

Multi Photomic Finder DP-20

REPAIR MANUAL

修 理 指 針

Nikon | NIKON CORPORATION
Tokyo, Japan

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SPECIFICATIONS

- 1) Viewfinder Pentagonal roof-prism, eye-level viewfinder
- 2) Field of viewfinder 100+0,-2%
- 3) Viewfinder diopter -3 to +1 DP (adjustable by dial operation)
- 4) Magnification and eyepoint (from the rear of eyepiece lens)

Diopter (DP)	-3	-2	-1	0	+1
Magnification	0.72	0.71	0.70	0.69	0.67
Eye point (mm)	17.6	19.6	22	24.7	27.6

- 5) Inside viewfinder (when mounted on the body)

Top of focusing screen

- (1) LCD indicators on the body (exposure compensation value, frame counter with data back)
- (2) Aperture value (direct reading)
- (3) LED indicators on the body (AF focusing information, exposure compensation mark, flash ready-light)

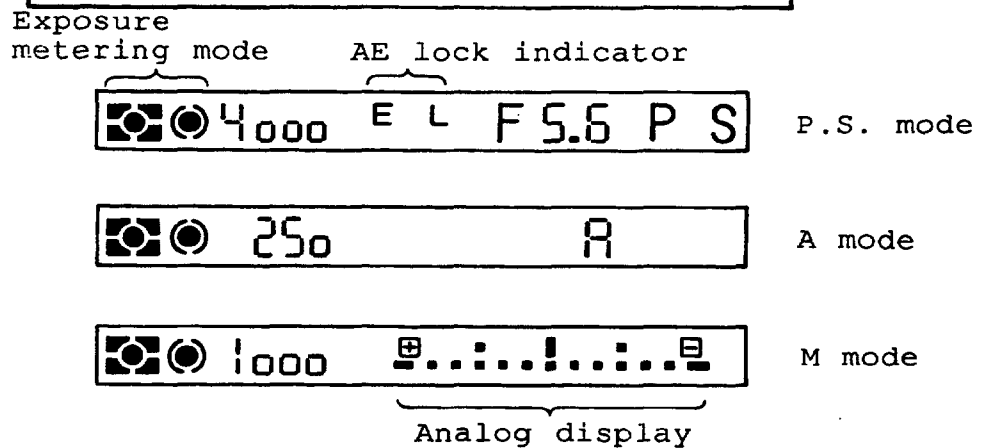
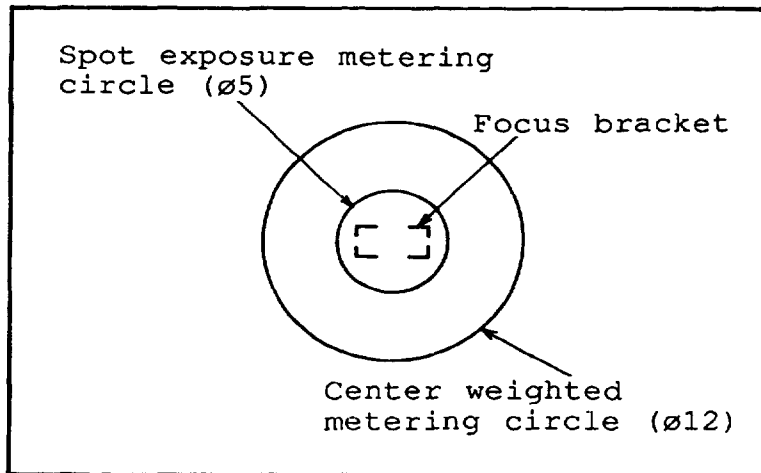
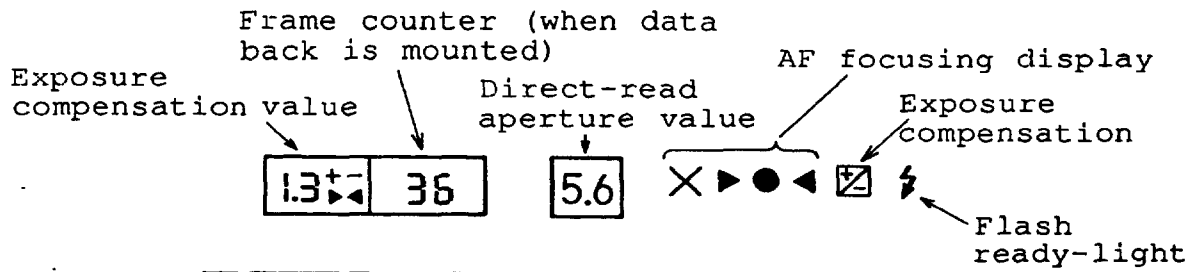
Bottom of focusing screen

Built-in LCD indicator in viewfinder

Viewfinder illuminator (green)

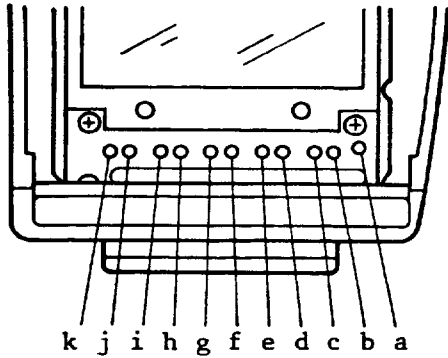
(Exposure information, metering mode, exposure mode, analog display (in M mode), and AE lock indicator)

*Viewfinder illuminator lights up in shutter pre-release operation.



- (6) Eyepiece shutter (Red, two-blade construction)
- (7) Eyepiece unit
 Eyepiece lens system (3 elements in 3 groups, central lens is movable)
 Eyepiece lens screw (compatible with $\varnothing 22$, $p=0.75$, F3HP)
- (8) Electrical signal contacts

Film advance side



a	Sync contact	for flash
b	GND	
c	Ready-light	
d	Stop signal	
e	TTL signal	
f	Power supply (5V)	for FD
g	GND	
h	Power supply (3V)	
i	CLK	
j	I/O terminal 1	
k	I/O terminal 2	

- | | |
|---|---|
| <p>9) Power consumption:</p> <p>Max. available voltage:</p> | <p>Approx. 20mA (viewfinder only)</p> <p>Approx. 26mA (when illuminator lights up)</p> <p>4.8V to 6V</p> |
| <p>10) Exposure metering range</p> | <p>EV1 to EV21 (at ISO100, f/1.4)</p> |
| <p>11) Exposure metering mode selector</p> | |
| <p>(1) Spot metering mode</p> | <p>Metering with spot metering FPC mounted in the bottom body (equivalent to spot metering circle (ø5))</p> |
| <p>(2) Multiple metering mode</p> | <p>Multiple exposure metering by five-separate area viewfinder SPD.</p> |
| <p>(3) Center-weighted mode</p> | <p>Exposure metering by central part of five-separate area SPD (equivalent to centerweighted metering circle (ø12))</p> |

12) Screen compensation

-2, -1 1/2, -1, -1/2, 0,
+1/2 (compensation value is
displayed in the window of
the inside viewfinder)

Screen compensation is not necessary	J, K, P, B, E
Screen compensation is necessary	C, M, G1-G4, F, U

*1 Multiple exposure metering is available only on the focusing screen which does not, as a rule, need compensation.

*2 Select compensation value by the combination of the focusing screen lenses.

13) Dimensions:

117.3mm (height) (camera
body)

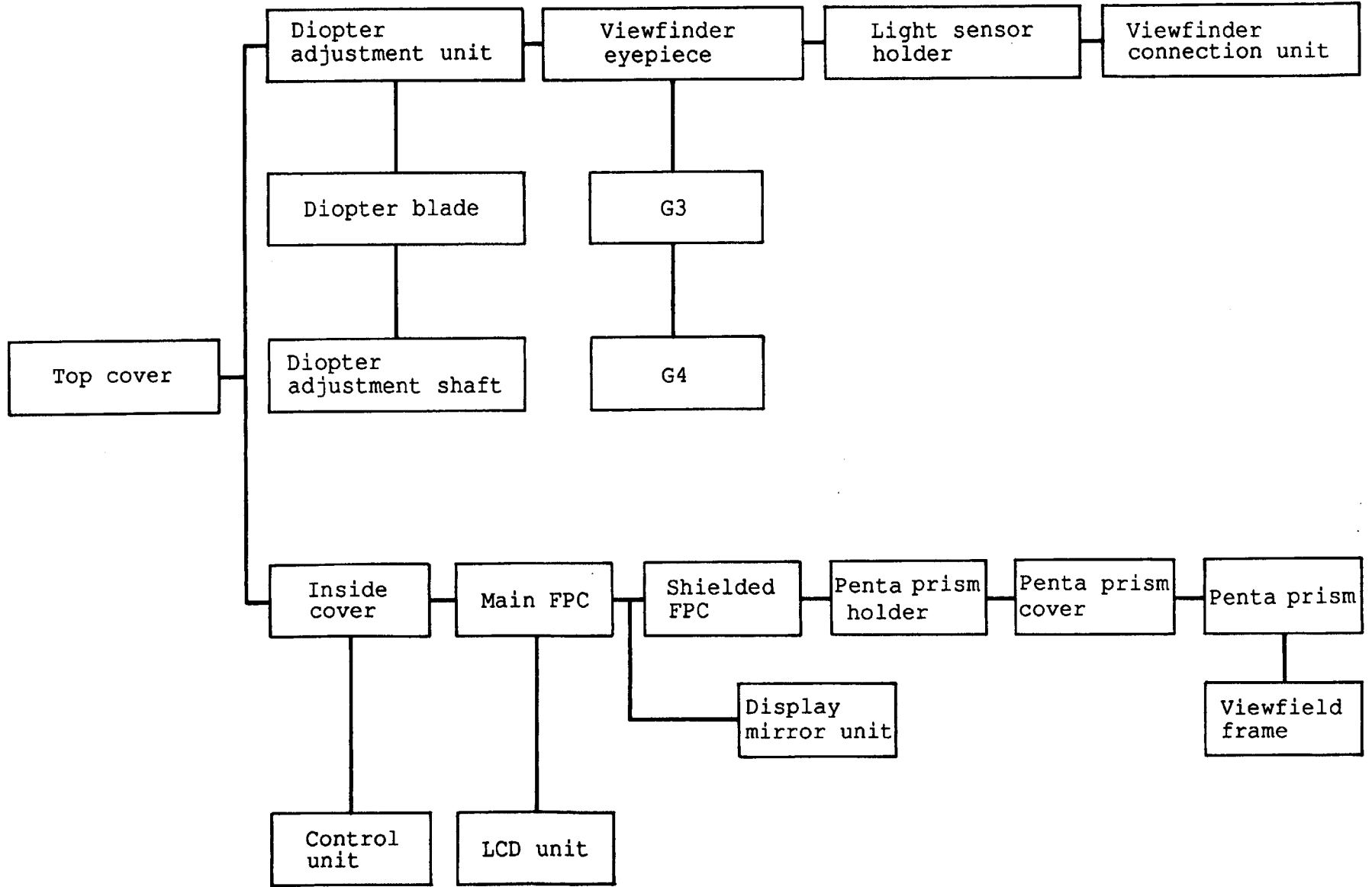
55mm (viewfinder width)

76.6mm (depth of viewfinder)

Weight:

170g

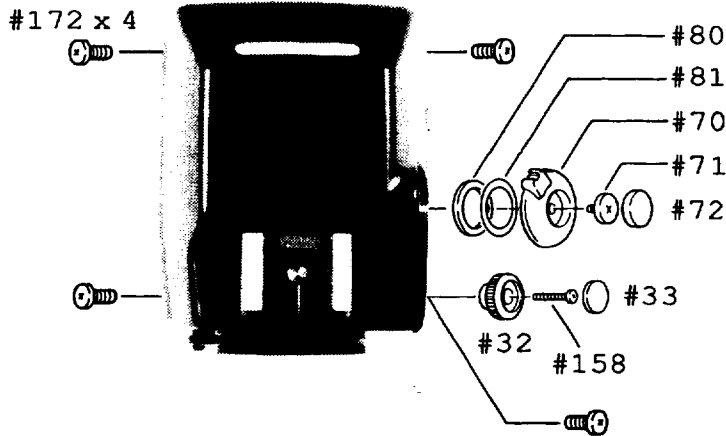
DISASSEMBLING OUTLINE



— D1 —

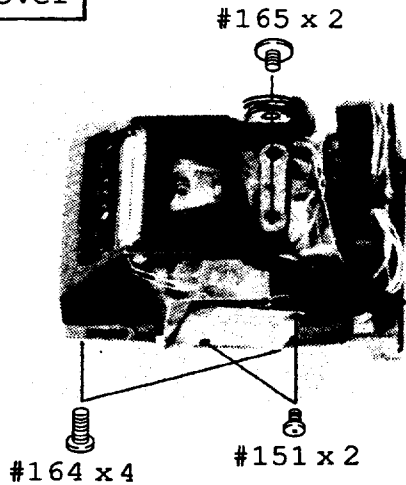
DISASSEMBLING

Top cover



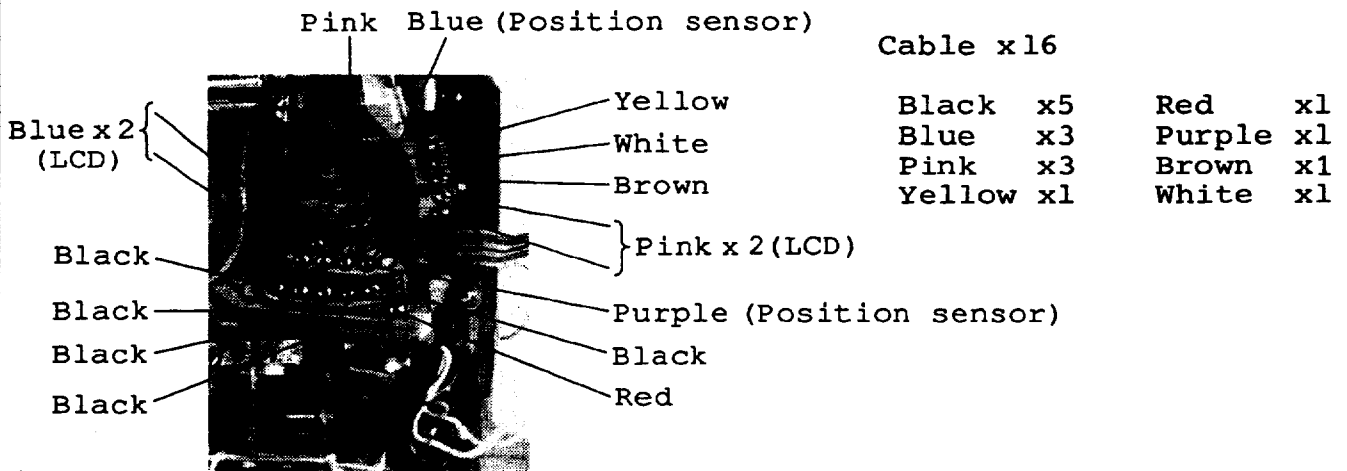
- #172 x 4
- Exposure metering mode dial (#70)
#72, #71, #80, #81
- Diopter adjustment dial (#32)
#33, #158
- Cable x 5 (Green, purple, orange, grey, black)

