FIG. 1A

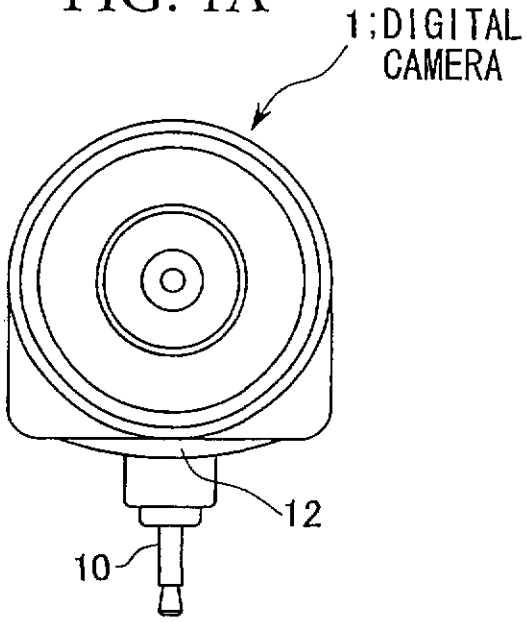


FIG. 1B

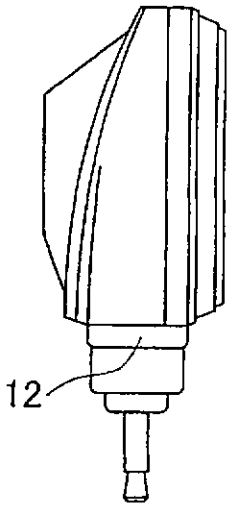


FIG. 1C

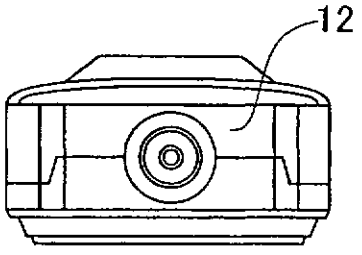


FIG. 1D

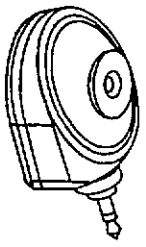


FIG. 2

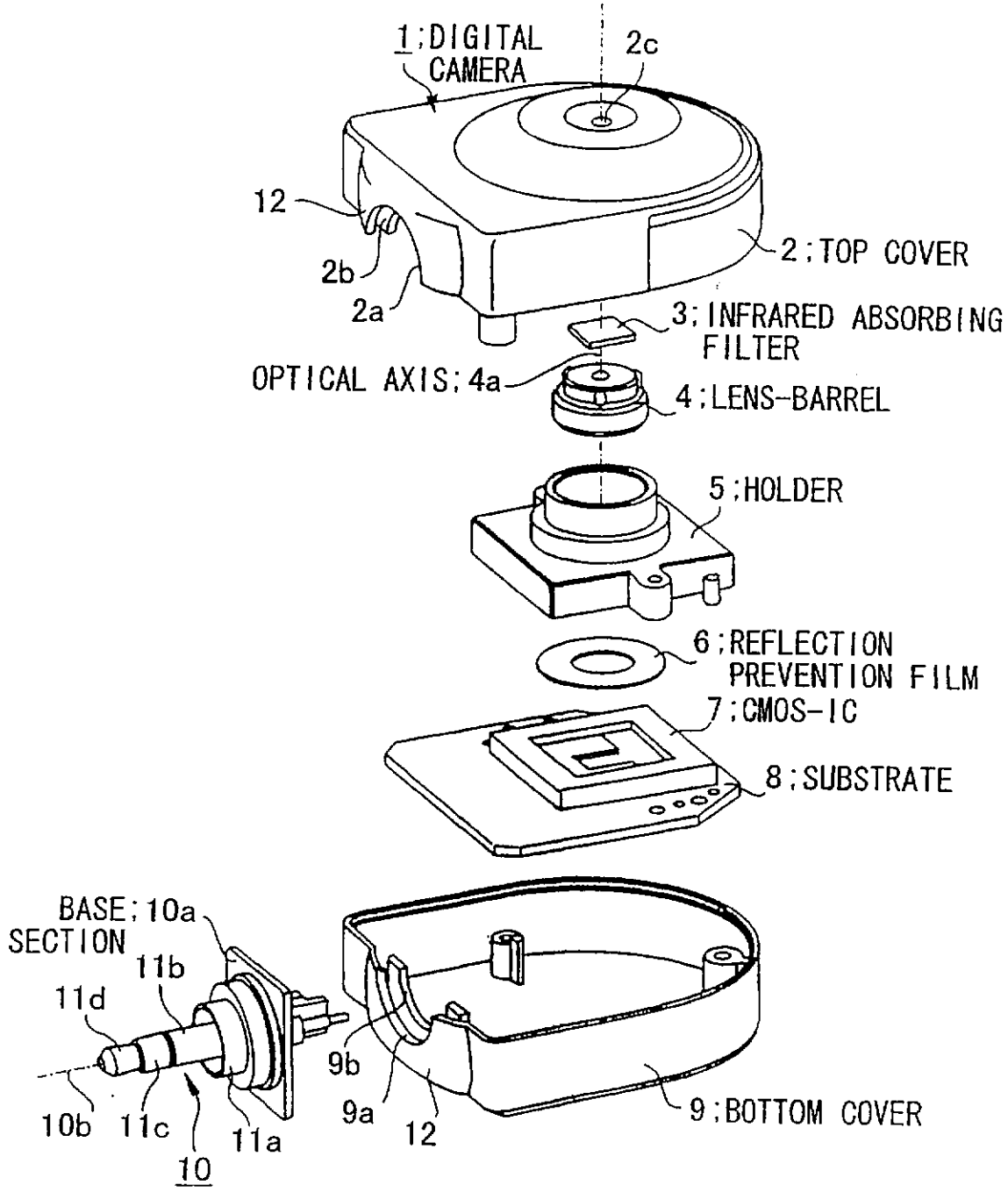

1;DIGITAL CAMERA
2c
12
2b
2a
2;TOP COVER
3;INFRARED ABSORBING FILTER
OPTICAL AXIS;4a
4;LENS-BARREL
5;HOLDER
6;REFLECTION PREVENTION FILM
7;CMOS-IC
8;SUBSTRATE
BASE;10a SECTION
11b
11d
9b
9a
12
9;BOTTOM COVER
10b
11c
11a
10

