

(19) (KR)
(12) (B1)

(51) 。 Int. Cl.⁷
H04B 3/54

(45)
(11)
(24)

2004 03 22
10-0423867
2004 03 09

(21) 10-2003-0096819 () (65) 10-2004-0004349
(22) 2003 12 24 (43) 2004 01 13
(62) 10-2001-0076336
: 2001 12 04 2001 12 04

(73) 4 873-29 4

(72) 893-26 604
18-23 3 505
4 834-11
3 가 608

(74)
:

(54)

X-10
(Half Area) 2 , 2 1010 가 (Preamble) ; 1 , 1
가 가 , ; 3 4
가 , ; 1 , 2 , 3 3 , 4
가 , ;

5

, X-10, ,

1a 1b
 2a X-10
 2b 2a
 3
 4a (Preamble)
 4b
 4c Sub
 5 2

X-10
 가
 (Zero Cross Point)
 1 , 1/2 120KHz X-10 1ms

1a 1b
 1a 1b 가 '0' '1'

(: 10-2000-002198)
 (: 10-1999-053820)

X-10
 2a X-10 2b 2a
 , 2a , X-10 'Start Code'가 2 , 'House Code'가 4
 , 'Number Code' 'Function Code'가 5
 , 'Start Code' 1110 , 1/2 가 L1 , 1 0 가 , L0 , 0 1
 1 L1 L0
 2b 가 '1', '2', '1(L1)'
 가 가 1 0 , '0(L0)'
 가 가

0 1 , 2b , 'Start Code' '1110', 'House Code' 'L0,L0,L0,L1', 'Number/Function Code' 'L0,L0

,L0,L1,L1' . 가 SMPS(: Switching Mode Power Sup
 ply)가 , SMPS 가

X-10

2 Half Area 1010 가 (Preamble) ; 1 Half Area (Half Area) 2 가
 ; 3 Half Area 4 Half Area
 가 ; 1 , 2 Half Area ; 3 , 4 Half Area가
 ;
 rrier) 가 () ; 가 (Ca
 amble) ; 1 Half Area 2 Half Area ; 2 1010 (Pre
 ; 1 Half Area 가 ; 3 Half A
 3 Half Area 4 Half Area 가 ; 1 , 2 Half Area ; 3 , 4
 Half Area가 ; 1

X-10

120 KHz 1ms X-10
 (Adaptive Twin Carrier)

X-10

3 , , , , , X-10
 () 2 , 4 가 5 가 가
 (Sub A, Sub B, Sub C 가
 1ms (X-10),
 '1' , 1/2 (Half Cycle) 4 , 가 120 KHz 1ms
 가 ('1') 가
 '0' 가 (Sub) 가 ,
 가 , Sub , '0' 가 '1'

4a (Preamble)

4b , 4c

Sub , , .

4a , 2 '1010' , Sub , 5

가 , 1 (Half Area) 가 , 2

Half Area 가 , 1 H

1 Half Area 가 , 2 Half Area , 1 H

alf Area 2 Half Area가 , 2 Half Area

가 , 1 Half Area

가 가 , 1 Half Area

가 3 , 4 Half Area 가 1 , 2 Half Ar

ea , 3 Half Cycle 4 Half Cycle 가 ,

4c , Sub 가 ,

5 2 ,

Sub S1201 , S1202

, Sub First_sub , S1203 , First_sub가

S1203 , S1204 ,

S1203 S1201 ,

S1205 ,

S1205 , S1206 , Sub

Second_sub , S1207 , Second_sub가

S1207 , S1208 ,

S1201 ,

S1207 , S1209 ,

S1210 , First_sub

S1205 , 가 S1211 , Sub

Second_sub , S1212 , Second_sub가

S1212 , Second_sub가 , S1213 , Second_sub

S1210 , S1212 , Second_sub가 , S1210

S1210 , S1214 ,

S1214 , S1201 , S1215 , S

ub , Third_sub , S1216 , Third_sub가

S1216 , S1201 , S1217 , T

hird_sub First_sub가 , S1201 , S1218 , S

ub S1217 ,

가 ,

가 ,

가 ,

(57)

1.

2 1010 (Preamble) ;
 1 (Half Area) 2 가 , ;
 , 1 가 , ;
 3 4 가 , 가 , ;
 , 3 가 , ;
 1 , 2 3 , 4 가 , ;
 ;

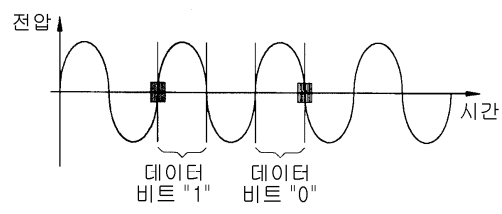
2.

