SAMSUNG

SERVICE MANUAL

GX 10

SAMSUNG TECHWIN

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Ⅰ. SPECIFICATION

1. SPECIFICATION

Image Sensor
- Type : 23.5mm × 15.7mmCCD
- Effective Pixel : Approx. 10.20 Mega-pixel
- Total Pixel : Approx. 10.75 Mega-pixel

Lens
- Mount : PENTAX KAF2 bayonet mount
- Usable Lens : Schneider D-XENON, D-XENOGON Lens
  * All PENTAX DSLR lenses are available.
  * KAF2 mount lenses, KAF mount lenses, KA mount lenses

Viewfinder
- Type : Pentaprism, Natural-Bright-Matte Focusing Screen
- Field of View : 95%
- Magnification : 0.95X (50mm F1.4 Lens · ∞)
- Diopter Adjustment : -2.5m^{-1} ~ 1.5m^{-1}
- LCD Monitor : Low-temperature polysilicon TFT colour LCD monitor
  2.5" (approximately 210,000 dots)

Focusing
- Type : TTL phase-matching 11 points wide AF
- Modes : AF Single (with focus lock), Manual focus, Continuous AF

Shutter
- Type : Electronically controlled vertical-run focal plane shutter
- Speed : Auto : 1/4000sec ~ 30sec (No step)
  Manual : 1/4000sec ~ 30sec (1/3EV step or 1/2EV step)
  with Bulb

Exposure Control
- Metering System : TTL open-aperture 16-segment
  Metering : Multi, Center-weighted, Spot
- Compensation : ±3(1/3EV or 1/2EV steps)
- ISO Equivalent : Auto, 100, 200, 400, 800, 1600

Flash
- Type : Built-in retractable P-TTL Manual pop-up flash
- Modes : Auto, Fill-in, Auto+Red eye, Fill-in+Red eye, Front curtain synchro,
  Front curtain synchro+Red eye, Rear curtain synchro
- Guide Number : 11(at ISO 100)
- Angle of View Coverage : 28mm wide-angle (equivalent to 35mm)
- Sync. Speed : 1/180 sec.
- Recharging Time : Approx. 3 sec.
- External Flash : SEF-36PZF, SEF-54PZF (optional)

White Balance
- Auto, Daylight, Shade, Cloudy, Tungsten, Fluorescent (W, D, N), Flash, Manual, Colour Temperature 1, 2, 3

Shooting
- Modes : Auto, Program, Sensitivity Priority, Shutter Priority, Aperture Priority,
  Shutter&Aperture Priority, Manual, Bulb, Flash X-sync, User mode
- Drive Modes : Single, Continuous, Auto Bracket
- Continuous : 3 fps up to 9 frames (RAW), Depending on the memory capacity (JPEG)

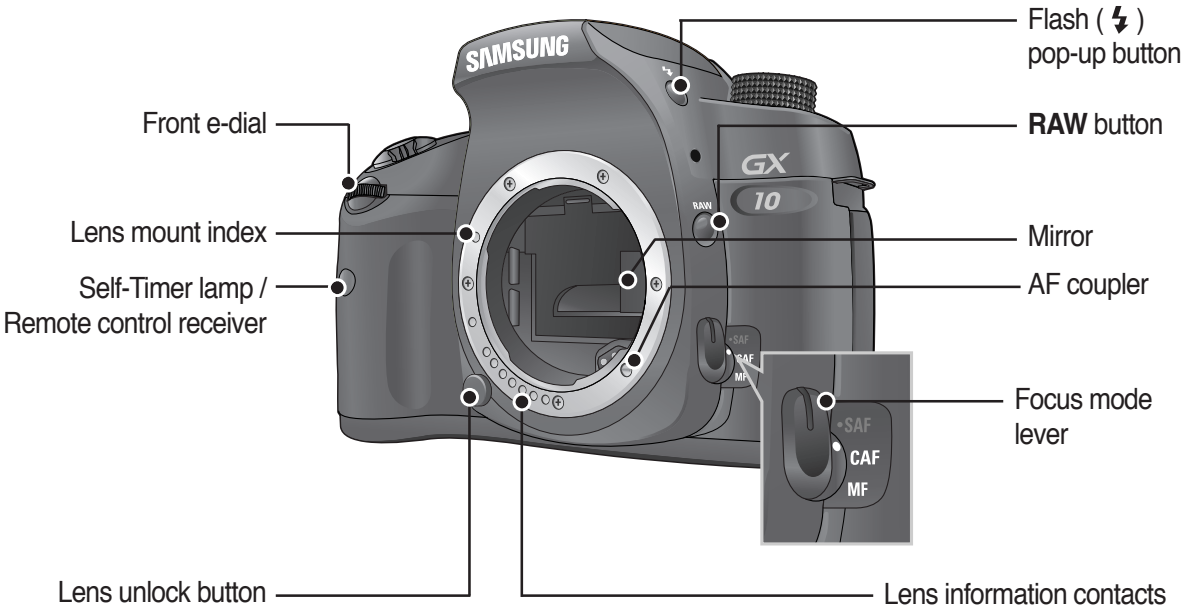
OPS	- CCD shift type
Dust Removal	- by removing the CCD and SP coating
Self-timer	- 2 sec., 12 sec., Remote control, Remote control 3 sec (Compatible with PENTAX remote control, Optional)
Storage	- Media : SD/MMC (up to 2GB guaranteed), SDHC (up to 4GB guaranteed) - File Format : RAW (DNG), JPEG (DCF), EXIF 2.21, DPOF 1.1, PictBridge 1.0 - Image Size : 10M : 3872X2592, 6M : 3008X2000, 2M : 1824X1216(JPEG) 10M : 3872X2592(RAW) - Capacity (512MB) : 10M : RAW 30 10M : Super Fine 104 Fine 178 Normal 306 6M : Super Fine 174 Fine 297 Normal 512 2M : Super Fine 474 Fine 802 Normal 1360 ※ These figures are measured under Samsung's standard conditions and may vary depending on shooting conditions and camera settings.
Image Play	- Type : Single image, Thumbnails, Slide show - Editing : Rotate, Digital Filter - Digital Filter : B&W, Sepia, Soft, Slim, Brightness
Interface	- Digital Output Connector : USB 2.0 (HI-SPEED) - Video Output : NTSC, PAL (user selectable) - DC Power Input Connector : DC 8.3V, 2A (100~240V)
Power Source	- Lithium Ion Battery : SLB-1674, Charger : SBC-L6 - AC adapter : SAC-82 (optional)
Dimensions (WxHxD)	- 142x101x71.5mm (excluding the projecting parts of the camera)
Weight	- 710g (without batteries and card)
Operating Temperature	- 0 ~ 40°C
Operating Humidity	- 5 ~ 85%
Software	- Camera Driver : Storage Driver (Windows 2000/ME/XP, Mac OS 10.2 or later) - Application : Digimax Master, Digimax RAW Converter, Adobe Reader

2. System Requirements

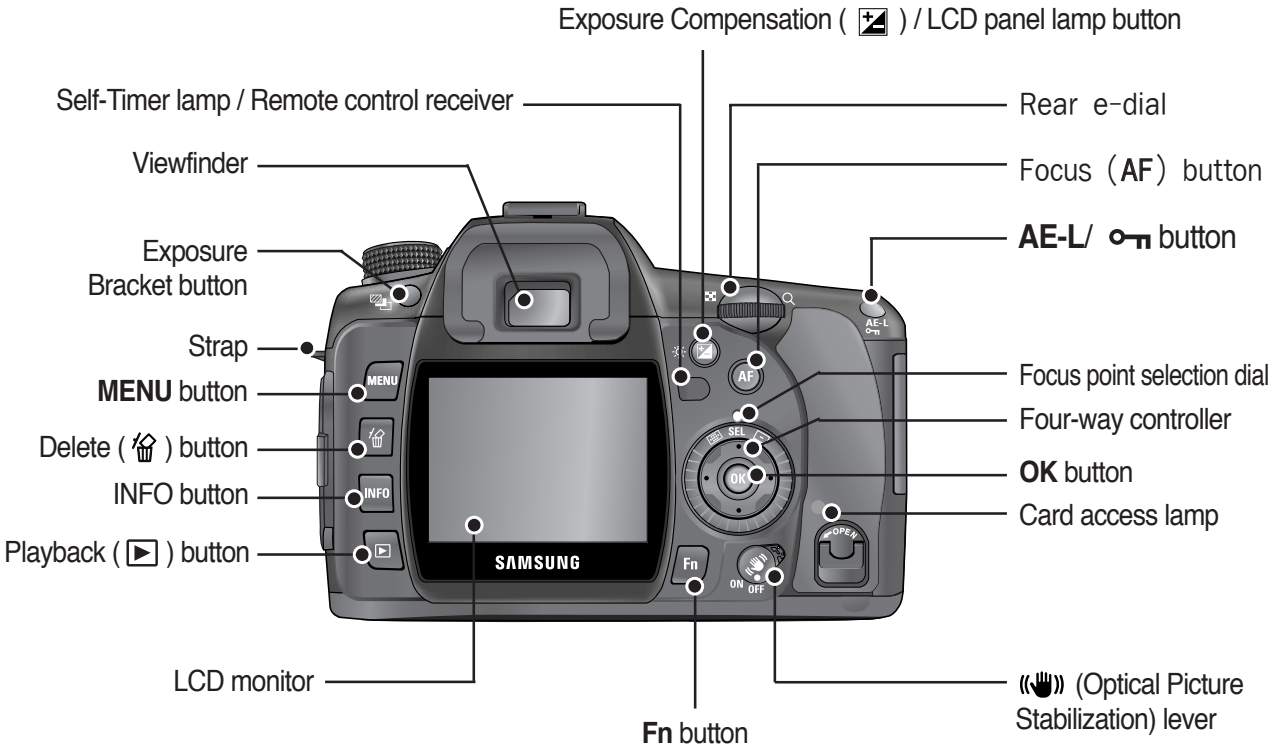
For Windows	For Macintosh
PC with processor better than Pentium III 450Mz (Pentium 700MHz recommended)	Power Mac G4 or later
Windows 2000/ME/XP	Mac OS 10.2 or later
Minimum 256MB RAM (XP : 512MB) 250MB of available hard disk space (1GB recommended)	Minimum 256MB RAM 250MB of available hard-disk space
USB port	USB port
CD-ROM drive	CD-ROM drive
1024x768 pixels, 16-bit colour display compatible monitor (24-bit colour display recommended)	

3. Names of Working Parts

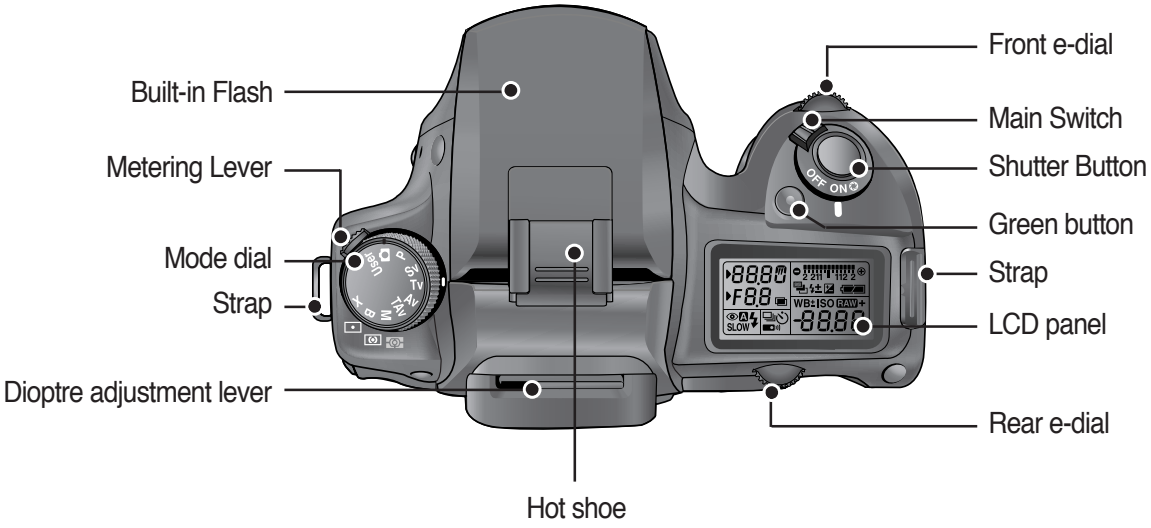
Front



Back

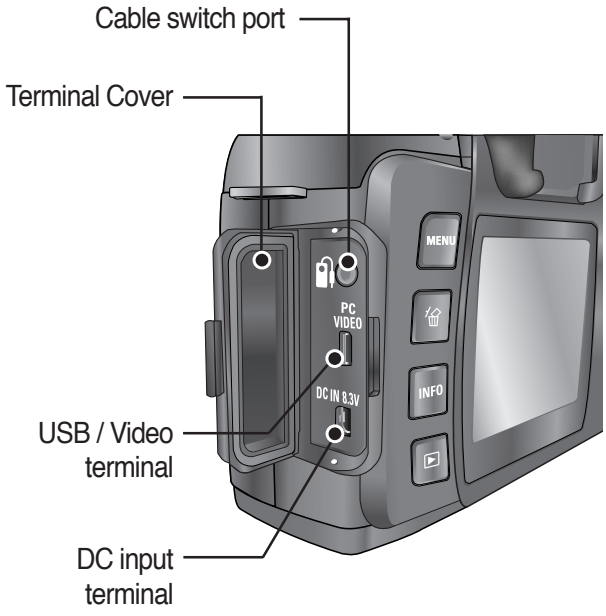


Top



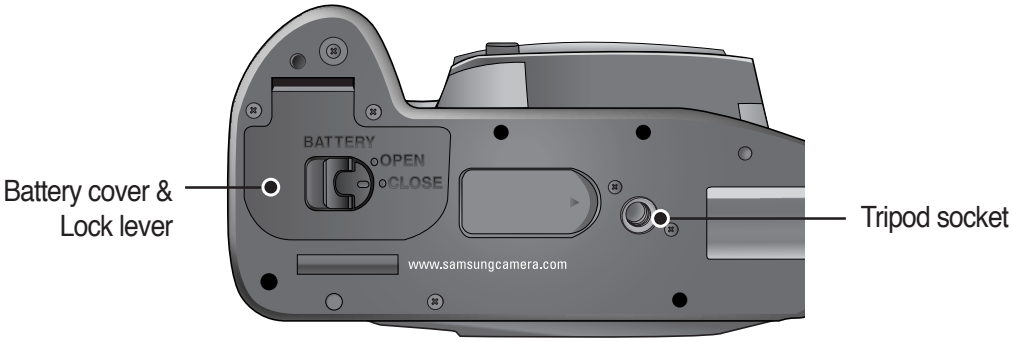
Side

Connection ports

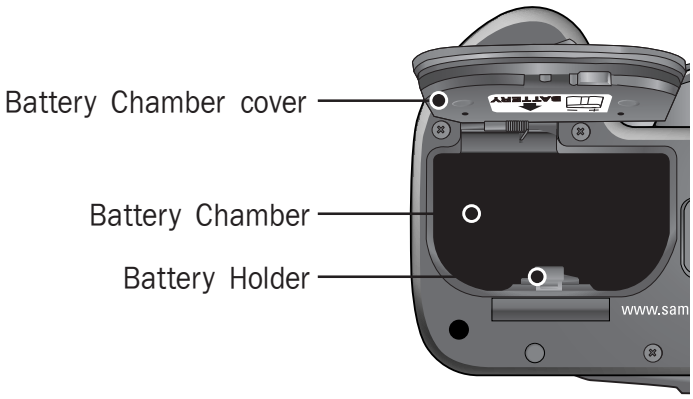


Memory Card Slot

Bottom



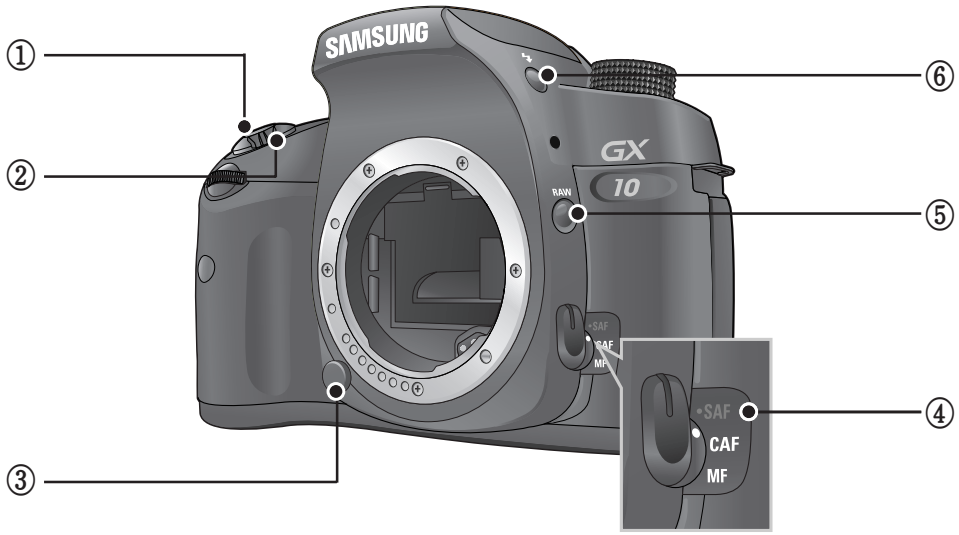
Battery Chamber



4. Using the Button Functions

Capture Mode

■ Functions of buttons used during shooting.



① Shutter release button
Press to capture images.

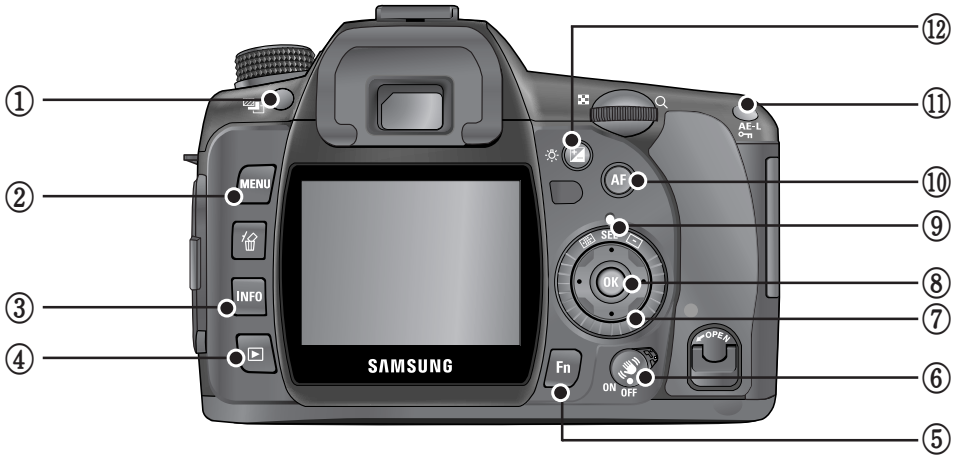
② Main switch
Move to turn the power on/off and confirm the depth of field (Preview)

③ Lens unlock button
Press to detach lens.

④ Focus mode lever
Switches between Autofocus mode and Manual focus mode.

⑤ **RAW** button
Press to capture a JPEG and RAW file at the same time.

⑥ Flash pop-up button (ϟ)
Press to pop up the built-in flash.



① Exposure bracket button
Sets the Exposure bracket.

② **MENU** button
Displays the [CAPTURE MENU], [CUSTOM1 MENU], [CUSTOM2 MENU], [SETUP MENU] and [PLAYBACK MENU] menu.

③ **INFO** butto
Press to show shooting information on the LCD monitor.

④ ▶ button
Switches to the Playback mode.

⑤ **Fn** button
Press to display the Fn menu. Press the four-way controller (▲▼◀▶) to choose the next operation.

⑥ Optical Picture Stabiliser ( ) button
Switches on or off the OPS function.

⑦ Four-way controller (▲▼◀▶)
Uses it to move cursor or change items in menus and Fn menu.

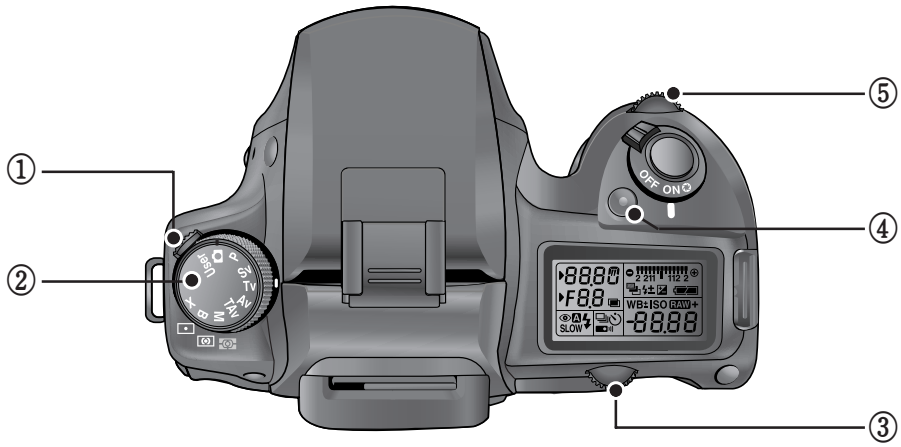
⑧ **OK** button
Saves the setting you selected in the menu.

⑨ Focus position dial
Press to select a focus position.

⑩ **AF** button
Focuses on the subject and get the proper metering.

⑪ **AE-L** button
Locks the exposure before shooting.

⑫ EV ( ) / LCD panel lamp button
Holding this button, rotate the front e-dial to compensate the exposure.
Press this button to turn on the LCD panel lamp.



① Metering mode lever
Changes the metering modes.

② Mode dial
Changes the camera modes.

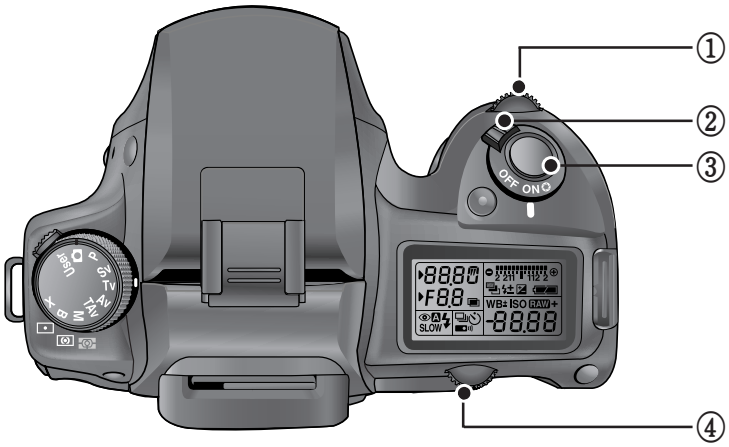
③ Rear e-dial
Sets aperture ISO sensitivity values.

④ Green button
Resets exposure settings and automatically adjusts the appropriate exposure in a M (Manual) mode.

⑤ Front e-dial
Sets shutter speed and EV compensation values.

Playback mode

■ Functions of buttons used during playback.

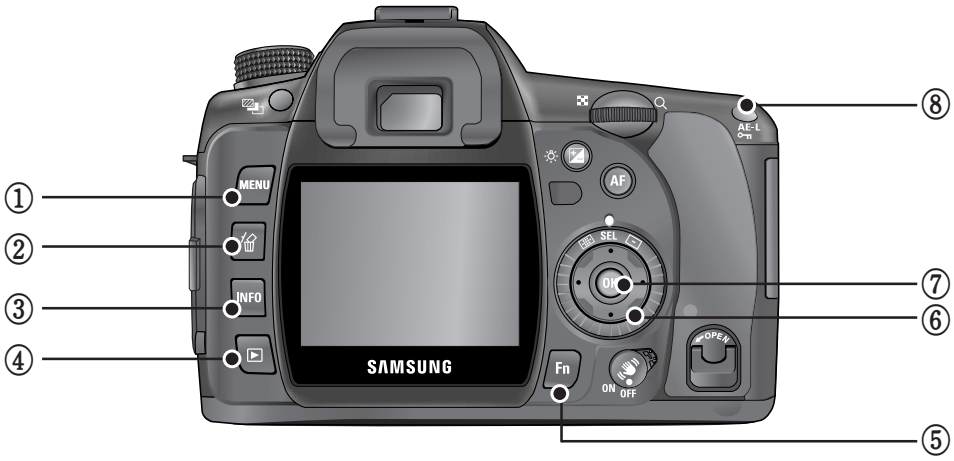


① Front e-dial
Use it to display the previous or next image in magnified playback or adjust the digital filter.

② Main switch
Move to turn the camera on and off.

③ Shutter release button
Press to switch to capture mode.

④ Rear e-dial
Sets the Exposure values.
Use it to enlarge an image or display multiple images at the same time.
Use to select a digital filter.



① **MENU** button
Press to display the [CAPTURE MENU], [PLAYBACK MENU], [CUSTOM1 MENU], [CUSTOM2 MENU] and [SETUP MENU] menu.

② 🗑 button
Press to delete images.

③ **INFO** button
Press to show shooting information on the LCD monitor.

④ ▶ button
Press to switch to capture mode.

⑤ **Fn** button
Press to display the Fn menu. Press the four-way controller (▲▼◀▶) to choose your next operation.

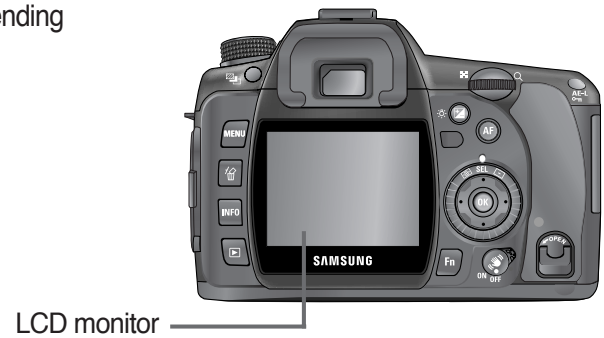
⑥ Four-way controller (▲▼◀▶)
Uses it to move cursor or change items in menus, Fn menu and playback screen.

⑦ **OK** button
Saves the setting you selected in the menu or playback screen.

⑧ **AE-L** / 🔑 button
Locks the exposure of the shooting conditions.
Press to protect images from being accidentally erased.

5. LCD Monitor Indications

■ The following indicators appear on the LCD monitor depending on the status of the camera.

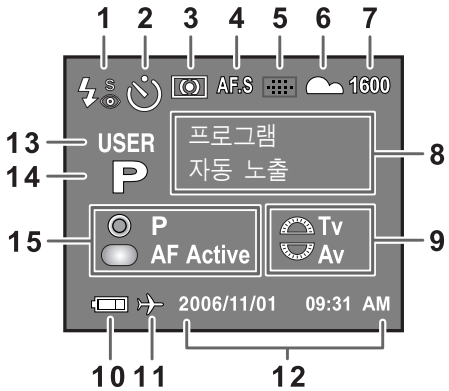


While Power is On or Operating Mode Dial

■ Guides appear on the LCD monitor for 3 seconds when powered on or setting dial mode.

INFORMATION

● Select [Off] for [Guide Display] in [SETUP MENU] to hide indicators.



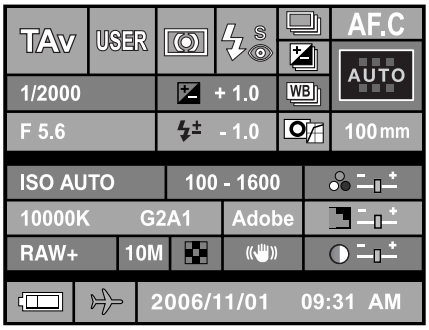
1. Flash mode (Active mode appears)
2. Drive mode / Auto Bracket / Multi Exposure
3. Metering type
4. AF mode
5. Focus Point Information
6. White balance
7. Sensitivity
8. Shooting mode (Mode dial position)
9. e-dial information
10. Battery Status
11. World time warning display
12. Date and time
13. Custom mode
14. Exposure mode
15. Button Guide

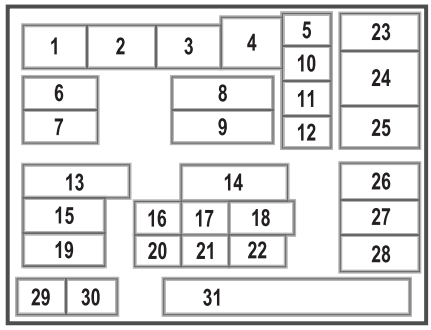
* Indicators 3, 4, 5, 6 and 7 only appear when the setting other than the default setting is selected. 11 only appears when World Time is On.

Capture Mode

■ Press the **INFO** button in capture mode to display the capture function settings on the LCD monitor for 15 seconds.

Detailed Information





1. Shooting mode
2. Custom mode
3. Metering mode
4. Flash mode
5. Drive mode
6. Shutter Speed
7. Aperture Value
8. Exposure Compensation Value
9. Flash Exposure Value
10. Exposure Bracket / Multi Exposure
11. Extended Bracket
12. Image tone
13. ISO sensitivity
14. ISO range (Auto)
15. White balance
16. GM compensation value
17. BA compensation value
18. Colour space
19. File type
20. Recorded pixels
21. Quality level
22. Optical Picture Stabilization (OPS)
23. AF mode
24. Focus point location
25. Lens focal length
26. Saturation
27. Sharpness
28. Contrast
29. Battery Status
30. World tiem
31. Date and time

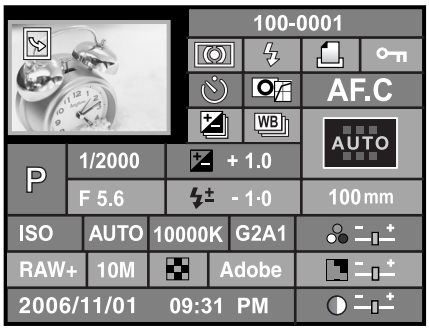
Playback Mode

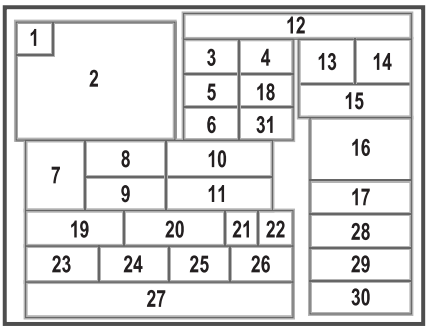
■ Press the **INFO** button in playback mode to display the image information on the LCD monitor. Whenever pressing the **INFO** button, Basic information, Histogram, Detail information and no information will display in that order.

INFORMATION

● You can change the information initially displayed by pressing the ▶ button.

Detailed Information



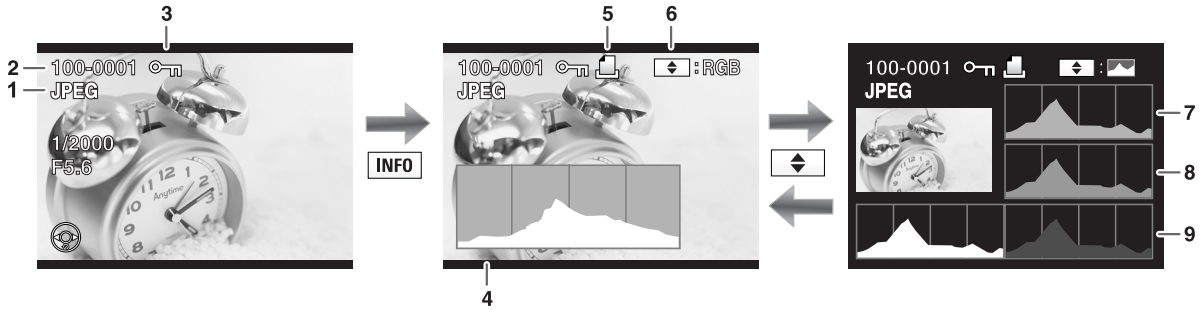


1. Rotate icon
2. Captured images
3. Metering mode
4. Flash mode
5. Drive mode
6. Exposure Bracket / Multi Exposure
7. Exposure mode
8. Shutter Speed
9. Aperture Value
10. Exposure Compensation Value
11. Flash Compensation Value
12. Folder name and Stored image number
13. DPOF settings
14. Protect icon
15. AF mode
16. Focus point information
17. Lens focal length
18. Image tone
19. Sensitivity
20. White Balance / Colour Temperature
21. WB compensation (GM)
22. WB compensation (BA)
23. File type
24. Image size
25. Quality
26. Colour Space
27. Date & Time
28. Saturation
29. Sharpness
30. Contrast
31. Extended Bracket

* Indicators 4 (Flash mode) and 11 (Flash compensation Value) only appear when the image was taken with flash.

Histogram Display

■ Brightness Histogram that distributes brightness of the image and RGB Histogram that distributes colour of the image are selectable by using the Up and Down (▲, ▼) button.

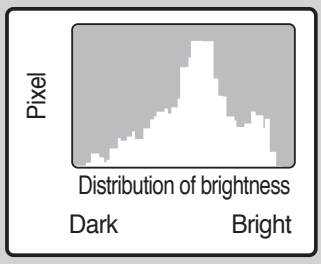


[Playback] [Y Histogram] [RGB Histogram]

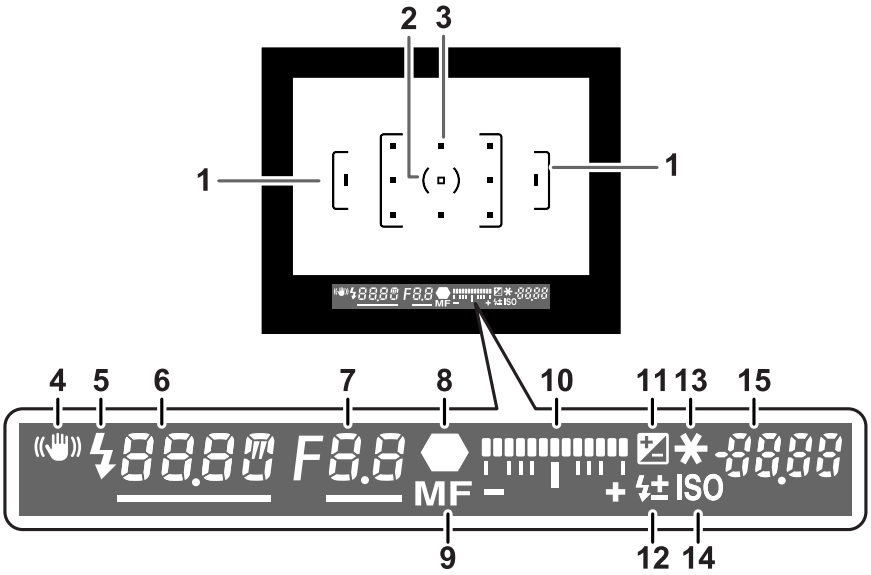
1. Capture quality (Image file type)
2. Image folder number and file number
3. Protect icon
4. Histogram (Brightness)
5. DPOF settings
6. Indicator for Brightness Histogram and RGB Histogram
7. Histogram (R)
8. Histogram (G)
9. Histogram (B)

INFORMATION

- DPOF icon ( ) will display only when an DPOF set image is played back.
- Areas where blooming occurred blink if [Exposure Warning] warning is on.
- Histogram shows you the distribution of brightness in recorded images.
  If the bars in the histogram are higher towards the right, the image may be too bright.
  If the bars are higher on the left, the image may be too dark.
  If the lighting conditions are too bright to check the subject by using the LCD, checking the histogram will enable more precise exposure control for the shots.



6. Viewfinder Indications



1. Autofocus frame
2. Spot metering frame
3. Focus point
4. indicator
   : Blinks when OPS is operating
5. Flash status
   : Appears when flash is available and blinks when flash is recommended but not set.
6. Shutter speed
   : Shutter speed when capturing or adjusting (underlined when shutter speed can be adjusted with front e-dial).
7. Aperture
   : Aperture when capturing or adjusting (underlined when aperture can be adjusted with rear e-dial).
8. Focus indicator
   : Appears when image is focused.
9. Manual Focus
   : Appears when the Manual Focus is selected.
10. Exposure Bar
    : Displays the Exposure Compensation Value.
    The differences between Current Exposure Value and Proper Exposure Value in the M mode.

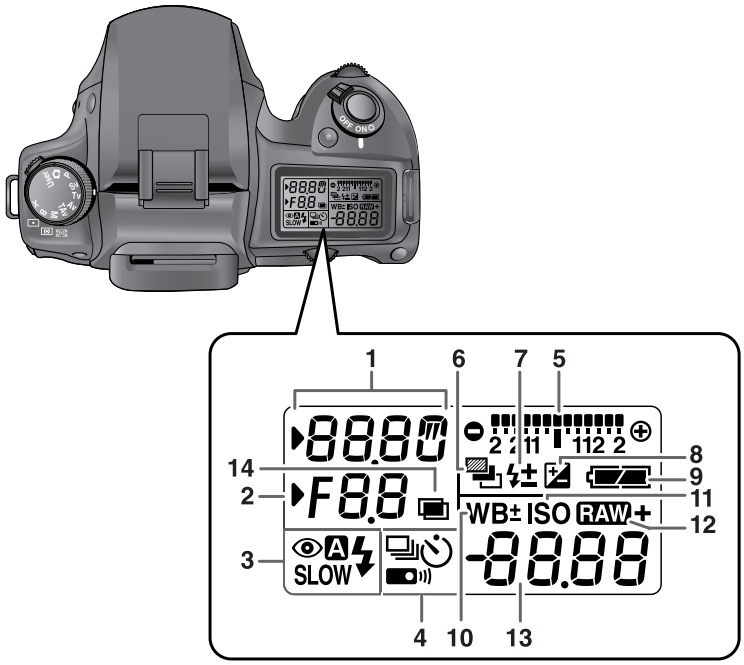
11. EV compensation
    : Appears when EV compensation is available or in use.
12. Flash Exposure Compensation
    : Appears when Flash Exposure is compensated.
13. AE Lock indicator
    : Appears when AE is locked.
14. ISO sensitivity warning
    : Appears when warning value is exceeded.
15. Number of recordable images / EV compensation
    : Show the number of recordable images with current quality and recorded pixel setting.
    Show the number of continuous shooting recordable images.
    The differences between the compensated Exposure and proper exposure will display.
    In the M mode, the exposure value can be different.
    In the Sensitivity priority mode / Shutter & Aperture Priority mode, ISO sensitivity will display.

INFORMATION

- The red indication of the focus point used for autofocus lights up and is superimposed on the view when the shutter release button is pressed halfway.
- When [AF Button Function] of the [CUSTOM1 MENU] menu is set to [Cancel AF], MF icon will display while AF button is pressed.
- In any mode with the exception of Sensitivity priority mode and Shutter & Aperture priority mode, ISO sensitivity will display on No. 14 position while the OK button is pressed.

7. LCD Panel Indications

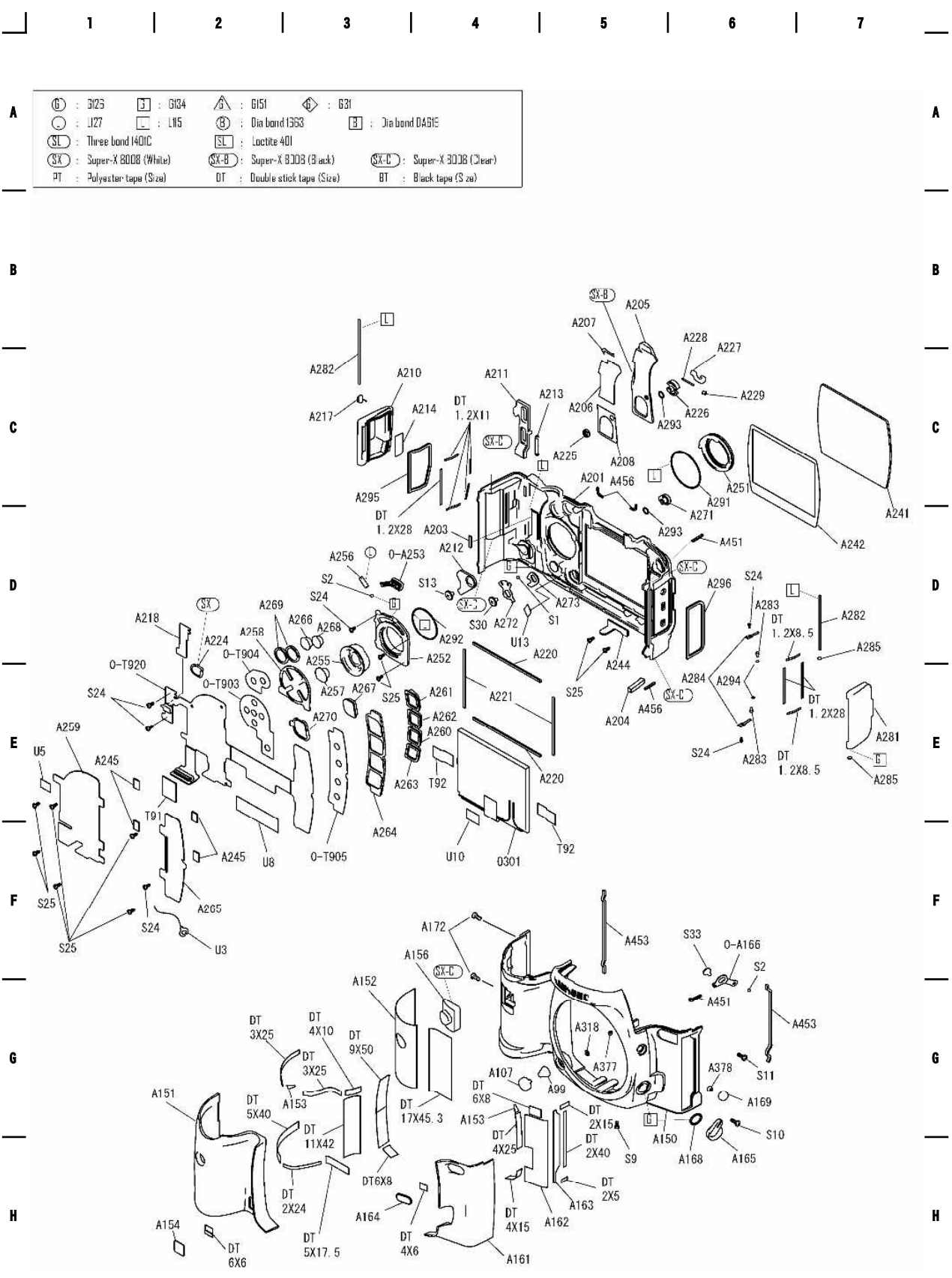
■ The following information appears in the LCD panel on top of the camera.



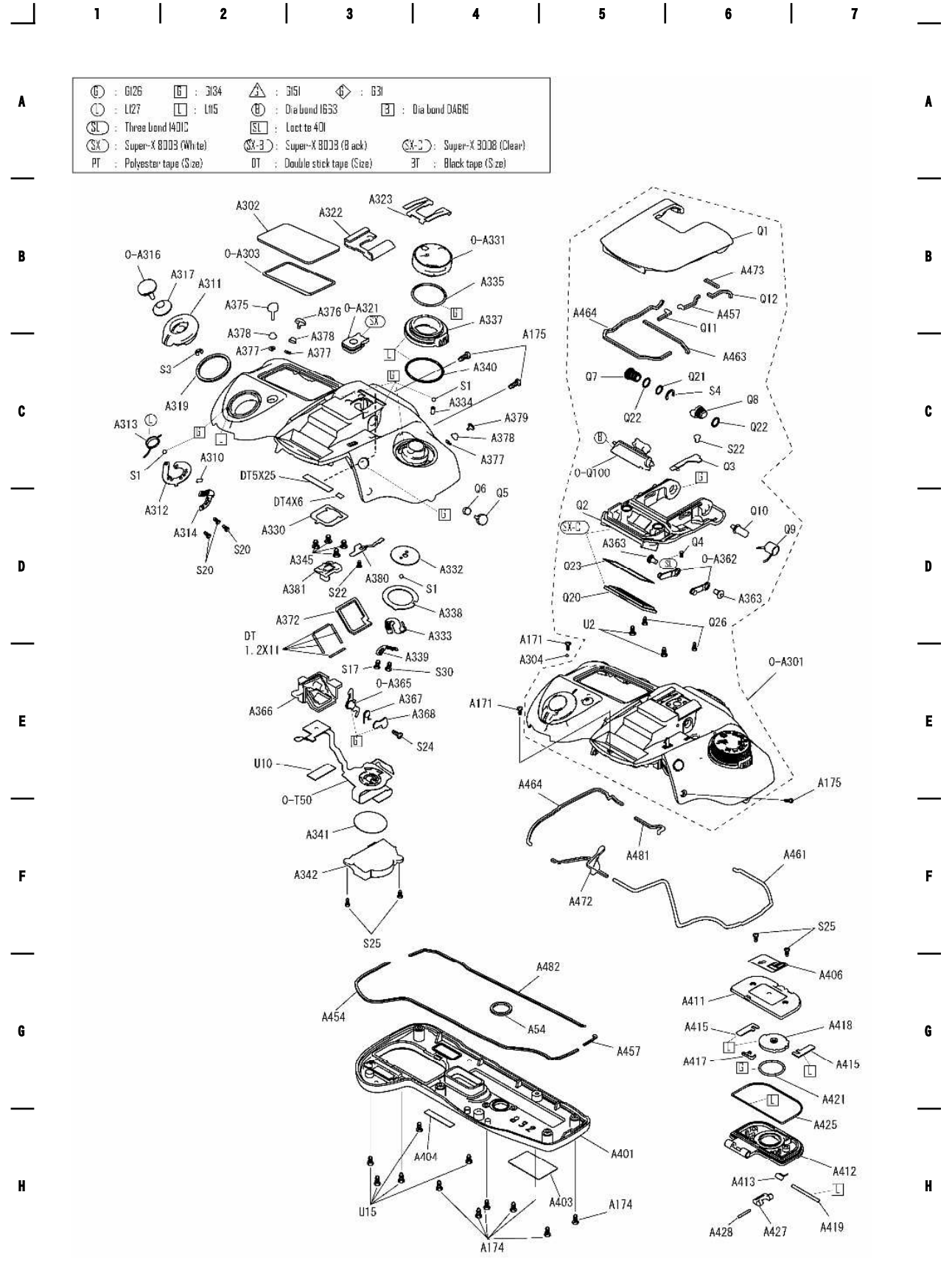
1. Shutter speed
2. Aperture
3. Flash mode
   - : Built-in flash is ready (when blinking, flash should be used; or incorrect lens is mounted)
   - : Red-eye reduction flash on
   - : Flash off
   - : Auto discharge
   - **SLOW** : First curtain synchro
4. Drive mode
   - : Single frame
   - : Continuous Shot
   - : Self-timer
   - : Remote control mode
5. Exposure Bar
6. Auto Bracket
7. Flash Exposure Compensation indicator
8. Exposure compensation
9. Battery status
10. White Balance (If Auto WB is selected, no icon will display)
    ± : White Balance Compensation
11. ISO sensitivity warning
12. RAW + button : RAW +
13. Number of recordable images / EV compensation value / PC (Pb)
    (PC=Personal Computer (mass storage))
    (Pb=PictBridge)
14. Multi exposure

Ⅱ. EXPLODED VIEW AND PART LIST

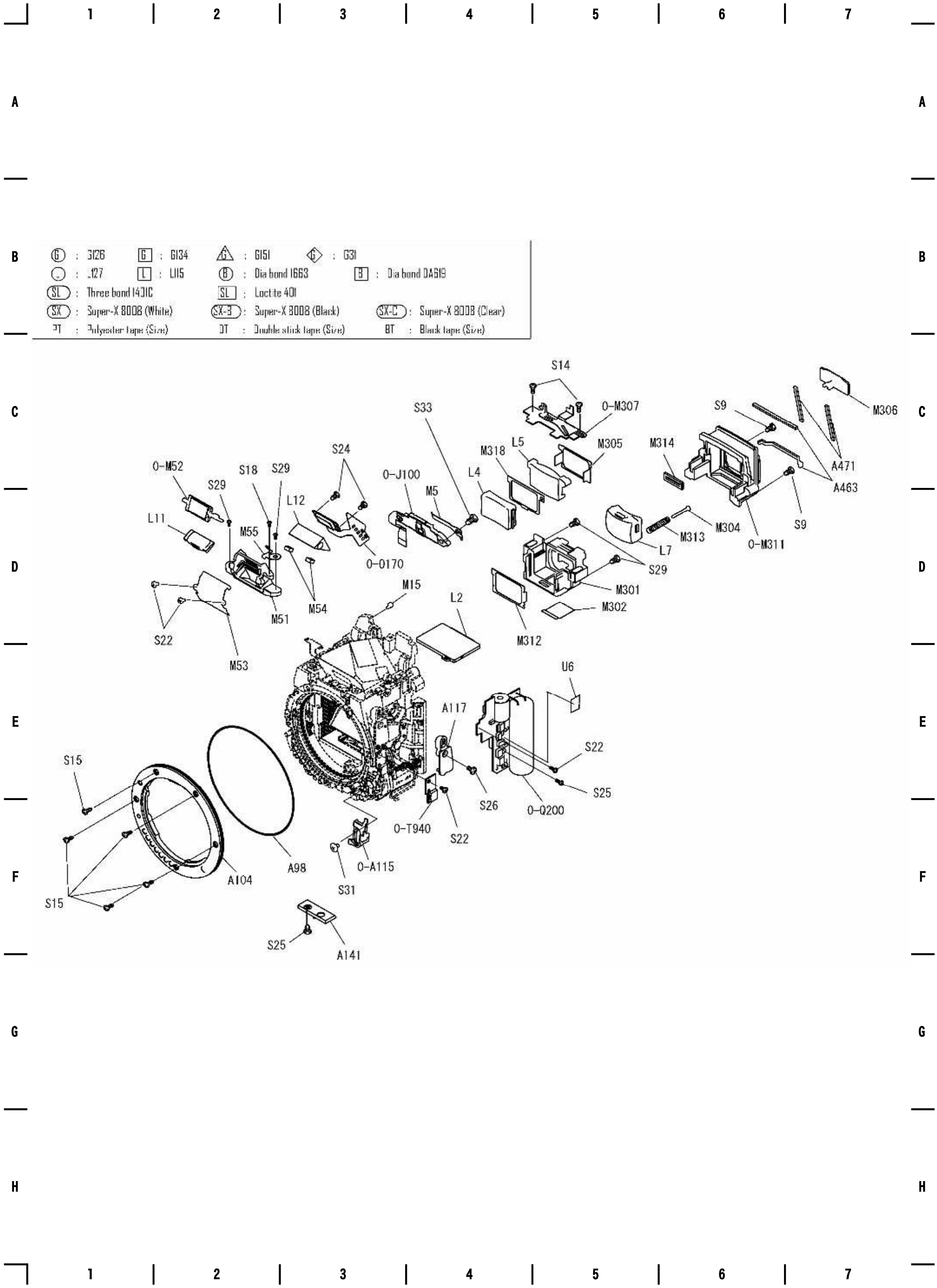
1. GX-10 : FIG. 1



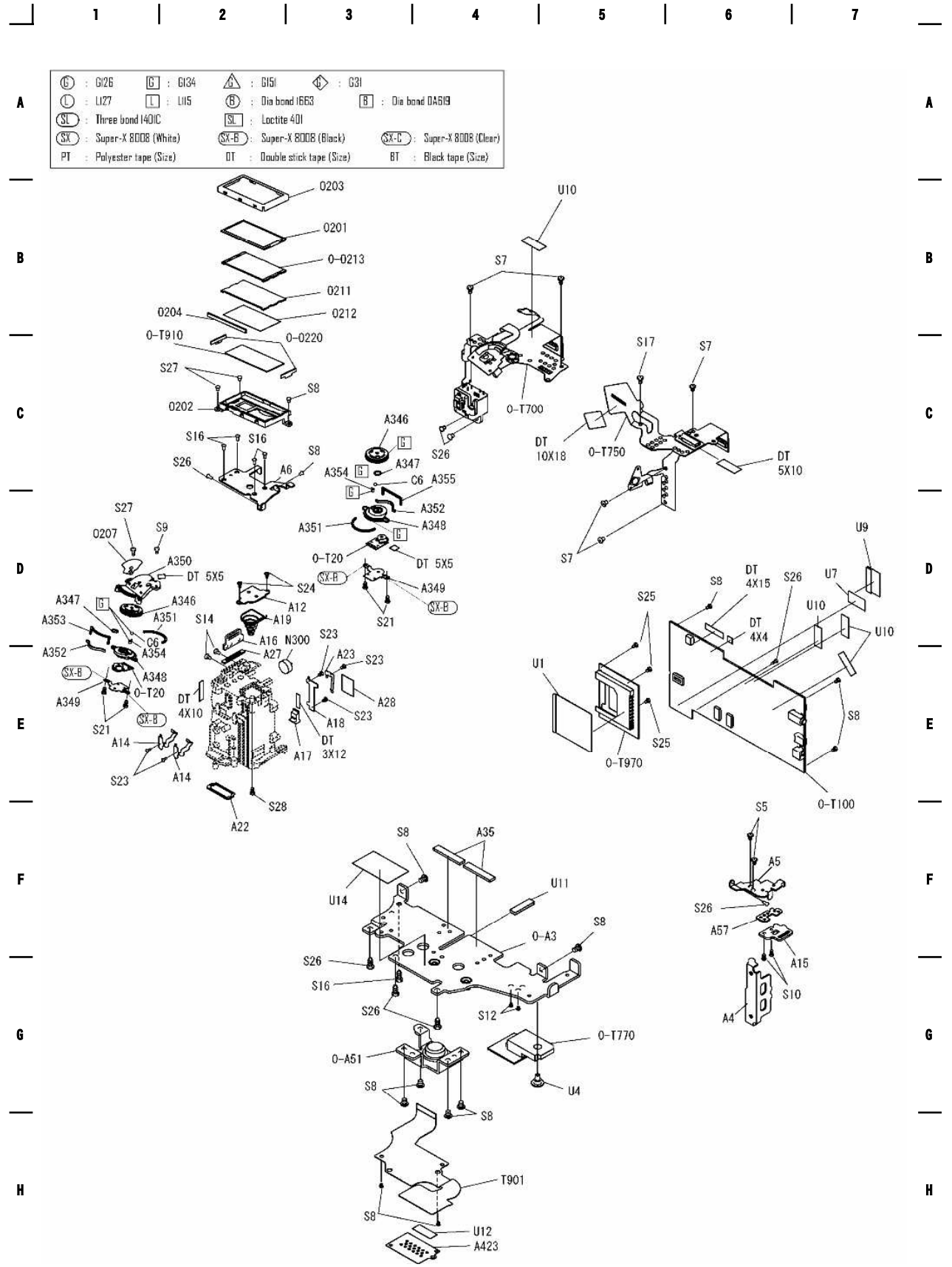
2. GX-10 : FIG. 2


G126 : G
3134 : 3
3151 : 3
631 : 6
LI27 : L
LI15 : L
Dia bond 1653 : B
Dia bond DA615 : 3
Three bond 1401C : SL
Loctite 401 : SL
Super-X 8003 (White) : SX
Super-X 8003 (Black) : SX-B
Super-X 3008 (Clear) : SX-C
Polyester tape (Size) : PT
Double stick tape (Size) : DT
Black tape (Size) : BT
A302
A322
A323
O-A331
O-A316
O-A303
A317
A311
A335
A375
A376
O-A321
A337
A378
A175
A377
A340
S3
A319
S1
A334
A379
A313
A378
A310
A377
S1
DT5X25
A312
DT4X6
Q6
Q5
A314
A330
S20
S20
A345
A332
A381
S22
A380
S1
A338
A372
A333
DT
1.2X11
A339
S17
S30
O-A365
A366
A367
A368
S24
U10
O-T50
A341
A342
S25
Q1
A473
Q12
A464
A457
Q11
A463
Q7
Q21
S4
Q8
Q22
Q22
S22
Q3
O-Q100
Q2
Q10
Q9
SX-C
A363
Q4
Q23
SL
O-A362
Q20
A363
U2
Q26
A171
A304
O-A301
A171
A464
A175
A481
A461
A472
S25
A406
A482
A411
A54
A415
A418
A454
A457
A417
A415
A421
A425
A401
A404
A412
A413
U15
A403
A174
A428
A427
A419
A174

3. GX-10 : FIG. 3


S14
0-M307
S33
S9
M306
M318
L5
M305
M314
A471
S24
L4
A463
0-M52
S18
S29
0-J100
M5
S29
L12
S9
L11
M55
M313
M304
0-M311
L7
0-0170
S29
M15
M51
M54
M301
M302
L2
S22
M312
M53
U6
A117
S22
S15
S25
S26
0-Q200
0-T940
S22
A98
0-A115
A104
S31
S15
S25
A141

4. GX-10 : FIG. 4


G : GI26
G : GI34
G : GI51
G : G31
L : LI27
L : LI15
B : Dia bond 1663
B : Dia bond DA619
SL : Three bond 1401C
SL : Loctite 401
SX : Super-X 8008 (White)
SX-B : Super-X 8008 (Black)
SX-C : Super-X 8008 (Clear)
PT : Polyester tape (Size)
DT : Double stick tape (Size)
BT : Black tape (Size)
0203
0201
0-0213
0211
0204
0212
0-T910
0-0220
S27
S8
0202
S16
S16
S8
S26
A6
A346
A347
A354
C6
A355
A352
A351
A348
0-T20
DT 5X5
A349
S21
S24
A12
A19
S14
A16
N300
A27
S23
A23
S23
A28
S23
A18
DT 3X12
A17
S28
A22
S27
0207
S9
A350
DT 5X5
A347
A346
A353
A351
C6
A352
A354
A348
0-T20
A349
S21
A14
S23
A14
DT 4X10
U10
S7
0-T700
S17
S7
DT 10X18
0-T750
DT 5X10
S7
U9
S8
DT 4X15
S26
U7
U10
DT 4X4
U10
S25
U1
S25
0-T970
S8
0-T100
S5
A5
S26
A57
A15
S10
A4
S8
A35
U14
U11
S8
0-A3
S26
S16
S26
S12
0-T770
0-A51
U4
S8
S8
T901
S8
U12
A423

▶ PARTS LIST FOR GX-10_CODE

Fig. No.	Parts No.	Parts Name	Q'ty	Location
O-A3	Q8100046101A	BOTTOM_PLATE_ASSY	1	4F5
A4	Q8100046201A	RIGHT_FRONT_PLATE	1	4G6
A5	Q8100046301A	RIGHT_SHOULDER_PLATE	1	4F6
A6	Q8100046401A	LEFT_SHOULDER_PLATE	1	4C3
A12	Q8100046501A	BATTERY_CASE_COVER	1	4D3
A14	Q8100046601A	BATTERY_CONTACT_A	2	4E1
A15	Q8100046701A	STRAP_HOOK_PLATE_R	1	4G7
A16	Q8100046801A	STRAP_HOOK_PLATE_L	1	4D2
A17	Q8100046901A	HOOK	1	4E3
A18	Q8100047001A	HOOK_SPRING	1	4E3
A19	Q8100047101A	STIMULATE_SPRING	1	4D2
A22	Q8100047201A	BATTERY_COVER_WATERPROOF_SHEET	1	4F2
A23	Q8100047301A	RESET_SWITCH_CONTACT	1	4E3
A27	Q8100047401A	STRAP_PLATE_WATERPROOF_SHEET	1	4E2
A28	Q8100047501A	PE_TAPE_12X15	1	4E3
A35	Q8100047601A	DUST_COLLECTOR_SHEET	2	4F4
O-A51	Q8100047701A	TRIPOD_STAND_ASSY	1	4G3
A54	Q8100047801A	TRIPOD_SCREW_WATERPROOF_SHEET	1	2G4
A57	Q8100047901A	STRAP_PLATE_SPACER	1	4F6
A98	Q8100048001A	O-RING_55.3X0.75	1	3F3
A99	Q8100048101A	LOCK_BUTTON_PACKING	1	1G5
A104	Q8100048201A	MOUNT_RING	1	3F2
A107	Q8100048301A	MOUNT_LOCK_BUTTON	1	1G4
O-A115	Q8100048401A	AM_SELECTING_SLIDE_PLATE_ASSY	1	3F3
A117	Q8100048501A	RAW_BUTTON_BASE	1	3E4
A141	Q7211086301A	SOLDER_STAND	1	3F3
A150	Q8100048601A	FRONT_COVER	1	1G5
A151	Q8100048701A	GRIP_RUBBER	1	1G2
A152	Q8100048801A	GRIP_RUBBER_TAPE_A	1	1G3
A153	Q8100048901A	GRIP_RUBBER_TAPE_B	2	1G3, 1G4
A154	Q8100049001A	OPS_PLATE	1	1H2
A156	Q8100049101A	REMOTE_CONTROL_WINDOW	1	1F4
A161	Q8100049201A	SIDE_RUBBER	1	1H4
A162	Q8100049301A	SIDE_RUBBER_TAPE_A	1	1H5
A163	Q8100049401A	SIDE_RUBBER_TAPE_B	1	1H5

▶ PARTS LIST FOR GX-10_CODE

Fig. No.	Parts No.	Parts Name	Q'ty	Location
A164	Q8100049501A	NAME_PLATE	1	1H3
A165	Q8100049601A	AF_MODE_CHANGEOVER_RING_LEVER	1	1H6
O-A166	Q8100049701A	AF_MODE_CLICK_PLATE	1	1F6
A168	Q8100049801A	O-RING_6X1	1	1H6
A169	Q8100049901A	RAW_BUTTON	1	1G6
A171	Q8100050001A	SCREW_C	2	2D4
A172	Q8100050101A	SCREW	2	2E4
A174	Q8100050201A	RETAINER_SCREW_C	7	2H4, 2H5
A175	Q8100050301A	SCREW	3	2B4, 2E7
A201	Q8100050401A	BACK_COVER	1	1C5
A203	Q8100050501A	ANTIREFLECTION_SHEET	1	1D4
A204	Q8100050601A	PORON(MOLT)_3X15.5	1	1E5
A205	Q8100050701A	REAR_GRIP_RUBBER	1	1B5
A206	Q8100050801A	REAR_GRIP_TAPE_A	1	1C5
A207	Q8100050901A	REAR_GRIP_TAPE_B	1	1B5
A208	Q8100051001A	REAR_GRIP_TAPE_C	1	1C5
A210	Q8100051101A	SD_CARD_COVER	1	1C3
A211	Q8100051201A	KEY_SPATULA	1	1C4
A212	Q8100051301A	KEY_SPATULA_CAM_PLATE	1	1D4
A213	Q8100051401A	KEY_SPATULA_SPRING	1	1C5
A214	Q8100051501A	SD_CARD_SEAL	1	1C4
A217	Q8100051601A	SD_CARD_COVER_SPRING	1	1C3
A218	Q8100051701A	LINING_BOARD_C	1	1D1
A220	Q7409240101A	I-LCD_CUSHION A	2	1D5, 1E5
A221	Q7409240201A	I-LCD_CUSHION B	2	1E4
A224	Q8100051801A	REAR_REMOTE_CONTROL_WINDOW	1	1D2
A225	Q8100051901A	ACCESS_LAMP_WINDOW	1	1C5
A226	Q8100052001A	HANDLE_BASE	1	1C6
A227	Q8100052101A	OPEN_LEVER_HANDLE	1	1B6
A228	Q8100052201A	HANDLE_SHAFT	1	1B6
A229	Q8100052301A	HANDLE_SPRING	1	1C6
A241	Q8100052401A	I-LCD_WINDOW	1	1D7
A242	Q8100052501A	I-LCD_WINDOW_RETAINER_TAPE	1	1D7
A244	Q8100052601A	BOTTOM_COVER_ATTACHMENT_PLATE	1	1D5
A245	Q7409240601A	I-LCD_RETAINER_PORON	4	1E1, 1F2

▶ PARTS LIST FOR GX-10_CODE

Fig. No.	Parts No.	Parts Name	Q'ty	Location
A251	Q8100052701A	FOCUS_POINT_SELECT_DIAL	1	1C6
A252	Q8100052801A	BEARING_PLATE	1	1D4
O-A253	Q8100052901A	BRUSH_ASSY	1	1D3
A255	Q8100053001A	4WAY_CONTROL_KEY	1	1D3
A256	Q8100053101A	LEVER_CLICK_SPRING	1	1D3
A257	Q8100053201A	OK_BUTTON	1	1E3
A258	Q8100053301A	RUBBER_SHEET_A	1	1D2
A259	Q8100053401A	LINING_BOARD_A	1	1E1
A260	Q8100053501A	INFO_BUTTON	1	1E4
A261	Q8100053601A	MENU_BUTTON	1	1E4
A262	Q8100053701A	DELETE_BUTTON	1	1E4
A263	Q8100053801A	REPLAY_BUTTON	1	1E3
A264	Q8100053901A	RUBBER_SHEET B	1	1F3
A265	Q8100054001A	LINING_BOARD B	1	1F2
A266	Q8100054101A	AF_BUTTON	1	1D3
A267	Q8100054201A	FN_BUTTON	1	1E3
A268	Q8100054301A	XV_BUTTON	1	1D3
A269	Q8100054401A	RUBBER_SHEET_C	2	1D2
A270	Q8100054501A	RUBBER_SHEET_D	1	1E3
A271	Q8100054601A	OPS_SWITCH_LEVER	1	1D6
A272	Q8100054701A	SR_GUIDE_PLATE	1	1D4
A273	Q8100054801A	GUIDE_PLATE	1	1D5
A281	Q8100054901A	CONNECTOR_COVER	1	1E7
A282	Q8100055001A	CAR_COVER_SHAFT	2	1C3, 1D7
A283	Q8100055101A	LOCK_PIN	2	1D6, 1E6
A284	Q8100055201A	LOCK_PIN_SPRING	2	1E6
A285	Q8100055301A	O-RING_1.0X0.75	2	1D7, 1E7
A291	Q8100055401A	O-RING_22.7X0.7	1	1C6
A292	Q8100055501A	O-RING_18.9X0.7	1	1D4
A293	Q8100055601A	O-RING_3.56X0.64	2	1C5
A294	Q8100055701A	O-RING_1.2X0.4	2	1E6
A295	Q8100055801A	CARD_COVER_WATERPROOF_SHEET	1	1C3
A296	Q8100055901A	CONNECTOR_COVER_SHEET	1	1D6
O-A301	Q8100056001A	TOP_COVER_ASSY	1	2E6
A302	Q8100056101A	LCD_WINDOW	1	2B2

