

가 1 2
FCCH SCH , GSM

1

1		1	CDMA	.
2	1			.
3	1			.
4	1			.
5	1			.
6	1			.
7	1			.
8		2	CDMA	.
9	2			.
10	2			.
11	2			.
12	3			.
13	3			.
14	3			.
15		4	CDMA	.
16	4		/	.
17	4			.
18	4			.
19	4			.
20		5	CDMA	.
21	5			.
22	5			.
23	5			.
24	6			.
25	6			.
26	6			.
27		7	CDMA	.
28	7			.
29	7			.
30	8			.
31	8			.
32		9	CDMA	.
33	9			.
34		9		.
35	9			.

36			
37		(BCH)	
38	2		16
39	2	i	
40			
41			10
42			
43	W - CDMA/W - CDMA		
44	2		
45	2		
46	2		
47	2		
48	GSM		
49	W - CDMA/GSM		

CDMA

(CDMA)

가

3가

(umbrella)

가

W(Wide band)-CDMA

2

가

(25)가 2

(Network Assisted Handover: NAHO)

2

가

MAHO

NAHO

NAHO

MAHO

가

CDMA

2

(TDMA)

가

(Compressed Mode)

(Seamless Handvers)

8-50

0475

DS-CDMA

가

36

36

CDMA

가

가

()

36

, Gustafsson, M. et al: 'Compressed Mode Techniques for Inter-Frequency Measurements in a Wide-band DS-CDMA System', Proc. of 8th IEEE PIMRC' 97.

가, 16 QAM

(¹) 가
(fading) TPC 가, TPC(가)

2 가 가

가

가

가

가

/

/

가
가

가

가

가

가

/

/

/

가
가

가

가 .

/

N(N)

N

가 .

N

, N

가 , ,

가 .

가

가 .

가

가

가

/

/

가

/

가

가 .

가 . ,

가

가 .

/

가 .

/

/

가 .

가 가 . /

가 가 .

N(N) /

N

가 . 1

1 가

가 . /

N(N) /

N

가 . 1

가 .

N(N) /

N

가 .

가

가

가 1

, 1

가 1

, 1

가

/

가

2

1

1

/

1

2

1

2

W-CDMA/W-CDMA

, 1

1/2

1

1

2

1

2

, 1

1/2

1

1

2

1

2

W-CDMA/W-CDMA

가

가

2

가

가

가

/

1

2

1

2

/

1

2

1

2

, 1

1/2

1

1

2

1

2

, 1

1/2

1

2

1

1

2

1 , 1 2

가 .

1 , 1 1 2 2

2 1

1

가 .

1 1

1 2 2 3 1

가 1

2 2 3 3 1

2 4

가 1

1

가 .

1/2 1 1 1 2 2 1 2

, 1 1/2 , 1 1 2 , ,
 , 1 2 W-CDMA/W-CDMA , 가
 , , 가 , 2
 가 , , 가 , ,
 가 , , 가 , ,
 , , , 1 1/2
 , 1 1 , ,
 2 1 2 , 1 2 , ,
 , 1 1/2 , 1 , 1 1
 2 , , 2 , ,
 , CDMA , 1 1 CDMA
 , CDMA , (1A) (2A) , ,
 , CDMA (1A) 1 (11A), (12), (13), / (14
 A), (13), (15) / (14A) (11A) (15) (negotiations) (11A) (2
 A) (11A) (/ (14A) , (15)
 (12) 가 (13)
 가 (interleave) (11A)
 (13) 2 '1' 1 , '2'가
 / (14A) , (14A) (11A)
 , / (14A) , (11A) (15) / (14A)
 (15) (15) (11A)
 가 (2A) 1 (21A), (22), (23), /
 (24A), (24A) (25) (21A) , (21A) , (1A) (23)
 / (21A) , / (24A)
 , (25) / (24A)
 , (2A) / (24A) (21A)
 (24A) , (21A) , /

(23) (1A) , (23) , (13) 가 2
 () , (21A) , '1'
 1 , (22) , 2
 , (13) (23) . 2 1
 , 2a , 2b
 . 2 , (13) (131A)가 , (23) , (13)
 , 2 , 1 , 2 , (13), (23)
) , (2a) , (131A) , 1 () , 1
 , 가 , (2b) , (131A) , 2 () 가
 , 2 , (23) ,
 , 3 1
 3 , F . 3 . CDMA / ,
 , 가 , 3 ,
 , 가
 , (1A) (2A) ,
 (13), (23) , 2
 , 1
 , (1A) . 4
 5 . 4 5 (11A)
 , (4) , '1' (13) (S101), (13) 1
) 가 , (S103). , (S102), / (14A)
 , (5) , '2'가 (13) (S111),
 (13) 2 가 1 (S112), (S11
 3). (S112), / (14A) , (S114),
 (15) , ()
 , (2A) . 6
 7 . 6 7 (21A)
 , (S121), / (24A) (6) , 1
 '1' (23) (S123), (23) 1 가
 , (7) , 1 (S131),
 / (24A) (23) (S132). ,
 '2'가 (23) (S133), (23) 2
 가 , ()
 , 1 ,
 , 가
 , 가
 , 가
 , 1 ,
 , 2 ,
 , 2 1 ,

. 8 2 CDMA
 (131B) 2 CDMA 가 1 (13) 1 (13)가 (23)가
 , 1 , , ,
 , 9 , / , 2 . CDMA
 , , 가 , 가 ,
 가 ,
 , , ,
 , 1 가 , 1 ,
 , , 10
 0), 1 , 11 가 (13) (S201), (13) 1 (1
 , 가 1 (S202), / (14A)
 (S203). (15) 가가
 (S204), () ,
 (S211), / (11), 1 (S212). , 1
 1 , 1 (24A) 가 (23) (S213), (23)
 , 가 2 , , 가
 , 가
 , 2 , 2 , 1 가 , ,
 가 ,
 , 가 1 ,
 , 3 , , 2 3 2 ,
 , , 12 3 ,
 A , 12 , / , . CDM
 , 가 , 가 ,
 가 , ()
 , , 1 가 , 1 ,
 , 가 N(N) , , N=2 2 , N=4
 , N=1, 2, 4 ,
 4 ,
 , 13
 3), 1 , 14 가 (13) (S301), (13) 1 (1
 가

가 N (S302), / (14A)
 (S303). (15) 가가
 (S304),
 ()
 (14), N (S311), /
 (24A) (S312). , 1
 가 (23) (S313), (23) 1 , 1 가
 ()
 3 , N
 , N / 가
 , N
 , 가 , ,
 , 3 , 2
 , 1 가 ,
 가
 , 1 3 ,
 , 4 ,
 , CDMA 15 4 CDMA
 . CDMA (1B) (2B) , ,
 , CDMA
 (1B) 15 (11B), (12), (13), / (1
 14B), (15) (11B) (2B) (11B) / (14B)
 3), / (14B) (15) (11B)
)
 , (12), (13) (15) , 1 ,
 , (13) , 1
 / (14B) ,
 , / (14B) (11B)
 (15) , / (1
 4B) , (11B) , 2
 , / (14B) 2 , 1
 , (13) / (14B) 1 가 , 2
 2
 (2B) 15 (21B), (22), (23), /
 (24B), (25) (21B) (1B)
 (23) / (24B) (21B) , / (24B)
 , (22), (23) (25) , 1 ,
 , (23) , 1
 / (24B) / (14B) 가 1
 / (24B) (21B)
 (25) , / (24B)
 , (21B) (23)
 , / (14B) / (24B) 16
 4 , / (14B)
 , 16a / (14B)
 16b , 16 / (14B)
 (141A)가 , / (24B) , / (14B)

$\frac{4}{1}$, $\frac{2}{2}$ 가 / (14B) $\frac{2}{2}$ (24B)
 (13), (23) 1 2
 (16a), (141A) (13)
 (16b), (14
 B) $\frac{2}{2}$ (141A)가 / (24B) (13) 가 / (14
 가 가
 17 4
 17, F . CDMA
 가
 (1B)
 17 (#1, #2)
 (#3 #4)
 (1B) 18 18
 (11B) 가 (13) (S401), (13) 1
 가 (S403). (S402), (14B) / 2
 ()
 (2B) 19
 19 (21B)
 (S411), / (2
 (S412).
 4B) 1 가 (23) (S413), (23)
 가 4
 가
 /
 가
 가
 4 1 가
 가
 가
 1 4
 5
 , CDMA 20 5 CDMA
 , CDMA (1C) (2C)
 , CDMA
 (1C) 20 (11C), (12), (13), / (1
 (14C), (15) (11C) (2C) (14C)
 3), / (14C) (15) (11C) / (14C)

(11C) 1 4 (15)
 , (12), (13) (15) , 1 ,
 , (13) , 1
 / (14C) , , / (14C) (11C)
 , (15) , /
 (14C) , (11C) ,
 (2C) , 20 , (21C), (22), (23), /
 (24C), (25) (21C) (1C) / (24C)
 (23) / (24C) (21C) ,
 , (22), (23) (25) , 1 ,
 , (23) , 1
 / (24C) (21C)
 (25) , / (24C) ,
 (21C) ,
 , (23) ,
 , 21 5
 . CDM
 A , , 가 , 가 ,
 , 가 ,
 , 21 , , 가 ,
 , , ,
 (1C) , 22 , 22
 (11C) , (13) (S501), (13) 1
 , 1 가 ,
 , (S502), / (14C)
 , (S503). ()
 , (2C) 23
 23 (21C) (S511), / (24C)
 , 1 (S512). (23) (S513), (23) 1
 , 가 , 5 ,
 , ,
 가 , 5 , 2 ,
 , ,
 , 가 ,
 , 5 , 3 , N
 , , 가 ,
 , 5 , 1 ,
 , 6 ,
 , 5 , 1 가 ,
 , , 24 6
 , 5 , 24 , / ,
 5 , 24 , 1/2