1 , 가 , ;

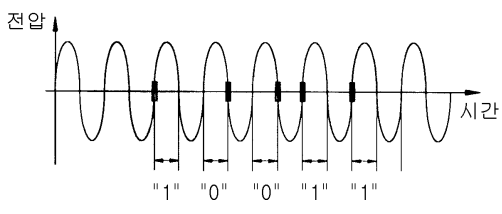
3.

2 1010 (Preamble) ;
 1 (Half Area) 2 가 , 가 , ;
 , 1 가 , ;
 3 4 가 , 가 , ;
 , 3 가 , ;
 1 , 2 3 , 4 가 , ;
 ;

1a



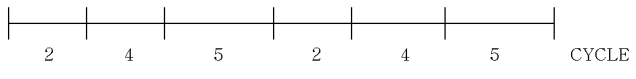
1b

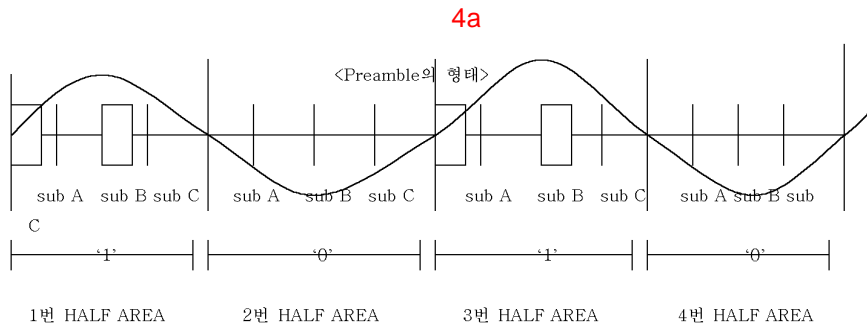
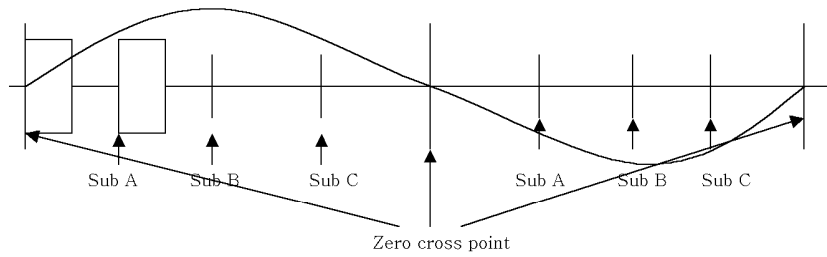
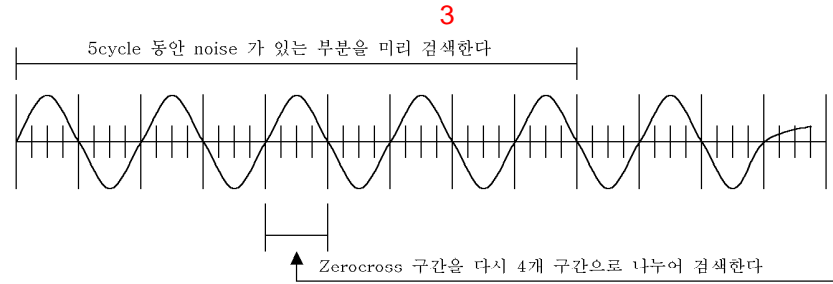
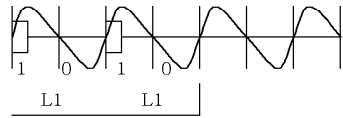
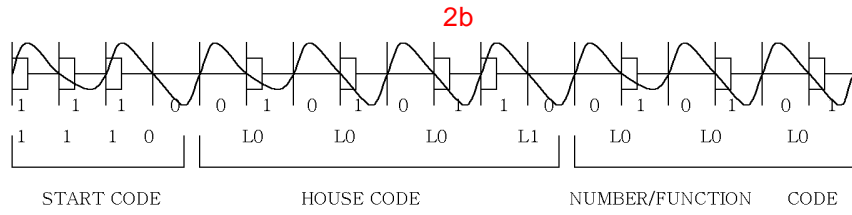


2a

START CODE	HOUSE CODE	NUMBER CODE	START CODE	HOUSE CODE	NUMBER CODE
------------	------------	-------------	------------	------------	-------------

START CODE	HOUSE CODE	FUNCTION CODE	START CODE	HOUSE CODE	FUNCTION CODE
------------	------------	---------------	------------	------------	---------------





4b

	첫번째 HALF CYCLE	두번째 HALF CYCLE	획득구간
Sub A	0	1	0
	0	0	0
	1	1	0
	1	0	1
Sub B	0	1	0
	0	0	0
	1	1	0
	1	0	1
Sub C	0	1	0
	0	0	0
	1	1	0
	1	0	1

4c

ZERO CROSS 구역의 DATA	Sub구간의 DATA	최종 수신 값
0	1	0
0	0	0
1	1	1
1	0	0

5