▶ PARTS LIST FOR GX-10_CODE

Fig. No.	Parts No.	Parts Name	Q'ty	Location
A303	Q8100056201A	LCD_WINDOW_D-S_TAPE	1	2B2
A304	Q8100056301A	O-RING_1.5X0.5	1	2E4
A310	Q8100056401A	PVF_TAPE_2X3	1	2C2
A311	Q8100056501A	MAIN_SW_LEVER	1	2B2
A312	Q6107071901A	MAIN_SW_CLICK_SPRING	1	2D1
A313	Q6107072001A	MAIN_SW_LEVER_SPRING	1	2C1
A314	Q8100056601A	MAIN_SW_BRUSH	1	2D2
O-A316	Q9007263601A	RELEASE_BUTTON_ASSY	1	2B1
A317	Q8100056701A	RELEASE_BUTTON_RUBBER	1	2B2
A318	Q6031006701A	RETAINER_RING_A	1	1G5
A319	Q8100056801A	MAIN_SW_LEVER_WATER_PROOF_SHEET	1	2C2
O-A321	Q9007263901A	HOT_SHOE_BASE_ASSY	1	2B3
A322	Q7014009401A	HOT_SHOE (B)	1	2B3
A323	Q6107072201A	HOT_SHOE_SPRING (B)	1	2B3
A330	Q8100056901A	HOT_SHOE_GROUND_PLATE	1	2D2
A331	Q8100057001A	MODE_DIAL_ASSY	1	2B4
A332	Q8100057101A	SUPPORT_PLATE	1	2D4
A333	Q8100057201A	MODE_DIAL_BRUSH	1	2D4
A334	Q6107072301A	MODE_DIAL_SPRING	1	2C4
A335	Q8100057301A	O-RING_16X1	1	2B4
A337	Q8100057401A	PHOTOMETR_SWITCH_LEVER	1	2B4
A338	Q8100057501A	LEVER_CLICK_SPRING	1	2D4
A339	Q8100057601A	LEVER_BRUSH	1	2E3
A340	Q8100057701A	O-RING_18X1	1	2C4
A341	Q8100057801A	CIRCULAR_D-S TAPE	1	2F3
A342	Q8100057901A	MODE_DIAL_BASE_PLATE	1	2F3
A345	Q7214090601A	SHOE_SCREW	4	2D3
A346	Q8100058001A	DIAL	2	4C3, 4D2
A347	Q8100058101A	DIAL_O-RING	2	4C3, 4D1
A348	Q8100058201A	DIAL_BASE_PLATE_A	2	4D4, 4E1
A349	Q8100058301A	DIAL_BASE_PLATE_B	2	4D4, 4E1
A350	Q8100058401A	MAIN_SW_BASE_PLATE	1	4D2
A351	Q8100058501A	DIAL_WATERPROOF_SHEET_A	2	4D2, 4D3
A352	Q8100058601A	DIAL_WATERPROOF_SHEET_B	2	4D4, 4E1
A353	Q8100058701A	DIAL_WATERPROOF_SHEET_C	1	4D1

▶ PARTS LIST FOR GX-10_CODE

Fig. No.	Parts No.	Parts Name	Q'ty	Location
A354	Q8100058801A	DIAL_CLICK_SPRING	2	4C3, 4E1
A355	Q8100058901A	DIAL_WATERPROOF_SHEET_D	1	4C4
O-A362	Q8100059001A	FLASH_ARM_ASSY	2	2D6
A363	Q8100059101A	ARM_RETAINER	2	2D5
O-A365	Q8100059201A	FLASH_HOOK_LEVER_ASSY	1	2E3
A366	Q8100059301A	FLASH_HOOK_LEVER_CASE	1	2E2
A367	Q8100059401A	FLASH_HOOK_SPRING	1	2E3
A368	Q8100059501A	FLASH_HOOK_PLATE	1	2E4
A372	Q8100059601A	FLASH_HOOK_CASE_WP__SHEET	1	2D2
A375	Q8100059701A	GREEN_BUTTON	1	2B2
A376	Q8100059801A	AE-L_BUTTON	1	2B3
A377	Q6031006801A	RETAINER_RING_B	4	1G5, 2C2, 2C3, 2C4
A378	Q8100059901A	TOP_COVER_BUTTON_RUBBER	4	1G6, 2B2, 2B3, 2C4
A379	Q8100060001A	AEB_BUTTON	1	2C4
A380	Q8100060101A	POP_CONTACT_BRUSH	1	2D3
A381	Q8100060201A	SHOE_SPACER	1	2D3
A401	Q8100060301A	BOTTOM_COVER	1	2H5
A403	Q8100060401A	CERTIFICATION_SEAL	1	2H5
A404	Q7217388701A	SERIAL_NUMBER_PLATE	1	2H4
A406	Q8100060501A	BATTERY_POLARITY_SEAL	1	2G7
A411	Q8100060601A	BATTERY_COVER_PLATE	1	2G6
A412	Q8100060701A	BATTERY_COVER	1	2H7
A413	Q8100060801A	BATTERY_COVER_SPRING	1	2H6
A415	Q8100060901A	BATTERY_COVER_LOCK_CLAW	2	2G6, 2G7
A417	Q8100061001A	BATTERY_COVER_CLICK_SPRING	1	2G6
A418	Q8100061101A	BATTERY_COVER_HANDLE_PLATE	1	2G7
A419	Q8100061201A	BATTERY_COVER_SHAFT	1	2H7
A421	Q8100061301A	O-RING_12.5X1.0	1	2G7
A423	Q8100061401A	BG_CONNECTOR_MASK	1	4H4
A425	Q8100061501A	O-RING_28X0.8	1	2H7
A427	Q8100061601A	BATTERY_COVER_HANDLE	1	2H6
A428	Q8100061701A	SPRING_PIN	1	2H6
A451	Q8100061801A	WATERPROOF_SHEET_1X11	2	1D6
A453	Q8100061901A	WATERPROOF_SHEET_1.5X63	2	1F5
A454	Q8100062001A	WATERPROOF_SHEET_1.2X192	1	2G3

▶ PARTS LIST FOR GX-10_CODE

Fig. No.	Parts No.	Parts Name	Q'ty	Location
A456	Q8100062101A	WATERPROOF_SHEET_1.2X11	3	1C5
A457	Q8100062201A	WATERPROOF_SHEET_1.2X20	2	2B6
A461	Q8100062301A	WATERPROOF_SHEET_1.2X158	1	2F6
A463	Q8100062401A	WATERPROOF_SHEET_1.5X34	3	2C6, 3C7
A464	Q8100062501A	WATERPROOF_SHEET_1.2X96	2	2B5, 2E4
A471	Q8100062601A	WATERPROOF_SHEET_1.5X25	2	3C7
A472	Q8100062701A	WATERPROOF_SHEET_1.2X105	1	2F5
A473	Q8100062801A	WATERPROOF_SHEET_1.2X9	1	2B6
A481	Q8100062901A	WATERPROOF_SHEET_1.2X28	1	2F5
A482	Q8100063001A	WATERPROOF_SHEET_1.2X152	1	2G5,
C6	Q8100063101A	STAINLESS_BALL_2.0	2	4C4, 4D1
O-J100	Q8100063201A	PHOTO_SENSOR_BLOCK	1	3C3
L2	Q8100063301A	FRESNEL_LENS	1	3D4
L4	Q8100063401A	EYEPIECE_FRONT_LENS	1	3C4
L5	Q8100063501A	EYEPIECE_INTERMEDIATE_LENS	1	3C4
L7	Q8100063601A	EYEPIECE_REAR_LENS	1	3D6
L11	Q6722003301A	SI_LENS	1	3D2
L12	Q6727001501A	SI_PRISM	1	3D3
M5	Q8100063701A	J100_RETAINER_PLATE	1	3C4
M15	Q8100063801A	ECCENTRIC_SCREW	1	3D4
M51	Q8100063901A	SI_HOLDER	1	3D2
O-M52	Q8100064001A	SI_MIRROR_SHEET_ASSY	1	3C2
M53	Q7001009001A	SI_COVER	1	3E2
M54	Q6049000301A	SI_PRISM_MOLT	2	3D3
M55	Q8100064101A	SI_SPRING	3	D2
M301	Q8100064201A	EYEPIECE_FRAME	1	3D5
M302	Q7409241701A	PVC_TAPE_10X13.5	1	3D5
M304	Q7004002201A	INTERMEDIATE_LENS_GUIDE_SHAFT	1	3D6
M305	Q8100064301A	LIGHT_SEAL_FRAME_A	1	3C5
M306	Q8100064401A	DIOPTER_ADJUSTING_LEVER	1	3C7
O-M307	Q8100064501A	GUIDE_PLATE_ASSY	1	3C5
O-M311	Q8100064601A	EYEPIECE_FRAME_COVER	1	3D6
M312	Q8100064701A	LIGHT_SEAL_FRAME_B	1	3D4
M313	Q8100064801A	INTERMEDIATE_LENS_SPRING	1	3D6
M314	Q8100064901A	ADJUSTING_LEVER_W-P_SHEET	1	3C6

▶ PARTS LIST FOR GX-10_CODE

Fig. No.	Parts No.	Parts Name	Q'ty	Location
M318	Q8100065001A	LIGHT_SEAL_FRAME_C	1	3C4
N300	Q8100065101A	PIEZO-ELECTRIC_BUZZER	1	4D3
O-O170	Q8100065201A	SI_BLOCK	1	3D3
O201	Q8100065301A	LCD_PANEL	1	4B3
O202	Q8100065401A	LCD_FLAME	1	4C2
O203	Q8100065501A	LCD_RETAINER	1	4B3
O204	Q8100065601A	CONDUCTIVE_RUBBER	1	4B2
O207	Q8100065701A	MAIN_SW_ADHESIVE_TAPE	1	4D1
O211	Q8100065801A	LIGHT_GUIDE	1	4B3
O212	Q8100065901A	REFLECTION_SHEET	1	4B3
O-O213	Q8100066001A	DIFFUSION_SHEET	1	4B3
O-O220	Q8100066101A	LED_P.C_BOARD	1	4C3
O-O301	Q8100066201A	IMAGE_LCD_PANEL	1	1F4
Q1	Q8100066301A	FLASH_COVER	1	2B6
Q2	Q8100066401A	FLASH_CASE	1	2D5
Q3	Q8100066501A	ADJUSTING_PLATE	1	2C6
Q4	Q8100066601A	ADJUSTING_SCREW	1	2D5
Q5	Q8100066701A	FLASH_POP-UP_BUTTON	1	2D4
Q6	Q8100066801A	FLASH_BUTTON_SPRING	1	2C4
Q7	Q8100066901A	FLASH_FRAME_SHAFT_A	1	2C5
Q8	Q8100067001A	FLASH_FRAME_SHAFT_B	1	2C6
Q9	Q8100067101A	POP-UP_SPRING	1	2D6
Q10	Q8100067201A	FLASH_FRAME_SHAFT	1	2D6
Q11	Q8100067301A	F_CASE_WATERPROOF_SHEET_A	1	2B6
Q12	Q8100067401A	F_CASE_WATERPROOF_SHEET_B	1	2B6
Q20	Q8100067501A	FLASH_WINDOW	1	2D5
Q21	Q8100067601A	O-RING_3.14X0.63	1	2C6
Q22	Q8100067701A	O-RING_3.48X0.64	2	2C5
Q23	Q8100067801A	FLASH_DOUBLE_STICK_TAPE	1	2D5
Q26	Q8100067901A	COVER_RETAINER_SCREW	2	2D6
O-Q100	Q8100068001A	FLASH_ASSY.	1	2C5
O-Q200	Q8100068101A	STROBE_P.C.BOARD	1	3F5
O-T20	Q8100068201A	TV/AV_DIAL_P.C. BOARD	2	4D3
O-T50	Q8100068301A	SHOE_F.P.C_BOARD	1	2F3
T91	Q8100068401A	INSULATING_TAPE	1	1E2

▶ PARTS LIST FOR GX-10_CODE

Fig. No.	Parts No.	Parts Name	Q'ty	Location
T92	Q8100068501A	COPPER_FOIL_TAPE	2	1E4, 1F5
O-T100	Q8100068601A	MAIN_P.C.BOARD	1	4E7
O-T700	Q8100068701A	UPPER_FLEX_CIRCUIT-A	1	4C4
O-T750	Q8100068801A	UPPER_FLEX_CIRCUIT-B	1	4C5
O-T770	Q8100068901A	PZ_P.C_BOARD	1	4G5
T901	Q8100069001A	LOWER_F.P_C.BOARD	1	4H4
O-T903	Q8100069101A	SWITCH SHEET_A	1	1E2
O-T904	Q8100069201A	SWITCH_SHEET_B	1	1D2
O-T905	Q8100069301A	SWITCH_SHEET_C	1	1F2
O-T910	Q8100069401A	O200_P.C_BOARD	1	4B2
O-T920	Q8100069501A	A200_P.C_BOARD	1	1D1
O-T940	Q8100069601A	AFMD_SELECT_CIRCUIT_BLOCK	1	3F4
O-T970	Q8100069701A	SD_CARD_CIRCUIT_BLOCK	1	4E5
U1	Q8100069801A	SD_CARD_COVER	1	4E5
U2	Q6001019801A	COVER_RETAINER_SCREW_F	1	2D5
U3	Q8100069901A	LUG_PLATE	1	1F2
U4	Q8100070001A	TB_WHEEL_RETAINER_SCREW	1	4G5
U5	Q8100070101A	PI_TAPE_6X8.5	1	1E1
U6	Q8100070201A	PI_TAPE_8X10	1	3E5
U7	Q8100070301A	PI_TAPE_8X14	1	4D7
U8	Q8100070401A	INSULATING_TAPE_10X35	1	1F2
U9	Q8100070501A	INSULATING_TAPE_15X18	1	4D7
U10	Q8100070601A	BLACK_TAPE_6X15	6	1F4, 2E2, 4B5, 4D7
U11	Q8100070701A	PVF_TAPE_7X11	1	4F5
U12	Q8100070801A	PVF_TAPE_8X12	1	4H4
U13	Q8100070901A	PET_SHEET_4X4	1	1D4
U14	Q8100071001A	INSULATING_TAPE_12X20	1	4F3
U15	Q6001020001A	RETAINER_SCREW	5	1F4, 2H3
S1	Q8100071101A	BO Ø1.5	4	1D5, 2C1, 2C4, 2D4
S2	Q8100071201A	BO Ø1/16	2	1D3, 1F6
S3	Q8100071301A	LW15	1	2C2
S4	Q8100071401A	CE4	1	2C6
S5	Q8100071501A	CSM_1.7X2.5	2	4F6
S6	Q8100071601A	CNL-D_1.7X1.6	2	4H3
S7	Q8100071701A	CNL-D_1.7X2.0	5	4B4, 4C6, 4D5

▶ PARTS LIST FOR GX-10_CODE

Fig. No.	Parts No.	Parts Name	Q'ty	Location
S8	Q8100071801A	CNL-D_1.7X2.5	11	4C3, 4D6, 4E7, 4F3, 4F5, 4G3, 4H4
S9	Q8100071901A	CNL-D_1.7X3.0	4	1H5, 3C6, 3D7, 4D2
S10	Q8100072001A	CNL-D_1.7X4.0	3	1G6, 4G7
S11	Q8100072101A	CNL-D_1.7X5.5	1	1G6
S12	Q8100072201A	CNL-E_1.7X2.2	2	4G4
S13	Q8100072301A	CNL-F_1.4X2.0	1	1D4
S14	Q8100072401A	TY-CNS_1.7X3.0	2	3C5, 4D2
S15	Q8100072501A	TY-CNS_2.0X4.5	7	3E1, 3F1
S16	Q8100072601A	TY-CSM_1.7X4.0	9	4C2, 4G3
S17	Q8100072701A	TY-CNL-B_1.4X2.5	2	2E3, 4C5
S18	Q8100072801A	TY-CNL-B_1.4X4.0	1	3C2
S19	Q8100072901A	TY-CNL-D_1.4X2.5	2	3D2
S20	Q8100073001A	TY-CNL-D_1.4X3.0	3	2D2
S21	Q8100073101A	TY-CNL-D_1.4X4.5	5	2C2, 4D3, 4E1
S22	Q8100073201A	TY-CNL-D_1.7X2.5	4	2C6, 2D3, 3E5, 3F4
S23	Q8100073301A	TY-CNL-D_1.7X2.8	4	4D3, 4E1, 4E3
S24	Q8100073401A	TY-CNL-D_1.7X3.0	8	1D3, 1D6, 1E1, 1E6, 1F1, 2E4, 3C3, 4D3, 3C3, 4D3
S25	Q8100073501A	TY-CNL-D_1.7X3.5	18	1E3, 1E5, 1F1, 2F3, 2F7, 3D5, 3E5, 3F3, 4C4, 4D5, 4D7, 4E5
S26	Q8100073601A	TY-CNL-D_1.7X4.0	7	3F4, 4C2, 4F6, 4G3
S27	Q8100073701A	TY-CNL-D_1.7X4.5	2	4C2, 4D1
S28	Q8100073801A	TY-CNL-D_1.7X8.0	1	4F2
S29	Q8100073901A	TY-CNL-F_1.7X4.5	2	3C2
S30	Q8100074001A	TY-CNL-E_1.7X4.0	1	2E4
S31	Q8100074101A	TY-CNL-G_1.7X2.5	2	1D4, 3F3
S32	Q8100074201A	TY-CNL-G_1.7X3.0	1	1F6
S33	Q8100074301A	TY-CNL-G_1.7X5.0	1	3C4
DT1	Q8100074401A	DOUBLE_STICK_TAPE_1.2X8.5	2	1D6, 1E6
DT2	Q8100074501A	DOUBLE _STICK_TAPE_1.2X11	8	1C4, 2E2
DT3	Q8100074601A	DOUBLE_STICK_TAPE_1.2X28	5	1D3, 1E7
DT4	Q8100074701A	DOUBLE_STICK_TAPE_2X40	1	1H5
DT5	Q8100074801A	DOUBLE_STICK_TAPE_2X5	5	1H5
DT6	Q8100074901A	DOUBLE_STICK_TAPE_2X15	1	1G5
DT7	Q8100075001A	DOUBLE_STICK_TAPE_2X24	1	1H3
DT8	Q8100075101A	DOUBLE_STICK_TAPE_3X12	1	4E3
DT9	Q8100075201A	DOUBLE_STICK_TAPE_3X25	2	1G2, 1G3

▶ PARTS LIST FOR GX-10_CODE

Fig. No.	Parts No.	Parts Name	Q'ty	Location
DT10	Q8100075301A	DOUBLE_STICK_TAPE_4X4	1	4D6
DT11	Q8100075401A	DOUBLE_STICK_TAPE_4X6	2	1H3, 2D2
DT12	Q8100075501A	DOUBLE_STICK_TAPE_4X10	2	1G3, 4E2
DT13	Q8100075601A	DOUBLE_STICK_TAPE_4X15	2	1H4, 4D6
DT14	Q8100075701A	DOUBLE_STICK_TAPE_4X25	1	1G4
DT15	Q8100075801A	DOUBLE_STICK_TAPE_5X5	4	4D2, 4D4
DT16	Q8100075901A	DOUBLE_STICK_TAPE_5X10	1	4C6
DT17	Q8100076001A	DOUBLE_STICK_TAPE_5X17.5	1	1H3
DT18	Q8100076101A	DOUBLE_STICK_TAPE_5X25	1	2C2
DT19	Q8100076201A	DOUBLE_STICK_TAPE_5X40	1	1G2
DT20	Q8100076301A	DOUBLE_STICK_TAPE_6X6	1	1H2
DT21	Q8100076401A	DOUBLE_STICK_TAPE_6X8	2	1G4, 1H3
DT22	Q8100076501A	DOUBLE_STICK_TAPE_9X50	1	1G3
DT23	Q8100076601A	DOUBLE_STICK_TAPE_10X18	1	4C5
DT24	Q8100076701A	DOUBLE_STICK_TAPE_11X42	1	1G3
DT25	Q8100076801A	DOUBLE_STICK_TAPE_17X45.3	1	1G4

▶ PACKING ITEM_PARTS LIST FOR GX-10_CODE

Part No	Part Name	Q'ty	Remark
Q9001121501A	BODY	1	
Q4609016301A	DIGIMAX MASTER_RAW CONVERTER_GX-10	1	
Q3801000701A	AC CODE CABLE_KOR-D1	1	
Q3801000901A	AC CODE CABLE_EXP-D1	1	
Q3801000801A	AC CODE CABLE_USA-D1	1	
Q3801001001A	AC CODE CABLE_UK-DSC220SE	1	
Q3801001101B	AC CODE CABLE_AUS-D1	1	
Q3801003701A	AC CODE CABLE_TSOE	1	
Q6804112601A	G/T BOX LABEL_GX-10_MEXICO	1	
Q6804116001A	NATRIUM STICKER_G/T BOX	1	
Q6909019301A	PE BAG (FOR ACCESSORY)	1	
Q6806349401A	U_MANUAL_GX-10_KOR	1	
Q6806349501A	U_MANUAL_GX-10_ENG	1	
Q6806349601A	U_MANUAL_GX-10_GER	1	
Q6806349701A	U_MANUAL_GX-10_FRA	1	
Q6806349801A	U_MANUAL_GX-10_SPA	1	
Q6806349901A	U_MANUAL_GX-10_ITA	1	
Q6806350001A	U_MANUAL_GX-10_DUT	1	
Q6806350101A	U_MANUAL_GX-10_RUS	1	
Q6806366301A	U_MANUAL_GX-10_CHI(S)	1	
Q6806366401A	U_MANUAL_GX-10_SWE	1	
Q6806366501A	U_MANUAL_GX-10_DAN	1	
Q6806350201A	Q/MANUAL_GX-10(8 LANGUAGE)	1	
Q6806367901A	PRODUCT_GUIDE_GX-10	1	
QP955150101F	WARRANTY CARD_KOREA	1	
Q6807012301A	WARRANTY CARD_2 YERARS	1	
Q6807010903C	WARRANTY CARD_RUS(3 YEARS)	1	
Q6807009502E	CARD_PRODUCT(Mexico)	1	
Q6807012401A	WARRANTY CARD_TURKEY	1	
Q6807012501A	SERVICE_CENTER_TURKEY	1	
Q6807012101A	WARRANTY CARD_IRAN	1	
Q6807011301B	WARRANTY CARD_TSOE(CHINA)	1	

Ⅲ. ADJUSTMENT

1. Firmware

1) Checking the general Firmware version

1. Turn off the camera.

2. Press and hold the MENU button and turn on the camera.

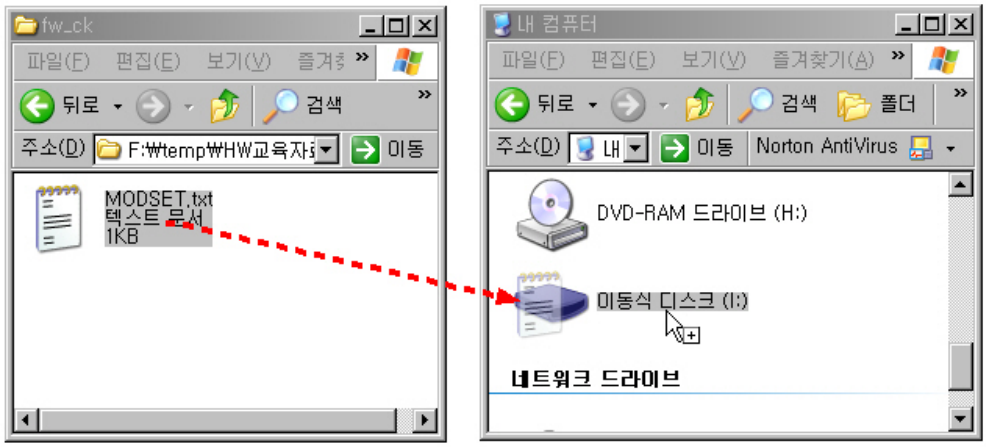
3. The firmware version displays on the LCD monitor.

2) Checking the Full Firmware version

1. Turn off the camera.

2. Download the Full Firmware and save it on an SD card (Root directory).

※ Move the cursor on the program download button and click the right mouse button.
And then select "Save as (A)..." to save the file.



3. Insert the SD card that has the Full Firmware.
Do not close the memory card slot cover after inserting the SD card.

4. Turn on the camera.

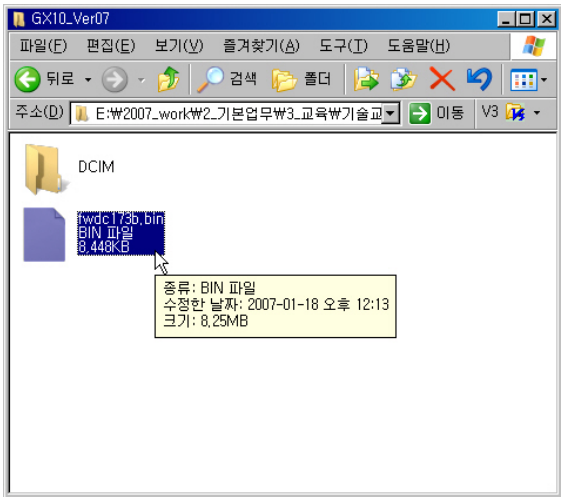
5. The firmware version displays on the LCD monitor.

3) Upgrading the Firmware of camera user.

※ When you upgrade the firmware, use the AC adapter and Batter at the same time to prevent the camera malfunction.

1. Download the new firmware and save it on an SD card (Root directory).

   Do not use the Multi Media Card (MMC) when upgrading the firmware.



2. Insert the battery and connect the AC cord with the camera.

3. Save the Firmware on the SD card.

4. Close the memory card slot cover.

5. Press and hold the MENU button and turn on the camera.

6. The following message displays on the LCD monitor. Select [Yes] by using the Up / Down button and press the OK button.

Upgrading starts. (It may take about 60 second. The processing time depends on the firmware item.

* Do not turn off the camera.

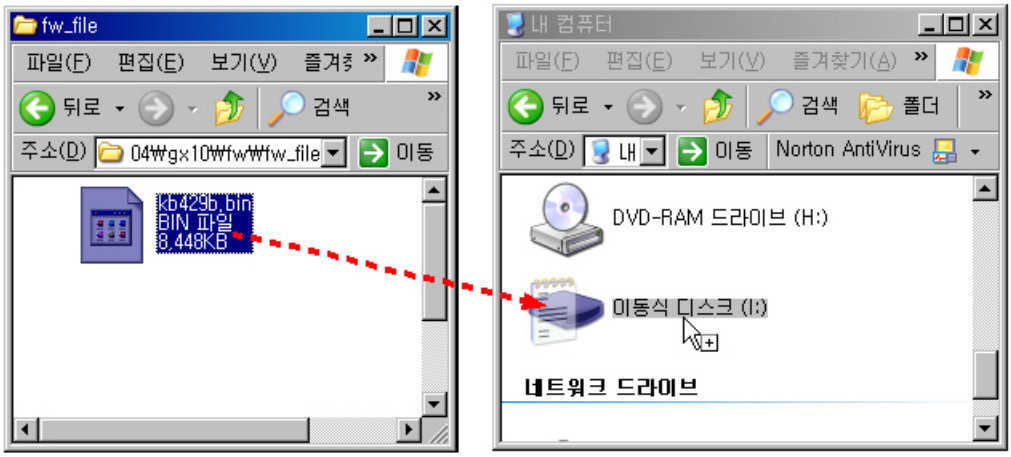
7. After displaying the [COMPLETE] message, turn off the camera.

* After completing the upgrade, the card access lamp (Red) still blinks.

4) Upgrading the Firmware of service center

1. Turn off the camera.

2. Download the firmware and save it on an SD card



3. Insert the SD card and do not close the memory card

4. Turn on the camera.

Use the AC adapter or fully charged battery.

5. The following message displays on the LCD monitor.

6. Remove the SD card (Do not close the memory card slot cover.)

7. The upgrade starts as shown.

Deleting the current firmware.....

Preparing the new firmware.....

Writing the new firmware.....

After completing the upgrade, "POWER OFF" message displays. The card access lamp (Red) still blinks.

8. Turn off the camera.

FAfter upgrading the firmware, the camera settings are reset to default. (Language, Date, Time)

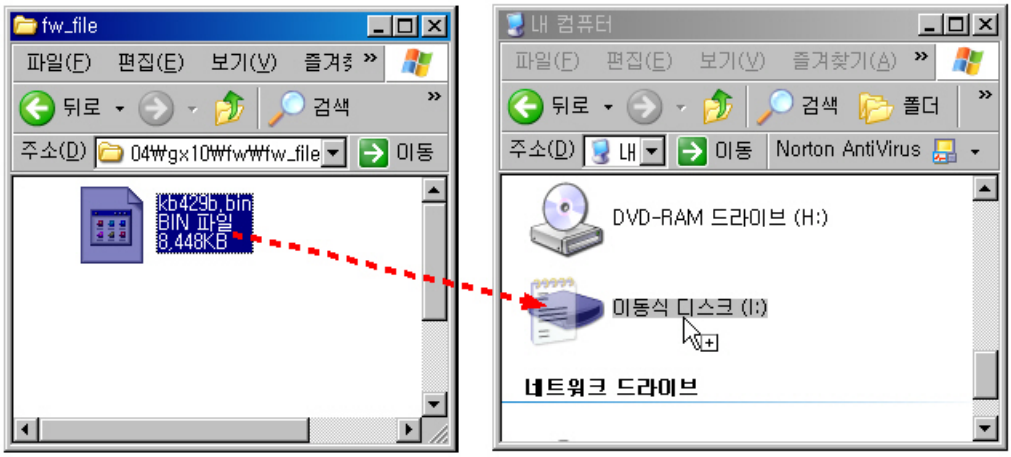
Though the firmware is upgraded, the adjustment data don't be changed.

Do the EEPROM patch after upgrading the firmware.

5) How to upgrade the firmware after changing the Main board

1. Turn off the camera.

2. Download the firmware and save it on an SD card.



3. Insert the SD card and do not close the memory card slot cover.

4. Turn on the camera.

Use the AC adapter or fully charged battery.

5. The following message displays on the LCD monitor.

6. Remove the SD card and do not close the memory card slot cover.

7. The upgrade starts as shown.

Deleting the current firmware.....

Preparing the new firmware.....

Writing the new firmware.....

After completing the upgrade, "POWER OFF" message displays. The card access lamp (Red) still blinks.

8. Turn off the camera.

After upgrading the firmware, the camera settings are reset to default. (Language, Date, Time)

Though the firmware is upgraded, the adjustment data don't be changed.

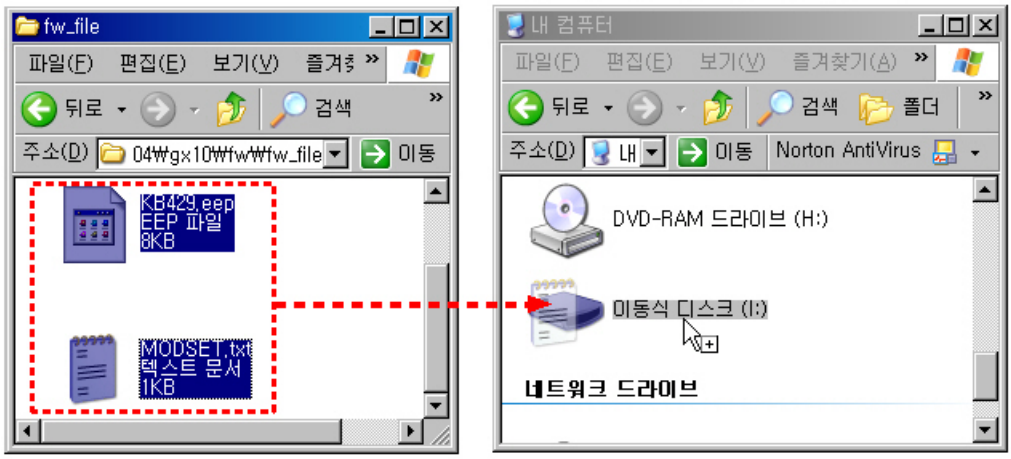
Do the EEPROM patch after upgrading the firmware.

6) Run the EEPROM Patch

1. Turn off the camera.

2. Download 2 files and save them on the SD card.

※ Move the cursor on the program download button and click the right mouse button.
And then select "Save as (A)..." to save the file.



3. Insert the SD card that has the EEPROM patch file. Do not close the memory card slot cover.

4. Turn on the camera.

5. The "WAIT..." message displays on the LCD monitor.

6. When the "COMPLETE...." message displays on the LCD monitor, turn off the camera.

2. Adjustments by menus

■ Preparing the adjustment

Equipments :

- □ Program for 76832 GX-10 adjustment (Included on the CD-R)
- □ PC for adjustments
- □ SD cards (3EA, over 16MB)
- □ SD card reader or camera with USB cable

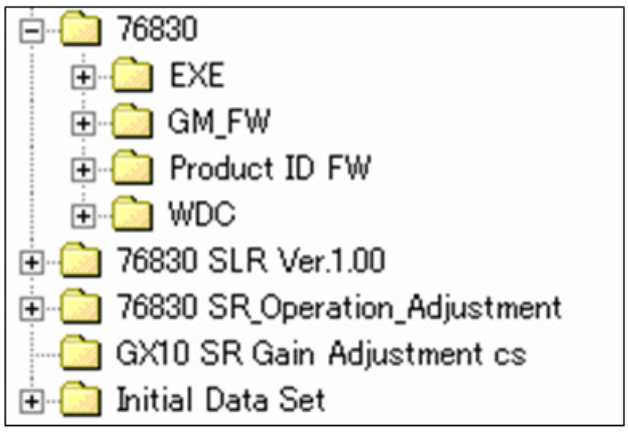
1) Preparing SD cards (3EA) for adjustment

* Prepare SD cards (3EA)

1. For camera firmware
2. For T100 circuit firmware when it is changed
3. For writing default data

2) PC settings and setup the SD card

* Insert the CD-R that has the program for 76832 adjustment.
  (76832: GX-10, 76830: PENTAX K10D)



① Copy the following files on the CD-R and paste the files on the C: drive.

「76830」: For Digital adjustment

「76830 SLR」: For Single Lens Reflex adjustment

「76830 SR Operation Adjustment」: For SR unit adjustment

「GX10 SR Gain Adjustment」: For SR gain adjustment

「Initial Data Set」: For writing the default data

② Copy the files on the [76830] > [GM_FW] folder and paste them to an SD card (for camera firmware)

※ Use the latest firmware

③ Copy the files on the [76830] > [Product ID FW] folder and paste them to an SD card.

(for T100 circuit firmware when it is changed)

④ Copy the files on the [Initial Data Set] folder and paste them to an SD card

⑤ Before adjusting the camera, set the [VB run time setup] of GX-1S

(76642, refer to Preparing part of the GX-1S service manual)

3) Light source adjustment for digital adjustment

Before starting the digital adjustment or when changing the light source, do the light source tuning.

Equipment :

□ K10D Master body for light source tuning (Adoption)

□ Program for 76830 Digital adjustment

□ PC with USB port (Windows 2000 or XP)

□ Luminance box (LB-3300, A light source)

□ Standard lens for adjustment and F8 set ring

※ Use the same Lens ID No. printed on the CD-R

□ Exclusive USB cable, □ AC adapter, □ Curtain for blocking any light source

□ Color thermometer for Picture, □ LV checker

3-1. Computer setup

Set the [Prepare] > [2. Computer setup] (Using the digital adjustment program)

3-2. Tuning

Tune the luminace and color themperature with the color thermometer and LV checker. See the following chart.

Light source	luminance	Color temperature
LV12	LV12.00Ev ±0.50	2,856K ±30
LV11	LV11.00Ev ±0.01	−

3-3. Setup the master body and standard lens

① Set the mode dial to [M]

② Set the focus mode lever to [MF].

③ Set the OPS lever to [OFF].

④ Attach the metering standard F8 set ring (for adjustment) on the body.

⑤ Set the standard lens to F8.

3-4. Tuning process

① Connect the AC adapter to the camera.

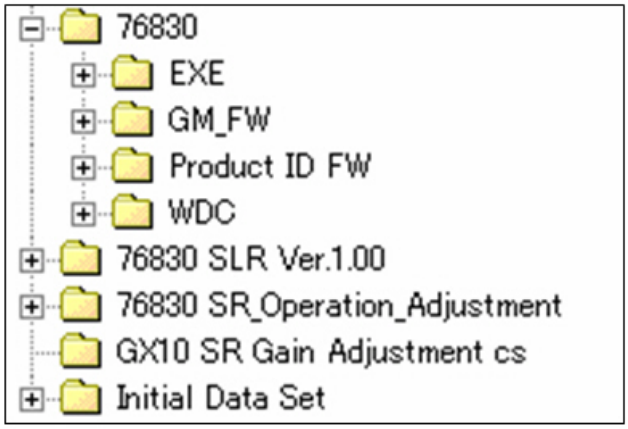
② Connect the camera to a PC with the USB cable.

③ Turn on the camera.

④ Set the light box to LV12.

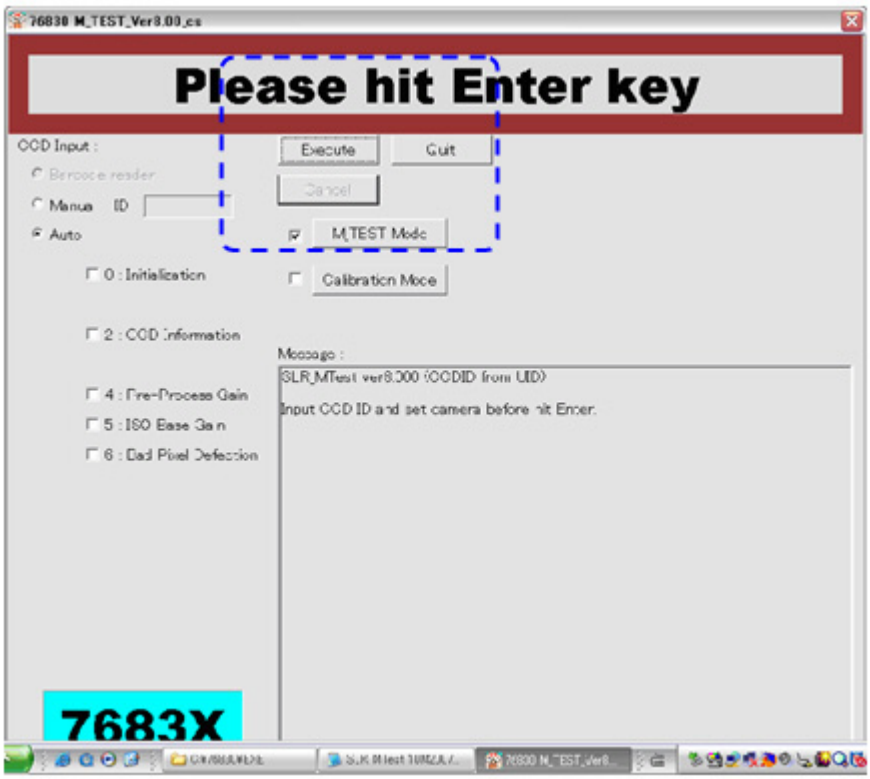
⑤ Match the center of the camera and the center of the light box and block the camera and front side of the light box with the blocking curtain.

⑥ Run the [76830 MTest.exe] on the [EXE] folder.

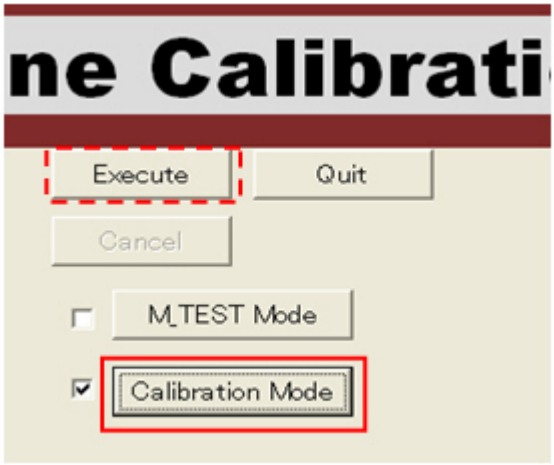


⑦ Input the correct Lens ID No. and click the OK button.

⑧ The adjustment program runs and the following menus display.



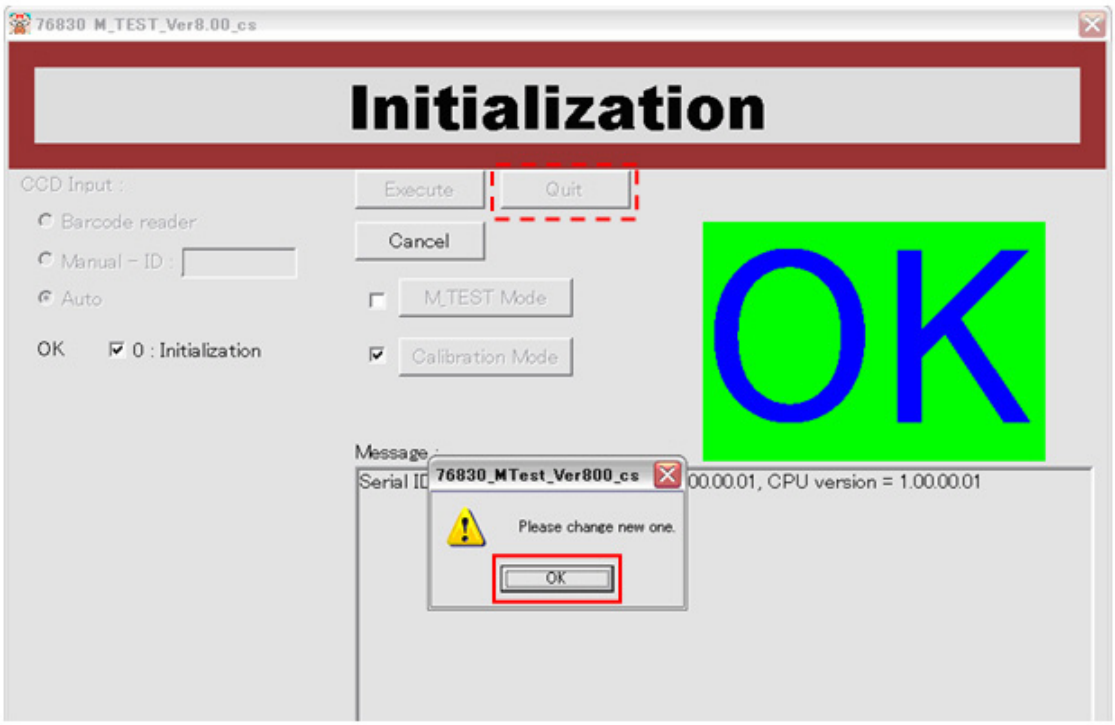
⑨ Click the [Calibration Mode] button. ↓



⑩ Click the [Execute] button.

⑪ After completing the calibration, the following menus display. ↓

⑫ Click the OK button and Quit button to close the program.



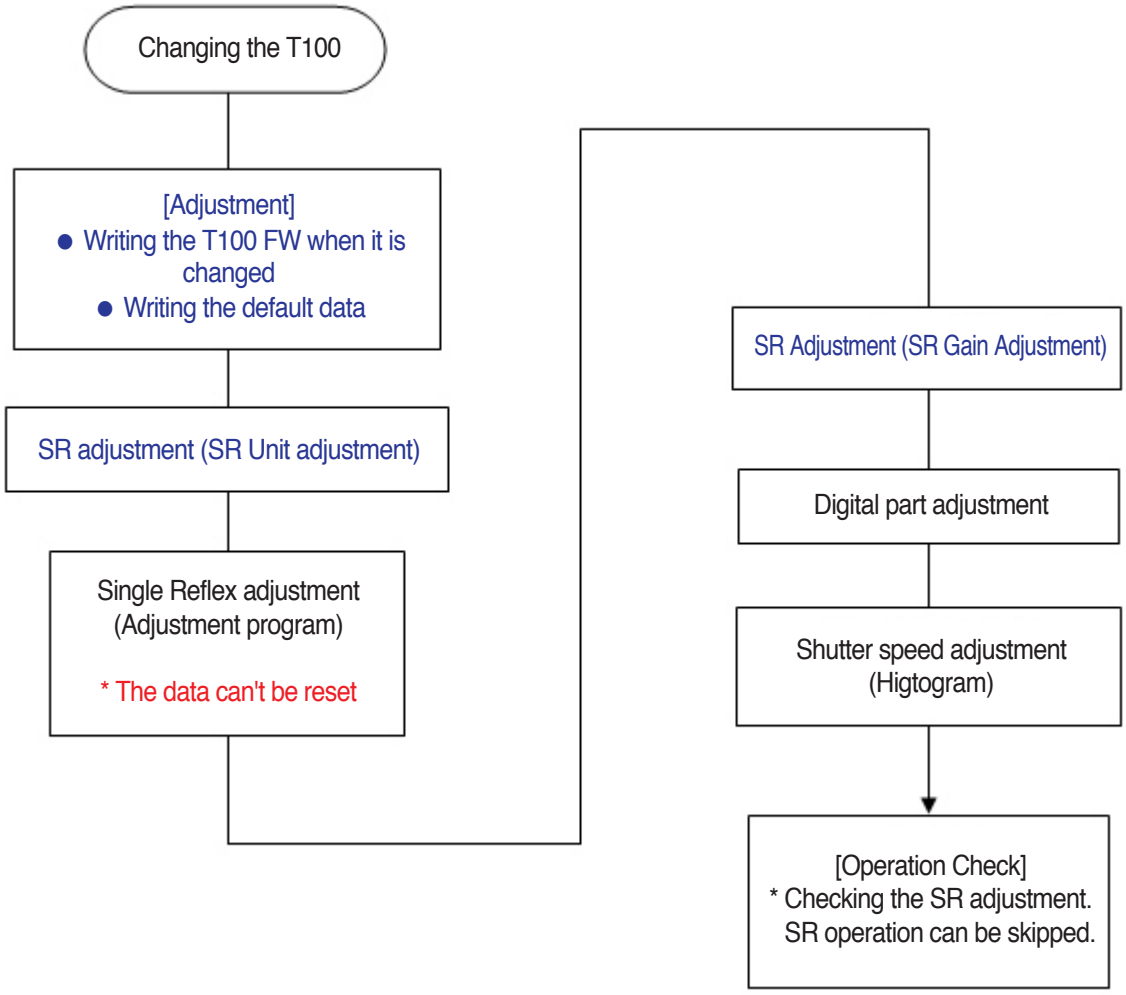
⑬ To disconnect the camera from the PC, click the hot plug icon > Reject Hardware > Stop Device and turn off the camera.

■ Adjustment process

Adjustment process when the T100 (Main board) is chan

The followings are for adjustment items when the T100 Main circuit was changed

Blue color texts are only for the GX-10.



Refer to the following menus for each adjustment items

Item	Link	Equipment	Remark
Exposure	BV ADJUST	Diaphragm set ring or 50M standard lens	Adjustment program for SLR part
AF	AF	EV tester, 50M standard lens, 35-80 lens, Chart for inclination adjustment, AF chart.	
Focusing	PINT	50M standard lens, AF chart	
	전핀후핀 확인/조정	Scale chart, lens	
Battery	배터리 레벨 조정	Battery tools, Power supply	
Shutter Speed	서터 스피드 조정	EV tester, 50M standard lens	
CCD	디지털부(CCD) 조정	Light source box (LB-3300)	Adjustment program for digital part
	CCD 불량화소 보정	WDC software	
Firmware	고객용	SD card for user	Concerned firmware
	서비스센터 용	SD card for service center	
	메인보드 교채용	SD card for mainboard changing	

Ⅰ. OPS Unit Adjustment

[Caution 1] When the T100 circuit is changed, this adjustment must be done.

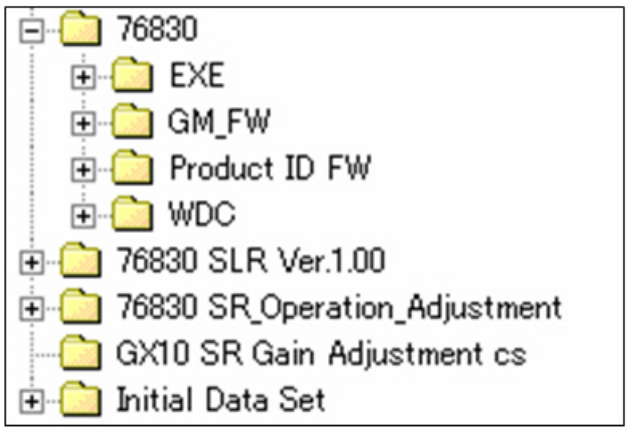
[Caution 2] The adjustment must be done in a stable place.

Equipment :

- SR Unit adjustment program for 76830
- SR Unit table
- PC (Windows 2000 or XP with USB port)
- USB cable
- AC adapter (or DC cord for 76830 · DC 8.3V)

17-1. Computer setup

① Copy the [76830 SR Operation Adjustment] folder on the PC



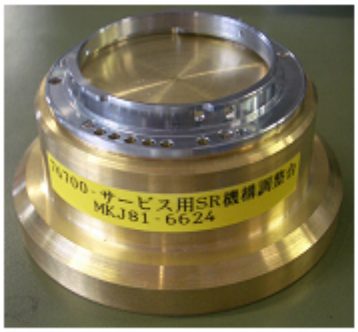
17-2. Preparation

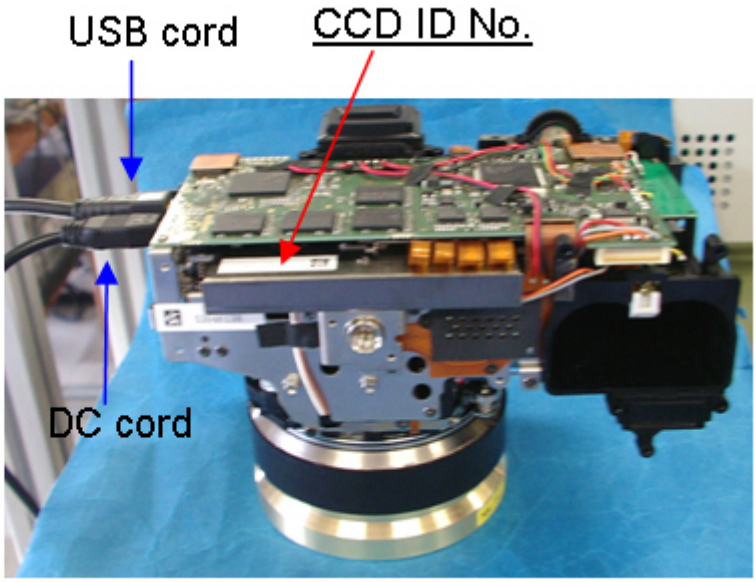
① Set the AF lever to MF.

② Attach the OPS Unit tool to the camera body.(↓)

③ Arrange the camera on a stable table. The lens faces the bottom of the table.

④ When the T100 circuit is changed, check the CCD ID No..





17-3. Adjustment process

① Turn on the PC.

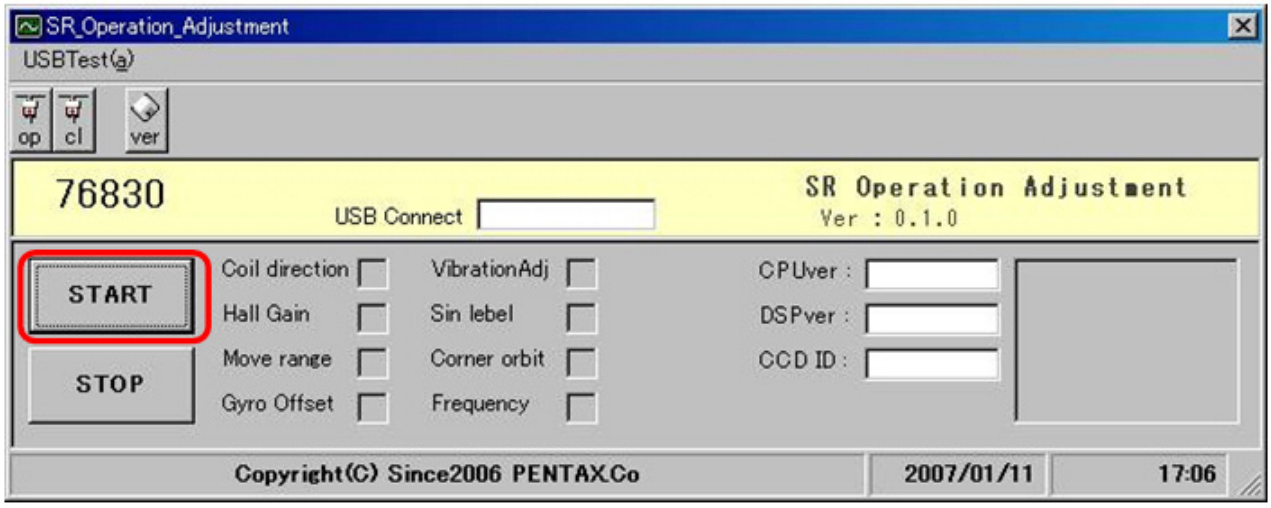
② Connect the camera to the PC with the USB cable and insert the AC adapter. Turn on the camera.

③ Check the Hot plug icon on the desktop.

④ Run the [K10D SR Operation.exe] in the adjustment software folder.

⑤ Adjustment program runs.

⑥ Click the [Start] button.

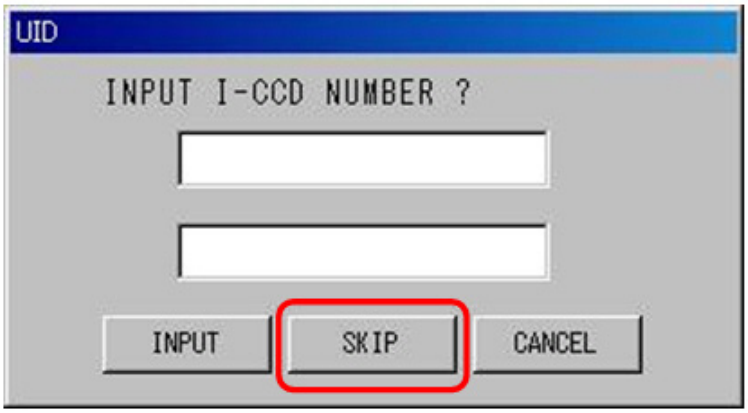


⑦ The following menu displays.

⑧ Refer to the following steps.

≪ When the T100 was not changed ≫

Click the [Skip] button

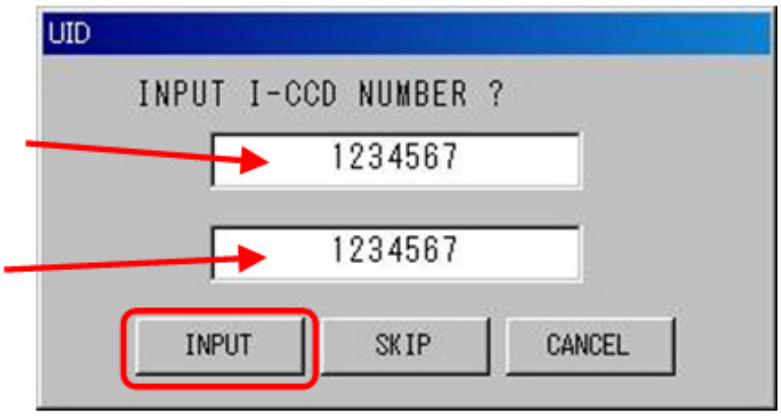


≪ When the T100 was changed ≫

Input the CCD ID No. twice.

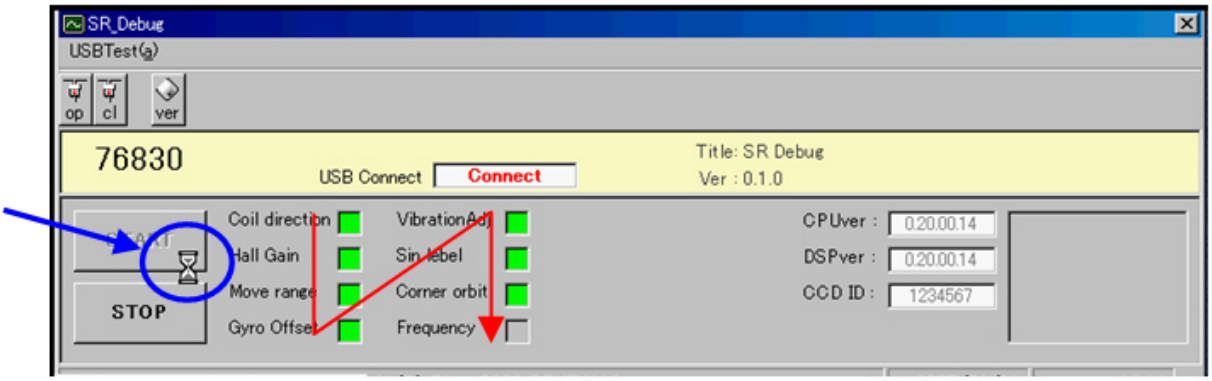
↓

Click the [Input] button.



※ If you want to stop the adjustment, click the [Cancel] button.

Adjustment is doing....(Adjustment time: About 3Min. 30 Sec.)

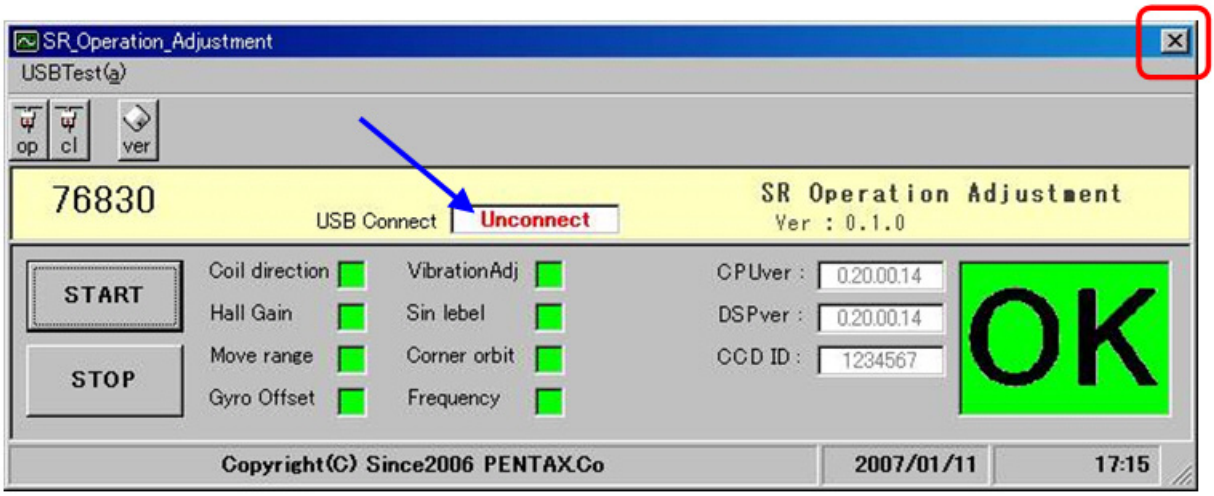


[Caution] Do not shake the camera during the adjustment. Any movements are strictly prohibited.
If any movements are involved during the adjustment, do the adjustment againg though the OK message displays.

※ If you want to stop the adjustment, click the [Stop] button.

⑨ When the following window displays, the adjustment is complete.

⑩ Check the Unconnect message and click the [X] button to close the window.



※ If the adjustment is NG, the green color will be red.

Ⅱ. Adjustment of the Single Reflex part

[Caution1] When the T100 circuit is changed, this adjustment must be done

[Caution2] Before the Shutter speed adjustment, the digital part adjustment must be done.
(Refer to the Shutter speed adjustment with the Histogram)

Equipment (Blue colors are new list) :

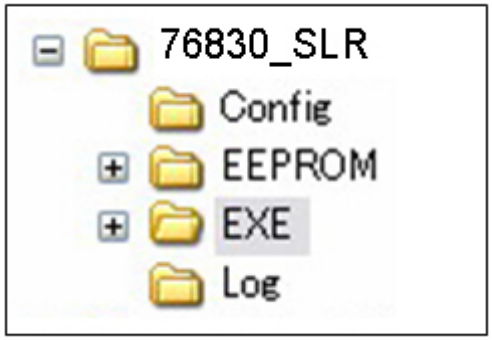
- SLR adjustment program for 76830
- PC (Windows 2000 or XP with USB port
- Exclusive USB cable
- Exclusive AC adapter (or DC cord for 76830)
- Light source for AE adjustment (LV6-8 or 9, -12-15 or 16, Shutter tester)
- Standard lens for digital adjustment (No.95901-D20, attached Lens ID No.) and F8 set ring
- F5.6 iris for the standard lens
- Tool for the AF inclination adjustment (Square)
- Tool for the AF inclination adjustment (Cross)
- Hexagon driver 1.5mm (HD-M1.5)
- Two kinds of AF chart for 2m
- 2m Standard lens for AF
- D-FA (FA) Macro 50mm F2.8 lens
- FA (F) 35-80mm F4-5.6 lens
- Battery adapter for 76830
- Power source (above 8V, 3A)

* The process of GX-10 is same with GX-1S (76642)

In this chapter, only the rest of GX-10 adjustments are instructed. For more information, refer to each adjustment menus.

22-1. Compter setup

Do the [2. Computer setup > VB runtime setup] first.



22-2. Preparation

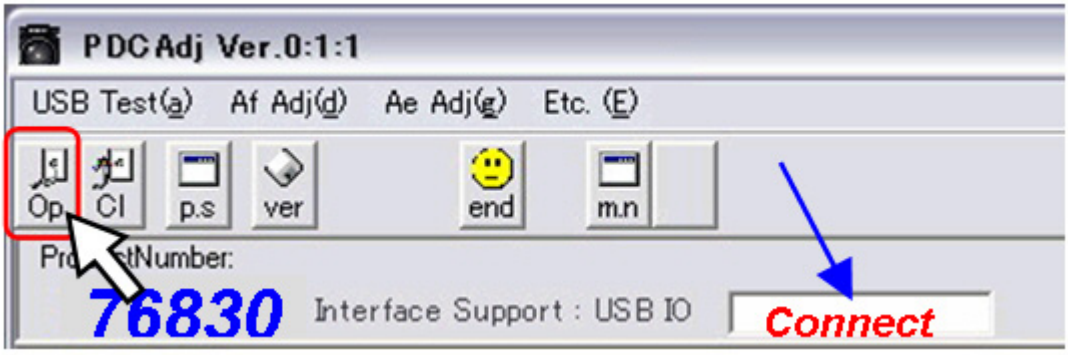
① Attach the bottom cover and battery cover on the body
(Don't attach the Connection terminal cover)

② Set the Focus mode lever to [MF].

③ Set the Mode dial to [M].

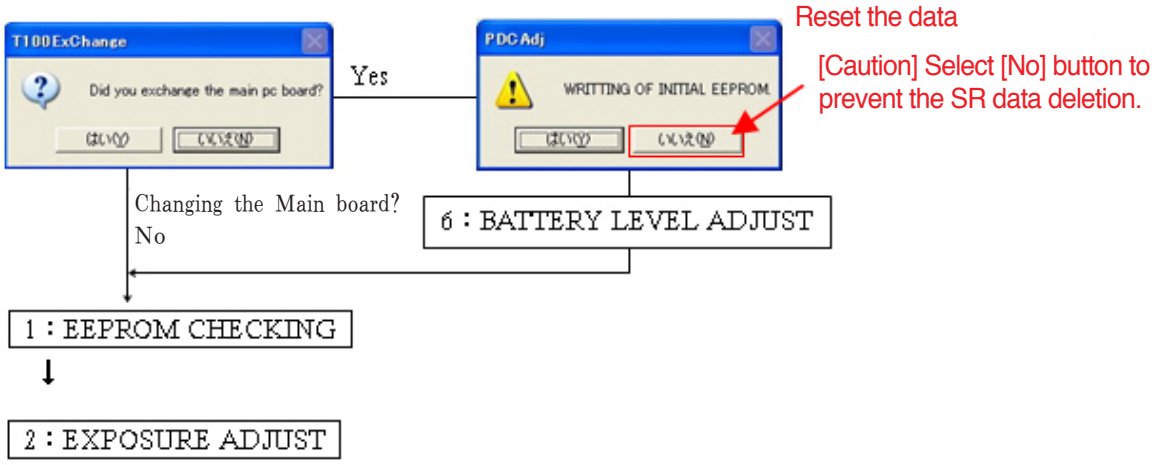
22-3. Adjustment

① Click the "Op" icon to connect the camera. (USB open)



[Check] Check whether the [Connect] message displays on the USB IO.

② Do the adjustment as the following steps.



↓

◇[BV ADJUST]

Equipment :

▫ F5.6 iris for the metering standard lens

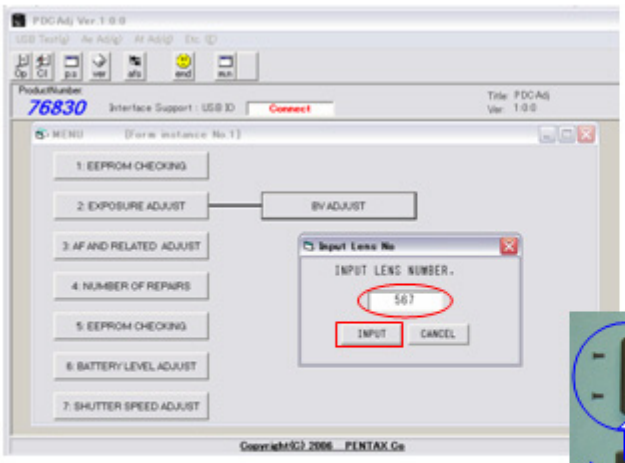
▫ Metering standard lens and F8 set ring

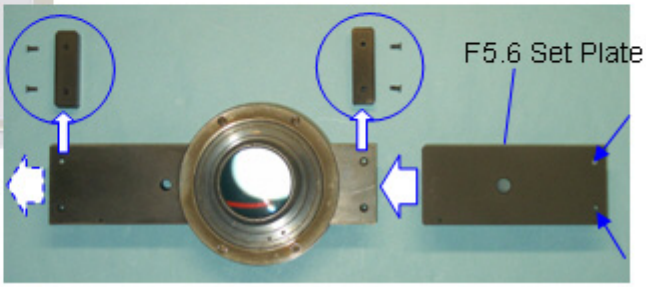
▫ Light source for AE adjustment (LV 6, 8, 12, 15 or 16, Shutter tester)

① Type the Lens ID No. and click the "Input" button.

② After displaying the window as shown, set the light source and F5.6 iris.

③ Attach the camera and click the "OK" button.





3 : AF AND RELATED ADJUST

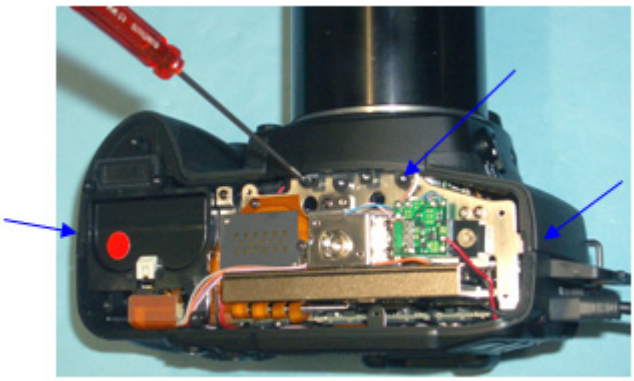
↓

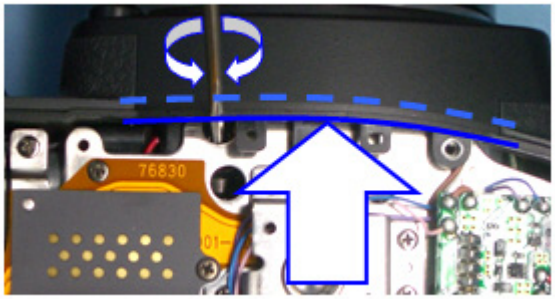
[CCD POSITION ADJUST] adjustment

① Remove the bottom cover. (Don't remove the Power and USB port cover)

② Remove 3 screws.

