)가 ,
 (114) (112)
 , . ADC(116)
 (decimate) (118) (DSP) (120)
 (118) ECG (16) . ECG

(118) (pacemaker) , , EEG

(integrity) ECG 가 (lead off)

(14) ECG (heart ve
E
E

(10) ECG (10) ECG 가 E

(in-series)' ECG ECG (20)

(difference), (differential)

(artifact) ECG 가 (anti-al
가

(differing group delay performance) 가

1200Hz ECG 3000Hz (over sampled). 0.05Hz 150Hz /

(decimated) (118) 8 (decima
(14)

tion) 가 1 (16) Bluetooth
(14) (16)

IEEE 802.11b 가 (14) (16) (14) (16)

(16) (16) (132)가 (14) (14)
9a (132) (14) (13)

6) (134) (133) 가 9b (132) (132)
(134) (16) (14) (136) (14) (14)

(132) (16) (14) (132) (14) (14) (134)

(14) (16) (132) (14) (14) (16) (132)

(16) (132) (14) (132) (132) (132)

(132)가 (14) (16) (14) (14) (16)

7 (102) (14) (16) (132) (16)

(14) 가 (14) 가

ECG 가 (14) (132)

) (14) (16) , (14) (16) (132)가 (16)
 (134) (, (14) (136)) (1
 4) (16) (132)가 (16) (16) (16)
 (14)
 (16) - - (ABS) 가 (16)
 Velcro, (16) (dual-lock strip), (double-sided foam tape)
 ECG (138) 가 , (16)
 ECG (138) 가 가 . 10 , (16)
 (14) 가 (14)
 (cradle, 140) (16) (144)가 가 (142)
 (16) 가 AC (wall power inlet) , (144)
 (16) (16) AC (144) , (16)
 144)가 (142) (146) AC (148)
 / (144) 3.6V - 가 , (14)
) 144) (104)가 가 , 가 (14)
 (144) (16) 104)가 가
 (144) , (16) (16) '7 '12 ' 가
 (lead switch, 150)
 11 , (16) (152) , (152) (14) (16)
 (144)가 (144)가 (16) , (16)
 , (102)가
 (14) (16) LED, LCD, , (152)
 (102) 11a .
 가 , , , (radio functionality)

 (16) (154) (14) (16) 12
 , (154) (156), (158), - - (DAC, 160), -
 (162), (164), (166) . (156)
 , (156) 가 (108)
 , ECG (14)

 (118) 3kHz
 (reconstruction filter)
 가 , 150Hz (group delay)
 . DAC(160) (162) (166)
 oth (specification) 가 (164) (108) Blueto
 (154) (12) (60) 10 9
 (166) (166) 가 (166) (168), (170), (172)
 (168) 가 (166) DAC (118) DAC

 (172) (170) DAC
 (14)

ECG (unity system g)

ain)

(16) ECG (174) ECG (138) ECG

(174) (16) (176) 가 (16)

(16) 10 (176) (176) (176) (174)

(174) (16) (174) 5 (176) RL, LA, LL, RA V/V1

(16) (174) 5 (176) V2, V3, V4, V5 V6

(174) ECG '7 (12) (176) ECG '12 (,

(176) (12) (16) 5 (176) 가) (174)

(176) 6 (16) 4 (176)

(16) (14) (ward) 가

(178)가 ECG (138) (12) (60)

(60) (178) 14 (12) (12)

(60) (receptacle, 180) (178),

(178) (12) (60) (60) ECG (trunk)

184), (178) 15 ECG (12) (185) 가 (188)

(186) (60)가 ECG (178) (12) (12)

(60) (192) (178) (190), (192)

(196) 가 (194) (178)

17 ECG (cardiac activity)

(198) (200) (12) /

(60)가 (21, 62) (202) (14) (14) (

(12) / (60) (14) (132) (16) (204) (132)

16) (16) (132) (14) (132) (16) (132) (16)

(14) (132) (14) (132) (14) (13)

2) (132) (14) (132) (16) (132) (16)

가 (12) (60) (206) (14) (208)

(14) (16) (212) (210)

(174) (214) (16) ECG (138)

(216) , ECG (138) (138)

(57)

1.

,
,

1 2. ,

가

2 3. ,

1 4. ,

5.

가

;

가

5 6. ,

5 7. ,

가

5 8. ,

1 9. ,

5

9 10. ,
1 2 , 3 4 , 1 2
, 2 , .

1 11. ,
가
.

11 12. ,
가
.

13. ,
, , ;
가 ,
,
, ,
, , .

14. ,
가
;
가
;
가 ,
;
,
, .

14 15. ,
가
.

14 16. ,

14 17. ,

14 18. ,

19. (physiological)

가 가

19 20. ,

가

21.

가 가

21 22. ,

21 23. ,

21 24. ,

23 25. ,

19 26. , , , EEG

21 27. , , , EEG

28. 가 ; ;

28 29. 가

29 30. 가

30 31.

31 32. 1 가 , 1 가 , 2 가 2 가

28 33. 가

33 34.