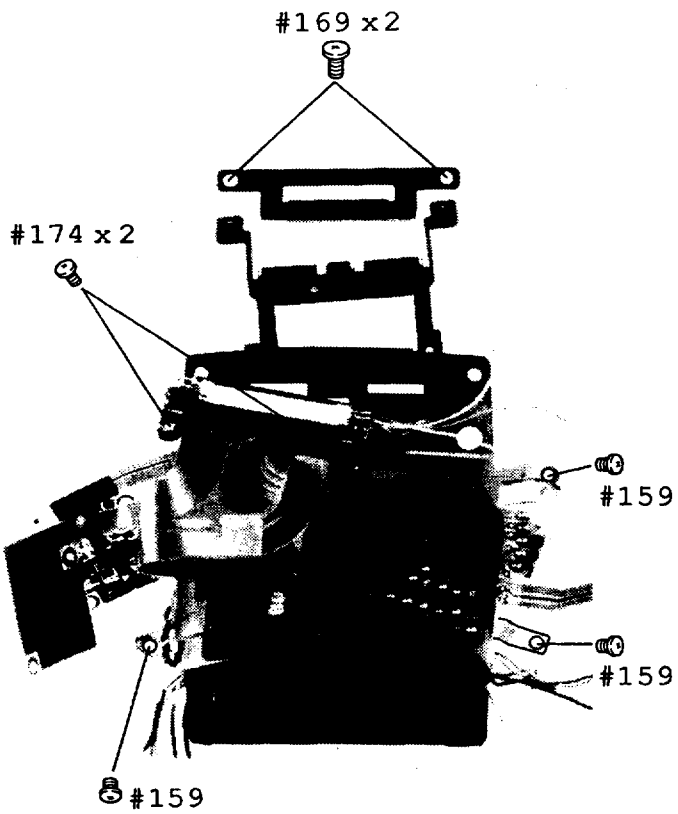
Inside cover



- #164 x 4
- Press contact holding plate (#100)
#165 x 2, #102 x 2
- FPC
#151 x 2

Main FPC, display mirror

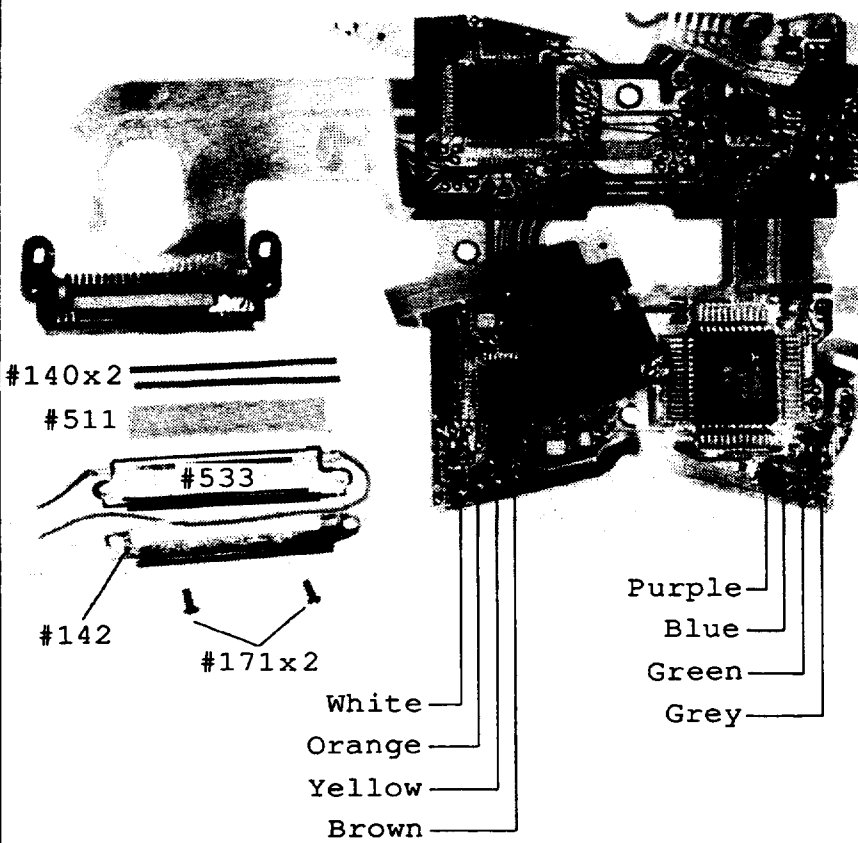




#159 x 3

#174 x 2

Display mirror unit,
Display mirror support
#169 x 2



Cable x 8

LCD unit

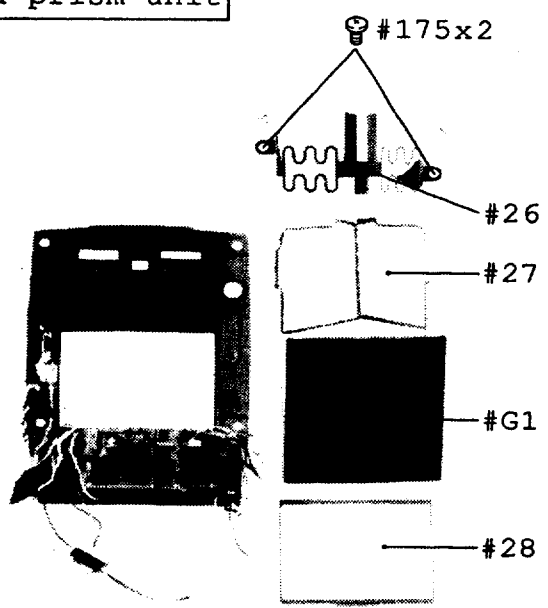
Viewfinder illuminator
holding plate (#142)
#171 x 2

Viewfinder illumination
lamp (#533)

LCD (#511)

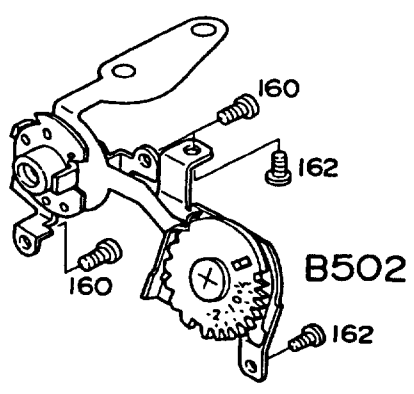
LCD rubber (#140 x 2)

Penta prism unit



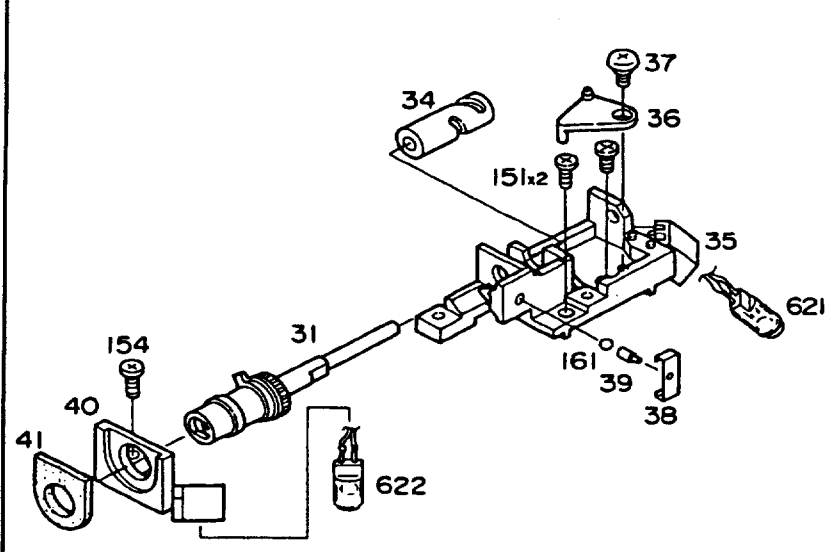
- Penta prism holder (#26)
#175 x 2
- Penta prism cover (#27)
- Penta prism (G1)
- Viewfield frame (#28)

Control unit FPC



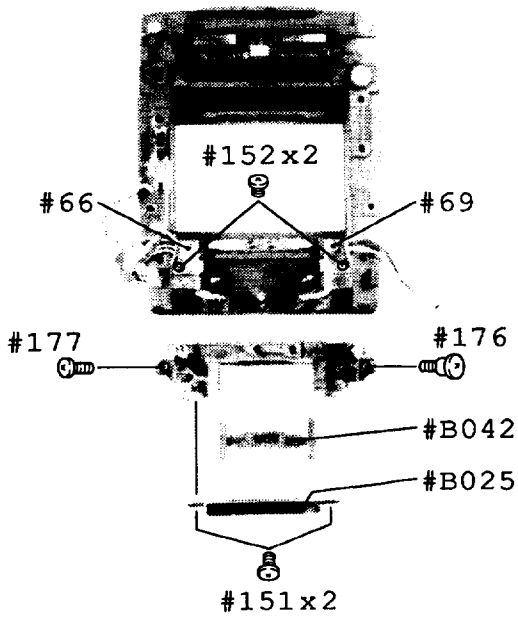
- #160 x 2, #162 x 2

Diopter adjustment unit



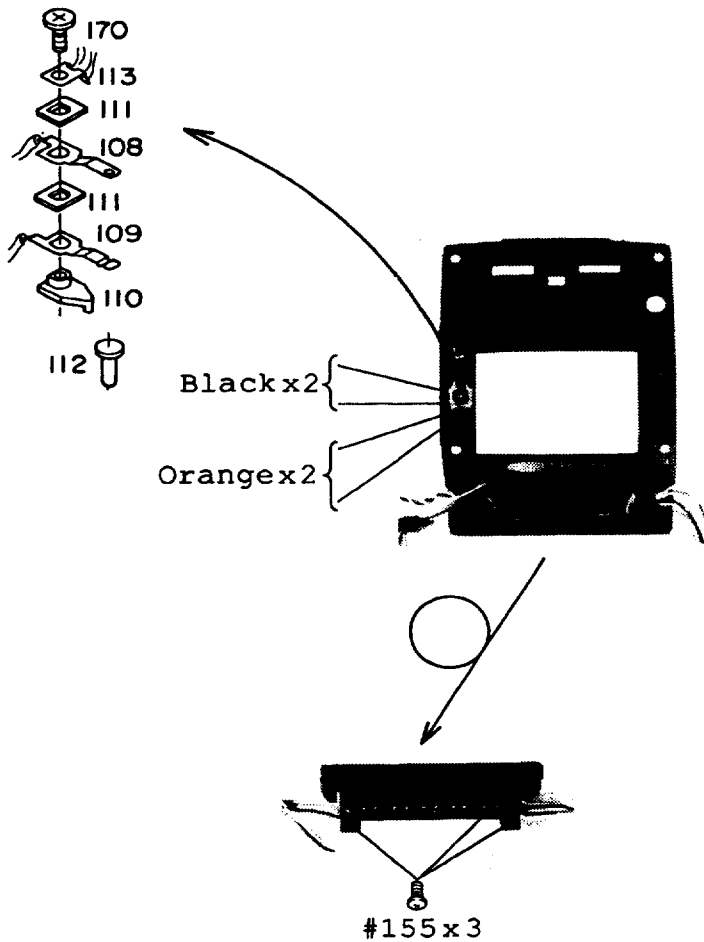
- #151 x 2
- Position sensor x 2
- Diopter adjustment bearing (#40, #41) #154
- Diopter adjustment cam (#34)
- Diopter adjustment shaft (#31)
- #161, #39, #38
- Viewfinder eyepiece driving plate (#36)
- #37

Viewfinder eyepiece



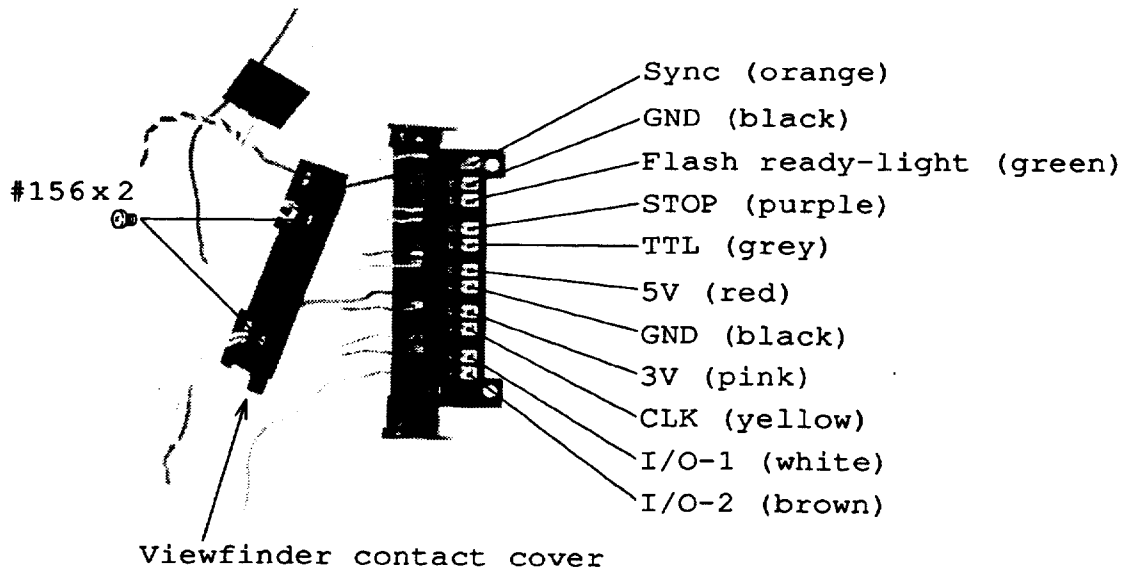
- Viewfinder eyepiece holder (#B025) #151 x 2
- Movable viewfinder eyepiece holder (#B042)
- Light sensor holder (#B023) #177, #176
- Cable x 4
Black x 2
Orange x 2
- Cable holder plate (#66, #69) #152 x 2

Viewfinder contact holder unit

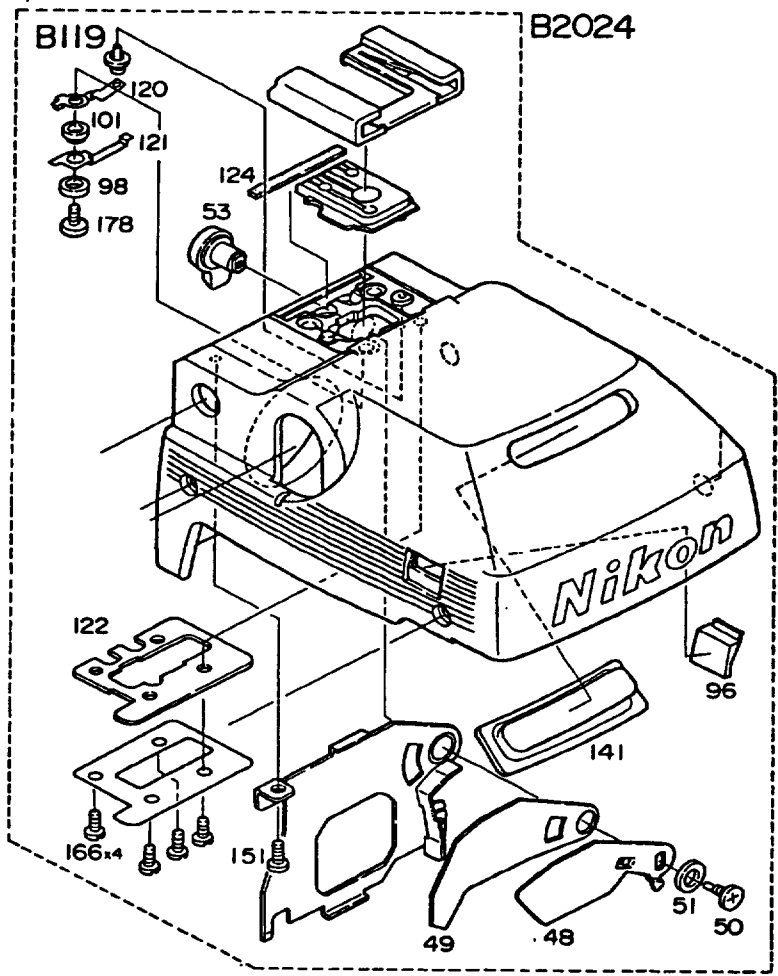


Viewfinder mounting/releasing detection switch

- #170
- GND lug (#113)
- Insulating plate (#111)
- Detection switch A (#108)
- Insulating plate (#111)
- Detection switch B (#109)
- Detection switch mold (#110)
- Detection switch pin (#112)
- Viewfinder contact holder unit #155x3
- Viewfinder contact cover #156x2

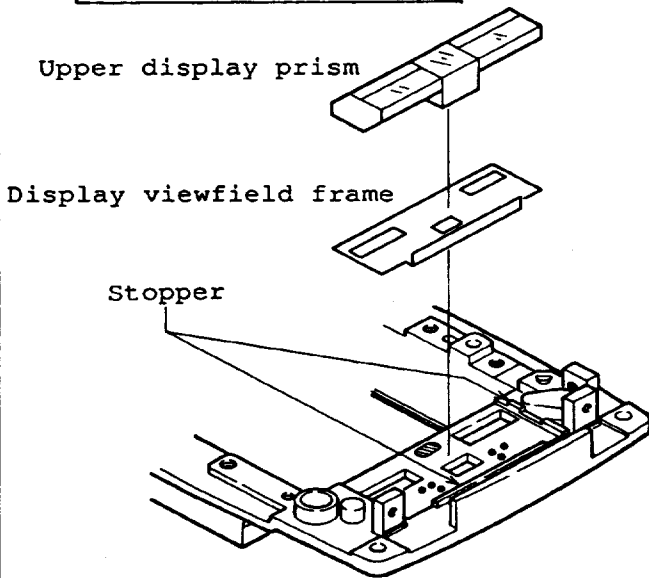


Top cover unit



ASSEMBLING AND ADJUSTMENT

Upper display prism



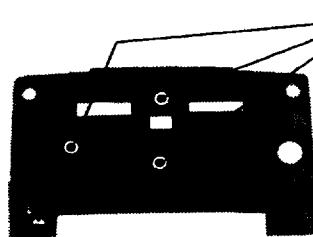
Spread adhesive agent at the portion as indicated in the figure.

