作成承認印	配布許可印
ニコン 映像事業 CS推進部 GM	サービス 計画課 M

Nikon F100 FAA35051

REPAIR MANUAL

Nikon | NIKON CORPORATION
Tokyo, Japan

Printed in Japan Norvember 1998

Specifications

Specifications

1 . Photometry

The pattern on photo detector

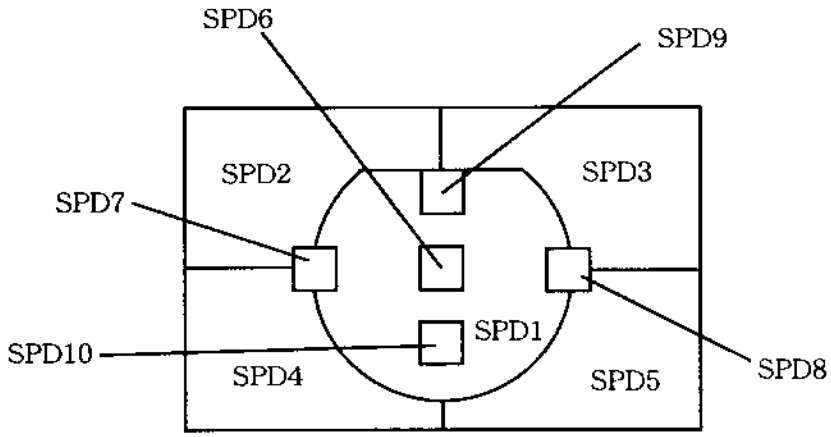


Photo detector : 10-division multiple segment SPD

Photometry performance : Multiple pattern photometry : EV 0 to 21

Center-weighted metering : EV 0 to 21

Spot metering : EV 3 to 21

In use of 50/1.4 lens in accordance with ISO100

2 . TTL auto-flash control

Photo detector : 5-segment TTL multi sensor

Film speed : ISO 25 to 1000 guaranteed

3 . A F

TTL phase difference detection method using the AP-4 module

Metering performance

Limit of measured luminance	Limit of open aperture value F
EV - 1 to +19 under room temp.,in accordance with ISO 100	F 1.2 to 5.6

4 . Finder

Finder screen	B-type clear mat screen III
Superimpose screen	With photometry and metering functions
Possibility of finder replacement	Impossible
Possibility of screen replacement	Possible for B-type and E-type alone : No compatibility withF90X's
Finder field frame ratio	Approximately 96 % in both length (50mm Lens、∞)
Diopter	-3~+ 1 Dpt
Eyepoint	21.1 mm in response to - 1 Dpt

5 .In-finder LCD back light

Using the yellow-green LED, back light shall apply.

Its luminance varies according to any photometry value(s).

6 .Superimpose display

LED light shall apply to the five micro prism in response to the AF area on the dedicated screen.

Its luminance varies according to any photometry value(s).

7 .The switches for mechanism

Name of switch	Arranged position
Rear cover switch	On the rear cover open/close key
Sync. switch	In the shutter unit
Sequence switch	In the sequence unit
Film detection switch	In the F detection unit
Rear curtain switch	In the shutter unit
Battery identification switch	On the grip of rear body
Battery release switch	On the grip of rear body
Power pack release switch a	On the bottom of rear body
Power pack release switch b	On the bottom of rear body
Mirror latch switch	On the I base plate
Lens release switch	On the front body

8 .Preview function

By forcibly pressing the preview button, the preview function starts to work.

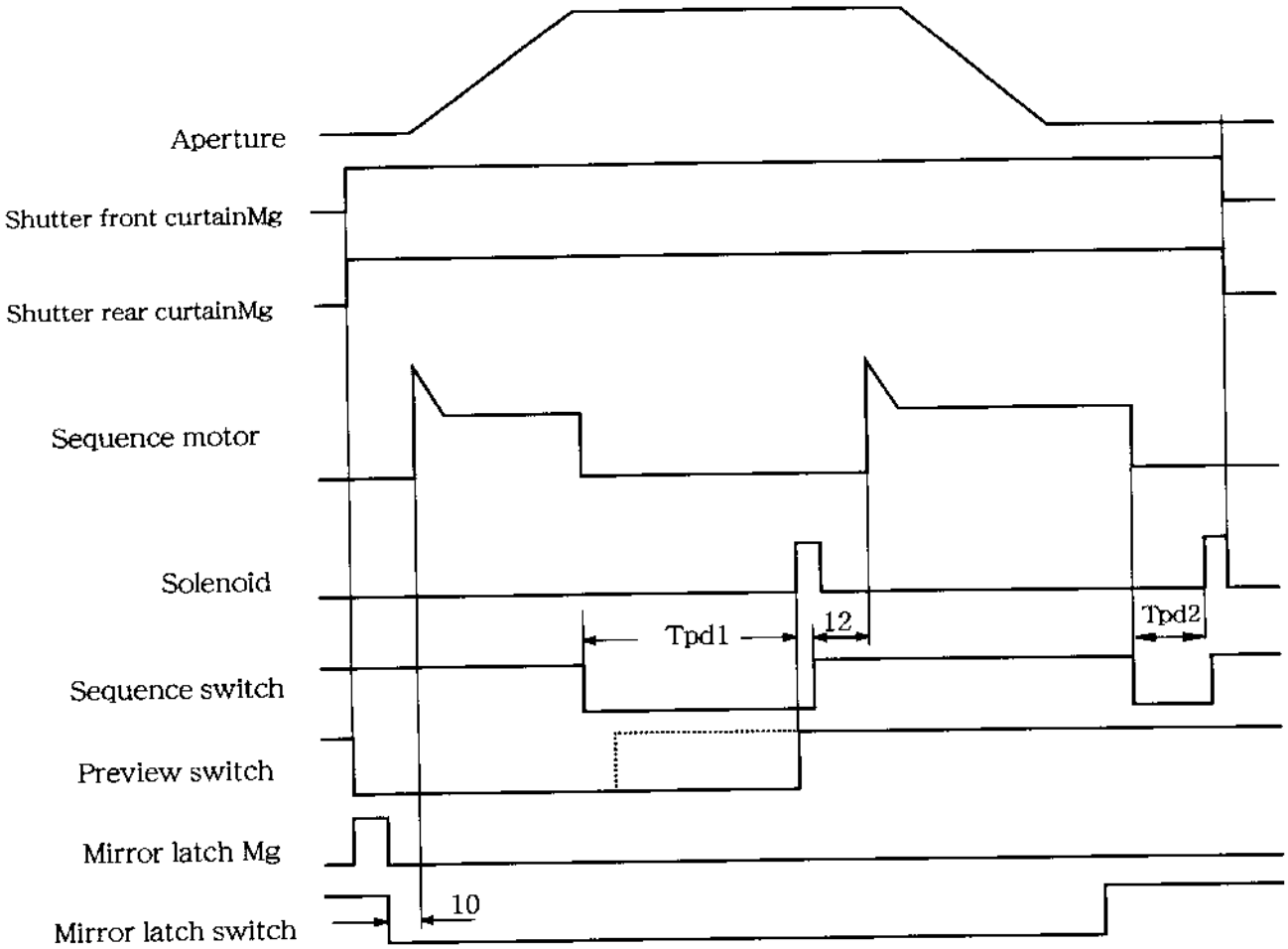
Then, the aperture mode shall be controlled by any controlled aperture value(s) without mirror-up mode.

During the preview function, any aperture value displayed just before the commencement of preview mode shall be maintained.

Then, any others such as shutter speed lock and exposure indicator shall not be displayed.

Besides, even if the exposure mode changes during the preview, the displayed aperture value shall be maintained and then the displayed aperture value changes after canceling the preview function.

The figure of preview sequence



① According to the ON signal from the preview switch, conduction shall be started to the mirror latch magnet and to the front and rear shutters' magnets.

② As soon as the mirror latch switch detecting the latch mode of mirror is turned on, the conduction shall be stopped.

③ As soon as the mirror latch switch is turned on, the aperture control starts after 10 ±1 m sec.

④ The conduction to the shutter magnet shall be maintained until the solenoid is turned off for the second time.

⑤ While pressing the preview button, the preview mode is maintained.

Then, select more delayed timing from either 't timing to output the off-signal from the preview switch' or 't timing to output the Tpd1', and turn on the solenoid.

Then, the preview mode goes to the sequence cancellation mode.

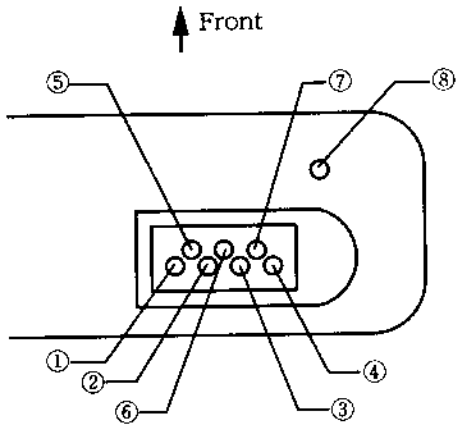
Tpd1 = 30 ± 1 (0 to 100) mse

⑥ The sequence motor shall be operated to drive after 12 m sec from the sequence switch's OFF signal.

⑦ After Tpd 2 from the sequence switch's ON signal, the conduction starts to the solenoid.

Tpd 2 = 30 ± 1 (0 to 100) mse

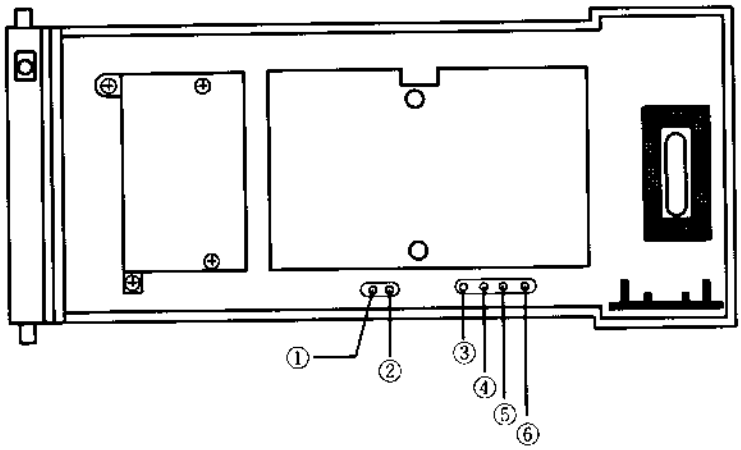
9 .The contacts for power pack



The figure for the bottom of camera

No.	Function of each contact
①	For command dial b on vertical position
②	For command dial a on vertical position
③	For AF operation
④	For shutter release from vertical position
⑤	For battery identification 0
⑥	For pre-release from vertical position
⑦	For battery release
⑧	For power pack change-over switch

1 0 .The contacts on the rear cover for connection with the camera



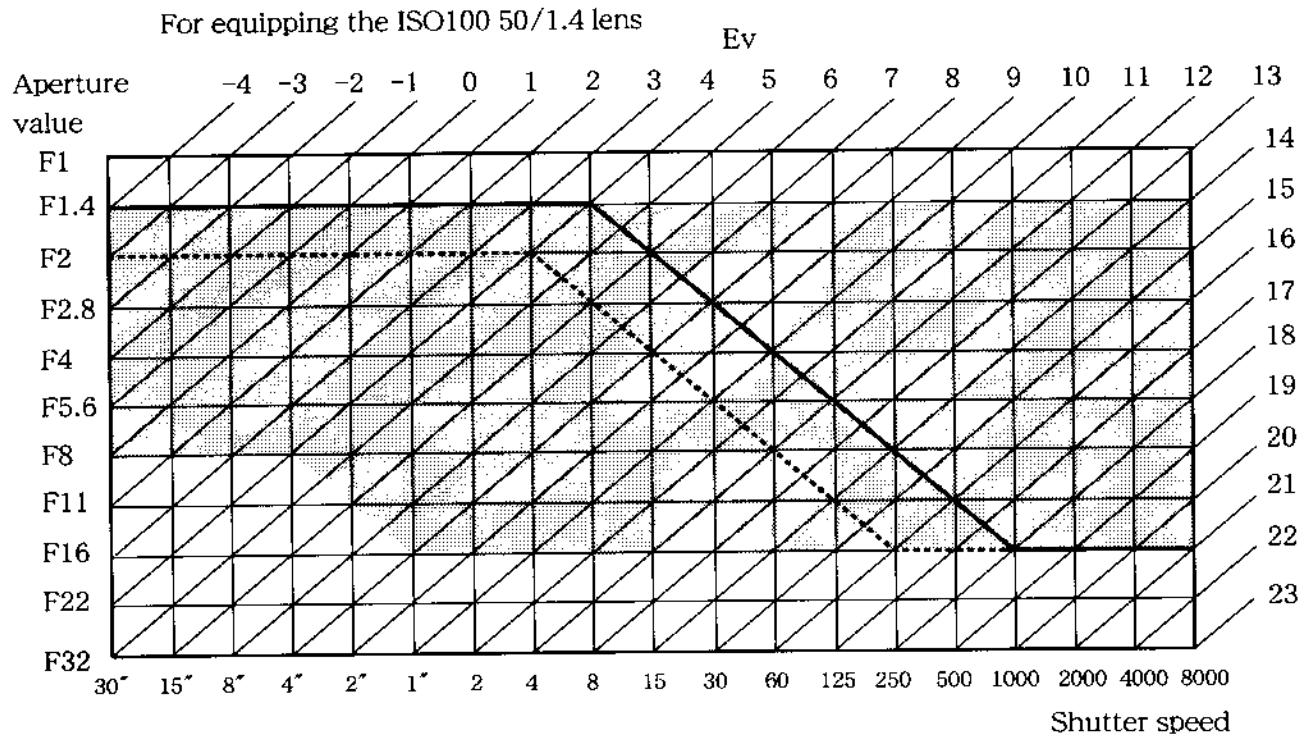
No.	Function of each contact
①	G N D
②	AF area mode
③	Focus area selector for left position
④	Focus area selector for upper position
⑤	Focus area selector for right position
⑥	Focus area selector for lower position

1 1 .Shutter

(1) Copal Company Ltd.-made CHS-EM III Unit shutter

(2) Max. speed 1/8000 sec. Sync. 1/250 sec.

1 2 .Program diagram



The pulse shows the line which goes 1-step further to the lower shutter speed in the program shift.

Program shift coverage

Program shift

① For the program shift, while constantly maintaining the EV value, the aperture value and the shutter speed shall be varied in order to change the diagram.

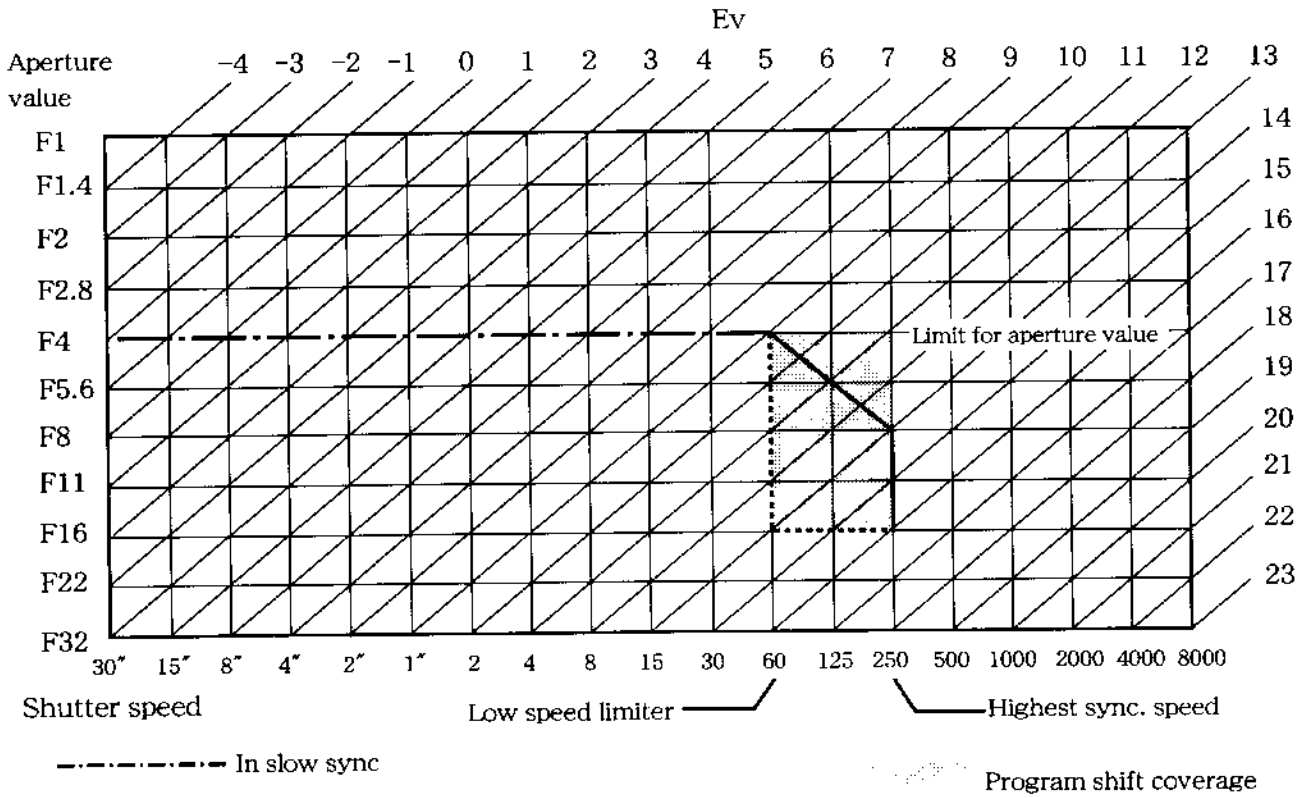
② The program shift shall be made by shifting the program diagram in the shutter speed direction.

In this accord, it shall be regarded impossible to make such a shift going beyond each control limit in the open aperture mode and the minimum aperture mode.

③ The shift shall be made for the program diagram even at the control limit.

④ In the program shift, ± 5 [EV] shall be specified the limit for both of the aperture value and the shutter speed.

1 3 .The program diagram in the case of equipping the speed light



The program shift in the case of equipping the speed light

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In this accord, it shall be regarded impossible to make such a shift going beyond each control limit in the open aperture mode and the minimum aperture mode.

③ The shift shall be made for the program diagram even at the control limit.

④ In the program shift, ± 5 [EV] shall be specified the limit for both of the aperture value and the shutter speed.

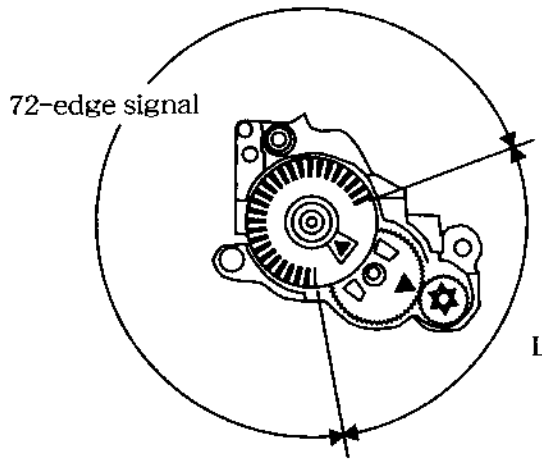
⑤ As an example, in case of conducting the program shift in the conditions of "EV=20" and "- 2 [EV] as the shutter speed" , the pulse shall be controlled as shown in the diagram above.

1 4 .The control for film advance / wind-up

By driving the film advance motor in the right and normal operation direction, the spool drives in the regular advancing direction in order to wind up the film.

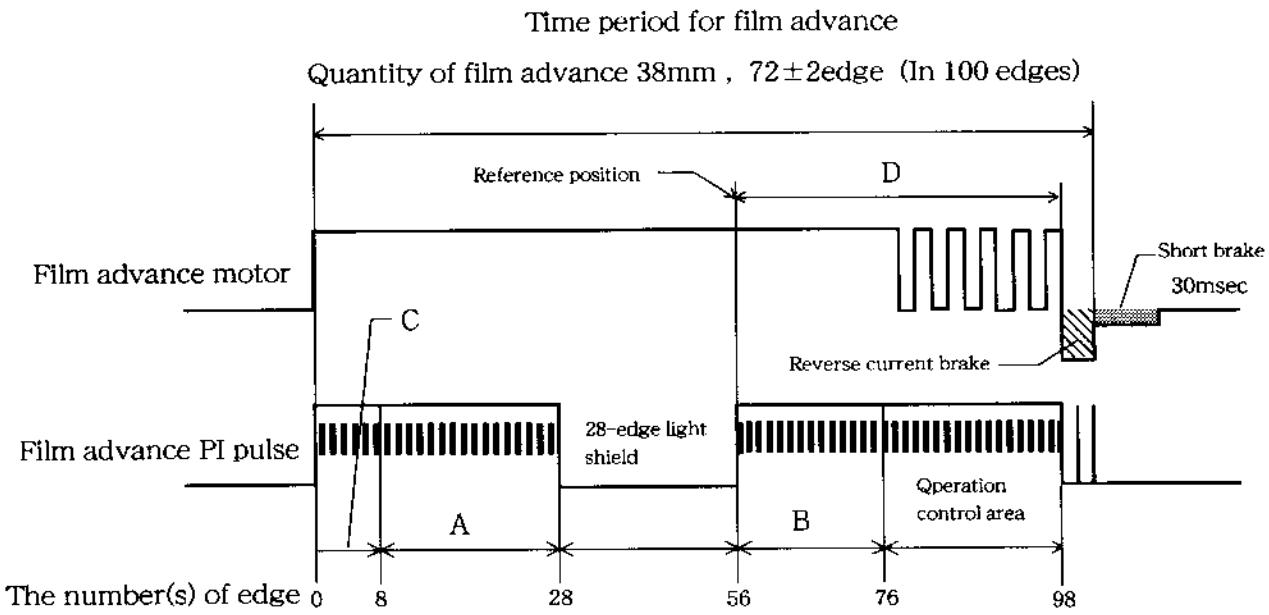
The quantity of film advance shall be controlled by monitoring the output from the film advance PI interlocking the move of sprocket.

*In response to 1-frame advance from a film, the 28-edge light shield and the 72-edge signal generate from the film advance PI.



Film advance detection unit

The control to stop a film



A : Speed monitoring realm A

B : Speed monitoring realm B

C : Tolerance for stop position error : The first 8-edge from the beginning of a loaded film is automatically winded.

D : The designated / duty drive finishes from thc reference position to the 42nd edge position as shown in the figure above.

The reference position

The position just after completion of detecting the 28-edge light shield area shall be specified as the reference position.

The position to stop

The 44th edge position from the reference position including the over-run shall be specified as the stop position.

Tolerance : 44 ± 2 edges

Stop servo

In response to changeable film advance speed caused by the power supply voltage, in order to constantly maintain the speed to stop, the film advance speed shall be monitored.

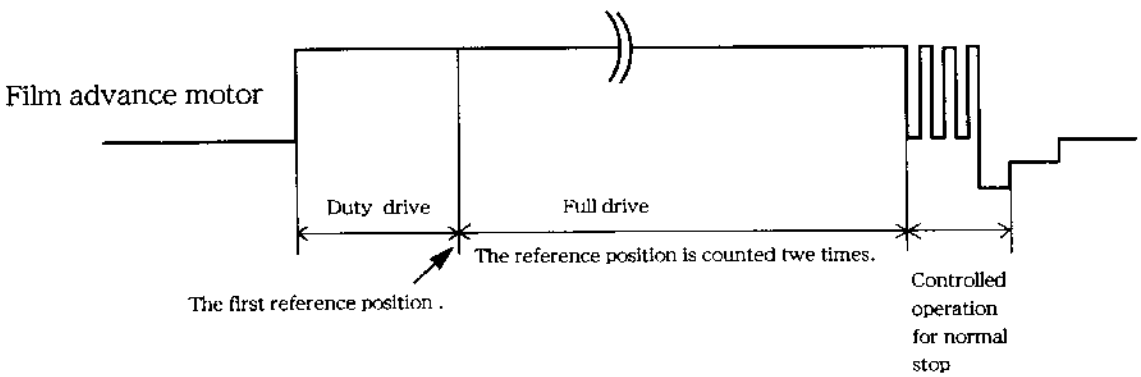
Then, the speed at the brake point shall be almost equally made by the operation control table in compliance with the monitored speed.

Besides, in order to respond to the dispersion in final speed, the operation time spent for reverse current brake shall be controlled in compliance with the stop servo speed.

Loading a film, film loading operation

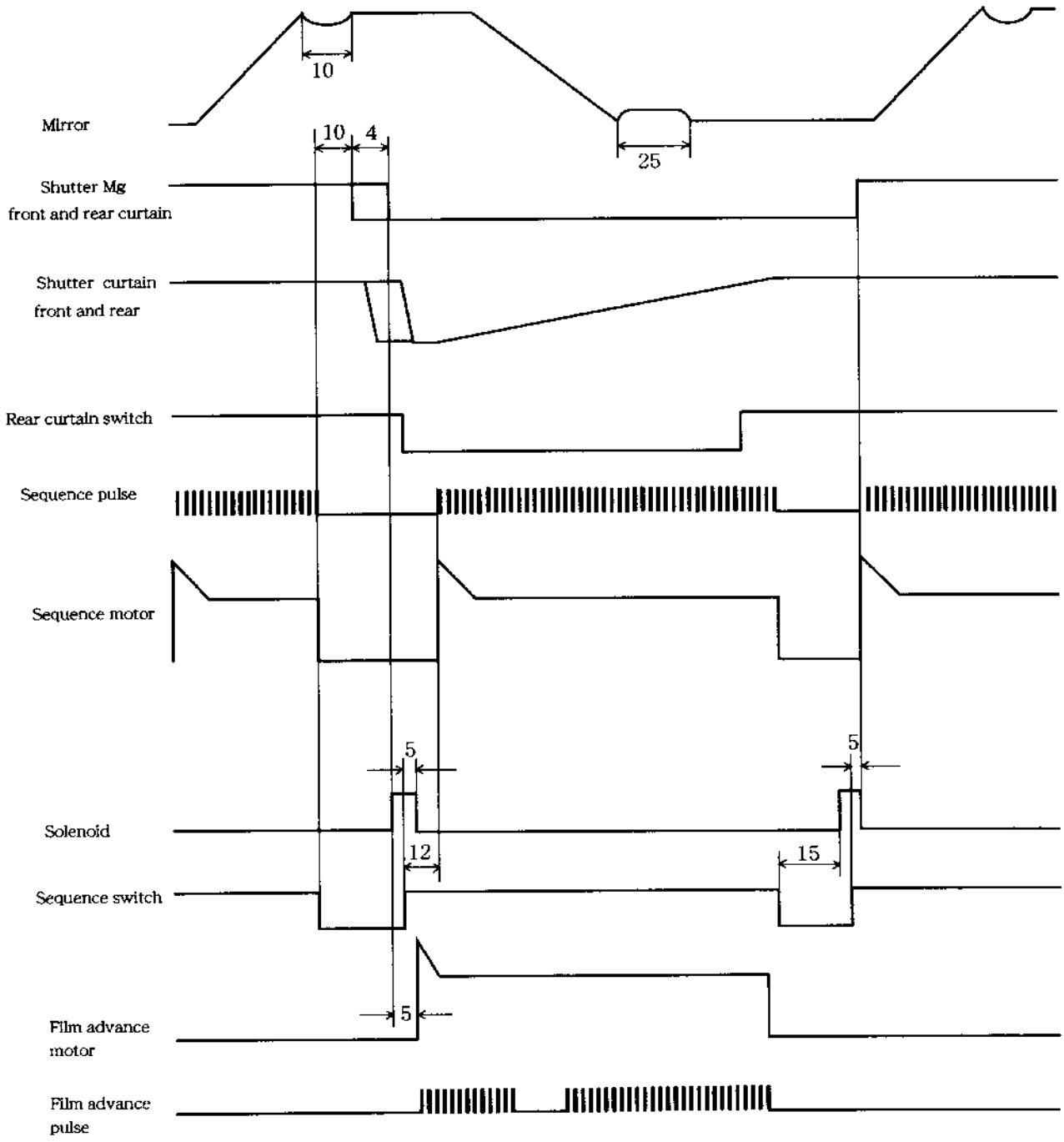
The film loading operation takes approximately 2.5 to 3.5 frames.

The camera automatically starts to count from the 3rd frame stop position as the 1st ex.

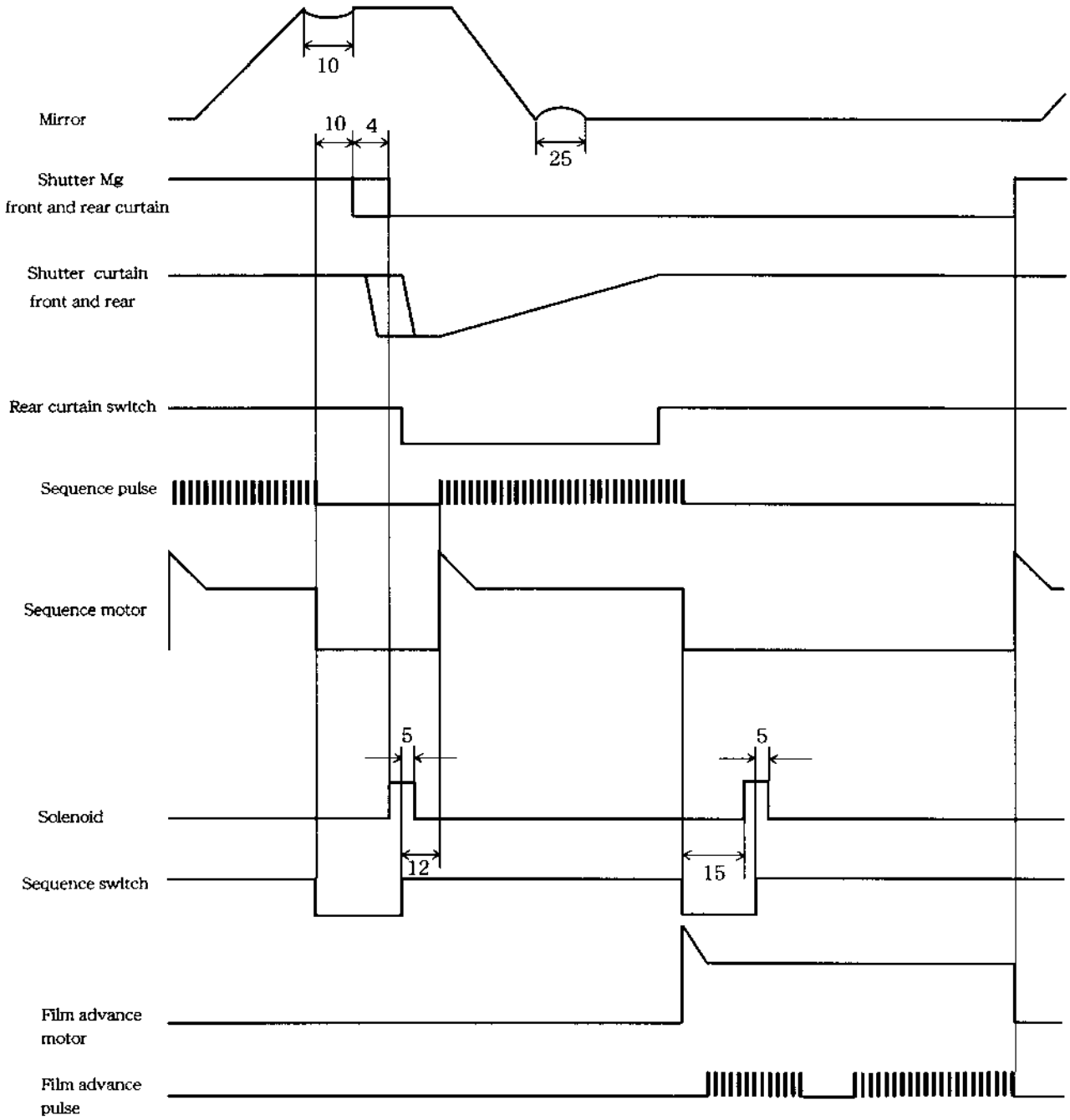


The figure of sequence

Parallel drive



Serial drive



1 5 .Sequence error

Sequence error	Condition(s) to cause the error
Mirror-up time-out	Even after 110 (± 10) m sec. from driving of the sequence motor, the sequence switch can not be turned on.
Mirror-down time-out	Even after 400 (± 20) m sec. from turning on the sequence motor after the shutter curtain operation, the sequence switch can not be turned on.
Front curtain release time-out	After canceling the close mode of shutter front curtain magnets, it takes more than 8 m sec. to turn on the contact X.
Troubled switch for shutter rear curtain switch	Before driving the sequence motor in the mirror-up mode, the shutter rear curtain switch is turned on.
Malfunction on sequence switch	In the condition that the solenoid is turned on once or twice, the sequence switch can not be switched from ON-mode to OFF-mode.
Troubled sequence switch	Before driving the sequence motor, the sequence switch is turned on.
Troubled sync. switch	Before the mirror-up operation, the sync. switch is turned on.
Preview time-out	Even after 500 m sec. from turning on the mirror latch solenoid, the mirror latch switch can not be turned on in the preview operation mode.
Sequence error during preview	Any sequence error(s) other than on the mirror latch switch happens in the preview operation mode.
Malfunction on shutter rear curtain switch	After canceling the close mode of shutter rear curtain magnets, it takes more than 12 m sec. to turn on the shutter rearcurtain switch.
Aperture control err	In case of more than 13-pulse difference(s) between the aperture control target pulse and the generation pulse. In this case, there is no recovery mode although "Err" is displayed.

15. The operational differences for aperture mode on between F5 and F100

For regular set-up			
condition/mode		F5	F100
Built-in CPU lens	Sub command dial/set-up	The aperture ring shall be set to minimum.	The aperture ring shall be set to minimum.
	display	1/3 Step	1/3 Step
	Aperture ring / set-up	Possible	Impossible ; Locked shutter release mode
	display	F- - Possible to check the aperture value through the direct-vision window	F E E No presence of direct-vision window
non-CPU lens	Command dial / set-up	Impossible	Impossible
	Aperture ring / set-up	Possible	Possible
	display	F- - Possible to check the aperture value through the direct-vision window	F- - No presence of direct-vision window

For set-up in the unavailable command dial under the custom-setting mode			
condition/mode		F5	F100
Built-in CPU lens	Aperture ring / set-up	Possible	Possible
	display	F- - Possible to check the aperture value through the direct-vision window	1 Step
non-CPU lens	Aperture ring / set-up	Possible	Possible
	display	F- - Possible to check the aperture value through the direct-vision window	F- - No presence of direct-vision window

Disassembly

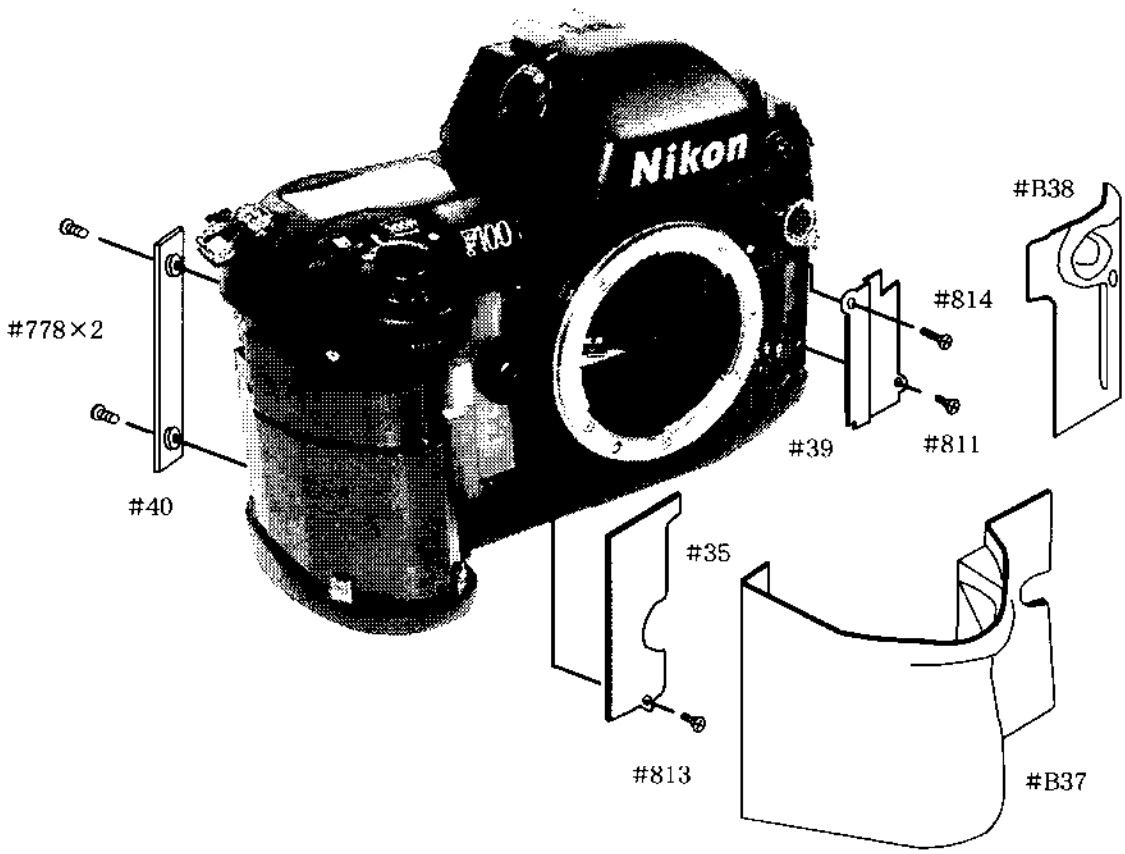
Disassembly • Assembly • Adjustment

Note : ① Be sure to remove battery before assembling.
② When disassembling, pay attention to the wire arrangement and mounting positions and types of screw to be removed.
③ Be sure you are grounded when holding electric parts because static electricity exerts serious adverse effects on IC's.

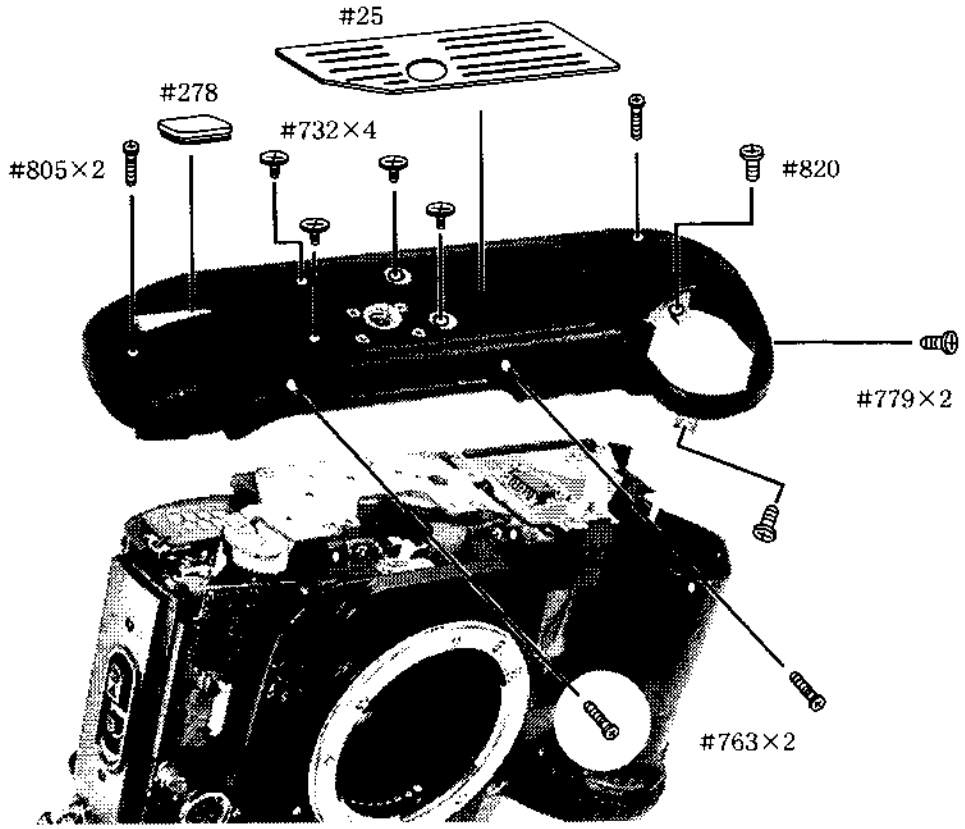
Disassembly

1. Exterior

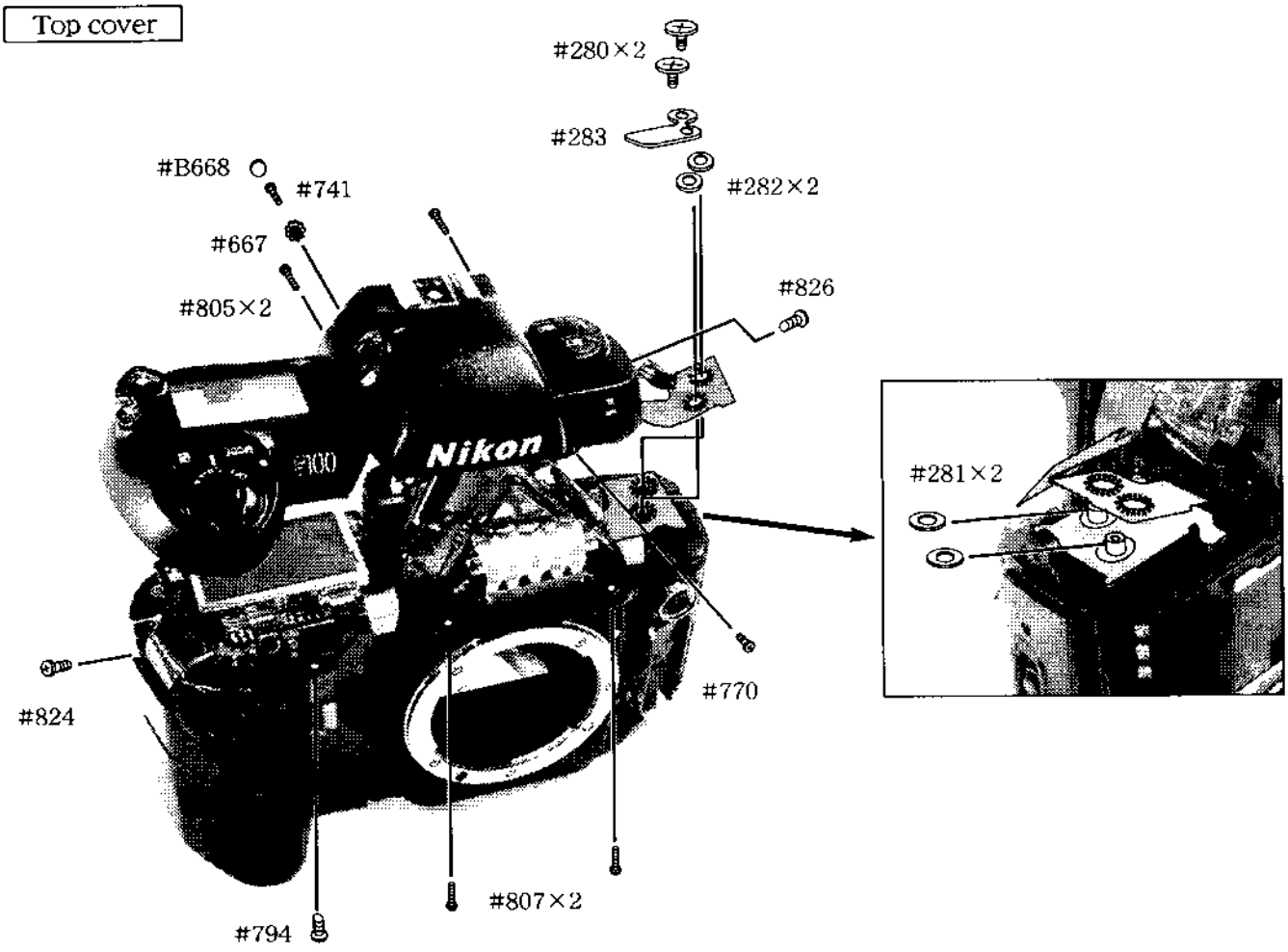
Grip rubber, rubber on the rewind side, cover base plate



Bottom cover

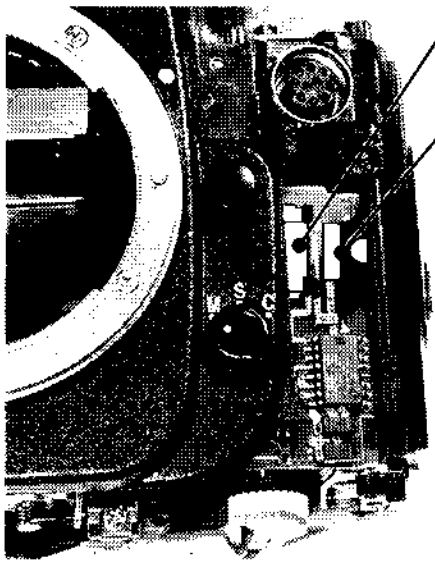


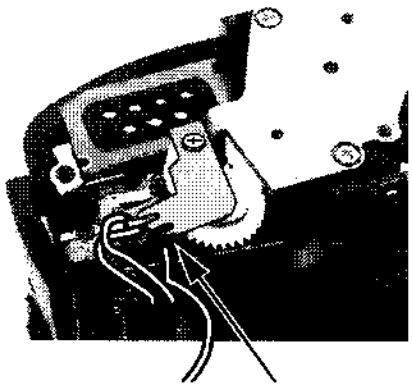
Top cover

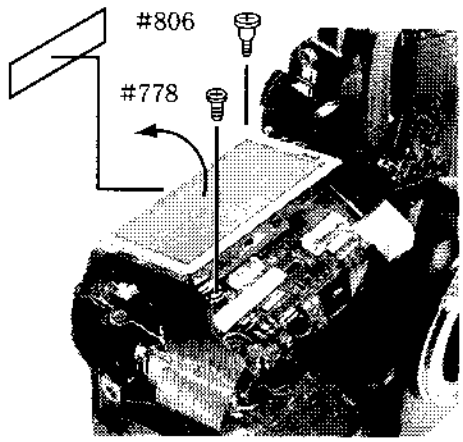


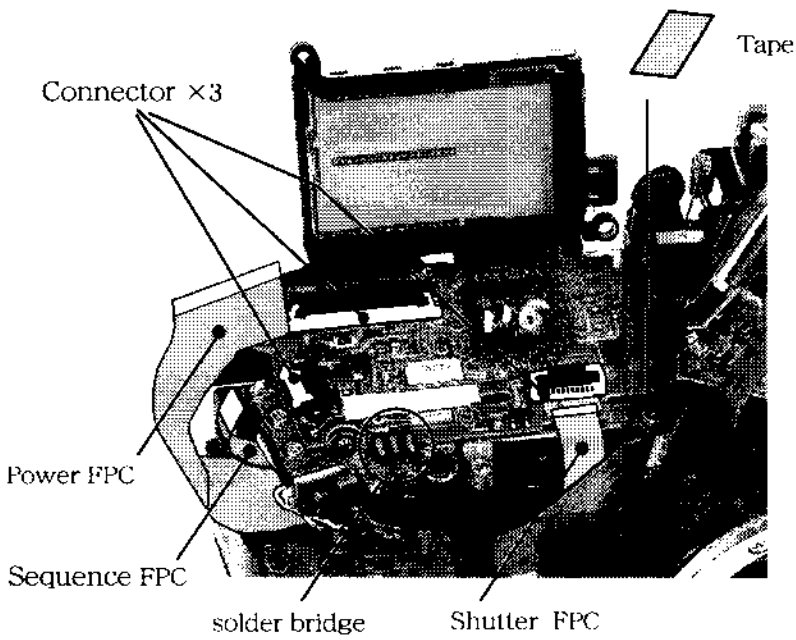
2. Separation of the front body from the rear body

Connector / solder bridge

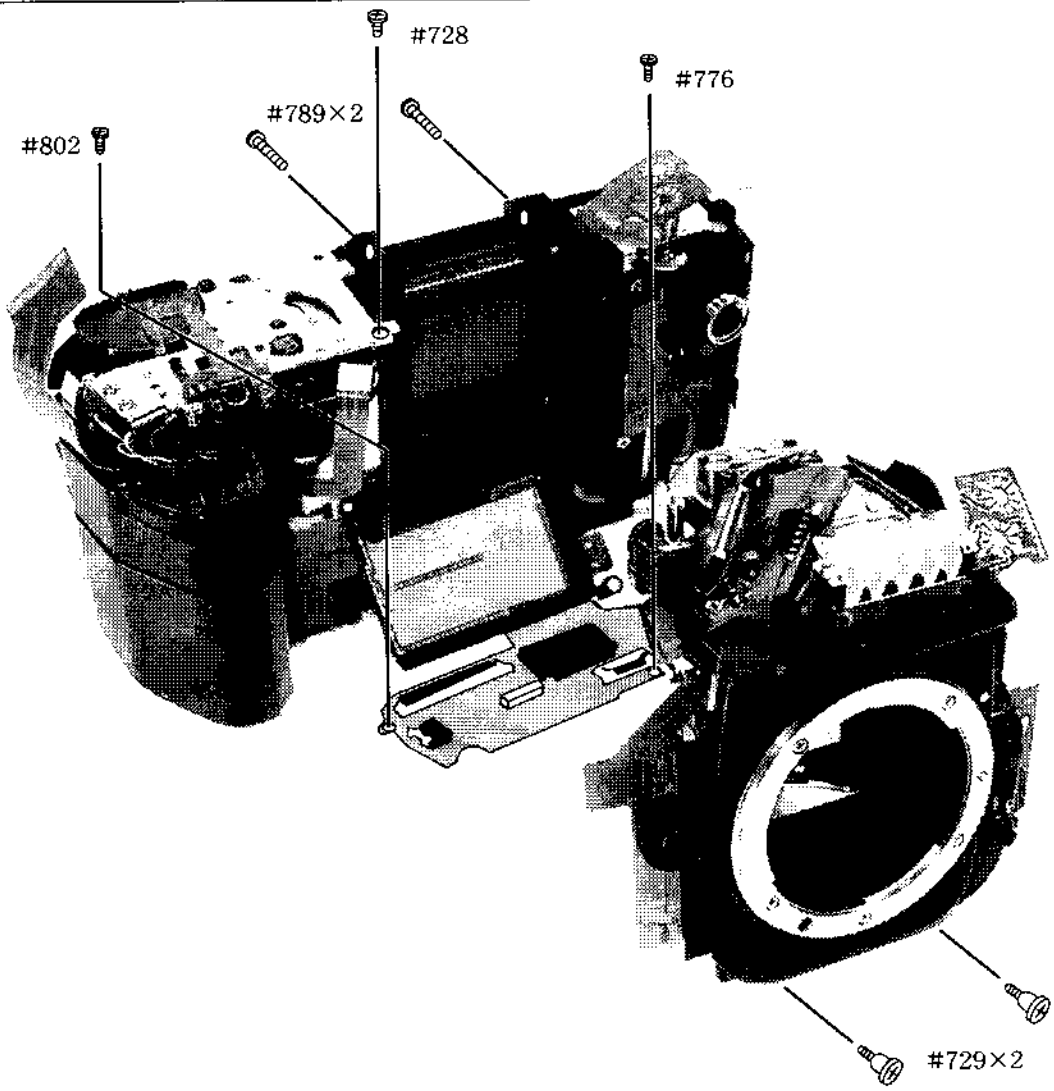






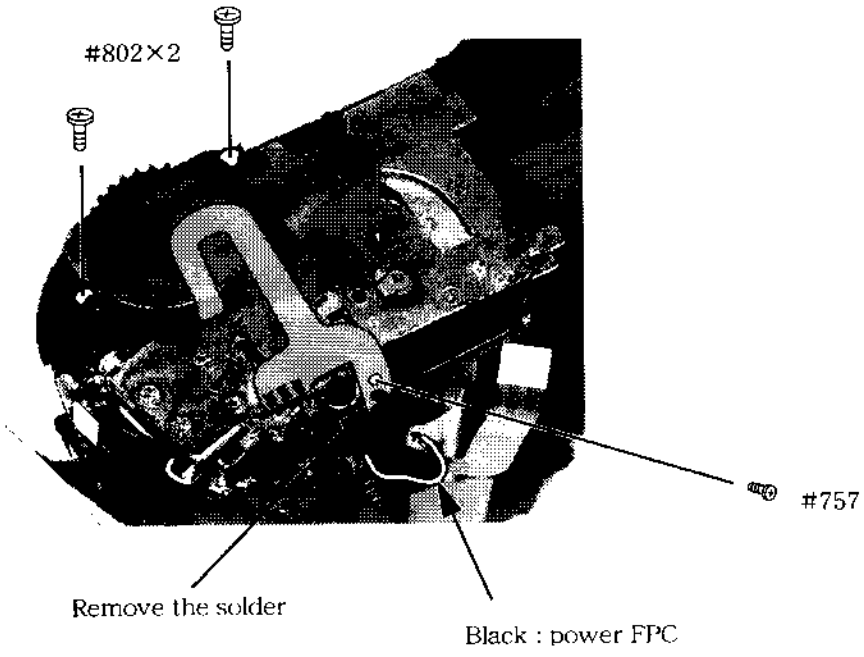


Separation of the front body from the rear body

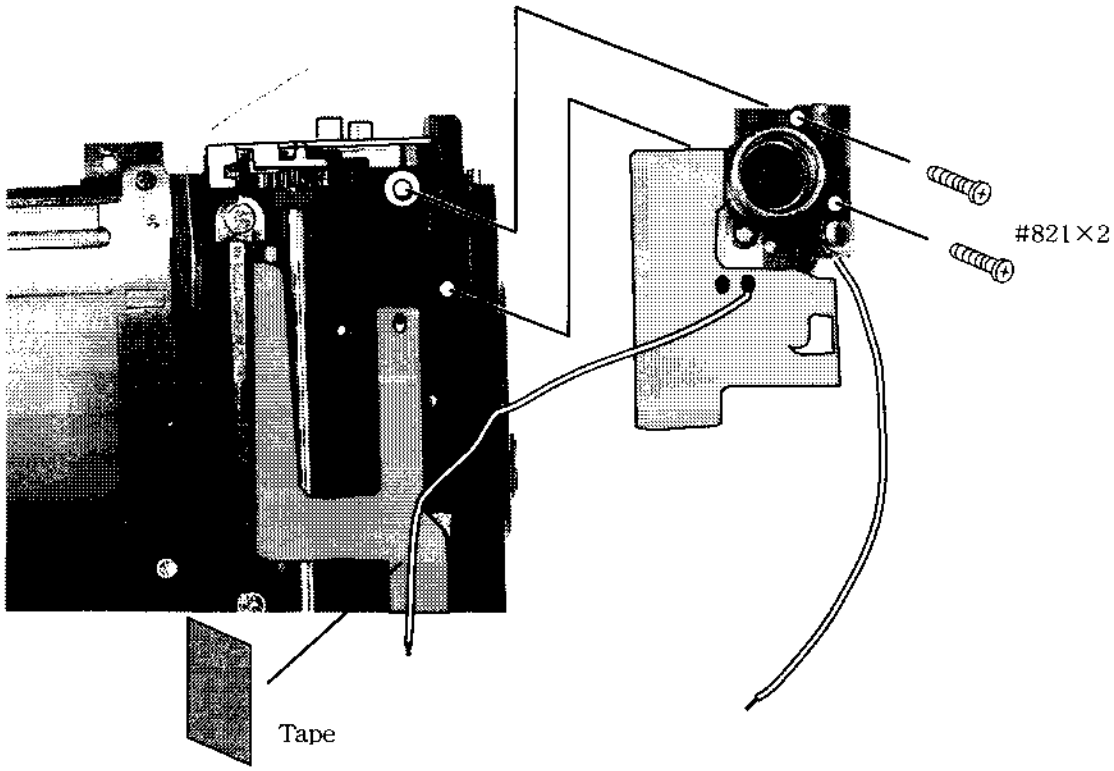


3. Rear body

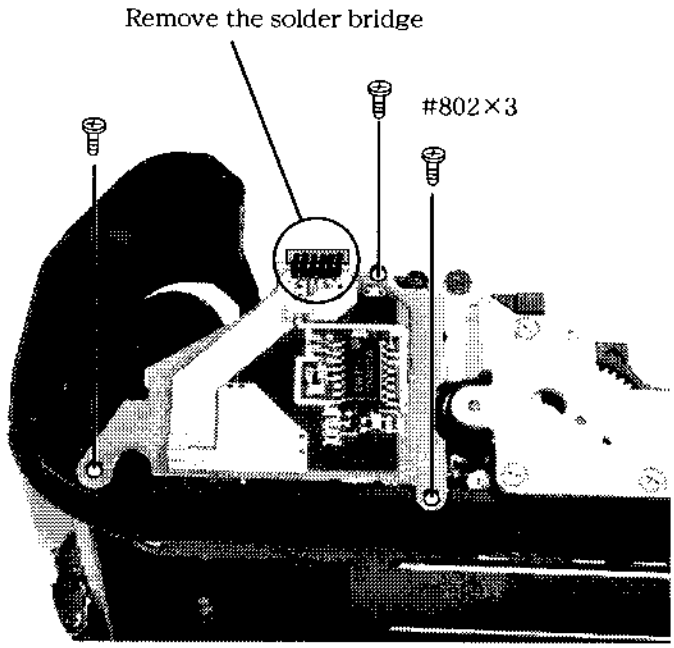
Rear C/D unit



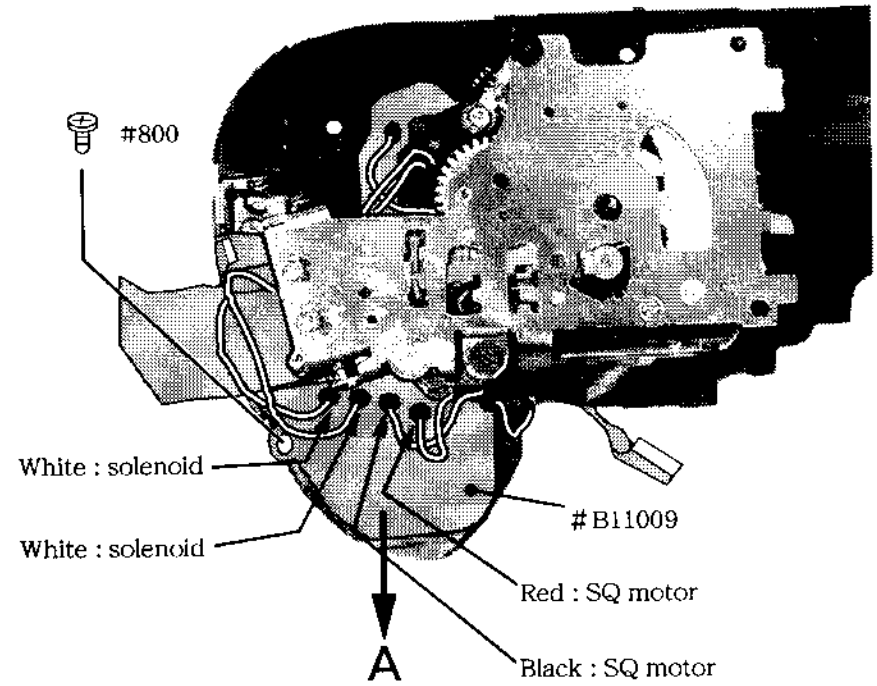
Remote terminal



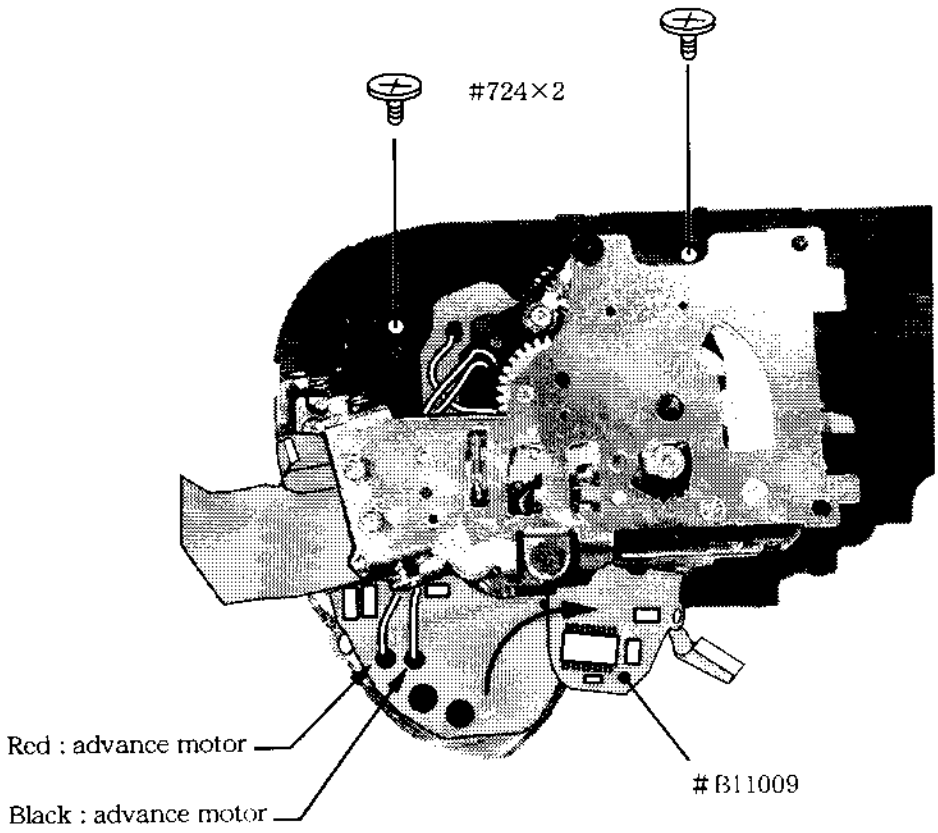
DC/DC circuit board



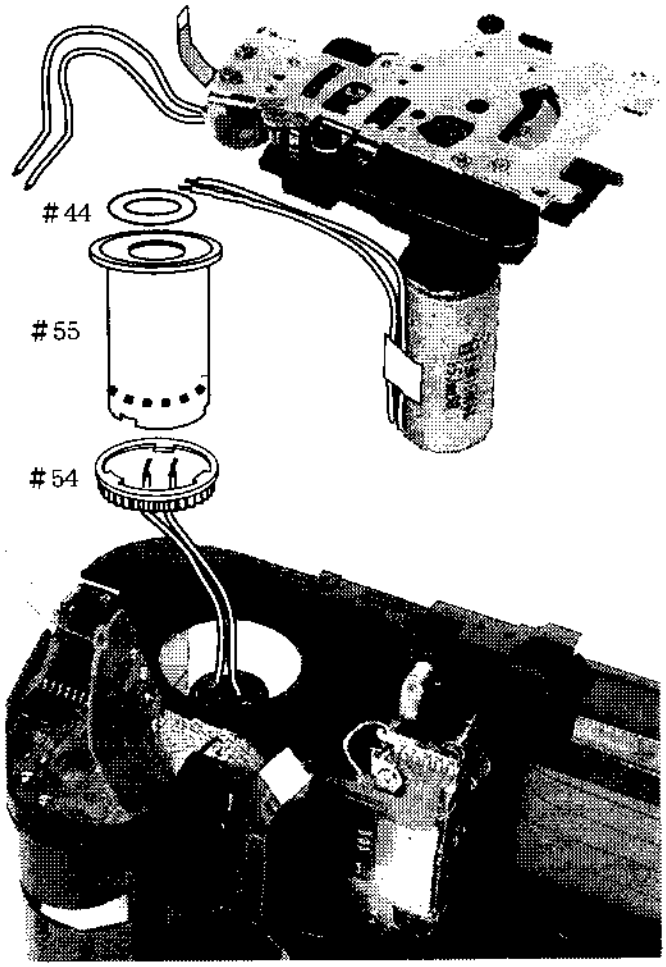
Sequence unit, spool

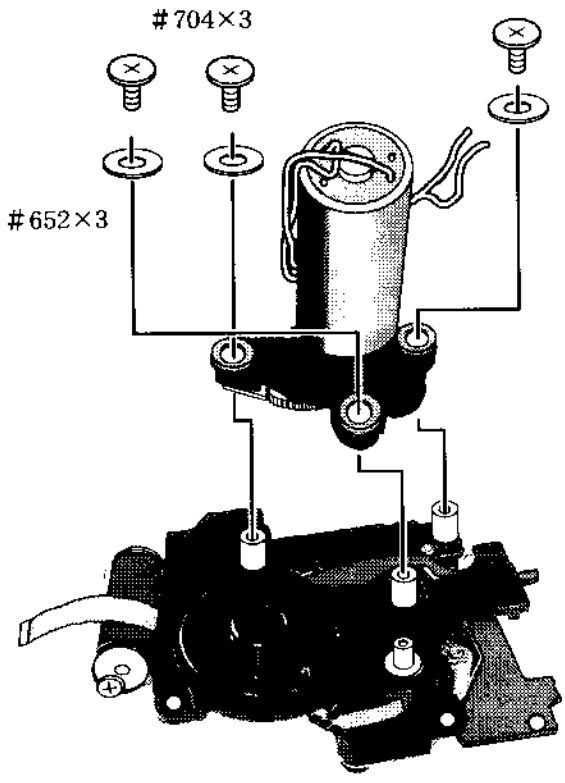


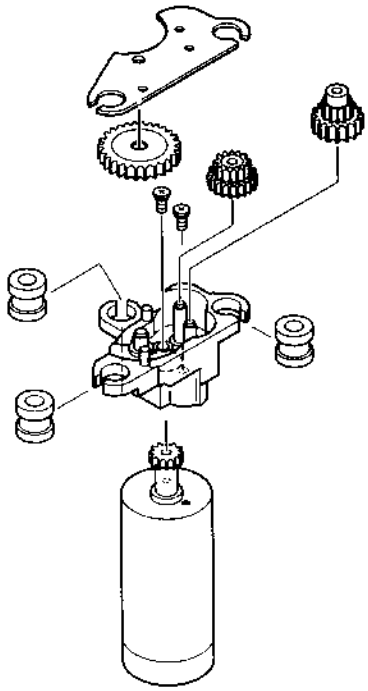
- Remove the screw #800.
- Slightly pull the power FPC #B11009 in the arrow direction and then remove four solder bridges.