28 35. ,

35 36. ,

가

28 37. ,

28 38. ,

38 39. ,

28 40. ,

가

40 41. ,

28 42. ,

가

28 43. ,

43 44. ,

가 .

44 45. ,

가

28 46. ,

1 2 ,

3 4 ,

1 2

, 2 .

47. ,

1

2 ;

1 ;

2 .

47 48. ,

47 49. ,

X-

47 50. ,

47 51. ,

28 52. ,

28 53. ,

32 54. ,

60 63. ,

55 64. ,

55 65. ,

66.

가 가 ,

66 67. ,

가

67 68. ,

67 69. ,

66 70. ,

66 71. ,

가

66 72. ,

가

66 73. ,

가

66 74. ,

가

66 75. ,

가

가

66 76. ,

가

가

66 77. ,

가

66 78. ,

가

가

78 79. ,

가

66 80. ,

가

75 81. ,

75 82. ,

;

;

;

;

,

가

83.

75

,

;

;

;

;

,

가

84.

66

,

가

가

,

85.

,

;

.

86.

85

,

가

87.

86

,

88.

89.

85 ,
가 .

가

89 90. ,

85 91. ,

가 .

85 92. ,

가

가 .

92 93. ,

가 .

85 94. ,

7

12

가

85 95. ,

ECG

가 .

89 96. ,

;

;

;

;

가 .

97.

;

가

98.

99.

100.

(routine)

;

;

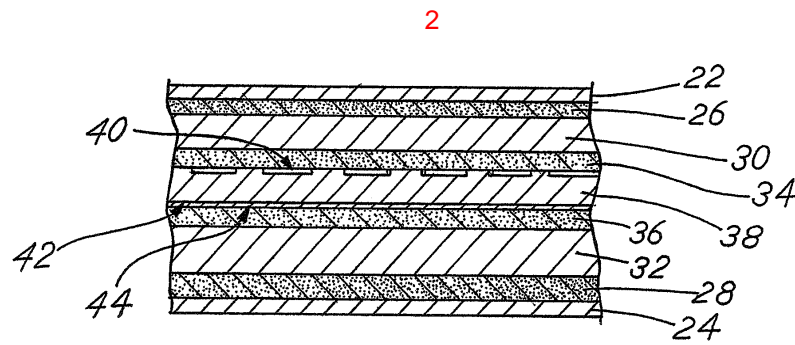
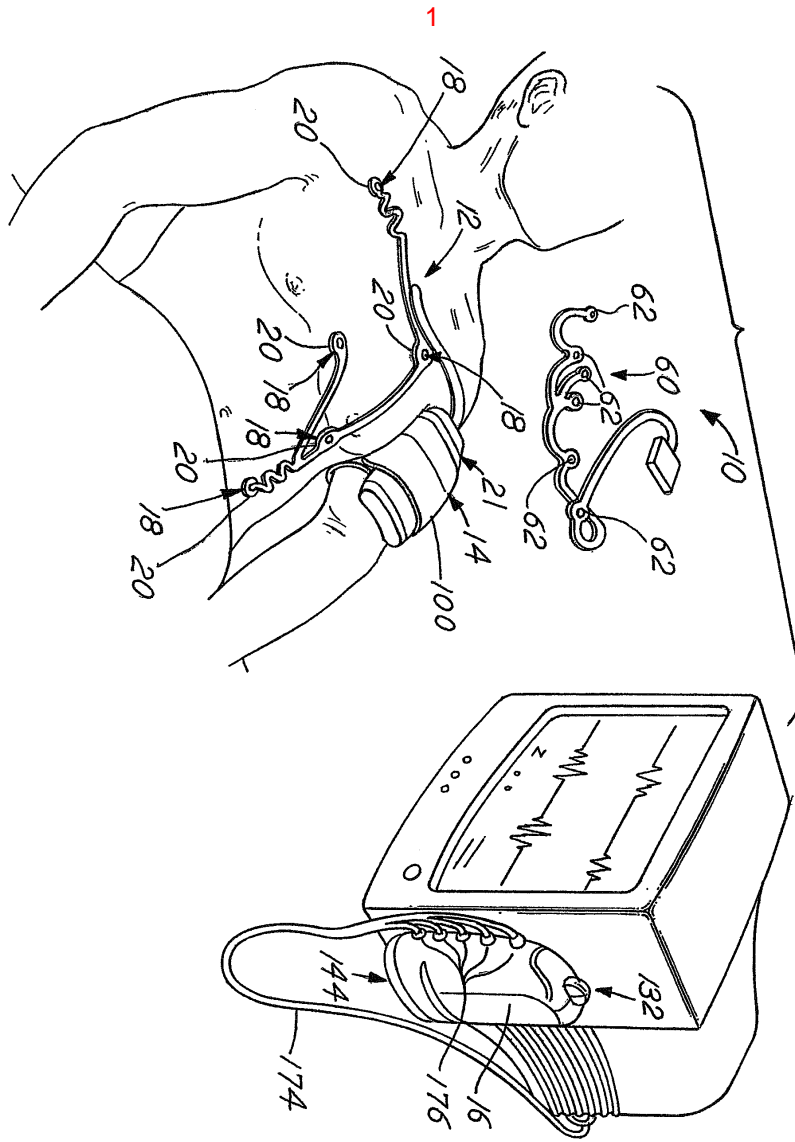
.