③ Lift the front cover to the front side and rotate the adjustment screw.





6 : BATTERY LEVEL ADJUST

↓

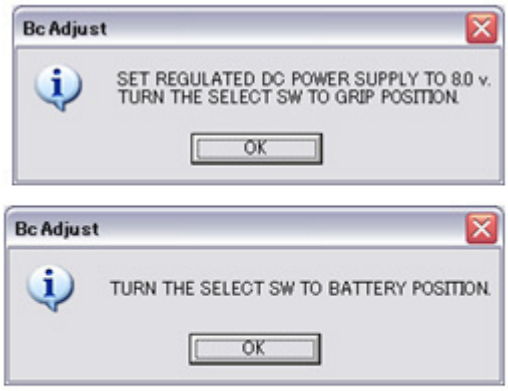
Equipment :

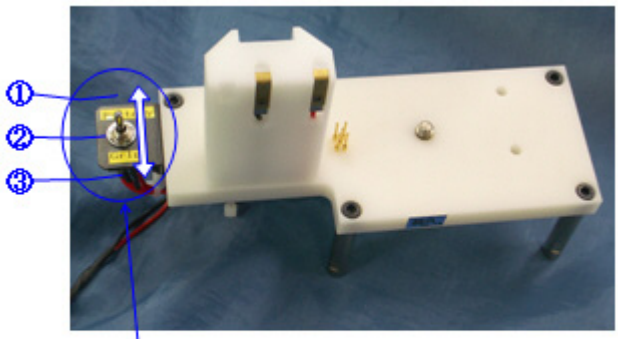
▫ Battery adapter for 76830

▫ Power source (Above DC 8V)

① Attach the bottom cover and battery cover to the body.
(Don't attach the Connection terminal cover)

② Changing the Select SW, do the adjustment as shown.





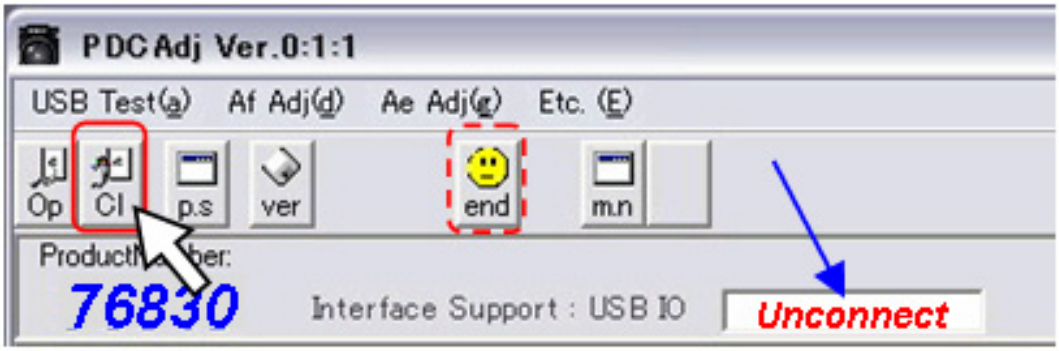
Battery adapter for 76830

Select SW : ①Battery
②Battery & Grip
③Grip

22-5. Closing procedure

① Click the "Cl" button to stop the connection with the camera. (USB close)

[Check] Check whether the [Unconnect] message displays on the USB IO



② Click the "end" button to close the window.

1. BV adjust (brightness value)

When taking a picture, selecting the exposure value is one of the important thing.
Bright or dark image is decided by the EV. Proper exposure is concluded by the metering sensor.

■ **Adjustment procedure**

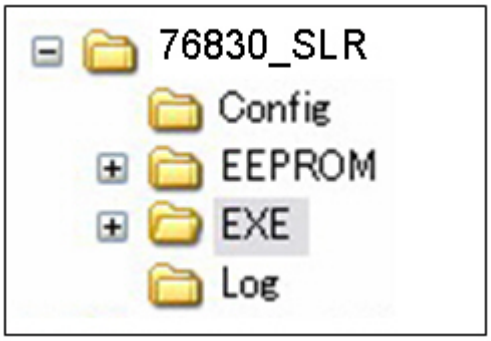
① Turn off the camera. Attach the AC adapter and connect the USB cable to the PC.

USB port of camera

USB port of compter (printer)

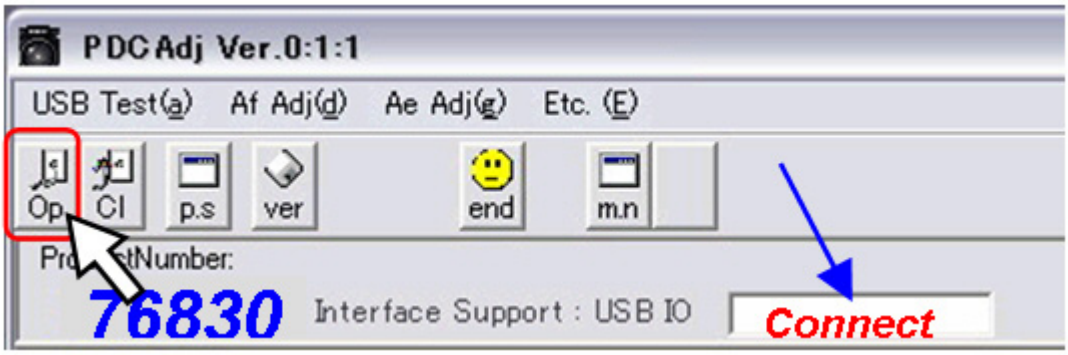
② Turn on the camera and check whether the hot plug icon displays on the desktop.

③ Run the PDCAdj01.exe on the [76830_SLR > EXE] folder.



④ Adjustment window displays.

⑤ Click the "Op" button to connect the camera. Check whether the [Connected] message displays on the USB IO.

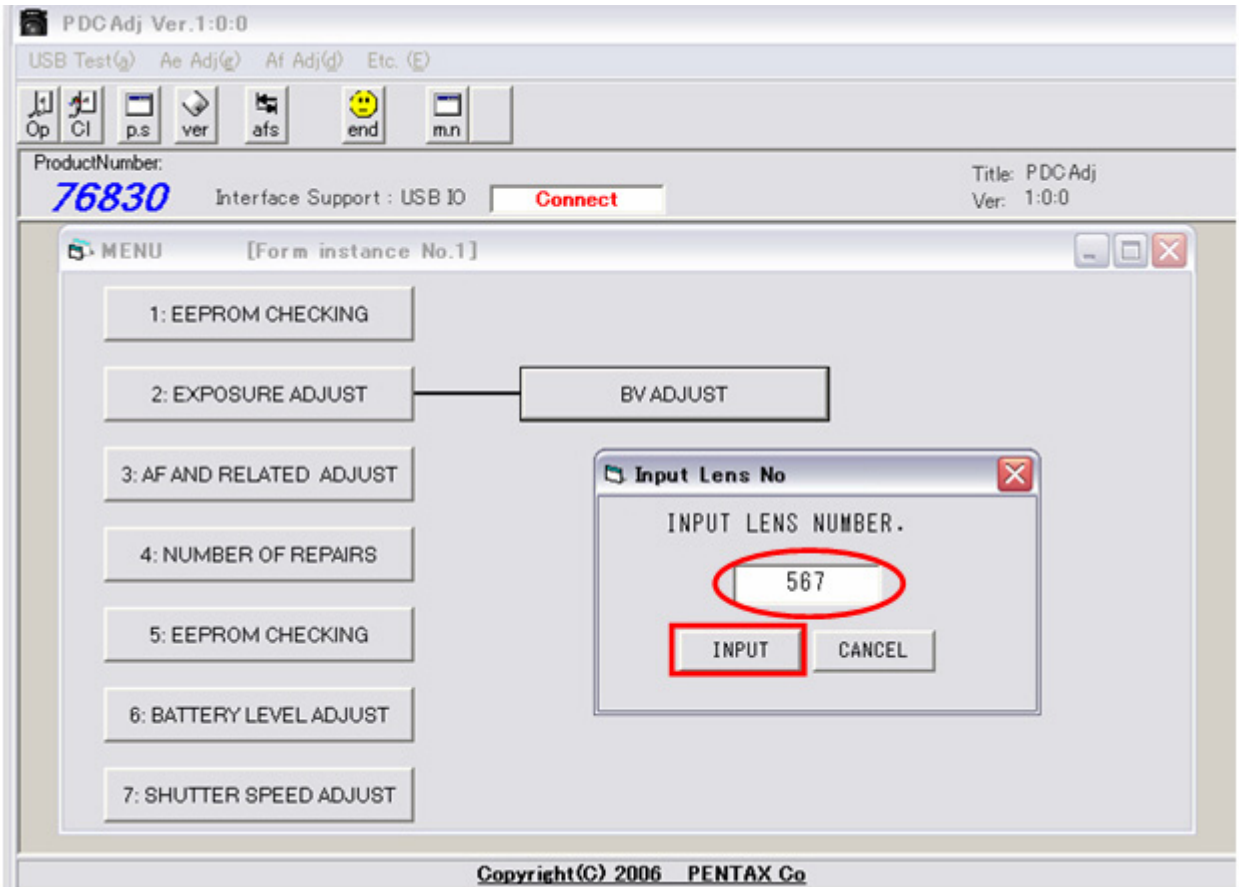


⑥ Open the iris and attach the Diaphragm set ring on the camera.

If there is no Diaphragm set ring tool, any F1.4 lens is available

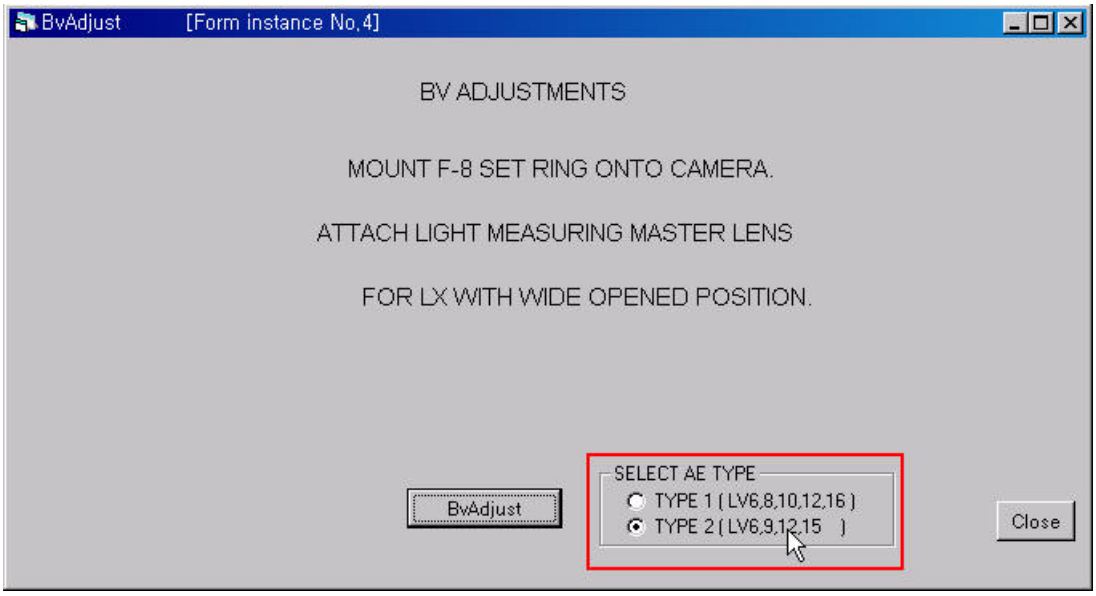
⑦ Attach the camera on the EV tester.

⑧ Click the 2. EXPOSURE ADJUST-BV ADJUST menu



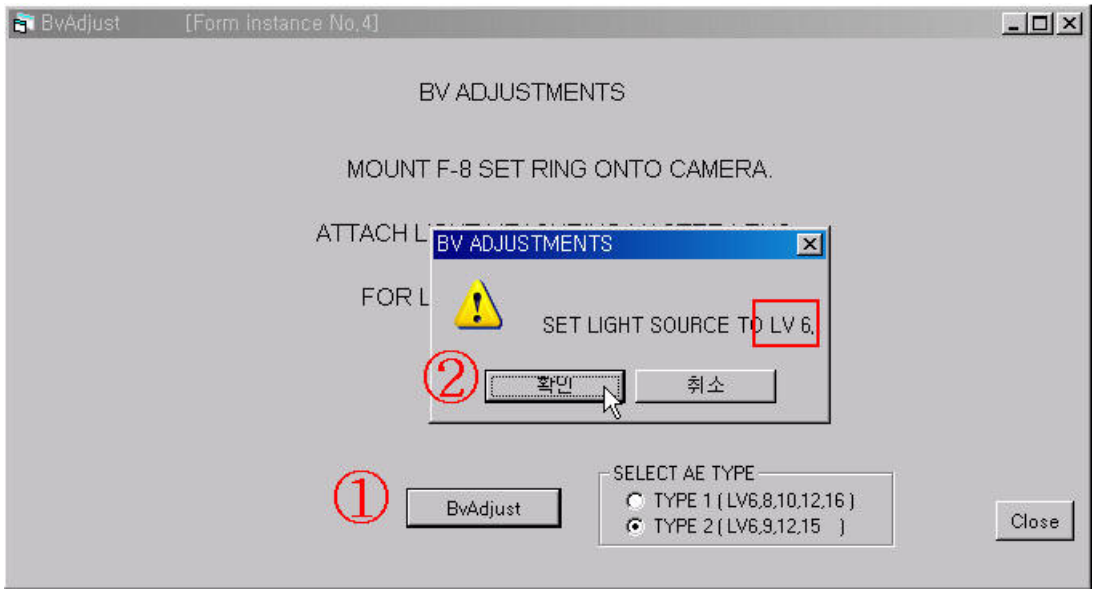
Type the Lens ID No. and click the "Input" button.

⑨ Select a type of EV tester.



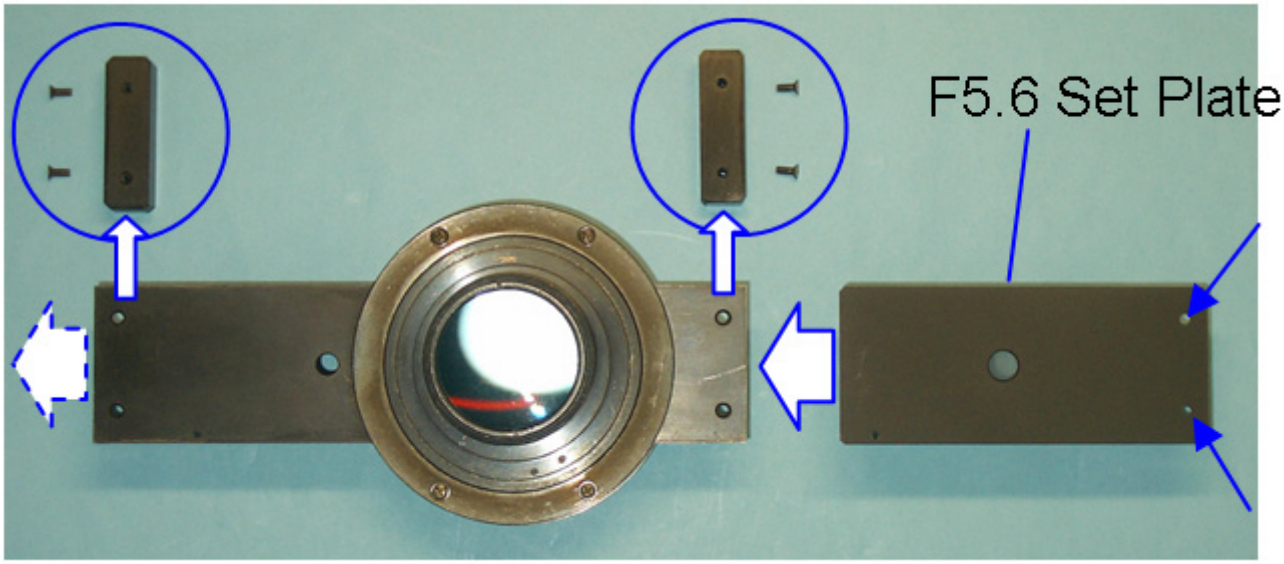
⑩ BClick the BV ADJUST button and a message to set the EV tester to LV6.

Set the EV tester to LV6 and click the "OK" button.

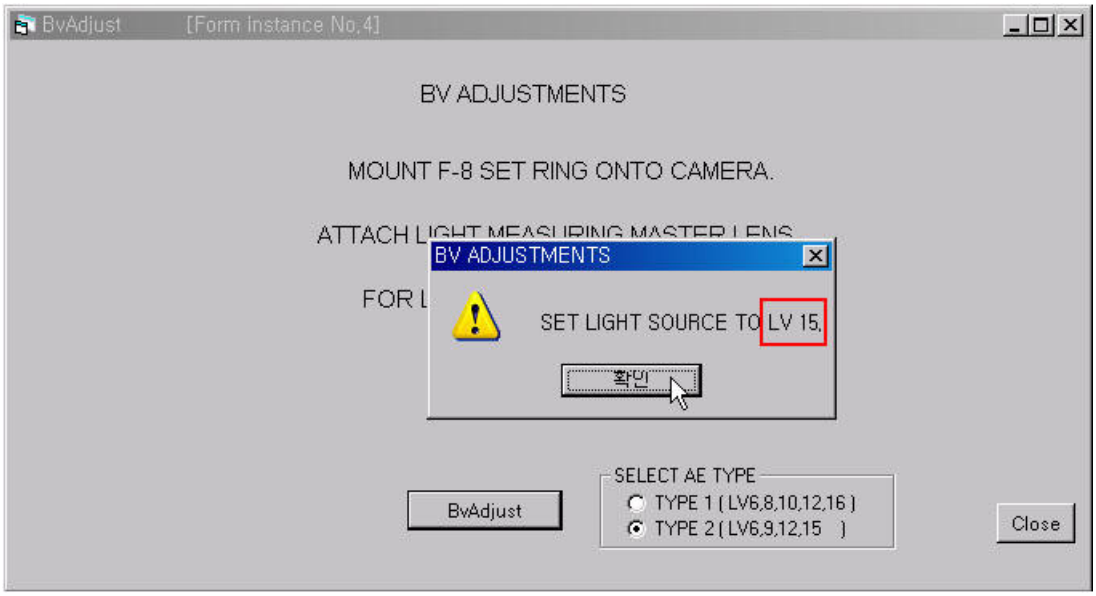


When the following window displays, change the iris to F5.6.

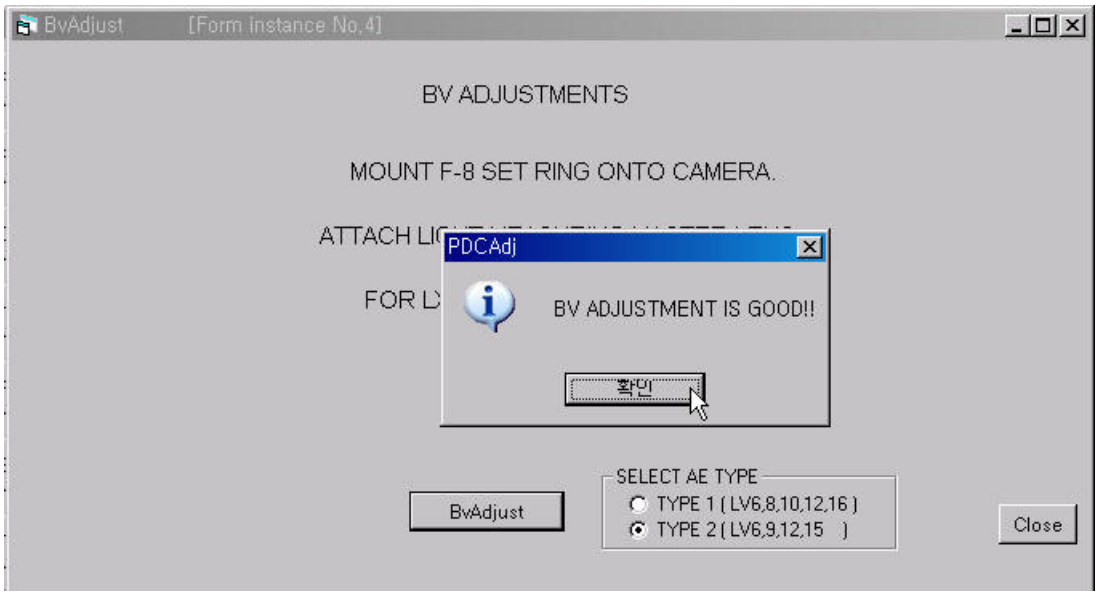
Click the "OK" button and the adjustment starts.



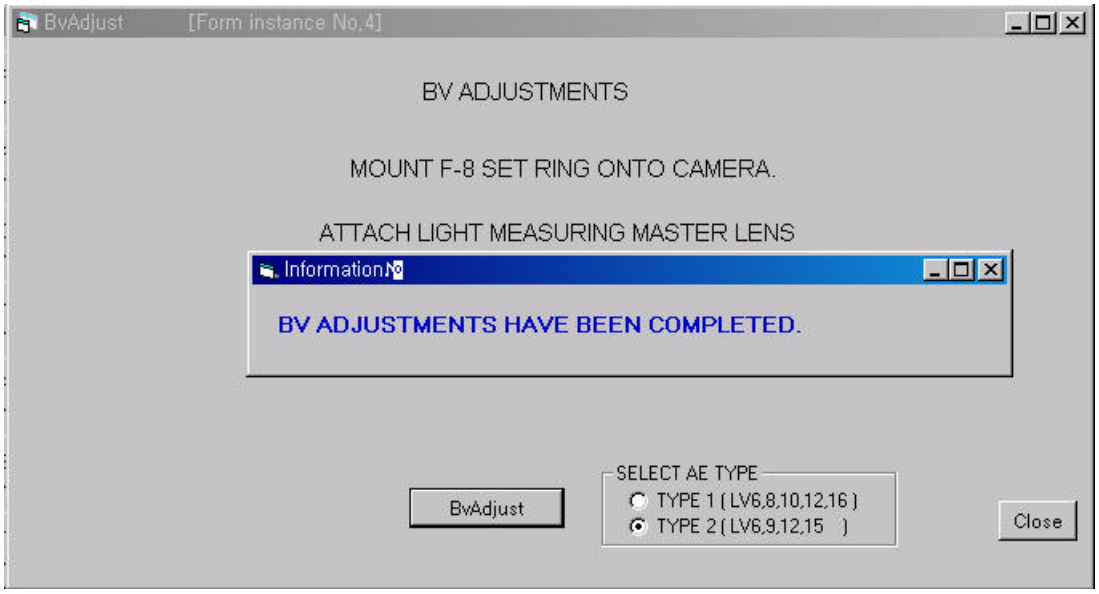
When the "SET LIGHT SOURCE TO LV15. message displays, set the LV to 15 and click the "OK" button.



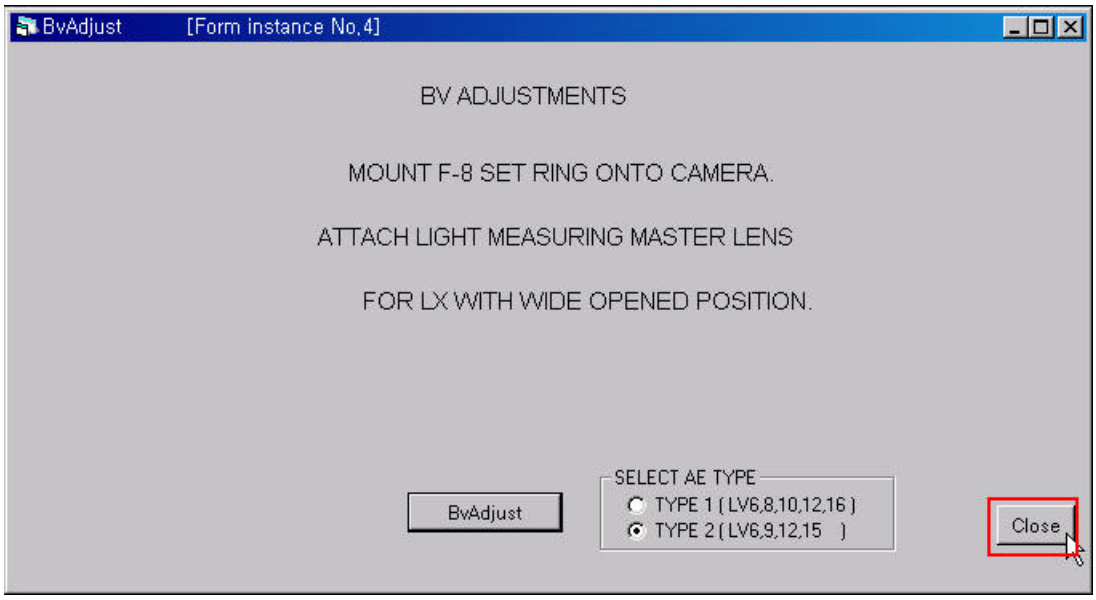
If the adjustment is complete correclty, click the "OK" button.



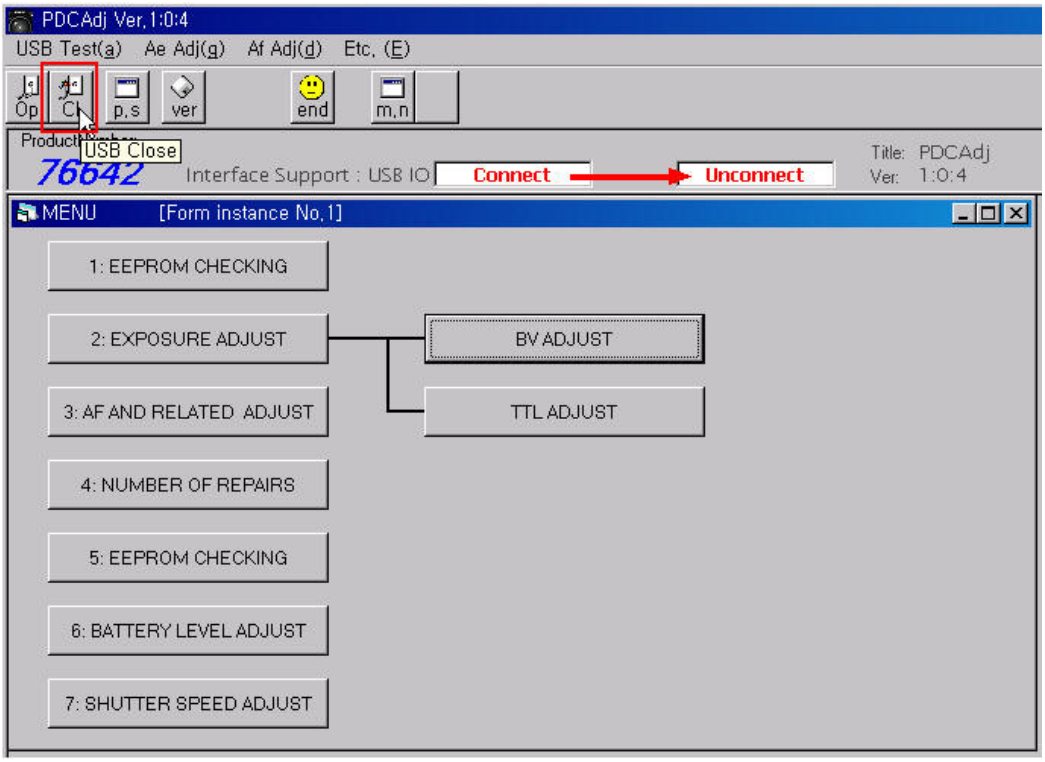
The changed data saves on the camera.



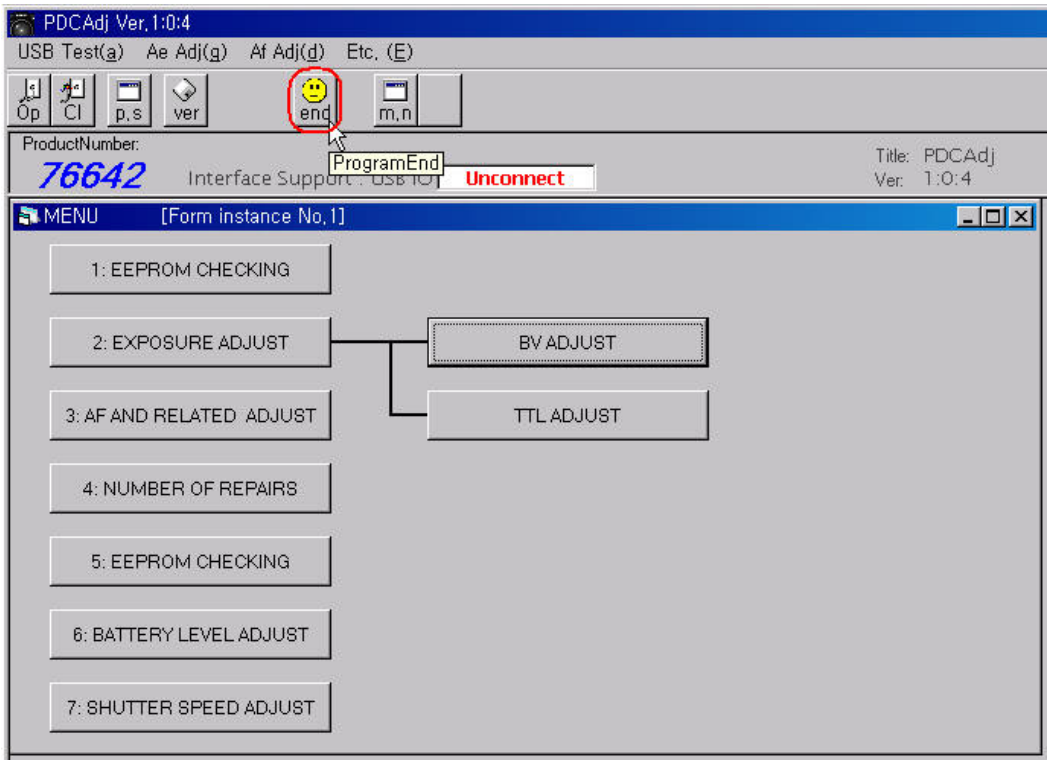
Click the "CLOSE" buttton.



⑪ Click the "Cl" button located on the top side of the Mani menu. Check whether the Connect message changes to Unconnect on the USB IO menu.



⑫ 'Click the "end" button to close the program.



⑬ Disconnect the USB cable from the camera and check the metering.

1. Attach the bundle lens to the camera and set camera settings as followings.

   Camera mode : Av, Aperture : F8, ISO: 200, Metering : Spot, Focus mode : MF, Focal Length : 35m, Focus ring : Infinity.

2. Put the camera on the EV tester.

3. Refering to the table as shown below, check the Tv by pressing the shutter button halfway down.

■ Metering table (F No.: 8, ISO: 200)

\	LV6	LV8	LV9	LV10	LV12	LV15	LV15(Multi metering)
Tv	Tv0.5”	Tv8	Tv15	Tv30	Tv125	Tv1000	Tv750

If the shutter speed values are same with the table in the F8 (F No.) condition, the adjustment is complete correclty. If not, adjust the camera again.

2. AF adjustment

2-1. Adjusting the AF sensor location

AF sensor functions as taking an image clearly.Ä
When the AF sensor is changed or the sensor malfunctions, do this adjustment.

■ Adjustment process

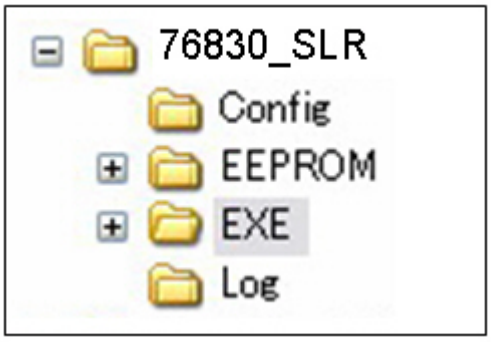
① Turn off the camera and insert the AC adapter. Connect the camera to the PC with the USB cable.

USB port for the camera

USB port for the computer (Printer)

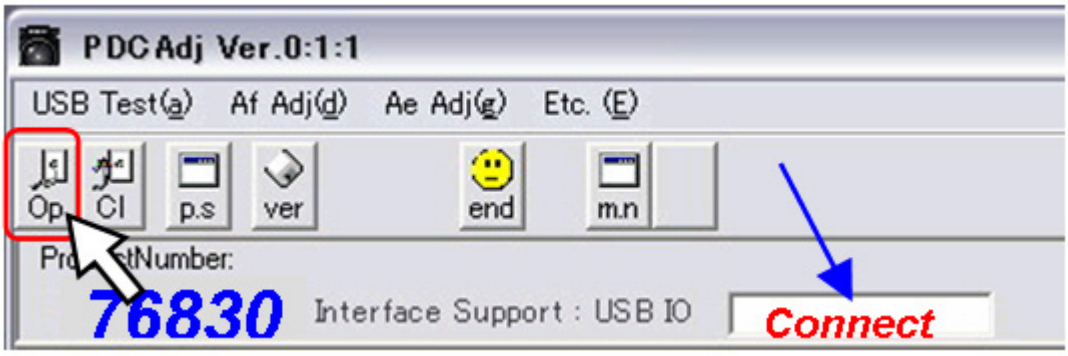
② Turn on the camera. Check whether the hot plug icon displays.

③ Run the PDCAdj01.exe file on the '76830_SLR > EXE folder.



④ The adjustment window displays.

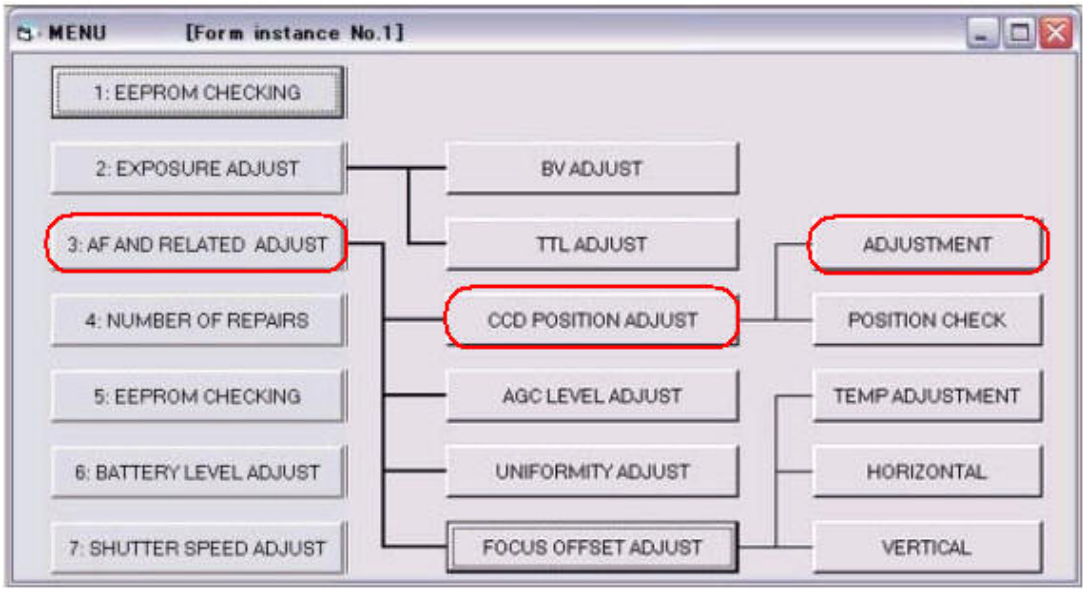
⑤ Click the "Op" button to connect the camera. Check whether the Connect message displays on the USB IO menu.



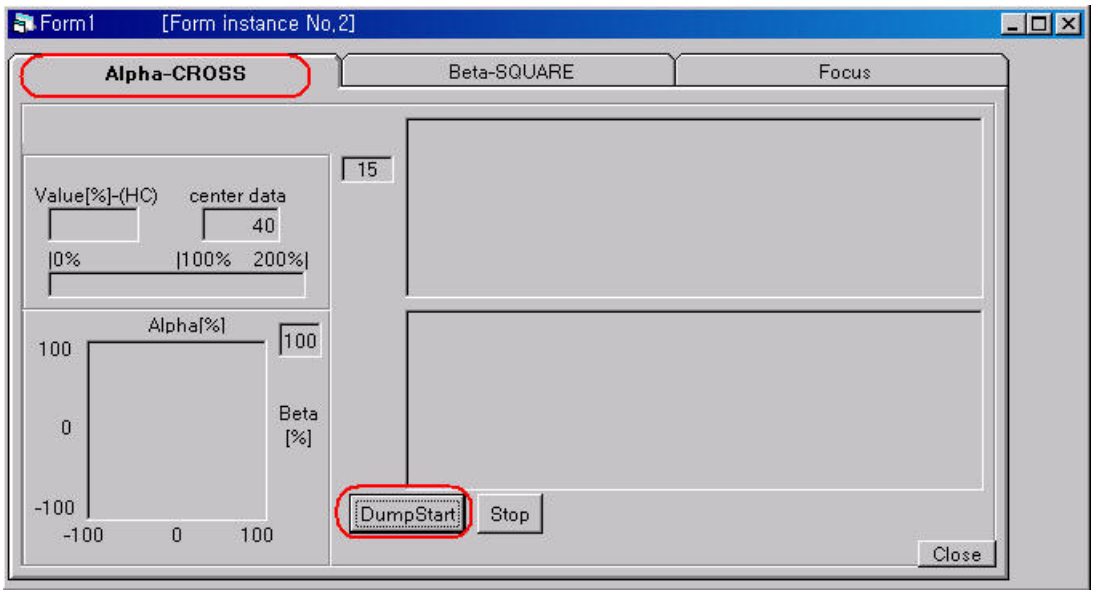
⑥ Attach the AF sensor inclination adjustment tool (Cross) on the camera. Set the focus mode to MF.

⑦ Put the camera (with the Cross) on the EV tester.

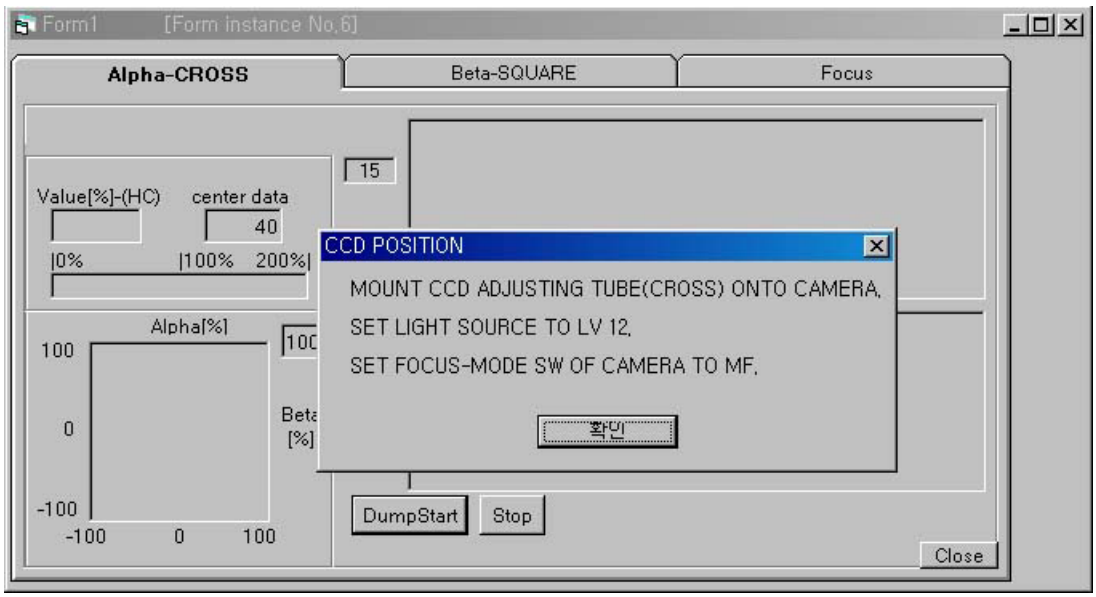
⑧ Click the 3.AF AND REL ADJ - CCD POSITION ADJ - ADJUSTMENT button.



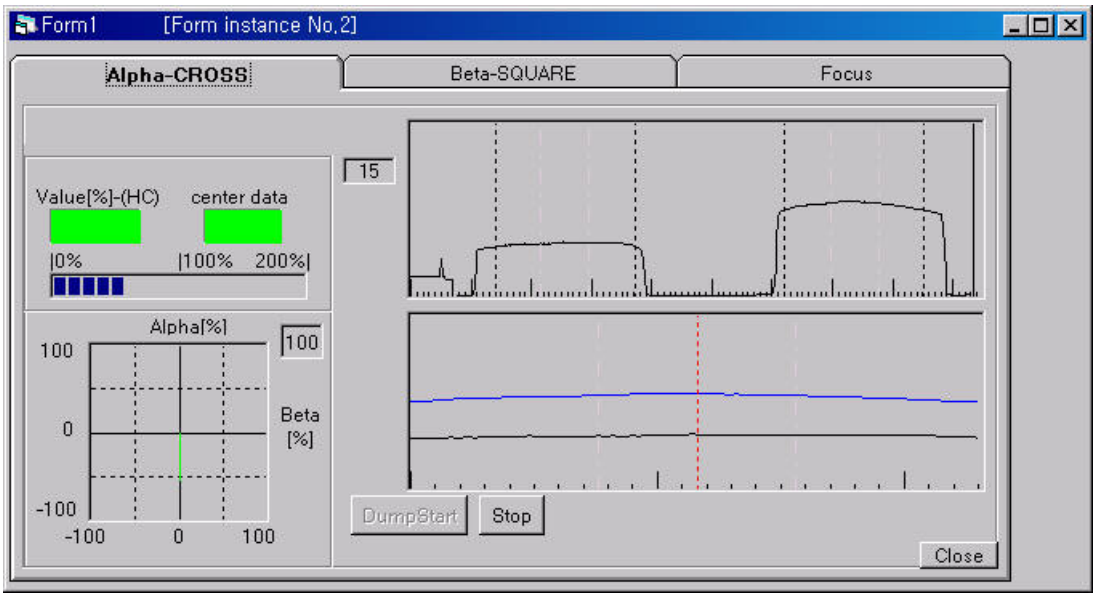
⑨ Click the "DumpStart" button on the Alpha-CROSS menu tab.



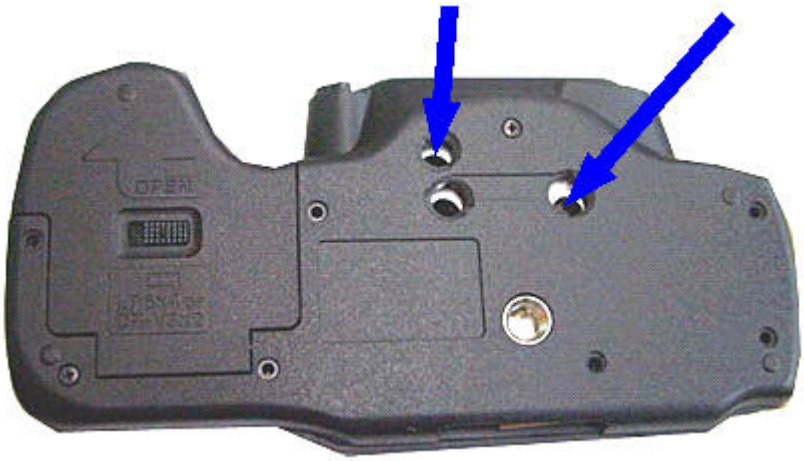
Set the EV tester to LV12 and click the "OK" button.



If the result displays as green color, it is correct.

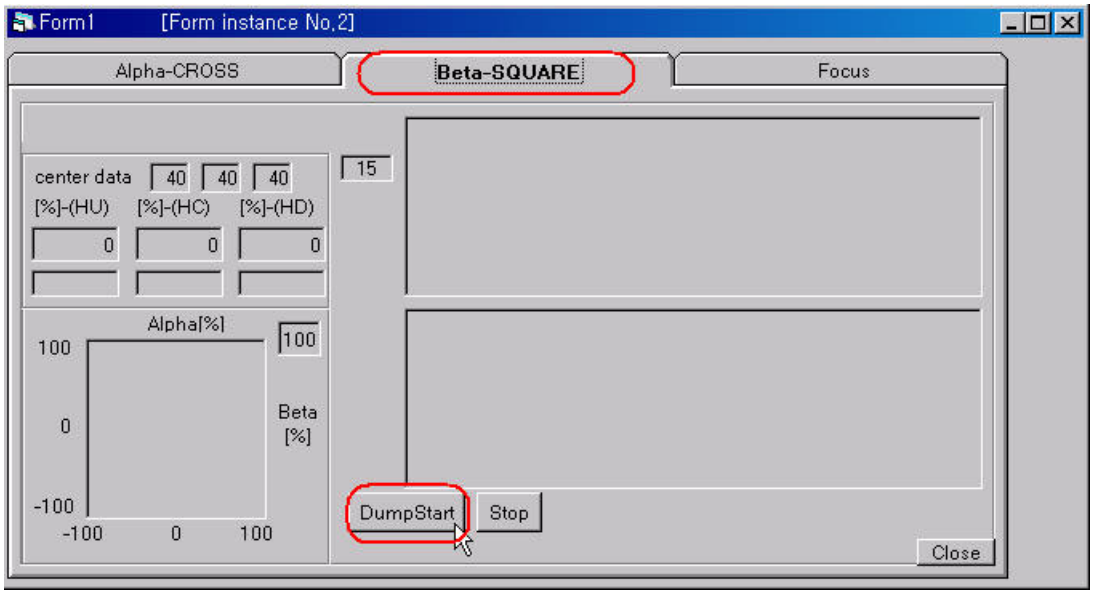


If the result displays as red color, adjust the AF sensor inclination by rotaing the two hexagon screws until the color comes to be green.

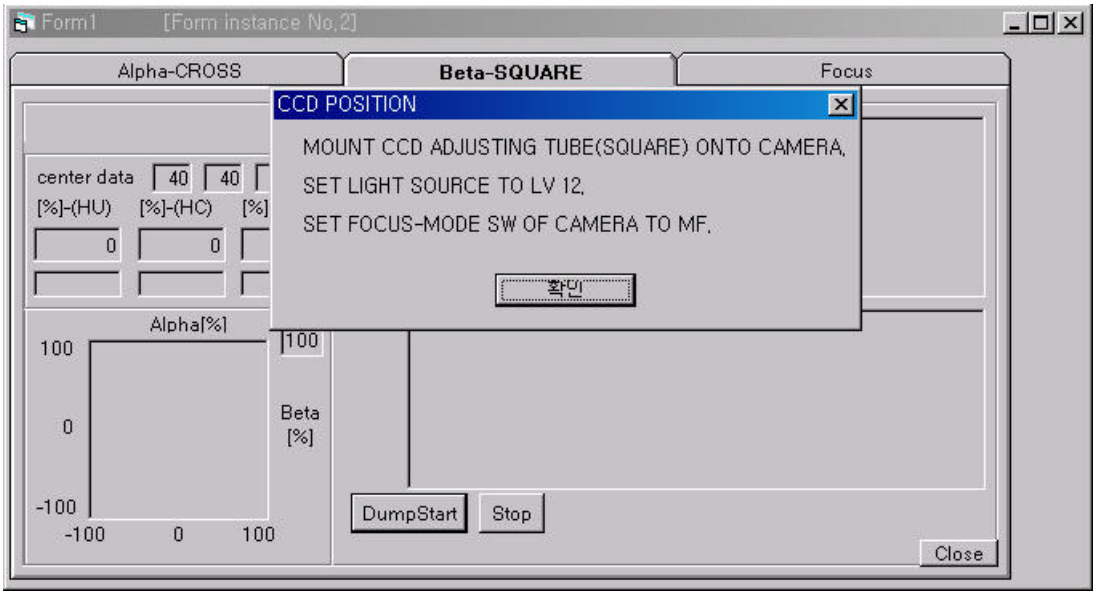


⑩ Attach the AF sensor inclination tool (Square) on the camera. Set the focus mode to MF.

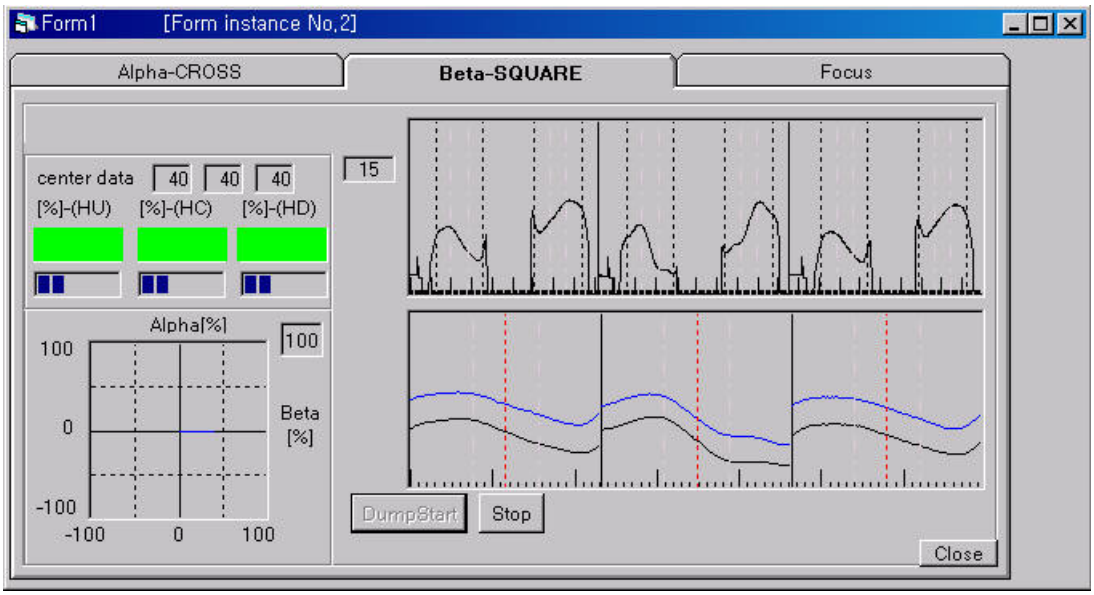
Click the "DumpStart" button on the Beta-SQUARE menu tab.



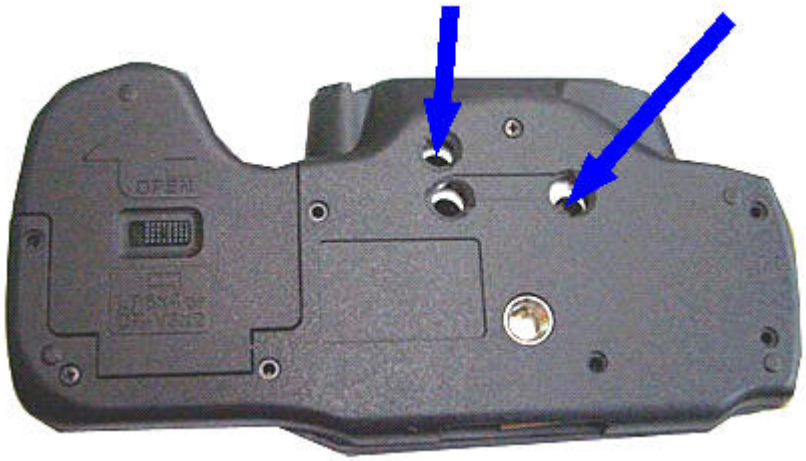
Set the EV tester to LV12 and click the "OK" button.



If the result is green, it is correct.

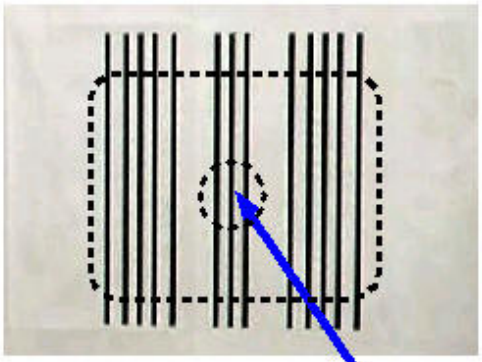


If the result displays as red color, adjust the AF sensor inclination by rotaing the two hexagon screws until the color comes to be green.



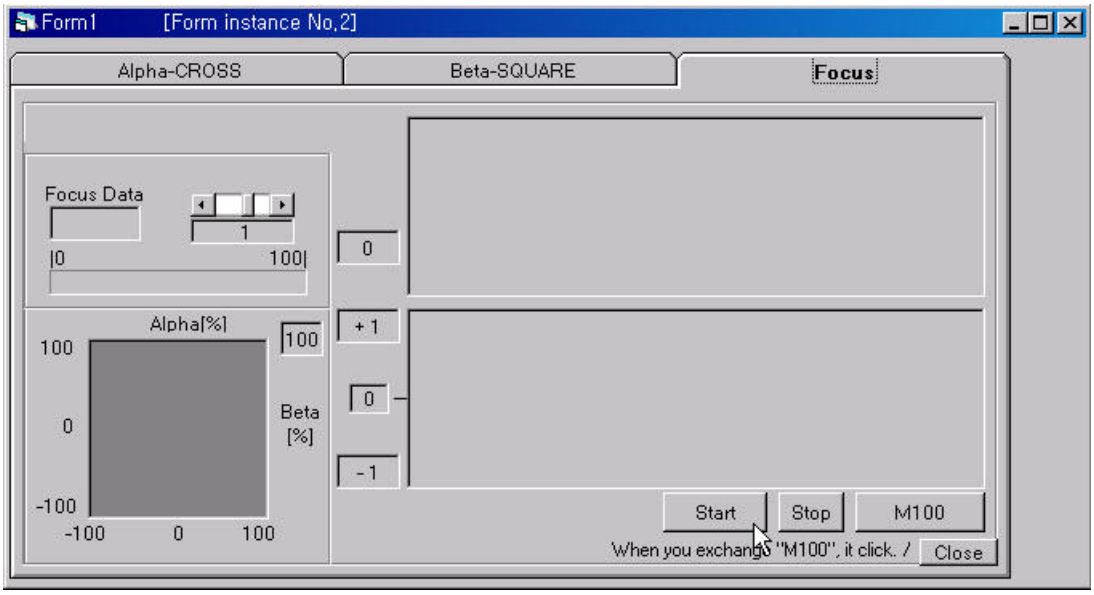
⑪ Attach the standard lens (50M, F1.4) on the camera.

Prepare the No.1 AF chart. Keep the distance between the chart and camera mount to 1,954.5mm.
Use the tripod.

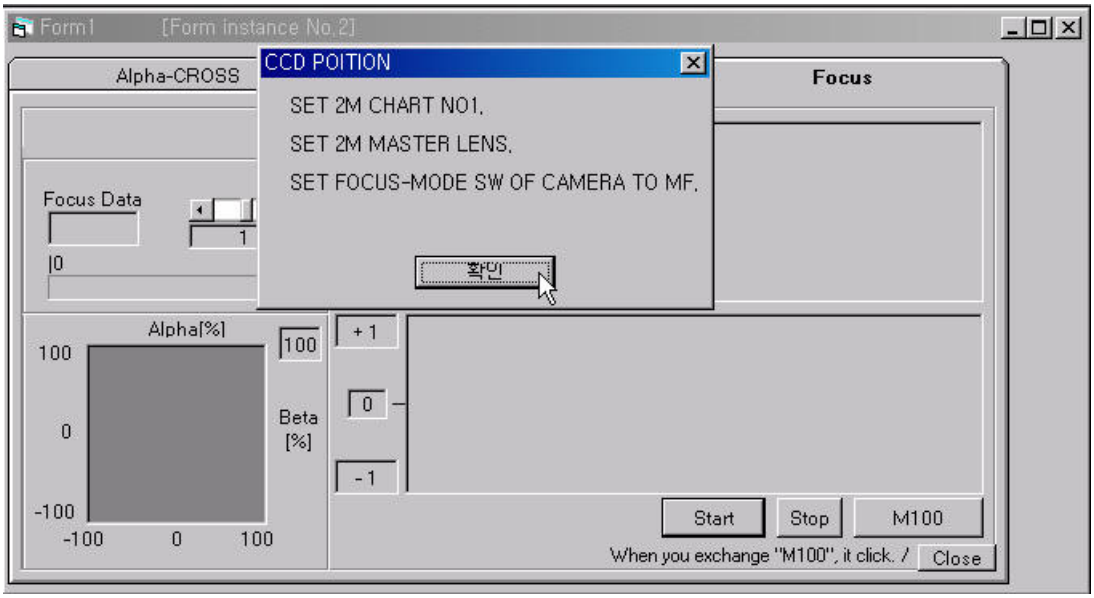


The distance between the chart and camera is 1.9545m

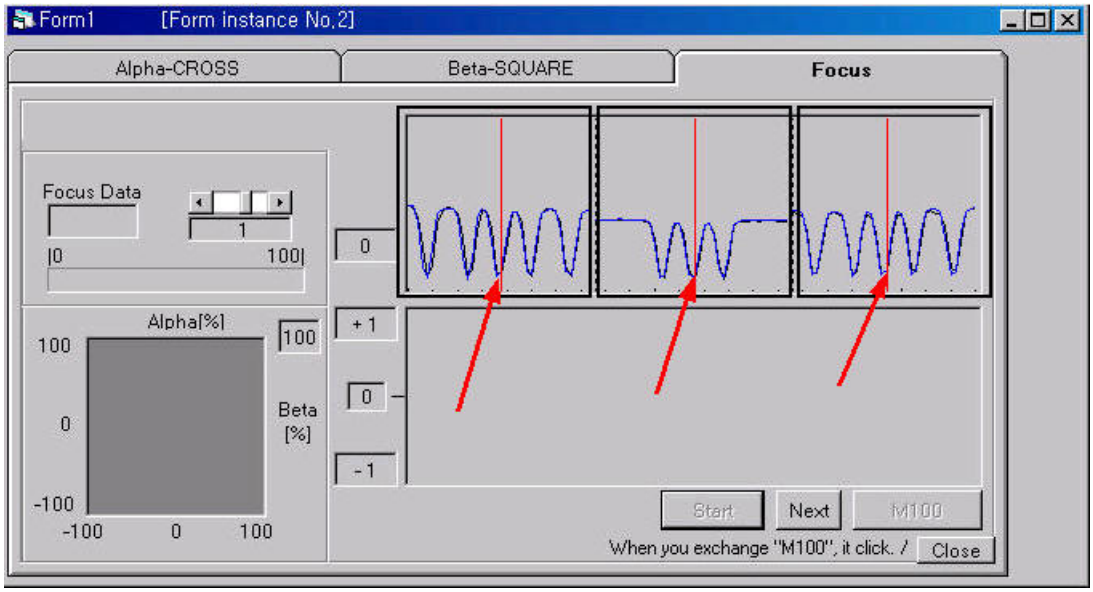
Click the "Start" button on the Fucos menu tab.



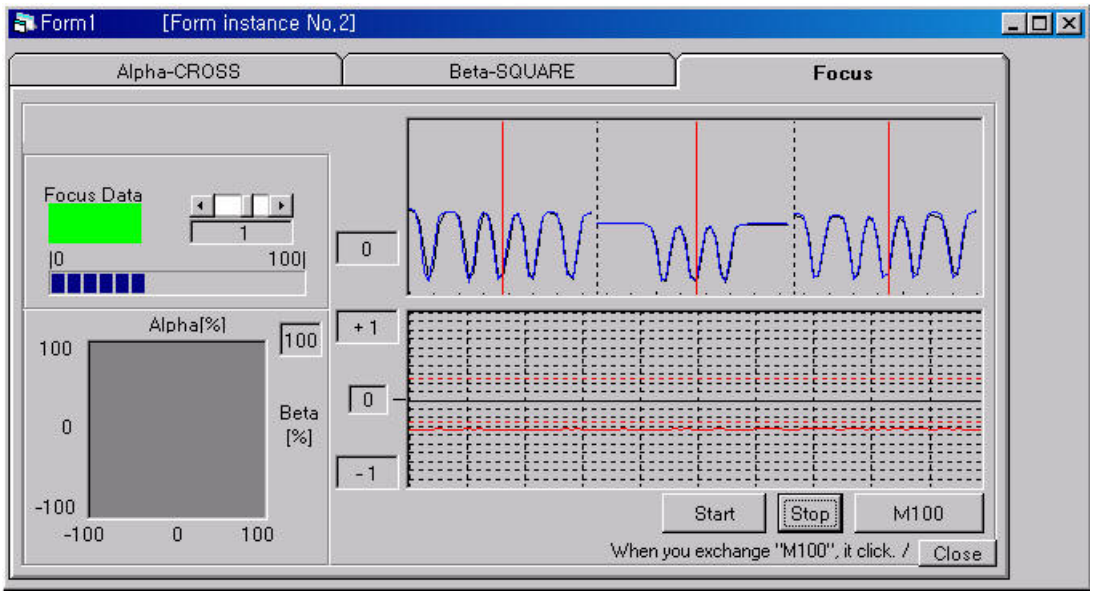
Check the conditions and click the "OK" button.



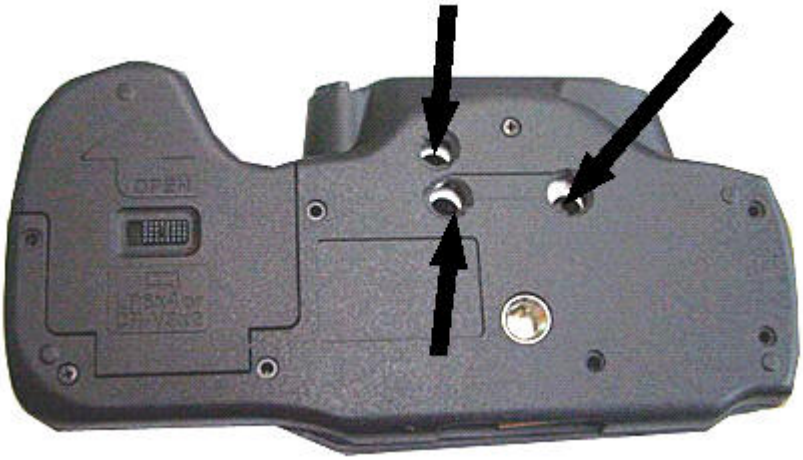
Set the centers of the blue graphs of the 3 part (Left, Center, Right) on the standard line (Red color).
Move the camera mounted on the tirpod slightly to the left or right directions to match the center of the graphs (Red color, bottom of the curved graph).
When the centers are matched, click the "Next" button.



If the result is green, it is correct.



If the result displays as red color, adjust the AF sensor inclination by rotaing the three hexagon screws until it comes to be green.



rotate the screws same times. If the screws are rotated differently, the inclination is changed and you must check the inclination or ajust the camera again.

2-2. Checking the AF sensor position

This chapter is for checking the AF sensor position after the general AF sensor adjustments.

■ **Checking process**

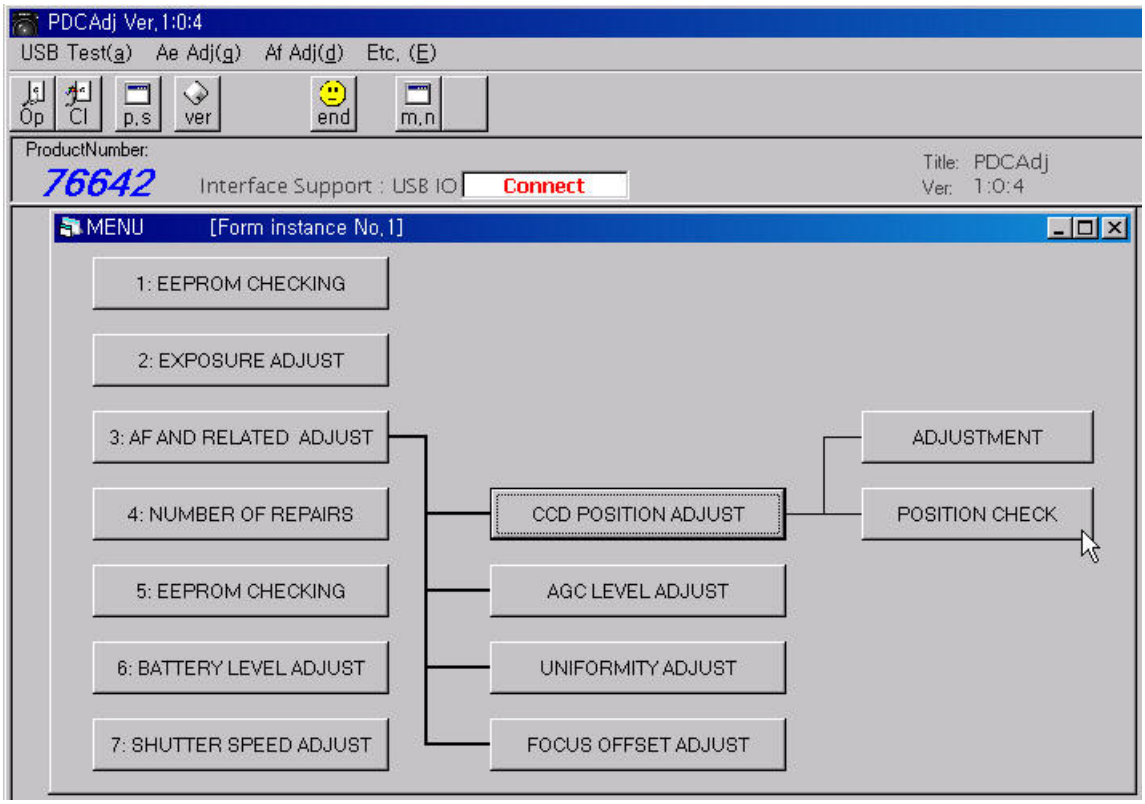
① Attach the 35-80 F4-5.6 lens on the camera.

If the 35-80 F4-5.6 lens is not prepared, the bundle lens is available.

