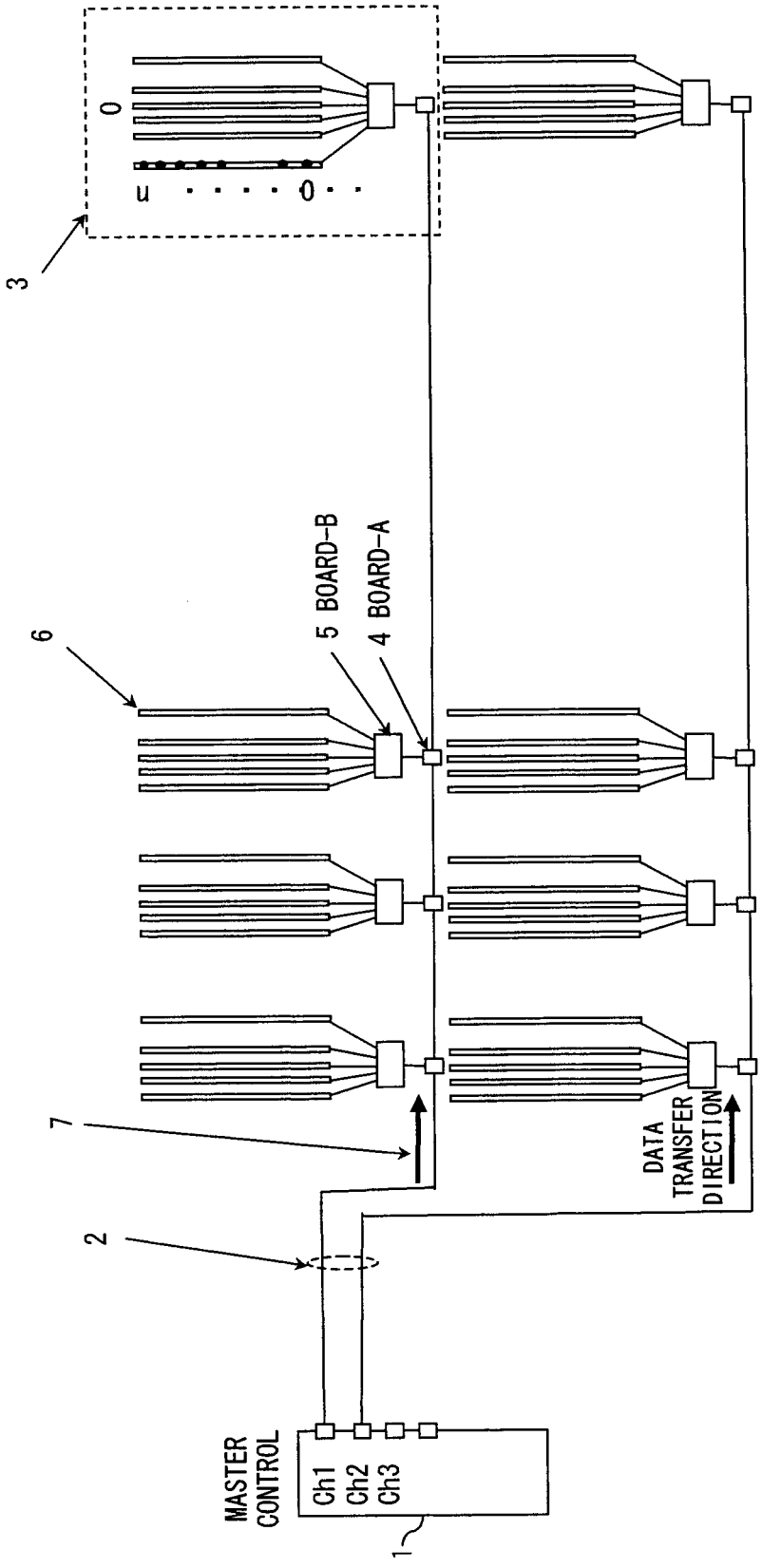

3
0
0
5 BOARD-B
4 BOARD-A
6
7
2
DATA
TRANSFER
DIRECTION
MASTER
CONTROL
Ch1
Ch2
Ch3
1

FIG.1

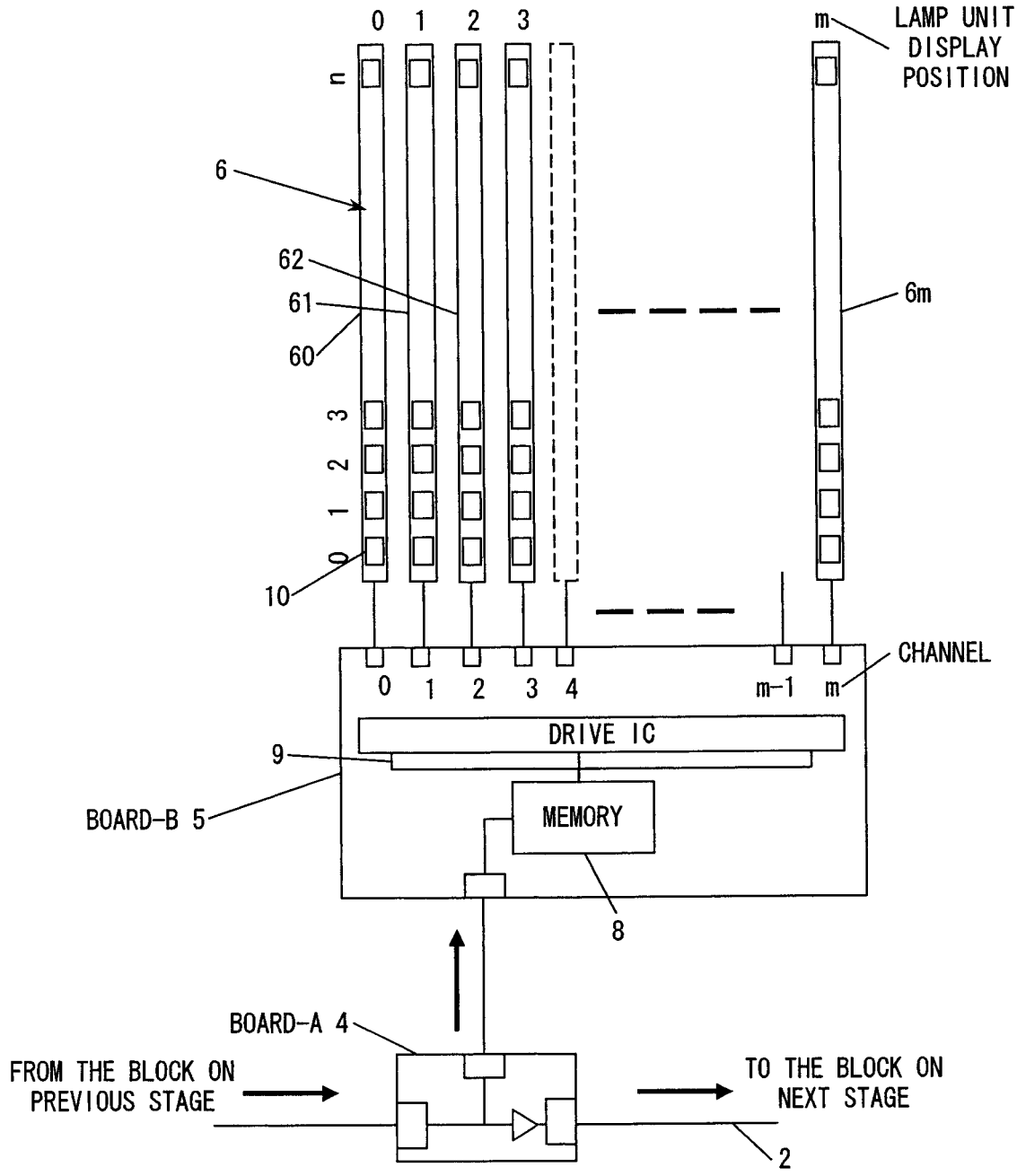

0 1 2 3
m
LAMP UNIT DISPLAY POSITION
n
6
62
61
60
6m
0 1 2 3
10
0 1 2 3 4
m-1 m
CHANNEL
DRIVE IC
9
BOARD-B 5
MEMORY
8
BOARD-A 4
FROM THE BLOCK ON PREVIOUS STAGE
TO THE BLOCK ON NEXT STAGE
2