Mount the upper display prism by moving aside the display viewfield frame toward the stopper.
 Note: Make sure to align with each window position.

Attach the upper display prism by moving aside the display prism toward the stopper.

Adhesion (551A)

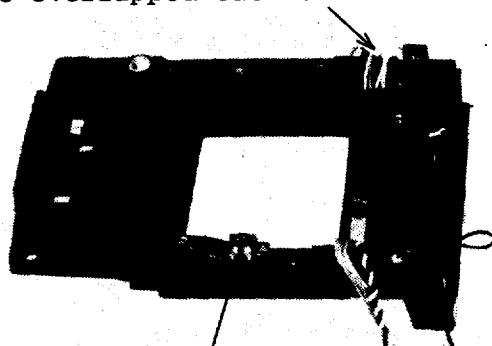
- : Spread a small amount of adhesive agent (3 drops) at two portions.
- ⊗: Spread a small amount of adhesive agent (1 drop) at one portion.



Adhesion (5 minutes epoxy)
 Spread a small amount of adhesive agent (one drop) at three portions.

Viewfinder mounting/releasing detection switch, viewfinder contact holder assembly part

Lead wires Arrange lead wires not to be overlapped each other.



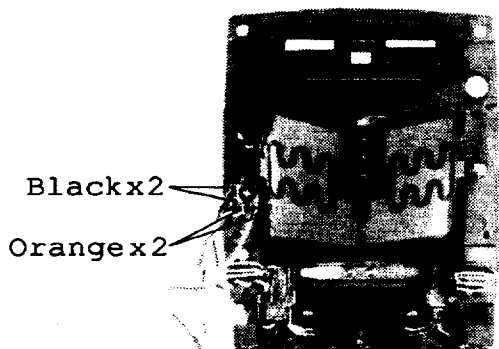
Note that the GND lug should be faced outside of the bend.

Viewfinder mounting/releasing detection switch
 Screw (#170 x 1)

Lead wire
 Cable holding plate x 2

Put acetate tape on the portion indicated in the figure.

Mounting penta prism



Viewfield frame

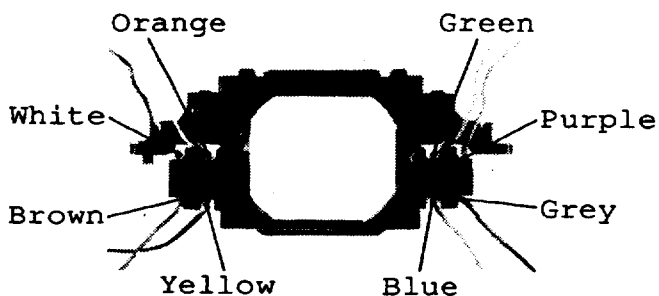
Penta prism

Penta prism cover

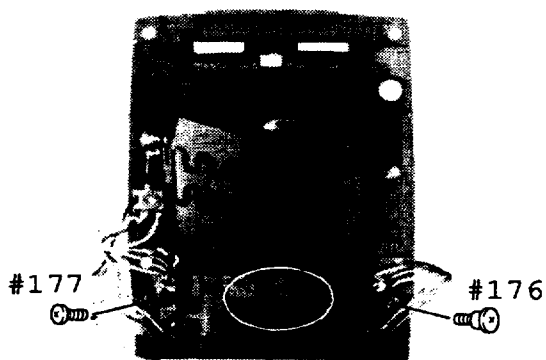
Penta prism holder
Screw (#175) x 2

Cable x 4
Black x 2
Orange x 2

Light sensor holder



* Spread moisture-proof liquid on the soldering portion.



Mounting direction

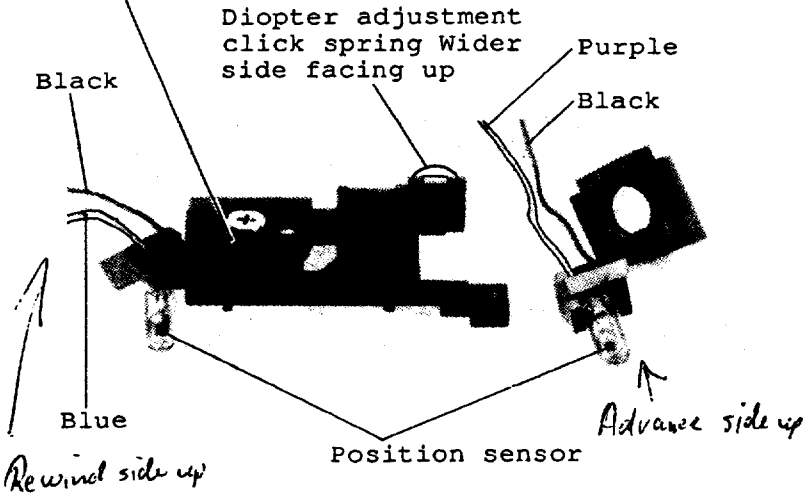
Light sensor holder
#176 (with a step)
#177

Movable eyepiece holder

Movable viewfinder
eyepiece holder
Screw (#151) x 2

Diopter adjustment unit

Viewfinder eyepiece driving plate



Position sensor x 2
Note: Black cable should be outside.

Viewfinder eyepiece driving plate (#36)
#37 x 1

Mount a diopter adjustment click spring (#38) at the portion indicated in the figure.

Diopter adjustment click pin (#39)

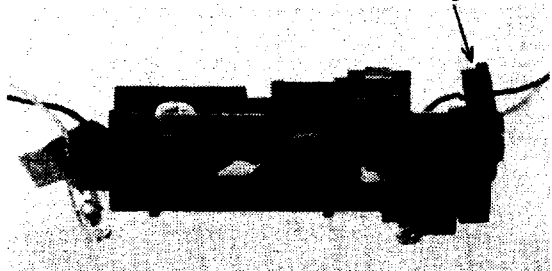
Diopter adjustment cam
Diopter adjustment shaft



Diopter adjustment cam (#34)
Diopter adjustment shaft (#31)
Mount then as indicated in the figure.

Click bearing (#161)

Diopter adjustment bearing

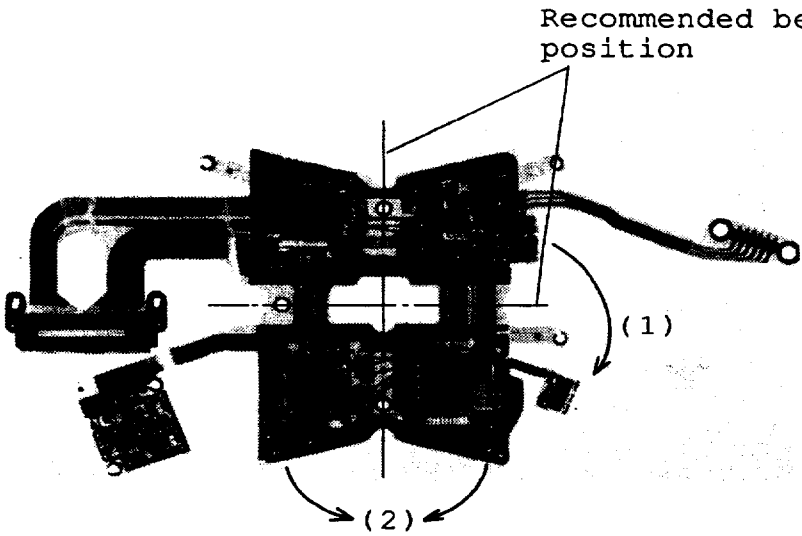


Diopter adjustment bearing (#40, #41)
#154 x 1

Rewind side up

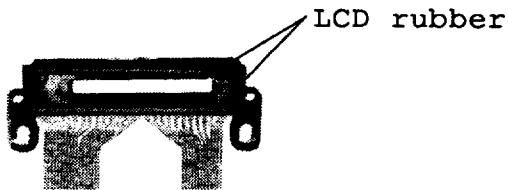
Advance side up

Main FPC



Bend the main FPC in the order of (1) to (2) as indicated in the figure.

LCD unit



LCD rubber (#140 x 2)

LCD (#511)

Viewfinder illumination lamp (#533)

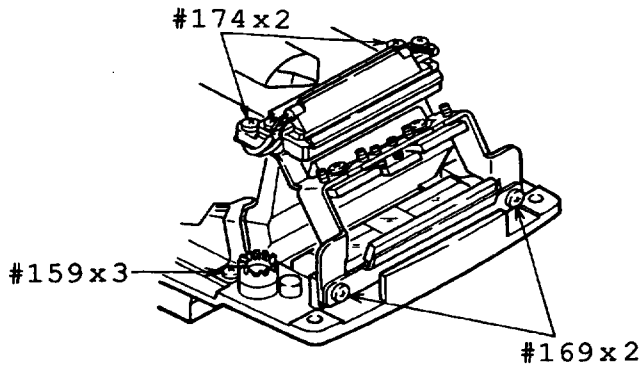
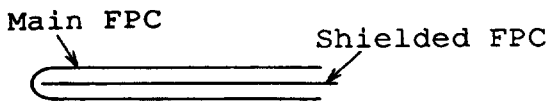
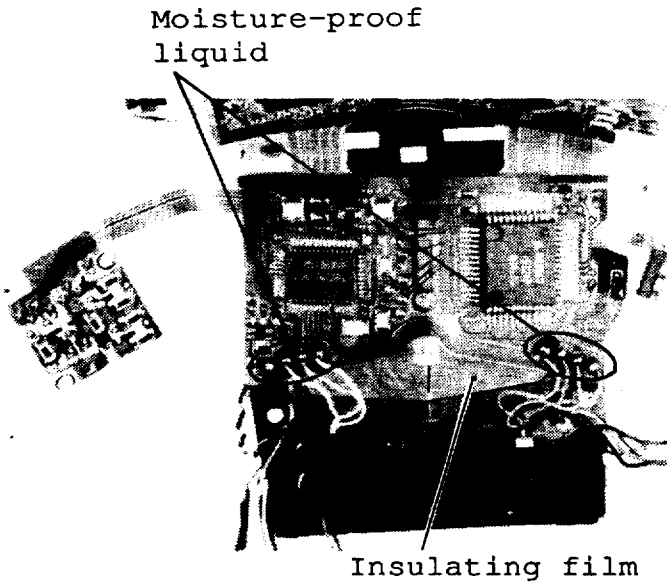
Viewfinder illuminator holding plate (#142) #171 x 2



Viewfinder illuminator holding plate

Note: Positions of anode and cathode of the viewfinder illumination lamp.





Insulating film (#44)

Main FPC (#B2501)

Cable x 8 (moisture-proof liquid)

Shielded FPC (#B504)

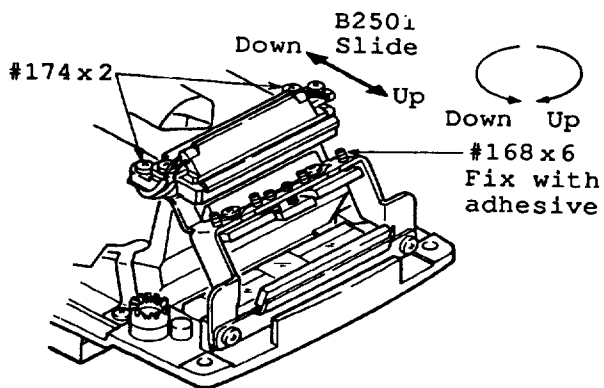
#159 x 3

Display mirror
Display mirror support
#169 x 2

LCD unit
#174 x 2

Cable x 16

·LCD window adjustment

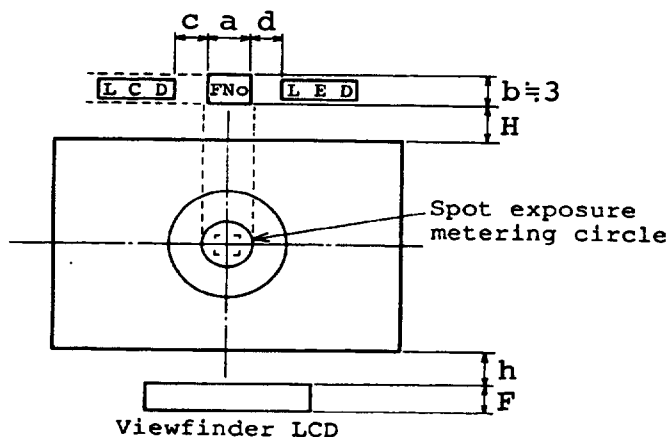


FNO window, LCD window, LED window, Screw (#168 x 6)

*Turn the screw counterclockwise to move down the display window.

Viewfinder LCD window Screw (#174 x 2)

*Slide the screw toward the viewfinder eyepiece to move down the display window.