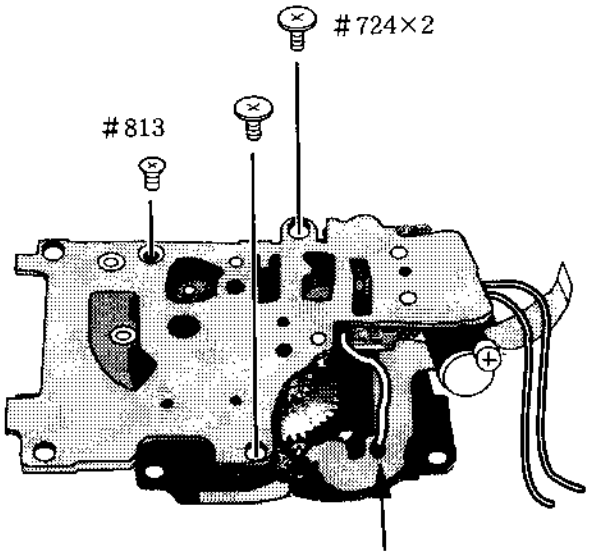


- Raise up the power FPC #B11009 in the arrow direction.
- Remove the two solder .

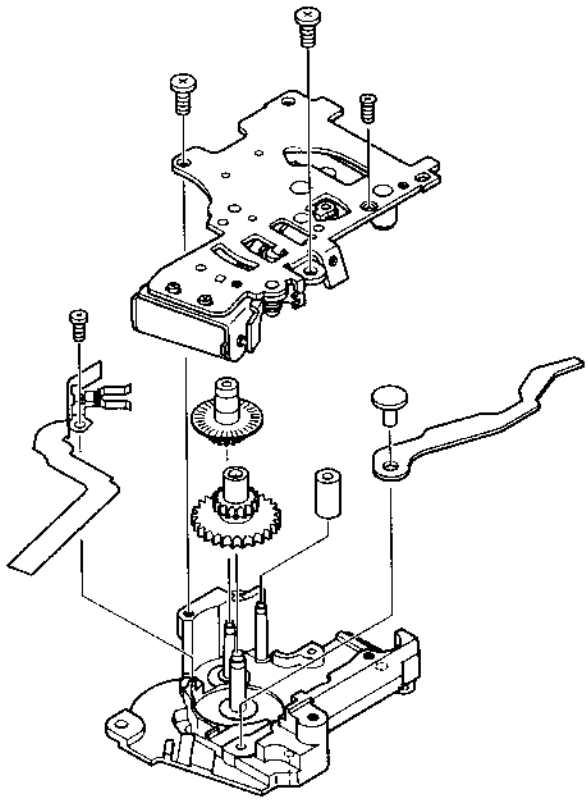

#44
#55
#54


#704×3
#652×3

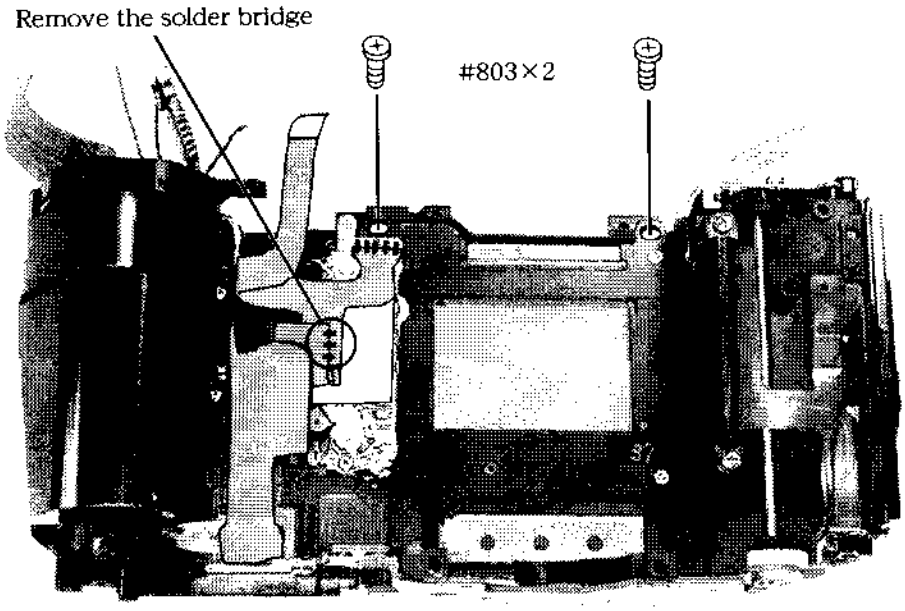




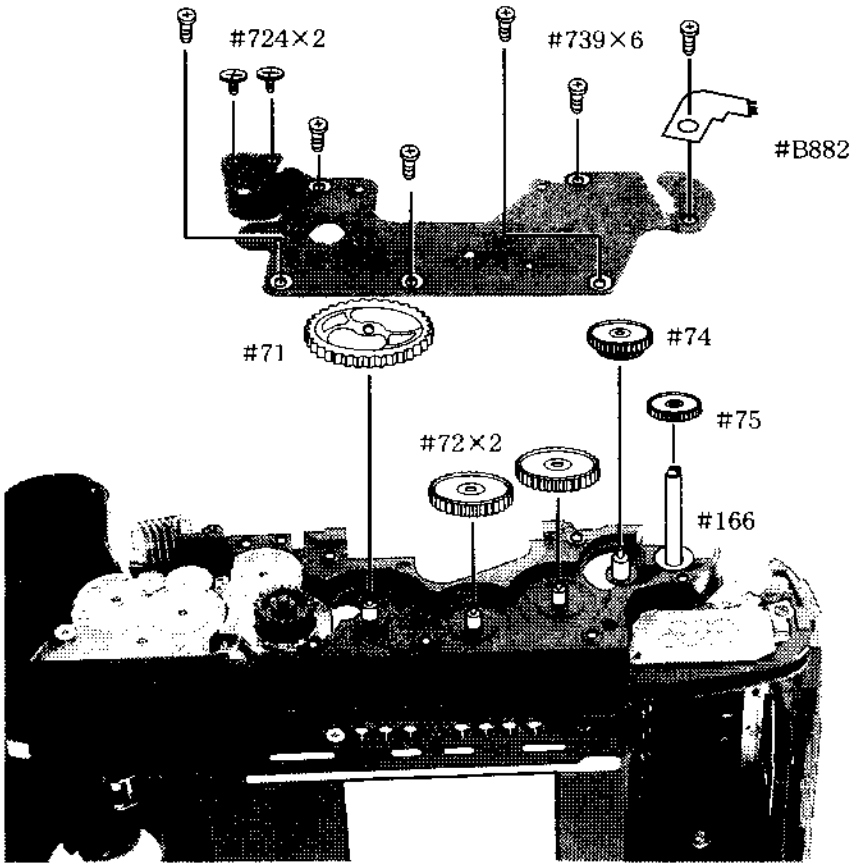
Remove the soldered blue lead wire.



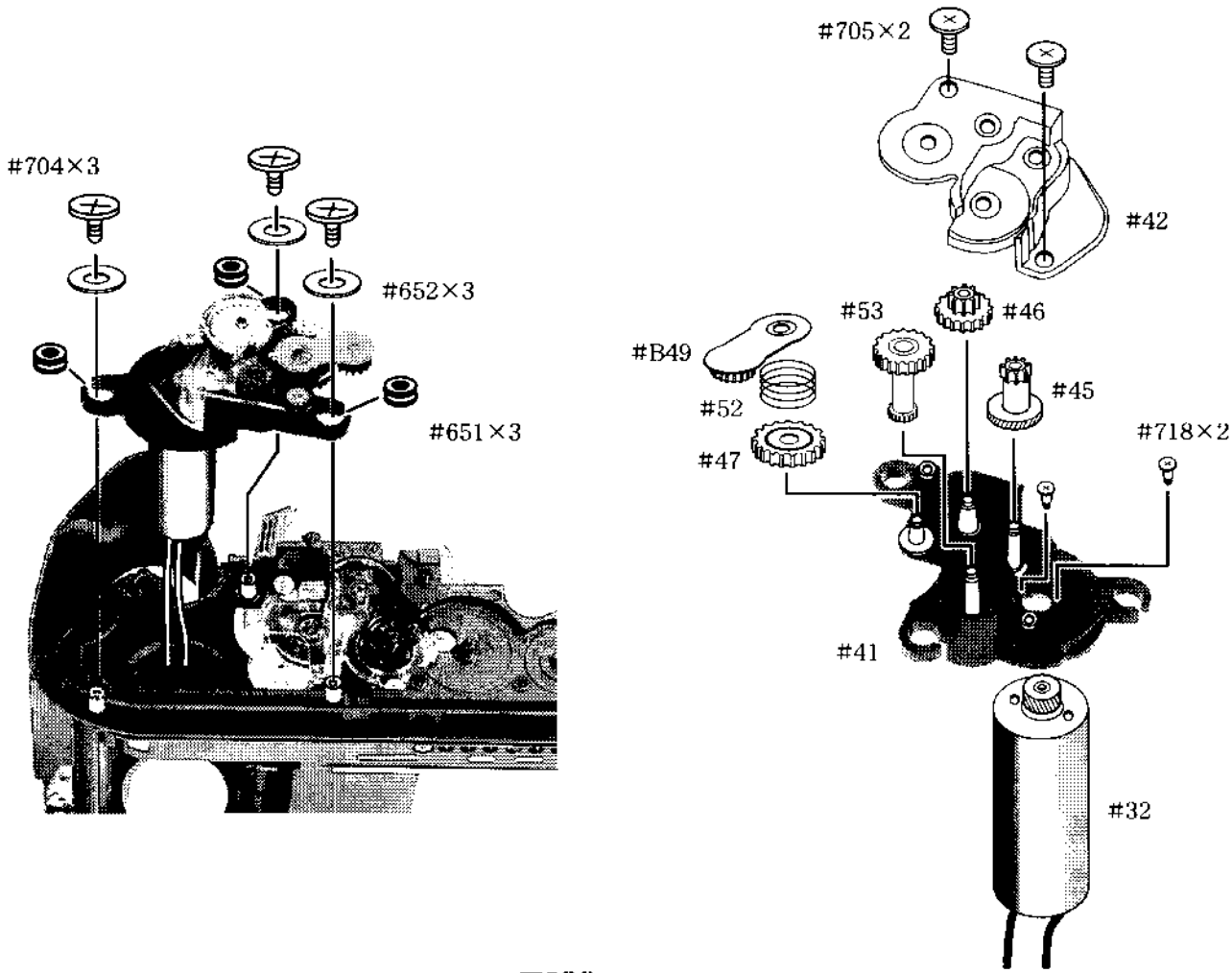
Shutter unit



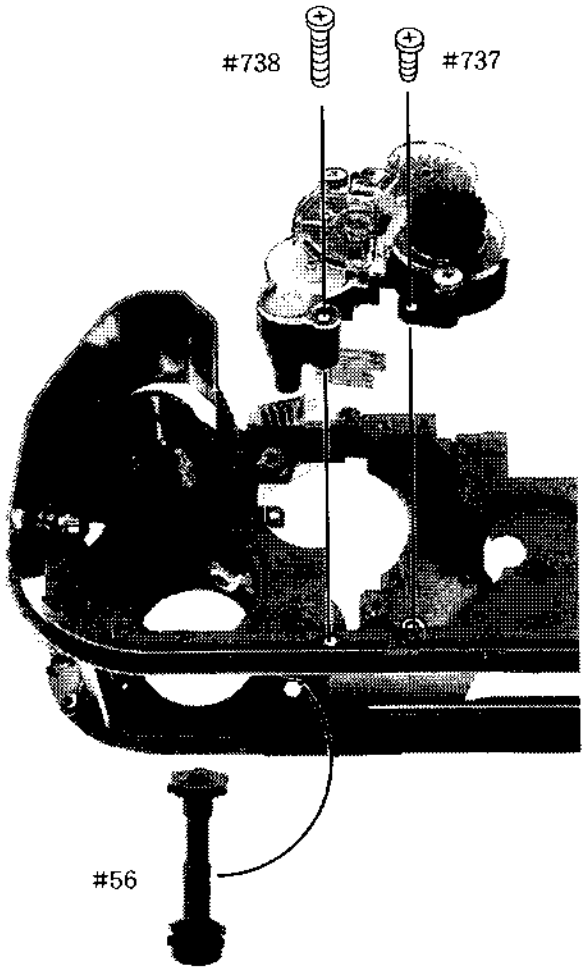
Bottom base plate

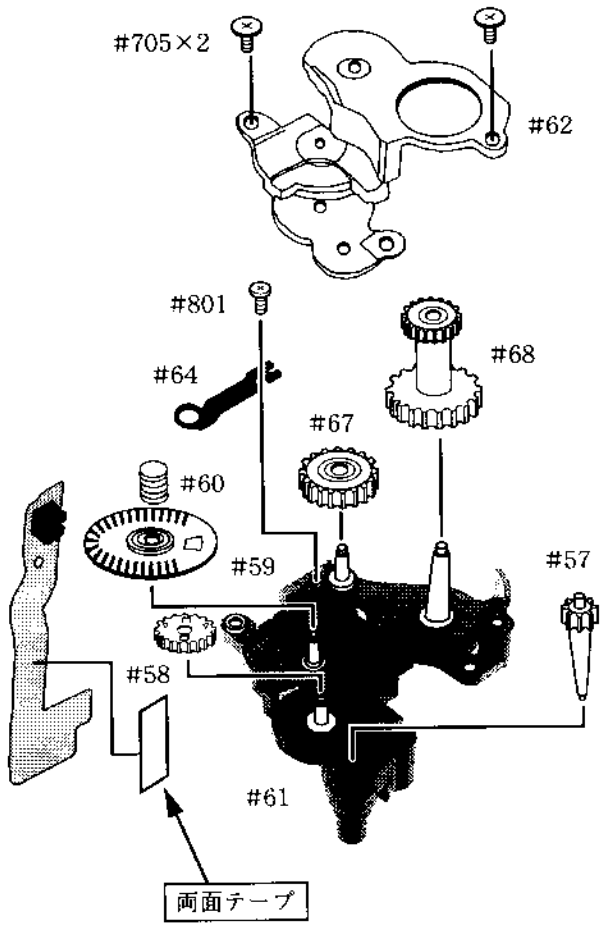


Film advance unit

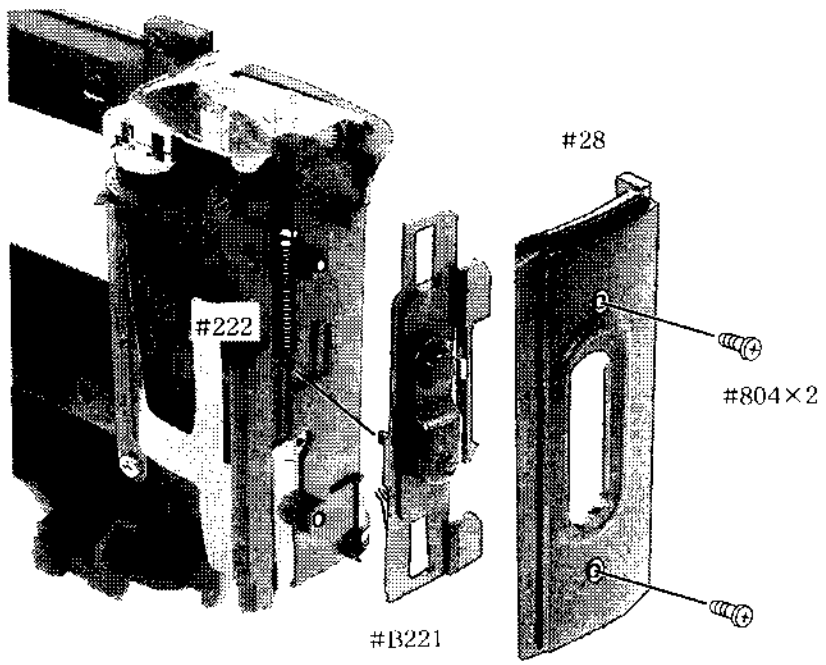


Film advance detection unit, sprocket

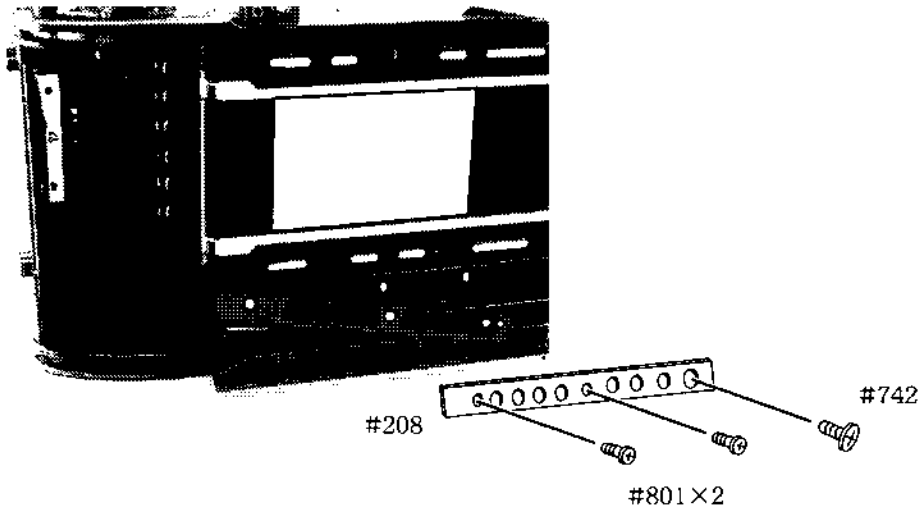


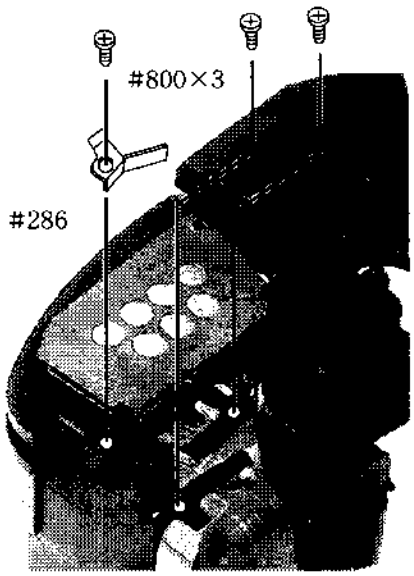


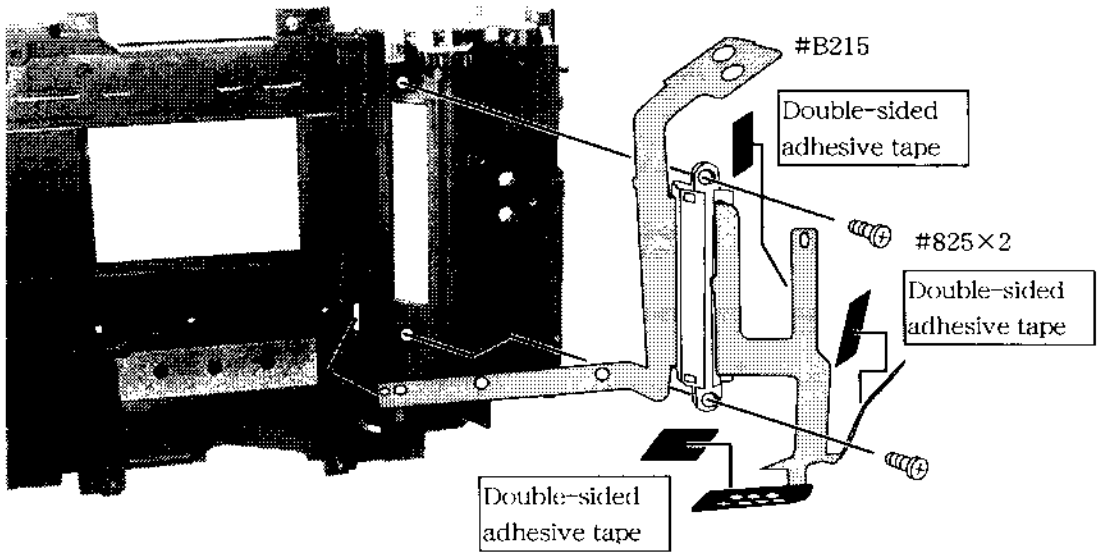
Rear cover open/close key



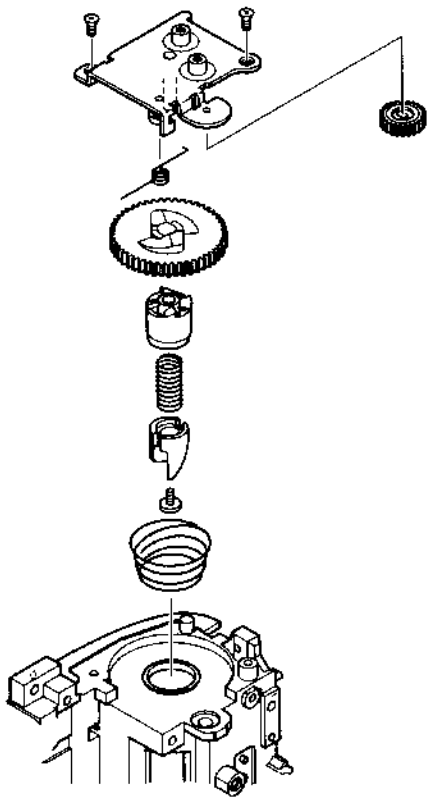
DX/DB F P C


#742
#208
#801×2

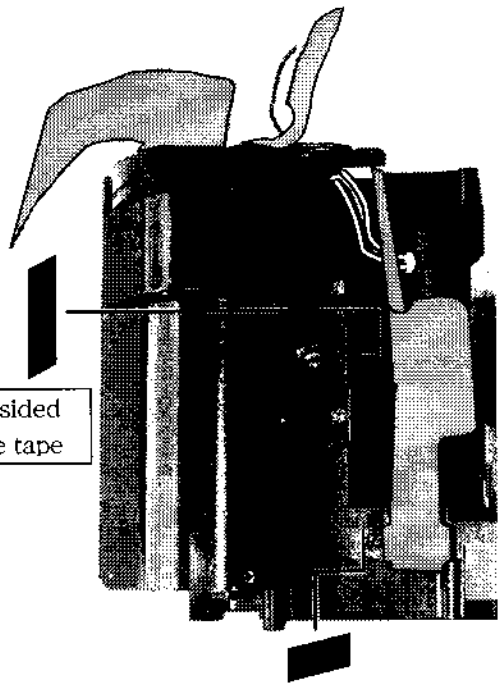

#800×3
#286

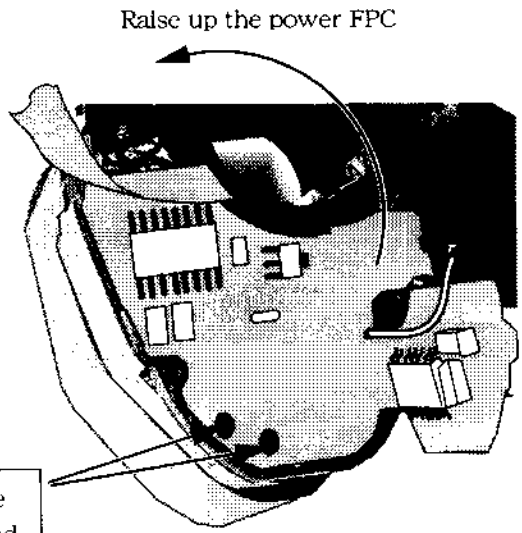

#B215
Double-sided adhesive tape
#825×2
Double-sided adhesive tape
Double-sided adhesive tape

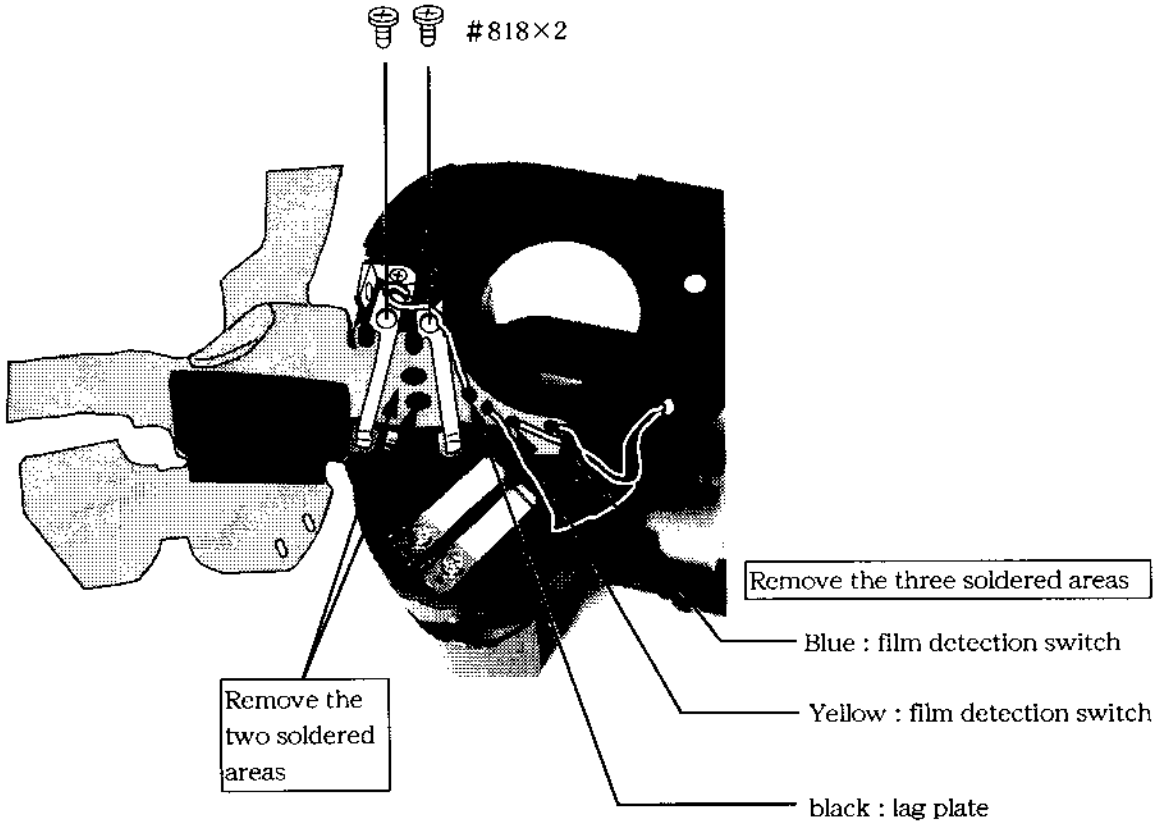
Rewind unit



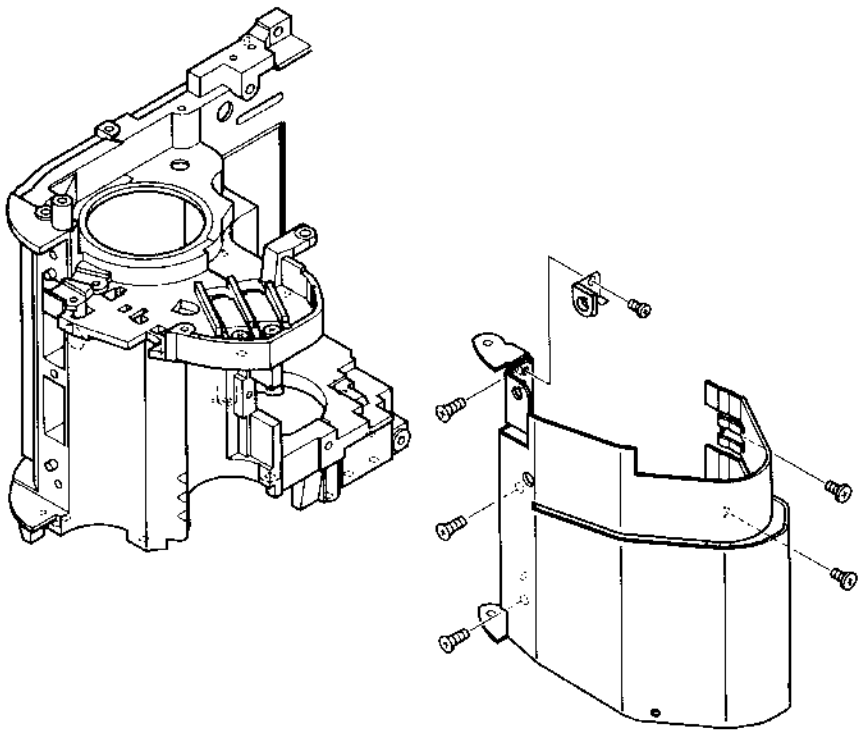
Power FPC



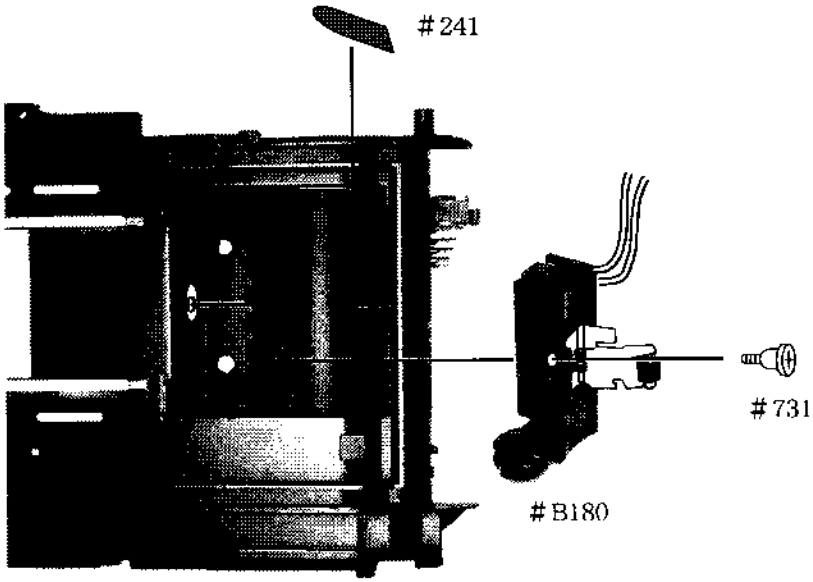



#818×2
Remove the three soldered areas
Blue : film detection switch
Yellow : film detection switch
black : lag plate
Remove the two soldered areas

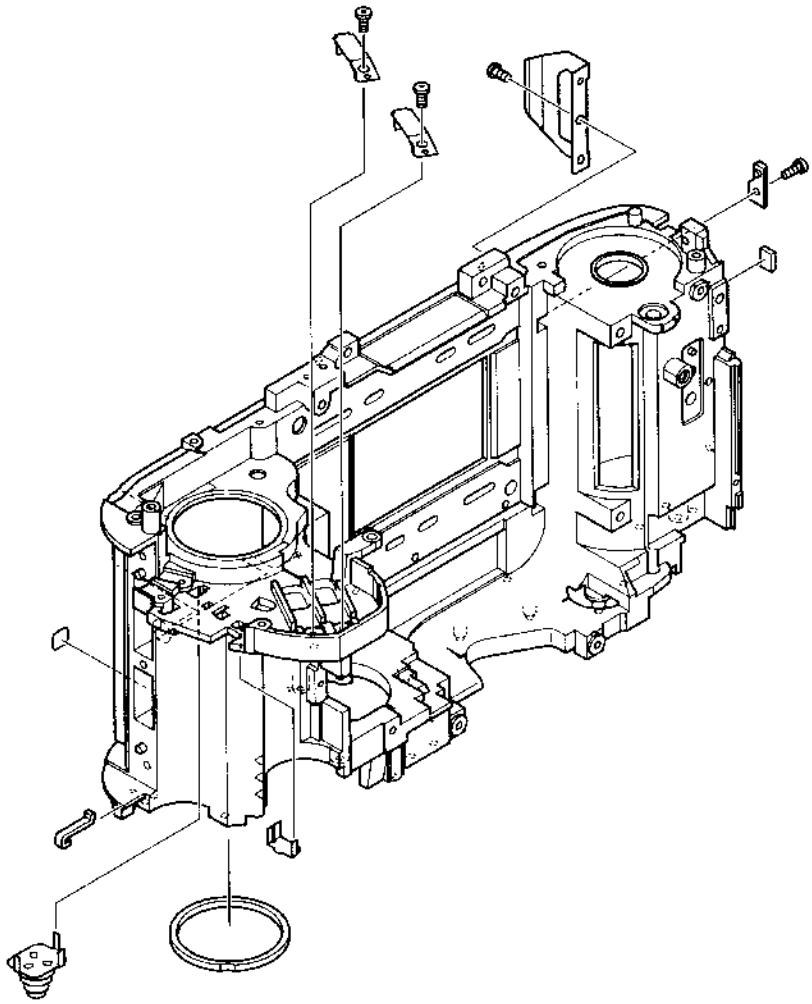
Grip



Film detection switch unit

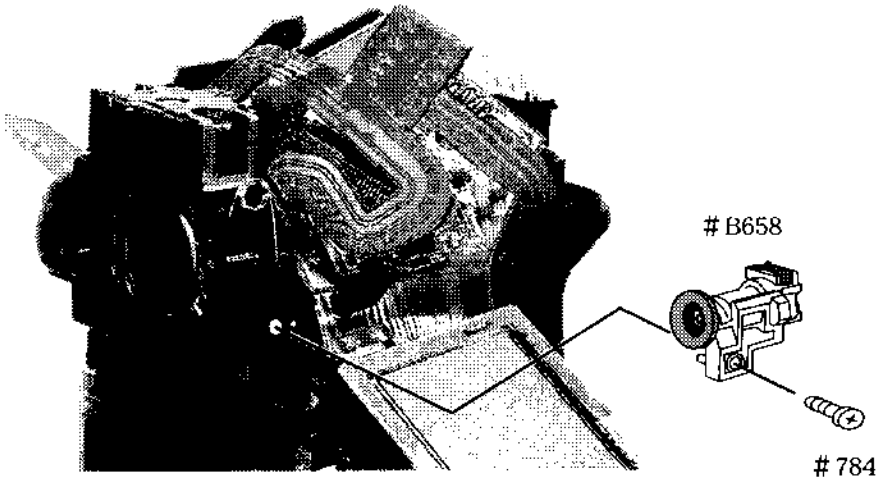


Other parts



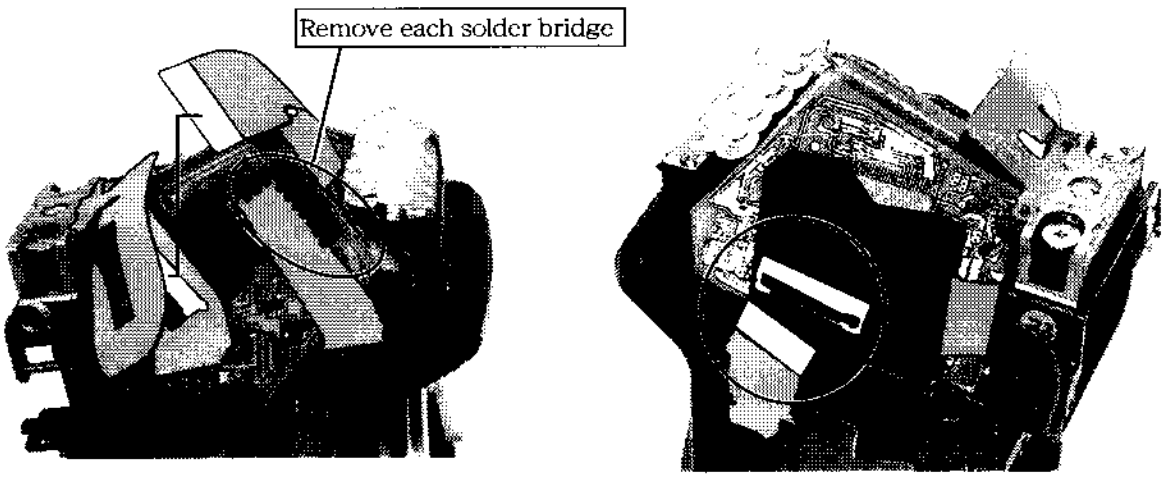
4. Front body

Diopter adjuster unit

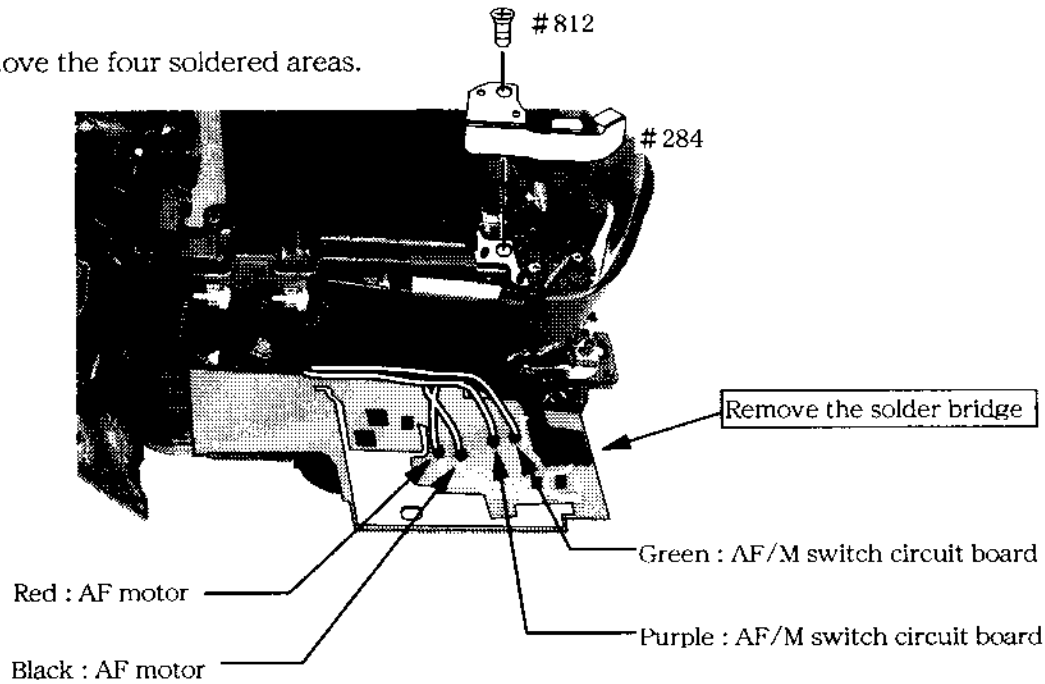


Main printed circuit board

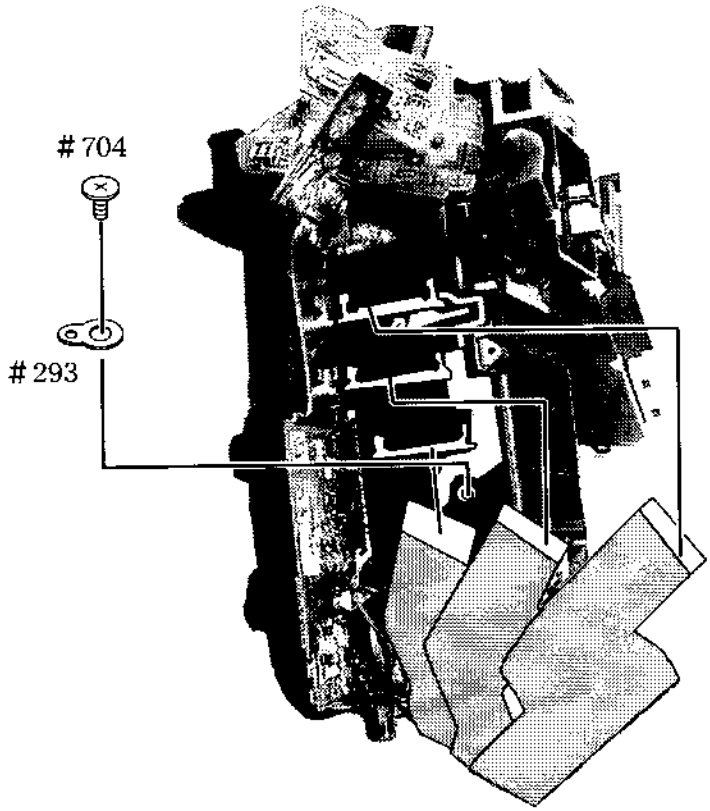
- Remove the two connectors.

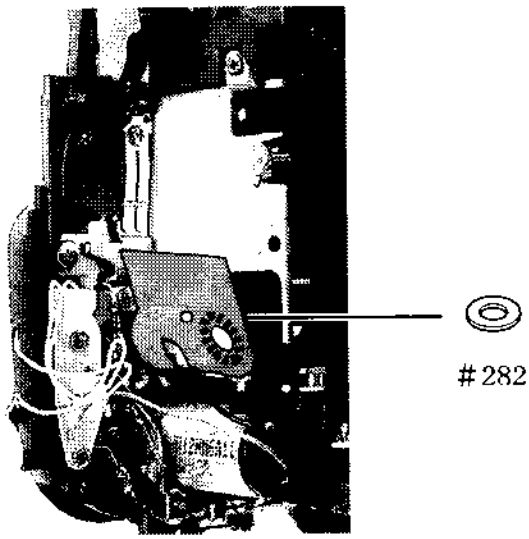


- Remove the four soldered areas.

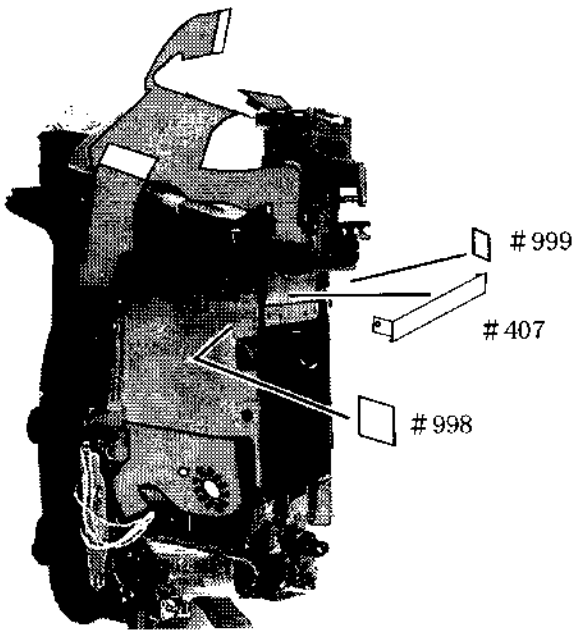


● Remove the three connectors.

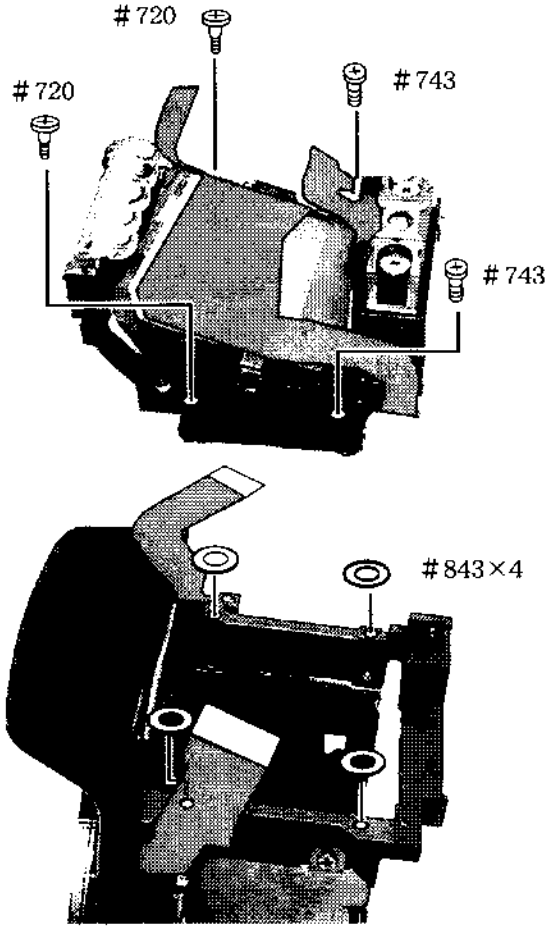




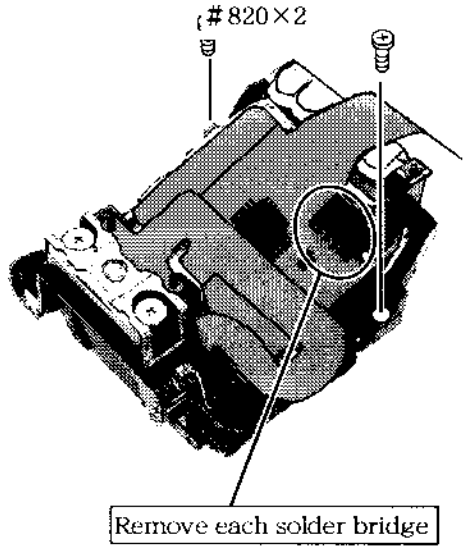
Light baffle plate



Prism box

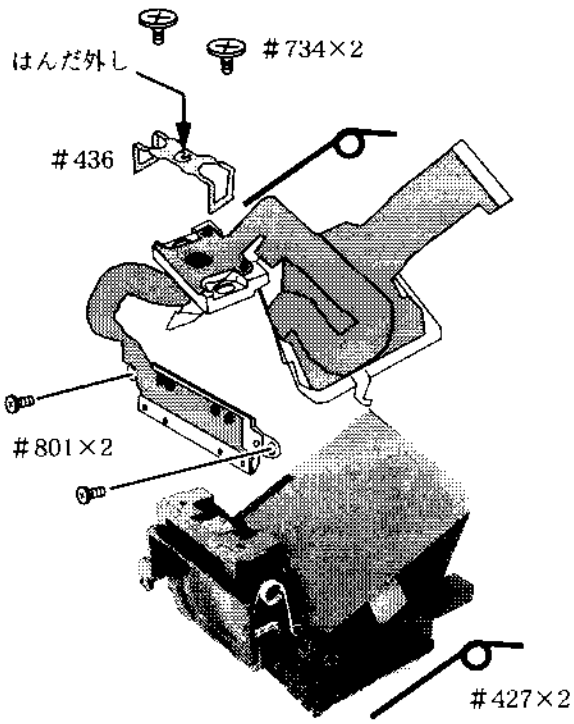


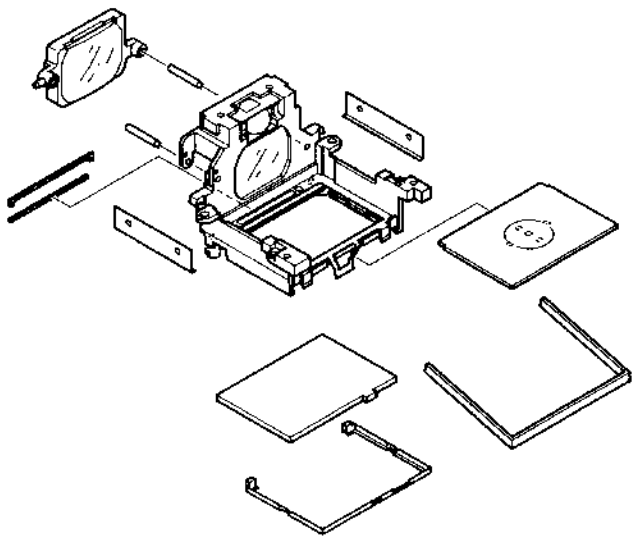
Remove the superimpose holder.



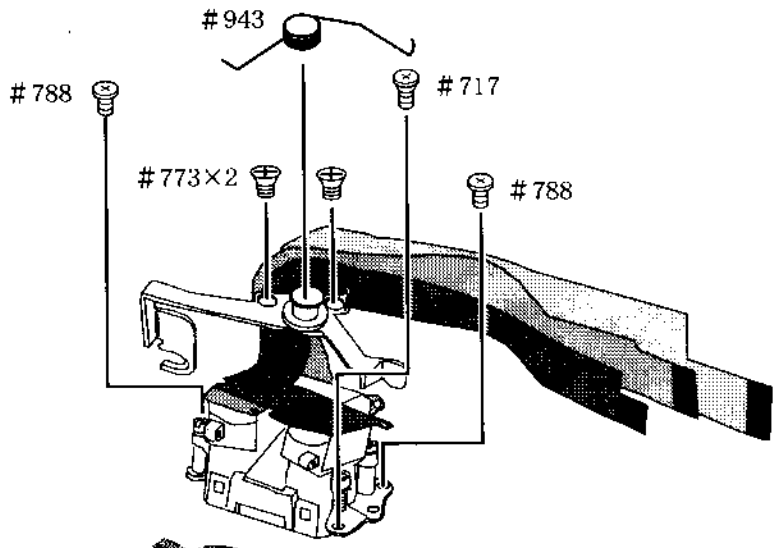
Remove each solder bridge

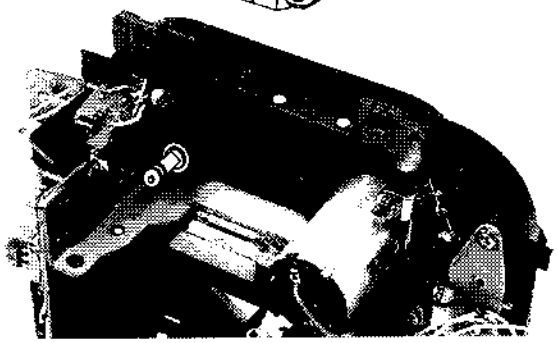
Remove the in-finder display FPC/AE SPD.