FIG. 3

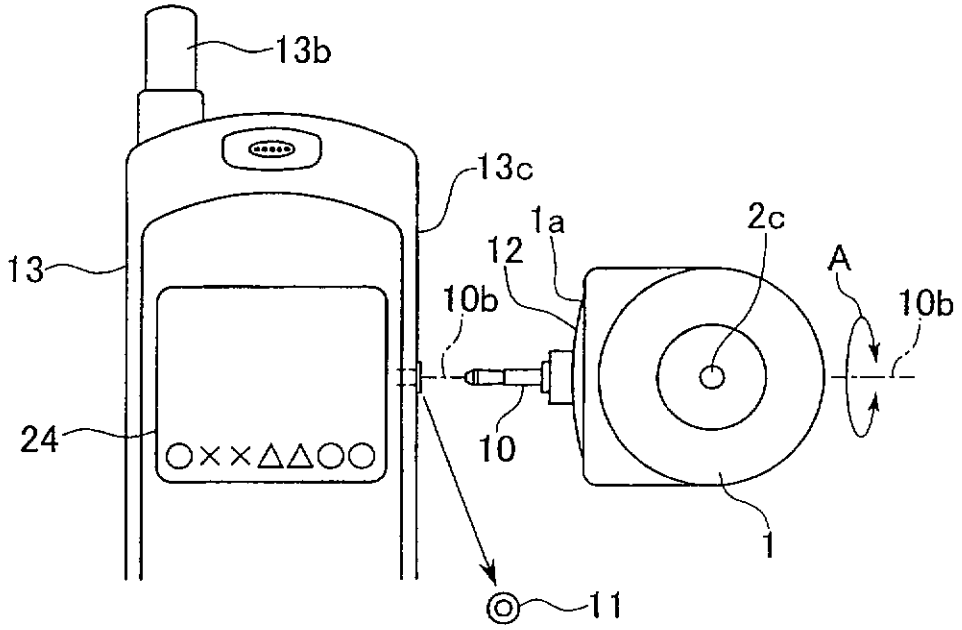


FIG. 4

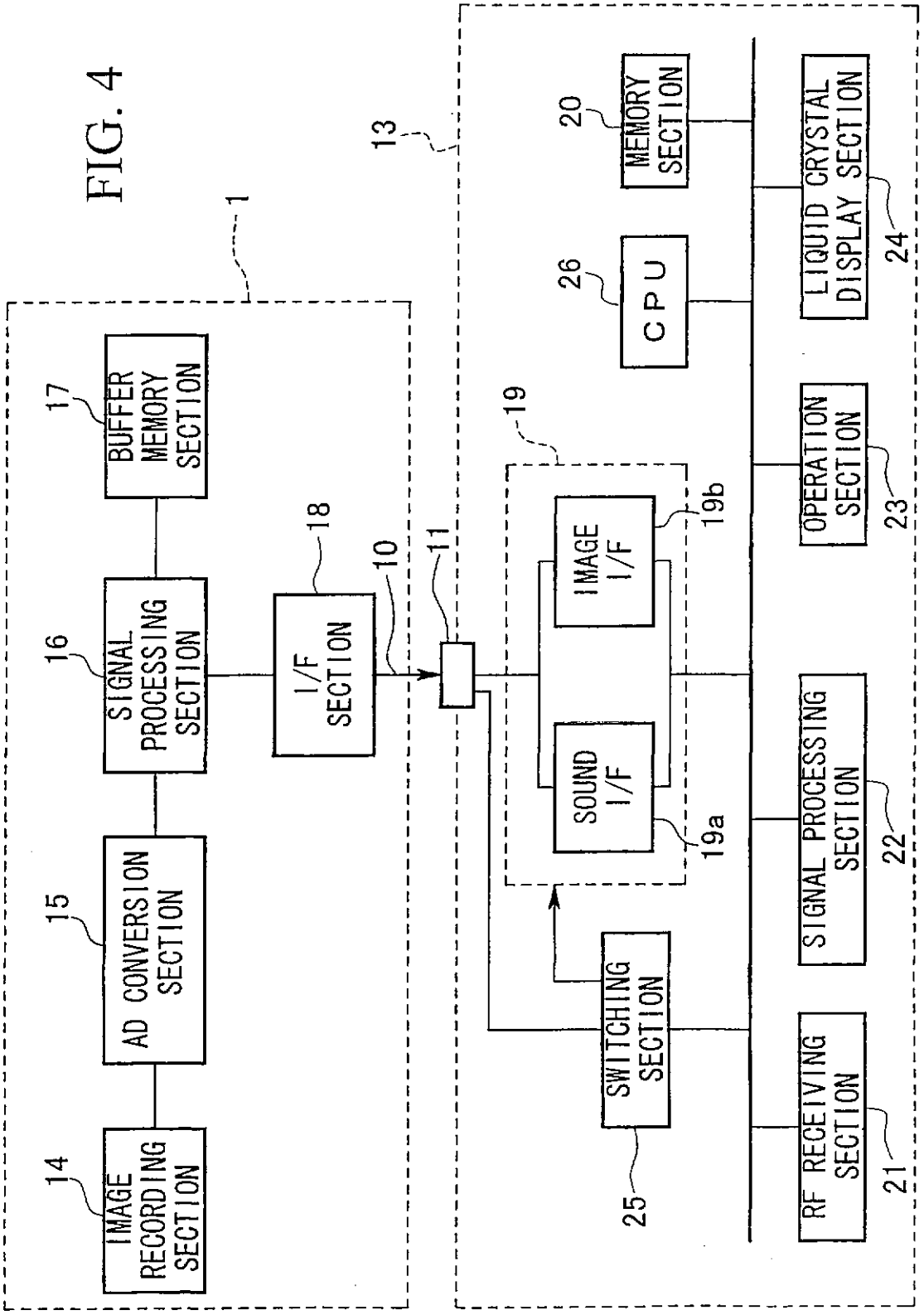

1
13
IMAGE RECORDING SECTION
14
AD CONVERSION SECTION
15
SIGNAL PROCESSING SECTION
16
BUFFER MEMORY SECTION
17
I/F SECTION
18
10
11
19
IMAGE I/F
19b
SOUND I/F
19a
SWITCHING SECTION
25
RF RECEIVING SECTION
21
SIGNAL PROCESSING SECTION
22
OPERATION SECTION
23
LIQUID CRYSTAL DISPLAY SECTION
24
CPU
26
MEMORY SECTION
20

FIG. 5A

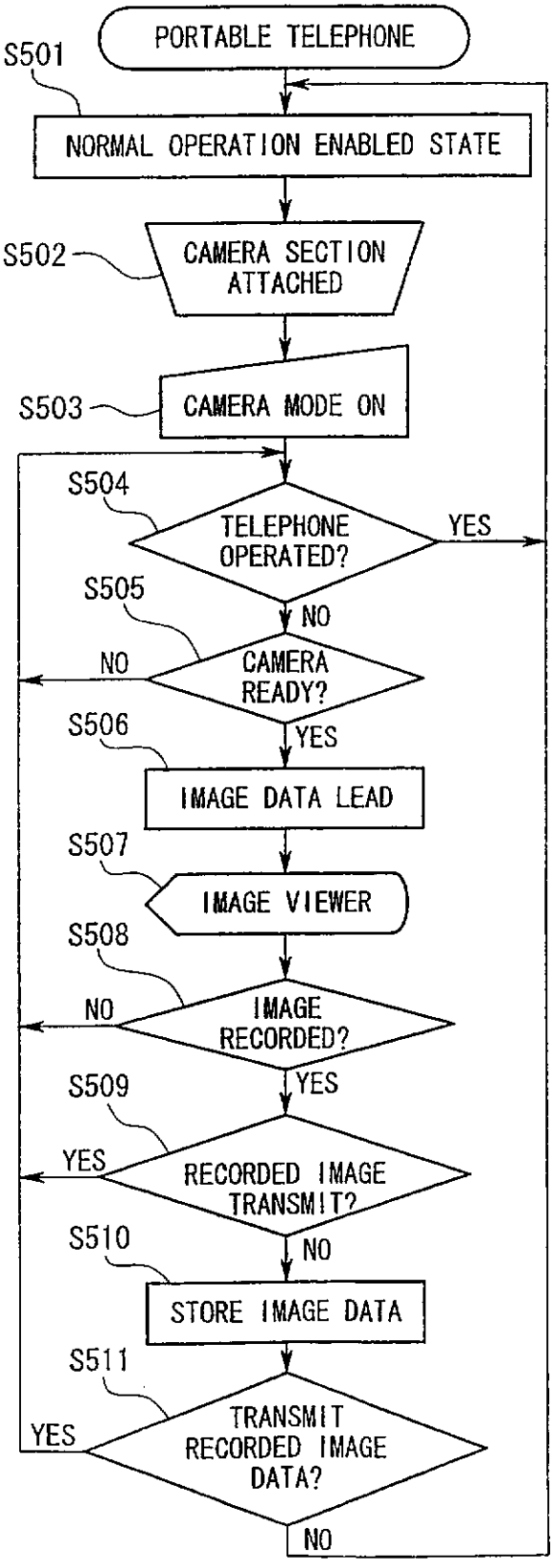

PORTABLE TELEPHONE
S501
NORMAL OPERATION ENABLED STATE
S502
CAMERA SECTION ATTACHED
S503
CAMERA MODE ON
S504
TELEPHONE OPERATED?
YES
NO
S505
CAMERA READY?
NO
YES
S506
IMAGE DATA LEAD
S507
IMAGE VIEWER
S508
IMAGE RECORDED?
NO
YES
S509
RECORDED IMAGE TRANSMIT?
YES
NO
S510
STORE IMAGE DATA
S511
TRANSMIT RECORDED IMAGE DATA?
YES
NO

FIG. 5B

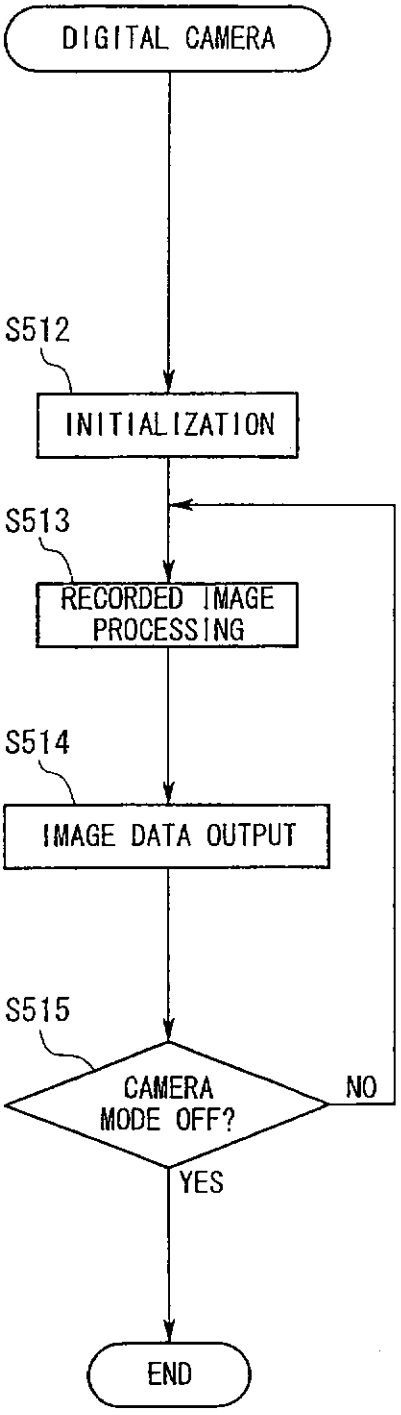

DIGITAL CAMERA
S512
INITIALIZATION
S513
RECORDED IMAGE PROCESSING
S514
IMAGE DATA OUTPUT
S515
CAMERA MODE OFF?
NO
YES
END