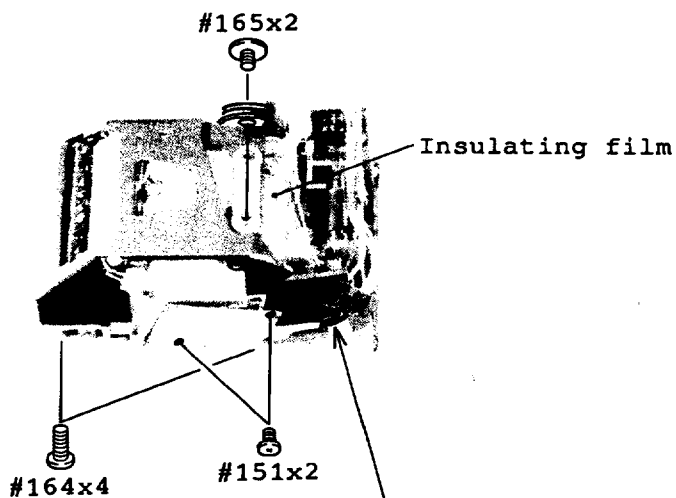


$H = 0.5b - b$ (within the diameter of the spot exposure metering circle)

$C = 0.5a - 1.5a$ (within the height b of the FNO window)

$d = 0.5a - 1.5a$ (within the height b of the FNO window)

Inside cover

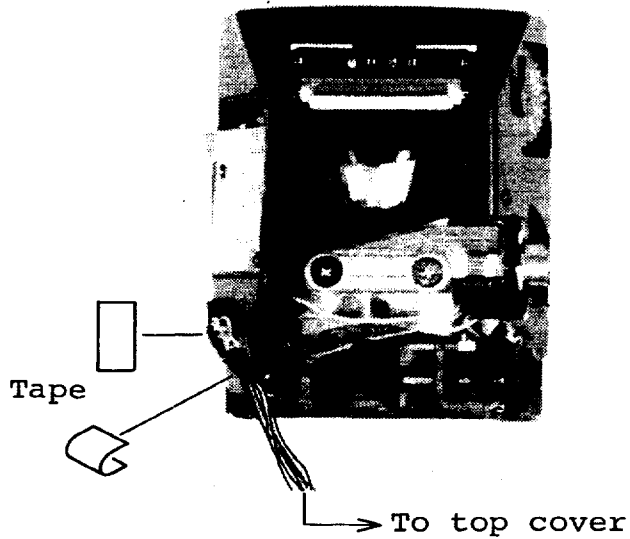


Inside cover (#21) #164x4

Press-contact holding plate (#110) #165x2, #100x2

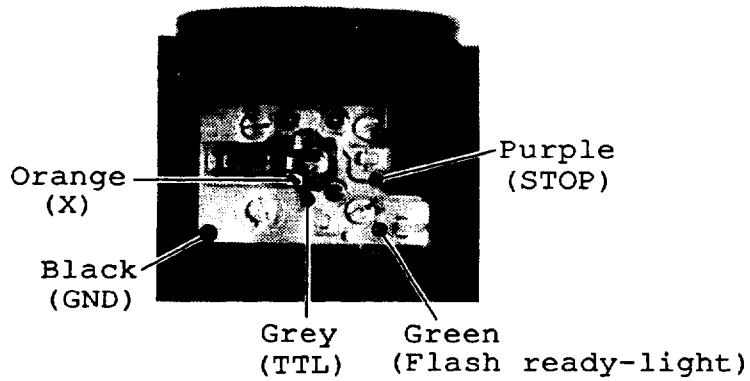
Fix FPC. #151x2

Note: Do not pinch cables.



Arrange cables.
Refer to the left figure.

Cover unit

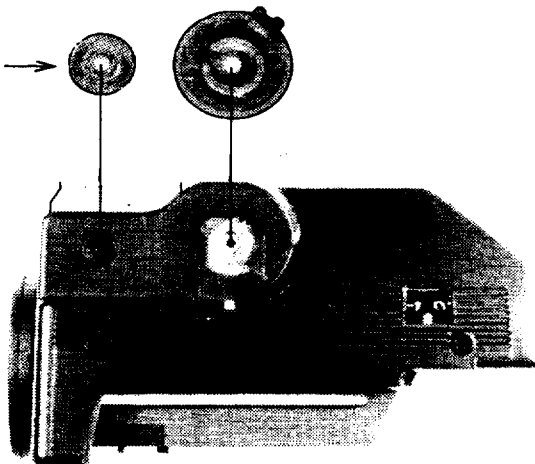


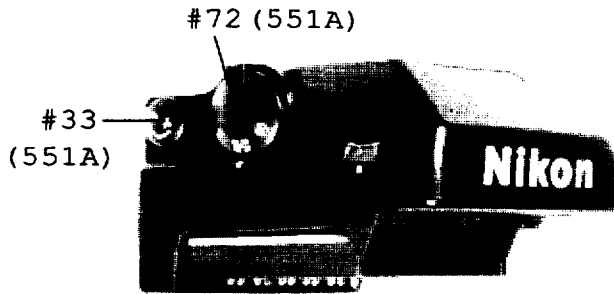
Cable x 5

#172 x 4

Exposure metering mode dial
Diopter adjustment dial

Check direction and position for insertion.



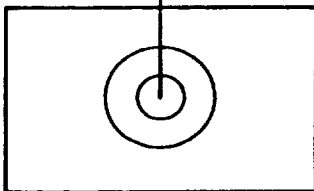
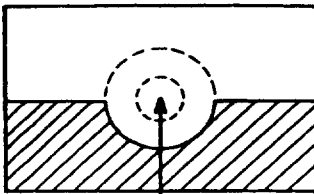


Diopter adjustment dial cover (#33)

*Make sure to insert the projected portion into the hollow.

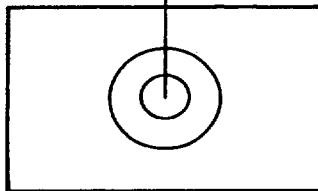
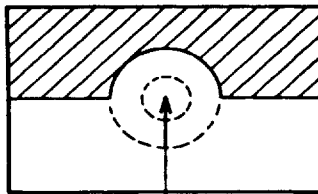
•Distribution inspection of five separate-area sensor module

Chart (1)



Focusing screen

Chart (2)



Focusing screen

Set the viewfinder on the body to communicate for checking.

Select "No,7: Information of light metering" of main menu.

Select again "No,2: Checking of wiring for 5 divided SPD" of sub-menu.

Set the focusing screen as shown in the chart (1) by looking through the eyepiece.

Depress the return key.

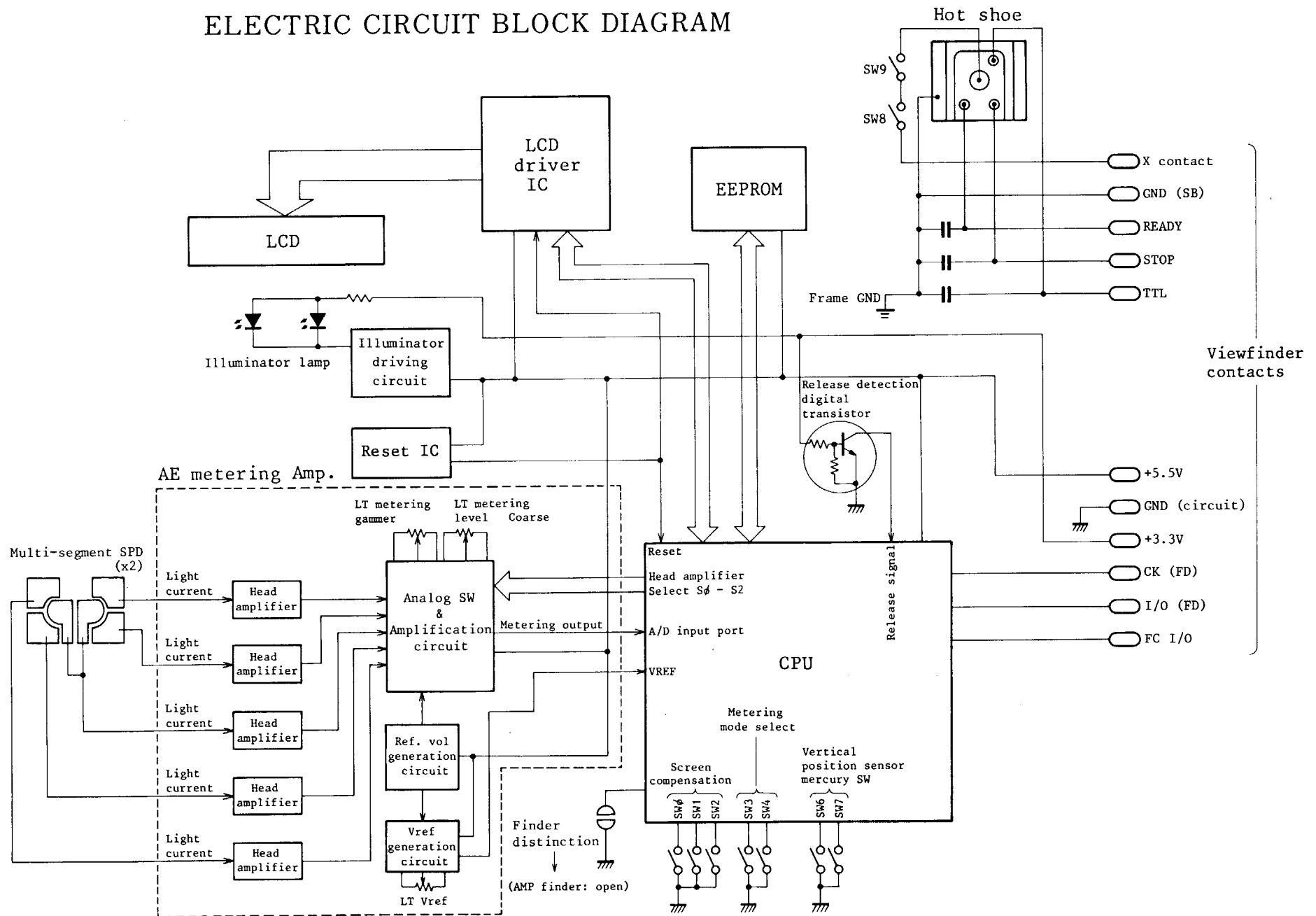
Set the focusing screen as shown in the chart (2) by looking through the eyepiece.

Depress the return key.

Return to "Detection of malfunction"

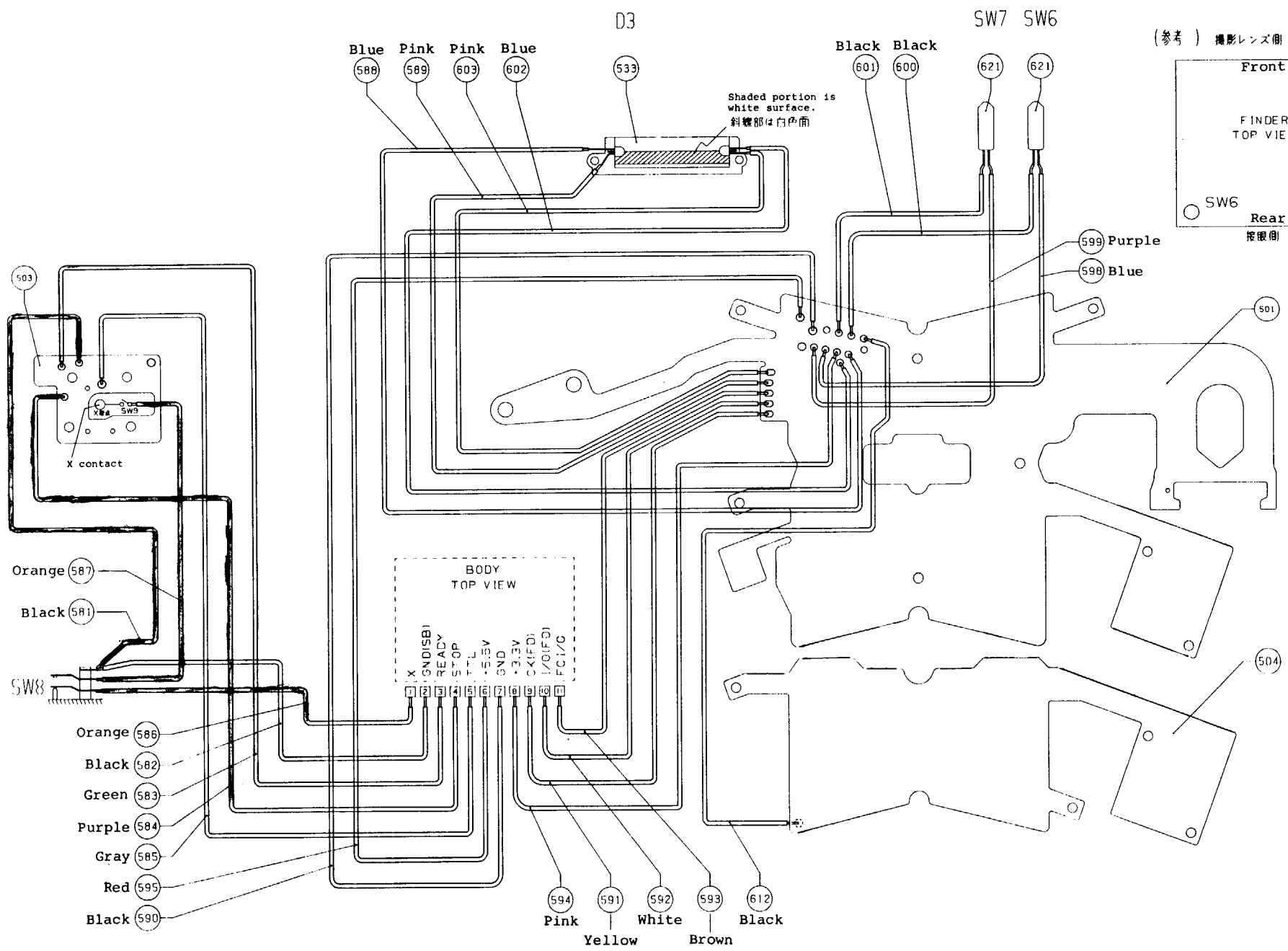
*Check wiring if malfunction is detected.

ELECTRIC CIRCUIT BLOCK DIAGRAM

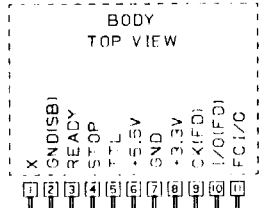
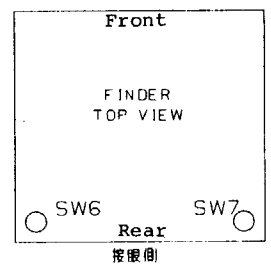