FIG. 2

PIXEL ADDRESS IN DISPLAY SCREEN → 12

11

000	001	002	· ·	00F	010	· ·	01F	020	· ·	0EF	0F0	· ·	0FF
100	101	102	· ·	10F	110	· ·	11F	120	· ·	1EF	1F0	· ·	1FF
200	201	202	· ·	20F	210	· ·	21F	220	· ·	2EF	2F0	· ·	2FF
300	301	302	· ·	30F	310	· ·	31F	320	· ·	3EF	3F0	· ·	3FF
400	401	402	· ·	40F	410	· ·	41F	420	· ·	4EF	4F0	· ·	4FF
·	·	·	·	·	·	·	·	·	·	·	·	·	·
E00	E01	E02	· ·	E0F	E10	· ·	E1F	E20	· ·	EEF	EF0	· ·	EFF
F00	F01	F02	· ·	F0F	F10	· ·	F1F	F20	· ·	FEF	FF0	· ·	FFF

ZEROTH DISPLAY BLOCK (columns 000–00F); FIRST DISPLAY BLOCK (columns 010–01F); SECOND DISPLAY BLOCK (columns 020–); E-TH DISPLAY BLOCK (–0EF); F-TH DISPLAY BLOCK (columns 0F0–0FF)

F I G. 3

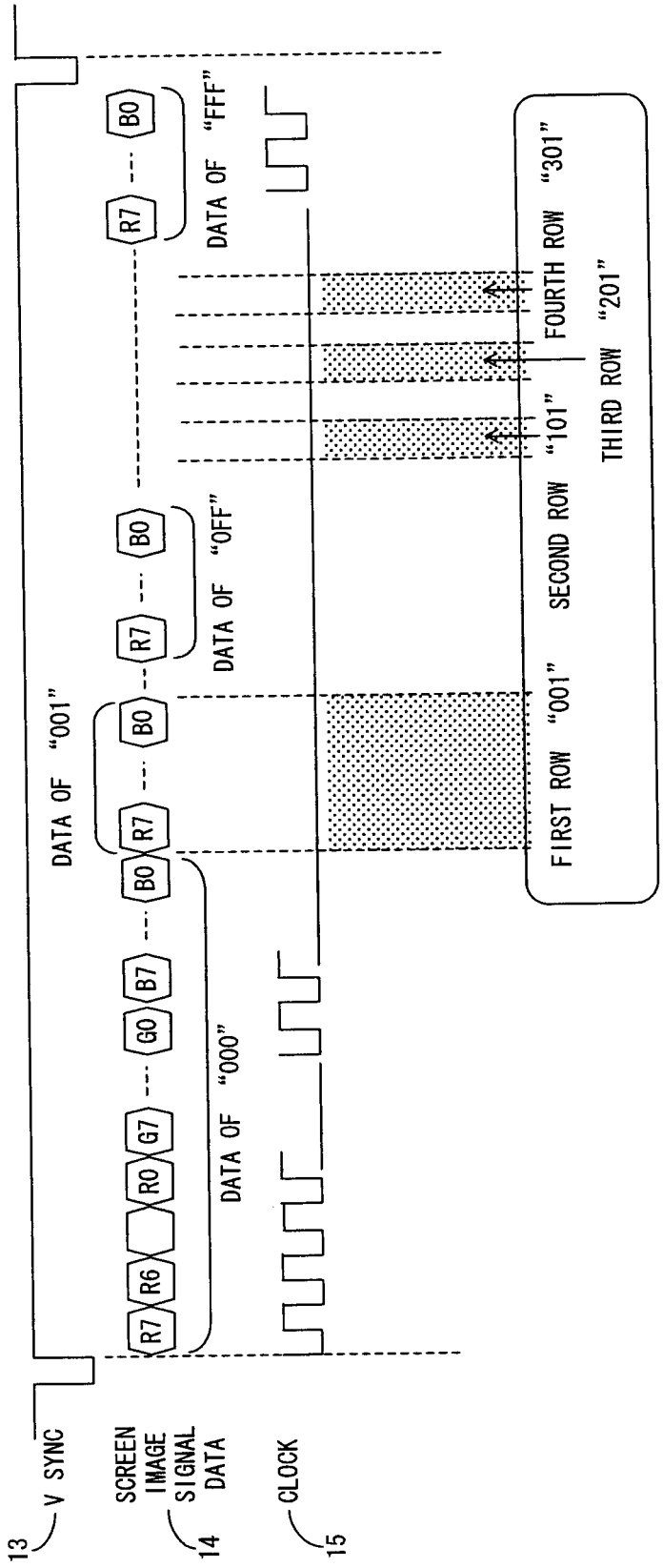

13
V SYNC
SCREEN IMAGE SIGNAL DATA
14
CLOCK
15
DATA OF "000"
DATA OF "001"
DATA OF "OFF"
DATA OF "FFF"
R7 R6 R0 G7 G0 B7 B0 R7 B0
R7 B0 R7 B0
R7 B0
R7 B0
FIRST ROW "001"
SECOND ROW "101"
THIRD ROW "201"
FOURTH ROW "301"