2
 6
 25 (11C) 가 (13) (S601), (13) 2
 가
 (S602), / (14C)
 (S603). ()
 6
 26 (21C) 26
 (S611), / (24C)
 (S612). (23) (S613), (23) 2
 가 ()
 6 5 가
 가
 6 2
 가
 6 3 N
 가
 1 6 7 가
 CDMA 27 7 CDMA
 CDMA (1D) (2D)
 CDMA
 (1D) 27 (11D), (12), (13), /
 (14D), (15) (11D) (2D)
 (13), / (14D) (15) (11D) / (2
 14D) (11D) (15)
 D) TPC
 (12), (13) (15) 1
 (13) , 1
 (15) (11D)
 / (14D)
 (11D)
 (15)
 (2D) 27 (21D), (22), (23), /
 (24D), (25) (21D) (1D) / (24D)
 (23) / (24D)
 (22), (23) (25) 1
 (23) , 1
 (25) ()
 (21D) / (24D) (21D)
 (25) / (24D) (23)
 (21C) / (24D) TPC (21D)
 , TPC
 28 7 (11D), (2D)
 (21D) TPC , 1 1(

) 0() 2 . , , 1() +1.0dB()가
 , 0() 11.0dB가 . ,
 1dB가 . , 1() +3.0dB() , 0()
 , 13.0dB가 . , 3 dB가 . ,
 가)
 , , 7 , 가 ,
 . 29 7 ,
 (1D) (2D) , 가 (1D)
 (1D) TPC (2D) TPC 가 (2D) S701), (1D)
 (S702). , (15) (S703)
 +3dB , TPC 가 1 , 가 , 28
 가 , TPC 가 0 , 3dB 가
 13dB 가 , (15) , 28
 가 7 , 1 가
 가 , , ,
 , 7 , 3 , N
 , 7 , TPC 가 2 가 , 가
 , 8 , 7 ,
 , TPC , 27 30 8
 (21D) 30 (1D) (11D) (2D)
 8 , TPC , 2 4 (1
 1B; B 2), 10B, 01B, 00B) TPC 11B
 10B 2 , TPC 01B 00B 2 TPC
 , 11B, 00B 7 TPC , 11B +1dB , 00B
 가 11dB . TPC , 11B , TPC 가 11B
 가 3 +3dB , TPC 가 00B 가
 3 13dB , TPC 가 10B +1dB , 01B
 4 -1dB , TPC 가 11B +1.0dB() , 00B
 , , 10B O1 B 1dB가 .
 , , TPC 가 11B +3.0dB() , 00B
 3dB가 . , TPC 가 11B 00B
 , TPC 가 10B +1.0dB() , 01B
 1dB가 . , TPC 가 10B O1B
 가 ,
 ()
 , 8 , 가 ,
 . 31 8 ,
 (1D) (2D) , 가 (1D)
 (1D) TPC (2D) TPC 가 (2D) S801), TPC 가 (S802).
 TPC 가 (S802).

03). , 30 S802 (S804). (S804).
, TPC 가 11B , 가 , 30
+3dB 가 가 (15) , 3dB 가
가 , TPC 가 00B , ,
30 13dB 가 (15) , 3dB
, TPC 가 10B , , 30 +1dB
가 가 , TPC 가 01B (15) , 1dB 가
-1dB 가 (15) , 1dB
가 , 8 , ,
, ,
가 7 TPC 가 가 7 , ,
TPC ,
, , 3 , , N
, 1 8 , , 9 ,
, 9 CDMA , ,
32 32 9 (100), 가 (110), (120), (100)
, (200)
, CDMA
(100) 가 (#1 #M) , (#1) (13), (13)
(#1 #M; M) (#1) , 32 (11E), (12), (13)
), / (14E), (16) (200) (13), / (14E)
(11E) , (16) (11E) , / (14E) ,
, (12), (13) 1 , (13)
, 1 / (14E) , , / (14E) , (11E)
(14E) , , (16) , /
(14E) , (11E)
(16) / (14E) , (11E)
, (#1 #M) , (#1 #M)
, (16) (#1 #M) , 가
가 (110) , (100) (#1 #M) (120) , 가 (110)
(120) , 1
(200) , 32 (201), (202),
(203), (204) , (201) (100)
(202) ,
(201) ,
1 가

(203) , (204) , , , , 33 9 , 33 / , , CDMA () , 가 , 가 , 가 , 가 , 33 , 32 (M1, M2) , 가 , 1 , 1 , M1, M2 , () , (M1, M2) (A, B)가 , (M1, M2) (C)가 (M1, M2) (C) (T2, T1) , (#1 #M) (14E) , 34 9 (11E) , 1 가 (13) , (S901), (13) 1 (200) (S902). (200)가 (S903). (14A) (S904), () , (200) , 35 9 (200) 35 (201) (#1 #M) 가 , (S911). , (S912)), (S912) , (S913). (S911) 가 , , 1 (S914). , 1 , 가 (S915). , 1 (S911) , 9 (200) (100) 가 1 (100) , 1 , 가 , 9 , 2 , , 가 , 9 , 3 , , 가 N , 1 9 , 가

가 1 1/2 2

41 10

41 (2E), (21E), (22), (23), / (24E),
(25), (51), (52), (53)

(21E) (23), / (24E)
(53) (21E) (21E) (53), /
(2E), / (51) (53) / (51)가
(25) / (24E)
E) (2E) (24E) (21E)
(25)
/ (24E) (21E) (23) (22)
()

/ (51) 1 2
(52) 1 2
(2E) 42 (: f1)
(: f2)
(2E) 43 W-CDMA/W-CDMA

(52) (21E)가

(S941).
1
가 (S942). 1
(S943), (S944), 1
(53)가 (21E)
/ (51)
1 2 16 2 가 (S943, YES), 가
44 2 16 2 (21E)가 1 (S945). 2 1 1 2
, 16 2
2 2 45 1
2 2 44 8 2
가 (, 2)
, 46, 47 2
가 1 1/2
2
가
(45 47)
() 가 S945
(S924, NO),
(S925), (S928, YES),
26), 2 가 (S924, YES, S928, YES),
가 가
3 가 (S932, YES), 가 (S933), 가 (S934, YES)

S), 2, (S934, NO), S931 가 ,

GSM(Global System for Mobile communications)

, k가 41 (2E)

, / (51), 1 2, FCCH SCH

48, GSM 48a GSM

FCCH(Frequency Correction CH), SCH(Synchronisation CH),

, 48b, GSM TCH(Traffic CH) 49, W-CDMA/GSM

, W-CDMA, 1, GSM 가 가

, 가 (S951, S952).

, 2, FCCH

, GSM (S953)., GSM, 51 1

, 5, FCCH가, W-CDMA, 5, W-CDMA

(S954, S955)., FCCH 48a FCCH/SCH, W-CDMA

가, FCCH W-CDMA/WLCDMA 가,

, GSM, 3, FCCH SCH

, (S956, S957, S958)., FCCH, SCH

, () 가, FCCH, SCH

가, SCH, FCCH SCH

, FCCH SCH, W-CDMA

, GSM 가

, (W-CDMA/W-CDMA, W-CDMA/GSM)

, 1 10,

, /

, 가 / 가 가

, (CDMA) 가

(W-CDMA/W-CDMA

MA, W-CDMA/GSM)

(57)

1.

(communication partner apparatus)

2.

1

$N(N)$

3.

가

4.

$N(N)$

5.

1

1

2

3

6.

1

가

1

2

3

7.

(transmission gap)

가

(power control step sizes)

가

가

8.

가

가

9.