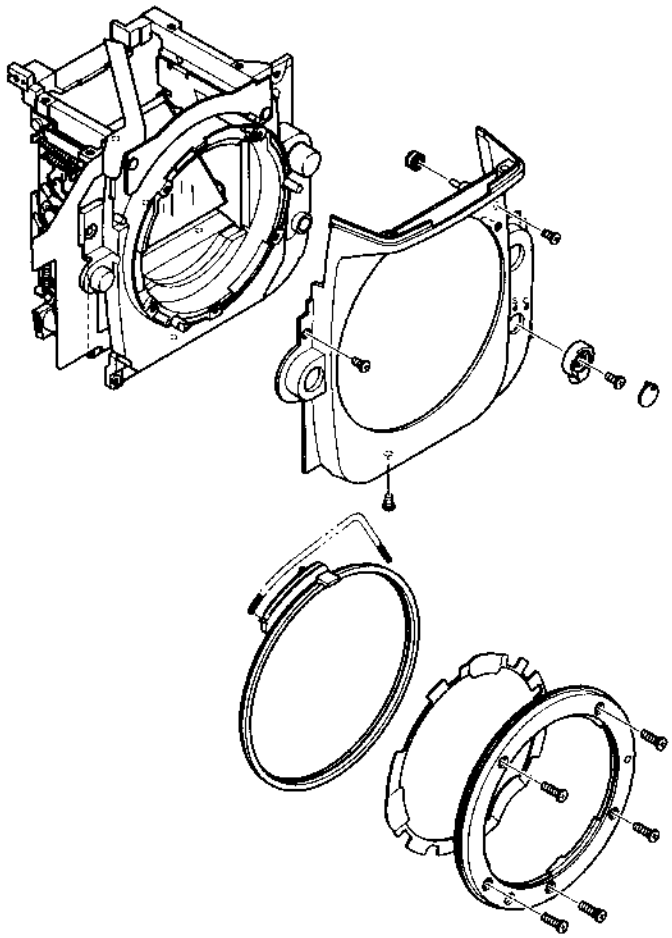


Horizontal AF lever, AF unit

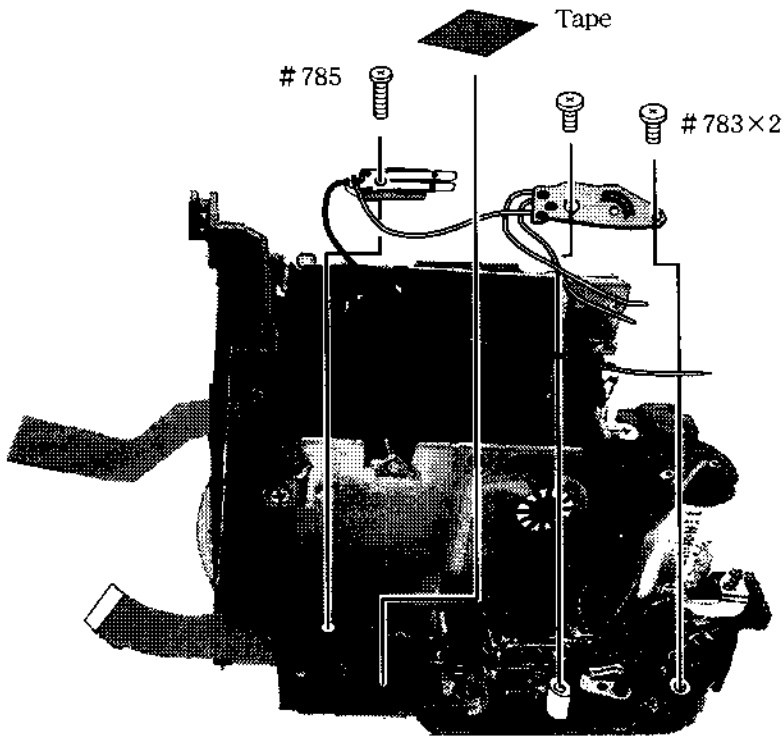




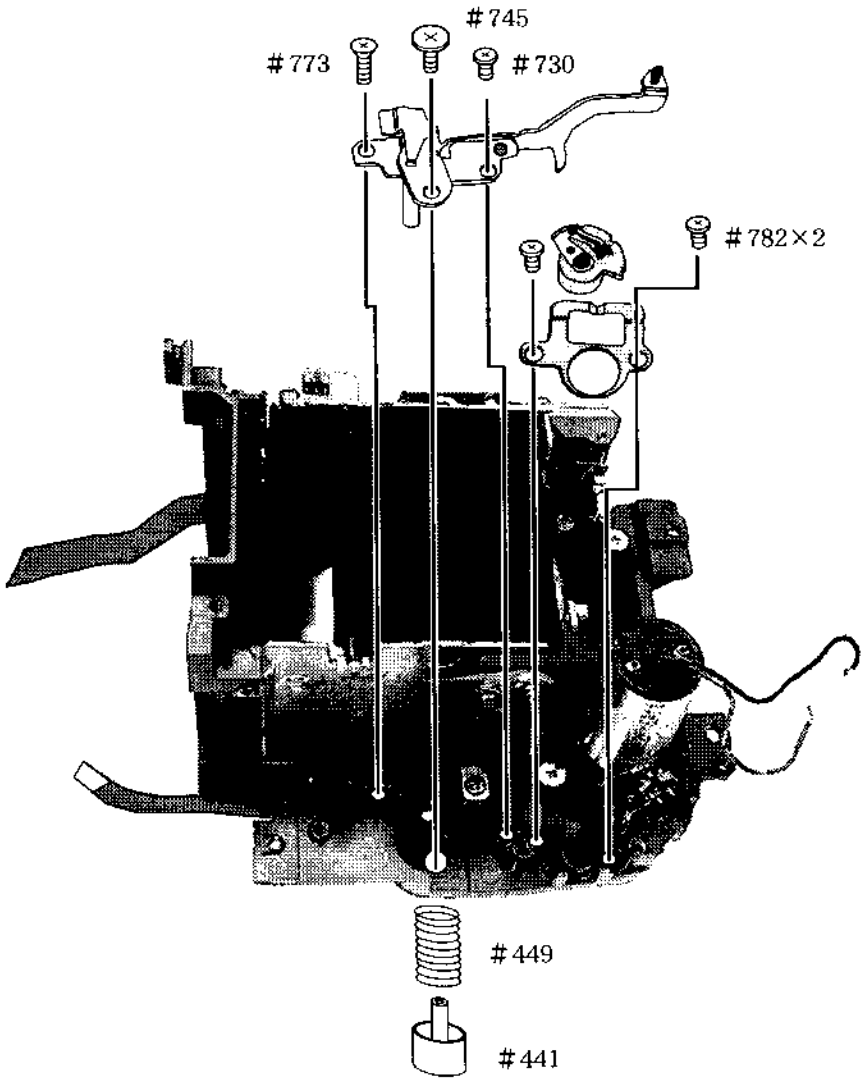
Bayonet mount, apron



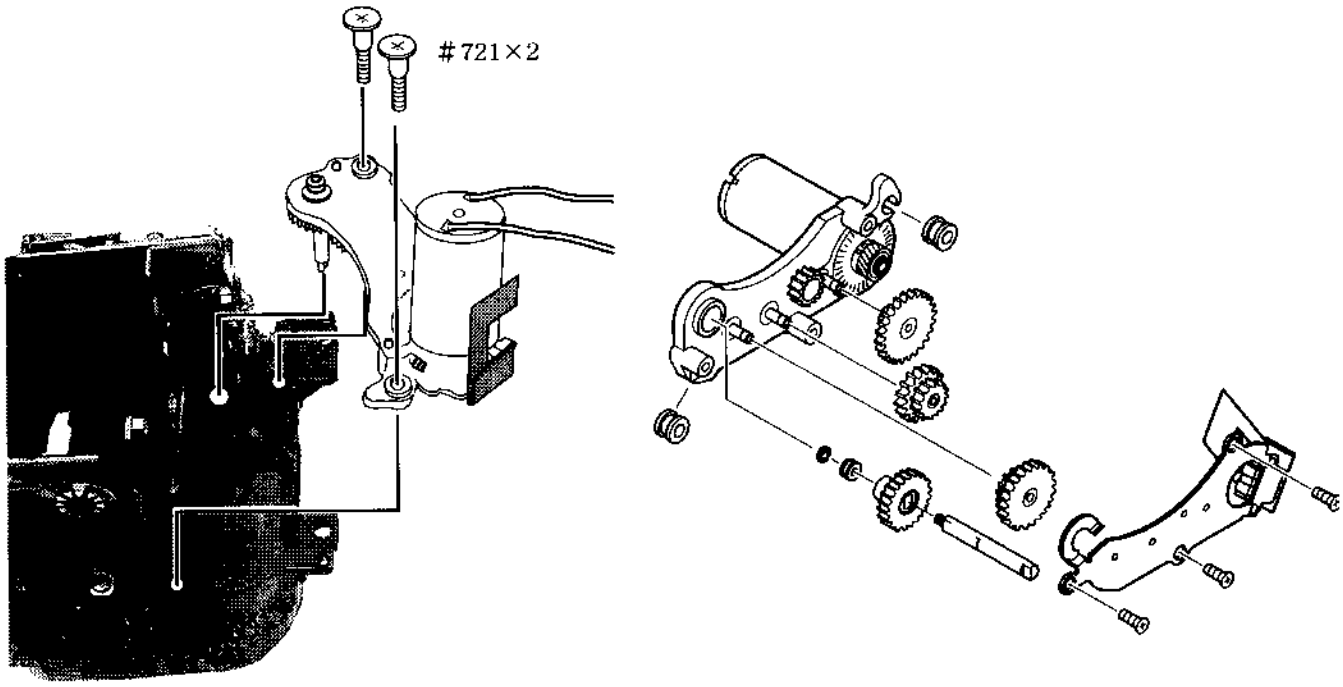
Attachable lens switch unit, AF/M switch circuit board



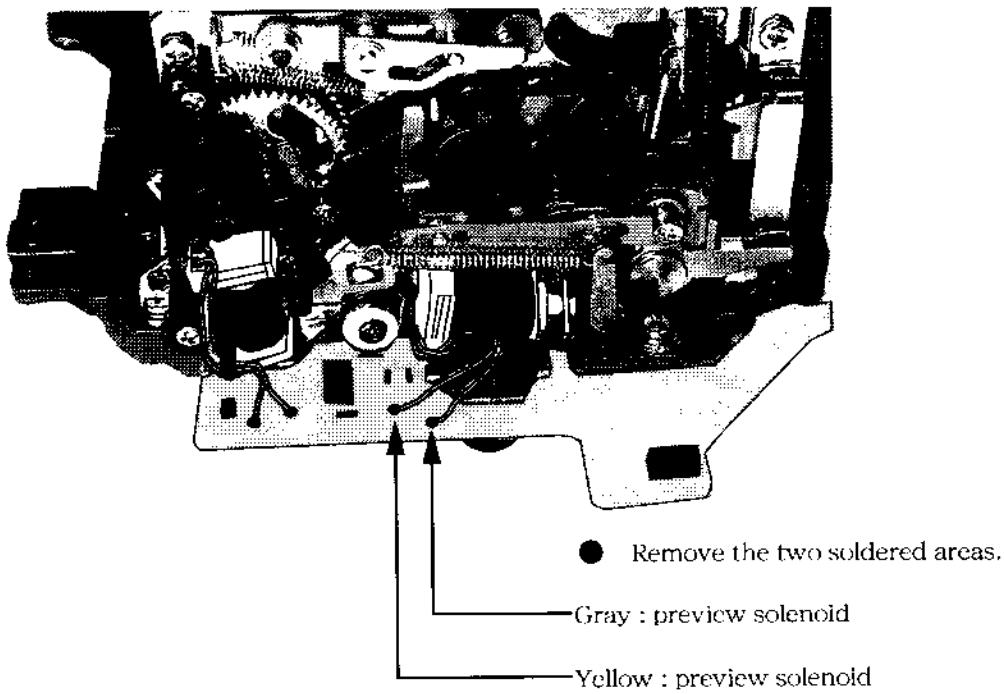
Lens release button unit, lens release base plate

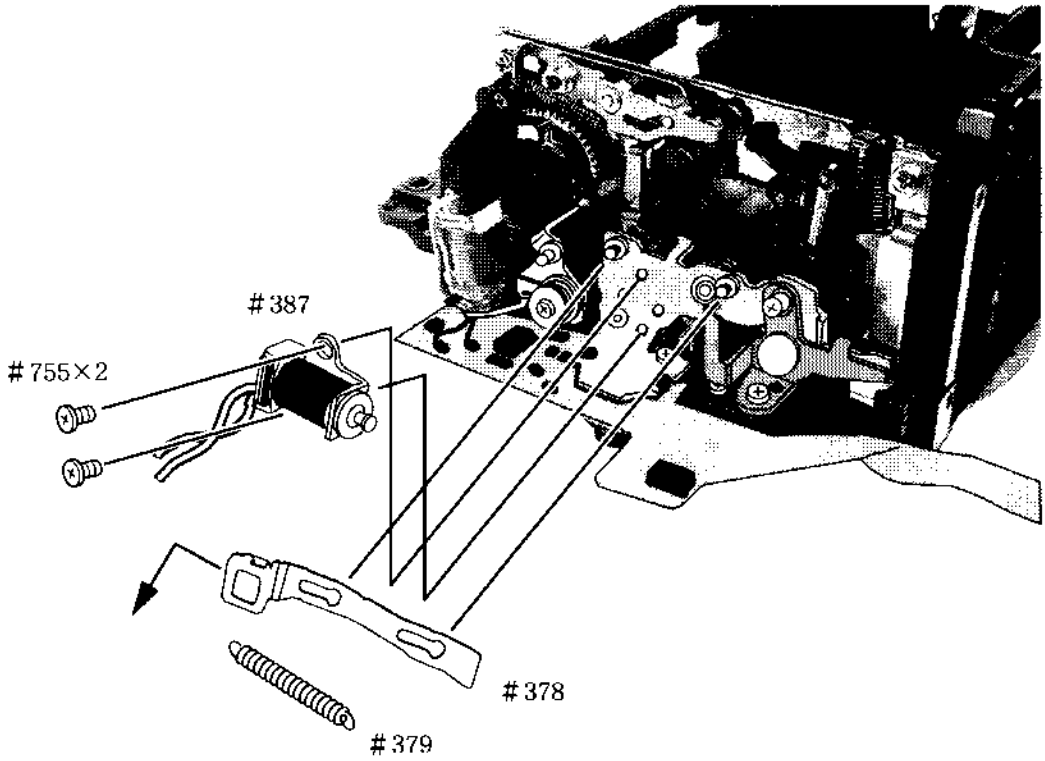


AF driving unit

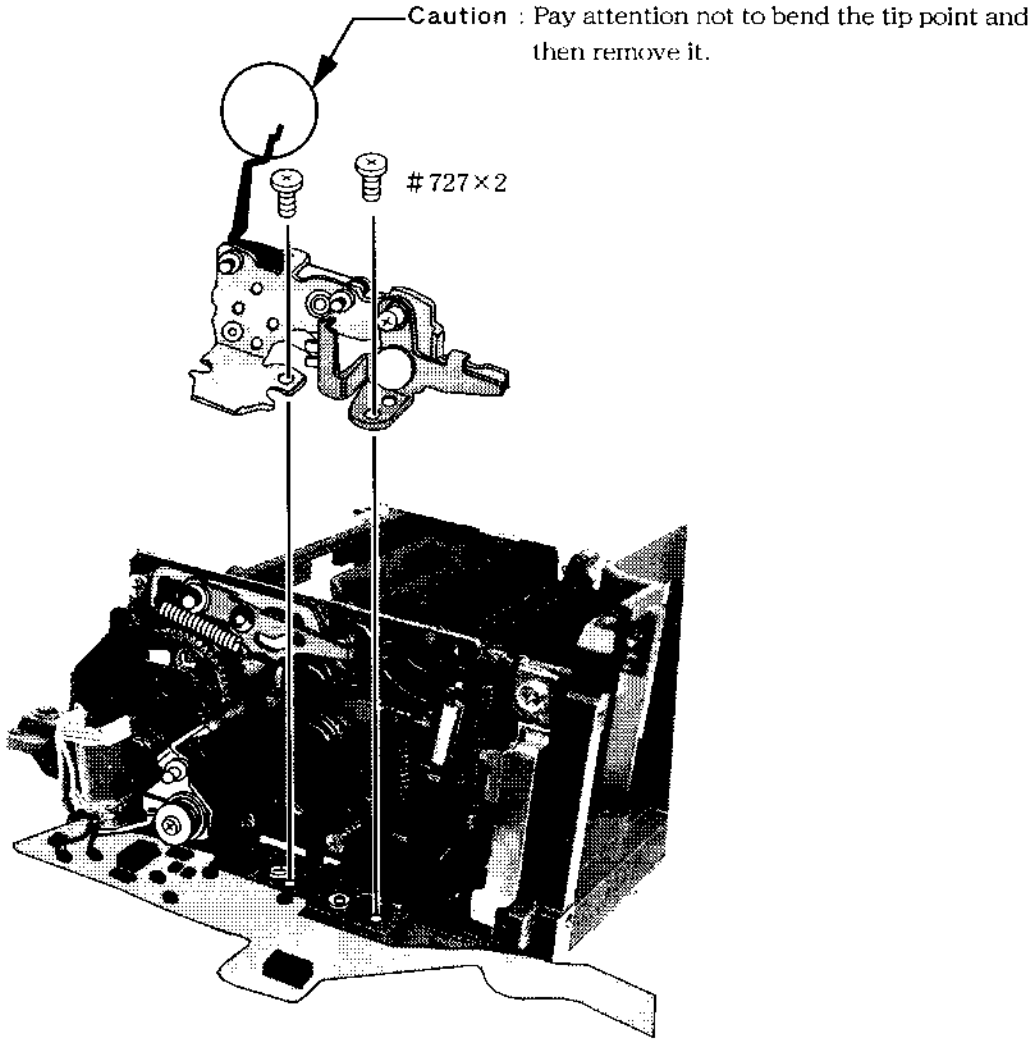


Preview unit

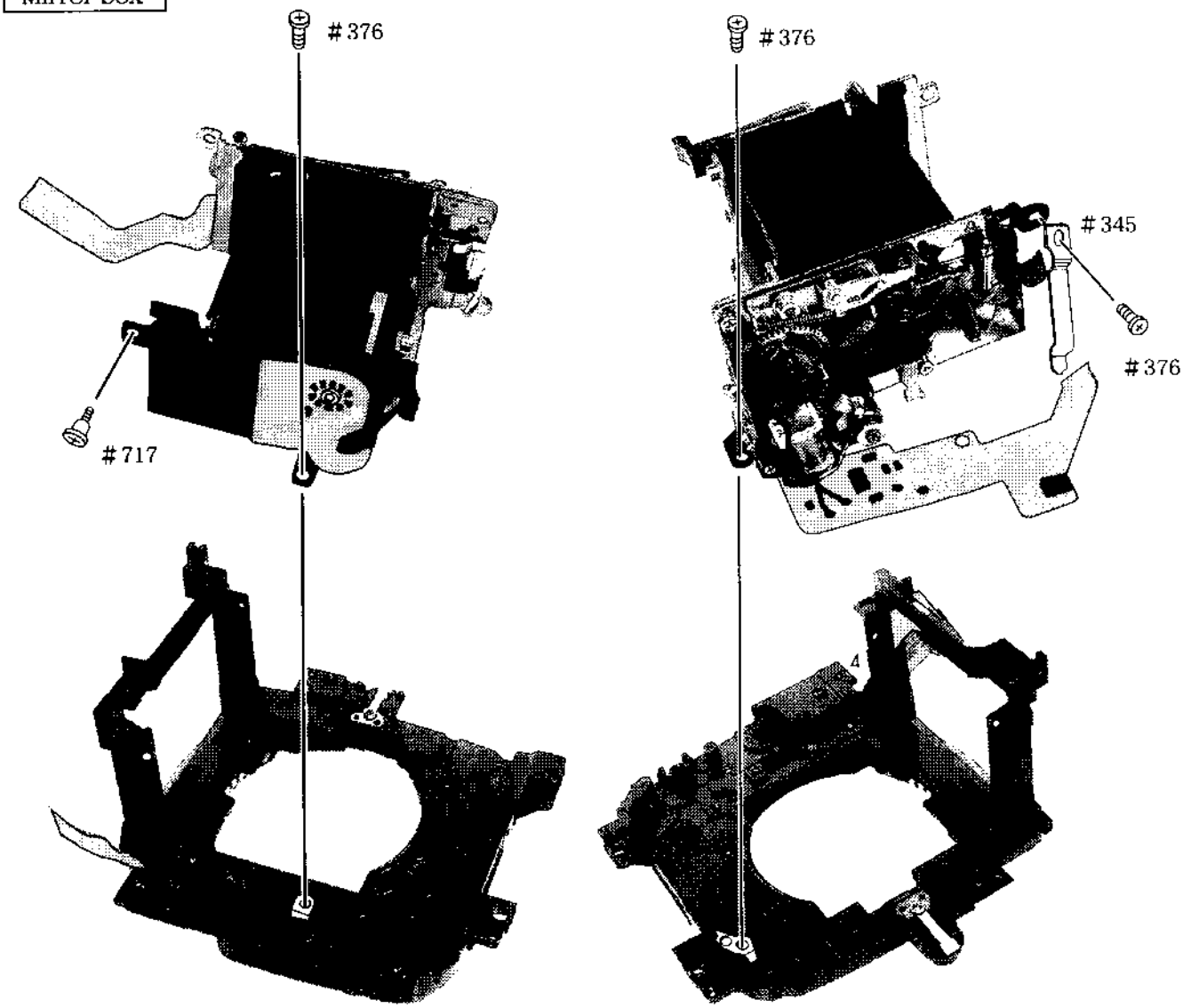




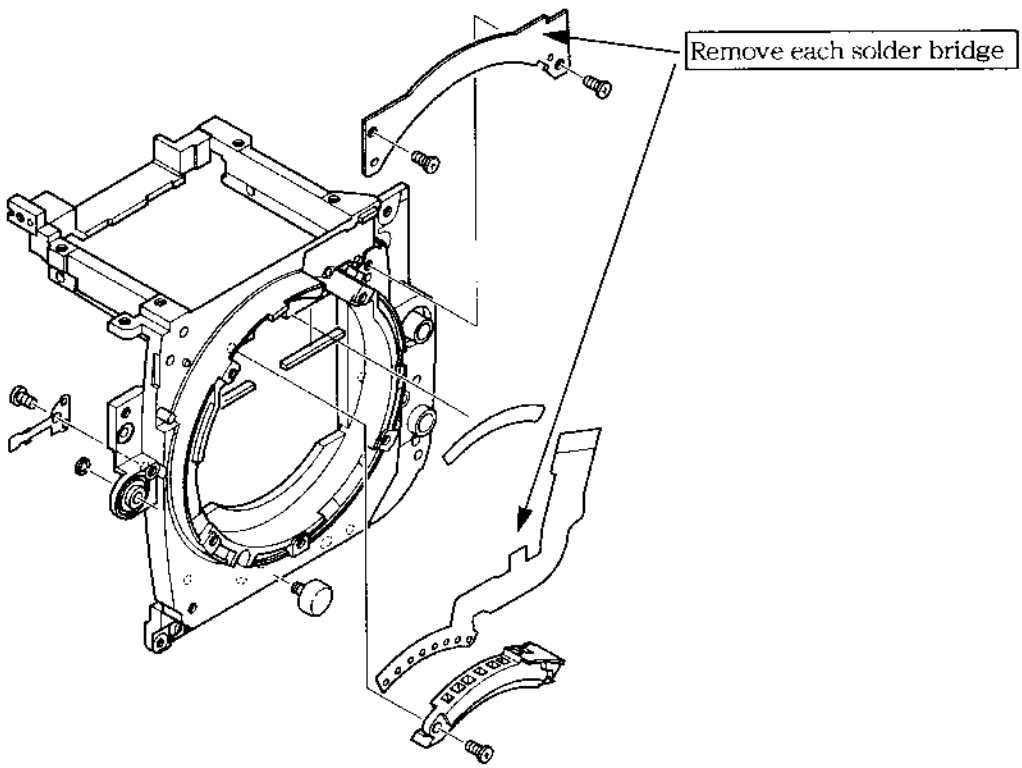
● Slide the aperture reset link lever #378 in the arrow direction and then remove it.



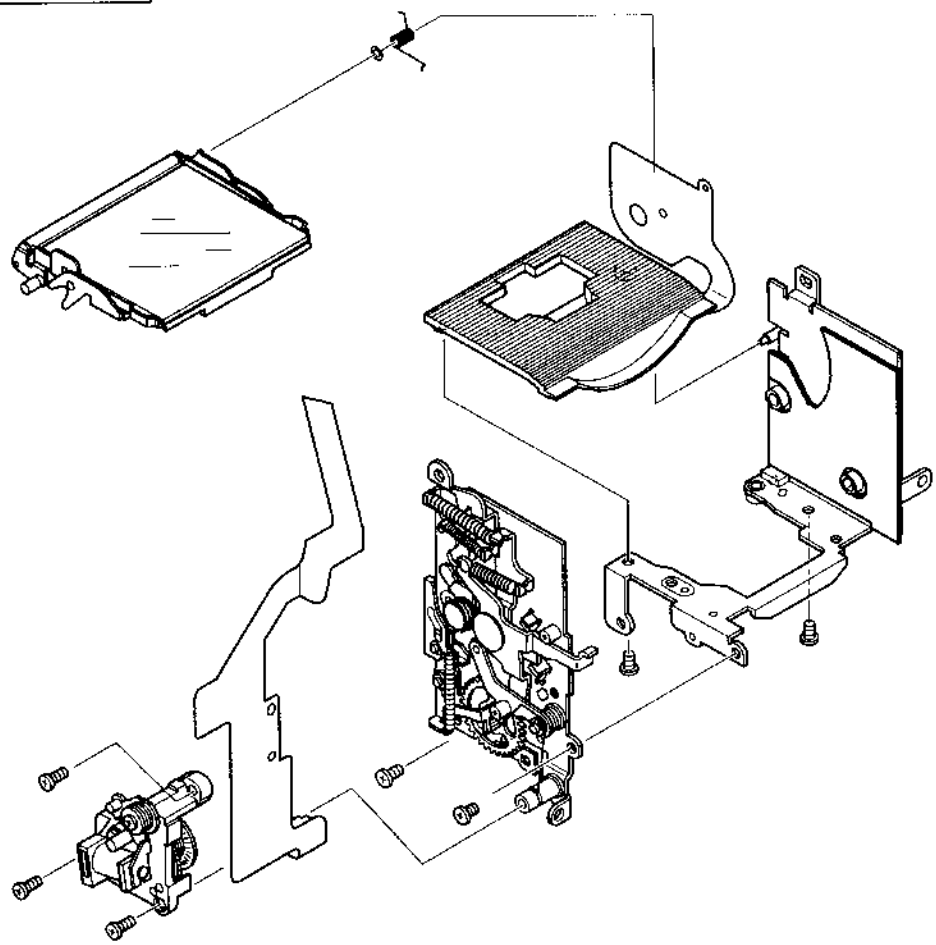
Mirror box



Others



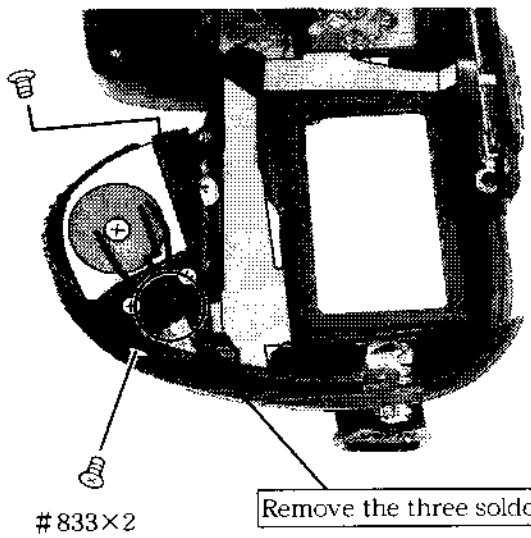
I base plate, L base plate



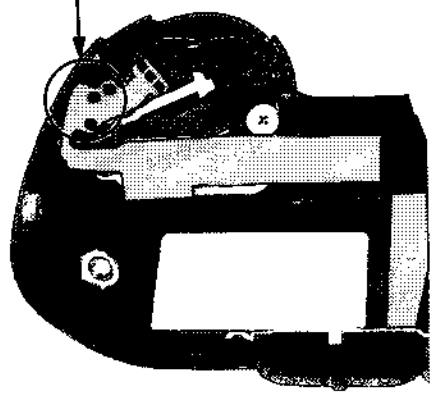
Caution : Avoid to directly touch the black-painted area on the main mirror holder.
This is for the sake of protection against discolouration.

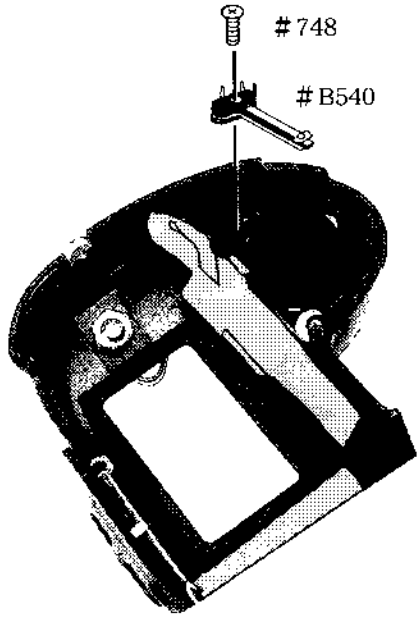
5. Top cover

Front C/D unit

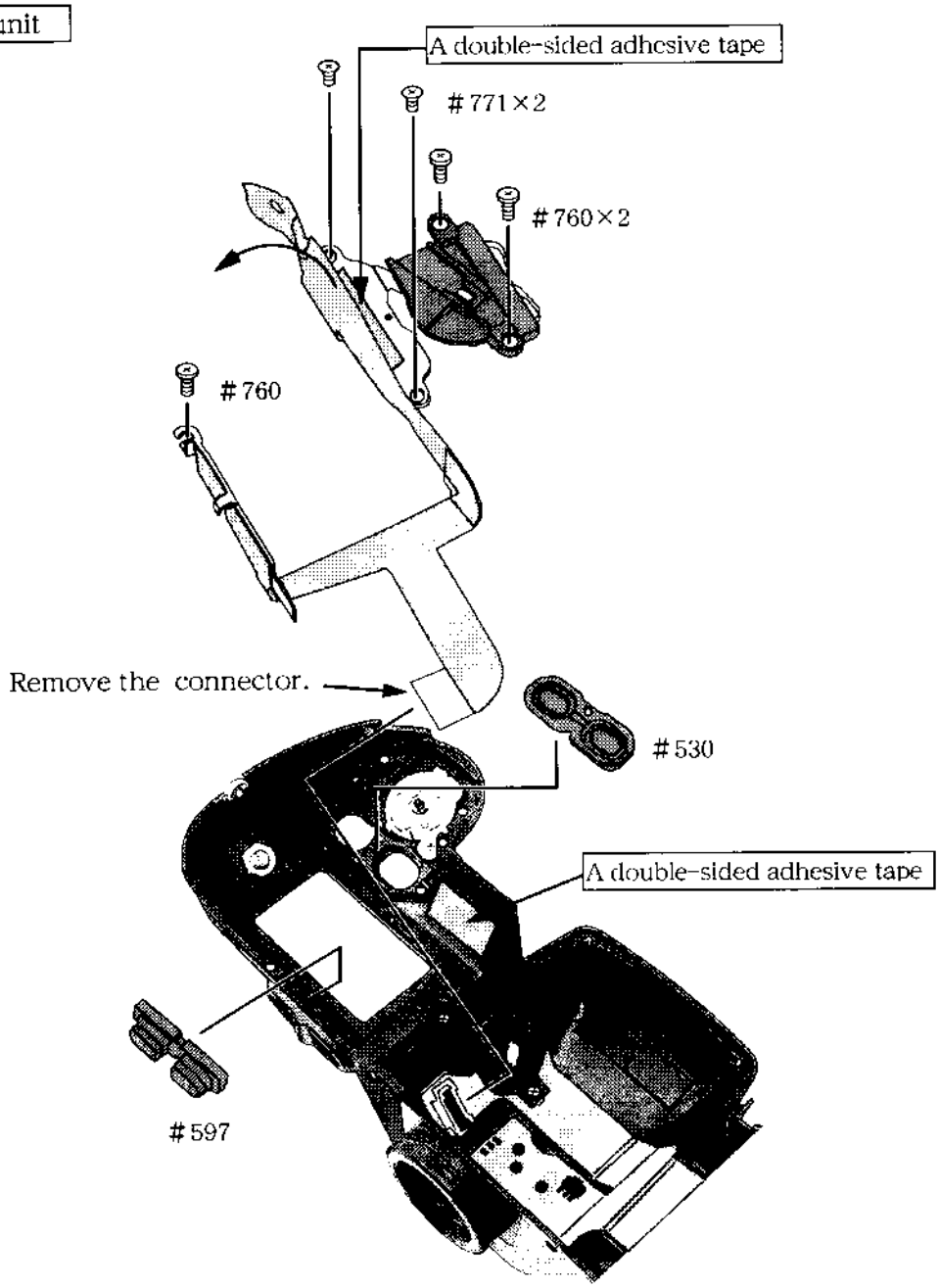


Release switch unit

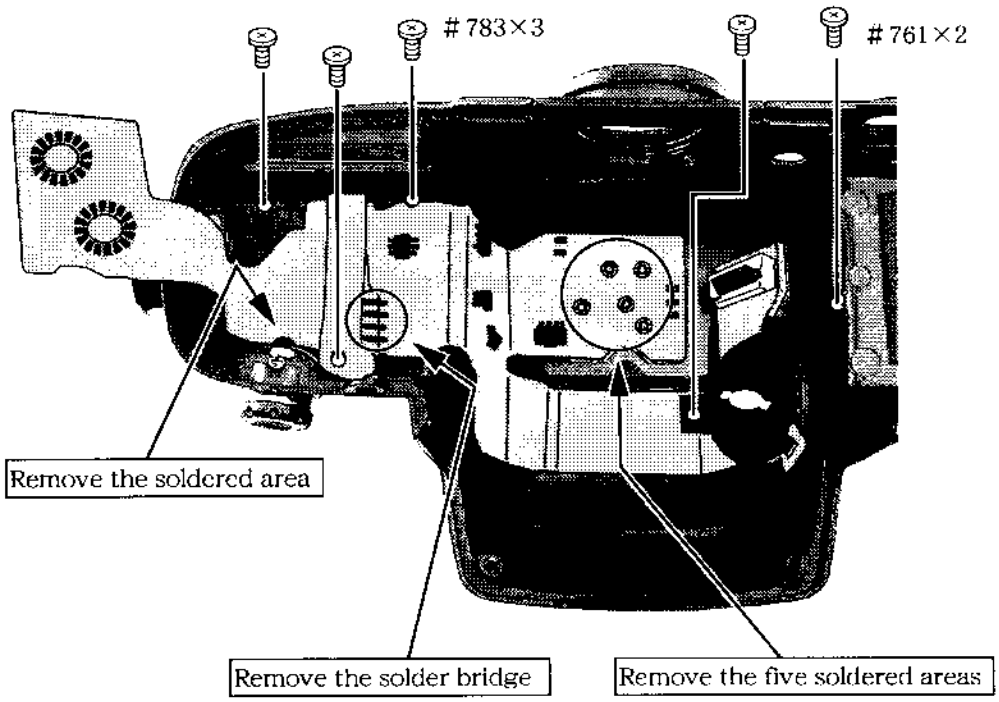


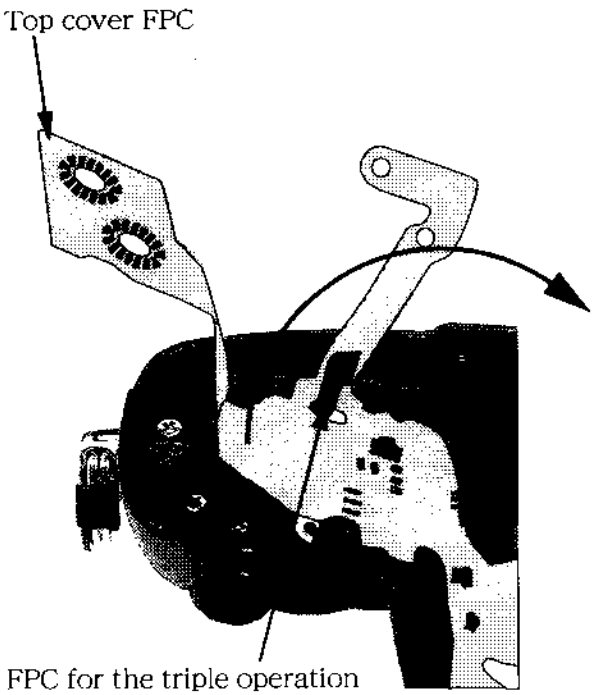


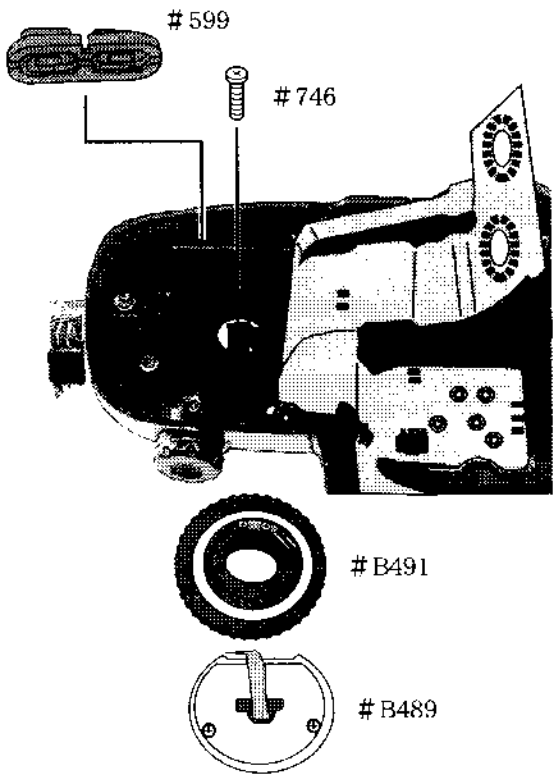
Front C/DFPC unit



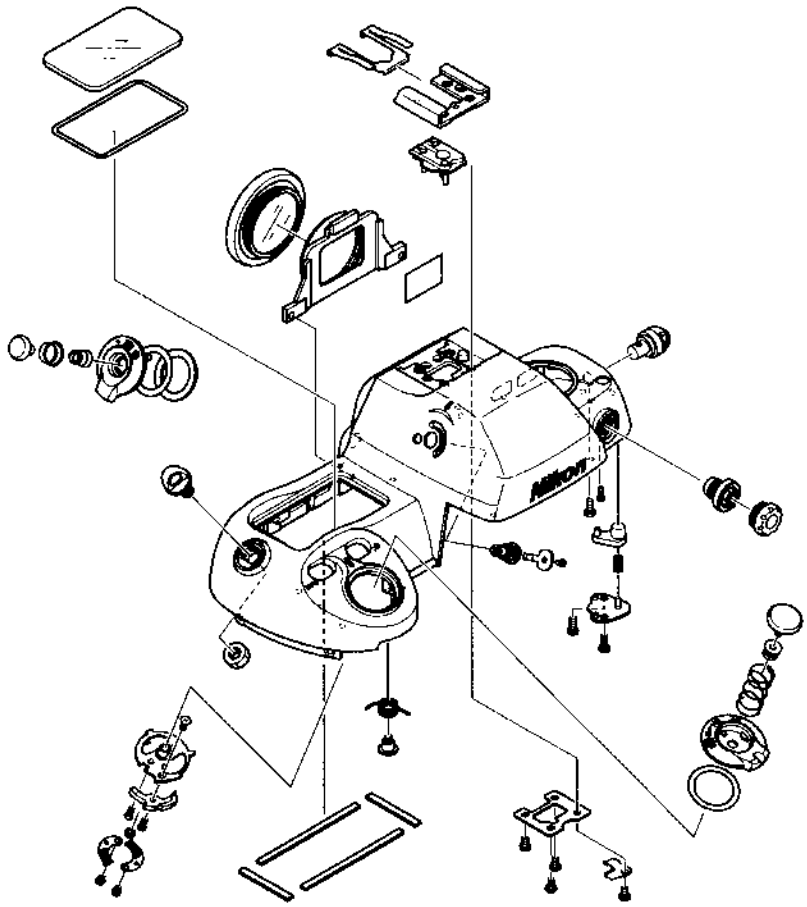
Top cover FPC / film advance mode dial / triple operation buttons



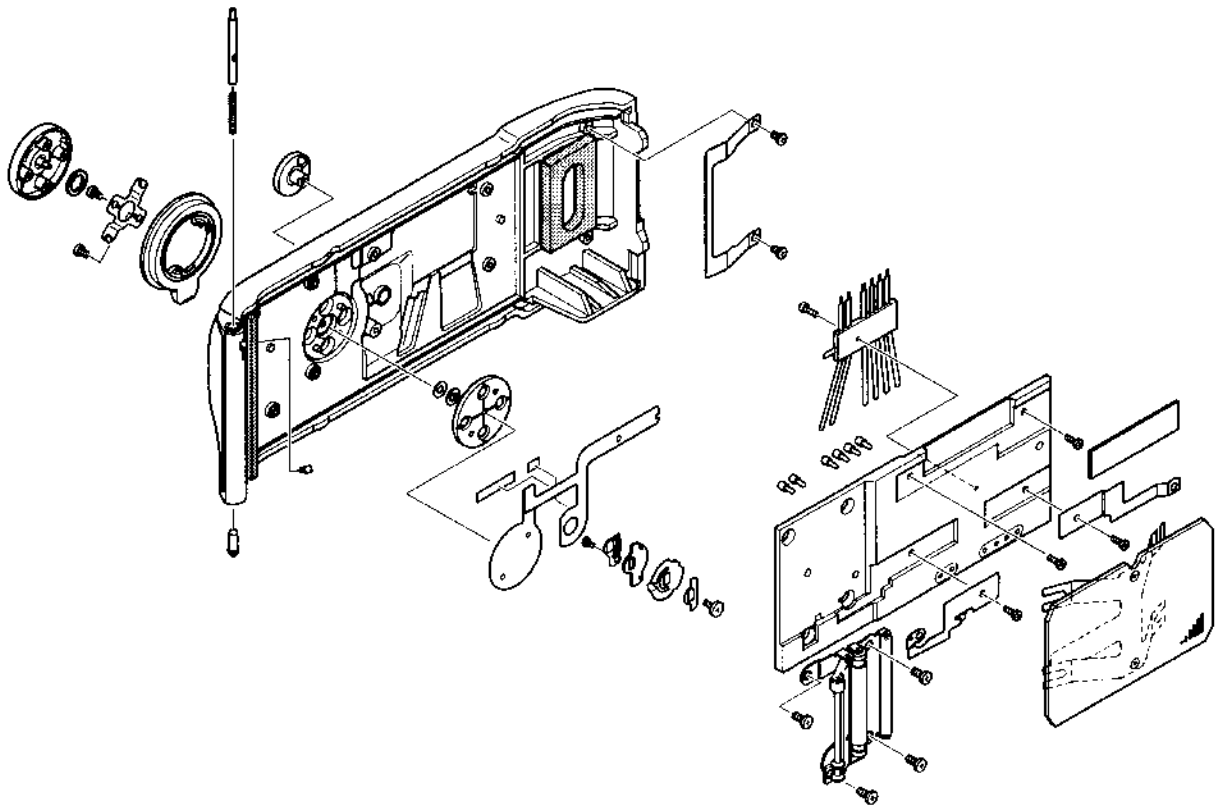




Others



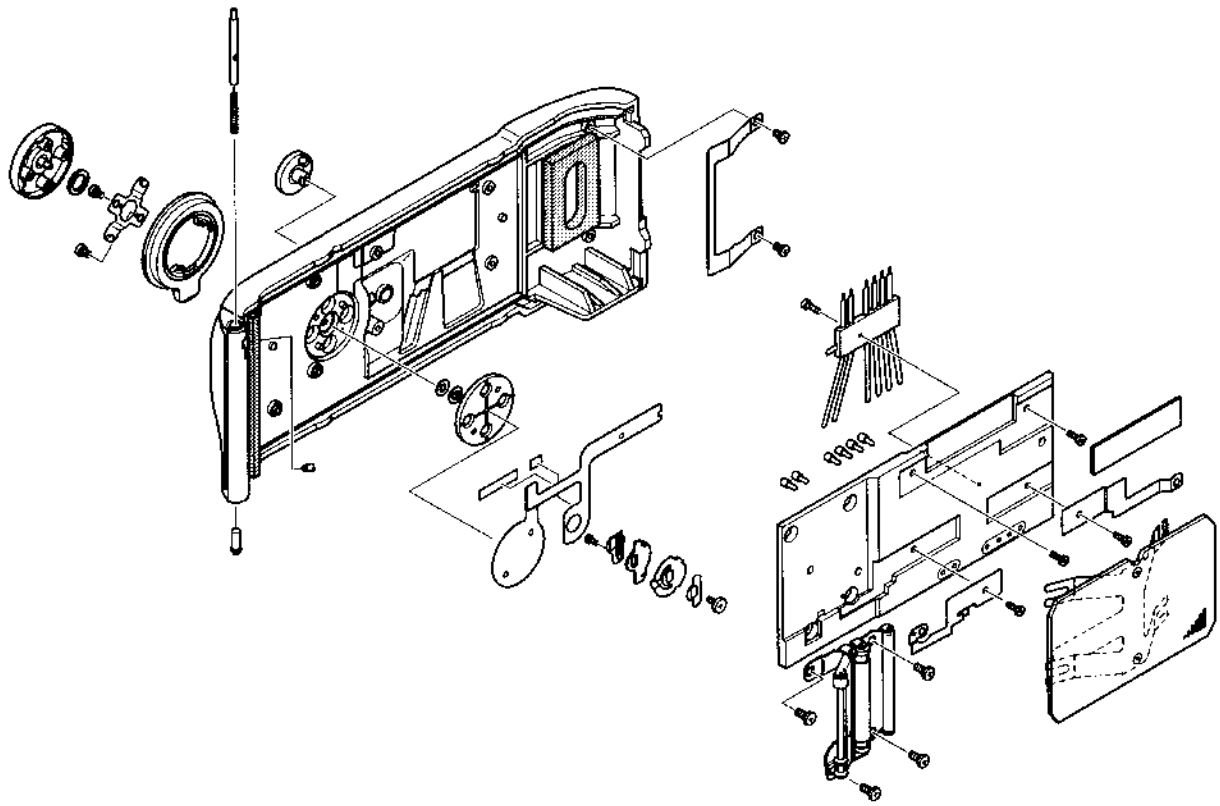
6. Rear cover



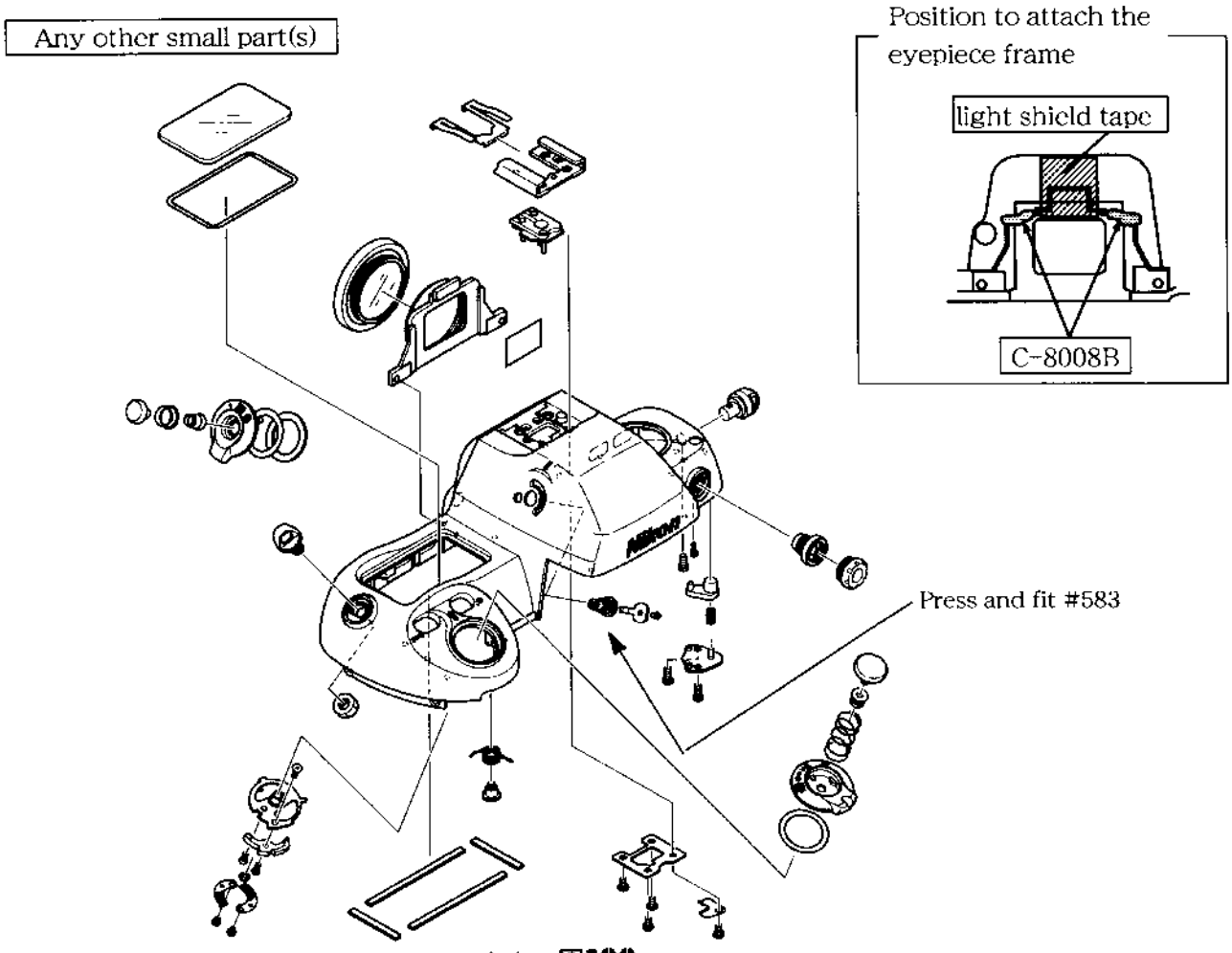
Assembly and adjustment

Assembly and adjustment

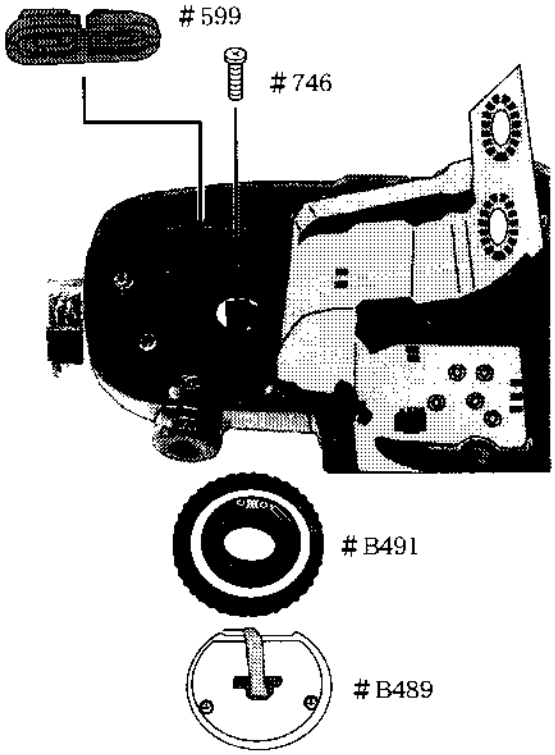
1. On the rear cover

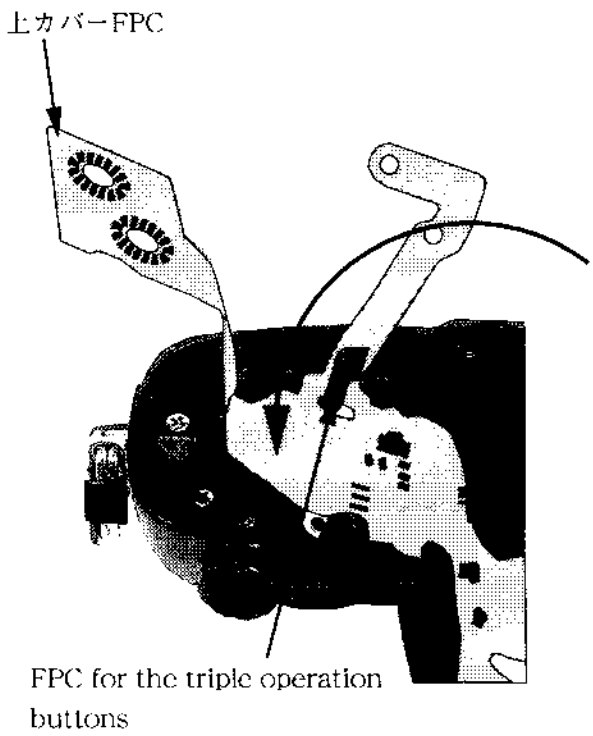


2. On the top cover

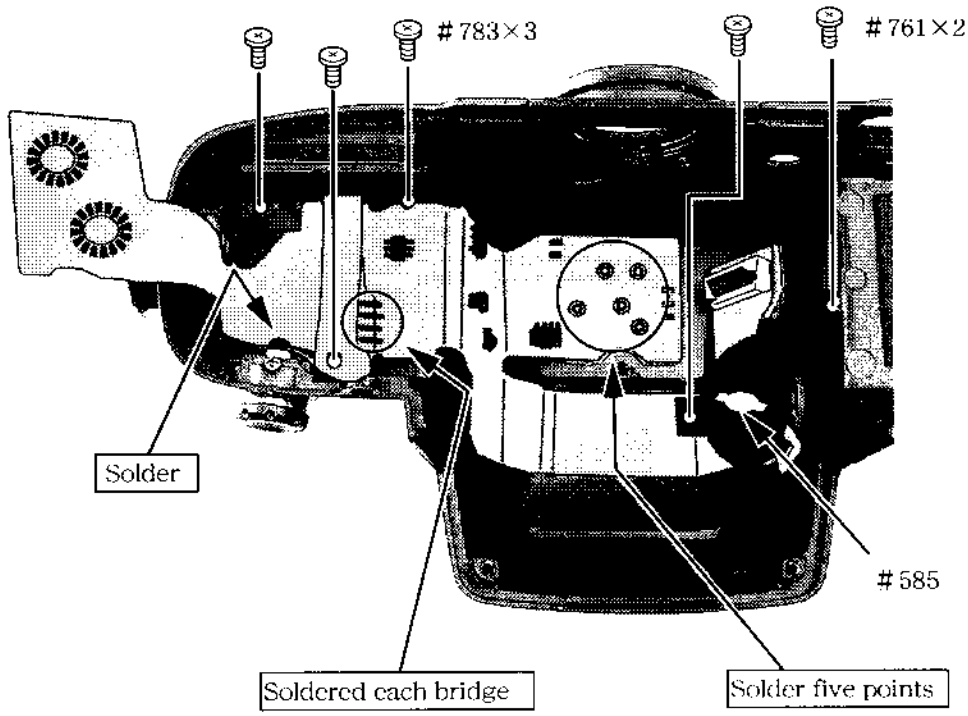


Top cover FPC / film advance mode dial / triple operation buttons



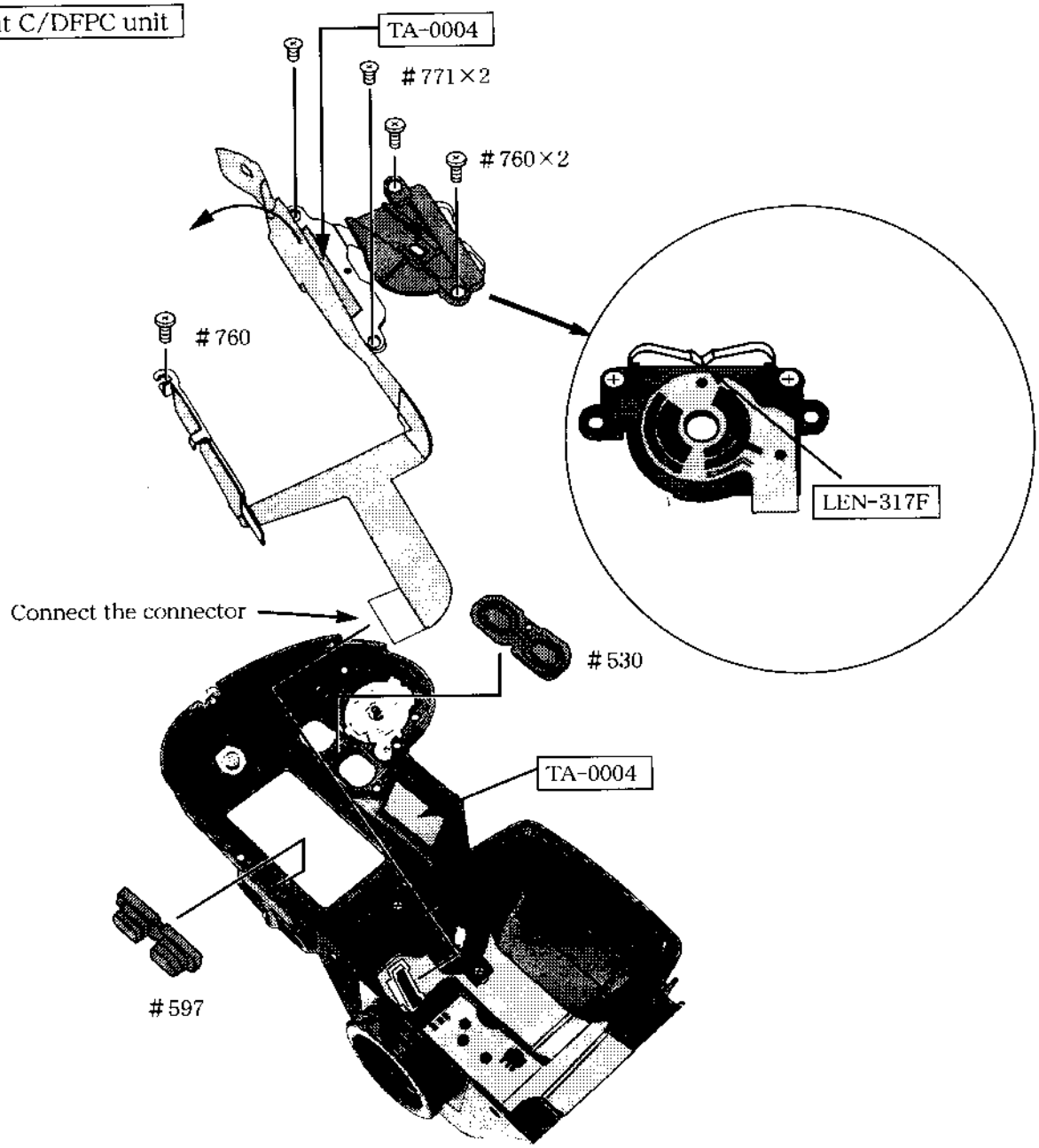


- Pass the triple operation buttons' FPC through the hole on top cover FPC.

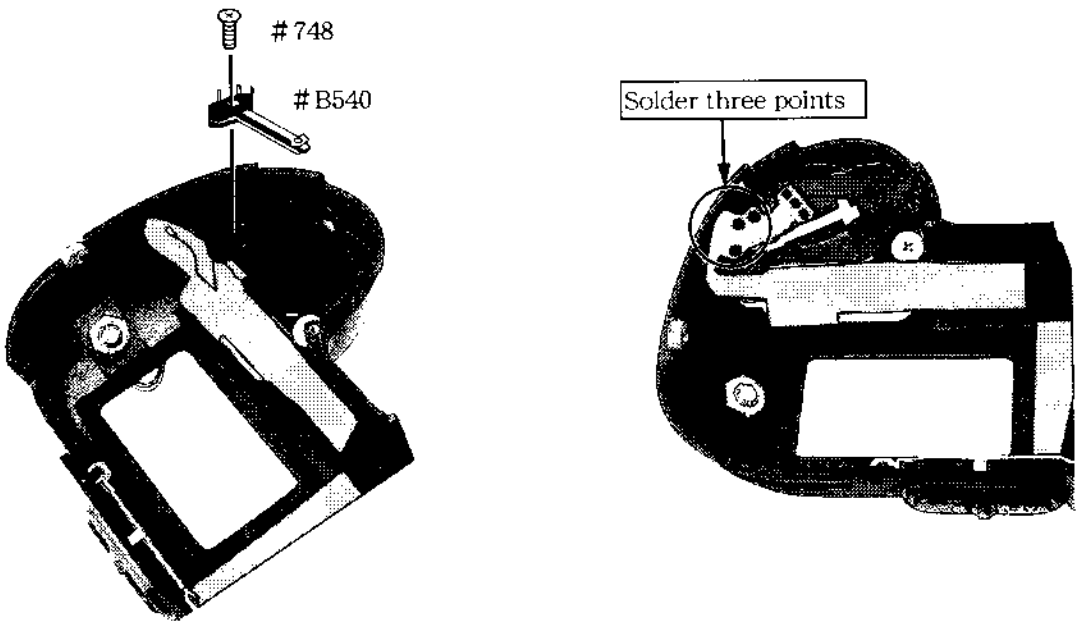


- Fit the photometry mode dial's projection into the notch on photometry mode change plate #585 and fix them together.