FIG. 4

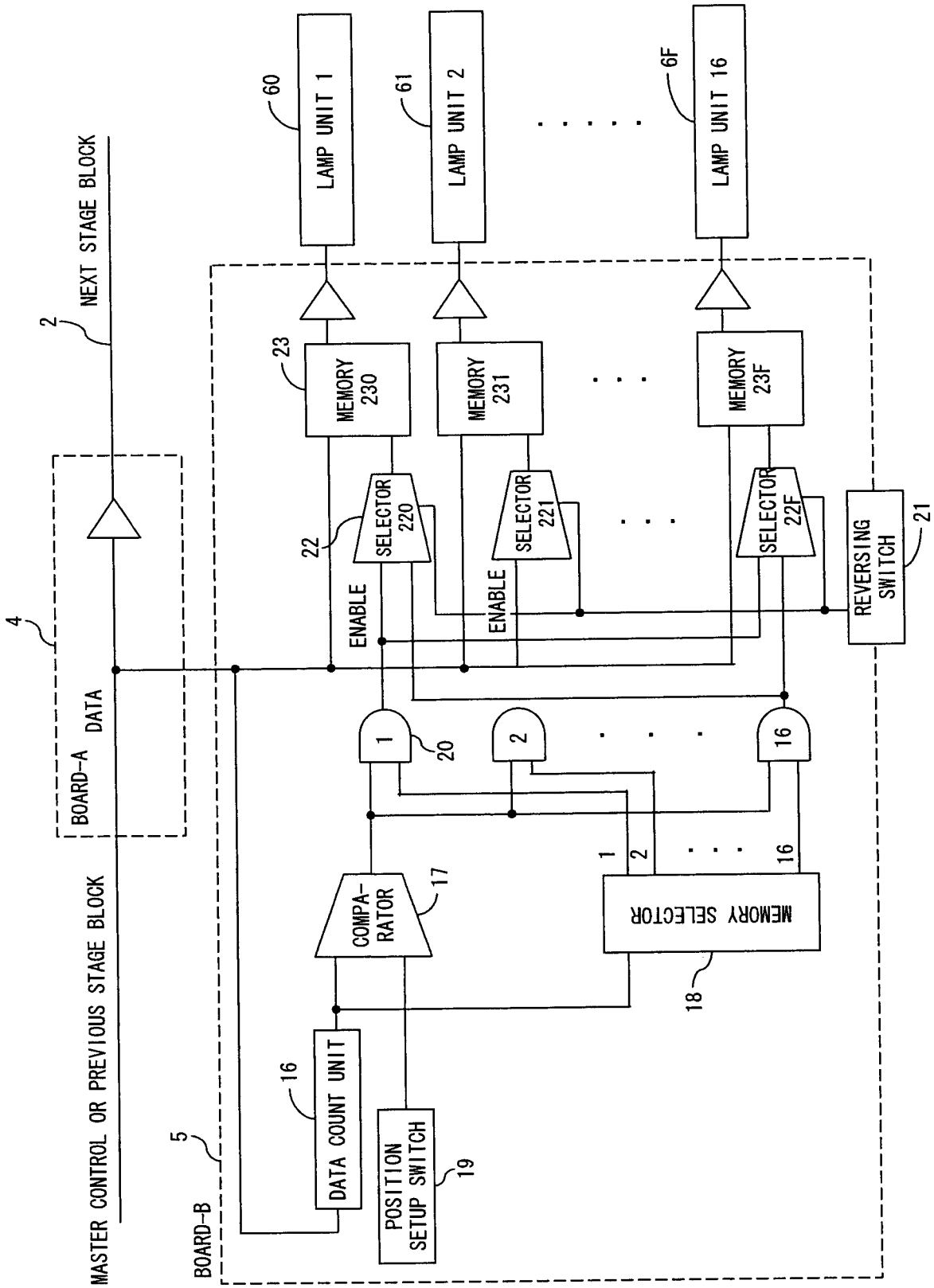

LAMP UNIT 1
LAMP UNIT 2
LAMP UNIT 16
60
61
6F
NEXT STAGE BLOCK
2
MEMORY 230
MEMORY 231
MEMORY 23F
23
SELECTOR 220
SELECTOR 221
SELECTOR 22F
22
ENABLE
ENABLE
REVERSING SWITCH
21
4
BOARD-A
DATA
1
2
16
20
COMPA-RATOR
17
MEMORY SELECTOR
18
MASTER CONTROL OR PREVIOUS STAGE BLOCK
5
BOARD-B
DATA COUNT UNIT
16
POSITION SETUP SWITCH
19

FIG. 5

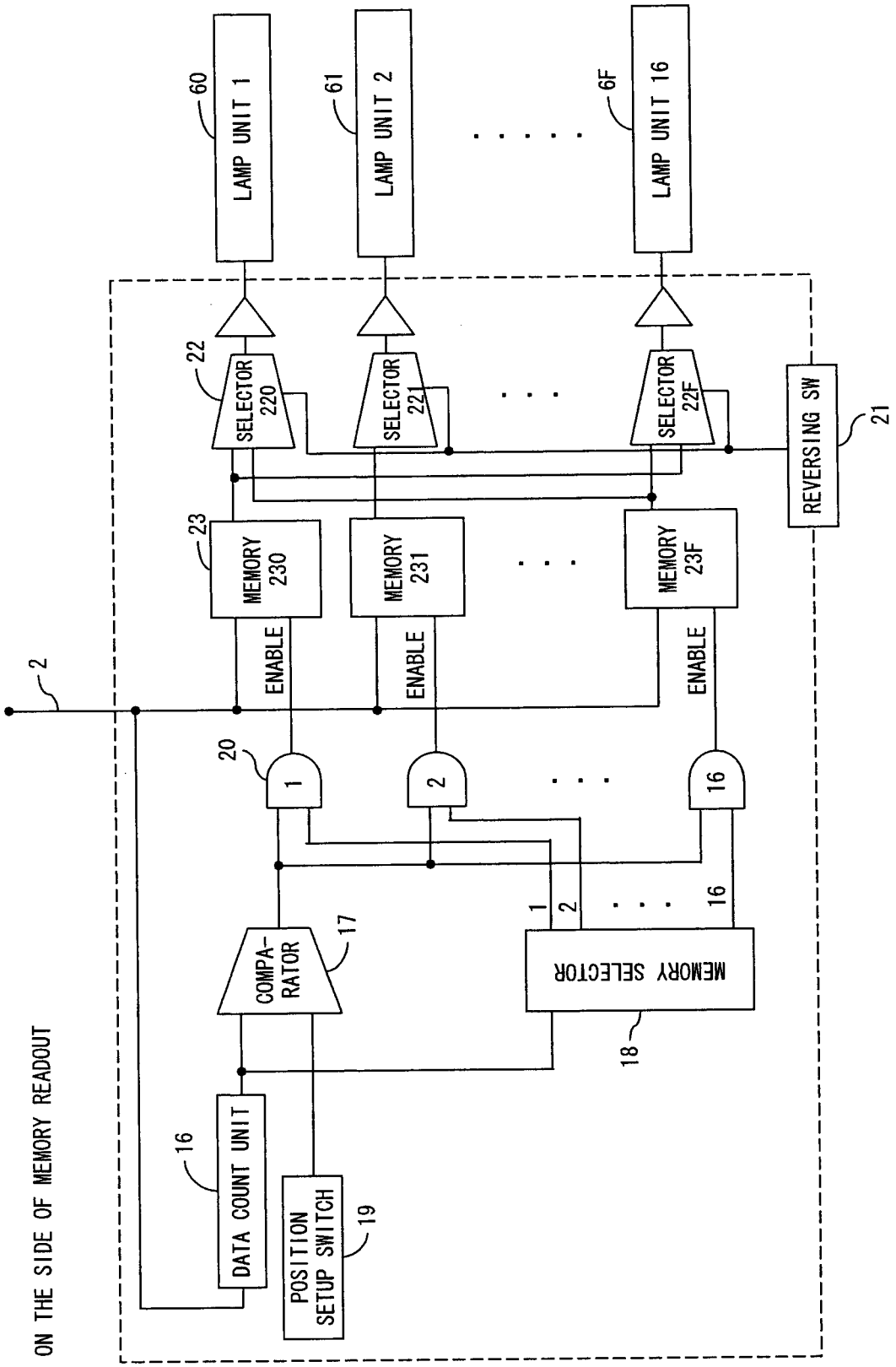

LAMP UNIT 1
LAMP UNIT 2
LAMP UNIT 16
60
61
6F
SELECTOR 220
SELECTOR 221
SELECTOR 22F
22
REVERSING SW
21
MEMORY 230
MEMORY 231
MEMORY 23F
23
ENABLE
ENABLE
ENABLE
2
20
1
2
16
1
2
16
COMPA-RATOR
17
MEMORY SELECTOR
18
DATA COUNT UNIT
16
POSITION SETUP SWITCH
19
ON THE SIDE OF MEMORY READOUT