1

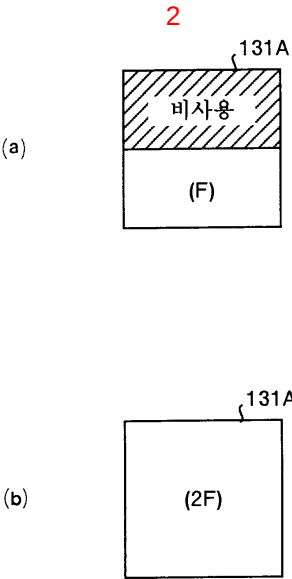
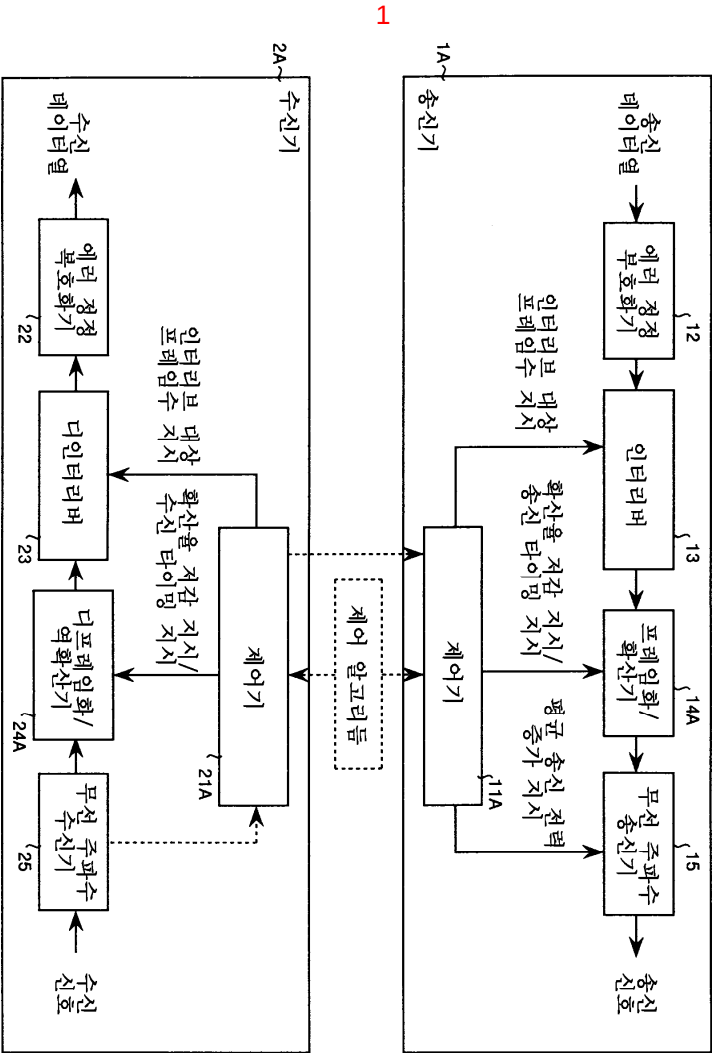
2

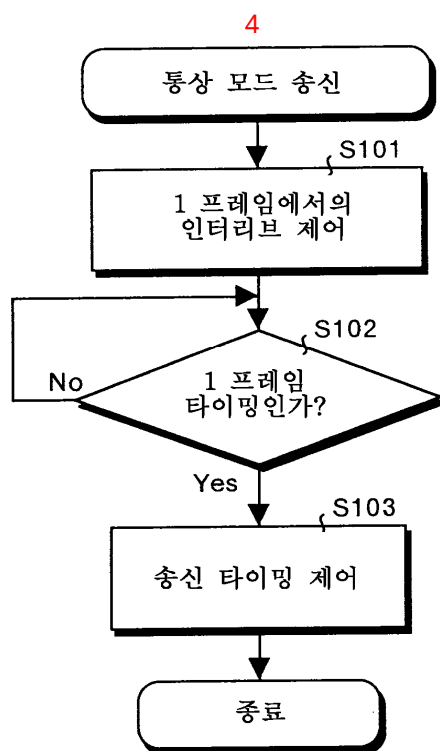
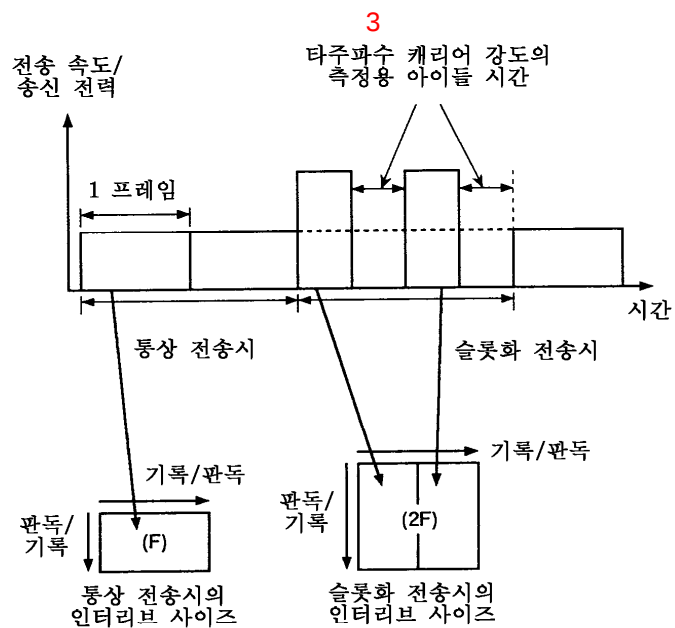
2

1

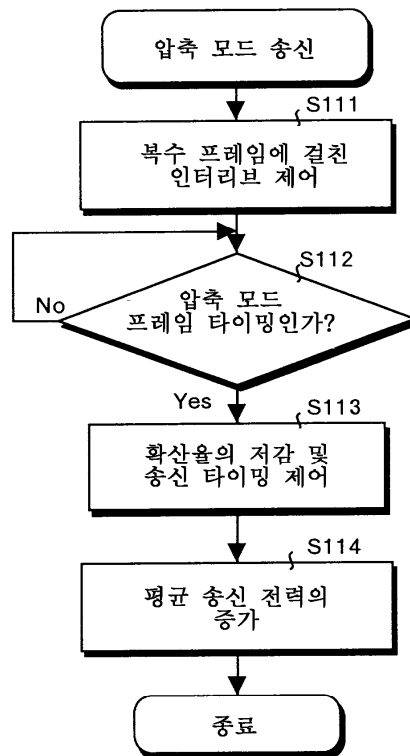
10.