FIG. 6A

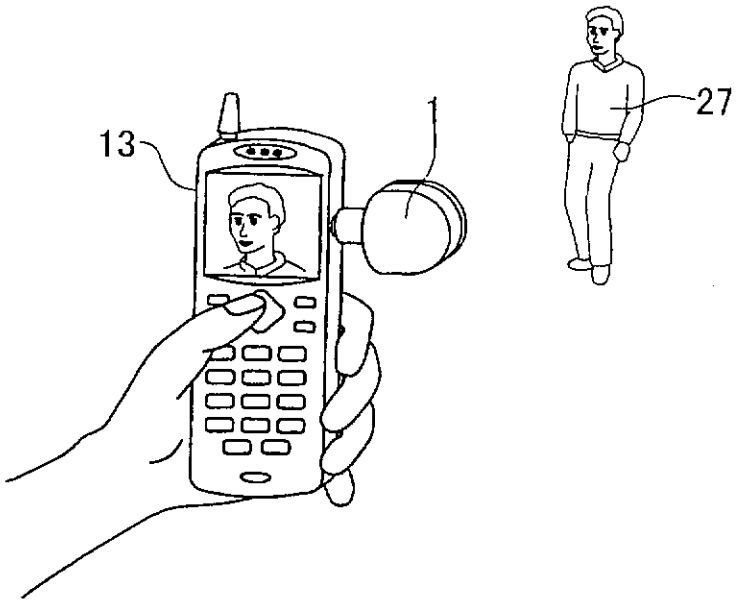


FIG. 6B

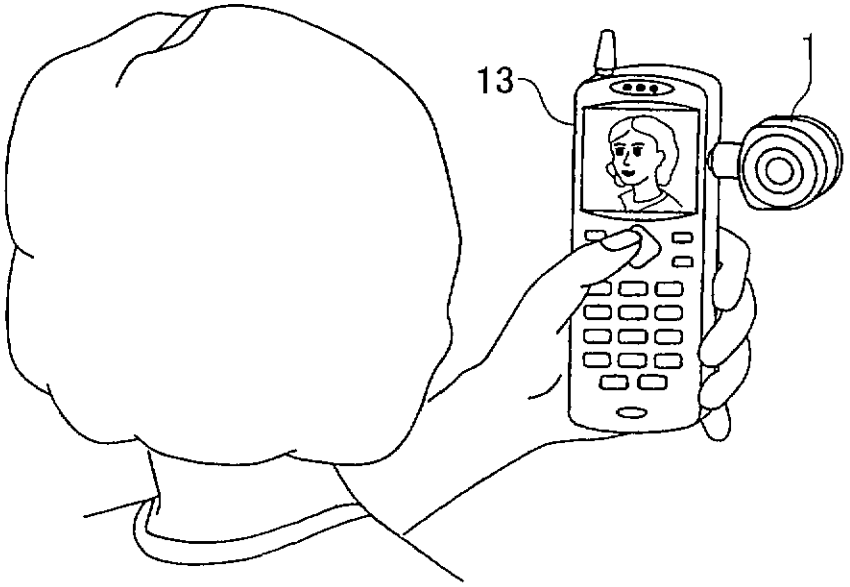


FIG. 7

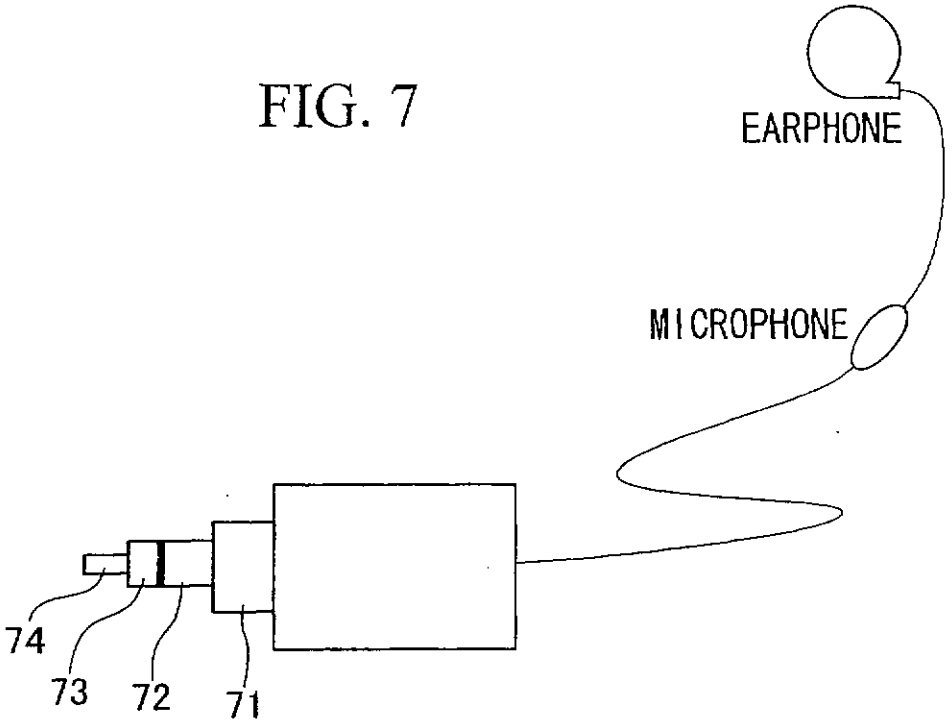

EARPHONE
MICROPHONE
74
73
72
71

FIG. 8

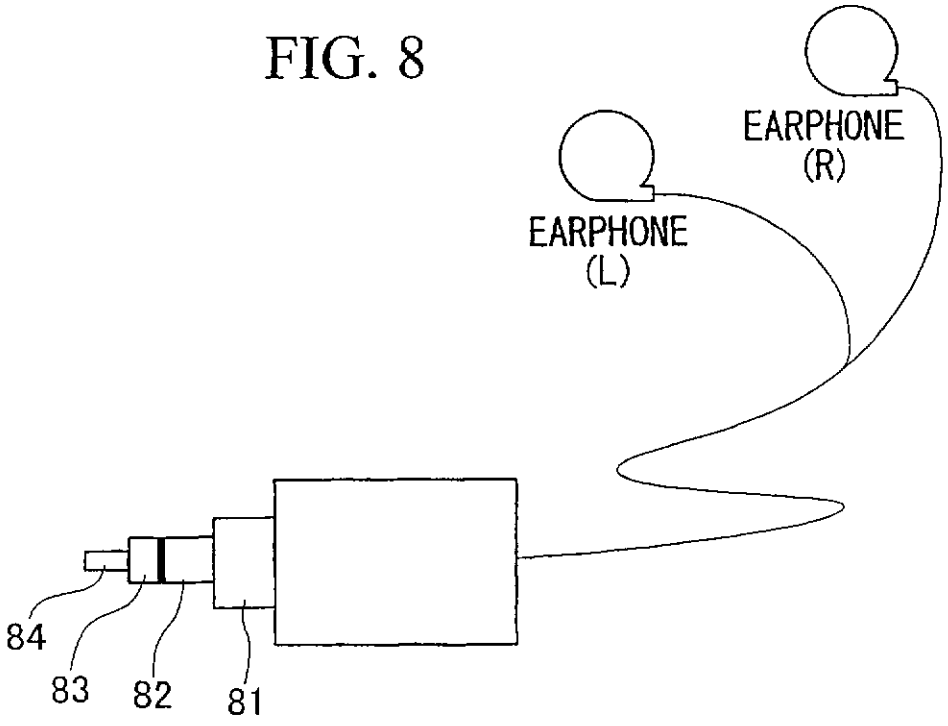

EARPHONE
(R)
EARPHONE
(L)
84
83
82
81

FIG. 9

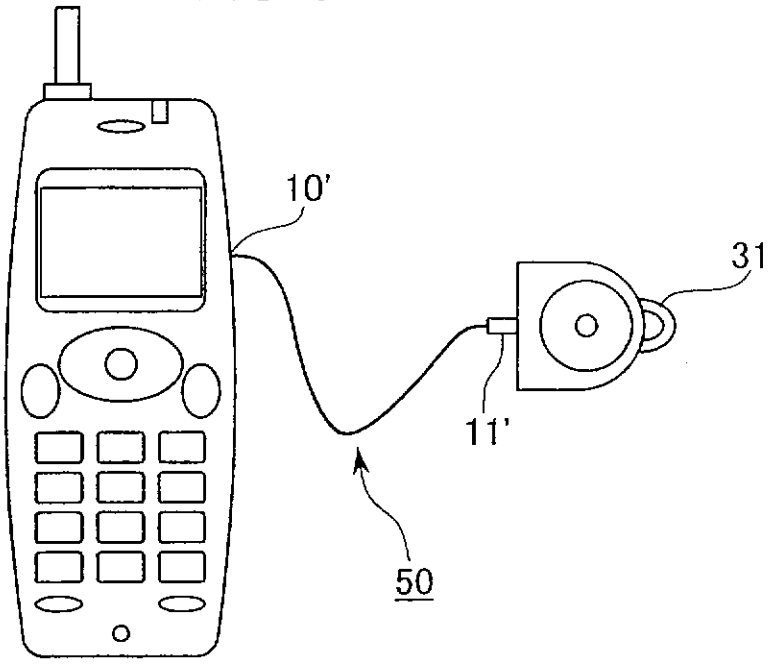


FIG. 10

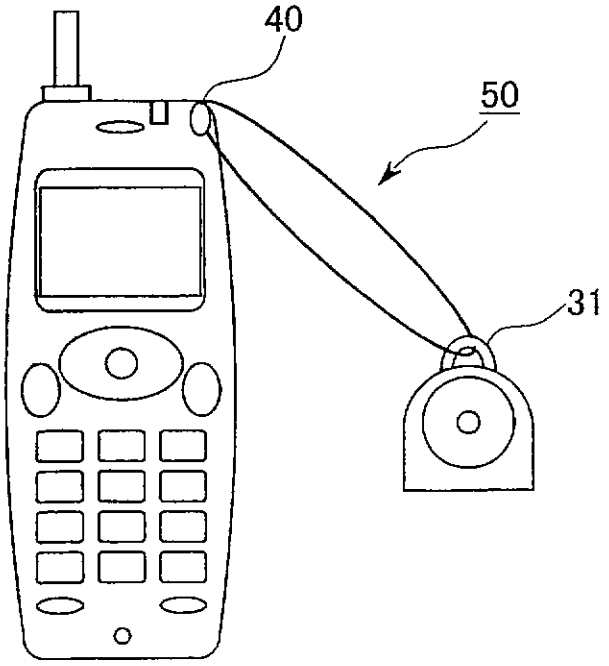


FIG. 11

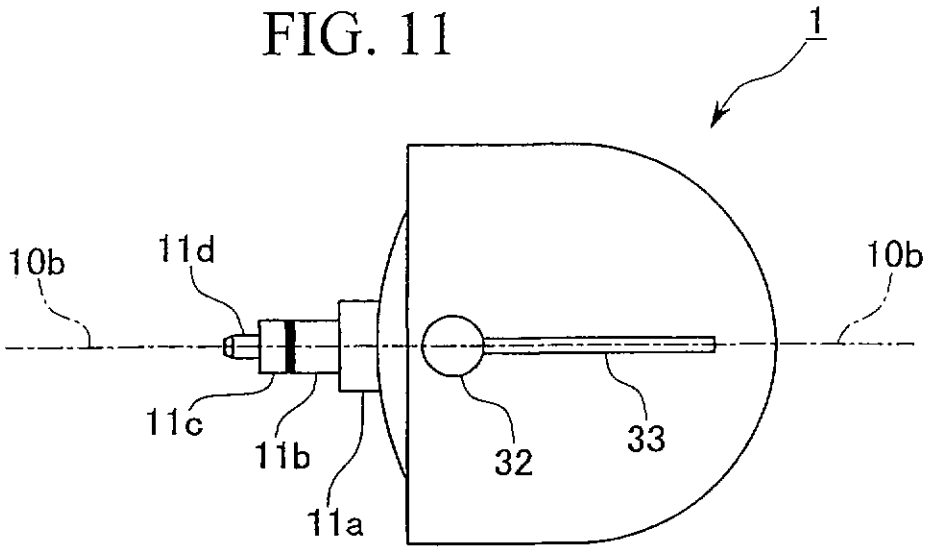


FIG. 12

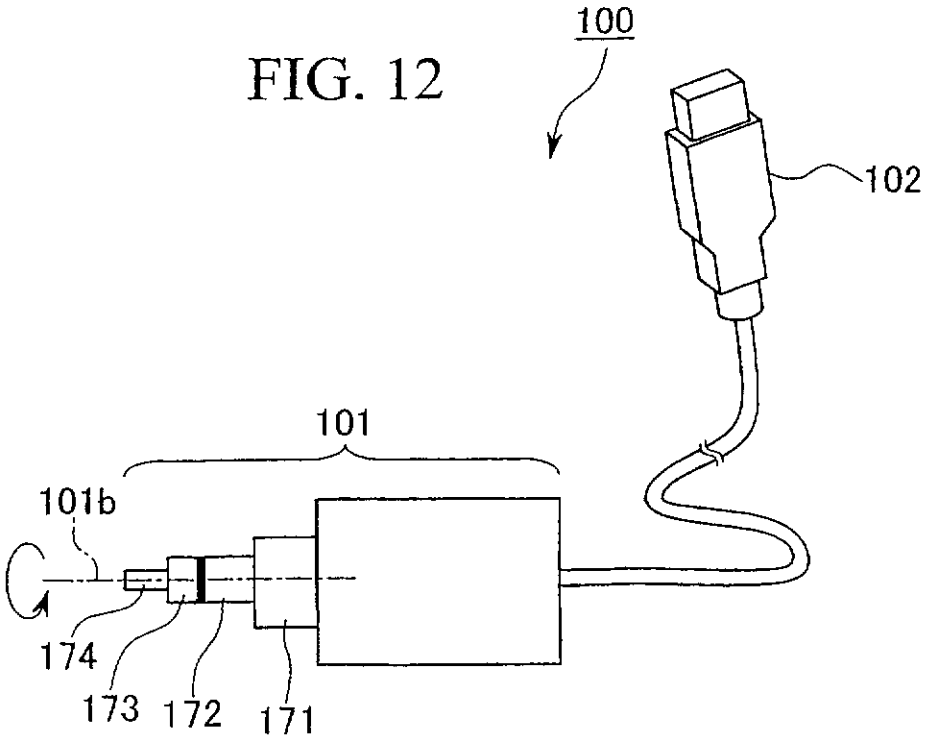


FIG. 13

