

(19)
(12)

(KR)
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(43)

2001 - 0061992
2001 07 07

(21) 10 - 2000 - 0071584
(22) 2000 11 29

(30) 09/453,274 1999 12 02 (US)

(71) . , , .
, ,

(72) 가
53217 6100
53151 15651

(74)
:

(54)

가 가 ,

1

1

MRI

2 1 MRI

MRI (peak gradient slew rate), (, dB/dt) 가 , (, dB/dt) 가 EPI (,

5,311,135

5,736,858

가 , 가

1999 8 25 " Modular Gradient System For MRI System" 09/382,905 ,

가 ,

(spatial localization)

4,715,383

E) 가 (sagittal planes) (Fast Spin Echo;FS S/I (field of view) (phase encode oversampling) (alia (" sing) (wrap - around) , B0

, B1

가 ,

, FSE

가

가

((spoilers))가

가 ,

(brain perfusion imaging)

가

가

(121)
(133) . 가 , (134) (133)

(127, 128) (139) (assembly)
NMR (139) (127) (128)
(141) (139) (140) RF (152)

1) (122) (transceiver module)(150) RF (15 (15
(153) / (154) RF (152) (exited nuclei)
(154) NMR RF (150) (154)
(152) (154) NMR (121) (150) /
(154) RF (151)
가

RF (152) NMR (150) (122)
(160) 가 (160) (161)가
(107) (111) (100) (115)
(100) (112) (106) 가
(104)

(121) - (slice - select), (48)
" " 2
(126) (50) X, Y, Z "
, 1, 2 3 X, Y, Z

G_x, G_y, G_z 1 (54) 2 (56)
(52) 가 (54)
(52) (139) (52) (1-)
() (56)

950,994 , 4,978,919 , 5,025,217 , 5,451,877 , 5,455,512 , 5,770,943

(54)
 (58)가 (56)
 (60) (54)
 (127) 가 (56)
 (128)

B₀ (62) (52) B₀ (62) B₀
 () (64) (54, 56) B₀ B₀
 B₀ (64) B₀ (shim coil) ()
 (64)가 (150) RF
 B₀ 5,289,127 5,856,744

3 4 , MRI NMR
 ,가 , ,
 (200) , MRI
 (202) (FSE),
 (EPI), 가 가
 (56) (head coil)
 5,304,933 5,293,126

(204)
 가 가
 4,715,383 (200)
 rf
 (200) 4 (206, 208)
 (54) (204)
 (56) 가 (54)

(210) 3 (54, 56) 가
 (54) (204) (212)
 (56) (202)

가
 4,937,526 가 NMR NMR rf
 가 가

(54, 56)

가
가

(57)

1.

(magnetic imaging system)

(scan sequence)

1 (first set of gradient coils)

(magnetic field gradient)

sequence)

(a series of imaging pulse

2

magnetization)

(interleaved)

(spin

(scan sequence)

2.

1 ,

2

resaturation pulse sequence)

(a series of p

3.

1 ,

2

r signal pulse sequence)

(a navigato

4.

1 ,

(fast spin echo pulse sequence)

5.

1 ,

(echo planar imaging sequence)

6.

1 ,

(fast gradient recalled echo sequence)

7.

(imaging volume)

(polarizing magnetic field)

rf (rf excitation field) ,

1 ,

NMR ,

가

NMR

rf 1

8.

7 ,

1 1 ,

2

9.

7 ,

1

10.

7 ,

11.