FIG. 6

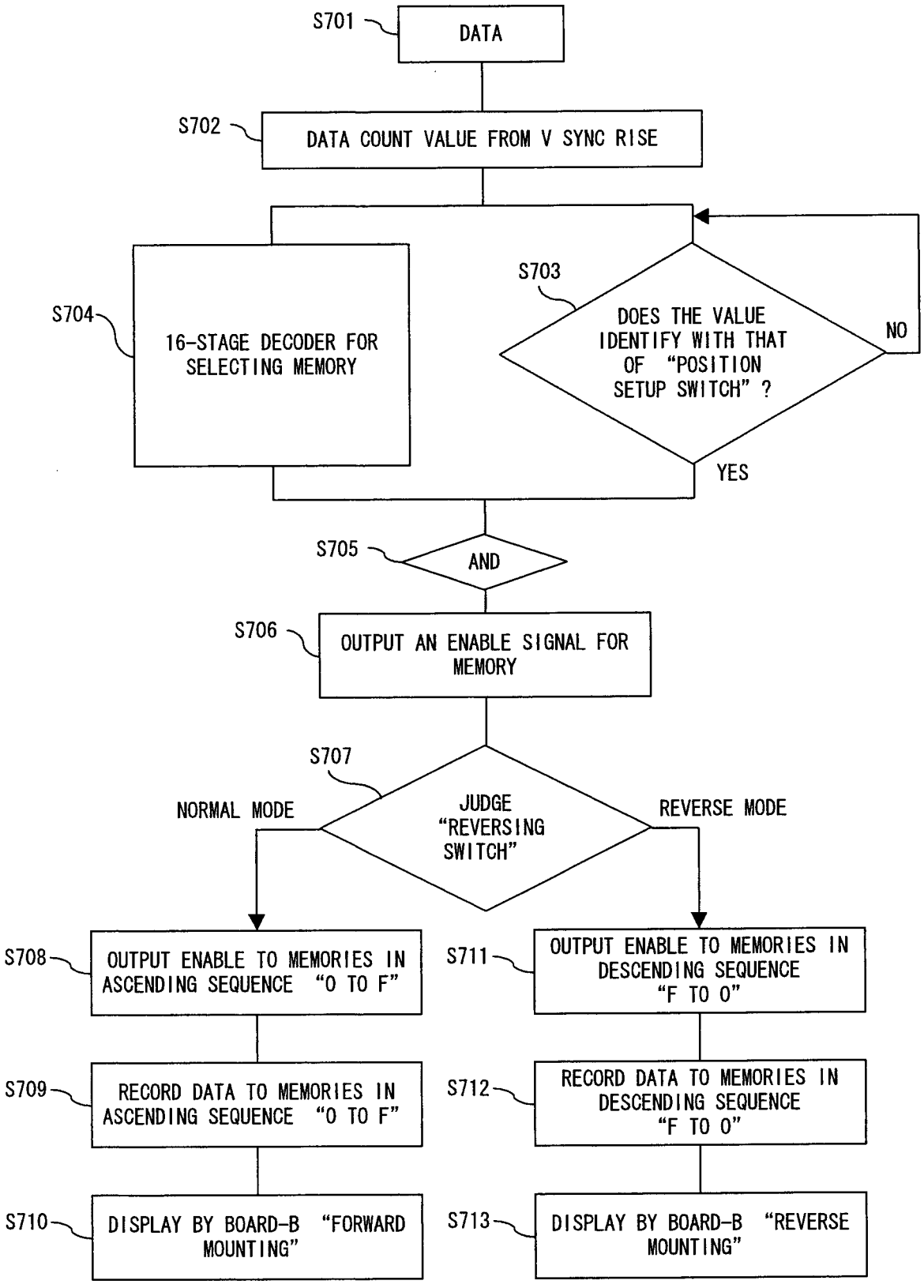

S701
DATA
S702
DATA COUNT VALUE FROM V SYNC RISE
S703
DOES THE VALUE IDENTIFY WITH THAT OF "POSITION SETUP SWITCH" ?
NO
YES
S704
16-STAGE DECODER FOR SELECTING MEMORY
S705
AND
S706
OUTPUT AN ENABLE SIGNAL FOR MEMORY
S707
JUDGE "REVERSING SWITCH"
NORMAL MODE
REVERSE MODE
S708
OUTPUT ENABLE TO MEMORIES IN ASCENDING SEQUENCE "0 TO F"
S709
RECORD DATA TO MEMORIES IN ASCENDING SEQUENCE "0 TO F"
S710
DISPLAY BY BOARD-B "FORWARD MOUNTING"
S711
OUTPUT ENABLE TO MEMORIES IN DESCENDING SEQUENCE "F TO 0"
S712
RECORD DATA TO MEMORIES IN DESCENDING SEQUENCE "F TO 0"
S713
DISPLAY BY BOARD-B "REVERSE MOUNTING"

FIG. 7

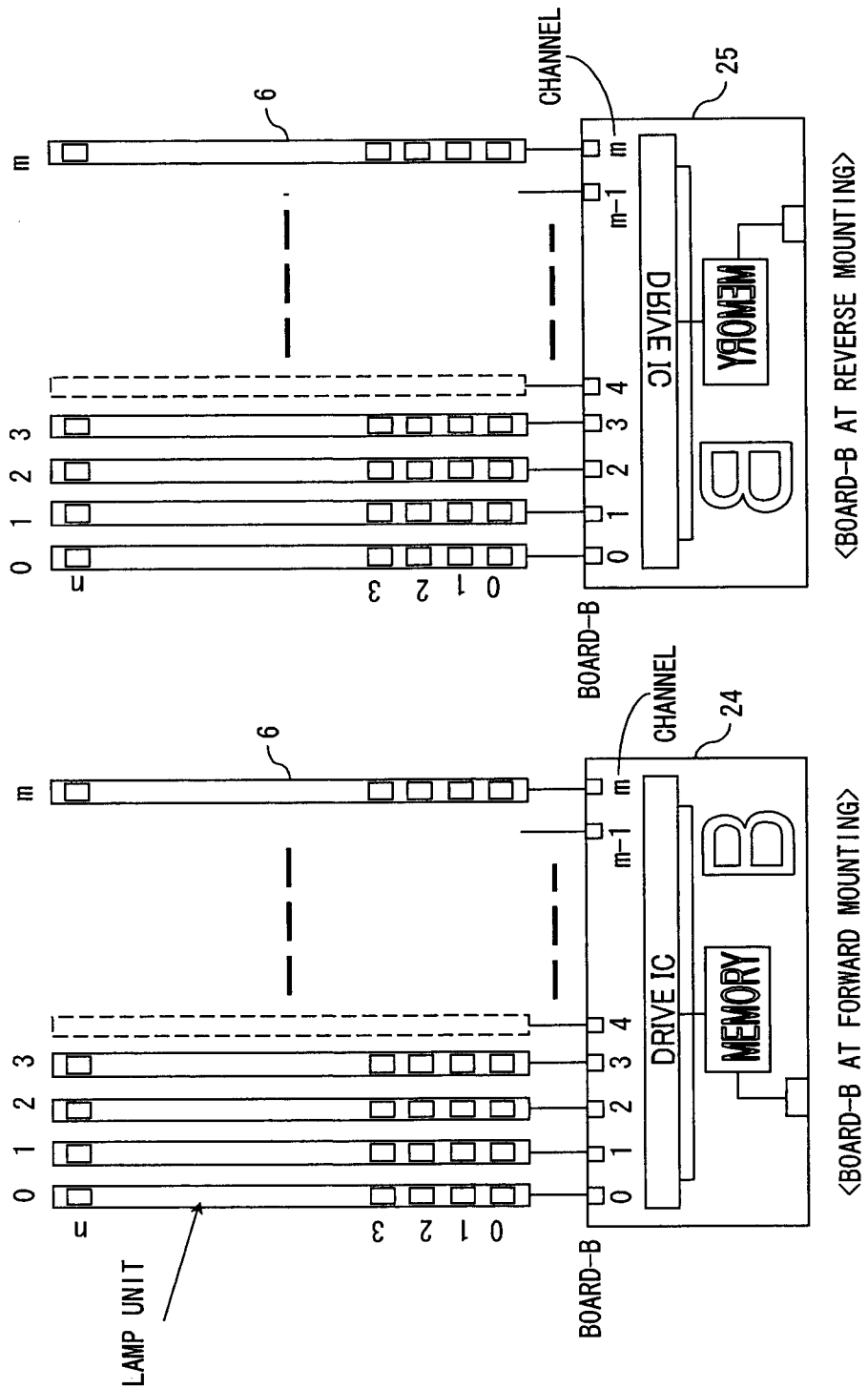

CHANNEL
25
6
m
m-1
4
3
2
1
0
DRIVE IC
MEMORY
B
BOARD-B
<BOARD-B AT REVERSE MOUNTING>
CHANNEL
24
6
m
m-1
4
3
2
1
0
DRIVE IC
MEMORY
B
BOARD-B
<BOARD-B AT FORWARD MOUNTING>
LAMP UNIT