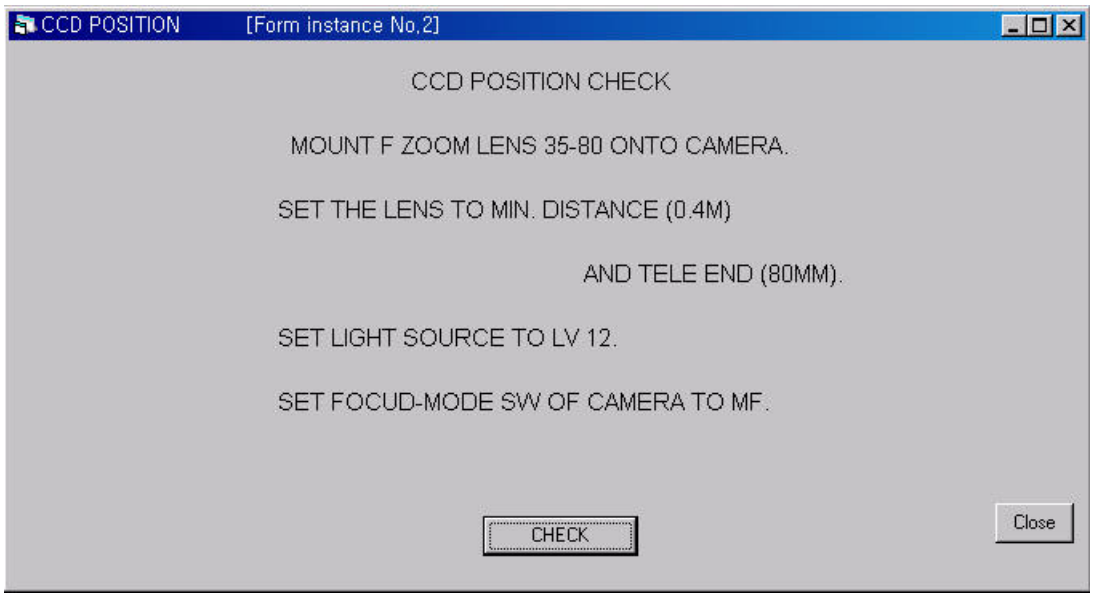
When the bundle lens is used, set the camera as followins.
Focus: MF, Lens distance: 55M, Distance ring: 0.4M

② Attach the camera (Mounted 35-80 or bundle lens) on the EV tester.

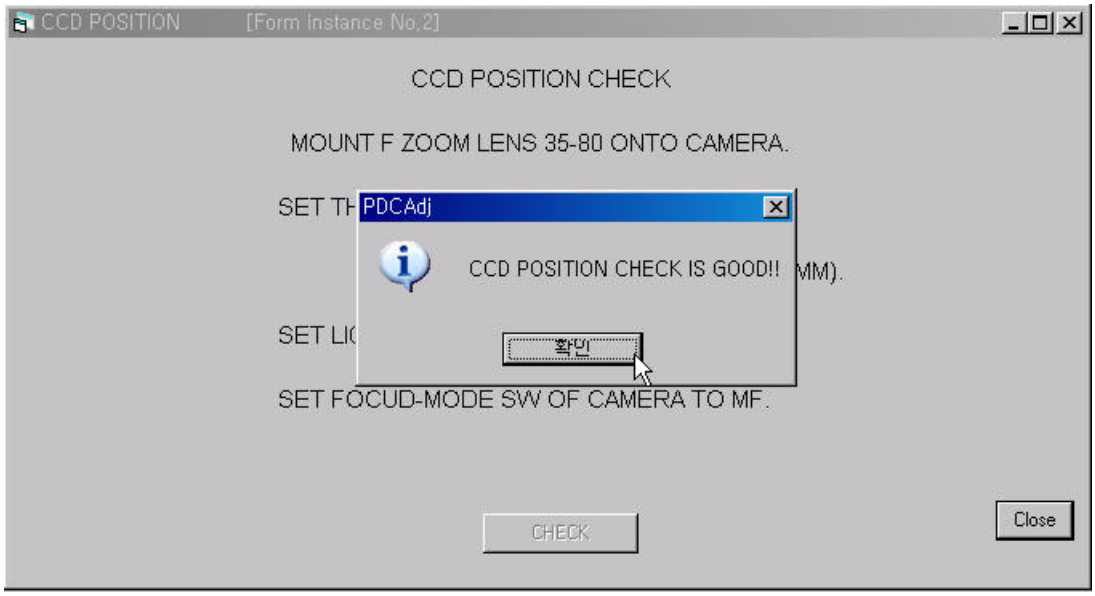
③ Click the 3. AF AND REL ADJ - CCD POSITION ADJ - POSITION CHECK button.



④ Set the EV tester to LV12. If the 35-80 lens is mounted, set the lens as 80mm and 0.4M distance ring and click the 'CHECK' button.
If the bundle lens is mounted, set the lens as 55mm and 0.4M distance ring.

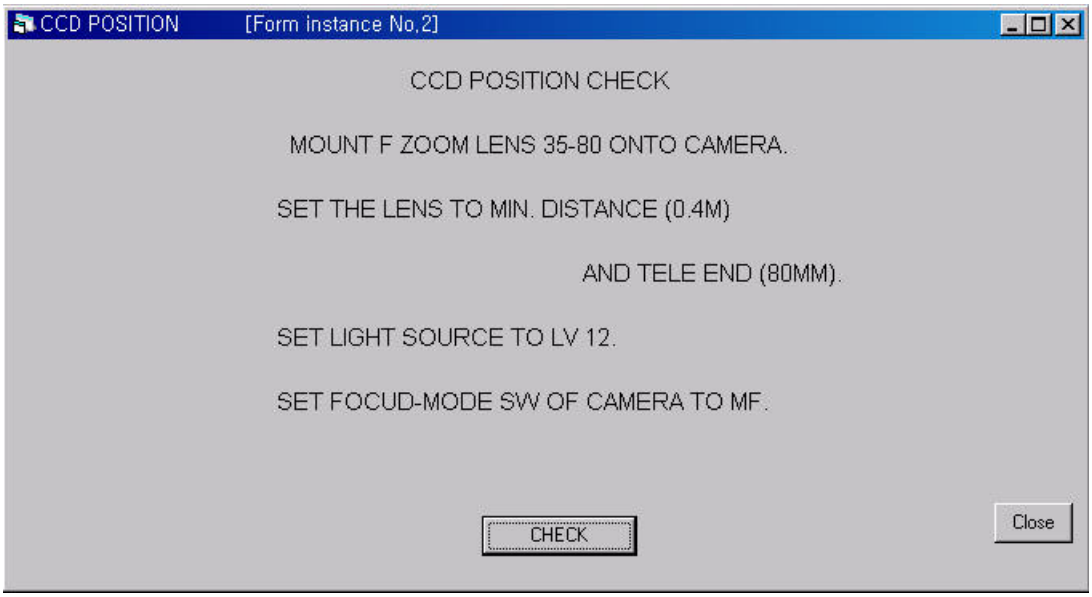


⑤ If the AF sensor position is correct, the following message displays. Click the "OK" button.



If the NG message displays, adjust the AF sensor position again.

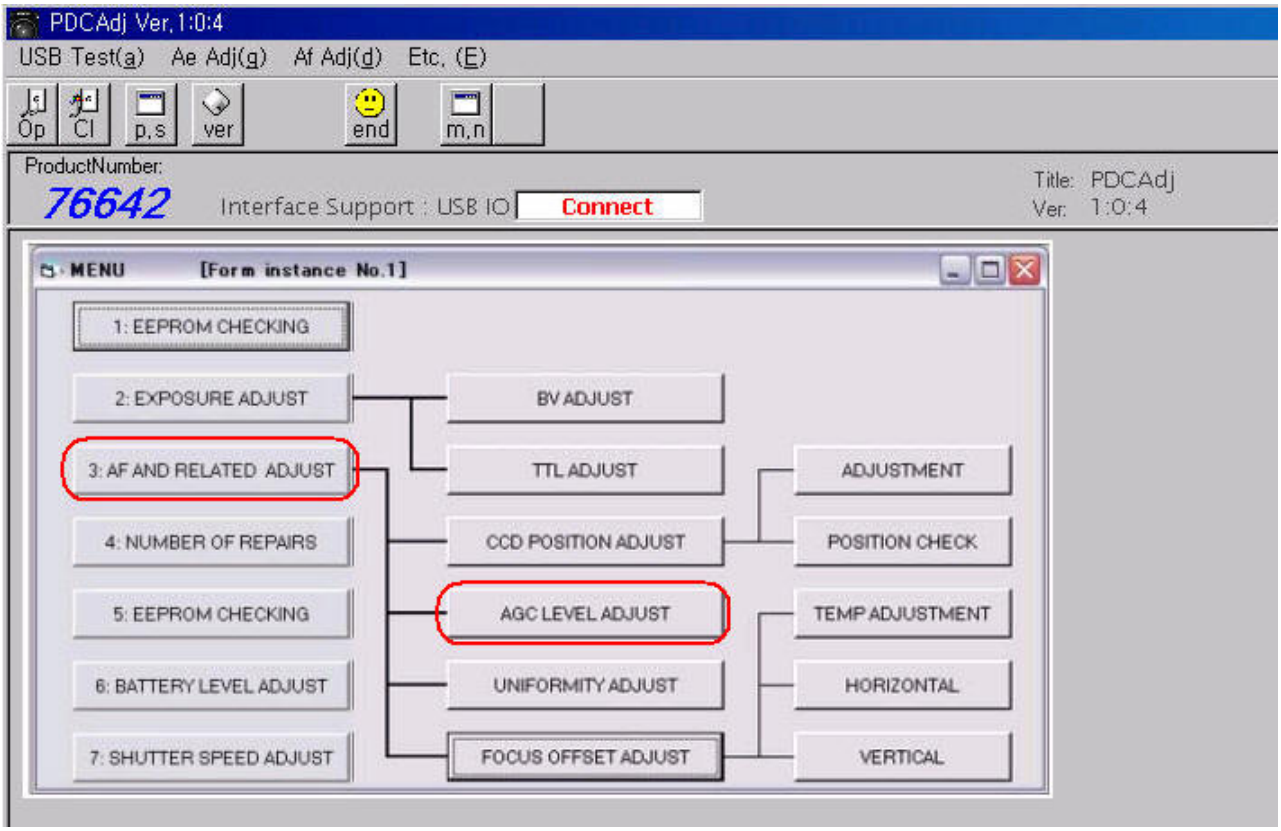
Click the 'CLOSE' button to close the AF sensor postion check window.



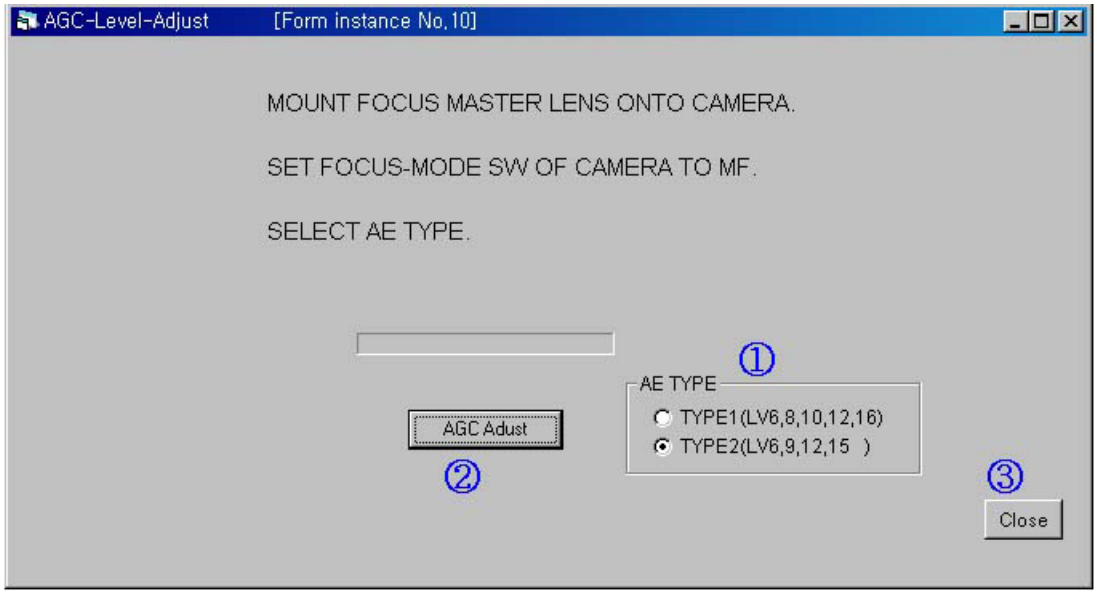
If the Diaphragm set ring is not prepared, a lens that has F1.4 is available.

② Attach the 50M lens mounted camera on the EV tester.

③ Click the 3. AF ADN REL ADJ - AGC LEVEL ADJUST button.



④ Select a EV tester type and click 'AGC Adust' button to adjust the LV.
Select the 6, 7, 12, 15 in order. After completing the adjustment, click the "Close" button to close the window.



2-4. Uniformity adjust: Adjustment for each AF sensors output equality

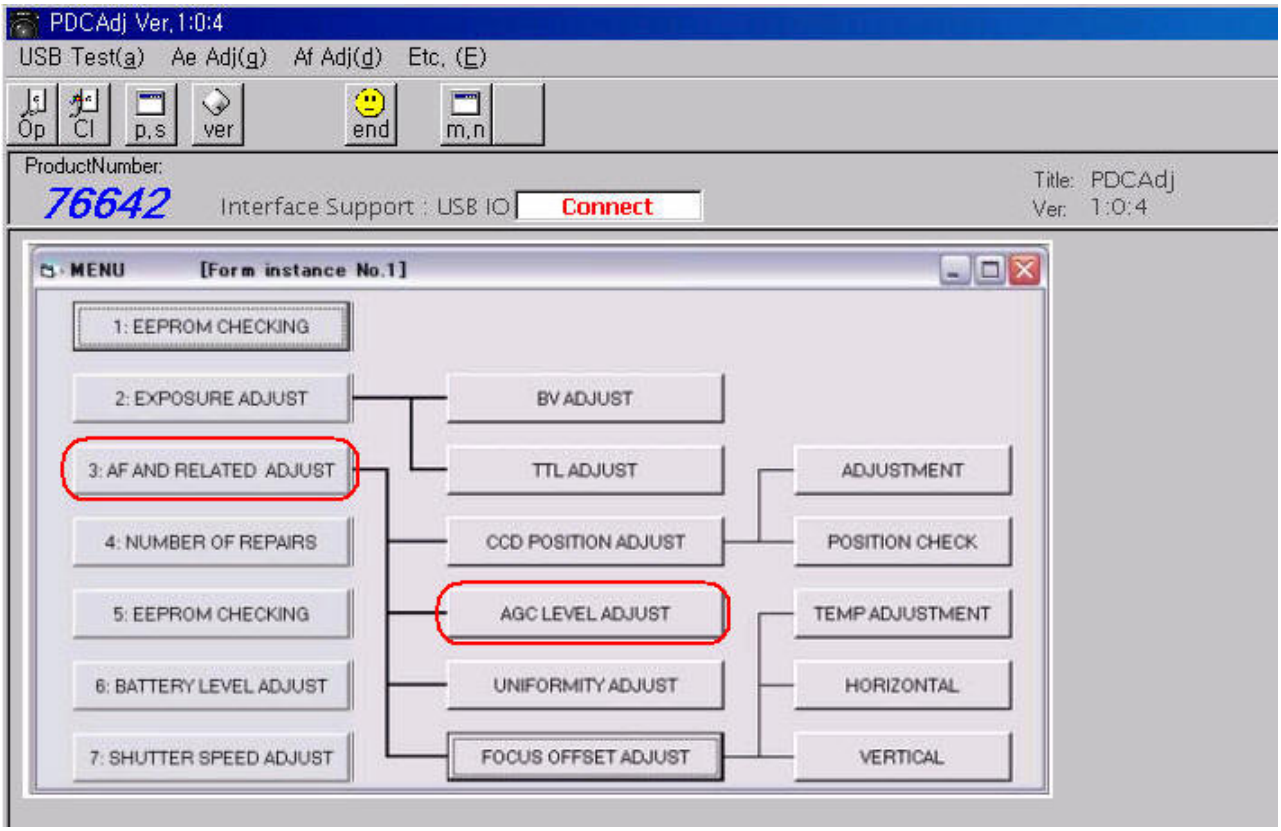
Each AF sensors output are not equal. Be equal each AF sensors output and the AF sensors performance are improved. When the AF sensor is changed or AF sensor has malfunction, do this adjustment.

■ **Adjustment process**

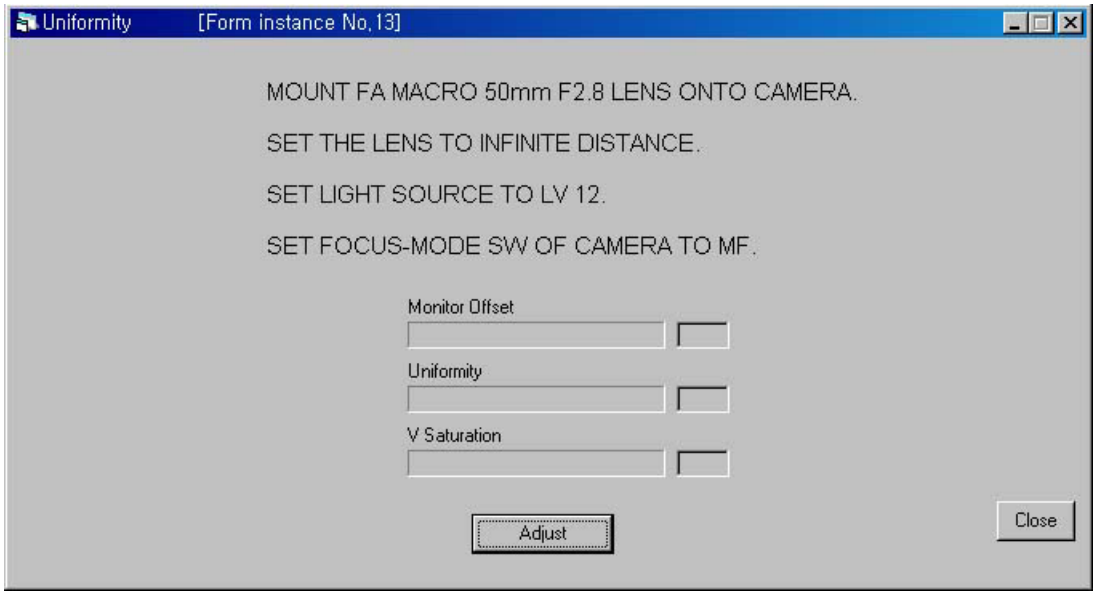
① Attach the Macro 50mm F2.8 lens on the camera. (Focus mode: MF)

② Put the camera (with Macro 50mm F2.8 lens) on the EV tester.

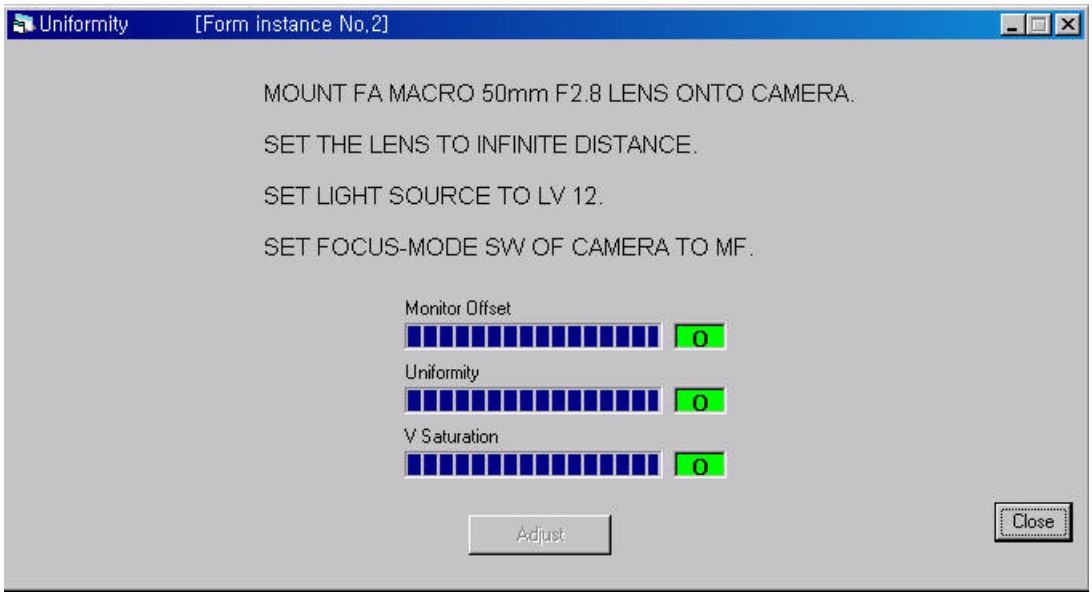
③ Click the 3. AF AND REL ADJ - UNIFORMITY ADJUST button.



④ Set the distance of Macro 50mm lens to infinity and the EV tester to LV12. Click the 'Adjust' button to start the adjustment.

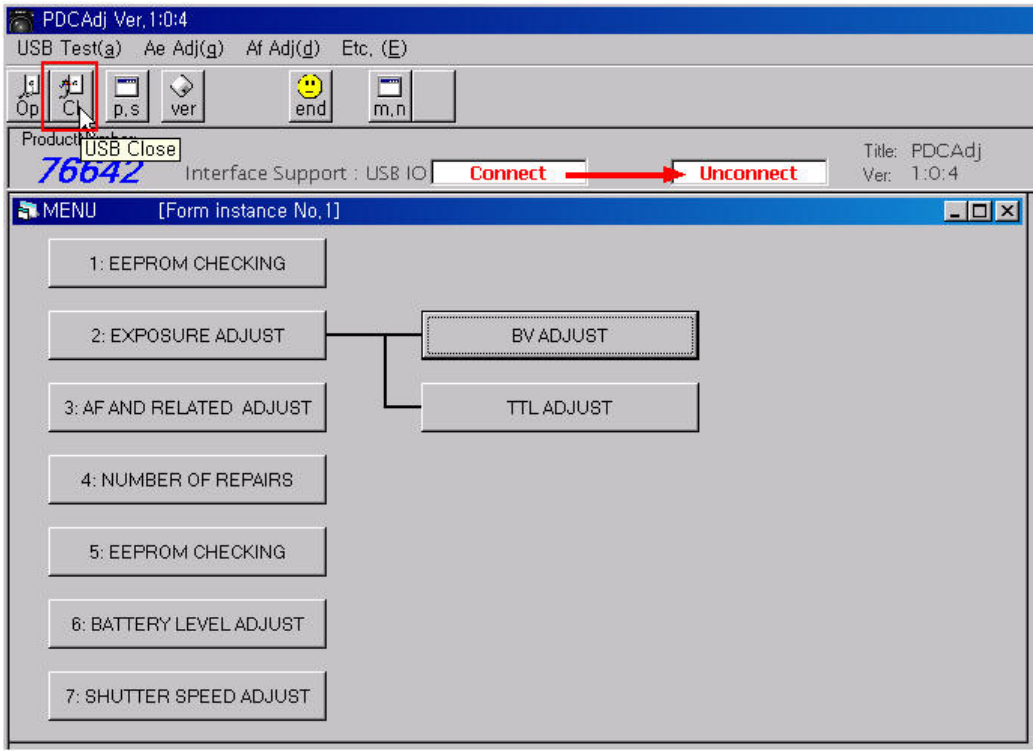


If the result is green, the adjustment is complete.

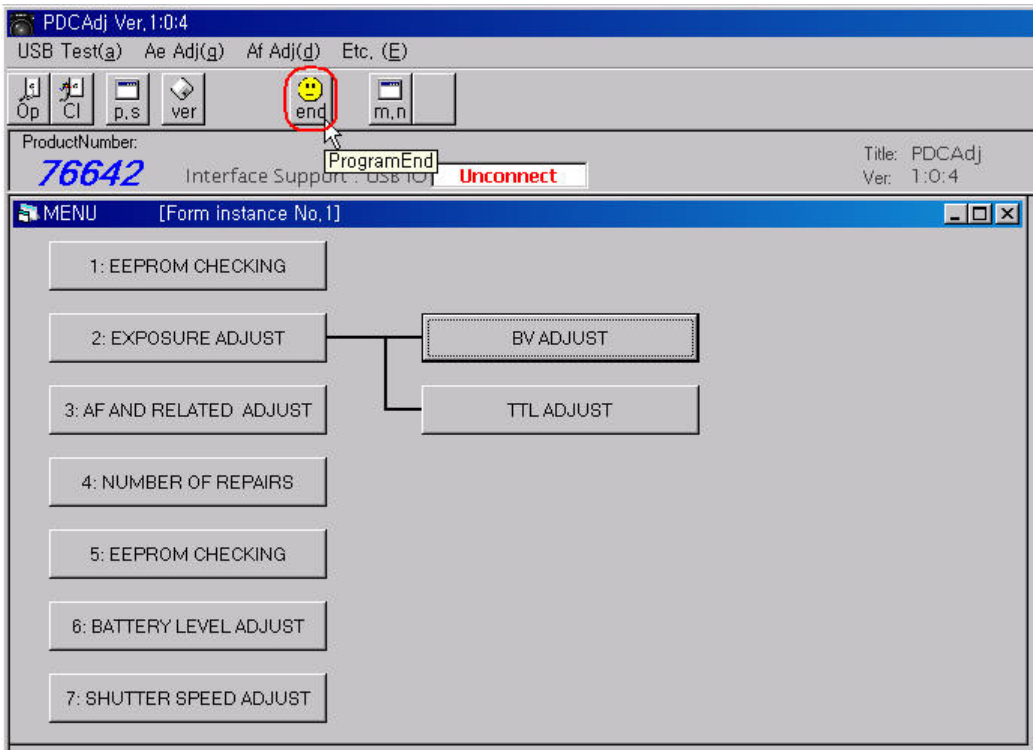


Click the 'Close' button to stop the adjustment.

⑤ Click the 'Cl' button on the top of the main menu.
Check whether the Connect message is changed to Unconnect on the USB IO menu.



⑥ Click the 'end' button to close the program.



3. Focus adjustment

3-1. TEMP ADJUSTMENT: Temperature setting for the Focus adjustment

This adjustment is for inputing the temperature of the test room. Generally, you can input the proper temperature, but if a specified temperature is required, put the exact temperature.

■ Adjustment process

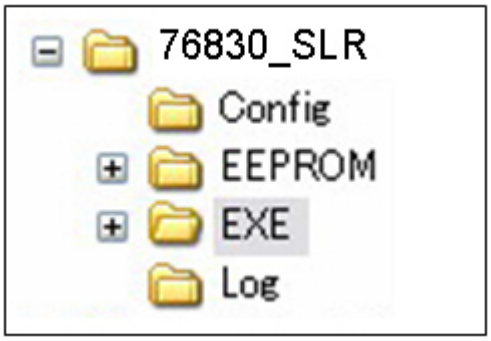
① Turn off the camera and insert the AC adapter. Connect the camera and the PC with the USB cable.

USB port for the camera

USB port for the computer (Printer)

② Turn on the camera and check the hot plug icon on the desktop.

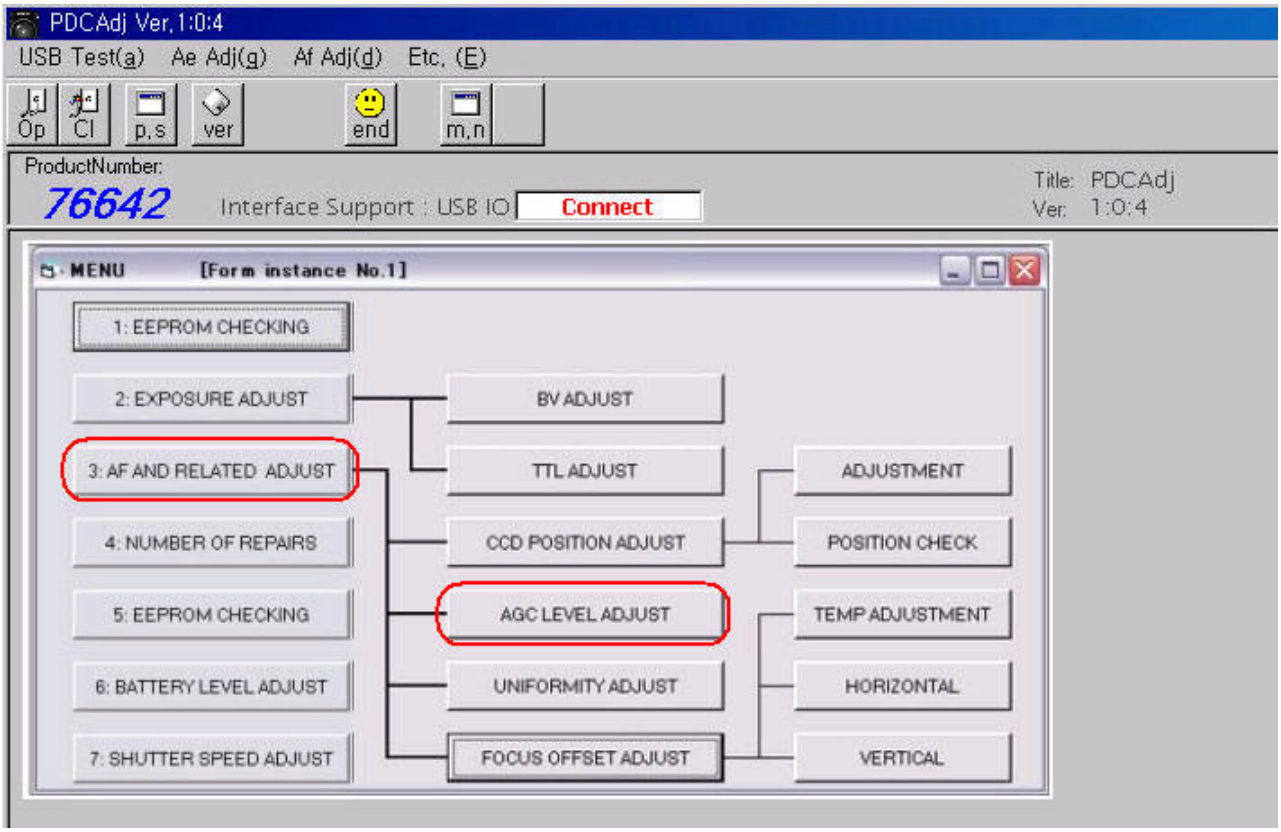
③ Run the PDCAdj01.exe program on the '76830_SLR > EXE folder.



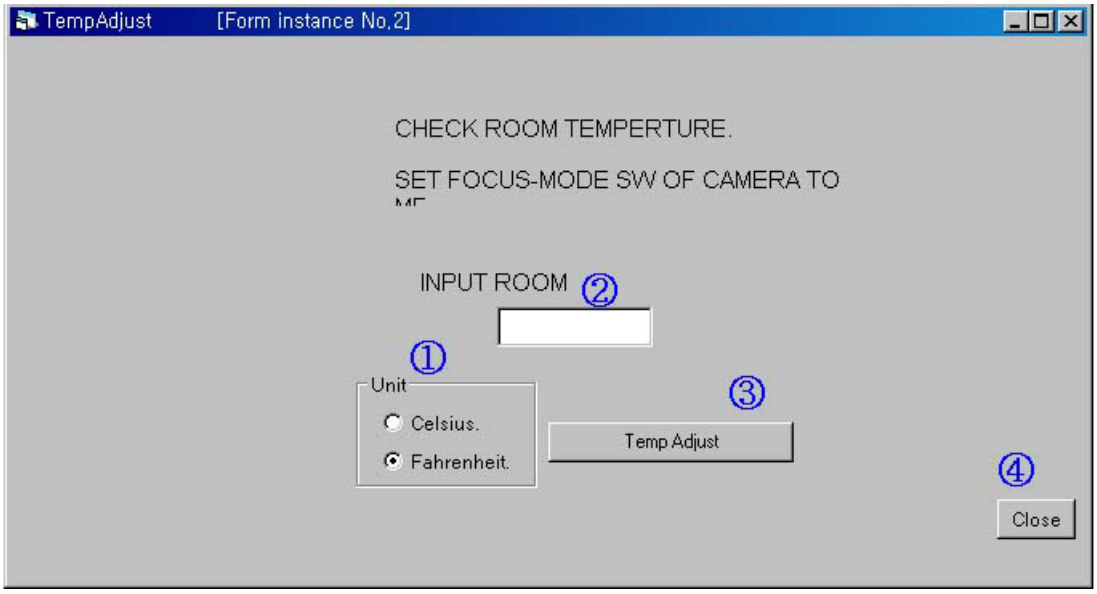
④ The adjustment program displays.

⑤ Click the "Op" button to connect the camera. Check whether the Connected message displays on the USB IO menu.

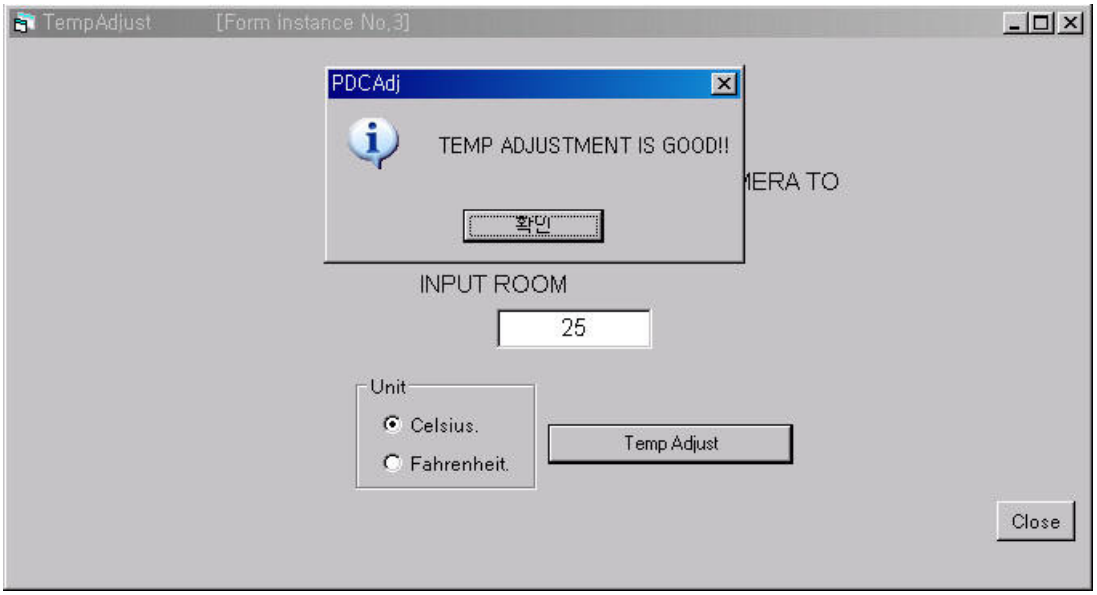
⑥ Click the 3. AF AND REL ADJ - FOCUS OFFSET ADJUST - TEMP ADJ button.



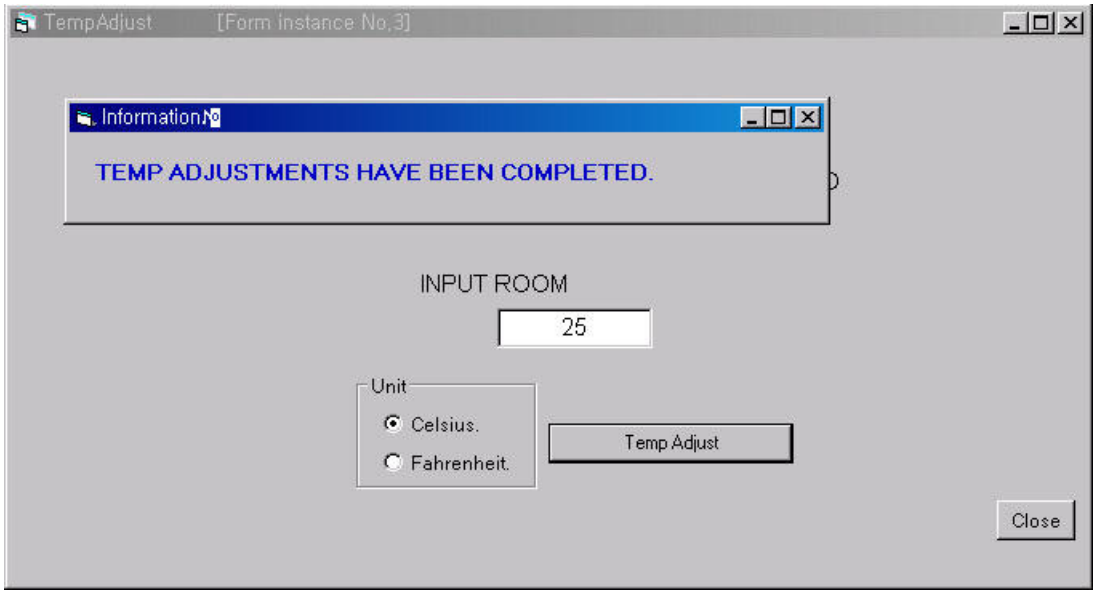
⑦ Set the focus mode to MF and select the temperature unit (1).
Input the test room temperature and click the 'Temp Adjust' button.



The temperature is adjusted. Click the 'OK' button.



The temperature is saved on the camera.



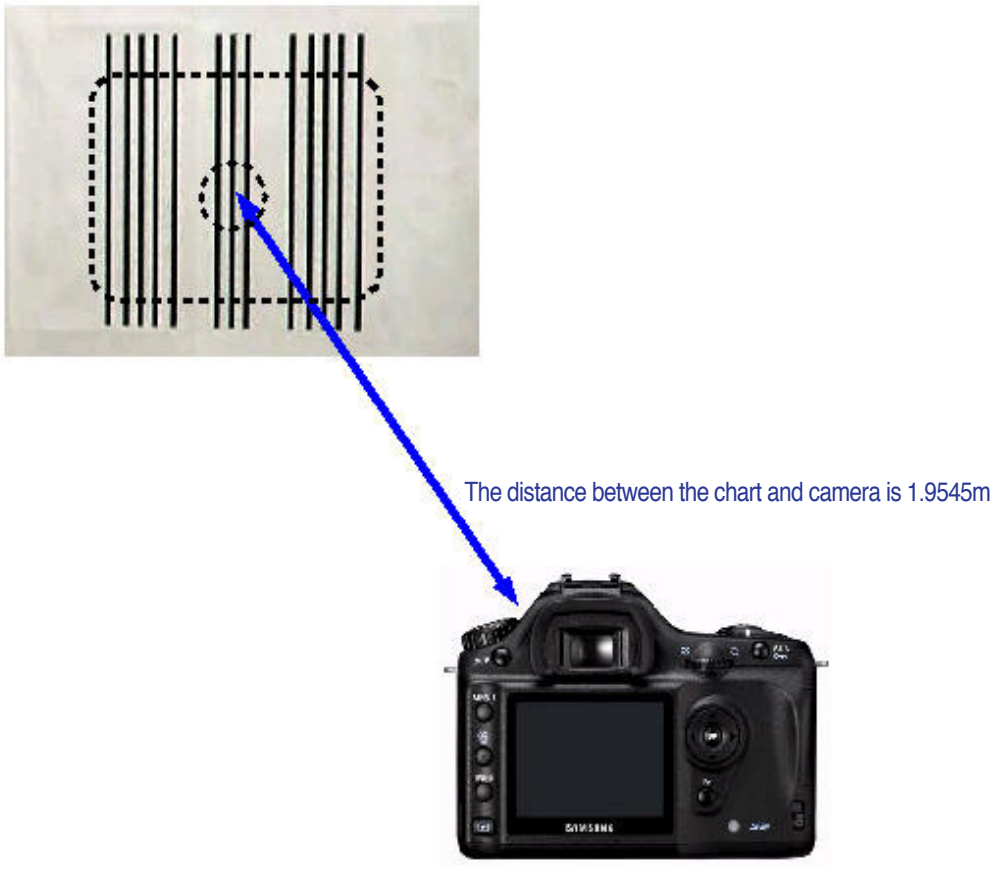
After saving the temperature, click the 'Close' button to close the window.

3-2. HORIZONTAL focus adjustment

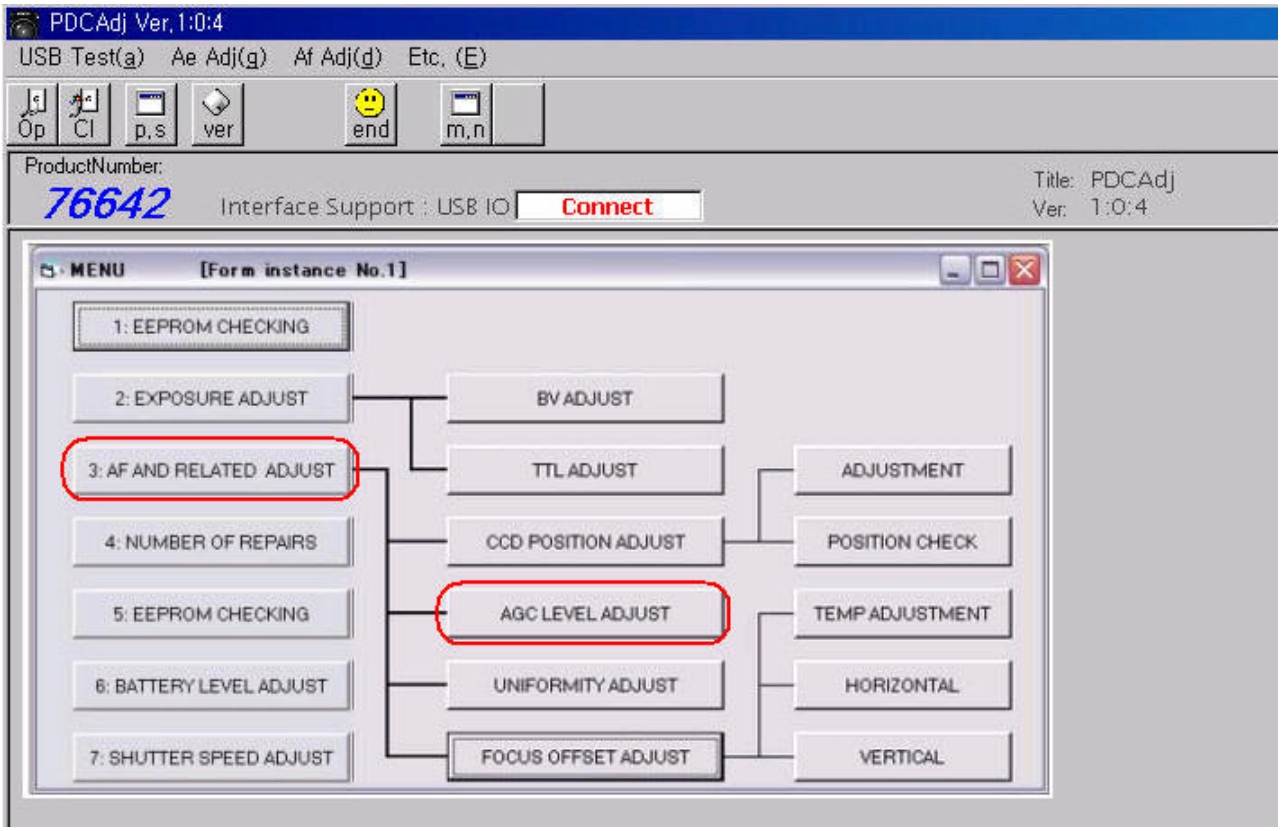
■ **Adjustment process**

① Attach the standard lens (50M. F1.4) on the camera.

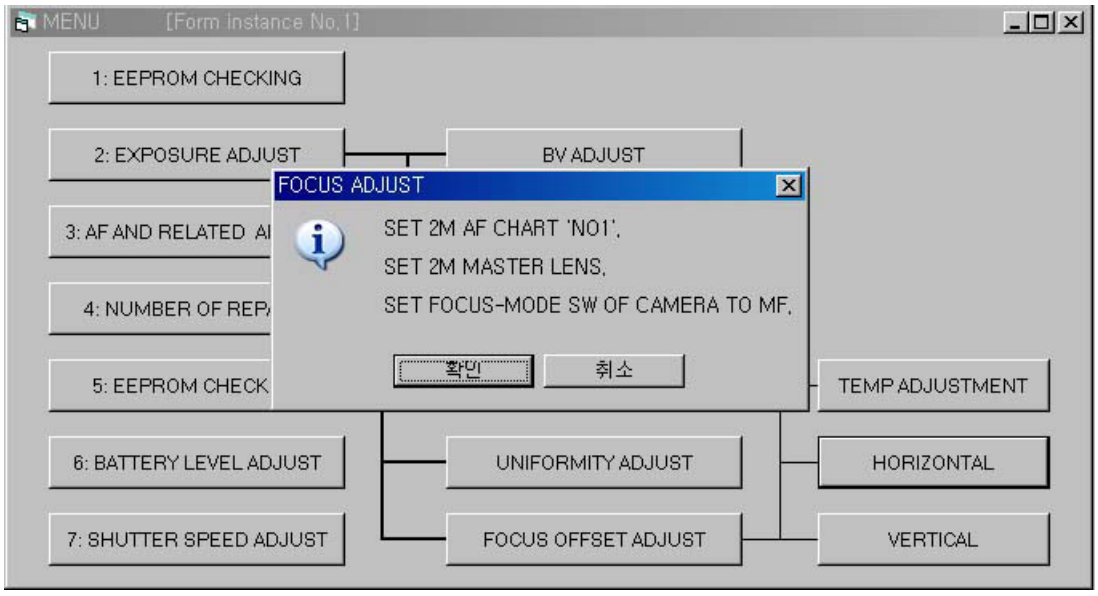
Prepare the No.1 AF chart for horizontal focus. Keep the distance between the chart and camera mount to 1,954.5mm. Use the tripod.



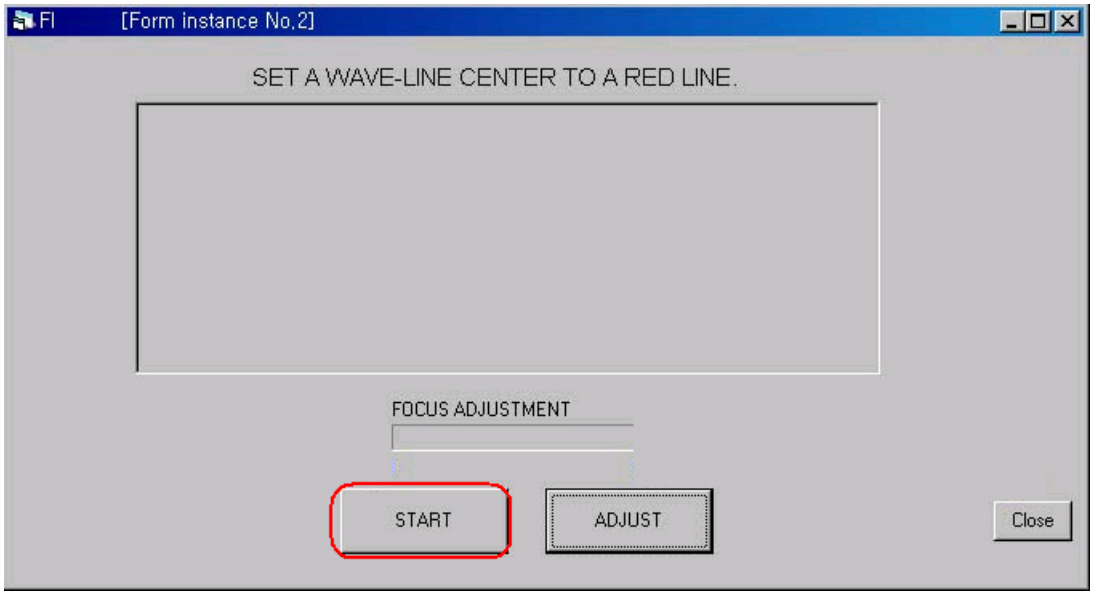
② Click the 3. AF AND REL ADJ - FOCUS OFFSET ADJUST - HORIZONTAL button.



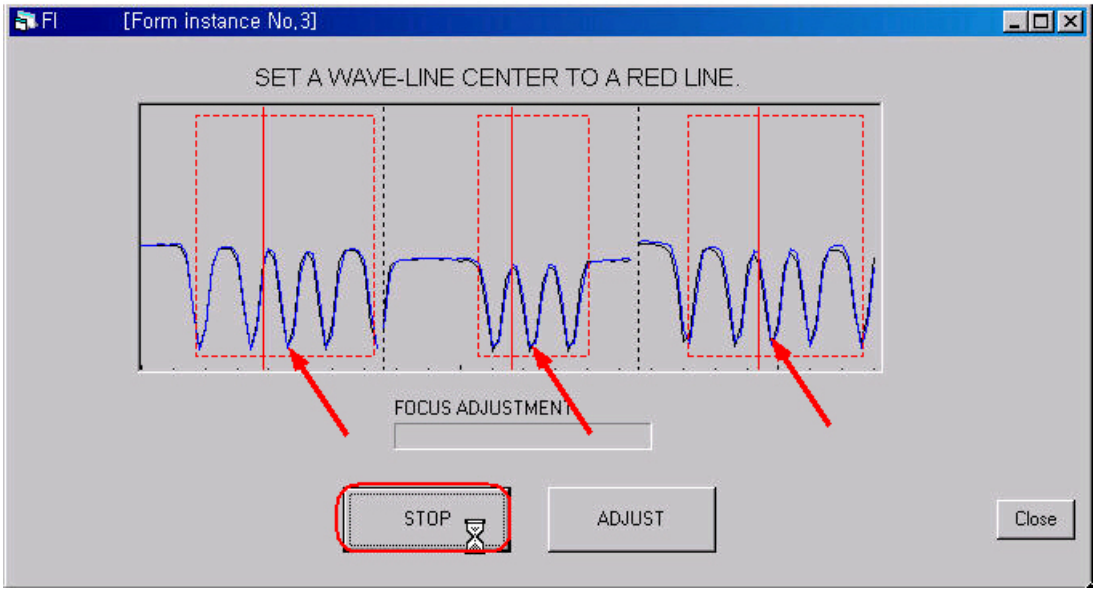
③ Check the settings of the message and click the 'OK' button.



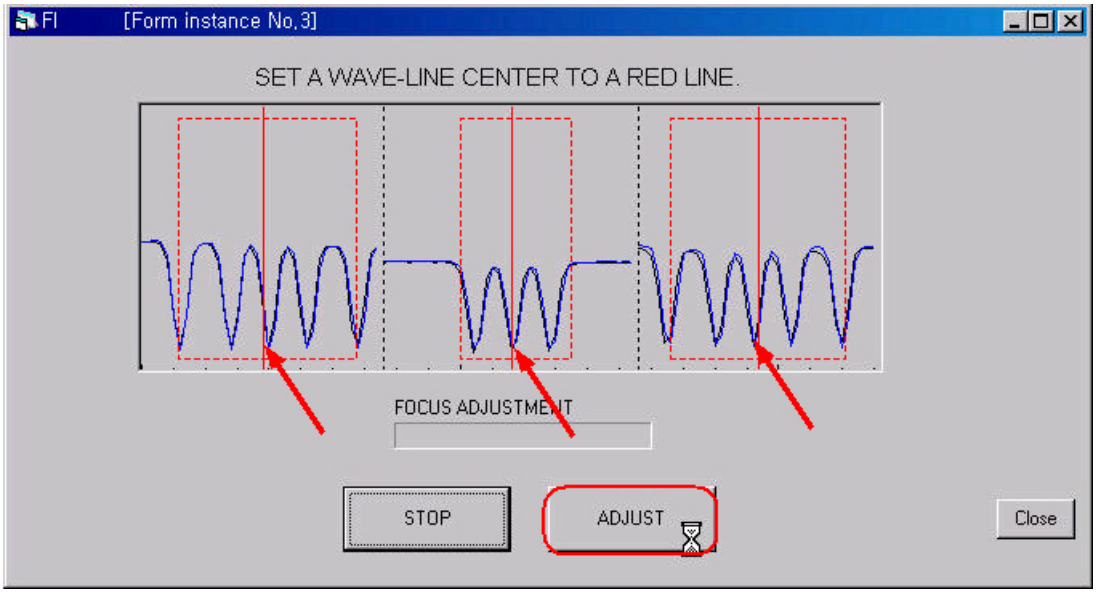
Click the 'START' button.



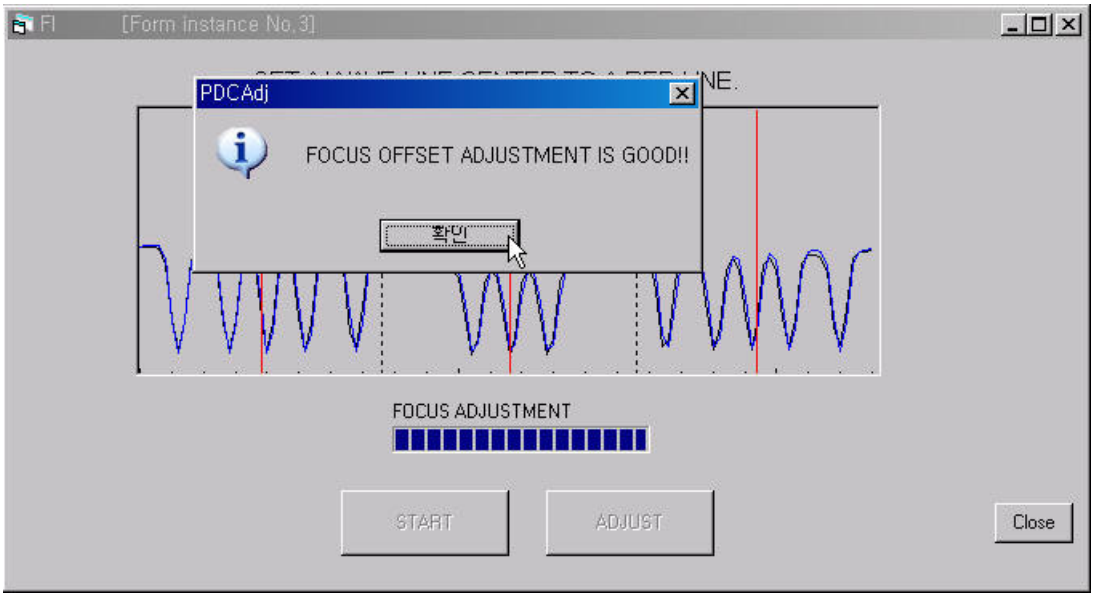
Set the centers of the blue graphs of the 3 part (Left, Center, Right) on the standard line (Red color).
Move the camera mounted on the tirpod slightly to the left or right directions to match the center of the graphs (Red color, bottom of the curved graph).



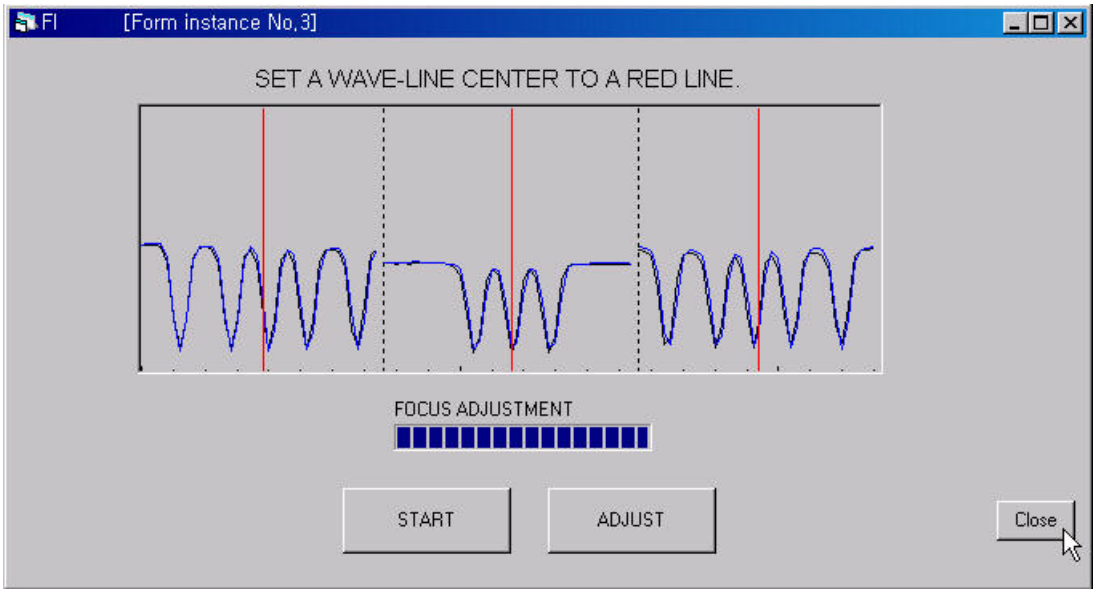
When the centers are matched, click the "ADJUST" button.
If the centers can't be matched, match the centeral part of the graph.



The adjustment is complete. Click the 'OK' button.



Click the 'Close' button to close the window.

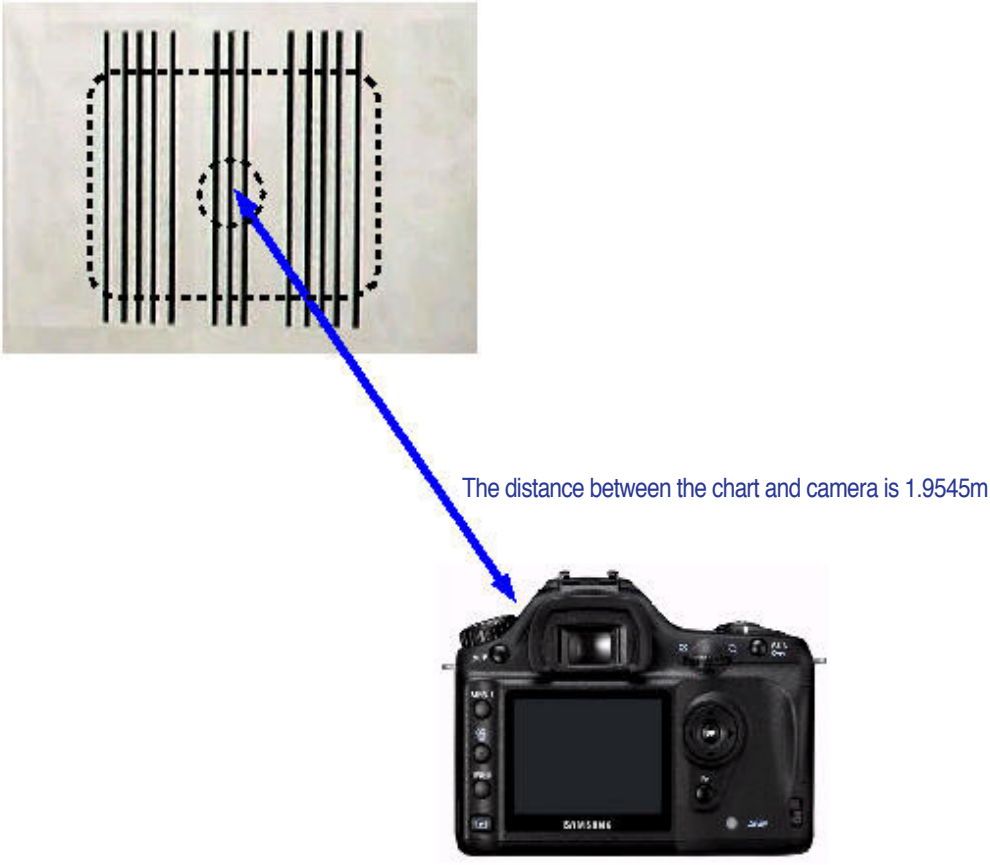


3-3. VERTICAL focus adjustment

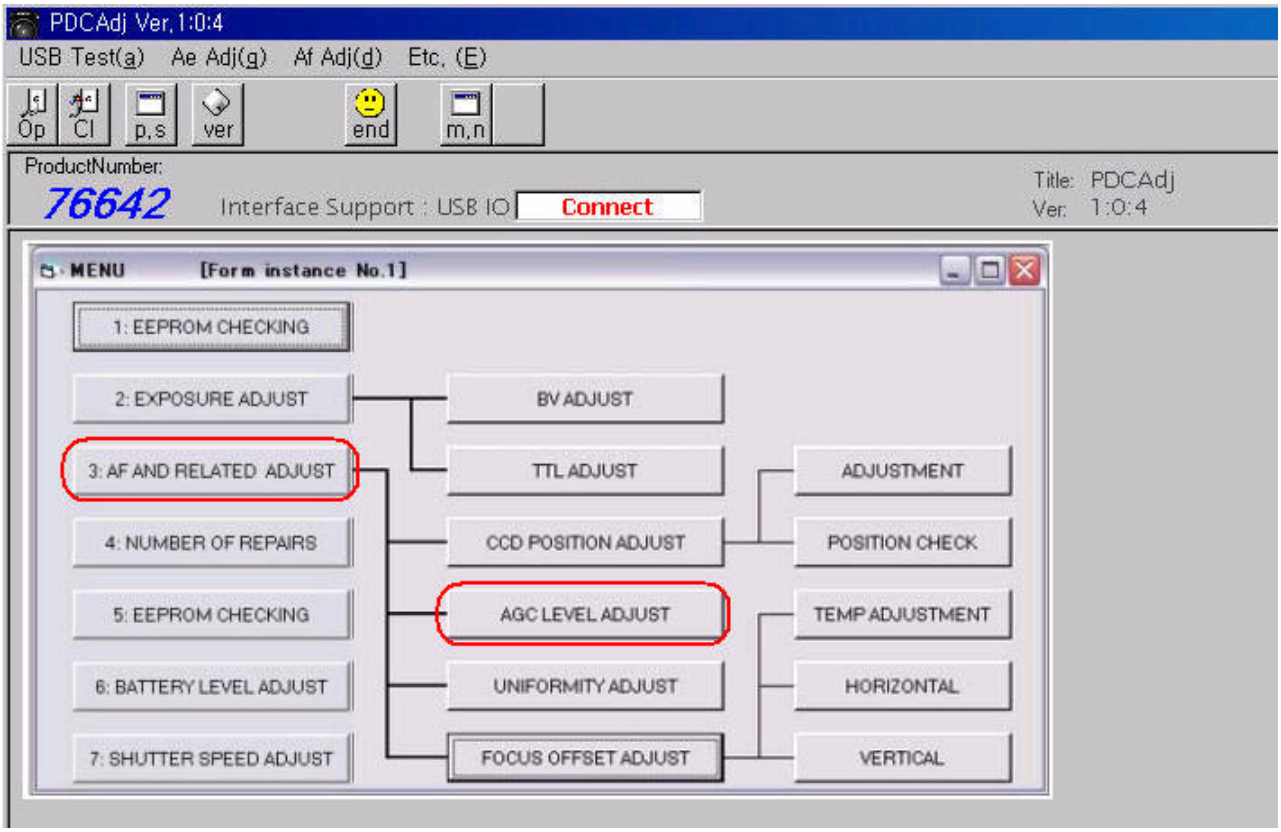
■ **Adjustment process**

① Attach the standard lens (50M. F1.4) on the camera.

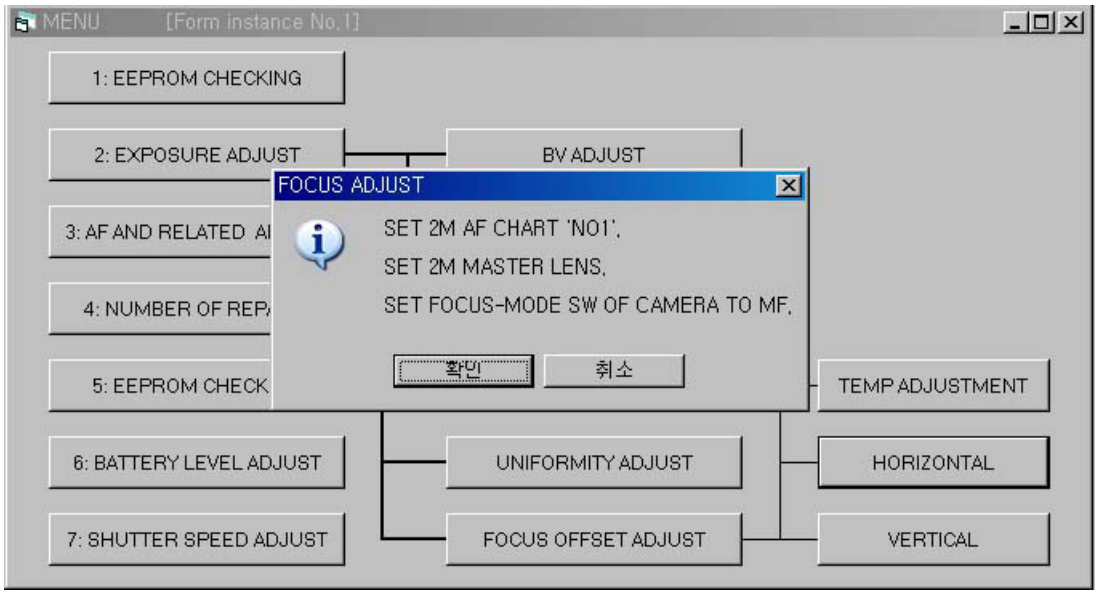
Prepare the No.2 AF chart for vertical focus. Keep the distance between the chart and camera mount to 1,954.5mm. Use the tripod.



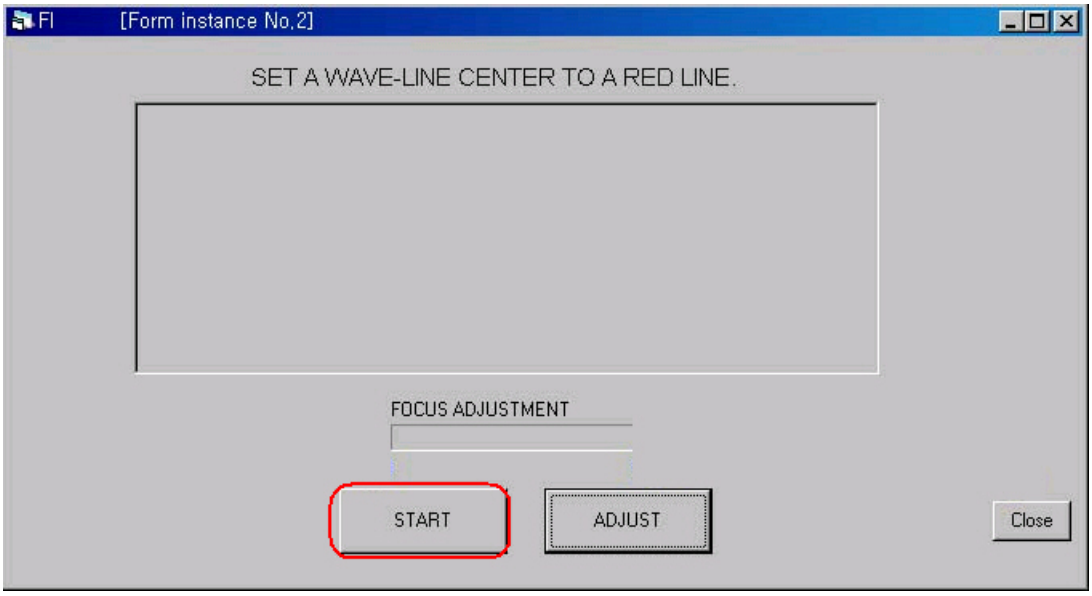
② Click the 3. AF AND REL ADJ - FOCUS OFFSET ADJUST - VERTICAL button.