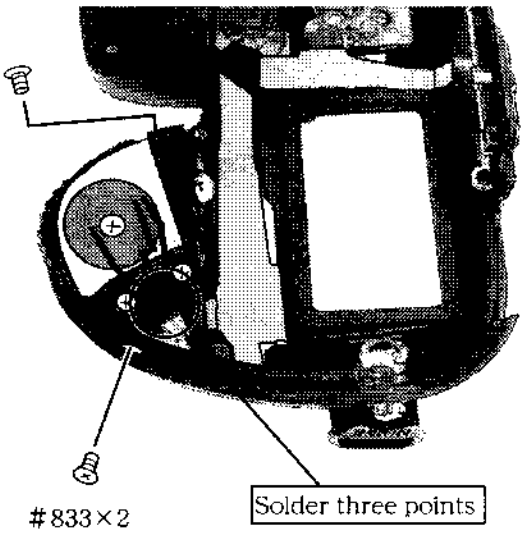
Front C/DFPC unit



Release switch unit

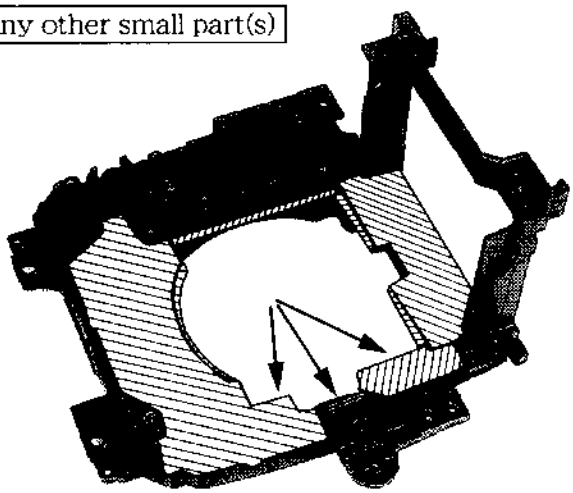


Front C/D unit

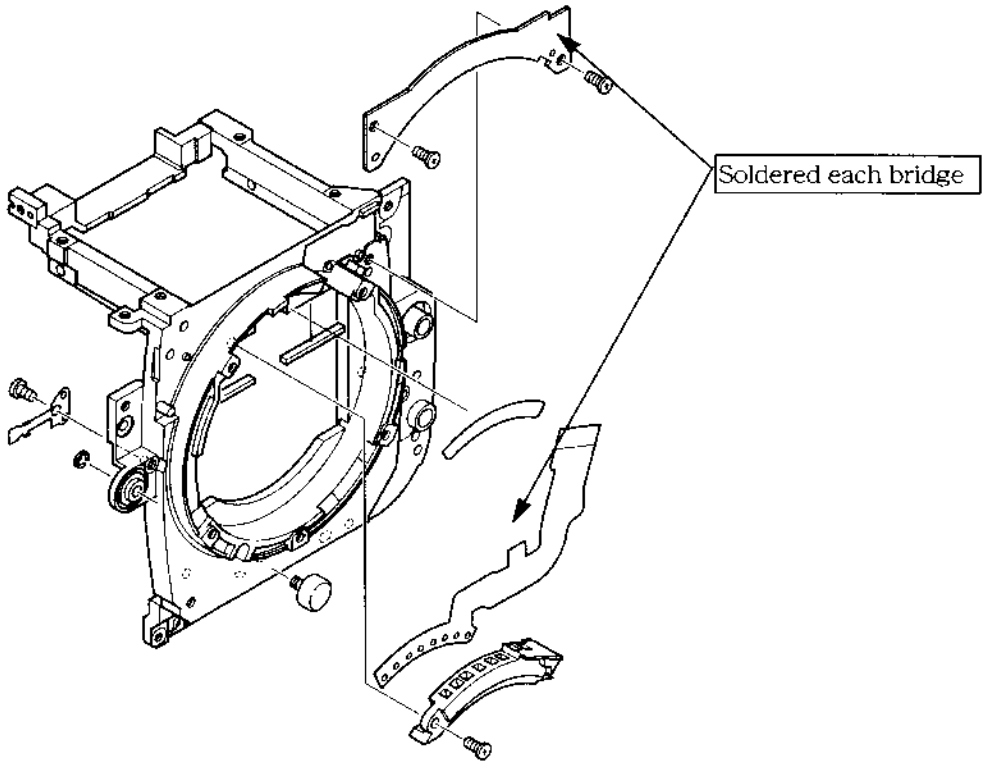


3. Front body

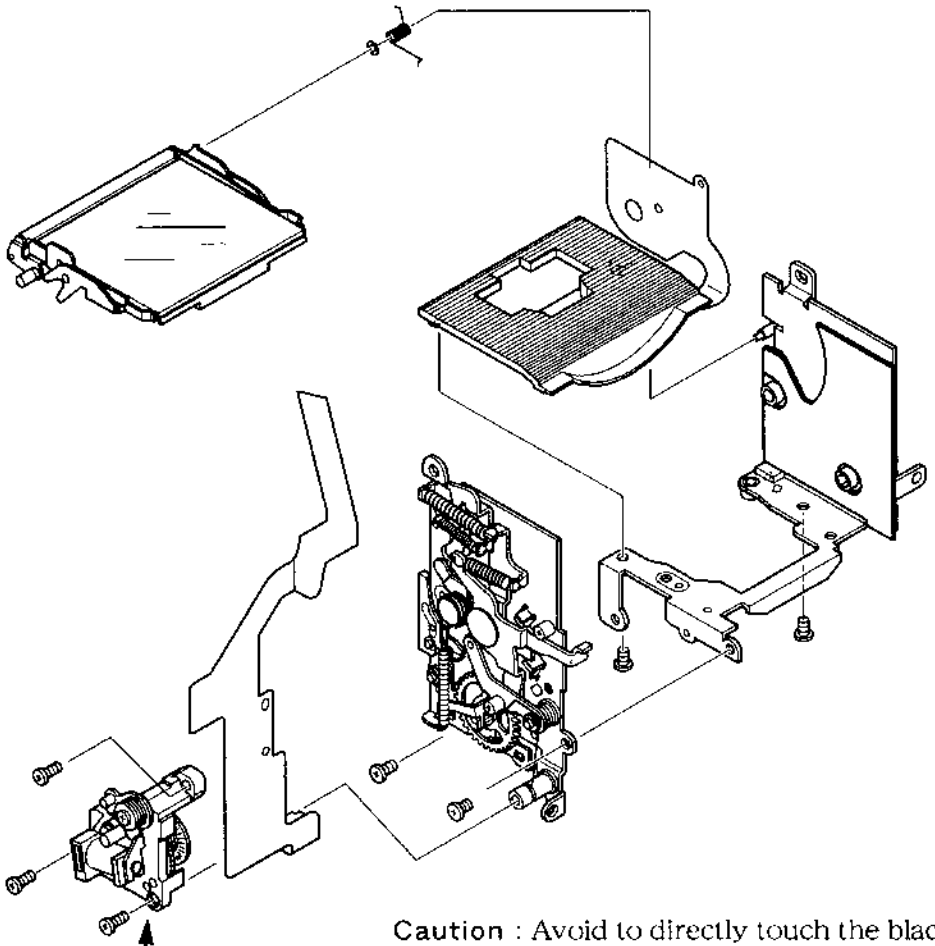
Any other small part(s)



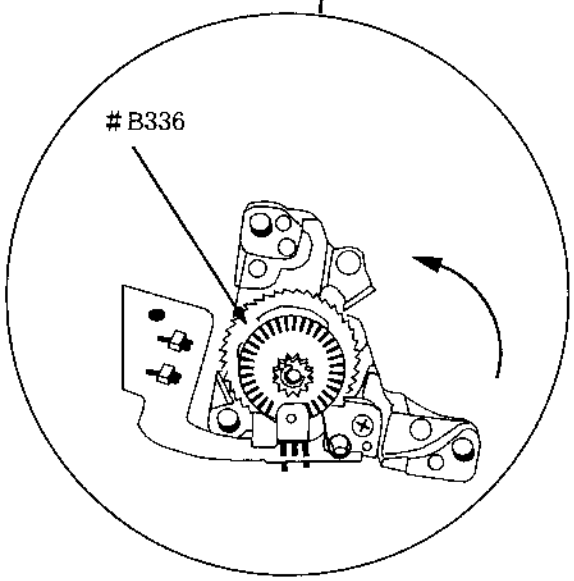
- Apply the oil barrier to the diagonal-lined area and the arrow areas.



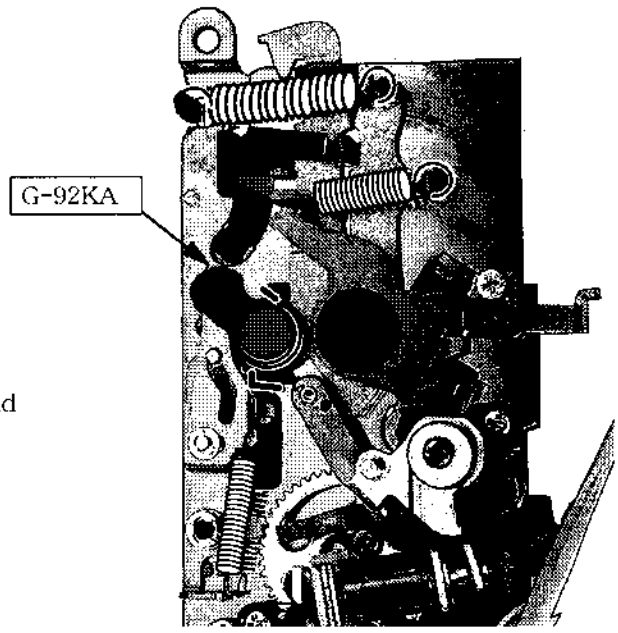
I base plate, L basc plate



Caution : Avoid to directly touch the black-painted area on the main mirror holder.
This is for the sake of protection against discolouration.

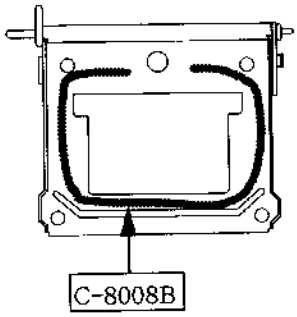


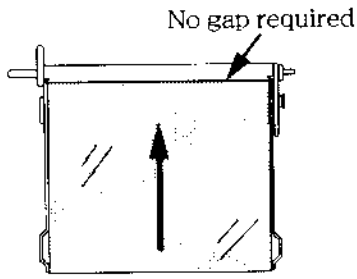
● Drive the ratchet gear #B336 one unticlockwise and then fix it on the I base plate.



The position to hook the spring

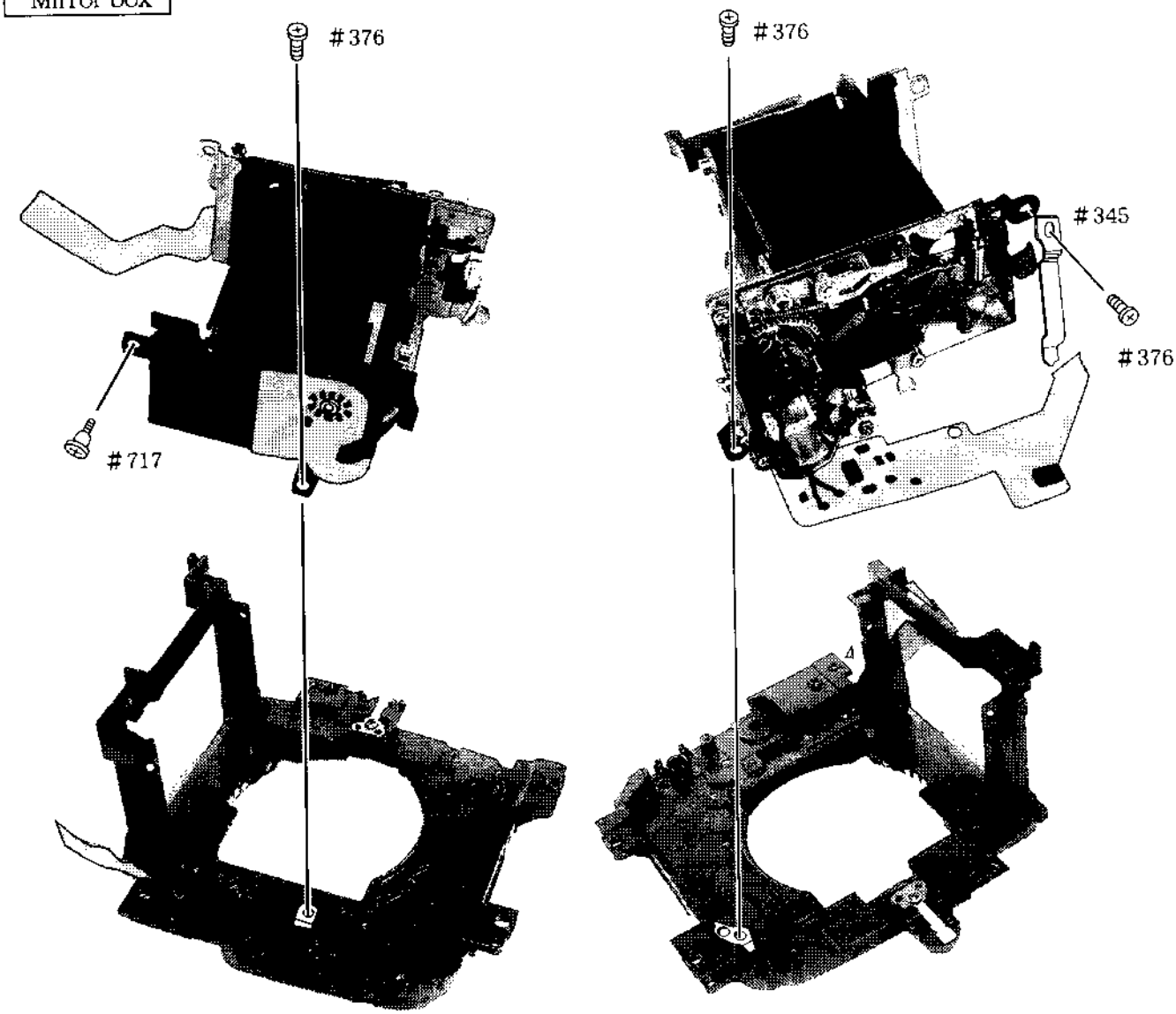
How to adhere the main mirror



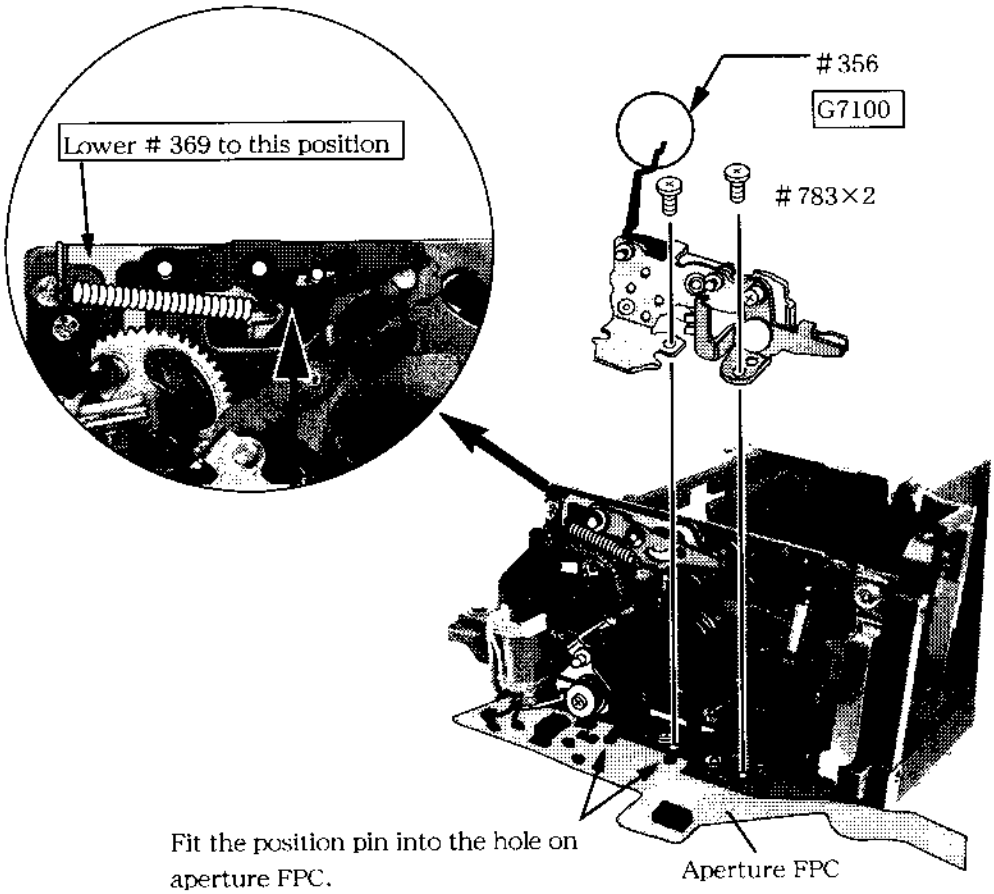


Note : In case of replacement of the main mirror, be sure to perform the 45-degree of angle adjustment between the main mirror and the sub mirror.
For more details, refer to the pages A 13 to 14.

Mirror box

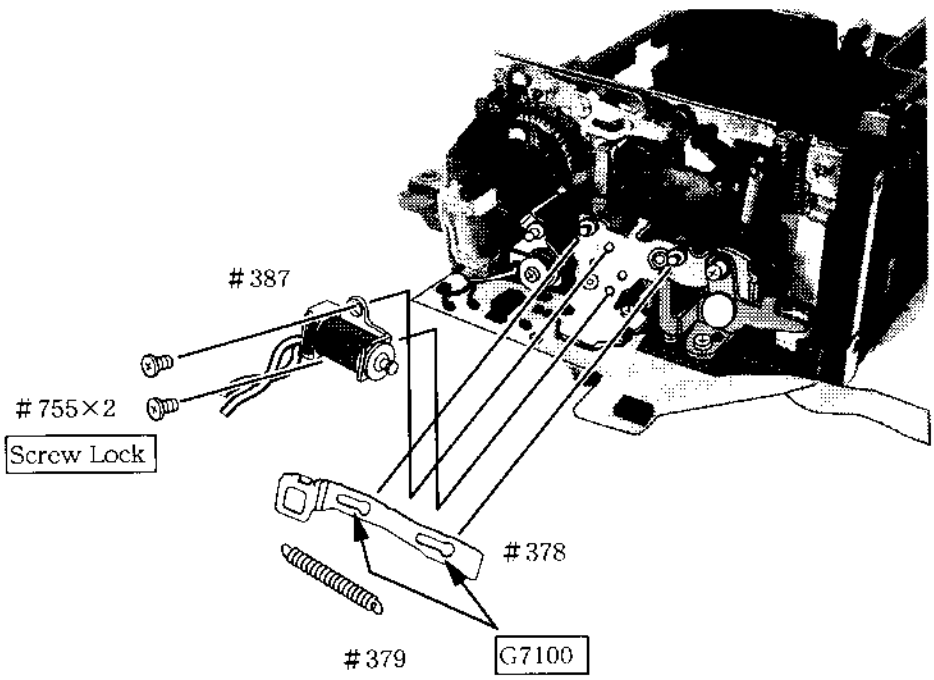


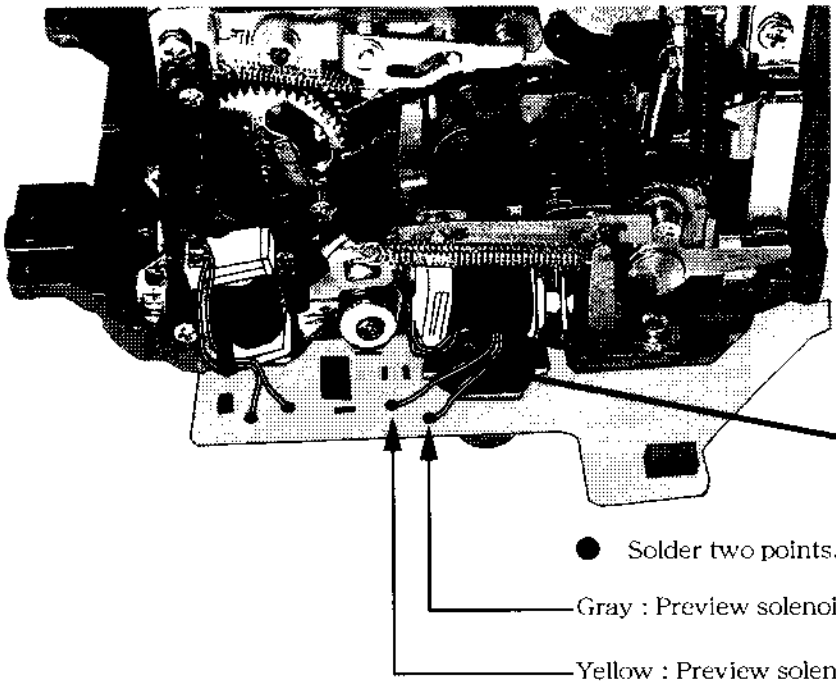
Preview unit



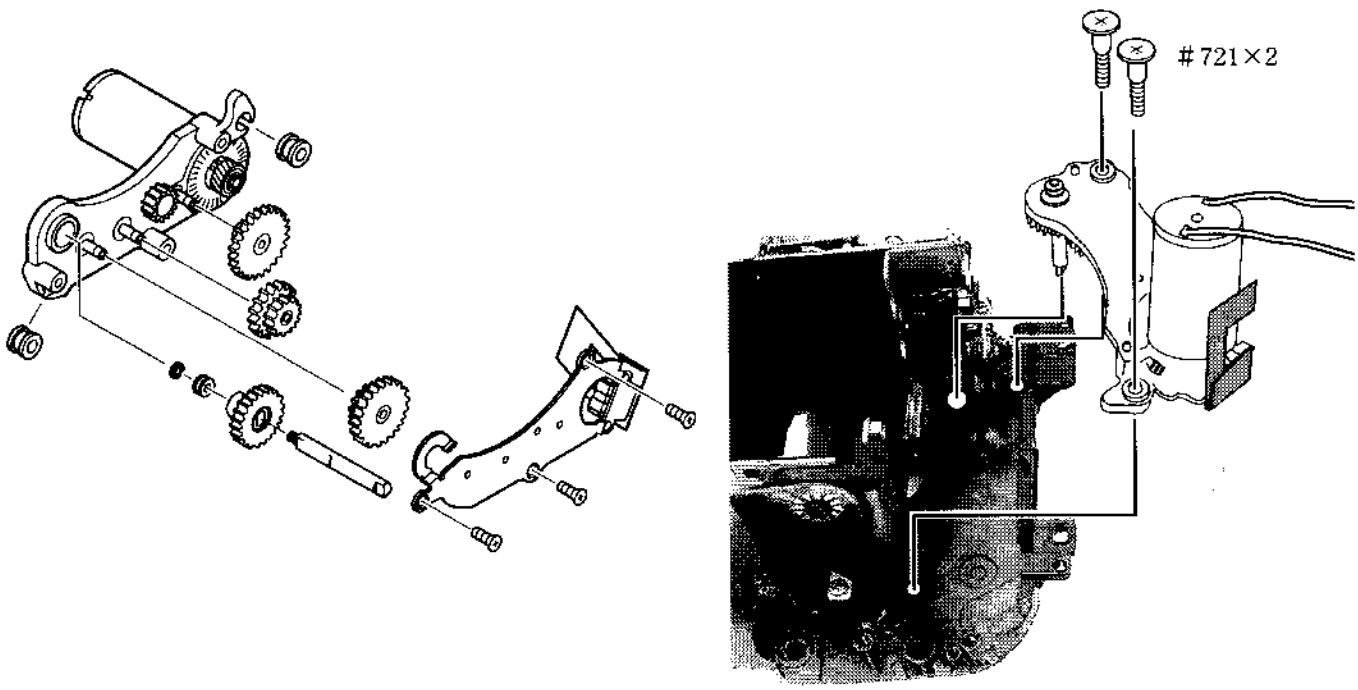
- Lower the preview slide lever #369 to the position described in the figure above.
- Fit the tip of mirror-up latch driving lever #356 into the ㄱ-shaped area on the preview slide lever #369.

  Then, assemble the preview unit.

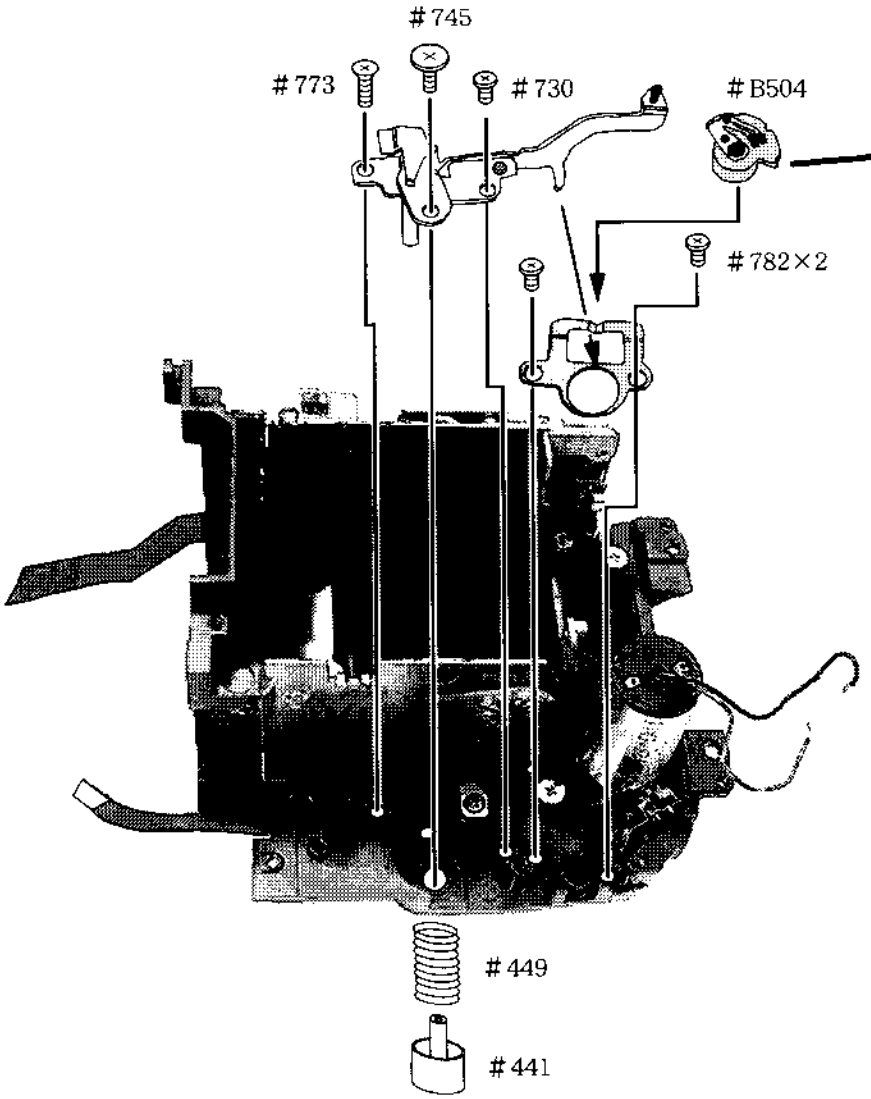


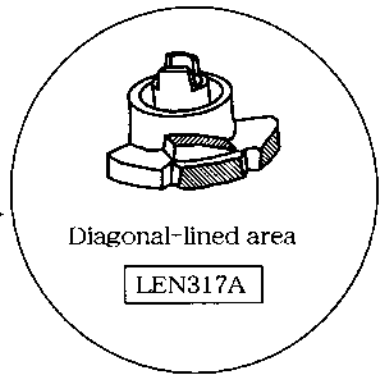


AF driving unit

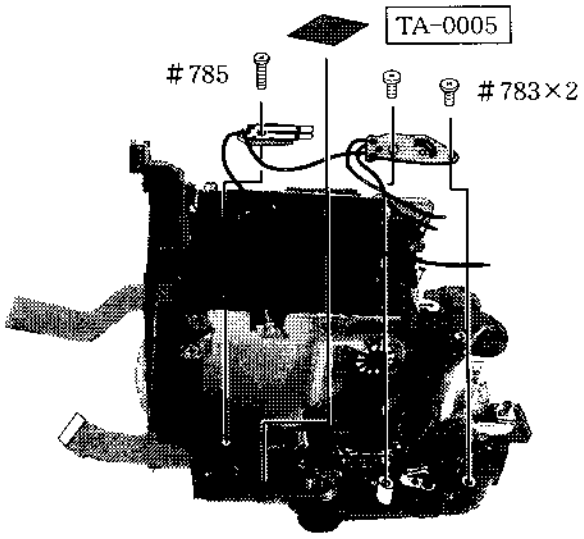


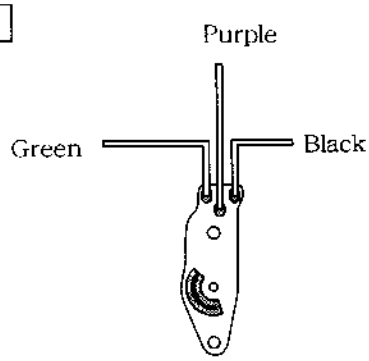
Lens release button unit, lens release base plate

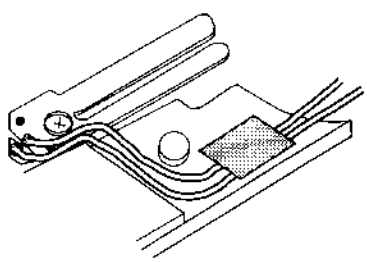




Lens release switch unit, AF/M switch circuit board

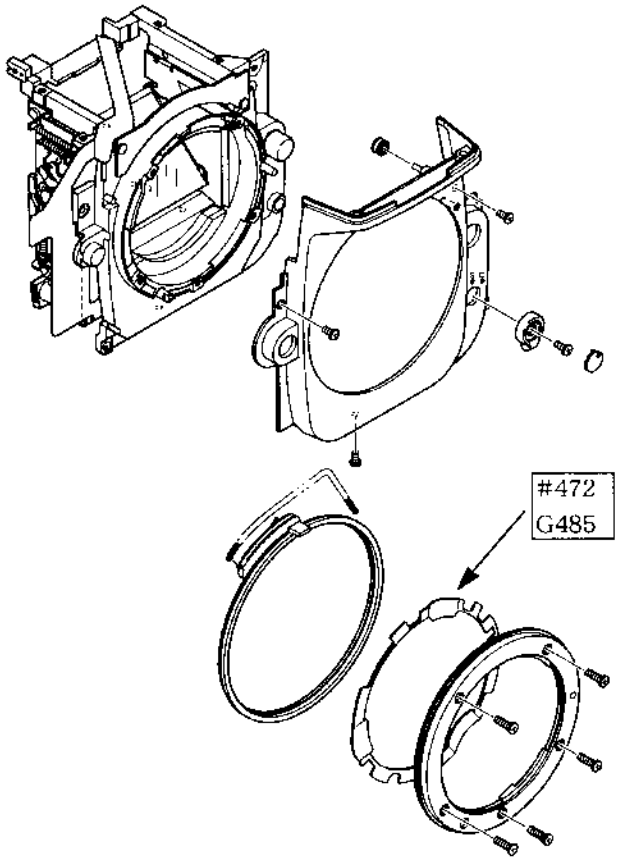




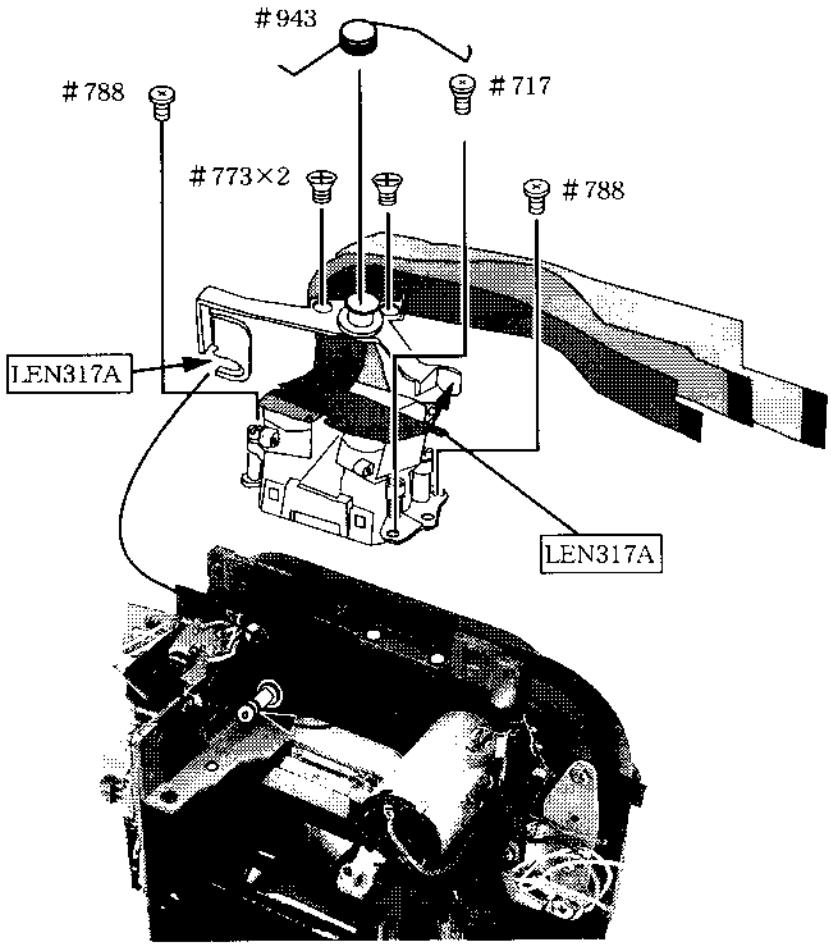


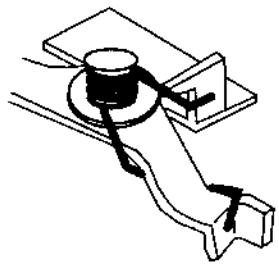
Where the black lead wire should go

Bayonet mount, apron



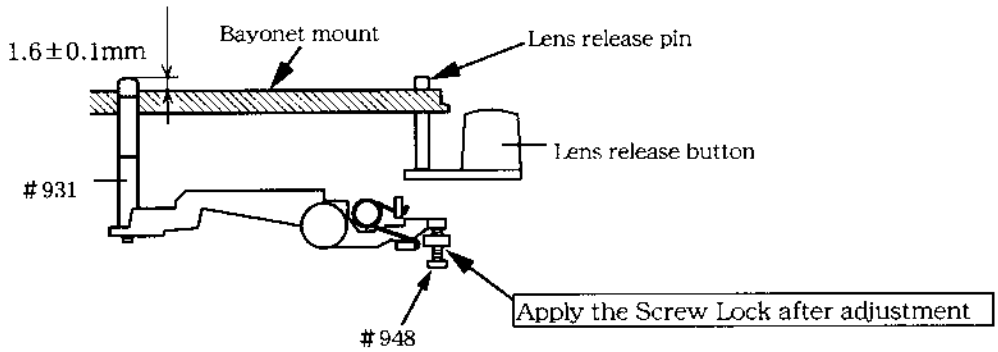
Horizontal AF lever, AF unit





The position to hook the spring

Height adjustment for the AF coupling



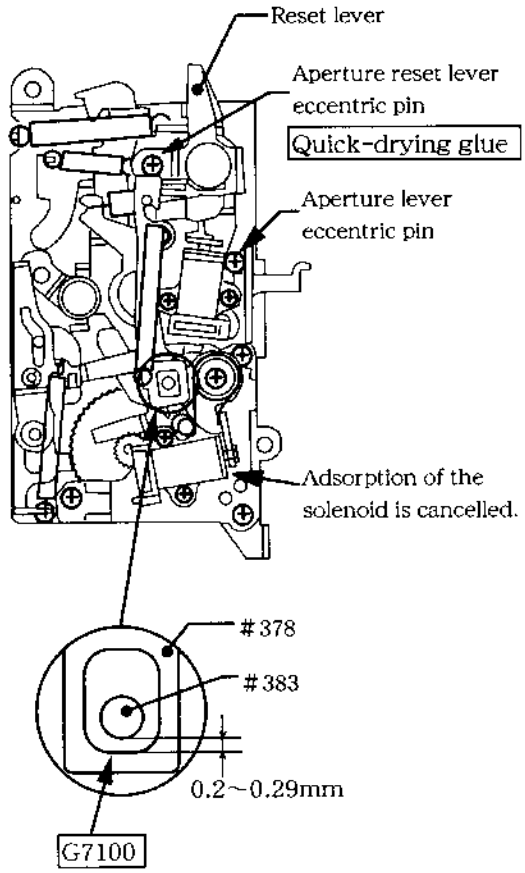
① Set the AF switch lever to [S].
Then, press the (attachable lens button) two or three times and measure the height of AF coupling axis #931.

② Adjust the height of AF coupling axis #931 using the screw #948.

③ Be sure that when adjusting the height of (attachable lens pin) to 0.4 mm, the AF coupling axis should not be higher than the bayonet surface.

④ After adjustment, fix the screw #491 by the Screw Lock.

Height adjustment for the aperture lever



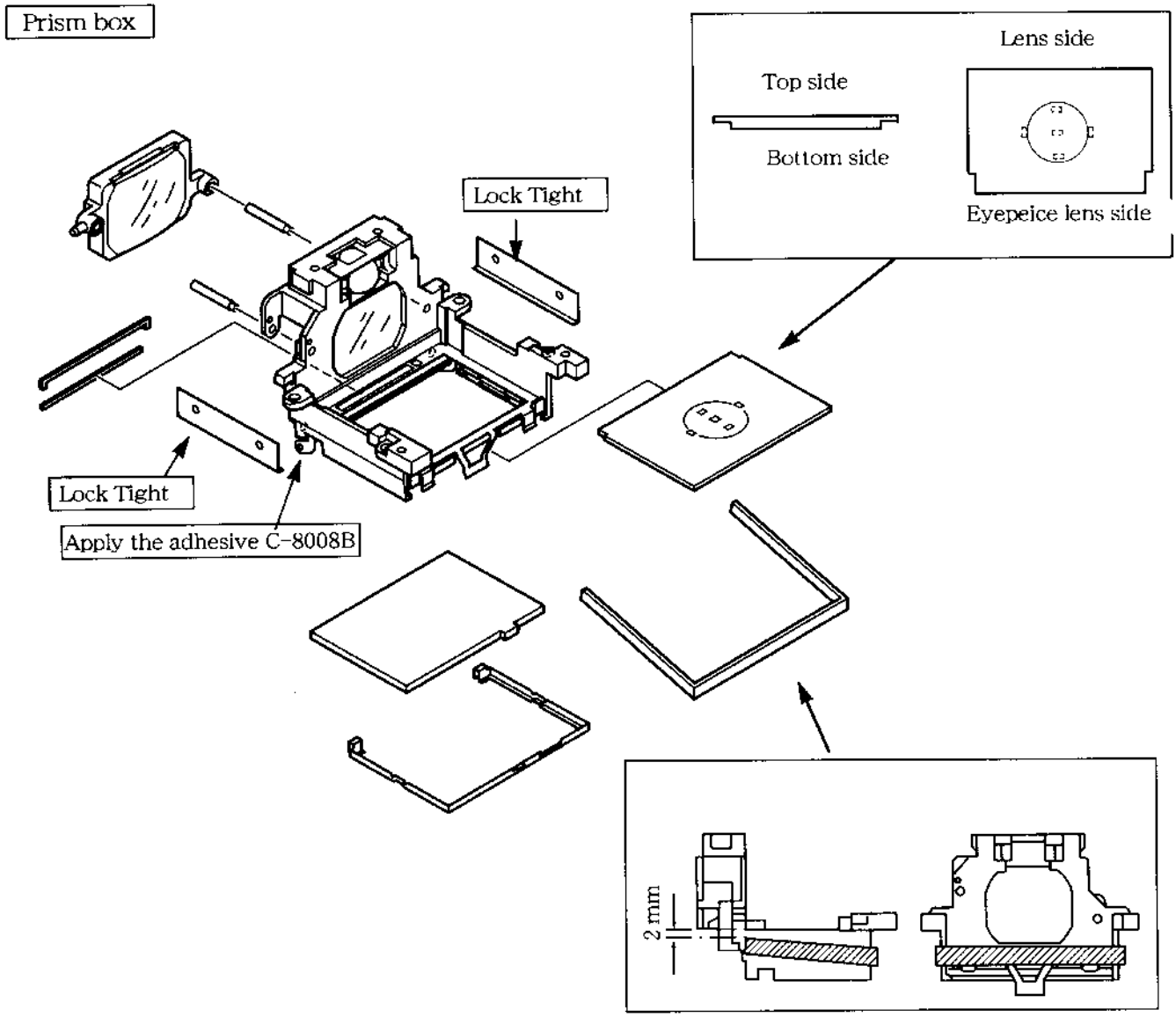
● Using the tool J18004, measure the height of aperture lever.
In the case of out-of-standard found from the measured result(s), adjust the height by rotating the eccentric pin.
After adjustment, shift the mirror-up vertical lever two or three times and check the height of aperture lever.

Standard : 3.4 ± 0.1 mm

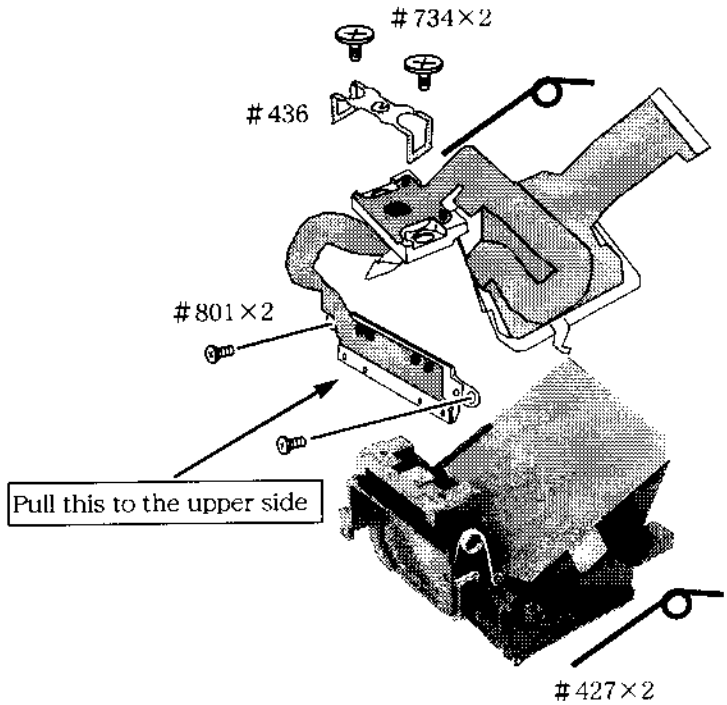
● In the situation that the solenoid adsorption is taken off from the aperture control unit, adjust the aperture reset lever eccentric pin to make a gap between #378 and #383 in the size of 0.2 to 0.29 mm.

● Shift the reset lever to the bayonet side and then reset the aperture control solenoid.

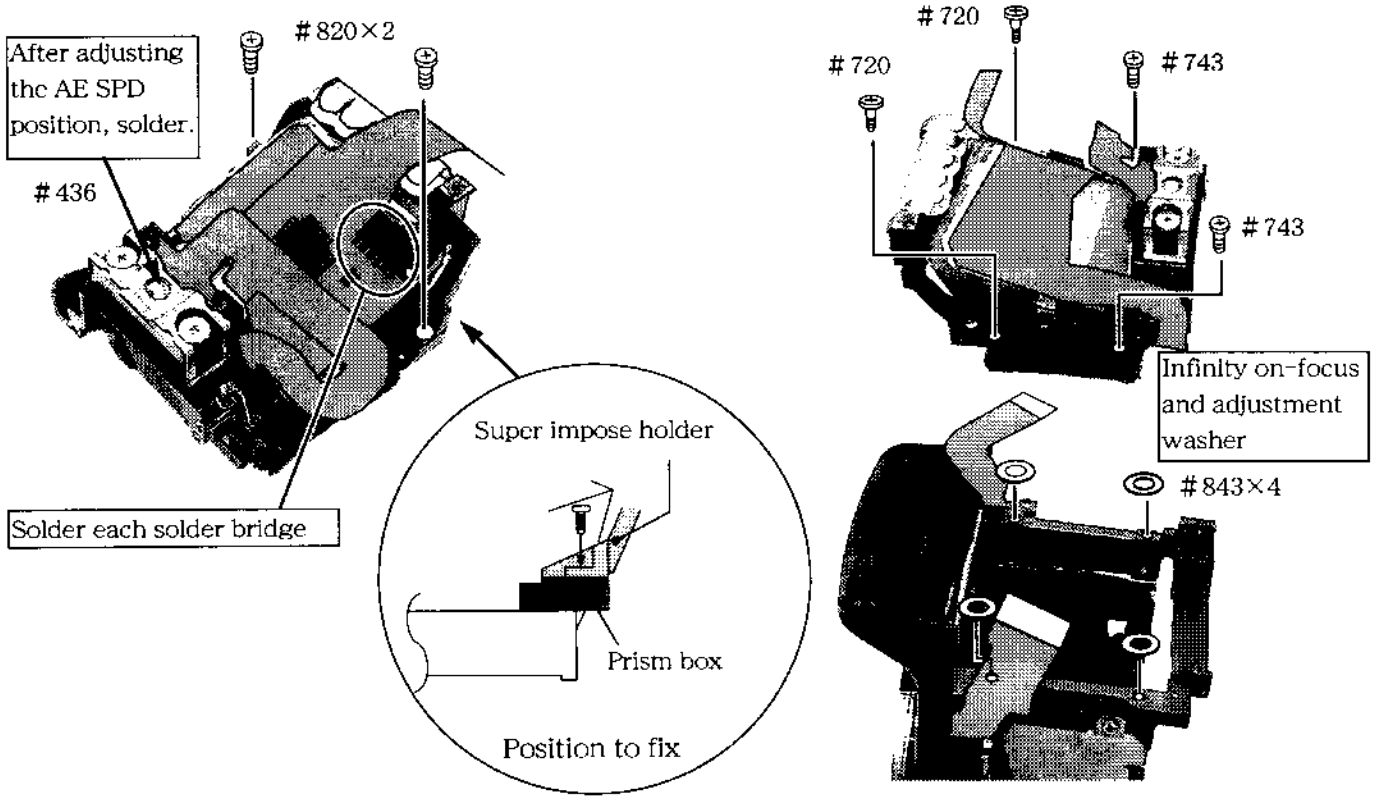
● Apply the grease to beneath #378.



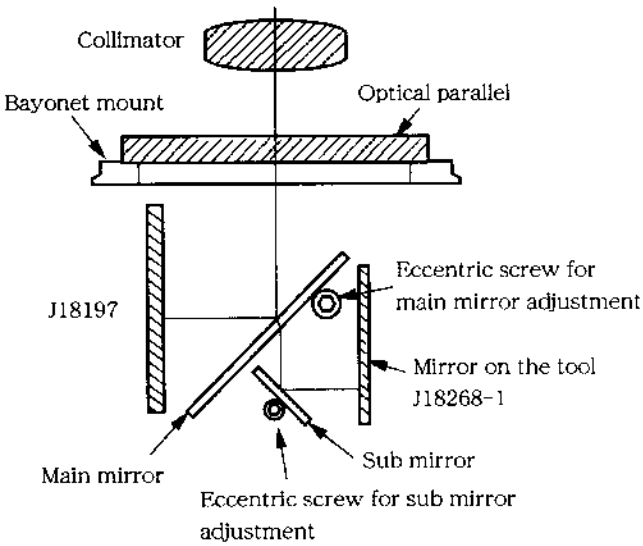
Mount and fix the in-finder display FPC / AE SPD.



Mount and fix the super impose holder.



Angle adjustment of main mirror and sub mirror to 45°



[Tools in use]

1. For adjustment of the main mirror
   - ① Collimator (J19002)
   - ② Reflection mirror (J18197)
   - ③ Optical parallel (J18037)
   - ④ Hex. key in the size of 2 mm
2. For adjustment of the sub mirror
   - ① Collimator (J19002)
   - ② Sub mirror angle adjustment tool (J18268-1)
   - ③ Hex. key in the size of 2 mm

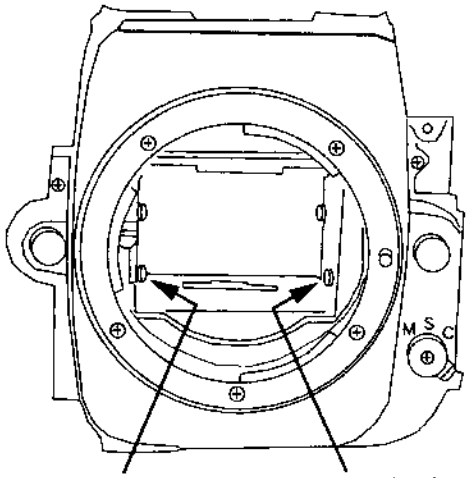
● Angle adjustment to settle 45-degree from the main mirror

Note :Adjust the accuracy of main mirror by lifting up and down the mirror two or three times before and after adjustment.

Avoid to directly touch the black colour-painted area by hand(s).

(1) Check the horizontal gap.

In case the horizontal gap size is out of standard, loosen the three screws #376 and a screw #717, and then shift the upper area of mirror box in back and forth in order for adjustment.



(2) Check the vertical gap.

Note :The eccentric pins for adjusting the main mirror are arranged on both the I and L base plates. In this accord, just in case the vertical gap is out of standard, these eccentric pins shall be used for adjustment.

① Drive the eccentric pin on the L base plate. Then, settle the mirror not to touch the eccentric pin.

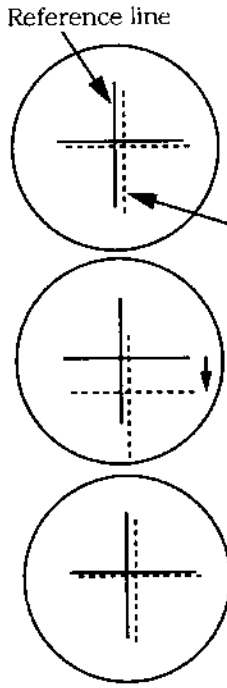
② Drive the eccentric pin on the I base plate in order to adjust the vertical gap to come within the standard.

③ After the adjustment, drive the I base plate's eccentric pin in order to settle it in negative 10′ position from where is settled in the above adjustment column ②.

④ Drive the eccentric pin on the L base plate in order to adjust the vertical gap to come within the standard.

⑤ Comparing to the eccentric pin on the I base plate, the eccentric pin on the L base plate is placed on 10′ in negative side and it causes to create a gap against a mirror.

The gap functions to absorb a bounce from the mirror.



● Angle adjustment to settle 45-degree from the sub mirror

Note : Adjust the accuracy of main mirror by lifting up and down the mirror two or three times before and after adjustment.

(1) Check the vertical gap.

In the out-of-standard case, adjust the gap by driving the eccentric screw for sub mirror adjustment.

Standard

	Main mirror	Sb mirror
Horizontal gap	within 0 ± 20′	
Vertical gap	within 0 ± 5′	within 0 + 5′
Distortion	within ±8′	

Adjustment for the infinity alignment

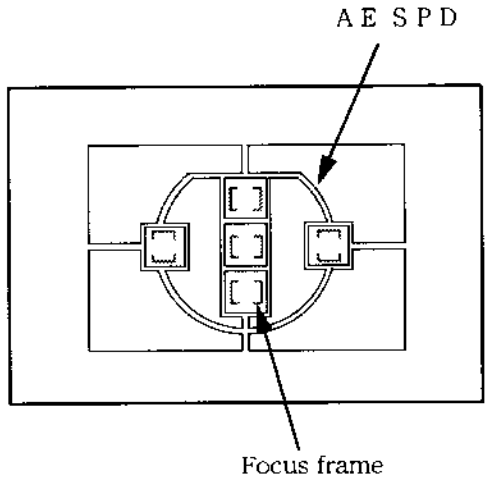
- Using the standard lens J18010, adjust the infinity mark to align within ± 0.03 mm.

How to adjust

Adjust the washer #843 for prism box.

For more details, refer to the figure in the page A13.

AE SPD position adjustment



① Apply a high luminance light to AE SPD in order to reflect the AE SPD pattern on the main mirror.

② As shown in the left figure, fit the AE SPD on the focus frame.

Then, the AE SPD should be parallel to the main mirror.

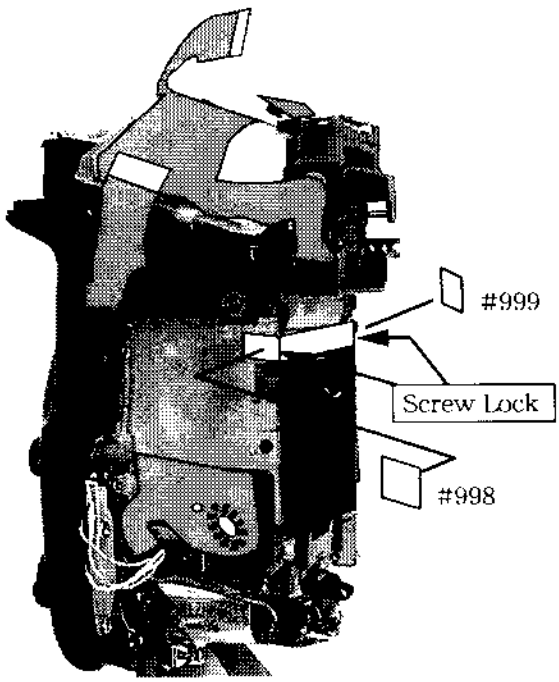
③ After adjustment, fix the AE SPD unit by two screws #734.

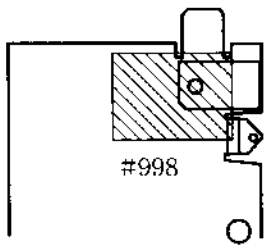
For more details, refer to the figure in the page A 12.

④ Solder #436 on the in-finder display FPC.

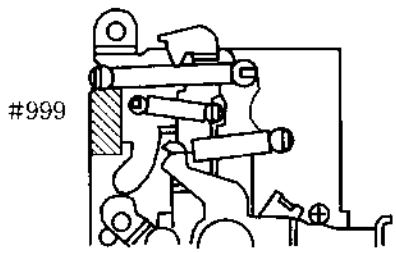
For more details, refer to the figure in the page A 13.

Light baffle plate



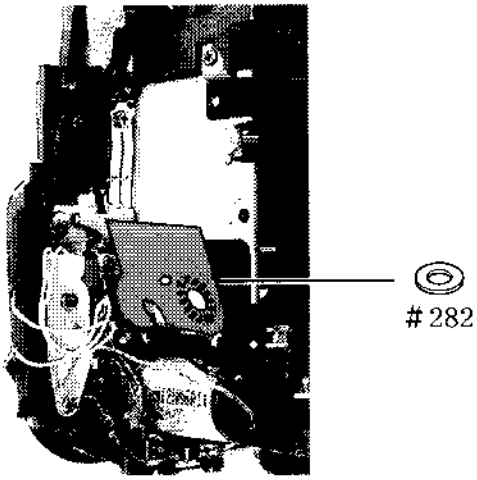


L base plate



I base plate

Main printed circuit board

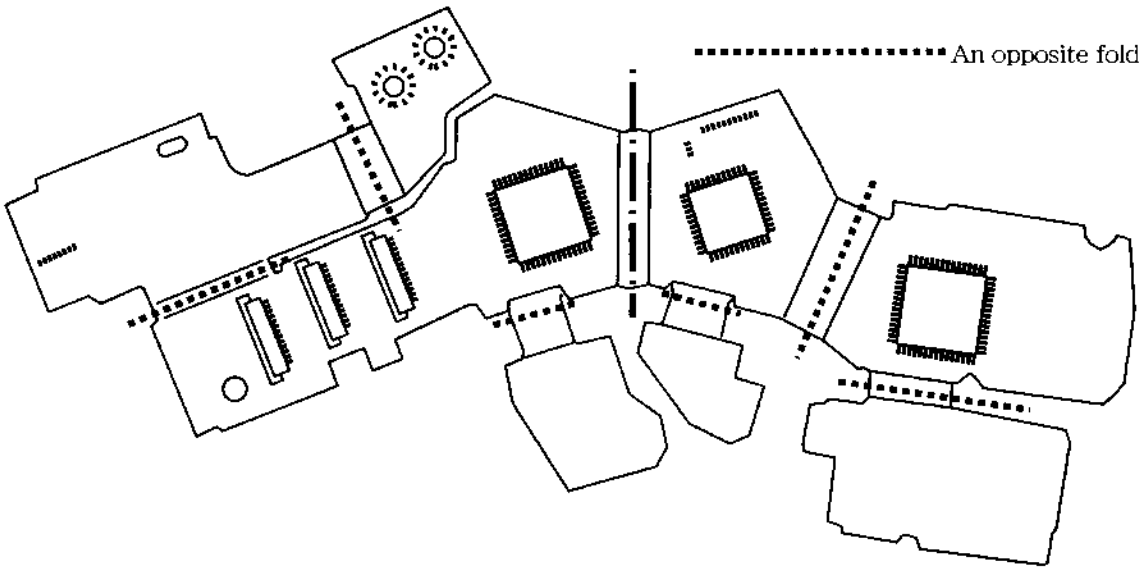


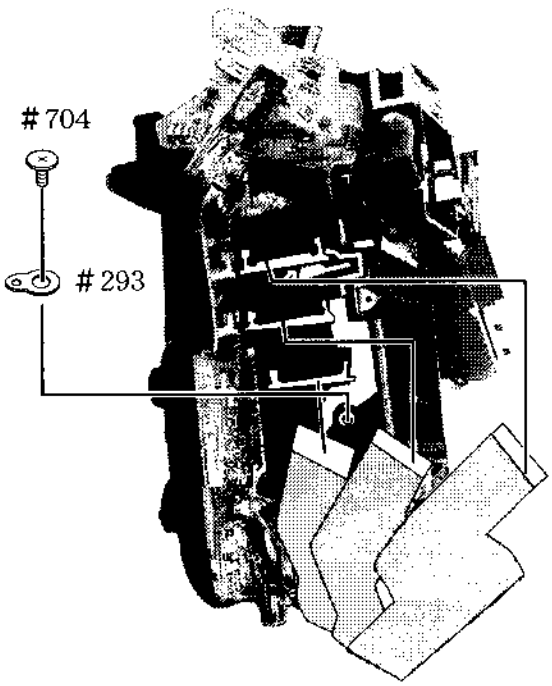
● Place #282 between TTL FPC and the L base plate mold.

How to crease on the main PCB

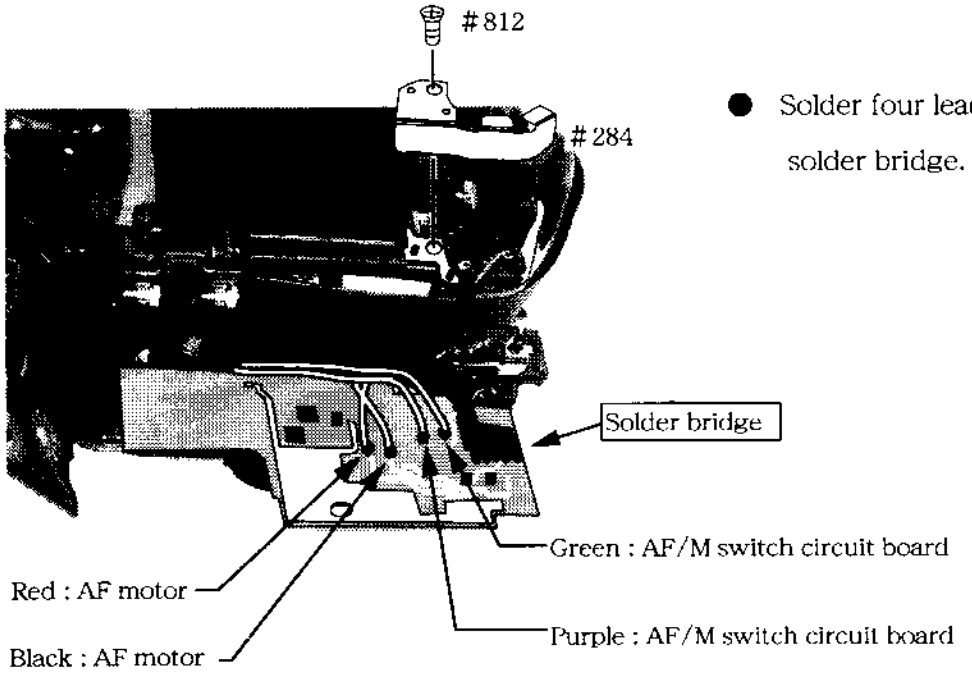
A fold : top

An opposite fold ; bottom

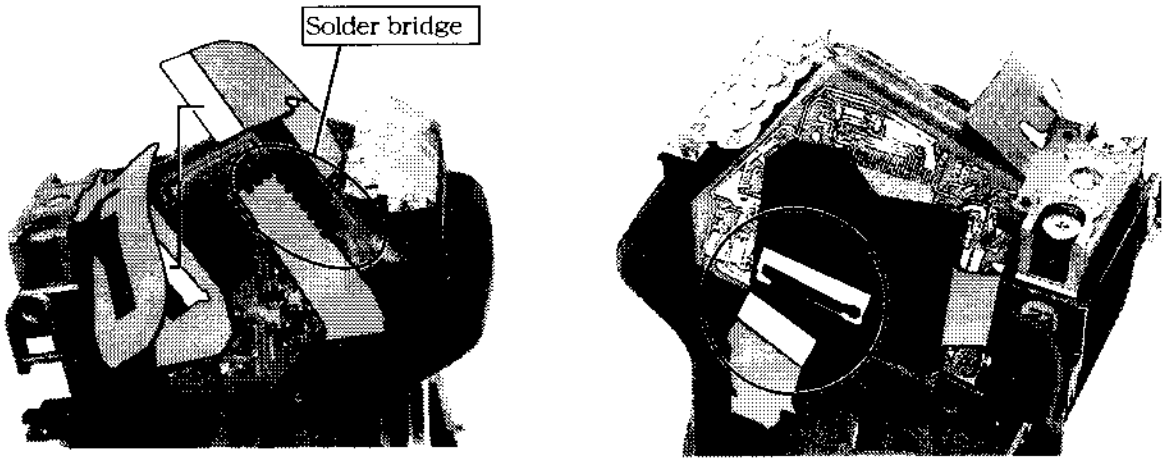




● Connect three connectors.