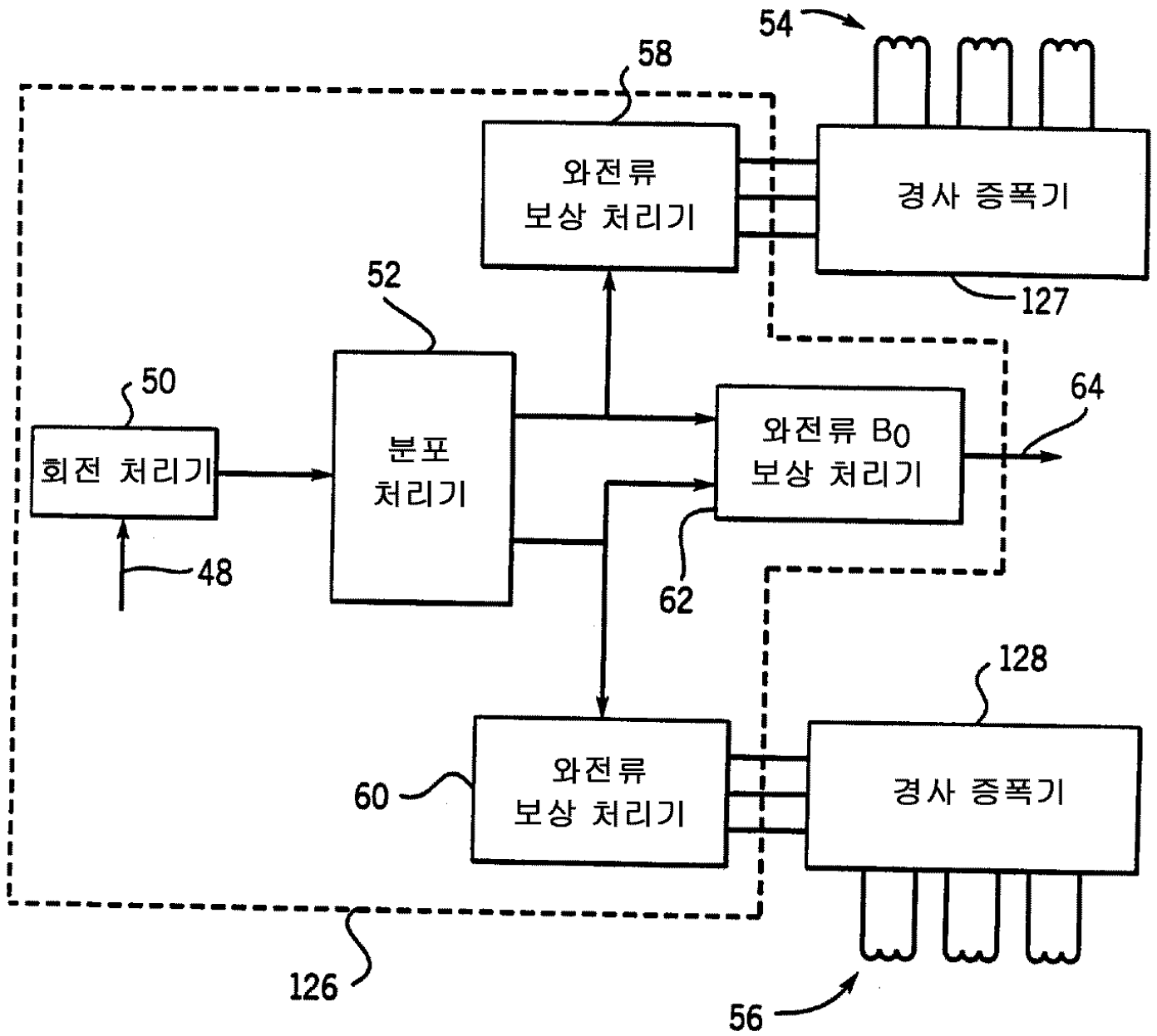
7 ,

MR

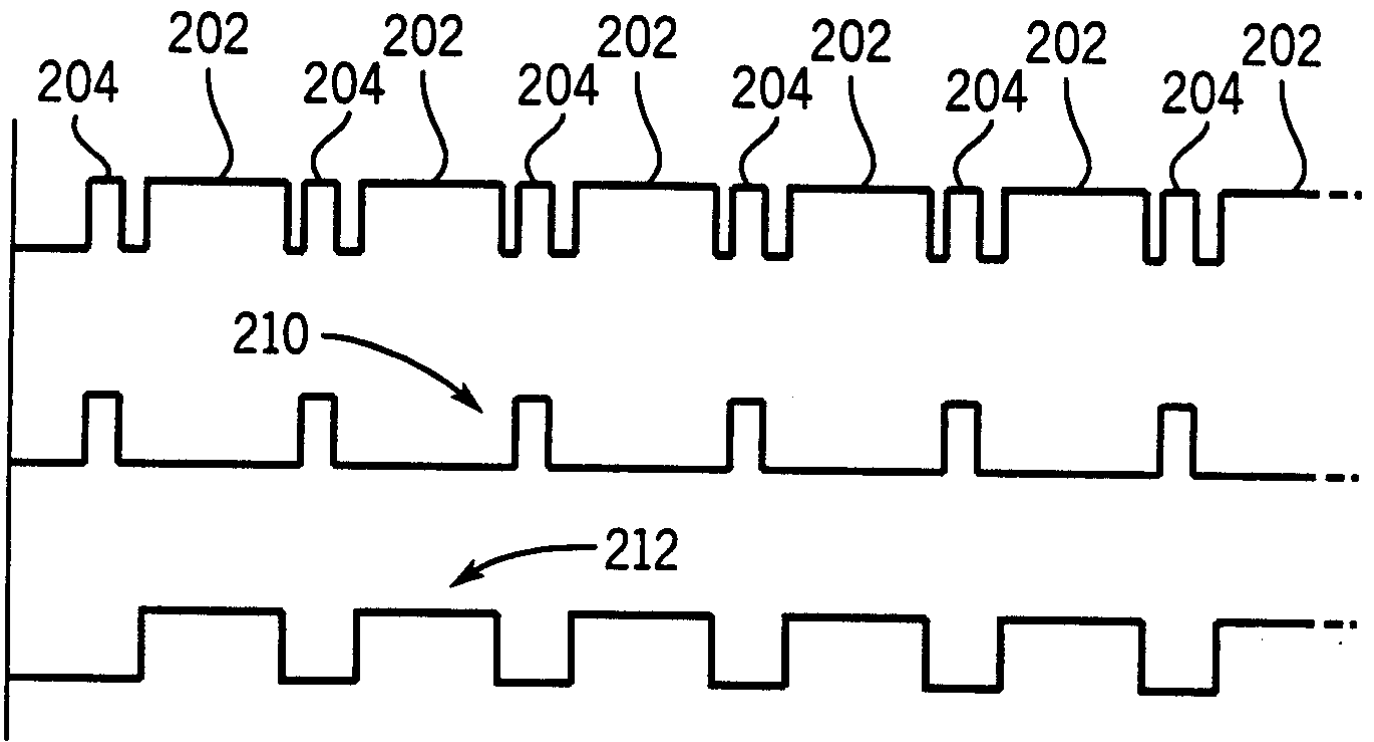
NMR

N

2



3



4