E1

FAB02001-R.3252.A

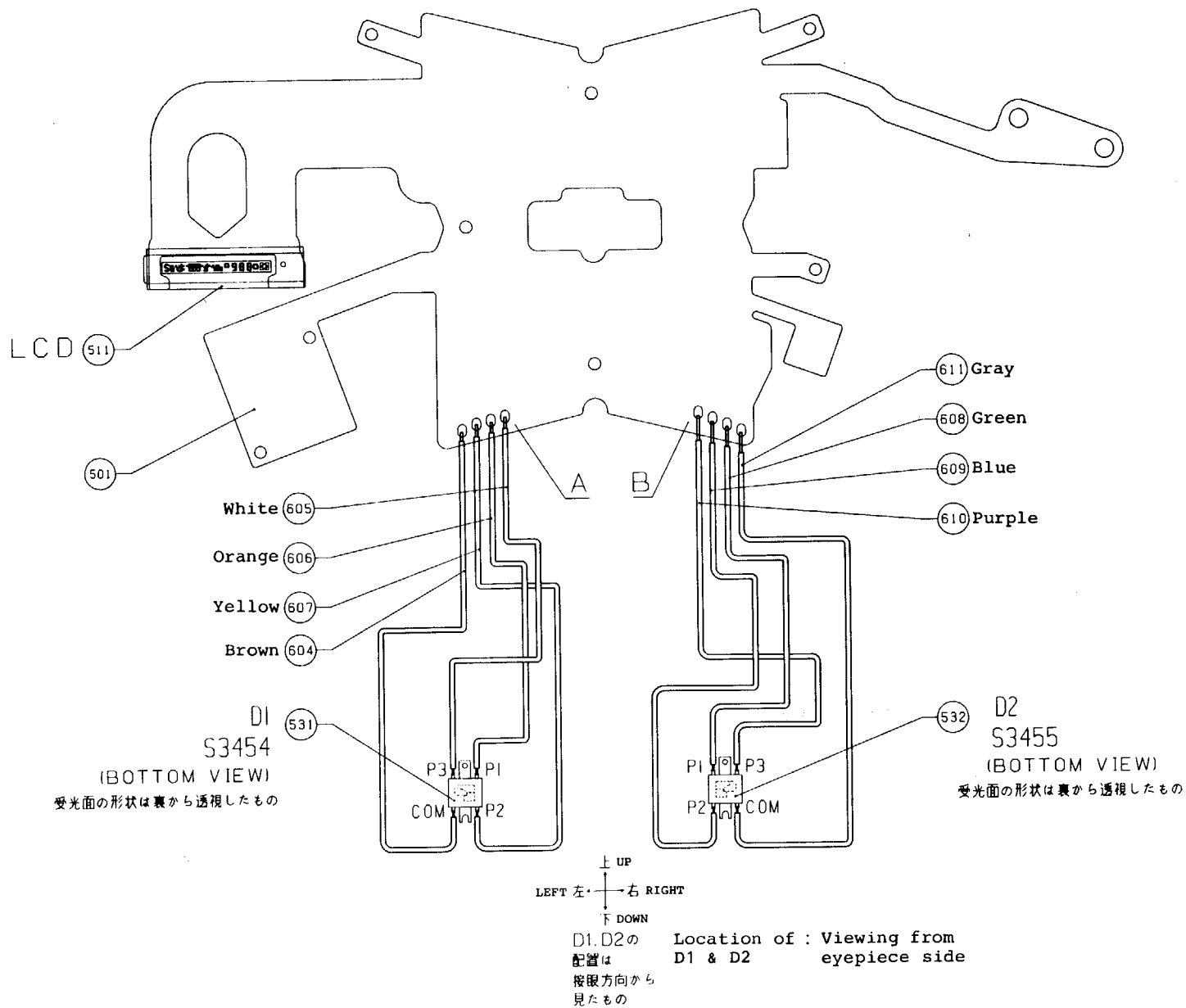


(参考) 撮影レンズ側

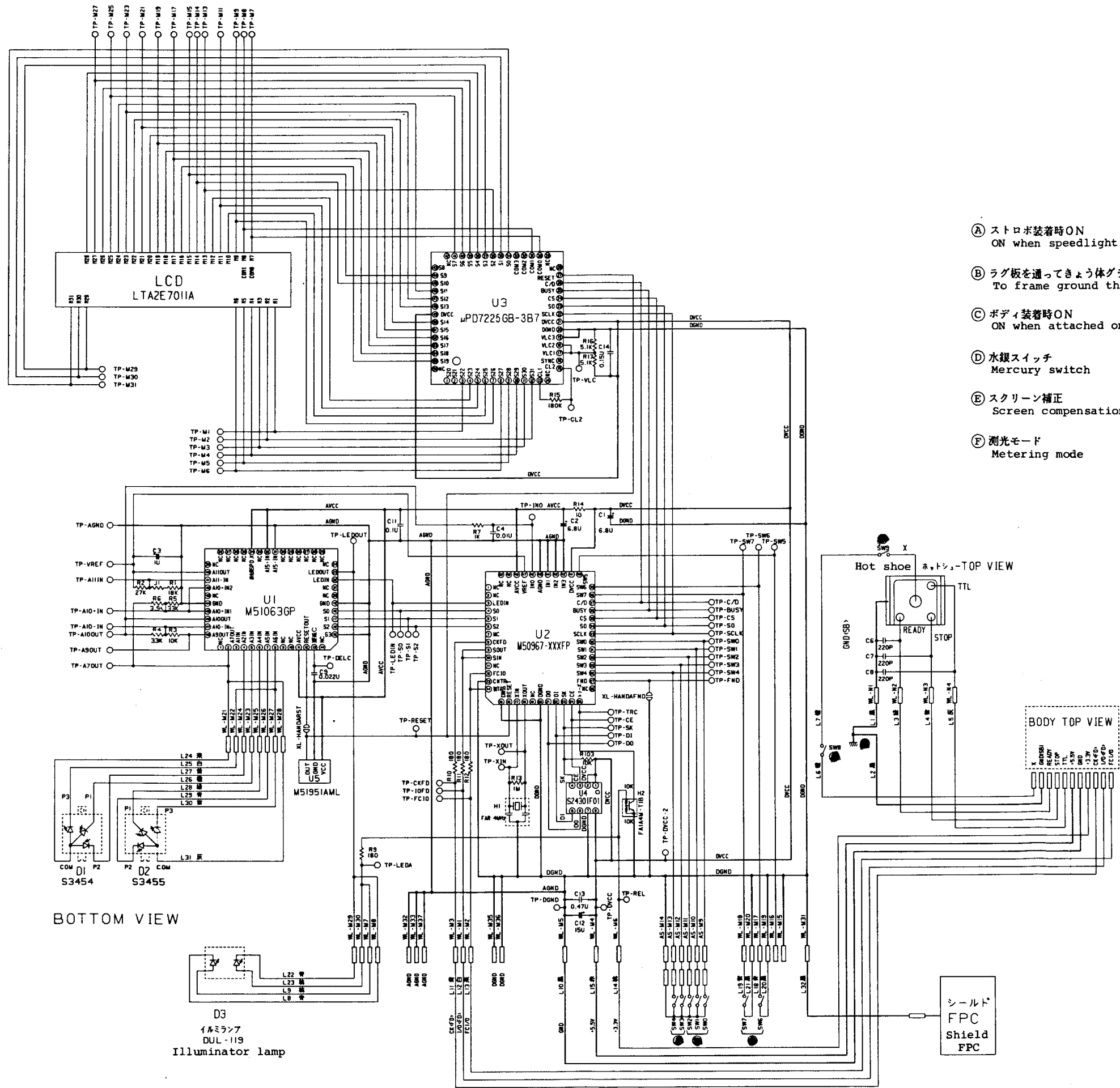


実体配線図 1 WIRING DIAGRAM 1

実体配線図 2 WIRING DIAGRAM 2



回路図 CIRCUIT DIAGRAM

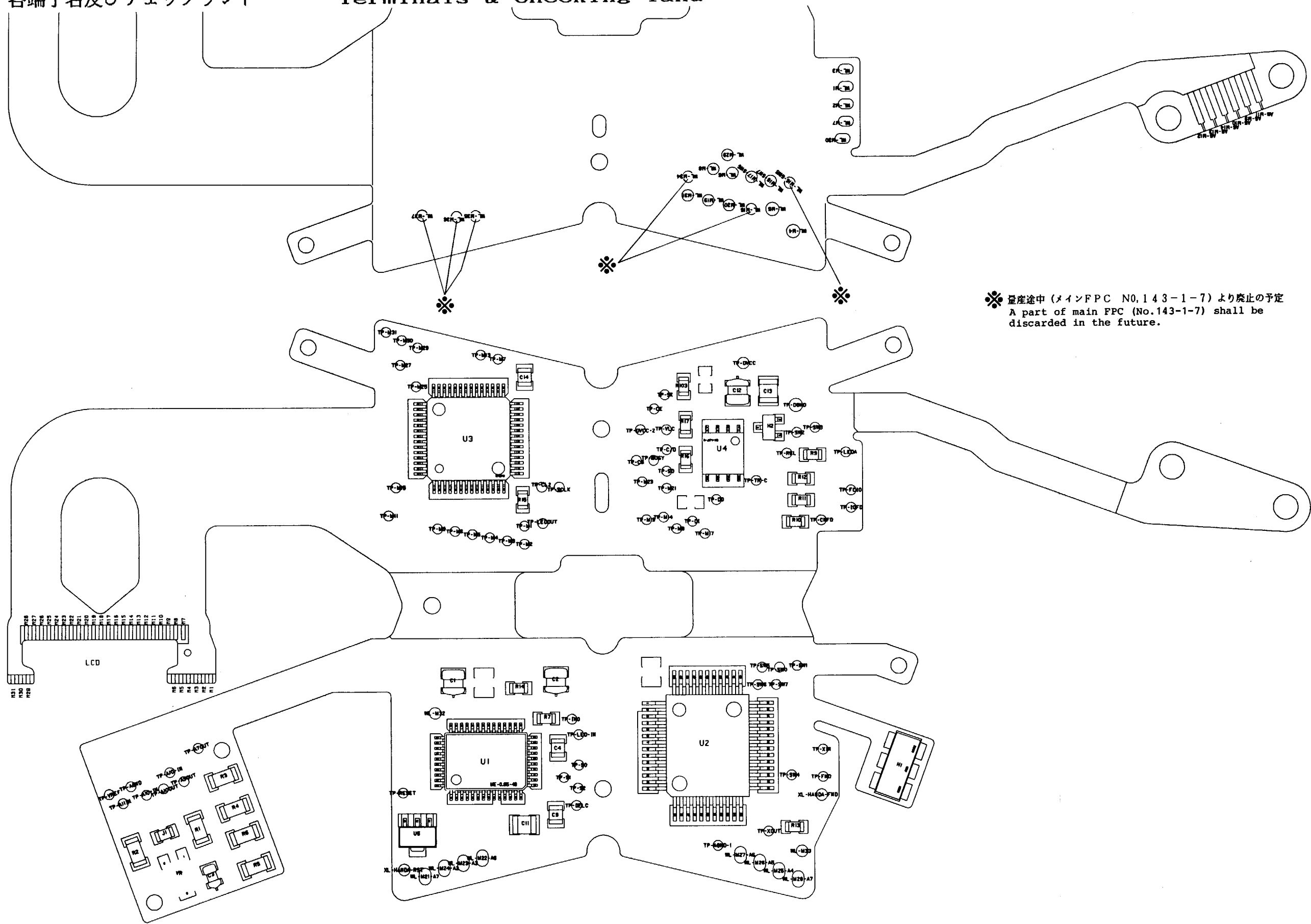


- Ⓐ ストロボ装着時ON
ON when speedlight is attached
- Ⓑ ラグ板を通過きょう体グラウンド
To frame ground through lug plate
- Ⓒ ボディ装着時ON
ON when attached on camera body
- Ⓓ 水銀スイッチ
Mercury switch
- Ⓔ スクリーン補正
Screen compensation
- Ⓕ 測光モード
Metering mode

シールド
FPC
Shield
FPC

メインFPC
電子部品配置図
各端子名及びチェックランド

Main FPC
Electric parts locations
Terminals & Checking land

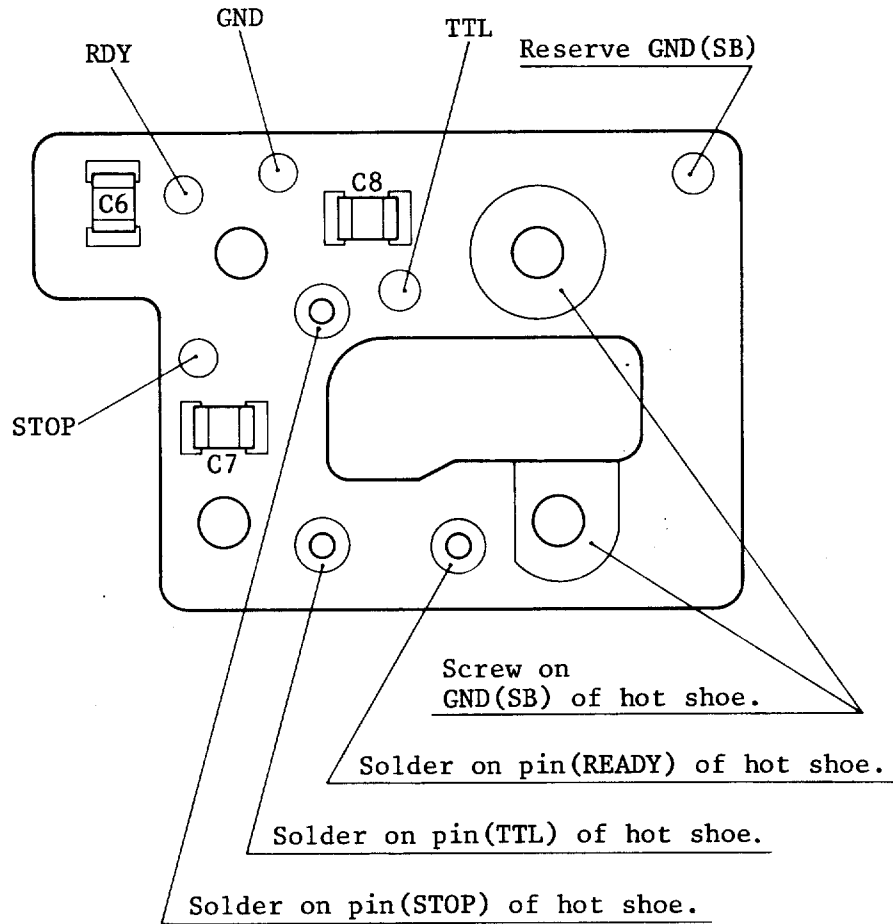


※ 量産途中 (メインFPC NO.143-1-7) より廃止の予定
 A part of main FPC (No.143-1-7) shall be
 discarded in the future.

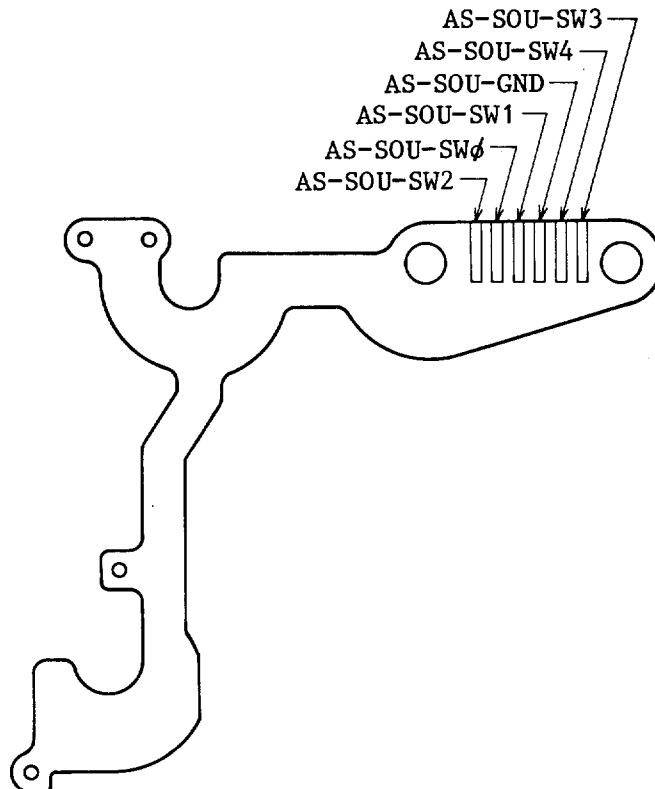
Electric parts locations
Terminals & Checking land

FAB02001-R.3252.A

X contact FPC



Operation unit FPC



CHECKING LANDS ON MAIN FPC (FRONT SIDE)