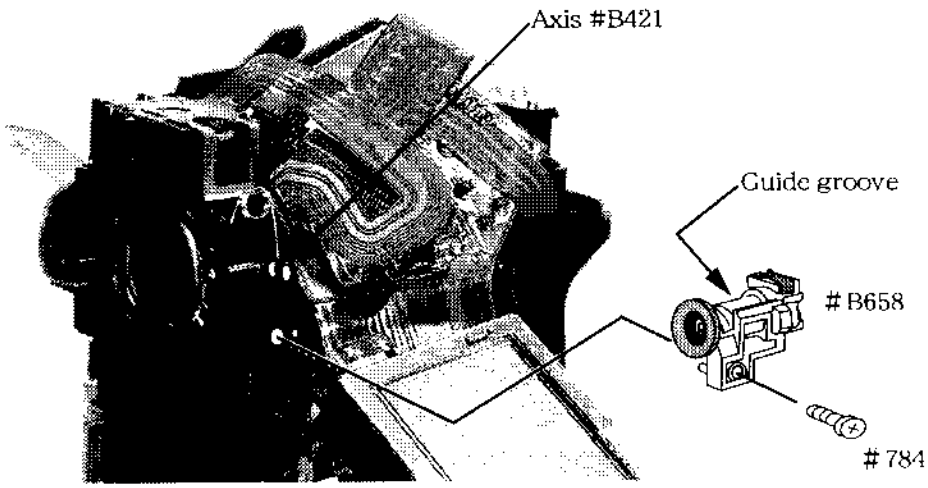


- Solder four lead wires tand each solder bridge.



- Solder the solder bridge.
- Connect two connectors.

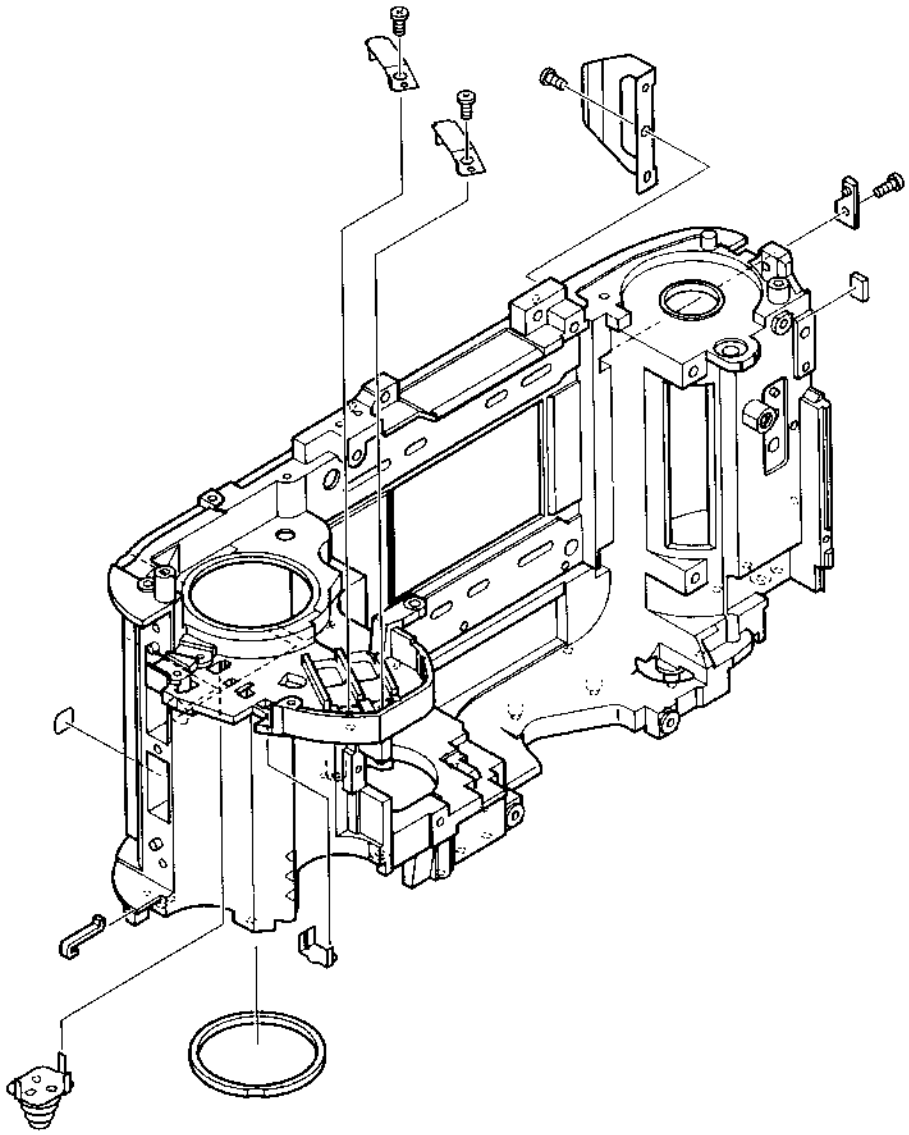
Diopter adjuster unit



- Fit the #B421 axis into the guide groove on the diopter adjuster unit #B658.

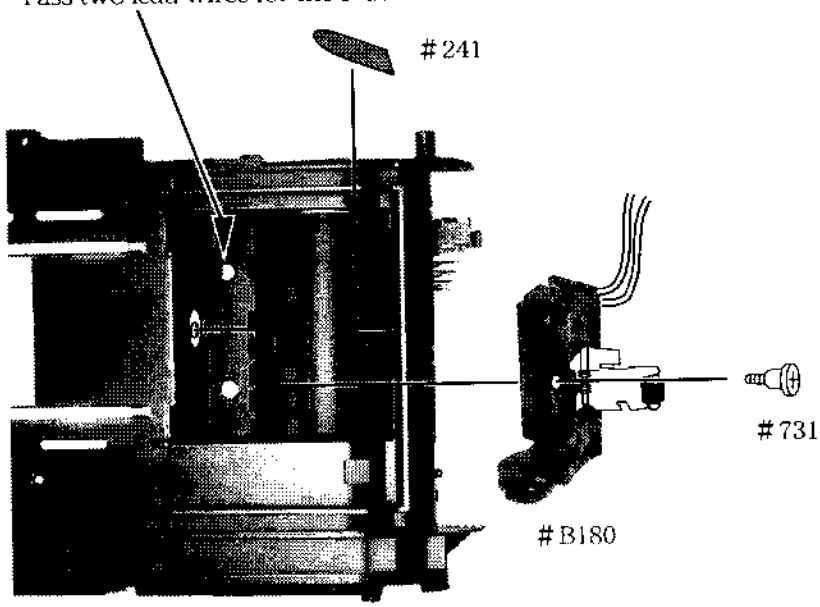
4. Rear body

Any other part(s)

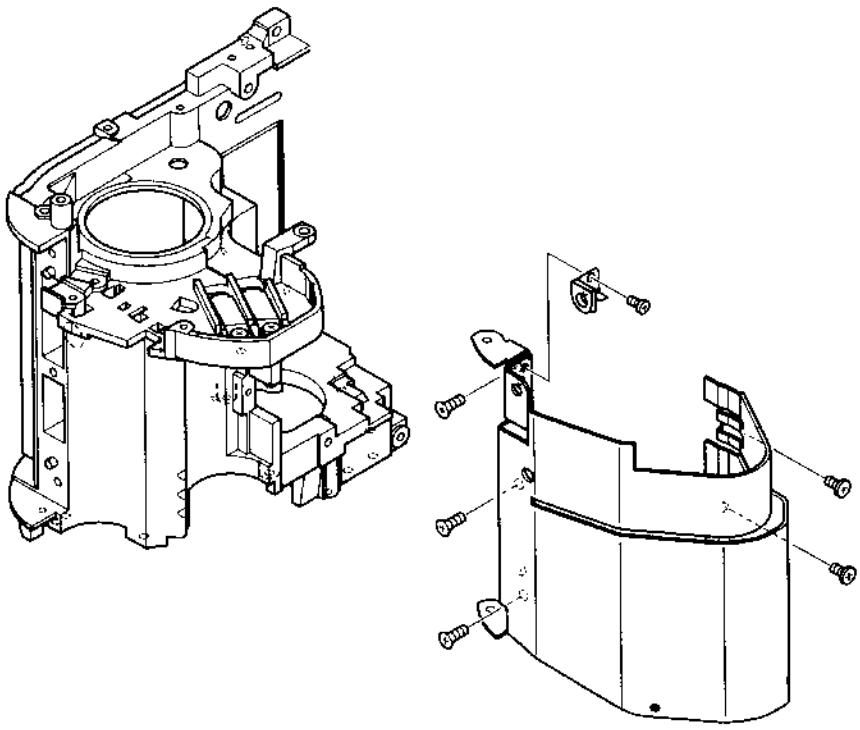


F detection switch

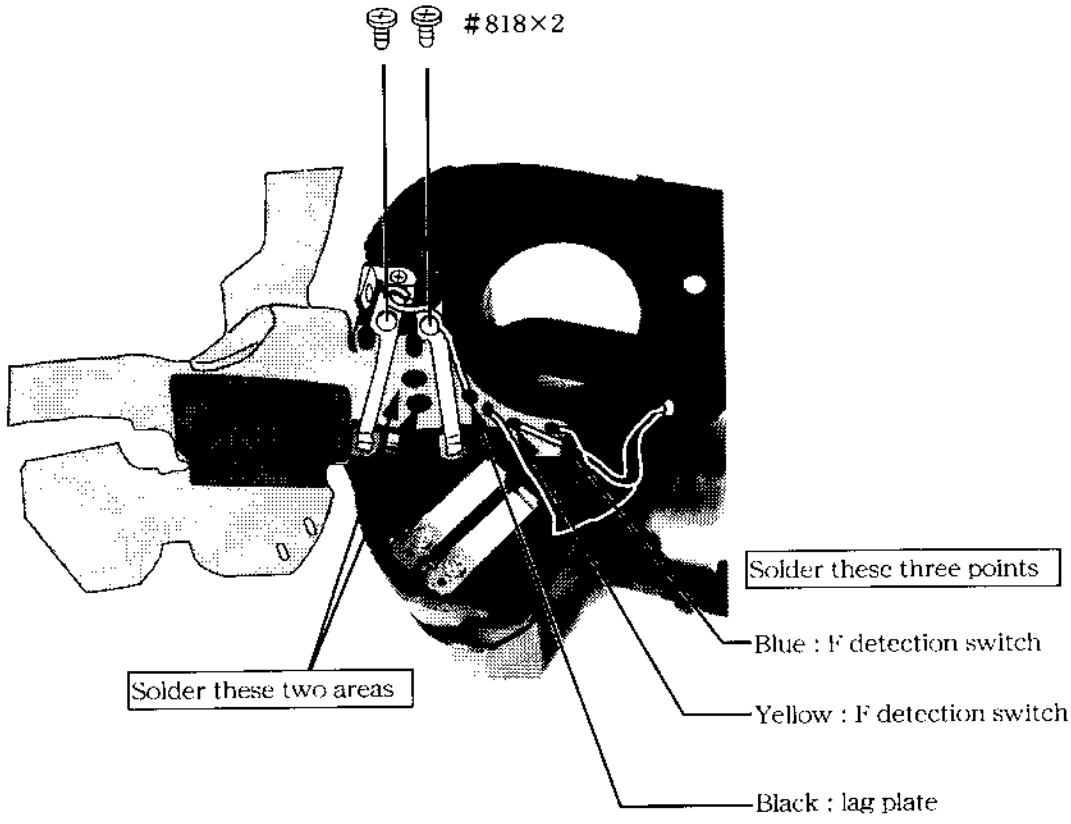
Pass two lead wires for the F detection switch through this hole.

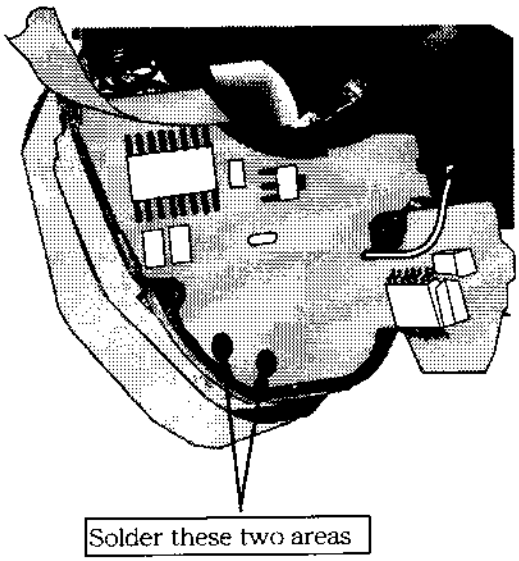


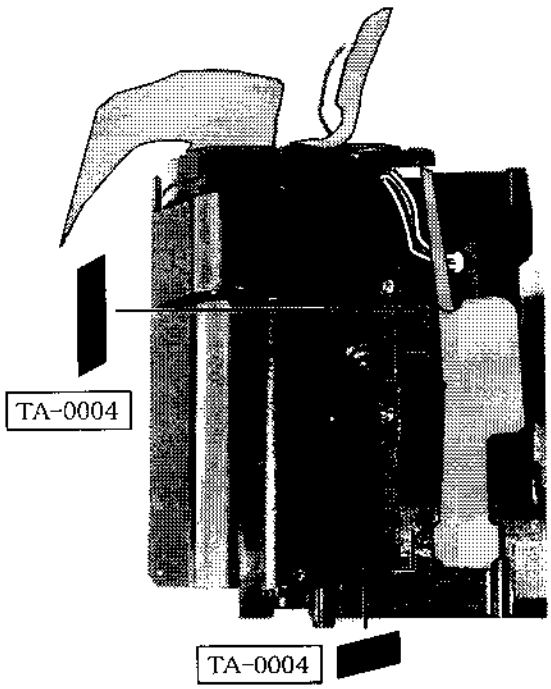
Grip



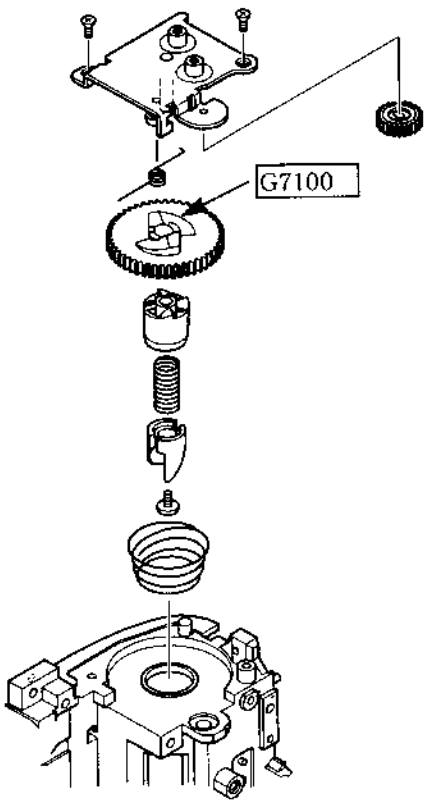
Power FPC

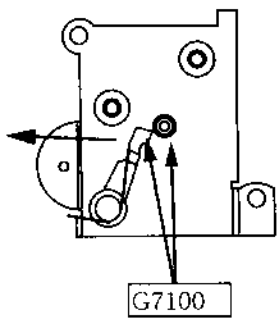






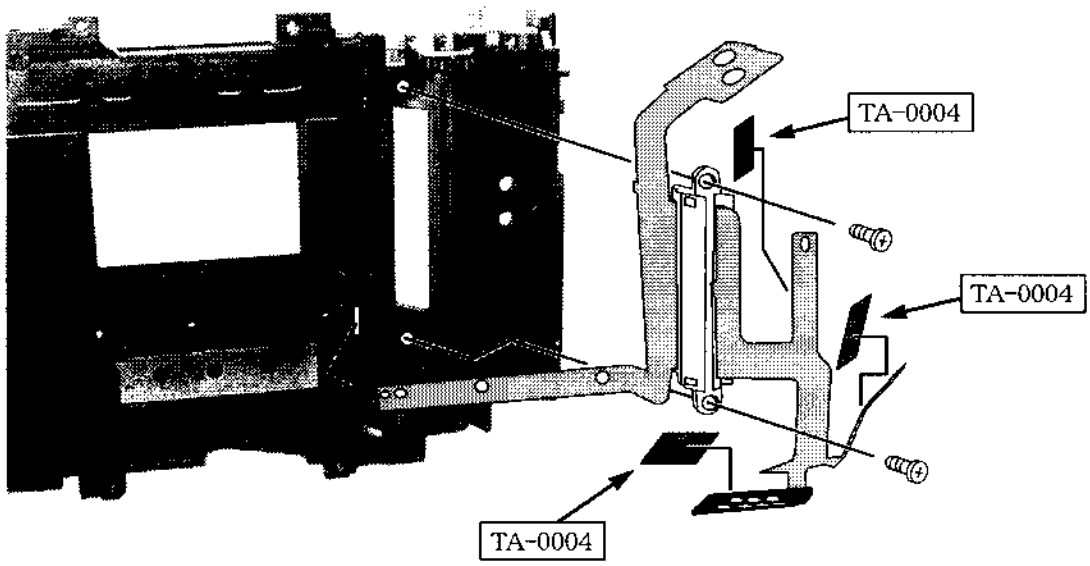
Rewind unit

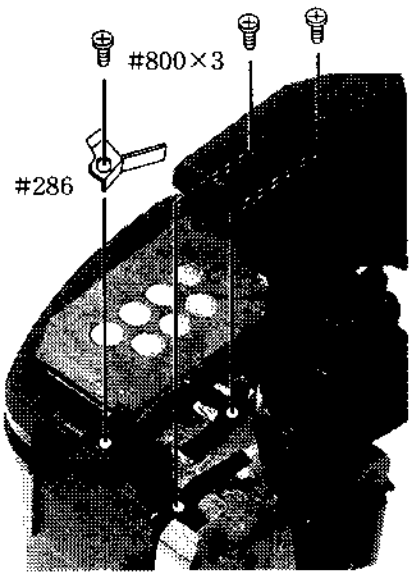


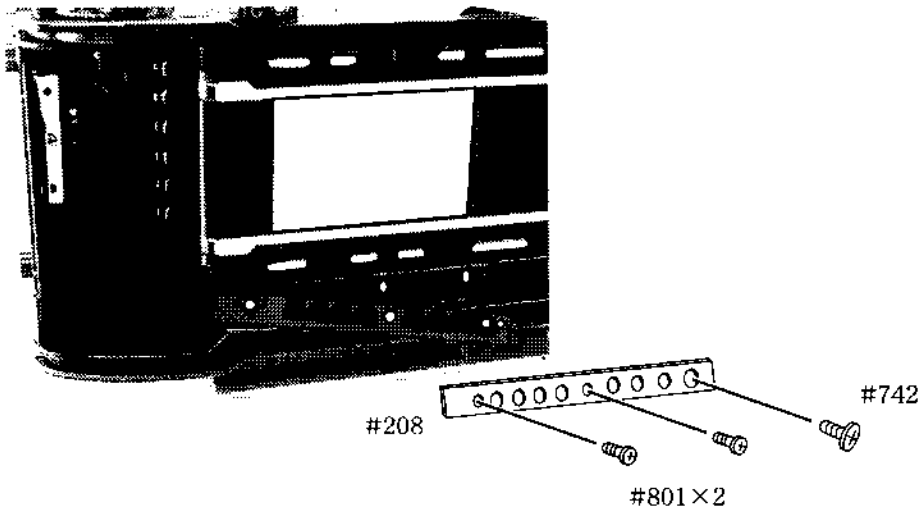


- Maintain to set the clutch lever free in the arrow direction, and simultaneously mount and fix the clutch gear.

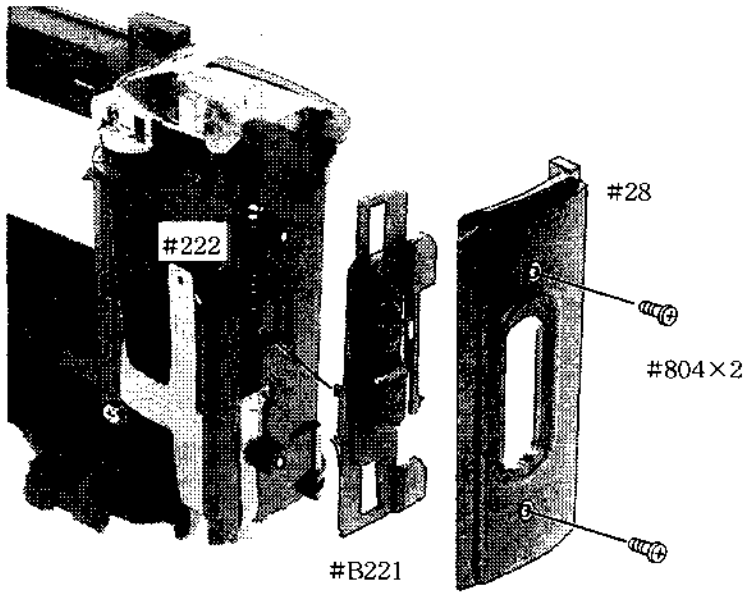
DX/DB F P C





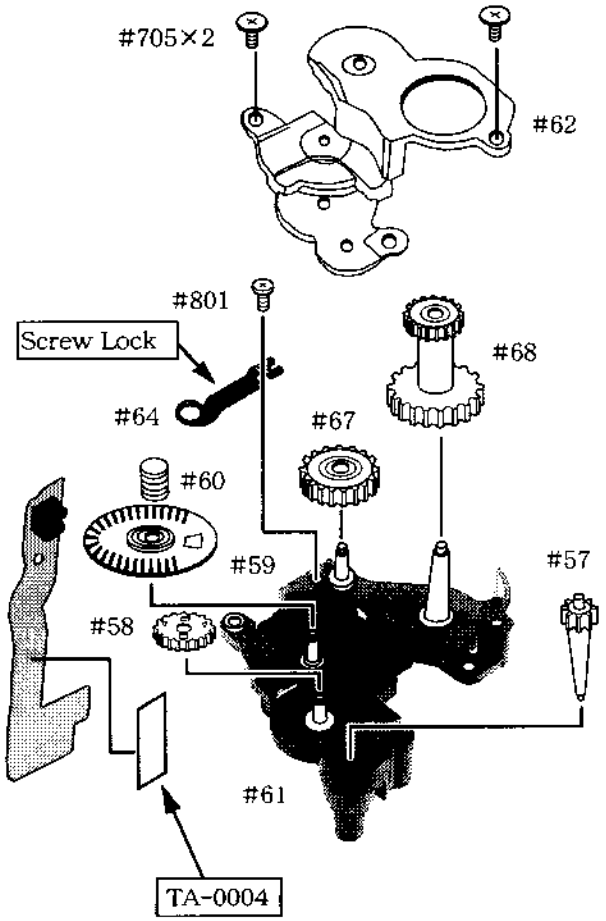


Rear cover open / close key

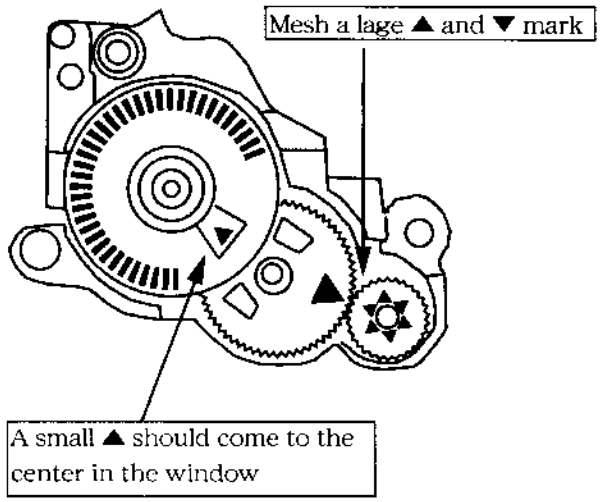


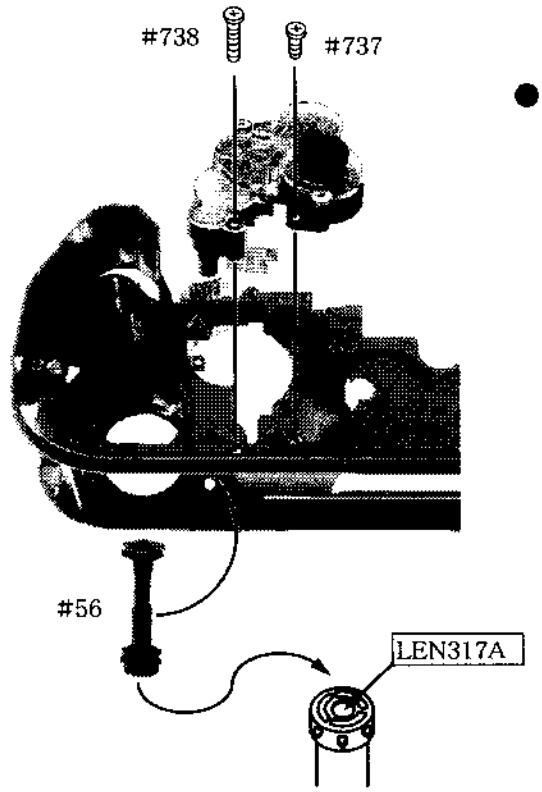
Film advance detection unit, sprocket

Apply the grease G7100 on to each gear's cog



Appropriate gearing

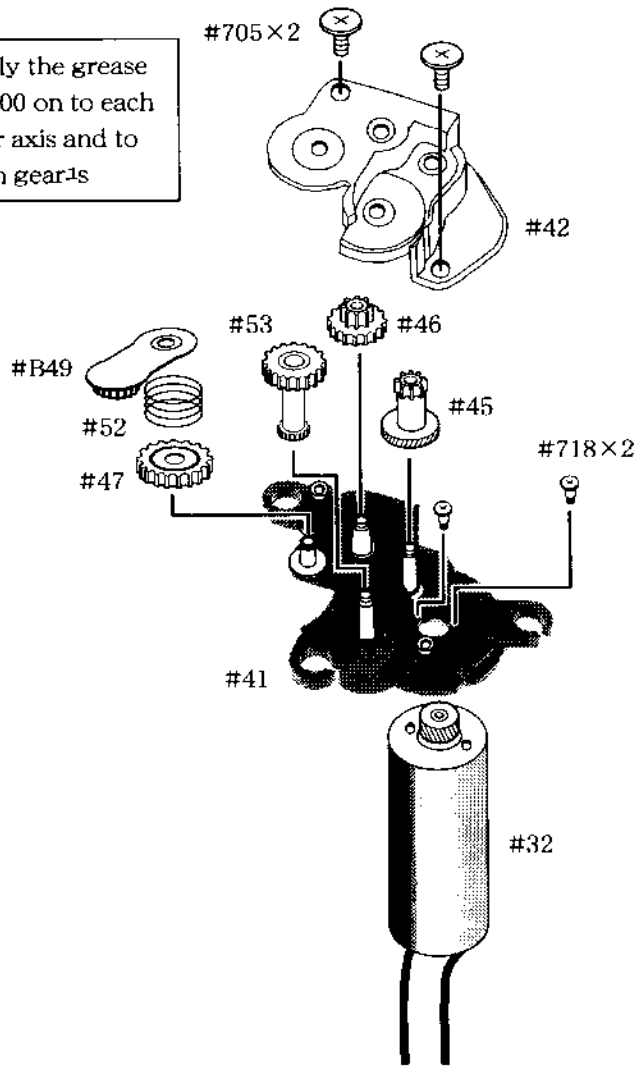


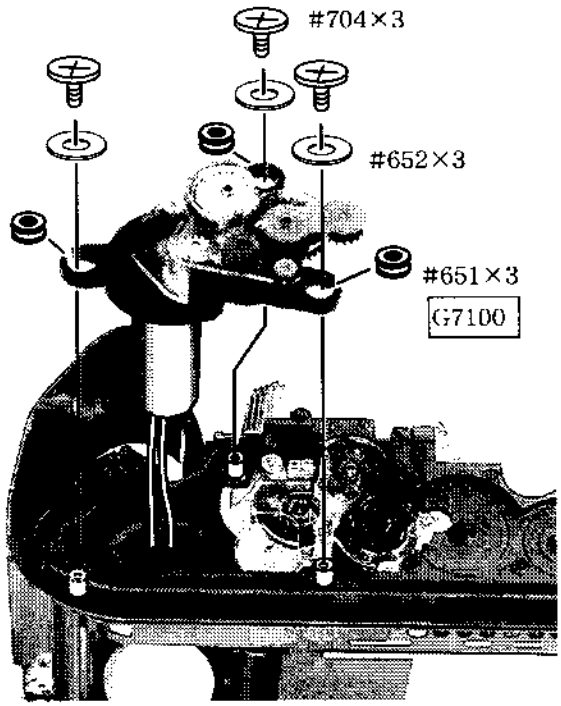


- Along with the driving of sprocket #56 after fixing it, the gear on the film advance detection unit should drive simultaneously.

Film advance unit

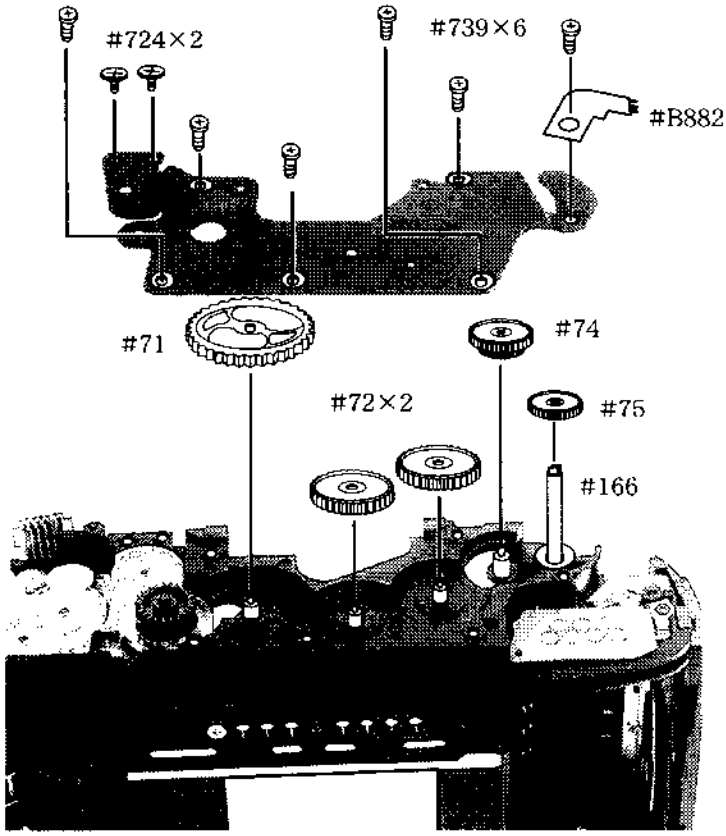
Apply the grease G7100 on to each gear axis and to each gear-s





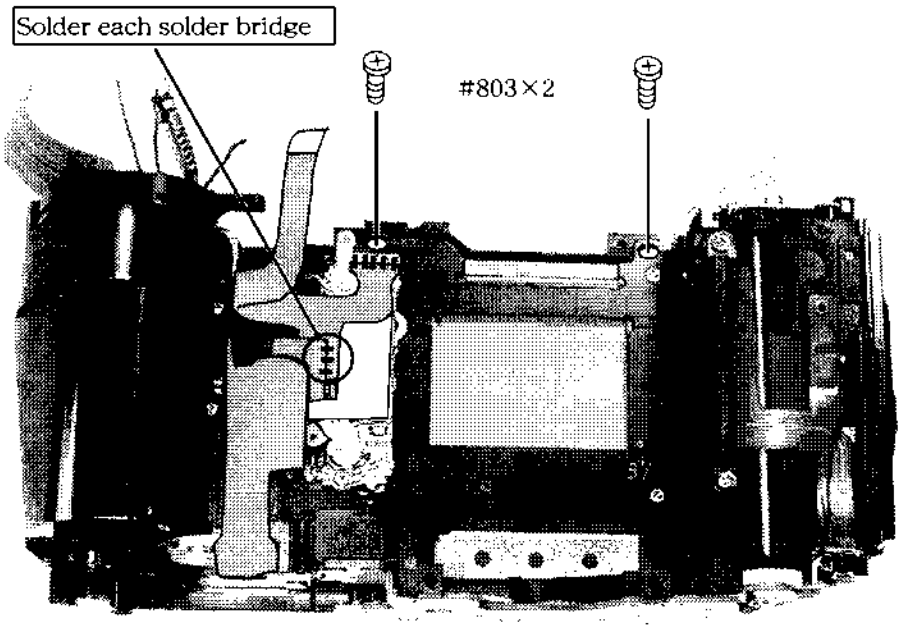
- Set the film holder roller inside the spool chamber and simultaneously mount and fix the clutch gear.

Bottom base plate



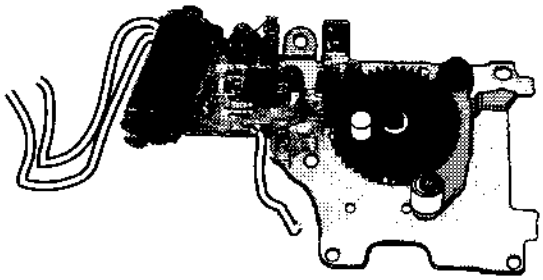
Apply the gear G7100 on to each gear axis, each gear's cog and both ends of #166

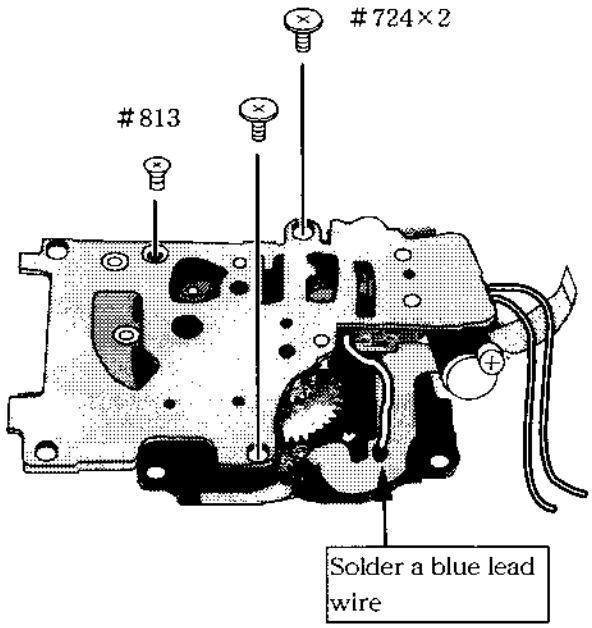
Shutter unit

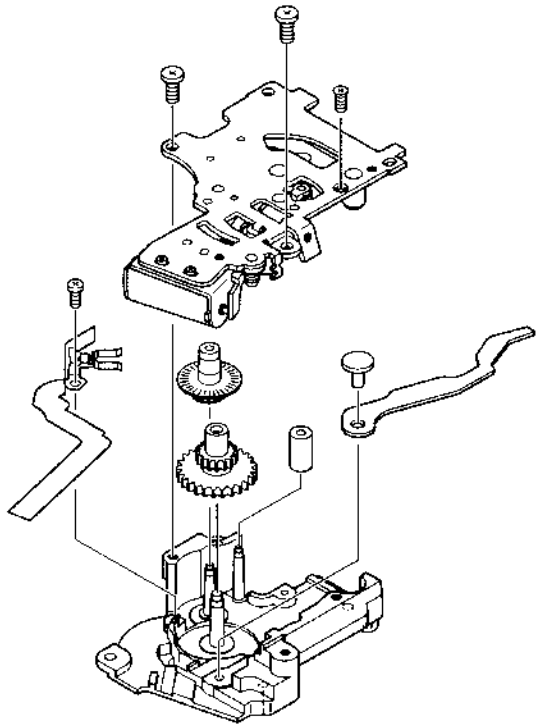


Sequence unit, spool

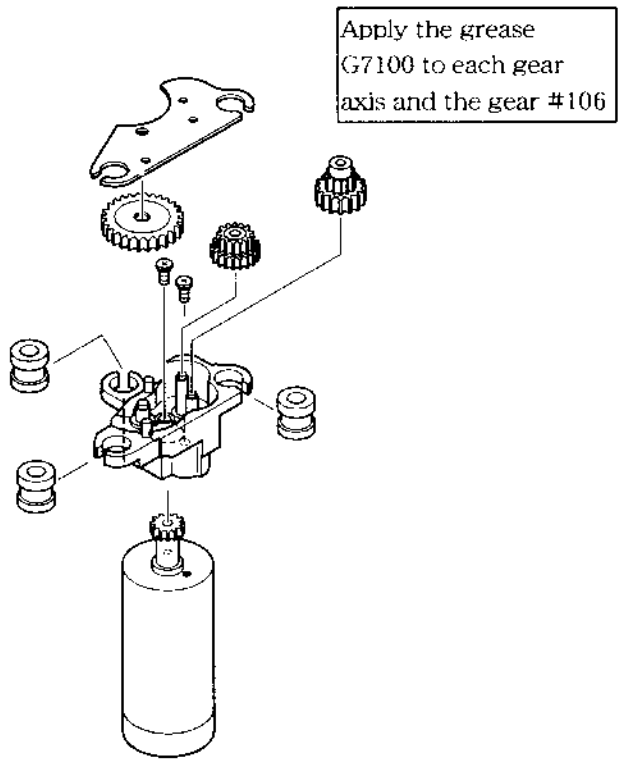
The start position on the upper SQ unit

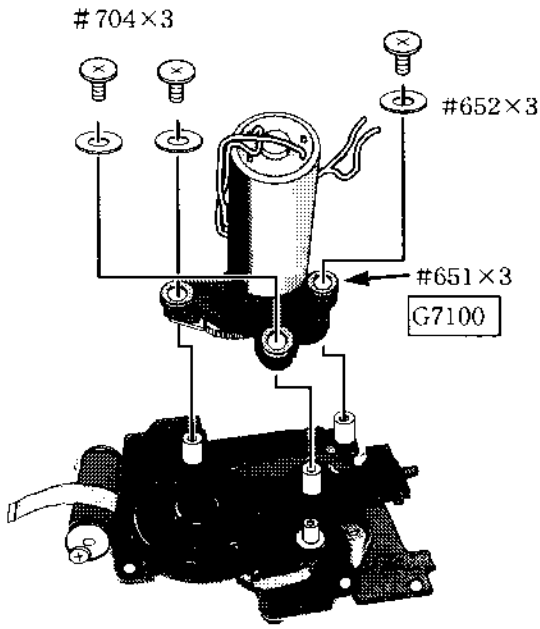




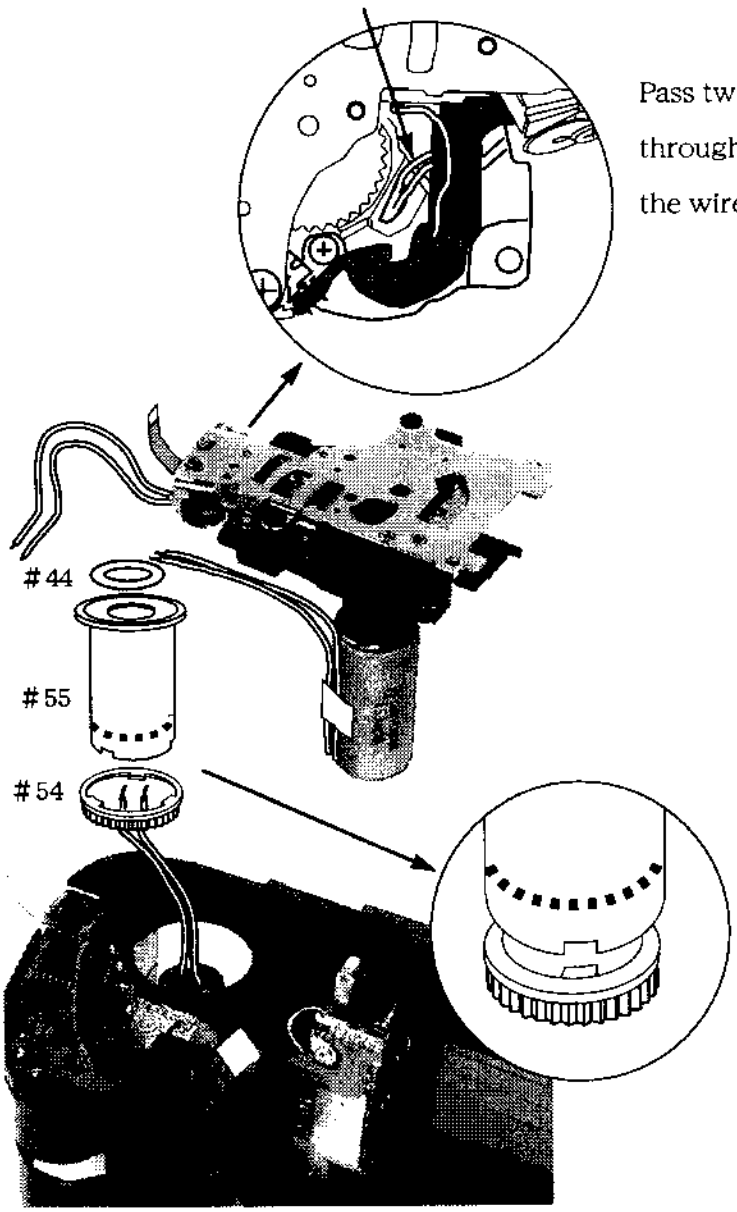


● Mount and fix the upper SQ unit on the lower SQ unit.

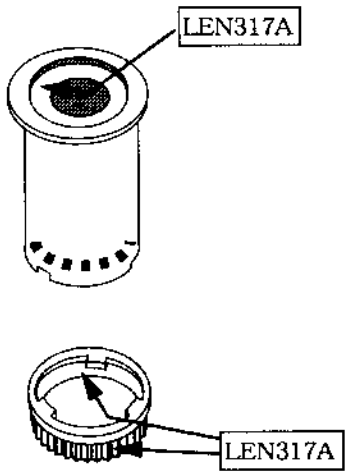


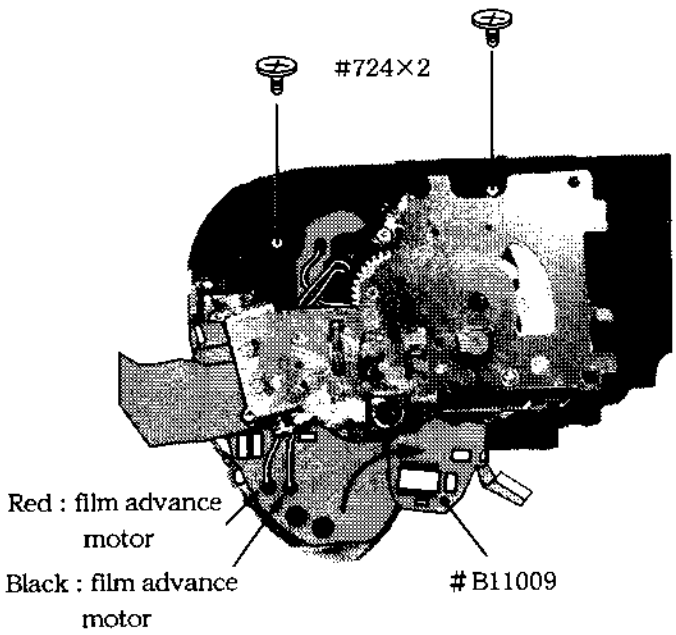


Where the lead wires for film advance motor should go

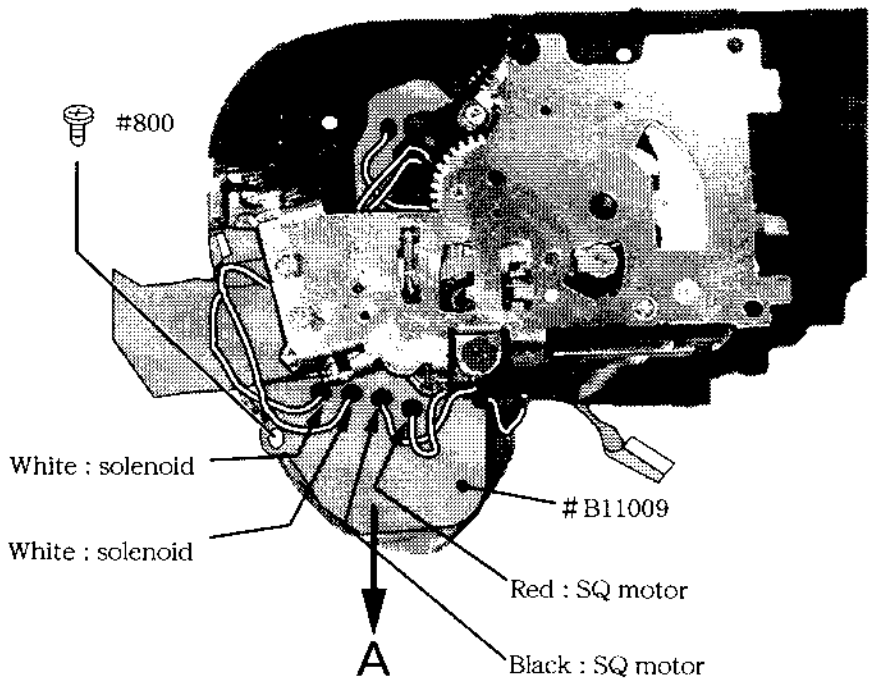


Pass two lead wires for the film advance motor through beneath the sequence FPC and bring the wires to the front side of sequence unit.



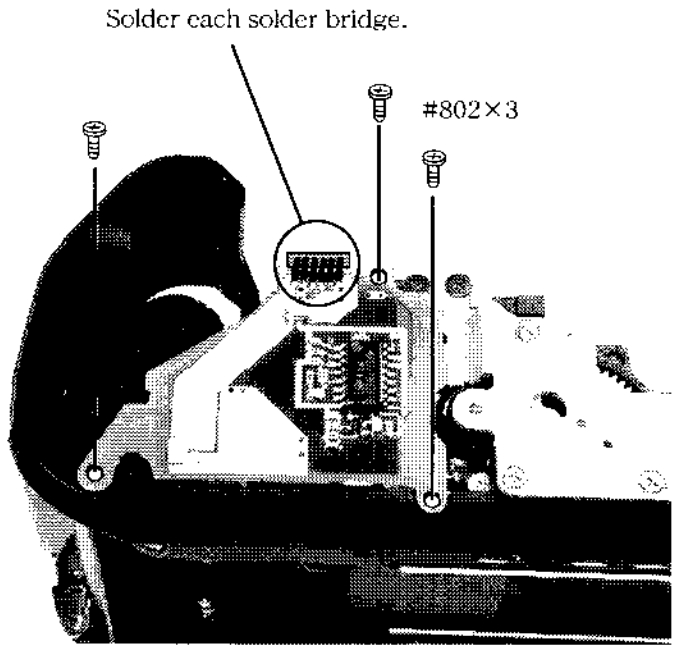


- Lift up the power FPC #B11009 in the arrow direction.
- Solder two lead wires.
- Return the power FPC #B11009 to the original position.

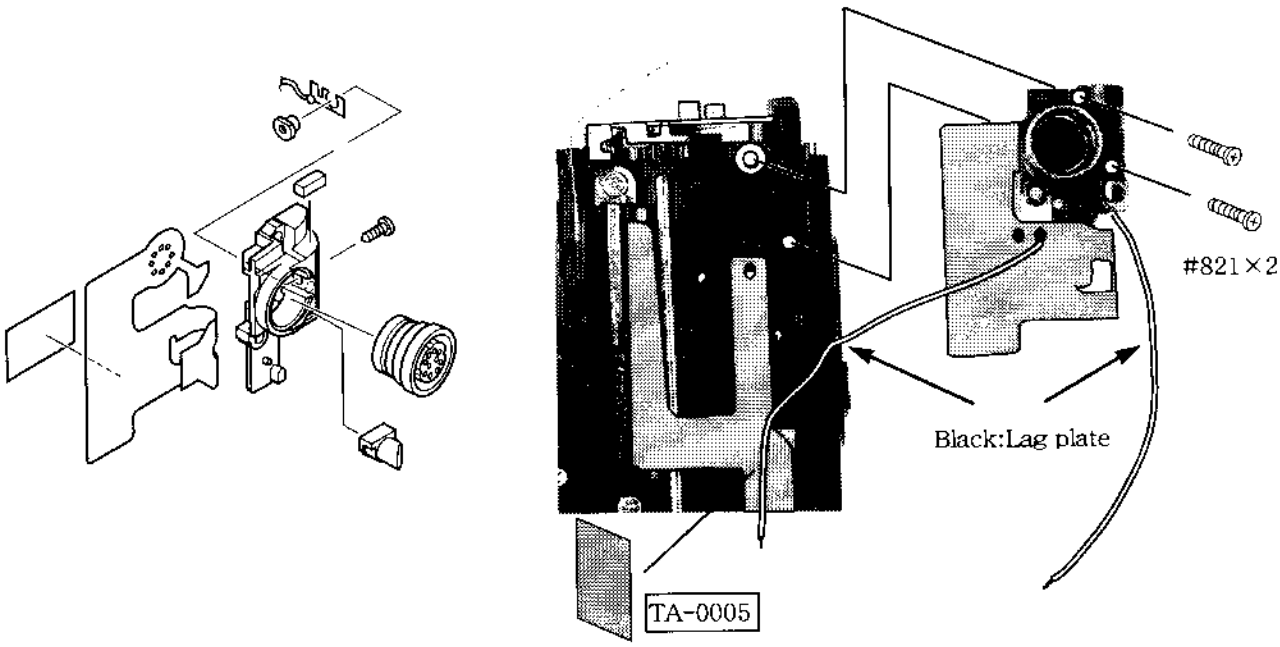


- Slightly pull the power FPC #B11009 in the arrow direction "A" and then solder four lead wires.
- Drive and fix the screw #800.
- Place any extra lead wire(s) to beneath the solenoid.

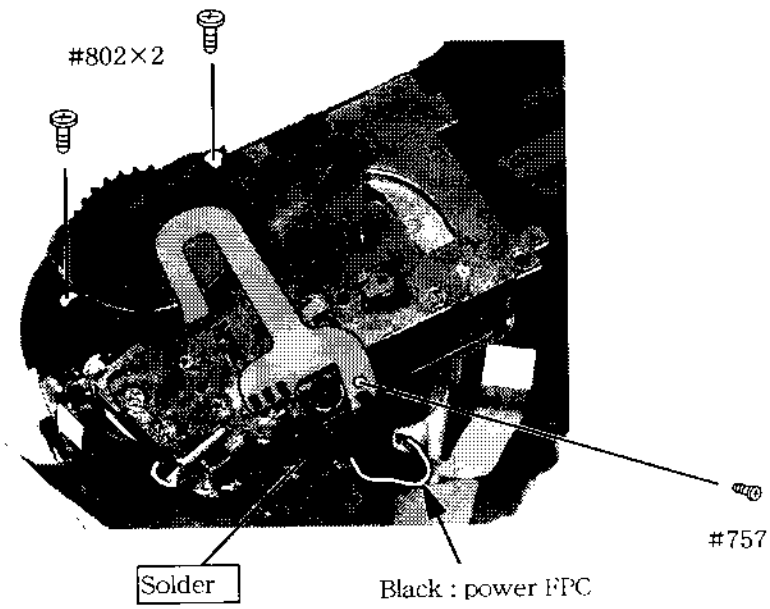
DC / DC circuit board



Remote terminal

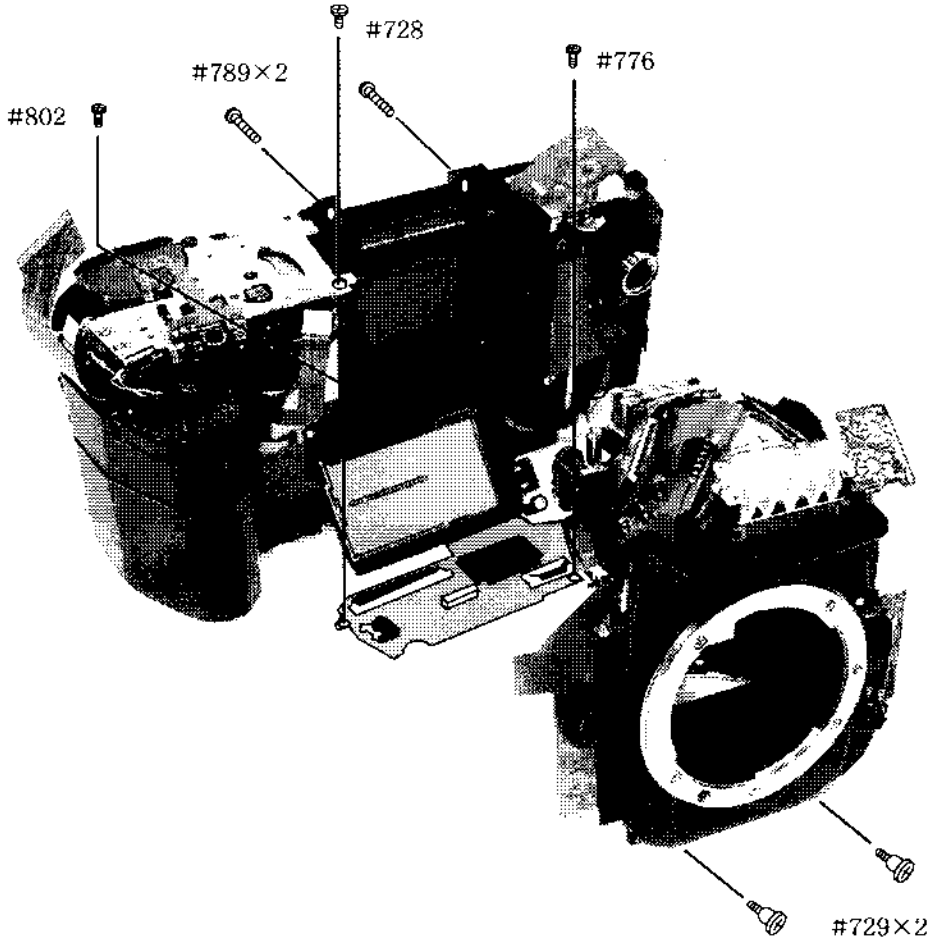


Rear C/D unit

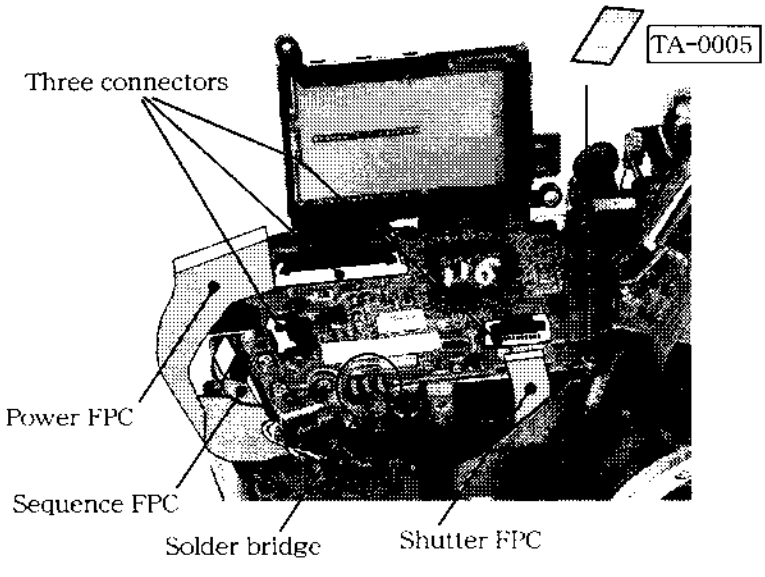


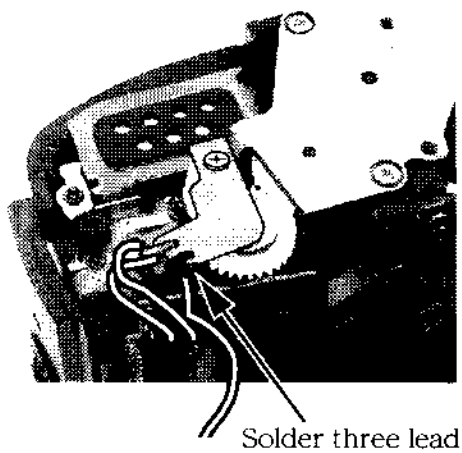
5. Mounting and fixing the front body on to the rear body

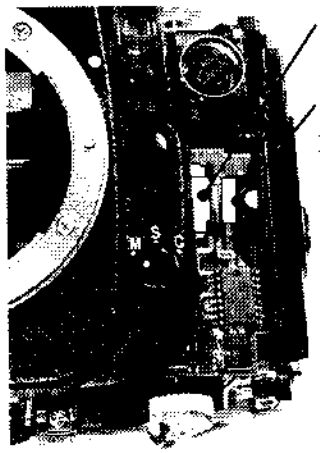
Fixing the front body to the rear body

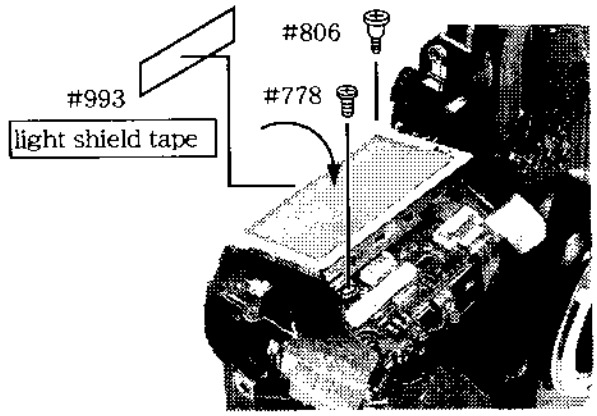


Where to connect the connectors / where to solder the solder bridge

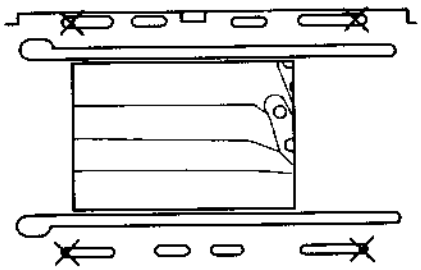








Adjustment for the bodyback



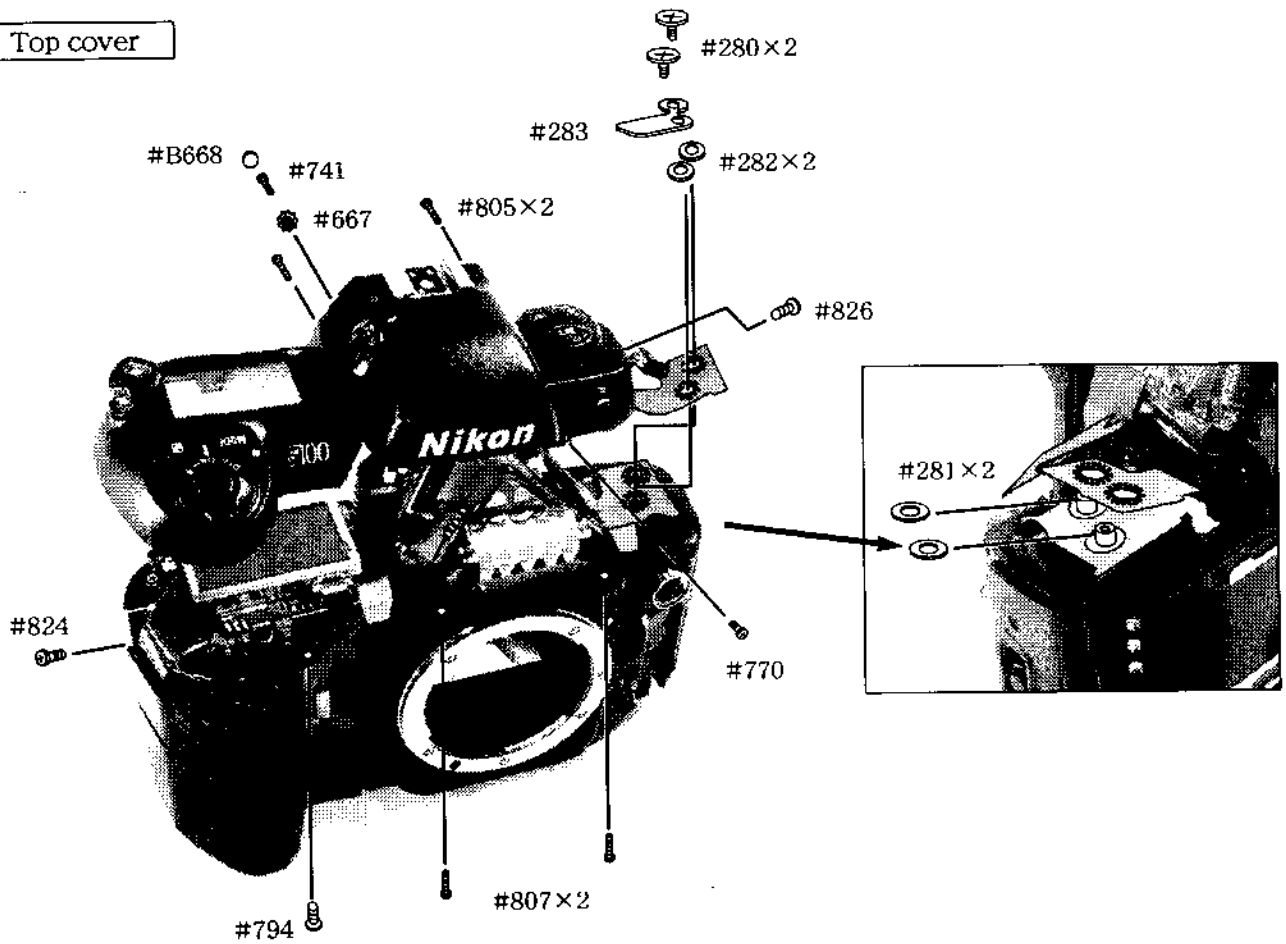
- Measure from the bayonet surface to the external rail.
  The ×- marked positions are where to be measured.