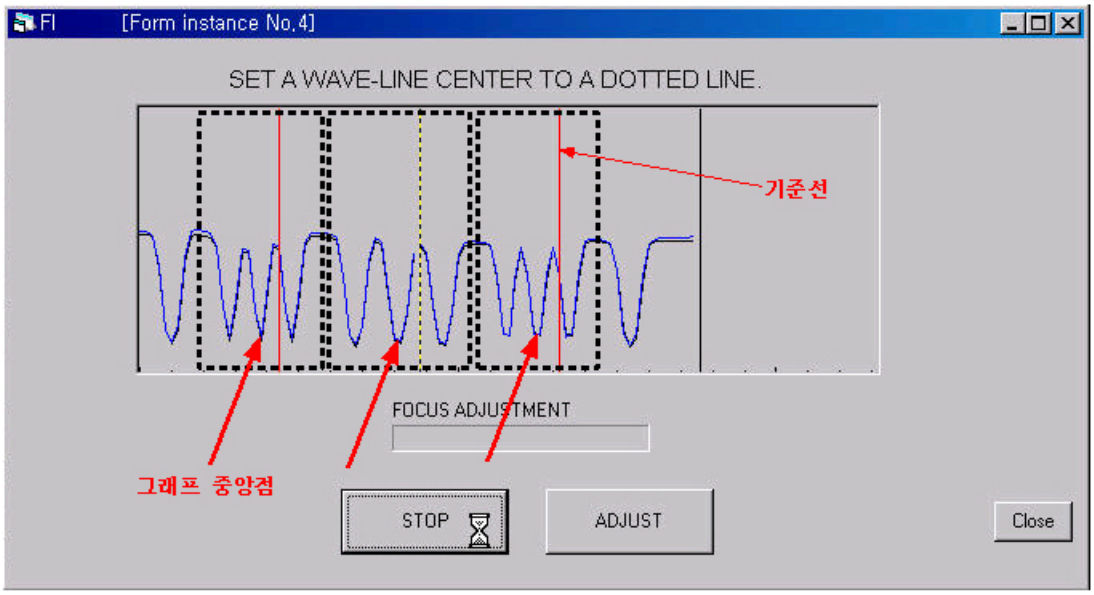
③ Check the message and click the 'OK' button.



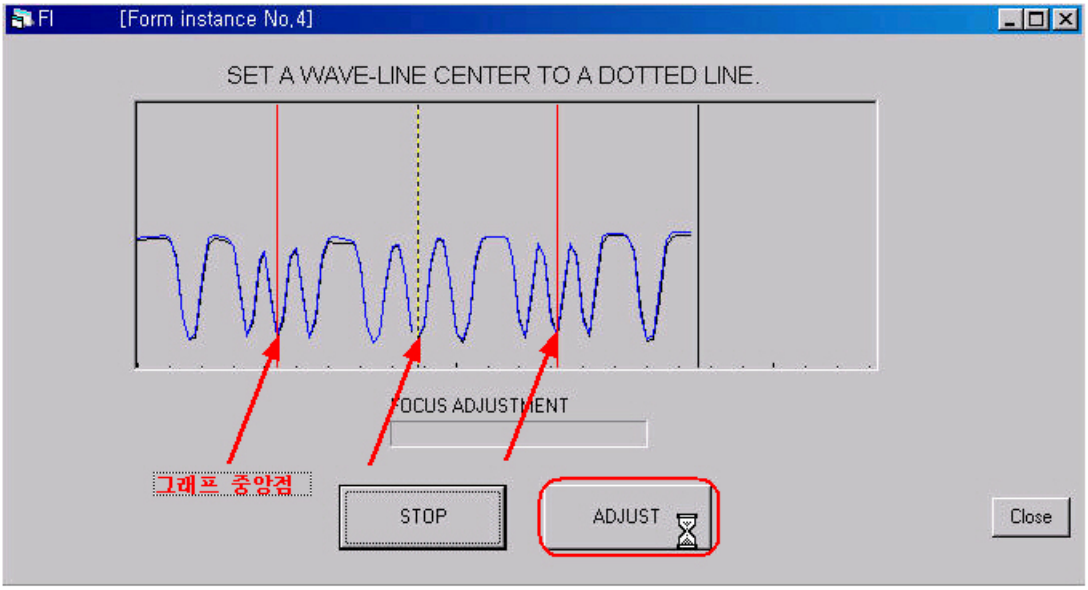
Click the 'START' button.



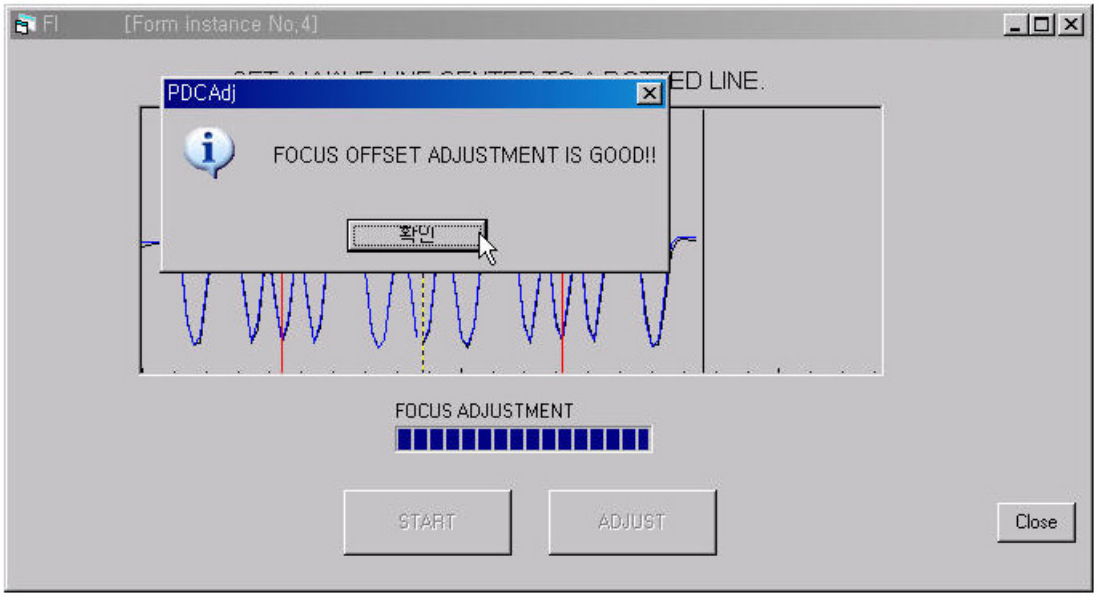
Set the centers of the blue graphs of the 3 part (Left, Center, Right) on the standard line (Red color).
Move the camera mounted on the tirpod slightly to the left or right directions to match the center of the graphs.



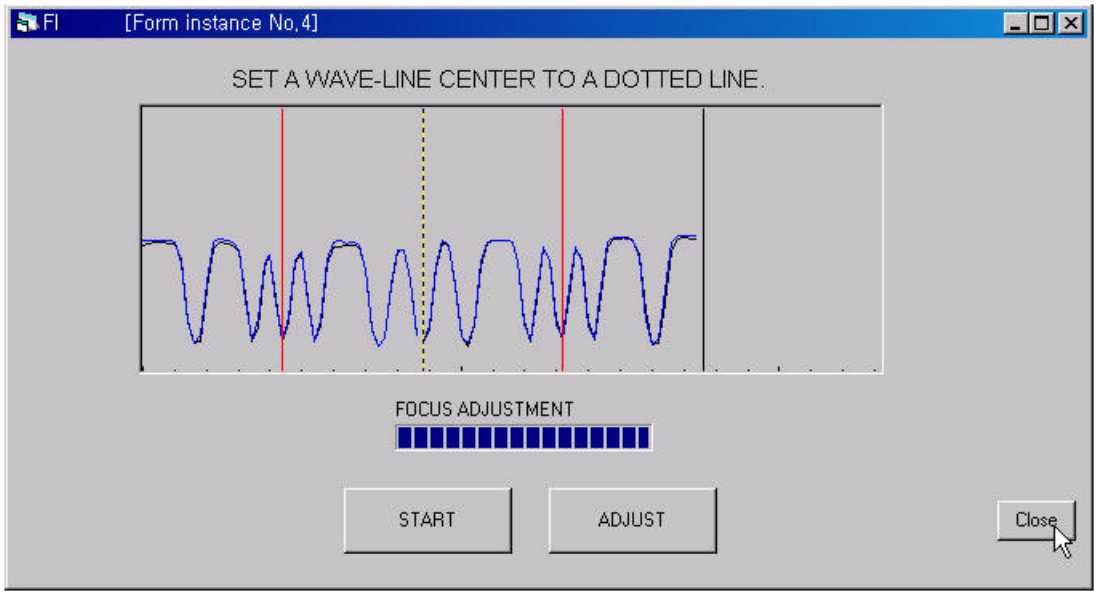
When the centers are matched, click the "ADJUST" button.
If the centers can't be matched, match the centeral part of the graph.



The adjustment is complete. Click the 'OK' button.



Click the 'Close' button to close the window.



3-4. AF shift adjustment

* This chapter is for checking the Focus in the A/S center.

* After taking a picture, you can check the focus position synthetically.

* You can apply this adjustment to each lenses.

Equipment :

□ PC, AC adapter, USB cable, FA 50mm F1.4 (or F1.7) lens

□ SD card for test shot, AF chart for checking, Scale for checking the focus (see the last page)

□ Light source (In case of fluorescent lamp, use the Flicker-less lamp)

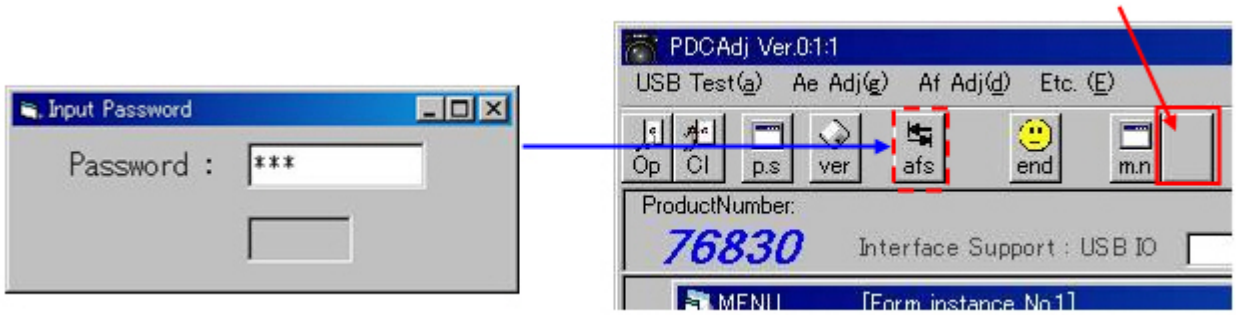
□ Image viewer program (Ex: PENTAX PHOTO BrowserTM, ACDSeeTM, Adobe Photoshop, ect.)

■ AF shift adjustment

* You can't improve the focus with this adjustment even though there are no reasons, do the Focus adjustment.

① Click the □ button.

② Input "AFS" and press the enter button.

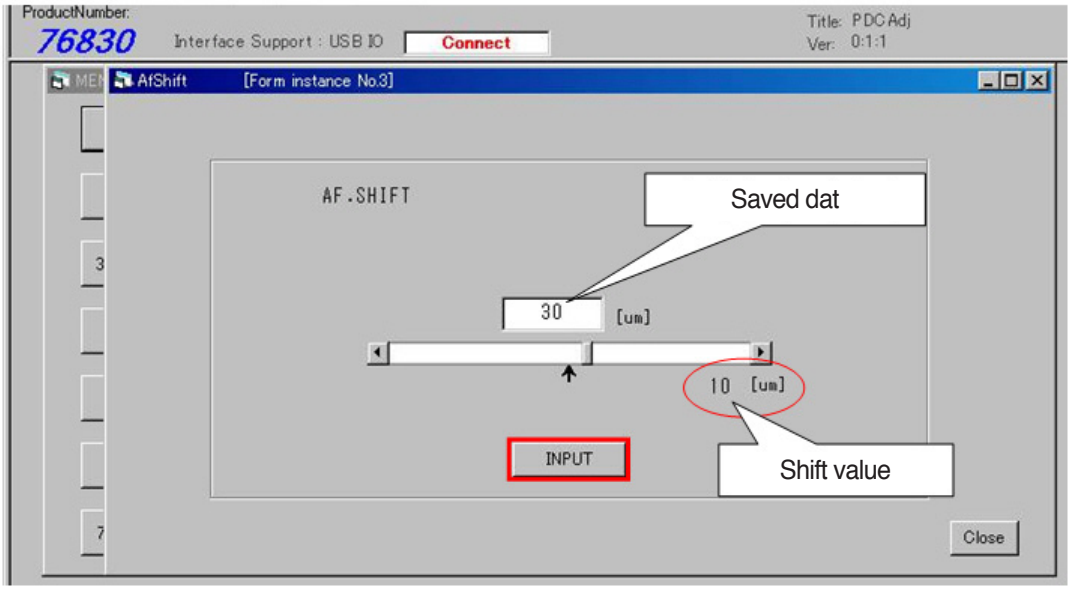


③ The [afs] button displays on the tool bar.

④ Click the afs button and the AF shift window displays as shown.

⑤ Move the cursor to shift the AF value (+: front, -: back).

⑥ Clic the "INPUT" button to start the adjustment. (Limitation is +/-100um. There are some reasons)



■ Checking process

① Attach the FA 50mm lens on the camera and set the iris to A position.

② Set the camera as followins
Exposure: Av mode, Focus: AF, Focus point: Center, WB: AWB, Size / Quality: 10M / Super fine (Default), Saturation / Sharpness / Contrast: Default

③ Select the open iris with Av dial.

④ Set the Chart / Scale / Light as shown. Brightness of the chart (White part of the chart is over EV12).
Use the tripod to prevent the camera shake.

⑤ Keep the distance between the camera and the chart 1m.

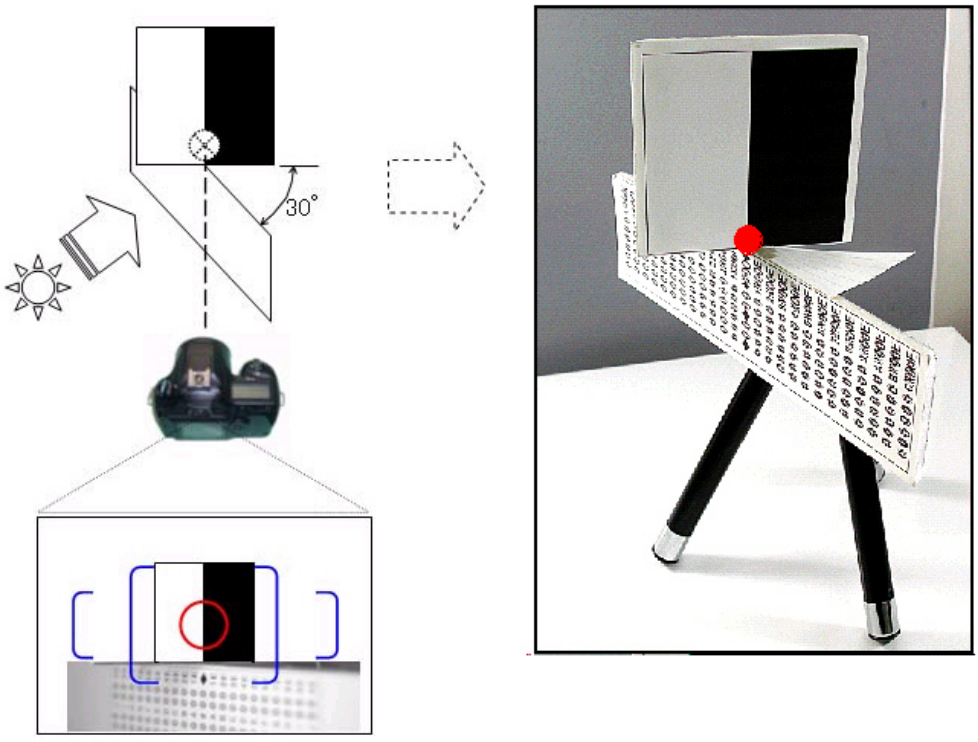
⑥ Block the lens and press the shutter button halfway down to set the distance to infinity.

⑦ Match the focus point and chart (border between the black and white part) and take 2 images.

⑧ Select the minimum distance and take 2 image. To check the vertical sensor, take images vertically.

⑨ Open the images with the image viewer.

⑩ Compare the image and the scale of the chart to check the focus.



4. BATTERY LEVEL ADJUST

This chapter is for displaying the exact battery status on the LCD panel.

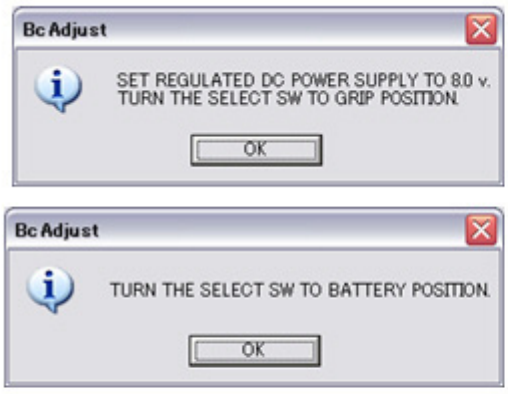
Equipment :

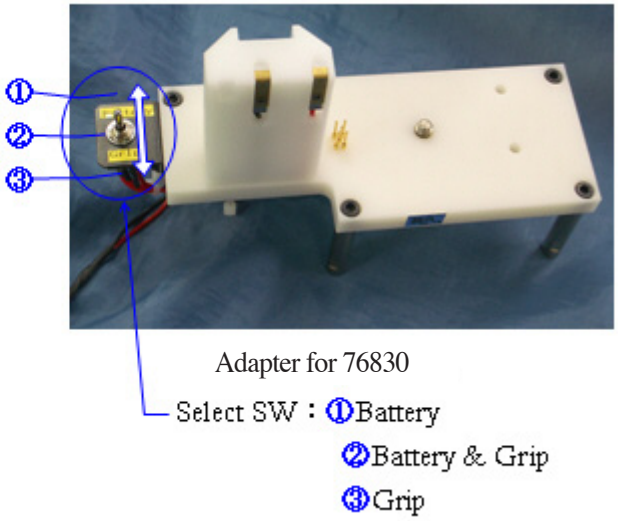
▫ Battery adapter for 76830

▫ Power source (over DC 8V -3A)

① Attach the botton cover and battery chamber cover temporarily. (Don't attach the Terminal cover)

② By changing the Select SW (see the displayed message), do the adjustment.





Ⅲ. Adjustment for OPS gain

[Caution1] When the T100 circuit is changed, this adjustment must be done.

[Caution2] Before doing this adjustment, do the [SR adjustment] first.

[Caution3] Do this adjustment in a stable place. Any vibration is prohibited.

[Caution4] Take care of the adjustment table as it is too heavy.

Equipment :

- Program for GX-10 SR gain adjustment
- Tools for SR gain (Table, Controller, Speed meter)
- Chart for SR gain adjustment
- D-XENON 50-200mm lens
- PC (Windows 2000 or XP with USB port)
- Exclusive USB cable
- Exclusive AC adapter

1) Computer settins

① The [GX10 SR_Gain_adjustment] folder must be copied on the computer.

② [VB runtime setup] must be done before doing this adjustment

2) Setup the OPS adjustment tools

① Set the tools on the stable table. (The distance of the chart from the camera is 2m)

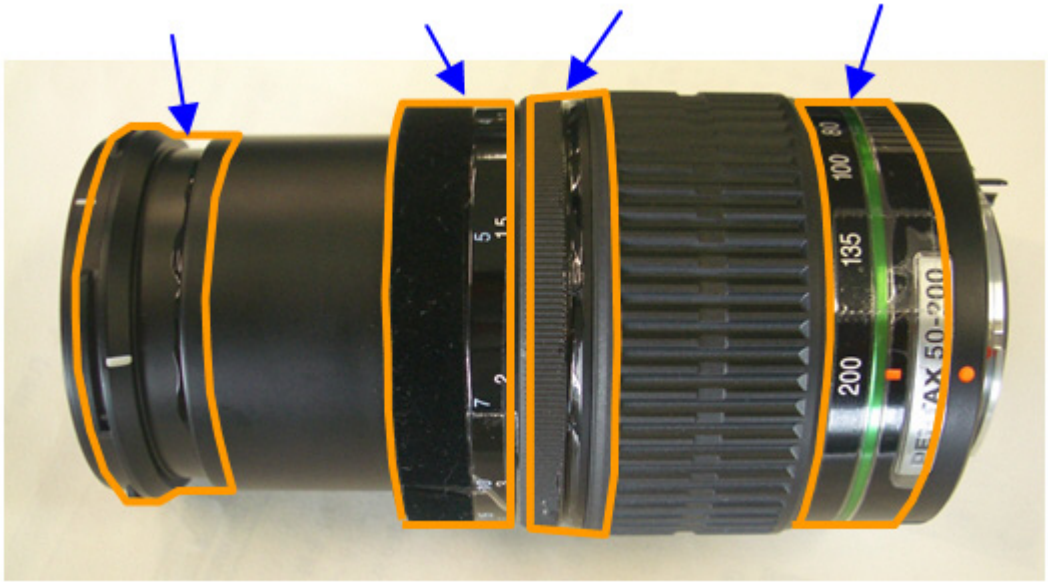
② Refer to the illustration. (Turn off the controller)

3) Preparation

① Set the exclusive chart. The distance of the chart from tripod of the camera is 2.0m.

② Set LV of the chart to 10-12.

③ Set the 50-200mm lens to 200mm (Zoom ring) and 2m (Distance ring).
Fix the 4 position with tapes.



④ Attach the lens to the camera.

⑤ Set the camera as followings

- Mode dial: M
- AF lever: MF
- OPS switch: ON

⑥ Put the camera on the camera table.

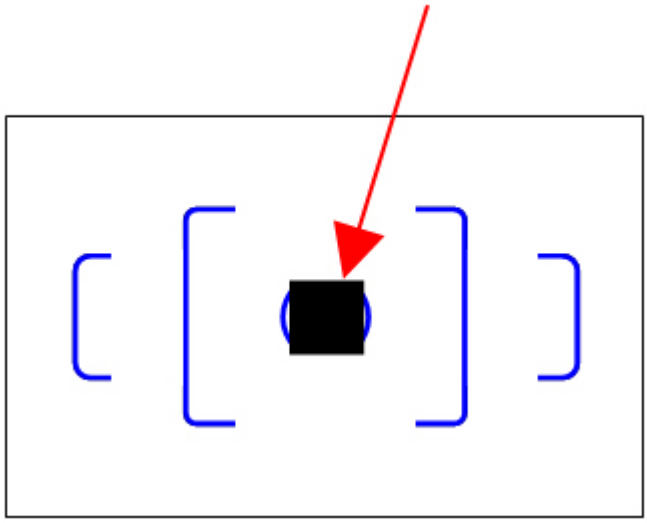
⑦ Fix the camera with 2 screws

⑧ Turn on the controller and set the controller to 1,000rpm by changing the dial.

⑨ After completing the adjustment, turn off the controller.

⑩ Match the exclusive chart on the center of the finder (within the spot metering frame)

[Check] Check whether the distance is 2.0m.



4) Adjustment process

① Turn on the PC

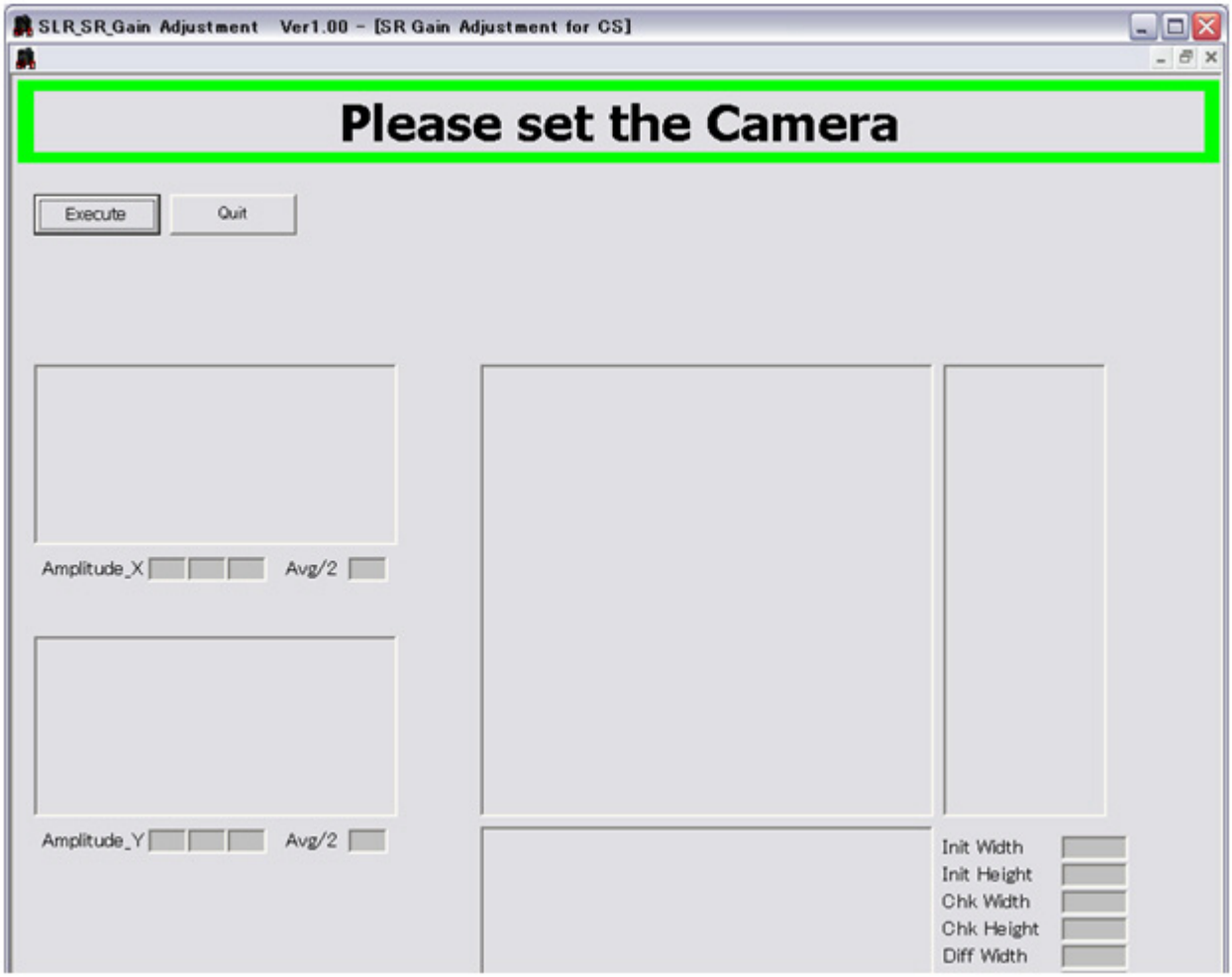
② Connect the camera and PC with the USB cable and insert the AC adapter.

③ Turn on the camera and check whethe the hot plug icon is on the desktop.

④ Run the GX10 SR_Gain.exe program on the [SR_Gain_adjustment] folder.
(The following window displays)

⑤ Click the [Execute] button to start the adjustment.

[Caution] Any vibration is prohibited. If any vibration is happened, do the adjustment again.



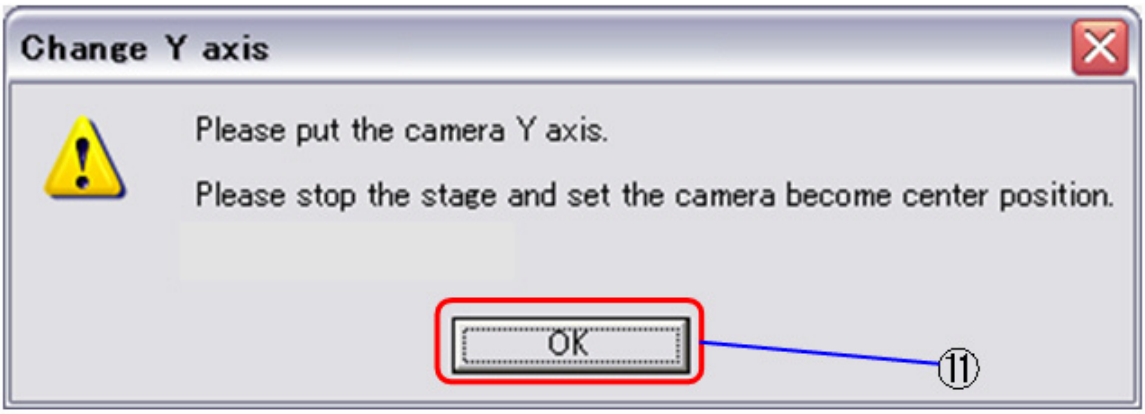
⑥ Turn off the controller. The ■ chart must be matched with the center of the finder.

⑦ Click the [OK] button to start the adjustment.

⑧ When the following window displays, turn on the controller (Ther rpm must be 1,000)

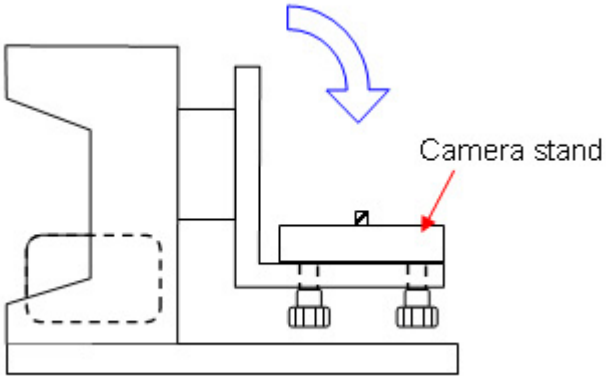
⑨ Click the [OK] button to do the next adjustment.

⑩ When the X adjustment is done, the following message displays.



- 1. Turn off the controller and change the position of the camera and stage for the Y adjustment.

[Caution] Take care of the stage as it is too heavy.



- 2. Keep the distance between the ■ chart and the tripod 2.00m and match the chart and the center of the finder.

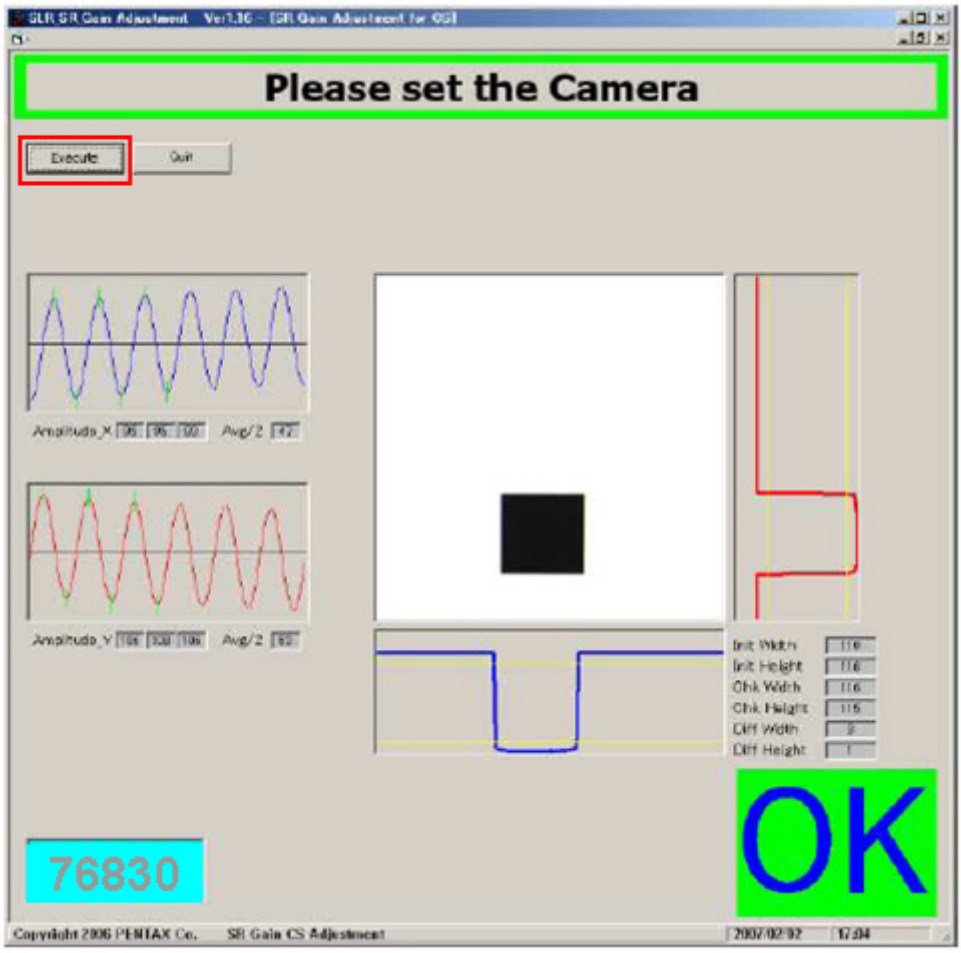
⑪ Click the [OK] button to start the Y adjustment.

⑫ When the following message displays, turn on the controller (1,000 rpm).

⑬ Click the [OK] button and do the next adjustment.

⑭ After completing all adjustments, the following window displays.

⑮ Click the [Quit] button to close the program.



16. Turn off the controller.

17. Move the mouse on the hot plug icon and click the right button of the mouse.
And then select Disconnect Hardware > Stop Device.

18. Turn off the camera and disconnect the AC adapter, USB cable and each power sources.

Ⅳ. CCD Adjust (Digital Part Adjustment)

When the CCD PCB is changed or the CCD has malfunctions, do this adjustment. Input the it's own information / Equalize the color output / Adjust the ISO Base Gain / Set the ISO standard and input the standard to the camera / Adjust the proper CCD output when the image is taken with the general shutter speed / Adjust the CCD when it has malfunction.

※ When the Main PCB (T100) or Circuit (or CCD) are changed, check the CCD ID No. and keep the No..

■ CCD adjustment item

0 : Initialization

1 : Set the product's own information

2 : Set the CCD information

3 : Pre-Process Gain adjustment
Each color outputs are not equalized because of the CCD characteristics. Equalize each color outputs with this adjustment.

4 : ISO Base Gain adjustment
Adjusting the proper CCD output when the image is taken with the general shutter speed

5 : Adjusting the CCD whitening defect
CCD whitening defect means a bad output in the dark lighting condition. with this adjustment, the defect can be detected and the information is saved. This adjustment is done by itself.

■ **Camera setup**

① Attach the metering standard F8 set ring. (or 50M F1.4 lens)

② Set the mode dial to M.

③ Set the Focus mode to MF.

■ Adjustment process

① Insert the AC adapter

② Turn off the camera and connect the camera and the PC with the USB cable.

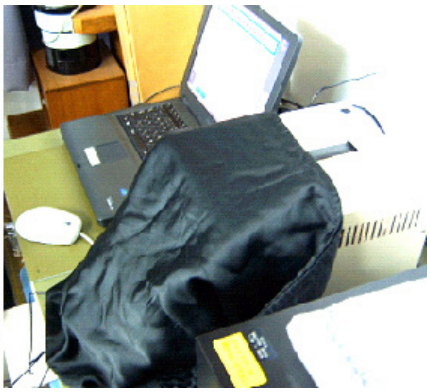
USB port for the camera

USB port for the computer (Printer)

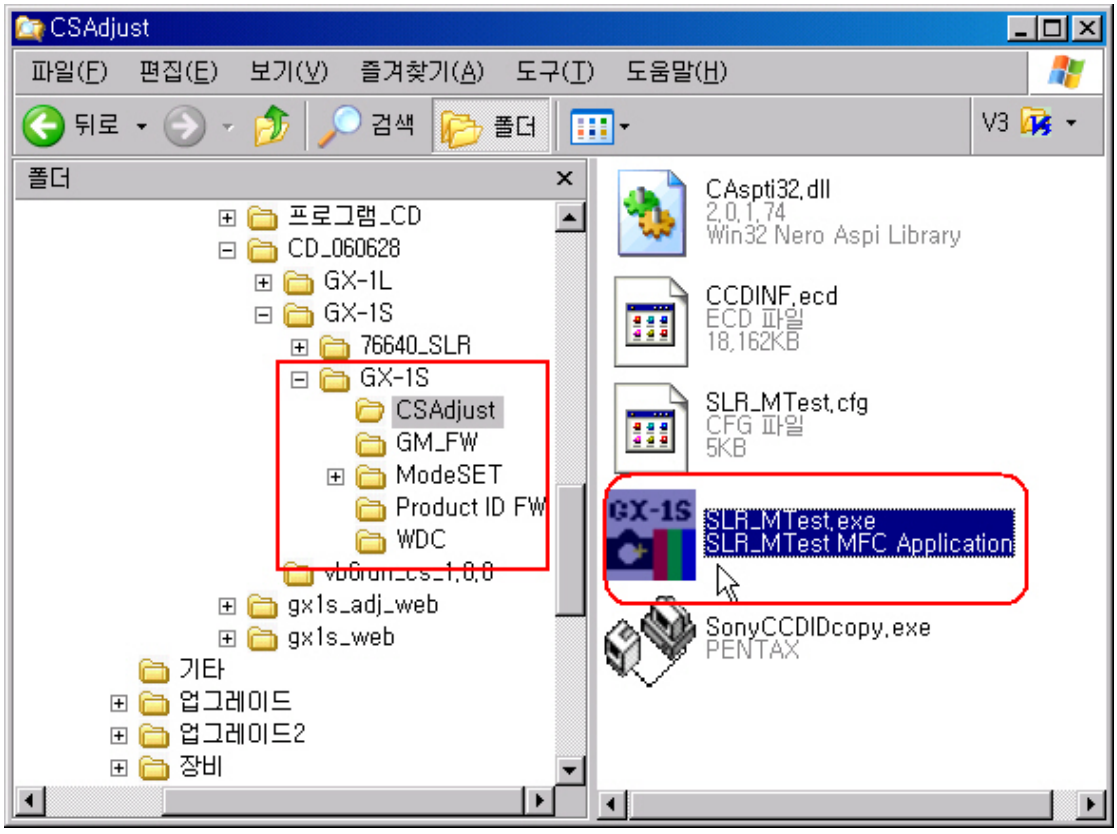
③ Set the metering standard lens to F8 (or 50M F1.4 lens) and attach it to the camera.

④ Turn on the camera and check whether the computer recognizes the camera.

⑤ Match the center of the lens and the brightness tester (A light source, color temperature: 2,850K+/- 10', brightness: LV11.00). Cover the camera with block curtain.

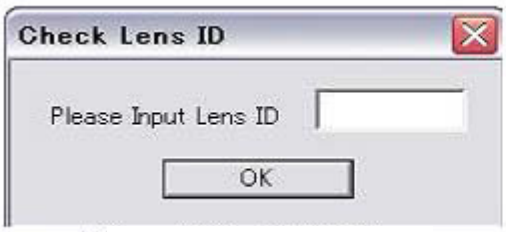


⑥ Run the SLR_MTest.exe (Digital adjustment program)

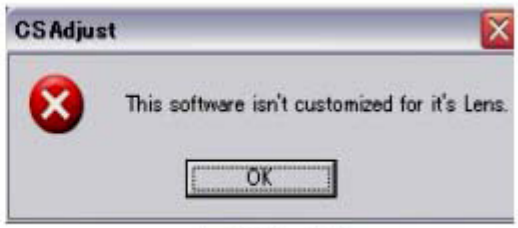


⑦ Input the Lens ID No. and click the "OK" button or press the "Enter" button of the keyboard.

[Caution] If the Lens ID No. is incorrect or if you press the "OK" button without typing the Lens ID No., an error message displays and the program is closed.
In this case, run the program again and type the Lens ID No. correctly.



■ Message window for typing the Lens ID No.

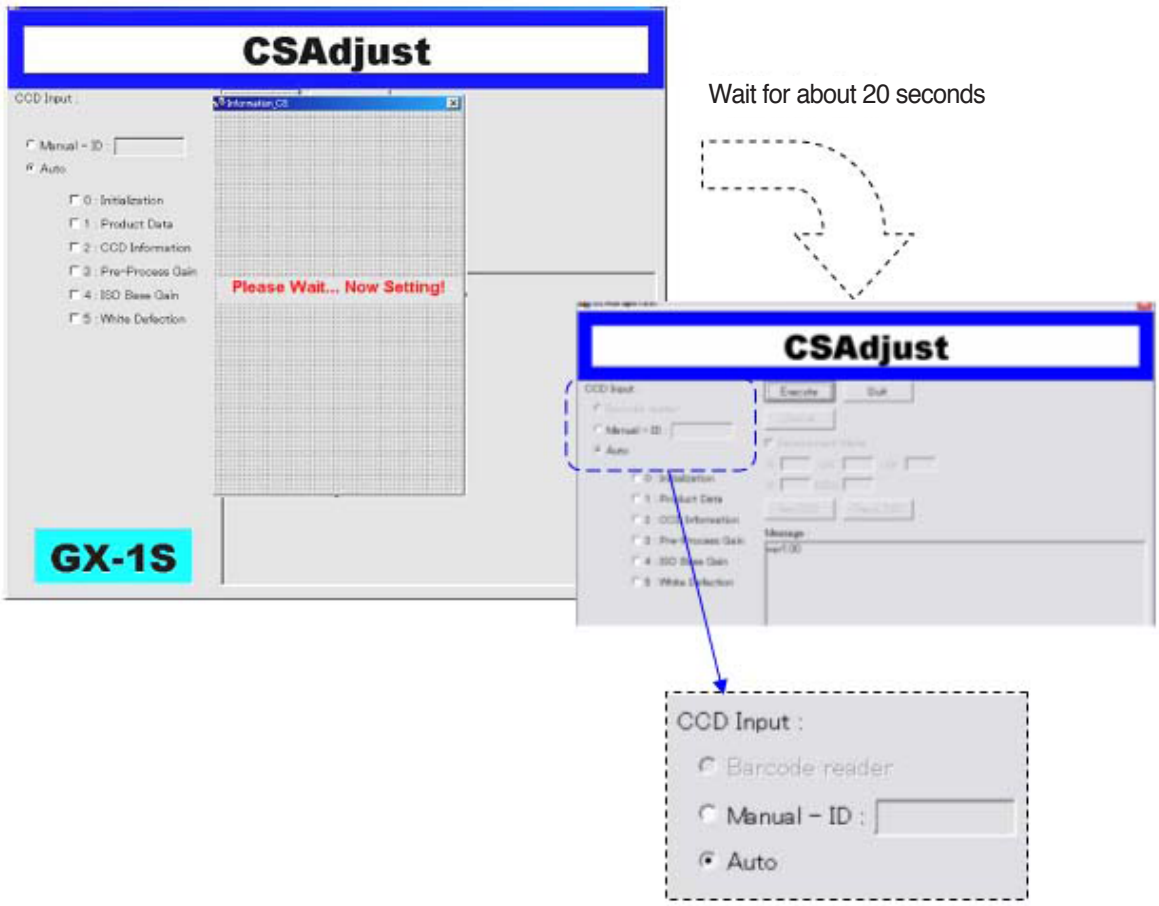


■ Error message

⑧ When the adjustment program runs, the following window displays.

⑨ Select the [CCD Input] menu.

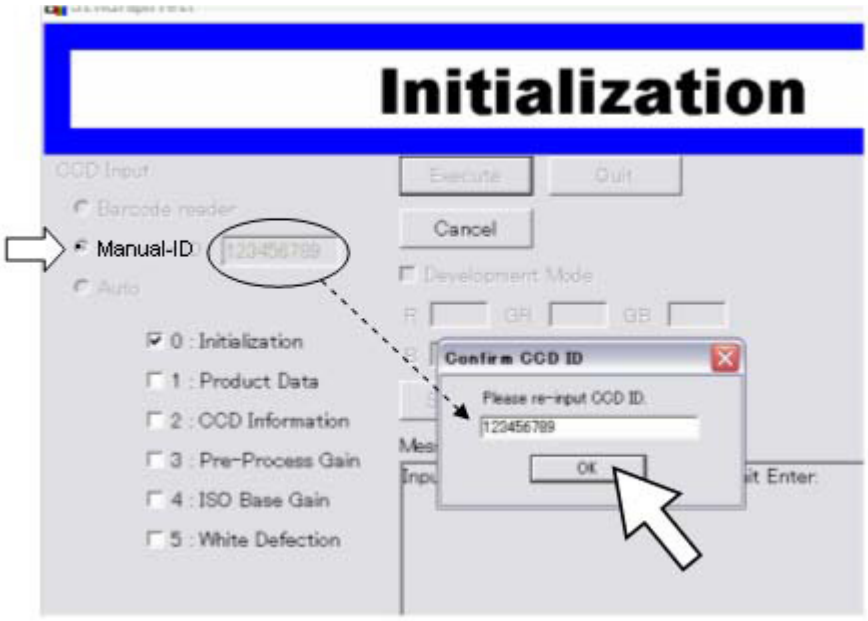
※ When the T100 circuit or CCD is changed, you must select the "Manual-ID" menu.
In the rest cases, select the "Auto" menu.



⑩ Executing the adjustment

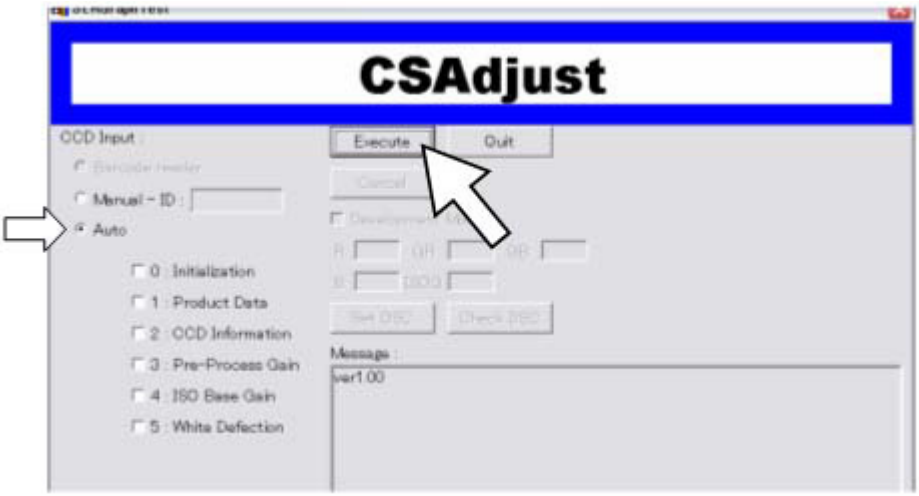
≪Manual-ID≫ In case of selecting the Manual-ID menu, type the new CCD PCB ID No. twice.

Type the first CCD ID No.. Click the "Execute" button.
Type the ID No. again. Click the "OK" button to start the adjustment.

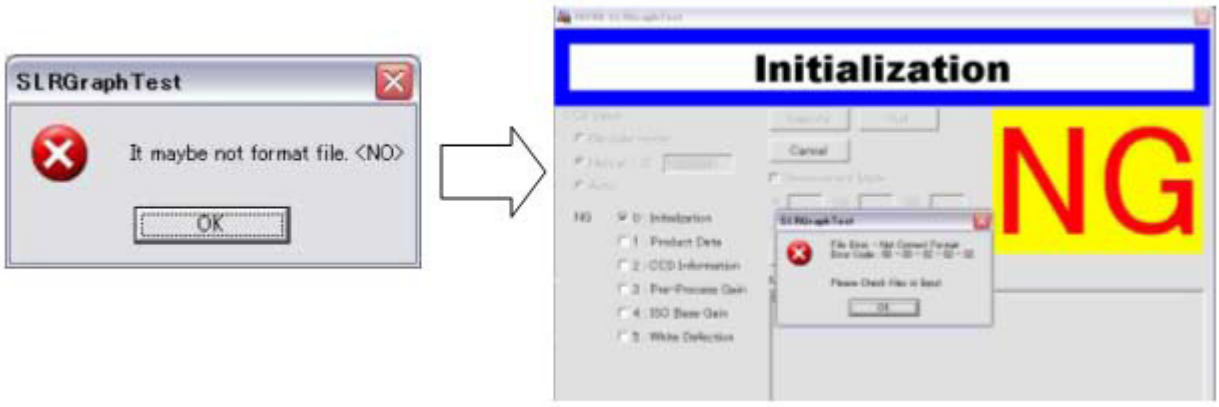


≪Auto≫ In case of selecting the Auto menu and the CCD PCB is not changed

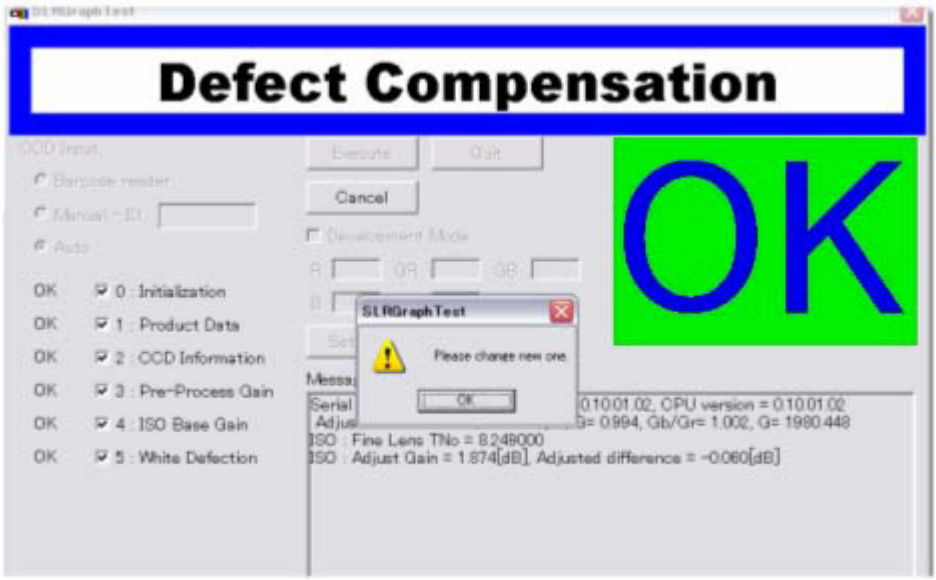
Click the "Execute" button of the program or press the "Enter" button.



※ When the following message displays, select the "Manual-ID" menu and type exact CCD ID No. again.



⑪ If thw following window displays, the adjustment is complete.



⑫ Select the Disconnect Hardware 〉 Stop Device of the hot plug icon on the desktop and turn off the camera.

※ Information: Error message

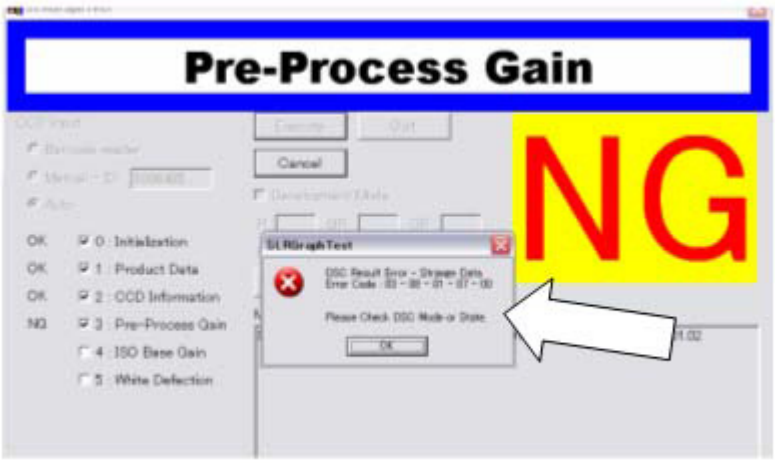
ex1: If the mode dial is not set to M, the following message displays.

ex2: If an error happens during the adjustment, the following message displays.

[Ex] In case of [03-08-01-07-00] error code

This means [Pre-Process Gain...x x x...x x x...DSC Result...Strange Data].

* Refer to the [Error code index] of the service manual.



Ⅴ. Shutter speed adjust

When the shutter curtain is changed or the shutter speed has malfunction, input the standard shutter speed to adjust the exact shutter speed.

■ Information

With the following adjustment, the Reflex type shutter tester for D-SLR don't required. Do the shutter speed adjustment with the followings.

* Before doing this adjustment, the Single Reflex function and Digital part adjustments must be done.

* When the 0-T100 is changed, do the shutter speed adjustment.

Equipment :

- Single Reflex function adjustment program for 6832
- PC (Windows 2000 or XP with USB port)
- Metering standard lens and F8 set ring
- Light source (LB-3300. Using LV8 or LV9)
- Exclusive USB cable
- Exclusive AC adapter
- SD card for test shot
- Solid plastic transparant scale (for measuring the distance)

1) Preparation

Computer settings must be done before doing this adjustment

2) Camera setup

① Set the camera as followins

Mode dial : M, Focus lever : MF
WB : Tungsten, ISO : 200
MENU :
[Capture menu] Color : Natural
Quality / Size : Super Fine / 6M (L) or 10M
Saturation / Sharpness / Contrast : Default
[Playback menu] QuickView : 5 sec
OSD : with Histogram
[Custom menu] Release available except the A position of aperture ring

3) Checking process

① Set the EV tester to LV9 or LV8.

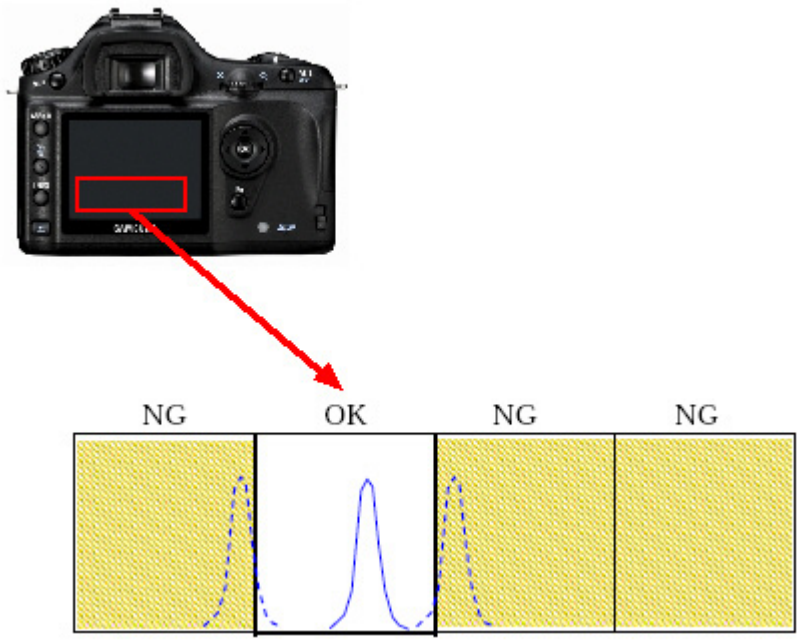
② Set the shutter speed to Tv 500. (In case of LV8, set the shutter speed to Tv 250 (ISO: 200)).

③ Attach the lens (50M, F1.4) to the camera. Set the lens to F1.5.

④ Put the camera on the EV tester. Block the Light source to prevent the external light.

⑤ Take about 3 shots.

[Caution] The histogram must be displayed as shown when you check it on the LCD monitor.
If the histogram is same with NG cases, check the settings or adjust the BV and CCD again.



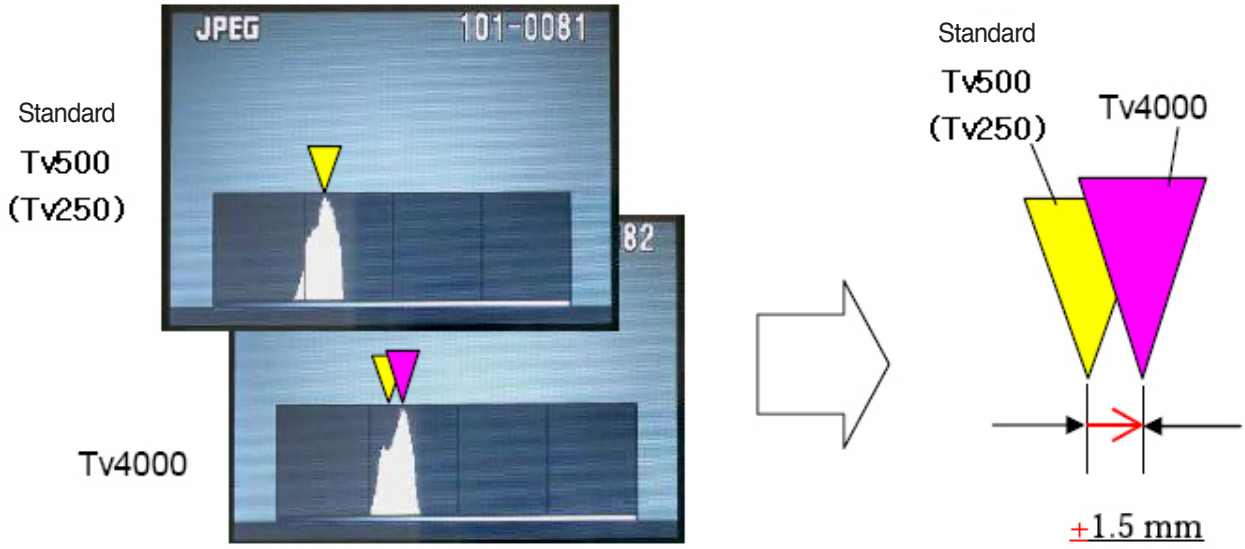
⑥ Use the same light source. Set the camera to F1.4, ISO 1600 (LV9) and Tv4000.
(In case of LvV8, set the camera to ISO3200, Tv4000).

⑦ Put the camera on the EV tester and take about 5 shots.

⑧ Playback 2 images and check the declination of the peaks of the histogram.
Measure the declination on the LCD monitor with the scale.

[Caution] Measure in front of the LCD monitor. Do not scratch the LCD monitor.

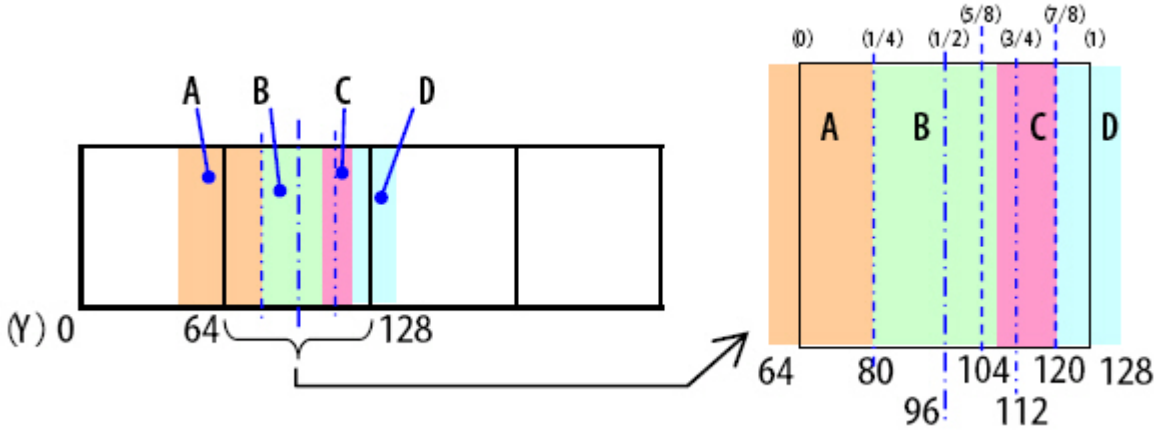
<< Example >>



Histogram on the LCD monito

Comparing the Tv 500 (Standard), there is +1.5mm inclination from right side of the Tv4000 peak.

⑨ Select a histogram zone (A-D) that matches with the Tv4000.
(The above illustration is B type)



⑩ Refering to the table, get the shutter speed from the differences between histogram zone and peak.
(As the illustrated histogram zone is B and +1.5mm from the right side, the result is 0.273mS.)

Shutter speed table

■ You can get the shutter speed (mS) from declination of histogram peaks on the LCD monitor.

For (GX-1S, GX-1L)

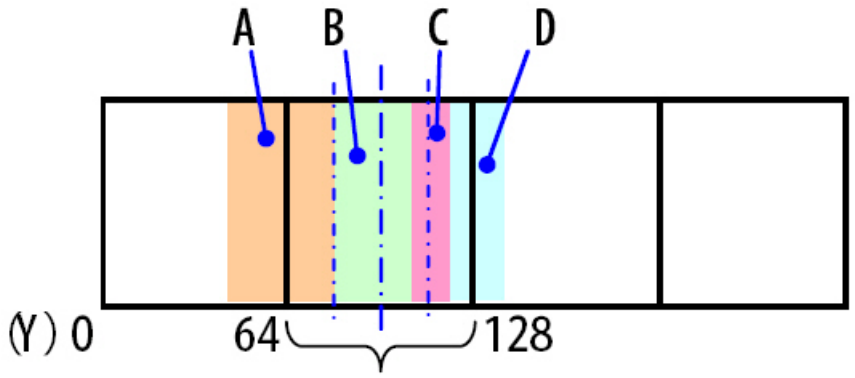
		Left side from the standard										
Declination(mS)		-10.0	-9.5	-9.0	-8.5	-8.0	-7.5	-7.0	-6.5	-6.0	-5.5	-5.0
Histogram zone	A	0.116	0.122	0.129	0.135	0.142	0.148	0.154	0.161	0.167	0.174	0.180
	B	0.054	0.064	0.073	0.083	0.092	0.102	0.111	0.121	0.130	0.140	0.149
	C	(0.001)	0.001	0.014	0.026	0.039	0.052	0.065	0.078	0.090	0.103	0.116
	D	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	0.004	0.020	0.036	0.052	0.068	0.084

		Left side from the standard										Right
Declination(mS)		-4.5	-4.0	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0.0	5.0
Histogram zone	A	0.186	0.193	0.199	0.206	0.212	0.218	0.225	0.231	0.238	0.244	0.250
	B	0.159	0.168	0.178	0.187	0.197	0.206	0.216	0.225	0.234	0.244	0.254
	C	0.129	0.142	0.154	0.168	0.180	0.193	0.206	0.218	0.231	0.244	0.257
	D	0.100	0.116	0.132	0.148	0.164	0.180	0.196	0.212	0.228	0.244	0.260

		Right side from the standard										
Declination(mS)		1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
Histogram zone	A	0.257	0.263	0.270	0.276	0.282	0.289	0.295	0.302	0.308	0.314	0.321
	B	0.263	0.273	0.282	0.292	0.301	0.311	0.320	0.330	0.339	0.349	0.358
	C	0.270	0.282	0.295	0.308	0.321	0.334	0.346	0.359	0.372	0.385	0.398
	D	0.276	0.292	0.308	0.324	0.340	0.356	0.372	0.388	0.404	0.420	0.436

		Right side from the standard										
Declination(mS)		6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0			
Histogram zone	A	0.327	0.334	0.340	0.346	0.353	0.359	0.366	0.372			
	B	0.368	0.377	0.387	0.396	0.406	0.415	0.425	0.434			
	C	0.410	0.423	0.436	0.449	0.462	0.474	0.487	0.500			
	D	0.452	0.468	0.484	0.500	0.516	0.532	0.548	0.564			

Histogram zone



4) Adjustment process (Converting value)

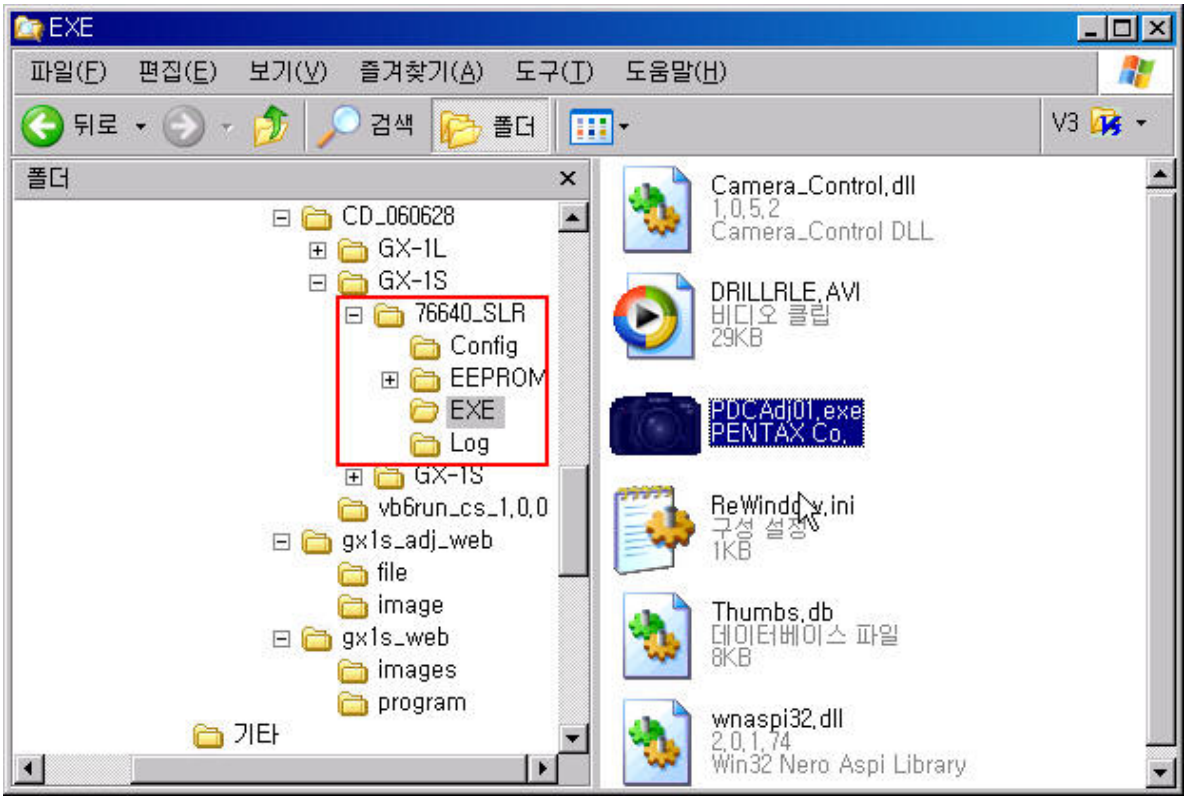
① Turn off the camera and insert the AC adapter. Connect the camera and the PC with the USB cable.

USB port for the camera

USB port for the computer (Printer)

② Turn on the camera and check whether the hot plug icon is on the desktop.