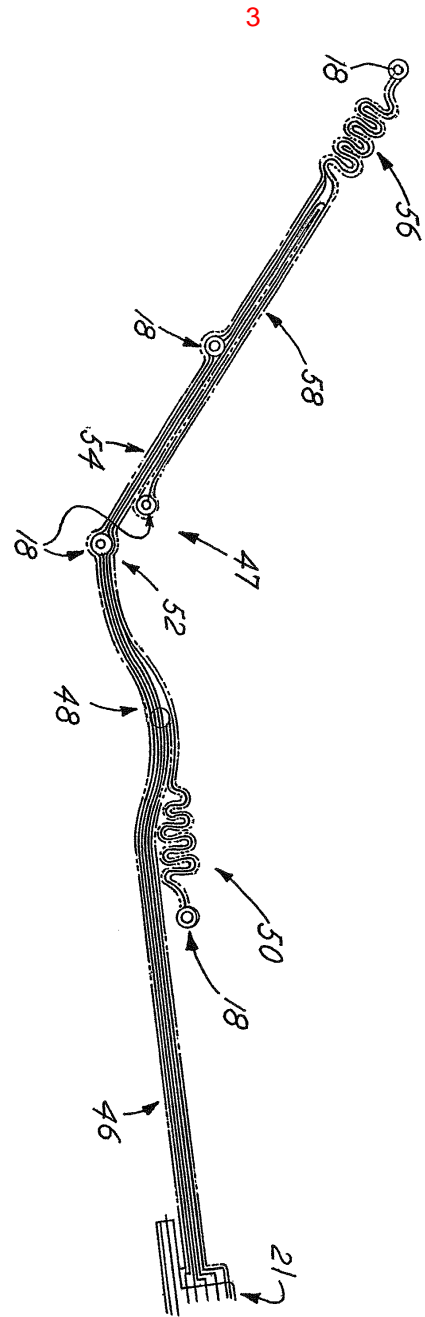
101.
100 ,

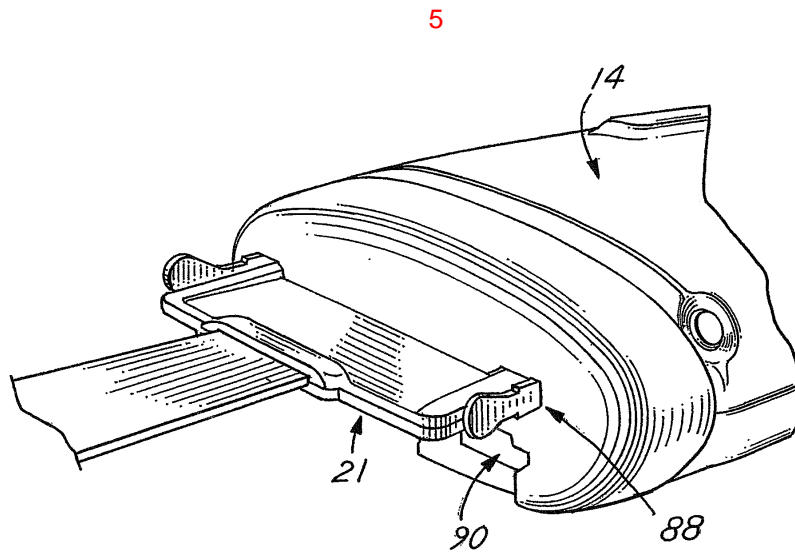
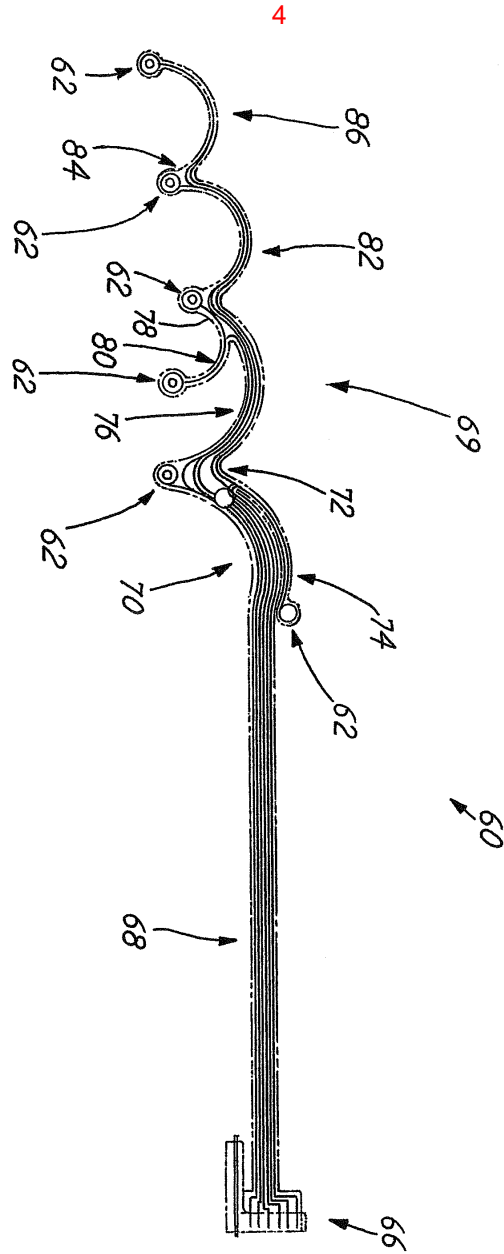
102.
100 ,