Standard : 46.67 ± 0.02 mm / Tolerance for flatness : within 0.02 mm

- In any out-of-standard case(s), place the washer between the rear body and the front body and then adjust it.

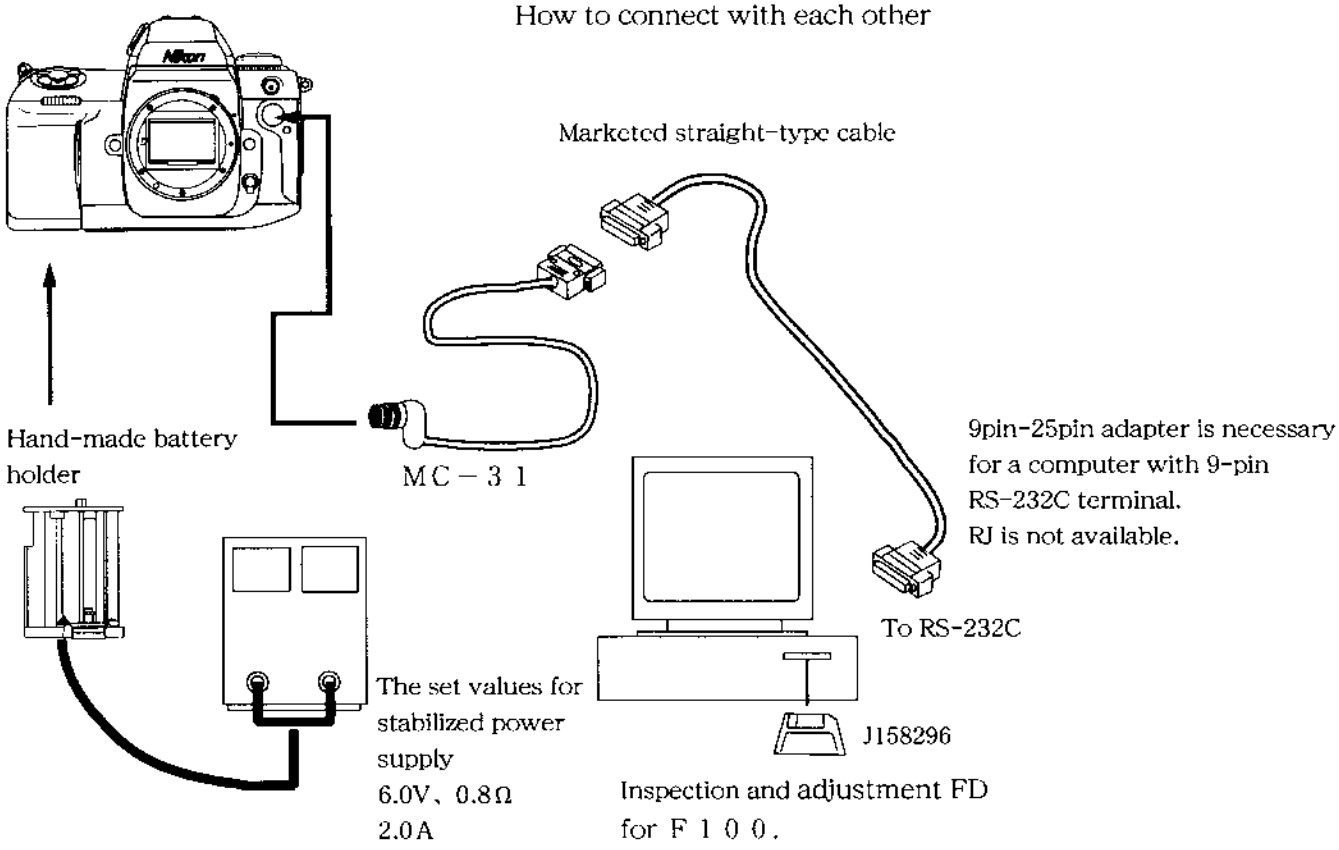
6. On the exterior

Top cover



Adjustment through PC

How to connect with each other



Conduct each adjustment in accordance with the adjustment software instructions on PC screen.

1. Adjustment for temperature detection voltage
2. AE adjustment
3. Inspection for aperture mode
4. M1 / 8000 adjustment
5. TTL adjustment

Note : Be sure to utilize either "F90" or "N90" oriented camera's shutter curtain.

6. Battery check adjustment

Confirmation of the battery check display mode

After adjusting the battery check, input below-mentioned each voltage data to the camera and then check the external LCD mode.

Note : Conduct the inspection by switching each voltage in order of No. 1 to 5.

External LCD mode	Set up voltage from the stabilized power supply	
	① 4.7V	⑤ 5.1V
	② 4.5V	④ 4.7V
 blinks	③ 4.3V	

AF adjustment

〔Inspection and adjustment items〕

① Inspection and adjustment for the AF accuracy : whole item shall be adjusted.

② YAW, PITCH

③ Lark adjustment

④ CCD output

〔Tools in use〕

1. For adjustment of whole item :

   The tool(s) used for the AE-oriented adjustment shall be utilized.

2. For check of the AF accuracy

   ① Z adjustment lens J18266 for F5

   ② AF adjustment stand J15259

   ③ Z lens holder J15280, or position conversion adapter J15271 for tripod socket

   ④ AF chart J18237 for F5

   ⑤ Lighting box J15264 for high frequency

3. For adjustment of yaw and pitch

   ① The whole tool used for the check of AF accuracy just as mentioned above

   ② Adjustment tool for yaw and pitch J18230

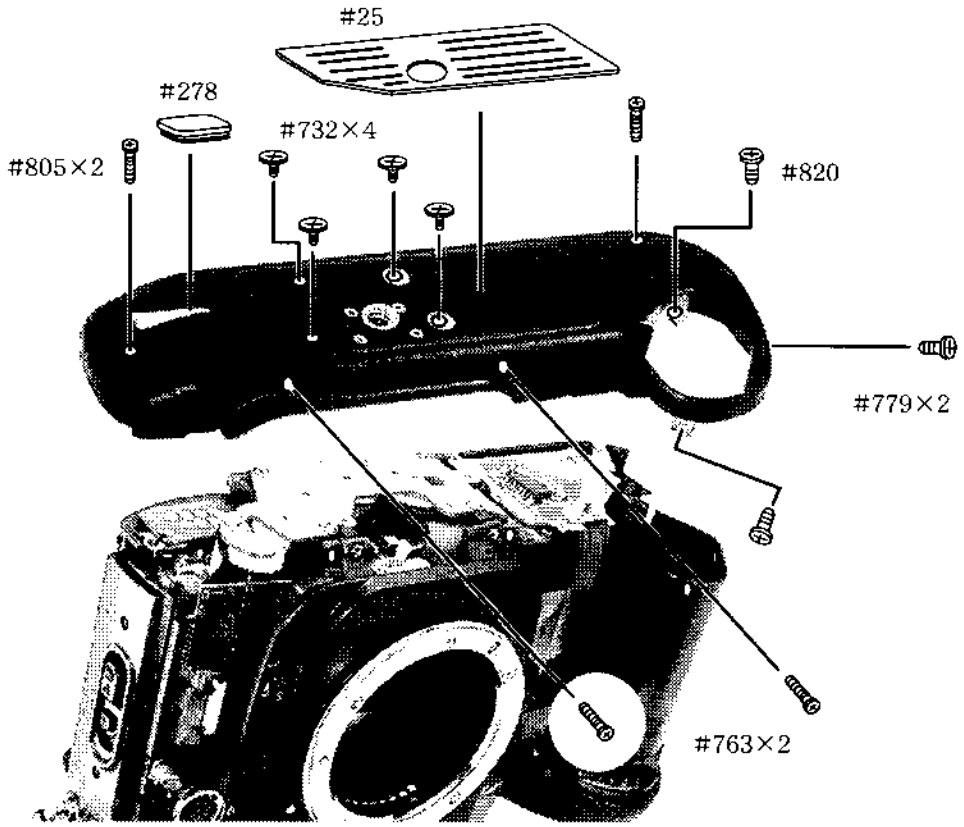
4. For adjustment of lark

   The whole tool used for the check of AF accuracy just as mentioned above

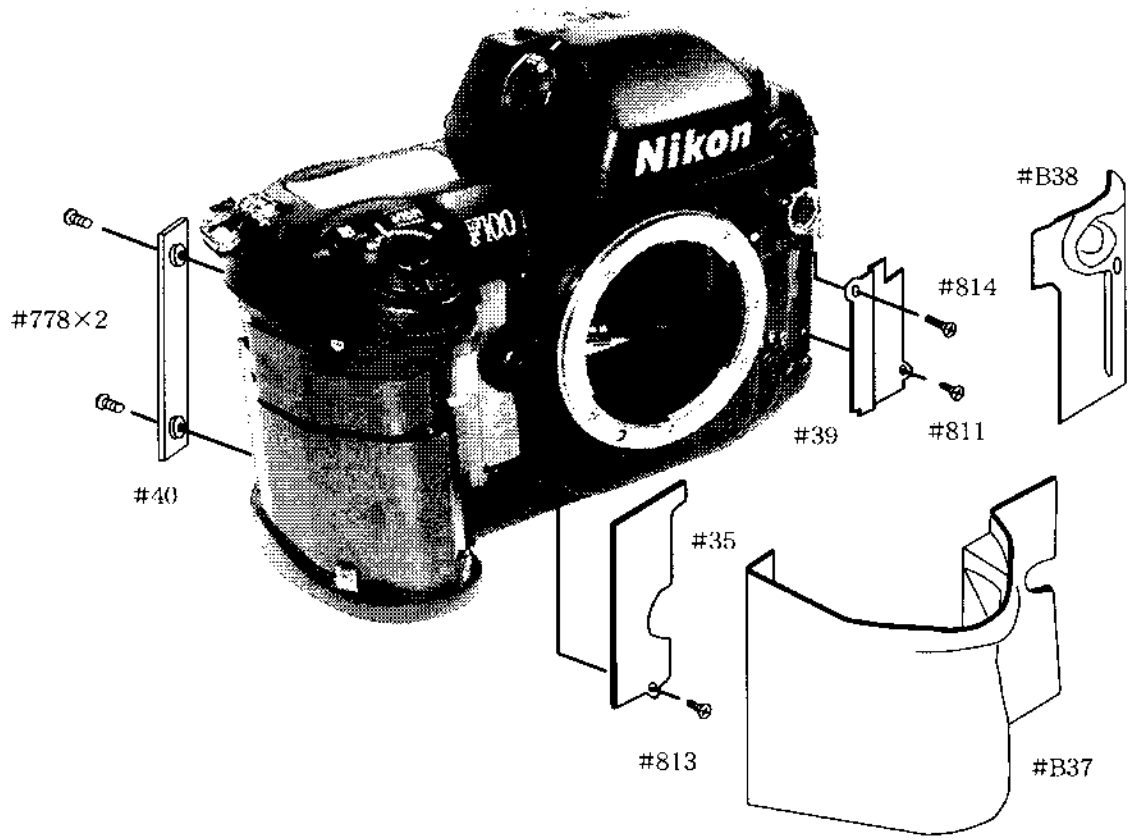
5. For adjustment of CCD output

   AF 50/1.4S lens

Bottom cover



Grip rubber, rewind-sided rubber, cover

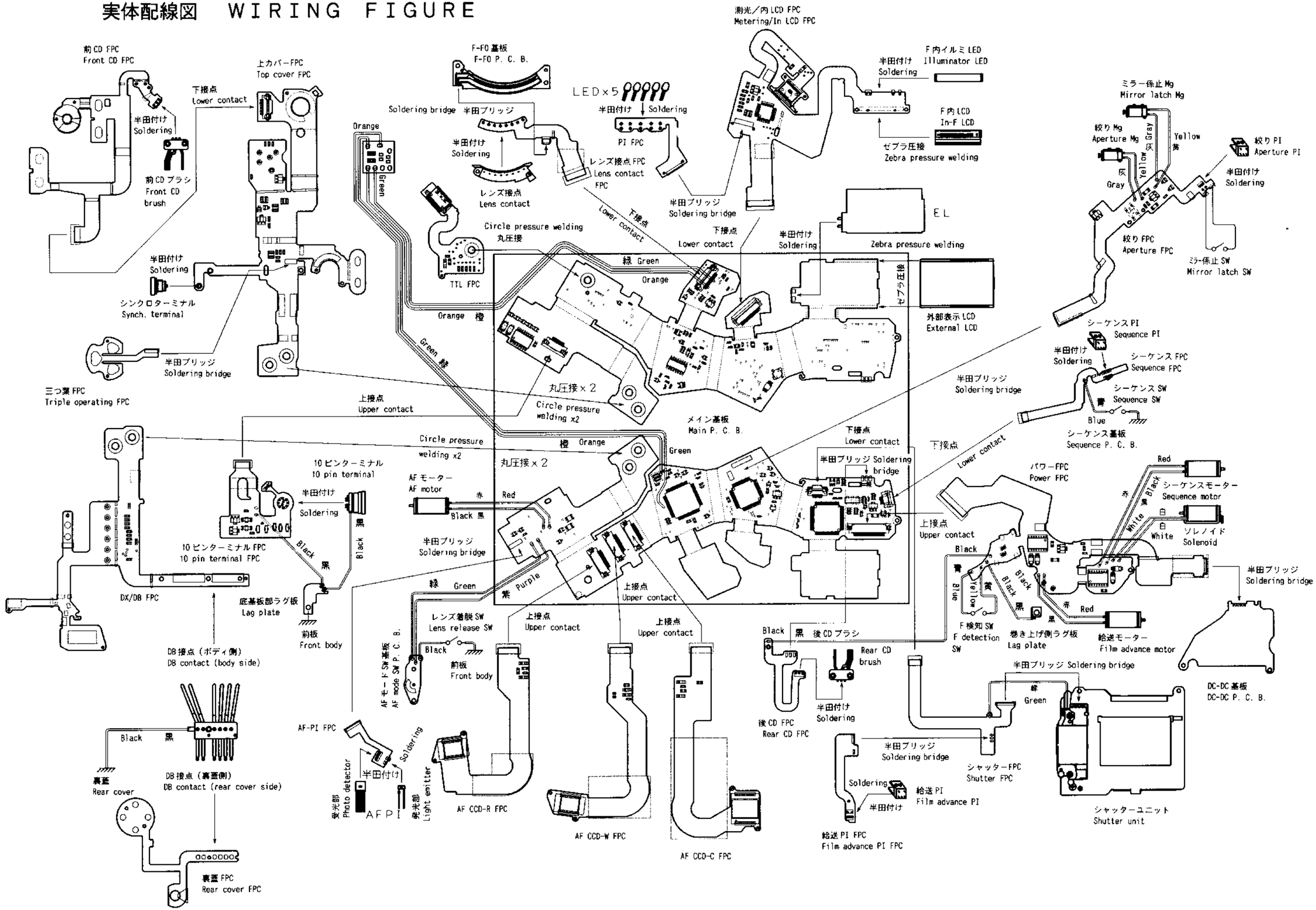


Adjustment through PC operation required at replacement of part(s)

Items of adjustment / Parts replaced	Start from the adjustment for temp. detection voltage	AE accu-racy	Aper-ture accu-racy	M 1/8000	TTL accu-racy	BC vol-tage	AF accu-racy
Shutter unit				○			
Main PCB unit	○	○	○	○	○	○	○
AF base plate unit							○
TTL SPD unit	○				○		○
DC/DC circuit board						○	

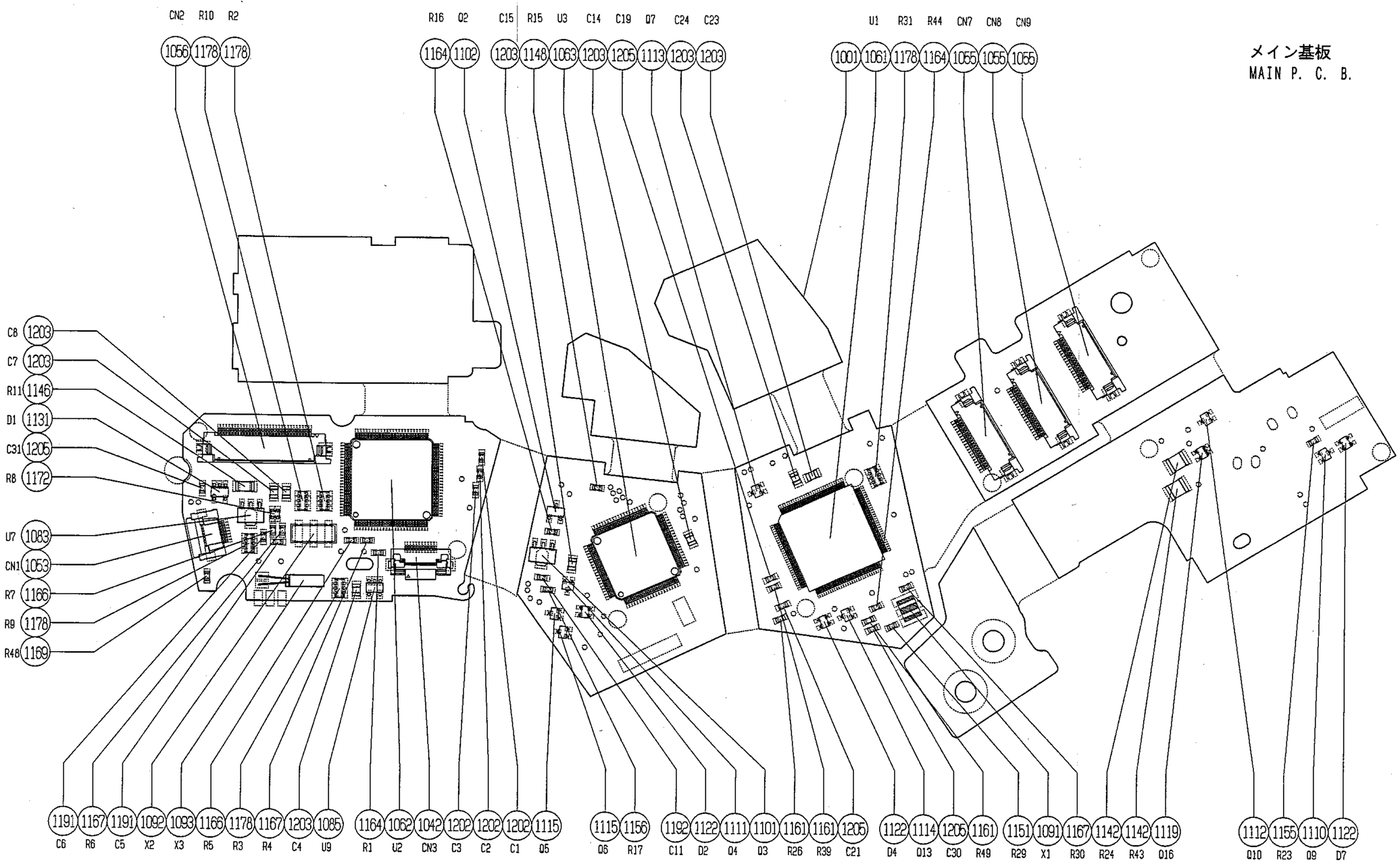
Electric circuit

実体配線図　WIRING FIGURE



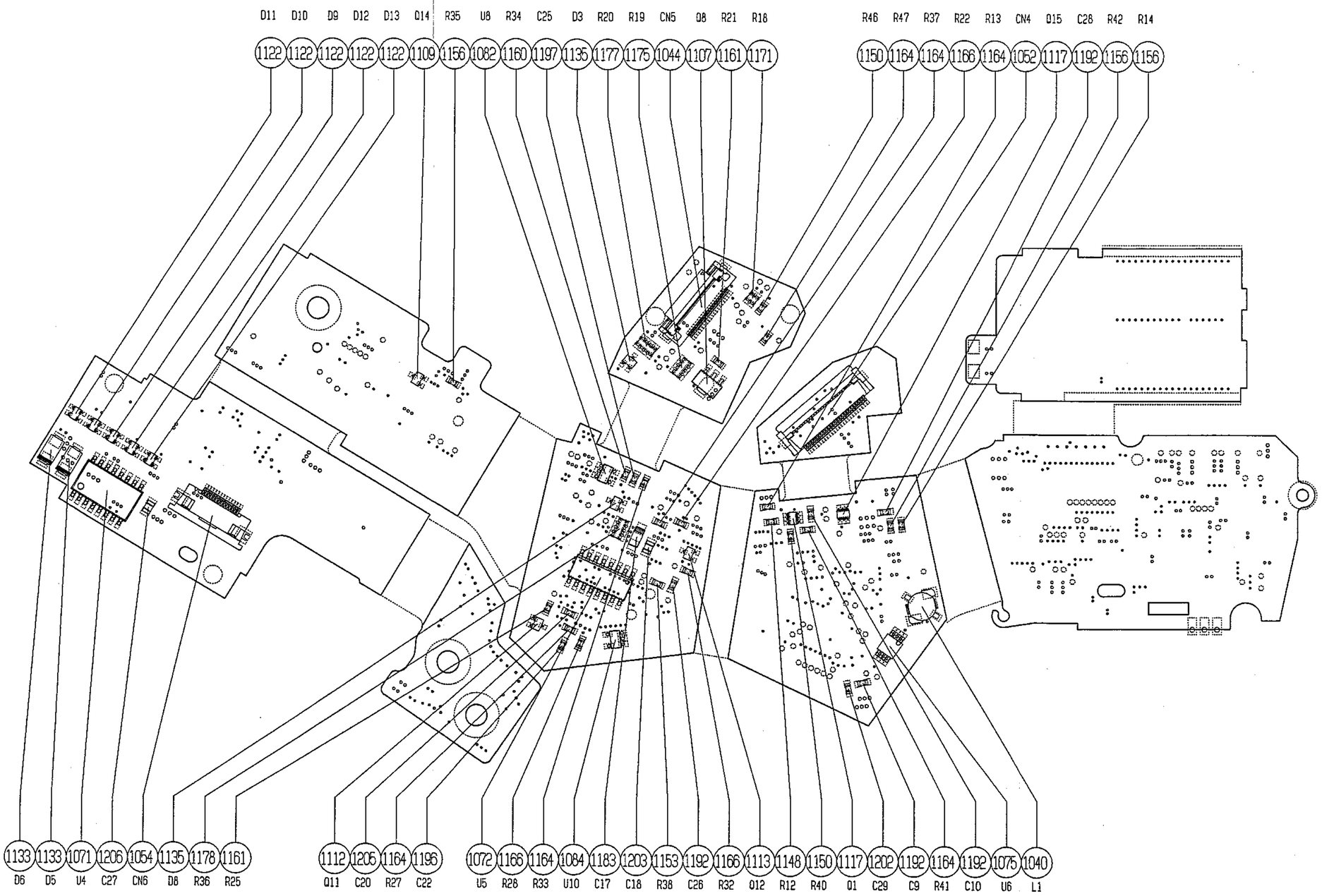
FAA35051-R.3459.A

回路図 CIRCUIT DIAGRAM

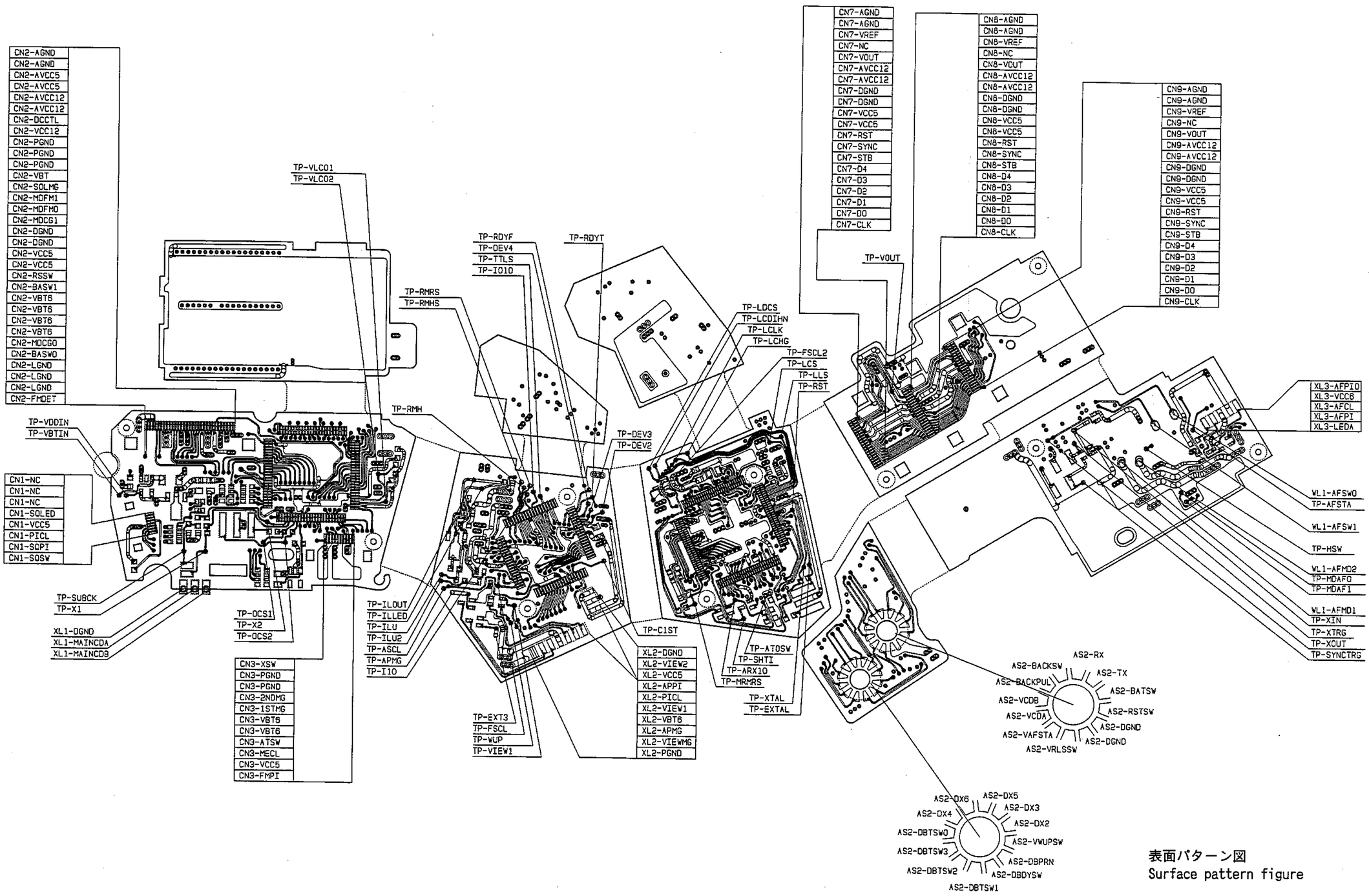


メイン基板
MAIN P. C. B.