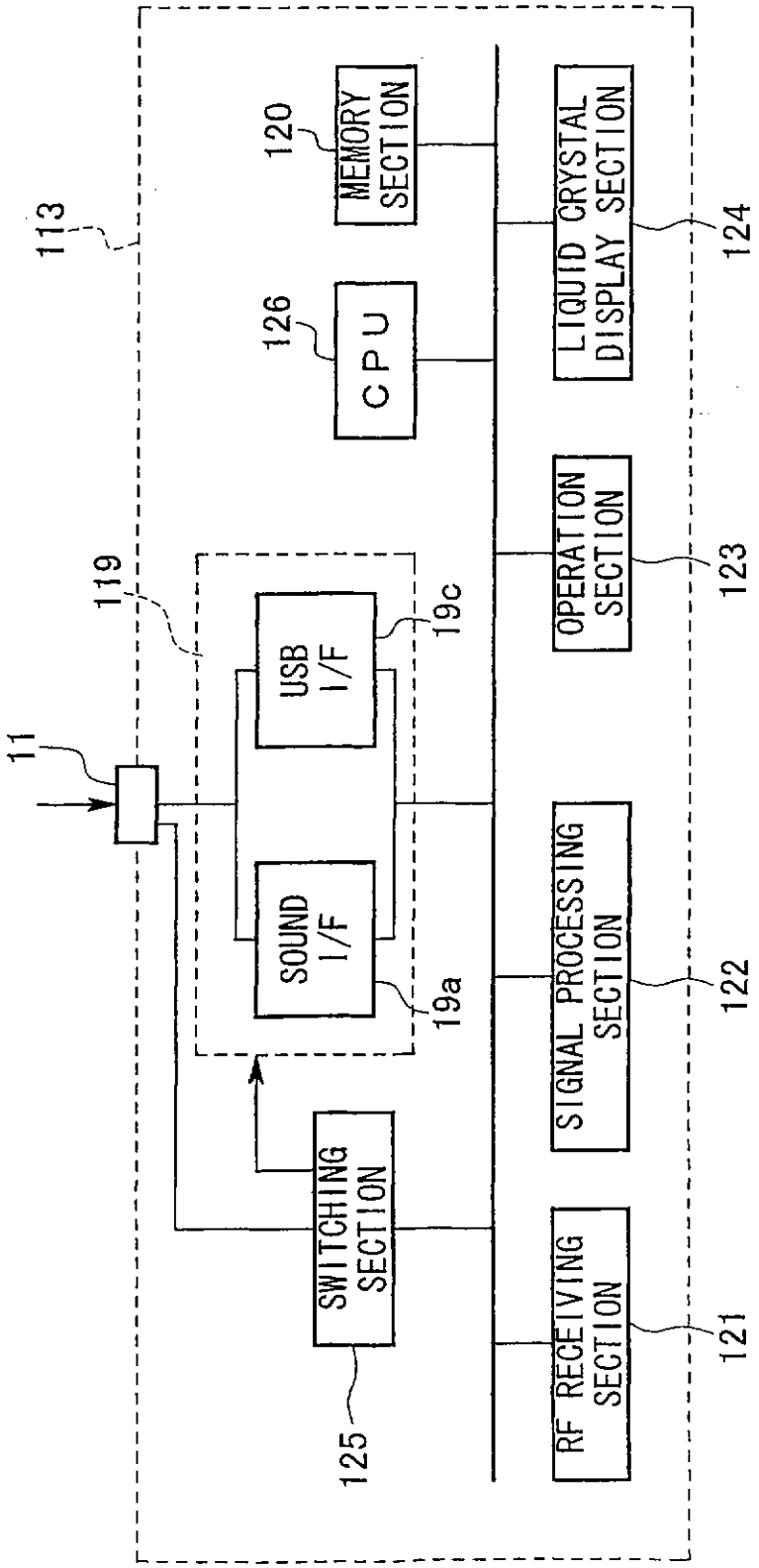

113
120
MEMORY SECTION
126
CPU
LIQUID CRYSTAL DISPLAY SECTION
124
119
USB I/F
19c
OPERATION SECTION
123
11
SOUND I/F
19a
SIGNAL PROCESSING SECTION
122
SWITCHING SECTION
125
RF RECEIVING SECTION
121

FIG. 14

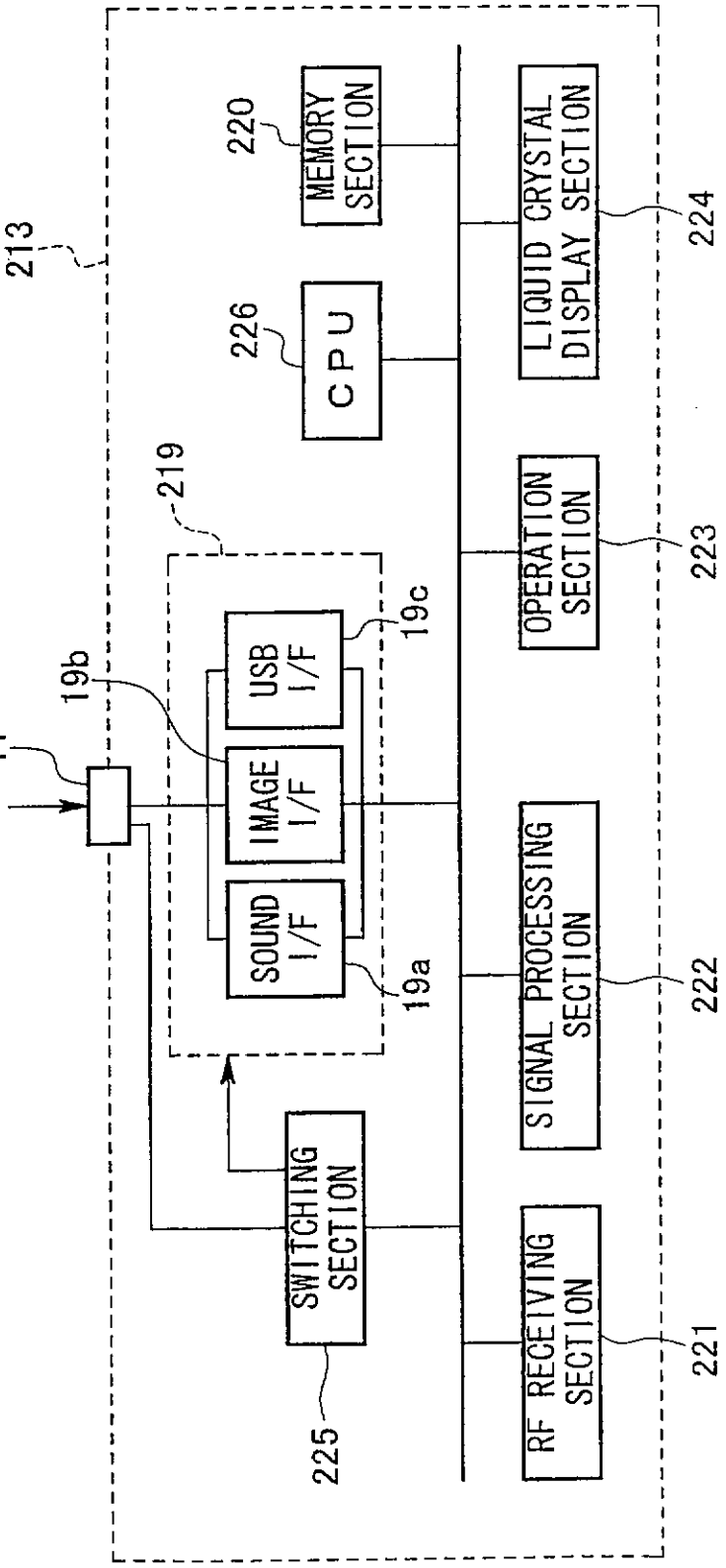

213
220
MEMORY SECTION
226
CPU
LIQUID CRYSTAL DISPLAY SECTION
224
219
OPERATION SECTION
223
19c
USB I/F
19b
11
IMAGE I/F
SOUND I/F
19a
SIGNAL PROCESSING SECTION
222
SWITCHING SECTION
225
RF RECEIVING SECTION
221