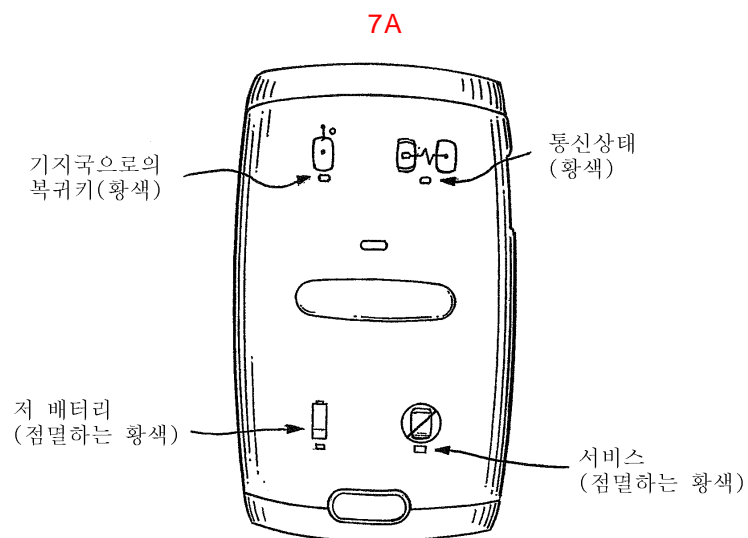
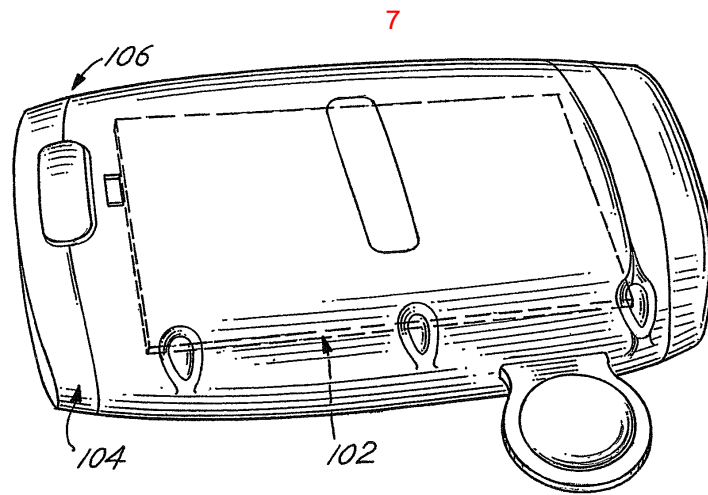
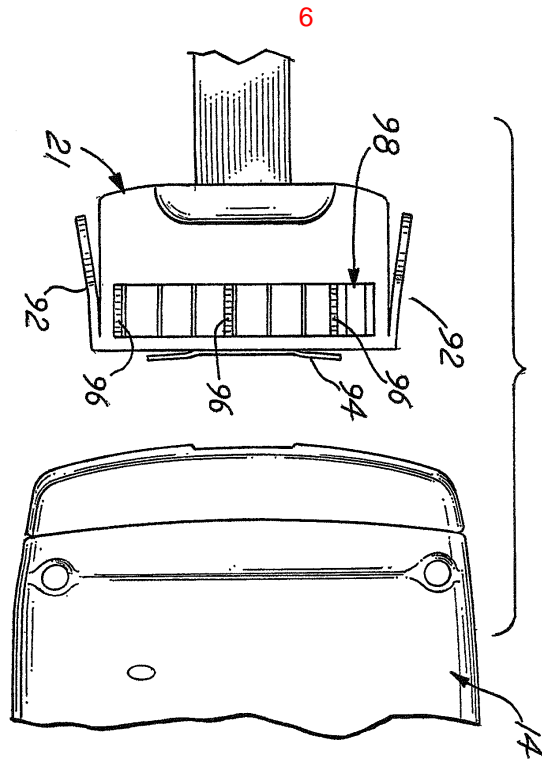
가 ,