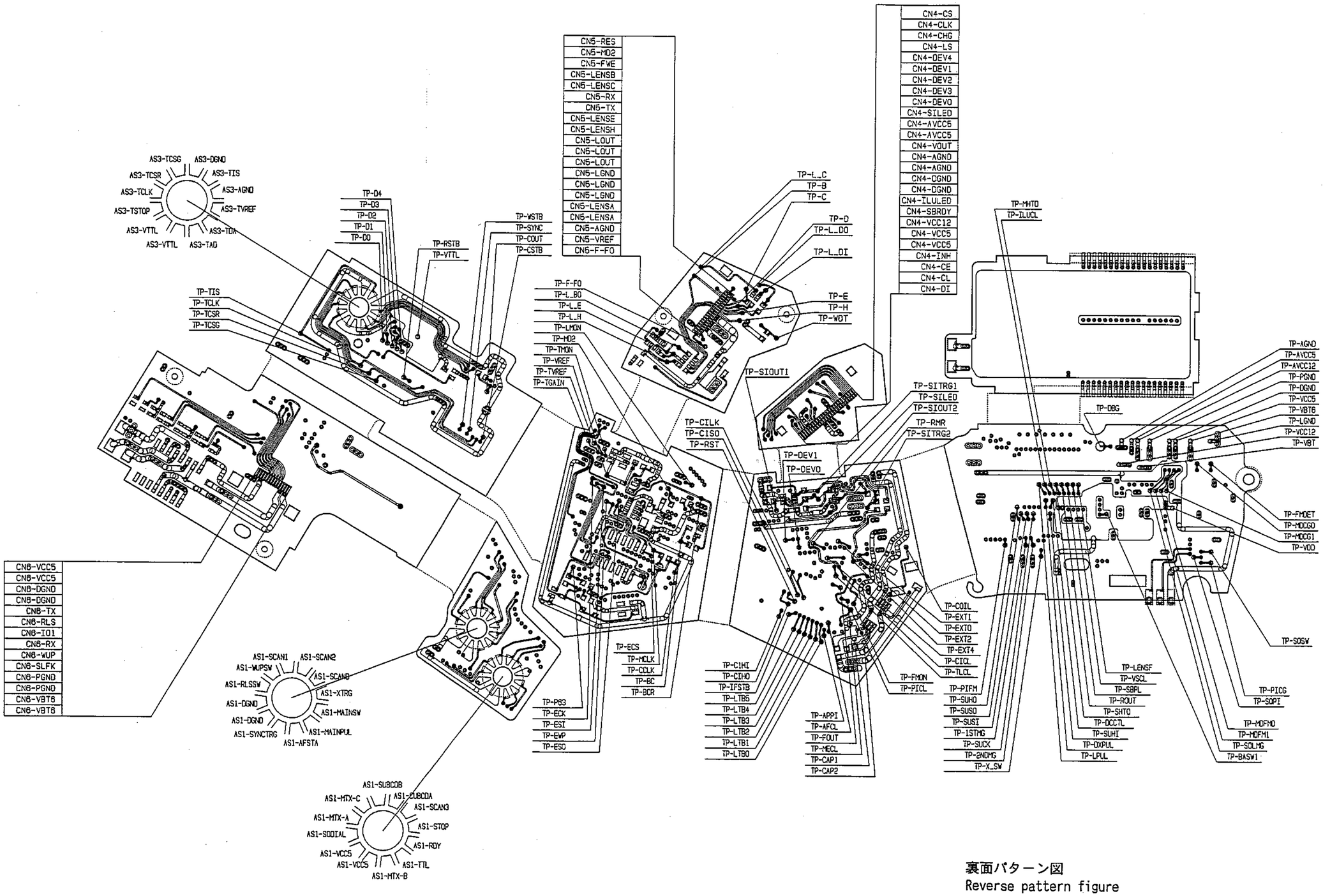
表面部品実装図
Surface parts mount figure



裏面部品実装図
Reverse parts mount figure

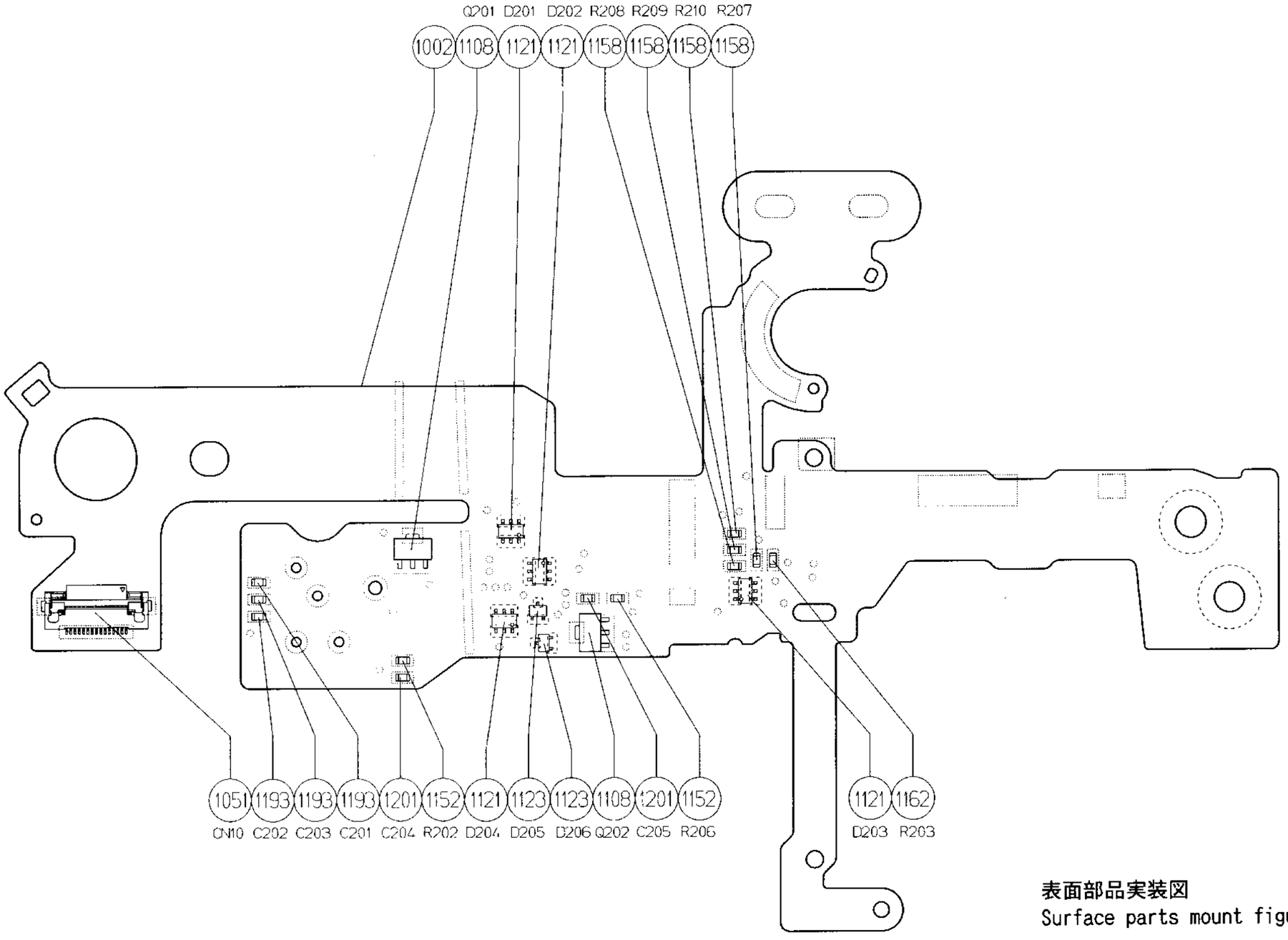


表面パターン図
Surface pattern figure

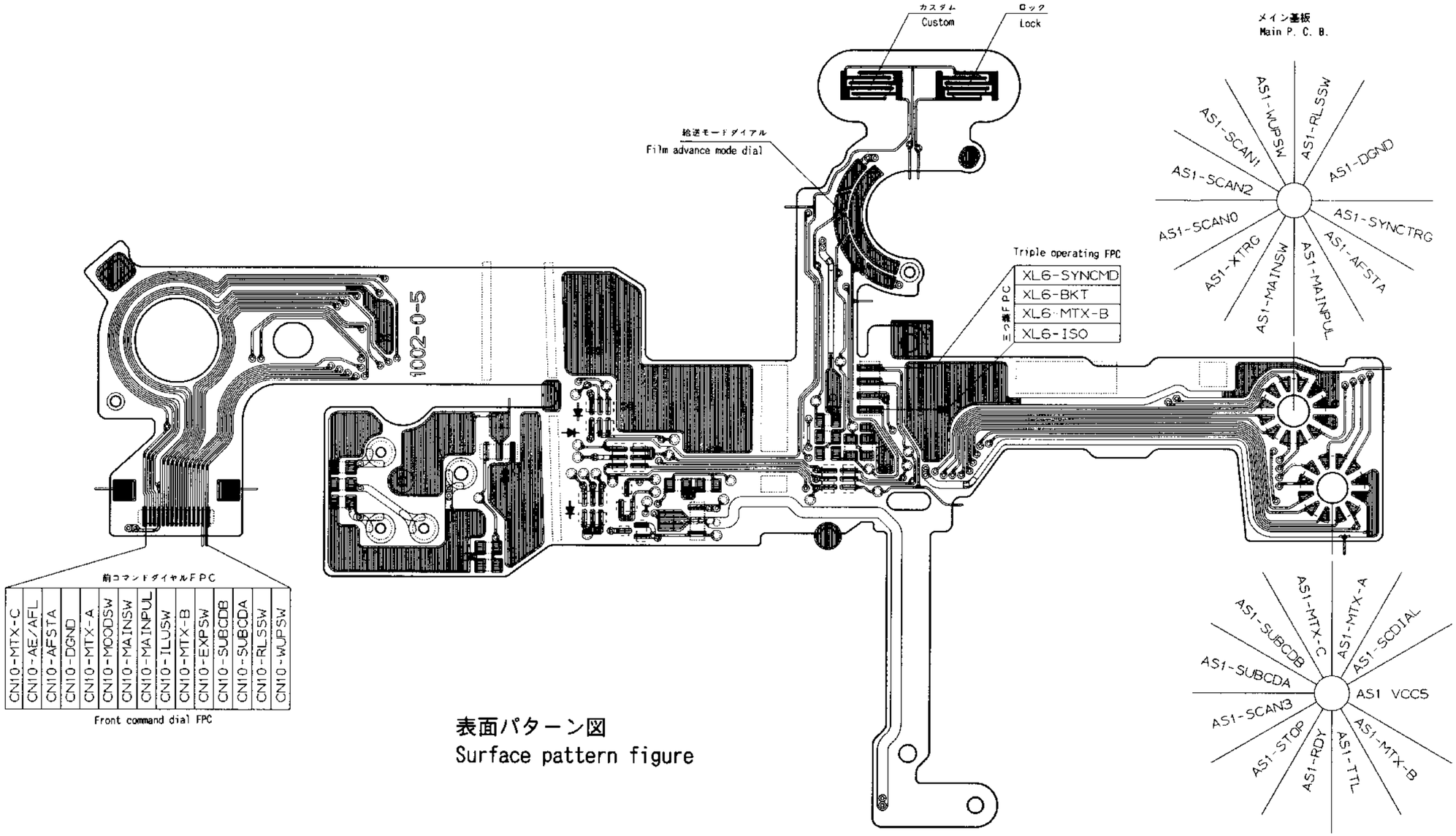


裏面パターン図
Reverse pattern figure

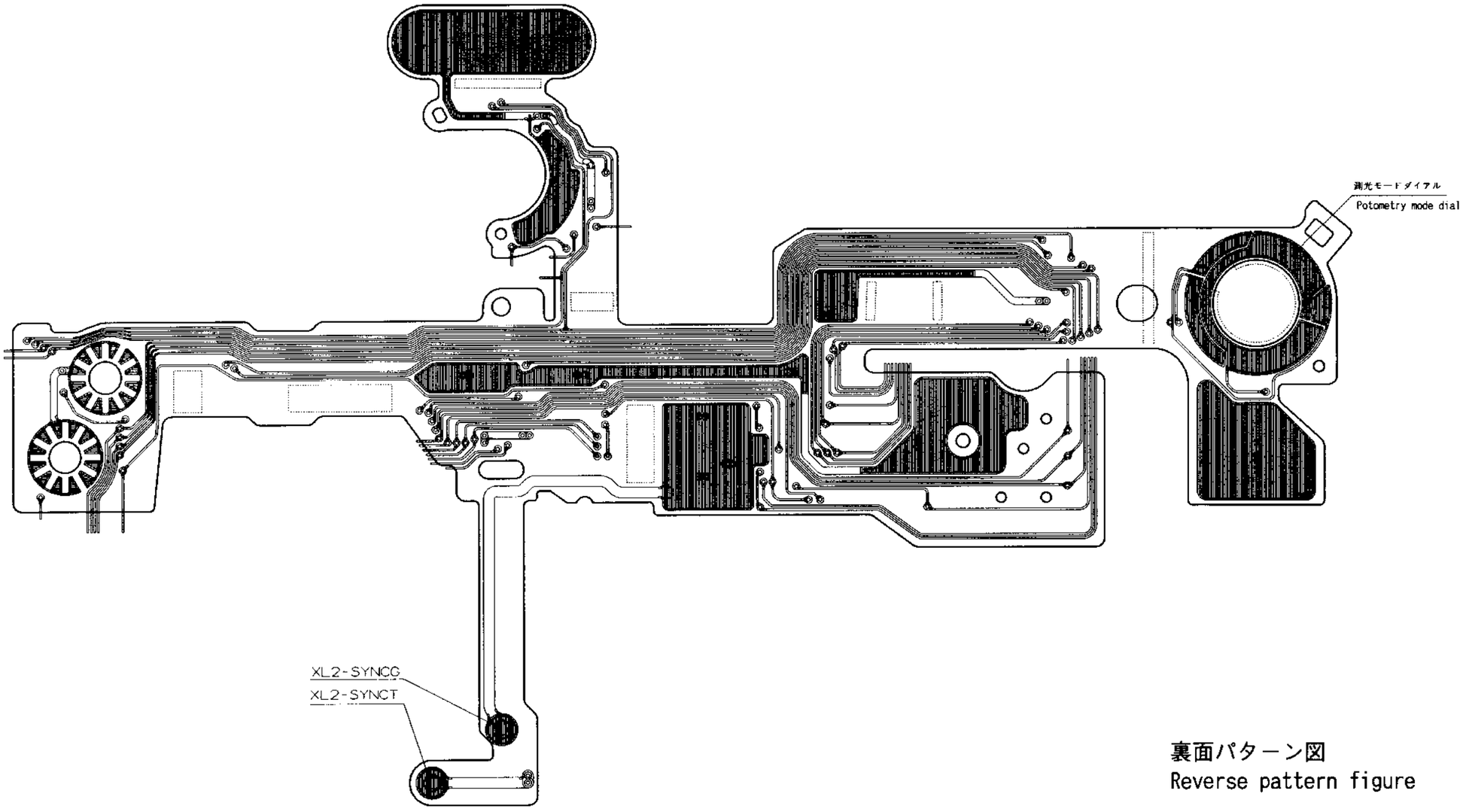
上カバーＦＰＣ
TOP COVER FPC



表面部品実装図
Surface parts mount figure

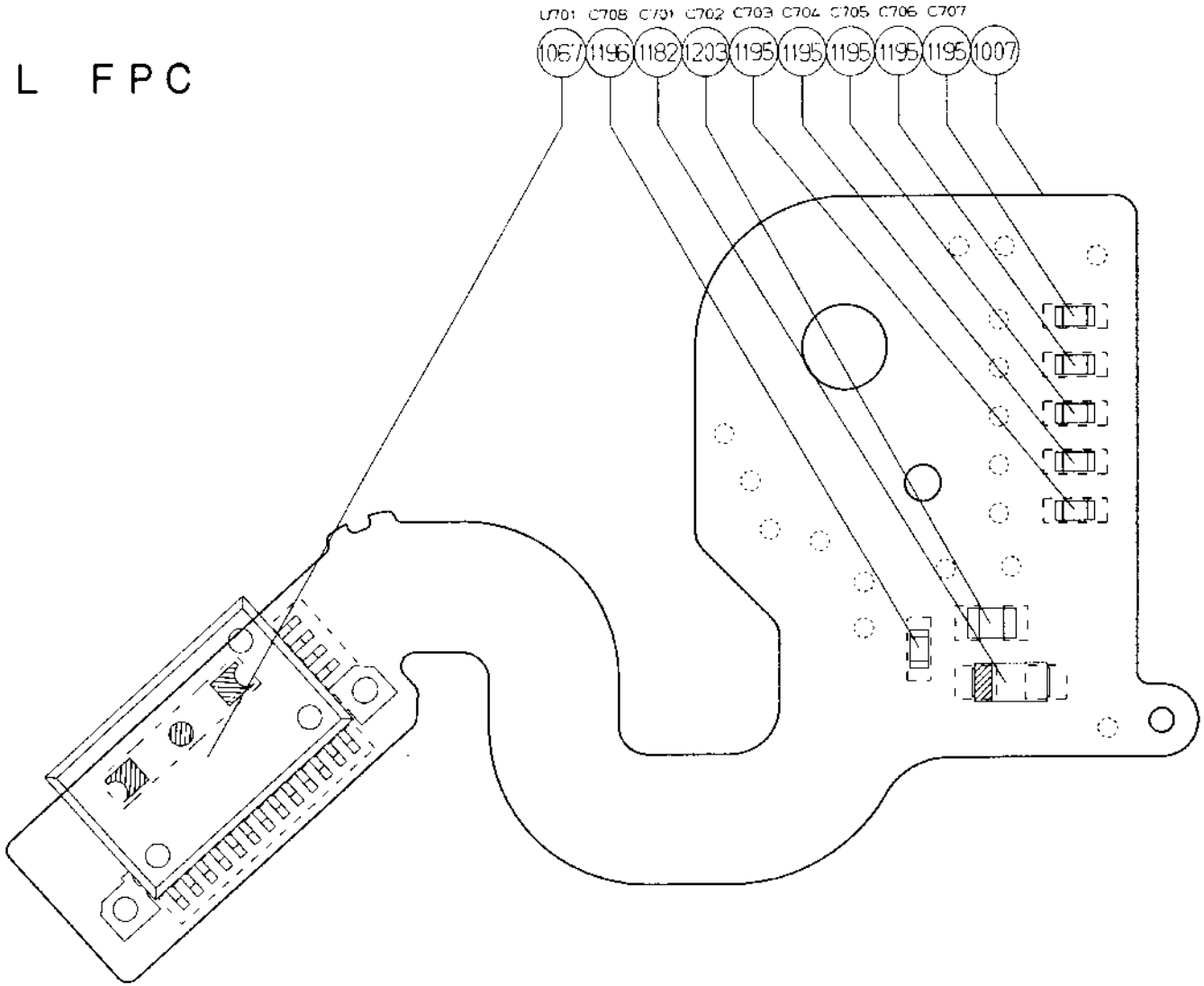


表面パターン図
Surface pattern figure



裏面パターン図
Reverse pattern figure

TTL FPC

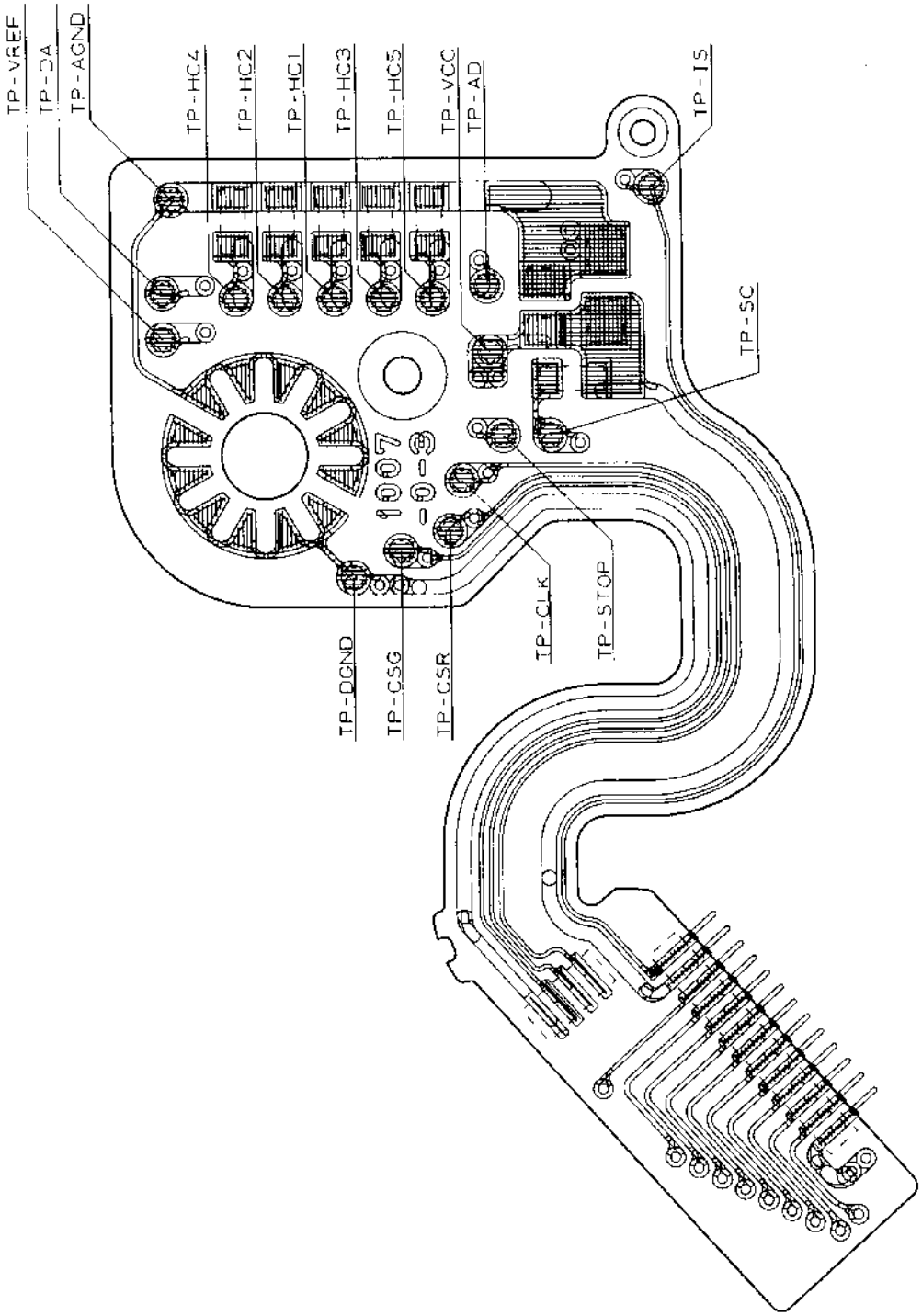


表面部品実装図
Surface parts mount figure

-E 10 · F100-

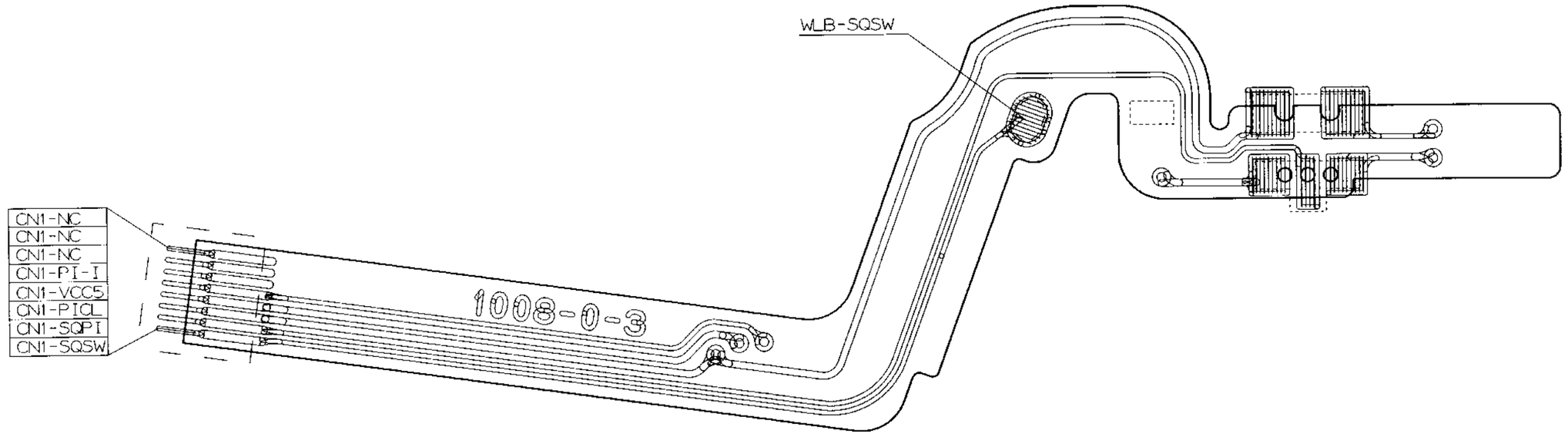
FAA35051-R.3459.A

表面パターン図
Surface pattern figure



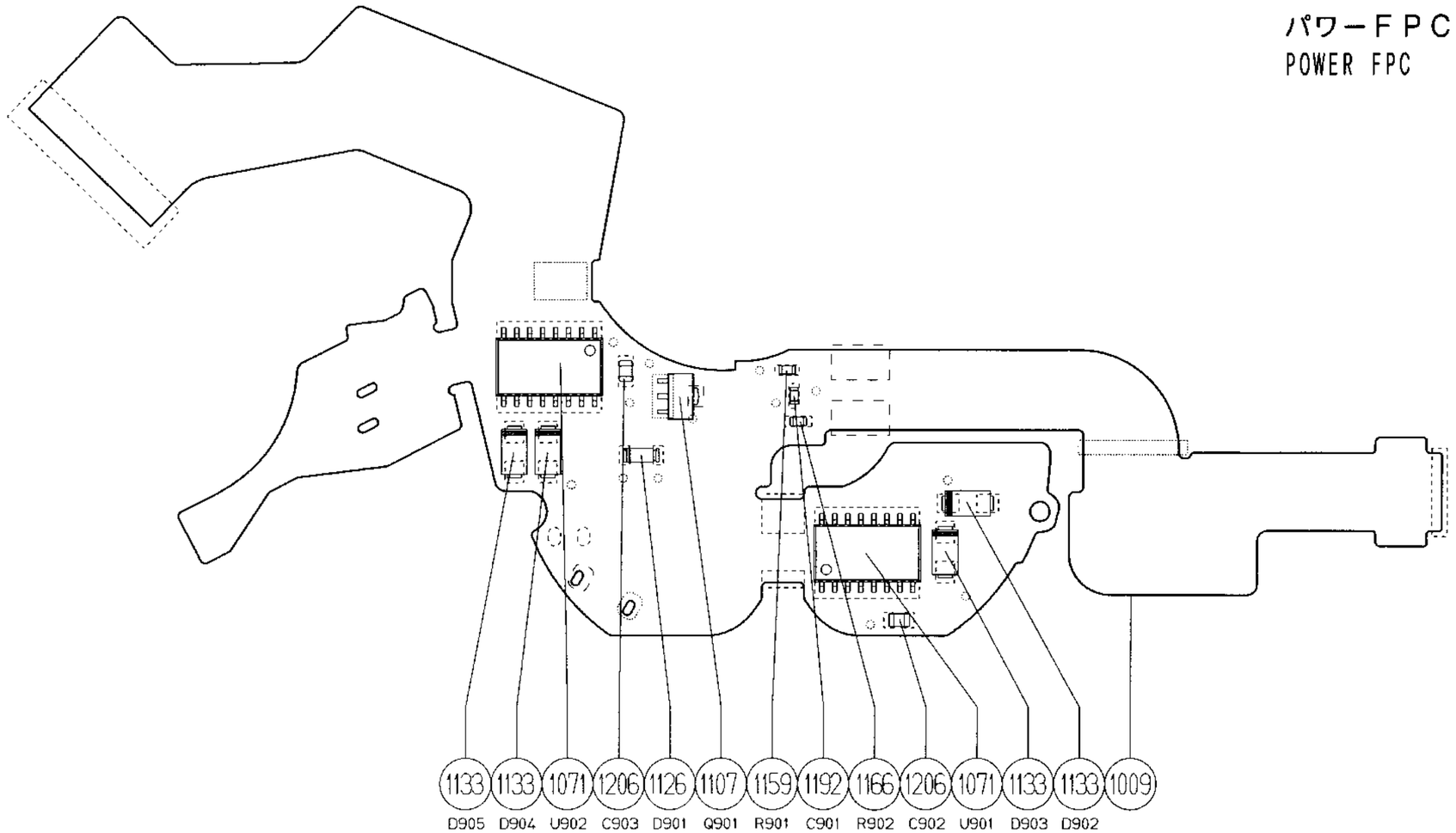
裏面パターン図
Reverse pattern figure

シーケンスＦＰＣ
SEQUENCE FPC

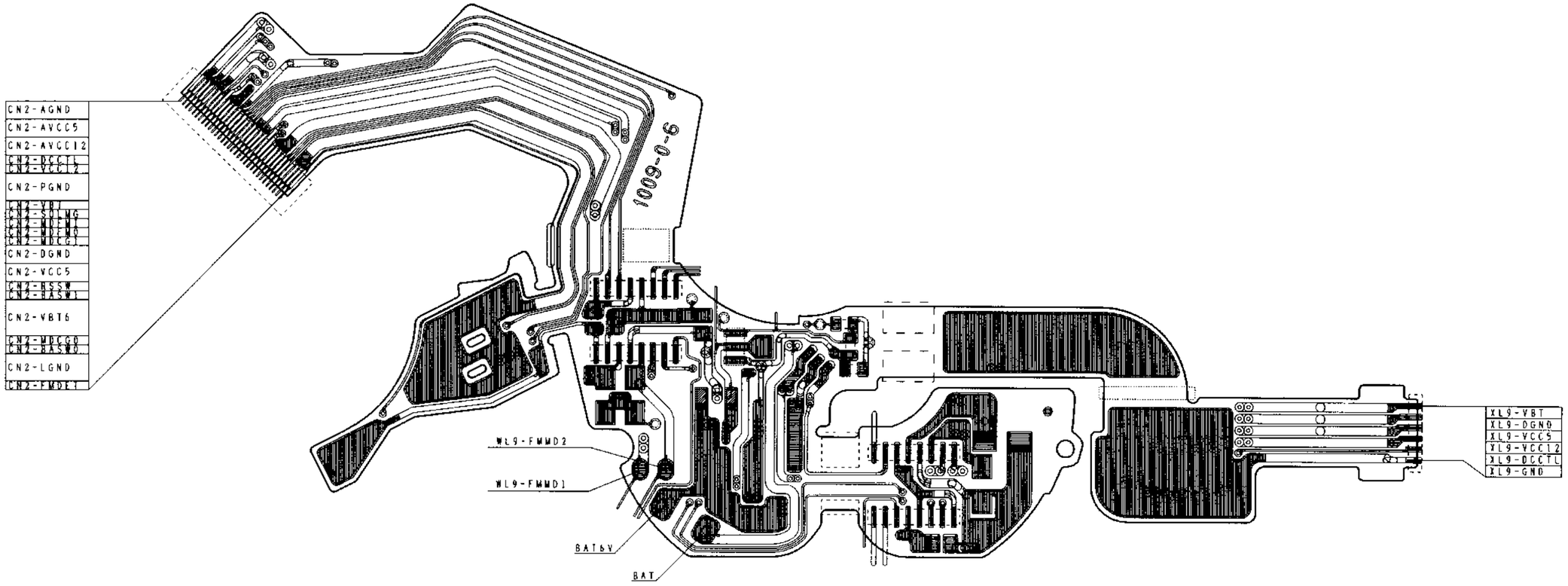


表面パターン図
Surface pattern figure

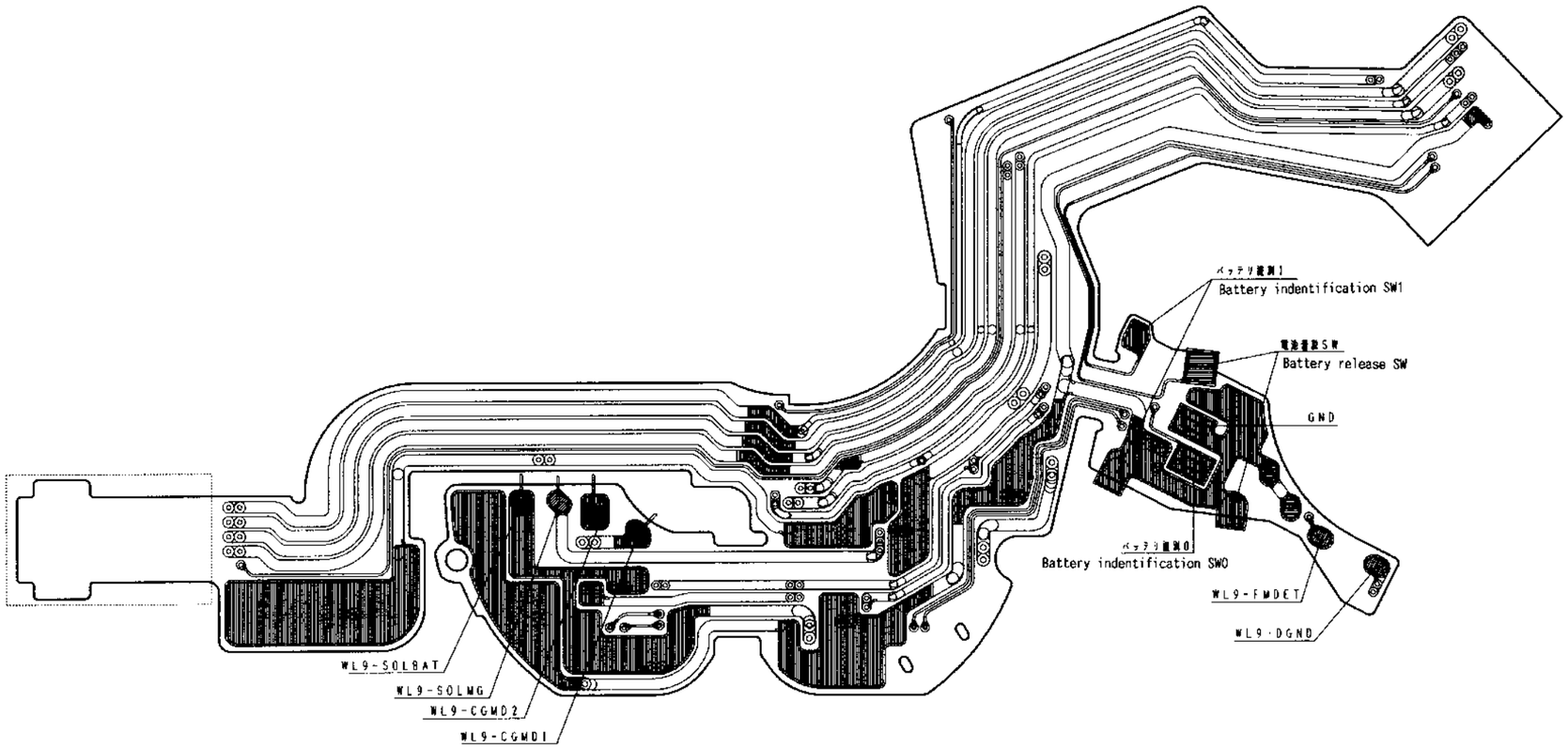
パワーＦＰＣ
POWER FPC



表面部品実装図
Surface parts mount figure

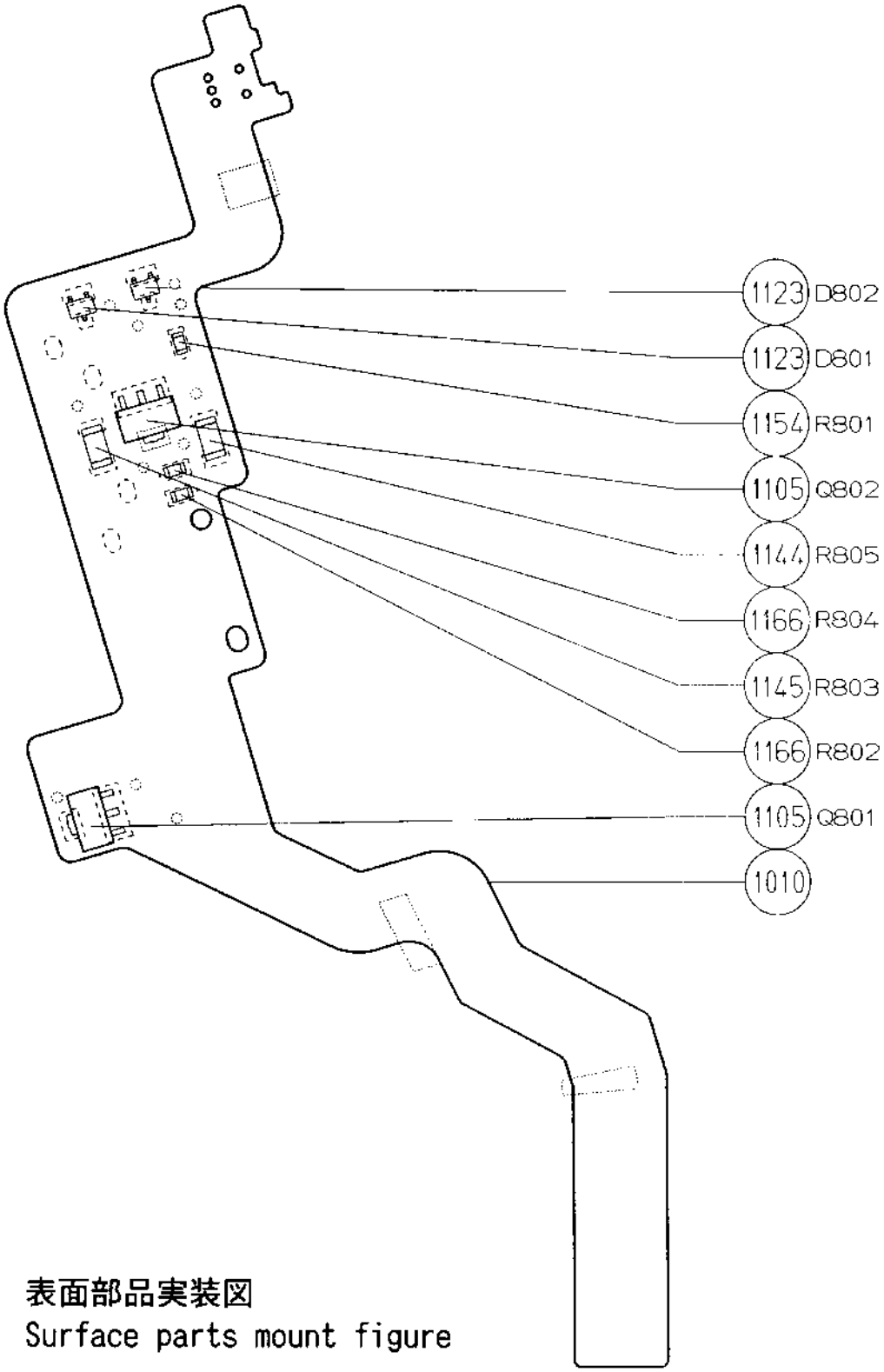


表面パターン図
Surface pattern figure

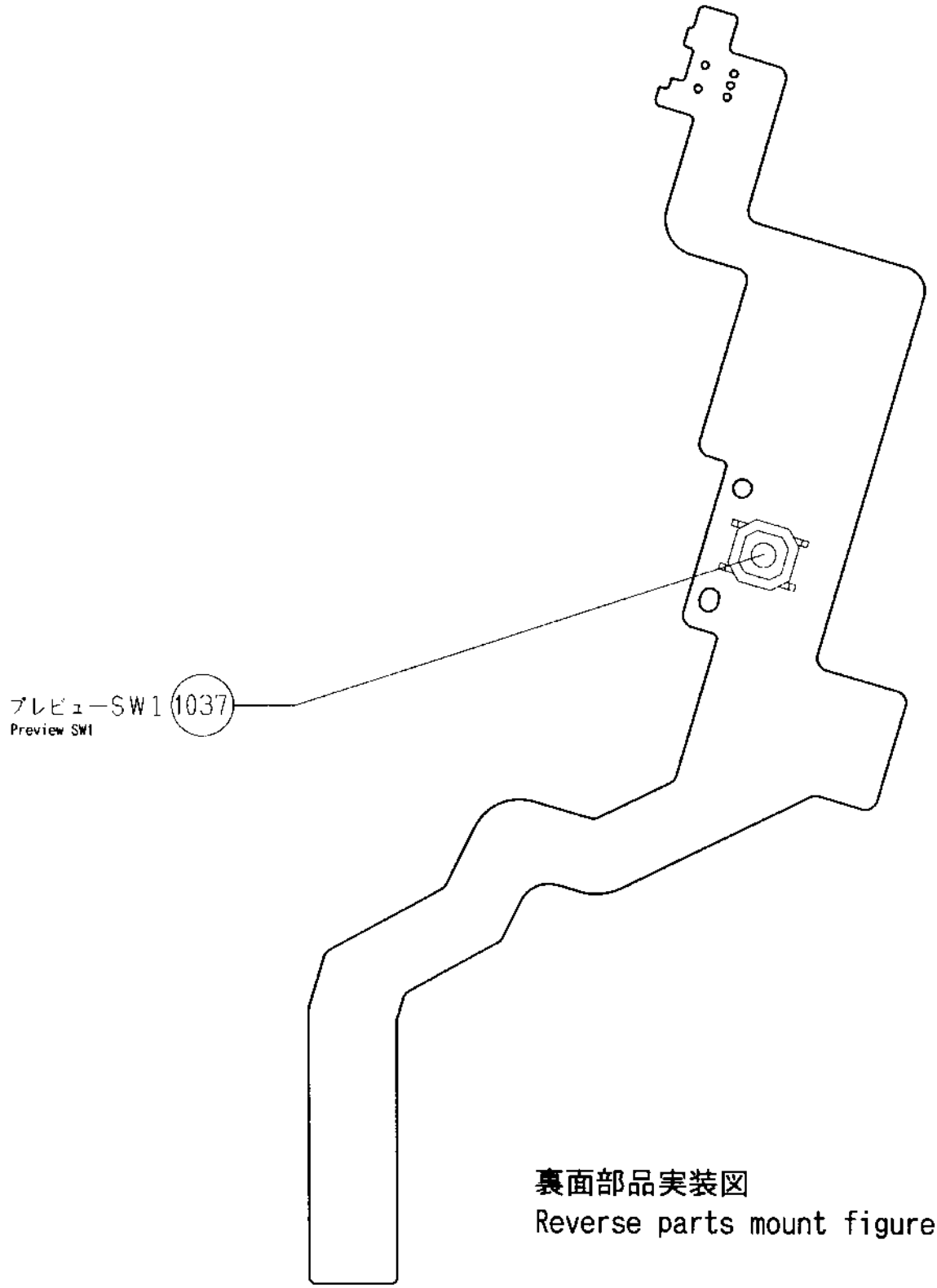


裏面パターン図
Reverse pattern figure

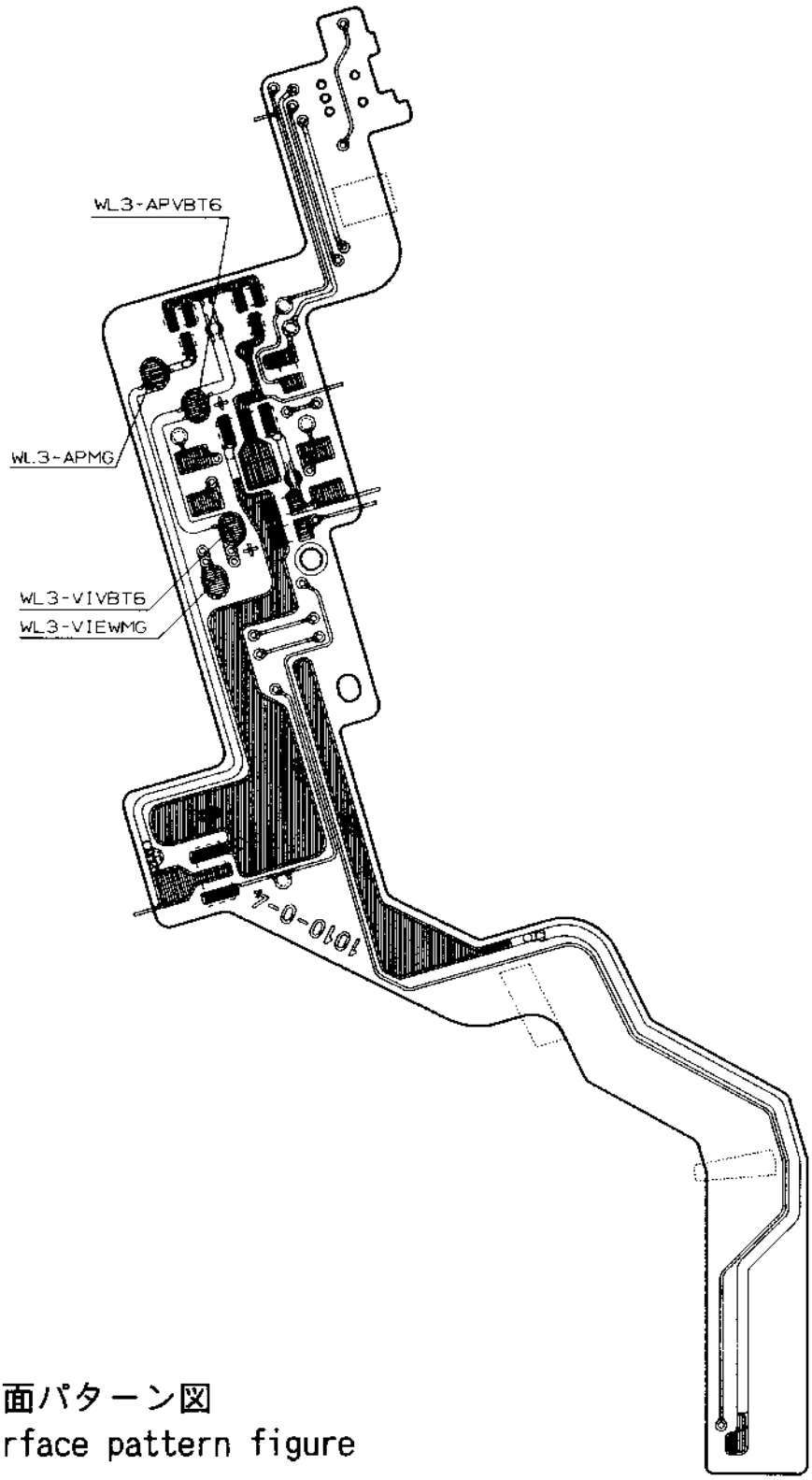
絞りＦＰＣ
APERTURE FPC



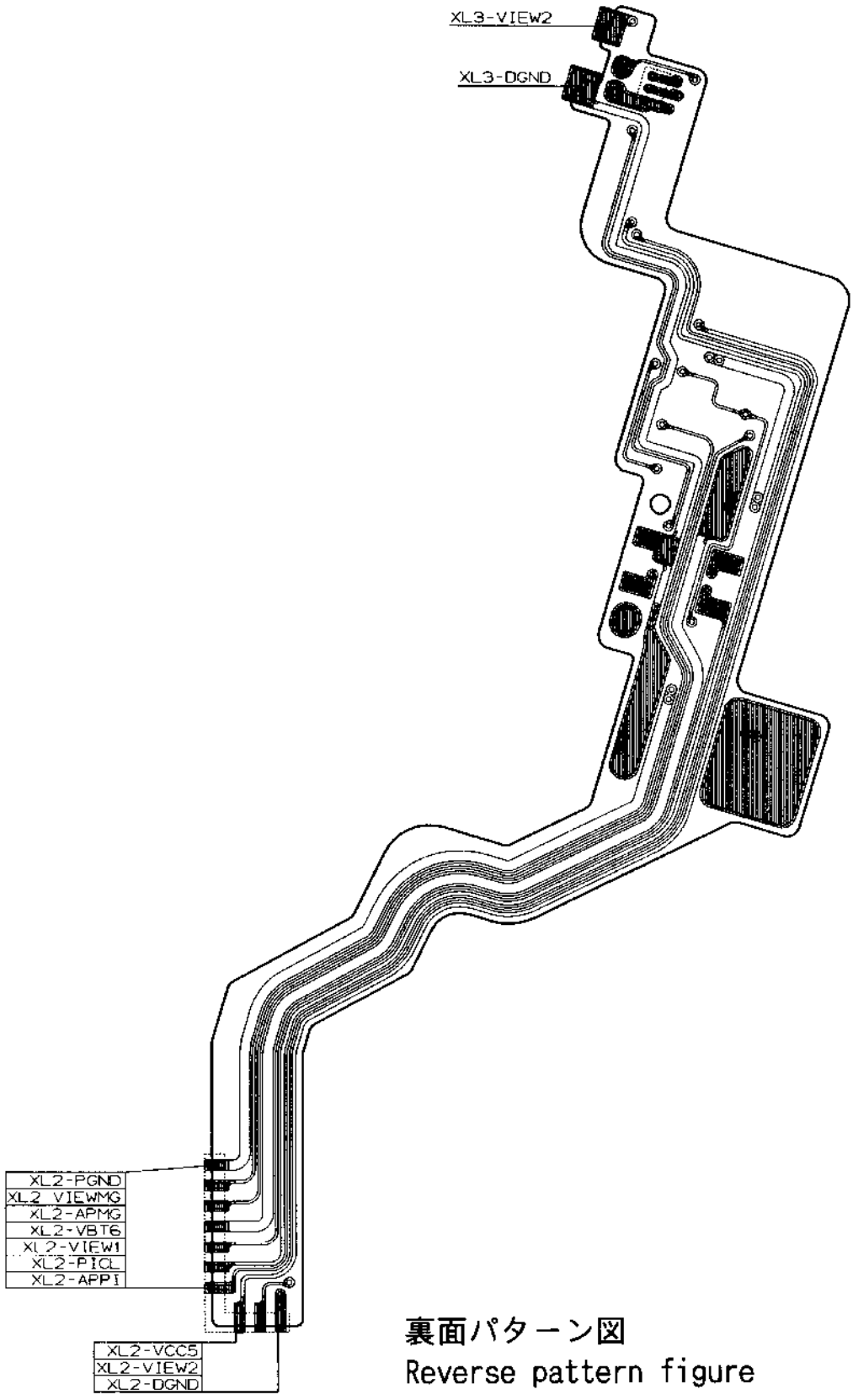
表面部品実装図
Surface parts mount figure



裏面部品実装図
Reverse parts mount figure

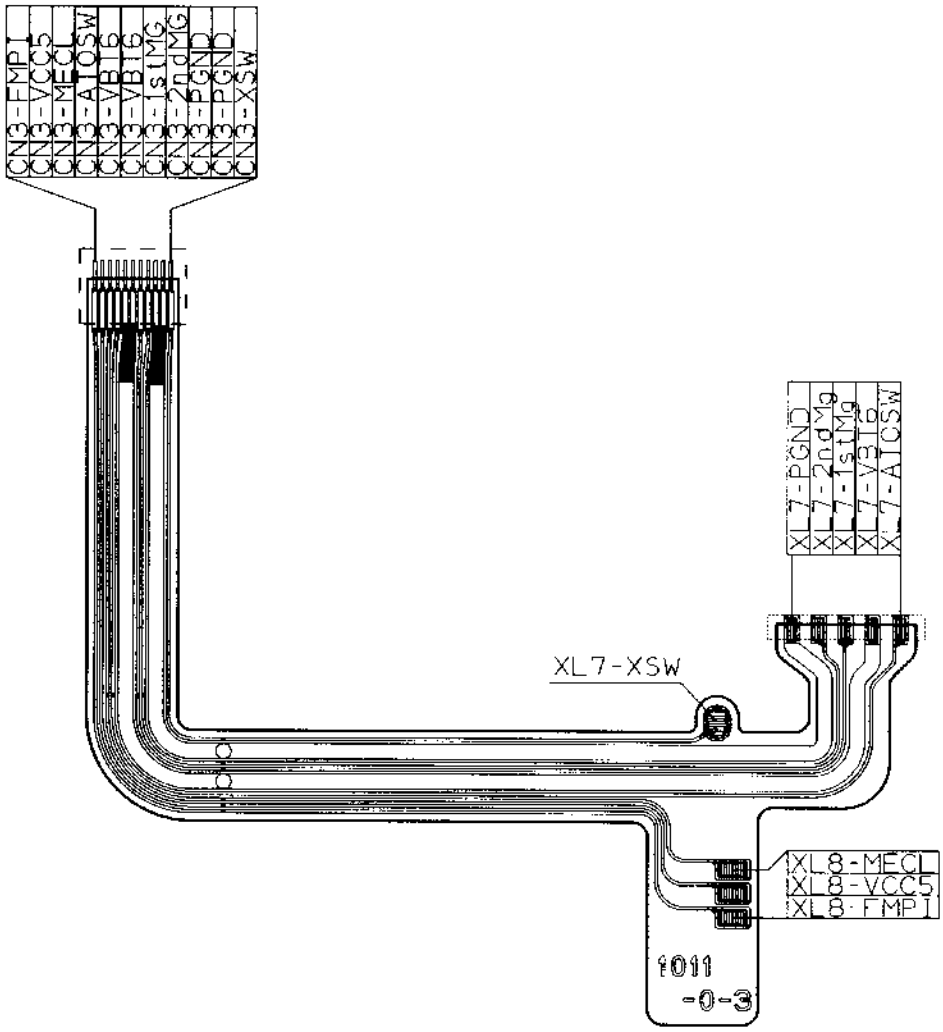


表面パターン図
Surface pattern figure



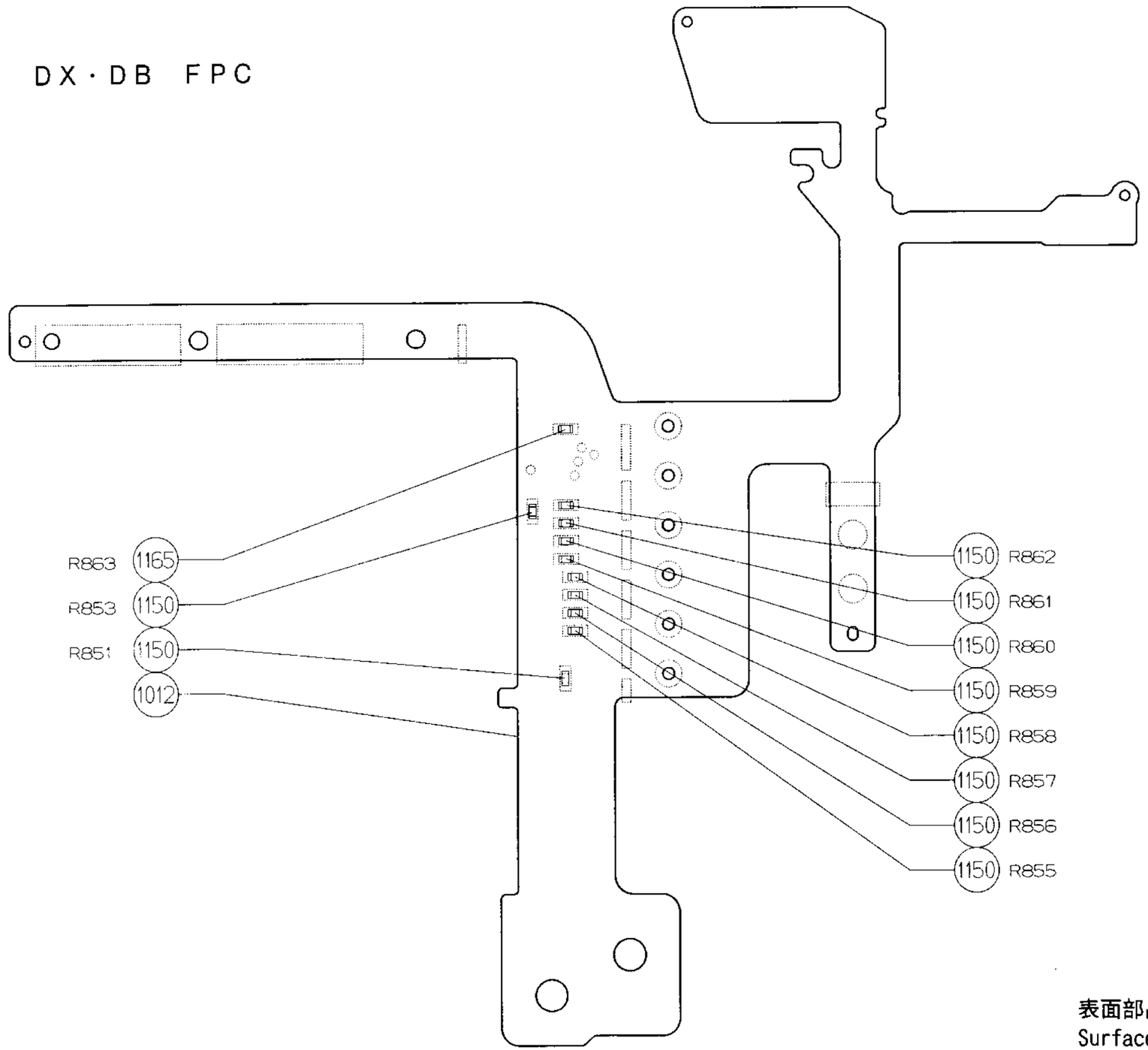
裏面パターン図
Reverse pattern figure

シャッターＦＰＣ
SHUTTER FPC

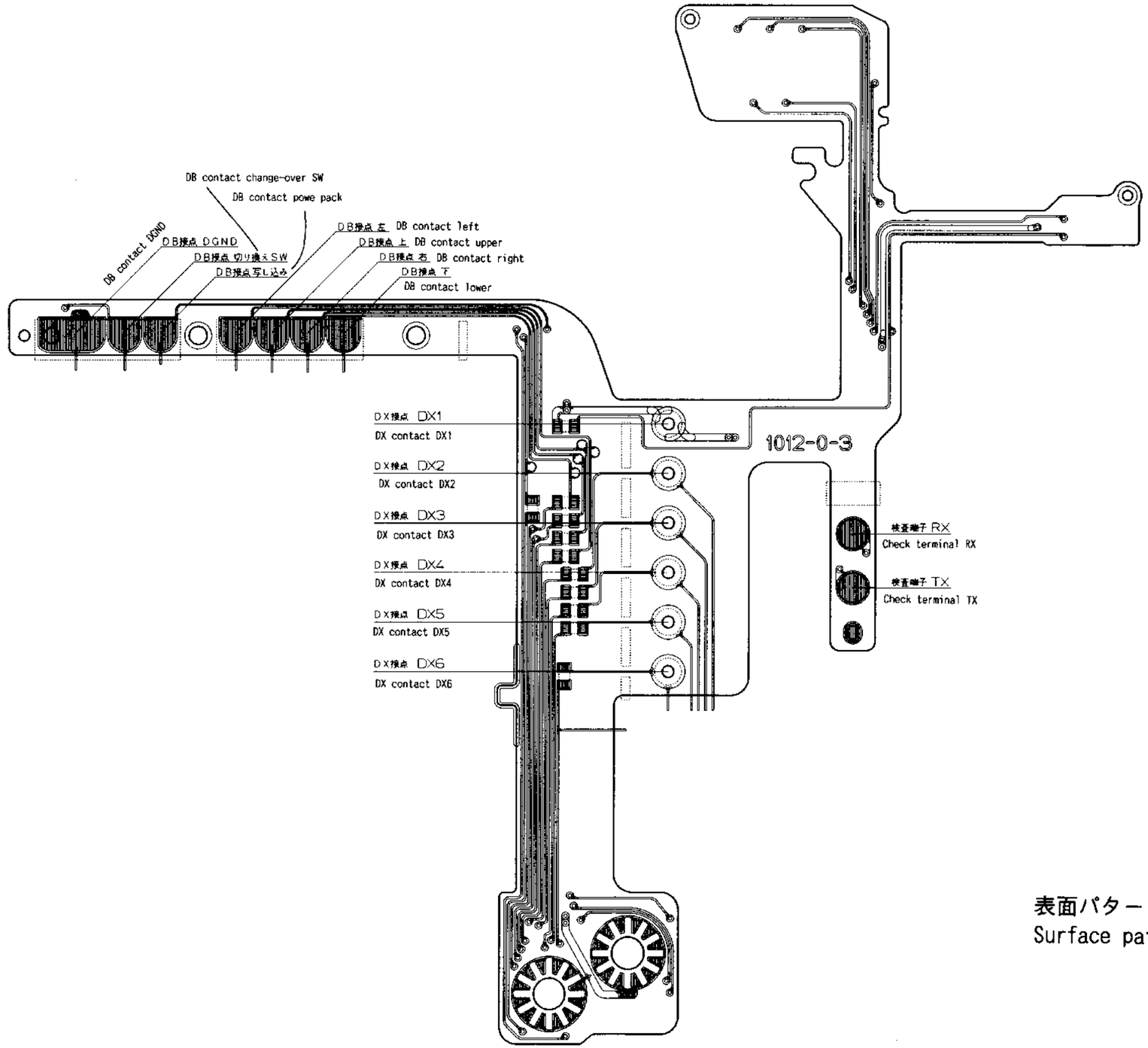


表面パターン図
Surface pattern figure

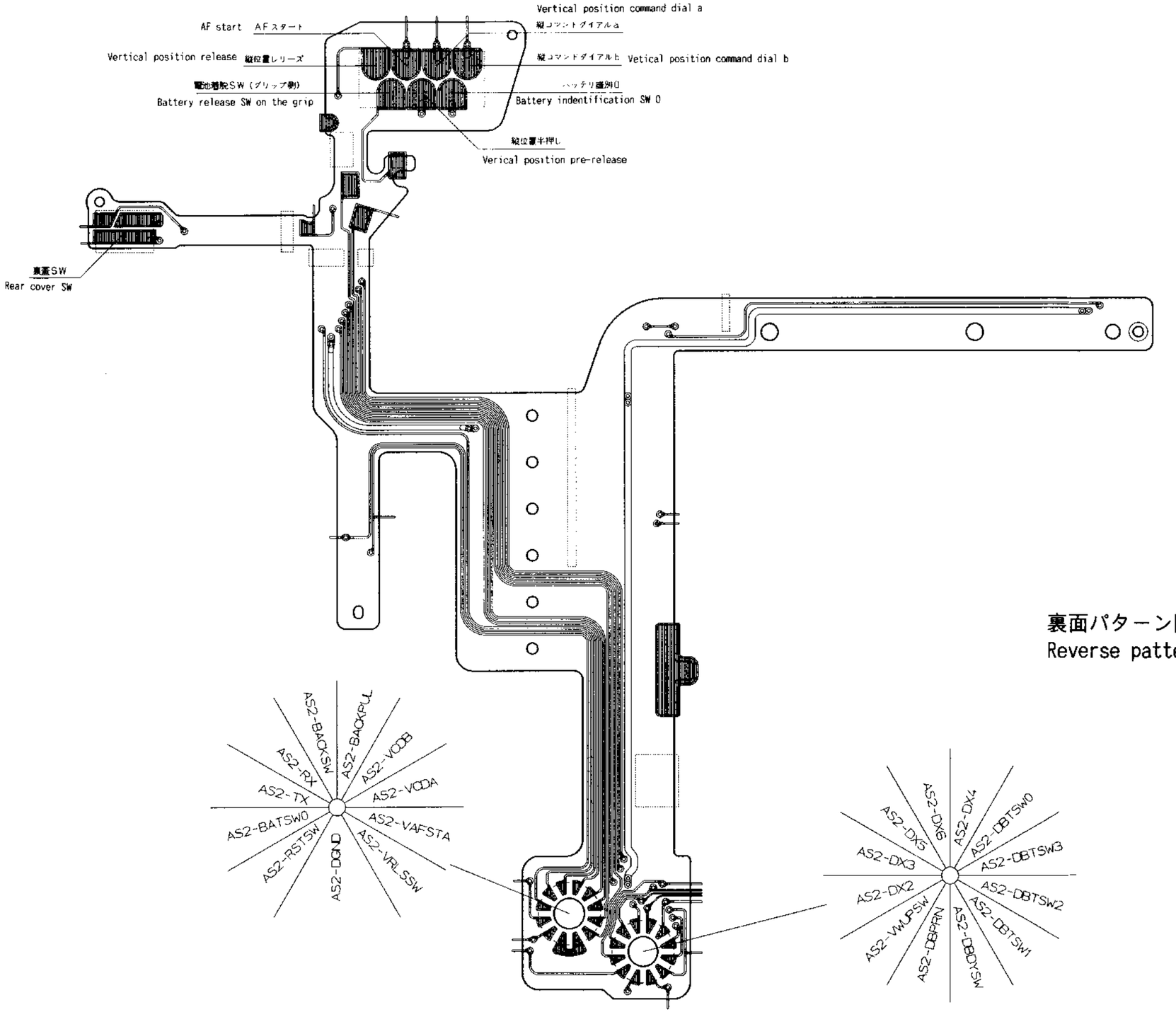
DX・DB FPC



表面部品実装図
Surface parts mount figure

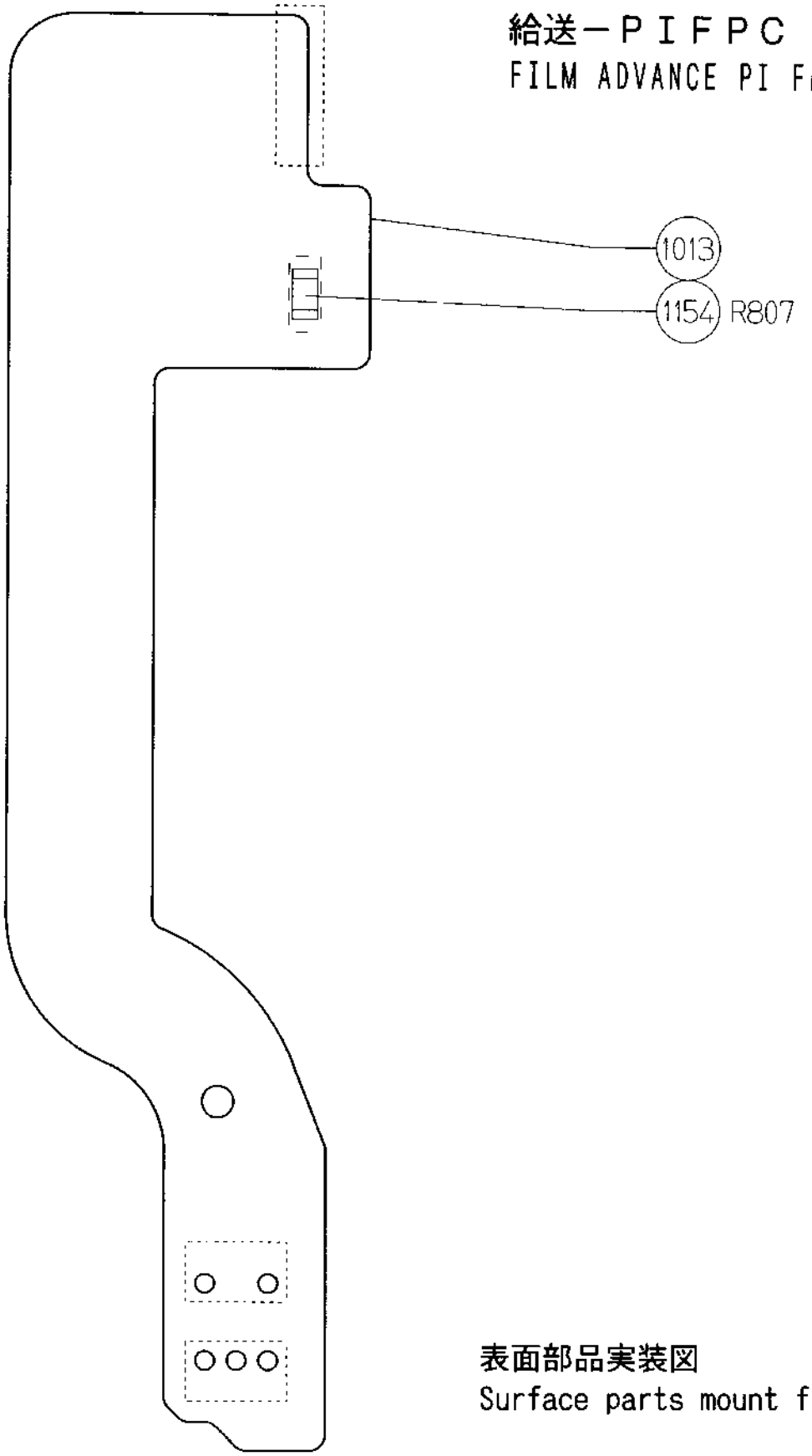


表面パターン図
Surface pattern figure

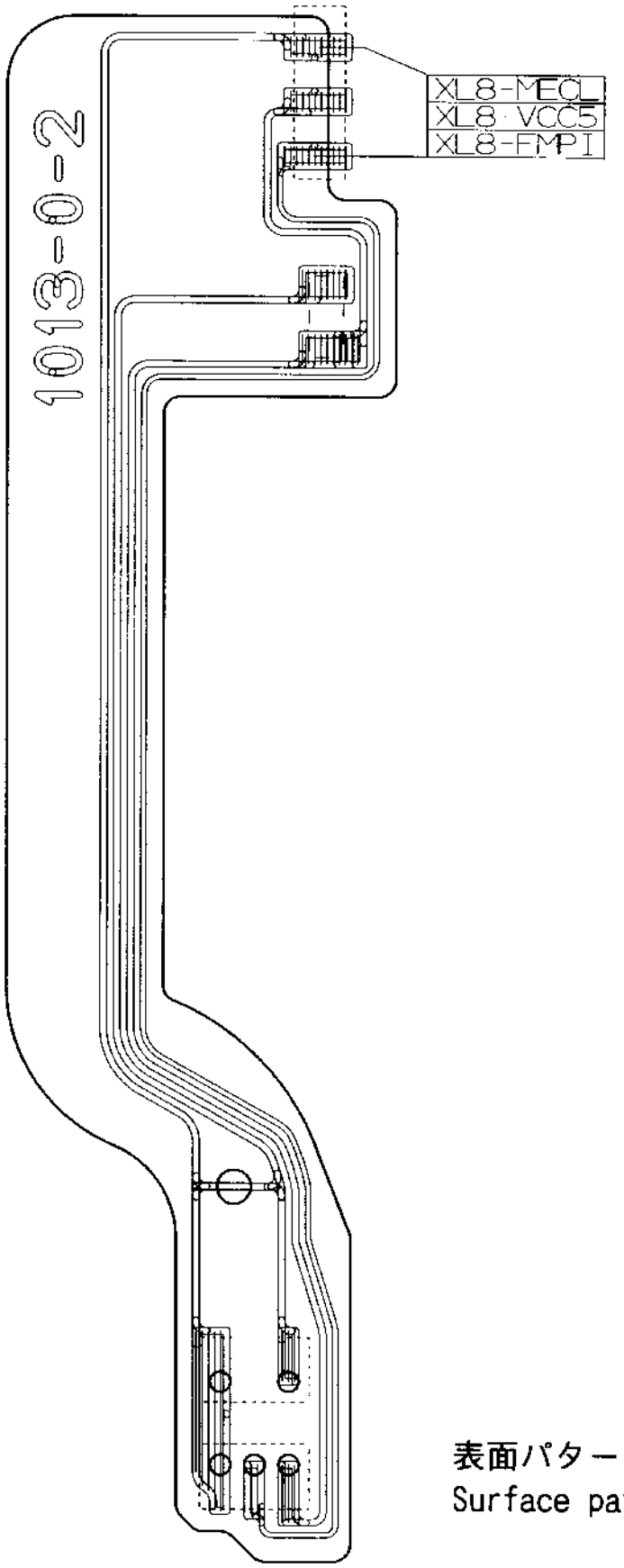


裏面パターン図
Reverse pattern figure

給送－ＰＩＦＰＣ
FILM ADVANCE PI FPC

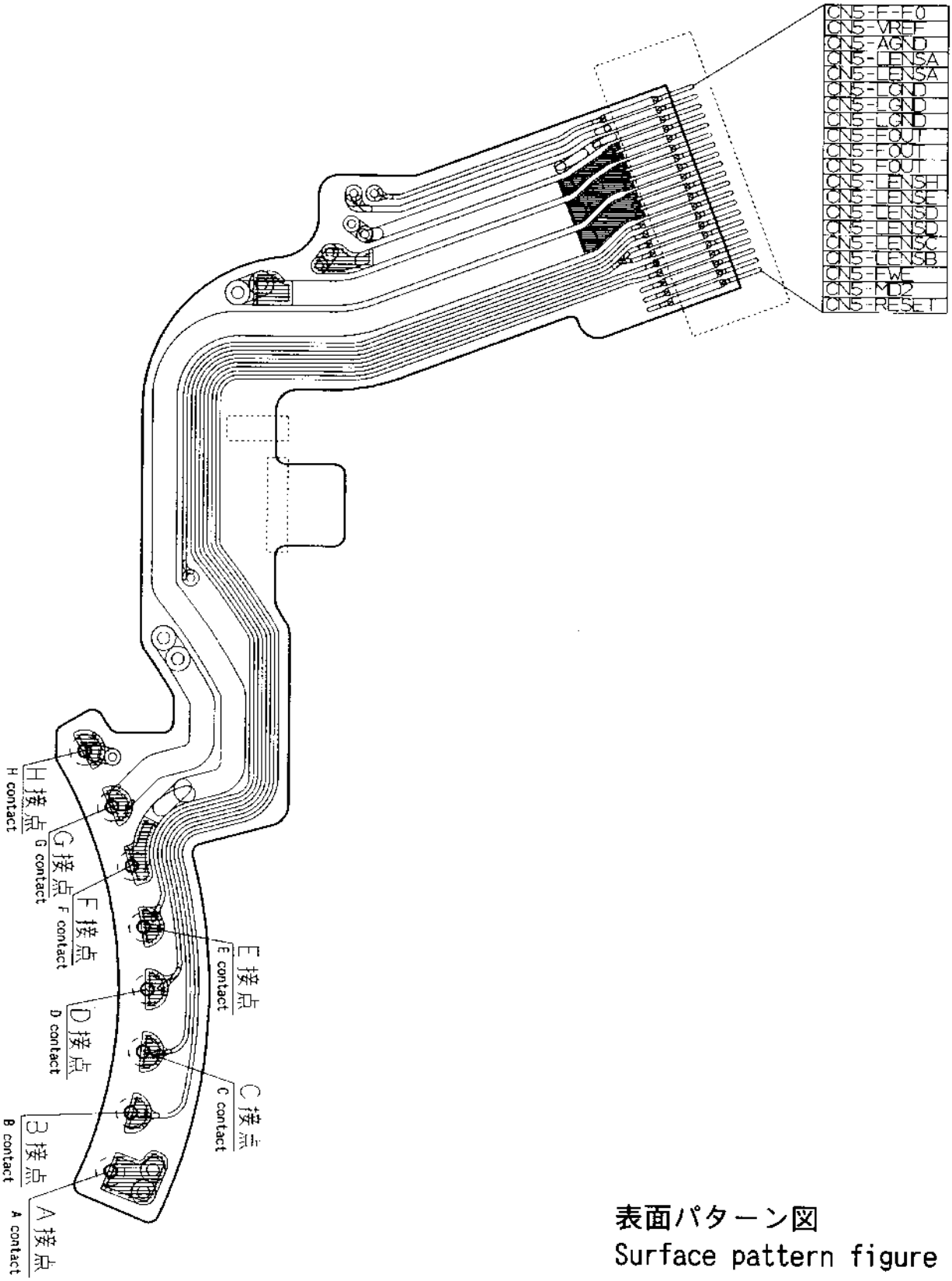


表面部品実装図
Surface parts mount figure



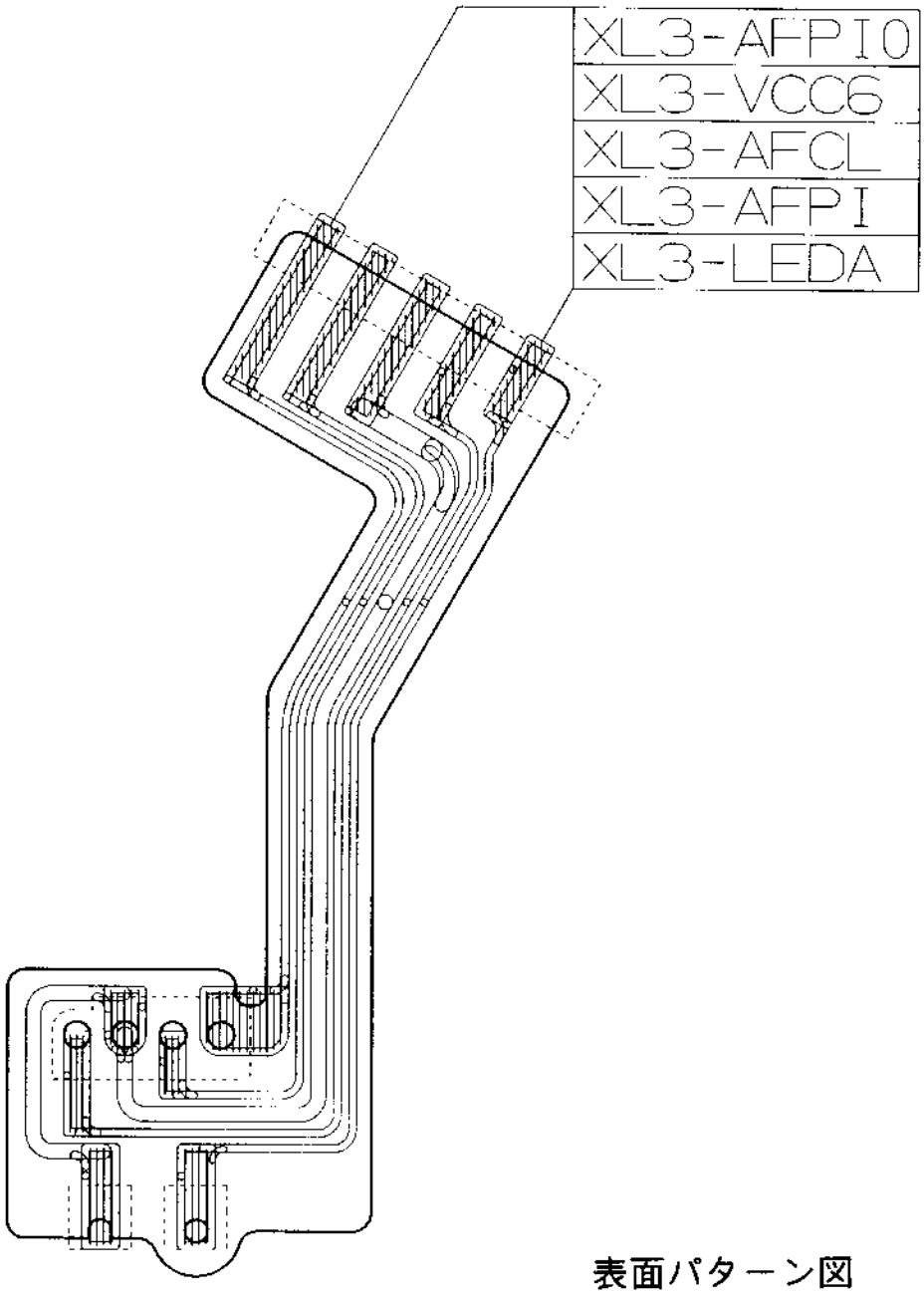
表面パターン図
Surface pattern figure

レンズ接点ＦＰＣ
LENS CONTACT FPC



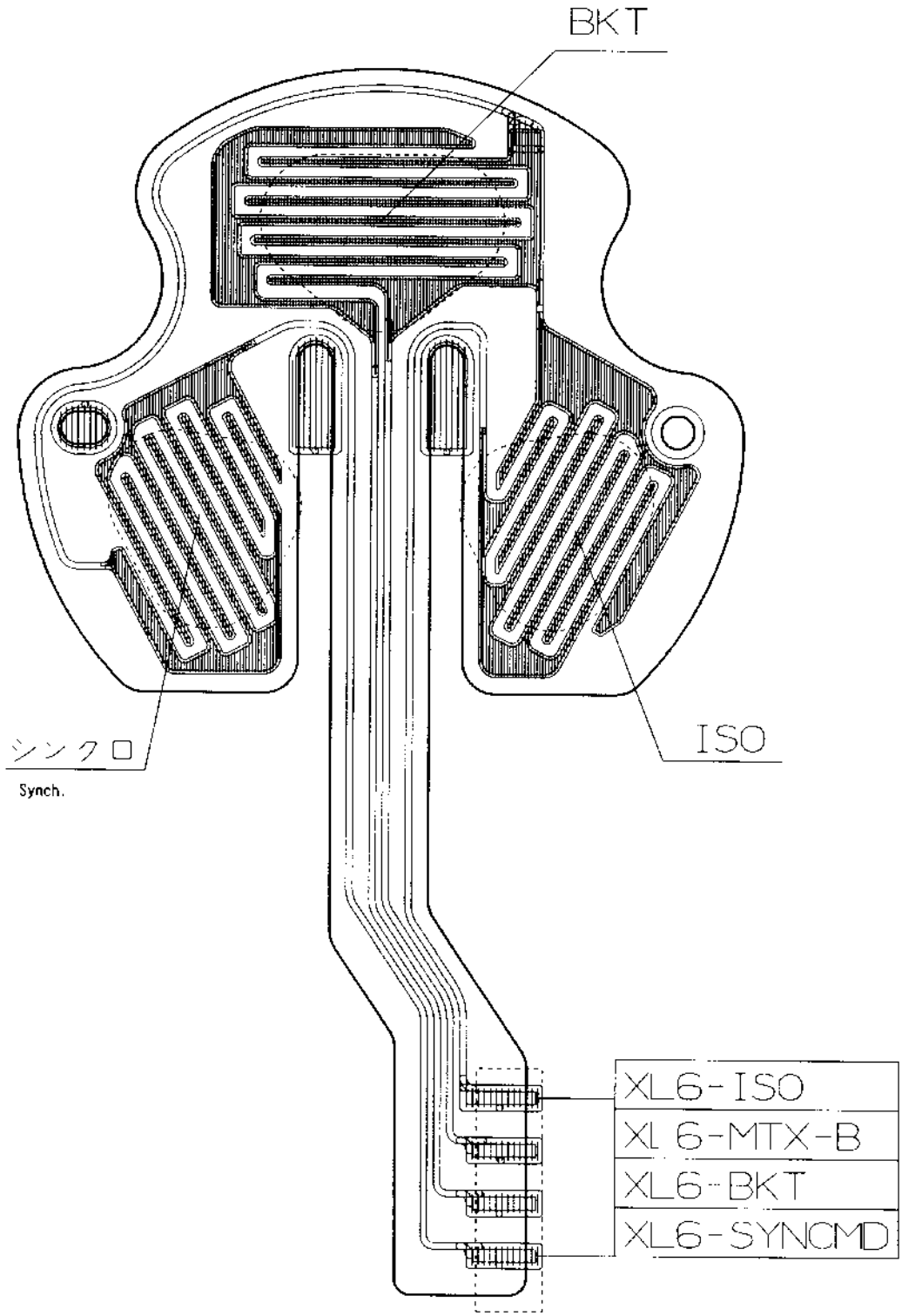
表面パターン図
Surface pattern figure

F－P I　F P C



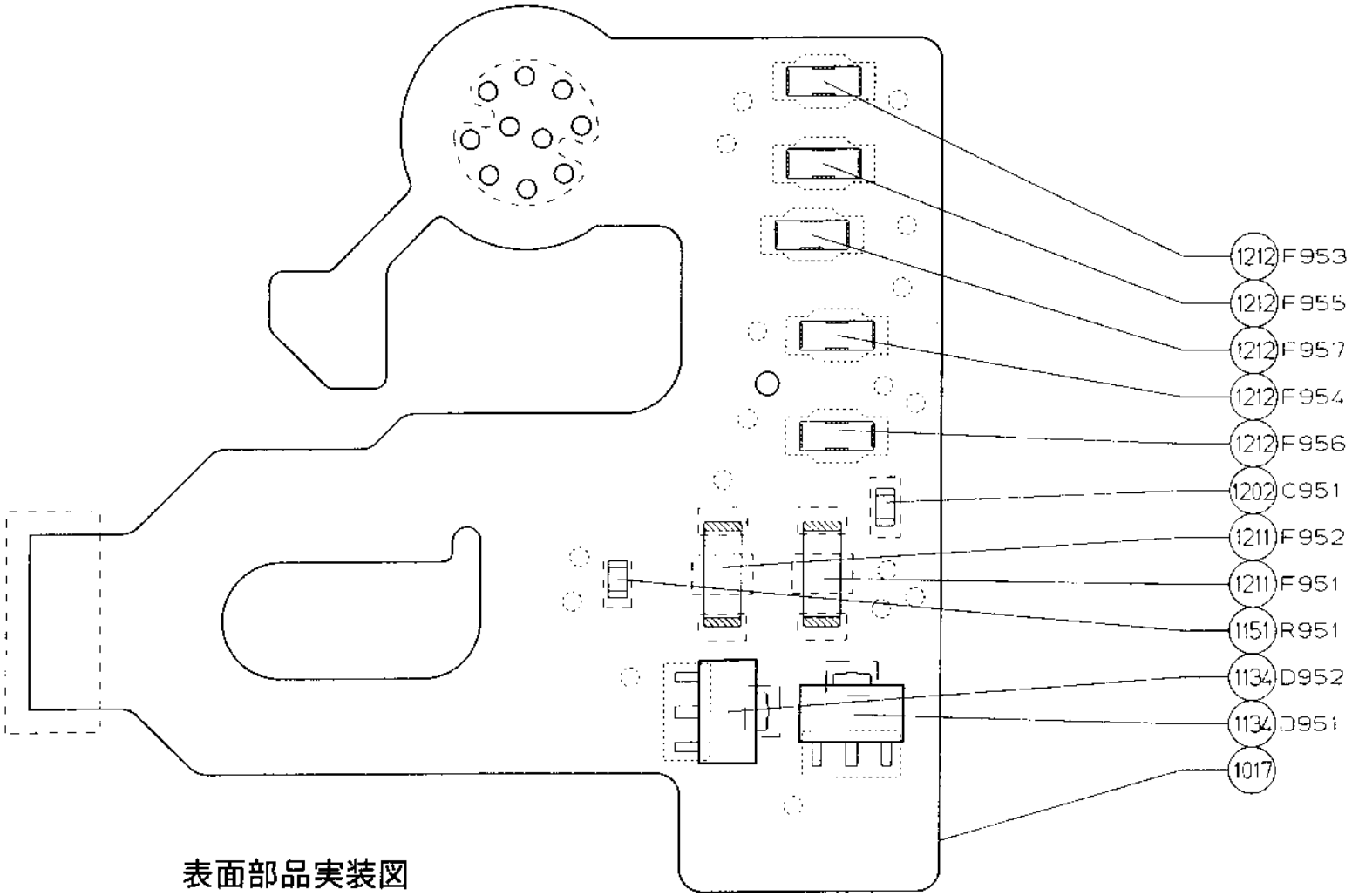
表面パターン図
Surface pattern figure

三つ葉ＦＰＣ
Triple operations FPC



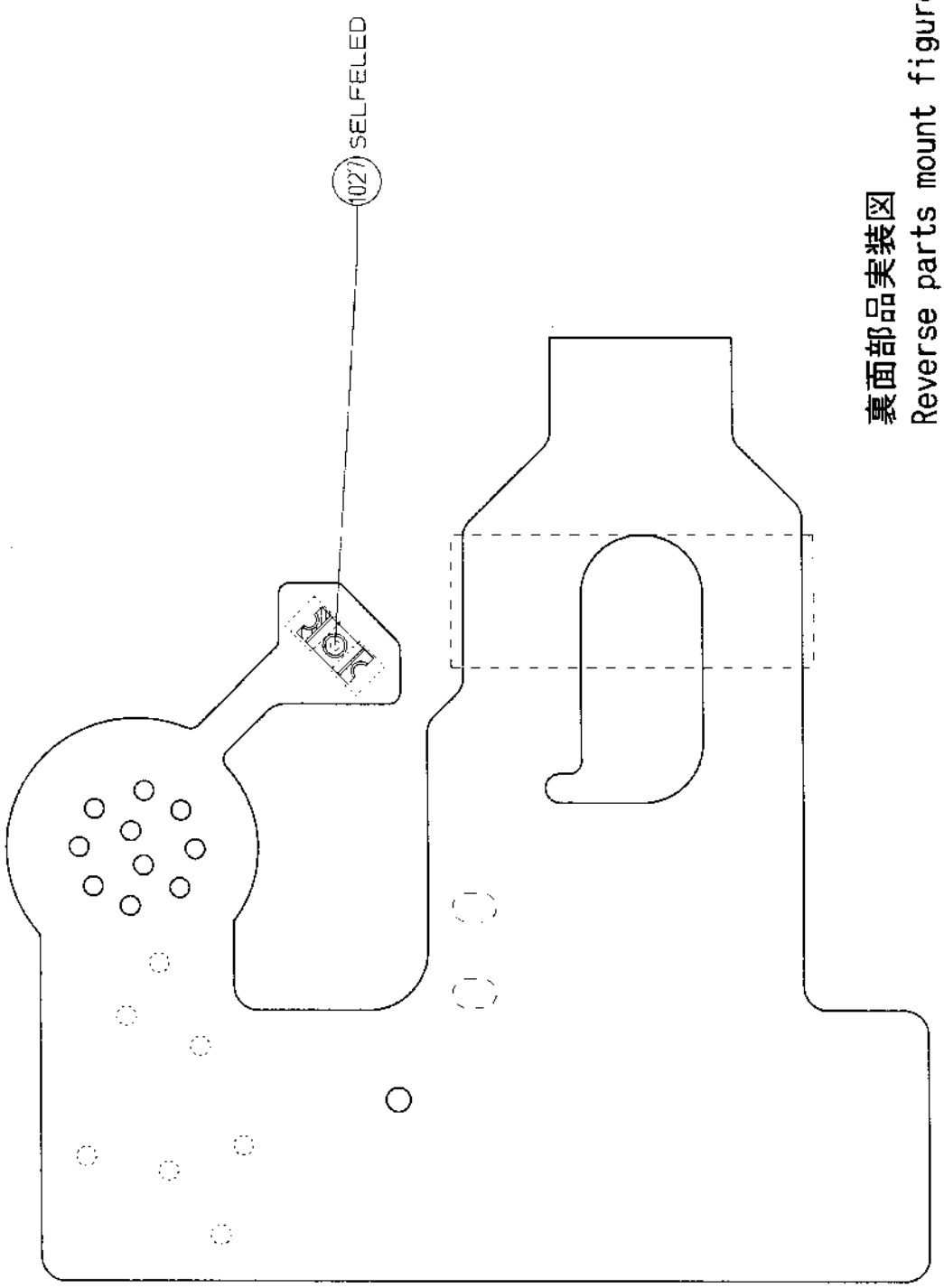
表面パターン図
Surface pattern figure

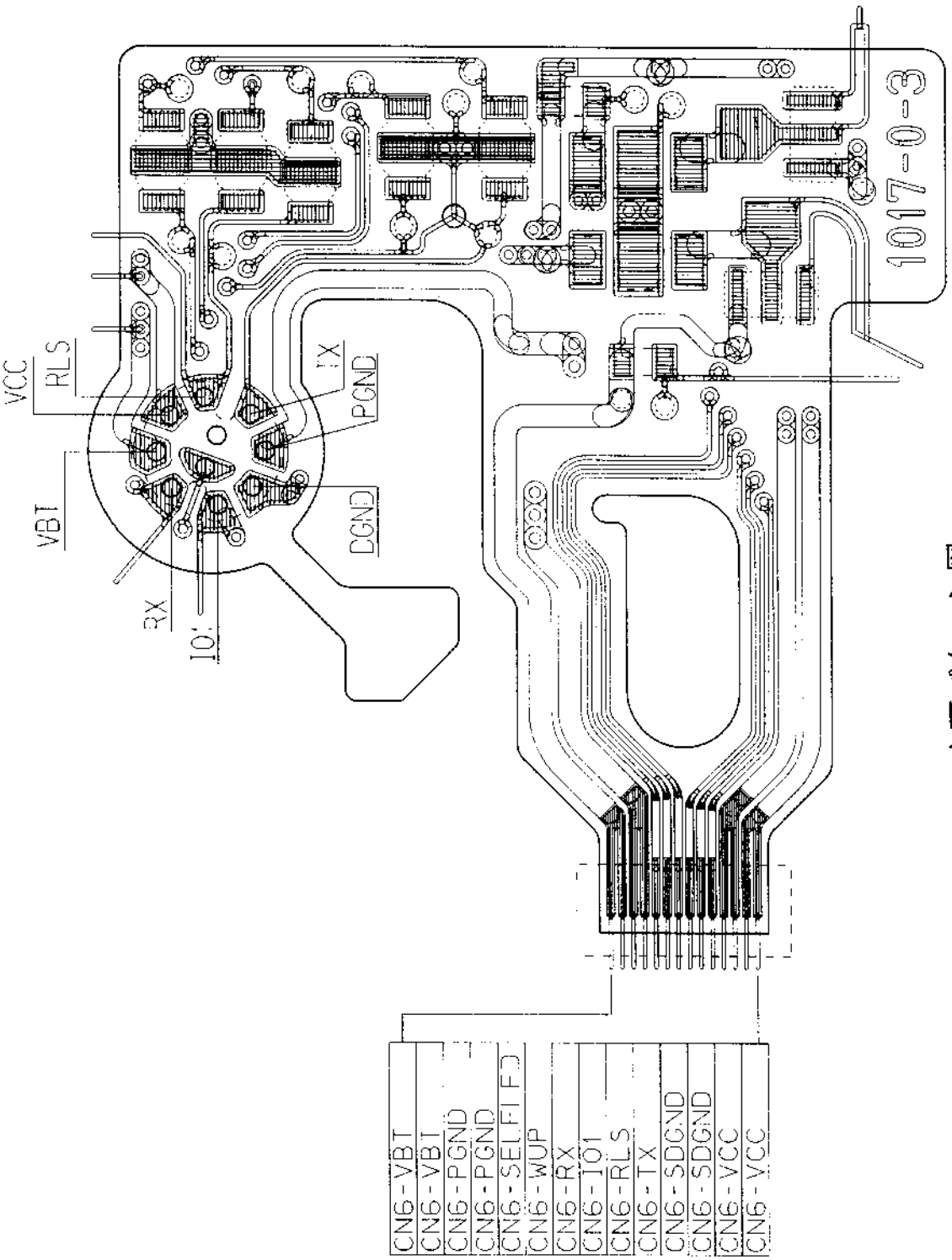
１０ピンターミナルＦＰＣ
10 PIN TERMINAL FPC



表面部品実装図
Surface parts mount figure

裏面部品実装図
Reverse parts mount figure

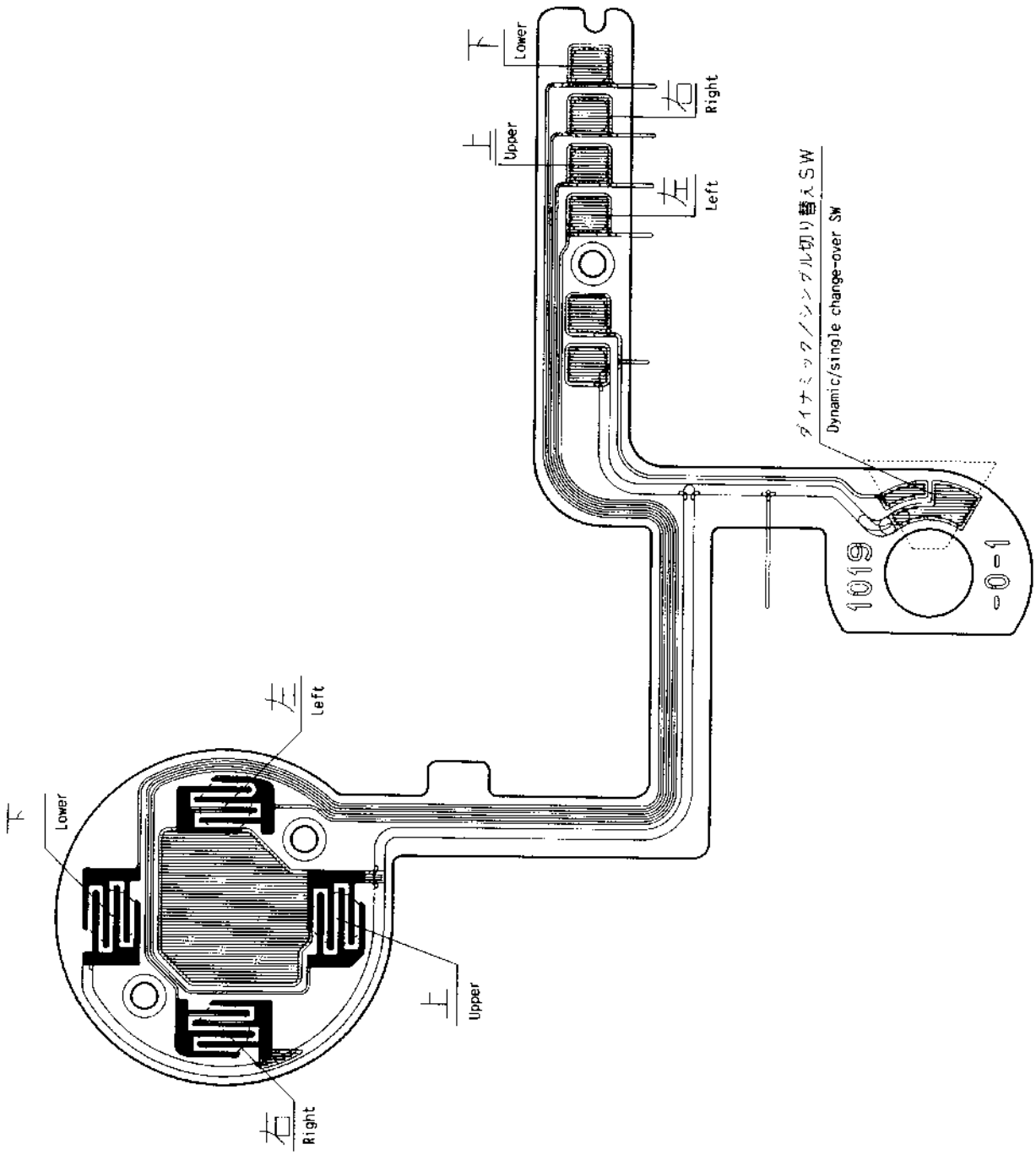




表面パターン図
Surface pattern figure

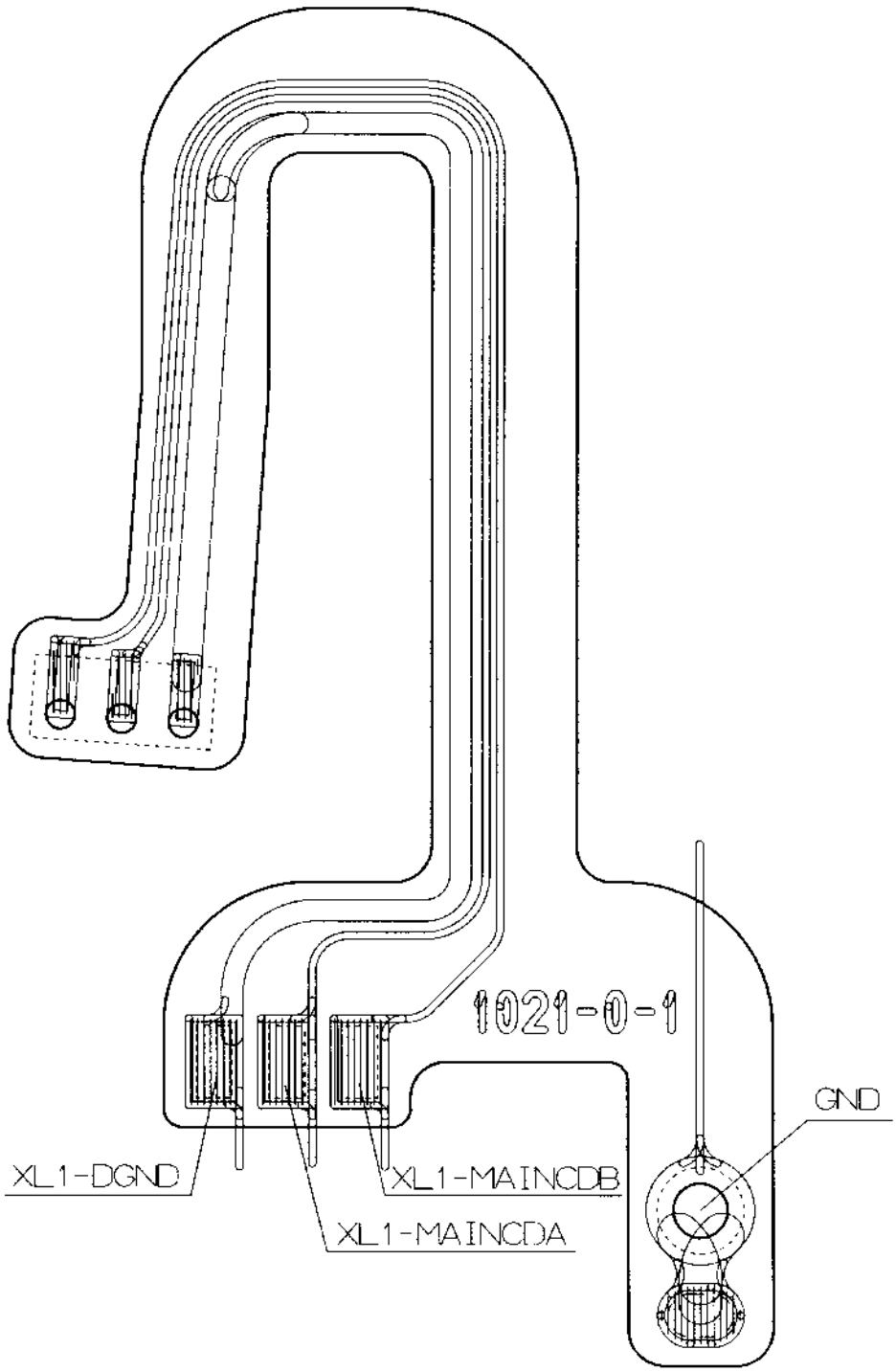
S.I FPC

表面パターン図
Surface pattern figure



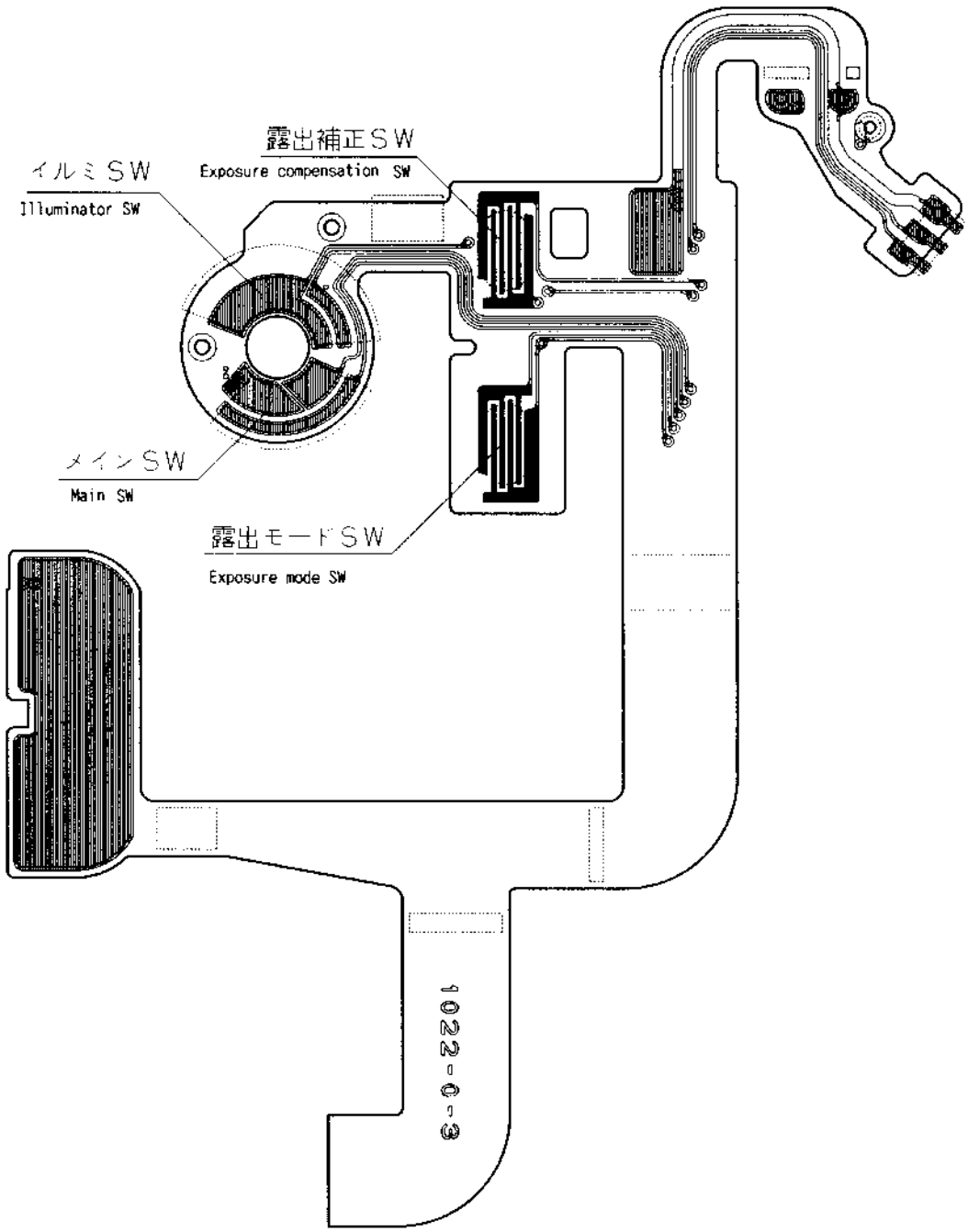
表面パターン図
Surface pattern figure

後コマンドダイヤルＦＰＣ
REAR COMMAND DIAL FPC



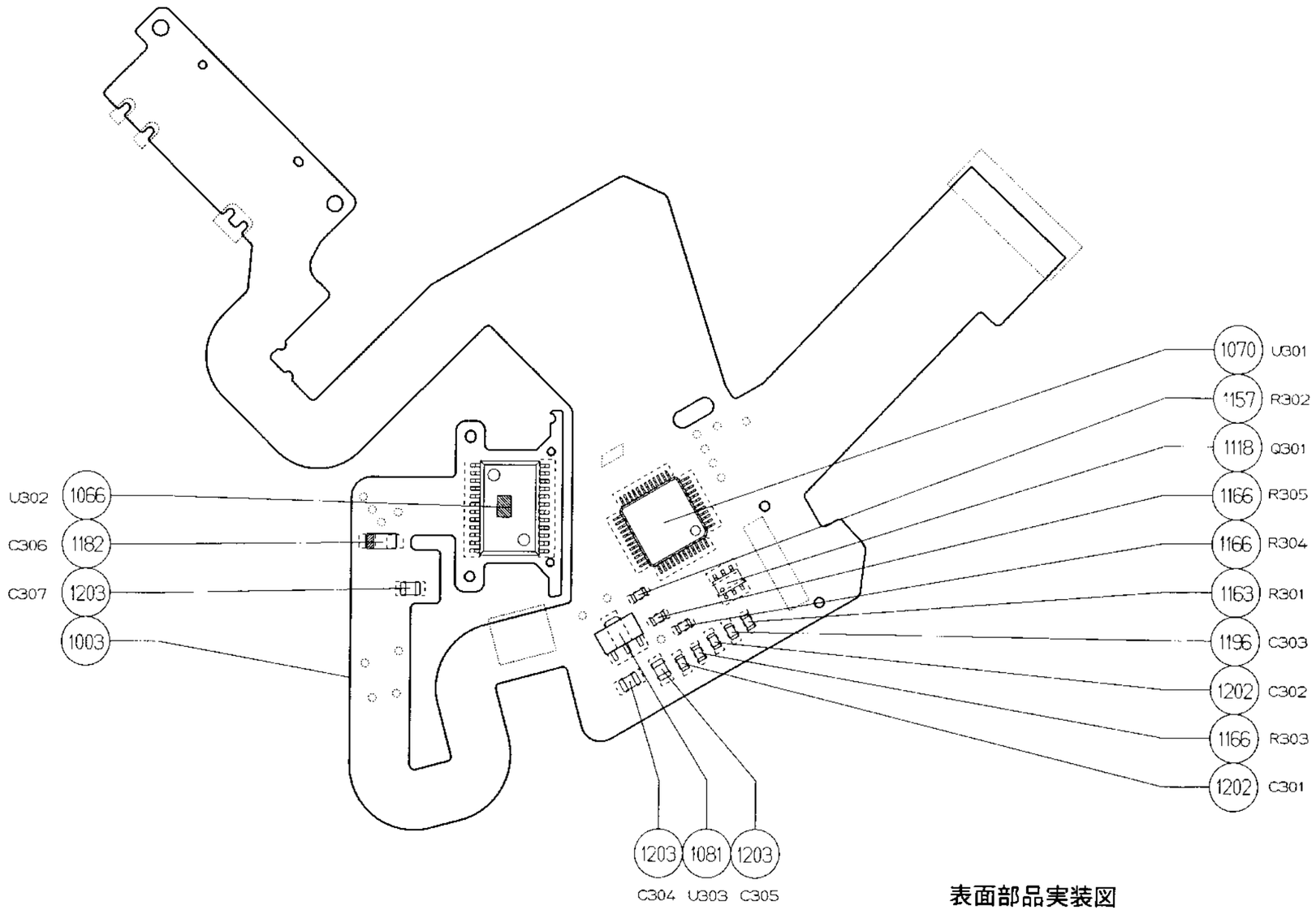
表面パターン図
Surface pattern figure

前コマンドダイヤルＦＰＣ
FRONT COMMAND DIAL FPC

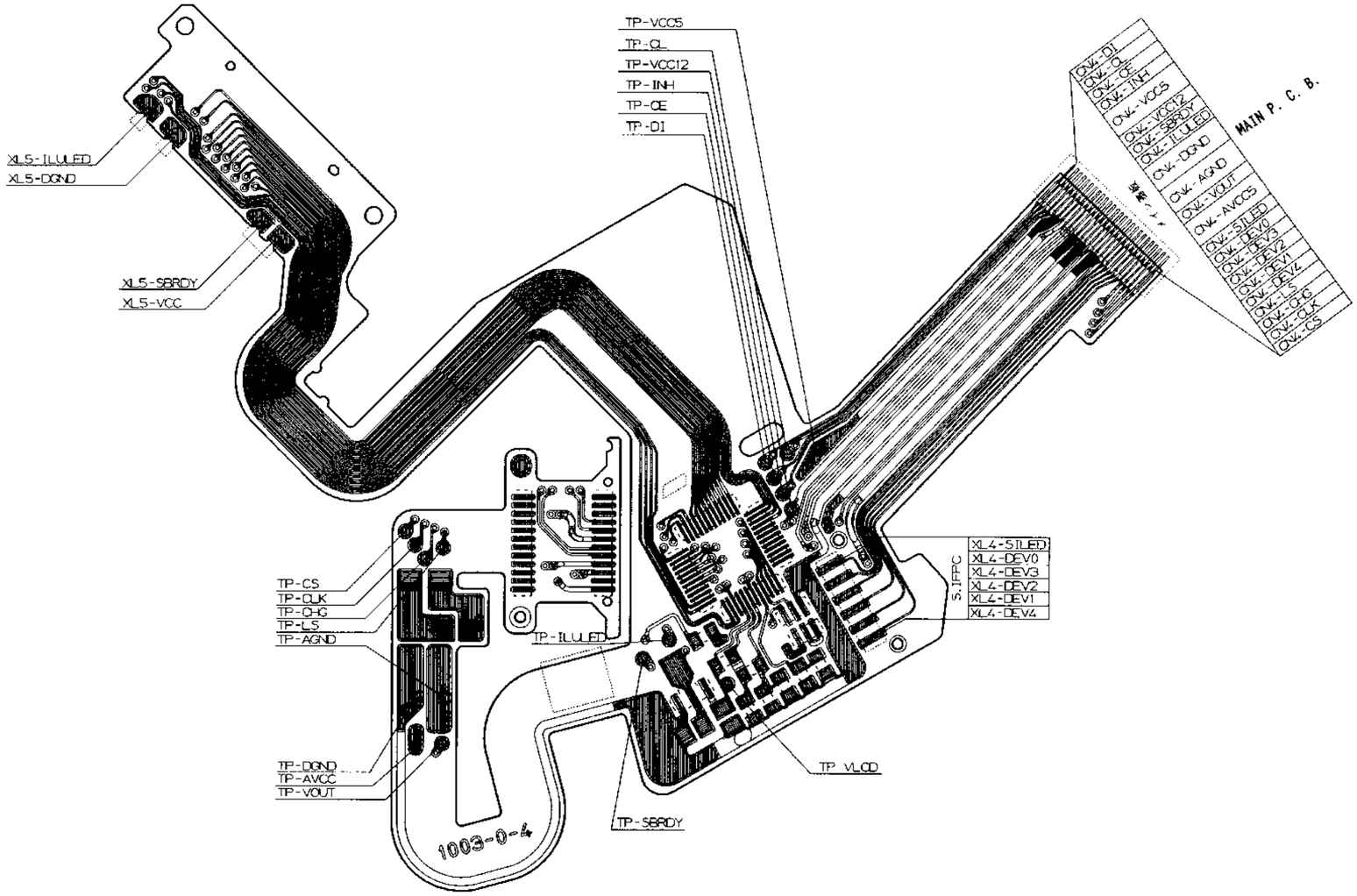


表面パターン図
Surface pattern figure

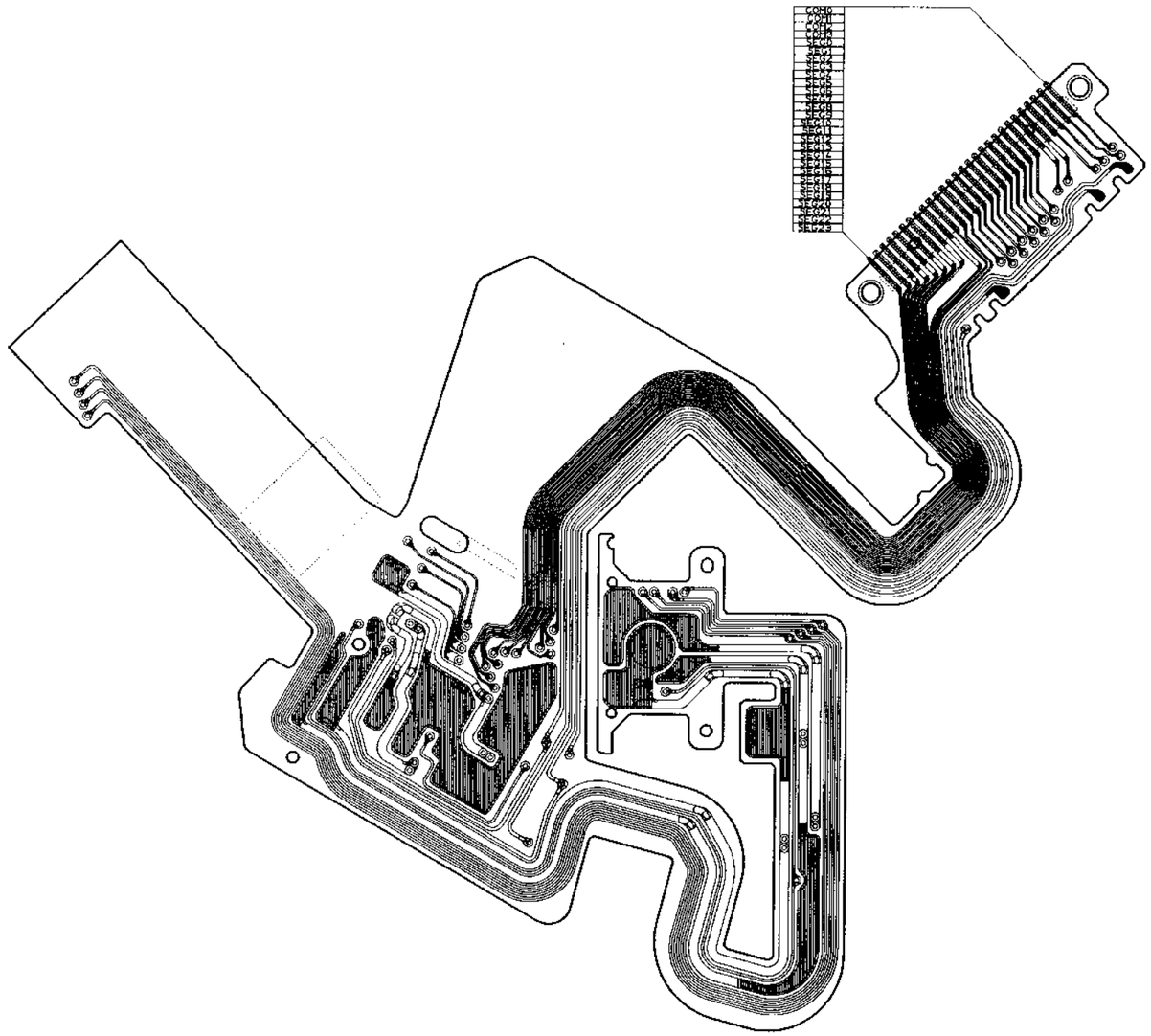
測光／内ＬＣＤ　ＦＰＣ
Metering/In LCD FPC



表面部品実装図
Surface parts mount figure



表面パターン図
Surface pattern figure



裏面パターン図
Reverse pattern figure

F100 EEPROM MAP

ADDRESS	CONTENTS	VER.4.XX		REMARKS
32 (0020)	(TTL LEVEL)	0 (00)		UNUSED FOR ADJUSTMENT
33 (0021)	TTL FLASH GAMMA	135 (87)		
34 (0022)	TTL FLASH LEVEL	110 (6E)		
|		|		
38 (0026)		110 (6E)		
39 (0027)	TTL MONITOR PRE FLASH GAMMA	120 (78)		
40 (0028)	TTL MONITOR PRE FLASH LEVEL	135 (87)		
|		|		
44 (002C)		135 (87)		
(002D)	CAMERA CONTROL DATA	72 (48)		
(002E)	〃	197 (C5)		
(002F)	〃	0 (00)		
(0030)	〃	39 (27)		
49 (0031)	BC ADJUSTMENT	122 (7A)		
50 (0032)	TEMPERATURE DETECTION ADJUSTMENT DATA	2 (02)		
51 (0033)	〃	250 (FA)		
52 (0034)	〃	1 (01)		
53 (0035)	〃	42 (2A)		
(0036)	BC ADJUSTMENT	102 (66)		UNUSED FOR ADJUSTMENT
(0037)	〃	92 (5C)		〃
(0038)	〃	96 (60)		〃
(0039)	〃	86 (56)		〃
(003A)	〃	0 (00)		〃
(003B)	〃	0 (00)		〃
(003C)	〃	106 (6A)		〃
(003D)	〃	89 (59)		〃
(003E)	〃	102 (66)		〃
(003F)	〃	84 (54)		〃
(0040)	〃	2 (02)		〃
(0041)	〃	209 (D1)		〃
(0042)	〃	147 (93)		〃
(0043)	〃	133 (85)		〃
(0044)	〃	143 (8F)		〃
(0045)	〃	122 (7A)		〃

サービス計画課 M

ADDRESS	CONTENTS	VER.4.XX		REMARKS
(0046)	BC ADJUSTMENT	1 (01)		UNUSED FOR ADJUSTMENT
(0047)	〃	44 (2C)		〃
(0048)	〃	155 (9B)		〃
(0049)	〃	129 (81)		〃
(004A)	〃	153 (99)		〃
(004B)	〃	113 (71)		〃
(004C)	〃	4 (04)		〃
(004D)	〃	179 (B3)		〃
78 (004E)	M1/8000 ADJUSTMENT DATA	0 (00)		
79 (004F)	〃	0 (00)		
(0050)	CAMERA CONTROL DATA	40 (28)		
(0051)	〃	45 (2D)		
(0052)	〃	5 (05)		
(0053)	〃	12 (0C)		
(0054)	〃	5 (05)		
(0055)	〃	19 (13)		
(0056)	〃	5 (05)		
(0057)	〃	11 (0B)		
(0058)	〃	11 (0B)		
(0059)	〃	6 (06)		
(005A)	〃	11 (0B)		
(005B)	〃	11 (0B)		
(005C)	〃	6 (06)		
(005D)	〃	0 (00)		
(005E)	〃	0 (00)		
(005F)	〃	7 (07)		
(0060)	〃	0 (00)		
(0061)	〃	0 (00)		
(0062)	〃	15 (0F)		
(0063)	〃	1 (01)		
(0064)	〃	50 (32)		
(0065)	〃	30 (1E)		
(0066)	〃	60 (3C)		
(0067)	〃	100 (64)		
(0068)	〃	70 (46)		
(0069)	〃	150 (96)		
(006A)	〃	6 (06)		
(006B)	〃	41 (29)		

サービス計画課 M

ADDRESS	CONTENTS	VER.4.XX		REMARKS
(006C)	CAMERA CONTROL DATA	30 (1E)		
(006D)	〃	30 (1E)		
(006E)	〃	43 (2B)		
(006F)	〃	145 (91)		
(0070)	〃	166 (A6)		
(0071)	〃	30 (1E)		
(0072)	〃	6 (06)		
(0073)	〃	0 (00)		
(0074)	〃	25 (19)		
(0075)	〃	5 (05)		
(0076)	〃	11 (0B)		
(0077)	〃	6 (06)		
(0078)	〃	50 (32)		
(0079)	〃	50 (32)		
(007A)	〃	36 (24)		
(007B)	〃	47 (2F)		
(007C)	〃	26 (1A)		
(007D)	〃	50 (32)		
(007E)	〃	19 (13)		
(007F)	〃	2 (02)		
(0080)	〃	3 (03)		
129 (0081)	FILM TONGUE	63 (3F)		
130 (0082)	〃	125 (7D)		
(0083)	CAMERA COMTROL DATA	5 (05)		
(0084)	〃	10 (0A)		
133 (0085)	〃	128 (80)		
(0086)	〃	255 (FF)		
(0087)	〃	0 (00)		
(0088)	〃	1 (01)		
(0089)	〃	104 (68)		
(008A)	〃	255 (FF)		
(008B)	〃	88 (58)		
(008C)	〃	32 (20)		
(008D)	〃	0 (00)		
142 (008E)	AE LEVEL	128 (80)		
|		|		
151 (0097)		128 (80)		
152 (0098)	AE GAMMA	128 (80)		

サービス計画課 M

ADDRESS	CONTENTS	VER.4.XX		REMARKS
153 (0099)	AE RANGE	128 (80)		
154 (009A)	AF ADJUSTMENT	0 (00)		
|		|		
1605 (0645)		0 (00)		
1606 (0646)	〃	119 (77)		
1607 (0647)	〃	85 (55)		
1608 (0648)	〃	34 (22)		
1608 (0649)	〃	34 (22)		
1610 (064A)	〃	102 (66)		
1611 (064B)	〃	102 (66)		
1612 (064C)	〃	119 (77)		
1613 (064D)	〃	170 (AA)		
1614 (064E)	〃	102 (66)		
1615 (064F)	〃	68 (44)		
1616 (0650)	〃	119 (77)		
1617 (0651)	〃	170 (AA)		
1618 (0652)	〃	102 (66)		
1619 (0653)	〃	68 (44)		
1620 (0654)	〃	0 (00)		
|		|		
1731 (06C3)		0 (00)		
1732 (06C4)	〃	0 (00)		
1733 (06C5)	〃	25 (19)		
1734 (06C6)	〃	240 (F0)		
|		|		
1761 (06E1)		240 (F0)		
1762 (06E2)	CAMERA CONTROL DATA	64 (40)		
1763 (06E3)	〃	88 (58)		
1764 (06E4)	〃	47 (2F)		
1765 (06E5)	〃	64 (40)		
1766 (06E6)	〃	44 (2C)		
1767 (06E7)	〃	46 (2E)		
1768 (06E8)	〃	40 (28)		
1769 (06E9)	〃	58 (3A)		
1770 (06EA)	〃	28 (1C)		
1771 (06EB)	〃	40 (28)		
1772 (06EC)	〃	39 (27)		
1773 (06ED)	〃	54 (36)		

サービス計画課 M

ADDRESS	CONTENTS	VER.4.XX		REMARKS
1774 (06EE)	CAMERA CONTROL DATA	28 (1C)		
1775 (06EF)	〃	37 (25)		
1776 (06F0)	〃	0 (00)		
｜		｜		
1789 (06FD)		0 (00)		
1790 (06FE)	〃	194 (C2)		
1791 (06FF)	〃	7 (07)		
1792 (0700)	〃	5 (05)		
1793 (0701)	〃	245 (F5)		
1794 (0702)	〃	248 (F8)		
1795 (0703)	〃	0 (00)		
1796 (0704)	〃	0 (00)		
1797 (0705)	〃	0 (00)		
1798 (0706)	〃	0 (00)		
1799 (0707)	〃	51 (33)		
1800 (0708)	〃	0 (00)		
1801 (0709)	〃	0 (00)		
1802 (070A)	〃	0 (00)		
1803 (070B)	〃	170 (AA)		
1804 (070C)	〃	5 (05)		
1805 (070D)	〃	20 (14)		
1806 (070E)	〃	4 (04)		
1807 (070F)	〃	179 (B3)		
1808 (0710)	〃	51 (33)		
1809 (0711)	〃	58 (3A)		
1810 (0712)	〃	0 (00)		
1811 (0713)	〃	40 (28)		
1812 (0714)	〃	16 (10)		
1813 (0715)	〃	0 (00)		
1814 (0716)	〃	0 (00)		
1815 (0717)	〃	122 (7A)		
1816 (0718)	〃	10 (0A)		
1817 (0719)	〃	2 (02)		
1818 (071A)	〃	4 (04)		
1819 (071B)	〃	3 (03)		
1820 (071C)	〃	240 (F0)		
1821 (071D)	〃	246 (F6)		
1822 (071E)	〃	2 (02)		

サービス計画課 M

ADDRESS	CONTENTS	VER.4.XX		REMARKS
1823 (071F)	CAMERA CONTROL DATA	14 (0E)		
1824 (0720)	〃	26 (1A)		
1825 (0721)	〃	38 (26)		
1826 (0722)	〃	50 (32)		
1827 (0723)	〃	62 (3E)		
1828 (0724)	〃	74 (4A)		
1829 (0725)	〃	246 (F6)		
1830 (0726)	〃	2 (02)		
1831 (0727)	〃	14 (0E)		
1832 (0728)	〃	26 (1A)		
1833 (0729)	〃	38 (26)		
1834 (072A)	〃	50 (32)		
1835 (072B)	〃	70 (46)		
1836 (072C)	〃	74 (4A)		
1837 (072D)	〃	254 (FE)		
1838 (072E)	〃	9 (09)		
1839 (072F)	〃	26 (1A)		
1840 (0730)	〃	38 (26)		
1841 (0731)	〃	50 (32)		
1842 (0732)	〃	62 (3E)		
1843 (0733)	〃	74 (4A)		
1844 (0734)	〃	58 (3A)		
1845 (0735)	〃	5 (05)		
1846 (0736)	〃	80 (50)		
1847 (0737)	〃	32 (20)		
1848 (0738)	〃	20 (14)		
1849 (0739)	〃	23 (17)		
1850 (073A)	〃	32 (20)		
1851 (073B)	〃	51 (33)		
1852 (073C)	〃	51 (33)		
1853 (073D)	〃	104 (68)		
1854 (073E)	〃	10 (0A)		
1855 (073F)	〃	32 (20)		
1856 (0740)	〃	64 (40)		
1857 (0741)	〃	24 (18)		
1858 (0742)	〃	36 (24)		
1859 (0743)	〃	64 (40)		
1860 (0744)	〃	32 (20)		

サービス計画課 M

ADDRESS	CONTENTS	VER.4.XX		REMARKS
1861 (0745)	CAMERA CONTROL DATA	38 (26)		
1862 (0746)	〃	64 (40)		
1863 (0747)	〃	13 (0D)		
1864 (0748)	〃	128 (80)		
1865 (0749)	〃	25 (19)		
1866 (074A)	〃	100 (64)		
1867 (074B)	〃	205 (CD)		
1868 (074C)	〃	26 (1A)		
1869 (074D)	〃	1 (01)		
1870 (074E)	〃	1 (01)		
1871 (074F)	〃	0 (00)		
1872 (0750)	〃	0 (00)		
1873 (0751)	〃	0 (00)		
1874 (0752)	〃	102 (66)		
1875 (0753)	〃	63 (3F)		
1876 (0754)	〃	102 (66)		
1877 (0755)	〃	63 (3F)		
1878 (0756)	〃	150 (96)		
1879 (0757)	〃	20 (14)		
1880 (0758)	〃	80 (50)		
1881 (0759)	〃	200 (C8)		
1882 (075A)	〃	0 (00)		
1883 (075B)	〃	12 (0C)		
1884 (075C)	〃	102 (66)		
1885 (075D)	〃	63 (3F)		
1886 (075E)	〃	6 (06)		
1887 (075F)	〃	63 (37)		
1888 (0760)	〃	6 (89)		
1889 (0761)	〃	55 (35)		
1890 (0762)	〃	137 (89)		
1891 (0763)	〃	53 (35)		
1892 (0764)	〃	6 (06)		
1893 (0765)	〃	53 (35)		
1894 (0766)	〃	137 (89)		
1895 (0767)	〃	54 (36)		
1896 (0768)	〃	3 (03)		
1897 (0769)	〃	232 (E8)		
1898 (076A)	〃	40 (28)		

サービス計画課 M

ADDRESS	CONTENTS	VER.4.XX		REMARKS
1899 (076B)	CAMERA CONTROL DATA	40 (28)		
1900 (076C)	〃	100 (64)		
1901 (076D)	〃	0 (00)		
1902 (076E)	〃	0 (00)		
1903 (076F)	〃	0 (00)		
1904 (0770)	〃	0 (00)		
1905 (0771)	〃	0 (00)		
1906 (0772)	〃	18 (12)		
1907 (0773)	〃	132 (84)		
1908 (0774)	〃	60 (3C)		
1909 (0775)	〃	45 (2D)		
1910 (0776)	〃	30 (1E)		
1911 (0777)	〃	20 (14)		
1912 (0778)	〃	0 (00)		
1913 (0779)	〃	125 (7D)		
1914 (077A)	〃	125 (7D)		
1915 (077B)	〃	1 (01)		
1916 (077C)	〃	0 (00)		
1917 (077D)	〃	0 (00)		
1918 (077E)	〃	48 (30)		
1919 (077F)	〃	16 (10)		
1920 (0780)	〃	58 (3A)		
1921 (0781)	〃	0 (00)		
1922 (0782)	〃	48 (30)		
1923 (0783)	〃	16 (10)		
1924 (0784)	〃	58 (3A)		
1925 (0785)	〃	0 (00)		
1926 (0786)	〃	48 (30)		
1927 (0787)	〃	16 (10)		
1928 (0788)	〃	58 (3A)		
1929 (0789)	〃	0 (00)		
1930 (078A)	〃	0 (00)		
1931 (078B)	〃	200 (C8)		
1932 (078C)	〃	7 (07)		
1933 (078D)	〃	208 (D0)		
1934 (078E)	〃	10 (0A)		
1935 (078F)	〃	30 (1E)		
1936 (0790)	〃	200 (C8)		

サービス計画課 M

ADDRESS	CONTENTS	VER.4.XX		REMARKS
1937 (0791)	CAMERA CONTROL DATA	100 (64)		
1938 (0792)	〃	2 (02)		
1939 (0793)	〃	50 (32)		
1940 (0794)	CHECK SUM DATA	—		
1941 (0795)	UNUSED			
1942 (0796)	MAKER OPTION	—		
1943 (0797)	〃	—		
1944 (0798)	〃	—		
1945 (0799)	〃	—		
1946 (079A)	RELEASE FREQUENCY	—		
1947 (079B)	〃	—		
1948 (079C)	CAMERA CONTROL DATA	—		
1949 (079D)	ERROR RECORD	—		
1950 (079E)	CAMERA CONTROL DATA	—		
|		|		
1974 (07B6)		—		

サービス計画課 M

JUL. 8, 1999

F100 EEPROM MAP

ADDRESS	CONTENTS	VER.5.XX		REMARKS
32 (0020)	(TTL LEVEL)	0 (00)		UNUSED FOR ADJUSTMENT
33 (0021)	TTL FLASH GAMMA	135 (87)		
34 (0022)	TTL FLASH LEVEL	110 (6E)		
|		|		
38 (0026)		110 (6E)		
39 (0027)	TTL MONITOR PRE FLASH GAMMA	120 (78)		
40 (0028)	TTL MONITOR PRE FLASH LEVEL	135 (87)		
|		|		
44 (002C)		135 (87)		