FIG. 15

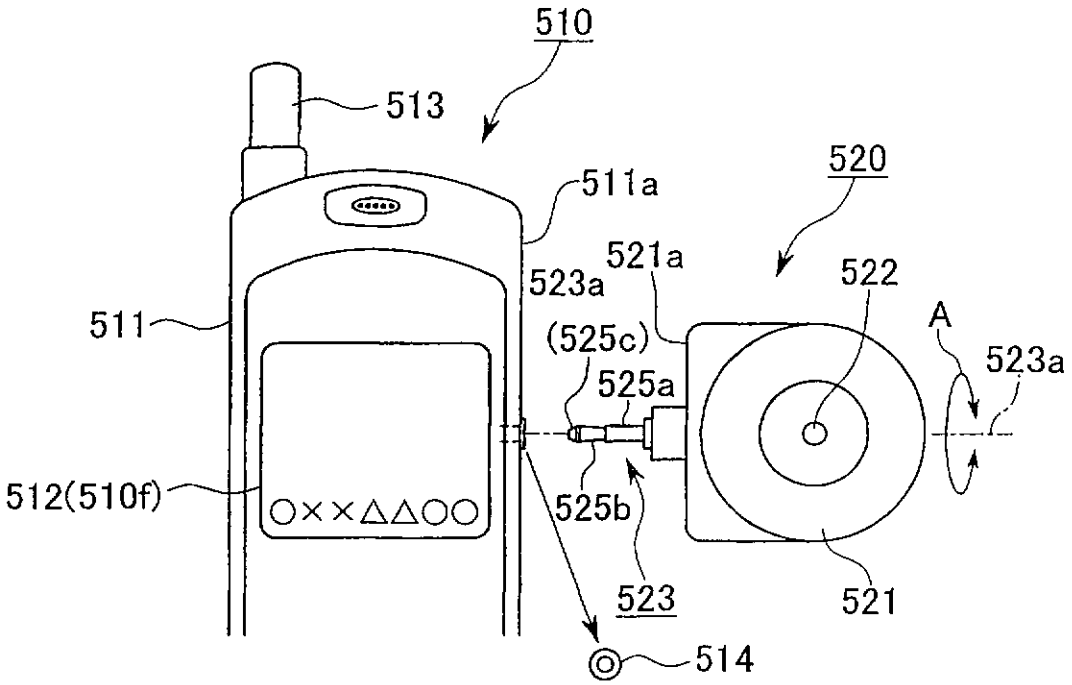

510
513
511a
520
521a
522
523a
511
(525c)
A
523a
525a
512(510f)
525b
523
521
514

FIG. 16

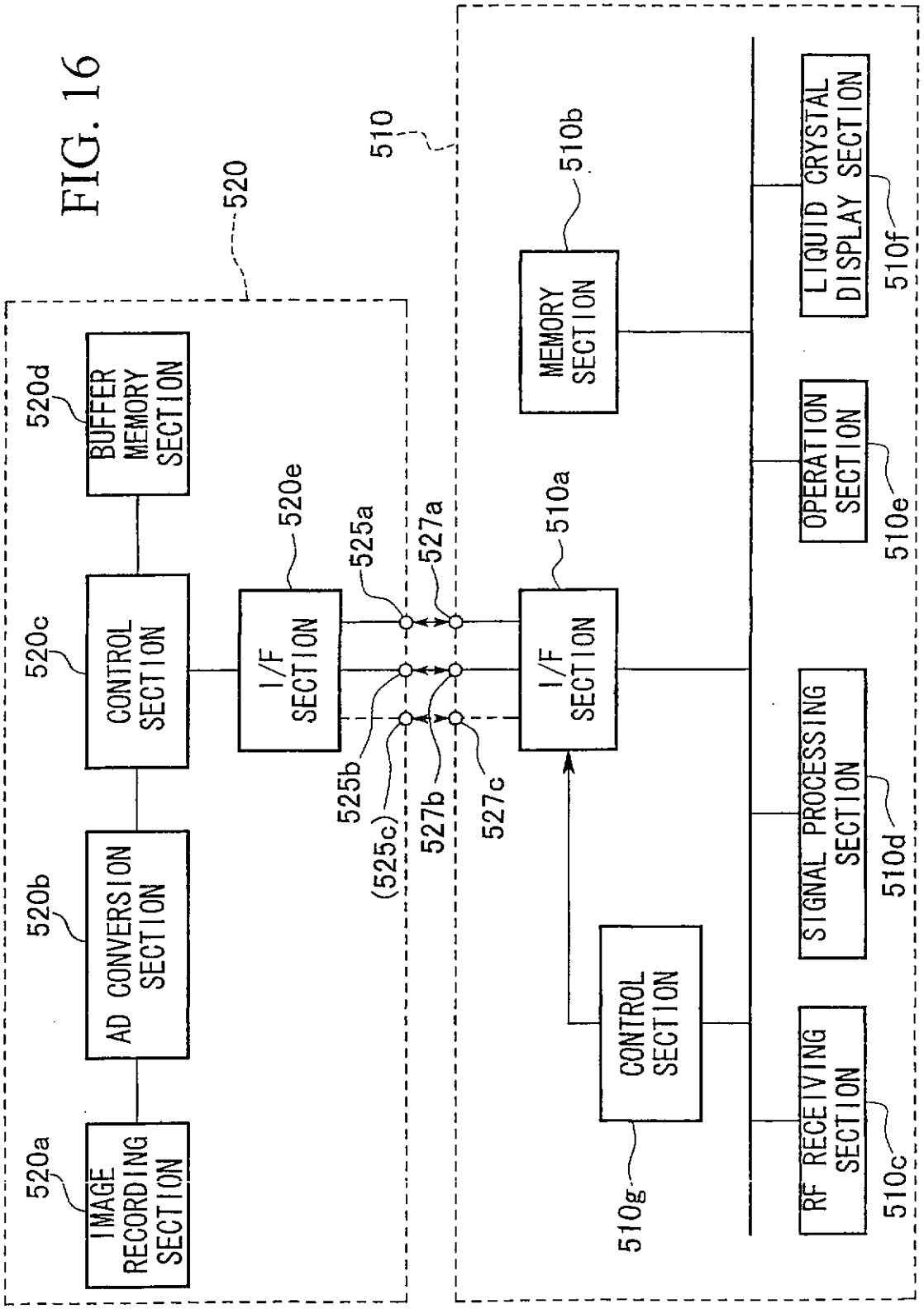

520
510
520a
IMAGE RECORDING SECTION
520b
AD CONVERSION SECTION
520c
CONTROL SECTION
520d
BUFFER MEMORY SECTION
520e
I/F SECTION
525a
527a
525b
(525c)
527b
527c
510a
I/F SECTION
510b
MEMORY SECTION
510c
RF RECEIVING SECTION
510d
SIGNAL PROCESSING SECTION
510e
OPERATION SECTION
510f
LIQUID CRYSTAL DISPLAY SECTION
510g
CONTROL SECTION