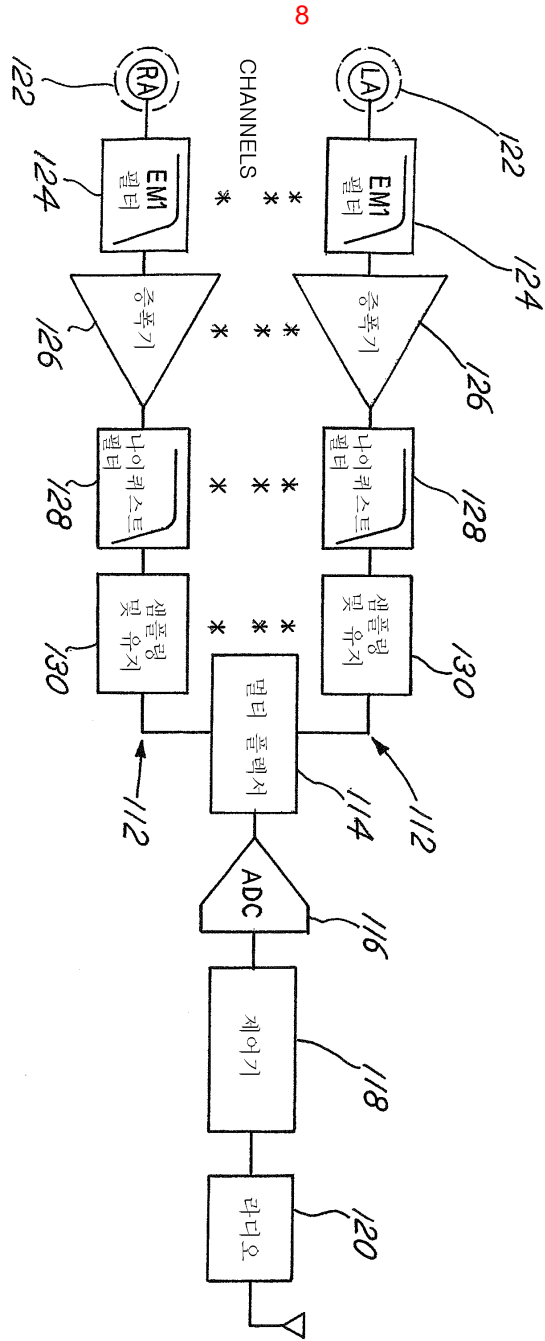
103.
100 ,



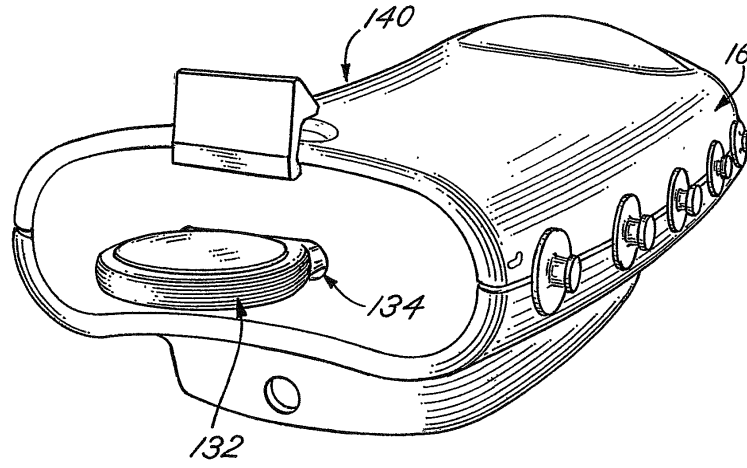




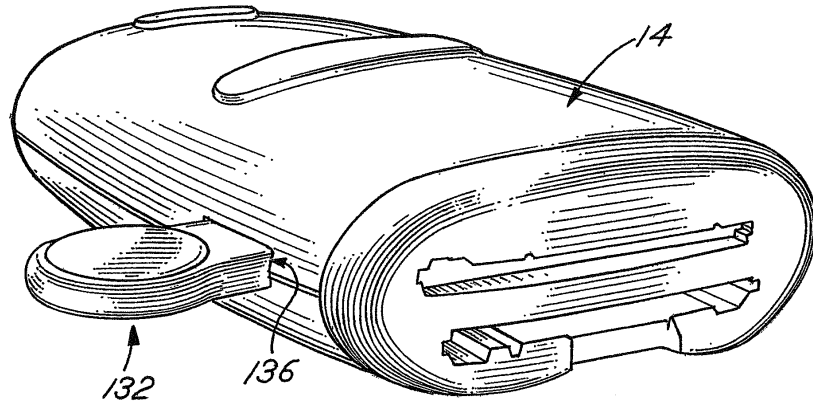




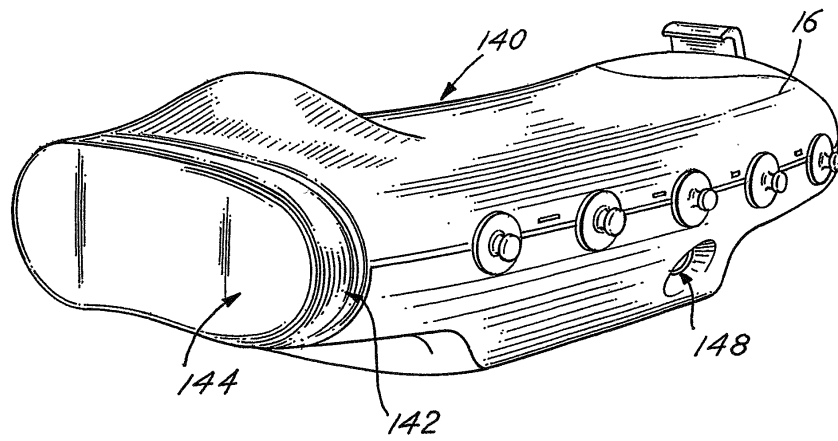
9A



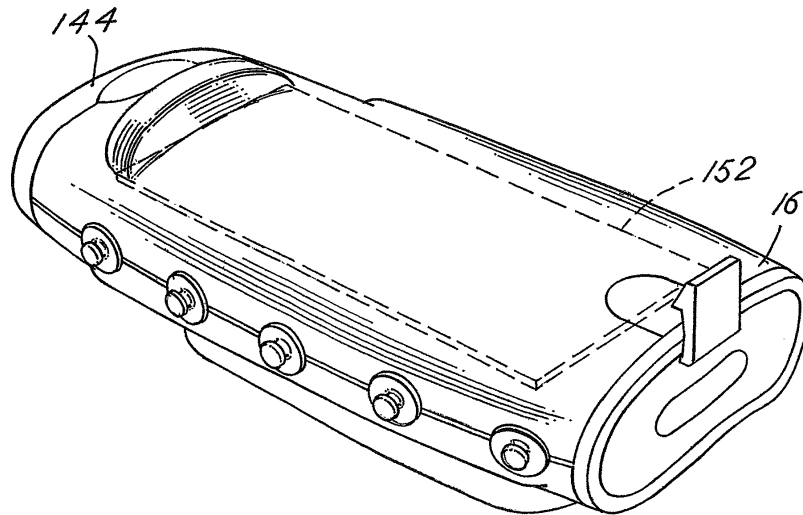
9B



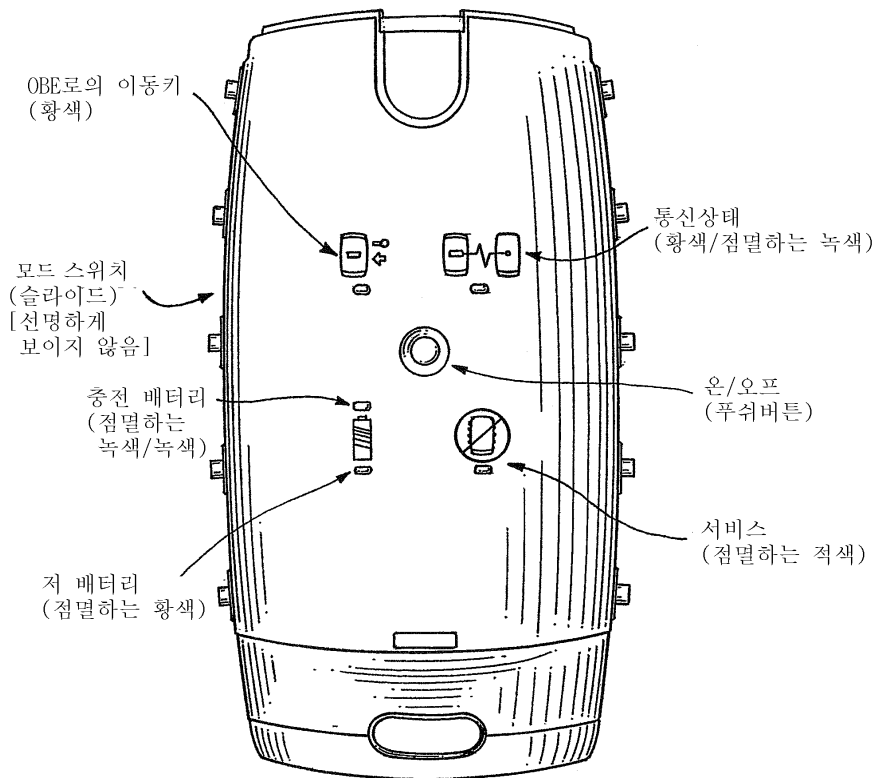
10

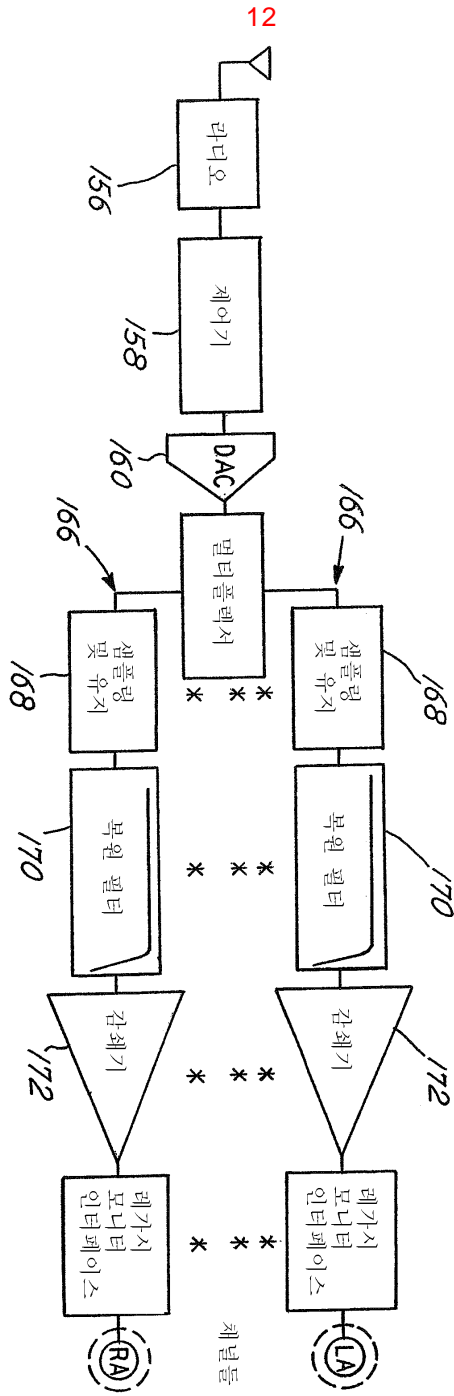