9 가

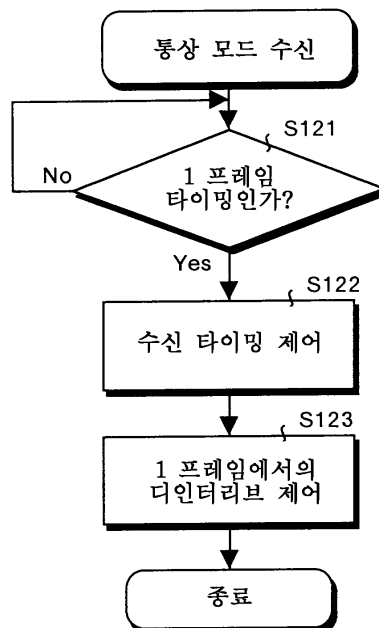




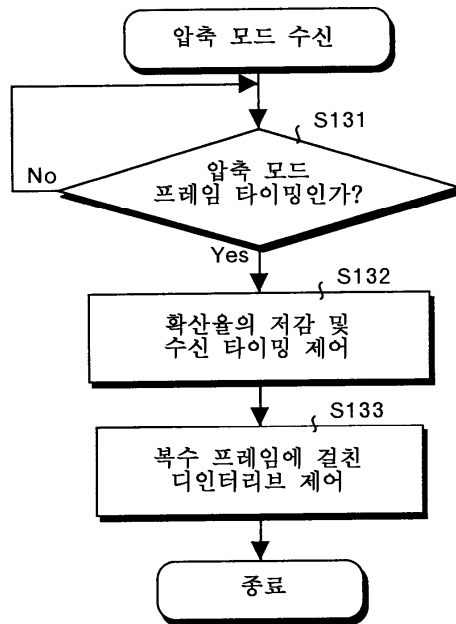
5



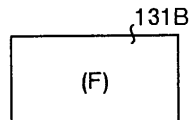
6



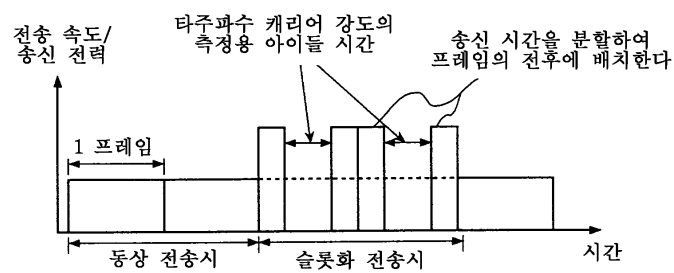
7



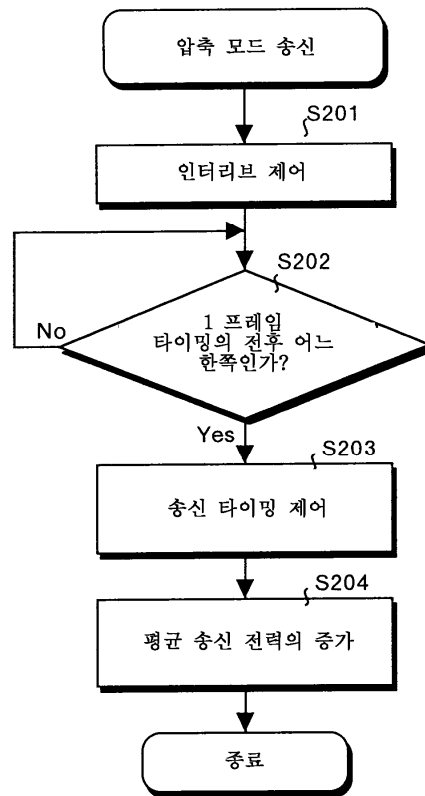
8



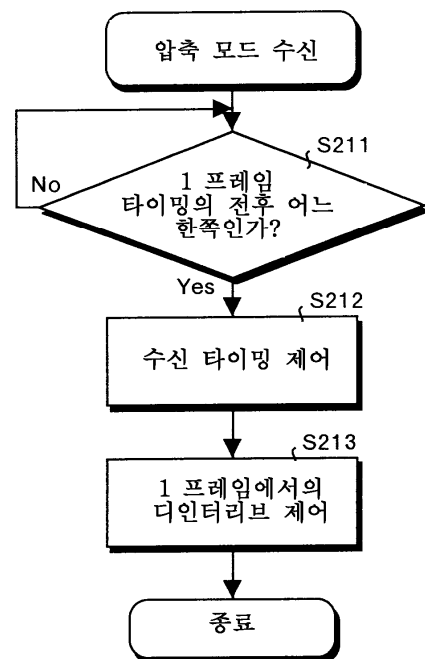
9



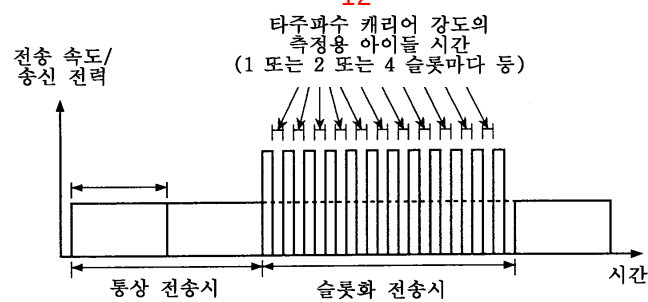
10



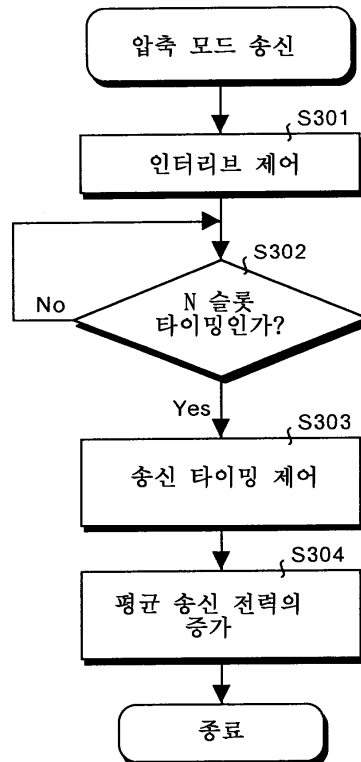
11



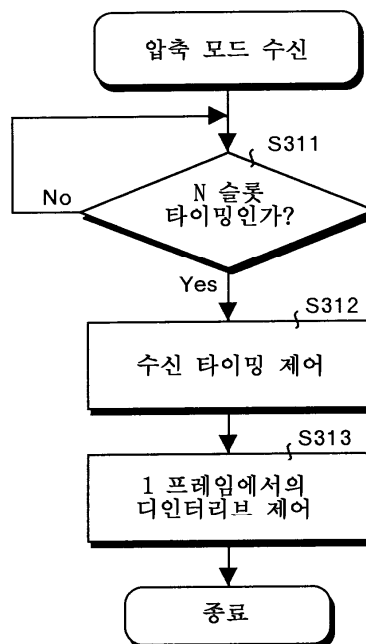
12



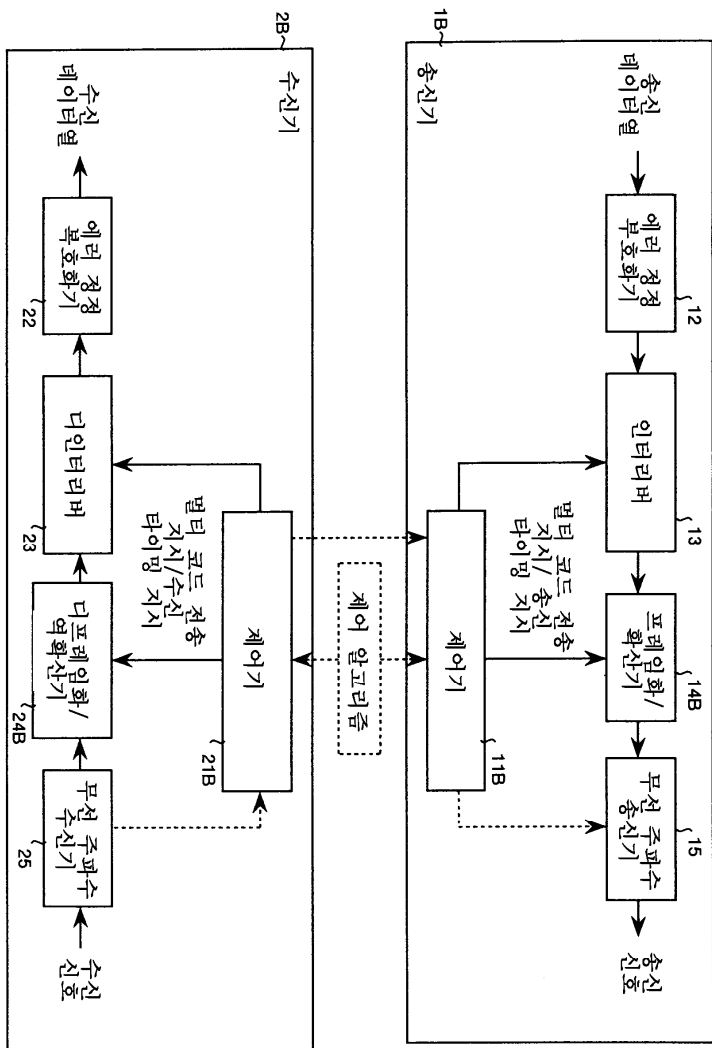
13



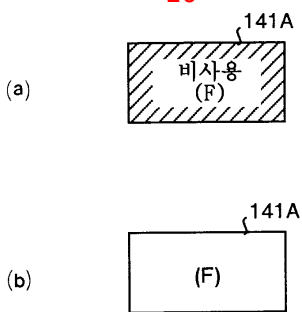
14



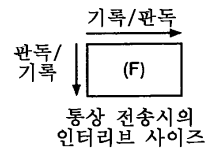
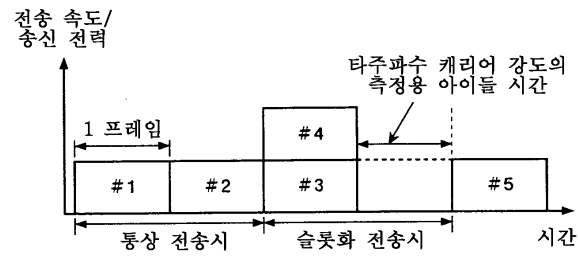
15