FIG. 17

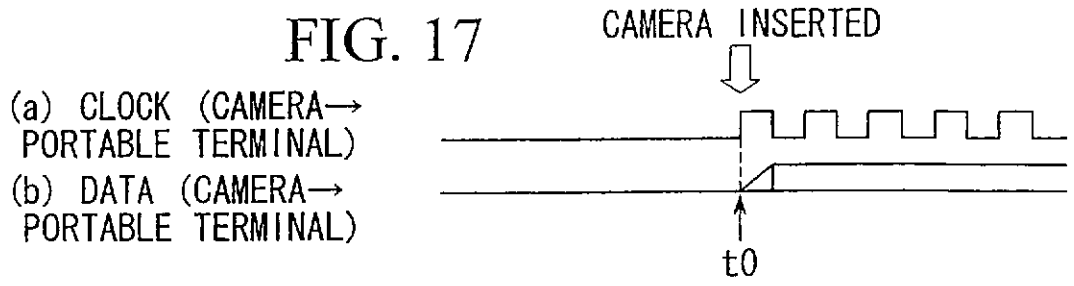


FIG. 18

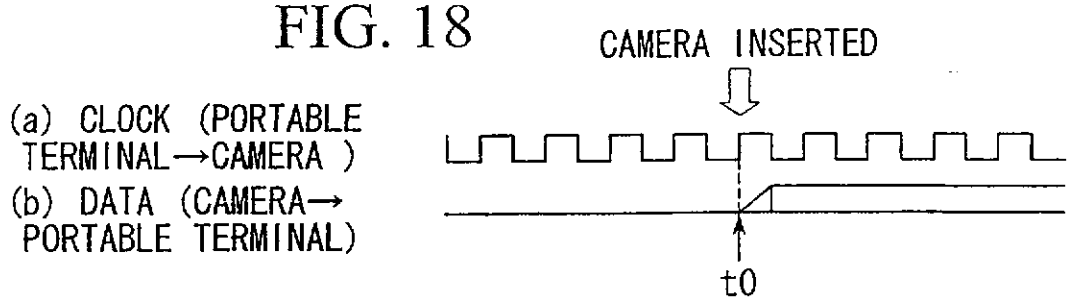


FIG. 19

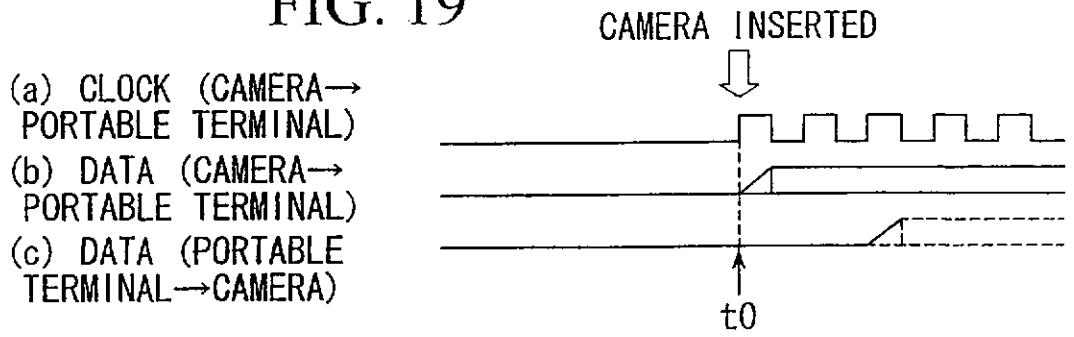


FIG. 20

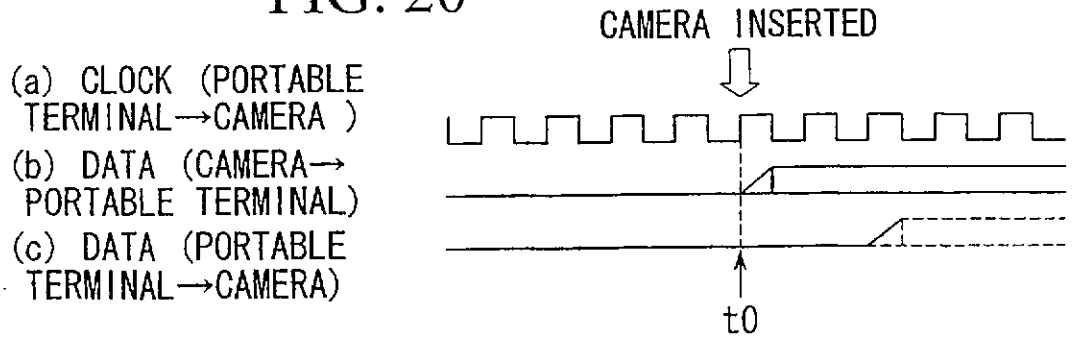


FIG. 21

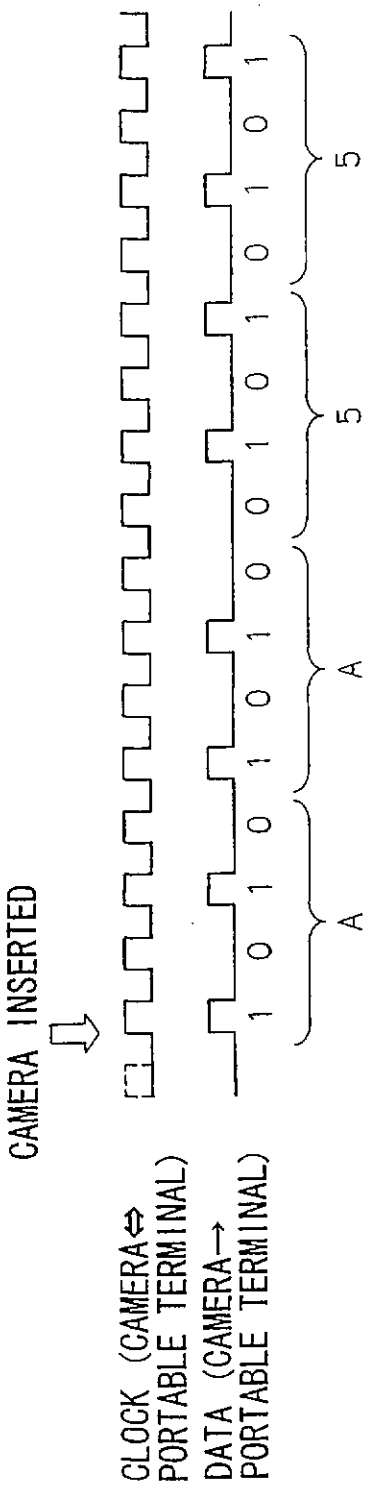

CAMERA INSERTED
CLOCK (CAMERA⇔ PORTABLE TERMINAL)
DATA (CAMERA→ PORTABLE TERMINAL)
1 0 1 0 1 0 1 0 0 0 1 0 1 0 1
A
A
5
5

FIG. 22

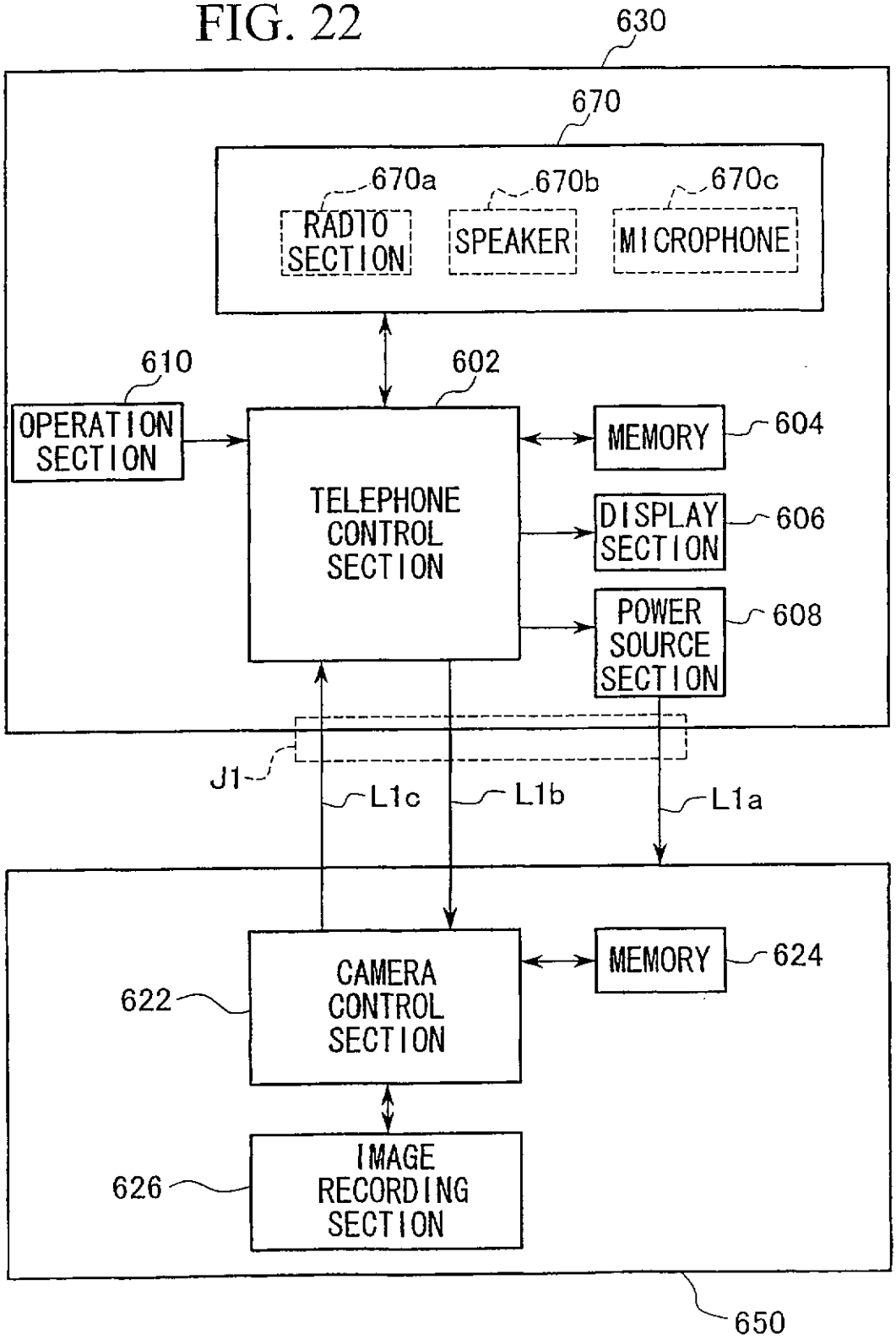

630
670
670a
670b
670c
RADIO SECTION
SPEAKER
MICROPHONE
610
602
OPERATION SECTION
TELEPHONE CONTROL SECTION
MEMORY
604
DISPLAY SECTION
606
POWER SOURCE SECTION
608
J1
L1c
L1b
L1a
CAMERA CONTROL SECTION
622
MEMORY
624
IMAGE RECORDING SECTION
626
650

FIG. 23

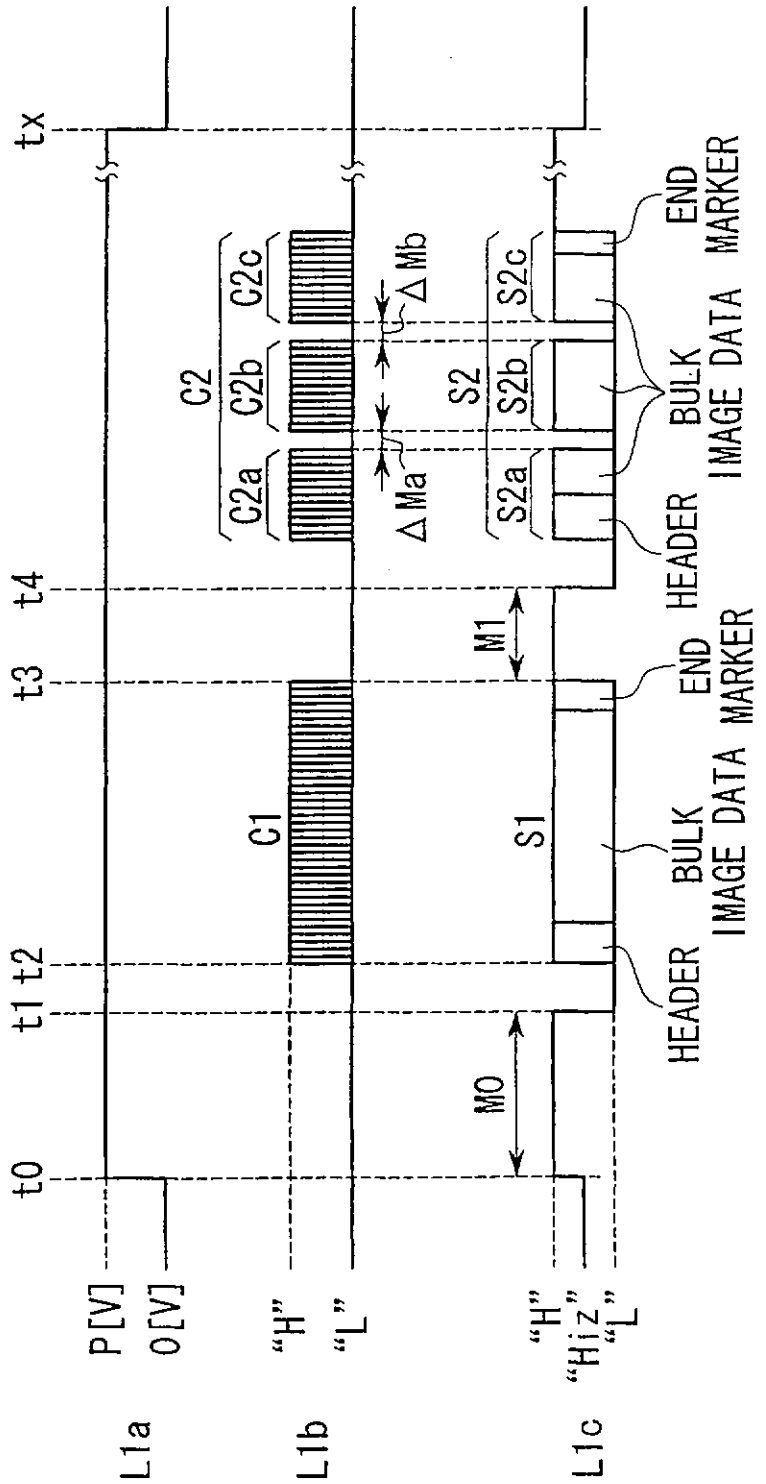

tx
t0
t1 t2
t3
t4
P[V]
0[V]
"H"
"L"
"H"
"Hiz"
"L"
L1a
L1b
L1c
C1
C2
C2a
C2b
C2c
ΔMa
ΔMb
S1
S2
S2a
S2b
S2c
M0
M1
HEADER
BULK IMAGE DATA
END MARKER
HEADER
BULK IMAGE DATA
END MARKER