11

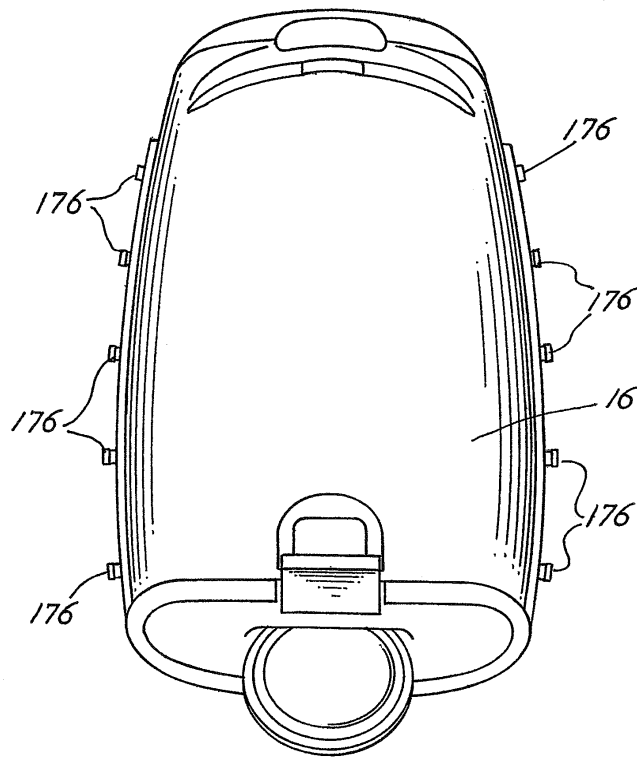


11A

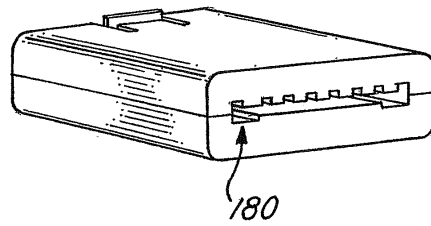




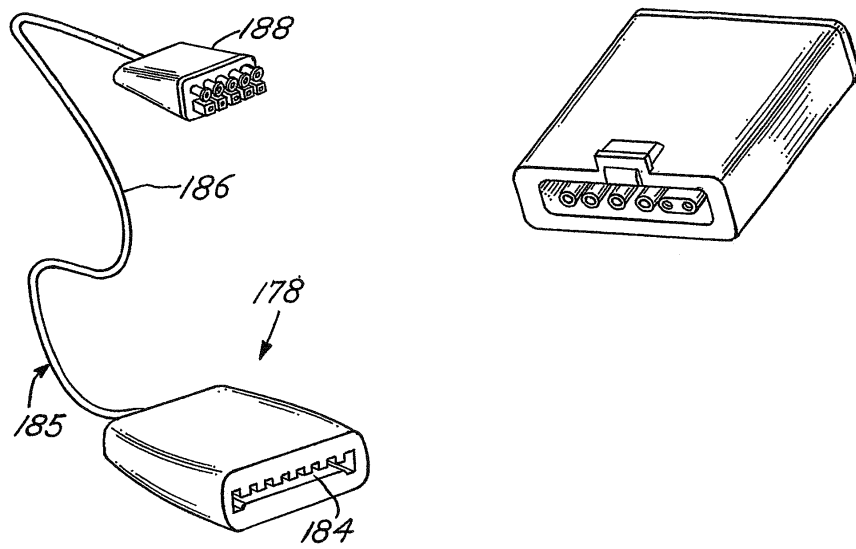
13



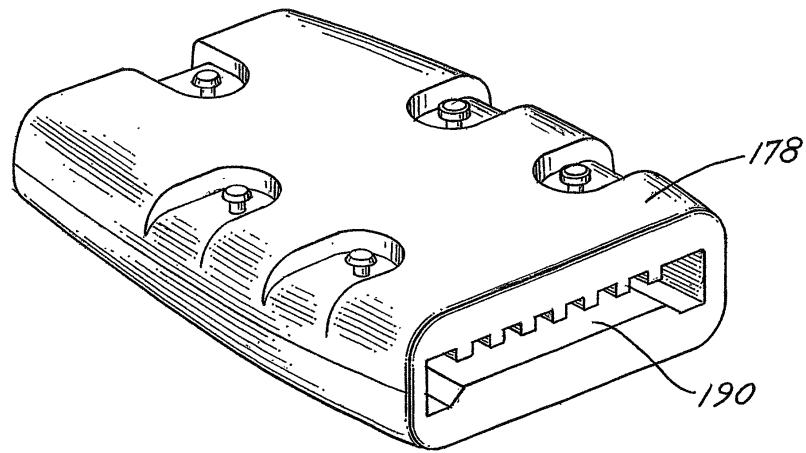
14



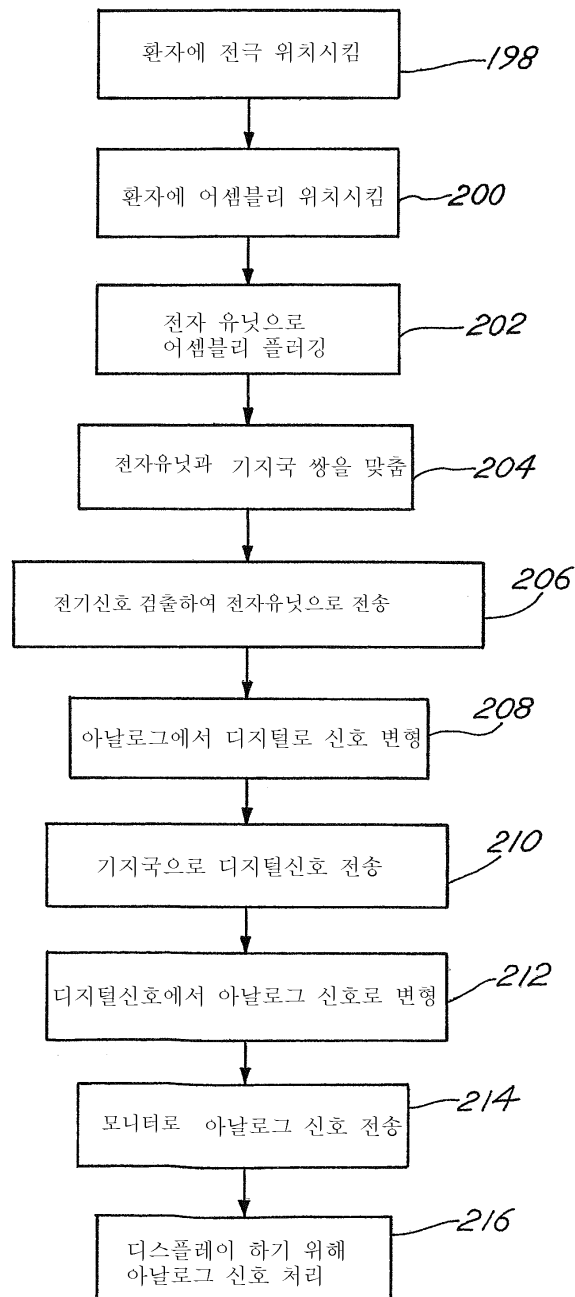
15



16



17



专利名称(译)	无线心电图系统		
公开(公告)号	KR1020040081427A	公开(公告)日	2004-09-21