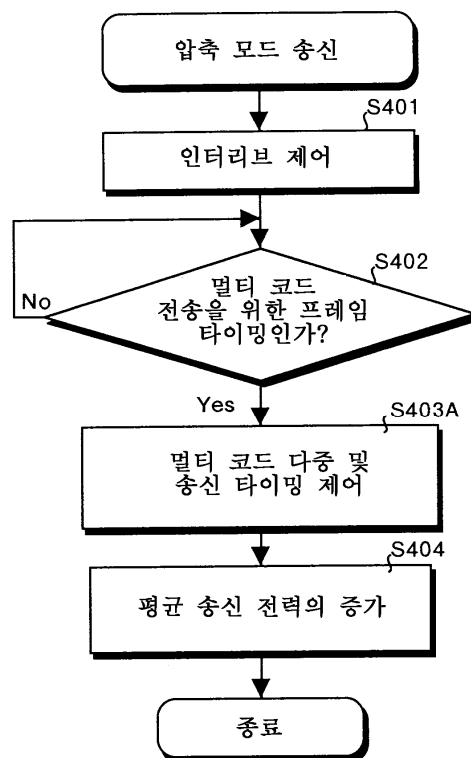
16



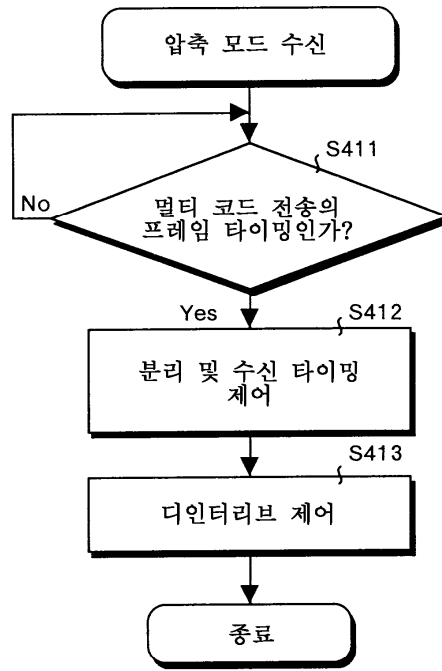
17



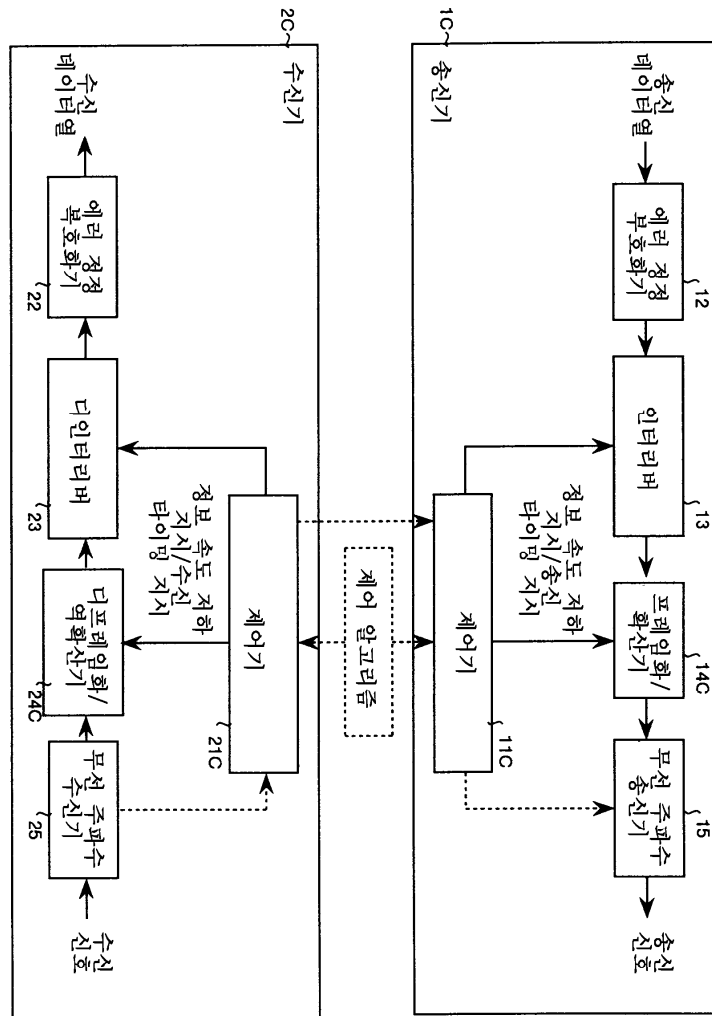
18

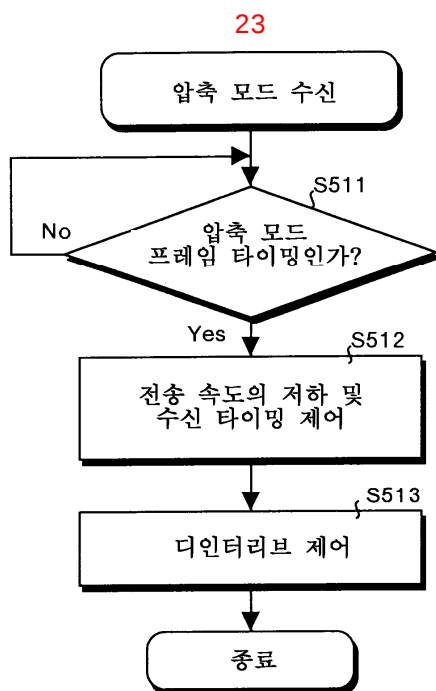
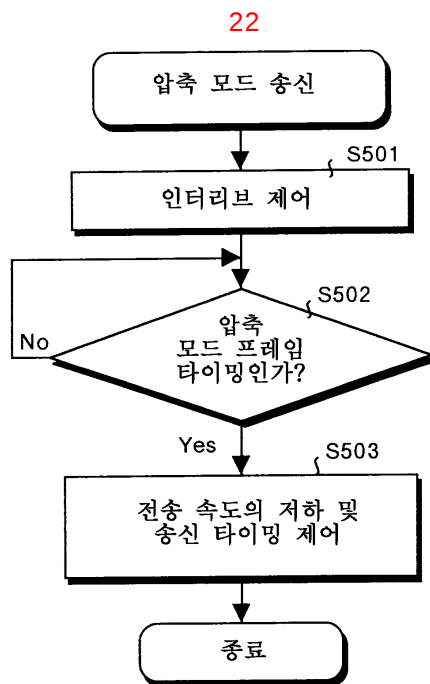
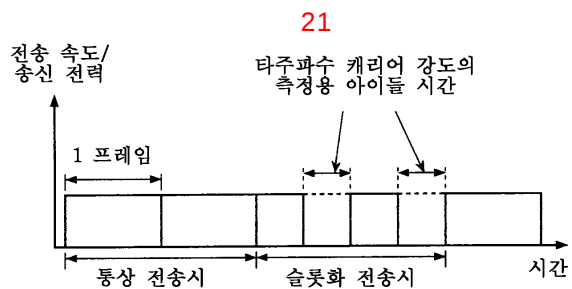


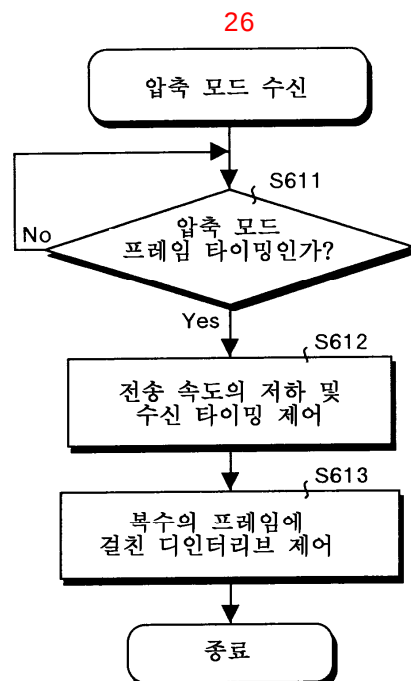
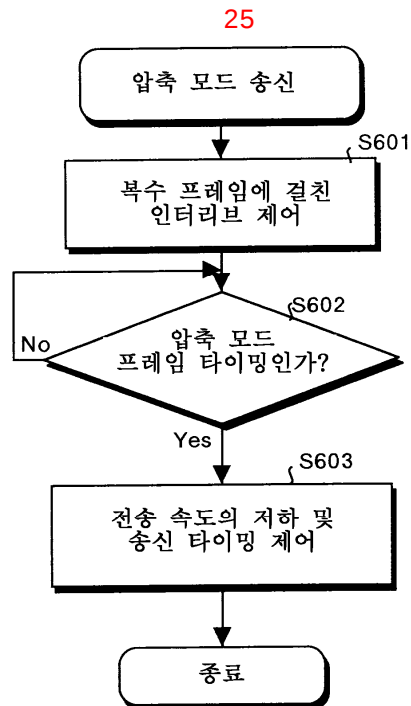
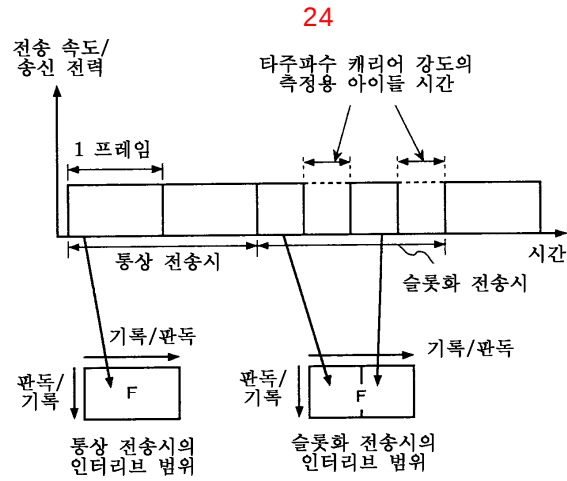
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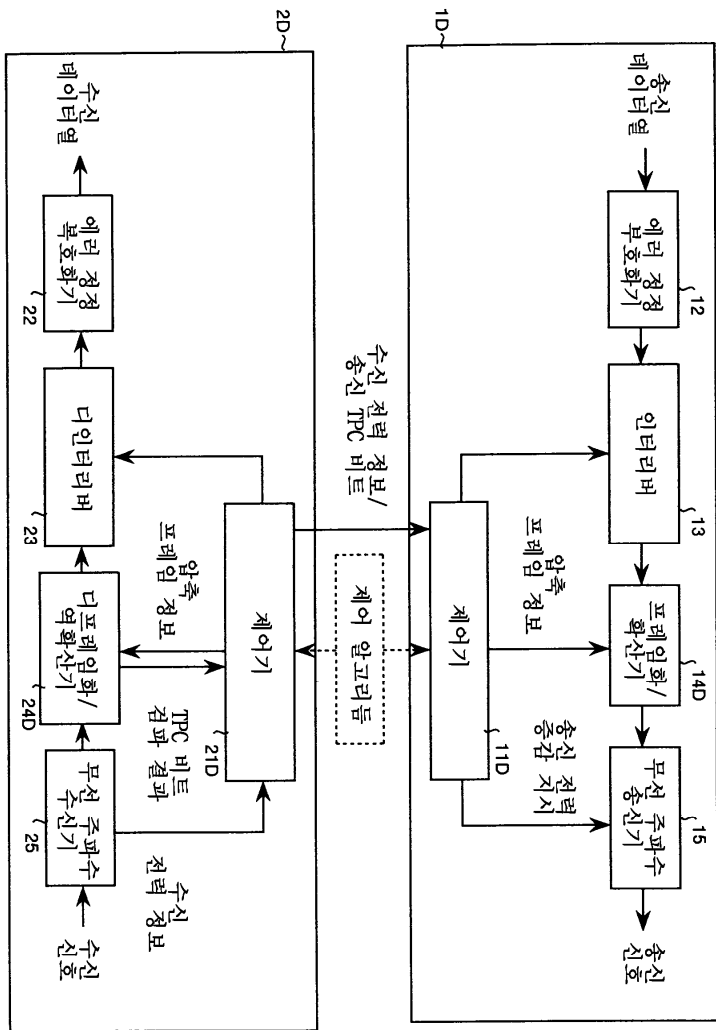
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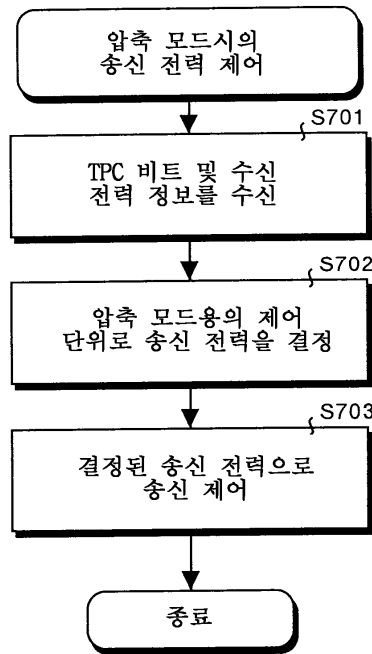
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TPC 비트 (1 비트)	송신 전력 제어량	
	통상 모드	압축 모드
1	+1.0dB	+3.0dB
0	-1.0dB	-3.0dB