FIG. 24

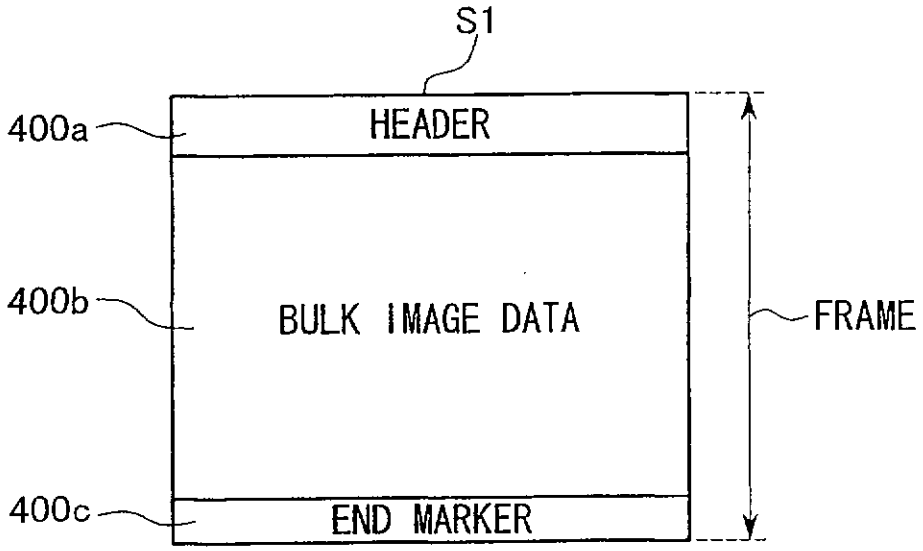
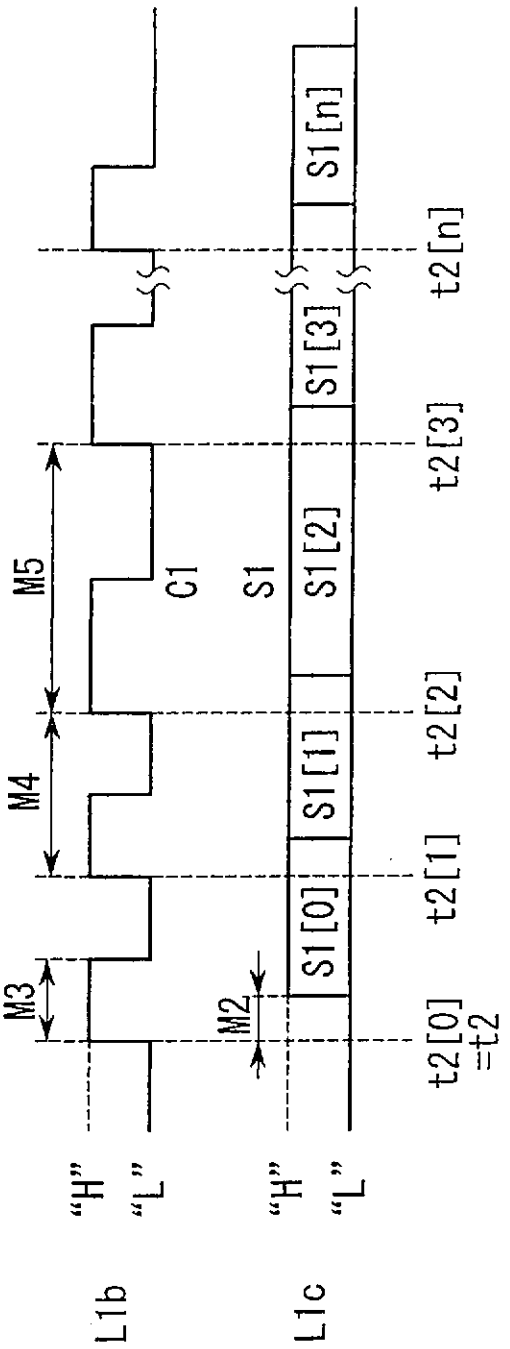


FIG. 25


L1b
L1c
"H"
"L"
"H"
"L"
M3
M4
M5
M2
C1
S1
S1[0]
S1[1]
S1[2]
S1[3]
S1[n]
t2[0] =t2
t2[1]
t2[2]
t2[3]
t2[n]

400a

FIG. 26

ITEM	SIZE	DATA (HEXADECIMAL)	NOTES
DUMMY	2 BYTES	AA56	FIXED VALUE: AA55
FRAME START MARKER (SOF)	2 BYTES	FFD8	FIXED VALUE: FFD8
HEADER BYTES EXCEPT DUMMY AND SOF	1 BYTE	1C	28 BYTES
MODEL TYPE	1 BYTE	F0	F*, *=0:CAMERA, UNDEFINED
VERSION	1 BYTE	F1	F*, *=1:VERSION 1
IMAGE WIDTH	2 BYTES	0060	PIXELS IN 1 LINE OF OUTPUT IMAGE; 96 PIXELS: 0060 (HEXADECIMAL)
IMAGE HEIGHT	2 BYTES	0048	LINES IN OUTPUT IMAGE; 72 LINES:0048 (HEXADECIMAL)
IMAGE BIT DEPTH	4 BYTES	8	8:8 BIT
IMAGE ELEMENTS	4 BYTES	1	0: BW, 1: YUV, OTHERS UNDEFINED;
DATA OUTPUT COLOR SEQUENCE	4 BYTES	2	0: YYVU, 1:YYUV, 2:VYUY, 3:UYVY, OTHERS UNDEFINED
DATA OUTPUT BIT SEQUENCE	4 BYTES	1	0:LSB START, 1:MSB START
OUTPUT PIXEL ELEMENTS	4 BYTES	2	0:(4:0:0), 1:(4:2:0(=4:1:1))2:(4:2:2), 4:(4:4:4), OTHERS UNDEFINED
COMPRESSION TYPE	4 BYTES	0	0: NON-COMPRESSION, OTHERS UNDEFINED
MAKER INFORMATION	8 BYTES	0	ARBITRARY: DEFAULT:0
USER INFORMATION IMAGE	8 BYTES	0	ARBITRARY: DEFAULT:0
DATA START ACKNOWLEDGE	2 BYTES	AA55	FIXED VALUE: AA55

FIG. 27

ITEM	SIZE	DATA (HEXADECIMAL)	NOTES
END MARKER	2 BYTES	FFD9	FIXED VALUE: FFD9

FIG. 28

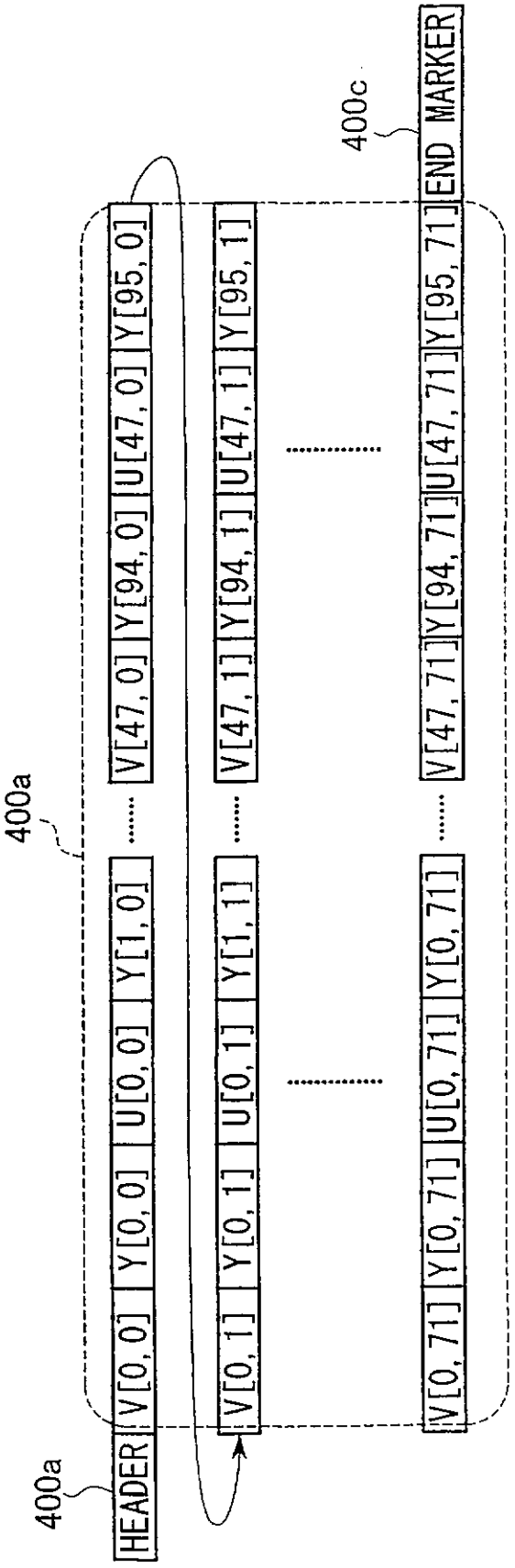

400a
400c
HEADER
V[0, 0]
Y[0, 0]
U[0, 0]
Y[1, 0]
V[0, 1]
Y[0, 1]
U[0, 1]
Y[1, 1]
V[0, 71]
Y[0, 71]
U[0, 71]
Y[1, 71]
V[47, 0]
Y[94, 0]
U[47, 0]
Y[95, 0]
V[47, 1]
Y[94, 1]
U[47, 1]
Y[95, 1]
V[47, 71]
Y[94, 71]
U[47, 71]
Y[95, 71]
END MARKER