NO.	NAME	FUNCTION	NO.	NAME	FUNCTION
1	TP-A7OUT	SPD anode	4 6	TP-M27	LCD Segment · Drive
2	TP-A9OUT	A9 output for A/D τ adjustment	4 7	TP-M29	LCD Segment · Drive
3	TP-A10 ⁻ IN	Meter level coarse adj. center terminal	4 8	TP-M30	LCD Segment · Drive
4	TP-A10 ⁻ IN	A/D τ Adj. center terminal	4 9	TP-M31	LCD Segment · Drive
5	TP-A10OUT	Metering output (head amplifier side)	5 0	TP-REL	+3.3V for finder (Power of illuminator & Release information)
6	TP-A11IN	Vref adj. center terminal	5 1	TP-RESET	Reset (at Low)
7	TP-AGND	Analog GND	5 2	TP-S ϕ	Head amplifier selection signal
8	TP-AGND-1	Analog GND	5 3	TP-S1	Head amplifier selection signal
9	TP-BUSY	LCD driver · BUSY	5 4	TP-S2	Head amplifier selection signal
1 0	TP-C/D	LCD driver · Command/Data selection	5 5	TP-SCLK	LCD driver · Serial clock
1 1	TP-CE	EEPROM · Chip Select	5 6	TP-SK	LCD driver · Serial clock
1 2	TP-CKFD	Finder serial communication CK (FD)	5 7	TP-S0	LCD driver · Serial data IN
1 3	TP-CL2	LCD driver · Clock oscillation	5 8	TP-SW0	Screen compensation SW
1 4	TP-CS	LCD driver · Chip select	5 9	TP-SW1	Screen compensation SW
1 5	TP-DELC	Reset delay condenser	6 0	TP-SW2	Screen compensation SW
1 6	TP-DGND	GND	6 1	TP-SW3	Metering mode SW
1 7	TP-DI	EEPROM · Serial data IN	6 2	TP-SW4	Metering mode SW
1 8	TP-DO	EEPROM · Serial data OUT	6 3	TP-SW5	(Not in use)
1 9	TP-DVCC	+5.5V	6 4	TP-SW6	Vertical sensor Mercury SW (b)
2 0	TP-DVCC-2	+5.5V	6 5	TP-SW7	Vertical sensor Mercury SW (c)
2 1	TP-FCIO	Finder serial communication FCI/O	6 6	TP-TR-C	Release signal (Hi in release)
2 2	TP-FND	Finder distinction	6 7	TP-VLC	LCD drive power
2 3	TP-INO	Metering output (CPU side)	6 8	TP-VREF	Vref for A/D conversion
2 4	TP-IOFD	Finder serial communication I/O (FD)	6 9	TP-XIN	Oscillator input
2 5	TP-LED-IN	Illuminator driver circuit input	7 0	WL-XOUT	Oscillator output
2 6	TP-LEDA	Illuminator lamp anode	7 1	WL-M21-A7	S3454 common anode soldering land
2 7	TP-LEDOUT	Illuminator driver circuit output	7 2	WL-M22-A6	S3454-P3 (center) soldering land
2 8	TP-M1	LCD segment · Drive	7 3	WL-M23-A3	S3454-P1 (lower-left) soldering land
2 9	TP-M2	LCD segment · Drive	7 4	WL-M24-A2	S3454-P2 (upper-left) soldering land
3 0	TP-M3	LCD segment · Drive	7 5	WL-M25-A4	S3455-P1 (lower-right) soldering land
3 1	TP-M4	LCD segment · Drive	7 6	WL-M26-A5	S3455-P2 (upper-right) soldering land
3 2	TP-M5	LCD segment · Drive	7 7	WL-M27-A6	S3455-P3 (center) soldering land
3 3	TP-M6	LCD segment · Drive	7 8	WL-M28-A7	S3455 common anode soldering land
3 4	TP-M7	LCD segment · Drive	7 9	WL-M32	AGND (reserve soldering land)
3 5	TP-M8	LCD segment · Drive	8 0	WL-M33	AGND (reserve soldering land)
3 6	TP-M9	LCD segment · Drive			
3 7	TP-M11	LCD segment · Drive			
3 8	TP-M13	LCD segment · Drive			
3 9	TP-M14	LCD segment · Drive			
4 0	TP-M15	LCD segment · Drive			
4 1	TP-M17	LCD segment · Drive			
4 2	TP-M19	LCD segment · Drive			
4 3	TP-M21	LCD segment · Drive			
4 4	TP-M23	LCD segment · Drive			
4 5	TP-M25	LCD segment · Drive			

CHECKING LANDS ON MAIN FPC (REAR SIDE)

NO.	NAME	FUNCTION
1	AS-M9	Operation unit FPC Press-contact/Screen compensation SW (SW φ)
2	AS-M10	Operation unit FPC Press-contact/Screen compensation SW (SW1)
3	AS-M11	Operation unit FPC Press-contact/Screen compensation SW (SW2)
4	AS-M12	Operation unit FPC Press-contact/Metering mode SW (SW3)
5	AS-M13	Operation unit FPC Press-contact/Metering mode SW (SW4)
6	AS-M14	Operation unit FPC Press-contact/GND
7	WL-M1	Finder contact soldering land I/O(FD)
8	WL-M2	Finder contact soldering land FCI/O
9	WL-M3	Finder contact soldering land CK(FD)
10	WL-M4	Finder contact soldering land +5.5V
11	TP-M5	Finder contact soldering land GND
12	WL-M6	Finder contact soldering land +3.3V
13	WL-M7	Illuminator lamp anode soldering land
14	WL-M8	Illuminator lamp cathode soldering land
15	WL-M15	DGND soldering land (reserve) *
16	WL-M16-SW5	Not in use, CPU port soldering land *
17	WL-M17-SW6	SW = Mercury SW (b) soldering land
18	WL-M18-SW7	SW = Mercury SW (c) soldering land
19	WL-M19	DGND for SW = Mercury SW (b) soldering land
20	WL-M20	DGND for SW = Mercury SW (c) soldering land
21	WL-M29	Illuminator lamp cathode soldering land.
22	WL-M30	Illuminator lamp anode soldering land
23	WL-M31	DGND for shield FPC soldering land
24	WL-M34	DGND soldering land (reserve) *
25	WL-M35	DGND soldering land (reserve) *
26	WL-M36	DGND soldering land (reserve) *
27	WL-M37	AGND soldering land (reserve) *

* To be discarded in future

*
*
*
*
*

**SOLDER-BRIDGE/LANDS ON MAIN FPC
(FRONT SIDE)**

No.	NAME	FUNCTION
1	XL-HANDAFND	Finder distinction (AMP finder: Open, Action finder: Bridge)
2	XL-HANDARST	Reset circuit selection (to be open)

CHECKING LANDS ON X CONTACT FPC

No.	NAME	FUNCTION
1	WL-N1-GND	Finder contact GND (SB) soldering land
2	WL-N2-RDY	Finder contact READY soldering land
3	WL-N3-STOP	Finder contact STOP soldering land
4	WL-N4-TTL	Finder contact TTL soldering land

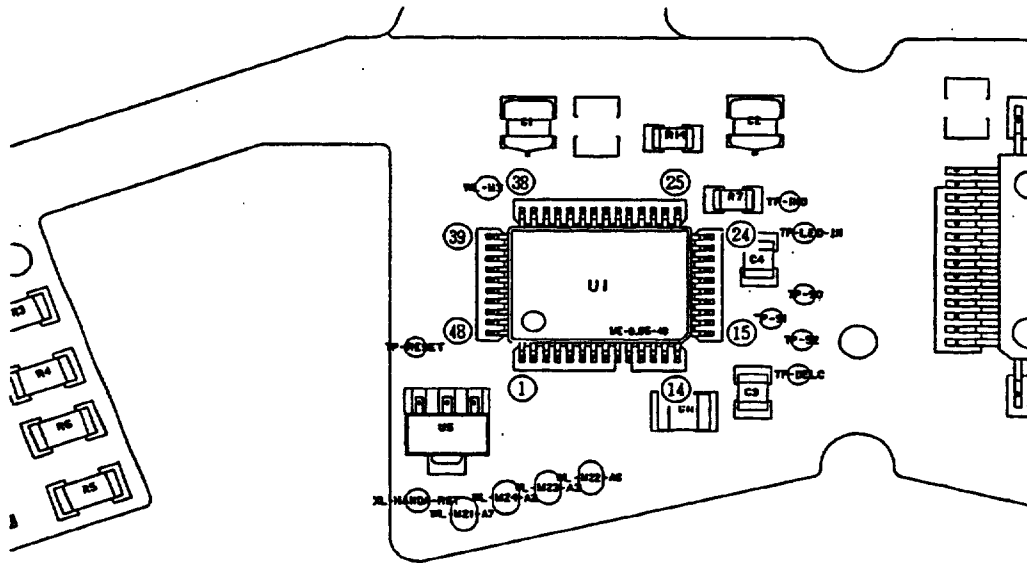
**PRESS-CONTACT TERMINAL ON OPERATION
UNIT FPC**

No.	NAME	FUNCTION
1	AS-SOU-SW0	Main FPC press-contact/screen compensation SW (SW ϕ)
2	AS-SOU-SW1	Main FPC press-contact/screen compensation SW (SW1)
3	AS-SOU-SW2	Main FPC press-contact/screen compensation SW (SW2)
4	AS-SOU-SW3	Main FPC press-contact/metering mode SW (SW3)
5	AS-SOU-SW4	Main FPC press-contact/metering mode SW (SW4)
6	AS-SOU-GND	Main FPC press-contact/GND

I C T E R M I N A L S

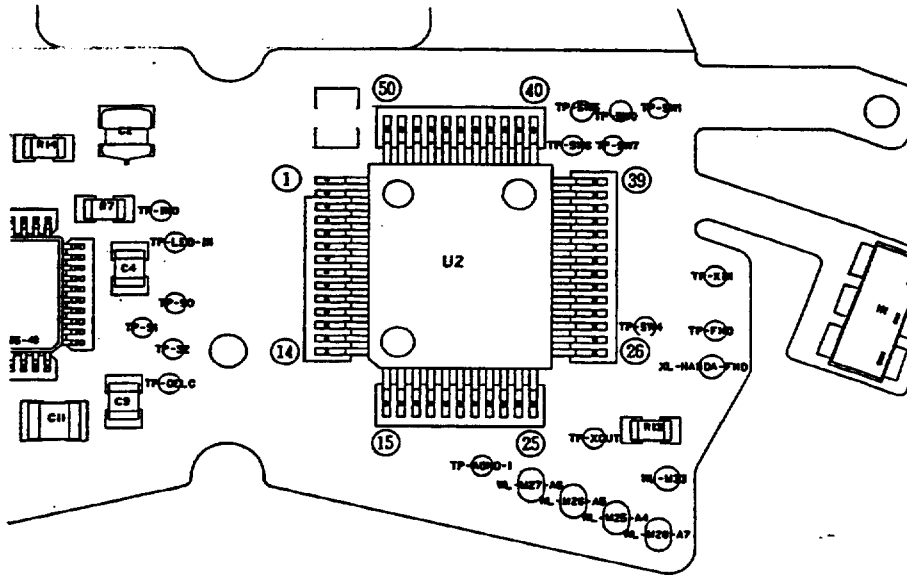
FAB02001-R.3252.A

METERING AMPLIFIER (U1)
M51063GP



PIN	NAME	FUNCTION	I/O	PIN	NAME	FUNCTION	I/O
1		<NC>		26	IS-sig	Integration start signal <NC>	I
2	A7 OUT	Reference voltage (Common, Anode)		27	FLASH STOP Sig2	<NC>	O
3	A1 IN	A1 input <NC>	I	28	FLASH STOP Sig1	<NC>	O
4	A2 IN	A2 input	I	29	INTEG. CONDENSER	Sync integration condenser <NC>	
5	A3 IN	A3 input	I	30	A15OUT	<NC>	
6	A4 IN	A4 input	I	31	A15 (-) IN	(GND)	
7	A5 IN	A5 input	I	32	A15 (+) IN	(VCC)	
8	A6 IN	A6 input	I	33		<NC>	
9	ADJ1	A3 off-set adjustment (1) <NC>		34	SYNC SPD(K)	(VCC)	
10	ADJ2	A3 off-set adjustment (2) <NC>		35	SYNC SPD(A)	<NC>	
11	Vcc			36	A12 OUT 2	<NC>	
12	RESET OUT	Reset output <NC>		37	A16 OUT	<NC>	
13	DELAY C	Reset delay condenser		38		<NC>	
14		<NC>		39	D/A CONDENSER	Charge/discharge condenser <NC>	
15	S3	Head amplifier selection (GND)	I	40	A11 OUT	Vref	O
16	S2	Head amplifier selection	I	41	A11 (-) IN		I
17	S1	Head amplifier selection	I	42	A10 (+) IN2		I
18	S0	Head amplifier selection	I	43		<NC>	
19	GND			44	GND		
20	DA1	Discharge <NC>		45	A10 (+) IN1		I
21	DA2	Charge <NC>		46	A10 OUT	Metering output	O
22	LED IN	LED control input	I	47	A10 (-) IN		I
23	LED OUT	LED control output	O	48	A9 OUT		O
24	SPEEDLIGHT	Speedlight terminal <NC>					
25		<NC>					

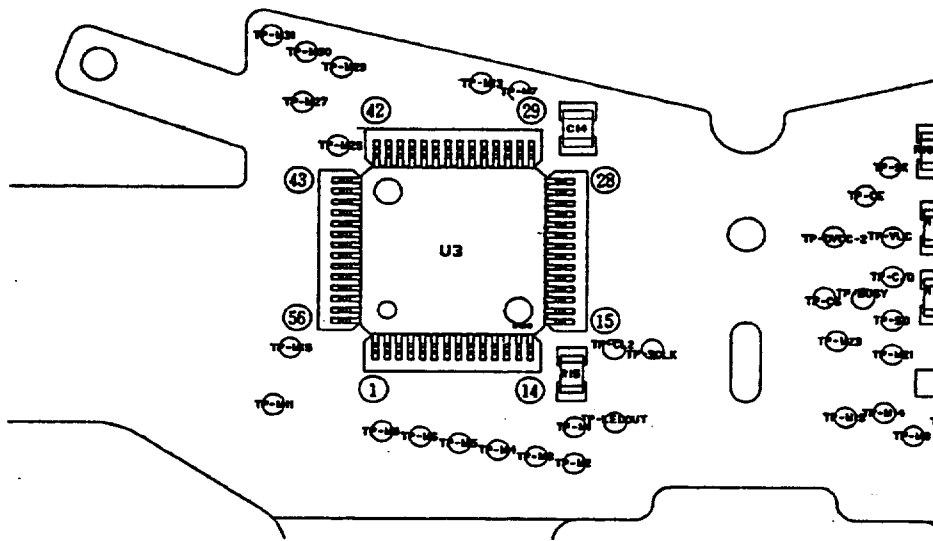
CPU (U2)
M50967FP



*: Pull-up resistor is included.

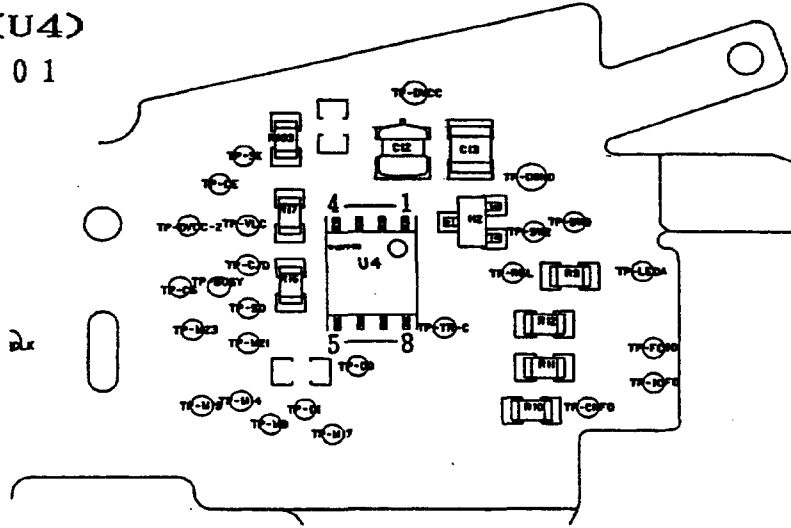
PIN	NAME	FUNCTION	PIN	NAME	FUNCTION
1	*P25	<NC>	26	*P16	<NC>
2	*P24	<NC>	27	*P15	FND (Finder distinction)
3	*P23	LED IN	28	*P14	SW4 (Metering mode)
4	*P22	S0 (Head amp selector)	29	*P13	SW3 (Metering mode)
5	*P21	S1 (Head amp selector)	30	*P12	SW2 (Screen compensation)
6	*P20	S2 (Head amp selector)	31	*P11	SW1 (Screen compensation)
7	*P37	<NC>	32	*P10	SW0 (Screen compensation)
8	*P36	CK (FD) (SI/O FOR BODY)	33	*P07	SCLK (For LCD driver)
9	*P35	I/O (FD) (SI/O FOR BODY)	34	*P06	S0 (For LCD driver)
10	*P34	I/O (FD) (SI/O FOR BODY)	35	*P05	CS (For LCD driver)
11	*P31	<NC>	36	*P04	BUSY (For LCD driver)
12	*P30	PC I/O (SI/O FOR BODY)	37	*P03	C/D (For LCD driver)
13	CNTR	DGND	38	*P02	SW7 (CAMERA ANGLE)
14	INT1	FC I/O (SI/O FOR BODY)	39	*P01	SW8 (CAMERA ANGLE)
15	CNVss	DGND	40	*P00	Not in use (SW5)
16	RESET	RESET	41	Vcc	Vcc
17	Xin	X IN	42	IN3	AVss
18	Xout	X OUT	43	IN2	AVss
19	φ	<NC>	44	IN1	AVss
20	Vss	DGND	45	AVss	AVss
21	*P43	D0 (for EEPROM)	46	IN0	A10 OUT (Head amplifier OUT)
22	*P42	D1 (for EEPROM)	47	Vref	Vref
23	*P41	SK (for EEPROM)	48	AVcc	AVcc
24	*P40	CE (for EEPROM)	49	*P27	<NC>
25	*P17	Release signal	50	*P26	<NC>

