

(19)  
(12)

(KR)  
(A)

(51) 。 Int. Cl. <sup>7</sup>  
H04B 3/54

(11)  
(43)

2002 - 0034452  
2002 05 09

(21) 10 - 2000 - 0064755  
(22) 2000 11 01

(71)

2 404 - 8

1 286 - 14

(72)

1 286 - 14

2 404 - 8 가 901

(74)

:

(54)

(5, 17),  
(4),

(29) (24) 가

(11) 가

(9),  
(15),

(28) (ID\_U .28)

3 (9),

, (28) (28)  
가 .

(28)  
(28)가 가 (ID  
GC\_2 .27) . (28)가  
(28)  
(IDGC\_12 .26) 가  
(28)  
IDGC\_12(26)  
(9) 가  
(28)  
가 .

(28) (IDGC\_12, 26)  
가 가 가 가 N:N  
(26, 27) (25) 가  
가 (28)가  
가 .

5

, , , , ,

- 1 (ID\_U)
- 2 2 (IDGC\_2)
- 3 12 (IDGC\_12)
- 4
- 5

6 가  
 7  
 8 (ID\_U)  
 9 2 (IDGC\_2)  
 10 12 (IDGC\_12)  
 11 (Server)

1: AC 2: 3: DC 5V  
 4: 5: 6: 2  
 7: 8: OPTO 9: /  
 10: 11:  
 12: 13: DC12V 14:  
 15: 16: OPTO 17:  
 18: RAM 19: F - RAM 20:  
 21: 470K Ohm 22: 0.1 micro F 23: 2.5 microH  
 24: 25: 26: IDGC\_12  
 27: IDGC\_2 28: ID\_U 29:

가 (28) 1:N 가 가  
 (9)

(Chirp)  
 Bandlimited Orthogonal Signal  
 requency Shift Keying), 가 1 , 0 0 FSK(F  
 ft Keying) ASK(Amplitude Shi

SSC(Spread Spectrum Carrier),  
 FFT(Fast Fourier Transform)  
 OFDM,

가 가 .

가 가 가 가 가 .

ASK(Amplitude Shift Keying)

가 가

가

[1]

(28)  
 (28, ID\_U)  
 (9), (14)  
 (15),  
 (17), (4), 2  
 (6), (7),  
 (9), (10), 3  
 (11), (24), 가  
 가 가 가  
 (29), 60Hz, 가 가  
 9600 bps, 300KHz - 400KHz

[2]

[1]

(15) (17)  
 (28) [1] (4)  
 OP AMP 가 1 OP AMP 가 0 (7) OP AMP

[3]

[1]

(28, ID\_U)  
 (10)

[4] [1] (28) 1 (15)

[5] [1] (28) 2 (27, IDGC\_2), 12 12 (26, IDGC\_12)

[6] [1] (28) 가 가 가 가 가 가 (26, 27) (28) 가

2 2 (27, IDGC\_2 ) 2 2 (9) (12) ON, OFF (14) (1)

5) IDGC\_2(27) OPTO (16) (12) IDGC\_2 (17) IDGC\_2 (10) 0 1 IDGC\_2 가 IDGC\_2 9 가 1 0 (15) 1 IDGC\_2 OPTO (16) (17) AC (1)

5 IDGC\_2(27), IDGC\_12(26)가 IDGC\_2(27), IDGC\_12(26)가 (25) IDGC\_2(27)가 IDGC\_2 가 (25) 3 12 (26) 가 (4) 3 IDGC\_2(27) (6) (7) 2 (5) OPTO (8) 80 (9) IDGC\_2 IDGC\_2(27), IDGC\_12(26) IDGC\_2(27), IDGC\_12(26) (14) 2 (15) OPTO (16), (1) 7) AC (25) ID\_U, IDGC\_2, IDGC\_12 ID\_U(28), IDGC\_2(27), IDGC\_12(26) ID\_U(28)가 ID\_U(28)가 (4) AC (4) (5), 2 (6) 가 (7) OPTO (8)

/ (9)

1 (11) ON .