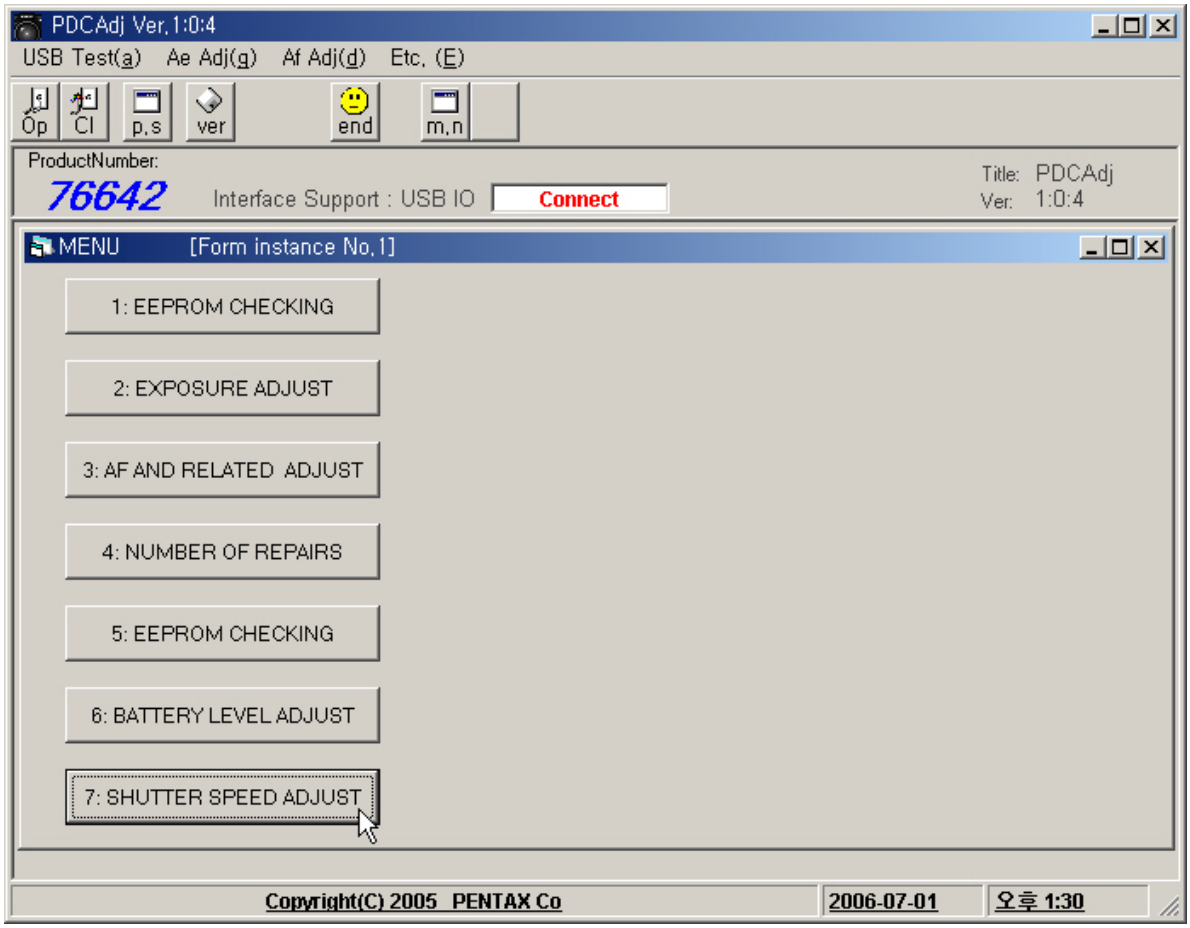
③ Run the PDCAdj01.exe program on the '76640_SLR > EXE' folder.



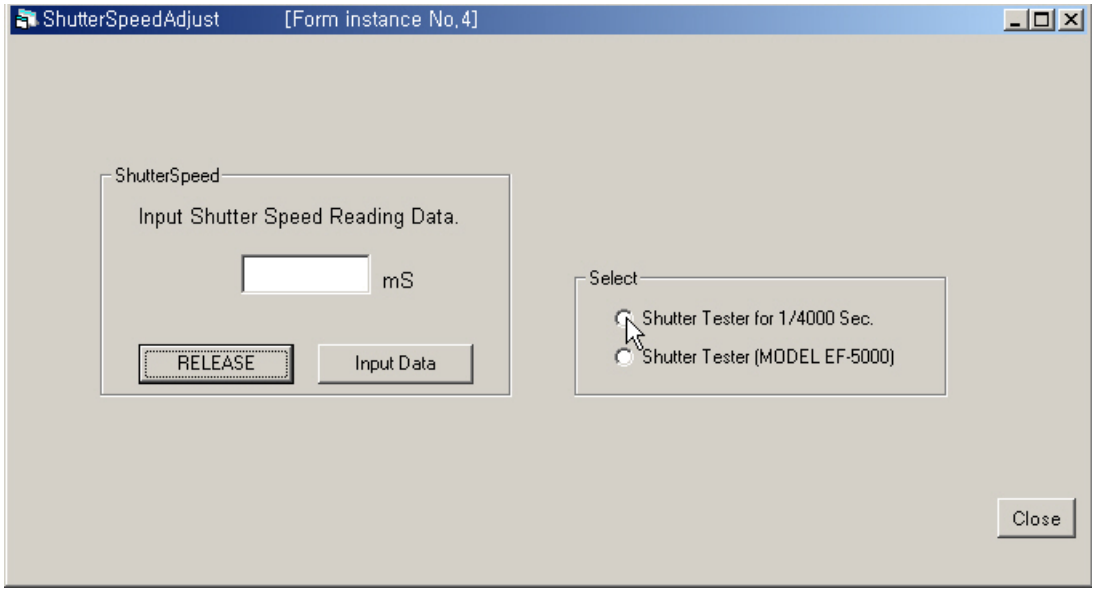
④ Adjustment window displays.

⑤ Click the "Op" button to connect the camera. Check whether the Connected message displays on the USB IO menu.

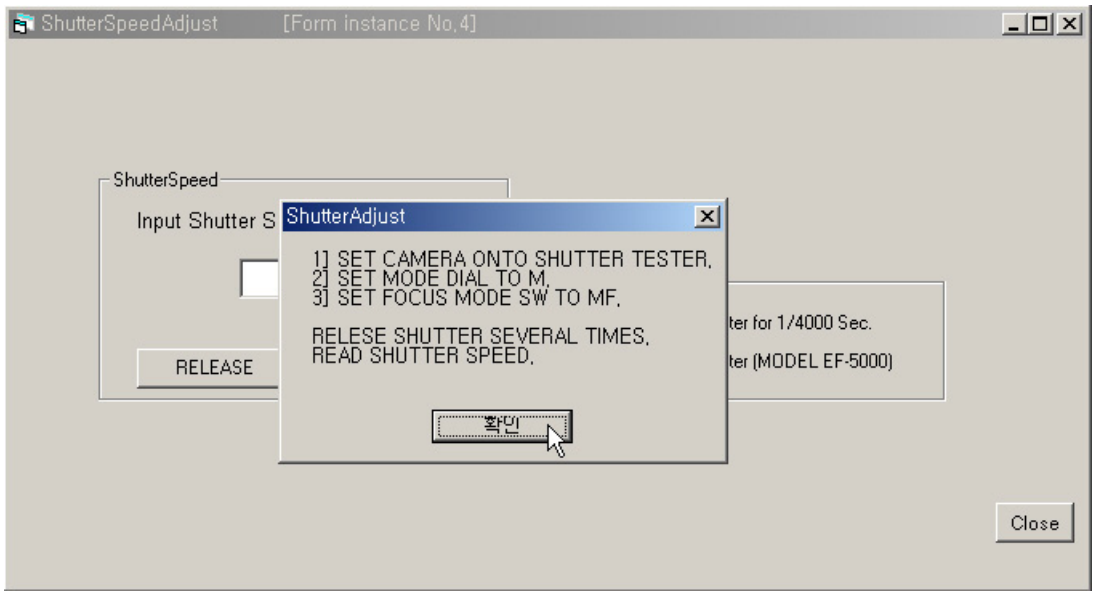
⑥ Click the 7. SHUTTER SPEED ADJUST button.



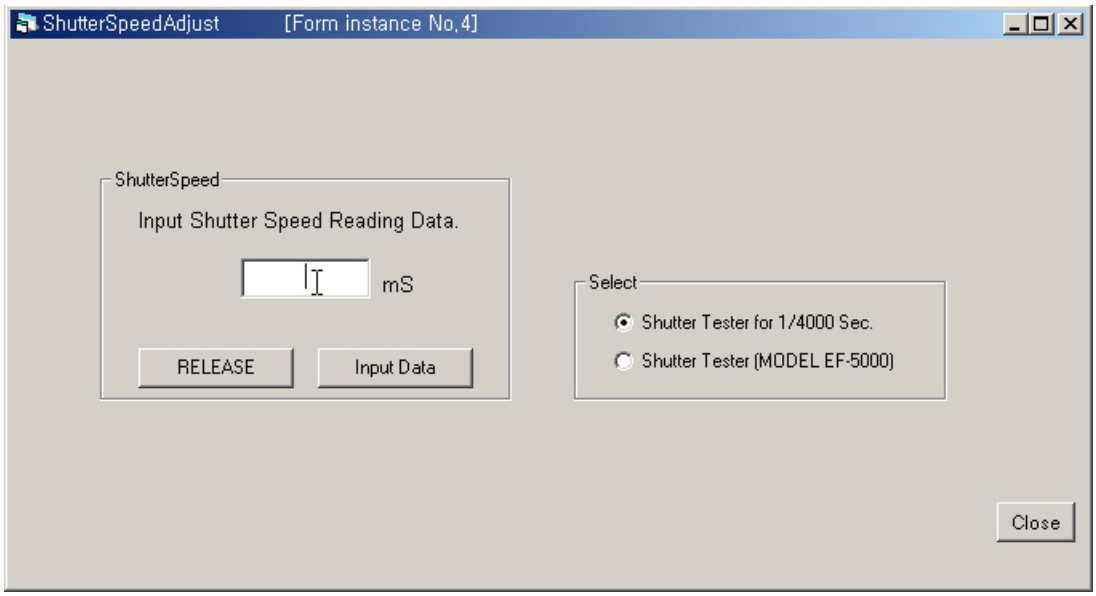
Select the 'Shutter Tester for 1/4000 Sec" on the Select menu.



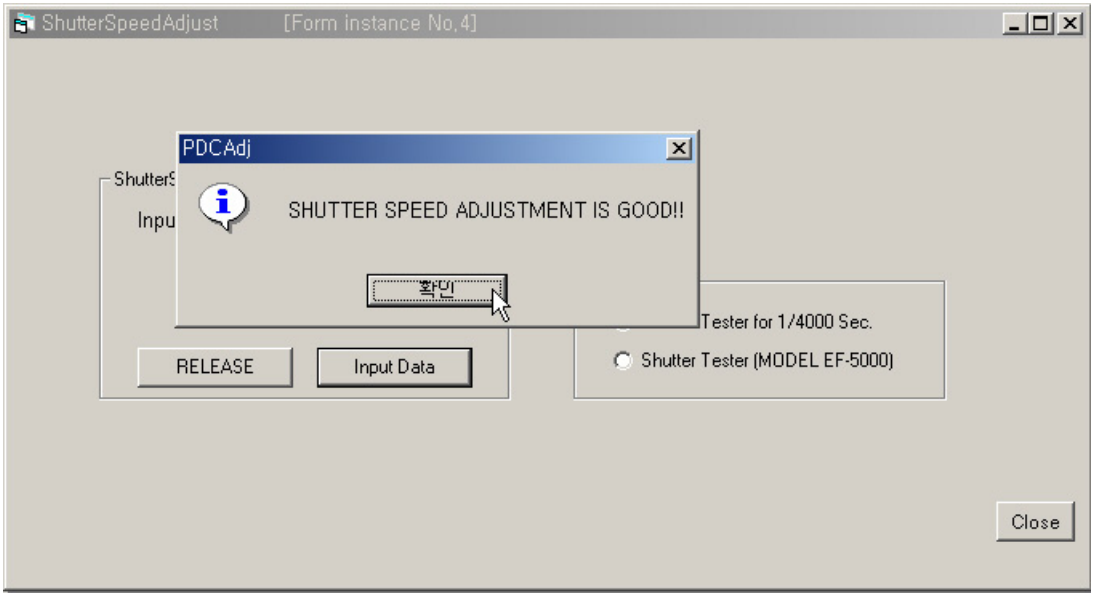
Ignore the message and click the 'OK' button.



Type the shutter speed got from the step 2 and click the 'Input Data' button.

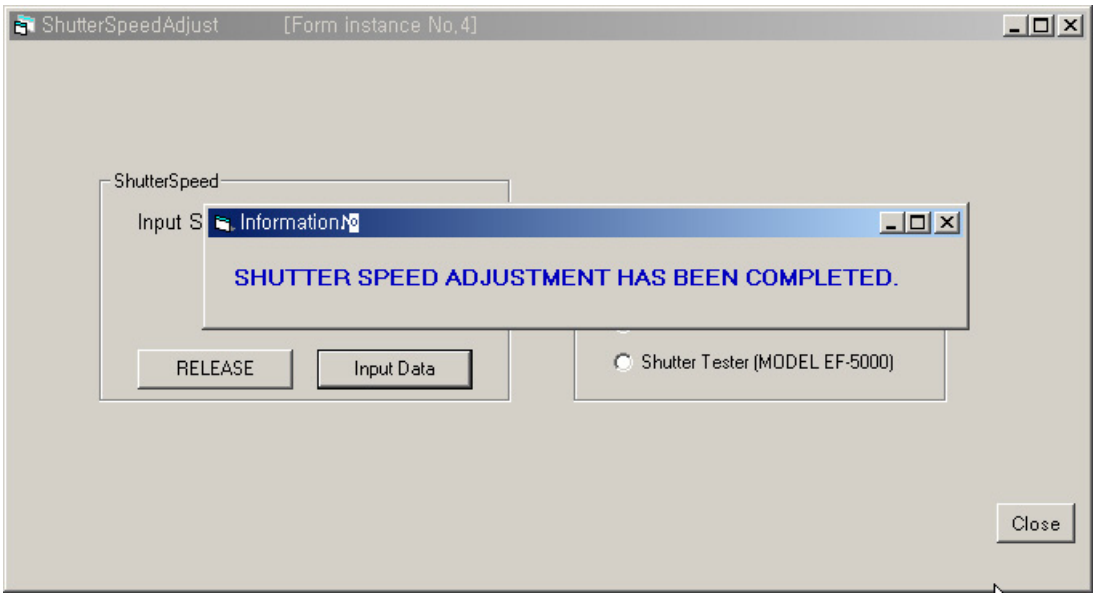


When the process is complete, the following message displays. Click the 'OK' button.

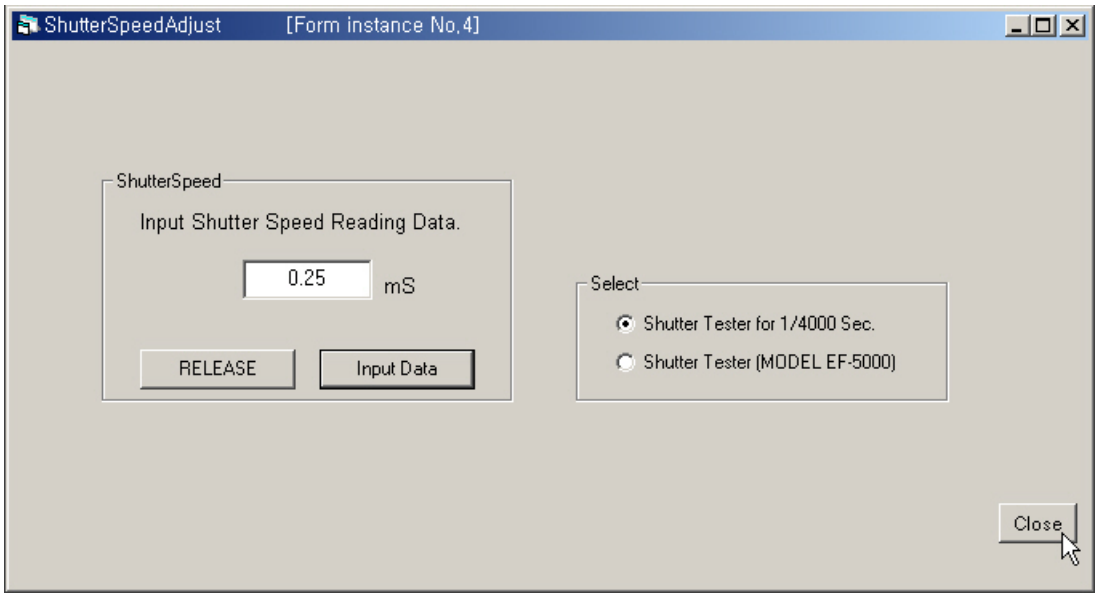


If the result is not good, type 0.25 in the data field and close the program and check the adjustment items to enable the data to use.

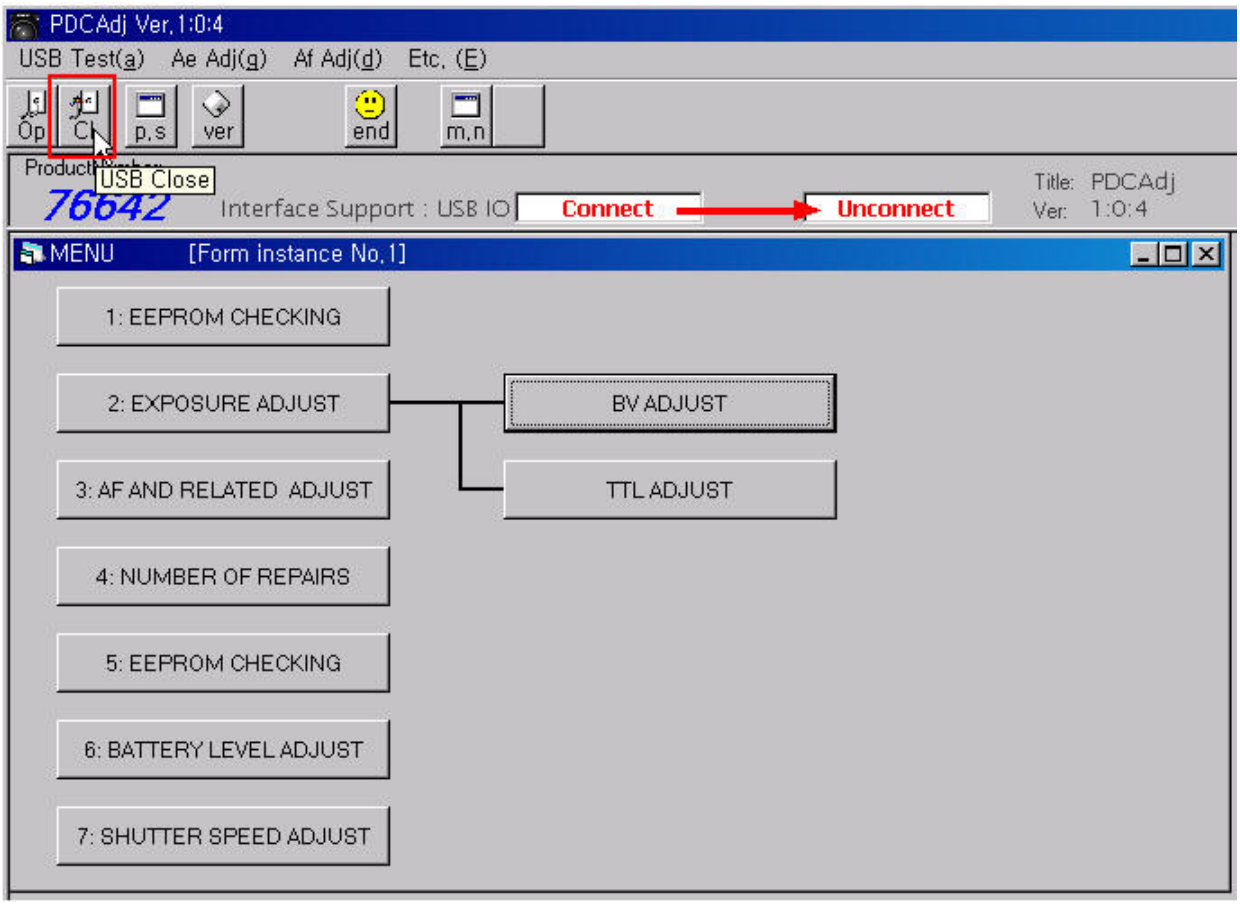
When the data are correct, they are saved on the camera.



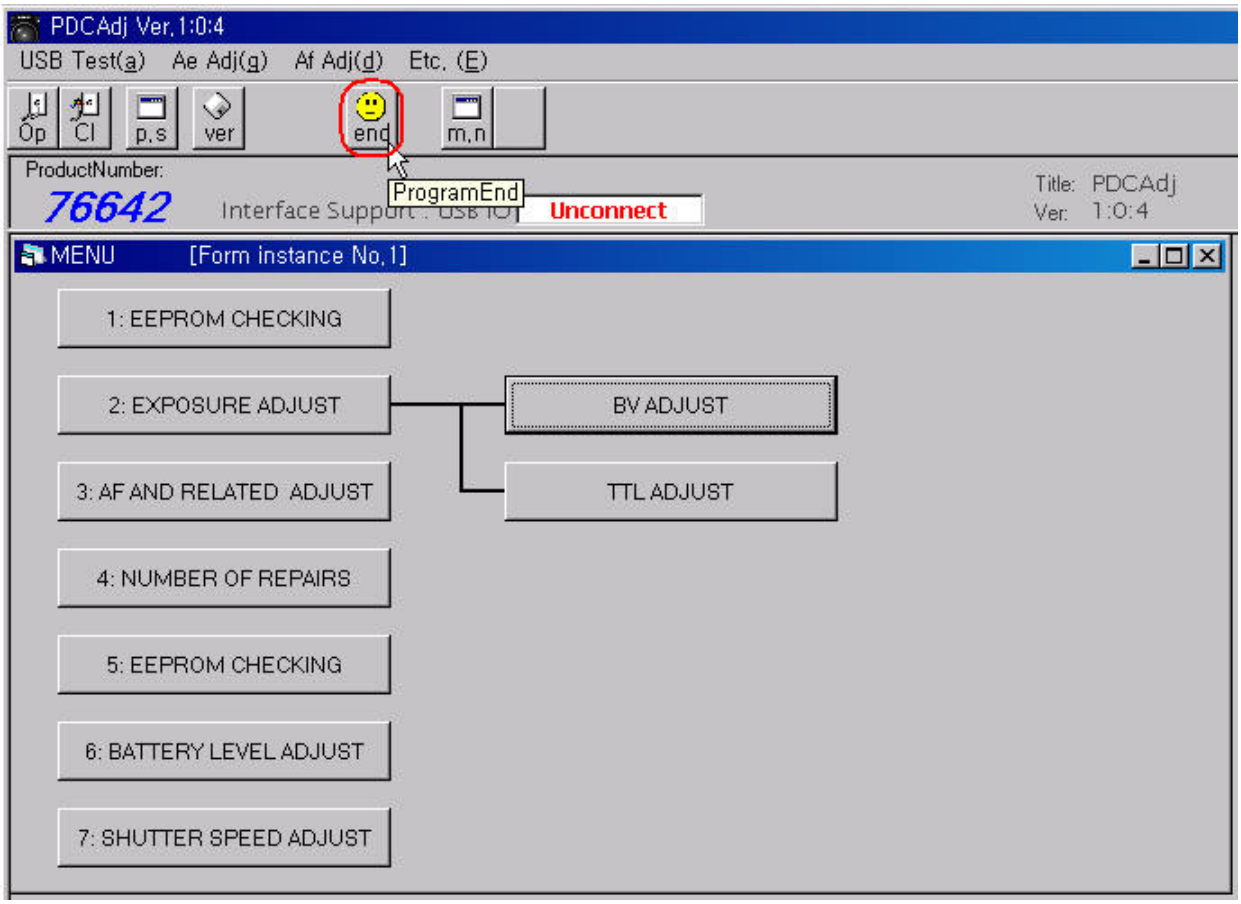
Click the 'CLOSE' button to close the window.



⑦ Click the 'Cl' button on the top of the Main menu. Check whether the Connect message is changed to the Unconnect on the USB IO menu.



⑧ Click the 'end' button to close the program.



[Check] Check the declination again. The declination must be within the following range.

※ Available range of the adjustment: 0.227-0.30mS (1/4000)

◐ The rest adjustments ◑

1. CCD bad pixel adjustment

This is for adjusting the bad pixels of the CCD.
The brightness tester and the standard lens are not required for this adjustment and any camera settings are not required.

■ Adjustment process

Camera settings - Mode dial: M, Focus lever: MF, Remove the lens and memory card

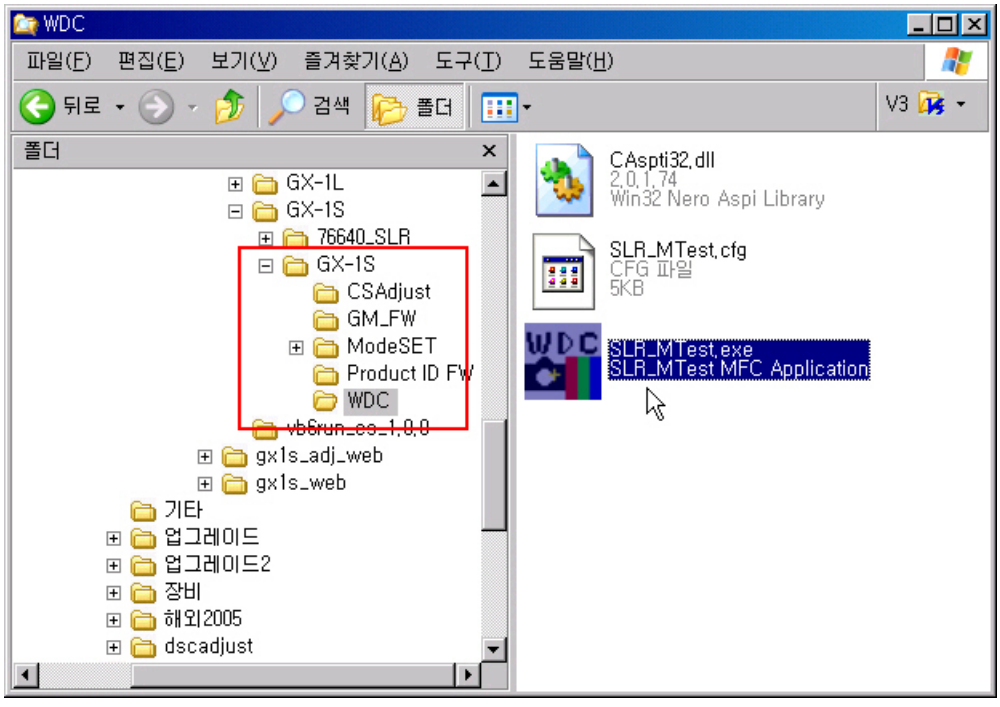
① Turn off the camera and insert the AC adapter. Connect the camera to the PC with the USB cable.

USB port for the camera

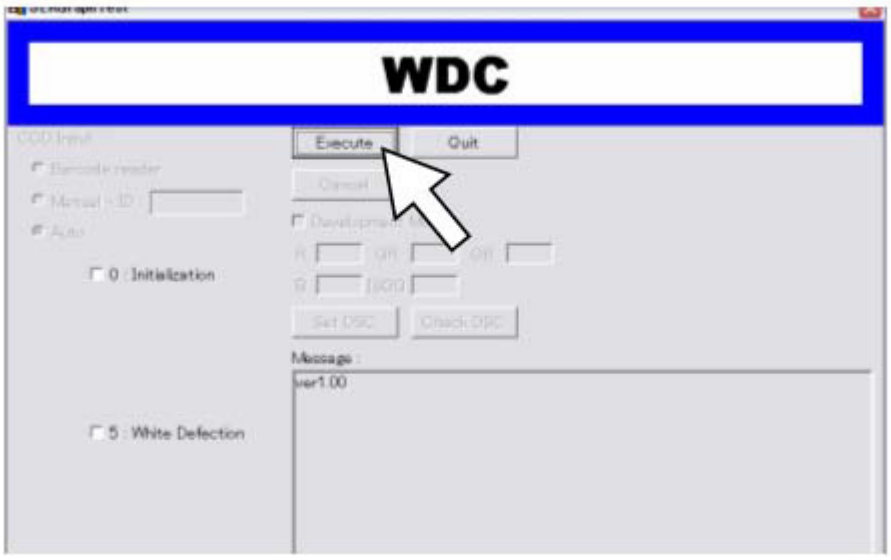
USB port for the computer (Printer)

② Turn on the camera and check whether the hot plug icon is on the desktop.

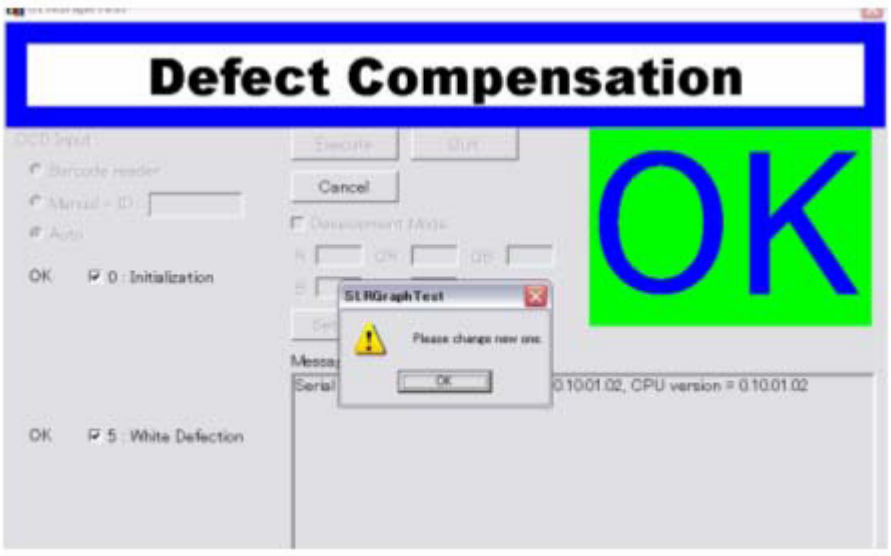
③ Run the SLR_MTest.exe program on the 'GX-10 > WDC' folder.



④ When the program is executed, the following window displays.
Click the "Execute" button or press the "Enter" button of the keyboard.



⑤ When the following window displays, the adjustment is complete.



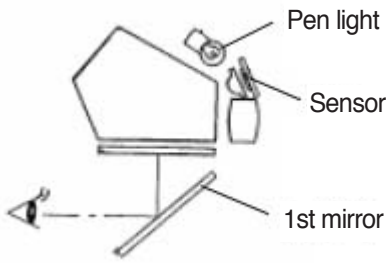
2. Adjusting the metering sensor position

Equipment : Pen light or similar kinds of lights

* Mirror must be down..

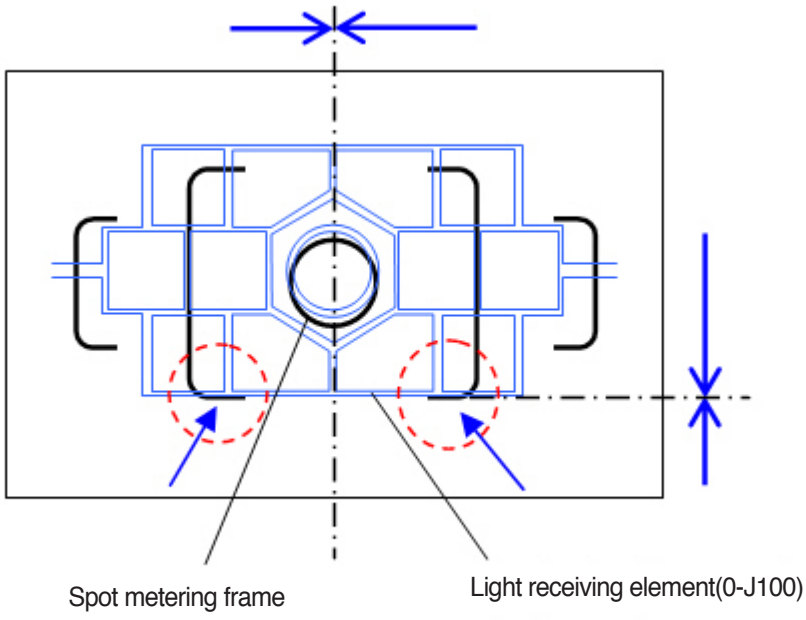
① Block the magnifying glass from the light with hand.

② By changing the light angle, emit the light to the light receiving elecments to find the position of light on the first mirror.



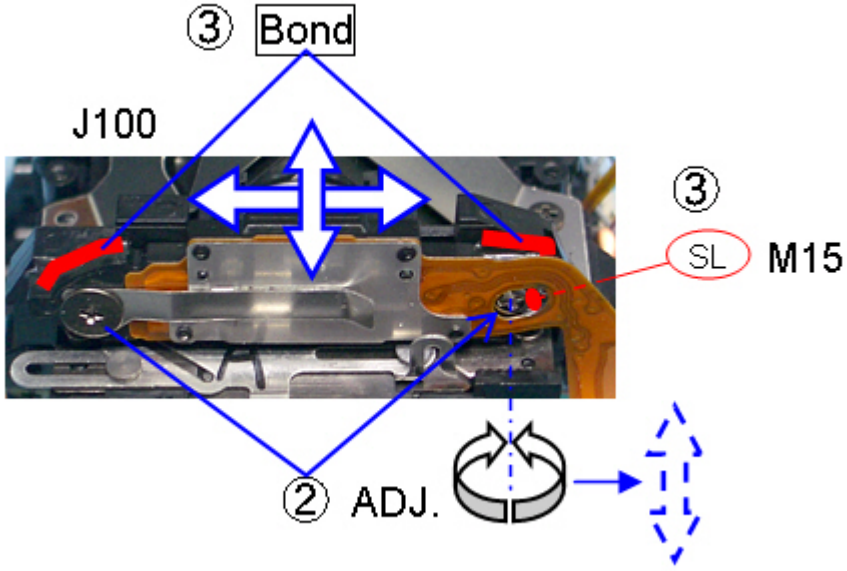
* To see the light receiving element easily, attach the lens

③ Do not incline the light receiving element as shown.



④ Remove the glue that holds 0-J100.

⑤ Loose the screws and adjust the position of the 0-J100.

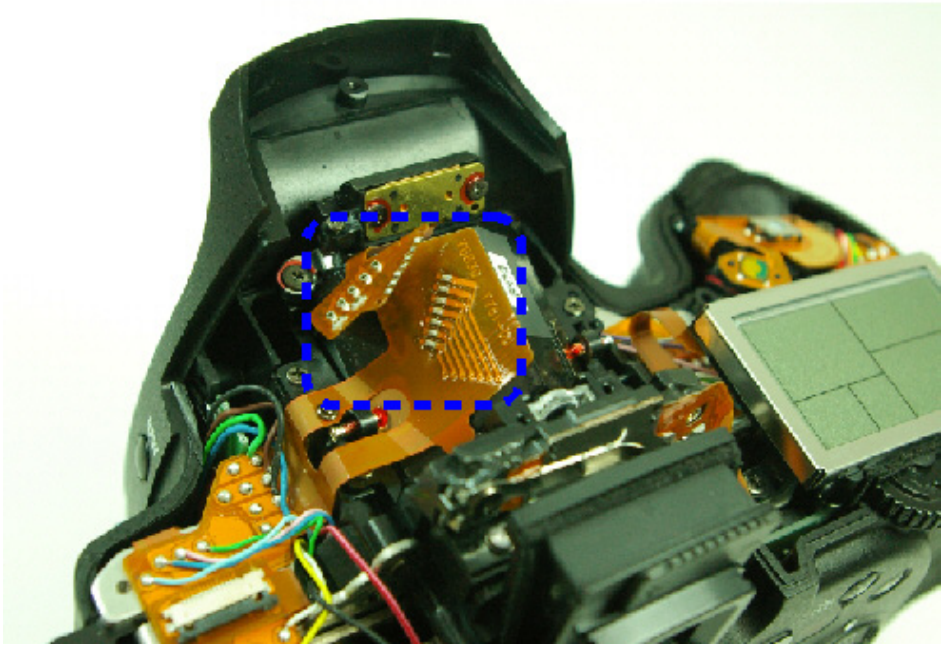


⑤ Tighten the screw and check the condition again.

⑥ After adjusting, cover the 2 screws with glue.

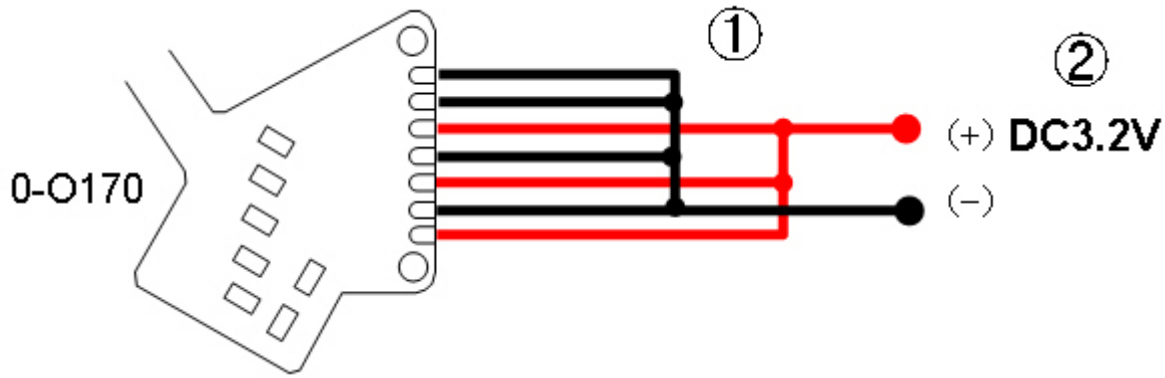
3. Adjusting the position of the AF-LED (Super Imposer)

Disassemble the Super Imposer PCB as shown.

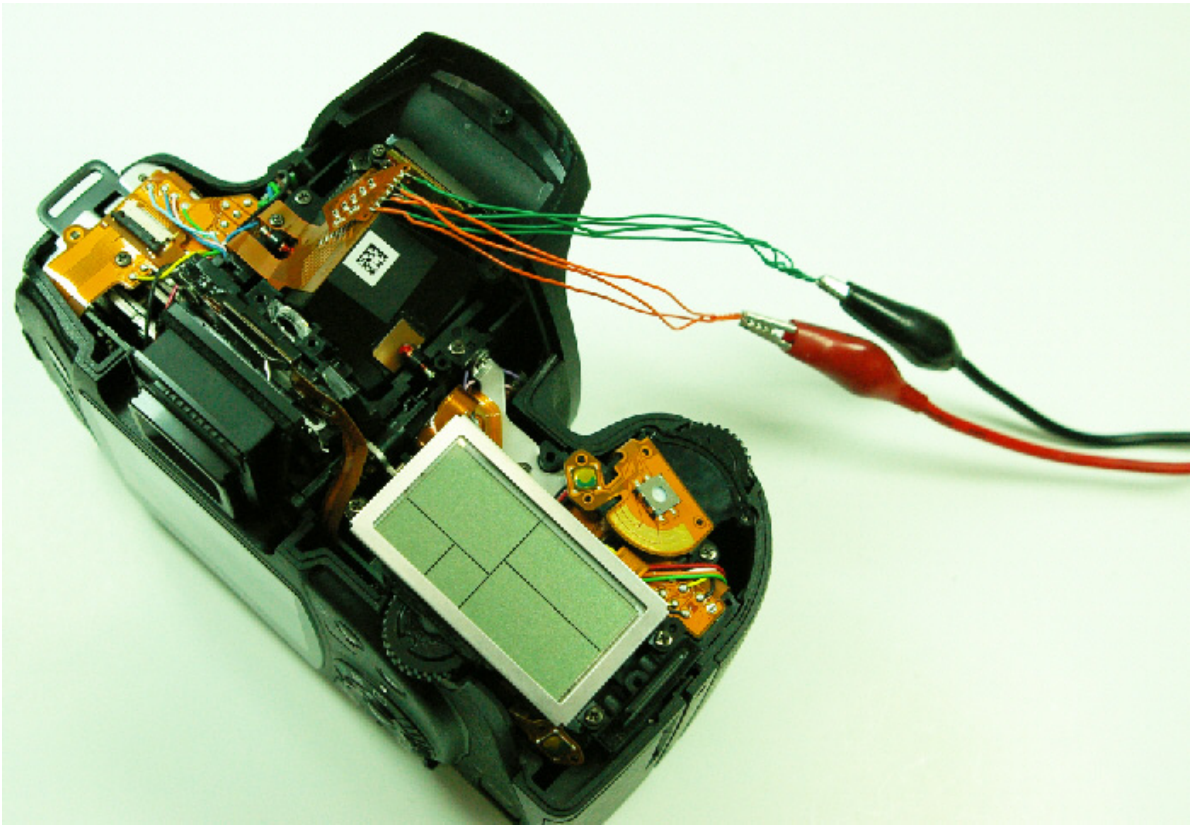


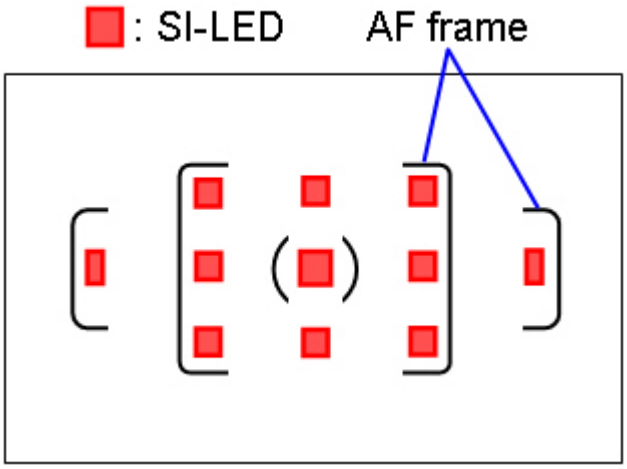
① Connect the lead wire on the 0-O170 (SI-LED) as shown.

[Caution] Do not press the soldering part of the 0-O170 .

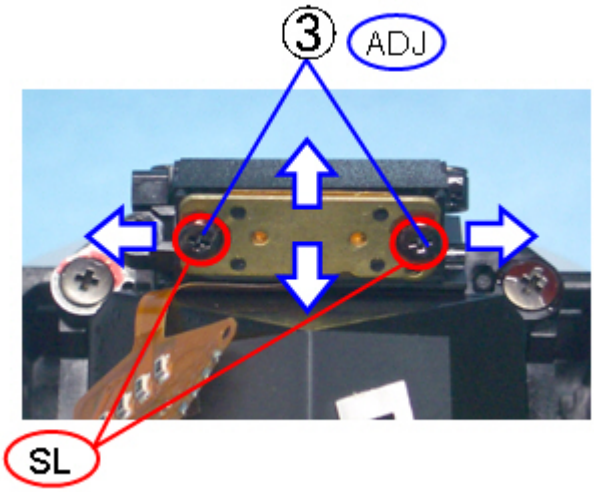


② Connect the power source (DC 3.2V) and check the position and condition of 11 points of the SI-LED.





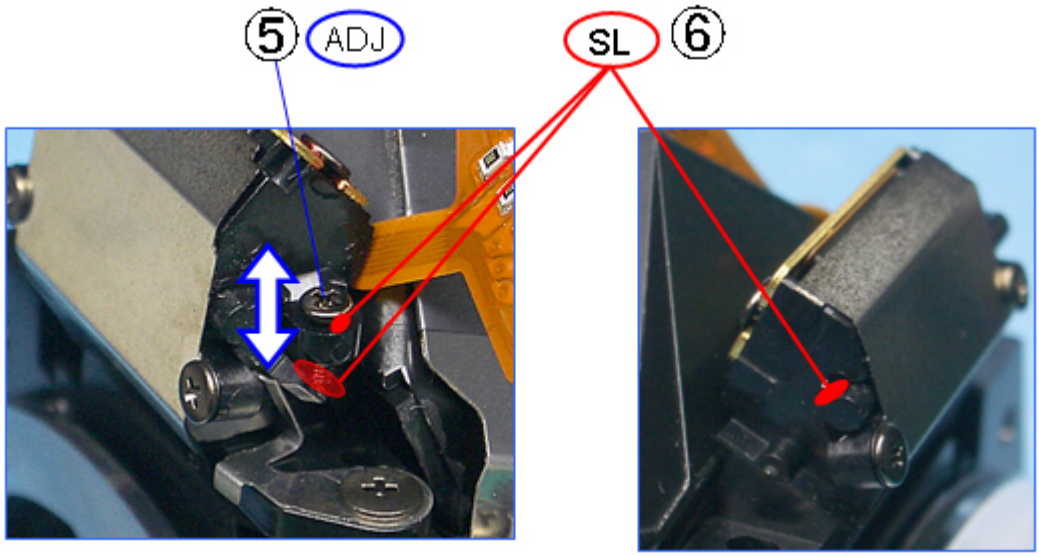
③ [Adjust1] Loose the 2 screws those hold teh 0-O170.
…Remove the glues those cover the 5 screws.



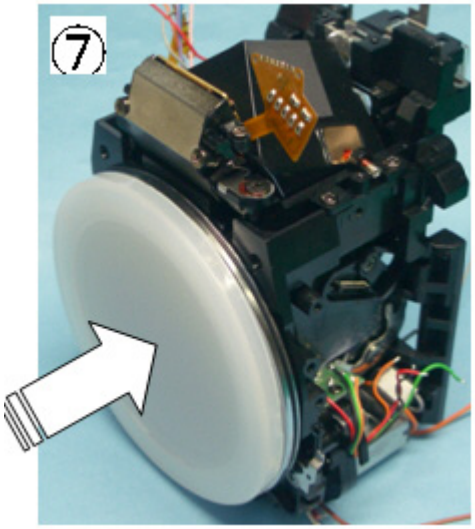
④ Check whether the screws are tightened.

⑤ [Adjust2] Rotate the adjustment screw to move it up and down.

⑥ After adjustment, cover the 5 screws with the glue and remove the lead wire.



⑦ While you adjust it attach the Mount cover to prevent the SI-LED from damage.



Ⅳ. SERVICE INFORMATION

1. The order of assembly and disassembly

■ Cautions

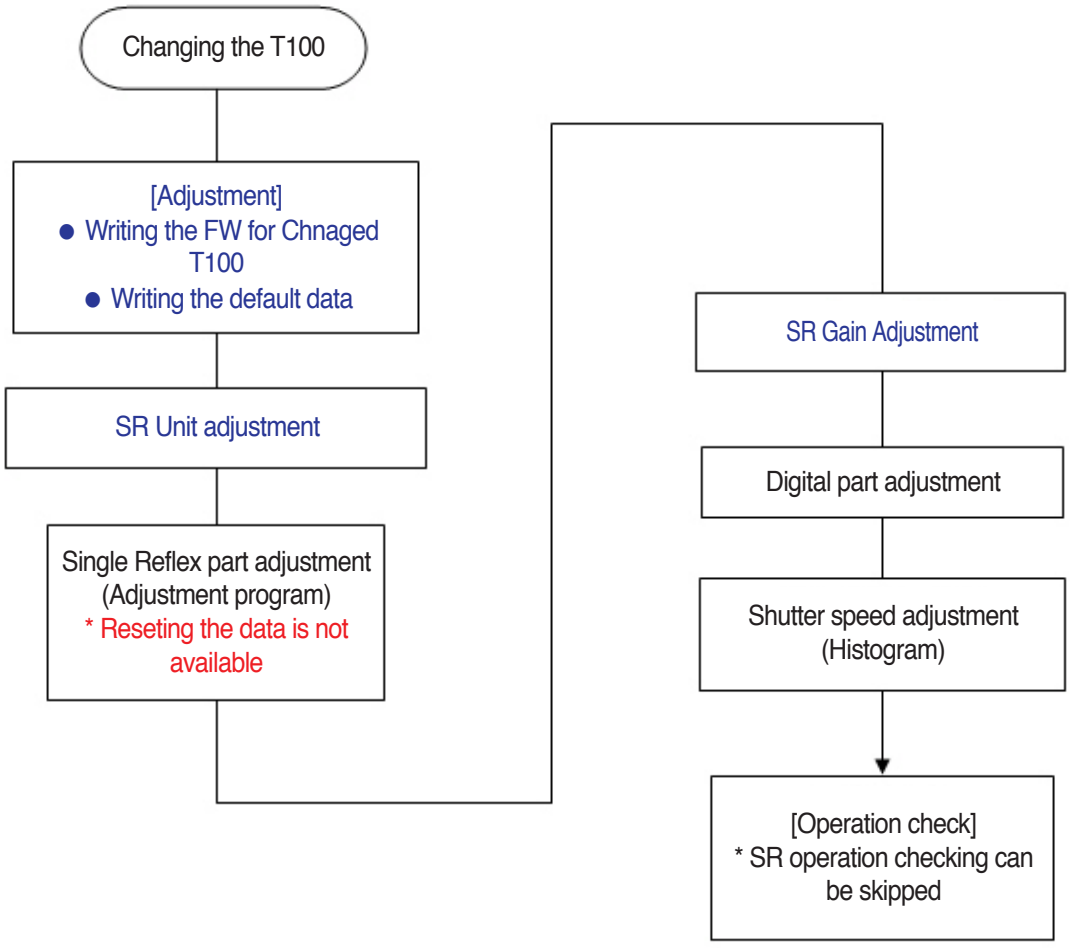
1. To protect the circuit from the power source, use the electric conduction mat and wrist strap.

2. This camera use the Pb free solder.
   The color of the solder is white and the melting temperature is high.
   The melting temperature may cause the camera brokage. To prevent the camera brokage, solder them quickly and use the exclusive iron that can melt the Pb free solder.
   Set the temperature of the iron to 340360℃.

3. Connector and PCB attached on the PCB are sensitive parts.
   Do not treat them by force and take care of breakage when they are assembled or disassembled.
   Tip: Before disassembling the parts, mark the positions with a marker.

■ Adjustment flow of changing the

The following diagram is for the T100 main circuit when it is changed.



■ The order of body disassembly

Preparation: Disassemble the accessories from the body. (Hot shoe cover, Eye cup, etc.)

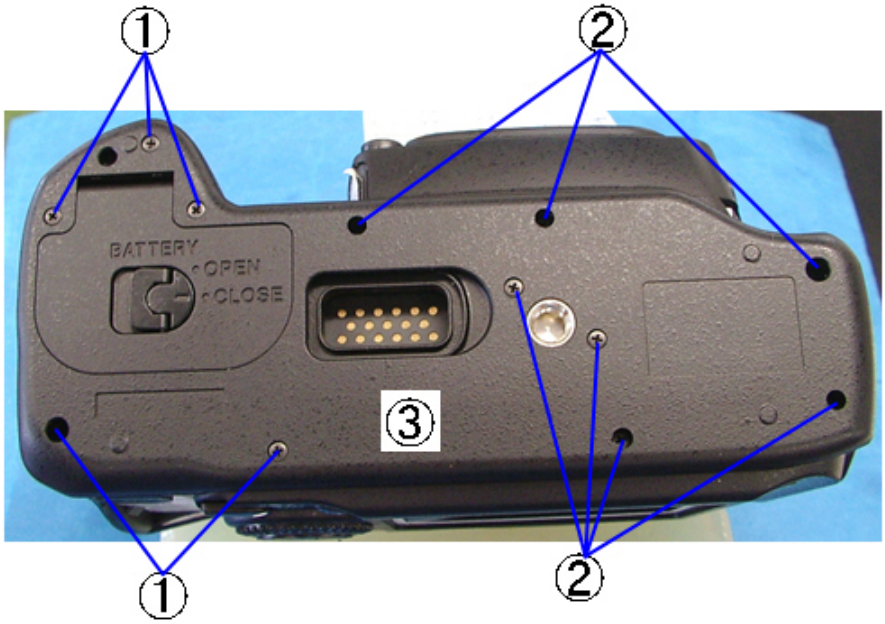
1. A401 (Bottom cover)

[Caution] When the covers are disassembled, don't put the metalic parts like screws or steal ball near the camera as the SR / CCD block has magnetic materials.

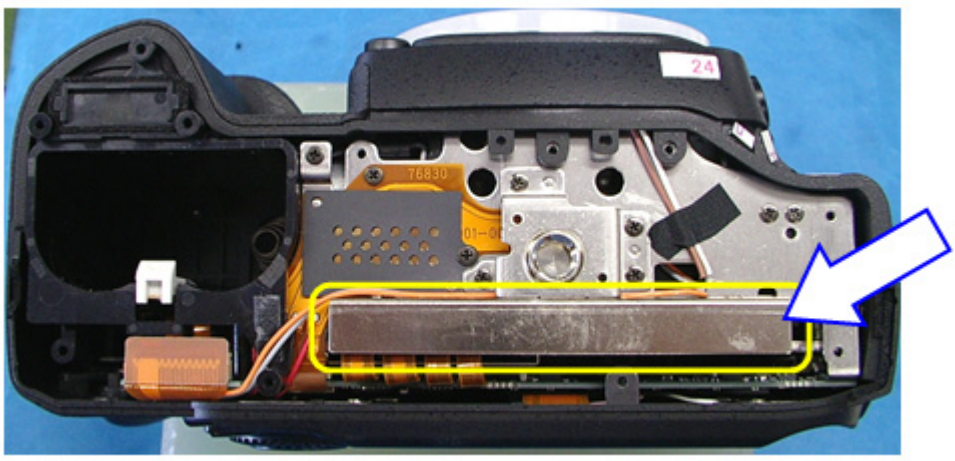
① Five screws

② Seven screws

③ A401, Battery chamber cover



[Caution] The SR / CCD block is projected from the bottom of the camera. Do not impact this part.



2. A301 (Top cover)

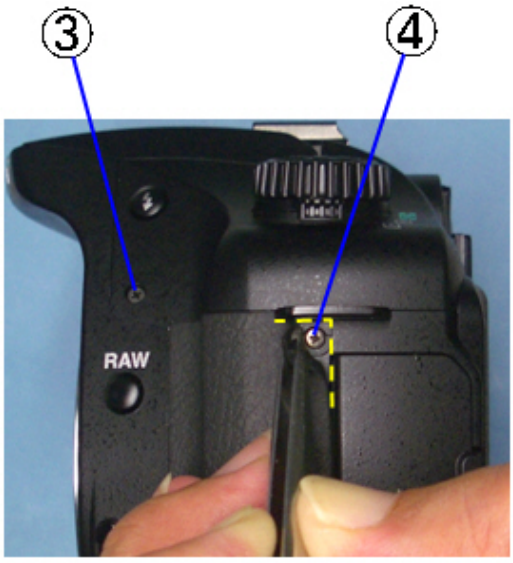
① Screw / O ring

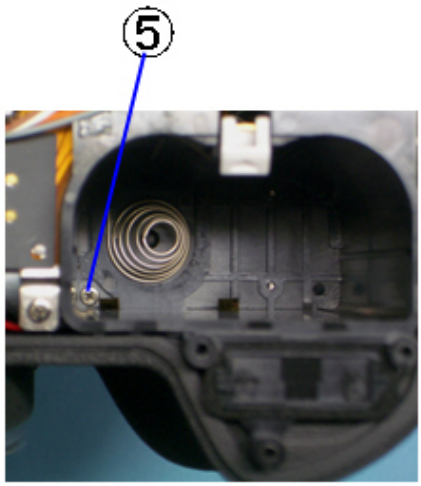
② Screw, Pop-up the internal flash

③ Screw

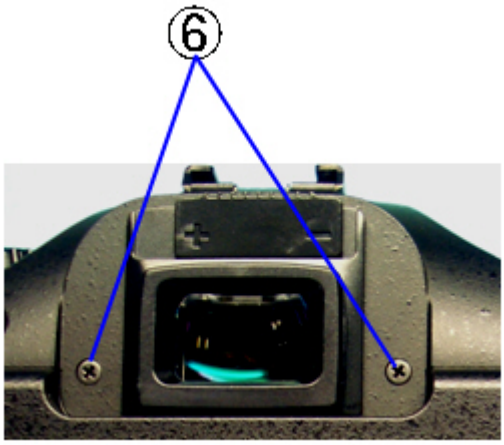
④ Screw, Open the rubber cover

⑤ Screw in the battery chamber





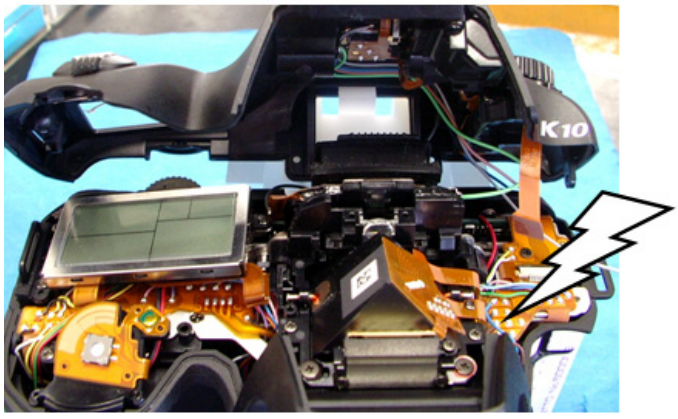
⑥ Two screws

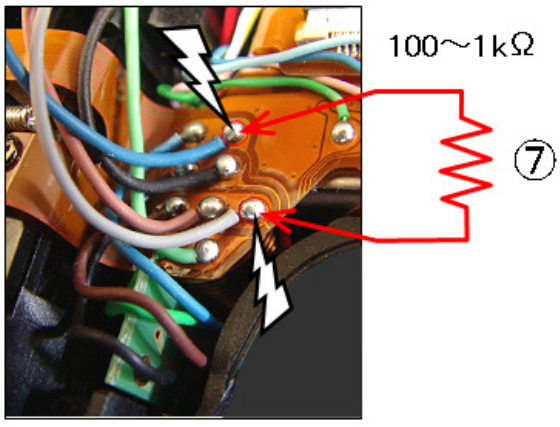


[Caution] Take care of the high voltage. It may cause the electric shock or short circuit

⑦ Discharging the main condensor of the strobe

Lift up the A301 and discharge the main condensor.
(T750, Between the Blue and Gray lead wire)

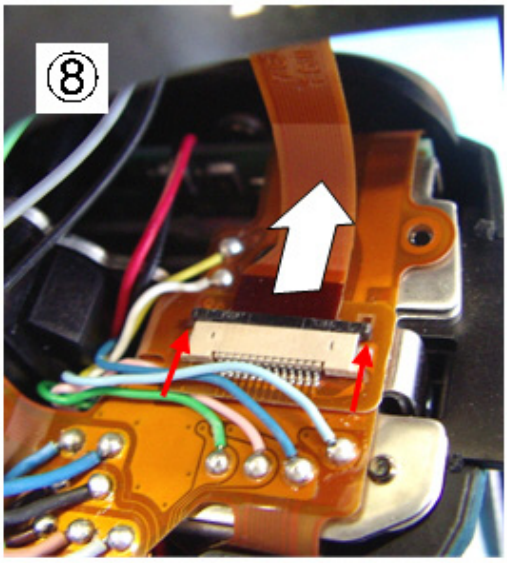


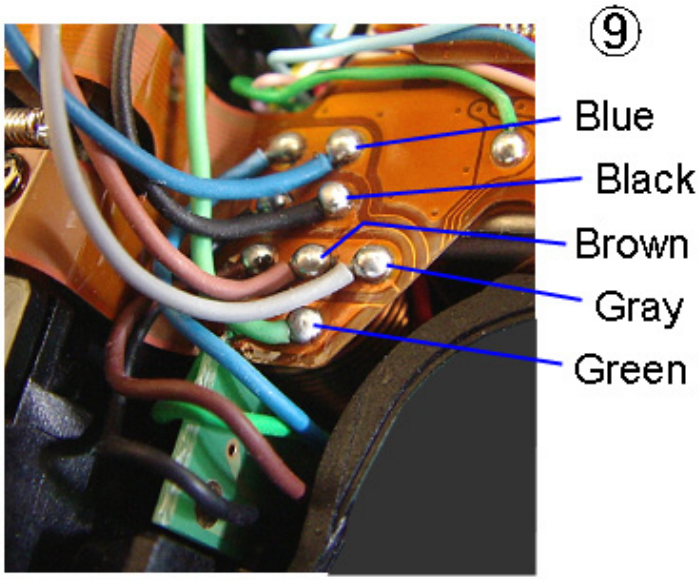


⑧ Remove the T51 PCB from the connector (Slide lock)

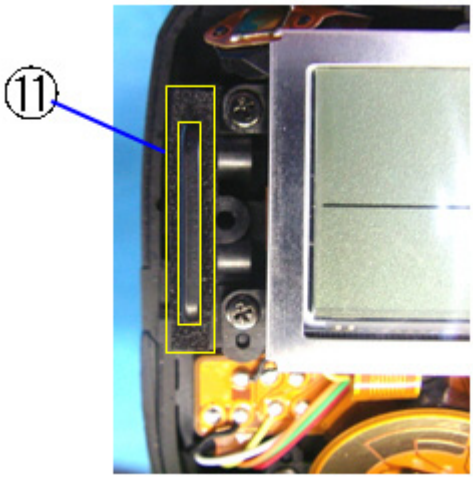
⑨ Five lead wires

⑩ A301



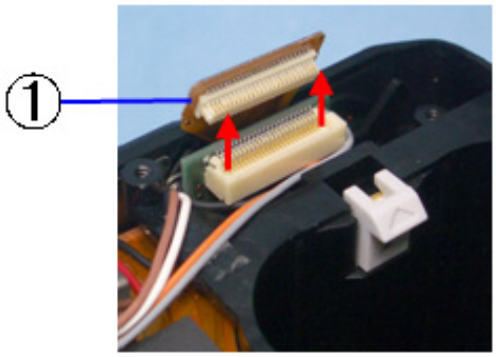


⑪ A27 (Waterproof sheet)



3. A150 / 201 (Front cover / Rear cover)

① Remove the T920 PCB from the connector (Wall socket type)

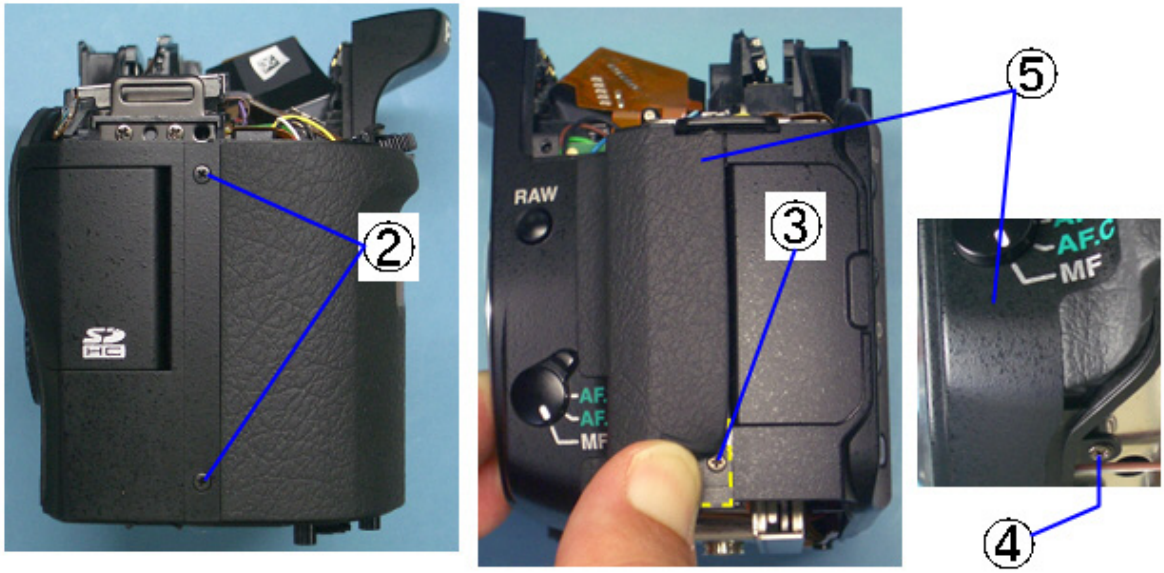


② Two screws (↓)

③ Screw, Open the rubber cover

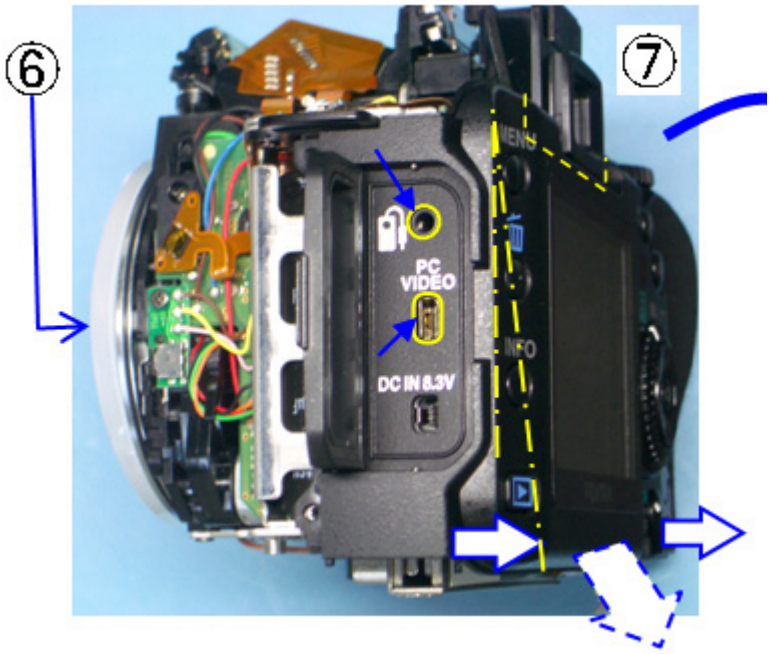
④ Screw

⑤ A150

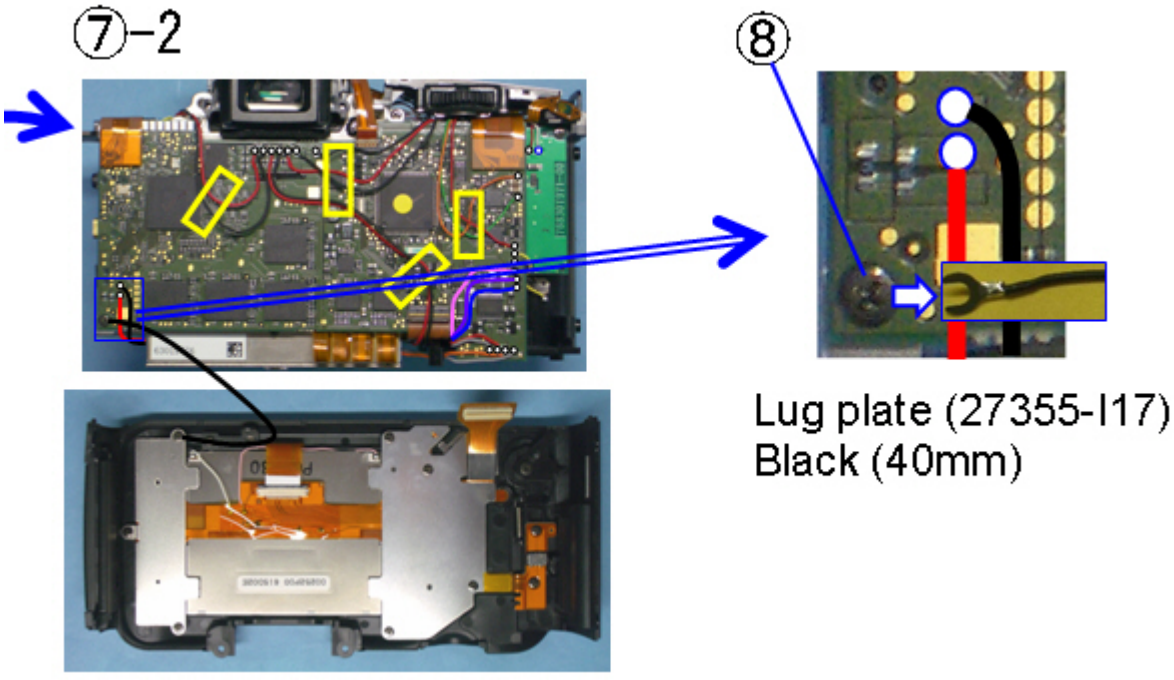


⑥ Attach the Mount cover to prevent the SI-LED and Tv dial.