LCD DRIVER (U3)
 μ PD7225GB-3B7



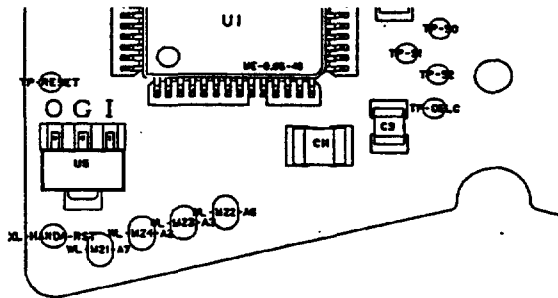
PIN	NAME	FUNCTION	I/O	PIN	NAME	FUNCTION	I/O
1	S 2 0	<NC>		31	COM1	Common output (M8)	O
2	S 2 1	<NC>		32	COM2	Common output	<NC>
3	S 2 2	LCD segment drive (M1)	O	33	COM3	Common output	<NC>
4	S 2 3	LCD segment drive (M12)	O	34	S 0	LCD segment drive (M31)	O
5	S 2 4	LCD segment drive (M11)	O	35	S 1	LCD segment drive (M30)	O
6	S 2 5	LCD segment drive (M10)	O	36	S 2	LCD segment drive (M13)	O
7	S 2 6	LCD segment drive (M9)	O	37	S 3	LCD segment drive (M29)	O
8	S 2 7	LCD segment drive (M6)	O	38	S 4	LCD segment drive (M28)	O
9	S 2 8	LCD segment drive (M5)	O	39	S 5	LCD segment drive (M27)	O
10	S 2 9	LCD segment drive (M4)	O	40	S 6	LCD segment drive (M26)	O
11	S 3 0	LCD segment drive (M3)	O	41	S 7	LCD segment drive (M25)	O
12	S 3 1	LCD segment drive (M2)	O	42		<NC>	
13	CL 1	R connection for clock oscillation		43	S 8	<NC>	O
14		<NC>		44	S 9	LCD segment drive (M15)	O
15	CL 2	R connection for clock oscillation		45	S 1 0	LCD segment drive (M14)	O
16	SYNC	Sync signal input/output	I/O	46	S 1 1	LCD segment drive (M24)	O
17	VLC 1	LCD drive power terminal		47	S 1 2	LCD segment drive (M23)	O
18	VLC 2	LCD drive power terminal		48	S 1 3	LCD segment drive (M22)	O
19	VLC 3	LCD drive power terminal (to DGND)		49	DVCC	+5.5 V	O
20	DGND	DGND		50	S 1 4	LCD segment drive (M21)	O
21	DVCC	+5.5V		51	S 1 5	LCD segment drive (M20)	O
22	SCLK	Serial clock input	I	52	S 1 6	LCD segment drive (M19)	O
23	SI	Serial data input	I	53	S 1 7	LCD segment drive (M18)	O
24	CS	Chip select input	I	54	S 1 8	LCD segment drive (M17)	O
25	BUSY	BUSY output	O	55	S 1 9	LCD segment drive (M16)	O
26	C/D	Command/data selection input	I	56		<NC>	
27	RESET	Reset signal input	I				
28		<NC>					
29		<NC>					
30	COM0	Common output (M7)	O				

EEPROM (U4)
S24301F01



PIN	NAME	FUNCTION	I/O
1	STORE	+5.5 V	I
2	Vcc	+5.5 V	
3	CE	Chip Enable input	I
4	SK	Serial Clock input	I
5	DI	Data input	I
6	DO	Data output	O
7	Vss	DGND	
8	RECALL	+5.5 V	I

RESET IC (U5)
M51951AML



PIN	NAME	FUNCTION	I/O
O	OUT	RESET SIGNAL INPUT	O
G	GND		
I	VCC	VOLTAGE INPUT	

作成承認印

配布許可印



MULTI PHOTOMIC FINDER (DP-20)

PARTS LIST (REVISED-1)

修理部品表 (改訂-1)

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Tokyo, Japan

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Feb. 17. 1994

〔 3 〕 部 品 表 Parts List

DP-20

FAB02001-R. 3252. B

部品番号 Part No.	補助番号 Ckt. No.	名 称 Name	1台分 個 数 Pcs. Per Unit	部組品番号 Assembly	参照 図番 Fig.	販 売 区 分 Term of Delivery	備 考 Remarks	要 求 単 位 Q'ty per order
1K050-340	51	アイピースシャッターワッシャー Washer, eyepiece shutter	1	18990-371-3	1 D2	○△		10
1K006-008	166	シュー止めビス Screw	4	18990-371	1	○△	OLD RP-8902	10
1K006-008-2		シュー止めビス Screw	4	18990-371-3	1 C2	○△	NEW	10
1K083-169	33	視度調ダイヤルカバー Diopter dial cover	1		1 C1	○		5
1K087-306	68	銘 板 Name plate	1		1 A3	○		5
1K116-714	105	ゴ ム Rubber	1		1 C1	○		5
1K116-800	27	ペンタカバー Pentaprism cover	1		1	○	Dis. RP-9004	5
1K116-800-2		ペンタカバー Pentaprism cover	1		1 A2	○	89P-1048	5
1K116-801	29	絶縁フィルム Insulation film	1		1 C3	○		5
1K116-802	41	視度調軸スポンジ Sponge, diopter shaft	1		1 C3	○		5
1K116-803	44	絶縁フィルム Insulation film	1		1 A1	○		5
1K116-804	65	スソゴム Side rubber	1		1 A3	○		5
1K116-805	67	コード押えテープ Tape	4		1 B2 D2	×	TA-0006	
1K116-806	83	防滴スポンジB Drop-proof sponge B	1		1 C2	○		5
1K116-808	124	シュー座スポンジ Sponge, shoe base	1	18990-371-3	1 D1	○△		5
1K116-810	126	ファインダー接点部スポンジ Sponge, viewfinder contact	1	18990-350-1	1 A3	○△		5

部品表 Parts List

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	部品番号 Assembly	参照 図番 Fig.	販売 区分 Term of Delivery	備考 Remarks	要求 単位 Q'ty per order
1K201-087	32	視度調ダイヤル Diopter dial	1		1 C1	○		5
1K206-072	53	アイピースシャッターレバー Eyepiece shutter lever	1	18990-371-1	1 D1	○△		5
1K206-073	70	測光モードダイヤル Metering mode selector dial	1		1	○	OLD KP-9004 89F-1050 RP-9008 在庫払底 DEPLETED	5
1K206-083	149	測光モードダイヤル Metering mode selector dial	1		1 C1	○	89F-2009 RP-8902	5
1K208-127	72	測光モードダイヤルカバー Metering mode selector dial cover	1		1 C1	○		5
1K233-030	106	バネ Spring	1		1 C1	○		5
1K240-685	126	ペンタ押さえバネ Penta prism retainer spring	1		1 A2	○	Add.	5
1K240-690	108	着脱検出SW A Release detection SW A	1		1 B2	○		5
1K240-691	118	シューバネ Shoe spring	1	18999-331-1	1 D1	○△	OLD	5
1K240-691-1		シューバネ Shoe spring	1	18990-371-3	1 D1	○△	RP-9365 サ-93-15号 NEW	5
1K240-692	120	ストロボ検出SW A Flash detection SW A	1	18990-371-3	1 D1	○△		5
1K273-008	88	スクリーン補正ギア Screen compensation gear	1		1 A3	○		5
1K302-050	34	視度調カム Diopter cam	1		1 C3	○		5
1K371-415	31	視度調軸 Diopter shaft	1		1 C3	○		5
1K371-416	39	視度調クリックピン Diopter Click pin	1		1 C3	○		5
1K371-418	63	スクリーン押え Screen retainer	2		1 B3	○	OLD A(F4)-90040	5
1K371-418-1		スクリーン押え Screen retainer	2		1 B3	○	NEW RP-9014 90F-1018 補-90-16	5

部品表 Parts List

FAB02001-R. 3252.B

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly	参照 図番 Fig.	販売 区分 Term of Delivery	備考 Remarks	要求 単位 Q'ty per order
1K371-420	112	着脱検出SWピン Release detection SW pin	1		1 B3	○		5
1K500-720	104	アイリング Eye Ring	1		1 C1	○		5
1K600-870	28	視野枠 View field frame	1		1 A2	○		5
1K600-871	49	アイピースシャッター B Eyepiece shutter B	1	1B990-371-3	1 D2	○△		5
1K600-872	62	スクリーン押えバネ Screen retainer spring	1		1 B2	○		5
1K600-873	98	絶縁カラー A Insulation collar A	1	1B990-371-3	1 C1	○△		5
1K600-874	102	圧接ゴム Press-contact rubber	2		1 C2	○		5
1K600-875	111	着脱検出SW絶縁板 Insulating plate	2		1 B2	○		5
1K600-876		シュー当て板 Shoe plate	1	1B990-371	1	○△	Dis. RP-8902	5
1K600-876-1	122	シュー当て板 Shoe plate	1	1B990-371-3	1 C2	○△		5
1K600-877	139	LCD用視野枠 LCD frame	1	1B990-363	1 B2	○△	RP-8902	5
1K611-299	38	視度調クリックバネ Diopter click spring	1		1 C3	○		5
1K611-302		アイピースシャッター A Eyepiece shutter A	1	1B990-371-3	1 D2	○△	OLD 89F-2008	5
1K611-302-1	48	アイピースシャッター A Eyepiece shutter A	1	1B990-371-3	1 D2	○△	NEW	5
1K611-303-3	66	コード押え板 A Wire retainer plate A	1		1 B2	○	RP-9242 92F-2011	5
1K611-304	69	コード押え板 B Wire retainer plate B	1		1	○	RP-9242 92F-2011 Dis.	5

部品表 Parts List

FAB02001-R. 3252. B

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分 價数 Pcs. Per Unit	部組品番号 Assembly	参照 図番 Fig.	販 区 分 Term of Delivery	備 考 Remarks	要 求 単 位 Q'ty per order
1K611-309	100	圧接押し板 Press-contact plate	1		1 C2	○		5
1K611-310	109	着脱検出 SW B Release detection SW B	1		1 B3	○		5
1K611-311	113	GNDラグ板 GND lug plate	1		1 B2	○		5
1K611-313	121	ストロボ検出 SW B Flash detection SW B	1	18990-371-3	1 C1	○△		5
1K611-317	137	表示視野枠 Viewfield frame	1		1 B3	○		5
1K611-375	142	押さえ板 Retaining plate	1	18990-363	1 B1	○△	RP-9020	5
1K611-828	93	遮光板 Light baffle plate	1		1 A1	○	RP-9242 92F-1010	5
1K620-158	107	オサエ環 Retaining ring	1		1 C1	○		5
1K640-889	101	絶縁カラー B Insulation collar B	1	18990-371-3	1 C1	○△		5
1K681-045	21	中カバー Intermediate cover	1		1 D2	○		1
1K681-046	22	プリズムボックス Prism box	1		1 B3	○	OLD 90F-1018 Dis.	1
1K681-046-3		プリズムボックス Prism box	1		1 B3	○	NEW 補90-16 A(F4)-90040	1
1K681-049	35	視度調基板 Diopter base plate	1		1 C3	○		5
1K681-050	36	視度調基板 Diopter base plate	1		1 C3	○		5
1K681-051	40	視度調軸受 Diopter bearing	1		1 C3	○		5
1K681-055	96	スクリーン補正窓 Screen compensation window	1	18990-371-3	1 D2	○△		5

部品表 Parts List

FAB02001-R. 3252. B

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly	参照 図番 Fig.	販 区 分 Term of Delivery	備 考 Remarks	要 求 単 位 Q'ty per order
1K681-056	110	着脱検出SWモールド Release detection SW mold	1		1 B3	○		5
1K681-057	129	レール部スポンジカバー左 Left sponge cover	1		1 D1	○		5
1K681-058	130	レール部スポンジカバー右 Right sponge cover	1		1 D2	○		5
1K681-059-1	138	LCDハウジング LCD housing	1	18990-363	1 B2	○△	RP-9242	5
1K681-060	141	LCD窓 LCD window	1	18990-371-3	1 D2	○△	OLD	5
1K681-060-1		LCD窓 LCD window	1	18990-371-3	1 D2	○△	NEW	5
1K999-056		視度調整ダイヤルカバー Diopter dial cover (no print)	1		1	○	RP-9014 90F-1008	5

部品表 Parts List

FAB02001-R. 3252. B

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	部品番号 Assembly	参照 図番 Fig.	販売 区分 Term of Delivery	備考 Remarks	要求 単位 Q'ty per order
A1-14016FB	153	小ネジ Screw	2		1 B2	○		50
A1-14020FA	152	"	2		1 B2 A3	○		50
A1-17016FA	159	"	3		1 B1	○		50
A1-17030FB	177	"	1		1 A1	○		50
A1-17035FS	155	"	3		1 A3	○		50
B1-14025FB	174	"	2		1 B1	○		50
B1-20022FA	175	"	2		1 A1	○		50
B1-20035FB	169	"	2		1 B3	○		50
G1-14030FB	171	"	2	18990-363	1 B1	○△		50
G1-17028FB	151	"	7	18990-371-3	1 A1 C3, D2	○△		50
G1-17040FB	154	"	3	18990-360-1	1 C3	○△		50
G1-20025FB	162	"	2		1 D3	○		50
G1-20030FA	160	"	2		1 D2	○		50
G1-20050FS	164	"	4		1 B3	○		50

部品表 Parts List

FAB02001-R. 3252.B

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	部品番号 Assembly	参照 図番 Fig.	販売 区分 Term of Delivery	備考 Remarks	要求 単位 Q'ty per order
H1-17080FA	158	小ネジ Screw	1		1 C1	○		50
T1-01500SX	161	"	1		1 C3	○		50
1S162-004	524	E*PRDM (S24301F01)	1	18990-363	1	○△	U4	5
1S190-007	522	マイクロコンピュータ IC (M50967-XXXFP)	1	18990-363	1	○△	U2	5
1S208-001	523	LCDドライバIC (MPD7225GB-387)	1	18990-363	1	○△	U3	5
*1S237-053	521	測光アンプ Metering amplifier (M51063GP)	1	18990-363	1	○△	U1 RP-8902	5
*1S260-044	533	イルミランプ DUL-119 Illuminator lamp	1	18990-363	1 B1	○△	D3 RP-8902	5
1S268-016	511	LCD (LTA2E. 701A)	1	18990-363	1 B1	○△		5
1S758-025	140	ゼブラ Zebra	2	18990-363	1 B1	○△		5

部品表 Parts List

FAB02001-R. 3252. B

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	部品番号 Assembly	参照 図番 Fig.	販売 区分 Term of Delivery	備考 Remarks	要求 単位 Q'ty per order
W-0056GN		リード線 Lead wire						
W-0056PU		リード線 Lead wire						
W-0056GY		リード線 Lead wire						
W-0056BE		リード線 Lead wire						
W-0056YE		リード線 Lead wire						
W-0056WH		リード線 Lead wire						
W-0056BN		リード線 Lead wire						
W-0056RE		リード線 Lead wire						
W-0056BK		リード線 Lead wire						
W-0080BK		リード線 Lead wire						
W-0080OR		リード線 Lead wire						
1G247-050	G2	接眼レンズ A Eyepiece lens A	1	18990-364	1	○△	OLD	1
1G247-055		接眼レンズ A Eyepiece lens A	1	18990-364-1	1 A1	○△	NEW RP-9242 92F-1010	1
1G430-031-1	G8	上側表示プリズム Upper prism	1	18990-359-1	1 C3	○△		1
1G710-002-2	G5	平面ガラス Plane glass	1		1 C1	○		1
1G960-001	145	LCD 用偏光板 Polarizing plate for LCD	1		1 B2		RP-8902	5