(002D)	CAMERA CONTROL DATA	197 (C5)		
(002E)	〃	39 (27)		
47 (002F)	BC ADJUSTMENT	122 (7A)		
48 (0030)	TEMPERATURE DETECTION ADJUSTMENT DATA	2 (02)		
49 (0031)	〃	250 (FA)		
50 (0032)	〃	1 (01)		
51 (0033)	〃	42 (2A)		
(0034)	BC ADJUSTMENT	102 (66)		UNUSED FOR ADJUSTMENT
(0035)	〃	92 (5C)		〃
(0036)	〃	96 (60)		〃
(0037)	〃	86 (56)		〃
(0038)	〃	0 (00)		〃
(0039)	〃	0 (00)		〃
(003A)	〃	106 (6A)		〃
(003B)	〃	89 (59)		〃
(003C)	〃	102 (66)		〃
(003D)	〃	84 (54)		〃
(003E)	〃	2 (02)		〃
(003F)	〃	209 (D1)		〃
(0040)	〃	147 (93)		〃
(0041)	〃	133 (85)		〃
(0042)	〃	143 (8F)		〃
(0043)	〃	122 (7A)		〃
(0044)	〃	1 (01)		〃
(0045)	〃	44 (2C)		〃

サービス計画課 M

ADDRESS	CONTENTS	VER.5.XX		REMARKS
(0046)	BC ADJUSTMENT	155 (9B)		UNUSED FOR ADJUSTMENT
(0047)	〃	129 (81)		〃
(0048)	〃	153 (99)		〃
(0049)	〃	113 (71)		〃
(004A)	〃	4 (04)		〃
(004B)	〃	179 (B3)		〃
76 (004C)	M1/8000 ADJUSTMENT DATA	0 (00)		
77 (004D)	〃	0 (00)		
(004E)	CAMERA CONTROL DATA	40 (28)		
(004F)	〃	45 (2D)		
(0050)	〃	5 (05)		
(0051)	〃	19 (13)		
(0052)	〃	11 (0B)		
(0053)	〃	11 (0B)		
(0054)	〃	6 (06)		
(0055)	〃	11 (0B)		
(0056)	〃	11 (0B)		
(0057)	〃	6 (06)		
(0058)	〃	7 (07)		
(0059)	〃	15 (0F)		
(005A)	〃	50 (32)		
(005B)	〃	30 (1E)		
(005C)	〃	60 (3C)		
(005D)	〃	100 (64)		
(005E)	〃	70 (46)		
(005F)	〃	150 (96)		
(0060)	〃	6 (06)		
(0061)	〃	41 (29)		
(0062)	〃	166 (A6)		
(0063)	〃	30 (1E)		
(0064)	〃	6 (06)		
(0065)	〃	25 (19)		
(0066)	〃	11 (0B)		
(0067)	〃	6 (06)		
(0068)	〃	50 (32)		
(0069)	〃	36 (24)		
(006A)	〃	47 (2F)		
(006B)	〃	26 (1A)		

サービス計画課 M

ADDRESS	CONTENTS	VER.5.XX		REMARKS
(006C)	CAMERA CONTROL DATA	19 (13)		
(006D)	〃	3 (03)		
110 (006E)	FILM TONGUE	63 (3F)		
111 (006F)	〃	125 (7D)		
(0070)	CAMERA CONTROL DATA	5 (05)		
(0071)	〃	10 (0A)		
114 (0072)	〃	128 (80)		
(0073)	〃	255 (FF)		
(0074)	〃	0 (00)		
117 (0075)	AE LEVEL	128 (80)		
|		|		
126 (007E)		128 (80)		
127 (007F)	AE GUMMA	128 (80)		
128 (0080)	AE RANGE	128 (80)		
129 (0081)	AF ADJUSTMENT	0 (00)		
|		|		
1580 (062C)		0 (00)		
1581 (062D)	〃	119 (77)		
1582 (062E)	〃	85 (55)		
1583 (062F)	〃	34 (22)		
1584 (0630)	〃	34 (22)		
1585 (0631)	〃	102 (66)		
1586 (0632)	〃	102 (66)		
1587 (0633)	〃	119 (77)		
1588 (0634)	〃	170 (AA)		
1589 (0635)	〃	102 (66)		
1590 (0636)	〃	68 (44)		
1591 (0637)	〃	119 (77)		
1592 (0638)	〃	170 (AA)		
1593 (0639)	〃	102 (66)		
1594 (063A)	〃	68 (44)		
1595 (063B)	〃	0 (00)		
1596 (063C)	〃	0 (00)		
|		|		
1707 (06AB)		0 (00)		
1708 (06AC)	〃	25 (19)		
1709 (06AD)	〃	240 (F0)		
|		|		

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ADDRESS	CONTENTS	VER.5.XX		REMARKS
1736 (06C8)	AF ADJUSTMENT	240 (F0)		
1737 (06C9)	CAMERA CONTROL DATA	0 (00)		
|		|		
1741 (06CD)		0 (00)		
1742 (06CE)	〃	58 (3A)		
1743 (06CF)	〃	20 (14)		
1744 (06D0)	〃	23 (17)		
1745 (06D1)	〃	32 (20)		
1746 (06D2)	〃	51 (33)		
1747 (06D3)	〃	10 (0A)		
1748 (06D4)	〃	32 (20)		
1749 (06D5)	〃	102 (66)		
1750 (06D6)	〃	36 (24)		
1751 (06D7)	〃	64 (40)		
1752 (06D8)	〃	38 (26)		
1753 (06D9)	〃	64 (40)		
1754 (06DA)	〃	13 (0D)		
1755 (06DB)	〃	128 (80)		
1756 (06DC)	〃	26 (1A)		
1757 (06DD)	〃	16 (10)		
1758 (06DE)	〃	102 (66)		
1759 (06DF)	〃	63 (3F)		
1760 (06E0)	〃	102 (66)		
1761 (06E1)	〃	63 (3F)		
1762 (06E2)	〃	128 (80)		
1763 (06E3)	〃	20 (14)		
1764 (06E4)	〃	80 (50)		
1765 (06E5)	〃	200 (C8)		
1766 (06E6)	〃	0 (00)		
1767 (06E7)	〃	12 (0C)		
1768 (06E8)	〃	102 (66)		
1769 (06E9)	〃	63 (3F)		
1770 (06EA)	〃	137 (89)		
1771 (06EB)	〃	53 (35)		
1772 (06EC)	〃	6 (06)		
1773 (06ED)	〃	53 (35)		
1774 (06EE)	〃	137 (89)		
1775 (06EF)	〃	54 (36)		

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ADDRESS	CONTENTS	VER.5.XX		REMARKS
1776 (06F0)	CAMERA CONTROL DATA	3 (03)		
1777 (06F1)	〃	232 (E8)		
1778 (06F2)	〃	40 (28)		
1779 (06F3)	〃	40 (28)		
1780 (06F4)	〃	125 (7D)		
1781 (06F5)	〃	1 (01)		
1782 (06F6)	〃	0 (00)		
1783 (06F7)	CHECK SUM	—		
1784 (06F8)	MAKER OPTION	—		
1785 (06F9)	〃	—		
1786 (06FA)	〃	—		
1787 (06FB)	〃	—		
1788 (06FC)	RELEASE FREQUENCY	—		
1789 (06FD)	〃	—		
1790 (06FE)	CAMERA CONTROL DATA	—		
1791 (06FF)	ERROR RECORD	—		
1792 (0700)	CAMERA CONTROL DATA	—		
｜		｜		
1801 (0709)		—		

INSPECTION STANDARD AND TOOLS

CONDITION FOR INSPECTION

Normal temperature : Temperature 20 ± 5 ℃ Humidity 65 ± 20 %

Power source : 5 . 5 V 5 A or more at 0 . 4 Ω load

Light source : 2 , 856 ° K

K coefficient : 1 . 1 6

1.INSPECTION STANDARD

1. The EV value in the description is the EV value of ISO100.
2. The symbol of EV conversion for errors is as follows. "+" is used for overexposure and "-" underexposure .
3. Cel 1 - cell 10 for metering are cells for 10-divided SPD as shown below.
   On the finder.
   Cell 1 : Center doughnut / Cell 2 : Left upper / Cell 3 : Right upper / Cell 4 : Left lower
   Cell 5 : Right lower / Cell 6 : Spot-center / Cell 7 : Spot-left / Cell 8 : Spot-right
   Cell 9 : Spot- upper / Cell 1 0 : Spot-lower
4. Cel 1 - cell 5 for metering are cells for 5-divided TTL SPD for TTL as shown below.
   On the finder.
   Cell 1 : Center / Cell 2 : Left upper / Cell 3 : Right upper / Cell 4 : Left lower
   Cell 5 : Right lower

Evaluation items	Standard	Remarks
Main mirror 4 5° position	Up and down Within 4 5 ′ Left and right Within 2 5 ′ Distortion Within 8 ′	No gap when mirror-up J19002 · J18197 · J1803 Hexagonal key
Sub mirror 4 7.7 5° position	Up and down Within − 5 $^{+10}_{-25}$ ′ Distortion Within 8 ′	J19002 · J18268-1 Hexagonal key
Lens release pin	Protrusion height 1.4 $^{+0.05}_{-0.2}$ mm	
Lens contact	Contact width 1.5 ±0.1 mm or more	
Aperture lever	Depth from bayonet surface 5.3mm~6.7mm 3.4 height (when using a tool)) 3.4±0.1 mm Horizontal position 1 8.7 $^{+0.35}_{-0.30}$ mm	J18004
AF coupling M B F	Protrusion height 1.7 ± 0.2 mm Standard 4 6.6 7 ±0.03mm Parallel Within 0.0 3 mm Clearance between outside rail and inner rail 0.2 3 ±0.02mm Difference between inner rail and aperture surface 0.2 mm or more	J18001 Dial gauge
Film detection switch	Hight from guide 2 ±0.2mm OFF position 0.3 mm or more Whole stroke should be lower than the sprocket surface.	
Infinity	± 4 0″ (± 6 0 μm)	J18010

Evaluation items	Standard			Remarks
Contacts of the rear cover	Hight		2.5 ±0.15mm	
	Stroke		1.35 $^{+0.3}_{0.2}$ mm	
A F alignment	Y a w	Center	0 ± 4 mrad	
		Side	0 ± 10 mrad	
	P i t c h	Center	0 ± 5 mrad	
		Side	0 ± 10 mrad	
Focusing range	A F ligthting range Within 0 ± 80 ~ 120 μm			
AF assist lamp	Turn on the AF assist lamp under EV6			
Metering	AF50/1.4D	AMP	Error of recognition (EV 0 ~ EV 21) Within ± 0.5 EV	
		CW	Error of recognition (EV 0 ~ EV 21) Within ± 0.5 EV	
		SPOT 5 area	Error of recognition (EV 3 ~ EV 21) Within ± 0.5 EV	
Error of Metering mode	From CW AF50/1.4D			
	AMP	Within ± 1/3 EV (EV 0 ~ EV 10)		
	SPOT	Within ± 1/3 EV (EV3 ~ EV)		
Center weighted	Φ 12 mm circle AF50/1.4D 75 % or more			
Difference by focusing screen	Stnderd from B type focusing screen E type focusing screen Within ± 1/3 EV			
Position of A E SPD	Stnderd from focusing screen Up and down and Left and right 0 ±0.5 mm			
A E accuracy	Each A E mode and each Metering mode			
	1/8000 ~ 1/4000		Within ± 0.75 EV (Without AMP)	
	(1/4000) ~ 1/2000		Within ± 0.5 EV	
	(1/2000) ~		Within ± 0.4 EV	
	Tolerance		Within + 0.3 EV	
	Difference by A E mode		Within ± 0.4 EV	
	Difference by Metering mode		Within ± 0.3 EV	

Evaluation items	Standard	Remarks
AE－A accuracy (CW)	EV15 F8 (1／500)	Within ±0．5Tv
	Tolerance	Within 0．3Tv
	EV12 F5.6 (1／125)	Within ±0．5Tv
	Tolerance	Within 0．3Tv
	EV6 F2.8 (1／8)	Within ±0．5Tv
	Tolerance	Within 0．3Tv
AE－S accuracy (CW)	EV15 1／500 (F8)	Within ±0．5Av
	Tolerance	Within 0．5Av
	EV12 1／125 (F5.6)	Within ±0．5Av
	Tolerance	Within 0．5Av
	EV6 1／8 (F2.8)	Within ±0．5Av
	Tolerance	Within 0．5Av
Shutter speed accuracy	1／8000～1/4000	Within ±0.65dTv
	(1／4000) ～1/2000	Within ±0.35dTv
	(1／2000) ～30秒	Within ±0.2dTv
	1/250	Within 4.14ms $^{+0.2}_{0.1}$dTv
	Tolerance	
	1／8000～1/5000	Within 0.45Tv
	1／4000～1/2500	Within 0.3Tv
	1／2000～30秒	Within 0.2Tv
Curtain speed (1/8000)	Front and rear curtain (21mm)	Within 2.58 ±0.08ms
Synchronization	Time lag (21mm) 0.1～0.4ms	
	Allowance after turning ON (21mm)	1.1ms or more
Finder	Visual field rate 96±2%	
	Prallax Up and down and Left and right	Within 0.5mm
	Eye point Distance to eyepiece lens	19±2mm
Consumption Standby current	Main switch OFF 60μA or less	Sub・onetime Ver
	Do not push the oll of operation button	100μA or less
	Main switch ON 60μA or less	Sub・onetime Ver
	(Power OFF)	100μA or less
	Main switch ON 330mA or less	EV12
	(Power ON)	50／1．4
	Main switch ON 330mA or less	EV12
	(Illumnater ON)	50／1．4
	Resistance of hotshoe and GND	50mΩ or less

Evaluation items	Standard		Remarks
B C level	Primary level	Standard battery pack Alkaline battery×4	Lower direction : 4.2 ± 0.2V Restoring direction : 4.7 ± 0.2V
		MS－13 For CR123	Lower direction : 4.5 ± 0.2V Restoring direction : 5.0 ± 0.2V
		MB－15 Alkaline battery× 6	Lower direction : 5.8 ± 0.2V Restoring direction : 6.2 ± 0.2V
		MB－15 Ni－MN-15	Lower direction : 6.5 ± 0.2V Restoring direction : 7.2 ± 0.2V
	Secondary level	Standard battery pack Alkaline battery×4	Lower direction : 4.1 ± 0.2V Restoring direction : 4.5 ± 0.2V
		MS－13 For CR123	Lower direction : 4.2 ± 0.2V Restoring direction : 4.7 ± 0.2V
		MB－15 Alkaline battery× 6	Lower direction : 5.5 ± 0.2V Restoring direction : 6.1 ± 0.2V
		MB－15 Ni－MN-15	Lower direction : 6.0 ± 0.2V Restoring direction : 7.0 ± 0.2V
Pre-release timer time	After pre-release switch OFF After release		6 ± 0.5 ms 1 ± 0.5 ms
Battery life on bulb mode	Alkaline battery×4 LR6 : 4H or more Lithum× 4 FR6 : 7H or more Alkaline battery× 6 LR6 : 8H or more Lithum× 6 FR6 : 10H or more Ni－MN Pack : 4H or more Lithum× 2 CR123 : 3H or more		
Image dimension 50/1.4 F5.6	Width 36 $^{+0.4}_{-0.0}$ mm Lenght 24 $^{+0.4}_{-0.0}$ mm R of corners R 0. 4 mm or less		
Frame space	Winding S・C mode Winding CS mode		2 ± 1.0 mm or less 2 ± 1.0 mm or less

2. Tools

1. Dedicated tools

There is provided only an adjustment software as a new tool for F 100.

In addition, the sub mirror angle adjustment tool J18268 for F 5 can be a commonly used tool for both of F100 and F5 by remodeling "J18268" to "J18268-1" by Service Planning Sec., Imaging Products Div.

Tool No.	Name of tool	Others
~~J15328-1~~	~~10-pin connector communication tool~~	~~For F5~~
J18266	Z adjustment lens	For F5
J18268-1	Sub mirror angle adjustment tool	For F5、F100
J18197	Reflection mirror	For F90
J18273	AF chart	For F5
J18296A	Inspection and adjustment software	For NEC 5.0 inch
J18296B	Inspection and adjustment software	For NEC 3.5 inch
J18296C	Inspection and adjustment software	ForIBM 5.0 inch
J18296D	Inspection and adjustment software	ForIBM 3.5 inch

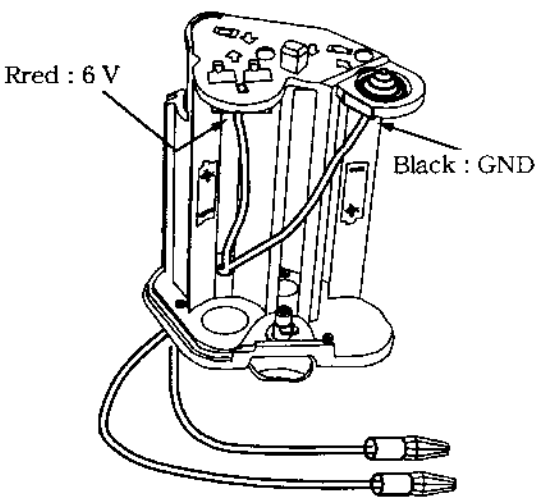
2. Hand-made tool

Through remodeling the battery holder, it makes possible to mechanically change the battery identification switch mode and to supply the set voltage from the stabilized power source to the camera.

① Remove the three screws from the bottom of battery holder and then remove the two battery contacts.

② While removing the bottom of battery contacts, assemble the battery holder.

③ Make a hole on the bottom of battery holder.



④ As shown in the figure, remodel the battery contact in order to attach it on to the battery holder, and then fix it on the GND of battery holder by an adhesive.

⑤ Prepare two lead wires and connect them as shown in the figure.

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