⑦ Taking care of the contact point, lift the A201 up slightly and disassemble the cover.
And then see the Figure 7-2.

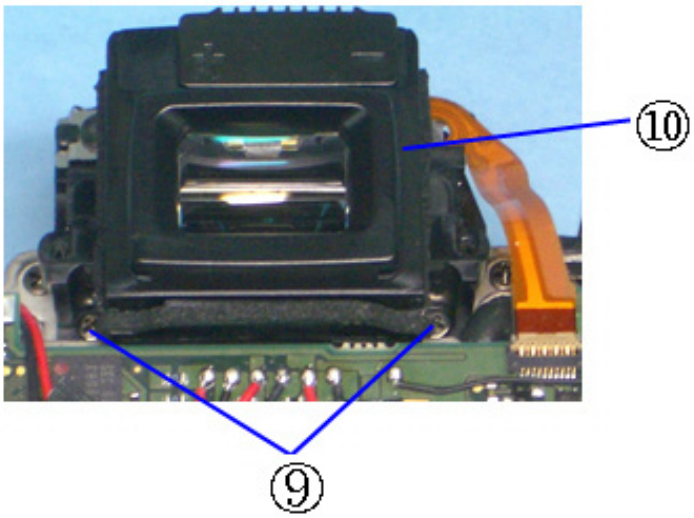


⑧ Loose the screw and remove the lug plate



⑨ Two screws

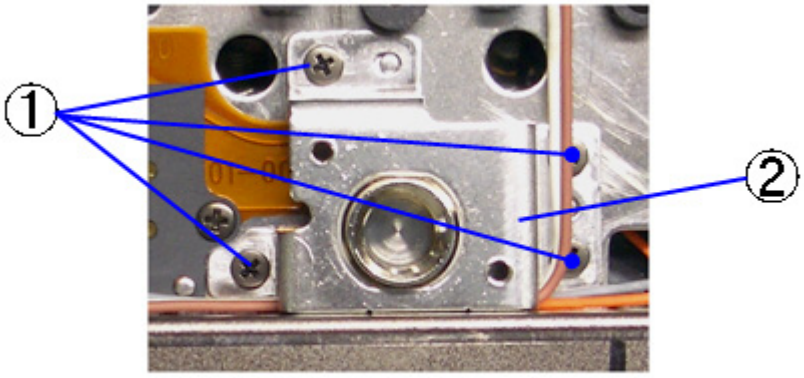
⑩ M311



4. 0-A51 (Tripod holder)

① Four screws

② 0-A51



5. 0-T100 (Main circuit block)

① BT(5x15)…6EA

② Remove the T90

③ Remove the A35

④ Seven lead wires

⑤ Two lead wires

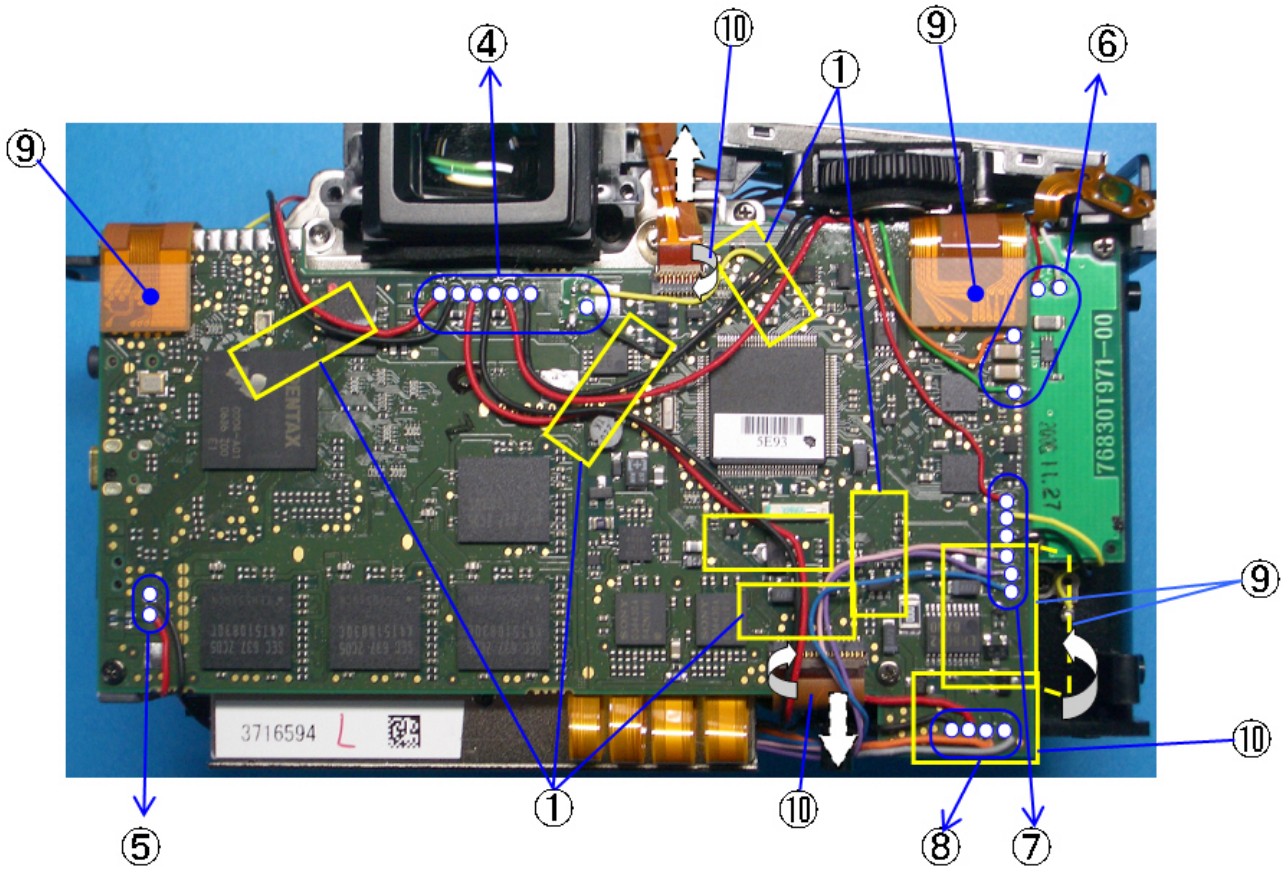
⑥ Four lead wires

⑦ Six lead wires

⑧ Four lead wires

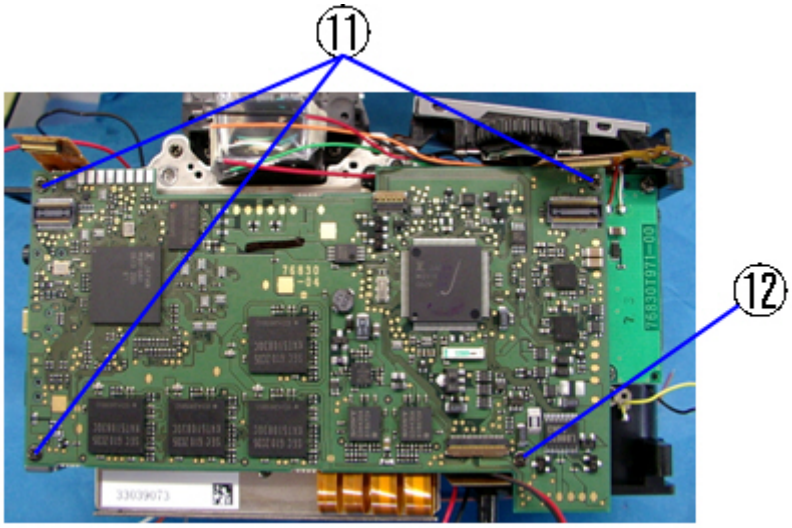
⑨ Remove the PCB from the connector (Two points, Wall socket type)

⑩ Remove the PCB from the connector (Two points, flip lock)
…Remove the J100 PCB from the DT.



⑪ Three screws ↓

⑫ TY screw

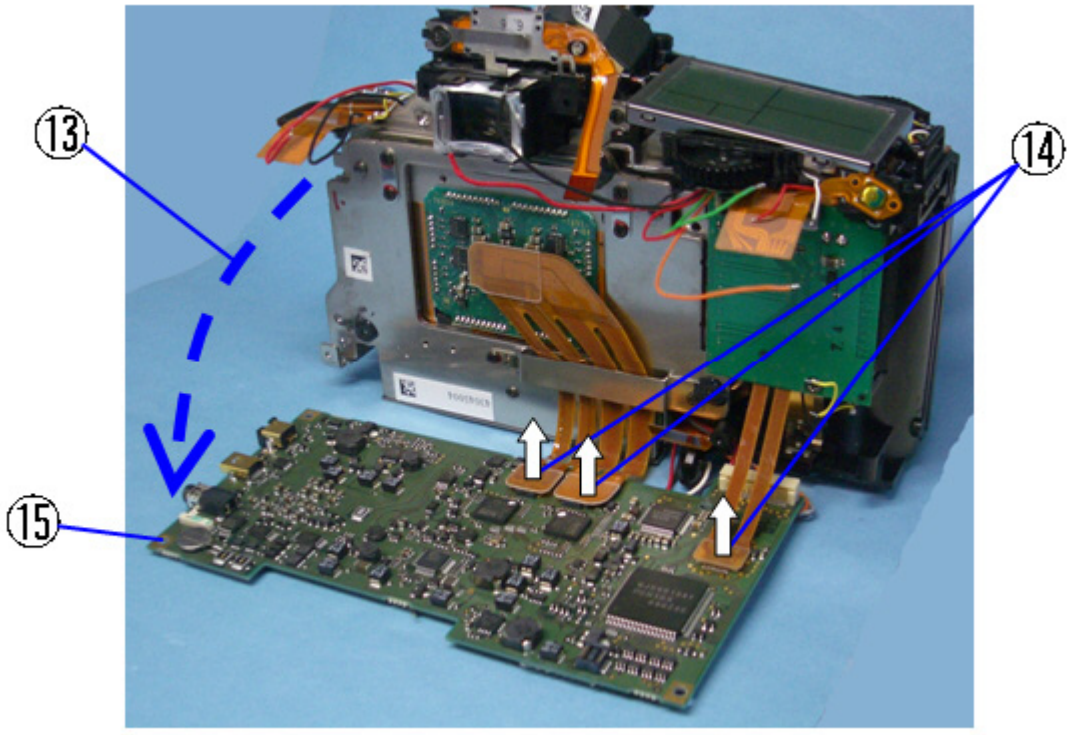


⑬ Put the T100 as shown

[Caution] Protect the SR / CCD block PCB from damage as it can effect the camera operation and do not fold the PCB.

⑭ Remove the PCB from the connector (Three points, Wall socket type)

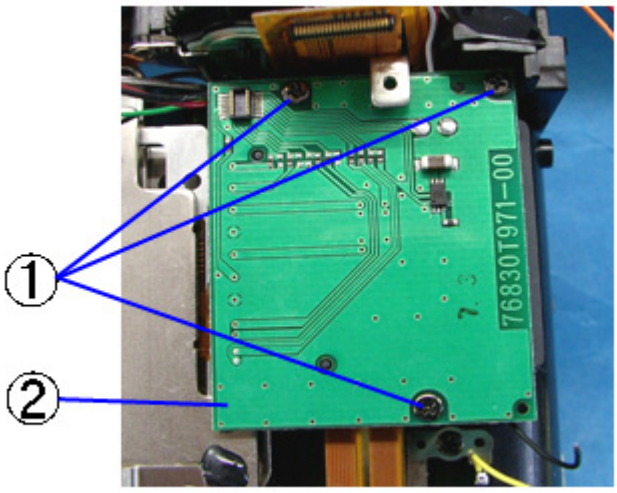
⑮ T100



6. 0-T970 (SD circuit block)

① Three screws

② 0-T970



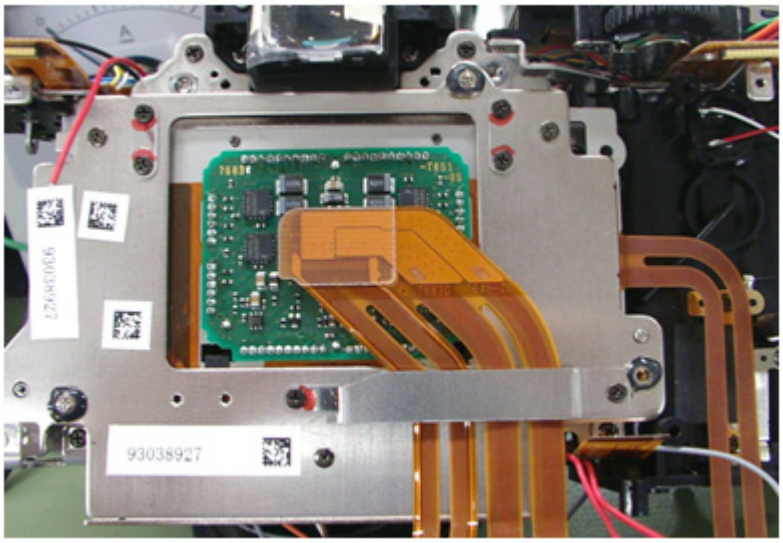
※ OPS / CCD block

[Caution] Adjustment is not available. Do not remove the 0-C000 as it can effect the camera operation

[Caution] Taking care of metalic parts as the SR / CCD block has magnetic materials.

[Caution] Do not disassemble the SR / CCD block as it effect the camera operation.
Do not press the operation parts with overpower.

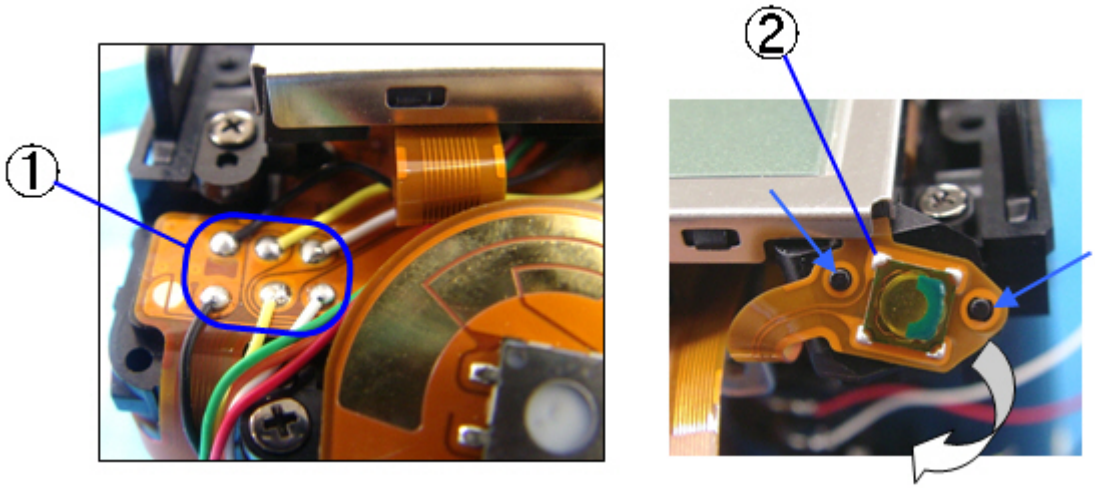
[Caution] Do not press the SR / CCD block PCB with overpower as it may effect the camera operation



7. O201 (LCD block)

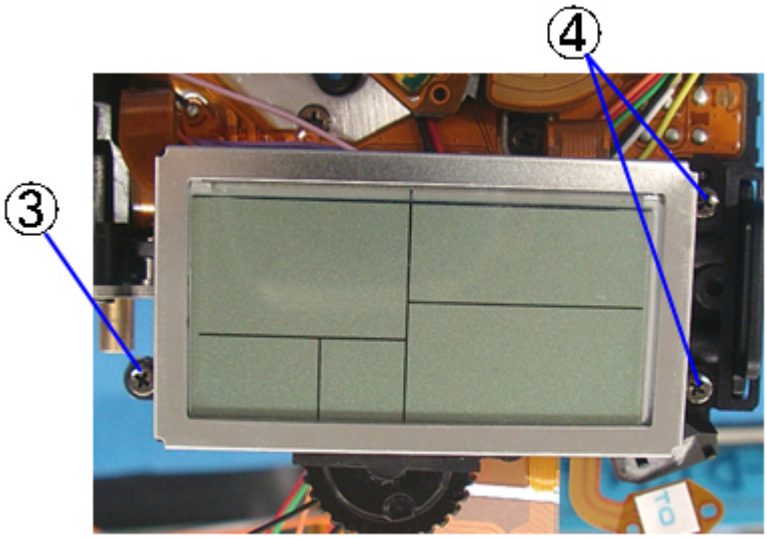
① Six lead wires

② Remove the PCB of the AE-L part.



③ Screw

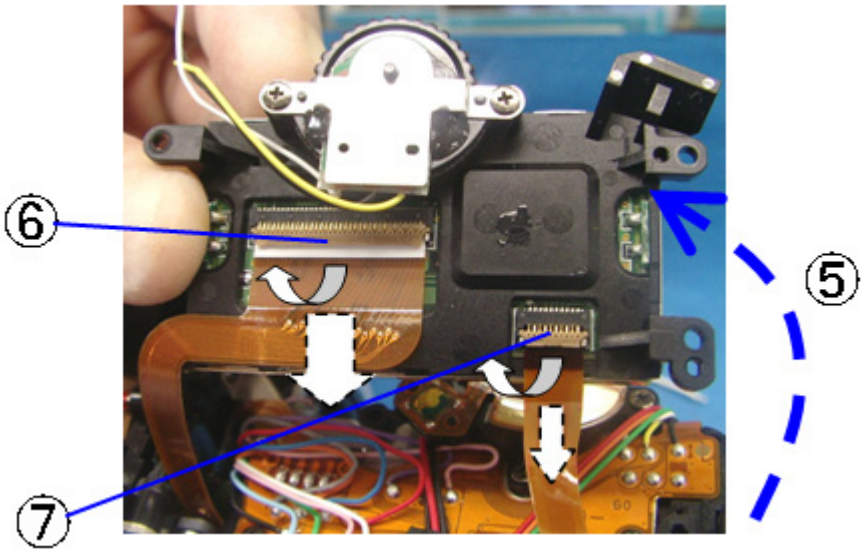
④ Two TY screw



⑤ Lift the O201 to the front as shown

⑥ Remove the O100 PCB from the connector (Flip lock)

⑦ Remove the T700 PCB from the connector (Flip lock)



8. A350 (Main SW part)

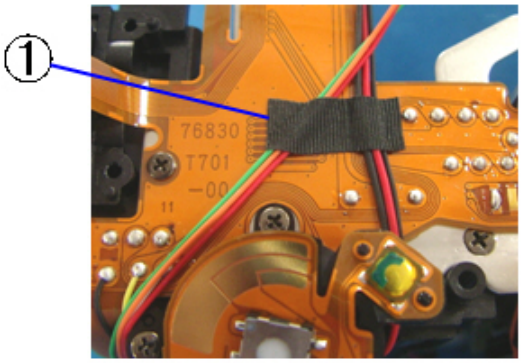
① BT(6x15)

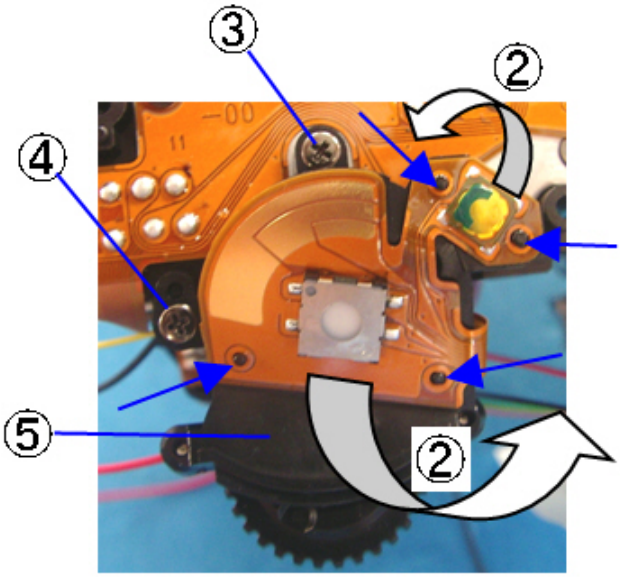
② Remove the PCB around the Shutter SW / Green button

③ Screw

④ TY screw

⑤ A350

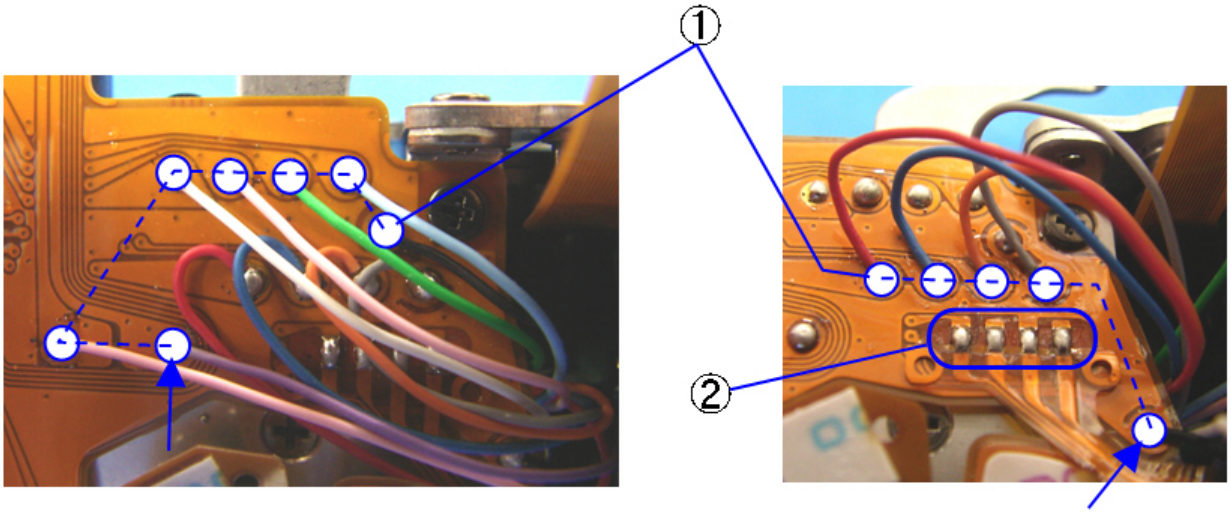




9. 0-T700 (Top right relay circuit)

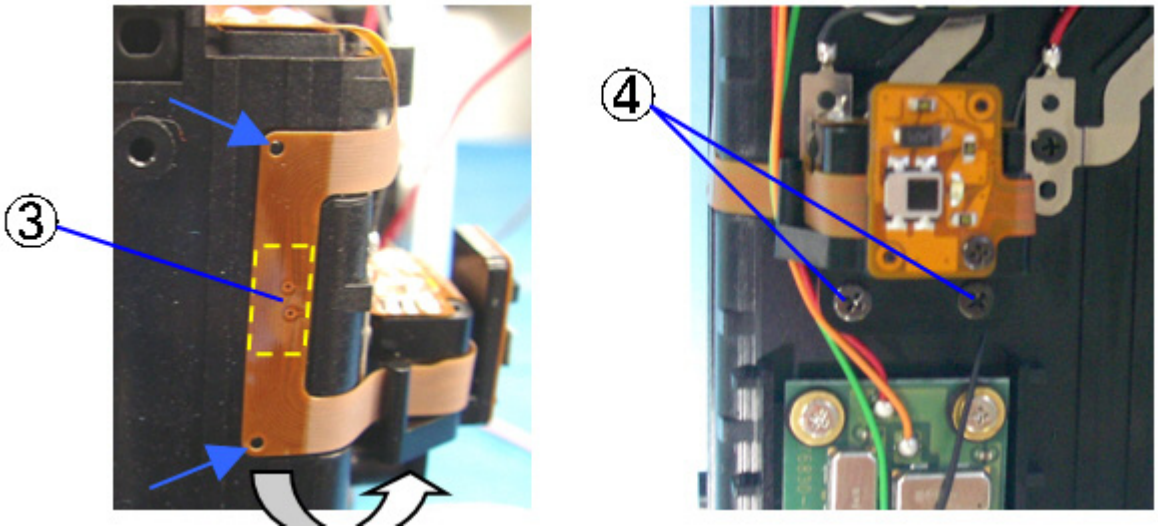
① Twelve lead wires

② Four soldering of T71 PCB



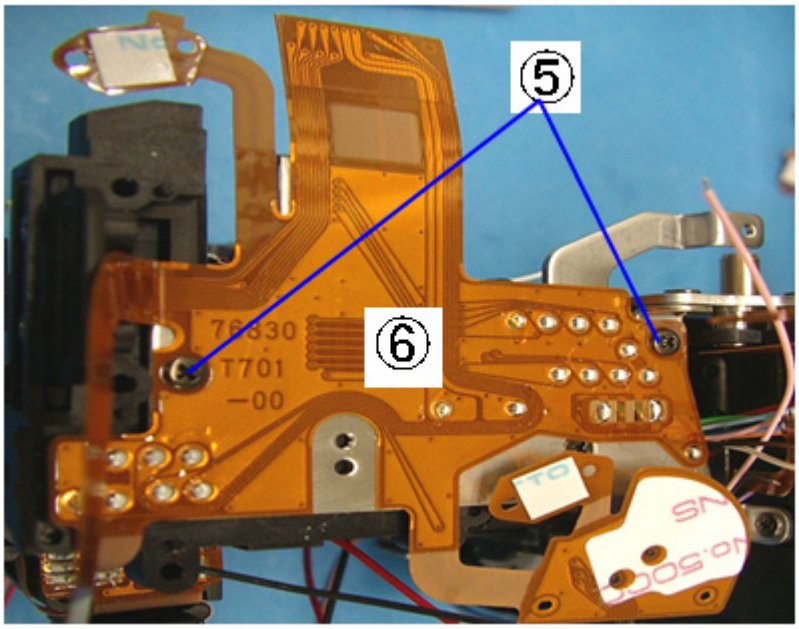
③ Remove the PCB from the DT.

④ Two TY screws



⑤ Two screws

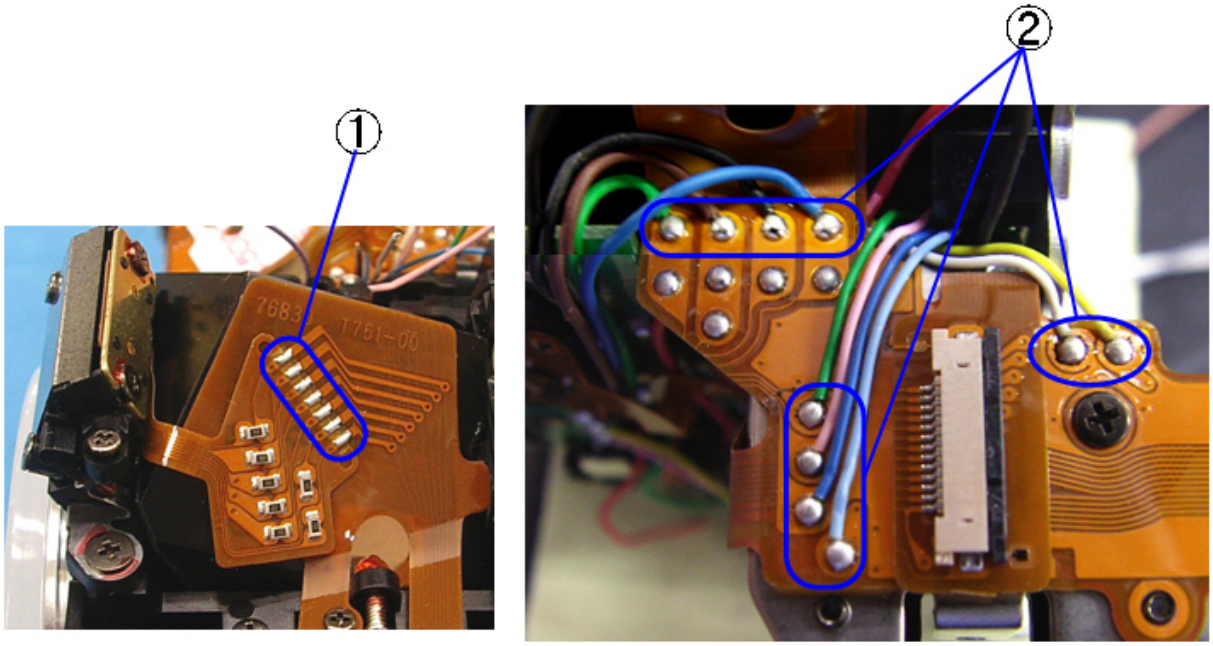
⑥ T700



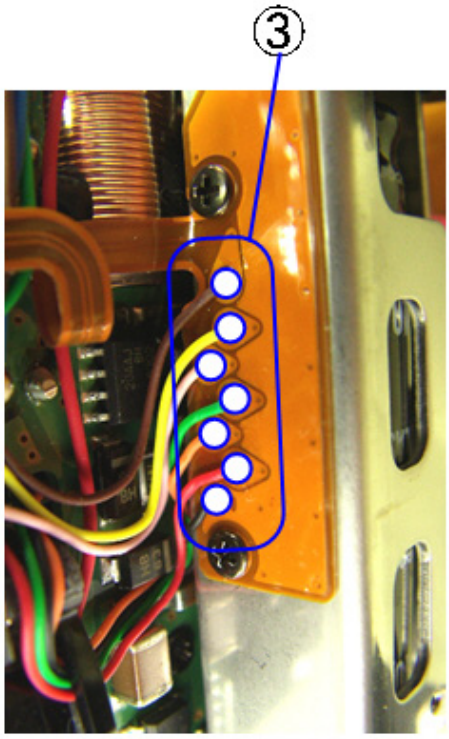
10. 0-T750 (Left top relay circuit)

① Seven soldering points of the O170 PCB

② Ten lead wires



③ Seven lead wires



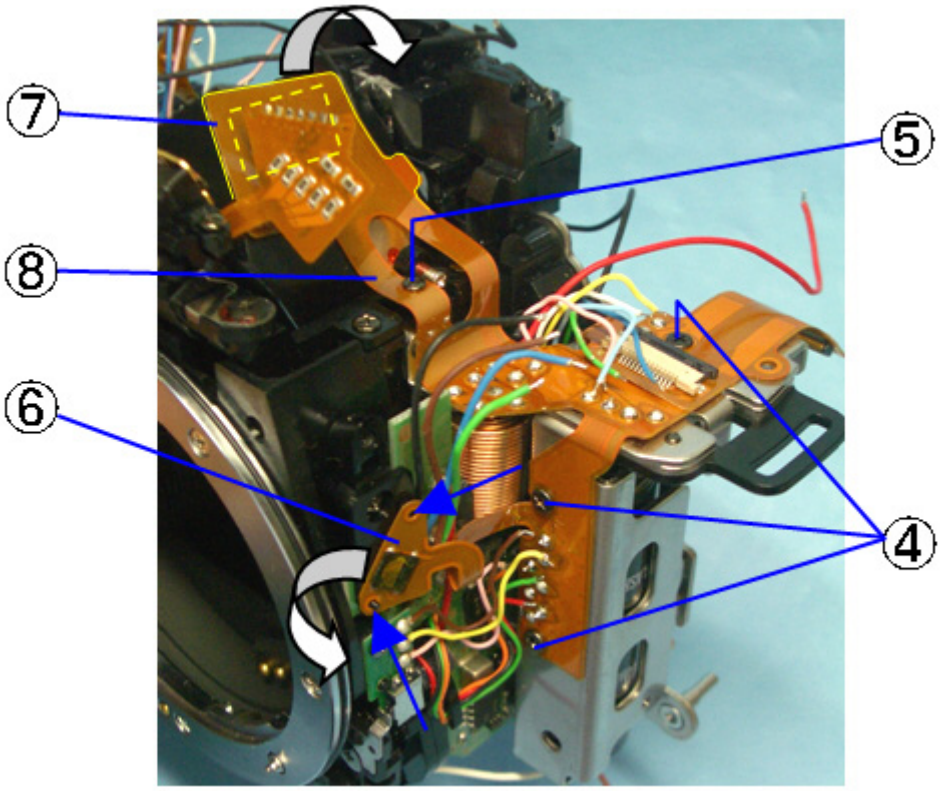
④ Three screws

⑤ TY screws

⑥ Remove the PCB around the RAW button SW

⑦ Remove the PCB of Pent part

⑧ T750



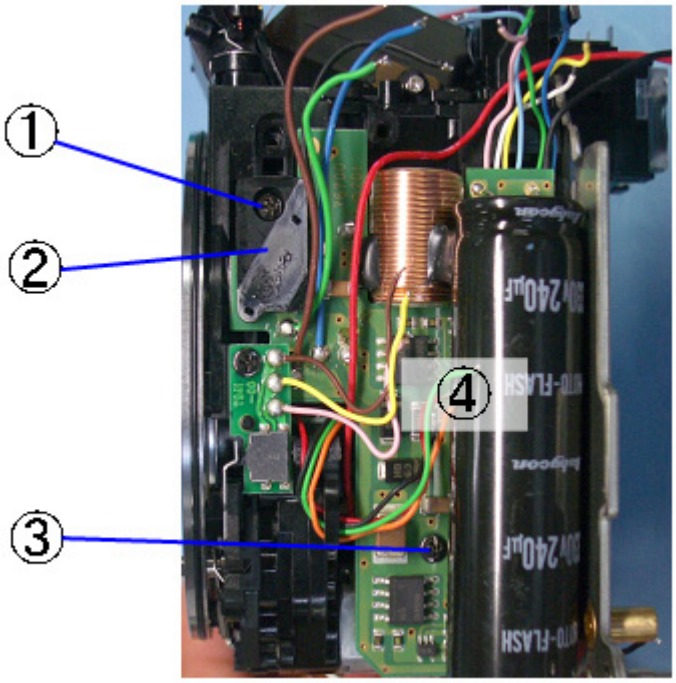
11. 0-Q200 (Storbe circuit)

① TY screw

② A117

③ TY screw

④ Q200



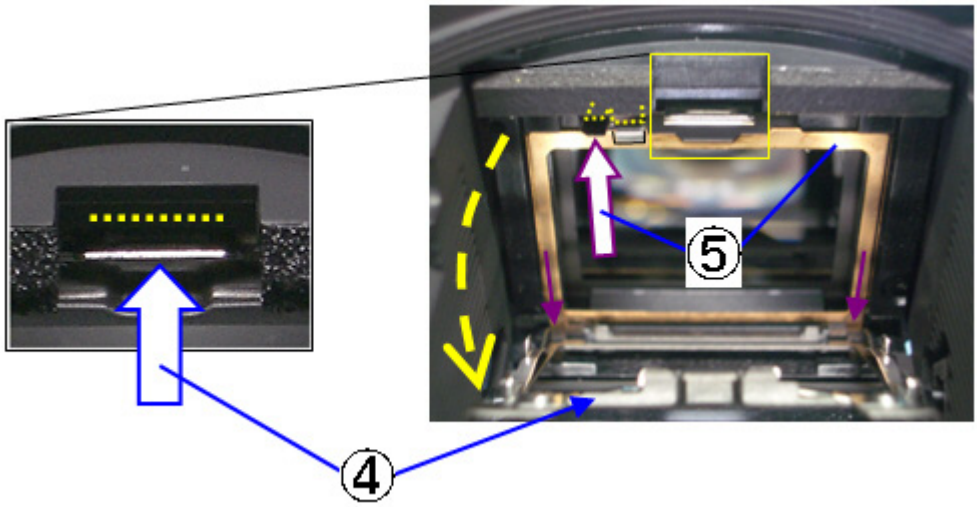
■ The order of body assembly

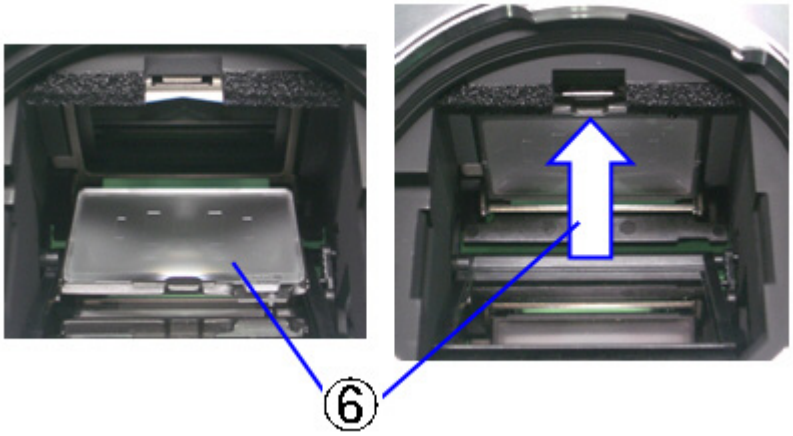
1. L2

① Remove Hook part lift down the focus plate guide (0-M4).

② Press the front of the projected part and attach the M22 as shown
(If it is temporary adjustment, use the M22-00 E (t=0.35))

③ Attach the L2 and lift up to lock it.

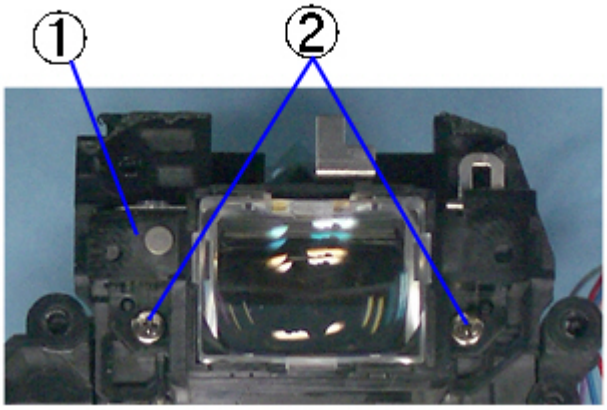




2. M301

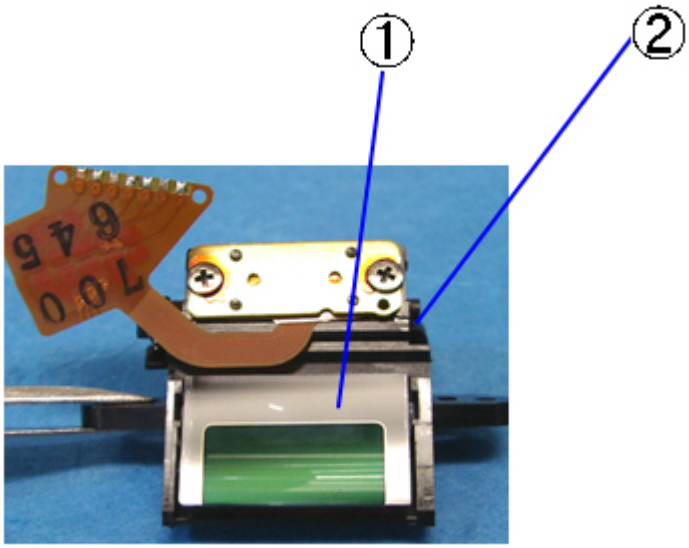
① Viewfinder lens part (M301 • L7 • etc.)

② TY-CNL-D1.7x4.0(2EA)



3. SI block

① No dust, scratch on the Prism.

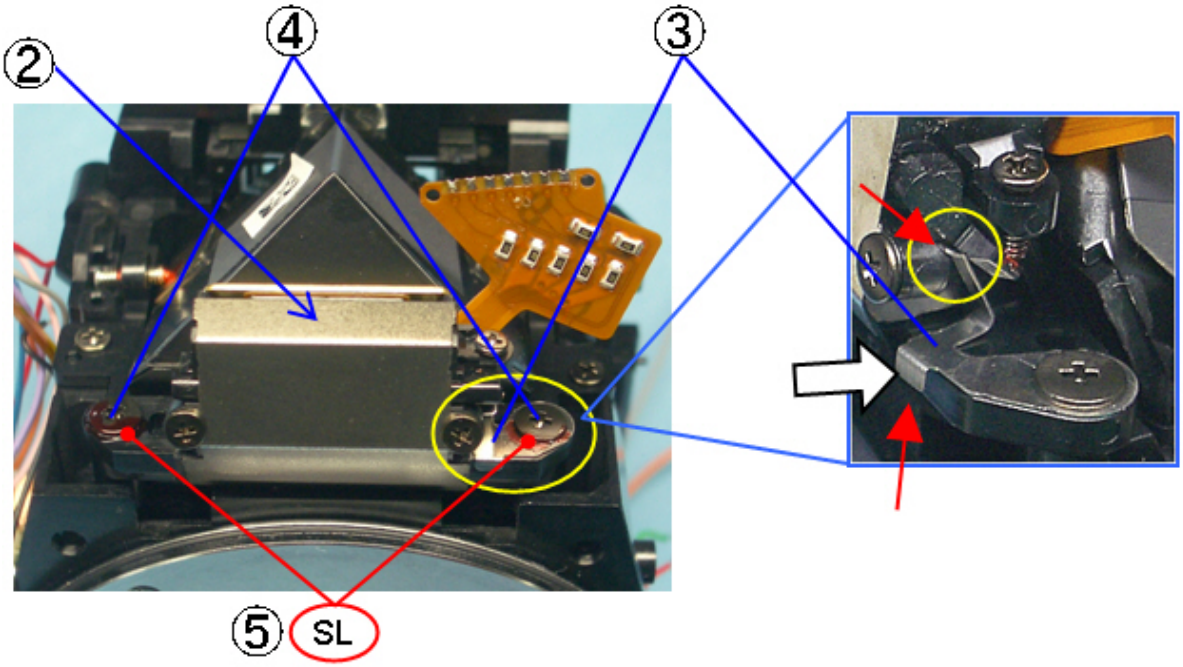


② SI block (M51, 0-M52, M53, L11, L12, 0-O170etc.)

③ Put the M55 (SI spring) as shown

④ TY-CNL-F1.7x4.5(2EA)
…Attach the SI block and M55 spring on the penta prism

⑤ Cover the screws with glue



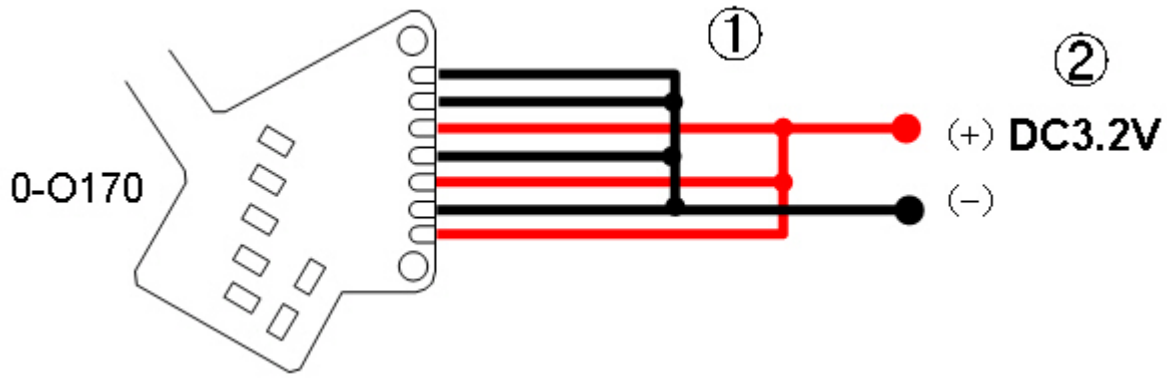
4. [Adjustment] SI-LED position

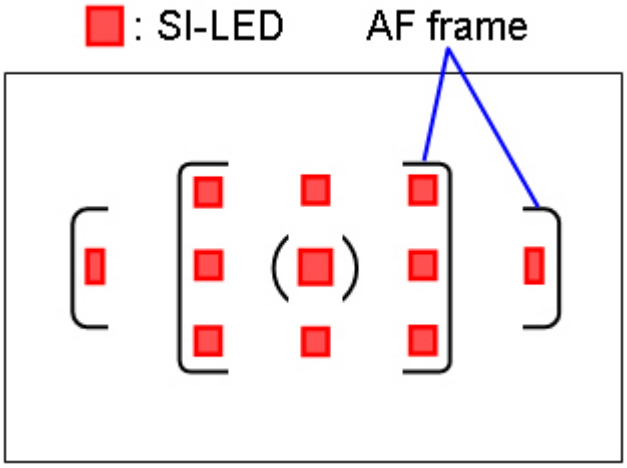
Equipment: Power source, lead wire

① Connect the lead wire on the 0-O170 (SI-LED) as shown.

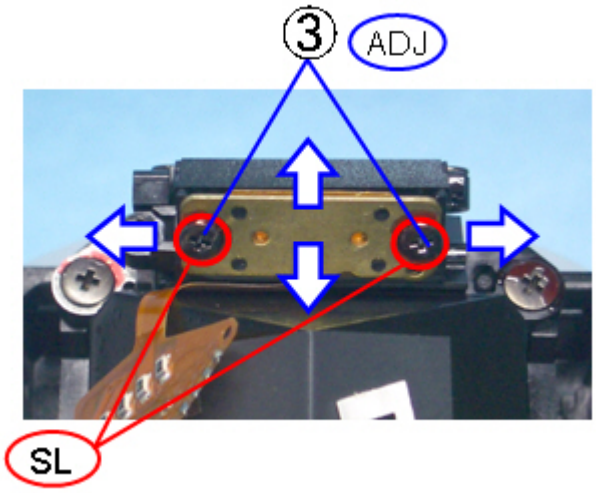
[Caution] Do not press the soldering part of the 0-O170 with overpower.

② Connect the power source (DC 3.2V) and check the condition and position of the 11 points of the SI-LED.





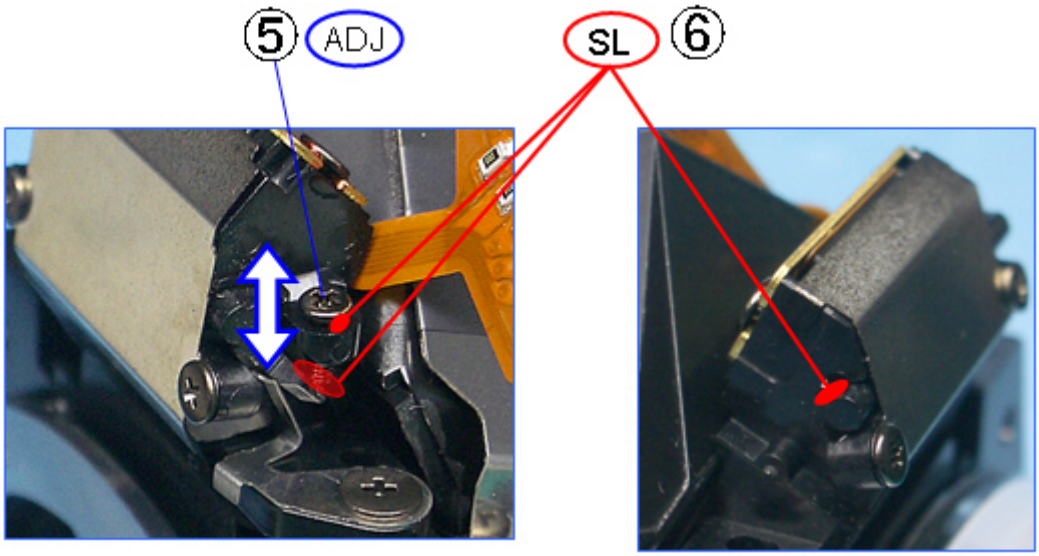
③ [Adjustment1] Loose the 2 screws hold the 0-O170.
…Remove the 5 points of the glues covered the screws



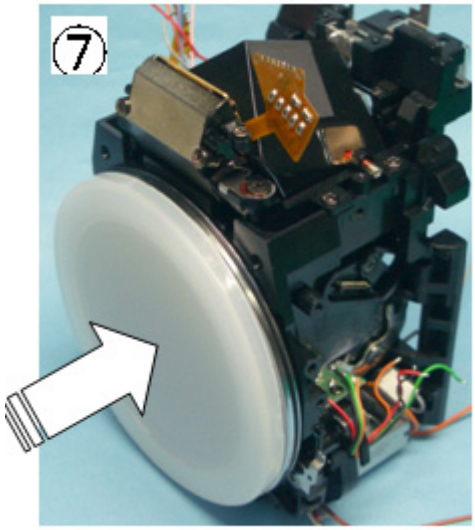
④ Check the screws whether they are fixed

⑤ [Adjustment2] Rotate the adjustment screws up and down. Check it again.

⑥ After adjustment, cover the 5 screws with the glue and remove the lead wire.



⑦ To protect the SI-LED part from damage during the adjustment, attach the Mount cover.

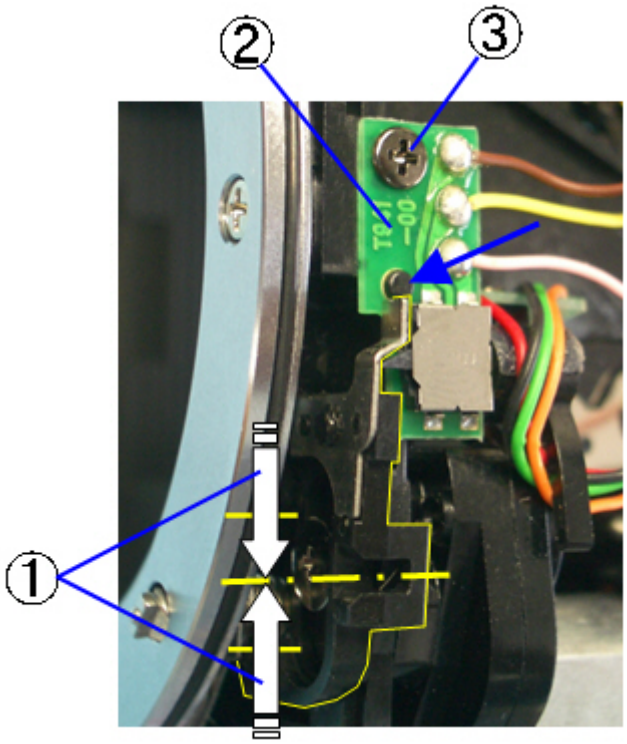


5. 0-T940

① Set the Focus lever to CAF

② 0-T940

③ TY-CNL-D1.7x3.0



[Cautions of disassembly]

When the 0-T940 is removed, set the Focus lever to CAF.

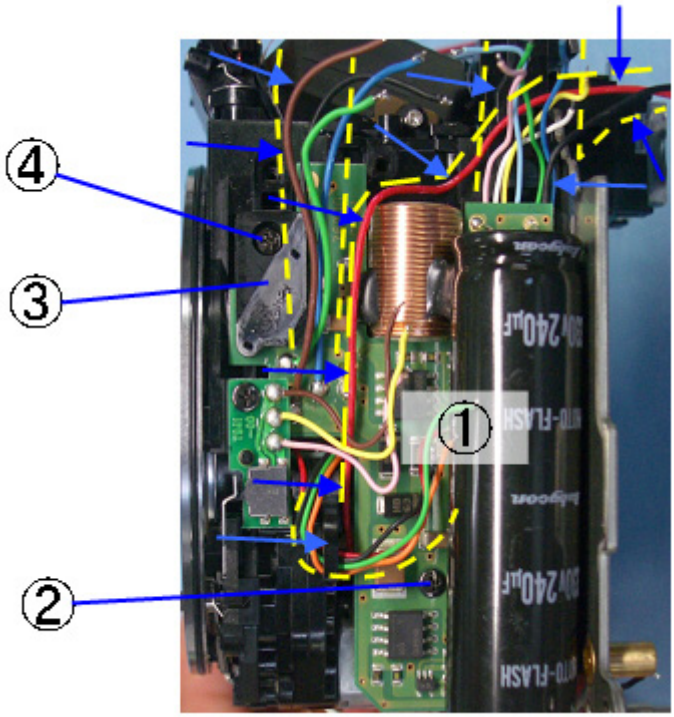
6. 0-Q200 (strobe Circuit)

① 0-Q200 • • • Arrange the lead wire

② TY-CNL-D1.7x3.5(Bottom side)

③ A117

④ TY-CNL-D1.7x3.5



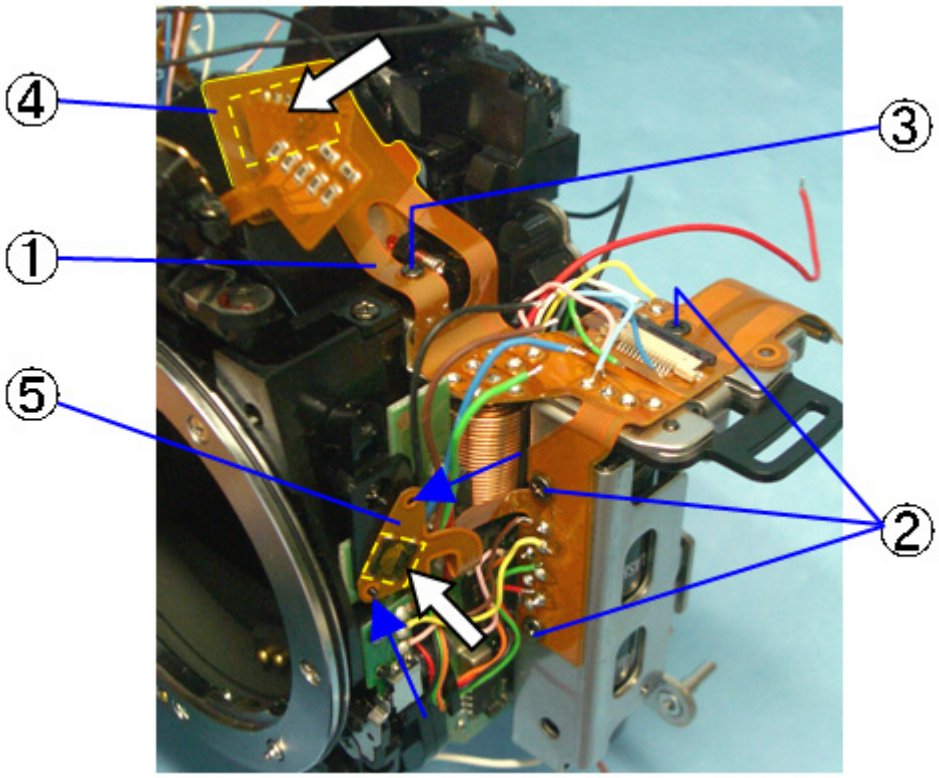
7. 0-T750 (Left top relay circuit)

① 0-T750 • • • Attach it on the body

② CNL-D1.7x1.6(3EA)

③ TY-CNL-B1.4x2.5

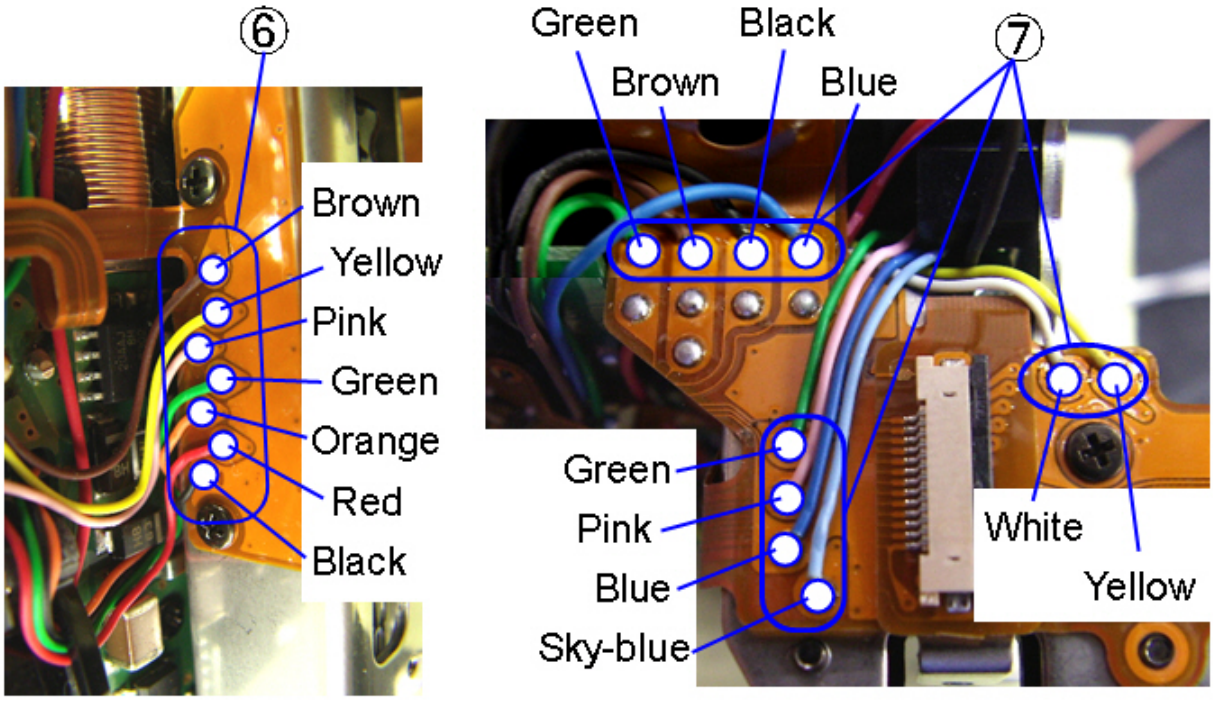
④ Fix the penta part with the DT (10X18)



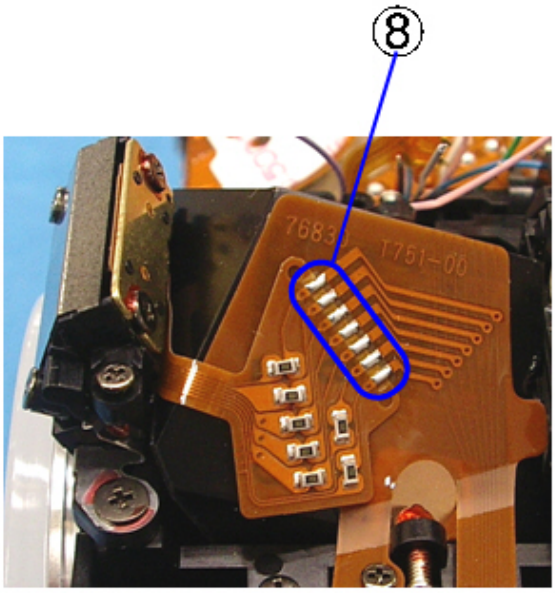
⑤ Fix the RAW button SW part with the DT (5x5)

⑥ Seven lead wires

⑦ Ten lead wires



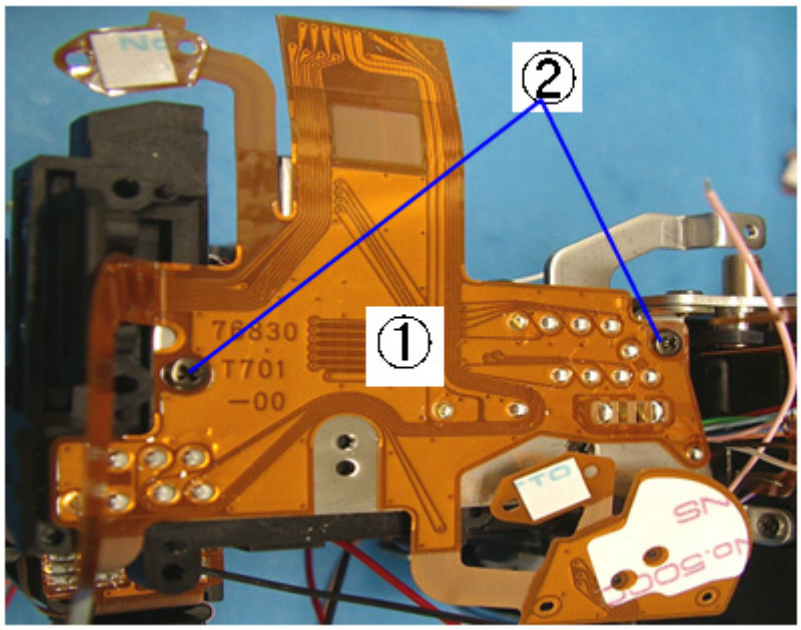
⑧ Seven points of the O170 PCB



8. 0-T700 (Right top relay circuit)

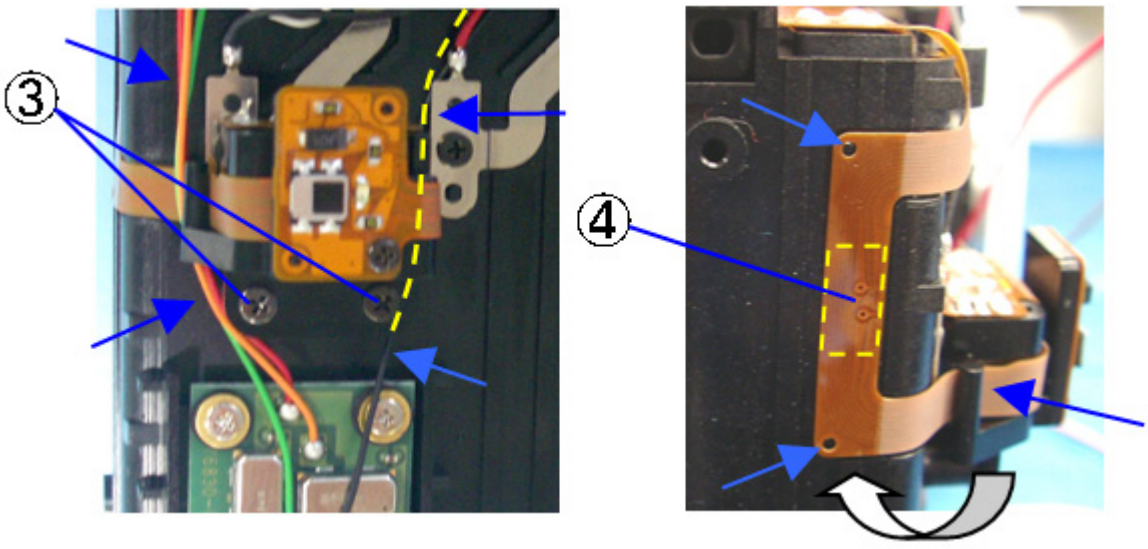
① 0-T700 • • • Attach it on the body

② CNL-D1.7x1.6(2EA)



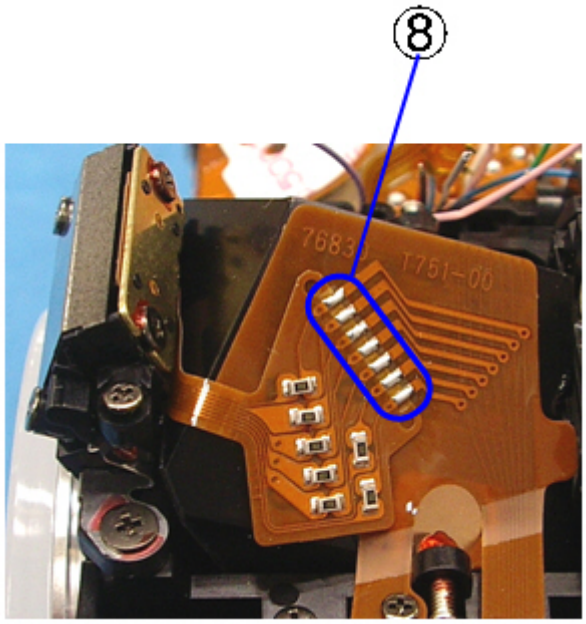
③ TY-CNL-D1.7x3.5(2EA)

④ Fix the PCB with the DT (10X4).



⑤ Four soldering points of the T71 PCB

⑥ Twelve lead wires

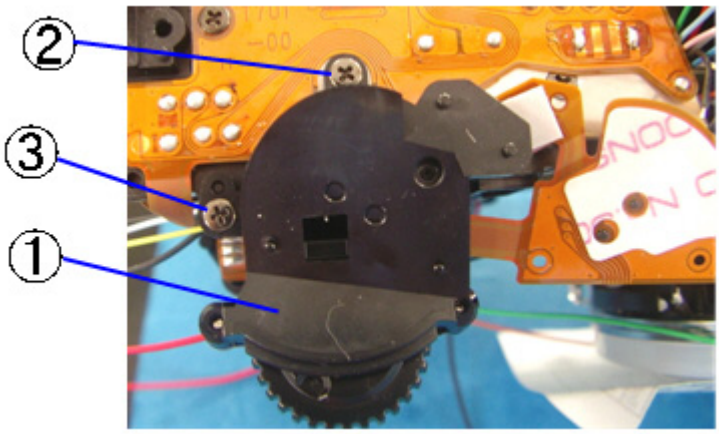


9. A350 (Main SW part)

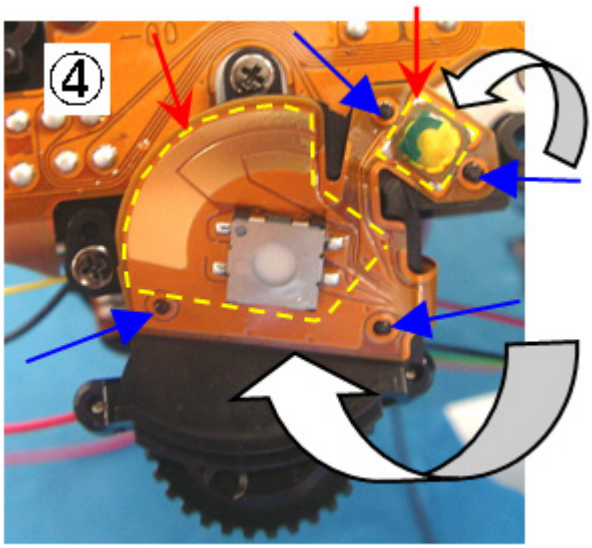
① A350

② CNL-D1.7x3.0

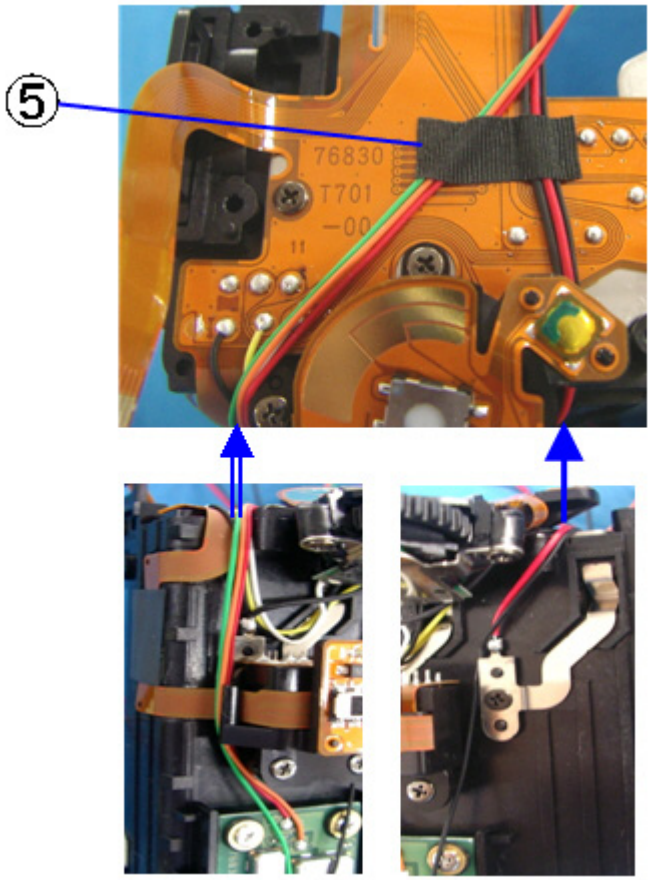
③ TY-CNL-D1.7x4.5



④ Fix the PCB around the Shutter button / Green button with the O207 (DT) / DT (5x5).