申请号	KR1020047008228	申请日	2002-11-06
[标]申请(专利权)人(译)	LIFESYNC		
申请(专利权)人(译)	生活洗涤鼻子炮升级		
当前申请(专利权)人(译)	生活洗涤鼻子炮升级		
[标]发明人	ISTVAN RUD 이스트반루드 GREGORY BILL 그레고리빌 SOLOVAY KENNETH CHASTAIN DAVID PAUL GUNDLACH JOHN DAVID HOPMAN NICHOLAS C 호프만니콜라스씨 WILLIAMS DANIEL L LODATO FRANCO MICHAEL SALEM		
发明人	이스트반,루드 그레고리,빌 솔로바이,케네스 체스테인,데이비드,폴 군드라하,존,데이비드 호프만,니콜라스,씨. 윌리엄스,다니엘,엘. 로다토,프랑코 미카엘,살렘		
IPC分类号	A61B5/0402 A61B5/0408 A61B5/00		
CPC分类号	A61B5/0006 A61B5/04085		
优先权	09/998733 2001-11-30 US		
外部链接	Espacenet		

摘要(译)

它在心脏监测系统中公开，特别是无线心电图（EG）系统。本发明涉及通过远程测量信号远程中心检测来自患者心脏的电信号。它用数字方法传输。基站将数字信号改变为模拟电信号，ECG监视器也可以再次读取。