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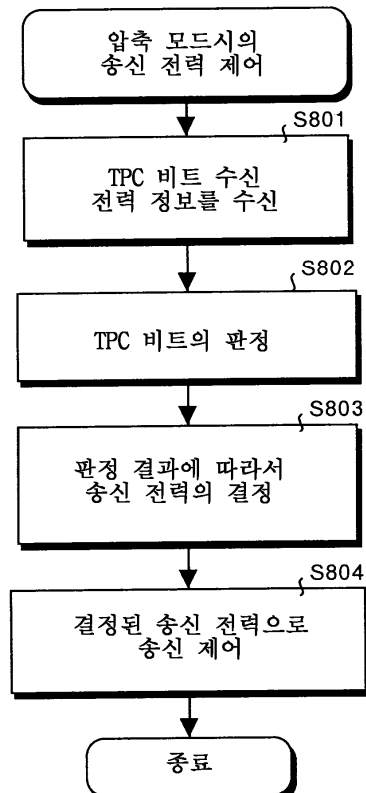


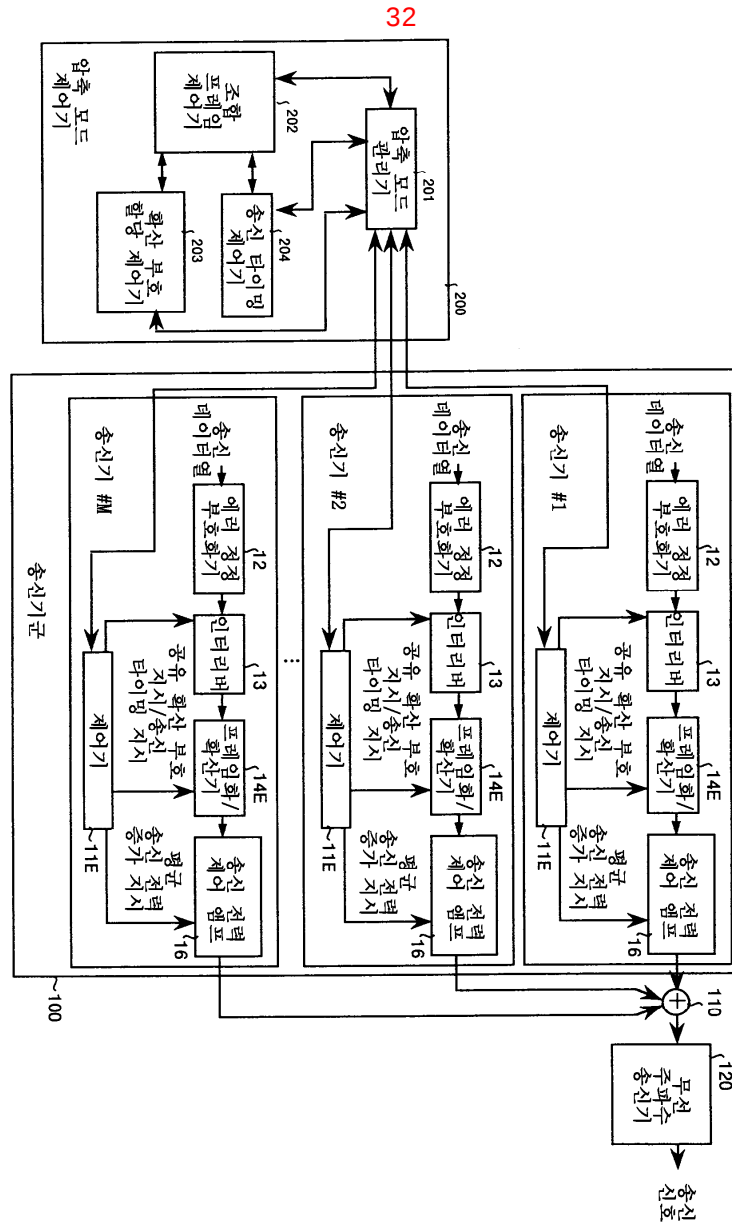
30

111B

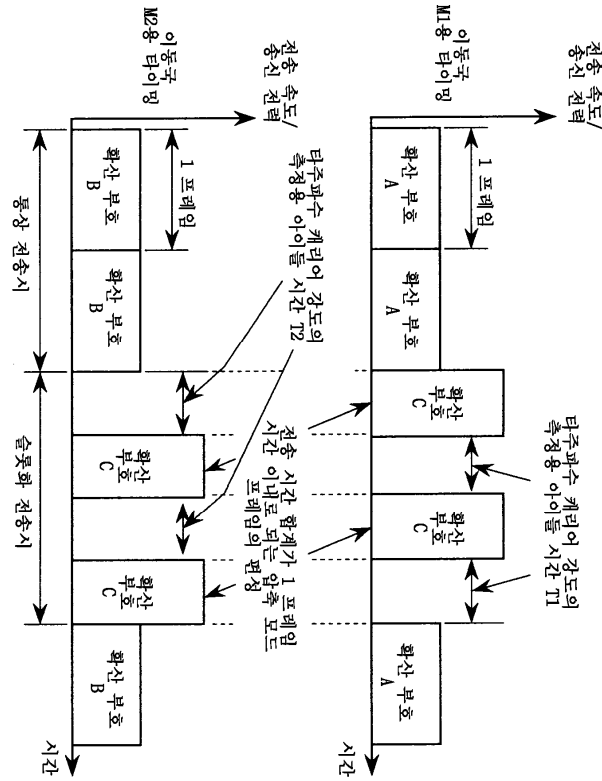
TPC 비트 (2 비트)	송신 전력 제어량	
	통상 모드	압축 모드
11	+1.0dB	+3.0dB
10	/	+1.0dB
01		-1.0dB
00	-1.0dB	-3.0dB