⑤ Arrange the lead wires with the BT (6X15).

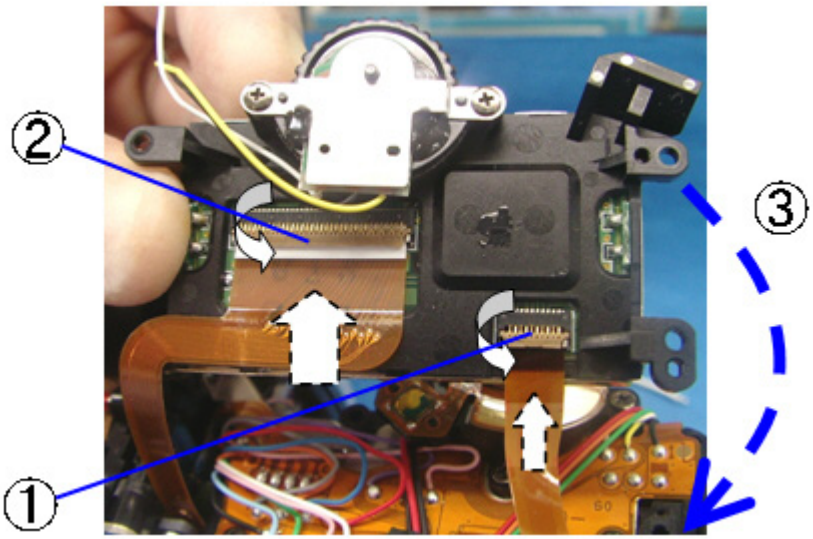


10. O201 (LCD block)

① Connect the T700 PCB to the connector. (Flip lock)

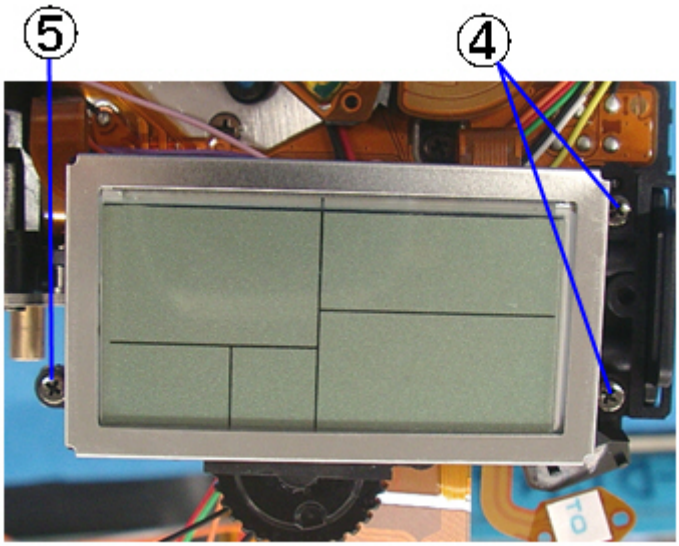
② Connect the O100 PCB to the connector. (Flip lock)

③ Attach the O201 on the body.



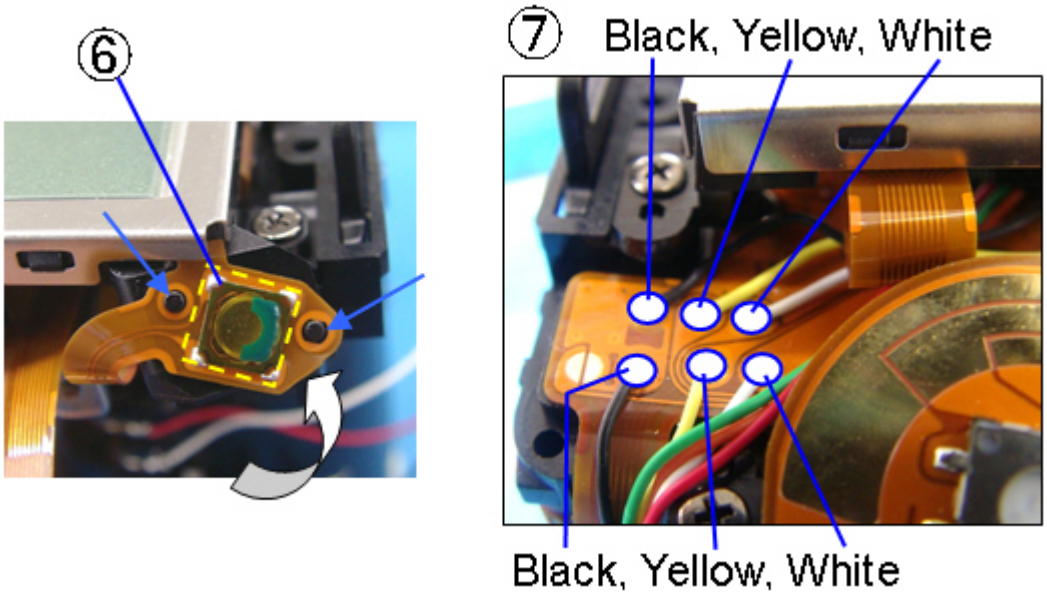
④ TY-CNL-D1.7x4.5(2EA)

⑤ CNL-D1.7x2.5



⑥ Fix the PCB of the AE-L part with the DT (5X5).

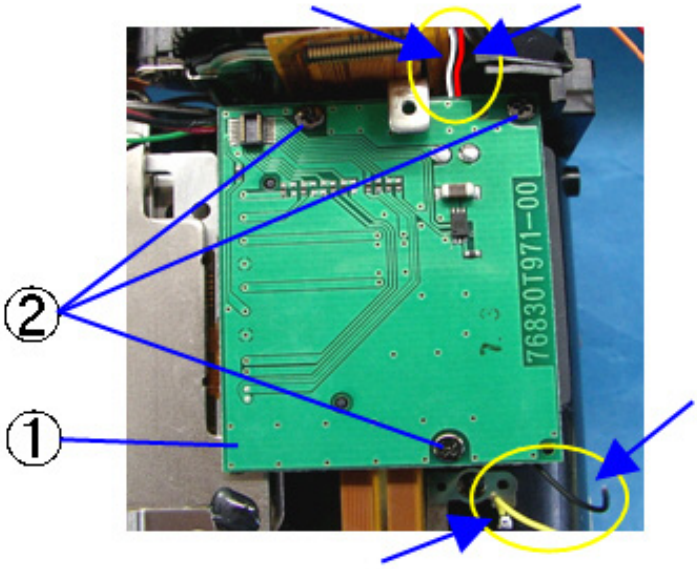
⑦ Six lead wires



11. 0-T970 (SD circuit block)

① 0-T970 ···Four lead wires

② TY-CNL-D1.7x3.5(3EA)



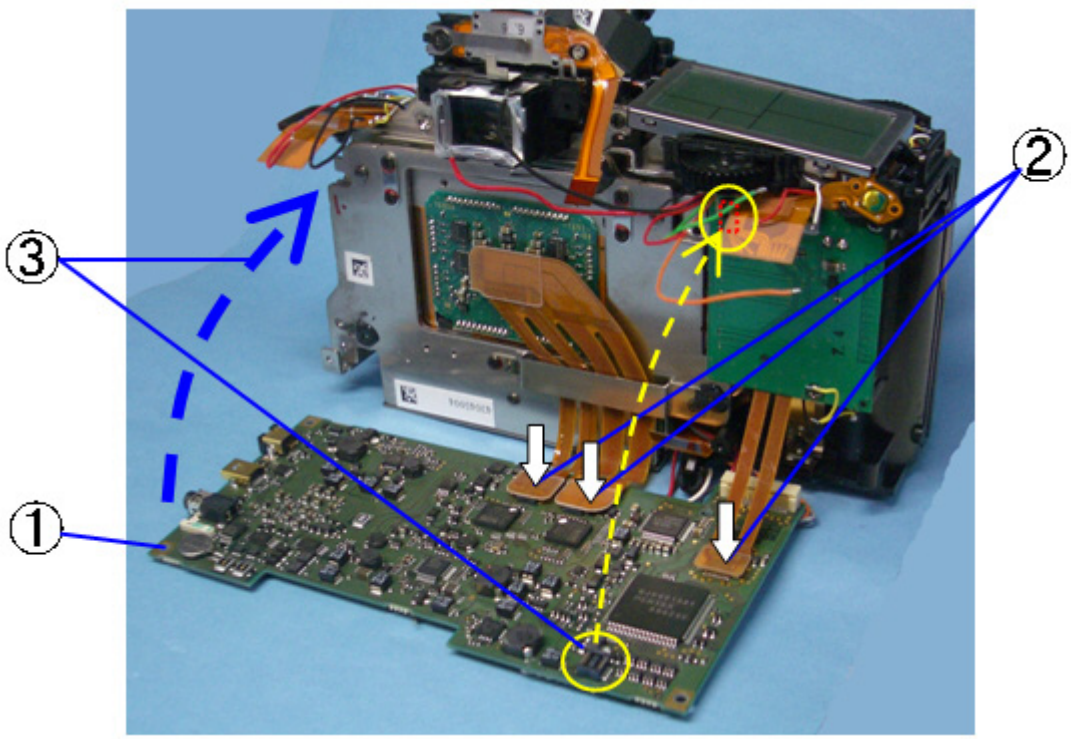
12. 0-T100 (Main circuit block)

[Caution] Do not press the SR / CCD block with over power and do not fold it as it may effect the camera operation

① Put the T100 as shown

② Connect the 3 PCBs to the connector. (Wall socket type)

③ Attach the T100 on the body and connect the connector. (Wall socket type)

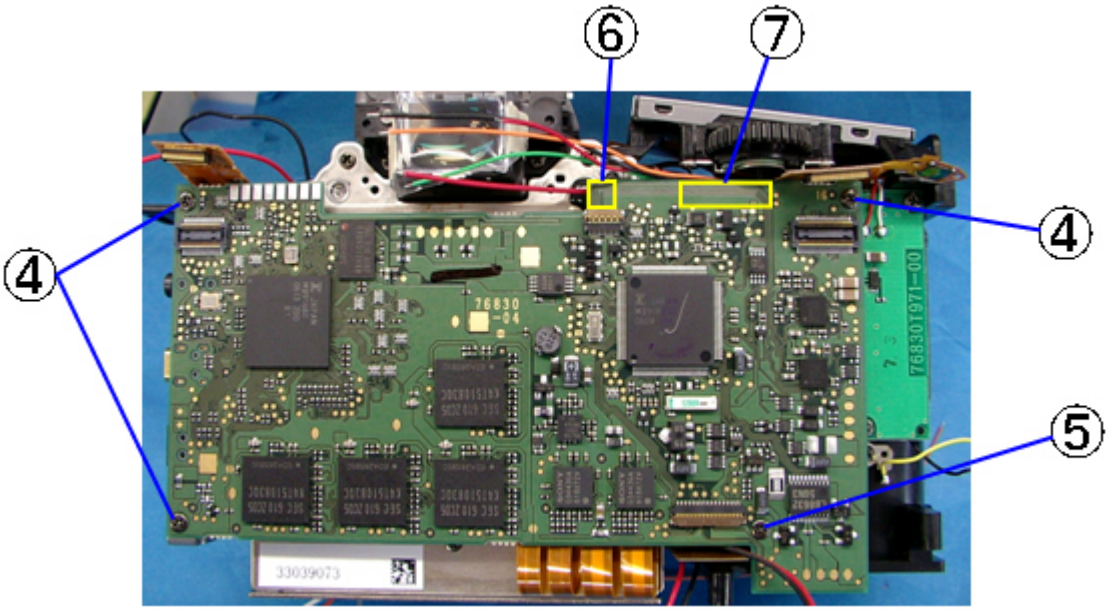


④ CNL-D1.7x2.5(3EA)

⑤ TY-CNL-D1.7x3.5

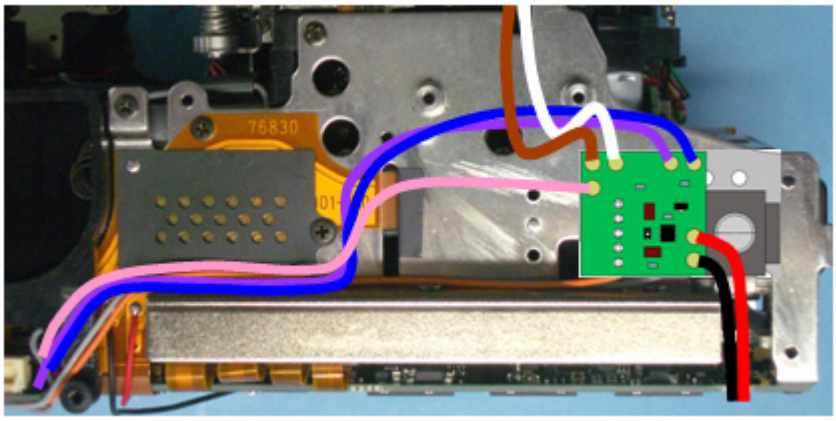
⑥ DT(4x4)

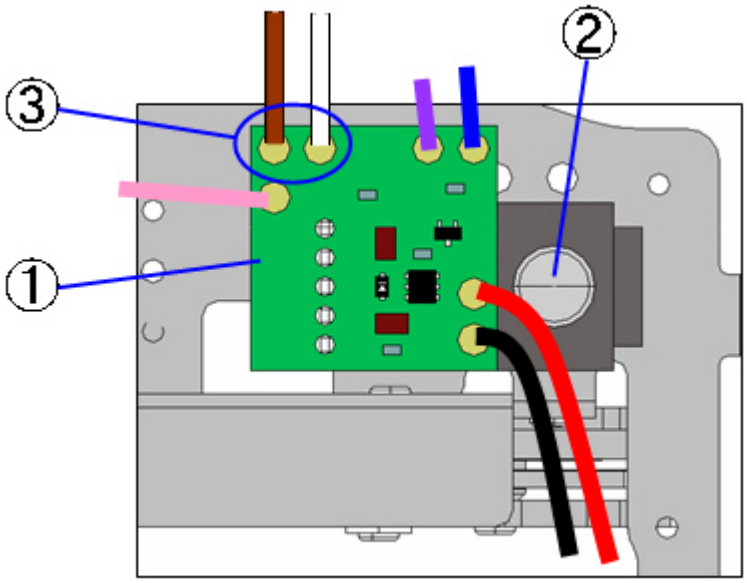
⑦ DT(4x15)



13. 0-T770 (PZ circuit block)

Arrange the lead wires as shown





14. Soldering of the T100 lead wire

① Connect the PCB to the connector (Two points, Flip lock)
…Fix the J100 PCB with the DT.

② Connect the PCB to the connector. (Two points, Flip lock)

③ Four lead wires

④ Six lead wires

⑤ Four lead wires

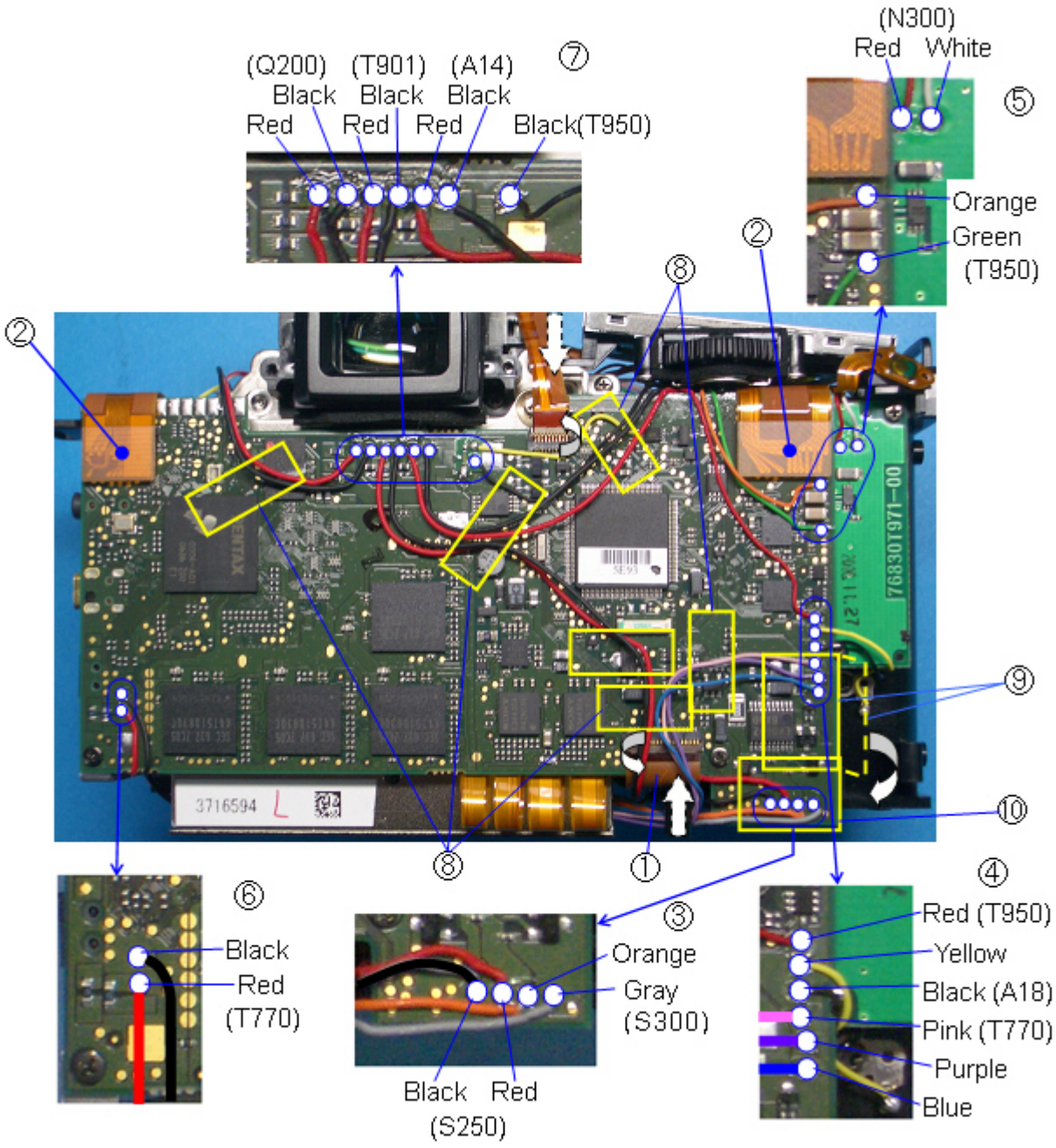
⑥ Two lead wires

⑦ Seven lead wires

⑧ BT(5x15)…4EA

⑨ T90 …Fold and bend

⑩ A35

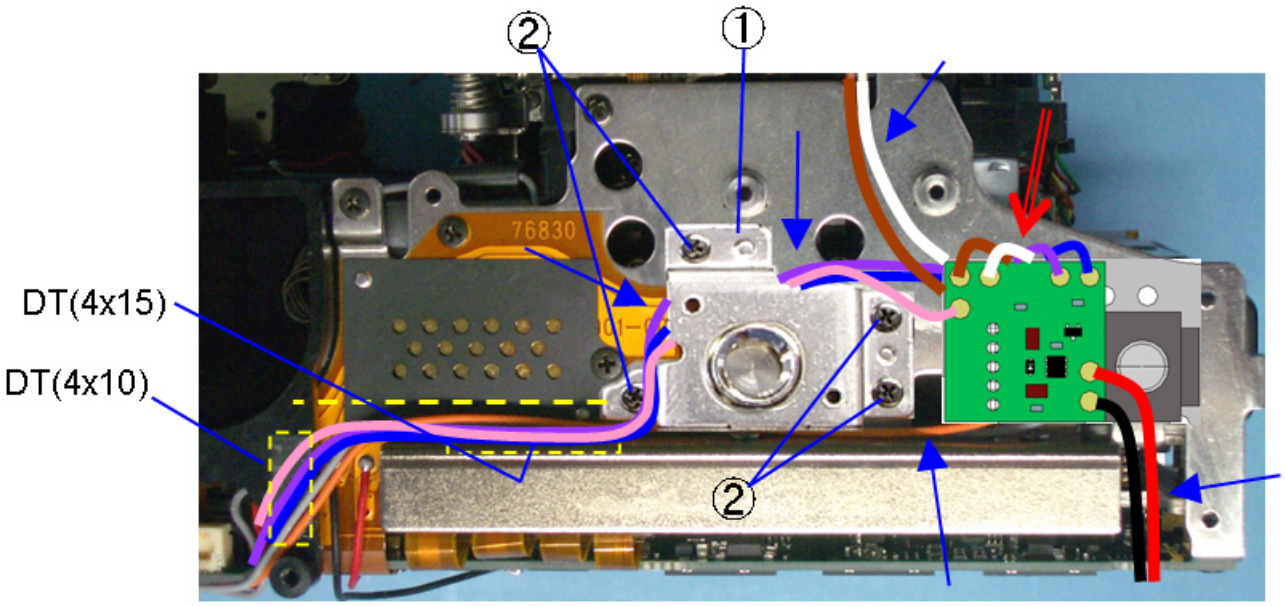


15. 0-A51 (Tripod holder)

① 0-A51

② CNL-D1.7x2.5(4EA)

③ Arranging the lead wires(S300,T770)



16. [Adjutment] Initial adjustment of the changed T100

Equipment :

- ▫ SD card for the adjustment (FW for the changed T100 and writing the initial data)
- ▫ TV monitor
- ▫ Exclusive video cable
- ▫ Circuit tester
- ▫ AC adapter (or DC cable for 76830 / Above DC 8.3V, 3A power source)

16-1. Preparation

① Connec the Video cable to the TV monitor.

② Short circuit the contact point (T200) of the Main SW with soldering.

16-2. Power checking

① Insert the DC cable (DC 8.3V, 3A) on the power source.

② Insert the DC cable on the camera. Take care of the short circuit or leaks

[Caution] If there is over current, disconnect the power source immediately. (When the metering is off, current consumption is about 320mA)

③ Disconnect the DC cable.

16-3. Writing the FW for the changed T100

[Caution] When the 0-T100 is changed, you must write this FW. In the rest cases, Writing this FW is not required.

For the detail information, refer to the e-leaning part of the web-site.

16-4. Writing the initial FW

* When the initial FW is written, all of EEPROM data is deleted.

[Caution] When the 0-T100 is changed, you must reset the camera. In the rest cases, Reseting the camera is not required.

For the detail information, refer to the e-leaning part of the web-site.

17. [Adjustment] SR adjustment

[Caution1] When the T100 circuit is changed, you must do this adjustment.

[Caution2] Adjustment must be done in a stable place with any vibration.

Equipment :

- SR unit Adjustment program for 76830
- SR unit table
- PC (Windows 2000 or XP with the USB port)
- USB cable
- AC adapter (or DC cable for 76830, DC 8.3V power source)

For the detail information, refer to the e-leaning part of the web-site.

18. [Adjustment] 0-J100 position adjustment

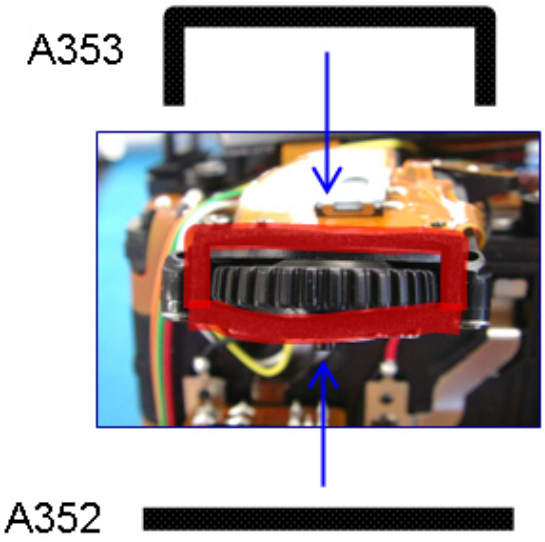
Equipment: Pen light or similar light

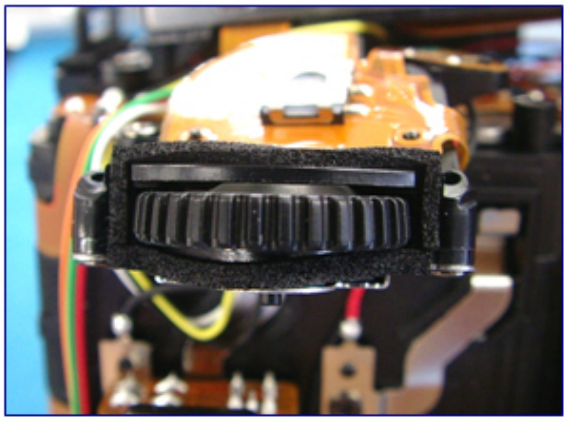
For the detail information, refer to the e-leaning part of the web-site.

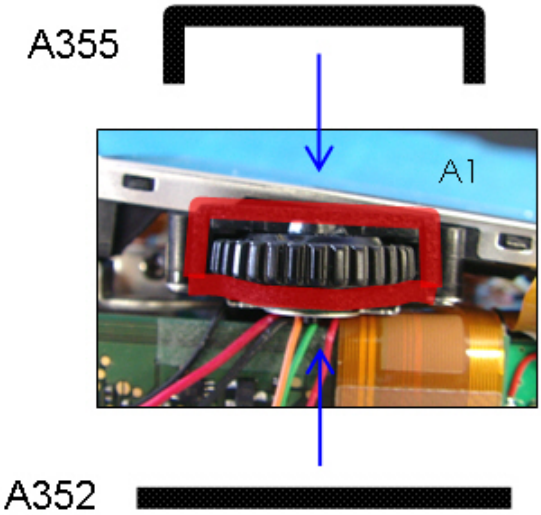
19. [Check] Checking the sealing

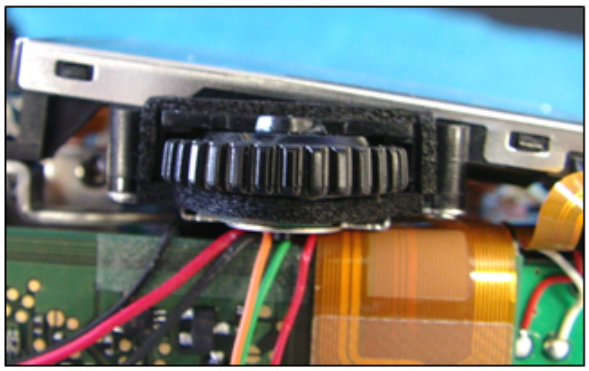
[Check] Twisted, Peeled, broken sealings are not permitted.

① Front and Rear e-dial : When the e-dial is rotated, it must not contact the cotton sheet.

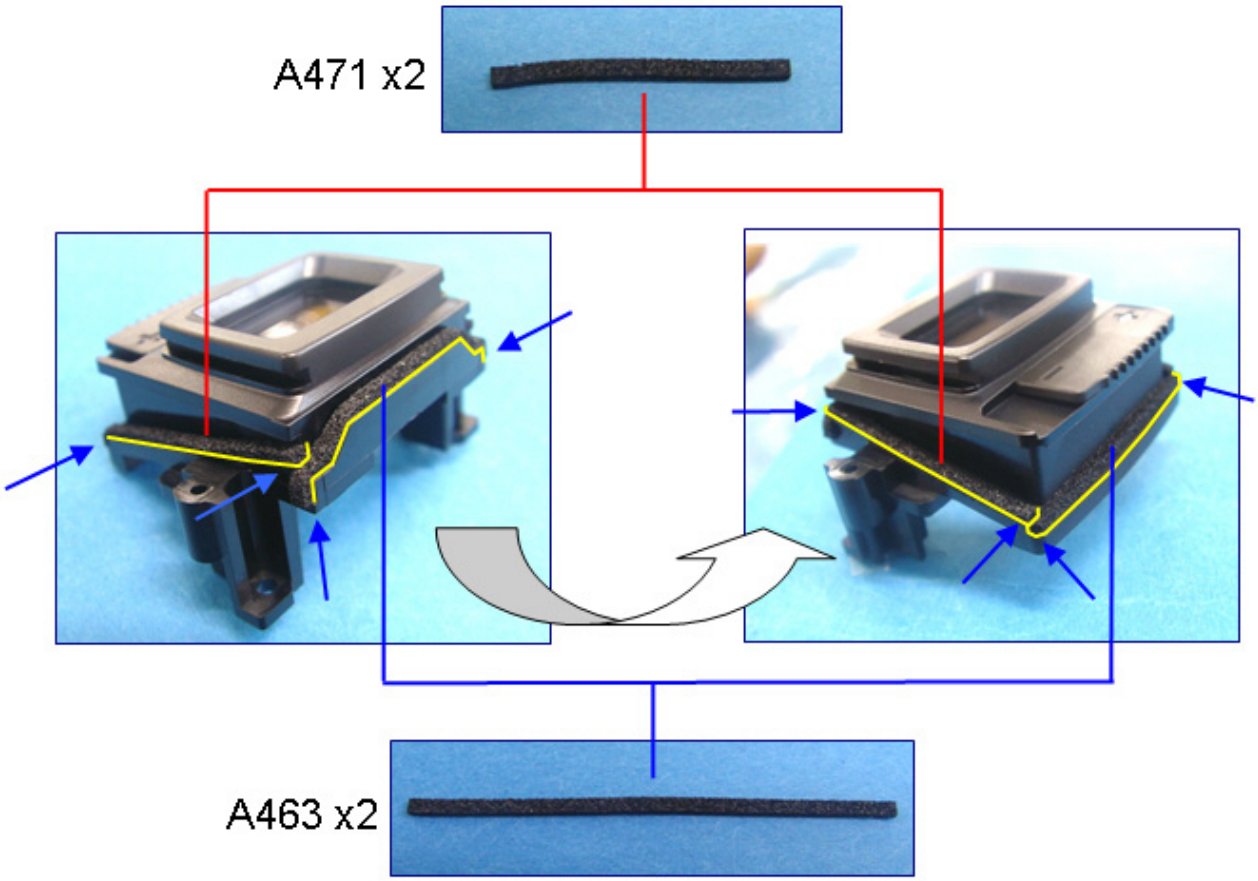




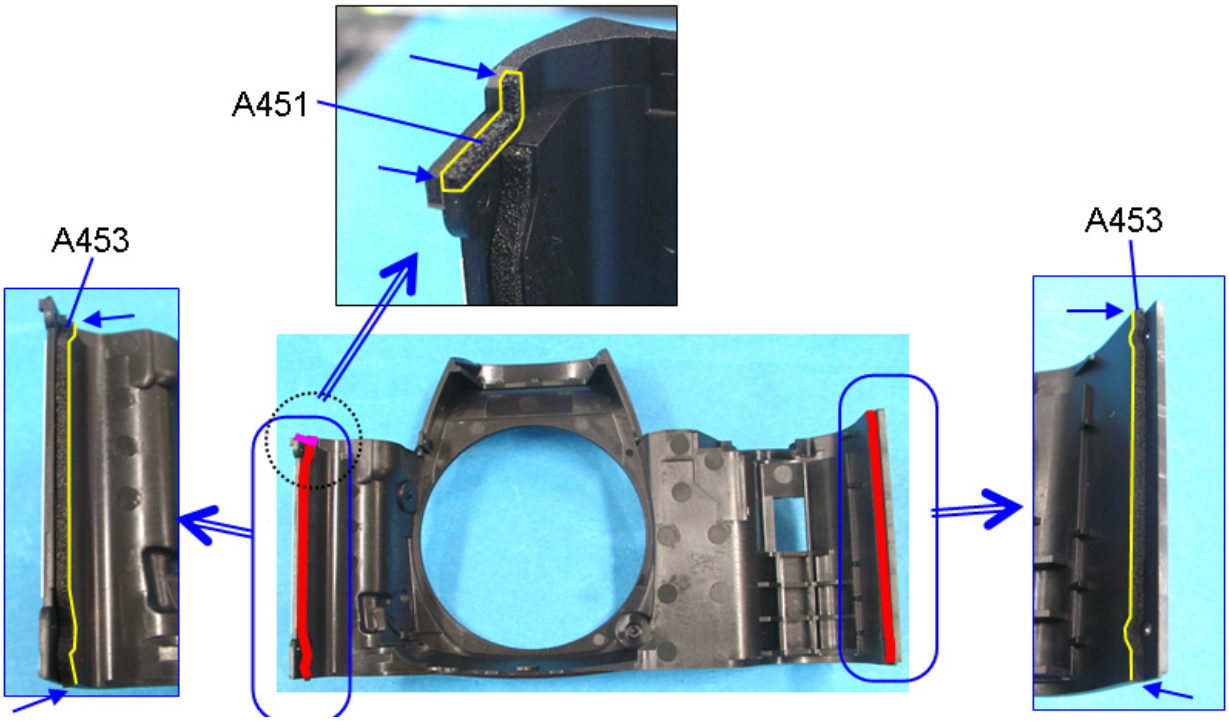




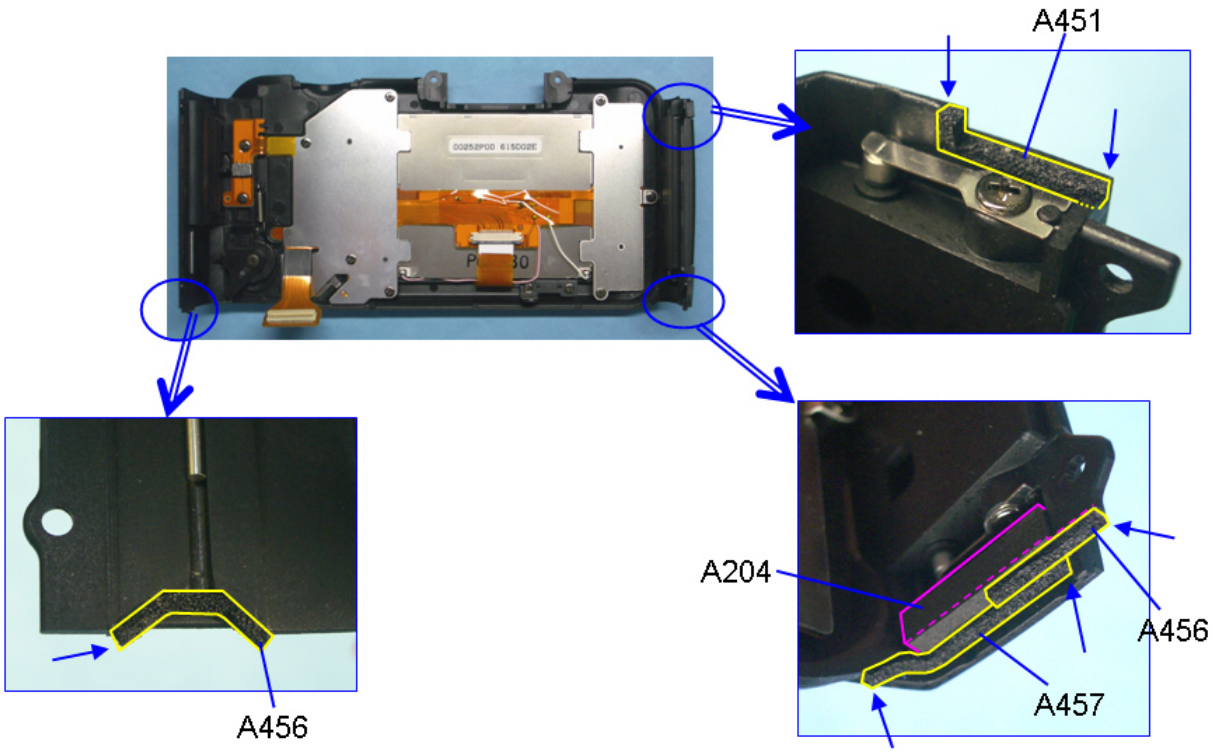
② M311



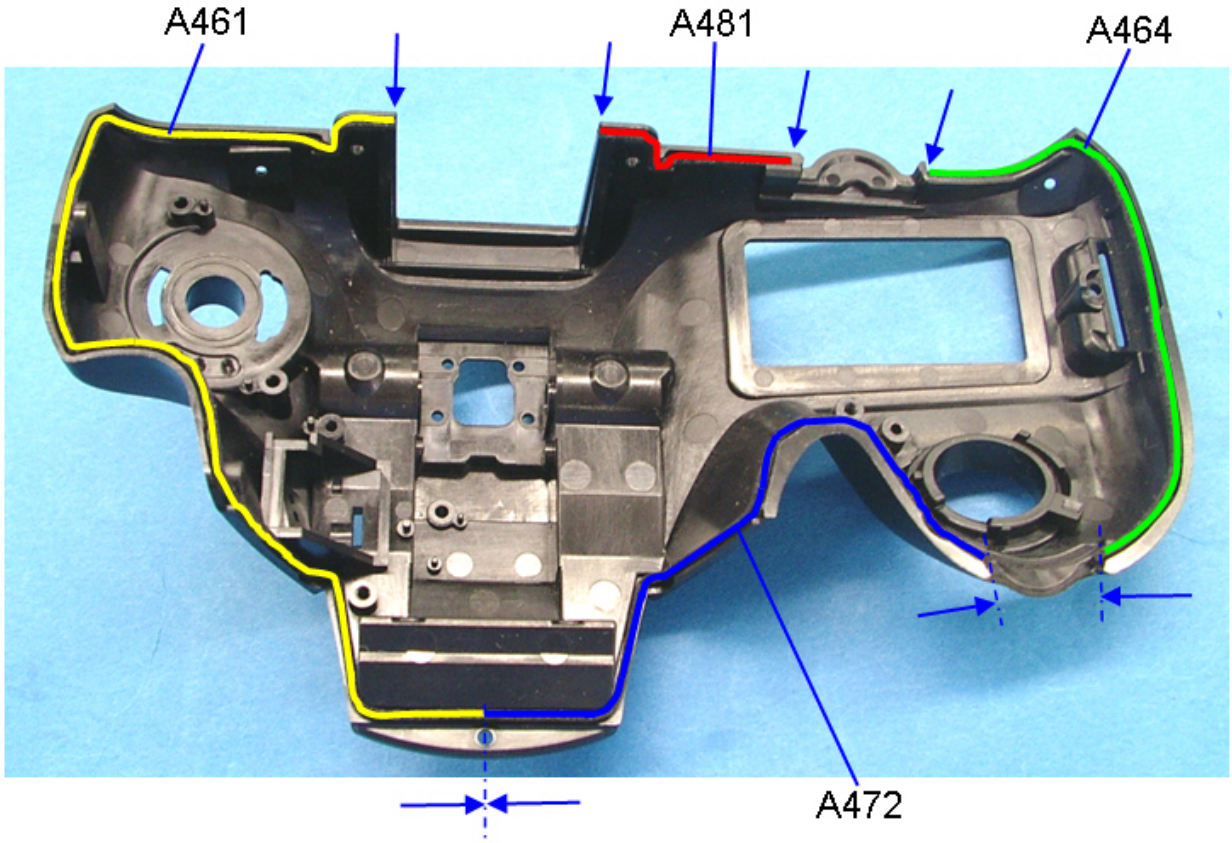
③ A150



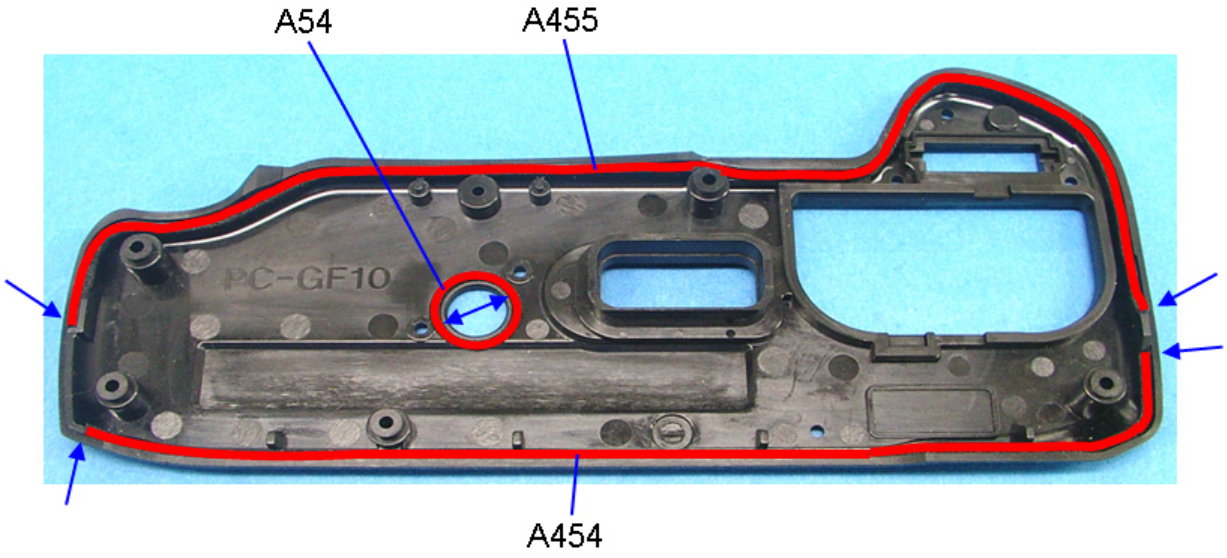
④ A201



⑤ A301



④ A401



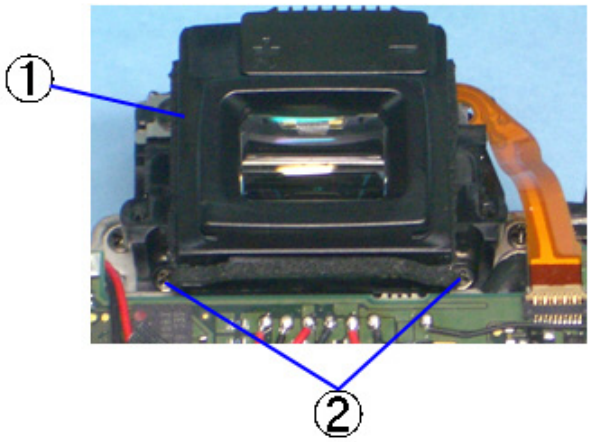
[Cautions of the sealing assembly]

- Take care of the twisted narrow sponge (Around the A301, A401, M311)
- If there are any damages on the waterproof parts, you must change them.
- Do not re-use the rubber sponge.
- Repeated assembly and disassembly may cause the decreasing waterproof capacity.
- If the duration of the parts are decreased, you must change them.

20. A150 · 201 (Front cover / Rear cover)

① M311

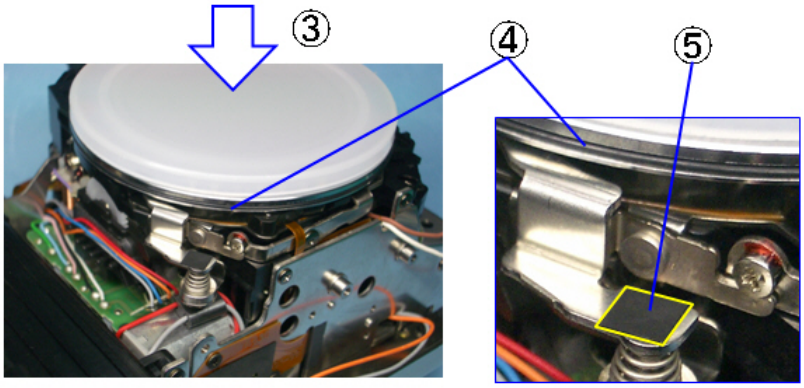
② CNL-D1.7x3.0(2EA)



③ Attach the Mount cover to prevent the SI-LED and Tv dial

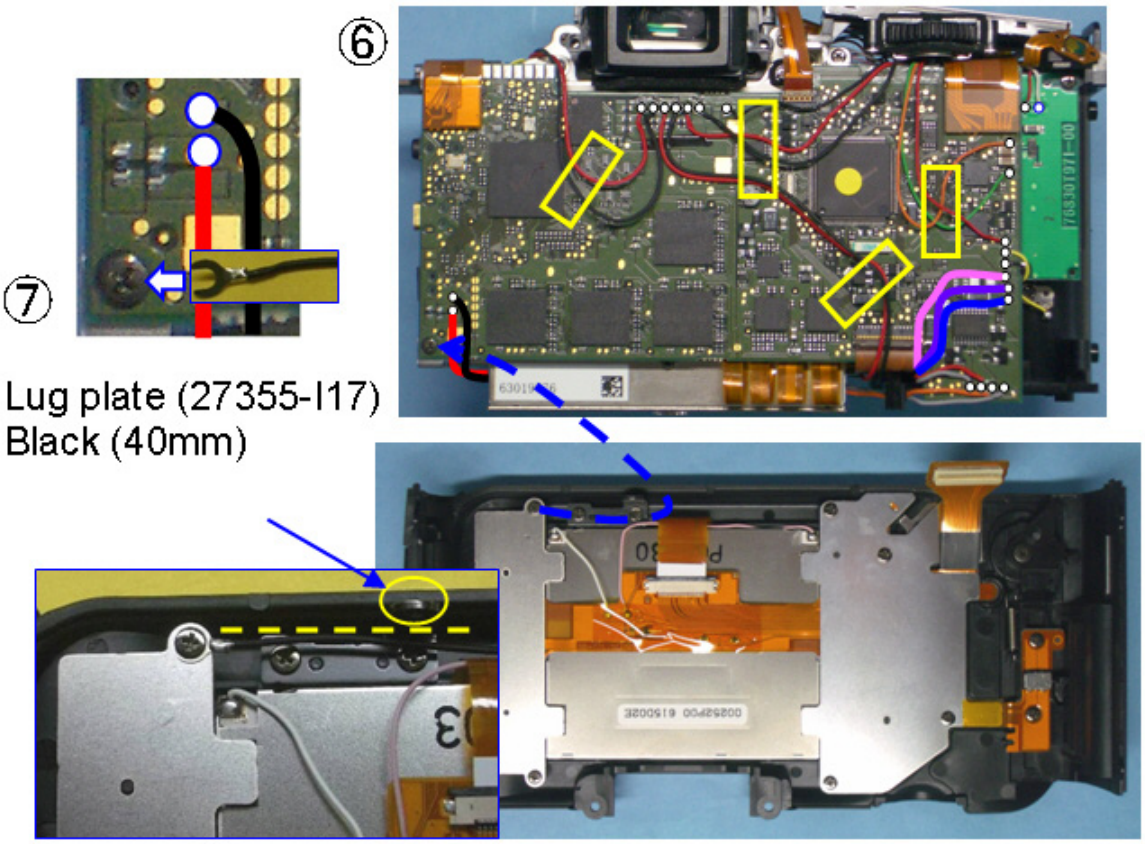
④ A98(ORing) …Without any damages

⑤ 27370-A115

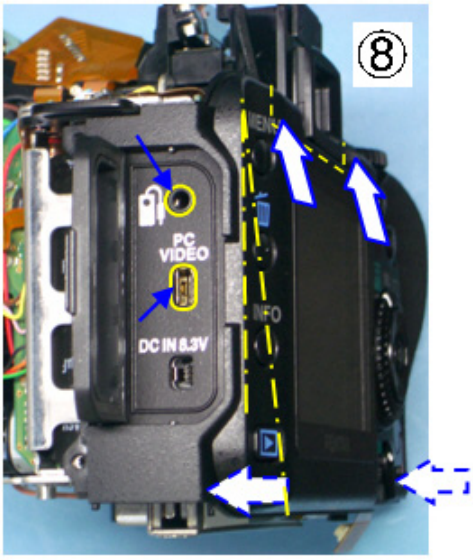


⑥ Put the body and the A201 as shown.

⑦ Fix the Rear cover as shown.



⑧Attach the A201 and assemble the bottom of the eye contact part first and assemble the connect port. connect port.



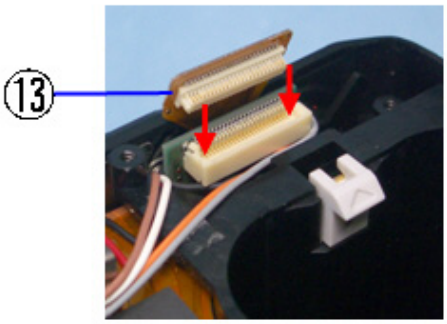
⑨ A150 ···Set the Focus lever to MF.

⑩ CNL-D1.7x3.0

⑪ CNL-D1.7x3.5 ···Open the Grip rubber.

⑫ A172(TY screw 1.7x4.5, 2EA)

⑬ Connect the T920 PCB to the connector (Wall socket type) ↓



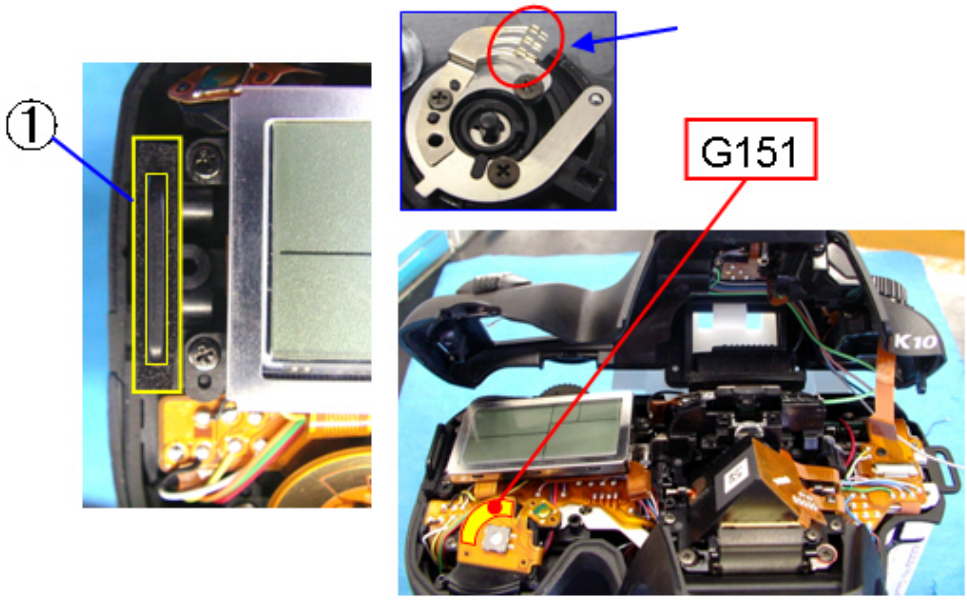
21. A301 (Top cover)

* Check whether the contact points of the Main SW is deformed.

* Cover the contact points of the Main SW with the G151.

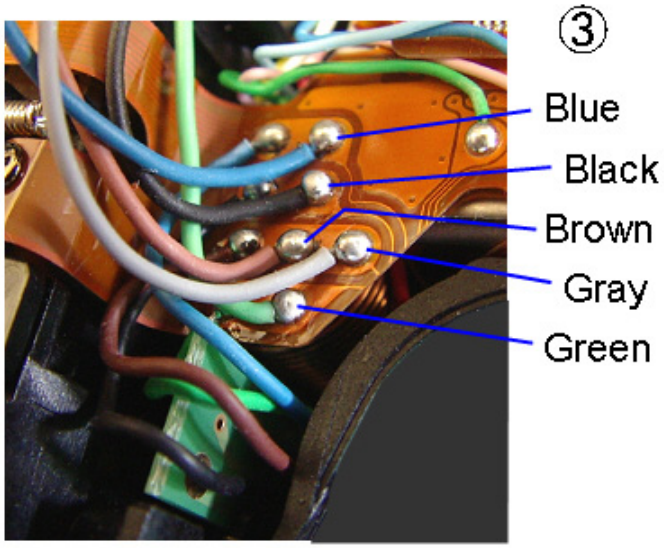
① A27(Waterproof sheet)

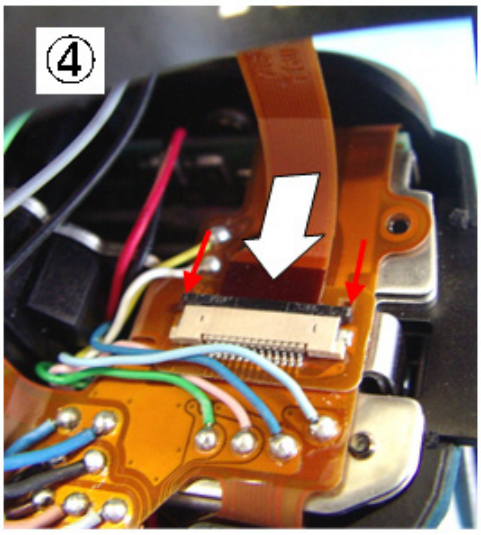
② A301



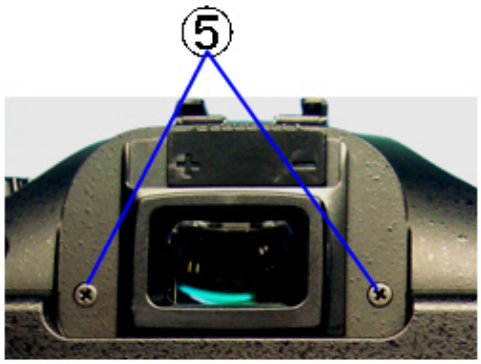
③ Five lead wires

④ Connect the T51 PCB to the connector (Slide lock)



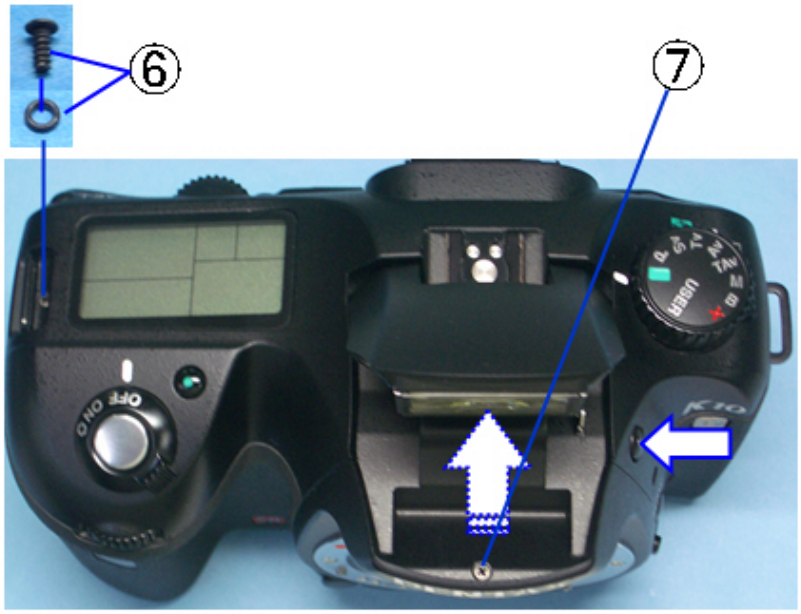


⑤ A173(TY screw 1.7x6.0, 2EA)



⑥ A171(TY screw 1.7x4.0) • A304(ORing)

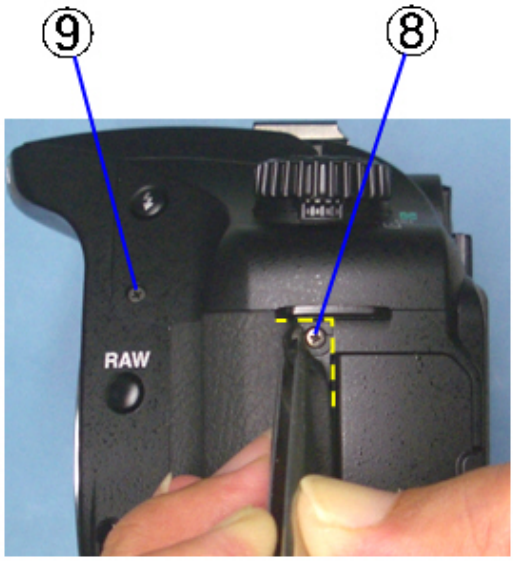
⑦ A171…Pop up the strobe.

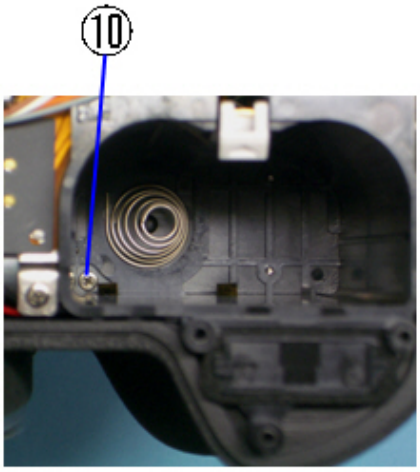


⑧ CNL-D1.7x5.5…Open the rubber

⑨ A173

⑩ TY-CNL-D1.7x8.0(In the battery chamber)





22. [Adjustment] Single Reflex part

[Caution 1] When the T100 circuit is changed, you must do this adjustment

[Caution 2] Do the digital part adjustment first and then do the shutter speed adjustment. (Refer the shutter speed adjustment with the histogram part)

Equipment :

- □ SLR Adjustment program for 76830
- □ PC (Windows 2000 or XP with USB port)
- □ Exclusive USB cable
- □ Exclusive AC adapter (or DC cable for 76830)
- □ Light source for AE adjustment (LV6 / LV8 or LV9 / LV12 / LV 15 or LV 16, Shutter tester)
- □ Metering standard lens for digital camera (No. 95901-D20) and F8 set ring
- □ F5.6 iris for the metering standard lens
- □ AF inclination adjustment tool (Square)
- □ AF inclination adjustment tool (Cross)
- □ Hexagon driver 1.5mm (HD-M1.5)
- □ Two kinds of 2m AF chart, □ Standard AF lens for 2m
- □ D-FA (FA) Macro 50mm F2.8 lens, □ FA (F) 35-80mm F4-5.6 lens
- □ Battery adapter for 76830
- □ Power source (above 8V, 3A)

For the detail information, refer to the e-leaning part of the web-site.

23. [Adjustment] SR Gain adjustment

[Caution 1] When the T100 is changed, you must do this adjustment

[Caution 2] Do the SR unit adjustment first

[Caution 3] Do this adjustment in a stable place without any vibrations

[Caution 4] Take care of the stage as it is heavy

Equipment :

- SR Gain adjustment program for the GX-10
- SR Gain tools (Stage, Controller, Speed meter)
- Chart for the SR Gain adjustment
- D-XENON 50-200mm lens
- PC (Windows 2000 or XP with USB port)
- Exclusive USB cable
- Exclusive AC adapter

For the detail information, refer to the e-leaning part of the web-site.

24. [Adjustment] Digital part adjustment

[Caution] Do the adjustment of light source for the digtal first

For the detail information, refer to the e-leaning part of the web-site.

25. [Adjustment] Shutter speed adjustment with the histogram

* Do the Single Reflex part and Digital part adjustments first

* When the 0-T100 is changed, do the shutter speed adjustment

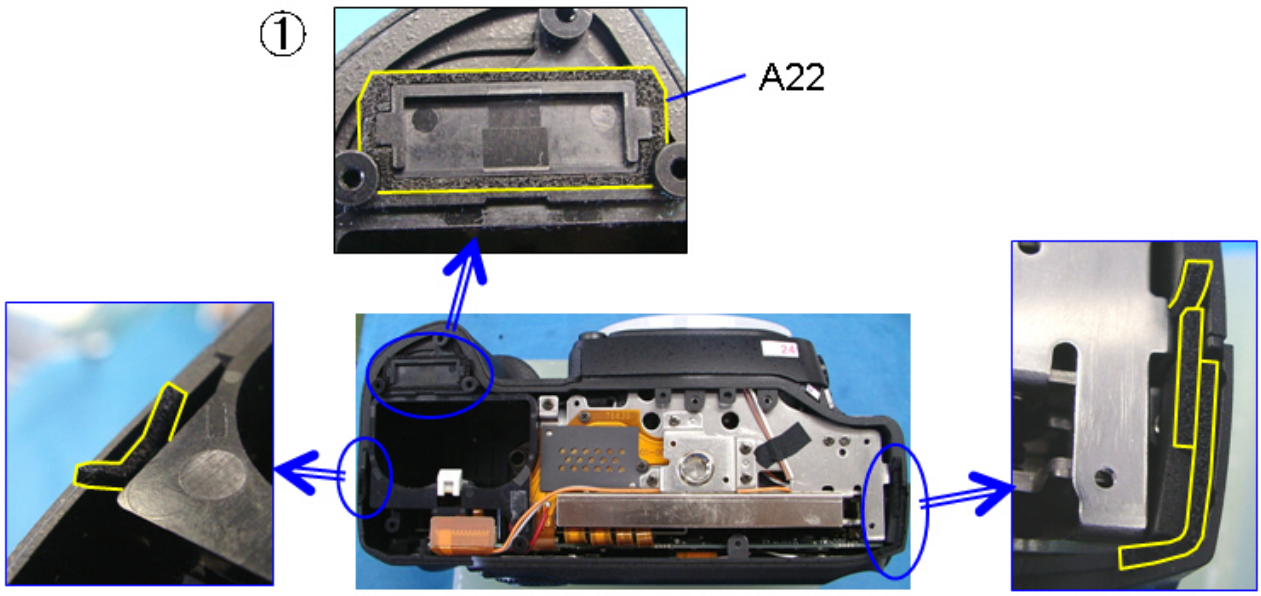
Equipment :

- Single Reflex adjustment program for 76832
- PC (Windows 2000 or XP with USB port)
- Metering standard lens and F8 ring set
- Light source (LB-3300, etc. using LV8 or LV9)
- Exclusive USB cable
- Exclusive AC adapter
- SD card for test shots
- Solid plastic transparant scale (for measuring the distance)

For the detail information, refer to the e-leaning part of the web-site.

26. A401 (Bottom cove

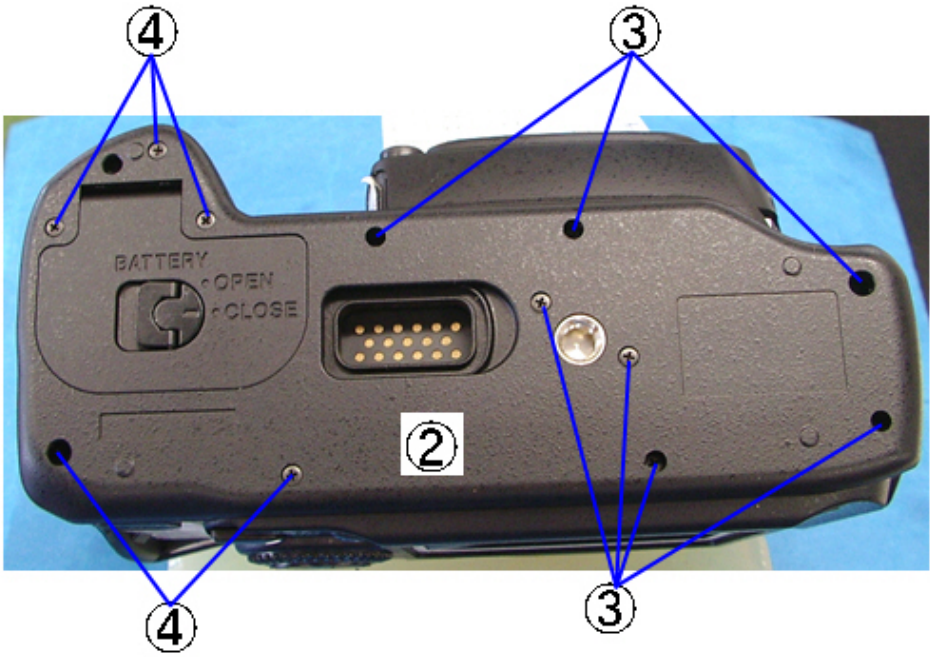
① Checking the sealing parts



② A401 • Battery cover

③ A174(1.7x4.0 Screws, 7EA)

④ A172(TY screw 1.7x4.5, 5EA)



27. [Check] Function check (Final checking)

* It is same with the GX-1S (76642). Refer to the GX-1S Service manual.

[Caution] When you clean the CCD, do not press the CCD with overpower as it may effect the OPS system.

27-1. Checking the OPS system

* This chapter is for checking the OPS system

Equipment: PC, Battery (AC adapter), USB cable, 50mm lens, SD card for test shot, Image viewer
(ex: PENTAX PHTO BrowserTM, ACDSeeTM, Adobe Photoshop, etc.)

① Attach the 50mm lens to the body and set the aperture to A position.

② Set the camera as following.
Exposure: Tv mode, Focus: AF.S, AF point: Center, Drive mode: Single, WB: AWB, Size / Quality: 6M (10M) / Super fine

③ Select Tv8 (1/8 sec.)

④ Keep the distance between the subject and the camera 2m.

⑤ Switch off the OPS and take 10 shots

⑥ Switch on the OPS and take 10 shots

[Caution] Wait about 1 sec. every shot to save the image.

⑦ Open the images with the image viewer

⑧ Check whether the OPS system prevents the camera shake by comparing the images

[Caution] Style of holding the camera may effect the image quality.

[Reference] Checking the OPS system by using the difference lenses

* Generally, Shutter speed of the OSP system can be calculated with 1/focal length.

ex: When using the 200mm lens, the shutter speed can be 1/300 sec (1/ (200X1.5*))

* : As the LCD monitor size is 23.5X15.7mm, 1.5 is multiplied by converting the film camera size.

① Calculate the shutter speed with the method mentioned above.

② Converting the result of 1 with 3 step slower shutter speed
(If need, 4 step slower shutter speed can be used)
ex: In case of 200mm lens, About 1/30 (About 3 step)

③ Select Tv30

④ Do the 27-1 again. (You can select any distance)

[Caution] The OPS system can be effected by Focal length and distance.

The OPS system may not function correctly when the distance is too close
(ex: around 0.4m when using the 50mm lens) and when the temperature is too low.

27-2. FW upgrade

* If there are any instructions, do the FW upgrade

For the detail information, refer to the e-leaning part of the web-site.