6 2

2

가 00 ID\_U , 11 IDGC가

가 IDGC

10 IDGC가

가 1 IDGC

가

6 0 1

0 1 5 5 10 0

1024 OFF 1 ON 가 00 ID\_U 01

IDGC ID\_U가 1024 , IDGC가 1024 2048

가 IDGC 1 가 1 가 0

IDGC가 1 IDGC가 IDGC\_2, IDGC\_12

0 IDGC가 0 IDGC 가 1

ID\_U 가 0 가

(18) FRAM(19) 가

3 가 7 8 8 가 7

(24) 60Hz (29)

9 가 (ID\_U, 28) 1 ON 0 가 OFF

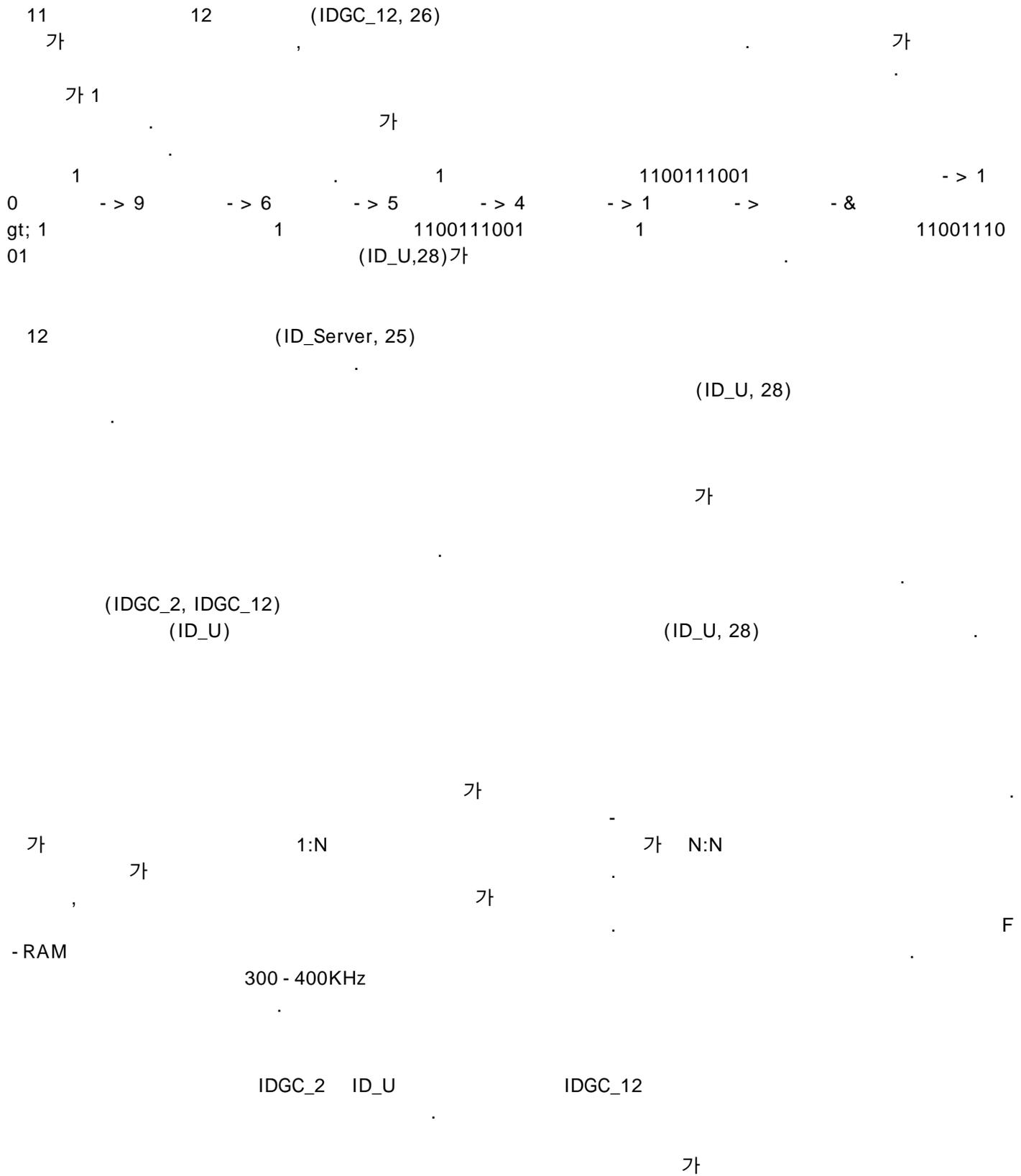
가 가

10 2 (IDGC\_2, 27) 가 가 1

IDGC\_2(27) 가 IDGC\_2(27) 가

가 GC

가



(57)

1.

P AMP

OP AMP

TTL Gate

5V

OP AMP

가

OP AMP

OP Amp  
TTL Gate

O

1

,

가

0

2.

3.

1:N

CSMA/CD

4.

5.

가

IDGC\_12

1

가

6.

,

가 1

7.