31

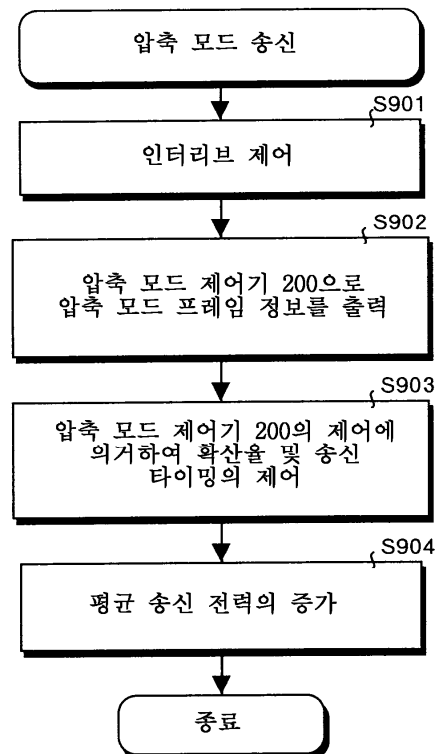




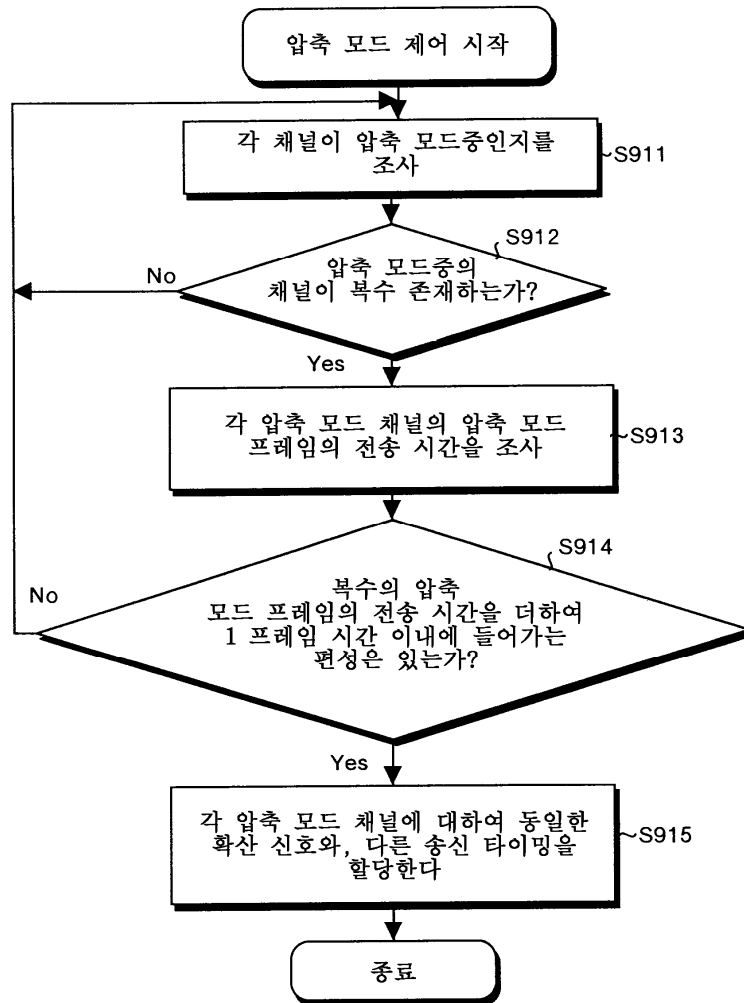
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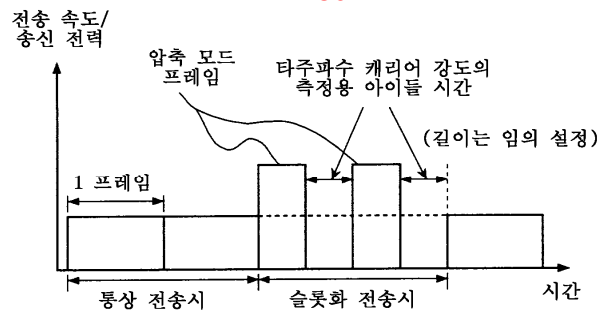
34



35

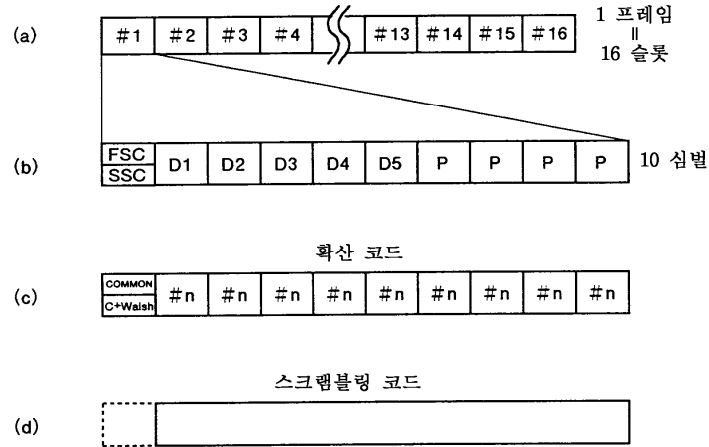


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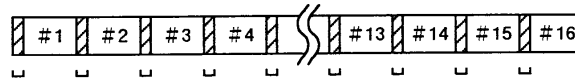
37

방송 채널 프레임 구성



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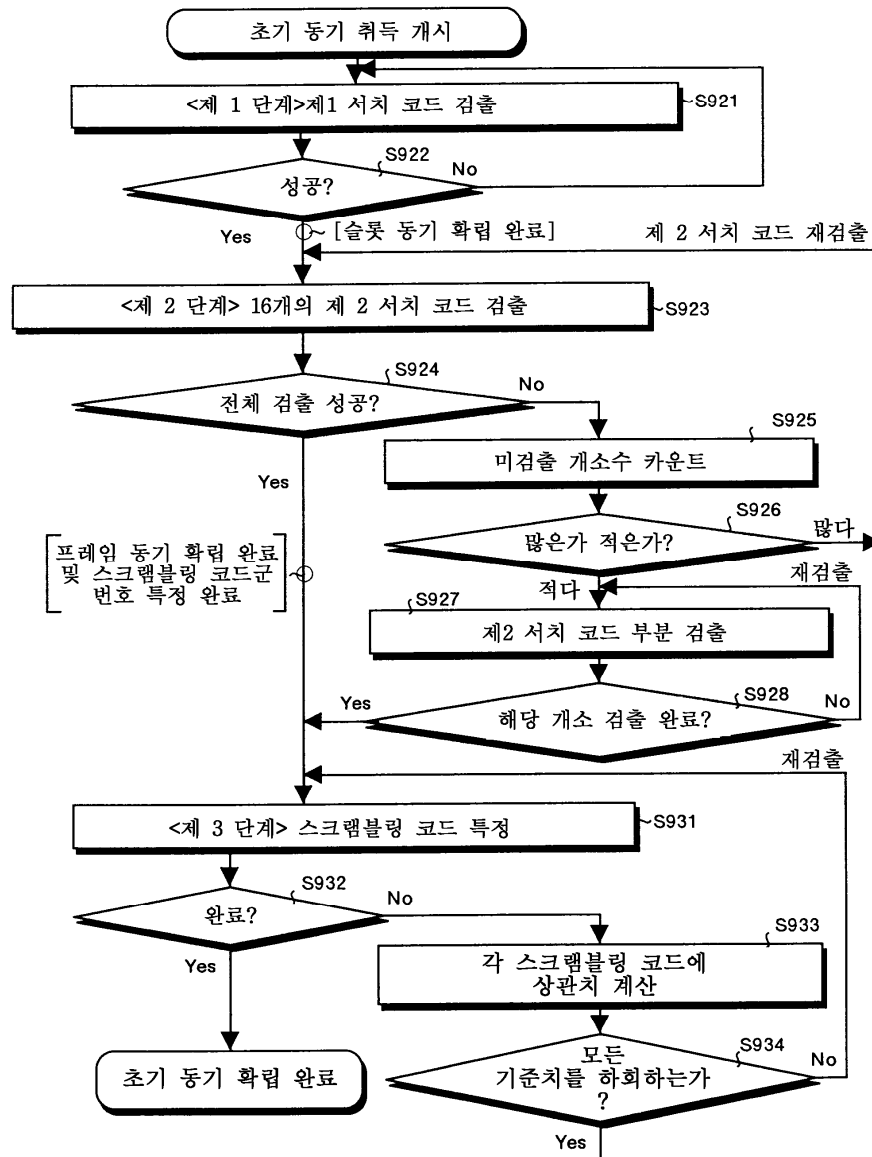
방송 채널 프레임 구성



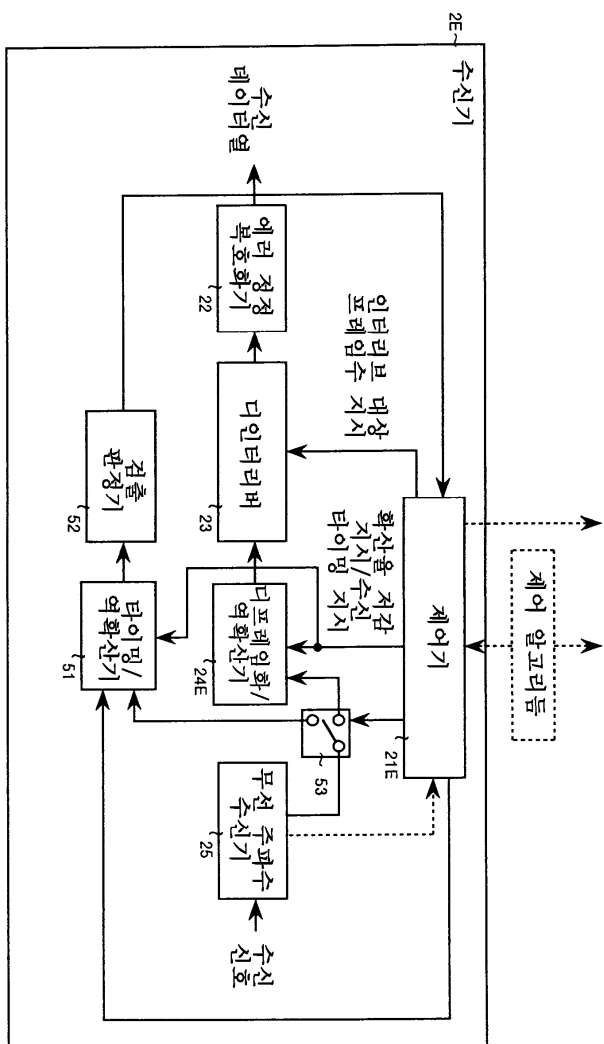
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Group 1	1	1	2	11	6	3	15	7	8	8	7	15	3	6	11	2
Group 2	1	2	9	3	10	11	13	13	11	10	3	9	2	1	16	16
Group 3	1	3	16	12	14	2	11	2	14	12	16	3	1	13	4	13
Group 4	1	4	6	4	1	10	9	8	17	14	12	14	17	8	9	10
Group 5	1	5	13	13	5	1	7	14	3	16	8	8	16	3	14	7
Group 6	1	6	3	5	9	9	5	3	6	1	4	2	15	15	2	4
Group 7	1	7	10	14	13	17	3	9	9	3	17	13	14	10	7	1
Group 8	1	8	17	6	17	8	1	15	12	5	13	7	13	5	12	15
Group 9	1	9	7	15	4	16	16	4	15	7	9	1	12	17	17	12
Group 10	1	10	14	7	8	7	14	10	1	9	5	12	11	12	5	9
Group 11	1	11	4	16	12	15	12	16	4	11	1	6	10	7	10	6
Group 12	1	12	11	8	16	6	10	5	7	13	14	17	9	2	15	3
Group 13	1	13	1	17	3	14	8	11	10	15	10	11	8	14	3	17
Group 14	1	14	8	9	7	5	6	17	13	17	6	5	7	9	8	14
Group 15	1	15	15	1	11	13	4	6	16	2	2	16	6	4	13	11
Group 16	1	16	5	10	15	4	2	12	2	4	15	10	5	16	1	8
Group 17	1	17	12	2	2	12	17	1	5	6	11	4	4	11	6	5
Group 18	2	8	11	15	14	1	4	10	10	4	1	14	15	11	8	2
Group 19	2	9	1	7	1	9	2	16	13	6	14	8	14	6	13	16
Group 20	2	10	8	16	5	17	17	5	16	8	10	2	13	1	1	13
Group 21	2	11	15	8	9	8	15	11	2	10	6	13	12	13	6	10
Group 22	2	12	5	17	13	16	13	17	5	12	2	7	11	8	11	7
Group 23	2	13	12	9	17	7	11	6	8	14	15	1	10	3	16	4
Group 24	2	14	2	1	4	15	9	12	11	16	11	12	9	15	4	1
Group 25	2	15	9	10	8	6	7	1	14	1	7	6	8	10	9	15
Group 26	2	16	16	2	12	14	5	7	17	3	3	17	7	5	14	12
Group 27	2	17	6	11	16	5	3	13	3	5	16	11	6	17	2	9
Group 28	2	1	13	3	3	13	1	2	6	7	12	5	5	12	7	6
Group 29	2	2	3	12	7	4	16	8	9	9	8	16	4	7	12	3
Group 30	2	3	10	4	11	12	14	14	12	11	4	10	3	2	17	17
Group 31	2	4	17	13	15	3	12	3	15	13	17	4	2	14	5	14
Group 32	2	5	7	5	2	11	10	9	1	15	13	15	1	9	10	11