FIG. 8

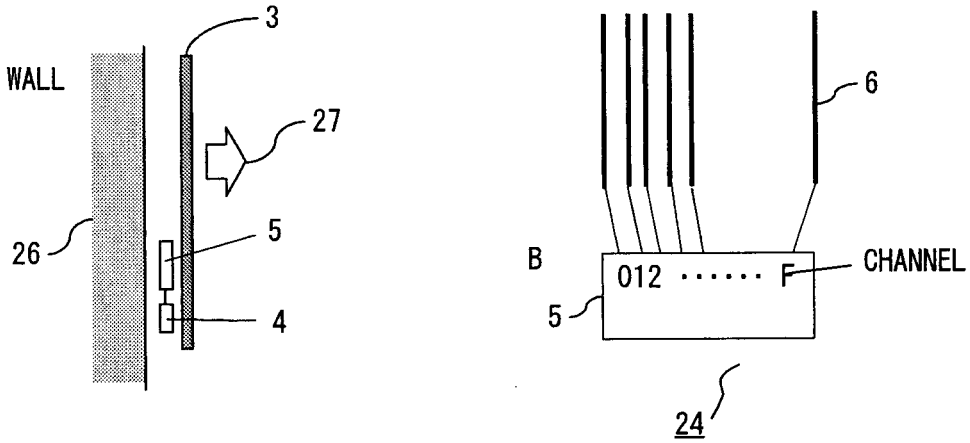


FIG. 9

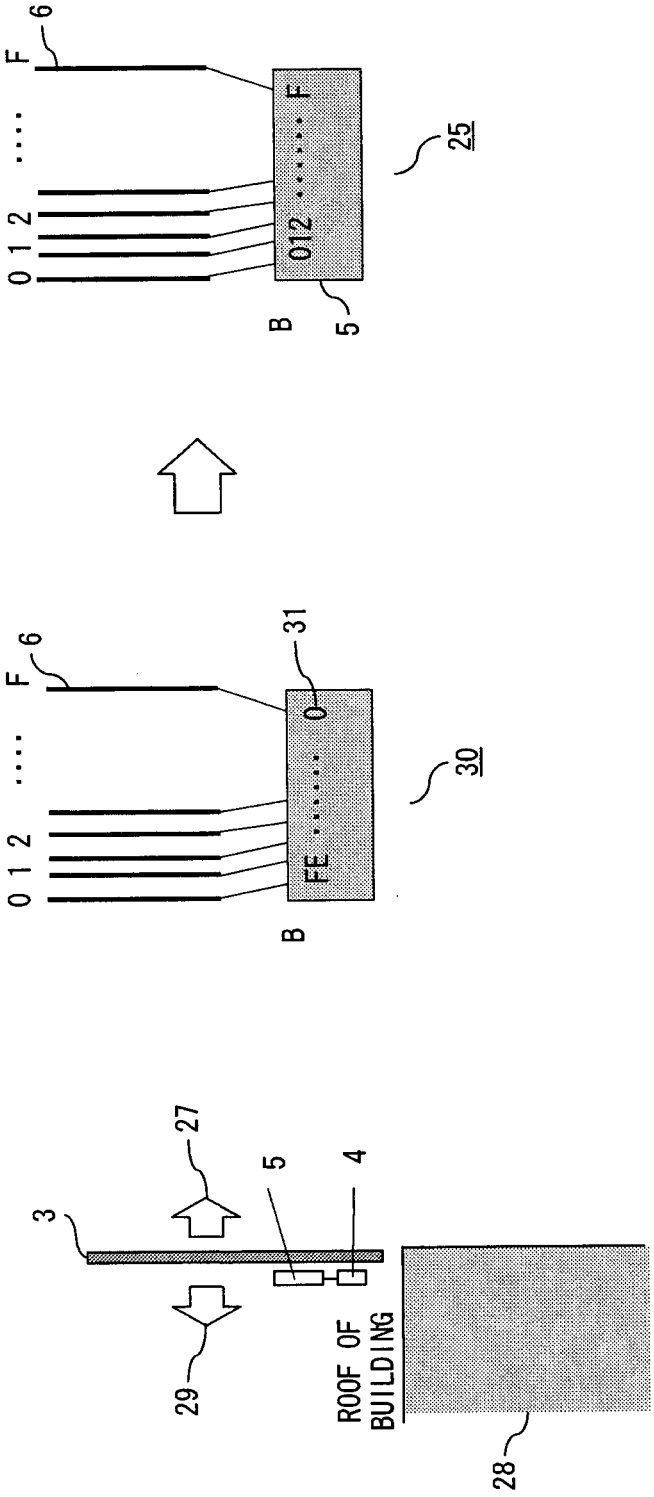


FIG. 10

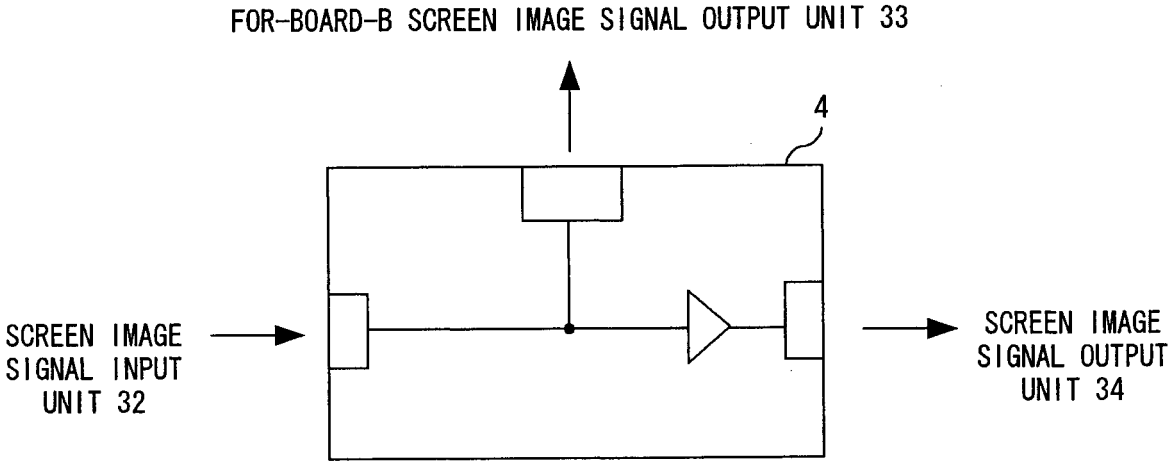

FOR-BOARD-B SCREEN IMAGE SIGNAL OUTPUT UNIT 33
4
SCREEN IMAGE SIGNAL INPUT UNIT 32
SCREEN IMAGE SIGNAL OUTPUT UNIT 34

FIG. 11

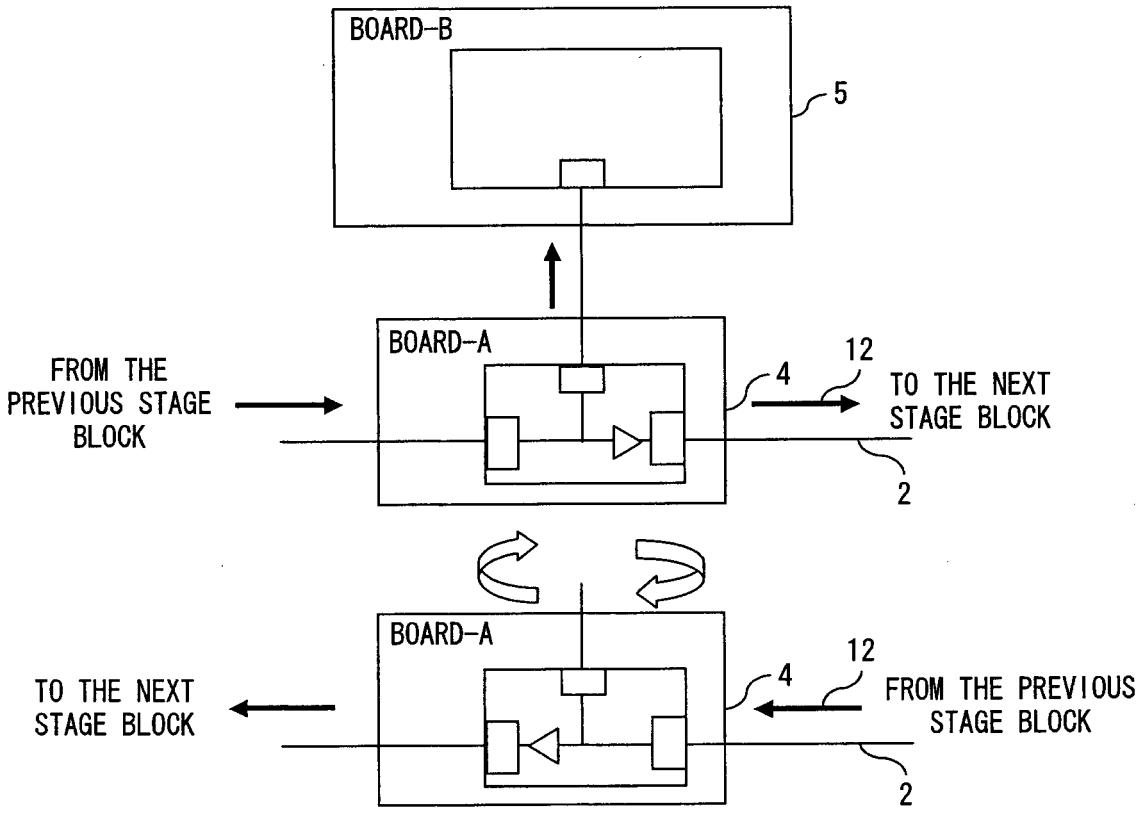
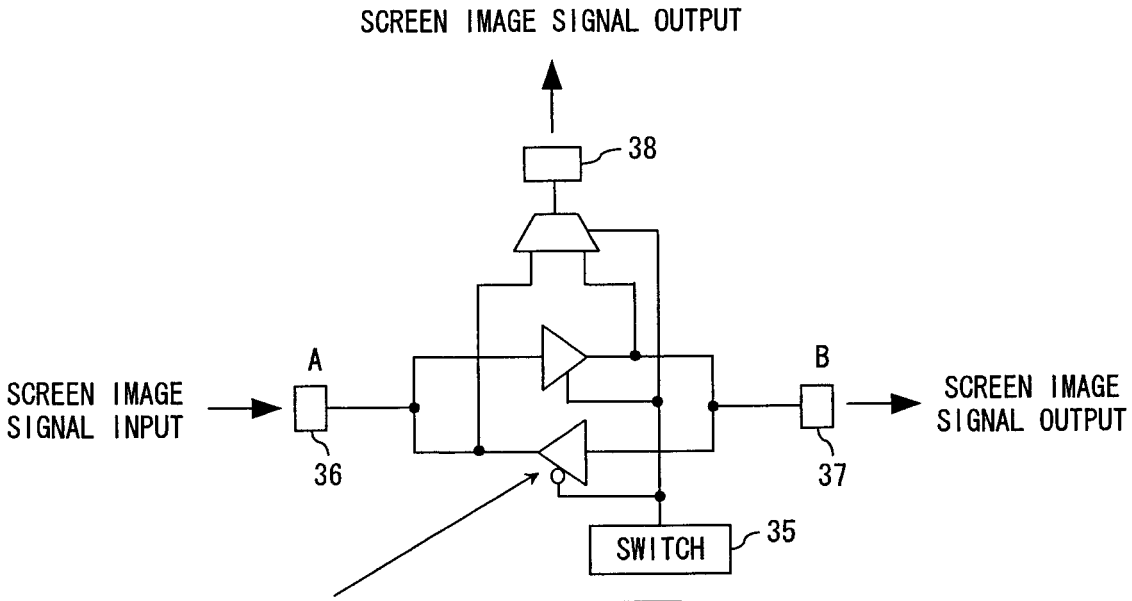

BOARD-B
5
BOARD-A
FROM THE PREVIOUS STAGE BLOCK
4
12
TO THE NEXT STAGE BLOCK
2
BOARD-A
TO THE NEXT STAGE BLOCK
4
12
FROM THE PREVIOUS STAGE BLOCK
2

FIG. 12



SW		
ON	Z(HIGH IMPEDANCE)	A→B
OFF	A←B	Z(HIGH IMPEDANCE)