가 1

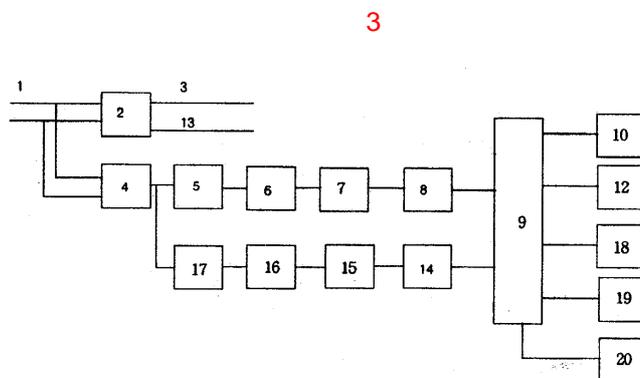
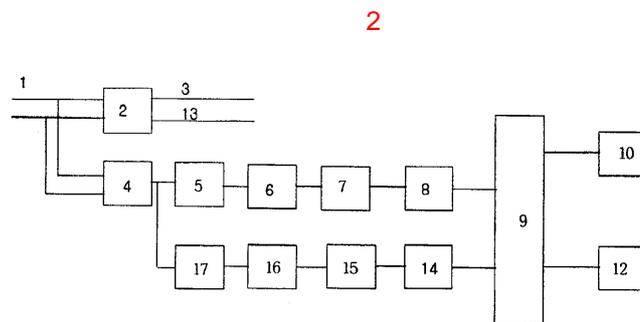
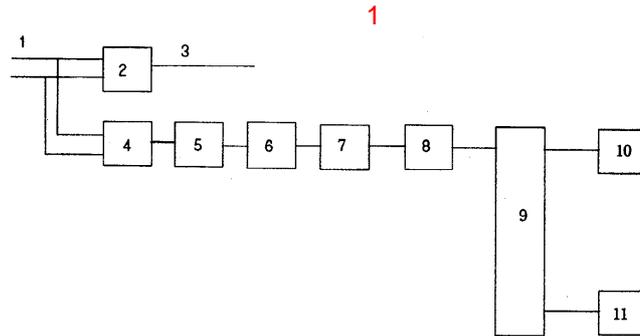
8.

3  
가

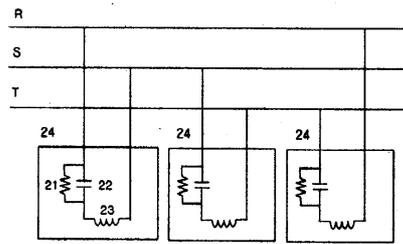
9.

가

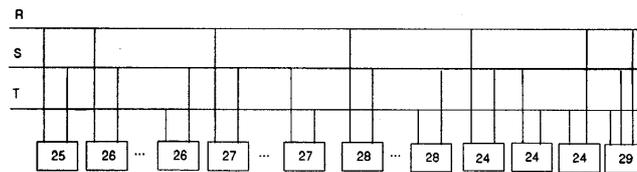
가



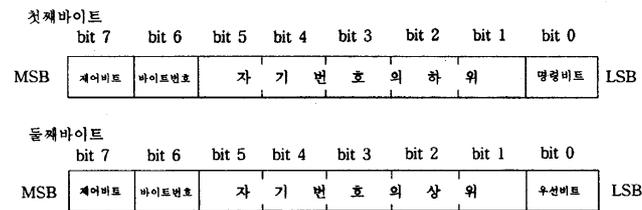
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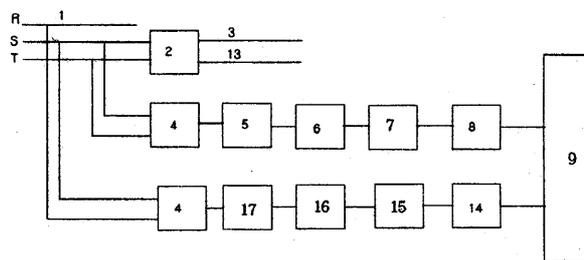
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6