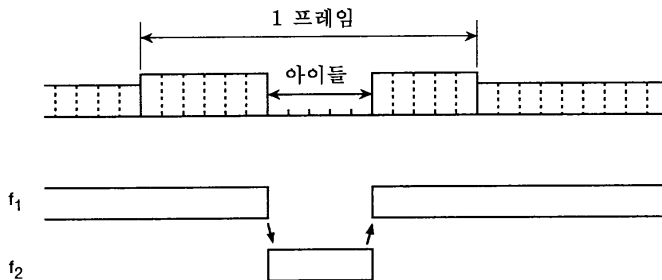
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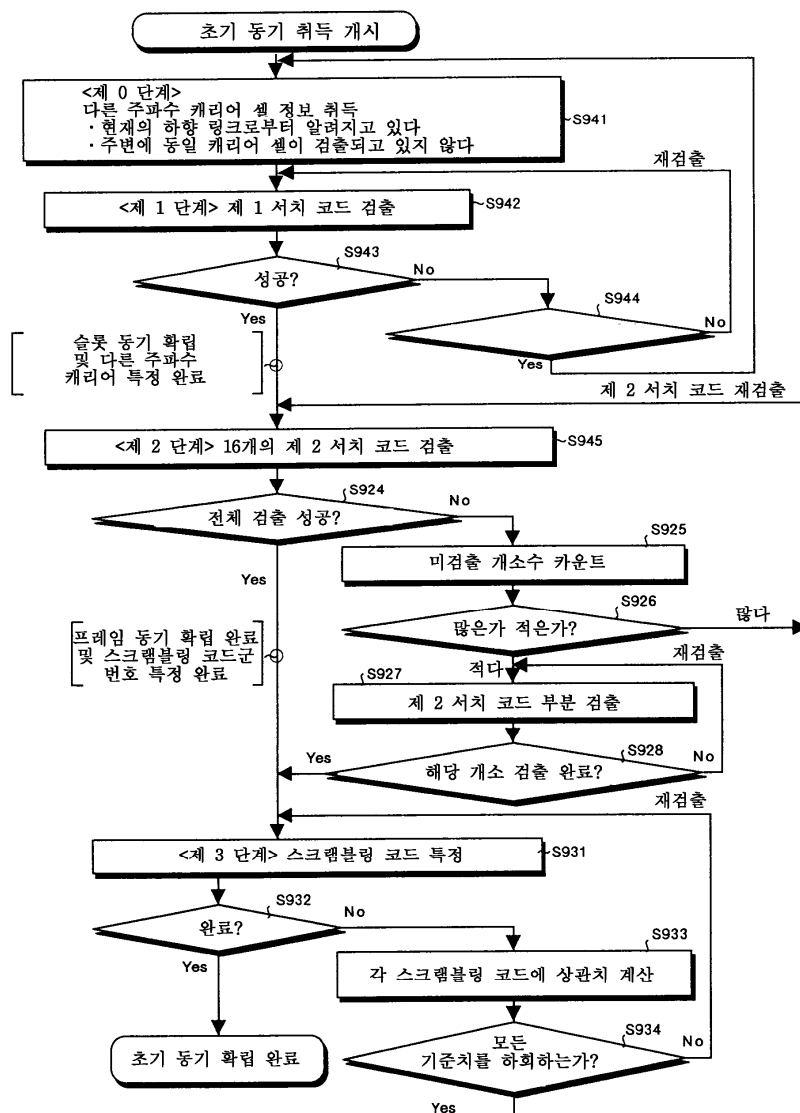
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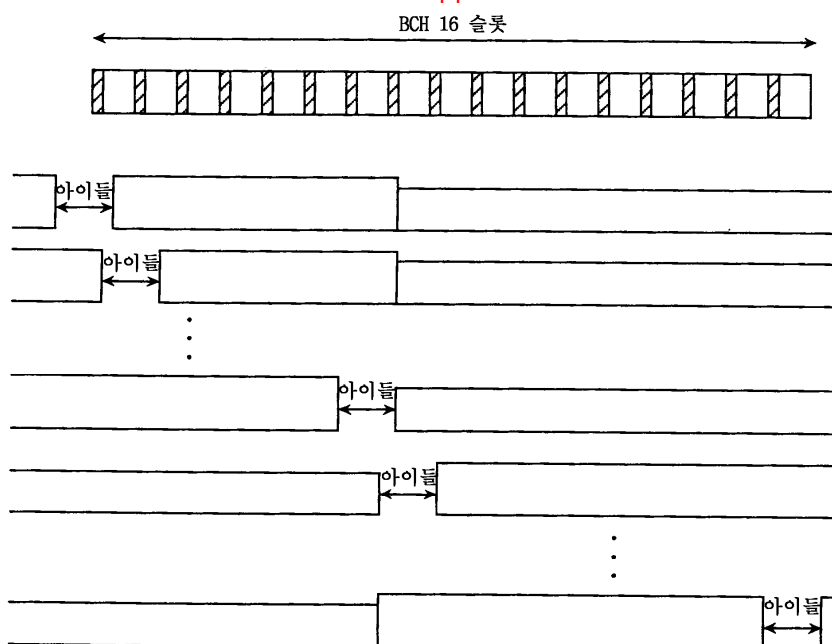
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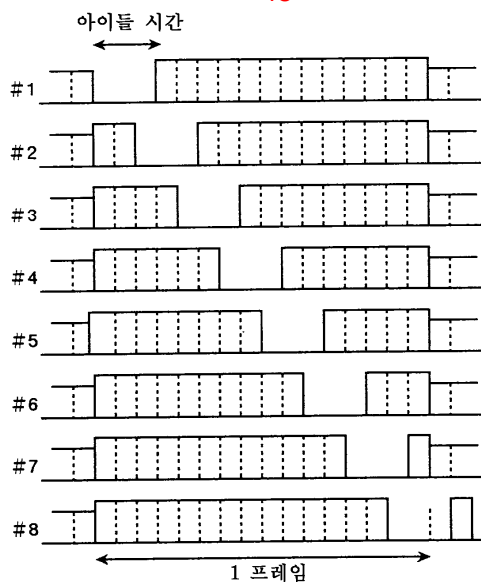
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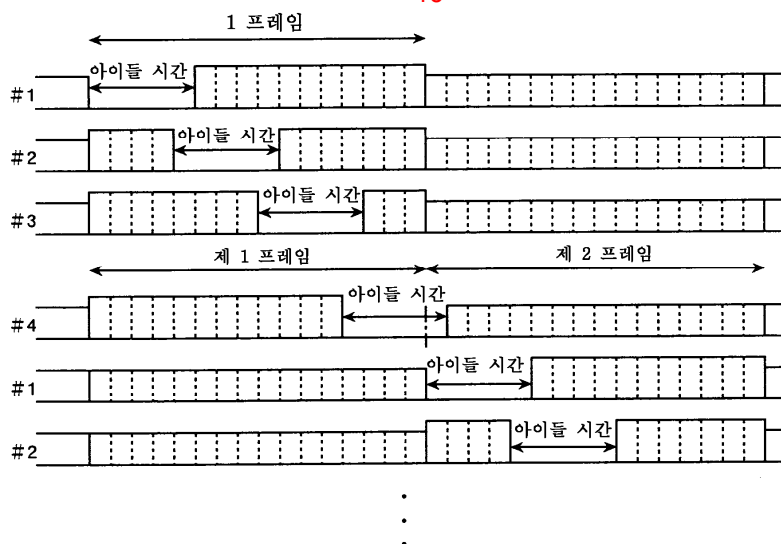
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