FIG. 13

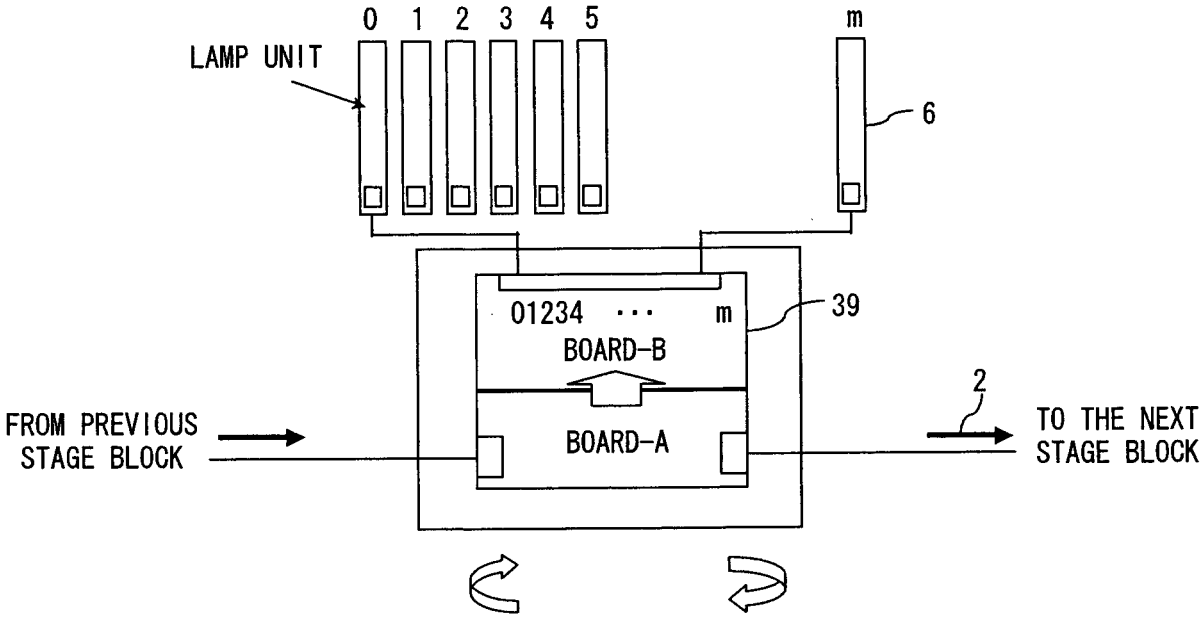

0 1 2 3 4 5
m
LAMP UNIT
6
01234 ··· m
39
BOARD-B
BOARD-A
2
FROM PREVIOUS STAGE BLOCK
TO THE NEXT STAGE BLOCK

FIG. 14

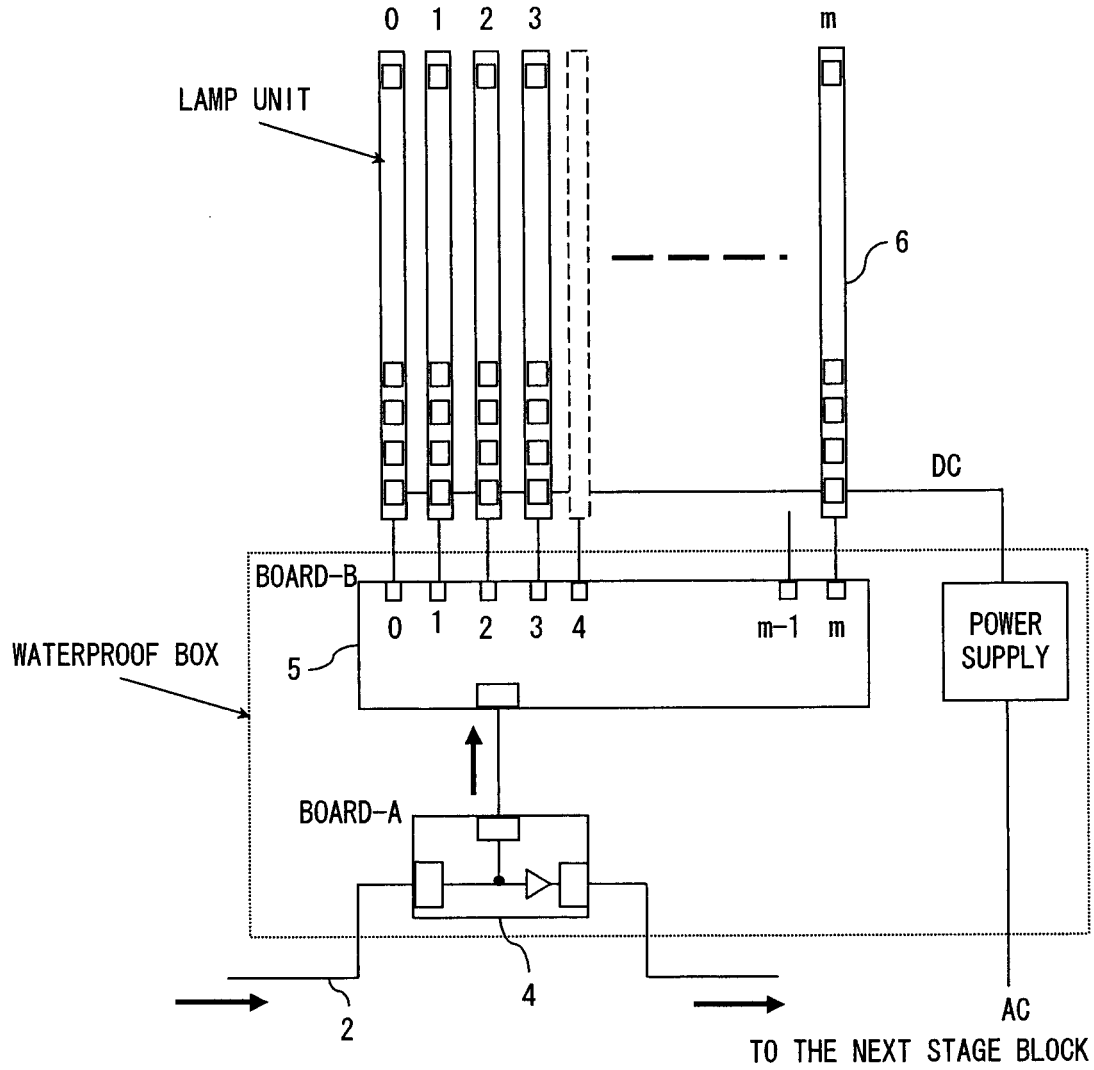

0 1 2 3
m
LAMP UNIT
6
DC
BOARD-B
0 1 2 3 4
m-1 m
POWER SUPPLY
WATERPROOF BOX
5