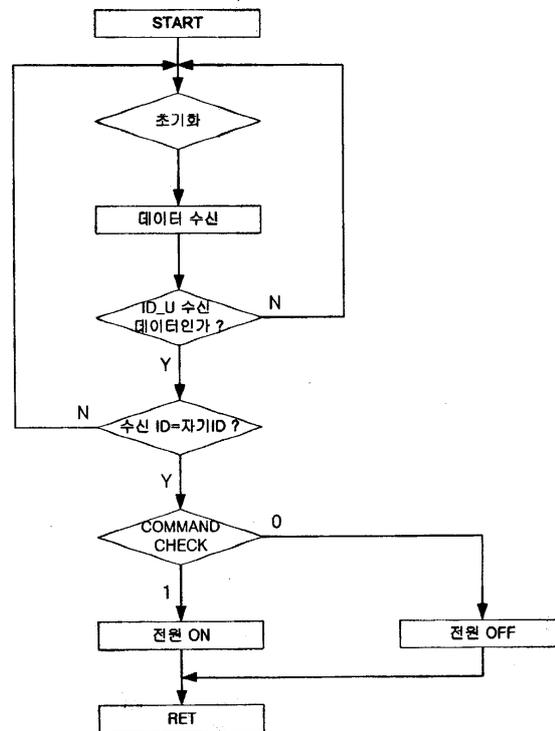


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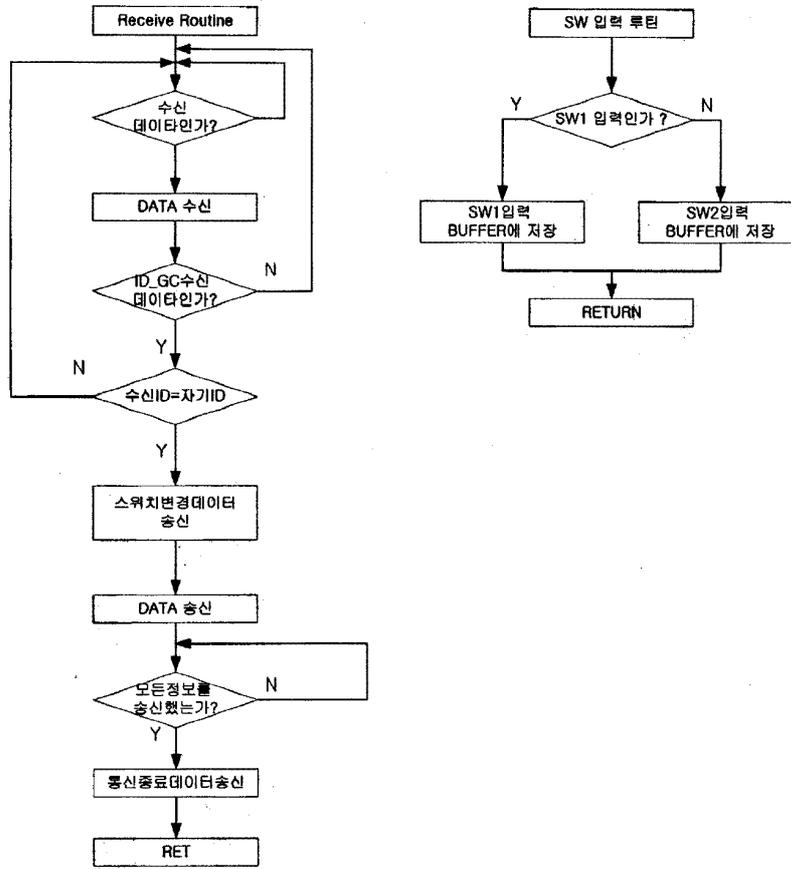


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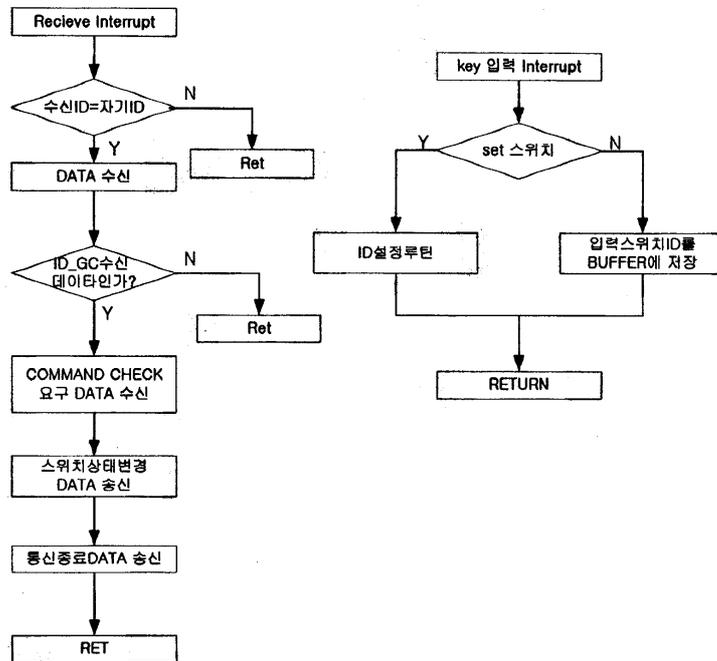
## ID\_U MAIN PROGRAM



ID\_GC\_2 MAIN PROGRAM



ID\_GC\_12 S/W Flow Chart



MAIN PROGRAM