FIG. 29

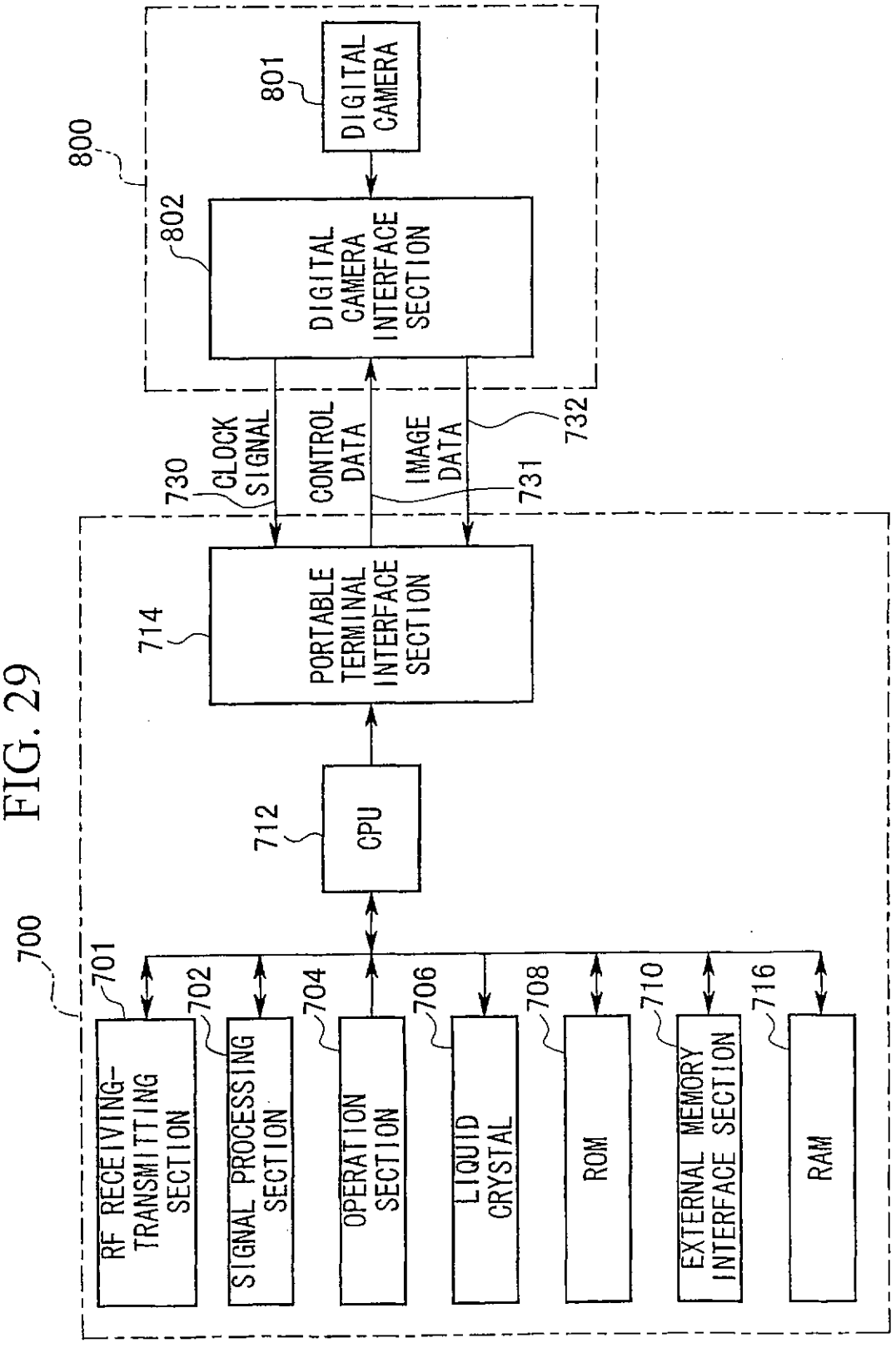

800
801
DIGITAL CAMERA
802
DIGITAL CAMERA INTERFACE SECTION
730
CLOCK SIGNAL
CONTROL DATA
IMAGE DATA
731
732
714
PORTABLE TERMINAL INTERFACE SECTION
712
CPU
700
701
RF RECEIVING-TRANSMITTING SECTION
702
SIGNAL PROCESSING SECTION
704
OPERATION SECTION
706
LIQUID CRYSTAL
708
ROM
710
EXTERNAL MEMORY INTERFACE SECTION
716
RAM

FIG. 30

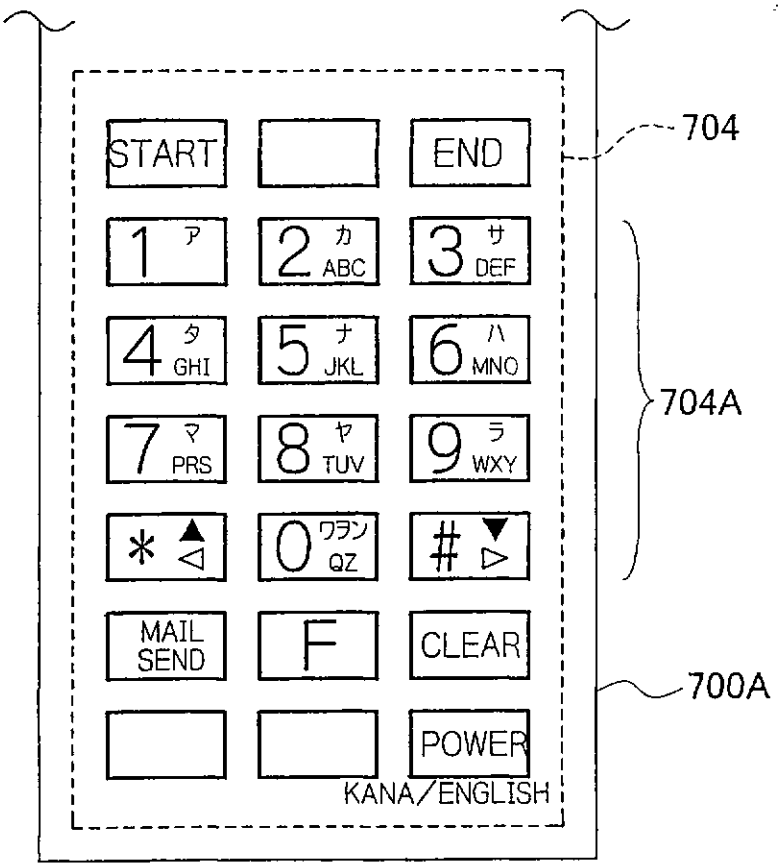

START
END
704
1 ア
2 カ ABC
3 サ DEF
4 タ GHI
5 ナ JKL
6 ハ MNO
7 マ PRS
8 ヤ TUV
9 ラ WXY
704A
* ▲ ◁
0 ワラン QZ
▼ ▷
MAIL SEND
F
CLEAR
700A
POWER
KANA/ENGLISH

FIG. 31

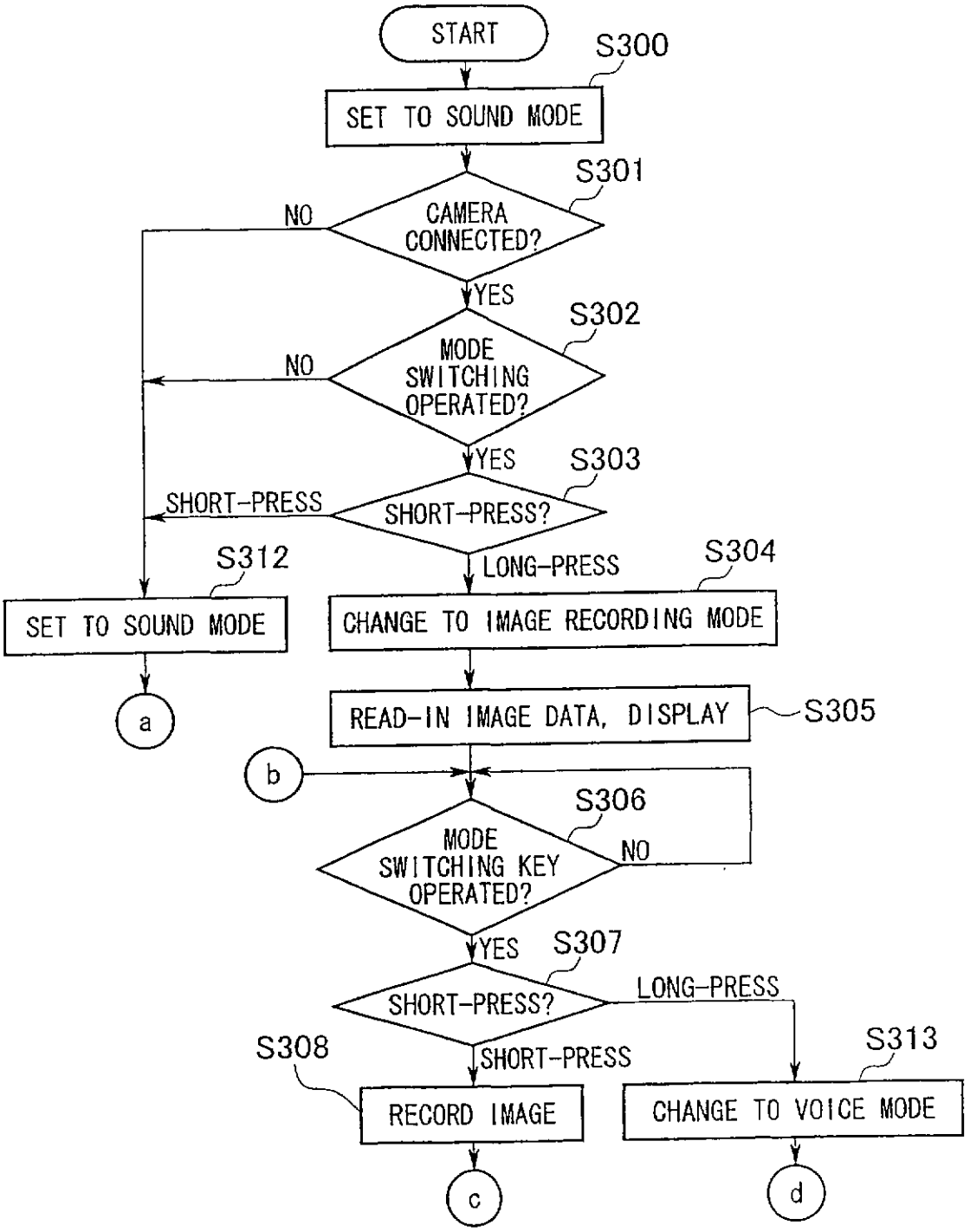
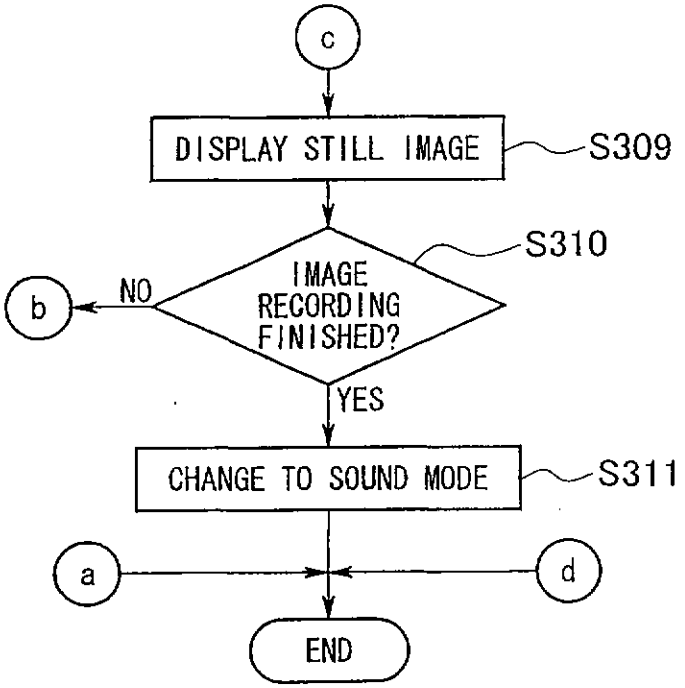

START
S300
SET TO SOUND MODE
S301
CAMERA CONNECTED?
NO
YES
S302
MODE SWITCHING OPERATED?
NO
YES
S303
SHORT-PRESS?
SHORT-PRESS
LONG-PRESS
S312
SET TO SOUND MODE
S304
CHANGE TO IMAGE RECORDING MODE
a
READ-IN IMAGE DATA, DISPLAY
S305
b
S306
MODE SWITCHING KEY OPERATED?
NO
YES
S307
SHORT-PRESS?
LONG-PRESS
S308
SHORT-PRESS
S313
RECORD IMAGE
CHANGE TO VOICE MODE
c
d

FIG. 32


c
DISPLAY STILL IMAGE
S309
S310
IMAGE RECORDING FINISHED?
NO
b
YES
CHANGE TO SOUND MODE
S311
a
d
END