BOARD-A
4
2
AC
TO THE NEXT STAGE BLOCK

FIG. 15

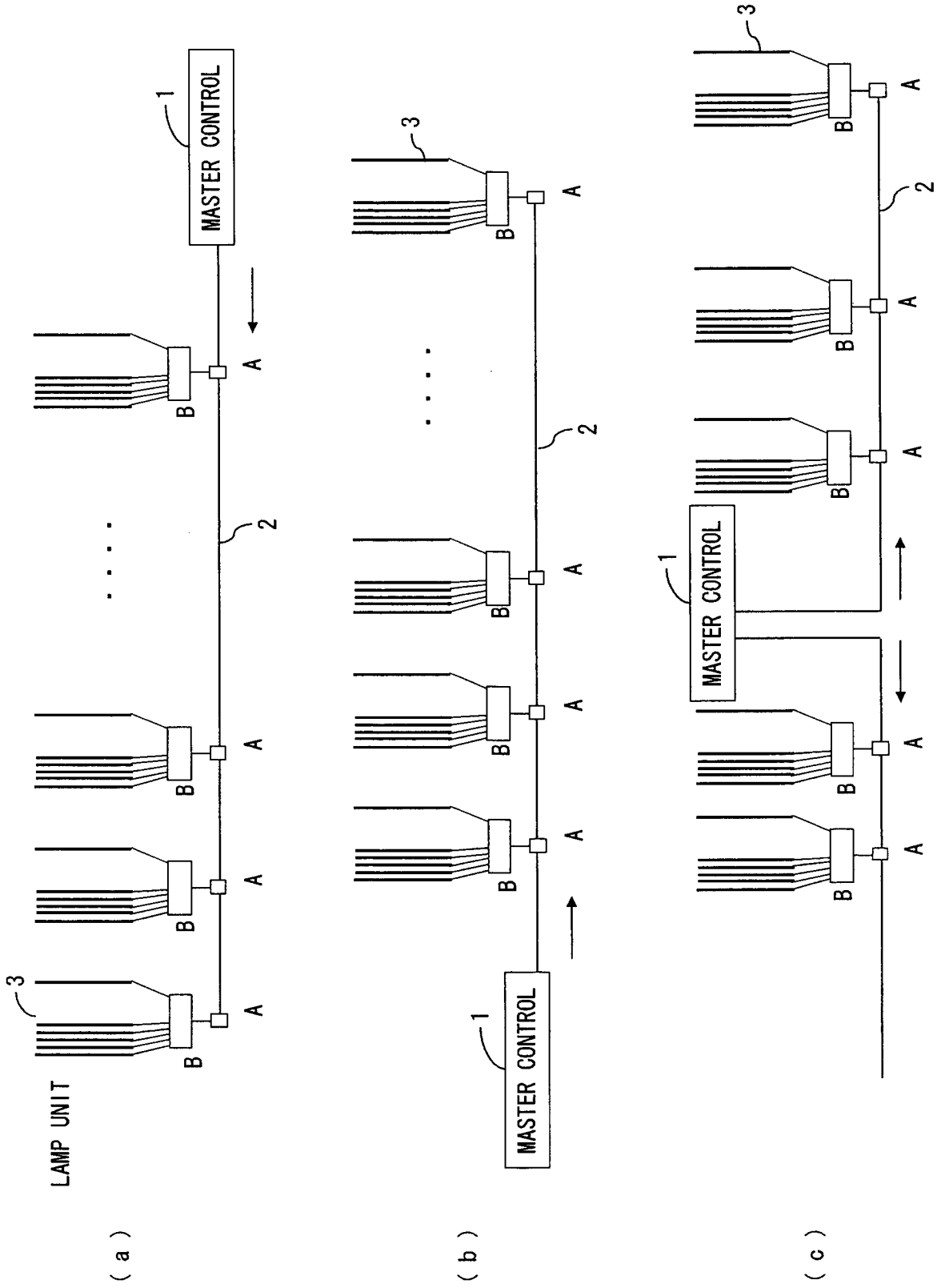


FIG. 16

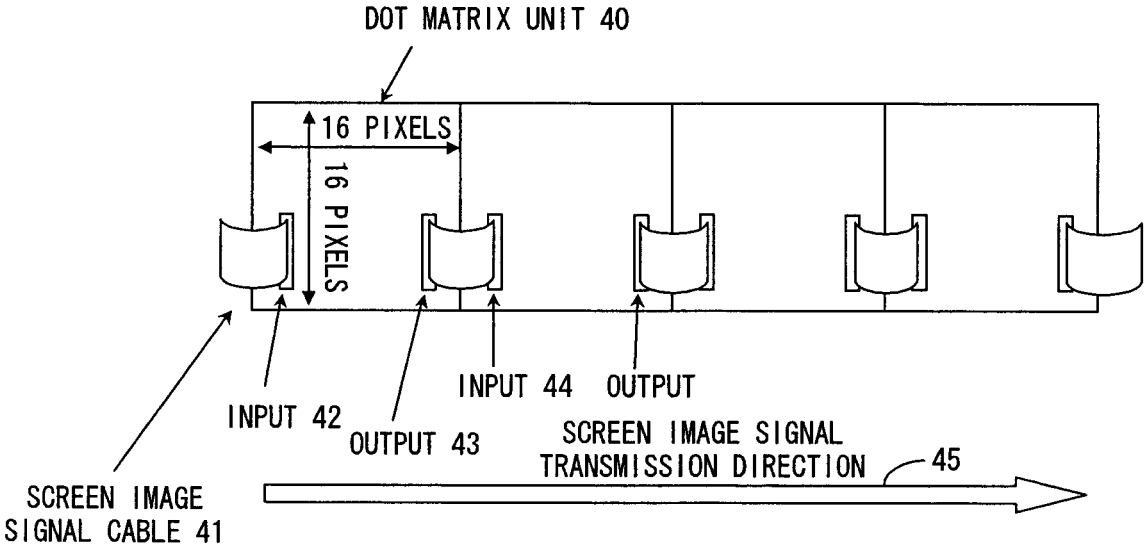

DOT MATRIX UNIT 40
16 PIXELS
16 PIXELS
INPUT 42
OUTPUT 43
INPUT 44
OUTPUT
SCREEN IMAGE SIGNAL TRANSMISSION DIRECTION
45
SCREEN IMAGE SIGNAL CABLE 41