部組品表 Assembly List

FAB02001-R.3252.B

部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	大部組品番号 Main assembly No.	参照 図番 Fig.	備考 Remarks	要求 単位 Q'ty per order
18990-359-1	B022	プリズムボックス部 Prism box	1		1 B3	90P-1018 補90-16 A(P4)-9040	1
18990-360	B055	ファインダー接点ホルダー組 Viewfinder contact holder unit	1		1 A3	RP-9242 92F-2011	1
18990-360-1		ファインダー接点ホルダー組 Viewfinder contact holder unit	1		1 A3		1
18990-362	B504	シールドFPC組 Shield FPC unit	1		1 B2		1
18990-363	B2501	メインFPC Main FPC	1		1 B1		1
18990-364	B023	受光素子ホルダー組 Sensor holder unit	1		1 B1	OLD 92F-1010 RP-9242	1
18990-364-1		受光素子ホルダー組 Sensor holder unit	1		1 B1	NEW	1
18990-365	B131	表示ミラー部 Display mirror unit	1		1 B3		1
18990-366	B132	表示ミラー支柱部 Display mirror post	1		1 C3		1
18990-367	B025	接眼ホルダー部 Eyepiece holder unit	1		1 A1	OLD RP-9242 92F-1010	1
18990-367-1		接眼ホルダー部 Eyepiece holder unit	1		1 A1	NEW	1
18990-368	B042	可動接眼ホルダー部 Movable eyepiece holder	1		1	OLD 92F-1010 在庫払底 DEPLETED	1
18990-368-1		可動接眼ホルダー部 Movable eyepiece holder	1		1 A1	RP-9289	1
18990-371	B2024	カバー部 Viewfinder cover unit	1		1	OLD 89F2008 RP-8902 92F-1010, RP-9116 RP-9216, RP-9289 在庫払底 DEPLETED RP-9379	1
18990-371-2		カバー部 Viewfinder cover unit	1		1		1
18990-371-3		カバー部 Viewfinder cover unit	1		1 D1	RP-9365 ナ 93-15号	1

部組品表 Assembly List

FAB02001-R. 3252. B

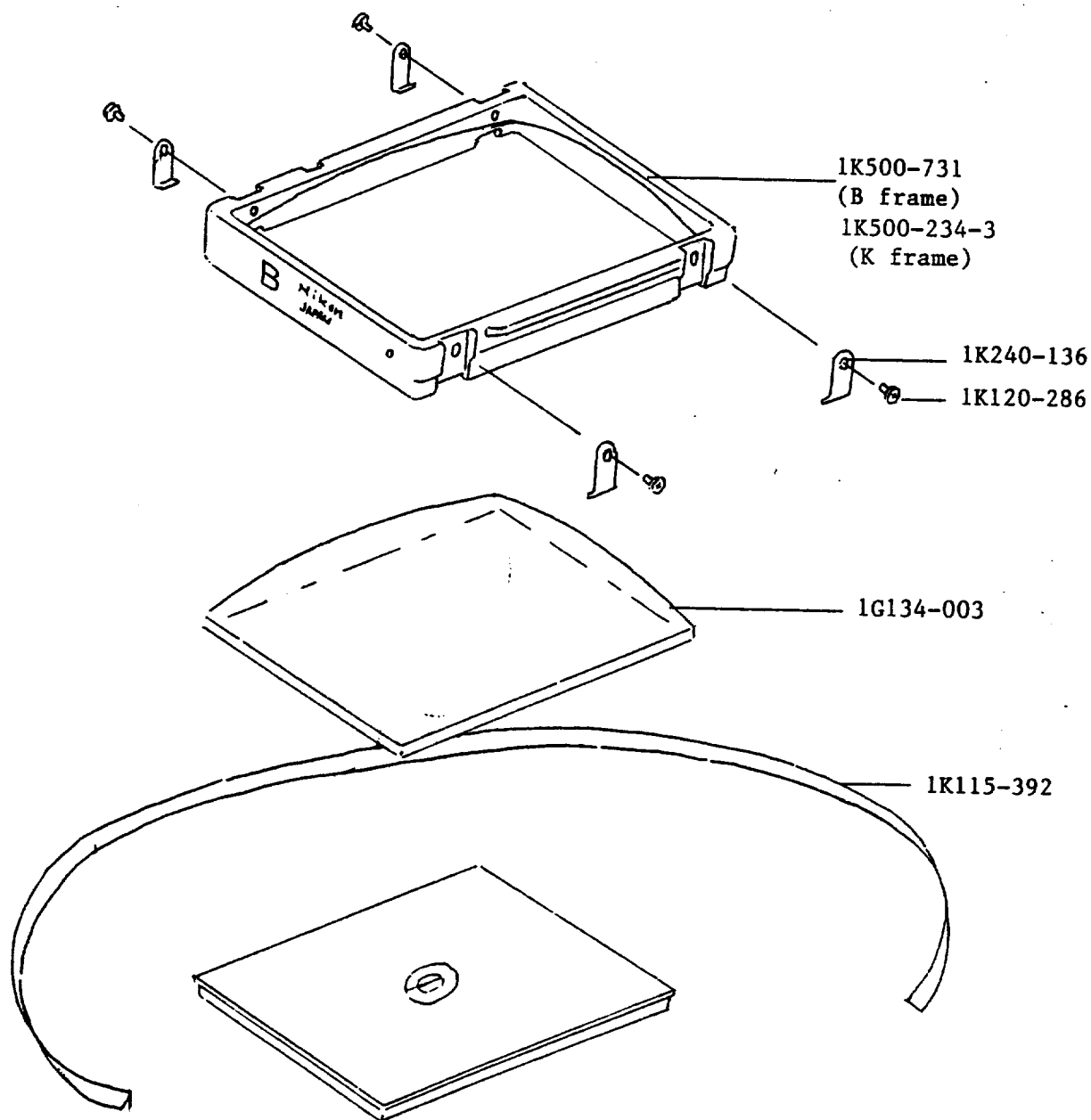
部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	大部組品番号 Main assembly No.	参照 図番 Fig. No.	備考 Remarks	要求単位 Q'ty per order
1B999-199-1	BB1	操作部フレキ Operation unit FPC	1		1 D2	RP-8838	1
1B999-289	B075	ダイヤルクリック板 Dial click plate	1		1 C3	RP-8838 Add.	5
1B999-331	B123	シュー座組 Accessory shoe base plate	1		1 D1	RP-8925 OLD	1
1B999-331-1		シュー座組 Accessory shoe base plate	1		1 D1	NEW Add.	1
△ 1B999-332	B119	ストロボ検出SWピン組 Flash detection SW pin unit	1		1 C1	RP-8925 RP-9433 Add.	5
△ 1B999-332-1		ストロボ検出SWピン組 Flash detection SW pin unit	1		1 C1	RP-9433 Add. NEW	5
1B999-333	B115	シュー組 Shoe unit	1		1 D1	DA-20 RP-9365 サ93-15号 OLD	5
1B999-333-1		シュー組 Shoe unit	1		1 D1	NEW Add. RP-8925	5
1B999-334	B045	アイピースシャッター基板			1 D2	RP-8925 Add.	5
1B999-353		接眼部組品 Plain rubber (fixed)				RP-9014 90F-1008 RP-9307 Add. 在庫払底 DEPLETED	1
1B999-353		接眼ホルダー部組 Eye piece unit	1			93F-1018 サ技93-55 RP-93F2	1
1S045-215	B621B	位置センサー B組 Position sensor B	1		1 D3		1
1S045-216	B621C	位置センサー C組 Position sensor C	1		1 C3		1
1S007-168	B303	X接点FPC組 X contact FPC unit	1	1B990-363	1 C2	RP-8925	
IG080-023-1 (IG080-023)	G1	ペンタプリズム Penta prism	1		1 A2		1

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Jun. 15. 1994



FRESNEL LENS, B & K TYPE



(B Screen) 1G950-056

(K Screen) 1G950-060

部品表 Parts List

FAC04101-R. 3040. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Fig. No.	販売区分 Class. of Salability	備考 Remarks	要求単位 Order Unit Q'ty
*1K115-392	8	ゴミ防止テープ Tape	1			○	1シート(50枚)	1
1K120-097	7	ピントガラス押えビス Screw	4		OLD	○	RP-9116	5
*1K120-286	7	ピントガラス押えビス Screw	4		NEW	○	RP-9116 パビン物の為、 1K500-234-3 同時交換	5
1K240-136	6	ピントガラス押え板 Retaining plate	4			○		5
1K500-234-2	5	ピントガラス枠 Frame	1		OLD	○	RP-9116 材質：鉄板	1
1K500-234-3	5	ピントガラス枠 Frame	1		NEW	○	RP-9116 材質：鉄板	1
1G950-009-2 (1G950-009-1)	1	フレネルレンズ Fresnel lens	1			○		1
1G134-003	2	コンデンサーレンズ Condencer lens	1			○		1
		その他のスクリーンは商品扱いです。 Screen of other types is to be delivered on a commercial basis						

40FAIK より FAC04101へ 図番化移行
 PRODUCT CODE 40FAIK IS CHANGED TO FCA04101 SINCE DRAWING'S NUMBERING SYSTEM IS CHANGED.

FRESNEL LENS, B & K TYPE 部品表 Parts List

FCA09001, 09401-R. 3252. A

部品番号 Part No.	補助番号 Ckt. No.	名 称 Name	1台分 個 数 Pcs. Per Unit	部組品番号 Assembly	参照 図番 Fig.	販 売 区 分 Term of Delivery	備 考 Remarks	要 求 単 位 Q'ty per order
*1K115-392	8	ゴミ防止テープ Tape	1			○	FCA04001	1
1K120-286	7	Screw	4			○		10
*1K240-136	6	ピントガラス押さえ板 Retaining plate	4			○	FCA04001	10
1K500-731	5	ピントガラス枠 Frame	1			○		1
*1G314-003	2	コンデンサーレンズ Condenser lens	1			○	FCA04001	1
1G950-056	1	フレネルレンズ (Bスクリーン) Fresnel lens, B type	1			○		1
FCA09401								
1G950-060	1	フレネルレンズ (Kスクリーン) Fresnel lens, K type	1			○		1

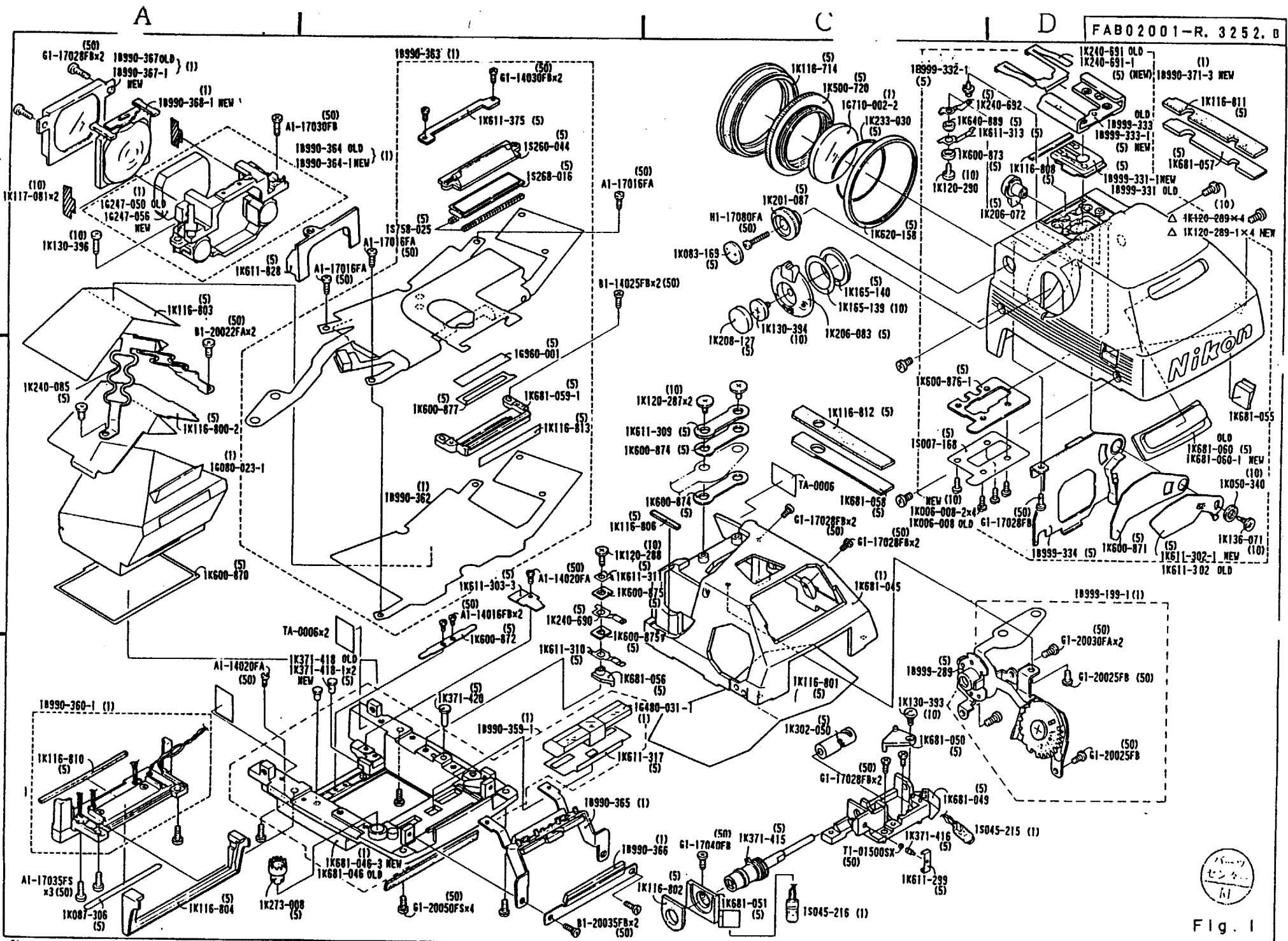


Fig. 1

部品表 Parts List

FAB02001-R. 3252. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly	参照 図番 Fig.	販売 区分 Term of Delivery	備考 Remarks	要求 単位 Q'ty per order
IK116-811	127	レール部スポンジ左 Sponge. left rail	1		1 D1	○		5
IK116-812	128	レール部スポンジ右 Sponge. right rail	1		1 D2	○		5
IK116-813	136	遮光ルミナー Light-baffle	1	1B990-363	1 B2	○△		5
IK116-948-1	103	ネオプレンゴム Rubber	2	1B990-371-3	1	○△	90F-2008 Add. RP-9014 A(F4)-900029	10
IK117-081	146	ポリエステルフィルム Poliestel film	2	1B990-364-1	1 A1	○△	RP-9020 Add.	10
IK120-287	165	圧接部ビス Press-contact screw	2		1 C2	○		10
IK120-288	170	着脱検出SWビス Release detection SW screw	1		1 B2	○		10
△ IK120-289	172	ビス	4		1	○	RP-9586	10
△ IK120-289-1		ビス		D1				
IK120-290	178	シンクロ接点ビス Sync. contact screw	1	1B990-371-3	1 C1	○△		10
IK130-393	37	接眼駆動板止めビス Eyepiece actuating plate screw	1		1 C3	○		10
IK130-394	71	ダイヤル止めビス Dial screw	1		1 C1	○		10
IK130-396	176	受光素子ホルダー段付ビス Sensor holder stepped screw	1		1 A1	○		10
IK136-071	50	アイピースシャッターネジ Eyepiece shutter screw	1	1B990-371-3	1 D2	○△		10
IK165-139	81	測光モード防滴ワッシャー Drop-proof washer	1		1 C1	○		10
IK165-140	82	測光モード防滴スポンジ Drop-proof sponge	1		1 C1	○		5

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OCT. 13. 1995