FIG. 17

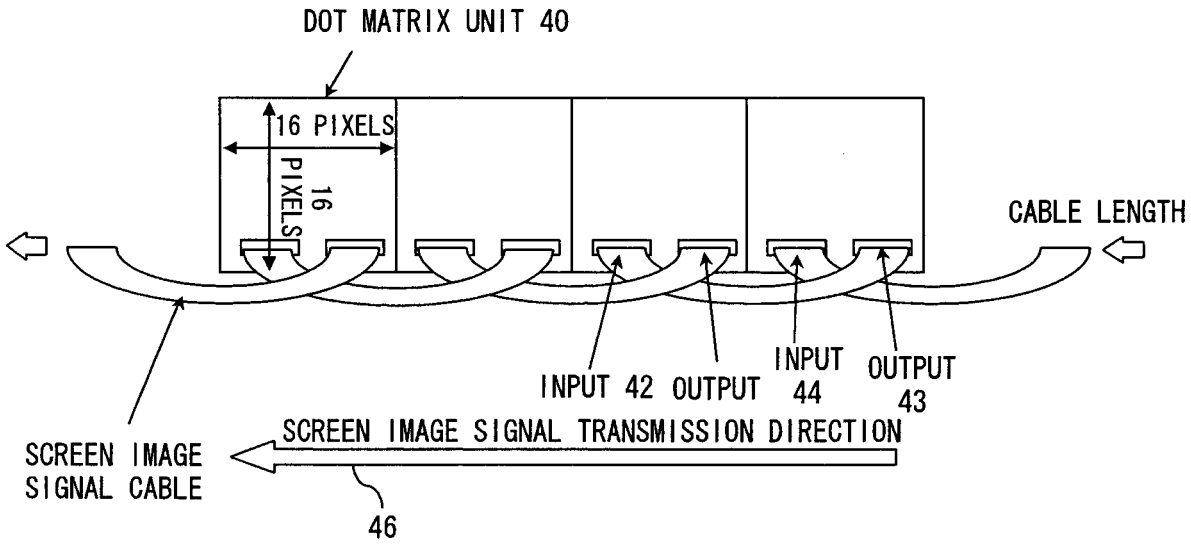

DOT MATRIX UNIT 40
16 PIXELS
16 PIXELS
CABLE LENGTH
INPUT 42
OUTPUT
INPUT 44
OUTPUT 43
SCREEN IMAGE SIGNAL TRANSMISSION DIRECTION
SCREEN IMAGE SIGNAL CABLE
46

FIG. 18

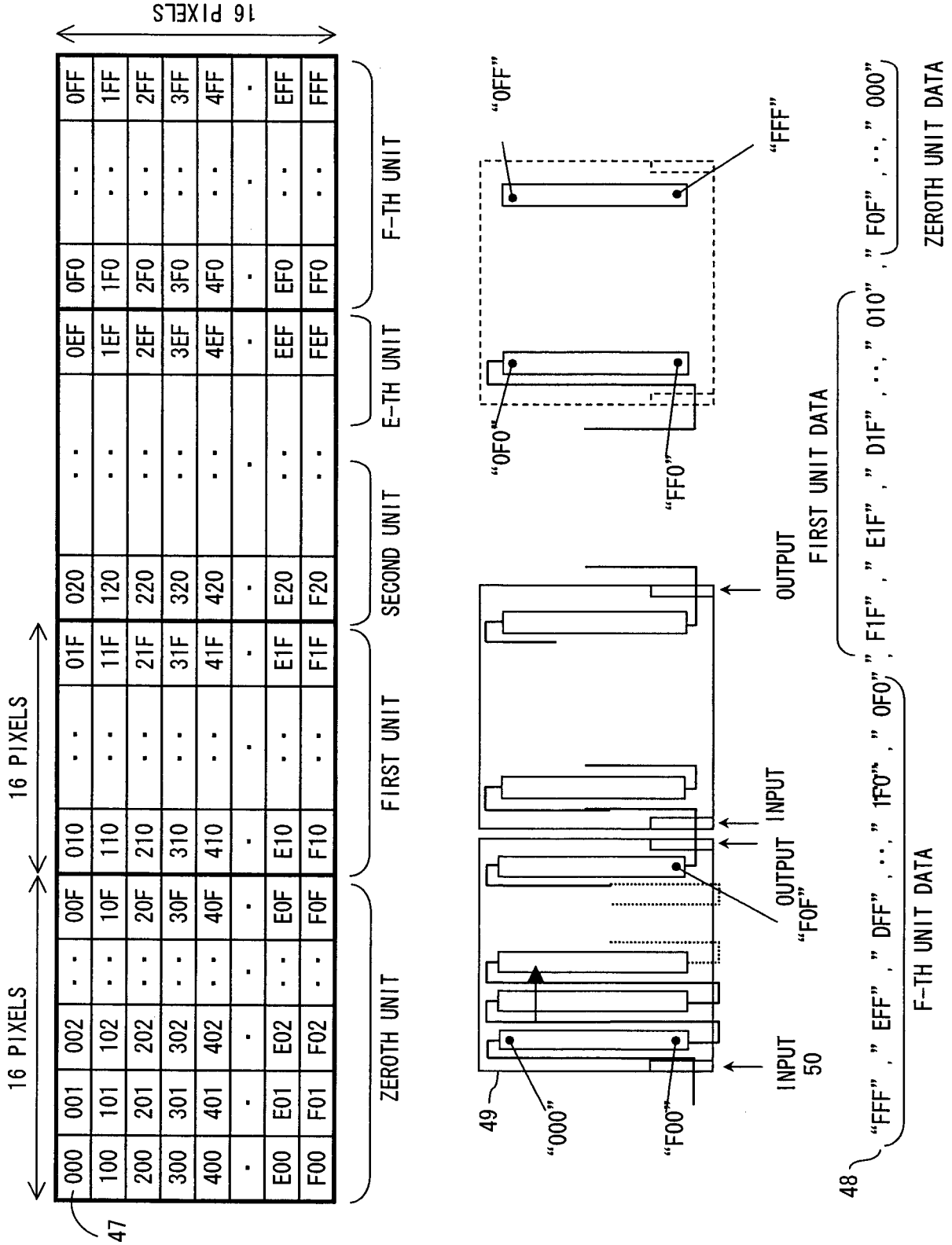

16 PIXELS
16 PIXELS
16 PIXELS
000 001 002 ・・ 00F 010 ・・ 01F 020 ・・ 0EF 0F0 ・・ 0FF
100 101 102 ・・ 10F 110 ・・ 11F 120 ・・ 1EF 1F0 ・・ 1FF
200 201 202 ・・ 20F 210 ・・ 21F 220 ・・ 2EF 2F0 ・・ 2FF
300 301 302 ・・ 30F 310 ・・ 31F 320 ・・ 3EF 3F0 ・・ 3FF
400 401 402 ・・ 40F 410 ・・ 41F 420 ・・ 4EF 4F0 ・・ 4FF
・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・
E00 E01 E02 ・・ E0F E10 ・・ E1F E20 ・・ EEF EF0 ・・ EFF
F00 F01 F02 ・・ F0F F10 ・・ F1F F20 ・・ FEF FF0 ・・ FFF
47
ZEROTH UNIT
FIRST UNIT
SECOND UNIT
E-TH UNIT
F-TH UNIT
"000"
"F00"
"0F0"
"FF0"
"0FF"
"FFF"
49
INPUT
50
OUTPUT
"F0F"
INPUT
OUTPUT
FIRST UNIT DATA
"FFF", "EFF", "DFF", ・・, "1F0", "0F0", F1F", "E1F", "D1F", ・・, "010", "F0F", ・・, "000"
48
F-TH UNIT DATA
ZEROTH UNIT DATA

FIG. 19